ARMY TM 9-2320-365-20-4
AIR FORCE T.O. 36A12-1B-1095-2-4

TECHNICAL MANUAL
MAINTENANCE INSTRUCTIONS
UNIT MAINTENANCE
M1078 SERIES, 2 1/2-TON, 4 X 4,
LIGHT MEDIUM TACTICAL VEHICLES (LMTV)
VOLUME NO. 4 OF 5

MODEL	NSN	EIC
TRK, CAR., LMTV, M1078		
W/WN	2320-01-360-1898	BHH
W/O WN	2320-01-354-3385	BHD
TRK, VAN, LMTV, M1079		
W/WN	2320-01-360-1891	BHG
W/O WN	2320-01-354-3384	BHE
TRK, CHAS, LMTV, M1080	2320-01-353-9098	BHC
TRK, CAR., LMTV, AIR DROP, M1081		
W/WN	2320-01-360-1899	BHJ
W/O WN	2320-01-355-3064	BHF

HOW TO USE THIS MANUAL PAGE iii

BODY AND CAB MAINTENANCE PAGE 16-1

11K SELF-RECOVERY WINCH MAINTENANCE PAGE 17-1

BODY, CHASSIS, AND ACCESSORY ITEMS MAINTENANCE PAGE 18-1

HYDRAULIC SYSTEM MAINTENANCE PAGE 19-1

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

HEADQUARTERS, DEPARTMENTS OF THE ARMY AND THE AIR FORCE

JUNE 1998

WARNING SUMMARY

WARNING

EXHAUST GASES CAN KILL

1. **DO NOT** operate your vehicle engine in an enclosed area.
2. **DO NOT** idle vehicle engine with cab windows closed.
3. **DO NOT** drive vehicle with inspection plates or covers removed.
4. **BE ALERT** at all times for exhaust odors.
5. **BE ALERT** for exhaust poisoning symptoms, they are:

   Headache

   Dizziness

   Sleepiness

   Loss of Muscular Control

6. **IF YOU SEE** another person with exhaust poisoning symptoms:

   Remove person from area.

   Expose to open air.

   Keep person warm.

   Do not permit person to move.

   Administer cardiopulmonary resuscitation, if necessary.*

* For cardiopulmonary resuscitation, refer to FM 21-11.

WARNING

Remove rings, bracelets, watches, necklaces, and any other jewelry before working around vehicle. Jewelry can catch on equipment and cause injury or short across electrical circuit and cause severe burns or electrical shock. Batteries can explode from a spark. Battery acid is harmful to skin and eyes. Always wear eye protection and rubber gloves when working with batteries.

WARNING

Battery acid (electrolyte) is extremely harmful. Always wear safety goggles and rubber gloves, and do not smoke when performing maintenance on batteries. Injury will result if acid contacts skin or eyes. Wear rubber apron to prevent clothing being damaged.

WARNING SUMMARY (CONT)

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

WARNING

- **Dry Cleaning Solvent (P-D-680) is TOXIC and flammable. Wear protective goggles and gloves; use only in well ventilated area; avoid contact with skin, eyes, and clothes, and do not breathe vapors. Keep away from heat or flame. Never smoke when using solvent; the flashpoint for Type I Dry Cleaning Solvent is 100 degrees F (38 degrees C) and for Type II is 130 degrees F (50 degrees C). Failure to comply may result in serious injury or death to personnel.**

- **If personnel become dizzy while using Dry Cleaning Solvent, immediately get fresh air and medical help. If Dry Cleaning Solvent contacts skin or clothes, flush with cold water. If Dry Cleaning Solvent contacts eyes, immediately flush eyes with water and get immediate medical attention. Failure to comply may result in injury to personnel.**

WARNING

Diesel fuel is flammable. If fuel is spilled, clean it up immediately. Failure to comply may result in serious injury or death to personnel.

WARNING

After Nuclear, Biological, or Chemical (NBC) exposure of vehicle, all air filters shall be handled with extreme caution. Unprotected personnel may experience serious injury or death if residual toxic agents or radioactive material are present. If vehicle is exposed to chemical or biological agents, servicing personnel shall wear protective mask, hood, protective overgarments, and chemical protective gloves and boots in accordance with FM-3-4. All contaminated air filters shall be placed in double-lined plastic bags and moved swiftly to a segregation area away from the worksite. The same procedure applies for radioactive dust contamination. The Company NBC team should measure radiation prior to filter removal to determine extent of safety procedures required per the NBC Annex to the unit Standard Operating Procedures (SOP). The segregation area in which the contaminated air filters are temporarily stored shall be marked with appropriate NBC placards. Final disposal of contaminated air filters shall be in accordance with local SOP. Decontamination operation shall be in accordance with FM-3-5 and local SOP. Failure to comply may result in serious injury or death to personnel.

WARNING

Diesel fuel is flammable. Do not fill fuel tank with engine running, while smoking, or when near an open flame. Never overfill the tank or spill fuel. If fuel is spilled, clean it up immediately. Failure to comply may result in serious injury or death to personnel.

WARNING

Adhesive sealant MIL-S-46163 can damage your eyes. Wear safety goggles/glasses when using; avoid contact with eyes. If sealant contacts eyes, flush eyes with water and get immediate medical attention. Failure to comply may result in injury to personnel.

WARNING

Use care when removing/installing springs. Springs are under tension and can act as projectiles when being removed. Failure to comply can cause injury to personnel.

WARNING

Retaining rings are under tension and can act as projectiles when released causing severe eye injury. Use care when removing retaining rings. Failure to comply may result in injury to personnel.

WARNING

Ensure exhaust system is cool before performing maintenance. Failure to comply may result in injury to personnel.

WARNING

Wear appropriate eye protection when working under vehicle due to the possibility of falling debris. Failure to comply may result in injury to personnel.

WARNING

Do not operate LMTV vehicle with muffler removed. Toxic exhaust fumes may enter cab, resulting in serious injury or death to personnel.

WARNING

Do not work on fuel system when engine is hot; fuel can be ignited by a hot engine.

WARNING SUMMARY (CONT)

WARNING

Post signs that read "NO SMOKING WITHIN 50 FEET" when working with open fuel, fuel lines or fuel tanks. Failure to comply may result in injury to personnel or damage to equipment.

WARNING

Exhaust pipe, transmission oil lines, and transmission scavenge pump hose may be hot to the touch. Extreme care should be taken when checking exhaust pipe, transmission oil lines, and transmission scavenge pump hose for leaks. Failure to comply may result in injury to personnel.

WARNING

Compressed air used for cleaning purposes will not exceed 30 psi (207 Kpa). Use only with effective chip guarding and personal protective equipment (goggles/shield, gloves, etc). Failure to comply may result in injury to personnel.

WARNING

Wheel drum weighs approximately 90 lb (41 Kg). Use the aid of an assistant to help remove wheel drum. Failure to comply may result in injury to personnel.

WARNING

Wheel drum weighs approximately 90 lb (41 kg). Use the aid of an assistant to help install wheel drum. Failure to comply may result in injury to personnel.

WARNING

Brake shoes may be covered with dust. Breathing this dust may be harmful to your health. Do not used compressed air to clean brake shoes. Wear a filter mask approved for use against brake dust. Failure to comply may result in injury to personnel.

WARNING

Cage spring brake before air chamber is removed or severe injury to personnel will occur.

WARNING

Ensure air chamber is caged prior to installation. Failure to comply may result in injury to personnel.

WARNING

Ensure that tire is totally deflated before removing self-locking nuts. Failure to comply may result in serious injury or death to personnel.

WARNING

Spring brakes must be caged before attempting replacement of a rear axle wheel stud. Failure to comply may result in severe injury to personnel.

WARNING

Wear protective goggles to protect against possible injury from release of high pressure air. Failure to comply may result in injury to personnel.

WARNING

Prolonged contact with lubricating oil (MIL-L-2104) may cause a skin rash. Skin and clothing that come in contact with lubricating oil should be thoroughly washed immediately. Saturated clothing should be removed immediately. Areas in which lubricating oil is used should be well ventilated to keep fumes to a minimum. Failure to comply may result in injury to personnel.

WARNING

Hydraulic fluid (MIL-H-5606) is TOXIC. Wear protective goggles and gloves; use only in well ventilated area; avoid contact with skin, eyes, and clothes. Skin and clothing that come in contact with hydraulic oil should be washed immediately. Saturated clothing should be removed immediately. Failure to comply may result in injury to personnel.

WARNING

Wire rope can become frayed or contain broken wires. Wear heavy leather-palmed gloves when handling wire rope. Frayed or broken wires can injure hands. Failure to comply may result in injury to personnel.

WARNING

Never let moving wire rope slide through hands, even when wearing gloves. A broken wire could cut through gloves and cut hands.

WARNING SUMMARY (CONT)

WARNING

Wear appropriate eye protection when removing rivets. Failure to comply may result in injury to personnel.

WARNING

Wear appropriate eye protection when drilling holes. Failure to comply may result in injury to personnel.

WARNING

Wear leather gloves at all times when handling winch cable. Do not allow cable to slide through hands even with gloves on. Broken wires may cause injury to personnel.

WARNING

Use extreme caution when working around moving cable. Failure to do so may result in serious injury to personnel.

WARNING

Caution must be exercised while cab is raised. Ensure that locking mechanism is functioning properly before proceeding. Failure to comply may result in death or serious injury to personnel and damage to equipment.

WARNING

Coolant may be very hot and under pressure from engine operation. Ensure engine is cool before performing maintenance. Failure to comply may result in injury to personnel.

WARNING

Do not remove oil filter while engine is hot. Failure to comply may result in injury to personnel.

WARNING

Sling spreader weighs approximately 200 lbs (91 kgs). Attach a suitable lifting device prior to removal. Failure to comply may result in injury to personnel or damage to equipment.

WARNING

Remove all loose equipment from van body. Failure to comply may result in injury to personnel or damage to equipment.

WARNING

Van body weighs approximately 3,360 lbs (1525 kgs) empty. Attach a suitable lifting device prior to removal. Failure to comply may result in serious injury or death to personnel.

WARNING

Guide ropes must be attached at opposite corners of van body to aid in controlling van body during removal. Failure to comply may result in serious injury or death to personnel.

WARNING

Center of gravity will change depending on equipment installed in van body. Attach and adjust lifting device so that van body lifts level. Failure to comply may result in serious injury or death to personnel or damage to equipment.

WARNING

Pod frame weighs approximately 80 lbs (36 kgs). Attach a suitable lifting device prior to removal. Failure to comply may result in injury to personnel or damage to equipment.

WARNING

Do not install pod frame on van body for 72 hours after installing blind rivet nuts and spacers. Failure to comply may result in injury to personnel and/or damage to equipment.

WARNING

Goggles and gloves must be worn when working with glass. Failure to comply may result in injury to personnel.

WARNING SUMMARY (CONT)

WARNING

RH door assembly weighs approximately 85 lbs (39 kgs). Attach a suitable lifting device prior to removal. Failure to comply may result in injury to personnel or damage to equipment.

WARNING

LH door assembly weighs approximately 85 lbs (39 kgs). Attach a suitable lifting device prior to removal. Failure to comply may result in injury to personnel or damage to equipment.

WARNING

Wear appropriate eye protection when handling fluorescent lamps. Failure to comply may result in injury to personnel.

WARNING

Heavy objects/loads, such as tool boxes and heavy parts, must always be carried on the floor with the weight distributed as equally as possible between left and right sides of M1079 van. Failure to comply decreases the stability of the M1079 van and will increase the likelihood of a rollover.

Heavy cabinets must always be mounted as low as possible with the weight distributed as equally as possible between left and right sides of M1079 van. Remember to consider the weight of the items that will be stored in the cabinets. Failure to comply decreases the stability of the M1079 van and will increase the likelihood of a rollover.

Always keep in mind, when placing items inside the M1079 van, that heavier items must always be positioned as low as possible and the weight distributed as equally as possible between left and right sides of M1079 van. Failure to comply decreases the stability of the M1079 van and will increase the likelihood of a rollover.

WARNING

Extreme care must be taken when lowering gravel deflector. Coolant hoses could be pulled loose. Failure to comply could result in serious eye injury.

WARNING

- **Do not open coolant fill cap if temperature reads above 110°F (43°C). Steam or hot coolant is under pressure. Failure to comply may result in injury to personnel.**
- **Pressure in reservoir tank must be released before removing cap. Failure to comply may result in injury to personnel.**

WARNING

Heater weighs approximately 120 lbs (54 kgs). Use the aid of an assistant when lifting. Failure to comply may result in injury to personnel.

WARNING

200 amp alternator weighs approximately 70 lbs (32 kgs). The aid of an assistant is required to install 200 amp alternator. Failure to comply may result in injury to personnel.

WARNING

Light Material Handling Crane (LMHC) mast weighs approximately 110 lbs (50 kgs). Attach a suitable lifting device prior to installation. Failure to comply may result in injury to personnel or damage to equipment.

WARNING

Light Material Handling Crane (LMHC) boom assembly weighs approximately 150 lbs (68 kgs). Use an assistant when removing LMHC boom assembly. Failure to comply may result in injury to personnel.

WARNING SUMMARY (CONT)

WARNING

Light Material Handling Crane (LMHC) boom weighs approximately 60 lbs (27 kgs). Attach a suitable lifting device prior to removal. Failure to comply may result in injury to personnel or damage to equipment.

WARNING

Light Material Handling Crane (LMHC) weighs approximately 250 lbs (114 kgs). Attach a suitable lifting device prior to removal. Failure to comply may result in injury to personnel.

WARNING

Use care when removing/installing springs. Springs are under tension and can act as projectiles when released. Failure to comply may result in injury to personnel.

WARNING

Air conditioner weighs approximately 300 lbs (136 kg). Attach a suitable lifting device prior to installation. Failure to comply may result in injury to personnel.

WARNING

Ensure cargo bed is free of equipment and debris, and is not warped or damaged in any way. Failure to comply may result in serious injury or death to personnel or damage to equipment.

WARNING

S-280 shelter weighs approximately 1500 lbs (680 kgs) empty. Attach a suitable lifting device prior to installation. Failure to comply may result in serious injury or death to personnel or damage to equipment.

CHANGE NO. 3

**HEADQUARTERS
DEPARTMENTS OF THE ARMY
AND THE AIR FORCE**
Washington, D.C., 10 February 2006

TECHNICAL MANUAL
MAINTENANCE INSTRUCTIONS
UNIT MAINTENANCE
M1078 SERIES, 2 1/2-TON, 4x4,
LIGHT MEDIUM TACTICAL VEHICLE
(LMTV)

VOLUME NO. 4 OF 5

TM 9-2320-365-20-4, 17 June 1998, is changed as follows:

1. Remove old pages and insert new pages as indicated below.
2. New or changed material is indicated by a vertical bar in the out margin of the page.
3. Added or revised illustrations are indicated by a vertical bar adjacent to the illustration.

Remove Pages	Insert Pages
None	Change 3 Transmittal/ Change 3 Authentication
A and B	A and B
i thru ii	i thru ii
B-1 thru B-19/(B-20 Blank)	B-1 thru B-20

Place this change sheet in the front of the publication for reference purposes.

By Order of the Secretary of the Army:

PETER J. SCHOOMAKER
General, United States Army
Chief of Staff

*O*fficial:

SANDRA R. RILEY
Administrative Assistant to the
Secretary of the Army
0601911

By Order of the Secretary of the Air Force:

JOHN P. JUMPER
General, United States Air Force
Chief of Staff

*O*fficial:

GREGORY S. MARTIN
General, United States Air Force
Commander, Air Force Materiel Command

Distribution:

To be distributed in accordance with the initial distribution number (IDN) 380934, requirements for Family of Medium Tactical Vehicles (FMTV) TM 9-2320-365-20-4.

CHANGE NO. 2

**HEADQUARTERS
DEPARTMENTS OF THE ARMY
AND THE AIR FORCE**
Washington, D.C., 20 AUGUST 2005

TECHNICAL MANUAL
MAINTENANCE INSTRUCTIONS
UNIT MAINTENANCE
M1078 SERIES, 2 1/2-TON, 4x4,
LIGHT MEDIUM TACTICAL VEHICLE
(LMTV)

VOLUME NO. 4 OF 5

TM 9-2320-365-20-4, 17 June 1998, is changed as follows:

1. Remove old pages and insert new pages as indicated below.
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3. Added or revised illustrations are indicated by a vertical bar adjacent to the illustration.

Remove Pages	Insert Pages
e thru h	e thru h
A and B	A and B
none	C/(D Blank)
none	Change 2 Authentication Sheet
16-1 and 16-2	16-1 and 16-2
16-7 and 16-8	16-7 and 16-8
16-12.1/(16-12.2 Blank)	16-12.1/(16-12.2 Blank)
16-15 thru 16-18	16-15 thru 16-18
16-35 and 16-36	16-35 and 16-36
16-39 and 16-40	16-39 and 16-40
16-40.1/(16-40.2 Blank)	16-40.1/(16-40.2 Blank)
16-55 and 16-56	16-55 and 16-56
none	16-56.1/(16-56.2 Blank)
16-57 and 16-58	16-57 and 16-58
16-69 and 16-70	16-69 and 16-70
16-73 and 16-74	16-73 and 16-74
none	16-74.1/(16-74.2 Blank)
16-77 and 16-78	16-77 and 16-78
16-487 and 16-488	16-487 and 16-488
none	16-488.1/(16-488.2 Blank)
16-489 and 16-490	16-489 and 16-490
16-497/(16-498 Blank)	16-497 and 16-498
17-19 and 17-20	17-19 and 17-20
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none	18-24.1 thru 18-24.6
18-25 and 18-26	18-25 and 18-26
18-57 and 18-58	18-57 and 18-58
18-69/(18-70 Blank)	18-69 and 18-70
none	18-71/(18-72 Blank)
19-1 and 19-2	19-1 and 19-2
19-51 and 19-52	19-51 and 19-52
B-5 and B-6	B-5 and B-6
B-17 thru B-19/ (B-20 Blank)	B-17 thru B-19/ (B-20 Blank)
C-1 thru C-4	C-1 thru C-4
D-1 and D-2	D-1 and D-2
D-5 and D-6	D-5 and D-6
G-1 thru G-11/ (G-12 Blank)	G-1 thru G-11/ (G-12 Blank)
H-1 thru H-12	H-1 thru H-12
H-15 thru H-21/ (H-22 Blank)	H-15 thru H-21/ (H-22 Blank)
K-1 thru K-4	K-1 thru K-4
INDEX-1 thru INDEX-4	INDEX-1 thru INDEX-4
FO-1 FP-3/(FP-4 Blank)	FO-1 FP-3/(FP-4 Blank)
FO-1 FP-61/(FP-62 Blank)	FO-1 FP-61/(FP-62 Blank)
Metric Conversion Chart /PIN	Metric Conversion Chart /PIN

Place this change sheet in the front of the publication for reference purposes.

By Order of the Secretary of the Army:

PETER J. SCHOOMAKER
General, United States Army
Chief of Staff

*O*fficial:

SANDRA R. RILEY
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0401506

By Order of the Secretary of the Air Force:

JOHN P. JUMPER
General, United States Air Force
Chief of Staff

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General, United States Air Force
Commander, Air Force Materiel Command

Distribution:

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CHANGE NO. 1

**HEADQUARTERS
DEPARTMENTS OF THE ARMY
AND THE AIR FORCE**

Washington, D.C., 1 July 2003

TECHNICAL MANUAL
MAINTENANCE INSTRUCTIONS
UNIT MAINTENANCE
M1078 SERIES, 2 1/2-TON, 4x4,
LIGHT MEDIUM TACTICAL VEHICLE
(LMTV)

VOLUME NO. 4 OF 5

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Remove Pages	Insert Pages
i and j	i and j
none	A and B
i thru iv	i thru iv
none	v/(vi Blank)
16-1 thru 16-4	16-1 thru 16-4
none	16-4.1/(16-4.2 Blank)
16-5 thru 16-12	16-5 thru 16-12
none	16-12.1/(16-12.2 Blank)
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none	16-42.1/(16-42.2 Blank)
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none	16-96.1 and 16-96.2
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16-289 thru 16-302	16-289 thru 16-302
16-393 thru 16-396	16-393 thru 16-396
16-415 and 16-416	16-415 and 16-416
none	16-487 thru 16-497/(16-498 Blank)
17-1 and 17-2	17-1 and 17-2
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17-13 and 17-14	17-13 and 17-14
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19-5 thru 19-8	19-5 thru 19-8
none	19-8.1 thru 19-8.10
19-9 thru 19-20	19-9 thru 19-20
none	19-20.1 thru 19-20.14
19-21 thru 19-26	19-21 thru 19-26
19-47 and 19-48	19-47 and 19-48
19-51 thru 19-58	19-51 thru 19-58
A-1 thru A-4	A-1 thru A-4
B-13 thru B-20	B-13 thru B-19/(B-20 Blank)
C-3 and C-4	C-3 and C-4
D-1 thru D-5/(D-6 Blank)	D-1 thru D-6
E-3 and E-4	E-3 and E-4
none	E-21 and E-22
G-1 thru G-10	G-1 thru G-10
none	G-11/(G-12 Blank)
H-1 thru H-8	H-1 thru H-8
H-17 thru H-21/ (H-22 Blank)	H-17 thru H-21/ (H-22 Blank)
none	K-1 thru K-4

Place this change sheet in the front of the publication for reference purposes.

Remove Pages	Insert Pages	Remove Pages	Insert Pages
INDEX-1 thru INDEX-7/ (INDEX-8 Blank)	INDEX-1 thru INDEX-7/ (INDEX-8 Blank)		
DA Form 2028-2 Sample	DA Form 2028 Sample		
DA Form 2028-2	DA Form 2028		
DA Form 2028-2	DA Form 2028		
DA Form 2028-2	DA Form 2028		
FO-1 FP-1/(FP-2 Blank)	FO-1 FP-1/(FP-2 Blank)		
thru FP-19/(FP-20 Blank)	thru FP-19/(FP-20 Blank)		
FO-1 FP-23/(FP-24 Blank)	FO-1 FP-23/(FP-24 Blank)		
FO-1 FP-27/(FP-28 Blank)	FO-1 FP-27/(FP-28 Blank)		
thru FP-61/(FP-62 Blank)	thru FP-61/(FP-62 Blank)		
FO-1 FP-65/(FP-66 Blank)	FO-1 FP-65/(FP-66 Blank)		
and FP-67/(FP-68 Blank)	and FP-67/(FP-68 Blank)		
Metric Conversion Chart	Metric Conversion Chart		
Cover	Cover		

Place this change sheet in the front of the publication for reference purposes.

By Order of the Secretary of the Army:

JOHN M. KEANE
General, United States Army
Chief of Staff

Official:

JOEL B. HUDSON
Administrative Assistant to the
Secretary of the Army
0110105

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LIST OF EFFECTIVE PAGES

Insert latest changed pages. Destroy superseded pages.

NOTE: New or changed material is indicated by a vertical bar in the outer margin of the page.

Dates of issue for original and changed pages are:
Original ..... 0 ..... 17 June 1998
Change ..... 1 ..... 1 July 2003
Change ..... 2 ..... 20 August 2005
Change ..... 3 ..... 10 February 2006

THE TOTAL NUMBER OF PAGES IN THIS PUBLICATION IS 946, CONSISTING OF THE FOLLOWING:

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Cover	1
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f	2
g	0
h	2
i	1
j	0
A and B	3
C Added	2
D Blank Added	2
i thru iv	1
v Added	1
vi Blank Added	1
16-1	1
16-2	2
16-3 and 16-4	1
16-4.1 Added	1
16-4.2 Blank Added	1
16-5	1
16-6 and 16-7	0
16-8	2
16-9	0
16-10 thru 16-12	1
16-12.1	2
16-12.2 Blank Added	1
16-13 thru 16-15	0
16-16	2
16-17	0
16-18	2
16-19 thru 16-21	0
16-22	1
16-23	0
16-24 and 16-25	1
16-26 thru 16-30	0
16-31 and 16-32	1
16-33	0
16-34	1
16-35	2
16-36	1
16-37	0
16-38	1
16-39	2
16-40	0
16-40.1	2
16-40.2 Blank Added	1
16-41	1
16-42	0
16-42.1 Added	1
16-42.2 Blank Added	1
16-43 thru 16-55	1
16-56	2
16-56.1 Added	2
16-56.2 Blank Added	2
16-57 and 16-58	2
16-59	0
16-60 thru 16-62	1
16-62.1 Added	1
16-62.2 Blank Added	1
16-63 thru 16-68	1
16-69	2
16-70 thru 16-72	1
16-73 and 16-74	2
16-74.1 Added	2
16-74.2 Blank Added	2
16-75 thru 16-77	1
16-78	2
16-79	0
16-80	1
16-81	0
16-82	1
16-83 thru 16-96	0
16-96.1 and 16-96.2 Added	1
16-97	1
16-98 thru 16-104	0
16-105 thru 16-110	1
16-110.1 and 16-110.2 Added	1
16-111	1
16-112 thru 16-115	0
16-116 thru 16-119	1
16-120 thru 16-127	0
16-128 and 16-129	1
16-130 thru 16-132	0
16-133	1
16-134 thru 16-139	0
16-140	1
16-141 thru 16-143	0
16-144 thru 16-150	1
16-151	0
16-152	1
16-153 thru 16-158	0
16-159	1
16-160 thru 16-177	0
16-178 thru 16-180	1
16-181 thru 16-211	0
16-212	1
16-213 thru 16-289	0
16-290 thru 16-302	1
16-303 thru 16-392	0
16-393 thru 16-395	1
16-396 thru 16-415	0
16-416	1
16-417 thru 16-486	0
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16-488 Added	1
16-488.1 Added	2
16-488.2 Blank Added	2
16-489	2
16-490 thru 16-496 Added	1
16-497	2
16-498	2
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17-2 thru 17-6	0
17-7 thru 17-9	1
17-10 thru 17-12	0
17-13 and 17-14	1
17-15 thru 17-18	0
17-19 and 17-20	2
17-20.1 thru 17-20.4 Added	2
17-21	0

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18-6 thru 18-8	1
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19-20.1 thru 19-20.14 Added	1
19-21	1
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19-24 and 19-25	1
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19-47	1
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19-59 thru 19-64	0
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C-2 thru C-4	2
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E-3 and E-4	1
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E-21 and E-22 Added	1
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H-12	2
H-13 thru H-15	0
H-16 thru H-18	2
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J-2 Blank	0
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K-4 Added	1
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TECHNICAL MANUAL
NO. 9-2320-365-20-4

TECHNICAL ORDER
NO. 36A12-1B-1095-2-4

HEADQUARTERS
DEPARTMENTS OF THE ARMY
AND THE AIR FORCE
Washington, D.C., 17 June 1998

Unit Maintenance Manual
M1078 SERIES, 2 1/2-TON, 4 x 4, LIGHT MEDIUM TACTICAL VEHICLES (LMTV)
VOLUME NO. 4 OF 5

MODEL	NSN	EIC
TRK, CAR., LMTV, M1078		
W/WN	**2320-01-360-1898**	**BHH**
W/O WN	**2320-01-354-3385**	**BHD**
TRK, VAN, LMTV, M1079		
W/WN	**2320-01-360-1891**	**BHG**
W/O WN	**2320-01-354-3384**	**BHE**
TRK, CHAS, LMTV, M1080	**2320-01-353-9098**	**BHC**
TRK, CAR., LMTV, AIR DROP, M1081		
W/WN	**2320-01-360-1899**	**BHJ**
W/O WN	**2320-01-355-3064**	**BHF**

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this publication. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Submit your DA Form 2028 (Recommended Changes to Equipment Technical Publications), through the Internet, on the Army Electronic Product Support (AEPS) website. The Internet address is http://aeps.ria.army.mil. If you need a password, scroll down and click on "ACCESS REQUEST FORM". The DA Form 2028 is located in the ONLINE FORMS PROCESSING section of the AEPS. Fill out the form and click on SUBMIT. Using this form on the AEPS will enable us to respond quicker to your comments and better manage the DA Form 2028 program. You may also mail, fax or Email your letter or DA Form 2028 direct to: AMSTA-LC-CI/TECH PUBS, TACOM-RI, 1 Rock Island Arsenal, Rock Island, IL 61299-7630. The email address is TACOM-TECH-PUBS@ria.army.mil. The fax number is DSN 793-0726 or Commercial (309) 782-0726.

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HOW TO USE THIS MANUAL

OVERVIEW

This technical manual (TM) is provided to help you maintain the LMTV at the Unit Maintenance level. Because of its size, it is divided into five volumes. Volume 4 contains the following major sections in order of appearance:

OVERVIEW (CONT)

- **WARNING SUMMARY.** Provides a summary of the most important warnings that apply throughout the manual.
- **CHAPTER 16, BODY AND CAB MAINTENANCE**
- **CHAPTER 17, 11K SELF-RECOVERY WINCH MAINTENANCE**
- **CHAPTER 18, BODY, CHASSIS, AND ACCESSORY ITEMS MAINTENANCE**
- **CHAPTER 19, HYDRAULIC SYSTEM MAINTENANCE**
- **APPENDIX A, REFERENCES.** Lists publications used with the LMTV.
- **APPENDIX B, MAINTENANCE ALLOCATION CHART.** The maintenance allocation chart denotes the level of maintenance which performs specific maintenance tasks and the time required. It also lists tools and special tools required for each task.
- **APPENDIX C, TOOLS IDENTIFICATION LIST.** Lists equipment used in the performance of maintenance and references publications which contain information regarding the equipment.
- **APPENDIX D, EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST.** Lists expendable and durable items used in the performance of maintenance.
- **APPENDIX E, ILLUSTRATED LIST OF MANUFACTURED ITEMS.** Illustrates and describes items that must be fabricated from bulk materials for repair of the LMTV.
- **APPENDIX F, TORQUE LIMITS.** Lists the standard torque values for specific attaching hardware.
- **APPENDIX G, MANDATORY REPLACEMENT PARTS.**
- **APPENDIX H, LUBRICATION ORDER.**
- **APPENDIX J, ADDITIONAL AUTHORIZATION LIST (AAL).**
- **APPENDIX K, TRANSMISSION/TRANSMISSION CONTROLS ADAPTABILITY CHART**.
- **SUBJECT INDEX.** Lists important subjects contained in volume 4 in alphabetical order and gives the associated paragraph number.

FINDING INFORMATION

There are several ways to find the information you need in this manual. They are as follows:

- **FRONT COVER INDEX.** The front cover index contains a list of the most important topics contained in each volume. It features a black box at the right edge of the cover which corresponds with a black box on the page containing the topic. The topics listed on the front cover are highlighted in the table of contents with a box.
- **TABLE OF CONTENTS.** Lists chapters, sections, appendixes, and indexes with page numbers in order of appearance.

- **CHAPTER INDEXES.** List paragraphs contained in the individual chapters with paragraph and page numbers in order of appearance.

- **SYMPTOM INDEX.** Lists malfunctions contained in the troubleshooting table with page numbers in order of appearance.

TROUBLESHOOTING

Troubleshooting is contained in chapter 2. When a malfunction occurs, look at the symptom index for the vehicle troubleshooting table in chapter 2. Find the malfunction in the index. Turn to the page number listed for the malfunction in the troubleshooting table. Perform the steps required to correct the malfunction. If you can't find the malfunction, or the malfunction is not corrected, notify your supervisor.

TROUBLESHOOTING (CONT)

- **SCHEDULED MAINTENANCE.** Your scheduled maintenance is located in Volume 1, table 2-1, PMCS. These checks and services are mandatory at the intervals listed. Always follow the WARNINGS and CAUTIONS.

- **UNSCHEDULED MAINTENANCE.** Unscheduled maintenance is located in chapters 3 through 22. The PMCS and troubleshooting tables often reference you to these procedures. When you perform maintenance, look over the entire procedure before starting. Make sure you have the necessary tools and materials at hand. Always follow the WARNINGS and CAUTIONS.

FOLLOW THESE GUIDELINES WHEN USING THIS MANUAL:

- Become familiar with the entire maintenance procedure before beginning a maintenance task.

- Read all **WARNINGS** and **CAUTIONS** before performing any procedures.

CHAPTER 16
BODY AND CAB MAINTENANCE

RESTRICTED MAINTENANCE NOTICE

Units not authorized SC 4910-95-CL-A72 (SHOP EQUIPMENT, COMMON NO. 2) in their T.O.E. may be unable to perform some of the maintenance tasks described in this chapter. If the required tools are not authorized, the equipment must be submitted to DS Maintenance for repair.

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Section I. INTRODUCTION

16-1. INTRODUCTION

This chapter contains maintenance instructions for replacing, repairing, and adjusting cab and body components authorized by the Maintenance Allocation Chart (MAC) at the Unit Maintenance level.

Section II. MAINTENANCE PROCEDURES

16-2. POWER DISTRIBUTION PANEL (PDP) COVER AND LATCH REPLACEMENT/ ADJUSTMENT

This task covers:

a. Removal
b. Installation
c. Latch Adjustment

INITIAL SETUP

Equipment Conditions
Engine shut down (TM 9-2320-365-10).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Goggles, Industrial (Item 15, Appendix C)
Drill, Portable, Electric (Item 7, Appendix C)

Tools and Special Tools (Cont)
Drill Set, Twist (Item 6, Appendix C)
Tool Kit, Blind Rivet (Item 43, Appendix C)

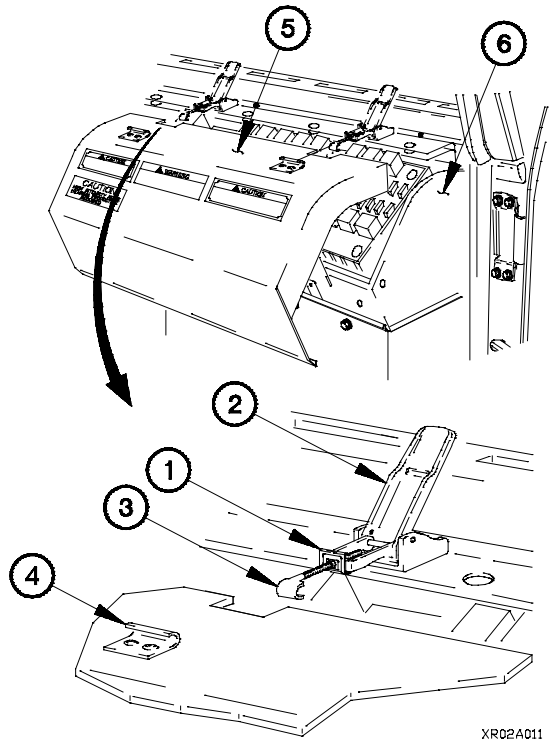
Material/Parts
Rivet, Blind (4) (Item 221, Appendix G)

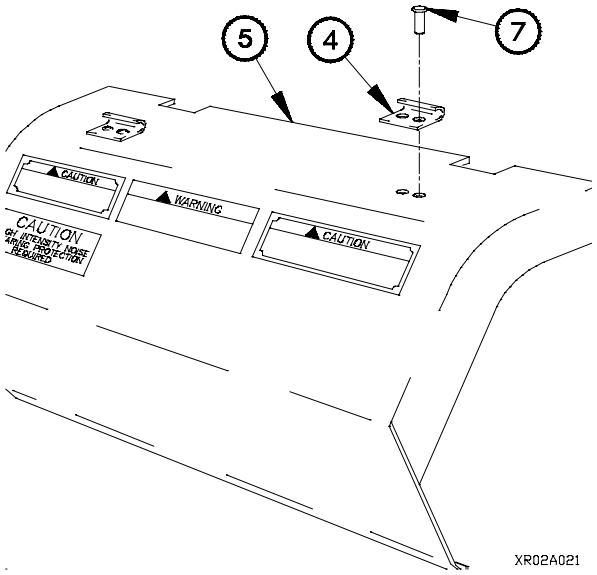
a. Removal.

(1) Pull two spring catches (1) and lift two latch levers (2).

(2) Release two latch hooks (3) from two strike plates (4).

(3) Remove PDP cover (5) from dashboard (6).





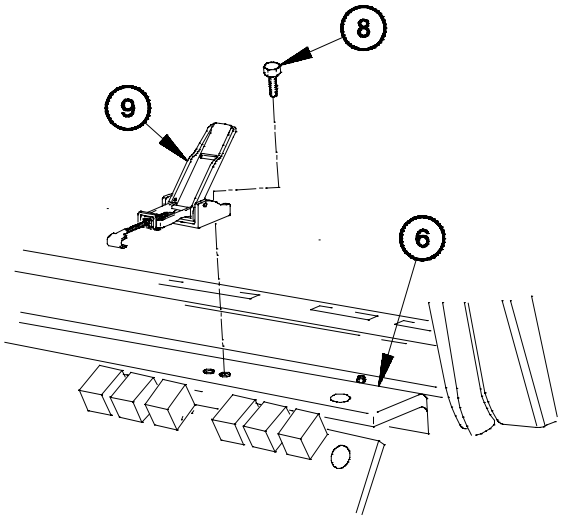
WARNING

Wear appropriate eye protection when removing rivets. Failure to comply may result in injury to personnel.

(4) Remove four rivets (7) and two strike plates (4) from PDP cover (5).

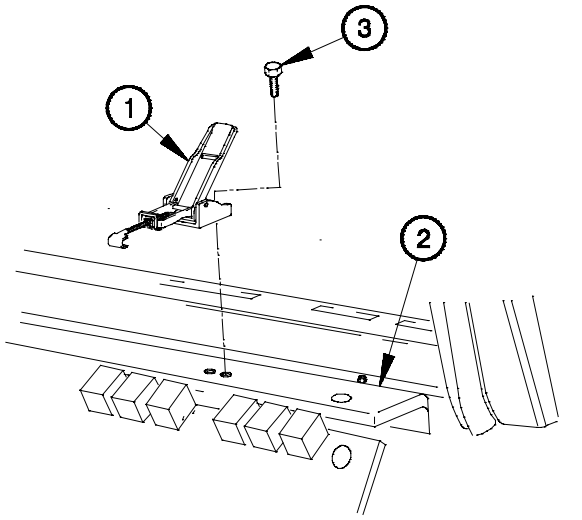
16-2. POWER DISTRIBUTION PANEL (PDP) COVER AND LATCH REPLACEMENT/ ADJUSTMENT (CONT)

(5) Remove four screws (8) and two latches (9) from dashboard (6).



XR02A031

b. Installation.



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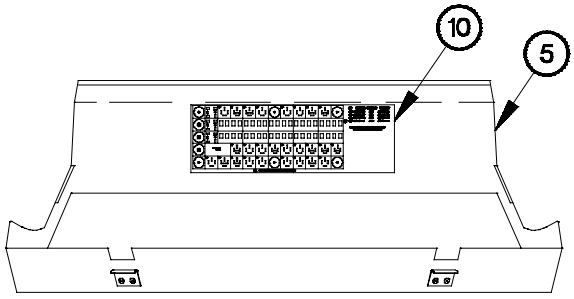
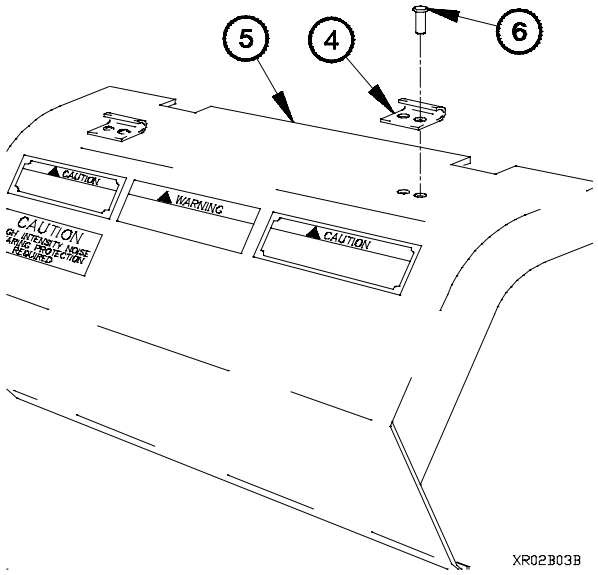
(1) Install two latches (1) on dashboard (2) with four screws (3).

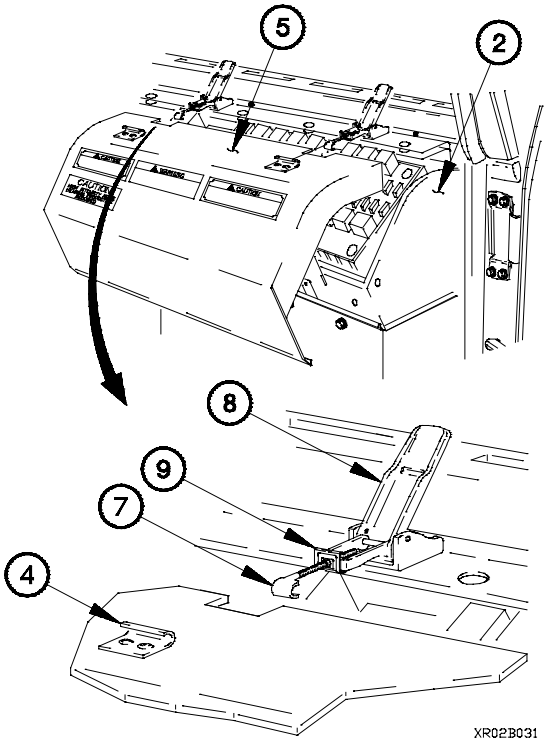
(1.1) Install PDP decal (10) on PDP cover (5).



XR02B02B



(2) Install two strike plates (4) on PDP cover (5) with four rivets (6).



(3) Position PDP cover (5) on dashboard (2).

(4) Fasten two latch hooks (7) on two strike plates (4).

NOTE

PDP cover should be drawn tight against dashboard and some resistance should be felt when closing latches. If PDP cover is loose on dashboard after performing step (5), perform latch adjustment.

(5) Push down on two latch levers (8) until spring catches (9) are engaged.

16-2. POWER DISTRIBUTION PANEL (PDP) COVER AND LATCH REPLACEMENT/ ADJUSTMENT (CONT)

c. Latch Adjustment.

(1) Pull spring catch (1) and lift latch lever (2).

(2) Release latch hook (3) from strike plate (4).

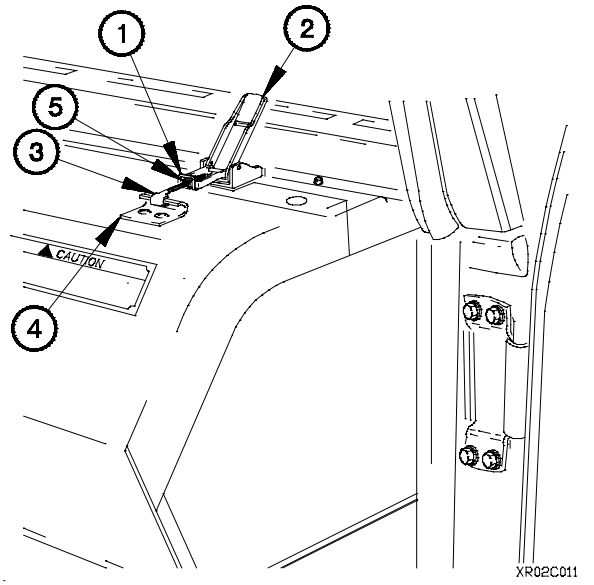
(3) Loosen jamnut (5) on latch hook (3).

(4) Turn latch hook (3) to the right to tighten or to the left to loosen.

(5) Tighten jamnut (5) on latch hook (3).

(6) Fasten latch hook (3) on strike plate (4).

(7) Push down on latch lever (2) until spring catch (1) is engaged.



End of Task.

16-3. KICK PANEL REPLACEMENT

This task covers:

a. Removal

b. Installation

INITIAL SETUP

Equipment Conditions
Engine shut down (TM 9-2320-365-10).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)

Tools and Special Tools (Cont)
Wrench, Torque, 0-200 lb-in. (Item 58, Appendix C)
Socket Set, Socket Wrench (Item 35, Appendix C)

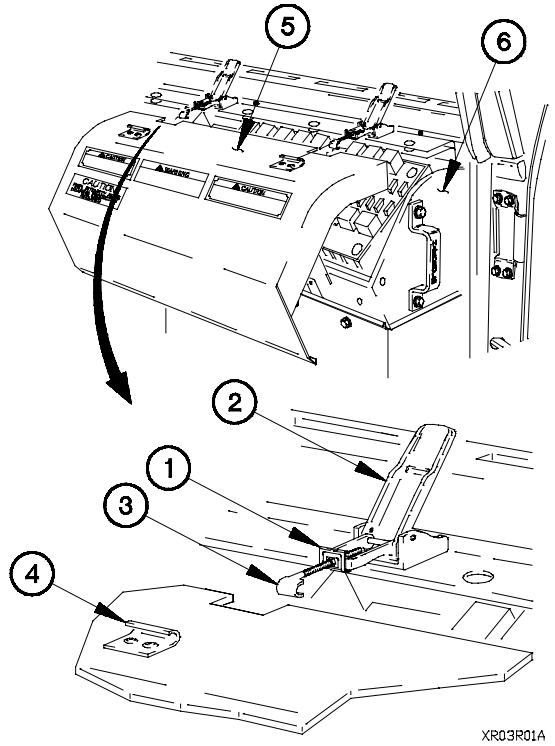
Material/Parts
Ties, Cable, Plastic (Item 75, Appendix D)

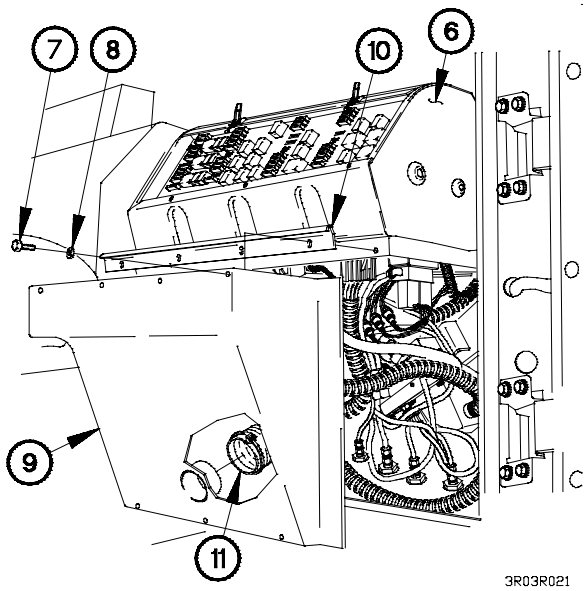
a. Removal.

(1) Pull two spring catches (1) and lift two latch levers (2).

(2) Release two latch hooks (3) from strike plates (4).

(3) Remove PDP cover (5) from dashboard (6).





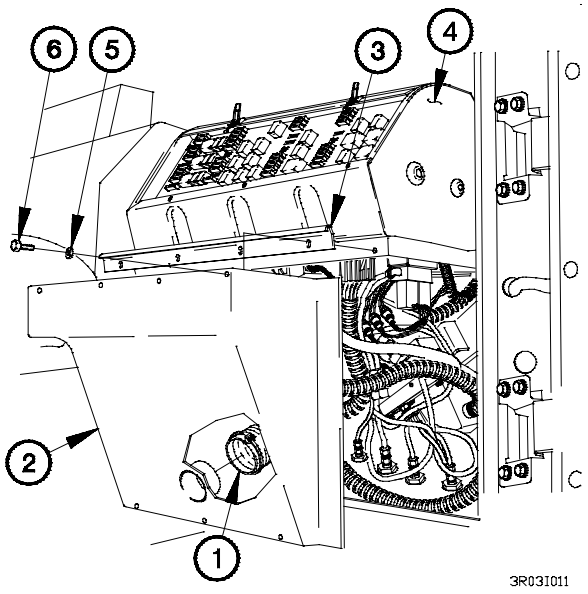
(4) Remove seven screws (7) and washers (8) from kick panel (9).

(5) Remove kick panel (9) and stiffener (10) from dashboard (6).

NOTE

Remove plastic cable ties as required.

(6) Disconnect air duct hose (11) from kick panel (9).



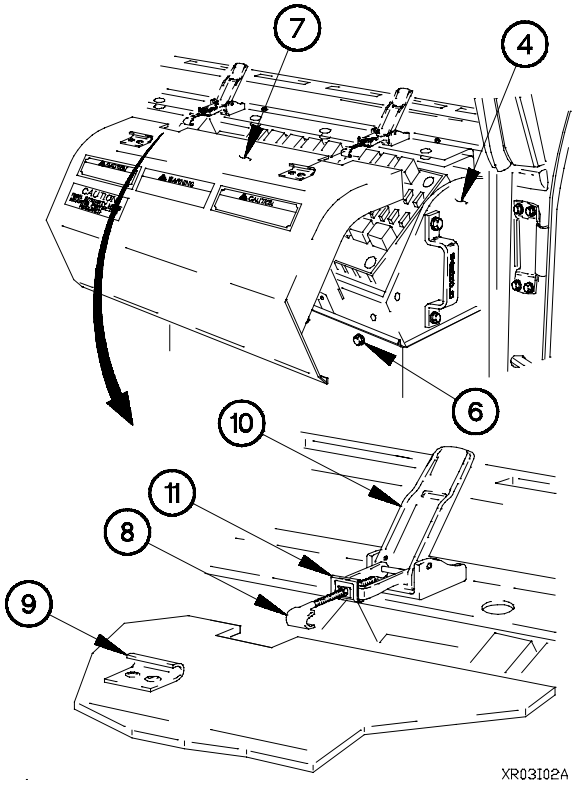
b. Installation.

NOTE

Install plastic cable ties as required.

(1) Connect air duct hose (1) to kick panel (2).

(2) Position stiffener (3) and kick panel (2) on dashboard (4) with seven washers (5) and screws (6).



(3) Position PDP cover (7) on dashboard (4).

(4) Fasten two latch hooks (8) on strike plates (9).

(5) Push down on two latch levers (10) until spring catches (11) are engaged.

(6) Tighten seven screws (6) to 71-88 lb-in. (8-10 N·m).

End of Task.

16-4. M1081 CAB ROOF REPLACEMENT

This task covers:

a. Removal
b. Installation
c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
Cab clearance lights removed (para 7-31).
Spare tire retainer and davit prepared for air drop (TM 9-2320-365-10).

Tools and Special Tools
Sling Assembly, Air Drop Roof (TM 9-2320-365-10).
Tool Kit, Genl Mech (Item 44, Appendix C)
Wrench, Torque, 0-200 lb-in. (Item 58, Appendix C)
Socket Set, Socket Wrench (Item 34, Appendix C)
Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C)
Screwdriver Attachment, Socket Wrench (Item 47.1, Appendix B)
Dispenser, Sealant (Item 13.1, Appendix B)

Tools and Special Tools (Cont)
Screwdriver Attachment, Socket Wrench (Item 45, Appendix B)
Screwdriver Attachment, Socket Wrench (Item 50, Appendix B)

Material/Parts
Rubber Strip (Item 251, Appendix F)
Sealing Compound (Item 68.3, Appendix D)

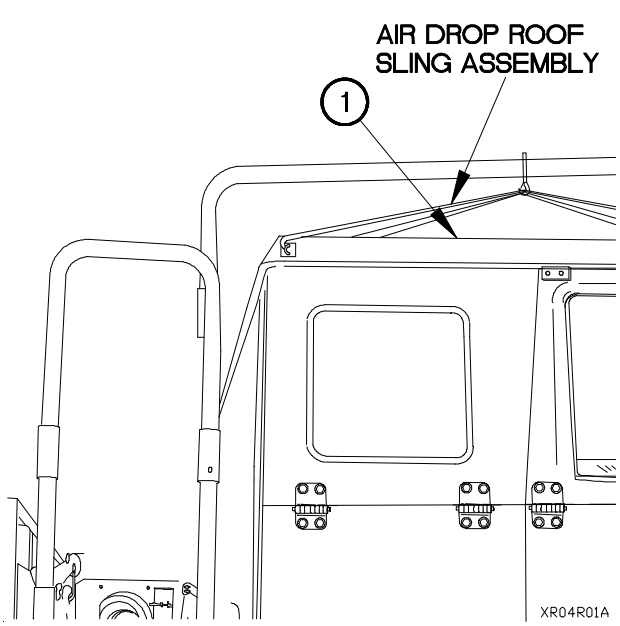
Personnel Required
(2)

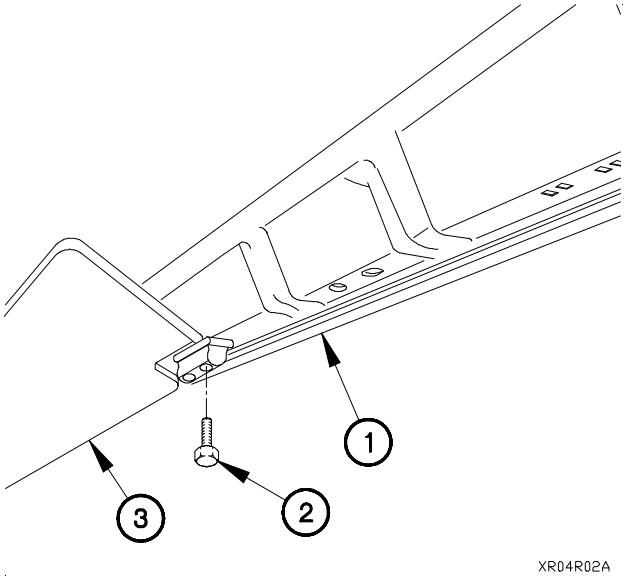
a. Removal.

WARNING

Cab roof weighs approximately 110 lbs (50 kgs). Attach a suitable lifting device prior to removal. Failure to comply may result in injury to personnel.

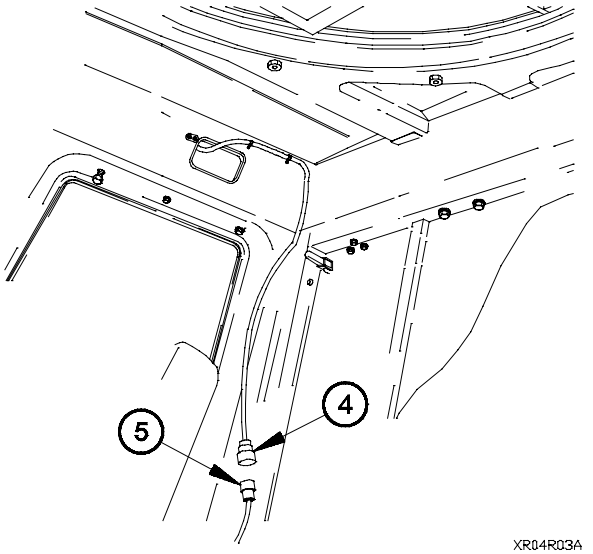
(1) Attach air drop roof sling assembly to cab roof (1).





(2) Remove four screws (2) and sun visor (3) from cab roof (1).

(3) Disconnect connector P3 (4) from connector J3 (5).



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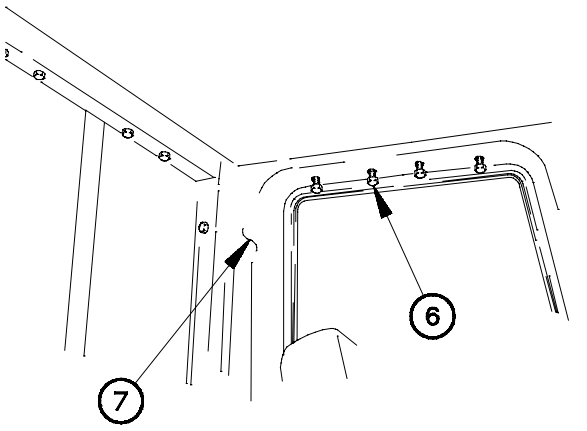

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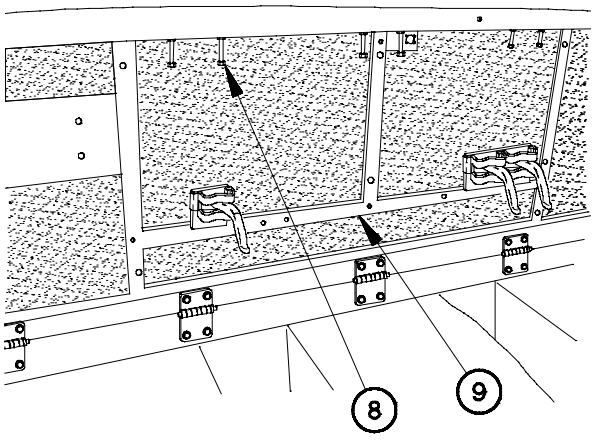
NOTE

Pull down on captive screws after loosening to disengage from cab roof.

(4) Loosen four captive screws (6) in left side cab wall (7).

(5) Loosen ten captive screws (8) in cab rear wall (9).



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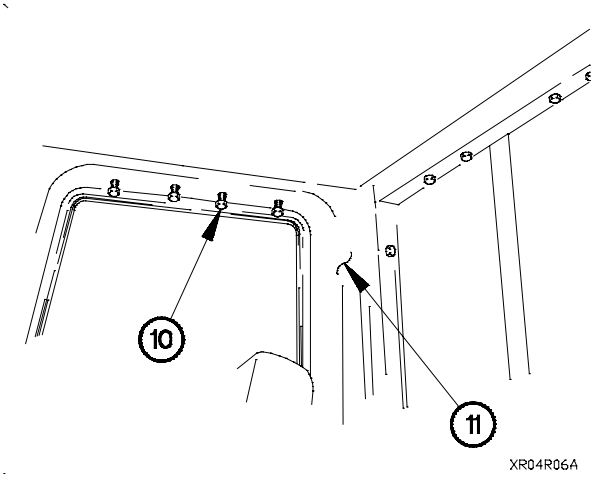
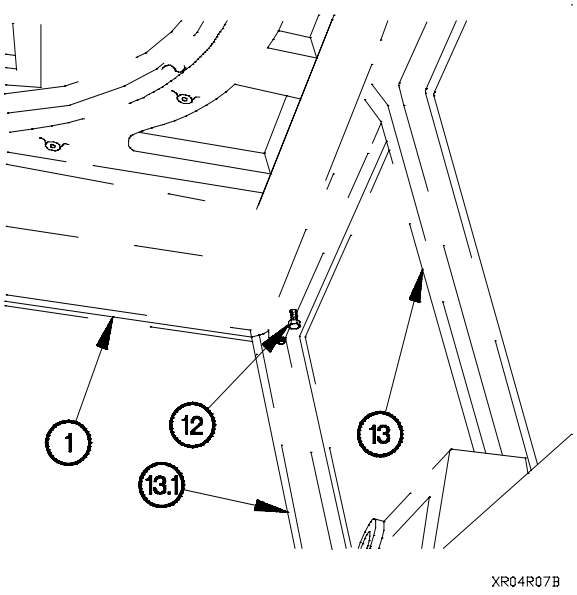
16-4. M1081 CAB ROOF REPLACEMENT (CONT)

(6) Loosen four captive screws (10) in right side cab wall (11).





(7) Loosen ten captive screws (12) in cab windshield frame (13).

NOTE

Steps (8) through (10.3) require the aid of an assistant.

(8) Remove cab roof (1) from cab (13.1).

(9) Match mark roof hatch (14) to cab roof (1).

NOTE

Perform step (10) if cab maintenance has not been previously performed. Replace screws P/N B1834B1205N with screws P/N 12422263 and washers P/N 12422217.

(10) Remove 12 screws (15) and roof hatch (14) from cab roof (1). Discard screws.

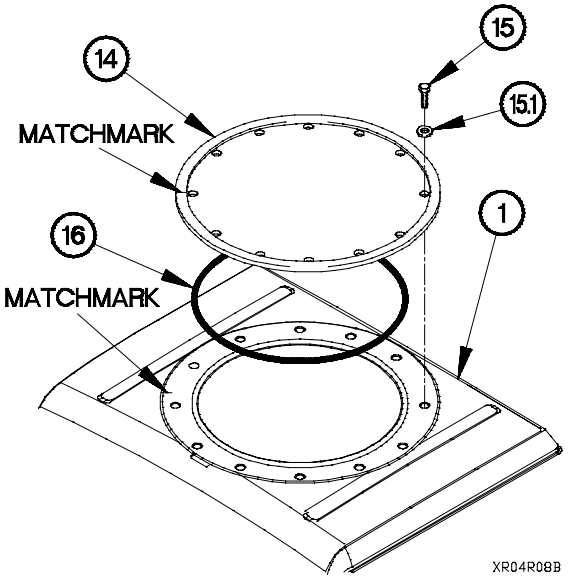
NOTE

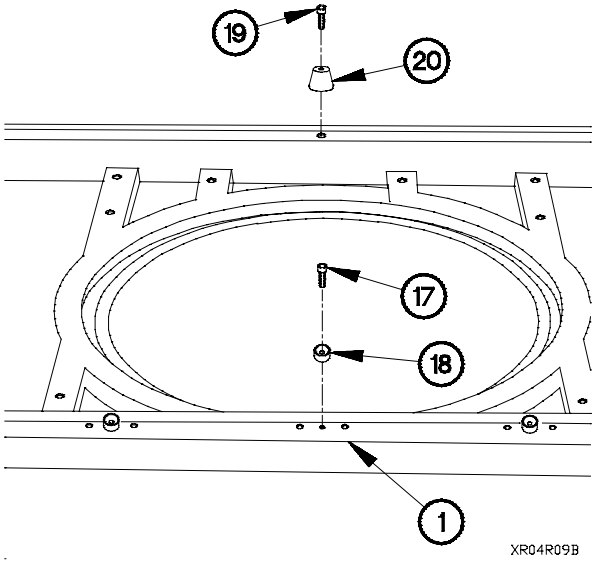
Perform steps (10.1) and (10.2) if cab maintenance has been previously performed.

(10.1) Remove sealant from 12 screws (15), roof hatch (14) and cab roof (1).

(10.2) Remove 12 screws (15), washers (15.1), and roof hatch (14) from cab roof (1).

(10.3) Remove rubber strip (16) from roof hatch (14). Discard rubber strip.

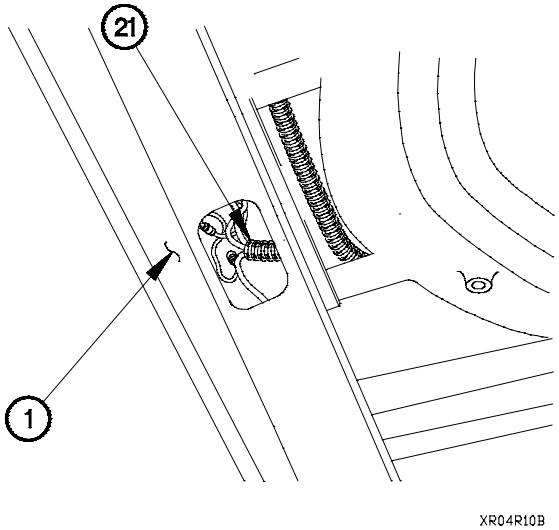




(11) Remove 11 screws (17) and centering cups (18) from cab roof (1).

(12) Remove five screws (19) and centering cones (20) from cab roof (1).

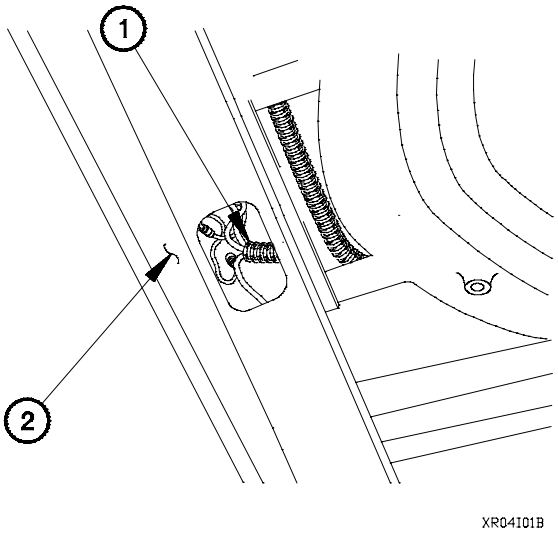
(13) Remove cab clearance lights upper cable assembly (21) from cab roof (1).

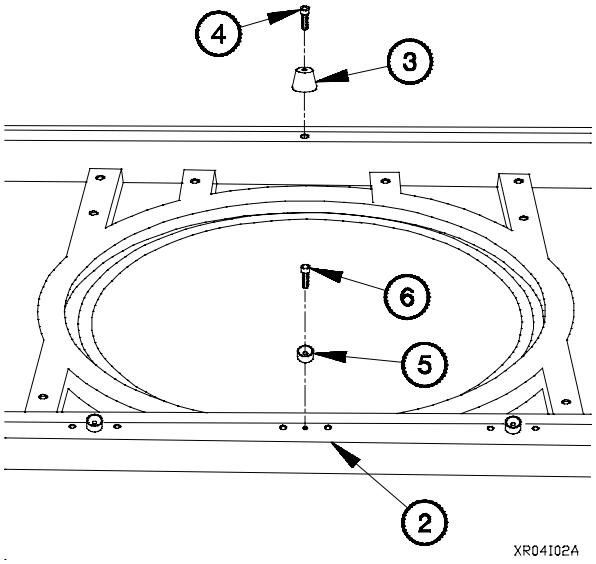


16-4. M1081 CAB ROOF REPLACEMENT (CONT)

b. Installation.

(1) Install cab clearance lights upper cable assembly (1) in cab roof (2).





(2) Position five centering cones (3) on cab roof (2) with five screws (4)

(3) Position 11 centering cups (5) on cab roof (2) with 11 screws (6).

(4) Tighten five screws (4) and 11 screws (6) to 62-124 lb-in. (7-14 N·m).

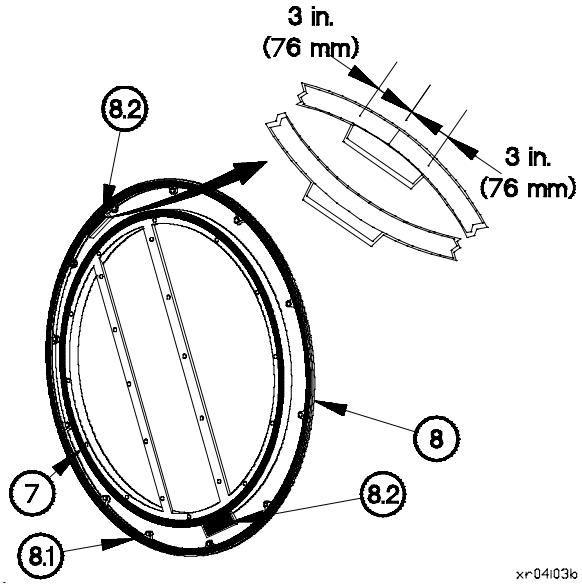
CAUTION

Begin inside and outside rubber strip installation on opposite sides of each other. Failure to comply may result in damage to equipment.

(5) Install inside rubber strip (7) on roof hatch (8).

(6) Install outside rubber strip (8.1) on roof hatch (8).

(7) Install 6 in. (152.0 mm) back-up rubber strips (8.2) centered on joints of inside and outside rubber strips (7 and 8.1).



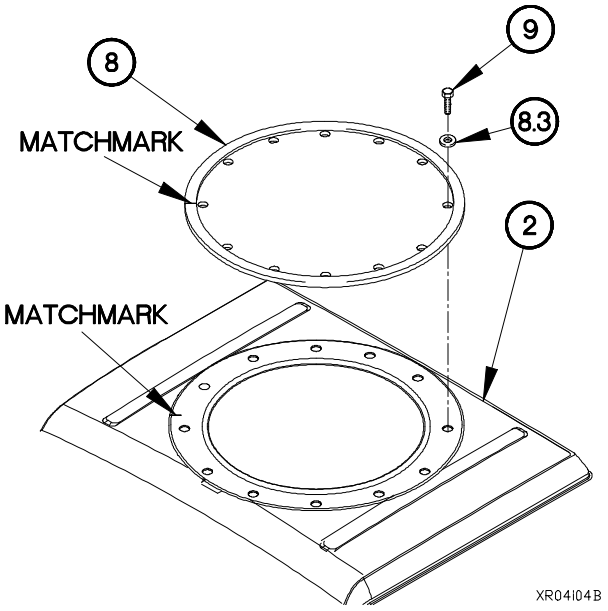
NOTE

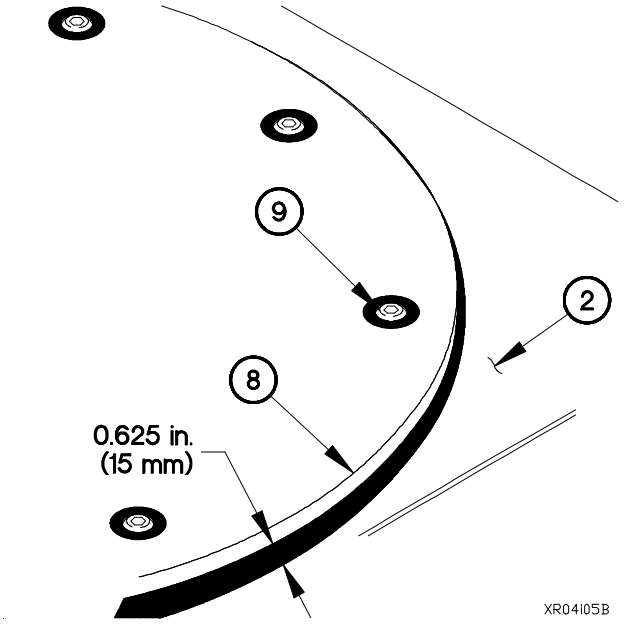
Steps (8) through (11) require the aid of an assistant.

(8) Position roof hatch (8) on cab roof (2) with matchmarks aligned.

(8.1) Position 12 washers (8.3) and screws (9) in roof hatch (8).

(8.2) Tighten 12 screws (9) to 35-41 lb-ft (48-56 N•m).





WARNING

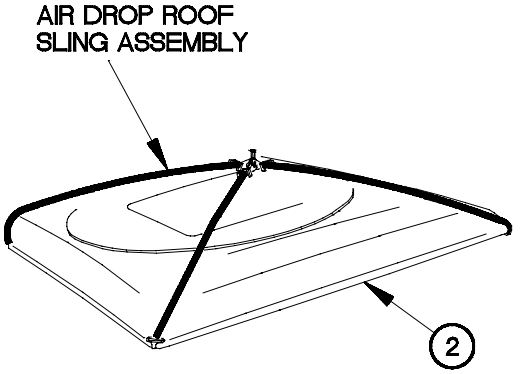
Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and ar harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

(8.3) Apply 0.625 in. (15.0 mm) bead of sealing compound to 12 screws (9) and between roof hatch (8) and cab roof (2).

WARNING

Cab roof weighs approximately 110 lbs (50 kgs). Attach a suitable lifting device prior to installation. Failure to comply may result in injury to personnel.

(9) Attach air drop roof sling assembly to cab roof (2).



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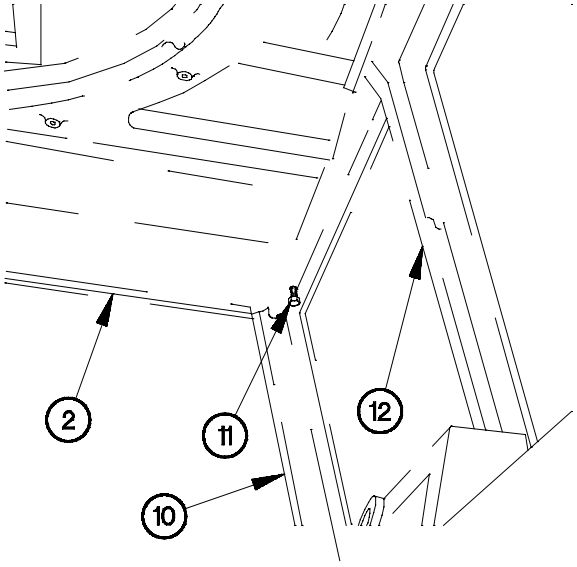

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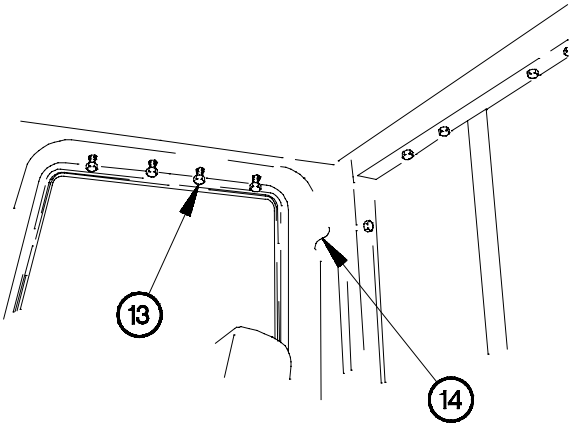
(10) Position cab roof (2) on cab (10).

(11) Tighten ten captive screws (11) in cab windshield frame (12).

(12) Tighten four captive screws (13) in right side cab wall (14).



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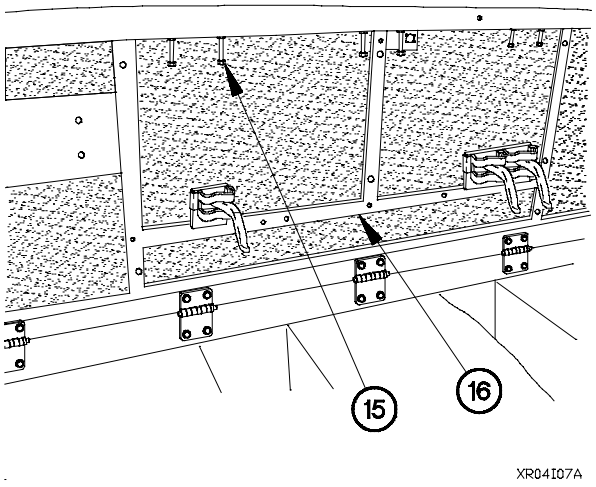
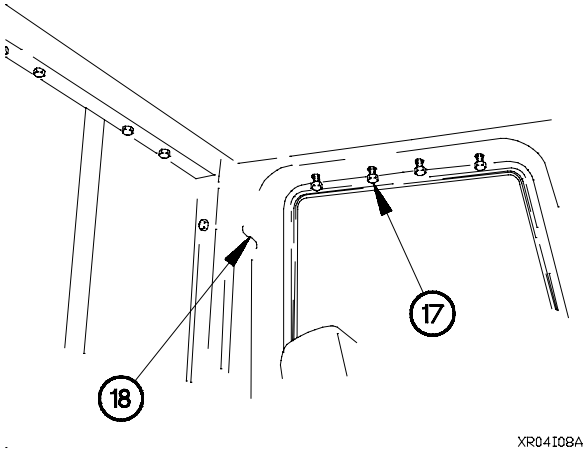
16-4. M1081 CAB ROOF REPLACEMENT (CONT)

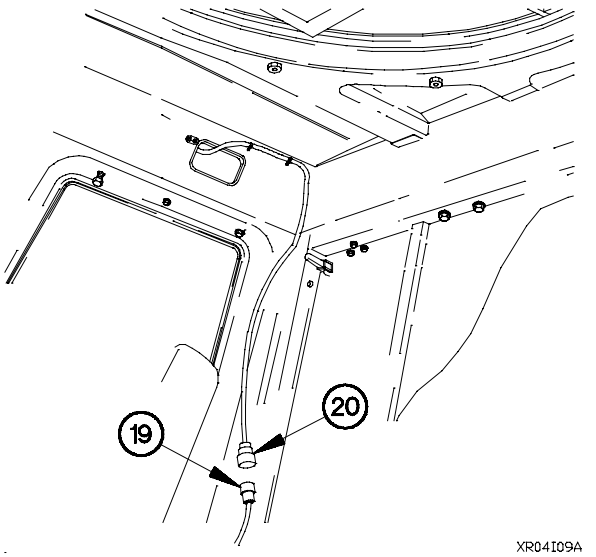
(13) Tighten ten captive screws (15) in cab rear wall (16).





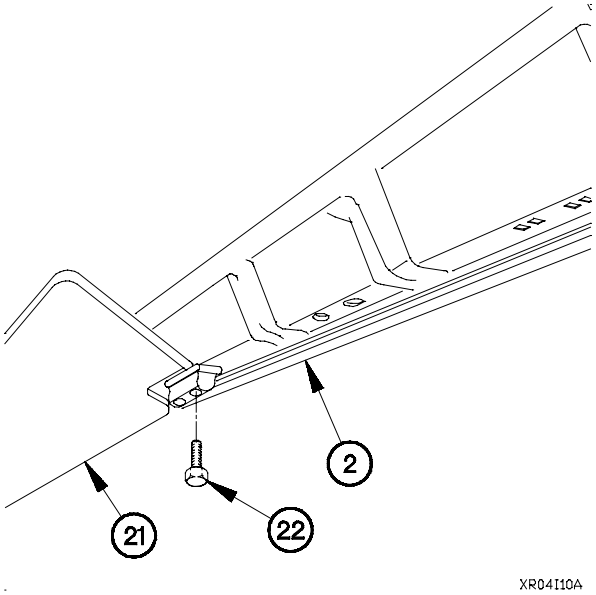
(14) Tighten four captive screws (17) in left side cab wall (18).

(15) Connect connector J3 (19) to connector P3 (20).



(16) Position sun visor (21) on cab roof (2) with four screws (22).

(17) Tighten four screws (22) to 40-49 lb-in. (4-5 N·m).



c. Follow-On Maintenance.

Install cab clearance lights (para 7-31).

End of Task.

16-5. DOOR REPAIR/ADJUSTMENT (ALL MODELS EXCEPT M1081)

This task covers:

a. Window and Window Regulator Removal
b. Window and Window Regulator Installation
c. Door Latch/Lock Disassembly
d. Door Latch/Lock Assembly
e. Door Removal
f. Door Installation
g. Door Adjustment
h. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
Engine shut down (TM 9-2320-365-10).
Marker light removed (para 7-31).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Wrench, Torque, 0-200 lb-in. (Item 58, Appendix C)
Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C)
Screwdriver Attachment, Socket Wrench (Item 49, Appendix B)
Socket Set, Socket Wrench (Item 35, Appendix C)
Tool Kit, Blind Rivet (Item 43, Appendix C)
Drill, Portable, Electric (Item 7, Appendix C)
Drill, Twist (Item 8, Appendix C)
Wrench, Torque, 0-75 lb-in. (Item 86, Appendix B)
Goggles, industrial (Item 15, Appendix B)

Materials/Parts
Soap, Laundry (Item 68, Appendix D)
Sealing Compound (Item 61, Appendix D)
Rivet, Compression (10) (Item 237, Appendix G)
Grease, Automotive and Artillery (GAA) (Item 23, Appendix D)
Seal, Nonmetallic (Item 253, Appendix G)
Rivet, Blind (6) (Item 217.1, Appendix G)

Personnel Required
(2)

NOTE

If complete repair of the door is required, it will be necessary to notify DS maintenance to replace the door side window at the completion of Unit level repairs.

a. Window and Window Regulator Removal.

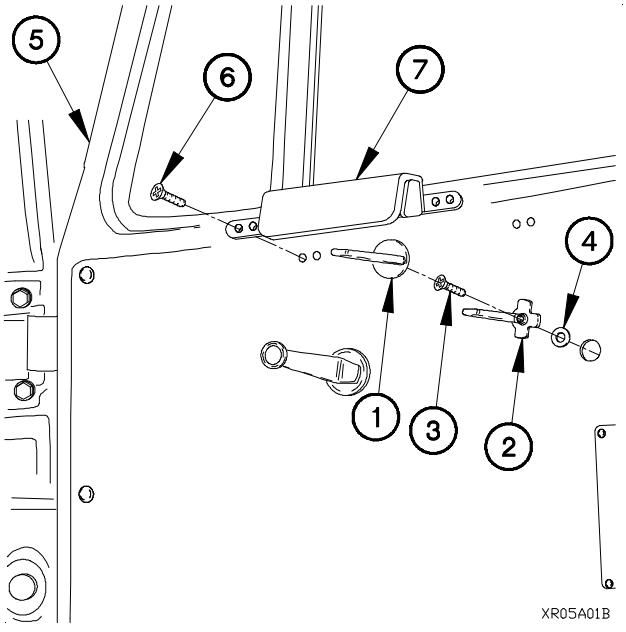
NOTE

Left and right windows and window regulators are removed the same way. Right side shown.

(1) Remove cover (1) from door handle (2).

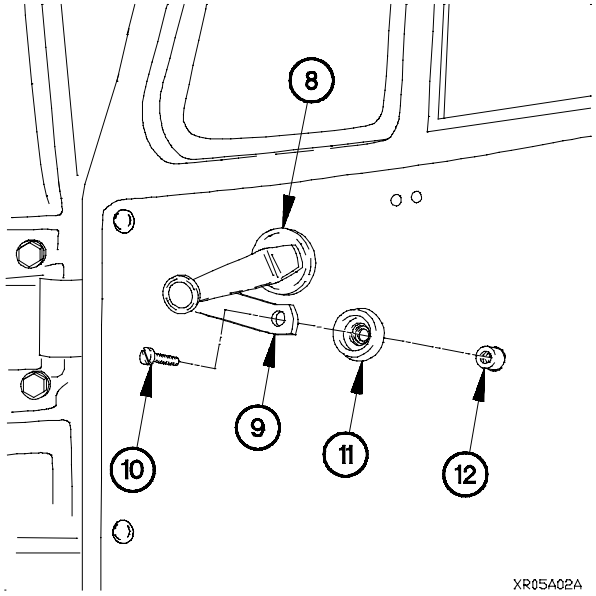
(2) Remove screw (3), door handle (2), and washer from door (5).

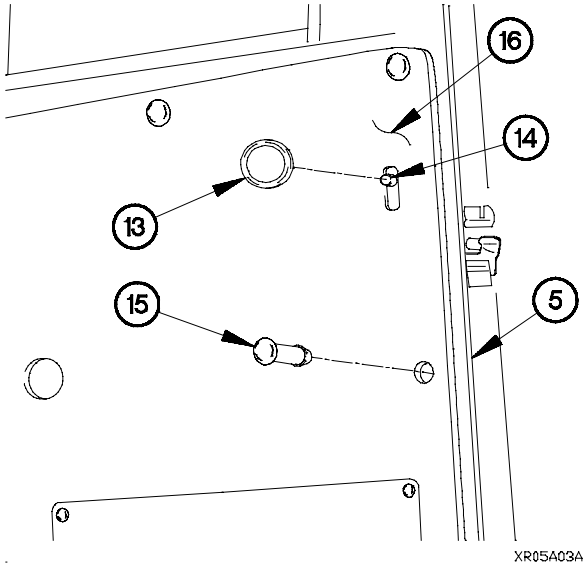
(3) Remove four screws (6) and door handle (7) from door (5).



(4) Raise cover (8) from window crank (9).

(5) Remove screw (10), window crank (9), and collar (11) from window regulator (12).





(6) Remove knob (13) from lock stud (14).

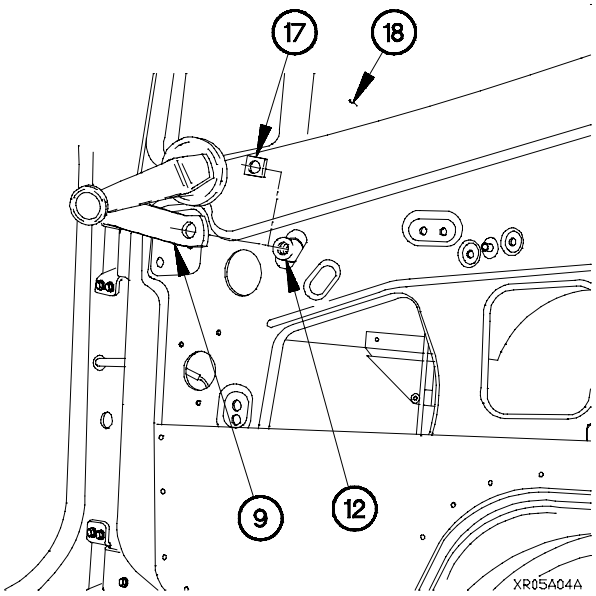
(7) Remove ten rivets (15) from door lining (16).

(8) Remove door lining (16) from door (5).

(9) Remove resilient mount (17) from window regulator (12).

(10) Install window crank (9) on window regulator (12).

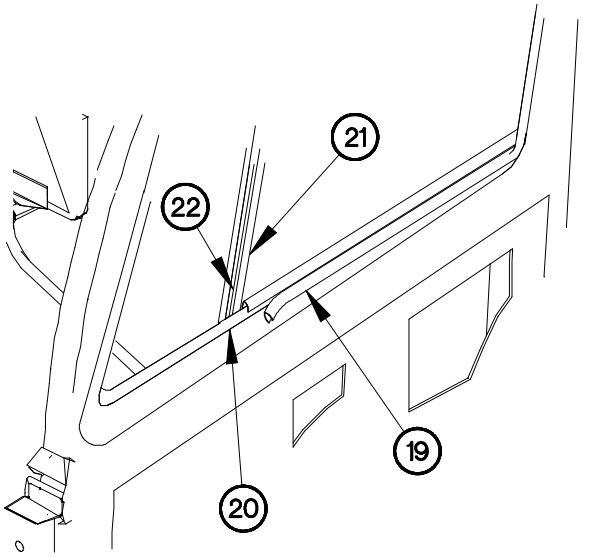
(11) Lower window (18) completely down.



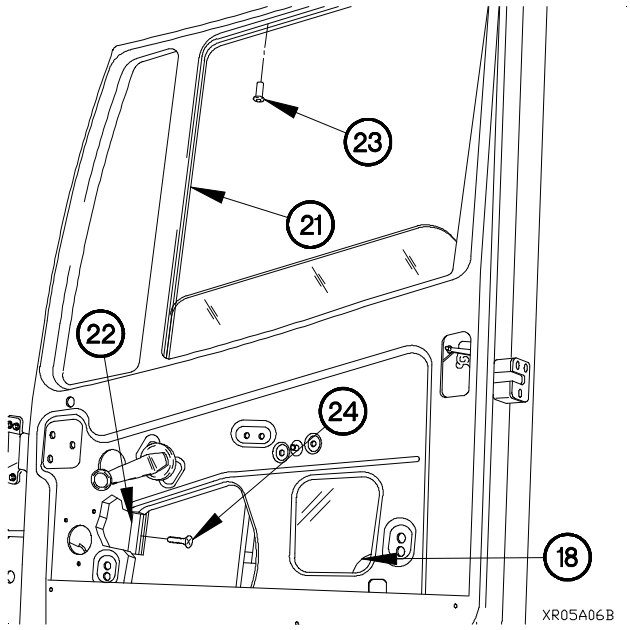
16-5. DOOR REPAIR/ADJUSTMENT (ALL MODELS EXCEPT M1081) (CONT)

(12) Remove inner edge seal (19) from window sill (20).

(13) Remove rubber sealing strip (21) from upper portion of window channel (22).



XR05A05A



XR05A06B

WARNING

Wear appropriate eye protection when drilling out rivets. Failure to comply may result in injury to personnel.

NOTE

Some vehicles had screws attaching upper window channel. Rivets are shown.

(14) Remove six rivets (23) from upper portion of window channel (22).

(15) Install rubber sealing strip (21) so that window (18) can be raised.

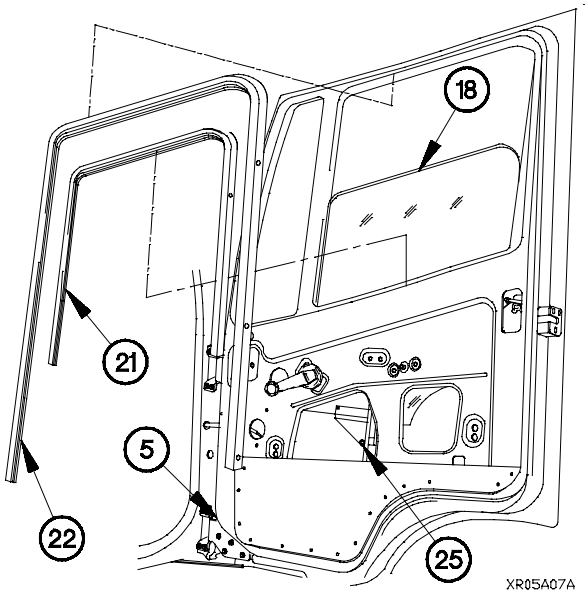
(16) Raise window (18) enough to access two lower screws (24).

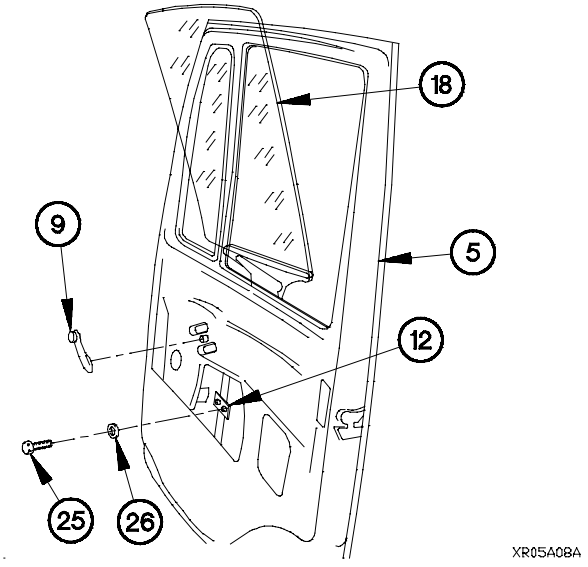
(17) Remove two screws (24) from bottom of window channel (22).

(18) Lower window (18) completely down.

(19) Remove window channel (22) and rubber sealing strip (21) from door (5).

(20) Raise window (18) enough to access two screws (25) at bottom of window.





WARNING

Use care when removing window. Do not force window. Window may shatter. Failure to comply may result in injury to personnel or damage to equipment.

NOTE

Steps (21) and (22) require the aid of an assistant.

(21) Support window (18) and remove two screws (25) and washers (26) from window regulator (12).

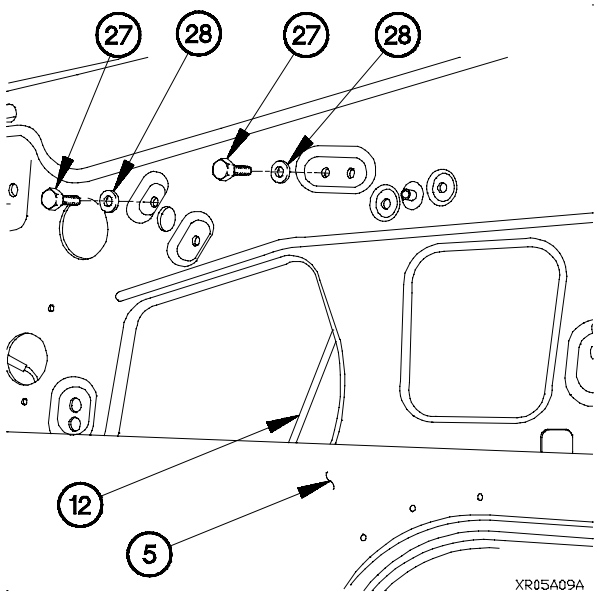
(22) Remove window (18) by holding window at a slight angle and lifting upward out of door (5).

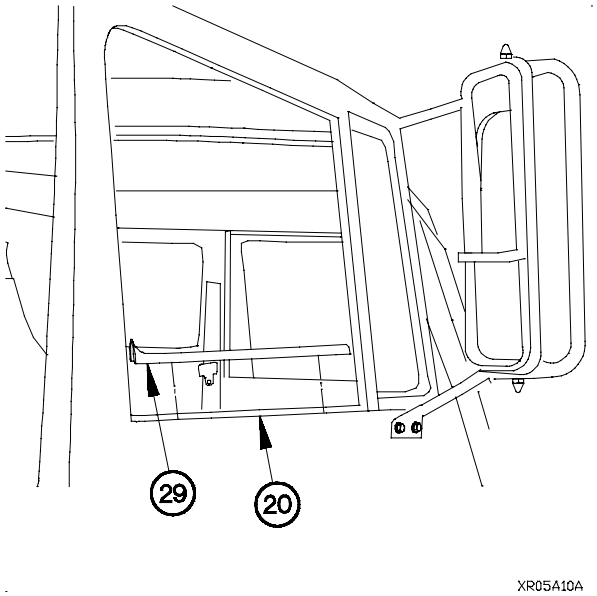
(23) Remove window crank (9) from window regulator (12).

16-5. DOOR REPAIR/ADJUSTMENT (ALL MODELS EXCEPT M1081) (CONT)

(24) Remove four screws (27) and washers (28) from window regulator (12).

(25) Remove window regulator (12) from door (5).





(26) Remove outer edge seal (29) from window sill (20).

b. Window and Window Regulator Installation.

NOTE

Left and right windows and window regulators are installed the same way. Right side shown.

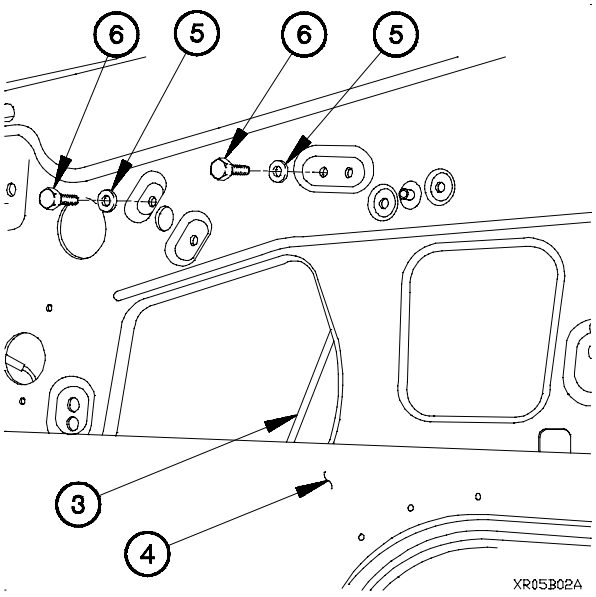
(1) Install outer edge seal (1) on window sill (2).

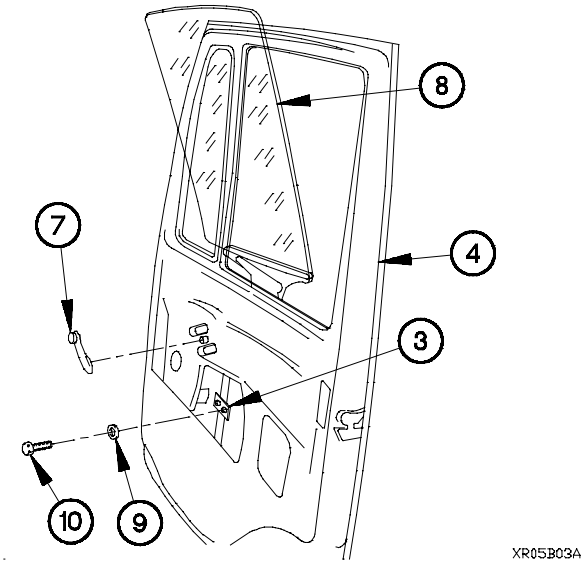
(2) Position window regulator (3) in door (4).

(3) Align holes in window regulator (3) and mounting holes of door (4).

(4) Position four washers (5) and screws (6) in window regulator (3).

(5) Tighten four screws (6) to 70-85 lb-in. (8-10 N·m).





(6) Position window crank (7) on window regulator (3).

WARNING

Use care when installing window. Do not force window or window may shatter. Failure to comply may result in injury to personnel or damage to equipment.

NOTE

Steps (7) and (8) require the aid of an assistant.

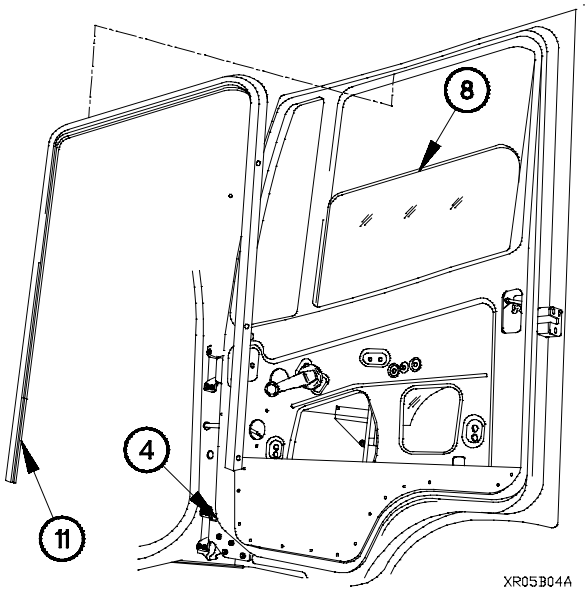
(7) Position window (8) in door (4) at a slight angle.

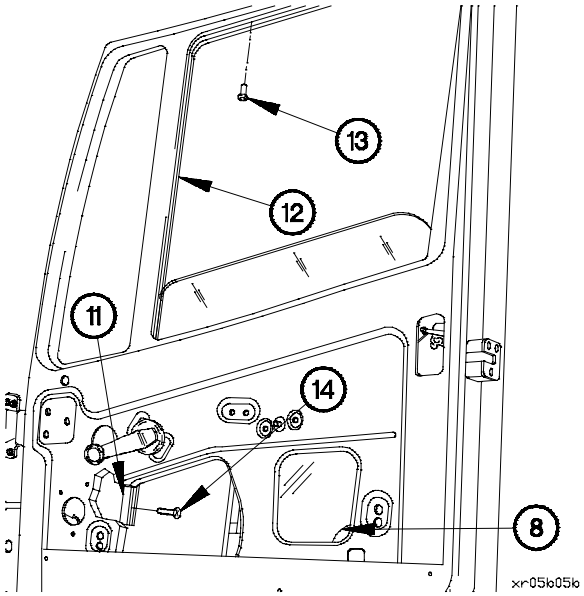
(8) Support window (8) and install two washers (9) and screws (10) in window regulator (3).

(9) Lower window (8) until completely down.

16-5. DOOR REPAIR/ADJUSTMENT (ALL MODELS EXCEPT M1081) (CONT)

(10) Position window channel (11) over window (8) from inside of door (4).





(11) Install window channel (11) on upper door frame (12) with six rivets (13).

(12) Raise window (8) for access to bottom of window channel (11).

(13) Position two screws (14) in bottom of window channel (11).

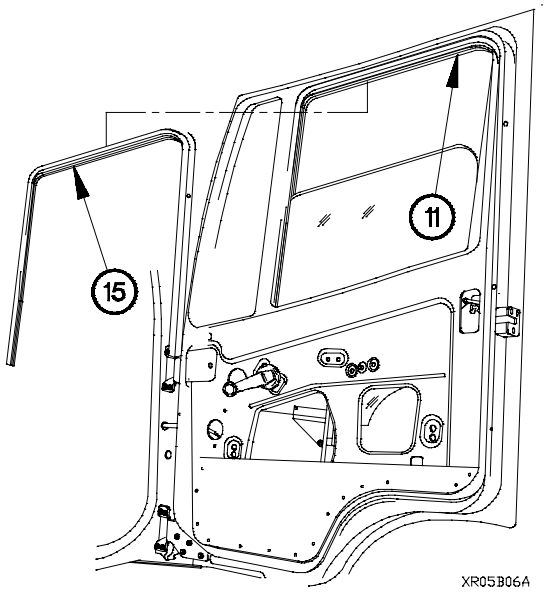
(13.1) Tighten two screws (14) to 10-14 lb-in. (1-2 N·m).

(14) Lower window (8) until completely down.

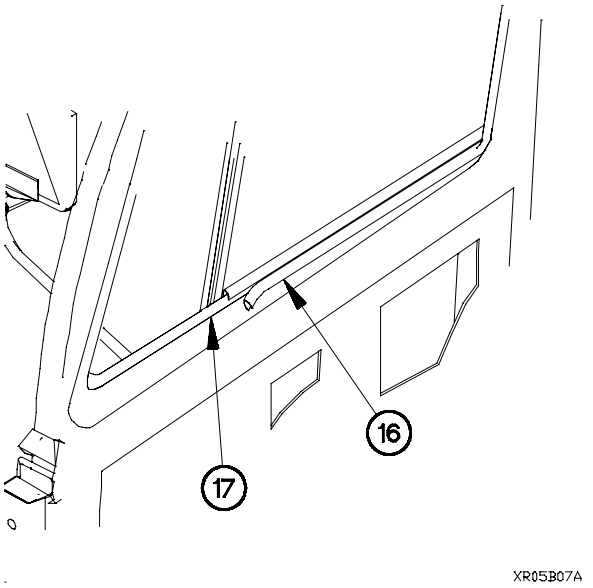
NOTE

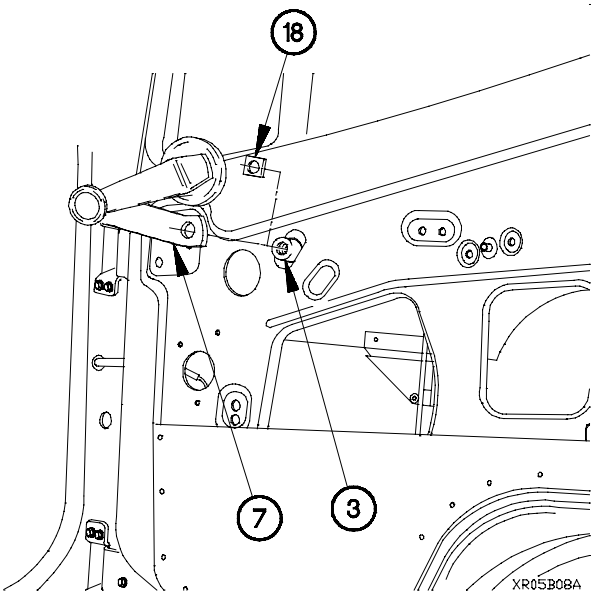
- Use a solution of soap and water to ease installation of rubber sealing strip.
- It may be necessary to roll window up and down during installation of rubber sealing strip.

(15) Install rubber sealing strip (15) around upper portion of window channel (11).



(16) Install inner edge seal (16) on window sill (17).



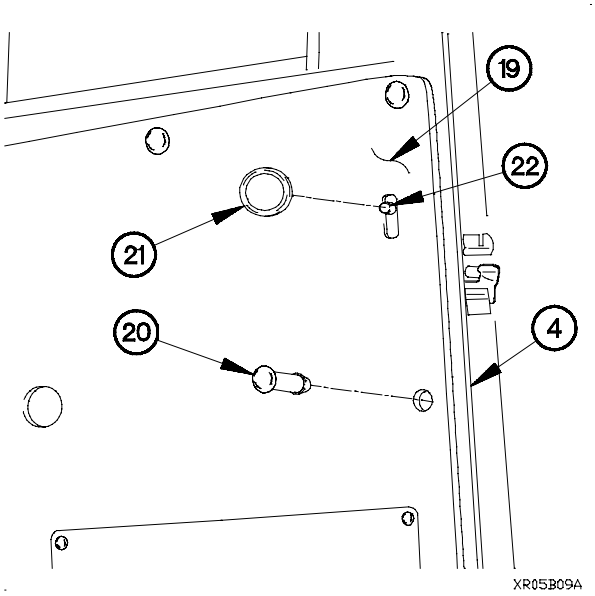


(17) Remove window crank (7) from window regulator (3).

(18) Install resilient mount (18) on window regulator (3).

(19) Install door lining (19) on interior side of door (4) with ten rivets (20).

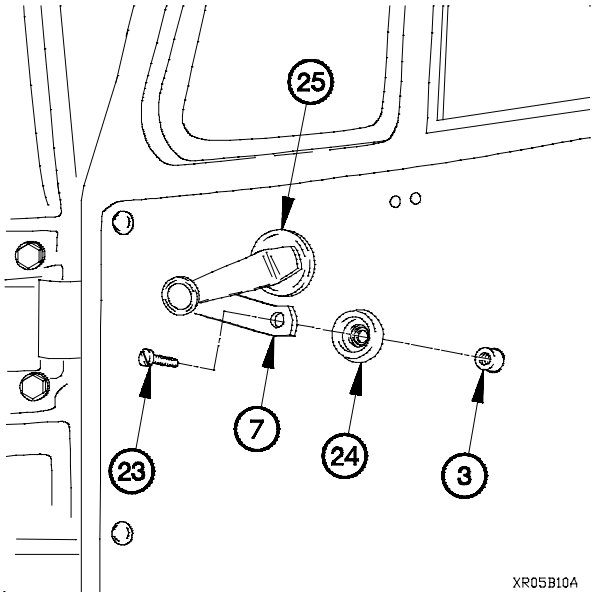
(20) Install knob (21) on lock stud (22).



16-5. DOOR REPAIR/ADJUSTMENT (ALL MODELS EXCEPT M1081) (CONT)

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

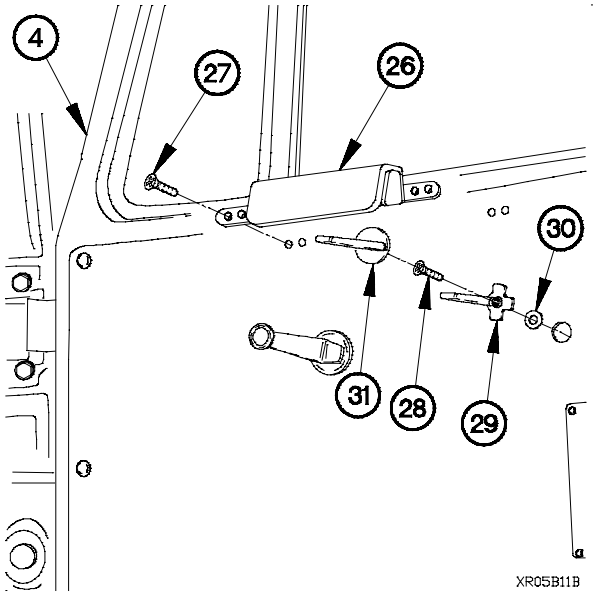


(21) Apply sealing compound to threads of screw (23).

(22) Position collar (24) and window crank (7) on window regulator (3) with screw (23).

(23) Tighten screw (23) to 50-55 lb-in. (6 N·m).

(24) Install cover (25) on window crank (7).



(25) Position door handle (26) on door (4) with four screws (27).

(26) Tighten four screws (27) to 22-28 lb-in. (2-3 N·m).

(27) Apply sealing compound to threads of screw (28).

(28) Position door handle (29) on door (4) with washer (30) and screw (28).

(29) Tighten screw (28) to 50-55 lb-in. (6 N·m).

(30) Install cover (31) on door handle (29).

c. Door Latch/Lock Disassembly.

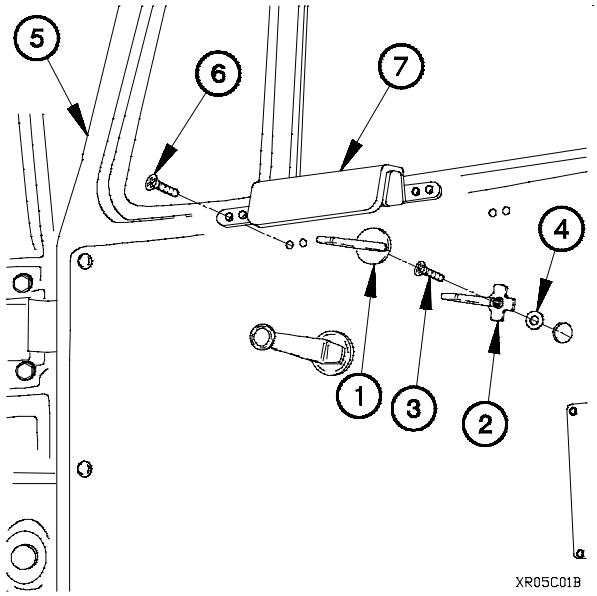
NOTE

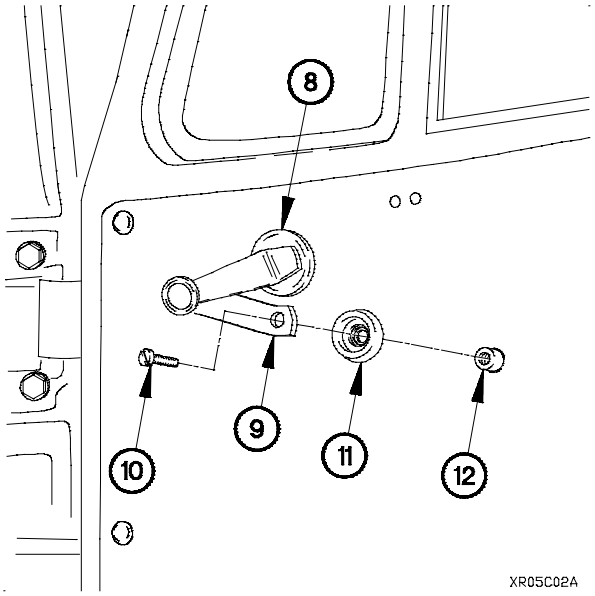
Left and right door latch/lock assemblies are disassembled the same way. Right door latch/lock assembly shown.

(1) Remove cover (1) from door handle (2).

(2) Remove screw (3), door handle (2), and washer (4) from door (5).

(3) Remove four screws (6) and door handle (7) from door (5).





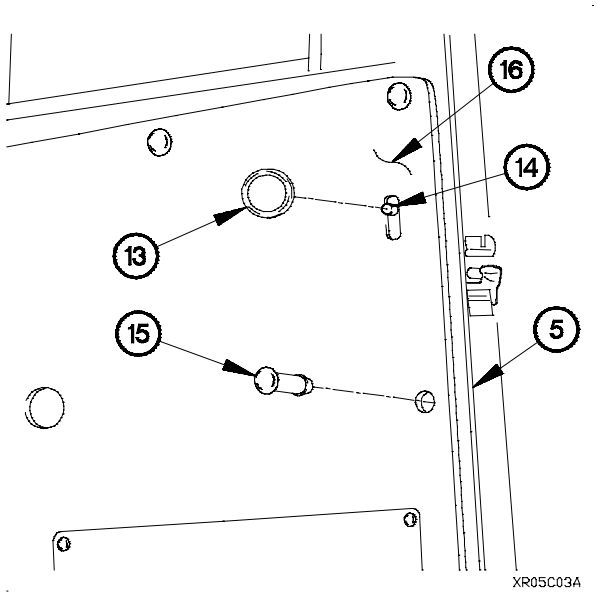
(4) Raise cover (8) from window crank (9).

(5) Remove screw (10), window crank (9), and collar (11) from window regulator (12).

(6) Remove knob (13) from lock stud (14).

(7) Remove ten rivets (15) from door lining (16).

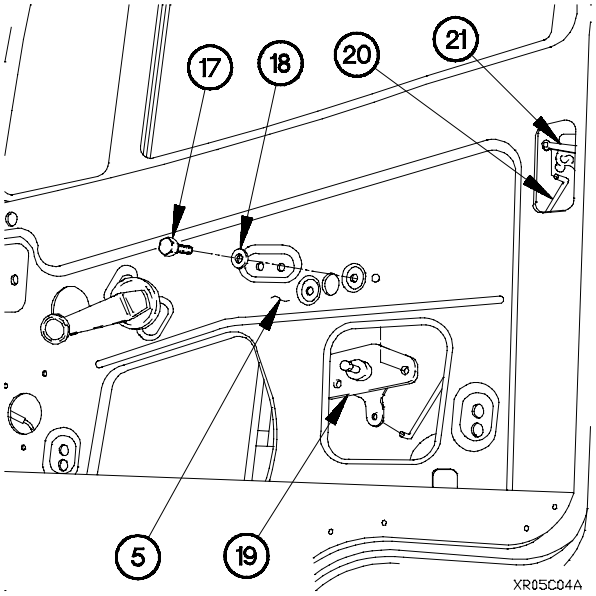
(8) Remove door lining (16) from door (5).

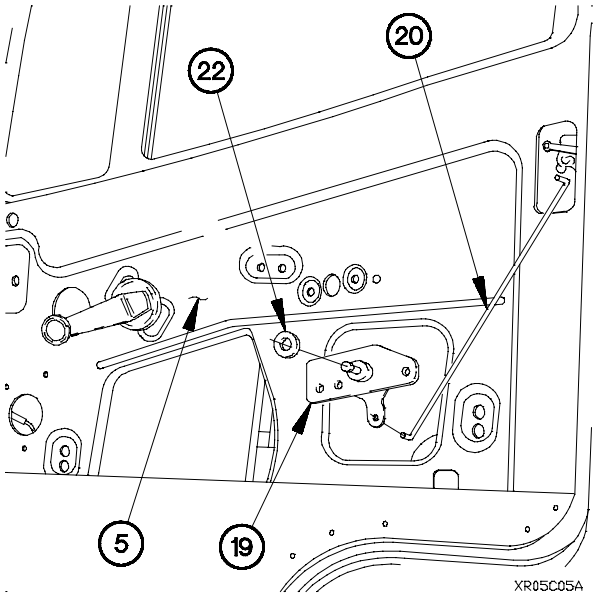


16-5. DOOR REPAIR/ADJUSTMENT (ALL MODELS EXCEPT M1081) (CONT)

(9) Remove two screws (17), washers (18), and actuator assembly (19) from door (5).

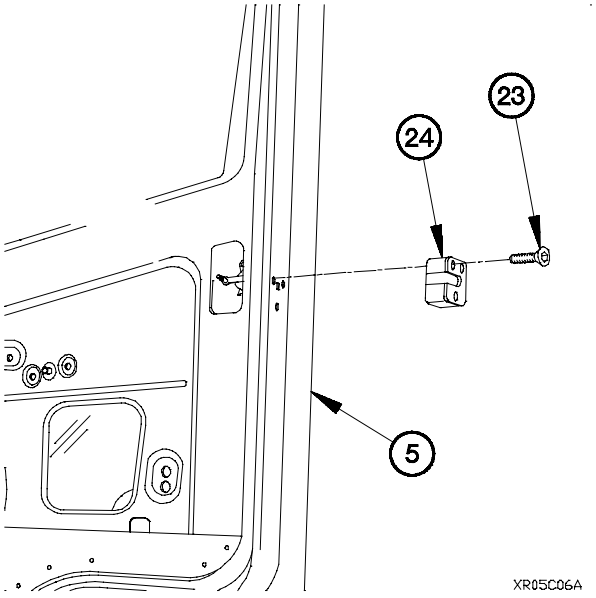
(10) Disconnect upper end of actuator control rod (20) from release assembly (21).





(11) Remove actuator control rod (20), actuator assembly (19), and seal (22) from door (5). Discard seal.

(12) Remove three screws (23) and latch assembly (24) from door (5).



NOTE

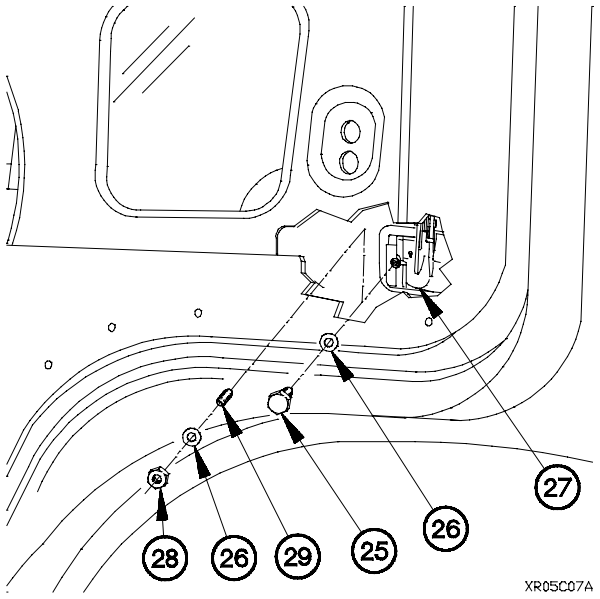
Perform step (13) on vehicle serial numbers 0001 through 3091 that have not had the handle/lock assembly replaced previously.

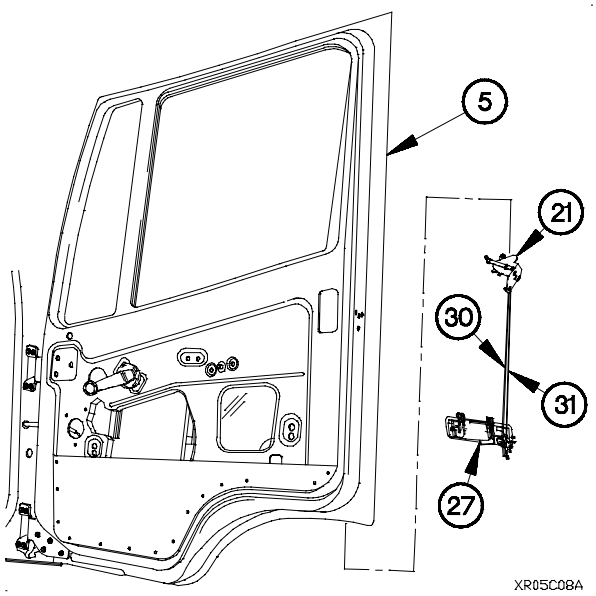
(13) Remove screw (25) and washer (26) from handle/lock assembly (27).

NOTE

Perform step (14) on vehicle serial numbers 3092 and higher serial numbers, and vehicles that have had the handle/lock assembly replaced previously.

(14) Remove nut (28), washer (26), and setscrew (29) from handle/lock assembly (27).





(15) Push handle/lock assembly (27) toward front of vehicle until rear of handle/lock assembly is released from door (5).

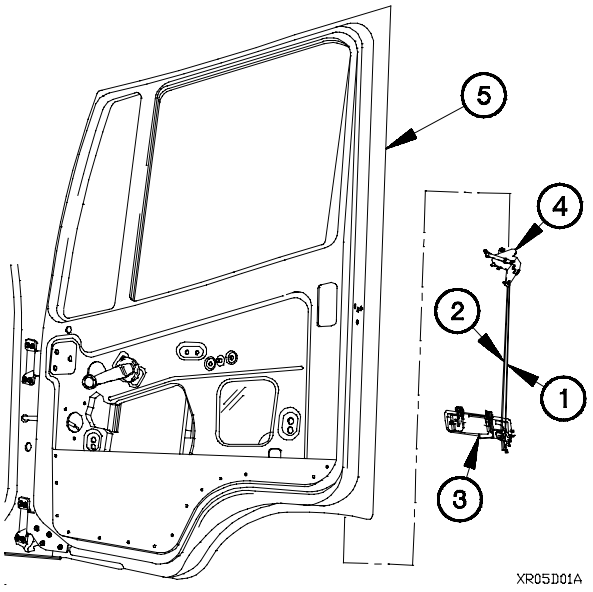
(16) Remove handle/lock assembly (27), control rods (30 and 31), and release assembly (21) from handle/lock opening.

16-5. DOOR REPAIR/ADJUSTMENT (ALL MODELS EXCEPT M1081) (CONT)

d. Door Latch/Lock Assembly.

NOTE

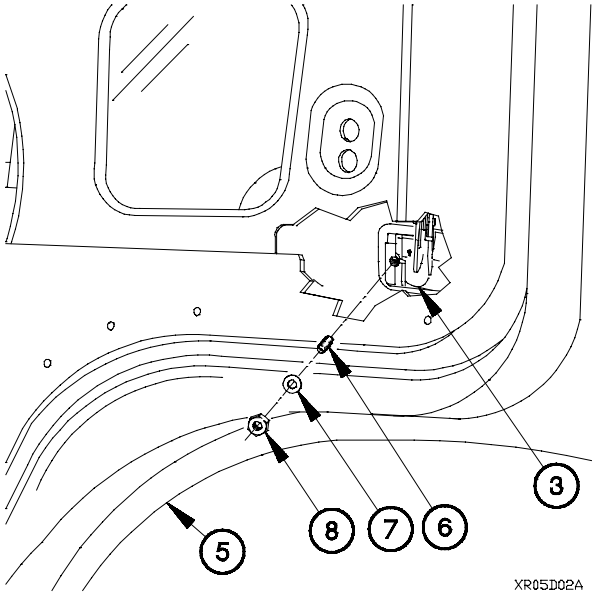
Left and right door latch/lock assemblies are assembled the same way. Right door latch/lock assembly shown.



(1) Attach control rods (1 and 2), between handle/lock assembly (3), and release assembly (4).

(2) Install release assembly (4) and two control rods (1 and 2), upward through handle/lock assembly opening in door (5).

(3) Seat handle/lock assembly (3) into door opening by pushing handle/lock assembly toward front of vehicle until rear of handle/lock assembly can enter opening, then push handle/lock assembly toward rear until handle/lock assembly is fully seated.



WARNING

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(4) Apply sealing compound to threads of setscrew (6).

(5) Position handle/lock assembly (3) on door (5) with setscrew (6).

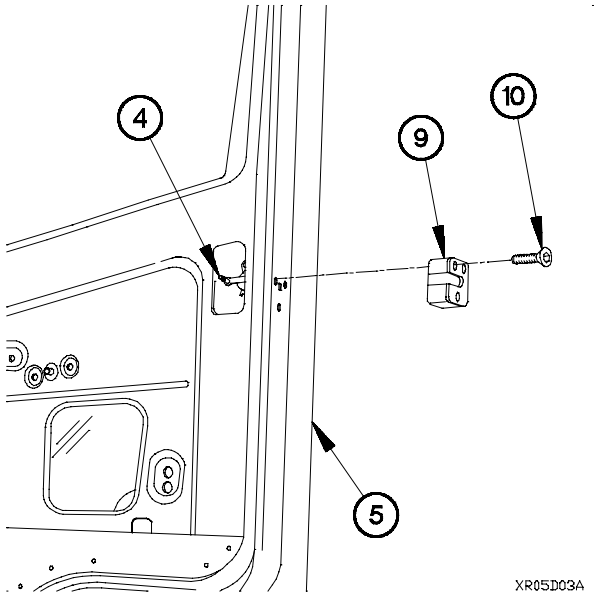
(6) Tighten setscrew (6) to 39-59 lb-in. (4-7 N·m).

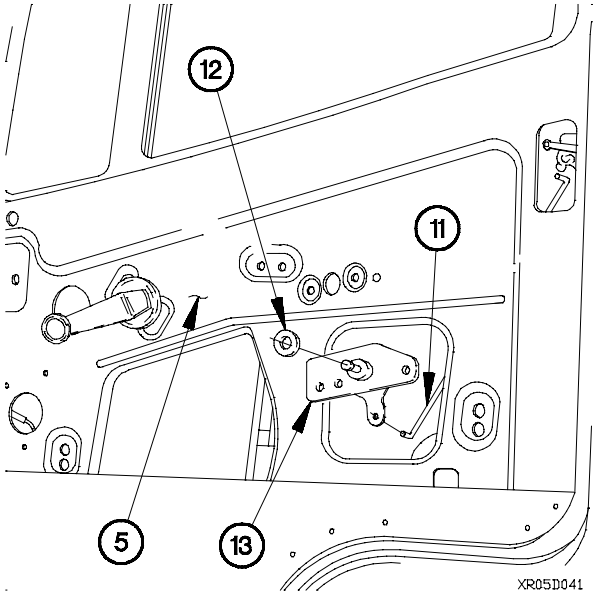
(7) Position washer (7) and nut (8) on setscrew (6).

(8) Tighten nut (8) to 39-59 lb-in. (4-7 N·m).

(9) Position latch assembly (9) and release assembly (4) on door (5) with three screws (10).

(10) Tighten three screws (10) to 70-85 lb-in. (8-10 N·m).





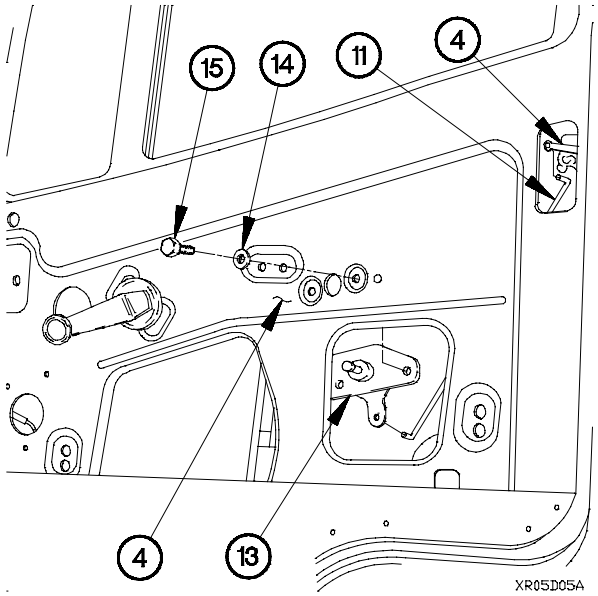
(11) Install actuator control rod (11) and seal (12) on actuator assembly (13).

(12) Install actuator assembly (13) in door (5).

(13) Attach upper end of actuator control rod (11) to release assembly (4).

(14) Position two washers (14) and screws (15) in actuator assembly (13).

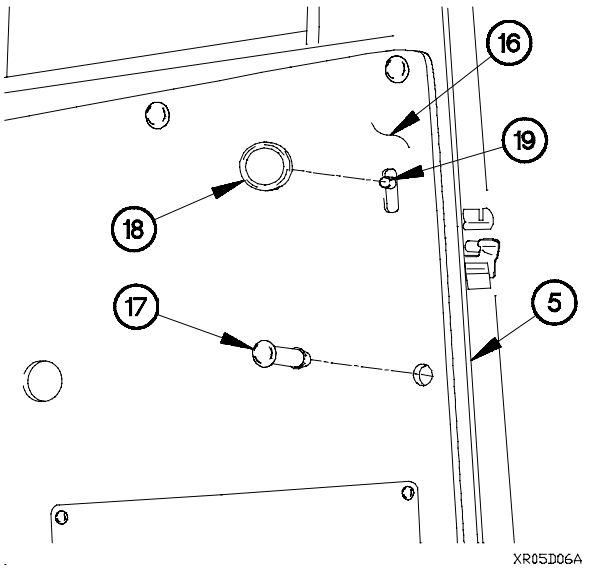
(15) Tighten two screws (15) to 49-60 lb-in. (5-7 N·m).

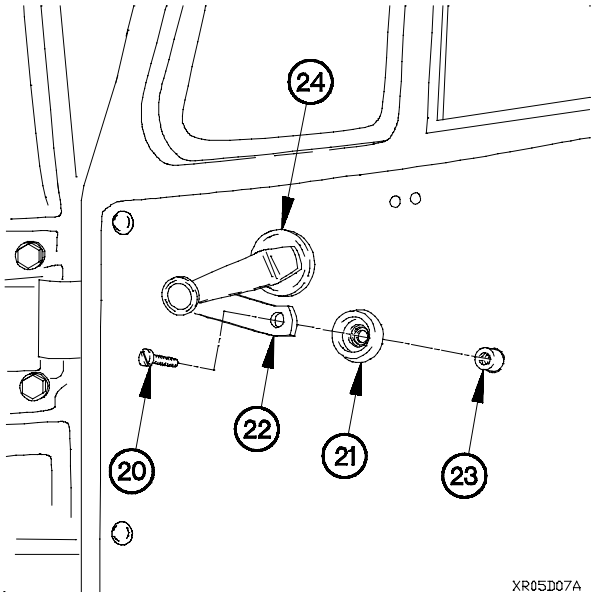


16-5. DOOR REPAIR/ADJUSTMENT (ALL MODELS EXCEPT M1081) (CONT)

(16) Install door lining (16) on interior side of door (5) with ten rivets (17).

(17) Install knob (18) on lock stud (19).





WARNING

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(18) Apply sealing compound to threads of screw (20).

(19) Position collar (21) and window crank (22) on window regulator (23) with screw (20).

(20) Tighten screw (20) to 50-55 lb-in. (6 N·m).

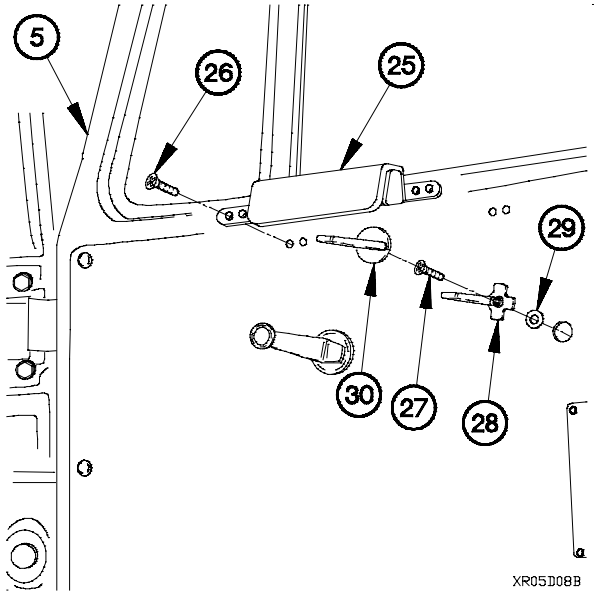
(21) Install cover (24) on window crank (22).

(22) Position door handle (25) on door (5) with four screws (26).

(23) Tighten four screws (26) to 22-28 lb-in. (2-3 N·m).

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.



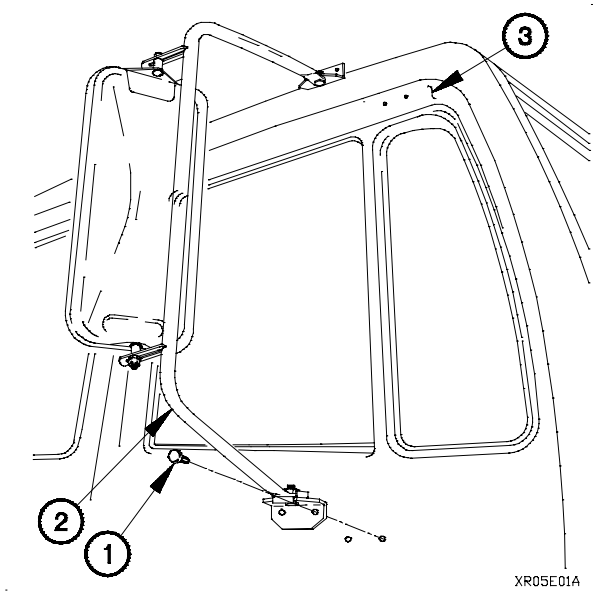
(24) Apply sealing compound to threads of screw (27).

(25) Position door handle (28) on door (5) with washer (29) and screw (27).

(26) Tighten screw (27) to 50-55 lb-in. (6 N·m).

(27) Install cover (30) on door handle (28).

e. Door Removal.



NOTE

Both doors are removed the same way. Right side door shown.

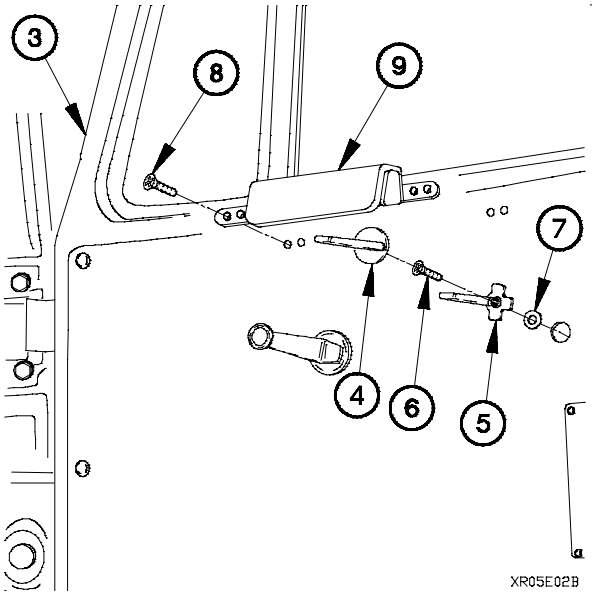
(1) Remove four screws (1) and mirror assembly (2) from door (3).

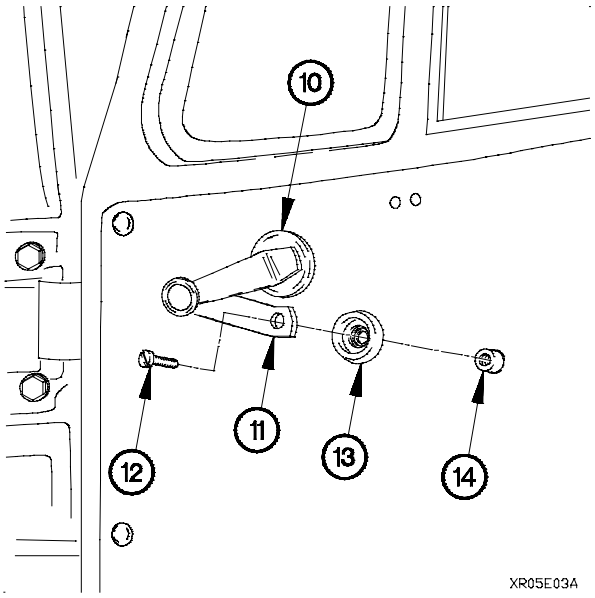
16-5. DOOR REPAIR/ADJUSTMENT (ALL MODELS EXCEPT M1081) (CONT)

(2) Remove cover (4) from door handle (5).

(3) Remove screw (6), door handle (5), and washer (7) from door (3).

(4) Remove four screws (8) and door handle (9) from door (3).





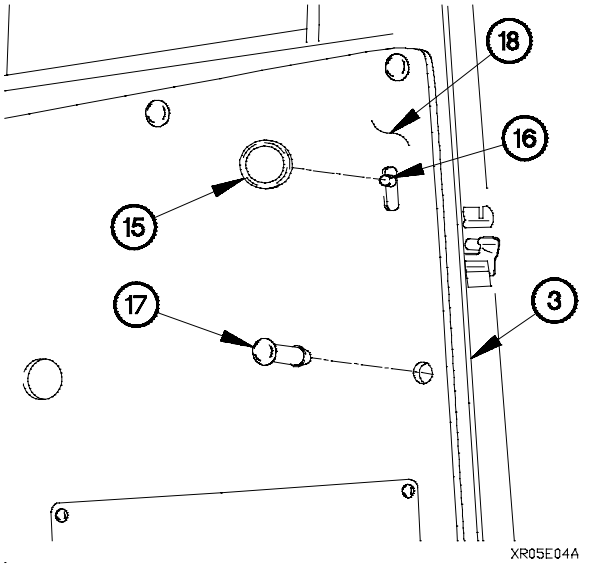
(5) Raise cover (10) from window crank (11).

(6) Remove screw (12), window crank (11), and collar (13) from window regulator (14).

(7) Remove knob (15) from lock stud (16).

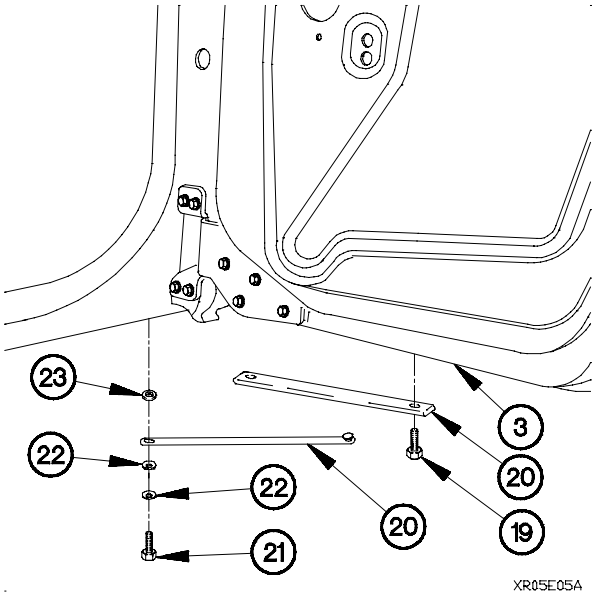
(8) Remove ten rivets (17) from door lining (18).

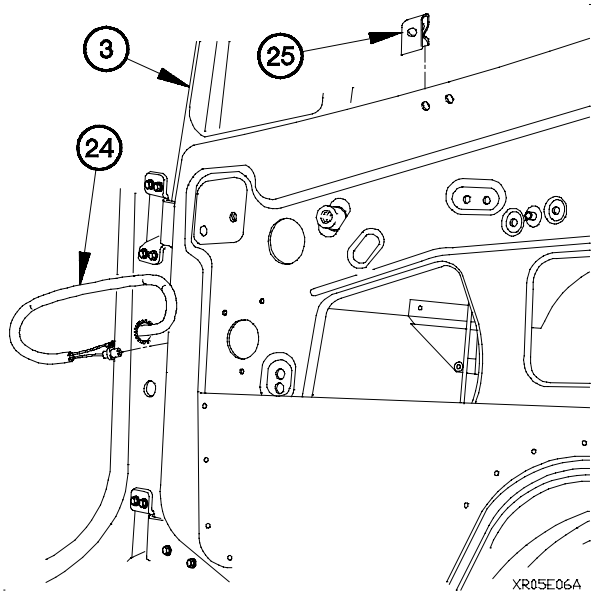
(9) Remove door lining (18) from door (3).



(10) Remove two screws (19) and door arrestor assembly (20) from bottom of door (3).

(11) Remove screw (21), two spring washers (22), door arrestor assembly (20), and washer (23) from cab.





(12) Remove wiring harness (24) from door (3) by pulling through access hole in forward edge of door (3).

(13) Remove four clip nuts (25) from door (3).

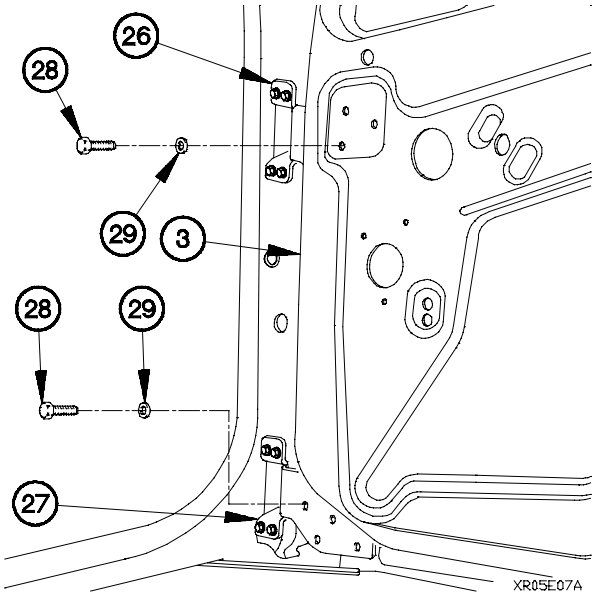
NOTE

Steps (14) through (16) require the aid of an assistant.

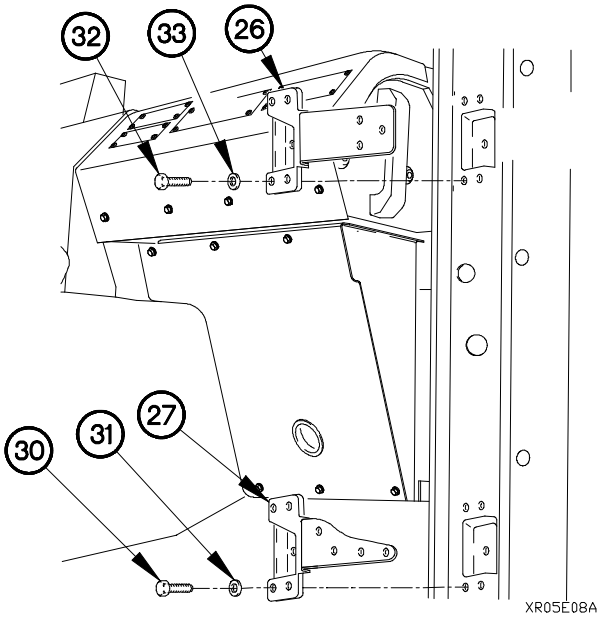
(14) Lift door (3) enough to take weight off hinges (26 and 27).

(15) Remove six screws (28) and washers (29) from hinges (26 and 27).

(16) Remove door (3) from cab.



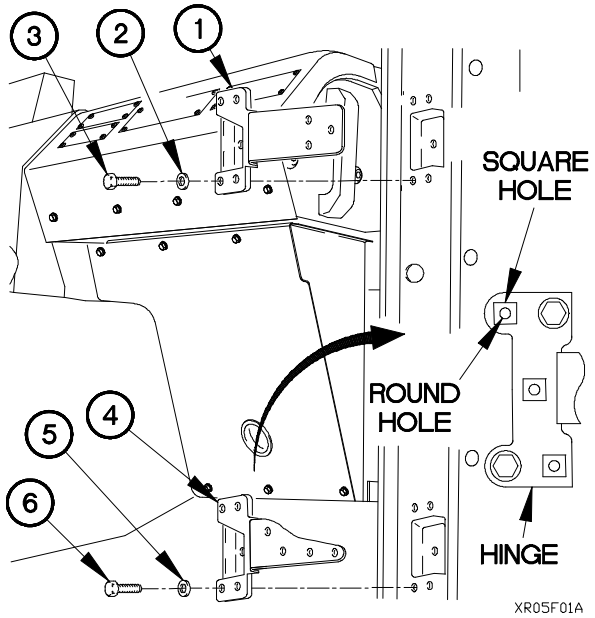
16-5. DOOR REPAIR/ADJUSTMENT (ALL MODELS EXCEPT M1081) (CONT)



(13) Remove five screws (30), washers (31), and hinge (27) from cab.

(14) Remove five screws (32), washers (33), and hinge (26) from cab.

f. Door Installation.



NOTE

Both doors are installed the same way. Right side door shown.

(1) Position hinge (1) on cab with two washers (2) and screws (3).

(2) Position hinge (4) on cab with t o washers (5) and screws (6).

(2.1) Position hinges (1 and 4) so that remaining three bolt holes in cab are centered in square holes in wings as shown.

(2.2) Tighten two screws (3 and 6) to 22-26 lb-ft (30-34 N•m).

(2.3) Position three washers (2 and 5) and screws (3 and 6) in hinges (1 and 2).

(2.4) Tighten three screws (3 and 6) to 22-26 lb-ft (30-34 N•m).

NOTE

Step (5) through (7) requires the aid of an assistant.

(3) Position door (7) on cab with hinge (1) in slot in forward edge of door and bolt holes aligned with openings in door.

(4) Position door (7) on hinge (1) with three washers (8) and screws (9).

(5) Position door (7) on hinge (4) with three washers (10) and screws (11).

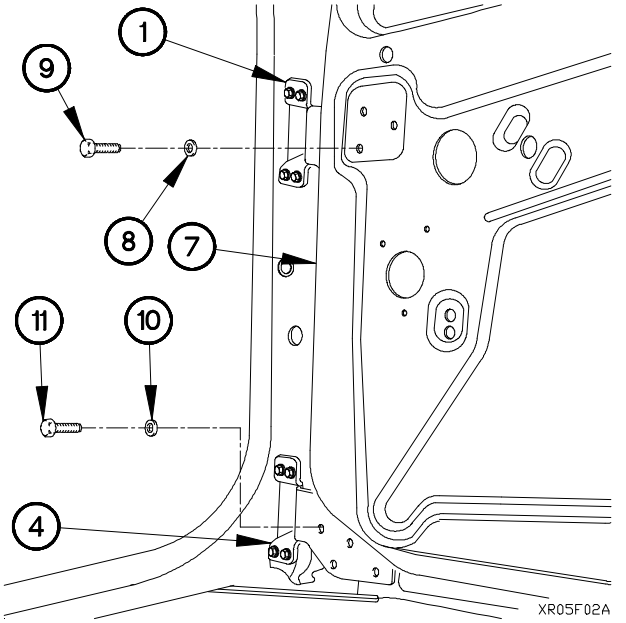
(6) Position door (7) so that gap between door and cab is approximately equal all around.

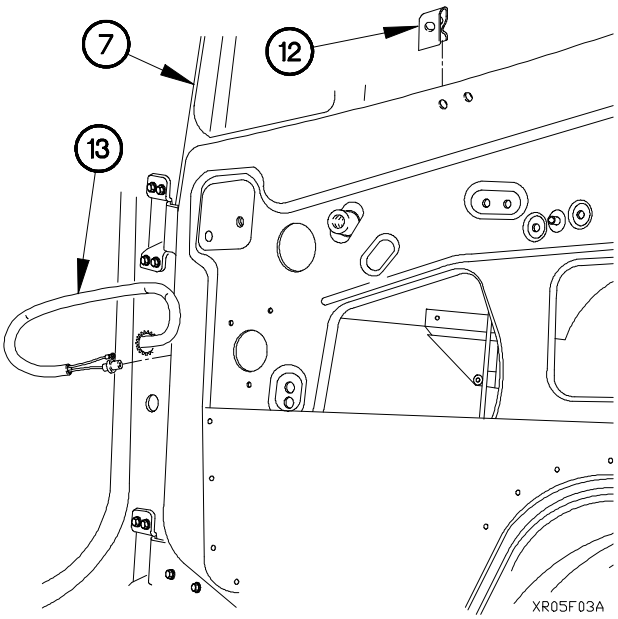
(7) Tighten three screws (9 and 11) one-half turn.

(8) Open, close, and open door (7) to ensure correct operation.

(9) Tighten three screws (9 and 11) to 22-26 lb-ft (30-35 N•m).

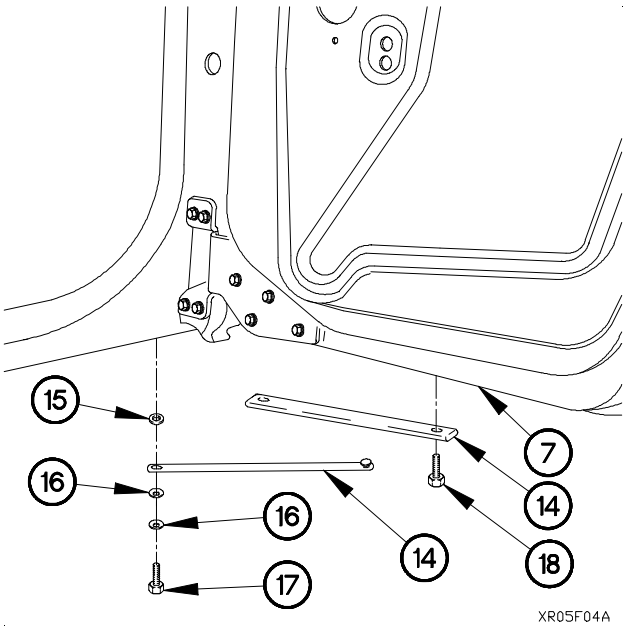
(10) Apply grease to hinges (1 and 4).





(11) Install four clip nuts (12) on door (7).

(12) Install wiring harness (13) through access hole in forward edge of door (7).



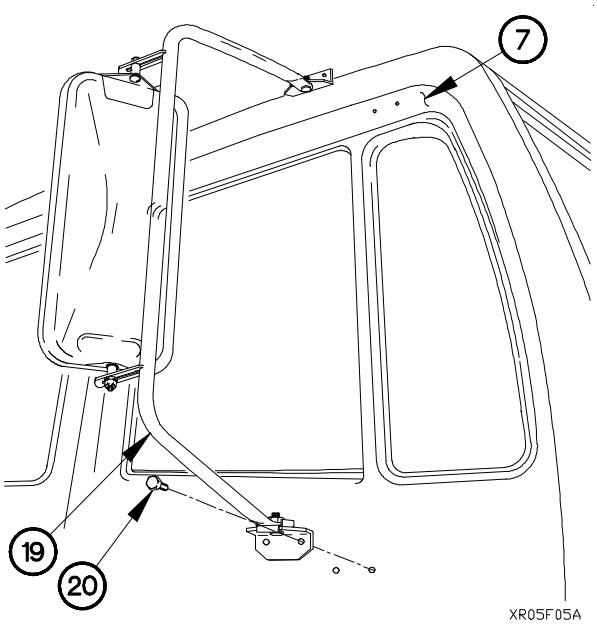
(13) Install door arrestor assembly (14) on cab with washer (15), two spring washers (16), and screw (17).

(14) Install door arrestor assembly (14) on bottom of door (7) with two screws (18).

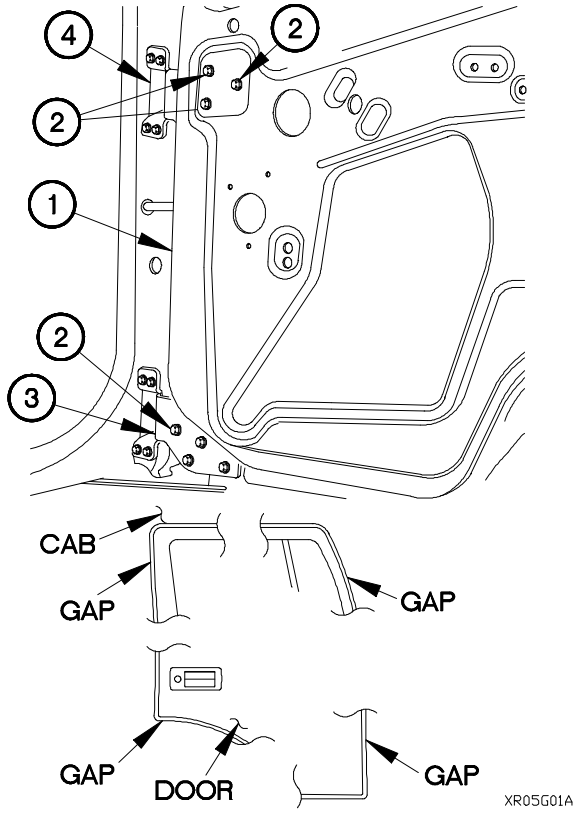
16-5. DOOR REPAIR/ADJUSTMENT (ALL MODELS EXCEPT M1081) (CONT)

(15) Position mirror assembly (19) on door (7) with four screws (20).

(16) Tighten four screws (20) to 84-96 lb-in. (9-11 N•m).



g. Door Adjustment.



NOTE

- Steps (1) through (4) require the aid of an assistant.
- Loosen door hinge screws only enough to allow small adjusting movements of door.

(1) Support door (1) and loosen six screws (2) on bottom hinge (3) and top hinge (4).

(2) Adjust door (1) so that gap between door (1) and cab is approximately equal all around.

NOTE

- Steps (1) through (4) require the aid of an assistant.
- Loosen door hinge screws only enough to allow small adjusting movements of door.

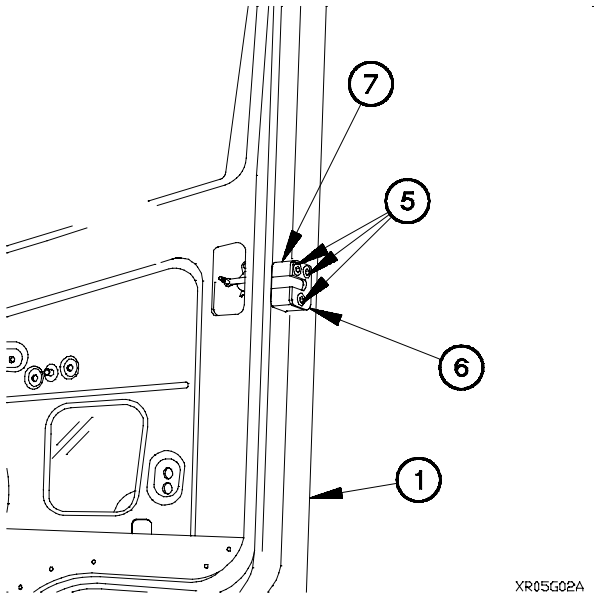
(3) Open, close, and open door (1) to ensure correct operation.

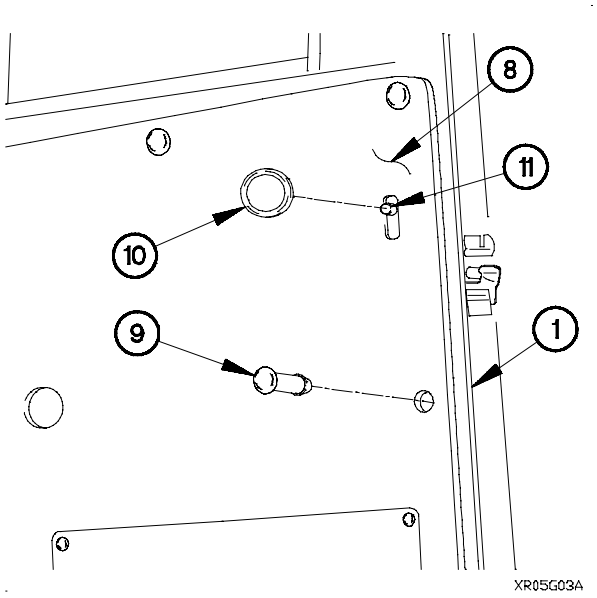
(4) Tighten six screws (2) on top hinge (4) and bottom hinge (3) to 22-26 lb-ft (30-35 N•m).

(5) Loosen three screws (5) on latch assembly (6) and adjust so latch assembly is centered on strike catch (7).

(6) Tighten three screws (5) to 70-85 lb-in. (8-10 N·m).

(7) Open and close door (1) to ensure correct operation.



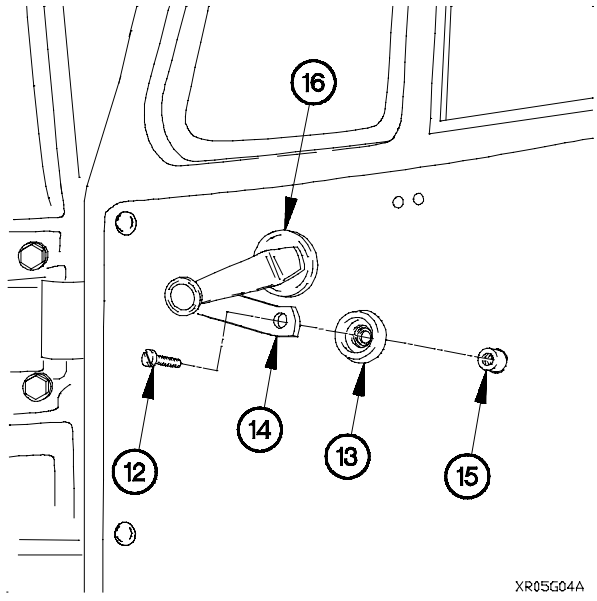


(8) Install door lining (8) on interior side of door (1) with ten rivets (9).

(9) Install knob (10) on lock stud (11).

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.



(10) Apply sealing compound to threads of screw (12).

(11) Position collar (13) and window crank (14) on window regulator (15) with screw (12).

(12) Tighten screw (12) to 50-55 lb-in. (6 N·m).

(13) Install cover (16) on window crank (14).

16-5. DOOR REPAIR/ADJUSTMENT (ALL MODELS EXCEPT M1081) (CONT)

(14) Position door handle (17) on door (1) with four screws (18).

(15) Tighten four screws (18) to 22-28 lb-in. (2-3 N·m).

WARNING

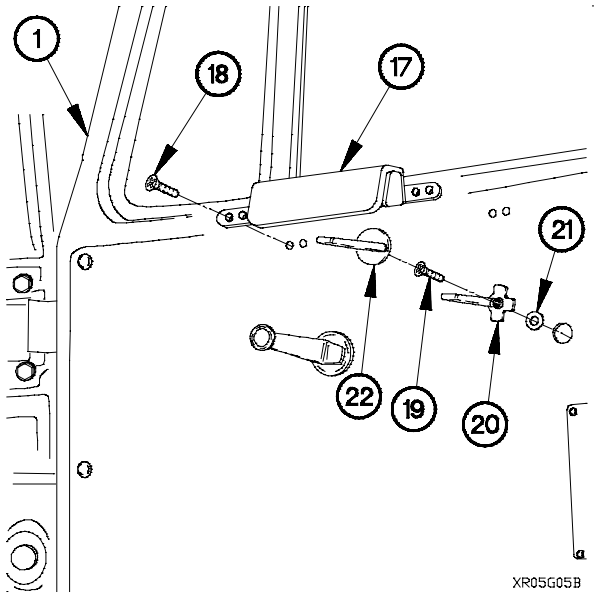
Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

(16) Apply sealing compound to threads of screw (19).

(17) Position door handle (20) on door (1) with washer (21) and screw (19).

(18) Tighten screw (19) to 50-55 lb-in. (6 N·m).

(19) Install cover (22) on door handle (20).



h. Follow-On Maintenance.

(1) Install marker light (para 7-31).

(2) Clean all grease or oil from door.

(3) Clean window glass.

End of Task.

16-6. M1081 DOOR REPAIR/ADJUSTMENT

This task covers:

a. Window and Window Regulator Removal
b. Window and Window Regulator Installation
c. Door Latch/Lock Disassembly
d. Door Latch/Lock Assembly
e. Door Upper-Half Removal
f. Door Upper-Half Installation
g. Door Lower-Half Removal
h. Door Lower-Half Installation
i. Door Adjustment
j. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
Engine shut down (TM 9-2320-365-10).
Marker light removed (para 7-31).
Upper door-half removed (for lower door-half removal only).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Wrench, Torque, 0-200 lb-in. (Item 58, Appendix C)
Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C)
Socket Set, Socket Wrench (Item 35, Appendix C)
Screwdriver Attachment, Socket Wrench (Item 49, Appendix B)
Tool Kit, Blind Rivet (Item 43, Appendix C)
Drill, Portable, Electric (Item 7, Appendix C)

Tools and Special Tools (Cont)
Drill, Twist (Item 8, Appendix C)
Goggles, Industrial (Item 15, Appendix B)

Materials/Parts
Sealing Compound (Item 61, Appendix D)
Grease, Automotive and Artillery (GAA) (Item 23, Appendix D)
Seal, Nonmetallic (Item 253, Appendix G)
Soap, Laundry (Item 69, Appendix D)
Rivet, Compression (12) (Item 237, Appendix G)
Rivet (6) (P/N 20601-M4W2)

Personnel Required
(2)

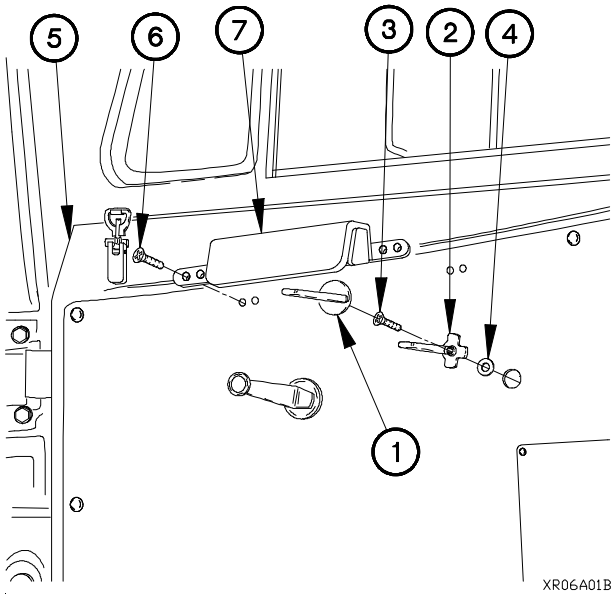
NOTE

If complete repair of the door is required, it will be necessary to notify DS maintenance to replace the door side window at the completion of Unit level repairs.

a. Window and Window Regulator Removal.

NOTE

Left and right windows and window regulators are removed the same way. Right side shown.



(1) Remove cover (1) from door handle (2).

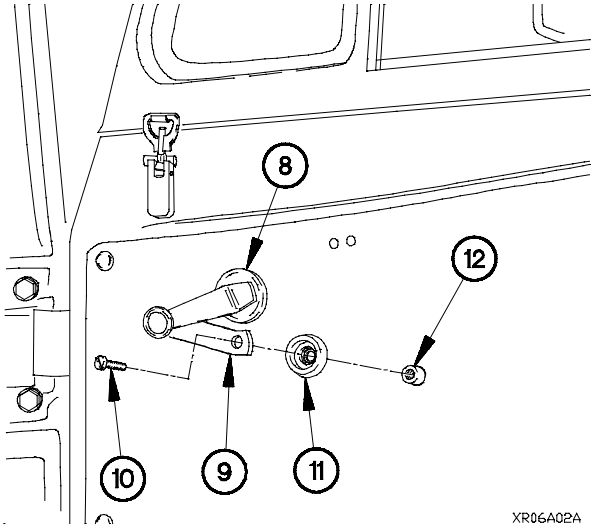
(2) Remove screw (3), door handle (2), and washer (4) from door (5).

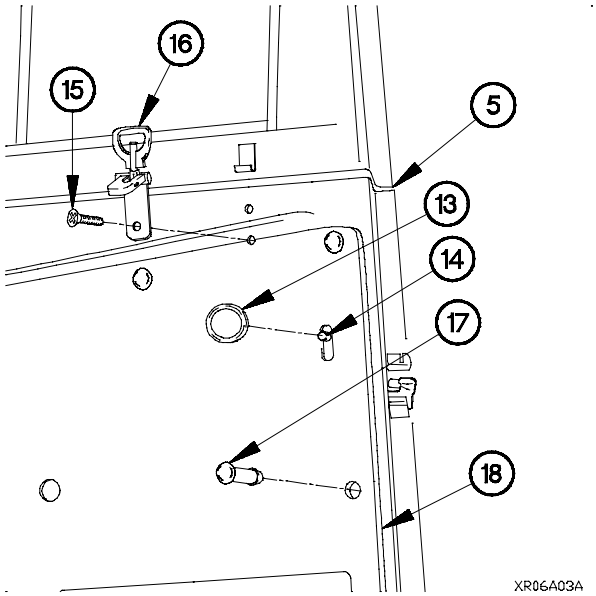
(3) Remove four screws (6) and handle (7) from door (5).

16-6. M1081 DOOR REPAIR/ADJUSTMENT (CONT)

(4) Raise cover (8) from window crank (9).

(5) Remove screw (10), window crank (9), and collar (11) from window regulator (12).





(6) Remove knob (13) from lock stud (14).

(7) Remove two screws (15) and latch (16) from door (5).

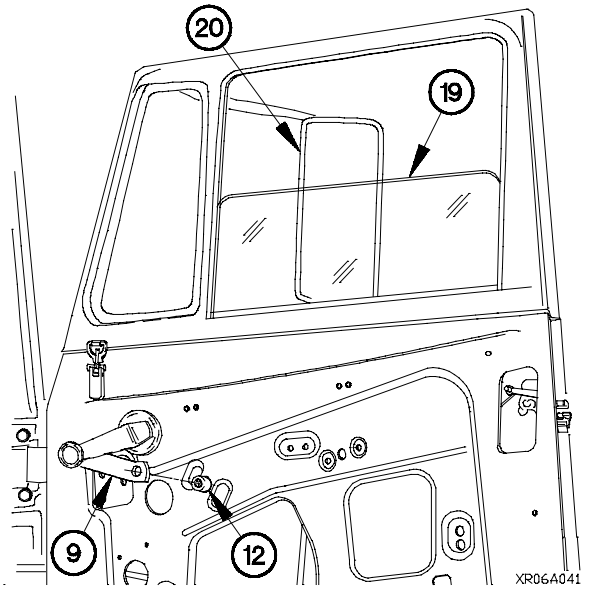
(8) Remove 12 rivets (17) from door lining (18).

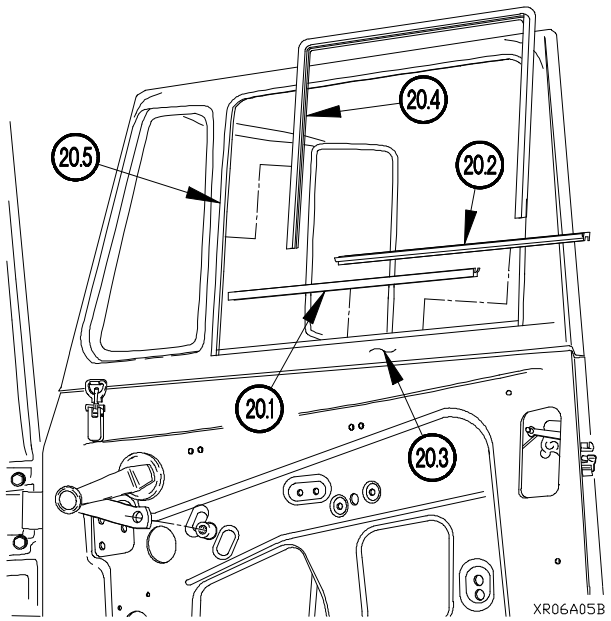
(9) Remove door lining (18) from door (5).

(10) Install window crank (9) on window regulator (12).

(11) Lower window (19) until completely down.

(12) Fold in rear view mirror (20).





(12.1) Remove inner and outer edge seals (20.1 and 20.2) from window sill (20.3).

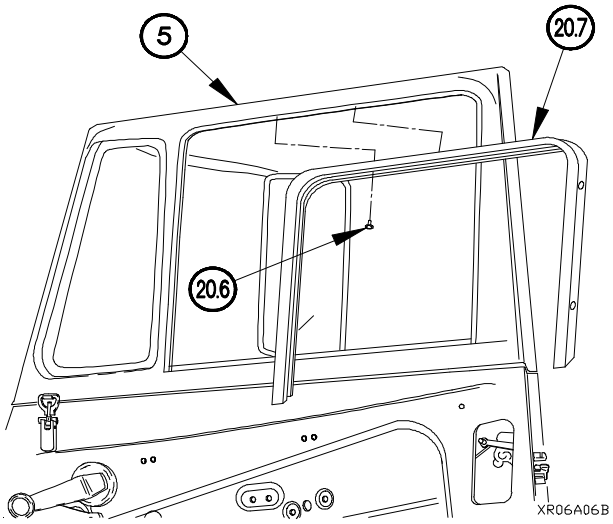
(12.2) Remove rubber sealing strip (20.4) from upper portion of window channel (20.5).

WARNING

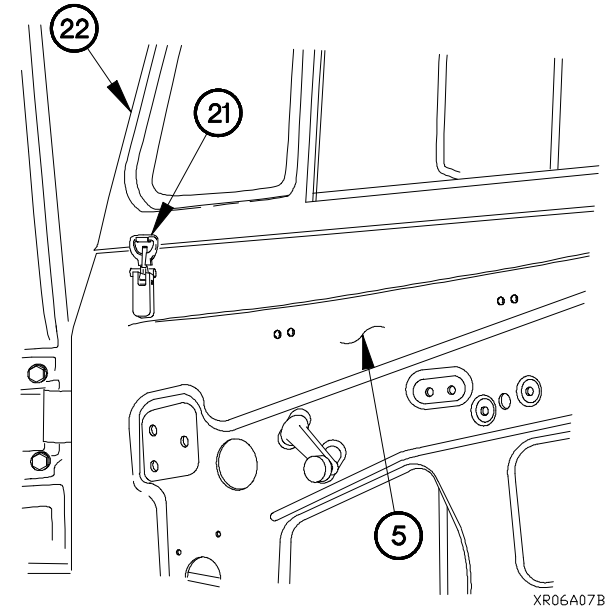
Wear appropriate eye protection when drilling out rivets. Failure to comply may result in injury to personnel.

NOTE

Some vehicles have screws attaching upper window channel. Rivets are shown.

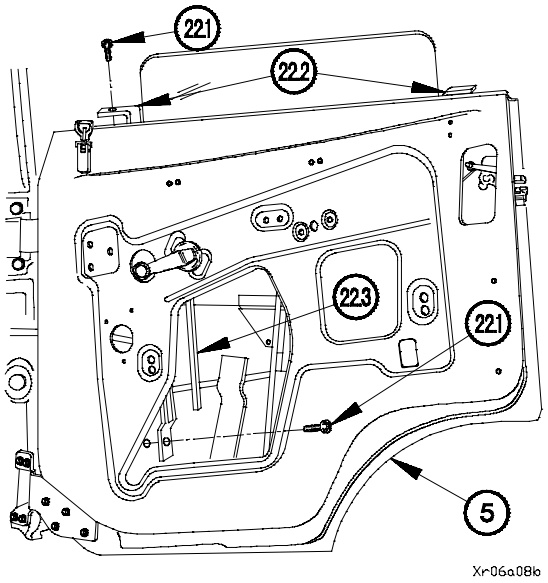


(12.3) Remove six rivets (20.6) and upper window channel (20.7) from door (5).



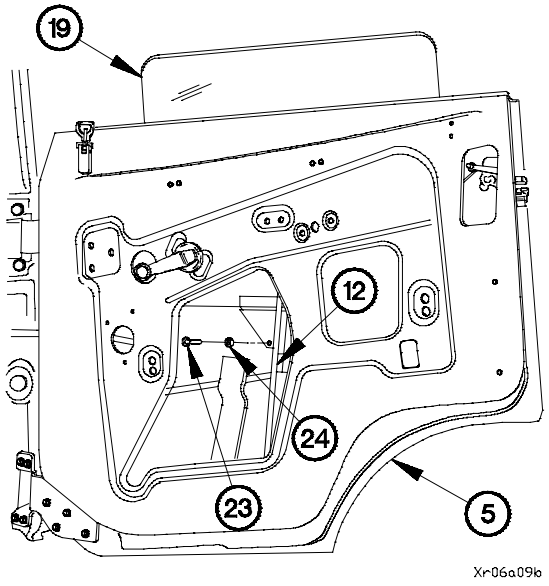
(13) Unlatch window frame latch (21) at front of door (5).

(14) Fold window frame (22) down.



(14.1) Remove four screws (22.1) from front and rear lower window channels (22.2).

(14.2) Remove two lower window channels (22.2) and rubber sealing strips (22.3) from door (5).



(15) Raise window (19) enough to access two screws (23) at bottom of window.

WARNING

Use care when removing window. Do not force window, or window may shatter. Failure to comply may result in injury to personnel or damage to equipment.

NOTE

Step (16) requires the aid of an assistant.

(16) Support window (19) and remove two screws (23) and washers (24) from window regulator (12).

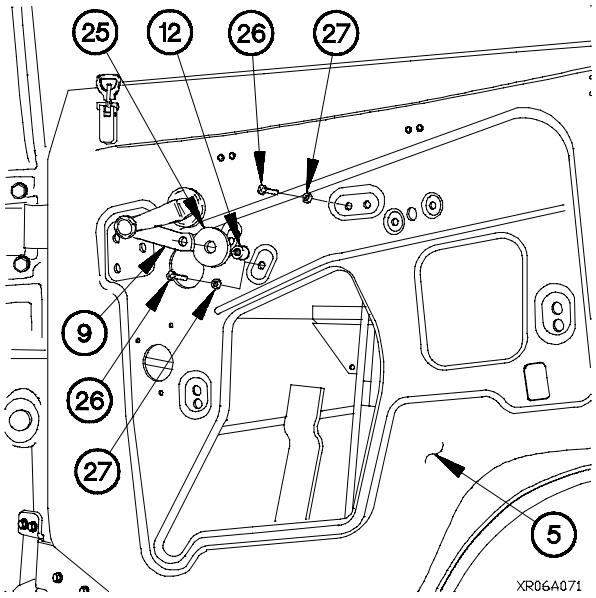
(17) Remove window (19) from door (5).

16-6. M1081 DOOR REPAIR/ADJUSTMENT (CONT)

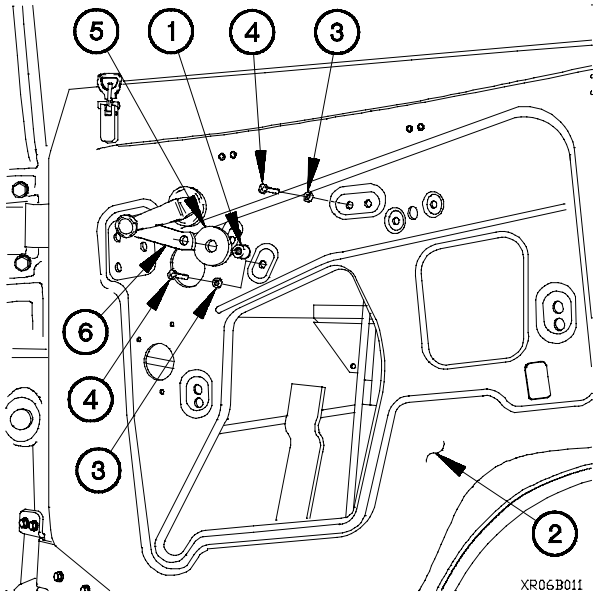
(18) Remove window crank (9) and resilient mount (25) from window regulator (12).

(19) Remove four screws (26) and washers (27) from window regulator (12).

(20) Remove window regulator (12) from door (5).



b. Window and Window Regulator Installation.



NOTE

Left and right windows and window regulators are installed the same way. Right side shown.

(1) Position window regulator (1) in door (2).

(2) Align holes in window regulator (1) and mounting holes in door (2)

(3) Position four washers (3) and screws (4) in window regulator (1).

(4) Tighten four screws (4) to 70-85 lb-in. (8-10 N·m).

(5) Install resilient mount (5) and window crank (6) on window regulator (1).

WARNING

Use care when installing window. Do not force window, or window may shatter. Failure to comply may result in injury to personnel.

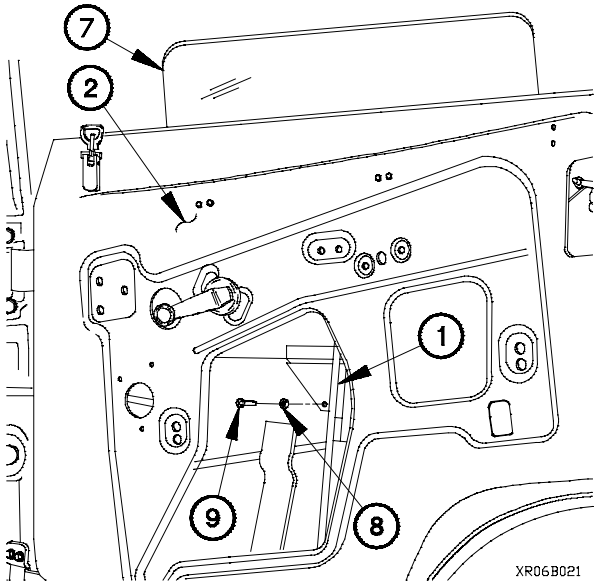
NOTE

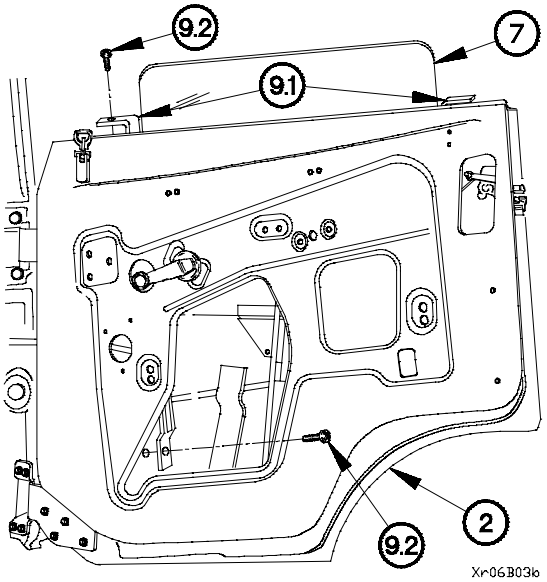
Steps (6) and (7) require the aid of an assistant.

(6) Position window (7) in door (2).

(7) Support window (7) and install two washers (8) and screws (9) in window regulator (1).

(8) Lower window (7) until completely down.

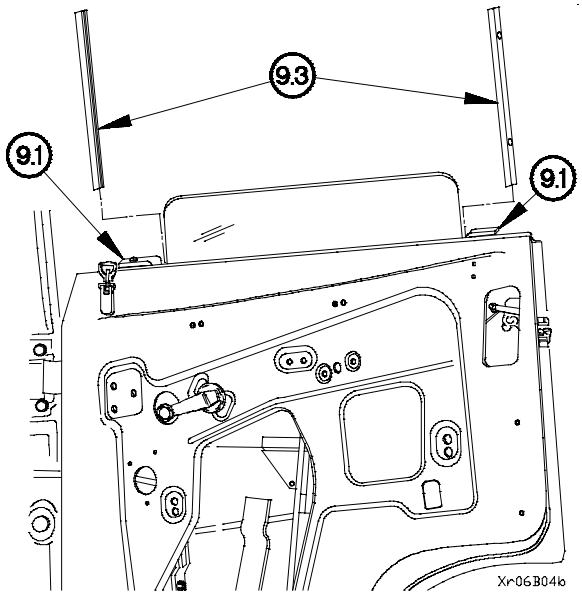




(8.1) Position two lower window channels (9.1) over window (7) from inside of door (2).

(8.2) Install two lower window channels (9.1) in door (2) with four screws (9.2).

(8.3) Tighten four screws (9.2) to 10-14 lb-in. (1-2 N·m).



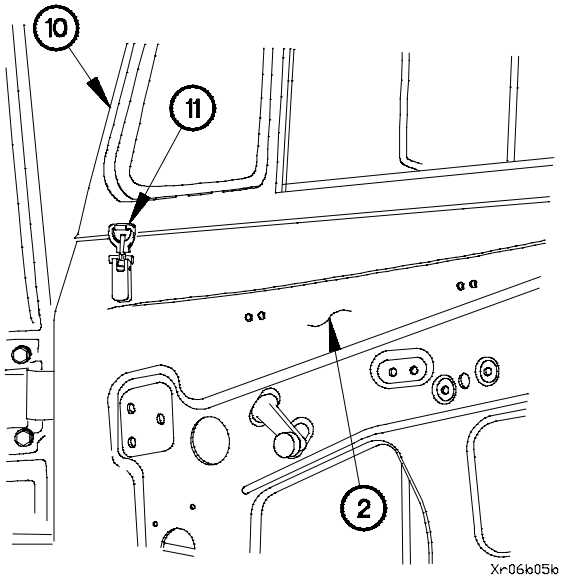
NOTE

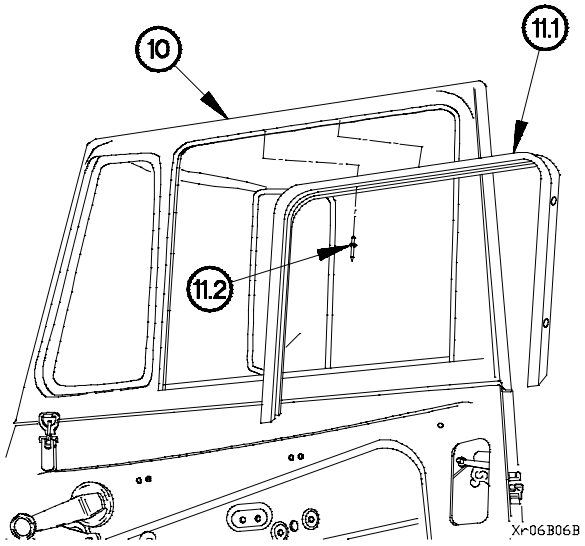
- Use a solution of soap and water to ease installation of rubber sealing strips.
- It may be necessary to roll window up and down during installation of rubber sealing strips.

(8.4) Install rubber sealing strips (9.3) in two lower window channels (9.1).

(9) Raise window frame (10) to vertical position.

(10) Latch window frame latch (11) at front of door (2).





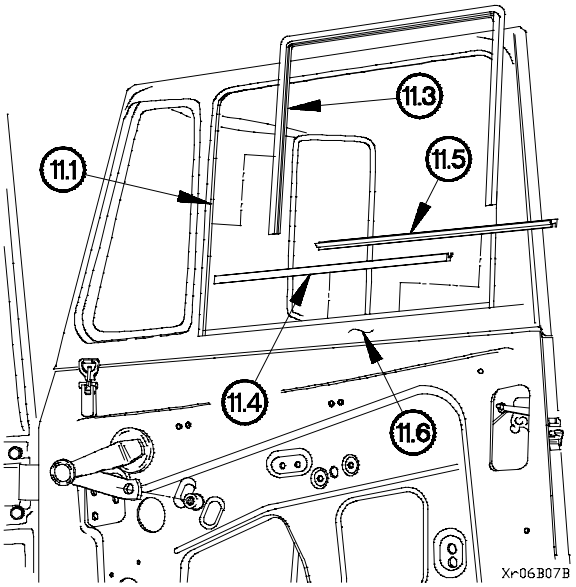
(10.1) Install upper window channel (11.1) in window frame (10) with six rivets (11.2).

NOTE

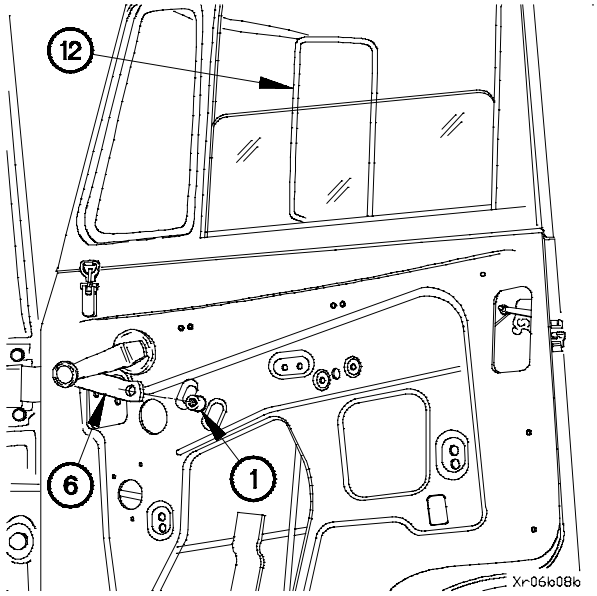
- Use a solution of soap and water to ease installation of rubber sealing strips.
- It may be necessary to roll window up and down during installation of rubber sealing strips.

(10.2) Install rubber sealing strip (11.3) in upper window channel (11.1).

(10.3) Install inner and outer edge seals (11.4 and 11.5) in window sill (11.6).

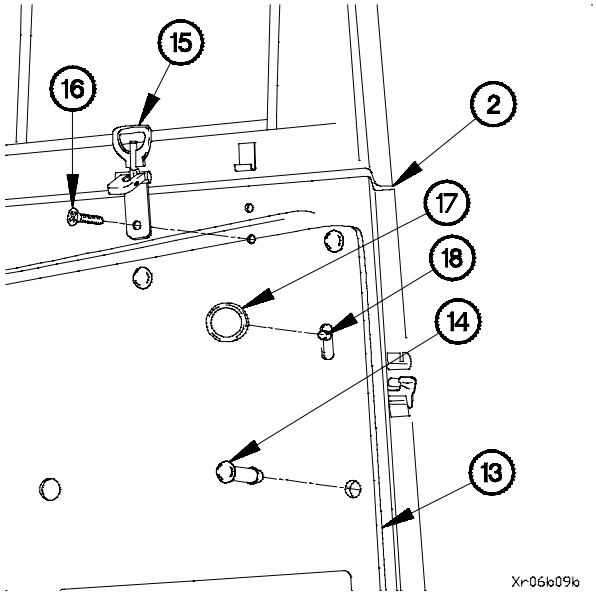


16-6. M1081 DOOR REPAIR/ADJUSTMENT (CONT)



(11) Remove window crank (6) from window regulator (1).

(12) Fold out rear view mirror (12).



NOTE

Position door lining inside of strip at bottom of door.

(13) Position door lining (13) on door (2).

(14) Install 12 rivets (14) in door lining (13).

(15) Position latch (15) on door (2) with two screws (16).

(16) Tighten two screws (16) to 65-121 lb-in. (10-14 N·m).

(17) Install knob (17) on lock stud (18).

WARNING

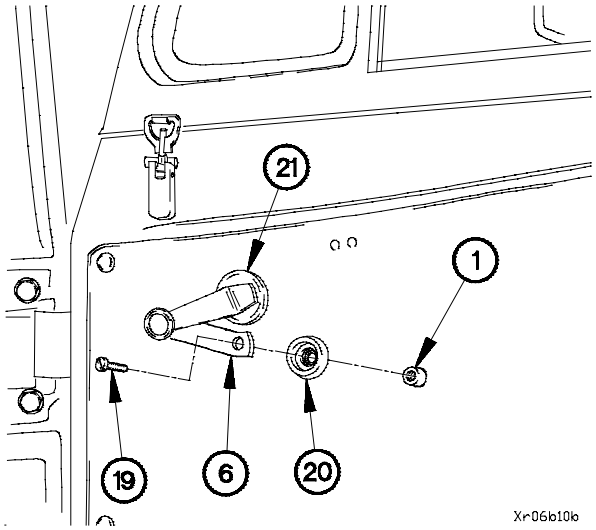
Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

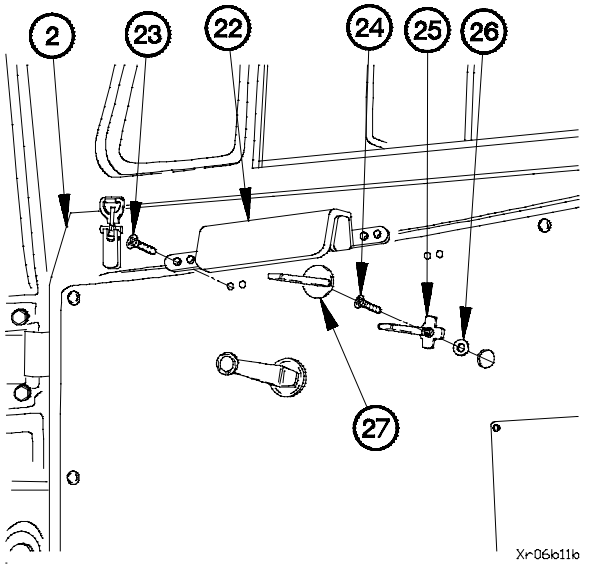
(18) Apply sealing compound to threads of screw (19).

(19) Position collar (20) and window crank (6) on window regulator (1) with screw (19).

(20) Tighten screw (19) to 50-55 lb-in. (6 N·m).

(21) Install cover (21) on window crank (6).





(22) Position handle (22) on door (2) with four screws (23).

(23) Tighten four screws (23) to 22-28 lb-in. (2-3 N·m).

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

(24) Apply sealing compound to threads of screw (24).

(25) Position door handle (25) on door (2) with washer (26) and screw (24).

(26) Tighten screw (24) to 50-55 lb-in. (6 N·m).

(27) Install cover (27) on door handle (25).

16-6. M1081 DOOR REPAIR/ADJUSTMENT (CONT)

c. Door Latch/Lock Disassembly.

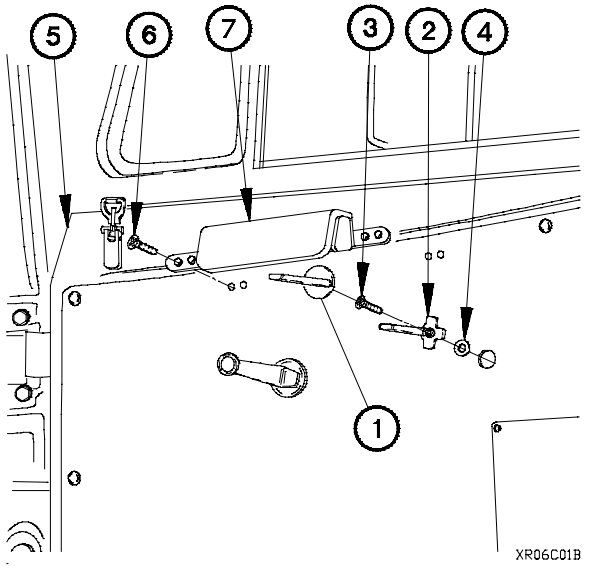
NOTE

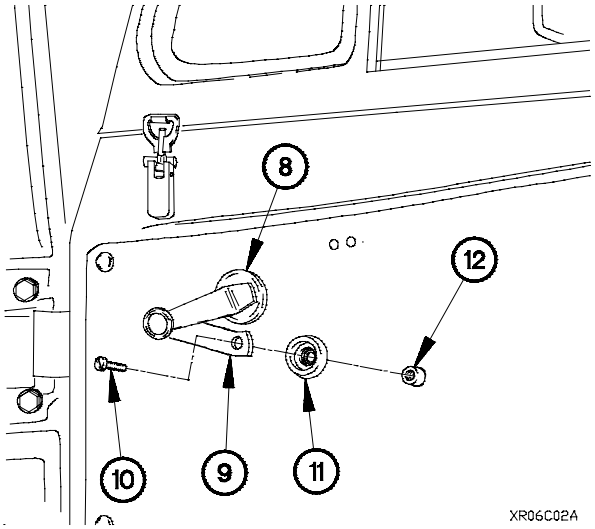
Both latch/lock assemblies are removed the same way. Right side shown.

(1) Remove cover (1) from door handle (2).

(2) Remove screw (3), door handle (2), and washer (4) from door (5).

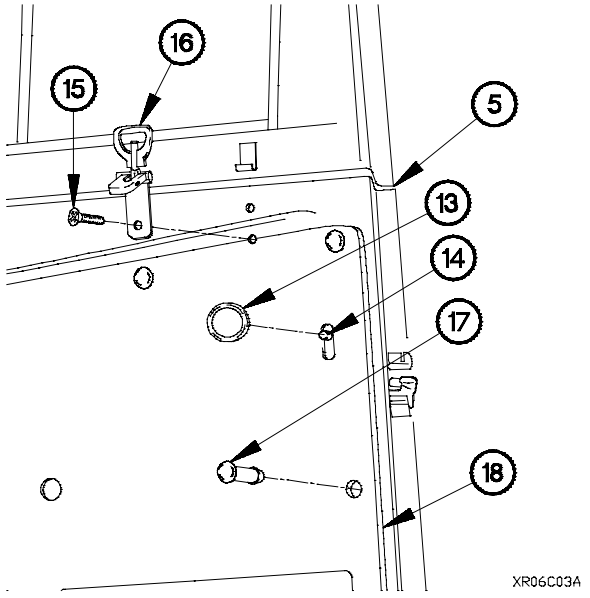
(3) Remove four screws (6) and handle (7) from door (5).





(4) Raise cover (8) from window crank (9).

(5) Remove screw (10), window crank (9), and collar (11) from window regulator (12).



(6) Remove knob (13) from lock stud (14).

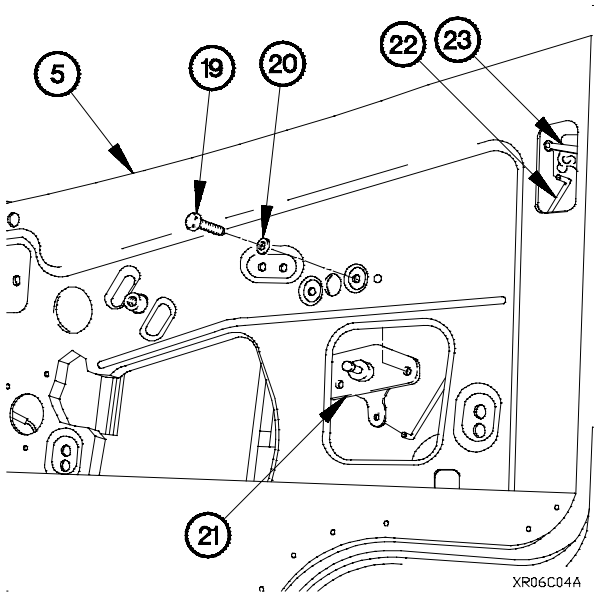
(7) Remove two screws (15) and latch (16) from door (5).

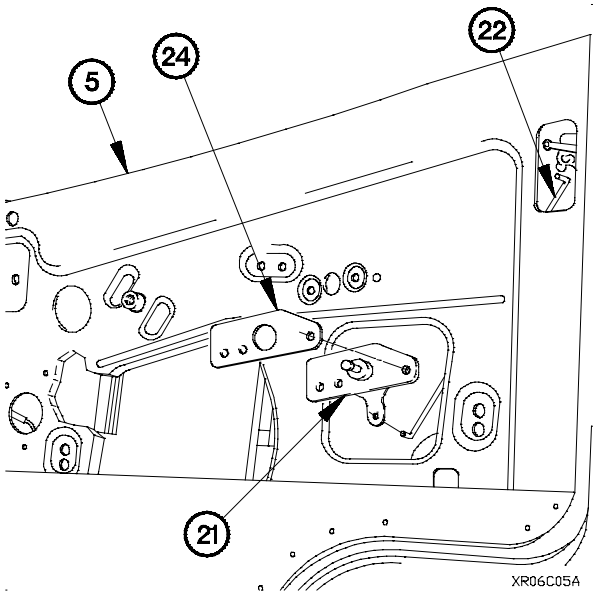
(8) Remove 12 rivets (17) from door lining (18).

(9) Remove door lining (18) from door (5).

(10) Remove two screws (19), washers (20), and actuator assembly (21) from door (5).

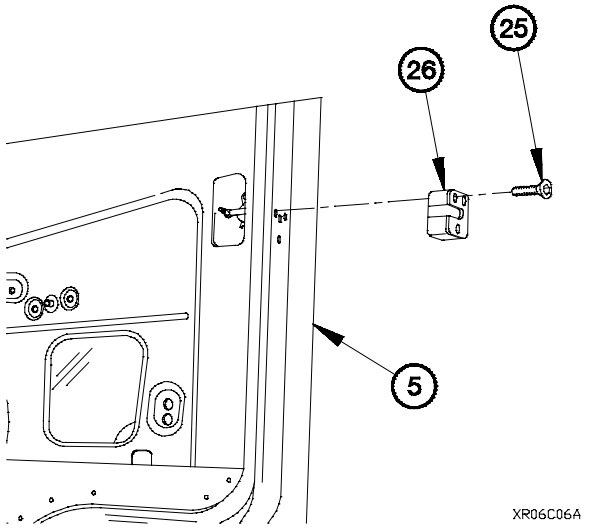
(11) Disconnect upper end of actuator control rod (22) from release assembly (23).





(12) Remove actuator control rod (22), actuator assembly (21), and seal (24) from door (5). Discard seal.

(13) Remove three screws (25) and latch assembly (26) from door (5).



16-6. M1081 DOOR REPAIR/ADJUSTMENT (CONT)

NOTE

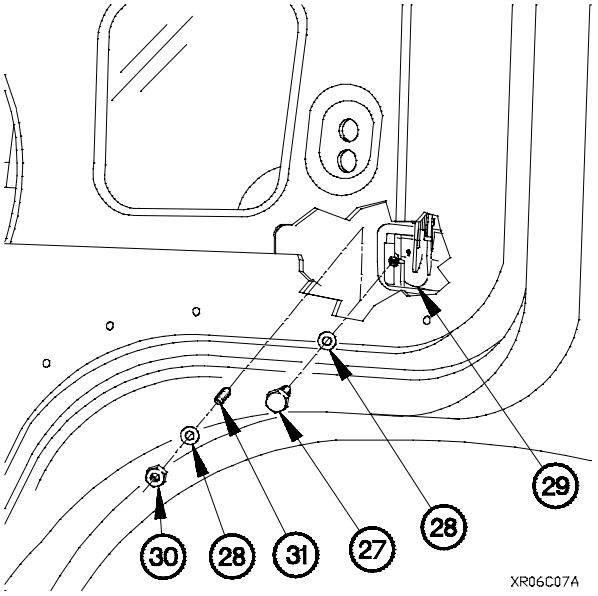
Perform step (14) on vehicle serial numbers 0001 through 3091 that have not had the handle/lock assembly replaced previously.

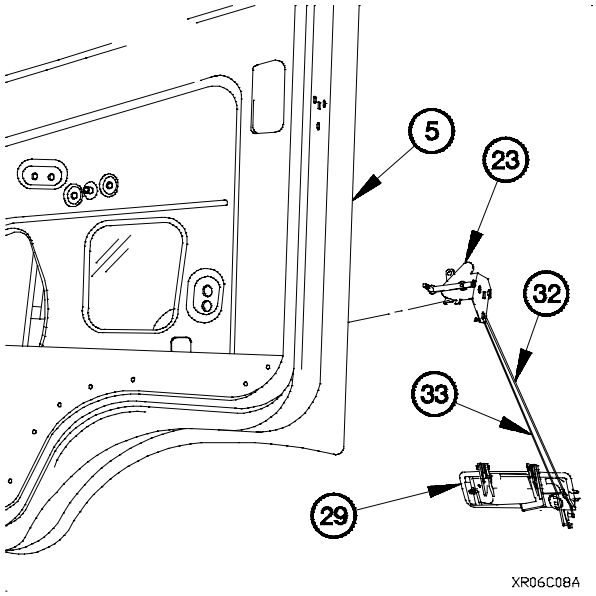
(14) Remove screw (27) and washer (28) from handle/lock assembly (29).

NOTE

Perform step (15) on vehicle serial numbers 3092 and higher serial numbers, and vehicles that have had the handle/lock assembly replaced previously.

(15) Remove nut (30), washer (28), and setscrew (31) from handle/lock assembly (29).





(16) Push handle/lock (29) toward front of vehicle until rear of handle/lock assembly is released from door (5).

(17) Remove handle/lock (29), two control rods (32 and 33), and release assembly (23) out through handle/ lock opening.

d. Door Latch/Lock Assembly.

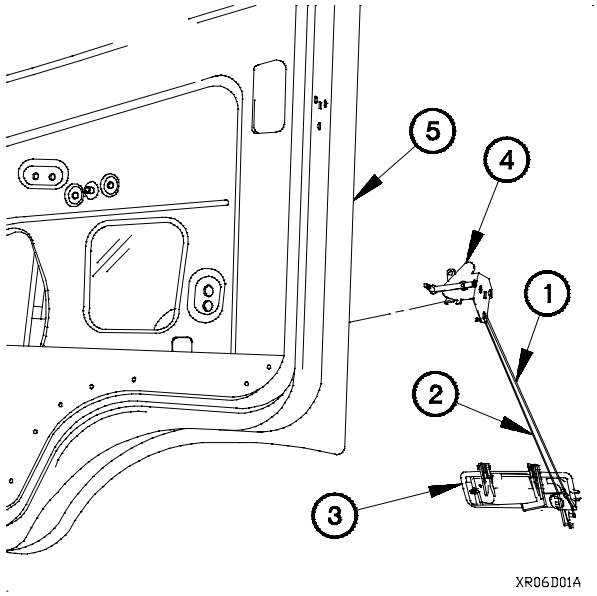
NOTE

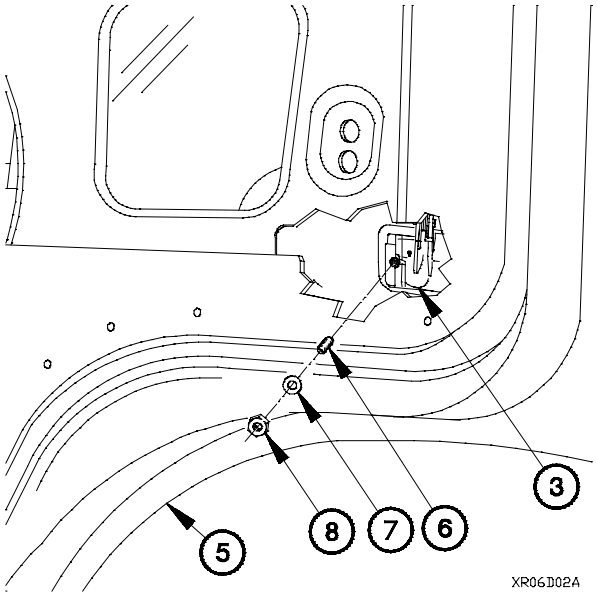
Both latch/lock assemblies are installed the same way. Right side shown.

(1) Attach two control rods (1 and 2) between handle/lock assembly (3) and release assembly (4).

(2) Insert release assembly (4) and two control rods (1 and 2) upward through handle/lock assembly (3) opening in door (5).

(3) Seat handle/lock assembly (3) into door opening by pushing handle/lock assembly toward front of vehicle until rear of handle/lock assembly can enter opening, then push handle/lock assembly toward rear until handle/lock assembly is fully seated.





WARNING

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(4) Apply sealing compound to threads of setscrew (6).

(5) Position handle/lock assembly (3) on door (5) with setscrew (6).

(6) Tighten setscrew (6) to 70-85 lb-in. (8-10 N·m).

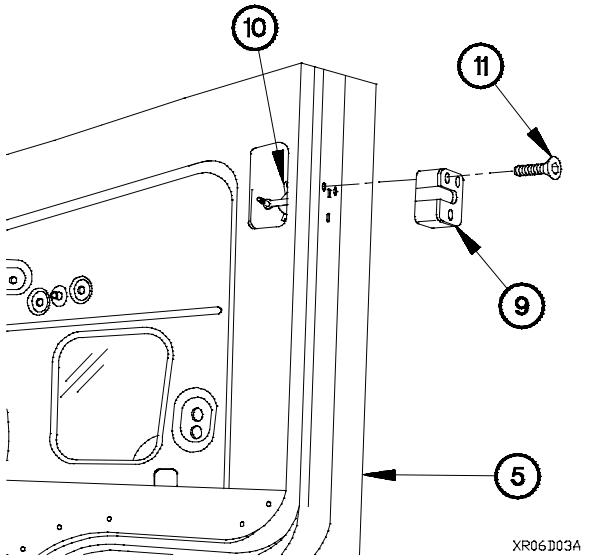
(7) Position washer (7) and nut (8) on setscrew (6).

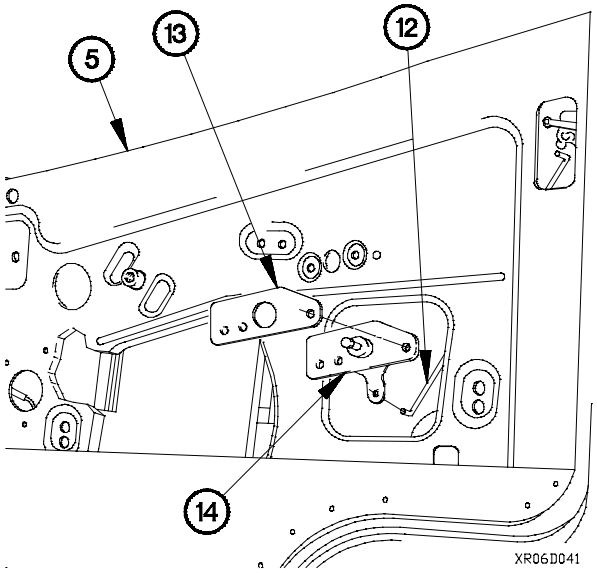
(8) Tighten nut (8) to 70-85 lb-in. (8-10 N·m).

16-6. M1081 DOOR REPAIR/ADJUSTMENT (CONT)

(9) Position latch assembly (9) and release assembly (10) on door (5) with three screws (11).

(10) Tighten three screws (11) to 70-85 lb-in. (8-10 N·m).





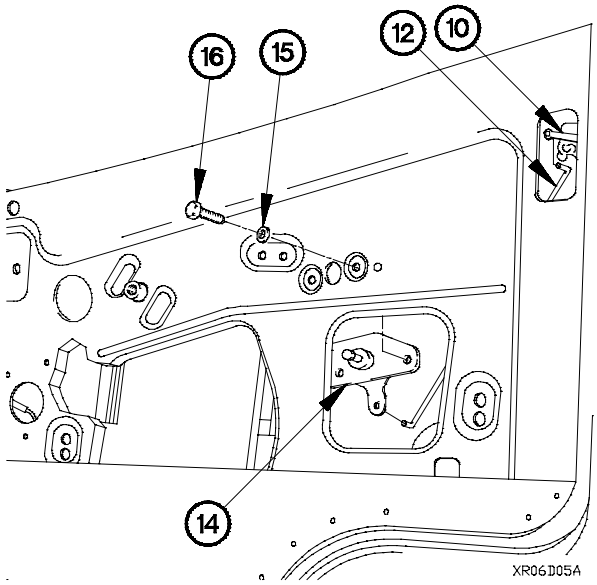
(11) Install actuator control rod (12) and seal (13) on actuator assembly (14).

(12) Insert actuator assembly (14) in door (5).

(13) Attach upper end of actuator control rod (12) to release assembly (10).

(14) Position two washers (15) and screws (16) in actuator assembly (14).

(15) Tighten two screws (16) to 49-60 lb-in. (5-7 N·m).



NOTE

Ensure door lining fits inside of strip at bottom of door.

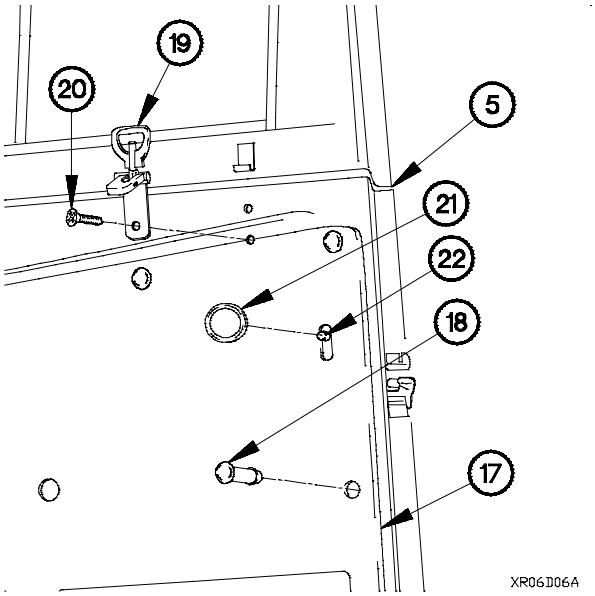
(16) Position door lining (17) on door (5).

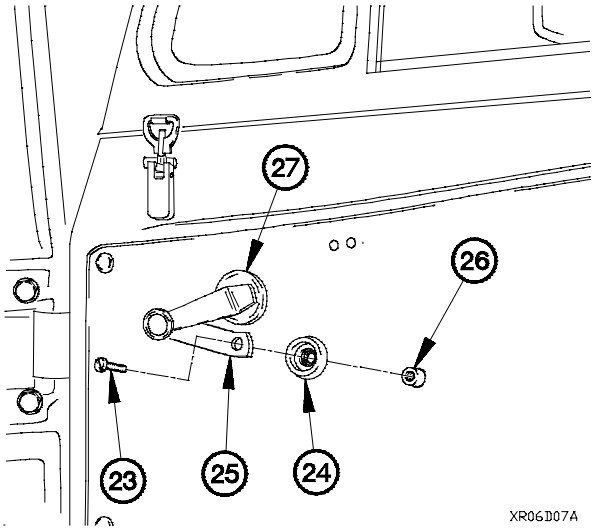
(17) Install 12 rivets (18) in door lining (17).

(18) Position latch (19) on door (5) with two screws (20).

(19) Tighten two screws (20) to 65-121 lb-in. (10-14 N·m).

(20) Install knob (21) on lock stud (22).





WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

(21) Apply sealing compound to threads of screw (23).

(22) Position collar (24) and window crank (25) on window regulator (26) with screw (23).

(23) Tighten screw (23) to 50-55 lb-in. (6 N·m).

(24) Install cover (27) on window crank (25).

16-6. M1081 DOOR REPAIR/ADJUSTMENT (CONT)

(25) Position handle (28) on door (5) with four screws (29).

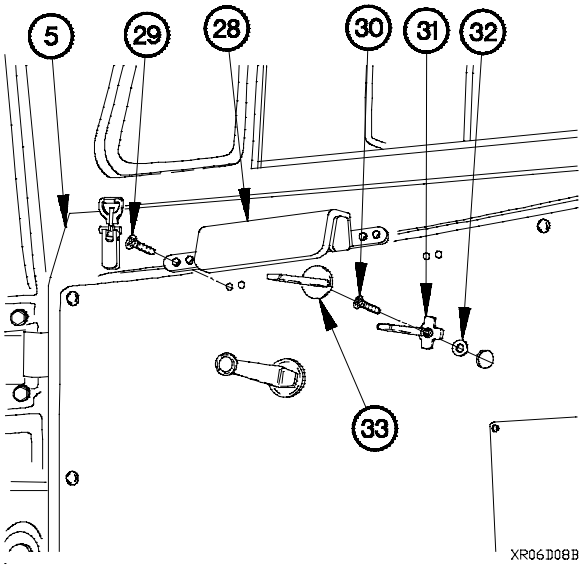
(26) Tighten four screws (29) to 22-28 lb-in. (2-3 N·m).

(27) Apply sealing compound to threads of screw (30).

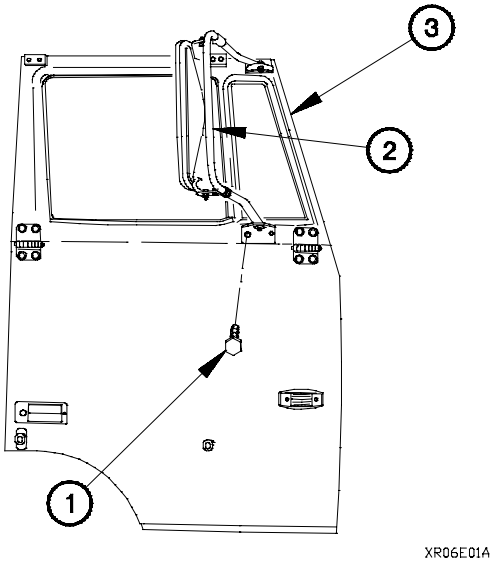
(28) Position door handle (31) on door (5) with washer (32) and screw (30).

(29) Tighten screw (30) to 50-55 lb-in. (6 N·m).

(30) Install cover (33) on door handle (31).



e. Door Upper-Half Removal.



NOTE

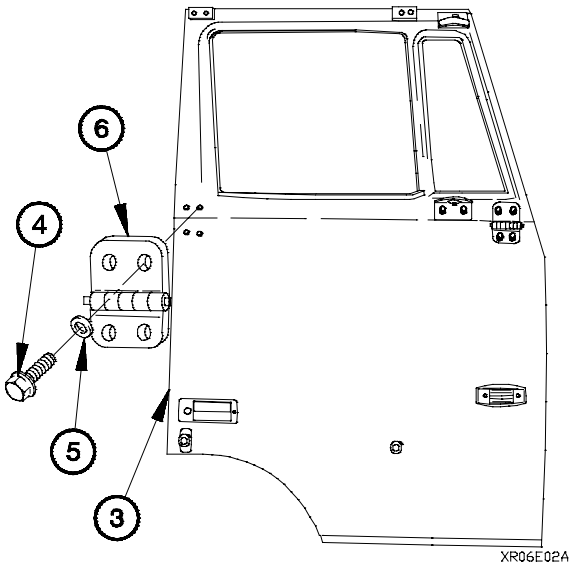
Left and right door upper-halves are removed the same way. Right side shown.

(1) Remove four screws (1) and mirror assembly (2) from door upper-half (3).

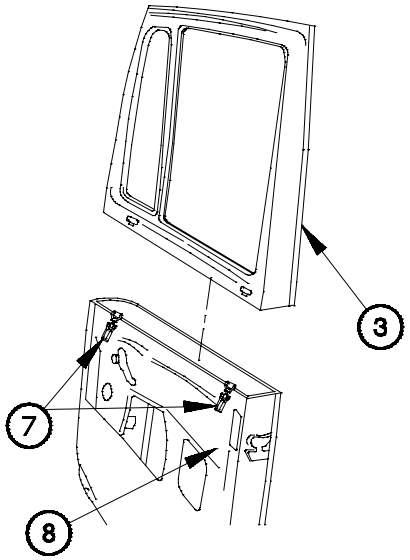
NOTE

The hinges are different. Note position of each hinge.

(2) Remove eight bolts (4), washers (5) and two hinges (6) from door (3).

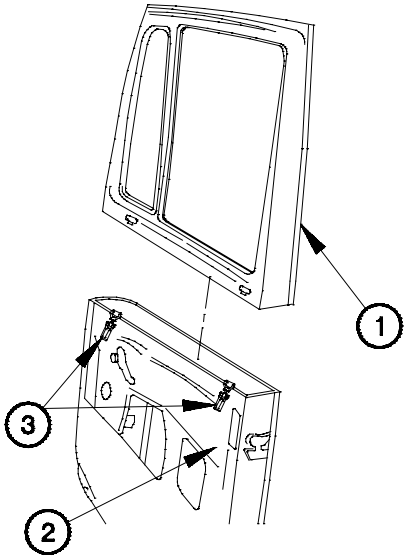


(3) Unlatch two latches (7) on door lower-half (8) and remove door upper-half (3).



XR06E03A

f. Door Upper-Half Installation.



XR06F01A

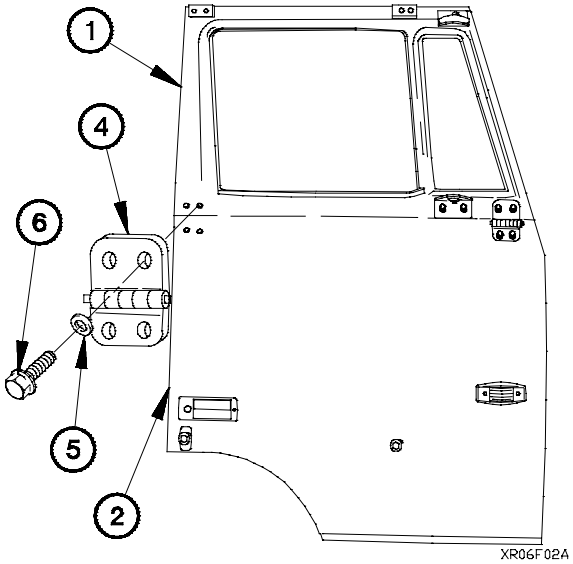
NOTE

Left and right door upper-halves are installed the same way. Right side shown.

(1) Install door upper-half (1) on door lower-half (2) with two latches (3).

(2) Position two hinges (4) on door upper-half (1) and door lower-half (2) with eight washers (5) and screws (6).

(3) Tighten eight screws (6) to 22-28 lb-ft (30-38 N·m).



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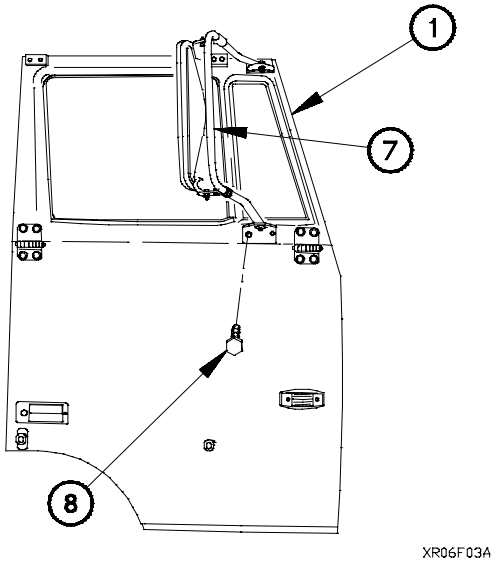
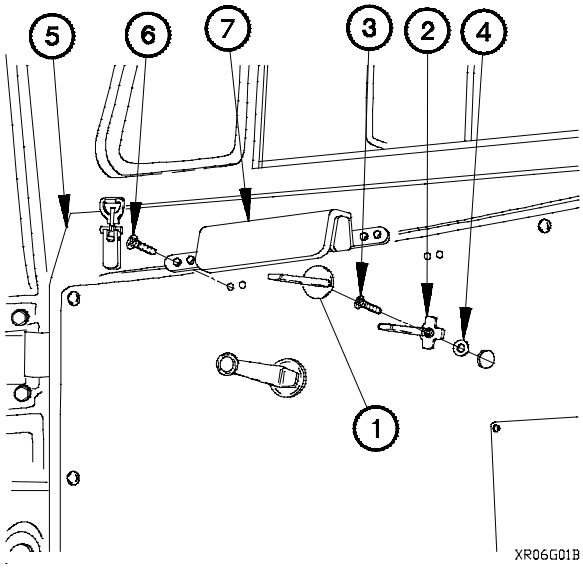
16-6. M1081 DOOR REPAIR/ADJUSTMENT (CONT)



(4) Position mirror assembly (7) on door upper-half (1) with four screws (8).

(5) Tighten four screws (8) to 84-96 lb-in. (9-11 N·m).

g. Door Lower-Half Removal.



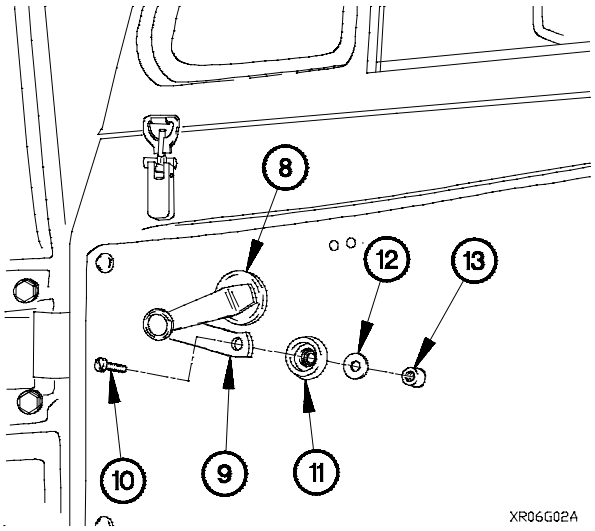
NOTE

Left and right door lower-halves are removed the same way. Right side shown.

(1) Remove cover (1) from door handle (2).

(2) Remove screw (3), door handle (2), and washer (4) from door (5).

(3) Remove four screws (6) and handle (7) from door (5).



(4) Raise cover (8) from window crank (9).

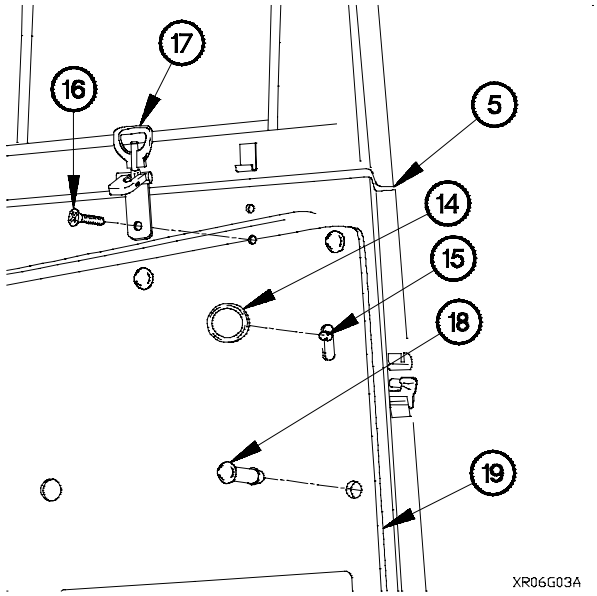
(5) Remove screw (10), window crank (9), collar (11), and resilient mount (12) from window regulator (13).

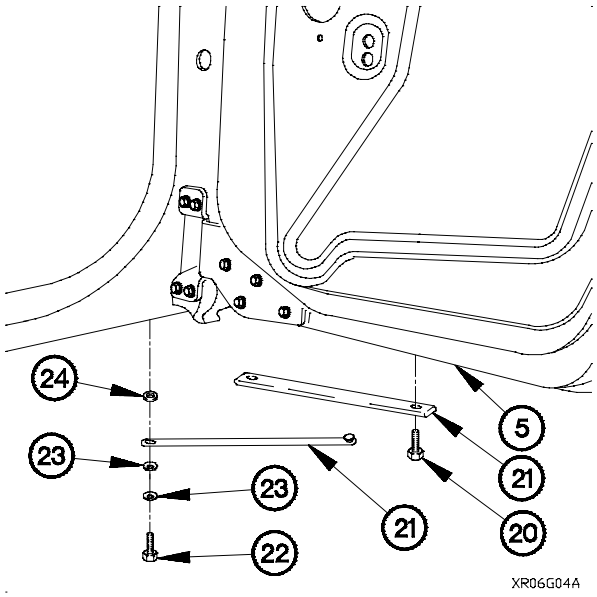
(6) Remove knob (14) from lock stud (15).

(7) Remove two screws (16) and latch (17) from door (5).

(8) Remove 12 rivets (18) from door lining (19).

(9) Remove door lining (19) from door (5).



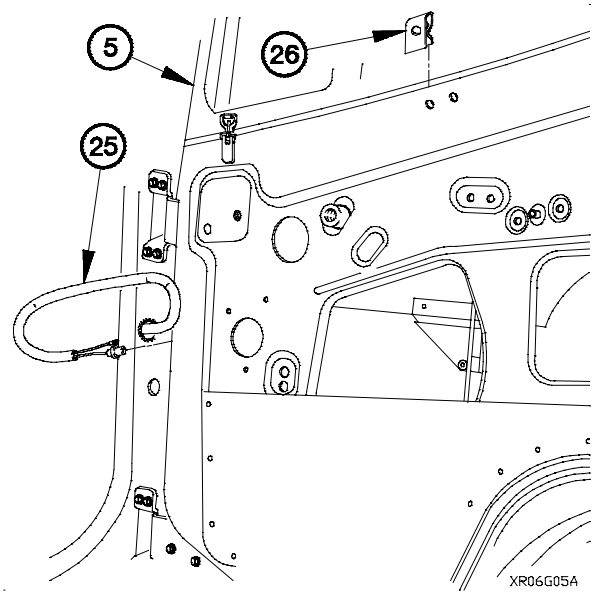


(10) Remove two screws (20) and door arrestor assembly (21) from bottom of door (5).

(11) Remove screw (22), two spring washers (23), door arrestor assembly (21), and washer (24) from cab.

(12) Remove wiring harness (25) from door (5) by pulling through access hole in forward edge of door (5).

(13) Remove four clip nuts (26) from door (5).



16-6. M1081 DOOR REPAIR/ADJUSTMENT (CONT)

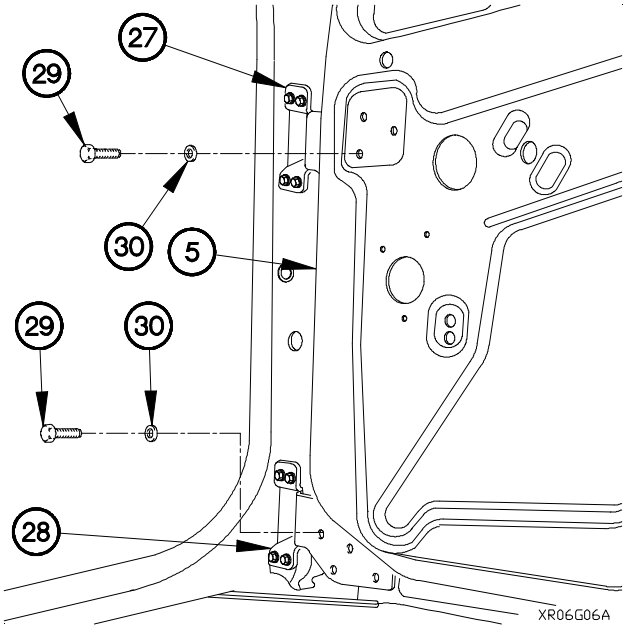
NOTE

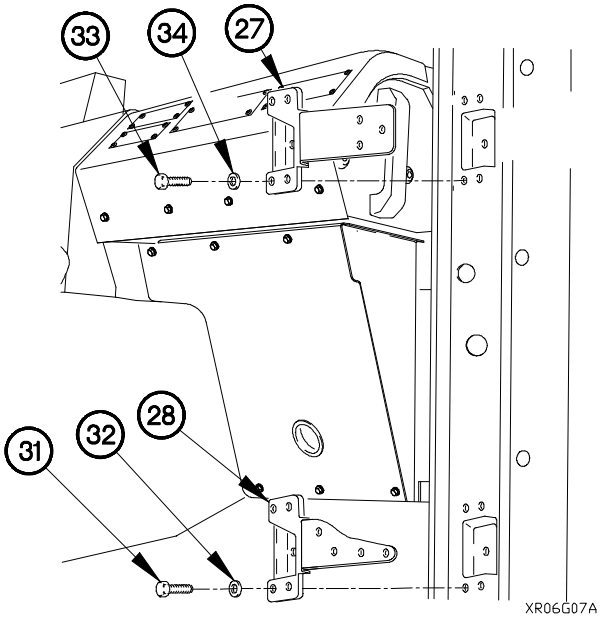
Steps (14) through (16) require the aid of an assistant.

(14) Lift door (5) enough to take weight off hinges (27 and 28).

(15) Remove six screws (29) and washers (30) from hinges (27 and 28).

(16) Remove door (5) from cab.





(17) Remove five screws (31), washers (32), and hinge (28) from cab.

(18) Remove five screws (33), washers (34), and hinge (27) from cab.

h. Door Lower-Half Installation.

NOTE

Left and right door lower-halves are installed the same way. Right side shown.

(1) Position hinge (1) on cab with two washers (2) and screws (3).

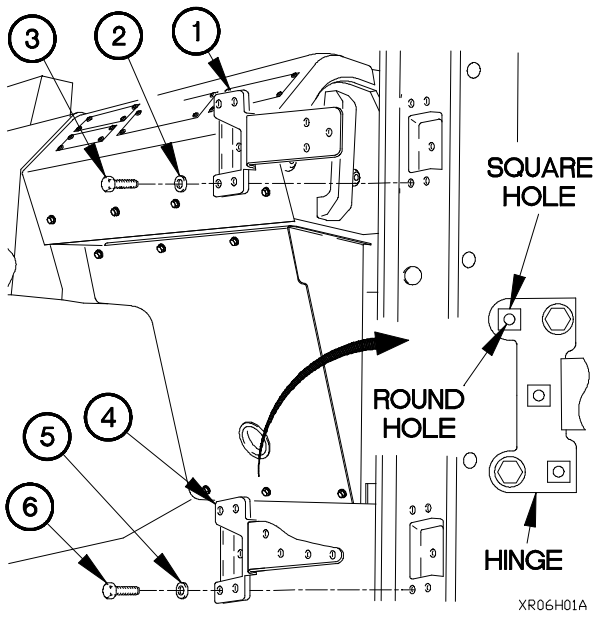
(2) Position hinge (4) on cab with two washers (5) and screws (6).

(2.1) Position hinges (1 and 4) so that remaining three bolt holes in cab are centered in square holes in hinges as shown.

(2.2) Tighten two screws (3 and 6) to 22-26 lb ft (30-34 N•m).

(2.3) Position three washers (2 and 5) and screws (3 and 6) in hinges (1 and 4).

(2.4) Tighten three screws (3 and 6) to 22-26 lb ft (30-34 N•m).



NOTE

Steps (3) through (7) require the aid of an assistant.

(3) Position door (7) on cab with hinge (1) in slot in forward edge of door and bolt holes aligned with openings in door.

(4) Position door (7) on hinge (1) with three washers (8) and screws (9).

(5) Position door (7) on hinge (4) with three washers (10) and screws (11).

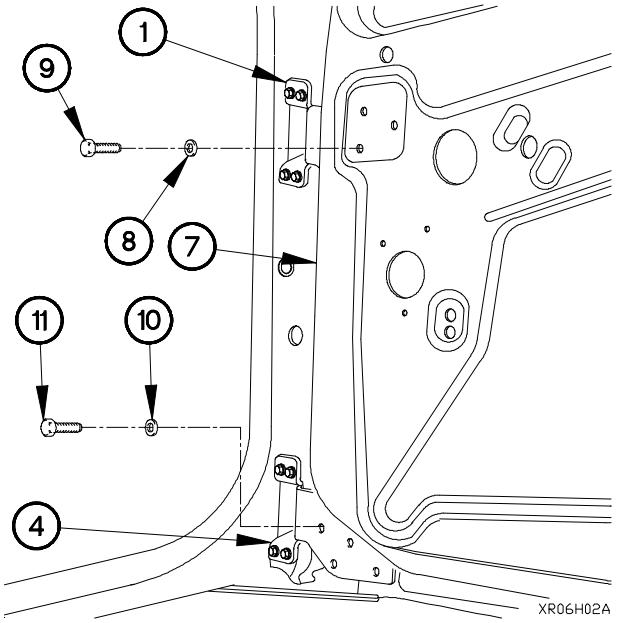
(6) Position door (7) so that gap between door and cab is approximately equal all around.

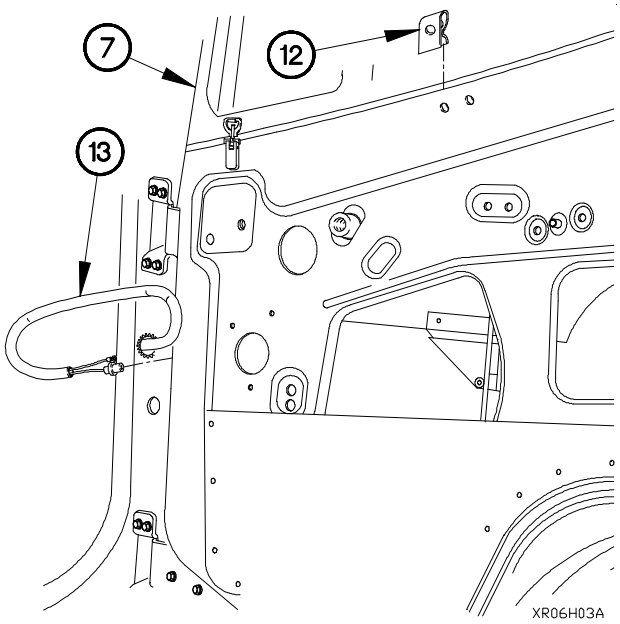
(7) Tighten three screws (9) and screws (11) one-half turn.

(8) Open, close, and open door (7) to ensure correct operation.

(9) Tighten three screws (9) and screws (11) to 22-26 lb-ft (30-35 N•m).

(9.1) Apply grease to hinges (1 and 4).





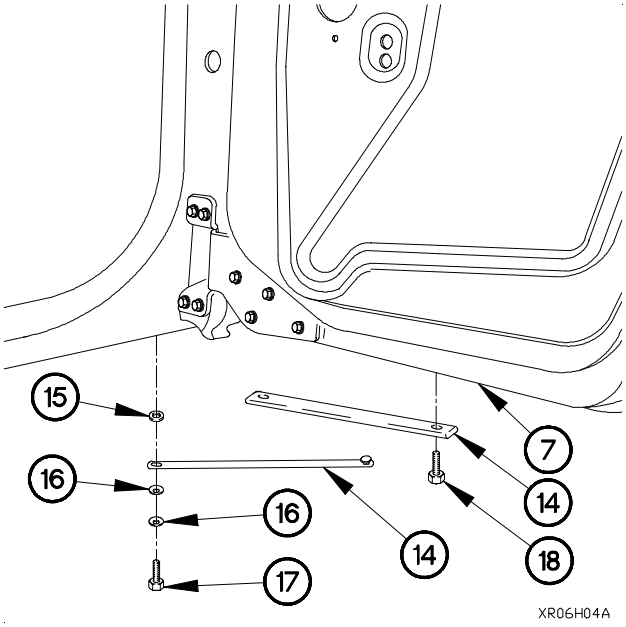
(10) Install four clip nuts (12) on door (7).

(11) Install wiring harness (13) through access hole in forward edge of door (7).

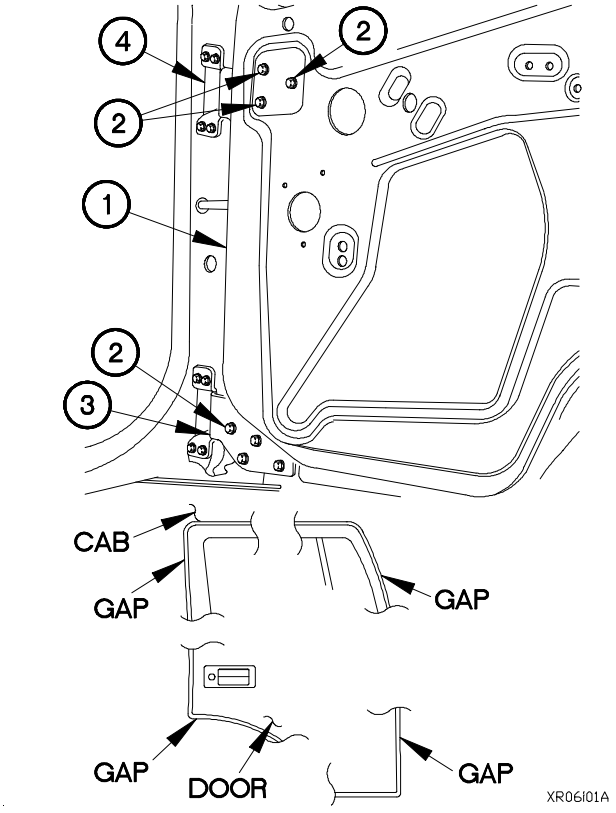
16-6. M1081 DOOR REPAIR/ADJUSTMENT (CONT)

(12) Install door arrestor assembly (14) on cab with washer (15), two spring washers (16), and screw (17).

(13) Install door arrestor assembly (14) on bottom of door (7) with two screws (18).



i. Door Adjustment.



NOTE

- Steps (1) through (4) require the aid of an assistant.
- Loosen door hinge screws only enough to allow small adjusting movements of door.

(1) Support door (1) and loosen six screws (2) on bottom hinge (3) and top hinge (4).

(2) Adjust door (1) so that gap between door (1) and cab is approximately equal all around.

(3) Open, close, and open door (1) to ensure correct operation.

NOTE

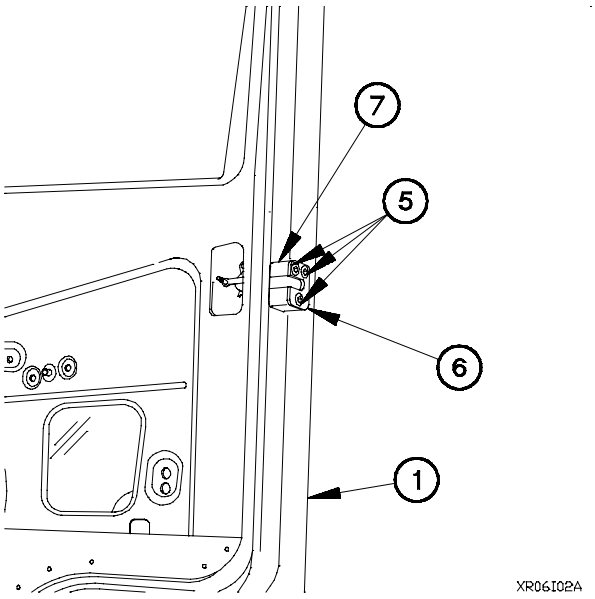
Hold door in Place while screws are tightened.

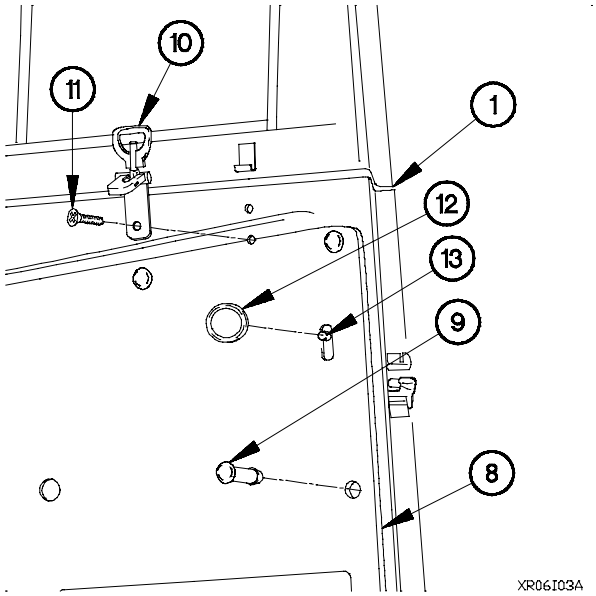
(4) Tighten six screws (2) on top hinge (4) and bottom hinge (3) to 22-26 lb-ft (30-35 N•m).

(5) Loosen three screws (5) on strike catch (6) and adjust so catch is centered in latch assembly (7) slot, as shown.

(6) Tighten three screws (5) to 70-85 lb-ft (8-10 N·m).

(7) Open and close door (1) to ensure correct operation.





NOTE

Ensure door lining fits inside of strip at bottom of door.

(8) Position door lining (8) on door (1).

(9) Install 12 rivets (9) in door lining (8).

(10) Position latch (10) on door (1) with two screws (11).

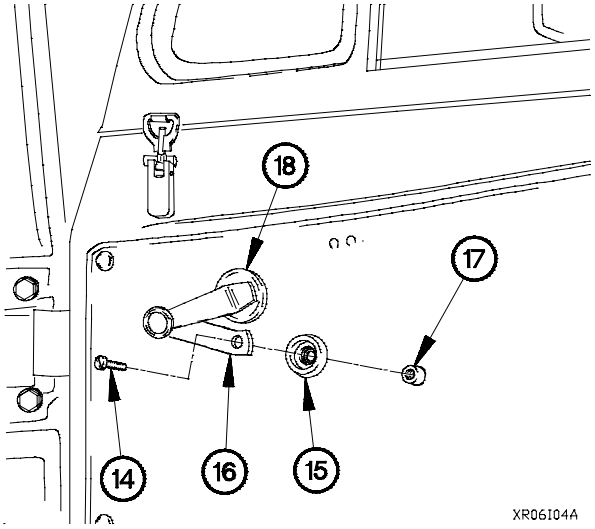
(11) Tighten two screws (11) to 65-121 lb-in. (10-14 N·m).

(12) Install knob (12) on lock stud (13).

16-6. M1081 DOOR REPAIR/ADJUSTMENT (CONT)

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

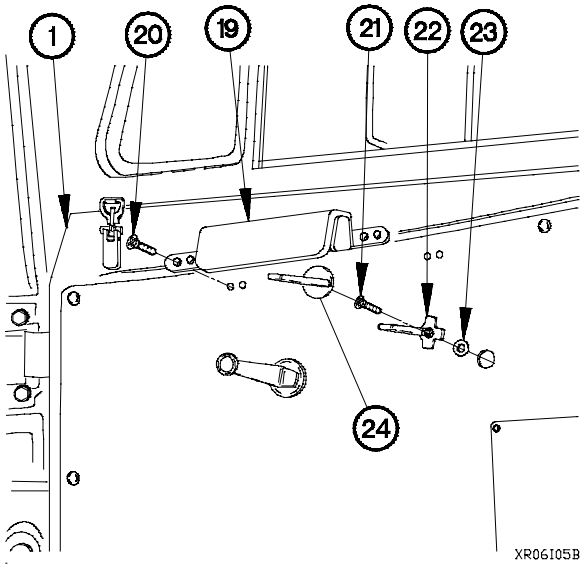


(13) Apply sealing compound to threads of screw (14).

(14) Position collar (15) and window crank (16) on window regulator (17) with screw (14).

(15) Tighten screw (14) to 50-55 lb-in. (6 N·m).

(16) Install cover (18) on window crank (16).



(17) Position handle (19) on door (1) with four screws (20).

(18) Tighten four screws (20) to 22-28 lb-in. (2-3 N·m).

(19) Apply sealing compound to threads of screw (21).

(20) Position door handle (22) on door (1) with washer (23) and screw (21).

(21) Tighten screw (21) to 50-55 lb-in. (6 N·m).

(22) Install cover (24) on door handle (22).

j. Follow-On Maintenance.

(1) Install upper door-half (for lower door-half removal).

(2) Install marker light (para 7-31).

(3) Clean all grease or oil from door.

(4) Clean window glass.

End of Task.

16-7. REAR CAB SUPPORT ASSEMBLY REPLACEMENT

This task covers:

a. Removal
b. Installation
c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
Engine shut down (TM 9-2320-365-10).
Cab air springs deflated (TM 9-2320-365-10).
Spare tire lowered (TM 9-2320-365-10).

Materials/Parts
Nut, Self-Locking (4) (Item 149, Appendix G)
Nut, Self-Locking (Item 125, Appendix G)
Nut, Self-Locking (8) (Item 140, Appendix G)

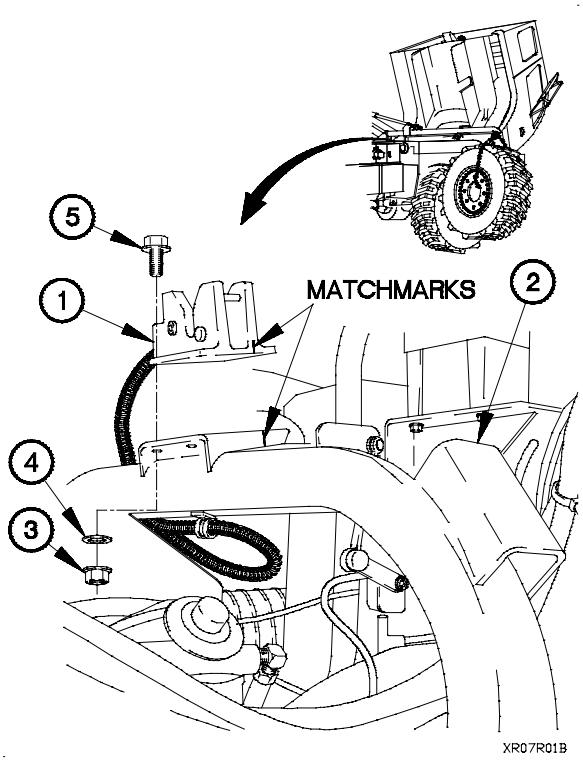
Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C)
Wrench, Torque, 0-200 lb-in. (Item 58, Appendix C)
Socket Set, Socket Wrench (Item 35, Appendix C)

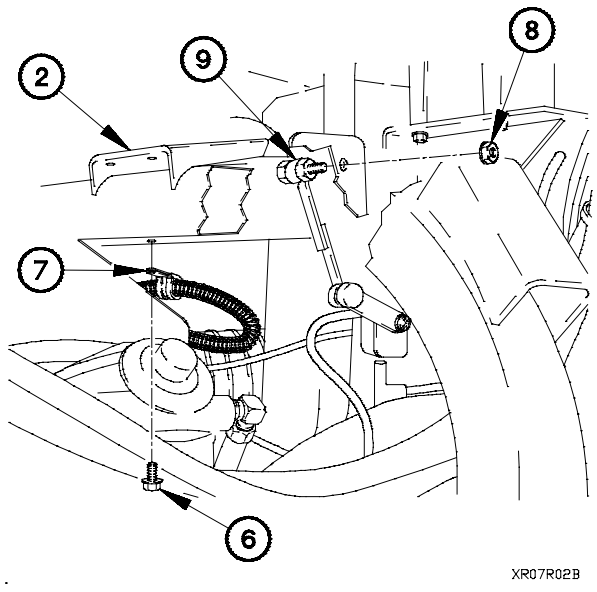
Personnel Required
(2)

a. Removal.

(1) Match mark position of cab hydraulic latch (1) on rear cab support (2).

(2) Remove four self-locking nuts (3), washers (4), screws (5), and cab hydraulic latch (1) from rear cab support (2). Discard self-locking nuts.





(3) Remove three screws (6) and cable clamps (7) from rear cab support (2).

(4) Remove self-locking nut (8) and cab leveling valve linkage (9) from rear cab support (2). Discard self-locking nut.

16-7. REAR CAB SUPPORT ASSEMBLY REPLACEMENT (CONT)

NOTE

Left and right sides of rear cab support are removed the same way. Right side shown.

(5) Loosen four self-locking nuts (10) on cab air spring (11).

(6) Remove four self-locking nuts (12) and screws (13) from rear cab support (2). Discard self-locking nuts.

NOTE

Perform step (7) on vehicles equipped with rubber plugs.

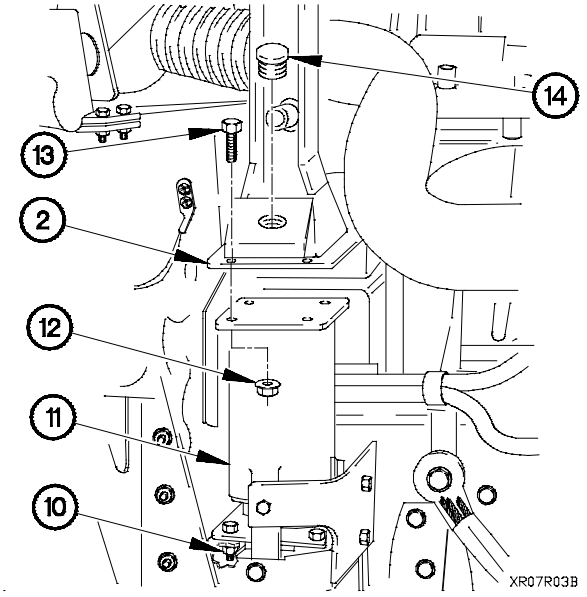
(7) Remove rubber plug (14) from rear cab support (2).

(8) Perform steps (5) through (7) on left side rear cab support.

NOTE

Step (9) requires the aid of an assistant.

(9) Remove rear cab support (2) from vehicle.



b. Installation.

NOTE

Step (1) requires the aid of an assistant.

(1) Position rear cab support (1) on vehicle.

NOTE

- Left and right sides of rear cab support are installed the same way. Right side shown.
- Order rubber plugs PN 12420305-027 if vehicle was not originally equipped with them.

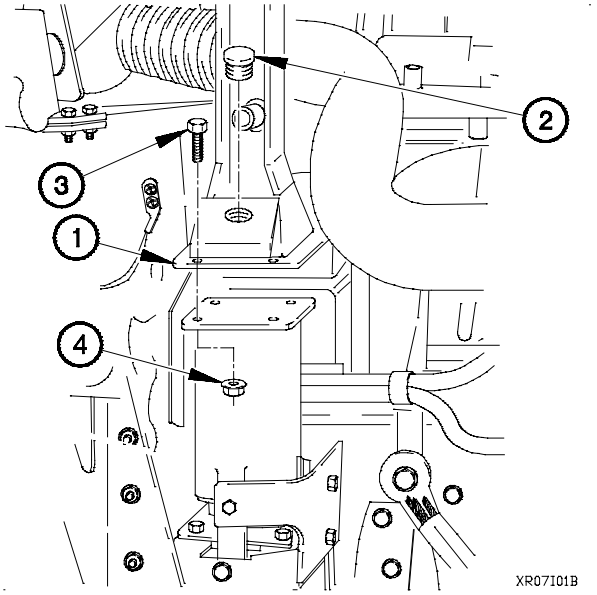
(2) Install rubber plug (2) on rear cab support (1).

(3) Position four screws (3) and self-locking nuts (4) in rear cab support (1).

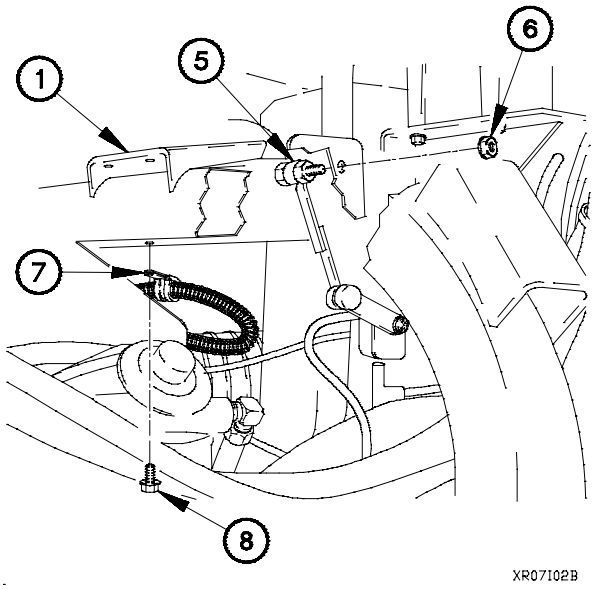
NOTE

Step (4) requires the aid of an assistant.

(4) Tighten four self-locking nuts (4) to 45-61 lb-ft (61-83 N·m).



(5) Perform steps (2) through (4) on left side of rear cab support.



(6) Position cab leveling valve linkage (5) on rear cab support (1) with self-locking nut (6).

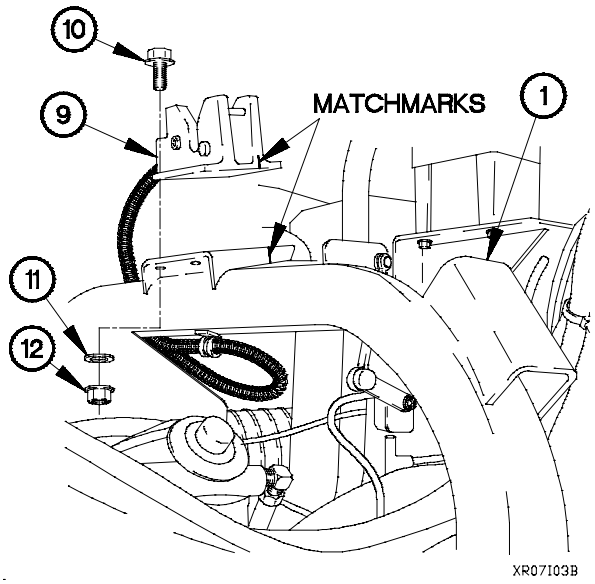
(7) Tighten self-locking nut (6) to 84-102 lb-in. (9-12 N·m).

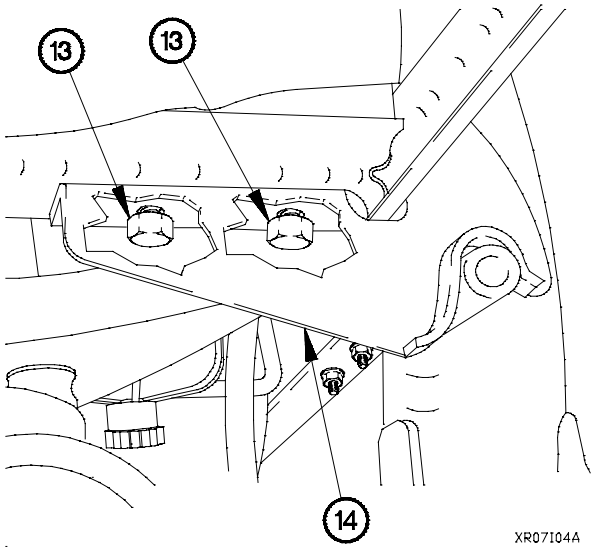
(8) Install three cable clamps (7) on cab support (1) with screws (8).

(9) Position cab hydraulic latch (9) on rear cab support (1) with matchmarks aligned.

(10) Position four screws (10), washers (11), and self-locking nuts (12) in cab hydraulic latch (9).

(11) Tighten four self-locking nuts (12) to 34-44 lb-ft (46-60 N·m).





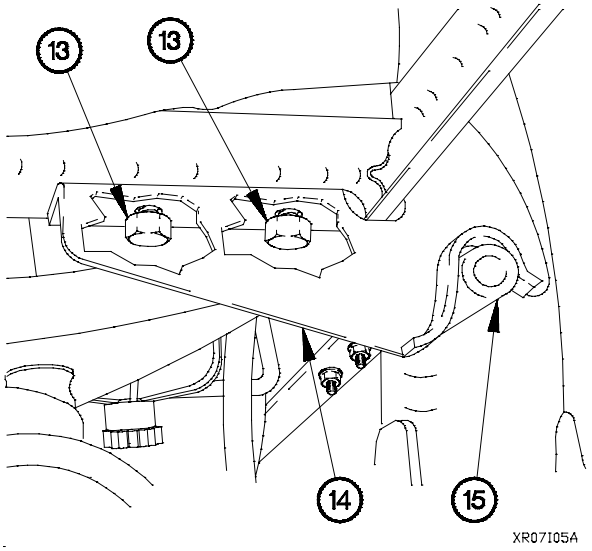
NOTE

Loosen screws only enough that latches can be moved with some resistance.

(12) Loosen four screws (13) in two cab latches (14).

16-7. REAR CAB SUPPORT ASSEMBLY REPLACEMENT (CONT)

(13) Lower cab (TM 9-2320-365-10).



CAUTION

Latches must be adjusted so that they ride squarely on the latch supports and do not contact the welded area of the latch supports. Failure to comply may result in damage to equipment.

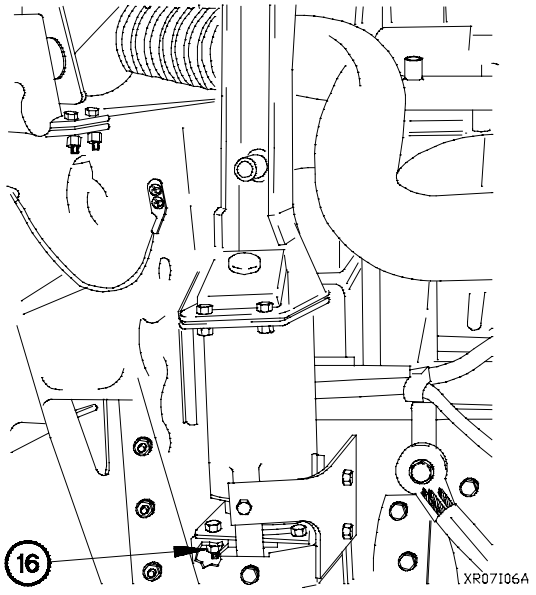
(14) Adjust two latches (14) on latch supports (15).

(15) Raise cab (TM 9-2320-365-10).

CAUTION

Do not allow latches to change position while tightening screws. Failure to comply may result in damage to equipment.

(16) Tighten four screws (13) to 34-44 lb-ft (46-60 N·m).



(17) Lower cab (TM 9-2320-365-10).

(18) Inflate cab air springs (TM 9-2320-365-10).

NOTE

- Perform step (19) on left and right sides of rear cab support.
- Step (19) requires the aid of an assistant.

(19) Tighten four self-locking nuts (16) to 45-61 lb-ft (61-83 N·m).

c. Follow-On Maintenance.

(1) Adjust cab hydraulic latch (para 19-6).

(2) Adjust cab leveling valve (para 16-8).

End of Task.

16-8. CAB LEVELING VALVE AND LINKAGE REPLACEMENT/ADJUSTMENT

This task covers:

a. Removal
b. Installation
c. Cab Leveling Valve Adjustment
d. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
Engine shut down (TM 9-2320-365-10).
Cab air springs deflated (TM 9-2320-365-10).
Cab raised (TM 9-2320-365-10).
Air tanks drained (TM 9-2320-365-10).

Materials/Parts
Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D)
Nut, Self-Locking (4) (Item 134, Appendix G)
Nut, Self-Locking (2) (Item 138, Appendix G)

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C)
Wrench, Torque, 0-200 lb-in. (Item 58, Appendix C)
Socket Set, Socket Wrench (Item 35, Appendix C)

Personnel Required
(2)

a. Removal.

(1) Remove self-locking nut (1) from lever (2). Discard self-locking nut.

(2) Remove two self-locking nuts (3), washers (4), screws (5), and cab leveling valve (6) from bracket (7). Discard self-locking nuts.

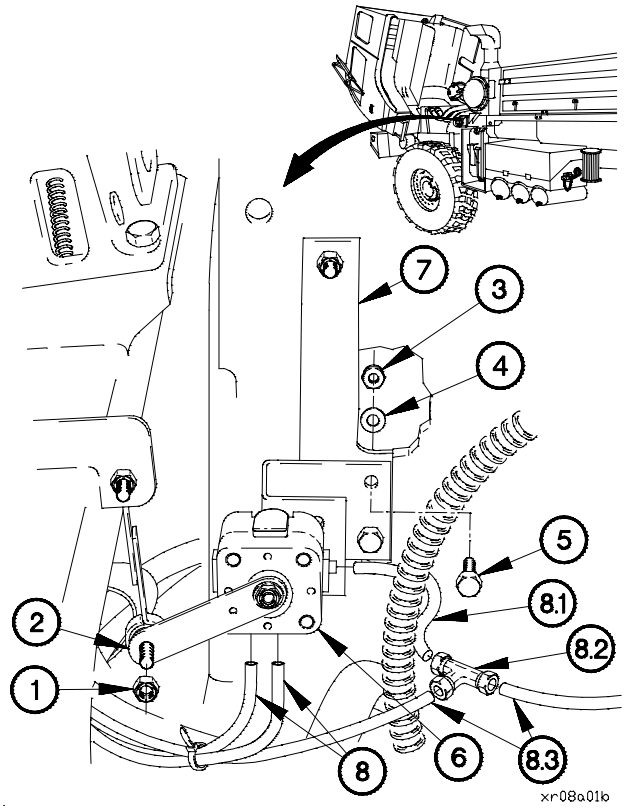
NOTE

Tag air hoses and connection points prior to disconnecting.

(3) Disconnect two air hoses (8) from cab leveling valve (6).

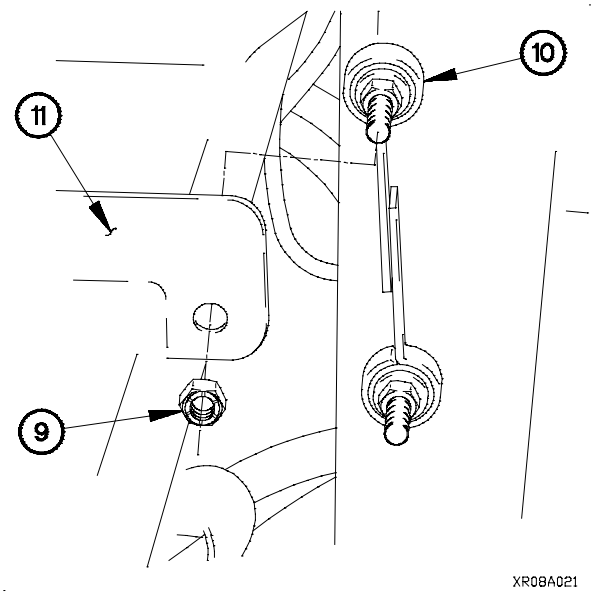
(3.1) Disconnect air hose (8.1) from cab leveling valve (6) and tee fitting (8.2).

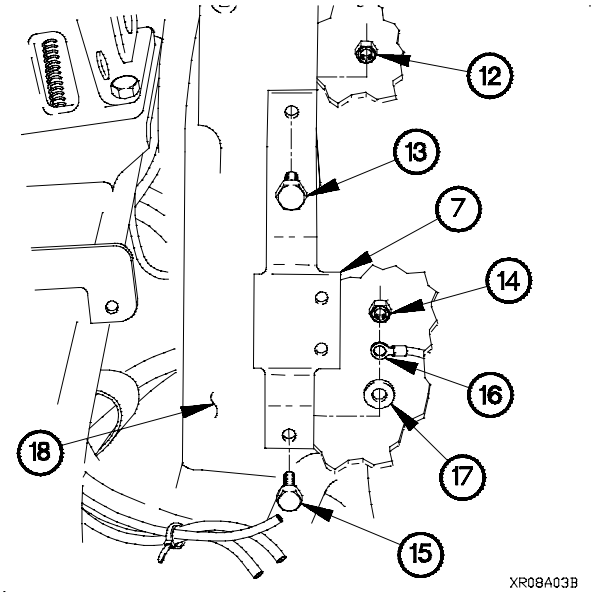
(3.2) Disconnect tee fitting (8.2) from two air hoses (8.3).



16-8. CAB LEVELING VALVE AND LINKAGE REPLACEMENT/ADJUSTMENT (CONT)

(4) Remove self-locking nut (9) and linkage (10) from bracket (11). Discard self-locking nut.





(5) Remove self-locking nut (12) and screw (13) from bracket (7). Discard self-locking nut.

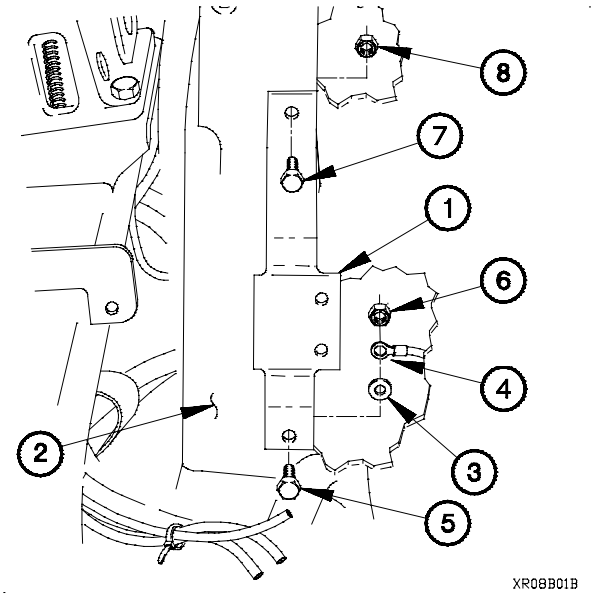
(6) Remove self-locking nut (14), screw (15), terminal lug TL84 (16), washer (17), and bracket (7) from spare tire retainer (18). Discard self-locking nut.

b. Installation.

(1) Position bracket (1) on spare tire retainer (2) with washer (3), terminal lug TL84 (4), screw (5) and self-locking nut (6).

(2) Position screw (7) and self-locking nut (8) in bracket (1).

(3) Tighten self-locking nuts (6 and 8) to 25-31 lb-ft (34-42 N·m).

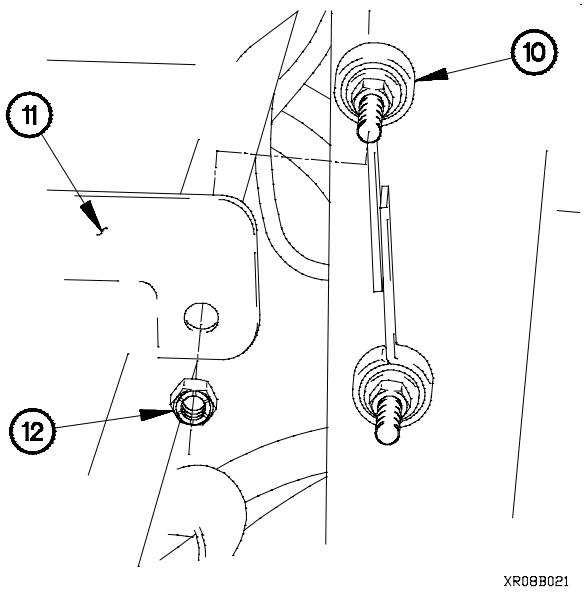


CAUTION

Linkage must be installed as shown. Failure to comply may result in damage to equipment.

(4) Position linkage (10) on bracket (11) with self-locking nut (12).

(5) Tighten self-locking nut (12) to 84-108 lb-in. (9-12 N·m).



(5.1) Connect tee fitting (12.1) to two air hoses (12.2).

(5.2) Connect air hose (12.3) to tee fitting (12.1) and cab leveling valve (14).

(6) Connect two air hoses (13) to cab leveling valve (14).

(7) Position cab leveling valve (14) on bracket (1) with two screws (15), washers (16), and self-locking nuts (17).

(8) Tighten two self-locking nuts (17) to 84-108 lb-in. (9-12 N·m).

(9) Position linkage (10) on lever (18) with self-locking nut (19).

(10) Tighten self-locking nut (19) to 84-108 lb-in. (9-12 N·m).

(11) Lower cab (TM 9-2320-365-10).

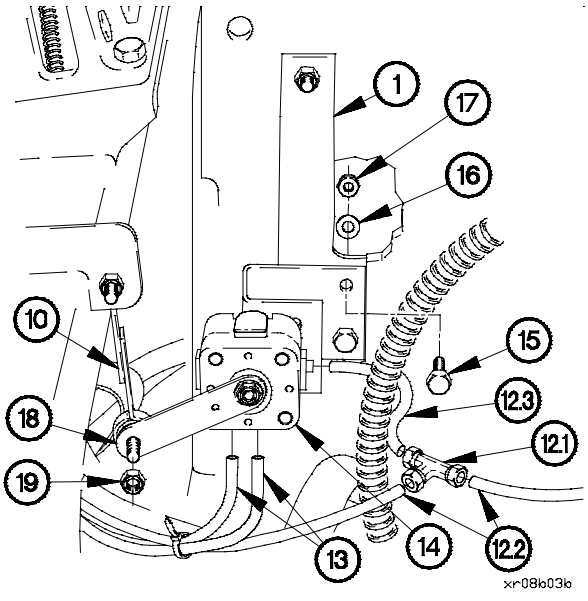
(12) Start engine (TM 9-2320-365-10).

(13) Inflate cab air springs (TM 9-2320-365-10).

(14) Check for air leaks around cab leveling valve (14).

(15) Shut down engine (TM 9-2320-365-10).

(16) Perform cab leveling valve adjustment (sub-para c.).



16-8. CAB LEVELING VALVE AND LINKAGE REPLACEMENT/ADJUSTMENT (CONT)

c. Cab Leveling Valve Adjustment.

(1) Lower spare tire (TM 9-2320-365-10).

(2) Start engine (TM 9-2320-365-10).

NOTE

Steps (3) through (5) require the aid of an assistant.

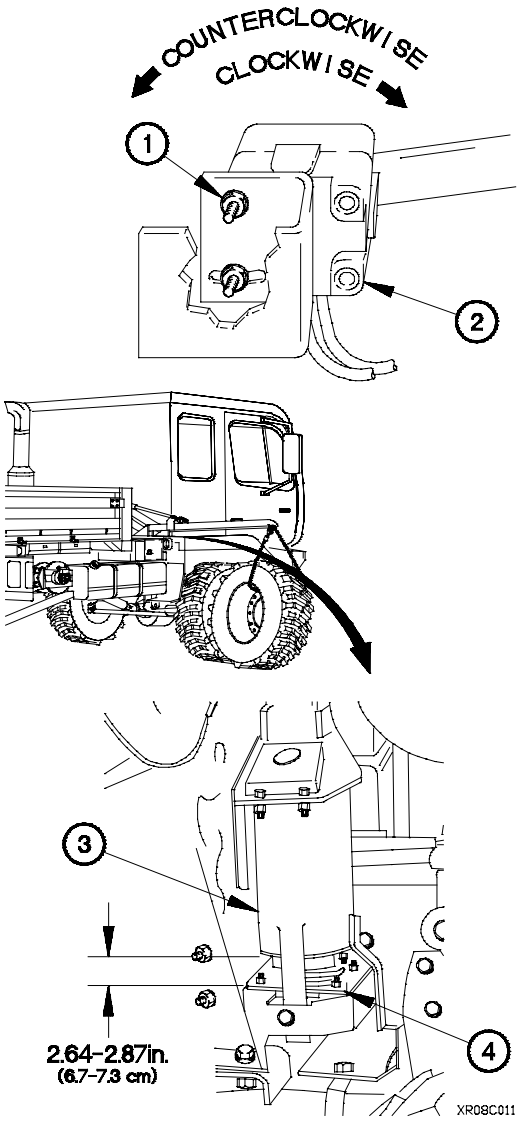
(3) Loosen self-locking nut (1) on cab leveling valve (2).

NOTE

- Rotating cab leveling valve clockwise (to the right), as seen from right side of vehicle, decreases cab height. Rotating cab leveling valve counterclockwise (to the left), as seen from right side of vehicle, increases cab height.
- Measure air spring to air spring bracket height on both air springs.
- If air spring to air spring bracket height varies between sides, but is no more than 0.25 in. (0.63 cm) outside of upper or lower limit, adjust cab leveling valve so that average for both sides is 2.64-2.87 in. (6.7-7.3 cm).

(4) Adjust cab leveling valve (2) until air spring (3) measures 2.64-2.87 in. (6.7-7.3 cm) from bottom edge of air spring to top surface of air spring bracket (4).

■ (5) Tighten self-locking nut (1) to 84-108 lb-in. (9-12 N·m).



d. Follow-On Maintenance.

(1) Shut down engine (TM 9-2320-365-10).

(2) Raise spare tire (TM 9-2320-365-10).

End of Task.

16-9. AIR SPRING AND BRACKET REPLACEMENT

This task covers:

a. Right Air Spring and Bracket Removal
b. Right Air Spring and Bracket Installation
c. Left Air Spring and Bracket Removal
d. Left Air Spring and Bracket Installation
e. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
Cab air springs deflated (TM 9-2320-365-10).
Cab raised (TM 9-2320-365-10).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C)
Wrench, Torque, 0-200 lb-in. (Item 58, Appendix C)
Socket Set, Socket Wrench (Item 35, Appendix C)

Materials/Parts
Rope, Fibrous (Item 53, Appendix D)
Antiseize Compound (Item 63, Appendix D)
Nut, Self-Locking (8) (Item 140, Appendix G)
Nut, Self-Locking (4) (Item 143, Appendix G)
Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D)

Personnel Required
(2)

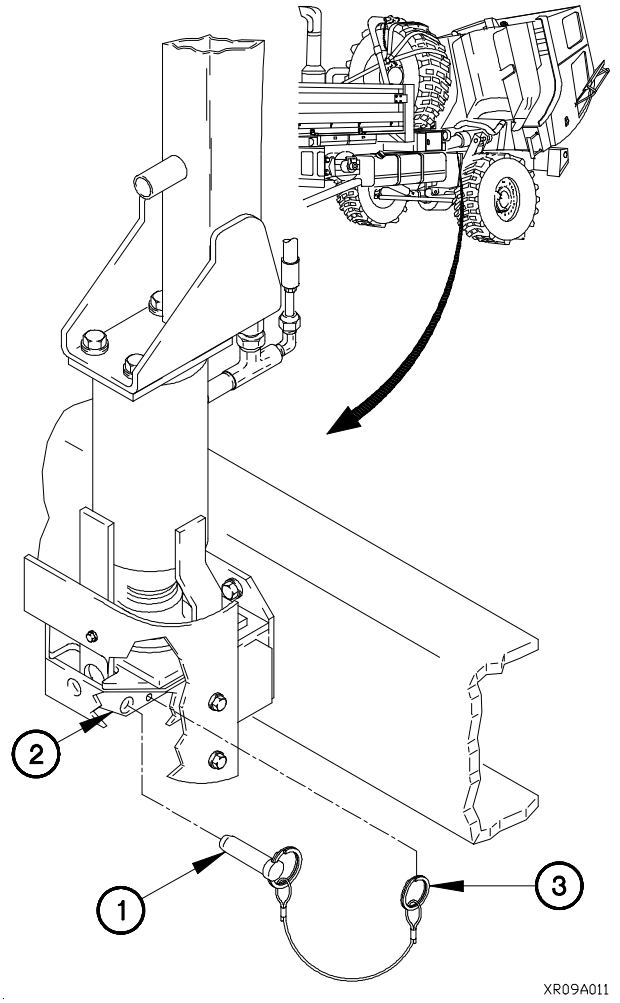
CAUTION

Vehicle serial numbers 0001 through 3091 were originally equipped with air springs PN 12420795-001/12420795-002. Vehicle serial numbers 3092 and higher are equipped with air springs PN 12421438-001/12421438-002. When air spring replacement is required on a vehicle equipped with air springs PN 12420795-001/12420795-002 or 12421438-001/12421438-002, both sides must be replaced with air springs PN 12421438-003/12421438-004. Failure to comply may result in damage to equipment.

a. Right Air Spring and Bracket Removal.

(1) Remove quick release pin (1) from mounting bracket (2).

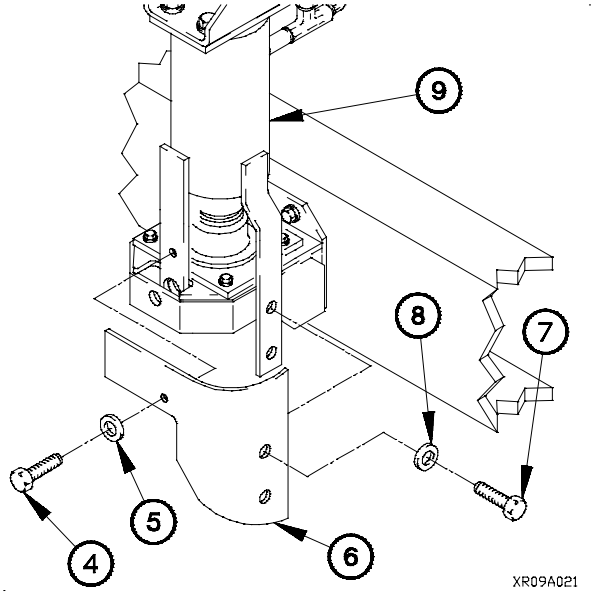
(2) Remove retaining ring (3) from mounting bracket (2).

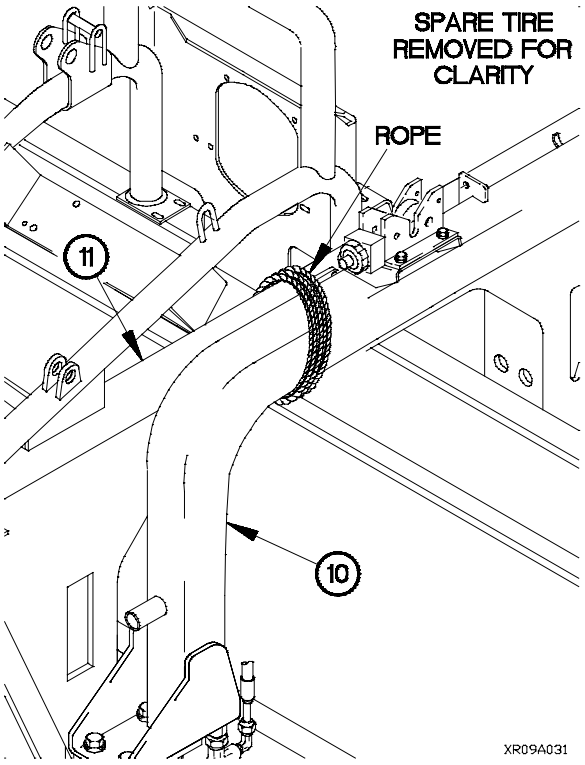


16-9. AIR SPRING AND BRACKET REPLACEMENT (CONT)

(3) Remove screw (4) and washer (5) from stoneguard (6).

(4) Remove two screws (7), washers (8), and stoneguard (6) from air spring (9).





(5) Secure rear cab support assembly (10) to spare tire retainer (11).

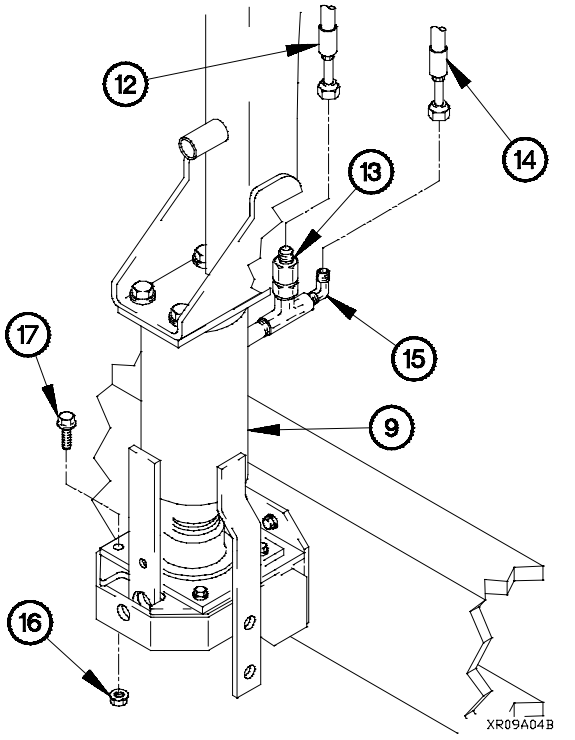
NOTE

Tag air hoses and connection points prior to disconnecting.

(6) Disconnect air hose (12) from check valve (13).

(7) Disconnect air hose (14) from 90-degree fitting (15).

(8) Remove four self-locking nuts (16) and screws (17) from air spring (9). Discard self-locking nuts.



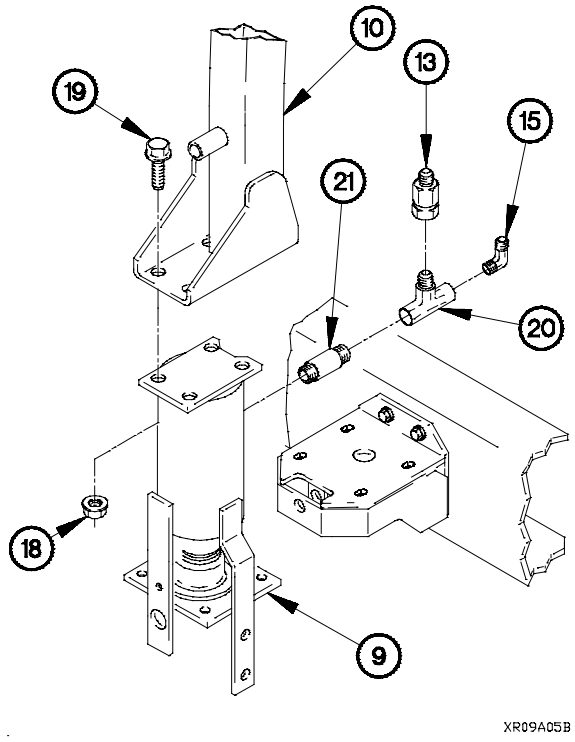
(9) Remove four self-locking nuts (18), screws (19), and air spring (9) from rear cab support assembly (10). Discard self-locking nuts.

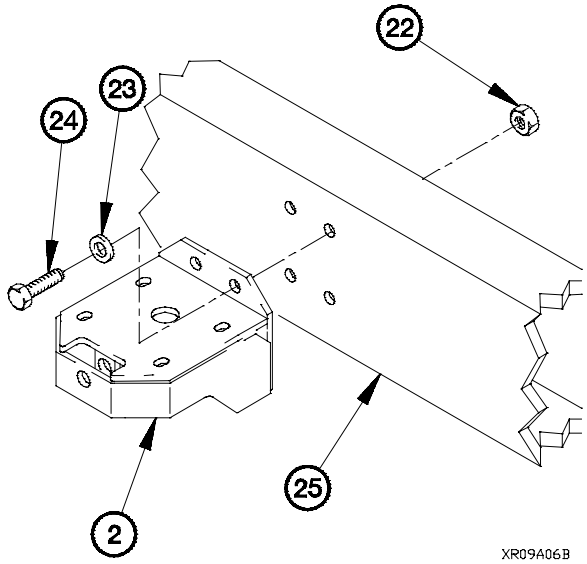
(10) Remove 90-degree fitting (15) from tee fitting (20).

(11) Remove check valve (13) from tee fitting (20).

(12) Remove tee fitting (20) from pipe fitting (21).

(13) Remove pipe fitting (21) from air spring (9).





(14) Remove four self-locking nuts (22), washers (23), screws (24), and mounting bracket (2) from right frame rail (25). Discard self-locking nuts.

b. Right Air Spring and Bracket Installation.

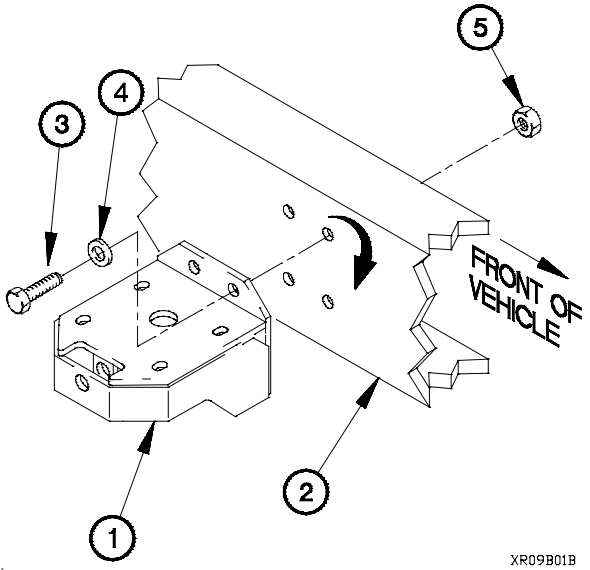
(1) Position mounting bracket (1) on right frame rail (2) with four screws (3), washers (4), and self-locking nuts (5).

NOTE

Step (1.1 and 2) requires the aid of an assistant.

(1.1) Rotate mounting bracket (1) clockwise to the maximum angle permitted by mounting hole clearance.

(2) Tighten four self-locking nuts (5) to 58-76 lb-ft (79-103 N·m).



16-9. AIR SPRING AND BRACKET REPLACEMENT (CONT)

WARNING

Adhesives, solvents, and sealing com-pounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

(3) Apply antiseize compound to threads of pipe fitting (6) and check valve (6.1).

(3.1) Apply antiseize compound to one end of 90-degree fitting (6.2).

(4) Install pipe fitting (6) in air spring (7).

(4.1) Install tee fitting (6.3) on pipe fitting (6).

(4.2) Install check valve (6.1) in tee fitting (6.3).

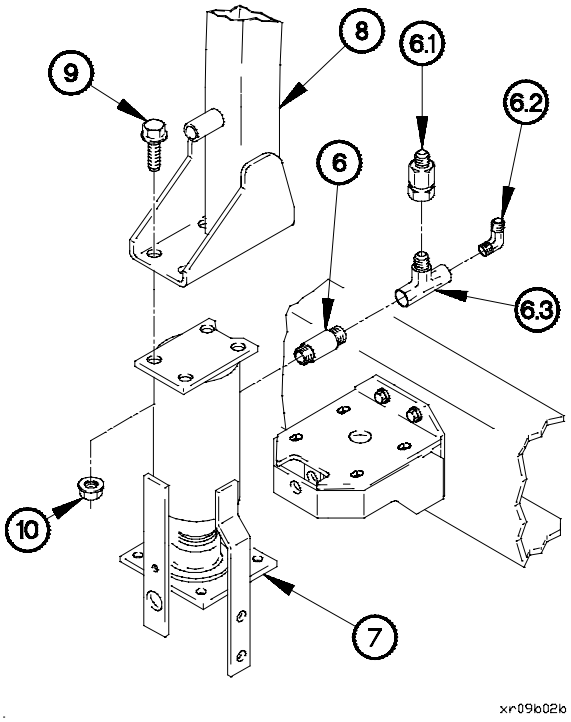
(4.3) Install 90-degree fitting (6.2) in tee fitting (6.3).

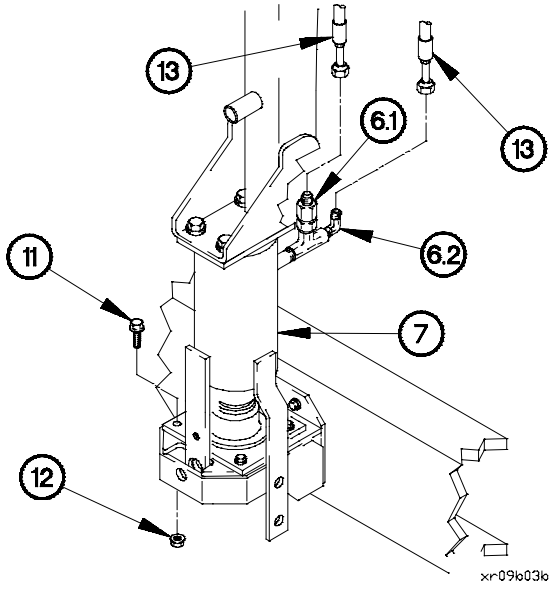
(5) Position air spring (7) on rear cab support assembly (8) with four screws (9) and self-locking nuts (10).

NOTE

Step (6) requires the aid of an assistant.

(6) Tighten four self-locking nuts (10) to 45-61 lb-ft (61-83 N·m).





(7) Position four screws (11) and self-locking nuts (12) in air spring (7).

(8) Connect two air hoses (13) to check valve (6.1) and 90-degree fitting (6.2).

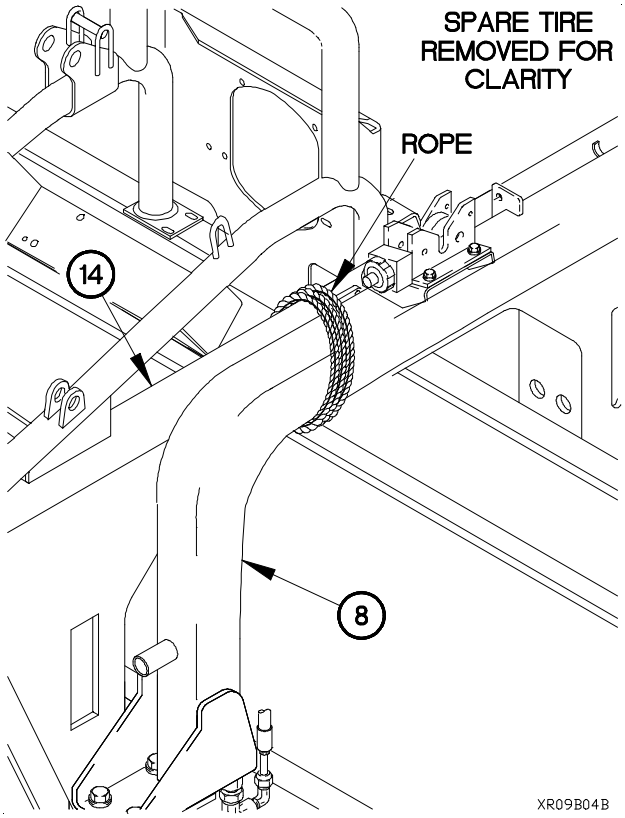
(9) Lower cab (TM 9-2320-365-10).

(10) Inflate cab air springs (TM 9-2320-365-10).

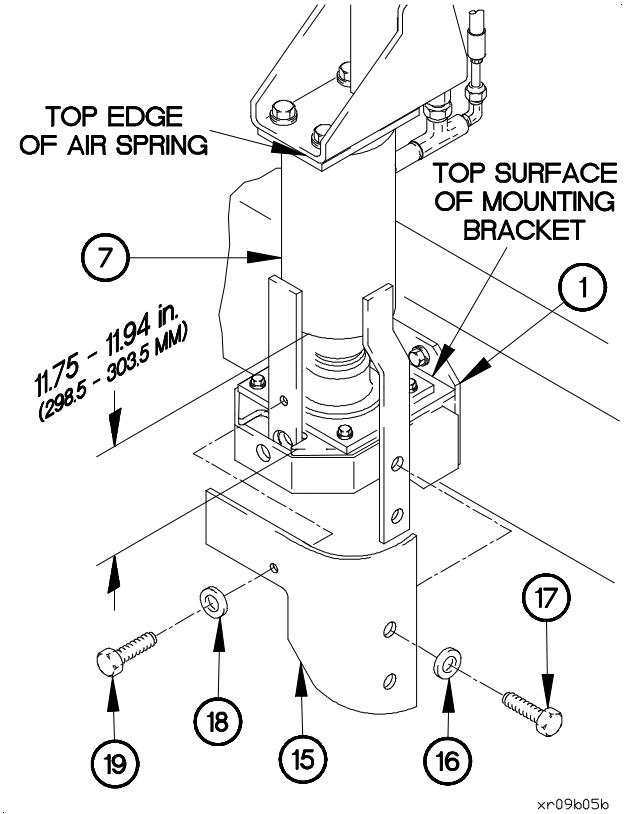
NOTE

Step (11) requires the aid of an assistant.

(11) Tighten four self-locking nuts (12) to 45-61 lb-ft (61-83 N·m).



(12) Remove rear cab support assembly (8) from spare tire retainer (14).



NOTE

Dimension measured in step (13) should be 11.75-11.94 in. (298.5-303.5 mm). If measurement recorded in step (13) is not within limits, perform cab leveling valve adjustment (para 16-8) prior to installing stoneguard.

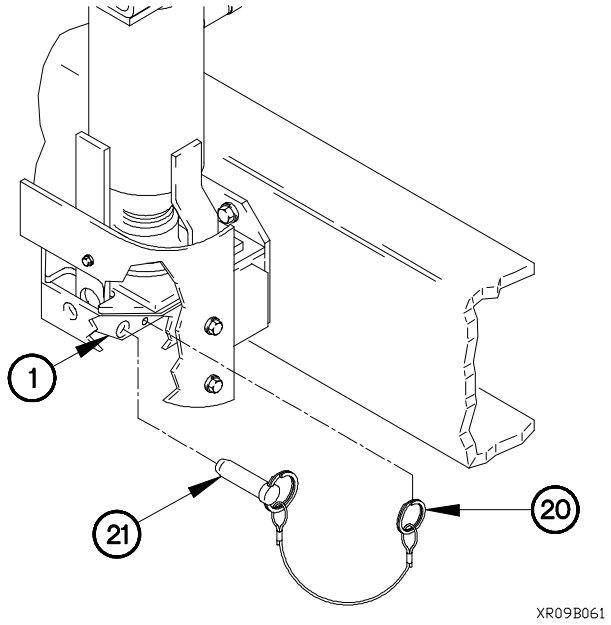
(13) Measure distance from top surface of mounting bracket (1) to top edge of air spring (7).

(14) Position stoneguard (15) on air spring (7) with two washers (16) and screws (17).

(15) Position washer (18) and screw (19) in stoneguard (15).

(16) Tighten two screws (17) and screw (19) to 48-72 lb-in. (5-8 N•m).

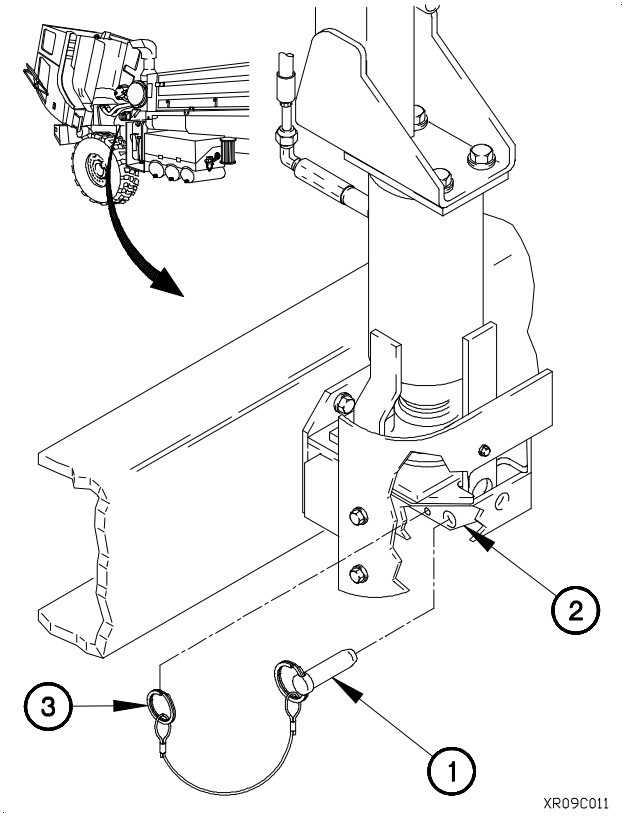
16-9. AIR SPRING AND BRACKET REPLACEMENT (CONT)



(17) Install retaining ring (20) on mounting bracket (1).

(18) Install quick release pin (21) in mounting bracket (1).

c. Left Air Spring and Bracket Removal.



CAUTION

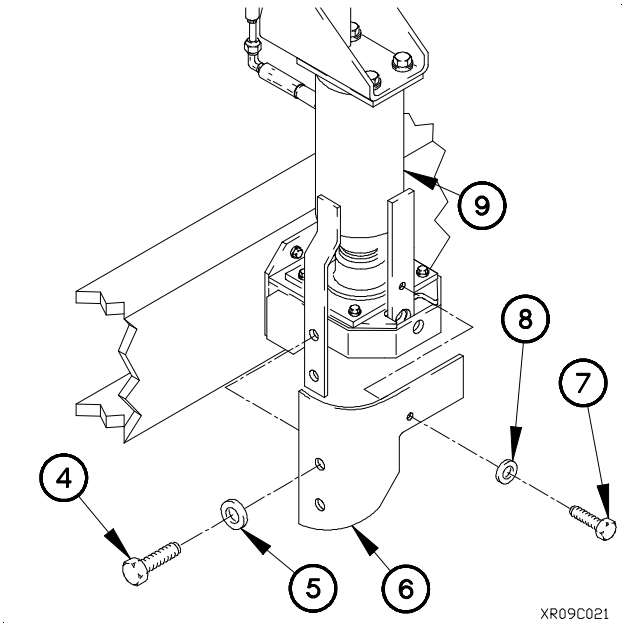
Vehicle serial numbers 0001 through 3091 were originally equipped with air springs PN 12420795-001/12420795-002. Vehicle serial numbers 3092 and higher are equipped with air springs PN 12421438-001/12421438-002. When air spring replacement is required on a vehicle equipped with air springs PN 12420795-001/12420795-002 or 12421438-001/12421438-002, both sides must be replaced with air springs PN 12421438-003/12421438-004. Failure to comply may result in damage to equipment.

(1) Remove quick release pin (1) from mounting bracket (2).

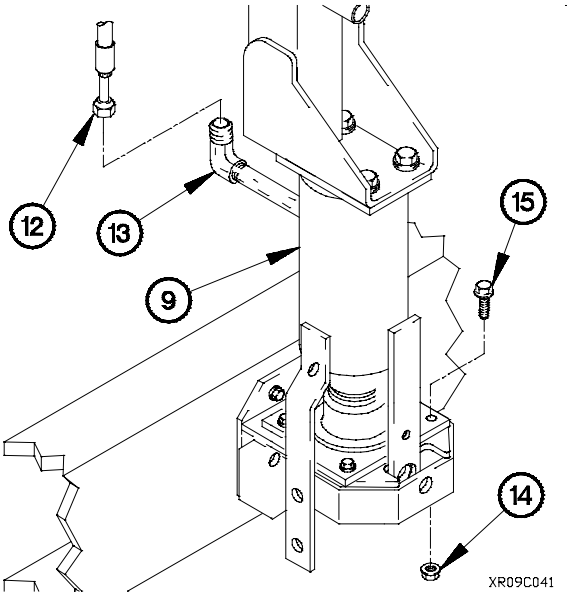
(2) Remove retaining ring (3) from mounting bracket (2).

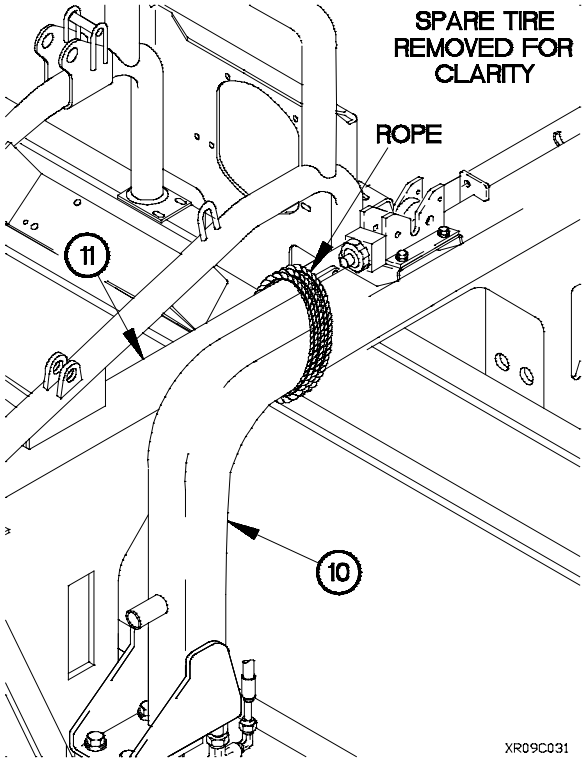
(3) Remove screw (4) and washer (5) from stoneguard (6).

(4) Remove two screws (7), washers (8), and stoneguard (6) from air spring (9).



(5) Secure rear cab support assembly (10) to spare tire retainer (11).





(6) Disconnect air hose (12) from 90-degree fitting (13).

(7) Remove four self-locking nuts (14) and screws (15) from air spring (9). Discard self-locking nuts.

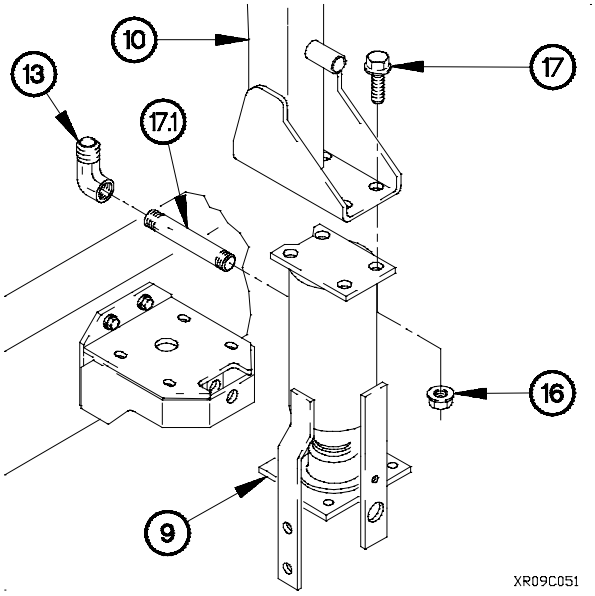
(8) Remove four self-locking nuts (16), screws (17), and air spring (9) from rear cab support assembly (10). Discard self-locking nuts.

NOTE

Note orientation of fitting prior to removal.

(9) Remove 90-degree fitting (13) from nipple (17.1).

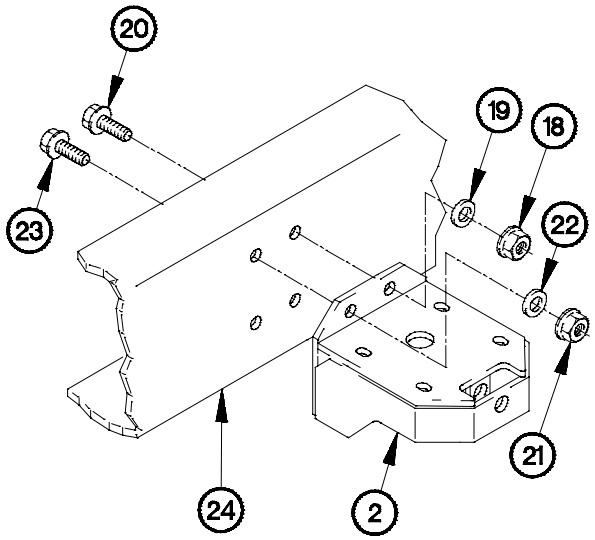
(9.1) Remove nipple (17.1) from air spring (9).



16-9. AIR SPRING AND BRACKET REPLACEMENT (CONT)

(10) Remove three self-locking nuts (18), washers (19), and screws (20) from mounting bracket (2). Discard self-locking nuts.

(11) Remove self-locking nut (21), washer (22), screw (23), and mounting bracket (2) from left frame rail (24). Discard self-locking nut.



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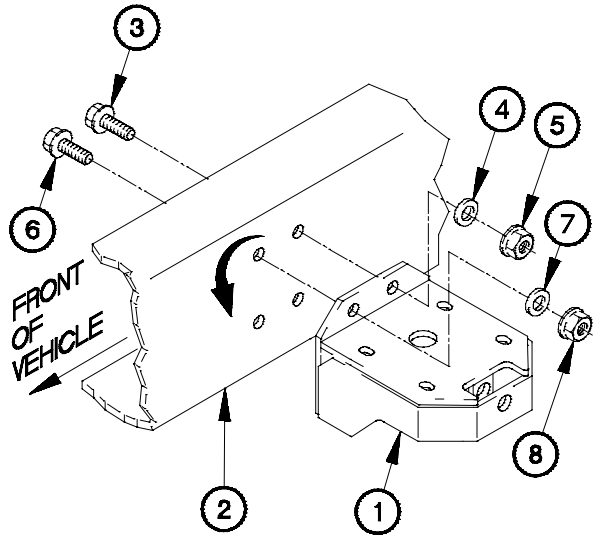
d. Left Air Spring and Bracket Installation.



XR09D01B

(1) Position mounting bracket (1) on left frame rail (2) with screw (3), washer (4), and self-locking nut (5).

(2) Position three screws (6), washers (7), and self-locking nuts (8) in mounting bracket (1).

NOTE

Steps (2.1) and (3) requires the aid of an assistant.

(2.1) Rotate mounting bracket (1) counterclockwise to the maximum angle permitted by mounting hole clearance.

(3) Tighten self-locking nut (5) and three self-locking nuts (8) to 58-76 lb-ft (79-103 N·m).

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

(4) Apply antiseize compound to threads of nipple (9) and 90-degree fitting (9.1).

(5) Install nipple (9) in air spring (10).

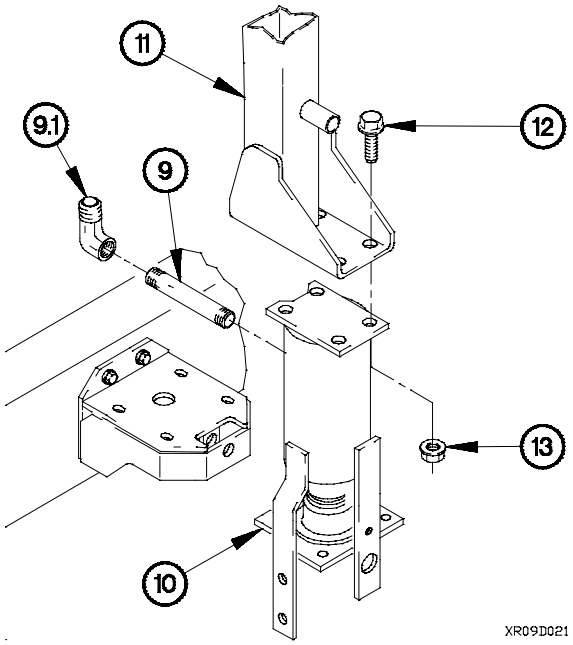
(5.1) Install 90-degree fitting (9.1) on nipple (9).

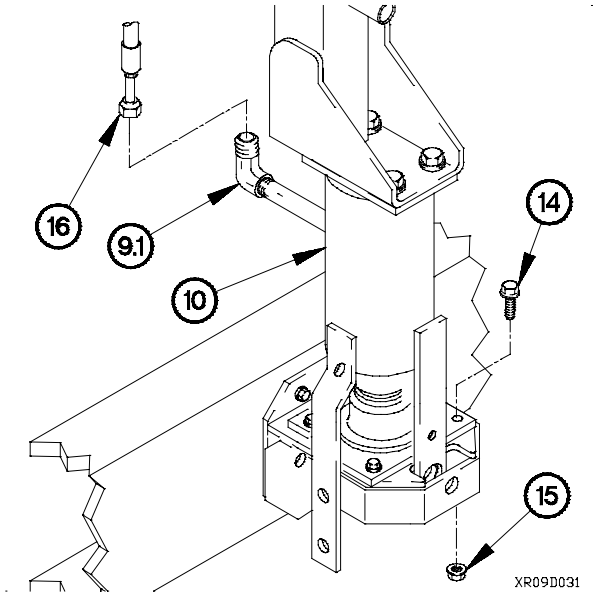
(6) Position air spring (10) on rear cab support assembly (11) with four screws (12) and self-locking nuts (13).

NOTE

Step (7) requires the aid of an assistant.

(7) Tighten four self-locking nuts (13) to 45-61 lb-ft (61-83 N·m).





(8) Position four screws (14) and self-locking nuts (15) in air spring (10).

(9) Connect air hose (16) to 90-degree fitting (9.1).

(10) Lower cab (TM 9-2320-365-10).

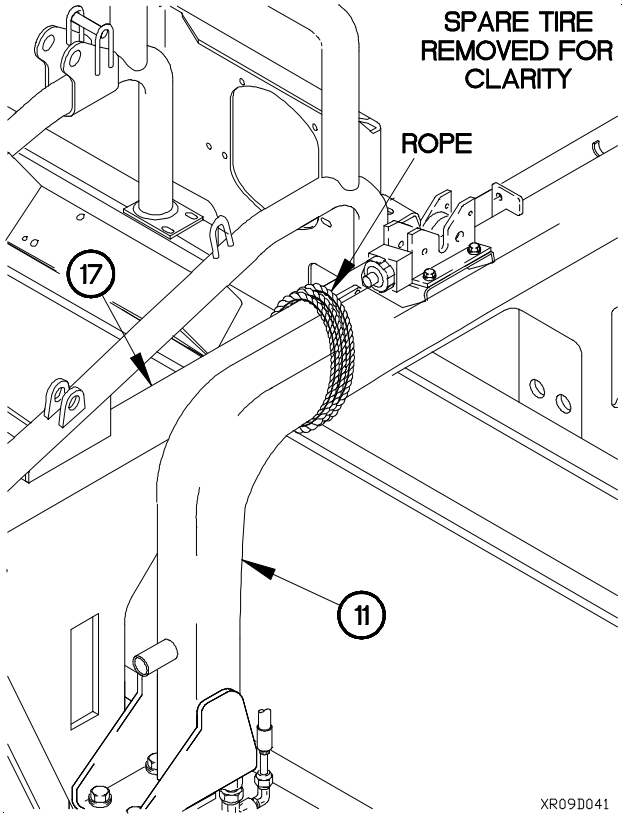
(11) Inflate cab air springs (TM 9-2320-365-10).

NOTE

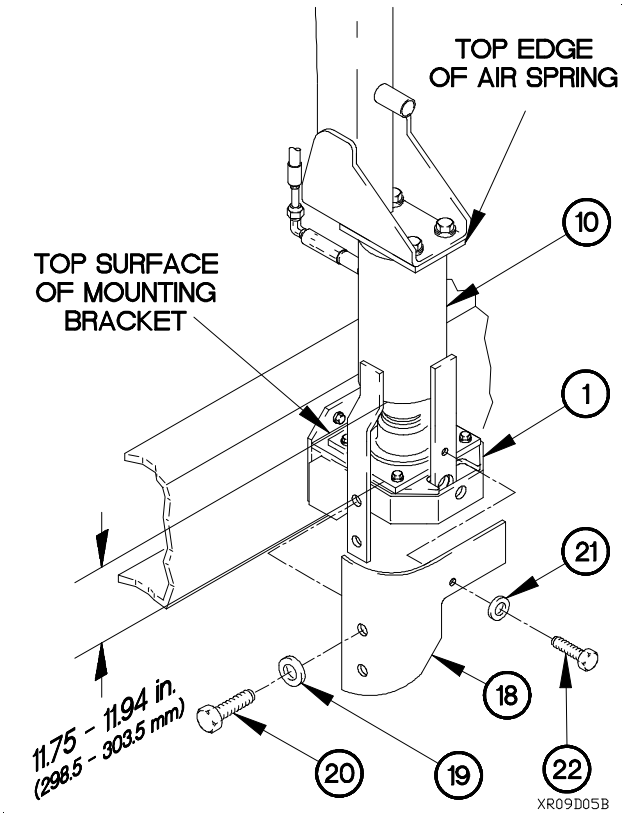
Step (12) requires the aid of an assistant.

(12) Tighten four self-locking nuts (15) to 45-61 lb-ft (61-83 N·m).

16-9. AIR SPRING AND BRACKET REPLACEMENT (CONT)



(13) Remove rear cab support assembly (11) from spare tire retainer (17).



NOTE

Dimension measured in step (14) should be 11.75-11.94 in. (298.5-303.5 mm). If measurement recorded in step (14) is not within limits, perform cab leveling valve adjustment (para 16-8) prior to installing stoneguard.

(14) Measure distance from top surface of mounting bracket (1) to top edge of air spring (10).

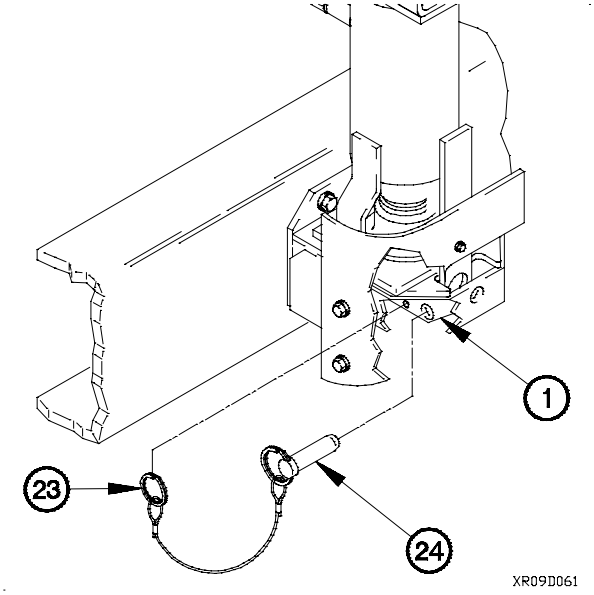
(15) Position stoneguard (18) on air spring (10) with two washers (19) and screws (20).

(17) Position washer (21) and screw (22) in stoneguard (18).

(18) Tighten two screws (20) and screw (22) to 48-72 lb-in. (5-8 N•m).

(18) Install retaining ring (23) on mounting bracket (1).

(19) Install quick release pin (24) in mounting bracket (1).



e. Follow-On Maintenance.

(1) Start engine (TM 9-2320-365-10).

(2) Check around air springs and fittings for air leaks.

(3) Shut down engine (TM 9-2320-365-10).

End of Task.

16-10. FENDER AND SPLASH GUARD REPLACEMENT

This task covers:

a. Front Fender Removal (All Models Except M1081)
b. Front Fender Installation (All Models Except M1081)
c. Engine Splash Guard Removal (All Models Except M1081)
d. Engine Splash Guard Installation (All Models Except M1081)
e. Rear Splash Guard Removal
f. Rear Splash Guard Installation
g. Rear Fender Removal
h. Rear Fender Installation
i. M1081 Front Fender Removal
j. M1081 Front Fender Installation
k. M1081 Engine Splash Guard Removal
l. M1081 Engine Splash Guard Installation
m. M1078/M1081 Splash Guard Removal
n. M1078/M1081 Splash Guard Installation
o. M1079 Front Splash Shield Removal
p. M1079 Front Splash Shield Installation
q. M1079 Rear Splash Shield Removal
r. M1079 Rear Splash Shield Installation
s. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
Engine shut down (TM 9-2320-365-10).
Windshield washer reservoir removed (para 18-2).
Warning and caution placards removed, if required (Chap 2).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Goggles, Industrial (Item 15, Appendix C)
Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C)
Tool Kit, Blind Rivet (Item 43, Appendix C)
Drill, Portable, Electric (Item 7, Appendix C)

Tools and Special Tools (Cont)
Drill Set, Twist (Item 6, Appendix C)

Materials/Parts
Rivet, Blind (17) (Item 222, Appendix G)
Nut, Self-Locking (11) (Item 148, Appendix G)
Nut, Self-Locking (3) (Item 116, Appendix G)
Nut, Self-Locking (7) (Item 138, Appendix G)
Lockwasher (Item 104, Appendix G)
Nut, Self-Locking (6) (Item 138, Appendix G)

Personnel Required
(2)

WARNING

Wear appropriate eye protection when working under vehicle due to the possibility of falling debris. Failure to comply may result in injury to personnel.

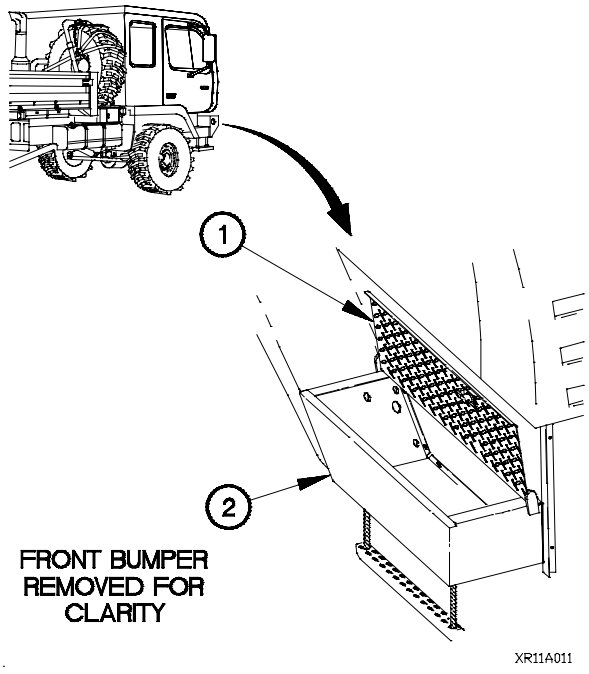
a. Front Fender Removal (All Models Except M1081).

NOTE

Perform step (1) on right side.

(1) Open cab step tread (1) on cab step (2).

(2) Raise cab (TM 9-2320-365-10).

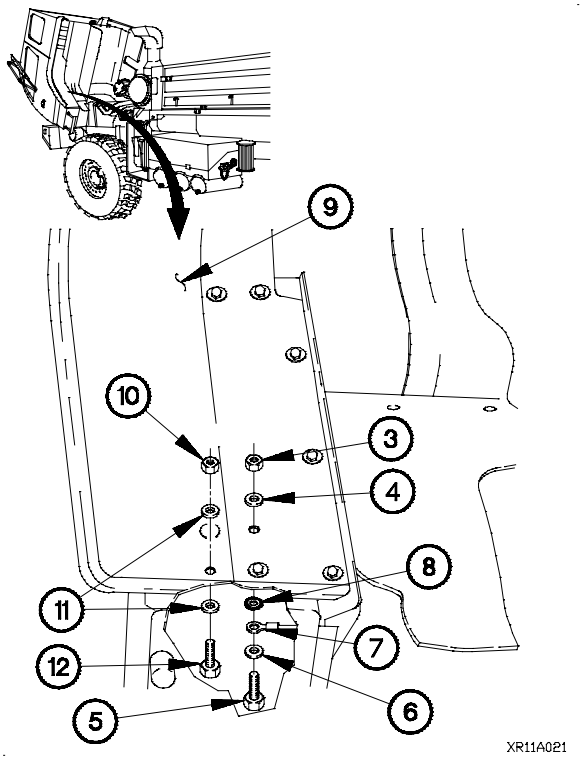


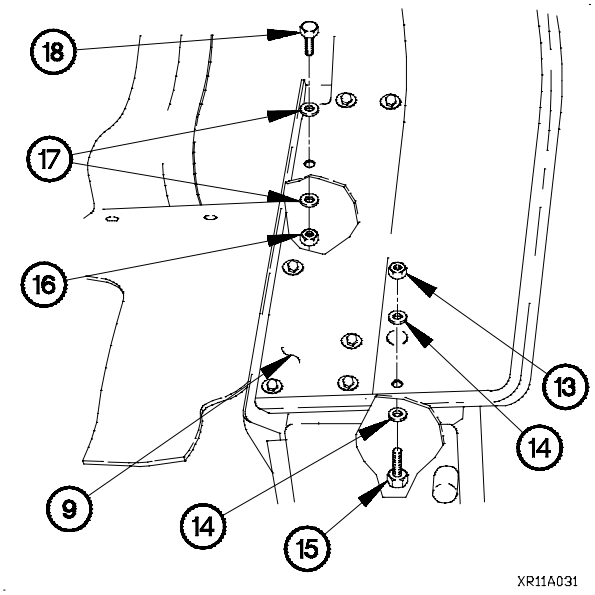
NOTE

Perform steps (3) and (4) on left side.

(3) Remove self-locking nut (3), washer (4), screw (5), washer (6), terminal lug TL94 (7), and lockwasher (8) from front fender (9). Discard self-locking nut and lockwasher.

(4) Remove three self-locking nuts (10), six washers (11), and three screws (12) from front fender (9). Discard self-locking nuts.





NOTE

Perform step (5) on right side.

(5) Remove four self-locking nuts (13), eight washers (14), and four screws (15) from front fender (9). Discard self-locking nuts.

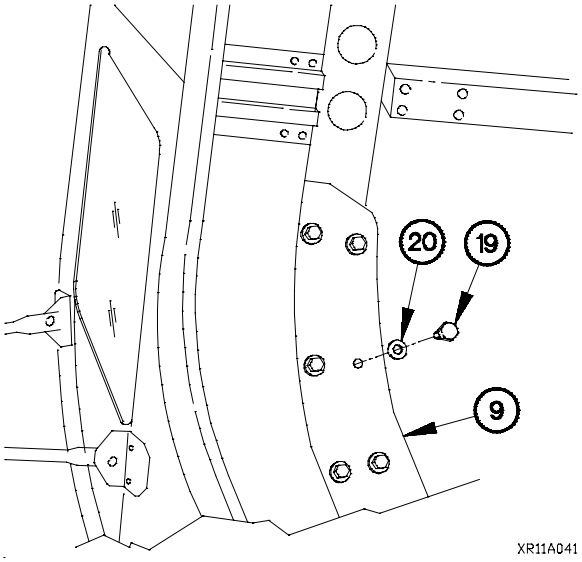
(6) Remove three self-locking nuts (16), six washers (17), and three screws (18) from front fender (9). Discard self-locking nuts.

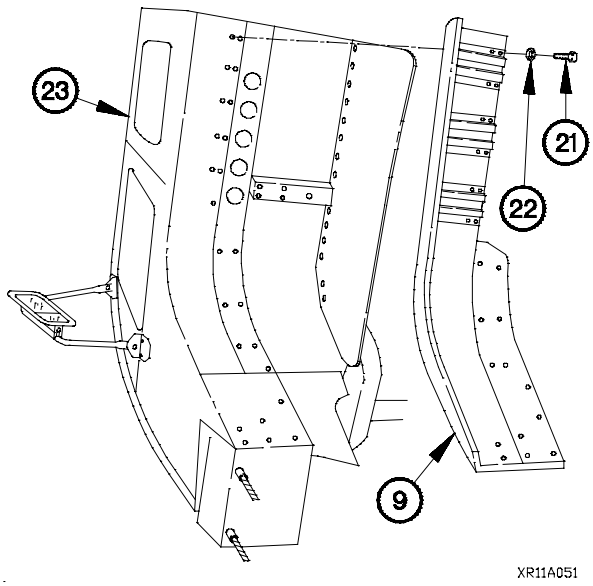
16-10. FENDER AND SPLASH GUARD REPLACEMENT (CONT)

NOTE

Left and right front fenders are removed the same way. Left side shown.

(7) Remove six screws (19) and washers (20) from front fender (9).





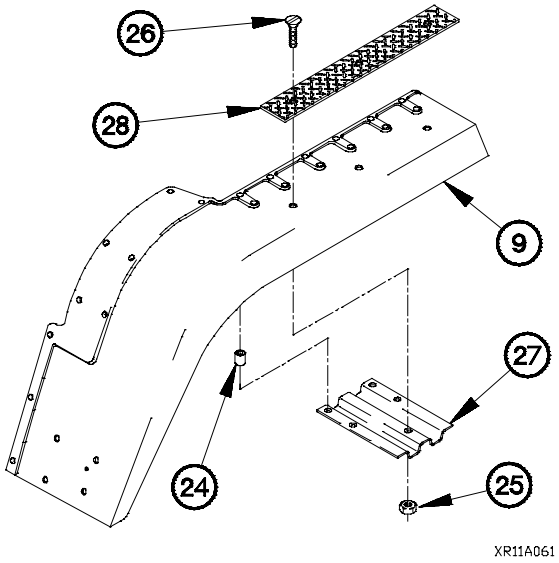
NOTE

Step (8) requires the aid of an assistant.

(8) Remove 12 screws (21), washers (22), and front fender (9) from cab (23).

(9) Remove 12 spacers (24) from front fender (9).

(10) Remove three self-locking nuts (25), screws (26), brackets (27), and step (28) from front fender (9). Discard self-locking nuts.



b. Front Fender Installation (All Models Except M1081).

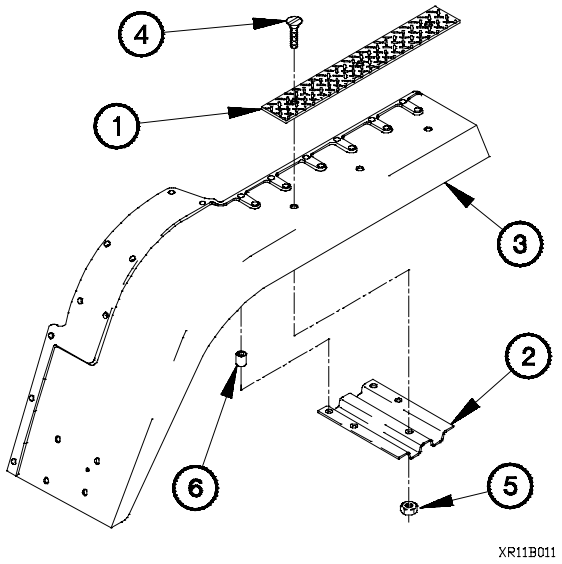
NOTE

Left and right front fenders are installed the same way. Left side shown.

(1) Position step (1) and three brackets (2) on front fender (3) with three screws (4) and self-locking nuts (5).

(2) Tighten three self-locking nuts (5) to 18-22 lb-ft (24-30 N·m).

(3) Install 12 spacers (6) in front fender (3).



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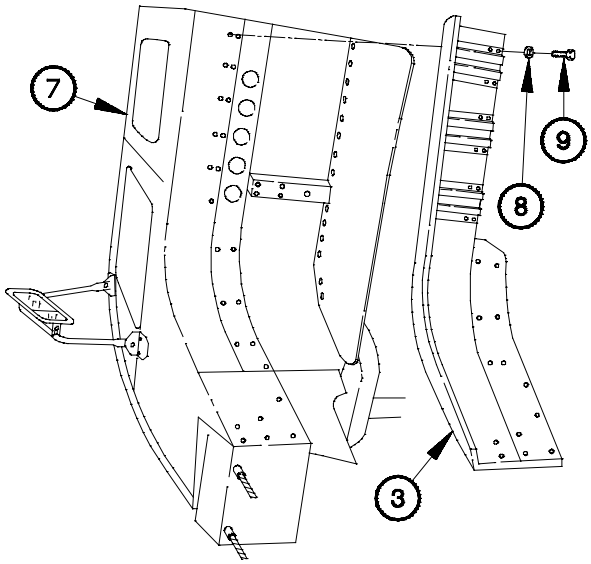

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NOTE

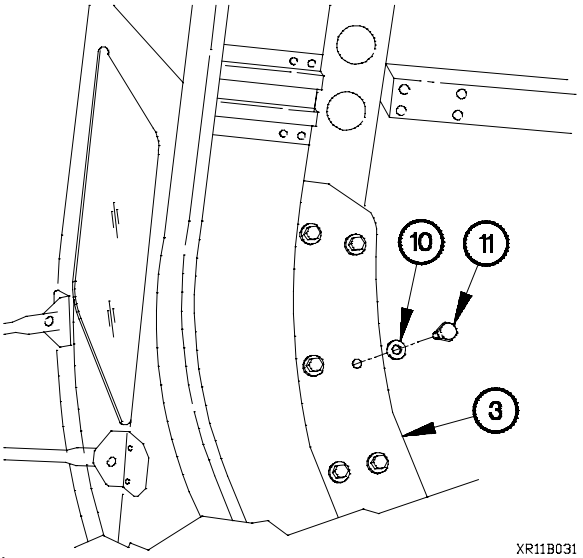
Step (4) requires the aid of an assistant.

(4) Position front fender (3) on cab (7) with 12 washers (8) and screws (9).

(5) Tighten 12 screws (9) to 18-22 lb-ft (24-30 N·m).

(6) Position six washers (10) and screws (11) in front fender (3).

(7) Tighten six screws (11) to 18-22 lb-ft (24-30 N·m).



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16-10. FENDER AND SPLASH GUARD REPLACEMENT (CONT)

(8) Position three screws (12), six washers (13), and three self-locking nuts (14) in front fender (3).

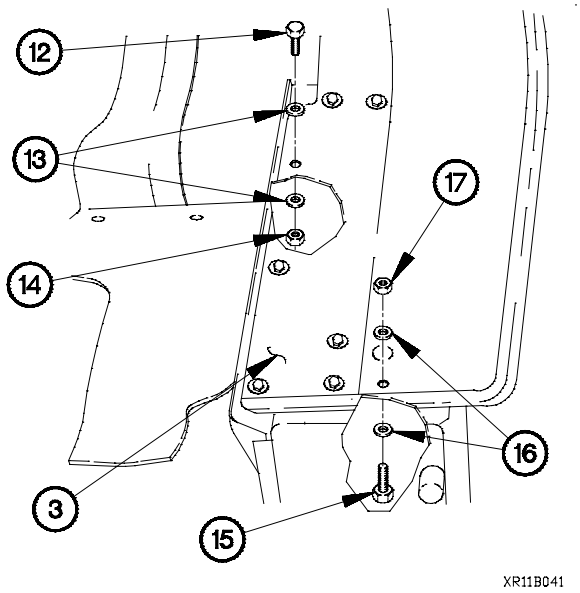
(9) Tighten three self-locking nuts (14) to 18-22 lb-ft (24-30 N·m).

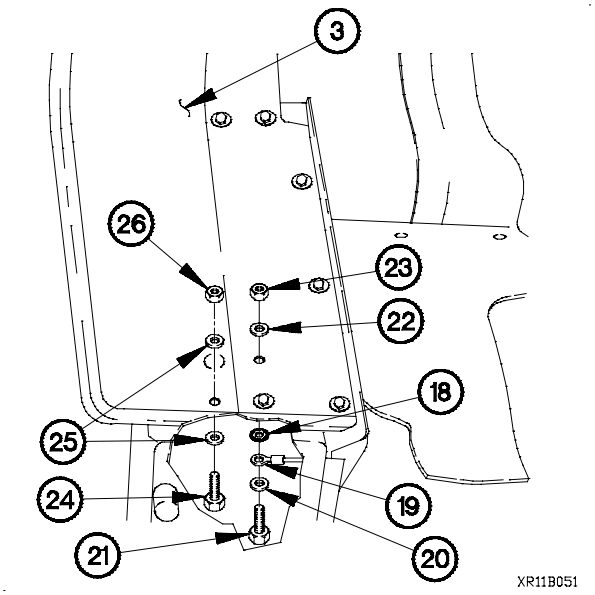
NOTE

Perform steps (10) and (11) on right side.

(10) Position four screws (15), eight washers (16), and four self-locking nuts (17) in front fender (3).

(11) Tighten four self-locking nuts (17) to 18-22 lb-ft (24-30 N·m).





NOTE

Perform steps (12) through (14) on left side.

(12) Position lockwasher (18) and terminal lug TL94 (19) on front fender (3) with washer (20), screw (21), washer (22), and self-locking nut (23).

(13) Position three screws (24), six washers (25), and three self-locking nuts (26) in front fender (3).

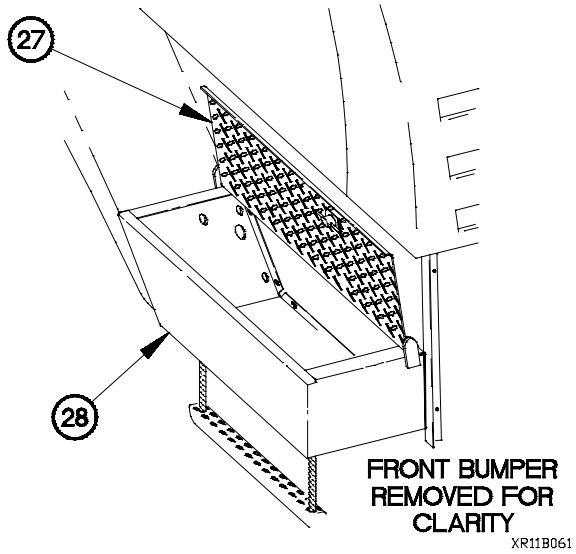
(14) Tighten self-locking nut (23) and three self-locking nuts (26) to 18-22 lb-ft (24-30 N·m).

NOTE

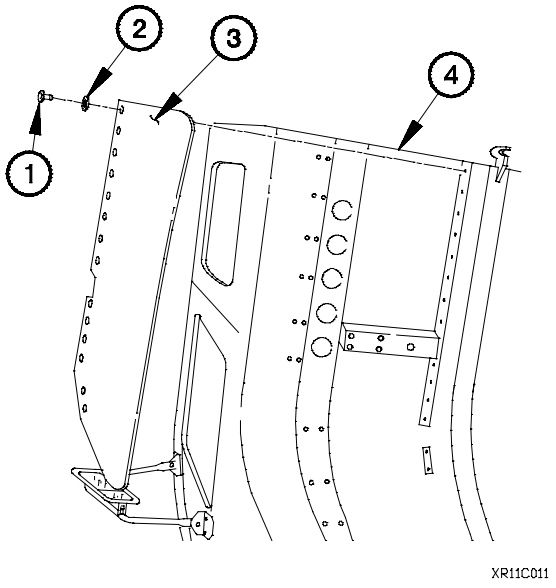
Perform step (15) on right side.

(15) Close cab step tread (27) on cab step (28).

(16) Lower cab (TM 9-2320-365-10).



c. Engine Splash Guard Removal (All Models Except M1081).



(1) Raise cab (TM 9-2320-365-10).

WARNING

Wear appropriate eye protection when removing rivets. Failure to comply may result in injury to personnel.

NOTE

Left and right engine splash guards are removed the same way. Left side shown.

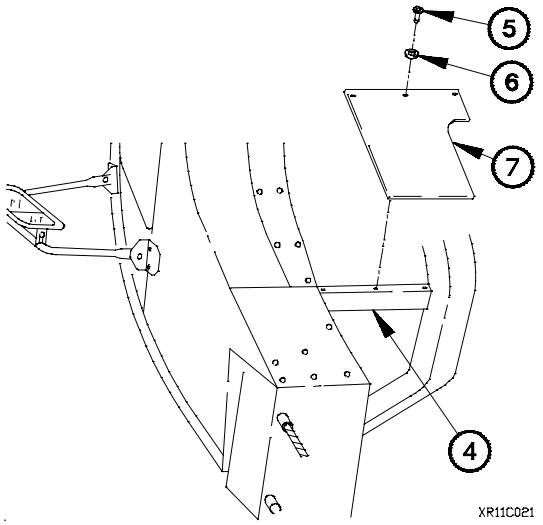
(2) Remove 14 rivets (1), washers (2), and engine splash guard (3) from cab (4).

16-10. FENDER AND SPLASH GUARD REPLACEMENT (CONT)

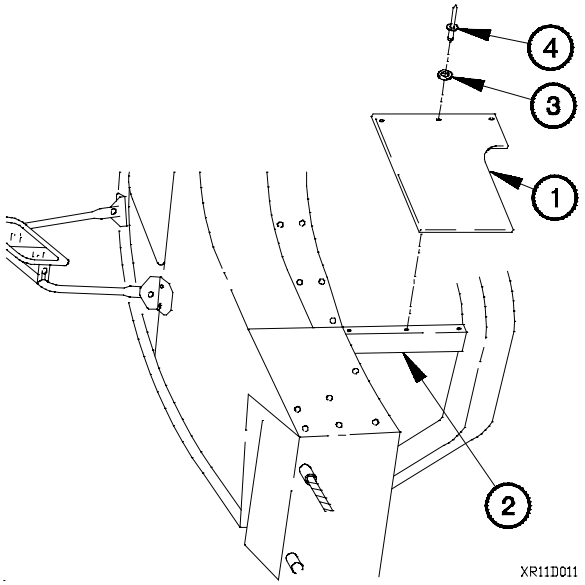
WARNING

Wear appropriate eye protection when removing rivets. Failure to comply may result in injury to personnel.

(3) Remove three rivets (5), washers (6), and engine splash guard (7) from cab (4).



d. Engine Splash Guard Installation (All Models Except M1081).



NOTE

Step (2) requires the aid of an assistant.

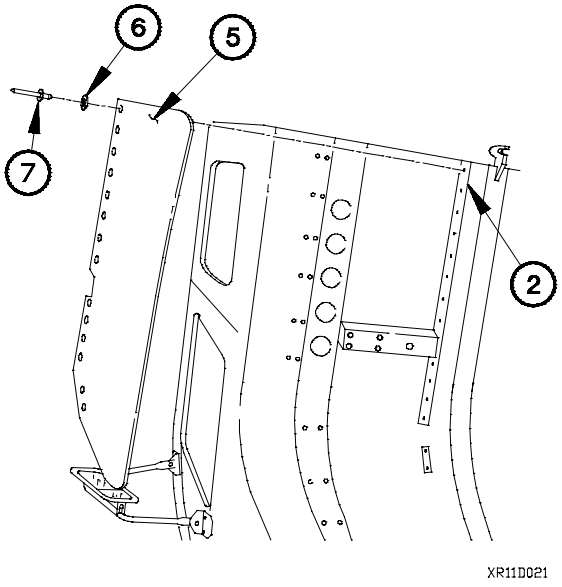
(2) Install engine splash guard (5) on cab (2) with 14 washers (6) and rivets (7).

(3) Lower cab (TM 9-2320-365-10).

NOTE

Left and right engine splash guards are installed the same way. Left side shown.

(1) Install engine splash guard (1) on cab (2) with three washers (3) and rivets (4).

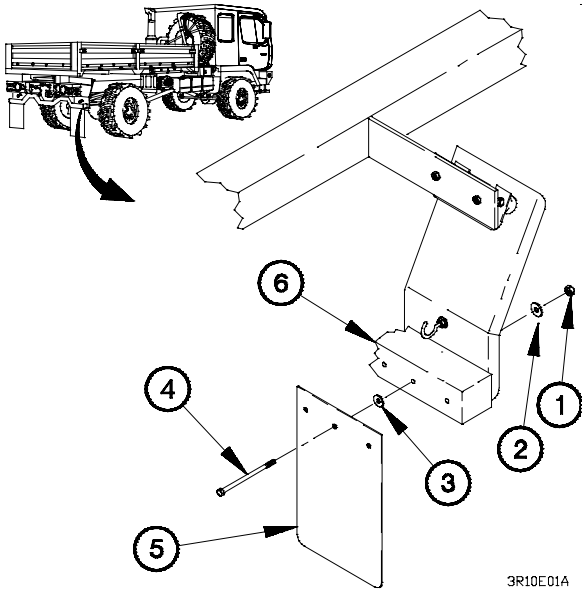


e. Rear Splash Guard Removal.

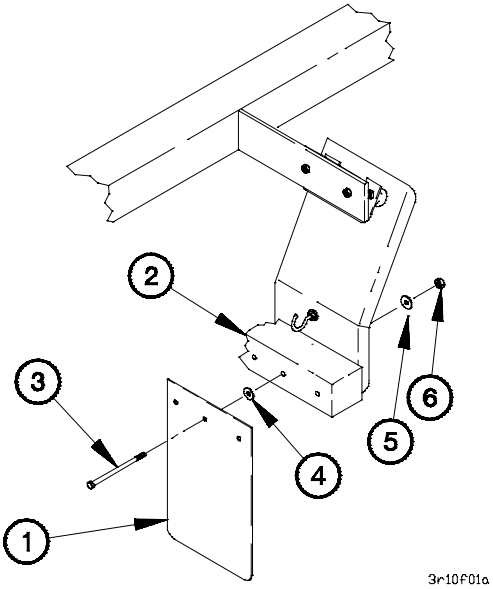
NOTE

Left and right rear splash guards are removed the same way. Right side shown.

Remove three nuts (1), washers (2), spacers (3), screws (4), and rear splash guard (5) from bumper (6).



f. Rear Splash Guard Installation.



NOTE

Left and right rear splash guards are installed the same way. Right side shown.

(1) Position rear splash guard (1) on bumper (2) with three screws (3), spacers (4), washers (5), and nuts (6).

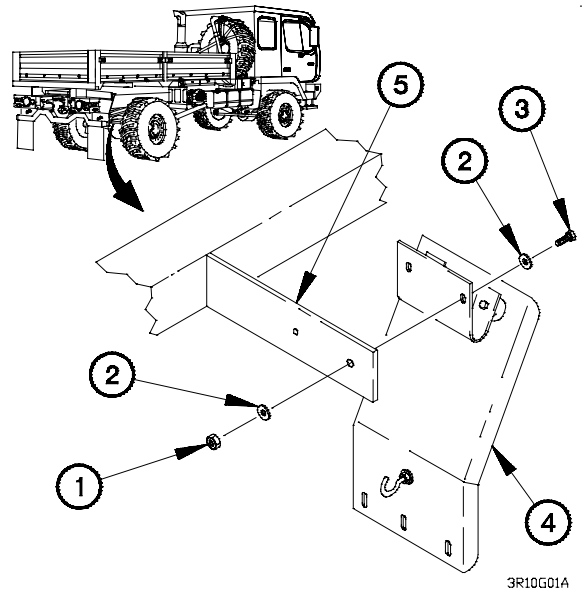
(2) Tighten three nuts (6) to 18-22 lb-ft (24-30 N·m).

g. Rear Fender Removal.

NOTE

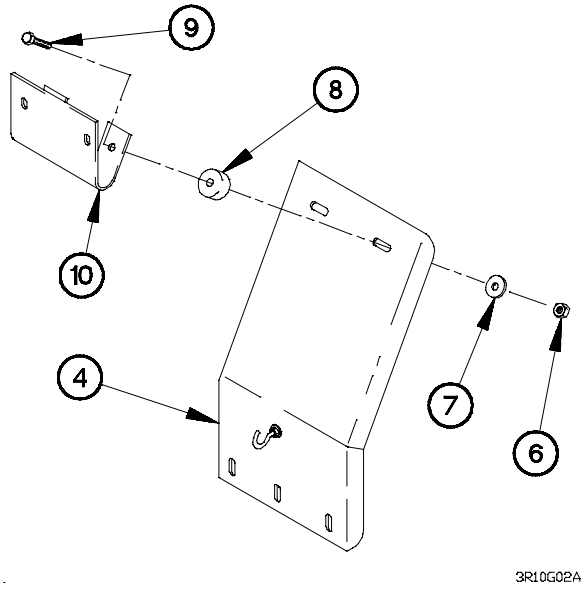
Left and right rear fenders are removed the same way. Right side shown.

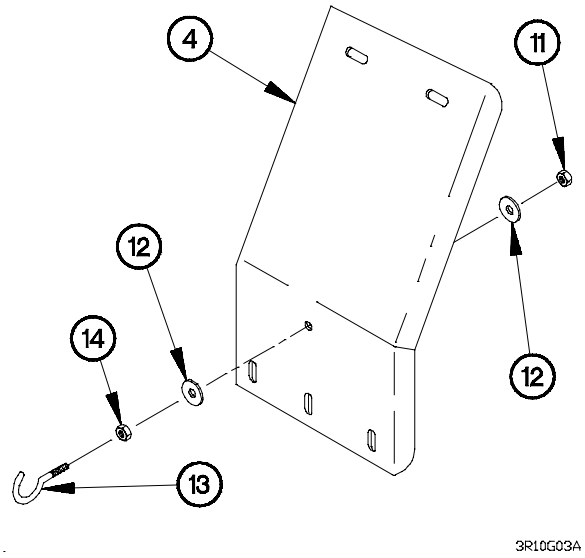
(1) Remove two nuts (1), four washers (2), two screws (3), and rear fender (4) from bracket (5).



16-10. FENDER AND SPLASH GUARD REPLACEMENT (CONT)

(2) Remove two self-locking nuts (6), washers (7), spacers (8), screws (9), and bracket (10) from rear fender (4). Discard self-locking nuts.





(3) Remove self-locking nut (11), two washers (12), and hook (13) from rear fender (4). Discard self-locking nut.

(4) Remove nut (14) from hook (13).

h. Rear Fender Installation.

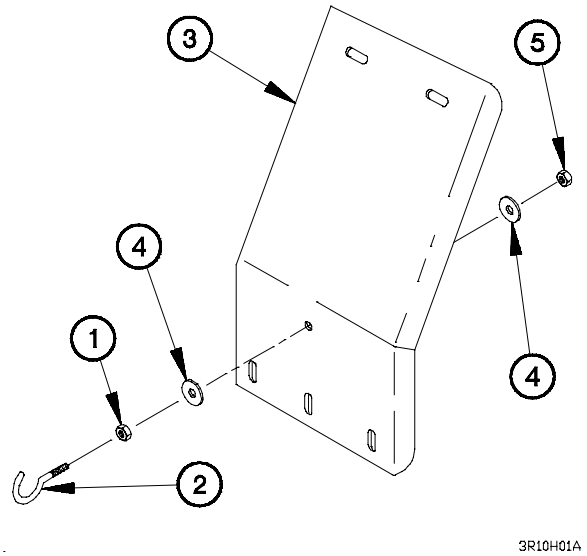
NOTE

Left and right rear fenders are installed the same way. Right side shown.

(1) Install nut (1) on hook (2).

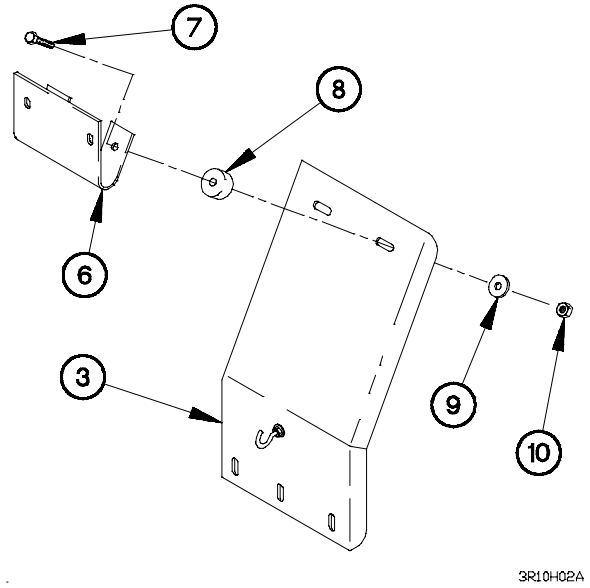
(2) Position hook (2) on rear fender (3) with two washers (4) and self-locking nut (5).

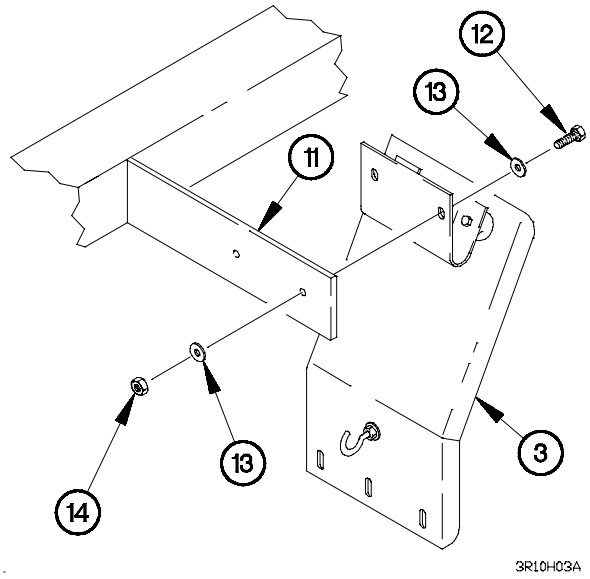
(3) Tighten self-locking nut (5) to 18-22 lb-ft (24-30 N·m).



(4) Position bracket (6) on rear fender (3) with two screws (7), spacers (8), washers (9), and self-locking nuts (10).

(5) Tighten two self-locking nuts (10) to 18-22 lb-ft (24-30 N·m).





(6) Position rear fender (3) on bracket (11) with two screws (12), four washers (13), and two nuts (14).

(7) Tighten two nuts (14) to 18-22 lb-ft (24-30 N·m).

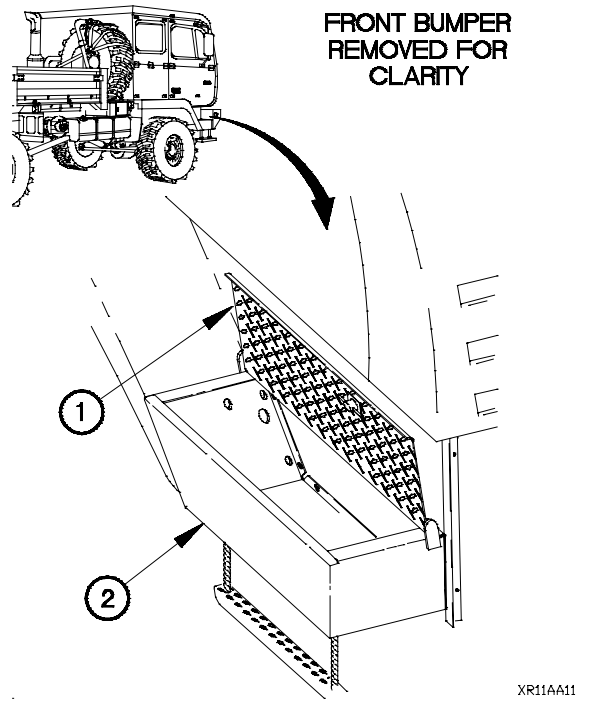
i. M1081 Front Fender Removal.

NOTE

Perform step (1) on right side.

(1) Open cab step tread (1) on cab step (2).

(2) Raise cab (TM 9-2320-365-10).



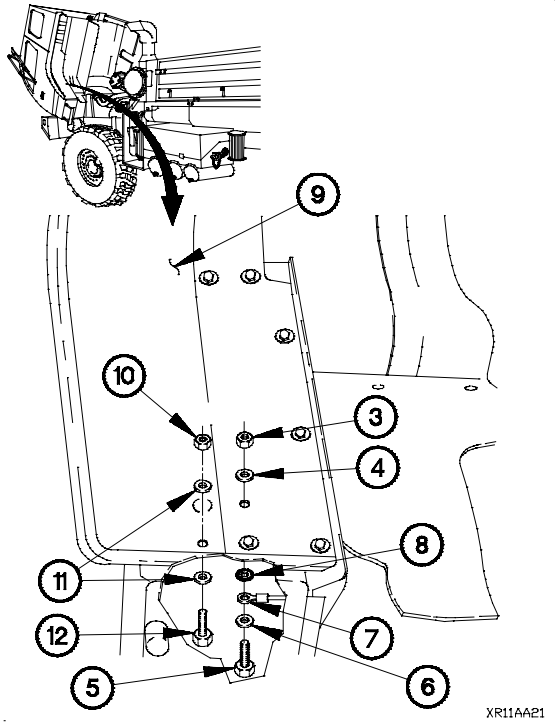
16-10. FENDER AND SPLASH GUARD REPLACEMENT (CONT)

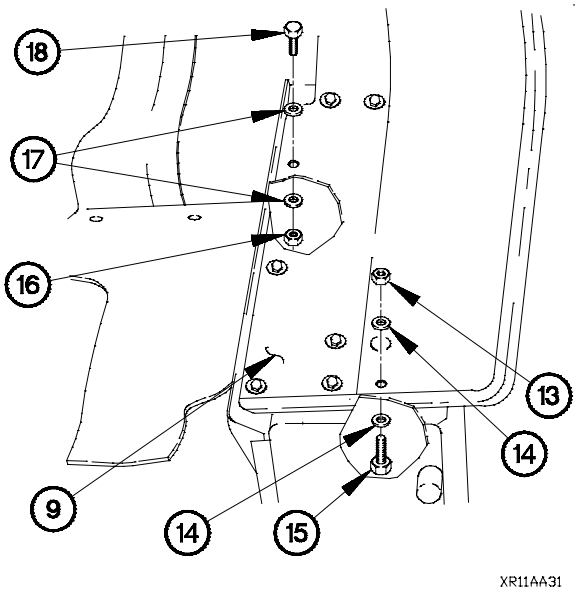
NOTE

Perform steps (3) and (4) on left side.

(3) Remove self-locking nut (3), washer (4), screw (5), washer (6), terminal lug TL94 (7), and lockwasher (8) from front fender (9). Discard self-locking nut and lockwasher.

(4) Remove three self-locking nuts (10), six washers (11), and three screws (12) from front fender (9). Discard self-locking nuts.





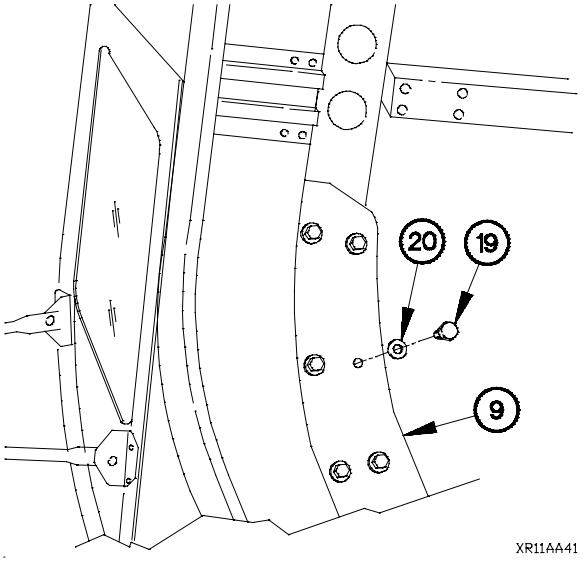
NOTE

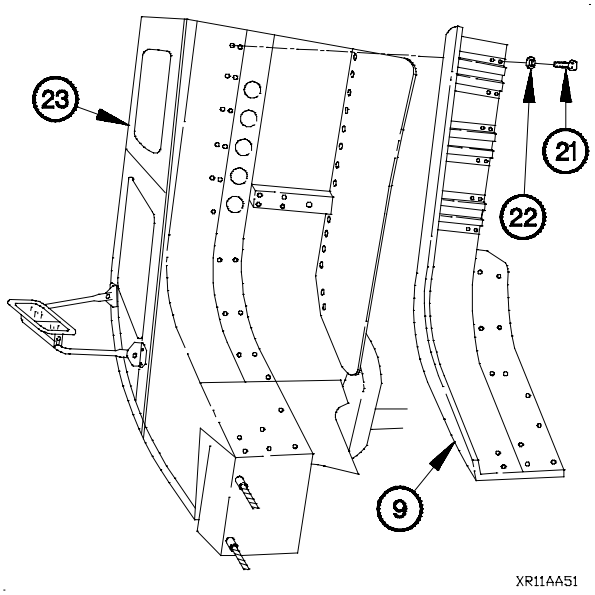
Perform step (5) on right side.

(5) Remove four self-locking nuts (13), eight washers (14), and four screws (15) from front fender (9). Discard self-locking nuts.

(6) Remove three self-locking nuts (16), six washers (17), and three screws (18) from front fender (9). Discard self-locking nuts

(7) Remove three screws (19) and washers (20) from front fender (9).





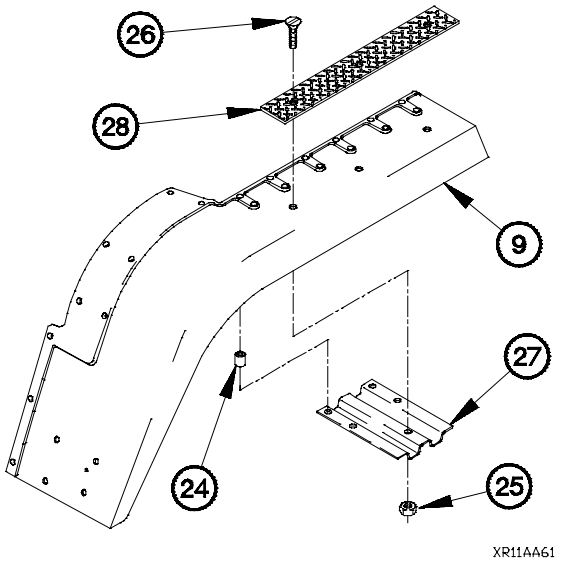
NOTE

Step (8) requires the aid of an assistant.

(8) Remove 12 screws (21), washers (22), and front fender (9) from cab (23).

(9) Remove 12 spacers (24) from front fender (9).

(10) Remove three self-locking nuts (25), screws (26), brackets (27), and step (28) from front fender (9). Discard self-locking nuts.



16-10. FENDER AND SPLASH GUARD REPLACEMENT (CONT)

j. M1081 Front Fender Installation.

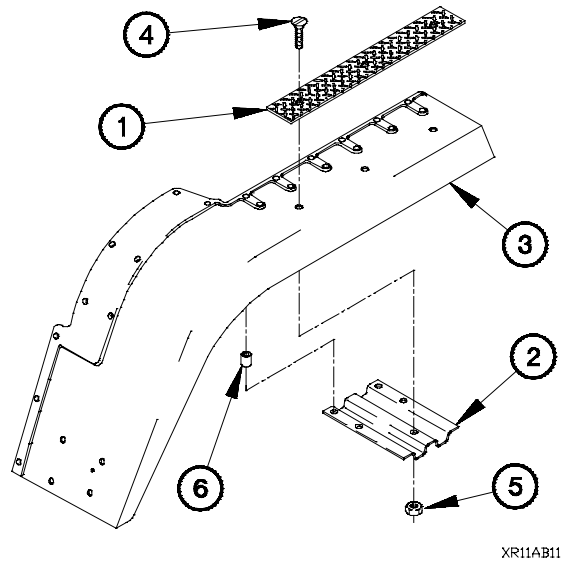
NOTE

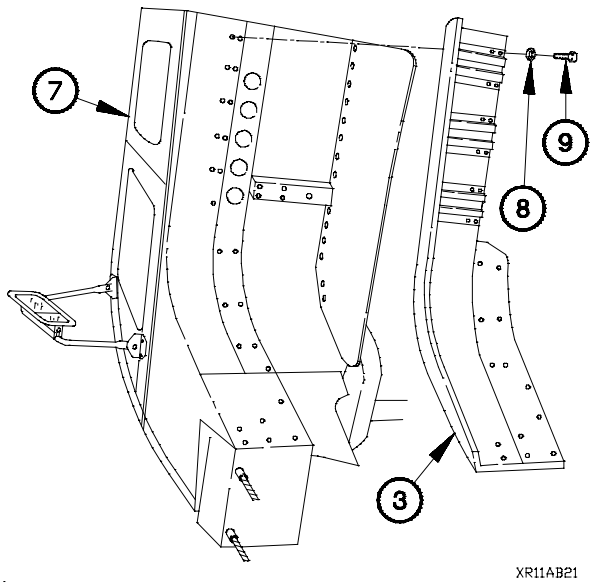
Left and right M1081 front fenders are installed the same way. Left side shown.

(1) Position step (1) and three brackets (2) on front fender (3) with three screws (4) and self-locking nuts (5).

(2) Tighten three self-locking nuts (5) to 18-22 lb-ft (24-30 N·m).

(3) Install 12 spacers (6) in front fender (3).





NOTE

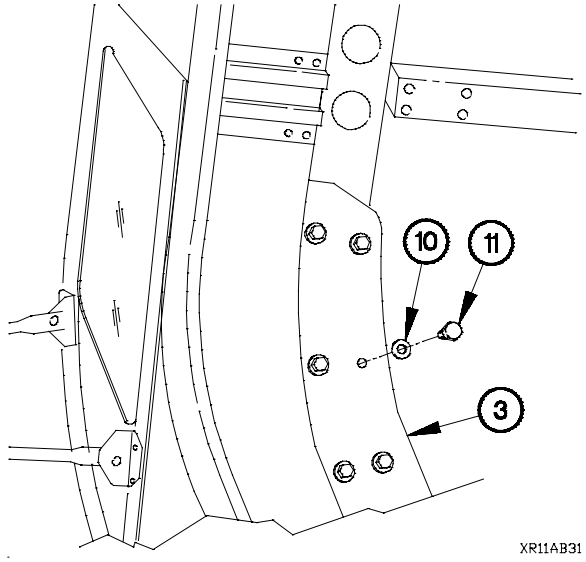
Step (4) requires the aid of an assistant.

(4) Position front fender (3) on cab (7) with 12 washers (8) and screws (9).

(5) Tighten 12 screws (9) to 18-22 lb-ft (24-30 N·m).

(6) Position three washers (10) and screws (11) in front fender (3).

(7) Tighten three screws (11) to 18-22 lb-ft (24-30 N·m).



(8) Position three screws (12), six washers (13), and three self-locking nuts (14) in front fender (3).

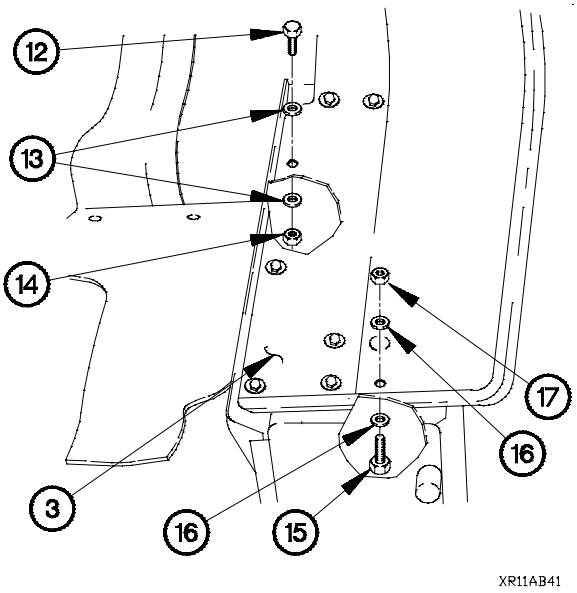
(9) Tighten three self-locking nuts (14) to 18-22 lb-ft (24-30 N·m).

NOTE

Perform steps (10) and (11) on right side.

(10) Position four screws (15), eight washers (16), and four self-locking nuts (17) in front fender (3).

(11) Tighten four self-locking nuts (17) to 18-22 lb-ft (24-30 N·m).



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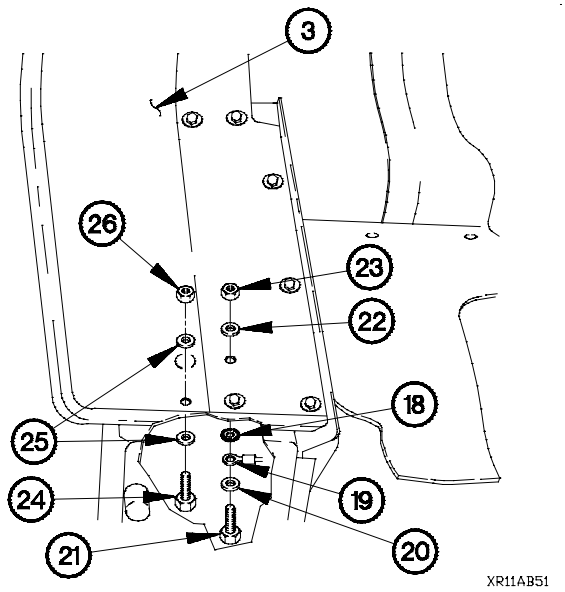


XR11AB51

NOTE

Perform steps (12) through (14) on left side.

(12) Position lockwasher (18) and terminal lug TL94 (19) on front fender (3) with washer (20), screw (21), washer (22), and self-locking nut (23).

(13) Position three screws (24), six washers (25), and three self-locking nuts (26) in front fender (3).

(14) Tighten self-locking nuts (23 and 26) to 18-22 lb-ft (24-30 N·m).

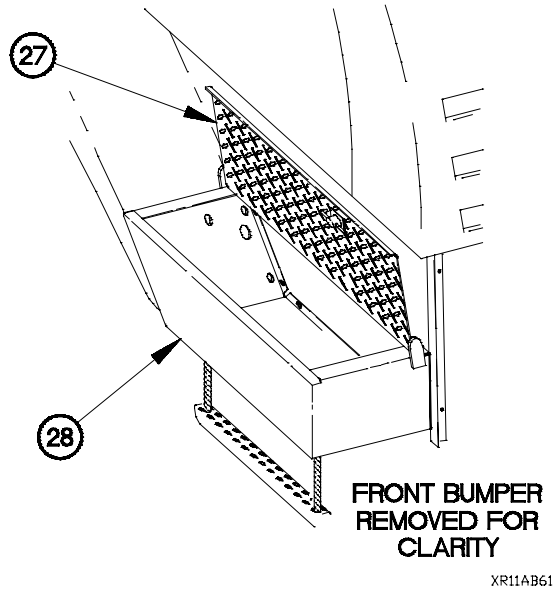
16-10. FENDER AND SPLASH GUARD REPLACEMENT (CONT)

NOTE

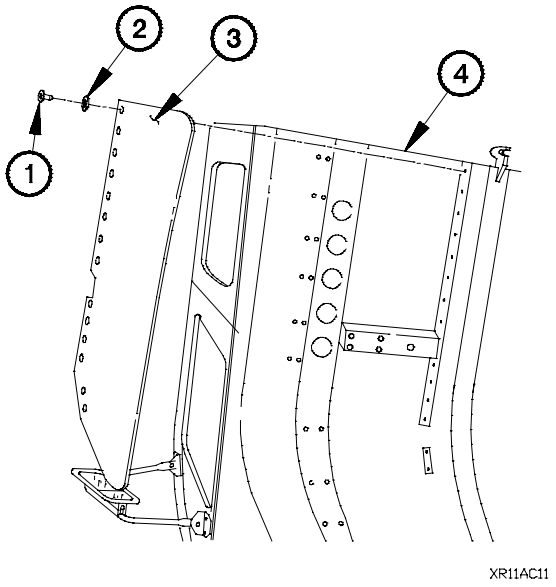
Perform step (15) on right side.

(15) Close cab step tread (27) on cab step (28).

(16) Lower cab (TM 9-2320-365-10).



k. M1081 Engine Splash Guard Removal.



NOTE

Left and right M1081 engine splash guards are removed the same way. Left side shown.

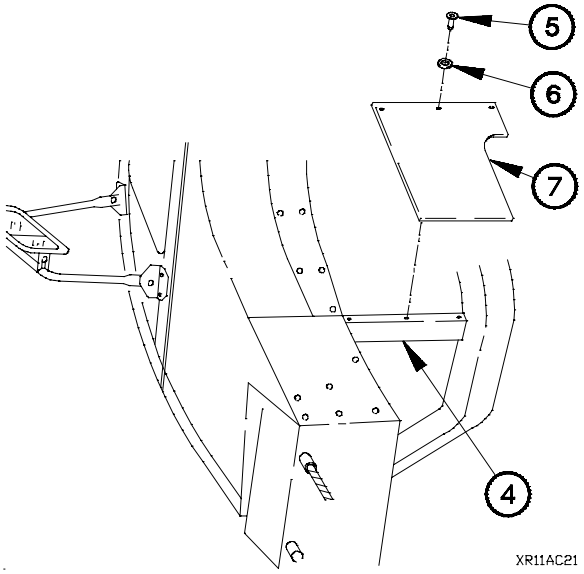
(1) Raise cab (TM 9-2320-365-10).

WARNING

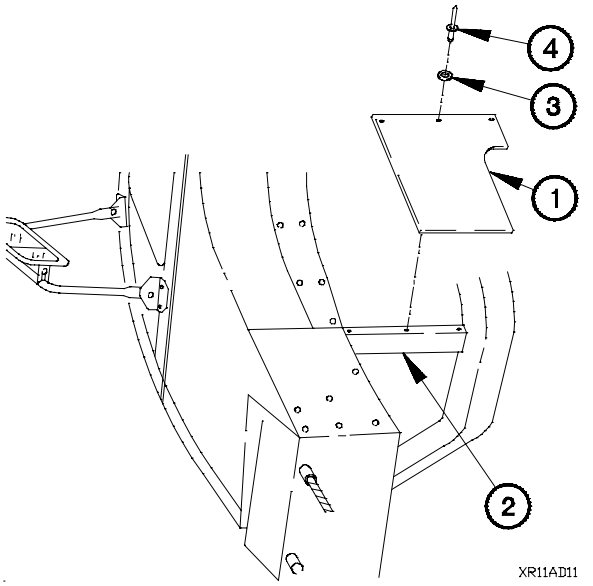
Wear appropriate eye protection when removing rivets. Failure to comply may result in injury to personnel.

(2) Remove 14 rivets (1), washers (2), and engine splash guard (3) from cab (4).

(3) Remove three rivets (5), washers (6), and engine splash guard (7) from cab (4).



l. M1081 Engine Splash Guard Installation.



NOTE

Step (2) requires the aid of an assistant.

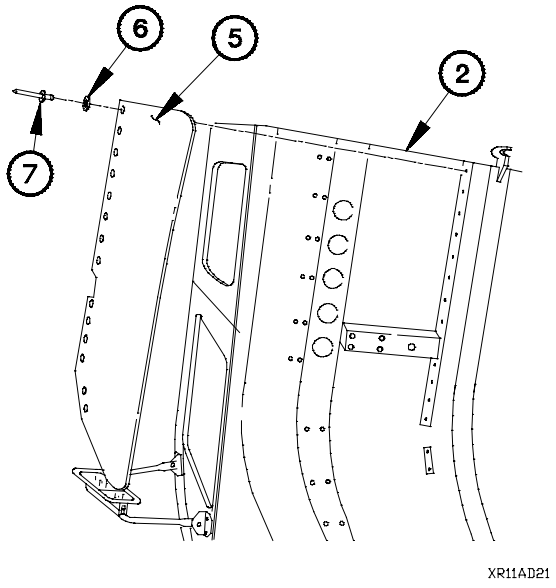
(2) Install engine splash guard (5) on cab (2) with 14 washers (6) and rivets (7).

(3) Lower cab (TM 9-2320-365-10).

NOTE

Left and right M1081 engine splash guards are installed the same way. Left side shown.

(1) Install engine splash guard (1) on cab (2) with three washers (3) and rivets (4).



16-10. FENDER AND SPLASH GUARD REPLACEMENT (CONT)

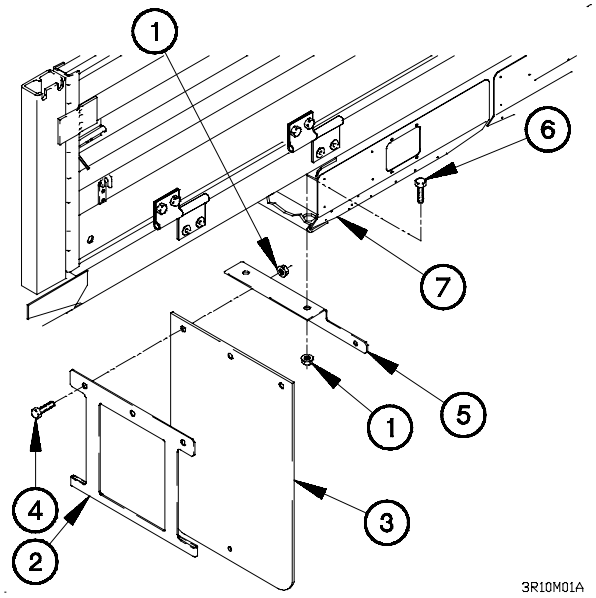
m. M1078/M1081 Splash Guard Removal.

NOTE

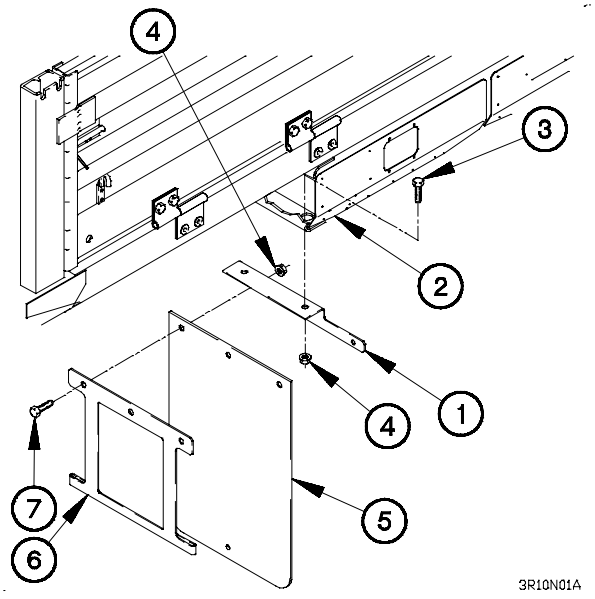
Right and left side splash guards are removed the same way. Right side shown.

(1) Remove three self-locking nuts (1), brace (2), splash guard (3), and three bolts (4) from bracket (5). Discard self-locking nuts.

(2) Remove two self-locking nuts (1), bracket (5), and two bolts (6) from cargo bed (7). Discard self-locking nuts.



n. M1078/M1081 Splash Guard Installation.



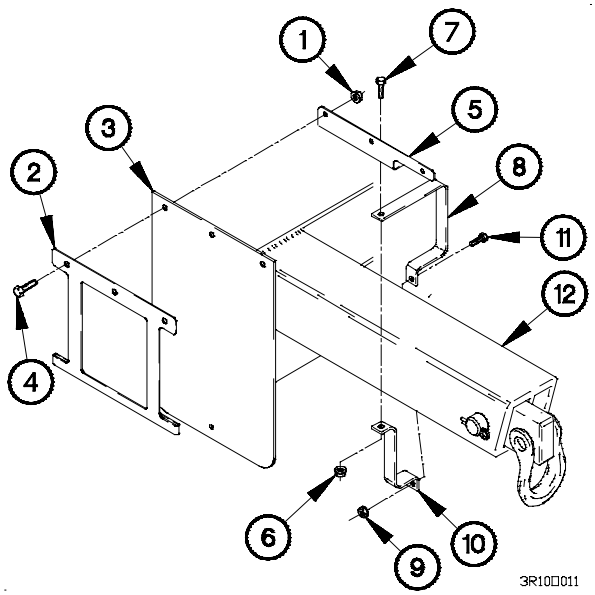
NOTE

Right and left side splash guards are installed the same way. Right side shown.

(1) Install bracket (1) on cargo bed (2) with two bolts (3) and self-locking nuts (4).

(2) Install splash guard (5) and brace (6) on bracket (1) with three bolts (7) and self-locking nuts (4).

o. M1079 Front Splash Shield Removal.



NOTE

Right and left side splash guards are removed the same way. Right side shown.

(1) Remove three self-locking nuts (1), brace (2), splash guard (3), and three screws (4) from bracket (5). Discard self-locking nuts.

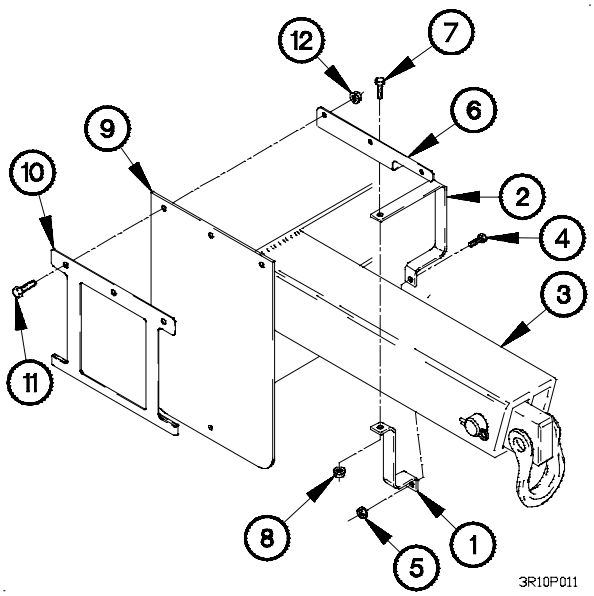
(2) Remove two self-locking nuts (6), screws (7) and bracket (5) from clamp (8). Discard self-locking nuts.

NOTE

Note position of clamps on sub-frame prior to removal.

(3) Remove two self-locking nuts (9), clamps (10), screws (11) and clamps (8) from sub-frame (12). Discard self-locking nuts.

p. M1079 Front Splash Shield Installation.



NOTE

Right and left side splash guards are installed the same way. Right side shown.

(1) Position two clamps (1) and clamps (2) on sub-frame (3) with two screws (4) and self-locking nuts (5).

(2) Position bracket (6) on clamp (2) with two screws (7) and self-locking nuts (8).

(3) Tighten self-locking nuts (5).

(4) Tighten self-locking nuts (8) to 26-32 lb-ft (35-43 N·m).

(5) Install splash guard (9) and brace (10) on bracket (6) with three screws (11) and self-locking nuts (12).

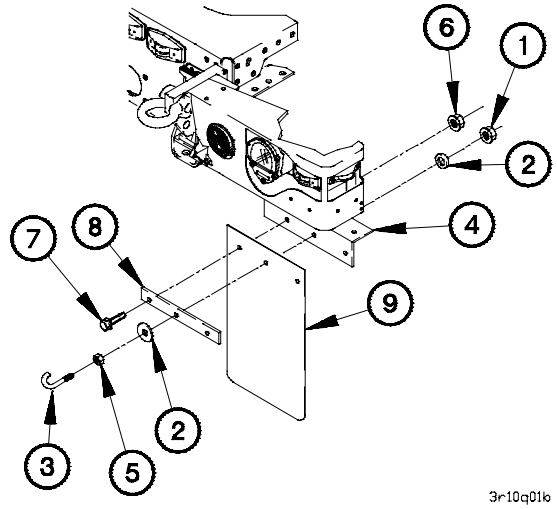
16-10. FENDER AND SPLASH GUARD REPLACEMENT (CONT)

q. M1079 Rear Splash Shield Removal.

(1) Remove self-locking nut (1), two washers (2) and hook (3) from bracket (4). Discard self-locking nut.

(2) Remove nut (5) from hook (3).

(3) Remove two self-locking nuts (6), bolts (7), plate (8), and splash shield (9) from bracket (4). Discard self-locking nuts.



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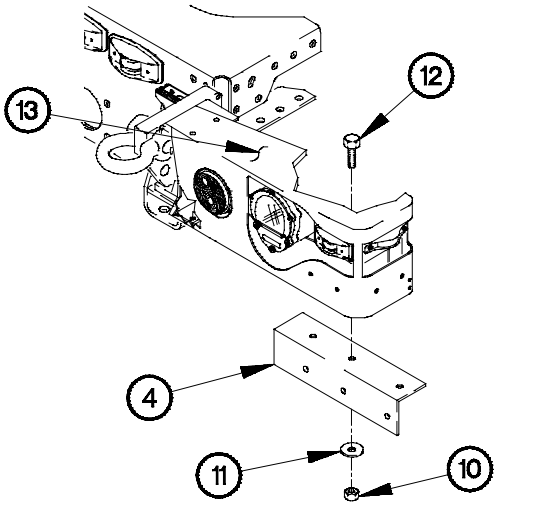

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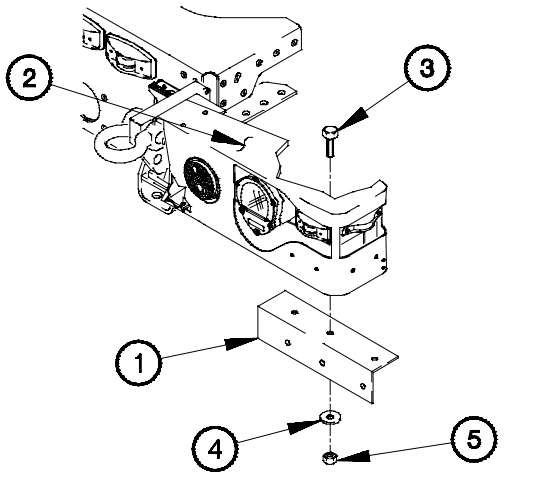
(4) Remove two nuts (10), washers (11), screws (12), and bracket (4) from taillight carrier (13).

r. M1079 Rear Splash Shield Installation.

(1) Position bracket (1) on taillight carrier (2) with two screws (3), washers (4), and nuts (5).

(2) Tighten two nuts (5) to 26-32 lb-ft (35-43 N·m).



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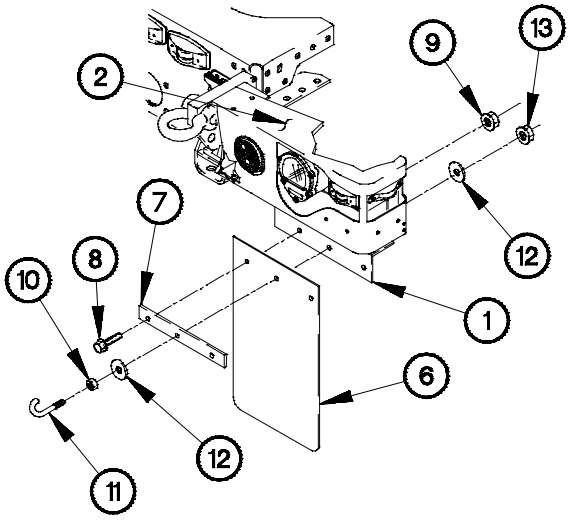
(3) Position splash shield (6) on bracket (1) with plate (7), two screws (8), and self-locking nuts (9).

(4) Install nut (10) on hook (11).

(5) Position hook (11) on bracket (1) with two washers (12), and self-locking nut (13).

(6) Tighten nut (13) and two nuts (9) to 18-22 lb-ft (24-30 N·m).



q. Follow-On Maintenance.

(1) Install windshield washer reservoir (para 18-2).

(2) Install warning and caution placards, if required (Chap 2).

End of Task.

16-11. CAB STEP REPLACEMENT

This task covers:

a. Removal
b. Installation
c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
Windshield washer reservoir and pump removed (left side cab step) (para 18-2).
Cab raised (TM 9-2320-365-10).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C)

Materials/Parts
Nut, Self-Locking (10) (Item 148, Appendix G)
Grommet, Nonmetallic (Item 50, Appendix G)
Receptacle (Item 213, Appendix G)
Seal, Nonmetallic (Item 252, Appendix G)

a. Removal.

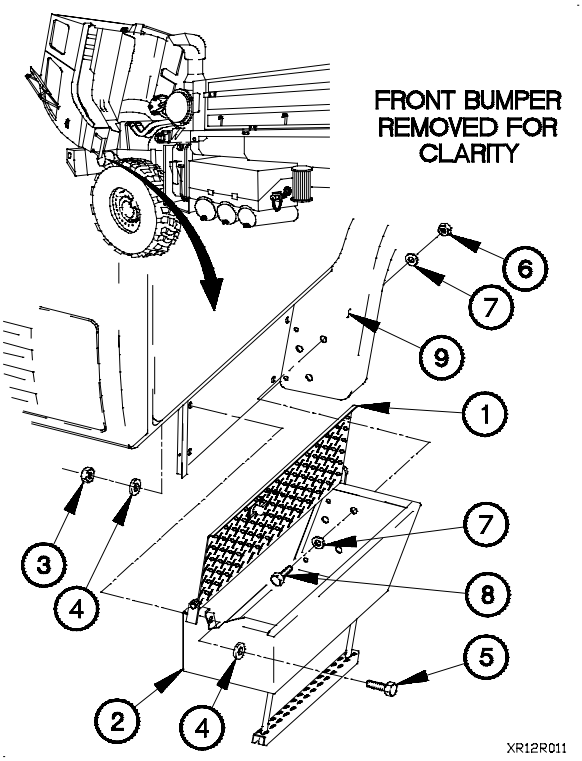
NOTE

Left and right cab steps are removed the same way. Left cab step shown.

(1) Open cab step tread (1) on cab step (2).

(2) Remove four self-locking nuts (3), eight washers (4), and four screws (5) from cab step (2). Discard self-locking nuts.

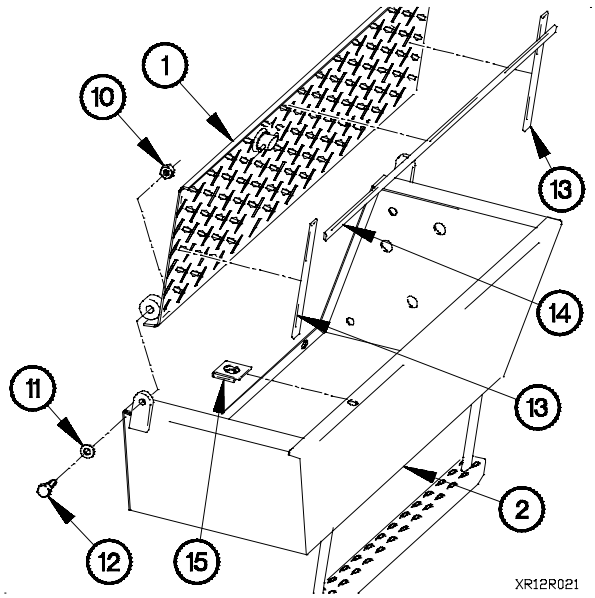
(3) Remove four self-locking nuts (6), eight washers (7), four screws (8), and cab step (2) from fender (9). Discard self-locking nuts.

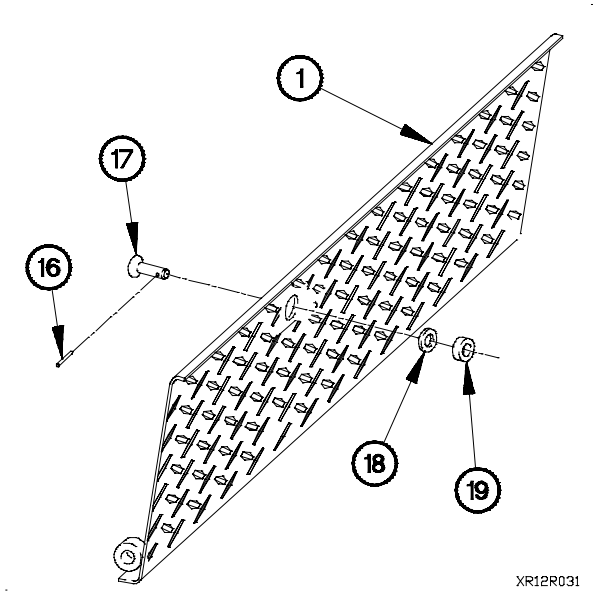


(4) Remove two self-locking nuts (10), washers (11), screws (12), and cab step tread (1) from cab step (2). Discard self-locking nuts.

(5) Remove two seals (13) and seal (14) from cab step tread (1). Discard seals.

(6) Remove turnlock receptacle (15) from cab step (2). Discard turnlock receptacle.





(7) Remove pin (16) from stud fastener (17).

(8) Remove stud fastener (17), washer (18), and grommet (19) from cab step tread (1). Discard grommet.

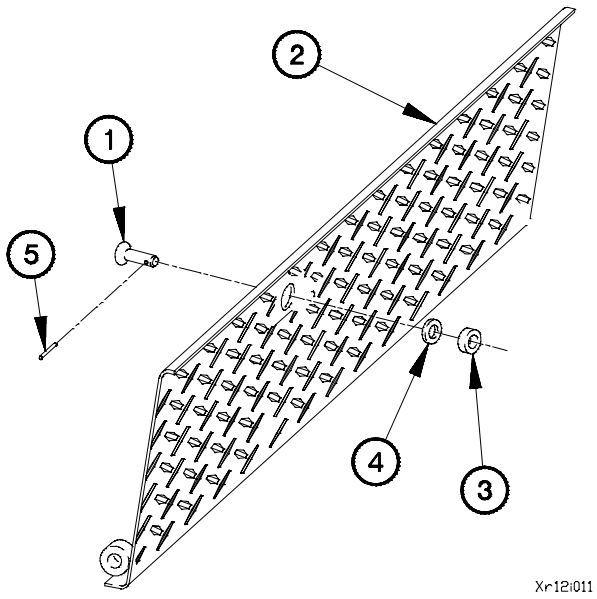
b. Installation.

NOTE

Left and right cab steps are installed the same way. Left cab step shown.

(1) Position stud fastener (1) in cab step tread (2) with grommet (3) and washer (4).

(2) Install pin (5) in stud fastener (1).



16-11. CAB STEP REPLACEMENT (CONT)

(3) Install turnlock receptacle (6) on cab step (7).

(4) Cut two seals (8) to 7.25 in. (18.4 cm) long.

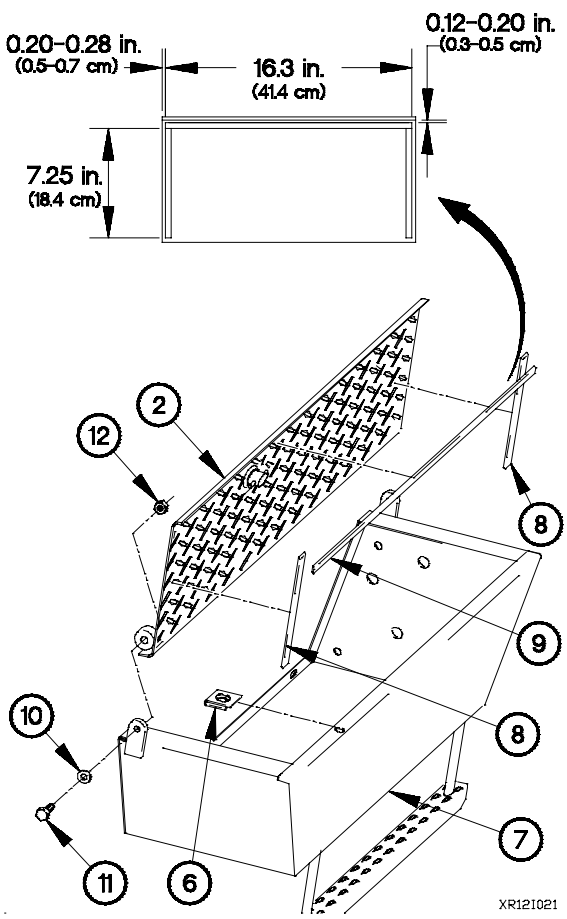
(5) Cut one seal (9) to 16.3 in. (41.4 cm) long.

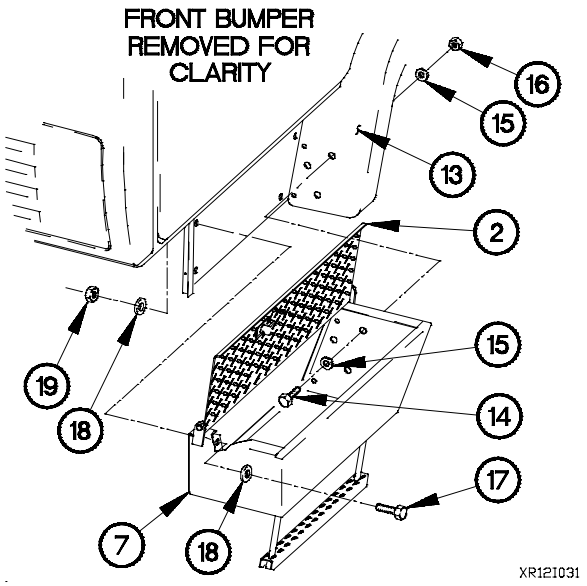
(6) Install seal (9) on cab step tread (2) as shown.

(7) Install two seals (8) on cab step tread (2) as shown.

(8) Position cab step tread (2) on cab step (7) with two washers (10), screws (11), and self-locking nuts (12).

(9) Tighten two self-locking nuts (12) to 21-27 lb-ft (28-37 N·m).





(10) Position cab step (7) on fender (13) with four screws (14), eight washers (15), and four self-locking nuts (16).

(11) Position four screws (17), eight washers (18), and four self-locking nuts (19) in cab step (7).

(12) Tighten four self-locking nuts (16 and 19) to 21-27 lb-ft (28-37 N·m).

(13) Close cab step tread (2) on cab step (7).

e. Follow-On Maintenance.

(1) Lower cab (TM 9-2320-365-10).

(2) Install windshield washer reservoir and pump (left side cab step) (para 18-2).

End of Task.

16-12. CAB FLOOR COVERING AND DOOR SEAL REPLACEMENT

This task covers:

a. Right Cab Floor Covering Removal
b. Right Cab Floor Covering Installation
c. Left Cab Floor Covering Removal
d. Left Cab Floor Covering Installation
e. Center Cab Floor Covering Removal
f. Center Cab Floor Covering Installation
g. Door Seal Removal (All Models Except M1081)
h. Door Seal Installation (All Models Except M1081)
i. M1081 Door Seal Removal
j. M1081 Door Seal Installation
k. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
Seats removed (para 16-14).

Tools and Special Tools (Cont)
Tool Kit, Genl Mech (Item 44, Appendix C)
Wrench, Torque, 0-200 lb-in. (Item 58, Appendix C)
Socket Set, Socket Wrench (Item 35, Appendix C)

a. Right Cab Floor Covering Removal.

(1) Remove right floor covering (1) from cab floor (2).

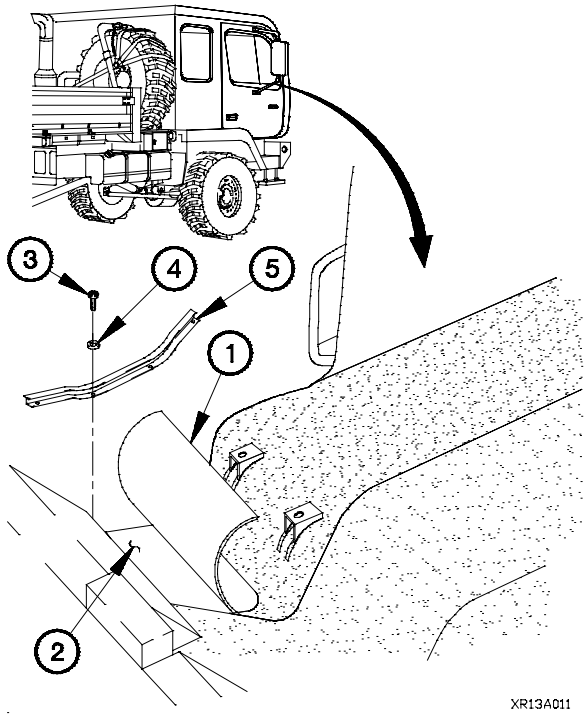
(2) Remove four screws (3), washers (4), and molding (5) from cab floor (2).

b. Right Cab Floor Covering Installation.

(1) Position molding (5) on cab floor (2) with four washers (4) and screws (3).

(2) Tighten four screws (3) to 22-26 lb-in. (2-3 N·m).

(3) Install right floor covering (1) on cab floor (2).



16-12. CAB FLOOR COVERING AND DOOR SEAL REPLACEMENT (CONT)

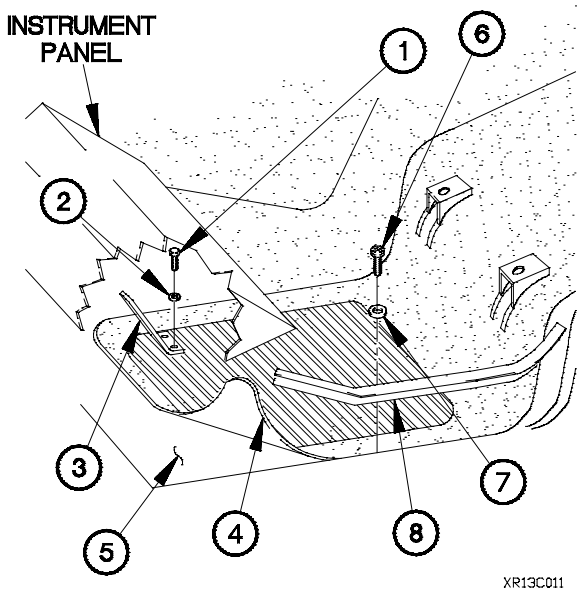
c. Left Cab Floor Covering Removal.

(1) Remove two screws (1) and washers (2) from accelerator pedal (3).

(2) Position accelerator pedal (3) to allow removal of left floor covering (4).

(3) Remove left floor covering (4) from cab floor (5).

(4) Remove four screws (6), washers (7), and molding (8) from cab floor (5).



d. Left Cab Floor Covering Installation.

(1) Position molding (8) on cab floor (5) with four washers (7) and screws (6).

(2) Tighten four screws (6) to 22-26 lb-in. (2-3 N·m).

(3) Install left floor covering (4) on cab floor (5).

(4) Install two washers (2) and screws (1) in accelerator pedal (3).

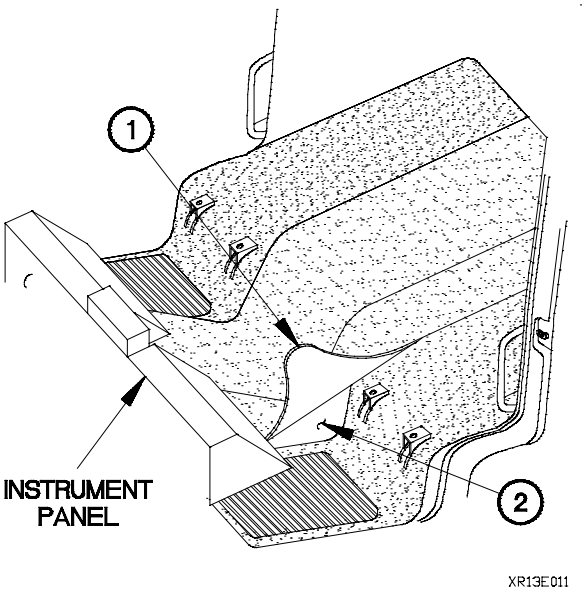
(5) Tighten two screws (1) to 72-84 lb-in. (8-9 N·m).

e. Center Cab Floor Covering Removal.

Remove center floor covering (1) from cab floor (2).

f. Center Cab Floor Covering Installation.

Install center floor covering (1) on cab floor (2).

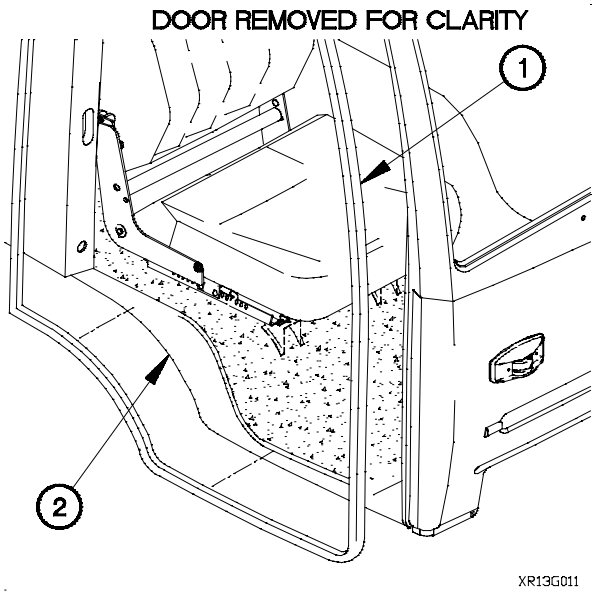


g. Door Seal Removal (All Models Except M1081)

NOTE

Left and right door seals are removed the same way. Right side shown.

Remove door seal (1) from cab (2).



h. Door Seal Installation (All Models Except M1081)

NOTE

Left and right door seal are installed the same way. Right side shown.

Install door seal (1) on cab (2).

i. M1081 Door Seal Removal.

NOTE

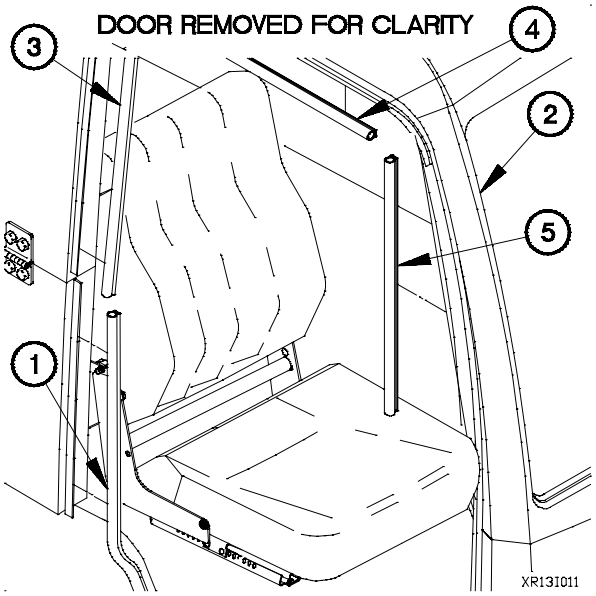
Left and right door seals are removed the same way. Right side shown.

(1) Remove bottom door seal (1) from cab (2).

(2) Remove top left door seal (3) from cab (2).

(3) Remove top door seal (4) from cab (2).

(4) Remove top right door seal (5) from cab (2).

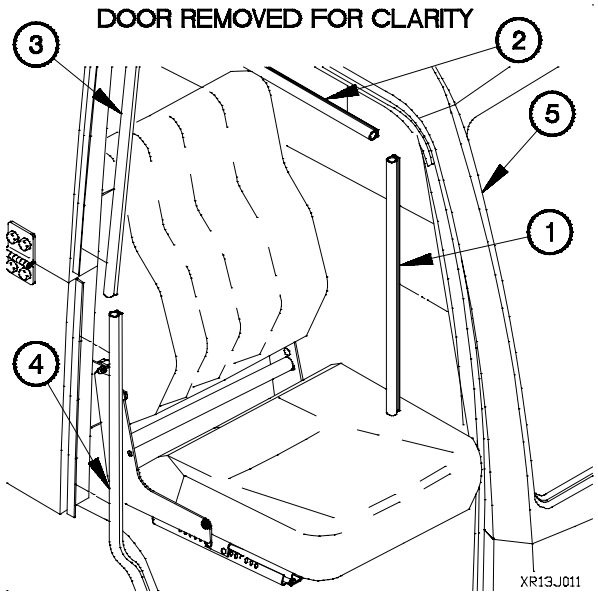


16-12. CAB FLOOR COVERING AND DOOR SEAL REPLACEMENT (CONT)

j. M1081 Door Seal Installation.

NOTE

Left and right door seals are installed the same way. Right side shown.



(1) Cut top right door seal (1) to 25.625 in. (65 cm).

(2) Cut top door seal (2) to 29.5 in. (74.9 cm).

(3) Cut top left door seal (3) to 22 in. (55.8 cm).

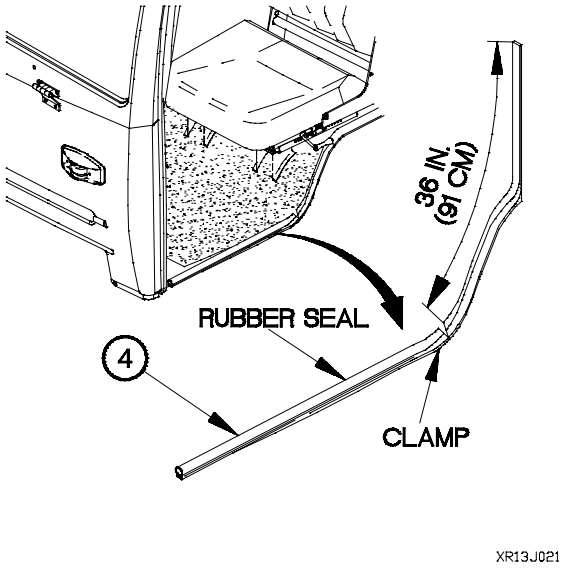
(4) Cut bottom door seal (4) to 85 in. (213.3 cm)

(5) Install top right door seal (1) on cab (5).

(6) Install top door seal (2) on cab (5).

(7) Install top left door seal (3) on cab (5).

(8) Install bottom door seal (4) on cab (5).



(9) Measure from top left of bottom door seal (4) 36 in. (91 cm).

(10) Cut rubber seal to plastic clamp.

k. Follow-On Maintenance.

Install seats (para 16-14).

End of Task.

16-13. CAB PANEL LINERS REPLACEMENT

This task covers:

a. Removal
b. Installation
c. Follow-On Maintenance

INITIAL SETUP

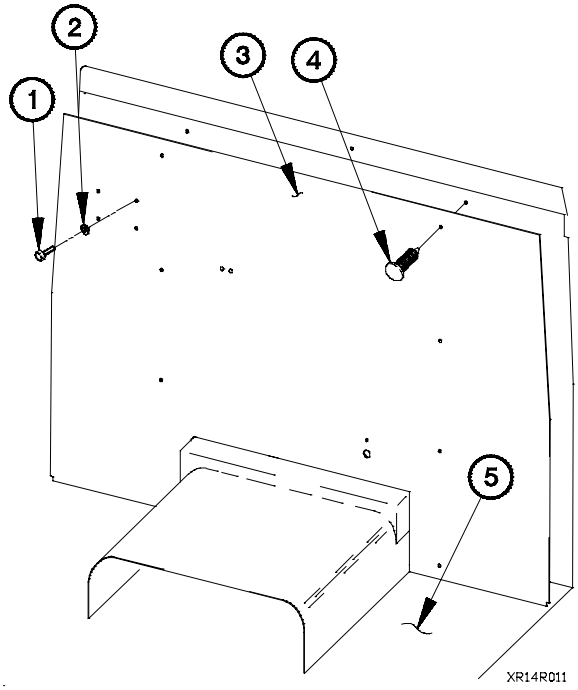
Equipment Conditions
Cab storage boxes removed (para 16-17).
Seats removed (para 16-14).
Seat belts removed (para 16-15).
Small arms mounts removed (para 21-7).
Rear boarding handles removed (para 16-76).

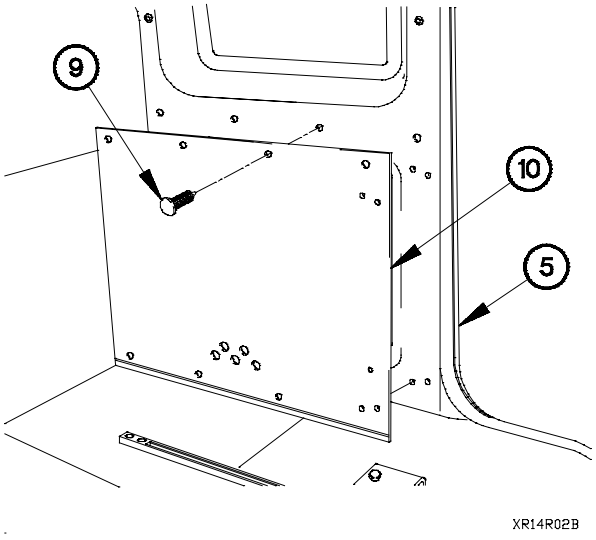
Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)

a. Removal.

(1) Remove four screws (1) and washers (2) from rear panel (3).

(2) Remove nine fasteners (4) and rear panel (3) from cab (5).





(3) Deleted.

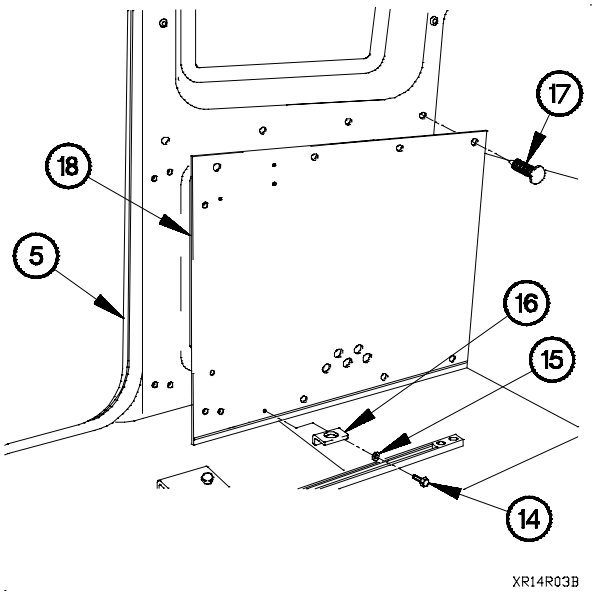
(4) Remove seven fasteners (9) and left side panel (10) from cab (5).

16-13. CAB PANEL LINERS REPLACEMENT (CONT)

(5) Deleted.

(6) Remove two screws (14), washers (15), and clip (16) from cab (5).

(7) Remove seven fasteners (17) and right side panel (18) from cab (5).



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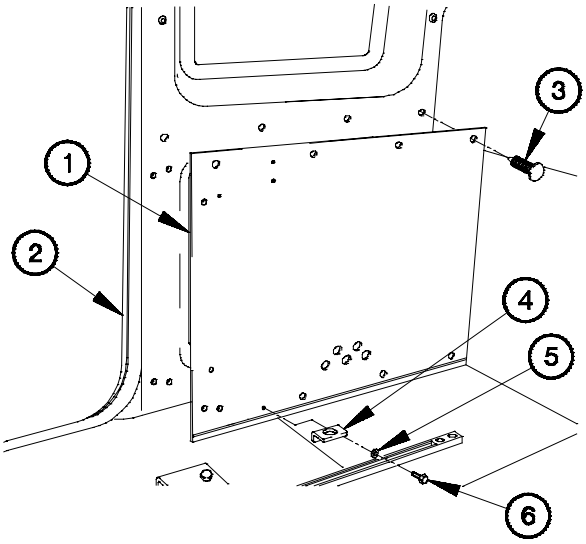
b. Installation.



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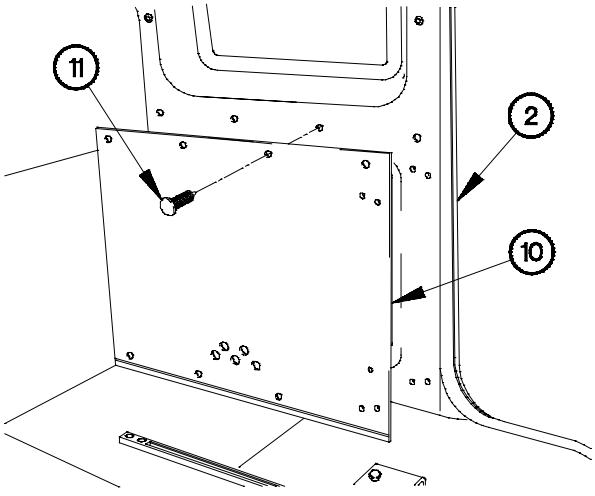
(1) Install right side panel (1) in cab (2) with seven fasteners (3).

(2) Install clip (4) in cab (2) with two washers (5) and screws (6).

(3) Deleted.



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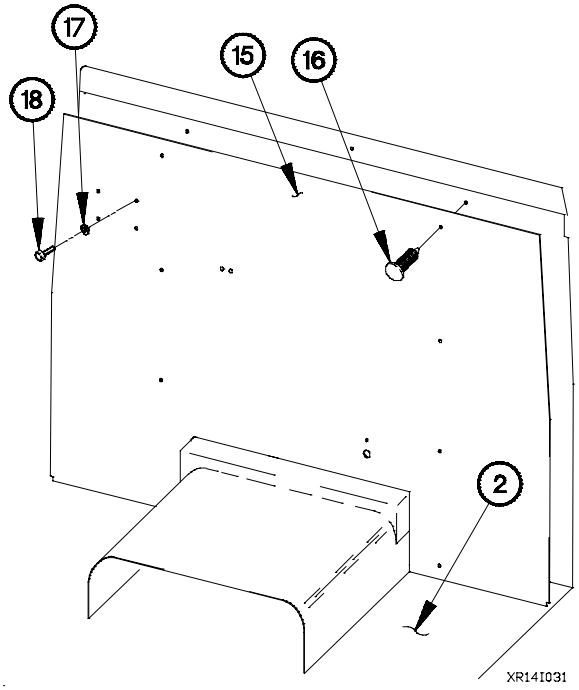
(4) Install left side panel (10) in cab (2) with seven fasteners (11).

(5) Deleted.

(6) Install rear panel (15) in cab (2) with nine fasteners (16).

(7) Install four washers (17) and screws (18) in rear panel (15).



c. Follow-On Maintenance.

(1) Install rear boarding handle (para 16-76).

(2) Install small arms mounts (para 21-7).

(3) Install seat belts (para 16-15).

(4) Install seats (para 16-14).

(5) Install cab storage boxes (para 16-17).

End of Task.

16-14. SEATS REPLACEMENT/REPAIR

This task covers:

a. Passenger's Seat Removal
b. Center Seat Removal
c. Driver's Seat Removal
d. Seat Disassembly
e. Seat Assembly
f. Driver's Seat Installation
g. Center Seat Installation
h. Passenger's Seat Installation

INITIAL SETUP

Equipment Conditions
Engine shut down (TM 9-2320-365-10).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Pliers, Hog Ring Staple (Item 36.2, Appendix B)

Tools and Special Tools
Goggles, Industrial (Item 15, Appendix C)

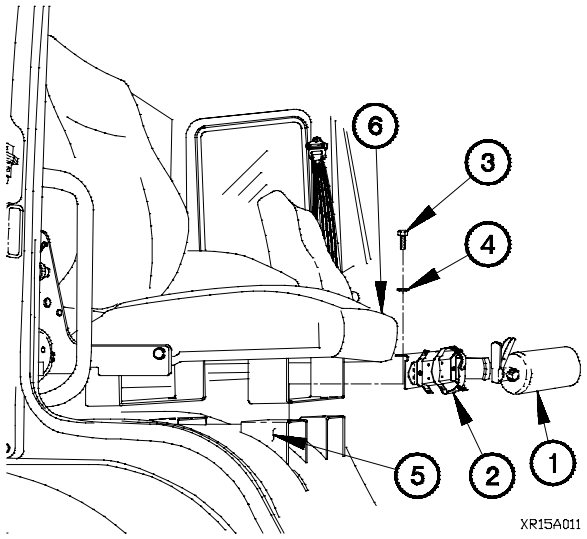
Materials/Parts
Lockwasher (4) (Item 101.1, Appendix G)
Cover, Seat, Vehicular (Item 19.2, Appendix D)
Cover, Seat, Vehicular (Item 19.1, Appendix D)

a. Passenger's Seat Removal.

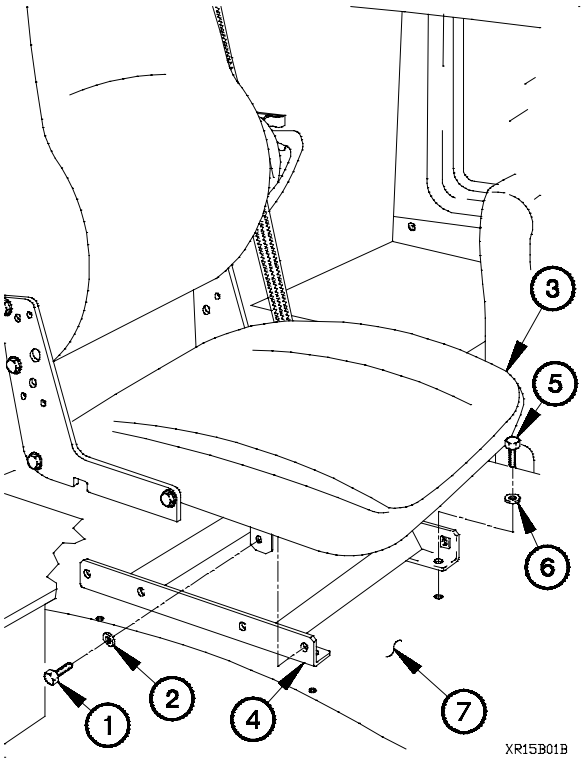
(1) Remove fire extinguisher (1) from bracket (2).

(2) Remove four screws (3) and washers (4) from seat mounts (5).

(3) Remove seat (6) and bracket (2) from seat mounts (5).



b. Center Seat Removal.



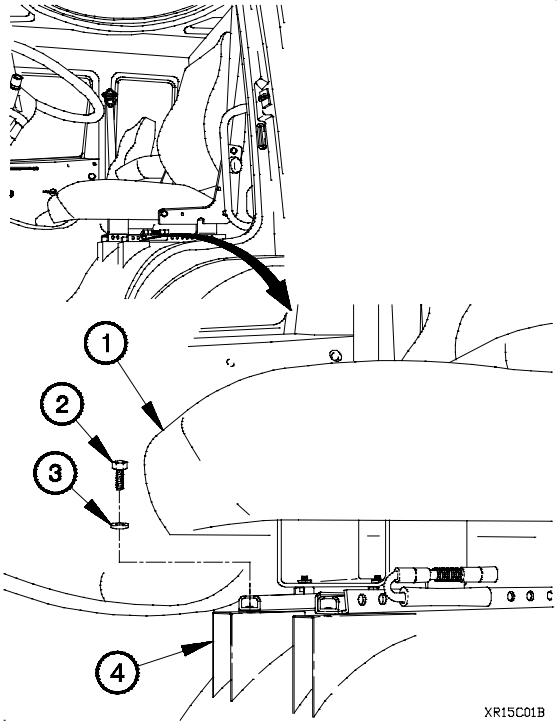
(1) Remove four screws (1), washers (2), and seat (3) from bracket (4).

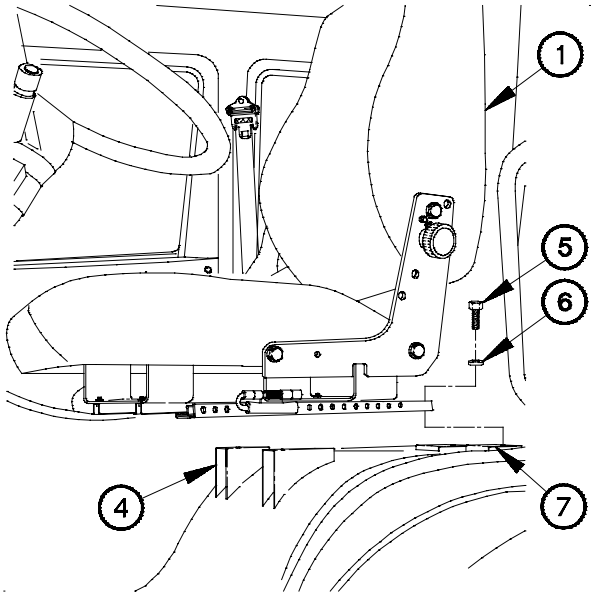
(2) Remove four screws (5), washers (6), and bracket (4) from cab floor (7).

c. Driver's Seat Removal.

(1) Slide seat (1) toward back of vehicle (TM 9-2320-365-10).

(2) Remove two screws (2) and washers (3) from front seat mount (4).





(3) Slide seat (1) toward front of vehicle (TM 9-2320-365-10).

(4) Remove two screws (5) and washers (6) from rear seat mount (7).

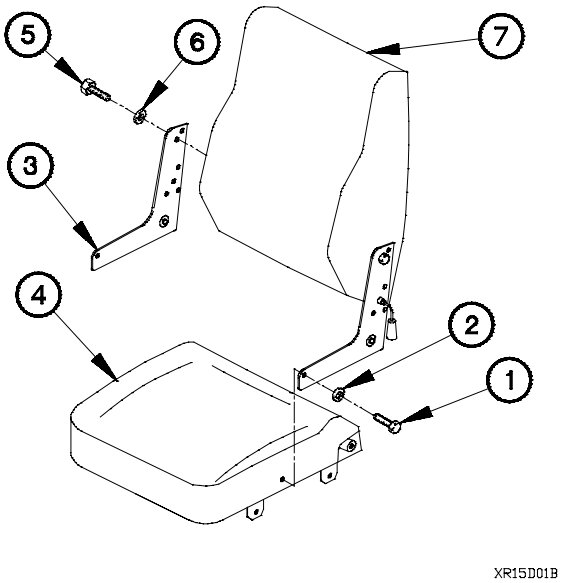
(5) Remove seat (1) from seat mounts (4 and 7).

d. Seat Disassembly.

(1) Remove two bolts (1) and washers (2) from two seat hinges (3).

(2) Remove seat bottom (4) from two seat hinges (3).

(3) Remove two bolts (5), washers (6), and two seat hinges (3) from seat back (7).



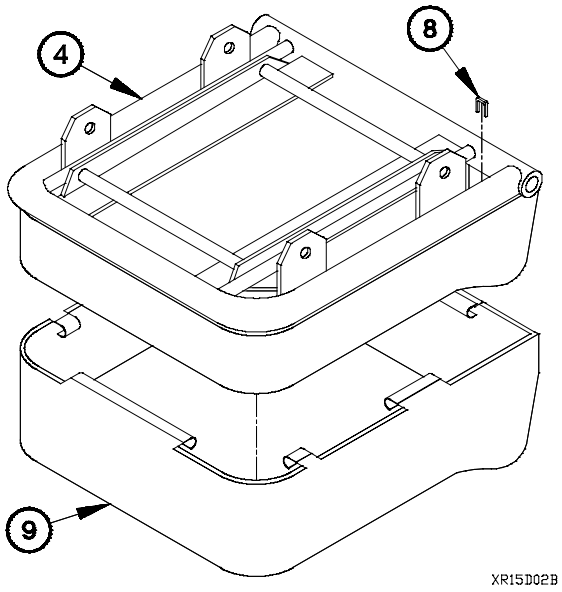
16-14. SEATS REPLACEMENT/REPAIR (CONT)

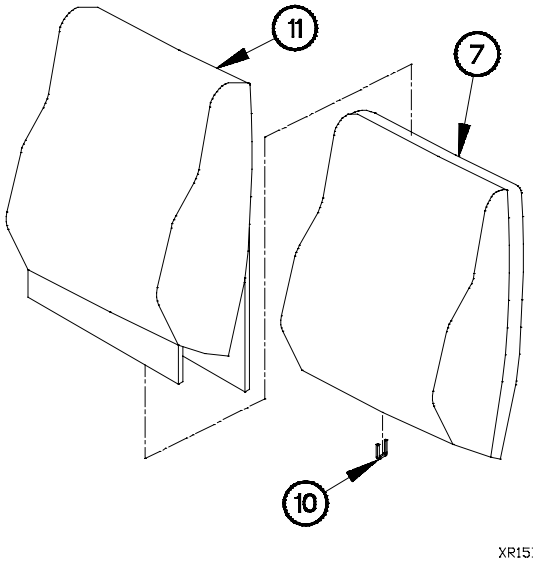
WARNING

Wear appropriate eye protection when removing hog rings. Hog rings are under tension and can act as projectiles when being removed. Failure to comply may result in injury to personnel.

(4) Remove 10 hog rings (8) from seat bottom cover (9).

(5) Remove seat bottom cover (9) from seat bottom (4).





(6) Remove five hog rings (10) from seat back cover (11).

(7) Remove seat back cover (11) from seat back (7).

e. Seat Assembly.

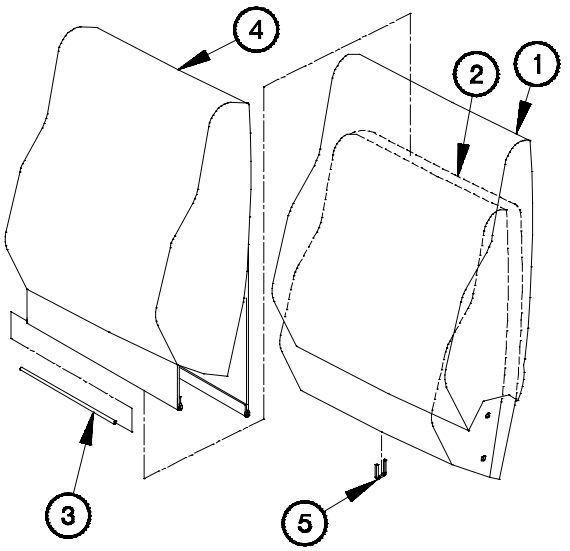
NOTE

Plastic film to be provided in replacement seat cover kit.

(1) Position plastic film (1) over seat back (2).

(2) Install two wire supports (3) in seat back cover (4).

(3) Position seat back cover (4) tightly over plastic film (1) and seat back (2).



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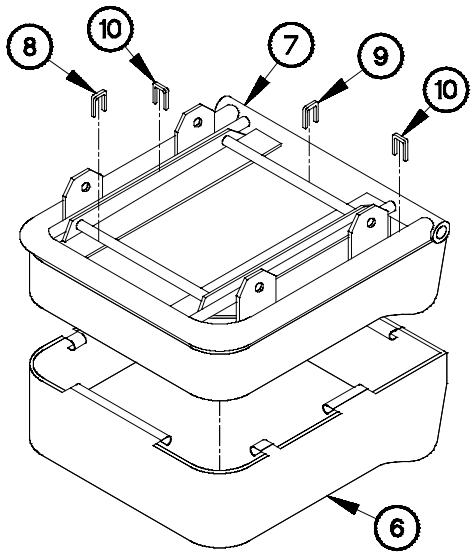
WARNING

Wear appropriate eye protection when installing hog rings. Hog rings are under tension and can act as projectiles when being installed. Failure to comply may result in injury to personnel.

CAUTION

Ensure hog rings are crimped over wire support wires on bottom of seat back frame. Failure to comply may result in damage to equipment.

(4) Install five hog rings (5) equally spaced on seat back cover (4).



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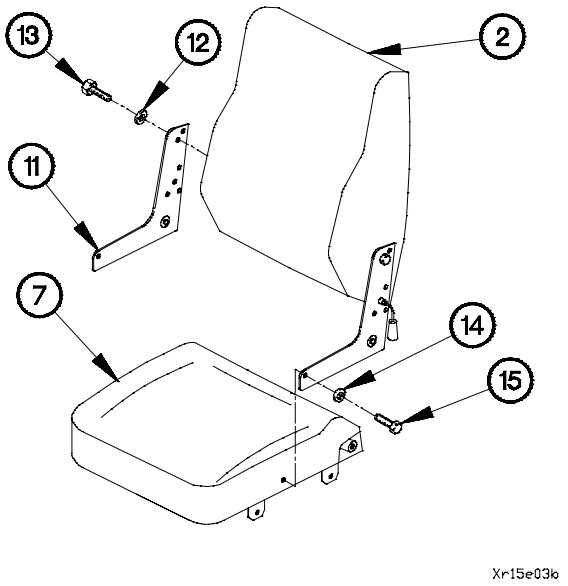
(5) Position seat bottom cover (6) tightly on seat bottom (7).

(6) Install two hog rings (8) on front of seat bottom cover (6).

(7) Install two hog rings (9) on rear of seat bottom cover (6).

(8) Install six hog rings (10) on left and right side of seat bottom cover (6).

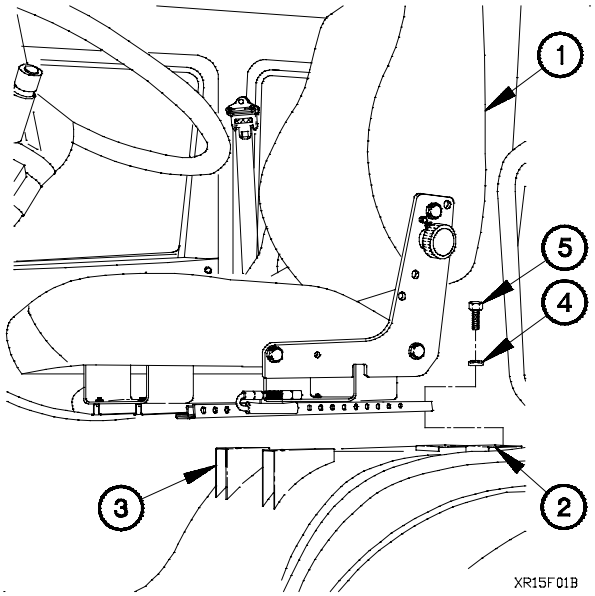
16-14. SEATS REPLACEMENT/REPAIR (CONT)



(9) Install two seat hinges (11) on seat back (2) with two washers (12) and bolt (13).

(10) Install seat bottom (7) on two seat hinges (11) with four washers (14) and bolts (15).

f. Driver's Seat Installation.



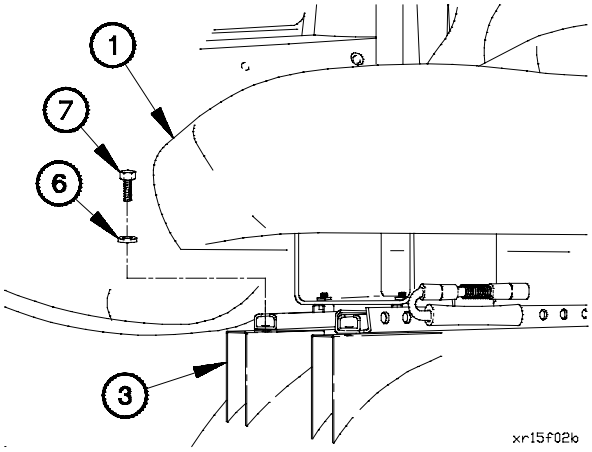
(1) Position seat (1) on seat mounts (2 and 3).

(2) Slide seat (1) toward front of vehicle (TM 9-2320-365-10).

(3) Install two washers (4) and screws (5) on rear seat mount (2).

(4) Slide seat (1) toward rear of vehicle (TM 9-2320-365-10).

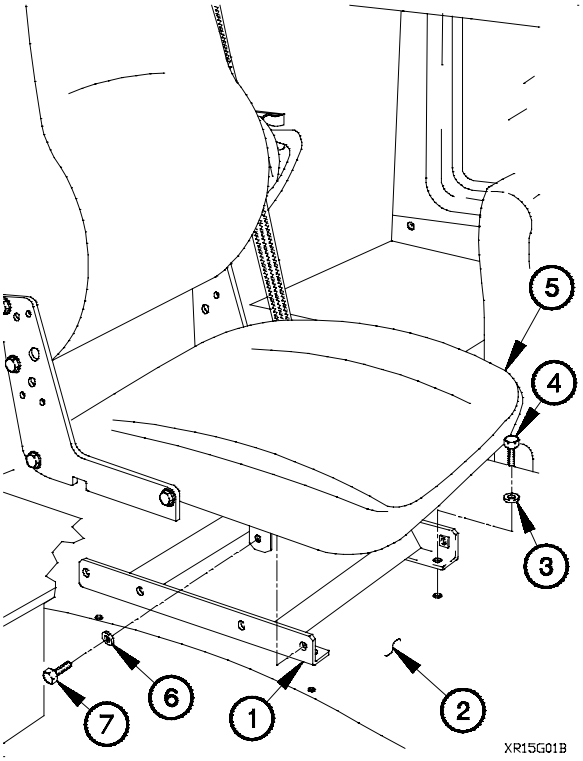
(5) Install two washers (6) and screws (7) on front seat mount (3).



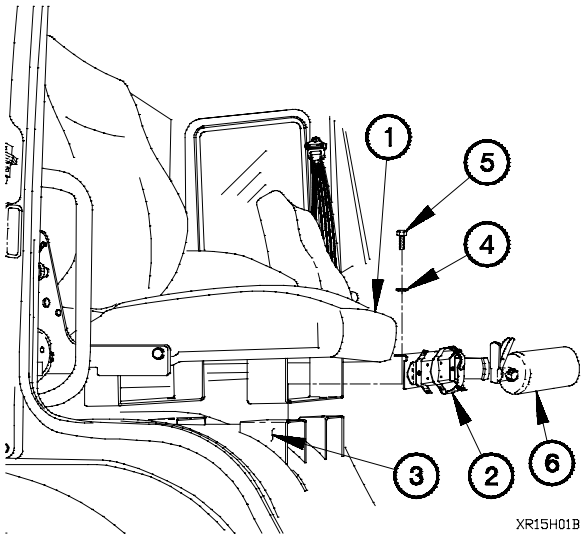
g. Center Seat Installation.

(1) Install bracket (1) on cab floor (2) with four washers (3) and screws (4).

(2) Install seat (5) on bracket (1) with four washers (6) and screws (7).



h. Passenger's Seat Installation.



(1) Install seat (1) and bracket (2) on seat mounts (3) with four washers (4) and screws (5).

(2) Install fire extinguisher (6) in bracket (2).

End of Task.

16-15. SEAT BELT REPLACEMENT

This task covers:

a. Removal
b. Installation
c. Follow-On Maintenance

INITIAL SETUP

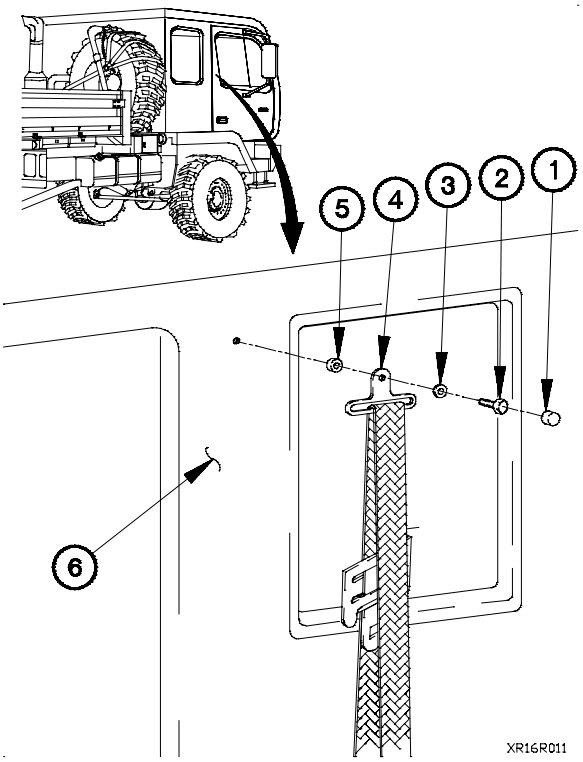
Equipment Conditions
Cab storage boxes removed (para 16-17).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C)

a. Removal.

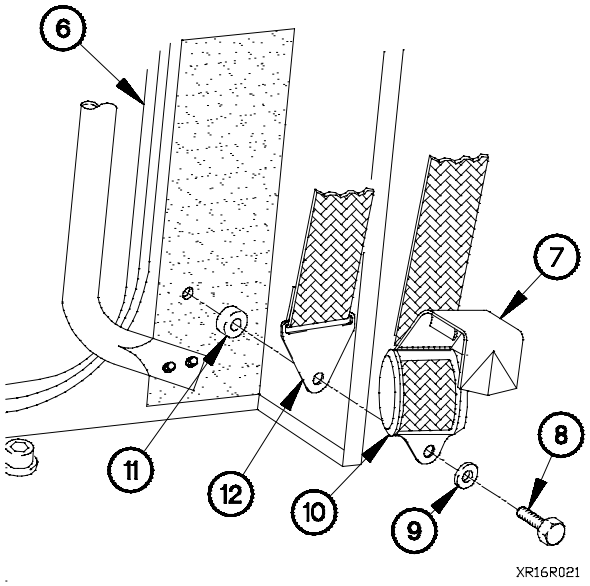
NOTE

Right and left side seat belts are replaced the same way. Right side shown.



(1) Remove plastic cover (1) from screw (2).

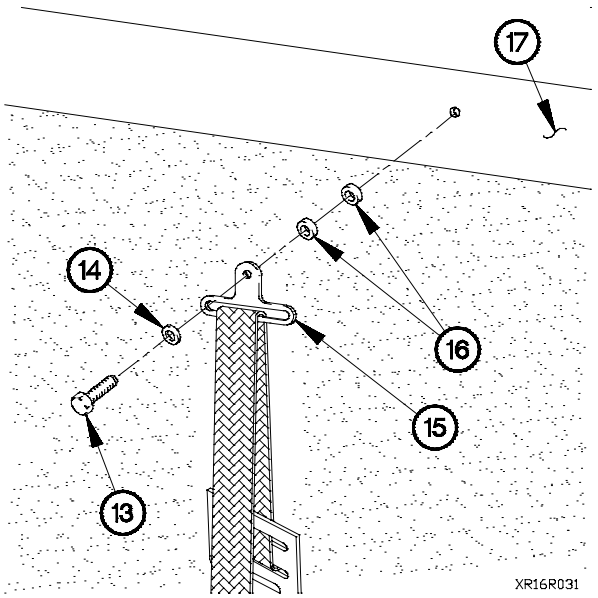
(2) Remove screw (2), washer (3), mounting bracket (4), and spacer (5) from side of cab (6).



(3) Open plastic cover (7).

(4) Remove screw (8), washer (9), seat belt retractor (10), and spacer (11) from side of cab (6).

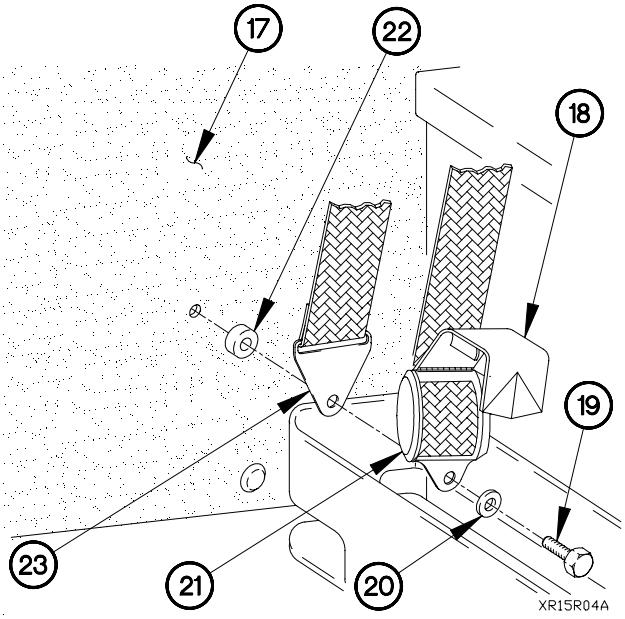
(5) Remove seat belt (12) from side of cab (6).



NOTE

Perform steps (6) through (8) for center seat belt.

(6) Remove screw (13), washer (14), center seat belt mounting bracket (15), and two spacers (16) from rear bulkhead (17).



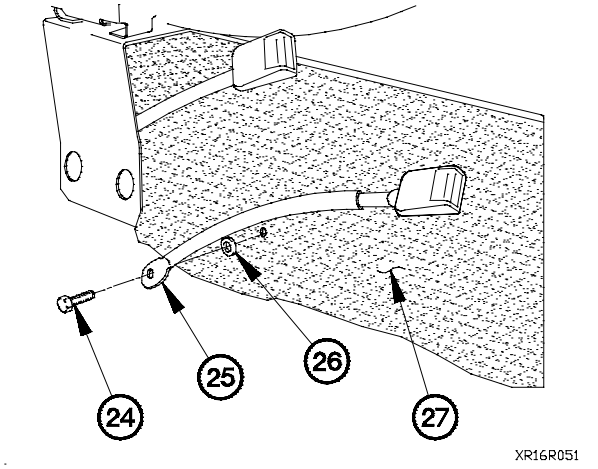
(7) Open plastic cover (18).

(8) Remove screw (19), washer (20), center seat belt retractor (21), spacer (22), and center seat belt (23) from rear bulkhead (17).

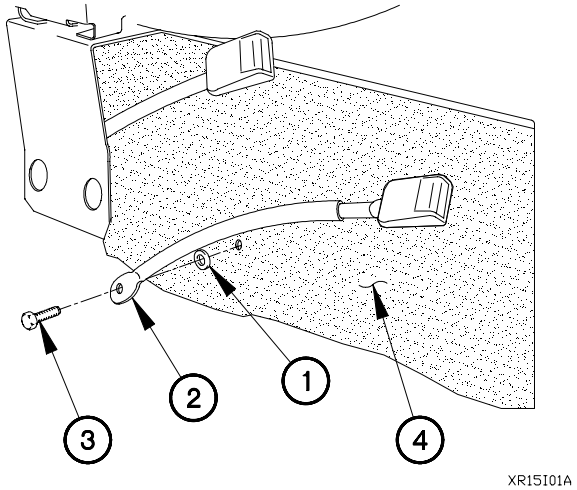
NOTE

All three seat belt buckles are replaced the same way. Right side shown.

(9) Remove screw (24), seat belt buckle (25), and spacer (26) from cab floor (27).



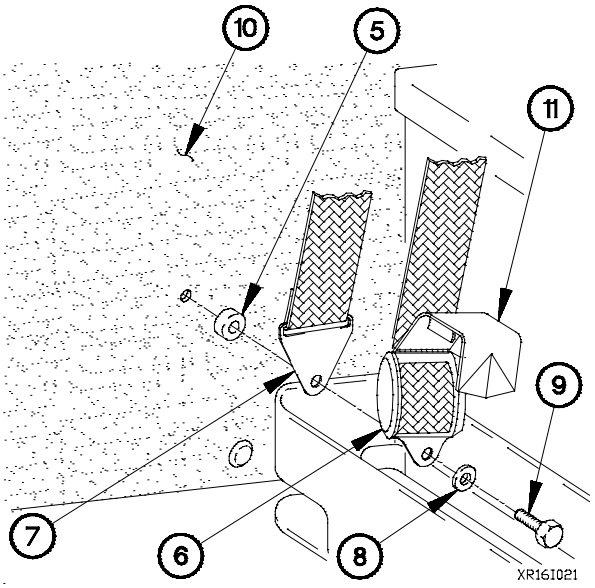
16-15. SEAT BELT REPLACEMENT (CONT)



b. Installation.

(1) Position spacer (1) and seat belt buckle (2) with screw (3) on cab floor (4).

(2) Tighten screw (3) to 30-35 lb-ft (41-47 N·m).



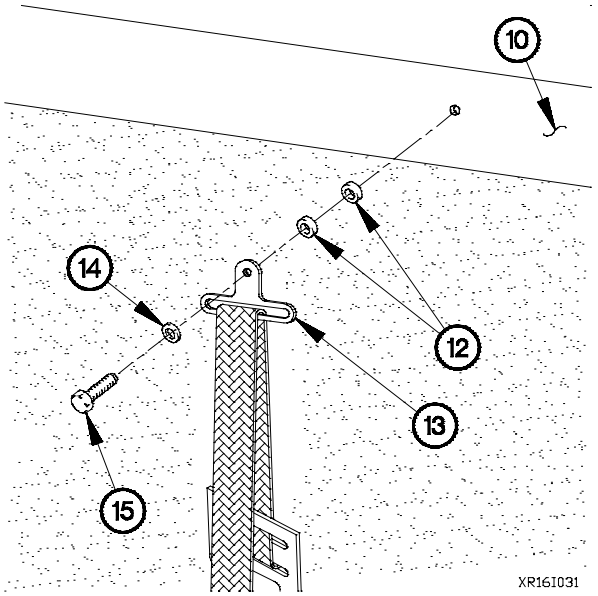
NOTE

Perform steps (3) through (7) for center seat belt.

(3) Position spacer (5), center seat belt retractor (6), center seat belt (7), washer (8), and screw (9) on rear bulkhead (10).

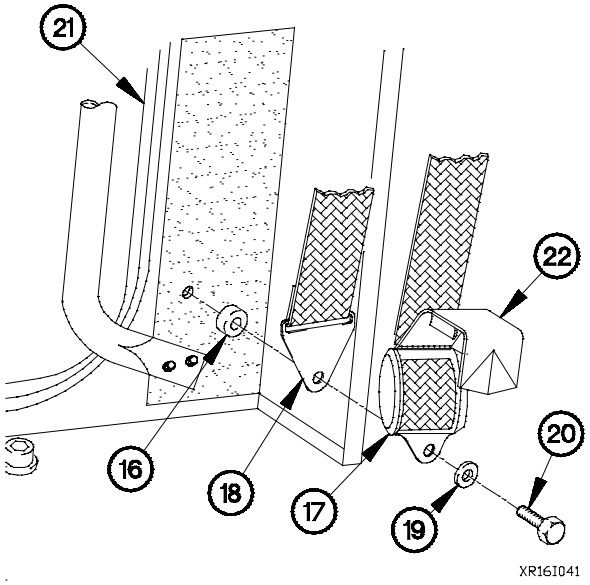
(4) Tighten screw (9) to 30-35 lb-ft (41-47 N·m).

(5) Close plastic cover (11).



(6) Position two spacers (12), center seat belt mounting bracket (13), washer (14), and screw (15) on rear bulkhead (10).

(7) Tighten screw (15) to 30-35 lb-ft (41-47 N·m).



(8) Position spacer (16), seat belt retractor (17), seat belt (18), washer (19), and screw (20) on side of cab (21).

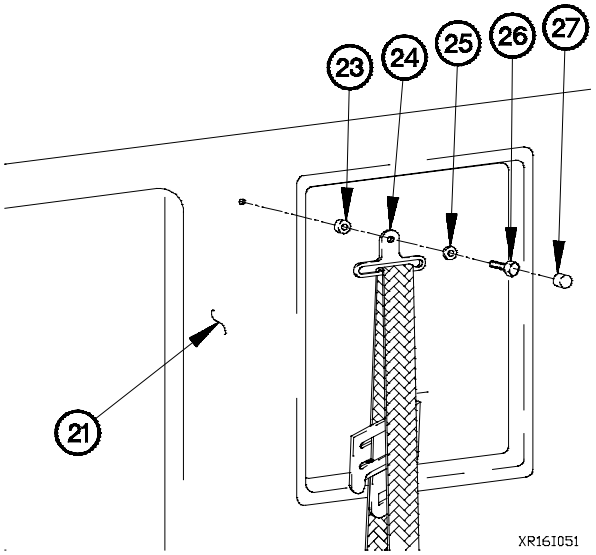
(9) Tighten screw (20) to 30-35 lb-ft (41-47 N·m).

(10) Close plastic cover (22).

(11) Position spacer (23), seat belt mounting bracket (24), washer (25), and screw (26) on side of cab (21).

(12) Tighten screw (26) to 30-35 lb-ft (41-47 N·m).

(13) Install plastic cover (27) on screw (26).



c. Follow-On Maintenance.

Install cab storage boxes (para 16-17).

End of Task.

16-16. TOOL BOX REPLACEMENT/REPAIR

This task covers:

a. Removal
b. Disassembly
c. Assembly
d. Installation
e. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
Engine shut down (TM 9-2320-365-10).
Spare tire lowered (TM 9-2320-365-10).
Tools removed from tool box (TM 9-2320-365-10).
Hydraulic manifold removed (para 19-4).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Goggles, Industrial (Item 15, Appendix C)
Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C)
Screwdriver Attachment, Socket Wrench (Item 47, Appendix B)

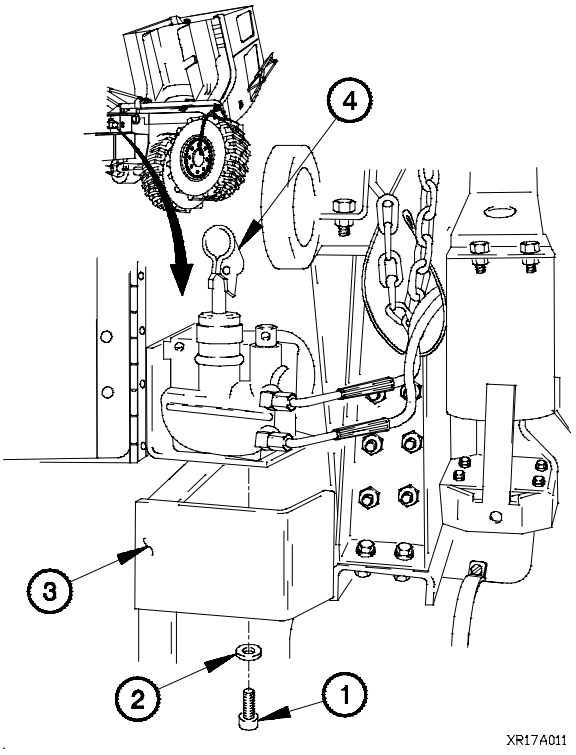
Tools and Special Tools (Cont)
Drill, Electric, Portable (Item 7, Appendix C)
Drill Set, Twist (Item 6, Appendix C)

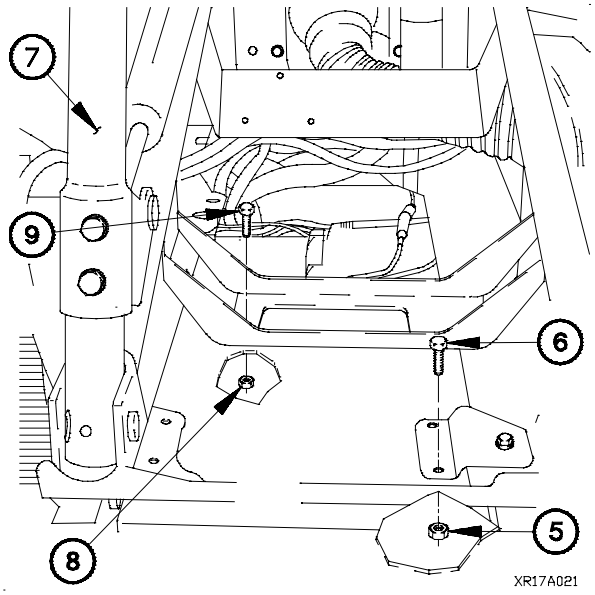
Materials/Parts
Latch, Bail Head (Item 59, Appendix G)
Seal, Nonmetallic (Item 252, Appendix G)
Nut, Self-Locking (8) (Item 139, Appendix G)
Nut, Self-Locking (2) (Item 140, Appendix G)

Personnel Required
(2)

a. Removal.

(1) Remove two screws (1), washers (2), and cover (3) from backup hydraulic pump (4).

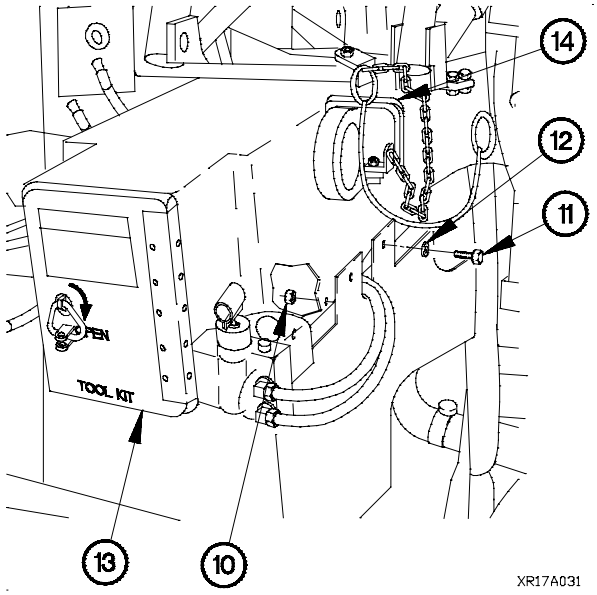


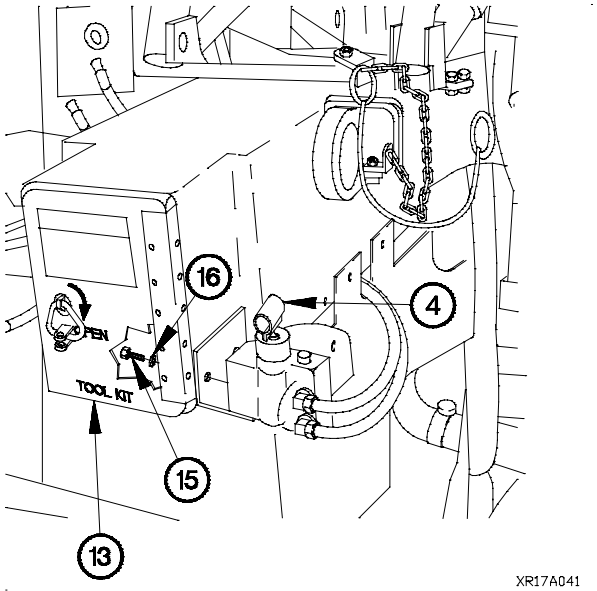


(2) Remove four self-locking nuts (5) and screws (6) from spare tire retainer assembly (7). Discard self-locking nuts.

(3) Remove four self-locking nuts (8) and screws (9) from spare tire retainer assembly (7). Discard self-locking nuts.

(4) Remove two self-locking nuts (10), screws (11), washers (12), and tool box (13) from front lifting beam (14). Discard self-locking nuts.





(5) Remove two screws (15), washers (16), and tool box (13) from backup hydraulic pump (4).

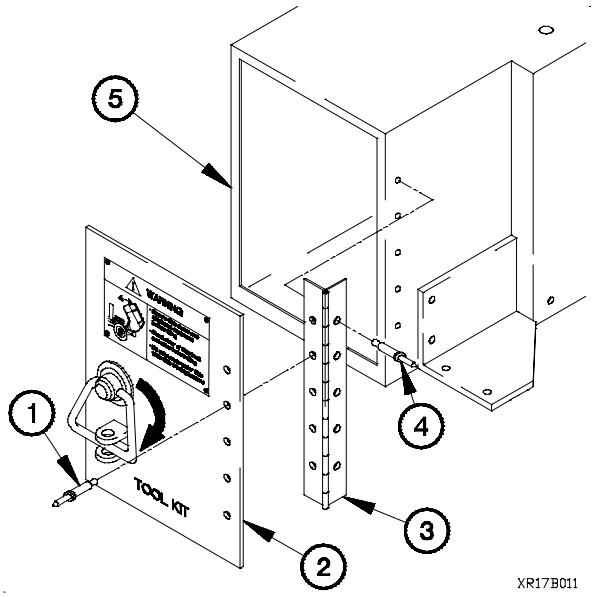
b. Disassembly.

WARNING

Wear appropriate eye protection when removing rivets. Failure to comply may result in injury to personnel.

NOTE

Tool box doors may be installed with rivets or screws and nuts. Tool box door with rivets shown.



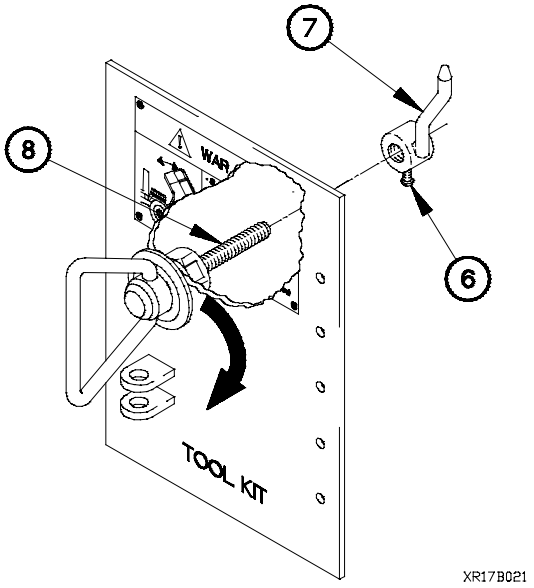
(1) Remove five rivets (1) and tool box door (2) from hinge (3).

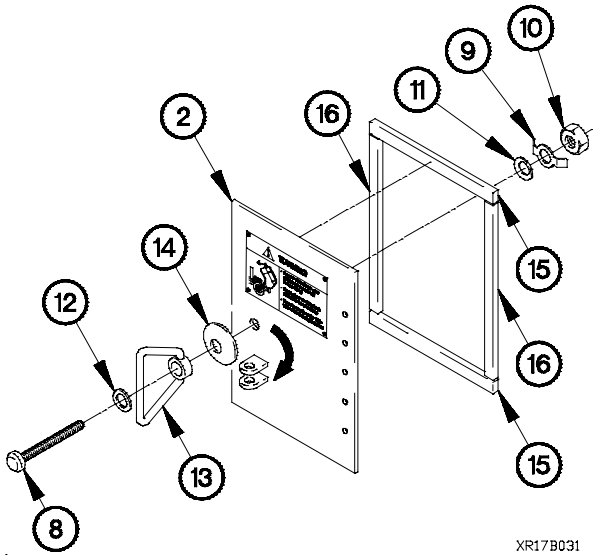
(2) Remove five rivets (4) and hinge (3) from tool box (5).

16-16. TOOL BOX REPLACEMENT/REPAIR (CONT)

(3) Loosen setscrew (6) in latch pawl (7).

(4) Remove latch pawl (7) from shaft (8). Discard latch pawl and setscrew.





(5) Bend down two tabs on key washer (9).

(6) Remove nut (10), key washer (9), spring washer (11), shaft (8), stop washer (12), bail (13), and plate (14) from tool box door (2). Discard nut, key washer, spring washer, shaft, stop washer, bail and plate.

(7) Remove two seals (15) and seals (16) from tool box door (2). Discard seals.

c. Assembly.

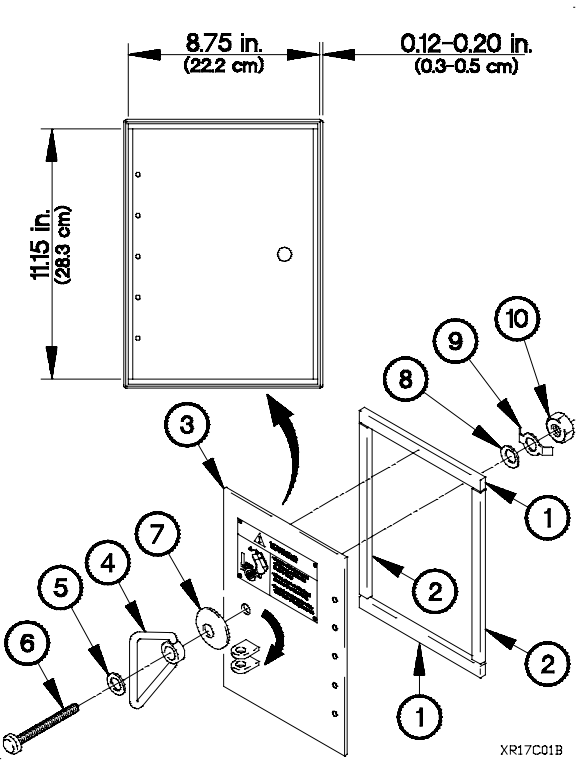
(1) Cut two seals (1) to 8.75 in. (22.2 cm) long.

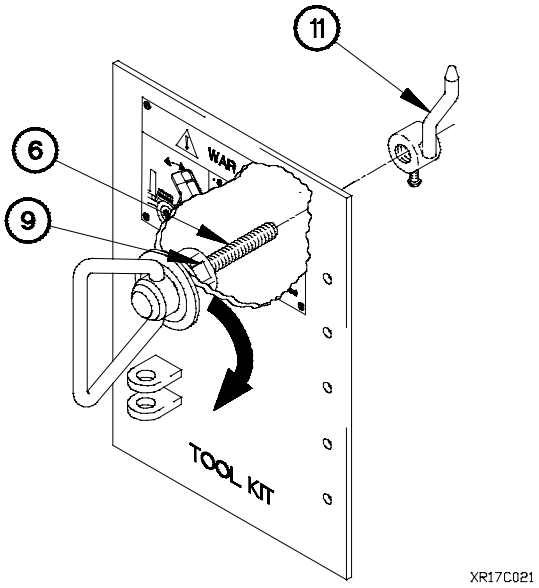
(2) Cut two seals (2) to 11.15 in. (28.3 cm) long.

(3) Install two seals (1) and seals (2) on tool box door (3) 0.12-0.20 in. (0.3-0.5 cm) offset from edge of tool box door.

(4) Install bail (4) and stop washer (5) on shaft (6).

(5) Install plate (7) and shaft (6) on tool box door (3) with spring washer (8), key washer (9), and nut (10).





(6) Bend up two tabs on key washer (9)

(7) Install latch pawl (11) on shaft (6).

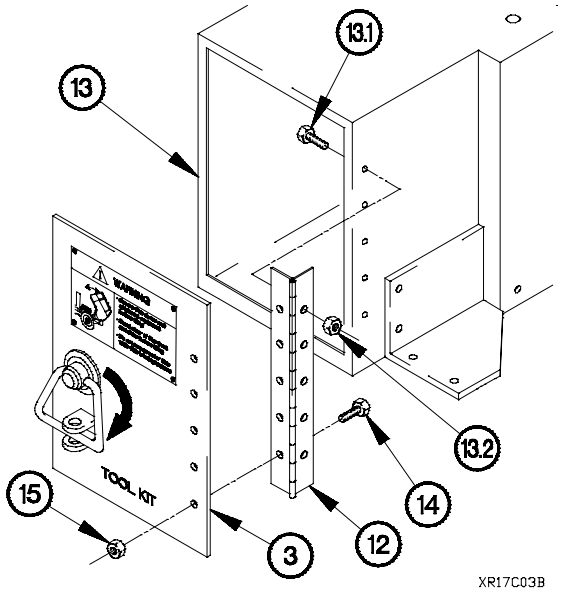
NOTE

Tool boxes disassembled with rivets attaching tool box door, will require tool box door and tool box mounting holes be enlarged to 0.250 in. (0.625 cm).

(7.1) Drill out 5 holes in tool box (13) and tool box door (3).

(8) Install hinge (12) on tool box (13) with five screws (13.1) and nuts (13.2).

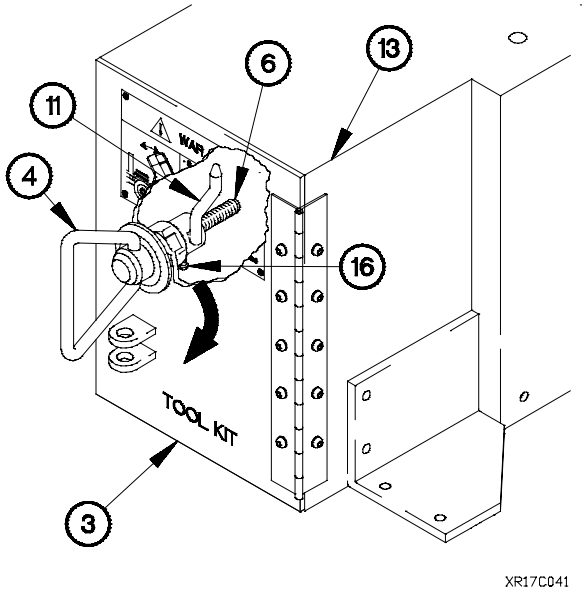
(9) Install tool box door (3) on hinge (12) with five screws (14) and nuts (15).



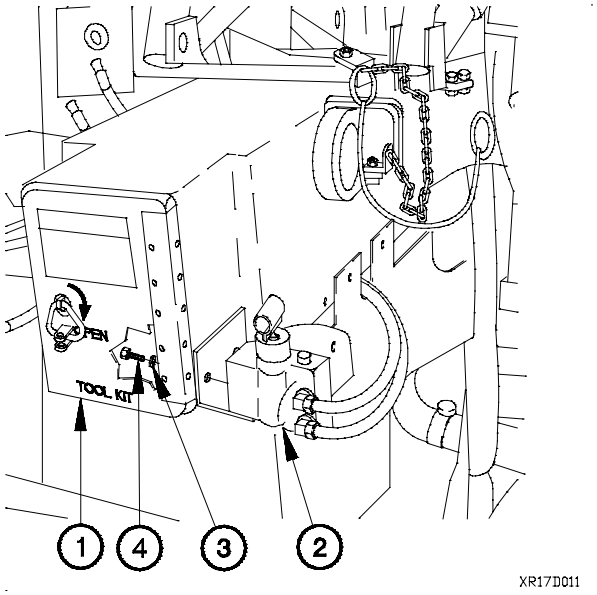
16-16. TOOL BOX REPLACEMENT/REPAIR (CONT)

(10) Adjust position of latch pawl (11) on shaft (6) so that tool box door (3) is flush against tool box (13) when bail (4) is turned to locked position.

(11) Tighten setscrew (16) in latch pawl (11).



b. Installation.



(1) Position tool box (1) on backup hydraulic pump (2) with two washers (3) and screws (4).

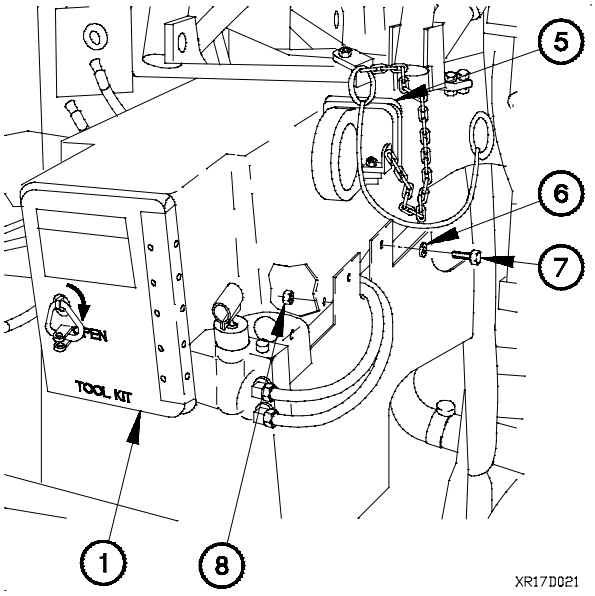
(2) Tighten two screws (4) to 28-34 lb-ft (38-46 N·m).

NOTE

Step (3) requires the aid of an assistant.

(3) Position tool box (1) on front lifting beam (5) with two washers (6), screws (7), and self-locking nuts (8).

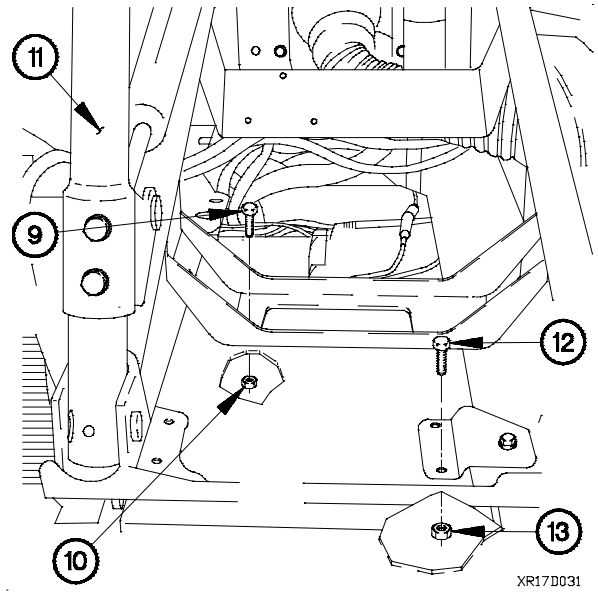
(4) Tighten two self-locking nuts (8) to 43-52 lb-ft (58-71 N·m).

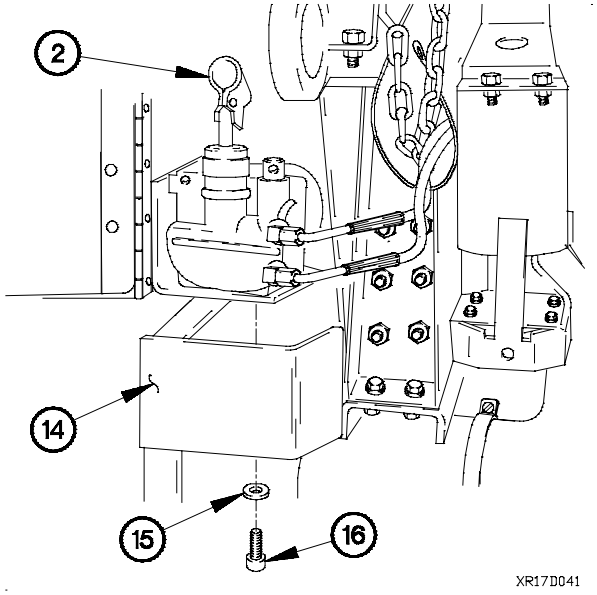


(5) Position four screws (9) and self-locking nuts (10) in spare tire retainer assembly (11).

(6) Position four screws (12) and self-locking nuts (13) in spare tire retainer assembly (11).

(7) Tighten four self-locking nuts (10 and 13) to 24-30 lb-ft (33-41 N·m).





(8) Position cover (14) on backup hydraulic pump (2) with two washers (15) and screws (16).

(9) Tighten two screws (16) to 28-34 lb-ft (38-46 N·m).

c. Follow-On Maintenance.

(1) Place tools in tool box (TM 9-2320-365-10).

(2) Install hydraulic manifold (para 19-4).

(3) Raise spare tire (TM 9-2320-365-10).

End of Task.

16-17. CAB STORAGE BOX REPLACEMENT/REPAIR

This task covers:

a. Removal
b. Disassembly
c. Assembly
d. Installation

INITIAL SETUP

Equipment Conditions
Engine shut down (TM 9-2320-365-10).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Wrench, Torque, 0-200 lb-in. (Item 58, Appendix C)
Socket Set, Socket Wrench (Item 35, Appendix C)

Materials/Parts
Pin, Cotter (Item 208, Appendix G)
Grommet, Nonmetallic (Item 46, Appendix G)
Bumper, Rubber (12) (Item 4, Appendix G)
Channel, Rubber (Item 6, Appendix G)
Adhesive (Item 3, Appendix D)

a. Removal.

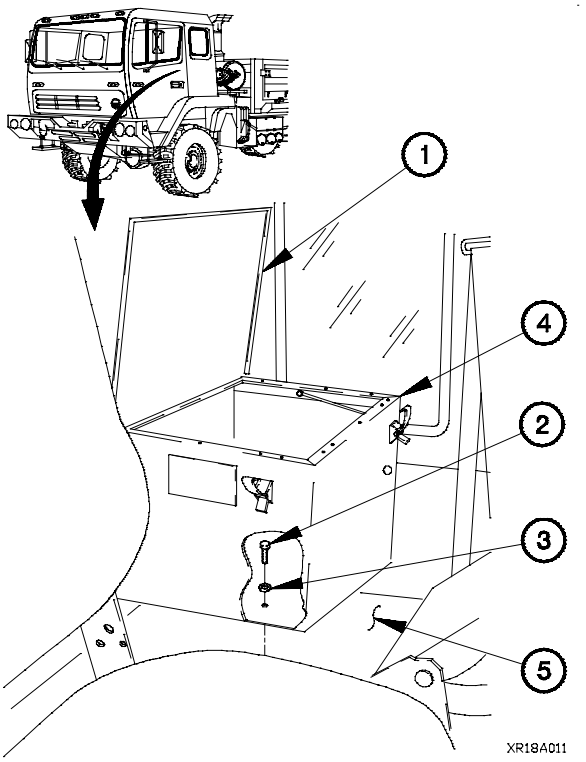
NOTE

Left and right storage boxes are removed the same way. Left storage box shown.

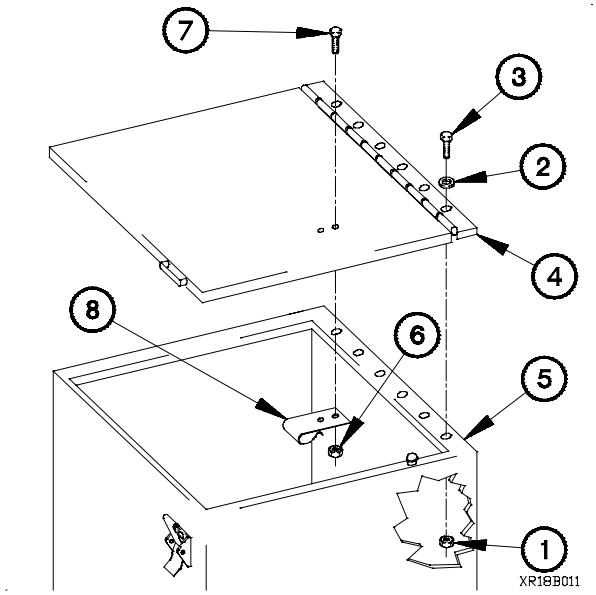
(1) Open storage box cover (1).

(2) Remove six screws (2) and washers (3) from storage box (4).

(3) Remove storage box (4) from cab floor (5).



b. Disassembly.



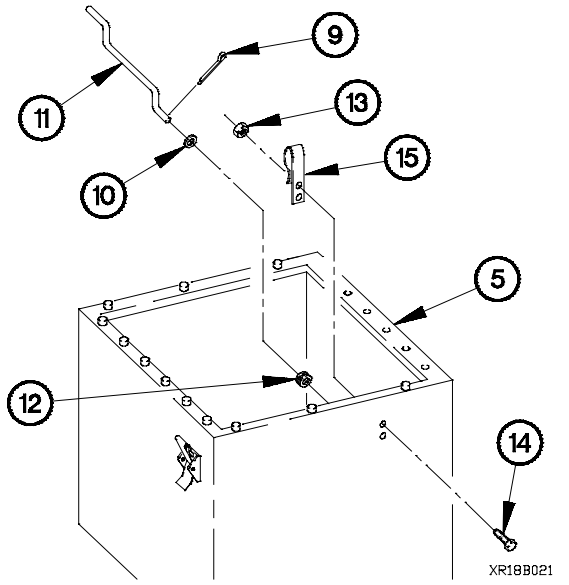
(1) Remove six nuts (1), washers (2), screws (3), and storage box cover (4) from storage box (5).

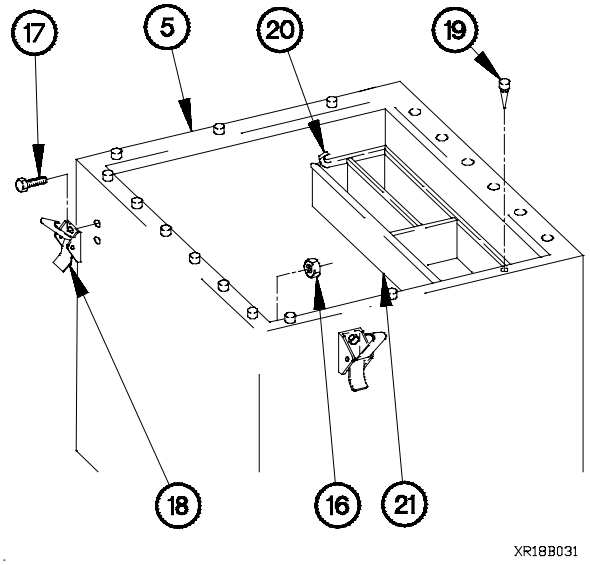
(2) Remove two nuts (6), screws (7) and clamp (8) from storage box cover (4).

(3) Remove cotter pin (9), washer (10), and cover support arm (11) from storage box (5). Discard cotter pin.

(4) Remove rubber grommet (12) from storage box (5). Discard rubber grommet.

(5) Remove two nuts (13), screws (14), and clamp (15) from storage box (5).





(6) Remove four nuts (16), screws (17), and two latches (18) from storage box (5).

(7) Remove 12 rubber bumpers (19) from storage box (5). Discard rubber bumpers.

NOTE

Right storage box is equipped with a tray. Perform step (8) on right storage box.

(8) Remove rubber channel (20) from storage box tray (21). Discard rubber channel.

16-17. CAB STORAGE BOX REPLACEMENT/REPAIR (CONT)

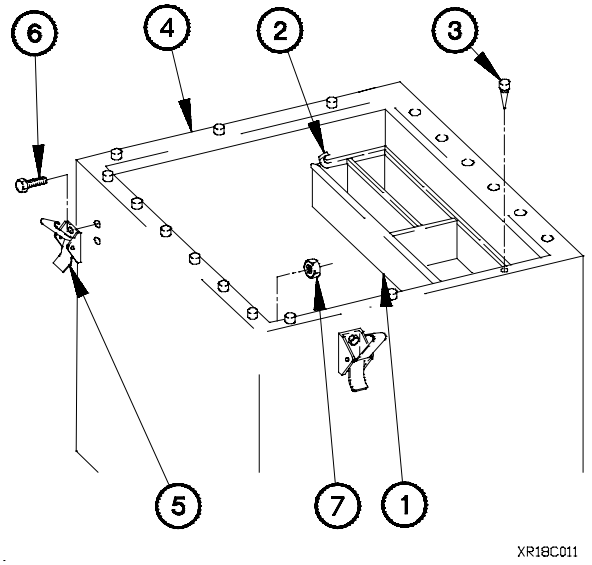
c. Assembly.

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

NOTE

Only right storage box is equipped with a tray. Perform steps (1) and (2) on right storage box.

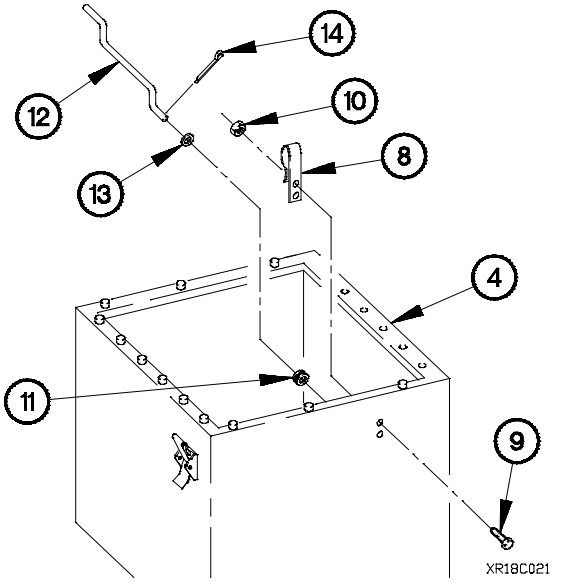


(1) Apply adhesive to top edges of storage box tray (1).

(2) Install rubber channel (2) on storage box tray (1).

(3) Install 12 rubber bumpers (3) in storage box (4).

(4) Install two latches (5) on storage box (4) with four screws (6) and nuts (7).



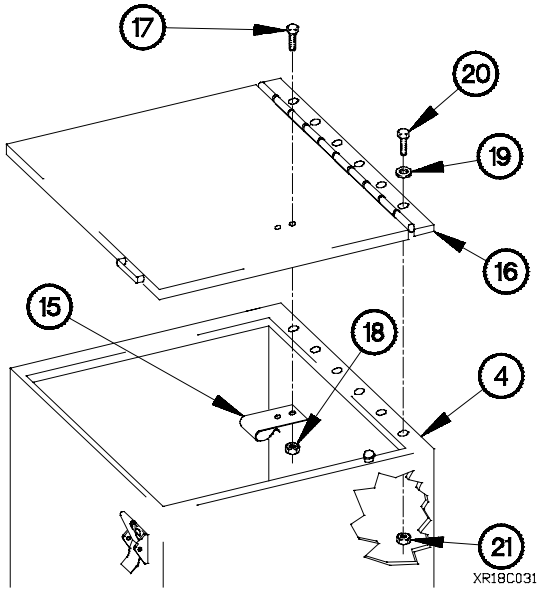
(5) Install clamp (8) on storage box (4) with two screws (9) and nuts (10).

(6) Install rubber grommet (11) in storage box (4).

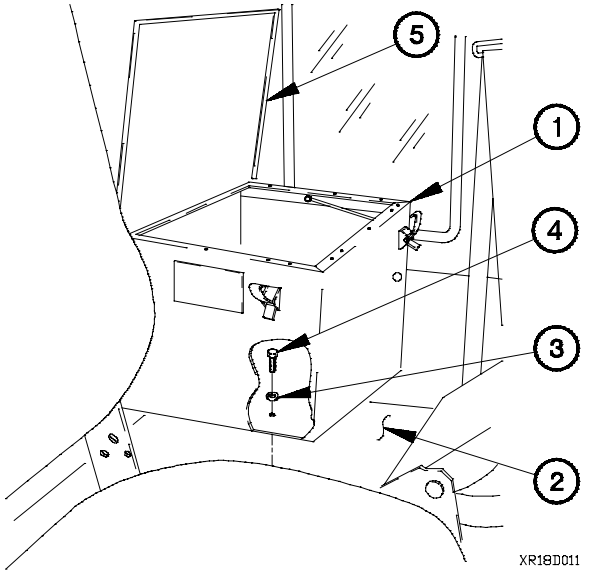
(7) Install cover support arm (12) in storage box (4) with washer (13) and cotter pin (14).

(8) Install clamp (15) on storage box cover (16) with two screws (17) and nuts (18).

(9) Install storage box cover (16) on storage box (4) with six washers (19), screws (20), and nuts (21).



d. Installation.



NOTE

Left and right storage boxes are installed the same way. Left storage box shown.

(1) Position storage box (1) in mounting location on cab floor (2).

(2) Position six washers (3) and screws (4) in storage box (1).

(3) Tighten six screws (4) to 70-85 lb-in. (8-10 N·m).

(4) Close storage box cover (5).

End of Task.

16-18. PANEL STOWAGE DOOR ASSEMBLY REPAIR

This task covers:

a. Removal
b. Disassembly
c. Assembly
d. Installation

INITIAL SETUP

Equipment Conditions
Engine shut down (TM 9-2320-365-10).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Drill Set, Twist (Item 6, Appendix C)
Drill, Portable, Electric (Item 7, Appendix C)
Goggles, Industrial (Item 15, Appendix C)

Tools and Special Tools (Cont)
Tool Kit, Blind Rivet (Item 44, Appendix C)

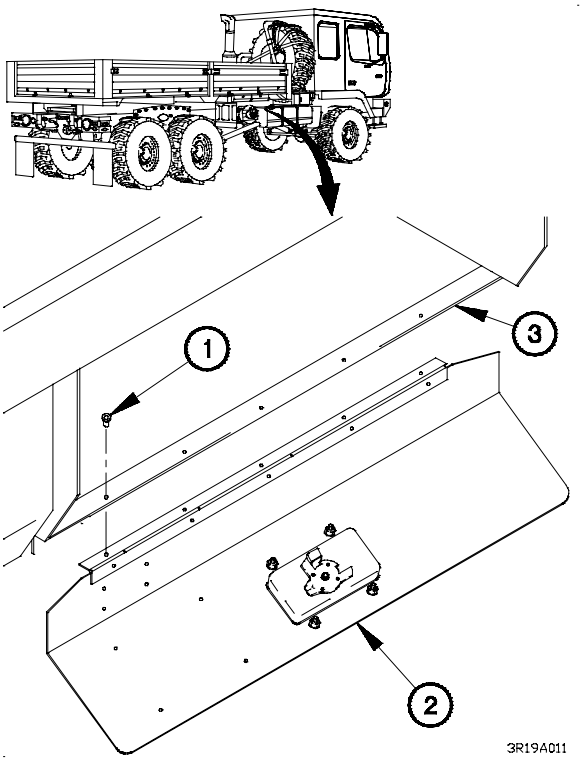
Materials/Parts
Nut, Self-Locking (4) (Item 123, Appendix G)
Rivet, Blind (10) (Item 235, Appendix G)
Rivet, Blind (8) (Item 220, Appendix G)

a. Removal.

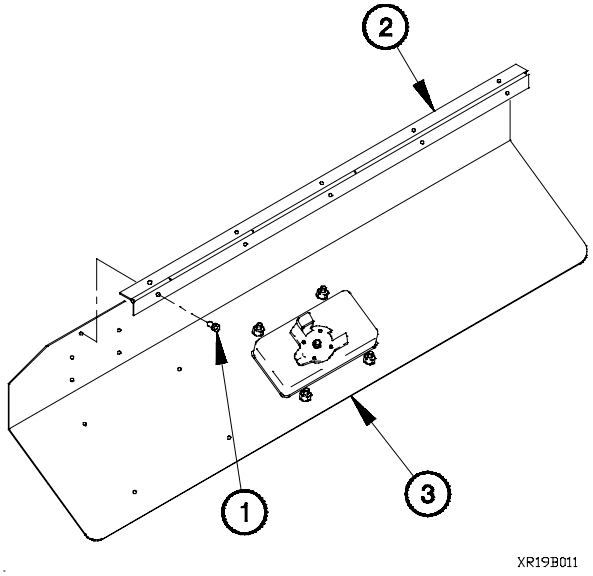
WARNING

Wear appropriate eye protection when removing rivets. Failure to comply may result in injury to personnel.

Remove five rivets (1) and door (2) from stowage box (3).



b. Disassembly.



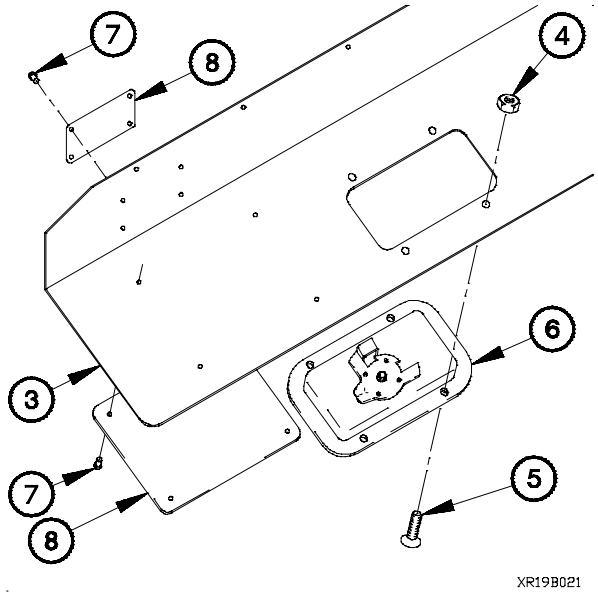
(1) Remove five rivets (1) and hinge (2) from door (3).

(2) Remove four nuts (4), screws (5), and door latch (6) from door (3).

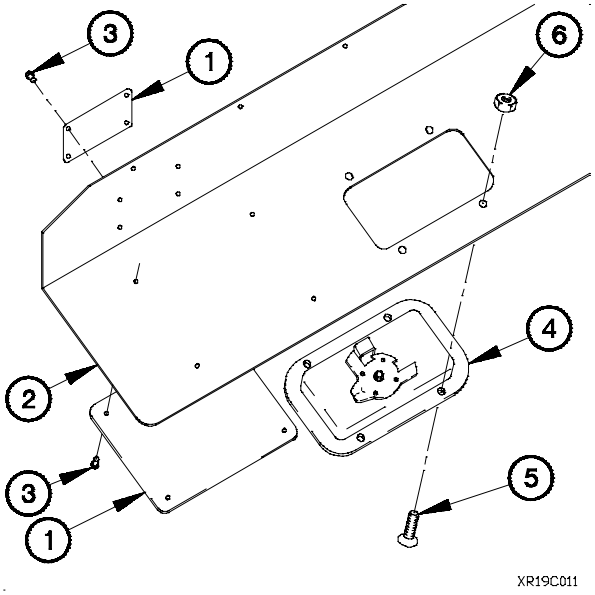
NOTE

Perform step (3) on right side door.

(3) Remove eight rivets (7) and two data plates (8) from door (3).



c. Assembly.



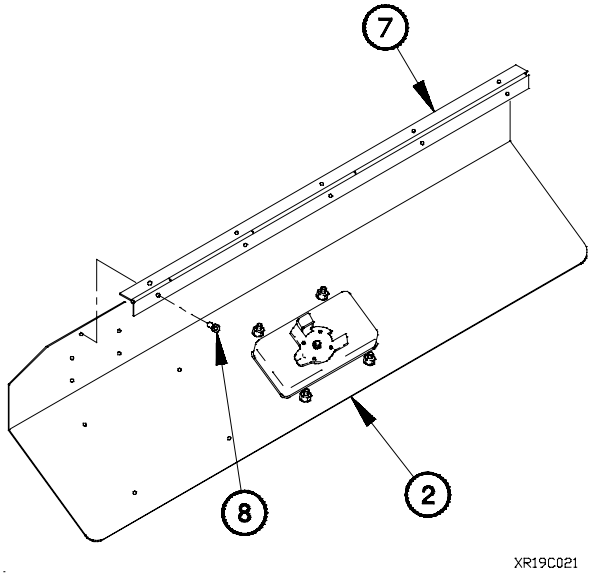
NOTE

Perform step (1) on right side door.

(1) Install two data plates (1) on door (2) with eight rivets (3).

(2) Install door latch (4) on door (2) with four screws (5) and nuts (6).

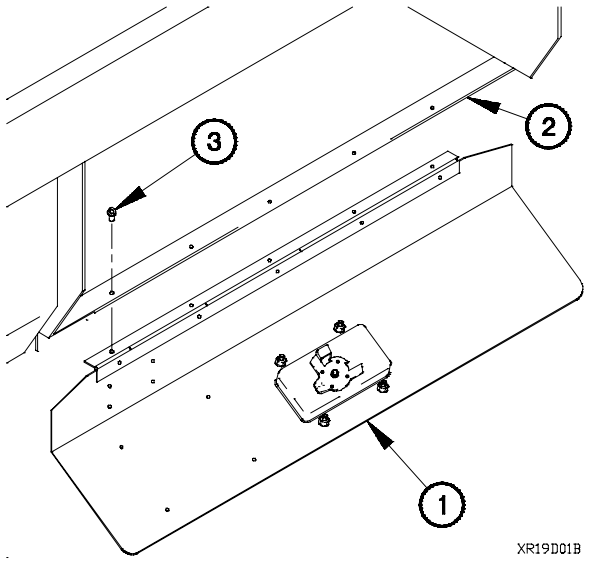
(3) Install hinge (7) on door (2) with five rivets (8).



16-18. PANEL STOWAGE DOOR ASSEMBLY REPAIR (CONT)

d. Installation.

Install door (1) on stowage box (2) with five rivets (3).



End of Task.

16-19. M1079 VAN BODY REPLACEMENT

This task covers:

a. Removal

b. Installation

INITIAL SETUP

Equipment Conditions
AC power disconnected (TM 9-2320-365-10).
Batteries disconnected (para 7-48).
Heater kit removed, if equipped (para 20-41).
Air conditioner kit removed, if equipped (para 20-81).

Tools and Special Tools
Sling, Eye (4) (Item 64, Appendix B)
Link, Chain, End (Item 36, Appendix B)
Tool Kit, Genl Mech (Item 44, Appendix C)
Wrench, Box and Open End, Combination (Item 51.1, Appendix C)

Materials/Parts
Rope, Fibrous (Item 53, Appendix D)
Pad, Cushioning (2) (Item 194, Appendix G)
Pad, Cushioning (2) (Item 195, Appendix G)

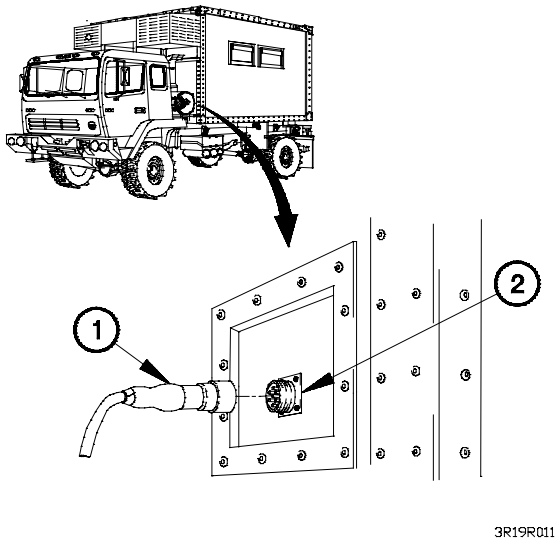
Personnel Required
(3)

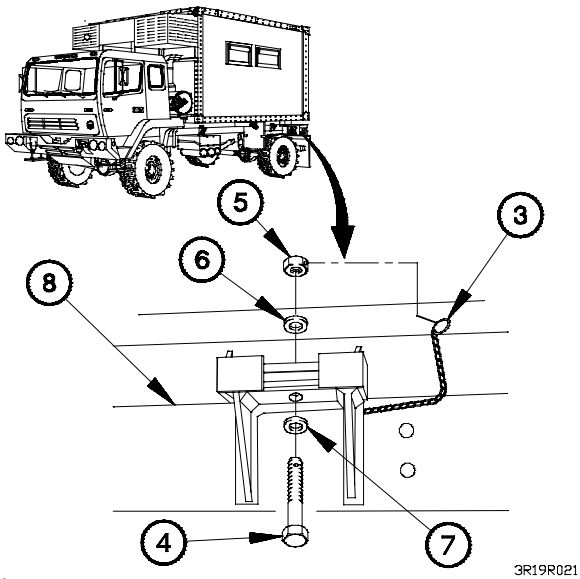
a. Removal.

WARNING

Remove all loose equipment from van body. Failure to comply may result in injury to personnel or damage to equipment.

(1) Disconnect connector P173 (1) from connector J173 (2).





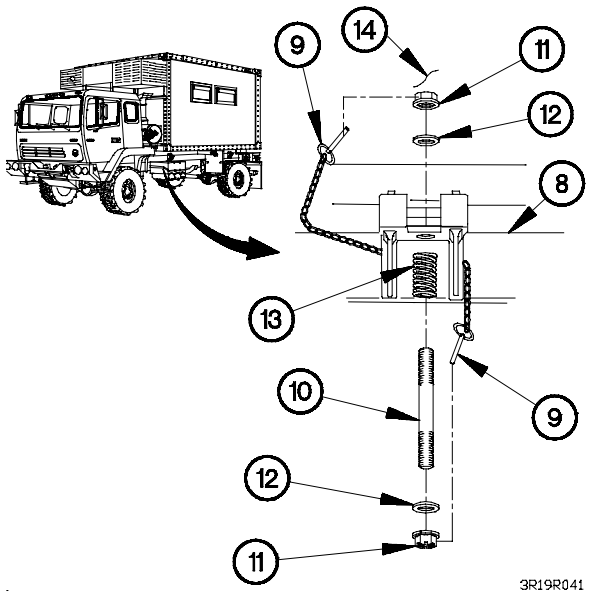
NOTE

Left and right van body mounting hardware is removed the same way. Left side shown.

(2) Remove lynch pin (3) from bolt (4).

(3) Remove slotted nut (5), washer (6), bolt (4), and washer (7) from sub-frame (8).

16-19. M1079 VAN BODY REPLACEMENT (CONT)



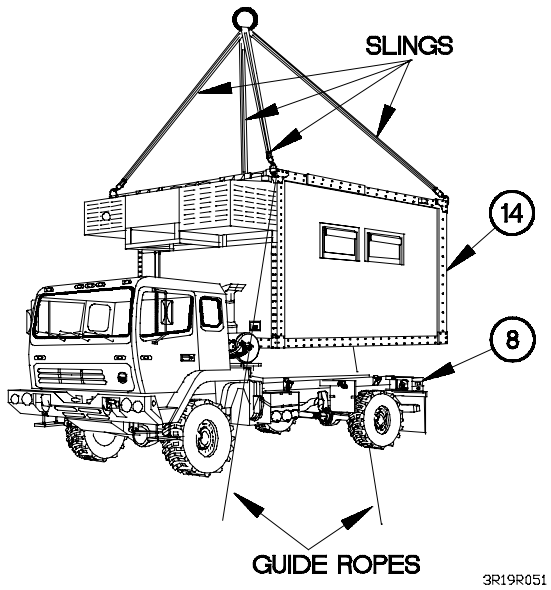
(4) Remove two lynch pins (9) from stud (10).

(5) Remove two slotted nuts (11), washers (12), stud (10), and spring (13) from sub-frame (8).

(6) Perform steps (2) through (5) on right side of van body.

WARNING

- **Van body weighs approximately 3,360 lbs (1525 kgs) empty. Attach a suitable lifting device prior to removal. Failure to comply may result in serious injury or death to personnel.**
- **Guide ropes must be attached at opposite corners of van body to aid in controlling van body during removal. Failure to comply may result in serious injury or death to personnel.**
- **Center of gravity will change depending on equipment installed in van body. Attach and adjust lifting device so that van body lifts level. Failure to comply may result in serious injury or death to personnel or damage to equipment.**

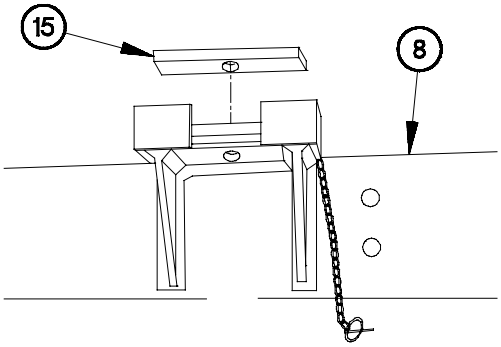


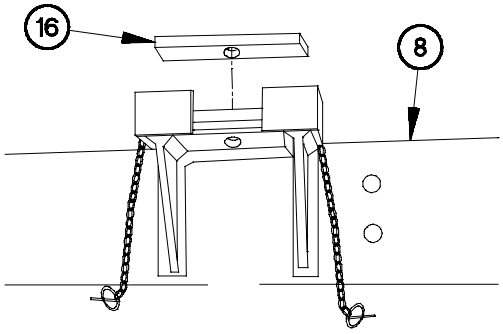
NOTE

Step (7) requires the aid of two assistants.

(7) Remove van body (14) from sub-frame (8).

(8) Remove two cushioning pads (15) from rear of sub-frame (8). Discard cushioning pads.

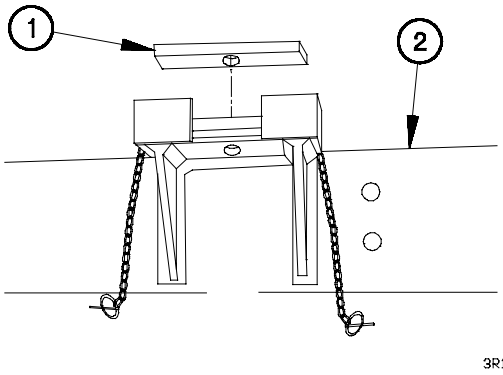




(9) Remove two cushioning pads (16) from front of sub-frame (8). Discard cushioning pads.

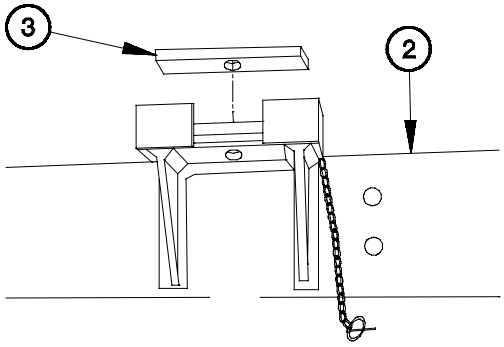
b. Installation.

(1) Install two cushioning pads (1) front of on sub-frame (2).



16-19. M1079 VAN BODY REPLACEMENT (CONT)

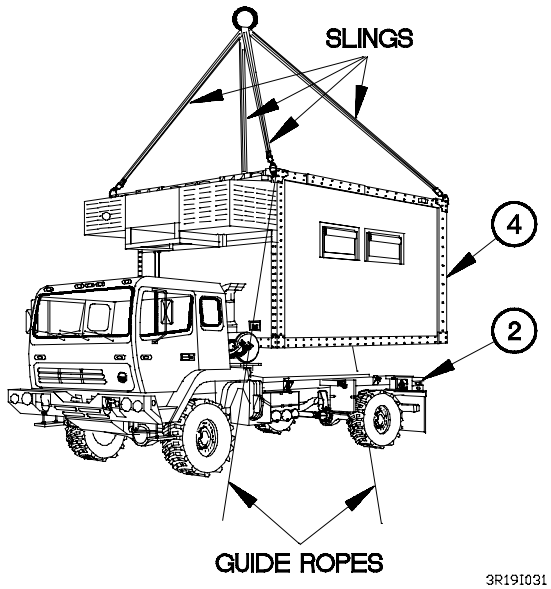
(2) Install two cushioning pads (3) on rear of sub-frame (2).



3R19I021

WARNING

- **Van body weighs approximately 3,360 lbs (1525 kgs) empty. Attach a suitable lifting device prior to removal. Failure to comply may result in serious injury or death to personnel.**
- **Guide ropes must be attached at opposite corners of van body to aid in controlling van body during installation. Failure to comply may result in serious injury or death to personnel.**
- **Center of gravity will change depending on equipment installed in van body. Attach and adjust lifting device so that van body lifts level. Failure to comply may result in serious injury or death to personnel or damage to equipment.**



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NOTE

Step (3) requires the aid of two assistants.

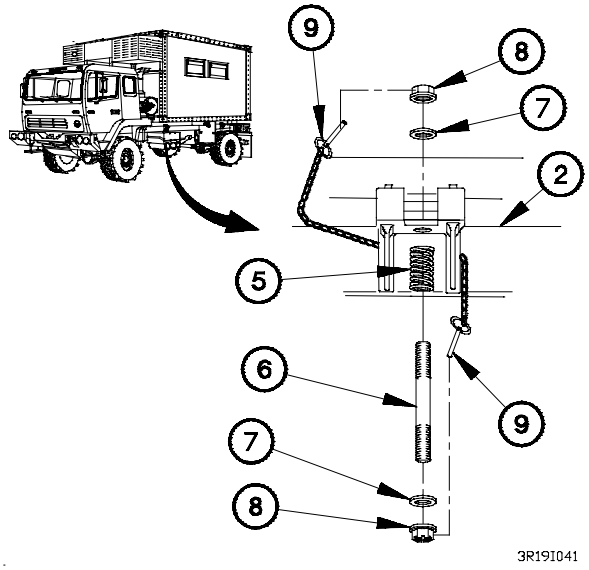
(3) Position van body (4) on sub-frame (2).

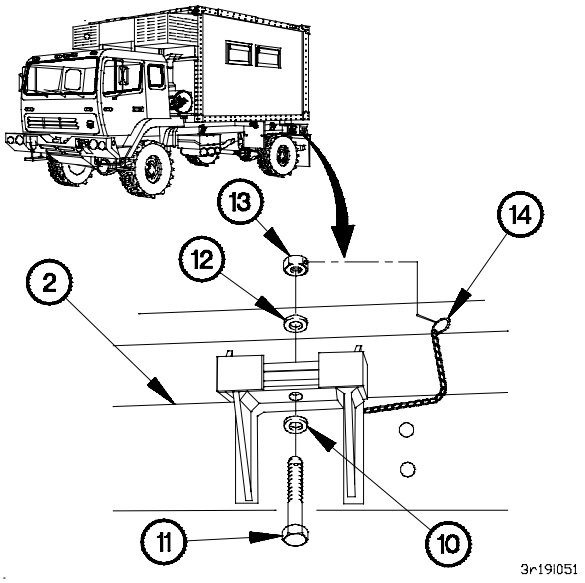
NOTE

Left and Right van body mounting hardware is installed the same way. Left side shown.

(4) Install spring (5), stud (6), two washers (7), and slotted nuts (8) in sub-frame (2).

(5) Install two lynch pins (9) in stud (6).

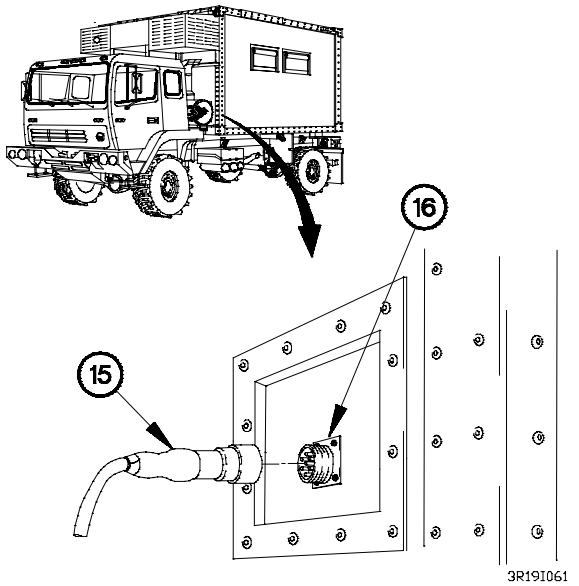




(6) Install washer (10), bolt (11), washer (12), and slotted nut (13) in sub-frame (2).

(7) Install lynch pin (14) in bolt (11).

(8) Perform steps (4) through (7) on right side of van body.



(9) Connect connector P173 (15) to connector J173 (16).

16-19. M1079 VAN BODY REPLACEMENT (CONT)

c. Follow-On Maintenance.

(1) Install air conditioner kit, if equipped (para 20-81).

(2) Install heater kit, if equipped (para 20-41).

(3) Connect batteries (para 7-48).

(4) Connect AC power (TM 9-2320-365-10).

End of Task.

16-20. M1079 UPPER SUB-FRAME REPLACEMENT

This task covers:

a. Removal
b. Installation
c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
Van body removed (para 16-19).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C)
Goggles, Industrial (Item 15, Appendix C)
Trestle, Motor Vehicle Maintenance (8) (Item 45, Appendix C)
Sling, Eye (4) (Item 64, Appendix B)
Link, Chain, End (Item 36, Appendix B)

Materials/Parts
Rope, Fibrous (as required) (Item 53, Appendix D)
Lockwasher (36) (Item 92, Appendix G)
Rubber Strip (as required) (Item 56, Appendix D)

Personnel Required
(3)

a. Removal.

WARNING

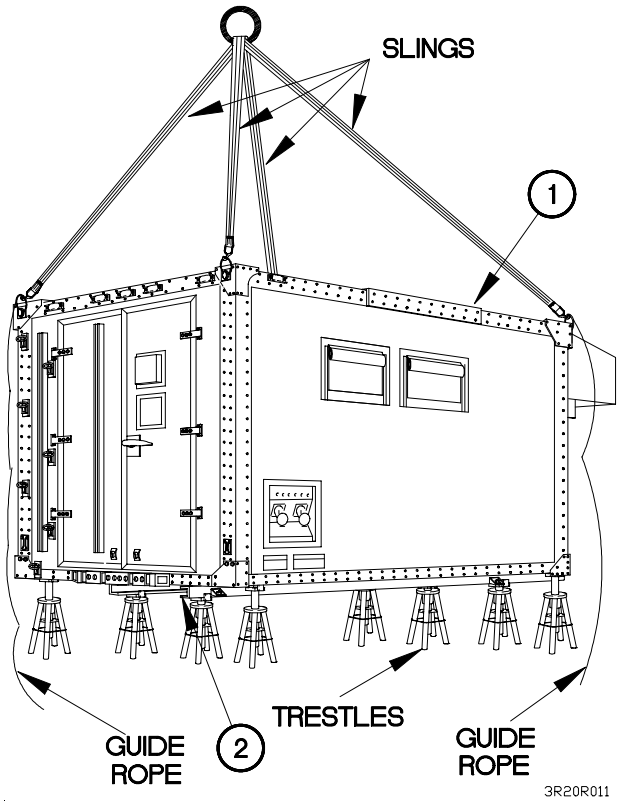
- **Van body weighs approximately 3360 lbs (1525 kgs). Attach a suitable lifting device prior to removal. Failure to comply may result in serious injury or death to personnel.**
- **Guide ropes must be attached at opposite corners of van body to aid in controlling van body during lifting. Failure to comply may result in serious injury or death to personnel.**

NOTE

Step (1) requires the aid of two assistants.

(1) Position van body (1) on four trestles.

(2) Position four trestles under upper sub-frame (2).



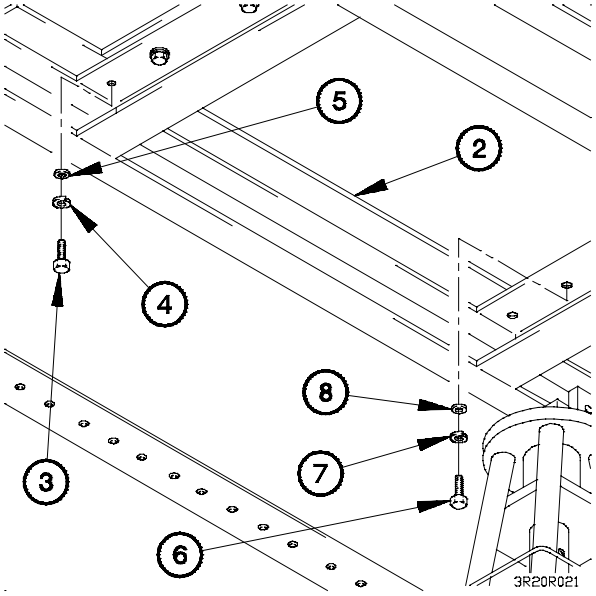
16-20. M1079 UPPER SUB-FRAME REPLACEMENT (CONT)

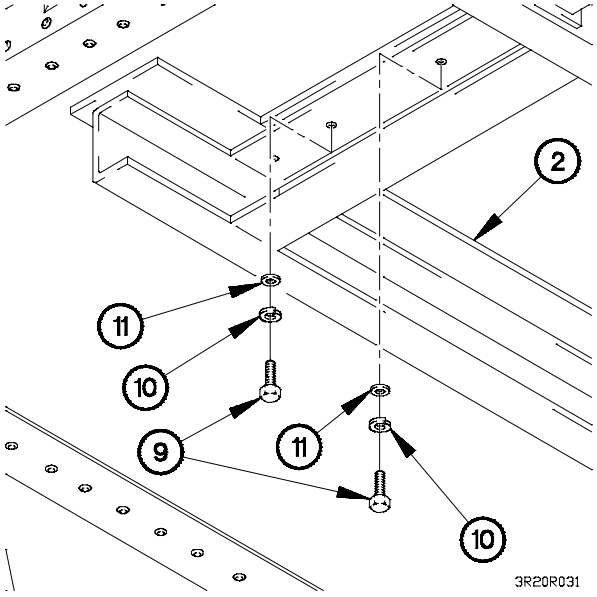
WARNING

Wear appropriate eye protection when working under vehicle due to the possibility of falling debris. Failure to comply may result in injury to personnel.

(3) Remove 28 screws (3), lockwashers (4), and washers (5) from upper sub-frame (2). Discard lockwashers.

(4) Remove six screws (6), lockwashers (7), and washers (8) from upper sub-frame (2). Discard lockwashers.





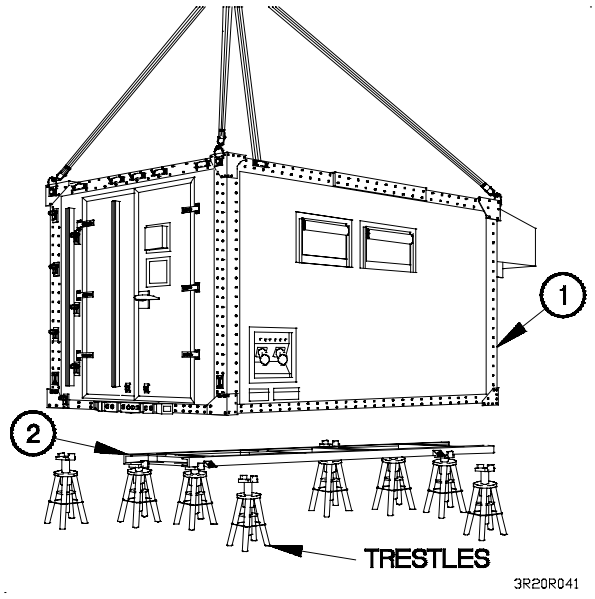
(5) Remove two screws (9), lockwashers (10), and washers (11) from upper sub-frame (2). Discard lockwashers.

WARNING

Van body weighs approximately 3360 lbs (1525 kgs) attach a suitable lifting device of adequate capacity prior to removal. Failure to comply may result in serious injury or death to personnel.

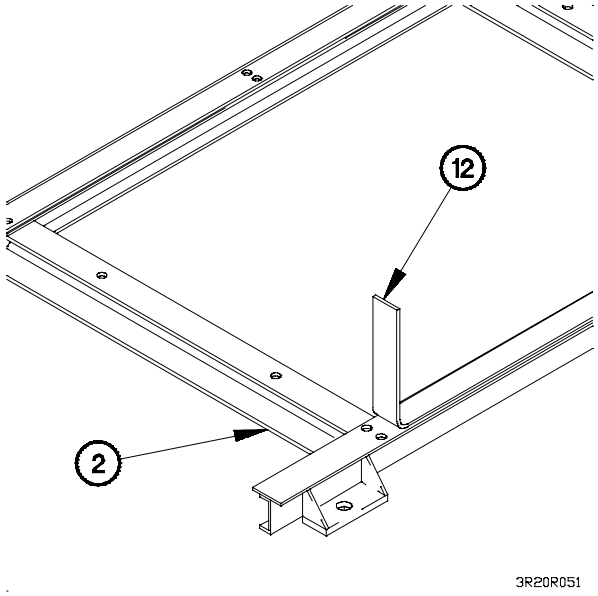
NOTE

Step (6) requires the aid of two assistants.

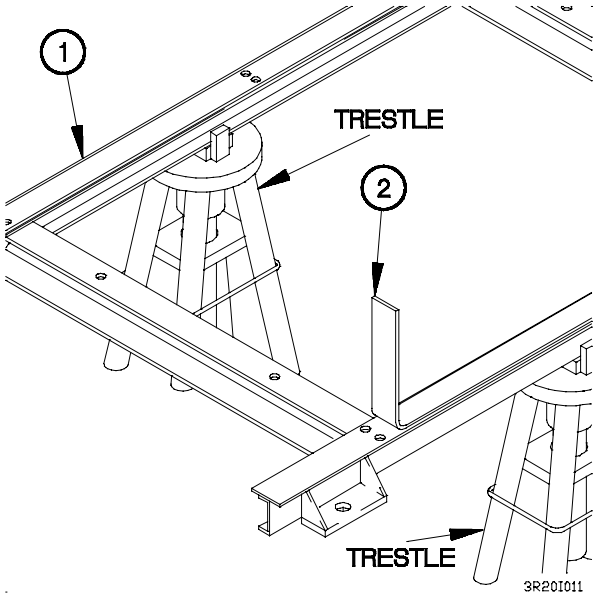


(6) Remove van body (1) from upper sub-frame (2).

(7) Remove rubber strip (12) from upper sub-frame (2). Discard rubber strip.



b. Installation.



(1) Position upper sub-frame on four trestles.

(2) Install rubber strip (2) on upper sub-frame (1).

WARNING

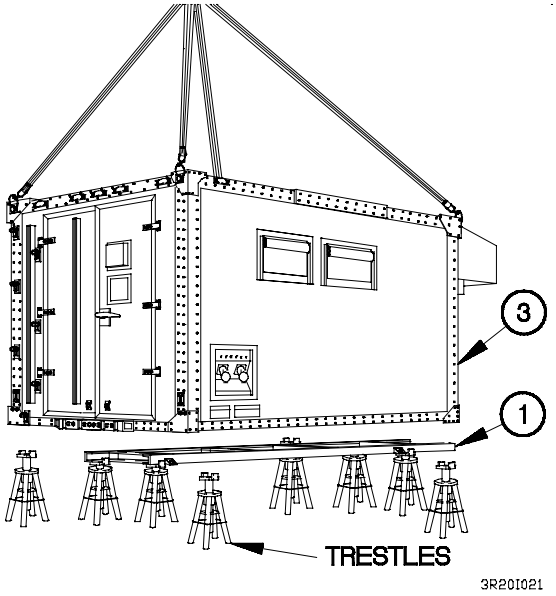
- **Van body weighs approximately 3360 lbs (1525 kgs). Attach a suitable lifting device prior to installation. Failure to comply may result in serious injury or death to personnel.**
- **Guide ropes must be attached at opposite corners of van body to aid in controlling van body during lifting. Failure to comply may result in serious injury or death to personnel.**

NOTE

Step (3) requires the aid of two assistants.

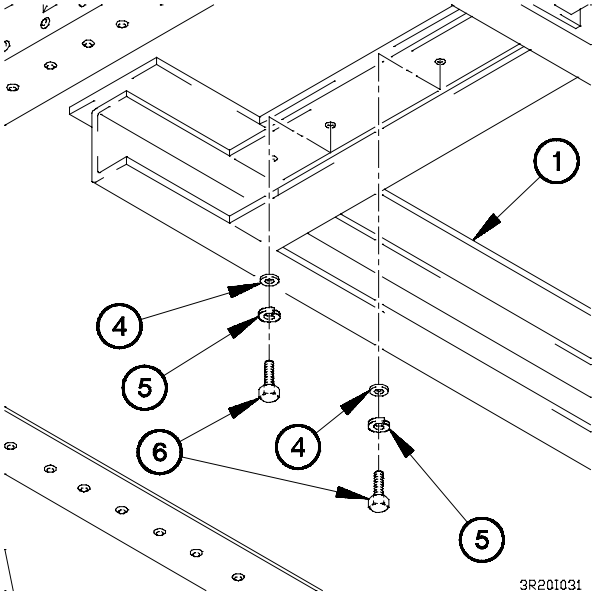
(3) Position van body (3) on upper sub-frame (1).

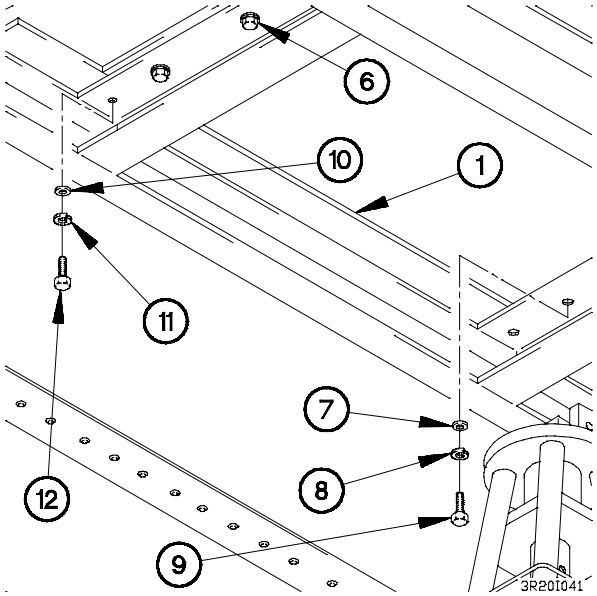
(4) Position four trestles under van body (3).



16-20. M1079 UPPER-SUB FRAME REPLACEMENT (CONT)

(5) Position two washers (4), lockwashers (5), and screws (6) in upper sub-frame (1).





(6) Position six washers (7), lockwashers (8), and screws (9) in upper sub-frame (1).

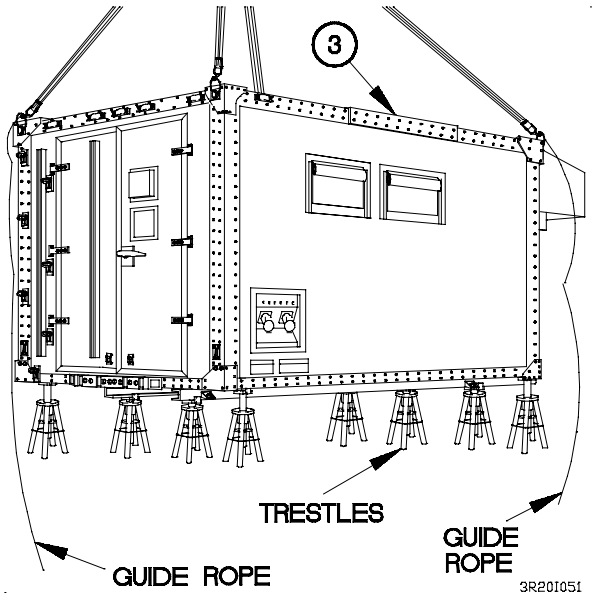
(7) Position 28 washers (10), lockwashers (11), and screws (12) in upper sub-frame (1).

(8) Tighten two screws (6), six screws (9), and 28 screws (12) to 24-26 lb-ft (33-35 N·m).

NOTE

Step (9) requires the aid of two assistants.

(9) Remove van body (3) from trestles.



c. Follow-On Maintenance.

Install van body on M1079 upper sub-frame (para 16-19).

End of Task.

16-21. M1079 LOWER SPREADER BAR REPLACEMENT

This task covers:

a. Removal
b. Installation
c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
Engine shut down (TM 9-2320-365-10).
Splash guard removed (right side lower spreader bar) (para 16-10).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C)

Materials/Parts
Grease, Automotive and Artillery (Item 23, Appendix D)

Personnel Required
(2)

a. Removal.

NOTE

Left and right lower spreader bars are removed the same way. Left side shown.

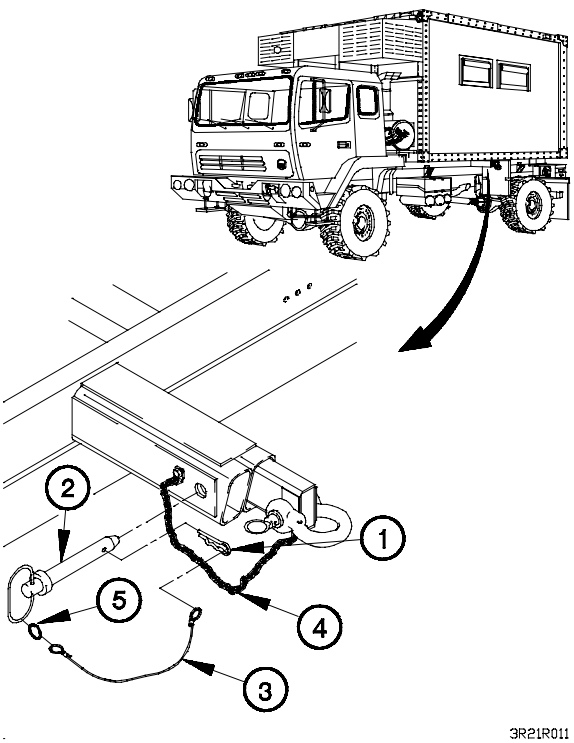
(1) Remove lynch pin (1) from retaining pin (2).

(2) Remove lynch pin (1) from lanyard (3).

(3) Remove lanyard (3) from chain (4).

(4) Remove split ring (5) from retaining pin (2).

(5) Remove split ring (5) from lanyard (3).



16-21. M1079 LOWER SPREADER BAR REPLACEMENT (CONT)

(6) Remove two screws (6) and chain (4) from sub-frame (7) and spreader bar (8).

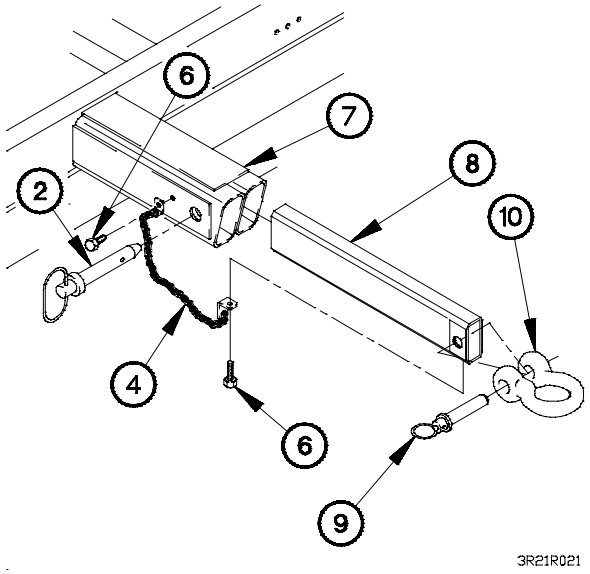
(7) Remove retaining pin (2) from spreader bar (8).

WARNING

Spreader bar weighs approximately 100 lbs (45 kgs). Attach a suitable lifting device prior to removal. Failure to comply may result in injury to personnel or damage to equipment.

NOTE

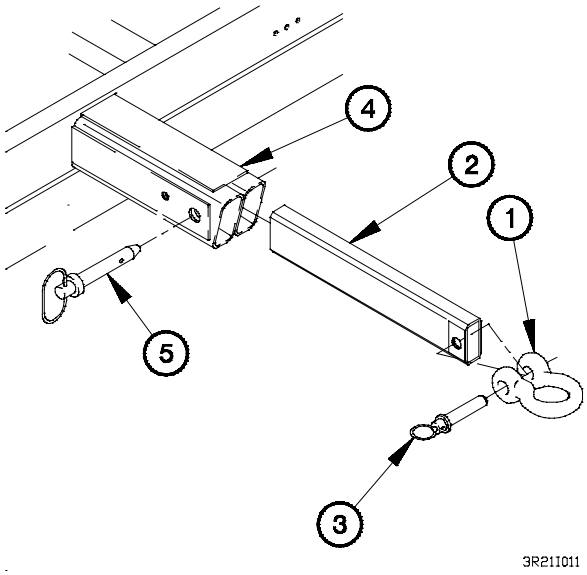
Step (8) requires the aid of an assistant.



(8) Remove spreader bar (8) from sub-frame (7).

(9) Remove pin (9) and shackle (10) from spreader bar (8).

b. Installation.



(1) Install shackle (1) on spreader bar (2) with pin (3).

(2) Apply a coating of grease to all sides of spreader bar (2).

WARNING

Spreader bar weighs approximately 100 lbs (45 kgs). Attach a suitable lifting device prior to installation. Failure to comply may result in injury to personnel or damage to equipment.

NOTE

Step (3) requires the aid of an assistant.

(3) Install spreader bar (2) in sub-frame (4).

(4) Install retaining pin (5) in spreader bar (2).

(5) Position chain (6) on sub-frame (4) and spreader bar (2) with two screws (7).

(6) Tighten two screws (7) to 13-17 lb-ft (18-23 N·m).

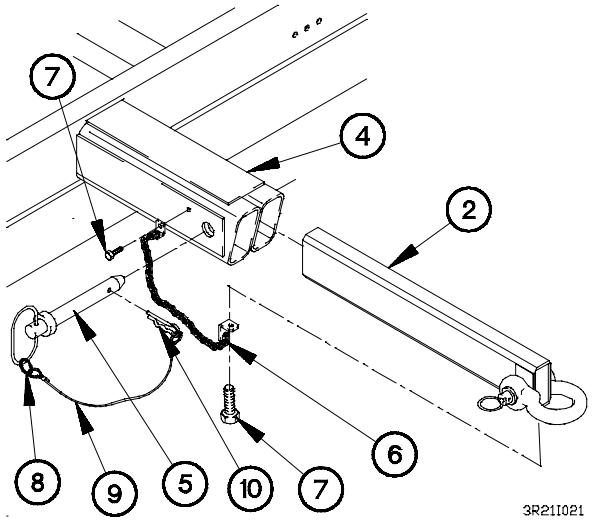
(7) Install split ring (8) on lanyard (9).

(8) Install split ring (8) on retaining pin (5).

(9) Route lanyard (9) through chain (6).

(10) Install lynch pin (10) on lanyard (9).

(11) Install lynch pin (10) in retaining pin (5).



c. Follow-On Maintenance.

Install splash guard (right side lower spreader bar) (para 16-10).

End of Task.

16-22. M1079 POD DOOR AND PANELS REPLACEMENT

This task covers:

a. Removal
b. Installation
c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
Engine shut down (TM 9-2320-365-10).
Sling spreader and guides removed (for top rear panels) (para 16-24).
Cab raised (TM 9-2320-365-10).

Materials/Parts
Lockwasher (as required) (Item 82, Appendix G)
Rivet, Blind (2) (Item 226, Appendix G)
Rivet, Blind (10) (Item 233, Appendix G)
Rubber Strip (as required) (Item 55, Appendix D)

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Goggles, Industrial (Item 15, Appendix C)
Drill, Portable, Electric (Item 7, Appendix C)
Drill Set, Twist (Item 6, Appendix C)
Tool Kit, Blind Rivet (Item 43, Appendix C)

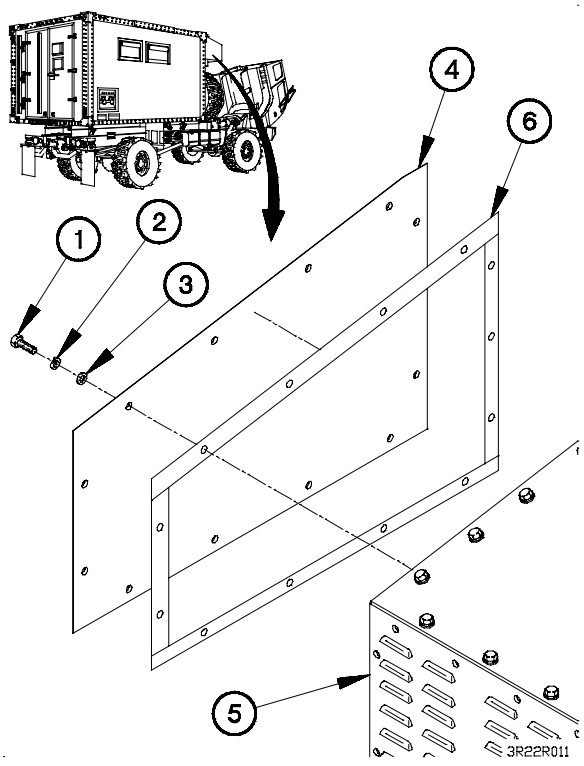
WARNING

Wear appropriate eye protection when removing rivets. Failure to comply may result in injury to personnel.

a. Removal.

(1) Remove 13 screws (1), lockwashers (2), washers (3), and curbside side panel (4) from pod frame (5). Discard lockwashers.

(2) Remove adhesive rubber strip (6) from curbside side panel (4). Discard adhesive rubber strip.



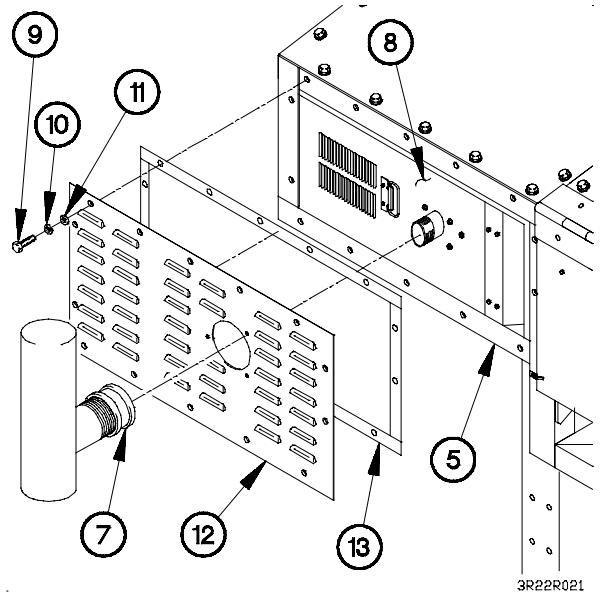
NOTE

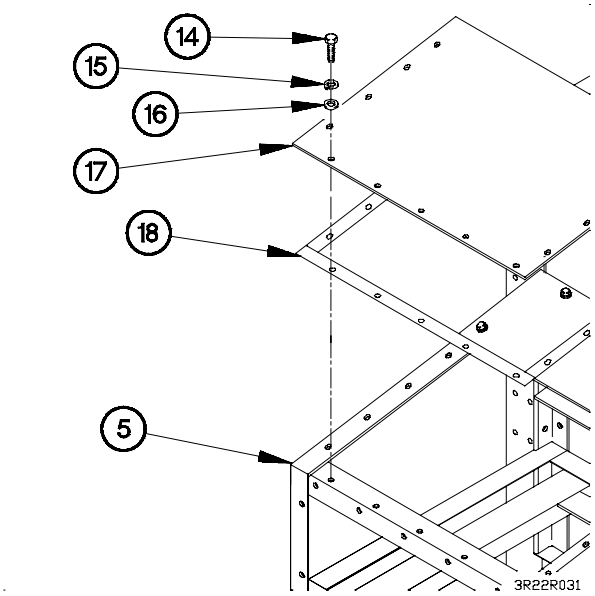
Perform step (3) if heater kit is installed.

(3) Remove heater exhaust pipe coupler (7) from heater (8).

(4) Remove 14 screws (9), lockwashers (10), washers (11), and curbside front panel (12) from pod frame (5). Discard lockwashers.

(5) Remove adhesive rubber strip (13) from curbside front panel (12). Discard adhesive rubber strip.



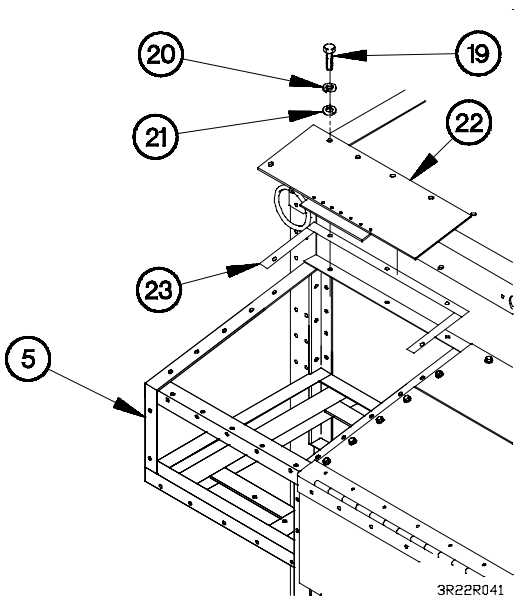


(6) Remove 13 screws (14), lockwashers (15), washers (16), and curbside top front panel (17) from pod frame (5). Discard lockwashers.

(7) Remove adhesive rubber strip (18) from curbside top front panel (17). Discard adhesive rubber strip.

(8) Remove five screws (19), lockwashers (20), washers (21), and curbside top rear panel (22) from pod frame (5). Discard lockwashers.

(9) Remove adhesive rubber strip (23) from curbside top rear panel (22). Discard adhesive rubber strip.



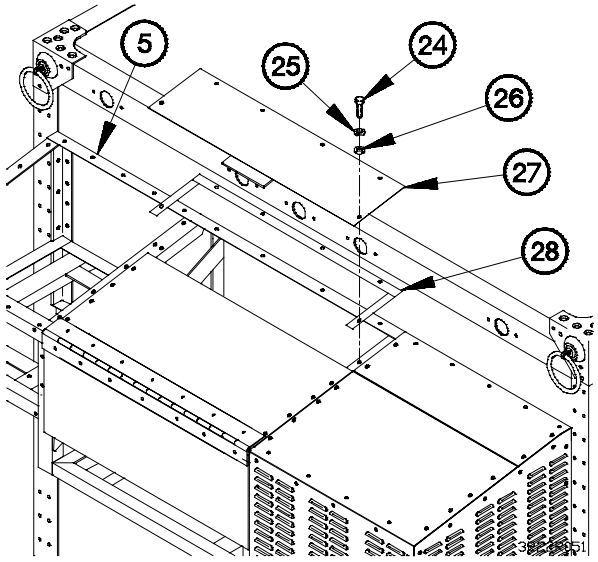
16-22. M1079 POD DOOR AND PANELS REPLACEMENT (CONT)

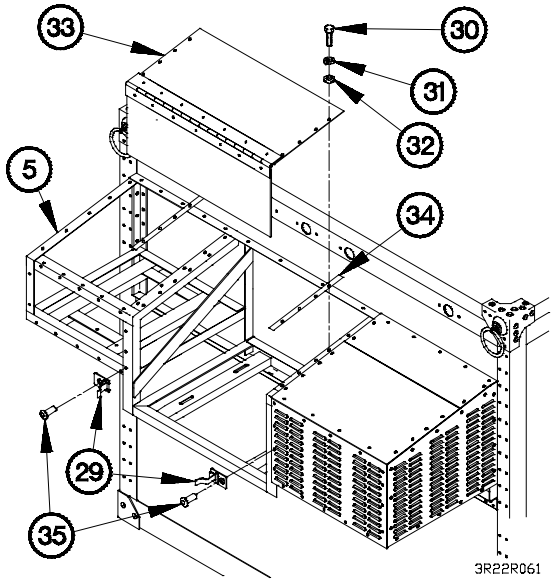
NOTE

Perform steps (10) through (17) on van bodies serial number 191 and higher.

(10) Remove eight screws (24), lockwashers (25), washers (26), and center top rear panel (27) from pod frame (5). Discard lockwashers.

(11) Remove adhesive rubber strip (28) from center top rear panel (27). Discard adhesive rubber strip.





(12) Open two latches (29) on pod frame (5).

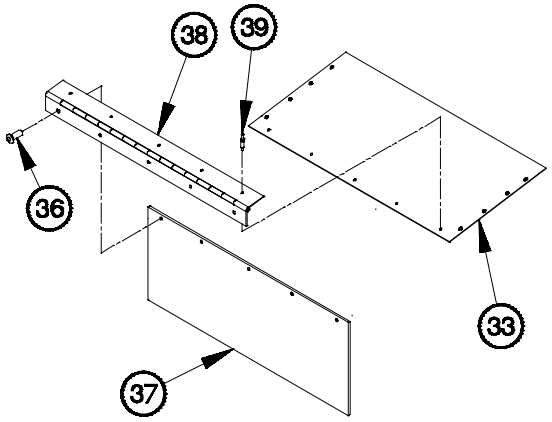
(13) Remove eight screws (30), lockwashers (31), washers (32), and center top front panel (33) from pod frame (5). Discard lockwashers.

(14) Remove adhesive rubber strip (34) from center top front panel (33). Discard adhesive rubber strip.

(15) Remove two rivets (35) and latches (29) from pod frame (5).

(16) Remove five rivets (36) and center front panel door (37) from hinge (38).

(17) Remove five rivets (39) and hinge (38) from center top front panel (33).



NOTE

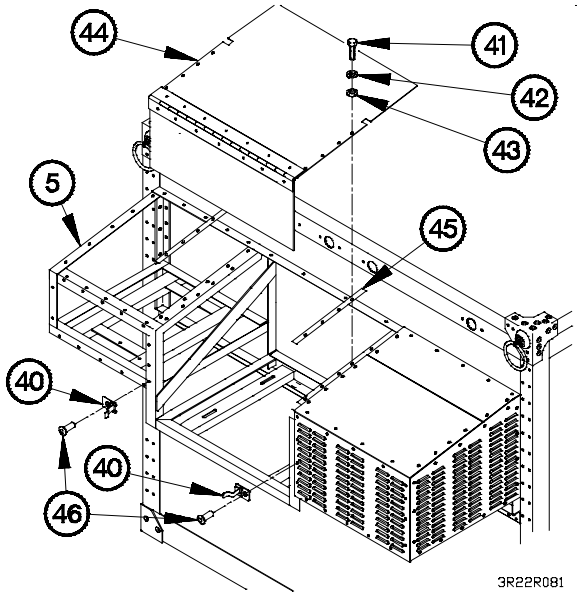
Perform steps (18) through (23) on van body serial numbers 001 through 190.

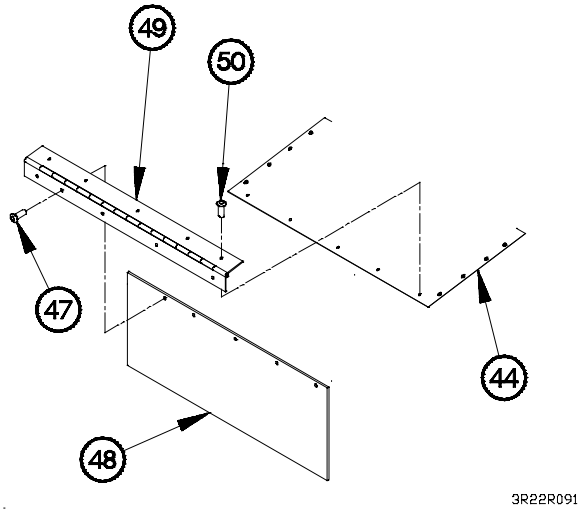
(18) Open two latches (40) on pod frame (5).

(19) Remove four screws (41), lockwashers (42), washers (43), and center top panel (44) from pod frame (5). Discard lockwashers.

(20) Remove adhesive rubber tape (45) from center top panel (44). Discard adhesive rubber tape.

(21) Remove two rivets (46) and latches (40) from pod frame (5).



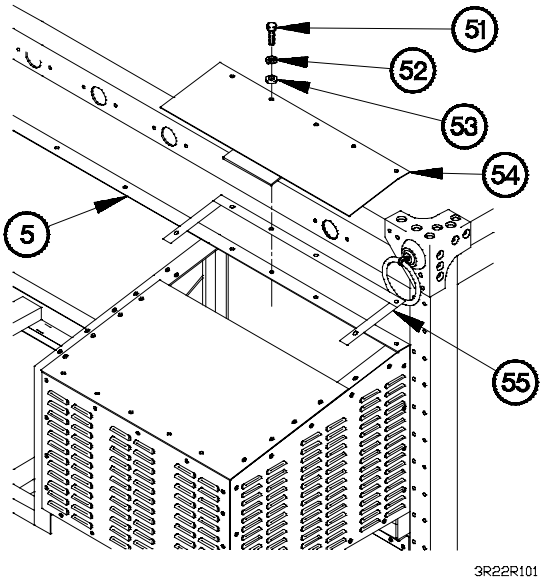


(22) Remove five rivets (47) and center front panel door (48) from hinge (49).

(23) Remove five rivets (50) and hinge (49) from center top panel (44).

(24) Remove five screws (51), lockwashers (52), washers (53), and roadside top rear panel (54) from pod frame (5). Discard lockwashers.

(25) Remove adhesive rubber strip (55) from roadside top rear panel (54). Discard adhesive rubber strip.



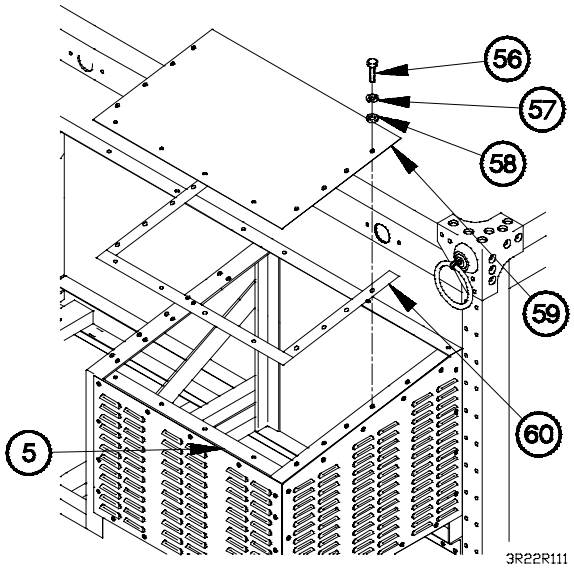
16-22. M1079 POD DOOR AND PANELS REPLACEMENT (CONT)

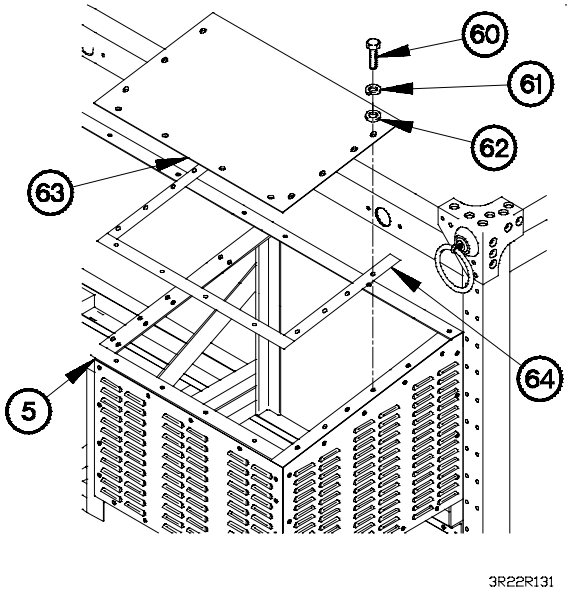
NOTE

Perform steps (26) and (27) on van bodies serial number 191 and higher.

(26) Remove 13 screws (56), lockwashers (57), washers (58), and roadside top front panel (59) from pod frame (5). Discard lockwashers.

(27) Remove adhesive rubber strip (60) from roadside top front panel (59). Discard adhesive rubber strip.





NOTE

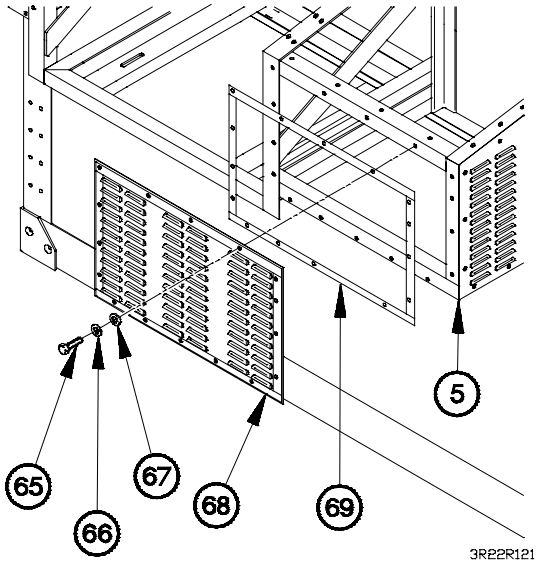
Perform steps (28) and (29) on van body serial numbers 001 through 190.

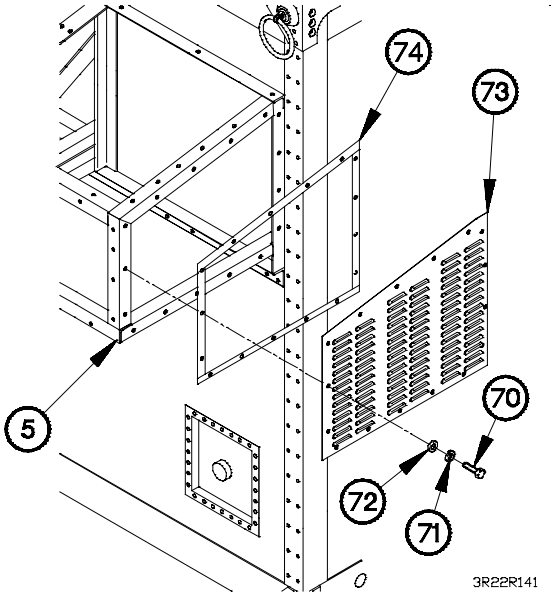
(28) Remove nine screws (60), lockwashers (61), washers (62), and roadside top front panel (63) from pod frame (5). Discard lockwashers.

(29) Remove adhesive rubber tape (64) from roadside top front panel (63). Discard adhesive rubber tape.

(30) Remove 16 screws (65), lockwashers (66), washers (67), and roadside front panel (68) from pod frame (5). Discard lockwashers.

(31) Remove adhesive rubber strip (69) from roadside front panel (68). Discard adhesive rubber strip.

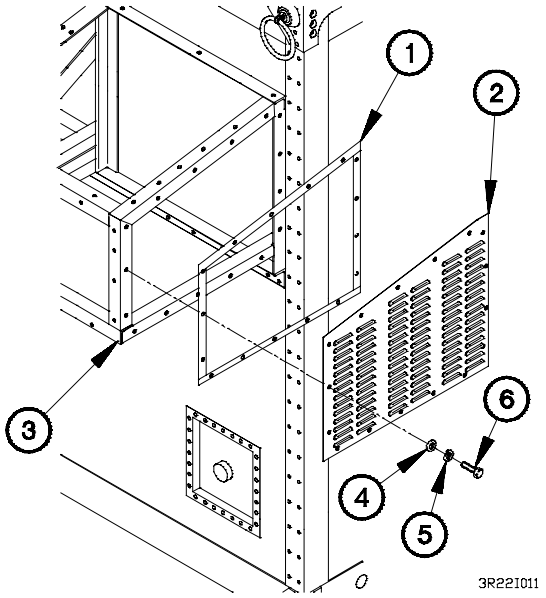




(32) Remove 15 screws (70), lockwashers (71), washers (72), and roadside side panel (73) from pod frame (5). Discard lockwashers.

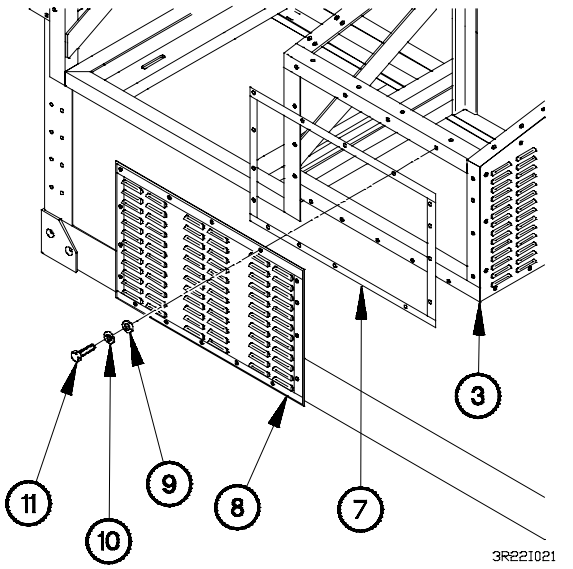
(33) Remove adhesive rubber strip (74) from roadside side panel (73). Discard adhesive rubber strip.

b. Installation.



(1) Install adhesive rubber strip (1) on roadside side panel (2).

(2) Install roadside side panel (2) on pod frame (3) with 15 washers (4), lockwashers (5), and screws (6).



(3) Install adhesive rubber strip (7) on roadside front panel (8).

(4) Install roadside front panel (8) on pod frame (3) with 16 washers (9), lockwashers (10), and screws (11).

16-22. M1079 POD DOOR AND PANELS REPLACEMENT (CONT)

(5) Install adhesive rubber strip (12) on roadside top front panel (13).

NOTE

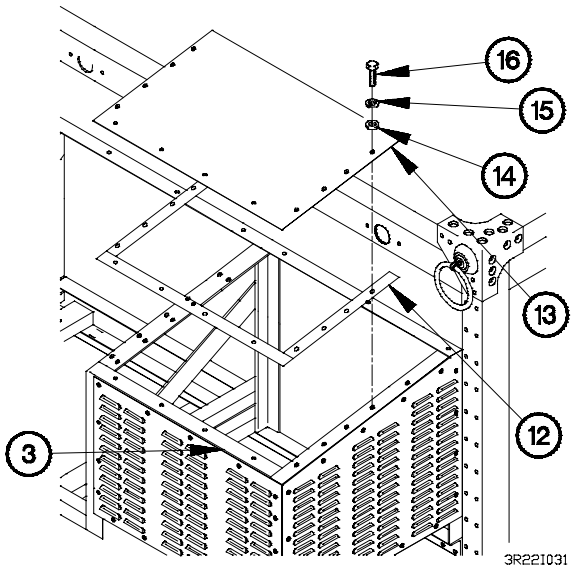
Perform step (6) on van bodies serial number 191 and higher.

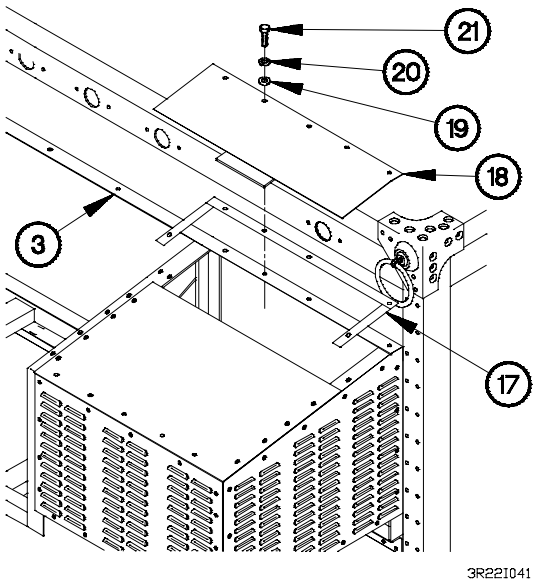
(6) Install roadside top front panel (13) on pod frame (3) with 13 washers (14), lockwashers (15), and screws (16).

NOTE

Perform step (7) on van body serial numbers 001 through 190.

(7) Install roadside top front panel (13) on pod frame (3) with nine washers (14), lockwashers (15), and screws (16).





(8) Install adhesive rubber strip (17) on roadside top rear panel (18).

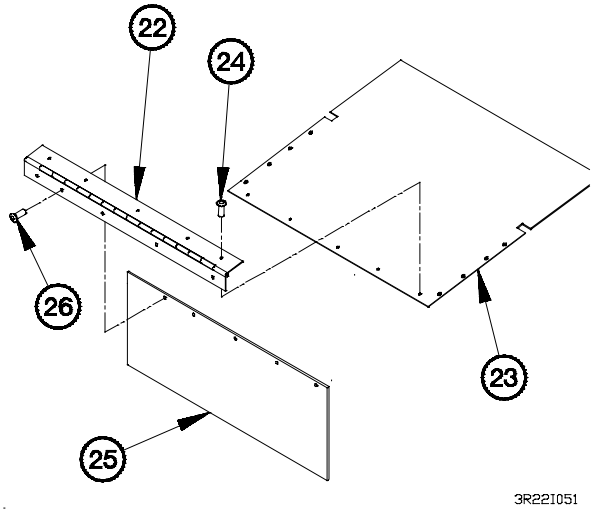
(9) Install roadside top rear panel (18) on pod frame (3) with five washers (19), lockwashers (20), and screws (21).

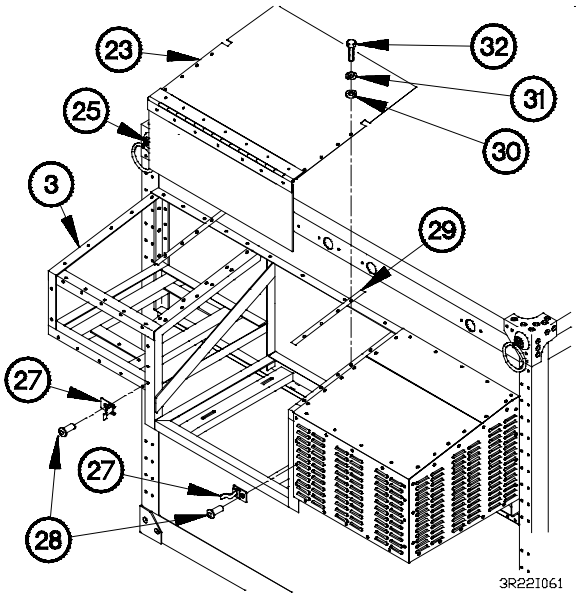
NOTE

Perform steps (10) through (15) on van body serial numbers 001 through 190.

(10) Install hinge (22) on center top front panel (23) with five rivets (24).

(11) Install center front panel door (25) on hinge (22) with five rivets (26).





(12) Install two latches (27) on pod frame (3) with two rivets (28).

(13) Install adhesive rubber strip (29) on center top front panel (23).

(14) Install center top front panel (23) on pod frame (3) with four washers (30), lockwashers (31), and screws (32).

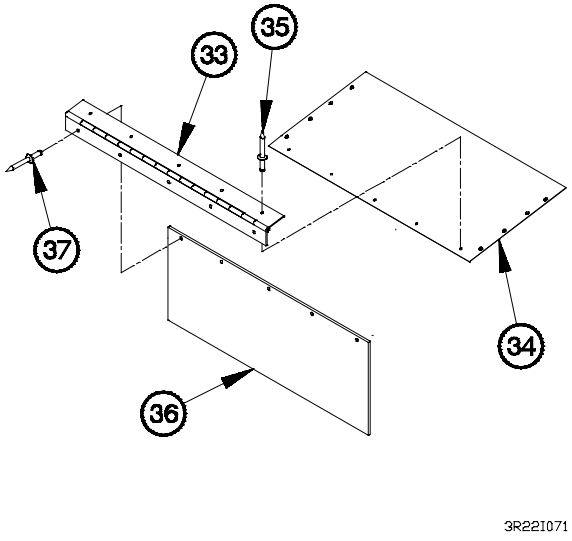
(15) Close two latches (27) on center front panel door (25).

NOTE

Perform steps (16) through (23) on van bodies serial number 191 and higher.

(16) Install hinge (33) on center top panel (34) with five rivets (35).

(17) Install center front panel door (36) on hinge (33) with five rivets (37).

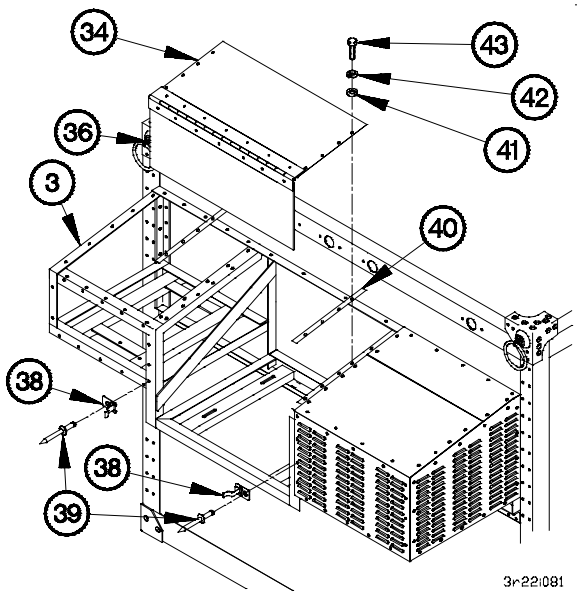


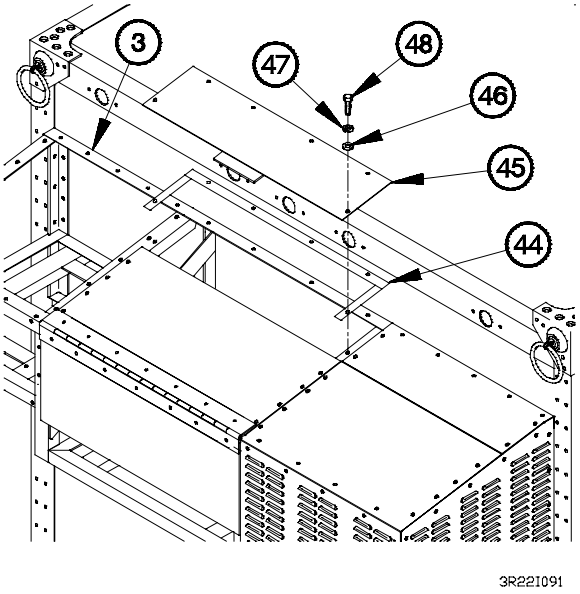
(18) Install two latches (38) on pod frame (3) with two rivets (39).

(19) Install adhesive rubber tape (40) on center top panel (34).

(20) Install center top panel (34) on pod frame (3) with eight washers (41), lockwashers (42), and screws (43).

(21) Close two latches (38) on center front panel door (36).



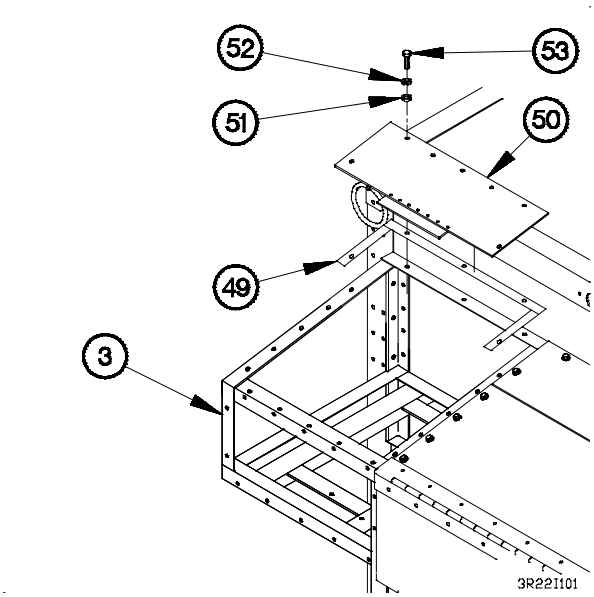


(22) Install adhesive rubber strip (44) on center top rear panel (45).

(23) Install center top rear panel (45) on pod frame (3) with eight washers (46), lockwashers (47), and screws (48).

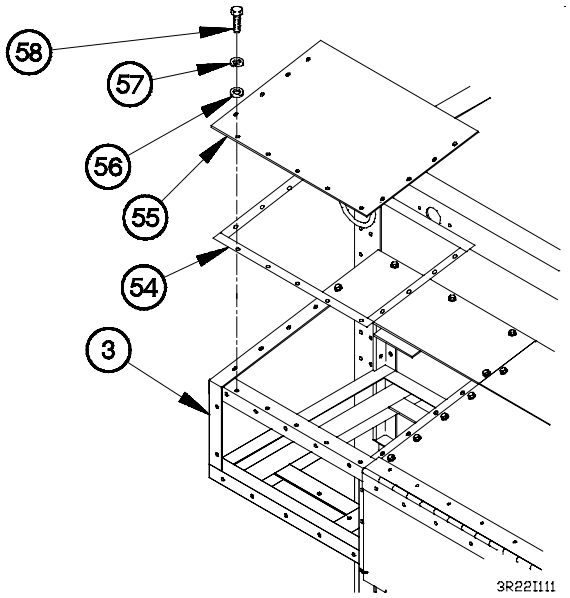
(24) Install adhesive rubber strip (49) on curbside top rear panel (50).

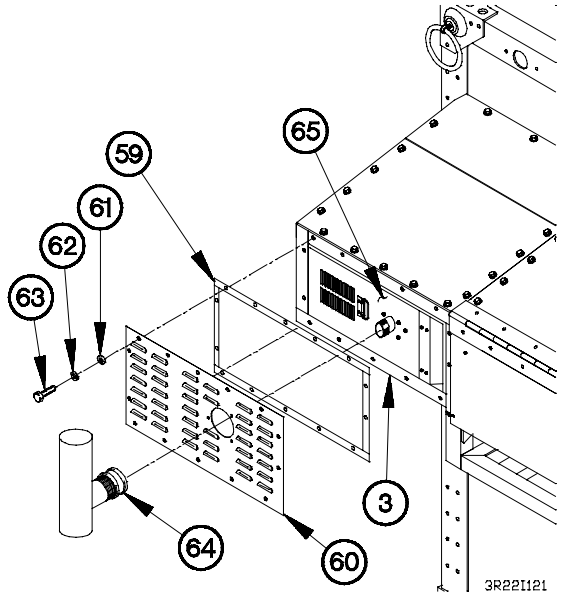
(25) Install curbside top rear panel (50) on pod frame (3) with five washers (51), lockwashers (52), and screws (53).



(26) Install adhesive rubber strip (54) on curbside top front panel (55).

(27) Install curbside top front panel (55) on pod frame (3) with 13 washers (56), lockwashers (57), and screws (58).





(28) Install adhesive rubber strip (59) on curbside front panel (60).

(29) Install curbside front panel (60) on pod frame (3) with 14 washers (61), lockwashers (62), and screws (63).

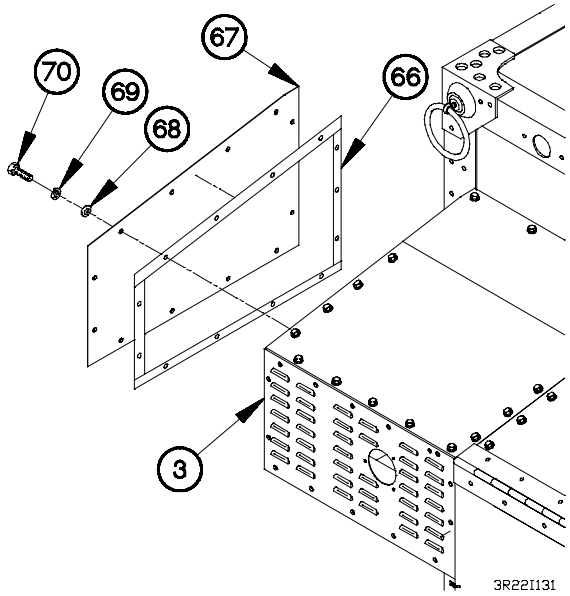
NOTE

Perform step (30) if heater kit installed.

(30) Install heater exhaust pipe coupler (64) on heater (65).

(30) Install adhesive rubber strip (66) on curbside side panel (67).

(31) Install curbside side panel (67) on pod frame (3) with 13 washers (68), lockwashers (69), and screws (70).



c. Follow-On Maintenance.

(1) Lower cab (TM 9-2320-365-10).

(2) Install sling spreader and guides, if removed (para 16-24).

End of Task.

16-23. M1079 POD FRAME REPLACEMENT/REPAIR

This task covers:

a. Removal
b. Disassembly
c. Assembly
d. Installation
e. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
Van body removed (para 16-19)
Air conditioner kit removed, if equipped (para 20-81).
Pod doors and panels removed (para 16-22).
Heater kit removed, if equipped (para 20-41).
Fan assembly removed, if equipped (para 16-67).

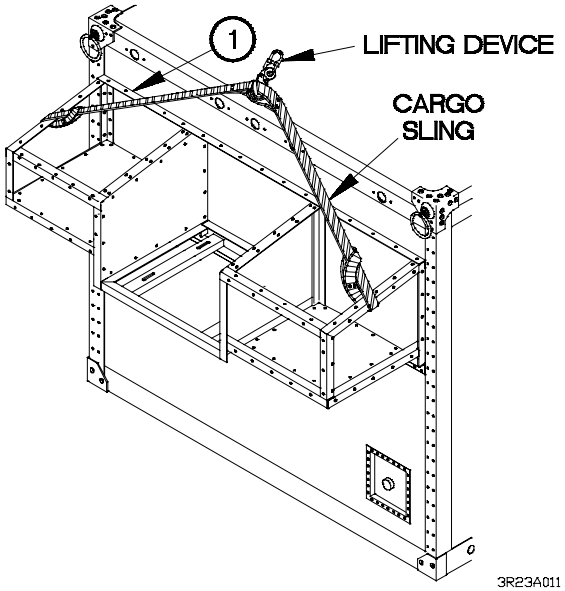
Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Goggles, Industrial (Item 15, Appendix C)
Drill, Electric (Item 7, Appendix C)
Drill Set, Twist (Item 6, Appendix C)
Tool Kit, Blind Rivet (Item 43, Appendix C)
Sling, Cargo (2) (Item 31, Appendix C)

Materials/Parts
Sealing Compound (Item 67, Appendix D)
Nut, Blind Rivet (96) (Item 110, Appendix G)
Screw, Machine (96) (Item 241, Appendix G)
Washer, Flat (96) (Item 270, Appendix G)
Lockwasher (96) (Item 97, Appendix G)
Rivet, Blind (as required) (Item 230, Appendix G)
Blade, Hand Hacksaw (Item 14.1, Appendix D)
Frame, Hand Hacksaw (Item 14.1, Appendix B)

Personnel Required
(2)

WARNING

- **Wear appropriate eye protection when removing rivets. Failure to comply may result in injury to personnel.**
- **Pod frame weighs approximately 80 lbs (36 kgs). Attach a suitable lifting device prior to removal. Failure to comply may result in injury to personnel or damage to equipment.**



a. Removal.

(1) Remove sealing compound from edges of pod frame (1).

NOTE

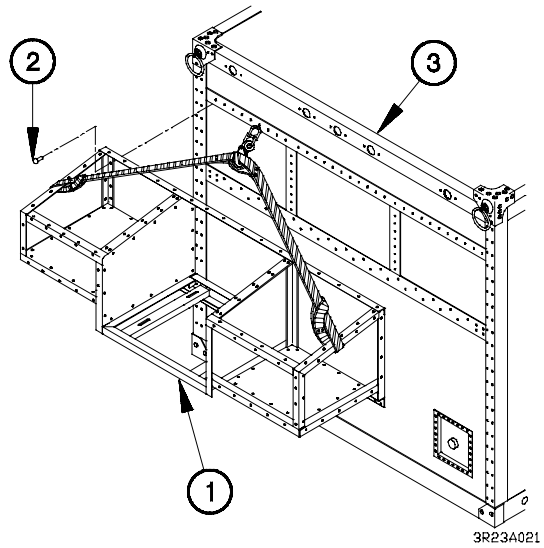
Steps (2) and (3) require the aid of an assistant.

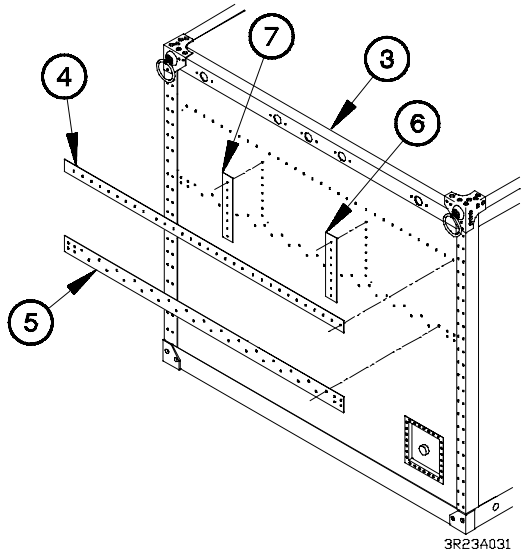
(2) Remove 96 rivets (2) from pod frame (1).

CAUTION

Use care when removing pod frame from van body wall. Start at one corner and slowly work pod frame loose from van body corner angles. Do not pry against van body skin. Failure to comply may result in damage to equipment.

(3) Remove pod frame (1) from van body wall (3).





(4) Remove spacers (4,5,6, and 7) from van body wall (3).

(5) Remove sealing compound from spacers (4,5,6, and 7) and van body wall (3).

16-23. M1079 POD FRAME REPLACEMENT/REPAIR (CONT)

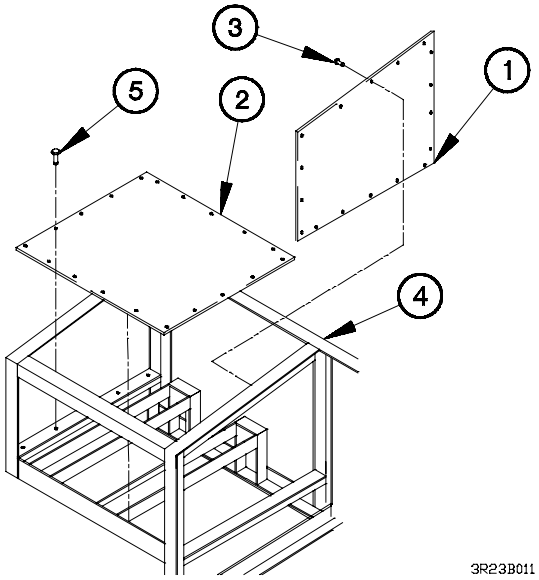
b. Disassembly

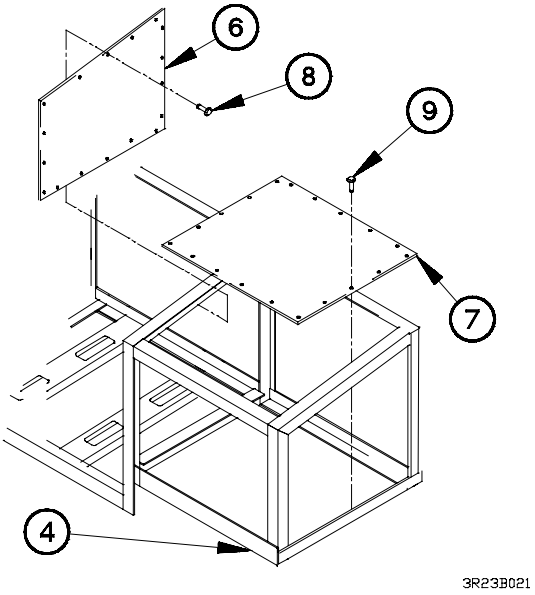
(1) Remove sealing compound from edges of curbside inside panel (1) and curbside bottom panel (2).

(2) Remove 14 blind rivets (3) and curbside inside panel (1) from pod frame (4).

(3) Remove 26 blind rivets (5) and curbside bottom panel (2) from pod frame (4).

(4) Remove sealing compound from curbside inside panel (1), curbside bottom panel (2), and pod frame (4).





(5) Remove sealing compound from edges of roadside inside panel (6) and roadside bottom panel (7).

(6) Remove 12 blind rivets (8) and roadside inside panel (6) from pod frame (4).

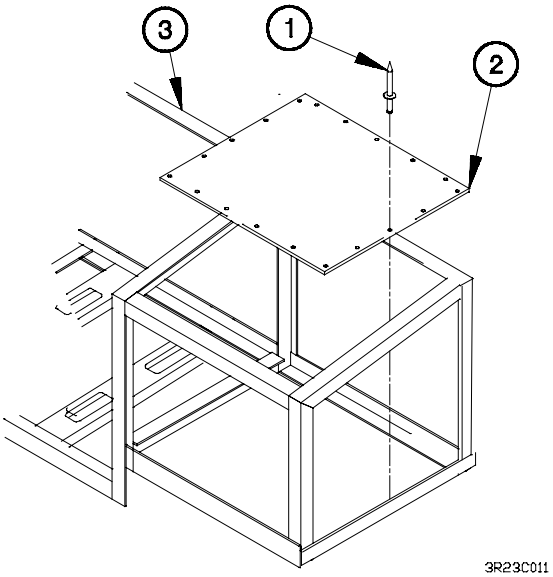
(7) Remove 26 blind rivets (9) and roadside bottom panel (7) from pod frame (4).

(8) Remove sealing compound from roadside inside panel (6), roadside bottom panel (7) and pod frame (4).

c. Assembly.

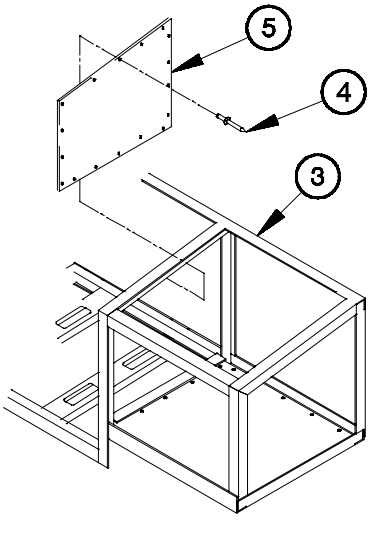
WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.



(1) Apply sealing compound to 26 blind rivets (1) and roadside bottom panel (2).

(2) Install roadside bottom panel (2) on pod frame (3) with 26 blind rivets (1).



(3) Apply sealing compound to 12 blind rivets (4) and roadside inside panel (5).

(4) Install roadside inside panel (5) on pod frame (3) with 12 blind rivets (4).

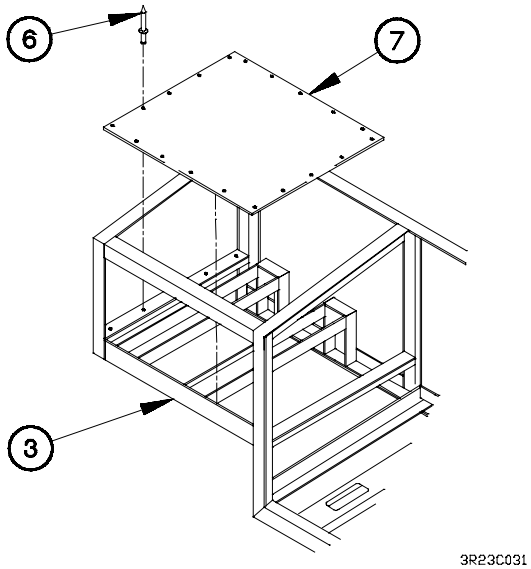
16-23. M1079 POD FRAME REPLACEMENT/REPAIR (CONT)

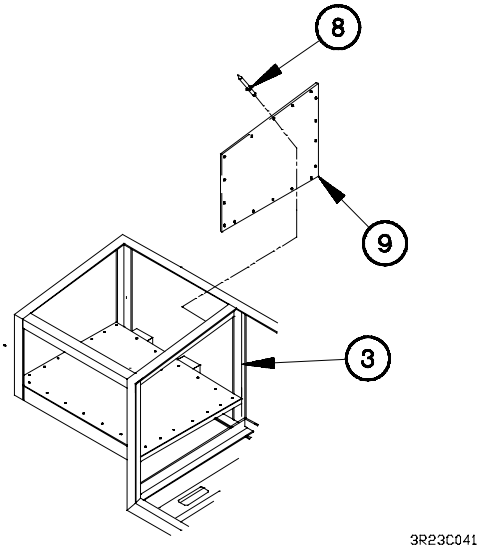
WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

(5) Apply sealing compound to 26 blind rivets (6) and curbside bottom panel (7).

(6) Install curbside bottom panel (7) on pod frame (3) with 26 blind rivets (6).





(7) Apply sealing compound to 14 blind rivets (8) and curbside inside panel (9).

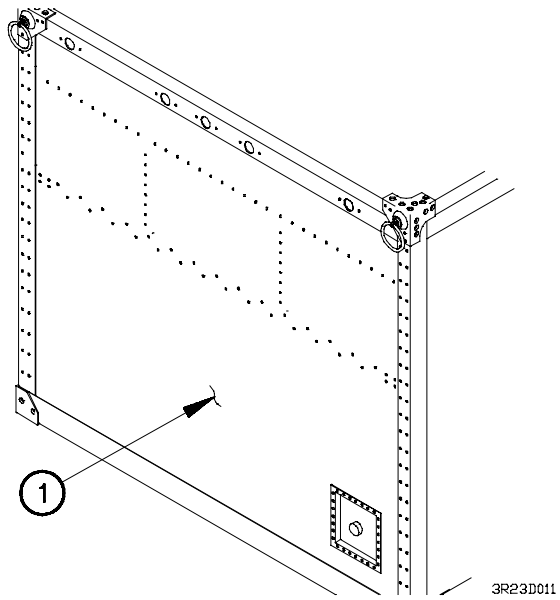
(8) Install curbside panel (9) on pod frame (3) with 14 blind rivets (8).

d. Installation.

CAUTION

Use Q size twist drill bit to perform steps (1) and (2). Failure to comply may result in damage to equipment.

(1) Enlarge 96 holes in van body wall (1).

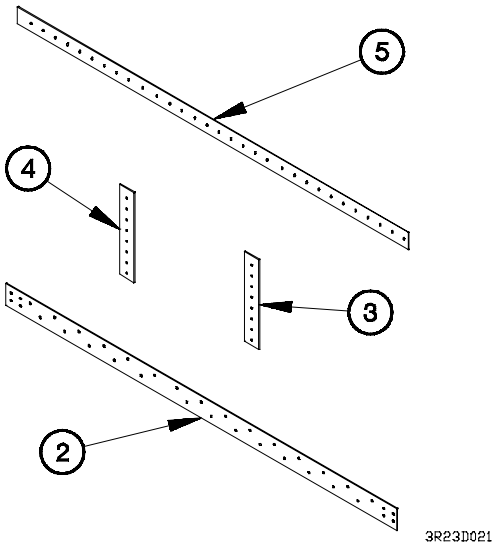


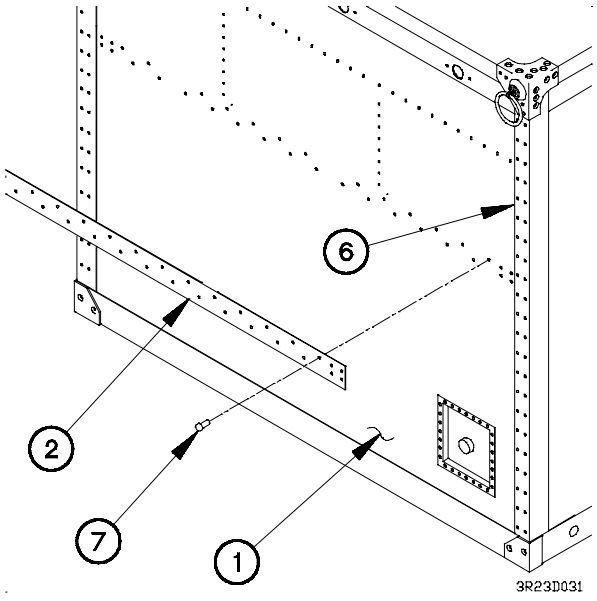
(2) Enlarge 71 holes in spacers (2,3,4, and 5).

CAUTION

Use 100 degree countersink to perform steps (3) and (4). Failure to comply may result in damage to equipment.

(3) Countersink 71 holes in spacers (2,3,4, and 5).





(4) Countersink 25 holes in van body trim angle (6).

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

NOTE

Sealing compound will become unusable two hours after being mixed.

(5) Apply sealing compound to 29 blind rivet nuts (7) and spacer (2).

(6) Install spacer (2) on van body wall (1) with 29 blind rivet nuts (7).

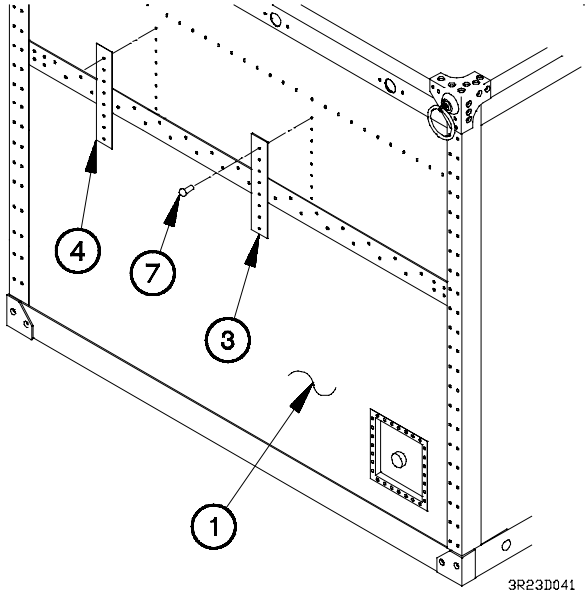
16-23. M1079 POD FRAME REPLACEMENT/REPAIR (CONT)

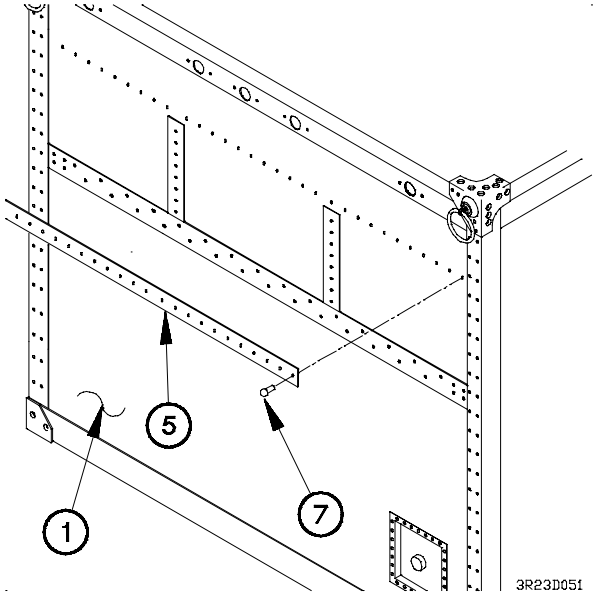
WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

(7) Apply sealing compound to 15 blind rivet nuts (7) and spacers (3 and 4).

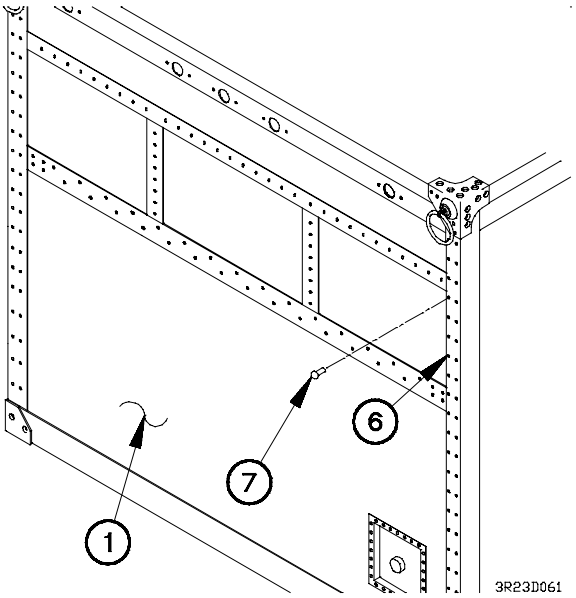
(8) Install spacers (3 and 4) on van body wall (1) with 15 blind rivet nuts (7).





(9) Apply sealing compound to 52 blind rivet nuts (7) and spacer (5).

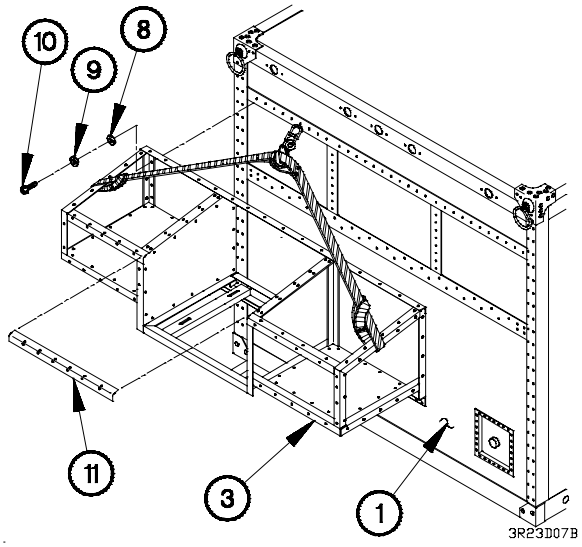
(10) Install spacer (5) on van body wall (1) with 27 blind rivet nuts (7).



(11) Install 25 blind rivet nuts (7) on van body trim angle (6).

WARNING

- **Do not install pod frame on van body for 72 hours after installing blind rivet nuts and spacers. Failure to comply may result in injury to personnel and/or damage to equipment.**
- **Pod frame weighs approximately 80 lbs. (36 kg). Attach a suitable lifting device prior to installation. Failure to comply may result in injury to personnel and/or damage to equipment.**



(12) Install pod frame (3) on van body wall (1) with 96 washers (8), lockwashers (9), and screws (10).

(13) Cut center section (11) from pod frame (3).

e. Follow-On Maintenance.

(1) Install heater kit, if equipped (para 20-41).

(2) Install air conditioner kit, if equipped (para 20-81).

(3) Install fan assembly (para 16-67).

(4) Install pod doors and panels (para 16-22).

(5) Install van body (para 16-19).

End of Task.

16-24. M1079 SLING SPREADER AND GUIDES REPLACEMENT

This task covers:

a. Removal
b. Installation
c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
Front clearance and marker lights removed (para 16-60).

Materials/Parts
Lockwasher (42) (Item 88, Appendix G)
Sealing Compound (Item 67, Appendix D)

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Sling, Cargo (Item 31, Appendix C)

Personnel Required
(2)

a. Removal.

NOTE

Both sides of spreader bar are rigged the same way. Left side shown.

(1) Remove clevis pin (1) from sling guide (2).

(2) Extend sling guide (2) from sling spreader (3).

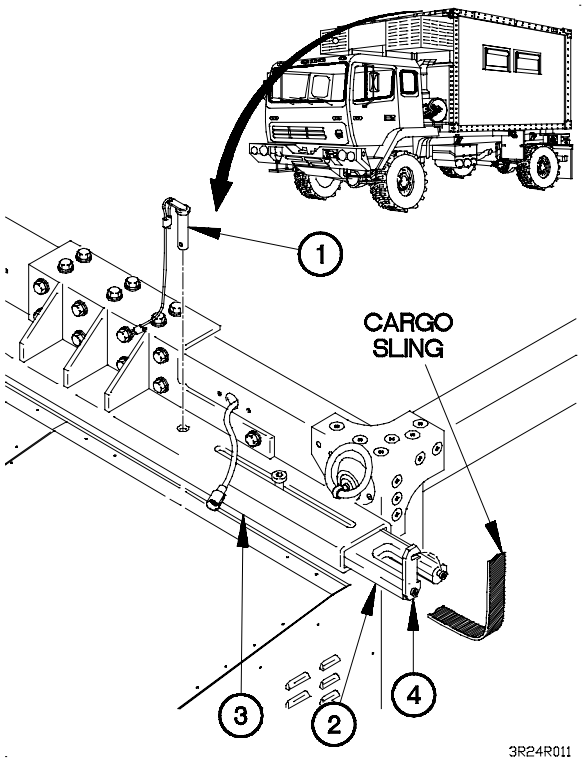
(3) Install clevis pin (1) in sling guide (2).

(4) Open end cap (4) on sling guide (2).

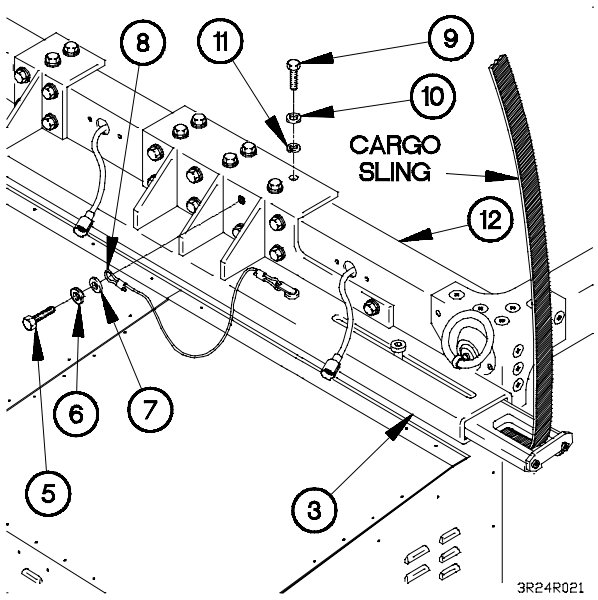
(5) Position cargo sling in sling guide (2).

(6) Close end cap (4) on sling guide (2).

(7) Perform steps (1) through (6) on right side of sling spreader (3).



(8) Remove sealing compound from edges of sling spreader (3).



WARNING

Sling spreader weighs approximately 200 lbs (91 kgs). Attach a suitable lifting device prior to removal. Failure to comply may result in injury to personnel or damage to equipment.

CAUTION

Use care when removing sling spreader. Failure to comply may result in damage to marker light wiring or connectors.

(9) Remove two screws (5), lockwashers (6), washers (7), and lanyards (8) from sling spreader (3). Discard lockwashers.

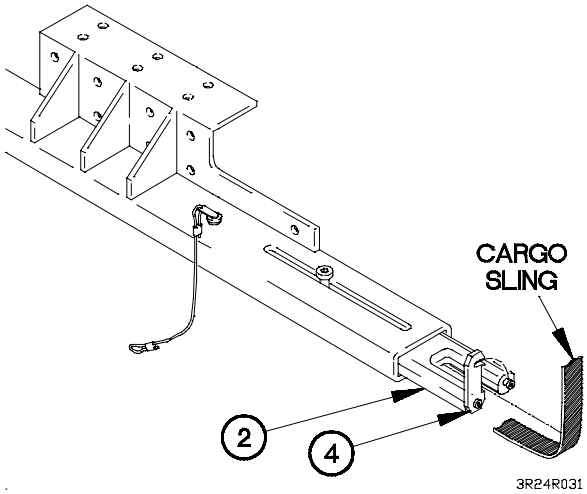
(10) Remove 40 screws (9), lockwashers (10), and washers (11) from sling spreader (3). Discard lockwashers.

NOTE

Step (11) requires the aid of an assistant.

(11) Remove sling spreader (3) from van body (12).

(12) Remove sealing compound from van body (12).



(13) Open two end caps (4) on sling guides (2).

(14) Remove cargo sling from two sling guides (2).

16-24. M1079 SLING SPREADER AND GUIDES REPLACEMENT (CONT)

NOTE

Both sling guides are removed the same way. Left side shown.

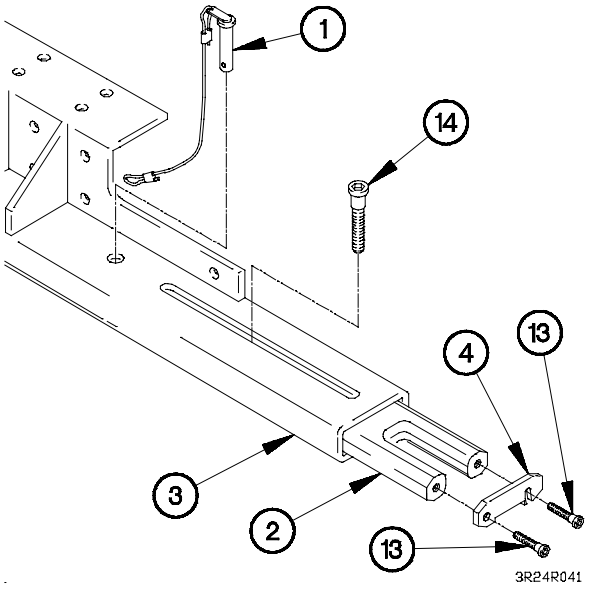
(15) Remove two screws (13) and end cap (4) from sling guide (2).

(16) Remove screw (14) from sling guide (2).

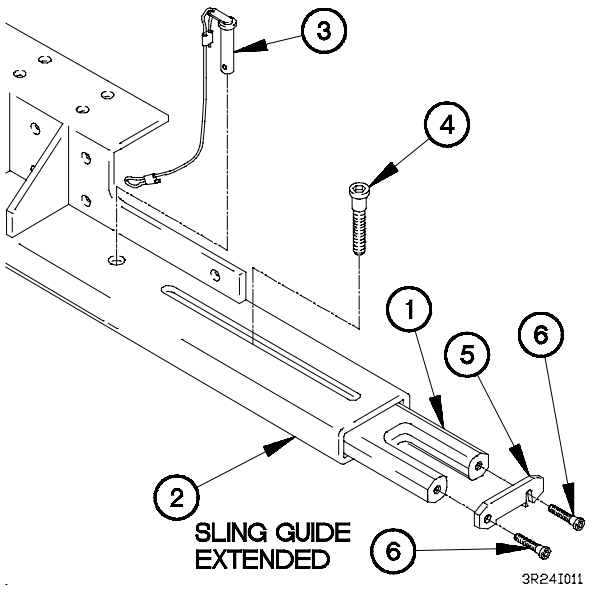
(17) Remove clevis pin (1) from sling guide (2).

(18) Remove sling guide (2) from sling spreader (3).

(19) Perform steps (15) through (18) on right side of sling spreader (3).



b. Installation.



NOTE

Both sling guides are installed the same way. Left side shown.

(1) Install sling guide (1) in sling spreader (2).

(2) Install clevis pin (3) in sling guide (1) with sling guide in extended position.

(3) Install screw (4) in sling guide (1).

(4) Install end cap (5) on sling guide (1) with two screws (6).

(5) Perform steps (1) through (4) on right side of sling spreader (2).

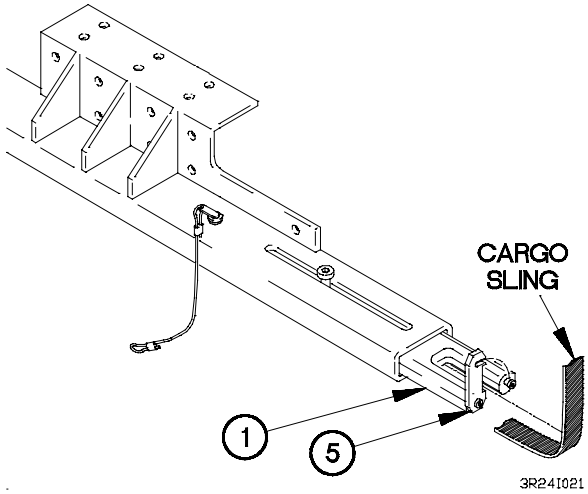
NOTE

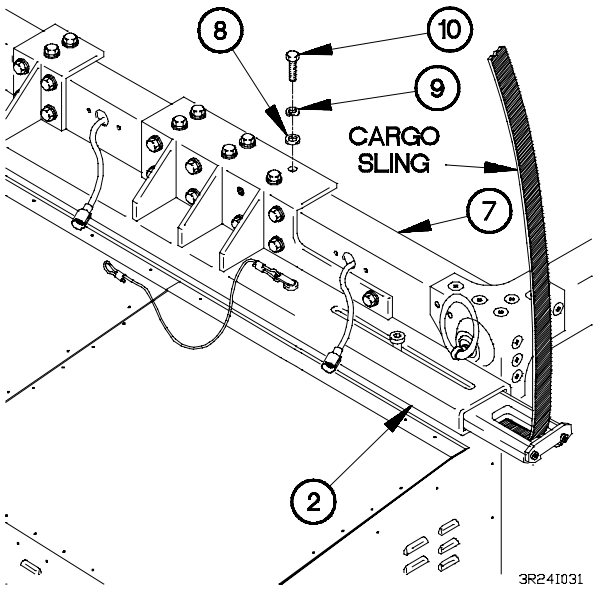
Both sides of sling spreader are rigged the same way. Left side shown.

(6) Open end cap (5) on two sling guides (1).

(7) Route cargo sling through two sling guides (1).

(8) Close end cap (5) on two sling guides (1).





WARNING

Sling spreader weighs approximately 200 lbs (91 kgs). Attach a suitable lifting device prior to installation. Failure to comply may result in injury to personnel or damage to equipment.

CAUTION

Use care when installing sling spreader. Failure to comply may result in damage to marker light wiring or connectors.

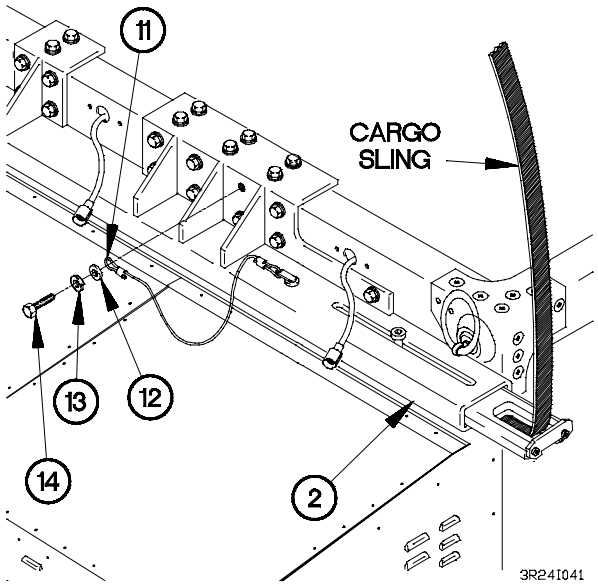
NOTE

Step (9) requires the aid of an assistant.

(9) Install sling spreader (2) on van body (7) with 40 washers (8), lockwashers (9), and screws (10).

16-24. M1079 SLING SPREADER AND GUIDES REPLACEMENT (CONT)

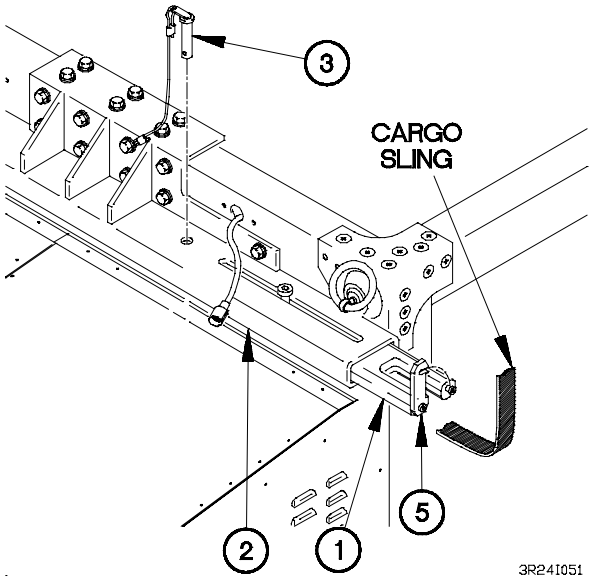
(10) Install two lanyards (11) on sling spreader (2) with two washers (12), lockwashers (13), and screws (14).



WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

(11) Apply sealing compound around edges of sling spreader (2).



(12) Open end cap (5) on two sling guides (1).

(13) Remove cargo sling from two sling guides (1).

(14) Close end cap (5) on two sling guides (1).

(15) Remove two clevis pins (3) from sling guides (1).

(16) Retract two sling guides (1) in sling spreader (2).

(17) Install two clevis pins (3) in sling guides (1).

c. Follow-On Maintenance.

Install front clearance and marker lights (para 16-60).

End of Task.

16-25. M1079 LIFT CASTING REPLACEMENT

This task covers:

a. Removal
b. Installation
c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
Engine shut down (TM 9-2320-365-10).
Sling spreader and guides removed (for front lift casting replacement) (para 16-24).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Screwdriver Attachment, Socket Wrench (van bodies serial number 191 and higher) (Item 42, Appendix B)
Screwdriver Attachment, Socket Wrench (van body serial numbers 001 through 190) (Item 43, Appendix B)

Materials/Parts
Lockwasher (2) (Item 81, Appendix G)
Sealing Compound (Item 67, Appendix D)

a. Removal.

NOTE

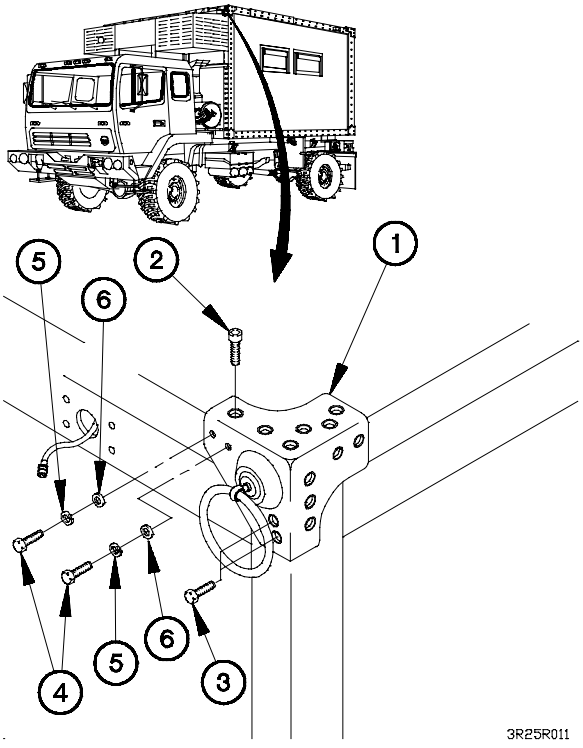
All four lift castings are removed the same way. Left front lift casting shown.

(1) Remove sealing compound from edges of lift casting (1).

(2) Remove 11 screws (2) from lift casting (1).

(3) Remove two screws (3) from lift casting (1).

(4) Remove two screws (4), lockwashers (5), and washers (6) from lift casting (1). Discard lockwashers.

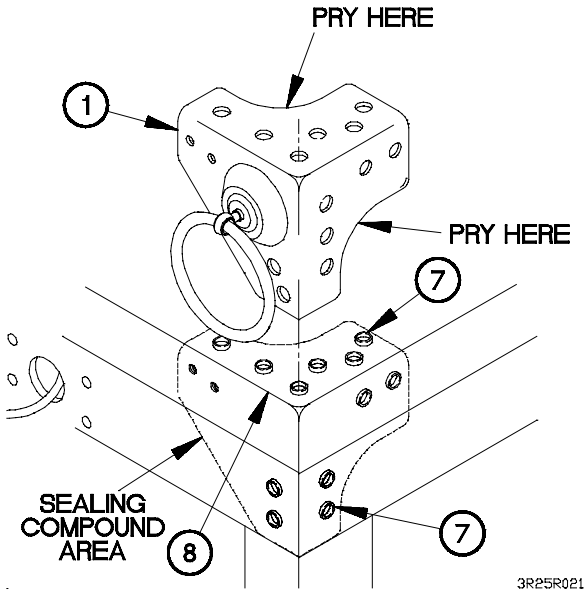


16-25. M1079 LIFT CASTING REPLACEMENT (CONT)

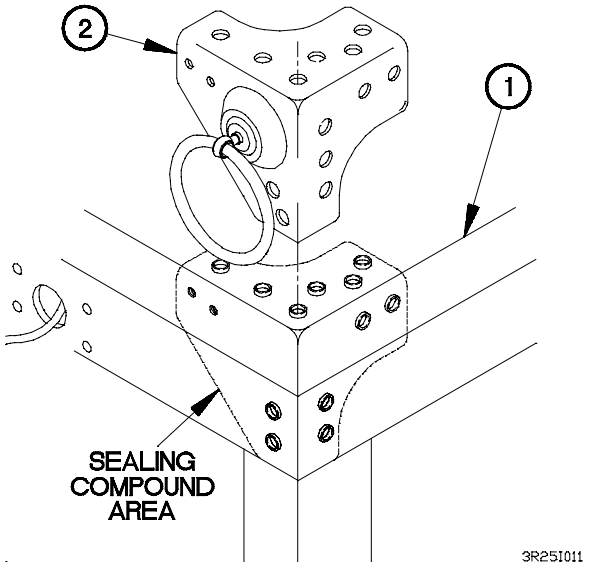
(5) Pry lift casting (1) over blind rivet nut heads (7) on top and side of van body (8).

(6) Remove lift casting (1) from van body (8).

(7) Remove sealing compound from van body (8).



b. Installation.



WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

NOTE

All four lift castings are installed the same way. Left front lift casting shown.

(1) Apply sealing compound to van body (1) on area where lift casting (2) attaches.

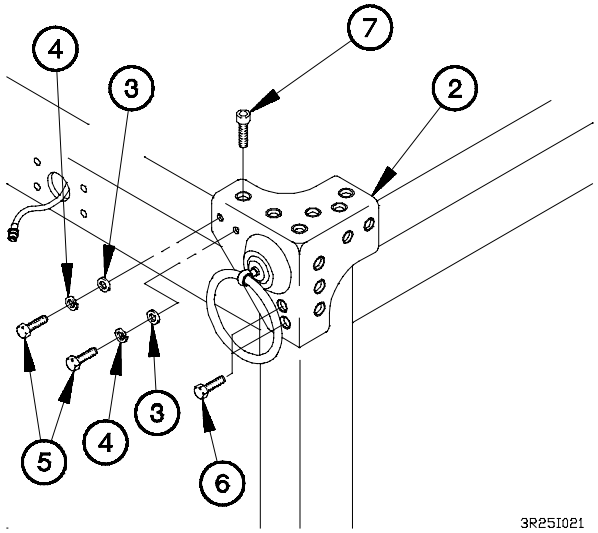
(2) Apply sealing compound to inside surface of lift casting (2).

(3) Position lift casting (2) on van body (1).

(4) Install two washers (3), lockwashers (4), and screws (5) in lift casting (2).

(5) Install two screws (6) in lift casting (2).

(6) Install 11 screws (7) in lift casting (2).



WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

(7) Apply sealing compound around edges of lift casting (2).

c. Follow-On Maintenance.

Install sling spreader and guides (front lift casting replacement only) (para 16-24).

End of Task.

16-26. M1079 SLING BEARING ANGLE REPLACEMENT

This task covers:

a. Removal

b. Installation

INITIAL SETUP

Equipment Conditions
Engine shut down (TM 9-2320-365-10).

Materials/Parts
Sealing Compound (Item 67, Appendix D)

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)

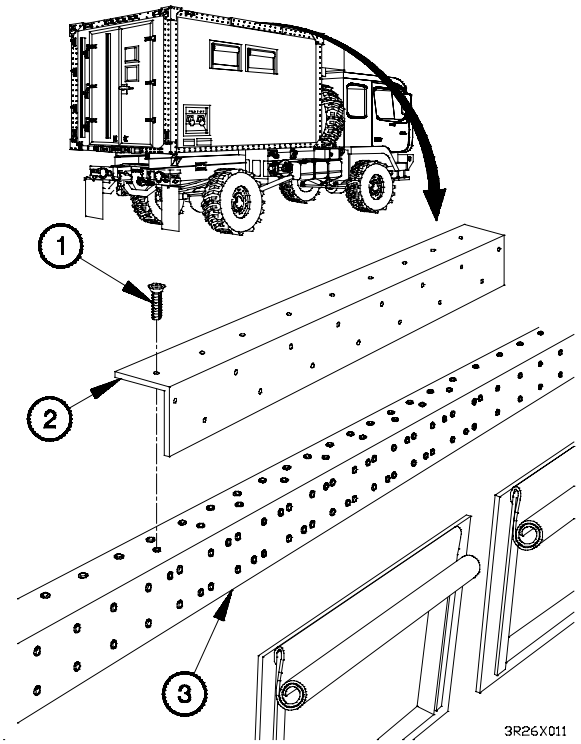
a. Removal.

(1) Remove 24 screws (1) from sling bearing angle (2).

(2) Remove sealing compound from edges of sling bearing angle (2).

(3) Remove sling bearing angle (2) from van body (3).

(4) Remove sealing compound from van body (3).



b. Installation.

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

(1) Apply sealing compound to inside edge of sling bearing angle (2).

(2) Install sling bearing angle (2) on van body (3) with 24 screws (1).

(3) Apply sealing compound on edges of sling bearing angle (2).

End of Task.

16-27. M1079 ROOF BAIL HANDLE REPLACEMENT

This task covers:

a. Removal

b. Installation

INITIAL SETUP

Equipment Conditions
Engine shut down (TM 9-2320-365-10).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)

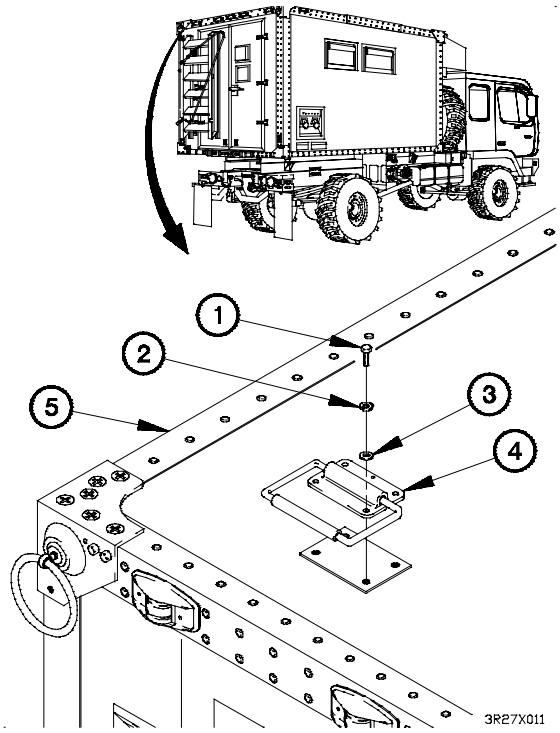
Materials/Parts
Sealing Compound (Item 67, Appendix D)
Lockwasher (4) (Item 78, Appendix G)

a. Removal.

(1) Remove sealing compound from heads of four screws (1).

(2) Remove four screws (1), lockwashers (2), washers (3), and bail handle (4) from van body (5). Discard lockwashers.

(3) Remove sealing compound from van body (5).



b. Installation.

(1) Install bail handle (4) on van body (5) with four washers (3), lockwashers (2), and screws (1).

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

(2) Apply sealing compound around heads of four screws (1).

End of Task.

16-28. M1079 FOLDING STEP REPLACEMENT

This task covers:

a. Removal

b. Installation

INITIAL SETUP

Equipment Conditions
Engine shut down (TM 9-2320-365-10).
LH door closed (TM 9-2320-365-10).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)

Materials/Parts
Lockwasher (2) (Item 80, Appendix G)

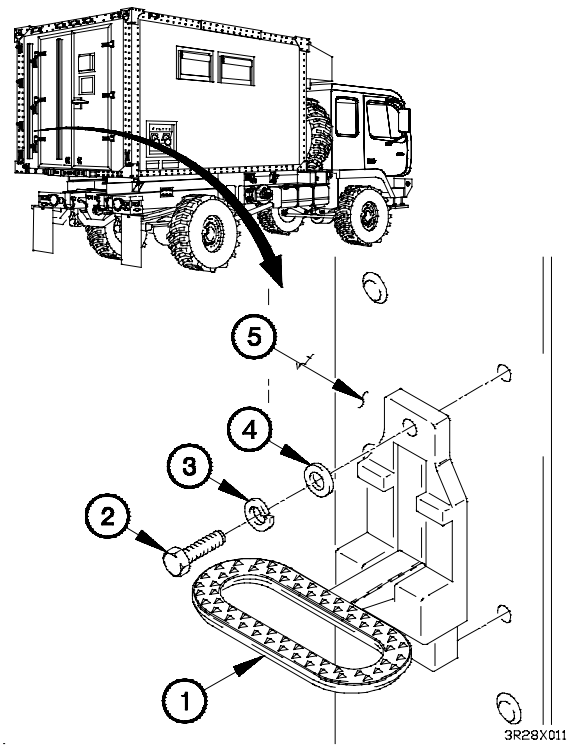
a. Removal.

NOTE

Van body is equipped with seven folding steps. All are removed the same way. One shown.

(1) Lower folding step (1).

(2) Remove two screws (2), lockwashers (3), washers (4), and folding step (1) from van body (5). Discard lockwashers.



b. Installation.

NOTE

Van body is equipped with seven folding steps. All are installed the same way. One shown.

(1) Install folding step (1) on van body (5) with two washers (4), lockwashers (3), and screws (2).

(2) Raise folding step (1).

End of Task.

16-29. M1079 RUBBER BUMPER AND TEE LATCH REPLACEMENT

This task covers:

a. Rubber Bumper Removal
b. Rubber Bumper Installation
c. Tee Latch Removal
d. Tee Latch Installation

INITIAL SETUP

Equipment Conditions
Engine shut down (TM 9-2320-365-10).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)

Materials/Parts
Lockwasher (Item 81, Appendix G)
Lockwasher (4) (Item 77, Appendix G)
Sealing Compound (Item 67, Appendix D)

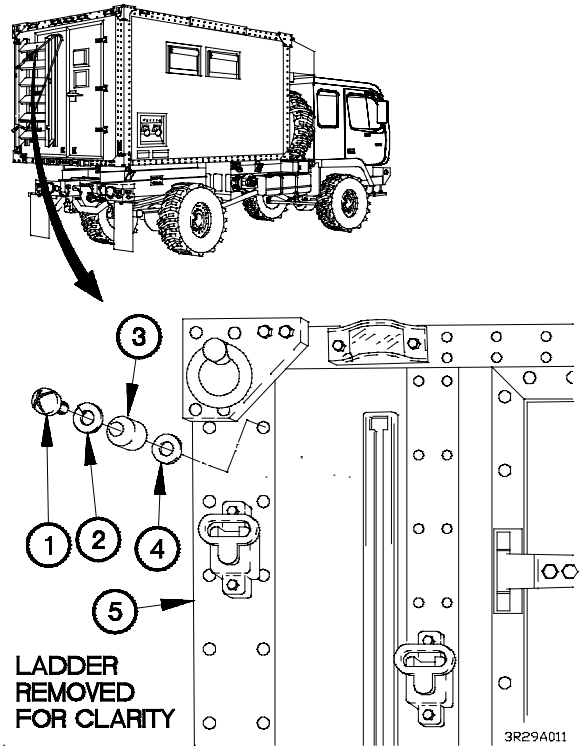
a. Rubber Bumper Removal.

NOTE

Left and right side rubber bumpers are removed the same way. Left side shown.

(1) Remove screw (1), lockwasher (2), rubber bumper (3), and spacer (4) from van body (5). Discard lock-washer.

(2) Remove sealing compound from van body (5).



b. Rubber Bumper Installation.

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

(1) Apply sealing compound to van body (5).

(2) Install spacer (4) and rubber bumper (3) on van body (5) with lockwasher (2) and screw (1).

16-29. M1079 RUBBER BUMPER AND TEE LATCH REPLACEMENT (CONT)

c. Tee Latch Removal.

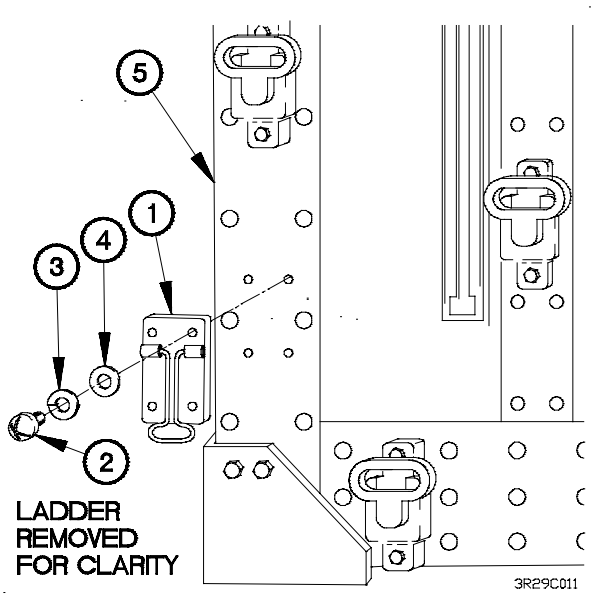
NOTE

Left and right side tee latches are removed the same way. Left side shown.

(1) Remove sealing compound from edges of tee latch (1) and heads of four screws (2).

(2) Remove four screws (2), lockwashers (3), washers (4), and tee latch (1) from van body (5). Discard lockwashers.

(3) Remove sealing compound from van body (5) and tee latch (1).



d. Tee Latch Installation.

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

NOTE

Left and right side tee latches are installed the same way. Left side shown.

(1) Apply sealing compound on tee latch (1).

(2) Install tee latch (1) on van body (5) with four washers (4), lockwashers (3), and screws (2).

(3) Apply sealing compound on edges of tee latch (1) and heads of screws (2).

End of Task.

16-30. M1079 DOOR SEAL, RETAINER, AND LATCH STRIKER REPLACEMENT

This task covers:

a. Door Seal and Retainer Removal
b. Door Seal and Retainer Installation
c. Latch Striker Removal
d. Latch Striker Installation
e. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
Engine shut down (TM 9-2320-365-10).
LH and RH doors opened (TM 9-2320-365-10).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Drill, Electric, Portable (Item 7, Appendix C)
Drill Twist (Item 6, Appendix C)
Tool Kit, Blind Rivet (Item 43, Appendix C)
Goggles, Industrial (Item 15, Appendix C)

Materials/Parts
Rivet, Blind (3) (Item 233, Appendix G)
Sealing Compound (Item 67, Appendix D)
Seal, Door (Item 250, Appendix G)
Lockwasher (2) (Item 82, Appendix G)

a. Door Seal and Retainer Removal.

WARNING

Wear appropriate eye protection when removing rivets. Failure to comply may result in injury to personnel.

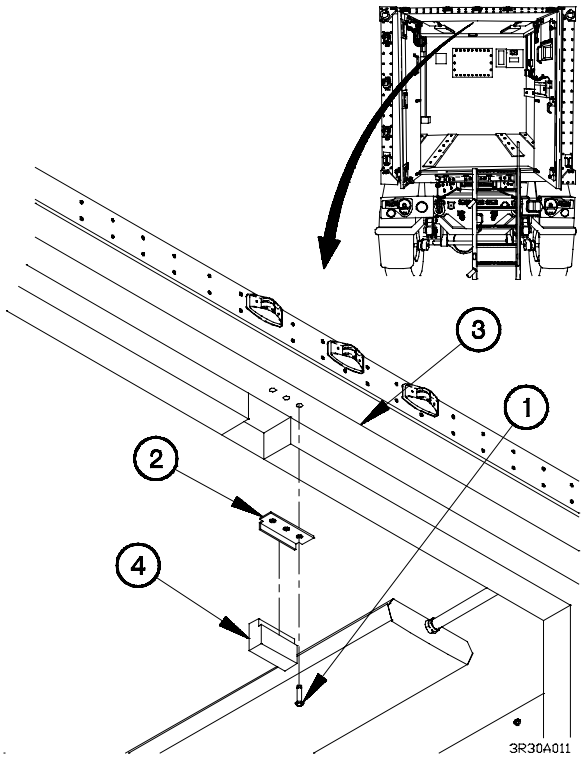
NOTE

Top and bottom door seal and retainer are removed the same way. Top door seal and retainer shown.

(1) Remove three rivets (1) and door seal retainer (2) from door jam (3).

(2) Remove door seal (4) from door jam (3). Discard door seal.

(3) Remove sealing compound from door jam (3).



16-30. M1079 DOOR SEAL AND RETAINER REPLACEMENT (CONT)

b. Door Seal and Retainer Installation.

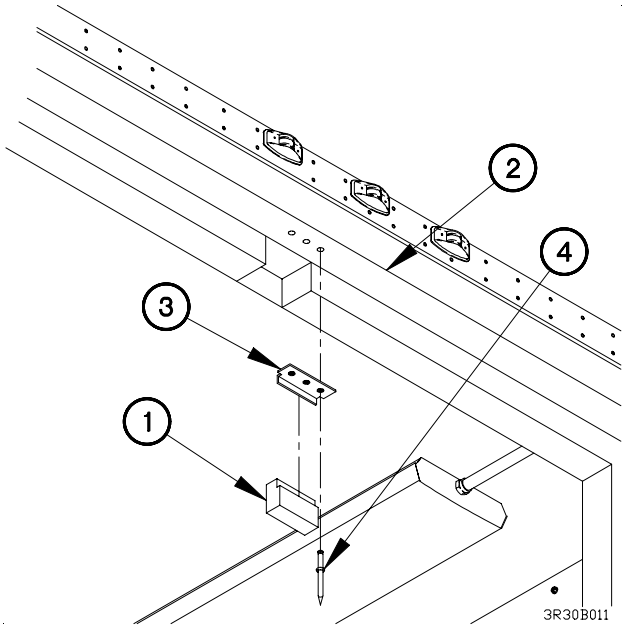
WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

(1) Apply sealing compound to door seal (1) and door jam (2).

(2) Install door seal (1) on door jam (2).

(3) Apply sealing compound to door seal retainer (3) and door jam (2).



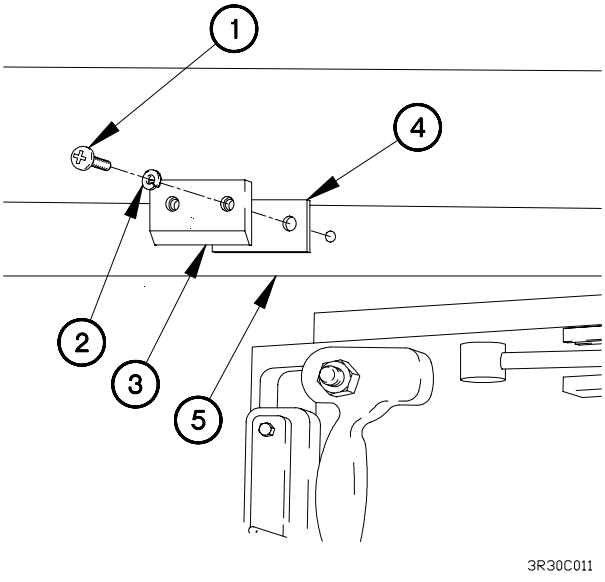
CAUTION

Coat all rivets with sealing compound prior to installation. Failure to comply may result in damage to equipment.

(4) Apply sealing compound to three rivets (4).

(5) Install door seal retainer (3) on door jam (2) with three rivets (4).

c. Latch Striker Removal.



NOTE

Top and bottom latch strikers are removed the same way. Top latch striker shown.

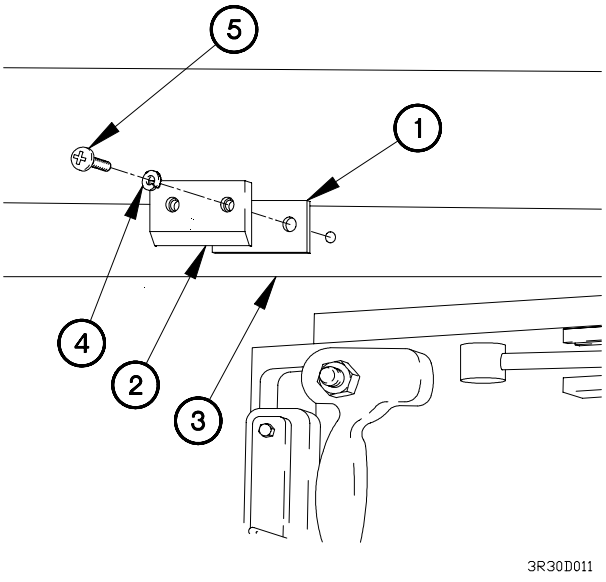
Remove two screws (1), lockwashers (2), latch striker (3) and shim (4) from van body wall (5). Discard lockwashers.

d. Latch Striker Installation.

NOTE

Top and bottom latch strikers are installed the same way. Top latch striker shown.

Install shim (1) and latch striker (2) on van body wall (3) with two lockwashers (4) and screws (5).



c. Follow-On Maintenance.

Check for proper operation of LH and RH doors (TM 9-2320-365-10).

End of Task.

16-31. M1079 HEATER AND AIR CONDITIONER COVER REPLACEMENT

This task covers:

a. Heater Cover Removal
b. Heater Cover Installation
c. Air Conditioner Cover Removal
d. Air Conditioner Cover Installation
e. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
Engine shut down (TM 9-2320-365-10).
LH and RH doors opened (115 degrees) (TM 9-2320-365-10).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)

Materials/Parts
Lockwasher (18) (Item 84, Appendix G)
Lockwasher (30) (Item 84, Appendix G)

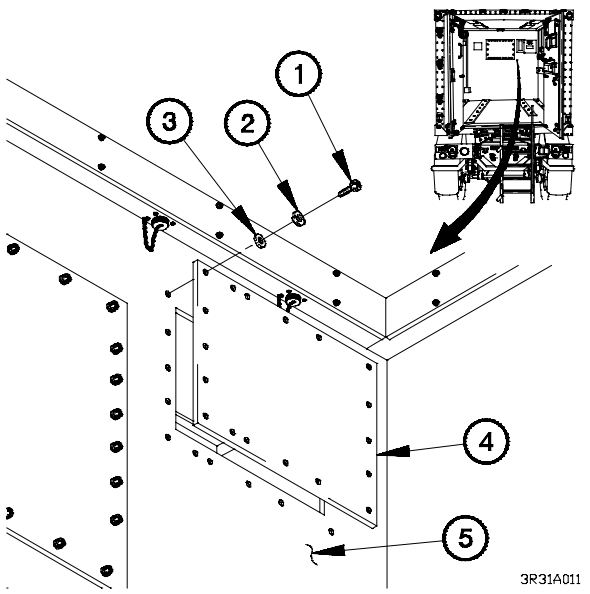
Personnel Required
(2)

a. Heater Cover Removal.

NOTE

The following step requires the aid of an assistant.

Remove 18 screws (1), lockwashers (2), washers (3), and heater cover (4) from van body wall (5). Discard lockwashers.



b. Heater Cover Installation.

NOTE

The following step requires the aid of an assistant.

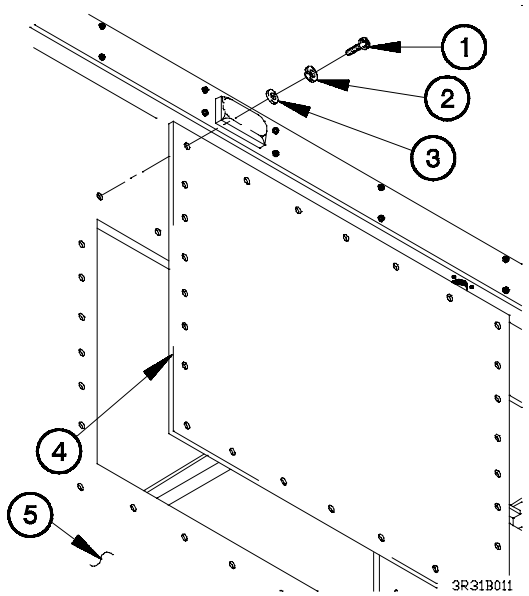
Install heater cover (4) on van body wall (5) with 18 washers (3), lockwashers (2), and screws (1).

c. Air Conditioner Cover Removal.

NOTE

The following step requires the aid of an assistant.

Remove 30 screws (1), lockwashers (2), washers (3), and air conditioner cover (4) from van body wall (5). Discard lockwashers.



d. Air Conditioner Cover Installation.

NOTE

The following step requires the aid of an assistant.

Install air conditioner cover (4) on van wall (5) with 30 washers (3), lockwashers (2), and screws (1).

e. Follow-On Maintenance.

Close LH and RH doors (TM 9-2320-365-10).

End of Task.

16-32. M1079 VENT COVER REPLACEMENT

This task covers:

a. Removal
b. Installation
c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
Engine shut down (TM 9-2320-365-10).
LH and RH doors opened (115 degrees) (TM 9-2320-365-10).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Drill, Portable, Electric (Item 7, Appendix C)
Drill Set, Twist (Item 6, Appendix C)
Goggles, Industrial (Item 15, Appendix C)
Tool Kit, Blind Rivet (Item 44, Appendix C)

Materials/Parts
Sealing Compound (Item 67, Appendix D)
Rivet (4) (Item 232, Appendix G)
Rivet (3) (Item 229, Appendix G)
Rivet (3) (Item 231, Appendix G)
Rivet (12) (frame) (Item 227, Appendix G)
Seal (Item 244, Appendix G)
Adhesive (Item 5, Appendix D)

a. Removal.

(1) Position vent cover (1) on stud base fastener (2).

(2) Latch stud base fastener (2).

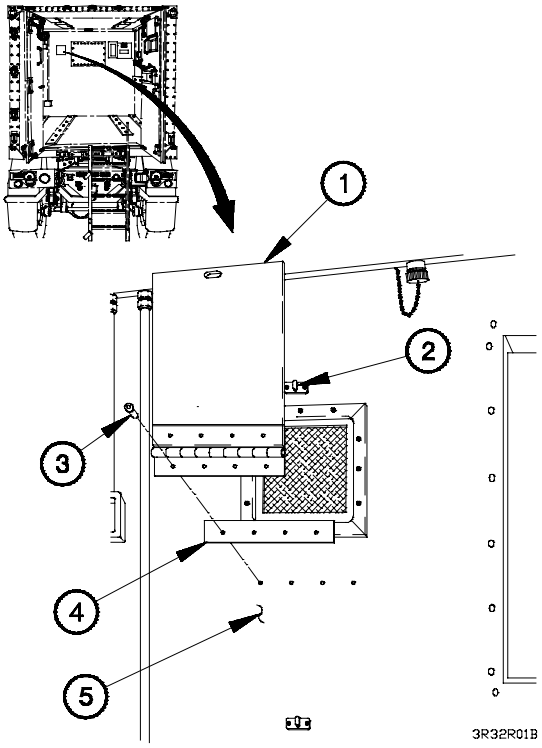
WARNING

Wear appropriate eye protection when removing rivets. Failure to comply may result in injury to personnel.

(3) Remove four rivets (3) from vent cover (1).

(4) Unlatch stud base fastener (2).

(5) Remove vent cover (1) and spacer (4) from van body wall (5).



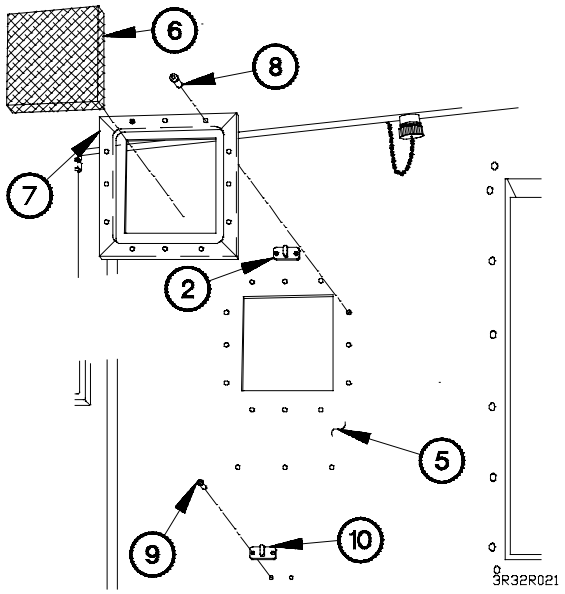
(6) Remove air filter (6) from filter frame (7).

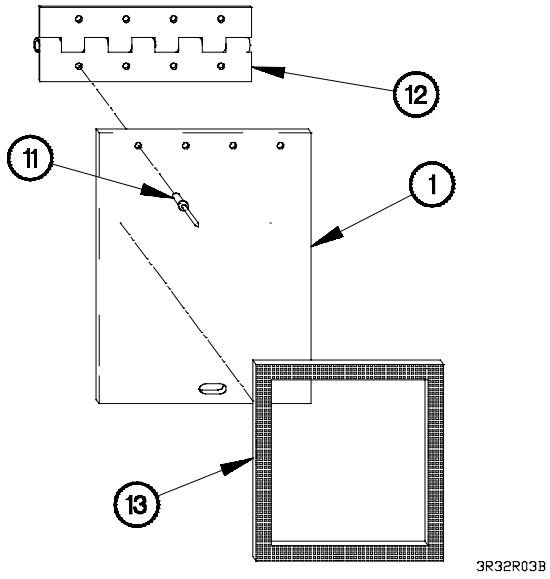
WARNING

Wear appropriate eye protection when removing rivets. Failure to comply may result in injury to personnel.

(7) Remove 12 rivets (8) and filter frame (7) from van body wall (5).

(8) Remove two rivets (9) and stud base fasteners (2 and 10) from van body wall (5).

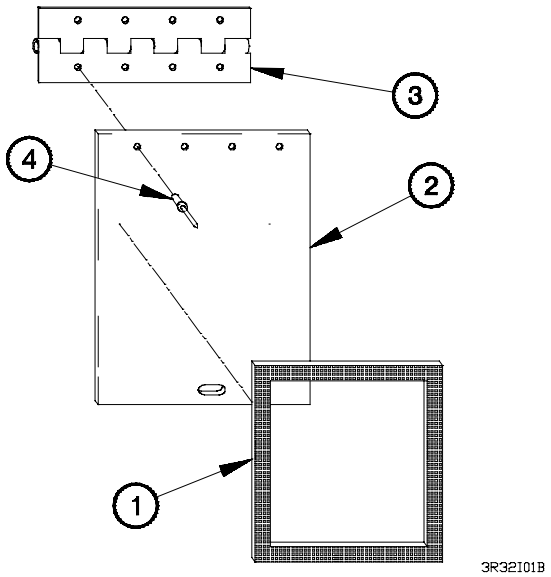




(9) Remove four rivets (11) and hinge (12) from vent cover (1).

(10) Remove seal (13) from vent cover (1). Discard seal.

(11) Remove sealing compound from vent cover (1).



b. Installation.

(1) Install seal (1) on vent cover (2).

(2) Install hinge (3) on vent cover (2) with three rivets (4).

16-32. M1079 VENT COVER REPLACEMENT (CONT)

CAUTION

Coat all rivets with sealing compound prior to installation. Failure to comply may result in damage to equipment.

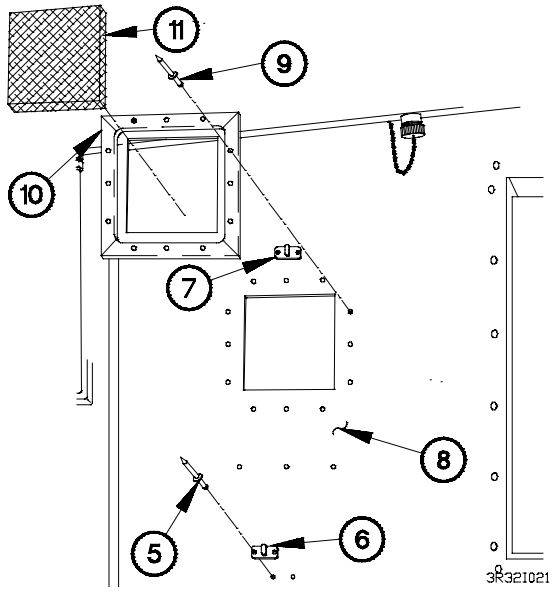
(3) Apply sealing compound on four rivets (5).

(4) Install stud base fasteners (6 and 7) on van body wall (8) with four rivets (5).

(5) Apply sealing compound on 12 rivets (9).

(6) Install filter frame (10) on van body wall (8) with 12 rivets (9).

(7) Install air filter (11) in filter frame (10).

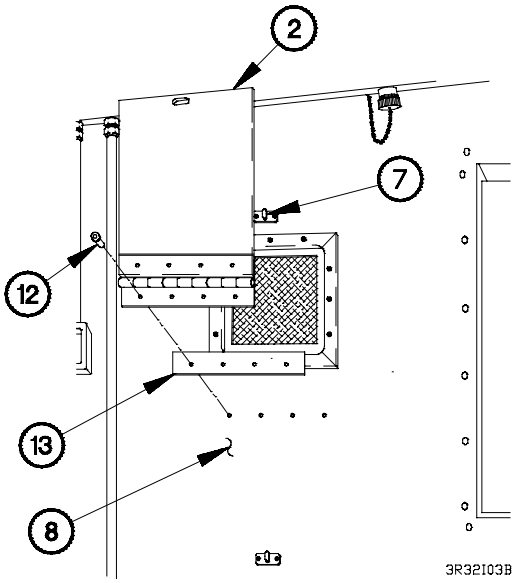


(8) Position fan vent cover (2) on stud base fastener (7).

(9) Latch stud base fastener (7).

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.



CAUTION

Coat all rivets with sealing compound prior to installation. Failure to comply may result in damage to equipment.

(10) Apply sealing compound to four rivets (12).

(11) Install spacer (13) and vent cover (2) on van body wall (8) with four rivets (12).

e. Follow-On Maintenance.

Close LH and RH doors (TM 9-2320-365-10).

End of Task.

16-33. M1079 AIR FILTER REPLACEMENT

This task covers:

a. Removal
b. Installation
c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
Engine shut down (TM 9-2320-365-10).
LH and RH doors opened (115 degrees) (TM 9-2320-365-10).

Materials/Parts
Filter, Air (fan) (Item 19, Appendix G)
Filter, Air (RH door) (Item 20, Appendix G)

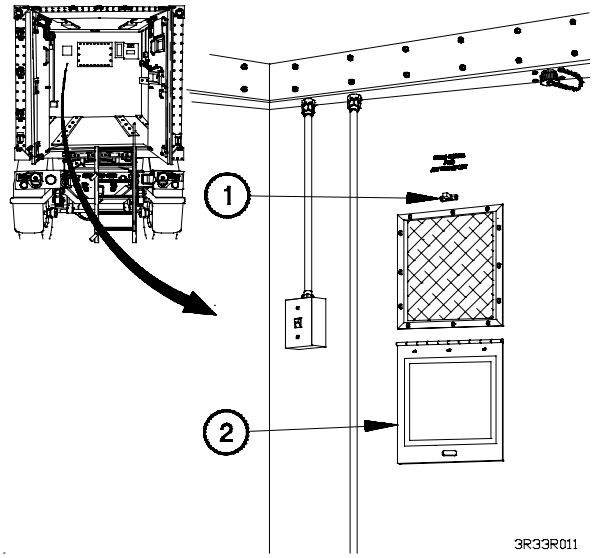
a. Removal.

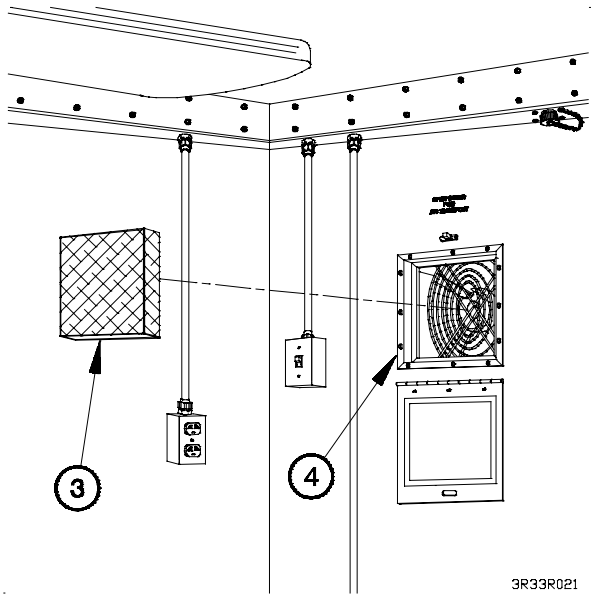
NOTE

Right hand door air filter and fan air filter are removed the same way. Fan air filter shown.

(1) Unlatch stud base fastener (1) on vent cover (2).

(2) Open vent cover (2).





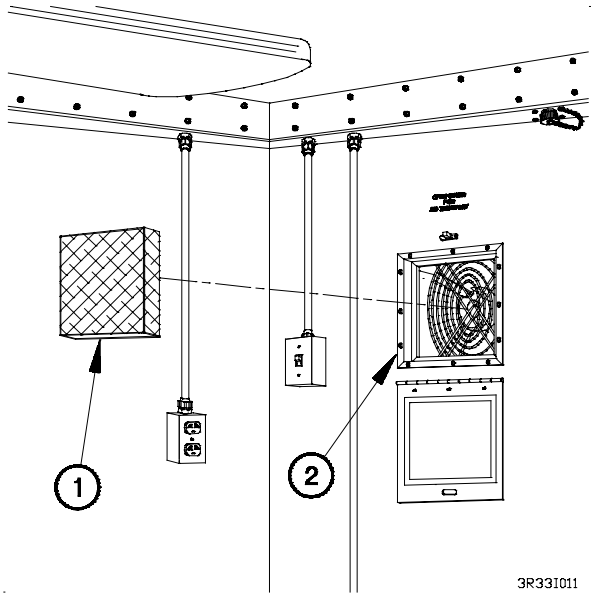
(3) Remove air filter (3) from filter frame (4). Discard air filter.

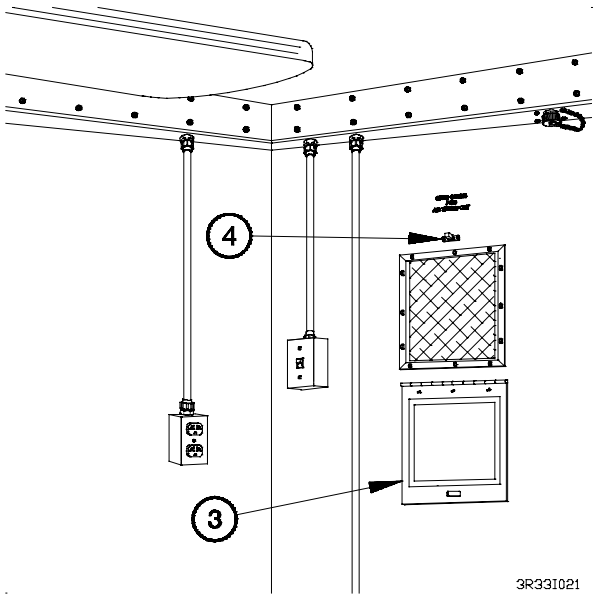
b. Installation.

NOTE

Right hand door air filter and fan air filter are installed the same way. Fan air filter shown.

(1) Install air filter (1) in filter frame (2).





(2) Close vent cover (3).

(3) Latch stud base fastener (4) on vent cover (3).

c. Follow-On Maintenance.

Close LH and RH doors (TM 9-2320-365-10).

End of Task.

16-34. M1079 LADDER, MOUNTING BRACKET, AND STOWAGE BRACKET REPLACEMENT/REPAIR

This task covers:

a. Ladder Mounting Bracket Removal
b. Ladder Mounting Bracket Installation
c. Ladder Stowage Bracket Removal
d. Ladder Stowage Bracket Installation
e. Ladder Disassembly
f. Ladder Assembly
g. Follow-On Maintenance

INITIAL SETUP

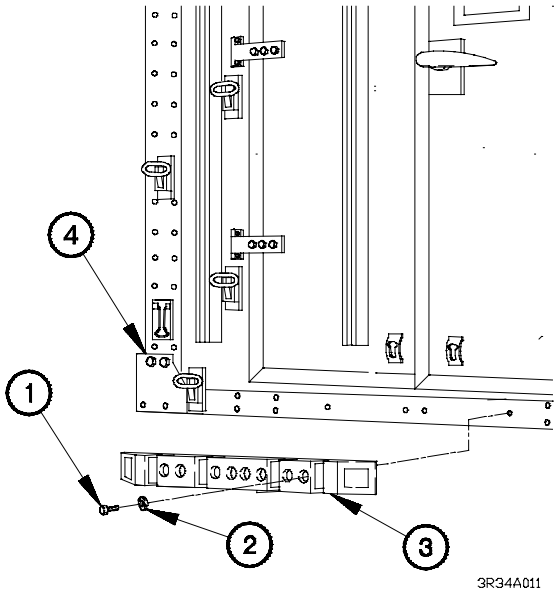
Equipment Conditions
Engine shut down (TM 9-2320-365-10).
Ladder removed (TM 9-2320-365-10).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Tool Kit, Blind Rivet (Item 43, Appendix C)
Drill, Portable Electric (Item 7, Appendix C)
Drill Set, Twist (Item 6, Appendix C)
Goggles, Industrial (Item 15, Appendix C)

Materials/Parts
Sealing Compound (Item 59, Appendix D)
Lockwasher (4) (Item 83, Appendix G)
Lockwasher (3) (Item 941, Appendix G)
Rivet, Blind (Item 219, Appendix G)
Rivet, Blind (Item 225, Appendix G)
Rivet, Blind (2) (Item 235, Appendix G)

a. Ladder Mounting Bracket Removal.

Remove four screws (1), lockwashers (2), and ladder mounting bracket (3) from van body (4). Discard lockwashers.



b. Ladder Bracket Installation.

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

(1) Apply sealing compound to threads of four screws (1).

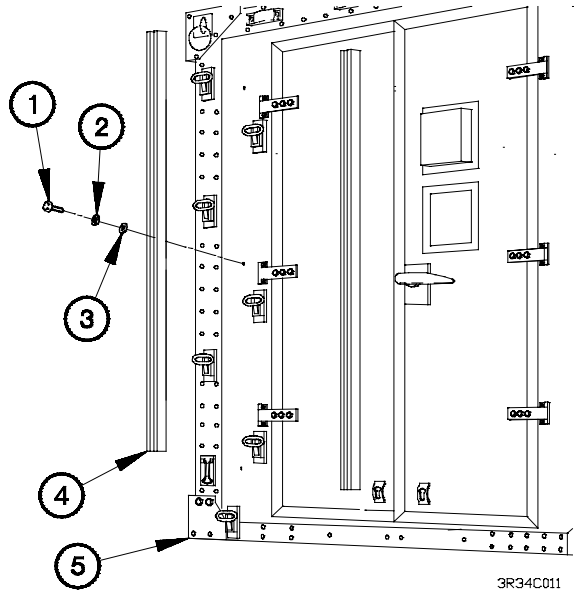
(2) Install ladder mounting bracket (4) on van body (3) with four lockwashers (2) and screws (1).

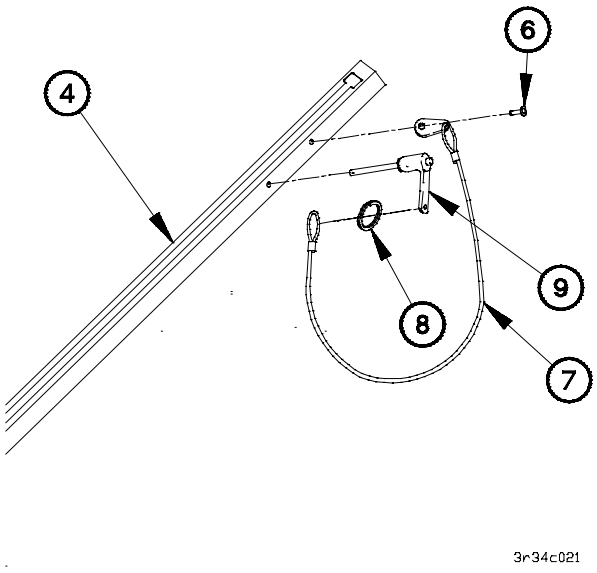
c. Ladder Stowage Bracket Removal.

NOTE

Left and right ladder stowage brackets are removed the same way. Left ladder stowage bracket shown.

(1) Remove three screws (1), lockwashers (2), washers (3), and ladder stowage bracket (4) from van body (5). Discard lockwashers.





WARNING

Wear appropriate eye protection when removing rivets. Failure to comply may result in injury to personnel.

NOTE

Perform steps (2) through (5) on left ladder stowage bracket.

(2) Remove rivet (6) and lanyard (7) from ladder stowage bracket (4).

(3) Remove split ring (8) from lanyard (7).

(4) Remove split ring (8) from quick release pin (9).

(5) Remove quick release pin (9) from ladder stowage bracket (4).

16-34. M1079 LADDER, MOUNTING BRACKET, AND STOWAGE BRACKET REPLACEMENT/REPAIR (CONT)

d. Ladder Stowage Bracket Installation.

NOTE

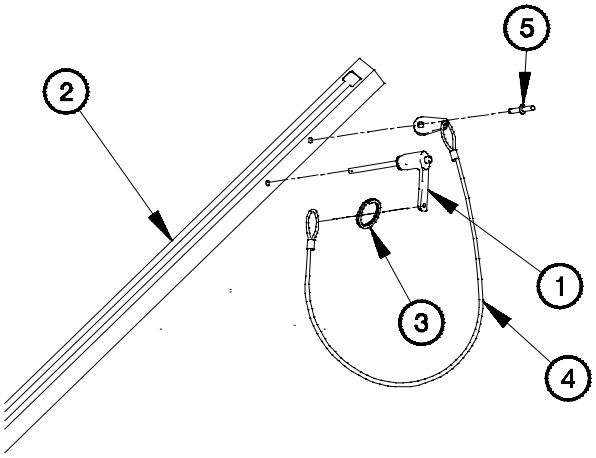
- Left and right ladder stowage brackets are installed the same way. Left ladder stowage bracket shown.
- Perform steps (1) through (4) on left ladder stowage bracket.

(1) Install quick release pin (1) in ladder stowage bracket (2).

(2) Install split ring (3) on quick release pin (1).

(3) Install split ring (3) on lanyard (4).

(4) Install lanyard (4) on ladder stowage bracket (2) with rivet (5).



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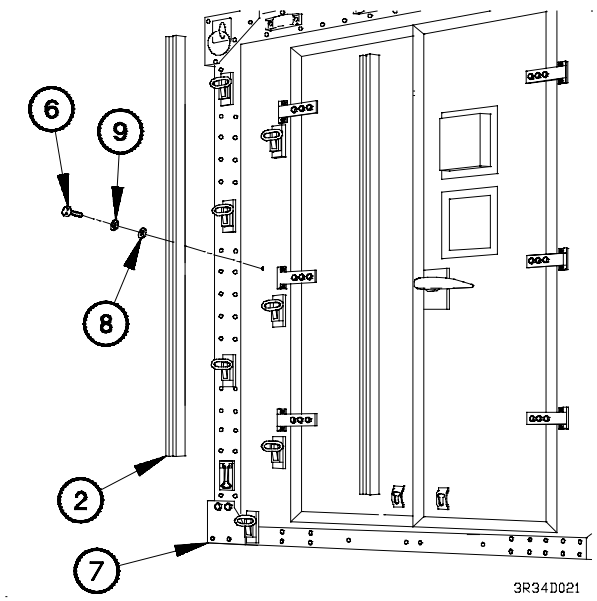

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WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

(5) Apply sealing compound to threads of three screws (6).

(6) Install ladder stowage bracket (2) on van body (7) with three washers (8), lockwashers (9), and screws (6).

e. Ladder Disassembly.

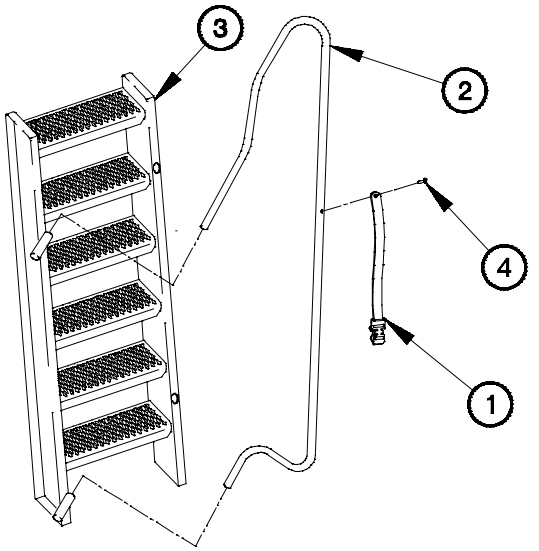
(1) Unbuckle strap (1).

(2) Remove handrail (2) from ladder (3).

WARNING

Wear appropriate eye protection when removing rivets. Failure to comply may result in injury to personnel.

(3) Remove rivet (4) and strap (1) from hand rail (2).



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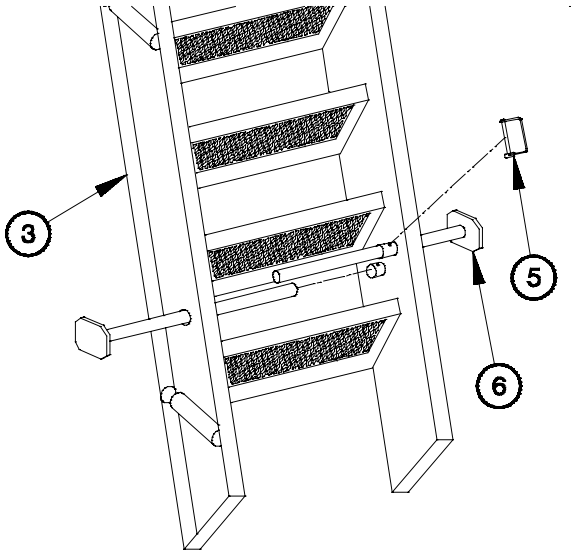
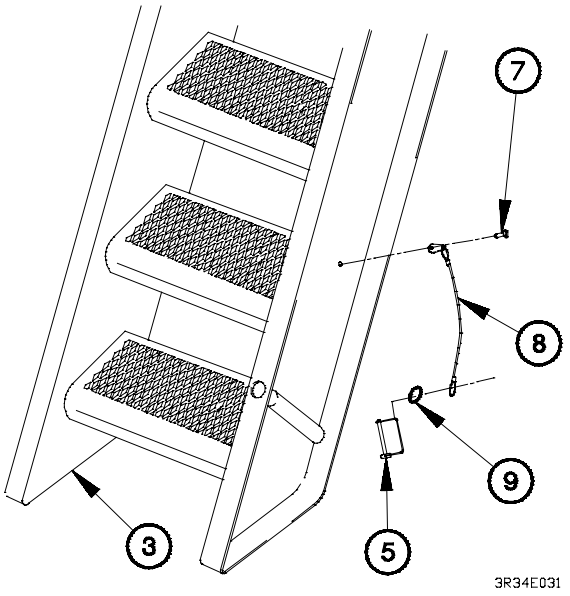


3R34E021

(4) Remove two lynch pins (5) from ladder (3).

(5) Remove two adjustable legs (6) from ladder (3).

16-34. M1079 LADDER, MOUNTING BRACKET, AND STOWAGE BRACKET REPLACEMENT/REPAIR (CONT)



WARNING

Wear appropriate eye protection when removing rivets. Failure to comply may result in injury to personnel.

NOTE

Left and right lanyards are removed the same way. Right lanyard shown.

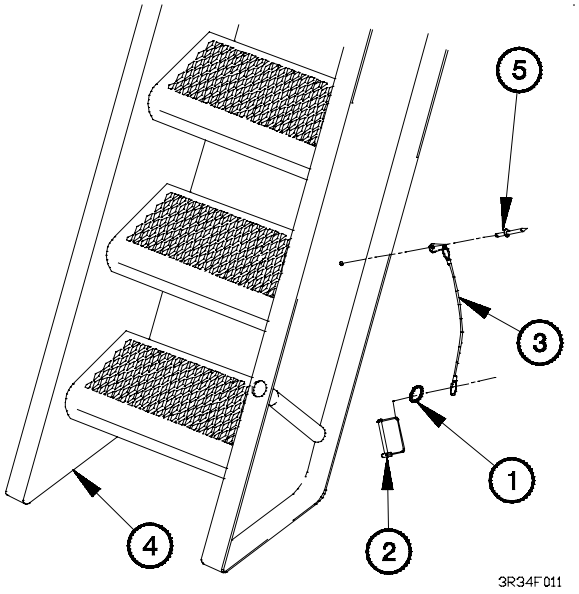
(6) Remove rivet (7) and lanyard (8) from ladder (3).

(7) Remove split ring (9) from lanyard (8).

(8) Remove split ring (9) from lynch pin (5).

(9) Perform steps (6) through (8) on left side of ladder (3).

f. Ladder Assembly.



NOTE

Left and right lanyards are installed the same way. Right lanyard shown.

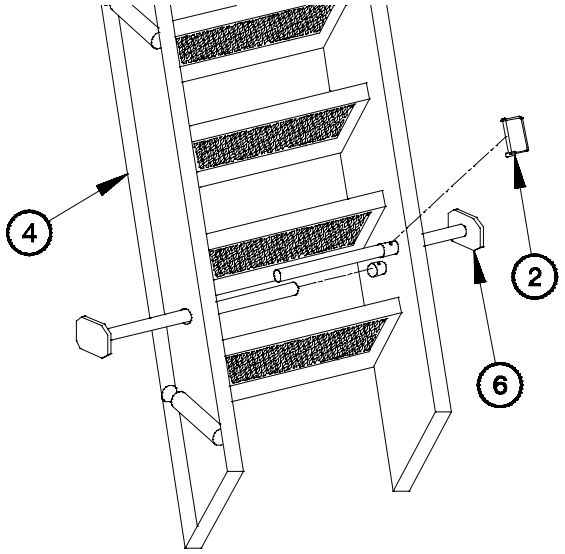
(1) Install split ring (1) on lynch pin (2).

(2) Install split ring (1) on lanyard (3).

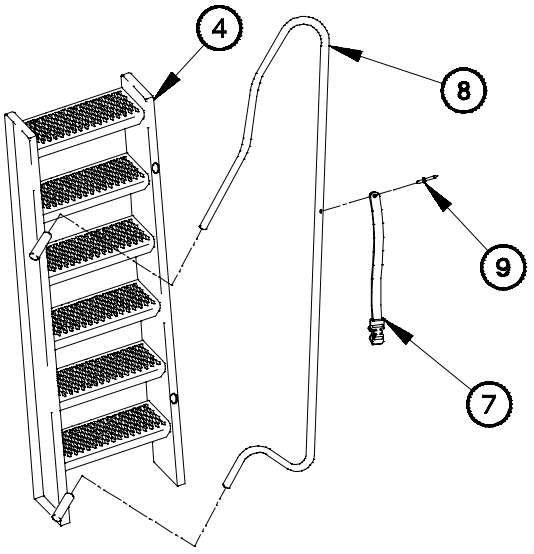
(3) Install lanyard (3) on ladder (4) with rivet (5).

(4) Perform steps (1) through (3) on left side of ladder (2).

(5) Install two adjustable legs (6) in ladder (4) with lynch pins (2).



3R34F021



3R34F031

(6) Install strap (7) on handrail (8) with rivet (9).

(7) Install handrail (8) on ladder (4).

(8) Fasten strap (7) on ladder (4).

g. Follow-On Maintenance.

Stow ladder on van body (TM 9-2320-365-10).

End of Task.

16-35. M1079 RH DOOR ASSEMBLY REPLACEMENT/REPAIR

This task covers:

a. Removal
b. Disassembly
c. Assembly
d. Installation
e. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
Engine shut down (TM 9-2320-365-10).
Ladder installed (TM 9-2320-365-10).
Placards and data plates removed (para 2-11).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Tool Kit, Blind Rivet (Item 43, Appendix C)
Sling, Endless (Item 32, Appendix C)
Goggles, Industrial (Item 15, Appendix C)
Drill, Portable Electric (Item 7, Appendix C)
Drill Set Twist (Item 6, Appendix C)

Materials/Parts
Adhesive (Item 11, Appendix D)
Sealing Compound (Item 67, Appendix D)
M1079 RH Door Gasket (Item E-7, Appendix E)
Filter, Air (Item 20, Appendix G)
Rivet, Blind (3) (Item 217, Appendix G)

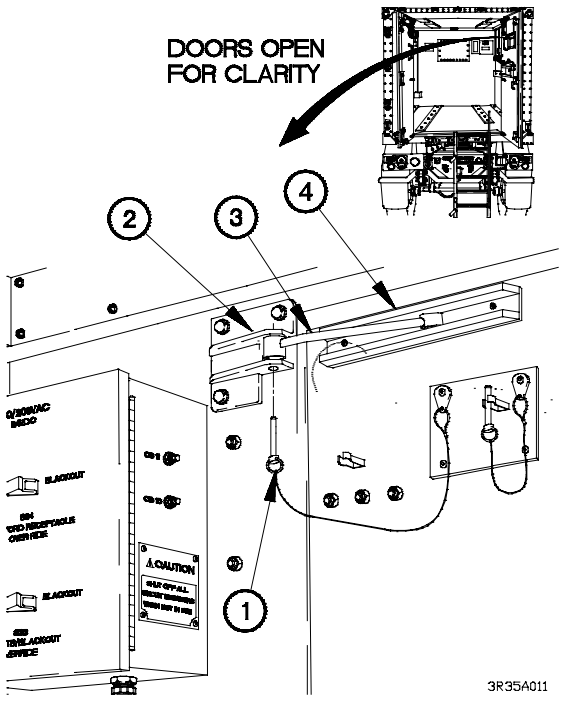
Materials/Parts (Cont)
Lockwasher (3) (Item 87, Appendix G)
Rivet, Blind (19) (Item 228, Appendix G)
Rivet, Blind (19) (Item 227, Appendix G)
Nut, Blind Rivet (Item 115, Appendix G)
Nut, Self-Locking (6) (Item 121, Appendix G)
Pin, Cotter (3) (Item 201, Appendix G)
Nut, Self-Locking (2) (Item 117, Appendix G)
Nut, Self-Locking (9) (Item 118, Appendix G)
Lockwasher (4) (Item 82, Appendix G)
Rivet, Blind (6) (Item 215, Appendix G)
Rivet, Blind (4) (Item 216, Appendix G)
Seal (2) (Item 245, Appendix G)
Seal (2) (Item 246, Appendix G)
Nut, Blind Rivet (16) (Item 113, Appendix G)
Washer, Spring (2) (Item 275, Appendix G)

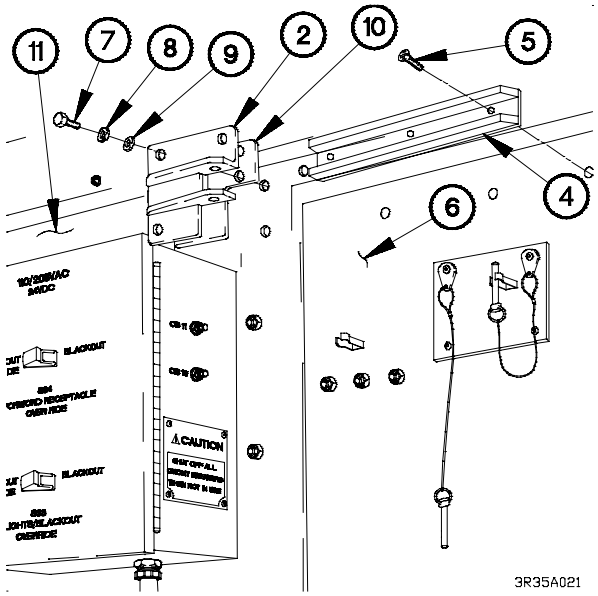
Personnel Required
(2)

a. Removal.

(1) Remove quick release pin (1) from bracket (2).

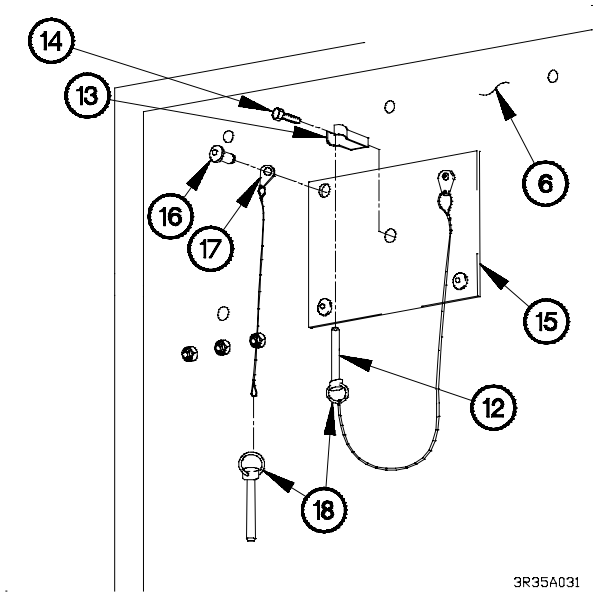
(2) Remove stay arm (3) from channel (4).





(3) Remove three screws (5) and channel (4) from RH door (6).

(4) Remove three screws (7), lockwashers (8), washers (9), bracket (2), and spacer (10) from van body wall (11). Discard lockwashers.



(5) Remove quick release pin (12) from clip (13).

(6) Remove two screws (14) and clips (13) from RH door (6) and plate (15).

WARNING

Wear appropriate eye protection when removing rivets. Failure to comply may result in injury to personnel.

(7) Remove two rivets (16) and lanyards (17) from plate (15).

(8) Remove two rings (18) from lanyards (17).

16-35. M1079 RH DOOR ASSEMBLY REPLACEMENT/REPAIR (CONT)

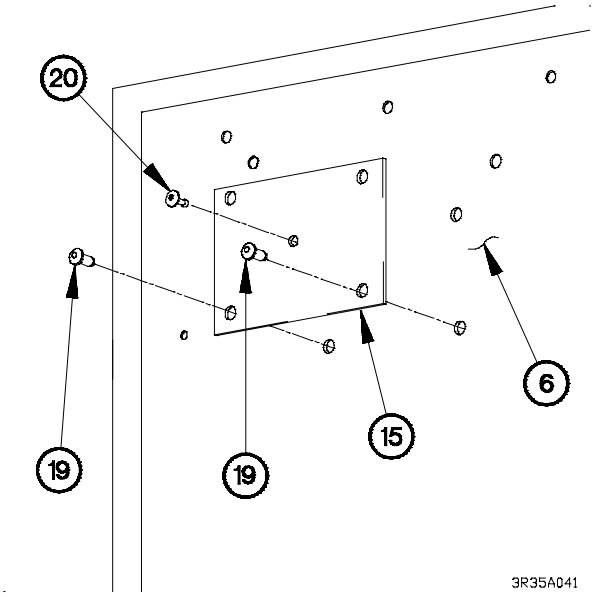
WARNING

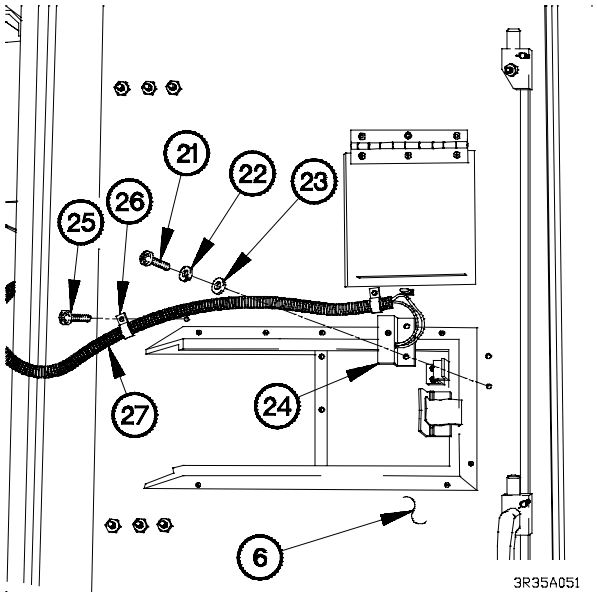
Wear appropriate eye protection when removing rivets. Failure to comply may result in injury to personnel.

(9) Remove two rivets (19) from plate (15).

(10) Remove rivet nut (20) and plate (15) from RH door (6).

(11) Remove sealing compound from plate (15) and RH door (6).





(12) Remove two screws (21), lockwashers (22), washers (23), and bracket (24) from RH door (6). Discard lockwashers.

(13) Remove two screws (25), clamps (26), and conduit (27) from RH door (6).

(14) Remove sealing compound from heads of six screws (28).

WARNING

RH door assembly weighs approximately 85 lbs (39 kgs). Attach a suitable lifting device prior to removal. Failure to comply may result in injury to personnel or damage to equipment.

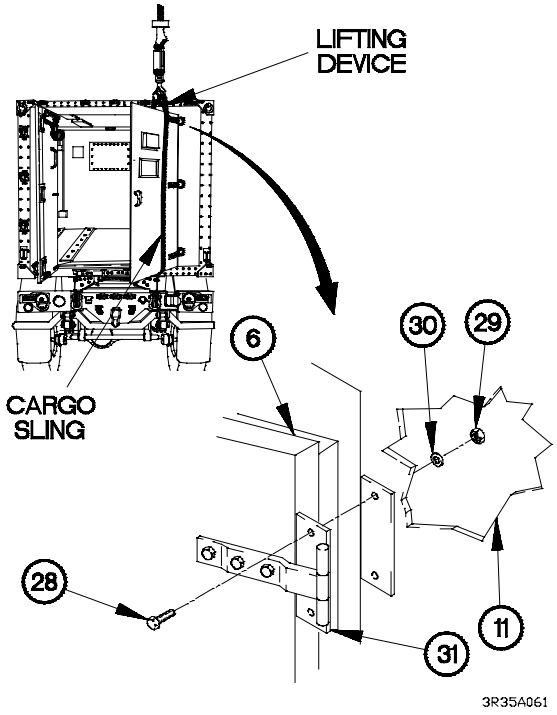
(15) Open RH door (6) (TM 9-2320-365-10).

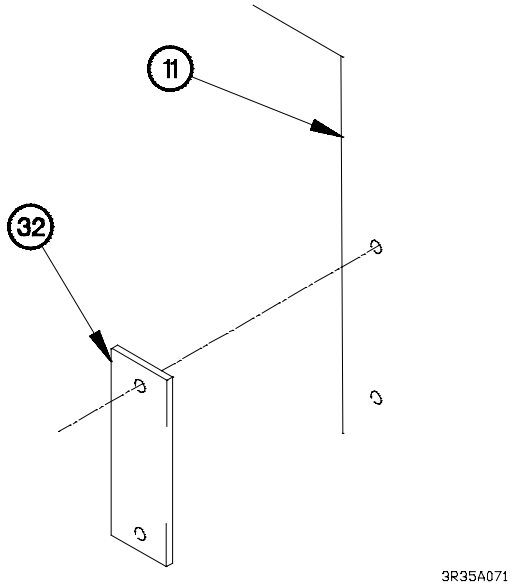
NOTE

Steps (16) and (17) require the aid of an assistant.

(16) Remove six self-locking nuts (29), washers (30), and screws (28) from hinges (31) and van body wall (11). Discard self-locking nuts.

(17) Remove RH door (6) from van body wall (11).





(18) Remove three spacers (32) from van body wall (11).

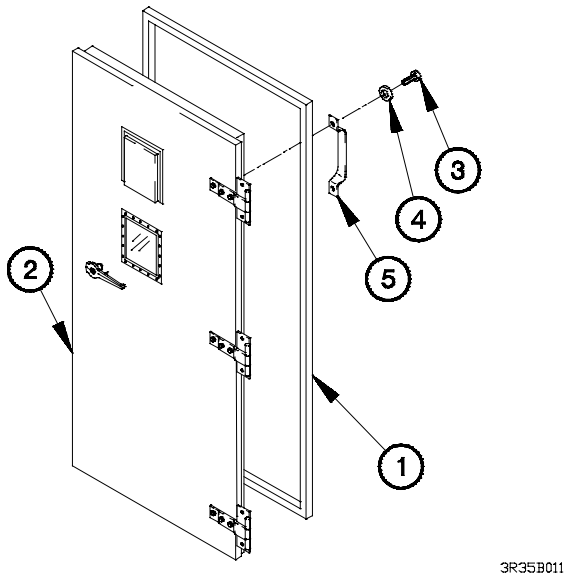
(19) Remove sealing compound from van body wall (11) and three spacers (32).

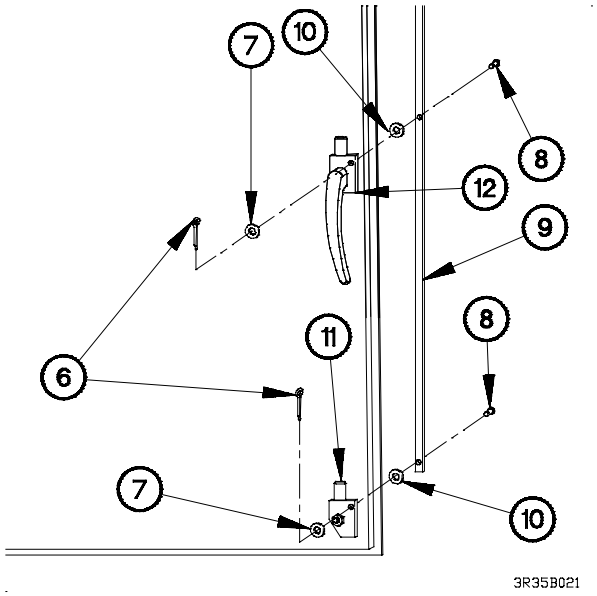
16-35. M1079 RH DOOR ASSEMBLY REPLACEMENT/REPAIR (CONT)

b. Disassembly.

(1) Remove gasket (1) from RH door (2). Discard gasket.

(2) Remove two screws (3), washers (4), and handle (5) from RH door (2).

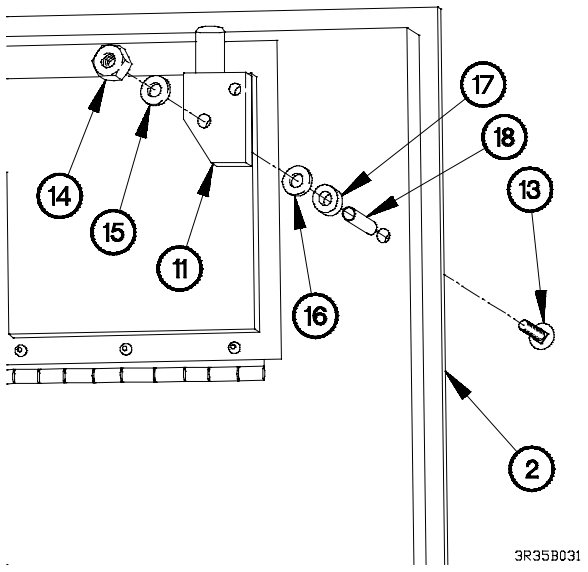




(3) Remove three cotter pins (6), washers (7), pins (8), latch rod (9) and three washers (10), from two latch arms (11) and latch arm (12). Discard cotter pins.

(4) Remove sealing compound from heads of two bolts (13).

(5) Remove two self-locking nuts (14), washers (15), latch arms (11), spring washers (16), spacers (17), sleeves (18), and bolts (13) from RH door (2). Discard self-locking nuts and spring washers.



(6) Remove two spring pins (19) from handle (20) and latch arm (12).

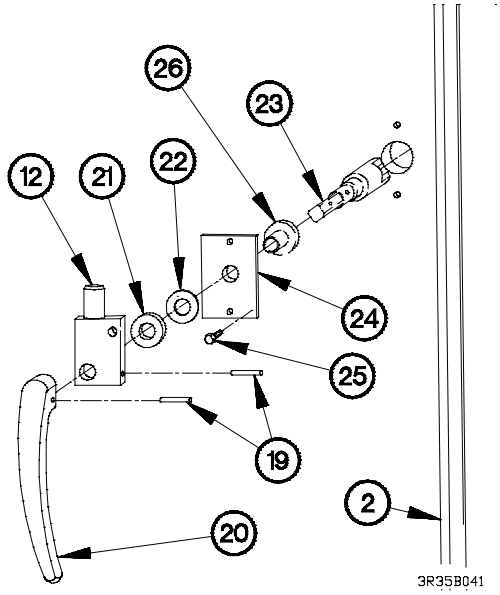
(7) Remove handle (20), latch arm (12), spacer (21), and washer (22) from shaft (23).

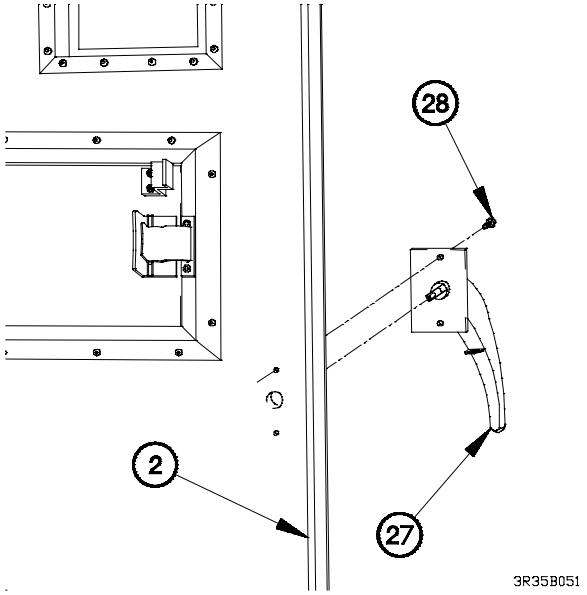
(8) Remove sealing compound from around edge of plate (24).

(9) Remove two screws (25) and plate (24) from RH door (2).

(10) Remove shaft (23) from RH door (2).

(11) Remove bushing (26) from plate (24).





(12) Remove sealing compound from around edge of handle assembly (27).

(13) Remove two screws (28) and handle assembly (27) from RH door (2).

NOTE

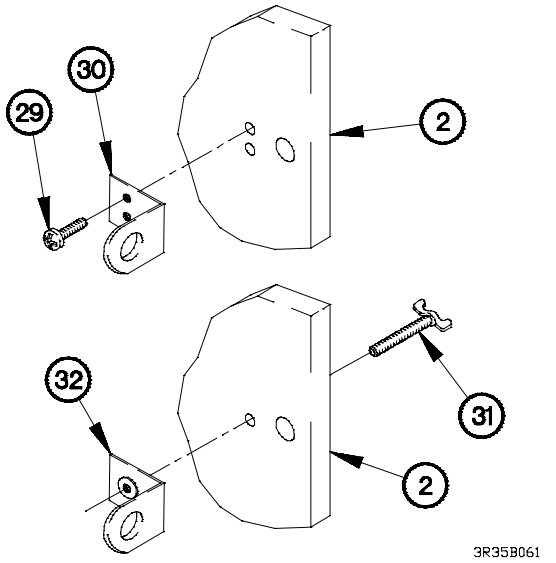
Perform step (14) on van body serial numbers 001 through 190.

(14) Remove two screws (29) and hasp (30) from RH door (2).

NOTE

Perform step (15) on van bodies serial number 191 and higher.

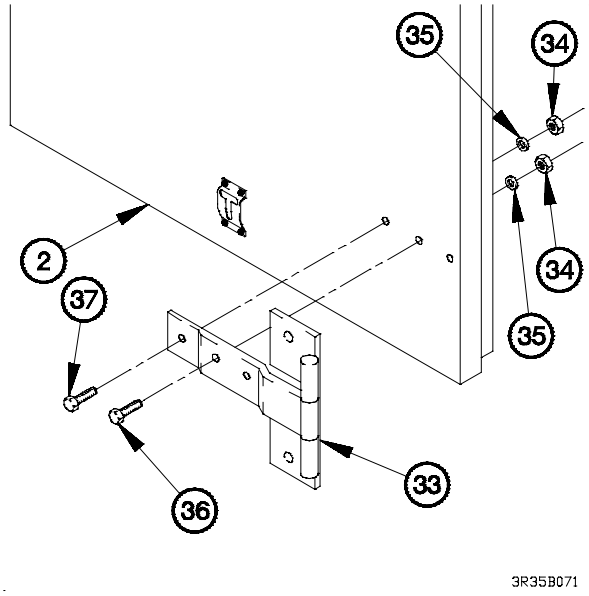
(15) Remove wing nut (31) and hasp (32) from RH door (2).

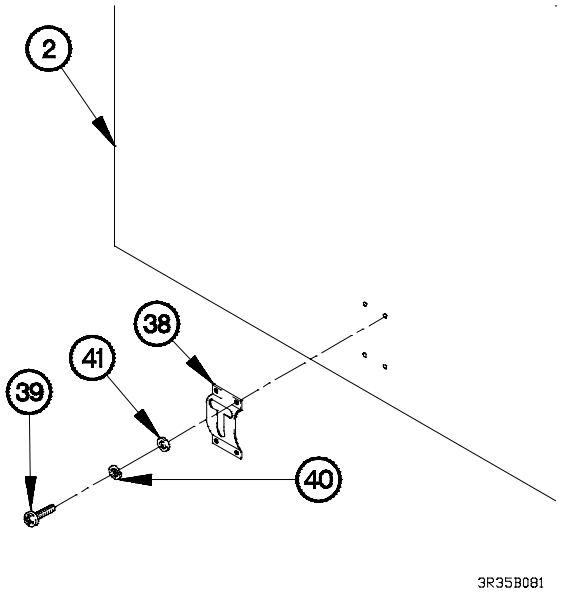


16-35. M1079 RH DOOR ASSEMBLY REPLACEMENT/REPAIR (CONT)

(16) Remove sealing compound around edges of three hinges (33).

(17) Remove nine self-locking nuts (34), washers (35), six screws (36), three screws (37), and hinges (33) from RH door (2). Discard self-locking nuts.





(18) Remove sealing compound around edge of latch (38).

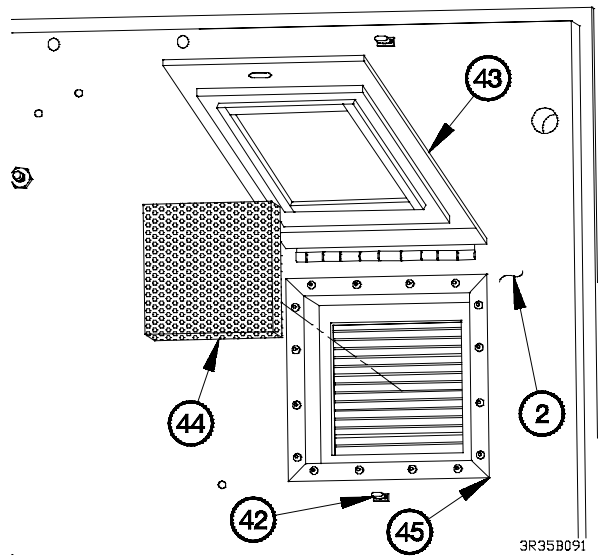
(19) Remove four screws (39), lockwashers (40), washers (41), and latch (38) from RH door (2). Discard lockwashers.

(20) Unlatch stud base fastener (42).

(21) Open vent cover (43) on RH door (2).

(22) Remove air filter (44) from filter frame (45).

(23) Close vent cover (43) on RH door (2).

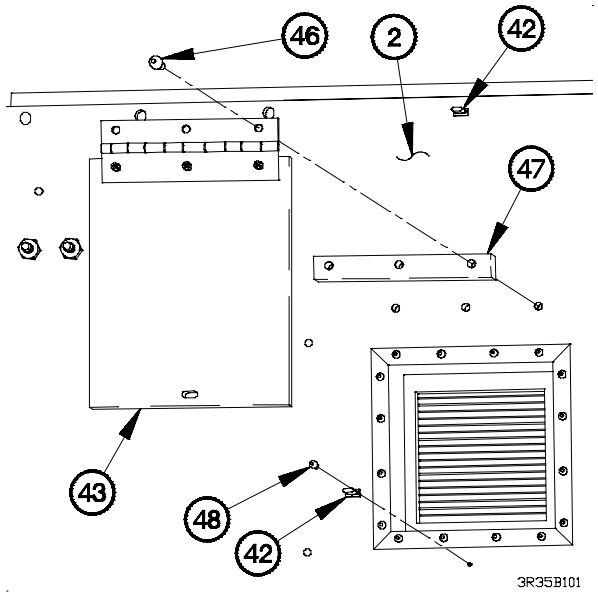


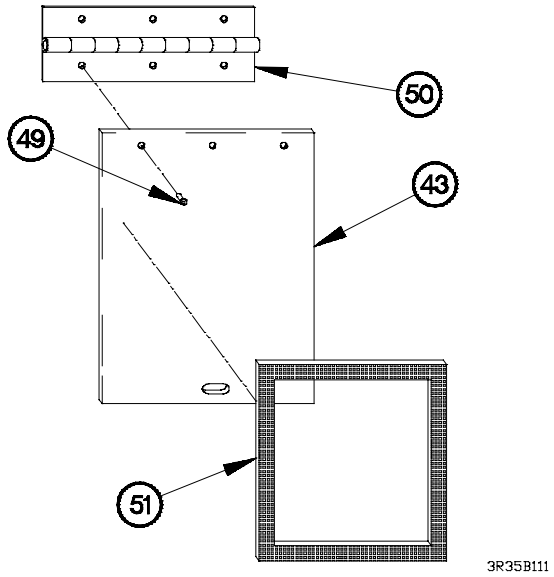
WARNING

Wear appropriate eye protection when removing rivets. Failure to comply may result in injury to personnel.

(24) Remove three rivets (46), vent cover (43), and spacer (47) from RH door (2).

(25) Remove four rivets (48) and two stud base fasteners (42) from RH door (2).





(26) Remove three rivets (49) and hinge (50) from vent cover (43).

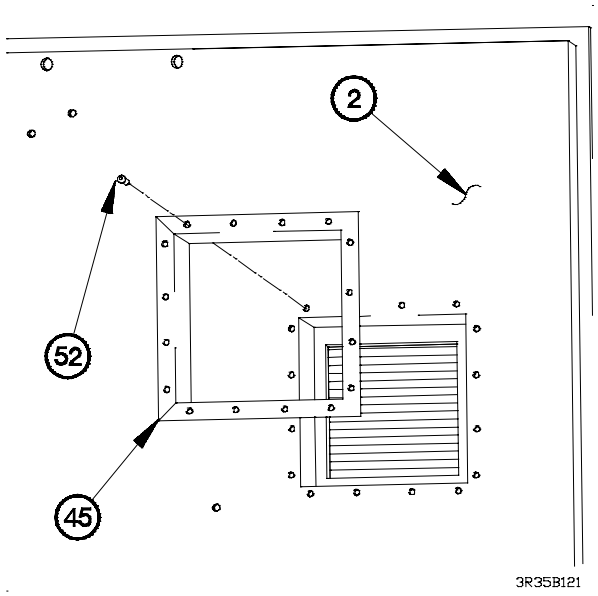
(27) Remove seal (51) from vent cover (43). Discard seal.

WARNING

Use care when removing filter frame from RH door. Sealing compound requires starting at one corner and slowly working filter frame loose. Failure to comply may result in damage to equipment.

(28) Remove 16 rivets (52) and filter frame (45) from RH door (2).

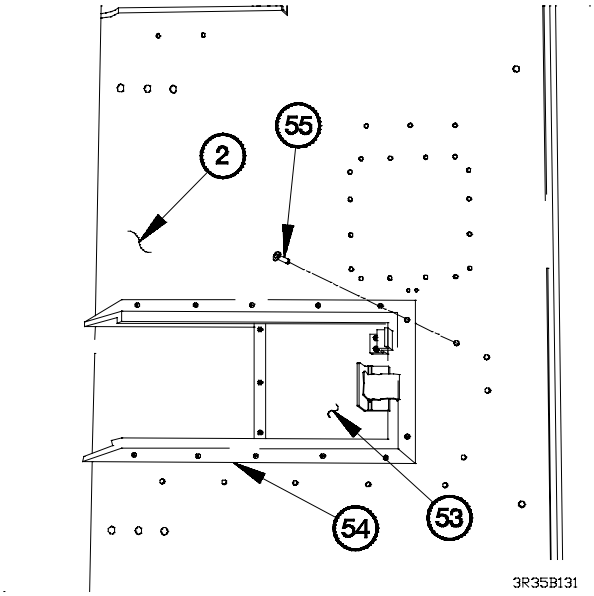
(29) Remove sealing compound from filter frame (45) and RH door (2).



16-35. M1079 RH DOOR ASSEMBLY REPLACEMENT/REPAIR (CONT)

(30) Close blackout shield (53).

(31) Remove sealing compound around edges of blackout shield frame (54).



WARNING

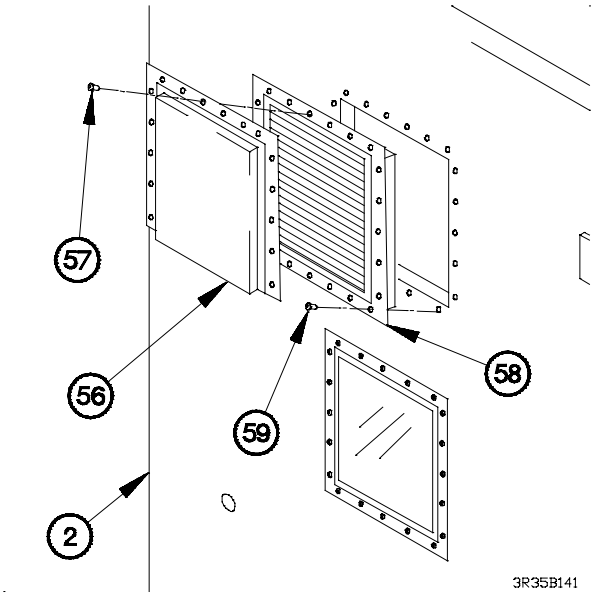
Wear appropriate eye protection when removing rivets. Failure to comply may result in injury to personnel.

CAUTION

Use care when removing blackout shield frame from RH door. Sealing compound requires starting at one corner and slowly working blackout shield frame loose. Failure to comply may result in damage to equipment.

(32) Remove 12 rivets (55) and blackout shield frame (54) from RH door (2).

(33) Remove sealing compound from blackout shield frame (54) and RH door (2).



(34) Remove sealing compound from edges of louver cover (56).

CAUTION

Use care when removing louver cover from RH door. Sealing compound requires starting at one corner and slowly working louver cover loose. Failure to comply may result in damage to equipment.

(35) Remove 17 rivets (57) and louver cover (56) from louver frame (58).

(36) Remove sealing compound from edges of louver frame (58).

(37) Remove five rivets (59) and louver frame (58) from RH door (2).

(38) Remove sealing compound from louver cover (56), louver frame (58), and RH door (2).

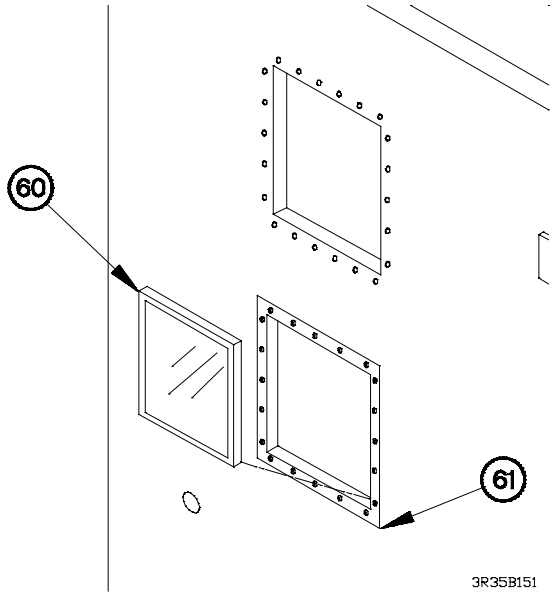
WARNING

Goggles and gloves must be worn when working with glass. Failure to comply may result in injury to personnel.

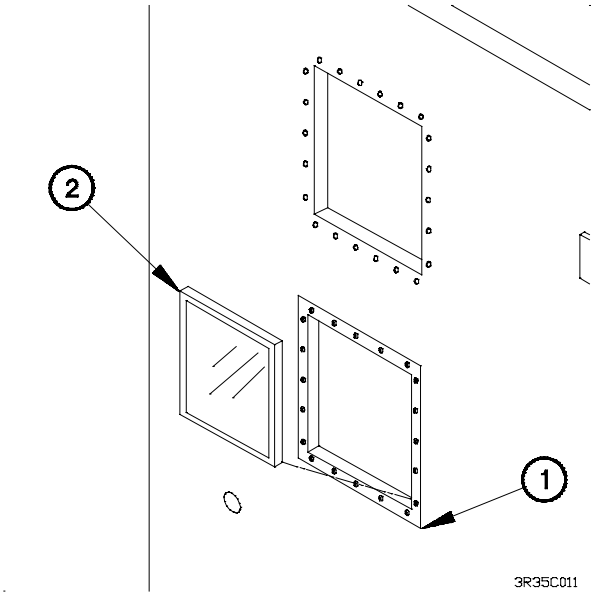
(39) Remove sealing compound from edges of window glass (60).

(40) Remove glass (60) from RH door window frame (61).

(41) Remove sealing compound from RH door window frame (61).



c. Assembly.



WARNING

- **Goggles and gloves must be worn when working with glass. Failure to comply may result in injury to personnel.**
- **Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.**

(1) Apply sealing compound on RH door window frame (1).

(2) Install window glass (2) on RH door window frame (1).

(3) Apply sealing compound on edges of RH door window frame (1) and window glass (2).

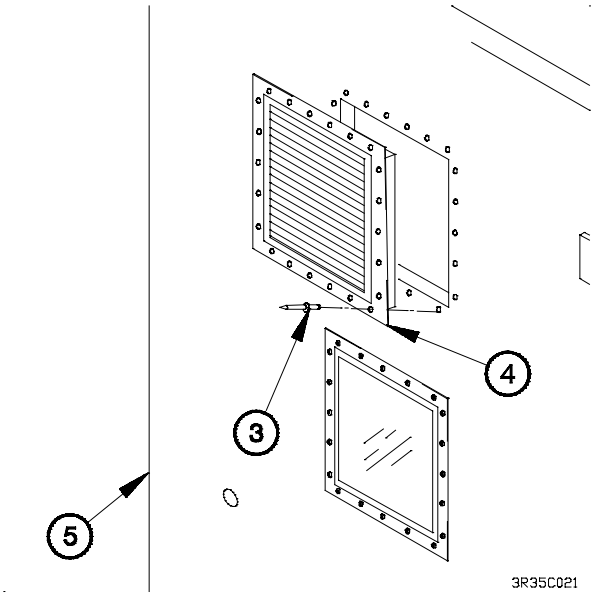
16-35. M1079 RH DOOR ASSEMBLY REPLACEMENT/REPAIR (CONT)

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

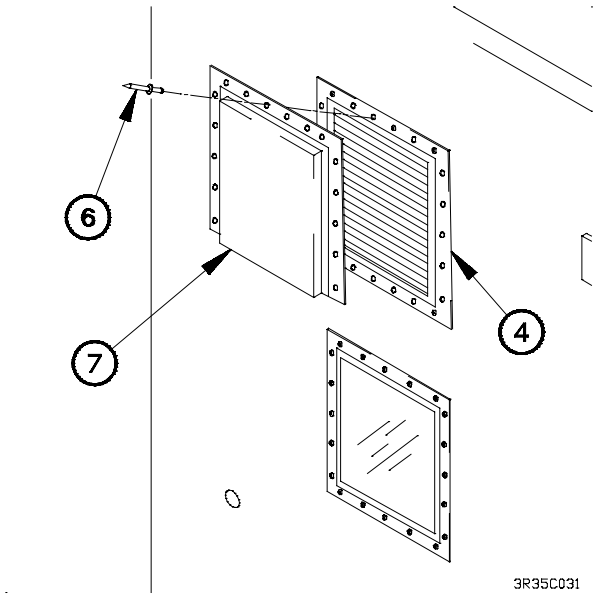
CAUTION

Coat all rivets with sealing compound prior to installation. Failure to comply may result in damage to equipment.



(4) Apply sealing compound on five rivets (3) and louver frame (4).

(5) Install louver frame (4) on RH door (5) with five rivets (3).



(6) Apply sealing compound on edges of louver frame (4).

(7) Apply sealing compound on 17 rivets (6) and louver cover (7).

(8) Install louver cover (7) on louver frame (4) with 17 rivets (6).

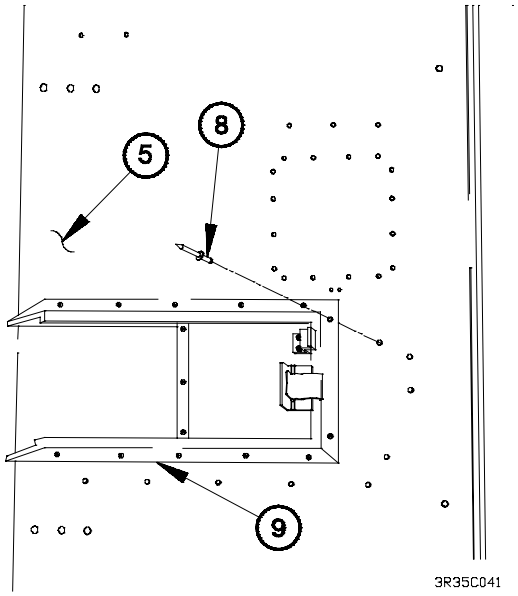
(9) Apply sealing compound on edges of louver cover (7).

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

CAUTION

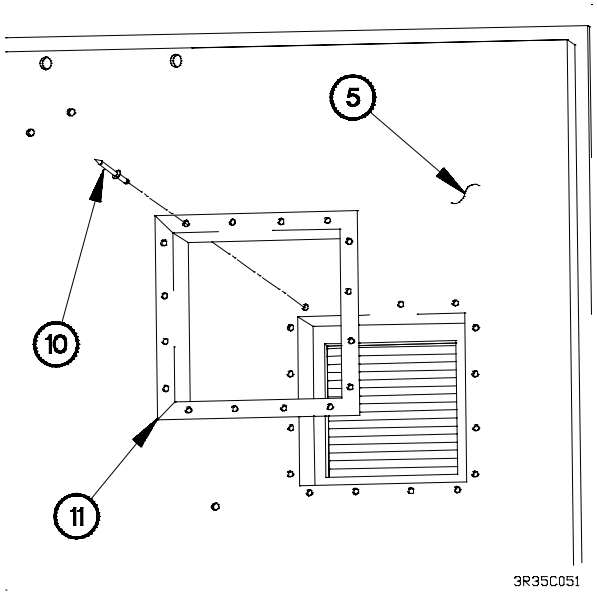
Coat all rivets with sealing compound prior to installation. Failure to comply may result in damage to equipment.



(10) Apply sealing compound to 12 rivets (8).

(11) Install blackout shield frame (9) on RH door (5) with 12 rivets (8).

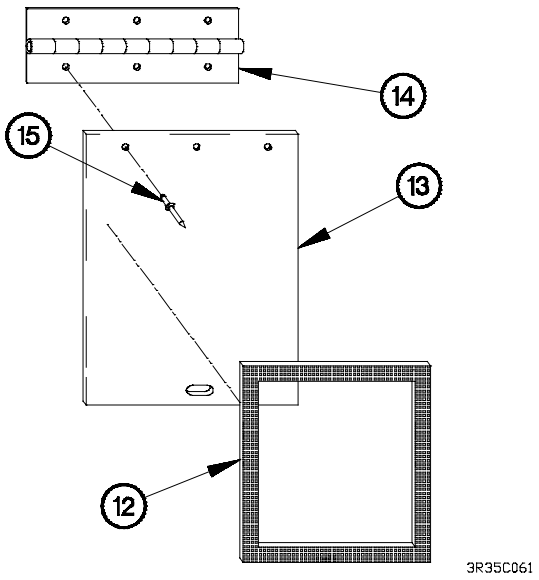
(12) Apply sealing compound to edges of blackout shield frame (9).



(13) Apply sealing compound on 16 rivets (10) and filter frame (11).

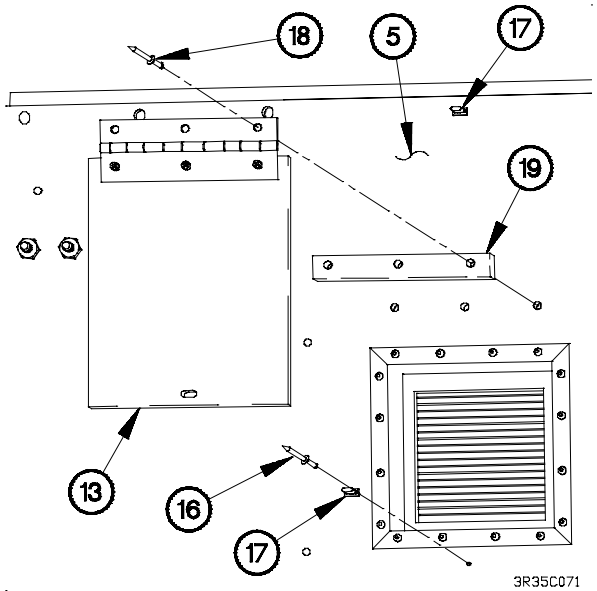
(14) Install filter frame (11) on RH door (5) with 16 rivets (10).

16-35. M1079 RH DOOR ASSEMBLY REPLACEMENT/REPAIR (CONT)



(15) Install seal (12) on vent cover (13).

(16) Install hinge (14) on vent cover (13) with three rivets (15).



WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

CAUTION

Coat all rivets with sealing compound prior to installation. Failure to comply may result in damage to equipment.

(17) Apply sealing compound to four rivets (16).

(18) Install two stud base fasteners (17) on RH door (5) with four rivets (16).

(19) Apply sealing compound to three rivets (18).

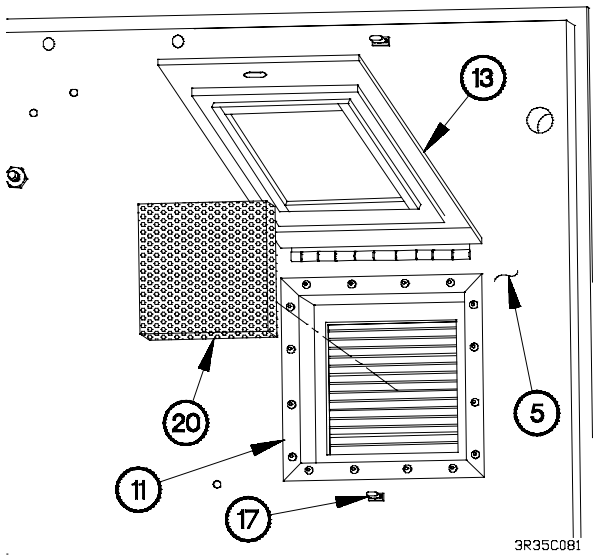
(20) Install spacer (19) and vent cover (13) on RH door (5) with three rivets (18).

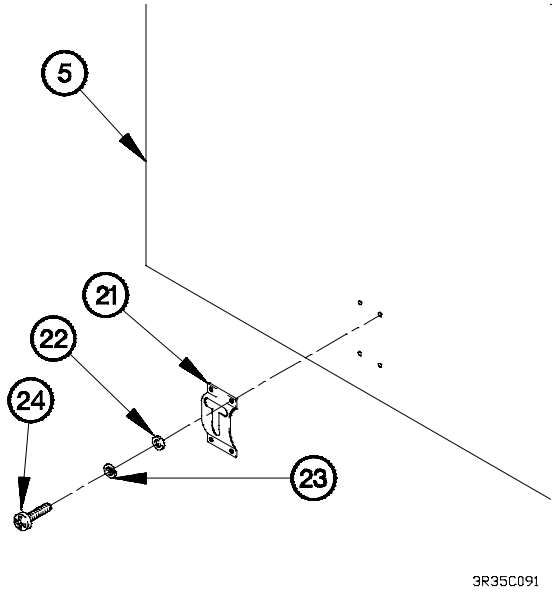
(21) Open vent cover (13) on RH door (5).

(22) Install air filter (20) in filter frame (11).

(23) Close vent cover (13) on RH door (5).

(24) Latch stud base fastener (17) on vent cover (13).





(25) Install latch (21) on RH door (5) with four washers (22), lockwashers (23), and screws (24).

WARNING

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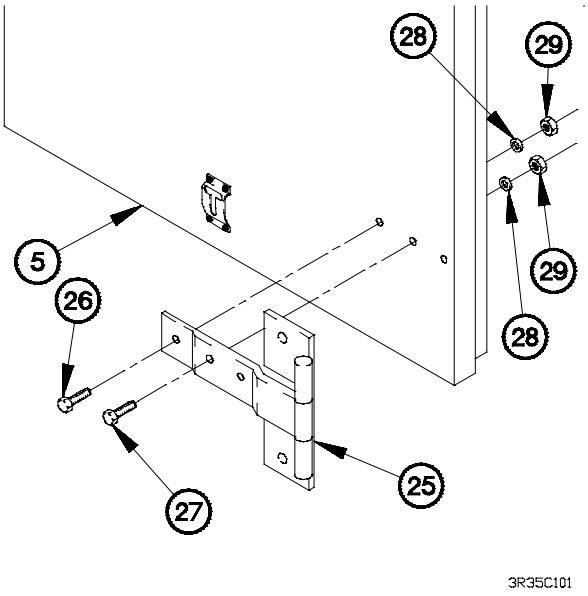
(26) Apply sealing compound around edge of latch (21) and screws (24).

16-35. M1079 RH DOOR ASSEMBLY REPLACEMENT/REPAIR (CONT)

(27) Install three hinges (25) on RH door (5) with three screws (26), six screws (27), nine washers (28), and self-locking nuts (29).



3R35C101

WARNING

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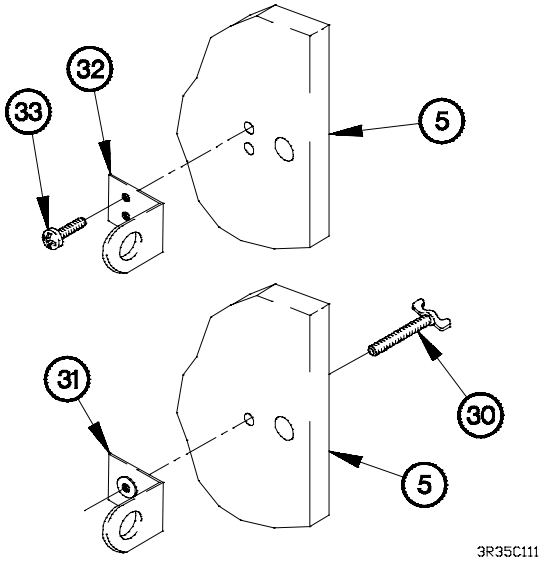
(28) Apply sealing compound around edges of three hinges (25).



3R35C111

NOTE

Perform step (29) on van bodies serial number 191 and higher.

(29) Install wing nut (30) and hasp (31) on RH door (5).

NOTE

Perform step (30) on van body serial numbers 001 through 190.

(30) Install hasp (32) on RH door (5) with two screws (33).

(31) Apply sealing compound around edges of hasp (32).

WARNING

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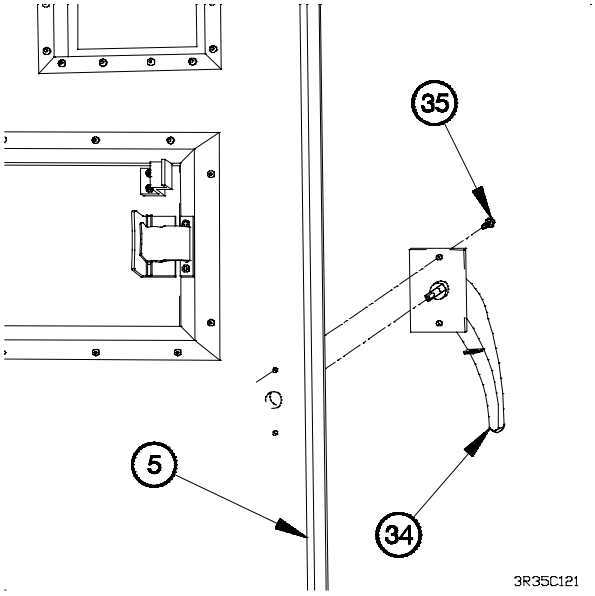
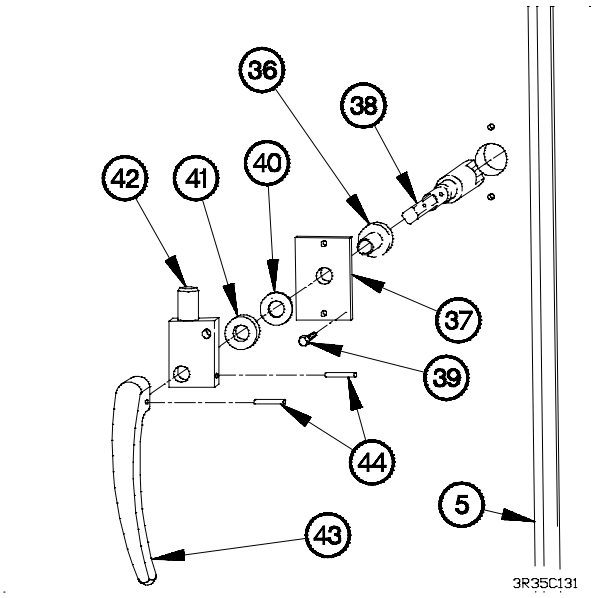


(32) Apply sealing compound to surface of handle assembly (34).

(33) Install handle assembly (34) on RH door (5) with two screws (35).

(34) Apply sealing compound around edge of handle assembly (34).



(35) Install bushing (36) on plate (37).

(36) Install shaft (38) on RH door (5).

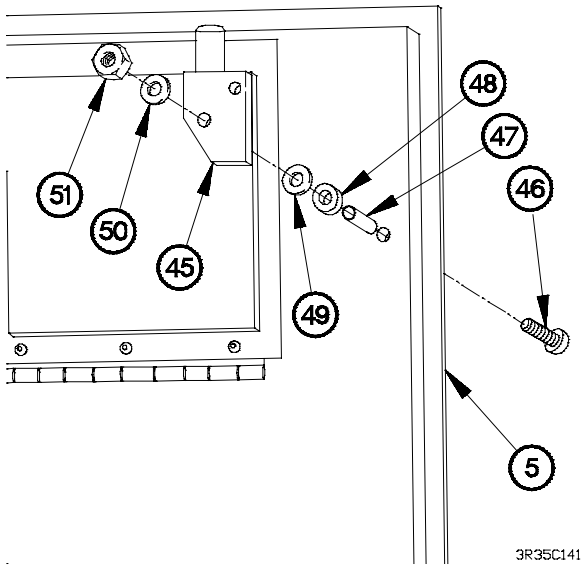
(37) Install plate (37) on RH door (5) with two screws (39).

(38) Install washer (40), spacer (41), latch arm (42), and handle (43) on shaft (38).

(39) Install two spring pins (44) in latch arm (42) and handle (43).

16-35. M1079 RH DOOR ASSEMBLY REPLACEMENT/REPAIR (CONT)

(40) Install two latch arms (45) on RH door (5) with two bolts (46), sleeve (47), two spacers (48), spring washers (49), washers (50), and self-locking nuts (51).



WARNING

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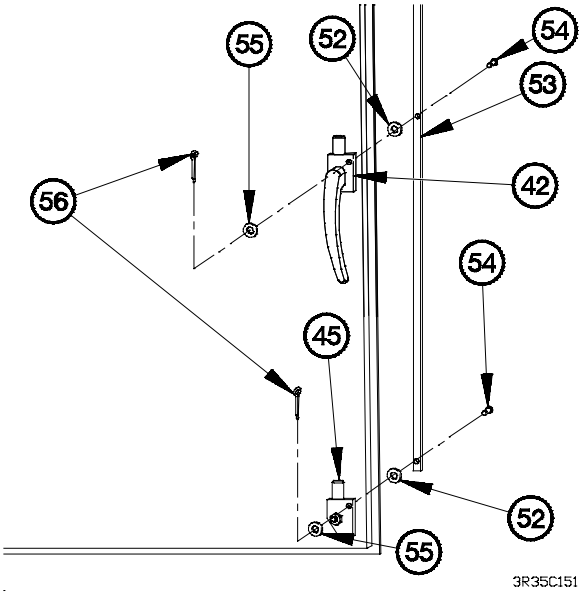
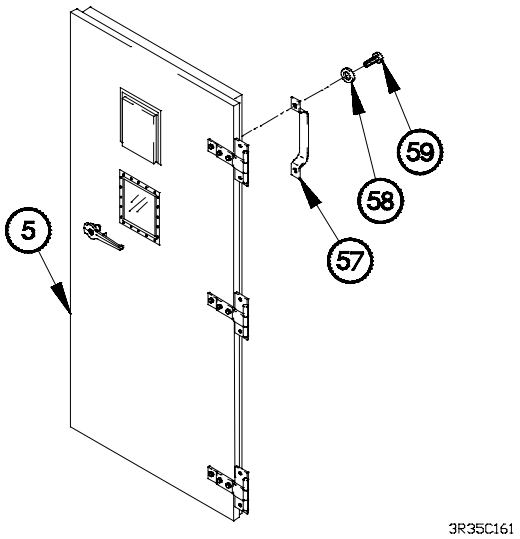
(41) Apply sealing compound around heads of two bolts (46).



(42) Install three washers (52) and latch rod (53) on two latch arms (45) and latch arm (42) with three pins (54), washers (55), and cotter pins (56).



(43) Install handle (57) on RH door (5) with two washers (58) and screws (59).

WARNING

- **Dry Cleaning Solvent (P-D-680) is TOXIC and flammable. Wear protective goggles and gloves; use only in well ventilated area; avoid contact with skin, eyes, and clothes, and do not breathe vapors. Keep away from heat or flame. Never smoke when using solvent; the flashpoint for Type I Dry Cleaning Solvent is 100°F (38°C) and for Type II is 130°F (50°C). Failure to comply may result in injury or death to personnel.**

- **If personnel become dizzy while using Dry Cleaning Solvent, immediately get fresh air and medical help. If Dry Cleaning Solvent contacts skin or clothes, flush with cold water. If Dry Cleaning Solvent contacts eyes, immediately flush eyes with water and get immediate medical attention. Failure to comply may result in injury to personnel.**

(44) Clean inside edges of RH door (5) with dry cleaning solvent.

WARNING

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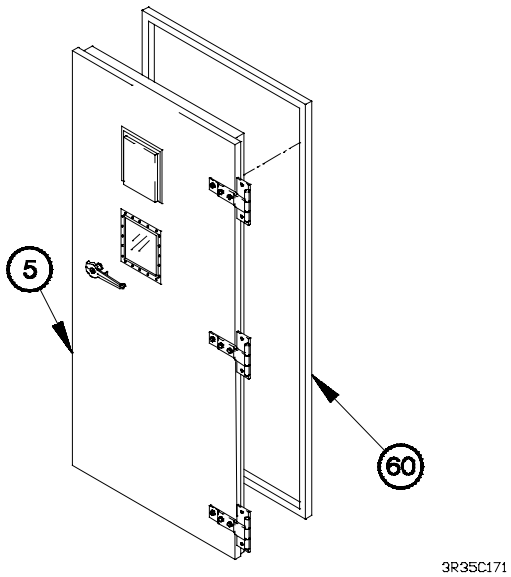
NOTE

Apply adhesive no sooner than 30 minutes, nor later than eight hours, after cleaning.

(45) Apply adhesive to inside edge of RH door (5).

(46) Install gasket (60) on RH door (5).



16-35. M1079 RH DOOR ASSEMBLY REPLACEMENT/REPAIR (CONT)

d. Installation.

WARNING

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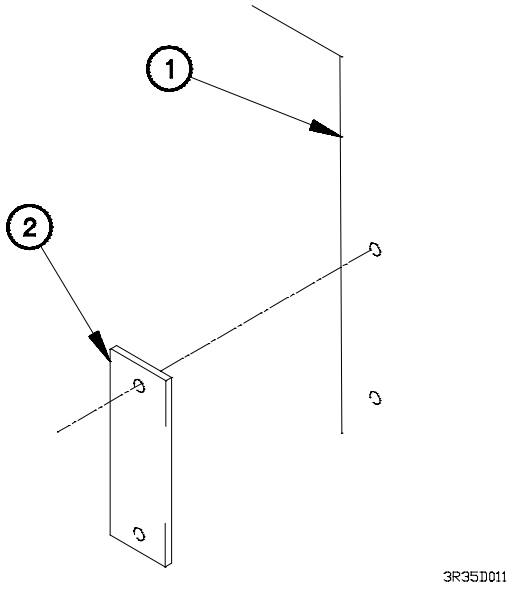
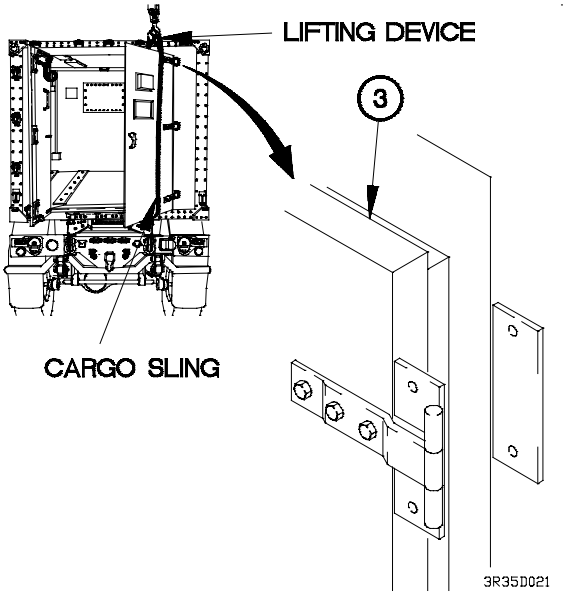


(1) Apply sealing compound to van body wall (1) and three spacers (2).

(2) Position three spacers (2) on van body wall (1).



WARNING

RH door assembly weighs approximately 85 lbs (39 kgs). Attach a suitable lifting device prior to installation. Failure to comply may result in injury to personnel or damage to equipment.

NOTE

Step (3) requires the aid of an assistant.

(3) Position RH door (3) at mounting location.

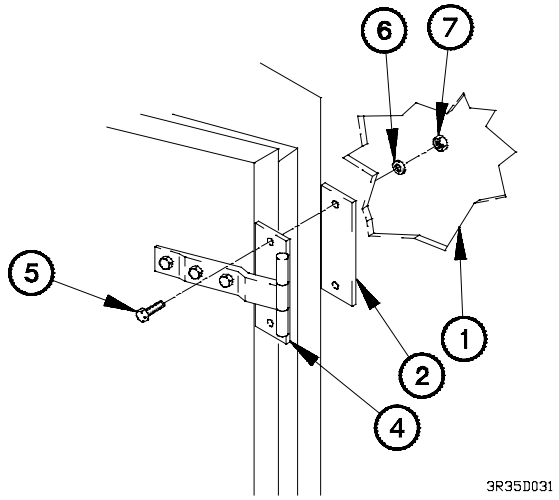
(4) Position spacer (2) between upper hinge (4) and van body wall (1).

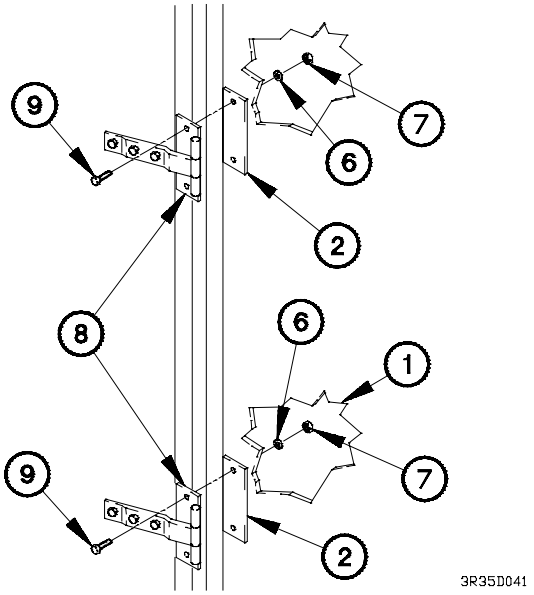
NOTE

Step (5) and (6) require the aid of an assistant.

(5) Position two screws (5) in upper hinge (4) and van body wall (1).

(6) Position washers (6) and self-locking nuts (7) on two screws (5).





(7) Position two spacers (2) between two hinges (8) and van body wall (1).

(8) Position two screws (9) in two hinges (8) and van body wall (1).

(9) Position washers (6) and self-locking nuts (7) on four screws (9).

NOTE

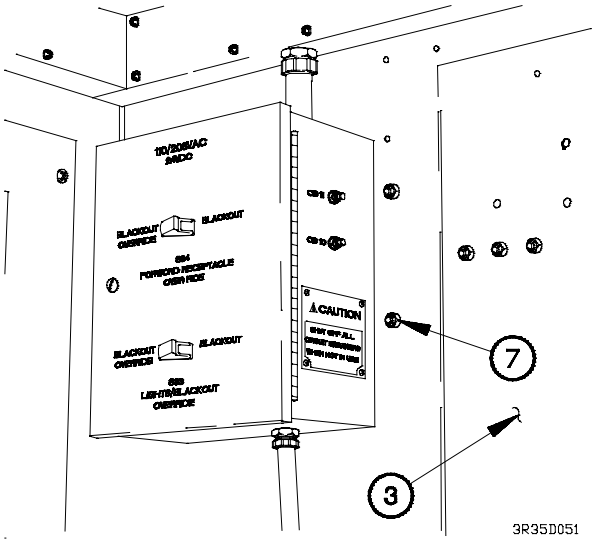
Latch should require some force to close completely.

(10) Close RH door (3) (TM 9-2320-365-10).

NOTE

Step (11) requires the aid of an assistant.

(11) Tighten six self-locking nuts (7).



16-35. M1079 RH DOOR ASSEMBLY REPLACEMENT/REPAIR (CONT)

WARNING

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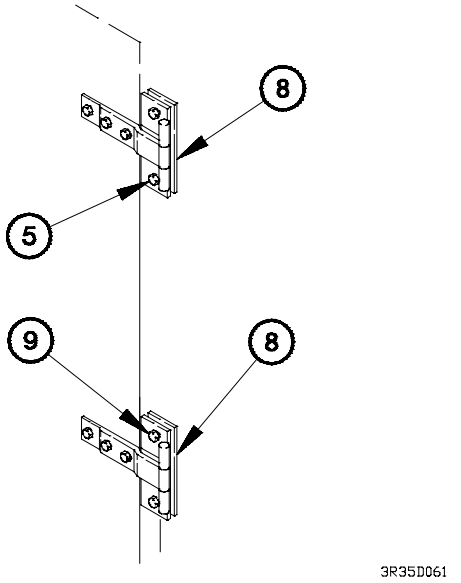
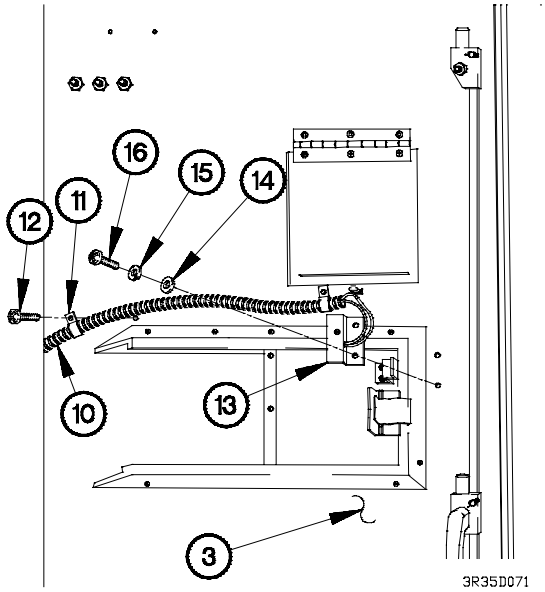
(12) Apply sealing compound around heads of six screws (5 and 9) and completely around edges of three hinges (8).





(13) Install conduit (10) on RH door (3) with two clamps (11) and screws (12).

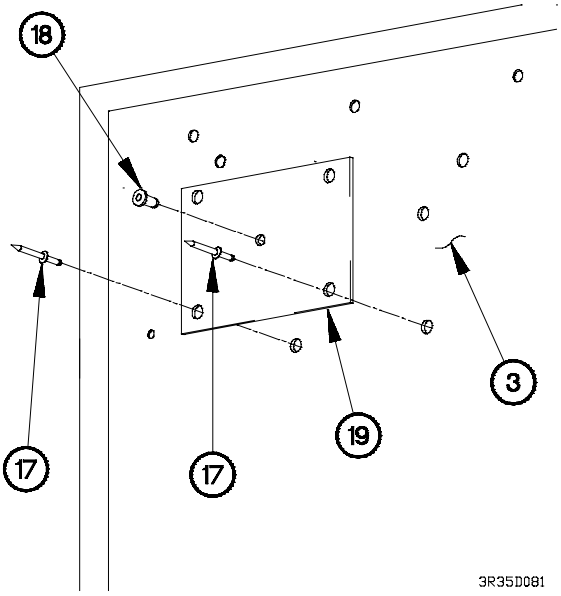
(14) Position bracket (13) on RH door (3) with two washers (14), lockwashers (15), and screws (16).

(15) Apply sealing compound to two rivets (17) and rivet nut (18).

(16) Install rivet nut (18) in plate (19).

(17) Apply sealing compound to back of plate (19).

(18) Install plate (19) on RH door (3) with two rivets (17).



(19) Install two lanyards (20) on rings (21).

WARNING

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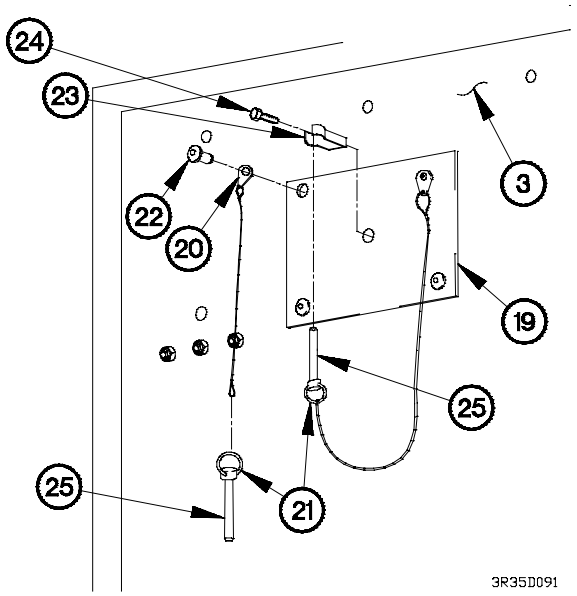
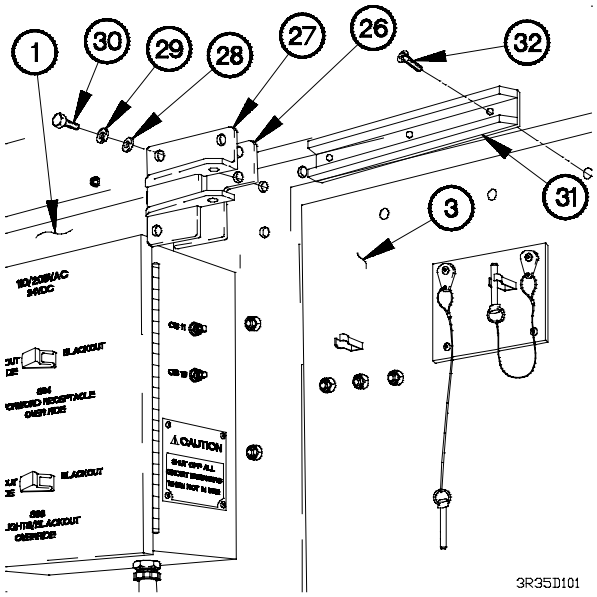


(20) Apply sealing compound to two rivets (22).

(21) Install two lanyards (20) on plate (19) with two rivets (22).

(22) Install two clips (23) on plate (19) and RH door (3) with two screws (24).

(23) Install quick release pin (25) in clip (23).



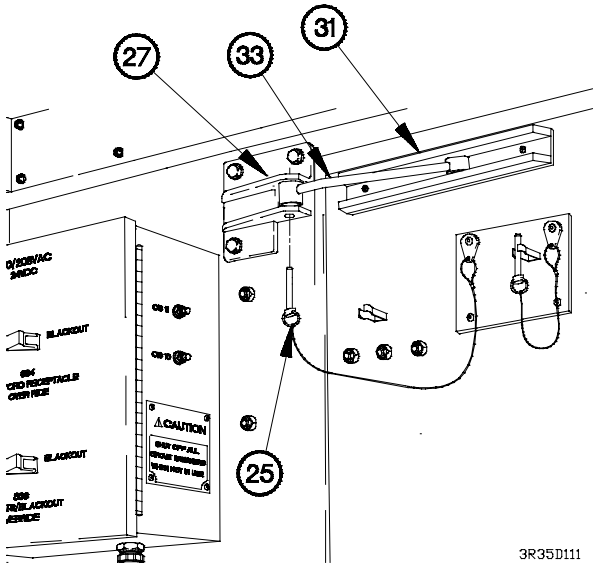
(24) Install spacer (26) and bracket (27) on van body wall (1) with three washers (28), lockwashers (29), and screws (30).

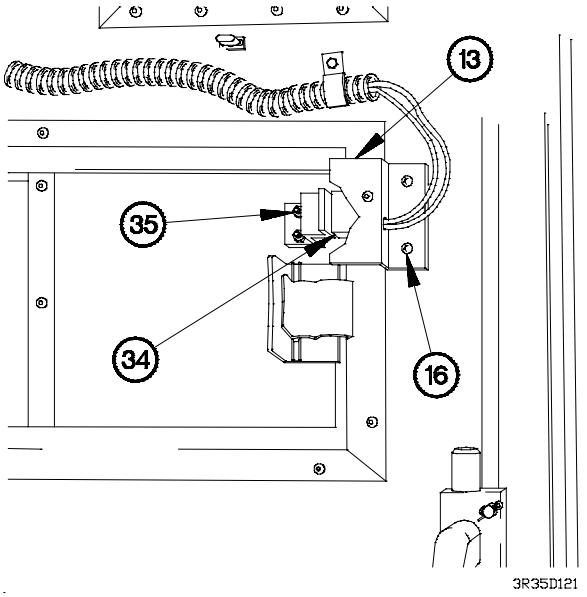
(25) Install channel (31) on RH door (3) with three screws (32).

16-35. M1079 RH DOOR ASSEMBLY REPLACEMENT/REPAIR (CONT)

(26) Position stay arm (33) in channel (31).

(27) Install quick release pin (25) in bracket (27) and stay arm (33).





(28) Slide bracket (13) to the left until blackout switch (34) contacts bracket (35).

(29) Tighten two screws (16).

e. Follow-On Maintenance.

(1) Install placards and data plates (para 2-11).

(2) Stow ladder (TM 9-2320-365-10).

(3) Check for proper operation of blackout lights system (TM 9-2320-365-10).

End of Task.

16-36. M1079 LH DOOR ASSEMBLY REPLACEMENT/REPAIR

This task covers:

a. Removal
b. Disassembly
c. Assembly
d. Installation
e. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
Engine shut down (TM 9-2320-365-10).
RH door opened (115 degrees) (TM 9-2320-365-10).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Sling, Endless (Item 32, Appendix C)
Drill, Portable, Electric (Item 7, Appendix C)
Drill Set, Twist (Item 6, Appendix C)
Goggles, Industrial (Item 15, Appendix C)
Tool Kit, Blind Rivet (Item 43, Appendix C)

Materials/Parts
Adhesive (Item 11, Appendix D)
Sealing Compound (Item 67, Appendix D)
M1079 LH Door Gasket (Item E-7, Appendix E)

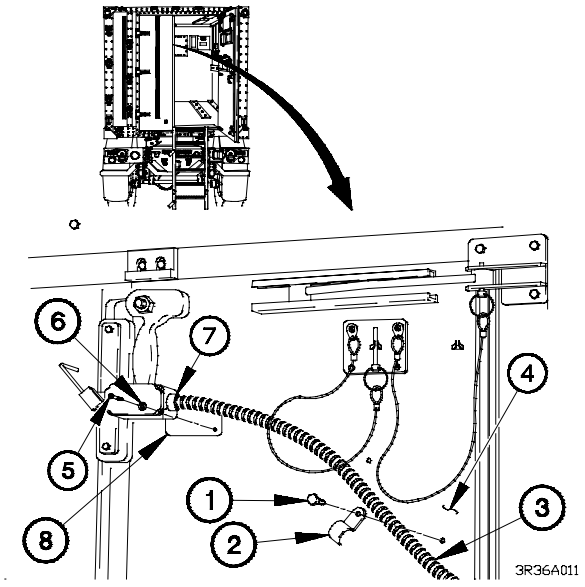
Materials/Parts (Cont)
Lockwasher (4) (Item 81, Appendix G)
Nut, Blind Rivet (4) (Item 112, Appendix G)
Lockwasher (9) (Item 87, Appendix G)
Rivet, Blind (2) (Item 228, Appendix G)
Rivet, Blind (2) (Item 227, Appendix G)
Nut, Blind Rivet (Item 115, Appendix G)
Nut, Self-Locking (6) (Item 121, Appendix G)
Lockwasher (13) (Item 82, Appendix G)
Lockwasher (3) (Item 94, Appendix G)
Nut, Self-Locking (2) (Item 117, Appendix G)
Nut, Self-Locking (9) (Item 118, Appendix G)

Personnel Required
(2)

a. Removal.

(1) Remove two screws (1) clamps (2) and conduit (3) from LH door (4).

(2) Remove four screws (5), lockwashers (6), and door ajar switch box (7) from plate (8). Discard lockwashers.



16-36. M1079 LH DOOR ASSEMBLY REPLACEMENT/REPAIR (CONT)

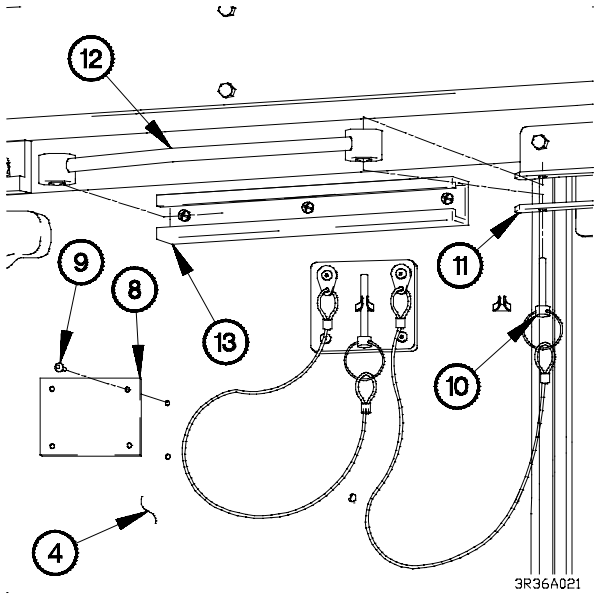
WARNING

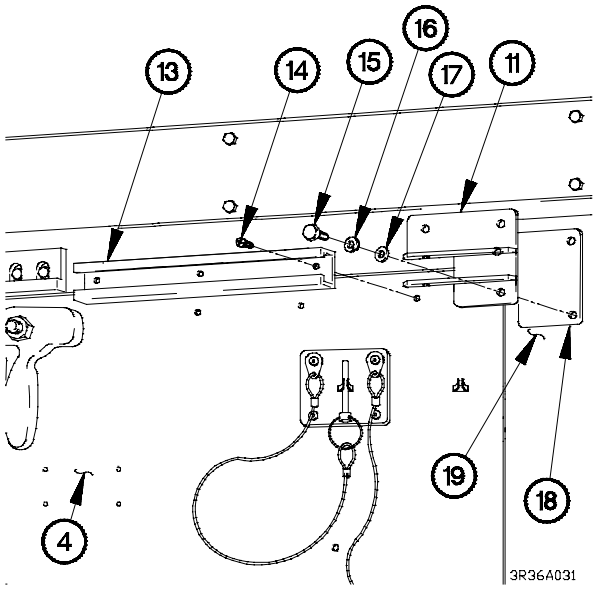
Wear appropriate eye protection when removing rivets or blind rivet nuts. Failure to comply may result in injury to personnel.

(3) Remove four blind rivet nuts (9) and plate (8) from LH door (4).

(4) Remove quick release pin (10) from bracket (11) and stay arm (12).

(5) Remove stay arm (12) from channel (13).





(6) Remove three screws (14) and channel (13) from LH door (4).

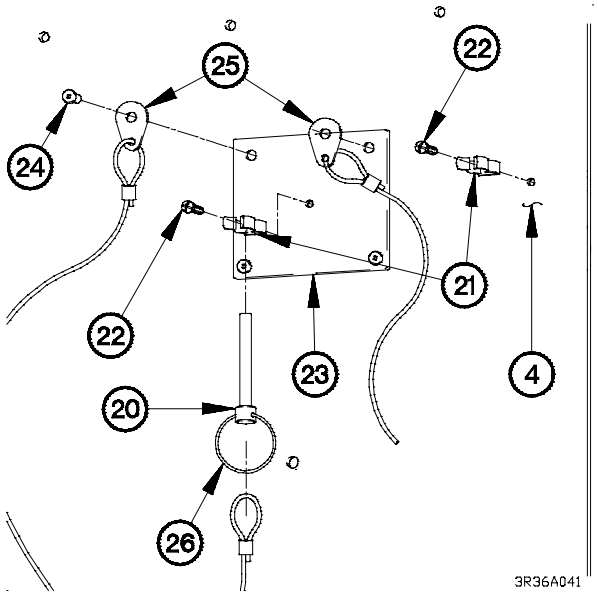
(7) Remove three screws (15), lockwashers (16), washers (17), bracket (11), and spacer (18) from van body wall (19). Discard lockwashers.

(8) Remove quick release pin (20) from clip (21).

(9) Remove two screws (22) and clips (21) from plate (23) and LH door (4).

(10) Remove two rivets (24) and lanyards (25) from plate (23).

(11) Remove two lanyards (25) from rings (26).

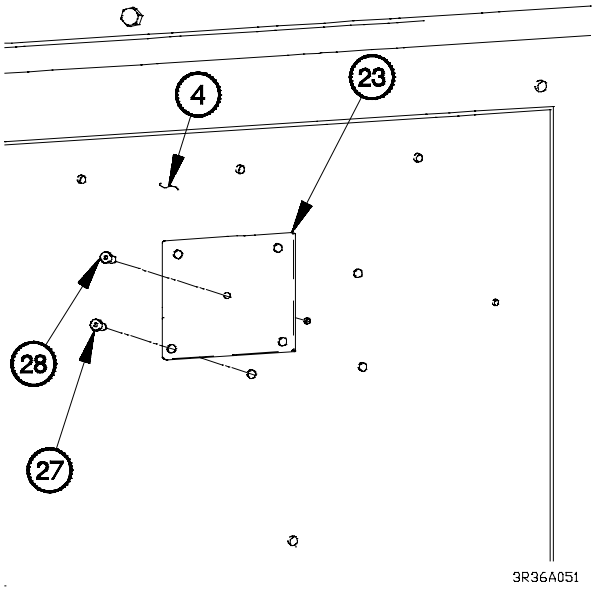


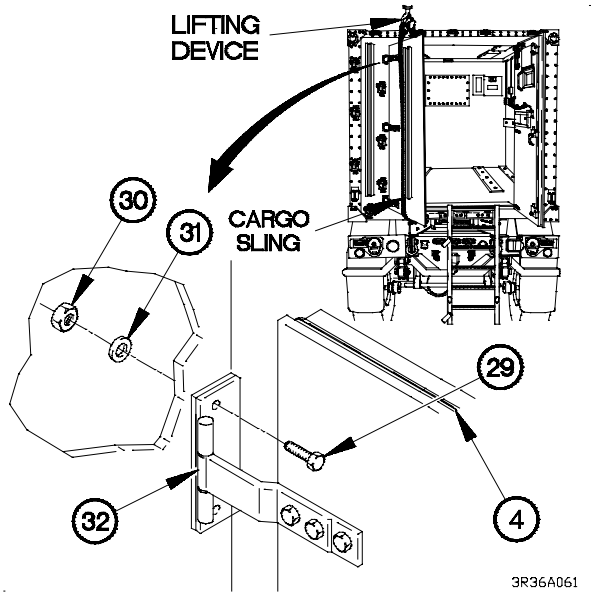
WARNING

Wear appropriate eye protection when removing rivets or blind rivet nuts. Failure to comply may result in injury to personnel.

(12) Remove two rivets (27) and plate (23) from LH door (4).

(13) Remove blind rivet nut (28) from plate (23).





(14) Remove sealing compound from heads of six screws (29).

WARNING

LH door assembly weighs approximately 85 lbs (39 kgs). Attach a suitable lifting device prior to removal. Failure to comply may result in injury to personnel or damage to equipment.

(15) Open LH door (4) (TM 9-2320-365-10).

NOTE

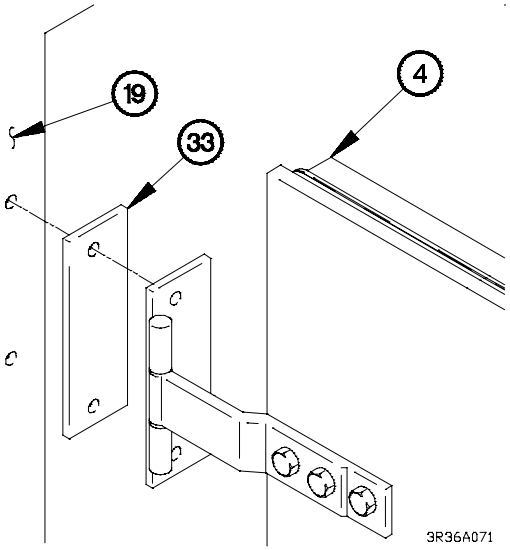
Step (16) requires aid of an assistant.

(16) Remove six self-locking nuts (30), washers (31), and screws (29) from three hinges (32). Discard self-locking nuts.

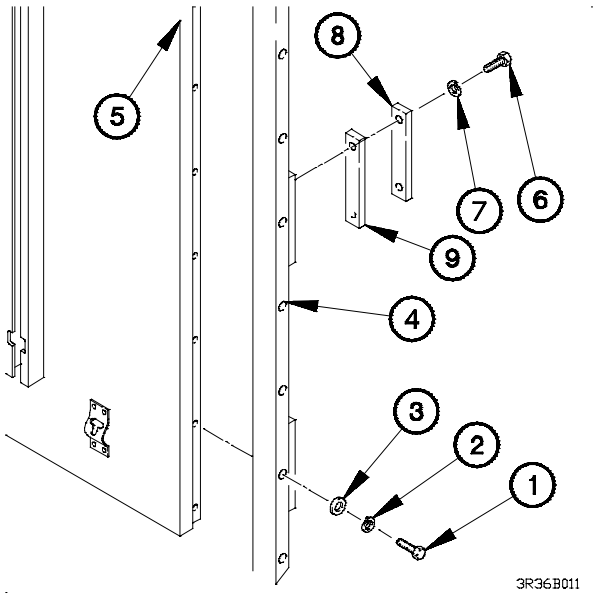
16-36. M1079 LH DOOR ASSEMBLY REPLACEMENT/REPAIR (CONT)

(17) Remove sealing compound from around three spacers (33).

(18) Remove LH door (4) and spacer(s) (33) from van body wall (19).



b. Disassembly.



(1) Remove nine screws (1), lockwashers (2), washers (3), and door channel (4) from LH door (5). Discard lockwashers.

CAUTION

Mark location of striker plate and shims prior to removal. Failure to comply may result in damage to equipment.

NOTE

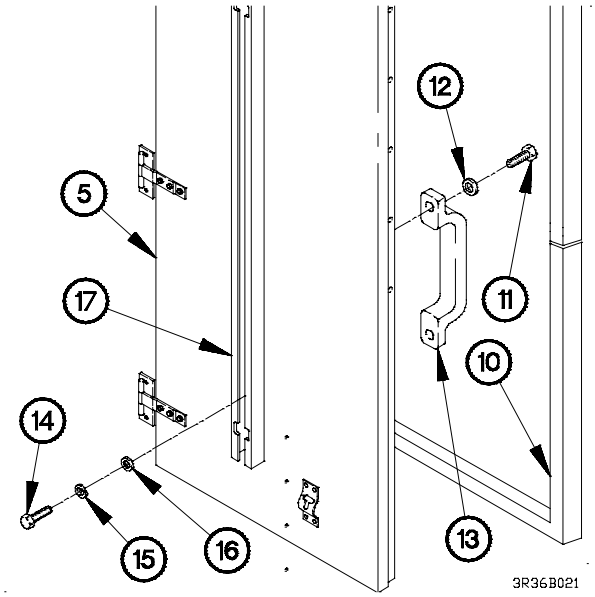
Number of shims installed with each striker plate may vary.

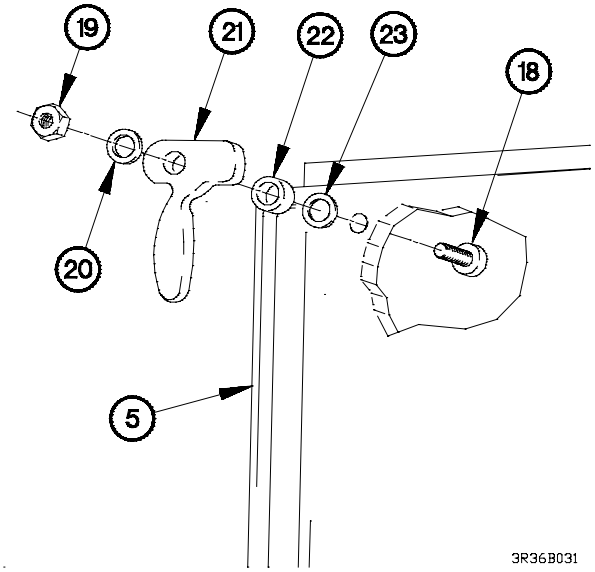
(2) Remove six screws (6), lockwashers (7), three striker plates (8) and shim(s) (9) from door channel (4). Discard lockwashers.

(3) Remove gasket (10) from LH door (5). Discard gasket.

(4) Remove two screws (11), washers (12), and handle (13) from LH door (5).

(5) Remove three screws (14), lockwashers (15), washers (16), and ladder channel (17) from LH door (5). Discard lockwashers.



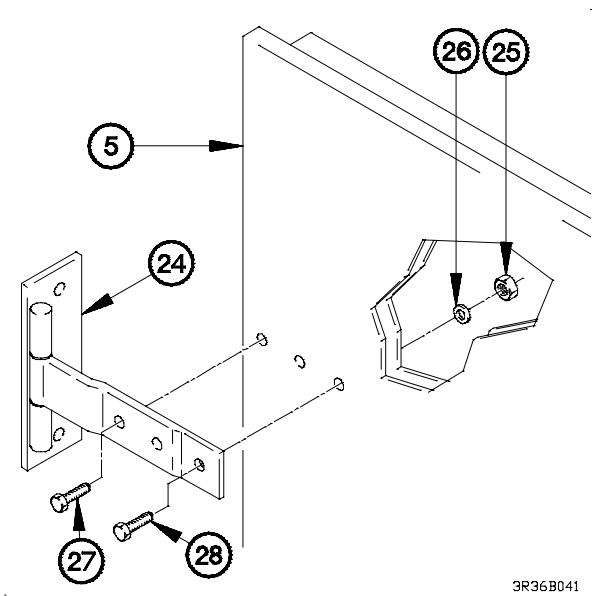


(6) Remove sealing compound from heads of two bolts (18).

(7) Remove two self-locking nuts (19), washers (20), latches (21), spacers (22), washers (23), and bolts (18) from LH door (5). Discard self-locking nuts.

(8) Remove sealing compound from around edges of three hinges (24).

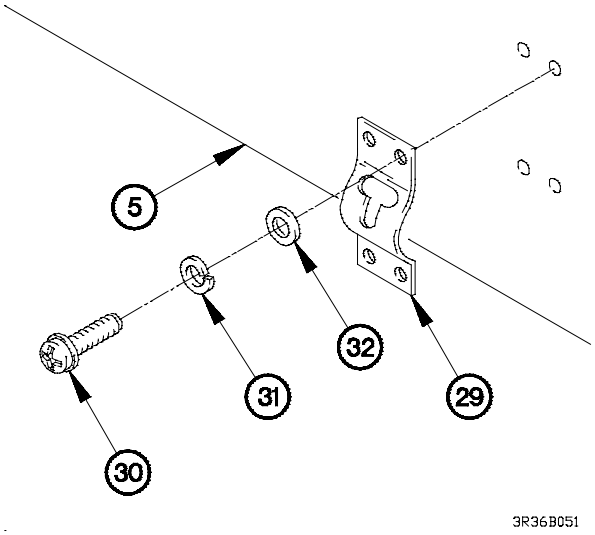
(9) Remove nine self-locking nuts (25), washers (26), six screws (27), three screws (28), and three hinges (24) from LH door (5). Discard self-locking nuts.



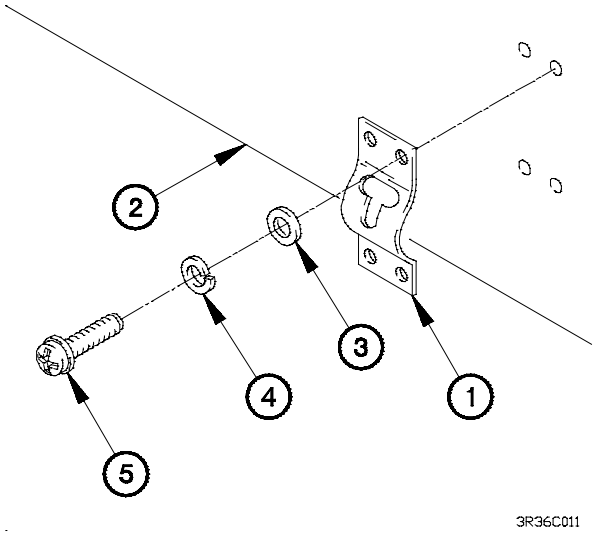
16-36. M1079 LH DOOR ASSEMBLY REPLACEMENT/REPAIR (CONT)

(10) Remove sealing compound from around edge of latch (29).

(11) Remove four screws (30), lockwashers (31), washers (32), and latch (29) from LH door (5). Discard lockwashers.



c. Assembly.



WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

(1) Apply sealing compound to latch (1).

(2) Install latch (1) on LH door (2) with four washers (3), lockwashers (4), and screws (5).

(3) Apply sealing compound around edge of latch (1).

WARNING

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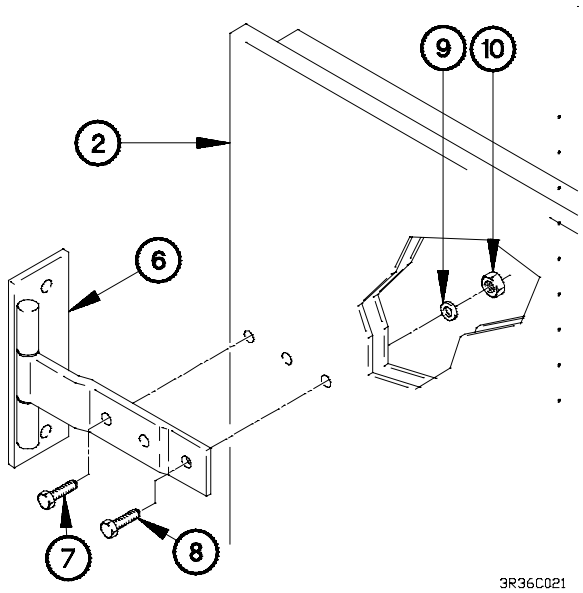
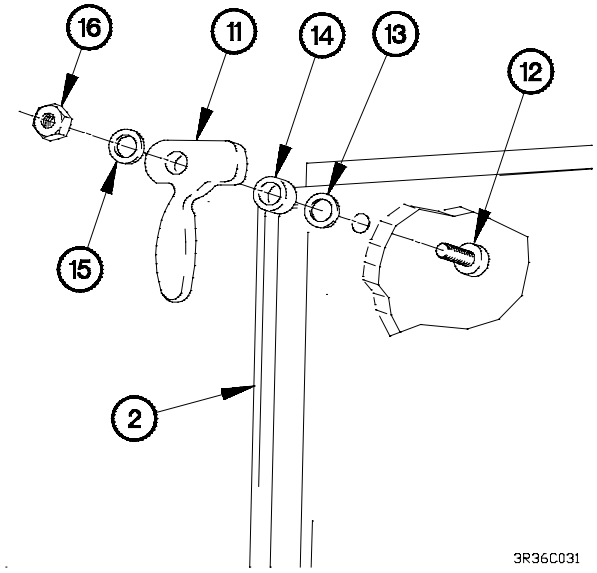


(4) Apply sealing compound on three hinges (6).

(5) Install three hinges (6) on LH door (2) with six screws (7), three screws (8), washers (9), and self-locking nuts (10).

(6) Apply sealing compound around edges of three hinges (6).



NOTE

Latches are supposed to spin freely. Do not overtighten self-locking nuts.

(7) Install two latches (11) on LH door (2) with bolts (12), washers (13), spacers (14), washers (15), and self-locking nuts (16).

(8) Apply sealing compound around heads of two bolts (12).

16-36. M1079 LH DOOR ASSEMBLY REPLACEMENT/REPAIR (CONT)

(9) Install ladder channel (17) on LH door (2) with three washers (18), lockwashers (19), and screws (20).

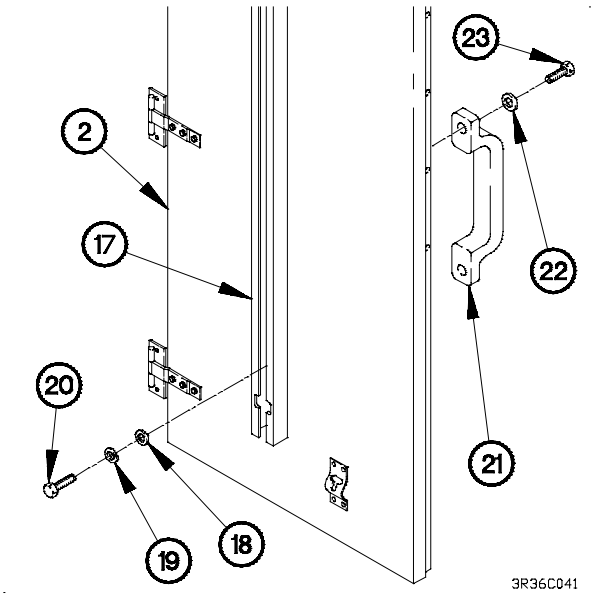
(10) Install handle (21) on LH door (2) with two washers (22) and screws (23).

WARNING

- **Dry Cleaning Solvent (P-D-680) is TOXIC and flammable. Wear protective goggles and gloves; use only in well ventilated area; avoid contact with skin, eyes, and clothes, and do not breathe vapors. Keep away from heat or flame. Never smoke when using solvent; the flashpoint for Type I Dry Cleaning Solvent is 100°F (38°C) and for Type II is 130°F (50°C). Failure to comply may result in injury or death to personnel.**

- **If personnel become dizzy while using Dry Cleaning Solvent, immediately get fresh air and medical help. If Dry Cleaning Solvent contacts skin or clothes, flush with cold water. If Dry Cleaning Solvent contacts eyes, immediately flush eyes with water and get immediate medical attention. Failure to comply may result in injury to personnel.**

(11) Clean inside edge of LH door (2) with dry cleaning solvent.



WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

NOTE

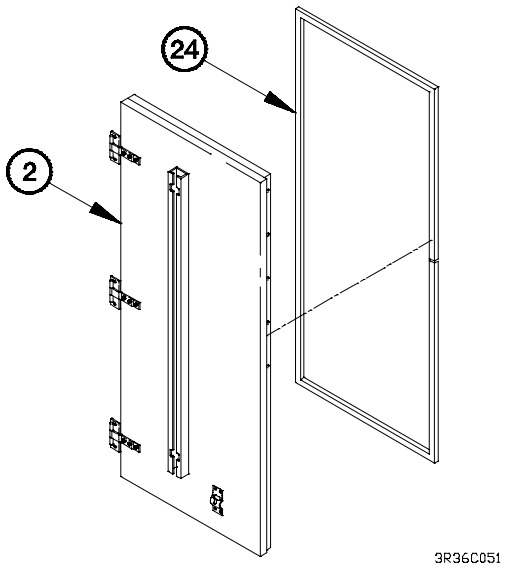
Apply adhesive no sooner than 30 minutes, nor later than eight hours after cleaning.

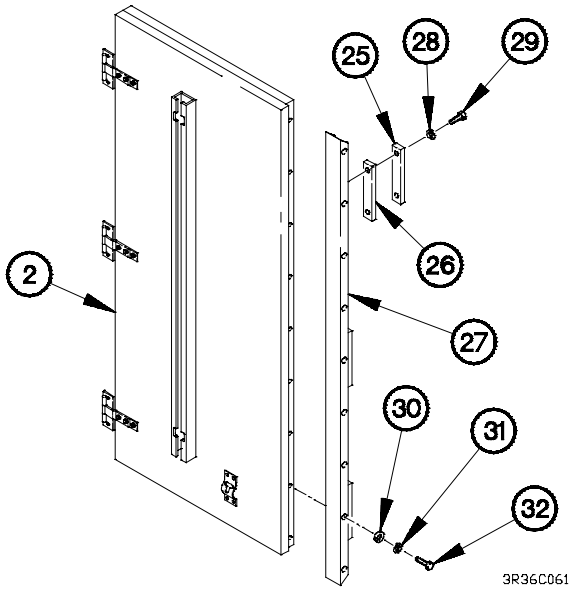
(12) Apply adhesive to inside edge of LH door (2).

NOTE

Gasket will be bonded all around LH door.

(13) Install gasket (24) on LH door (2).





(14) Install three strikers (25) and shim(s) (26) on door channel (27) with six lockwashers (28) and screws (29).

(15) Install door channel (27) on LH door (2) with nine washers (30), lockwashers (31), and screws (32).

16-36. M1079 LH DOOR ASSEMBLY REPLACEMENT/REPAIR (CONT)

d. Installation.

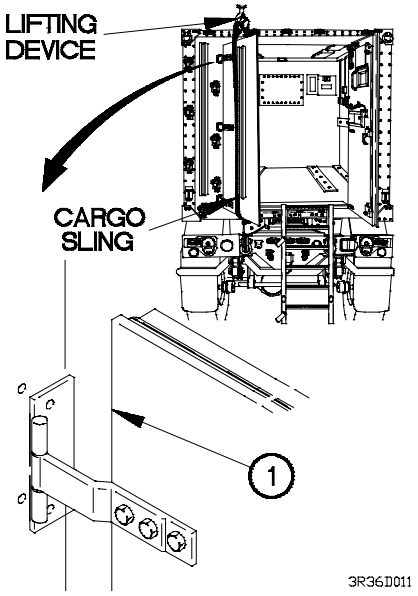
WARNING

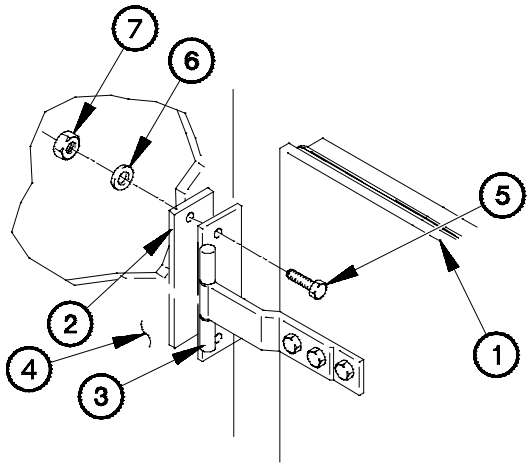
LH door assembly weighs approximately 85 lbs (39 kgs). Attach a suitable lifting device prior to installation. Failure to comply may result in injury to personnel or damage to equipment.

NOTE

Step (1) requires aid of an assistant.

(1) Position LH door (1) at mounting location.





WARNING

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(2) Apply sealing compound to spacer(s) (2) and hinges (3).

(3) Position spacer(s) (2) between LH door (1), upper hinge (3), and van body wall (4).

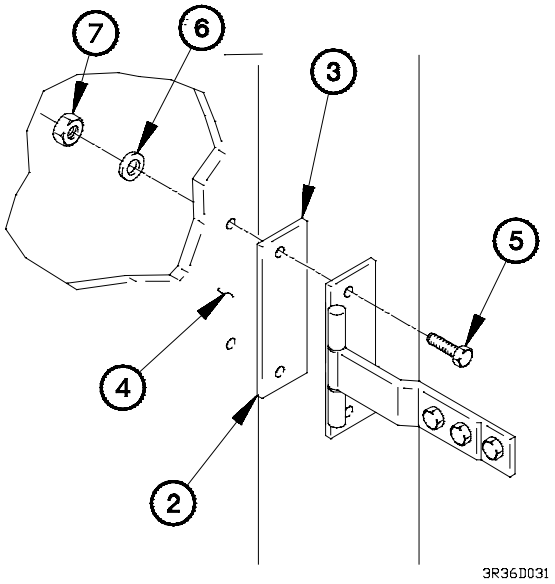
(4) Install two screws (5) in upper hinge (3).

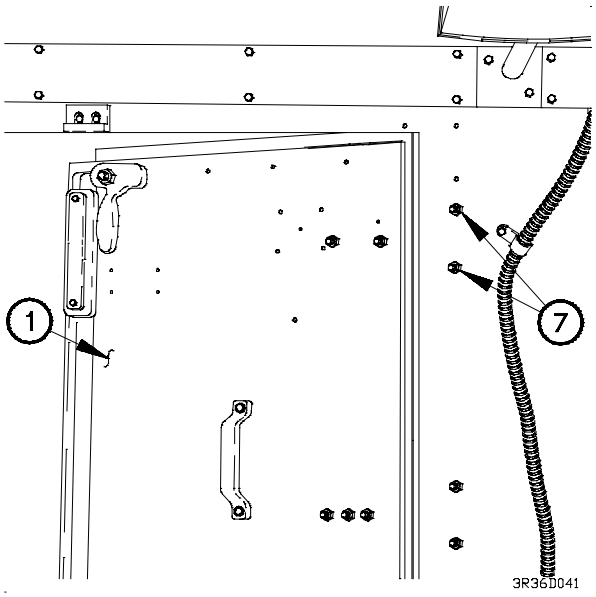
(5) Position two washers (6) and self-locking nuts (7) on screws (5).

(6) Position two spacers (2) between two hinges (3) and van body wall (4).

(7) Position four screws (5) in two hinges (3) and spacers (2).

(8) Position four washers (6) and self-locking nuts (7) on screws (5).





NOTE

Latches should require some force to close completely.

(9) Close LH door (1) (TM 9-2320-365-10).

NOTE

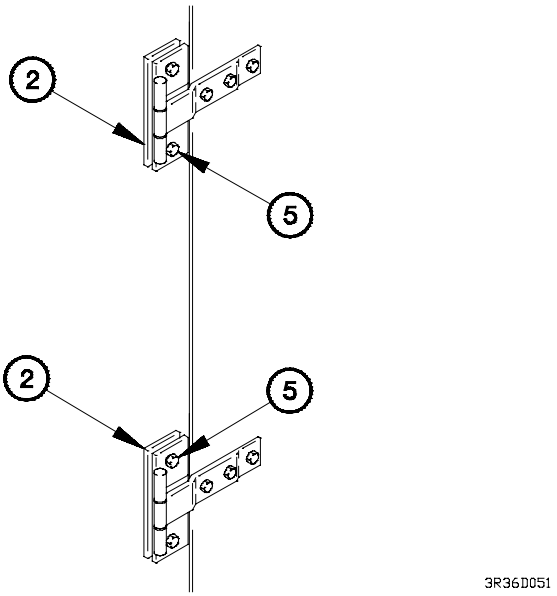
Step (10) requires the aid of an assistant.

(10) Tighten six self-locking nuts (7).

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

(11) Apply sealing compound around heads of six screws (5) and around edges of three spacers (2).



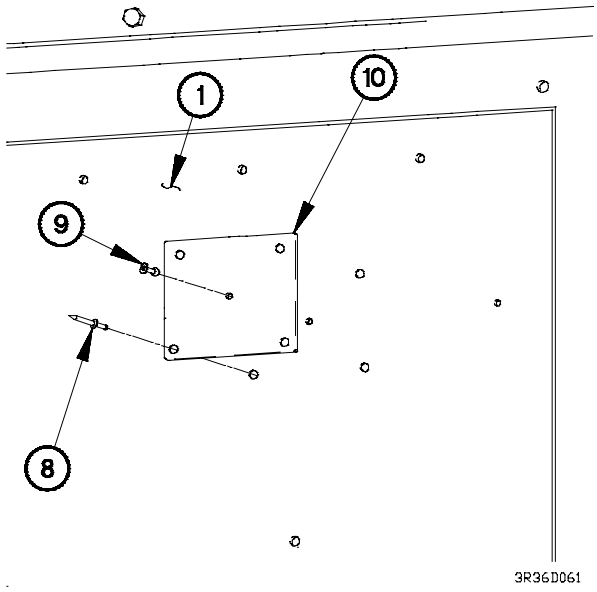
16-36. M1079 LH DOOR ASSEMBLY REPLACEMENT/REPAIR (CONT)

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

CAUTION

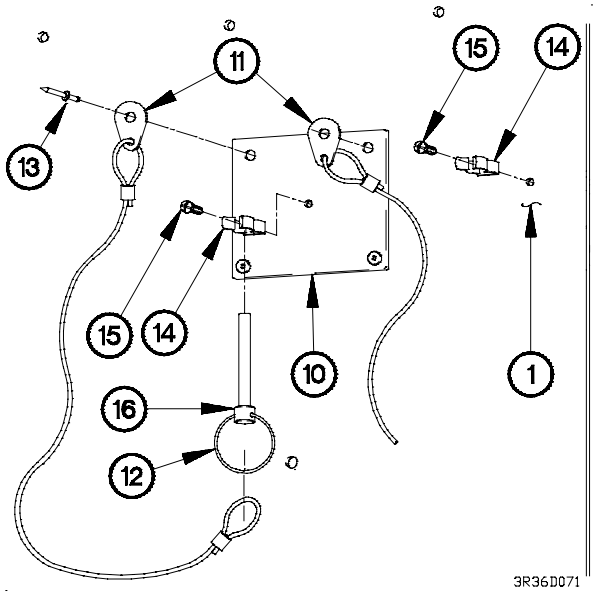
Coat all rivets and blind rivet nuts with sealing compound to prior to installation. Failure to comply may result in damage to equipment.



(12) Apply sealing compound to two rivets (8) and blind rivet nut (9).

(13) Install blind rivet nut (9) on plate (10).

(14) Install plate (10) on LH door (1) with two rivets (8).



(15) Install two lanyards (11) on rings (12).

(16) Apply sealing compound to two rivets (13).

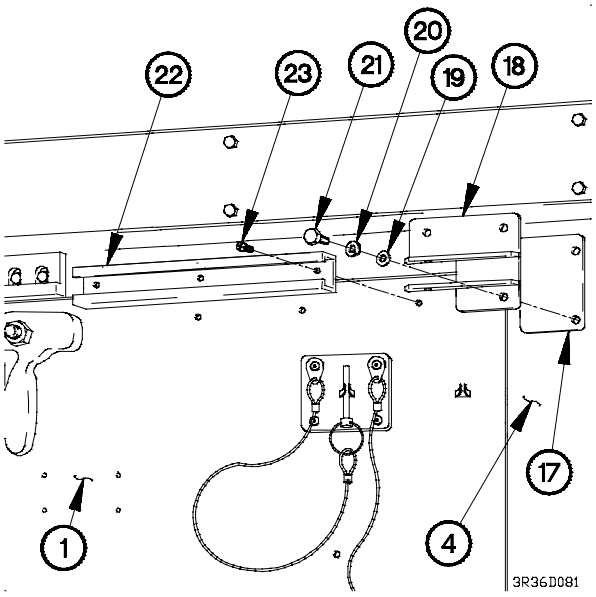
(17) Install two lanyards (11) on plate (10) with two rivets (13).

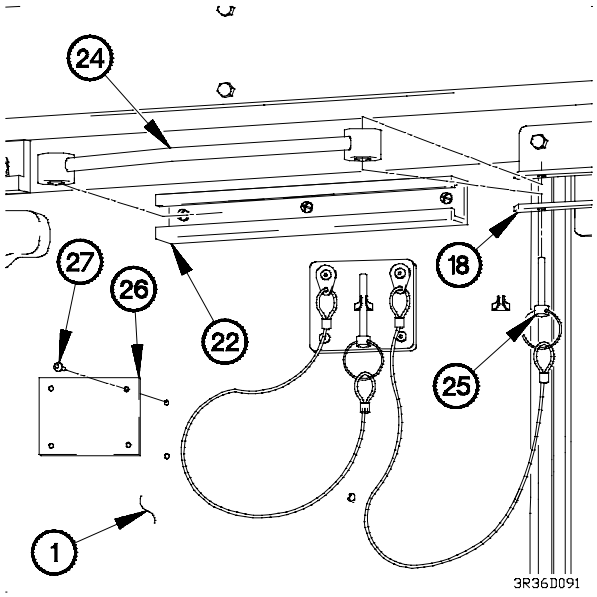
(18) Install two clips (14) on LH door (1) and plate (10) with two screws (15).

(19) Install quick release pin (16) in clip (14).

(20) Install spacer (17) and bracket (18) on van body wall (4) with three washers (19), lockwashers (20), and screws (21).

(21) Install channel (22) on LH door (1) with three screws (23).





(22) Open LH door (1).

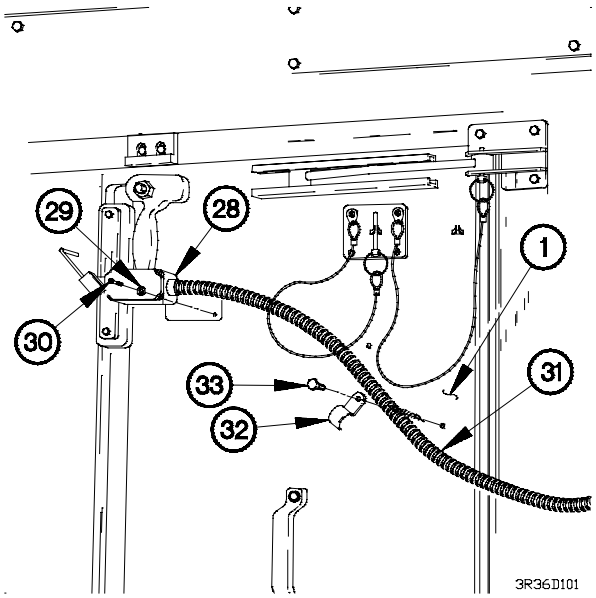
(23) Install stay arm (24) in channel (22).

(24) Install stay arm (24) in bracket (18) with quick release pin (25).

(25) Install plate (26) on LH door (1) with four rivet nuts (27).

(26) Install door ajar switch box (28) on LH door (1) with four lockwashers (29) and screws (30).

(27) Install conduit (31) on LH door (1) with two clamps (32) and screws (33).



e. Follow-On Maintenance.

(1) Adjust door ajar switch (para 16-55).

(2) Stow ladder (TM 9-2320-365-10).

End of Task.

16-37. M1079 BLACKOUT SHIELD AND FRAME REPLACEMENT/REPAIR

This task covers:

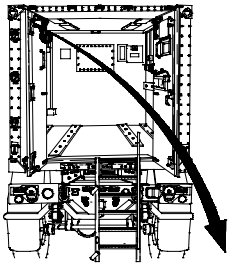
a. Removal
b. Disassembly
c. Assembly
d. Installation
e. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
Engine shut down (TM 9-2320-365-10).
LH and RH doors opened (115 degrees) (TM 9-2320-365-10).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Drill, Portable, Electrical (Item 7, Appendix C)
Drill Set, Twist (Item 6, Appendix C)
Goggles, Industrial (Item 15, Appendix C)
Tool Kit, Blind Rivet (Item 43, Appendix C)

Materials/Parts
Lockwasher (2) (Item 77, Appendix G)
Rivet, Blind (17) (van bodies serial number 191 and higher) (Item 218, Appendix G)
Rivet, Blind (29) (van body serial numbers 001 through 190) (Item 218, Appendix G)
Nut, Self-Locking (2) (Item 122, Appendix G)
M1079 Blackout Shield Header Seal (Item E-6, Appendix E)
M1079 Blackout Shield Jamb Seal (2) (Item E-6, Appendix E)
Sealing Compound (Item 67, Appendix D)
Seal, Weather (Item 259, Appendix G)
Tape, Adhesive (Item 72, Appendix D)
Adhesive (Item 5, Appendix D)

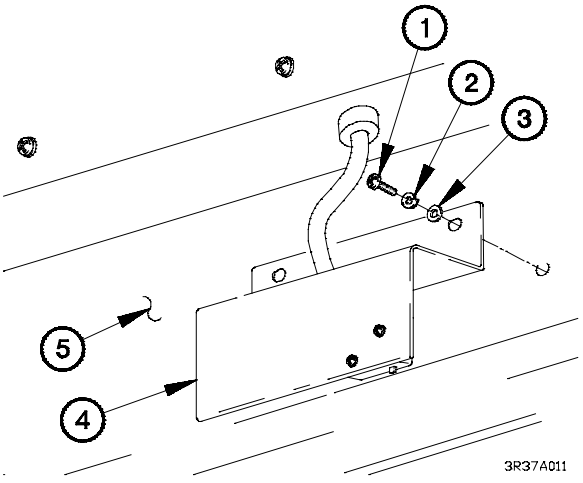


a. Removal.

NOTE

All blackout shields and frames are removed the same way. Left front blackout shield and frame on van body serial number 191 shown.

(1) Remove two screws (1), lockwashers (2), washers (3) and bracket (4) from van body wall (5). Discard lockwashers.



(2) Close blackout shield (6).

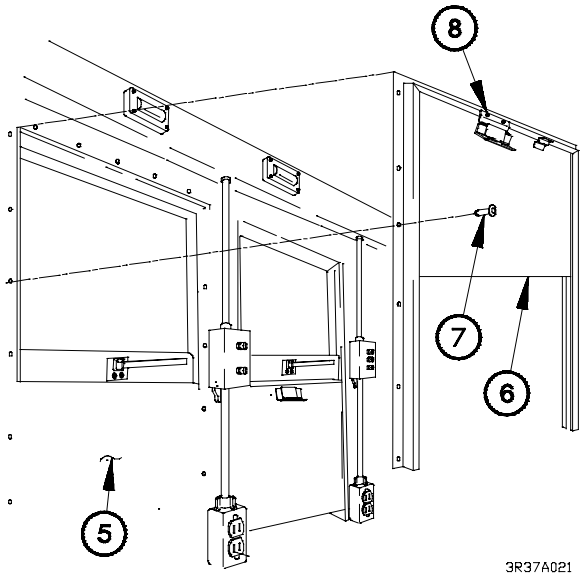
WARNING

Wear appropriate eye protection when removing rivets. Failure to comply may result in injury to personnel.

NOTE

Perform step (3) on van bodies serial number 191 and higher.

(3) Remove 17 rivets (7) and blackout shield assembly (8) from van body wall (5).

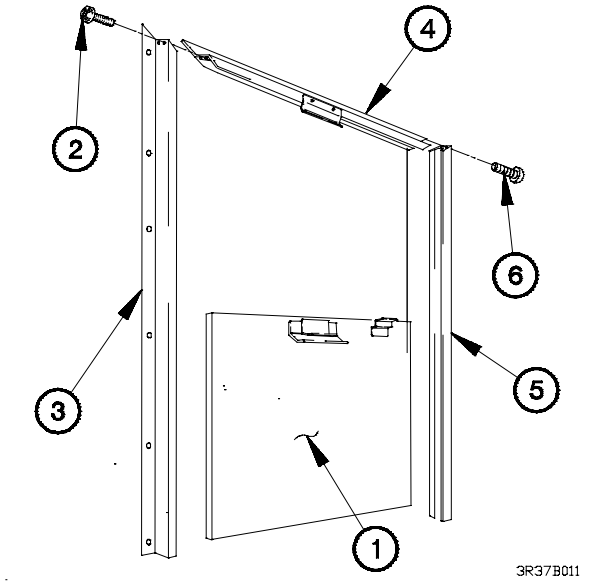


NOTE

Perform step (4) on van body serial numbers 001 through 190.

(4) Remove 29 rivets (7) and blackout shield assembly (8) from van body wall (5).

b. Disassembly.



(1) Open blackout shield (1).

(2) Remove two screws (2) and left jamb frame (3) from header frame (4).

(3) Remove blackout shield (1) from right jamb frame (5).

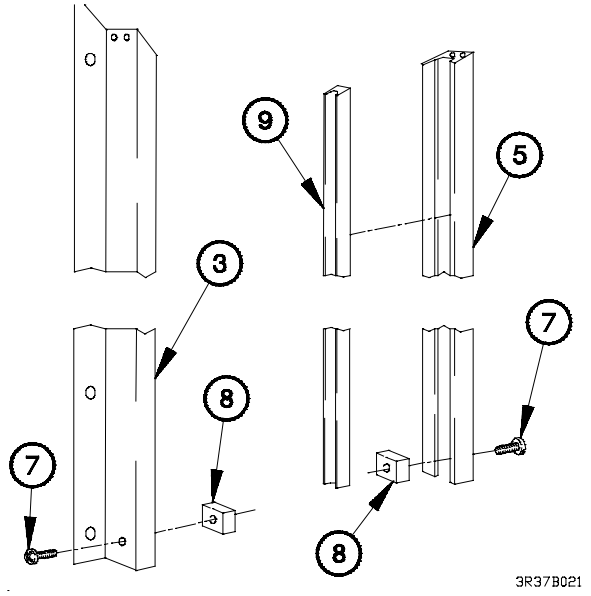
(4) Remove two screws (6) and right jamb frame (5) from header frame (4).

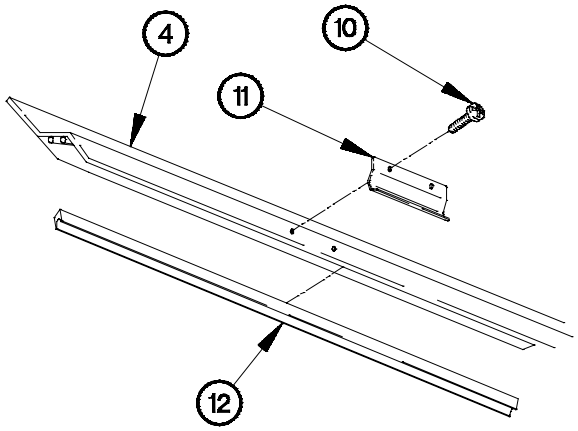
16-37. M1079 BLACKOUT SHIELD AND FRAME REPLACEMENT/REPAIR (CONT)

(5) Remove two screws (7) and stops (8) from left and right jamb frames (3 and 5).

(6) Remove two seals (9) from left and right jamb frames (3 and 5). Discard seals.

(7) Remove sealing compound from left and right jamb frames (3 and 5).





(8) Remove two screws (10) and keeper (11) from header frame (4).

(9) Remove seal (12) from header frame (4). Discard seal.

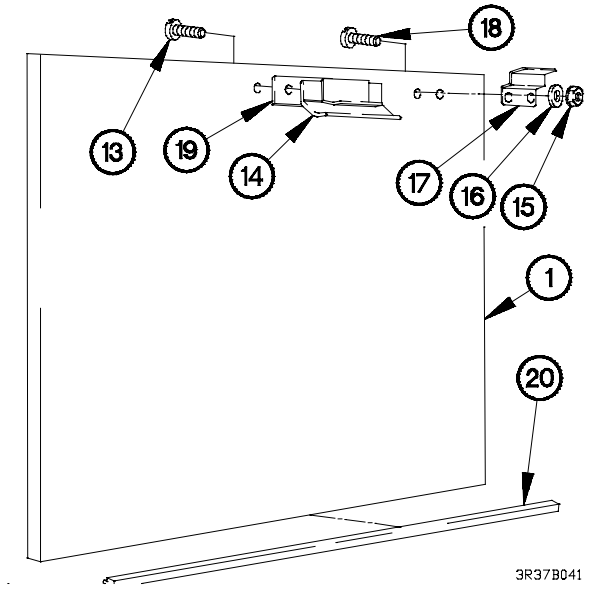
(10) Remove sealing compound from header frame (4).

(11) Remove screw (13) and latch (14) from blackout shield (1).

(12) Remove two self-locking nuts (15), washers (16), bracket (17), and two screws (18) from blackout shield (1). Discard self-locking nuts.

(13) Remove tape (19) from latch (14) and blackout shield (1).

(14) Remove weather seal (20) from blackout shield (1). Discard weather seal.



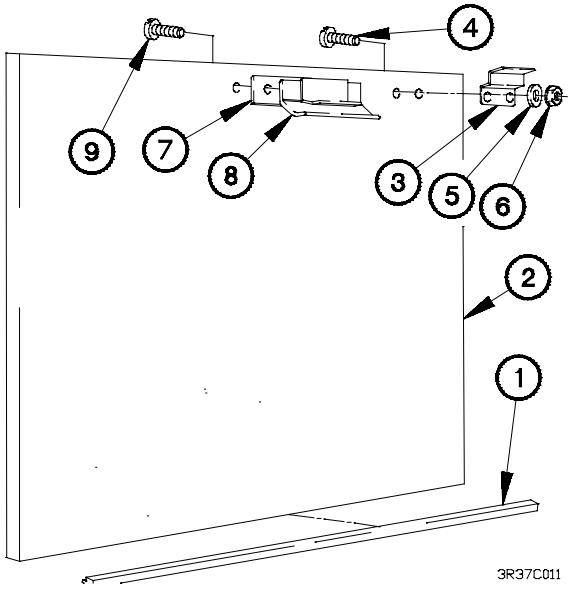
c. Assembly.

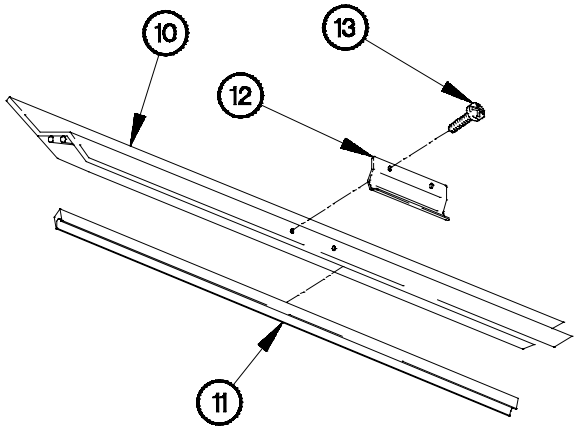
(1) Install weather seal (1) in blackout shield (2).

(2) Install bracket (3) on blackout shield (2) with two screws (4), washers (5), and self-locking nuts (6).

(3) Install tape (7) on latch (8).

(4) Install latch (8) on blackout shield (2) with screw (9).





WARNING

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(5) Apply adhesive on header frame (10).

(6) Install seal (11) in header frame (10).

(7) Install bracket (12) on header frame (10) with two screws (13).

16-37. M1079 BLACKOUT SHIELD AND FRAME REPLACEMENT/REPAIR (CONT)

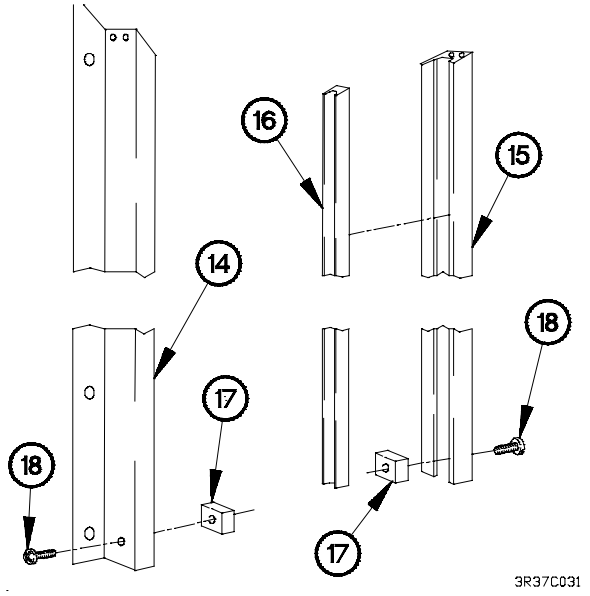
WARNING

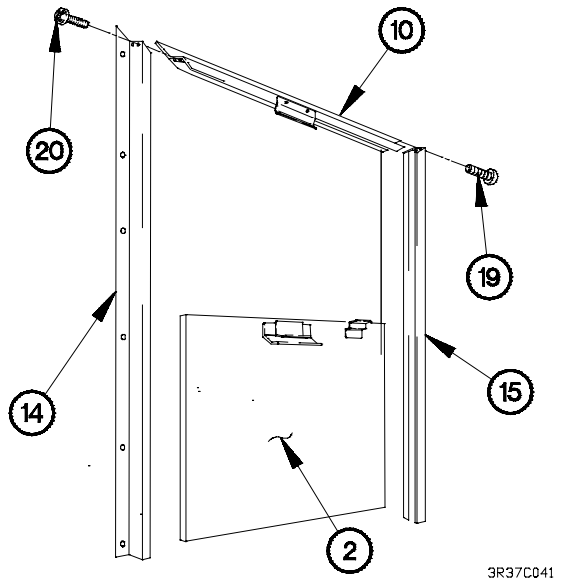
Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

(8) Apply adhesive on left and right jamb frames (14 and 15).

(9) Install two seals (16) in left and right jamb frames (14 and 15).

(10) Install two stops (17) in left and right jamb frames (14 and 15) with two screws (18).





(11) Install right jamb frame (15) on header frame (10) with two screws (19).

(12) Install blackout shield (2) in right jamb frame (15).

(13) Install left jamb frame (14) on header frame (10) with two screws (20).

(14) Close blackout shield (2).

d. Installation.

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

CAUTION

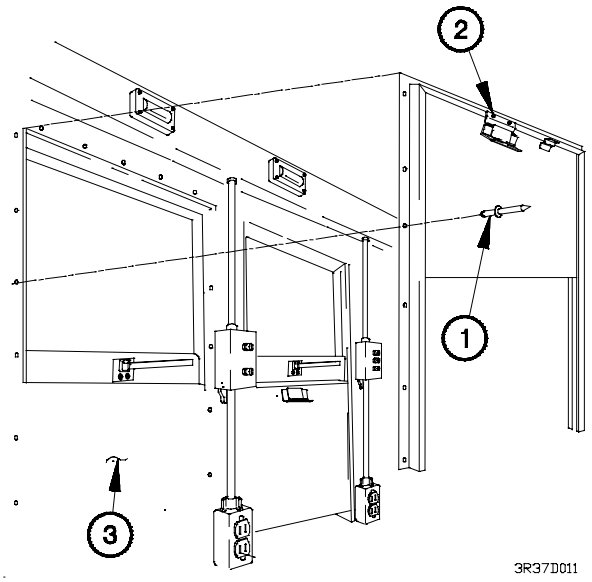
Coat all rivets with sealing compound prior to installation. Failure to comply may result in damage to equipment.

NOTE

- All blackout shields and frames are installed the same way. Left front blackout shield and frame on van body serial number 191 shown.
- Perform steps (1) and (2) on van bodies serial number 191 and higher.

(1) Apply sealing compound to 17 rivets (1).

(2) Install blackout shield assembly (2) on van body wall (3) with 17 rivets (1).



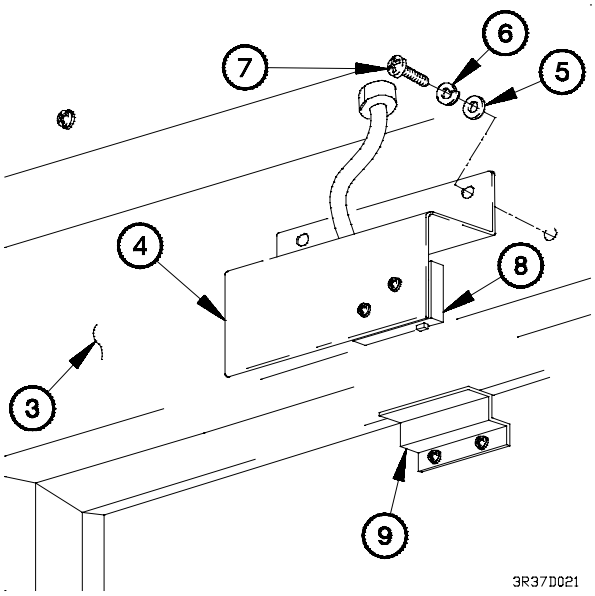
NOTE

Perform steps (3) and (4) on van body serial numbers 001 through 190.

(3) Apply sealing compound to 29 rivets (1).

(4) Install blackout shield assembly (2) on van body wall (3) with 29 rivets (1).

16-37. M1079 BLACKOUT SHIELD AND FRAME REPLACEMENT/REPAIR (CONT)



(5) Position bracket (4) on van body wall (3) with two washers (5), lockwashers (6), and screws (7).

(6) Press down on bracket (4) until blackout switch (8) contacts bracket (9).

(7) Tighten two screws (7).

e. Follow-On Maintenance.

(1) Check for proper operation of blackout lights (TM 9-2320-365-10).

(2) Close LH and RH doors (TM 9-2320-365-10).

End of Task.

16-38. M1079 WINDOW LATCH AND PROP REPLACEMENT

This task covers:

a. Removal
b. Installation
c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
Engine shut down (TM 9-2320-365-10).
Window cover stowed (van bodies serial number 191 and higher) (TM 9-2320-365-10).
LH and RH doors opened (115 degrees) (TM 9-2320-365-10).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)

Materials/Parts
Adhesive (Item 9, Appendix D)
Nut, Self-Locking (Item 154, Appendix G)

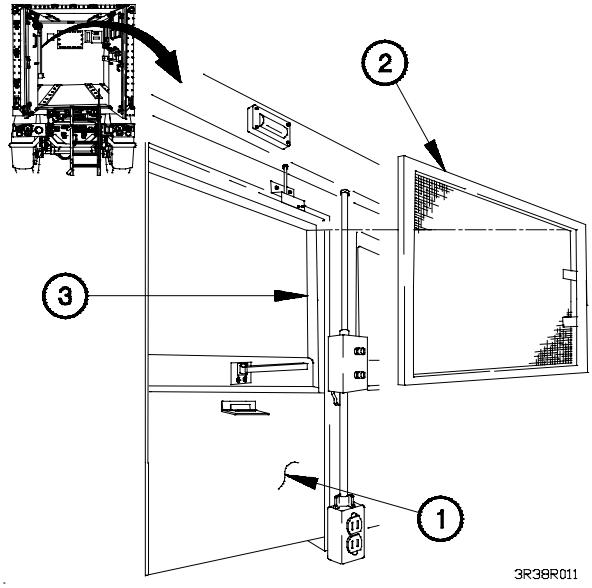
a. Removal.

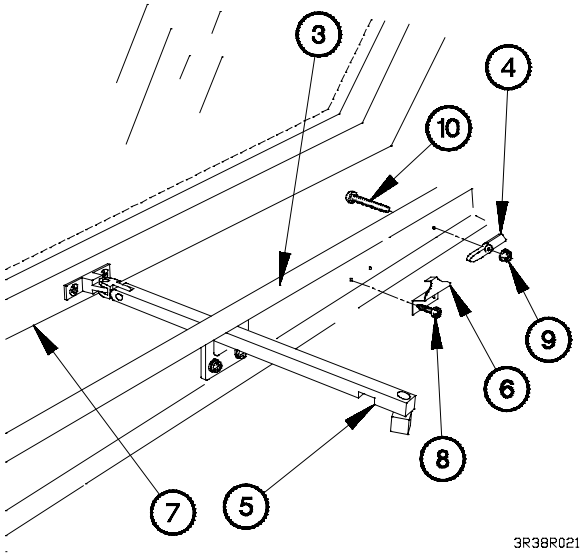
NOTE

- Van body serial numbers 001 through 190 are equipped with five side windows, van bodies serial number 191 and higher are equipped with four side windows.
- All window latches and props are removed the same way. Left rear window latch and prop on van body serial number 191 shown.

(1) Lower blackout shield (1).

(2) Remove screen (2) from window main frame (3).





(3) Open transport lock (4) on window main frame (3).

(4) Remove prop (5) from latch (6).

(5) Open window sash assembly (7).

(6) Remove two screws (8) and latch (6) from window main frame (3).

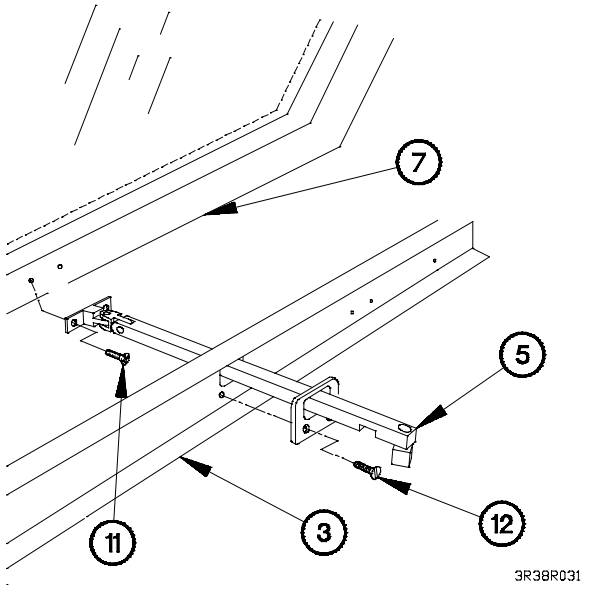
(7) Remove self-locking nut (9), screw (10), and transport lock (4) from window main frame (3). Discard self-locking nut.

16-38. M1079 WINDOW LATCH AND PROP REPLACEMENT (CONT)

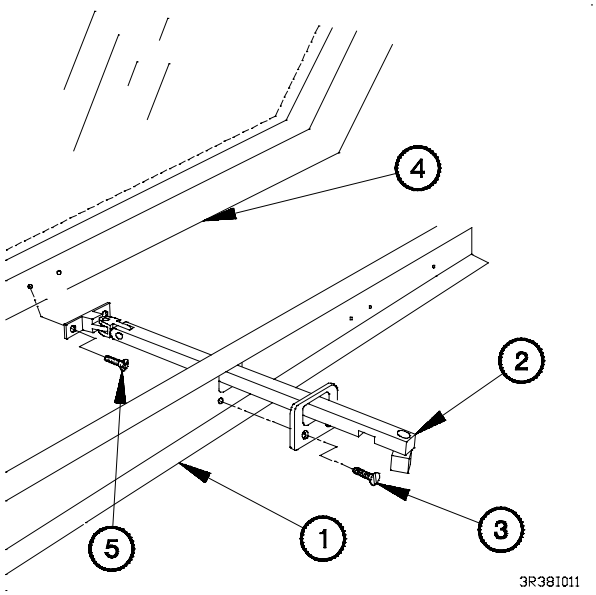
(8) Remove two screws (11) and prop (5) from window sash assembly (7).

(9) Remove two screws (12) and prop (5) from window main frame (3).

(10) Remove adhesive from window main frame (3).



b. Installation.



WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

NOTE

- Van body serial numbers 001 through 190 are equipped with five side windows, van bodies serial number 191 and higher are equipped with four side windows.
- All window latches and props are installed the same way. Left rear window latch and prop on van body serial number 191 shown.

(1) Apply a bead of adhesive around prop opening in window main frame (1).

(2) Install prop (2) on window main frame (1) with two screws (3).

(3) Install prop (2) on window sash assembly (4) with two screws (5).

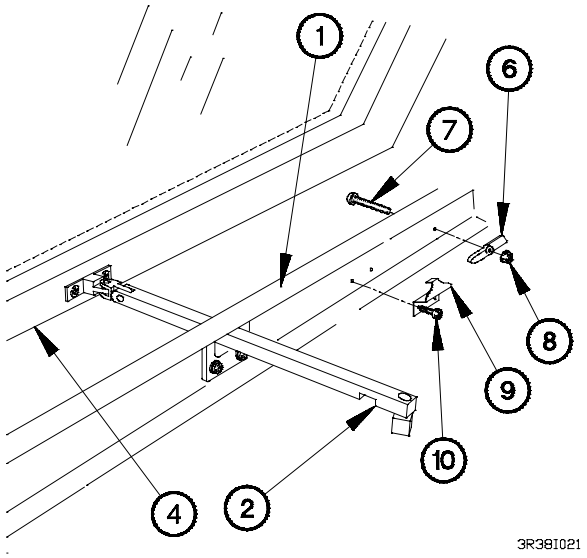
(4) Install transport lock (6) on window main frame (1) with screw (7) and self-locking nut (8).

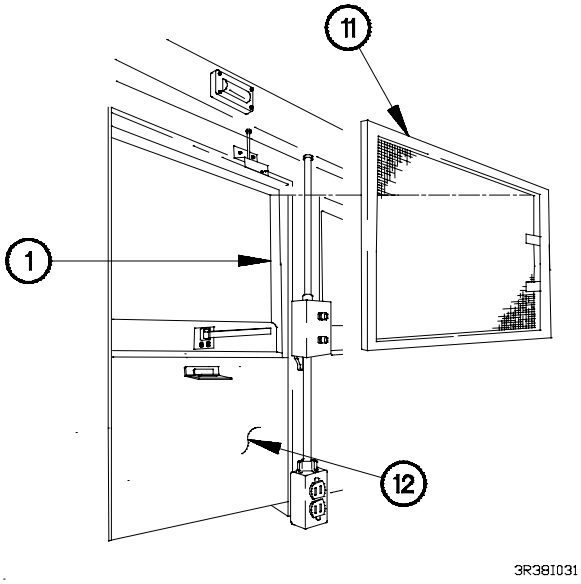
(5) Install latch (9) on window main frame (1) with two screws (10).

(6) Close window sash assembly (4).

(7) Position prop (2) in latch (9).

(8) Close transport lock (6) on window main frame (1).





(9) Install screen (11) in window main frame (1).

(10) Raise blackout shield (12).

c. Follow-On Maintenance.

(1) Lower window cover (van bodies serial number 191 and higher) if required (TM 9-2320-365-10).

(2) Close LH and RH doors (TM 9-2320-365-10).

End of Task.

16-39. M1079 WINDOW SASH ASSEMBLY REPLACEMENT/REPAIR

This task covers:

a. Removal
b. Disassembly
c. Assembly
d. Installation
e. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
Engine shut down (TM 9-2320-365-10).
Window cover stowed (van bodies serial number 191 and higher) (TM 9-2320-365-10).
LH and RH doors opened (115 degrees) (TM 9-2320-365-10).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Drill, Portable, Electric (Item 7, Appendix C)
Drill Set, Twist (Item 6, Appendix C)
Goggles, Industrial (Item 15, Appendix C)
Tool Kit, Blind Rivet (Item 43, Appendix C)

Materials/Parts
Rivet, Blind (4) (Item 225, Appendix G)
Adhesive (Item 9, Appendix D)
M1079 Window Sash Top/Bottom Glazing Seal (2) (Item E-8, Appendix E)
M1079 Window Sash Side Glazing Seal (2) (Item E-8, Appendix E)

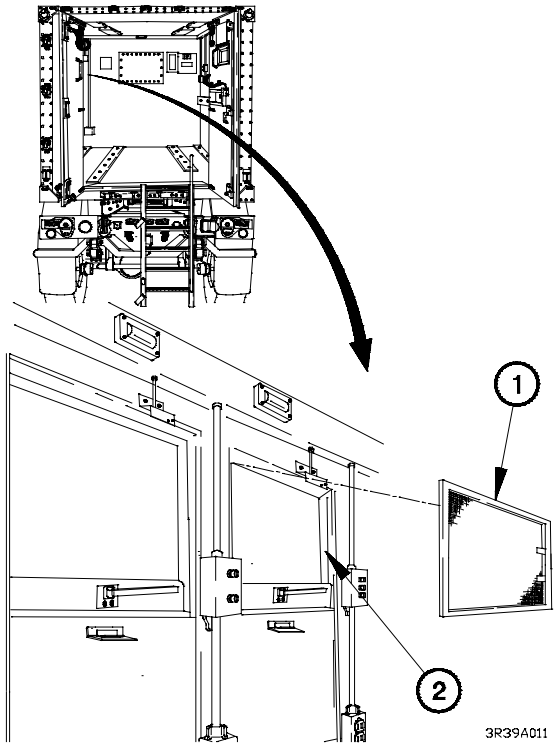
Personnel Required
(2)

a. Removal.

NOTE

- Van body serial numbers 001 through 190 are equipped with five window sash assemblies 30 in. (760 mm) tall. Van bodies serial numbers 191 and higher are equipped with four window sash assemblies 14 in. (355 mm) tall.
- All window sash assemblies are removed the same way. Left front window sash assembly on van body serial number 191 shown.

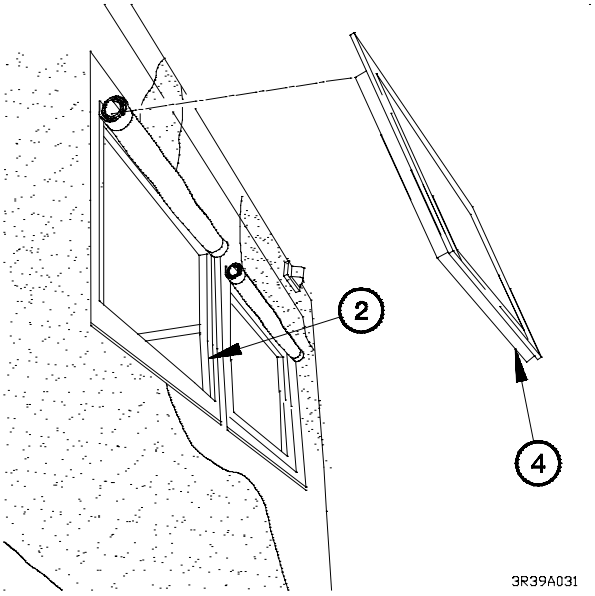
(1) Remove screen (1) from window main frame (2).

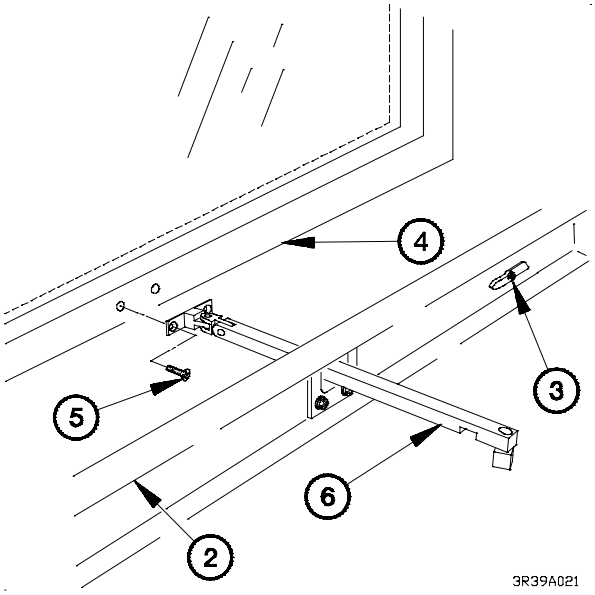


(2) Open transport lock (3) on window main frame (2).

(3) Open window sash assembly (4).

(4) Remove two screws (5) and prop (6) from window sash assembly (4).





(5) Remove window sash assembly (4) from window main frame (2).

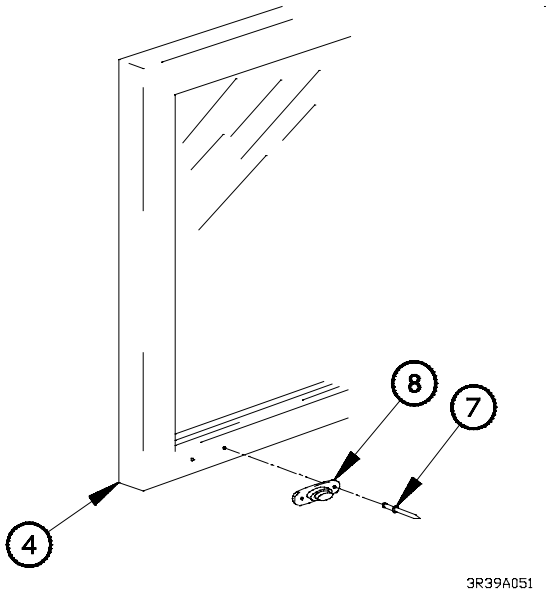
WARNING

Wear appropriate eye protection when removing rivets. Failure to comply may result in injury to personnel.

NOTE

Perform step (6) on van bodies serial number 191 and higher.

(6) Remove four rivets (7) and two stud base fasteners (8) from window sash assembly (4).



16-39. M1079 WINDOW SASH ASSEMBLY REPLACEMENT (CONT)

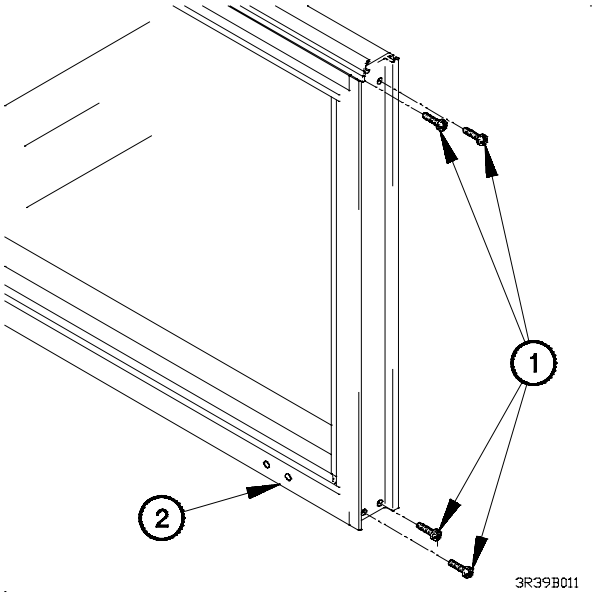
b. Disassembly.

WARNING

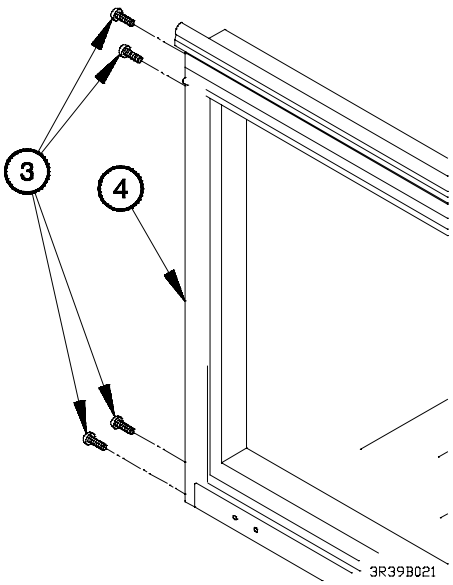
Goggles and gloves must be worn when working with glass. Failure to comply may result in injury to personnel.

NOTE

- Van body serial numbers 001 through 190 are equipped with window sash assemblies 30 in. (760 mm) tall. Van bodies serial number 191 and higher are equipped with window sash assemblies 14 in. (355 mm) tall.
- All window sash assemblies are dis-assembled the same way. Van body serial number 191 window sash assembly shown.



(1) Remove four screws (1) from RH jamb sash (2).

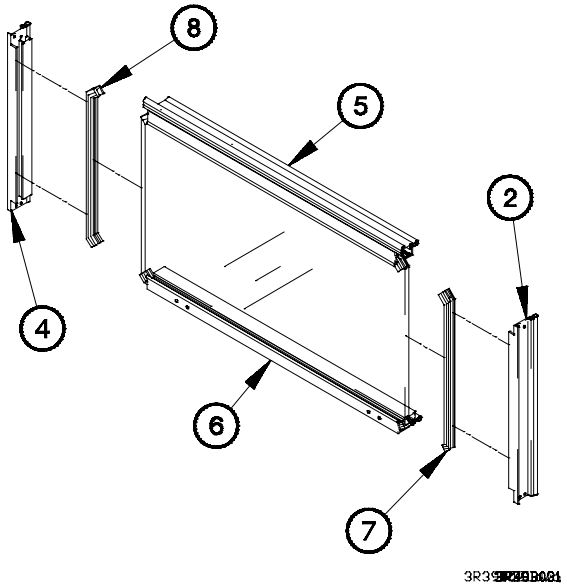


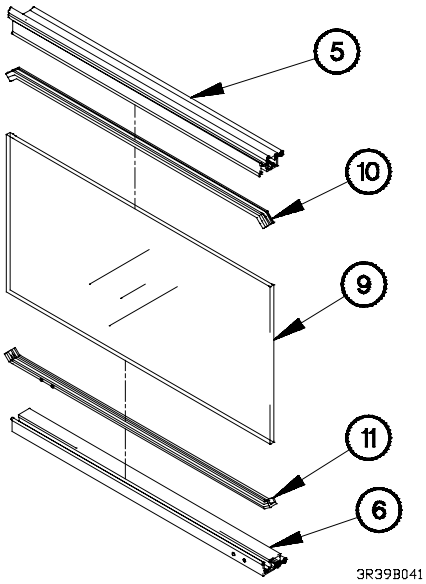
(2) Remove four screws (3) from LH jamb sash (4).

(3) Remove RH jamb sash (2) from header sash (5) and bottom sash (6).

(4) Remove LH jamb sash (4) from header sash (5) and bottom sash (6).

(5) Remove glazing seals (7 and 8) from RH and LH jamb sashes (2 and 4). Discard glazing seals.





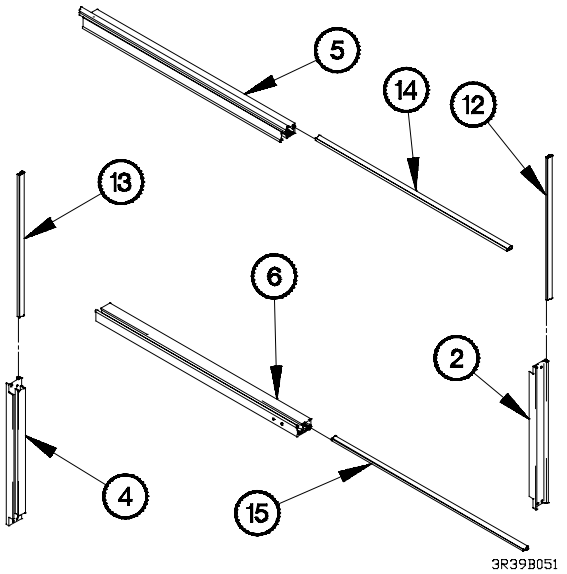
(6) Remove header sash (5) from glass (9).

(7) Remove bottom sash (6) from glass (9).

(8) Remove glazing seals (10 and 11) from header sash (5) and bottom sash (6). Discard glazing seals.

(9) Remove weather seals (12 and 13) from RH and LH jamb sashes (2 and 4). Discard weather seals.

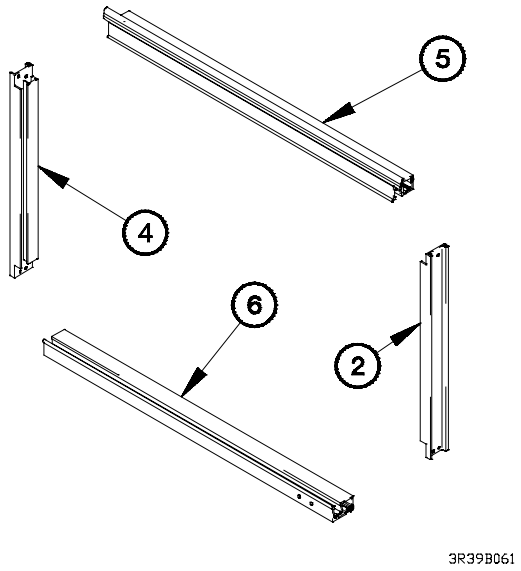
(10) Remove weather seals (14 and 15) from header sash (5) and bottom sash (6). Discard weather seals.



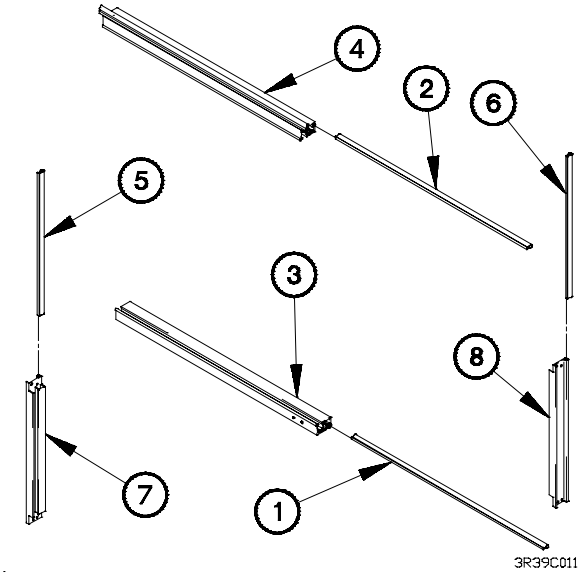
16-39. M1079 WINDOW SASH ASSEMBLY REPLACEMENT (CONT)

(11) Remove adhesive from RH and LH jamb sashes (2 and 4).

(12) Remove adhesive from header sash (5) and bottom sash (6).



c. Assembly.



WARNING

Goggles and gloves must be worn when working with glass. Failure to comply may result in injury to personnel.

NOTE

- Van body serial numbers 001 through 190 are equipped with window sash assemblies 30 in. (760 mm) tall. Van bodies serial number 191 and higher are equipped with window sash assemblies 14 in. (355 mm) tall.
- All window sash assemblies are assembled the same way. Van body serial number 191 window sash assembly shown.

(1) Install weather seals (1 and 2) in bottom sash (3) and header sash (4).

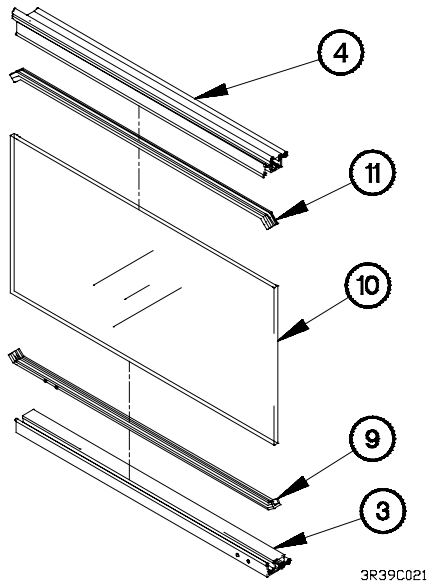
(2) Install weather seals (5 and 6) in LH and RH jamb sashes (7 and 8).

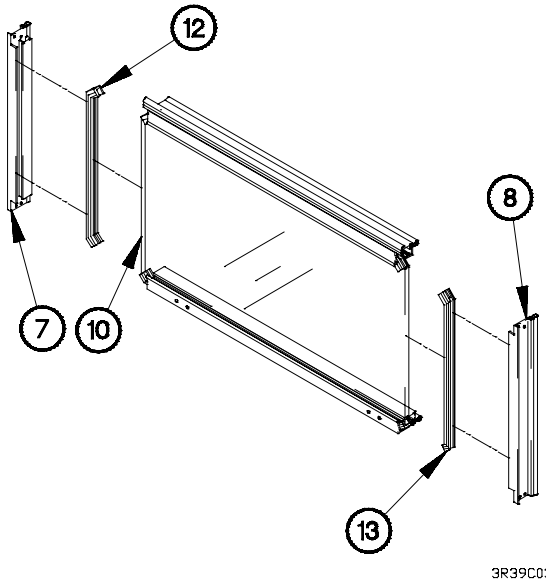
(3) Install glazing seal (9) on bottom edge of glass (10).

(4) Install bottom sash (3) on glazing seal (9).

(5) Install glazing seal (11) on top edge of glass (10).

(6) Install header sash (4) on glazing seal (11).



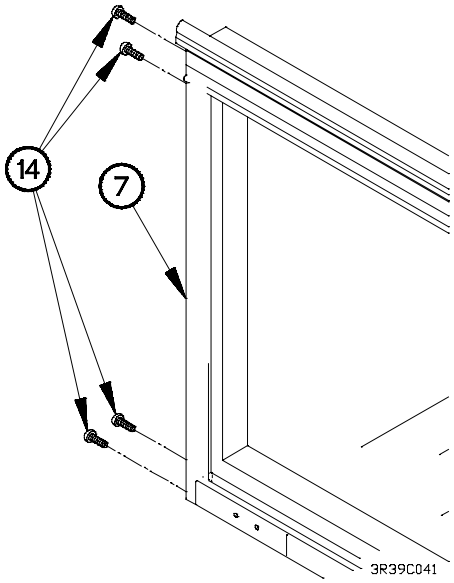


(7) Install glazing seal (12) on left edge of glass (10).

(8) Install LH jamb sash (7) on glazing seal (12).

(9) Install glazing seal (13) on right edge of glass (10).

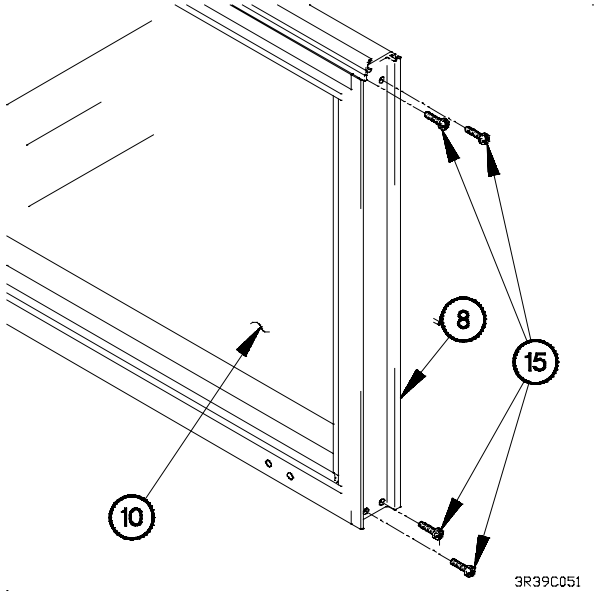
(10) Install RH jamb sash (8) on glazing seal (13).



(11) Install four screws (14) in LH jamb sash (7).

16-39. M1079 WINDOW SASH ASSEMBLY REPLACEMENT (CONT)

(12) Install four screws (15) in RH jamb sash (8).

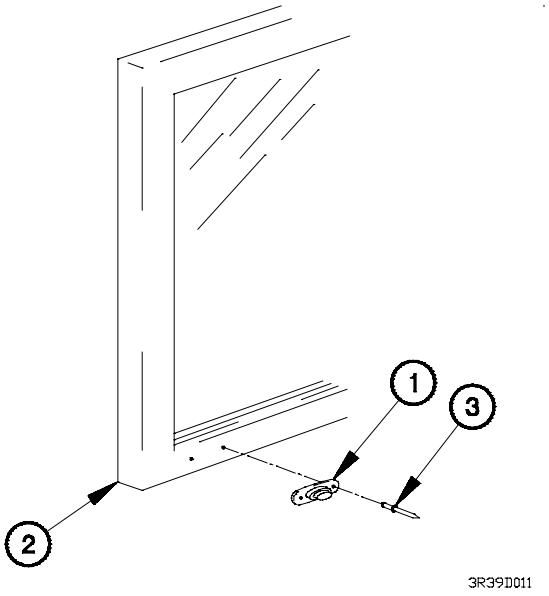


WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

(13) Apply adhesive completely around outside edge of glass (10).

d. Installation.

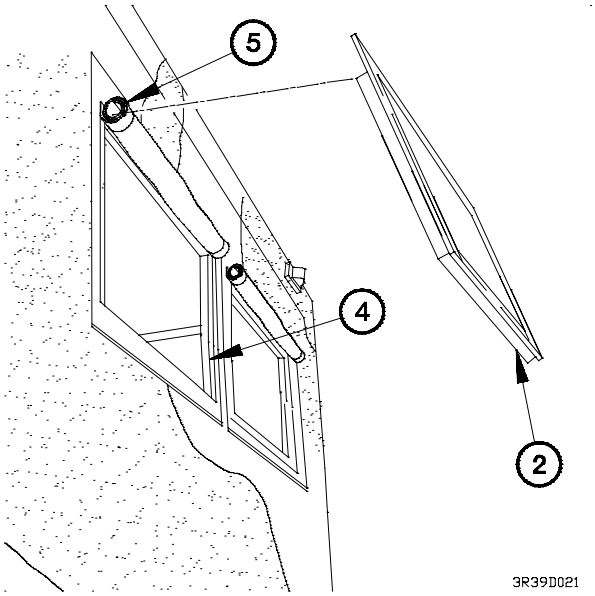


NOTE

- Van body serial numbers 001 through 190 are equipped with five window sash assemblies 30 in. (760 mm) tall. Van bodies serial number 191 and higher are equipped with four window sash assemblies 14 in. (355 mm) tall.
- All window sash assemblies are installed the same way. Left front window sash assembly on van body serial number 191 shown.
- Perform step (1) on van bodies serial number 191 and higher.

(1) Install two stud base fasteners (1) on window sash (2) with four rivets (3).

(2) Install window sash assembly (2) in window main frame (4).



NOTE

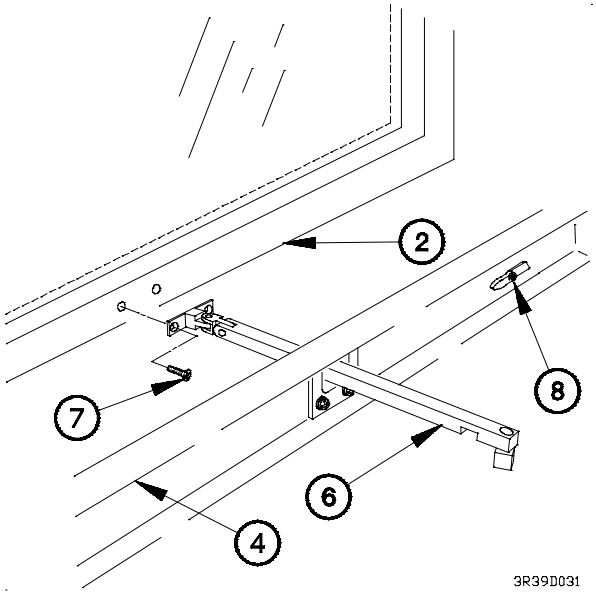
- Steps (3) and (4) require the aid of an assistant.
- Perform step (3) on van bodies serial number 191 and higher.

(3) Lift lower edge of window cover (5).

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

(4) Apply adhesive between top edge of window sash assembly (2) and window main frame (4).



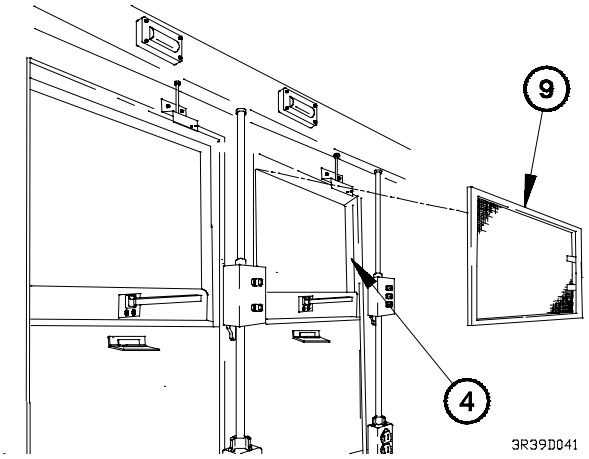
(5) Install prop (6) on window sash assembly (2) with two screws (7).

(6) Close window sash assembly (2).

(7) Close transport lock (8) on window main frame (4).

16-39. M1079 WINDOW SASH ASSEMBLY REPLACEMENT (CONT)

(8) Install screen (9) in window main frame (4).



c. Follow-On Maintenance.

(1) Lower window cover (van bodies serial number 191 and higher) (TM 9-2320-365-10).

(2) Close LH and RH doors (TM 9-2320-365-10).

End of Task.

16-40. M1079 WINDOW MAIN FRAME REPLACEMENT

This task covers:

a. Removal
b. Installation
c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
Window sash assembly removed (para 16-39).
Latch and prop removed (para 16-38).
Window cover removed (van bodies serial number 191 and higher) (para 16-41).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Tool Kit, Blind Rivet (Item 43, Appendix C)
Drill, Portable, Electric (Item 7, Appendix C)
Drill Set, Twist (Item 6, Appendix C)
Goggles, Industrial (Item 15, Appendix C)

Materials/Parts
Sealing Compound (Item 67, Appendix D)
Rivet, Blind (22) (van body serial numbers 001 through 190) (Item 229, Appendix G)
Rivet, Blind (11) (van bodies serial number 191 and higher) (Item 229, Appendix G)
Rivet, Blind (5) (van bodies serial number 191 and higher) (Item 234, Appendix G)

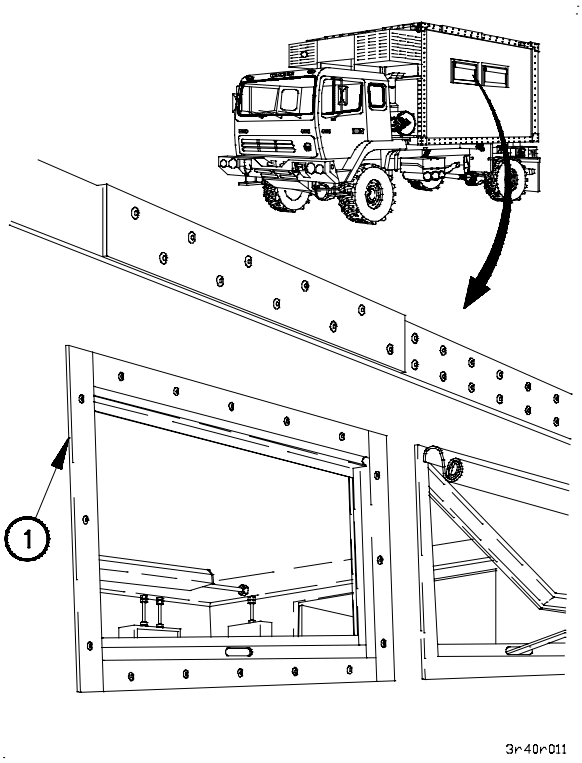
Personnel Required
(2)

a. Removal.

NOTE

- Van body serial numbers 001 through 190 are equipped with five windows 30 in. (760 mm) tall. Van bodies serial number 191 and higher are equipped with four windows 14 in. (355 mm) tall.
- All windows main frames are removed the same way. Left front window main frame on van body serial number 191 shown.

(1) Remove sealing compound from edges of window main frame (1).



16-40. M1079 WINDOW MAIN FRAME REPLACEMENT (CONT)

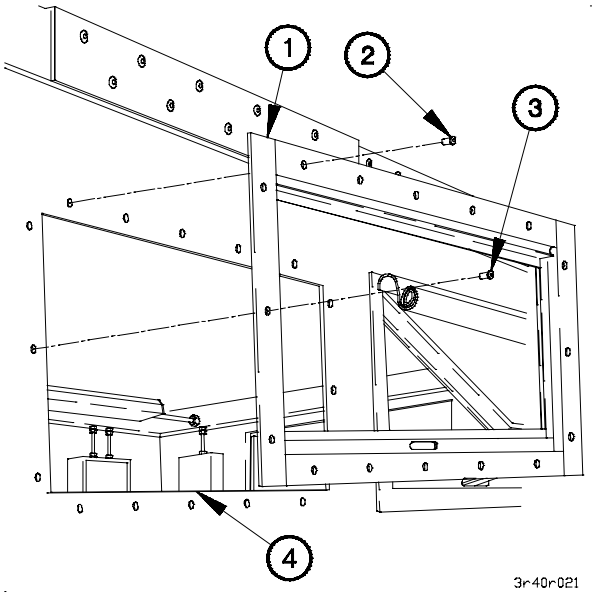
WARNING

Wear appropriate eye protection when removing rivets. Failure to comply may result in injury to personnel.

NOTE

Perform steps (2) and (3) on van bodies serial number 191 and higher.

(2) Remove five rivets (2) from window main frame (1).



CAUTION

Use care when removing window main frame from van body. Start at one corner and slowly work frame loose. Failure to comply may result in damage to equipment.

NOTE

Step (3) requires the aid of an assistant.

(3) Remove 11 rivets (3) and window main frame (1) from van body (4).

NOTE

- Perform step (4) on van body serial numbers 001 through 190.
- Step (4) requires the aid of an assistant.

(4) Remove 22 rivets (3) and window main frame (1) from van body (4).

b. Installation.

WARNING

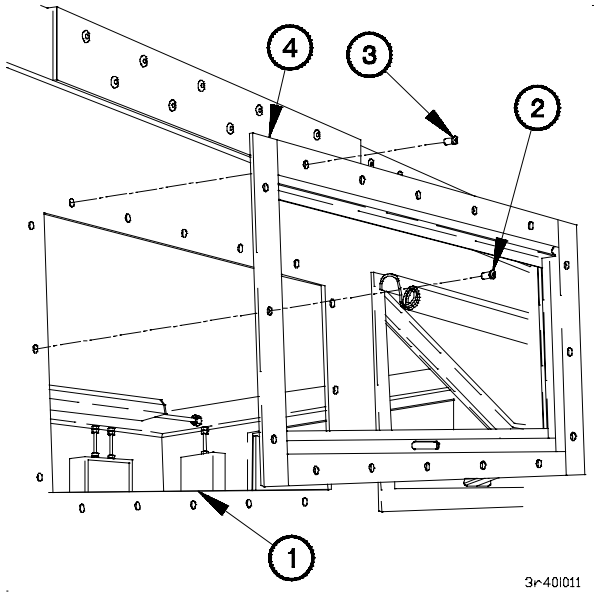
Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

CAUTION

Coat all rivets with sealing compound prior to installation. Failure to comply may result in damage to equipment.

NOTE

- Van body serial numbers 001 through 190 are equipped with five windows 30 in. (760 mm) tall. Van bodies serial numbers 191 and higher are equipped with four windows 14 in. (355 mm) tall.
- All windows main frames are installed the same way. Left front window main frame on van body serial number 191 shown.



(1) Apply sealing compound around window opening in van body (1).

NOTE

Perform steps (2) through (4) on van bodies serial number 191 and higher.

(2) Apply sealing compound to 11 rivets (2) and five rivets (3).

(3) Install window main frame (4) in van body (1) with 11 rivets (2).

(4) Install five rivets (3) in window main frame (4).

NOTE

Perform steps (5) and (6) on van body serial numbers 001 through 190.

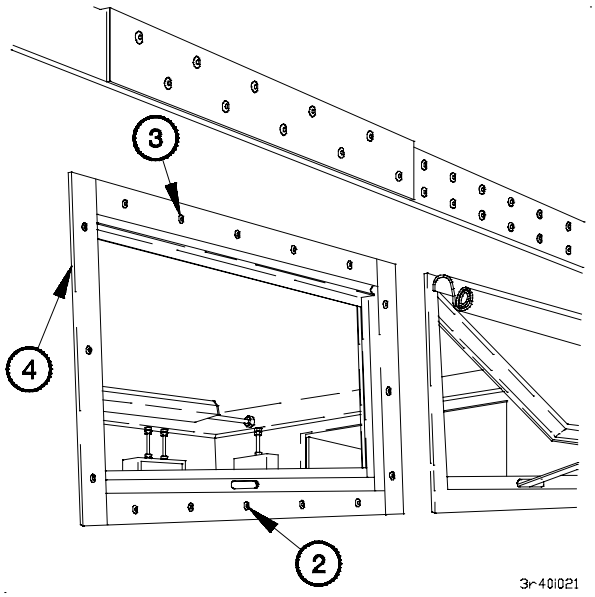
(5) Apply sealing compound to 22 rivets (2).

(6) Install window main frame (4) in van body (1) with 22 rivets (2).

16-40. M1079 WINDOW MAIN FRAME REPLACEMENT (CONT)

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.



(7) Apply sealing compound around edges of window main frame (4).

NOTE

Perform step (8) on van body serial numbers 001 through 190.

(8) Apply sealing compound on heads of rivets (2).

NOTE

Perform step (9) on van bodies serial number 190 and higher.

(9) Apply sealing compound on heads of rivets (2 and 3).

c. Follow-On Maintenance.

(1) Install window cover (van bodies serial number 191 and higher) (para 16-41).

(2) Install window latch and prop (para 16-38).

(3) Install window sash assembly (para 16-39).

End of Task.

16-41. M1079 WINDOW COVER REPLACEMENT

This task covers:

a. Removal

b. Installation

INITIAL SETUP

Equipment Conditions
Engine shut down (TM 9-2320-365-10).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Drill, Portable, Electric (Item 7, Appendix C)
Drill Set, Twist (Item 6, Appendix C)

Tools and Specials Tools (Cont)
Goggles, Industrial (Item 15, Appendix C)
Tool Kit, Blind Rivet (Item 43, Appendix C)

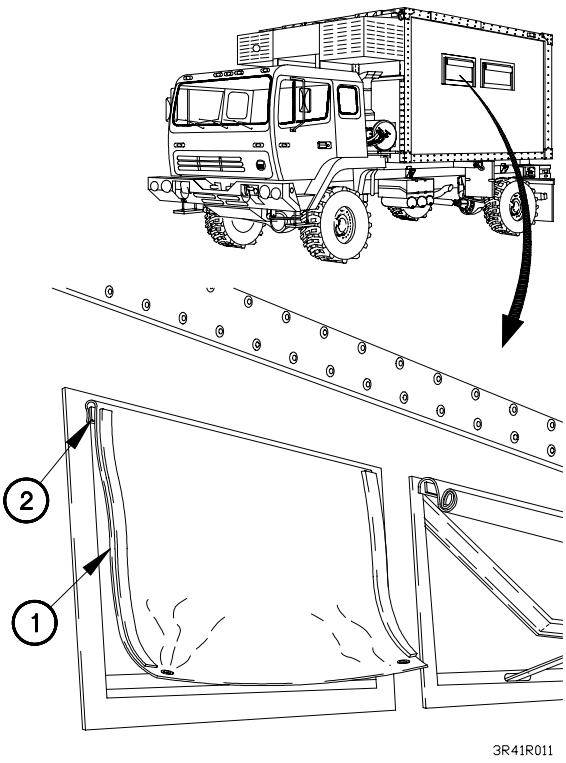
Materials/Parts
Sealing Compound (Item 67, Appendix D)
Rivet, Blind (6) (Item 226, Appendix G)

a. Removal.

NOTE

All window covers are removed the same way. Left front window cover shown.

(1) Remove sealing compound from top edge of window cover (1) and edges of retainer (2).



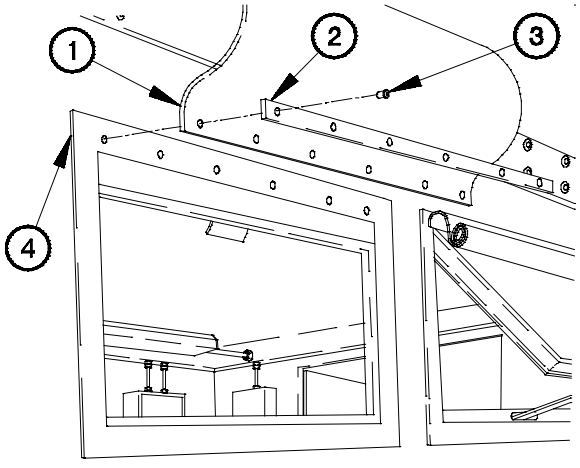
(2) Position window cover (1) to allow access to retainer (2).

WARNING

Wear appropriate eye protection when removing rivets. Failure to comply may result in injury to personnel.

(3) Remove six rivets (3), retainer (2), and window cover (1) from window main frame (4).

(4) Remove sealing compound from top edge of window main frame (4).

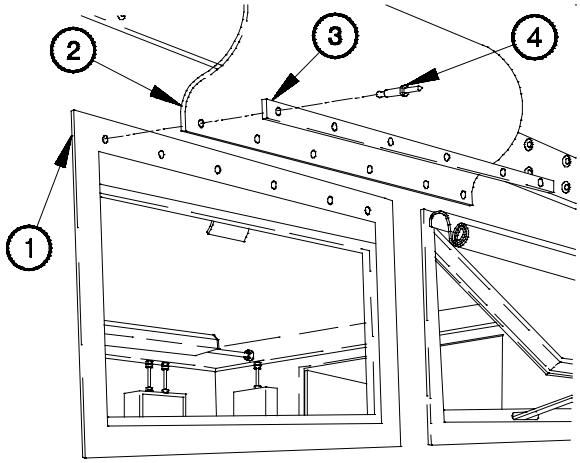


16-41. M1079 WINDOW COVER REPLACEMENT (CONT)

b. Installation.

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.



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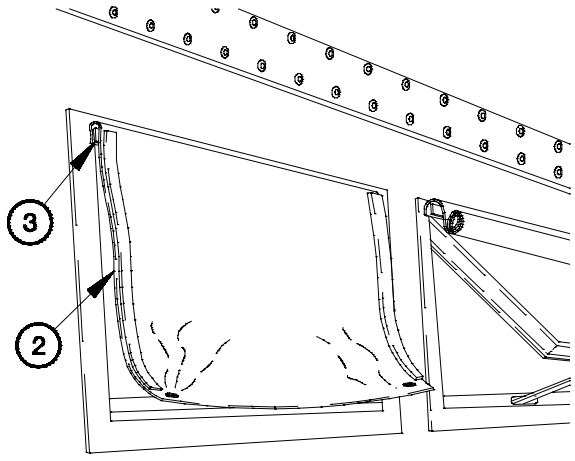
(1) Apply sealing compound to top edge of window main frame (1).

(2) Install window cover (2) and retainer (3) on window main frame (1) with six rivets (4).



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(3) Position window cover (2) to allow access to top edge of window cover.

(4) Apply sealing compound to top edge of window cover (2) and edges of retainer (3).

End of Task.

16-42. M1079 TAPPING PLATE REPLACEMENT

This task covers:

a. Removal
b. Installation
c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
Engine shut down (TM 9-2320-365-10).
LH and RH doors opened (115 degrees) (TM 9-2320-365-10).

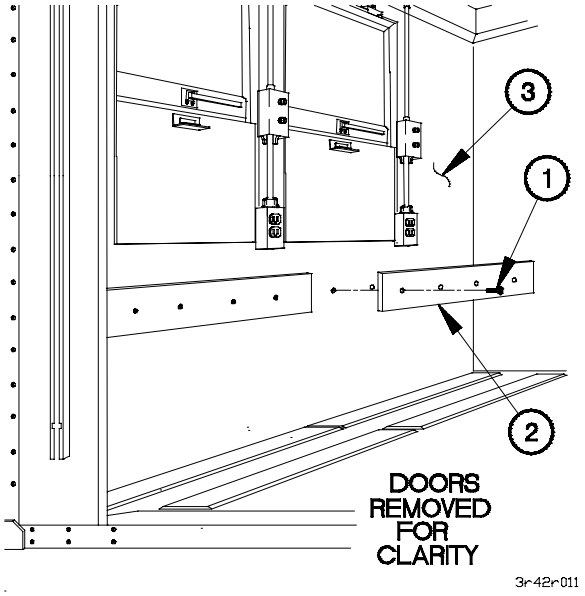
Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Screwdriver Attachment, Socket Wrench (Item 42, Appendix B)

Personnel Required
(3)

a. Removal.

NOTE

- Van bodies serial number 191 and higher are equipped with tapping plates on the floor and side walls for mounting accessory items.
- Van body serial numbers 001 through 190 can be equipped with tapping plates on the floor for mounting accessory items.
- Removal of floor tapping plates requires the aid of an assistant.
- Removal of side wall tapping plates requires the aid of two assistants.
- All tapping plates are attached by either three, four or five screws. Van body serial number 191 left side wall front tapping plate shown.



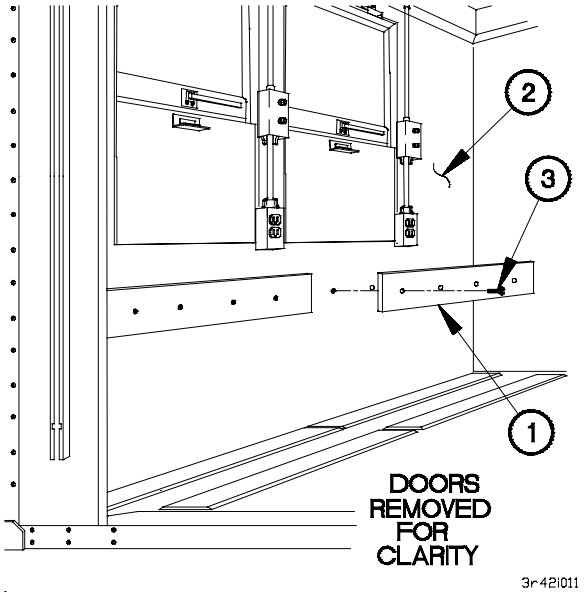
Remove four screws (1) and tapping plate (2) from van body left side wall (3).

16-42. M1079 TAPPING PLATE REPLACEMENT (CONT)

b. Installation.

NOTE

- Van bodies serial number 191 and higher are equipped with tapping plates on the floor and side walls for mounting accessory items.
- Van body serial numbers 001 through 190 can be equipped with tapping plates on the floor for mounting accessory items.
- Installation of floor tapping plates requires the aid of an assistant.
- Installation of side wall tapping plates requires the aid of two assistants.
- All tapping plates are attached by either three, four or five screws. Van body serial number 191 left side wall front tapping plate shown.



Install tapping plate (1) on van body left side wall (2) with four screws (3).

c. Follow-On Maintenance.

Close LH and RH doors (TM 9-2320-365-10).

End of Task.

16-43. M1079 VAN BODY FLOOR TAPPING PLATE INITIAL INSTALLATION (SERIAL NUMBERS 001 THROUGH 190)

This task covers:

a. Floor Tapping Plate Initial Installation

b. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
Engine shut down (TM 9-2320-365-10).
LH and RH doors opened (115 degrees) (TM 9-2320-365-10).
Any loose equipment removed (TM 9-2320-365-10).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Goggles, Industrial (Item 15, Appendix C)
Drill Set, Twist (Item 6, Appendix C)
Drill, Portable, Electric (Item 7, Appendix C)
Tool Kit, Blind Rivet (Item 43, Appendix C)

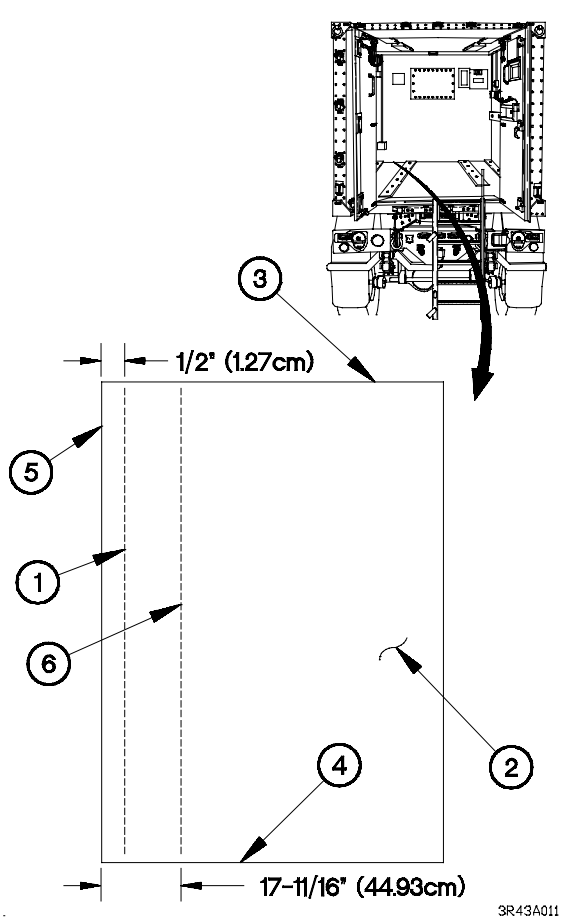
Materials/Parts
Nut, Blind Rivet (26) (Item 111, Appendix G)
Screw, Machine (26) (Item 240, Appendix G)
Sealing Compound (Item 67, Appendix D)

Personnel Required
(2)

a. Floor Tapping Plate Initial Installation.

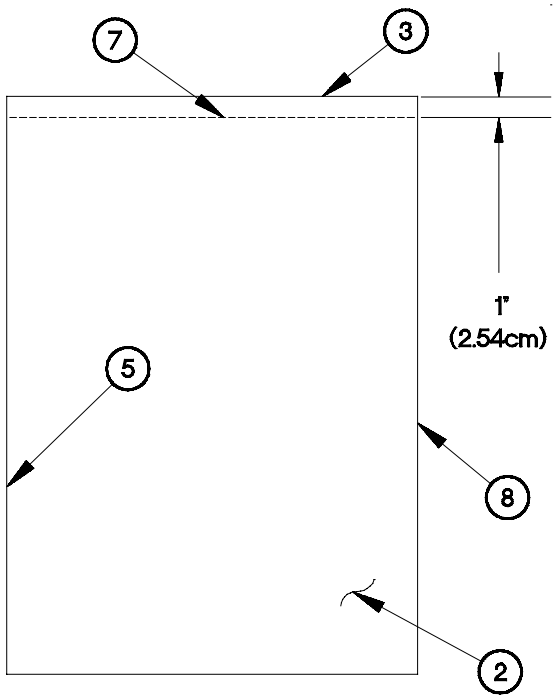
(1) Measure and mark a line (1) on van body floor (2) from van body front wall (3) to van body rear wall (4) 1/2 in. (1.25 cm) from van body left side wall (5).

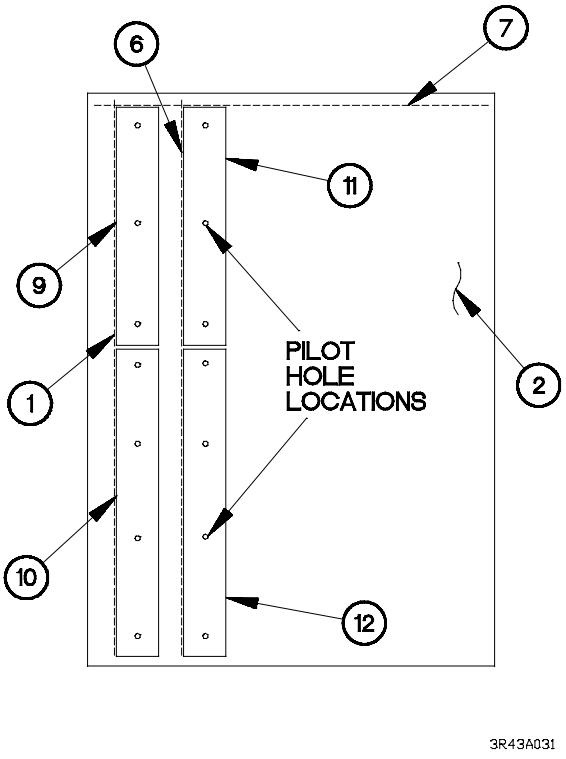
(2) Measure and mark a line (6) on van body floor (2) from van body front wall (3) to van body rear wall (4) 17-11/16 in. (44.9 cm) from van body left side wall (5).



16-43. M1079 VAN BODY FLOOR TAPPING PLATE INITIAL INSTALLATION (SERIAL NUMBERS 001 THROUGH 190) (CONT)

(3) Measure and mark a line (7) on van body floor (2) from van body left side wall (5) to van body right side wall (8) 1 in. (2.54 cm) from van body front wall (3).





NOTE

Step (4) requires the aid of an assistant.

(4) Position tapping plates (9 and 10) on van body floor (2) with left edges of tapping plates aligned with line (1) and front edge of tapping plate (9) aligned with line (7).

(5) Mark locations for drilling pilot holes.

NOTE

Step (6) requires the aid of an assistant.

(6) Position tapping plates (11 and 12) on van body floor (2) with left edges of tapping plates aligned with line (6) and front edge of tapping plate (11) aligned with line (7).

(7) Mark locations for drilling pilot holes.

NOTE

Steps (8) and (9) require the aid of an assistant.

(8) Remove tapping plates (11 and 12) from van body floor (2).

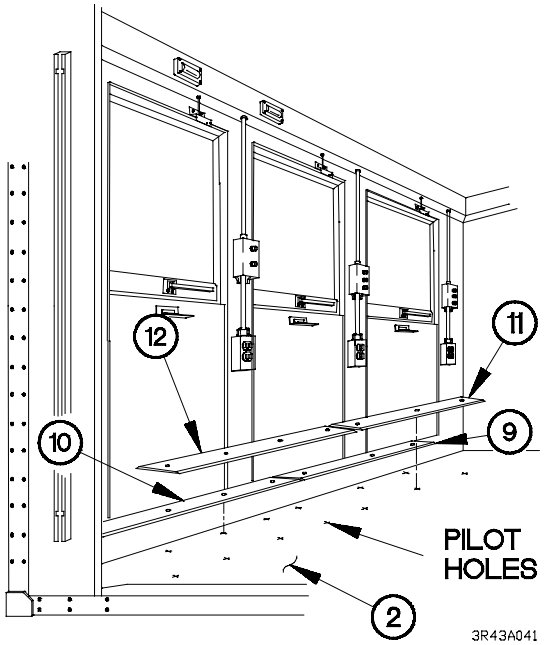
(9) Remove tapping plates (9 and 10) from van body floor (2).

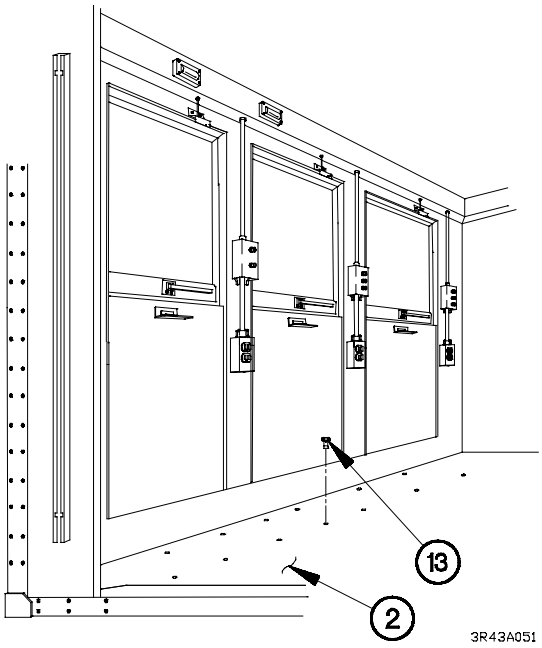
WARNING

Wear appropriate eye protection when drilling holes. Failure to comply may result in injury to personnel.

(10) Drill pilot holes at locations marked in steps (5) and (7).

(11) Enlarge pilot holes to 1/2 in. (1.27 cm).





WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

CAUTION

Coat all rivet nuts with sealing compound prior to installation. Failure to comply may result in damage to equipment.

(12) Apply sealing compound to 14 blind rivet nuts (13).

(13) Install 14 blind rivet nuts (13) in van body floor (2).

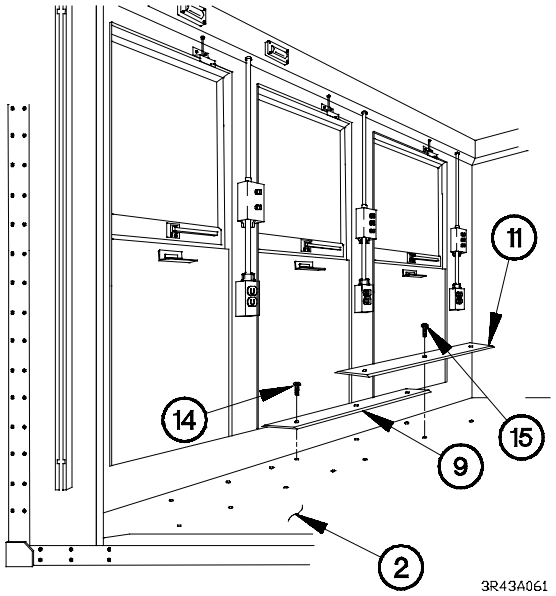
16-43. M1079 VAN BODY FLOOR TAPPING PLATE INITIAL INSTALLATION (SERIAL NUMBERS 001 THROUGH 190) (CONT)

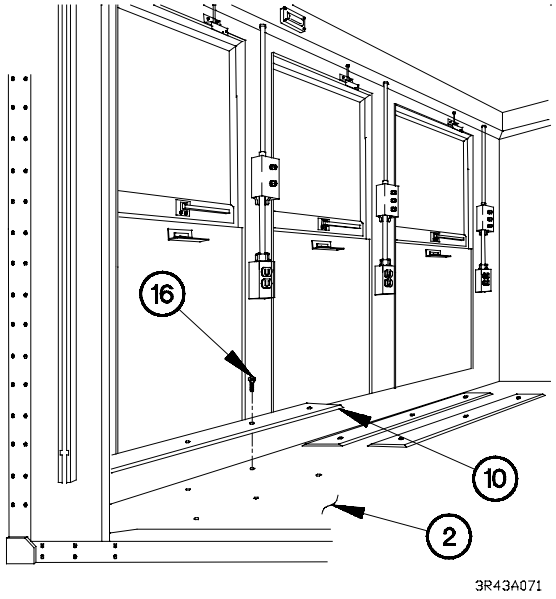
NOTE

Steps (14) through (17) require the aid of an assistant.

(14) Install tapping plate (9) on van body floor with three screws (14).

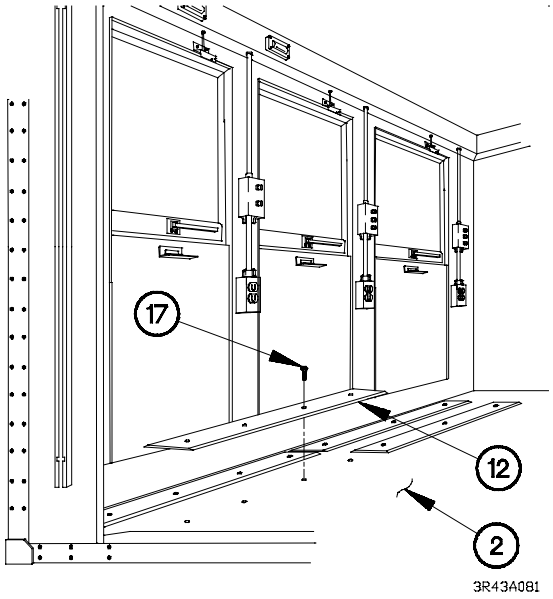
(15) Install tapping plate (11) on van body floor with three screws (15).

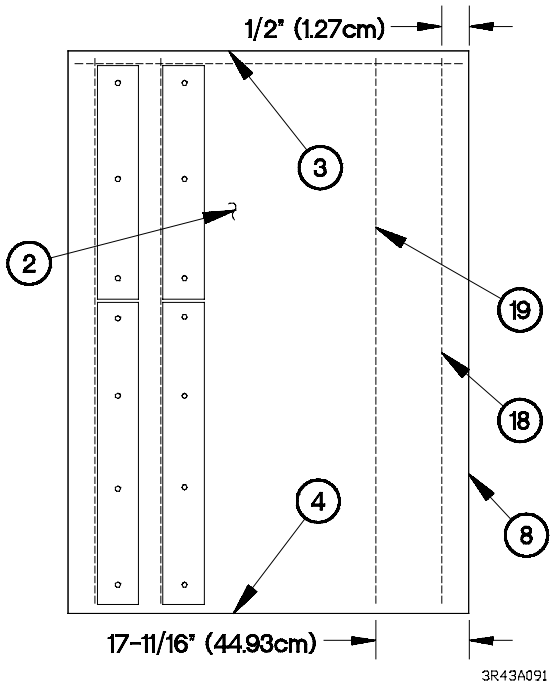




(16) Install tapping plate (10) on van body floor (2) with four screws (16).

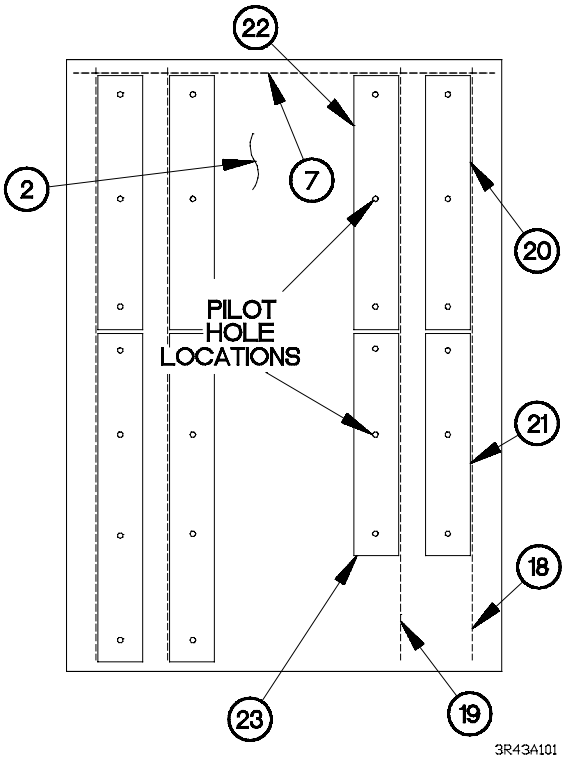
(17) Install tapping plate (12) on van body floor (2) with four screws (17).





(18) Measure and mark a line (18) on van body floor (2) from van body front wall (3) to van body rear wall (4) 1/2 in. (1.27 cm) from van body right side wall (8).

(19) Measure and mark a line (19) on van body floor (2) from van body front wall (3) to van body rear wall (4) 17-11/16 in. (44.93 cm) from van body right side wall (8).



NOTE

Step (20) requires the aid of an assistant.

(20) Position tapping plates (20 and 21) on van body floor (2) with right edges of tapping plates aligned with line (18) and front edge of tapping plate (20) aligned with line (7).

(21) Mark locations for drilling pilot holes.

NOTE

Step (22) requires the aid of an assistant.

(22) Position tapping plates (22 and 23) on van body floor (2) with right edges of tapping plates aligned with line (19) and front edge of tapping plate (22) aligned with line (7).

(23) Mark locations for drilling pilot holes.

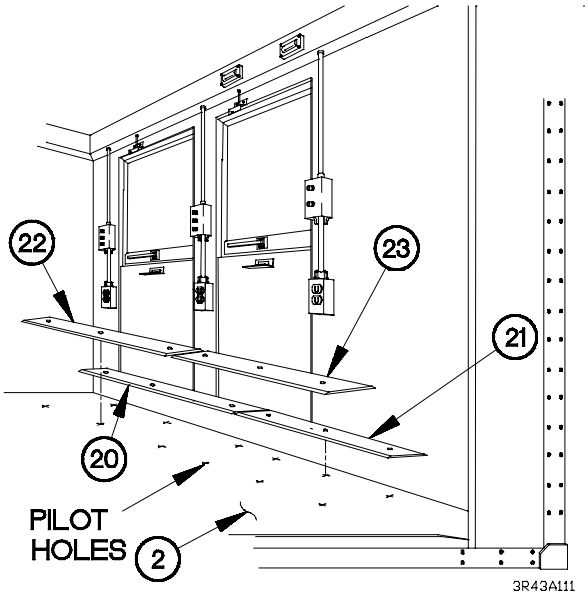
16-43. M1079 VAN BODY FLOOR TAPPING PLATE INITIAL INSTALLATION (SERIAL NUMBERS 001 THROUGH 190) (CONT)

NOTE

Steps (24) and (25) require the aid of an assistant.

(24) Remove tapping plates (22 and 23) from van body floor (2).

(25) Remove tapping plates (20 and 21) from van body floor (2).

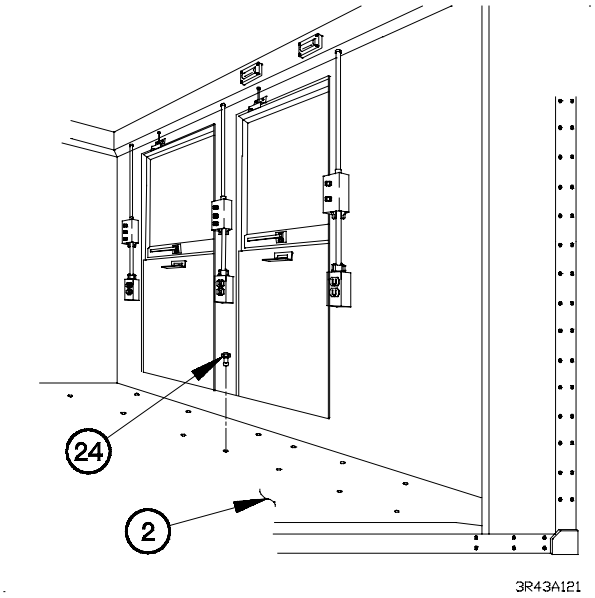


WARNING

Wear appropriate eye protection when drilling holes. Failure to comply may result in injury to personnel.

(26) Drill pilot holes at locations marked in steps (20) and (22).

(27) Enlarge pilot holes to 1/2 in. (1.27 cm).



WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

CAUTION

Coat all rivet nuts with sealing compound prior to installation. Failure to comply may result in damage to equipment.

(28) Apply sealing compound to 12 blind rivet nuts (24).

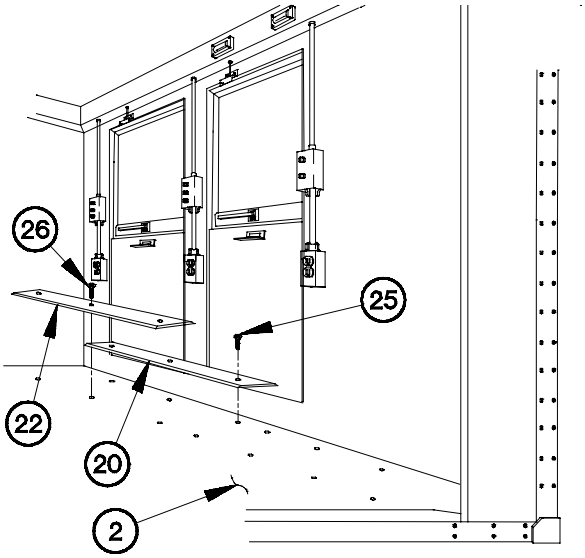
(29) Install 12 blind rivet nuts (24) in van body floor (2).

NOTE

Steps (30) through (33) require the aid of an assistant.

(30) Install tapping plate (20) on van body floor (2) with three screws (25).

(31) Install tapping plate (22) on van body floor (2) with three screws (26).



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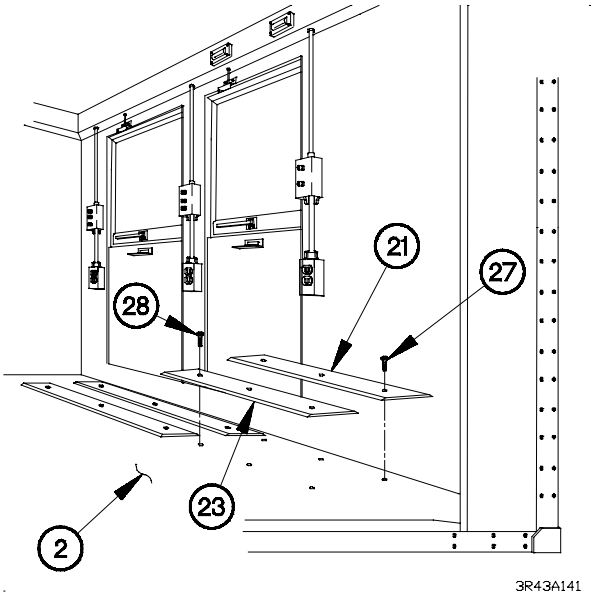

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(32) Install tapping plate (21) on van body floor (2) with three screws (27).

(33) Install tapping plate (23) on van body floor (2) with three screws (28).

b. Follow-On Maintenance.

(1) Install any loose equipment (TM 9-2320-365-10).

(2) Close LH and RH doors (TM 9-2320-365-10).

End of Task.

16-44. M1079 VAN BODY INTERIOR ACCESSORY MOUNTING LOCATIONS

This task covers:

a. Locating Hardpoints for Accessory Mounting

b. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
Engine shut down (TM 9-2320-365-10).
LH and RH doors opened (115 degrees) (TM 9-2320-365-10).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Drill Set, Twist (Item 6, Appendix C)
Drill, Portable, Electric (Item 7, Appendix C)

Tools and Special Tools (Cont)
Goggles, Industrial (Item 15, Appendix C)
Tape, Measuring (Item 40, Appendix C)

Materials/Parts
Sealing Compound (Item 67, Appendix D)

WARNING

- **Heavy objects/loads, such as tool boxes and heavy parts, must always be carried on the floor with the weight distributed as equally as possible between left and right sides of M1079 Van. Failure to comply decreases the stability of the M1079 Van and will increase the likelihood of a rollover.**
- **Heavy cabinets must always be mounted as low as possible with the weight distributed as equally as possible between left and right sides of M1079 Van. Remember to consider the weight of the items that will be stored in the cabinets. Failure to comply decreases the stability of the M1079 Van and will increase the likelihood of a rollover.**
- **Always keep in mind, when placing items inside the M1079 Van, that heavier items must always be positioned as low as possible and the weight distributed as equally as possible between left and right sides of M1079 Van. Failure to comply decreases the stability of the M1079 Van and will increase the likelihood of a rollover.**

a. Locating Hardpoints for Accessory Mounting.

CAUTION

Accessories mounted in the interior of M1079 Van bodies must be positioned so that mounting fasteners are located in structural frame members. Failure to comply may result in damage to equipment.

NOTE

- This task shows only the hardpoints suitable for supporting mounted accessories. Refer to **Figures 16-1 through 16-6. M1079 Van Body Interior Accessory Mounting Hardpoints** for details.
- The user is responsible for selecting the correct size and number of blind rivet nuts to be installed. Refer to **Table 16-1. M1079 Van Body Accessory Mounting Blind Rivet Nuts** for details.
- Alternative blind rivet nuts, not listed in **Table 16-1. M1079 Van Body Accessory Mounting Blind Rivet Nuts**, may be used if the dimension 0.415 in. (1.05 cm) falls within their grip range and maximum hole size of 0.500 in. (1.27 cm) is not exceeded.

Table 16-1. M1079 Van Body Accessory Mounting Blind Rivet Nuts

Part Number	Thread Size	Grip Range	Drill Size	Install Hole Size	
				Min.	Max.
MS27130-47	5/16-18 UNC	0.350-0.425	Z	0.413	0.423
MS27130-53	5/16-24 UNF	0.350-0.425	Z	0.413	0.423
MS27130-59	3/8-16 UNC	0.370-0.455	12.5 mm	0.490	0.500
MS27130-65	3/8-24 UNF	0.370-0.455	12.5 mm	0.490	0.500

(1) Determine appropriate mounting location for accessory. Refer to **Figure 16-1 through 16-6. M1079 Van Body Interior Accessory Mounting Hardpoints**.

WARNING

Wear appropriate eye protection when drilling holes. Failure to comply may result in injury to personnel.

(2) Drill pilot hole(s) for blind rivet nut(s).

(3) Enlarge pilot hole(s) to correct size. Refer to **Table 16-1. M1079 Van Body Accessory Mounting Blind Rivet Nuts**.

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

CAUTION

Coat all blind rivet nuts with sealing compound prior to installation. Failure to comply may result in damage to equipment.

(4) Coat blind rivet nut(s) with sealing compound.

(5) Install blind rivet nut(s) in hole(s) enlarged in step (3).

16-44. M1079 VAN BODY INTERIOR ACCESSORY MOUNTING LOCATIONS (CONT)

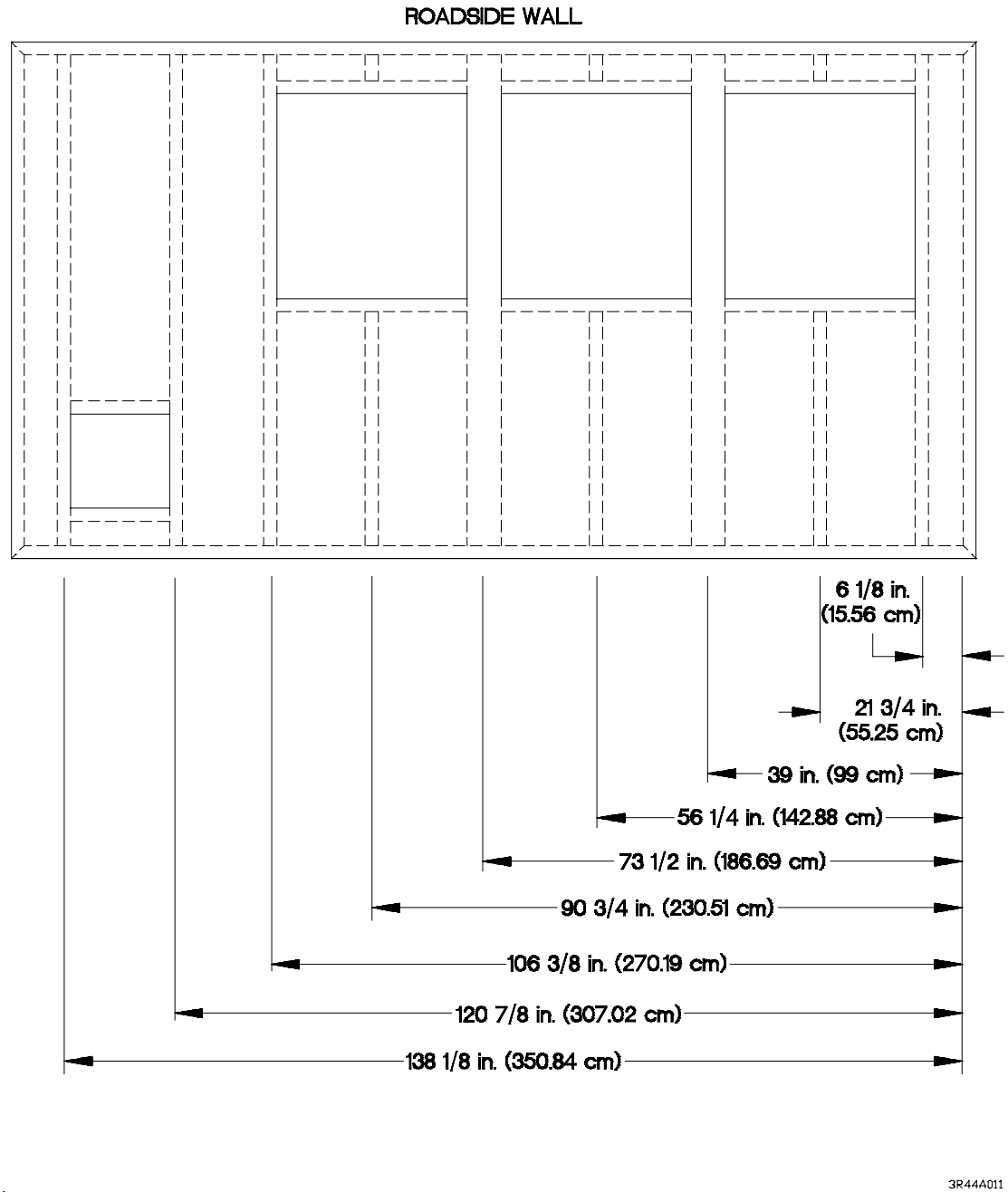


Figure 16-1. M1079 Van Body Interior Accessory Mounting Hardpoints. (Serial Numbers 001 through 190)

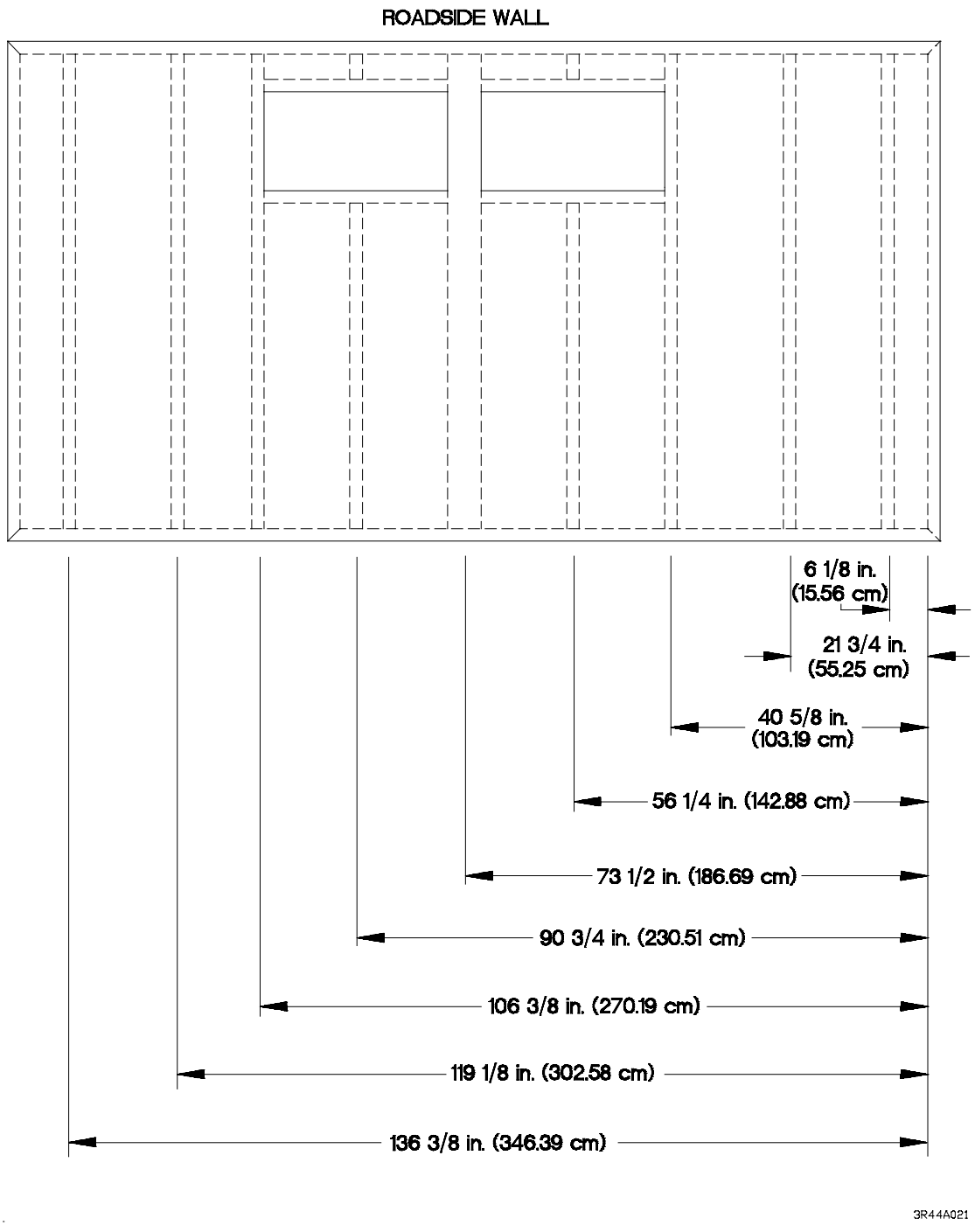


Figure 16-2. M1079 Van Body Interior Accessory Mounting Hardpoints. (Serial Numbers 191 and Higher)

16-44. M1079 VAN BODY INTERIOR ACCESSORY MOUNTING LOCATIONS (CONT)

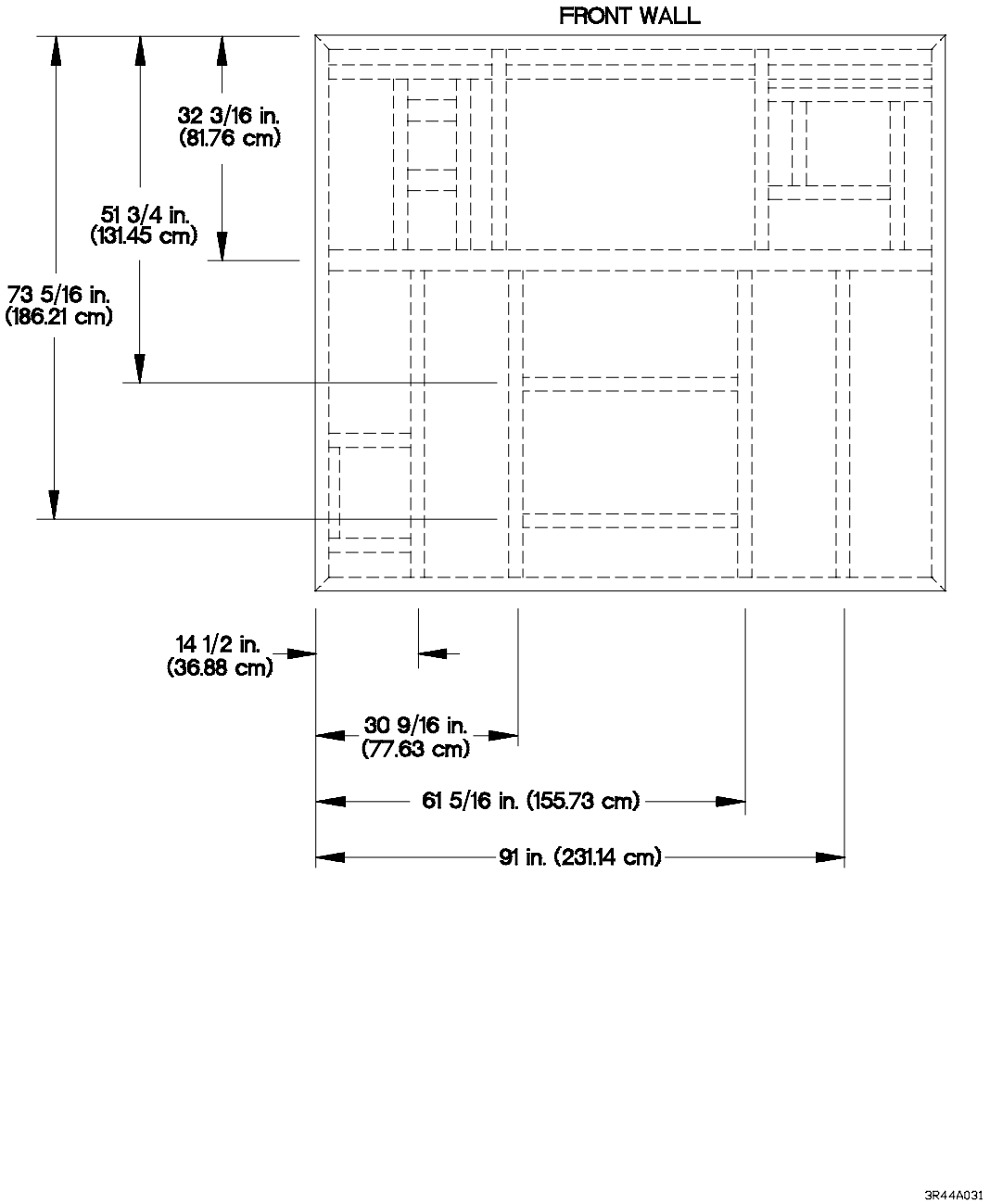


Figure 16-3. M1079 Van Body Interior Accessory Mounting Hardpoints.

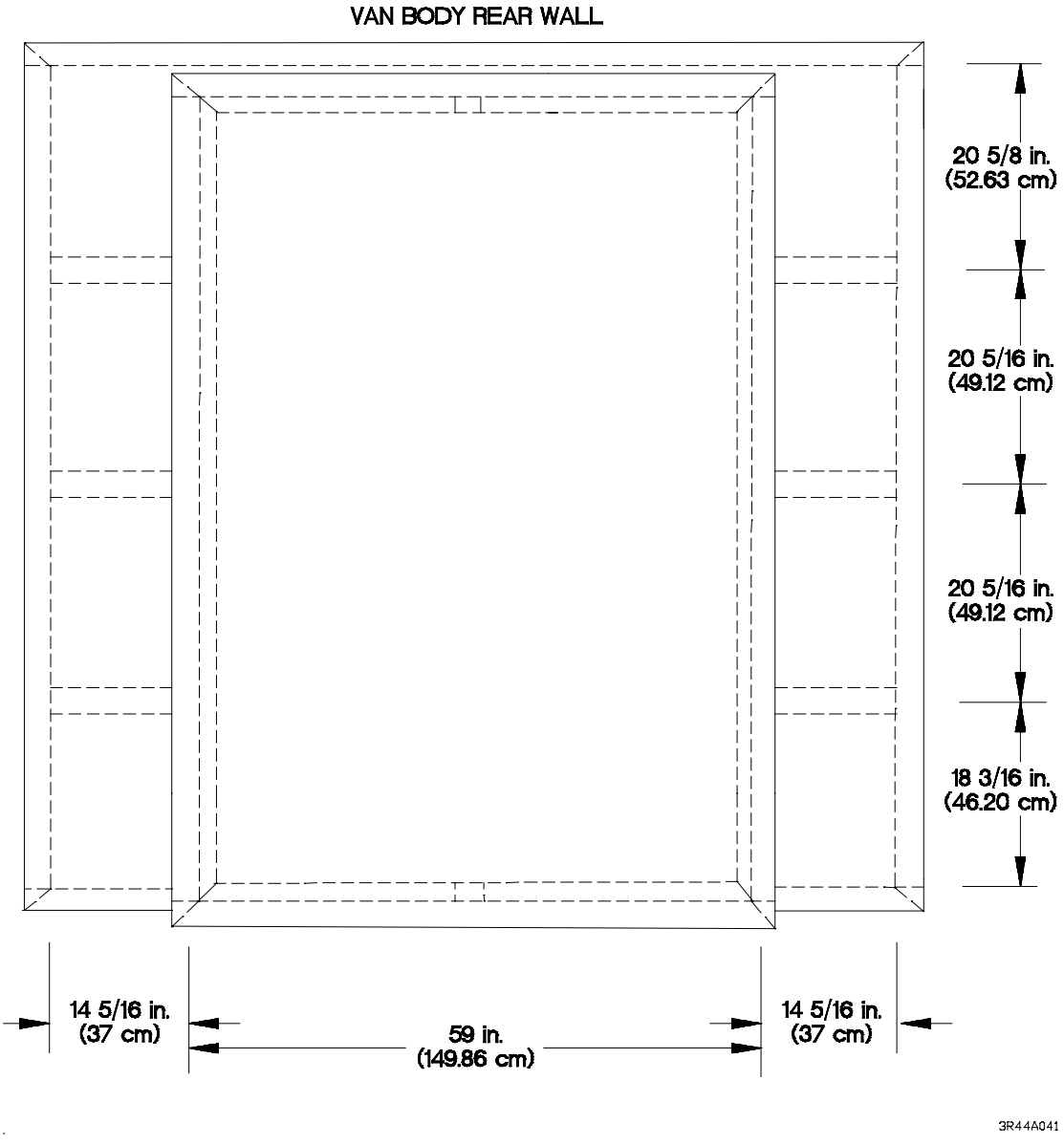


Figure 16-4. M1079 Van Body Interior Accessory Mounting Hardpoints.

16-44. M1079 VAN BODY INTERIOR ACCESSORY MOUNTING LOCATIONS (CONT)

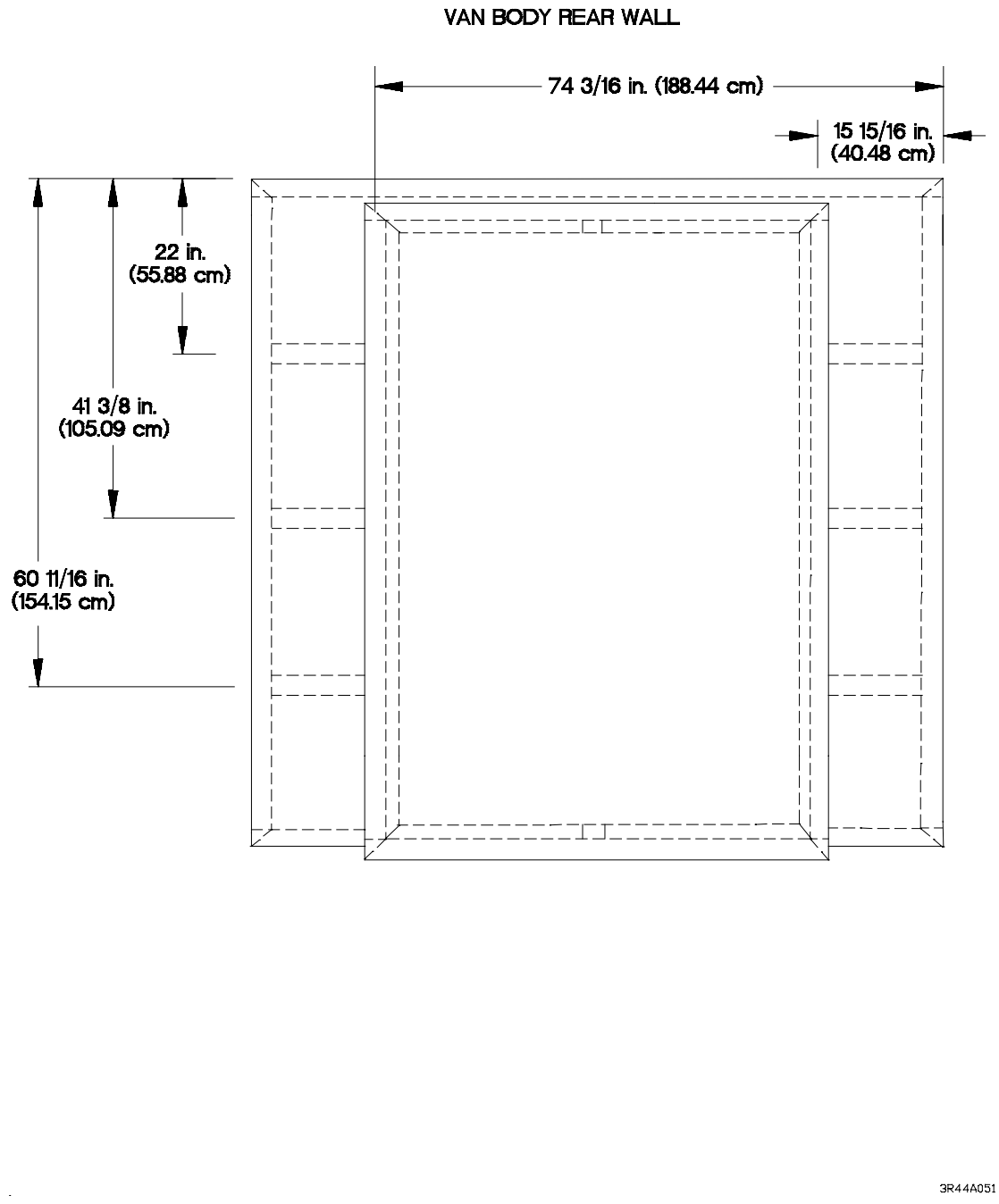


Figure 16-4. M1079 Van Body Interior Accessory Mounting Hardpoints (Cont).

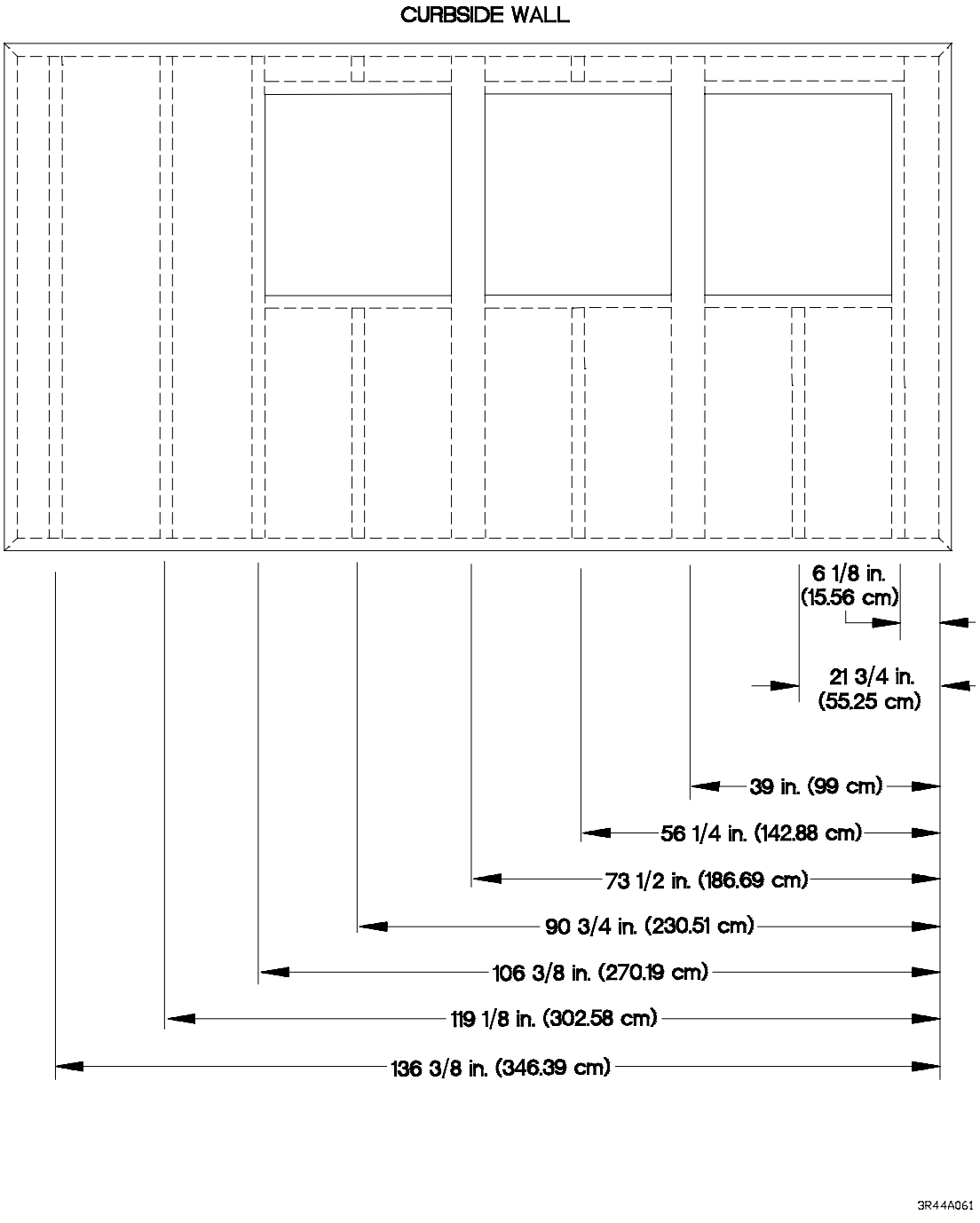


Figure 16-5. M1079 Van Body Interior Accessory Mounting Hardpoints. (Serial Numbers 001 through 190)

16-44. M1079 VAN BODY INTERIOR ACCESSORY MOUNTING LOCATIONS (CONT)

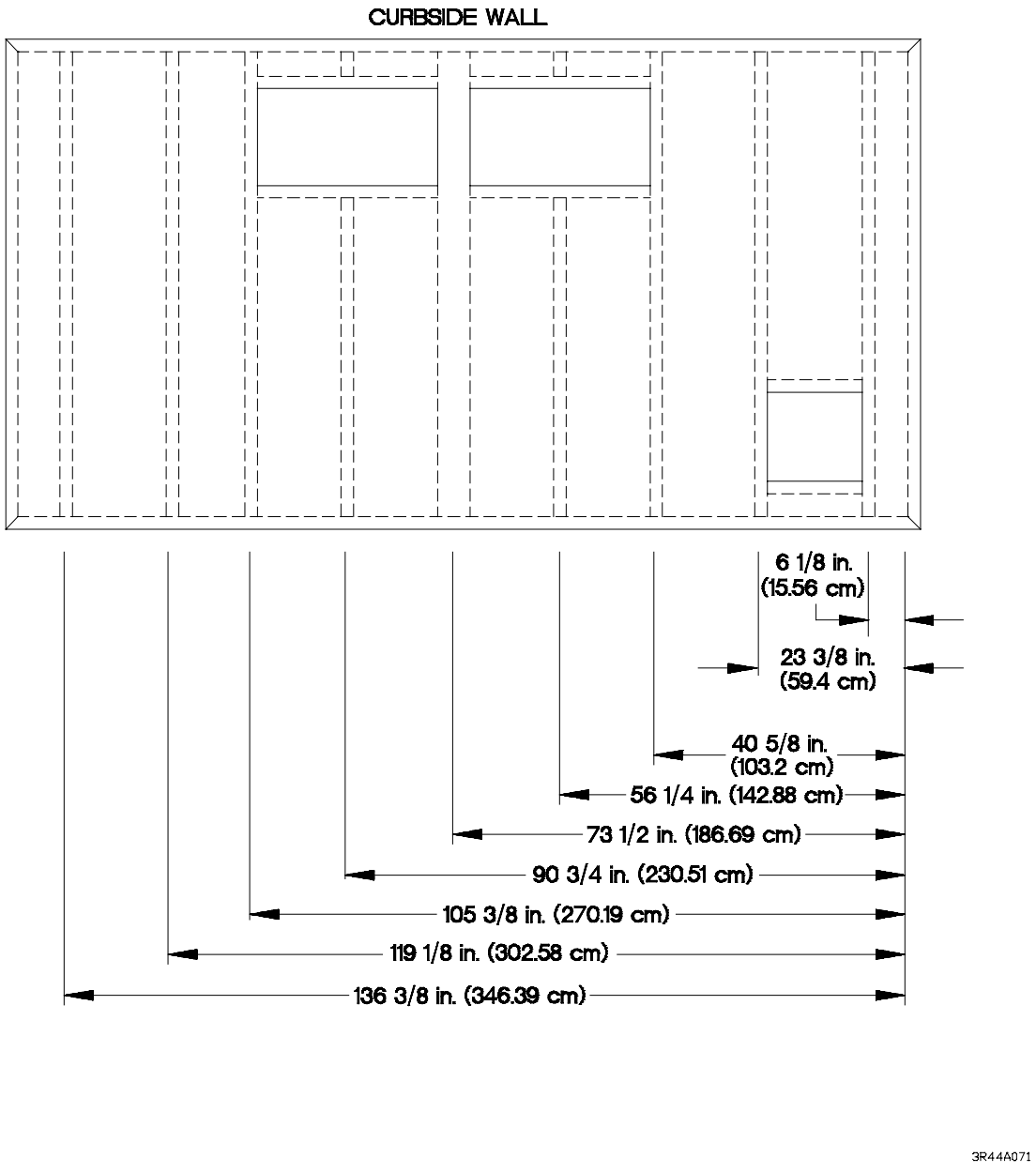


Figure 16-6. M1079 Van Body Interior Accessory Mounting Hardpoints. (Serial Numbers 191 and Higher)

b. Follow-On Maintenance.

(1) Install accessory item(s).

(2) Close LH and RH doors (TM 9-2320-365-10).

End of Task.

16-45. M1079 RACEWAY COVER REPLACEMENT

This task covers:

a. Removal
b. Installation
c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
Engine shut down (TM 9-2320-365-10).
LH and RH doors opened (115 degrees) (TM 9-2320-365-10).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)

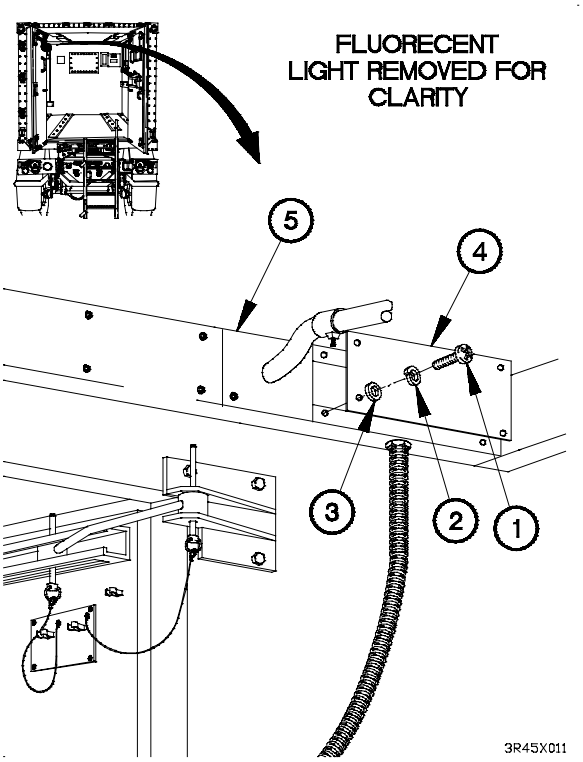
Materials/Parts
Lockwasher (4) (Item 76, Appendix G)

a. Removal.

NOTE

Removal of raceway covers with lights or conduits attached can be found in para 16-58 or 16-59.

Remove four screws (1), lockwashers (2), washers (3), and raceway cover (4) from raceway (5). Discard lockwashers.



b. Installation.

NOTE

Installation of raceway covers with lights or conduits attached can be found in para 16-58 or 16-59.

Install raceway cover (4) on raceway (5) with four washers (3), lockwashers (2), and screws (1).

c. Follow-On Maintenance.

Close LH and RH doors (TM 9-2320-365-10).

End of Task.

16-46. M1079 RACEWAY REPLACEMENT

This task covers:

a. Front Raceway Removal
b. Front Raceway Installation
c. Side Raceway Removal
d. Side Raceway Installation
e. Rear Raceway Removal
f. Rear Raceway Installation
g. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions

Front Raceway;
Heater and air conditioner covers removed, if equipped (para 16-31).
Fan switch/box, and conduit removed (para 16-54).
Heater thermostat connector removed from raceway (para 16-48).
Heater connector removed from raceway (para 16-49).
Air conditioner ECU connector removed from raceway (para 16-47).
12/24 vdc power entry connector removed (para 16-71).

Front, Left and Right Side Raceways;
110 vac outlet/box and conduit removed (para 16-53).
24 vdc binding post/box and conduit removed (para 16-52).
Field telephone binding post/box and conduit removed (para 16-51).
Blackout switch removed (para 16-57).

Left Side Rear Raceway;
Blackout switch removed (para 16-57).

Right Side Rear Raceway;
110/208 VAC POWER DISTRIBUTION PANEL removed (para 16-66).
Blackout switch removed (para 16-57).

Equipment Conditions (Cont)

Rear Raceway;
Fluorescent lights and conduits removed (para 16-59).
Relay box assembly removed (para 16-63).
Door ajar switch and conduit removed (para 16-55).
Raceway cover removed (para 16-45).
LH and RH doors opened (180 degrees) (TM 9-2320-365-10).

Tools and Special Tools

Tool Kit, Genl Mech (Item 44, Appendix C)

Materials/Parts

Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D)
Ties, Cable, Plastic (Item 76, Appendix D)
Lockwasher (17) (for front raceway) (Item 80, Appendix G)
Strain Relief (for side raceways) (Item 263, Appendix G)
Strain Relief (for left side rear raceway on van body serial numbers 001 through 190) (Item 263, Appendix G)
Lockwasher (6) (for rear raceway) (Item 83, Appendix G)
Lockwasher (2) (for rear raceway) (Item 77, Appendix G)
Splice, Conductor (1) (for front raceway) (Item 261, Appendix G)
Splice, Conductor (1) (for rear raceway) (Item 261, Appendix G)
Splice, Conductor (1) (for rear raceway) (Item 262, Appendix G)

16-46. M1079 RACEWAY REPLACEMENT (CONT)

a. Front Raceway Removal.

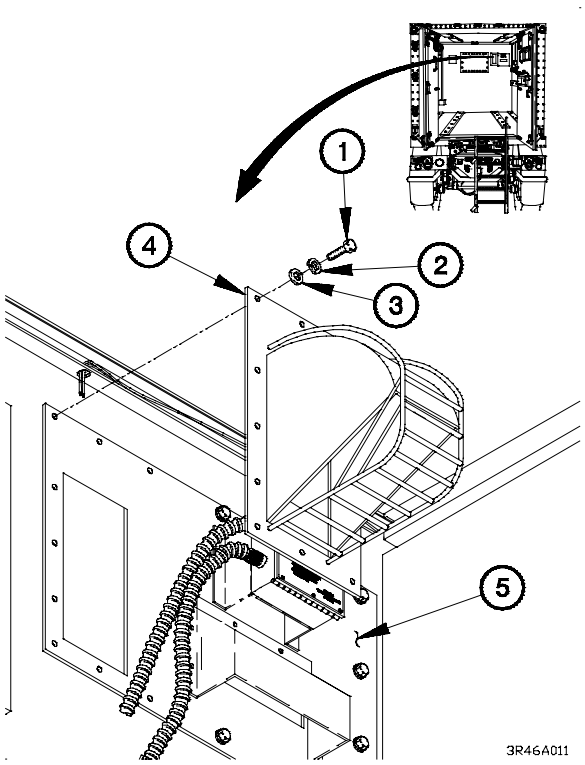
CAUTION

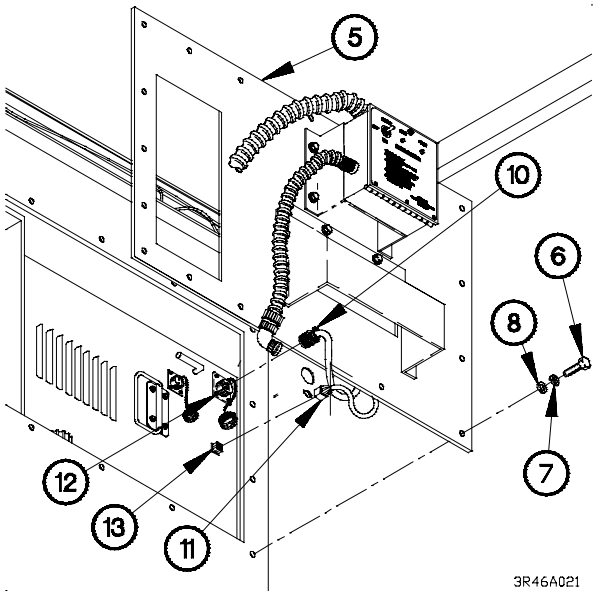
Use care when removing heater deflector and cover, electrical cables are attached. Failure to comply may result in damage to equipment.

NOTE

- Perform steps (1) through (3) if heater kit is installed.
- Steps (1) through (3) require the aid of an assistant.

(1) Remove nine screws (1), lockwashers (2), washers (3), and heater deflector (4) from heater cover (5). Discard lockwashers.





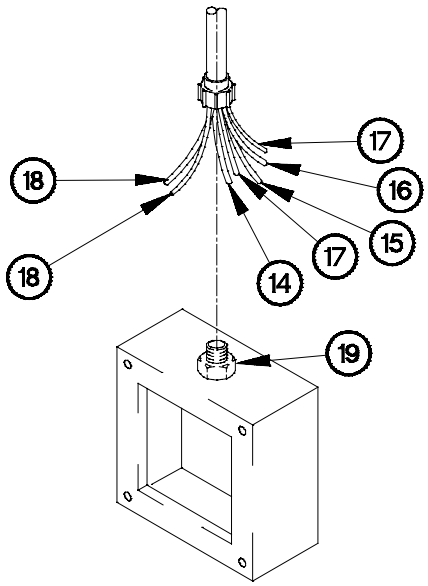
(2) Remove nine screws (6), lockwashers (7), washers (8), and heater cover (5) from van body wall (9). Discard lockwashers.

NOTE

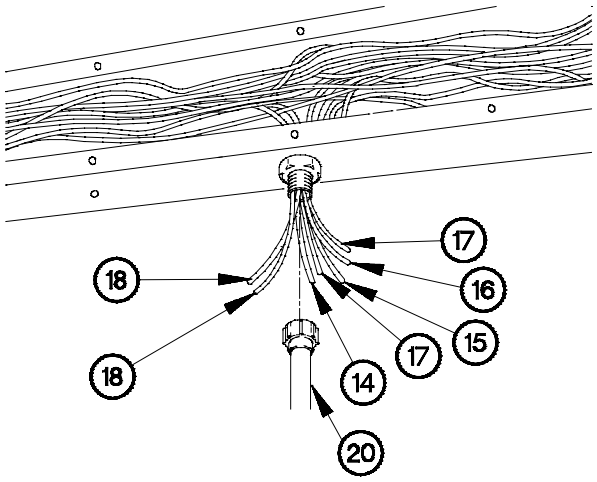
- Tag connectors and connection points prior to disconnecting.
- Remove plastic cable ties as required.

(3) Disconnect connectors J244A (10) and P4A (11) from heater power connector (12) and connector J4 (13).

(4) Remove wire 2010 (14), 2006 (15), 2040 (16), two wires 3086 (17), and two wires 1507 (18) from conduit connector (19).



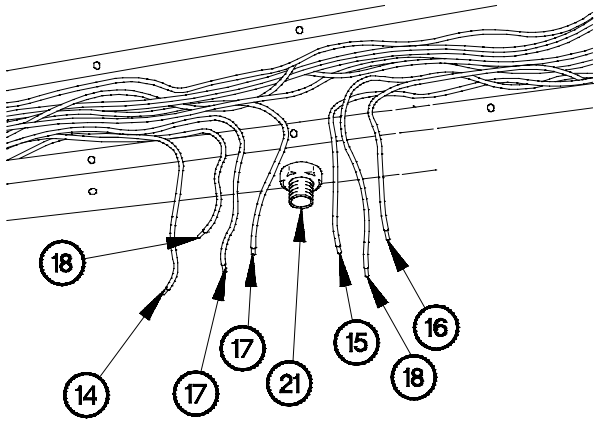
3R46A031



3R46A041

(5) Remove conduit (20) from wires 2010 (14), 2006 (15), 2040 (16), two wires 3086 (17), and two wires 1507 (18).

(6) Remove wires 2010 (14), 2006 (15), 2040 (16), two wires 3086 (17), and two wires 1507 (18) from conduit connector (21).



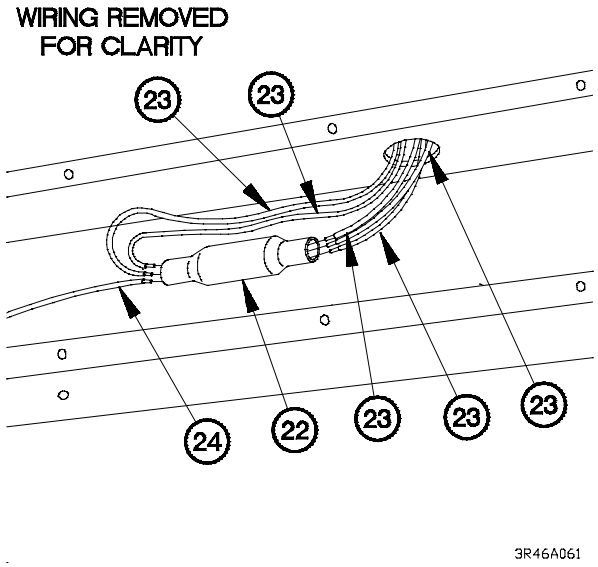
3R46A051

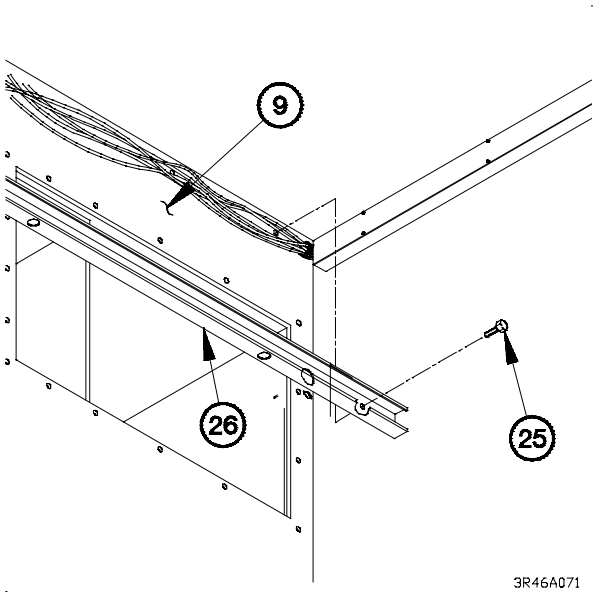
16-46. M1079 RACEWAY REPLACEMENT (CONT)

NOTE

- Tag wires and connection points prior to removal.
- Remove plastic cable ties as required.

(7) Remove conductor splice (22) from five wires 2040 (23) and wire 2040 (24). Discard conductor splice.





CAUTION

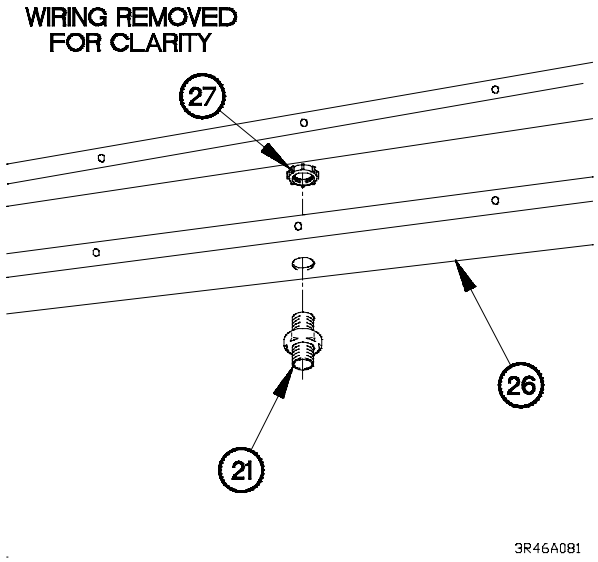
Use care when removing raceway so that wiring is not cut or insulation removed. Failure to comply may result in damage to equipment.

NOTE

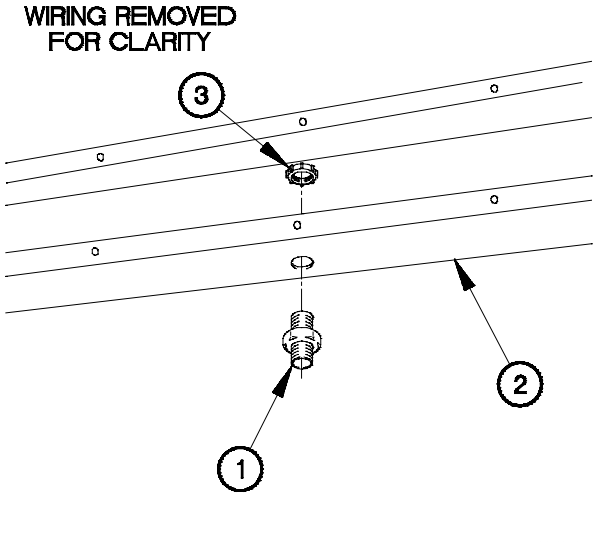
Step (8) requires the aid of an assistant.

(8) Remove eight screws (25) and raceway (26) from van body wall (9).

(9) Remove locknut (27) and conduit connector (21) from raceway (26).



b. Front Raceway Installation.



(1) Install conduit connector (1) in raceway (2) with locknut (3).

CAUTION

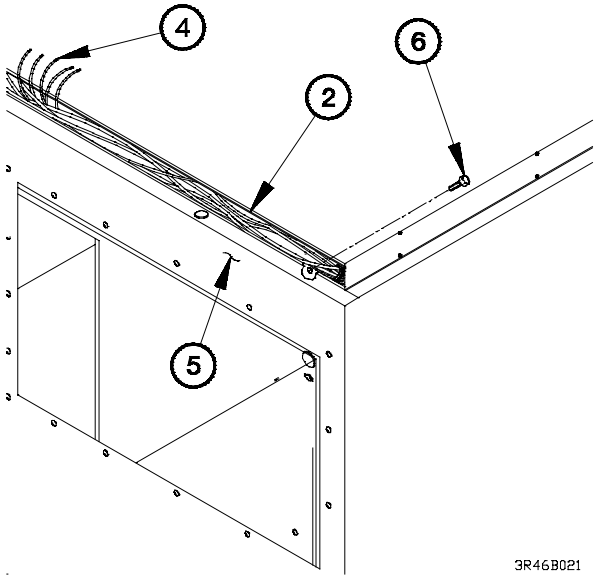
Use care when installing raceway so that wiring is not cut or insulation removed. Failure to comply may result in damage to equipment.

(2) Position five wires 2040 (4) in raceway (2).

NOTE

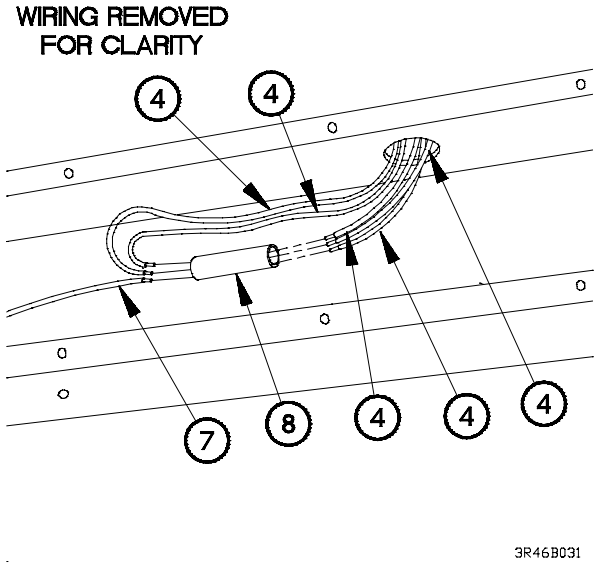
Step (3) requires the aid of an assistant.

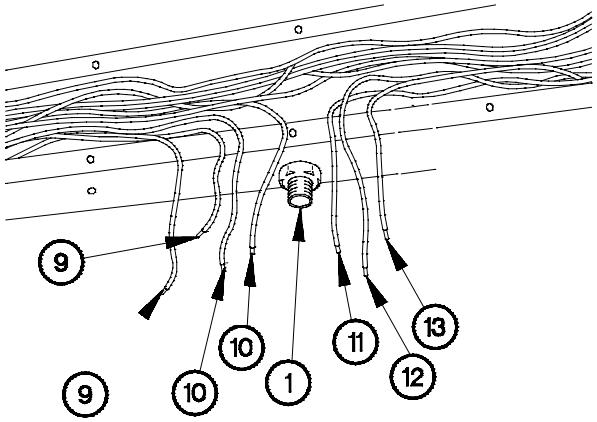
(3) Install raceway (2) on van body wall (5) with eight screws (6).



16-46. M1079 RACEWAY REPLACEMENT (CONT)

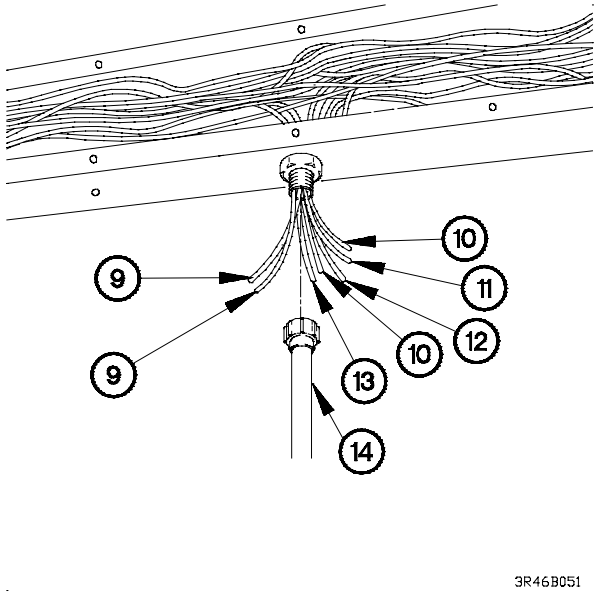
(4) Install five wires 2040 (4) and wire 2040 (7) in conductor splice (8).





(5) Route two wires 1507 (9), two wires 3086 (10), wires 2040 (11), 2006 (12), and 2010 (13) through conduit connector (1).

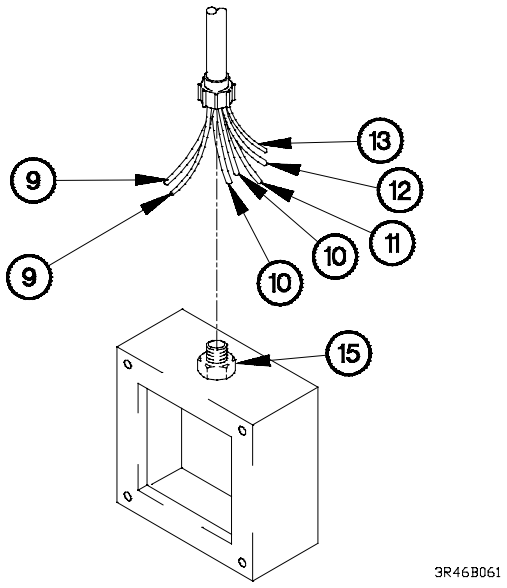
(6) Route two wires 1507 (9), two wires 3086 (10), wires 2040 (11), 2006 (12), and 2010 (13) through conduit (14).

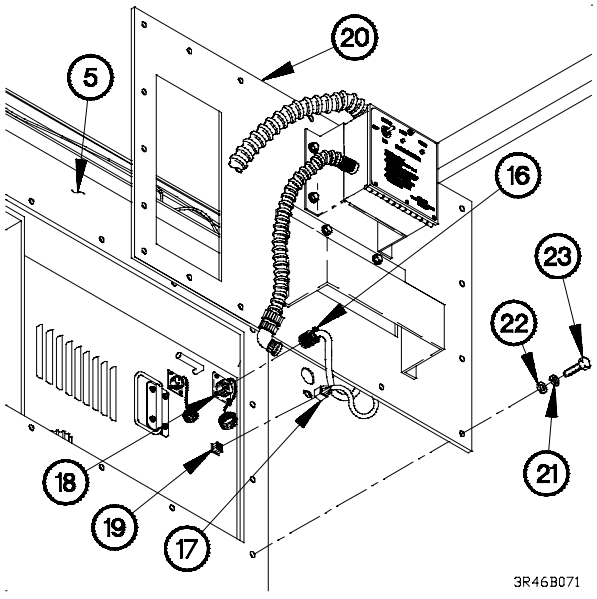


NOTE

Install plastic cable ties as required.

(7) Route two wires 1507 (9), two wires 3086 (10), wires 2040 (11), 2006 (12), and 2010 (13) through conduit connector (15).





NOTE

- Perform steps (8) through (10) if heater kit is installed.
- Steps (8) through (10) require the aid of an assistant.

(8) Connect connectors J244A (16) and P4A (17) to heater power connector (18) and connector J4 (19).

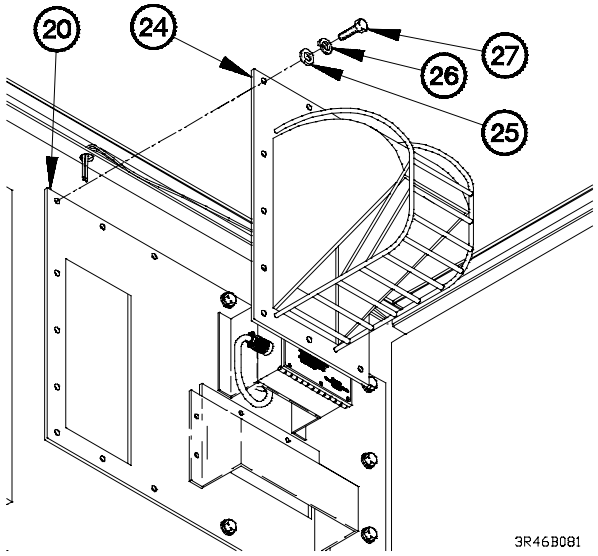
CAUTION

Use care when installing heater cover and deflector, electrical cables are attached. Failure to comply may result in damage to equipment.

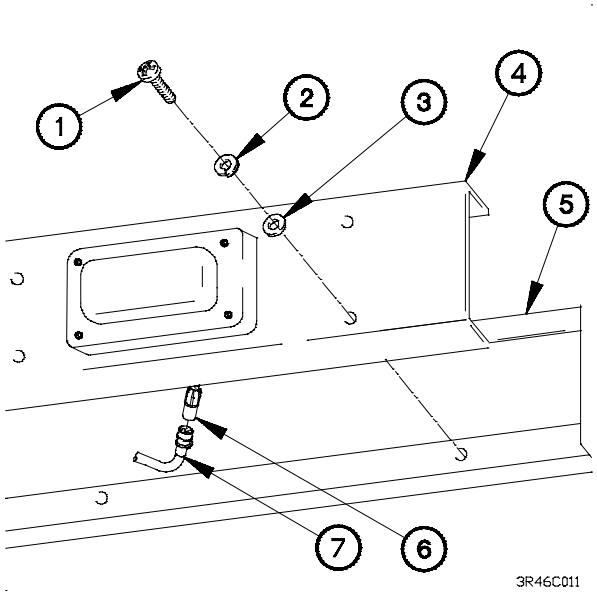
(9) Install heater cover (20) on van body wall (5) with nine washers (21), lockwashers (22), and screws (23).

16-46. M1079 RACEWAY REPLACEMENT (CONT)

(10) Install heater deflector (24) on heater cover (20) with nine washers (25), lockwashers (26), and screws (27).



c. Side Raceway Removal.

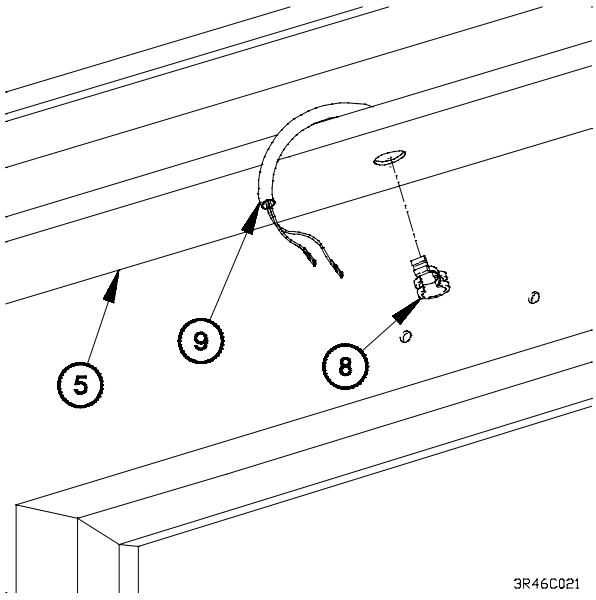


NOTE

Perform steps (1) and (2) on left rear raceway.

(1) Remove 12 screws (1), lockwashers (2), washers (3), and cover (4) from raceway (5). Discard lockwashers.

(2) Disconnect emergency light connector J165 (6) from connector P165 (7).

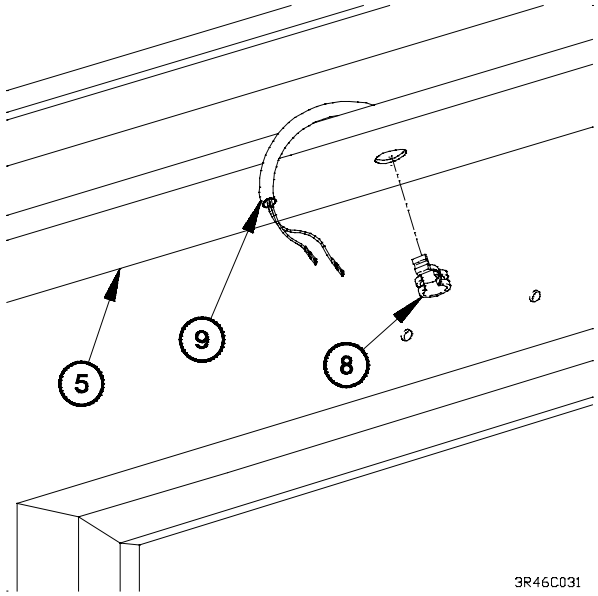


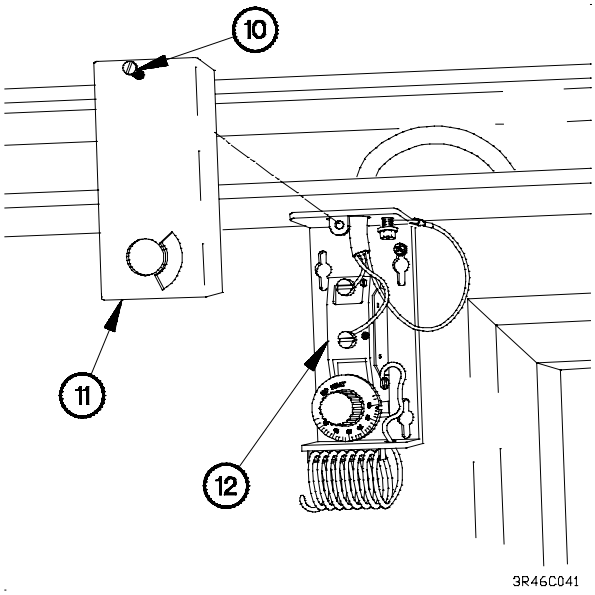
(3) Remove strain relief (8) and wires (9) from raceway (5). Discard strain relief.

NOTE

Perform step (4) on van body serial numbers 001 through 190 for left side rear raceway removal.

(4) Remove strain relief (8) and wires (9) from raceway (5). Discard strain relief.





NOTE

Perform steps (5) through (14) on left side rear raceway if heater kit is installed.

(5) Loosen screw (10) on thermostat cover (11).

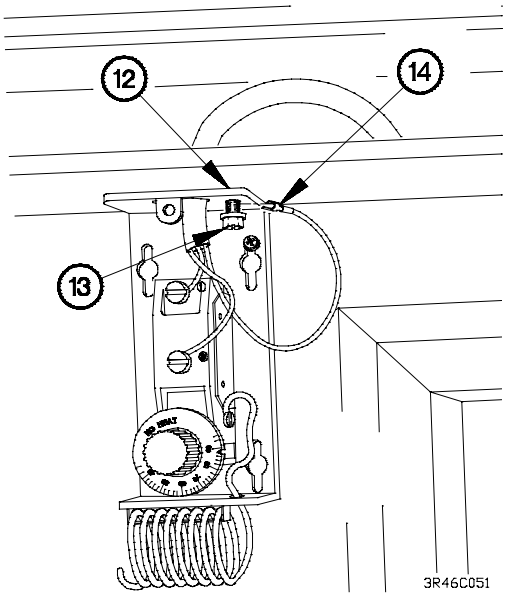
(6) Remove thermostat cover (11) from thermostat (12).

NOTE

Tag terminal lugs and connection points prior to removal.

(7) Loosen screw (13) on thermostat (12).

(8) Remove wire 3086C terminal lug (14) from thermostat (12).



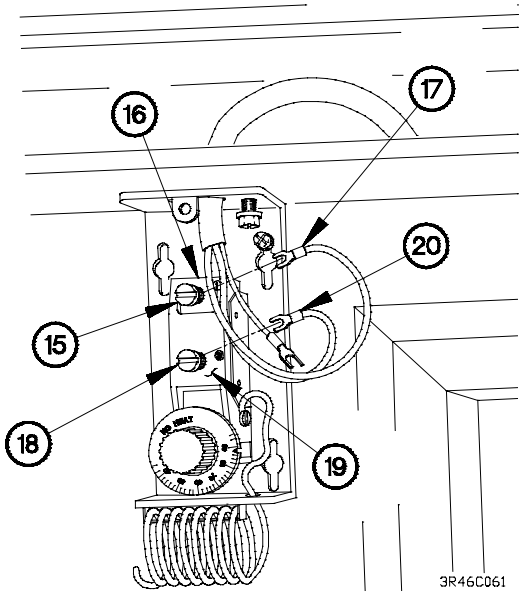
16-46. M1079 RACEWAY REPLACEMENT (CONT)

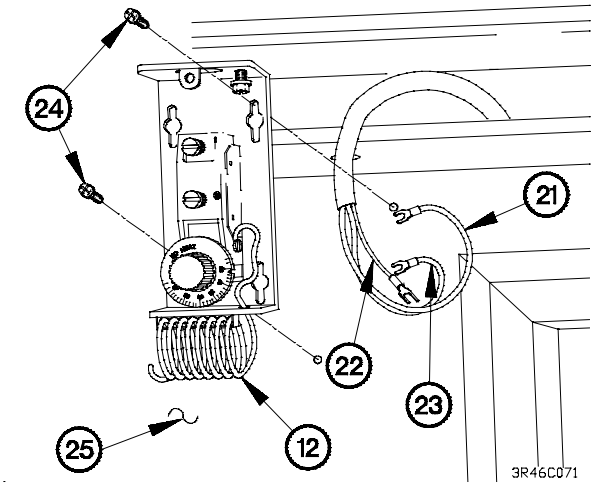
(9) Loosen screw (15) on thermostat terminal 1 (16).

(10) Remove wire 1499R terminal lug (17) from thermostat terminal 1 (16).

(11) Loosen screw (18) on thermostat terminal 3 (19).

(12) Remove wire 401 terminal lug (20) from thermostat terminal 3 (19).





(13) Remove wires 1499R (21), 401 (22), and 3086C (23) from thermostat (12).

(14) Remove two screws (24) and thermostat (12) from van body wall (25).

CAUTION

Use care when removing raceway so that wiring is not cut or insulation removed. Failure to comply may result in damage to equipment.

NOTE

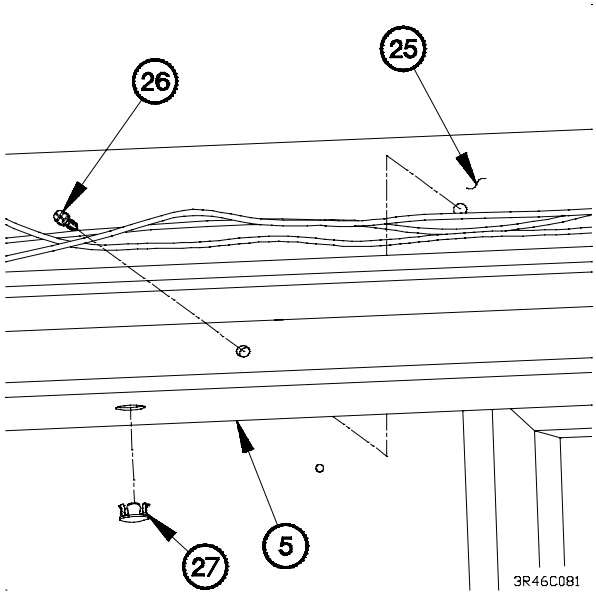
Step (15) requires the aid of an assistant.

(15) Remove six screws (26) and raceway (5) from van body wall (25).

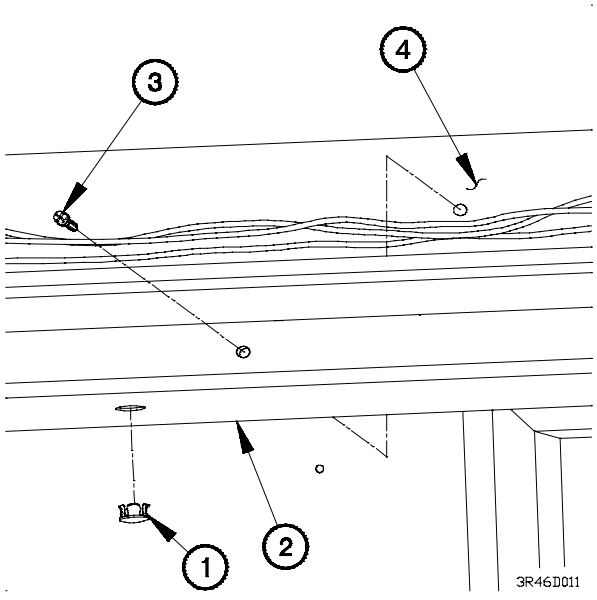
NOTE

Perform step (16) on left side rear raceway if heater kit is not installed.

(16) Remove plug (27) from raceway (5).



d. Side Raceway Installation.



NOTE

Perform step (1) on left side rear raceway if heater kit is not installed.

(1) Install plug (1) in raceway (2).

CAUTION

Use care when installing raceway so that wiring is not cut or insulation removed. Failure to comply may result in damage to equipment.

NOTE

Step (2) requires the aid of an assistant.

(2) Install raceway (2) on van body wall (3) with six screws (4).

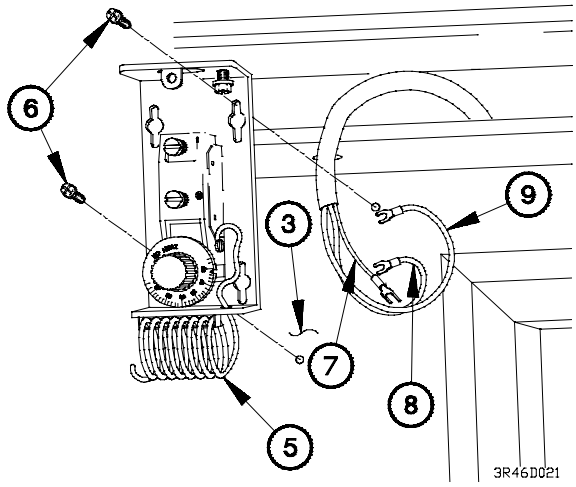
16-46. M1079 RACEWAY REPLACEMENT (CONT)

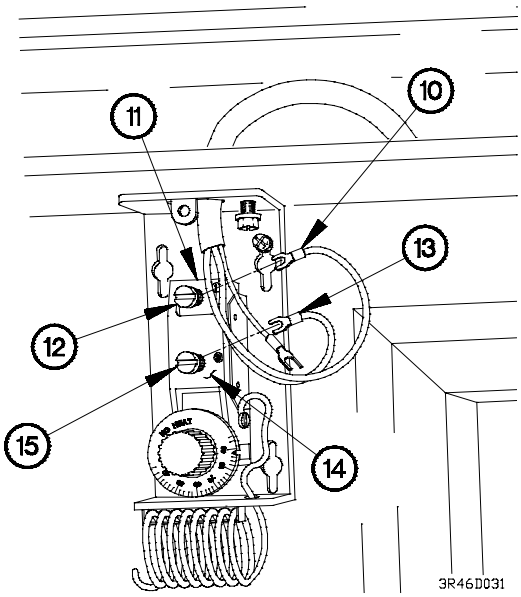
NOTE

Perform steps (3) through (12) on left side rear raceway if heater kit is installed.

(3) Install thermostat (5) on van body wall (3) with two screws (6).

(4) Route wires 3086C (7), 401 (8), and 1499R (9) in thermostat (5).



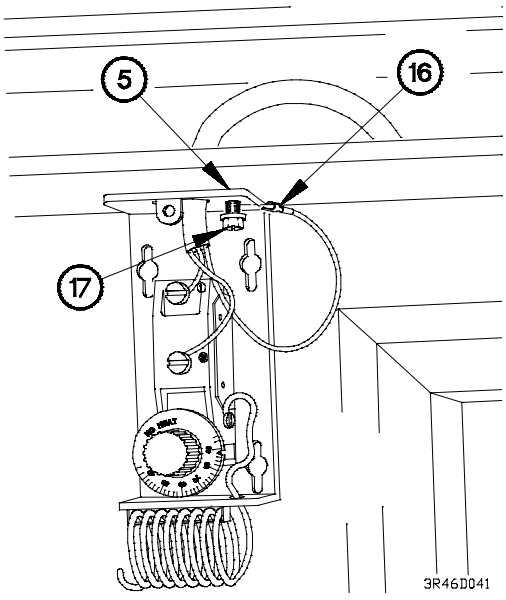


(5) Install wire 1499R terminal lug (10) on thermostat terminal 1 (11).

(6) Tighten screw (12) on thermostat terminal 1 (11).

(7) Install wire 401 terminal lug (13) on thermostat 3 terminal (14).

(8) Tighten screw (15) on thermostat terminal 3 (14).

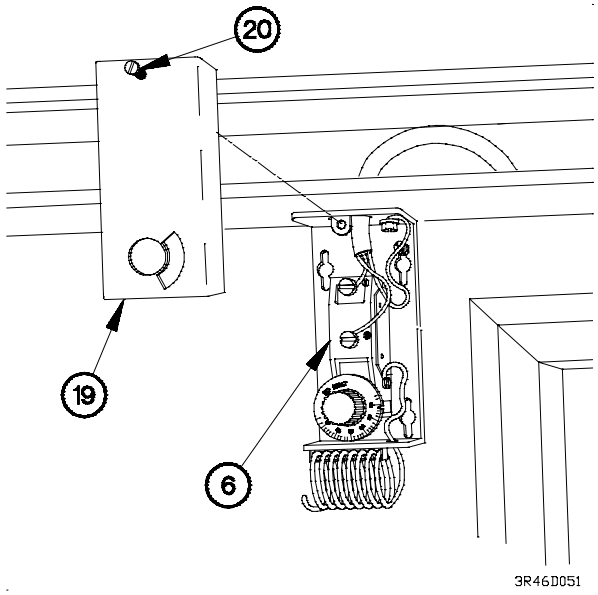


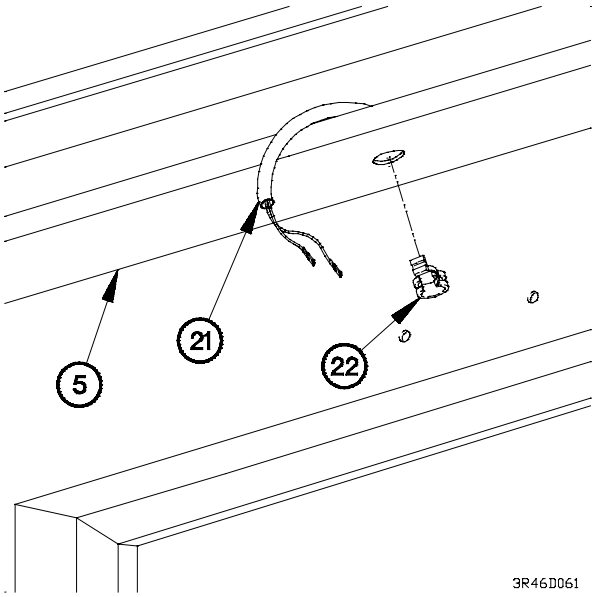
(9) Install wire 3086C terminal lug (16) on thermostat (5).

(10) Tighten screw (17) on thermostat (5).

(11) Install thermostat cover (18) on thermostat (5).

(12) Tighten screw (19) in thermostat cover (18).



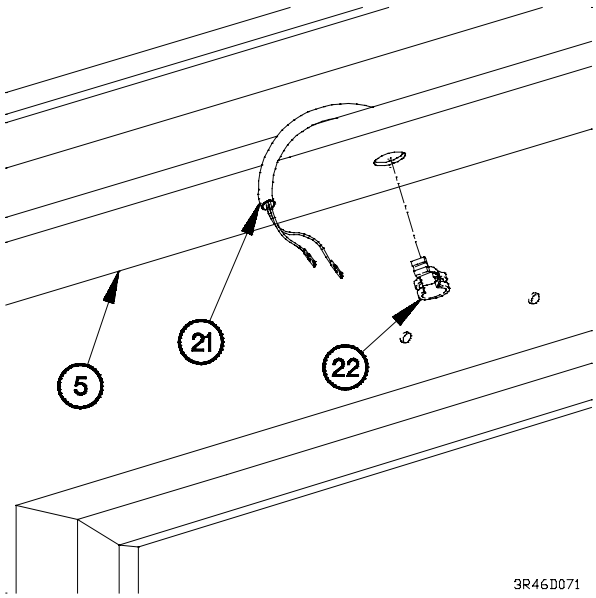


NOTE

Perform step (13) on van body serial numbers 001 through 190 for left side rear raceway installation.

(13) Install wires (20) in raceway (4) with strain relief (21).

(14) Install wires (20) in raceway (4) with strain relief (21).



16-46. M1079 RACEWAY REPLACEMENT (CONT)

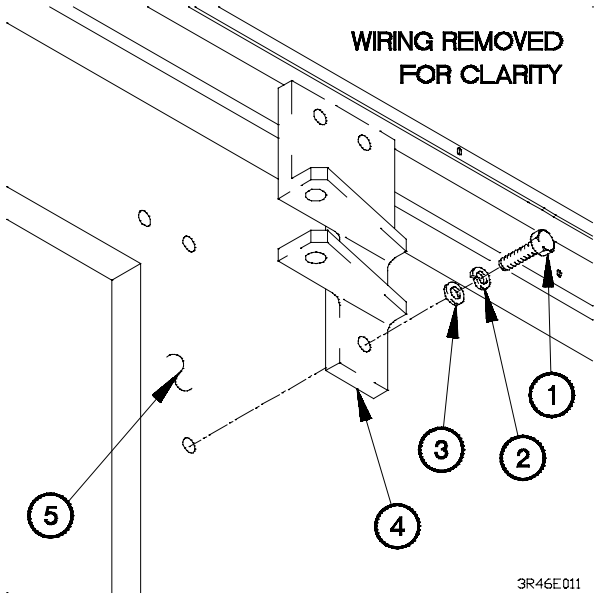
e. Rear Raceway Removal.

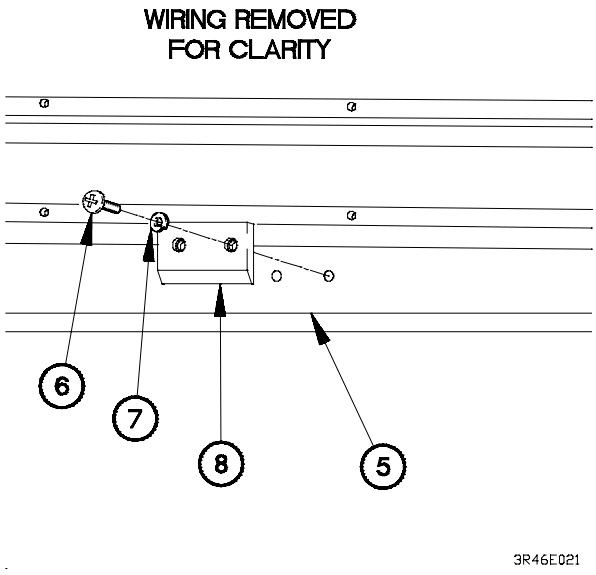
NOTE

LH and RH door brackets are removed the same way. LH door bracket shown.

(1) Remove three screws (1), lockwashers (2), washers (3), and bracket (4) from van body wall (5). Discard lockwashers.

(2) Perform step (1) on right side.



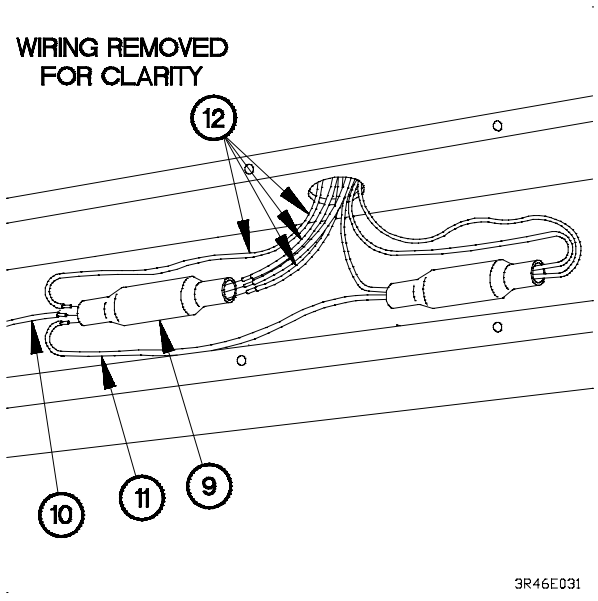


(3) Remove two screws (6), lockwashers (7), and latch striker (8) from van body wall (5). Discard lockwashers.

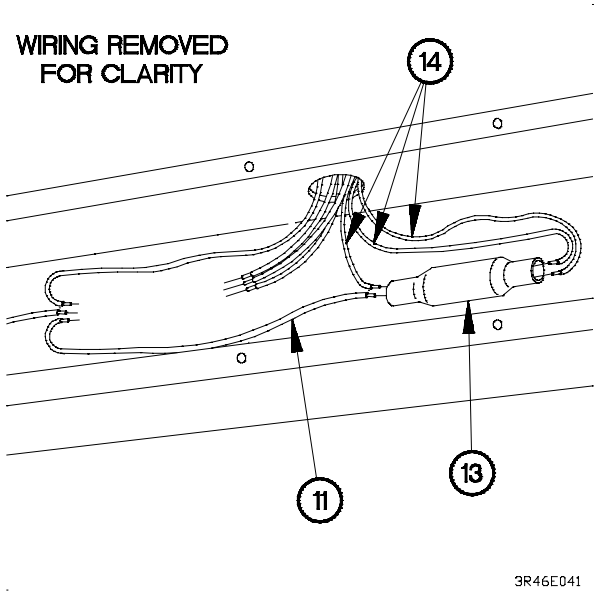
NOTE

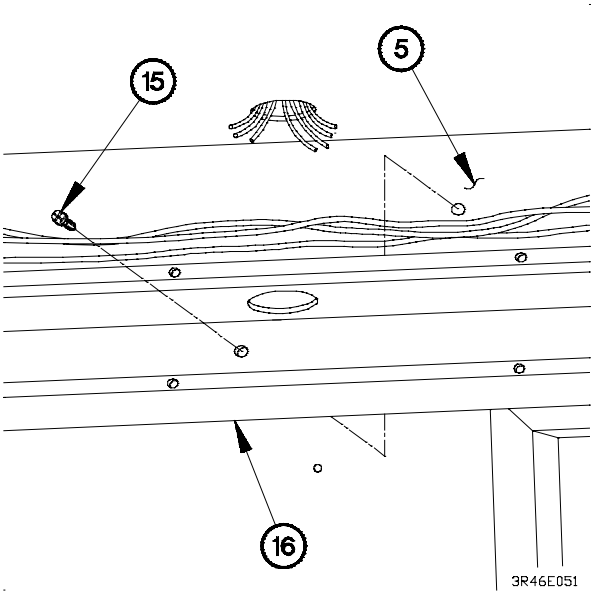
- Tag wires and connection points prior to removal.
- Remove plastic cable ties as required.

(4) Remove conductor splice (9) from wire 2040 (10), jumper wire (11), and four wires 2040 (12). Discard conductor splice.



(5) Remove conductor splice (13) from jumper wire (11) and three wires 2040 (14). Discard conductor splice.





CAUTION

Use care when removing raceway so that wiring is not cut or insulation removed. Failure to comply may result in damage to equipment.

NOTE

Step (6) requires the aid of an assistant.

(6) Remove eight screws (15) and raceway (16) from van body wall (5).

16-46. M1079 RACEWAY REPLACEMENT (CONT)

f. Rear Raceway Installation.

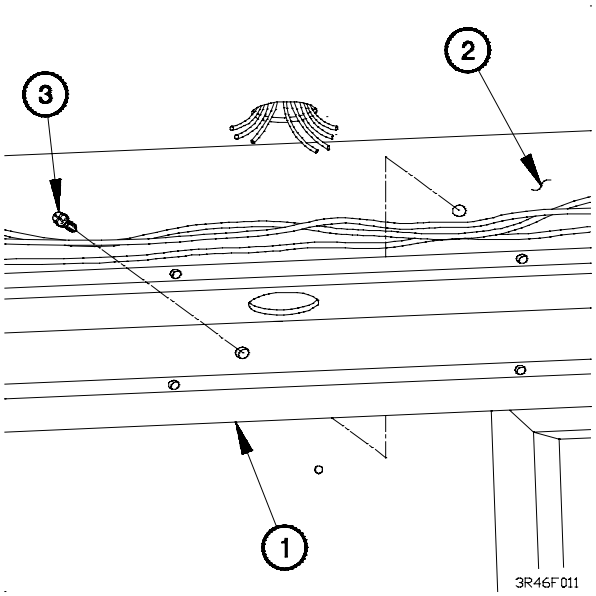
CAUTION

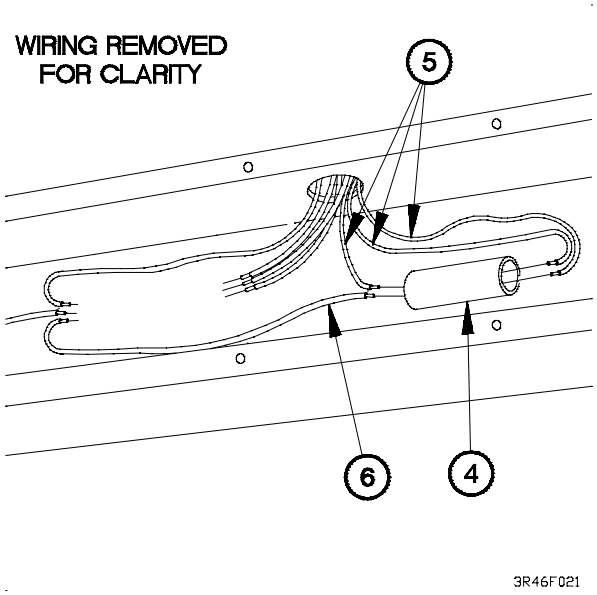
Use care when installing raceway so that wiring is not cut or insulation removed. Failure to comply may result in damage to equipment.

NOTE

Step (1) requires the aid of an assistant.

(1) Install raceway (1) on van body wall (2) with eight screws (3).



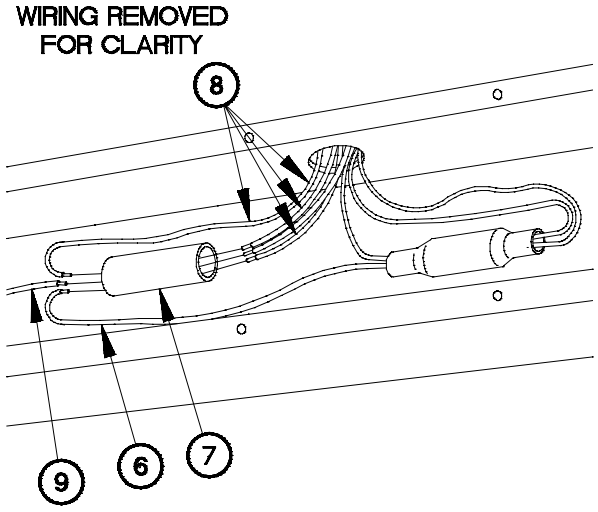


NOTE

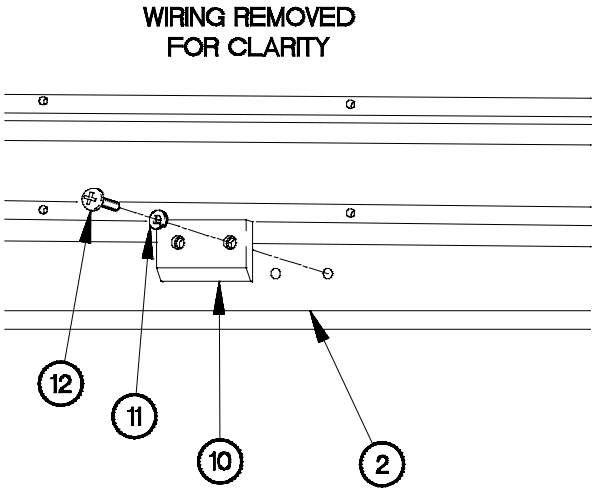
Install plastic cable ties as required.

(2) Install conductor splice (4) on three wires 2040 (5) and jumper wire (6).

(3) Install conductor splice (7) on four wires 2040 (8), jumper wire (6), and wire 2040 (9).



3R46F031



3R46F041

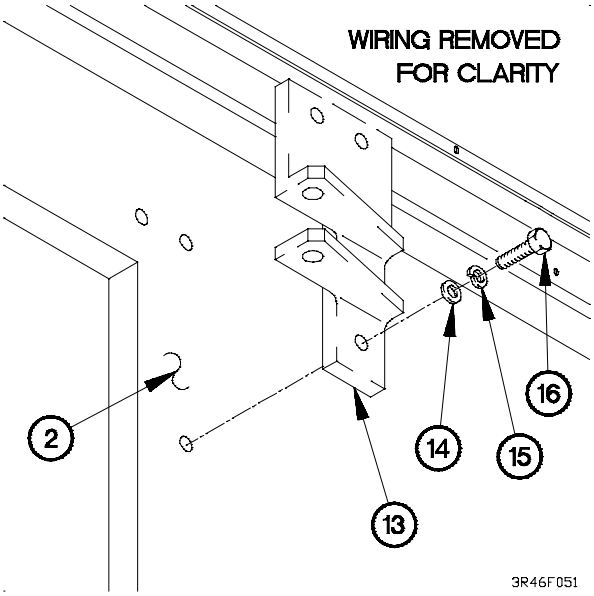
(4) Install latch striker (10) on van body wall (2) with two lockwashers (11) and screws (12).

NOTE

LH and RH door brackets are installed the same way. LH door bracket shown.

(5) Install bracket (13) on van body wall (2) with three washers (14), lockwashers (15), and screws (16).

(6) Perform step (5) on right side.



3R46F051

16-46. M1079 RACEWAY REPLACEMENT (CONT)

g. Follow-On Maintenance.

Front Raceway:

(1) Install air conditioner ECU connector (para 16-47).

(2) Install heater connector (para 16-49).

(3) Install heater thermostat connector (para 16-48).

(4) Install fan switch/box and conduit (para 16-54).

(5) Install 12/24 vdc power entry panel connector (para 16-71).

(6) Install heater and air conditioner covers, if equipped (para 16-31).

Left and Right Side Front Raceways:

(1) Install blackout switch (para 16-57).

(2) Install field telephone binding post/box and conduit (para 16-51).

(3) Install 24 vdc binding post/box and conduit (para 16-52).

(4) Install 110 vac outlet/box and conduit (para 16-53).

Left Side Rear Raceway:

Install blackout switch (para 16-57).

Right Side Rear Raceway :

(1) Install blackout switch (para 16-57).

(2) Install 110/208 VAC POWER DISTRIBUTION PANEL (para 16-66).

Rear Raceway:

(1) Install door ajar switch and conduit (para 16-55).

(2) Install relay box assembly (para 16-63).

(3) Install fluorescent lights and conduits (para 16-59).

(4) Close LH and RH doors (TM 9-2320-365-10).

End of Task.

16-47. M1079 AIR CONDITIONER ECU CONNECTOR REPLACEMENT

This task covers:

a. Removal
b. Installation
c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
AC power disconnected (TM 9-2320-365-10).
Batteries disconnected (para 7-48).
LH and RH doors opened (115 degrees) (TM 9-2320-365-10).

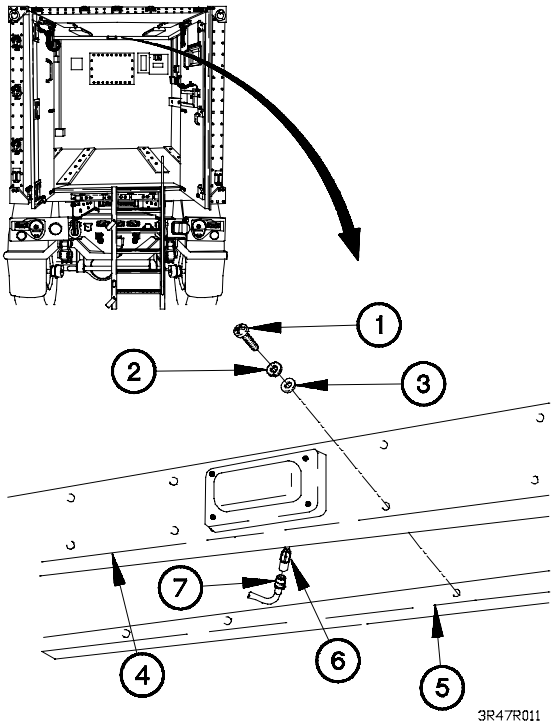
Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Soldering Iron, Electric (Item 72, Appendix B)
Heater, Gun Type, Electric (Item 20, Appendix B)

Materials/Parts
Lockwasher (4) (Item 79, Appendix G)
Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D)
Lockwasher (16) (Item 76, Appendix G)
Insulation Sleeving, Electrical (Item 31, Appendix D)
Solder, Tin Alloy (Item 70, Appendix D)

a. Removal.

(1) Remove 16 screws (1), lockwashers (2), washers (3), and raceway cover (4) from raceway (5). Discard lockwashers.

(2) Disconnect connector P166 (6) from connector J166 (7).



16-47. M1079 AIR CONDITIONER ECU CONNECTOR REPLACEMENT (CONT)

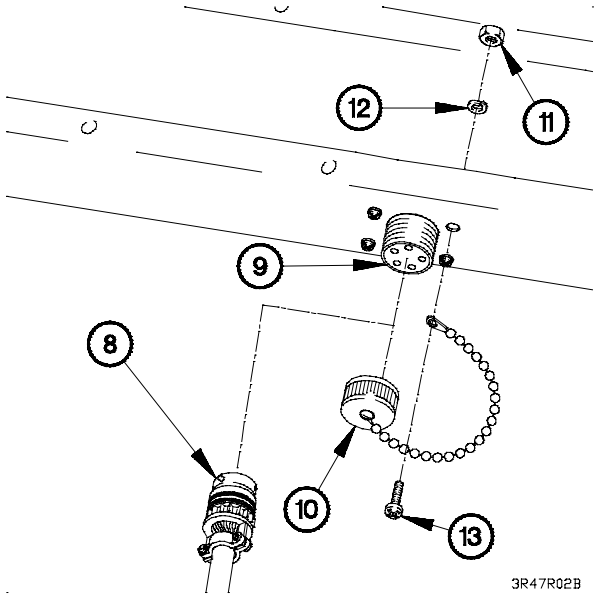
NOTE

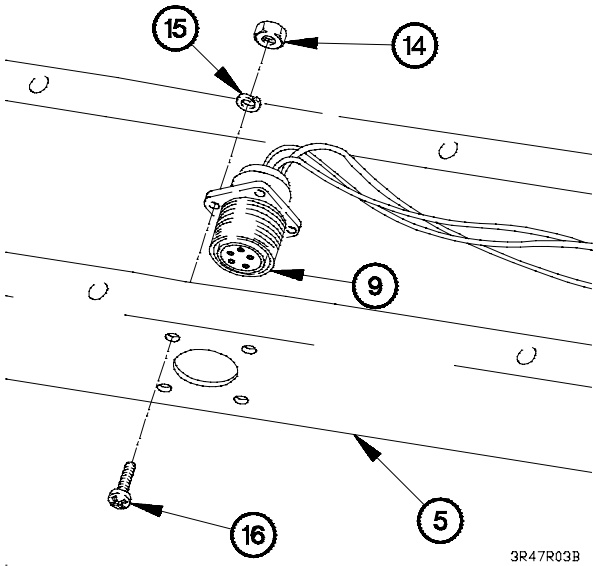
Perform step (3) if air conditioner kit is installed.

(3) Disconnect connector P242 (8) from connector J242 (9).

(4) Remove dust cap (10) from connector J242 (9).

(5) Remove nut (11), lockwasher (12), dust cap (10), and screw (13) from air conditioner ECU connector J242 (9). Discard lockwasher.





(6) Remove three nuts (14), lockwashers (15), screws (16), and air conditioner ECU connector J242 (9) from raceway (5). Discard lockwashers.

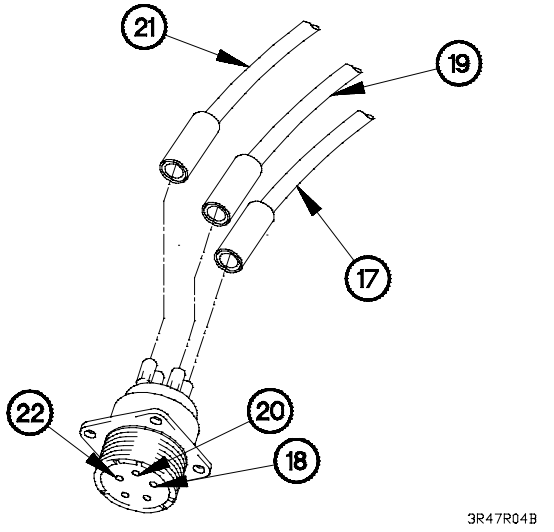
NOTE

Tag wires and connection points prior to removal.

(7) Remove wire 1500 (17) from air conditioner ECU connector J242 PIN A (18).

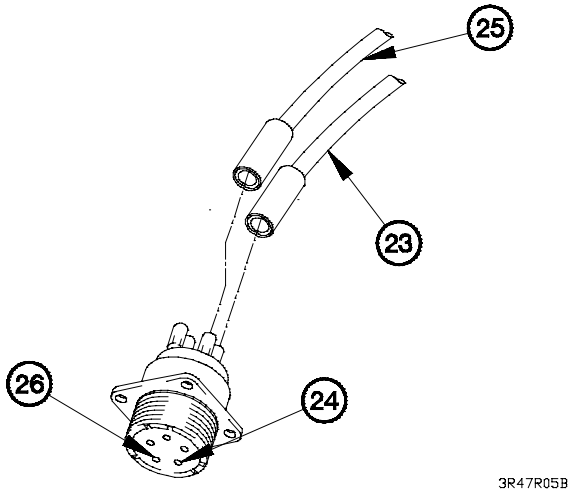
(8) Remove wire 1501 (19) from air conditioner ECU connector J242 PIN B (20).

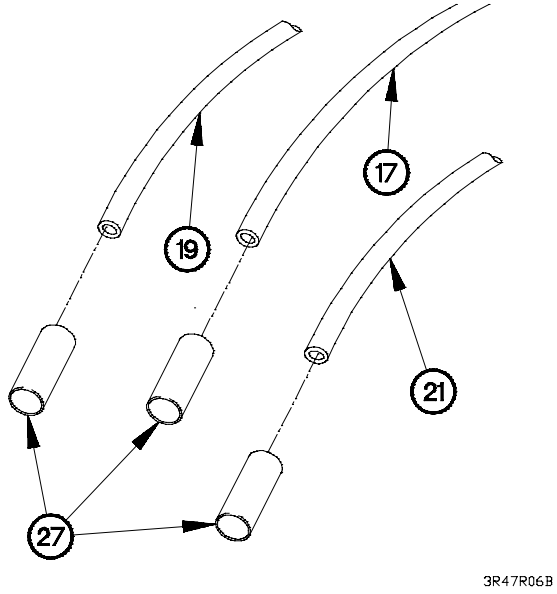
(9) Remove wire 1502 (21) from air conditioner ECU connector J242 PIN C (22).



(10) Remove wire 1499M (23) from air conditioner ECU connector J242 PIN D (24).

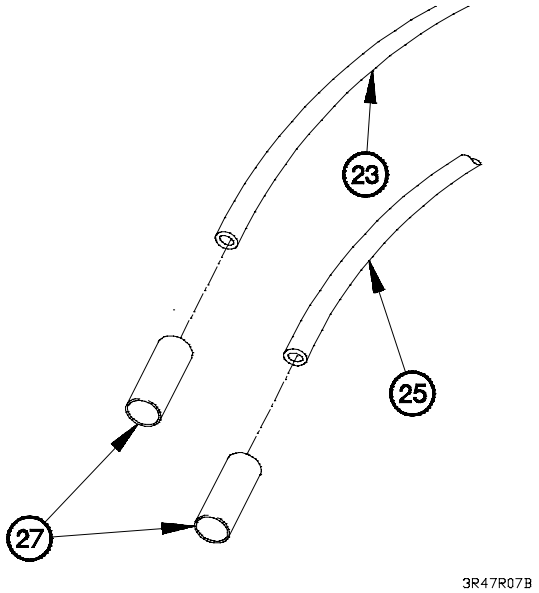
(11) Remove wire 3085D (25) from air conditioner ECU connector J242 PIN E (26).





(12) Remove insulation sleeving (27) from wires 1500 (17), 1501 (19), and 1502 (21). Discard insulation sleeving.

(13) Remove insulation sleeving (27) from wires 1499M (23) and 3085D (25). Discard insulation sleeving.

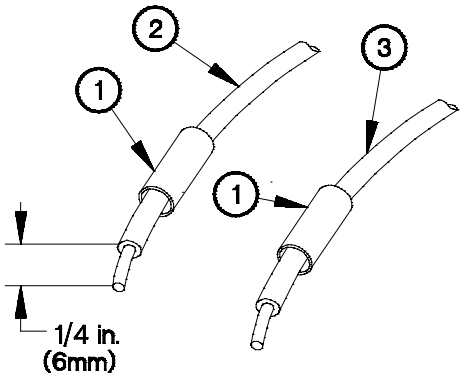


16-47. M1079 AIR CONDITIONER ECU CONNECTOR REPLACEMENT (CONT)

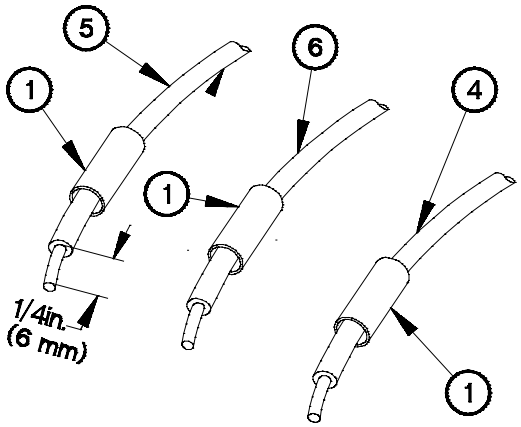
b. Installation.

(1) Position insulation sleeving (1) on wires 3085D (2) and 1499M (3).

(2) Strip approximately 1/4 in. (6 mm) of insulation from wires 3085D (2) and 1499M (3).



3R47101B



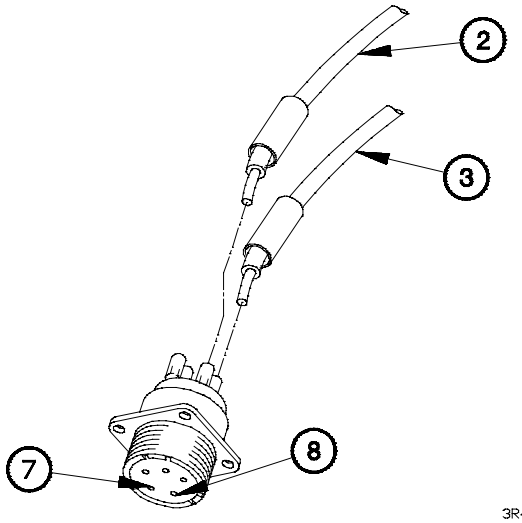
3R47102B

(3) Position insulation sleeving (1) on wires 1502 (4), 1501 (5), and 1500 (6).

(4) Strip approximately 1/4 in. (6 mm) of insulation from wires 1502 (4), 1501 (5), and 1500 (6).

(5) Solder wire 3085D (2) to air conditioner ECU connector J242 PIN E (7).

(6) Solder wire 1499M (3) to air conditioner ECU connector J242 PIN D (8).



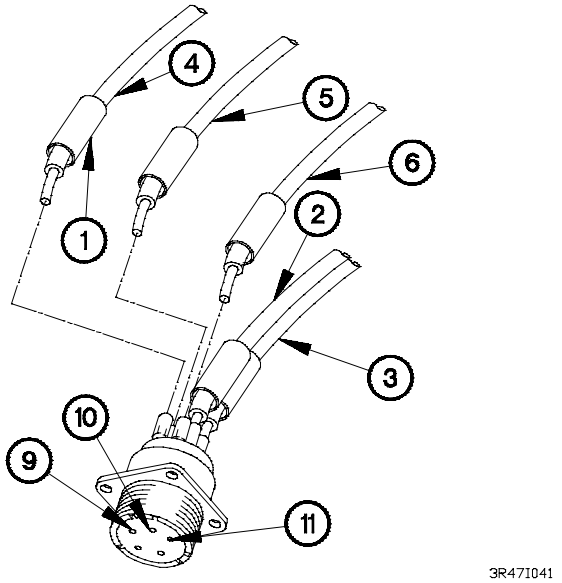
3R47I031

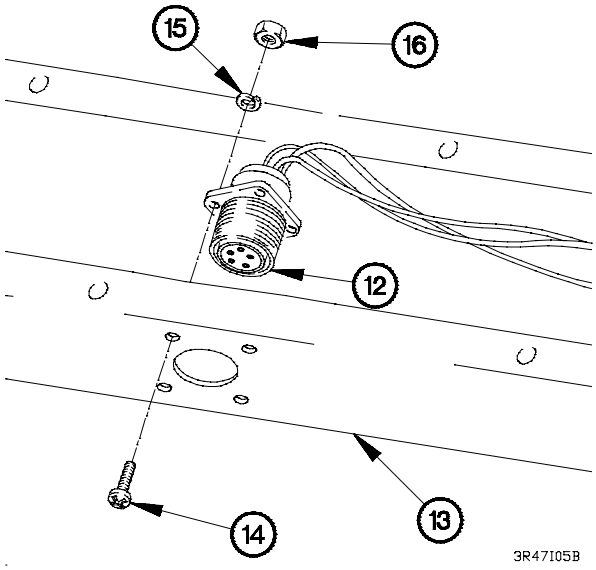
(7) Solder wire 1502 (4) to air conditioner ECU connector J242 PIN C (9).

(8) Solder wire 1501 (5) to air conditioner ECU connector J242 PIN B (10).

(9) Solder wire 1500 (6) to air conditioner ECU connector J242 PIN A (11).

(10) Shrink insulation sleeving (1) on wires 3085D (2), 1499M (3), 1502 (4), 1501 (5), and 1500 (6).





(11) Install air conditioner ECU connector J242 (12) in raceway (13), screws (14), lockwashers (15), and nuts (16).

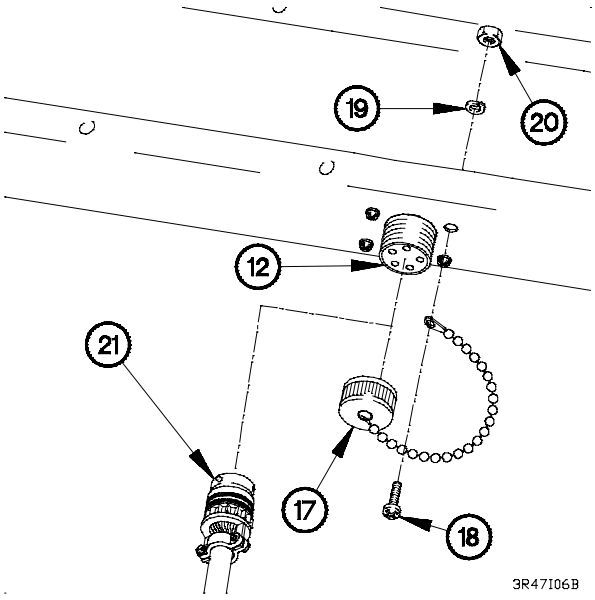
(12) Install dustcap (17) on air conditioner ECU connector J242 (12), screw (18), lockwasher (19), and nut (20).

NOTE

Perform step (13) if air conditioner kit is installed.

(13) Connect connector P242 (21) to connector J242 (12).

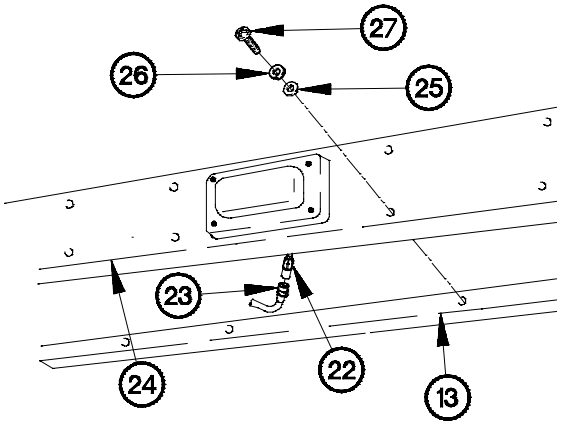
(14) Install dust cap (17) on connector J242 (12).



16-47. M1079 AIR CONDITIONER ECU CONNECTOR REPLACEMENT (CONT)

(15) Connect connector P166 (22) to connector J166 (23).

(16) Install raceway cover (24) on raceway (13) with 16 washers (25), lockwashers (26), and screws (27).



c. Follow-On Maintenance.

(1) Connect batteries (para 7-48).

(2) Connect AC power (TM 9-2320-365-10).

(3) Check for proper operation of air conditioner, if installed (TM 9-2320-365-10).

(4) Close LH and RH doors (TM 9-2320-365-10).

End of Task.

16-48. M1079 HEATER THERMOSTAT CONNECTOR REPLACEMENT

This task covers:

a. Removal
b. Installation
c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
AC power disconnected (TM 9-2320-365-10).
Batteries disconnected (para 7-48).
LH and RH doors opened (115 degrees) (TM 9-2320-365-10).

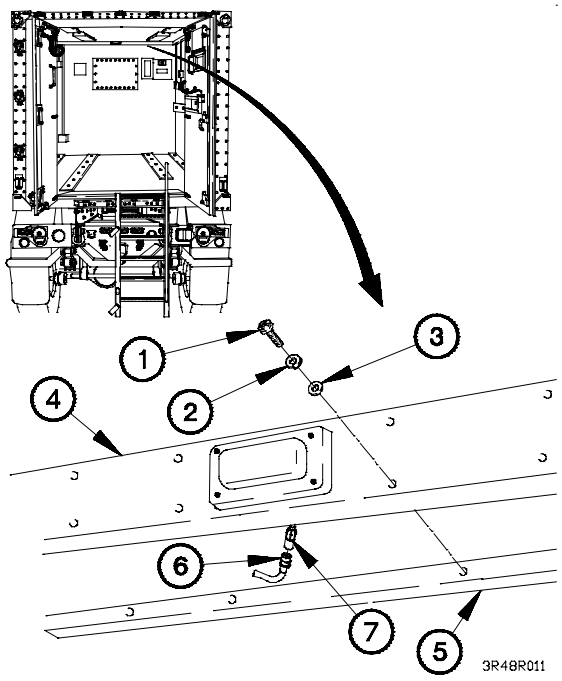
Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Tool Kit, Auto Fuel (Item 42, Appendix C)
Heater, Gun Type, Electric (Item 20, Appendix B)
Soldering Iron, Electric (Item 72, Appendix B)

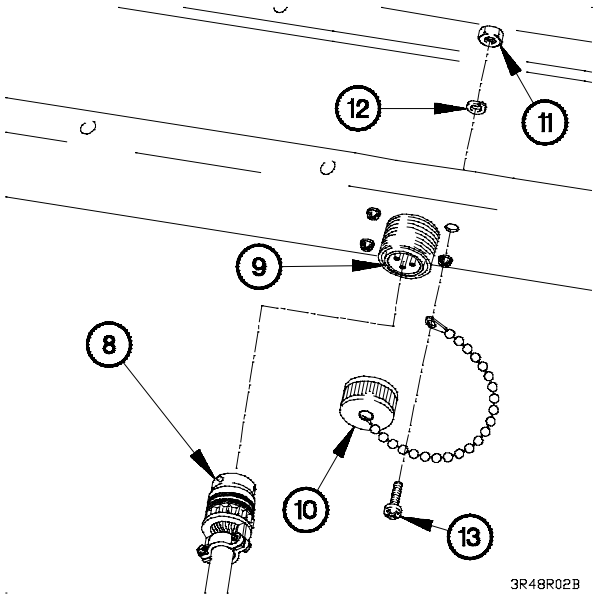
Materials/Parts
Lockwasher (4) (Item 79, Appendix G)
Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D)
Lockwasher (16) (Item 81, Appendix G)
Insulation Sleeving, Electrical (Item 31, Appendix D)
Solder, Tin Alloy (Item 70, Appendix D)

a. Removal.

(1) Remove 16 screws (1), lockwashers (2), washers (3), and raceway cover (4) from raceway (5). Discard lockwashers.

(2) Disconnect connector J166 (6) from connector P166 (7).





NOTE

Perform step (3) if heater kit is installed.

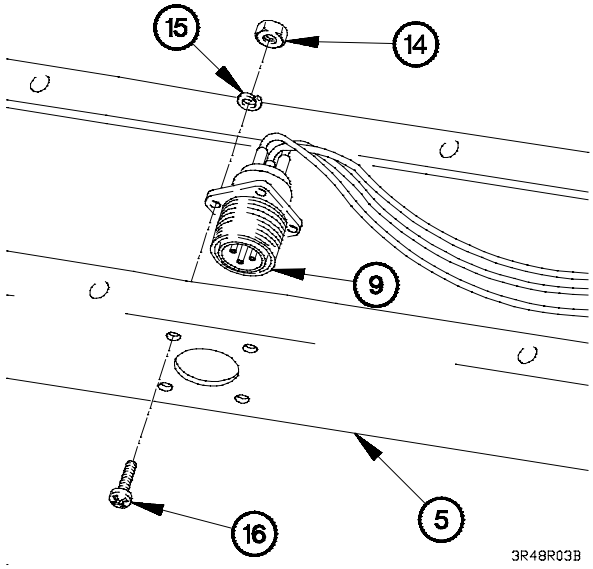
(3) Disconnect connector P245 (8) from connector J245 (9).

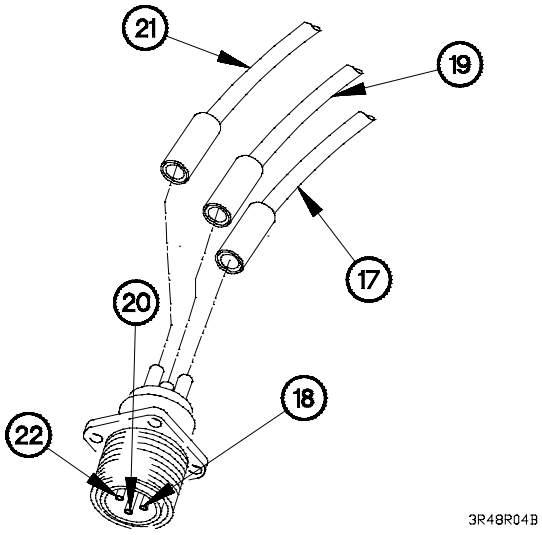
(4) Remove dust cap (10) from connector J245 (9).

(5) Remove nut (11), lockwasher (12), screw (13) and dustcap (10) from connector J245 (9). Discard lockwasher.

16-48. M1079 THERMOSTAT CONNECTOR J245 REPLACEMENT (CONT)

(6) Remove three nuts (14), lockwashers (15), screws (16) and connector J245 (9) from raceway (5). Discard lockwashers.



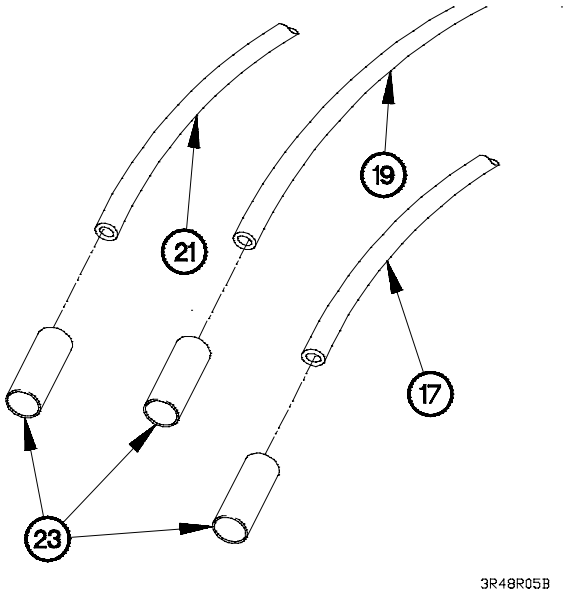


(7) Remove wire 1499R (17) from connector J245A (18).

(8) Remove wire 3086C (19) from connector J245B (20).

(9) Remove wire 401 (21) from connector J245C (22).

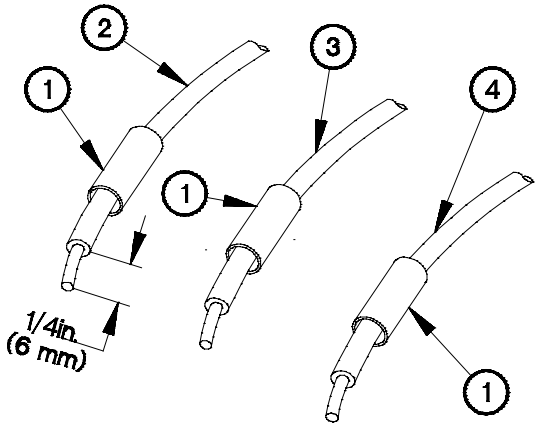
(10) Remove insulation sleeving (23) from wires 1499R (17), 3086C (19), and 401 (21).



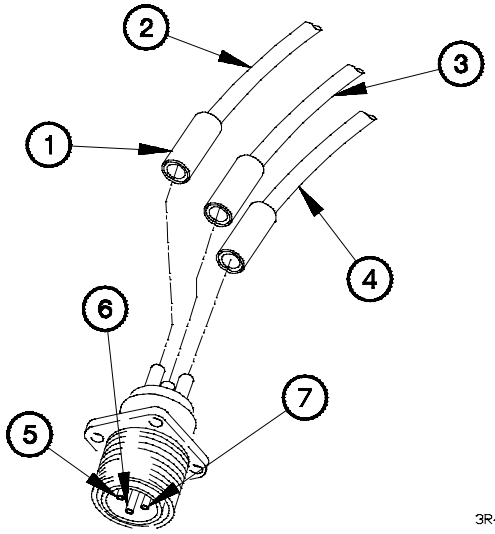
b. Installation.

(1) Install insulation sleeving (1) on wires 401 (2), 3086C (3), and 1499R (4).

(2) Strip approximately 1/4 in. (6 mm) of insulation from wires 401 (2), 3086A (3), and 1499R (4).



3R48I01B



3R48I021

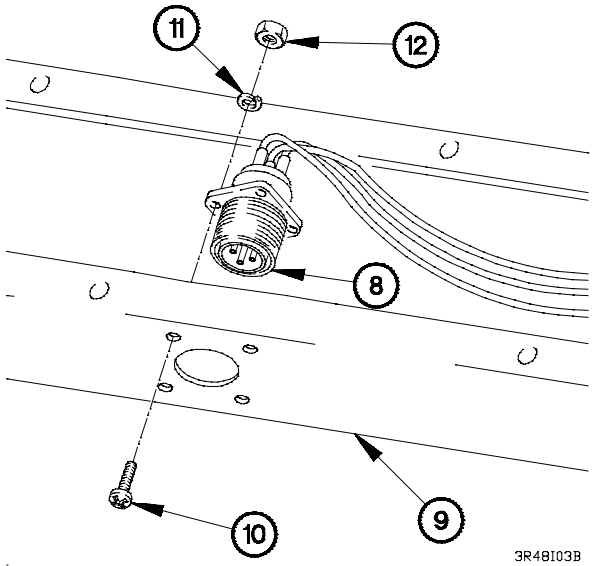
(3) Solder wire 401 (2) to connector J245C (5).

(4) Solder wire 3086C (3) to connector J245B (6).

(5) Solder wire 1499R (4) to connector J245A (7).

(6) Shrink insulation sleeving (1) on wires 401 (2), 3086C (3), and 1499R (4).

(7) Install connector J245 (8) in raceway (9) with three screws (10), lockwashers (11), and nuts (12).



3R48I03B

16-48. M1079 THERMOSTAT CONNECTOR J245 REPLACEMENT (CONT)

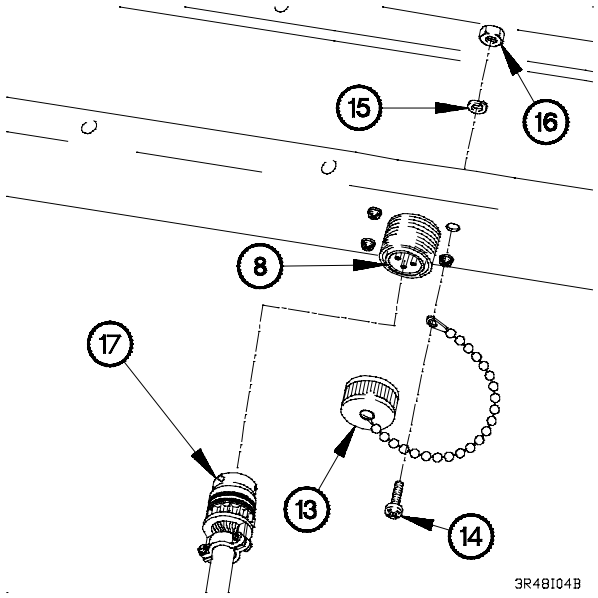
(8) Install dustcap (13) on connector J245 (8) with screw (14), lockwasher (15), and nut (16).

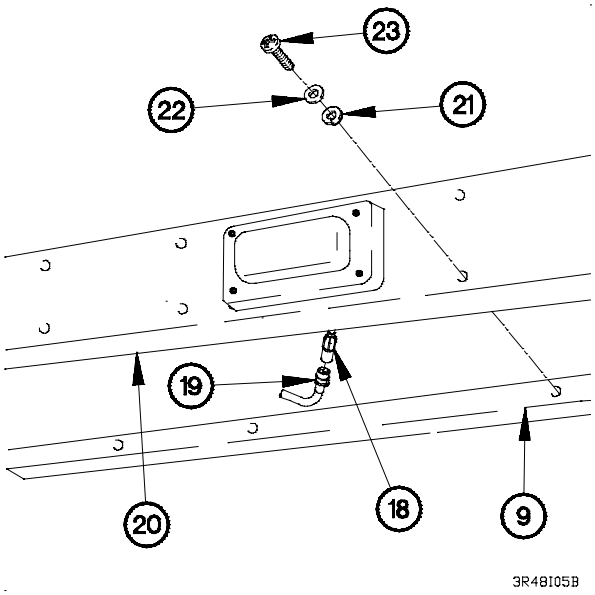
NOTE

Perform step (9) if heater kit is installed.

(9) Connect connector P245 (17) to connector J245 (8).

(10) Install dust cap (13) on connector J245 (8).





(11) Connect connector J166 (18) to connector P166 (19).

(12) Install raceway cover (20) on raceway (9) with 16 washers (21), lockwashers (22), and screws (23).

c. Follow-On Maintenance.

(1) Connect batteries (para 7-48).

(2) Connect AC power (TM 9-2320-365-10).

(3) Check for proper operation of thermostat (TM 9-2320-365-10).

(4) Close LH and RH doors (TM 9-2320-365-10).

End of Task.

16-49. M1079 HEATER CONNECTOR REPLACEMENT

This task covers:

a. Removal
b. Installation
c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
AC power disconnected (TM 9-2320-365-10).
Batteries disconnected (para 7-48).
LH and RH doors opened (115 degrees) (TM 9-2320-365-10).

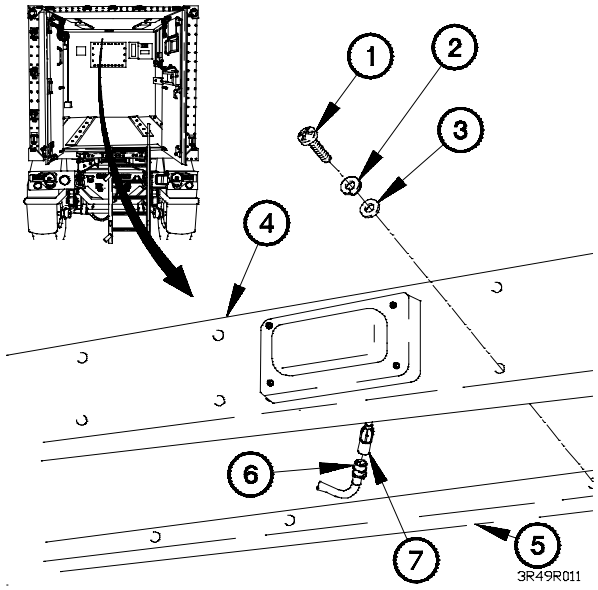
Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Heater, Gun Type, Electric (Item 20, Appendix B)
Soldering Iron, Electric (Item 72, Appendix B)

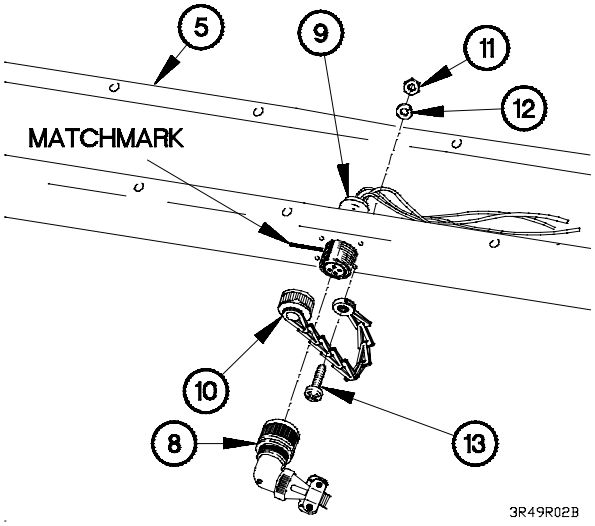
Materials/Parts
Solder, Tin Alloy (Item 70, Appendix D)
Lockwasher (4) (Item 79, Appendix G)
Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D)
Lockwasher (16) (Item 76, Appendix G)
Insulation Sleeving, Electrical (Item 31, Appendix D)

a. Removal.

(1) Remove 16 screws (1), lockwashers (2), washers (3), and raceway cover (4) from raceway (5). Discard lockwashers.

(2) Disconnect connector J166 (6) from connector P166 (7).





NOTE

Perform step (3) if heater kit is installed.

(3) Disconnect connector P244 (8) from connector J244 (9).

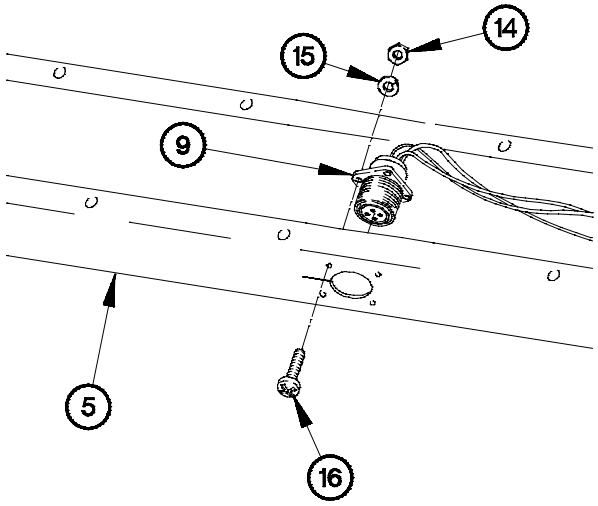
(4) Remove dust cap (10) from connector J244 (9).

(5) Match mark connector J244 (9) to raceway (5).

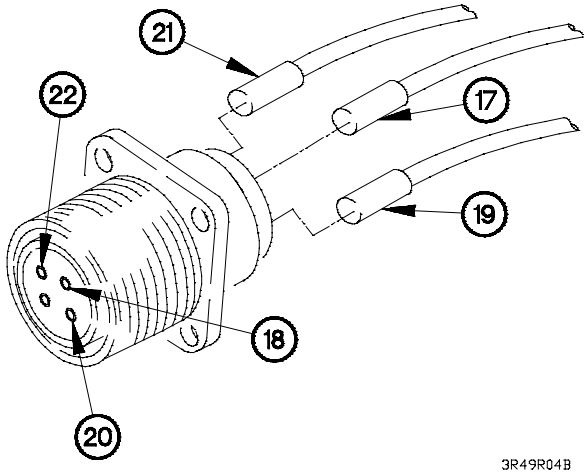
(6) Remove nut (11), lockwasher (12), screw (13) and dustcap (10) from connector J244 (9). Discard lockwasher.

16-49. M1079 HEATER CONNECTOR REPLACEMENT (CONT)

(7) Remove three nuts (14), lockwashers (15), screws (16) and connector J244 (9) from raceway (5). Discard lockwashers.



3R49R03B



3R49R04B

NOTE

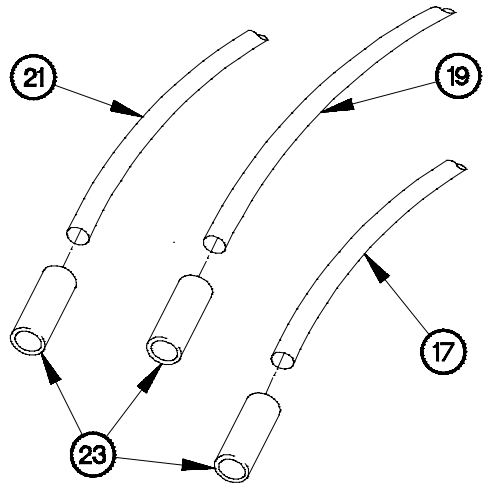
Tag wires and connection points prior to removal.

(8) Remove wire 400 (17) from connector J244A (18).

(9) Remove wire 1499A (19) from connector J244C (20).

(10) Remove wire 3085A (21) from connector J244D (22).

(11) Remove insulation sleeving (23) from wires 400 (17), 1499A (19), and 3085A (21).

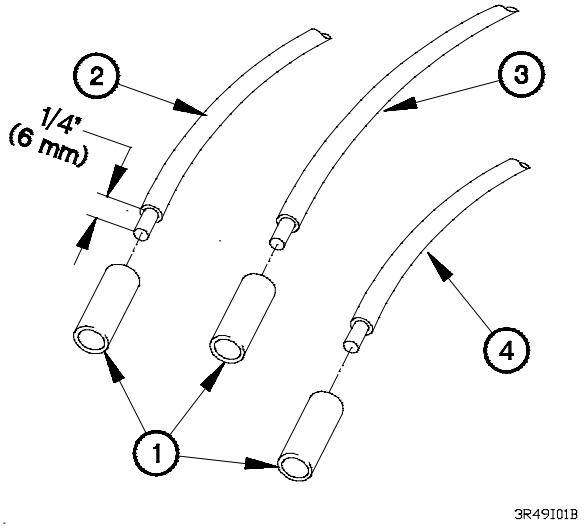


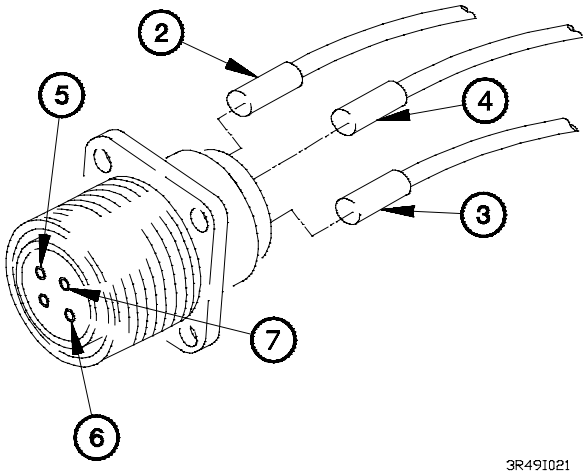
3R49R05B

b. Installation.

(1) Position insulation sleeving (1) on wires 3085A (2), 1499A (3), and 400 (4).

(2) Strip approximately 1/4 in. (6 mm) of insulation from wires 3085A (2), 1499A (3), and 400 (4).





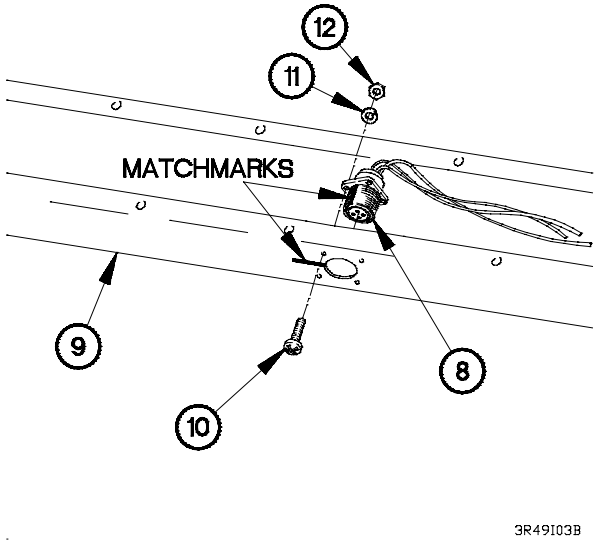
(3) Solder wire 3085A (2) to heater connector J244D (5).

(4) Solder wire 1499A (3) to heater connector J244C (6).

(5) Solder wire 400 (4) to heater connector J244A (7).

(6) Position heater connector J244 (8) in raceway (9) with matchmarks aligned.

(7) Install three screws (10), lockwashers (11), and nuts (12) in heater connector J244 (8).



16-49. M1079 HEATER CONNECTOR REPLACEMENT (CONT)

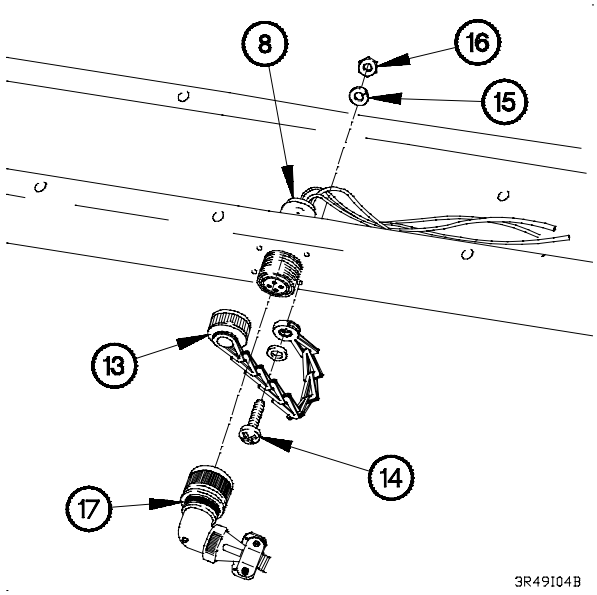
(8) Install dust cap (13) on connector J244 (8) with screw (14), lockwasher (15), and nut (16).

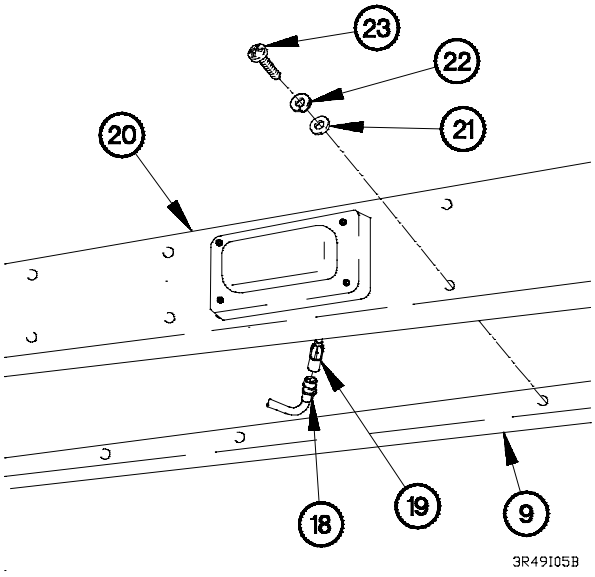
NOTE

Perform step (9) if heater kit is installed.

(9) Connect connector P244 (17) to connector J244 (8).

(10) Install dust cap (13) on connector J244 (8).





(11) Connect connector J166 (18) to connector P166 (19).

(12) Install raceway cover (20) on raceway (9) with 16 washers (21), lockwashers (22), and screws (23).

c. Follow-On Maintenance.

(1) Connect batteries (para 7-48).

(2) Connect AC power (TM 9-2320-365-10).

(3) Check for proper operation of van heater, if installed (TM 9-2320-365-10).

(4) Close LH and RH doors (TM 9-2320-365-10).

End of Task.

16-50. M1079 INTERIOR LIGHTS SWITCH/BOX AND CONDUIT REPLACEMENT

This task covers:

a. Removal
b. Installation
c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
Batteries disconnected (para 7-48).
AC power disconnected (TM 9-2320-365-10).
LH and RH doors opened (115 degrees) (TM 9-2320-365-10).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Tool Kit, Auto Fuel And Electrical Systems Repair (Item 42, Appendix C)

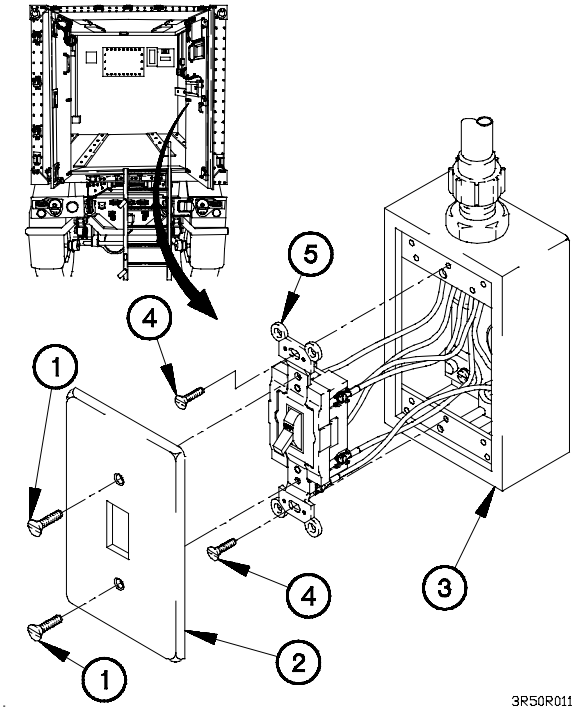
Materials/Parts
Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D)
Lockwasher (2) (Item 77, Appendix G)
Terminal, Lug (2) (van bodies serial number 191 and higher) (Item 268, Appendix G)
Strain Relief (van bodies serial number 191 and higher) (Item 263, Appendix G)

Personnel Required
(2)

a. Removal.

(1) Remove two screws (1) and cover (2) from outlet box (3).

(2) Remove two screws (4) and switch S32 (5) from outlet box (3).



16-50. M1079 INTERIOR LIGHT SWITCH/BOX AND CONDUIT REPLACEMENT (CONT)

NOTE

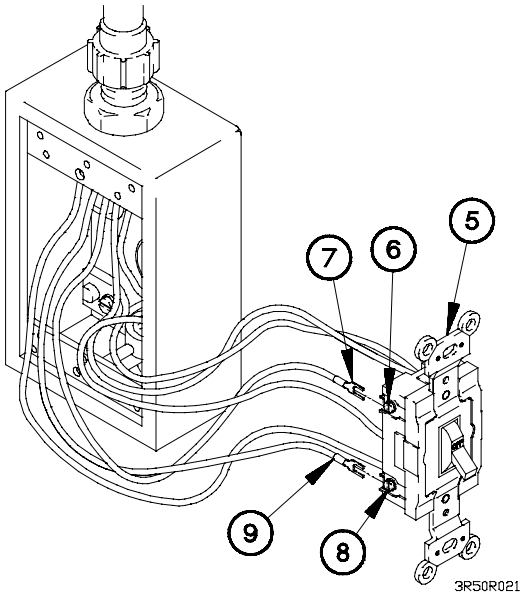
Tag wires and connection points prior to disconnecting.

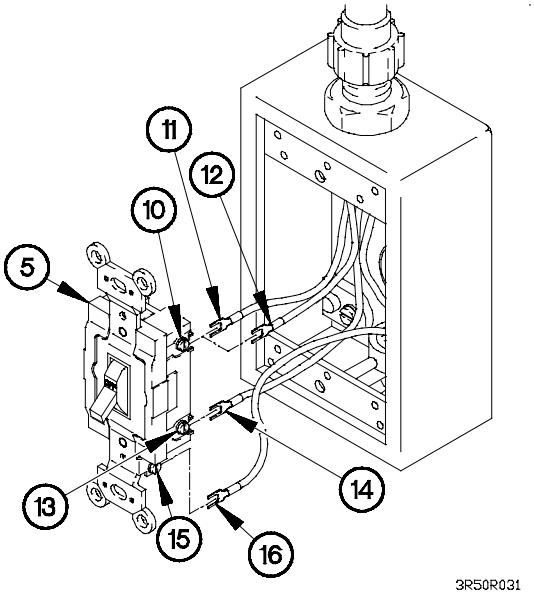
(3) Loosen screw (6) on switch S32 (5).

(4) Remove wire 706C terminal lug (7) from switch S32 (5).

(5) Loosen screw (8) on switch S32 (5).

(6) Remove wire 706B terminal lug (9) from switch S32 (5).





(7) Loosen screw (10) on switch S32 (5).

(8) Remove wire 1505C and 1508A terminal lugs (11 and 12) from switch S32 (5).

(9) Loosen screw (13) on S32 switch (5).

(10) Remove wire 3085E terminal lug (14) from switch S32 (5).

(11) Loosen screw (15) on switch S32 (5).

(12) Remove wire 3085AH terminal lug (16) from switch S32 (5).

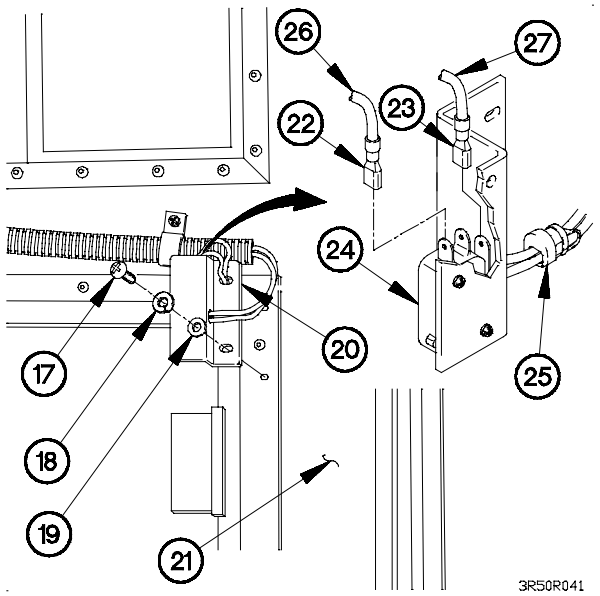
NOTE

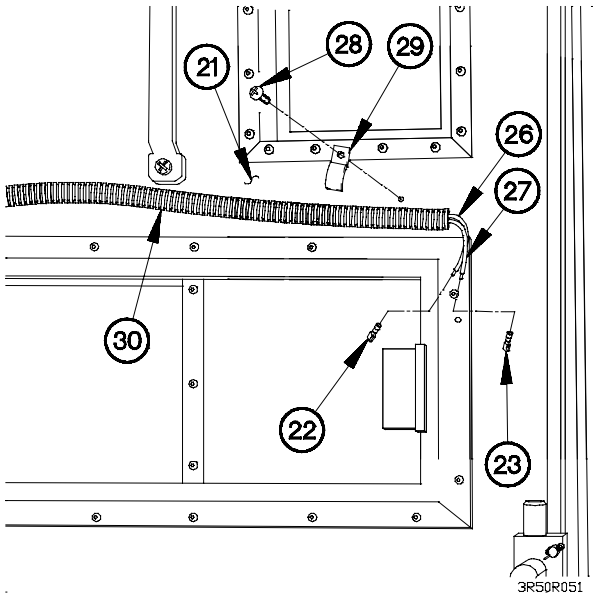
Perform steps (13) through (19) on van bodies serial number 191 and higher.

(13) Remove two screws (17), lockwashers (18), washers (19), and bracket (20) from RH door (21). Discard lockwashers.

(14) Disconnect wire 1509D terminal lug (22) and 1509E terminal lug (23) from blackout switch S15 (24).

(15) Remove strain relief (25) and wires 1509D and 1509E (26 and 27) from bracket (20). Discard strain relief.



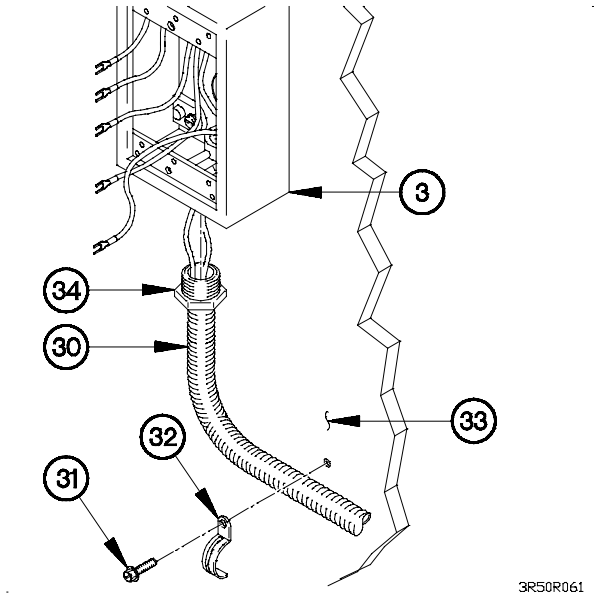


(16) Remove wire 1509D and 1509E terminal lugs (22 and 23) from wires 1509D and 1509E (26 and 27). Discard terminal lugs.

(17) Remove two screws (28), clamps (29), and conduit (30) from RH door (21).

(18) Remove screw (31), clamp (32), and conduit (30) from van body wall (33).

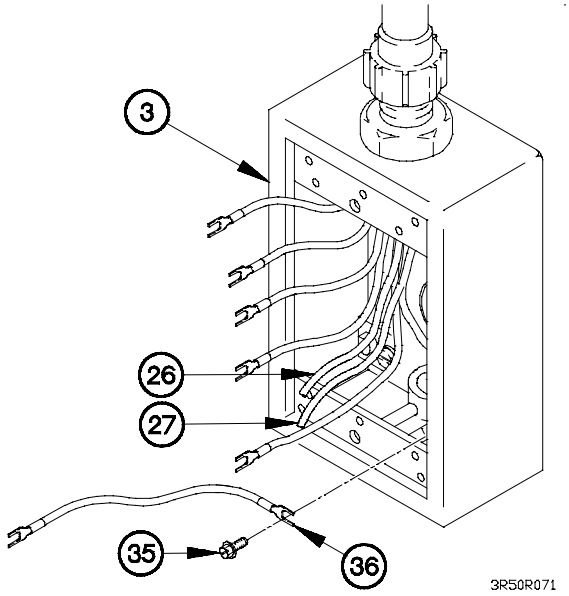
(19) Remove conduit connector (34) from outlet box (3).

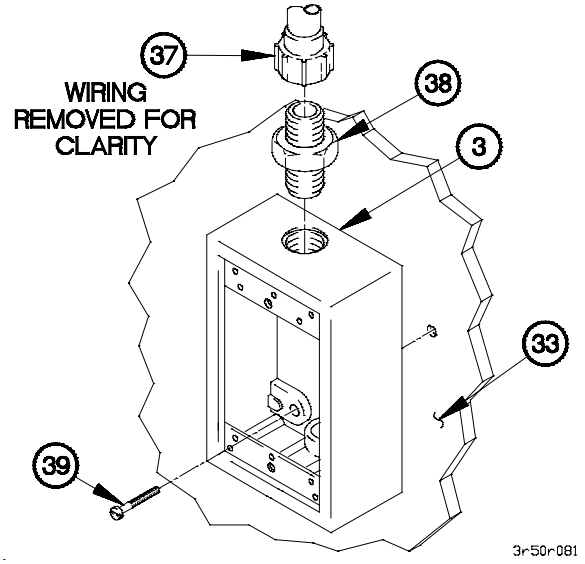


16-50. M1079 INTERIOR LIGHT SWITCH/BOX AND CONDUIT REPLACEMENT (CONT)

(20) Remove wires 1509D and 1509E (26 and 27) from outlet box (3).

(21) Remove screw (35) and wire 3085AH terminal lug (36) from outlet box (3).





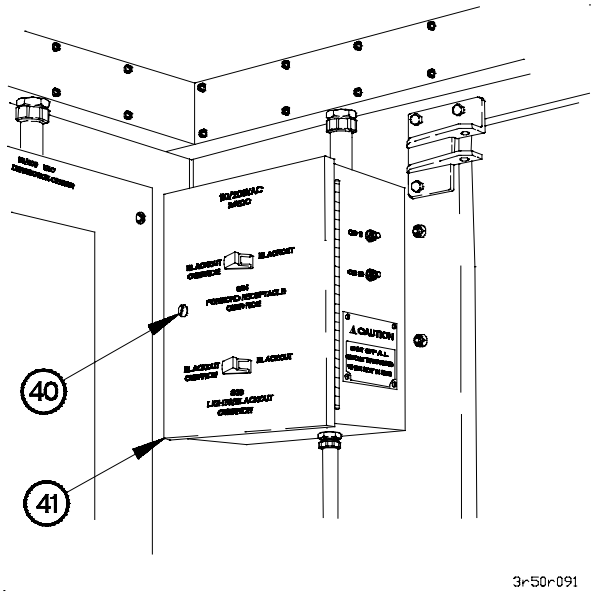
(22) Remove conduit nut (37) from conduit connector (38).

(23) Remove two screws (39) and outlet box (3) from van body wall (33).

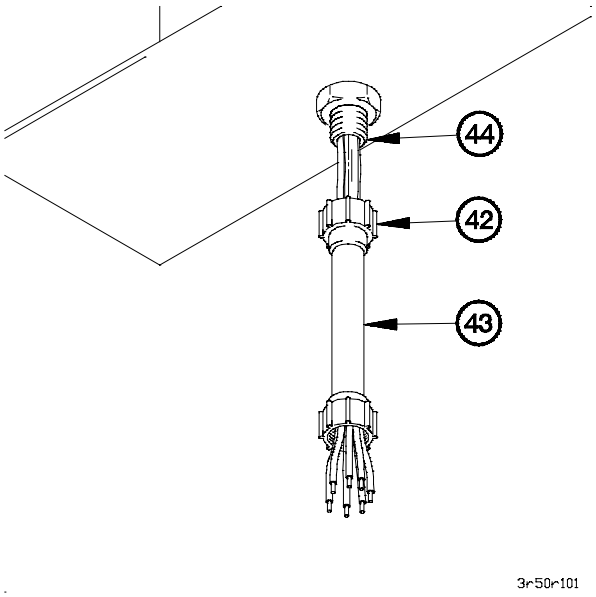
(24) Remove conduit connector (38) from outlet box (3).

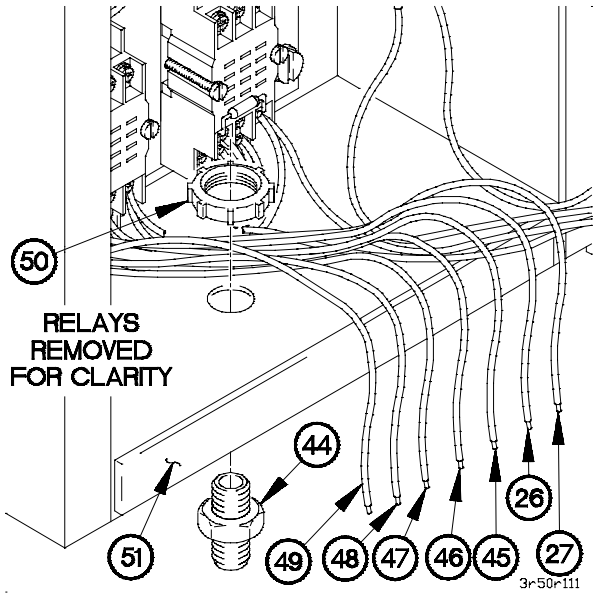
(25) Loosen screw (40) on relay box cover (41).

(26) Open relay box cover (41).



(27) Remove conduit nut (42) and conduit (43) from conduit connector (44).





(28) Remove wires 706C (45), 706B (46), 1505C (47), 1508A (48), and 3085E (49) from conduit connector (44).

NOTE

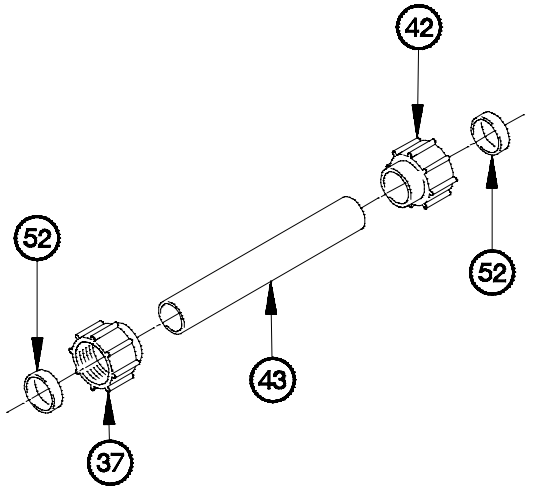
Perform step (29) on van bodies serial number 191 and higher.

(29) Remove wires 1509D (26) and 1509E (27) from conduit connector (44).

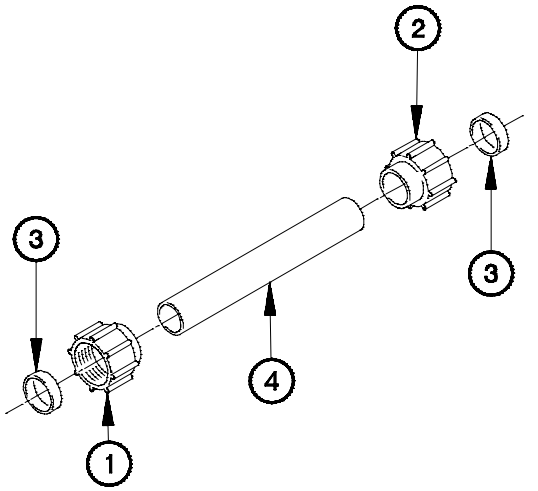
(30) Remove locknut (50) and conduit connector (44) from relay box (51).

16-50. M1079 INTERIOR LIGHT SWITCH/BOX AND CONDUIT REPLACEMENT (CONT)

(31) Remove two ferrules (52) and conduit nuts (37 and 42) from conduit (43).



b. Installation.



(1) Position conduit nuts (1 and 2) and two ferrules (3) on conduit (4).

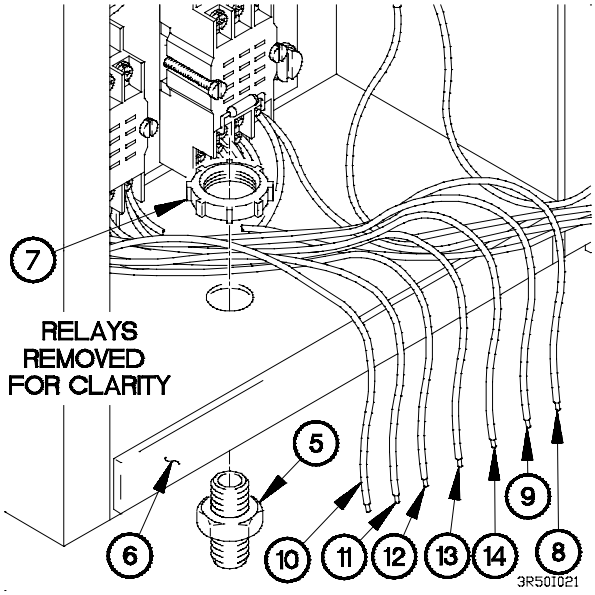
(2) Install conduit connector (5) in relay box (6) with locknut (7).

NOTE

Perform step (3) on van bodies serial number 191 and higher.

(3) Route wires 1509E (8), and 1509D (9) through conduit connector (5).

(4) Route wires 3085E (10), 1508A (11), 1505C (12), 706B (13), 706C (14) through conduit connector (5).



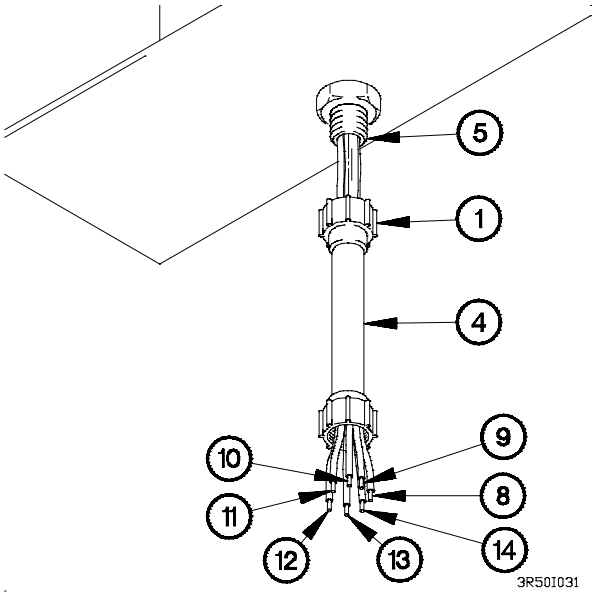
NOTE

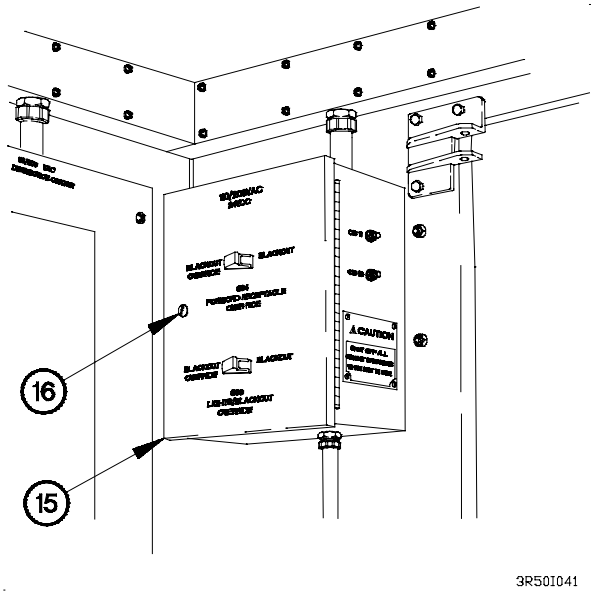
Perform step (5) on van bodies serial number 191 and higher.

(5) Route wires 1509E (8), and 1509D (9) through conduit (4).

(6) Route wires 3085E (10), 1508A (11), 1505C (12), 706B (13), and 706C (14) through conduit (4).

(7) Install conduit nut (1) on conduit connector (5).





(8) Close relay box cover (15).

(9) Tighten screw (16) in relay box cover (15).

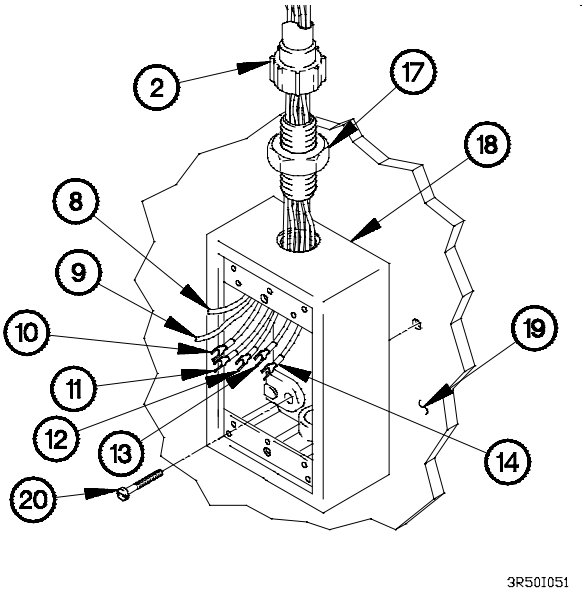
(10) Install conduit connector (17) in outlet box (18).

(11) Route wires 1509E (8), and 1509D (9) through conduit connector (17).

(12) Route wires 3085E (10), 1508A (11), 1505C (12), 706B (13), and 706C (14) through conduit connector (17).

(13) Install outlet box (18) on van body wall (19) with two screws (20).

(14) Install conduit nut (2) on conduit connector (17).



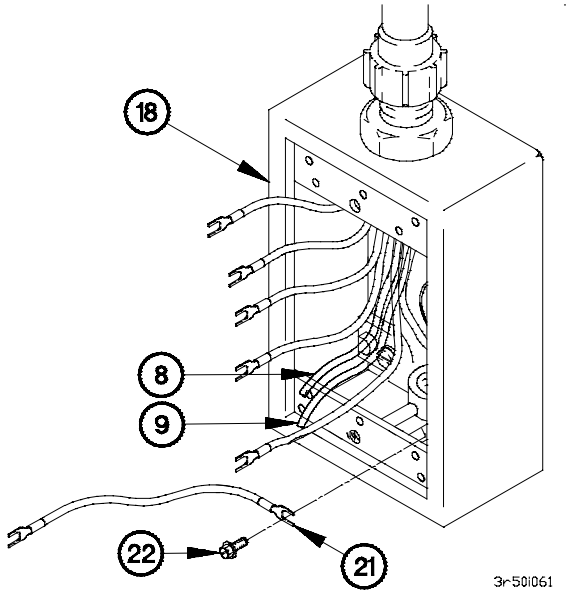
16-50. M1079 INTERIOR LIGHT SWITCH/BOX AND CONDUIT REPLACEMENT (CONT)

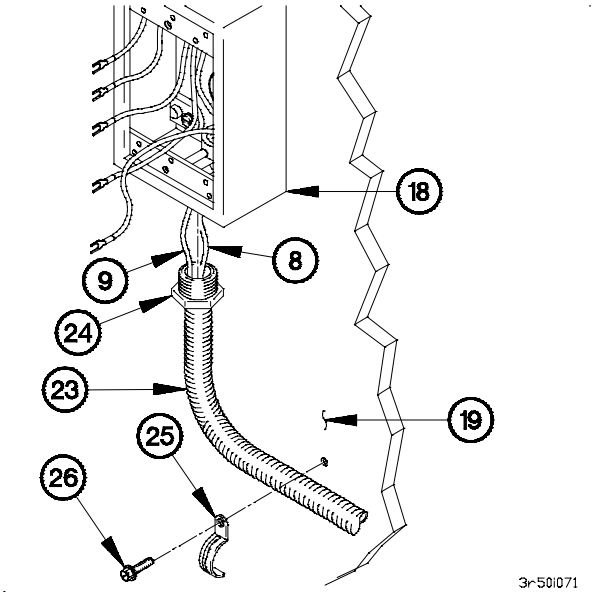
(15) Install wire 3085AH terminal lug (21) on outlet box (18) with screw (22).

NOTE

Perform steps (16) through (23) on van bodies serial number 191 and higher.

(16) Route wires 1509E and 1509D (8 and 9) through bottom of outlet box (18).





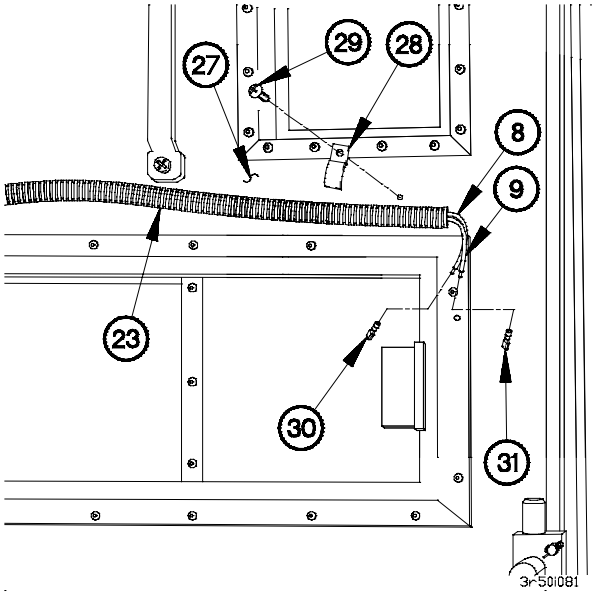
(17) Route wires 1509E and 1509D (8 and 9) through conduit (23).

(18) Install conduit connector (24) in outlet box (18).

(19) Install conduit (23) on van body wall (19) with clamp (25) and screw (26).

(20) Install conduit (23) on RH door (27) with two clamps (28) and screws (29).

(21) Install wire 1509E and 1509D terminal lugs (30 and 31) on wire 1509E and 1509D (8 and 9).

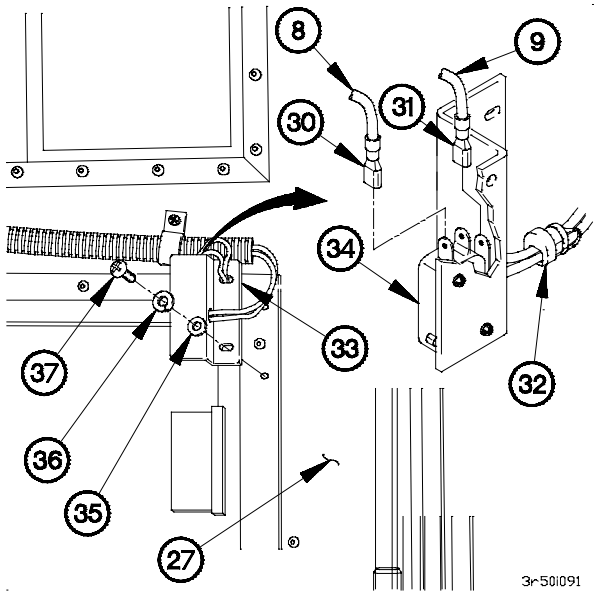


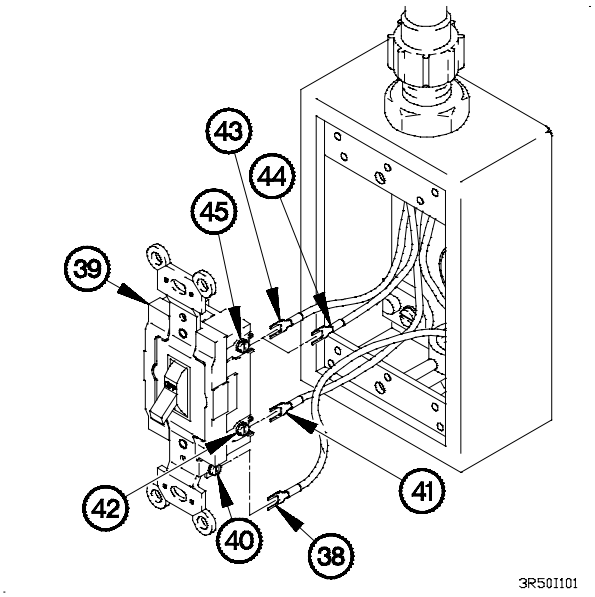
(22) Install wires 1509E and 1509D (8 and 9) in strain relief (32).

(23) Install strain relief (32) in bracket (33).

(24) Connect wire 1509E terminal lug (30) and 1509D terminal lug (31) to blackout switch S15 (34).

(25) Install bracket (33) on RH door (27) with two washers (35), lockwashers (36), and screws (37).





(26) Install wire 3085AH terminal lug (38) on switch S32 (39).

(27) Tighten screw (40) on switch S32 (39).

(28) Install wire 3085E terminal lug (41) on switch S32 (39).

(29) Tighten screw (42) on switch S32 (39).

(30) Install wire 1508A and 1505C terminal lugs (43 and 44) on switch S32 (39).

(31) Tighten screw (45) on switch S32 (39).

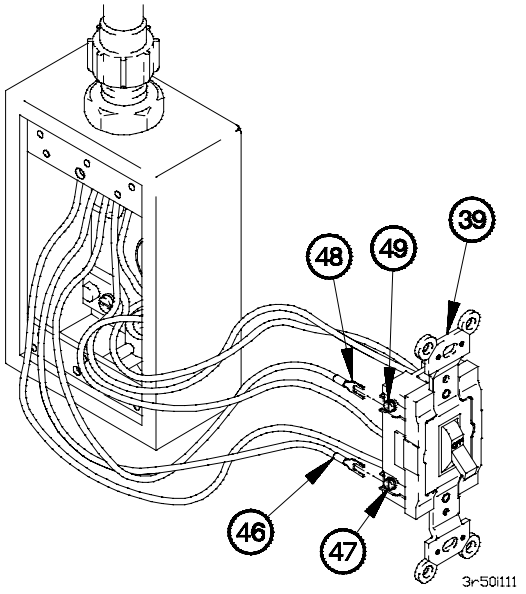
16-50. M1079 INTERIOR LIGHT SWITCH/BOX AND CONDUIT REPLACEMENT (CONT)

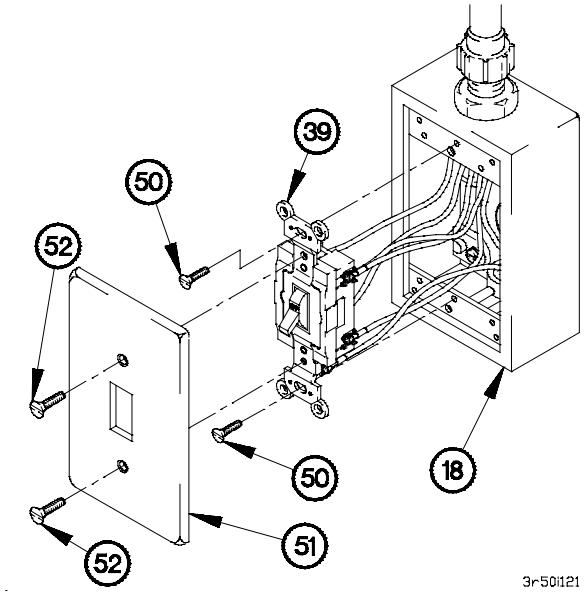
(32) Install wire 706B terminal lug (46) on switch S32 (39).

(33) Tighten screw (47) on switch S32 (39).

(34) Install wire 706C terminal lug (48) on switch S32 (39).

(35) Tighten screw (49) on switch S32 (39).





(36) Install switch S32 (39) in outlet box (18) with two screws (50).

(37) Install cover (51) on outlet box (18) with two screws (52).

c. Follow-On Maintenance.

(1) Connect AC power (TM 9-2320-365-10).

(2) Connect batteries (para 7-48).

(3) Check proper operation of fluorescent lights (TM 9-2320-365-10).

(4) Check proper operation of blackout lights (TM 9-2320-365-10).

(5) Close LH and RH doors (TM 9-2320-365-10).

End of Task.

16-51. M1079 FIELD TELEPHONE BINDING POST/BOX AND CONDUIT REPLACEMENT

This task covers:

a. Exterior Field Telephone Binding Post Removal
b. Exterior Field Telephone Binding Post Installation
c. Interior Field Telephone Binding Post/Box and Conduit Removal
d. Interior Field Telephone Binding Post/Box and Conduit Installation
e. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
Field telephone disconnected (TM 9-2320-365-10).
AC power disconnected (TM 9-2320-365-10).
Batteries disconnected (para 7-48).
110 vac outlet/box and conduit removed (for removal of field telephone box or conduit) (para 16-53).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Tool Kit, Auto Fuel and Electrical Systems Repair (Item 42, Appendix C)

Materials/Parts
Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D)
Lockwasher (28) (van body serial numbers 001 through 190) (Item 77, Appendix G)
Lockwasher (16) (van bodies serial number 191 and higher) (Item 77, Appendix G)
Lockwasher (12) (Item 81, Appendix G)
Terminal, Lug (2) (Item 266, Appendix G)
Terminal, Lug (4) (Item 269, Appendix G)

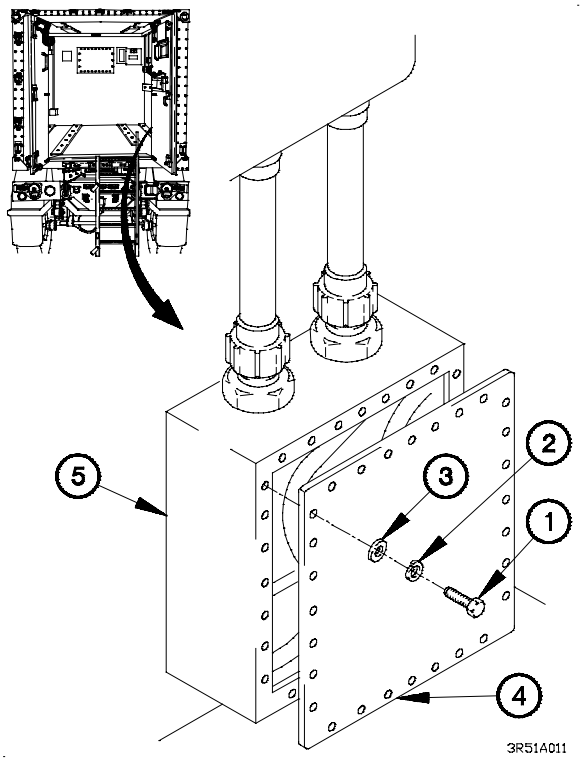
Personnel Required
(2)

a. Exterior Field Telephone Binding Post Removal.

NOTE

- Both exterior field telephone binding posts are removed the same way. Negative exterior field telephone binding post shown.
- Perform step (1) on van body serial numbers 001 through 190.

(1) Remove 28 screws (1), lockwashers (2), washers (3), and cover (4) from 110/208 vac power entry panel (5). Discard lockwashers.

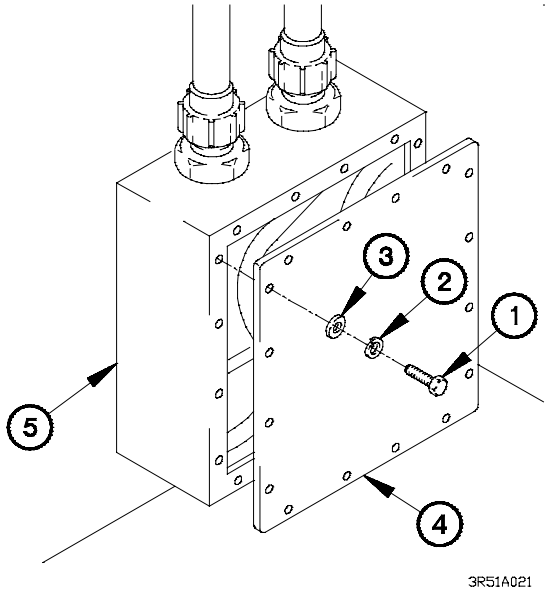


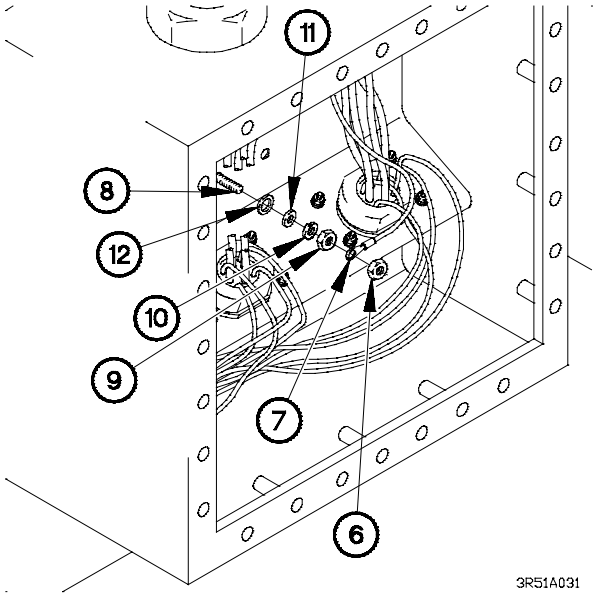
16-51. M1079 FIELD TELEPHONE BINDING POST/BOX AND CONDUIT REPLACEMENT (CONT)

NOTE

Perform step (2) on van bodies serial number 191 and higher.

(2) Remove 16 screws (1), lockwashers (2), washers (3), and cover (4) from 110/208 vac power entry panel (5). Discard lockwashers.





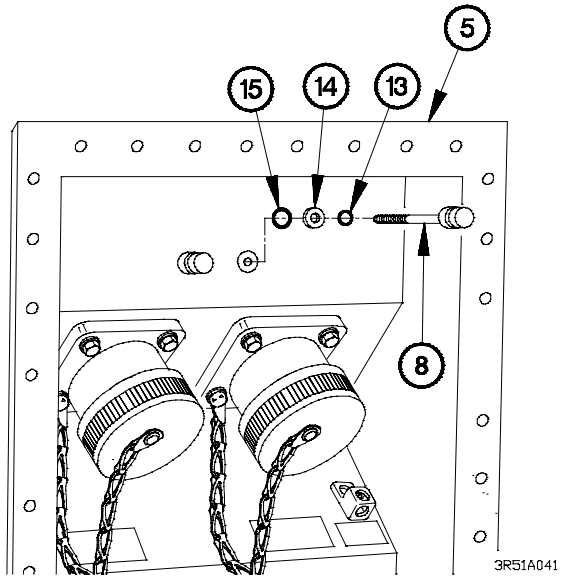
NOTE

- Steps (3) through (5) require the aid of an assistant.
- Positive field telephone binding post wire number is 424.

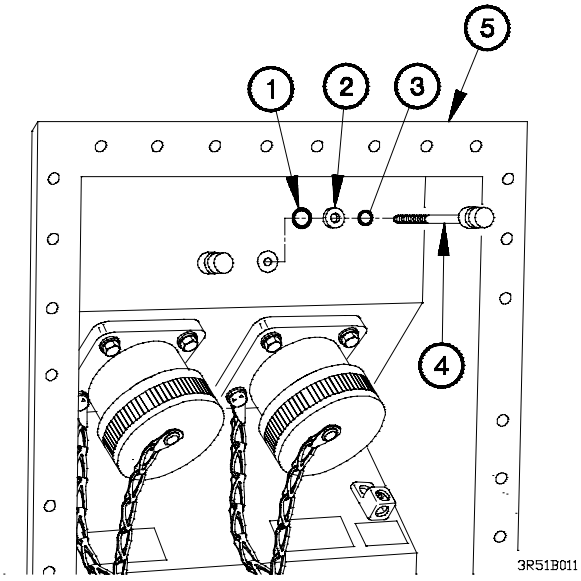
(3) Remove nut (6) and wire 425 terminal lug (7) from binding post (8).

(4) Remove nut (9), lockwasher (10), washer (11), and nylon washer (12) from binding post (8). Discard lockwasher.

(5) Remove binding post (8), preformed packing (13), nylon washer (14), and preformed packing (15) from 110/208 vac power entry panel (5).



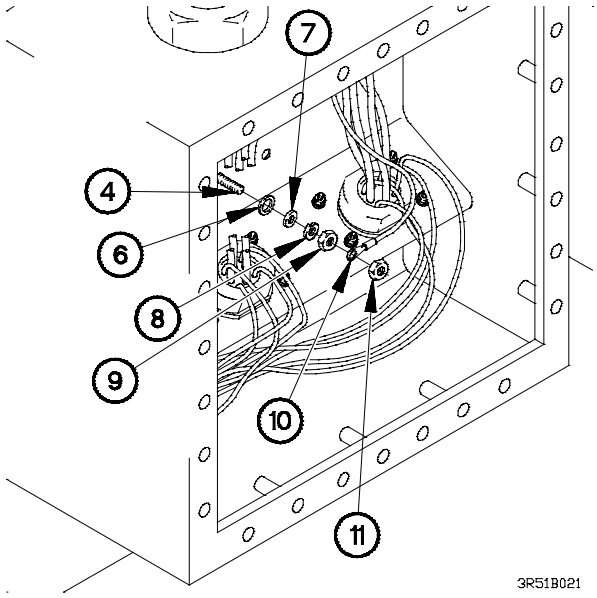
b. Exterior Field Telephone Binding Post Installation.



NOTE

- Both exterior field telephone binding posts are installed the same way. Negative exterior field telephone binding post shown.
- Steps (1) through (3) require the aid of an assistant.

(1) Install preformed packing (1), nylon washer (2), preformed packing (3), and binding post (4) in 110/208 vac power entry panel (5).



(2) Install nylon washer (6), washer (7), lockwasher (8), and nut (9) on binding post (4).

NOTE

Positive field telephone binding post wire number is 424.

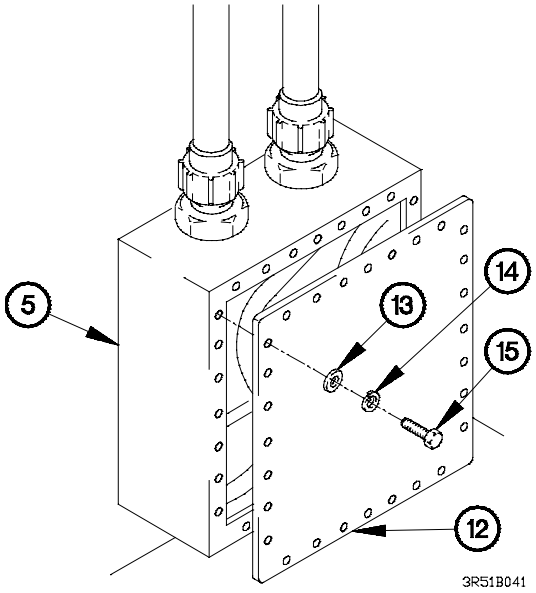
(3) Install wire 425 terminal lug (10) on binding post (4) with nut (11).

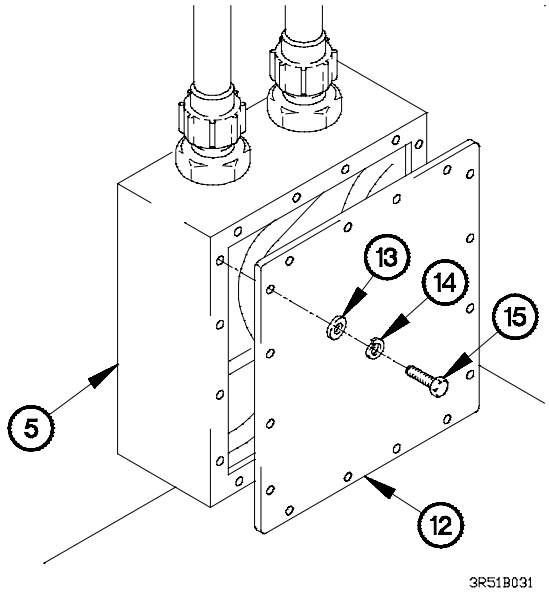
16-51. M1079 FIELD TELEPHONE BINDING POST/BOX AND CONDUIT REPLACEMENT (CONT)

NOTE

Perform step (4) on van bodies serial number 191 and higher.

(4) Install cover (12) on 110/208 vac power entry panel (5) with 16 washers (13), lockwashers (14), and screws (15).





NOTE

Perform step (5) on van body serial numbers 001 through 190.

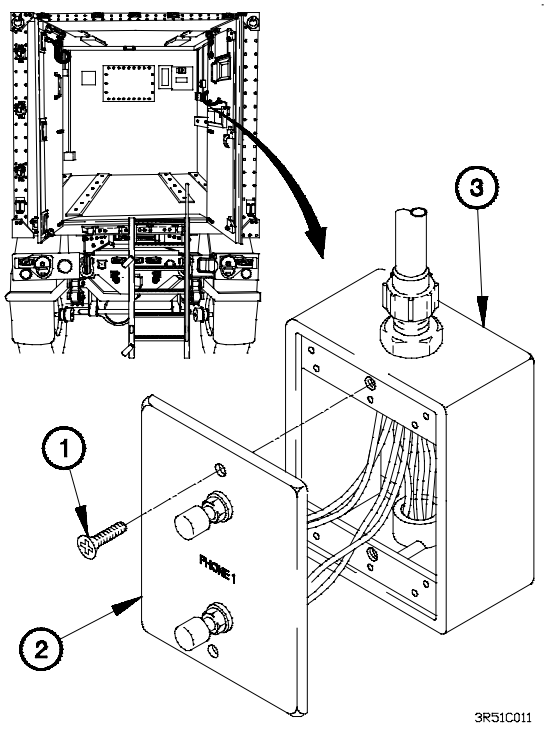
(5) Install cover (12) on 110/208 vac power entry panel (5) with 28 washers (13), lockwashers (14), and screws (15).

c. Interior Field Telephone Binding Post/Box and Conduit Removal.

NOTE

PHONE 1 and PHONE 2 field telephone binding posts/boxes and conduits are removed the same way. PHONE 1 positive field telephone binding post/box and conduit shown.

(1) Remove two screws (1) and cover (2) from outlet box (3).

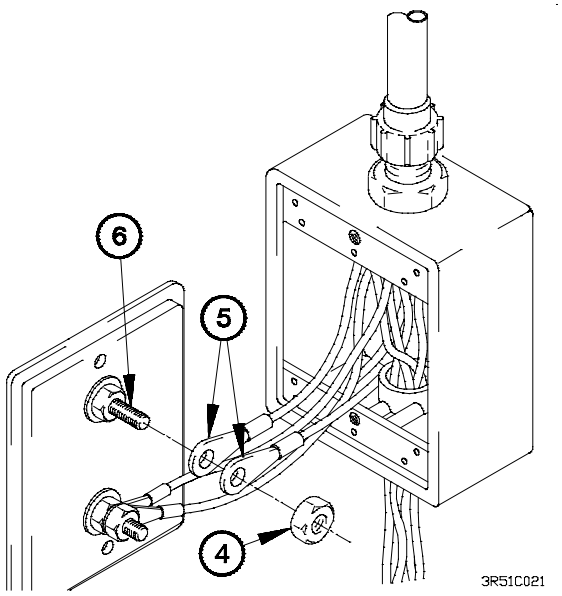


NOTE

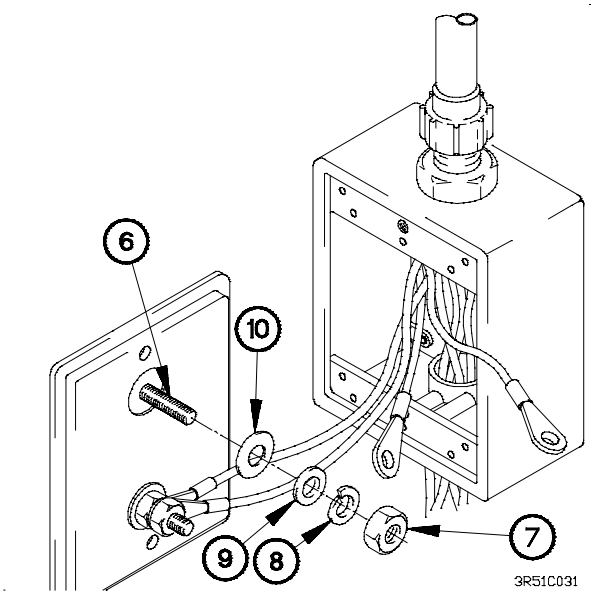
- Tag wires and connection points prior to disconnecting.
- PHONE 1 field telephone binding posts have two wires attached. PHONE 2 field telephone binding posts have one wire attached. **Refer to Table 16-2. M1079 Interior Field Telephone Binding Post Wire Numbers** for details.
- Perform steps (2) through (4) on positive and negative field telephone binding posts for outlet box and/or conduit removal.

Table 16-2. M1079 Interior Field Telephone Binding Post Wire Numbers

Binding Post Identification	Wire Number(s)
PHONE 1 Positive (red)	424A, 424
PHONE 1 Negative (black)	425A, 425
PHONE 2 Positive (red)	424A
PHONE 2 Negative (black)	425A



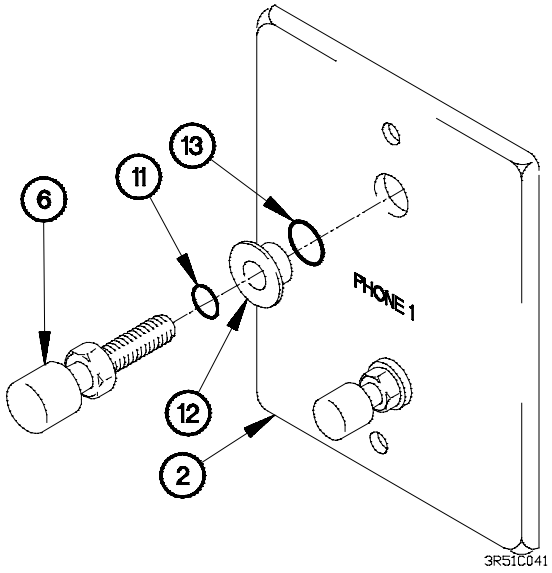
(2) Remove nut (4) and wire terminal lug(s) (5) from binding post (6).

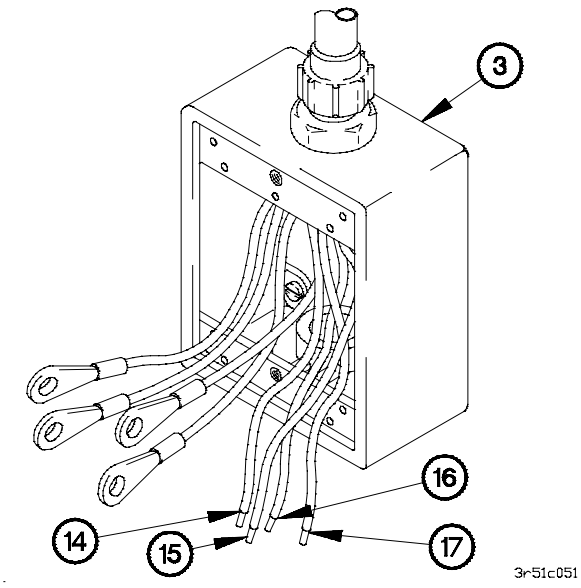


(3) Remove nut (7), lockwasher (8), washer (9), and nylon washer (10) from binding post (6).

16-51. M1079 FIELD TELEPHONE BINDING POST/BOX AND CONDUIT REPLACEMENT (CONT)

(4) Remove binding post (6), preformed packing (11), nylon washer (12), and preformed packing (13) from cover (2).





NOTE

Perform step (5) for PHONE 1 outlet box and/or conduit removal.

(5) Remove wires 702C (14), 702F (15), 3085J (16), and 1499D (17) from bottom of outlet box (3).

NOTE

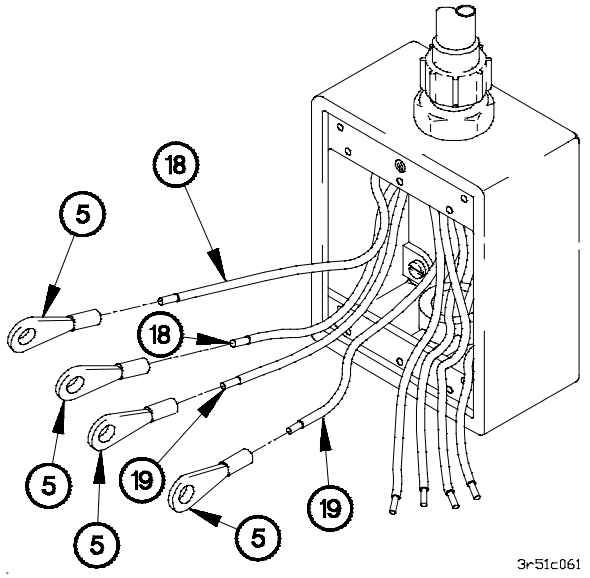
Perform step (6) for PHONE 2 outlet box and/or conduit removal.

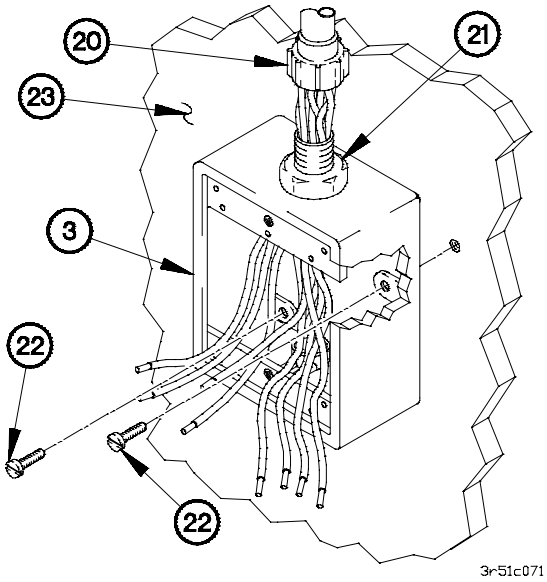
(6) Remove wires 702F (15), 3085G (16), and 1499F (17) from bottom of outlet box (3).

NOTE

PHONE 1 outlet box contains four wires. PHONE 2 outlet box contains two wires. **Refer to Table 16-2. M1079 Interior Field Telephone Binding Post Wire Numbers** for details.

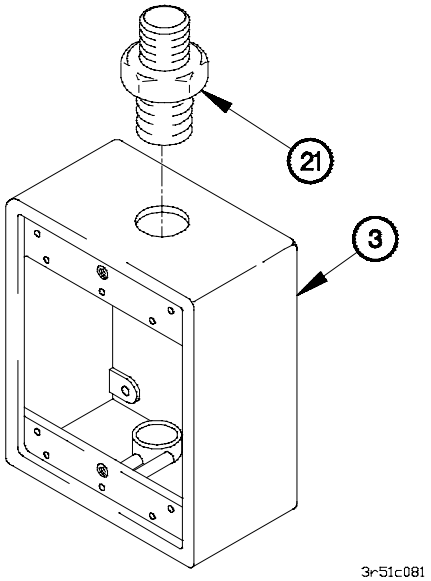
(7) Remove terminal lugs (5) from wires 424/424A (18) and 425/425A (19).





(8) Remove conduit nut (20) from conduit connector (21).

(9) Remove two screws (22) and outlet box (3) from van body wall (23).



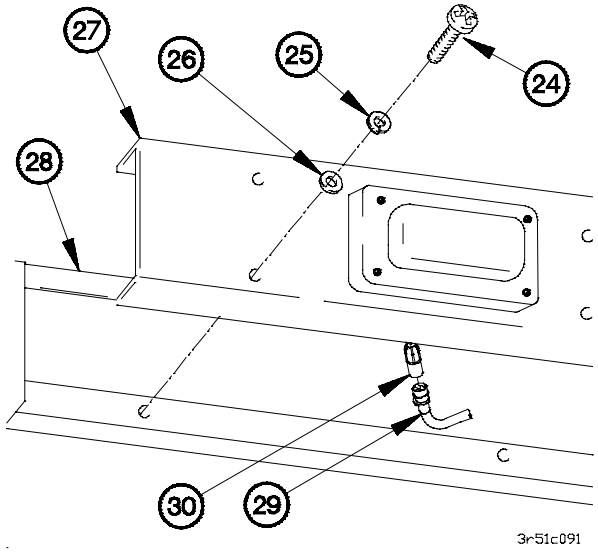
(10) Remove conduit connector (21) from outlet box (3).

16-51. M1079 FIELD TELEPHONE BINDING POST/BOX AND CONDUIT REPLACEMENT (CONT)

NOTE

Perform steps (11) through (18) for conduit removal.

(11) Remove 12 screws (24), lockwashers (25), washers (26), and raceway cover (27) from raceway (28). Discard lockwashers.



NOTE

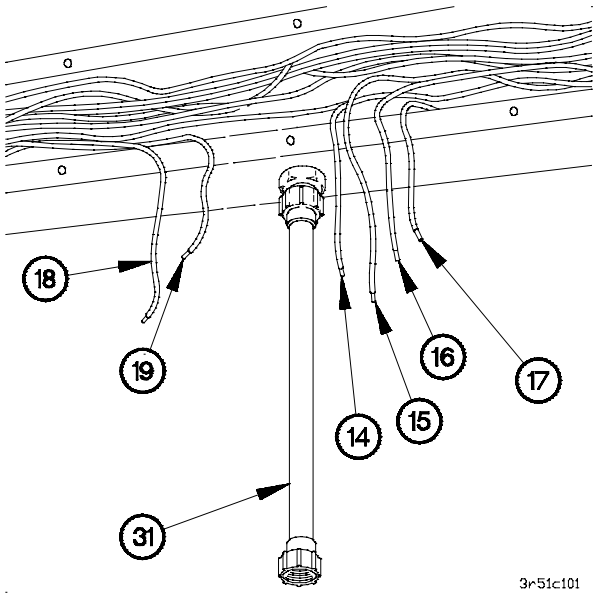
Perform step (12) for PHONE 1 outlet box and/or conduit removal.

(12) Disconnect blackout light connector J162 (29) from connector P162 (30).

NOTE

Perform step (13) for PHONE 2 outlet box and/or conduit removal.

(13) Disconnect blackout light connector J164 (29) from connector P164 (30).



NOTE

Perform step (14) for PHONE 1 conduit removal.

(14) Remove wires 424 (18), 425 (19), 702C (14), 702F (15), 3085J (16), and 1499D (17) from conduit (31).

NOTE

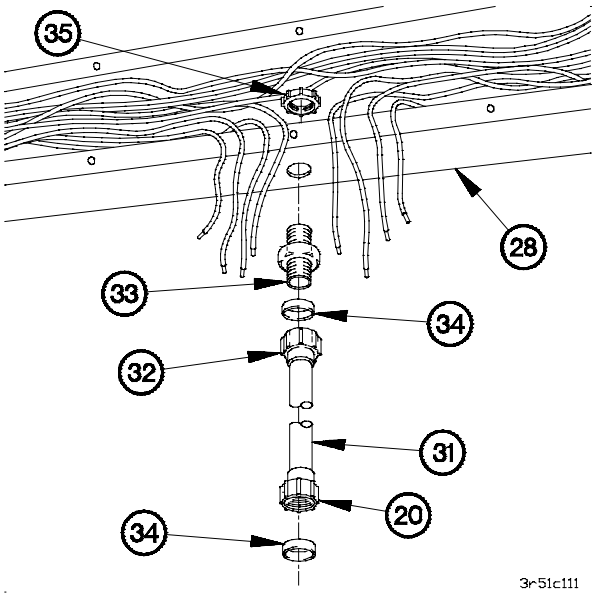
Perform step (15) for PHONE 2 conduit removal.

(15) Remove wires 424A (18), 425A (19), 702F (15), 3085G (16), and 1499F (17) from conduit (31).

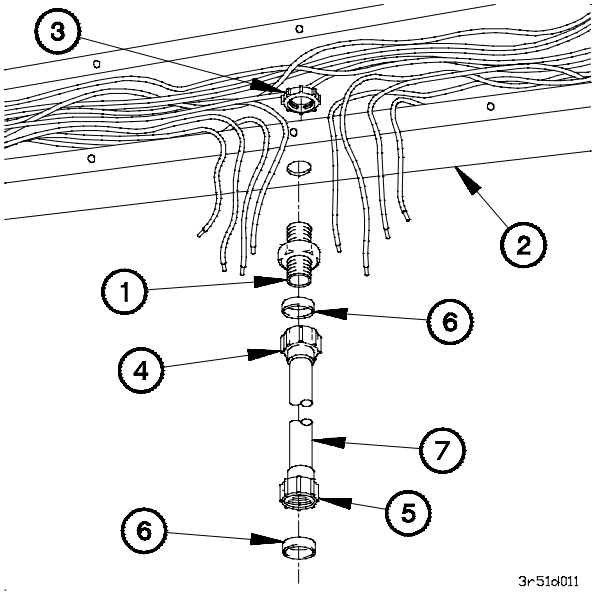
(16) Remove conduit nut (32) from conduit connector (33).

(17) Remove two ferrules (34) and conduit nuts (20 and 32) from conduit (31).

(18) Remove lock nut (35) and conduit connector (33) from raceway (28).



d. Interior Field Telephone Binding Post/Box and Conduit Installation.



NOTE

- PHONE 1 and PHONE 2 field telephone binding posts/boxes and conduits are removed the same way. PHONE 1 positive field telephone binding post/box and conduit shown.
- Perform steps (1) through (8) for conduit installation.

(1) Install conduit connector (1) in raceway (2) with lock nut (3).

(2) Position conduit nuts (4 and 5) and two ferrules (6) on conduit (7).

(3) Install conduit nut (4) on conduit connector (1).

16-51. M1079 FIELD TELEPHONE BINDING POST/BOX AND CONDUIT REPLACEMENT (CONT)

NOTE

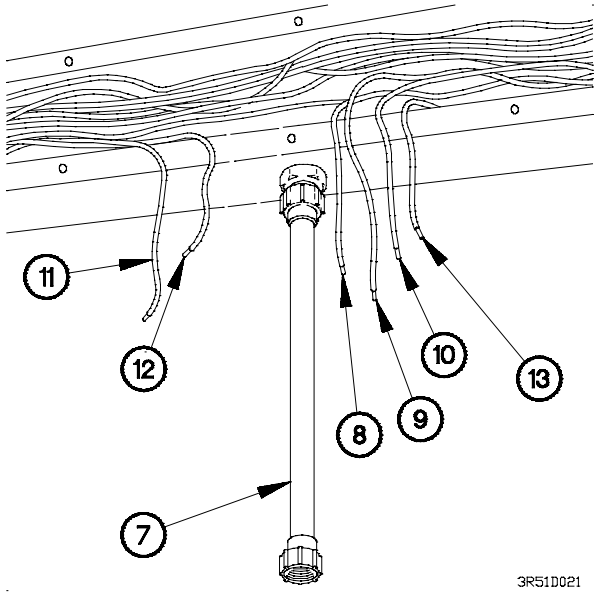
Perform step (4) for PHONE 2 outlet box installation.

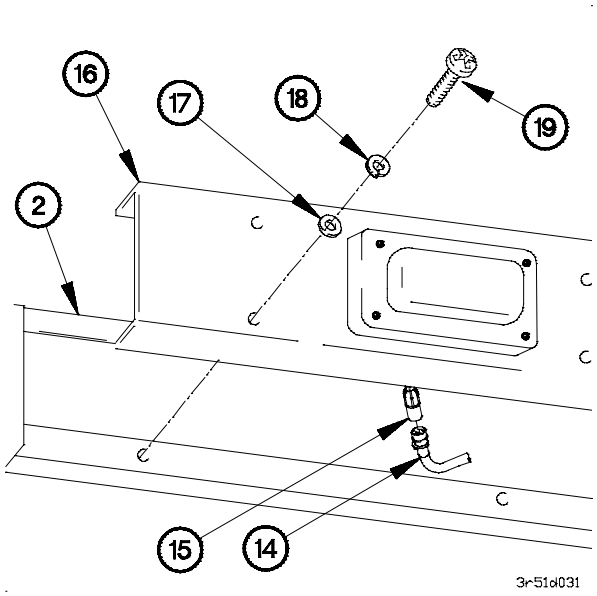
(4) Route wires 1499F (8), 3085G (9), 702F (10), 425A (11), and 424A (12) through conduit (7).

NOTE

Perform step (5) for PHONE 1 outlet box installation.

(5) Route wires 1499D (8), 3085J (9), 702F (10), 702C (13), two wires 425 (11), and two wires 424 (12) through conduit (7).





NOTE

Perform step (6) for PHONE 2 outlet box and/or conduit installation.

(6) Connect blackout light connector J164 (14) to connector P164 (15).

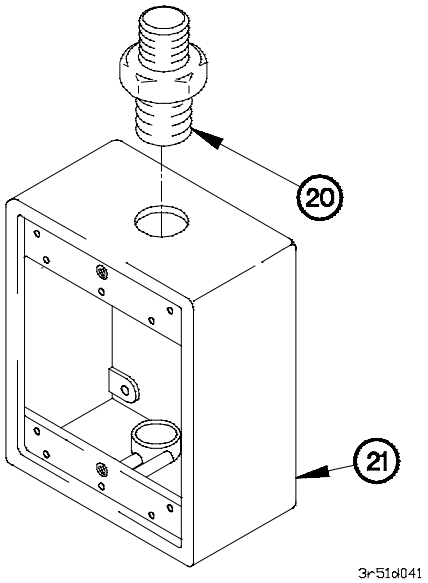
NOTE

Perform step (7) for PHONE 1 outlet box and/or conduit installation.

(7) Connect blackout light connector J162 (14) to connector P162 (15).

(8) Install raceway cover (16) on raceway (2) with 12 washers (17), lockwashers (18), and screws (19).

(9) Install conduit connector (20) in outlet box (21).



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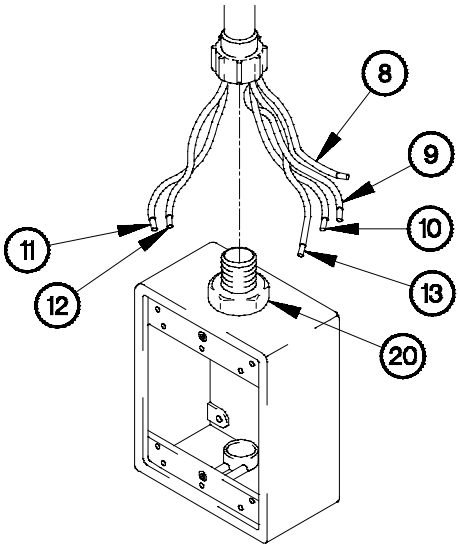

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NOTE

Perform step (10) for PHONE 2 outlet box installation.

(10) Route wires 425A (11), 424A (12), 1499F (8), 3085G (9), and 702F (10) through conduit connector (20).

NOTE

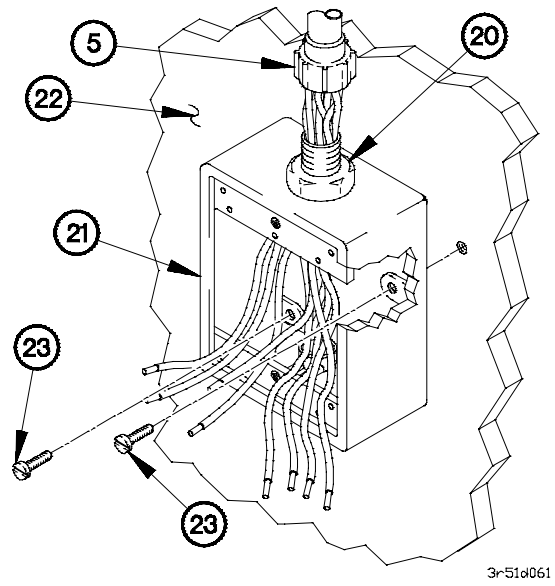
Perform step (11) for PHONE 1 outlet box installation.

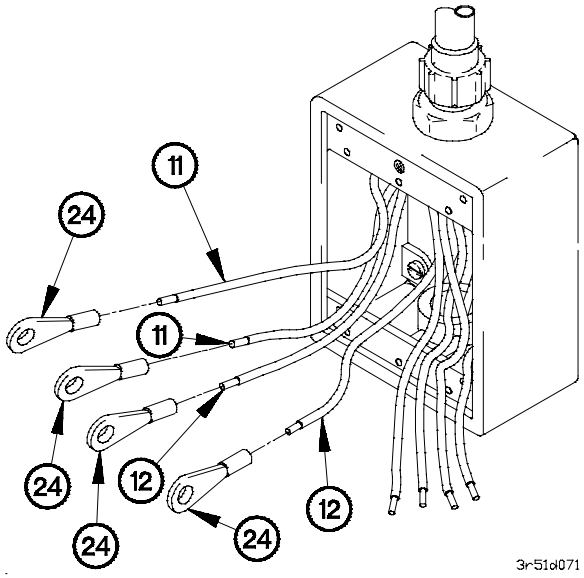
(11) Route wires 425 (11), 424 (12), 1499D (8), 3085J (9), 702F (10), and 702C (13) through conduit connector (20).

16-51. M1079 FIELD TELEPHONE BINDING POST/BOX AND CONDUIT REPLACEMENT (CONT)

(12) Install outlet box (21) on van body wall (22) with two screws (23).

(13) Install conduit nut (5) on conduit connector (20).





NOTE

PHONE 1 outlet box contains four wires. PHONE 2 outlet box contains two wires. **Refer to Table 16-2. M1079 Interior Field Telephone Binding Post Wire Numbers** for details.

(14) Install terminal lugs (24) on wires 425/425A (11) and 424/424A (12).

NOTE

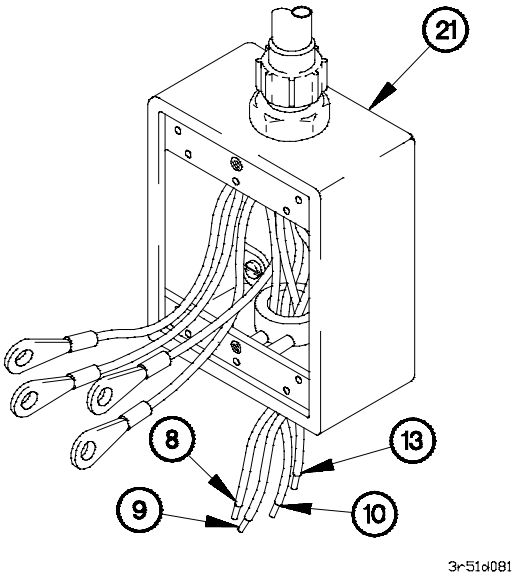
Perform step (15) on PHONE 2 outlet box.

(15) Route wires 1499F (8), 3085G (9), and 702F (10) through hole in outlet box (21).

NOTE

Perform step (16) on PHONE 1 outlet box.

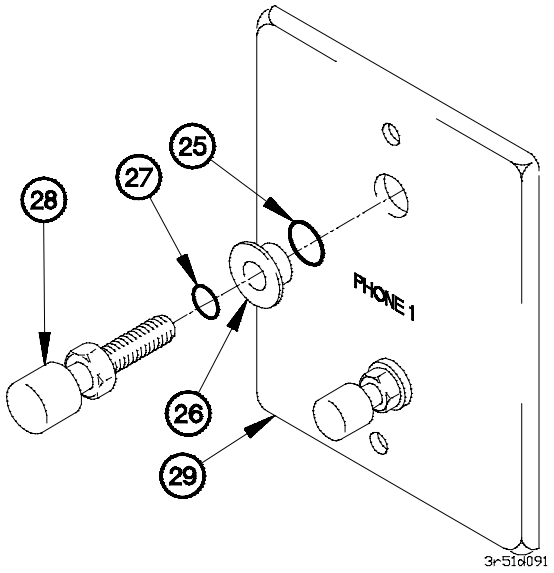
(16) Route wires 1499D (8), 3085J (9), 702F (10), and 702C (13) through hole in outlet box (21).

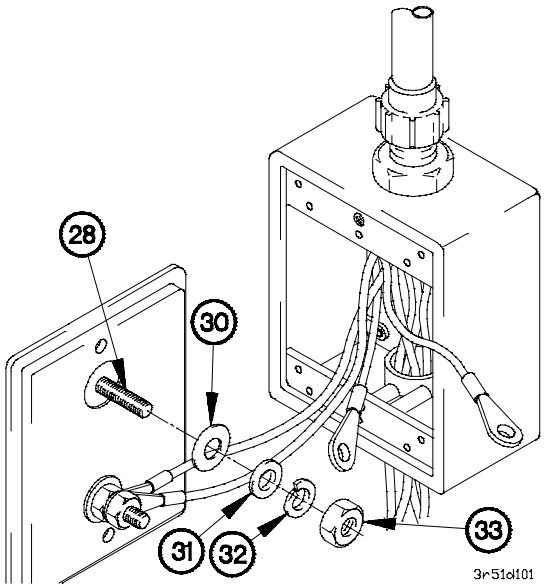


NOTE

Perform steps (17) through (19) on positive and negative field telephone binding posts after installation of outlet box.

(17) Install preformed packing (25), nylon washer (26), preformed packing (27), and binding post (28) in cover (29).



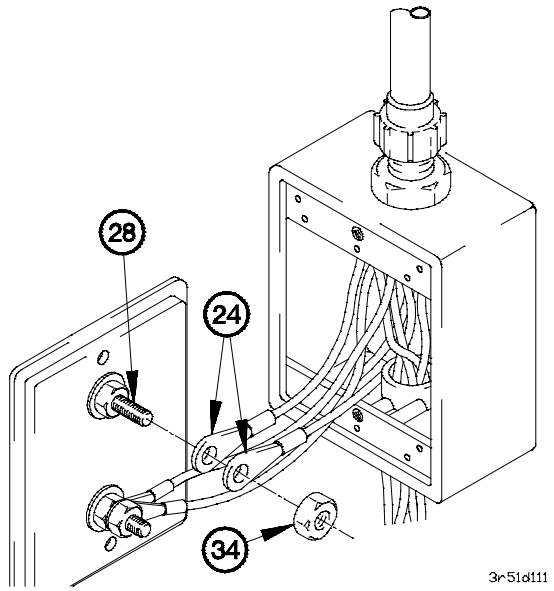


(18) Install nylon washer (30), washer (31), lockwasher (32), and nut (33) on binding post (28).

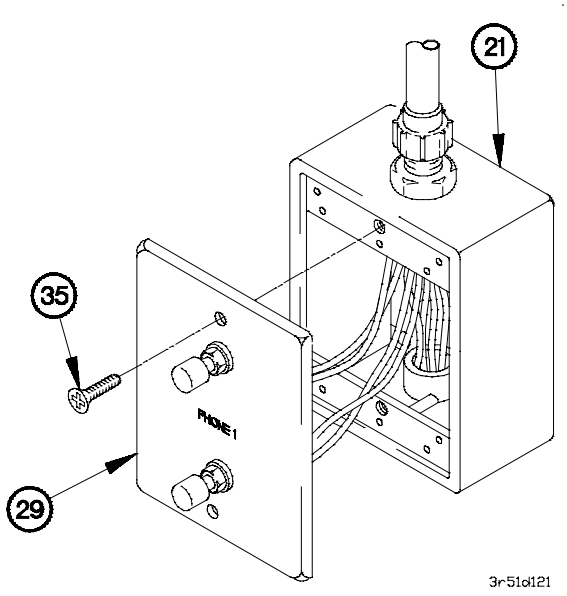
NOTE

PHONE 1 field telephone binding posts have two wires attached. PHONE 2 field telephone binding posts have one wire attached. Refer to **Table 16-2. M1079 Interior Field Telephone Binding Post Wire Numbers** for details.

(19) Install wire terminal lug(s) (24) on binding post (28) with nut (34).



16-51. M1079 FIELD TELEPHONE BINDING POST/BOX AND CONDUIT REPLACEMENT (CONT)



(20) Install cover (29) on outlet box (21) with two screws (35).

e. Follow-On Maintenance.

(1) Install 110/208 vac outlet/box and conduit if removed (para 16-53).

(2) Connect batteries (para 7-48).

(3) Connect AC power if required (TM 9-2320-365-10).

(4) Connect field telephone (TM 9-2320-365-10).

(5) Check for proper operation of field telephone (TM 9-2320-365-10).

End of Task.

16-52. M1079 24 VDC BINDING POST/BOX AND CONDUIT REPLACEMENT

This task covers:

a. Removal
b. Installation
c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
AC power disconnected (TM 9-2320-365-10).
Batteries disconnected (para 7-48).
110 vac outlet/box and conduit removed (for removal of 24 vdc box or conduit) (para 16-53).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Tool Kit, Auto Fuel and Electrical Systems Repair (Item 42, Appendix C)

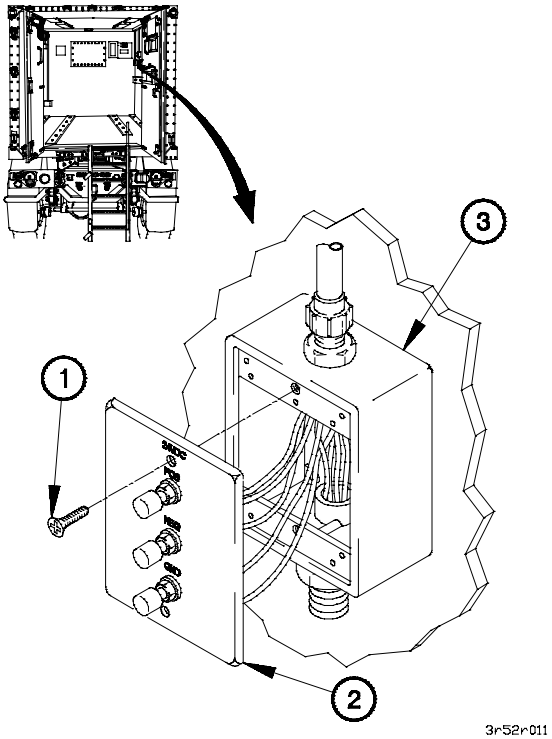
Materials/Parts
Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D)
Lockwasher (12) (Item 76, Appendix G)
Terminal, Lug (5) (Item 266, Appendix G)

a. Removal.

NOTE

Left side and right side 24 vdc POS, NEG, and GND binding posts are removed the same way. Right side (J237) 24 vdc POS binding post shown.

(1) Remove two screws (1) and cover (2) from outlet box (3).



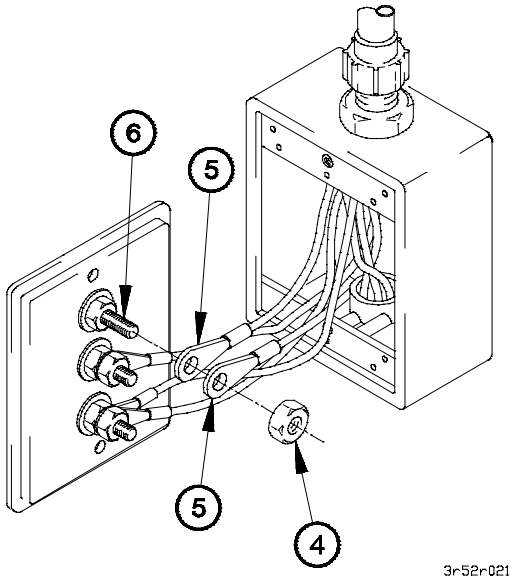
16-52. M1079 24 VDC TERMINAL/BOX AND CONDUIT REPLACEMENT (CONT)

NOTE

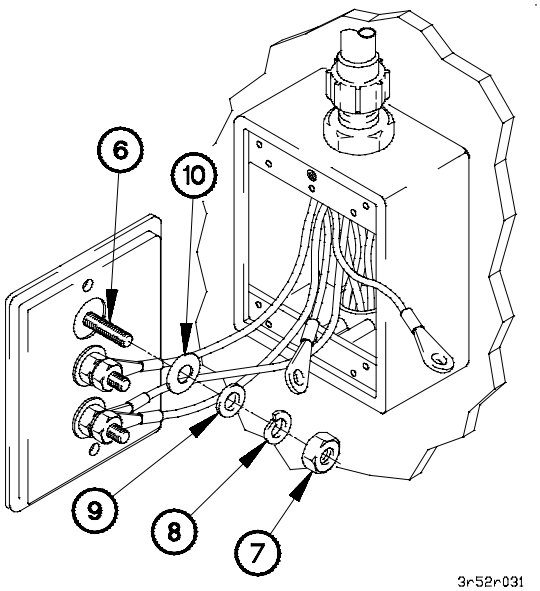
- Tag wires and connection points prior to removing.
- Right side (J237) 24 vdc POS and GND binding posts, and left side (J236) 24 vdc NEG binding post have two wires attached. The remaining three binding posts have one wire attached. Refer to **Table 16-3. M1079 24 VDC Binding Post Wire Numbers** for details.
- Perform steps (2) through (4) on 24 VDC POS, NEG, and GND binding posts for outlet box and/or conduit removal.

Table 16-3. M1079 24 VDC Binding Post Wire Numbers

Binding Post Identification	Wire Number(s)
J236 24VDC POS	49A
J236 24VDC NEG	3086, 3086
J236 24VDC GND	3085AD
J237 24VDC POS	49, 49A
J237 24VDC NEG	3086
J237 24VDC GND	3085L, 3085AD

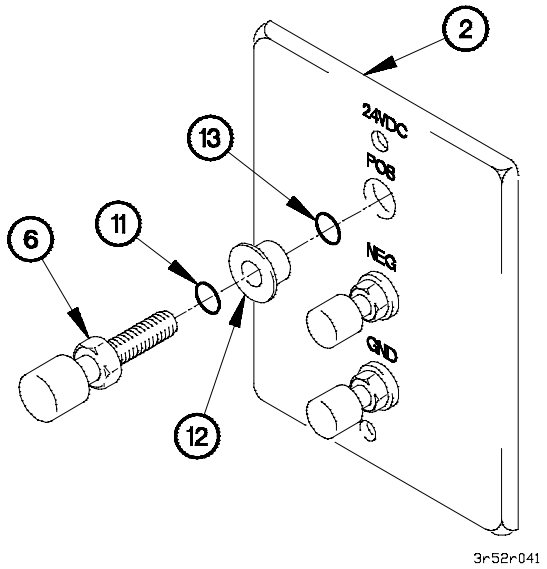


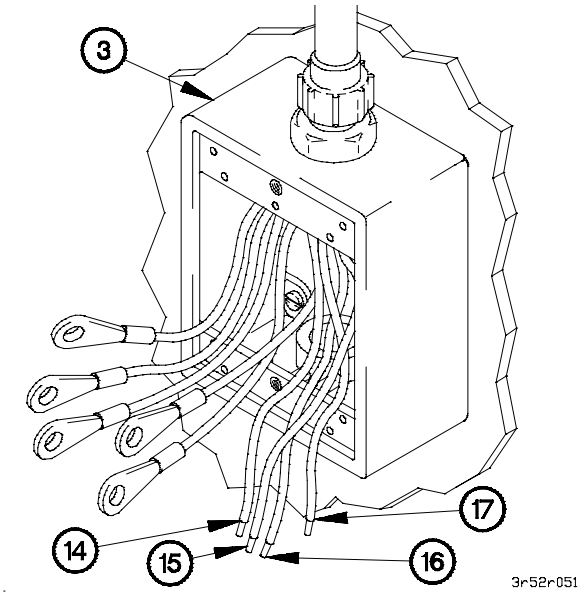
(2) Remove nut (4) and terminal lug(s) (5) from binding post (6).



(3) Remove nut (7), lockwasher (8), washer (9), and nylon washer (10) from binding post (6).

(4) Remove binding post (6), preformed packing (11), nylon washer (12), and preformed packing (13) from cover (2).





NOTE

Perform step (5) for right side (J237) outlet box and/or conduit removal.

(5) Remove wires 1499C (14), 3085M (15), 702B (16), and 702E (17) from bottom of outlet box (3).

NOTE

Perform step (6) for left side (J236) outlet box and/or conduit removal.

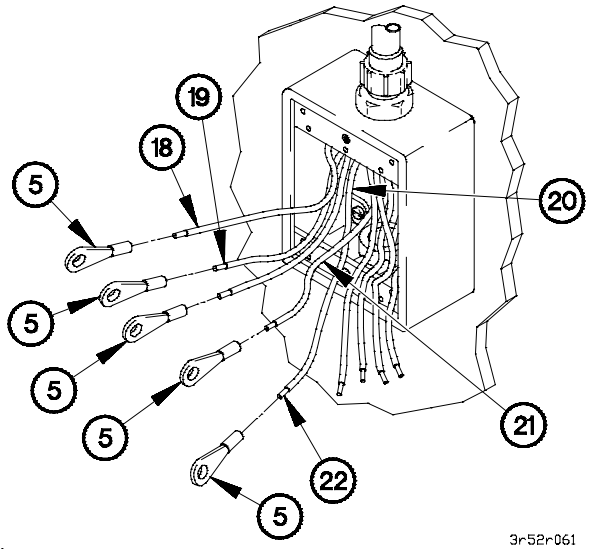
(6) Remove wires 1499E (14), 3085H (15), and 702E (17) from bottom of outlet box (3).

16-52. M1079 24 VDC TERMINAL/BOX AND CONDUIT REPLACEMENT (CONT)

NOTE

Perform step (7) for right side (J237) outlet box and/or conduit removal.

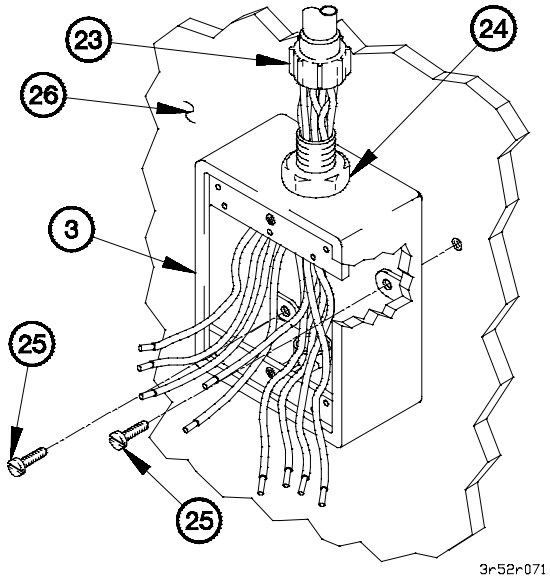
(7) Remove terminal lugs (5) from wires 49 (18), 49A (19), 3086 (20), 3085AD (21), and 3085L (22). Discard terminal lugs.



NOTE

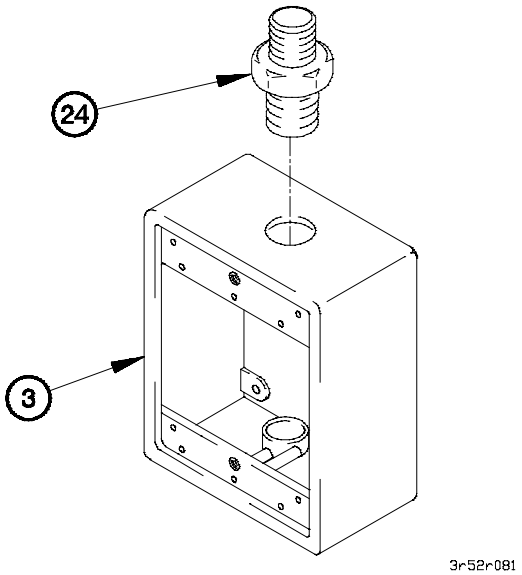
Perform step (8) for left side (J236) outlet box and/or conduit removal.

(8) Remove terminal lugs (5) from wires 49A (19), 3085AD (21), and two wires 3086 (20). Discard terminal lugs.

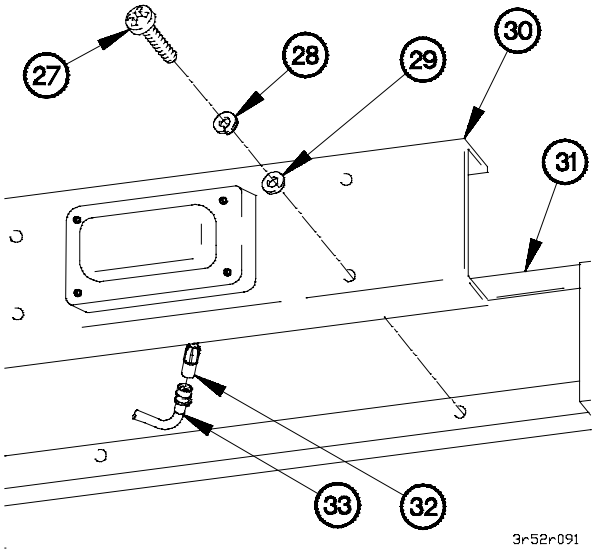


(9) Remove conduit nut (23) from conduit connector (24).

(10) Remove two screws (25) and outlet box (3) from van body wall (26).



(11) Remove conduit connector (24) from outlet box (3).



NOTE

Perform steps (12) through (19) for conduit removal.

(12) Remove 12 screws (27), lockwashers (28), washers (29), and raceway cover (30) from raceway (31). Discard lockwashers.

NOTE

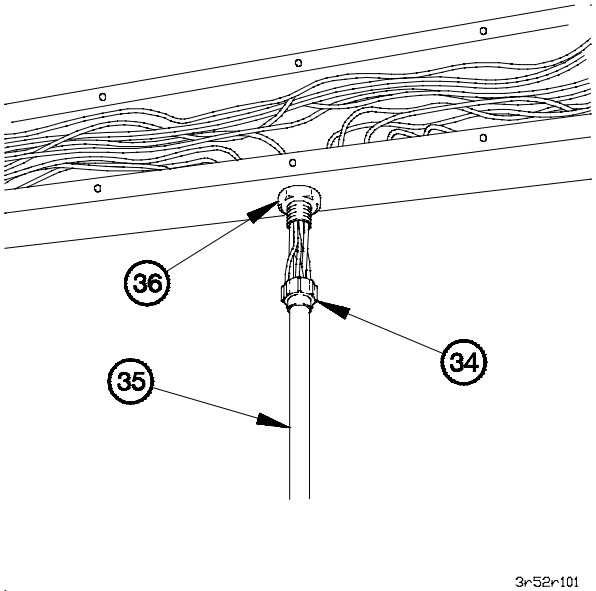
Perform step (13) for right side (J237) outlet box and/or conduit removal.

(13) Disconnect blackout light connector J162 (32) from connector P162 (33).

NOTE

Perform step (14) for left side (J236) outlet box and/or conduit removal.

(14) Disconnect blackout light connector J164 (32) from connector P164 (33).



(15) Remove conduit nut (34) and conduit (35) from conduit connector (36).

16-52. M1079 24 VDC TERMINAL/BOX AND CONDUIT REPLACEMENT (CONT)

NOTE

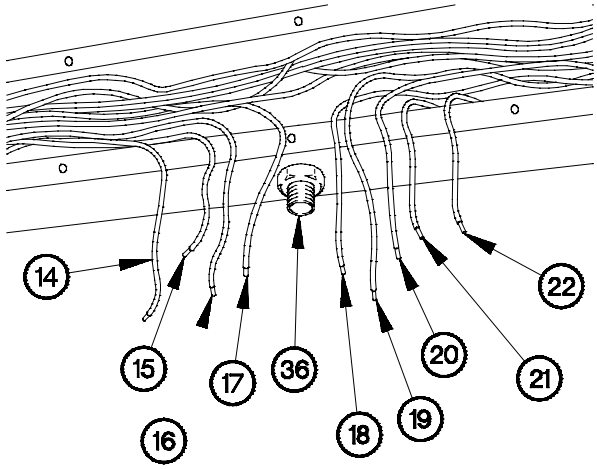
Perform step (16) for right side (J237) conduit removal.

(16) Remove wires 1499C (14), 3085M (15), 702B (16), 702E (17), 49 (18), 49A (19), 3086 (20), 3085AD (21), and 3085L (22) from conduit connector (36).

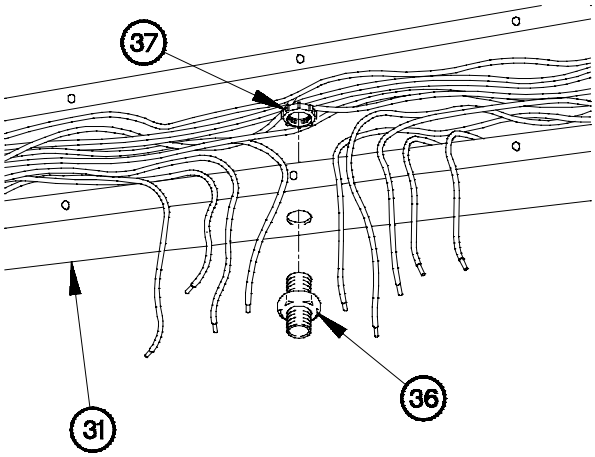
NOTE

Perform step (17) for left side (J236) conduit removal.

(17) Remove wires 1499E (14), 3085H (15), 702E (17), 49A (19), 3085AD (21), and two wires 3086 (20) from conduit connector (36).

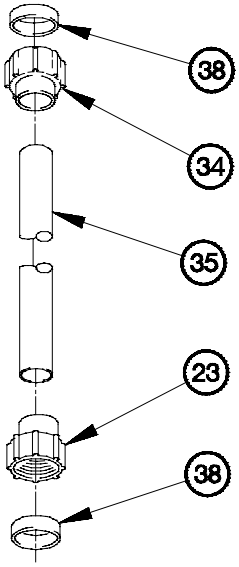


3r52r111



3r52r121

(18) Remove locknut (37) and conduit connector (36) from raceway (31).



3r52r131

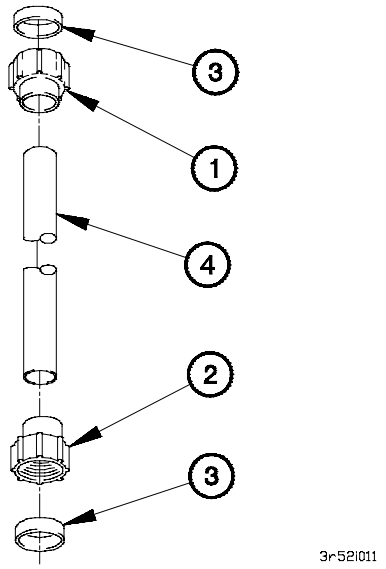
(19) Remove two ferrules (38) and conduit nuts (23 and 34) from conduit (35).

b. Installation.

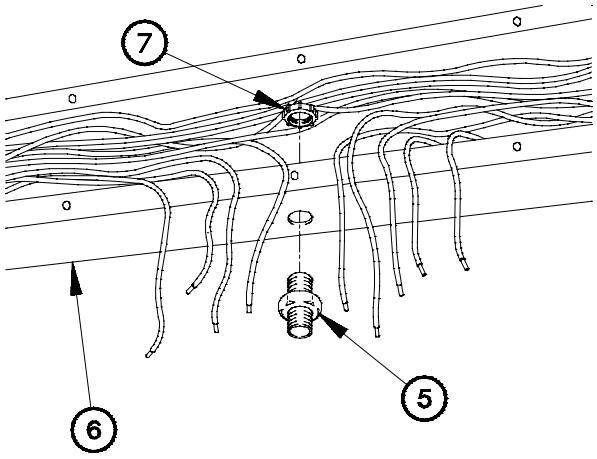
NOTE

Perform steps (1) through (9) for conduit installation.

(1) Install conduit nuts (1 and 2) and two ferrules (3) on conduit (4).



3r52l011



3r52l021

(2) Install conduit connector (5) in raceway (6) with locknut (7).

NOTE

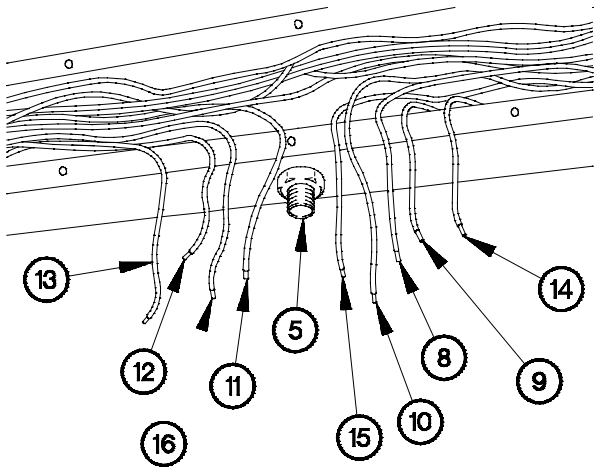
Perform step (3) for left side (J236) outlet box and conduit installation.

(3) Route two wires 3086 (8) and wires 3085AD (9), 49A (10), 702E (11), 3085H (12), and 1499E (13) through conduit connector (5).

NOTE

Perform step (4) for right side (J237) outlet box and conduit installation.

(4) Route wires 3086 (8), 3085AD (9), 49A (10), 702E (11), 3085M (12), 1499C (13), 3085L (14), 49 (15), and 702B (16) through conduit connector (5).



3r52l031

16-52. M1079 24 VDC TERMINAL/BOX AND CONDUIT REPLACEMENT (CONT)

NOTE

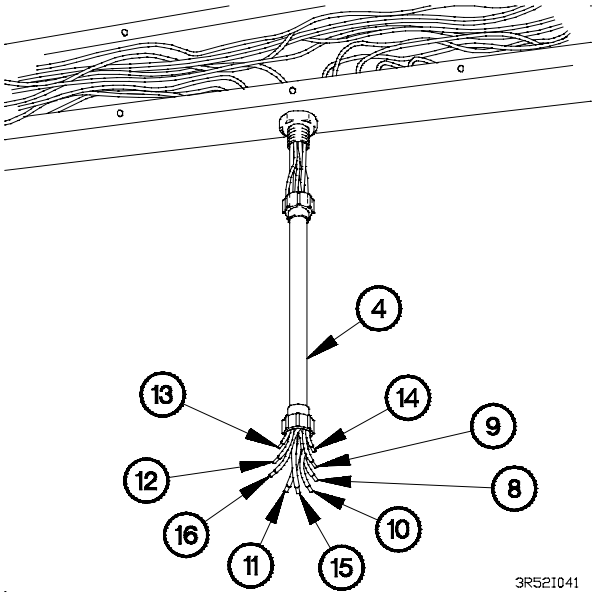
Perform step (5) for left side (J236) outlet box and conduit installation.

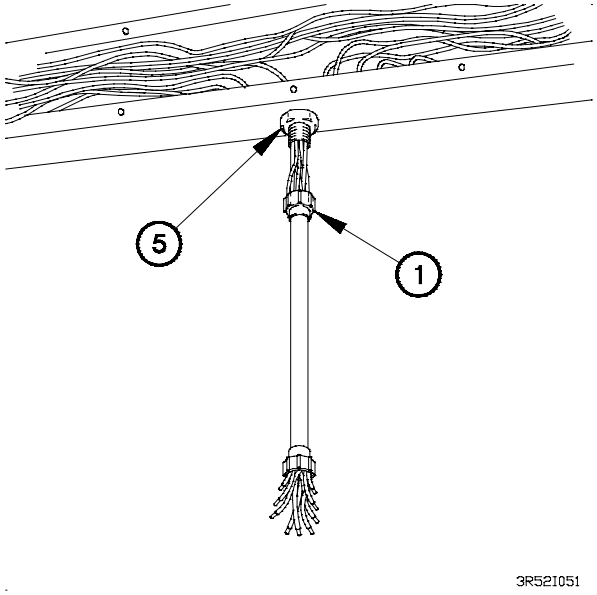
(5) Route two wires 3086 (8) and wires 3085AD (9), 49A (10), 702E (11), 3085AH (12), and 1499E (13) through conduit (4).

NOTE

Perform step (6) for right side (J237) outlet box and conduit installation.

(6) Route wires 3086 (8), 3085AD (9), 49A (10), 702E (11), 3085M (12), 1499C (13), 3085L (14), 49 (15), and 702B (16) through conduit (4).





(7) Install conduit nut (1) on conduit connector (5).

NOTE

Perform step (8) for left side (J236) outlet box and/or conduit installation.

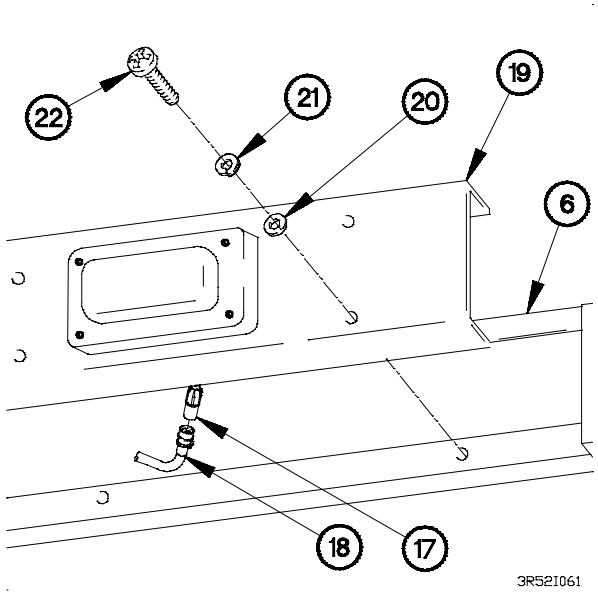
(8) Connect blackout light connector J164 (17) to connector P164 (18).

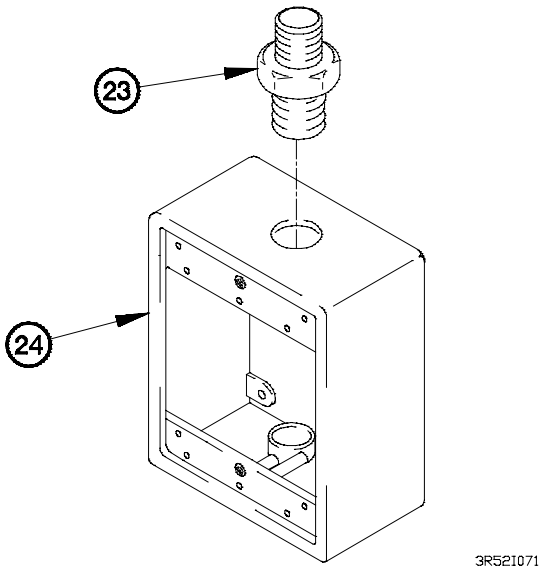
NOTE

Perform step (9) for right side (J237) outlet box and/or conduit installation.

(9) Connect blackout light connector J162 (17) to connector P162 (18).

(10) Install raceway cover (19) on raceway (6) with 12 washers (20), lockwashers (21), and screws (22).





(11) Install conduit connector (23) in outlet box (24).

16-52. M1079 24 VDC TERMINAL/BOX AND CONDUIT REPLACEMENT (CONT)

NOTE

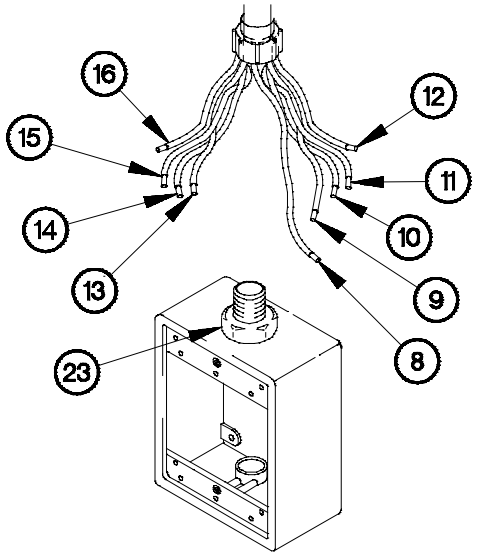
Perform step (12) for left side (J236) outlet box installation.

(12) Route two wires 3086 (8) and wires 3085AD (9), 49A (10), 702E (11), 3085H (12), and 1499E (13) through conduit connector (23).

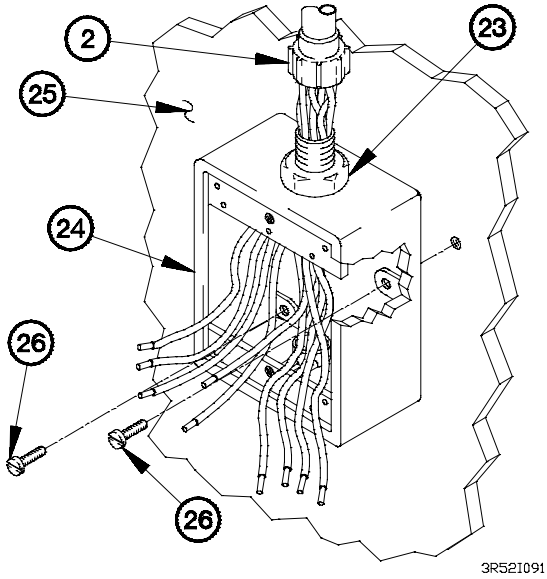
NOTE

Perform step (13) for right side (J237) outlet box installation.

(13) Route wires 3086 (8), 3085AD (9), 49A (10), 702E (11), 3085M (12), 1499C (13), 3085L (14), 49 (15), and 702B (16) through conduit connector (23).



3R52I081



3R52I091

(14) Install outlet box (24) on van body wall (25) with two screws (26).

(15) Install conduit nut (2) on conduit connector (23).

NOTE

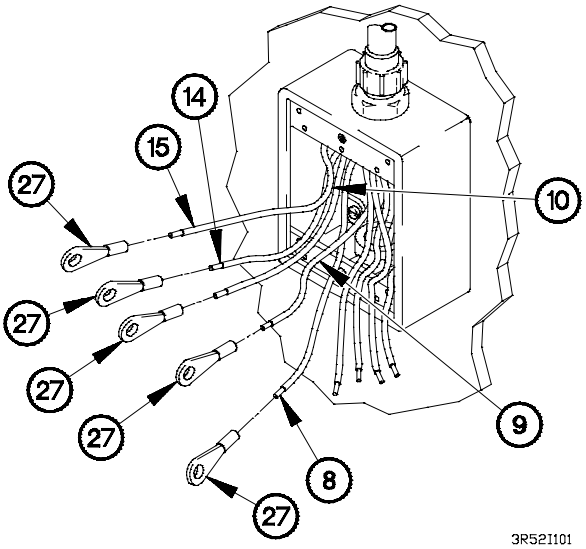
Perform step (16) on left side (J236) outlet box.

(16) Install terminal lugs (27) on two wires 3086 (8), wires 3085AD (9), and 49A (10).

NOTE

Perform step (17) on right side (J237) outlet box.

(17) Install terminal lugs (27) on wires 3086 (8), 3085AD (9), 49A (10), 3085L (14), and 49 (15).



3R52I101

NOTE

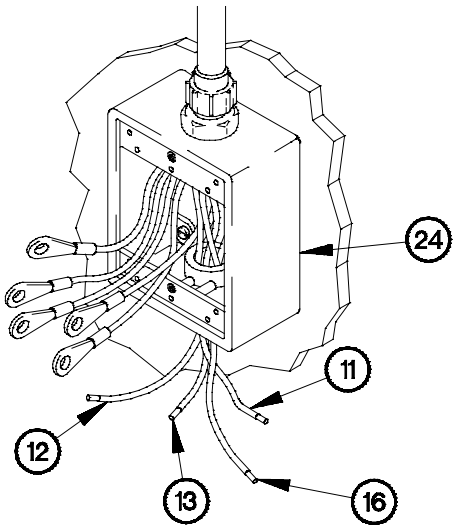
Perform step (18) on left side (J236) outlet box.

(18) Route wires 702E (11), 3085H (12), and 1499E (13) through bottom of outlet box (24).

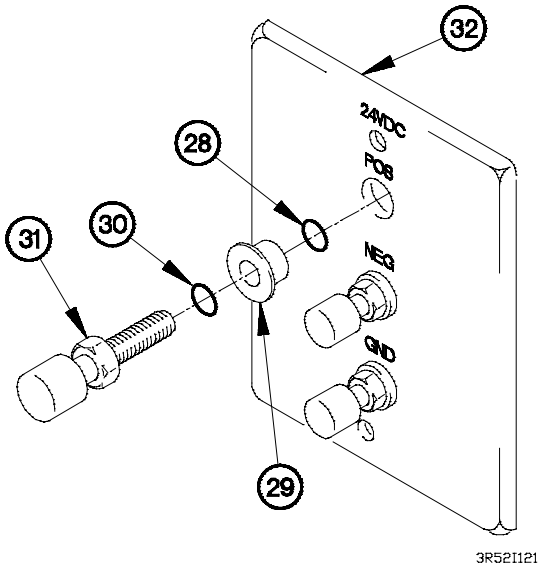
NOTE

Perform step (19) on right side (J237) outlet box.

(19) Route wires 702E (11), 3085M (12), 1499C (13), and 702B (16) through bottom of outlet box (24).



3R52I111



3R52I121

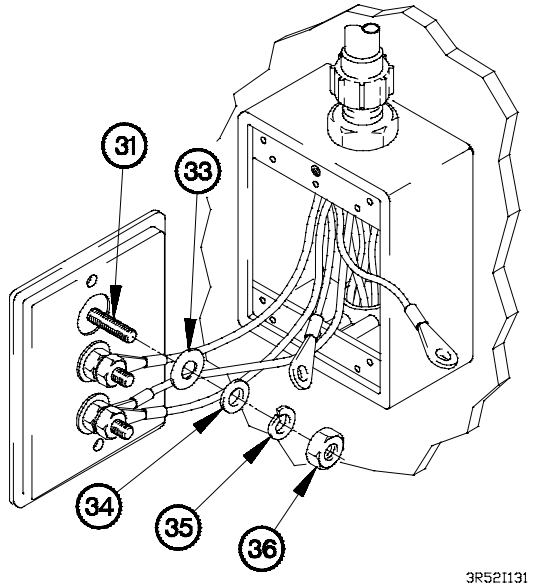
NOTE

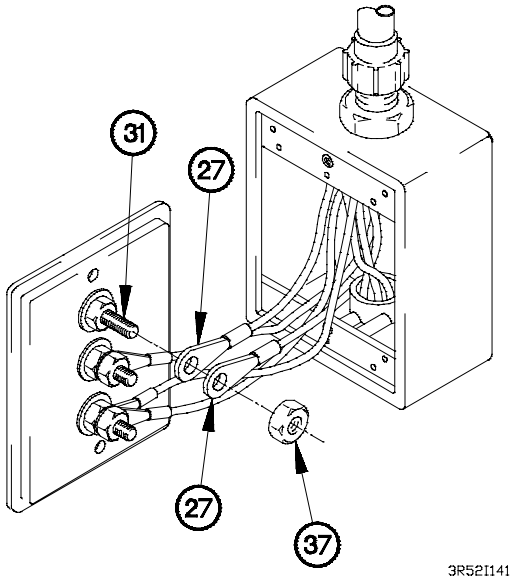
- Left side and right side 24 vdc POS, NEG, and GND binding posts are installed the same way. Right side (J237) 24 vdc POS binding post shown.
- Perform steps (20) through (22) on 24 vdc POS, NEG, and GND binding posts after installation of outlet box.

(20) Install preformed packing (28), nylon washer (29), preformed packing (30), and binding post (31) on cover (32).

16-52. M1079 24 VDC TERMINAL/BOX AND CONDUIT REPLACEMENT (CONT)

(21) Install nylon washer (33), washer (34), lockwasher (35), and nut (36) on binding post (31).



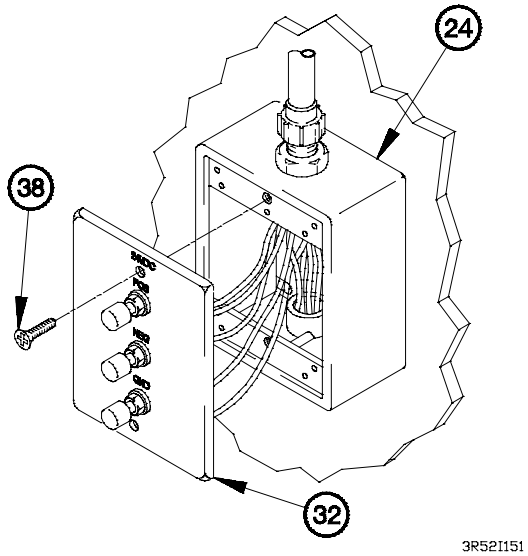


NOTE

Right side (J237) 24 vdc POS and GND binding posts, and left side (J236) 24 vdc NEG binding post have two wire attached. The remaining three binding posts have one wire attached. Refer to **Table 16-3. M1079 24 VDC Binding Post Wire Numbers** for details.

(22) Install terminal lug(s) (27) on binding post (31) with nut (37).

(23) Install cover (32) on outlet box (24) with two screws (38).



c. Follow-On Maintenance.

(1) Install 110 vac outlet/box and conduit, if removed (para 16-53).

(3) Connect AC power (TM 9-2320-365-10).

(2) Connect batteries (TM 9-2320-365-10).

(4) Check for proper operation of 24 vdc system (TM 9-2320-365-10).

End of Task.

16-53. M1079 110 VAC OUTLET/BOX AND CONDUIT REPLACEMENT

This task covers:

a. Removal
b. Installation
c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
AC power disconnected (TM 9-2320-365-10).
Batteries disconnected (para 7-48).
LH and RH doors opened (115 degrees) (TM 9-2320-365-10).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Tool Kit, Auto Fuel and Electrical System Repair (Item 42, Appendix C)

Materials/Parts
Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D)
Lockwasher (12) (Item 81, Appendix G)
Terminal, Lug (4) (Item 269, Appendix G)

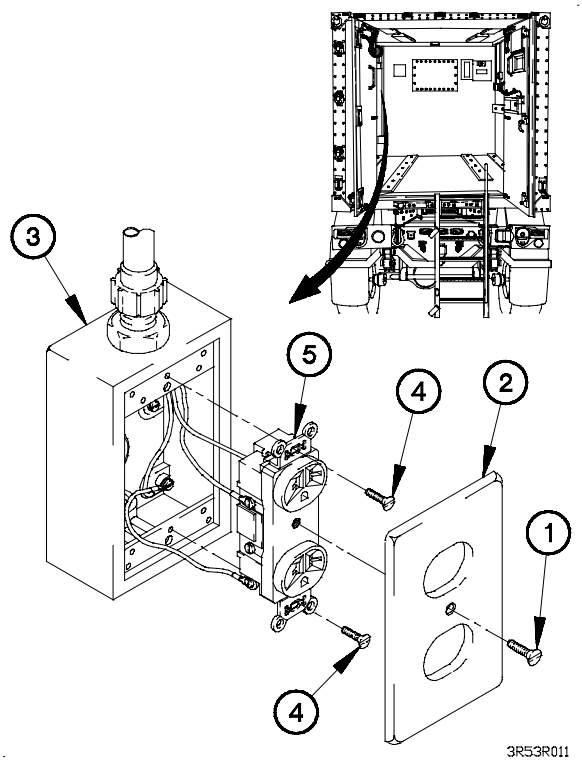
a. Removal.

NOTE

All 110 vac outlets are removed the same way. Left front 110 vac outlet J233 shown.

(1) Remove screw (1) and cover (2) from outlet box (3).

(2) Remove two screws (4) and 110 vac outlet (5) from outlet box (3).



NOTE

- Perform steps (3) through (6) on all 110 vac outlets.
- Tag wires and connection points prior to disconnecting.
- Refer to **Table 16-4. M1079 110 VAC Outlet Box Location and Wire Numbers** for details.

(3) Loosen screw (6) in receptacle (5).

(4) Remove neutral wire terminal lug (7) from receptacle (5).

(5) Loosen green screw (8) in receptacle (5).

(6) Remove ground wire and jumper wire terminal lugs (9 and 10) from receptacle (5).

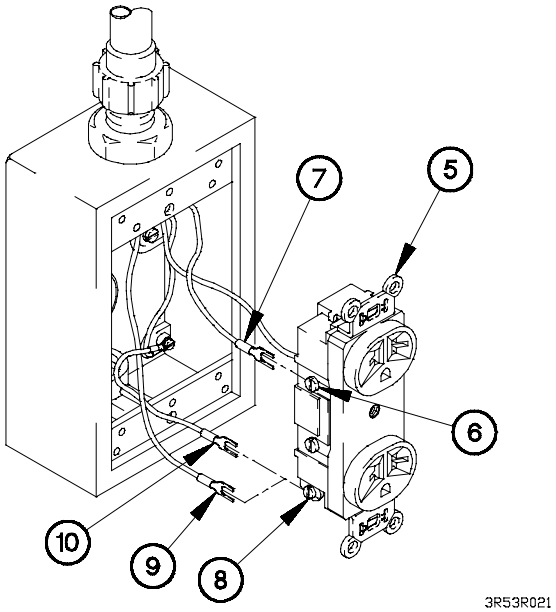


Table 16-4. M1079 110 VAC Outlet Box Location and Wire Numbers

Location	Outlet Number	Outlet Wiring		
		Supply	Neutral	Ground
Left Front	J233	702D (Bottom)	1499G (Top)	3085W 3085AF (Jumper)
Left Middle	J234	702E (Bottom)	1499E (Top)	3085H 3085AE (Jumper)
Left Rear	J235	702F (Bottom	1499F (Top)	3085G 3085AG (Jumper)
Right Front	J232	702D (Top) 702A (Bottom)	1499B (Top)	3085K 3085AA (Jumper)
Right Middle	J231	702E (Top) 702B (Bottom)	1499C (Top)	3085M 3085AB (Jumper)
Right Rear	J230	702F (Top) 702C (Bottom)	1499D (Top)	3085J 3085AC (Jumper)

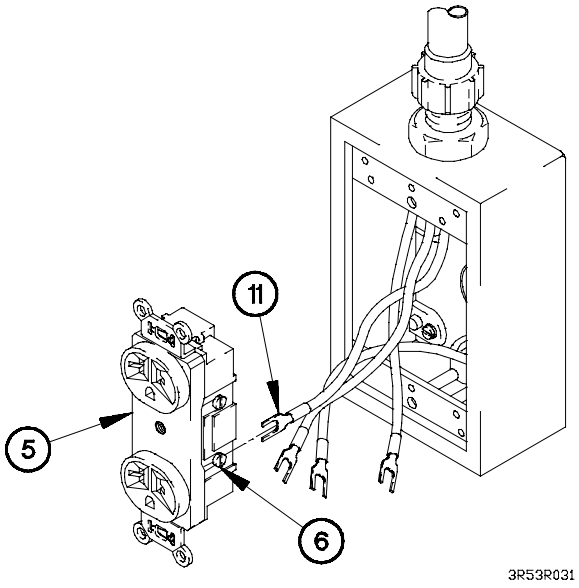
16-53. M1079 110 VAC OUTLET/BOX AND CONDUIT REPLACEMENT (CONT)

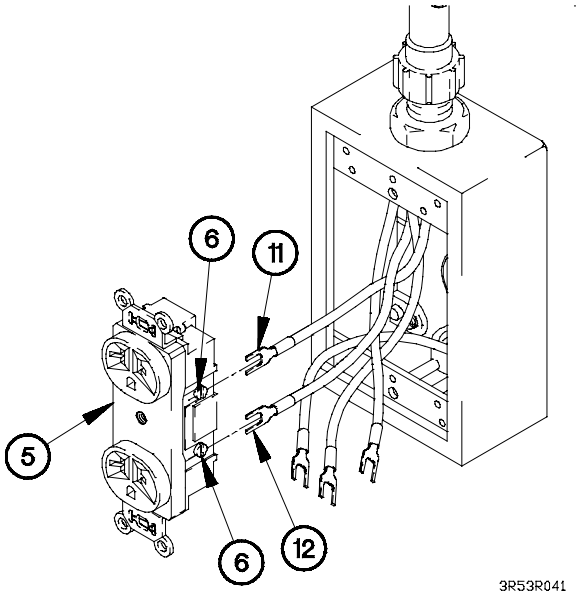
NOTE

Perform steps (7) and (8) on left side 110 vac outlets, J233, J234, and J235.

(7) Loosen screw (6) in receptacle (5).

(8) Remove supply wire terminal lug (11) from receptacle (5).





NOTE

Perform steps (9) and (10) on right side 110 vac outlets J232, J231, and J230.

(9) Loosen two screws (6) in receptacle (5).

(10) Remove two supply wire terminal lugs (11 and 12) from receptacle (5).

(11) Loosen screw (13) on outlet box (3).

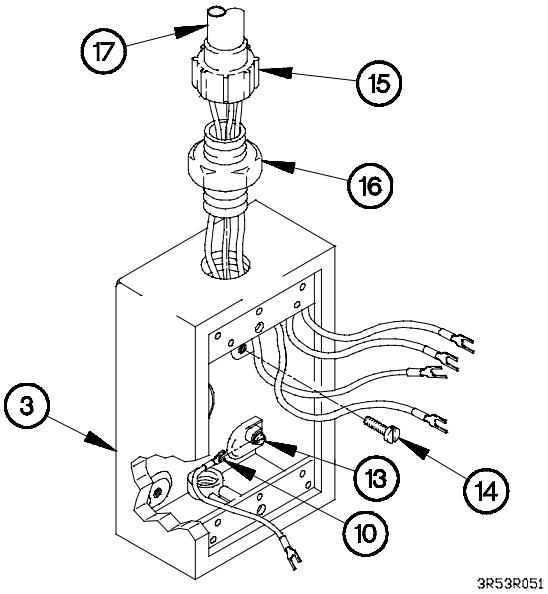
(12) Remove ground wire jumper terminal lug (10) from outlet box (3).

(13) Remove two screws (14) from outlet box (3).

(14) Remove conduit nut (15) from conduit connector (16).

(15) Remove outlet box (3) from conduit (17).

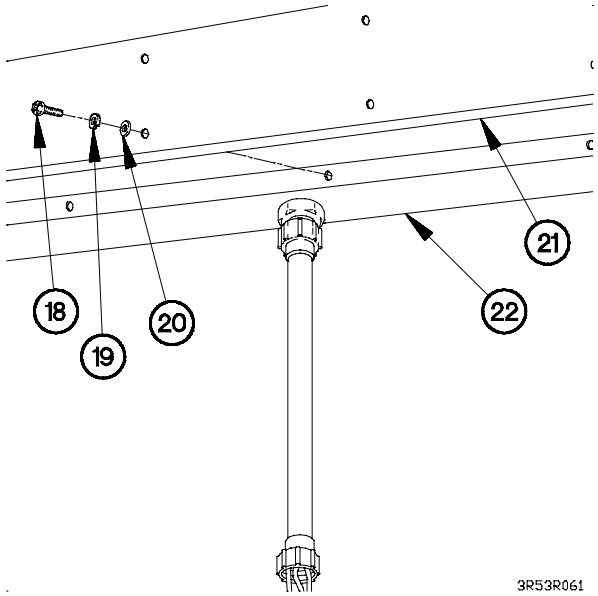
(16) Remove conduit connector (16) from outlet box (3).

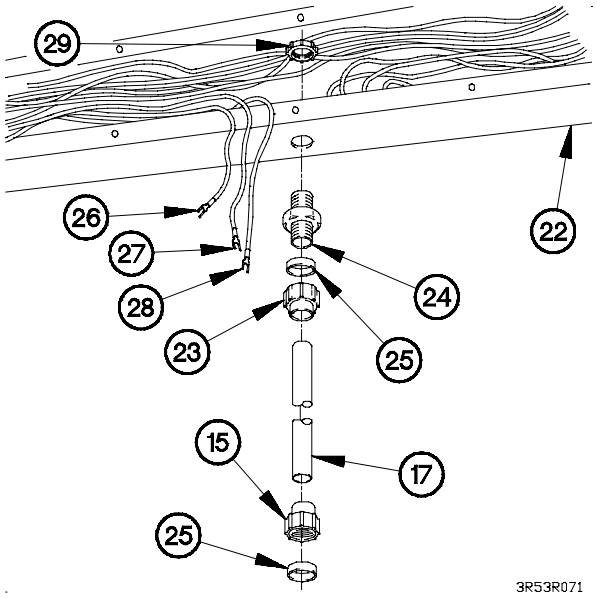


NOTE

Perform steps (17) through (22) if conduit is being removed from 110 vac outlet box J233 or J232.

(17) Remove 12 screws (18), lockwashers (19), washers (20), and raceway cover (21) from raceway (22). Discard lockwashers.





(18) Remove conduit nut (23) from conduit connector (24).

(19) Remove conduit (17) from conduit connector (24).

(20) Remove two ferrules (25) and conduits nuts (15 and 23) from conduit (17).

(21) Remove supply wire (26), neutral wire (27), and ground wire (28) from conduit connector (24).

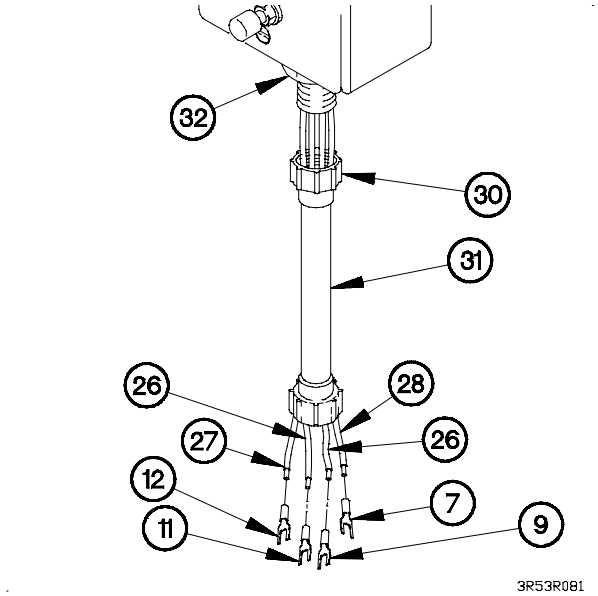
(22) Remove locknut (29) and conduit connector (24) from raceway (22).

NOTE

Perform steps (23) through (27) if conduit is being removed from 110 vac outlet box J234, J235, J231, or J230.

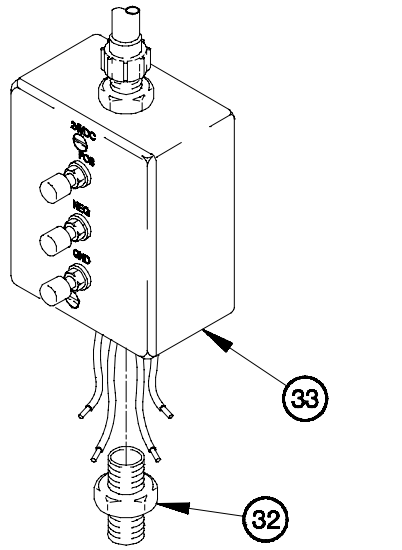
(23) Remove terminal lugs (7, 9, 11, and/or 12) from supply wires (26) neutral wire (27) and ground wire (28).

(24) Remove conduit nut (30) and conduit (31) from conduit connector (32).

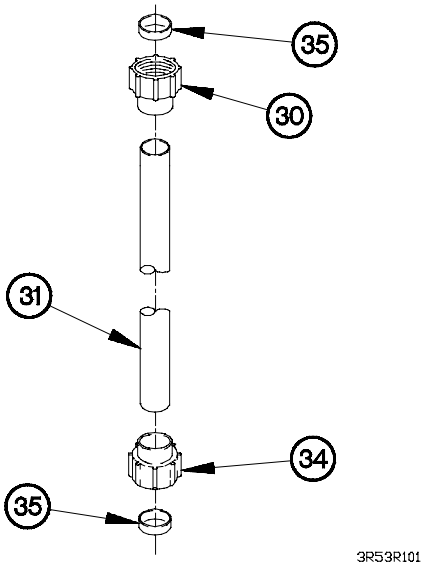


16-53. M1079 110 VAC OUTLET/BOX AND CONDUIT REPLACEMENT (CONT)

(25) Remove conduit connector (32) from outlet box (33).



3R53R091



3R53R101

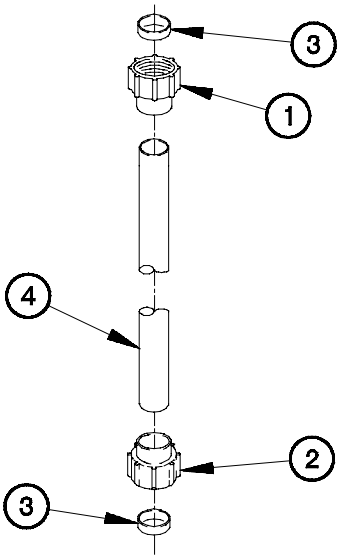
(26) Remove two ferrules (35) and conduit nuts (34 and 30) from conduit (31).

b. Installation.

NOTE

Perform steps (1) through (6) if conduit is being installed on 110 vac outlet box J234, J235, J231, or J230.

(1) Install conduit nuts (1 and 2) and two ferrules (3) on conduit (4).



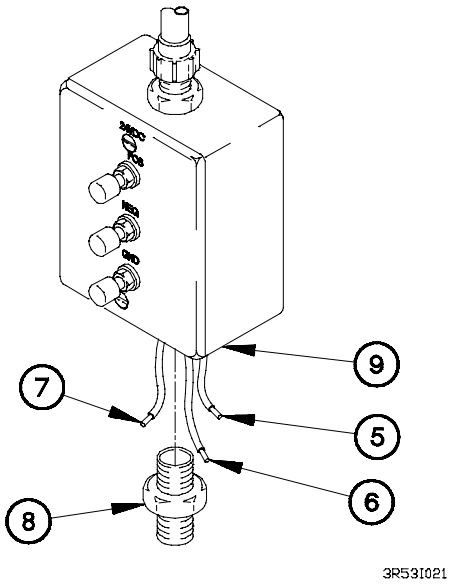
3R53I011

NOTE

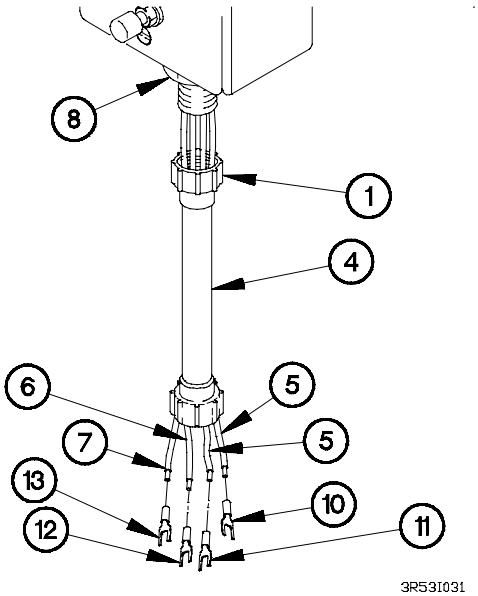
110 vac outlet boxes J230, J231, and J232 each contain two supply wires. Refer to **Table 16-4. M1079 110 VAC Outlet Box and Wire Numbers** for details.

(2) Route supply wire(s) (5), neutral wire (6), and ground wire (7) through conduit connector (8).

(3) Install conduit connector (8) in outlet box (9).



3R53I021



3R53I031

(4) Route supply wire(s) (5), neutral wire (6), and ground wire (7) through conduit (4).

(5) Install conduit (4) on conduit connector (8) with conduit nut (1).

NOTE

Refer to **Table 16-4. M1079 110 VAC Outlet Box and Wire Numbers** for details.

(6) Install terminal lugs (10, 11, 12, and 13) on supply wire(s) (5), neutral wire (6), and ground wire (7).

16-53. M1079 110 VAC OUTLET/BOX AND CONDUIT REPLACEMENT (CONT)

NOTE

Perform steps (7) through (12) if conduit is being installed on 110 vac outlet box J233 or J232.

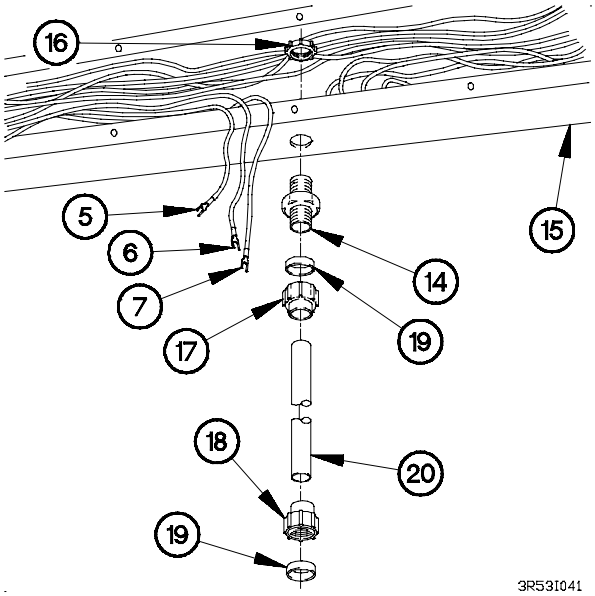
(7) Install conduit connector (14) in raceway (15) with lock nut (16).

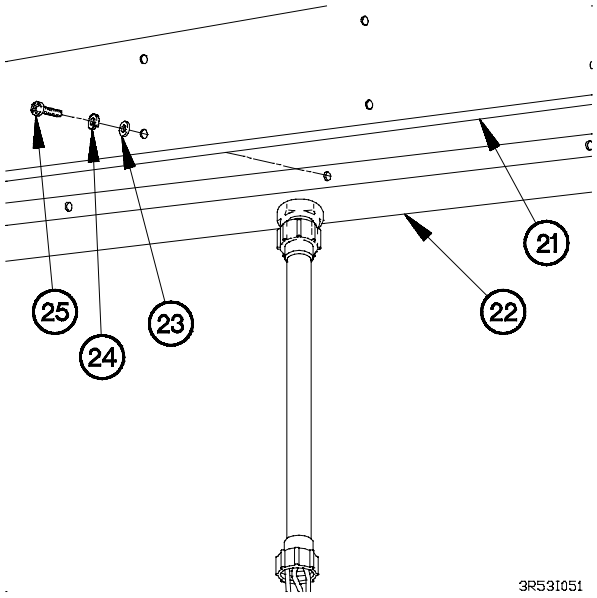
(8) Route supply wires (5), neutral wire (6), and ground wire (7) through conduit connector (14).

(9) Install conduit nuts (17 and 18) and two ferrules (19) on conduit (20).

(10) Route supply wires (5), neutral wire (6), and ground wire (7) through conduit (20).

(11) Install conduit (20) on conduit connector (14) with conduit nut (17).





(12) Install raceway cover (21) on raceway (22) with 12 washers (23), lockwashers (24), and screws (25).

(13) Install conduit connector (26) in 110 vac outlet box (27).

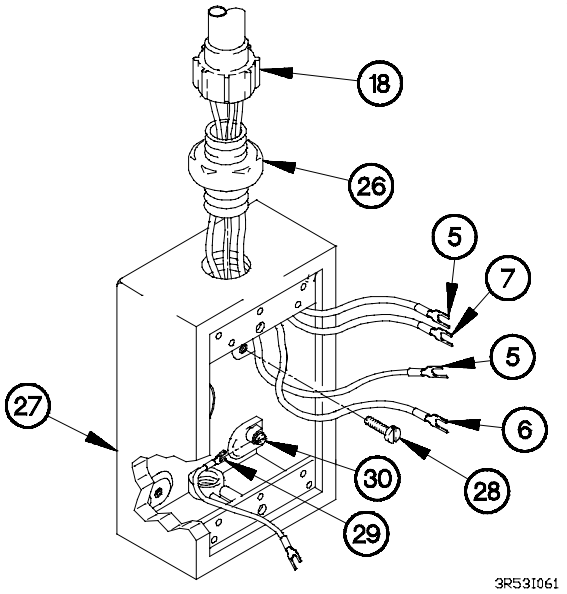
(14) Route supply wire(s) (5), neutral wire (6), ground wire (7) through conduit connector (26).

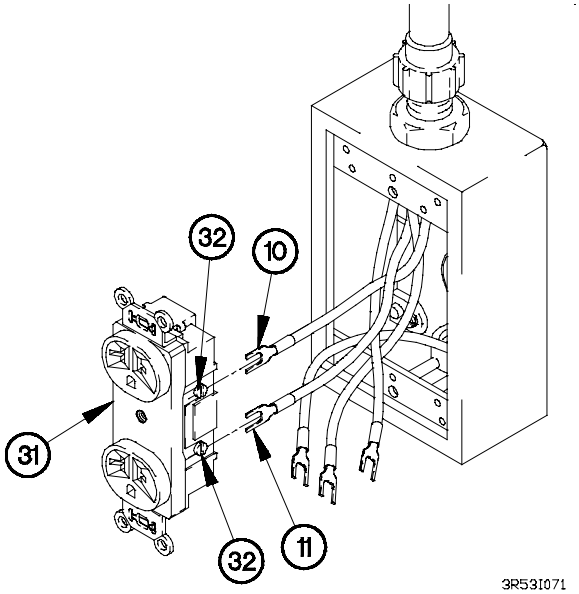
(15) Install conduit nut (18) on conduit connector (26).

(16) Install two screws (28) in outlet box (27).

(17) Install ground jumper wire terminal lug (29) on outlet box (27).

(18) Tighten screw (30) in outlet box (27).





NOTE

Perform step (21) and (22) on left side 110 vac outlets J233, J234, and J235.

(21) Install supply wire terminal lug (10) on receptacle (31).

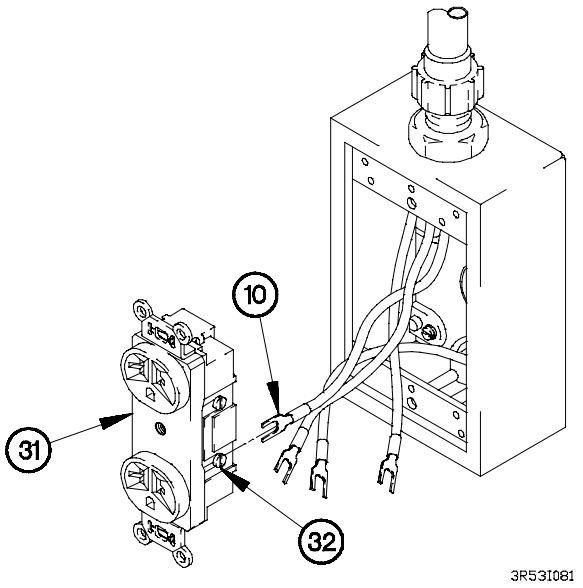
(22) Tighten screw (32) in receptacle (31).

NOTE

Perform step (19) and (20) on right side 110 vac outlets J232, J231, and J230.

(19) Install supply wire terminal lugs (10 and 11) on receptacle (31).

(20) Tighten two screws (32) in receptacle (31).



16-53. M1079 110 VAC OUTLET/BOX AND CONDUIT REPLACEMENT (CONT)

NOTE

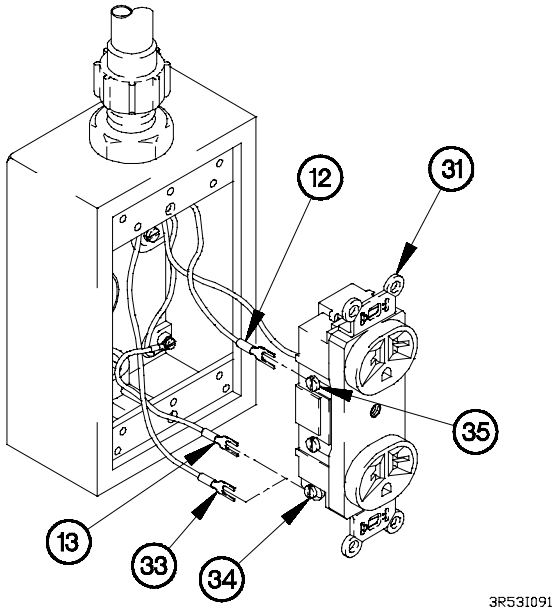
Perform steps (23) through (28) on all 110 vac outlets.

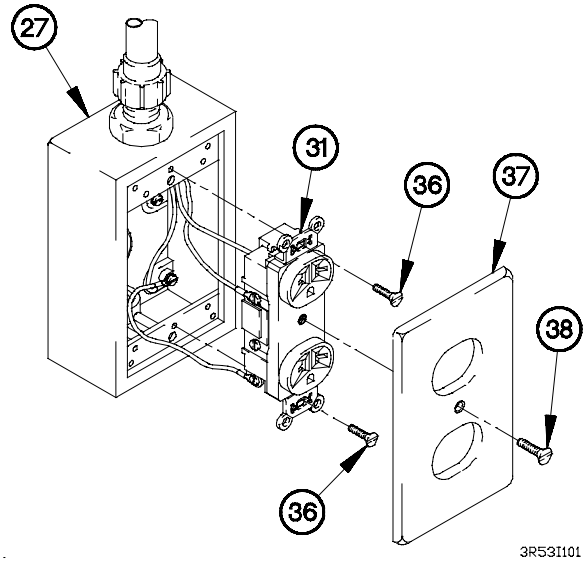
(23) Install ground wire and ground jumper wire terminal lugs (13 and 33) on receptacle (31).

(24) Tighten screw (34) in receptacle (31).

(25) Install neutral wire terminal lug (12) on receptacle (31).

(26) Tighten screw (35) in receptacle (31).





(27) Install receptacle (31) in outlet box (27) with two screws (36).

(28) Install cover (37) on outlet box (27) with screw (38).

c. Follow-On Maintenance.

(1) Connect batteries (para 7-48).

(2) Connect AC power (TM 9-2320-365-10).

(3) Check for proper operation of 110 vac outlet (TM 9-2320-365-10).

(4) Close LH and RH doors (TM 9-2320-365-10).

End of Task.

16-54. M1079 FAN SWITCH/BOX AND CONDUIT REPLACEMENT

This task covers:

a. Removal
b. Installation
c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
Engine shut down (TM 9-2320-365-10).
AC power disconnected (TM 9-2320-365-10).
Batteries disconnected (para 7-48).
LH and RH doors opened (115 degrees) (TM 9-2320-365-10).

Tools and Special Tools
Tool Kit, Auto Fuel and Electrical System Repair (Item 42, Appendix C)

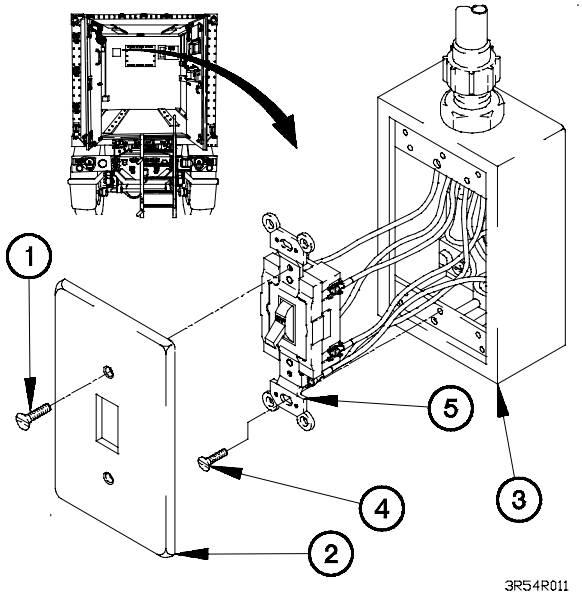
Tools and Special Tools (Cont)
Tool Kit, Genl Mech (Item 44, Appendix C)
Heater, Gun Type, Electric (Item 20, Appendix B)

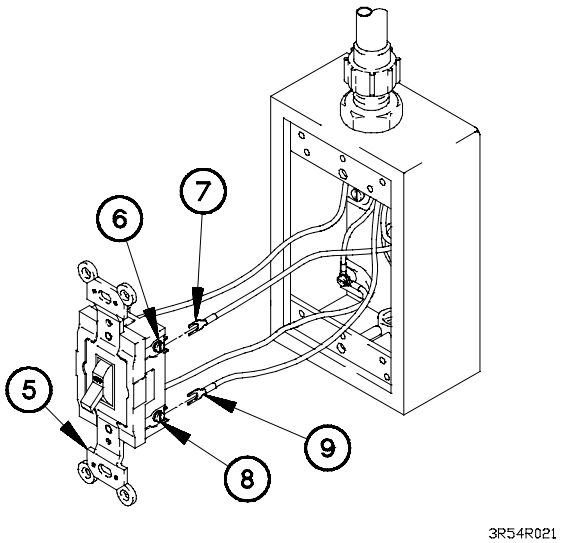
Materials/Parts
Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D)
Splice, Conductor (Item 261, Appendix G)
Lockwasher (16) (Item 76, Appendix G)

a. Removal.

(1) Remove two screws (1) and cover (2) from outlet box (3).

(2) Remove two screws (4) and switch S35 (5) from outlet box (3).





NOTE

Tag wires and connection points prior to disconnecting.

(3) Loosen screw (6) on switch S35 (5).

(4) Remove wire 415 terminal lug (7) from switch S35 (5).

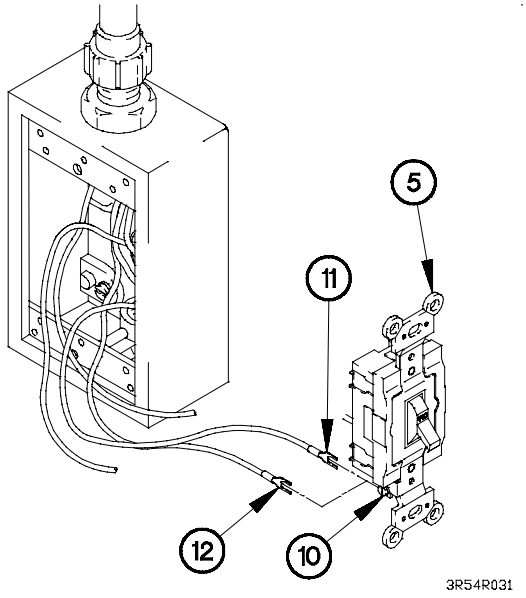
(5) Loosen screw (8) on switch S35 (5).

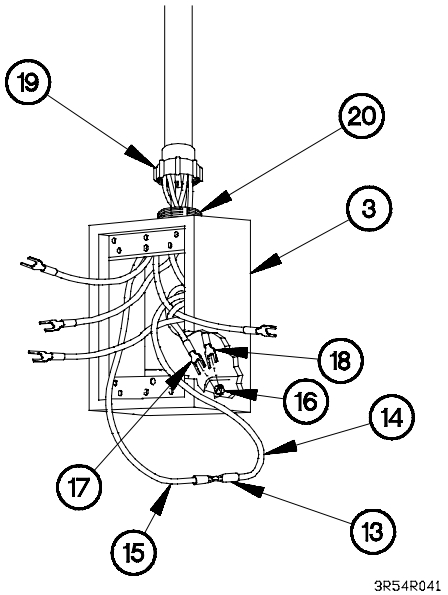
(6) Remove wire 415A terminal lug (9) from switch S35 (5).

16-54. M1079 FAN SWITCH/BOX AND CONDUIT REPLACEMENT (CONT)

(7) Loosen screw (10) on switch S35 (5).

(8) Remove wire 3085X terminal lug (11) and 3085Z terminal lug (12) from switch S35 (5).





(9) Remove conductor splice (13) from wires 1499H (14 and 15). Discard conductor splice.

(10) Loosen screw (16) in outlet box (3).

(11) Remove wire 3085Z terminal lug (17), and wire 3085F terminal lug (18) from screw (16).

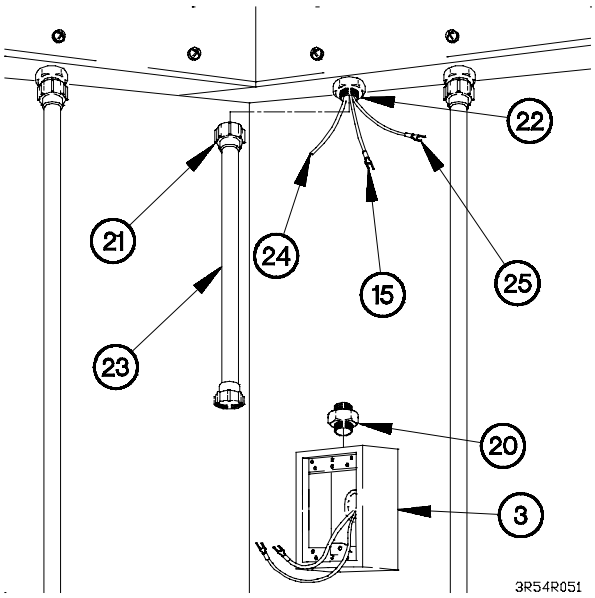
(12) Remove conduit nut (19) from conduit connector (20).

(13) Remove conduit nut (21) from conduit connector (22).

(14) Remove conduit (23) from conduit connectors (20 and 22).

(15) Remove wires 3085F (24), 415 (25), and 1499H (15) from conduit (23).

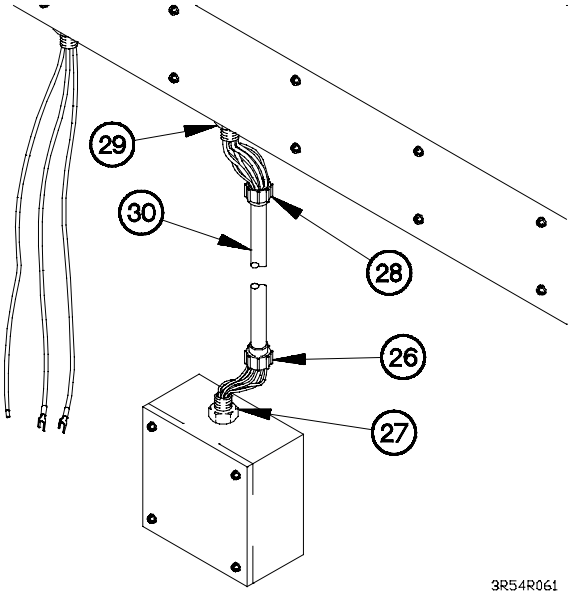
(16) Remove conduit connector (20) from outlet box (3).

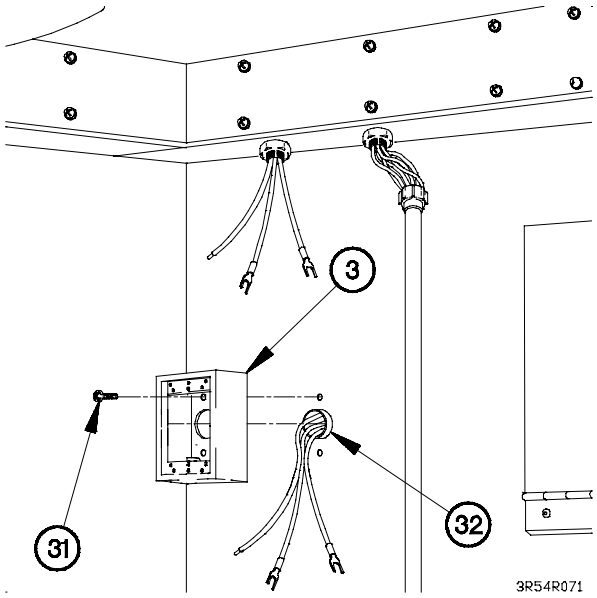


(17) Remove conduit nut (26) from conduit connector (27).

(18) Remove conduit nut (28) from conduit connector (29).

(19) Remove conduit (30) from conduit connectors (27 and 29).



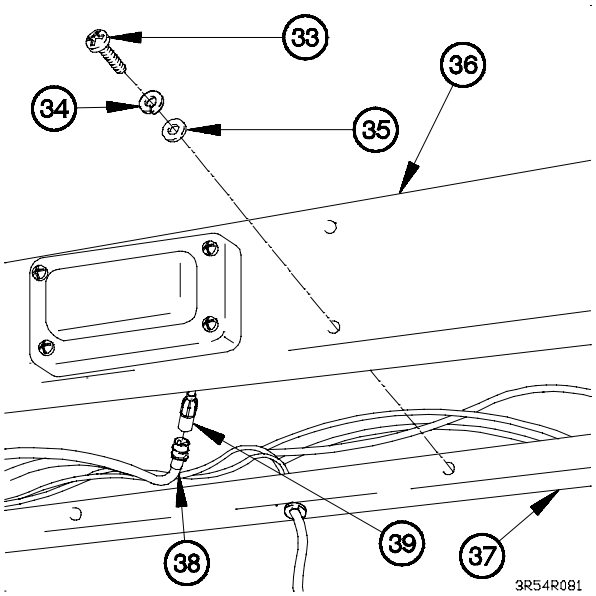


(20) Remove two screws (31) from outlet box (3).

(21) Remove outlet box (3) from pipe nipple (32).

(22) Remove 16 screws (33), lockwashers (34), washers (35), and raceway cover (36) from raceway (37). Discard lockwashers.

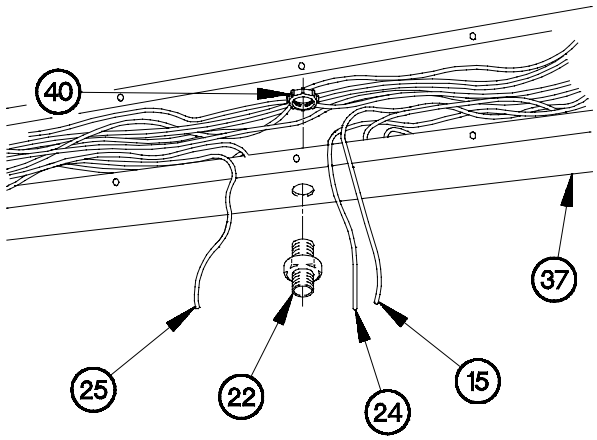
(23) Disconnect emergency light connector J166 (38) from connector P166 (39).



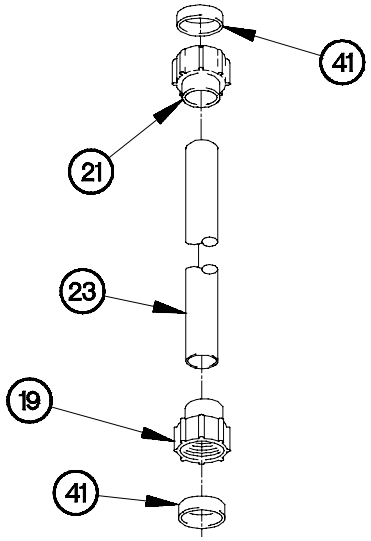
16-54. M1079 FAN SWITCH/BOX AND CONDUIT REPLACEMENT (CONT)

(24) Remove wires 3085F (24), 415 (25), and 1499H (15) from conduit connector (22).

(25) Remove lock nut (40) and conduit connector (22) from raceway (37).



3R54R091

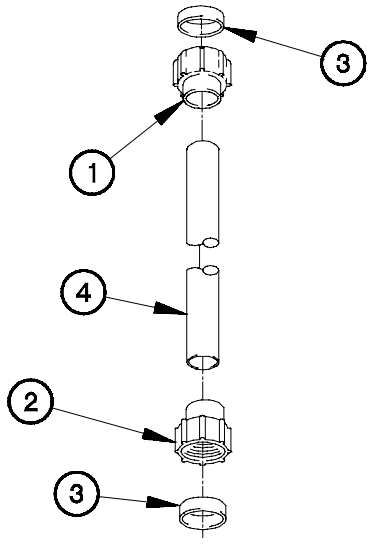


3R54R101

(26) Remove conduit nuts (19 and 21) and two ferrules (41) from conduit (23).

b. Installation.

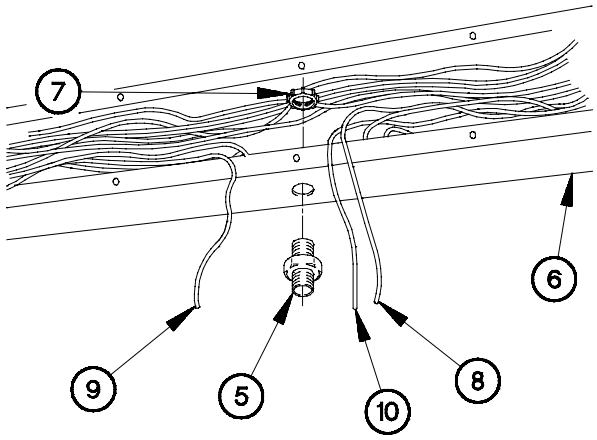
(1) Install conduit nuts (1 and 2) and two ferrules (3) on conduit (4).



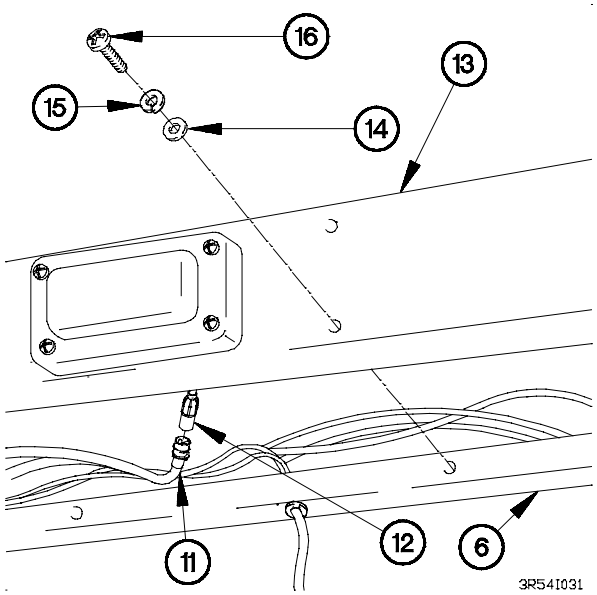
3R54I011

(2) Install conduit connector (5) in raceway (6) with lock nut (7).

(3) Route wires 1499H (8), 415 (9), and 3085F (10) through conduit connector (5).



3R54I021



3R54I031

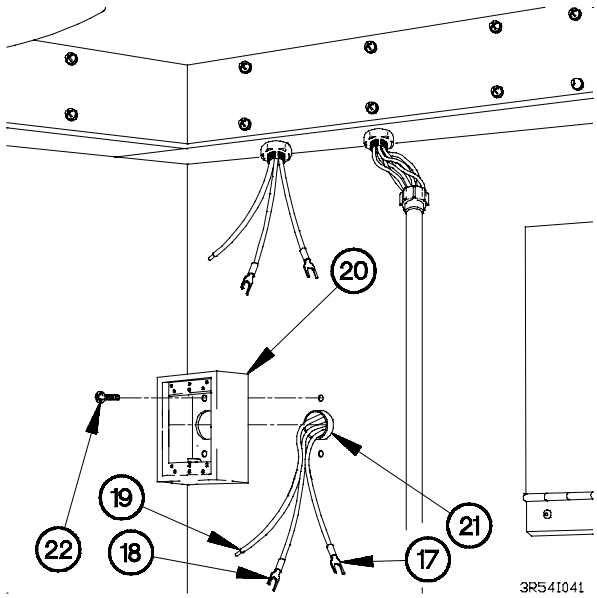
(4) Connect emergency light connector J166 (11) to connector P166 (12).

(5) Install raceway cover (13) on raceway (6) with 16 washers (14), lockwashers (15), and screws (16).

(6) Route wires 415A (17), 3085X (18), and 1499H (19) through outlet box (20).

(7) Install outlet box (20) on pipe nipple (21).

(8) Install two screws (22) in outlet box (20).



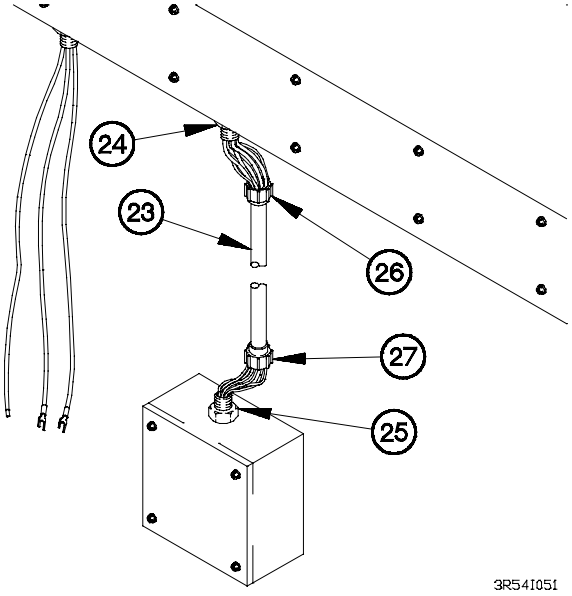
3R54I041

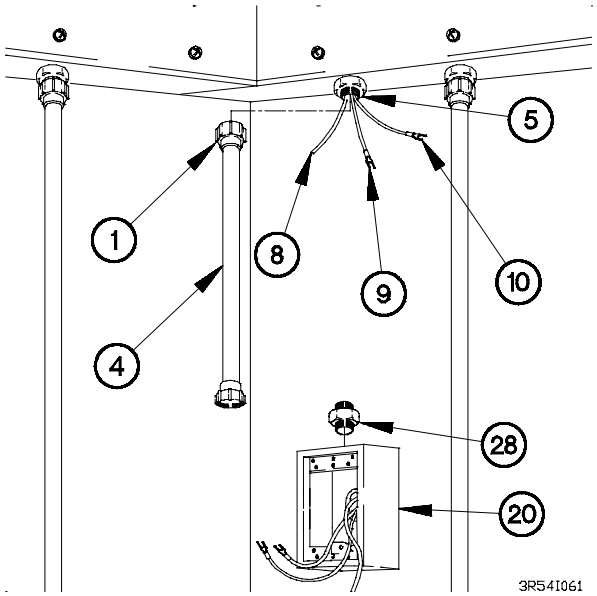
16-54. M1079 FAN SWITCH/BOX AND CONDUIT REPLACEMENT (CONT)

(9) Install conduit (23) in conduit connectors (24 and 25).

(10) Install conduit nut (26) on conduit connector (24).

(11) Install conduit nut (27) on conduit connector (25).



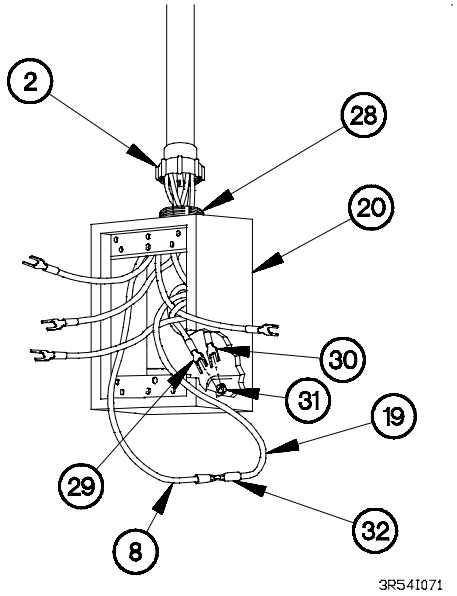


(12) Install conduit connector (28) in outlet box (20).

(13) Route wires 1499H (8), 415 (9), and 3085F (10) through conduit (4) and outlet box (20).

(14) Install conduit (4) in conduit connectors (5 and 28).

(15) Install conduit nut (1) on conduit connector (5).



(16) Install conduit nut (2) on conduit connector (28).

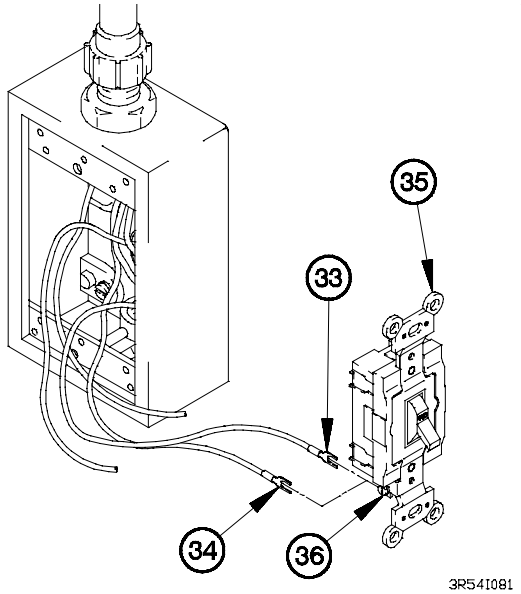
(17) Install wire 3085F terminal lug (29) and wire 3085Z terminal lug (30) on screw (31).

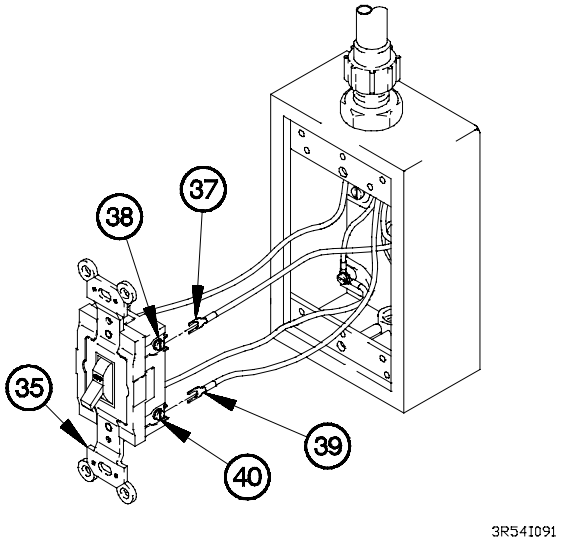
(18) Tighten screw (31) in outlet box (20).

(19) Install conductor splice (32) on wires 1499H (8 and 19).

(20) Install wire 3085Z terminal lug (33) and wire 3085X terminal lug (34) on switch S35 (35).

(21) Tighten screw (36) on switch S35 (35).





(22) Install wire 415 terminal lug (37) on switch S35 (35).

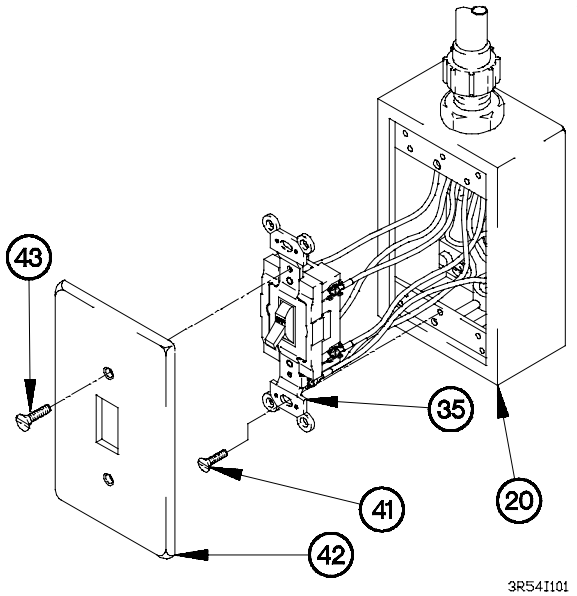
(23) Tighten screw (38) on switch S35 (35).

(24) Install wire 415A terminal lug (39) on switch S35 (35).

(25) Tighten screw (40) on switch S35 (35).

(26) Install switch S35 (35) in outlet box (20) with two screws (41).

(27) Install cover (42) on outlet box (20) with two screws (43).



16-54. M1079 FAN SWITCH/BOX AND CONDUIT REPLACEMENT (CONT)

c. Follow-On Maintenance.

(1) Connect batteries (para 7-48).

(2) Connect AC power (TM 9-2320-365-10).

(3) Check for proper operation of fan (TM 9-2320-365-10).

(4) Close LH and RH doors (TM 9-2320-365-10).

End of Task.

16-55. M1079 DOOR AJAR SWITCH AND CONDUIT REPLACEMENT

This task covers:

a. Removal
b. Installation
c. Adjustment
d. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
Batteries disconnected (para 7-48).
LH door closed (TM 9-2320-365-10).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Key, Socket Head Screw (Item 35, Appendix B)

Materials/Parts
Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D)
Lockwasher (11) (Item 81, Appendix G)

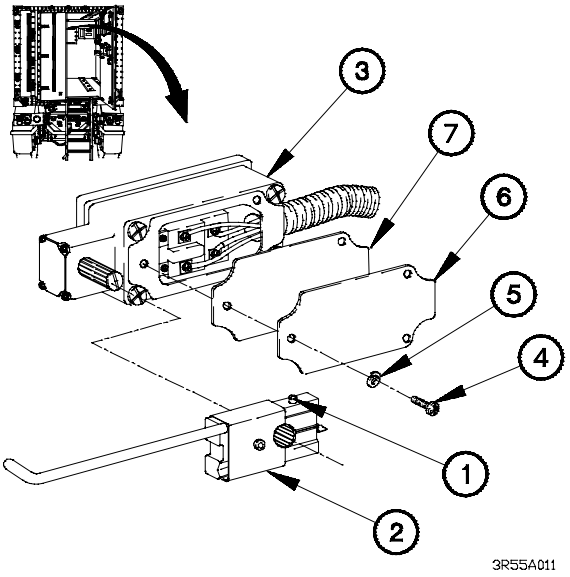
Personnel Required
(2)

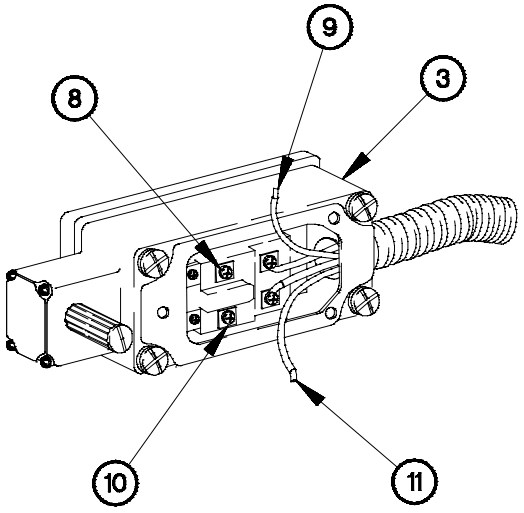
a. Removal.

(1) Loosen screw (1) on switch lever (2).

(2) Remove switch lever (2) from switch S17 (3).

(3) Remove three screws (4), lockwashers (5), cover (6), and gasket (7) from switch S17 (3). Discard lockwashers.





NOTE

Tag wires and connection points prior to disconnecting.

(4) Loosen screw 3 (8) in switch S17 (3).

(5) Remove wire 709 (9) from switch S17 (3).

(6) Loosen screw 4 (10) in switch S17 (3).

(7) Remove wire 1509E (11) from switch S17 (3).

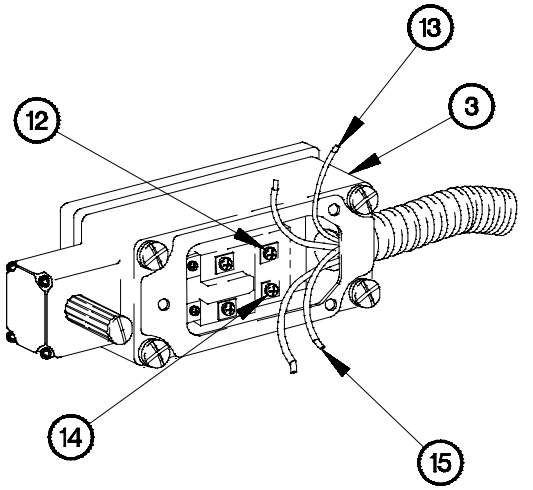
16-55. M1079 DOOR AJAR SWITCH AND CONDUIT REPLACEMENT (CONT)

(8) Loosen screw 2 (12) in switch S17 (3).

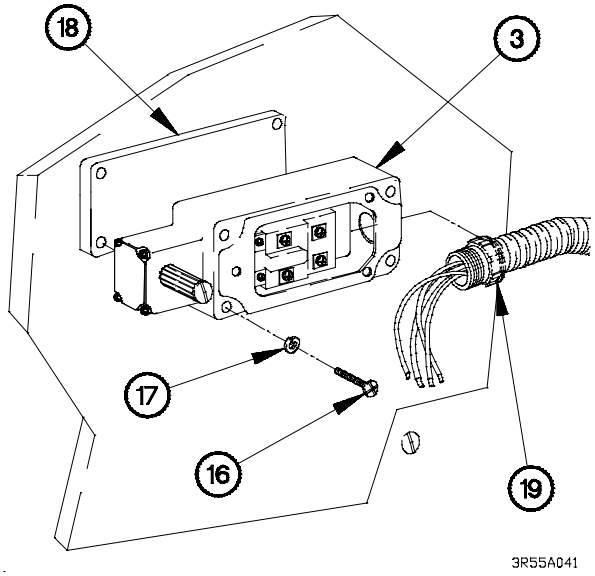
(9) Remove wire 2006 (13) from switch S17 (3).

(10) Loosen screw 1 (14) in switch S17 (3).

(11) Remove wire 1506 (15) from switch S17 (3).



3R55A031

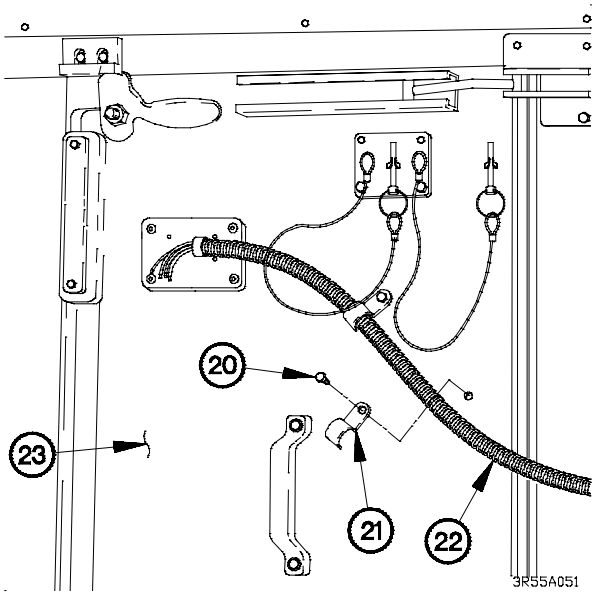


3R55A041

(12) Remove four screws (16), lockwashers (17), and switch S17 (3) from plate (18). Discard lockwashers.

(13) Remove conduit connector (19) from switch S17 (3).

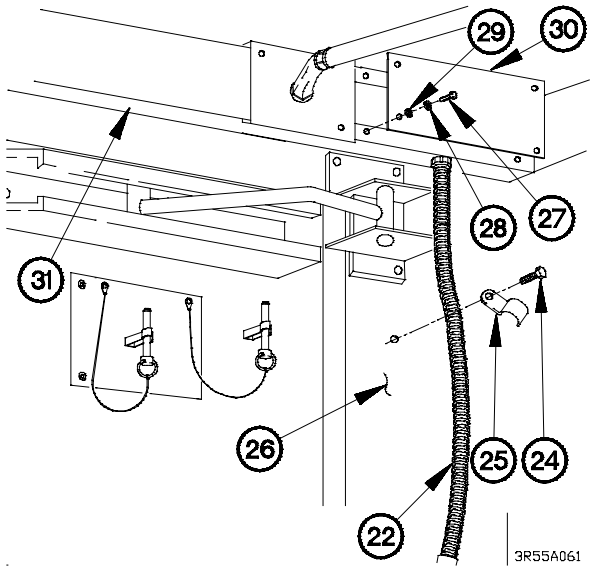
(14) Remove two screws (20), clamps (21), and flexible conduit (22) from LH door (23).

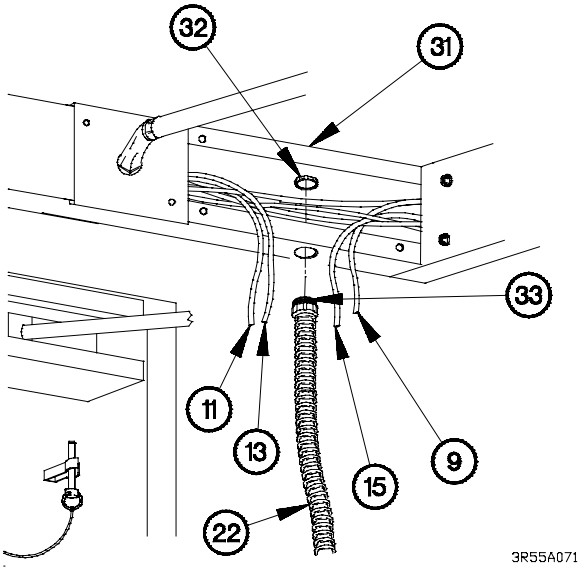


3R55A051

(15) Remove screw (24), clamp (25), and flexible conduit (22) from van body wall (26).

(16) Remove four screws (27), lockwashers (28), washers (29), and cover (30) from raceway (31). Discard lockwashers.

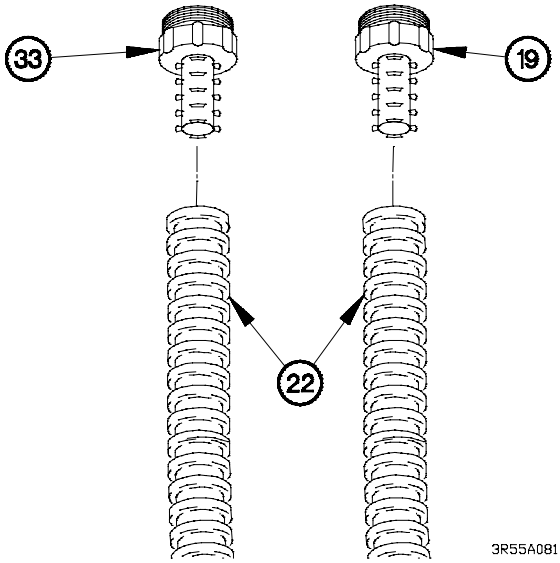




(17) Remove wires 709 (9), 1509E (11), 2006 (13), and 1506 (15) from flexible conduit (22).

(18) Remove locknut (32) and conduit connector (33) from raceway (31).

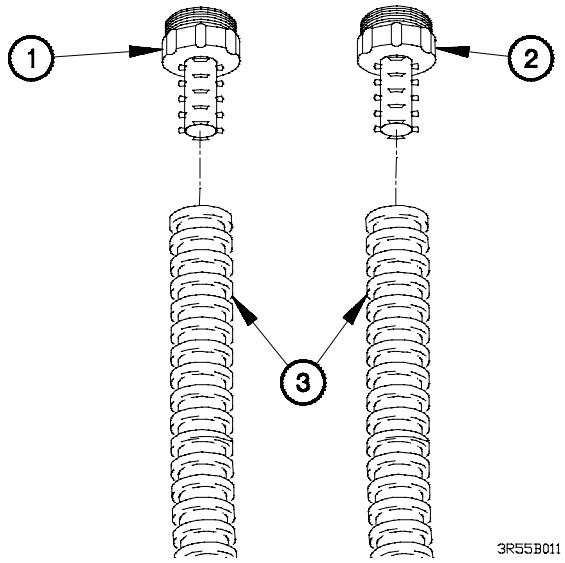
(19) Remove conduit connectors (19 and 33) from flexible conduit (22).

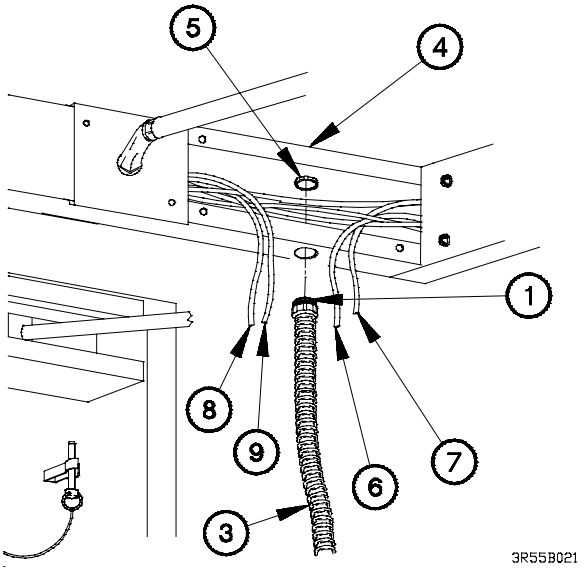


16-55. M1079 DOOR AJAR SWITCH AND CONDUIT REPLACEMENT (CONT)

b. Installation.

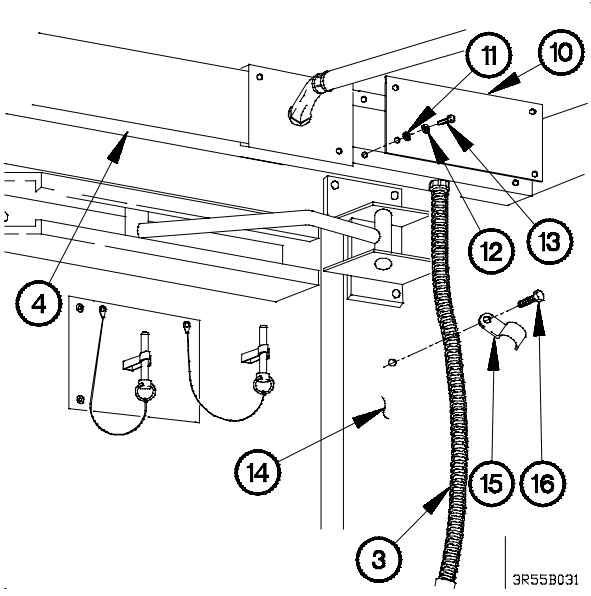
(1) Install conduit connectors (1 and 2) in flexible conduit (3).





(2) Install conduit connector (1) in raceway (4) with locknut (5).

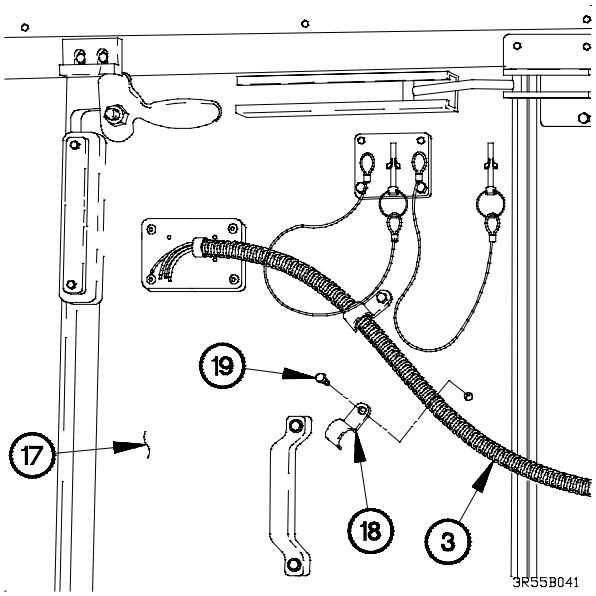
(3) Route wires 1506 (6), 2006 (7), 1509E (8), and 709 (9) through flexible conduit (3).

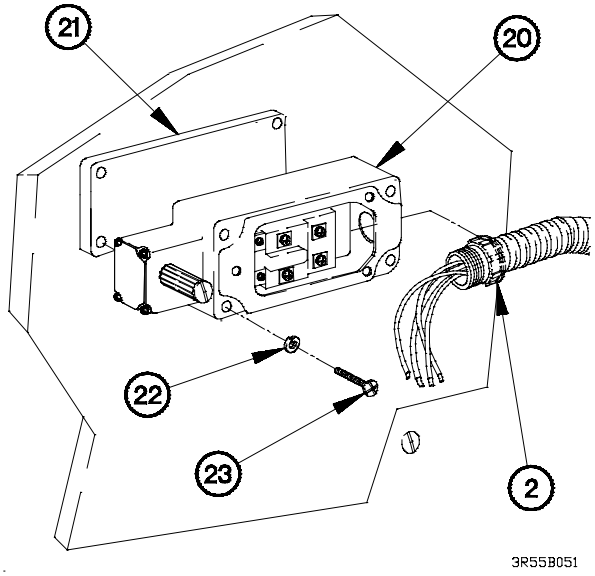


(4) Install cover (10) on raceway (4) with four washers (11), lockwashers (12), and screws (13).

(5) Install flexible conduit (3) on van body wall (14) with clamp (15) and screw (16).

(6) Install flexible conduit (3) on LH door (17) with two clamps (18) and screws (19).





(7) Install switch S17 (20) on conduit connector (2).

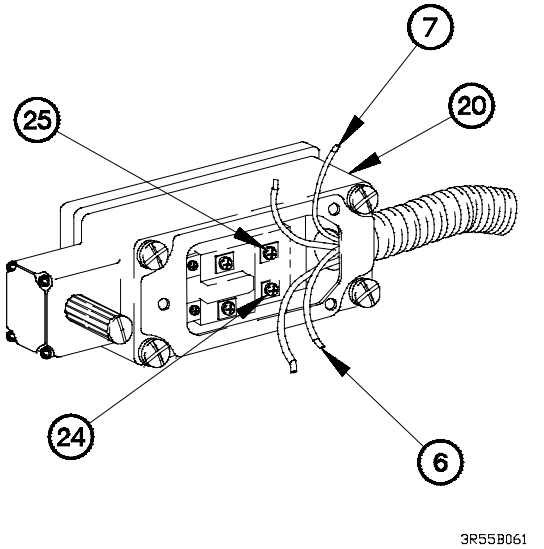
(8) Install switch S17 (20) on plate (21) with four lockwashers (22) and screws (23).

(9) Position wire 1506 (6) on switch S17 (20).

(10) Tighten screw 1 (24) in switch S17 (20).

(11) Position wire 2006 (7) on switch S17 (20).

(12) Tighten screw 2 (25) in switch S17 (20).



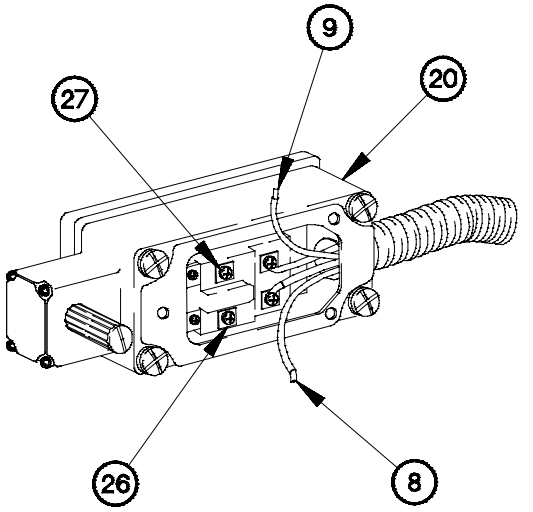
16-55. M1079 DOOR AJAR SWITCH AND CONDUIT REPLACEMENT (CONT)

(13) Position wire 1509E (8) on switch S17 (20).

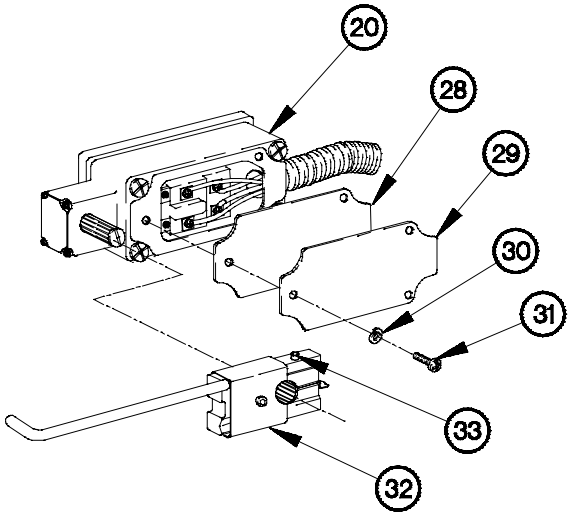
(14) Tighten screw 4 (26) in switch S17 (20).

(15) Position wire 709 (9) on switch S17 (20).

(16) Tighten screw 3 (27) in switch S17 (20).



3R55B071



3R55B081

(17) Install gasket (28) and cover (29) on switch S17 (20) with three lockwashers (30) and screws (31).

(18) Position switch lever (32) on switch S17 (20).

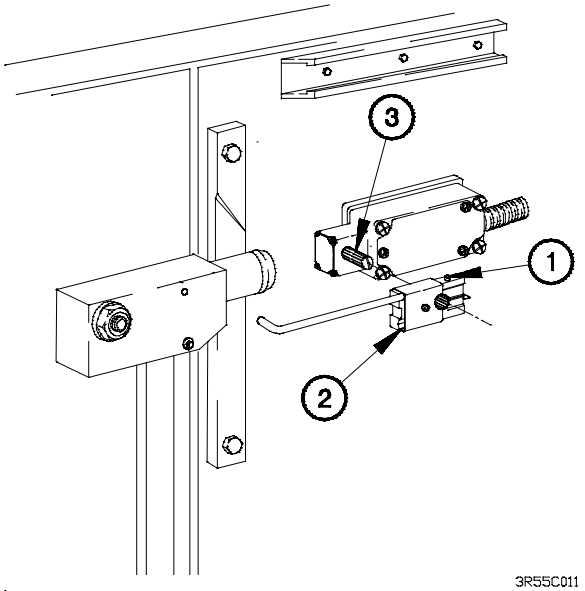
(19) Tighten screw (33) on switch lever (32).

c. Adjustment.

(1) Loosen screw (1) on switch lever (2).

(2) Remove switch lever (2) from switch actuator (3).

(3) Close RH door (TM 9-2320-365-10).



3R55C011

CAUTION

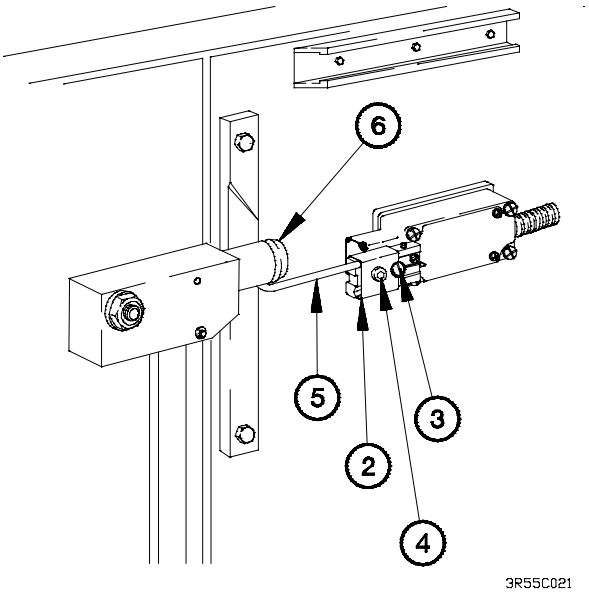
Use care while performing adjustment. Failure to comply may result in damage to equipment.

(4) Position switch lever (2) on switch actuator (3).

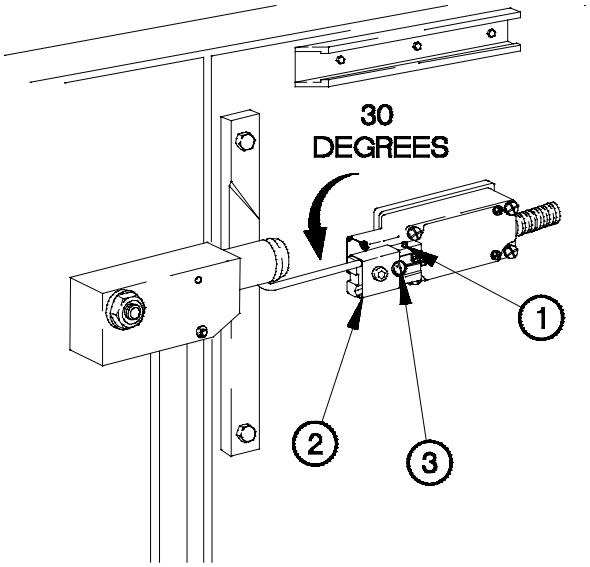
(5) Loosen screw (4) on switch lever (2).

(6) Position switch lever rod (5) under RH door latch arm (6).

(7) Tighten screw (4) in switch lever (2).



3R55C021



3R55C031

NOTE

- Step (8) requires switch actuator to be rotated approximately 30 degrees CCW while switch lever rod remains in contact with right hand door latch arm.
- Step (8) requires the aid of an assistant.

(8) Rotate switch actuator (3) approximately 30 degrees CCW.

(9) Tighten screw (1) on switch lever (2).

NOTE

A click will be heard as switch opens and closes.

(10) Unlatch and latch RH door several times (TM 9-2320-365-10).

(11) Repeat steps (8) through (10) as required.

d. Follow-On Maintenance.

(1) Connect batteries (para 7-48).

(2) Check for proper operation of van door open light and blackout lights system (TM 9-2320-365-10).

End of Task.

16-56. M1079 BLACKOUT OVERRIDE SWITCH REPLACEMENT

This task covers:

a. Removal
b. Installation
c. Follow-On Maintenance

INITIAL SETUP

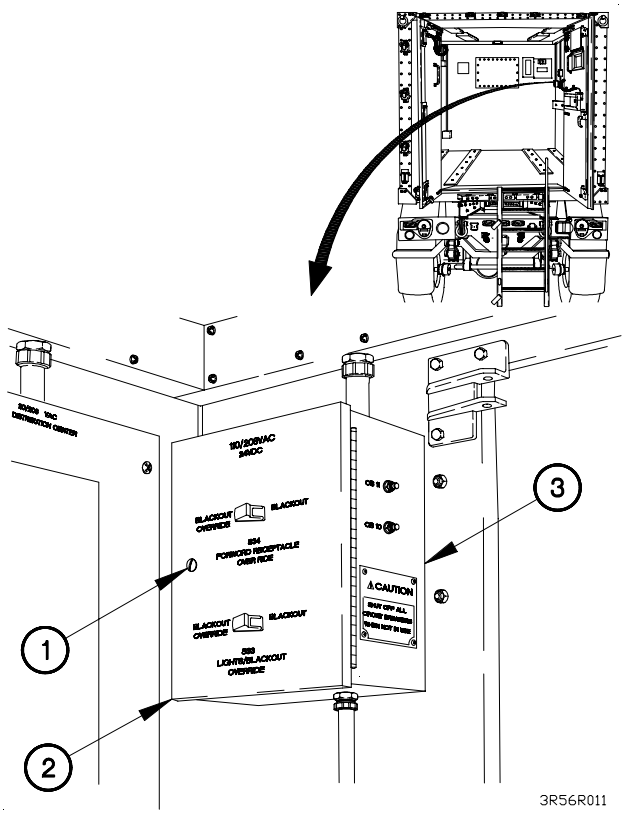
Equipment Conditions
AC power disconnected (TM 9-2320-365-10).
Batteries disconnected (para 7-48).
LH and RH doors opened (115 degrees) (TM 9-2320-365-10).

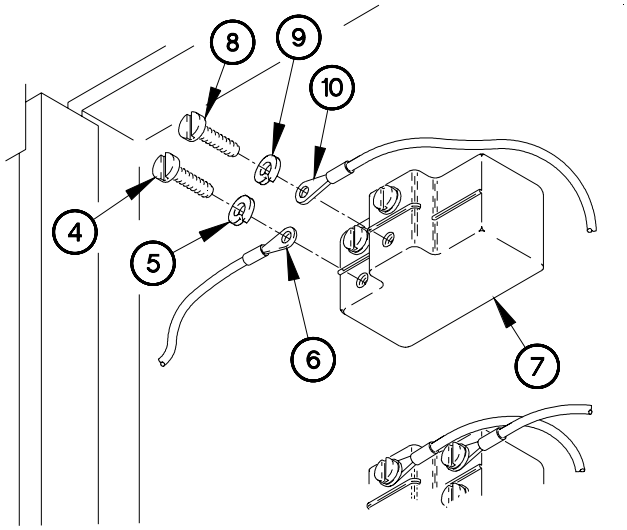
Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)

a. Removal.

(1) Loosen screw (1) on cover (2).

(2) Open cover (2) on relay box (3).





NOTE

Perform steps (3) and (4) on switch S34.

(3) Remove screw (4), lockwasher (5), and wire 702AA terminal lug (6) from bottom left terminal of switch S34 (7).

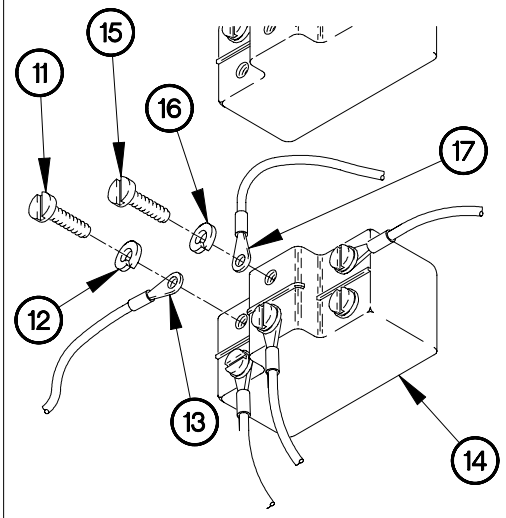
(4) Remove screw (8), lockwasher (9), and wire 701AA terminal lug (10) from bottom right terminal of switch S34 (7).

NOTE

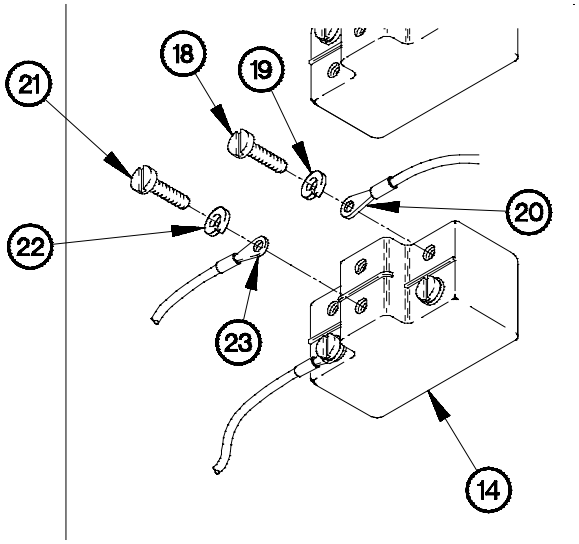
Perform steps (5) through (9) on switch S33.

(5) Remove screw (11), lockwasher (12), and wire 38 terminal lug (13) from top left terminal of switch S33 (14).

(6) Remove screw (15), lockwasher (16), and wire 1508 terminal lug (17) from top center terminal of switch S33 (14).



3R56R031

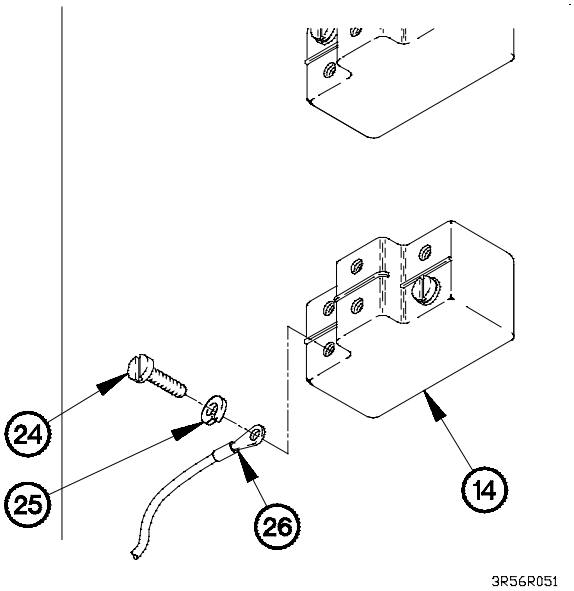


3R56R041

(7) Remove screw (18), lockwasher (19), and wire 1509 terminal lug (20) from top right terminal of switch S33 (14).

(8) Remove screw (21), lockwasher (22), and wire 707A terminal lug (23) from bottom center terminal of switch S33 (14).

(9) Remove screw (24), lockwasher (25), and wire 1511 terminal lug (26) from bottom left terminal of switch S33 (14).



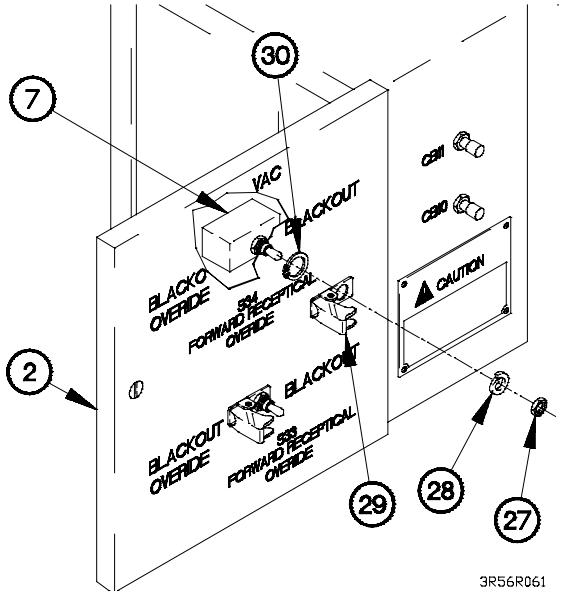
3R56R051

16-56. M1079 BLACKOUT OVERRIDE SWITCH REPLACEMENT (CONT)

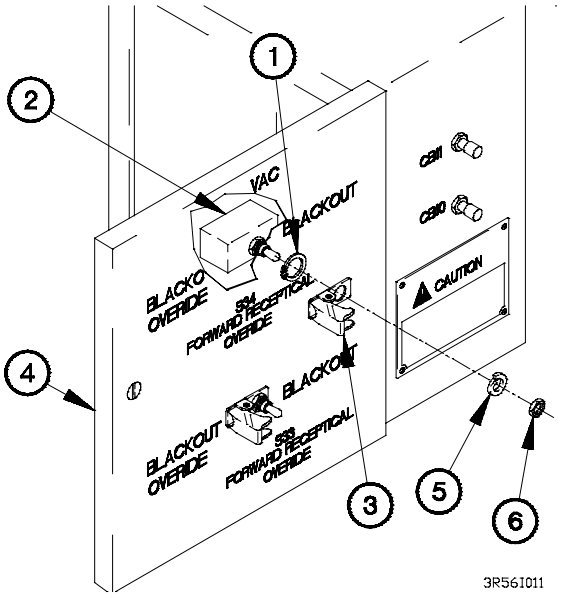
NOTE

Switches S33 and S34 are removed the same way. Switch S34 shown.

(10) Remove nut (27), lockwasher (28), switch guard (29), switch S34 (7), and key washer (30) from cover (2).



b. Installation.



NOTE

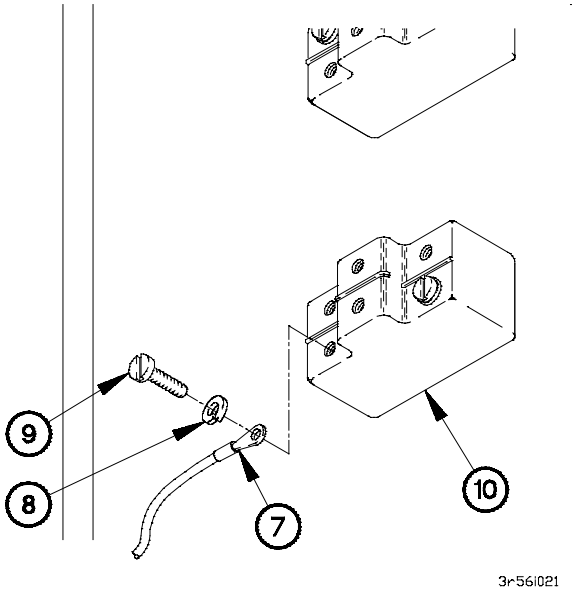
Switches S33 and S34 are installed the same way. Switch S34 shown.

(1) Install key washer (1), switch S34 (2), and switch guard (3) in cover (4) with lockwasher (5), and nut (6).

NOTE

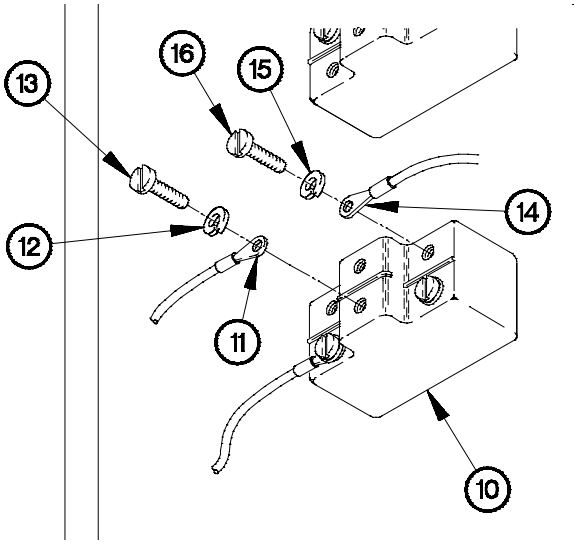
Perform steps (2) through (6) on switch S33.

(2) Install wire 1511 terminal lug (7), lockwasher (8), and screw (9) on bottom left terminal of switch S33 (10).

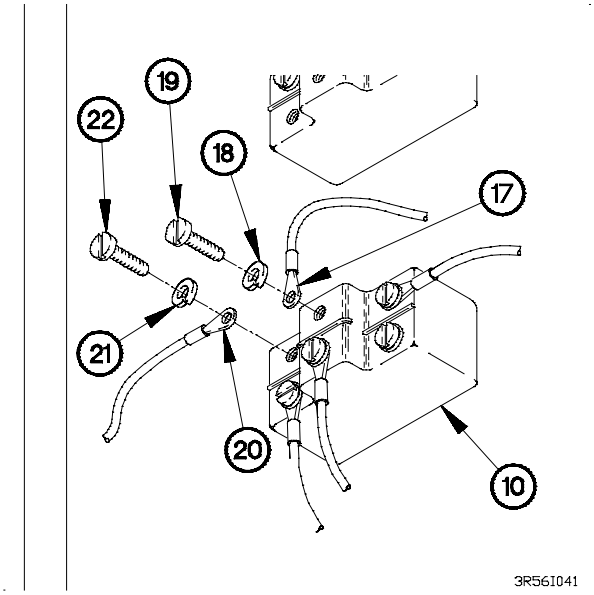


(3) Install wire 707A terminal lug (11), lockwasher (12), and screw (13) on bottom center terminal of switch S33 (10).

(4) Install wire 1509 terminal lug (14), lockwasher (15), and screw (16) on top right terminal of switch S33 (10).



3r56i031



3R56I041

(5) Install wire 1508 terminal lug (17), lockwasher (18), and screw (19) on top center terminal on switch S33 (10).

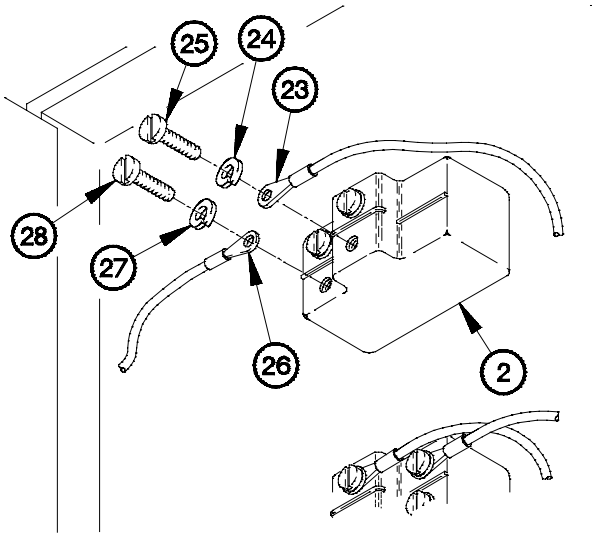
(6) Install wire 38 terminal lug (20), lockwasher (21), and screw (22) on top left terminal on switch S33 (10).

NOTE

Perform steps (7) and (8) on switch S34.

(7) Install wire 701AA terminal lug (23) on bottom right terminal of switch S34 (2) with lockwasher (24) and screw (25).

(8) Install wire 702AA (26) on bottom left terminal of switch S34 (2) with lockwasher (27) and screw (28).

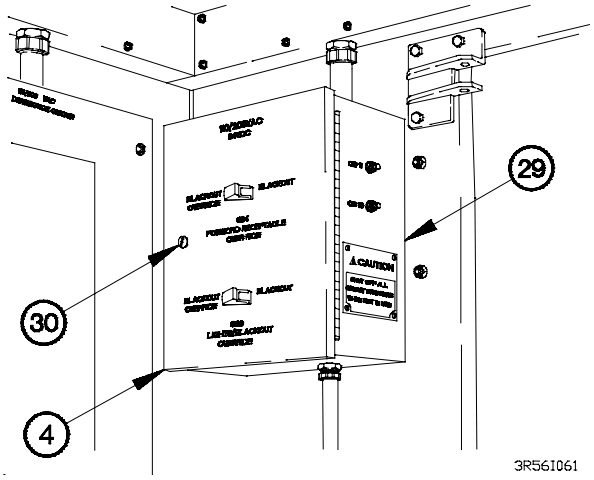


3R56I051

16-56. M1079 BLACKOUT OVERRIDE SWITCH REPLACEMENT (CONT)

(9) Close cover (4) on relay box (29).

(10) Tighten screw (30) in cover (4).



c. Follow-On Maintenance.

(1) Connect batteries (para 7-48).

(2) Connect AC power (TM 9-2320-365-10).

(3) Check for proper operation of blackout lights system (TM 9-2320-365-10).

(4) Close LH and RH doors (TM 9-2320-365-10).

End of Task.

16-57. M1079 BLACKOUT SWITCH REPLACEMENT

This task covers:

a. Removal
b. Installation
c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
AC power disconnected (TM 9-2320-365-10).
Batteries disconnected (para 7-48).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)

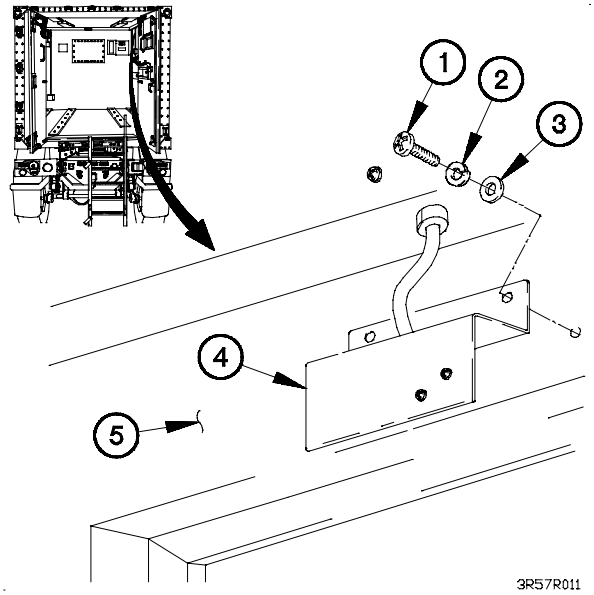
Materials/Parts
Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D)
Lockwasher (2) (Item 77, Appendix G)
Dispenser, Pressure Sensitive Adhesive
Lockwasher (2) (Item 79, Appendix G)
Strain Relief (Item 263, Appendix G)

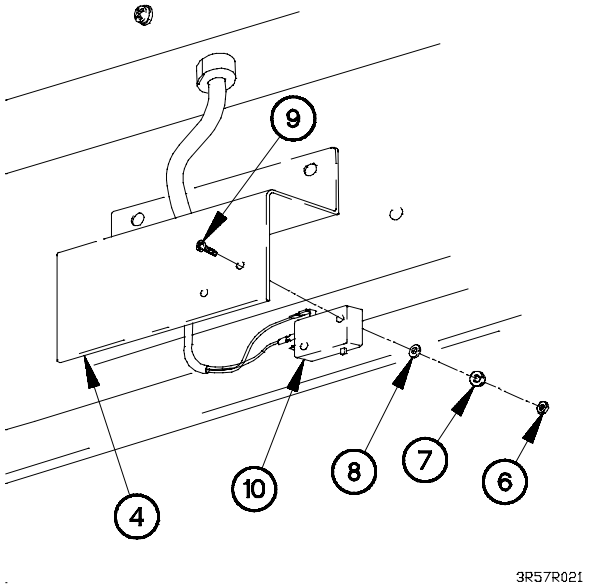
a. Removal.

NOTE

All blackout switches are removed the same way. Right rear blackout switch S11 shown.

(1) Remove two screws (1), lockwashers (2), washers (3), and bracket (4) from van body wall (5). Discard lockwashers.





(2) Remove two nuts (6), lockwashers (7), washers (8), screws (9), and blackout switch (10) from bracket (4).

16-57. M1079 BLACKOUT SWITCH REPLACEMENT (CONT)

NOTE

- Refer to **Table 16-5. M1079 Blackout Switch Location and Wire Numbers** for details.
- Tag wires and connection points prior to disconnecting.

(3) Disconnect supply wire terminal lug (11) and common wire terminal lug (12) from blackout switch (10).

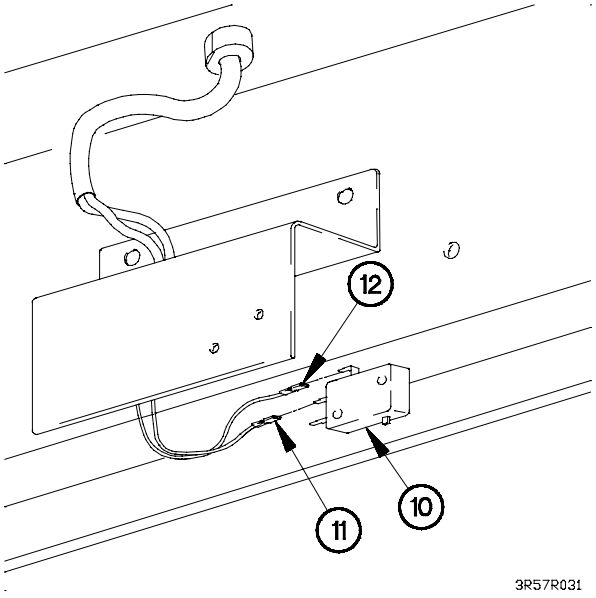
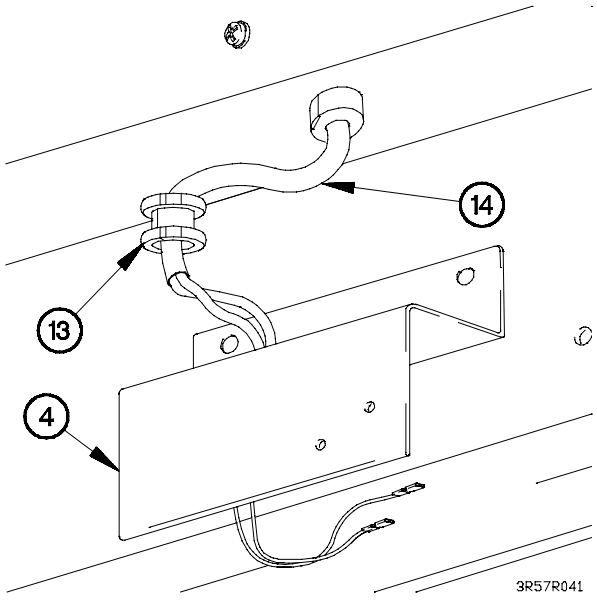


Table 16-5. M1079 Blackout Switch Location and Wire Numbers

Blackout Switch		Wire Numbers	
Number	**Location**	**Common**	**Supply**
S11	Right Rear	1509A	1509
S12	Right Front	1509B	1509A
S13	Left Front	1509C	1509B
S14	Left Middle	1509D	1509C
S15	Left Rear	1509E	1509D
S15	RH Door	1509E	1509D



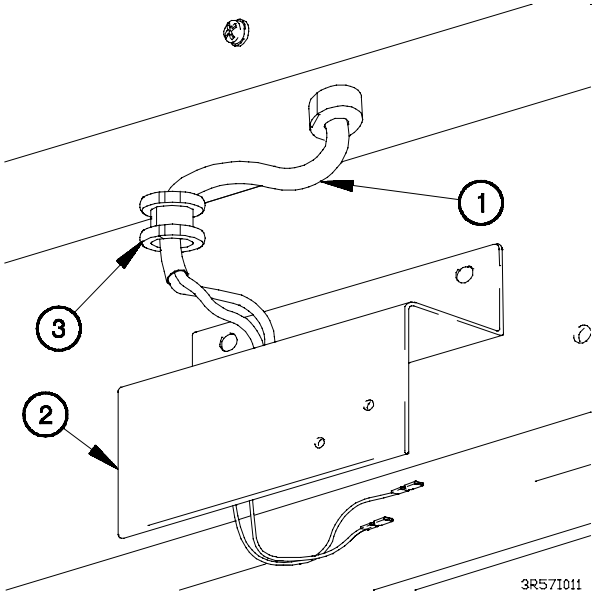
(4) Remove strain relief (13) and cable (14) from bracket (4). Discard strain relief.

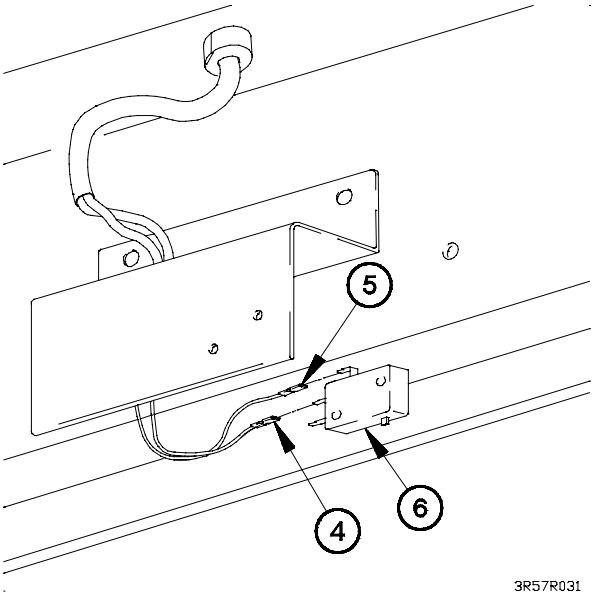
b. Installation.

NOTE

All blackout switches are installed the same way. Right rear blackout switch S11 shown.

(1) Install cable (1) in bracket (2) with strain relief (3).



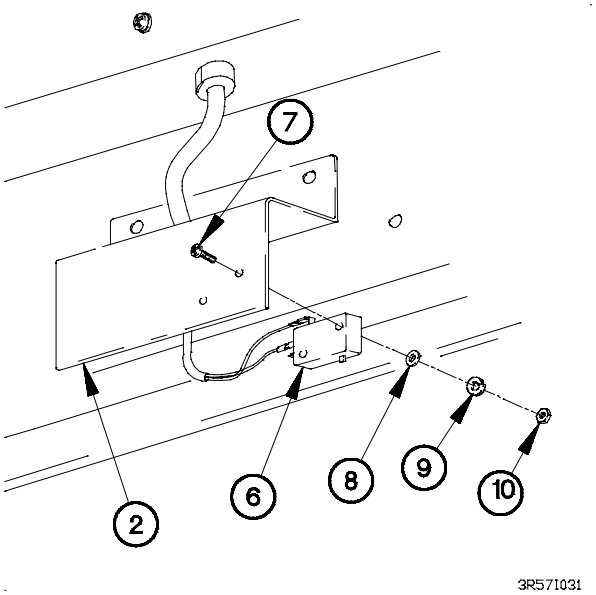


NOTE

Refer to **Table 16-5. M1079 Blackout Switch Location and Wire Numbers** for details.

(2) Connect common wire terminal lug (4) and supply wire terminal lug (5) to blackout switch (6).

(3) Install blackout switch (6) on bracket (2) with two screws (7), washers (8), lockwashers (9), and nuts (10).



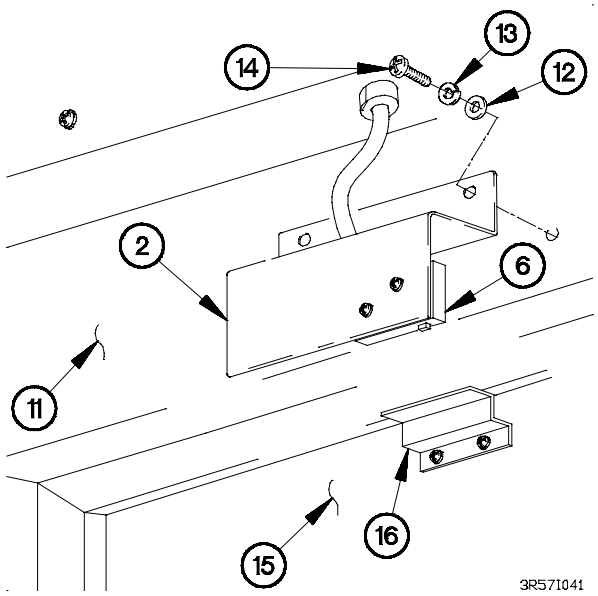
16-57. M1079 BLACKOUT SWITCH REPLACEMENT (CONT)

(4) Position bracket (2) on van body wall (11) with two washers (12), lockwashers (13), and screws (14).

(5) Close blackout shield (15).

(6) Press down on bracket (2) until blackout switch (6) contacts bracket (16).

(7) Tighten two screws (14).



c. Follow-On Maintenance.

(1) Connect batteries (para 7-48).

(2) Connect AC power (TM 9-2320-365-10).

(3) Check blackout lights for proper operation (TM 9-2320-365-10).

End of Task.

16-58. M1079 BLACKOUT/EMERGENCY LIGHT REPLACEMENT

This task covers:

a. Removal
b. Installation
c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
AC power disconnected (TM 9-2320-365-10).
Batteries disconnected (para 7-48).
LH and RH doors opened (115 degrees) (TM 9-2320-365-10).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Tool Kit, Blind Rivet (Item 43, Appendix C)
Goggles, Industrial (Item 15, Appendix C)

Tools and Special Tools (Cont)
Drill, Portable, Electric (Item 7, Appendix C)
Drill Set, Twist (Item 6, Appendix C)

Materials/Parts
Rivet, Blind (4) (Item 224, Appendix G)
Lockwasher (12) (Item 76, Appendix G)
Lockwasher (4) (for front emergency light) (Item 76, Appendix G)

a. Removal.

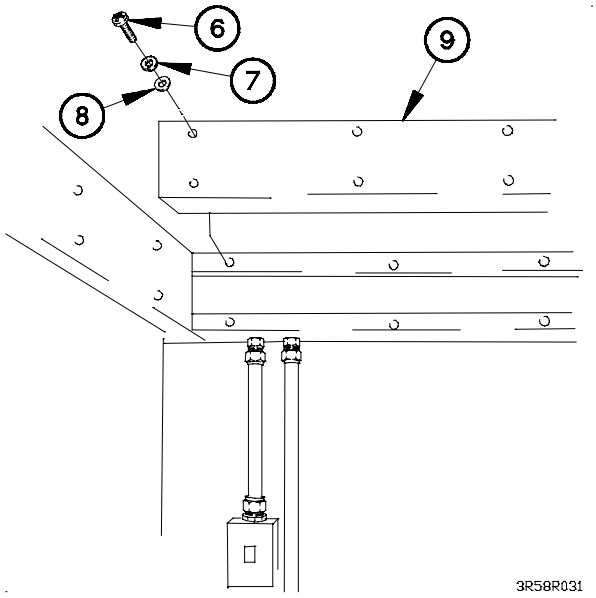
NOTE

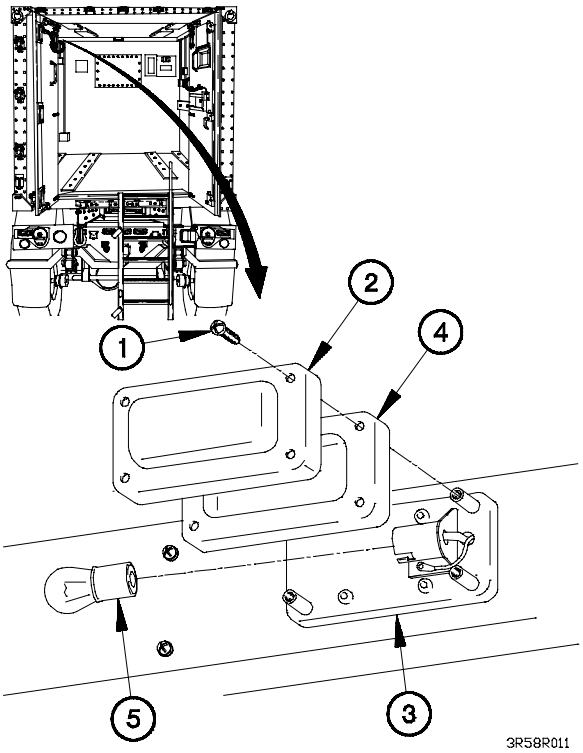
All blackout/emergency lights are removed the same way. Left side emergency light DS79 shown.

(1) Remove four screws (1) and lens (2) from base (3).

(2) Remove gasket (4) from base (3).

(3) Remove lamp (5) from base (3).



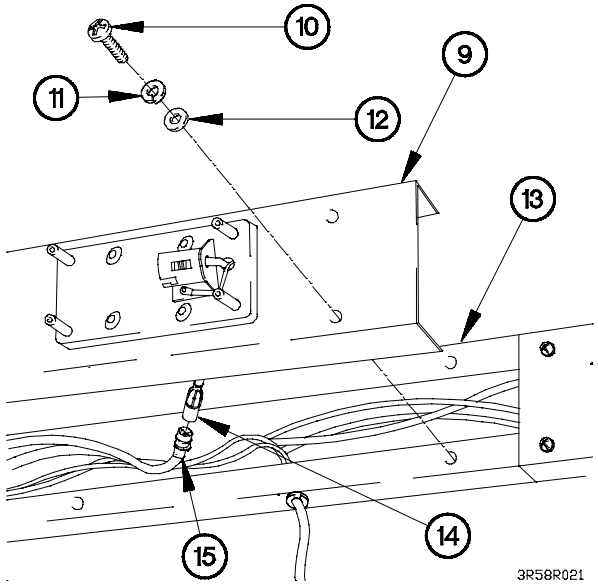


NOTE

Perform step (4) on front raceway cover.

(4) Remove two screws (6), lockwashers (7), and washers (8) from each end of raceway (9). Discard lockwashers.

16-58. M1079 BLACKOUT/EMERGENCY LIGHT REPLACEMENT (CONT)



(5) Remove 12 screws (10), lockwashers (11), washers (12) and raceway cover (9) from raceway (13). Discard lockwashers.

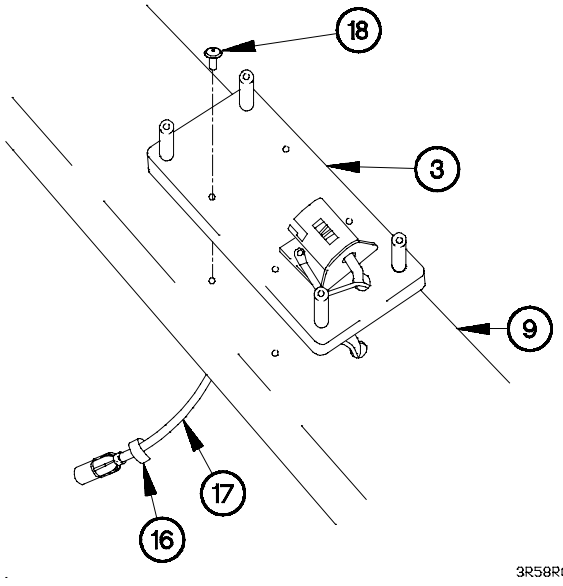
NOTE

Refer to **Table 16-6. M1079 Blackout/ Emergency Light Locations and Connectors** for details.

(6) Disconnect blackout/emergency light connector (14) from connector (15).

Table 16-6. M1079 Blackout/Emergency Light Locations and Connectors

LIGHT NO.	LOCATION	FUNCTION	JACK CONNECTOR NO.	PLUG CONNECTOR NO.
DS75	Right Side	Blackout	J162	P162
DS76	Left Side	Blackout	J164	P164
DS78	Right Side	Emergency	J163	P163
DS79	Left Side	Emergency	J165	P165
DS96	Front	Emergency	J166	P166
DS97	Rear	Emergency	J167	P167



(7) Remove band marker (16) from wire (17).

WARNING

Wear appropriate eye protection when removing rivets. Failure to comply may result in injury to personnel.

(8) Remove four rivets (18) and base (3) from raceway cover (9).

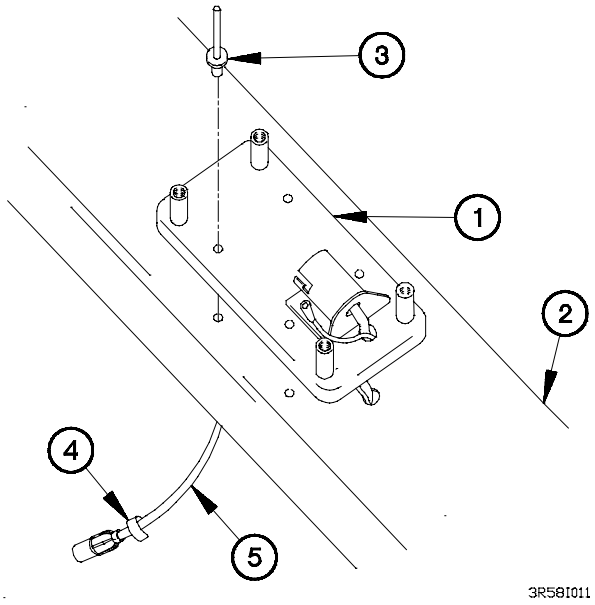
b. Installation.

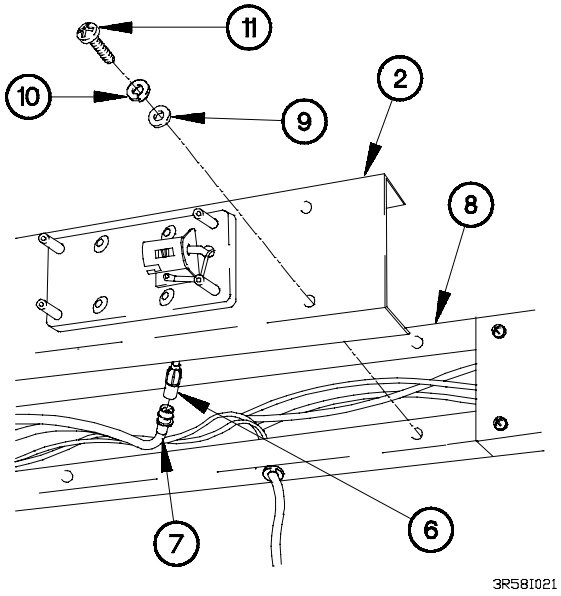
NOTE

All blackout/emergency lights are installed the same way. Left side emergency light DS79 shown.

(1) Install base (1) on raceway cover (2) with four rivets (3).

(2) Install band marker (4) on wire (5).





NOTE

Refer to **Table 16-6. M1079 Blackout/ Emergency Light Locations and Connectors** for details.

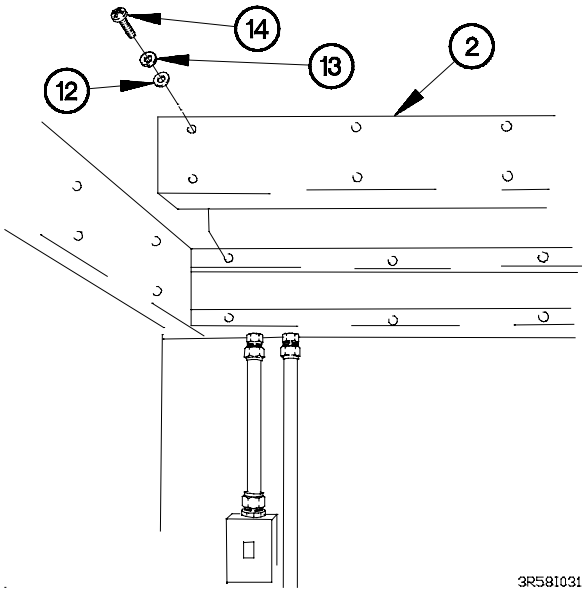
(3) Connect blackout/emergency light connector (6) to connector (7).

(4) Install raceway cover (2) on raceway (8) with 12 washers (9), lockwashers (10) and screws (11).

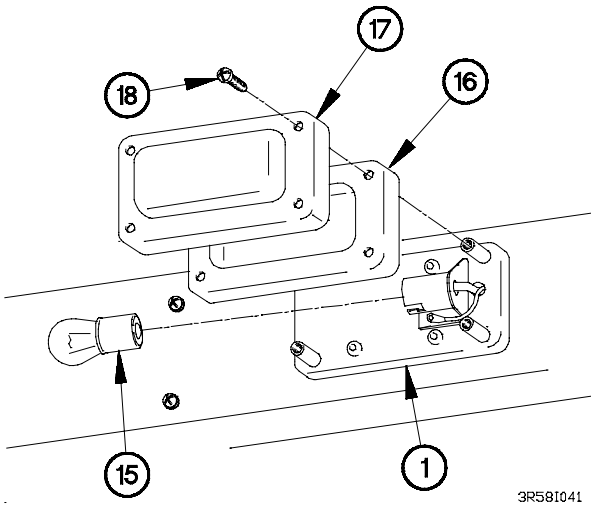
NOTE

Perform step (5) on front raceway cover.

(5) Install two washers (12), lockwashers (13), and screws (14) in each end of raceway cover (2).



16-58. M1079 BLACKOUT/EMERGENCY LIGHT REPLACEMENT (CONT)



(6) Install lamp (15) in base (1).

(7) Install gasket (16) on base (1).

(8) Install lens (17) on base (1) with four screws (18).

c. Follow-On Maintenance.

(1) Connect batteries (para 7-48).

(2) Connect AC power (TM 9-2320-365-10).

(3) Close LH and RH doors (TM 9-2320-365-10).

(4) Check for proper operation of blackout/emergency lights (TM 9-2320-365-10).

End of Task.

16-59. M1079 LIGHTING FIXTURE AND CONDUIT REPLACEMENT

This task covers:

a. Front Lighting Fixture Removal
b. Front Lighting Fixture Installation
c. Rear Lighting Fixture Removal
d. Rear Lighting Fixture Installation
e. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
AC power disconnected (TM 9-2320-365-10).
Batteries disconnected (para 7-48).
LH and RH doors opened (115 degrees) (TM 9-2320-365-10).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Goggles, Industrial (Item 15, Appendix C)

Materials/Parts
Ties, Cable, Plastic (Item 76, Appendix D)

Personnel Required
(2)

WARNING

Wear appropriate eye protection when handling fluorescent lamps. Failure to comply may result in injury to personnel.

a. Front Lighting Fixture Removal.

NOTE

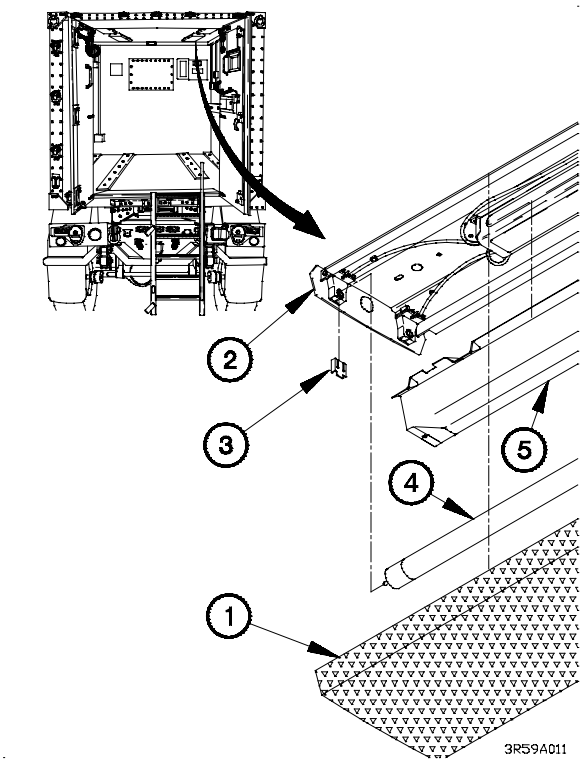
Left front lighting fixture DS82 and right front lighting fixture DS81 are removed the same way. Right front lighting fixture DS81 shown.

(1) Remove diffuser (1) from lighting fixture DS81 (2).

(2) Remove tube lock holder (3) from each end of two fluorescent lamps (4).

(3) Remove two fluorescent lamps (4) from lighting fixture DS81 (2).

(4) Remove ballast cover (5) from lighting fixture DS81 (2).



16-59. M1079 LIGHTING FIXTURE AND CONDUIT REPLACEMENT (CONT)

NOTE

- Perform step (5) on right front lighting fixture DS81.
- Tag wires and connection points prior to disconnecting.
- Remove plastic cable ties as required.

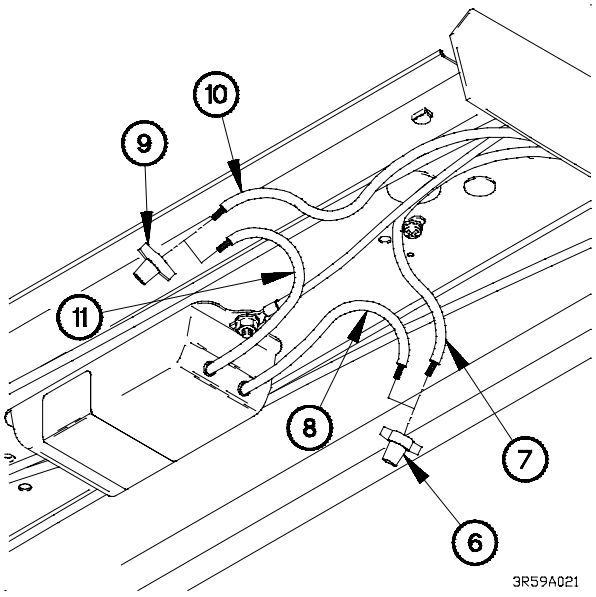
(5) Remove wire nut (6) from wire 1499J (7) and yellow/green wire (8).

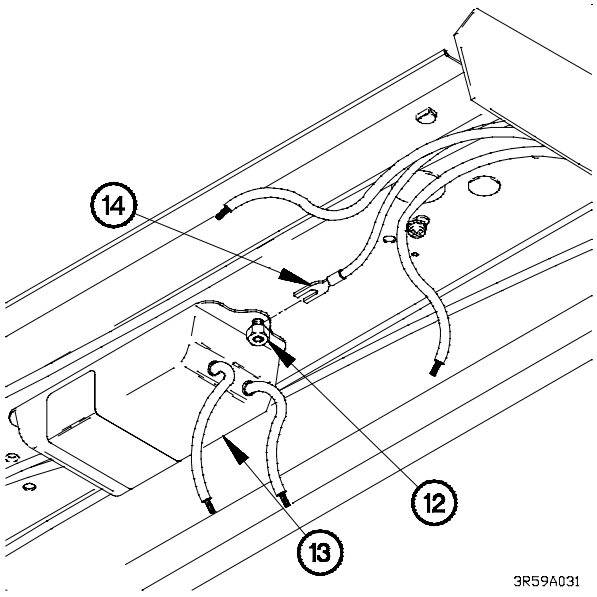
NOTE

Perform step (6) on left front lighting fixture DS82.

(6) Remove wire nut (6) from wire 1499K (7) and yellow/green wire (8).

(7) Remove wire nut (9) from wire 706B (10) and black wire (11).





(8) Loosen nut (12) on filter unit (13).

NOTE

Perform step (9) on right front lighting fixture DS81.

(9) Remove wire 3085AK terminal lug (14) from filter unit (13).

NOTE

Perform step (10) on left front lighting fixture DS82.

(10) Remove wire 3085AJ terminal lug (14) from filter unit (13).

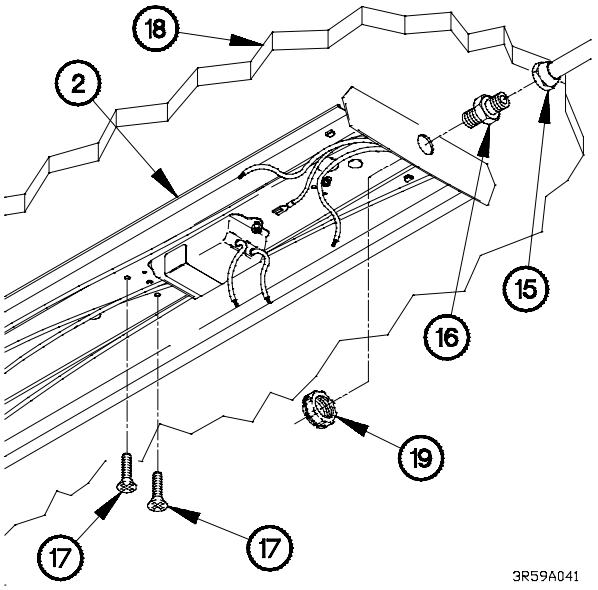
(11) Remove conduit nut (15) from conduit connector (16).

NOTE

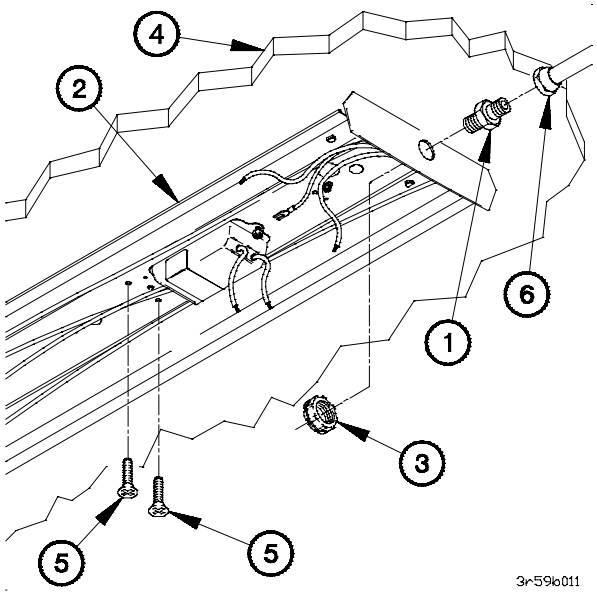
Step (12) requires the aid of an assistant.

(12) Remove four screws (17) and lighting fixture DS81 (2) from van body ceiling (18).

(13) Remove locknut (19) and conduit connector (16) from lighting fixture DS81 (2).



b. Front Lighting Fixture Installation.



NOTE

Left front lighting fixture DS82 and right front lighting fixture DS81 are installed the same way. Right front lighting fixture DS81 shown.

(1) Install conduit connector (1) in lighting fixture DS81 (2) with locknut (3).

NOTE

Step (2) requires the aid of an assistant.

(2) Install lighting fixture DS81 (2) on van body ceiling (4) with four screws (5).

(3) Install conduit nut (6) on conduit connector (1).

16-59. M1079 LIGHTING FIXTURE AND CONDUIT REPLACEMENT (CONT)

NOTE

Perform step (4) on right front lighting fixture DS81.

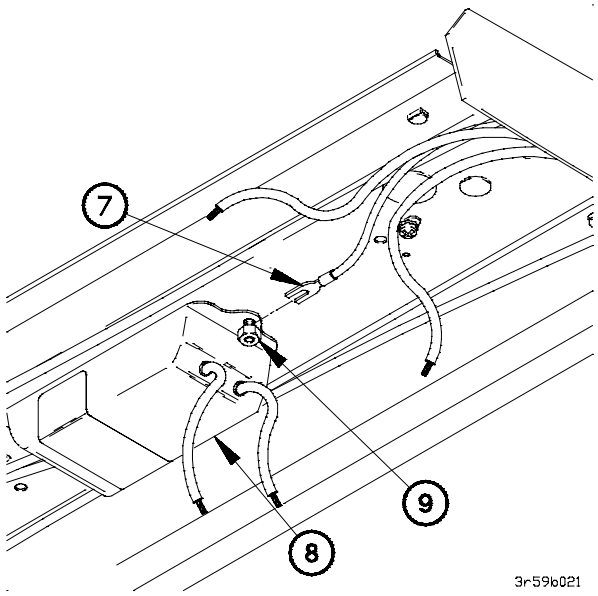
(4) Install wire 3085AK terminal lug (7) on filter unit (8).

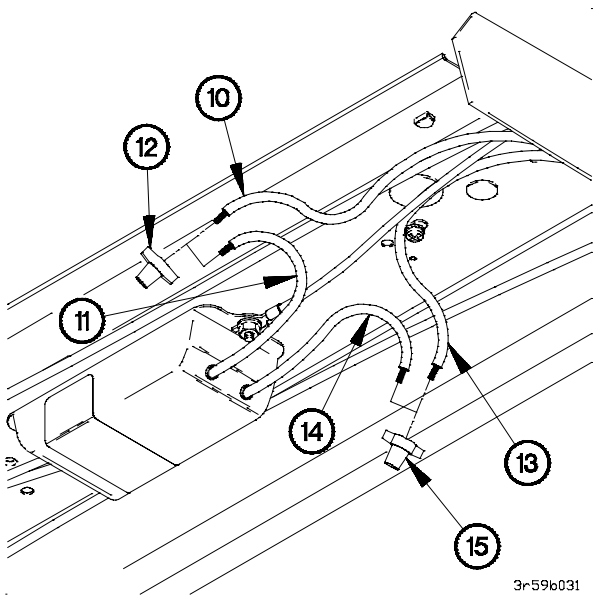
NOTE

Perform step (5) on left front lighting fixture DS82.

(5) Install wire 3085AJ terminal lug (7) on filter unit (8).

(6) Tighten nut (9) on filter unit (8).





(7) Connect wire 706B (10) and black wire (11) with wire nut (12).

NOTE

Perform step (8) on right front lighting fixture DS81.

(8) Connect wire 1499J (13) and yellow/green wire (14) with wire nut (15).

NOTE

- Perform step (9) on left front lighting fixture DS82.
- Install plastic cable ties as required.

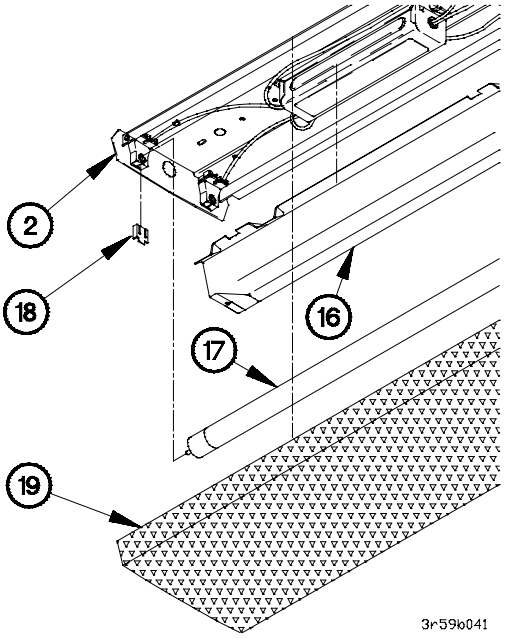
(9) Connect wire 1499K (13) and yellow/green wire (14) with wire nut (15).

(10) Install ballast cover (16) on lighting fixture DS81 (2).

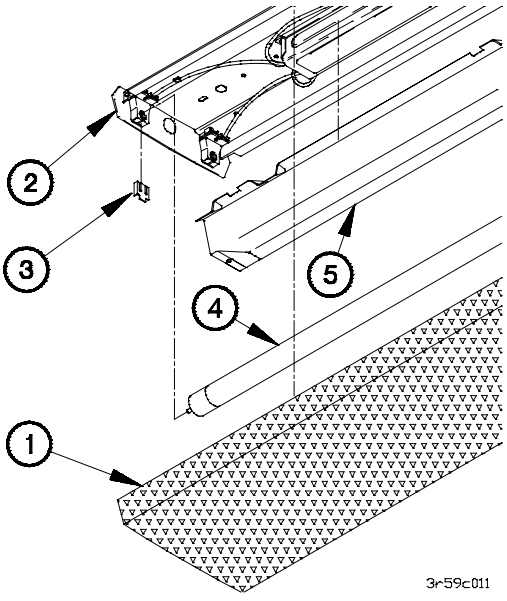
(11) Install two fluorescent lamps (17) in lighting fixture DS81 (2).

(12) Install tube lock holder (18) at each end of two fluorescent lamps (17).

(13) Install diffuser (19) on lighting fixture DS81 (2).



c. Rear Lighting Fixture Removal.



NOTE

Left rear lighting fixture DS83 and right rear lighting fixture DS80 are removed the same way. Right rear lighting fixture DS80 shown.

(1) Remove front lighting fixture (para 16-59).

(2) Remove diffuser (1) from lighting fixture DS80 (2).

(3) Remove tube lock holder (3) from each end of two fluorescent lamps (4).

(4) Remove two fluorescent lamps (4) from lighting fixture DS80 (2).

(5) Remove ballast cover (5) from lighting fixture DS80 (2).

16-59. M1079 LIGHTING FIXTURE AND CONDUIT REPLACEMENT (CONT)

NOTE

- Perform steps (6) and (7) on right rear lighting fixture DS80.
- Tag wires, terminal lugs, and connection points prior to disconnecting.
- Remove plastic cable ties as required.

(6) Remove wire nut (6) from two wires 1499J (7) and yellow/green wire (8).

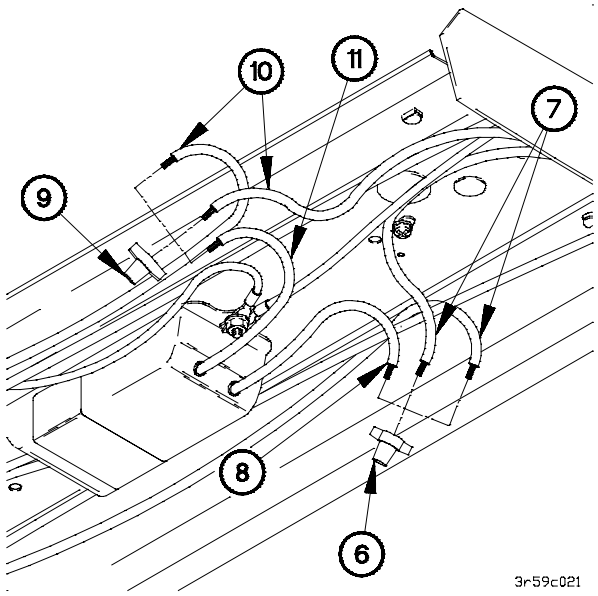
(7) Remove wire nut (9) from three wires 706B (10) and black wire (11).

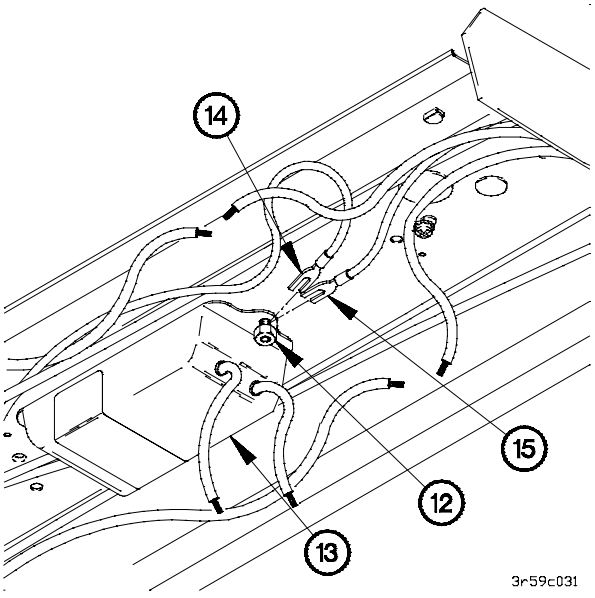
NOTE

Perform steps (8) and (9) on left rear lighting fixture DS83.

(8) Remove wire nut (6) from two wires 1499K (7) and yellow/green wire (8).

(9) Remove wire nut (9) from two wires 706B (10) and black wire (11).





(10) Loosen nut (12) on filter unit (13).

NOTE

Perform step (11) on right rear lighting fixture DS80.

(11) Remove wire 3085AK and 3085C terminal lugs (14 and 15) from filter unit (13).

NOTE

Perform step (12) on left rear lighting fixture DS83.

(12) Remove wires 3085AJ and 3085B (14 and 15) from filter unit (13).

NOTE

Perform step (13) on right rear lighting fixture DS80.

(13) Remove wires 1499J (7), 706B (11), and 3085AK (16) from conduit (17).

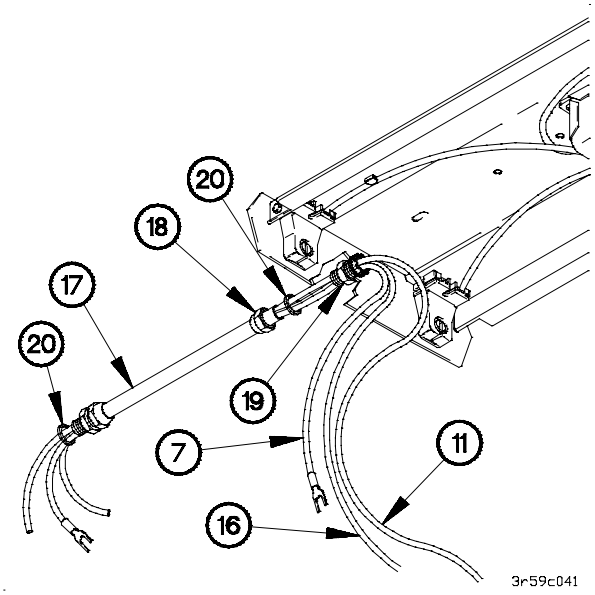
NOTE

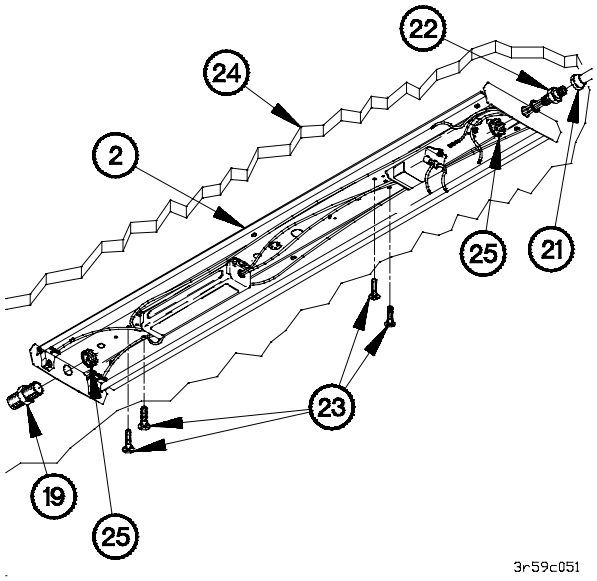
Perform step (14) on left rear lighting fixture DS83.

(14) Remove wires 1499K (7), 706B (11), and 3085AJ (16) from conduit (17).

(15) Remove conduit nut (18) from conduit connector (19).

(16) Remove two ferrules (20) and conduit nuts (18) from conduit (17).





(17) Remove conduit nut (21) from conduit connector (22).

NOTE

Step (18) requires the aid of an assistant.

(18) Remove four screws (23) and lighting fixture DS80 (2) from van body ceiling (24).

(19) Remove two locknuts (25) and conduit connectors (19 and 22) from lighting fixture DS80 (2).

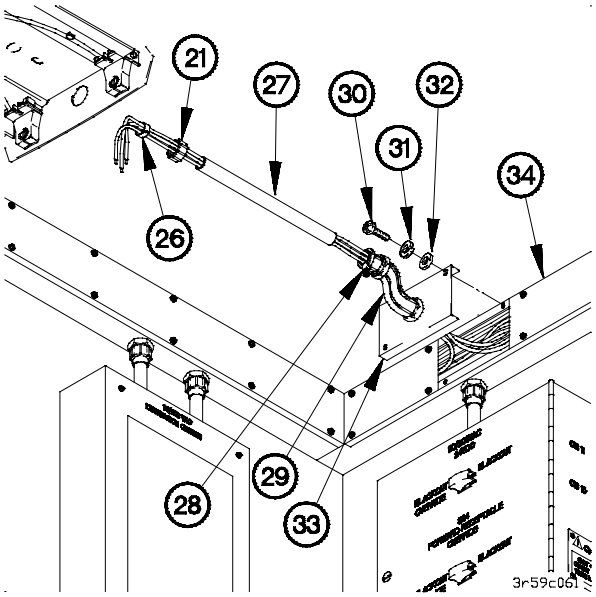
16-59. M1079 LIGHTING FIXTURE AND CONDUIT REPLACEMENT (CONT)

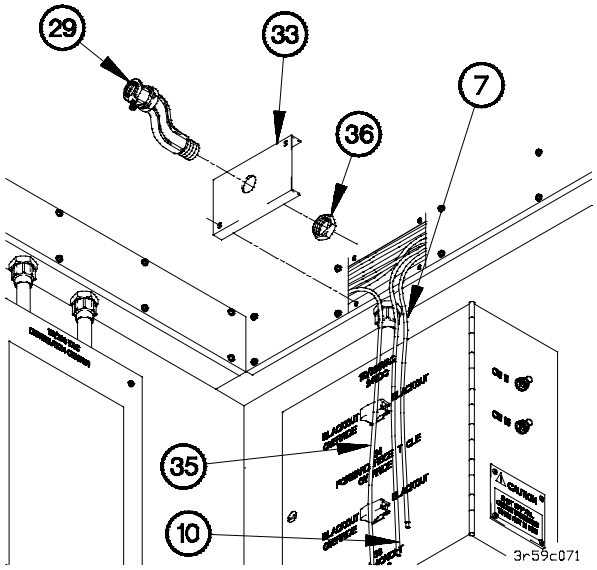
(20) Remove ferrule (26) and conduit nut (21) from conduit (27).

(21) Loosen screw (28) on conduit connector (29).

(22) Remove conduit (27) from conduit connector (29).

(23) Remove two screws (30), lockwashers (31), washers (32), and raceway cover (33) from raceway (34). Discard lockwashers.





NOTE

Perform step (24) on right side raceway cover.

(24) Remove wires 3085C (35), 706B (10), and 1499J (7) from conduit connector (29).

NOTE

Perform step (25) on left side raceway cover.

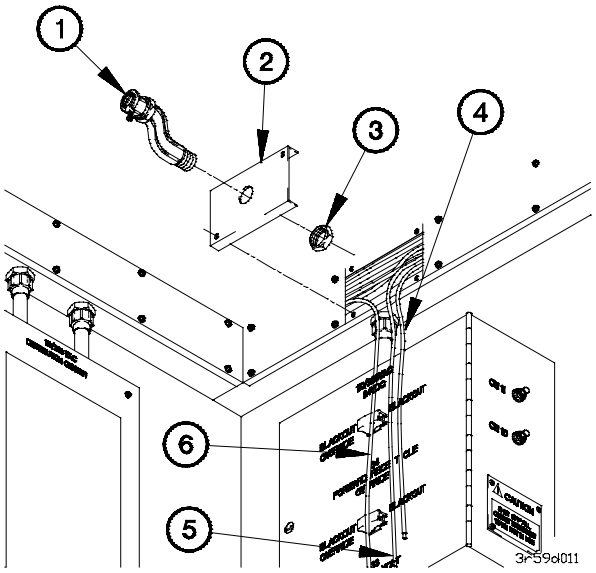
(25) Remove wires 3085B (35), 706B (10), and 1499K (7) from conduit connector (29).

NOTE

Note position of conduit connector prior to removal.

(26) Remove locknut (36) and conduit connector (29) from raceway cover (33).

d. Rear Lighting Fixture Installation.



NOTE

Left rear lighting fixture DS83 and right rear lighting fixture DS80 are installed the same way. Right rear lighting fixture DS80 shown.

(1) Install conduit connector (1) in raceway cover (2) with locknut (3).

NOTE

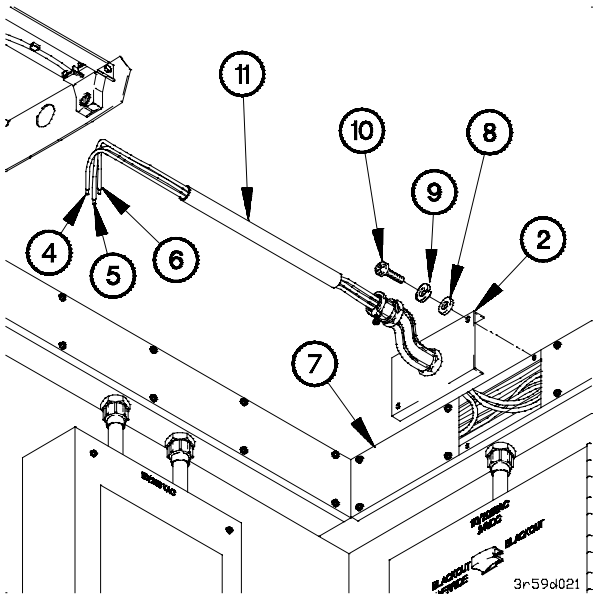
Perform step (2) on right rear lighting fixture DS80.

(2) Route wires 3085C (4), 706B (5), and 1499J (6) through conduit connector (1).

NOTE

Perform step (3) on left rear lighting fixture DS83.

(3) Route wires 3085B (4), 706B (5), and 1499K (6) through conduit connector (1).



(4) Install raceway cover (2) on raceway (7) with two washers (8), lockwashers (9), and screws (10).

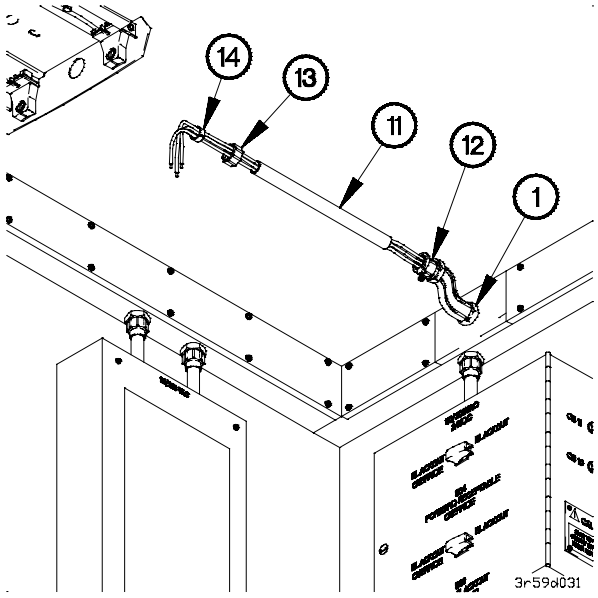
(5) Route wires 3085B (4), 706B (5), and 1499K (6) through conduit (11).

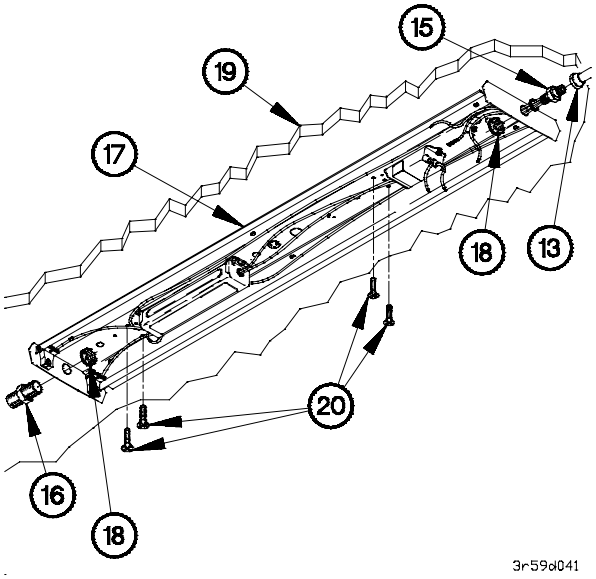
16-59. M1079 LIGHTING FIXTURE AND CONDUIT REPLACEMENT (CONT)

(6) Install conduit (11) in conduit connector (1).

(7) Tighten screw (12) in conduit connector (1).

(8) Install conduit nut (13) and ferrule (14) on conduit (11).





(9) Install conduit connectors (15 and 16) in light fixture (17) with two locknuts (18).

NOTE

Step (10) requires the aid of an assistant.

(10) Install light fixture (17) on van body ceiling (19) with four screws (20).

(11) Install conduit nut (13) on conduit connector (15).

(12) Position two conduit nuts (21) and ferrules (22) on conduit (23).

NOTE

Perform step (13) on right rear lighting fixture DS80.

(13) Route wires 3085AK (24) 706B (5) and 1499J (6) through conduit (23).

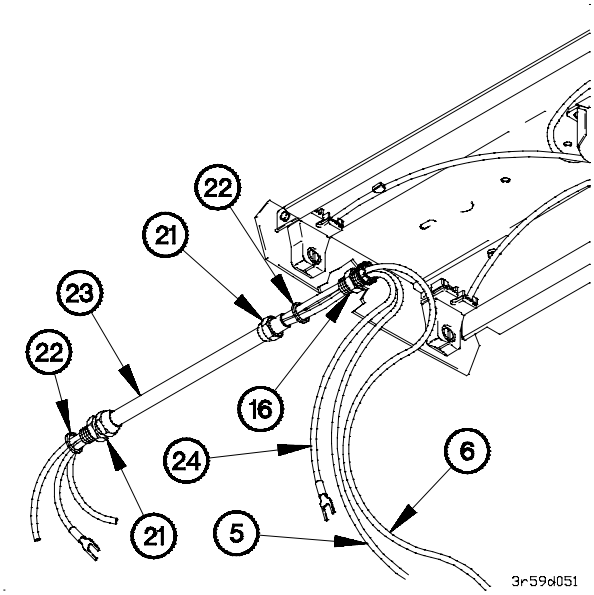
NOTE

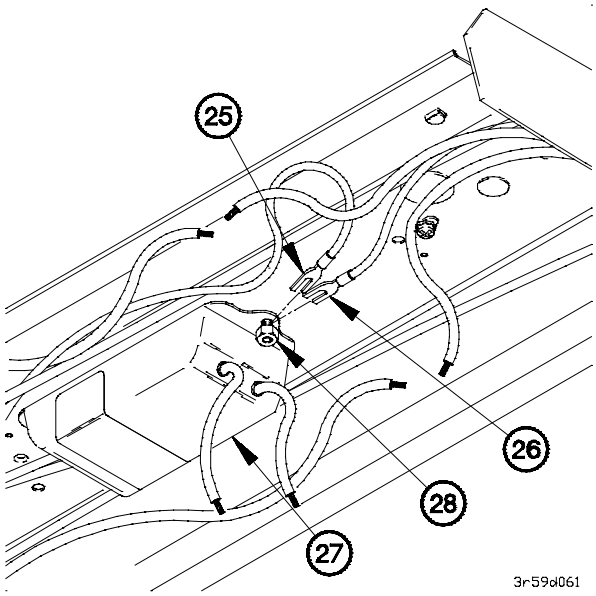
Perform step (14) on left rear lighting fixture DS83.

(14) Route wires 3085AJ (24), 706B (5) and 1499K (6) through conduit (23).

(15) Route wires 3085AJ (24), 706B (5) and 1499K (6) through conduit connector (16).

(16) Install conduit nut (21) on conduit connector (16).





NOTE

Perform step (17) on right rear lighting fixture DS80.

(17) Install wire 3085AK and 3085C terminal lugs (25 and 26) on filter unit (27).

NOTE

Perform step (18) on left rear lighting fixture DS83.

(18) Install wire 3085AJ and 3085B terminal lugs (25 and 26) on filter unit (27).

(19) Tighten nut (28) on filter unit (27).

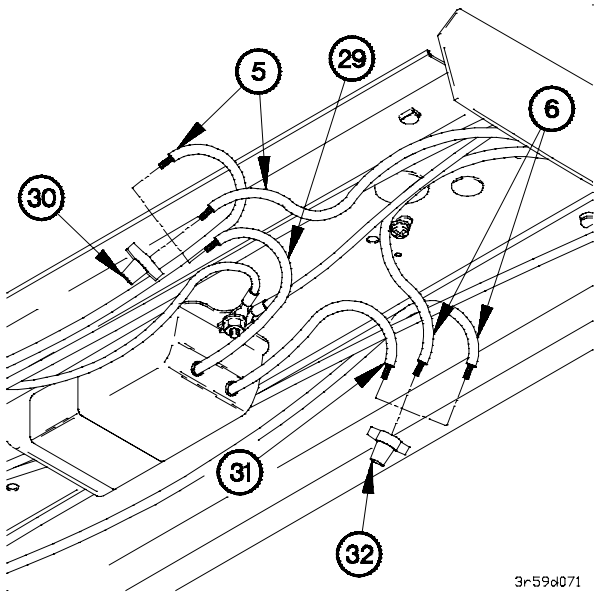
16-59. M1079 LIGHTING FIXTURE AND CONDUIT REPLACEMENT (CONT)

NOTE

Perform steps (20) and (21) on right rear lighting fixture DS80.

(20) Connect three wires 706B (5) and black wire (29) with wire nut (30).

(21) Connect two wires 1499J (6) and yellow/green wire (31) with wire nut (32).



NOTE

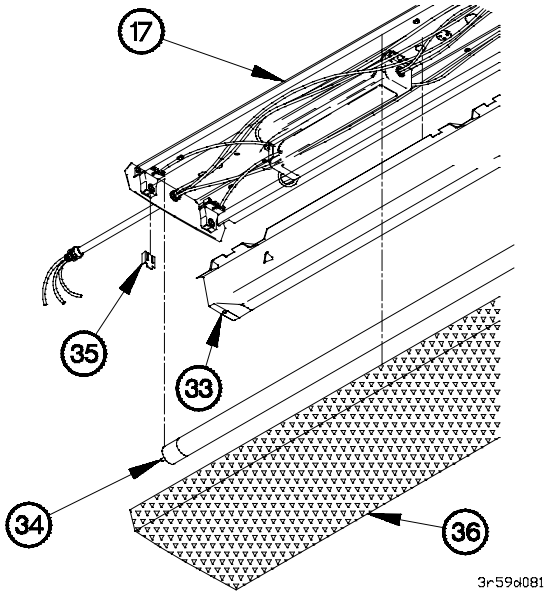
Perform steps (22) and (23) on left rear lighting fixture DS83.

(22) Connect two wires 706B (5) and black wire (29) with wire nut (30).

NOTE

Install plastic cable ties as required.

(23) Connect two wires 1499K (6) and yellow/green wire (31) with wire nut (32).



(24) Install ballast cover (33) on lighting fixture DS80 (17).

(25) Install two fluorescent lamps (34) in lighting fixture DS80 (17).

(26) Install tube lock holder (35) at each end of two fluorescent lamps (34).

(27) Install diffuser (36) on lighting fixture DS80 (17).

(28) Install front lighting fixture (para 16-59).

e. Follow-On Maintenance.

(1) Connect batteries (para 7-48).

(2) Connect AC power (TM 9-2320-365-10).

(3) Close LH and RH doors (TM 9-2320-365-10).

(4) Check for proper operation of fluorescent lights (TM 9-2320-365-10).

End of Task.

16-60. M1079 CLEARANCE AND MARKER LIGHTS REPLACEMENT

This task covers:

a. Removal
b. Installation
c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
Batteries disconnected (para 7-48).

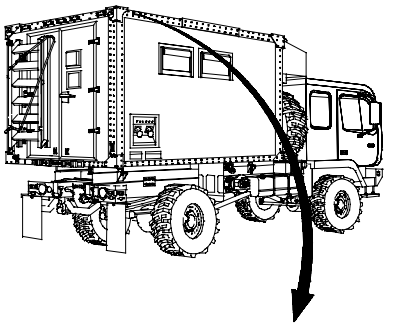
Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)

Materials/Parts
Lockwasher (4) (Item 77, Appendix G)
Gasket (Item 28, Appendix G)

a. Removal.

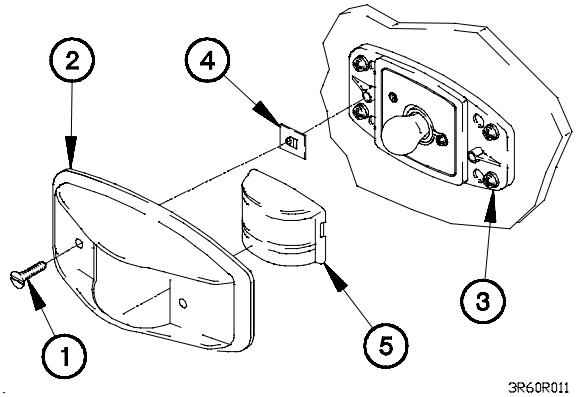
NOTE

All M1079 clearance and marker lights are removed the same way. Right side rear marker light shown.

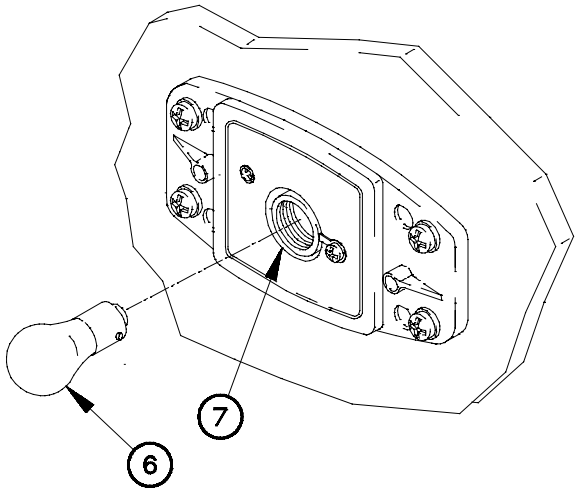


(1) Remove two screws (1) and lens housing (2) from base (3).

(2) Remove two clips (4) and lens (5) from lens housing (2).



3R60R011



3R60R021

(3) Remove lamp (6) from socket (7).

16-60. M1079 CLEARANCE AND MARKER LIGHTS REPLACEMENT (CONT)

(4) Remove four screws (8), lockwashers (9), and base (3) from van body (10). Discard lockwashers.

NOTE

Refer to **Table 16-7. M1079 Clearance and Marker Lights Location and Connectors** for details.

(5) Disconnect connector 489 (11) from connector (12).

(6) Remove gasket (13) from van body (10). Discard gasket.

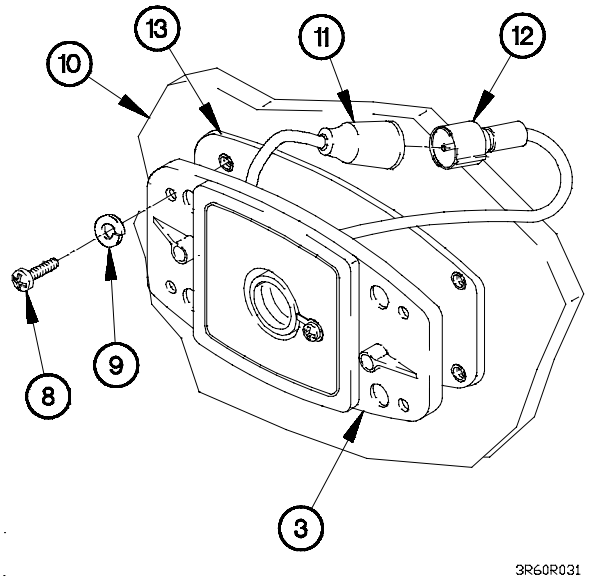


Table 16-7. M1079 Clearance and Marker Lights Location and Connectors

CLEARANCE/MARKER LIGHT LOCATION	CONNECTOR NUMBER
Left Front	P150
Left Front Center	P151
Front Center	P152
Right Front Center	P153
Right Front	P154
Left Side Rear	P155
Left Rear	P156
Left Rear Center	P157
Rear Center	P158
Right Rear Center	P159
Right Rear	P160
Right Side Rear	P161

b. Installation.

NOTE

- All M1079 clearance and marker lights are installed the same way. Right side rear marker light shown.
- Discard gasket supplied with replacement clearance/marker light.

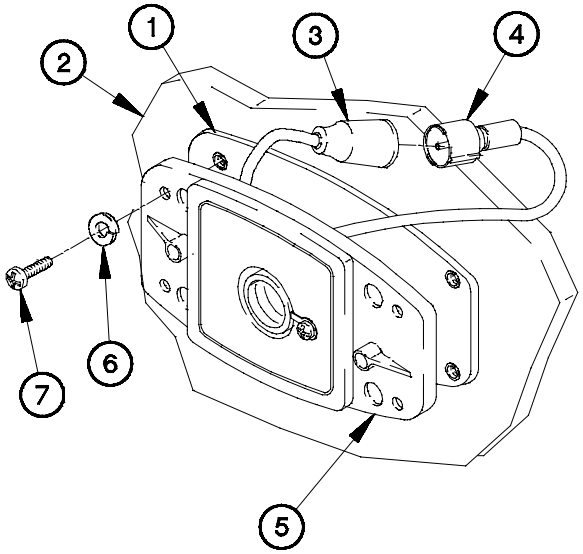
(1) Position gasket (1) on van body (2).

NOTE

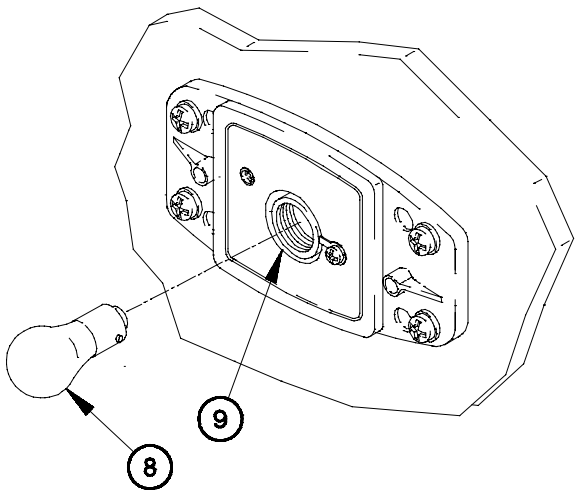
Refer to **Table 16-7. M1079 Clearance and Marker Lights Location and Connectors** for details.

(2) Connect connector 489 (3) to connector (4).

(3) Install base (5) on van body (2) with four lockwashers (6) and screws (7).



3R60I011



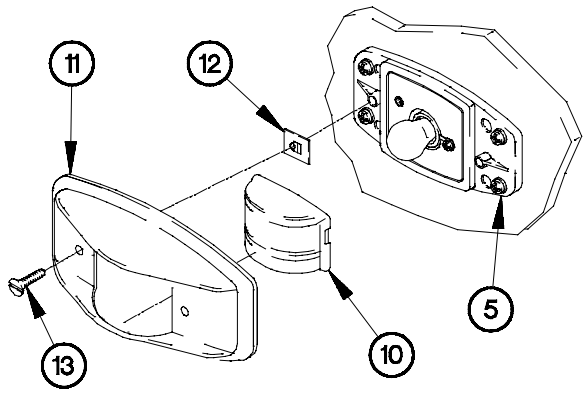
3R60I021

(4) Install lamp (8) in socket (9).

16-60. M1079 CLEARANCE AND MARKER LIGHTS REPLACEMENT (CONT)

(5) Install lens (10) in lens housing (11) with two clips (12).

(6) Install lens housing (11) on base (5) with two screws (13).



3R60I031

c. Follow-On Maintenance.

(1) Connect batteries (para 7-48).

(2) Check operation of clearance and marker lights (TM 9-2320-365-10).

End of Task.

16-61. M1079 5/20 AMP DC CIRCUIT BREAKER REPLACEMENT

This task covers:

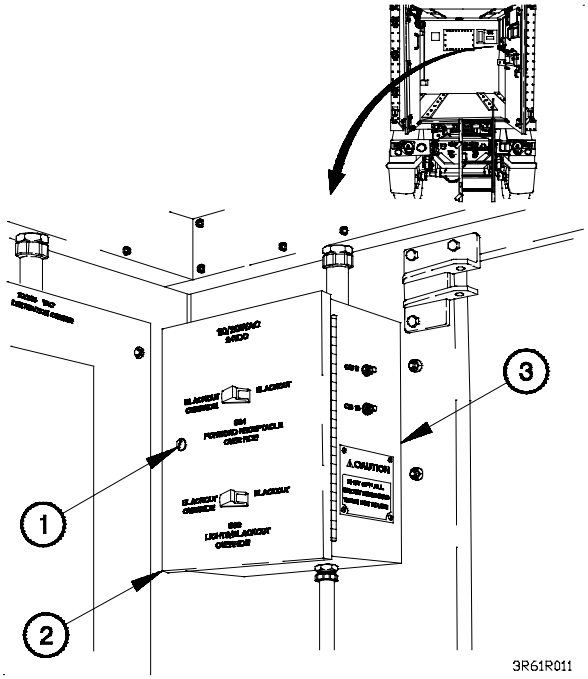
a. Removal
b. Installation
c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
AC power disconnected (TM 9-2320-365-10).
Batteries disconnected (para 7-48).
LH and RH doors opened (115 degrees) (TM 9-2320-365-10).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)

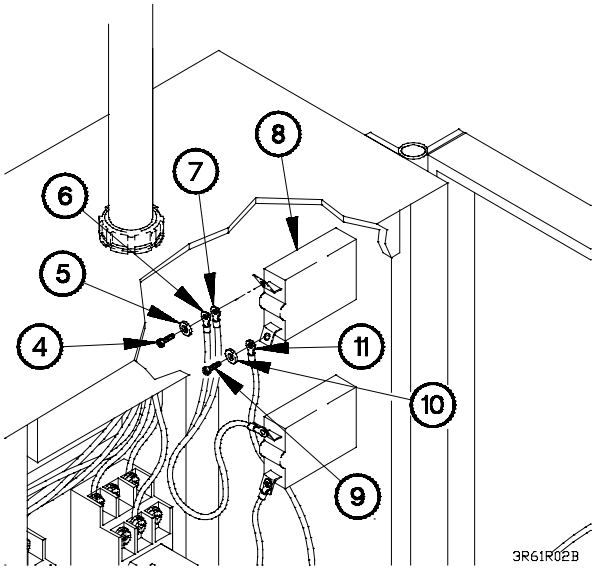
Materials/Parts
Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D)



a. Removal.

(1) Loosen screw (1) on cover (2).

(2) Open cover (2) on relay box (3).



NOTE

- Perform steps (3) and (4) on circuit breaker CB11.
- Tag wires and connection points prior to removal.

(3) Remove screw (4), washer (5), and wires 1507 and 1507A terminal lugs (6 and 7) from left terminal on circuit breaker CB11 (8).

(4) Remove screw (9), washer (10), and wire 49 terminal lug (11) from right terminal on circuit breaker CB11 (8).

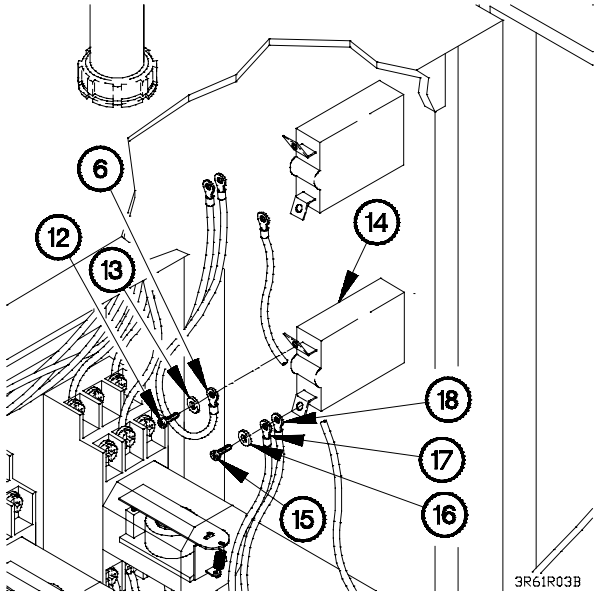
16-61. M1079 5/20 AMP DC CIRCUIT BREAKER REPLACEMENT (CONT)

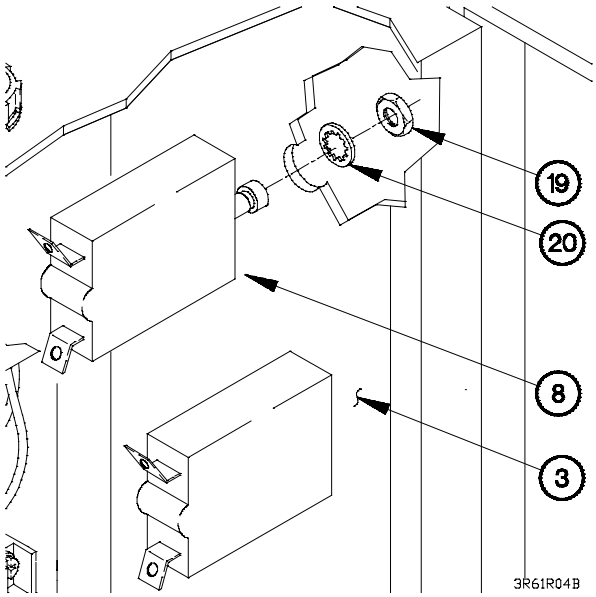
NOTE

Perform steps (5) and (6) on circuit breaker CB10.

(5) Remove screw (12), washer (13), and wire 1507A terminal lug (6) from left terminal on circuit breaker CB10 (14).

(6) Remove screw (15), washer (16), and wire 1508 and 1508A terminal lugs (17 and 18) from right terminal on circuit breaker CB10 (14).





b. Installation.

NOTE

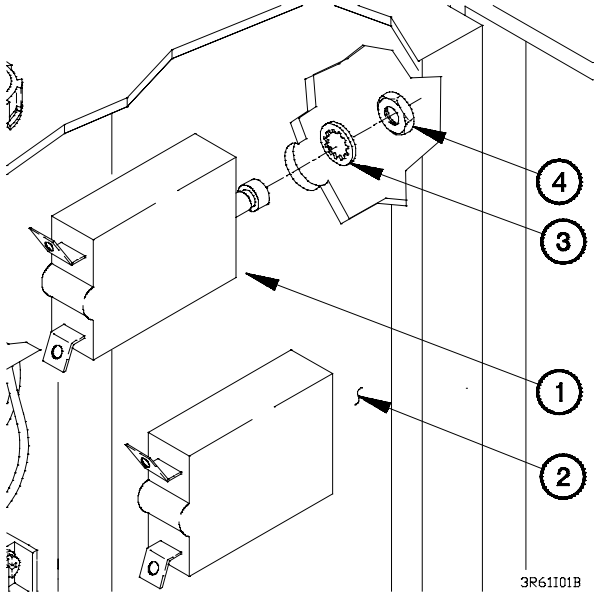
Circuit breakers CB10 and CB11 are installed the same way. Circuit breaker CB11 shown.

(1) Install circuit breaker CB11 (1) in relay box (2) with lockwasher (3) and nut (4).

NOTE

Circuit breakers CB10 and CB11 are removed the same way. Circuit breaker CB11 shown.

(7) Remove nut (19), lockwasher (20), and circuit breaker CB11 (8) from relay box (3).

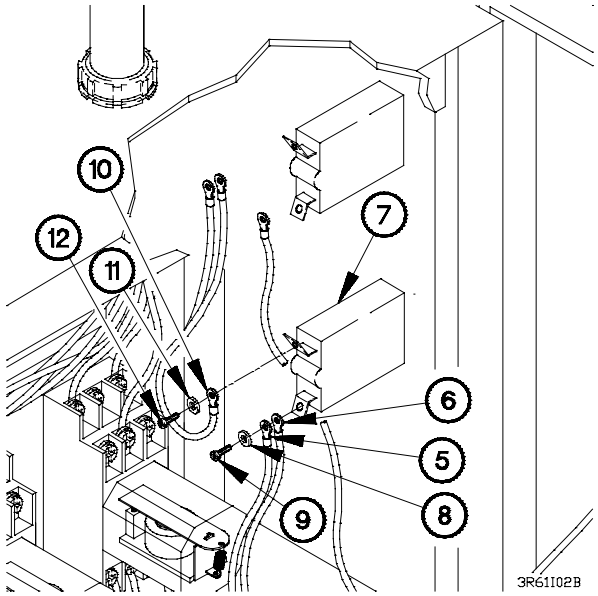


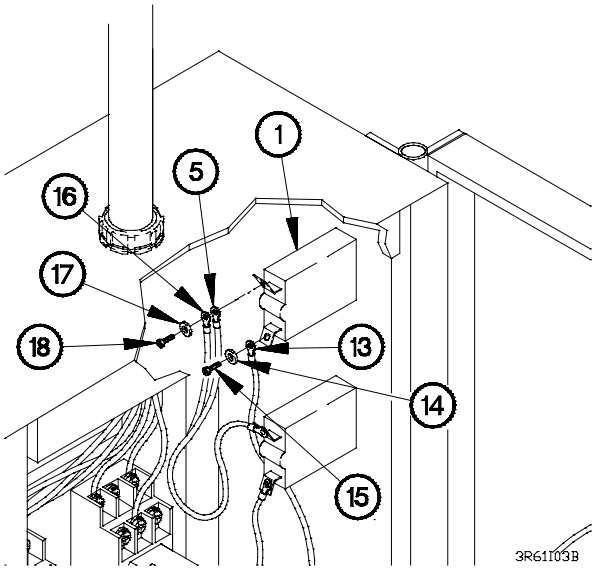
NOTE

Perform steps (2) and (3) on circuit breaker CB10.

(2) Install wire 1508 and 1508A terminal lugs (5 and 6) on right terminal of circuit breaker CB10 (7) with washer (8) and screw (9).

(3) Install wire 1507A terminal lug (10) on left terminal of circuit breaker CB10 (7) with washer (11) and screw (12).





NOTE

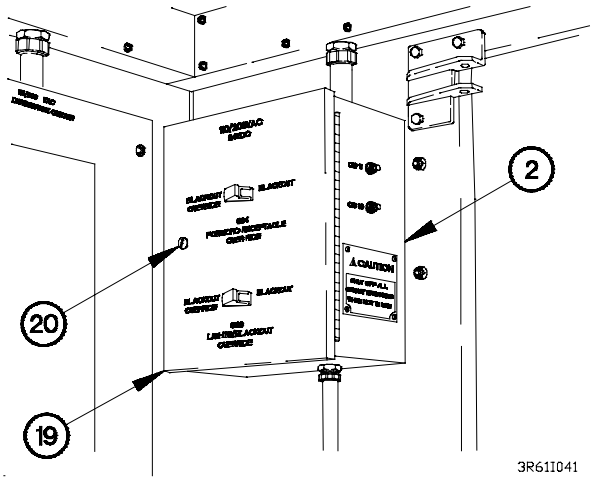
Perform steps (4) and (5) on circuit breaker CB11.

(4) Install wire 49 (13) on right terminal of circuit breaker CB11 (1) with washer (14) and screw (15).

(5) Install wire 1507A and 1507 terminal lugs (5 and 16) on left terminal of circuit breaker CB11 (1) with washer (17) and screw (18).

(6) Close cover (19) on relay box (2).

(7) Tighten screw (20) on cover (19).



16-61. M1079 5/20 AMP DC CIRCUIT BREAKER REPLACEMENT (CONT)

c. Follow-On Maintenance.

(1) Connect batteries (para 7-48).

(2) Connect AC power (TM 9-2320-365-10).

(3) Check for proper operation of blackout override (TM 9-2320-365-10).

(4) Close LH and RH doors (TM 9-2320-365-10).

End of Task.

16-62. M1079 110 VAC AND 24 VDC RELAY REPLACEMENT

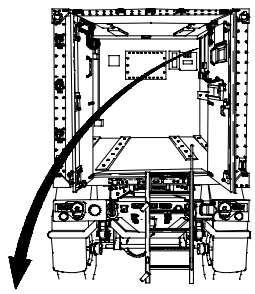
This task covers:

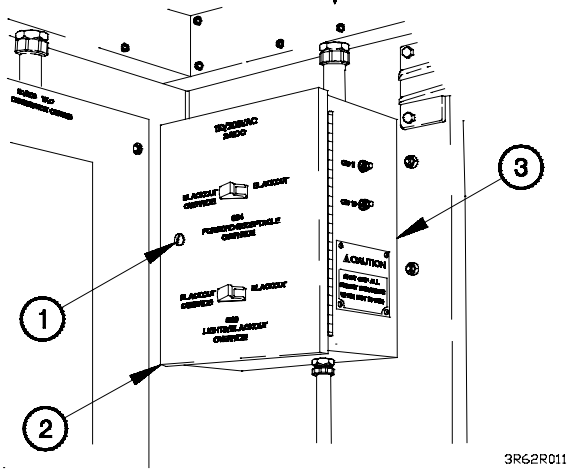
a. Removal
b. Installation
c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
AC power disconnected (TM 9-2320-365-10).
Batteries disconnected (para 7-48).
LH and RH doors opened (115 degrees) (TM 9-2320-365-10).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)

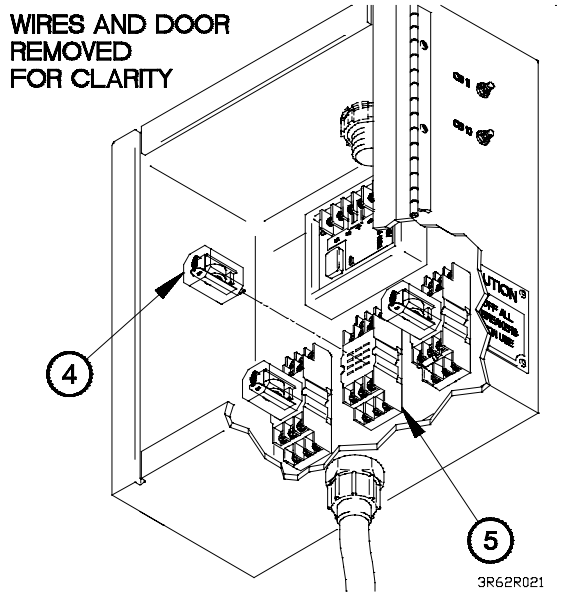




a. Removal.

(1) Loosen screw (1) on cover (2).

(2) Open cover (2) on relay box (3).



NOTE

All relays are replaced the same way. Relay K35 shown.

(3) Remove relay K35 (4) from relay socket (5).

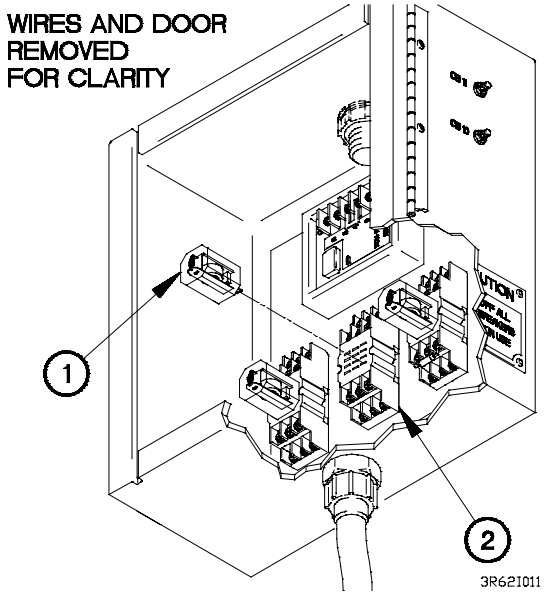
16-62. M1079 110 VAC AND 24 VDC RELAY REPLACEMENT (CONT)

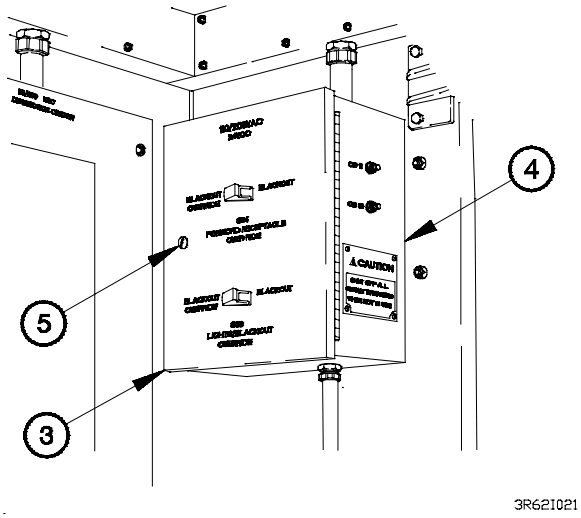
b. Installation.

CAUTION

Relay can only be installed one way. Ensure pins on relay are aligned with sockets on relay base. Failure to comply may result in damage to equipment.

(1) Install relay K35 (1) in relay socket (2).





(2) Close cover (3) on relay box (4).

(3) Tighten screw (5) on cover (3).

c. Follow-On Maintenance.

(1) Connect batteries (para 7-48).

(2) Connect AC Power (TM 9-2320-365-10).

(3) Check for proper operation of relay sub system (TM 9-2320-365-10).

(4) Close LH and RH doors (if desired) (TM 9-2320-365-10).

End of Task.

16-63. M1079 RELAY BOX ASSEMBLY REPLACEMENT/REPAIR

This task covers:

a. Removal
b. Disassembly
c. Assembly
d. Installation
e. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
AC power disconnected (TM 9-2320-365-10).
Batteries disconnected (para 7-48).
Interior lights switch/box and conduit removed (para 16-50).
Right side fluorescent lights and conduits removed (para 16-59).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)

Materials/Parts
Ties, Cable, Plastic (Item 62, Appendix)
Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D)
Lockwasher (7) (Item 80, Appendix G)
Lockwasher (12) (Item 81, Appendix G)
Lockwasher (4) (Item 86, Appendix G)
Nut, Blind Rivet (8) (Item 114, Appendix G)

Personnel Required
(2)

a. Removal.

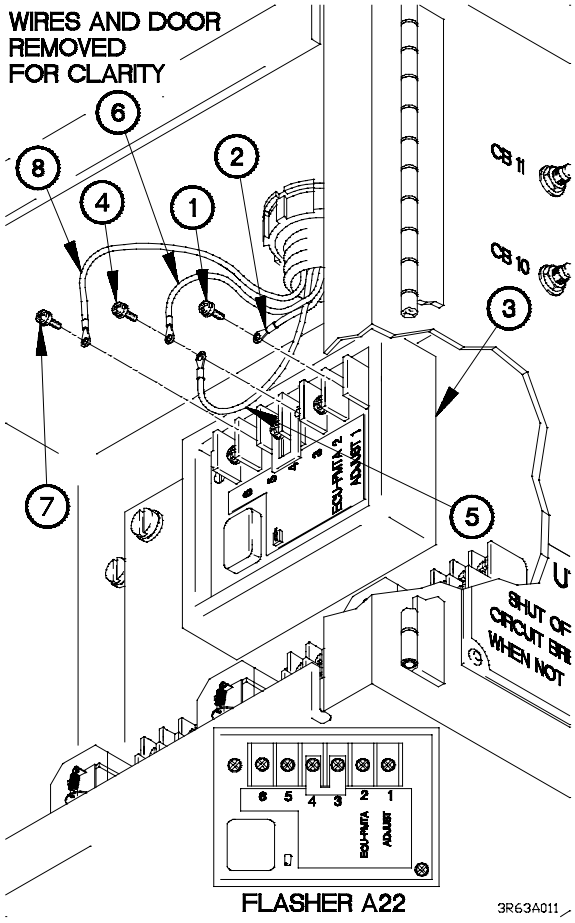
NOTE

- Tag wires and connection points prior to removal.
- Remove plastic cable ties as required.

(1) Remove screw 1 (1) and wire 1506 terminal lug (2) from flasher A22 (3).

(2) Remove screw 3 (4), wire 3086 terminal lug (5), and wire 3086B terminal lug (6) from flasher A22 (3).

(3) Remove screw 5 (7) and wire 2010 terminal lug (8) from flasher A22 (3).



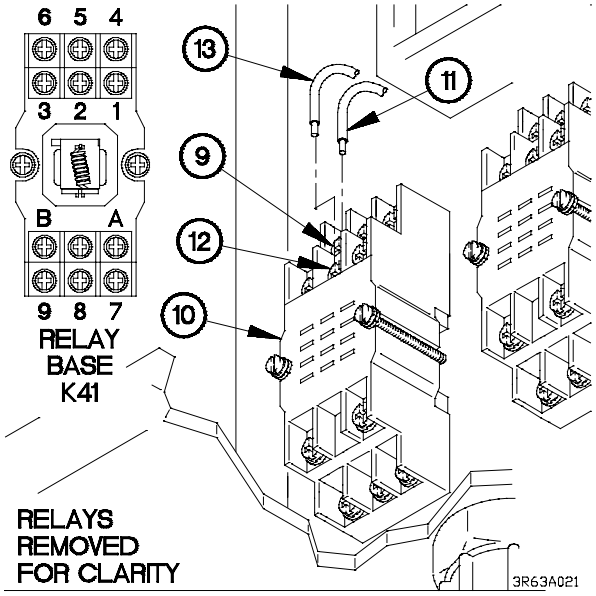
16-63. M1079 RELAY BOX ASSEMBLY REPLACEMENT/REPAIR (CONT)

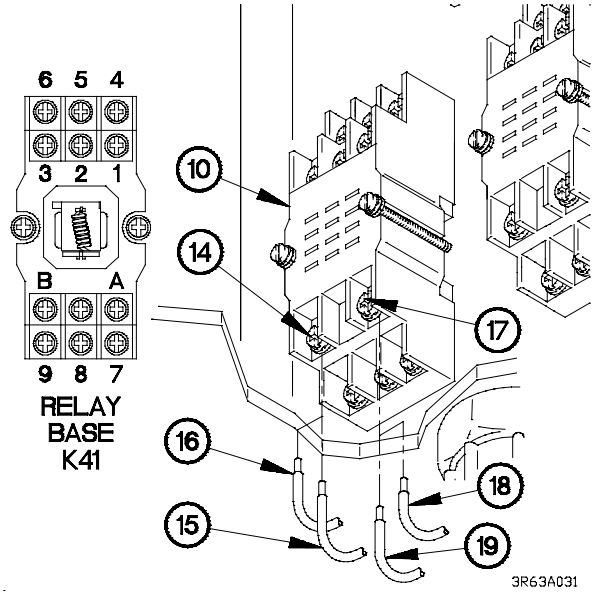
(4) Loosen screw 6 (9) in relay base K41 (10).

(5) Remove wire 706C (11) from relay base K41 (10).

(6) Loosen screw 2 (12) in relay base K41 (10).

(7) Remove wire 38A (13) from relay base K41 (10).



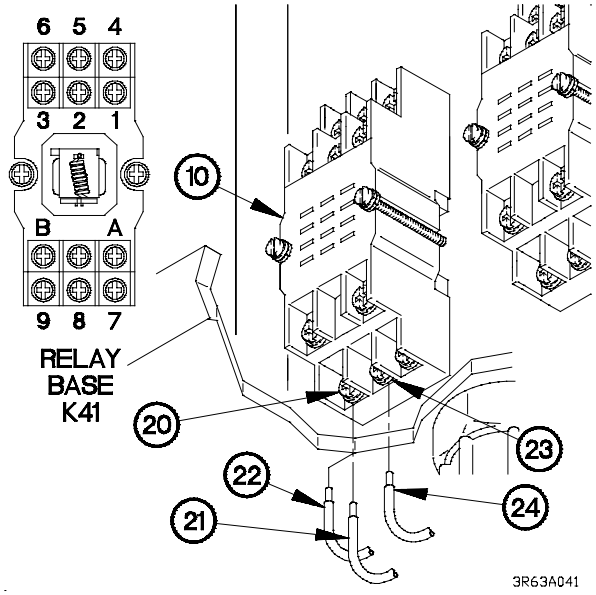


(8) Loosen screw B (14) in relay base K41 (10).

(9) Remove wires 1499L and 1499Q (15 and 16) from relay base K41 (10).

(10) Loosen screw A (17) in relay base K41 (10).

(11) Remove wires 1511 and 1511B (18 and 19) from relay base K41 (10).



(12) Loosen screw 9 (20) in relay base K41 (10).

(13) Remove wires 708BB and 1510 (21 and 22) from relay base K41 (10).

(14) Loosen screw 8 (23) in relay base K41 (10).

(15) Remove wire 1505A (24) from relay base K41 (10).

(16) Loosen screw 6 (25) in relay base K35 (26).

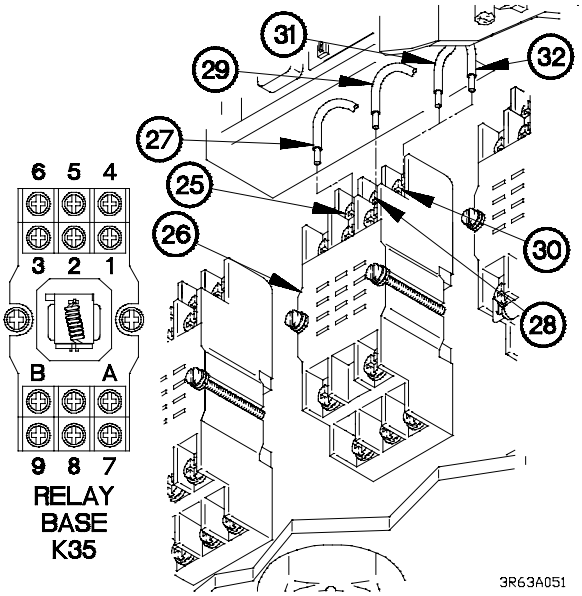
(17) Remove wire 702C (27) from relay base K35 (26).

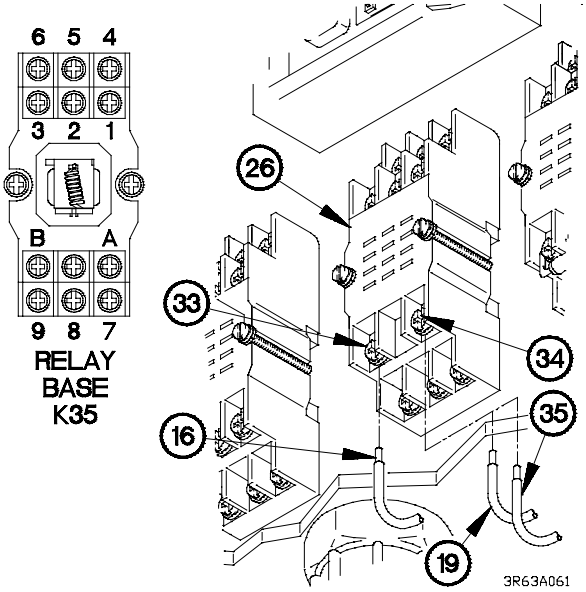
(18) Loosen screw 5 (28) in relay base K35 (26).

(19) Remove wire 702B (29) from relay base K35 (26).

(20) Loosen screw 4 (30) in relay base K35 (26).

(21) Remove wires 702A and 702AA (31 and 32) from relay base K35 (26).



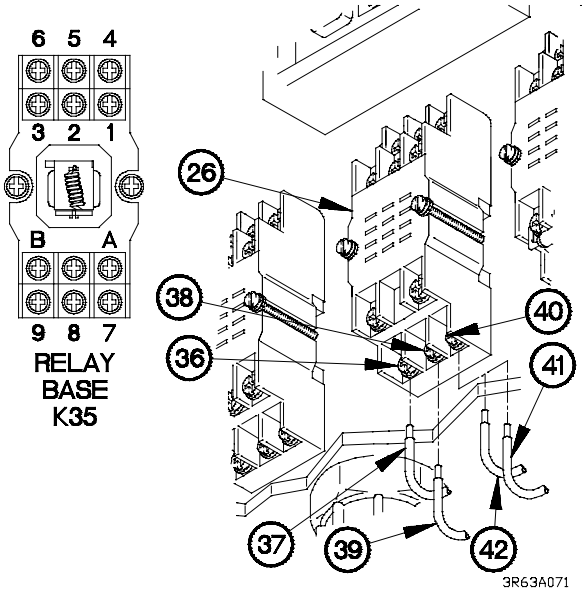


(22) Loosen screw B (33) in relay base K35 (26).

(23) Remove wire 1499Q (16) from relay base K35 (26).

(24) Loosen screw A (34) in relay base K35 (26).

(25) Remove wires 1511A and 1511B (35 and 19) from relay base K35 (26).



(26) Loosen screw 9 (36) in relay base K35 (26).

(27) Remove wire 701C (37) from relay base K35 (26).

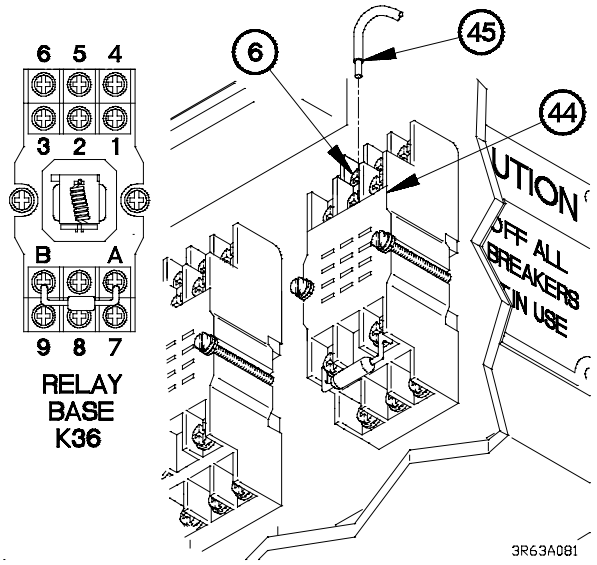
(28) Loosen screw 8 (38) in relay base K35 (26).

(29) Remove wire 701B (39) from relay base K35 (26).

(30) Loosen screw 7 (40) in relay base K35 (26).

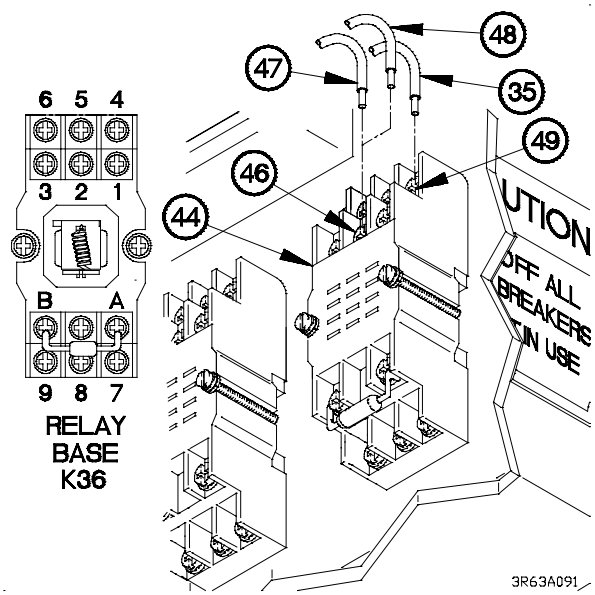
(31) Remove wires 701A and 701AA (41 and 42) from relay base K35 (26).

16-63. M1079 RELAY BOX ASSEMBLY REPLACEMENT/REPAIR (CONT)



(32) Loosen screw 6 (43) in relay base K36 (44).

(33) Remove wire 38B (45) from relay base K36 (44).

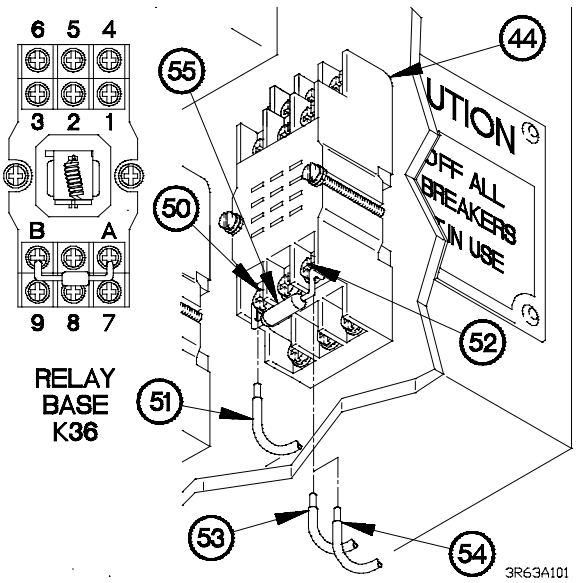


(34) Loosen screw 2 (46) in relay base K36 (44).

(35) Remove wires 1505 and 1505B (47 and 48) from relay base K36 (44).

(36) Loosen screw 4 (49) in relay base K36 (44).

(37) Remove wire 1511A (35) from relay base K36 (44).



(38) Loosen screw B (50) in relay base K36 (44).

(39) Remove wire 3086B (51) from relay base K36 (44).

(40) Loosen screw A (52) in relay base K36 (44).

(41) Remove wires 38 and 709 (53 and 54) from relay base K36 (44).

NOTE

Note position of gray band on diode prior to removal.

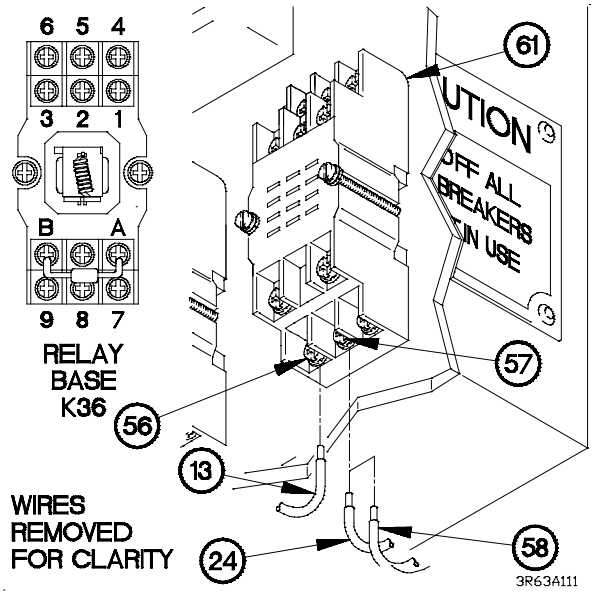
(42) Remove diode (55) from relay base K36 (44).

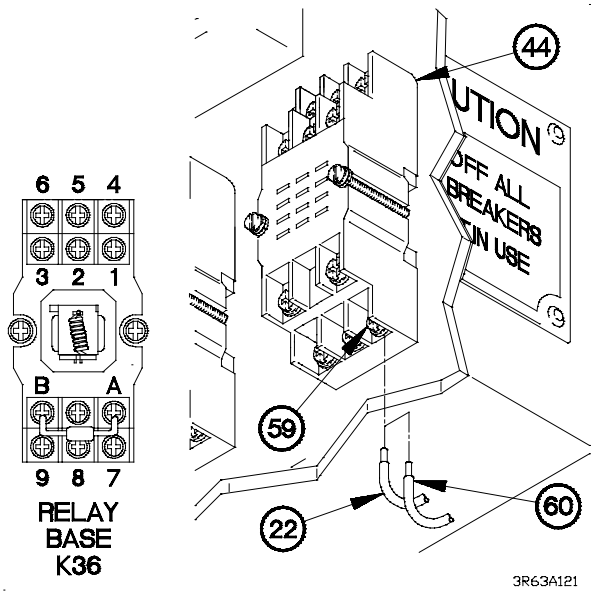
(43) Loosen screw 9 (56) in relay base K36 (44).

(44) Remove wire 38A (13) from relay base K36 (44).

(45) Loosen screw 8 (57) in relay base K36 (44).

(46) Remove wires 1505A and 1505C (24 and 58) from relay base K36 (44).



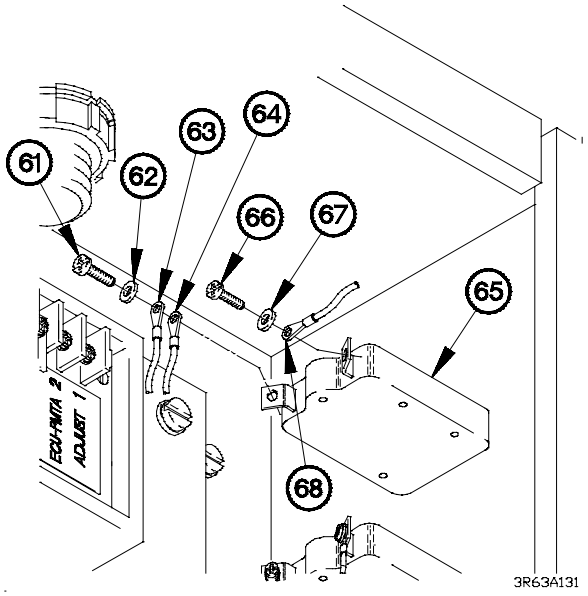


(47) Loosen screw 7 (59) in relay base K36 (44).

(48) Remove wires 707A and 1510 (60 and 22) from relay base K36 (44).

(49) Remove screw (61), washer (62), wire 1507 terminal lug (63), and wire 1507A terminal lug (64) from circuit breaker CB11 (65).

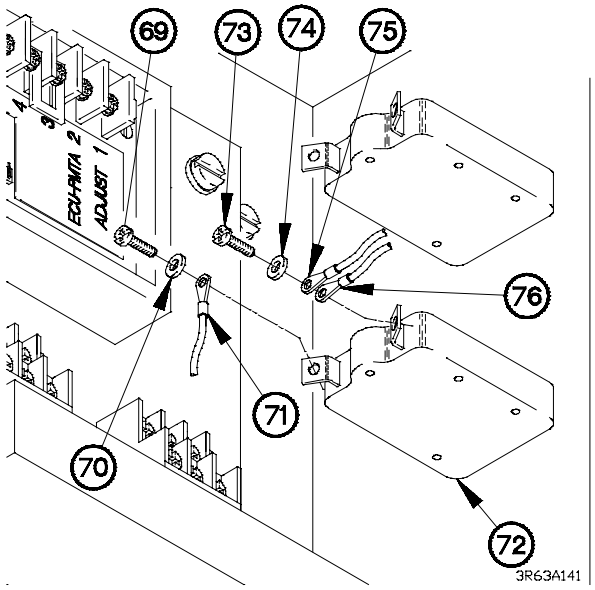
(50) Remove screw (66), washer (67), and wire 49 terminal lug (68) from circuit breaker CB11 (65).

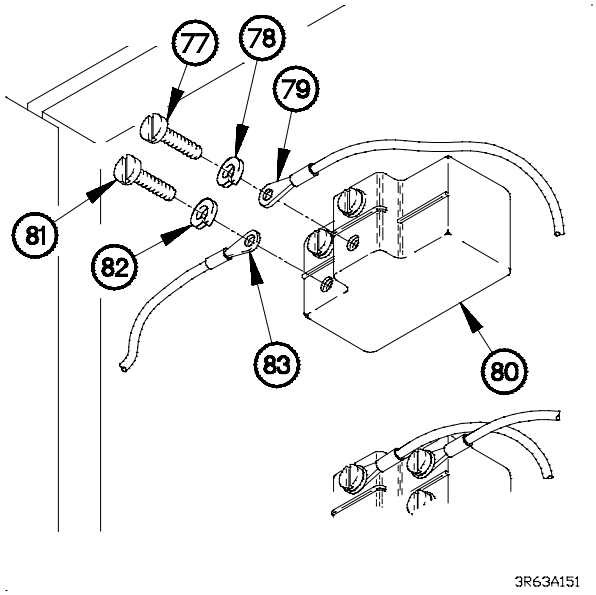


16-63. M1079 RELAY BOX ASSEMBLY REPLACEMENT/REPAIR (CONT)

(51) Remove screw (69), washer (70), and wire 1507A terminal lug (71) from circuit breaker CB10 (72).

(52) Remove screw (73), washer (74), wire 1508 terminal lug (75), and wire 1508A terminal lug (76) from circuit breaker CB10 (72).



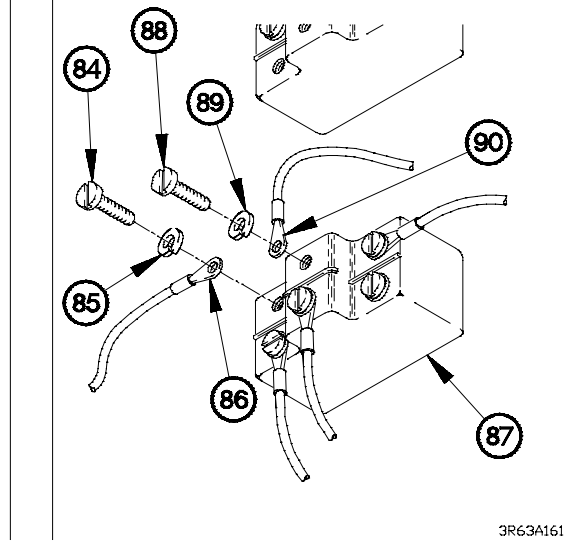


(53) Remove screw (77), lockwasher (78), and wire 701AA terminal lug (79) from switch S34 (80). Discard lockwasher.

(54) Remove screw (81), lockwasher (82), and wire 702AA terminal lug (83) from switch S34 (80). Discard lockwasher.

(55) Remove screw (84), lockwasher (85), and wire 38 terminal lug (86) from switch S33 (87). Discard lockwasher.

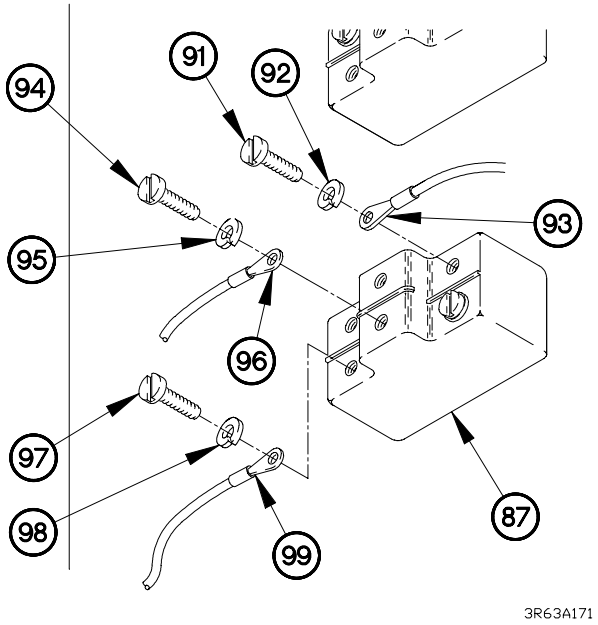
(56) Remove screw (88), lockwasher (89), and wire 1508 terminal lug (90) from switch S33 (87). Discard lockwasher.

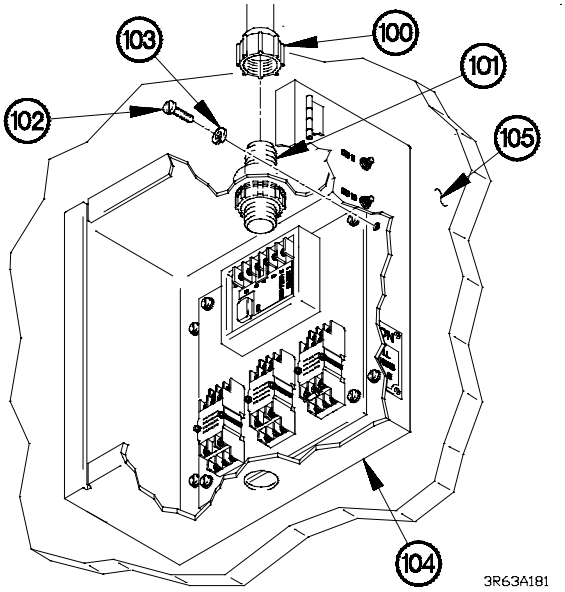


(57) Remove screw (91), lockwasher (92), and wire 1509 terminal lug (93) from switch S33 (87). Discard lockwasher.

(58) Remove screw (94), lockwasher (95), and wire 707A terminal lug (96) from switch S33 (87). Discard lockwasher.

(59) Remove screw (97), lockwasher (98), and wire 1511 terminal lug (99) from switch S33 (87). Discard lockwasher.

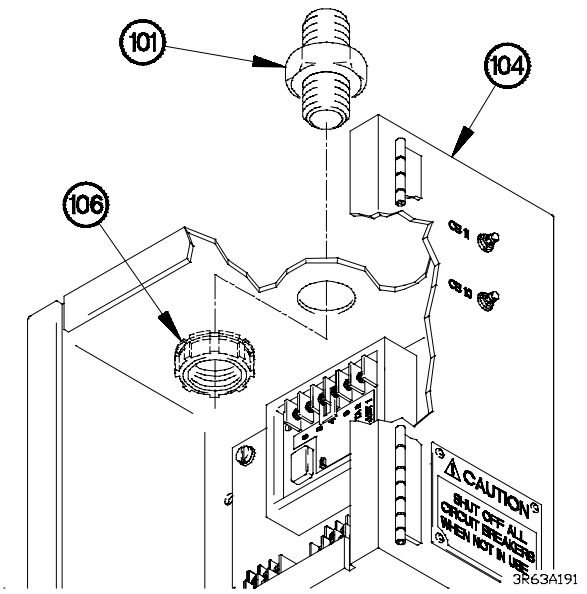




(60) Remove conduit nut (100) from conduit connector (101).

(61) Remove four screws (102), washers (103), and relay box assembly (104) from van body wall (105).

(62) Remove locknut (106) and conduit connector (101) from relay box assembly (104).



16-63. M1079 RELAY BOX ASSEMBLY REPLACEMENT/REPAIR (CONT)

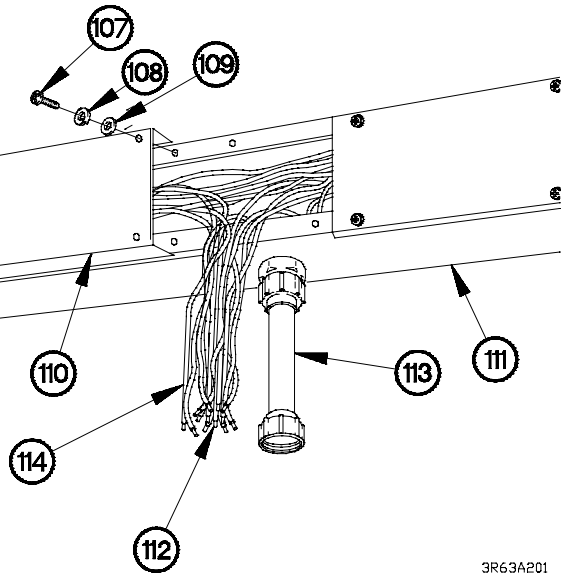
(63) Remove four screws (107), lockwashers (108), washers (109), and cover (110) from raceway (111). Discard lockwashers.

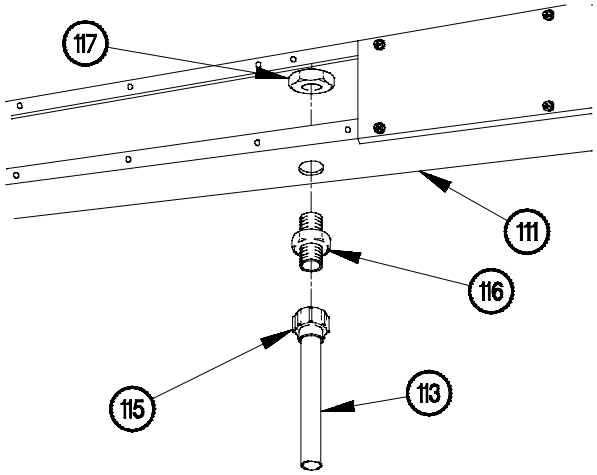
(64) Remove wires (112) from conduit (113).

NOTE

Perform step (65) on van bodies serial number 191 and higher.

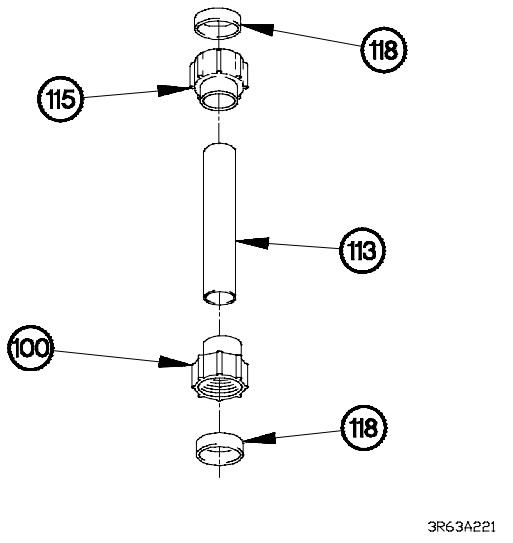
(65) Remove wires (114) from conduit (113).





(66) Remove conduit nut (115) and conduit (113) from conduit connector (116).

(67) Remove locknut (117) and conduit connector (116) from raceway (111).



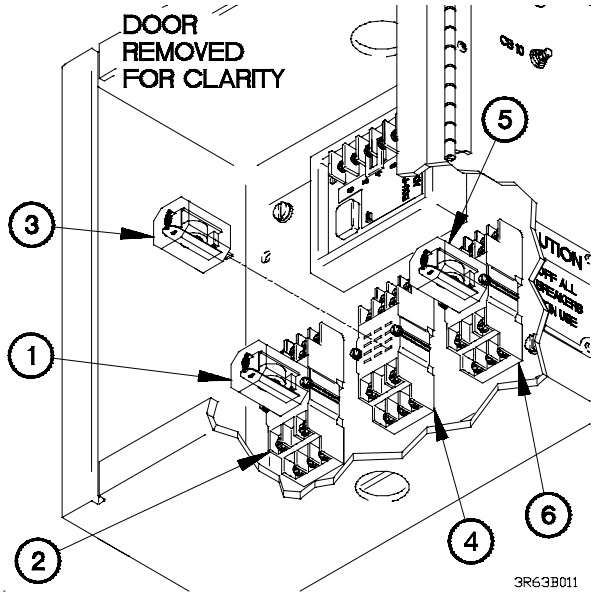
(68) Remove two ferrules (118) and conduit nuts (100 and 115) from conduit (113).

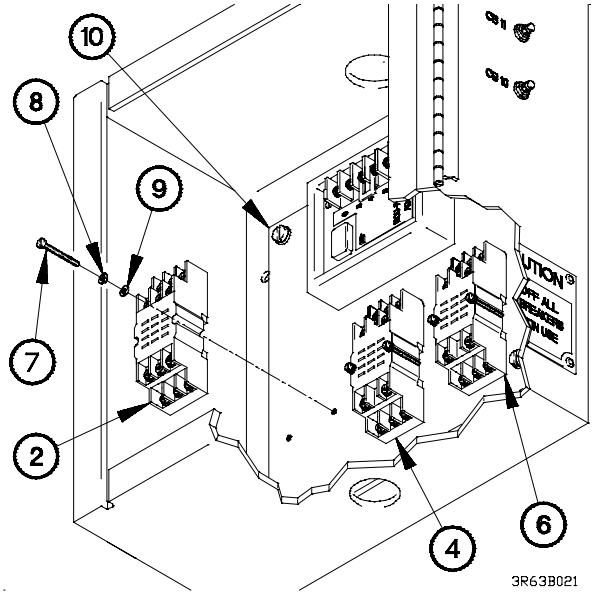
b. Disassembly.

(1) Remove relay K41 (1) from relay base (2).

(2) Remove relay K35 (3) from relay base (4).

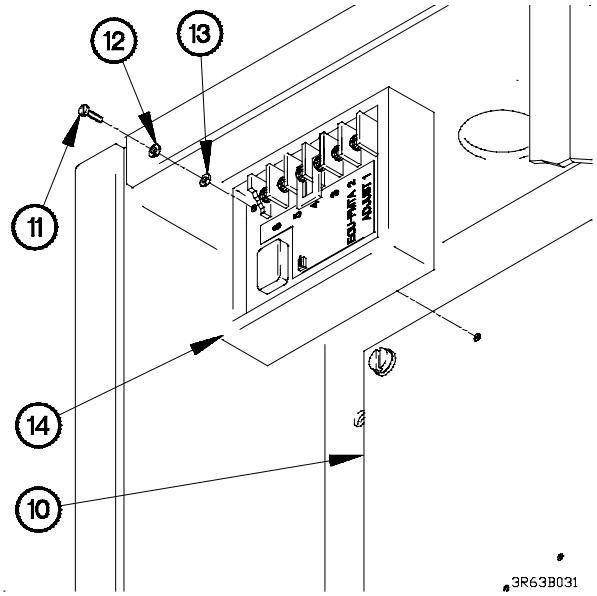
(3) Remove relay K36 (5) from relay base (6).





(4) Remove six screws (7), lockwashers (8), washers (9), and three relay bases (2, 4, and 6) from inner plate (10). Discard lockwashers.

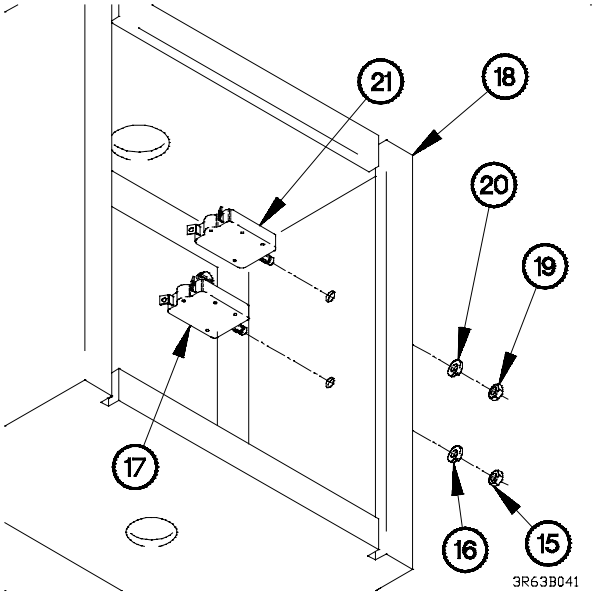
(5) Remove two screws (11), lockwashers (12), washers (13), and flasher A22 (14) from inner plate (10). Discard lockwashers.

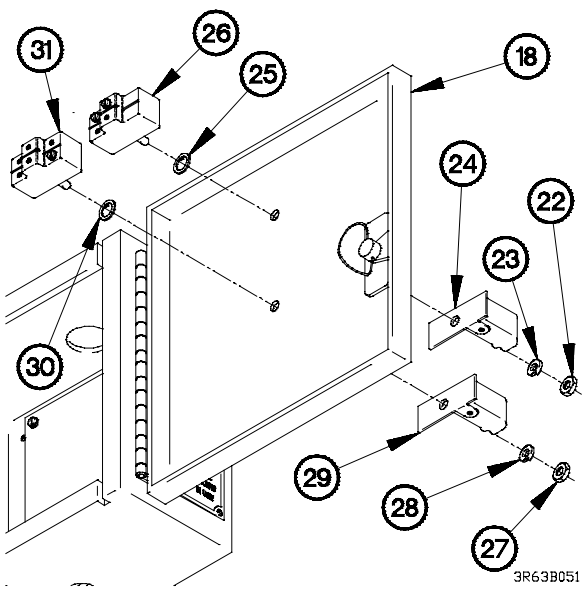


16-63. M1079 RELAY BOX ASSEMBLY REPLACEMENT/REPAIR (CONT)

(6) Remove nut (15), lockwasher (16), and circuit breaker CB11 (17) from relay box (18). Discard lockwasher.

(7) Remove nut (19), lockwasher (20), and circuit breaker CB10 (21) from relay box (18). Discard lockwasher.



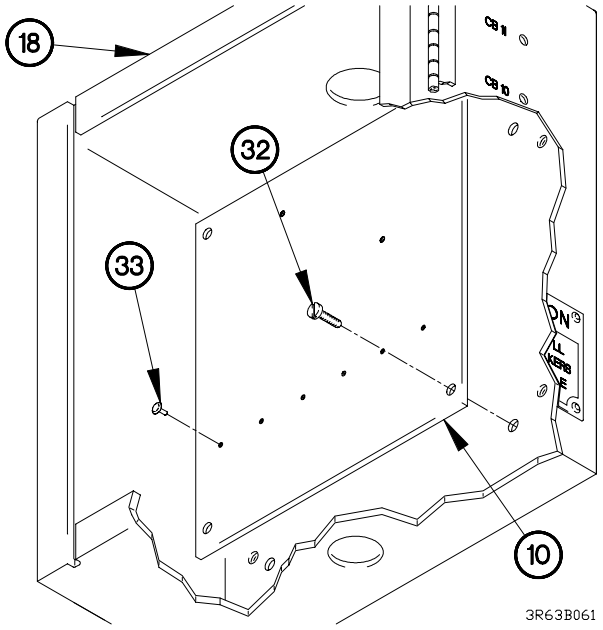


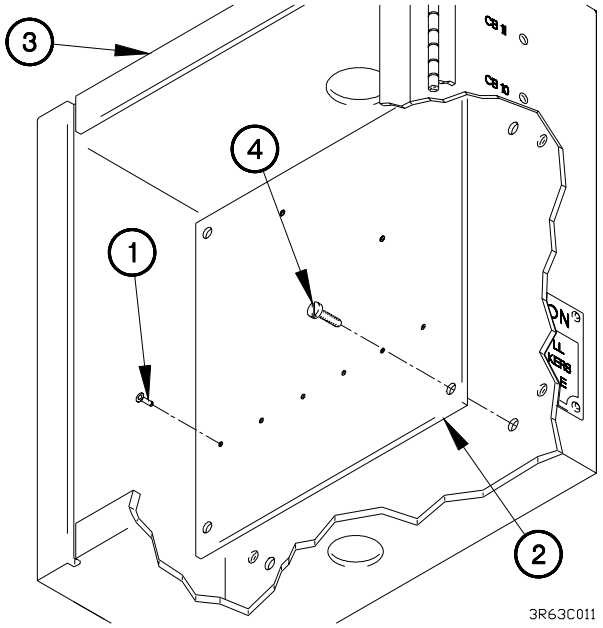
(8) Remove nut (22), lockwasher (23), switch guard (24), key washer (25), and switch S34 (26) from relay box (18). Discard lockwasher.

(9) Remove nut (27), lockwasher (28), switch guard (29), key washer (30), and switch S33 (31) from relay box (18). Discard lockwasher.

(10) Remove four screws (32) and inner plate (10) from relay box (18).

(11) Remove eight blind rivet nuts (33) from inner plate (10).

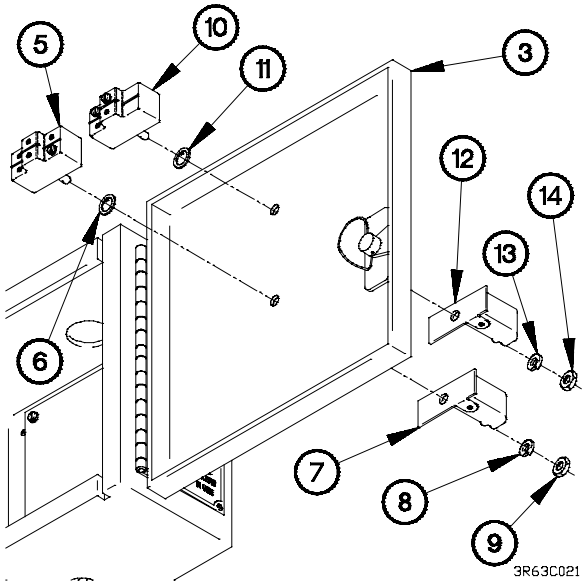




c. Assembly.

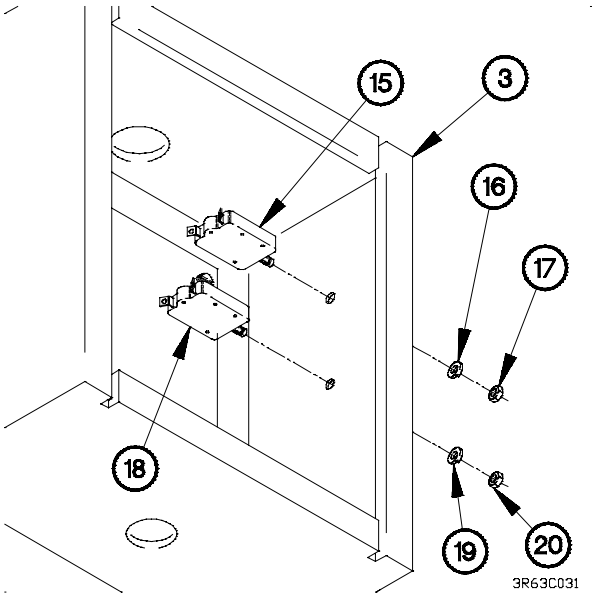
(1) Install eight blind rivet nuts (1) in inner plate (2).

(2) Install inner plate (2) in relay box (3) with four screws (4).



(3) Install switch S33 (5) in relay box (3) with keywasher (6), switch guard (7), lockwasher (8) and nut (9).

(4) Install switch S34 (10) in relay box (3) with keywasher (11), switch guard (12), lockwasher (13) and nut (14).

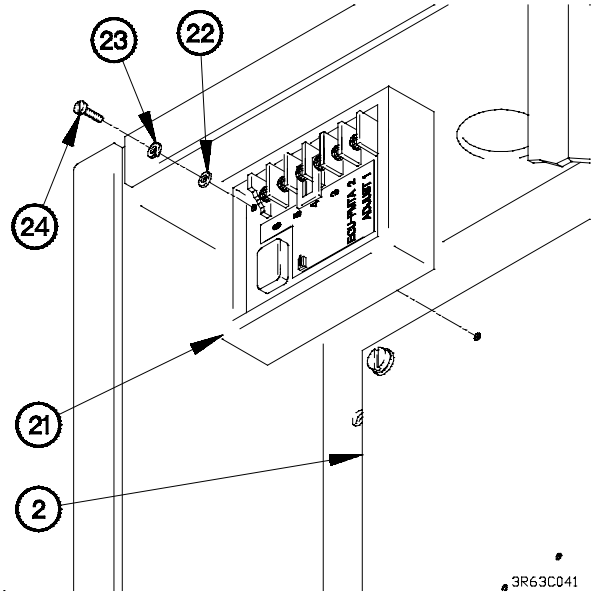


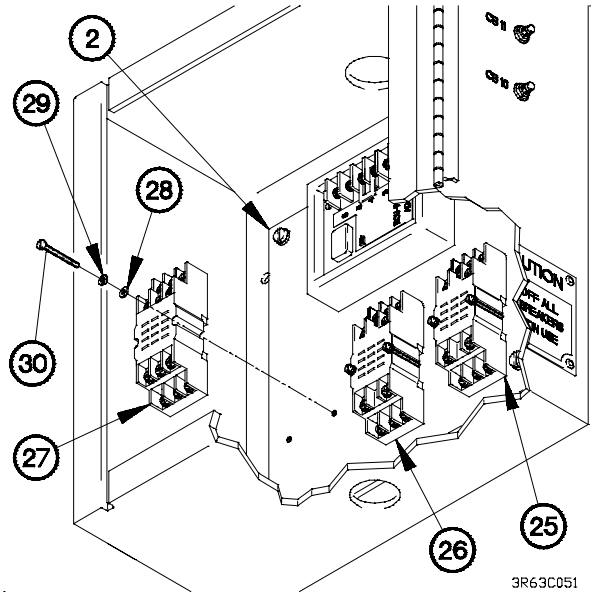
(5) Install circuit breaker CB10 (15) in relay box (3) with lockwasher (16) and nut (17).

(6) Install circuit breaker CB11 (18) in relay box (3) with lockwasher (19) and nut (20).

16-63. M1079 RELAY BOX ASSEMBLY REPLACEMENT/REPAIR (CONT)

(7) Install flasher A22 (21) on inner plate (2) with two washers (22), lockwashers (23), and screws (24).



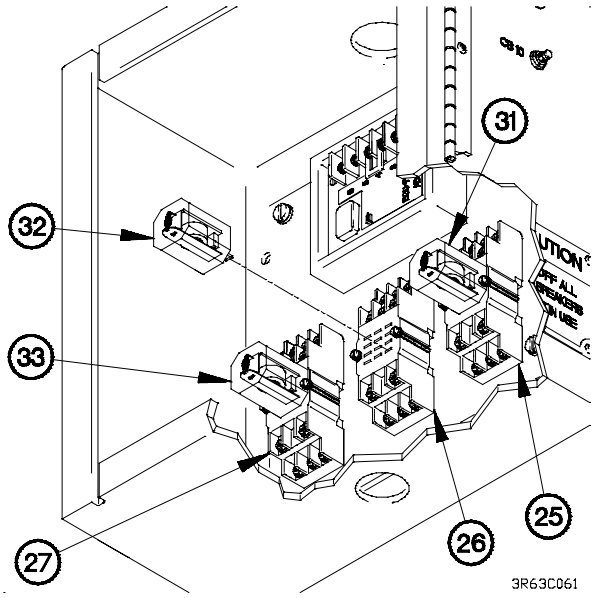


(8) Install relay bases (25, 26, and 27) on inner plate (2) with six washers (28), lockwashers (29), and screws (30).

(9) Install relay K36 (31) on relay base (25).

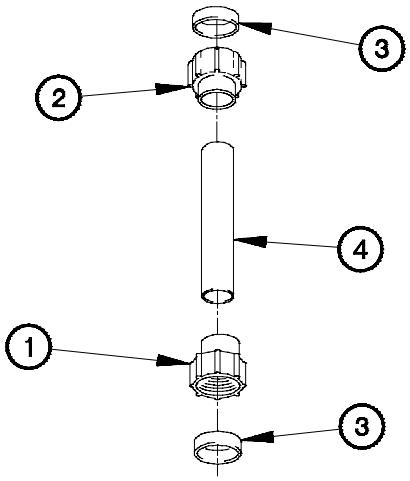
(10) Install relay K35 (32) on relay base (26).

(11) Install relay K41 (33) on relay base (27).

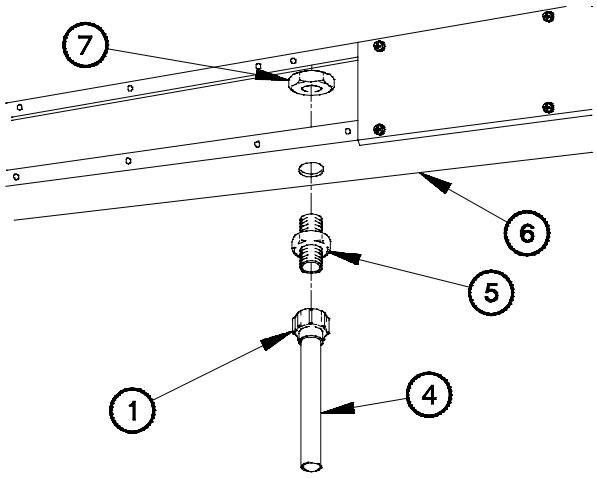


d. Installation.

(1) Install conduit nuts (1 and 2) and two ferrules (3) on conduit (4).



3R63I011



3R63I021

(2) Install conduit connector (5) in raceway (6) with locknut (7).

(3) Install conduit (4) on conduit connector (5) with conduit nut (1).

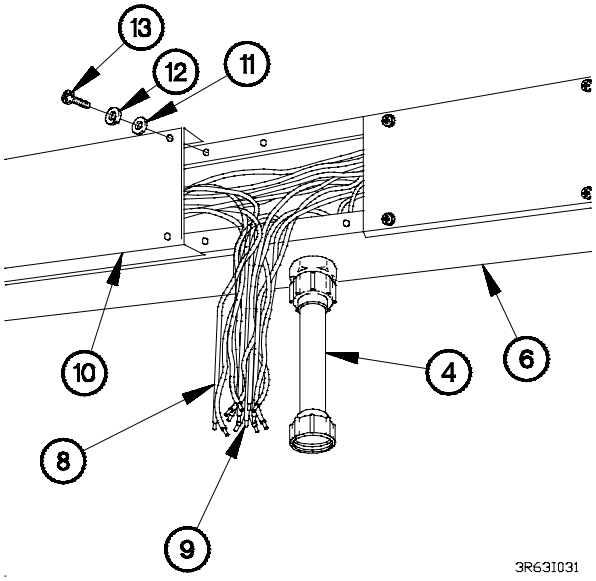
NOTE

Perform step (4) on van bodies serial number 191 and higher.

(4) Route wires (8) through conduit (4).

(5) Route wires (9) through conduit (4).

(6) Install cover (10) on raceway (6) with four washers (11), lockwashers (12), and screws (13).



3R63I031

16-63. M1079 RELAY BOX ASSEMBLY REPLACEMENT/REPAIR (CONT)

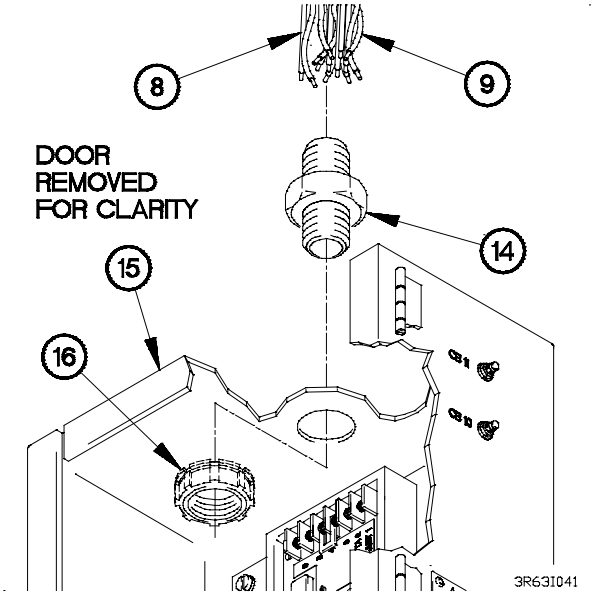
(7) Install conduit connector (14) in relay box assembly (15) with locknut (16).

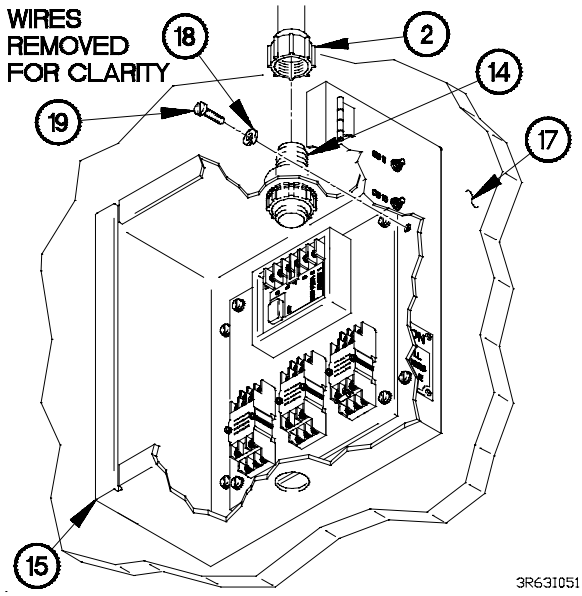
NOTE

Perform step (8) on van bodies serial number 191 and higher.

(8) Route two wires (8) through conduit connector (14).

(9) Route 20 wires (9) through conduit connector (14).





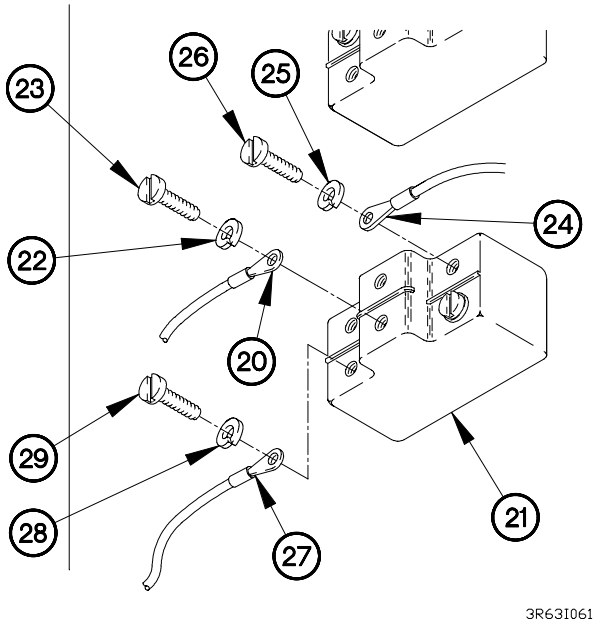
(10) Install relay box assembly (15) on van body wall (17) with four washers (18) and screws (19).

(11) Install conduit nut (2) on conduit connector (14).

(12) Install wire 1511 terminal lug (20) on switch S33 (21) with lockwasher (22) and screw (23).

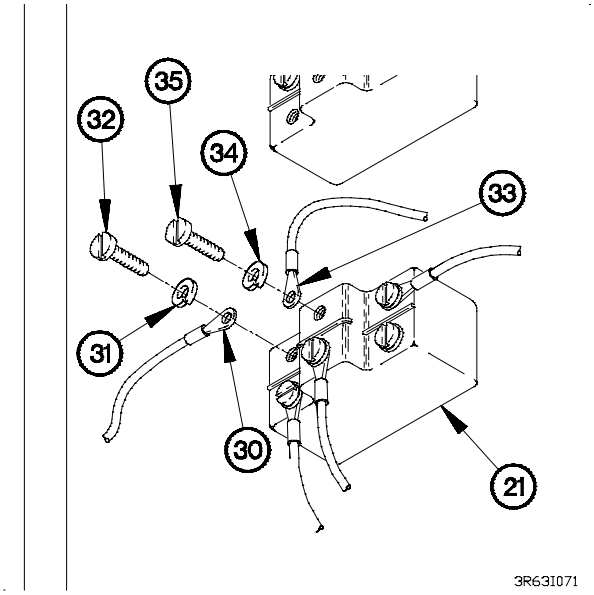
(13) Install wire 707A terminal lug (24) on switch S33 (21) with lockwasher (25) and screw (26).

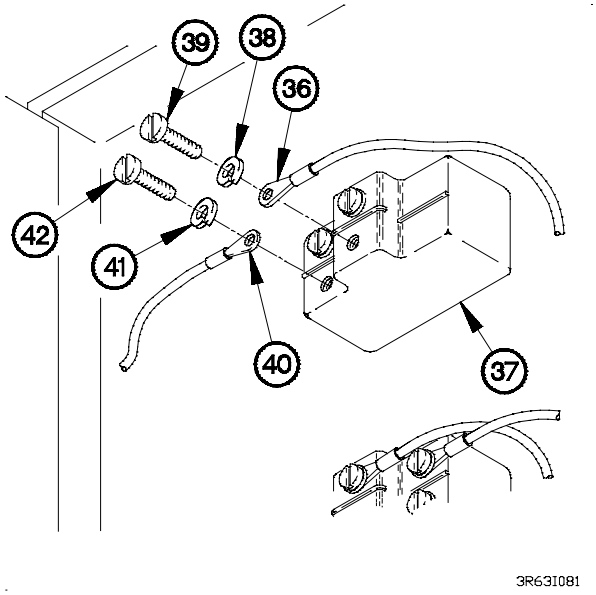
(14) Install wire 1509 terminal lug (27) on switch S33 (21) with lockwasher (28) and screw (29).



(15) Install wire 1508 terminal lug (30) on switch S33 (21) with lockwasher (31) and screw (32).

(16) Install wire 38 terminal lug (33) on switch S33 (21) with lockwasher (34) and screw (35).



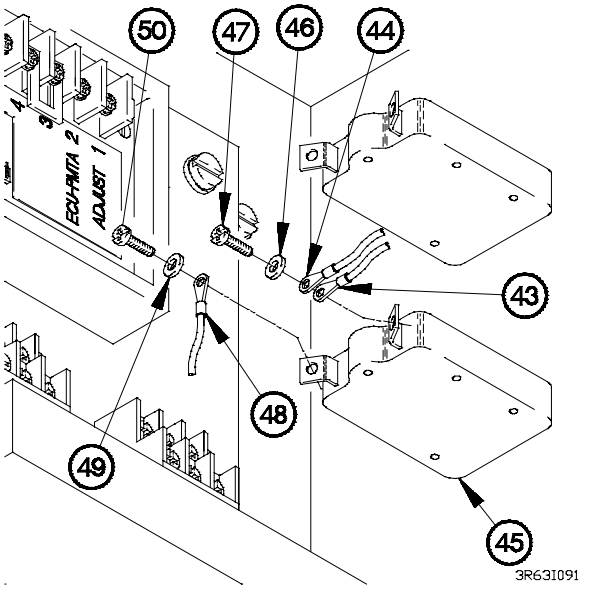


(17) Install wire 702AA terminal lug (36) on switch S34 (37) with lockwasher (38) and screw (39).

(18) Install wire 701AA terminal lug (40) on switch S34 (37) with lockwasher (41) and screw (42).

(19) Install wire 1508A terminal lug (43) and wire 1508 terminal lug (44) on circuit breaker CB10 (45) with washer (46) and screw (47).

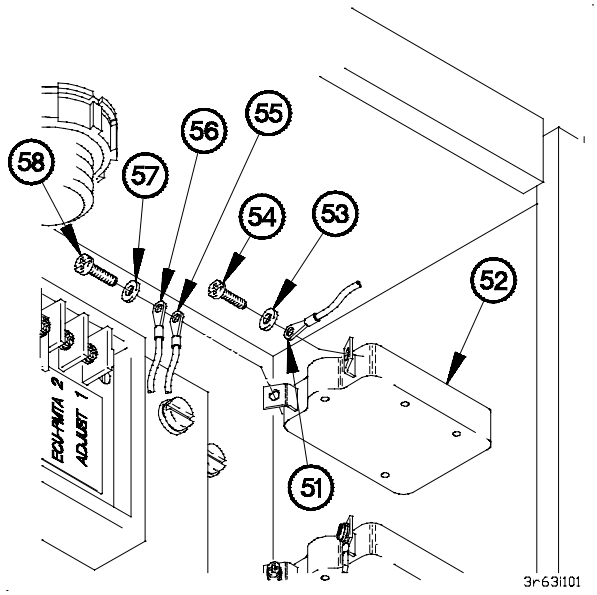
(20) Install wire 1507A terminal lug (48) on circuit breaker CB10 (45) with washer (49) and screw (50).

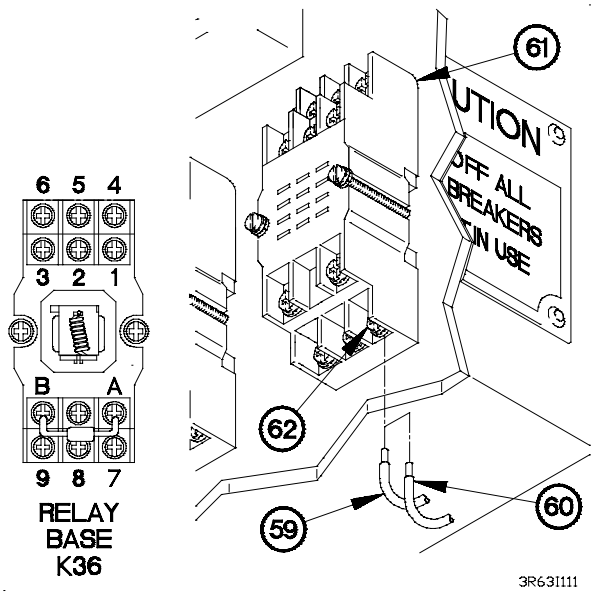


16-63. M1079 RELAY BOX ASSEMBLY REPLACEMENT/REPAIR (CONT)

(21) Install wire 49 terminal lug (51) on circuit breaker CB11 (52) with washer (53) and screw (54).

(22) Install wire 1507A terminal lug (55) and wire 1507 terminal lug (56) on circuit breaker CB11 (52) with washer (57) and screw (58).





(23) Install wires 1510 and 707A (59 and 60) in relay base K36 (61).

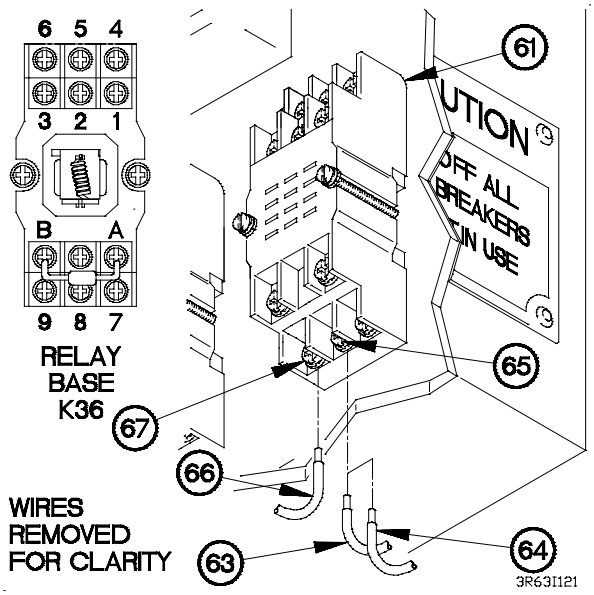
(24) Tighten screw 7 (62) in relay base K36 (61).

(25) Install wires 1505C and 1505A (63 and 64) in relay base K36 (61).

(26) Tighten screw 8 (65) in relay base K36 (61).

(27) Install wire 38A (66) in relay base K36 (61).

(28) Tighten screw 9 (67) in relay base K36 (61).



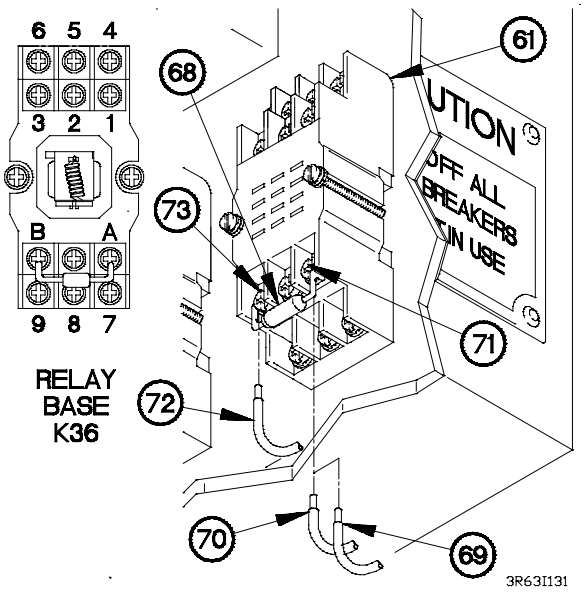
(29) Install diode (68) on relay base K36 (61).

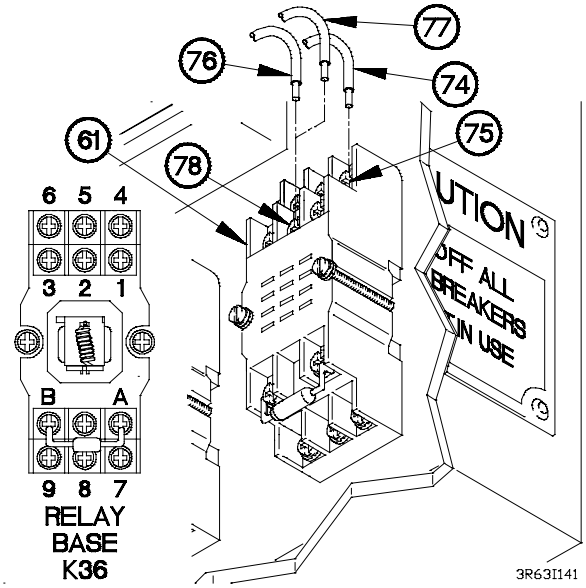
(30) Install wires 709 and 38 (69 and 70) in relay base K36 (61).

(31) Tighten screw A (71) in relay base K36 (61).

(32) Install wire 3086B (72) in relay base K36 (61).

(33) Tighten screw B (73) in relay base K36 (61).





(34) Install wire 1511A (74) in relay base K36 (61).

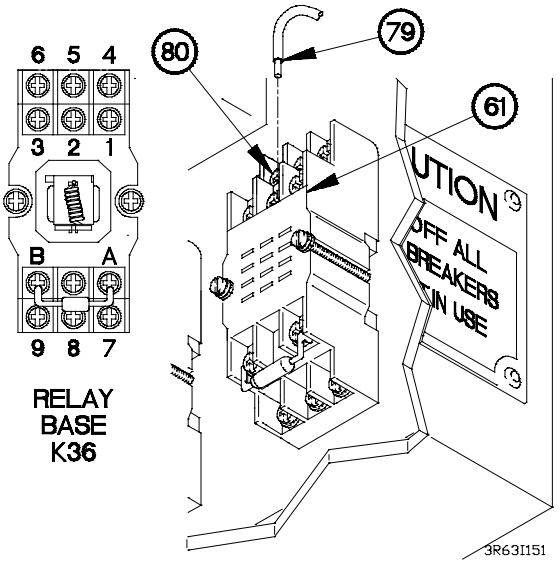
(35) Tighten screw 4 (75) in relay base K36 (61).

(36) Install wires 1505B and 1505 (76 and 77) in relay base K36 (61).

(37) Tighten screw 2 (78) in relay base K36 (61).

(38) Install wire 38B (79) in relay base K36 (61).

(39) Tighten screw 6 (80) in relay base K36 (61).



16-63. M1079 RELAY BOX ASSEMBLY REPLACEMENT/REPAIR (CONT)

(40) Install wires 701AA and 701A (81 and 82) in relay base K35 (83).

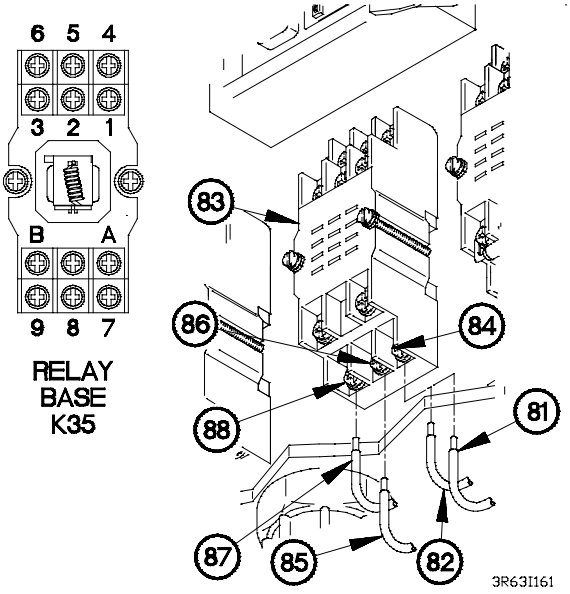
(41) Tighten screw 7 (84) in relay base K35 (83).

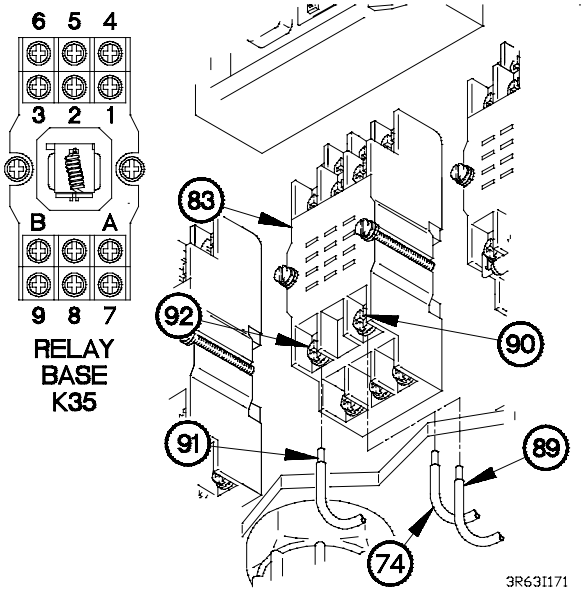
(42) Install wire 701B (85) in relay base K35 (83).

(43) Tighten screw 8 (86) in relay base K35 (83).

(44) Install wire 701C (87) in relay base K35 (83).

(45) Tighten screw 9 (88) in relay base K35 (83).





(46) Install wires 1511B and 1511A (89 and 74) in relay base K35 (83).

(47) Tighten screw A (90) in relay base K35 (83).

(48) Install wire 1499Q (91) in relay base K35 (83).

(49) Tighten screw B (92) in relay base K35 (83).

(50) Install wires 702AA and 702A (93 and 94) in relay base K35 (83).

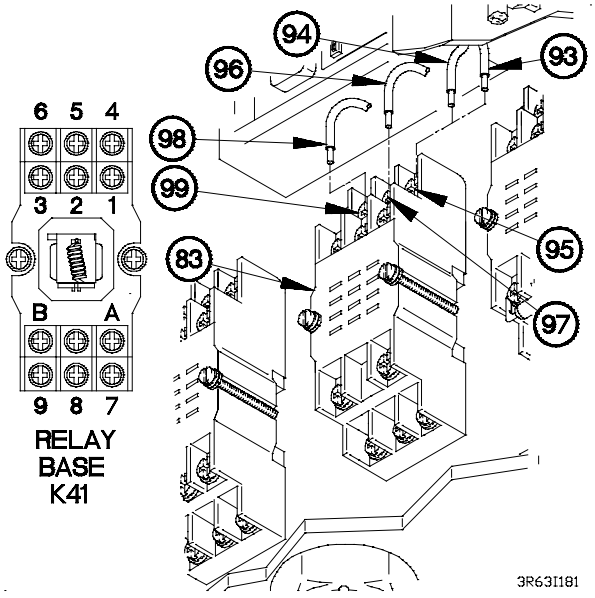
(51) Tighten screw 4 (95) in relay base K35 (83).

(52) Install wire 702B (96) in relay base K35 (83).

(53) Tighten screw 5 (97) in relay base K35 (83).

(54) Install wire 702C (98) in relay base K35 (83).

(55) Tighten screw 6 (99) in relay base K35 (83).

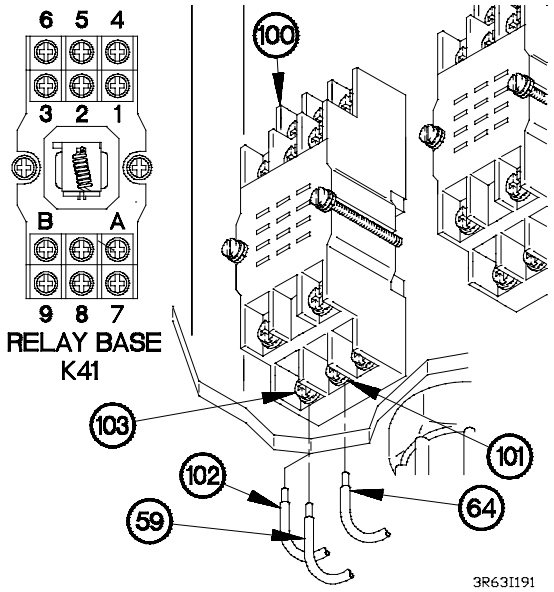


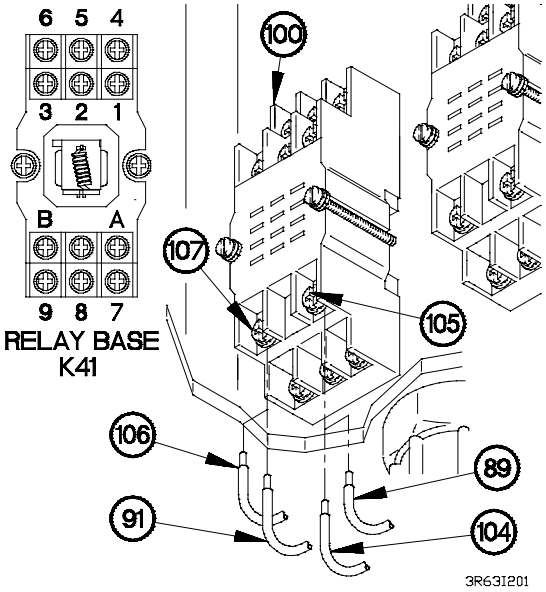
(56) Install wire 1505A (64) in relay base K41 (100).

(57) Tighten screw 8 (101) in relay base K41 (100).

(58) Install wires 1510 and 708BB (59 and 102) in relay base K41 (100).

(59) Tighten screw 9 (103) in relay base K41 (100).





(60) Install wires 1511B and 1511 (89 and 104) in relay base K41 (100).

(61) Tighten screw A (105) in relay base K41 (100).

(62) Install wires 1499Q and 1499L (91 and 106) in relay base K41 (100).

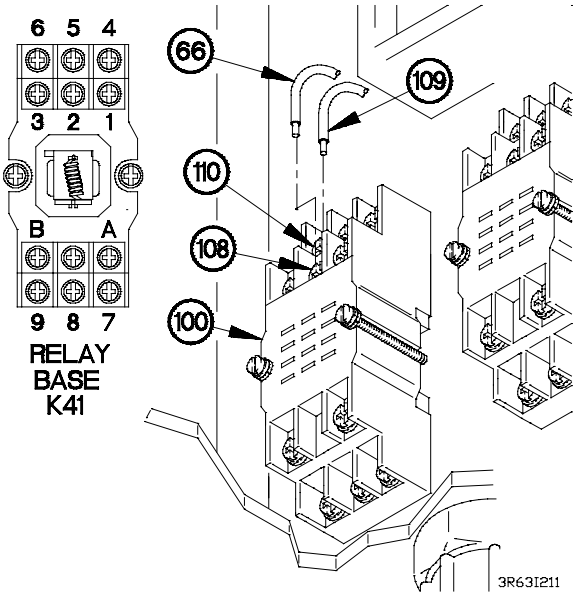
(63) Tighten screw B (107) in relay base K41 (100).

(64) Install wire 38A (66) in relay base K41 (100).

(65) Tighten screw 2 (108) in relay base K41 (100).

(66) Install wire 706C (109) in relay base K41 (100).

(67) Tighten screw 6 (110) in relay base K41 (100).

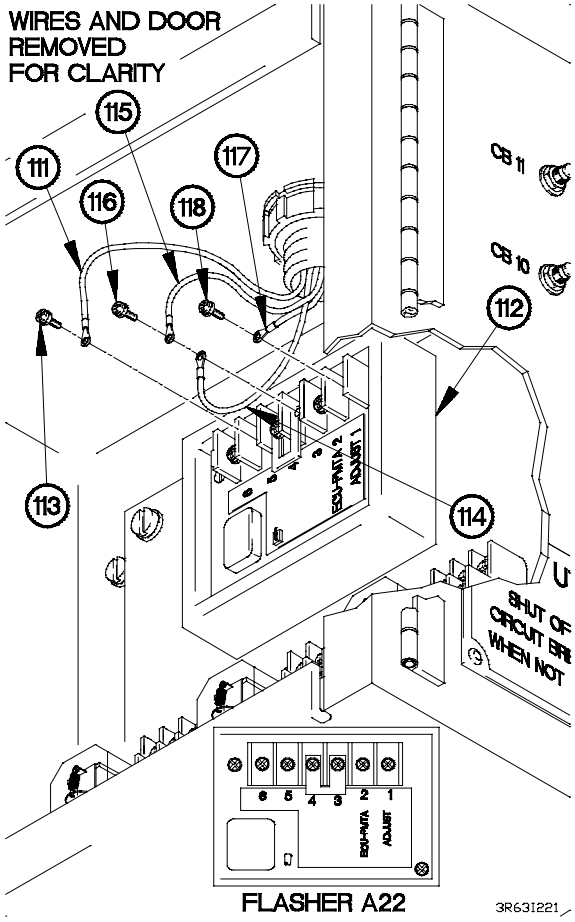


16-63. M1079 RELAY BOX ASSEMBLY REPLACEMENT/REPAIR (CONT)

(68) Install wire 2010 terminal lug (111) on flasher A22 (112) with screw 5 (113).

(69) Install wire 3086B terminal lug (114) and wire 3086 terminal lug (115) on flasher A22 (112) with screw 3 (116).

(70) Install wire 1506 terminal lug (117) on flasher A22 (112) with screw 1 (118).



e. Follow-On Maintenance.

(1) Install right side fluorescent lights and conduits (para 16-59).

(2) Install interior lights switch/box, and conduit (para 16-50).

(3) Connect batteries (para 7-48).

(4) Connect AC power (TM 9-2320-365-10).

(5) Operate van body lighting systems and check for proper operation (TM 9-2320-365-10).

End of Task.

16-64. M1079 15/20/30 AND 50 AMP AC CIRCUIT BREAKER REPLACEMENT

This task covers:

a. Removal
b. Installation
c. Follow-On Maintenance

INITIAL SETUP

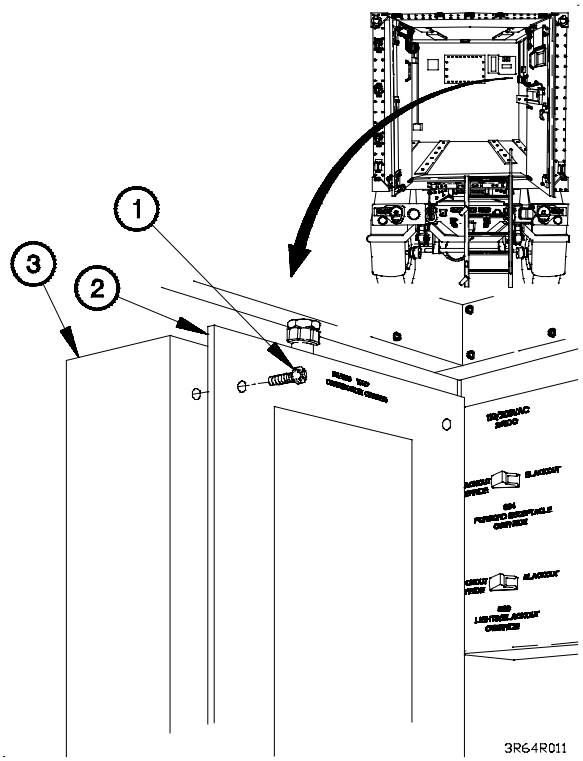
Equipment Conditions
AC power disconnected (TM 9-2320-365-10).
Batteries disconnected (para 7-48).
LH and RH doors opened (115 degrees) (TM 9-2320-365-10).

Materials/Parts
Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D)

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)

a. Removal.

(1) Remove six screws (1) and 110/208 VAC POWER DISTRIBUTION PANEL cover (2) from 110/208 vac power distribution box (3).



16-64. M1079 15/20/30 AND 50 AMP AC CIRCUIT BREAKER REPLACEMENT (CONT)

NOTE

- Tag wires and connection points prior to removal.
- All eight circuit breakers are removed the same way. Circuit breaker CB8 shown.
- Refer to **Table 16-8. M1079 Circuit Breakers and Wire Numbers** for details.
- Remove plastic cable ties as required.

(2) Loosen screw (4) on circuit breaker CB8 (5).

(3) Remove wires 400 (6) and 415 (7) from circuit breaker CB8 (5).

(4) Remove circuit breaker CB8 (5) from 110/208 VAC POWER DISTRIBUTION PANEL (8).

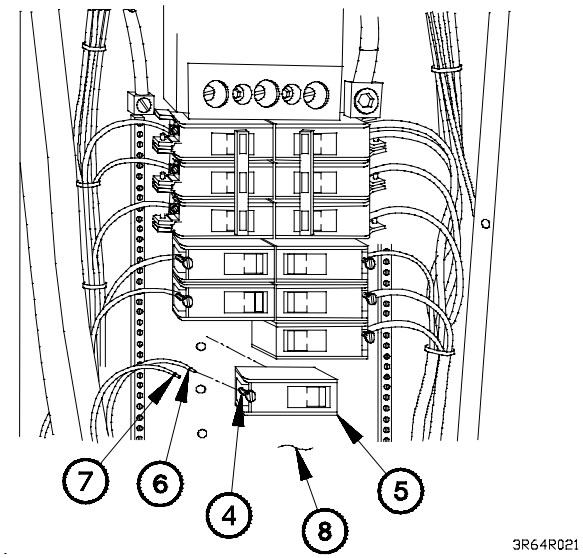


Table 16-8. M1079 Circuit Breakers and Wire Numbers

Circuit Breaker	Amperage	Wire Number
CB2	30AMP	1500/1501/1502
CB3	50AMP	500AA/501BB/502CC
CB4	15AMP	NOT USED
CB5	20AMP	701A
CB6	15AMP	708BB
CB7	20AMP	701B
CB8	15AMP	400/415
CB9	20AMP	701C

b. Installation.

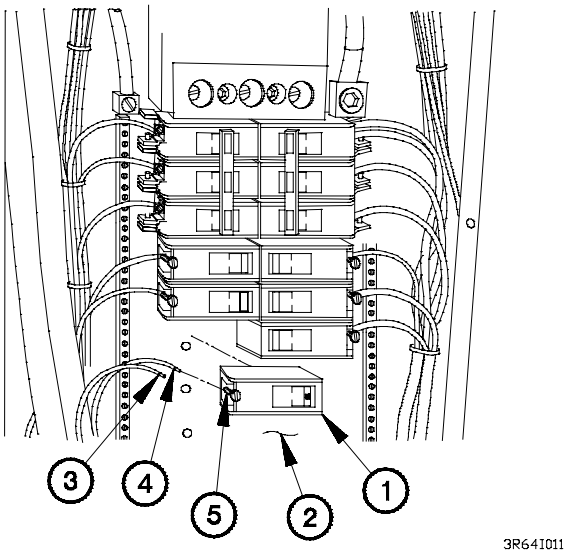
NOTE

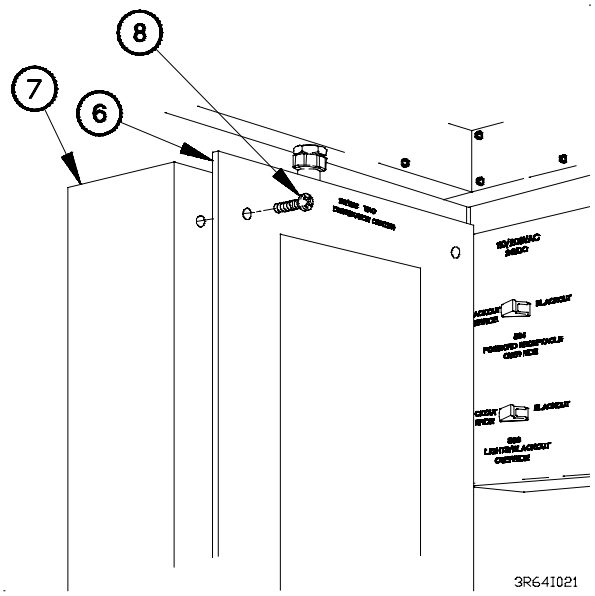
- All eight circuit breakers are installed the same way. Circuit breaker CB8 shown.
- Refer to **Table 16-8. M1079 Circuit Breakers and Wire Numbers** for details.
- Install plastic cable ties as required.

(1) Install circuit breaker CB8 (1) on 110/208 VAC POWER DISTRIBUTION PANEL (2).

(2) Install wires 415 (3) and 400 (4) in circuit breaker CB8 (1).

(3) Tighten screw (5) on circuit breaker CB8 (1).





(4) Install cover (6) on 110/208 VAC POWER DISTRIBUTION PANEL (7) with six screws (8).

c. Follow-On Maintenance.

(1) Connect batteries (para 7-48).

(2) Connect AC power (TM 9-2320-365-10).

(3) Check for proper operation of affected circuit breaker (TM 9-2320-365-10).

(4) Close LH and RH doors (TM 9-2320-365-10).

End of Task.

16-65. M1079 200 AMP AC CIRCUIT BREAKER REPLACEMENT

This task covers:

a. Removal
b. Installation
c. Follow-On Maintenance

INITIAL SETUP

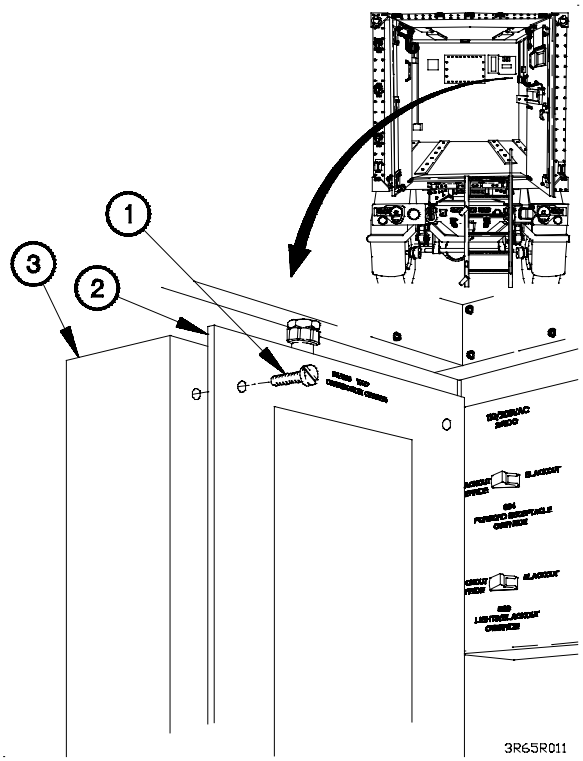
Equipment Conditions
AC power disconnected (TM 9-2320-365-10).
Batteries disconnected (para 7-48).
LH and RH doors opened (115 degrees) (TM 9-2320-365-10).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Screwdriver Attachment, Socket Wrench (Item 47, Appendix B)

Materials/Parts
Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D)

a. Removal.

(1) Remove six screws (1) and cover (2) from 110/208 VAC POWER DISTRIBUTION PANEL (3).



(2) Loosen three screws (4) in 200 amp circuit breaker (5).

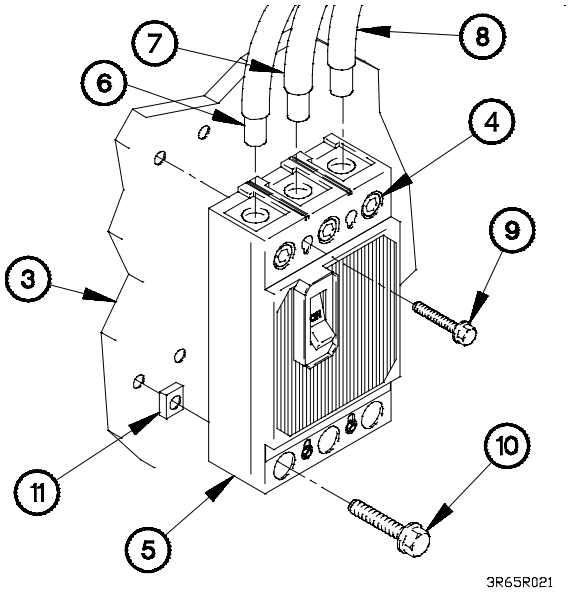
NOTE

Tag wires and connection points prior to disconnecting.

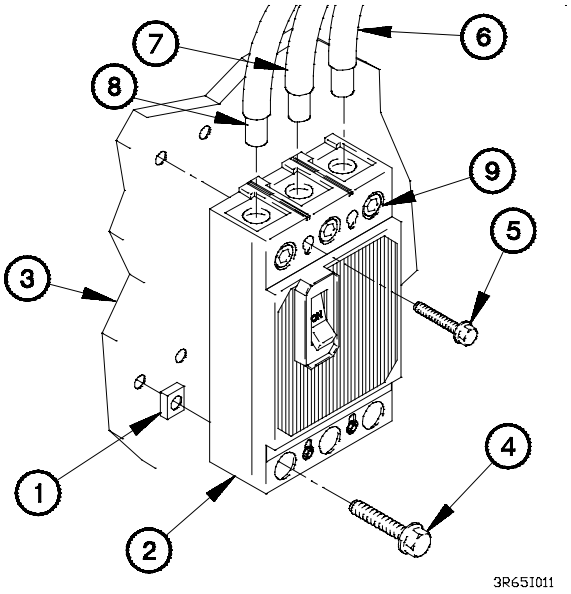
(3) Remove wires 500 (6), 501 (7), and 502 (8) from 200 amp circuit breaker (5).

(4) Remove two screws (9) from 200 amp circuit breaker (5).

(5) Remove three screws (10), 200 amp circuit breaker (5), and three spacers (11) from 110/208 VAC POWER DISTRIBUTION PANEL (3).



b. Installation.



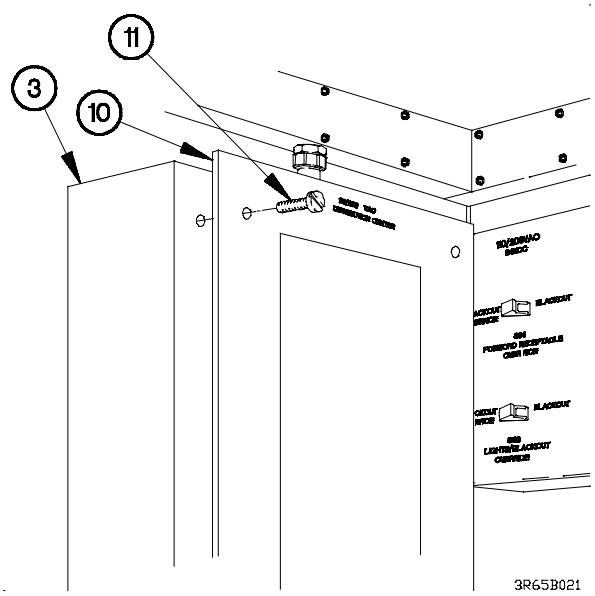
(1) Install three spacers (1) and 200 amp circuit breaker (2) in 110/208 VAC POWER DISTRIBUTION PANEL (3) with three screws (4).

(2) Install two screws (5) in 200 amp circuit breaker (2).

(3) Install wires 502 (6), 501 (7), and 500 (8) in 200 amp circuit breaker (2).

(4) Tighten three screws (9) in 200 amp circuit breaker (2).

16-65. M1079 200 AMP AC CIRCUIT BREAKER REPLACEMENT (CONT)



(5) Install cover (10) on 110/208 VAC POWER DISTRIBUTION PANEL (3) with six screws (11).

c. Follow-On Maintenance.

(1) Connect batteries (para 7-48).

(2) Connect AC power (TM 9-2320-365-10).

(3) Check for proper operation of AC power system (TM 9-2320-365-10).

(4) Close LH and RH doors (TM 9-2320-365-10).

End of Task.

16-66. M1079 110/208 VAC POWER DISTRIBUTION PANEL REPLACEMENT

This task covers:

a. Removal
b. Installation
c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
15/20/30 and 50 amp AC circuit breakers removed (para 16-64).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)

Materials/Parts
Ties, Cable, Plastic (Item 76, Appendix D)
Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D)

Materials/Parts (Cont)
Lockwasher (28) (van body serial numbers 001 through 190) (Item 77, Appendix G)
Lockwasher (16) (van bodies serial number 191 and higher) (Item 77, Appendix G)
Lockwasher (12) (Item 76, Appendix G)
Lockwasher (4) (Item 83, Appendix G)

Personnel Required
(2)

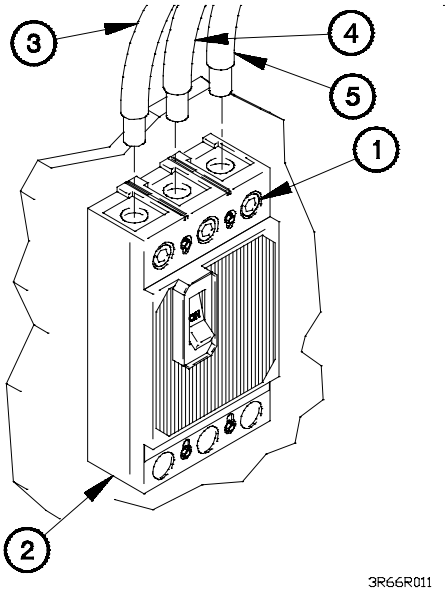
a. Removal

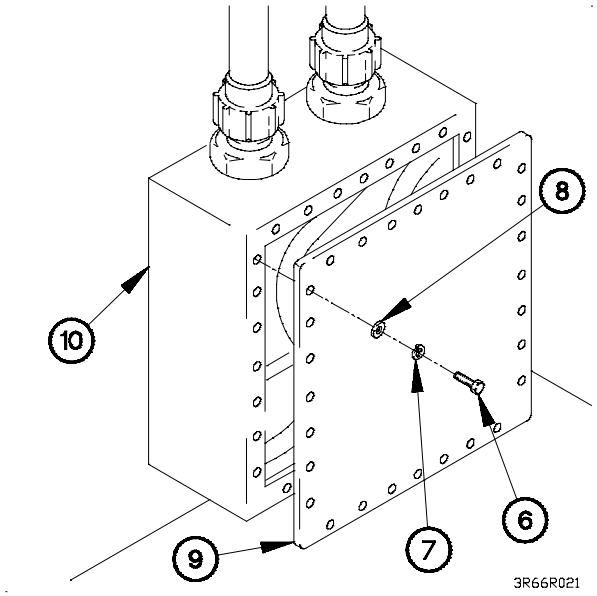
NOTE

- Tag wires and connection points prior to disconnecting.
- Remove plastic cable ties as required.

(1) Loosen three screws (1) in 200 amp AC circuit breaker (2).

(2) Remove wires 500 (3), 501 (4), and 502 (5) from 200 amp AC circuit breaker (2).





NOTE

Perform step (3) on van body serial numbers 001 through 190.

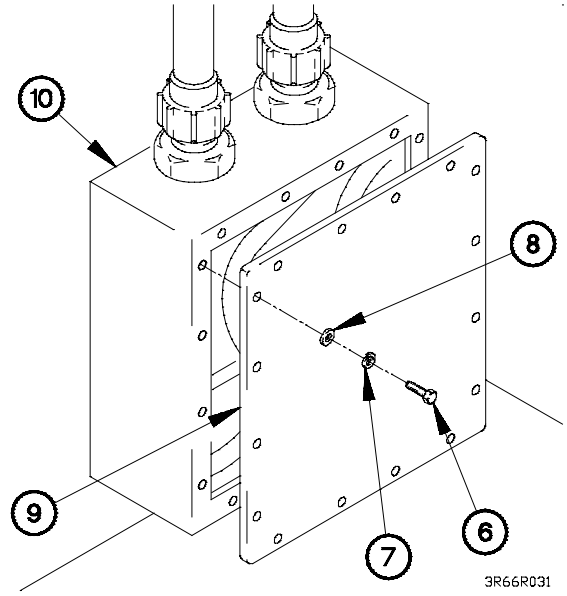
(3) Remove 28 screws (6), lockwashers (7), washers (8), and cover (9) from 110/208 vac power entry panel (10). Discard lockwashers.

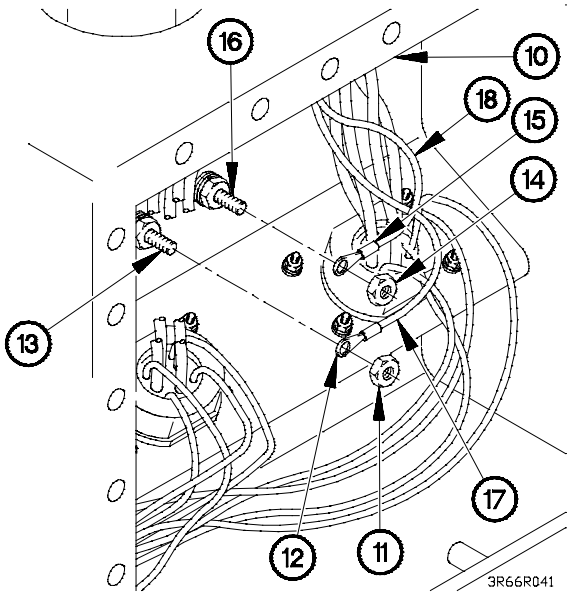
16-66. M1079 110/208 VAC POWER DISTRIBUTION PANEL REPLACEMENT (CONT)

NOTE

Perform step (4) on van bodies serial number 191 and higher.

(4) Remove 16 screws (6), lockwashers (7), washers (8), and cover (9) from 110/208 vac power entry panel (10). Discard lockwashers.





(5) Remove nut (11) and wire 425 terminal lug (12) from negative field telephone binding post (13).

(6) Remove nut (14) and wire 424 terminal lug (15) from positive field telephone binding post (16).

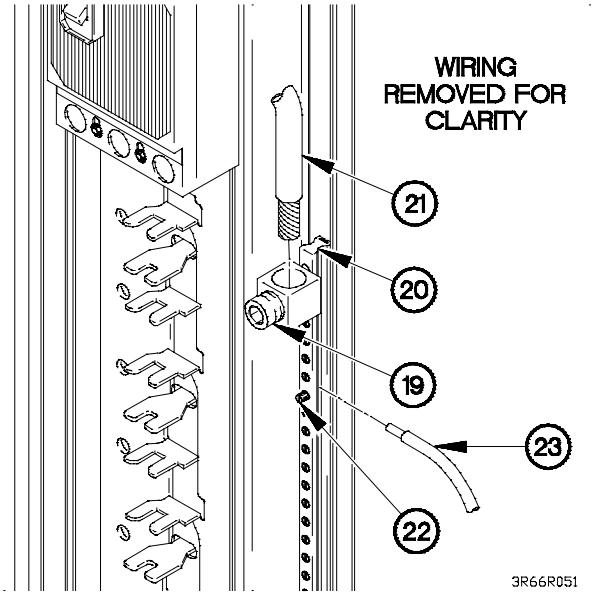
(7) Remove wires 425 (17) and 424 (18) from 110/208 vac power entry panel (10).

(8) Loosen screw (19) on terminal board TB4 (20).

(9) Remove wire 1499P (21) from terminal board TB4 (20).

(10) Loosen screw (22) on terminal board TB4 (20).

(11) Remove wire 1499N (23) from terminal board TB4 (20).

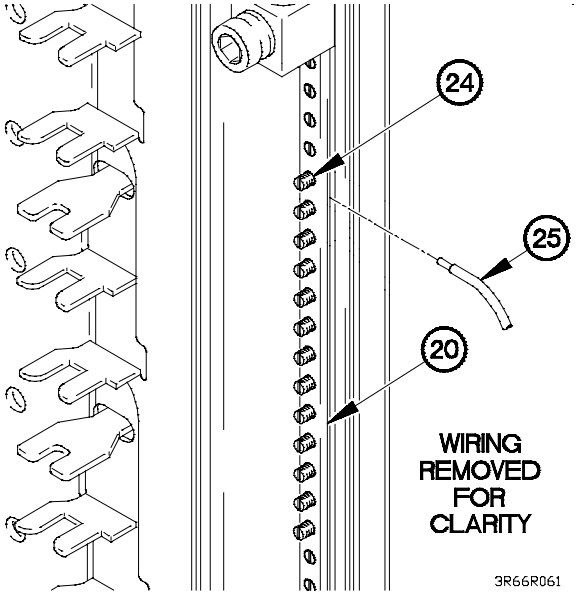


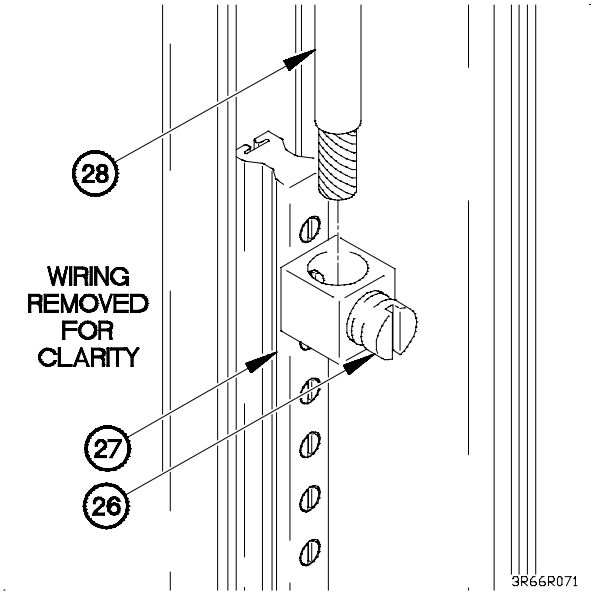
NOTE

Tag wires and connection points prior to removal.

(12) Loosen 12 screws (24) on terminal board TB4 (20).

(13) Remove 12 wires 1499A-M (25) from terminal board TB4 (20).





(14) Loosen screw (26) on terminal board TB3 (27).

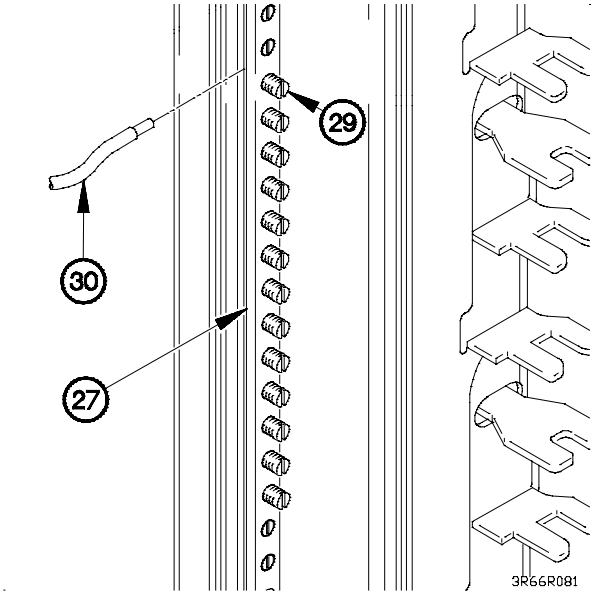
(15) Remove wire 3085Y (28) from terminal board TB3 (27).

NOTE

Tag wires and connection points prior to removal.

(16) Loosen 13 screws (29) on terminal board TB3 (27).

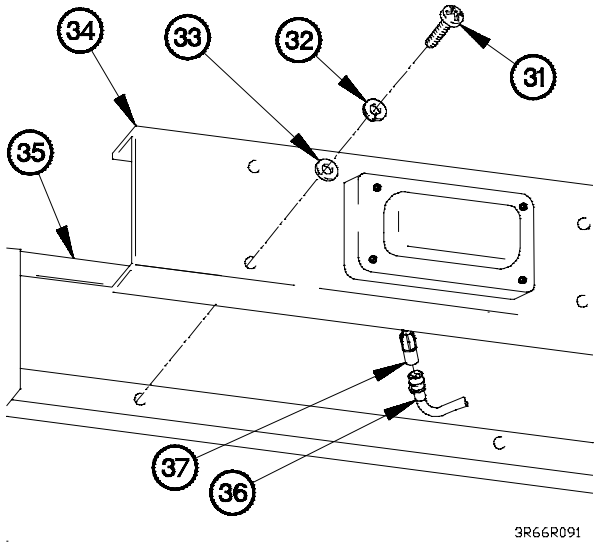
(17) Remove 13 wires 3085A-W (30) from terminal board TB3 (27).

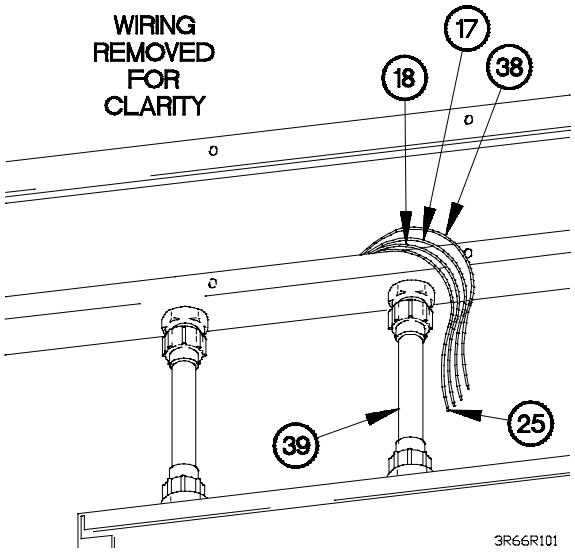


16-66. M1079 110/208 VAC POWER DISTRIBUTION PANEL REPLACEMENT (CONT)

(18) Remove 12 screws (31), lockwashers (32), washers (33), and raceway cover (34) from raceway (35). Discard lockwashers.

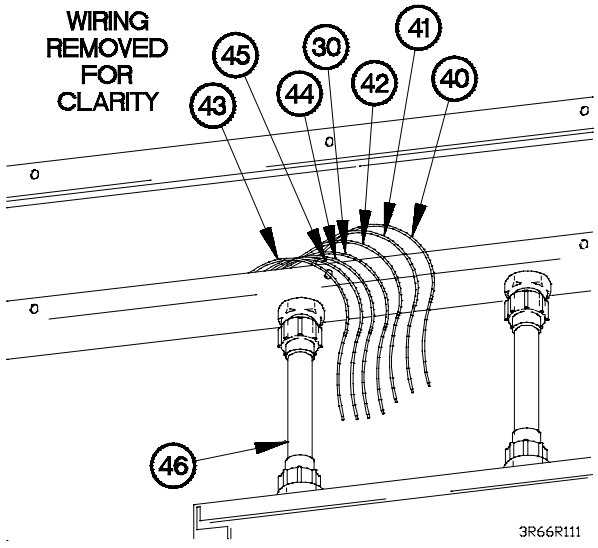
(19) Disconnect emergency light connector J163 (36) from connector P163 (37).





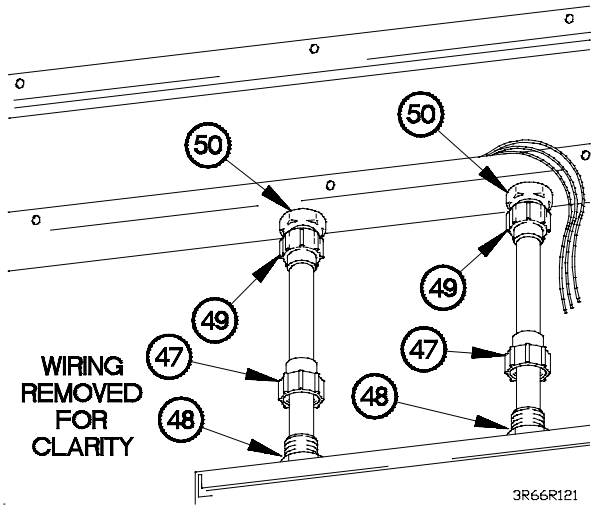
(20) Remove 12 wires 1499 (25), wire 425 (17), wire 424 (18), and three wires 701 (38) from conduit (39).

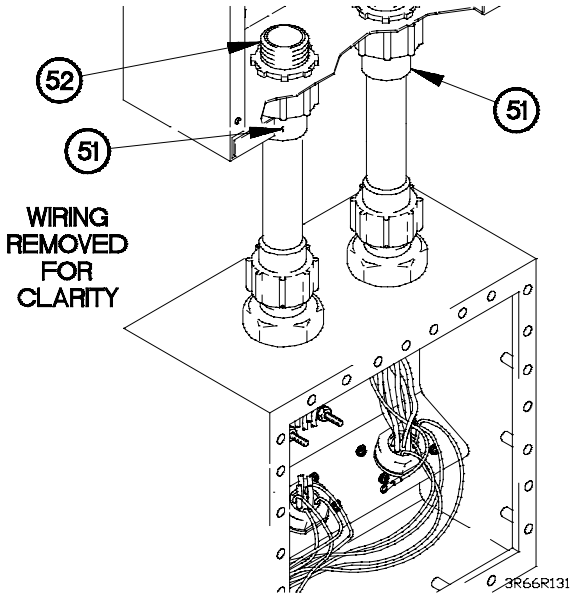
(21) Remove 13 wires 3085 (30), wire 1500 (40), wire 1501 (41), wire 1502 (42), wire 400 (43), wire 415 (44), and wire 708BB (45) from conduit (46).



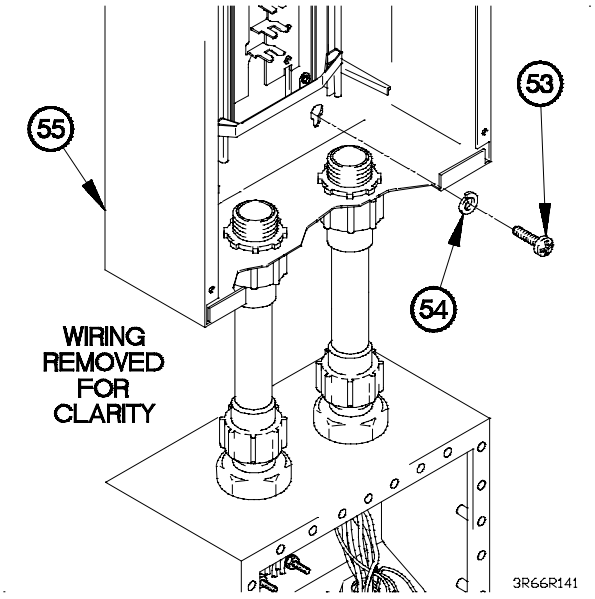
(22) Remove two conduit nuts (47) from conduit connectors (48).

(23) Loosen two conduit nuts (49) on conduit connectors (50).





(24) Remove two conduit nuts (51) from conduit connectors (52).



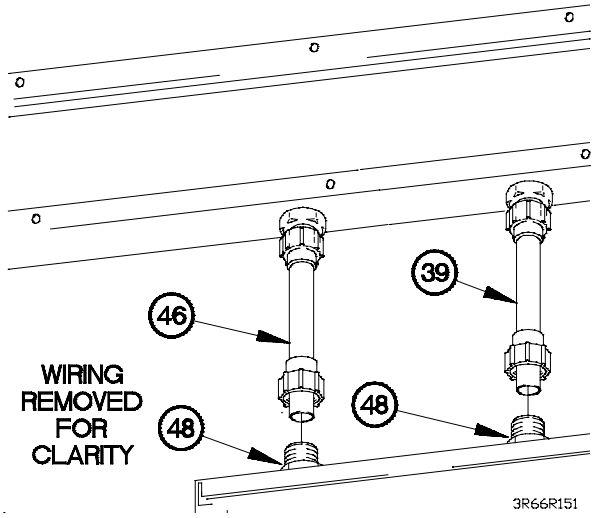
(25) Remove four screws (53) and lockwashers (54) from 110/208 VAC POWER DISTRIBUTION PANEL (55). Discard lockwashers.

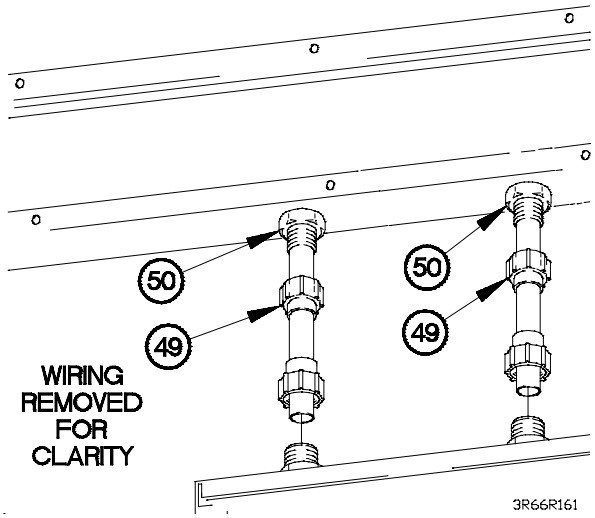
16-66. M1079 110/208 VAC POWER DISTRIBUTION PANEL REPLACEMENT (CONT)

NOTE

Steps (26) and (27) require the aid of an assistant.

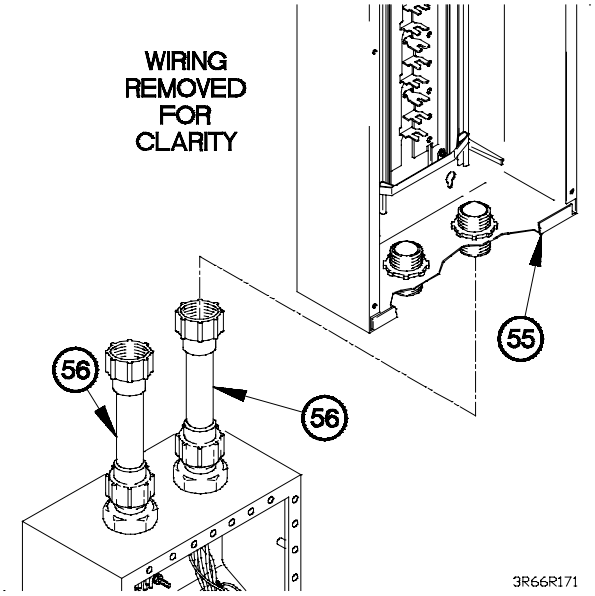
(26) Lift two conduits (39 and 46) clear of conduit connectors (48).





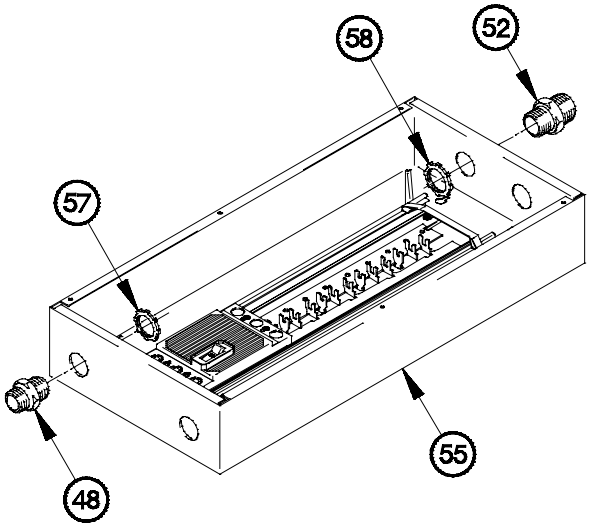
(27) Remove two conduit nuts (49) from conduit connectors (50).

(28) Remove 110/208 VAC POWER DISTRIBUTION PANEL (55) from two conduits (56).

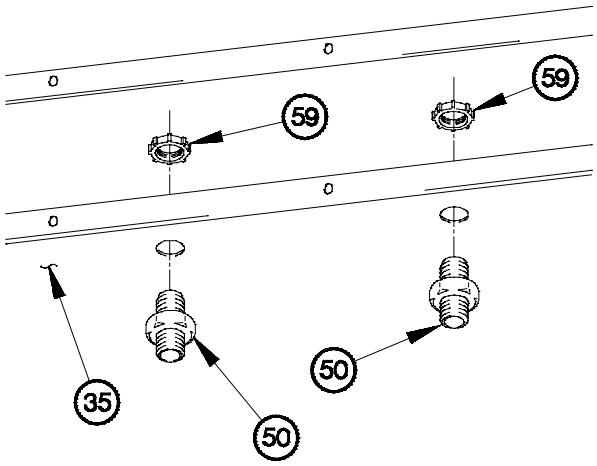


(29) Remove two locknuts (57) and conduit connectors (48) from 110/208 VAC POWER DISTRIBUTION PANEL (55).

(30) Remove two locknuts (58) and conduit connectors (52) from 110/208 VAC POWER DISTRIBUTION PANEL (55).



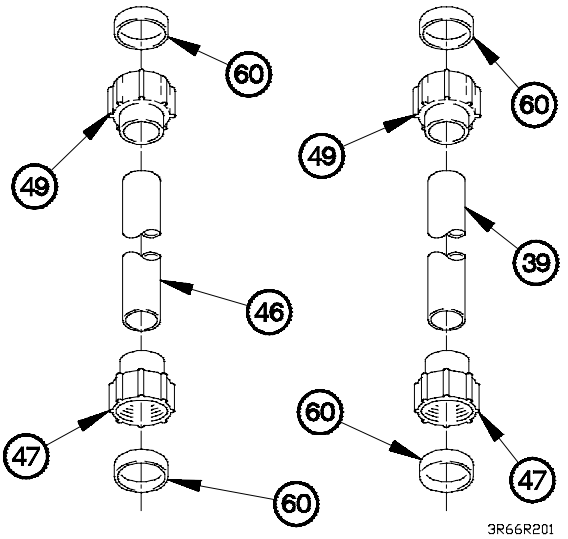
3R66R181



3R66R191

(31) Remove two locknuts (59) and conduit connectors (50) from raceway (35).

(32) Remove two ferrules (60) and conduit nuts (47 and 49) from two conduits (39 and 46).

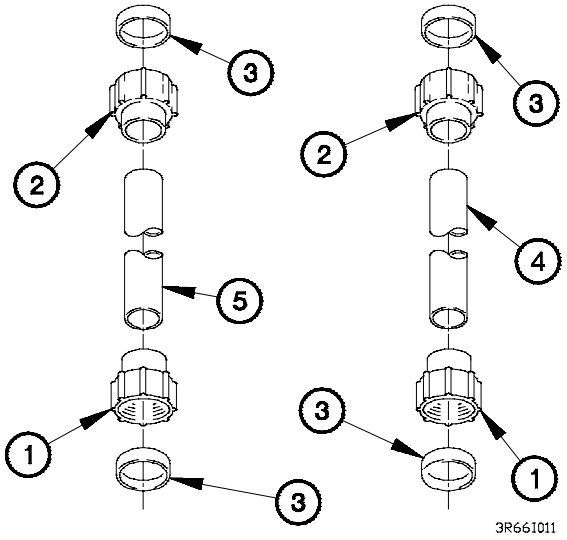


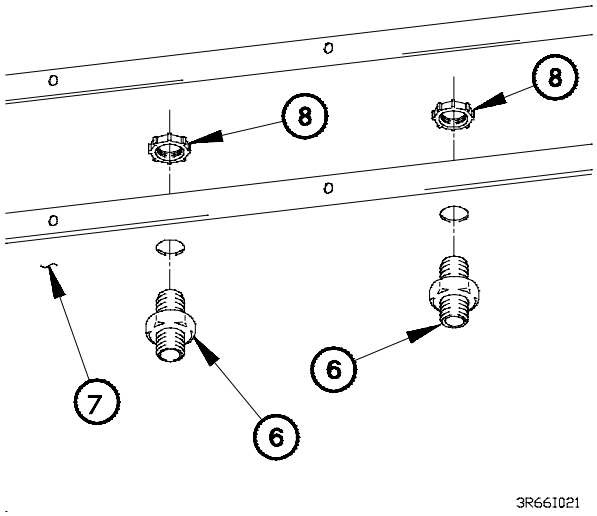
3R66R201

16-66. M1079 110/208 VAC POWER DISTRIBUTION PANEL REPLACEMENT (CONT)

b. Installation.

(1) Install conduit nuts (1 and 2) and two ferrules (3) on two conduits (4 and 5).

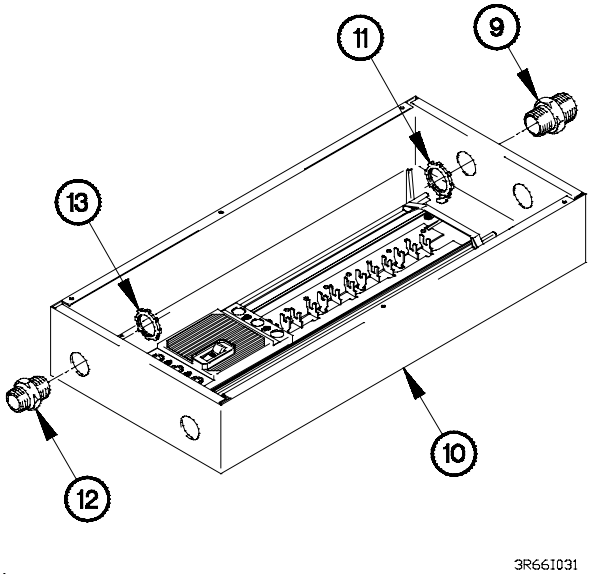




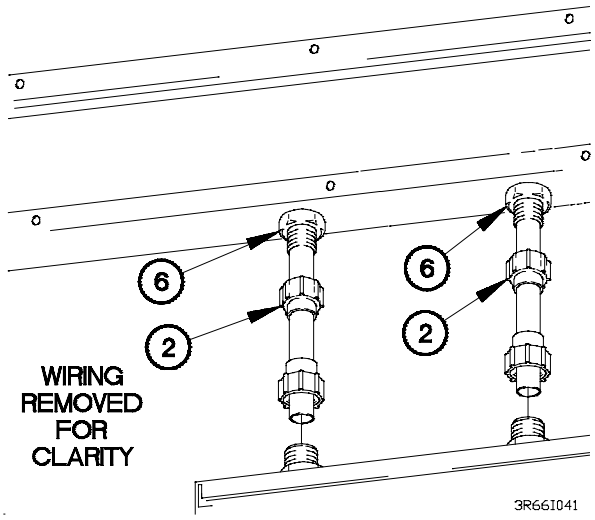
(2) Install two conduit connectors (6) in raceway (7) with locknuts (8).

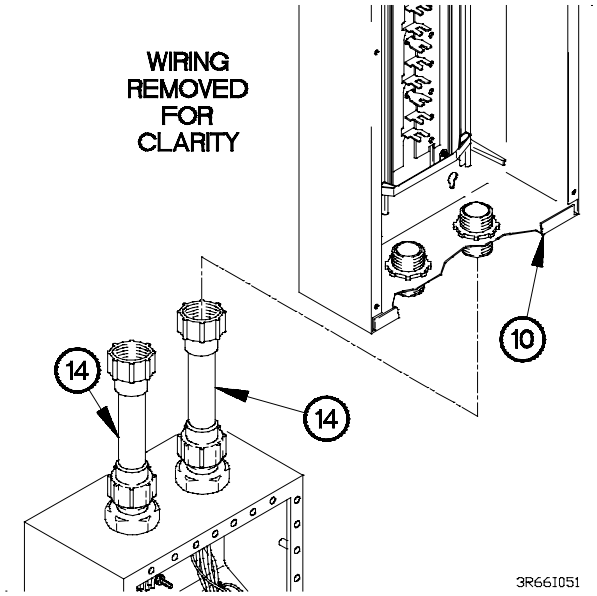
(3) Install two conduit connectors (9) in 110/208 VAC POWER DISTRIBUTION PANEL (10) with locknuts (11).

(4) Install two conduit connectors (12) in 110/208 VAC POWER DISTRIBUTION PANEL (10) with locknuts (13).



(5) Position two conduit nuts (2) on conduit connectors (6).



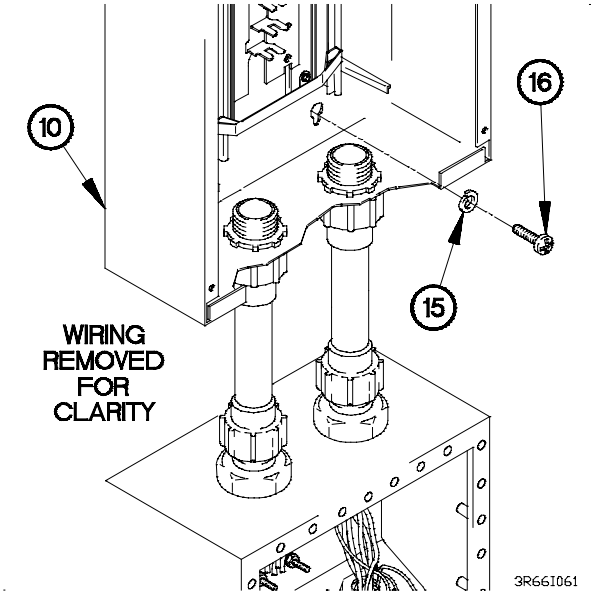


NOTE

Step (6) requires the aid of an assistant.

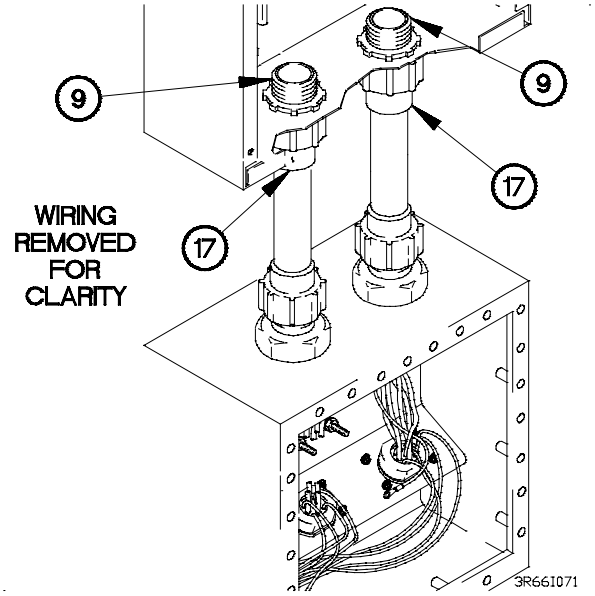
(6) Position 110/208 VAC POWER DISTRIBUTION PANEL (10) and two conduits (14).

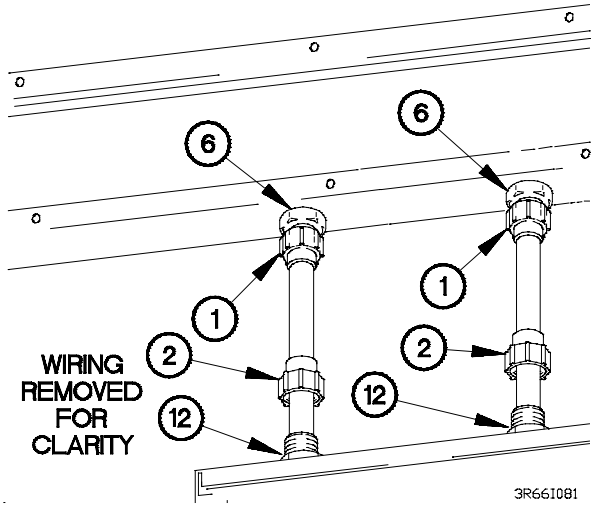
(7) Install four lockwashers (15) and screws (16) in 110/208 VAC POWER DISTRIBUTION PANEL (10).



16-66. M1079 110/208 VAC POWER DISTRIBUTION PANEL REPLACEMENT (CONT)

(8) Install two conduit nuts (17) on conduits connectors (9).

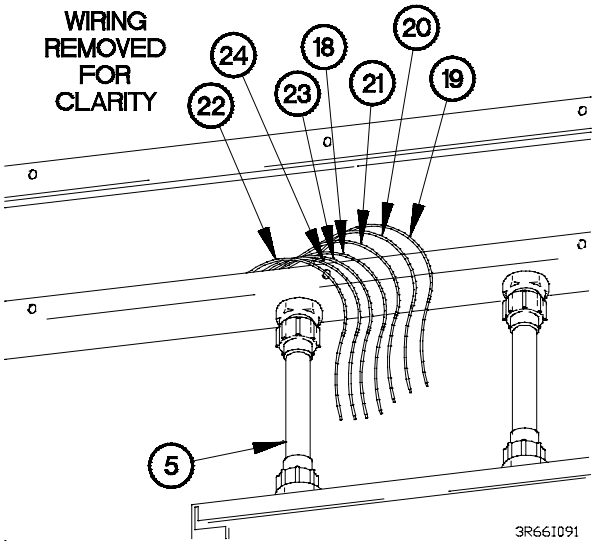




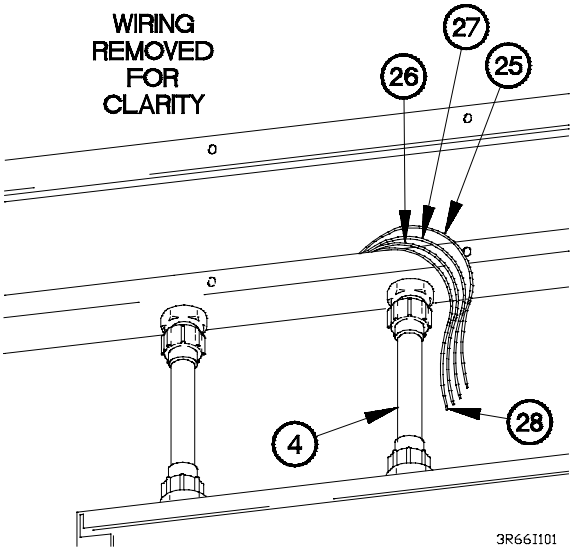
(9) Install two conduit nuts (2) on conduit connectors (12).

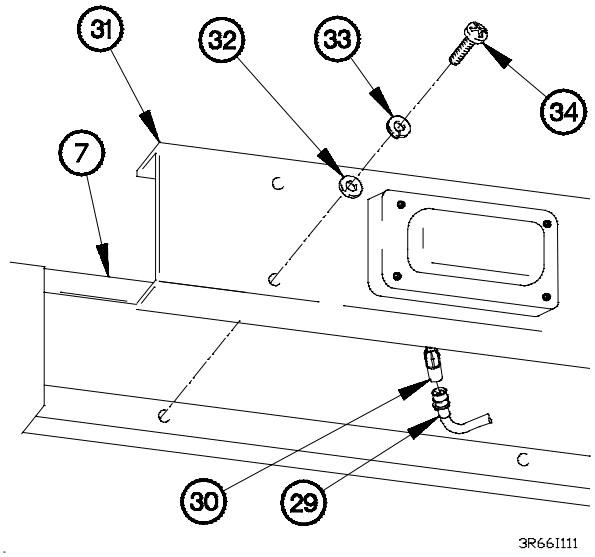
(10) Tighten two conduit nuts (1) on conduit connectors (6).

(11) Route 13 wires 3085A-W (18), wire 1500 (19), wire 1501 (20), wire 1502 (21), wire 400 (22), wire 415 (23), and wire 708BB (24) through conduit (5).



(12) Route three wires 701 (25), wire 424 (26), wire 425 (27), and 12 wires 1499A-M (28) through conduit (4).



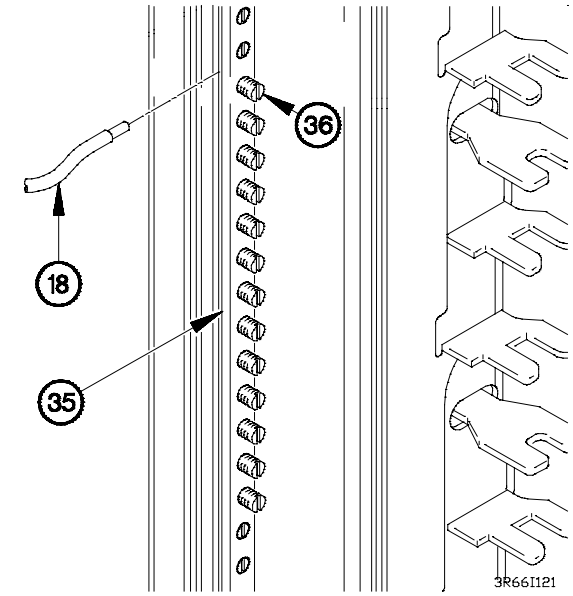


(13) Connect emergency light connector J163 (29) to connector P163 (30).

(14) Install raceway cover (31) on raceway (7) with 12 washers (32), lockwashers (33), and screws (34).

(15) Install 13 wires 3085A-W (18) on terminal board TB3 (35).

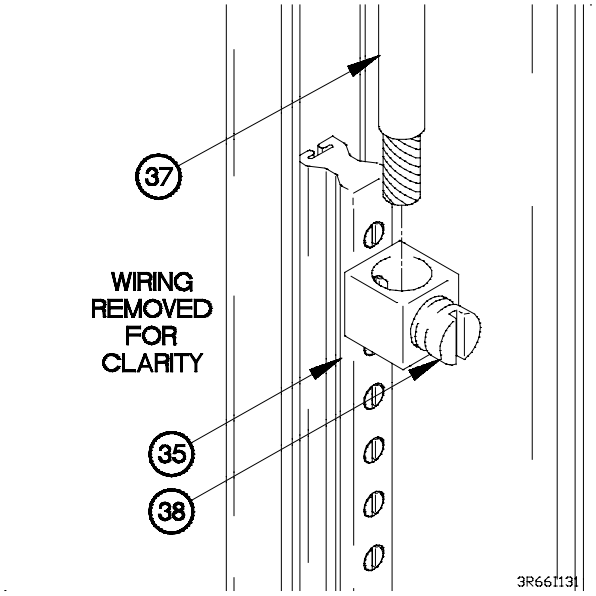
(16) Tighten 13 screws (36) on terminal board TB3 (35).

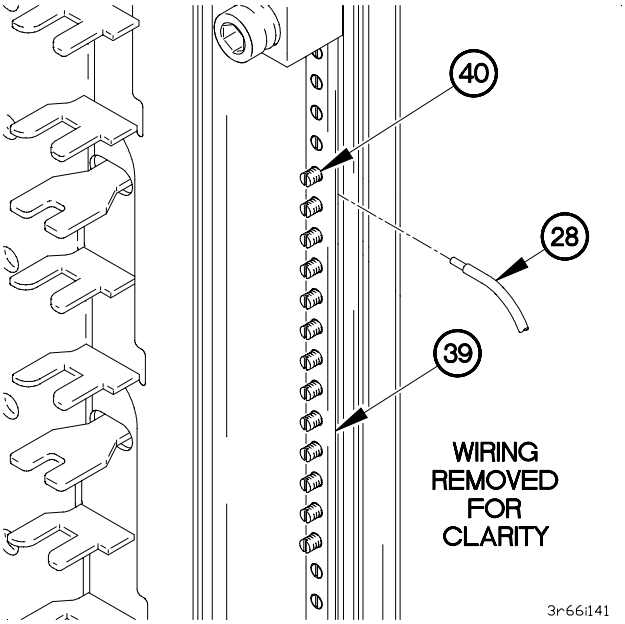


16-66. M1079 110/208 VAC POWER DISTRIBUTION PANEL REPLACEMENT (CONT)

(17) Install wire 3085Y (37) in terminal board TB3 (35).

(18) Tighten screw (38) on terminal board TB3 (35).





(19) Install 12 wires 1499A-M (28) on terminal board TB4 (39).

(20) Tighten 12 screws (40) on terminal board TB4 (39).

NOTE

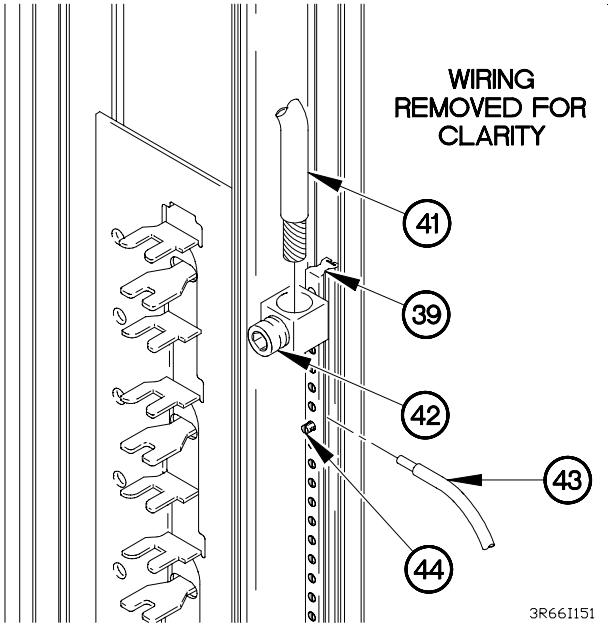
Install plastic cable ties as required.

(21) Install wire 1499N (41) on terminal board TB4 (39).

(22) Tighten screw (42) on terminal board TB4 (39).

(23) Install wire 1499P (43) on terminal board TB4 (39).

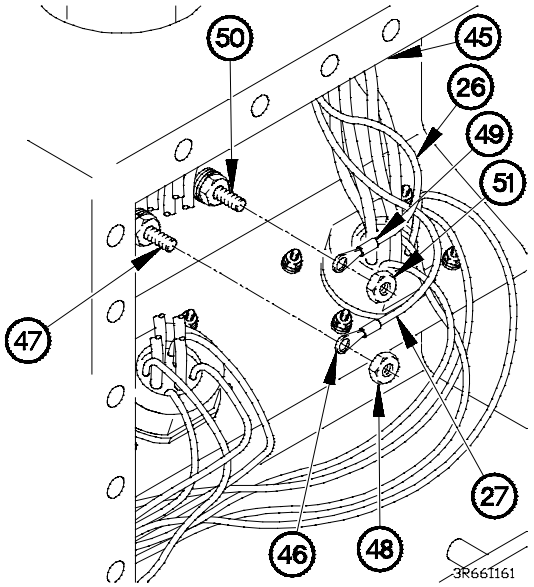
(24) Tighten screw (44) on terminal board (39).

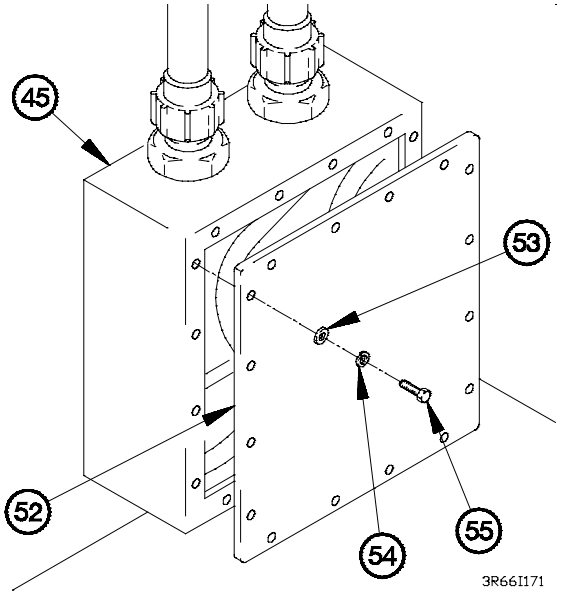


(25) Route wires 424 (26) and wire 425 (27) in 110/208 vac power entry panel (45).

(26) Install wire 424 terminal lug (46) on positive field telephone binding post (47) with nut (48).

(27) Install wire 425 terminal lug (49) on negative field telephone binding post (50) with nut (51).





NOTE

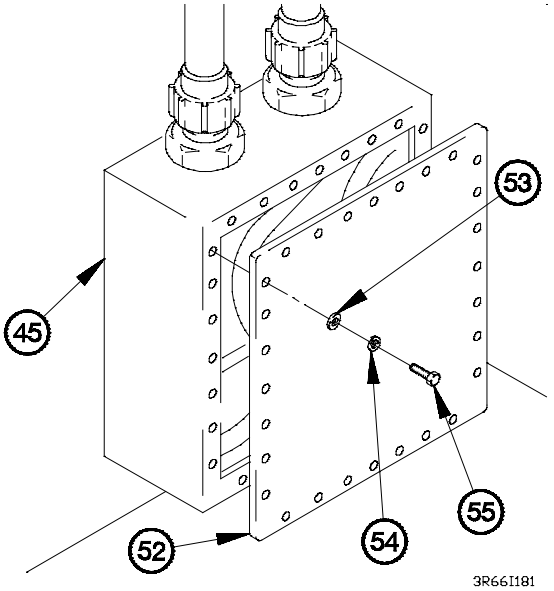
Perform step (29) on van body serial numbers 001 through 190.

(29) Install cover (52) on 110/208 vac power entry panel (45) with 28 washers (53), lockwashers (54), and screws (55).

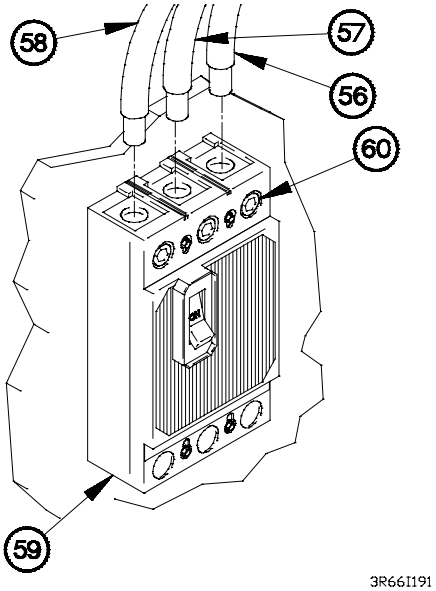
NOTE

Perform step (28) on van bodies serial number 191 and higher.

(28) Install cover (52) on 110/208 vac power entry panel (45) with 16 washers (53), lockwashers (54), and screws (55).



16-66. M1079 110/208 VAC POWER DISTRIBUTION PANEL REPLACEMENT (CONT)



(30) Install wires 502 (56), 501 (57), and 500 (58) on 200 amp AC circuit breaker (59).

(31) Tighten three screws (60) in 200 amp AC circuit breaker (59).

c. Follow-On Maintenance.

(1) Install 15/20/30 and 50 amp AC circuit breakers (para 16-64).

(2) Check for proper operation of AC electrical system (TM 9-2320-365-10).

End of Task.

16-67. M1079 FAN ASSEMBLY REPLACEMENT/REPAIR

This task covers:

a. Removal
b. Disassembly
c. Assembly
d. Installation
e. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
AC power disconnected (TM 9-2320-365-10).
Batteries disconnected (para 7-48).
LH and RH doors opened (115 degrees) (TM 9-2320-365-10).

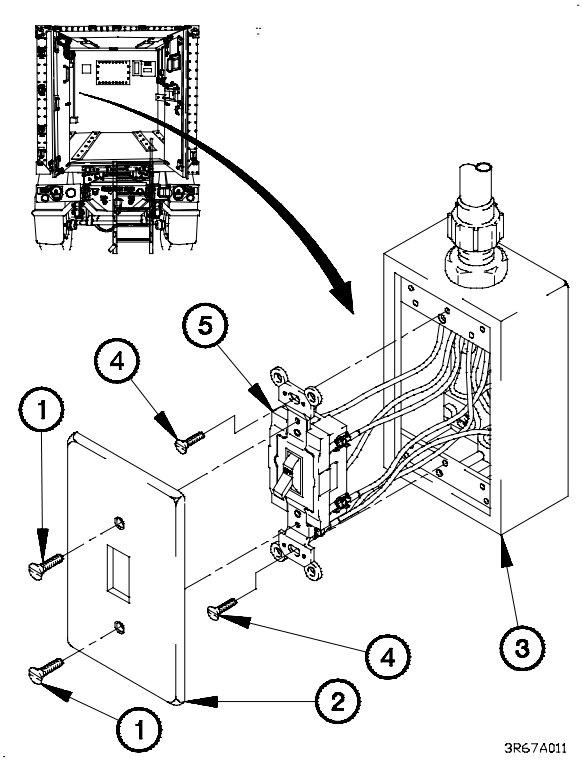
Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Tool Kit, Electrical (Item 42, Appendix C)
Heater, Gun Type, Electric (Item 20, Appendix B)

Materials/Parts
Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D)
Ties, Cable, Plastic (Item 63, Appendix D)
Insulation Sleeving, Electrical (Item 31, Appendix D)
Splice, Conductor (Item 261, Appendix G)
Lockwasher (32) (Item 82, Appendix G)
Lockwasher (8) (Item 92, Appendix G)

a. Removal.

(1) Remove two screws (1) and cover (2) from outlet box (3).

(2) Remove two screws (4) and switch S35 (5) from outlet box (3).



16-67. M1079 FAN ASSEMBLY REPLACEMENT/REPAIR

NOTE

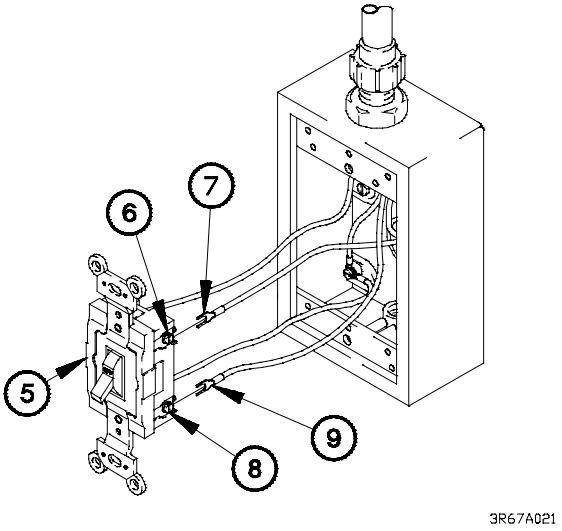
Tag wires and connection points prior to disconnecting.

(3) Loosen screw (6) on switch S35 (5).

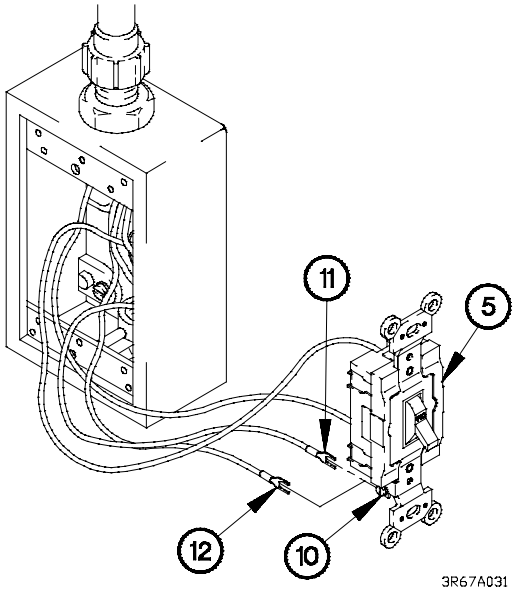
(4) Remove wire 415 terminal lug (7) from switch S35 (5).

(5) Loosen screw (8) on switch S35 (5).

(6) Remove wire 415A terminal lug (9) from switch S35 (5).



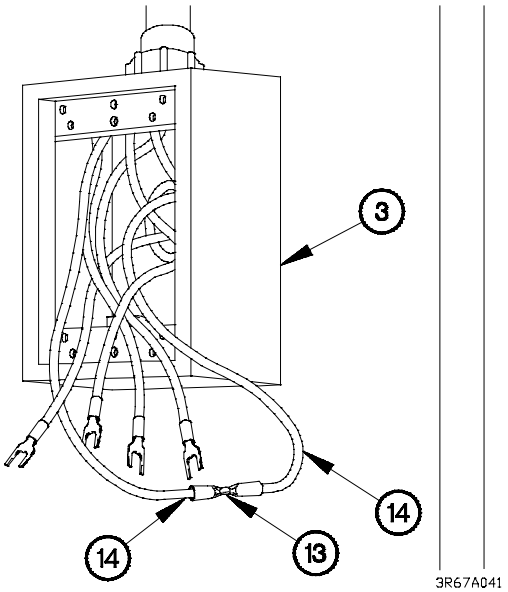
3R67A021



3R67A031

(7) Loosen screw (10) on switch S35 (5).

(8) Remove wire 3085X terminal lug (11) and 3085Z terminal lug (12) from switch S35 (5).



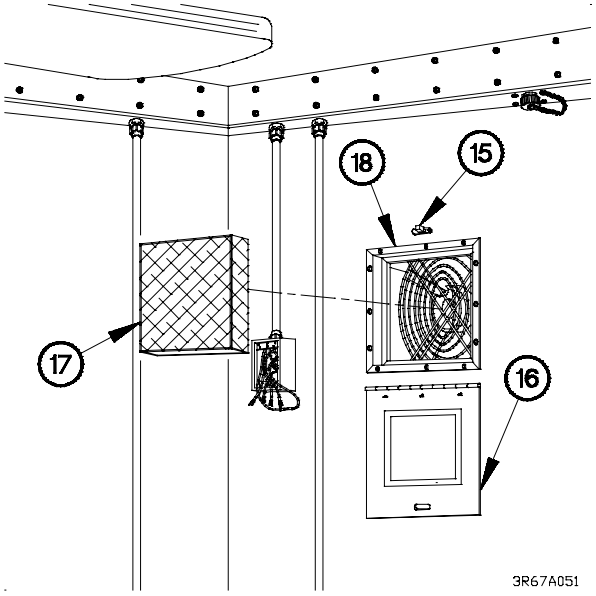
3R67A041

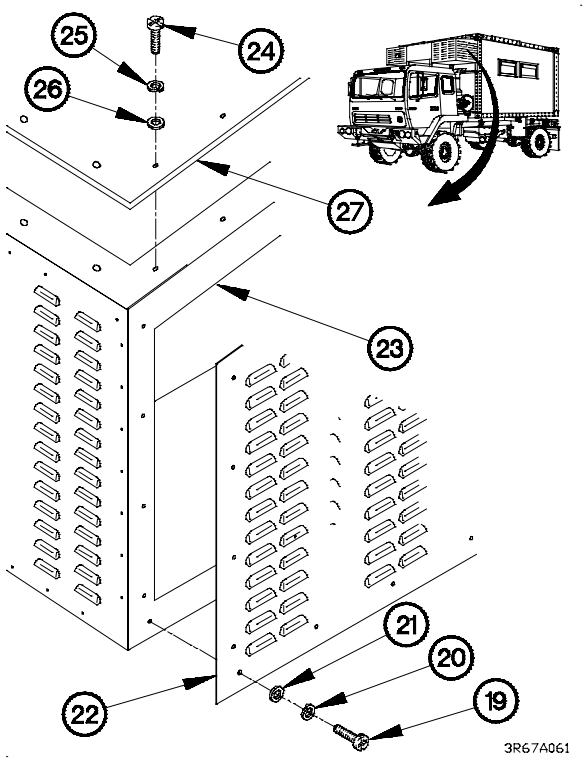
(9) Remove conductor splice (13) from wire 1499H (14) in outlet box (3). Discard conductor splice.

(10) Unlatch stud base fastener (15).

(11) Open vent cover (16).

(12) Remove air filter (17) from filter frame (18).

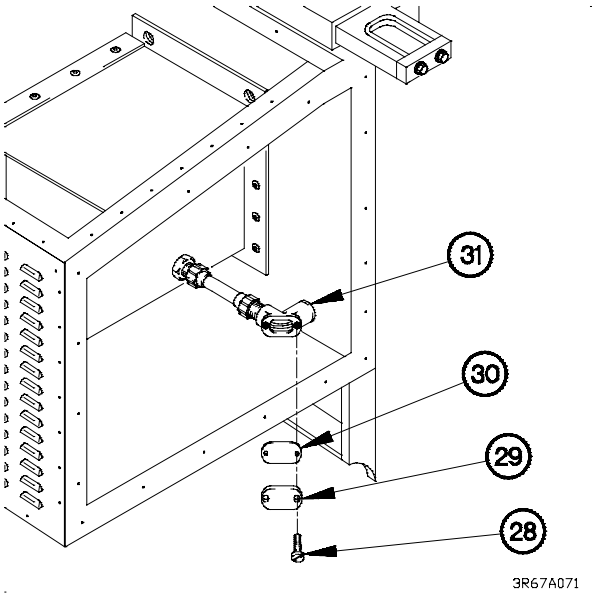




(13) Remove 15 screws (19), lockwashers (20), washers (21), and roadside cover (22) from pod frame (23). Discard lockwashers.

(14) Remove 13 screws (24), lockwashers (25), washers (26) and roadside top front cover (27) from pod frame(23). Discard lockwashers.

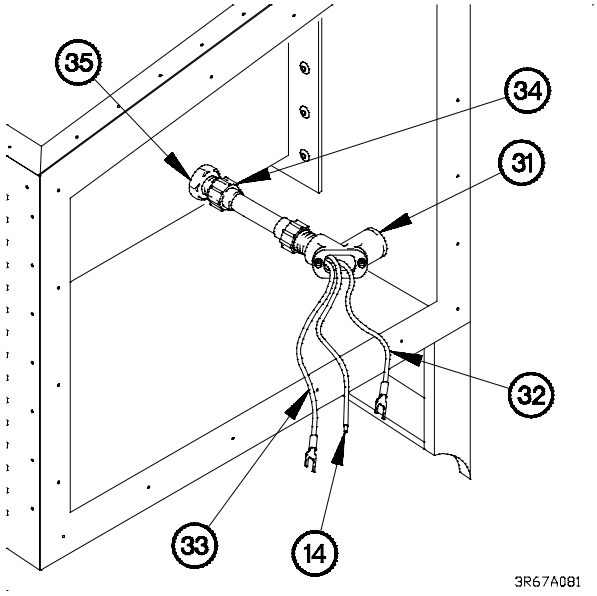
(15) Remove two screws (28), cover (29), and rubber seal (30) from conduit elbow (31).

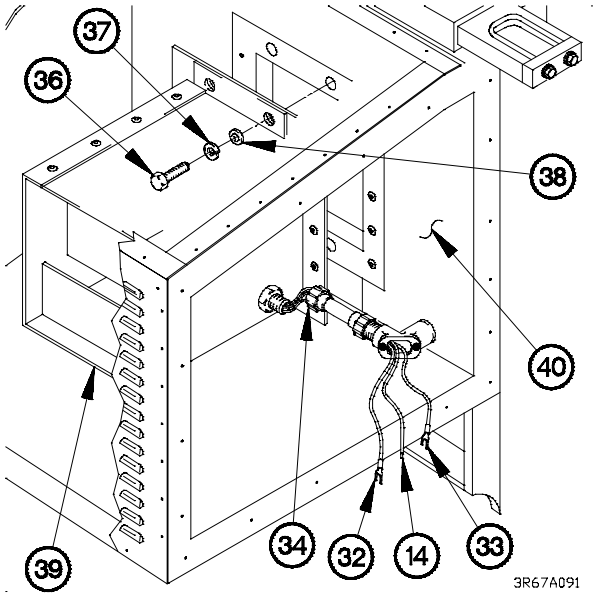


16-67. M1079 FAN ASSEMBLY REPLACEMENT/REPAIR

(16) Remove wires 3085X (32), 415A (33), and 1499H (14) from conduit elbow (31).

(17) Remove conduit nut (34) from conduit connector (35).





(18) Remove four screws (36), lockwashers (37), washers (38), and fan shroud (39) from van body wall (40). Discard lockwashers.

(19) Remove wires 3085X (32), 415A (33), and 1499H (14) from conduit nut (34).

(20) Remove conduit nut (41) and conduit (42) from conduit elbow (31).

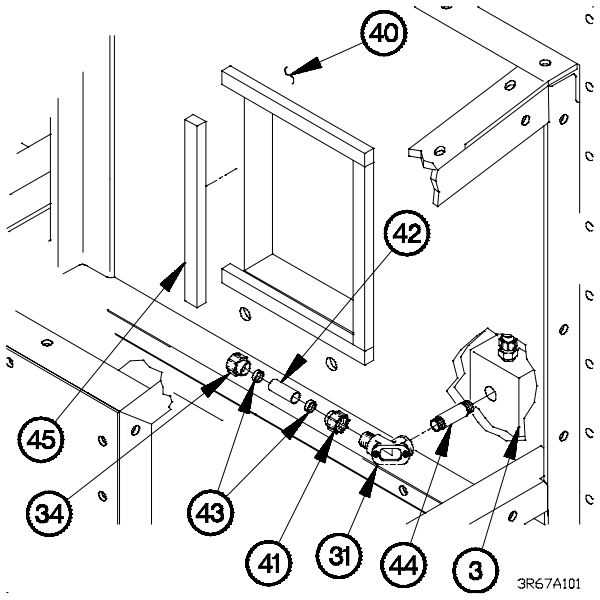
(21) Remove two ferrules (43) and conduit nuts (34 and 41) from conduit (42).

(22) Remove conduit elbow (31) from pipe nipple (44).

(23) Remove pipe nipple (44) from outlet box (3).

(24) Remove four seals (45) from van body wall (40).

(25) Remove sealing compound from van body wall (40).



b. Disassembly.

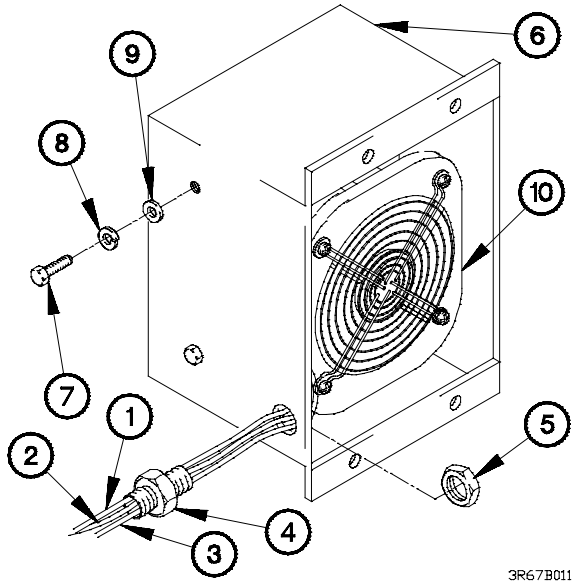
NOTE

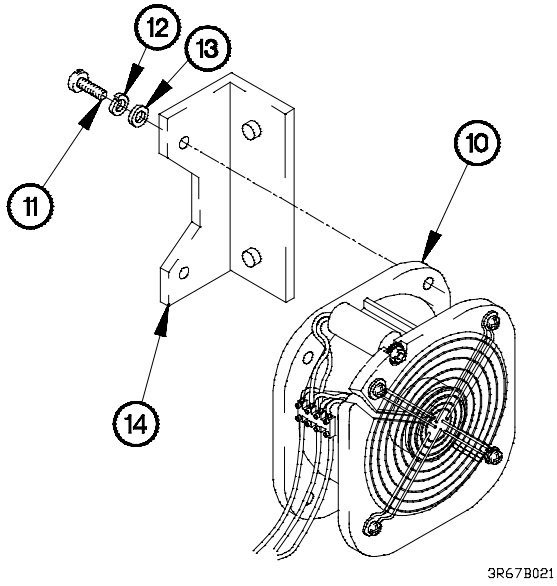
Remove plastic cable ties as required.

(1) Remove wires 3085X, 415A, and 1499H (1, 2, and 3) from conduit connector (4).

(2) Remove locknut (5) and conduit connector (4) from fan shroud (6).

(3) Remove four screws (7), lockwashers (8), washers (9), and fan assembly (10) from fan shroud (6). Discard lockwashers.

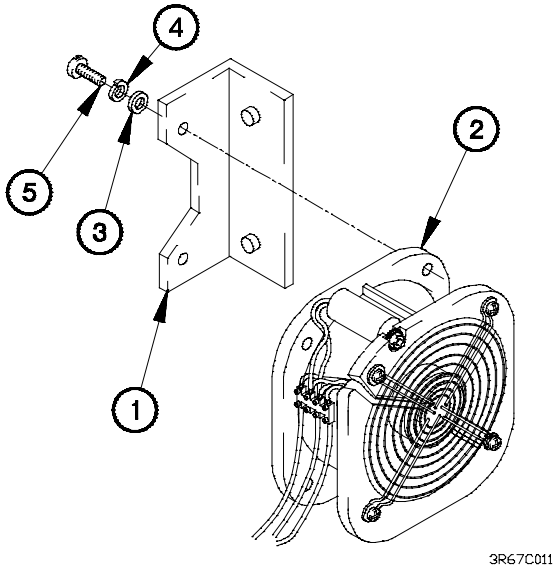




(4) Remove four screws (11), lockwashers (12), washers (13), and two brackets (14) from fan assembly (10). Discard lockwashers.

c. Assembly.

(1) Install two brackets (1) on fan assembly (2) with four washers (3), lockwashers (4), and screws (5).



16-67. M1079 FAN ASSEMBLY REPLACEMENT/REPAIR

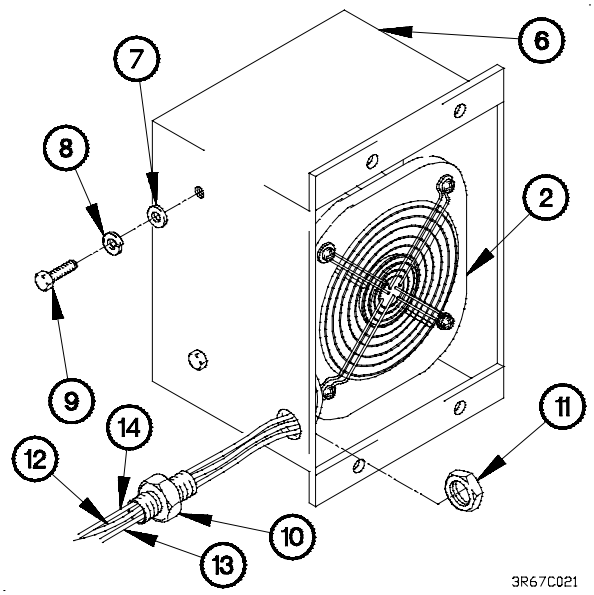
NOTE

Install plastic cable ties as required.

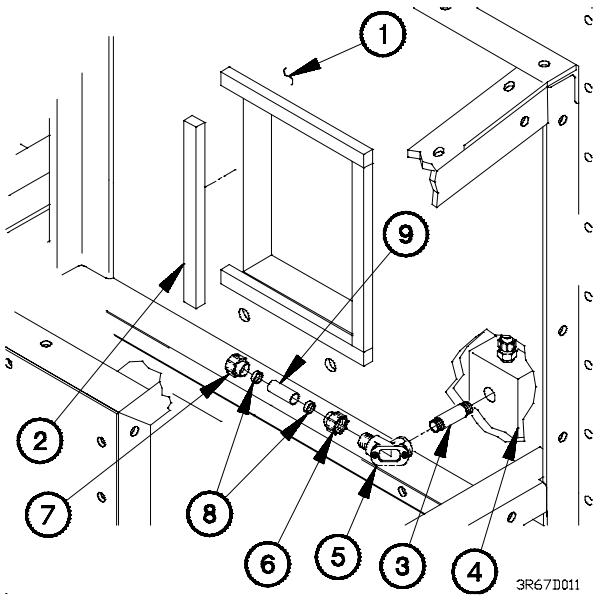
(2) Install fan assembly (2) in fan shroud (6) with four washers (7), lockwashers (8), and screws (9).

(3) Install conduit connector (10) in fan shroud (6) with locknut (11).

(4) Route wires 1499H, 415A, and 3085X (12, 13, and 14) through conduit connector (10).



d. Installation.



WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

(1) Apply sealing compound to van body wall (1).

(2) Install four seals (2) on van body wall (1).

(3) Install pipe nipple (3) on outlet box (4).

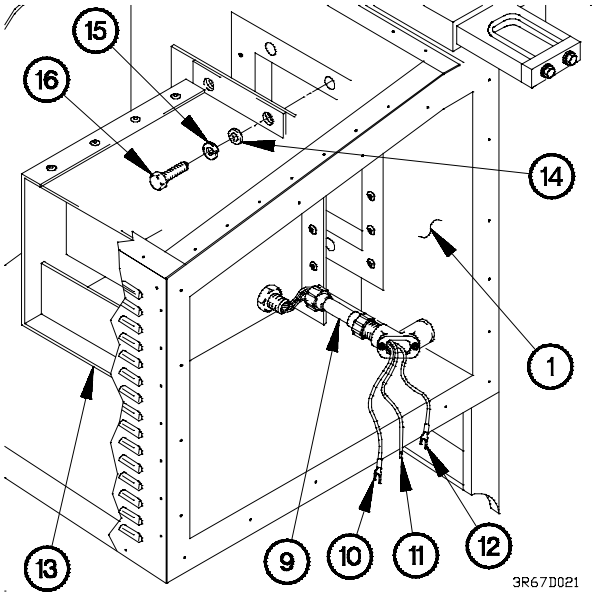
(4) Install conduit elbow (5) on pipe nipple (3).

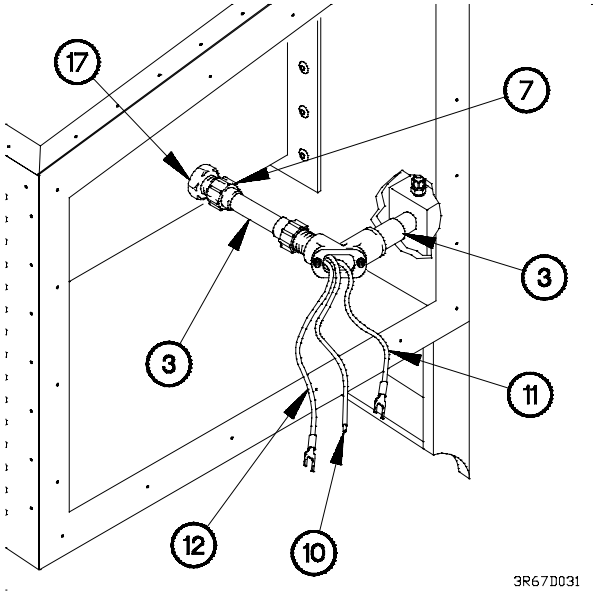
(5) Position conduit nuts (6 and 7) and ferrules (8) on conduit (9).

(6) Position conduit nut (6) and conduit (9) on conduit elbow (5).

(7) Route wires 1499H (10), 415A (11), and 3085X (12) through conduit (9).

(8) Install fan shroud (13) on van body wall (1) with four washers (14), lockwashers (15), and screws (16).

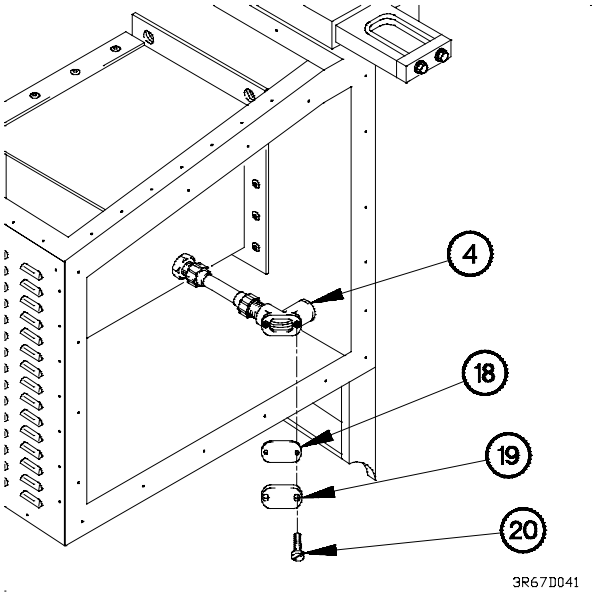




(9) Install conduit nut (7) on conduit connector (17).

(10) Route wires 1499H (10), 415A (11), and 3085X (12) through pipe nipple (3).

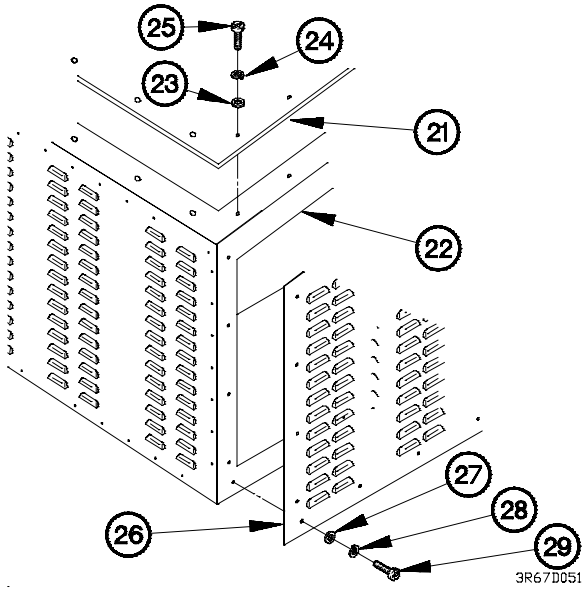
(11) Install rubber seal (18) and cover (19) on conduit elbow (4) with two screws (20).

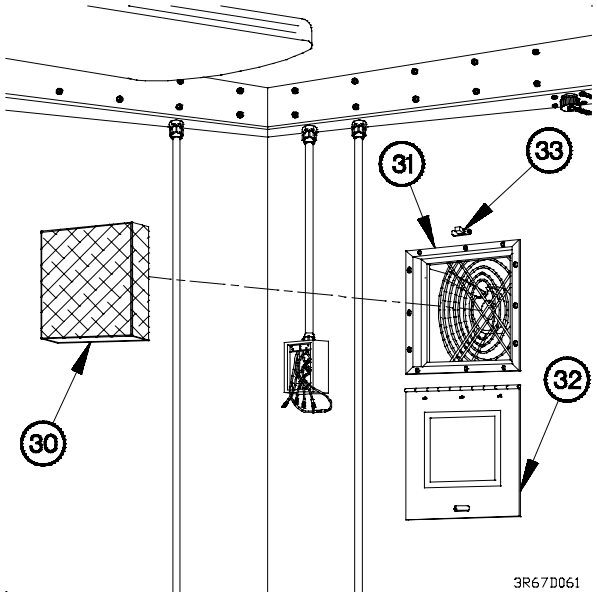


16-67. M1079 FAN ASSEMBLY REPLACEMENT/REPAIR

(12) Install roadside top front cover (21) on pod frame (22) with 13 washers (23), lockwashers (24) and screws (25).

(13) Install roadside cover (26) on pod frame (22) with 15 washers (27), lockwashers (28), and screws (29).



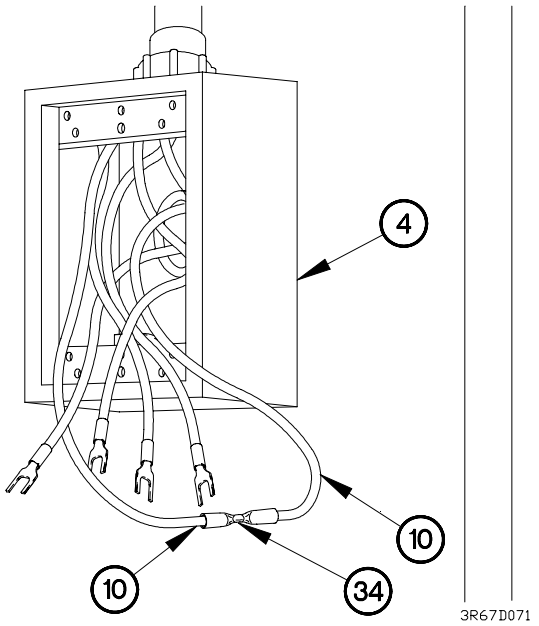


(14) Install air filter (30) in filter frame (31).

(15) Close vent cover (32).

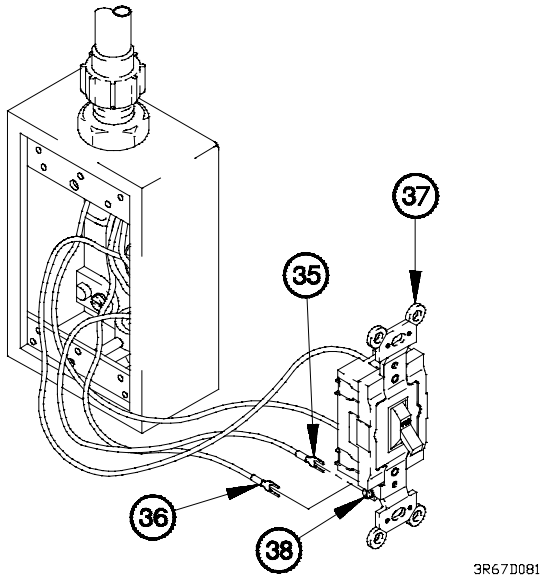
(16) Latch stud base fastener (33).

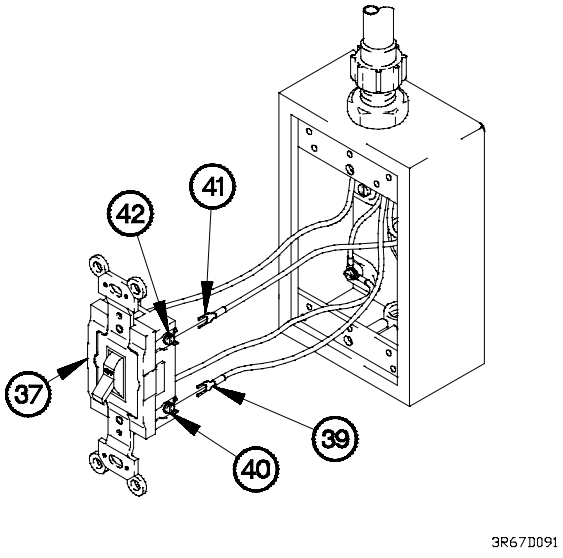
(17) Connect wires 1499H (10) with conductor splice (34) in outlet box (4).



(18) Install wire 3085X terminal lug (35) and wire 3085Z terminal lug (36) on switch S35 (37).

(19) Tighten screw (38) on switch S35 (37).





(20) Install wire 415A terminal lug (39) on switch S35 (37).

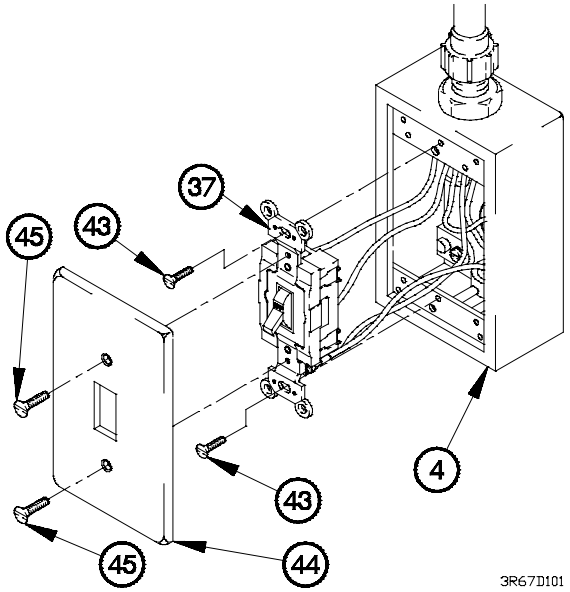
(21) Tighten screw (40) on switch S35 (37).

(22) Install wire 415 terminal lug (41) on switch S35 (37).

(23) Tighten screw (42) on switch S35 (37).

(24) Install switch S35 (37) in outlet box (4) with two screws (43).

(25) Install cover (44) on outlet box (4) with two screws (45).



16-67. M1079 FAN ASSEMBLY REPLACEMENT/REPAIR

e. Follow-On Maintenance.

(1) Connect AC power (TM 9-2320-365-10).

(2) Connect batteries (para 7-48).

(3) Operate van fan check proper operation (TM 9-2320-365-10).

(4) Close LH and RH door (TM 9-2320-365-10).

End of Task.

16-68. M1079 110/208 VAC POWER IN/OUT CABLE REPLACEMENT

This task covers:

a. 110/208 VAC POWER IN Connector Removal
b. 110/208 VAC POWER IN Connector Installation
c. 110/208 VAC POWER OUT Connector Removal
d. 110/208 VAC POWER OUT Connector Installation
e. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
Field telephone wires disconnected, if required, (TM 9-2320-365-10).
AC power disconnected (TM 9-2320-365-10).
Batteries disconnected (para 7-48).
LH and RH door opened (115 degrees) (TM 9-2320-365-10).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)

Materials/Parts
Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D)
Ties, Cable, Plastic (Item 76, Appendix D)
Sealing Compound (Item 67, Appendix D)
Lockwasher (16) (van bodies serial number 191 and higher) (Item 77, Appendix G)
Lockwasher (28) (van body serial numbers 001 through 190) (Item 77, Appendix G)
Lockwasher (8) (Item 78, Appendix G)
Lockwasher (2) (Item 85, Appendix G)

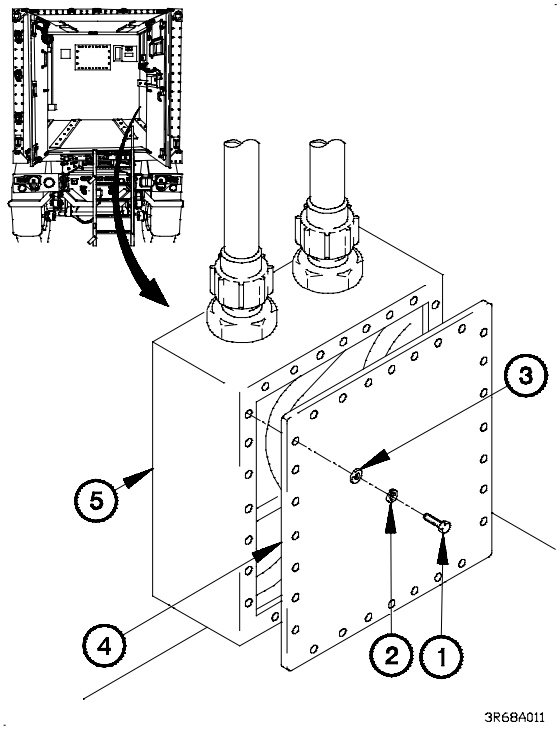
Personnel Required
(2)

a. 110/208 VAC POWER IN Connector Removal.

NOTE

Perform step (1) on van body serial numbers 001 through 190.

(1) Remove 28 screws (1), lockwashers (2), washers (3), and cover (4) from 110/208 vac power entry panel (5). Discard lockwashers.

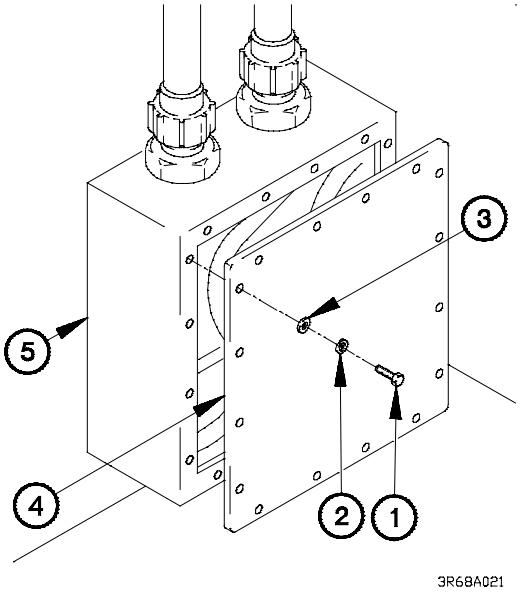


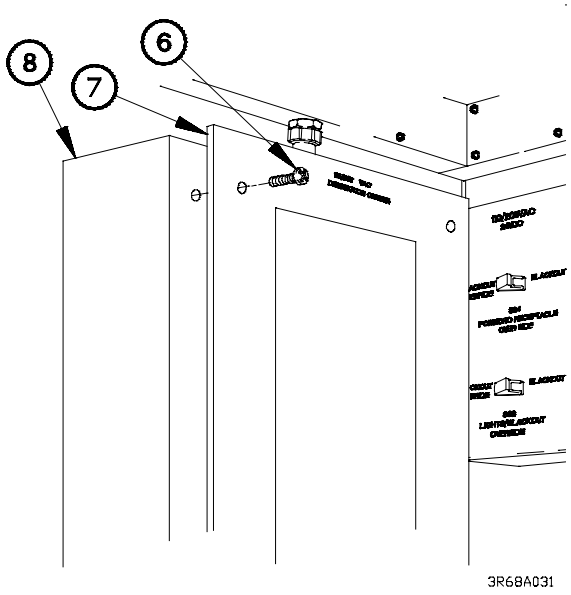
16-68. M1079 110/208 VAC POWER IN/OUT CABLE REPLACEMENT (CONT)

NOTE

Perform step (2) on van bodies serial number 191 and higher.

(2) Remove 16 screws (1), lockwashers (2), washers (3), and cover (4) from 110/208 vac power entry panel (5). Discard lockwashers.





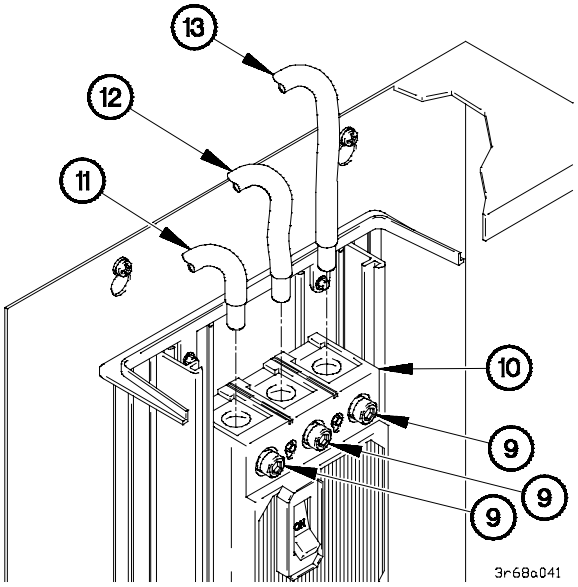
(3) Remove six screws (6) and cover (7) from 110/208 VAC POWER DISTRIBUTION PANEL (8).

NOTE

- Tag wires and connection points prior to disconnecting.
- Remove plastic cable ties as required.

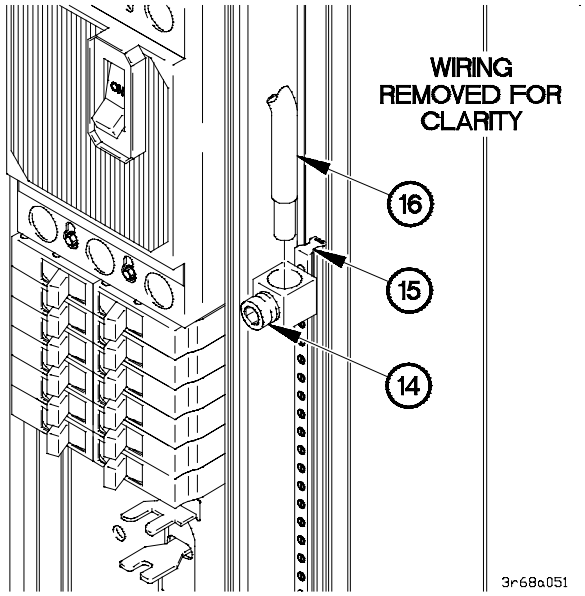
(4) Loosen three screws (9) in 200 amp AC circuit breaker (10).

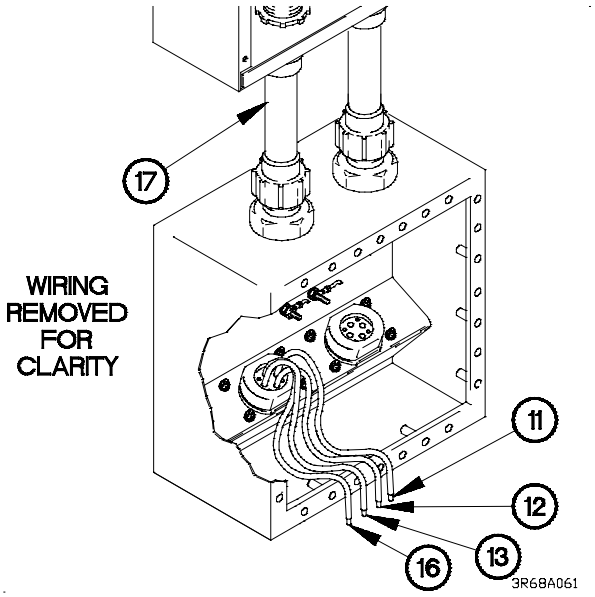
(5) Remove wires 500 (11), 501 (12), and 502 (13) from 200 amp AC circuit breaker (10).



(6) Loosen screw (14) on terminal board TB4 (15).

(7) Remove wire 1499P (16) from terminal board TB4 (15).



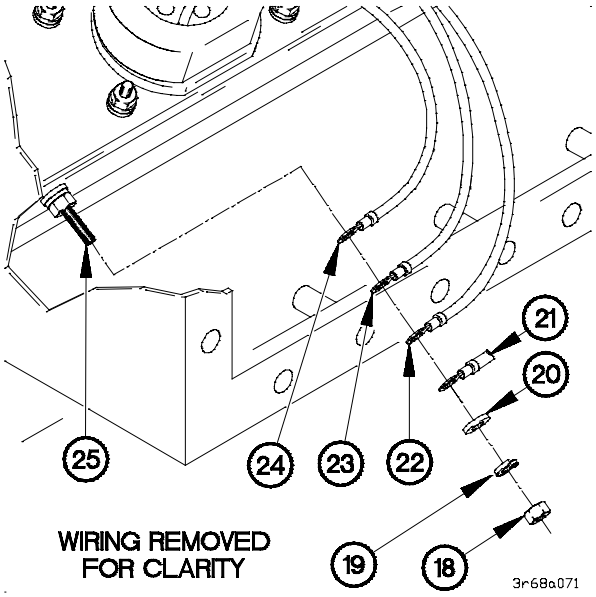


(8) Remove wires 500 (11), 501 (12), 502 (13), and 1499P (16) from conduit (17).

NOTE

Step (9) may require removal of five other terminal lugs.

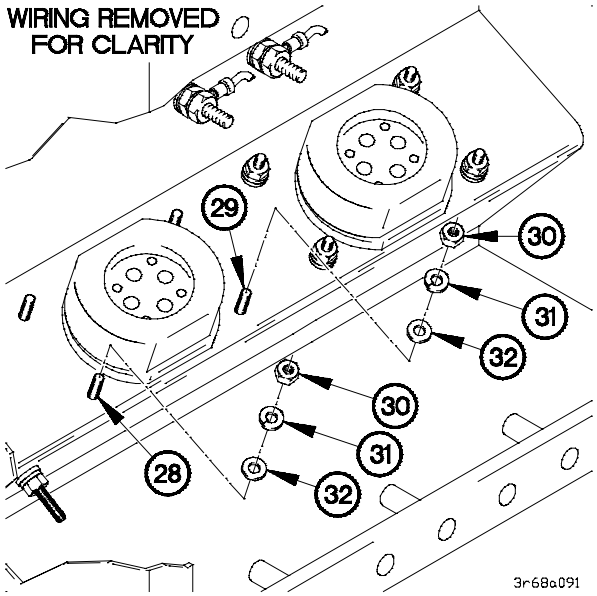
(9) Remove nut (18), lockwasher (19), washer (20), wire 3085N terminal lug (21), wire 3085P terminal lug (22), wire 3085Q terminal lug (23), and wire 3085R terminal lug (24), from chassis ground lug (25). Discard lockwasher.

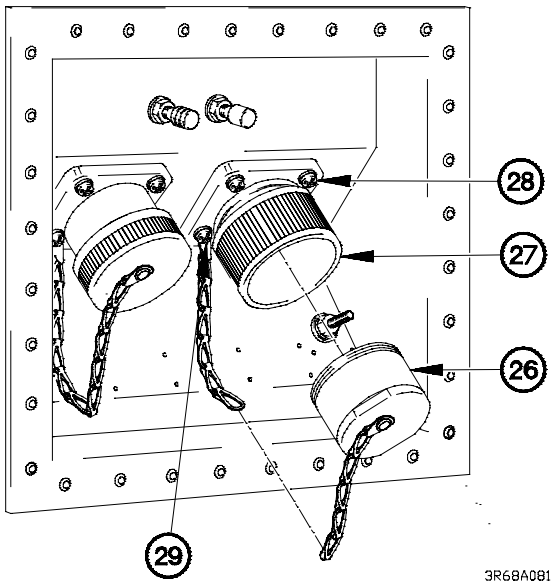


16-68. M1079 110/208 VAC POWER IN/OUT CABLE REPLACEMENT (CONT)

(10) Remove dust cap (26) from 110/208 vac POWER IN connector (27).

(11) Remove sealing compound from heads of three screws (28), screw (29), and edges of 110/208 vac POWER IN connector (27).





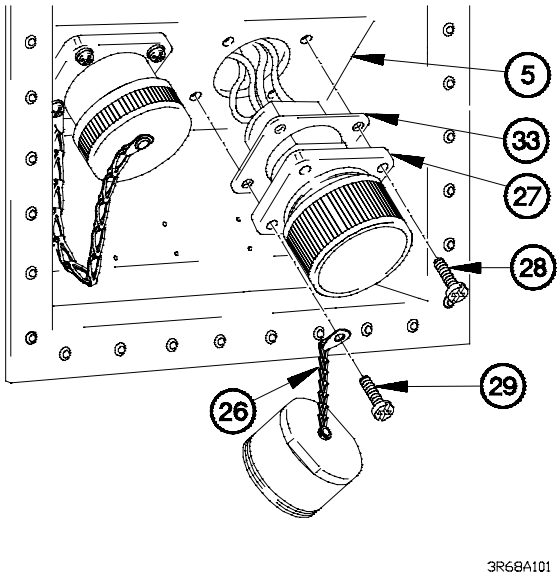
NOTE

Steps (12) through (14) require the aid of an assistant.

(12) Remove four nuts (30), lockwashers (31), and washers (32) from three screws (28) and screw (29). Discard lockwashers.

(13) Remove three screws (28) from 110/208 vac POWER IN connector (27).

(14) Remove screw (29), dust cap (26), 110/208 vac POWER IN connector (27), and gasket (33) from 110/208 vac power entry panel (5).



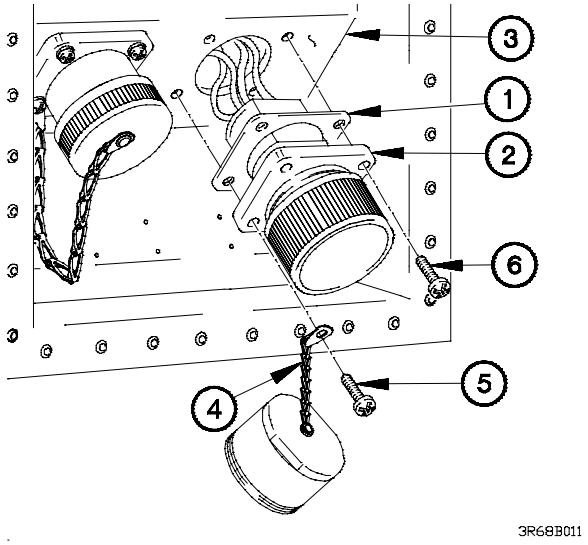
b. 110/208 VAC POWER IN Connector Installation.

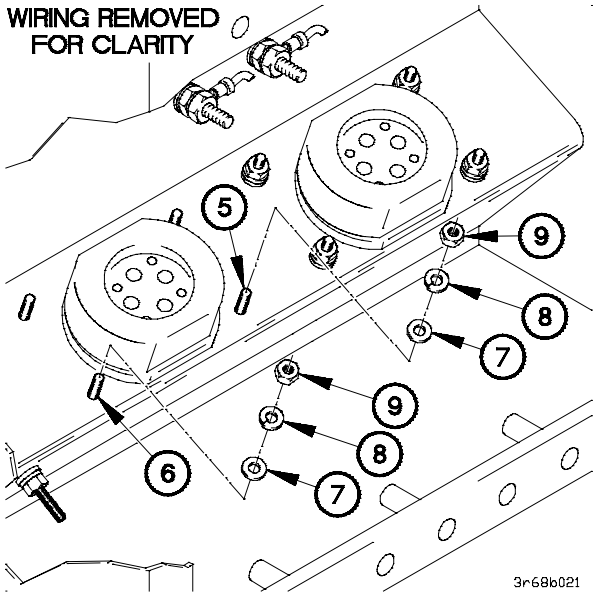
NOTE

Steps (1) through (4) require the aid of an assistant.

(1) Install gasket (1) and 110/208 vac POWER IN connector (2) on 110/208 power entry panel (3) with dust cap (4) and screw (5).

(2) Install three screws (6) in 110/208 vac POWER IN connector (2).





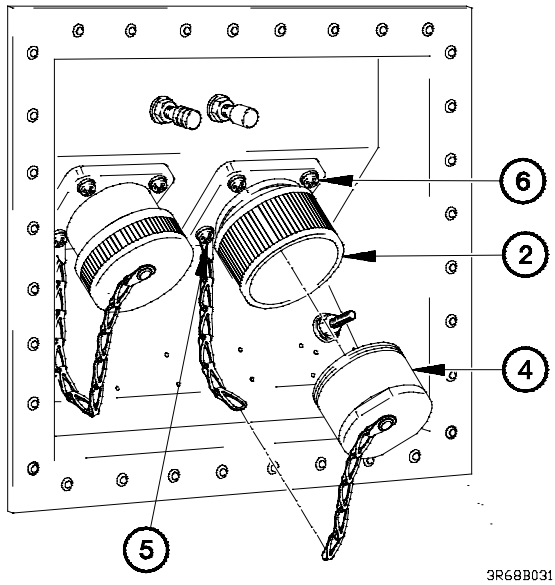
(3) Install four washers (7), lockwashers (8) and nuts (9) on screw (5) and three screws (6).

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

(4) Apply sealing compound on heads of screws (5 and 6) and edges of 110/208 vac POWER IN connector (2).

(5) Install dust cap (4) on 110/208 vac POWER IN connector (2).

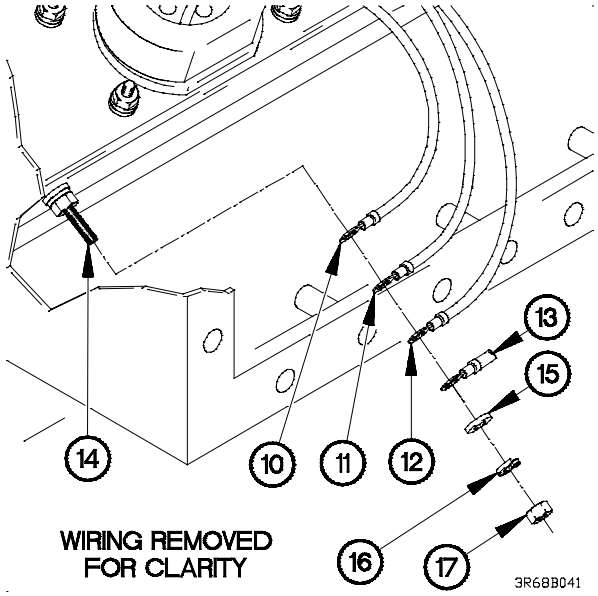


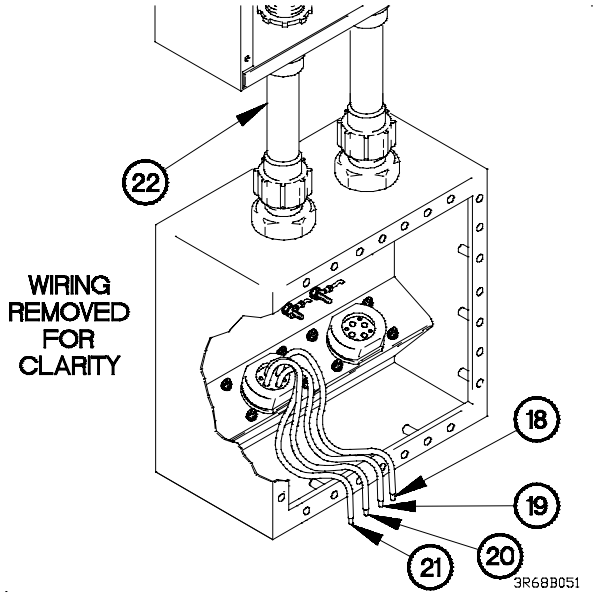
16-68. M1079 110/208 VAC POWER IN/OUT CABLE REPLACEMENT (CONT)

NOTE

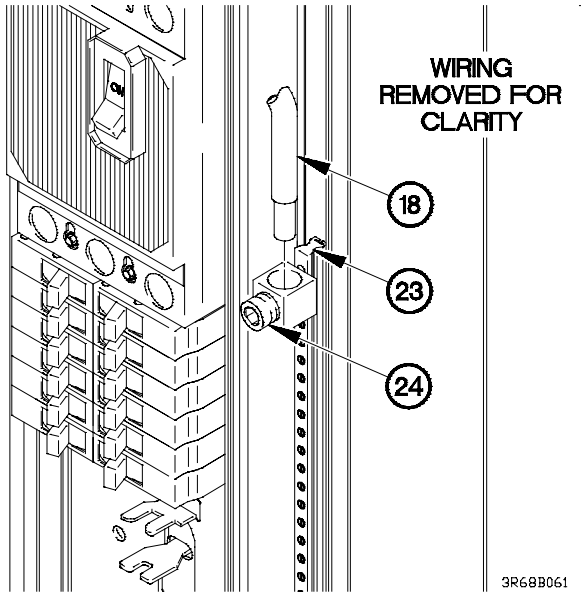
Step (6) may require installation of five additional terminal lugs.

(6) Install wire 3085R terminal lug (10), wire 3085Q terminal lug (11), wire 3085P terminal lug (12) and wire 3085N terminal lug (13) on chassis ground lug (14) with washer (15), lockwasher (16), and nut (17).





(7) Route wires 1499P (18), 502 (19), 501 (20), and 500 (21) through conduit (22).



(8) Install wire 1499P (18) on terminal board TB4 (23).

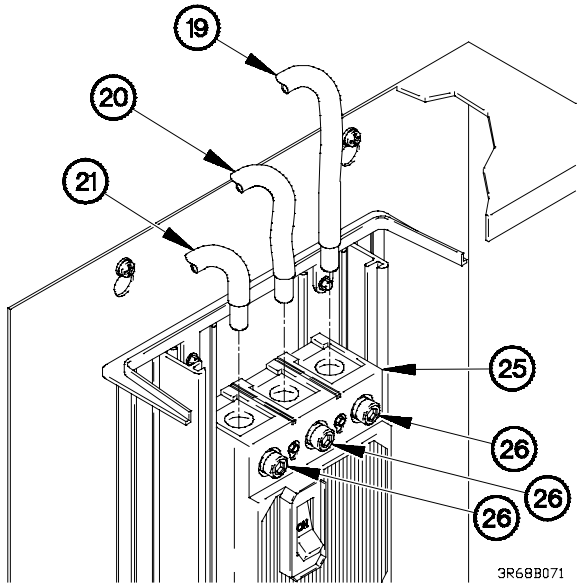
(9) Tighten screw (24) on terminal board TB4 (23).

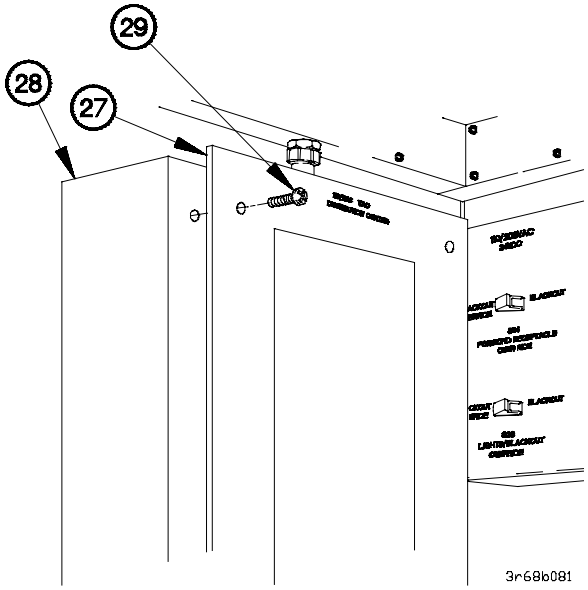
NOTE

Install plastic cable ties as required.

(10) Install wires 502 (19), 501 (20), and 500 (21) in 200 amp AC circuit breaker (25).

(11) Tighten three screws (26) in 200 amp AC circuit breaker (25).



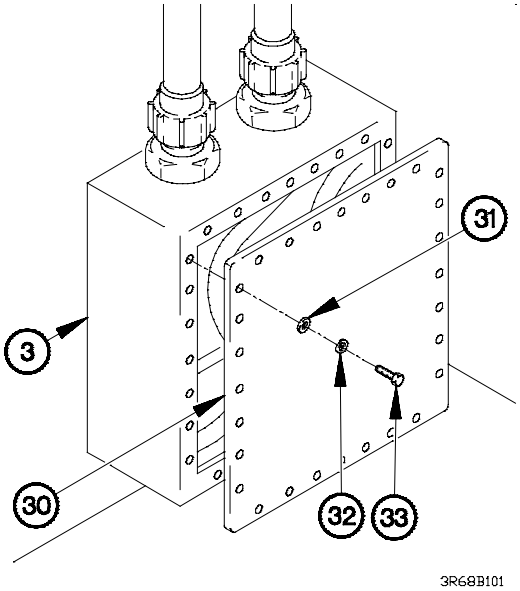


(12) Install cover (27) on 110/208 VAC POWER DISTRIBUTION PANEL (28) with six screws (29).

NOTE

Perform step (13) on van bodies serial number 191 and higher.

(13) Install cover (30) on 110/208 vac power entry panel (3) with 16 washers (31), lockwashers (32), and screws (33).

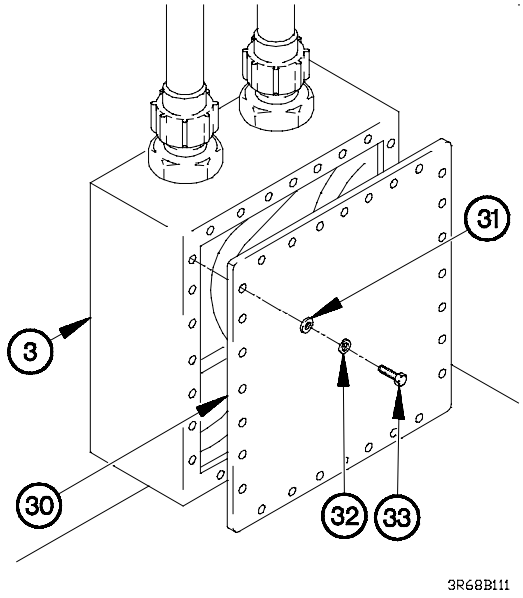


16-68. M1079 110/208 VAC POWER IN/OUT CABLE REPLACEMENT (CONT)

NOTE

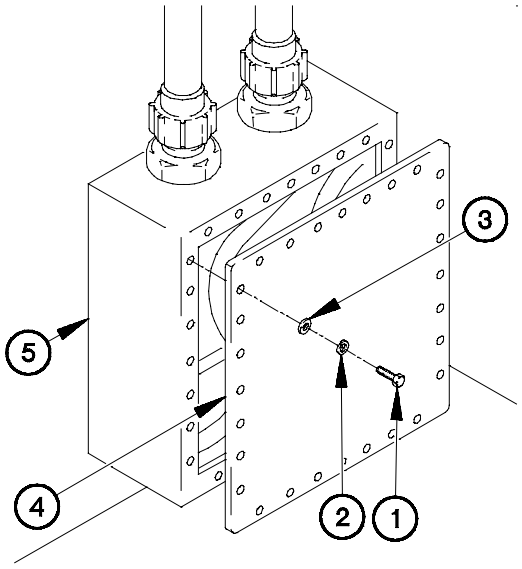
Perform step (14) on van body serial numbers 001 through 190.

(14) Install cover (30) on 110/208 vac power entry panel (3) with 28 washers (31), lockwashers (32), and screws (33).



3R68B111

c. 110/208 VAC POWER OUT Connector Removal.



3R11C011

NOTE

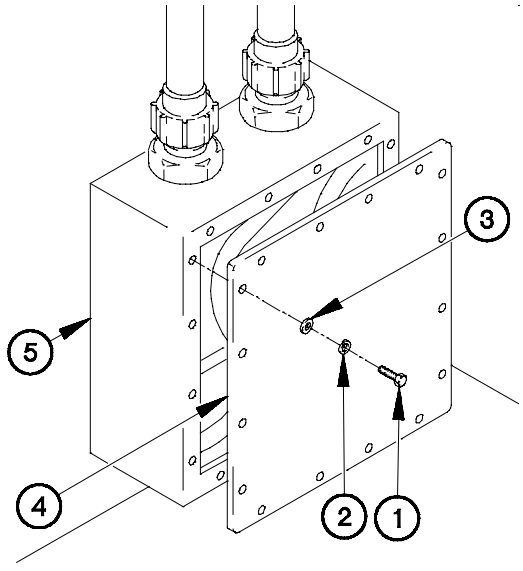
Perform step (1) on van body serial numbers 001 through 190.

(1) Remove 28 screws (1), lockwashers (2), washers (3), and cover (4) from 110/208 power entry panel (5). Discard lockwashers.

NOTE

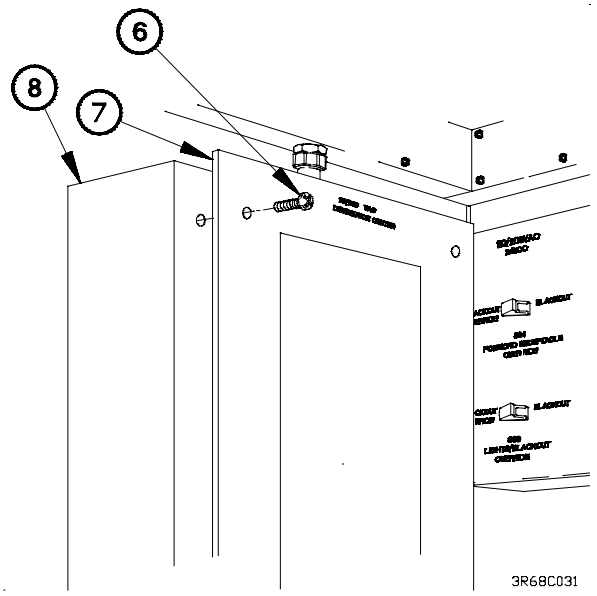
Perform step (2) on van bodies serial number 191 and higher.

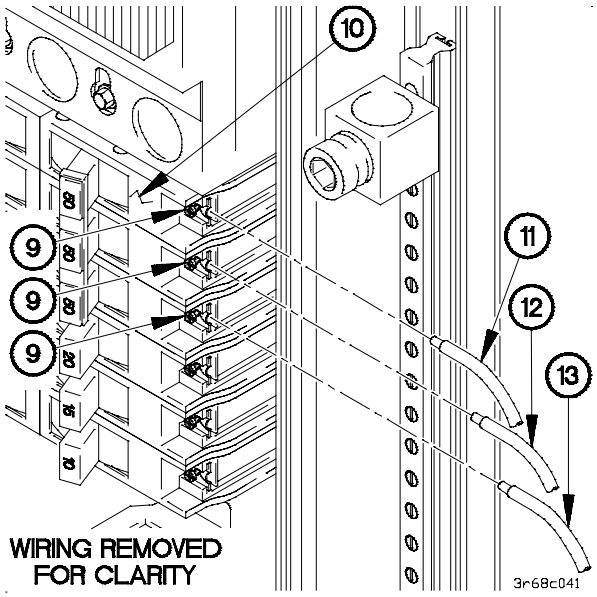
(2) Remove 16 screws (1), lockwashers (2), washers (3), and cover (4) from 110/208 power entry panel (5). Discard lockwashers.



3R11C021

(3) Remove six screws (6) and cover (7) from 110/208 VAC POWER DISTRIBUTION PANEL (8).





NOTE

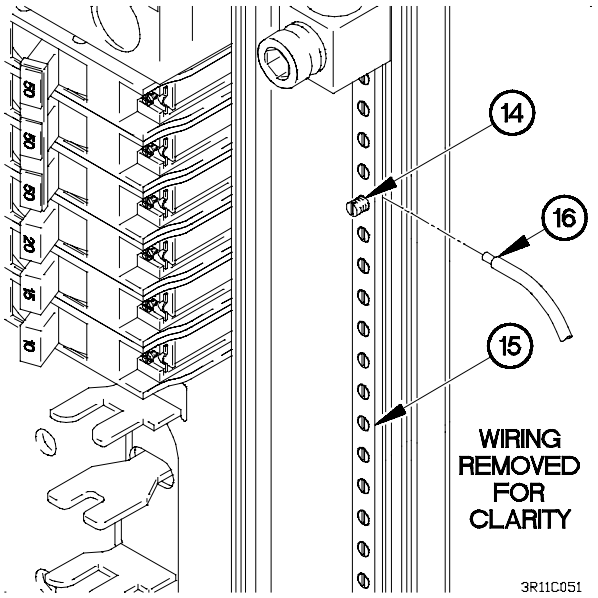
- Tag wires and connection points prior to disconnecting.
- Remove plastic cable ties as required.

(4) Loosen three screws (9) in 50 amp AC circuit breaker (10).

(5) Remove wires 500AA (11), 501BB (12), and 502CC (13) from 50 amp AC circuit breaker (10).

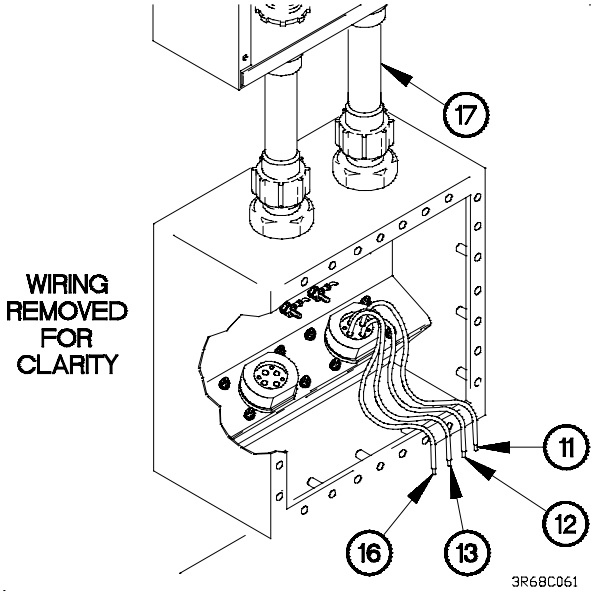
(6) Loosen screw (14) in terminal board TB4 (15).

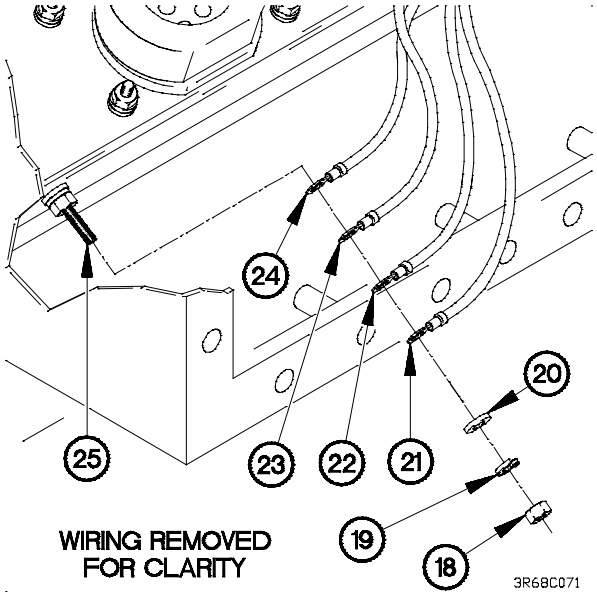
(7) Remove wire 1499N (16) from terminal board TB4 (15).



16-68. M1079 110/208 VAC POWER IN/OUT CABLE REPLACEMENT (CONT)

(8) Remove wires 500AA (11), 501BB (12), 502CC (13), and 1499N (16) from conduit (17).





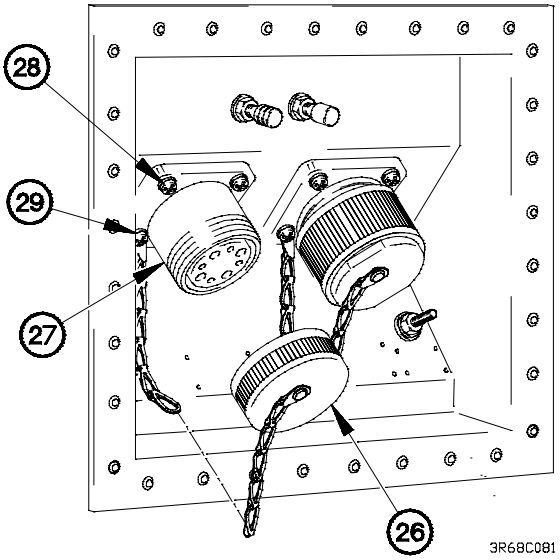
NOTE

Step (9) may require removal of five other terminal lugs.

(9) Remove nut (18), lockwasher (19), washer (20), wire 3085S terminal lug (21), wire 3085T terminal lug (22), wire 3085U terminal lug (23), and wire 3085V terminal lug (24) from chassis ground lug (25). Discard lockwasher.

(10) Remove dust cap (26) from 110/208 vac POWER OUT connector (27).

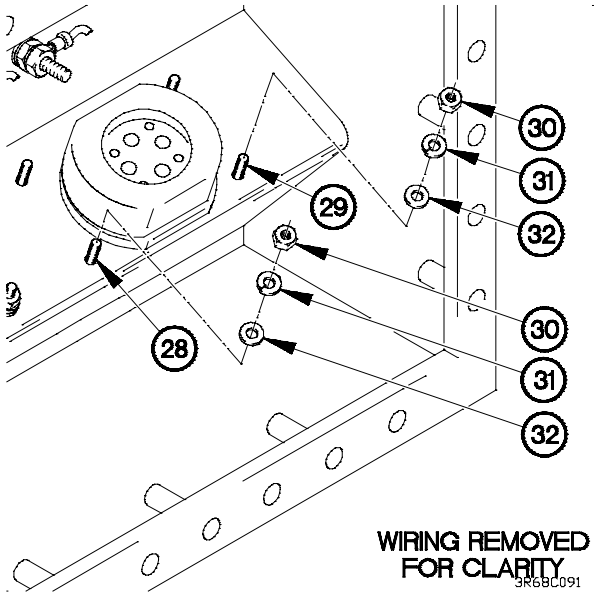
(11) Remove sealing compound from heads of screws (28 and 29) and edges of 110/208 vac POWER OUT connector (27).

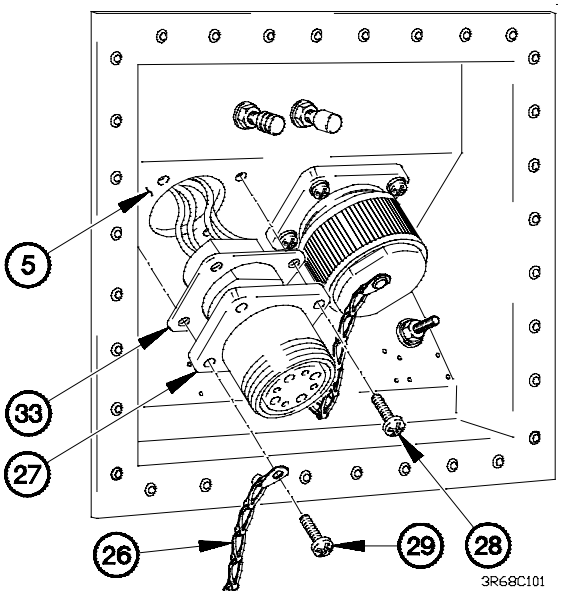


NOTE

Steps (12) through (14) require the aid of an assistant.

(12) Remove four nuts (30), lockwashers (31), and washers (32) from three screws (28) and screw (29). Discard lockwashers.





(13) Remove three screws (28) from 110/208 vac POWER OUT connector (27).

(14) Remove screw (29), dust cap (26), 110/208 vac POWER OUT connector (27) and gasket (33) from 110/208 vac power entry panel (5).

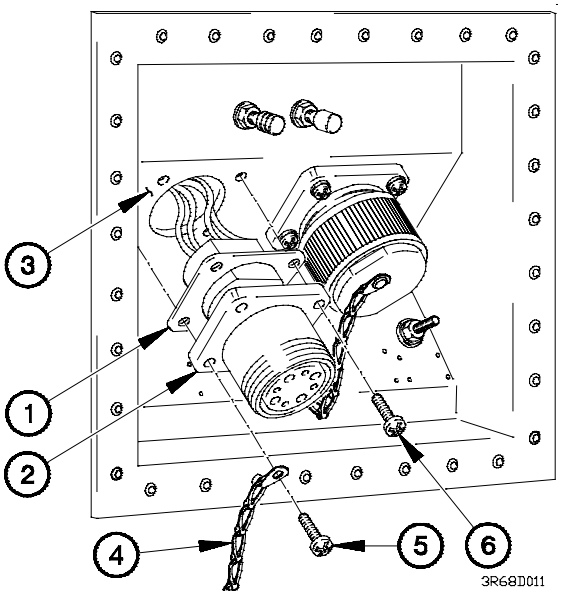
d. 110/208 VAC POWER OUT Connector Installation.

NOTE

Steps (1) through (4) require the aid of an assistant.

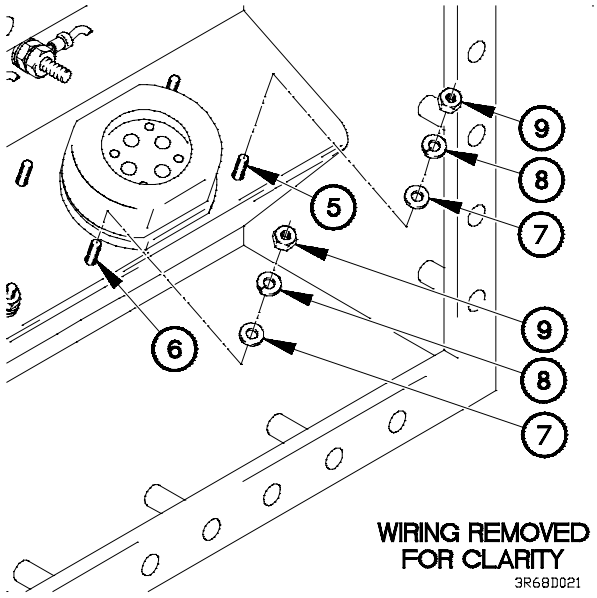
(1) Install gasket (1) and 110/208 vac POWER OUT connector (2) on 110/208 vac power entry panel (3) with dust cap (4) and screw (5).

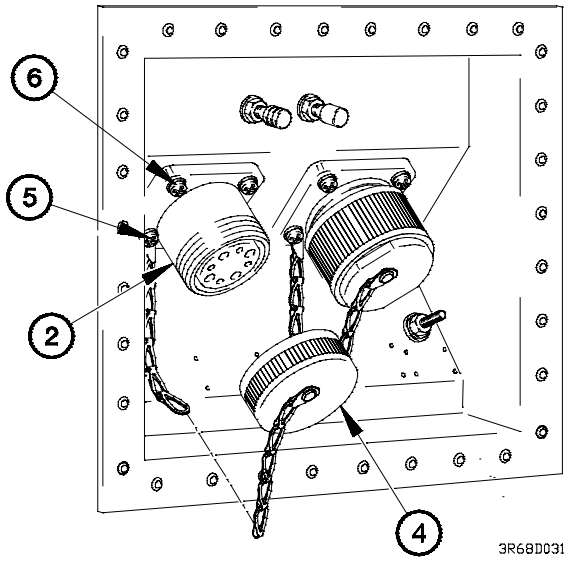
(2) Install three screws (6) in 110/208 vac POWER OUT connector (2).



16-68. M1079 110/208 VAC POWER IN/OUT CABLE REPLACEMENT (CONT)

(3) Install four washers (7), lockwashers (8), and nuts (9) on screw (5) and three screws (6).





WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

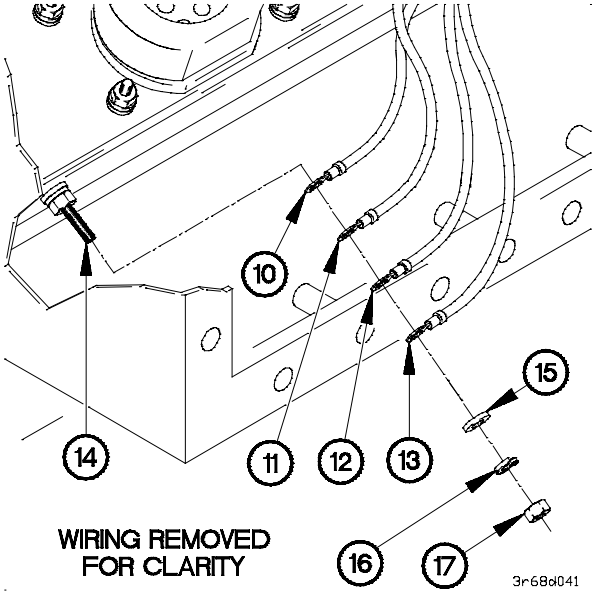
(4) Apply sealing compound on heads of screws (5 and 6) and edges of 110/208 vac POWER OUT connector (2).

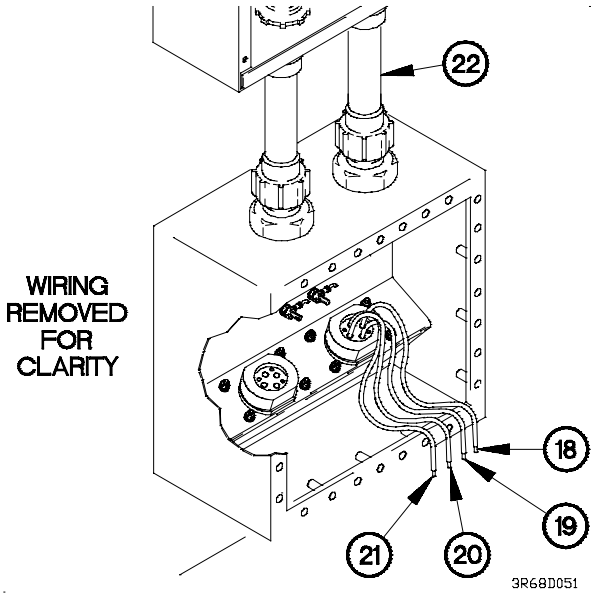
(5) Install dust cap (4) on 110/208 vac POWER OUT connector (2).

NOTE

Step (6) may require installation of five additional terminal lugs.

(6) Install wire 3085V terminal lug (10), wire 3085U terminal lug (11), wire 3085T terminal lug (12), and wire 3085S terminal lug (13) on chassis ground lug (14) with washer (15), lockwasher (16), and nut (17).

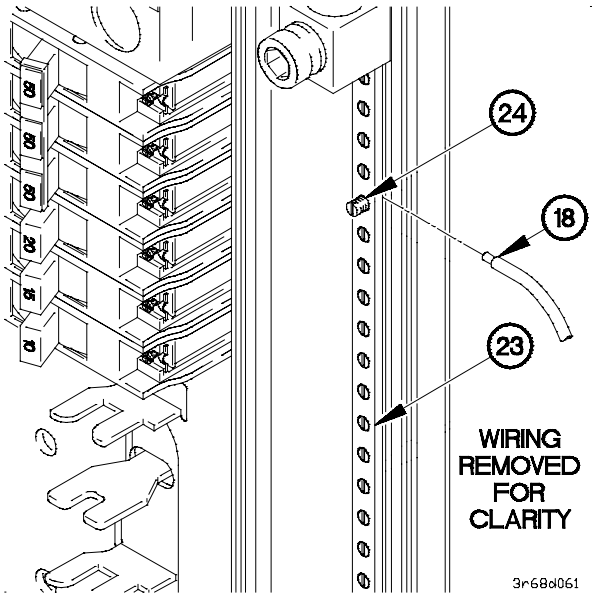




(7) Route wires 1499N (18), 502CC (19), 501BB (20), and 500AA (21) through conduit (22).

(8) Install wire 1499N (18) in terminal board TB4 (23).

(9) Tighten screw (24) in terminal board TB4 (23).



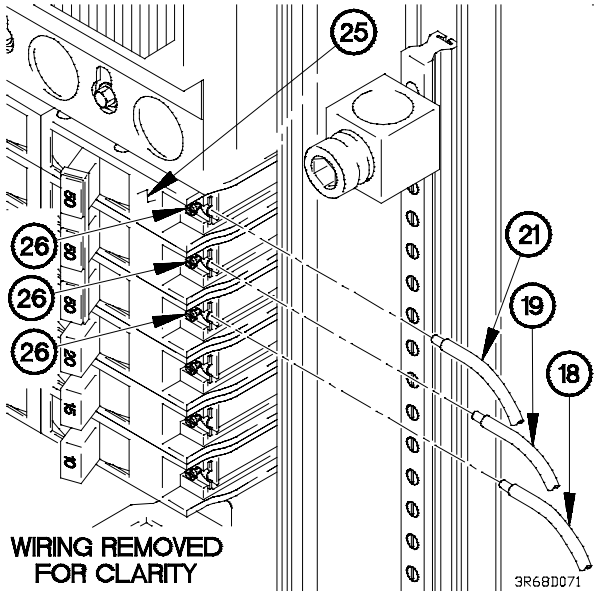
16-68. M1079 110/208 VAC POWER IN/OUT CABLE REPLACEMENT (CONT)

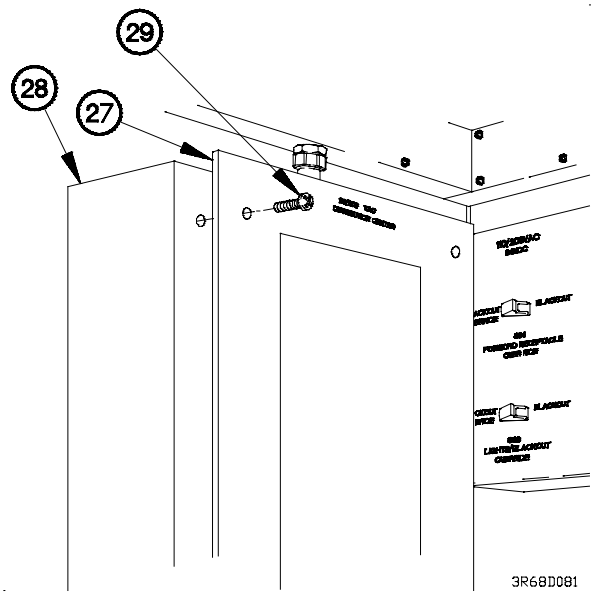
NOTE

Install plastic cable ties as required.

(10) Position wires 502CC (18), 501BB (19), and 500AA (21) in 50 amp AC circuit breaker (25).

(11) Tighten three screws (26) in 50 amp AC circuit breaker (25).



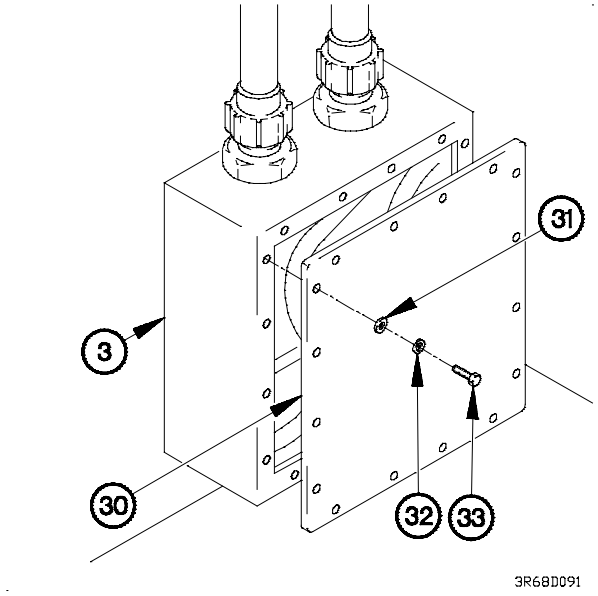


(12) Install cover (27) on 110/208 VAC POWER DISTRIBUTION PANEL (28) with six screws (29).

NOTE

Perform step (13) on van bodies serial number 191 and higher.

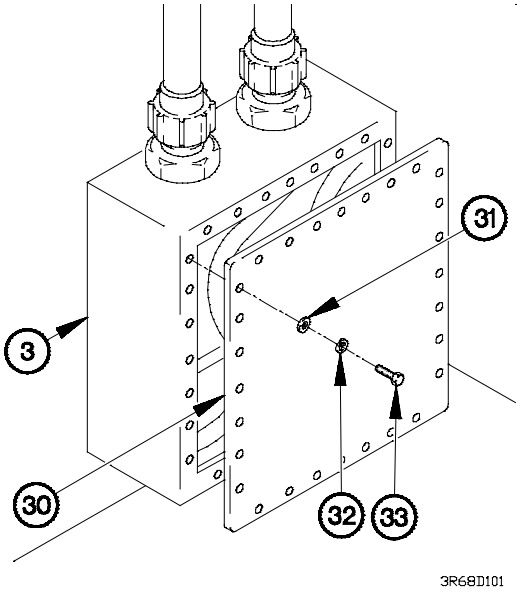
(13) Install cover (30) on 110/208 vac power entry panel (3) with 16 washers (31), lockwashers (32), and screws (33).



NOTE

Perform step (14) on van body serial numbers 001 through 190.

(14) Install cover (30) on 110/208 vac power entry panel (3) with 28 washers (31), lockwashers (32), and screws (33).



e. Follow-On Maintenance.

(1) Connect batteries (para 7-48).

(2) Connect AC power (TM 9-2320-365-10).

(3) Connect field telephone wires, if required (TM 9-2320-365-10).

(4) Check for proper operation of 110/208 VAC power system (TM 9-2320-365-10).

(5) Close LH and RH doors (TM 9-2320-365-10).

End of Task.

16-69. M1079 CHASSIS GROUND LUG REPLACEMENT

This task covers:

a. Removal
b. Installation
c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
AC power disconnected (TM 9-2320-365-10).
Batteries disconnected (para 7-48).
Ground wire removed, if installed (TM 9-2320-365-10).
LH and RH doors opened (115 degrees) (TM 9-2320-365-10).

Materials/Parts
Ties, Cable, Plastic (Item 76, Appendix D)
Lockwasher (16) (van bodies serial number 191 and higher) (Item 77, Appendix G)
Lockwasher (28) (van body serial numbers 001 through 190) (Item 77, Appendix G)
Lockwasher (4) (Item 81, Appendix G)

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)

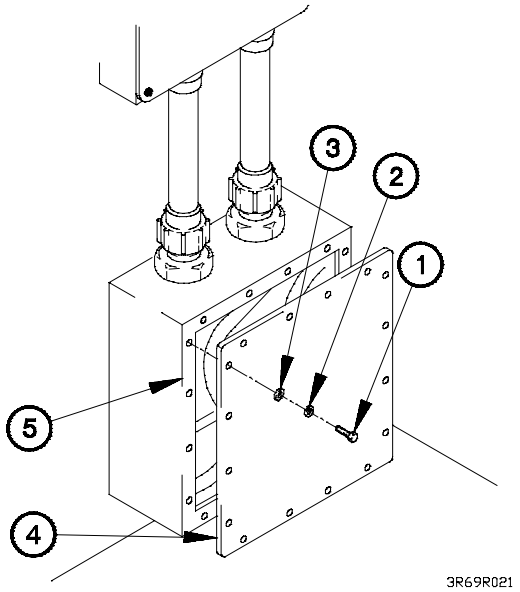
Personnel Required
(2)

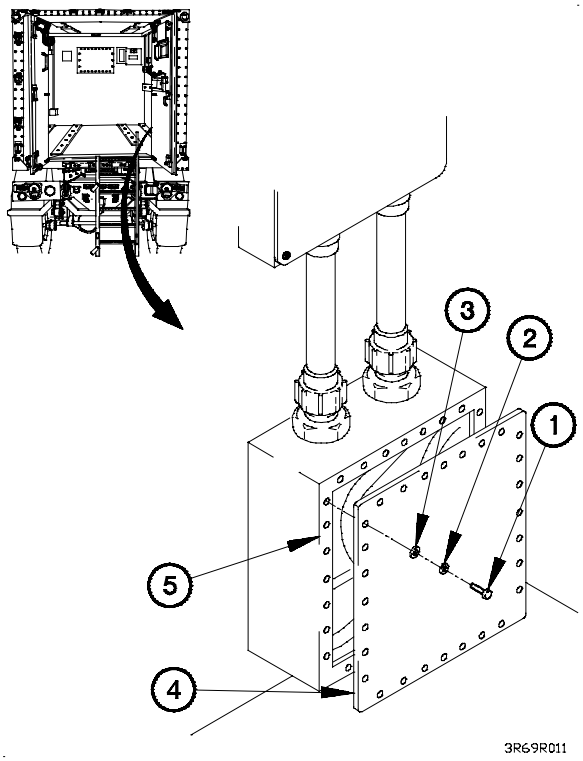
a. Removal.

NOTE

Perform step (1) on van body serial numbers 001 through 190.

(1) Remove 28 screws (1), lockwashers (2), washers (3), and cover (4) from 110/208 vac power entry panel (5). Discard lockwashers.





NOTE

Perform step (2) on van bodies serial number 191 and higher.

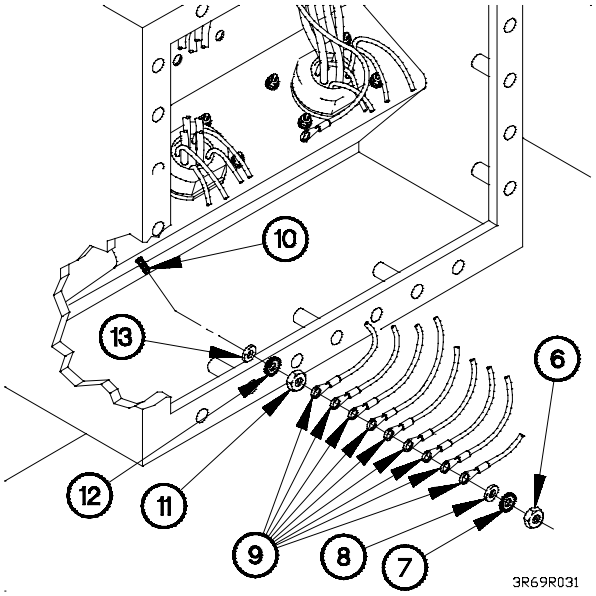
(2) Remove 16 screws (1), lockwashers (2), washers (3), and cover (4) from 110/208 vac power entry panel (5). Discard lockwashers.

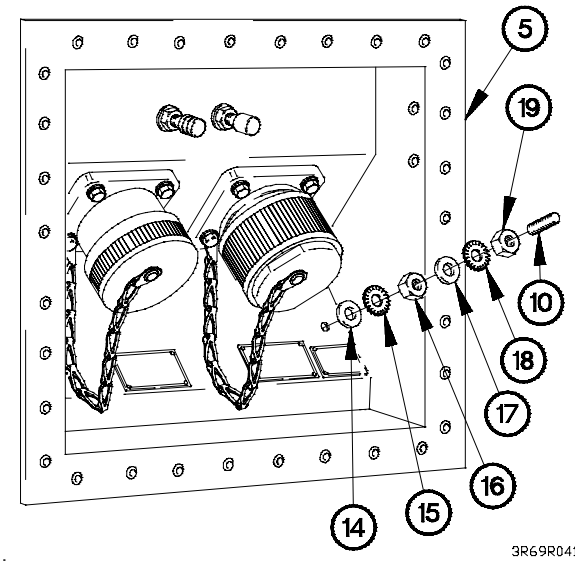
NOTE

- Steps (3) and (4) require the aid of an assistant.
- Note position of terminal lugs prior to removal.
- Remove plastic cable ties as required.

(3) Remove nut (6), lockwasher (7), washer (8), and nine terminal lugs (9) from chassis ground lug (10). Discard lockwasher.

(4) Remove nut (11), lockwasher (12), and washer (13) from chassis ground lug (10). Discard lockwasher.





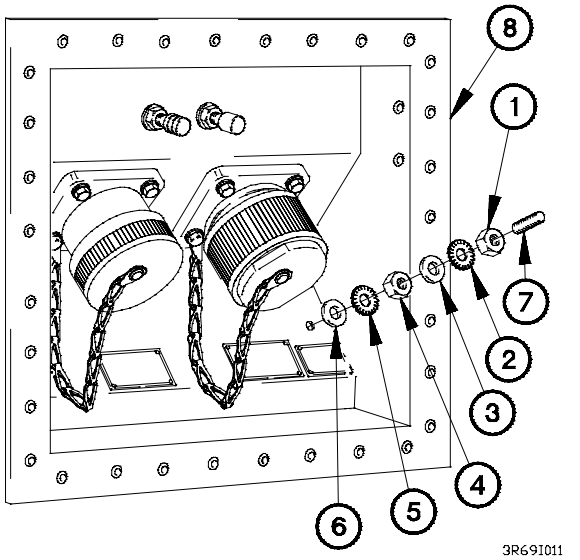
(5) Remove chassis ground lug (10) from 110/208 vac power entry panel (5).

(6) Remove washer (14), lockwasher (15), nut (16), washer (17), lockwasher (18), and nut (19) from chassis ground lug (10).

b. Installation.

(1) Install nut (1), lockwasher (2), washer (3), nut (4), lockwasher (5), and washer (6) on chassis ground lug (7).

(2) Install chassis ground lug (7) in 110/208 vac power entry panel (8).



16-69. M1079 CHASSIS GROUND LUG REPLACEMENT (CONT)

NOTE

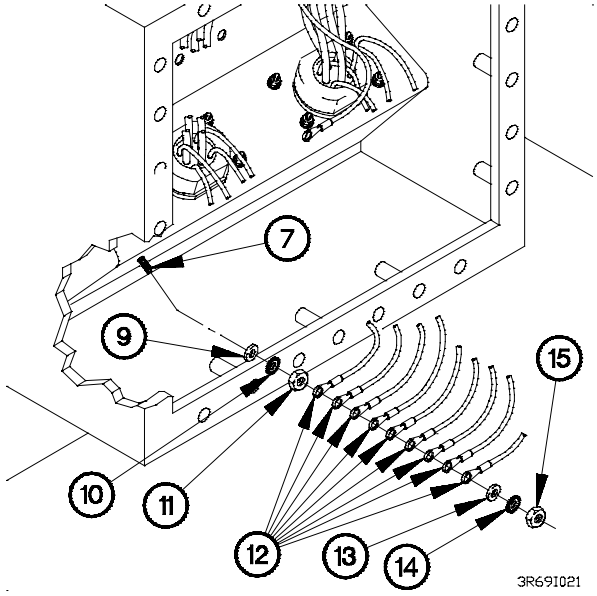
Steps (3) and (4) require the aid of an assistant.

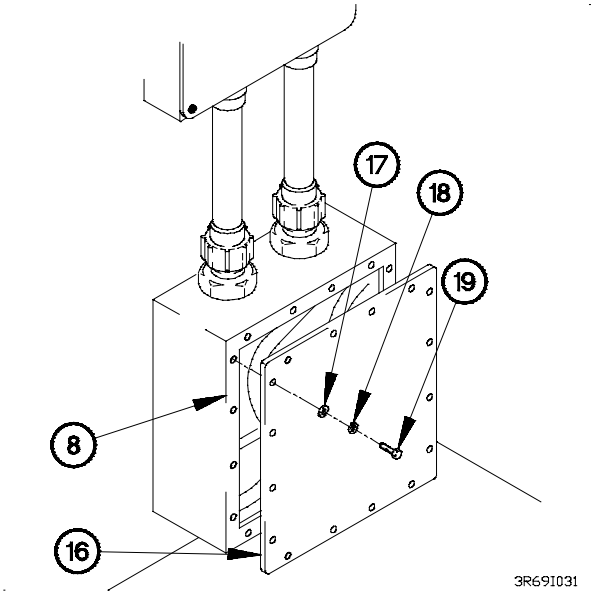
(3) Install washer (9), lockwasher (10), and nut (11) on chassis ground lug (7).

NOTE

Install plastic cable ties as required.

(4) Install nine terminal lugs (12) on chassis ground lug (7) with washer (13), lockwasher (14), and nut (15).





NOTE

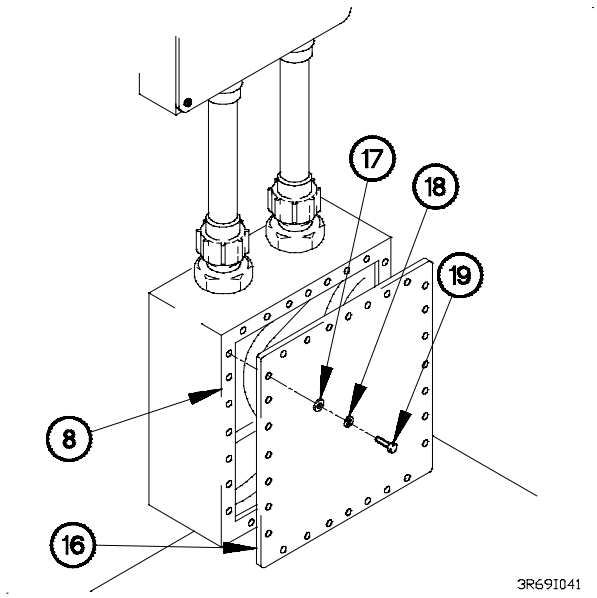
Perform step (6) on van body serial numbers 001 through 190.

(6) Install cover (16) on 110/208 vac power entry panel (8) with 28 washers (17), lockwashers (18), and screws (19).

NOTE

Perform step (5) on van bodies serial number 191 and higher.

(5) Install cover (16) on 110/208 vac power entry panel (8) with 16 washers (17), lockwashers (18), and screws (19).



c. Follow-On Maintenance.

(1) Connect ground wire, if installed (TM 9-2320-365-10).

(2) Connect batteries (para 7-48).

(3) Connect AC power (TM 9-2320-365-10).

(4) Close LH and RH doors (TM 9-2320-365-10).

End of Task.

16-70. M1079 110/208 VAC POWER ENTRY PANEL AND CONDUIT REPLACEMENT

This task covers:

a. Removal
b. Installation
c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
Chassis ground lug removed (para 16-69).
110/208 VAC POWER IN/OUT cables removed (para 16-68).
Field telephone binding posts removed (para 16-51).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Drill, Portable, Electric (Item 7, Appendix C)
Drill Set, Twist (Item 6, Appendix C)
Goggles, Industrial (Item 15, Appendix C)
Tool Kit, Blind Rivet (Item 43, Appendix C)

Materials/Parts
Sealing Compound (Item 67, Appendix D)
Rivet, Blind (32) (Item 229, Appendix G)

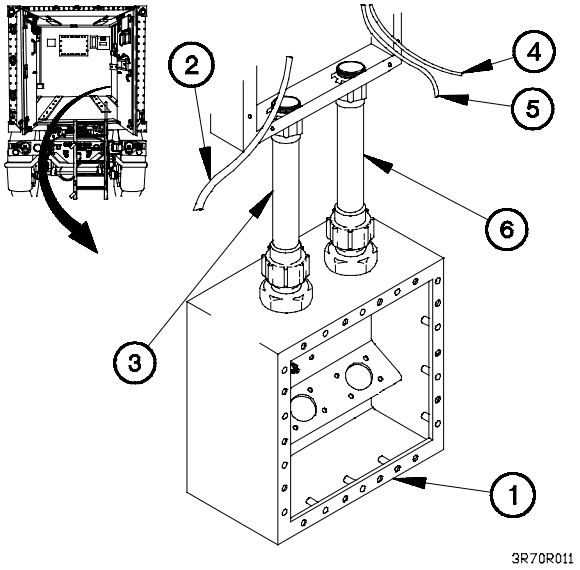
Personnel Required
(2)

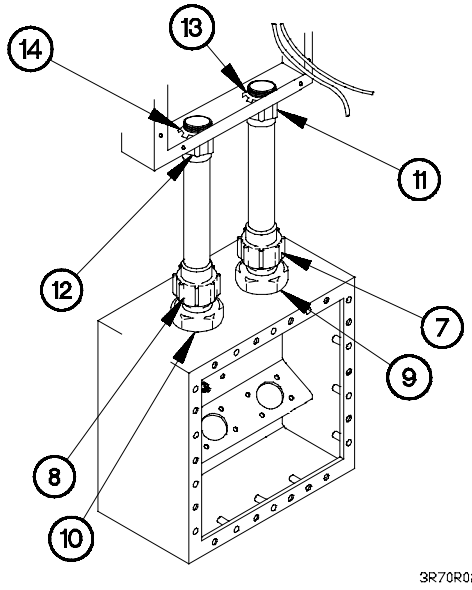
a. Removal.

(1) Remove sealing compound from edges of 110/208 vac power entry panel (1).

(2) Remove wire 3085Y (2) from conduit (3).

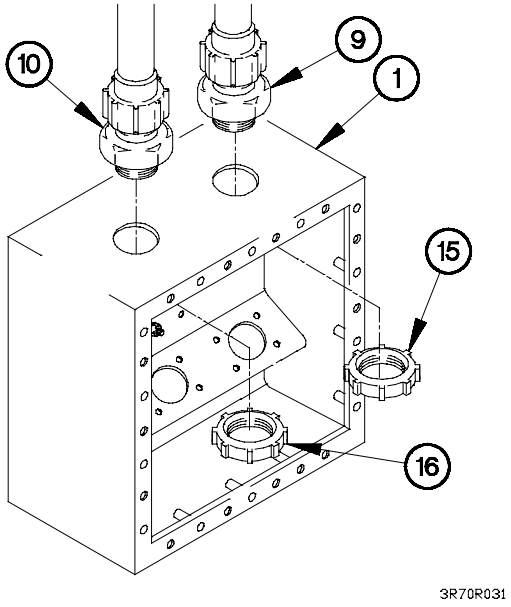
(3) Remove wires 424 (4) and 425 (5) from conduit (6).





(4) Loosen conduit nuts (7 and 8) on conduit connectors (9 and 10).

(5) Loosen conduit nuts (11 and 12) on conduit connectors (13 and 14).



(6) Remove locknuts (15 and 16) from conduit connectors (9 and 10).

(7) Lift conduit connectors (9 and 10) clear of 110/208 vac power entry panel (1).

(8) Remove sealing compound from edges of 110/208 vac power entry panel (1).

WARNING

Wear appropriate eye protection when removing rivets. Failure to comply may result in injury to personnel.

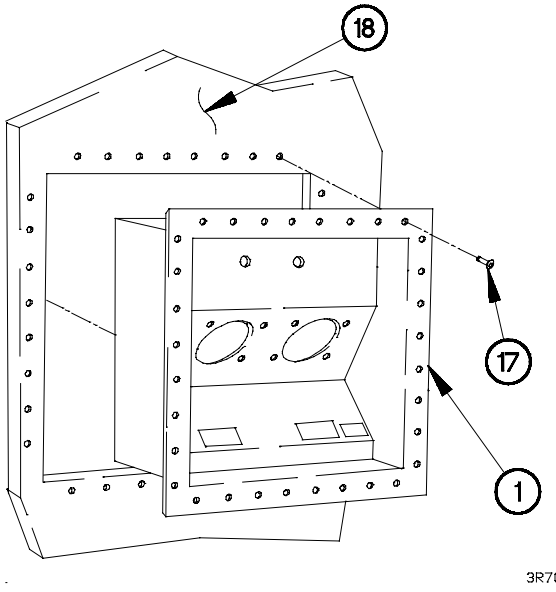
NOTE

Steps (9 and 10) require the aid of an assistant.

(9) Remove 32 rivets (17) from 110/208 vac power entry panel (1).

CAUTION

Start at one corner and slowly work 110/208 vac power entry panel loose. Failure to comply may result in damage to equipment.



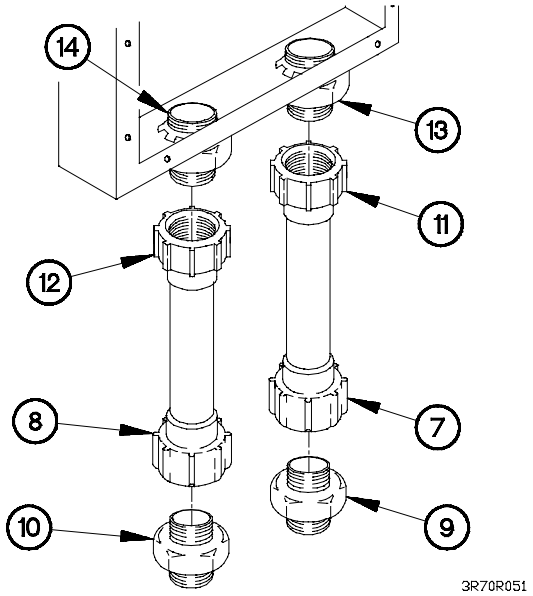
(10) Remove 110/208 vac power entry panel (1) from van body wall (18).

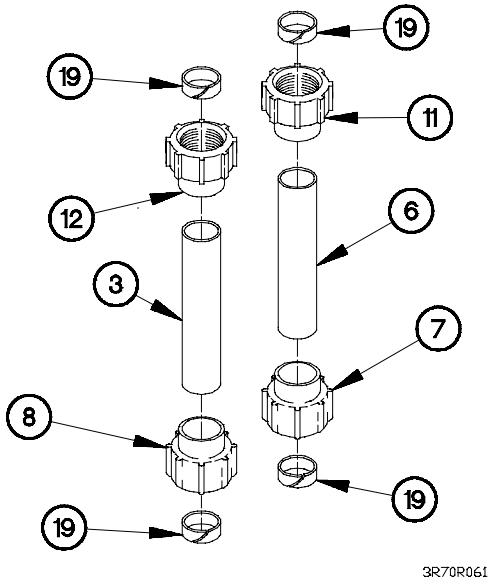
(11) Remove sealing compound from van body wall (18).

16-70. M1079 110/208 VAC POWER ENTRY PANEL AND CONDUIT REPLACEMENT (CONT)

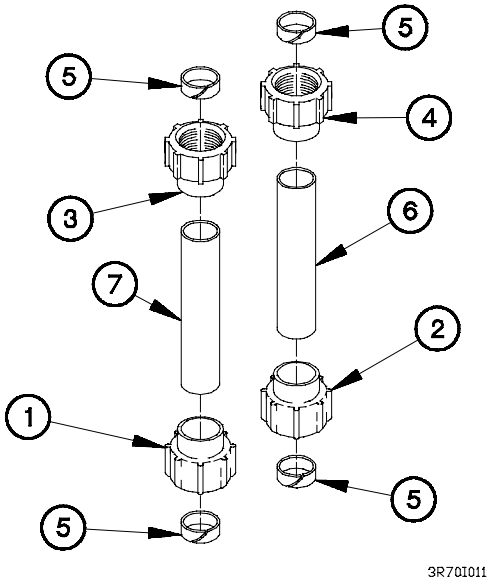
(12) Remove conduit nuts (11 and 12) from conduit connectors (13 and 14).

(13) Remove conduit nuts (7 and 8) from conduit connectors (9 and 10).





(14) Remove four ferrules (19) and conduit nuts (7, 8, 11, and 12) from conduits (3 and 6).

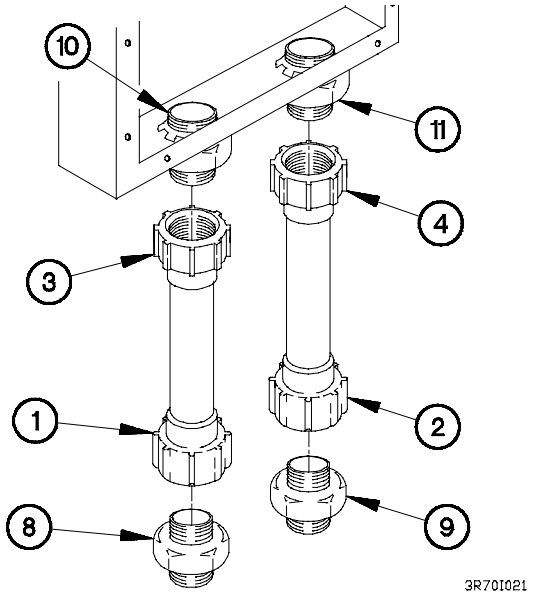


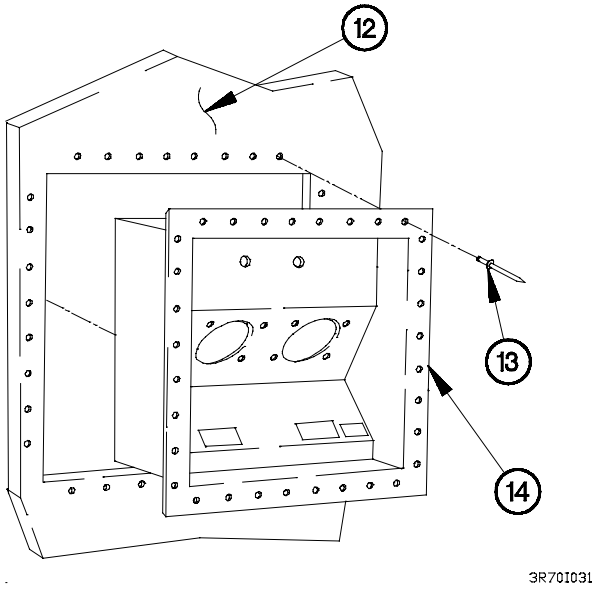
b. Installation.

(1) Install conduit nuts (1, 2, 3, and 4) and four ferrules (5) on conduits (6 and 7).

(2) Position conduit nuts (1 and 2) on conduit connectors (8 and 9).

(3) Position conduit nuts (3 and 4) on conduit connectors (10 and 11).





WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

(4) Apply sealing compound to van body wall (12).

CAUTION

Coat all rivets with sealing compound prior to installation. Failure to comply may result in damage to equipment.

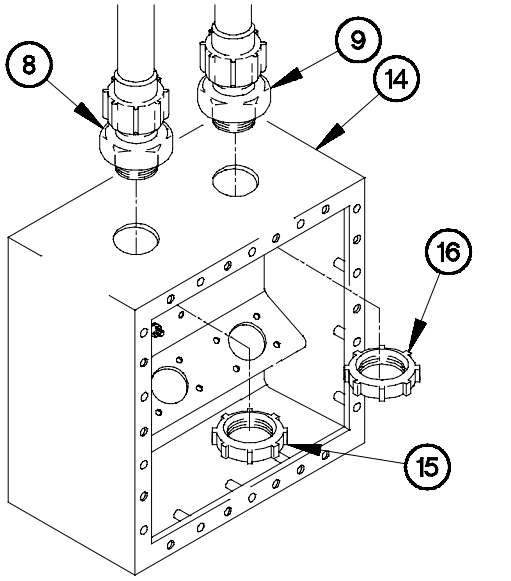
(5) Apply sealing compound to 32 rivets (13).

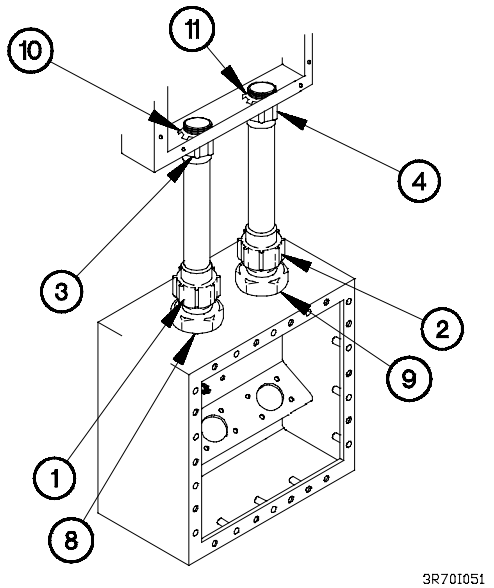
(6) Install 110/208 vac power entry panel (14) in van body wall (12) with 32 rivets (13).

(7) Apply sealing compound on edges of 110/208 vac power entry panel (14).

16-70. M1079 110/208 VAC POWER ENTRY PANEL AND CONDUIT REPLACEMENT (CONT)

(8) Install conduit connectors (8 and 9) in 110/208 vac power entry panel (14) with locknuts (15 and 16).





(9) Tighten conduit nuts (3 and 4) on conduit connectors (10 and 11).

(10) Tighten conduit nuts (1 and 2) on conduit connectors (8 and 9).

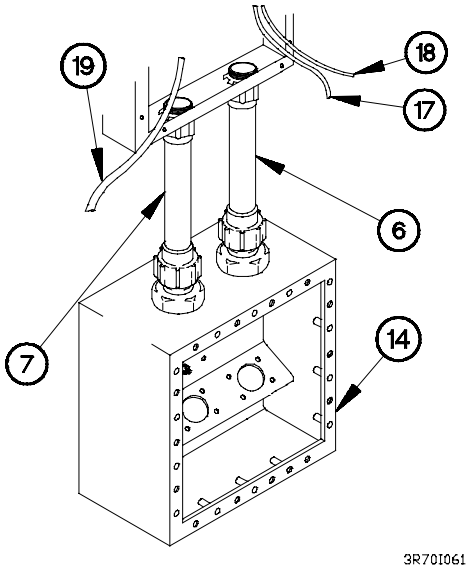
(11) Route wires 425 (17) and 424 (18) through conduit (6).

(12) Route wire 3085Y (19) through conduit (7).

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

(13) Apply sealing compound around 110/208 vac power entry panel (14).



c. Follow-On Maintenance.

(1) Install field telephone binding posts (para 16-51).

(2) Install 110/208 VAC POWER IN/OUT cables (para 16-68).

(3) Install chassis ground lug (para 16-69).

End of Task.

16-71. M1079 12/24 VDC POWER ENTRY CONNECTOR REPLACEMENT

This task covers:

a. Removal
b. Installation
c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
AC power disconnected (TM 9-2320-365-10).
Batteries disconnected (para 7-48).
LH and RH doors opened (115 degrees) (TM 9-2320-365-10).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Heater, Gun Type, Electric (Item 20, Appendix B)
Soldering Iron, Electric (Item 72, Appendix B)

Materials/Parts
Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D)
Insulation Sleeving, Electrical (Item 31, Appendix D)
Solder, Tin Alloy (Item 70, Appendix D)
Sealing Compound (Item 67, Appendix D)
Lockwasher (Item 79 Appendix G)
Lockwasher (4) (van bodies serial number 191 and higher) (Item 77, Appendix G)
Lockwasher (16) (van body serial numbers 001 through 190) (Item 77, Appendix G)
Gasket (Item 29, Appendix G)

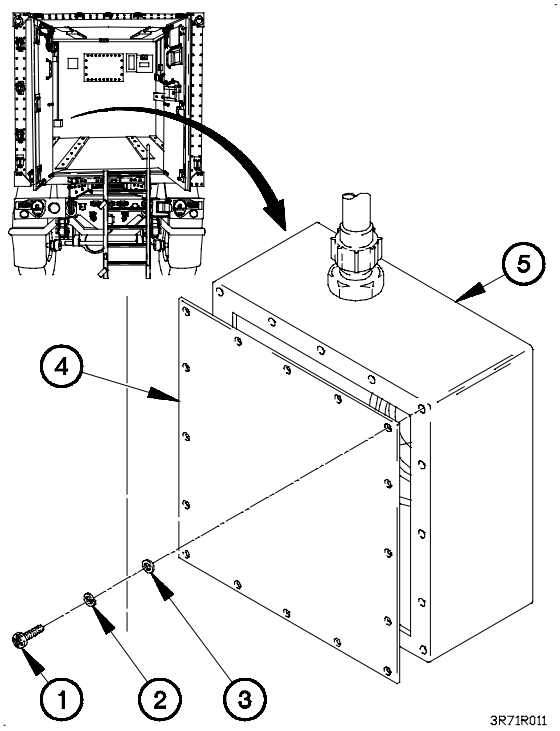
Personnel Required
(2)

a. Removal.

NOTE

Perform step (1) on van body serial numbers 001 through 190.

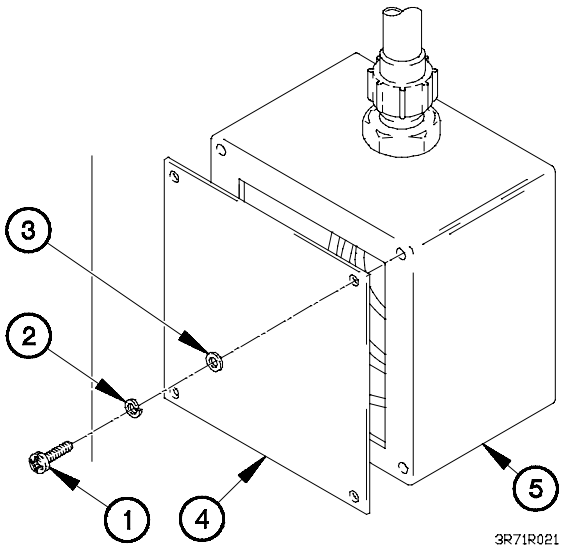
(1) Remove 16 screws (1), lockwashers (2), washers (3), and cover (4) from 12/24 vdc power entry panel (5). Discard lockwashers.

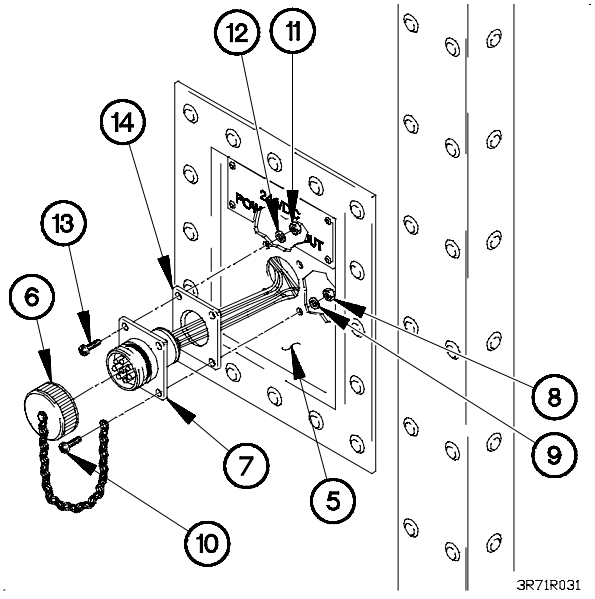


NOTE

Perform step (2) on van bodies serial number 191 and higher.

(2) Remove four screws (1), lockwashers (2), washers (3), and cover (4) from 12/24 vdc power entry panel (5). Discard lockwashers.





(3) Remove dust cap (6) from 12/24 vdc power entry connector J173 (7).

(4) Remove sealing compound from edges of 12/24 vdc power entry connector J173 (7).

NOTE

Steps (5) and (6) require the aid of an assistant.

(5) Remove nut (8), lockwasher (9), dust cap (6), and screw (10) from 12/24 vdc power entry connector J173 (7). Discard lockwasher.

(6) Remove three nuts (11), lockwashers (12), screws (13), 12/24 vdc power entry connector J173 (7), and gasket (14) from 12/24 vdc power entry panel (5). Discard lockwashers.

16-71. M1079 12/24 VDC POWER ENTRY CONNECTOR REPLACEMENT (CONT)

NOTE

- All wires on 12/24 vdc power entry connector are removed the same way. One wire shown.
- Tag wires and connection points prior to disconnecting.
- Refer to **Table 16-9. M1079 Connector J173 Pin Letters and Wire Numbers** for details.

(7) Remove wire (15) from 12/24 vdc power entry connector J173 pin (16).

(8) Remove insulation sleeving (17) from wire (15).

(9) Perform steps (7) and (8) on remaining wires.

(10) Remove gasket (14) from 12/24 vdc power entry connector J173 (7). Discard gasket.

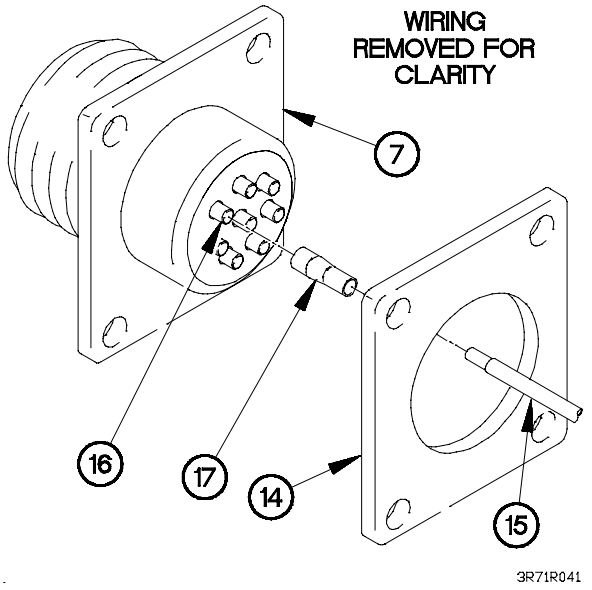
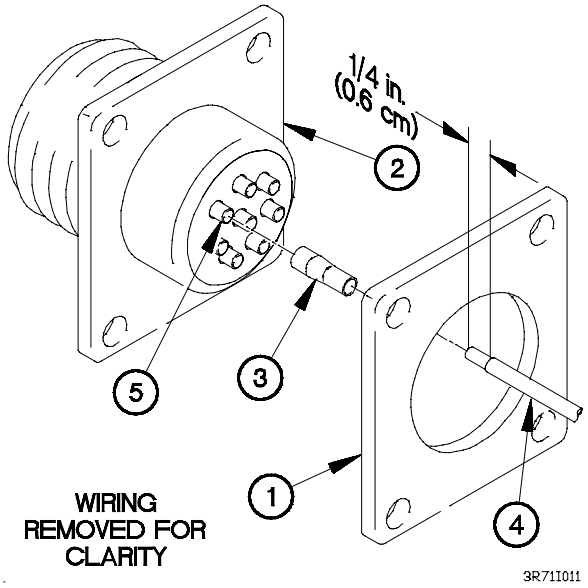


Table 16-9. M1079 Connector J173 Pin Letters and Wire Numbers

PIN LETTER	A	B	C	D	E	F	G	H
WIRE NUMBER	2010	3086	2040	3086	UNUSED	2006	1507	1507

b. Installation.



NOTE

- All wires on 12/24 vdc power entry connector are installed the same way. One wire shown.
- Refer to **Table 16-9. M1079 Connector J173 Pin Letters and Wire Numbers** for details.

(1) Position gasket (1) on 12/24 vdc power entry connector J173 (2).

(2) Position insulation sleeving (3) on wire (4).

(3) Remove approximately 1/4 in. (0.6 cm) of insulation from wire (4).

(4) Solder wire (4) to 12/24 vdc power entry connector J173 pin (5).

(5) Shrink insulation sleeving (3) on wire (4) and 12/24 vdc power entry connector J173 pin (5).

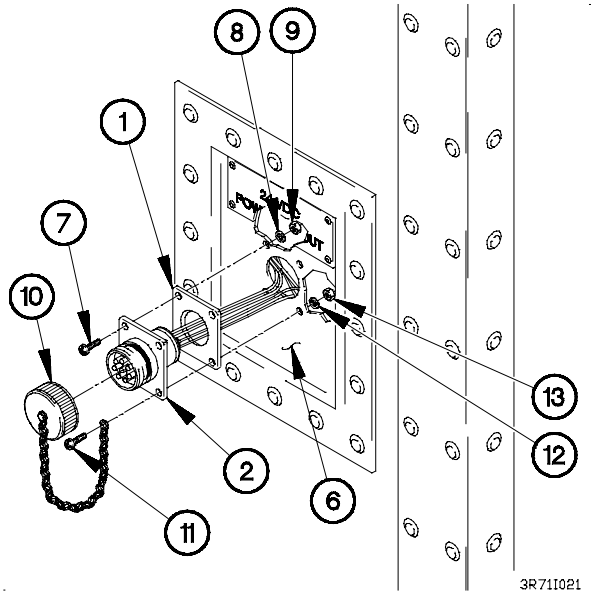
(6) Perform steps (2) through (5) on remaining wires.

NOTE

Steps (7) and (8) require the aid of an assistant.

(7) Install gasket (1) and 12/24 vdc power entry connector J173 (2) in 12/24 vdc power entry panel (6) with three screws (7), lockwashers (8), and nuts (9).

(8) Install dust cap (10) on 12/24 vdc power entry connector J173 (2) with screw (11), lockwasher (12), and nut (13).

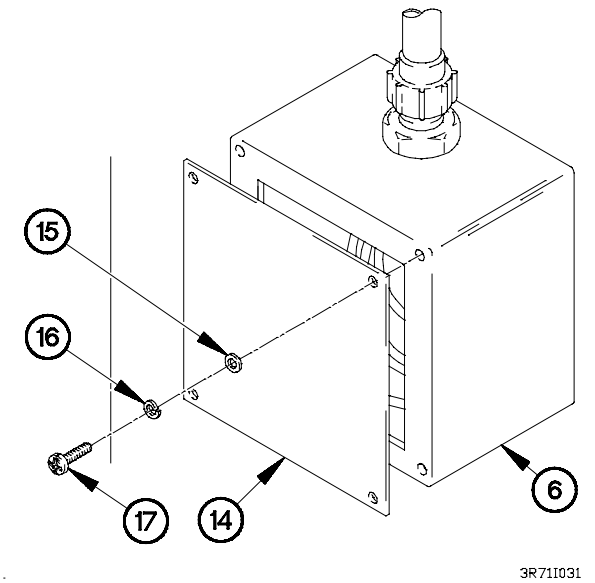


WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

(9) Apply sealing compound on edges of 12/24 vdc power entry connector J173 (2).

(10) Install dust cap (10) on 12/24 vdc power entry connector J173 (2).



NOTE

Perform step (11) on van bodies serial number 191 and higher.

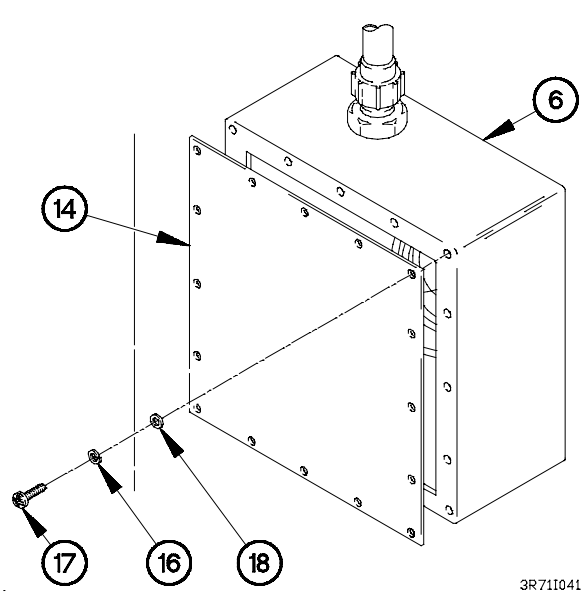
(11) Install cover (14) on 12/24 vdc power entry panel (6) with four washers (15), lockwashers (16), and screws (17).

16-71. M1079 12/24 VDC POWER ENTRY CONNECTOR REPLACEMENT (CONT)

NOTE

Perform step (12) on van body serial numbers 001 through 190.

(12) Install cover (14) on 12/24 vdc power entry panel (6) with 16 washers (18), lockwashers (16), and screws (17).



c. Follow-On Maintenance.

(1) Connect batteries (para 7-48).

(2) Connect AC power (TM 9-2320-365-10).

(3) Check for proper operation of 12/24 vdc system (TM 9-2320-365-10).

(4) Close LH and RH doors (TM 9-2320-365-10).

End of Task.

16-72. M1079 12/24 VDC POWER ENTRY PANEL AND CONDUIT REPLACEMENT

This task covers:

a. Removal
b. Installation
c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
12/24 vdc power entry connector removed (para 16-71).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Drill, Portable, Electric (Item 7, Appendix C)
Drill Set, Twist (Item 6, Appendix C)
Goggles, Industrial (Item 15, Appendix C)

Materials/Parts
Sealing Compound (Item 67, Appendix D)
Rivet, Blind (22) (van body serial numbers 001 through 190) (Item 229, Appendix G)
Rivet, Blind (14) (van bodies serial number 191 and higher) (Item 229, Appendix G)
Lockwasher (16) (Item 76, Appendix G)

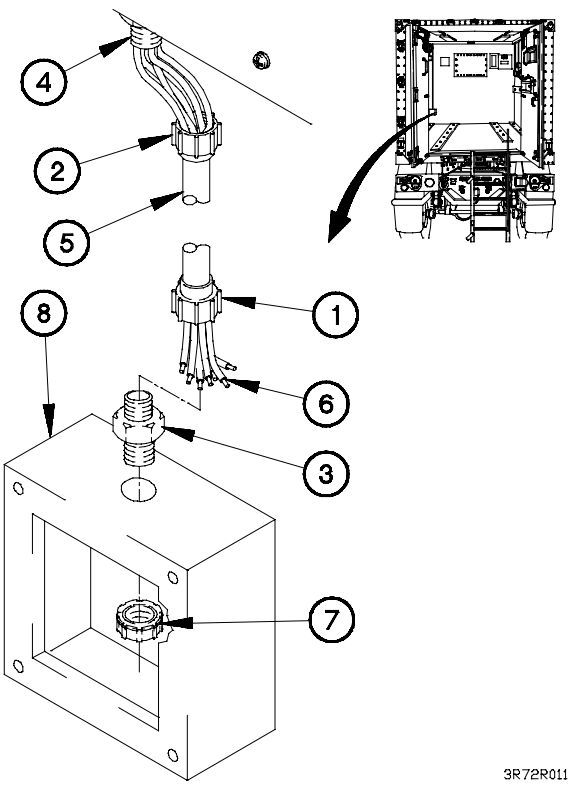
a. Removal.

(1) Remove conduit nuts (1 and 2) from conduit connectors (3 and 4).

(2) Remove conduit (5) and wires (6) from conduit connector (3).

(3) Remove locknut (7) and conduit connector (3) from 12/24 vdc power entry panel (8).

(4) Remove sealing compound from edges of 12/24 vdc power entry panel (8).



16-72. M1079 12/24 VDC POWER ENTRY PANEL AND CONDUIT REPLACEMENT (CONT)

(5) Remove sealing compound from edges of 12/24 vdc power entry panel (8).

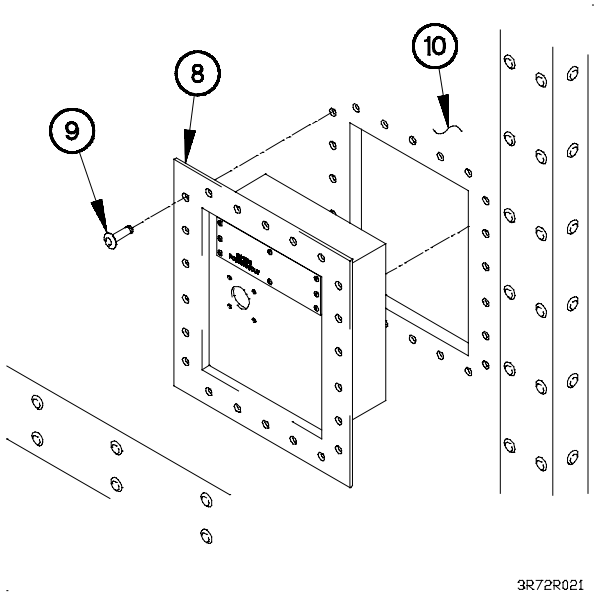
WARNING

Wear appropriate eye protection when removing rivets. Failure to comply may result in injury to personnel.

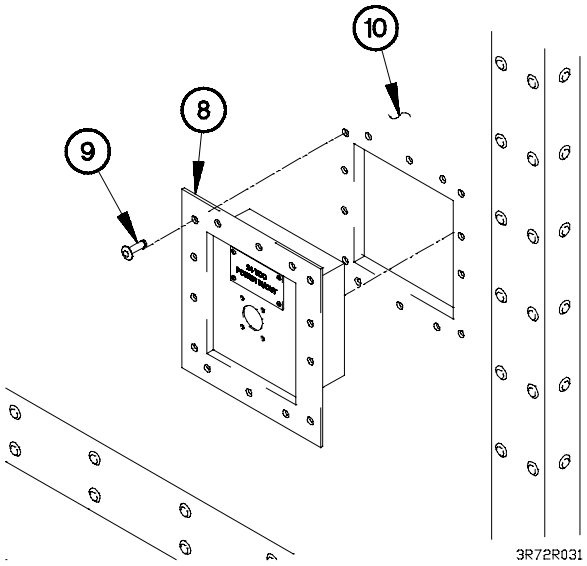
NOTE

Perform step (6) on van body serial numbers 001 through 190.

(6) Remove 22 rivets (9) and 12/24 vdc power entry panel (8) from van body wall (10).



3R72R021



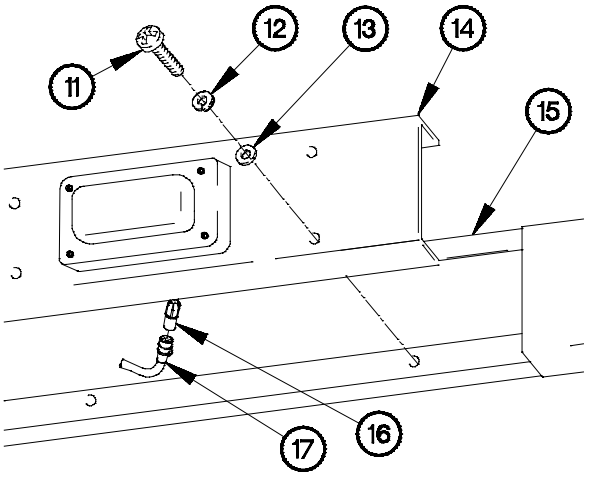
3R72R031

NOTE

Perform step (7) on van bodies serial number 191 and higher.

(7) Remove 14 rivets (9) and 12/24 vdc power entry panel (8) from van body wall (10).

(8) Remove sealing compound from van body wall (10).



3R72R041

(9) Remove 16 screws (11), lockwashers (12), washers (13), and raceway cover (14) from raceway (15). Discard lockwashers.

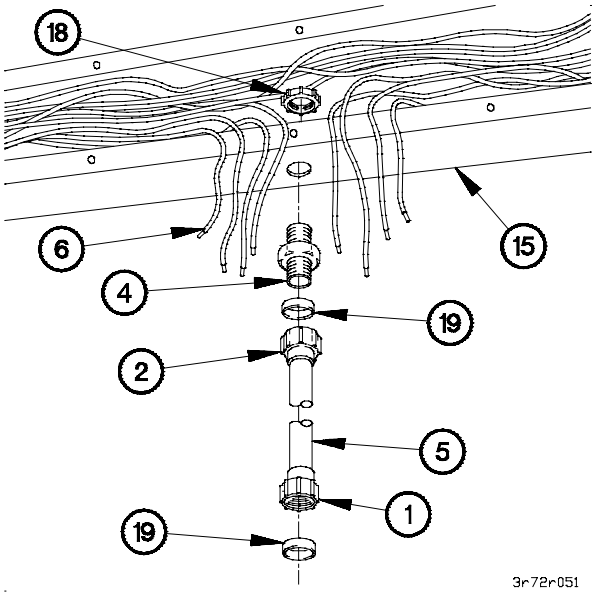
(10) Disconnect emergency light connector J166 (16) from connector P166 (17).

(11) Remove conduit (5) from wires (6).

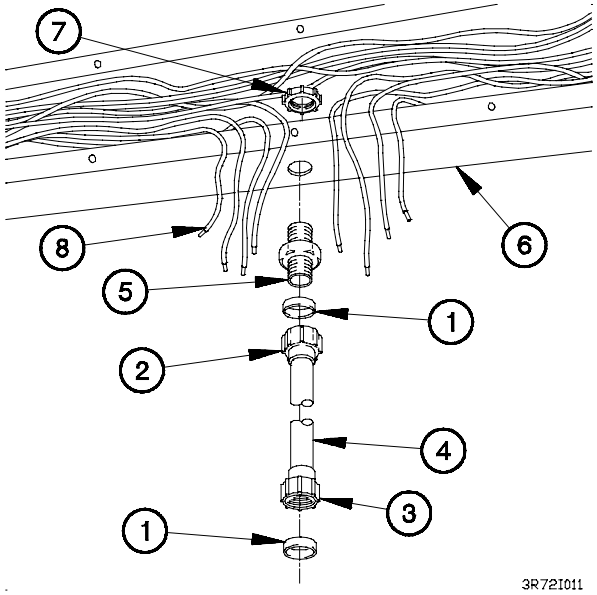
(12) Remove wires (6) from conduit connector (4).

(13) Remove locknut (18) and conduit connector (4) from raceway (15).

(14) Remove conduit nuts (1 and 2) and two ferrules (19) from conduit (5).



b. Installation.



(1) Install two ferrules (1) and conduit nuts (2 and 3) on conduit (4).

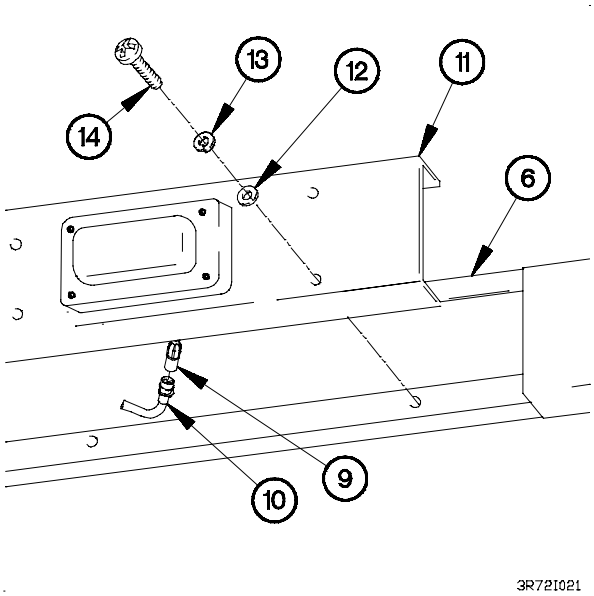
(2) Install conduit connector (5) in raceway (6) with locknut (7).

(3) Route wires (8) through conduit connector (5).

(4) Route wires (8) through conduit (4).

(5) Connect emergency light connector J166 (9) to connector P166 (10).

(6) Install raceway cover (11) on raceway (6) with 16 washers (12), lockwashers (13), and screws (14).



16-72. M1079 12/24 VDC POWER ENTRY PANEL AND CONDUIT REPLACEMENT (CONT)

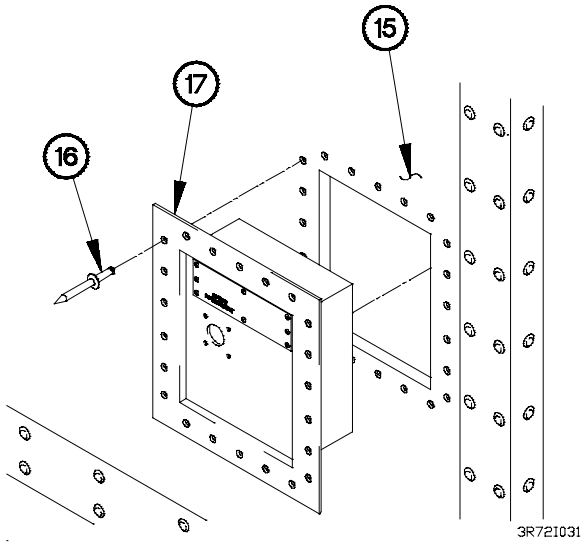
WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

CAUTION

Coat all rivets with sealing compound prior to installation. Failure to comply may result in damage to equipment.

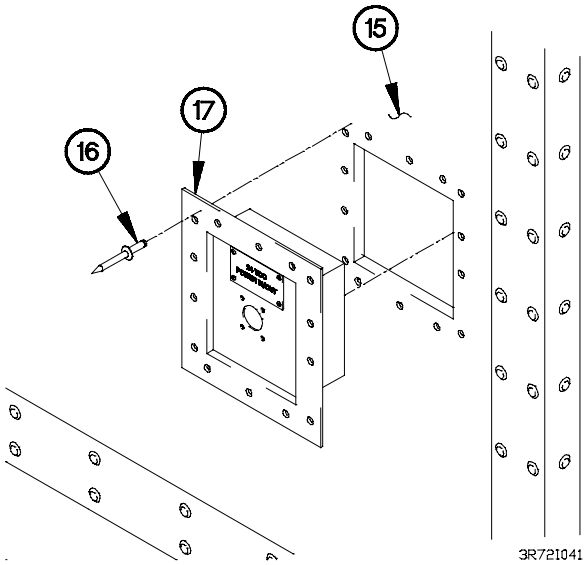
(7) Apply sealing compound on van body wall (15) and rivets (16).



NOTE

Perform step (8) on van bodies serial number 191 and higher.

(8) Install 12/24 vdc power entry panel (17) on van body wall (15) with 14 rivets (16).



NOTE

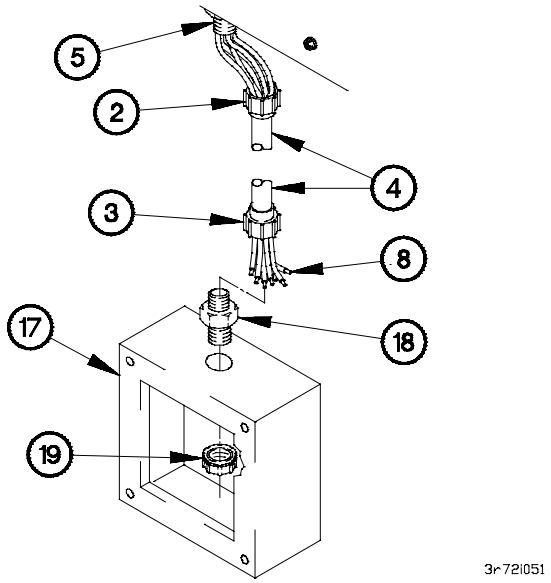
Perform step (9) on van body serial numbers 001 through 190.

(9) Install 12/24 vdc power entry panel (17) on van body wall (15) with 22 rivets (16).

(10) Apply sealing compound on edges of 12/24 vdc power entry panel (17).

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.



(11) Apply sealing compound on edges of 12/24 vdc power entry panel (17).

(12) Install conduit connector (18) in 12/24 vdc power entry panel (17) with locknut (19).

(13) Install wires (8) and conduit (4) in conduit connector (18).

(14) Tighten nuts (2 and 3) on conduit connectors (5 and 18).

c. Follow-On Maintenance.

Install 12/24 vdc power entry connector (para 16-71).

End of Task.

16-73. M1079 VAN PREPARATION FOR AIR TRANSPORT

This task covers:

a. Preparation b. Recovery

INITIAL SETUP

Equipment Conditions
Engine shut down (TM 9-2320-365-10).

WARNING

- **Heavy objects/loads, such as tool boxes and heavy parts, must always be carried on the floor with the weight distributed as equally as possible between left and right sides of M1079 van. Failure to comply decreases the stability of the M1079 van and will increase the likelihood of a rollover.**
- **Heavy cabinets must always be mounted as low as possible with the weight distributed as equally as possible between left and right sides of M1079 van. Remember to consider the weight of the items that will be stored in the cabinets. Failure to comply decreases the stability of the M1079 van and will increase the likelihood of a rollover.**
- **Always keep in mind, when placing items inside the M1079 van, that heavier items must always be positioned as low as possible and the weight distributed as equally as possible between left and right sides of M1079 van. Failure to comply decreases the stability of the M1079 van and will increase the likelihood of a rollover.**

a. Preparation.

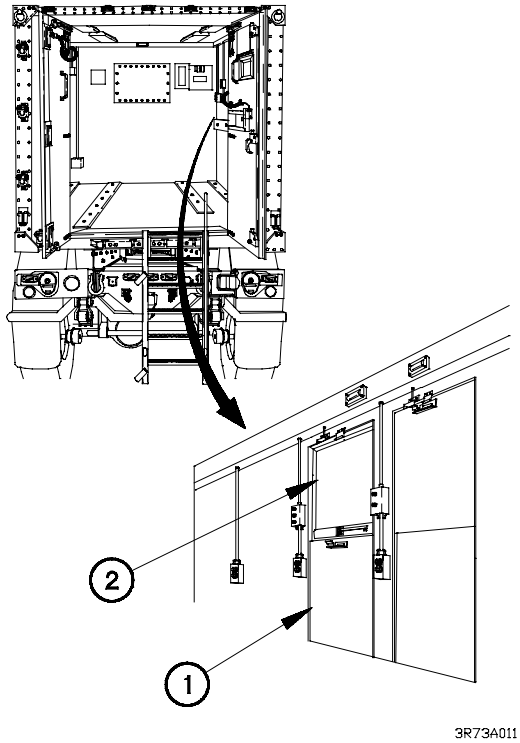
CAUTION

PRIOR TO SHIPMENT BY RAIL, PROPERLY STOW, TIE DOWN, AND OR BRACE ALL LOOSE ITEMS AND OTHER ITEMS INSIDE THE VAN. Failure to comply may result in damage to equipment.

NOTE

All four blackout shields are closed the same way. Right side front shield shown.

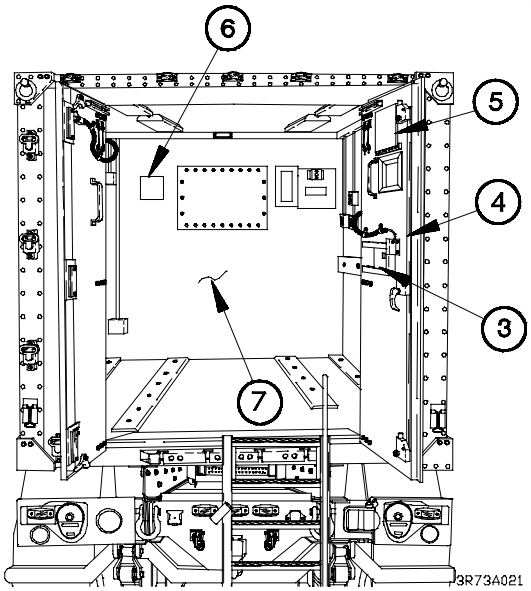
(1) Raise and latch blackout shield (1) on van window (2).

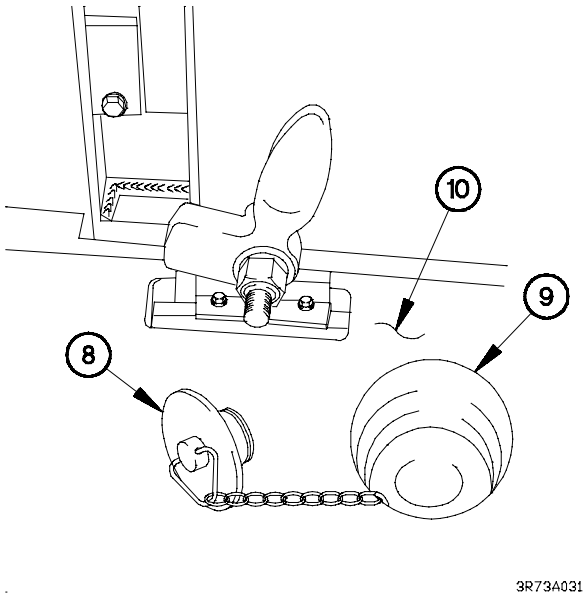


(2) Close blackout shield (3) on right hand side door (4).

(3) Open vent cover (5) on right hand side door (4).

(4) Open fan vent cover (6) on front interior van wall (7).





NOTE

Both drain plugs are loosened the same way.
Rear drain plug shown.

(5) Loosen drain plug (8) from drain hole (9) on van floor (10).

(6) Remove M1079 van body from chassis (para 16-19).

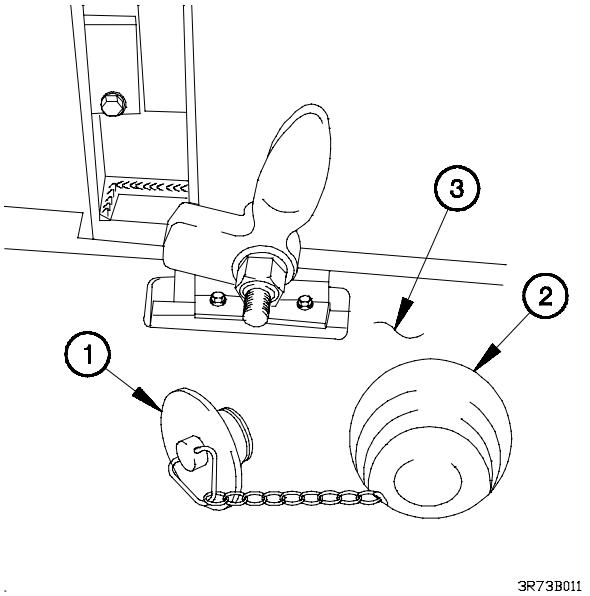
b. Recovery

(1) Install M1079 van body on chassis (para 16-19).

NOTE

Both drain plugs are tightened the same way.
Rear drain plug shown.

(2) Tighten drain plug (1) in drain hole (2) on van floor (3).

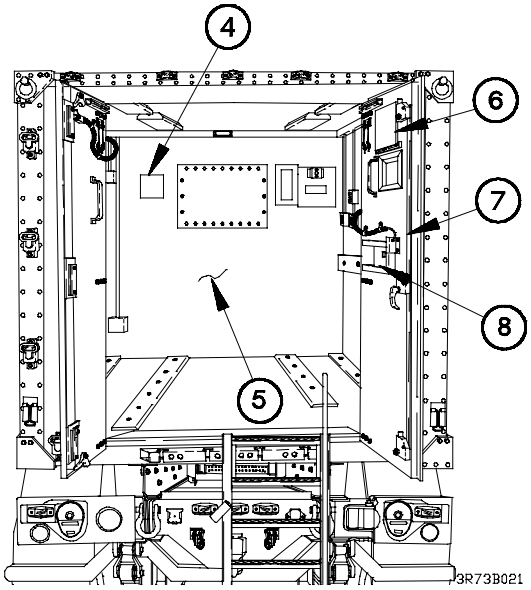


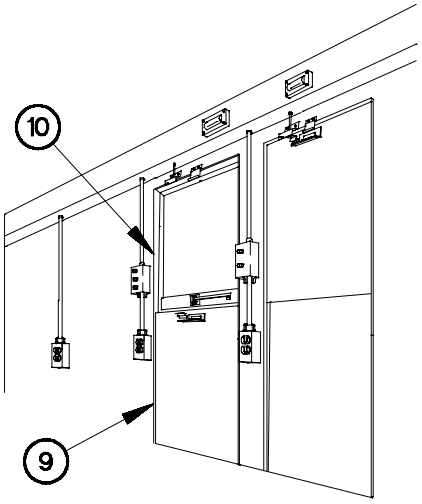
16-73. VAN PREPARATION FOR AIR TRANSPORT (CONT)

(3) Close fan vent cover (4) on front interior wall (5).

(4) Close vent cover (6) on right hand side door (7).

(5) Open blackout shield (8) on right hand side door (7).





NOTE

All four blackout shields are opened the same way. Right side front shield shown.

(6) Lower blackout shield (9) on van window (10).

End of Task.

16-74. LATCH AND CAB LATCH BRACKETS REPLACEMENT

This task covers:

a. Latch Bracket Removal
b. Latch Bracket Installation
c. Cab Latch Bracket Removal
d. Cab Latch Bracket Installation

INITIAL SETUP

Equipment Conditions
Engine shut down (TM 9-2320-365-10).

Tools and Special Tools
Tool Kit, Genl Mech (Item 46, Appendix C)
Wrench, Torque, 0-175 lb-ft (Item 58, Appendix C)
Cab Support Tool (Item E-4, Appendix E)

Materials/Parts
Sealing Compound (Item 68.3, Appendix D)
Nuts, Self-Locking (2) (Item 149, Appendix G)

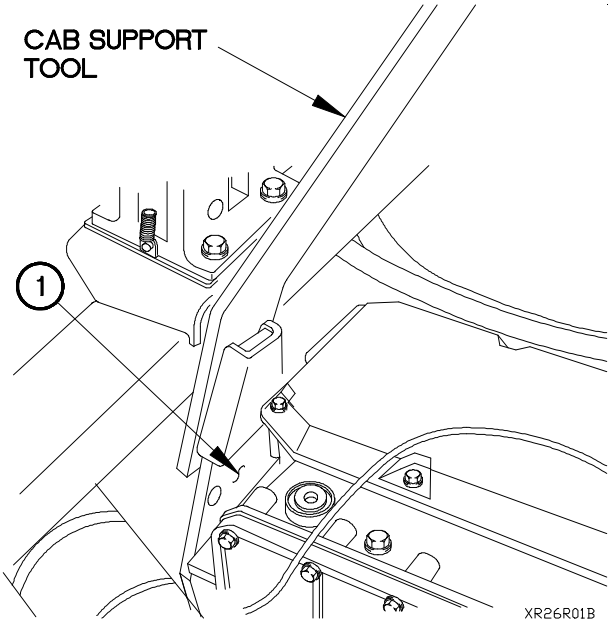
Personnel Required
(2)

a. Latch Bracket Removal.

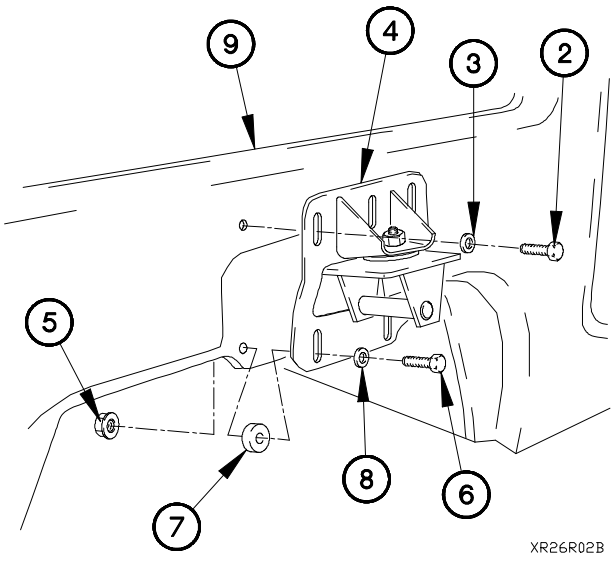
(1) Raise cab (TM 9-2320-365-10).

(2) Install cab support tool on engine rear lifting eye (1).

(3) Lower cab until cab rests on cab support tool (TM 9-2320-365-10).



CAB SUPPORT REMOVED FOR CLARITY



(4) Remove three bolts (2) and washers (3) from latch bracket (4).

NOTE

Perform step (5) on vehicles 0001 through 7167.

(5) Remove two self-locking nuts (5), screws (6),spacers (7), washers (8), and latch bracket (4) from cab (9). Discard self-locking nuts and spacers.

NOTE

Perform step (6) on vehicles 7168 and higher.

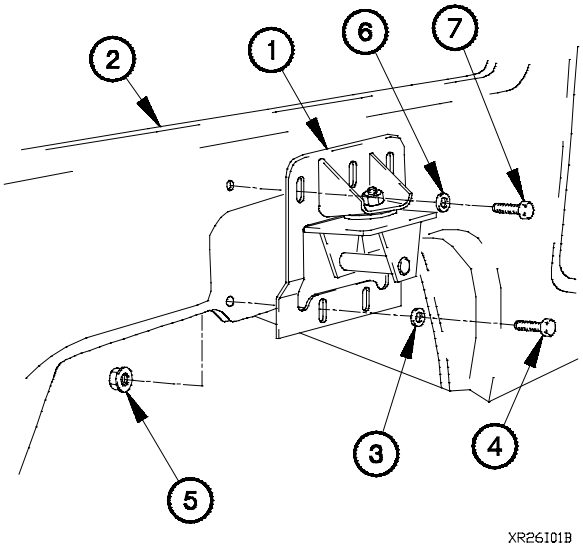
(6) Remove two self-locking nuts (5), screws (6), washers (8), and latch bracket (4) from cab (9). Discard self-locking nuts.

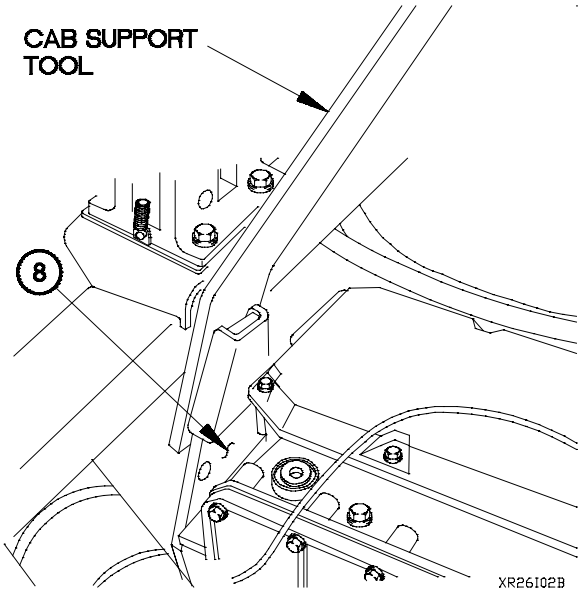
16-74. LATCH AND CAB LATCH BRACKETS REPLACEMENT (CONT)

b. Latch Bracket Installation.

(1) Position latch bracket (1) on cab (2) with two washers (3), screws (4), and self-locking nuts (5).

(2) Install three washers (6) and screws (7) in latch bracket (1).





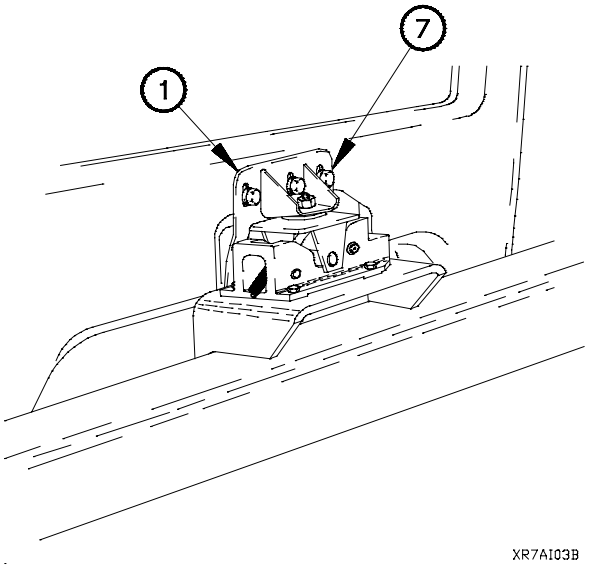
(3) Raise cab slightly and remove cab support tool from engine rear lifting eye (8) (TM 9-2320-366-10-1).

(4) Lower cab (TM 9-2320-365-10-1).

NOTE

Outside screws are loosened first, then the center screw.

(5) Loosen three screws (7) on latch bracket (1).

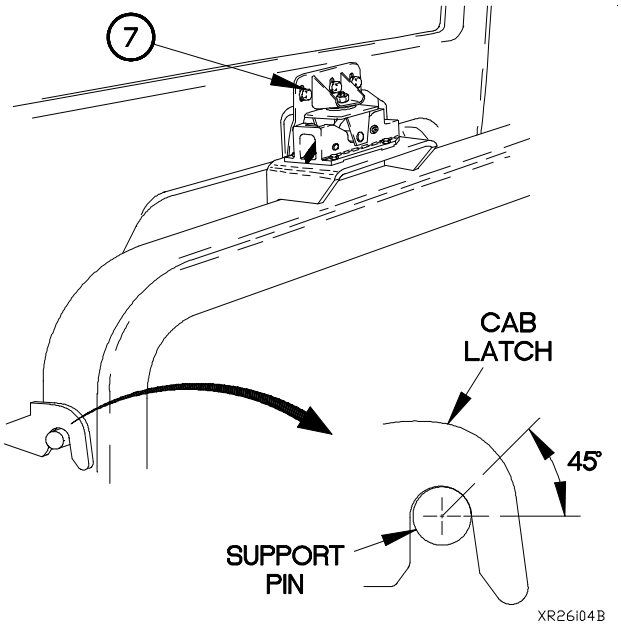


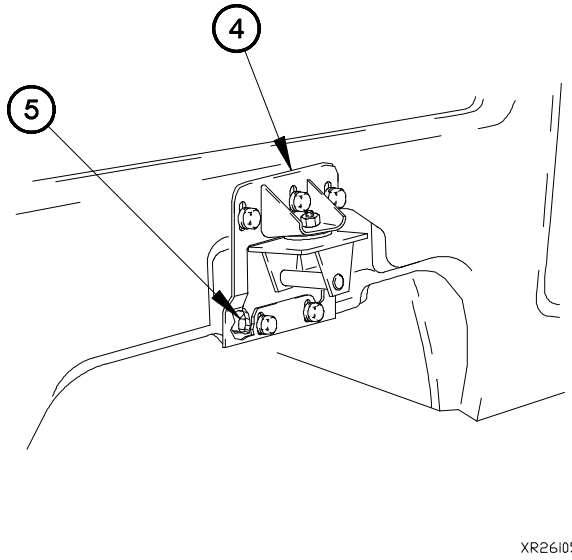
CAUTION

Ensure cab latch brackets on each side of the cab support bridge rest squarely on the support pins.

(6) Tighten three screws (7) to 34-44 lb-ft (44-60 N•m).

(7) Raise cab (TM 9-2320-366-10-1).





(8) Tighten two self-locking nuts (5) to 34-44 lb-ft (44-60 N•m).

(9) Lower cab (TM 9-2320-366-10-1).

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

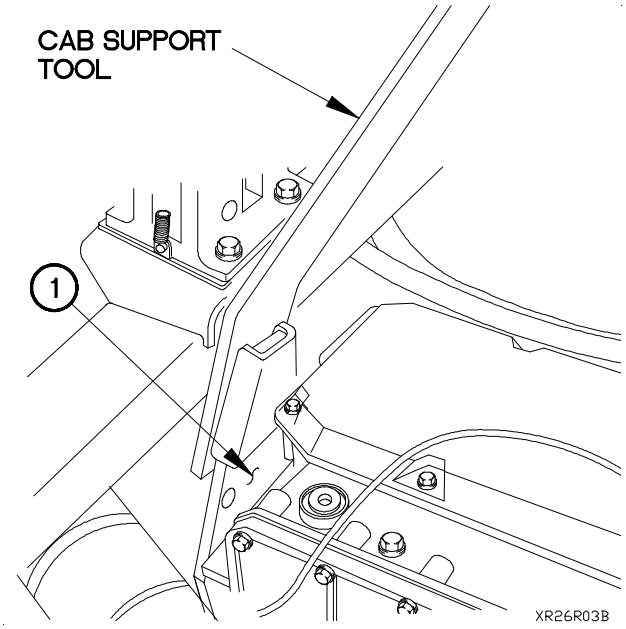
(10) Apply sealing compound to inside of latch bracket (4).

c. Cab Latch Bracket Removal.

(1) Raise cab (TM 9-2320-365-10).

(2) Install cab support tool on engine rear lifting eye (1).

(3) Lower cab until cab rests on cab support tool (TM 9-2320-365-10).

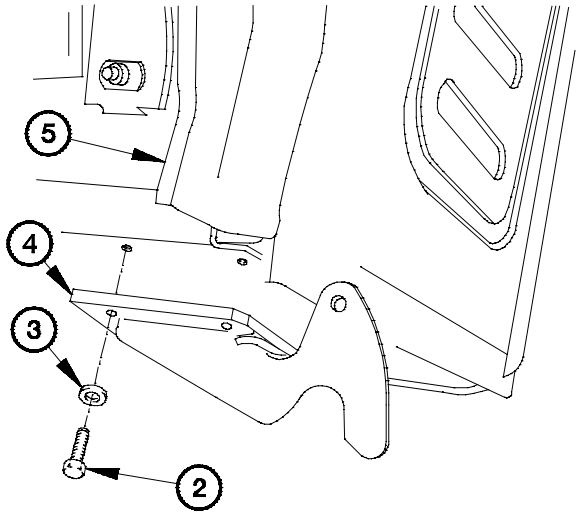


16-74. LATCH AND CAB LATCH BRACKETS REPLACEMENT (CONT)

NOTE

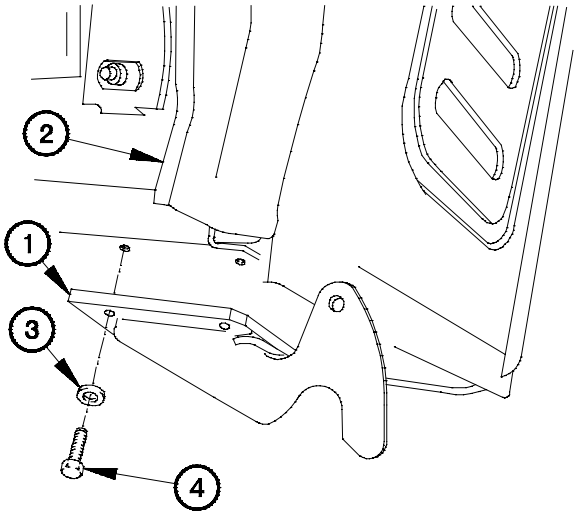
Left and right cab latches are removed the same way. Right cab latch shown.

(4) Remove two screws (2), washers (3), and cab latch (4) from cab (5).



XR26R04B

d. Cab Latch Bracket Installation.

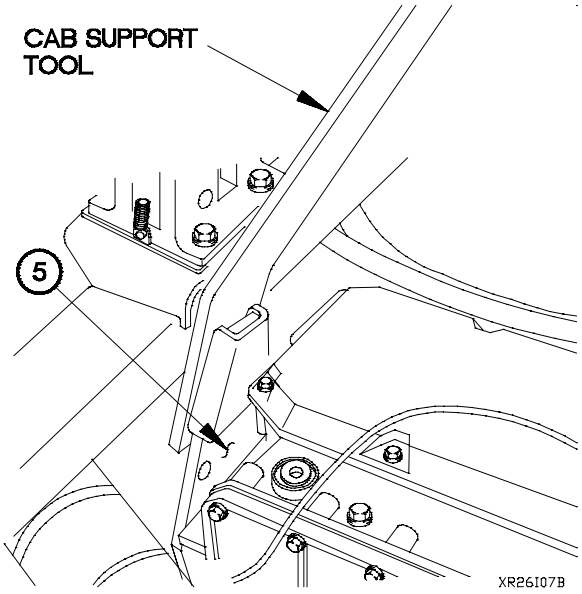


XR26I06B

NOTE

- Left and right cab latches are installed the same way. Right cab latch shown.
- Tighten screws only enough that cab latch can be moved with some resistance.

(1) Position cab latch (1) on cab (2) with two washers (3) and screws (4).



XR26I07B

(2) Raise cab slightly and remove cab support tool from engine rear lifting eye (5) (TM 9-2320-365-10).

(3) Lower cab (TM 9-2320-365-10-1).

CAUTION

Cab latch must be adjusted so that it rides squarely on the support pins and does not contact the welded area of the support pins. Failure to comply may result in damage to equipment.

(4) Adjust cab latch (1) on support pin (6).

(5) Raise cab (TM 9-2320-365-10).

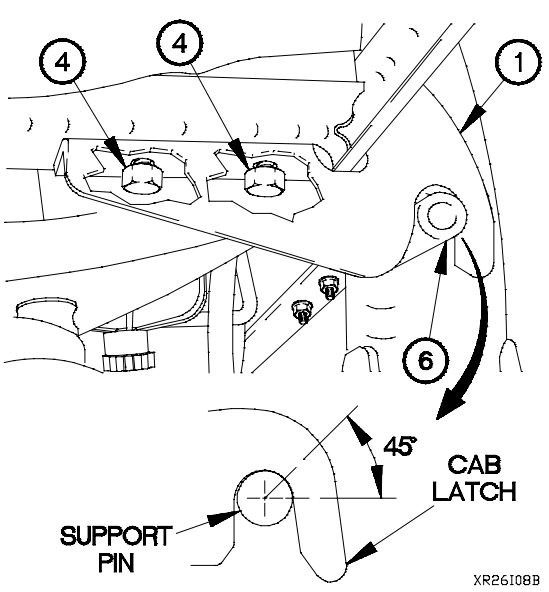
CAUTION

Do not allow cab latch to change position while tightening screws. Failure to comply may result in damage to equipment.

(6) Tighten two screws (4) to 34-44 lb-ft (44-60 N·m).

(7) Lower cab (TM 9-2320-365-10-1).

End of Task.



16-75. ROOF HATCH REPLACEMENT (ALL MODELS EXCEPT M1081)

This task covers:

a. Removal
b. Installation
c. Follow-On

INITIAL SETUP

Equipment Conditions
Engine shut down (TM 9-2320-365-10).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C)
Screwdriver Attachment, Socket Wrench (Item 54.1, Appendix B)
Dispenser, Sealant (Item 13.1, Appendix B)

Materials/Parts
Rubber Strip (Item 251, Appendix G)
Sealing Compound (Item 68.1, Appendix D)

Personnel Required
(2)

a. Removal.

(1) Match mark roof hatch (1) to cab roof (2).

NOTE

- Perform step (2) if cab maintenance has not been previously performed. Replace screws P/N B1834B1205N with screws P/N 12422263 and washers P/N 12422217.
- Store roof hatch for future installation.

(2) Remove 12 screws (3) and roof hatch (1) from cab roof (2). Discard screws.

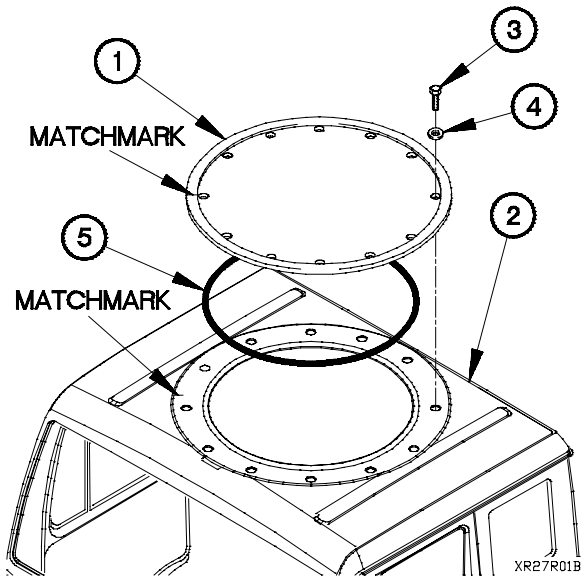
NOTE

Perform steps (3) and (4) if cab maintenance has been previously performed.

(3) Remove sealant from 12 screws (3), roof hatch (1), and cab roof (2).

(4) Remove 12 screws (3), washers (4), and roof hatch (1) from cab roof (2).

(5) Remove rubber strip (5) from roof hatch (1). Discard rubber strip.



b. Installation.

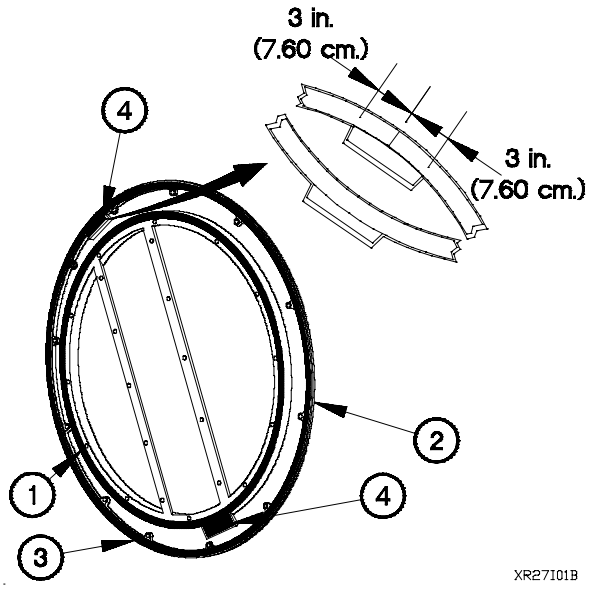
CAUTION

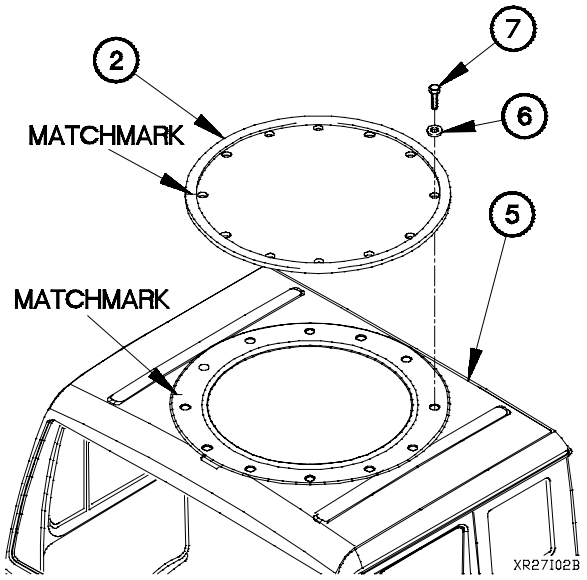
Begin inside and outside rubber strip installation on opposite sides of each other. Failure to comply may result in damage to equipment.

(1) Install inside rubber strip (1) on roof hatch (2).

(2) Install outside rubber strip (3) on roof hatch (2).

(3) Install 6 in. (15.2 cm) back-up rubber strips (4) centered on joints of inside and outside rubber strips (1 and 3).





(4) Position roof hatch (2) on cab roof (5) with matchmarks aligned.

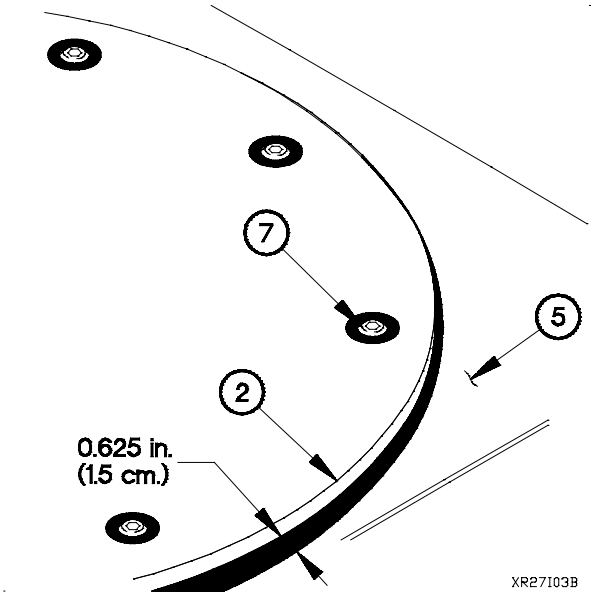
(5) Position 12 washers (6) and screws (7) in roof hatch (2).

(6) Tighten 12 screws (7) to 35-41 lb-ft (48-56 N·m).

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

(7) Apply 0.625 in. (1.5 cm) bead of sealant to 12 screws (7) and between roof hatch (2) and cab roof (5).



End of Task.

16-76. BOARDING HANDLES REPLACEMENT

This task covers:

a. Rear Boarding Handle Removal
b. Rear Boarding Handle Installation
c. Front Boarding Handle Removal
d. Front Boarding Handle Installation
e. Top Boarding Handle Removal
f. Top Boarding Handle Installation
g. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
Engine shut down (TM 9-2320-365-10).
Instrument panel assembly removed for access (para 7-15).
Kick panel removed (para 16-3).

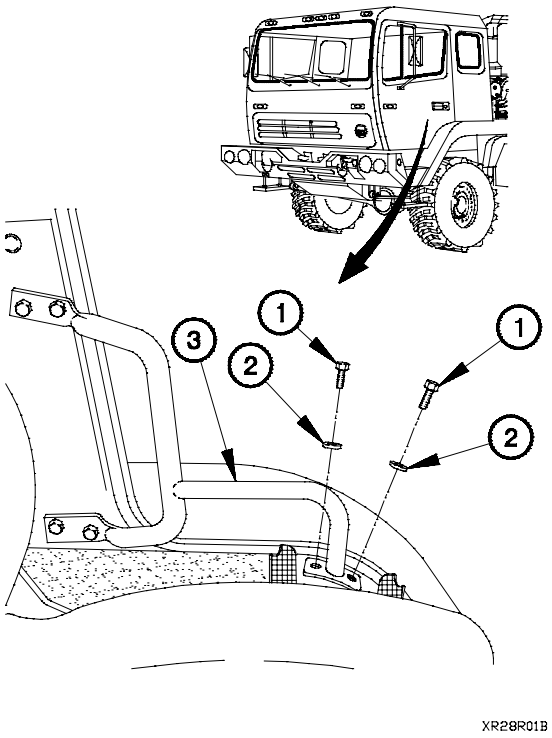
Materials/Parts
Tool Kit, Genl Mech (Item 44, Appendix C)
Wrench, Torque, 0-200 lb-in. (Item 58, Appendix C)

a. Rear Boarding Handle Removal.

NOTE

Passenger side and driver side boarding handles are removed the same way. Driver side shown.

(1) Remove two screws (1) and washers (2) from boarding handle (3).



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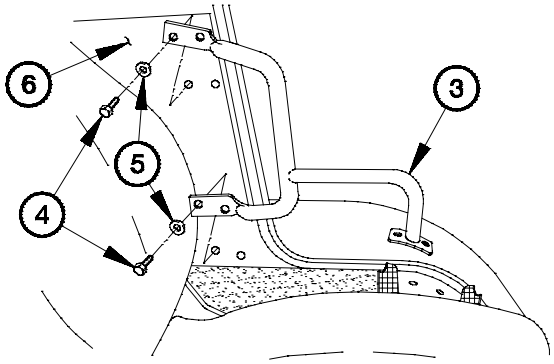


XR28R02B

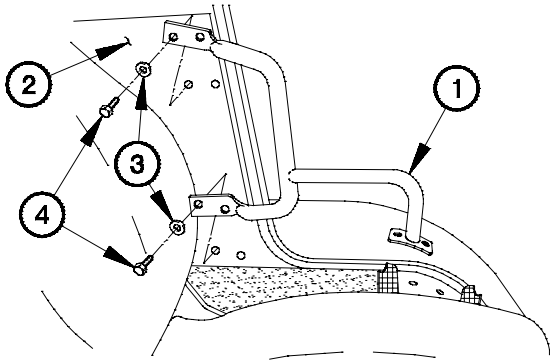
(2) Remove four screws (4), washers (5), and boarding handle (3) from cab (6).

b. Rear Boarding Handle Installation.

NOTE

Passenger side and driver side boarding handles are installed the same way. Driver side shown.

(1) Position rear boarding handle (1) on cab (2) with four washers (3) and screws (4).



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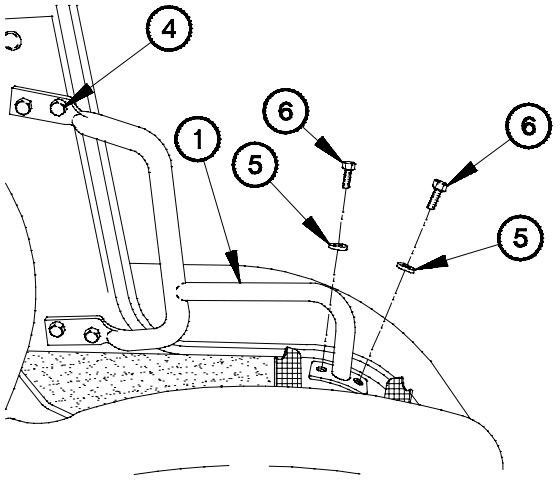


XR28I02B

(2) Position two washers (5) and screws (6) in rear boarding handle (1).

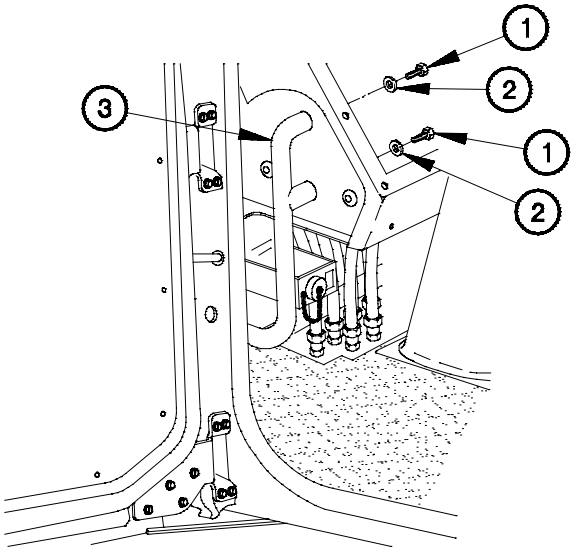
(3) Tighten two screws (6) and four screws (4) to 70-85 lb-in. (8-10 N·m).

c. Front Boarding Handle Removal.

NOTE

Passenger side and driver side boarding handles are removed the same way. Driver side shown.

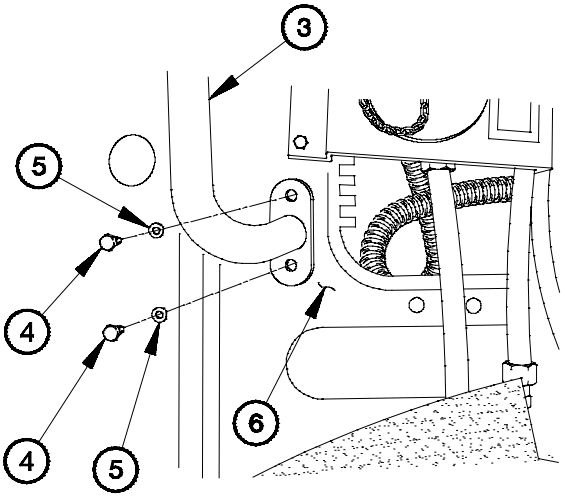
(1) Remove two screws (1) and washers (2) from front boarding handle (3).



XR28R03B

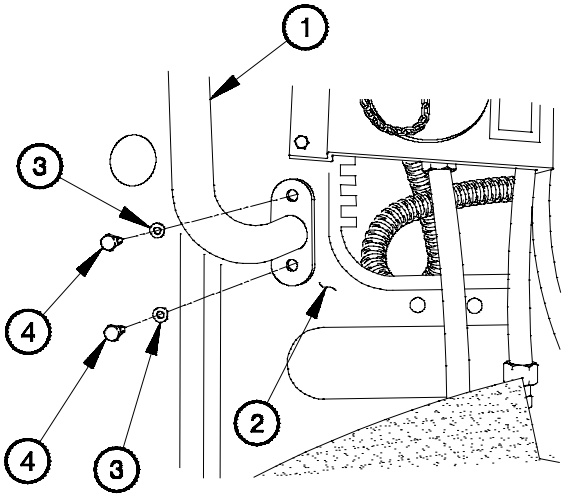
16-76. BOARDING HANDLES REPLACEMENT (CONT)

(2) Remove two screws (4), washers (5) and front boarding handle (3) from cab (6).



XR28R04B

d. Front Boarding Handle Installation.



XR28I03B

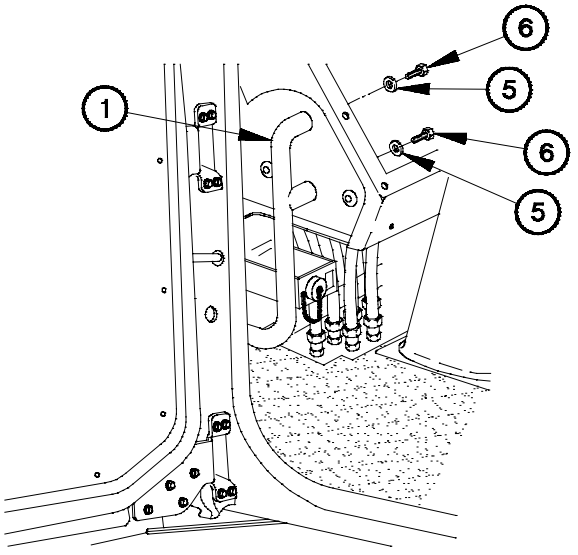
NOTE

Passenger and driver side boarding handles are installed the same way. Driver side shown.

(1) Position front boarding handle (1) in cab (2) with two washers (3) and screws (4).

(2) Position two washers (5) and screws (6) in front boarding handle (1).

(3) Tighten two screws (6) and screws (4) to 70-85 lb-in. (8-10 N·m).



XR28I04B

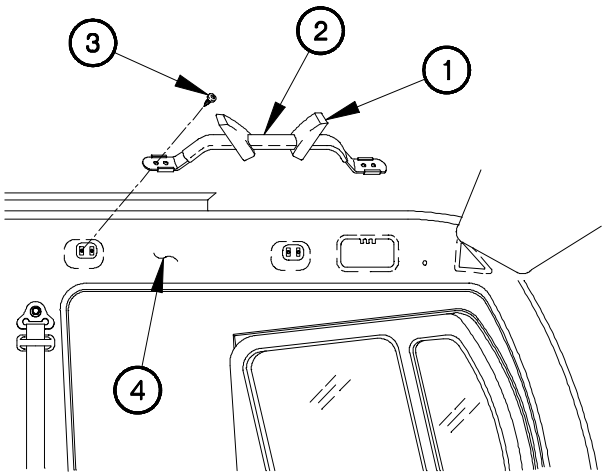
e. Top Boarding Handle Removal.

NOTE

Passenger side and driver side boarding handle are removed the same way. Driver side shown.

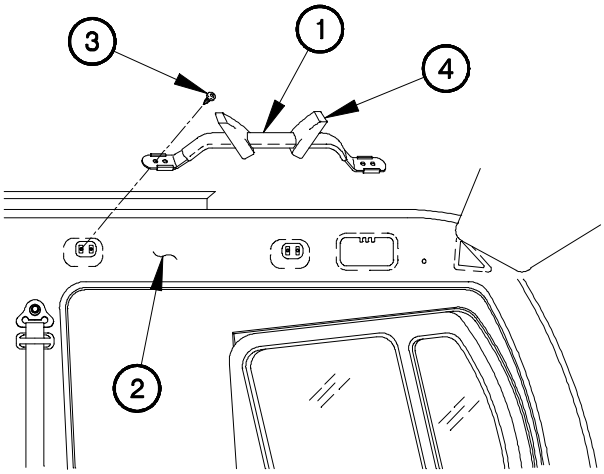
(1) Lift two covers (1) from top boarding handle (2).

(2) Remove four screws (3) and top boarding handle (2) from cab (4).



XR28R05B

f. Top Boarding Handle Installation.



XR28I05B

NOTE

Passenger side and driver side boarding handles are installed the same way. Driver side shown.

(1) Position top boarding handle (1) in cab (2) with four crews (3).

(2) Tighten four screws (3).

(3) Position two covers (4) on top boarding handle (2).

g. Follow-On Maintenance.

(1) Install instrument panel (para 7-15).

(2) Install kick panel (para 16-3).

End of Task.

16-77. INCLINOMETER REPLACEMENT

This task covers:

a. Removal

B. Installation

INITIAL SETUP

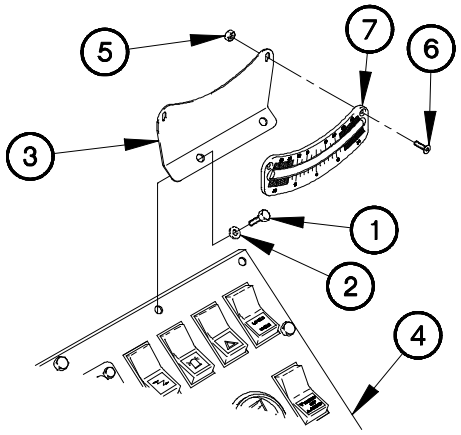
Equipment Conditions
Engine shut down (TM 9-2320-365-10-1).

Materials/Parts
Tool Kit, Genl Mech (Item 44, Appendix C)
Wrench, Torque, 0-75 lb-in (Item 86, Appendix B)
Nuts, self-locking (2) (Item 152.1, Appendix G)

a. Removal

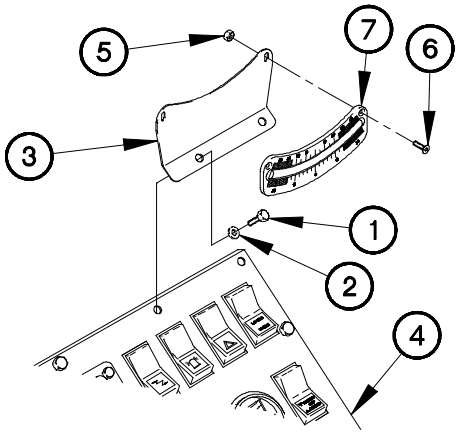
(1) Remove two screws (1), washers (2), and inclinometer plate (3) from instrument panel (4).

(2) Remove two self-locking nuts (5), screws (6), and inclinometer (7) from inclinometer plate (3). Discard self-locking nuts.



XR29R01

b. Installation



XR29R01

(1) Install inclinometer (7) on inclinometer plate (3) with two screws (6) and self-locking nuts (5).

(2) Position inclinometer plate (3) on instrument panel (4) with two washers (2) and screws (1).

(3) Tighten screws (1) to 25-30 lb-in (3 N•m).

End of Task

CHAPTER 17
11K SELF-RECOVERY WINCH (SRW) MAINTENANCE

RESTRICTED MAINTENANCE NOTICE

Units not authorized SC 4910-95-CL-A72 (SHOP EQUIPMENT, COMMON NO. 2) in their T.O.E. may be unable to perform some of the maintenance tasks described in this chapter. If the required tools are not authorized, the equipment must be submitted to DS Maintenance for repair.

Section I. INTRODUCTION 17-1
17-1. INTRODUCTION 17-1

Section II. MAINTENANCE PROCEDURES 17-2
17-2. 11K SELF-RECOVERY WINCH (SRW) FRONT ROLLER FAIRLEAD REPLACEMENT 17-2
17-3. 11K SELF-RECOVERY WINCH (SRW) REAR ROLLER FAIRLEAD REPLACEMENT 17-7
17-4. 11K SELF-RECOVERY WINCH (SRW) CABLE PULLEYS REPLACEMENT 17-15
17-5. 11K SELF-RECOVERY WINCH (SRW) CABLE REPLACEMENT 17-19
17-6. WINCH CONTROL VALVE ASSEMBLY AND BRACKET REPLACEMENT 17-23
17-7. 11K SELF-RECOVERY WINCH (SRW) HOSES REPLACEMENT 17-28

Section I. INTRODUCTION

17-1. INTRODUCTION

This chapter contains maintenance instructions for replacing 11K SRW components authorized by the Maintenance Allocation Chart (MAC) at the Unit Maintenance level.

Section II. MAINTENANCE PROCEDURES

17-2. 11K SELF-RECOVERY WINCH (SRW) FRONT ROLLER FAIRLEAD REPLACEMENT

This task covers:

a. Removal
b. Installation
c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
Front bumper and gravel deflector removed (para 14-2).
Cab raised (TM 9-2320-365-10).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Gun, Lubricating (Item 16, Appendix C)
Goggles, Industrial (Item 15, Appendix C)

Materials/Parts
Grease, Automotive and Artillery (GAA) (Item 23, Appendix D)
Pin, Spring (2) (Item 210, Appendix G)
Pin, Spring (Item 211, Appendix G)

WARNING

Wear appropriate eye protection when working under vehicle due to the possibility of falling debris. Failure to comply may result in injury to personnel.

a. Removal.

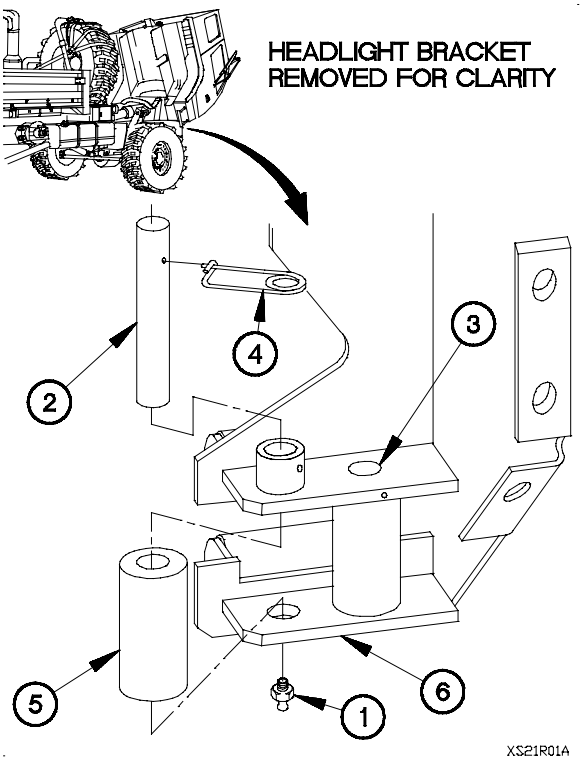
(1) Remove two lubrication fittings (1) from straight shafts (2 and 3).

(2) Remove retaining pin (4) from straight shaft (2).

CAUTION

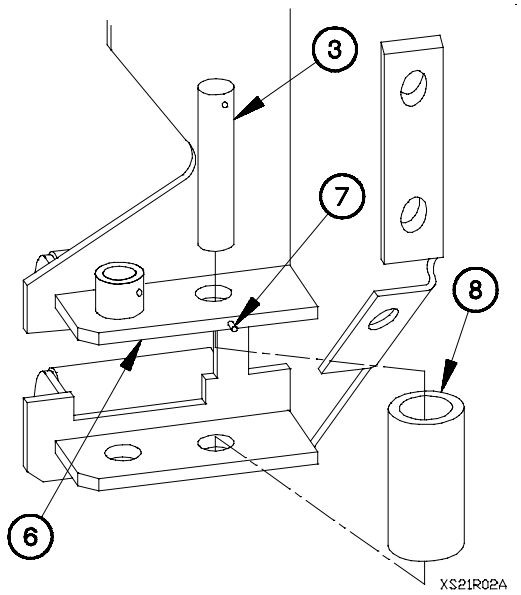
Use a brass punch to remove straight shafts. Failure to comply may damage threads for lubrication fittings.

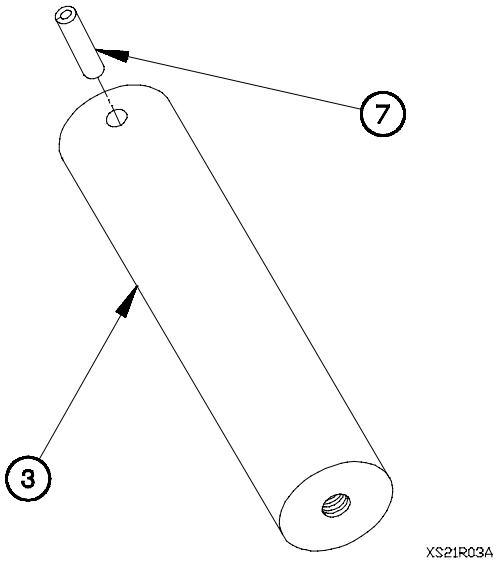
(3) Remove straight shaft (2) and roller fairlead (5) from bracket (6).



(4) Drive spring pin (7) through bracket (6) and into straight shaft (3) as far as possible.

(5) Remove straight shaft (3) and roller fairlead (8) from bracket (6).



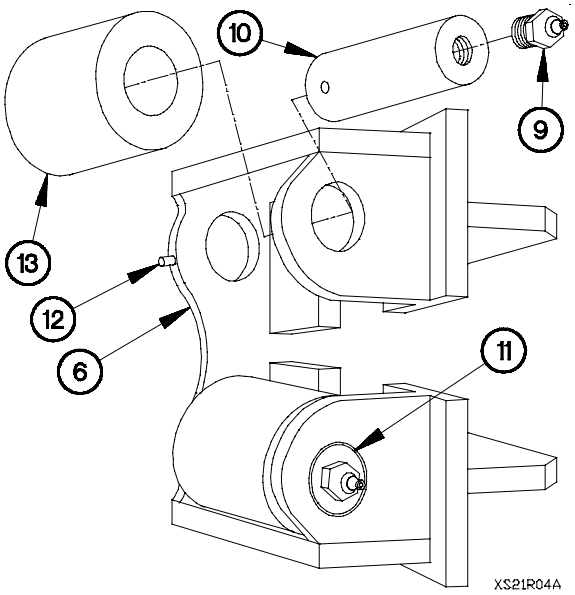


(6) Remove spring pin (7) from straight shaft (3). Discard spring pin.

(7) Remove two lubrication fittings (9) from straight shafts (10 and 11).

(8) Drive spring pin (12) through bracket (6) and into straight shaft (10) as far as possible.

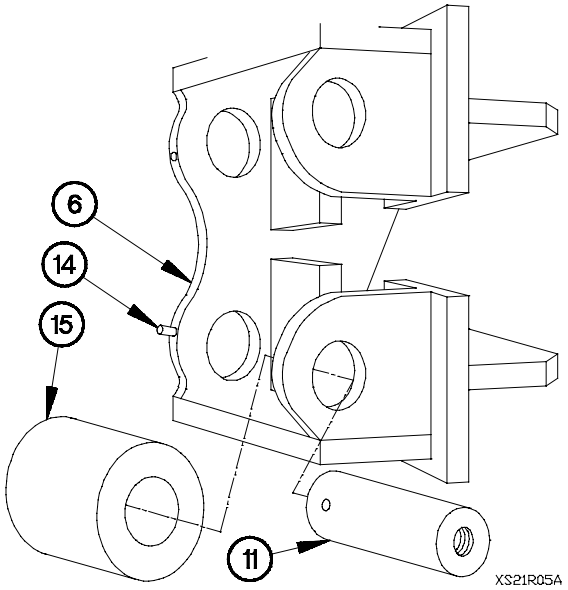
(9) Remove straight shaft (10) and roller fairlead (13) from bracket (6).

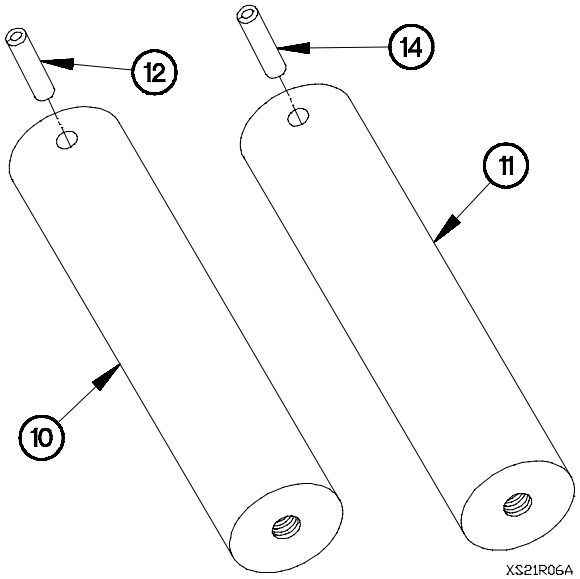


17-2. 11K SELF-RECOVERY WINCH (SRW) FRONT ROLLER FAIRLEAD REPLACEMENT (CONT)

(10) Drive spring pin (14) through bracket (6) and into straight shaft (11) as far as possible.

(11) Remove straight shaft (11) and roller fairlead (15) from bracket (6).

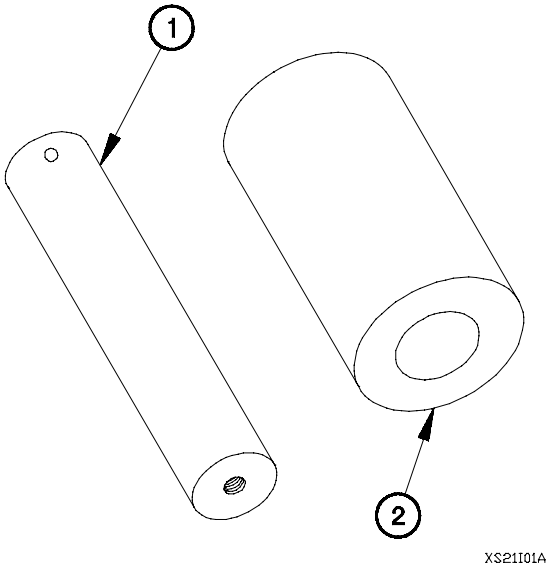




(12) Remove spring pins (12 and 14) from straight shafts (10 and 11). Discard spring pins.

b. Installation.

(1) Apply grease to straight shaft (1) and inside of roller fairlead (2).



CAUTION

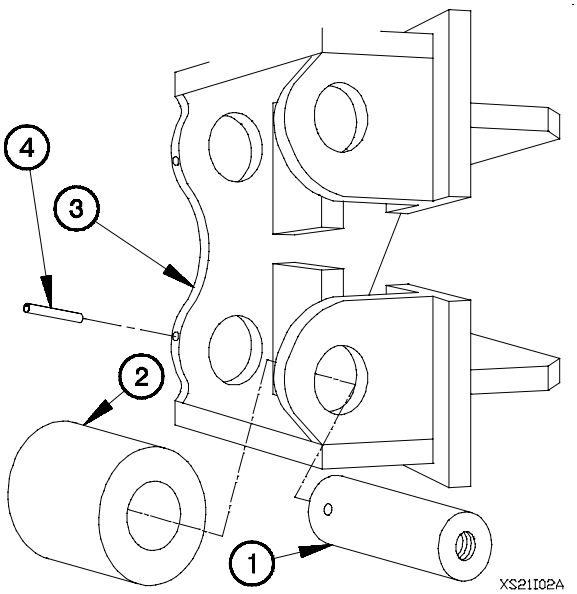
Use a brass punch to install straight shafts. Failure to comply may damage threads for lubrication fittings.

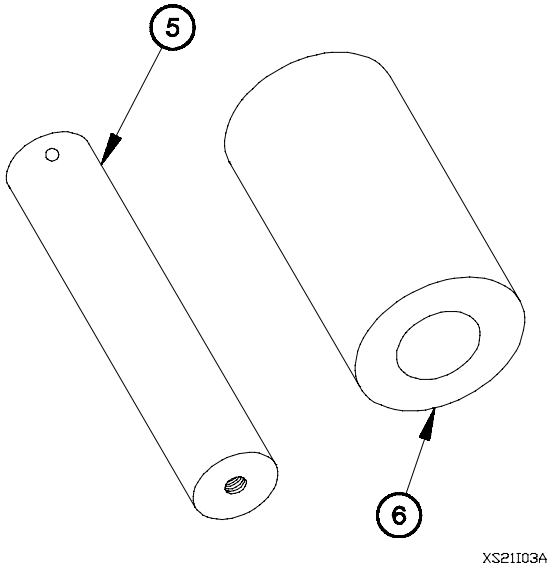
NOTE

Align hole in straight shaft with hole in bracket.

(2) Install roller fairlead (2) and straight shaft (1) in bracket (3).

(3) Install spring pin (4) through bracket (3) and straight shaft (1).





(4) Apply grease to straight shaft (5) and inside of roller fairlead (6).

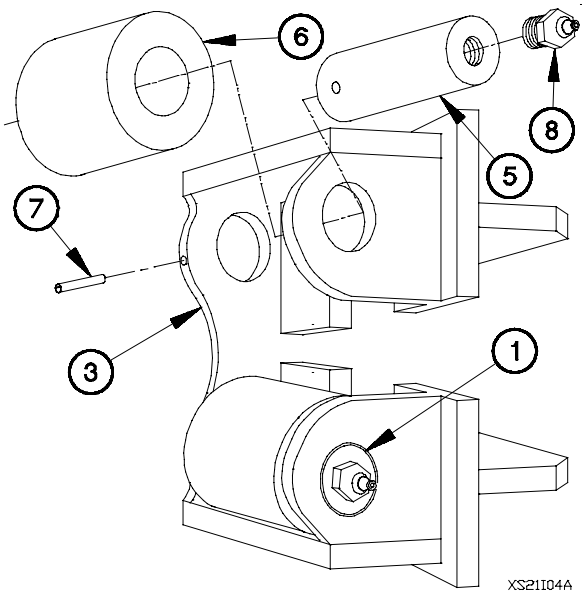
NOTE

Align hole in straight shaft with hole in bracket.

(5) Install roller fairlead (6) and straight shaft (5) in bracket (3).

(6) Install spring pin (7) through bracket (3) and straight shaft (5).

(7) Install two lubrication fittings (8) in straight shafts (1 and 5).



17-2. 11K SELF-RECOVERY WINCH (SRW) FRONT ROLLER FAIRLEAD REPLACEMENT (CONT)

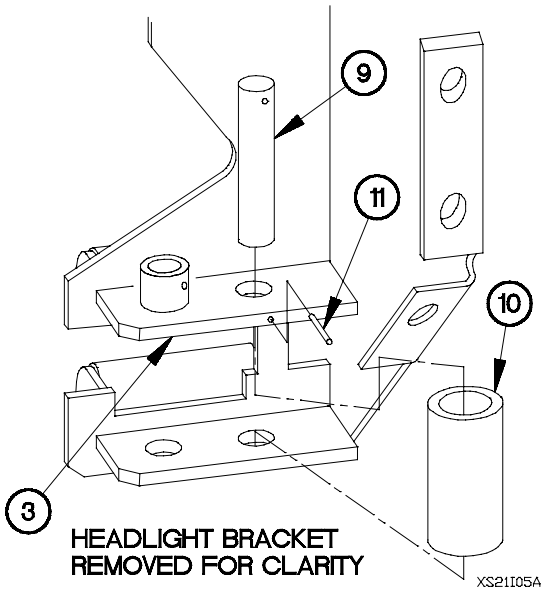
(8) Apply grease to straight shaft (9) and inside of roller fairlead (10).

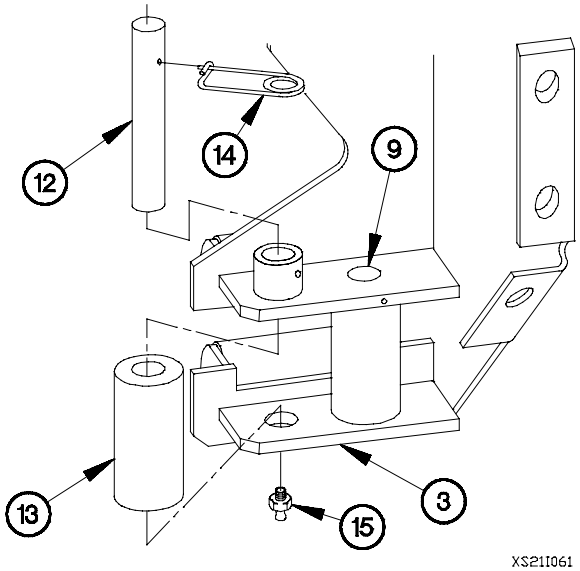
NOTE

- Install straight shaft so that lubrication fitting is toward bottom.
- Align hole in straight shaft with hole in bracket.

(9) Install roller fairlead (10) and straight shaft (9) in bracket (3).

(10) Install spring pin (11) through bracket (3) and straight shaft (9).





(11) Apply grease to straight shaft (12) and inside of roller fairlead (13).

NOTE

Install straight shaft so that lubrication fitting is toward bottom.

(12) Install roller fairlead (13) and straight shaft (12) in bracket (3).

NOTE

Align hole in straight shaft with hole in bracket.

(13) Install retaining pin (14) through bracket (3) and straight shaft (12).

(14) Install two lubrication fittings (15) in straight shafts (9 and 12).

c. Follow-On Maintenance.

(1) Lower cab (TM 9-2320-365-10).

(2) Install front bumper and gravel deflector (para 14-2).

(3) Lubricate front rollers (Appendix H).

End of Task.

17-3. 11K SELF-RECOVERY WINCH (SRW) REAR ROLLER FAIRLEAD REPLACEMENT

This task covers:

a. Removal
b. Installation
c. Follow-On Maintenance

INITIAL SETUP

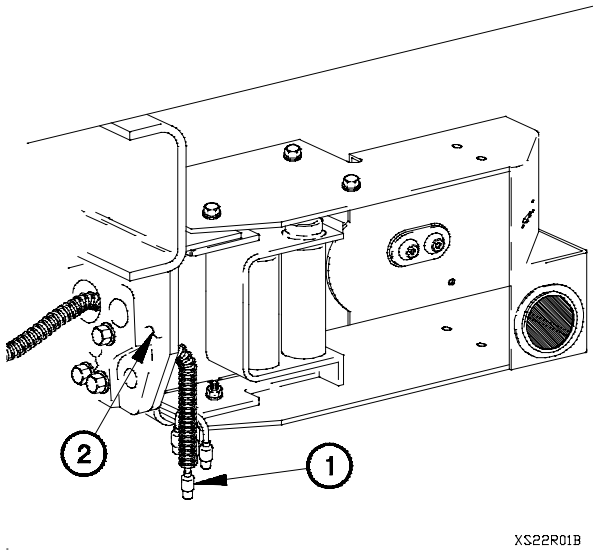
Equipment Conditions
Engine shut down (TM 9-2320-365-10).
11K SRW cable removed from rear roller fairlead, if required (TM 9-2320-365-10).
Right composite taillight assembly removed (para 7-32).
Right marker light assemblies removed (para 7-31).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C)
Wrench, Torque, 0-600 lb-ft (Item 59, Appendix C)
Gun, Lubricating (Item 16, Appendix C)
Wrench, Set Socket (Item 48, Appendix C)

Materials/Parts
Grease, Automotive and Artillery (GAA) (Item 23 Appendix D)
Nut, Self-Locking (4) (Item 144, Appendix G)
Nut, Self-Locking (2) (Item 140, Appendix G)
Pin, Spring (3) (Item 210, Appendix G)
Pin, Spring (Item 211, Appendix G)
Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D)

a. Removal.

(1) Pull rear lights cable assembly (1) through right frame rail (2).



17-3. 11K SELF-RECOVERY WINCH (SRW) REAR ROLLER FAIRLEAD REPLACEMENT (CONT)

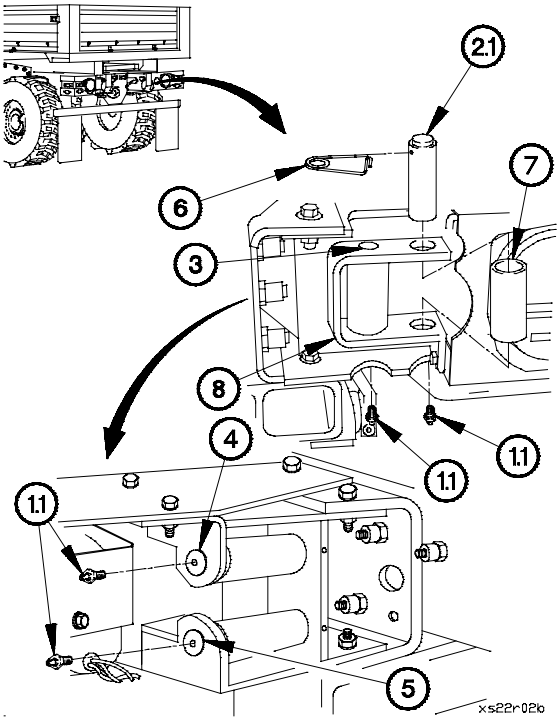
(1.1) Remove four lubrication fittings (1.1) from straight shafts (2.1, 3, 4, and 5).

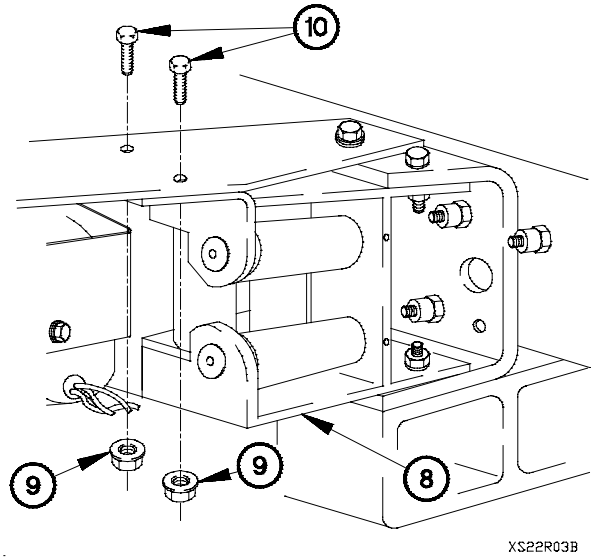
(2) Remove retaining pin (6) from straight shaft (2.1).

CAUTION

Use a brass punch to remove straight shafts. Failure to comply may damage threads for lubrication fittings.

(3) Remove straight shaft (2.1) and fairlead roller (7) from roller bracket (8).





(4) Remove two self-locking nuts (9) and screws (10) from roller bracket (8). Discard self-locking nuts.

(5) Deleted

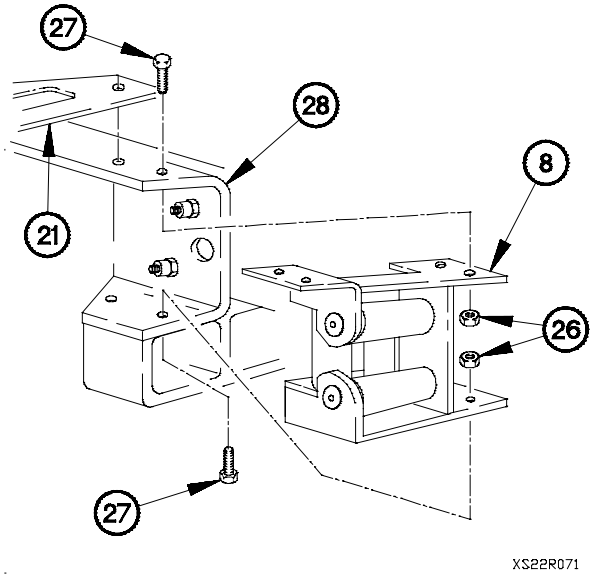
(6) Deleted

(7) Deleted

(8) Deleted

(9) Deleted

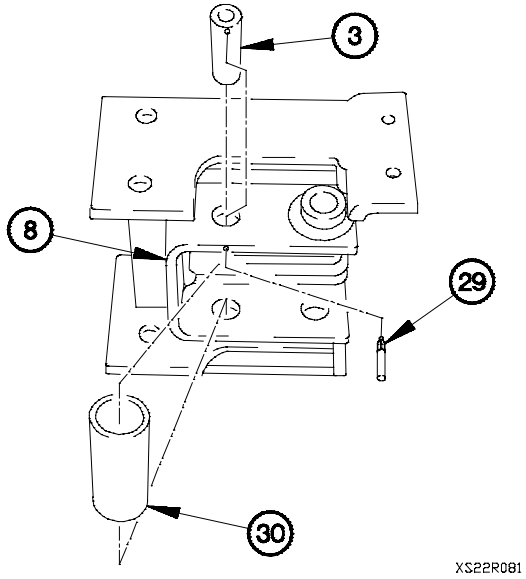
(10) Remove four self-locking nuts (26), screws (27), taillight bracket (21), and roller bracket (8) from mounting bracket (28). Discard self-locking nuts.



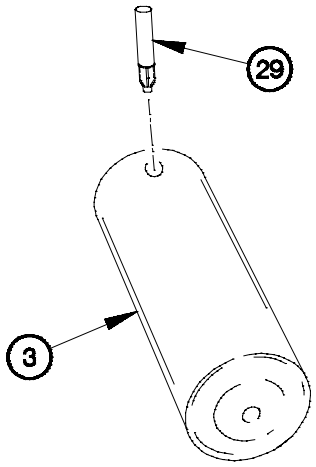
17-3. 11K SELF-RECOVERY WINCH (SRW) REAR ROLLER FAIRLEAD REPLACEMENT (CONT)

(11) Drive spring pin (29) in straight shaft (3) as far as possible.

(12) Remove straight shaft (3) and fairlead roller (30) from roller bracket (8).



XS22R081

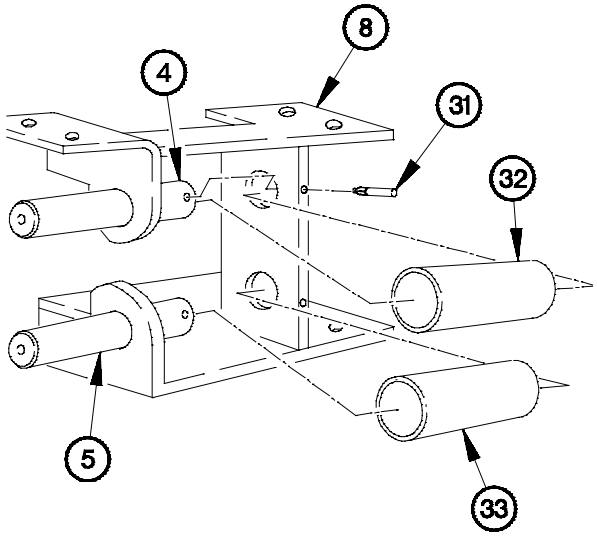


XS22R091

(13) Remove spring pin (29) from straight shaft (3). Discard spring pin.

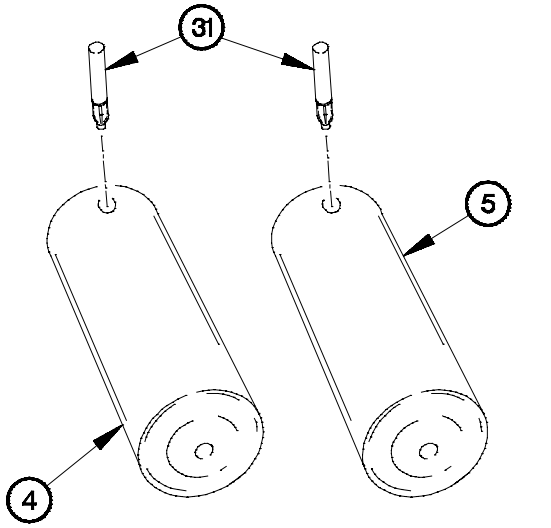
(14) Drive two spring pins (31) in straight shafts (4 and 5).

(15) Remove straight shafts (4 and 5) and fairlead rollers (32 and 33) from roller bracket (8).

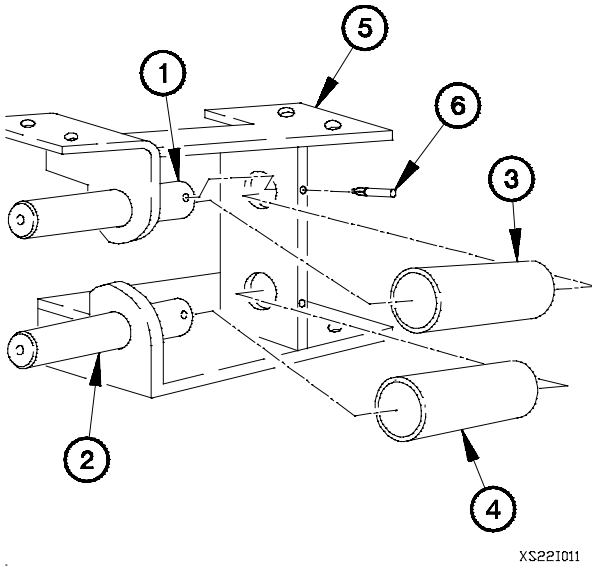


XS22R101

(16) Remove two spring pins (31) from straight shafts (4 and 5). Discard spring pins.



b. Installation.



(1) Apply grease to straight shafts (1 and 2) and inside of fairlead rollers (3 and 4).

CAUTION

Use a brass punch to install straight shafts. Failure to comply may result in damage to threads for lubrication fittings.

NOTE

- Install straight shafts so that lubrication fittings are toward curbside of vehicle.
- Align hole in straight shafts with holes in bracket.

(2) Install fairlead rollers (3 and 4) and straight shafts (1 and 2) in roller bracket (5).

(3) Install two spring pins (6) through roller bracket (5) and straight shafts (1 and 2).

17-3. 11K SELF-RECOVERY WINCH (SRW) REAR ROLLER FAIRLEAD REPLACEMENT (CONT)

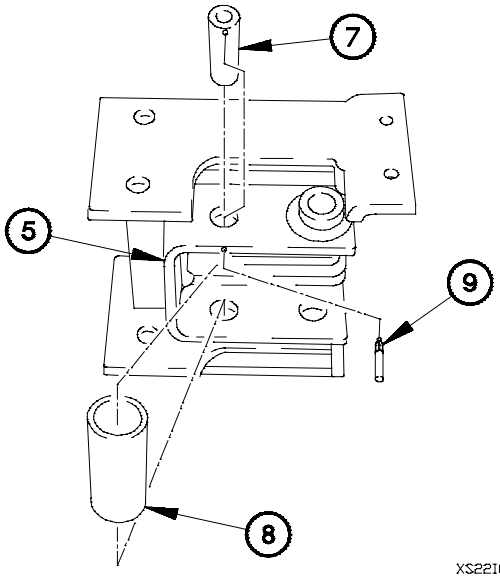
(4) Apply grease to straight shaft (7) and inside of fairlead roller (8).

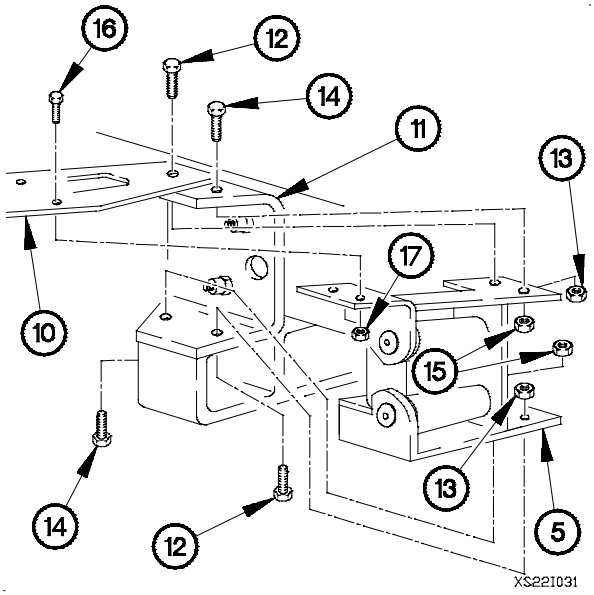
NOTE

- Install straight shaft so that lubrication fitting faces toward bottom.
- Align hole in straight shaft with hole in bracket.

(5) Install fairlead roller (8) and straight shaft (7) in roller bracket (5).

(6) Install spring pin (9) through roller bracket (5) and straight shaft (7).

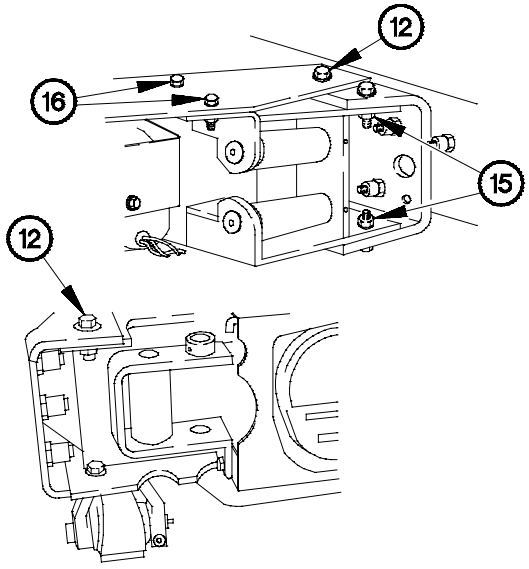




(7) Position roller bracket (5) and taillight bracket (10) on mounting bracket (11) with two screws (12) and self-locking nuts (13).

(8) Position two screws (14) in mounting bracket (11) with two self-locking nuts (15).

(9) Position two screws (16) in taillight bracket (10) with two self-locking nuts (17).



(10) Tighten two screws (12) to 149-182 lb-ft (202-247 N·m).

(11) Tighten two self-locking nuts (15) to 149-182 lb-ft (202-247 N·m).

(12) Tighten two screws (16) to 26-32 lb-ft (35-43 N·m).

NOTE

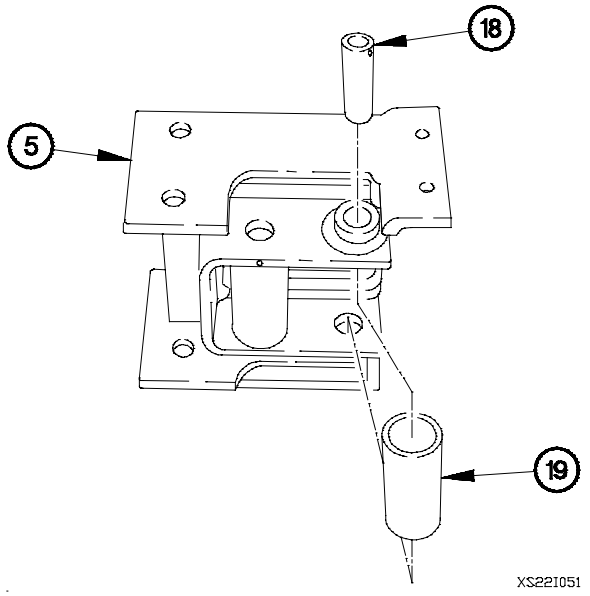
If straight shaft is being replaced, a replacement spring pin must be installed.

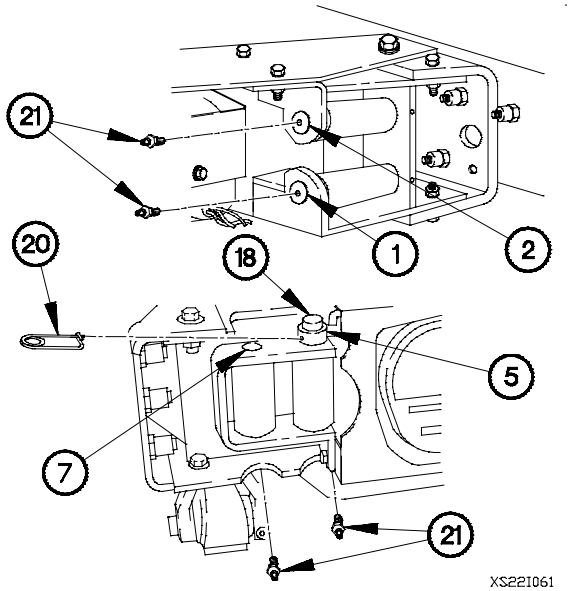
(13) Apply grease to straight shaft (18) and inside of fairlead roller (19).

NOTE

Install straight shaft so that lubrication fitting faces toward bottom.

(14) Install fairlead roller (19) and straight shaft (18) in roller bracket (5).





(15) Install retaining pin (20) through roller bracket (5) and straight shaft (18).

(16) Install four lubrication fittings (21) in straight shafts (1, 2, 7, and 18).

(17) Deleted

17-3. 11K SELF-RECOVERY WINCH (SRW) REAR ROLLER FAIRLEAD REPLACEMENT (CONT)

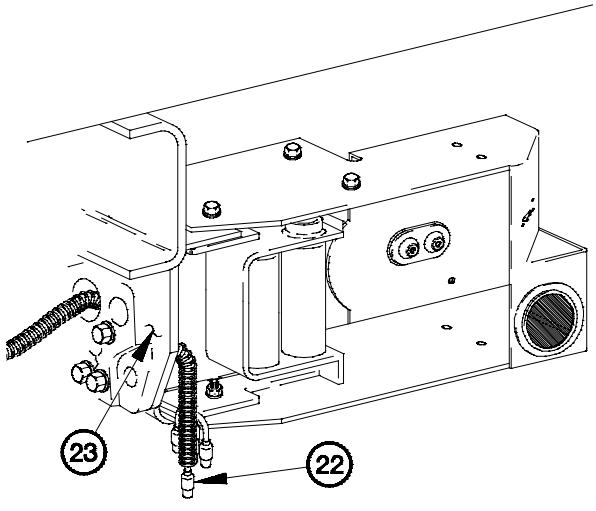
(18) Deleted

(19) Deleted

(20) Deleted.

(21) Deleted.

(22) Position rear lights cable assembly (22) through right frame rail (23).



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c. Follow-On Maintenance.

(1) Install right marker light assemblies (para 7-31).

(2) Install right composite taillight assembly (para 7-32).

(3) Install 11K SRW cable in rear roller fairlead, if required (TM 9-2320-365-10).

(4) Lubricate rear rollers (Appendix H).

End of Task.

17-4. 11K SELF-RECOVERY WINCH (SRW) CABLE PULLEYS REPLACEMENT

This task covers:

a. Front Pulley Removal
b. Front Pulley Installation
c. Rear Pulley Removal
d. Rear Pulley Installation
e. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
Engine shut down (TM 9-2320-365-10).
Cab raised (TM 9-2320-365-10).
11K SRW cable extended approximately 3 ft (TM 9-2320-365-10).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C)

Tools and Special Tools
Hammer, Hand (Item 17, Appendix C)
Gloves, Welder's (Item 14, Appendix C)
Goggles, Industrial (Item 15, Appendix C)

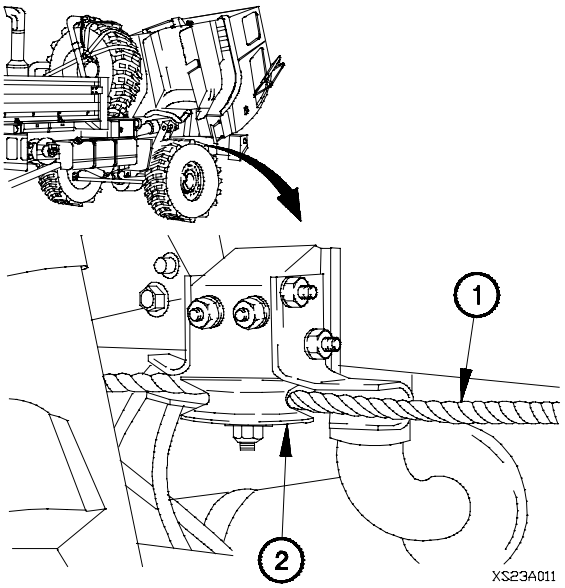
Materials/Parts
Nut, Self-Locking (2) (Item 134, Appendix G)
Nut, Self-Locking (2) (Item 149, Appendix G)

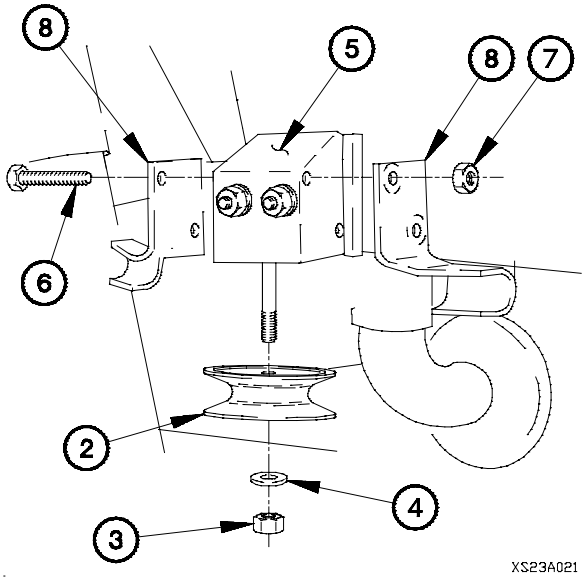
WARNING

Cable can become frayed or contain broken wires. Frayed or broken wires can injure hands. Wear heavy leather-palmed work gloves when handling cable. Failure to comply may result in injury to personnel.

a. Front Pulley Removal.

(1) Remove 11K SRW cable (1) from front cable pulley (2).



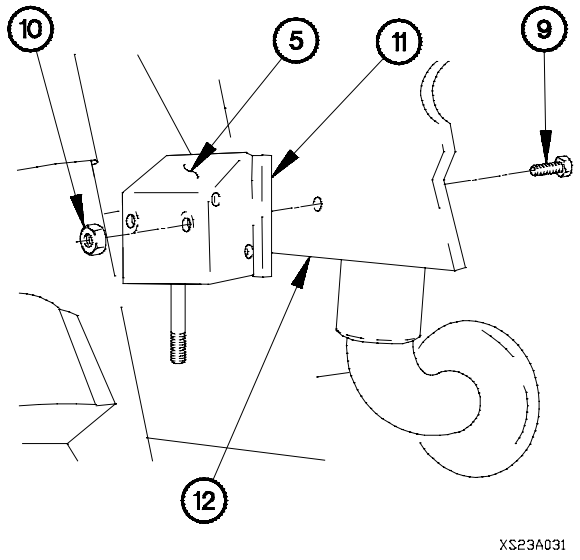


(2) Remove nut (3), washer (4), and cable pulley (2) from mounting bracket (5).

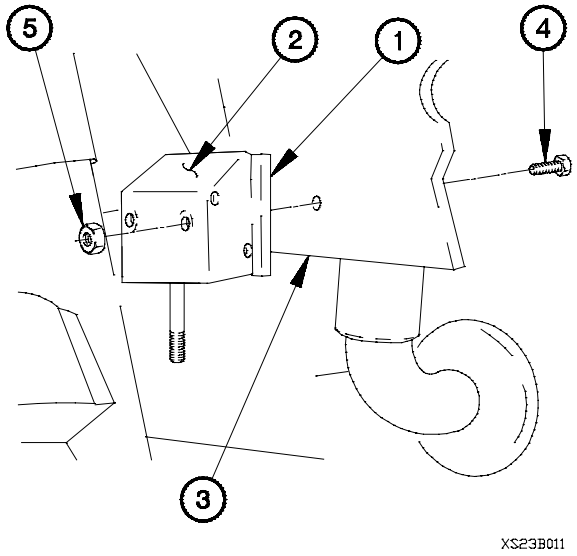
(3) Remove two screws (6), self-locking nuts (7), and brackets (8) from mounting bracket (5). Discard self-locking nuts.

17-4. 11K SELF-RECOVERY WINCH (SRW) CABLE PULLEYS REPLACEMENT (CONT)

(4) Remove two screws (9), self-locking nuts (10), mounting bracket (5), and mounting plate (11) from frame (12). Discard self-locking nuts.



b. Front Pulley Installation.



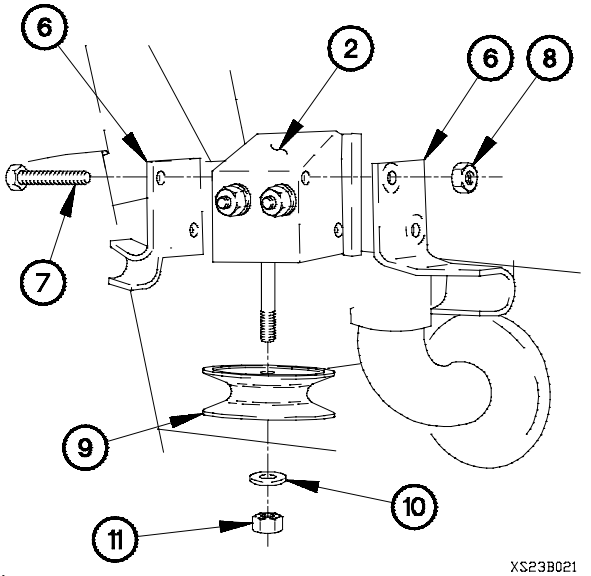
(1) Position mounting plate (1) and mounting bracket (2) to frame (3) with two screws (4) and self-locking nuts (5).

(2) Tighten two self-locking nuts (5) to 114-140 lb-ft (155-190 N·m).

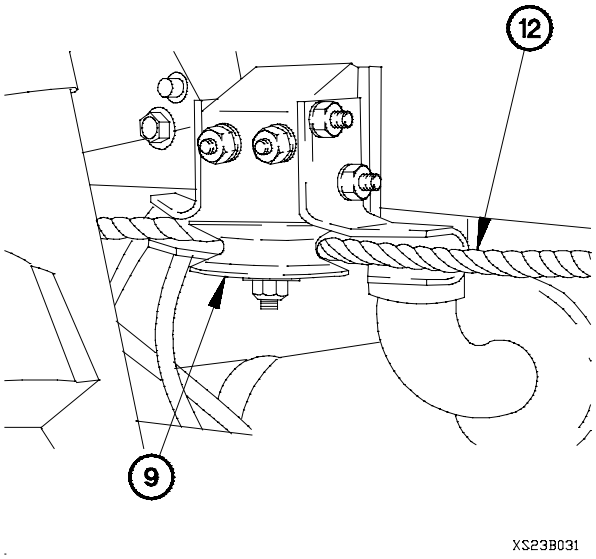
(3) Position two brackets (6) on mounting bracket (2) with two screws (7) and self-locking nuts (8).

(4) Tighten two self-locking nuts (8) to 58-79 lb-ft (79-107 N·m).

(5) Install cable pulley (9) on mounting bracket (2) with washer (10) and nut (11).



(6) Route 11K SRW cable (12) through front cable pulley (9).



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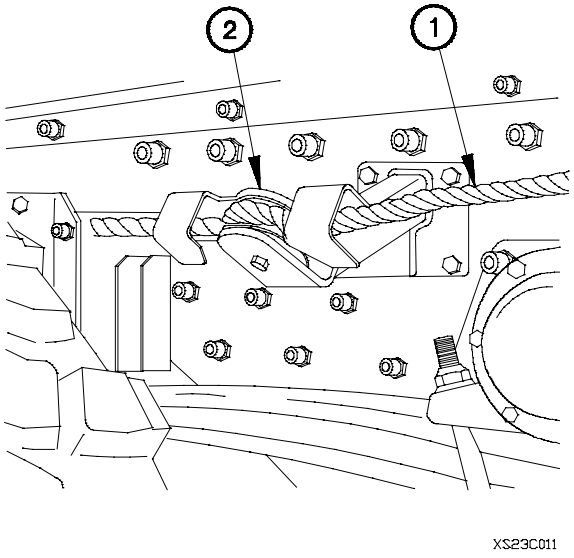
c. Rear Pulley Removal.



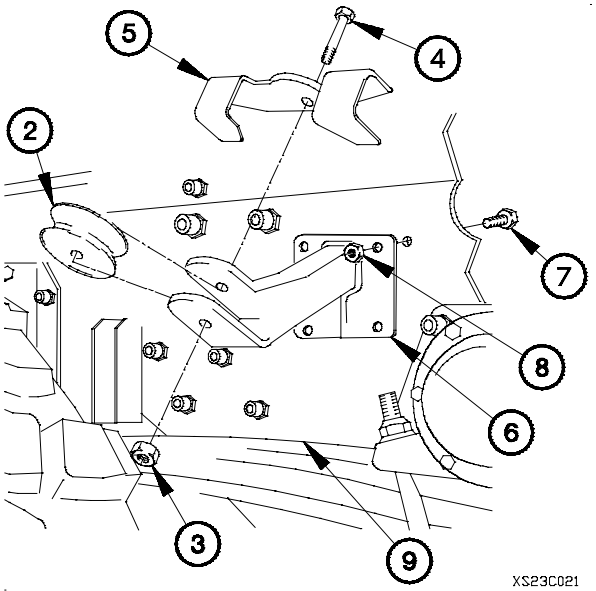
XS23C011

(1) Remove 11K SRW cable (1) from rear cable pulley (2).

(2) Remove self-locking nut (3) from screw (4). Discard self-locking nut.

(3) Remove screw (4), cable pulley (2), and mounting bracket (5) from bracket assembly (6).

(4) Remove four screws (7), self-locking nuts (8), and bracket (6) from frame (9). Discard self-locking nuts.



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17-4. 11K SELF-RECOVERY WINCH (SRW) CABLE PULLEYS REPLACEMENT (CONT)

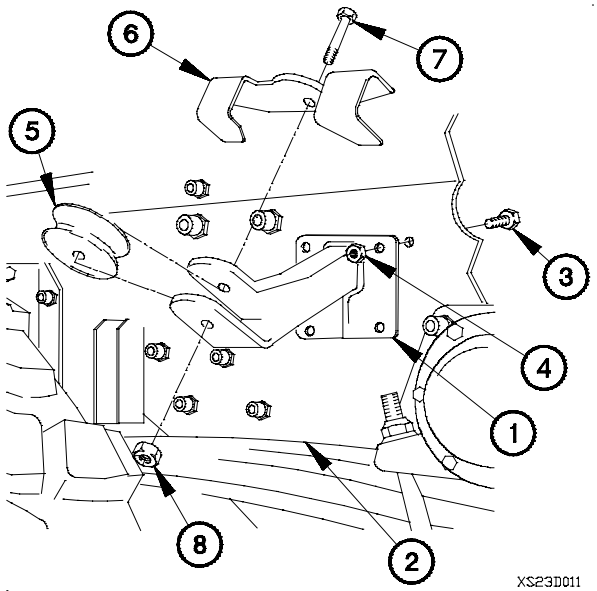
d. Rear Pulley Installation.

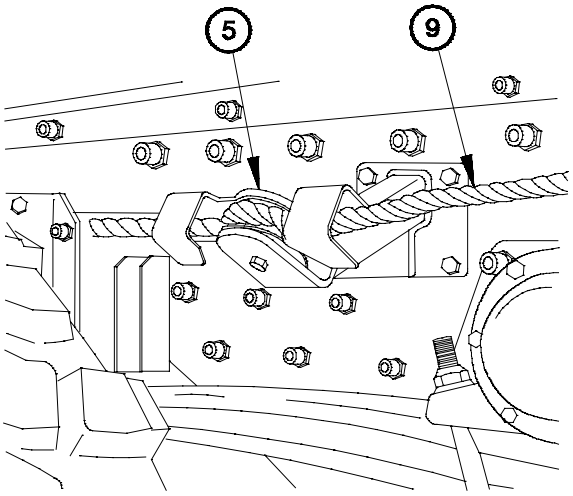
(1) Position bracket (1) on frame (2) with four screws (3) and self-locking nuts (4).

(2) Tighten four self-locking nuts (4) to 114-140 lb-ft (155-190 N·m).

(3) Position cable pulley (5) and mounting bracket (6) on bracket (1) with screw (7) and self-locking nut (8).

(4) Tighten self-locking nut (8) to 114-140 lb-ft (155-190 N·m).





(5) Route 11K SRW cable (9) through rear cable pulley (5).

e. Follow-On Maintenance.

(1) Lower cab (TM 9-2320-365-10).

(2) Operate 11K SRW and check for proper operation (TM 9-2320-365-10).

(3) Reel in 11K SRW cable (TM 9-2320-365-10).

End of Task.

17-5. 11K SELF-RECOVERY WINCH (SRW) CABLE REPLACEMENT/REPAIR

This task covers:

a. Removal
b. Spelter Socket Removal
c. Spelter Socket Installation
d. Installation
e. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
11K SRW cable payed-out completely from front of vehicle (TM 9-2320-365-10).
Engine shut down (TM 9-2320-365-10).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Gloves, Welder's (Item 14, Appendix C)
Goggles, Industrial (Item 15, Appendix C)
Grease, Wire Rope-Exposed Gear (Item 23.1, Appendix-D)
Wire, Non-Electrical (Item 72, Appendix D)

Tool and Special Tool (cont)
Tape, Duct (Item 67, Appendix-D)
Adhesive (Item 10.1, Appendix-D)
Spelter Socket Resin (Item 65.3, Appendix-D)
Vice, Machinist (Item 48, Appendix-C)
Frame, Hand, Hacksaw (Item 9.1, Appendix-C)
Blade, Hand, Hacksaw (Item 3.1, Appendix-C)

Personnel Required
(3)

WARNING

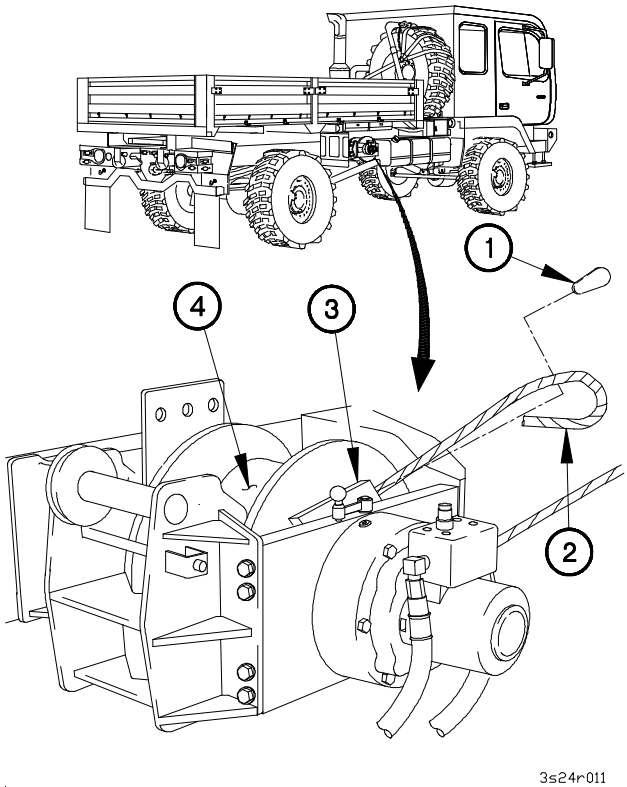
- **Wear leather gloves at all times when handling cable. Do not allow cable to slide through hands even with gloves on. Broken wires may cause injury. Failure to comply may result in injury to personnel.**
- **Wear appropriate eye protection when working under vehicle due to the possibility of falling debris. Failure to comply may result in injury to personnel.**

a. Removal.

(1) Remove cable wedge (1) and 11K SRW cable (2) from flange (3).

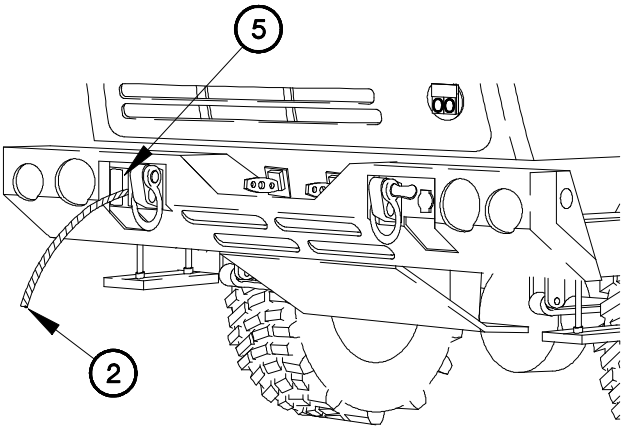
(2) Pull 11K SRW cable (2) from flange (3).

(3) Remove 11K SRW cable (2) from drum (4).



17-5. 11K SELF-RECOVERY WINCH (SRW) CABLE REPLACEMENT/REPAIR (CONT)

(4) Pull 11K SRW cable (2) out through roller fairleads (5) at front of vehicle.



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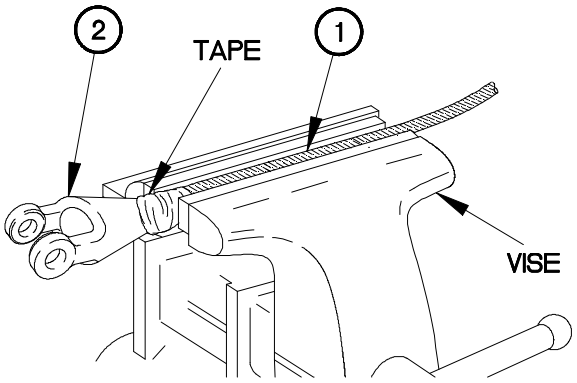
b. Spelter Socket Removal



XS24R031

(1) Wrap tape around cable (1) as close to spelter socket (2) as possible to prevent fraying of cable end while cutting.

(2) Position cable (1) and spelter socket (2) in vise, so half of taped cable end is showing.

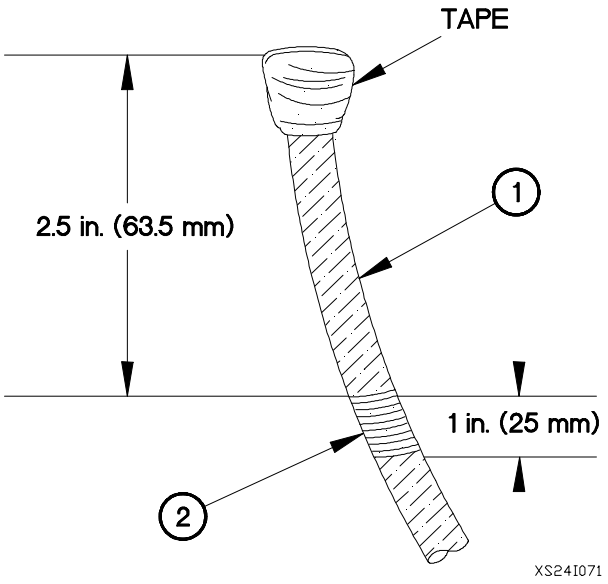
(3) Cut through taped part of cable (1) removing damaged spelter socket (2). Discard spelter socket.

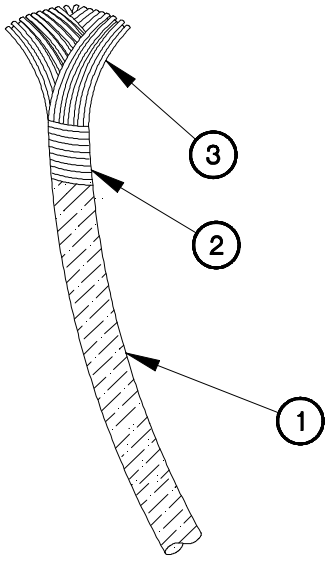
c. Spelter Socket Installation.

(1) Match mark 2.5 in (63.5 mm) down from end of cable (1).

(2) Wrap wire (2) around cable (1) at match mark until 1 in. (25 mm) wide coil of wire is placed on cable.

(3) Remove tape from end of cable (1).





CAUTION

Cut out any fibers or plastic materials in separate strands of wire. Failure to comply may result in inability of resin to bound to cable end.

(4) Separate strands of wire (3) at end of cable (1) until wire reaches top edge of wrapped wire (2).

(5) Fan separated wires (3) evenly on end of cable (1).

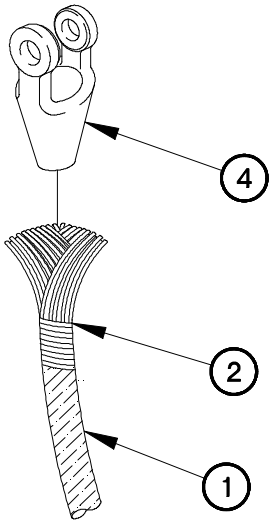
17-5. 11K SELF-RECOVERY WINCH (SRW) CABLE REPLACEMENT/REPAIR (CONT)

WARNING

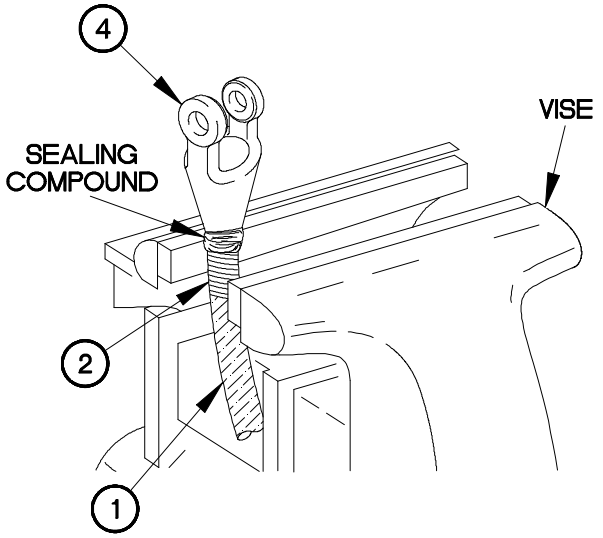
- **Dry cleaning solvent (P-D-680) is TOXIC and flammable. Wear protective goggles and gloves; use only in well ventilated area; avoid contact with skin, eyes, and clothes, and do not breathe vapors. Keep away from heat or flame. Never smoke when using solvent; the flashpoint for Type I dry cleaning solvent is 100° F (38° C) and for Type II is 130° F (50° C). Failure to comply may result in serious injury or death to personnel.**
- **If personnel become dizzy while using dry cleaning solvent, immediately get fresh air and medical help. If solvent contacts skin or clothes, flush with cold water. If solvent contacts eyes, immediately flush eyes with water and get immediate medical attention. Failure to comply may result in injury to personnel.**

(6) Clean cable end thoroughly.

(7) Position spelter socket (4) on fanned area of cable (1) until contact is made with top edge of wrapped wire (2).



XS24I091



XS24I101

WARNING

Adhesive sealant MIL-S-46163 can damage your eyes. Wear safety goggles/glasses when using; avoid contact with eyes. If sealant contacts eyes, flush eyes with water and get immediate medical attention. Failure to comply may result in injury to personnel.

CAUTION

All sealing compound to cure before adding resin. Failure to comply may result in damage to equipment.

(8) Apply 1 in. (25 mm) wide bead of sealant to between bottom of spelter socket (4) and wrapped wire (2).

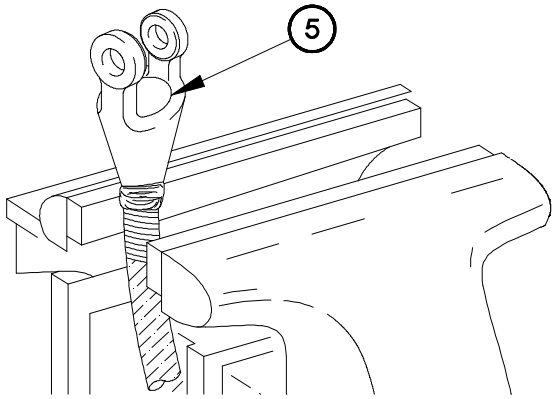
(9) Position cable (1) and spelter socket (4) vertically in vise.

17-5. 11K SELF-RECOVERY WINCH (SRW) CABLE REPLACEMENT /REPAIR (CONT)

WARNING

- **Incorrect use of spelter socket resin can result in unsafe termination of cable. This may result in death or serious injury to personnel and damage to equipment.**
- **Never use a repaired spelter socket until resin has thoroughly cured. Resin will gel in approximately 15 minutes and be fully cured in 2 hours from mixing.**
- **Never heat socket to accelerate gelling or curing.**
- **Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in a well ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.**
- Spelter socket kit consists of two containers, ensure that all contents of both containers in kit are used and mixed thoroughly.
- Spelter socket and cable must remain in the vertical position during curing. Curing time on spelter socket resin varies with temperature. Two hours is an average amount of time the resin takes to cure at temperatures of 65 degrees to 75 degrees fahrenheit.

(10) Slowly pour the mixture down one side of the socket basket (5) until the socket basket (5) is full.

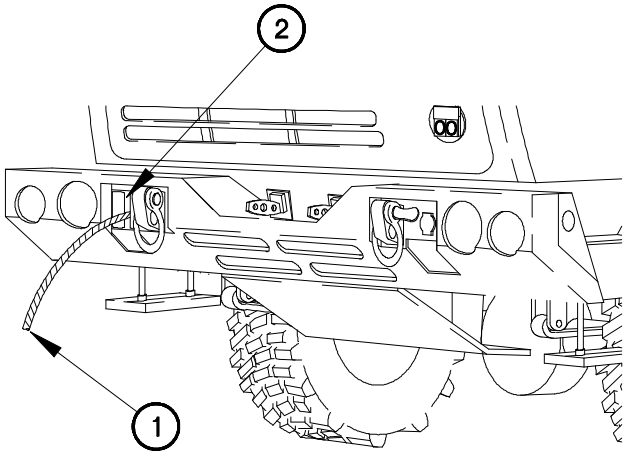


XS24I111

17-5. 11K SELF-RECOVERY WINCH (SRW) CABLE REPLACEMENT/REPAIR (CONT)

d. Installation.

(1) Route 11K SRW cable (1) through roller fairleads (2) at front of vehicle.



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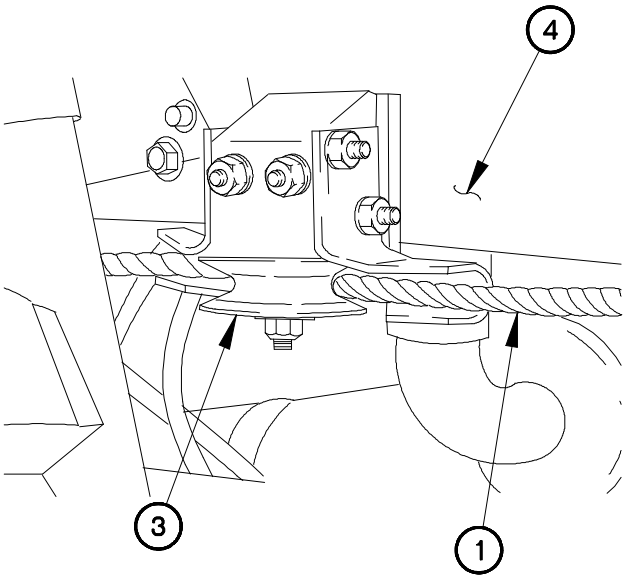
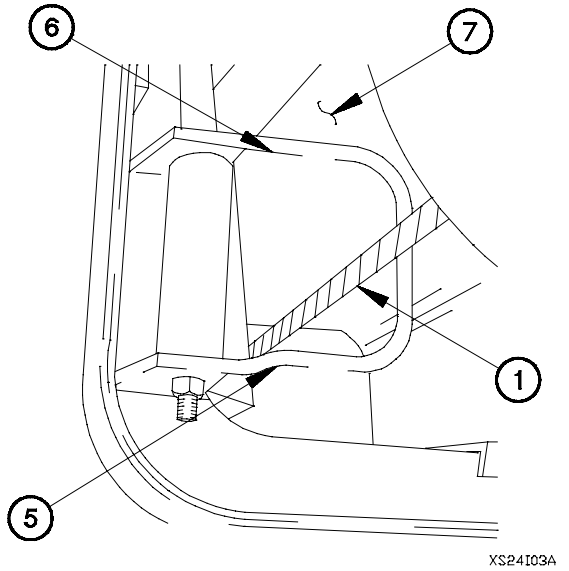
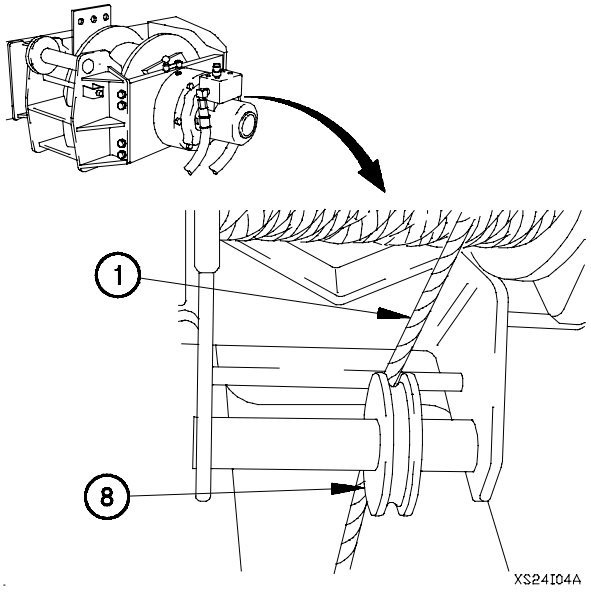


XS24I02A

(2) Route 11K SRW cable (1) through front cable pulley (3) on frame (4).

(3) Route 11K SRW cable (1) through cable guides (5 and 6) behind fuel tank (7).





(4) Route 11K SRW cable (1) over cable guide roller (8).

NOTE

Position 11K SRW cable on drum so it will spool properly.

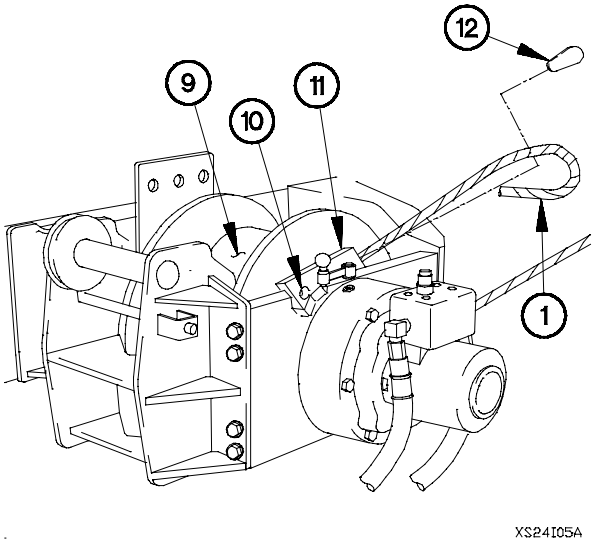
(5) Route 11K SRW cable (1) over and around drum (9).

(6) Insert 11K SRW cable (1) through slot (10) in side of drum (9).

(7) Route 11K SRW cable (1) up through flange (11) and back down into flange, making a loop.

(8) Insert wedge (12) in loop and pull 11K SRW cable (1) and wedge into flange (11).

(9) Drive wedge (12) and 11K SRW cable (1) down into flange (11) until fully seated.



17-5. 11K SELF-RECOVERY WINCH (SRW) CABLE REPLACEMENT/REPAIR (CONT)

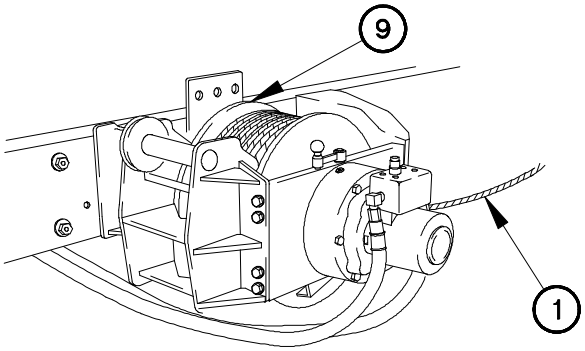
(10) Start engine (TM 9-2320-365-10).

(11) Engage PTO (TM 9-2320-365-10).

(12) Push and hold winch switch (TM 9-2320-365-10).

NOTE

- After one complete layer of 11K SRW cable is on drum, provide tension on 11K SRW cable by physically pulling on 11K SRW cable so that 11K SRW cable spools on tightly. Leave enough 11K SRW cable unspooled to allow installation of hook block.
- Step (13) requires the aid of two assistants.



XS24106A

(13) Rewind 11K SRW cable (1) onto drum (9) (TM 9-2320-365-10).

e. Follow-On Maintenance.

(1) Disengage PTO (TM 9-2320-365-10).

(2) Shut down engine (TM 9-2320-365-10).

(3) Lubricate 11K SRW cable (Appendix H).

End of Task.

17-6. WINCH CONTROL VALVE ASSEMBLY AND BRACKET REPLACEMENT

This task covers:

a. Removal
b. Installation
c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
Engine shut down (TM 9-2320-365-10).

Tools and Special Tools
Goggles, Industrial (Item 15, Appendix C)
Pan, Drain (Item 24, Appendix C)
Tool Kit, Genl Mech (Item 44, Appendix C)
Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C)
Socket Set, Socket Wrench (Item 34, Appendix C)

Materials/Parts
Cap and Plug Set (Item 15, Appendix D)
Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D)
Packing, Preformed (5) (Item 159, Appendix G)
Ties, Cable, Plastic (Item 76, Appendix D)

WARNING

Wear appropriate eye protection when working under vehicle due to the possibility of falling debris. Failure to comply may result in injury to personnel.

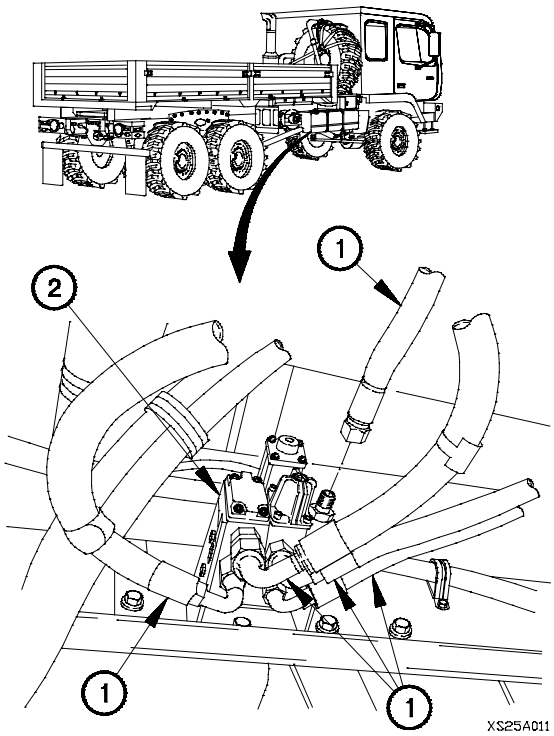
a. Removal

CAUTION

Cap or plug hoses and connection points to prevent contamination of hydraulic system. Failure to comply may result in damage to equipment.

NOTE

- Remove plastic cable ties as required.
- Tag hoses and connection points prior to disconnecting.



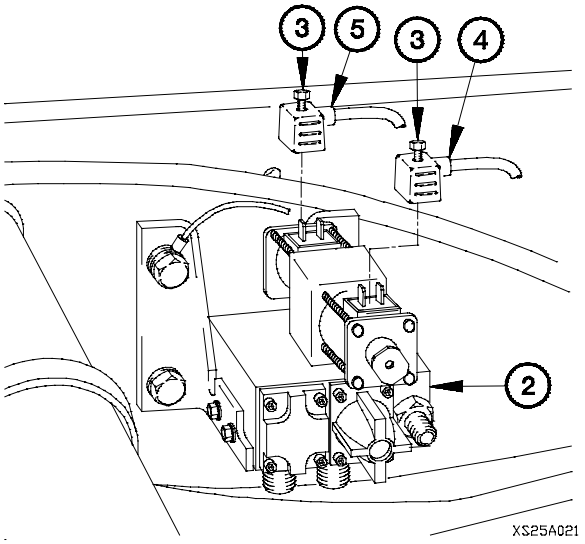
(1) Disconnect five hoses (1) from winch control valve (2).

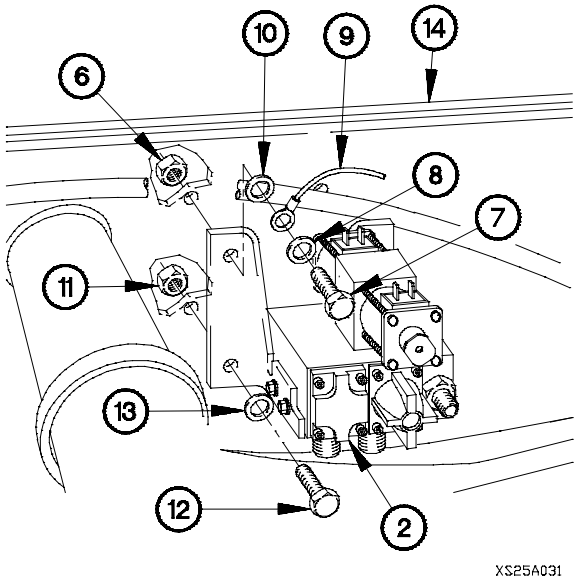
17-6. WINCH CONTROL VALVE ASSEMBLY AND BRACKET REPLACEMENT (CONT)

NOTE

Tag connectors and connection points prior to disconnecting.

(2) Loosen two captive screws (3) and disconnect connectors L4 (4) and L5 (5) from winch control valve (2).

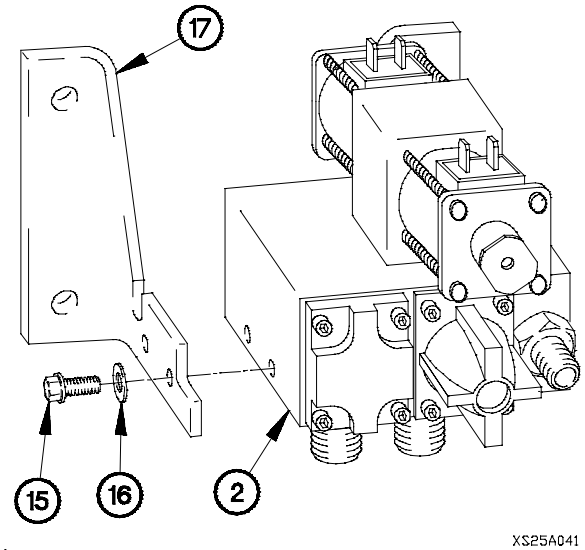




(3) Remove nut (6), screw (7), washer (8), terminal lug TL320 (9), and washer (10) from winch control valve (2).

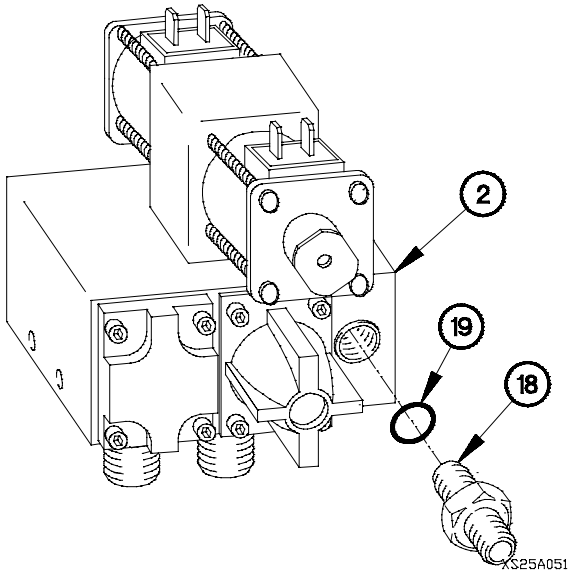
(4) Remove three nuts (11), screws (12), washers (13), and winch control valve (2) from right frame rail (14).

(5) Remove four screws (15), washers (16) and two brackets (17) from winch control valve (2).

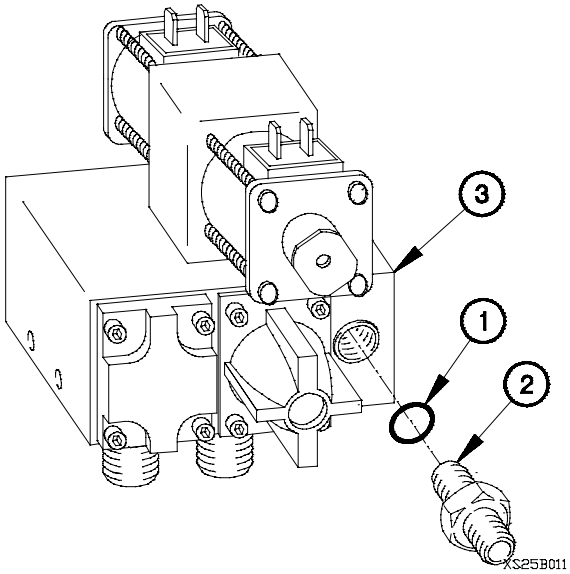


(6) Remove five fittings (18) from winch control valve (2).

(7) Remove five preformed packings (19) from fittings (18). Discard preformed packings.



b. Installation

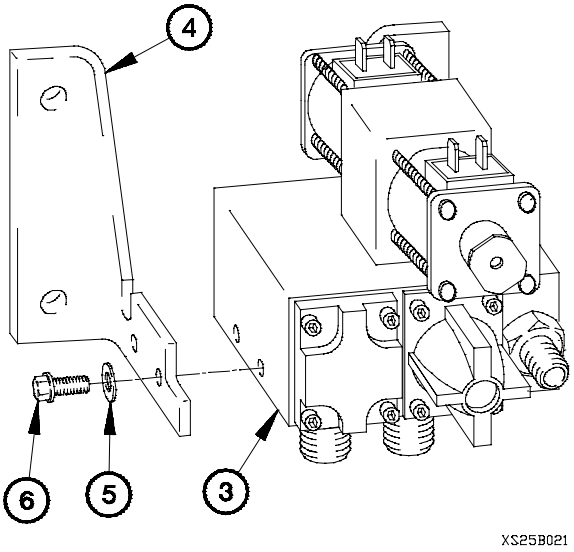


(1) Install preformed packing (1) on each of five fittings (2).

(2) Install five fittings (2) in winch control valve (3).

(3) Position two brackets (4) on winch control valve (3) with four washers (5) and screws (6).

(4) Tighten four screws (6) to 11-13 lb-ft (15-17 N·m).

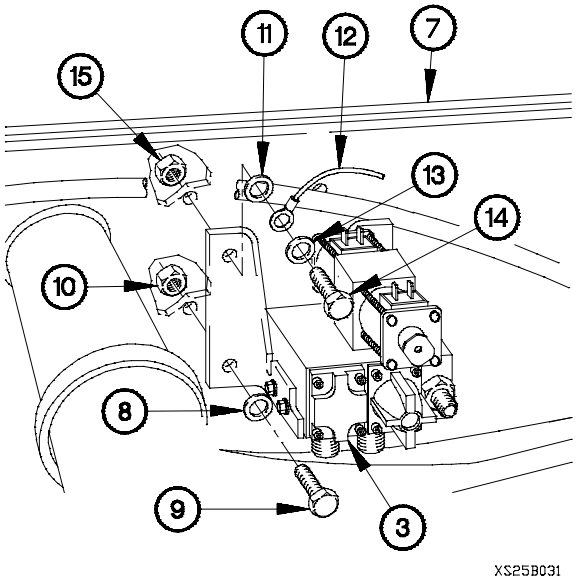


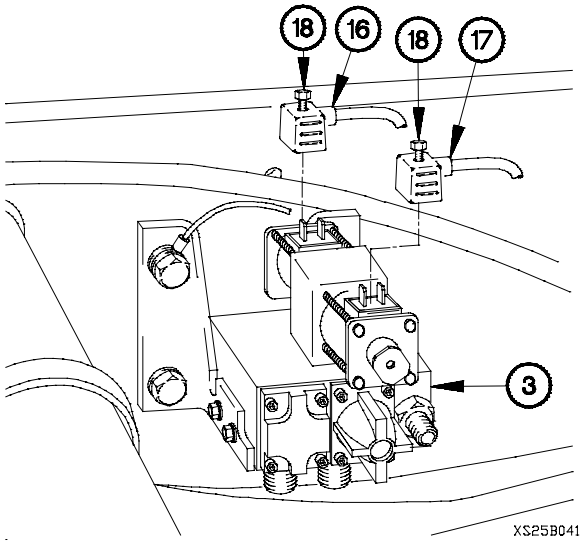
17-6. WINCH CONTROL VALVE ASSEMBLY AND BRACKET REPLACEMENT (CONT)

(5) Position winch control valve (3) on right frame rail (7) with three washers (8), screws (9), and nuts (10).

(6) Position washer (11) and terminal lug TL320 (12) on winch control valve (3) with washer (13) screw (14), and nut (15).

(7) Tighten three nuts (10) and nut (15) to 20-24 lb-ft (27-33 N·m).





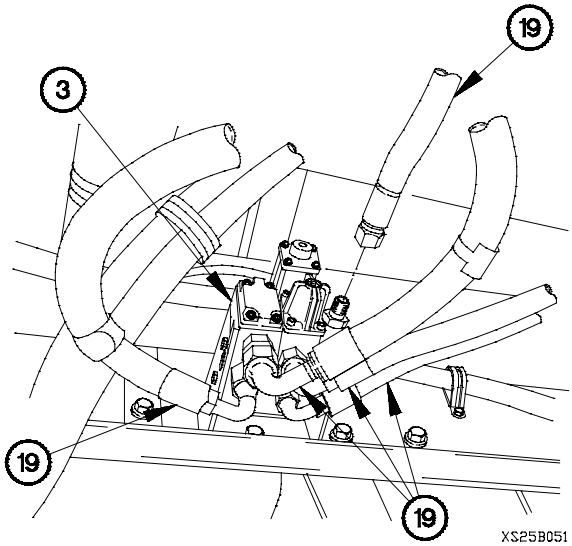
NOTE

Install plastic cable ties as required.

(8) Connect connectors L5 (16) and L4 (17) to winch control valve (3).

(9) Tighten two captive screws (18) in connectors L5 (16) and L4 (17).

(10) Install five hoses (19) on winch control valve (3).



c. Follow-On Maintenance.

(1) Start engine (TM 9-2320-365-10).

(2) Operate 11K SRW and check for proper operation and for hydraulic leaks around winch control valve and hoses (TM 9-2320-365-10).

End of Task.

17-7. 11K SELF-RECOVERY WINCH (SRW) HOSES REPLACEMENT

This task covers:

a. Hydraulic Hose Locations

b. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
Engine shutdown (TM 9-2320-365-10).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Pan, Drain (Item 24, Appendix C)
Goggles, Industrial (Item 15, Appendix C)
Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C)
Wrench, Torque, 0-600 lb-ft (Item 59, Appendix C)
Crowfoot Attachment, Socket Wrench (Item 10, Appendix B)

Tools and Special Tools (Cont)
Crowfoot Attachment, Socket Wrench (Item 12, Appendix B)
Crowfoot Attachment, Socket Wrench (Item 11, Appendix B)

Materials/Parts
Cap and Plug Set (Item 15, Appendix D)
Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D)
Ties, Cable, Plastic (Item 76, Appendix D)
Oil, Lubricating, OE/HDO 10 (Item 43, Appendix D)

a. Hydraulic Hose Locations.

WARNING

- **Wear appropriate eye protection when working under vehicle due to the possibility of falling debris. Failure to comply may result in injury to personnel.**
- **Prolonged contact with lubricating oil (MIL-L-2104) may cause a skin rash. Skin and clothing that come in contact with lubricating oil should be thoroughly washed immediately. Saturated clothing should be removed immediately. Areas in which lubricating oil is used should be well ventilated to keep fumes to a minimum. Failure to comply may result in injury to personnel.**

CAUTION

Cap or plug hoses and connection points to prevent contamination of 11K SRW hydraulic system. Failure to comply may result in damage to equipment.

NOTE

- Refer to **Table 17-1. 11K Self-Recovery Winch (SRW) Hydraulic Hose Locations** for locations of hydraulic hoses on the 11K SRW. It may not be necessary to remove all hydraulic hoses at one time.
- Tag hoses and connection points prior to removal.
- Remove plastic cable ties as required.
- Remove clamps and support brackets as required.
- Position drain pan to collect oil.

Figure 17-1. 11K Self-Recovery Winch (SRW) Hydraulic Hose Locations

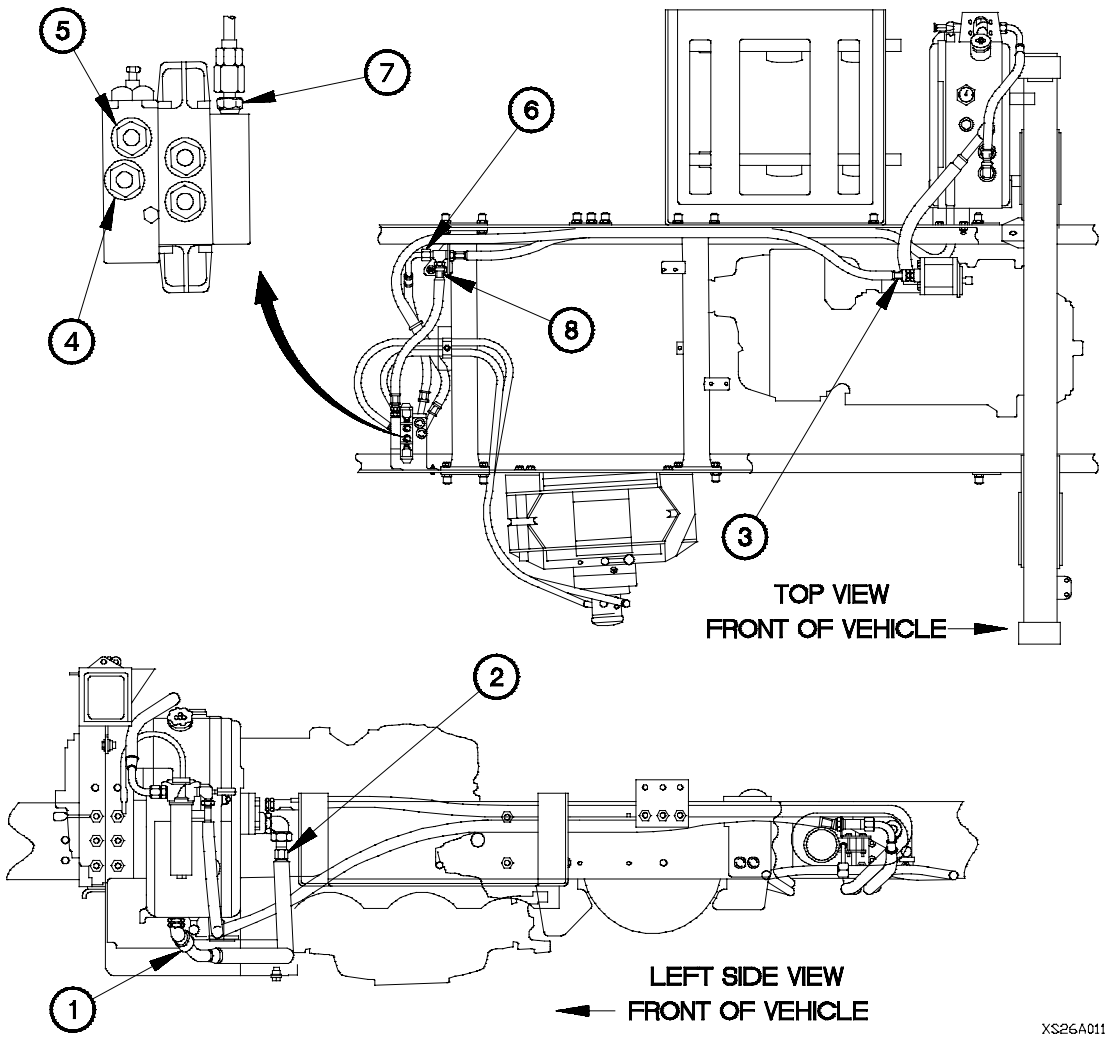


Table 17-1. 11K Self-Recovery Winch (SRW) Hydraulic Hose Locations

Hydraulic Hose Name	From	To	Torque
Pump Suction Hose	Hydraulic tank fitting (1)	Hydraulic pump fitting (2)	207-229 lb-ft (281-311 N·m)
Pump Pressure Hose	Hydraulic pump fitting (3)	Control valve fitting (4)	107-120 lb-ft (145-163 N·m)
Rear Return Hose	Control valve fitting (5)	Bulkhead tee fitting (6)	107-120 lb-ft (145-163 N·m)
Control Valve Bypass Hose	Control valve fitting (7)	Bulkhead tee fitting (8)	107-120 lb-ft (145-163 N·m)

17-7. 11K SELF-RECOVERY WINCH (SRW) HOSE REPLACEMENT (CONT)

Figure 17-1. 11K Self-Recovery Winch (SRW) Hydraulic Hose Locations (Cont)

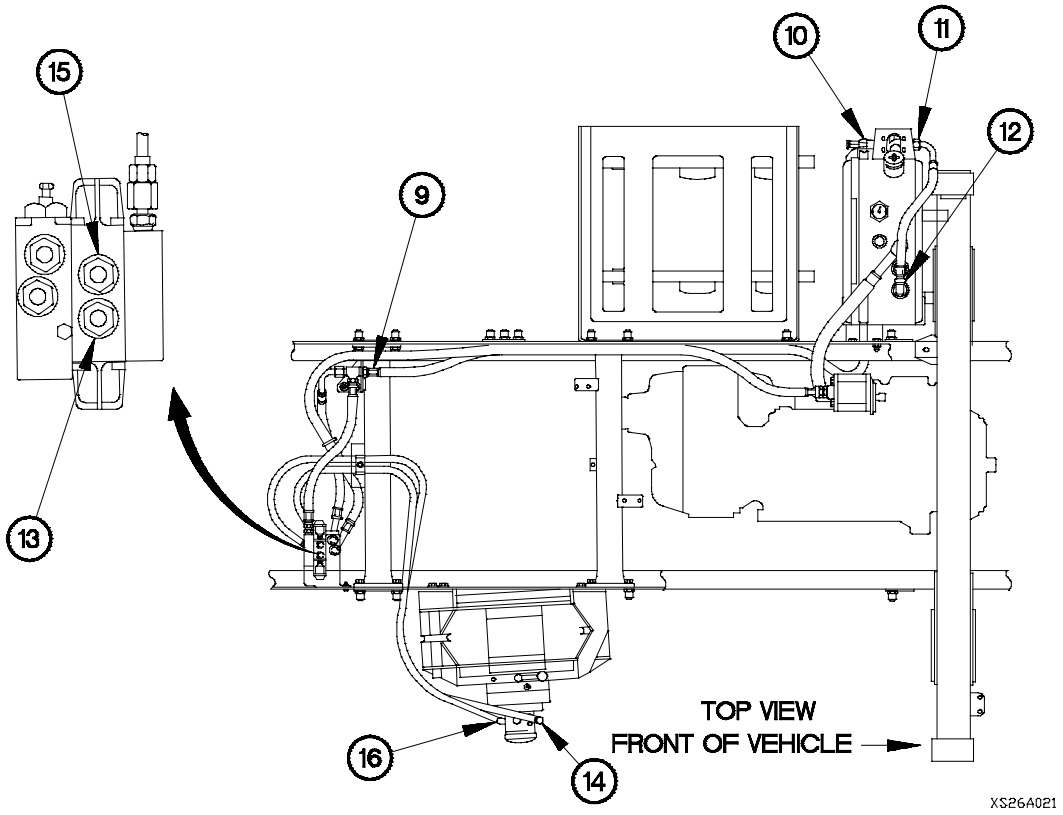


Table 17-1. 11K Self-Recovery Winch (SRW) Hydraulic Hose Locations (Cont)

Hydraulic Hose Name	From	To	Torque
Intermediate Return Hose	Bulkhead tee fitting (9)	Hydraulic oil filter fitting (10)	107-120 lb-ft (145-163 N·m)
Front Return Hose	Hydraulic oil filter fitting (11)	Hydraulic tank fitting (12)	107-120 lb-ft (143-163 N·m)
Front Winch Motor Hose	Control valve fitting (13)	11K SRW holding valve fitting (14)	107-120 lb-ft (143-163 N·m)
Rear Winch Motor Hose	Control valve fitting (15)	11K SRW holding valve fitting (16)	107-120 lb-ft (143-163 N·m)

b. Follow-On Maintenance.

(1) Fill hydraulic reservoir with oil (Appendix H).

(2) Check around hoses for oil leaks.

(3) Operate 11K SRW and check for oil leaks (TM 9-2320-365-10).

End of Task.

CHAPTER 18
BODY, CHASSIS, AND ACCESSORY ITEMS MAINTENANCE

RESTRICTED MAINTENANCE NOTICE

Units not authorized SC 4910-95-CL-A72 (SHOP EQUIPMENT, COMMON NO. 2) in their T.O.E. may be unable to perform some of the maintenance tasks described in this chapter. If the required tools are not authorized, the equipment must be submitted to DS Maintenance for repair.

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18-1. INTRODUCTION 18-1

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18-3. WINDSHIELD WIPER AND NOZZLE REPLACEMENT 18-6
18-4. WINDSHIELD WIPER MOTOR REPLACEMENT 18-9
18-5. WINDSHIELD WIPER LINKAGE REPLACEMENT 18-12
18-6. WINDSHIELD WASHER HOSES AND CONNECTOR REPLACEMENT 18-18
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18-8. DEFROST COVER REPLACEMENT 18-26
18-9. PERSONNEL HEATER REPLACEMENT/REPAIR 18-30
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Section I. INTRODUCTION

18-1. INTRODUCTION

This chapter contains maintenance instructions for replacing the vehicle body, chassis, and accessory components authorized by the Maintenance Allocation Chart (MAC) at the Unit Maintenance level.

Section II. MAINTENANCE PROCEDURES

18-2. WINDSHIELD WASHER RESERVOIR AND PUMP REPLACEMENT

This task covers:

a. Removal
b. Installation
c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
Engine shut down (TM 9-2320-365-10).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)

Materials/Parts
Cleaning Compound, Windshield (Item 16, Appendix D)
Grommet, Nonmetallic (Item 47, Appendix G)

a. Removal.

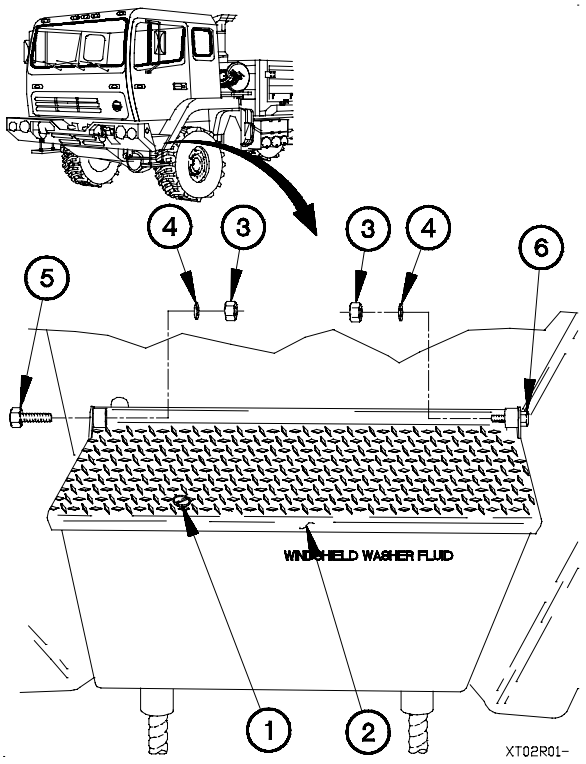
(1) Turn screw (1) to the left to unlock cab step tread (2).

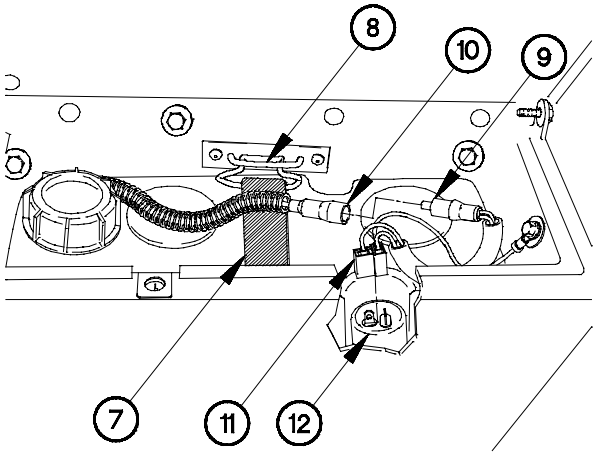
(2) Remove two nuts (3), washers (4), and screw (5) from cab step tread (2).

NOTE

Screw will remain attached to cab step.

(3) Remove cab step tread (2) from screw (6).





(4) Remove strap (7) from two brackets (8).

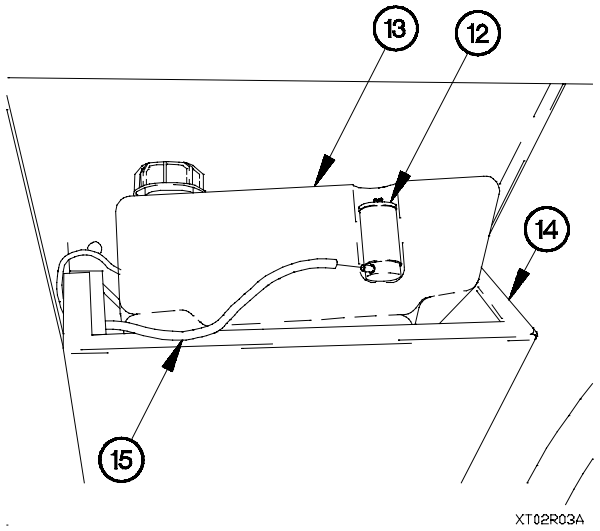
(5) Disconnect connector J25 (9) from connector P25 (10).

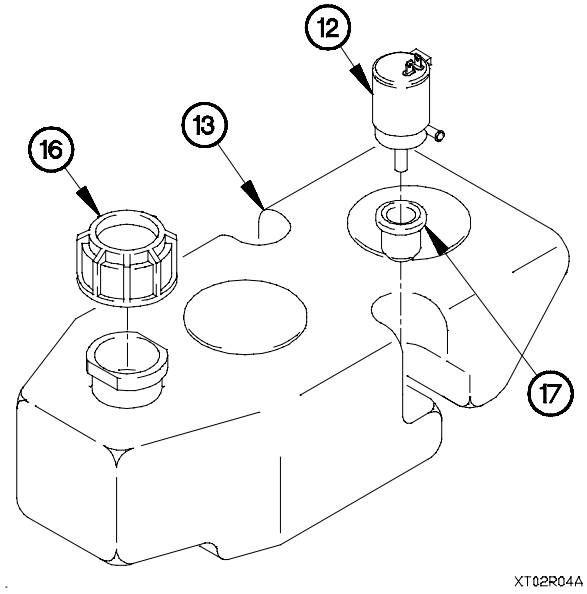
(6) Disconnect connector P125 (11) from windshield washer pump (12).

(7) Lift windshield washer reservoir (13) partially out of left cab step (14).

(8) Disconnect windshield washer supply tube (15) from windshield washer pump (12).

(9) Remove windshield washer reservoir (13) from left cab step (14).





(10) Remove cap (16) from windshield washer reservoir (13).

(11) Remove windshield washer pump (12) from windshield washer reservoir (13).

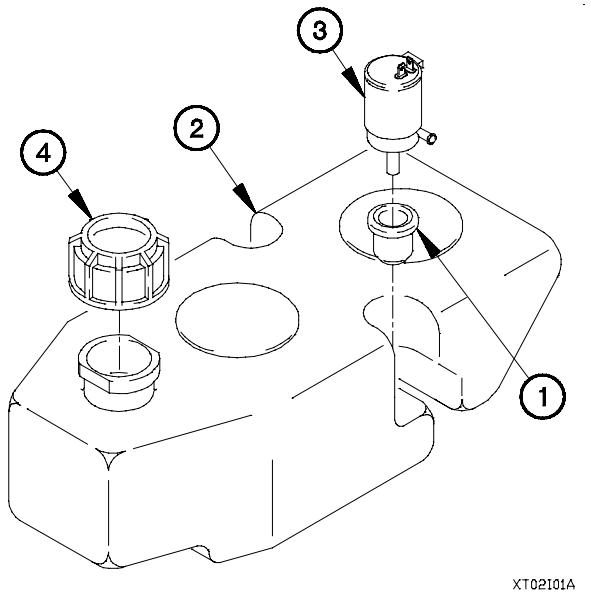
(12) Remove grommet (17) from windshield washer reservoir (13). Discard grommet.

b. Installation.

(1) Install grommet (1) in windshield washer reservoir (2).

(2) Install windshield washer pump (3) in windshield washer reservoir (2).

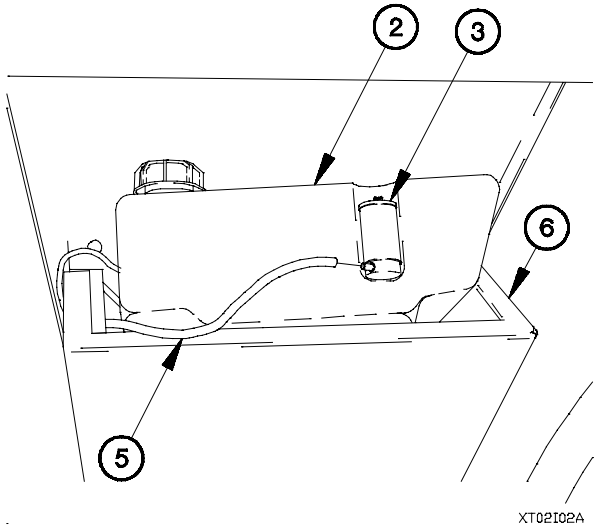
(3) Install cap (4) on windshield washer reservoir (2).



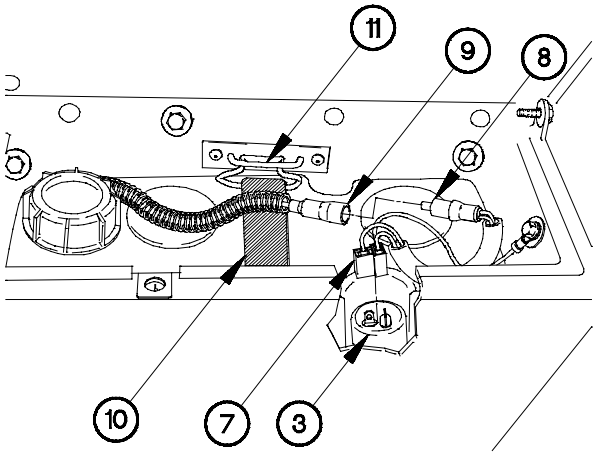
18-2. WINDSHIELD WASHER RESERVOIR AND PUMP REPLACEMENT (CONT)

(4) Connect windshield washer supply tube (5) to windshield washer pump (3).

(5) Install windshield washer reservoir (2) in left cab step (6).



XT02I02A



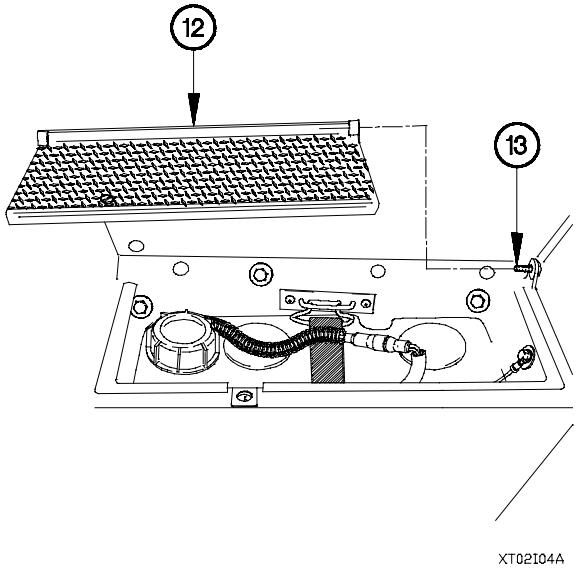
XT02I03A

(6) Connect connector P125 (7) to windshield washer pump (3).

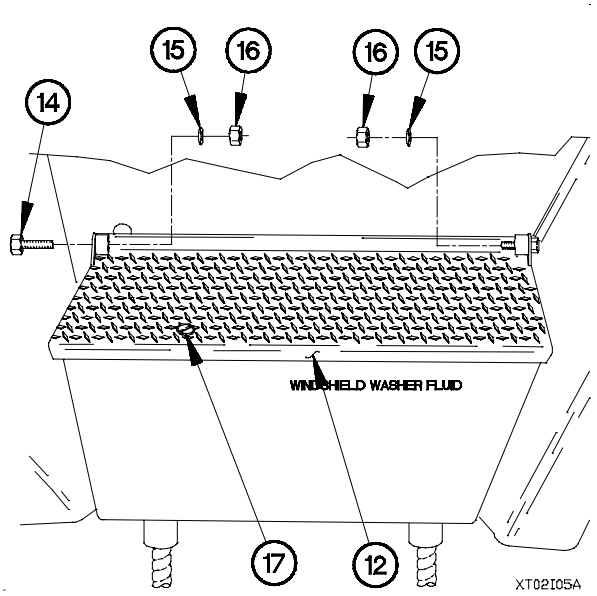
(7) Connect connector J25 (8) to connector P25 (9).

(8) Connect strap (10) to two brackets (11).

(9) Position cab step tread (12) on screw (13).



XT02I04A



(10) Install screw (14), two washers (15), and nuts (16) in cab step tread (12).

(11) Lock cab step tread (12) by turning screw (17) one half turn to the right.

c. Follow-On Maintenance.

(1) Fill windshield washer reservoir (TM 9-2320-365-10).

(2) Operate windshield washer and check for proper operation (TM 9-2320-365-10).

End of Task.

18-3. WINDSHIELD WIPER AND NOZZLE REPLACEMENT

This task covers:

a. Removal
b. Disassembly
c. Assembly
d. Installation
e. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
Engine shut down (TM 9-2320-365-10).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Wrench, Torque, 0-200 lb-in. (Item 58, Appendix C)
Socket Set, Socket Wrench (Item 35, Appendix C)

Materials/Parts
Washer, Spring (Item 279, Appendix G)
Wiper, Refill (Item 283, Appendix G)

a. Removal.

NOTE

All windshield wipers are removed the same way. Left side shown.

(1) Disconnect windshield washer hose (1) from fitting (2).

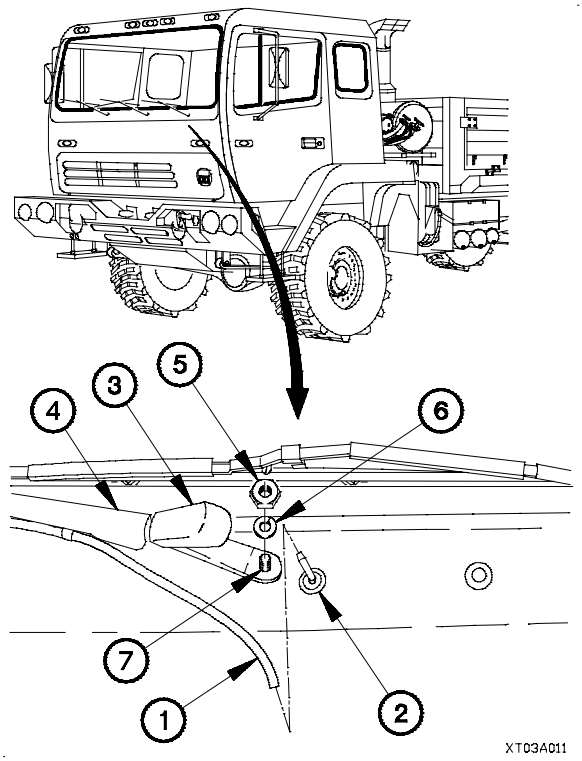
(2) Lift cover (3) at base of wiper arm (4).

(3) Remove nut (5) and spring washer (6) from wiper arm shaft (7). Discard spring washer.

NOTE

Mark position of wiper arm prior to removal.

(4) Remove wiper arm (4) from wiper arm shaft (7).

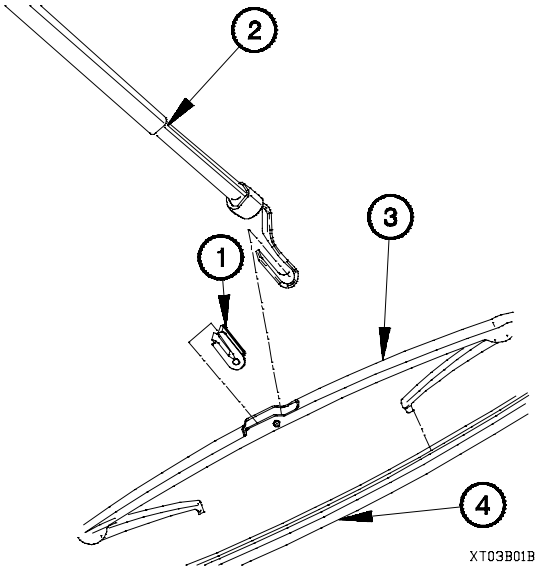


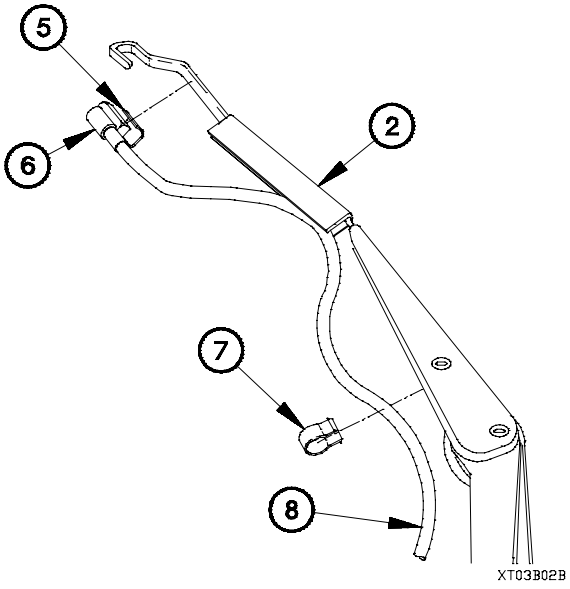
b. Disassembly.

(1) Depress clip (1) and separate wiper arm (2) and wiper blade (3).

(2) Remove clip (1) from wiper blade (3).

(3) Remove wiper (4) from wiper blade (3). Discard wiper.





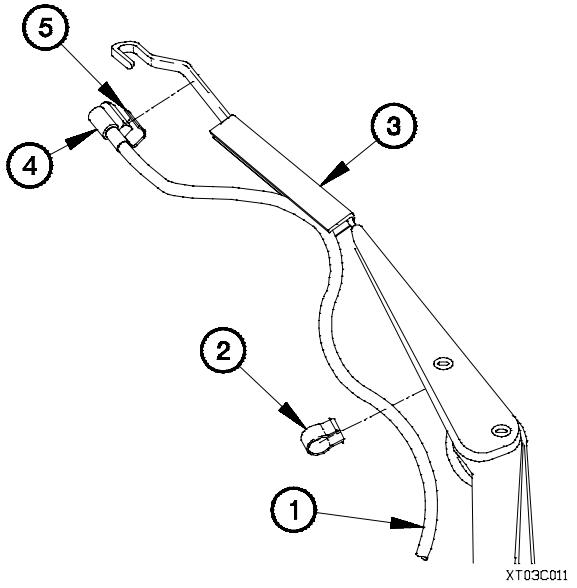
(4) Lift up clip (5) and remove windshield washer nozzle (6) from wiper arm (2).

(5) Squeeze clip (7) and remove clip and windshield washer hose (8) from wiper arm (2).

c. Assembly.

(1) Install windshield wiper hose (1) and clip (2) on wiper arm (3).

(2) Install windshield washer nozzle (4) and clip (5) on wiper arm (3).

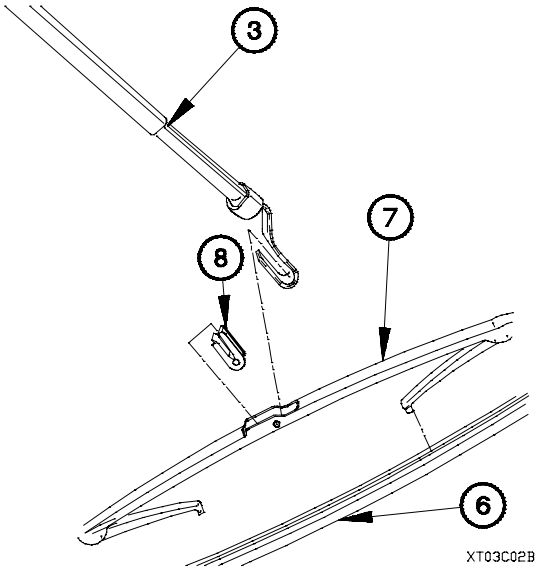


18-3. WINDSHIELD WIPER AND NOZZLE REPLACEMENT (CONT)

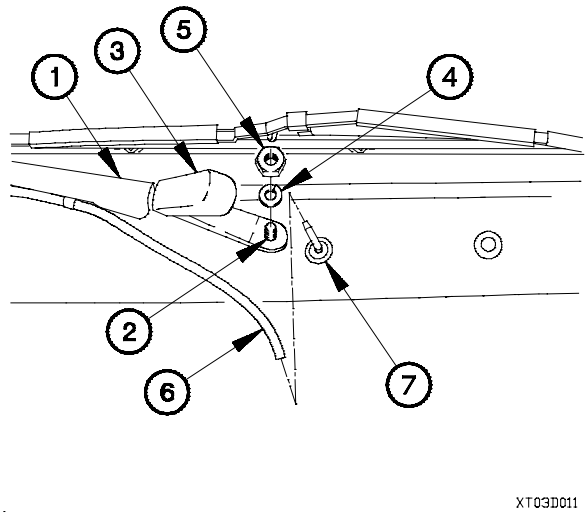
(3) Install wiper (6) on wiper blade (7).

(4) Install clip (8) on wiper blade (7).

(5) Install wiper blade (7) on wiper arm (3).



d. Installation.



NOTE

All windshield wipers are installed the same way. Left side shown.

(1) Position wiper arm (1) on wiper arm shaft (2).

(2) Lift cover (3) on wiper arm shaft (2).

(3) Position spring washer (4) and nut (5) on wiper arm shaft (2).

(4) Tighten nut (5) to 120-168 lb-in. (14-19 N·m).

(5) Snap cover (3) in place on wiper arm (1).

(6) Connect windshield washer hose (6) to fitting (7).

e. Follow-On Maintenance.

Operate windshield wipers and check for proper operation (TM 9-2320-365-10).

End of Task.

18-4. WINDSHIELD WIPER MOTOR REPLACEMENT

This task covers:

a. Removal
b. Installation
c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
Batteries disconnected (para 7-48).
PDP cover removed (para 16-2).

Materials/Parts
Ties, Cable, Plastic (Item 76, Appendix D)
Nut, Self-Locking (Item 153, Appendix G)

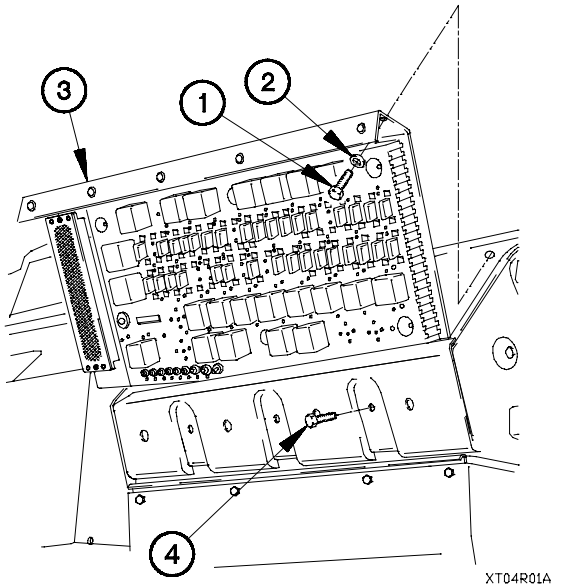
Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Wrench, Torque 0-200 lb-in. (Item 58, Appendix C)
Wrench, Torque 0-175 lb-ft (Item 57, Appendix C)
Wrench Set, Socket (Item 49, Appendix C)

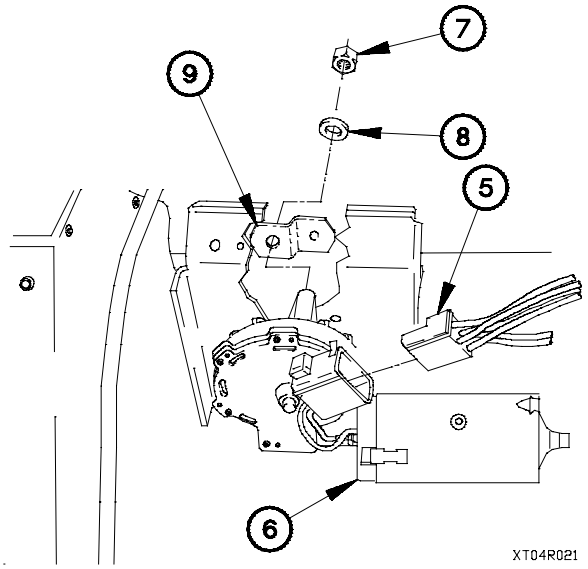
a. Removal.

(1) Remove three screws (1) and washers (2) from PDP (3).

(2) Remove three screws (4) from PDP (3).

(3) Lift PDP (3) outward to gain access.





NOTE

Remove plastic cable ties as required.

(4) Disconnect connector PX22 (5) from wiper motor (6).

(5) Remove self-locking nut (7) and washer (8) from wiper motor (6). Discard self-locking nut.

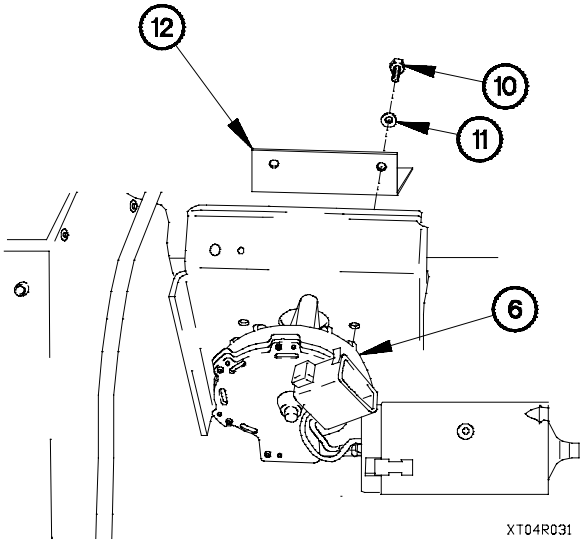
NOTE

Note orientation of wiper arm prior to removal.

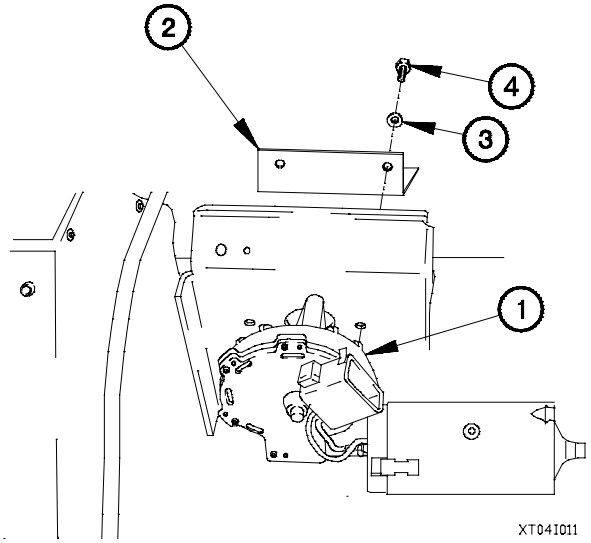
(6) Remove wiper arm (9) from wiper motor (6).

18-4. WINDSHIELD WIPER MOTOR REPLACEMENT (CONT)

(7) Remove three screws (10), washers (11), wiper motor (6), and wiper motor bracket (12) from vehicle.



b. Installation.



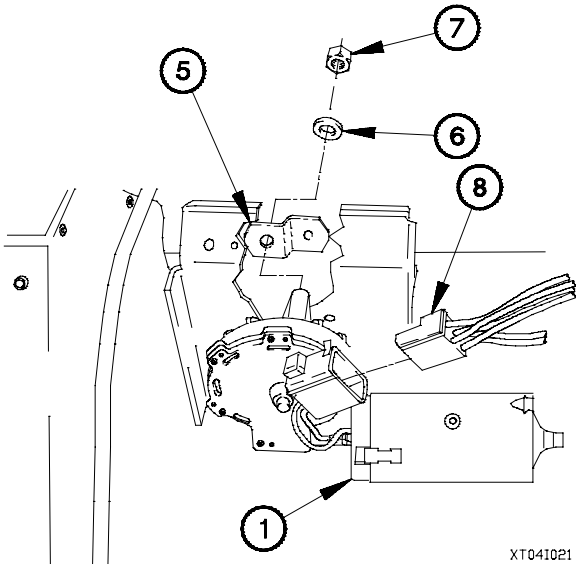
(1) Position wiper motor (1) and wiper motor bracket (2) on vehicle with three washers (3) and screws (4).

(2) Tighten three screws (4) to 96-120 lb-in. (11-14 N·m).

NOTE

Use orientation noted from removal of wiper arm.

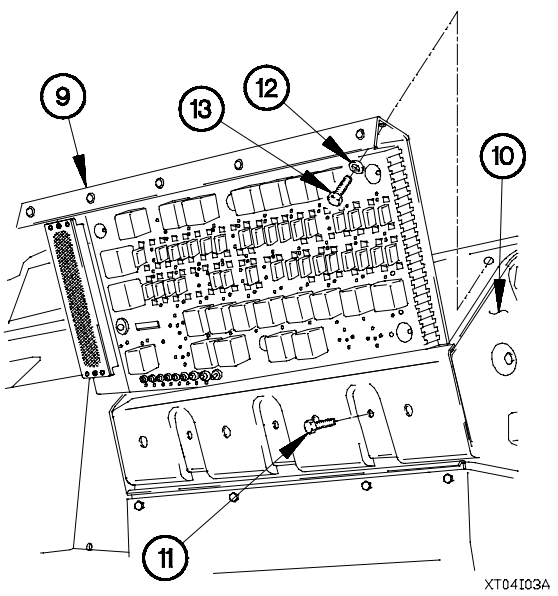
(3) Install wiper arm (5) on wiper motor (1) with washer (6) and self-locking nut (7).



NOTE

Install plastic cable ties as required.

(4) Connect connector PX22 (8) to wiper motor (1).



(5) Install PDP (9) on dashboard (10) with three screws (11).

(6) Install three washers (12) and screws (13) in PDP (9).

c. Follow-On Maintenance.

(1) Install PDP cover (para 16-2).

(2) Connect batteries (para 7-48).

(3) Check windshield wiper operation (TM 9-2320-365-10).

End of Task.

18-5. WINDSHIELD WIPER LINKAGE REPLACEMENT

This task covers:

a. Removal
b. Installation
c. Follow-On Maintenance

INITIAL SETUP

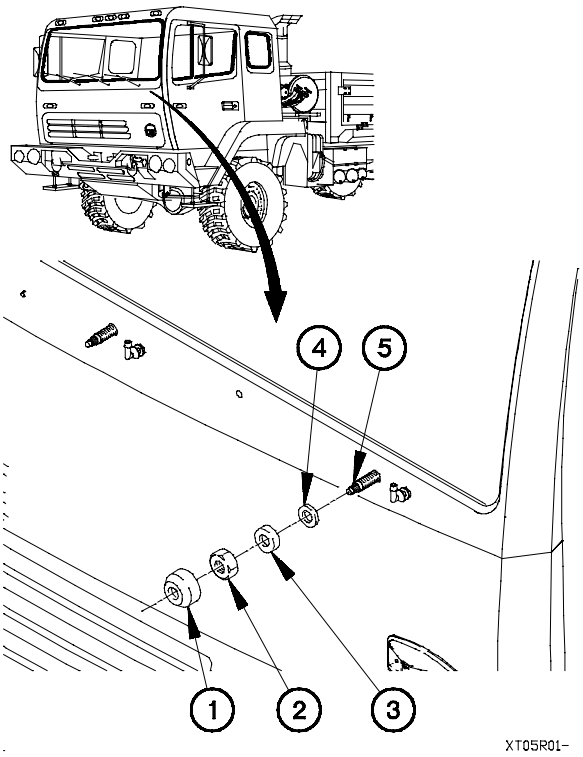
Equipment Conditions
Batteries disconnected (para 7-48).
Windshield wipers and nozzles removed (para 18-3).
PDP cover removed (para 16-2).
Personnel heater removed (para 18-9).
Instrument panel assembly removed for access (para 7-15).

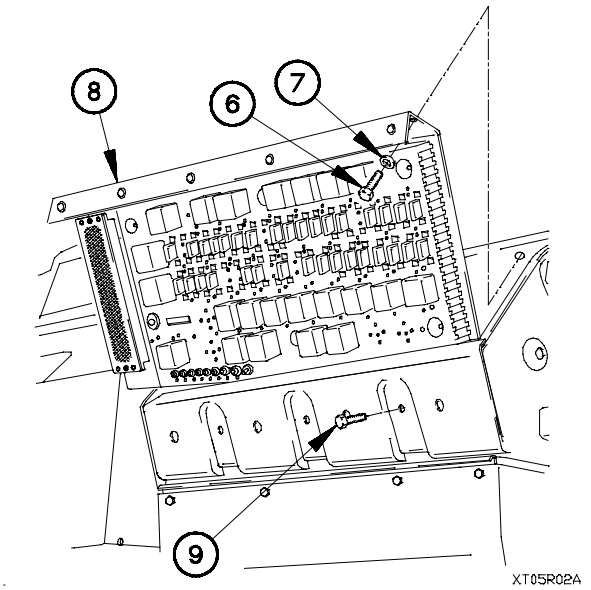
Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C)
Wrench, Torque, 0-200 lb-in. (Item 58, Appendix C)
Socket Set, Socket Wrench (Item 34, Appendix C)

Material/Parts
Washer, Flat Rubber (3) (Item 272, Appendix G)
Nut, Self-Locking (6) (Item 116, Appendix G)
Nut, Self-Locking (Item 153, Appendix G)

a. Removal.

(1) Remove three collars (1), nuts (2), washers (3), and rubber washers (4) from wiper shafts (5).





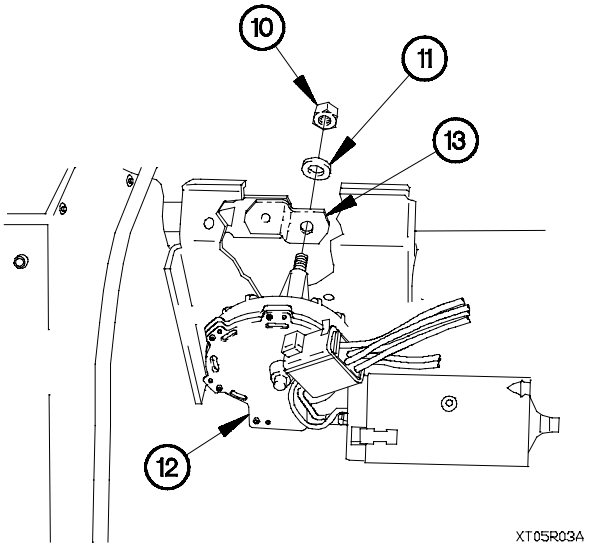
(2) Remove three screws (6) and washers (7) from PDP (8).

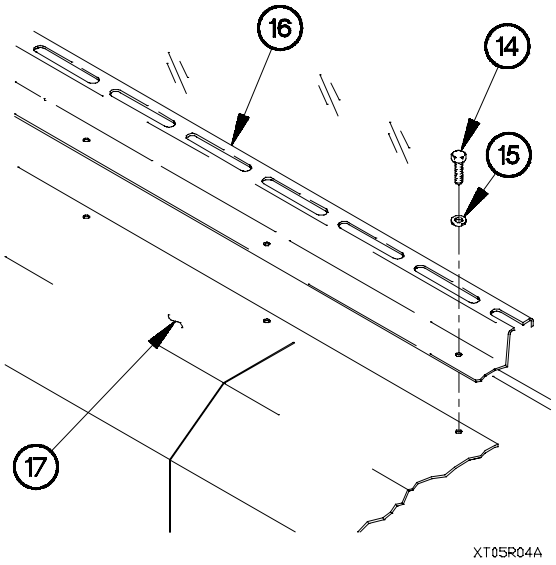
(3) Remove three screws (9) from PDP (8).

(4) Lift PDP (8) outward to gain access.

(5) Remove self-locking nut (10) and washer (11) from wiper motor (12). Discard self-locking nut.

(6) Remove windshield wiper linkage (13) from wiper motor (12).



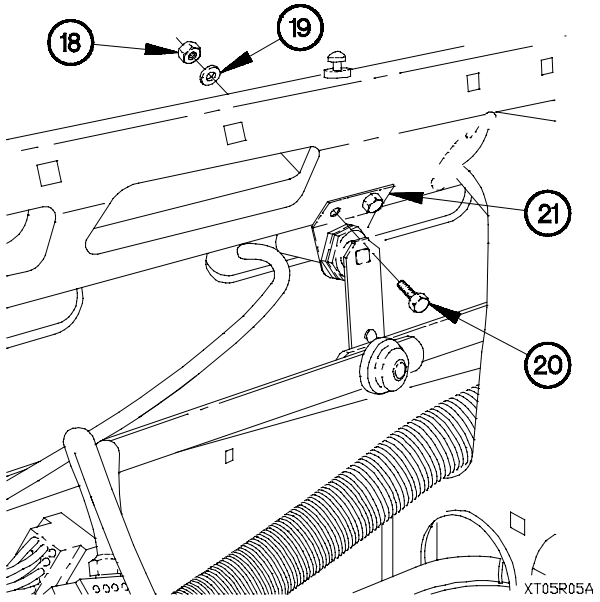


NOTE

Perform steps (7) and (8) on all models except M1081.

(7) Remove six screws (14), washers (15), and defroster plenum (16) from dashboard (17).

(8) Remove six self-locking nuts (18), washers (19), and screws (20) from three linkage mounting brackets (21). Discard self-locking nuts.



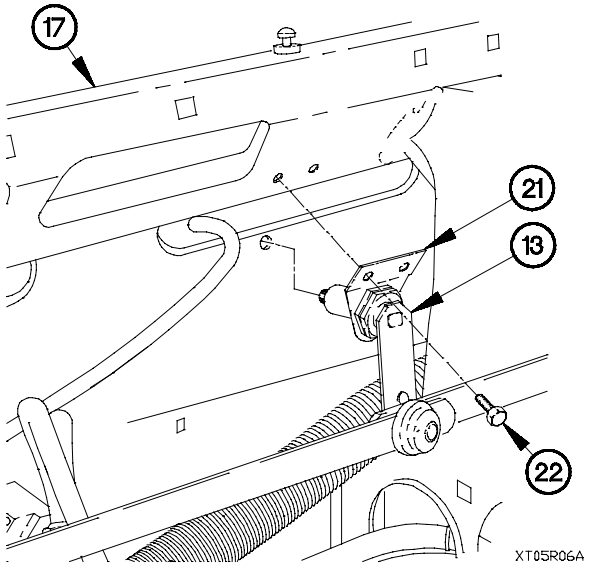
18-5. WINDSHIELD WIPER LINKAGE REPLACEMENT (CONT)

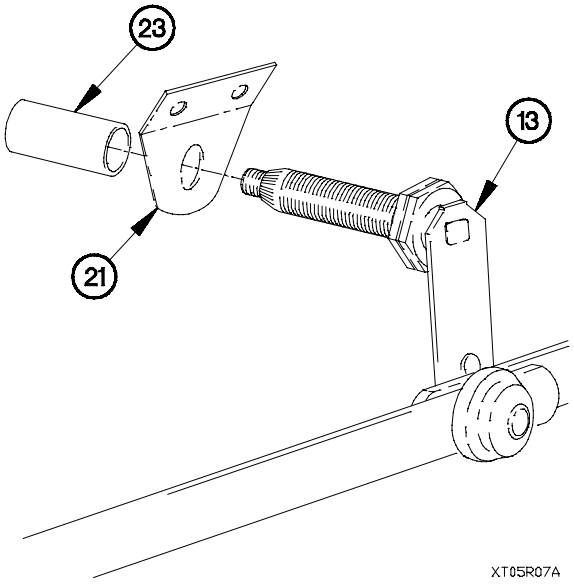
NOTE

Perform step (9) on M1081.

(9) Remove six screws (22) from three linkage mounting brackets (21).

(10) Remove windshield wiper linkage (13) from dashboard (17).

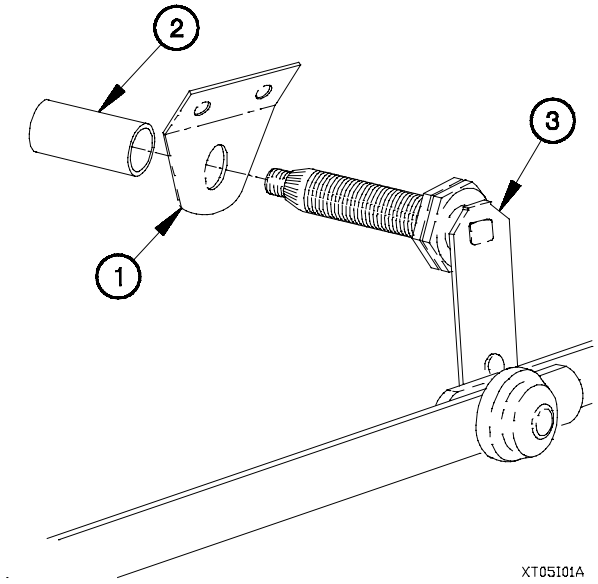




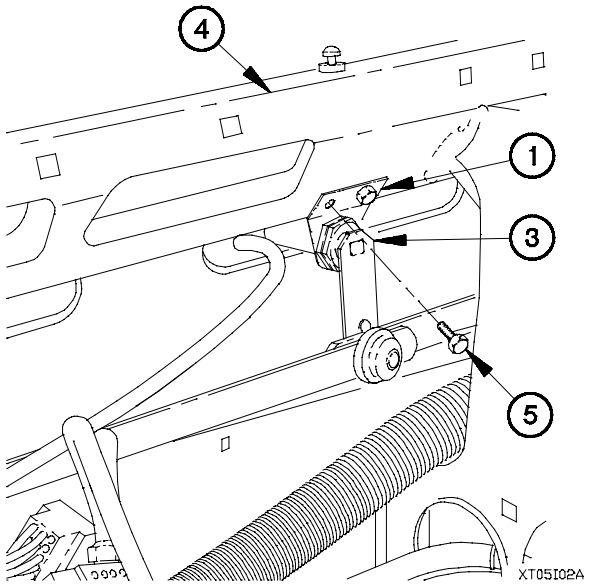
(11) Remove three sleeve spacers (23) and linkage mounting brackets (21) from windshield wiper linkage (13).

b. Installation.

(1) Install three linkage mounting brackets (1) and sleeve spacers (2) on windshield wiper linkage (3).



(2) Position windshield wiper linkage (3) in dashboard (4).

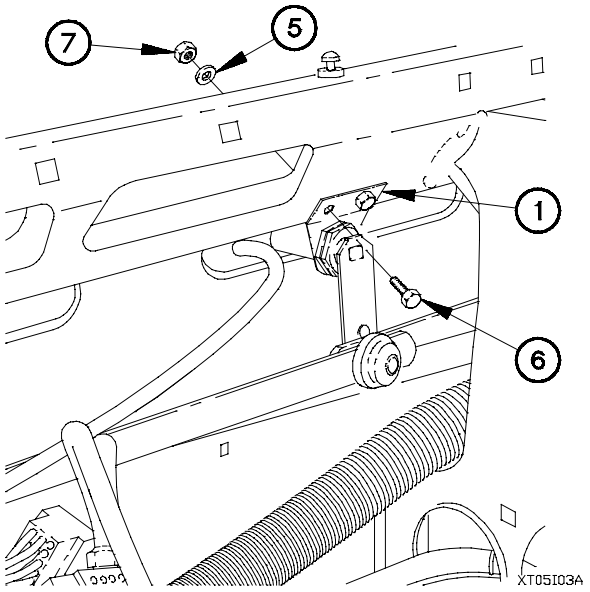


NOTE

Perform steps (3) and (4) on model M1081.

(3) Position six screws (5) in three linkage mounting brackets (1).

(4) Tighten six screws (5) to 96-120 lb-in. (11-14 N·m).



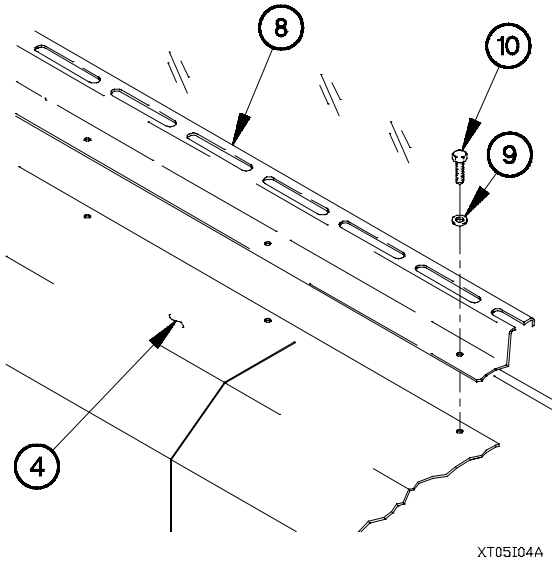
NOTE

Perform steps (5) through (7) on all models except M1081.

(5) Position six screws (6), washers (5), and self-locking nuts (7) in three linkage mounting brackets (1).

(6) Tighten six self-locking nuts (7) to 96-120 lb-in. (11-14 N·m).

(7) Install defroster plenum (8) on dashboard (4) with six washers (9) and screws (10).



18-5. WINDSHIELD WIPER LINKAGE REPLACEMENT (CONT)

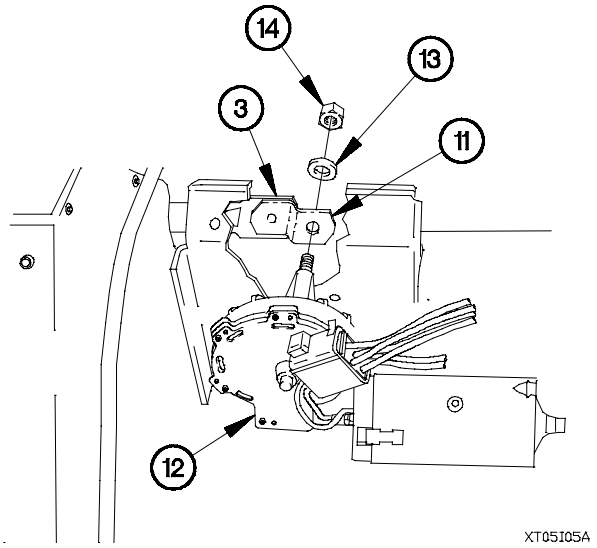
(8) Position windshield wiper linkage (3) to full left position.

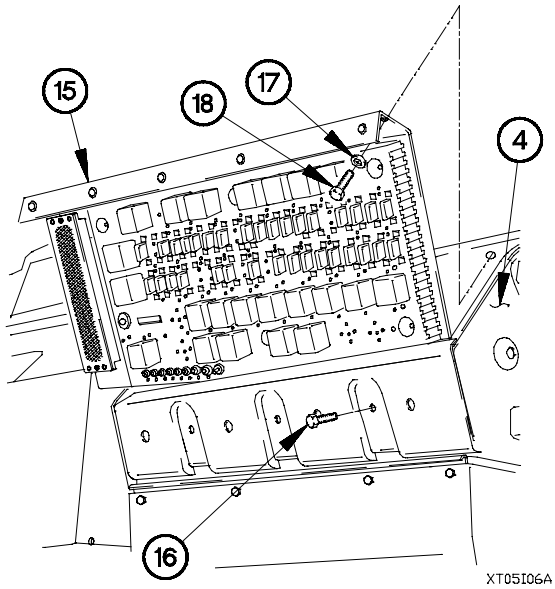
NOTE

Wiper arm should be in a straight line with windshield wiper linkage prior to installing on wiper motor.

(9) Position wiper arm (11) on wiper motor (12) with washer (13) and self-locking nut (14).

(10) Tighten self-locking nut (14) to 20-26 lb-ft (27-35 N·m).

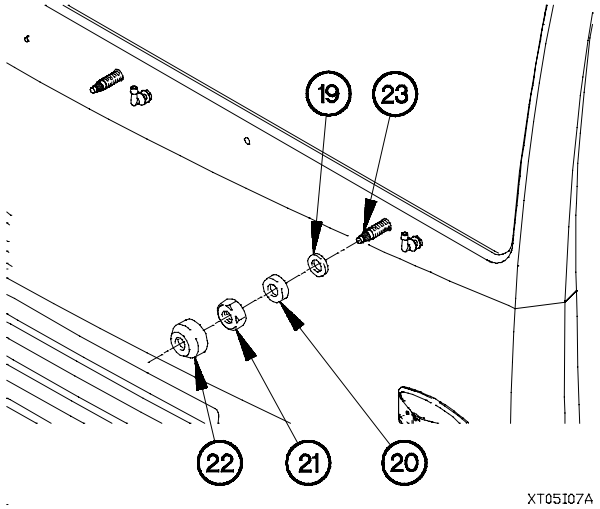




(11) Install PDP (15) on dashboard (4) with three screws (16).

(12) Install three washers (17) and screws (18) in PDP (15).

(13) Install three rubber washers (19), washers (20), nuts (21), and collars (22) on wiper shafts (23).



c. Follow-On Maintenance.

(1) Install instrument panel assembly (para 7-15).

(2) Install personnel heater (para 18-9).

(3) Install PDP cover (para 16-2).

(4) Install windshield wipers and nozzles (para 18-3).

(5) Connect batteries (para 7-48).

(6) Check windshield wiper operation (TM 9-2320-365-10).

End of Task.

18-6. WINDSHIELD WASHER HOSES AND CONNECTOR REPLACEMENT

This task covers:

a. Removal
b. Installation
c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
Batteries disconnected (para 7-48).
Personnel heater removed (para 18-9).
Instrument panel assembly removed for access (para 7-15).

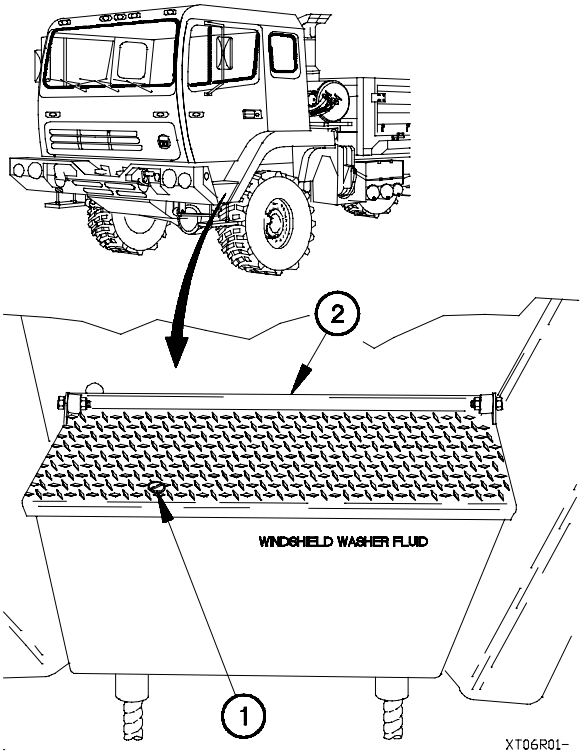
Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)

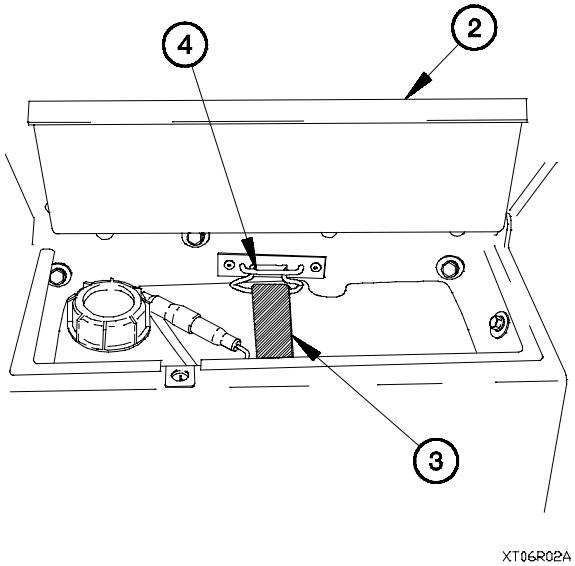
Material/Parts
Grommet, Nonmetallic (Item 46, Appendix G)
Lockwire (Item 32, Appendix D)

Personnel Required
(2)

a. Removal.

(1) Turn screw (1) to the left to unlock cab step tread (2).





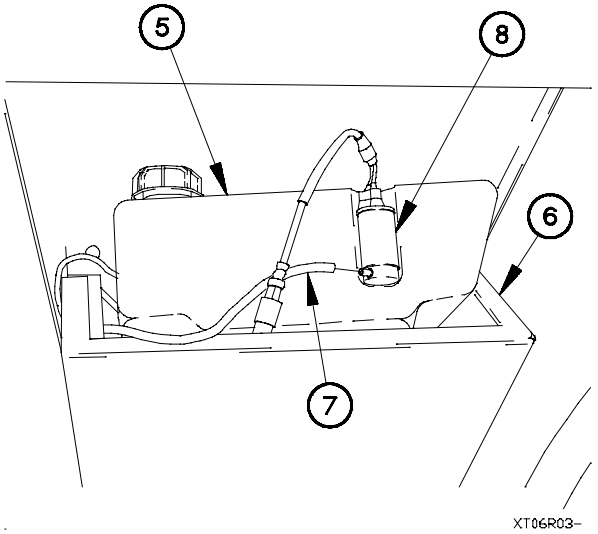
(2) Open cab step tread (2).

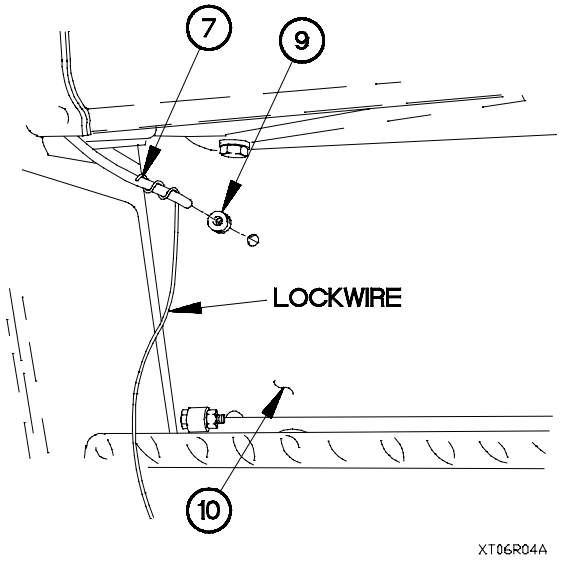
(3) Remove strap (3) from two brackets (4).

(4) Lift windshield washer reservoir (5) partially out of left cab step (6).

(5) Disconnect hose (7) from windshield washer pump (8).

(6) Pull hose (7) out through hole at back of left cab step (6).





(7) Remove grommet (9) and hose (7) from cab step mount (10).

(8) Remove grommet (9) from hose (7). Discard grommet.

(9) Attach a length of lockwire to bottom end of hose (7).

NOTE

All three hoses and connectors are removed the same way. Center hose and connector shown.

(10) Disconnect three hoses (7) from three connectors (11).

NOTE

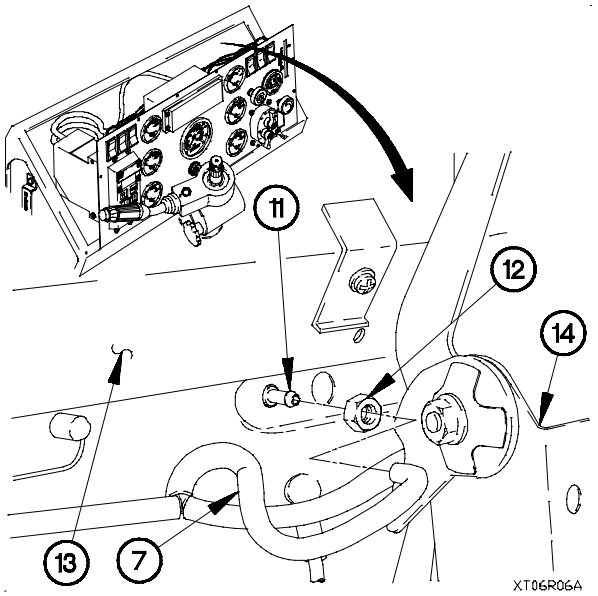
Step (11) requires the aid of an assistant.

(11) Remove three nuts (12) and connectors (11) from cab (13).

NOTE

Note routing of hoses prior to removal.

(12) Remove three hoses (7) from dashboard (14).

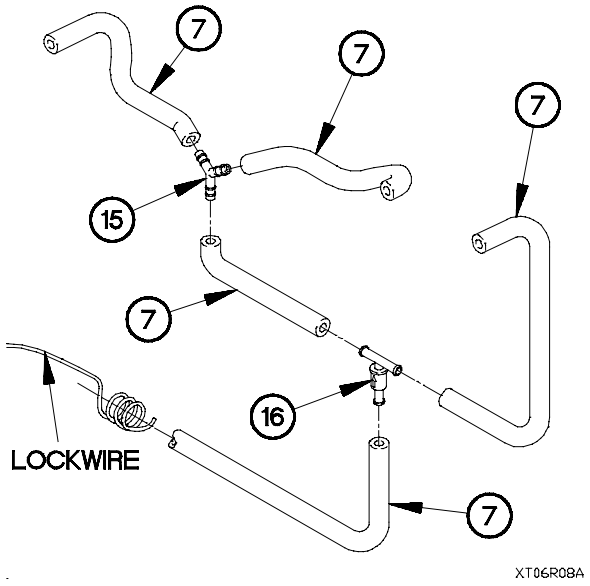


18-6. WINDSHIELD WASHER HOSES AND CONNECTOR REPLACEMENT (CONT)

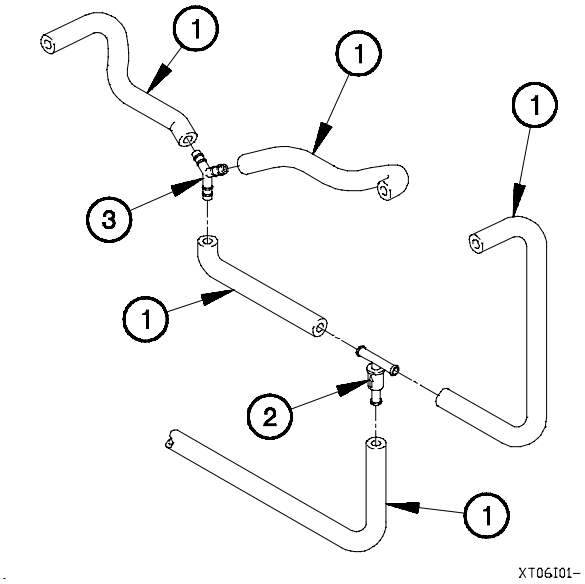
(13) Remove bottom end of hose (7) from lockwire.

(14) Disconnect three hoses (7) from wye splitter (15).

(15) Disconnect three hoses (7) from check valve (16).



b. Installation.



(1) Connect three hoses (1) to check valve (2).

(2) Connect three hoses (1) to wye splitter (3).

NOTE

Steps (3) and (4) require the aid of an assistant.

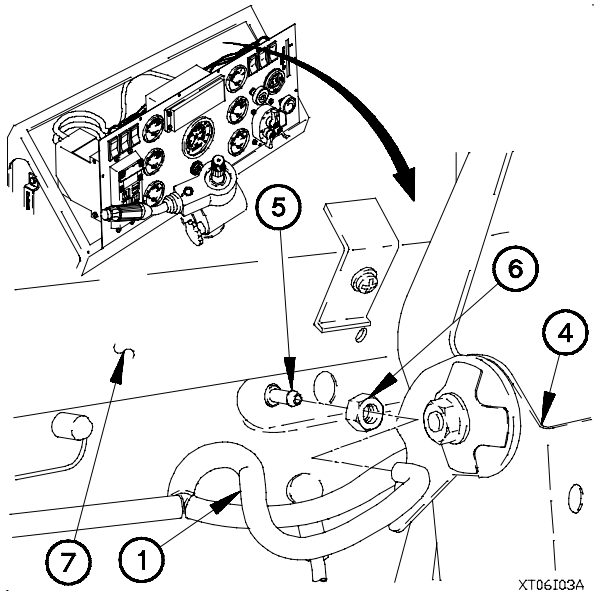
(3) Route three hoses (1) through dashboard (4).

NOTE

All three connectors and hoses are installed the same way. Center connector and hose shown.

(4) Install three connectors (5) and nuts (6) in cab (7).

(5) Connect three hoses (1) to three connectors (5).



(6) Attach lockwire to bottom end of hose (1).

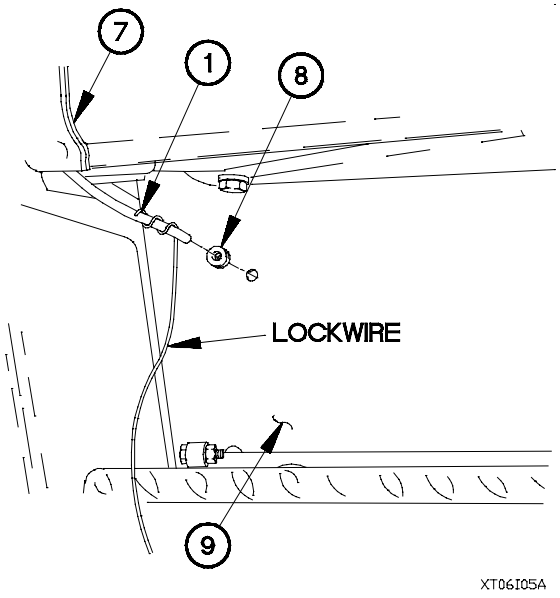
(7) Pull lockwire and hose (1) through hole at bottom corner of cab (7).

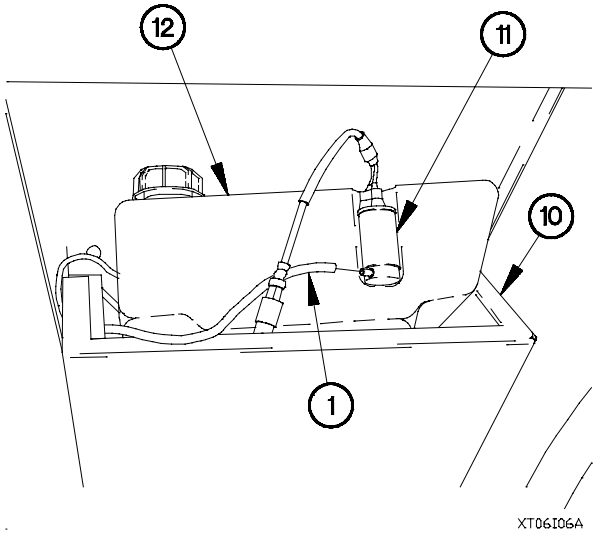
(8) Remove lockwire from hose (1).

(9) Install grommet (8) on hose (1).

(10) Route hose (1) through cab step mount (9).

(11) Install grommet (8) in cab step mount (9).

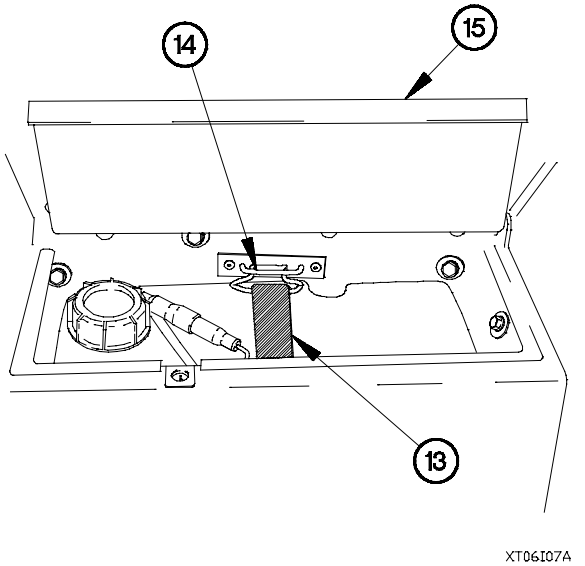




(12) Route hose (1) through hole at back of left cab step (10).

(13) Connect hose (1) to windshield washer pump (11).

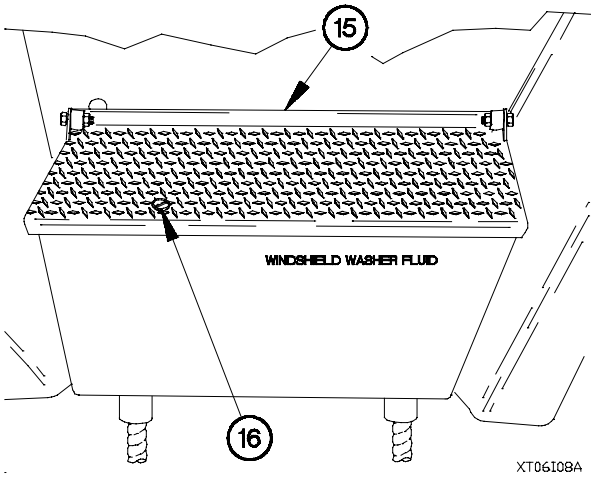
(14) Install windshield washer reservoir (12) in left cab step (10).



(15) Connect strap (13) to two brackets (14).

(16) Close cab step tread (15).

18-6. WINDSHIELD WASHER HOSES AND CONNECTOR REPLACEMENT (CONT)



(17) Turn screw (16) to the right to lock cab step tread (15).

c. Follow-On Maintenance.

(1) Install instrument panel assembly (para 7-15).

(2) Install personnel heater (para 18-9).

(3) Connect batteries (para 7-48).

(4) Check fluid level in windshield washer reservoir (TM 9-2320-365-10).

(5) Operate windshield washer and check for proper operation (TM 9-2320-365-10).

End of Task.

18-7. CAB MIRROR REPLACEMENT

This task covers:

a. Removal

b. Installation

INITIAL SETUP

Equipment Conditions
Engine shut down (TM 9-2320-365-10).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C)
Wrench, Torque, 0-200 lb-in. (Item 58, Appendix C)
Socket Set, Socket Wrench (Item 34, Appendix C)

Tools and Special Tools (Cont)
Screwdriver Attachment, Socket Wrench (Item 43, Appendix B)

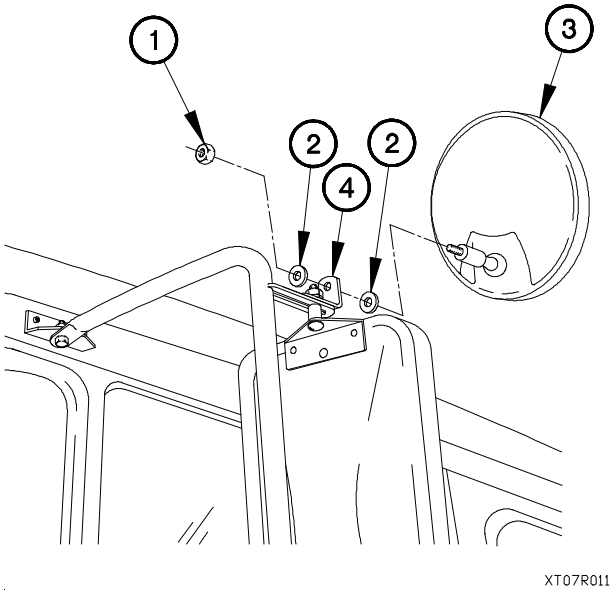
Materials/Parts
Nut, Self-Locking (2) (Item 148, Appendix G)
Nut, Self-Locking (2) (Item 128, Appendix G)
Lockwasher (Item 101.3, Appendix G)

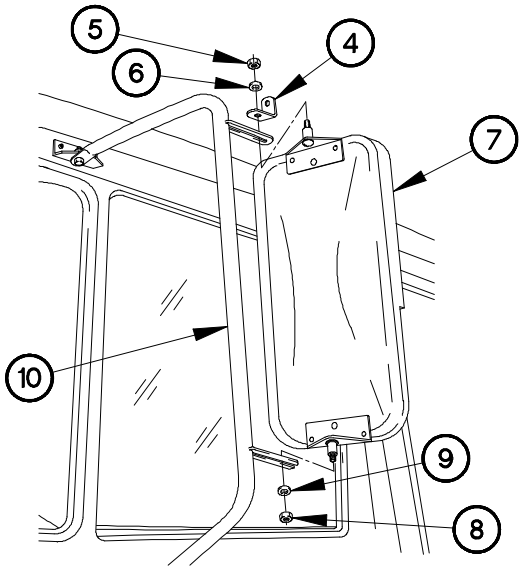
a. Removal.

NOTE

- Left and right cab mirrors are removed the same way. Left side shown.
- Perform steps (1) and (7) convex mirror mounted with bracket.

(1) Remove nut (1), washer (2), convex mirror (3), and washer (2) from bracket (4).



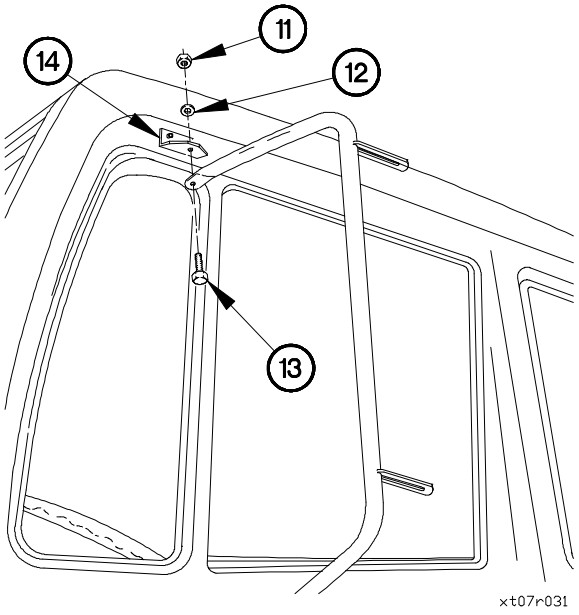


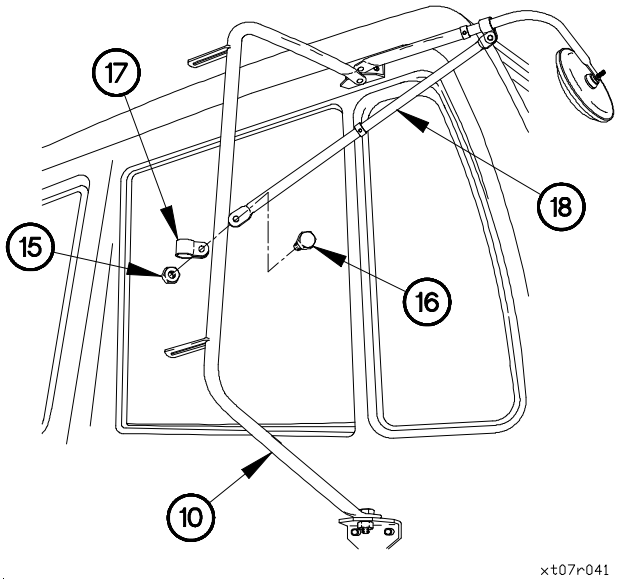
(2) Remove self-locking nut (5), washer (6), and bracket (4) from cab mirror (7). Discard self-locking nut.

(3) Remove self-locking nut (8), washer (9), and cab mirror (7) from mirror arm (10). Discard self-locking nut.

18-7. CAB MIRROR REPLACEMENT (CONT)

(4) Remove self-locking nut (11), washer (12), and screw (13) from upper bracket (14). Discard self-locking nuts.



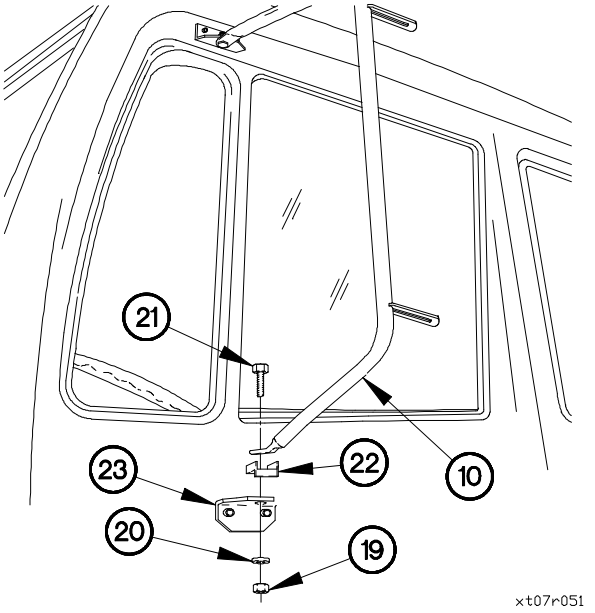


NOTE

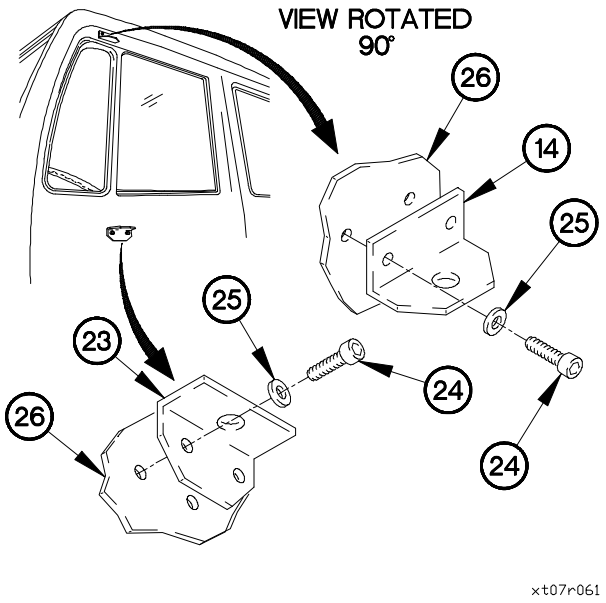
Perform the following step on RH side cab mirror with RH convex mirror installed.

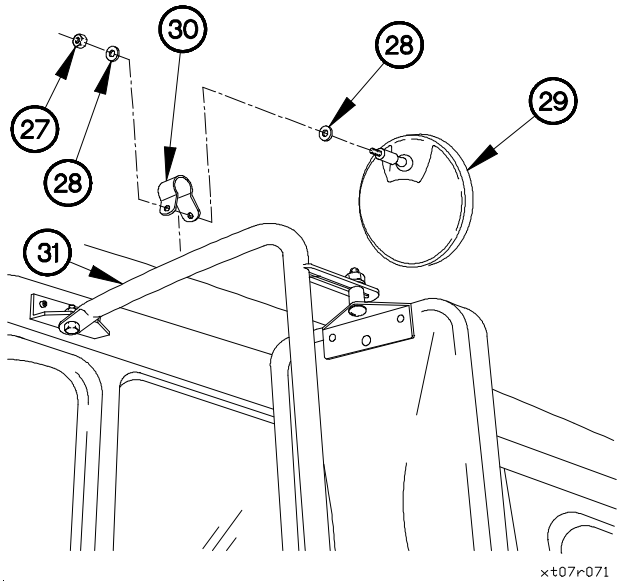
(5) Remove nut (15), screw (16), clamp (17), and RH convex mirror (18) from mirror arm (10).

(6) Remove self-locking nut (19), washer (20), screw (21), mirror arm (10), and clip (22) from lower bracket (23). Discard self-locking nut.



(7) Remove four screws (24), washer (25), upper bracket (14), and lower bracket (23) from cab (26).





NOTE

Perform steps (8) through (14) on convex mirror mounted on clamp.

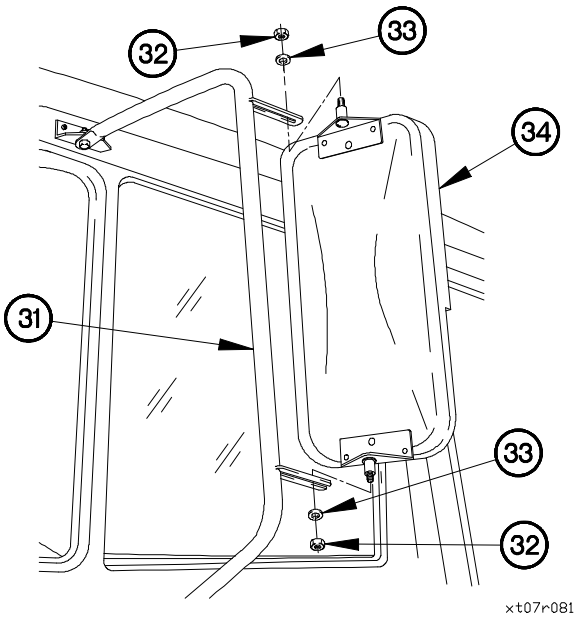
(8) Remove nut (27), washer (28), convex mirror (29), and washer (28) from clamp (30).

(9) Remove clamp (30) from mirror arm (31).

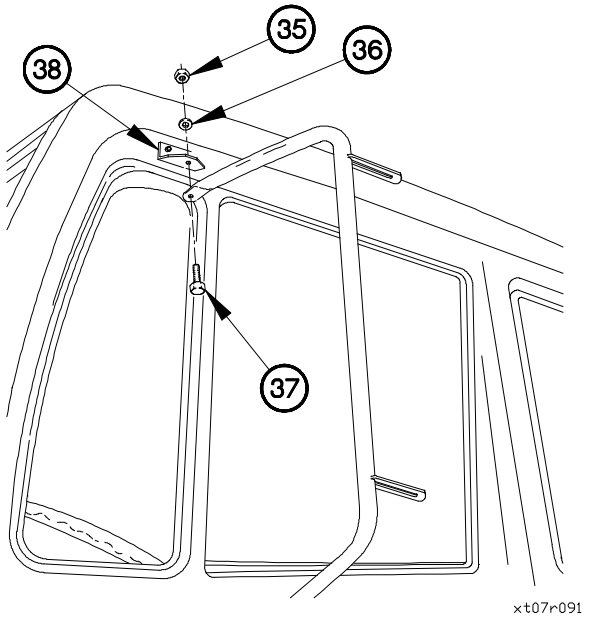
NOTE

Left and right cab mirrors are removed the same way. Left side shown.

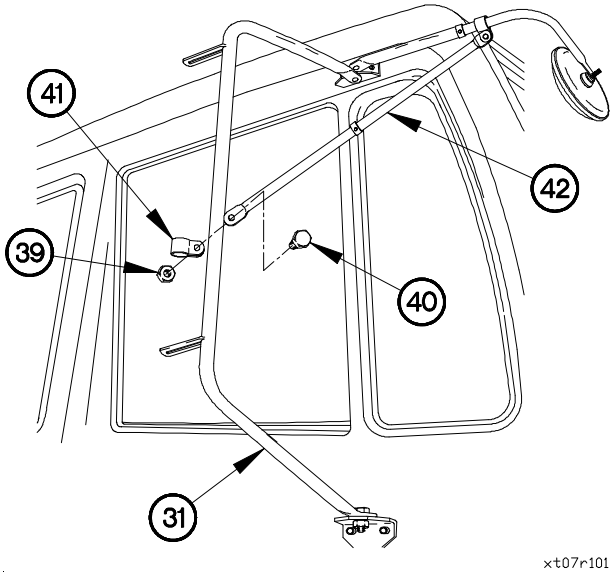
(10) Remove two self-locking nuts (32), washers (33), and cab mirror (34) from mirror arm (31). Discard self-locking nuts.



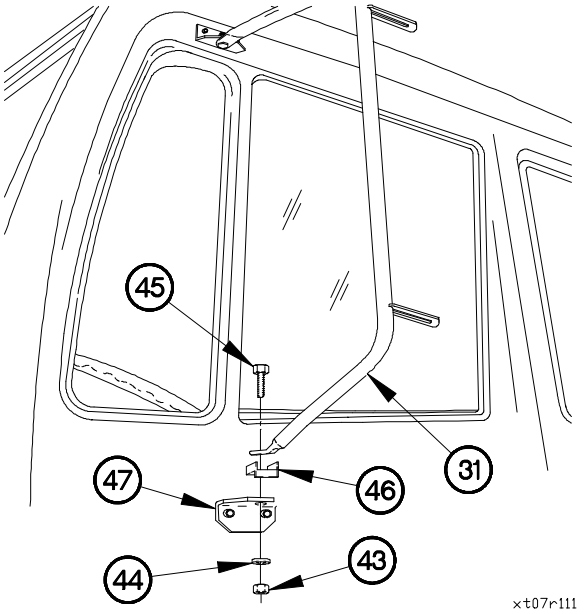
18-7. CAB MIRROR REPLACEMENT (CONT)



(11) Remove self-locking nut (35), washer (36), and screw (37) from upper bracket (38). Discard self-locking nut.

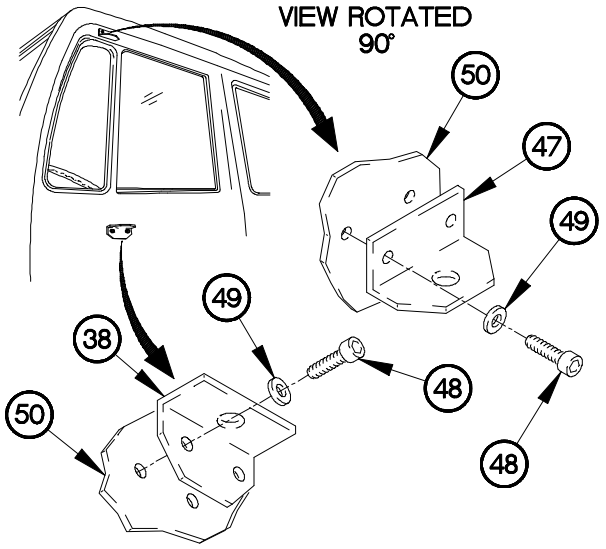


(12) Remove nut (39), screw (40), clamp (41), and RH convex mirror (42) from mirror arm (31).

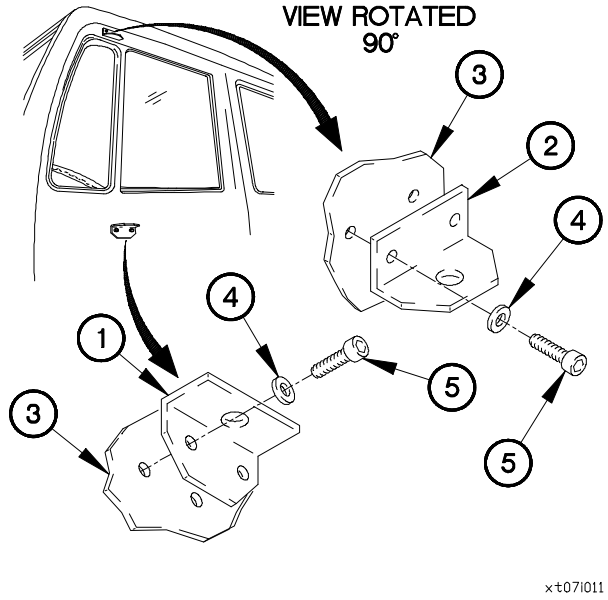


(13) Remove self-locking nut (43), washer (44), screw (45), mirror arm (31), and clip (46) from lower bracket (47). Discard self-locking nut.

(14) Remove four screws (48), washers (49), and brackets (38 and 47) from cab (50).



b. Installation.



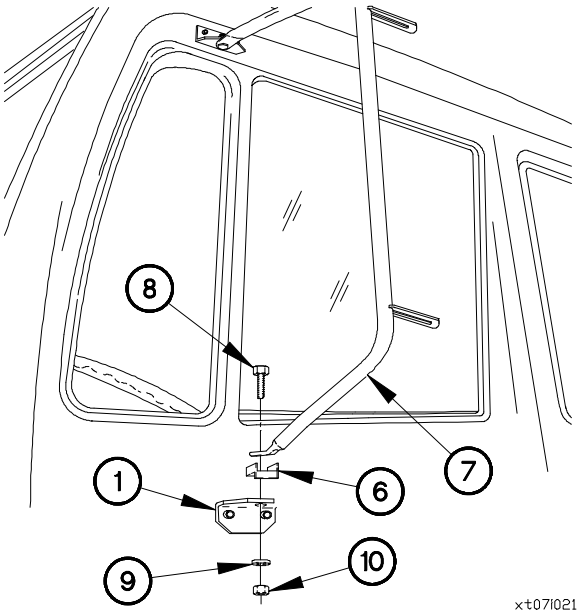
NOTE

- Left and right cab mirrors are installed the same way. Left side shown.
- Perform steps (1) through (11) on vehicles equipped with convex mirrors mounted with clamps.

(1) Position brackets (1 and 2) on cab (3) with four washers (4) and screws (5).

(2) Tighten four screws (5) to 80-98 lb-in. (9-11 N•m).

(3) Position clip (6) and mirror arm (7) on lower bracket (1) with screw (8), washer (9), and self-locking nut (10).



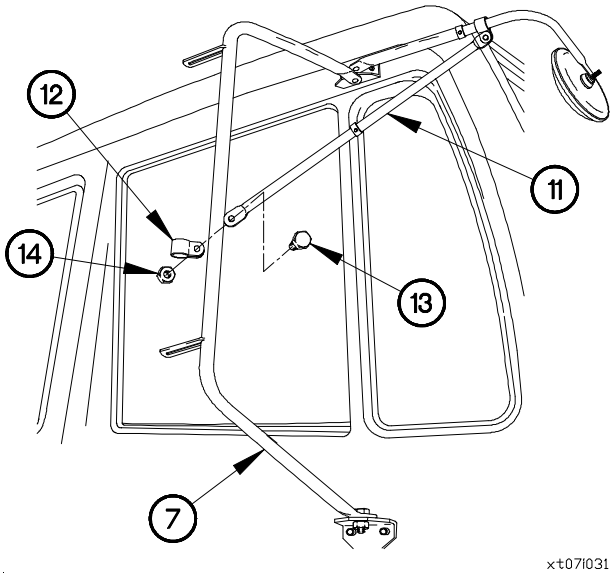
18-7. CAB MIRROR REPLACEMENT (CONT)

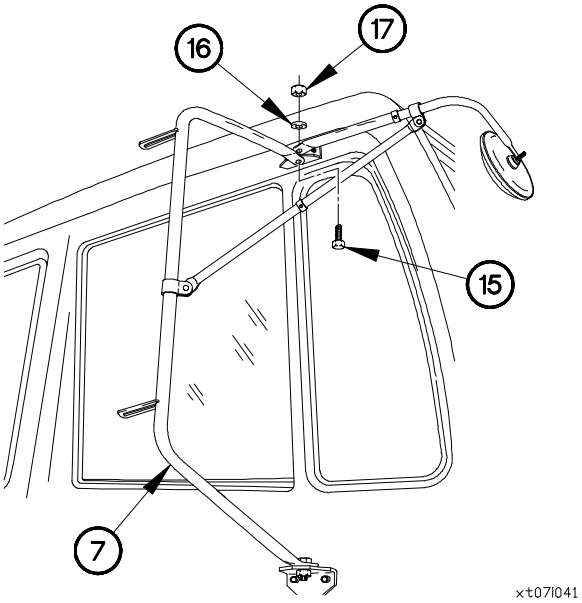
NOTE

Perform steps (4) through (7) on RH side cab mirror with RH convex mirror.

(4) Position RH convex mirror (11) on mirror arm (7) with clamp (12), screw (13), and self-locking nut (14).

(5) Tighten self-locking nut (14) to 84-108 lb-in. (10-12 N•m).



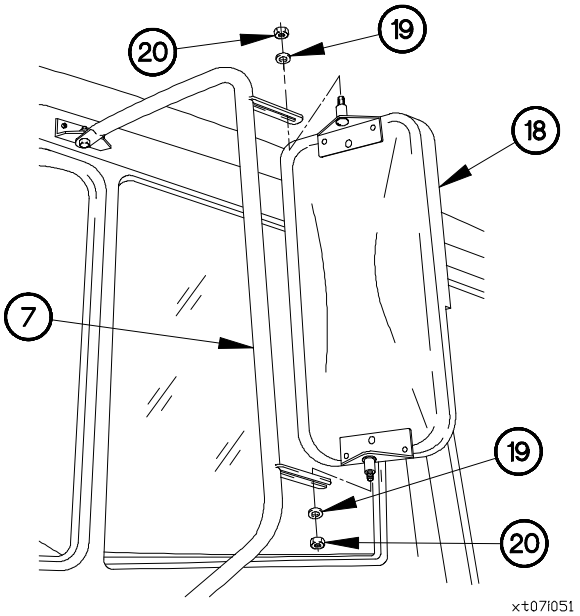


(6) Position screw (15), washer (16), and self-locking nut (17), in mirror arm (7).

(7) Tighten self-locking nut (17) to 156-204 lb-in. (18-23 N•m).

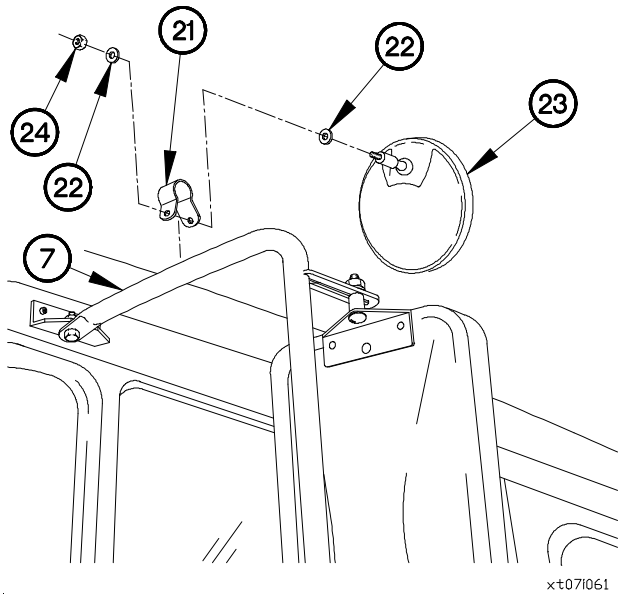
(8) Position cab mirror (18) on mirror arm (7) with two washers (19) and self-locking nuts (20).

(9) Tighten two self-locking nuts (20) to 53-61 lb-in. (6-8 N•m).

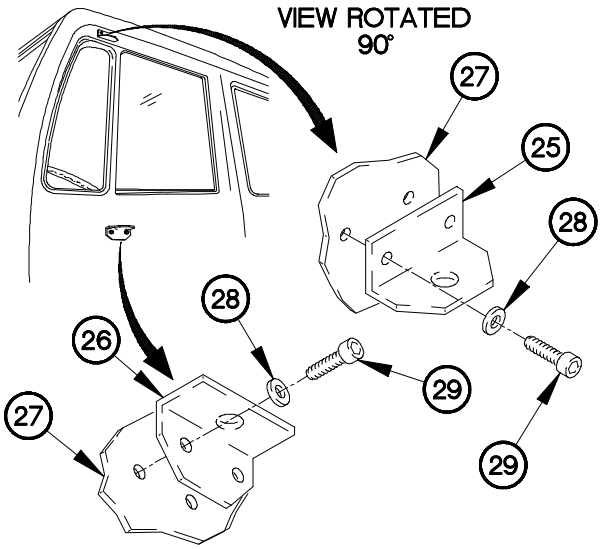


(10) Position clamp (21) on mirror arm (7).

(11) Install washer (22) and convex mirror (23) with washer (22) and nut (24).



xt07l061



xt07l071

NOTE

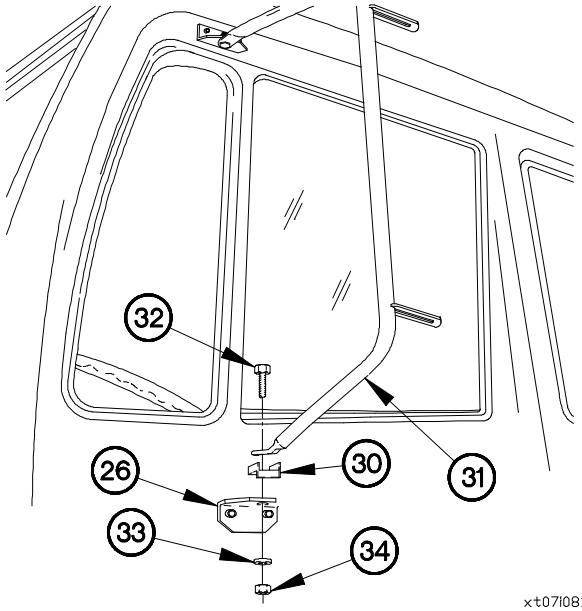
- Perform steps (12) through (24) on vehicles equipped with convex mirrors mounted with brackets.
- Left and right cab mirrors are installed the same wav. Left side shown.

(12) Position upper bracket (25) and lower bracket (26) on cab (27) with four washers (28) and screws (29).

(13) Tighten four screws (29) to 80-98 lb-in. (9-11 N•m).

(14) Position clip (30) and mirror (31) on lower bracket (26) with screw (32), washer (33), and self-locking nut (34).

(15) Tighten self-locking nut (34) to 21-27 lb-ft (28-37 Nm).



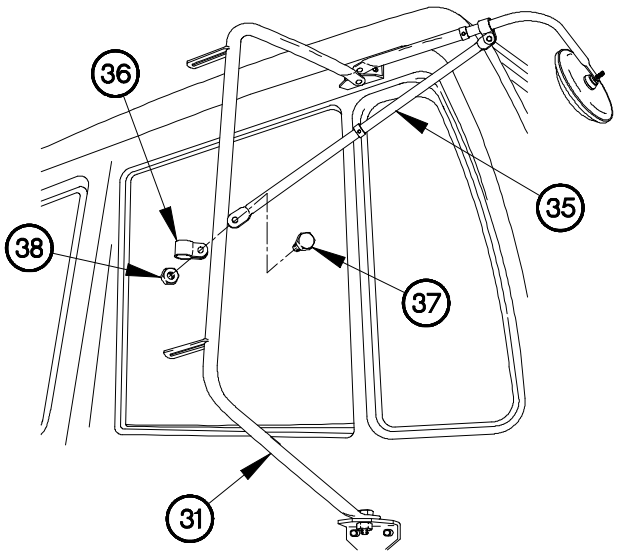
xt07l081

18-7. CAB MIRROR REPLACEMENT (CONT)

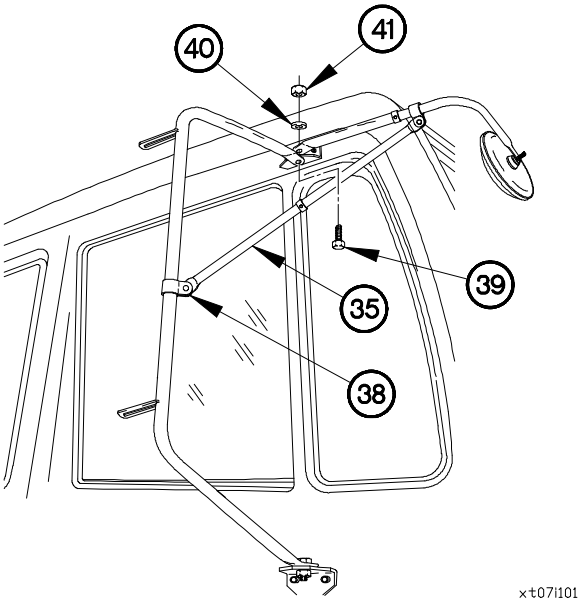
NOTE

Perform steps (16) through (19) on RH side cab mirror with RH convex mirror.

(16) Position bracket arm (35) on mirror arm (31) with clamp (36), screw (37), and nut (38).



xt07i091



xt07i101

(17) Position screw (39), washer (40), and self-locking nut (41) in mirror arm (35).

(18) Tighten self-locking nut (41) to 156-204 lb-in. (18-23 N•m).

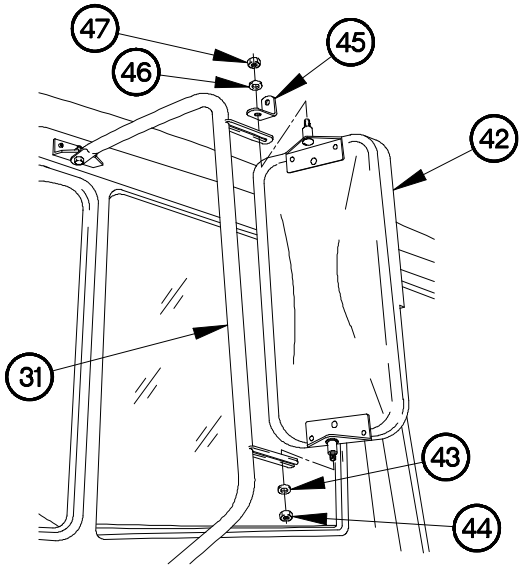
(19) Tighten self-locking nut (38) to 84-108 lb-in. (10-12 N•m).

(20) Position cab mirror (42) on mirror arm (31) with washer (43) and self-locking nut (44).

(21) Tighten self-locking nut (44) to 53-61 lb-in. (6-8 N•m).

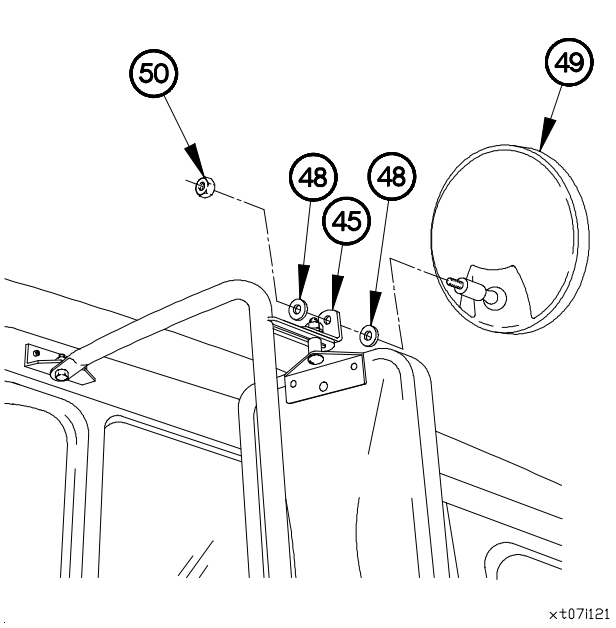
(22) Position cab mirror (42) on mirror arm (31) with bracket (45), washer (46), and self-locking nut (47).

(23) Tighten self-locking nut (47) to 53-61 lb-in. (6-8 N•m).



xt07i111

(24) Install washer (48) and convex mirror (49) on bracket (45) with washer (48) and nut (50).



End of Task.

18-8. DEFROST COVER REPLACEMENT

This task covers:

a. Removal (All Models Except M1081)
b. Installation (All Models Except M1081)
c. M1081 Removal
d. M1081 Installation
e. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
Engine shut down (TM 9-2320-365-10).
M1081 cab roof removed (para 16-4).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Wrench, Torque, 0-200 lb-in. (Item 58, Appendix C)
Socket Set, Socket Wrench (Item 34, Appendix C)

Materials/Parts
Seal, Urethane Foam (86.75 in. (220.3 cm)) (Item 256, Appendix G) (all models except M1081)

Materials/Parts (Cont)
Seal, Urethane Foam (102.25 in. (259.7 cm)) (Item 258, Appendix G) (all models except M1081)
Seal, Urethane Foam (36.25 in. (92.1 cm)) (Item 257, Appendix G) (M1081)
Seal, Urethane Foam (37.5 in. (95.2 cm)) (Item 256, Appendix G) (M1081)

Personnel Required
(2)

a. Removal (All Models Except M1081).

(1) Remove six screws (1), washers (2), and defrost cover (3) from dashboard (4).

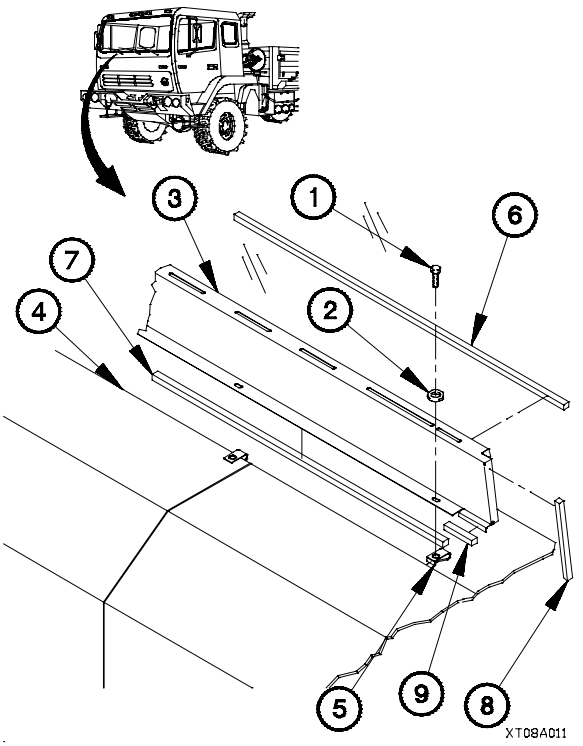
(2) Remove six clip nuts (5) from dashboard (4).

NOTE

Note position of seals prior to removal.

(3) Remove seals (6 and 7) and two seals (8) from defrost cover (3). Discard seals.

(4) Remove two seals (9) from defrost cover (3). Discard seals.



b. Installation (All Models Except M1081).

(1) Cut two seals (1) to 2.5 in. (6.3 cm).

(2) Cut seal (2) to 86 3/4 in. (220.3 cm).

(3) Cut seal (3) to 86 3/4 in. (220.3 cm).

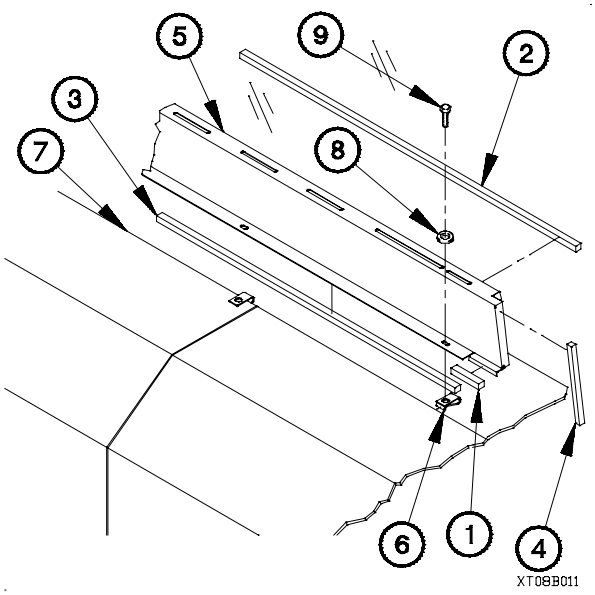
(4) Cut two seals (4) to 5.25 in. (13.3 cm).

(5) Install seals (2 and 3) and two seals (4) on defrost cover (5).

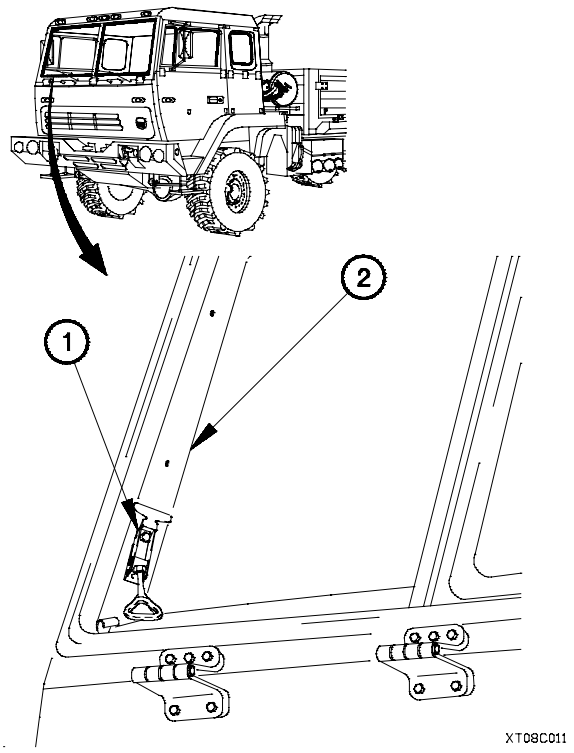
(6) Install six clip nuts (6) in dashboard (7).

(7) Position defrost cover (5) on vehicle with six washers (8) and screws (9).

(8) Tighten four screws (9) to 22-27 lb-in. (2-3 N·m).



c. M1081 Removal.



(1) Release two latches (1) and fold down windshield frame (2).

18-8. DEFROST COVER REPLACEMENT (CONT)

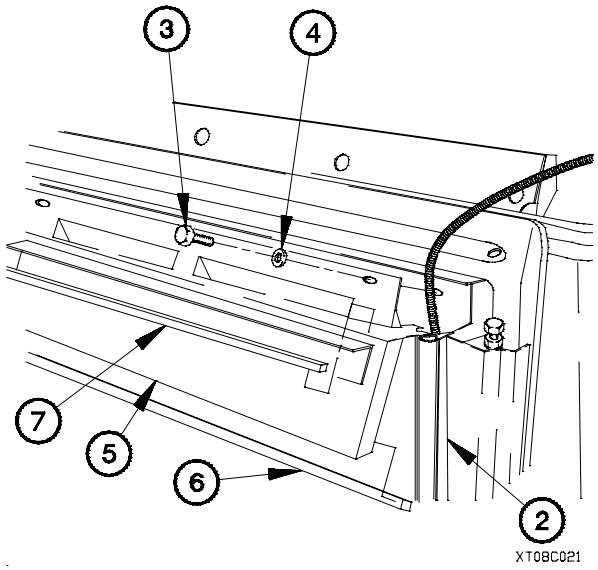
NOTE

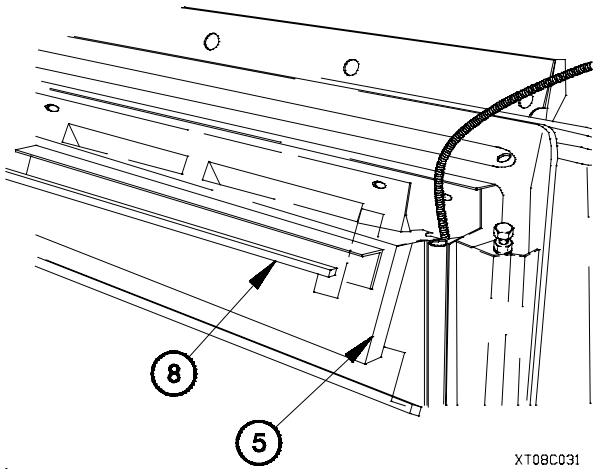
Left and right defrost covers are removed the same way. Left defrost cover shown.

(2) Remove four screws (3), washers (4), and defrost cover (5) from windshield frame (2).

(3) Remove seal (6) from defrost cover (5). Discard seal.

(4) Remove seal (7) from defrost cover (5). Discard seal.





(5) Remove seal (8) from defrost cover (5). Discard seal.

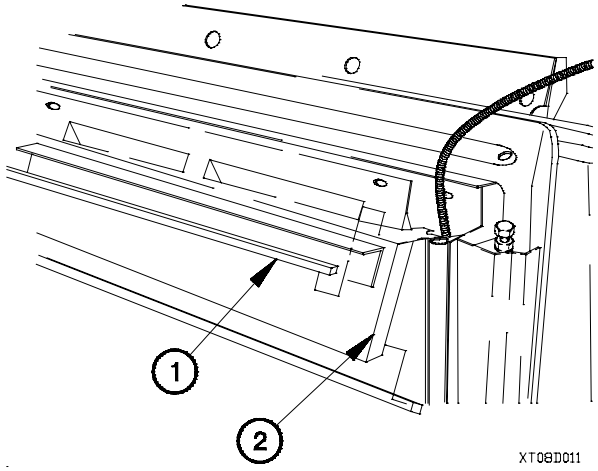
d. M1081 Installation.

NOTE

Left and right defrost covers are installed the same way. Left defrost cover shown.

(1) Cut seal (1) to 1 3/4 in. (4.5 cm).

(2) Install seal (1) on defrost cover (2).

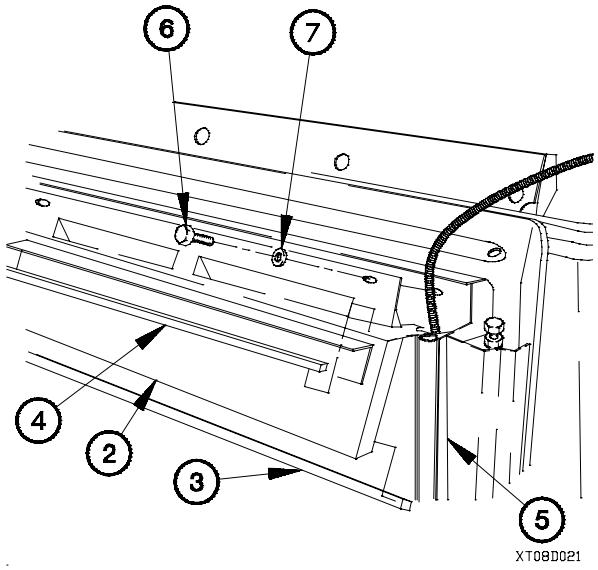


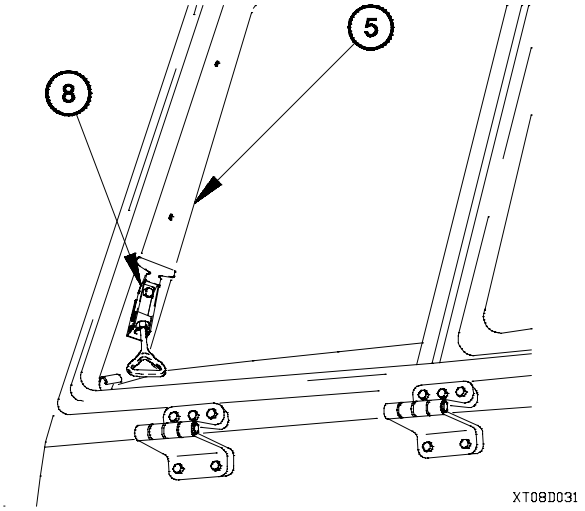
(3) Cut seal (3) to 71 in. (180.1 cm).

(4) Cut seal (4) to 75 in. (190.1 cm).

(5) Install seals (3 and 4) on defrost cover (2).

(6) Install defrost cover (2) on windshield frame (5) with four washers (6) and screws (7).





(7) Fold up windshield frame (5) and fasten two latches (8).

e. Follow-On Maintenance.

Install M1081 cab roof (para 16-4).

End of Task.

18-9. PERSONNEL HEATER REPLACEMENT/REPAIR

This task covers:

a. Removal
b. Disassembly
c. Cleaning/Inspection
d. Assembly
e. Installation
f. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
CTIS ECU removed (para 12-6).
Auxiliary panel removed, if equipped (para 7-8).
Kick panel removed (para 16-3).

Tools and Special Tools
Pan, Drain (Item 24, Appendix C)
Goggles, Industrial (Item 15, Appendix C)
Gloves, Rubber (Item 13, Appendix C)
Tool Kit, Genl Mech (Item 44, Appendix C)
Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C)
Wrench, Torque, 0-200 lb-in. (Item 58, Appendix C)
Socket Set, Socket Wrench (Item 35, Appendix C)
Tool Kit, Blind Rivet (Item 43, Appendix C)
Drill, Portable, Electric (Item 7, Appendix C)
Drill Set, Twist (Item 6, Appendix C)

Materials/Parts
Cap and Plug Set (Item 15, Appendix D)
Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D)
Ties, Cable, Plastic (Item 76, Appendix D)
Strap, Tiedown, Electrical Components (Item 71.1, Appendix D)

Materials/Parts (Cont)
Antifreeze, Ethylene Glycol, Permanent (Item 13, Appendix D)
Rivet, Blind (12) (Item 236, Appendix G)
Gasket (Item 31, Appendix G)
Gasket (Item 38, Appendix G)
Seal (Item 247, Appendix G)
Gasket (Item 33, Appendix G)
Gasket (Item 39, Appendix G)
Gasket (2) (Item 34, Appendix G)
Gasket (Item 35, Appendix G)
Gasket (Item 36, Appendix G)
Rag, Wiping (Item 51, Appendix D)
Solvent, Dry Cleaning (Item 571 Appendix D)
Soap, Laundry (Item 69, Appendix D)
Gasket (3) (Item 41, Appendix G)
Gasket (Item 37, Appendix G)
Plastic Strip (Item 212, Appendix G)
Nut, Self-Locking (6) (Item 156, Appendix G)
Nut, Self-Locking (3) (vehicle serial numbers 0001 through 3696 equipped with original personnel heaters) (Item 156, Appendix G)
Decal (Item 9, Appendix G)

NOTE

Perform steps (1) through (25) to remove personnel heater for access.

a. Removal.

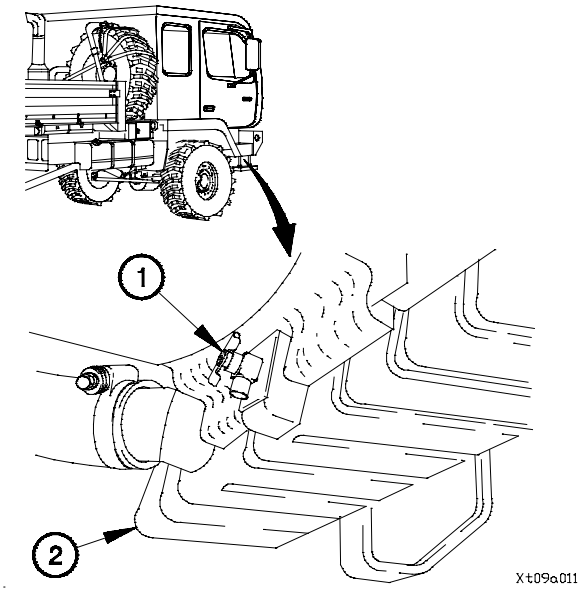
WARNING

Wear appropriate eye protection when working under vehicle due to the possibility of falling debris. Failure to comply may result in injury to personnel.

(1) Position drain pan under radiator draincock (1).

(2) Open radiator draincock (1) and drain approximately 15-20 qt (14-19 L) of coolant from radiator (2).

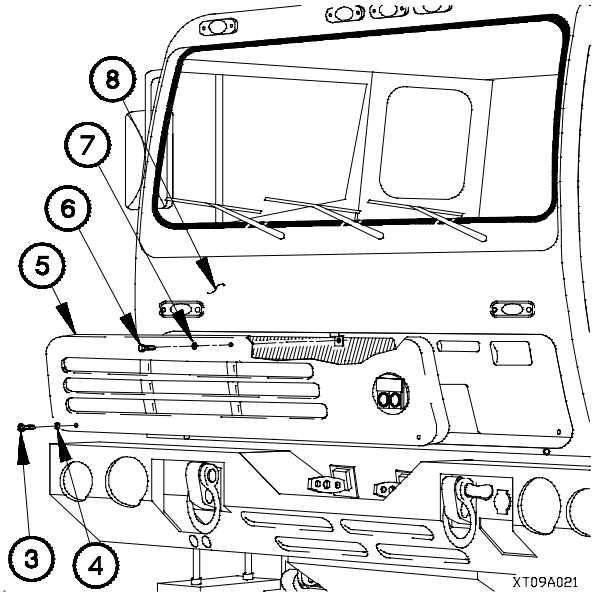
(3) Close radiator draincock (1).

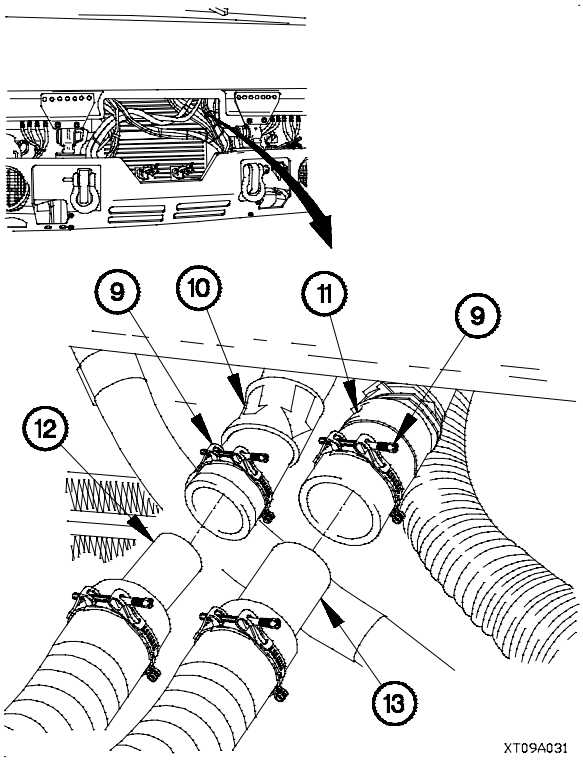


(4) Remove two screws (3) and washers (4) from front grille (5).

(5) Remove screw (6) and washer (7) from front grille (5).

(6) Remove front grille (5) from cab (8).





(7) Loosen two clamps (9) on heater outlet hose (10) and heater inlet hose (11).

NOTE

Tag heater hoses prior to disconnecting.

(8) Disconnect heater outlet hose (10) and heater inlet hose (11) from return fitting (12) and supply fitting (13).

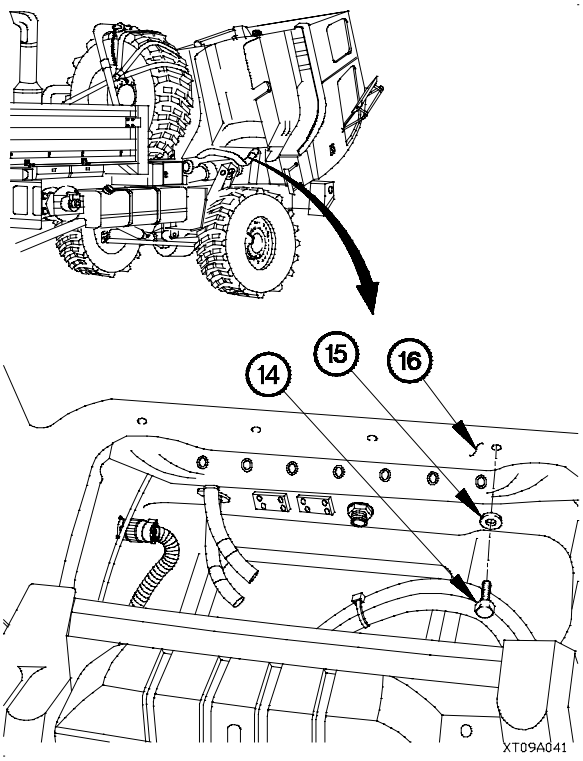
(9) Remove two clamps (9) from heater outlet hose (10) and heater inlet hose (11).

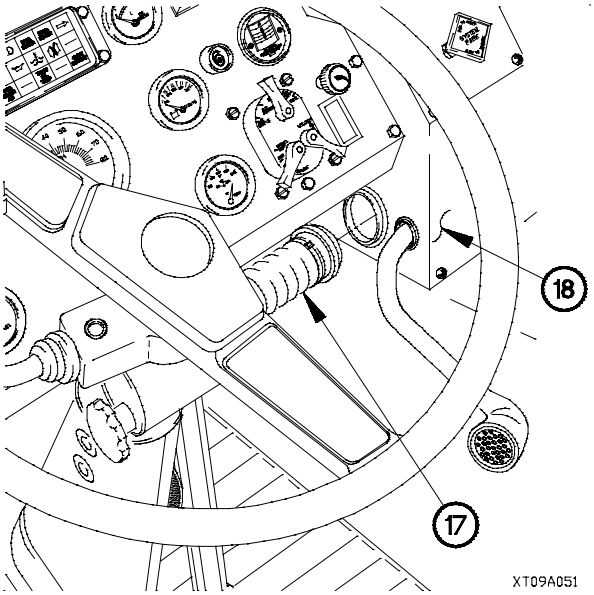
18-9. PERSONNEL HEATER REPLACEMENT/REPAIR (CONT)

(10) Raise cab (TM 9-2320-365-10).

(11) Remove eight screws (14) and washers (15) from cab floor (16).

(12) Lower cab (TM 9-2320-365-10).



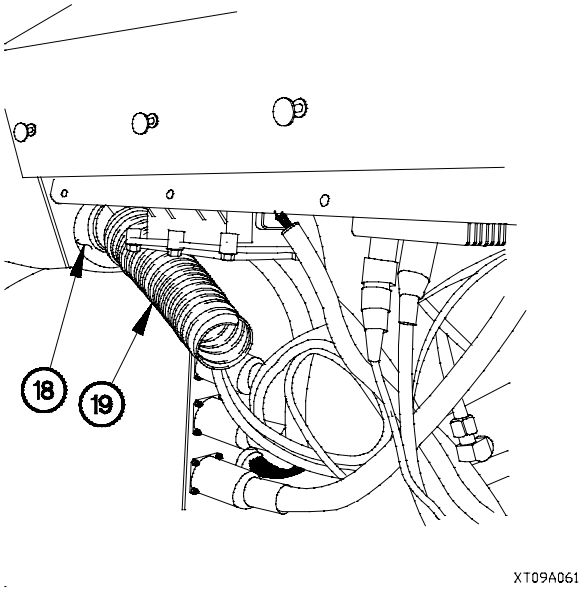


NOTE

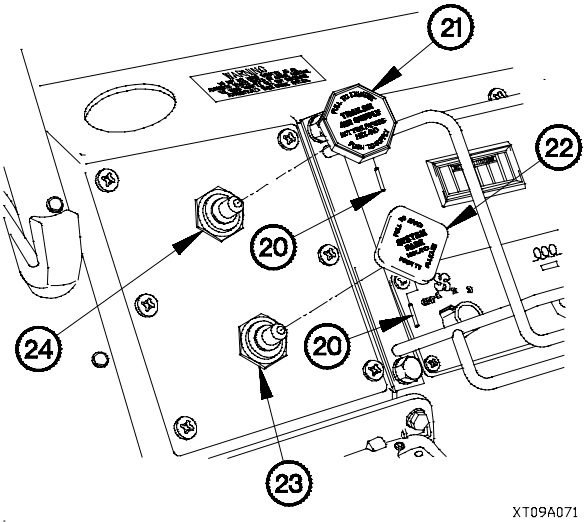
Remove plastic cable ties as required.

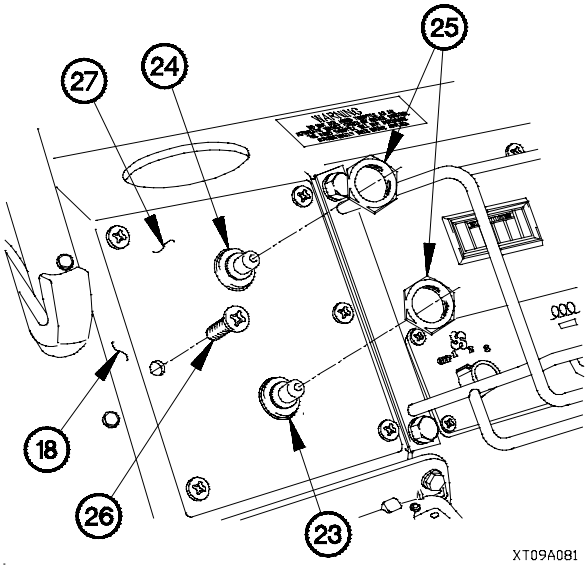
(13) Remove personnel heater air duct (17) from personnel heater (18).

(14) Remove personnel heater air duct (19) from personnel heater (18).



(15) Remove two roll pins (20) and knobs (21 and 22) from SYSTEM PARK valve (23) and TRAILER AIR SUPPLY valve (24).





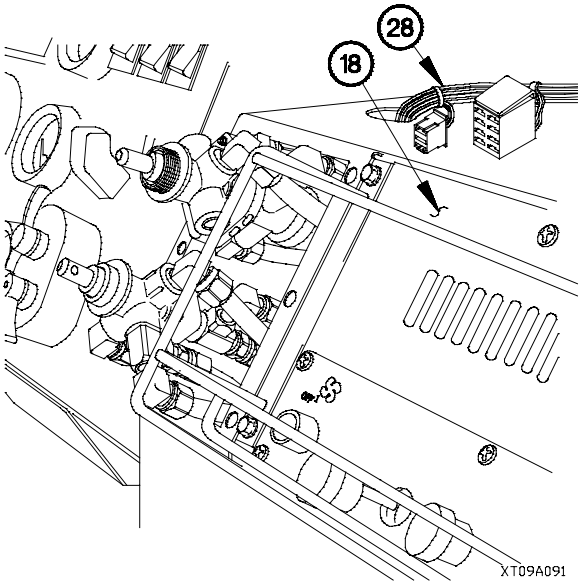
(16) Remove two nuts (25) from SYSTEM PARK valve (23) and TRAILER AIR SUPPLY valve (24).

(17) Remove six screws (26) and valve panel (27) from personnel heater (18).

NOTE

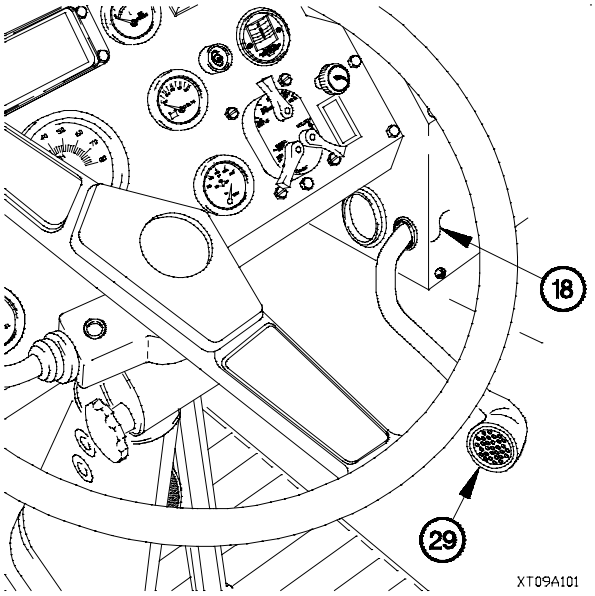
Perform step (18) on vehicles equipped with auxiliary panel.

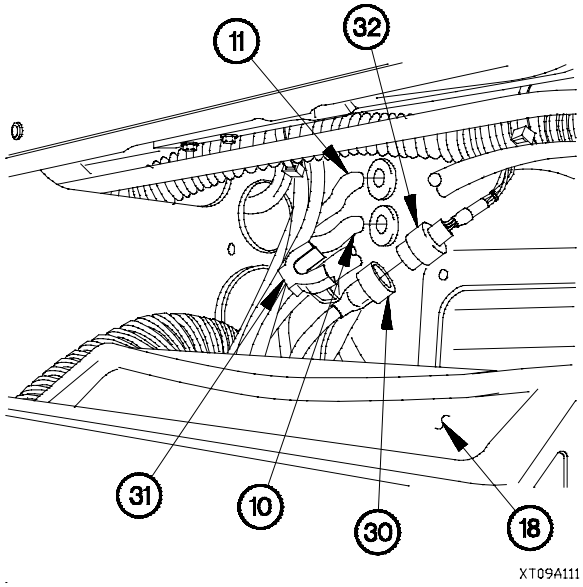
(18) Remove auxiliary panel cable assembly (28) from personnel heater (18).



18-9. PERSONNEL HEATER REPLACEMENT/REPAIR (CONT)

(19) Route CTIS ECU cable P110 (29) in through hole in side of personnel heater (18).





(20) Pull personnel heater (18) out enough to access personnel heater connector (30).

(21) Remove connector clamp (31) from personnel heater connector (30).

(22) Disconnect personnel heater connector (30) from connector PX25 (32).

NOTE

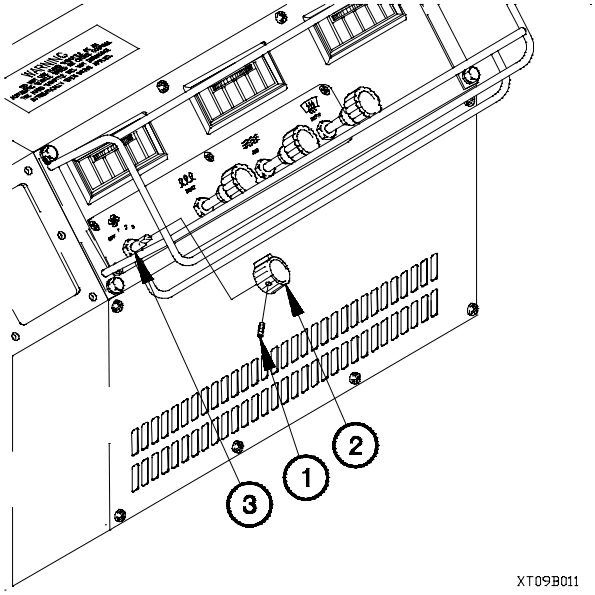
Tag personnel heater hoses and grommet opening in cab floor.

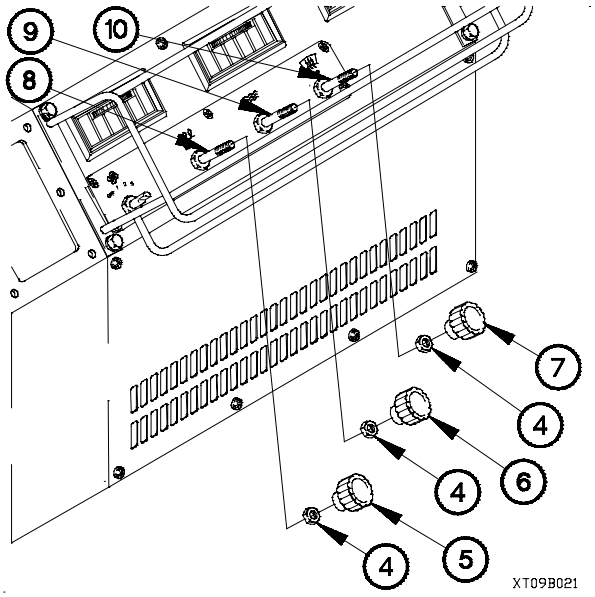
(23) Remove personnel heater (18) and hoses (10 and 11) from vehicle.

b. Disassembly.

(1) Loosen two set screws (1) in fan switch knob (2).

(2) Remove fan switch knob (2) from fan switch (3).





NOTE

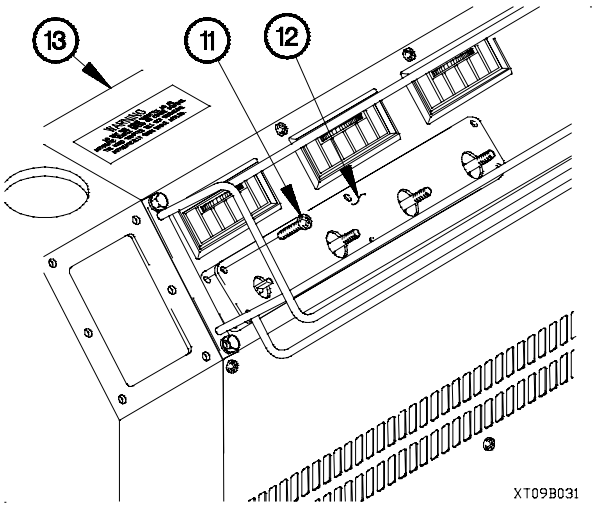
Perform steps (3) and (5) on vehicle serial numbers 0001 through 3696 equipped with original personnel heaters.

(3) Loosen three self-locking nuts (4) on knobs (5, 6, and 7).

(4) Remove knobs (5, 6, and 7) from HEAT control cable (8), VENT control cable (9), and DEFR control cable (10).

(5) Remove three self-locking nuts (4) from HEAT control cable (8), VENT control cable (9), and DEFR control cable (10). Discard self-locking nuts.

(6) Remove six screws (11) and control panel (12) from personnel heater (13).



18-9. PERSONNEL HEATER REPLACEMENT/REPAIR (CONT)

NOTE

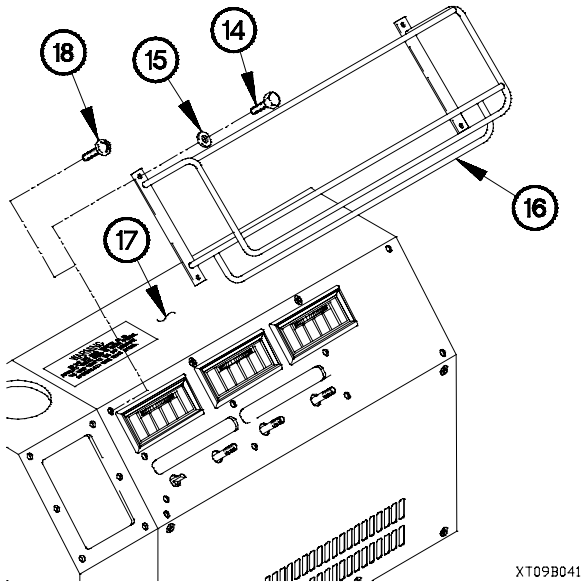
Perform step (7) on vehicles equipped with personnel heater control guard.

(7) Remove four screws (14), washers (15), and personnel heater control guard (16) from personnel heater (17).

NOTE

Perform step (8) on vehicles not equipped with personnel heater control guard.

(8) Remove four screws (18) from personnel heater (17). Discard screws.



(9) Remove seven screws (18) and cover (19) from personnel heater (17).

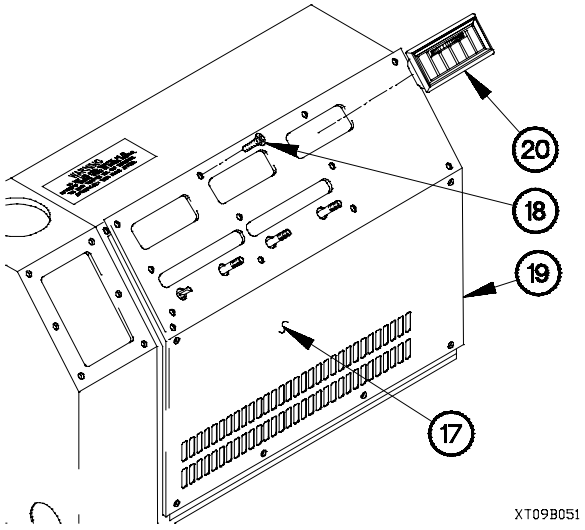
CAUTION

Use care when releasing four retaining clips on each louver and removing louvers from cover. Failure to comply may result in damage to equipment.

NOTE

Note position of louvers prior to removal.

(10) Remove three louvers (20) from cover (19).



CAUTION

Cap or plug hoses and personnel heater coil to prevent contamination of cooling system. Failure to comply may result in damage to equipment.

NOTE

- Tag hoses prior to disconnecting.
- Remove plastic cable ties as required.

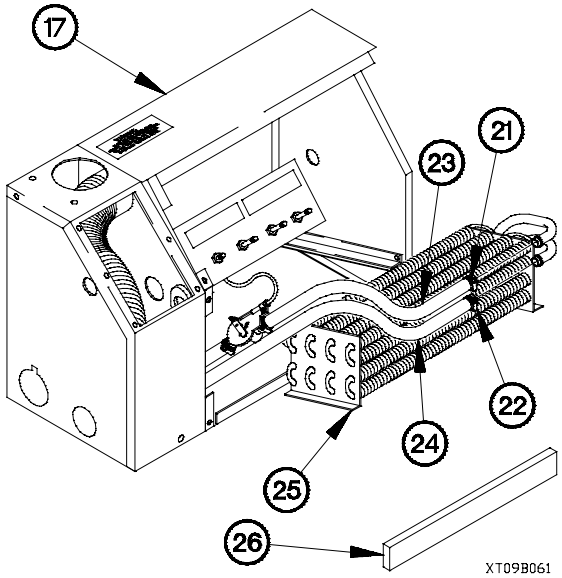
(11) Loosen clamps (21 and 22) on hoses (23 and 24).

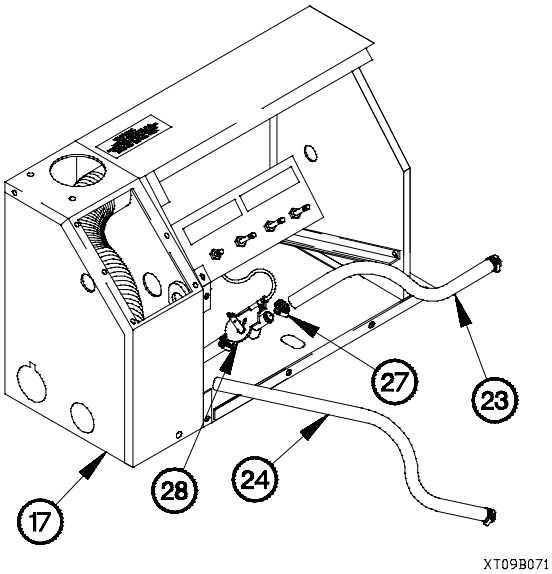
(12) Disconnect hoses (23 and 24) from personnel heater coil (25).

(13) Remove clamps (21 and 22) from hoses (23 and 24).

(14) Remove personnel heater coil (25) from personnel heater (17).

(15) Remove seal (26) from personnel heater coil (25).





(16) Remove hose (24) from personnel heater (17).

(17) Loosen clamp (27) on hose (23).

(18) Disconnect hose (23) from valve (28).

(19) Remove clamp (27) from hose (23).

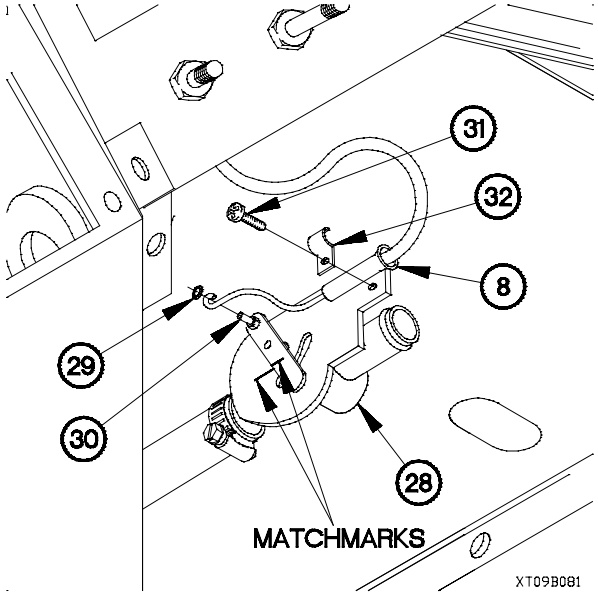
18-9. PERSONNEL HEATER REPLACEMENT/REPAIR (CONT)

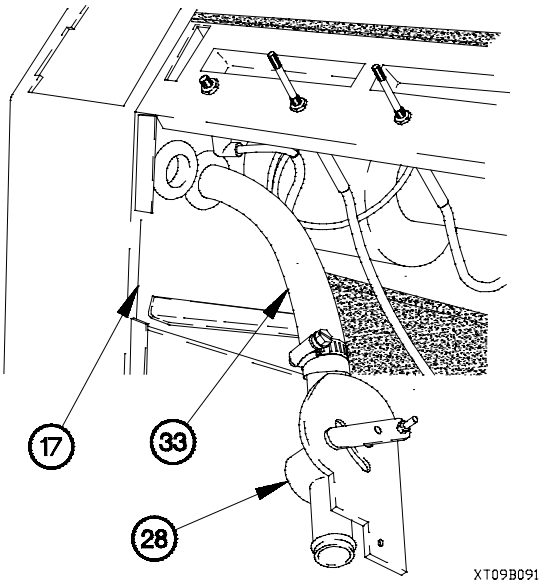
(20) Remove push nut (29) from valve shaft (30).

(21) Match mark valve shaft (30) to valve (28).

(22) Remove screw (31) and cable clamp (32) from valve (28).

(23) Remove HEAT control cable (8) from valve shaft (30).



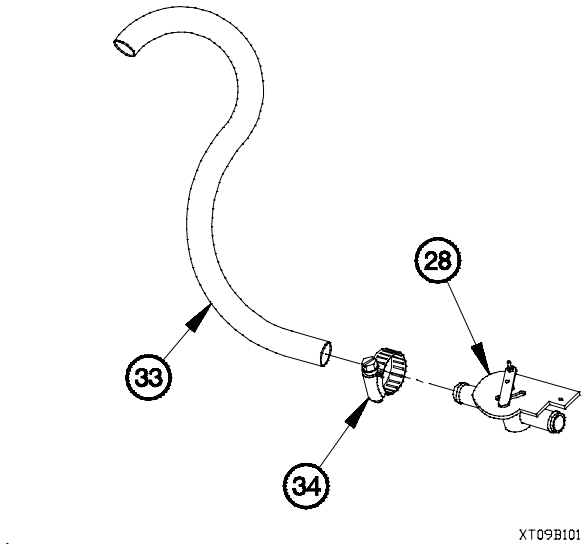


(24) Remove valve (28) and hose (33) from personnel heater (17).

(25) Loosen clamp (34) on hose (33).

(26) Disconnect hose (33) from valve (28).

(27) Remove clamp (34) from hose (33).



(28) Remove locking nut (35) from HEAT control cable (8).

NOTE

Tag cables prior to removal.

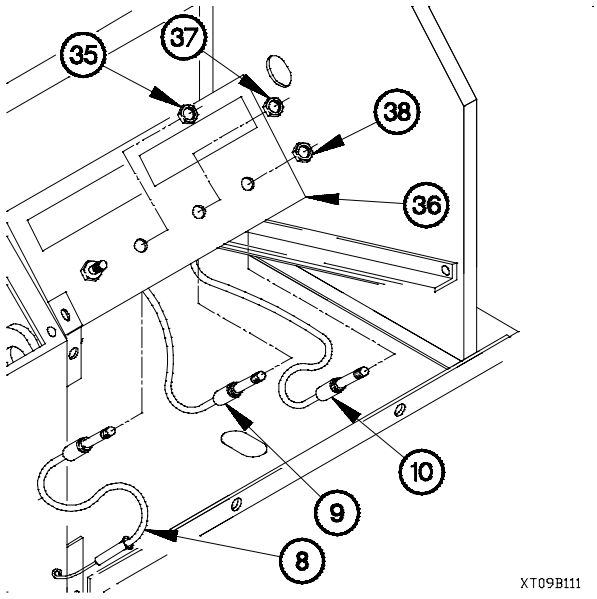
(29) Remove HEAT control cable (8) from control plate (36).

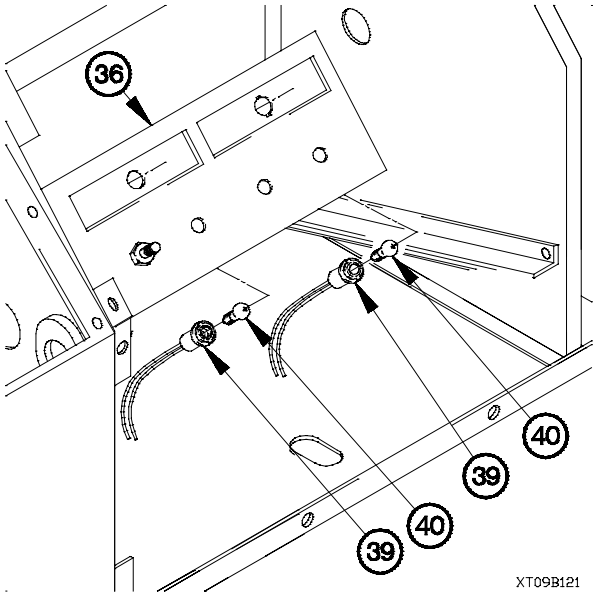
(30) Remove locking nut (37) from VENT control cable (9).

(31) Remove VENT control cable (9) from control plate (36).

(32) Remove locking nut (38) from DEFR control cable (10).

(33) Remove DEFR control cable (10) from control plate (36).





(34) Remove two lamp sockets (39) from control plate (36).

(35) Remove two lamps (40) from lamp sockets (39).

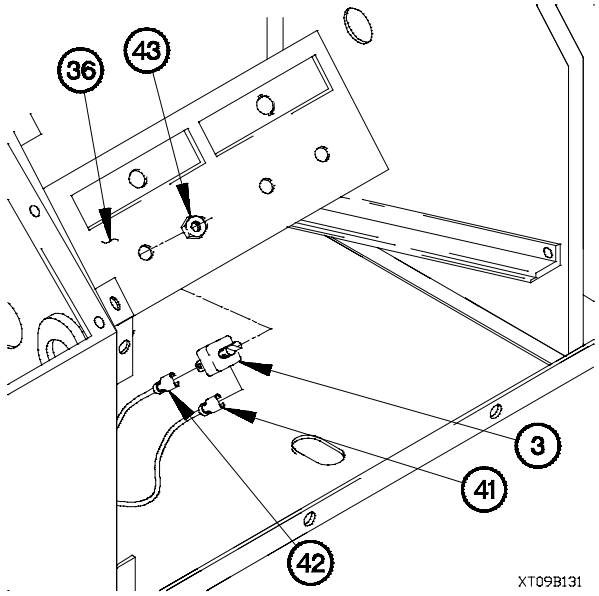
18-9. PERSONNEL HEATER REPLACEMENT/REPAIR (CONT)

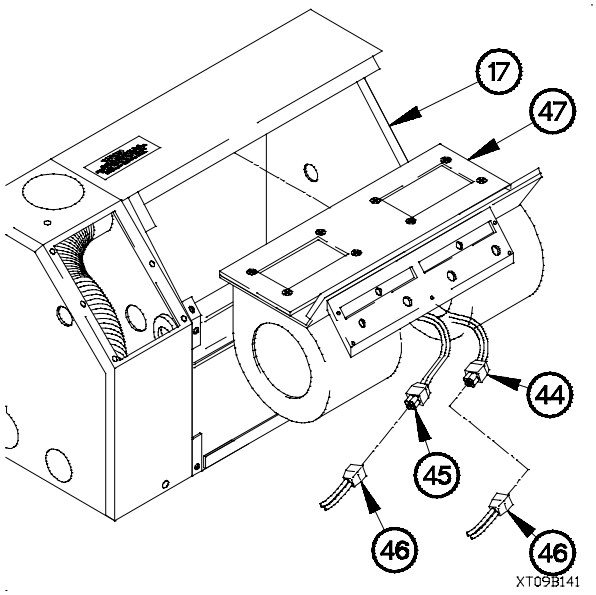
NOTE

Tag connectors and connection points prior to disconnecting.

(36) Disconnect connectors (41 and 42) from fan switch (3).

(37) Remove locking nut (43) and fan switch (3) from control plate (36).





(38) Disconnect connectors (44 and 45) from electrical harness (46).

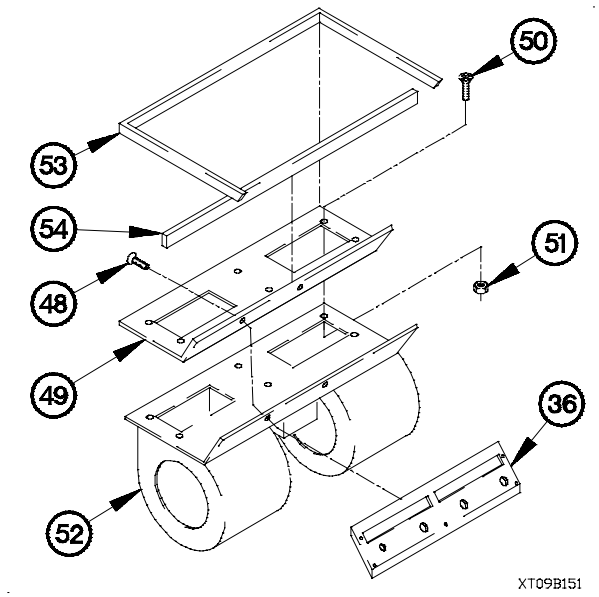
(39) Remove blower (47) from personnel heater (17).

(40) Remove two screws (48) and control plate (36) from blower plate (49).

(41) Remove six screws (50), self-locking nuts (51), and blower plate (49) from blower motor (52). Discard self-locking nuts.

(42) Remove seal (53) from blower plate (49). Discard seal.

(43) Remove seal (54) from blower plate (49). Discard seal.



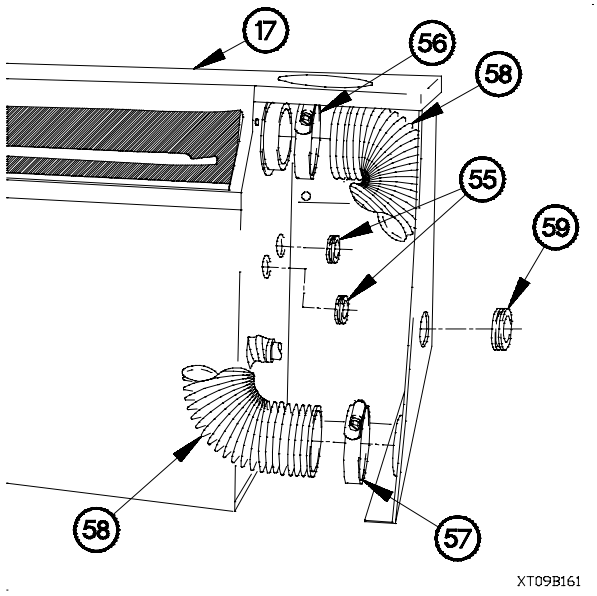
(44) Remove two grommets (55) from personnel heater (17).

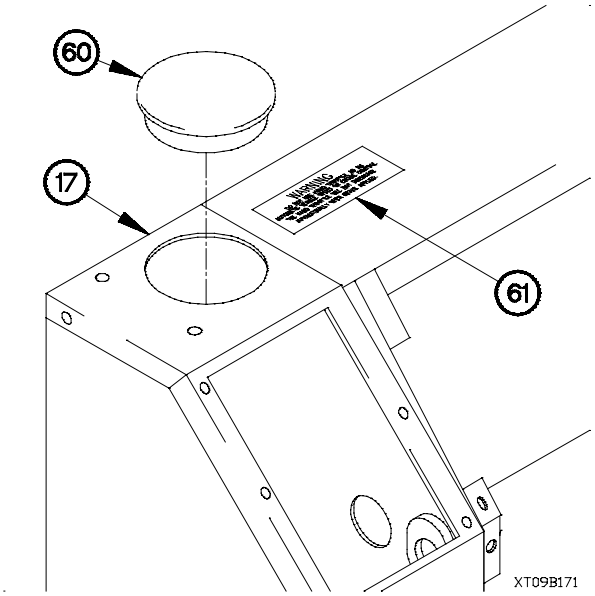
(45) Loosen clamps (56 and 57) on duct (58).

(46) Disconnect duct (58) from personnel heater (17).

(47) Remove clamps (56 and 57) from duct (58).

(48) Remove grommet (59) from personnel heater (17).





NOTE

Perform steps (49) and (50) on vehicles not equipped with auxiliary panel.

(49) Remove plug (60) from personnel heater (17).

(50) Remove decal (61) from personnel heater (17). Discard decal.

(51) Remove seven rivets (62) and cover (63) from personnel heater (17).

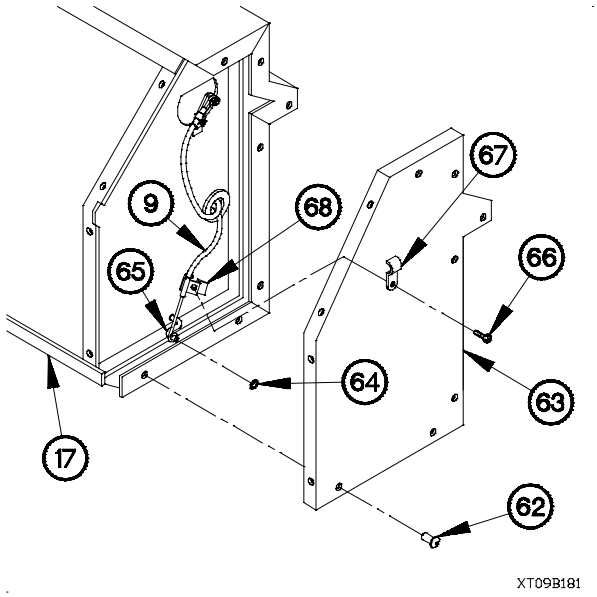
(52) Remove push nut (64) from vent door shaft (65).

(53) Remove screw (66) and cable clamp (67) from bracket (68).

(54) Remove VENT control cable (9) from vent door shaft (65).

(55) Remove VENT control cable (9) from personnel heater (17).

(56) Remove cable clamp (67) from VENT control cable (9).



18-9. PERSONNEL HEATER REPLACEMENT/REPAIR (CONT)

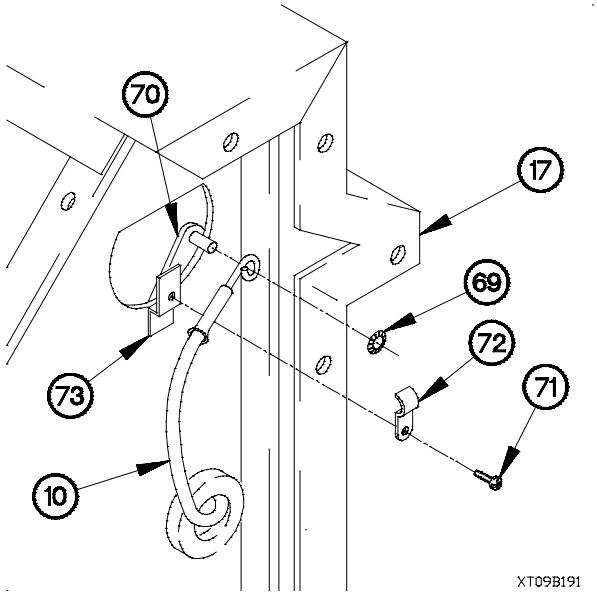
(57) Remove push nut (69) from defrost door shaft (70).

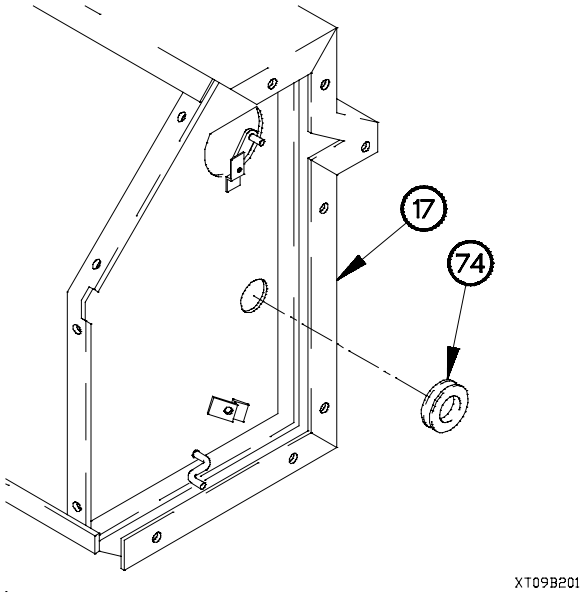
(58) Remove screw (71) and cable clamp (72) from bracket (73).

(59) Remove DEFR control cable (10) from defrost door shaft (70).

(60) Remove DEFR control cable (10) from personnel heater (17).

(61) Remove cable clamp (72) from DEFR control cable (10).

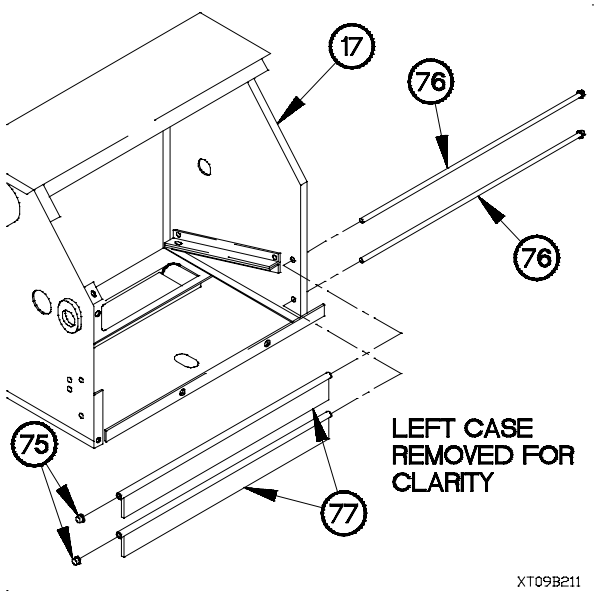




(62) Remove grommet (74) from personnel heater (17).

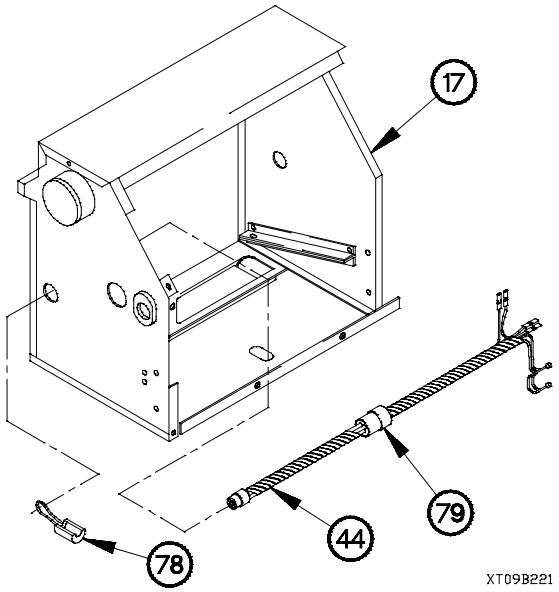
(63) Remove two push nuts (75) from shafts (76).

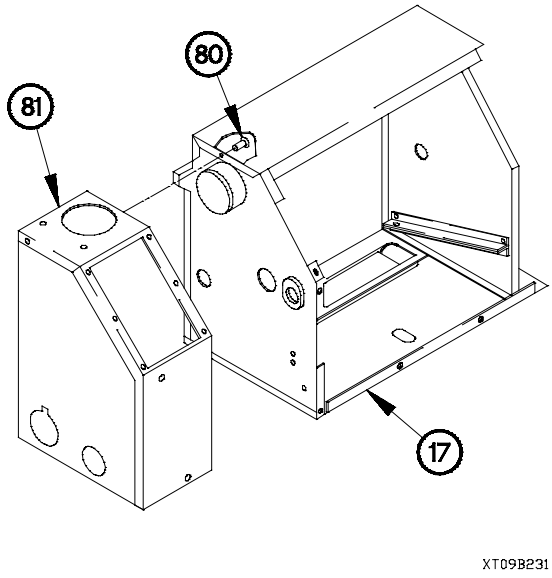
(64) Remove two shafts (76) and air seals (77) from personnel heater (17).



(65) Remove cable stay (78) from electrical harness (44).

(66) Remove grommet (79) and electrical harness (44) from personnel heater (17).



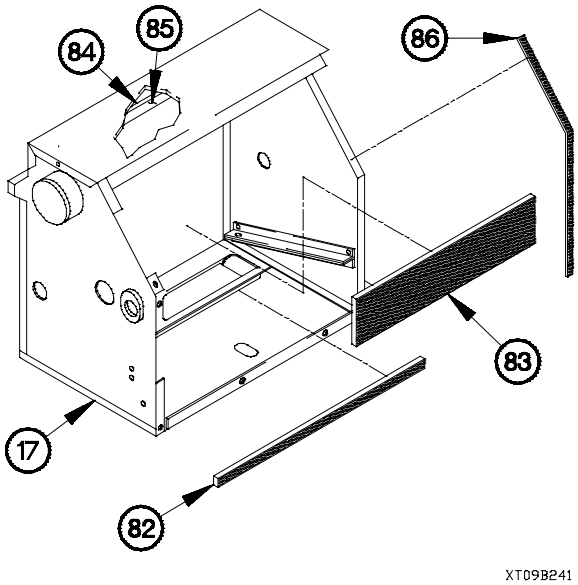


(67) Remove five rivets (80) and left case (81) from personnel heater (17).

(68) Remove gaskets (82 and 83) from personnel heater (17). Discard gaskets.

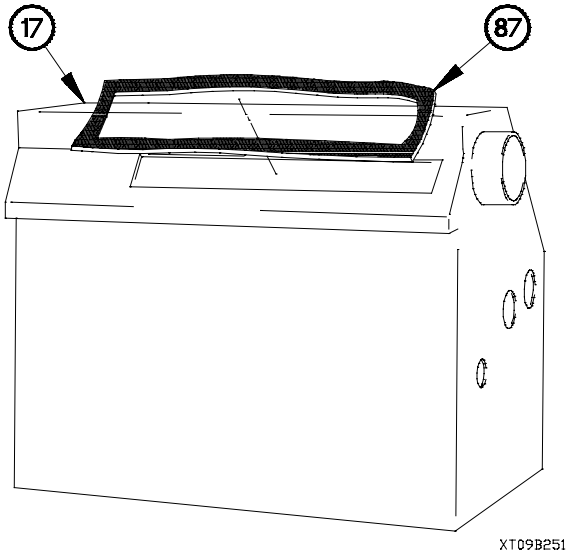
(69) Remove gaskets (84) from defrost door (85). Discard gaskets.

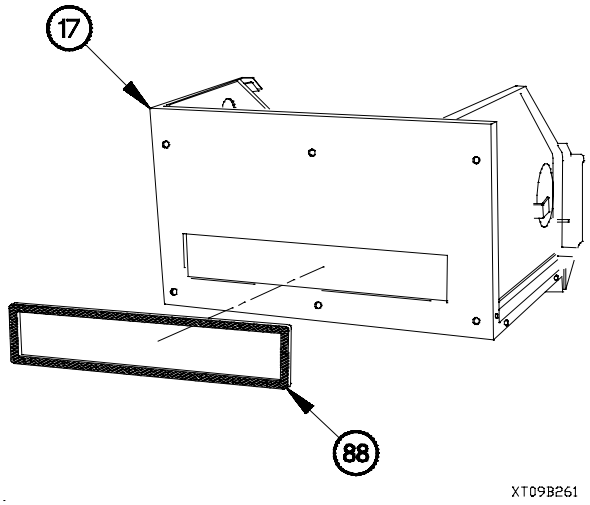
(70) Remove gaskets (86) from personnel heater (17). Discard gaskets.



18-9. PERSONNEL HEATER REPLACEMENT/REPAIR (CONT)

(71) Remove seal (87) from personnel heater (17).





(72) Remove seal (88) from personnel heater (17).

c. Cleaning/Inspection.

WARNING

- **Dry Cleaning Solvent (P-D-680) is TOXIC and flammable. Wear protective goggles and gloves; use only in well-ventilated area; avoid contact with skin, eyes, and clothes, and do not breathe vapors. Keep away from heat or flame. Never smoke when using solvent; the flashpoint for Type I Dry Cleaning Solvent is 100°F (38°C) and for Type II is 130°F (50°C). Failure to comply may result in serious injury or death to personnel.**
- **If personnel become dizzy while using Dry Cleaning Solvent, immediately get fresh air and medical help. If Dry Cleaning Solvent contacts skin or clothes, flush with cold water. If Dry Cleaning Solvent contacts eyes, immediately flush eyes with water and get immediate medical attention. Failure to comply may result in injury to personnel.**

(1) Clean metal parts with dry cleaning solvent.

NOTE

Replace any part that fails visual inspection.

(2) Inspect all parts for visible cracks or damage.

NOTE

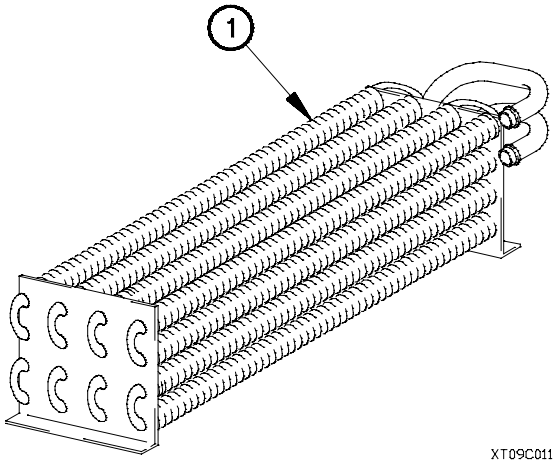
Perform step (3) if personnel heater coil is to be reused.

(3) Clean personnel heater coil (1) with soap and water.

WARNING

Compressed air used for cleaning purposes will not exceed 30 psi (207 kPa). Use only with effective chip guarding and personal protective equipment (goggles/shield, gloves, etc). Failure to comply may result in injury to personnel.

(4) Dry personnel heater coil (1) with compressed air.



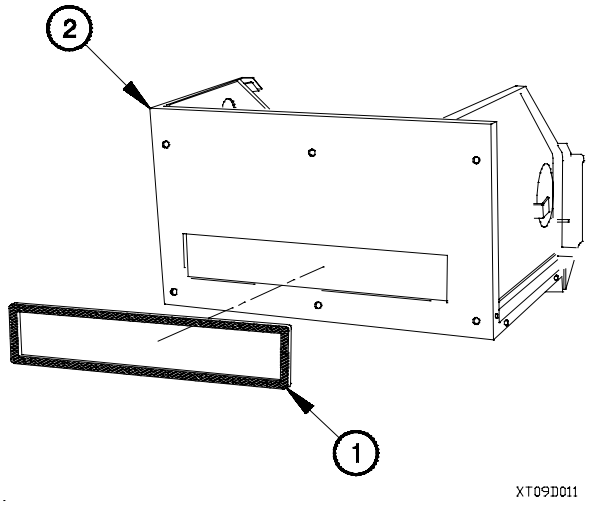
18-9. PERSONNEL HEATER REPLACEMENT/REPAIR (CONT)

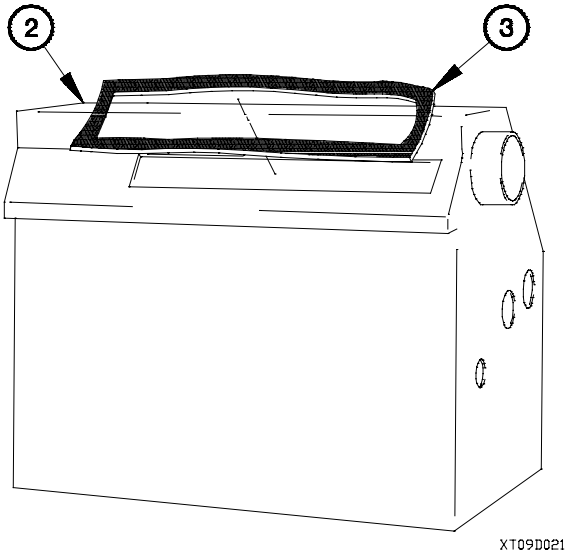
d. Assembly

CAUTION

Seals used on the personnel heater have double-sided tape attached. Use care when installing these seals. Failure to comply may result in damage to equipment.

(1) Install seal (1) on personnel heater (2).



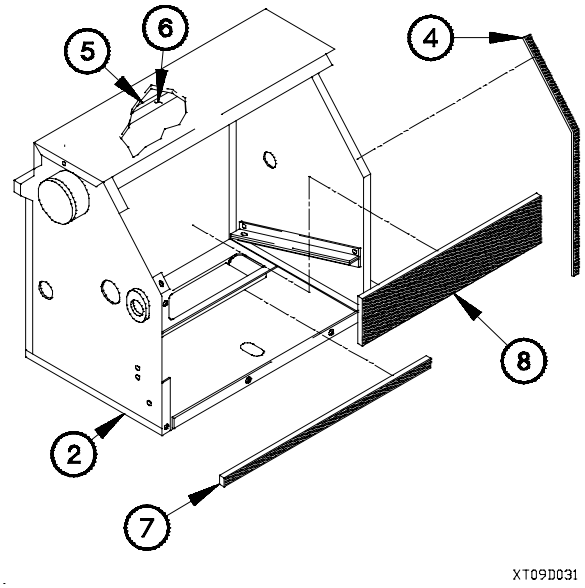


(2) Install seal (3) on personnel heater (2).

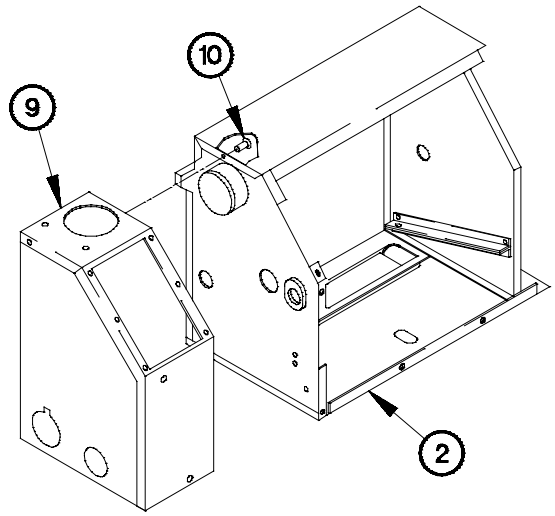
(3) Install gasket (4) on personnel heater (2).

(4) Install gasket (5) on defrost door (6).

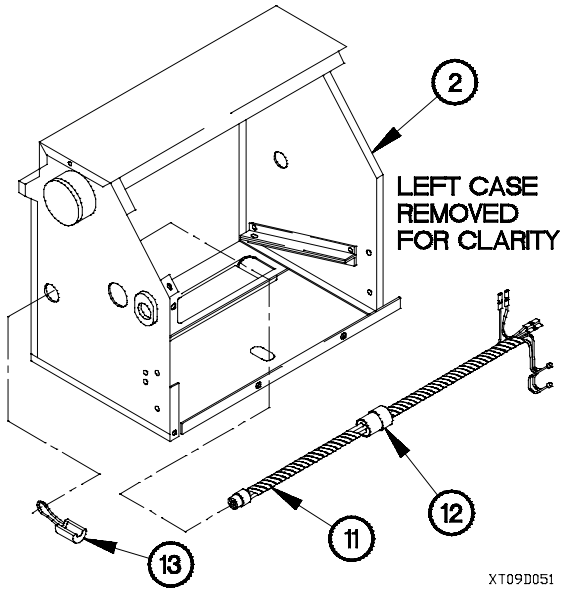
(5) Install gaskets (7 and 8) on personnel heater (2).



(6) Install left case (9) on personnel heater (2) with five rivets (10).



XT09D041



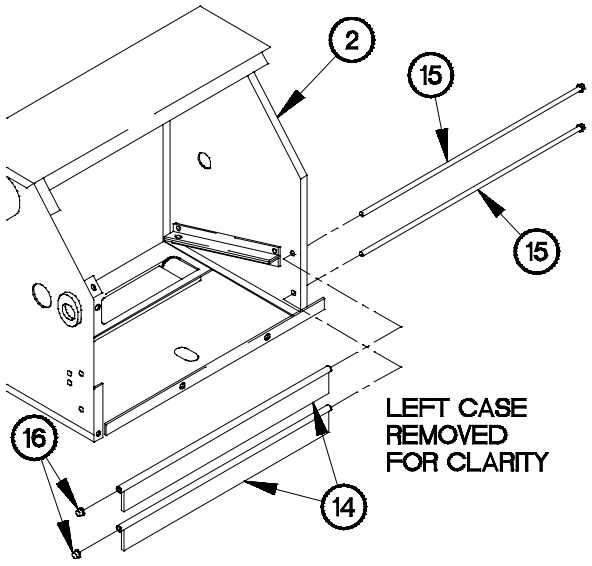
XT09D051

(7) Install electrical harness (11) and grommet (12) in personnel heater (2).

(8) Install cable stay (13) on electrical harness (11).

(9) Position two air seals (14) on shafts (15) in personnel heater (2).

(10) Install two push nuts (16) on shafts (15).



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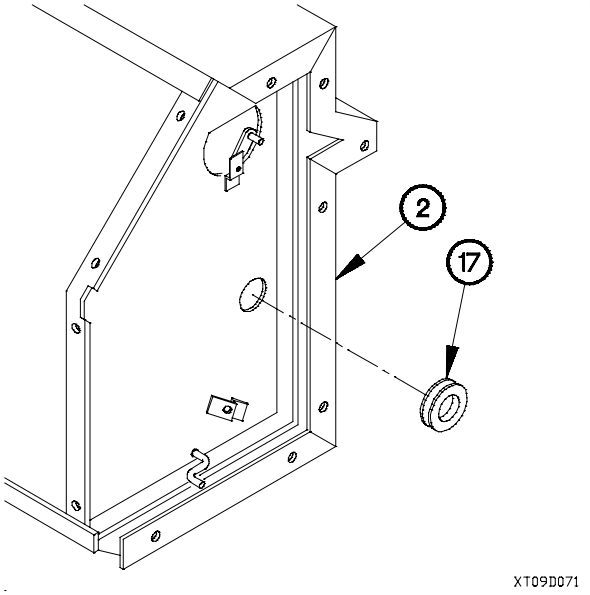
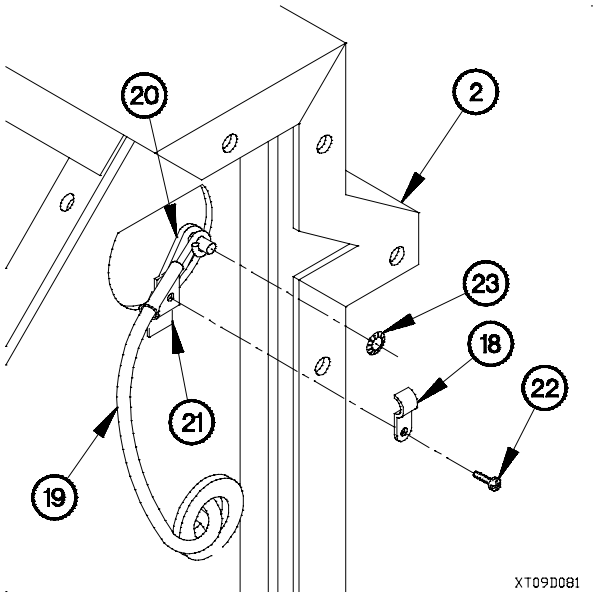
18-9. PERSONNEL HEATER REPLACEMENT/REPAIR (CONT)

(11) Install grommet (17) in personnel heater (2).





(12) Position cable clamp (18) on DEFR control cable (19).

(13) Position DEFR control cable (19) in personnel heater (2).

(14) Position DEFR control cable (19) on defrost door shaft (20).

(15) Install cable clamp (18) on bracket (21) with screw (22).

(16) Install push nut (23) on defrost shaft (20).

(17) Position cable clamp (24) on VENT control cable (25).

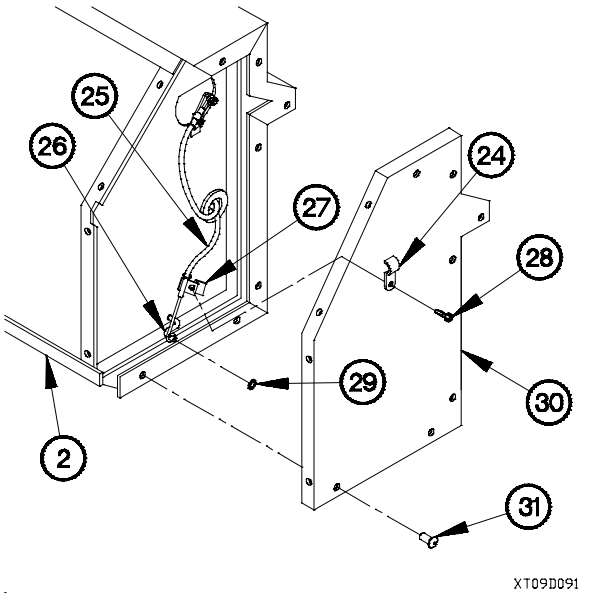
(18) Position VENT control cable (25) in personnel heater (2).

(19) Position VENT control cable (25) on vent door shaft (26).

(20) Install cable clamp (24) on bracket (27) with screw (28).

(21) Install push nut (29) on vent door shaft (26).

(22) Install cover (30) on personnel heater (2) with seven rivets (31).

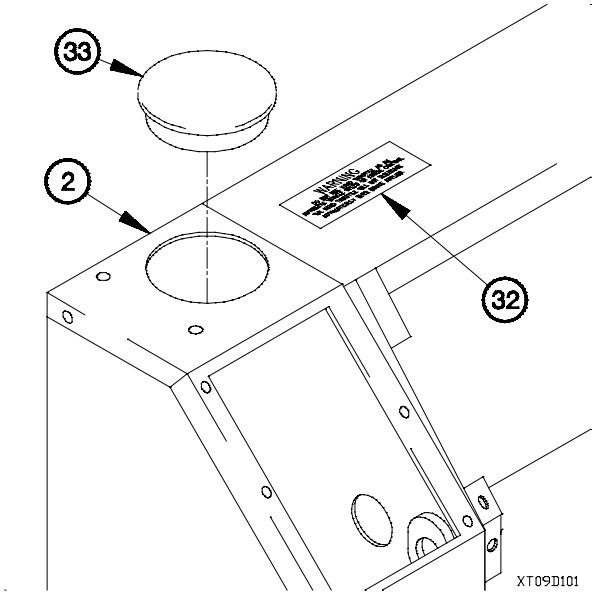


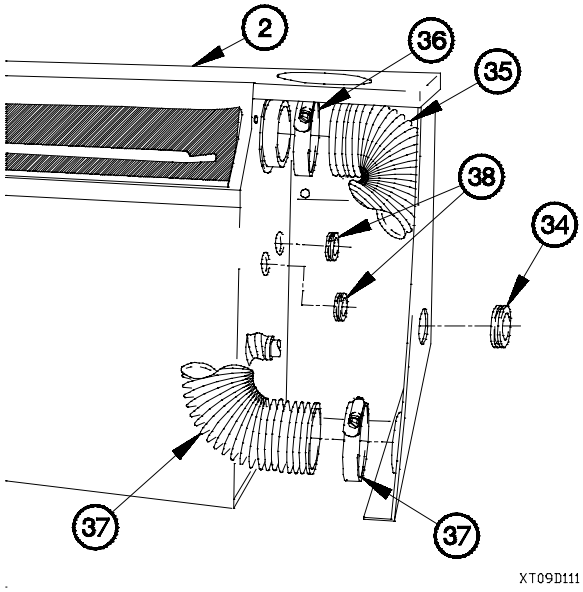
NOTE

Perform steps (23) and (24) on vehicles not equipped with auxiliary panel.

(23) Install decal (32) on personnel heater (2).

(24) Install plug (33) in personnel heater (2).





(25) Install grommet (34) in personnel heater (2).

(26) Install duct (35) on personnel heater (2) with clamps (36 and 37).

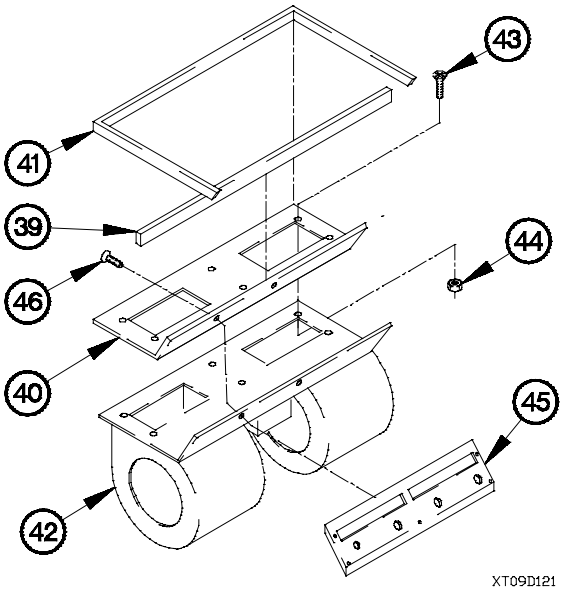
(27) Install two grommets (38) in personnel heater (2).

(28) Install seal (39) on blower plate (40).

(29) Install seal (41) on blower plate (40).

(30) Install blower plate (40) on blower (42) with six screws (43) and self-locking nuts (44).

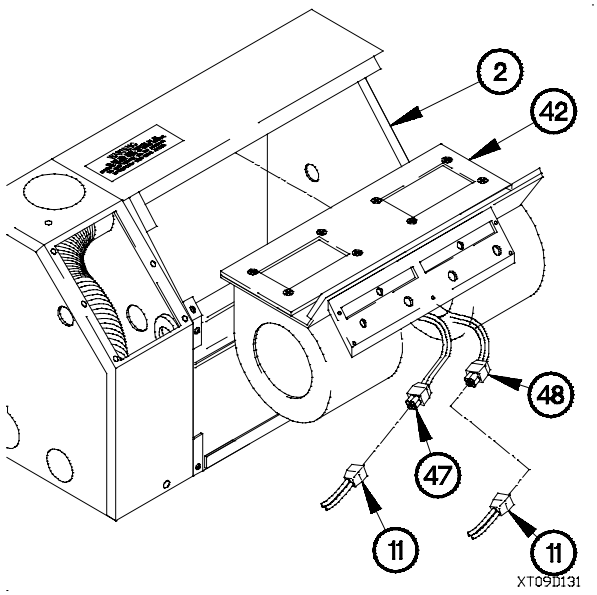
(31) Install control plate (45) on blower plate (40) with two screws (46).

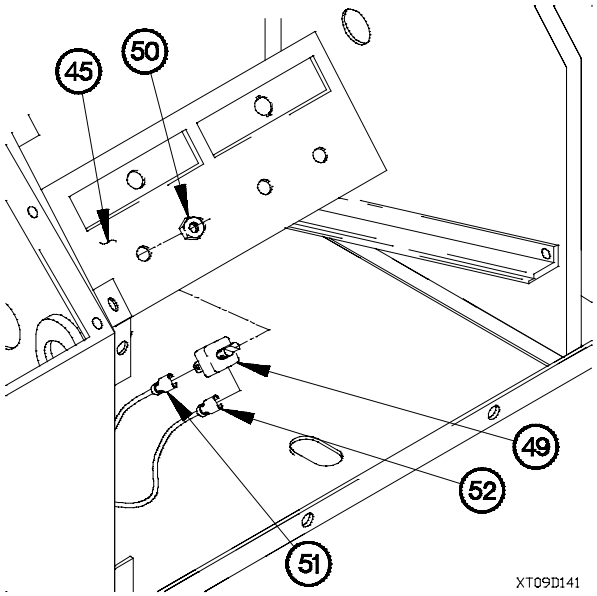


18-9. PERSONNEL HEATER REPLACEMENT/REPAIR (CONT)

(32) Position blower (42) in personnel heater (2).

(33) Connect connectors (47 and 48) to electrical harness (11).



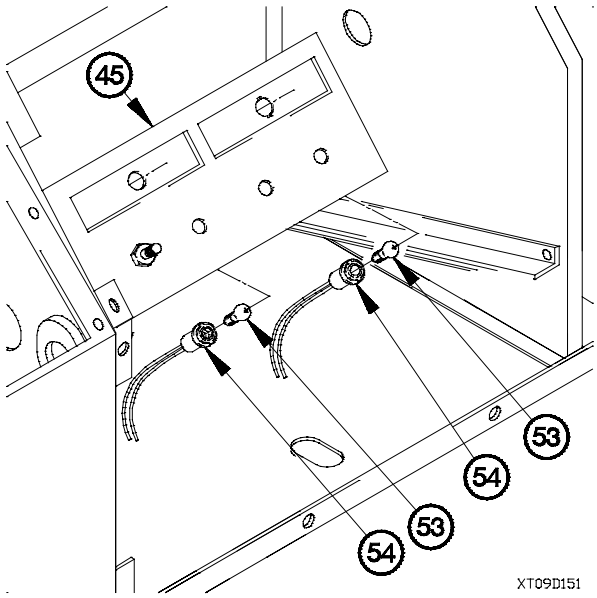


(34) Install fan switch (49) on control plate (45) with locking nut (50).

(35) Connect connectors (51 and 52) to fan switch (49).

(36) Install two lamps (53) in lamp sockets (54).

(37) Install two lamp sockets (54) on control plate (45).



CAUTION

Secure all wiring with tie wraps to prevent contact with fan switch coils. Failure to comply may result in damage to equipment.

(38) Position DEFR control cable (19) on control plate (45).

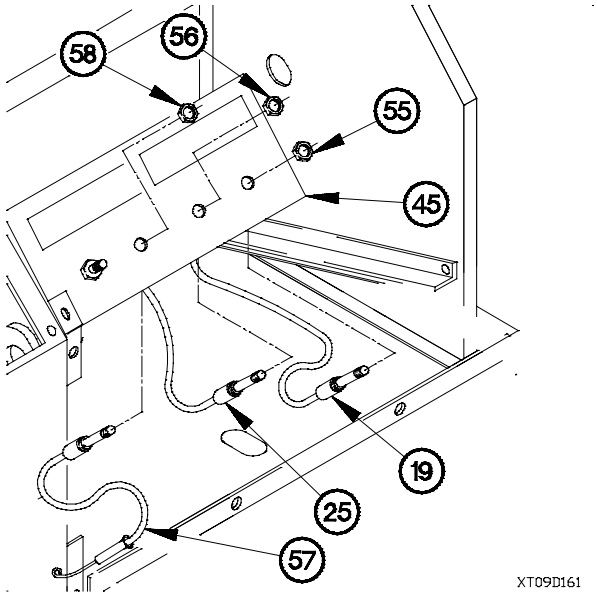
(39) Install locking nut (55) on DEFR control cable (19).

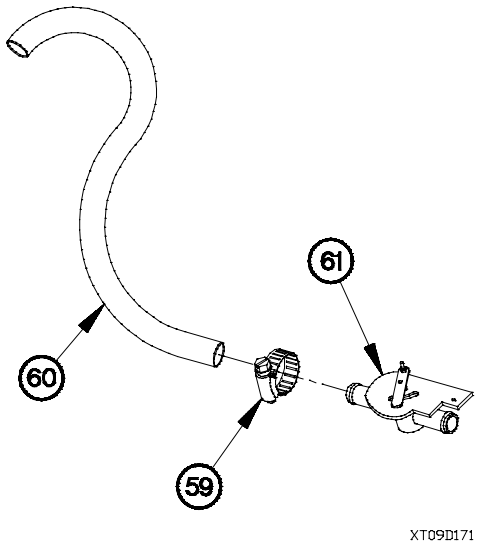
(40) Position VENT control cable (25) on control plate (45).

(41) Install locking nut (56) on VENT control cable (25).

(42) Position HEAT control cable (57) on control plate (45).

(43) Install locking nut (58) on HEAT control cable (57).



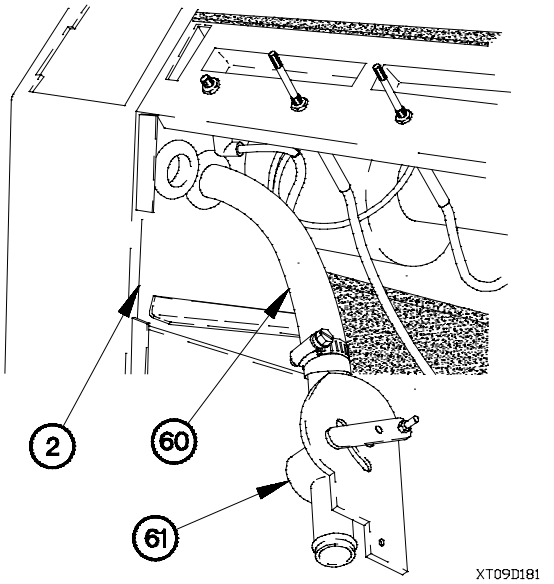


(44) Position clamp (59) on hose (60).

(45) Connect hose (60) to valve (61).

(46) Tighten clamp (59) to 35-45 lb-in. (4-5 N·m).

(47) Position hose (60) and valve (61) in personnel heater (2).

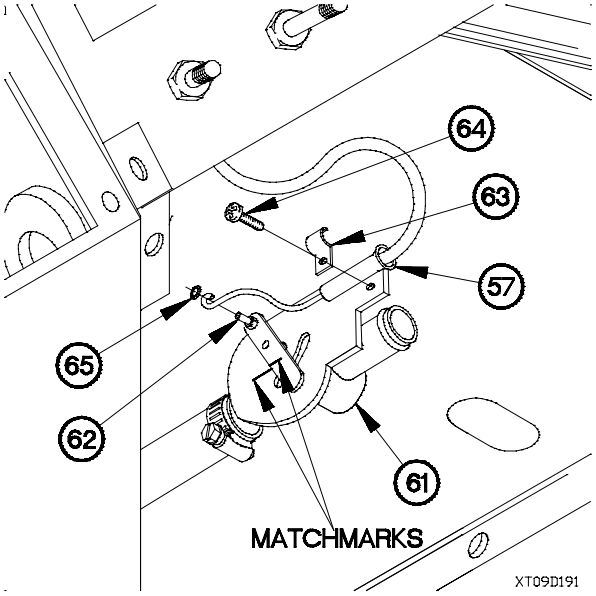


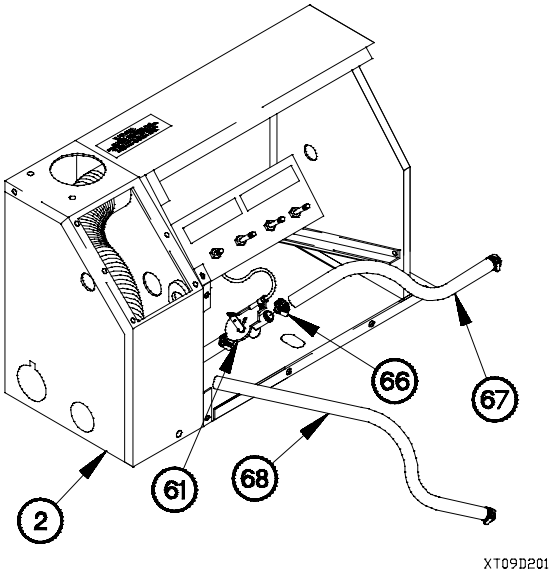
18-9. PERSONNEL HEATER REPLACEMENT/REPAIR (CONT)

(48) Position HEAT control cable (57) on valve shaft (62) with matchmarks aligned.

(49) Install cable clamp (63) on valve (61) with screw (64).

(50) Install push nut (65) on valve shaft (62).





(51) Position clamp (66) on hose (67).

(52) Connect hose (67) to valve (61).

(53) Tighten clamp (66) to 35-45 lb-in. (4-5 N·m).

(54) Position hose (68) in personnel heater (2).

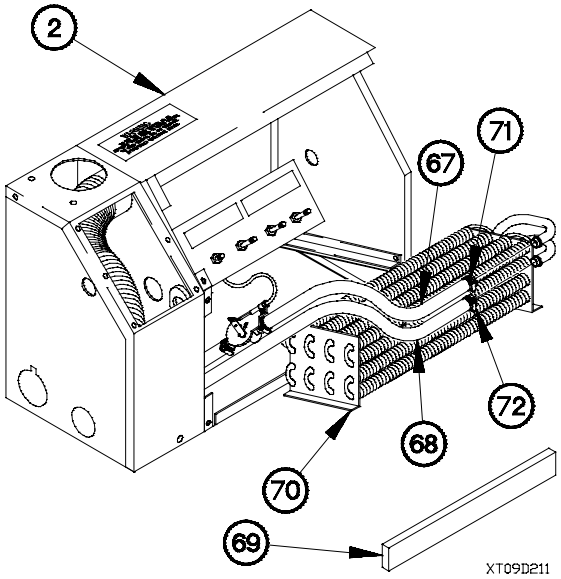
(55) Install seal (69) on personnel heater coil (70).

(56) Position personnel heater coil (70) in personnel heater (2).

(57) Position clamps (71 and 72) on hoses (67 and 68).

(58) Connect hoses (67 and 68) to personnel heater coil (70).

(59) Tighten clamps (71 and 72) to 35-45 lb-in. (4-5 N·m).

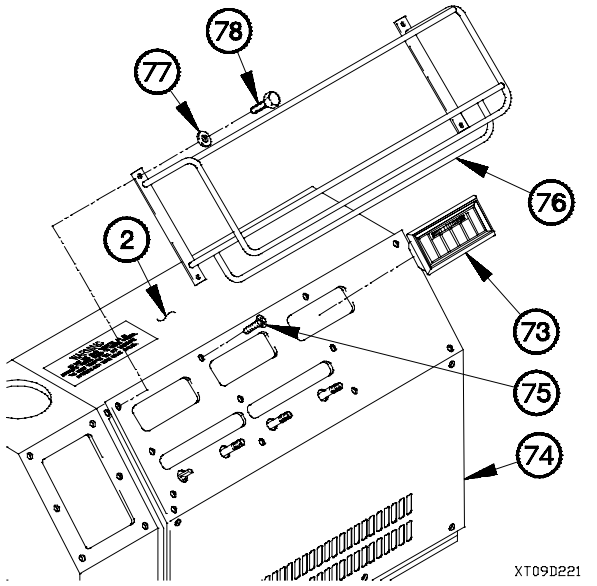


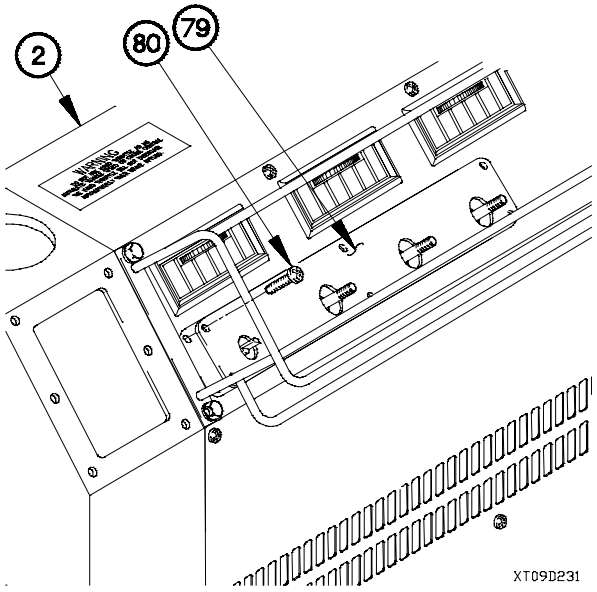
(60) Install three louvers (73) on cover (74).

(61) Install cover (74) on personnel heater (2) with seven screws (75).

(62) Position personnel heater control guard (76) on cover (74) with four washers (77) and screws (78).

(63) Tighten four screws (78) to 39-59 lb-in. (4-7 N·m).





(64) Install control panel (79) on personnel heater (2) with six screws (80).

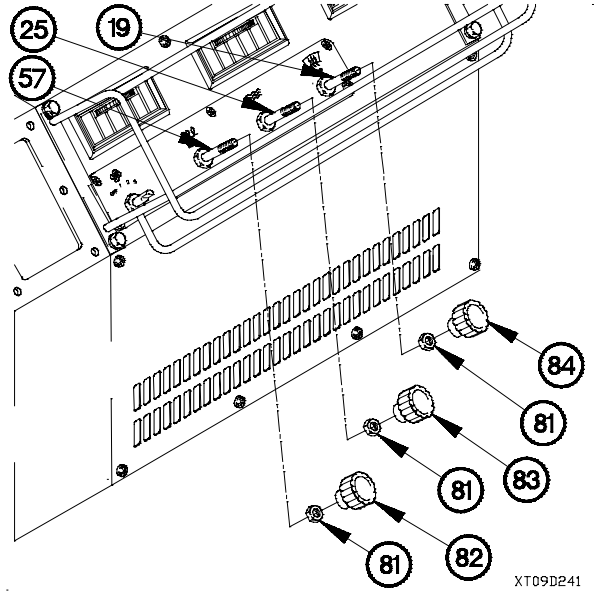
NOTE

Perform steps (65) and (67) on vehicle serial numbers 0001 through 3696 equipped with original personnel heaters.

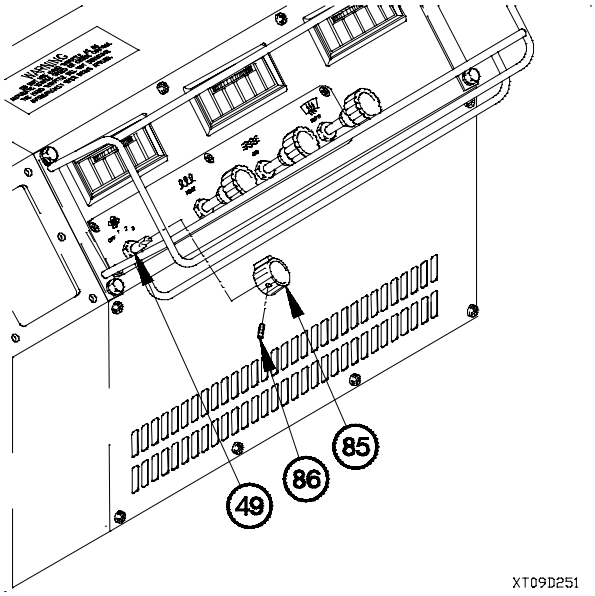
(65) Position three self-locking nuts (81) on DEFR control cable (19), VENT control cable (25), and HEAT control cable (57).

(66) Install knobs (82, 83, and 84) on DEFR control cable (19), VENT control cable (25), and HEAT control cable (57).

(67) Tighten three self-locking nuts (81) on knobs (82, 83, and 84).



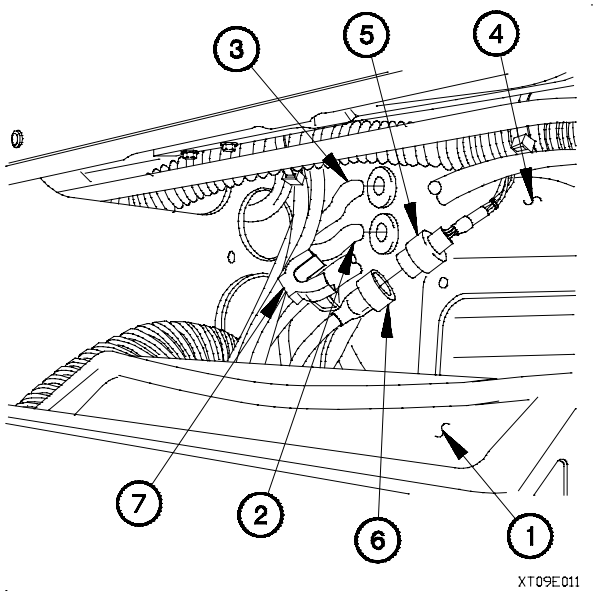
18-9. PERSONNEL HEATER REPLACEMENT/REPAIR (CONT)



(68) Position fan switch knob (85) on fan switch (49).

(69) Tighten two set screws (86) on fan switch knob (85).

e. Installation.



NOTE

Install plastic cable ties as required.

(1) Position personnel heater (1) in vehicle.

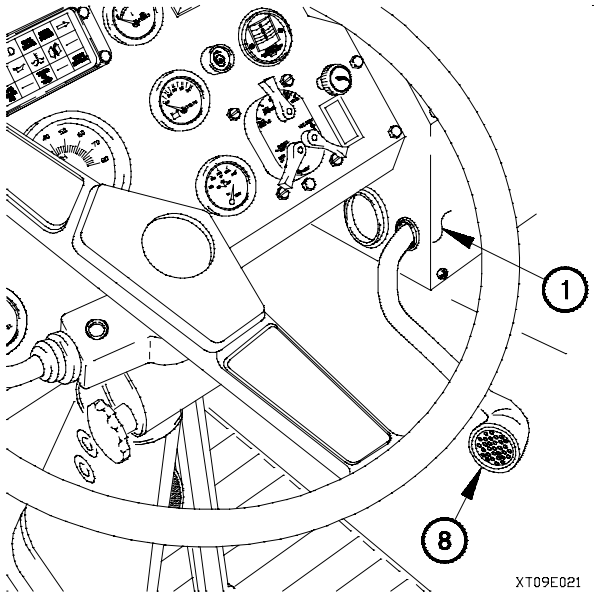
(2) Position heater outlet hose (2) and heater inlet hose (3) through cab floor (4).

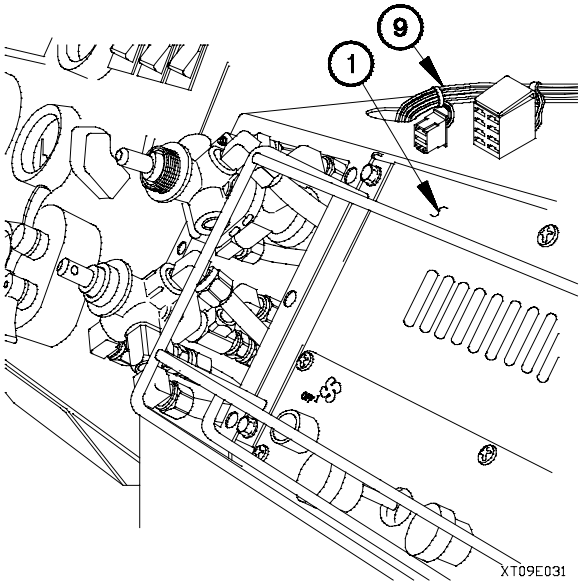
(3) Connect connector PX25 (5) to personnel heater connector (6).

(4) Install connector clamp (7) on personnel heater connector (6).

(5) Position personnel heater (1) in mounting position.

(6) Position CTIS ECU cable P110 (8) in personnel heater (1).





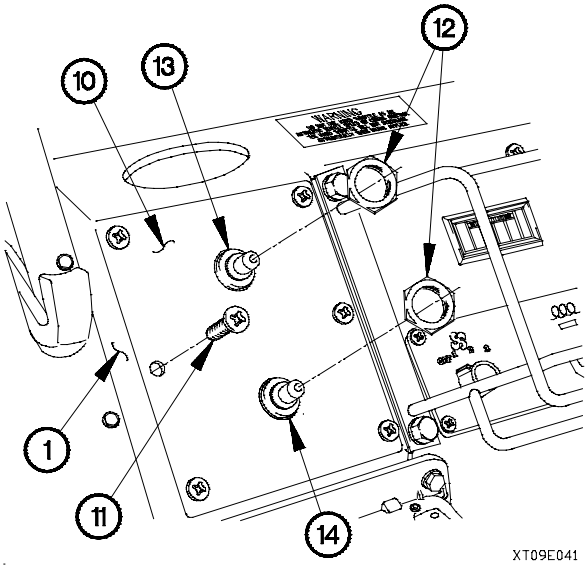
NOTE

Perform step (7) on vehicles equipped with auxiliary panel.

(7) Position auxiliary panel cable assembly (9) through personnel heater (1).

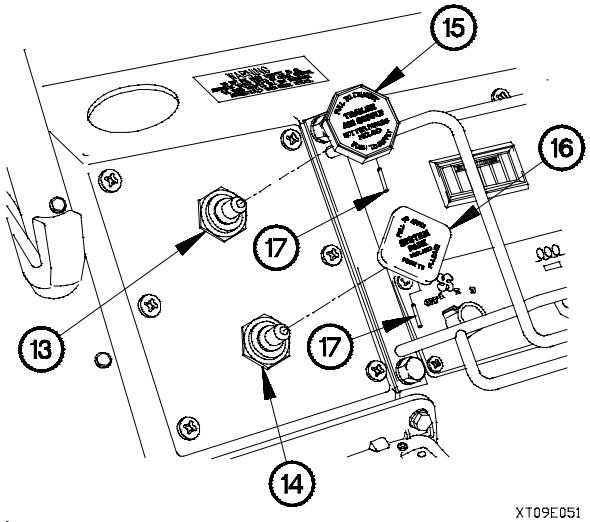
(8) Install valve panel (10) on personnel heater (1) with six screws (11).

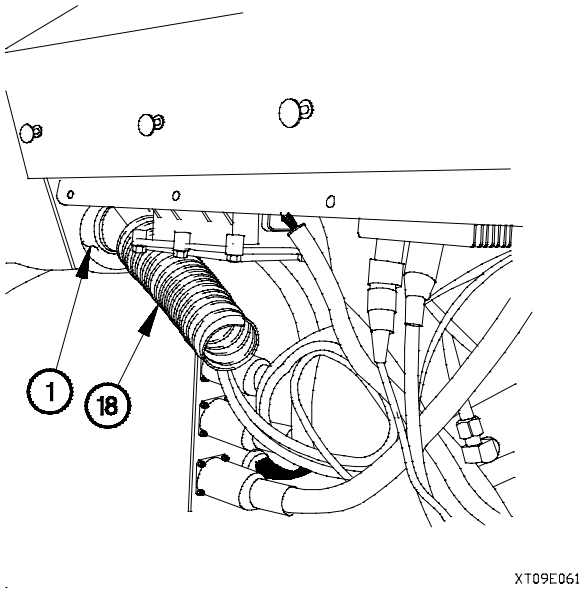
(9) Install self-locking nuts (12) on TRAILER AIR SUPPLY valve (13) and SYSTEM PARK valve (14).



18-9. PERSONNEL HEATER REPLACEMENT/REPAIR (CONT)

(10) Install knobs (15 and 16) on TRAILER AIR SUPPLY valve (13) and SYSTEM PARK valve (14) with roll pins (17).



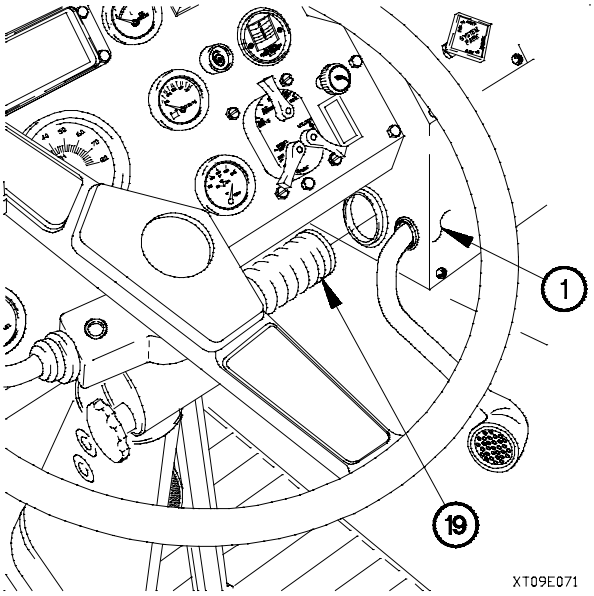


(11) Install personnel heater air duct (18) on personnel heater (1).

WARNING

Ensure heater air duct does not interfere with the operation of the accelerator or brake pedal. Failure to comply may result in serious injury or death to personnel.

(12) Install personnel heater air duct (19) on personnel heater (1).

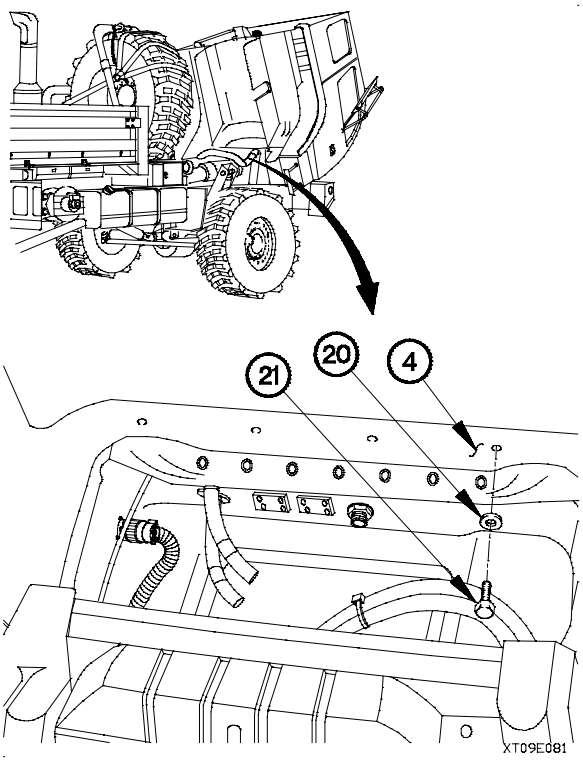


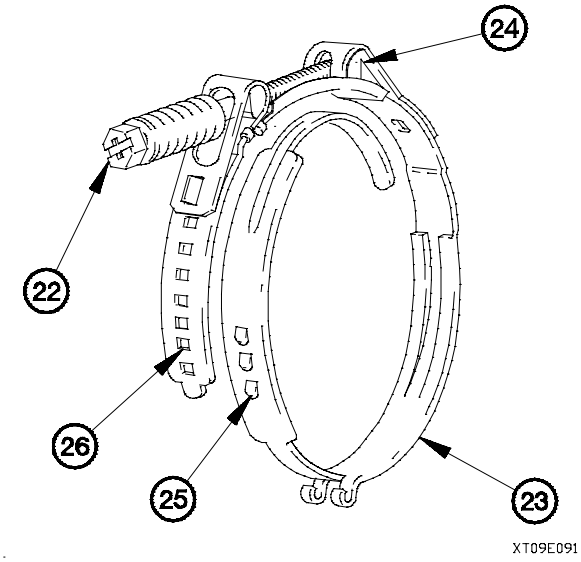
(13) Raise cab (TM 9-2320-365-10).

(14) Position eight washers (20) and screws (21) in cab floor (4).

(15) Tighten eight screws (21) to 14-18 lb-ft (19-24 N·m).

(16) Lower cab (TM 9-2320-365-10).





(17) Loosen two screws (22) in clamps (23) as far as possible without disengaging screws from D-nuts (24).

(18) Unhook clamp tabs (25) from tab windows (26).

18-9. PERSONNEL HEATER REPLACEMENT/REPAIR (CONT)

CAUTION

Ensure clamp tongue is started in clamp groove. Failure to comply may result in damage to equipment.

(19) Position clamp (23) on heater outlet hose (2).

(20) Position clamp (23) on heater inlet hose (3).

NOTE

Heater outlet hose is marked with an arrow pointing down.

(21) Position heater outlet hose (2) on return fitting (27).

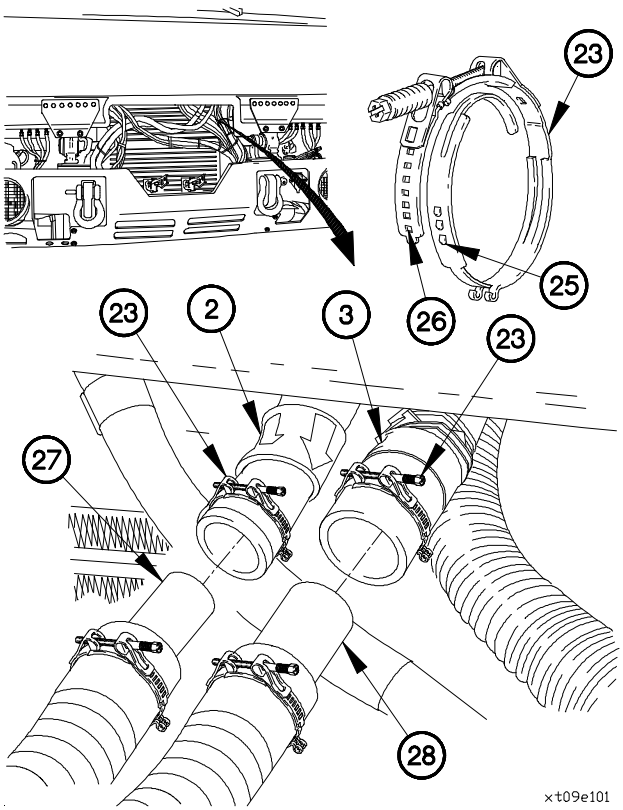
NOTE

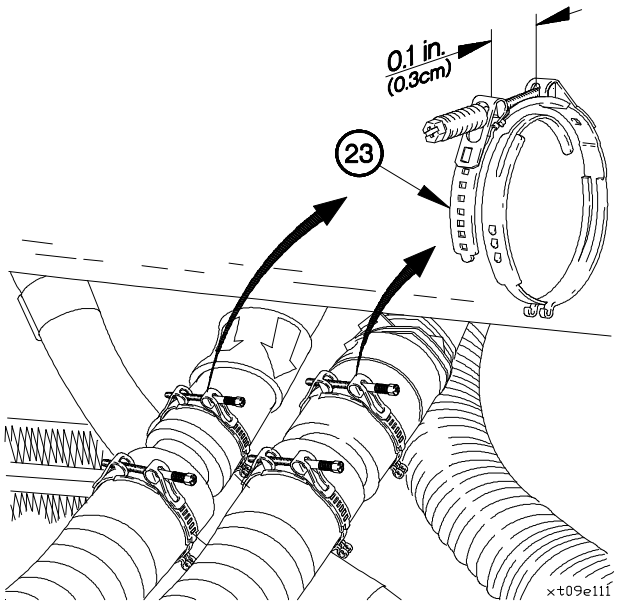
Heater inlet hose is marked with an arrow pointing up.

(22) Position heater inlet hose (3) on supply fitting (28).

(23) Engage as many clamp tabs (25) as possible in tab windows (26) allowing little or no play between clamps (23) and heater outlet hose (2) and heater inlet hose (3).

(24) Tighten two clamps (23) to 8-9 lb-in. (0.9-1 N•m).

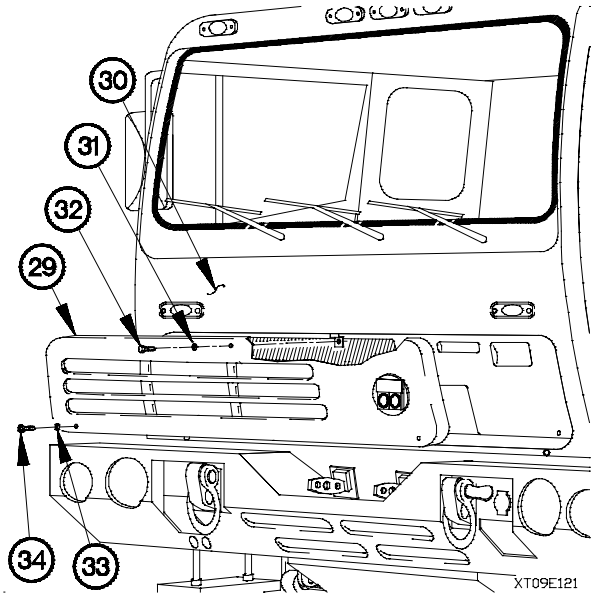




NOTE

Minimum allowable gap between ends of clamp is 0.1 in. (0.3 cm). If gap is less than 0.1 in. (0.3 cm), remove and re-install clamp.

(25) Measure gap between ends of two clamps (23).



(26) Position front grille (29) on cab (30) with washer (31) and screw (32).

(27) Position two washers (33) and screws (34) in front grille (29).

(28) Tighten screw (32) to 48-60 lb-in. (5-7 N·m).

(29) Tighten two screws (34) to 24 lb-in. (3 N·m).

f. Follow-On Maintenance.

(1) Install kick panel (para 16-3).

(2) Install auxiliary panel (para 7-8), if equipped.

(3) Install CTIS ECU (para 12-6).

(4) Start engine and check for leaks (TM 9-2320-365-10).

(5) Add coolant as required (TM 9-2320-365-10).

(6) Operate personnel heater, checking for proper operation and for coolant leaks (TM 9-2320-365-10).

(7) Shut down engine (TM 9-2320-365-10).

End of Task.

18-10. HEATER FAN CONTROL SWITCH REPLACEMENT

This task covers:

a. Removal
b. Installation
c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
Batteries disconnected (para 7-48).
CTIS ECU removed (para 12-6).

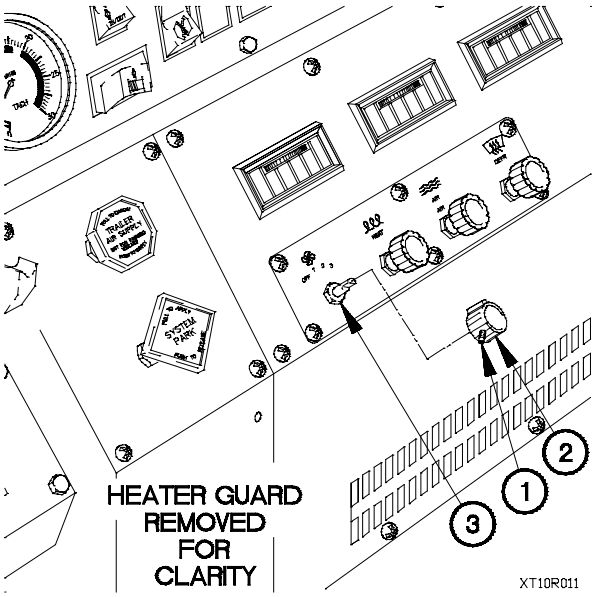
Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)

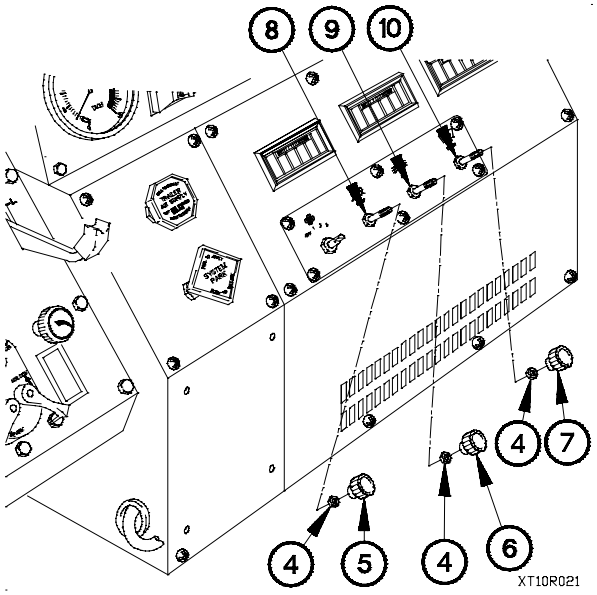
Materials/Parts
Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D)
Nut, Self-Locking (3) (vehicle serial numbers 0001 through 3696 equipped with original personnel heaters) (Item 156, Appendix G)

a. Removal.

(1) Loosen two setscrews (1) in heater fan control switch knob (2).

(2) Remove heater fan control switch knob (2) from heater fan control switch (3).





NOTE

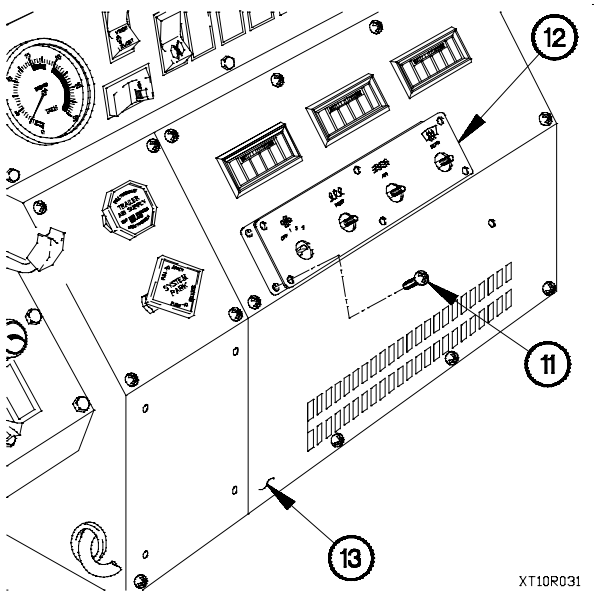
Perform steps (3) and (5) on vehicle serial numbers 0001 through 3696 equipped with original personnel heaters.

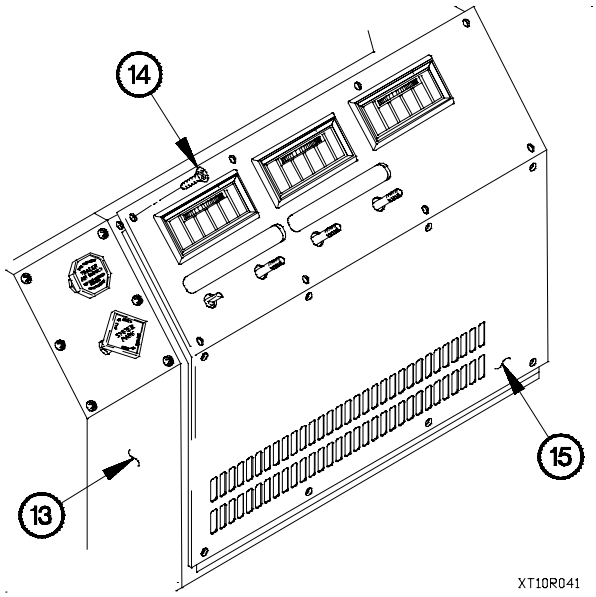
(3) Loosen three self-locking nuts (4) on knobs (5, 6, and 7).

(4) Remove knobs (5, 6, and 7) from HEAT control cable (8), VENT control cable (9), and DEFR control cable (10).

(5) Remove three self-locking nuts (4) from HEAT control cable (8), VENT control cable (9), and DEFR control cable (10). Discard self-locking nuts.

(6) Remove six screws (11) and control panel (12) from personnel heater (13).





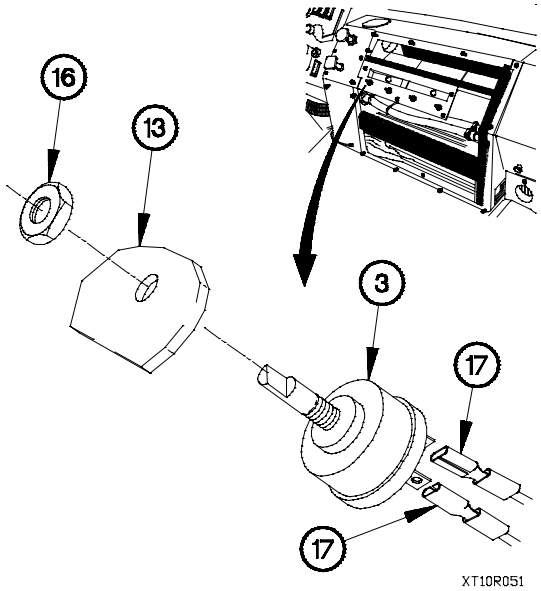
(7) Remove 12 screws (14) and cover (15) from personnel heater (13).

(8) Remove nut (16) and heater fan control switch (3) from personnel heater (13).

NOTE

Tag connectors and connection points prior to disconnecting.

(9) Disconnect two connectors 1601 (17) from heater fan control switch (3).

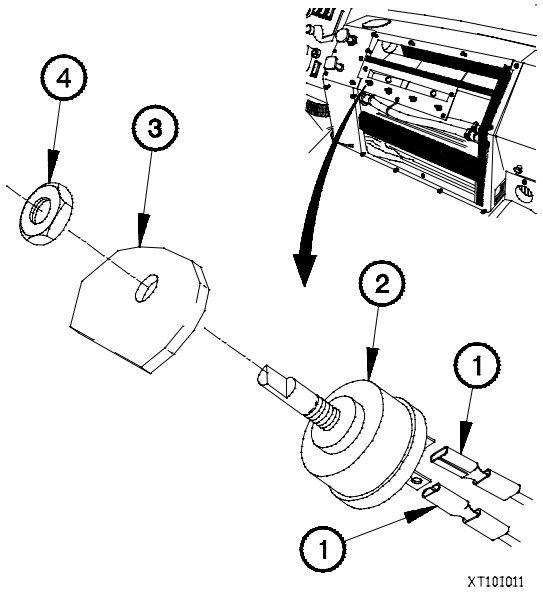


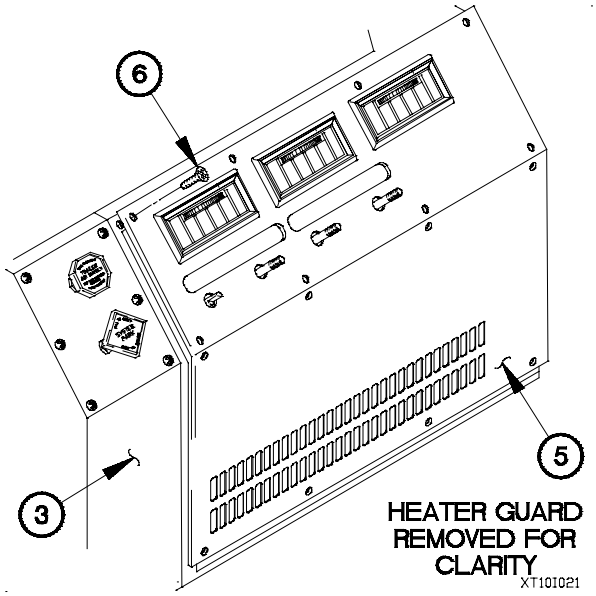
18-10. HEATER FAN CONTROL SWITCH REPLACEMENT (CONT)

b. Installation.

(1) Connect two connectors 1601 (1) to heater fan control switch (2).

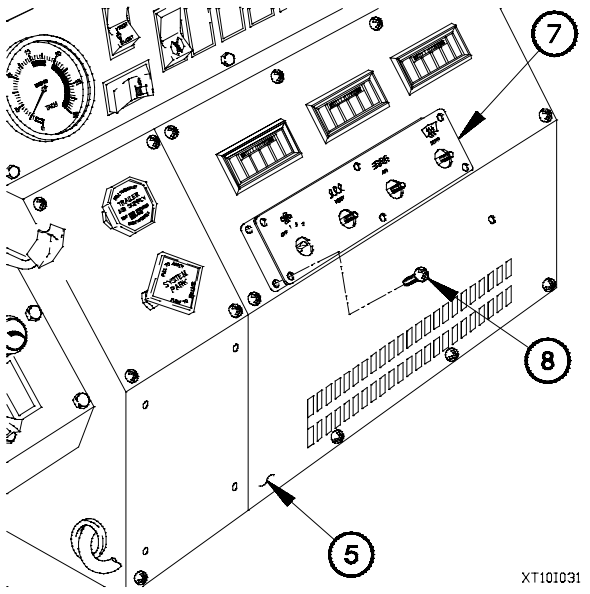
(2) Install heater fan control switch (2) in personnel heater (3) with nut (4).





(3) Install cover (5) on personnel heater (3) with 12 screws (6).

(4) Install control panel (7) on cover (5) with 12 screws (8).



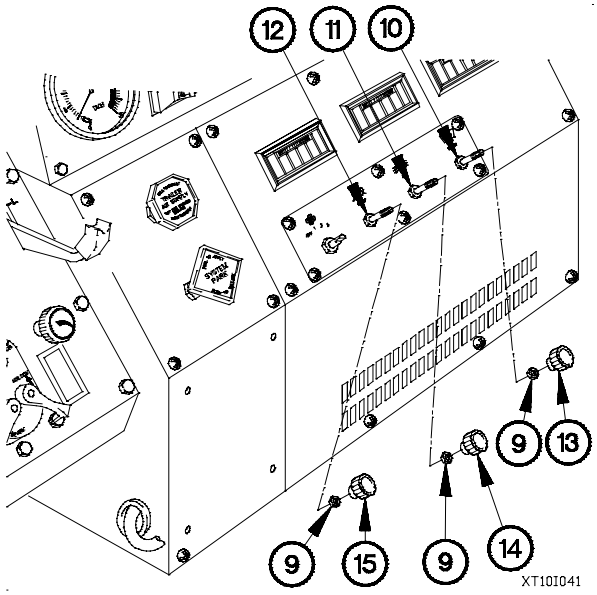
NOTE

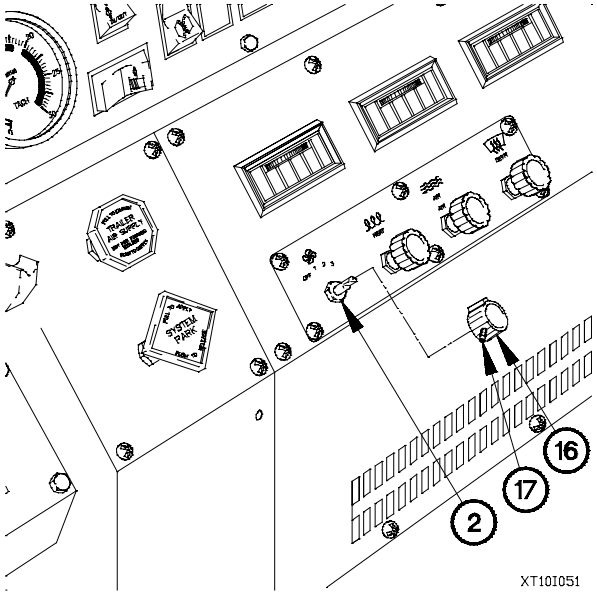
Perform steps (5) and (7) on vehicle serial numbers 0001 through 3696 equipped with original personnel heaters.

(5) Position three self-locking nuts (9) on DEFR control cable (10), VENT control cable (11), and HEAT control cable (12).

(6) Install knobs (13, 14, and 15) on DEFR control cable (10), VENT control cable (11), and HEAT control cable (12).

(7) Tighten three self-locking nuts (9) on knobs (13, 14, and 15).





(8) Position heater fan control switch knob (16) on heater fan control switch (2).

(9) Tighten two setscrews (17) in heater fan control switch knob (16).

c. Follow-On Maintenance.

(1) Install CTIS ECU (para 12-6).

(2) Connect batteries (para 7-48).

(3) Check heater fan operation (TM 9-2320-365-10).

End of Task.

18-11. PERSONNEL HEATER CONTROL GUARD REPLACEMENT

This task covers:

a. Removal

b. Installation

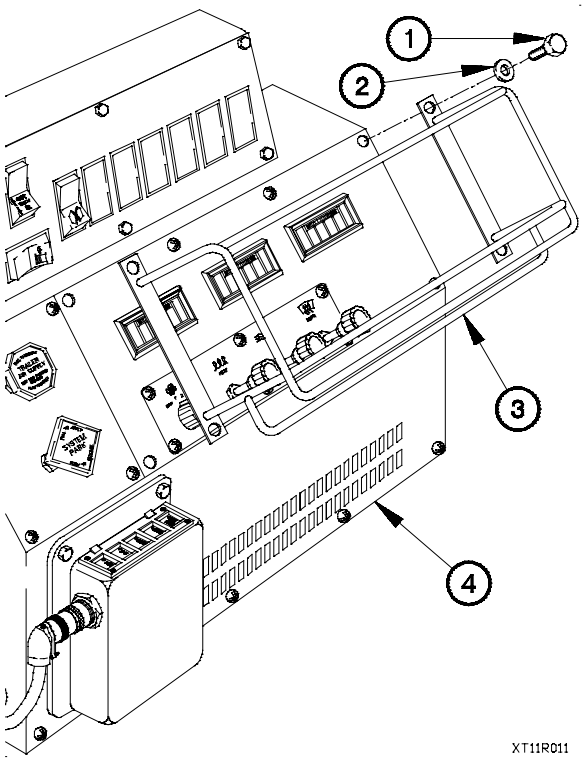
INITIAL SETUP

Equipment Conditions
Engine shut down (TM 9-2320-365-10).

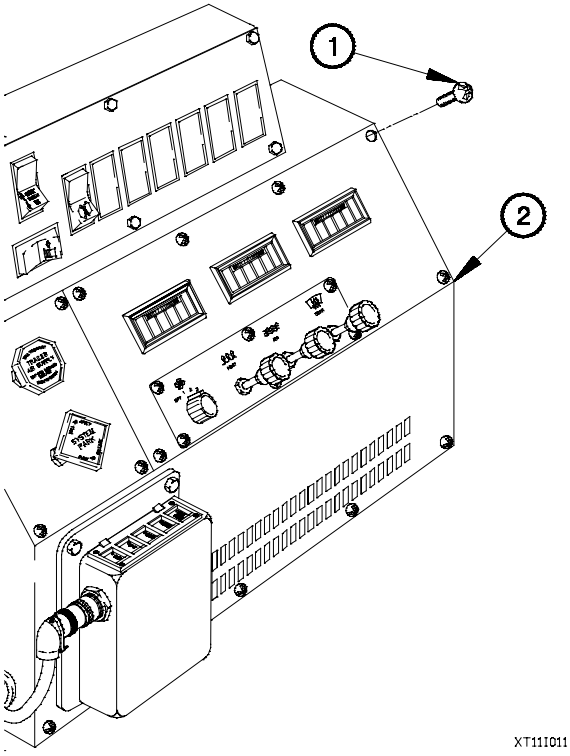
Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Wrench, Torque, 0-200 lb-in. (Item 58, Appendix C)
Socket Set, Socket Wrench (Item 34, Appendix C)

a. Removal.

Remove four screws (1), washers (2), and personnel heater control guard (3) from personnel heater (4).



b. Installation



NOTE

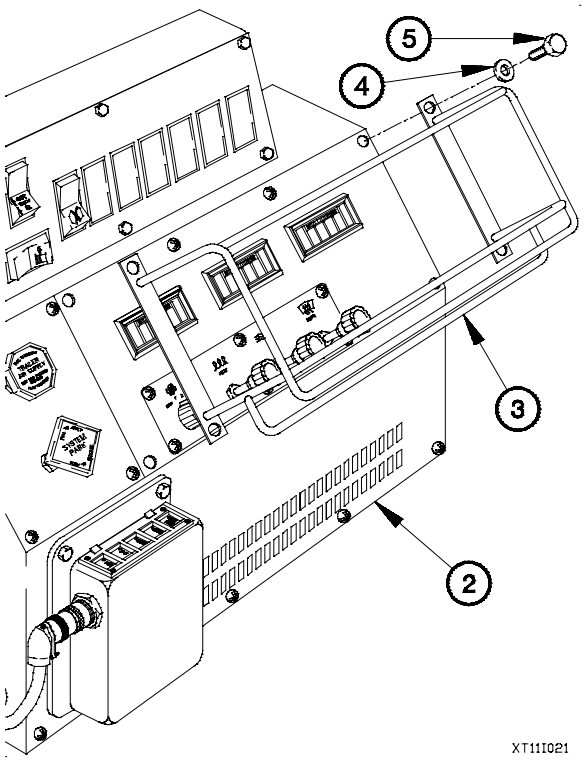
Perform step (1) on vehicles not equipped with personnel heater guard.

(1) Remove four screws (1) from personnel heater (2). Discard screws.

(2) Position personnel heater control guard (3) on personnel heater (2) with four washers (4) and screws (5).

(3) Tighten screws (5) to 39-59 lb-in. (5-7 N·m).

End of Task.



18-12. COLD WEATHER RADIATOR COVER INSTALLATION/REMOVAL

This task covers:

a. Installation
b. Removal
c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
Engine shut down (TM 9-2320-365-10).
Cab raised (TM 9-2320-365-10).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C)

a. Installation.

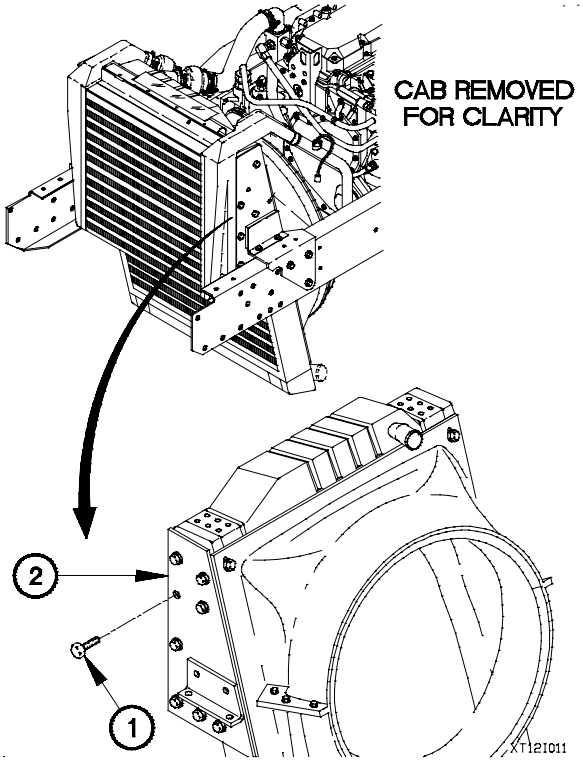
CAUTION

Install cold weather radiator cover when outside temperature is below 40°F (4°C). Cold weather radiator cover must remain on vehicle in outside temperatures of -26°F to -50°F (-32°C to -46°C). Failure to comply may result in damage to equipment.

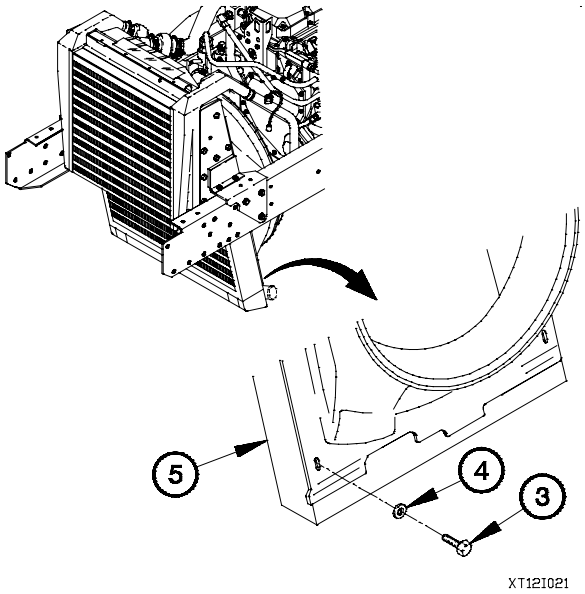
NOTE

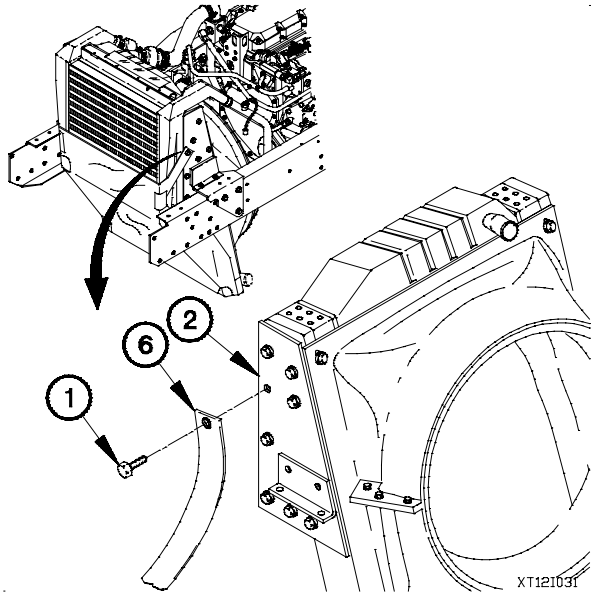
Left and right sides of cold weather radiator cover are installed the same way. Left side shown.

(1) Remove two screws (1) from charge air cooler (2).



(2) Remove two screws (3) and washers (4) from bottom corners of radiator (5).





(3) Position cold weather radiator cover (6) over charge air cooler (2) with two screws (1).

(4) Tighten two screws (1) to 21-26 lb-ft (28-35 N·m).

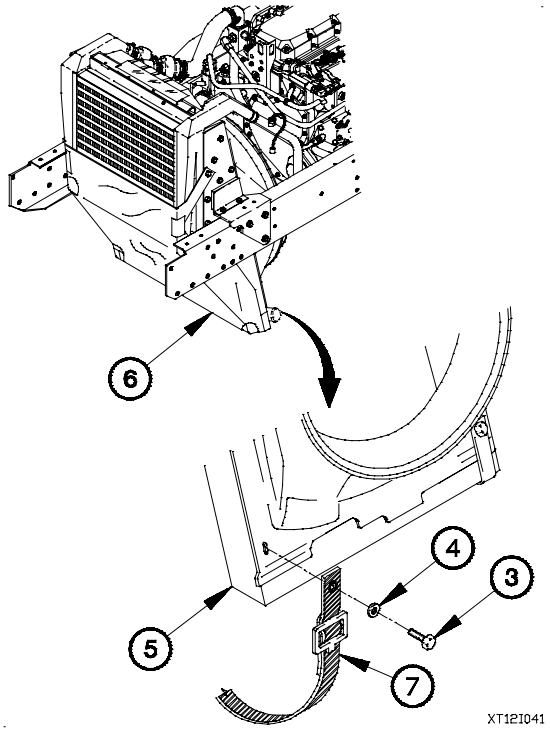
18-12. COLD WEATHER RADIATOR COVER INSTALLATION/REMOVAL (CONT)

(5) Position cold weather radiator cover (6) over radiator (5) with two straps (7), washers (4), and screws (3).

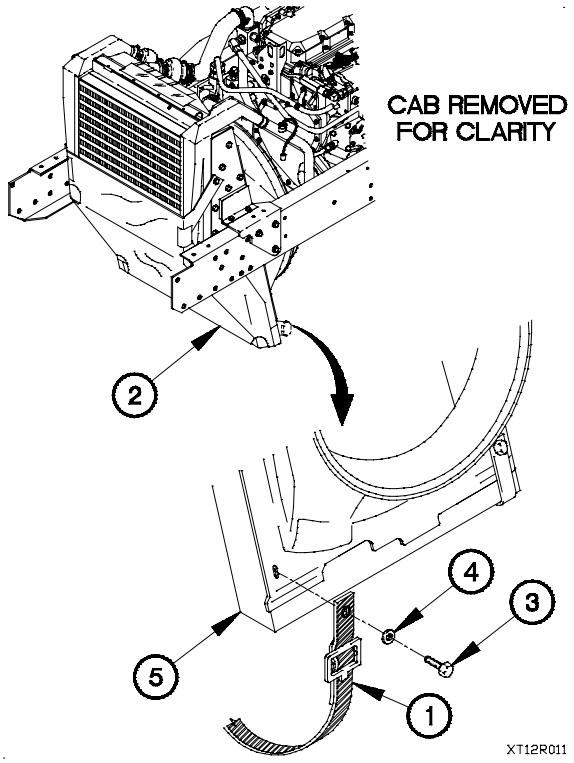
(6) Tighten two screws (3) to 21-26 lb-ft (28-35 N·m).

(7) Tighten two straps (7) until all slack is removed from cold weather radiator cover (6).

(8) Perform steps (1) through (7) on right side of cold weather radiator cover.



b. Removal.



CAUTION

Cold weather radiator cover should be removed when outside temperature is above 40°F (4°C). Cold weather radiator cover may be removed any time outside temperature is above 32°F (0°C), and must be removed before outside temperature reaches 70°F (21°C). Failure to comply may result in damage to equipment.

NOTE

Left and right sides of cold weather radiator cover are removed the same way. Left side shown.

(1) Loosen two straps (1) on cold weather radiator cover (2).

(2) Remove two screws (3), washers (4), and cold weather radiator cover (2) from bottom corners of radiator (5).

(3) Position two washers (4) and screws (3) in radiator (5).

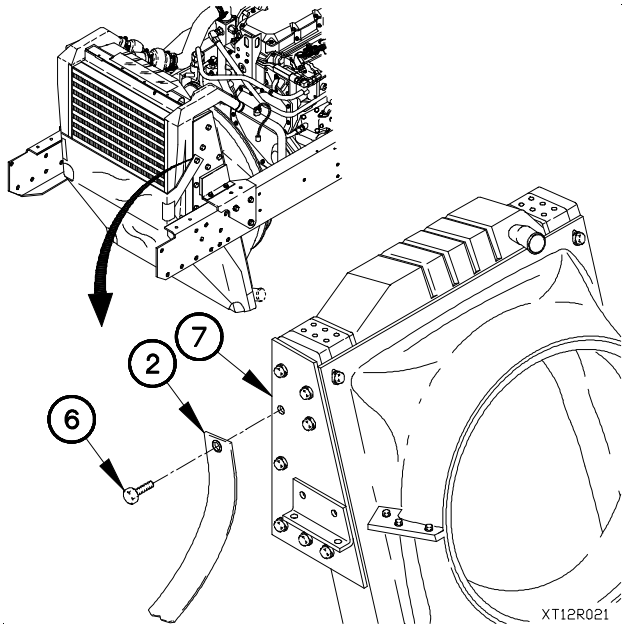
(4) Tighten two screws (3) to 21-26 lb-ft (28-35 N·m).

(5) Remove two screws (6) and cold weather radiator cover (2) from charge air cooler (7).

(6) Position two screws (6) in charge air cooler (7).

(7) Tighten two screws (6) to 21-26 lb-ft (28-35 N m).

(8) Perform steps (1) through (7) on right side of cold weather radiator cover.



c. Follow-On Maintenance.

Lower cab (TM 9-2320-365-10).

End of Task.

18-13. RH CONVEX MIRROR REPLACEMENT

This task covers:

a. Removal

b. Installation

INITIAL SETUP

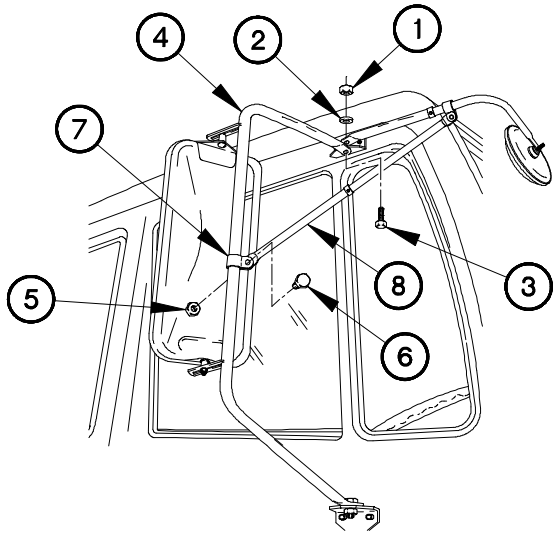
Equipment Conditions
Engine shut down (TM 9-2320-365-10)

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C)

a. Removal.

(1) Remove nut (1), washer (2), and screw (3) from mirror arm (4).

(2) Remove nut (5), screw (6), and clip (7) from bracket arm (8).

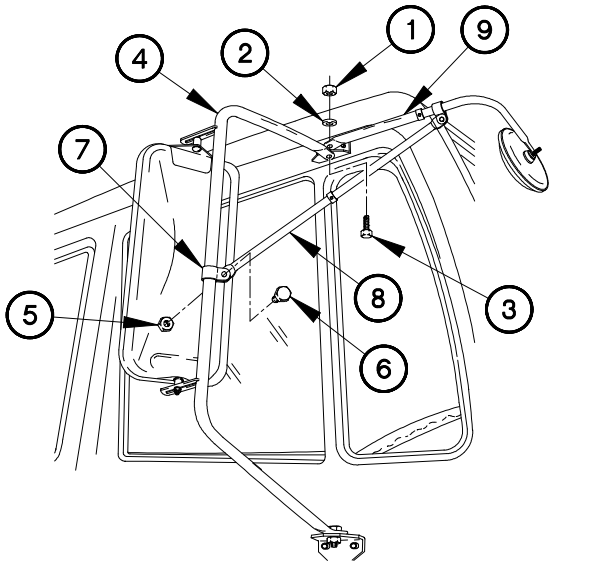


XT13R011

b. Installation

(1) Position bracket arm (9) on mirror arm (4) with screws (3), washers (2), and nut (1).

(2) Position bracket arm (8) on mirror arm (4) with clip (7), screws (6), and nut (5).



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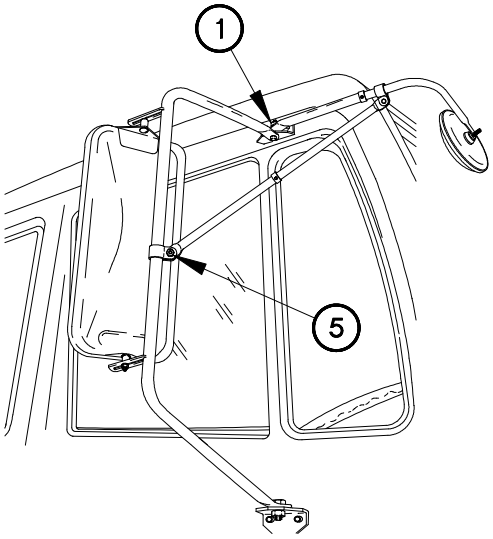

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(3) Tighten nut (1) to 156-204 lb-in (17-23 N•m).

(4) Tighten nut (5) to 84-108 lb-in (9-12 N•m).

End of Task.

CHAPTER 19
HYDRAULIC SYSTEM MAINTENANCE

RESTRICTED MAINTENANCE NOTICE

Units not authorized SC 4910-95-CL-A72 (SHOP EQUIPMENT, COMMON NO. 2) in their T.O.E. may be unable to perform some of the maintenance tasks described in this chapter. If the required tools are not authorized, the equipment must be submitted to DS Maintenance for repair.

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19-1. INTRODUCTION 19-1

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19-3. AIR/HYDRAULIC POWER UNIT AND BRACKET REPLACEMENT/REPAIR 19-5
19-4. HYDRAULIC MANIFOLD REPLACEMENT/REPAIR 19-10
19-5. HYDRAULIC MANIFOLD FILTER REPLACEMENT 19-22
19-6. CAB HYDRAULIC LATCH REPLACEMENT/ADJUSTMENT 19-24
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Section I. INTRODUCTION

19-1. INTRODUCTION

This chapter contains maintenance instructions for replacing, repairing, and servicing hydraulic system components authorized by the Maintenance Allocation Chart (MAC) at the Unit Maintenance level.

Section II. MAINTENANCE PROCEDURES

19-2. BACK-UP HYDRAULIC PUMP REPLACEMENT

This task covers:

a. Removal
b. Installation
c. Follow-On Maintenance

INITIAL SETUP

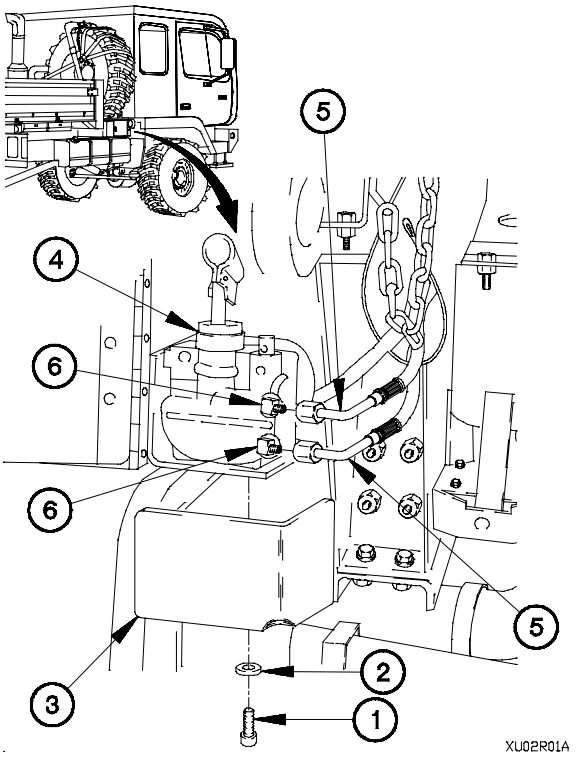
Equipment Conditions
Engine shut down (TM 9-2320-365-10).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C)
Gloves, Rubber (Item 13, Appendix C)
Goggles, Industrial (Item 15, Appendix C)

Materials/Parts
Cap and Plug Set (Item 15, Appendix D)
Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D)
Packing, Preformed (2) (Item 166, Appendix G)
Hydraulic Fluid A (Item 26, Appendix D)

a. Removal.

(1) Remove two screws (1), washers (2), and cover (3) from back-up hydraulic pump (4).



WARNING

Hydraulic fluid (MIL-L-5606) is TOXIC. Wear protective goggles and gloves; use only in well ventilated area; avoid contact with skin, eyes, and clothes. Skin and clothing that come in contact with hydraulic oil should be washed immediately. Saturated clothing should be removed immediately. Failure to comply may result in injury to personnel.

CAUTION

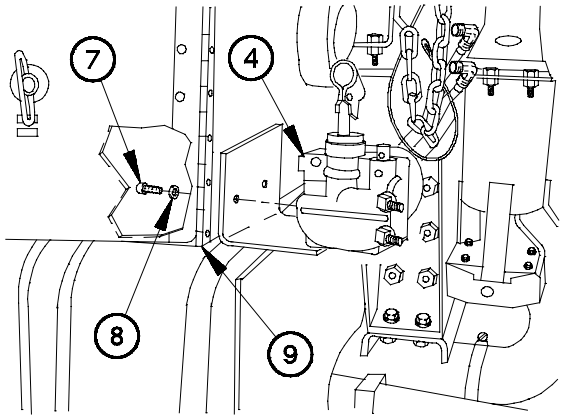
Cap or plug hydraulic hoses and connection points to prevent contamination of hydraulic system. Failure to comply may result in damage to equipment.

NOTE

Tag hoses and connection points prior to disconnecting.

(2) Disconnect two hydraulic hoses (5) from 90-degree fittings (6).

(3) Remove two screws (7), washers (8), and back-up hydraulic pump (4) from tool box (9).



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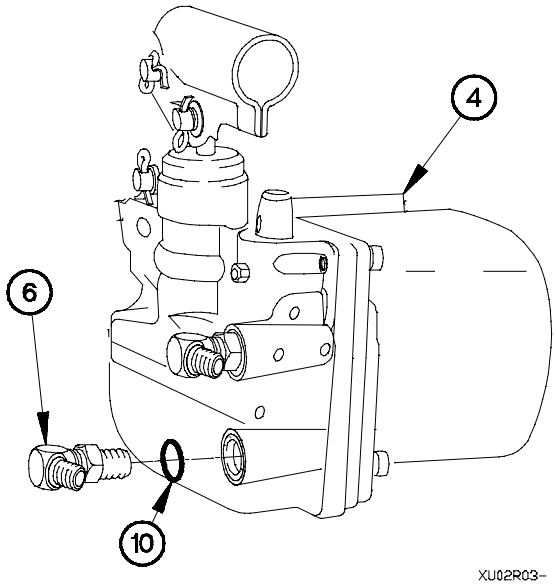


XU02R03-

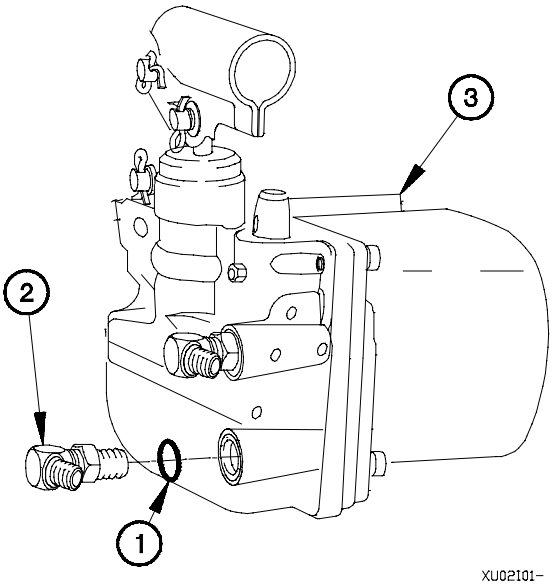
(4) Remove two 90-degree fittings (6) from back-up hydraulic pump (4).

(5) Remove two preformed packings (10) from 90-degree fittings (6). Discard preformed packings.

b. Installation.

(1) Install two preformed packings (1) on 90-degree fittings (2).

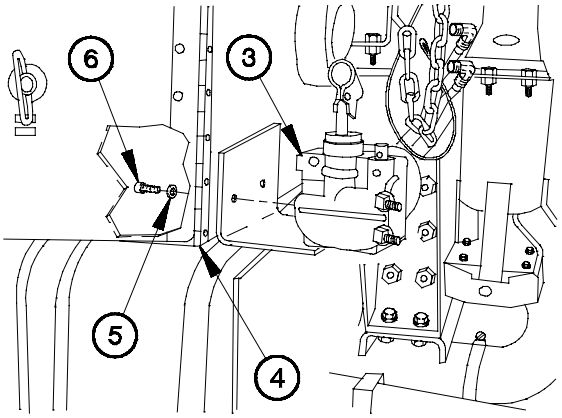
(2) Install two 90-degree fittings (2) in back-up hydraulic pump (3).



XU02I01-

19-2. BACK-UP HYDRAULIC PUMP REPLACEMENT (CONT)

(3) Position back-up hydraulic pump (3) on tool box (4) with two washers (5) and screws (6).



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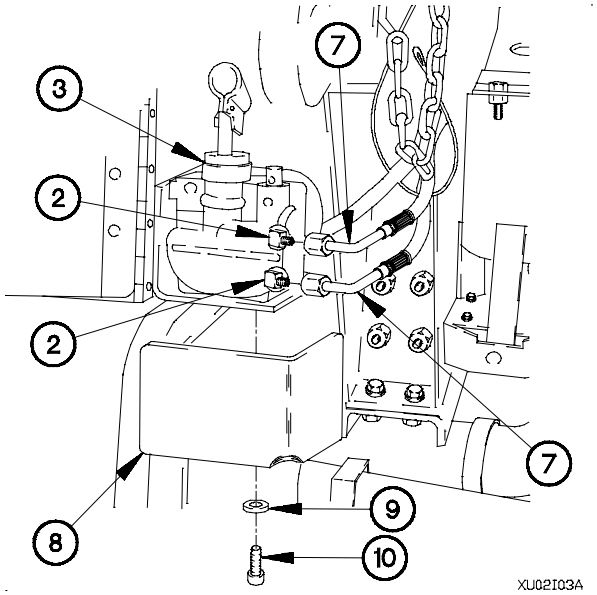

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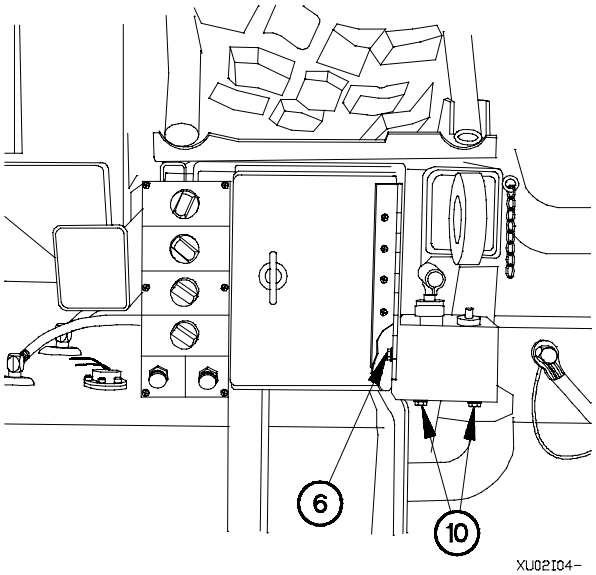
(4) Install two hydraulic hoses (7) on 90-degree fittings (2).

(5) Position cover (8) on back-up hydraulic pump (3) with two washers (9) and screws (10).



XU02I04-

(6) Tighten screws (6 and 10) to 18-28 lb-ft (24-38 N·m).

c. Follow-On Maintenance.

Fill air transportability hydraulic system (Appendix H).

End of Task.

19-3. AIR/HYDRAULIC POWER UNIT AND BRACKET REPLACEMENT/REPAIR

This task covers:

a. Air/Hydraulic Power Unit Removal
b. Air/Hydraulic Power Unit Disassembly
c. Air/Hydraulic Power Unit Cleaning/Inspection
d. Air/Hydraulic Power Unit Assembly
e. Air/Hydraulic Power Unit Installation
f. Bracket Removal
g. Bracket Installation
h. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
Engine shut down (TM 9-2320-365-10).
Spare tire lowered (TM 9-2320-365-10).
M13 decontamination unit removed, if equipped (TM 3-4230-214-12&P).
Air springs deflated (TM 9-2320-365-10).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C)
Wrench, Torque, 0-200 lb-in. (Item 58, Appendix C)
Wrench Set, Socket (Item 47, Appendix C)
Pan, Drain (Item 24, Appendix C)
Gloves, Rubber (Item 13, Appendix C)
Goggles, Industrial (Item 15, Appendix C)

Materials/Parts
Cap and Plug Set (Item 15, Appendix D)
Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D)
Antiseize Compound (Item 63, Appendix D)
Washer, Spring (4) (Item 279, Appendix G)
Packing, Preformed (2) (Item 166, Appendix G)
Nut, Self-Locking (4) (Item 149, Appendix G)
Hydraulic Fluid A (Item 26, Appendix D)

Materials/Parts (Cont)
Gasket (Item 32, Appendix G)
Packing, Preformed (2) (Item 168.1, Appendix G)
Packing, Preformed (Item 184.1, Appendix G)
Packing, Preformed (Item 174.2, Appendix G)
Gasket (Item 26.1, Appendix G)
Washer, Flat (2) (Item 271.1, Appendix G)
Lockwasher (3) (101.2, Appendix G)
Packing, Preformed (174.1, Appendix G)
Packing, Preformed (2) (171.2, Appendix G)
Retainer, Packing (2) (213.2, Appendix G)
Retainer, Packing (2) (213.3, Appendix G)
Rag, Wiping (Item 51, Appendix D)

References
TM 3-4230-214-12&P

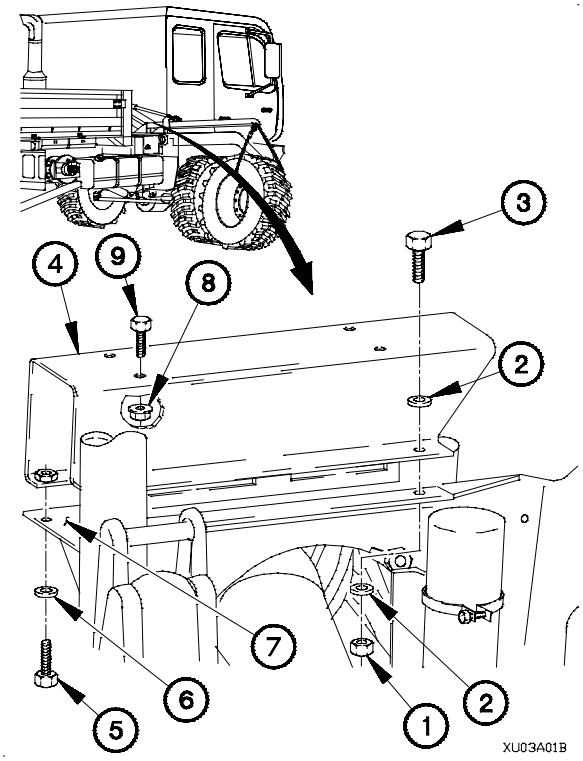
19-3. AIR/HYDRAULIC POWER UNIT AND BRACKET REPLACEMENT/REPAIR (CONT)

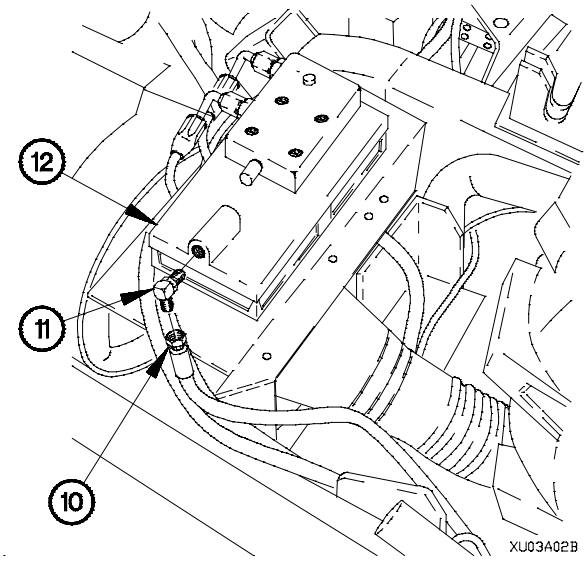
a. Air/Hydraulic Power Unit Removal.

(1) Remove two nuts (1), four washers (2), and two screws (3) from decontamination unit mounting bracket (4).

(2) Remove two screws (5), washers (6), and decontamination unit mounting bracket (4) from air/hydraulic unit mounting bracket (7).

(3) Remove four self-locking nuts (8) and screws (9) from decontamination unit mounting bracket (4). Discard self-locking nuts.





(4) Disconnect air hose (10) from fitting (11).

(5) Remove fitting (11) from air/hydraulic power unit (12).

WARNING

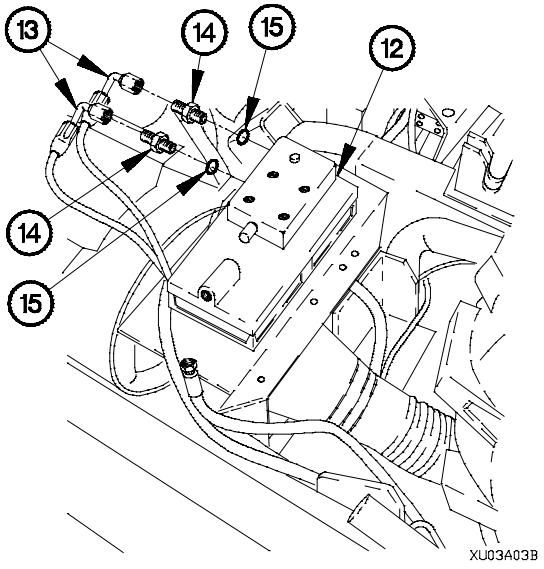
Hydraulic fluid (MIL-H-5606A) is TOXIC. Wear protective goggles and gloves; use only in well ventilated area; avoid contact with skin, eyes, and clothes. Skin and clothing that come in contact with hydraulic oil should be washed immediately. Saturated clothing should be removed immediately. Failure to comply may result in injury to personnel.

CAUTION

Cap or plug hydraulic hoses and connection points to prevent contamination to hydraulic system. Failure to comply may result in damage to equipment.

NOTE

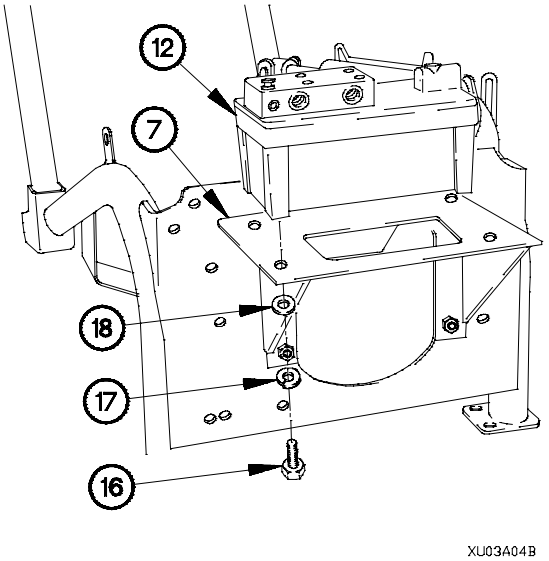
Tag hoses and connection points prior to disconnecting.



(6) Disconnect two hydraulic hoses (13) from fittings (14).

(7) Remove two fittings (14) from air/hydraulic power unit (12).

(8) Remove two preformed packings (15) from fittings (14). Discard preformed packings.



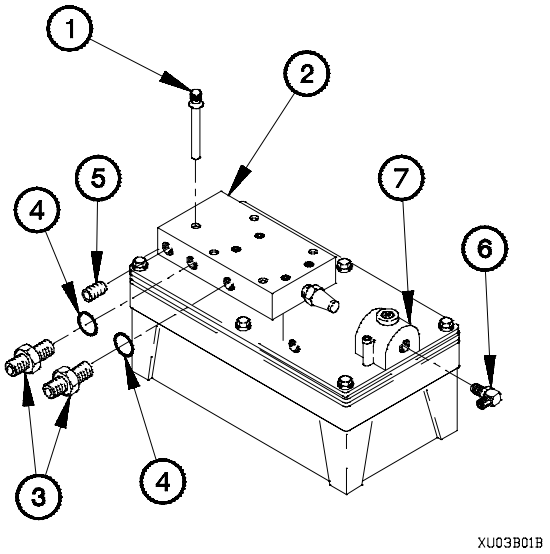
(9) Remove four screws (16), spring washers (17), washers (18) and air/hydraulic power unit (12) from air/hydraulic power unit mounting bracket (7). Discard spring washers.

19-3. AIR/HYDRAULIC POWER UNIT AND BRACKET REPLACEMENT/REPAIR (CONT)

b. Air/Hydraulic Power Unit Disassembly.

WARNING

Hydraulic fluid (MIL-L-5606) is TOXIC. Wear protective goggles and gloves; use only in well-ventilated area: avoid contact with skin, eyes, and clothes. Skin and clothing that come in contact with hydraulic oil should be washed immediately. Failure to comply may result in injury to personnel.



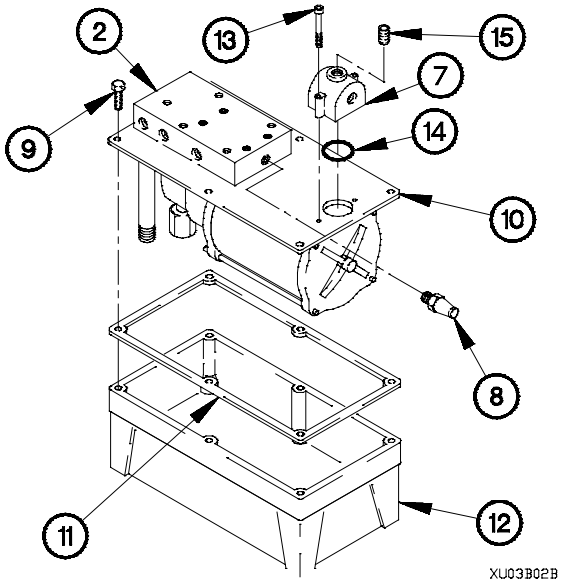
(1) Remove dipstick (1) from manifold body (2).

(2) Remove two fittings (3) from manifold body (2).

(3) Remove two preformed packings (4) from fittings (3). Discard preformed packings.

(4) Remove pressure plug (5) from manifold body (2).

(5) Remove 90-degree fitting (6) from air intake body (7).



(6) Remove muffler (8) from manifold body (2).

(7) Remove six screws (9), cover (10), and gasket (11) from reservoir (12). Discard gasket.

(8) Drain oil from reservoir (12).

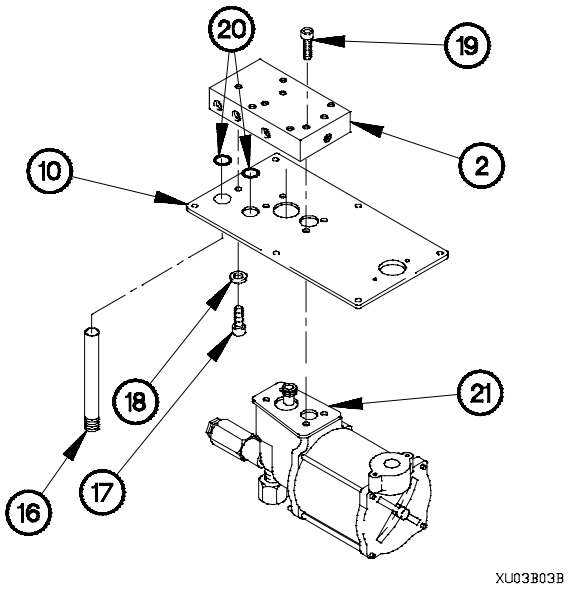
(9) Remove two screws (13), air intake body (7), and preformed packing (14) from cover (10). Discard preformed packing.

(10) Remove plug (15) from air intake body (7).

(11) Remove pipe (16) from cover (10).

(12) Remove screw (17) and washer (18) from cover (10).

(13) Remove four screws (19), manifold body (2), two preformed packings (20), and cover (10) from pump (21). Discard preformed packings.



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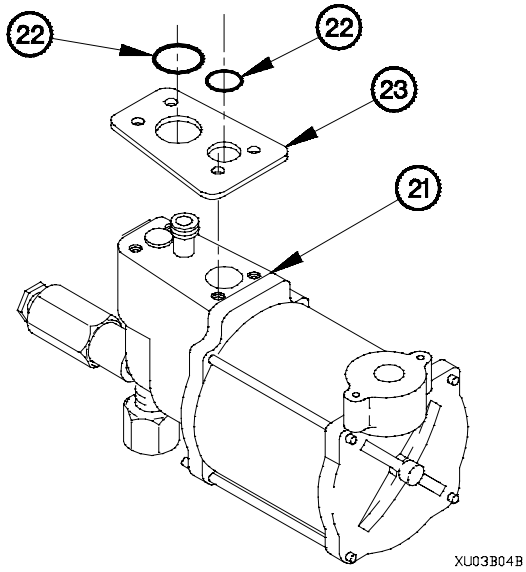

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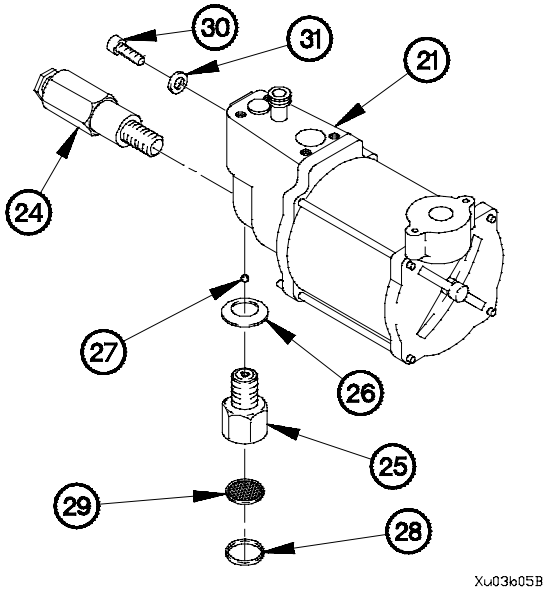
(14) Remove two preformed packings (22) and gasket (23) from pump (21). Discard preformed packings and gasket.

(15) Remove relief valve (24) from pump (21).

(16) Remove filter adapter (25), washer (26), and bearing (27) from pump (21).

(17) Remove retaining ring (28) and filter (29) from filter adapter (25).

(18) Remove screw (30) and washer (31) from pump (21).



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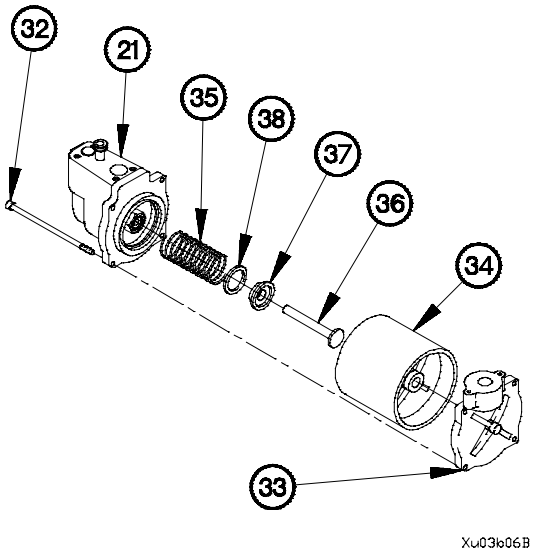
19-3. AIR/HYDRAULIC POWER UNIT AND BRACKET REPLACEMENT/REPAIR (CONT)

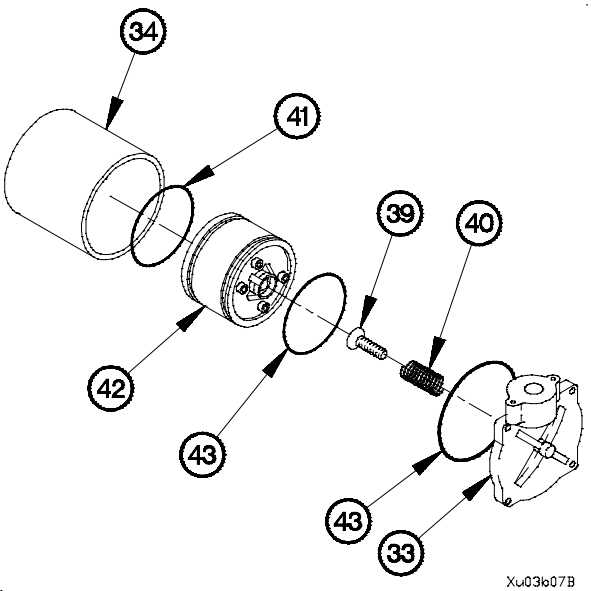
WARNING

Use care when removing screws. Pump is under spring tension. Failure to comply may result in injury to personnel.

(19) Remove four screws (32), cover (33), air cylinder (34), and spring (35) from pump (21).

(20) Remove guide (36), bumper (37), and washer (38) from spring (35).





(21) Remove screw (39), spring (40), and preformed packing (41) from cover (33). Discard preformed packing.

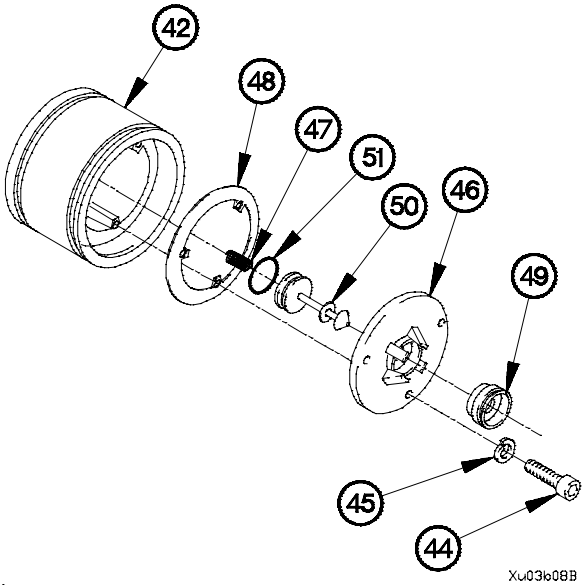
(22) Remove piston (42) from air cylinder (34).

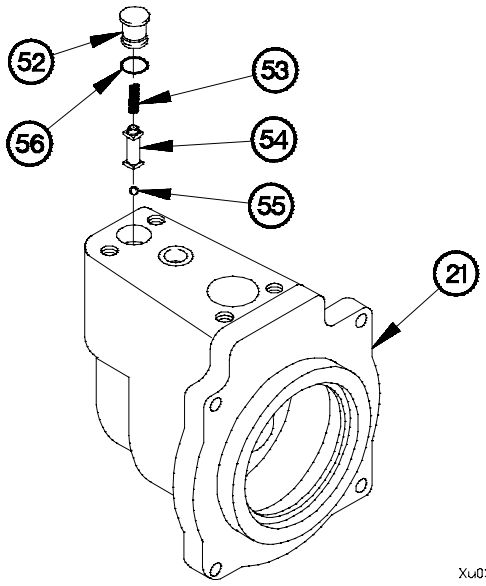
(23) Remove two preformed packings (43) from piston (42). Discard preformed packings.

(24) Remove three screws (44), lockwashers (45), piston end plate (46), spring (47), and gasket (48) from piston (42). Discard lockwashers and gasket.

(25) Remove retainer (49) and piston poppet (50) from piston end plate (46).

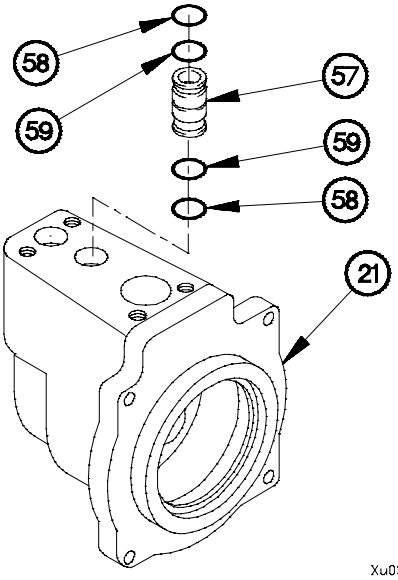
(26) Remove preformed packing (51) from piston poppet (50). Discard preformed packing.





(27) Remove check valve retainer (52), spring (53), guide (54), and bearing (55) from pump (21).

(28) Remove preformed packing (56) from check valve retainer (52). Discard preformed packing.



(29) Remove bushing (57) from pump (21).

(30) Remove two preformed packings (58) and backup rings (59) from bushing (57). Discard preformed packings and bushing rings.

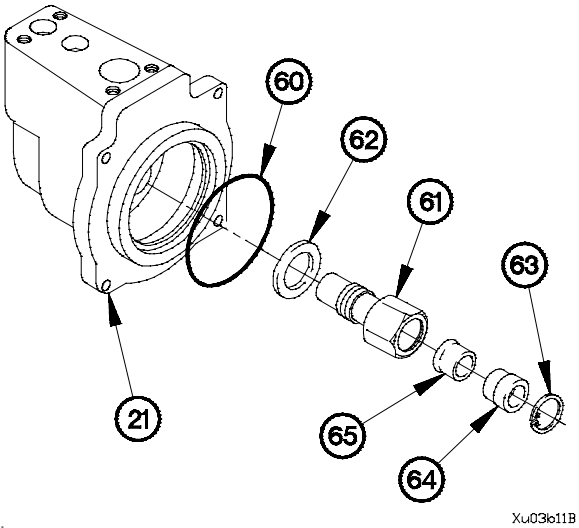
(31) Remove preformed packing (60) from pump (21). Discard preformed packing.

(32) Remove cylinder (61) and washer (62) from pump (21).

WARNING

Use care when removing retaining rings. Retaining rings are under tension and can act as projectiles when released. Failure to comply may result in injury to personnel.

(33) Remove retaining ring (63), retainer (64), and preformed packing (65) from cylinder (61). Discard preformed packing.



19-3. AIR/HYDRAULIC POWER UNIT AND BRACKET REPLACEMENT/REPAIR (CONT)

c. Air/Hydraulic Power Unit Cleaning/Inspection.

WARNING

- **Dry Cleaning Solvent (P-D-680) is TOXIC and flammable. Wear protective goggles and gloves; use only in well-ventilated area; avoid contact with skin, eyes, and clothes, and do not breathe vapors. Keep away from heat of flame. Never smoke when using solvent; the flashpoint for Type I Dry Cleaning Solvent is 100° F (38° C) and for Type II is 130° F (50° C). Failure to comply may result in serious injury or death to personnel.**
- **If personnel become dizzy while using cleaning solvent, immediately get fresh air and medical help. If dry cleaning solvent contacts skin or clothes, flush with cold water. If dry cleaning solvent contacts eyes, immediately flush eyes with water and get immediate medical attention. Failure to comply may result in serious injury or death to personnel.**

(1) Clean all metal parts and filter thoroughly with dry cleaning solvent.

NOTE

Replace any part that fails visual inspection.

(2) Inspect all parts for visible cracks or damage.

(3) Inspect filter for clogged or punctured screen.

d. Air/Hydraulic Power Unit Assembly.

WARNING

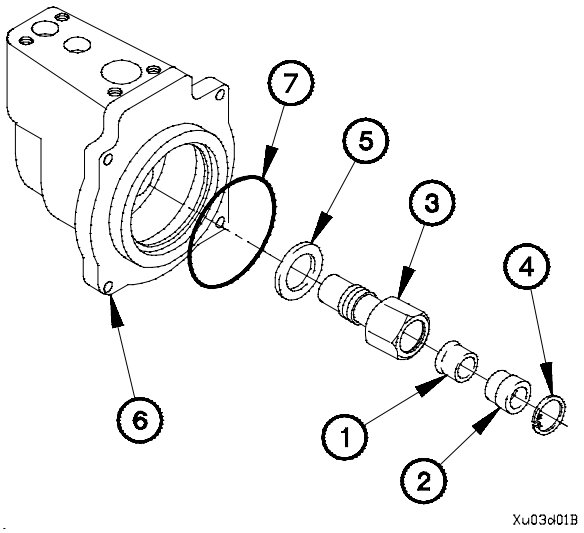
Use care when installing retaining rings. Retaining rings are under tension and can act as projectiles when released. Failure to comply may result in injury to personnel.

(1) Install preformed packing (1) and retainer (2) in cylinder (3) with retaining ring (4).

(2) Position cylinder (3) and washer (5) in pump (6).

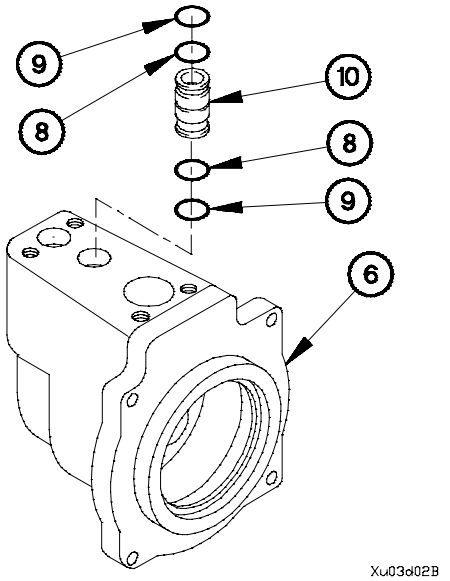
(3) Tighten cylinder (3) to 90-100 lb-ft (122-136 N·m).

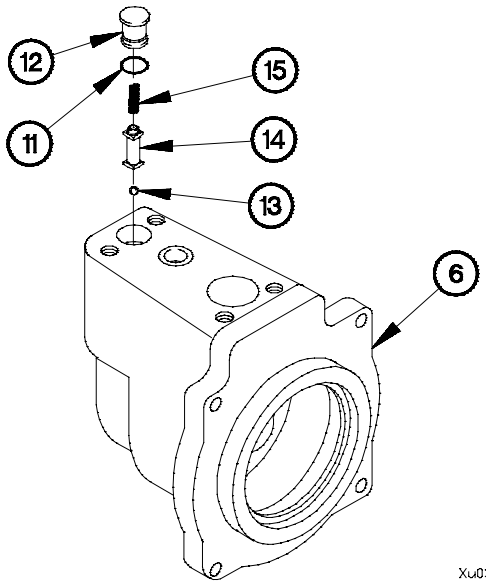
(4) Position preformed packing (7) on pump (6).



(5) Install two backup rings (8) and preformed packings (9) on bushing (10).

(6) Install bushing (10) in pump (6).





(7) Install preformed packing (11) on check valve retainer (12).

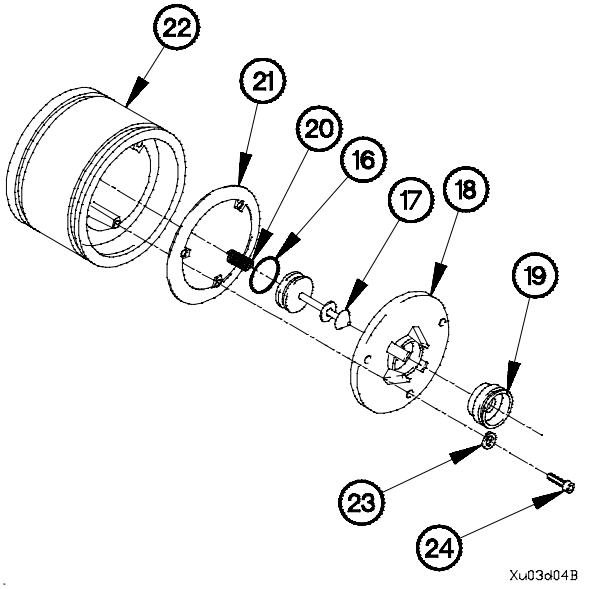
(8) Install bearing (13), guide (14), and spring (15) in pump (6) with check valve retainer (12).

(9) Install preformed packing (16) on piston poppet (17).

(10) Install piston poppet (17) in end plate (18) with retainer (19).

(11) Position spring (20), gasket (21), and piston end plate (18) in piston (22) with three lockwashers (23) and screws (24).

(12) Tighten three screws (24) to 50-55 lb-in. (6-7 N·m).



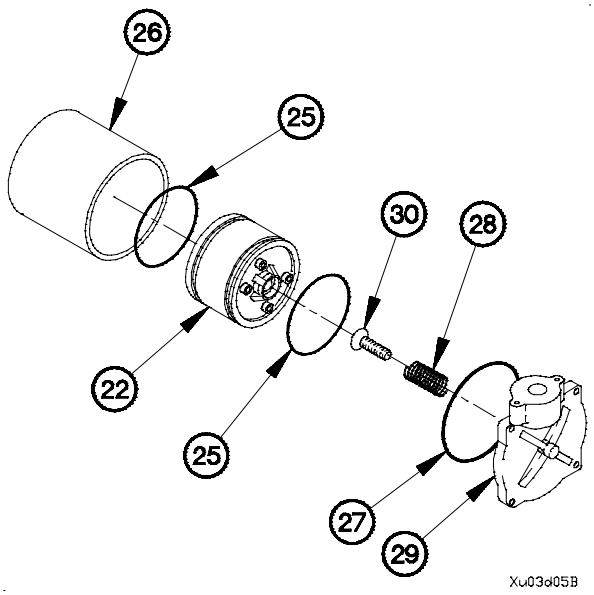
19-3. AIR/HYDRAULIC POWER UNIT AND BRACKET REPLACEMENT/REPAIR (CONT)

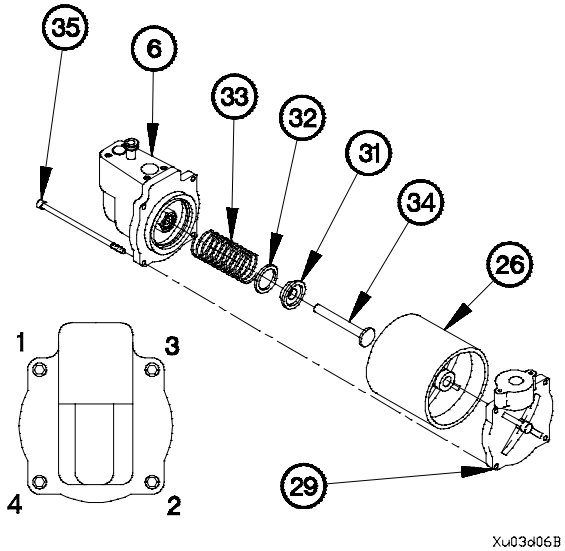
(13) Install two preformed packings (25) on piston (22).

(14) Position piston (22) in air cylinder (26).

(15) Position preformed packing (27) and spring (28) in cover (29) with screw (30).

(16) Tighten screw (30) to 12-18 lb-in. (1-2 N·m).





WARNING

Use care when installing screws, pump is under spring tension. Failure to comply may result in injury to personnel.

NOTE

Locate groove in air cylinder assembly on upper half of pump assembly with chambered end toward rear head.

(17) Install bumper (31), washer (32), and spring (33) on guide (34).

(18) Position spring (33), air cylinder (26), and cover (29) on pump (6) with four screws (35).

(19) Tighten four screws (35) to 85-95 lb-in. (10-11 N·m) in sequence shown.

(20) Position washer (36) and screw (37) in pump (6).

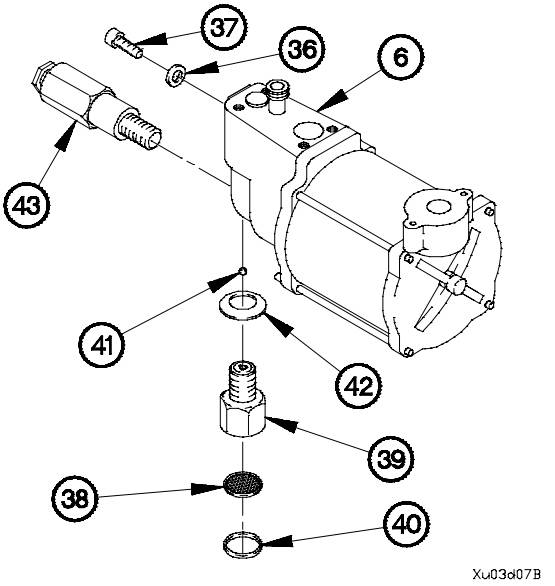
(21) Tighten screw (37) to 90-110 lb-in. (10-12 N·m).

(22) Install filter (38) in filter adapter (39) with retaining ring (40).

(23) Position bearing (41), washer (42), and filter (39) in pump (6).

(24) Tighten filter adapter (39) to 40-50 lb-ft (54-68 N·m).

(25) Install relief valve (43) in pump (6).



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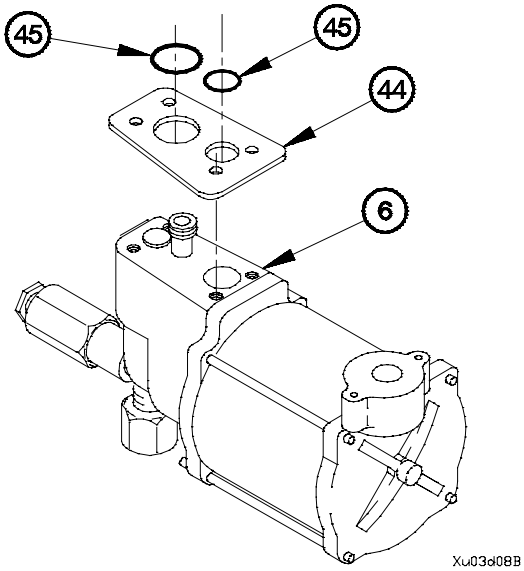

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(26) Position gasket (44) and two preformed packings (45) on pump (6).

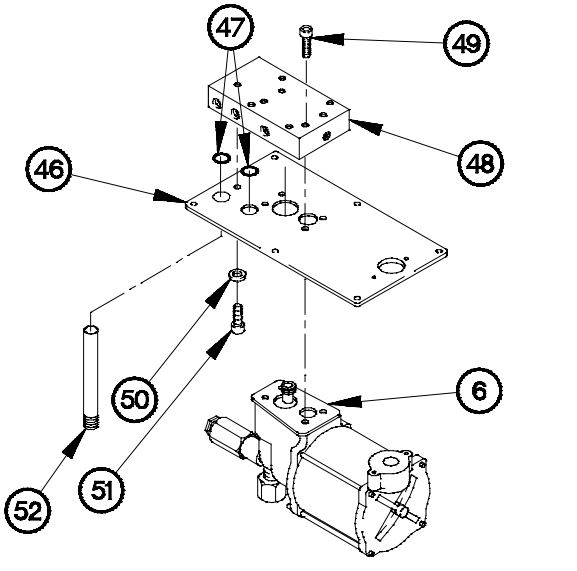
(27) Position cover (46), two preformed packings (47), and manifold body (48) on pump (6) with four screws (49).

(28) Tighten four screws (49) to 50-60 lb-in. (6-7 N·m).

(29) Position washer (50) and screw (51) in cover (46).

(30) Tighten screw (51) to 90-110 lb-in. (10-12 N·m).

(31) Install pipe (52) in cover (46).



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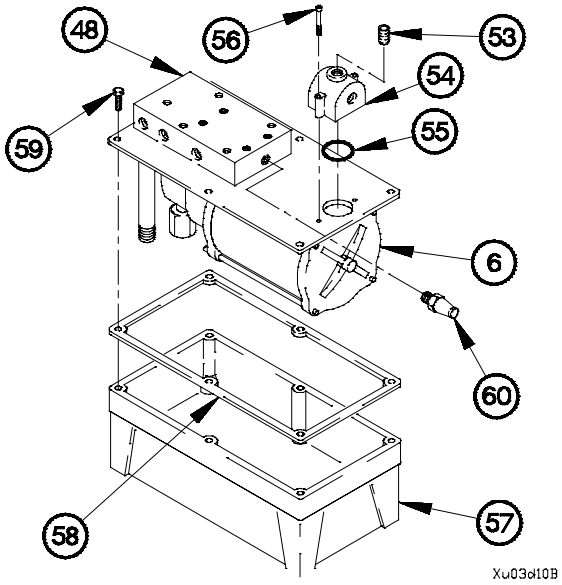
19-3. AIR/HYDRAULIC POWER UNIT AND BRACKET REPLACEMENT/REPAIR (CONT)



(32) Install plug (53) in air intake body (54).

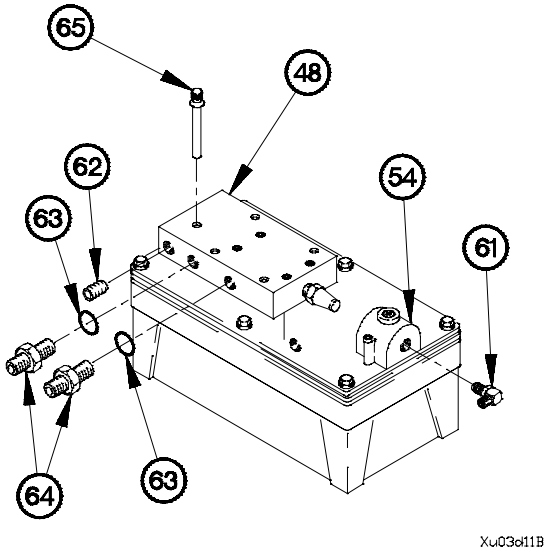
(33) Position preformed packing (55), and air intake body (54) on pump (6) with two screws (56).

(34) Tighten two screws (56) to 50-60 lb-in. (6-7 N·m).

(35) Fill reservoir (57) with oil.

(36) Install gasket (58) and pump (6) on reservoir (57) with six screws (59).

(37) Install muffler (60) on manifold body (48).



(38) Install 90-degree fitting (61) in air intake body (54).

(39) Install pressure plug (62) in manifold body (48).

(40) Install two preformed packings (63) on fittings (64).

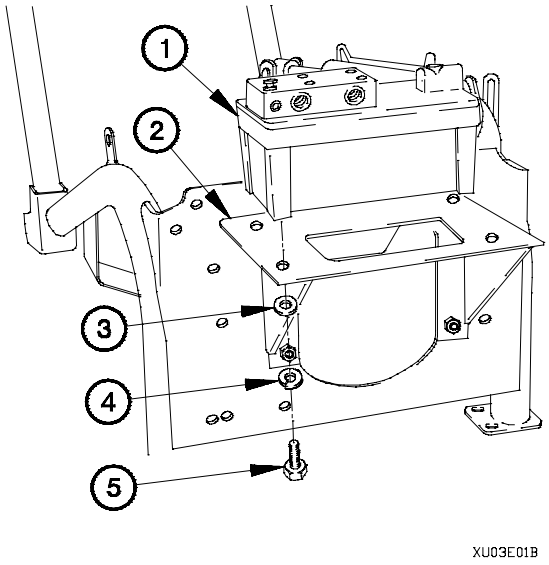
(41) Install two fittings (64) in manifold body (48).

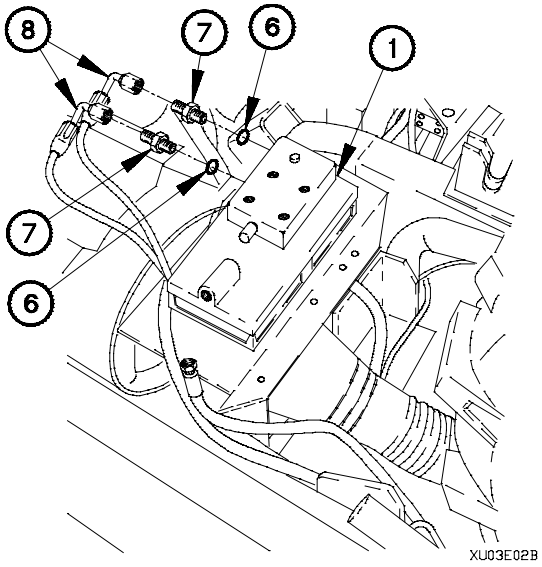
(42) Install dipstick (65) in manifold body (48).

e. Air/Hydraulic Power Unit Installation.

(1) Position air/hydraulic power unit (1) on air/hydraulic unit mounting bracket (2) with four washers (3), spring washers (4), and screws (5).

(2) Tighten four screws (5) to 18-22 lb-ft (24-30 N·m).





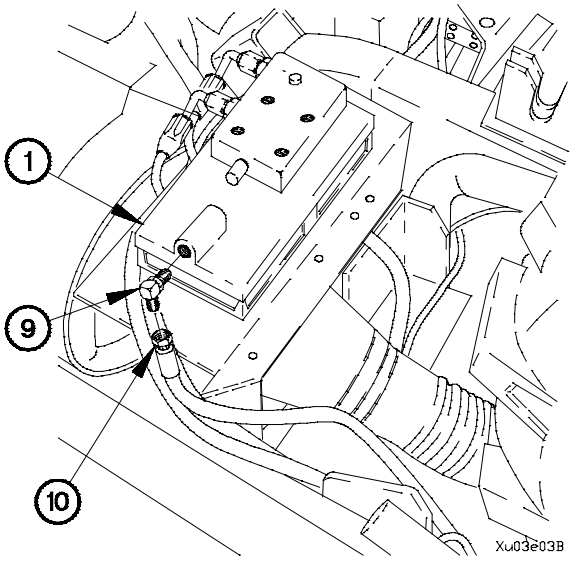
(3) Install two preformed packings (6) on fittings (7).

(4) Install two fittings (7) in air/hydraulic power unit (1).

(5) Connect two hydraulic hoses (8) to fittings (7).

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.



(6) Apply antiseize compound to threads of fitting (9).

(7) Install fitting (9) in air/hydraulic power unit (1).

(8) Connect air hose (10) to fitting (9).

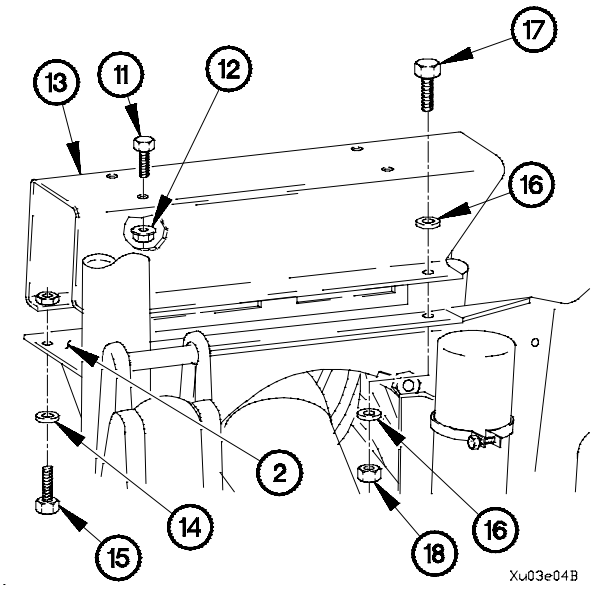
19-3. AIR/HYDRAULIC POWER UNIT AND BRACKET REPLACEMENT/REPAIR (CONT)

(9) Install four screws (11) and self-locking nuts (12) in decontamination unit mounting bracket (13).

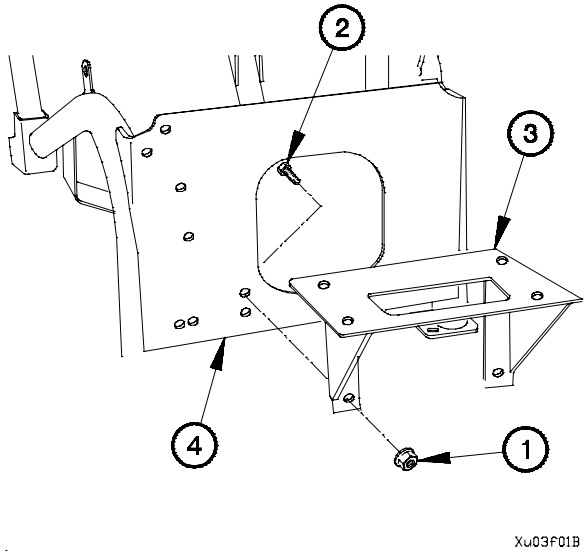
(10) Position decontamination unit mounting bracket (13) on air/hydraulic power unit mounting bracket (2) with two washers (14) and screws (15).

(11) Position four washers (16), two screws (17), and nuts (18) in decontamination unit mounting bracket (13).

(12) Tighten two screws (15) and nuts (18) to 18-22 lb-ft (24-30 N·m).



f. Bracket Removal.



Remove four self-locking nuts (1), screws (2), and air/hydraulic power unit mounting bracket (3) from spare tire retainer (4). Discard self-locking nuts.

g. Bracket Installation.

(1) Position air/hydraulic power unit mounting bracket (3) on spare tire retainer (4) with four screws (2) and self-locking nuts (1).

(2) Tighten four self-locking nuts (1) to 48-58 lb-ft (65-79 N·m).

h. Follow-On Maintenance.

(1) Fill air/hydraulic power unit (Appendix H).

(2) Start engine (TM 9-2320-365-10).

(3) Inflate air springs (TM 9-2320-365-10).

(4) Operate air/hydraulic power unit, check for leaks and proper operation (TM 9-2320-365-10).

(5) Install M13 unit, if equipped (TM 3-4230-214-12&P).

(6) Raise spare tire (TM 9-2320-365-10).

(7) Shut down engine (TM 9-2320-365-10).

End of Task.

19-4. HYDRAULIC MANIFOLD REPLACEMENT/REPAIR

This task covers:

a. Removal
b. Disassembly (PN HFC32598)
c. Assembly (PN HFC32598)
d. Disassembly (PN 65234)
e. Assembly (PN 65234)
f. Installation
g. Follow-On Maintenance

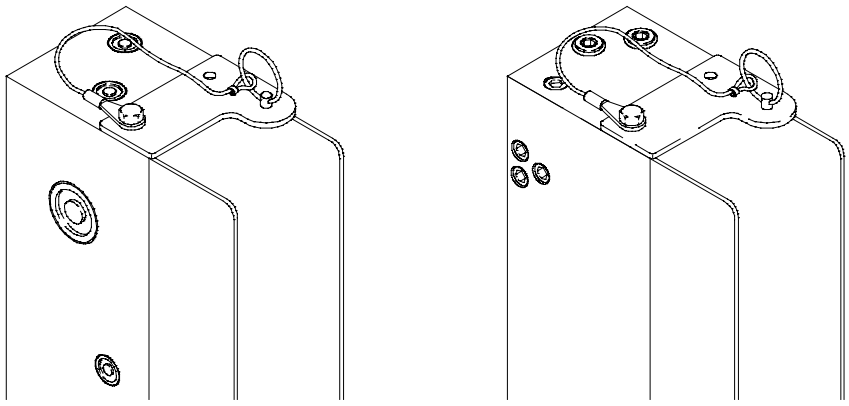
INITIAL SETUP

Equipment Conditions
Engine shut down (TM 9-2320-365-10).
Air tanks drained (TM 9-2320-365-10).
Spare tire lowered (TM 9-2320-365-10).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Goggles, Industrial (Item 15, Appendix C)
Gloves, Rubber (Item 13, Appendix C)
Pan, Drain (Item 24, Appendix C)
Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C)
Wrench, Torque, 0-200 lb-in. (Item 58, Appendix C)
Socket Set, Socket Wrench (Item 34, Appendix C)
Puller Kit, Mechanical (Item 27, Appendix C)
Screwdriver Attachment, Socket Wrench (Item 51, Appendix B)

Materials/Parts
Dispenser, Pressure Sensitive Tape (Item 21, Appendix D)
Cap and Plug Set (Item 15, Appendix D)
Ties, Cable, Plastic (Item 76, Appendix D)
Antiseize Compound (Item 63, Appendix D)
Sealing Compound (Item 58, Appendix D)

Materials/Parts (Cont)
Oil, Lubricating, OE/HDO 10W (Item 44, Appendix D)
Hydraulic Fluid A (Item 26, Appendix D)
Filter Assembly (2) (Item 12, Appendix G)
Parts Kit, Seal Replacement (Item 197, Appendix G)
Parts Kit, Seal Replacement (Item 198, Appendix G)
Parts Kit, Seal Replacement (Item 199, Appendix G)
Nut, Self-Locking (Item 134, Appendix G)
Packing, Preformed (11) (Item 165, Appendix G)
Nut, Self-Locking (2) (Item 163, Appendix G)
Filter Element, Fluid (2) (Item 14.1, Appendix G)
Packing, Preformed (2) (Item 162.1, Appendix G)
Packing, Preformed (2) (Item 171.1, Appendix G)
Packing, Preformed (2) (Item 171.3, Appendix G)



Hydraulic Manifold Identification

Xu04new

NOTE

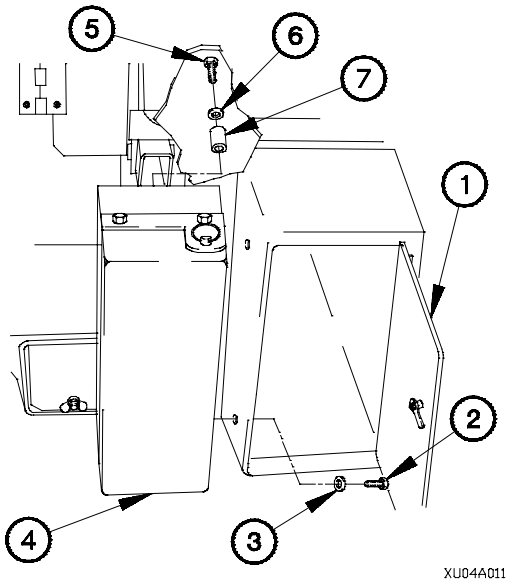
Refer to **Figure 19-1. Hydraulic Manifold PN HFC32598 Rear View** and **Figure 19-1.1. Hydraulic Manifold PN 65234 Rear View** for hoses location.

a. Removal.

(1) Open tool box (1).

(2) Remove two screws (2) and spacers (3) from hydraulic manifold (4).

(3) Remove two screws (5), spacers (6), and spacers (7) from hydraulic manifold (4).



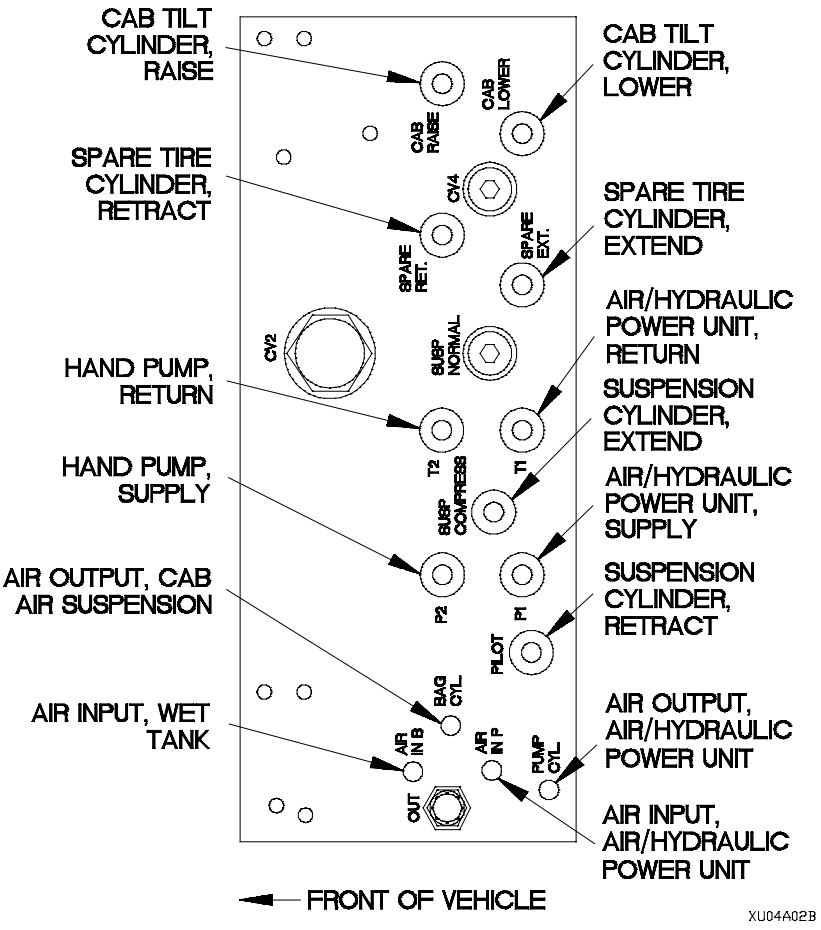


Figure 19-1. Hydraulic Manifold PN HFC32598 Rear View

19-4. HYDRAULIC MANIFOLD REPLACEMENT/REPAIR (CONT)

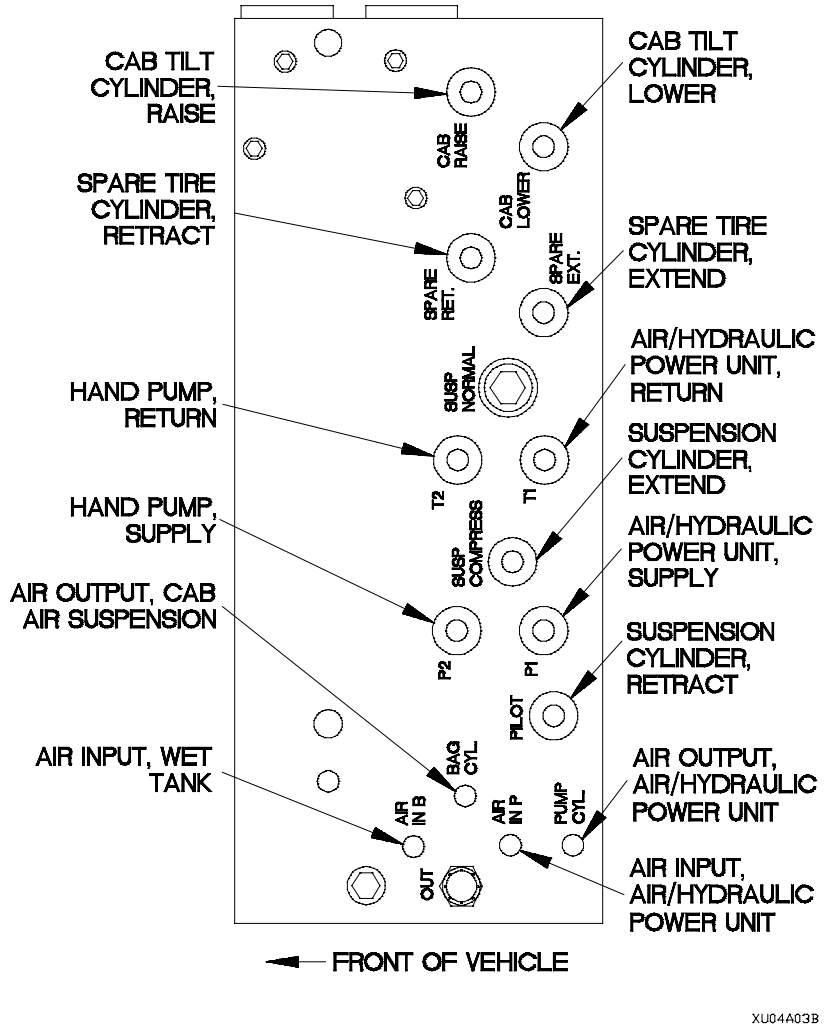
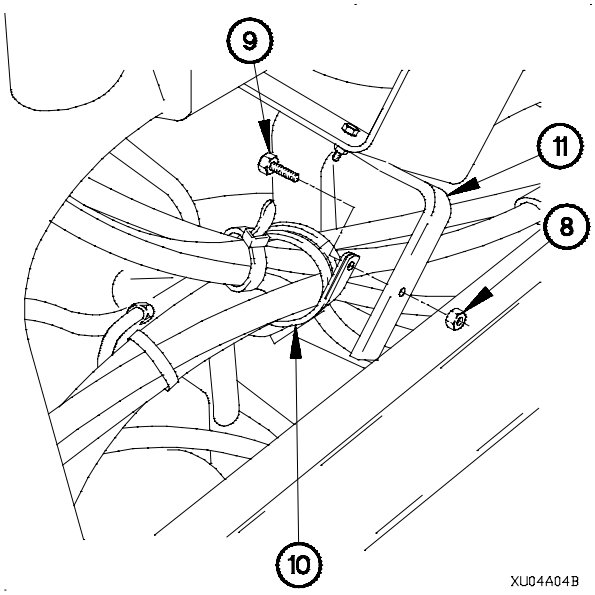
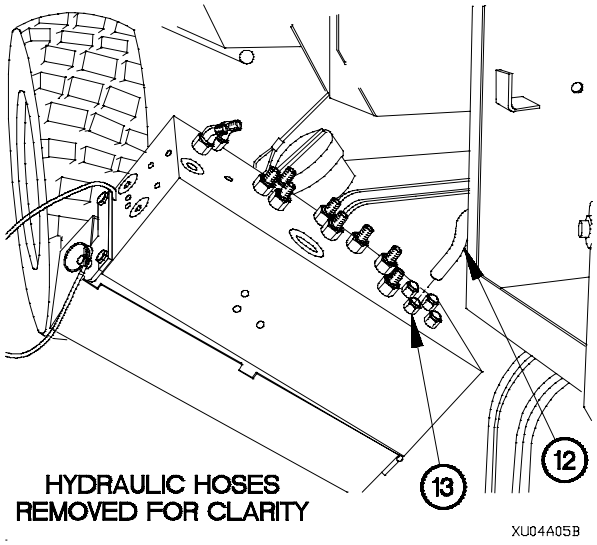


Figure 19-1.1. Hydraulic Manifold PN 65234 Rear View

(4) Remove self-locking nut (8), bolt (9), and clamp (10) from bracket (11). Discard self-locking nut.





NOTE

Perform steps (6) and (7) on vehicle serial numbers 0001 through 4202 that have not previously had pneumatic fitting or air hose replaced.

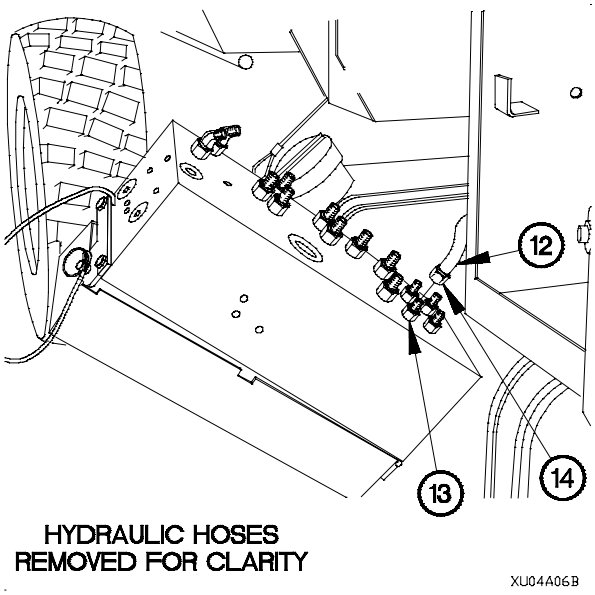
(6) Disconnect four air hoses (12) from fitting (13).

(7) Cut four air hose couplings (14) from air hoses (12). Discard air hose couplings.

NOTE

- Tag hoses and connection points prior to disconnecting.
- Remove plastic cable ties as required.
- Perform step (5) on vehicle serial number 4203 and higher, and vehicle serial numbers 0001 through 4202 that have previously had pneumatic fitting or air hose replaced.

(5) Disconnect four air hoses (12) from fittings (13).



19-4. HYDRAULIC MANIFOLD REPLACEMENT/REPAIR (CONT)

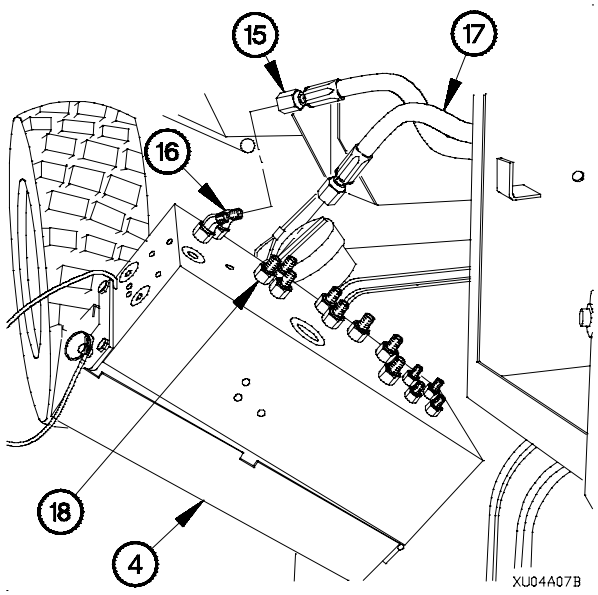
(8) Position drain pan under hydraulic manifold (4).

WARNING

Hydraulic fluid (MIL-H-5606) is TOXIC. Wear protective goggles and gloves; use only in well ventilated area; avoid contact with skin, eyes, and clothes. Skin and clothing that come in contact with hydraulic oil should be washed immediately. Saturated clothing should be removed immediately. Failure to comply may result in injury to personnel.

CAUTION

Cap or plug hydraulic hoses and connection points to prevent contamination of hydraulic system. Failure to comply may result in damage to equipment.

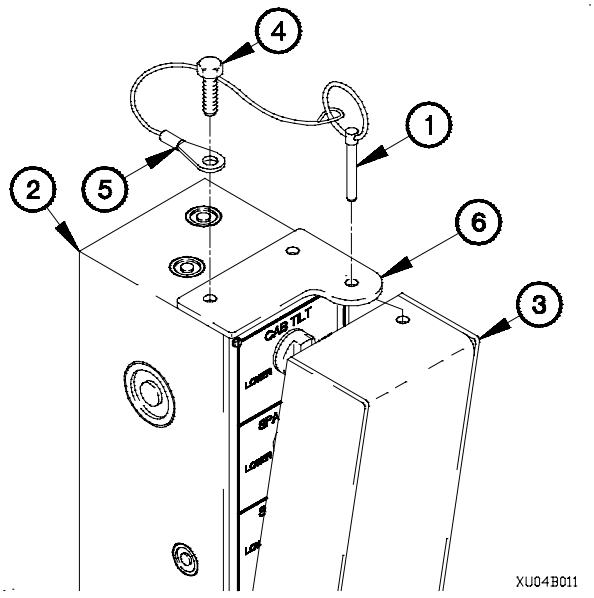


(9) Disconnect two hydraulic hoses (15) from 45-degree fittings (16).

(10) Disconnect eight hydraulic hoses (17) from fittings (18).

(11) Remove hydraulic manifold (4) from vehicle.

b. Disassembly (PN HFC32598).



(1) Remove retaining pin (1) from hydraulic manifold (2) and open cover (3).

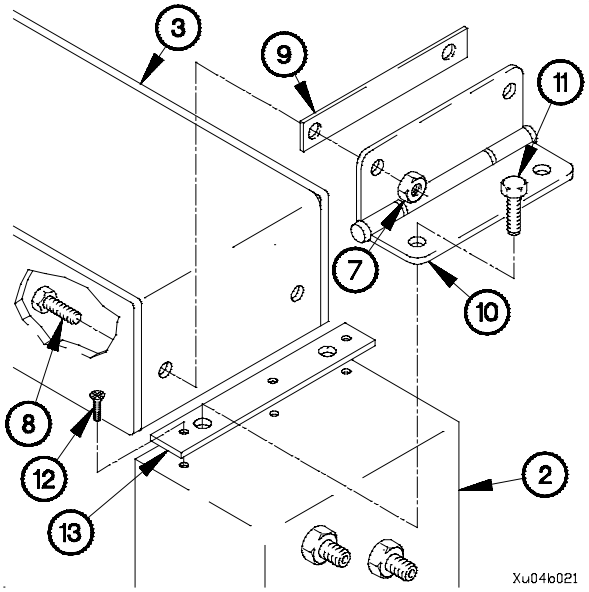
(2) Remove two screws (4), lanyard (5), and plate (6) from hydraulic manifold (2).

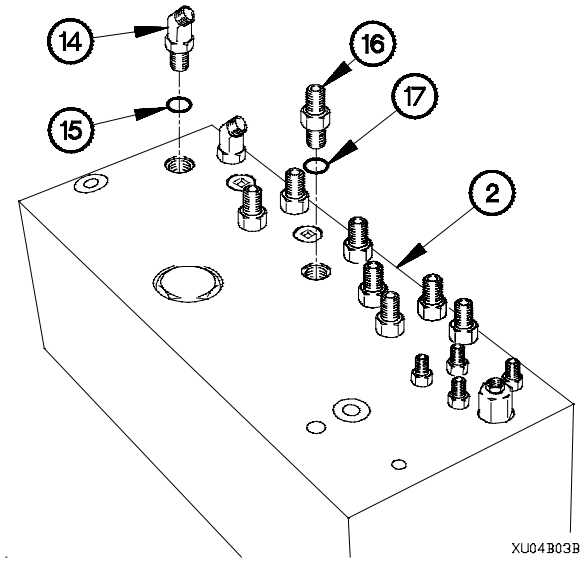
NOTE

Note position of spacer prior to removal.

(3) Remove two self-locking nuts (7), screws (8), spacer (9), and cover (3) from hinge (10). Discard self-locking nuts.

(4) Remove two screws (11), hinge (10), three screws (12), and plate (13) from hydraulic manifold (2).





NOTE

Note position and location of valves, plugs, and fittings prior to disassembly.

(5) Remove two 45-degree fittings (14) from hydraulic manifold (2).

(6) Remove two preformed packings (15) from 45-degree fittings (14). Discard preformed packings.

(7) Remove eight fittings (16) from hydraulic manifold (2).

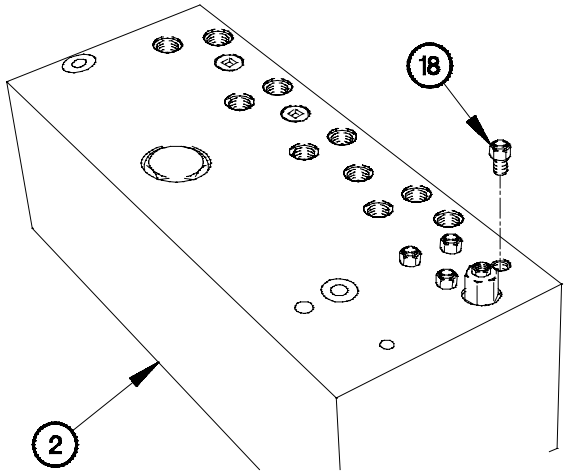
(8) Remove eight preformed packings (17) from fittings (16). Discard preformed packings.

19-4. HYDRAULIC MANIFOLD REPLACEMENT/REPAIR (CONT)

NOTE

Perform step (9) on vehicle serial number 4203 and higher and vehicle serial numbers 0001 through 4202 that have previously had pneumatic fitting or air hose replaced.

(9) Remove four fittings (18) from hydraulic manifold (2).



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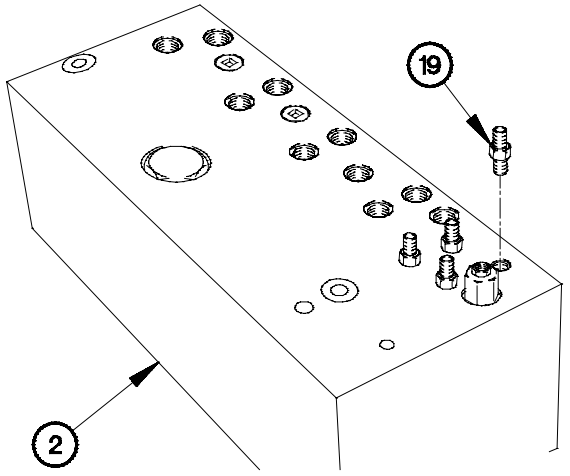

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NOTE

Perform step (10) on vehicle serial numbers 0001 through 4202 that have not previously had pneumatic fitting or air hose replaced.

(10) Remove four fittings (19) from hydraulic manifold (2). Discard fittings.

(11) Remove muffler (20) from check valve (21).

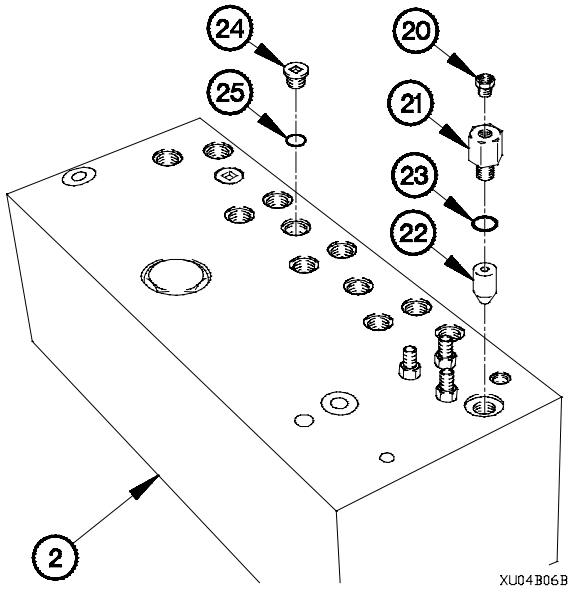
(12) Remove check valve (21) from adapter (22).

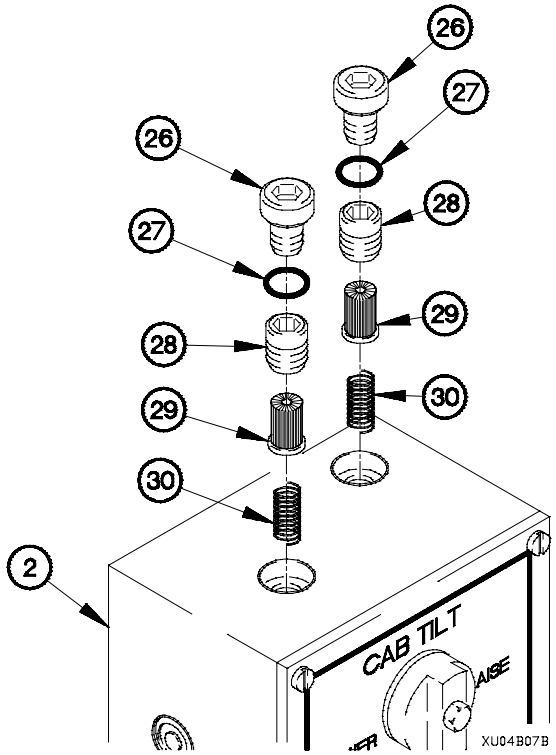
(13) Remove preformed packing (23) from check valve (21). Discard preformed packing and check valve.

(14) Remove adapter (22) from hydraulic manifold (2).

(15) Remove plug (24) from hydraulic manifold (2).

(16) Remove preformed packing (25) from plug (24). Discard preformed packing.

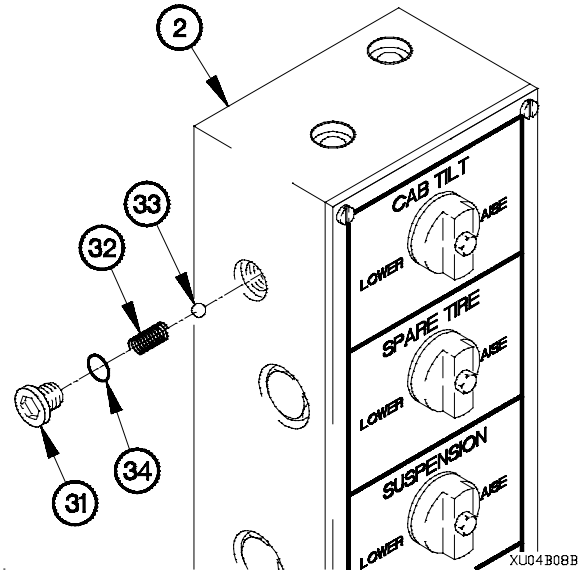




(17) Remove two plugs (26) from hydraulic manifold (2).

(18) Remove two preformed packings (27) from plugs (26). Discard preformed packings and plugs.

(19) Remove two retainers (28), filters (29), and springs (30) from hydraulic manifold (2). Discard retainers, filters, and springs.



(20) Remove plug (31), spring (32), and ball seat (33) from hydraulic manifold (2). Discard plug, spring, and ball seat.

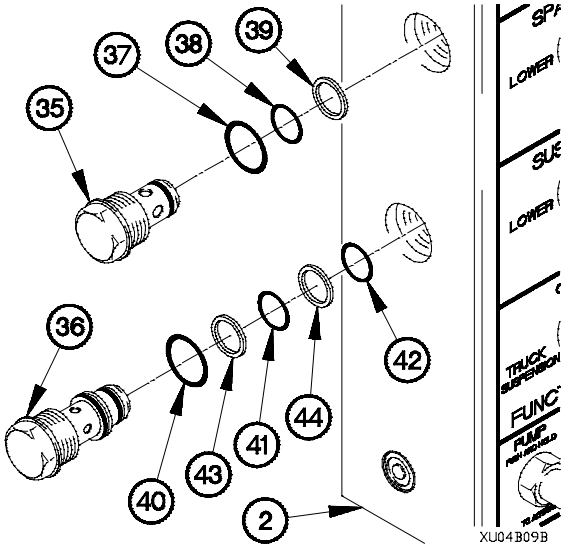
(21) Remove preformed packing (34) from plug (31). Discard preformed packing and plug.

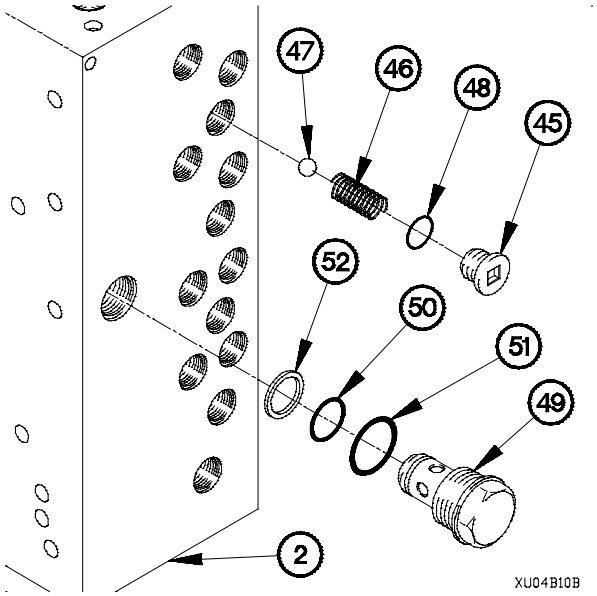
19-4. HYDRAULIC MANIFOLD REPLACEMENT/REPAIR (CONT)

(22) Remove cartridge valves (35 and 36) from hydraulic manifold (2).

(23) Remove preformed packings (37 and 38) and back-up ring (39) from cartridge valve (35). Discard preformed packings and back-up ring.

(24) Remove preformed packings (40, 41, and 42) and back-up rings (43 and 44) from cartridge valve (36). Discard preformed packings and back-up rings.





(25) Remove plug (45), spring (46), and ball seat (47) from hydraulic manifold (2). Discard plug, spring, and ball seat.

(26) Remove preformed packing (48) from plug (45). Discard preformed packing and plug.

(27) Remove cartridge valve (49) from hydraulic manifold (2).

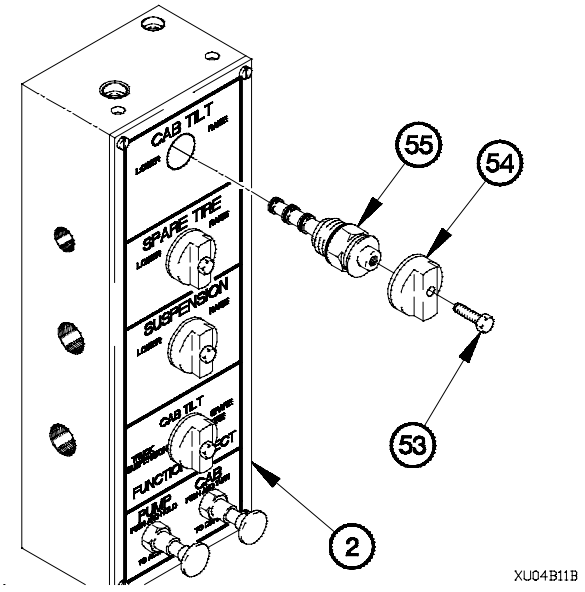
(28) Remove preformed packings (50 and 51) and back-up ring (52) from cartridge valve (49). Discard preformed packings and back-up ring.

NOTE

Top three manifold valves are two position valves, bottom manifold valve is a three position. Note position of manifold valves prior to removal.

(29) Remove four screws (53) and knobs (54) from hydraulic manifold (2).

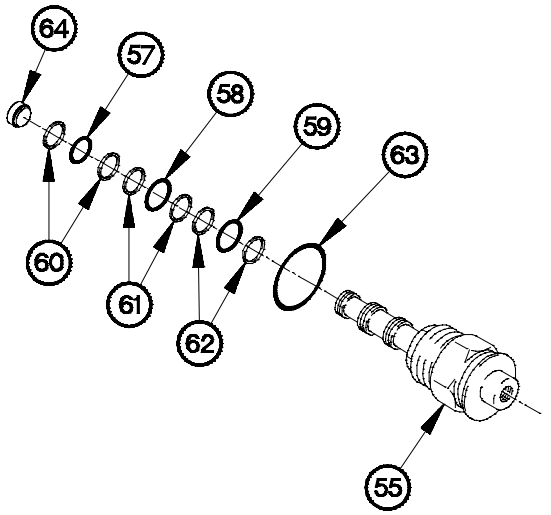
(30) Remove four manifold valves (55) from hydraulic manifold (2).



(31) Remove four preformed packings (57, 58, and 59) and eight back-up rings (60, 61, and 62) from four manifold valves (55). Discard preformed packings and back-up rings.

(32) Remove four preformed packings (63) from manifold valves (55). Discard preformed packings.

(33) Remove two orifice filters (64) from manifold valves (55). Discard orifice filters.



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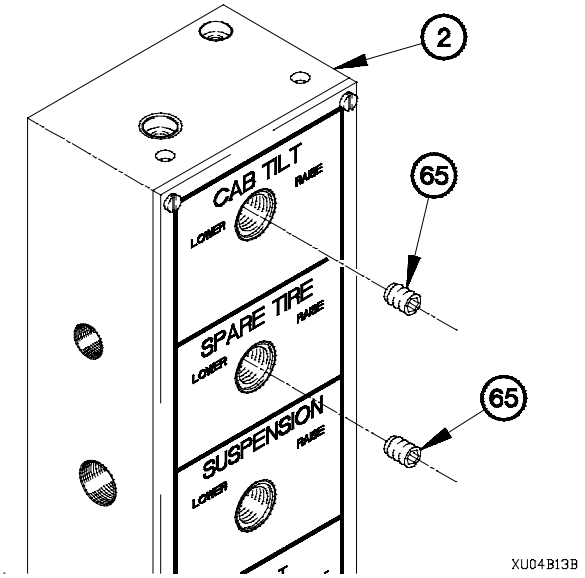

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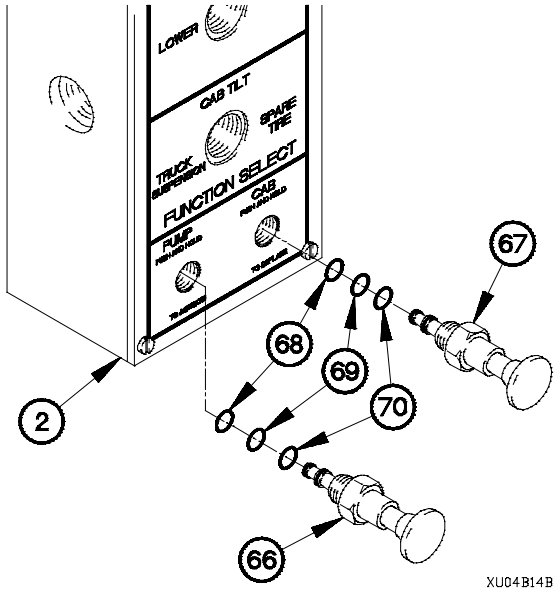
(34) Remove two orifice plugs (65) from hydraulic manifold (2).

(35) Remove air valves (66 and 67) from hydraulic manifold (2).

(36) Remove two preformed packings (68, 69, and 70) from air valves (66 and 67). Discard preformed packings.



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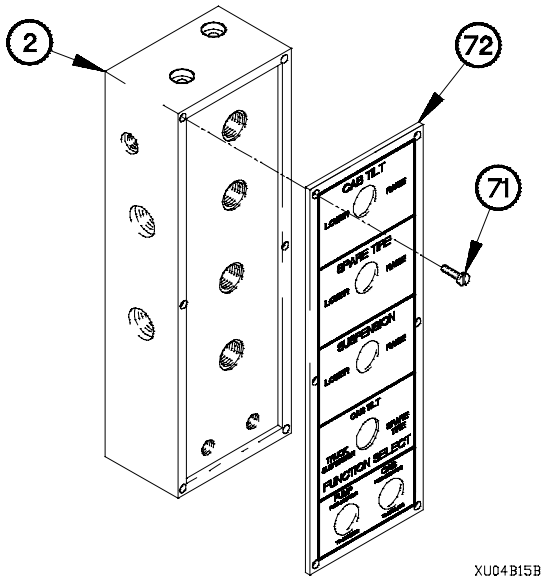
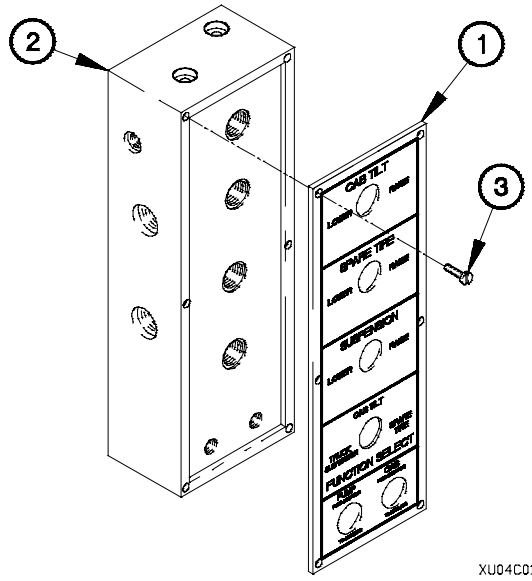
19-4. HYDRAULIC MANIFOLD REPLACEMENT/REPAIR (CONT)



(37) Remove six screws (71) and plate (72) from hydraulic manifold (2).

c. Assembly (PN HFC32598).



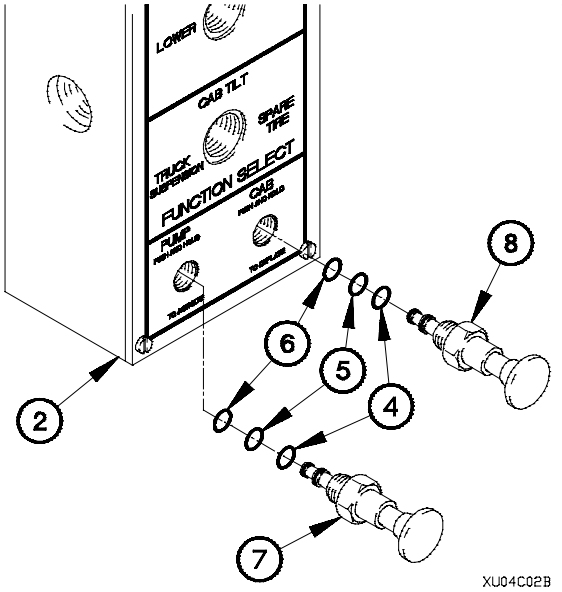
(1) Install plate (1) on hydraulic manifold (2) with six screws (3).

NOTE

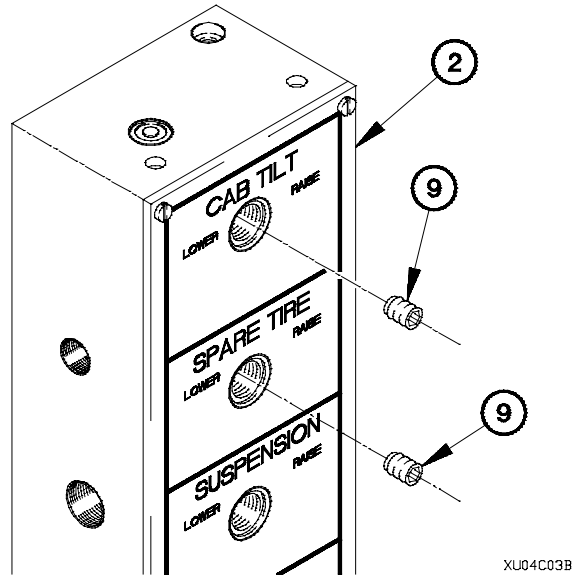
Lubricate parts with oil as required.

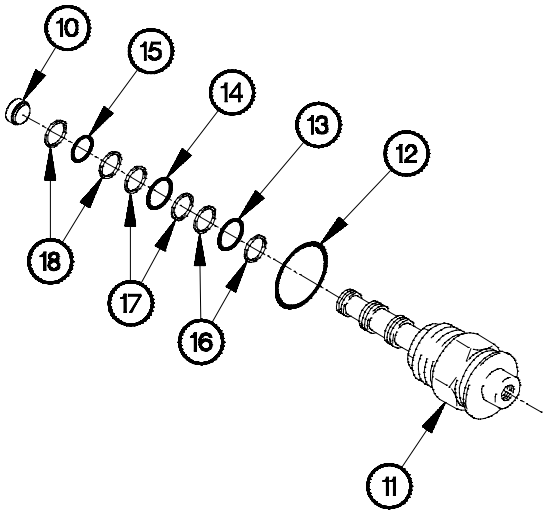
(2) Install two preformed packings (4, 5, and 6) on air valves (7 and 8).

(3) Install air valves (7 and 8) in hydraulic manifold (2).



(4) Install two orifice plugs (9) in hydraulic manifold (2).





(5) Install two orifice filters (10) in manifold valves (11).

(6) Install four preformed packings (12) on manifold valves (11).

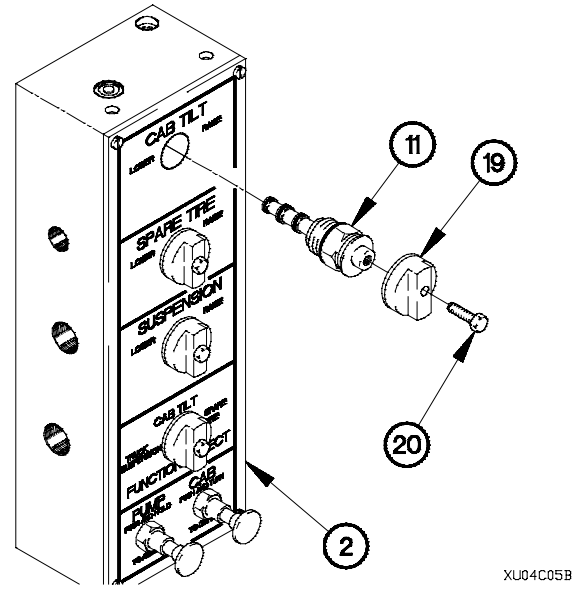
(7) Install four preformed packings (13, 14, and 15) and eight back-up rings (16, 17, and 18) on four manifold valves (11).

NOTE

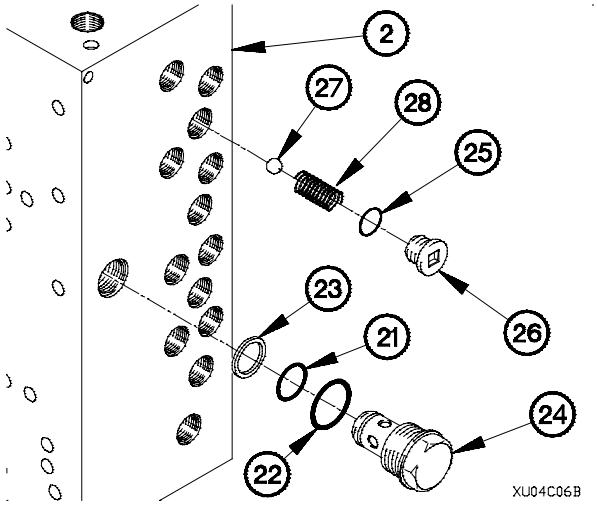
Position manifold valves as noted during disassembly.

(8) Install four manifold valves (11) in hydraulic manifold (2).

(9) Install four knobs (19) on manifold valves (11) with screws (20).



19-4. HYDRAULIC MANIFOLD REPLACEMENT/REPAIR (CONT)

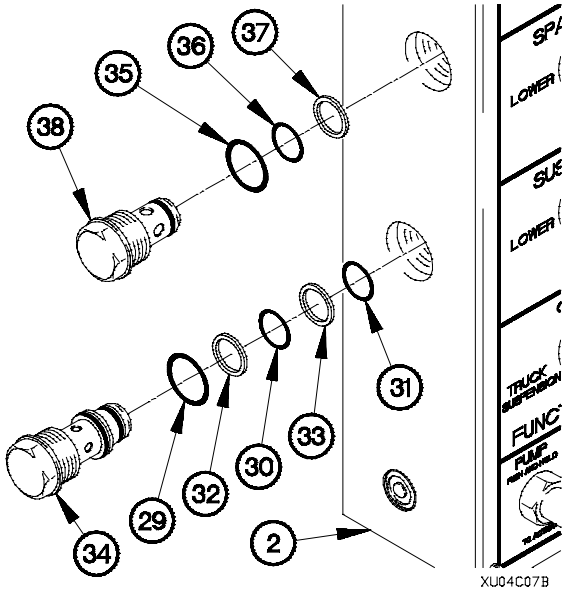


(10) Install preformed packings (21 and 22) and back-up ring (23) on cartridge valve (24).

(11) Install cartridge valve (24) in hydraulic manifold (2).

(12) Install preformed packing (25) on plug (26).

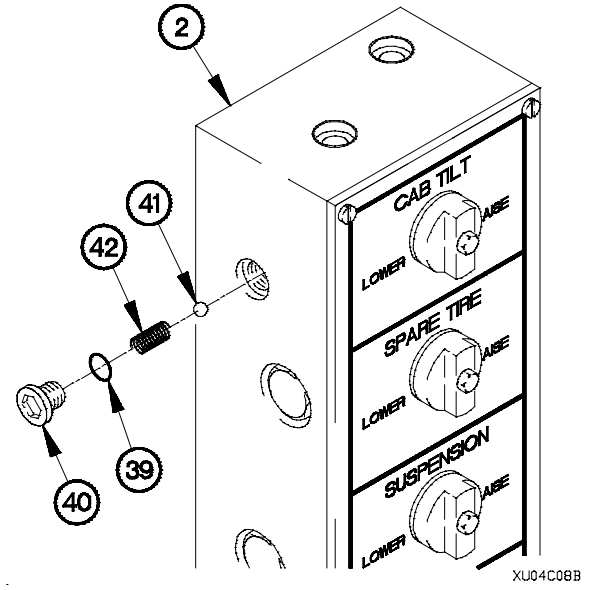
(13) Install ball seat (27), spring (28), and plug (26) in hydraulic manifold (2).



(14) Install preformed packings (29, 30, and 31) and back-up rings (32 and 33) on cartridge valve (34).

(15) Install preformed packings (35 and 36) and back-up ring (37) on cartridge valve (38).

(16) Install cartridge valves (34 and 38) in hydraulic manifold (2).



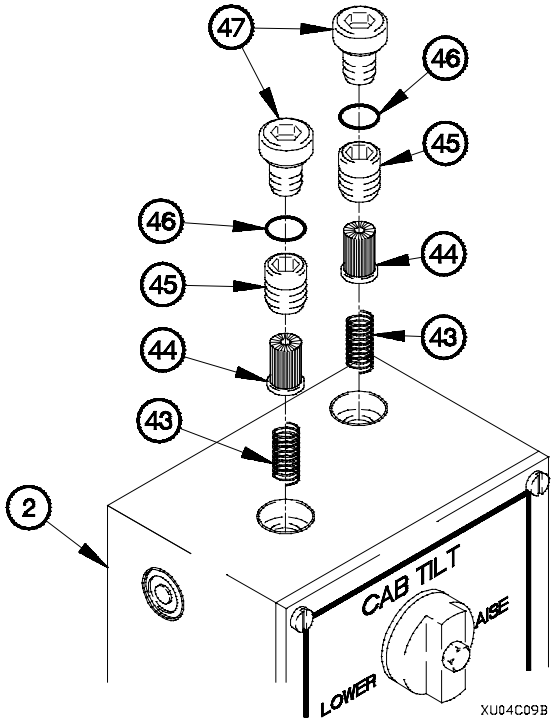
(17) Install preformed packing (39) on plug (40).

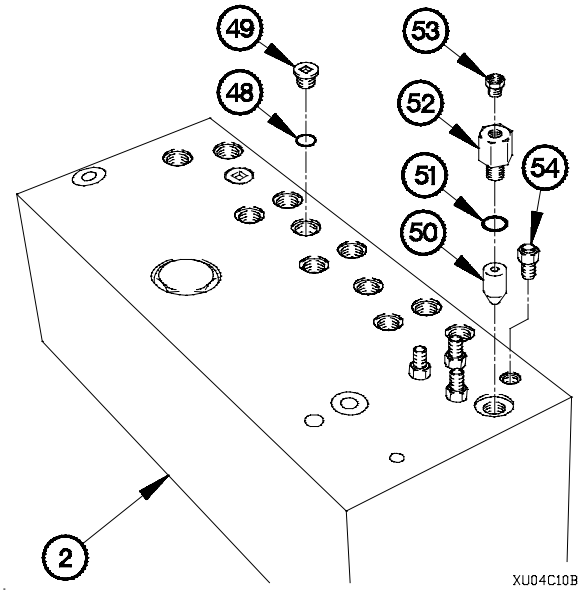
(18) Install ball seat (41), spring (42), and plug (40) in hydraulic manifold (2).

(19) Position two springs (43) and filters (44) in hydraulic manifold (2) with two retainers (45).

(20) Install two preformed packings (46) on plugs (47).

(21) Install two plugs (47) in hydraulic manifold (2).





(22) Install preformed packing (48) on plug (49).

(23) Install plug (49) in hydraulic manifold (2).

(24) Install adapter (50) in hydraulic manifold (2).

(25) Install preformed packing (51) on check valve (52).

(26) Install check valve (52) in adapter (50).

(27) Install muffler (53) in check valve (52).

WARNING

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(28) Apply antiseize compound to four fittings (54).

(29) Install four fittings (54) in hydraulic manifold (2).

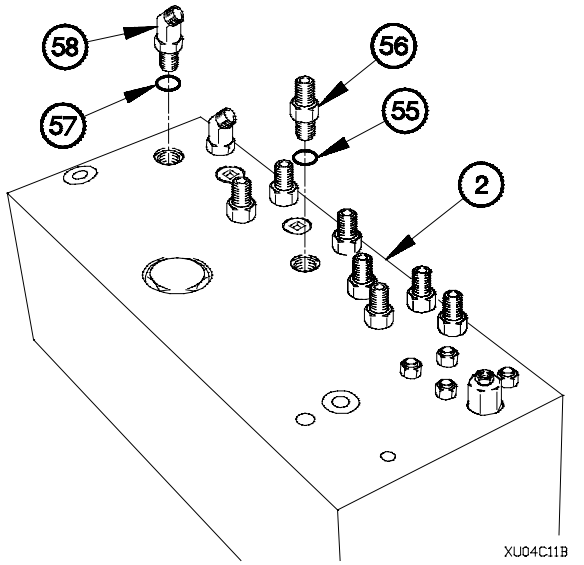
19-4. HYDRAULIC MANIFOLD REPLACEMENT/REPAIR (CONT)

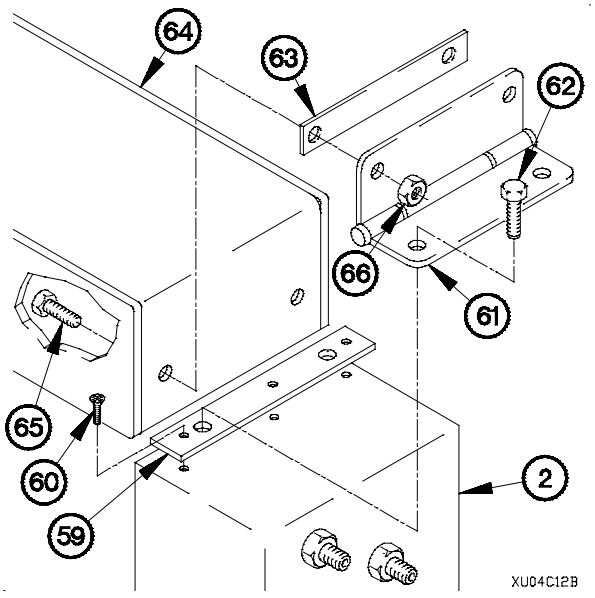
(30) Install eight preformed packings (55) on fittings (56).

(31) Install eight fittings (56) in hydraulic manifold (2).

(32) Install two preformed packings (57) on 45-degree fittings (58).

(33) Install two 45-degree fittings (58) in hydraulic manifold (2).





(34) Position spacer (59) on hydraulic manifold (2) with three screws (60).

(35) Tighten three screws (60) to 72-120 lb-in. (8-14 N·m).

(36) Position hinge (61) on plate (59) with two screws (62).

(37) Tighten two screws (62) to 18-22 lb-ft (24-30 N·m).

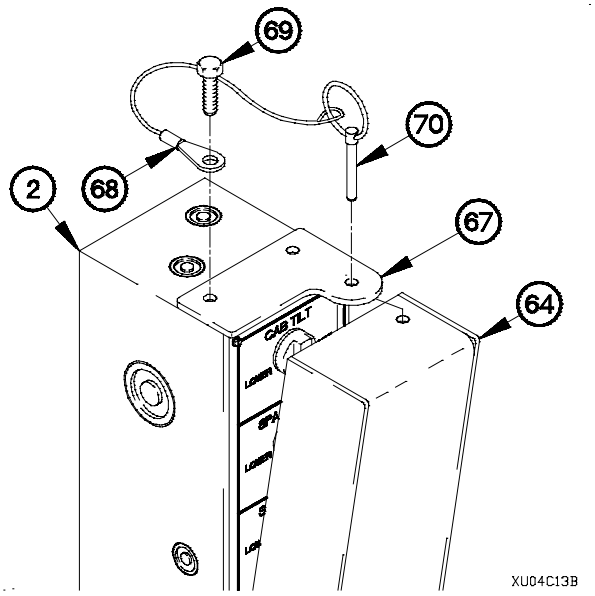
(38) Position spacer (63) and cover (64) on hinge (61) with two screws (65) and self-locking nuts (66).

(39) Tighten two self-locking nuts (66) to 18-22 lb-ft (24-30 N·m).

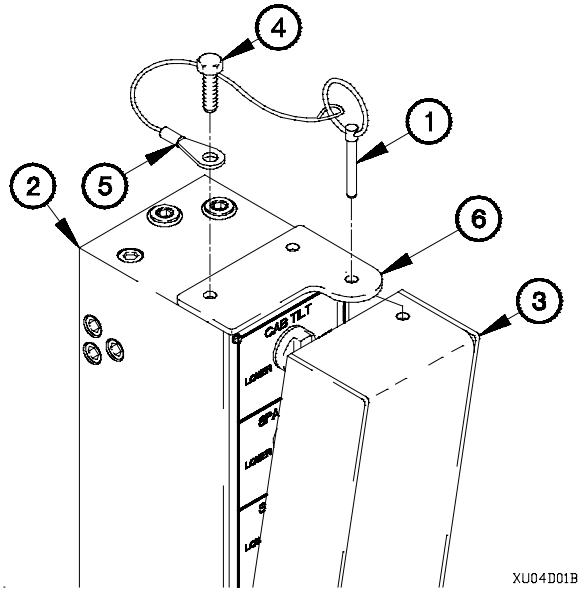
(40) Position plate (67) and lanyard (68) on hydraulic manifold (2) with two screws (69).

(41) Tighten two screws (69) to 18-22 lb-ft (24-30 N·m).

(42) Close cover (64) and install retaining pin (70).



d. Disassembly (PN 65234).



(1) Remove retaining pin (1) from hydraulic manifold (2) and open cover (3).

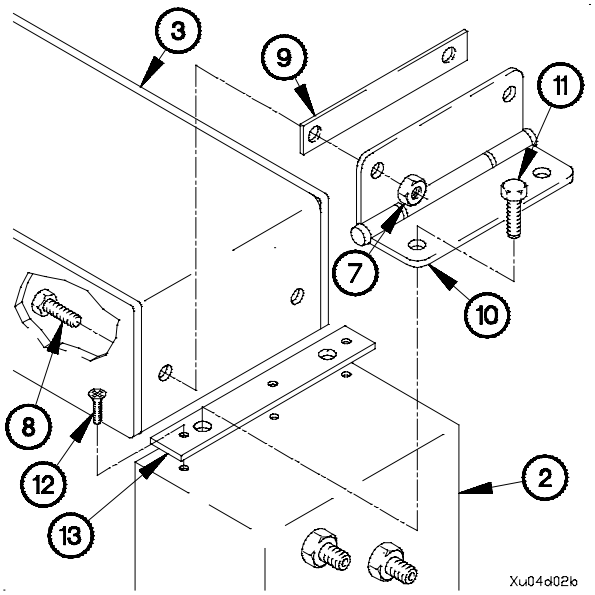
(2) Remove two screws (4), lanyard (5), and plate (6) from hydraulic manifold (2).

NOTE

Note position of spacer prior to removal.

(3) Remove two self-locking nuts (7), screws (8), spacer (9), and cover (3) from hinge (10). Discard self-locking nuts.

(4) Remove two screws (11), hinge (10), three screws (12), and plate (13) from hydraulic manifold (2).



19-4. HYDRAULIC MANIFOLD REPLACEMENT/REPAIR (CONT)

NOTE

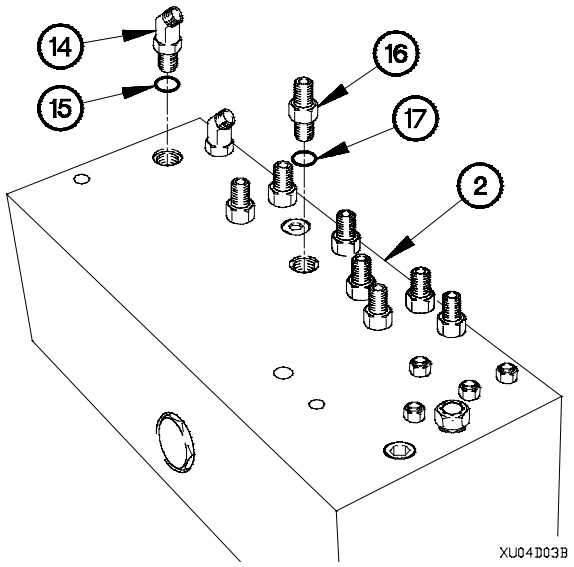
Note position and location of valves, plugs, and fittings prior to disassembly.

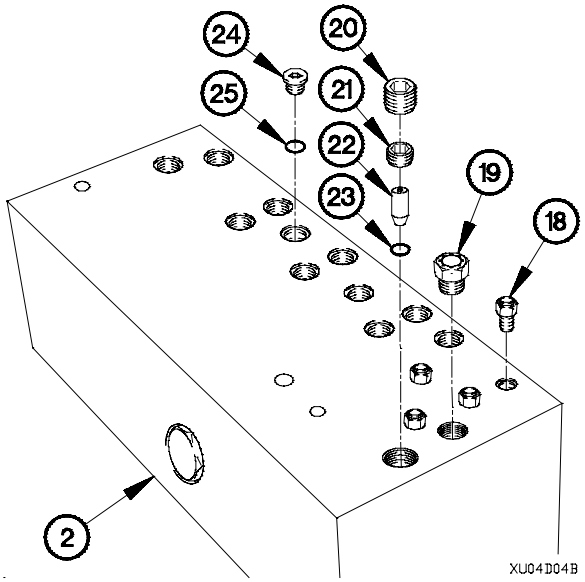
(5) Remove two 45-degree fittings (14) from hydraulic manifold (2).

(6) Remove two preformed packings (15) from 45-degree fittings (14). Discard preformed packings.

(7) Remove eight fittings (16) from hydraulic manifold (2).

(8) Remove eight preformed packings (17) from fittings (16). Discard preformed packings.





(9) Remove four air fittings (18) from hydraulic manifold (2).

(10) Remove breather cap (19) from hydraulic manifold (2).

(11) Remove plug (20), setscrew (21), check valve (22), and preformed packing (23) from hydraulic manifold (2).

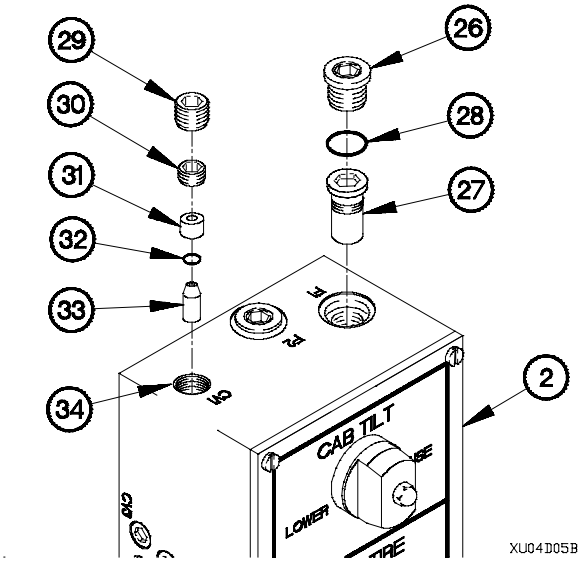
(12) Remove plug (24) from hydraulic manifold (2).

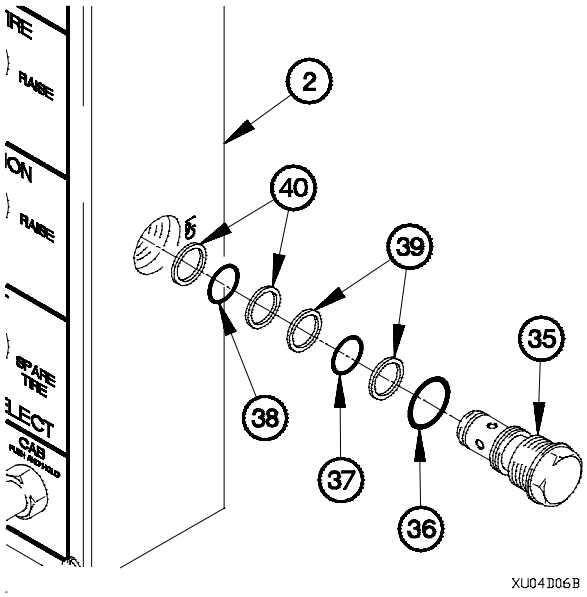
(13) Remove preformed packing (25) from plug (24). Discard preformed packing.

(14) Remove two plugs (26) and filters (27) from hydraulic manifold (2). Discard filters.

(15) Remove two preformed packings (28) from plugs (26). Discard preformed packings.

(16) Remove plug (29), setscrew (30), spacer (31), preformed packing (32), and check valve (33) from CV1 orifice (34). Discard preformed packing.





(17) Remove cartridge valve (35) from hydraulic manifold (2).

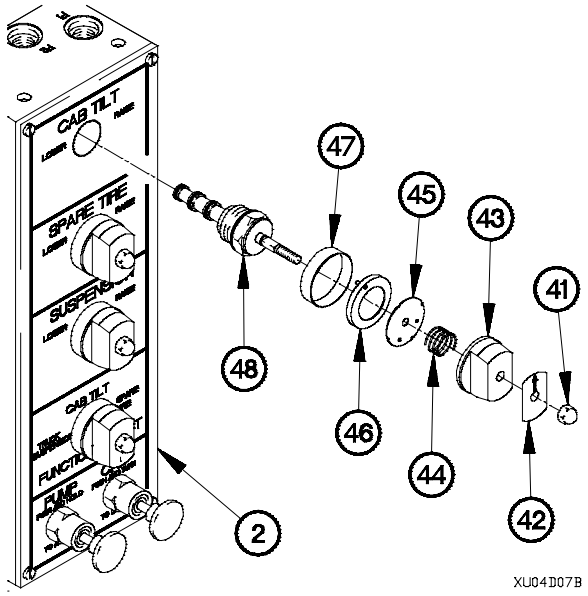
(18) Remove preformed packings (36, 37, and 38) and back-up rings (39 and 40) from cartridge valve (35). Discard preformed packings and back-up rings.

NOTE

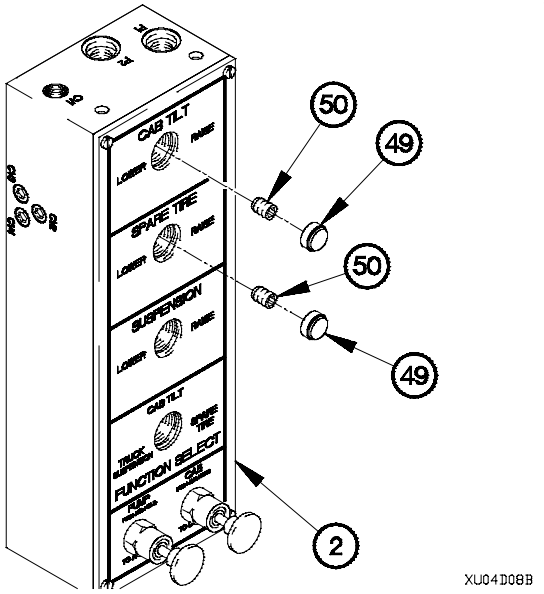
Top three manifold valves are two position valves. Bottom manifold valve is a three position. Note position of manifold valves and retainer rings prior to removal.

(19) Remove four nuts (41), name plates (42), knobs (43), springs (44), spacers (45), retainer rings (46), and dust boots (47) from manifold valves (48).

(20) Remove four manifold valves (48) from hydraulic manifold (2).

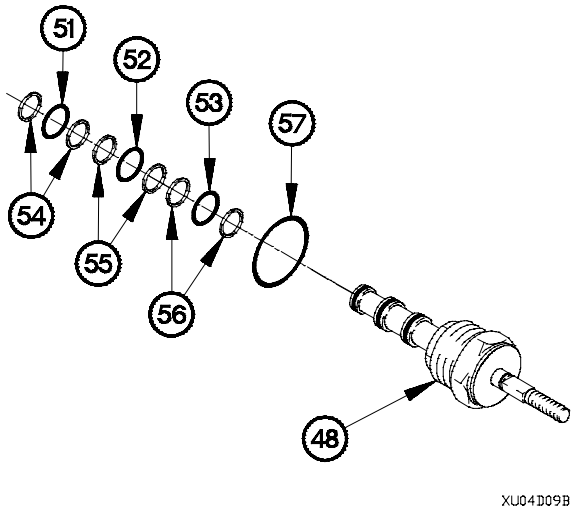


19-4. HYDRAULIC MANIFOLD REPLACEMENT/REPAIR (CONT)



(21) Remove two orifice filters (49) from hydraulic manifold (2). Discard orifice filters.

(22) Remove two orifice plugs (50) from hydraulic manifold (2).

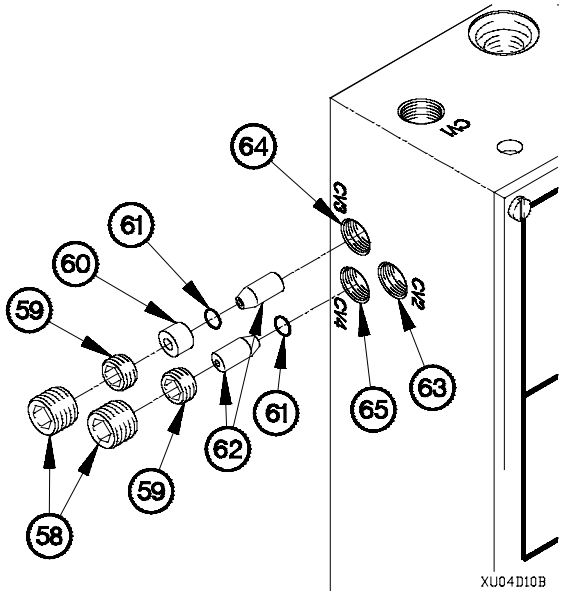


(23) Remove four preformed packings (51, 52, and 53) and eight back-up rings (54, 55, and 56) from four manifold valves (48). Discard preformed packings and back-up rings.

(24) Remove four preformed packings (57) from manifold valves (48). Discard preformed packings.

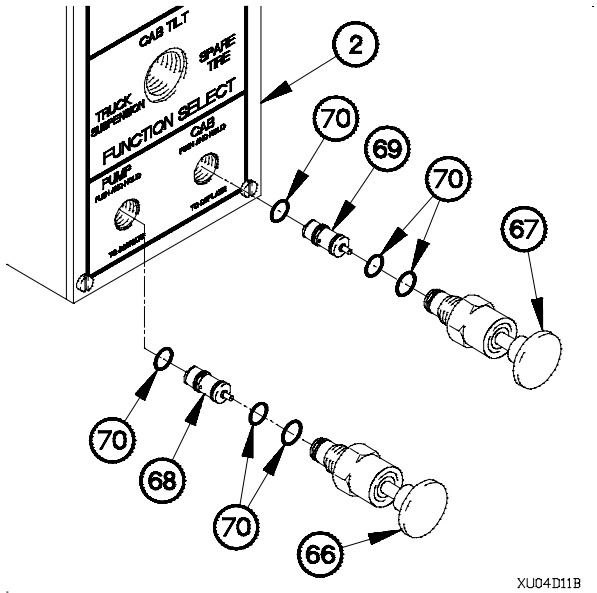
(25) Remove two plugs (58), setscrews (59), spacers (62), preformed packings (61), and check valves (62) from CV2 orifice (63) and CV3 orifice (64). Discard preformed packings.

(26) Remove plug (58), setscrew (59), check valve (60), and preformed packing (61) from CV4 orifice (65). Discard preformed packing.



(27) Remove air valves (66 and 67) and valves (68 and 69) from hydraulic manifold (2).

(28) Remove six preformed packings (70) from air valves (66 and 67) and valves (68 and 69). Discard preformed packings.



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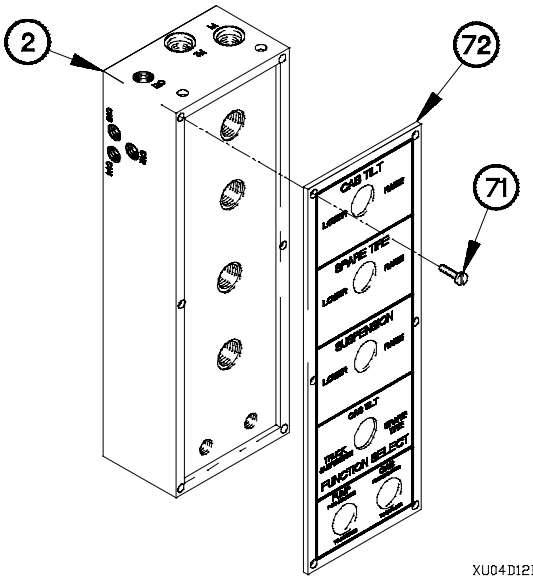

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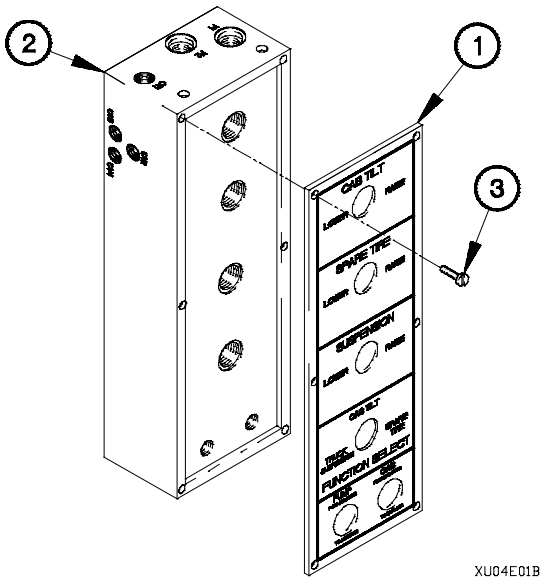
(29) Remove six screws (71) and plate (72) from hydraulic manifold (2).

e. Assembly (PN 65234).

(1) Install plate (1) on hydraulic manifold (2) with six screws (3).



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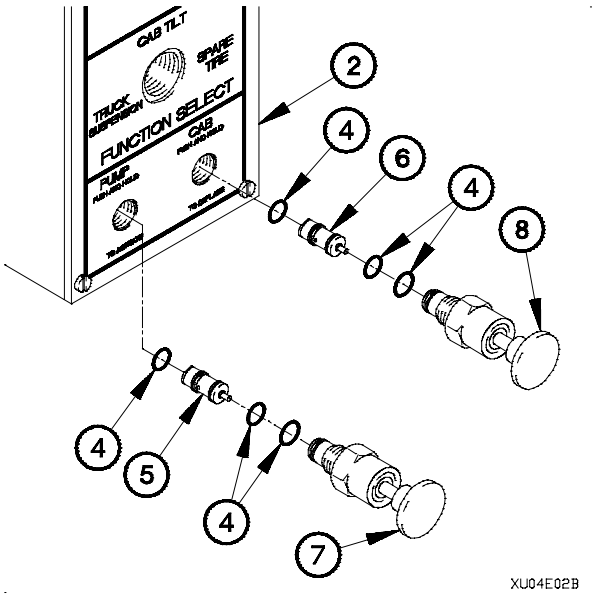
19-4. HYDRAULIC MANIFOLD REPLACEMENT/REPAIR (CONT)

(2) Install six preformed packings (4) on valves (5 and 6) and air valves (7 and 8).

NOTE

Lubricate parts with oil as required.

(3) Install valves (5 and 6) and air valves (7 and 8) in hydraulic manifold (2).



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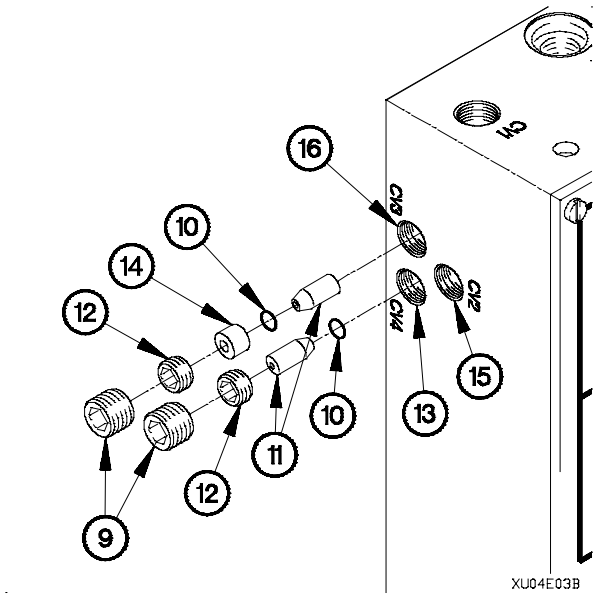


(4) Apply sealing compound to threads of three plugs (9).

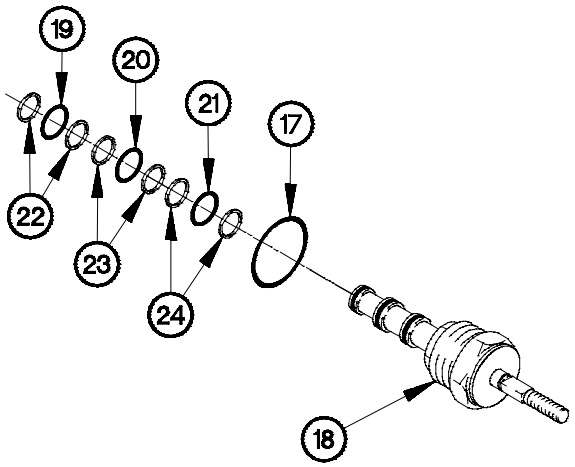
(5) Position preformed packing (10), check valve (11), setscrew (12), and plug (9) in CV4 orifice (13).

(6) Position two check valves (11), preformed packings (10), spacers (14), setscrews (12), and plugs (9) in CV2 orifice (15) and CV3 orifice (16).

(7) Tighten three plugs (9) to 21 lb-ft (28 N·m).

(8) Install four preformed packings (17) on manifold valves (18).

(9) Install four preformed packings (19, 20, and 21) and eight back-up rings (22, 23, and 24) on four manifold valves (18).



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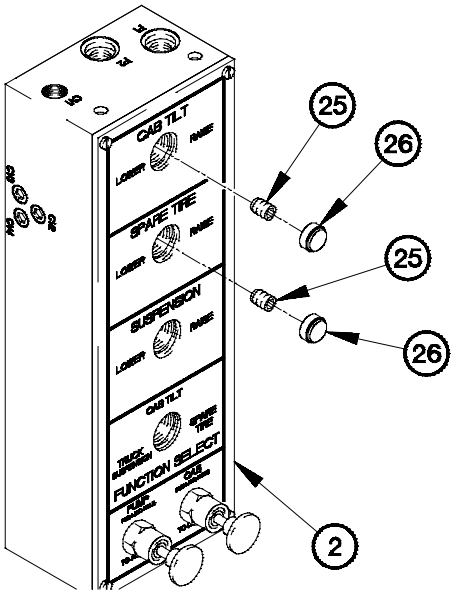

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(10) Install two orifice plugs (25) in hydraulic manifold (2).

(11) Install two orifice filters (26) in hydraulic manifold (2).

NOTE

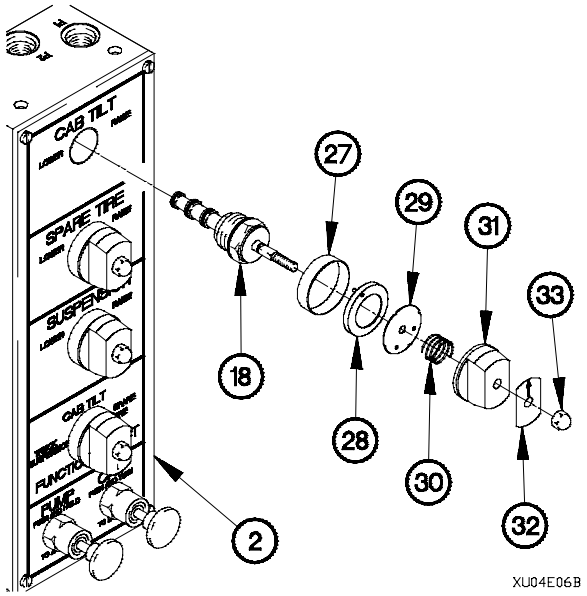
Position retainer rings and manifold valves as noted during disassembly.

(12) Position four manifold valves (18) in hydraulic manifold (2).

(13) Tighten four manifold valves (18) to 40 lb-ft (54 N·m).

(14) Position four dust boots (27), retainer rings (28), spacers (29), springs (30), knobs (31), and name plates (32) on manifold valves (18) with nuts (33).

(15) Tighten four nuts (33) to 40 lb-in. (5 N·m).



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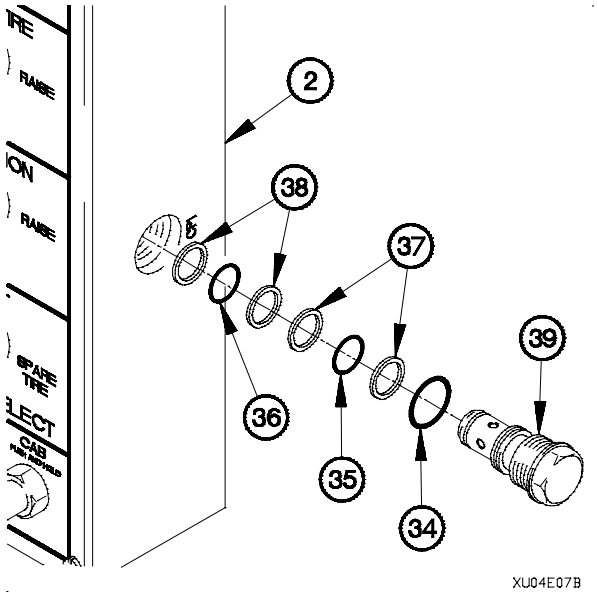
19-4. HYDRAULIC MANIFOLD REPLACEMENT/REPAIR (CONT)

(16) Install preformed packings (34, 35, and 36) and back-up rings (37 and 38) on cartridge valve (39).

(17) Position cartridge valve (39) in hydraulic manifold (2).

(18) Tighten cartridge valve (39) to 40 lb-ft (54 N·m).



WARNING

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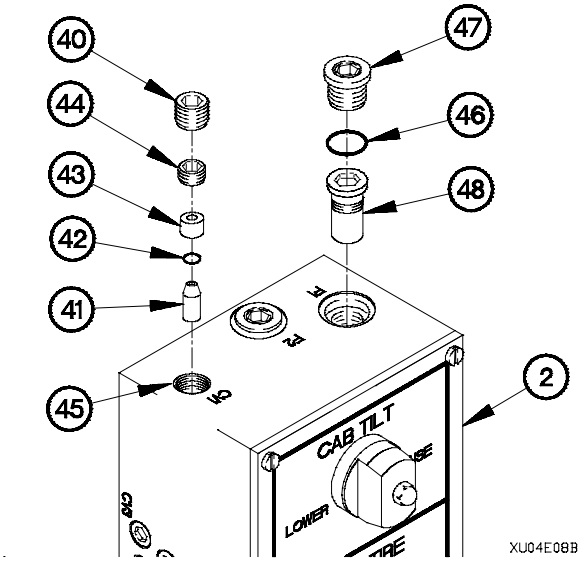

(19) Apply sealing compound to threads of plug (40).

(20) Position check valve (41), preformed packing (42), spacer (43), setscrew (44), and plug (40) in CV1 orifice (45).

(21) Tighten plug (40) to 21 lb-ft (28 N·m).

(22) Install two preformed packings (46) on plugs (47).

(23) Install two filters (48) and plugs (47) in hydraulic manifold (2).

(24) Install preformed packing (49) on plug (50).

(25) Position plug (50) in hydraulic manifold (2).

(26) Tighten plug (50) to 13 lb-ft (18 N·m).

WARNING

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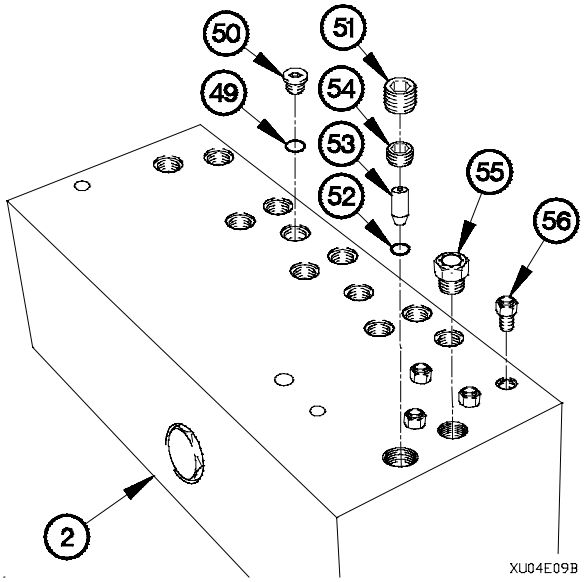


(27) Apply sealing compound to threads of plug (51).

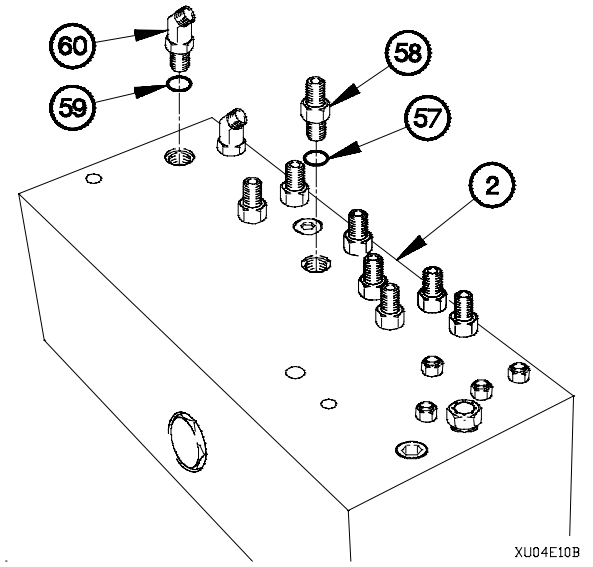
(28) Position preformed packing (52), check valve (53), setscrew (54), and plug (51) in hydraulic manifold (2).

(29) Tighten plug (51) to 21 lb-ft (28 N·m).

(30) Install breather cap (55) in hydraulic manifold (2).

(31) Apply antiseize compound to four air fittings (56).

(32) Install four air fittings (56) in hydraulic manifold (2).



(33) Install eight preformed packings (57) on fittings (58).

(34) Install eight fittings (58) in hydraulic manifold (2).

(35) Install two preformed packings (59) on 45-degree fittings (60).

(36) Install two 45-degree fittings (60) in hydraulic manifold (2).

19-4. HYDRAULIC MANIFOLD REPLACEMENT/REPAIR (CONT)

(37) Position spacer (61) on hydraulic manifold (2) with three screws (62).

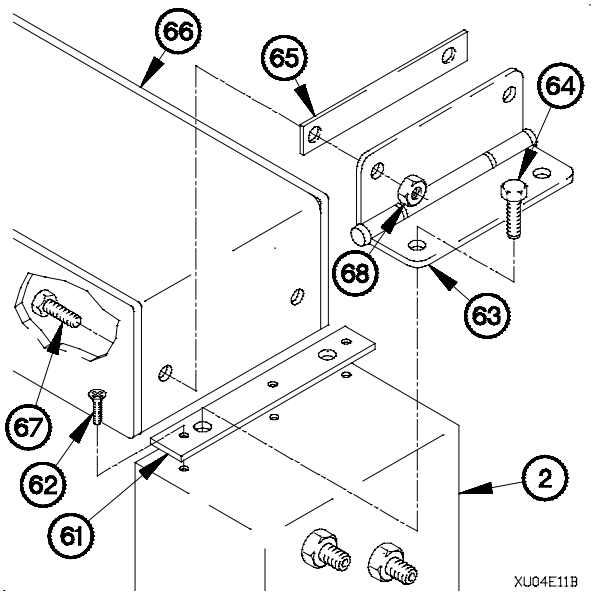
(38) Tighten three screws (62) to 72-120 lb-in. (8-14 N·m).

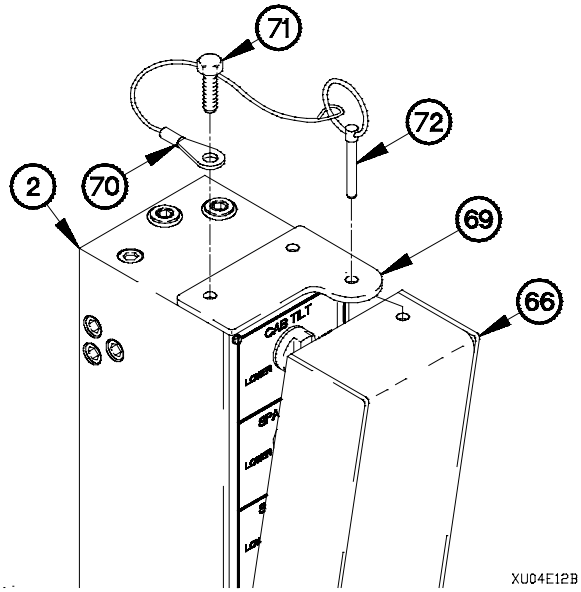
(39) Position hinge (63) on spacer (61) with two screws (64).

(40) Tighten two screws (64) to 18-22 lb-ft (24-30 N·m).

(41) Position spacer (65) and cover (66) on hinge (63) with two screws (67) and self-locking nuts (68).

(42) Tighten two self-locking nuts (68) to 18-22 lb-ft (24-30 N·m).





(43) Position plate (69) and lanyard (70) on hydraulic manifold (2) with two screws (71).

(44) Tighten two screws (71) to 18-22 lb-ft (24-30 N·m).

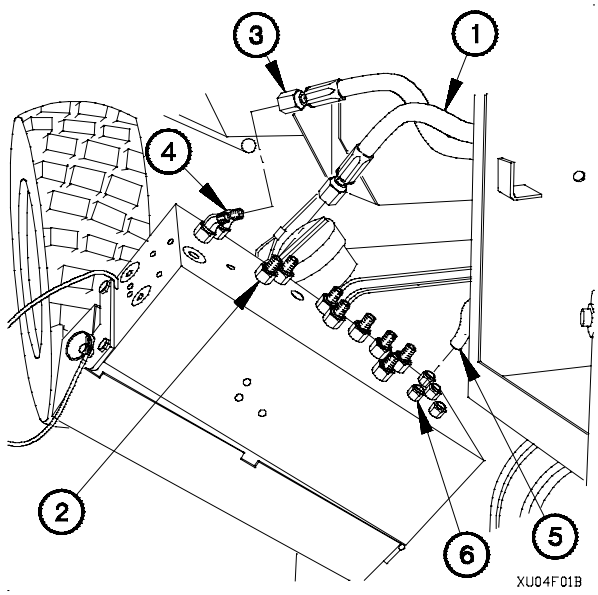
(45) Close cover (66) and install retaining pin (72).

f. Installation.

(1) Connect eight hydraulic hoses (1) to fittings (2).

(2) Connect two hydraulic hoses (3) to 45-degree fittings (4).

(3) Connect four air hoses (5) to air fittings (6).

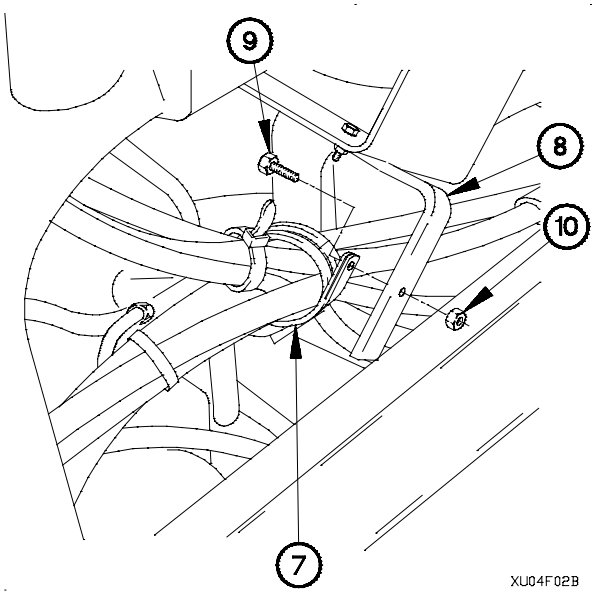


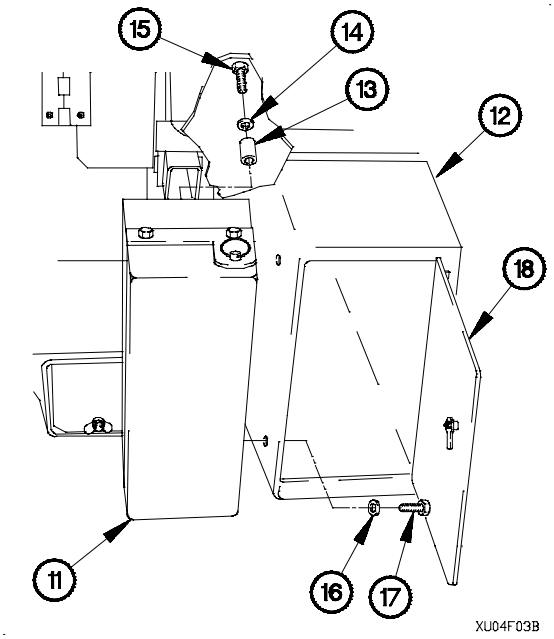
NOTE

Install plastic cable ties as required.

(4) Position clamp (7) on bracket (8) with bolt (9) and self-locking nut (10).

(5) Tighten self-locking nut (10) to 84-132 lb-in. (9-15 N·m).





(6) Position hydraulic manifold (11) on tool box (12) with two spacers (13), spacers (14), and screws (15).

(7) Position two spacers (16) and screws (17) in hydraulic manifold (11).

(8) Tighten two screws (15) and screws (17) to 18-22 lb-ft (24-30 N·m).

(9) Close tool box door (18).

g. Follow-On Maintenance.

(1) Raise spare tire (TM 9-2320-365-10).

(2) Fill hydraulic system (Appendix H).

(3) Raise cab and check hydraulic manifold for oil leaks (TM 9-2320-365-10).

End of Task.

19-5. HYDRAULIC MANIFOLD FILTER REPLACEMENT

This task covers:

a. Removal
b. Installation
c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
Engine shut down (TM 9-2320-365-10).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Gloves, Rubber (Item 13, Appendix C)
Goggles, Industrial (Item 15, Appendix C)

Materials/Parts
Filter Assembly (2) (Item 12, Appendix G)
Hydraulic Fluid A (Item 26, Appendix D)

a. Removal.

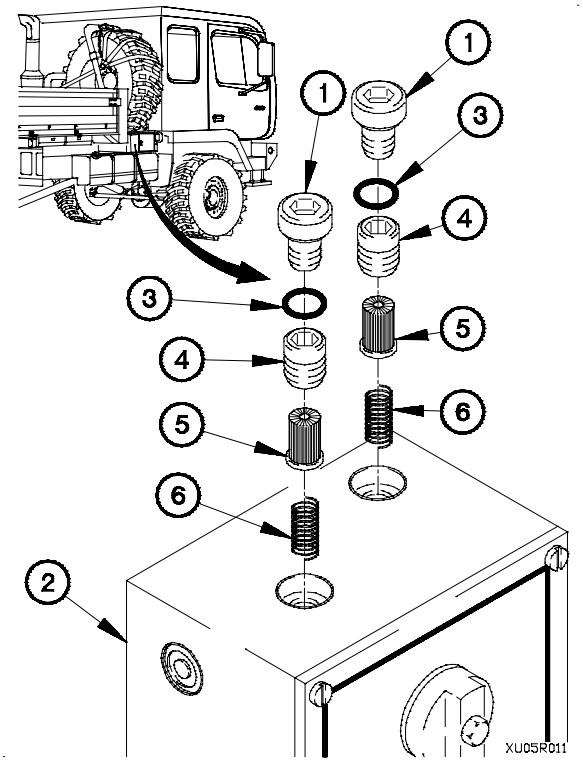
WARNING

Hydraulic fluid (MIL-L-5606) is TOXIC. Wear protective goggles and gloves; use only in well ventilated area; avoid contact with skin, eyes, and clothes. Skin and clothing that come in contact with hydraulic oil should be washed immediately. Saturated clothing should be removed immediately. Failure to comply may result in injury to personnel.

(1) Remove two plugs (1) from hydraulic manifold (2).

(2) Remove two preformed packings (3) from plugs (1). Discard preformed packings and plugs.

(3) Remove two retainers (4), filters (5), and springs (6) from hydraulic manifold (2). Discard retainers, filters, and springs.

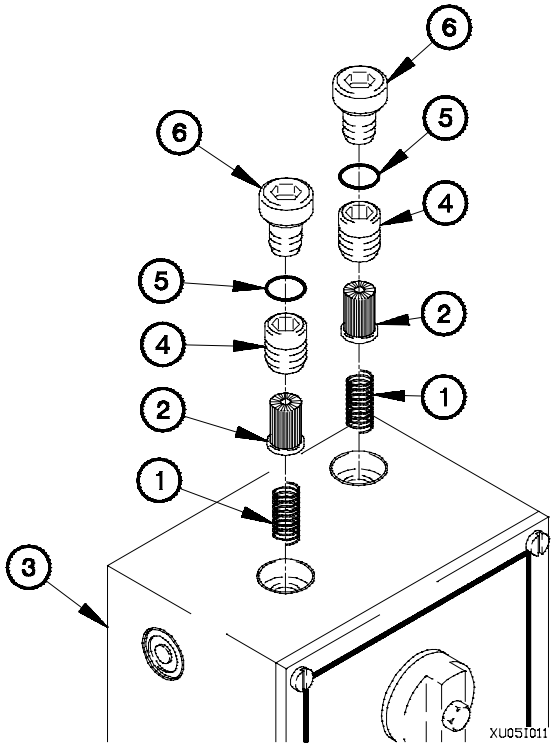


b. Installation.

(1) Position two springs (1) and filters (2) in hydraulic manifold (3) with two retainers (4).

(2) Install two preformed packings (5) on plugs (6).

(3) Install two plugs (6) in hydraulic manifold (3).



c. Follow-On Maintenance.

Fill air transportability hydraulic system (Appendix H).

End of Task.

19-6. CAB HYDRAULIC LATCH REPLACEMENT/ADJUSTMENT

This task covers:

a. Removal
b. Installation
c. Adjustment
d. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
Engine shut down (TM 9-2320-365-10).
Cab raised (TM 9-2320-365-10).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Goggles, Industrial (Item 15, Appendix C)
Gloves, Rubber (Item 13, Appendix C)
Pan, Drain (Item 24, Appendix C)
Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C)

Materials/Parts
Cap and Plug Set (Item 15, Appendix D)
Nut, Self-Locking (4) (Item 149, Appendix G)
Hydraulic Fluid A (Item 26, Appendix D)

a. Removal.

(1) Position drain pan under hydraulic hose (1).

WARNING

Hydraulic fluid (MIL-H-5606A) is TOXIC. Wear protective goggles and gloves; use only in well ventilated area; avoid contact with skin, eyes, and clothes. Skin and clothing that come in contact with hydraulic oil should be washed immediately. Saturated clothing should be removed immediately. Failure to comply may result in injury to personnel.

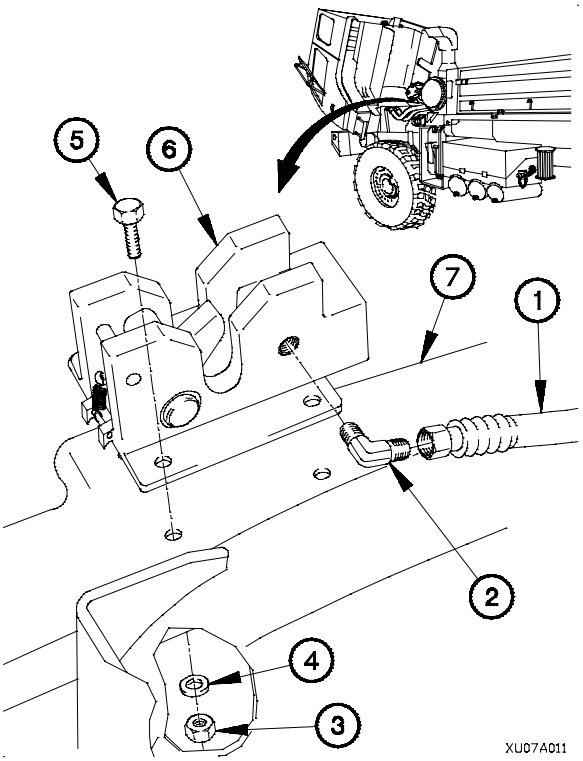
CAUTION

Cap or plug hydraulic hose and connection point to prevent contamination of hydraulic system. Failure to comply may result in damage to equipment.

(2) Disconnect hydraulic hose (1) from 90-degree fitting (2).

(3) Remove four self-locking nuts (3), washers (4), screws (5), and hydraulic latch (6) from cab support assembly (7). Discard self-locking nuts.

(4) Remove 90-degree fitting (2) from hydraulic latch (6).

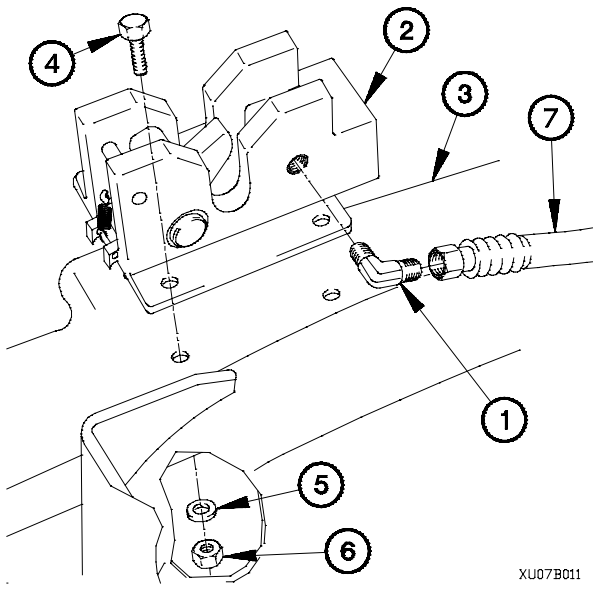


b. Installation.

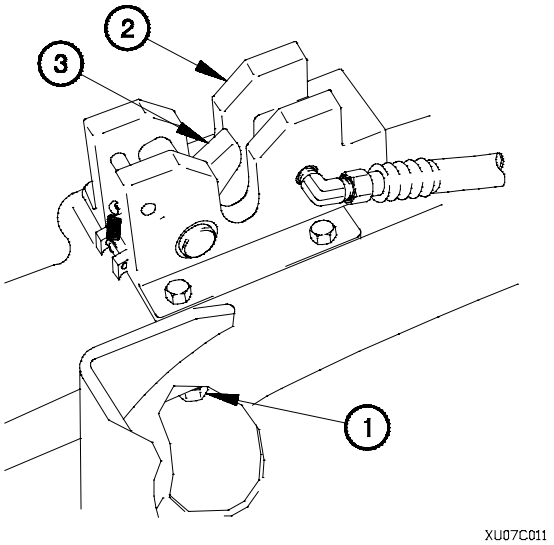
(1) Install 90-degree fitting (1) in hydraulic latch (2).

(2) Install hydraulic latch (2) on cab support assembly (3) with four screws (4), washers (5), and self-locking nuts (6).

(3) Connect hydraulic hose (7) to 90-degree fitting (1).



c. Adjustment.



(1) Loosen four nuts (1) on hydraulic latch (2).

NOTE

Perform step (2) and note position of cab latching hook assembly when it is near hydraulic latch.

(2) Lower cab (TM 9-2320-365-10).

(3) Raise cab (TM 9-2320-365-10).

(4) Position hydraulic latch (2) to engage cab latching hook assembly (3).

(5) Tighten four self-locking nuts (1) to 34-44 lb-ft (46-60 N·m).

(6) Lower cab (TM 9-2320-365-10).

(7) Check cab latching hook assembly (3) for proper operation.

(8) Perform steps (1) through (7), as required.

19-6. CAB HYDRAULIC LATCH REPLACEMENT/ADJUSTMENT (CONT)

d. Follow-On Maintenance.

Fill air transportability hydraulic system (Appendix H).

End of Task.

19-7. AIR TRANSPORTABILITY HYDRAULIC SYSTEM SERVICE

This task covers:

a. Purging

b. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
Engine shut down (TM 9-2320-365-10).
Air tanks drained (TM 9-2320-365-10).
M13 decontamination unit removed, if equipped (TM 3-4230-214-12&P).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Pan, Drain (Item 24, Appendix C)
Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C)
Gloves, Rubber (Item 13, Appendix C)
Goggles, Industrial (Item 15, Appendix C)

Materials/Parts
Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D)
Solvent, Dry Cleaning (Item 71, Appendix D)
Washer, Spring (4) (Item 279, Appendix G)
Gasket (Item 32, Appendix G)
Filter Assembly (2) (Item 12, Appendix G)
Packing, Preformed (Item 166, Appendix G)
Hydraulic Fluid A (Item 26, Appendix D)

References
TM 3-4230-214-12&P

WARNING

Hydraulic fluid (MIL-H-5606A) is TOXIC. Wear protective goggles and gloves; use only in well ventilated area; avoid contact with skin, eyes, and clothes. Skin and clothing that come in contact with hydraulic oil should be washed immediately. Saturated clothing should be removed immediately. Failure to comply may result in injury to personnel.

a. Purging.

NOTE

Perform the following steps to ensure all air and contaminants are removed from air transportability hydraulic system.

(1) Remove two screws (1), washers (2) and cover (3) from back-up hydraulic pump (4).

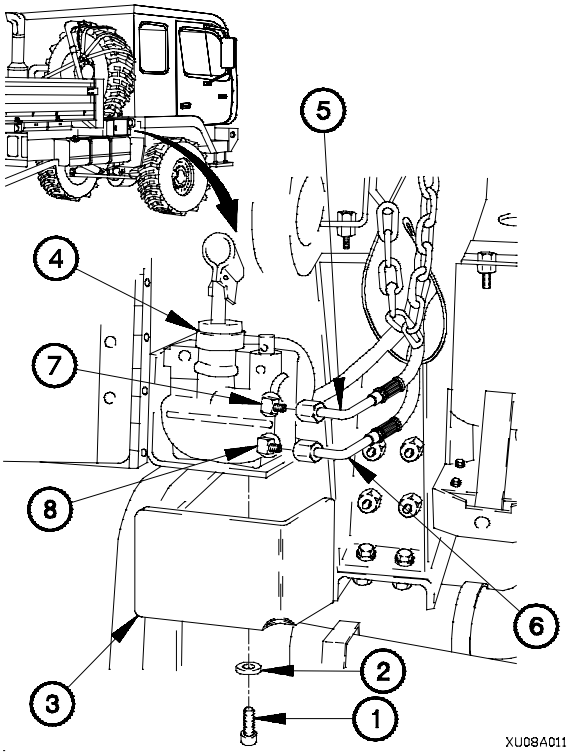
(2) Position drain pan under back-up hydraulic pump (4).

NOTE

Tag hoses and connection points prior to disconnecting.

(3) Disconnect hydraulic hoses (5 and 6) from 90-degree fittings (7 and 8).

(4) Operate back-up hydraulic pump (4) until hydraulic fluid stops flowing (TM 9-2320-365-10).



19-7. AIR TRANSPORTABILITY HYDRAULIC SYSTEM SERVICE (CONT)

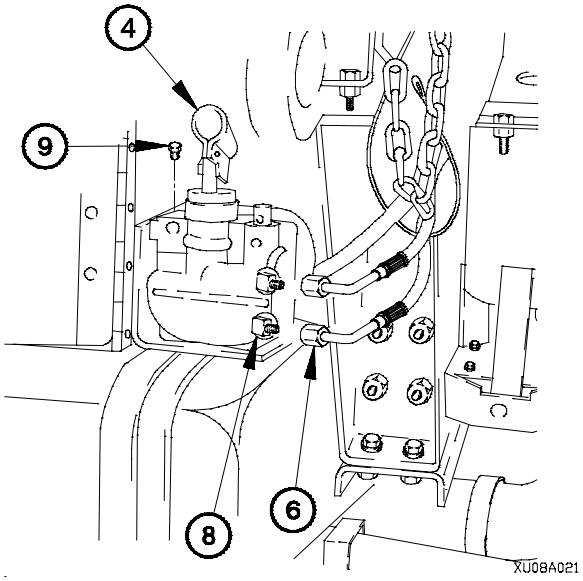
(5) Remove filler plug (9) from back-up hydraulic pump (4).

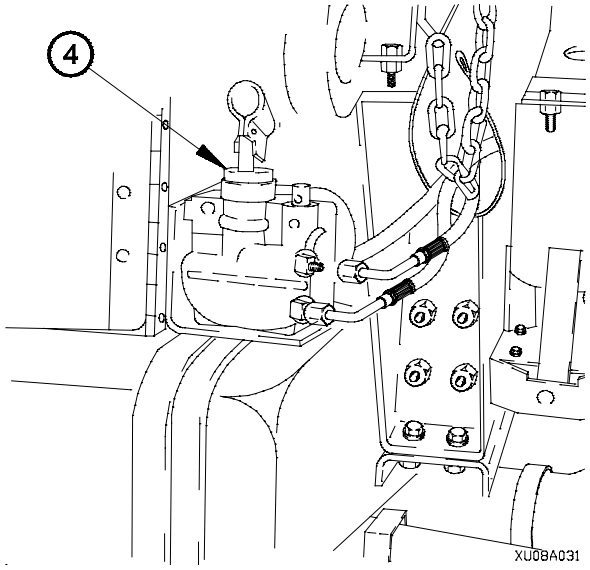
(6) Fill back-up hydraulic pump (4) with hydraulic fluid (Appendix H).

(7) Install filler plug (9) in back-up hydraulic pump (4).

(8) Operate back-up hydraulic pump (4) until hydraulic fluid starts flowing (TM 9-2320-365-10).

(9) Install bottom hydraulic hose (6) on 90-degree fitting (8).





(10) Repeat steps (5) through (7).

(11) Raise cab with back-up hydraulic pump (4) (TM 9-2320-365-10).

(12) Repeat steps (5) through (7).

(13) Lower cab with back-up hydraulic pump (4) (TM 9-2320-365-10).

(14) Repeat steps (5) through (7).

(15) Repeat steps (11) through (14) until hydraulic fluid is cleared of foam, grit, and other contaminants.

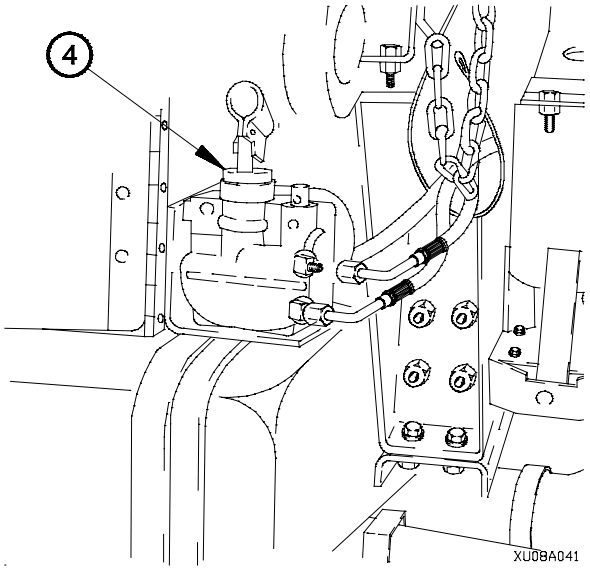
(16) Lower spare tire with back-up hydraulic pump (4) (TM 9-2320-365-10).

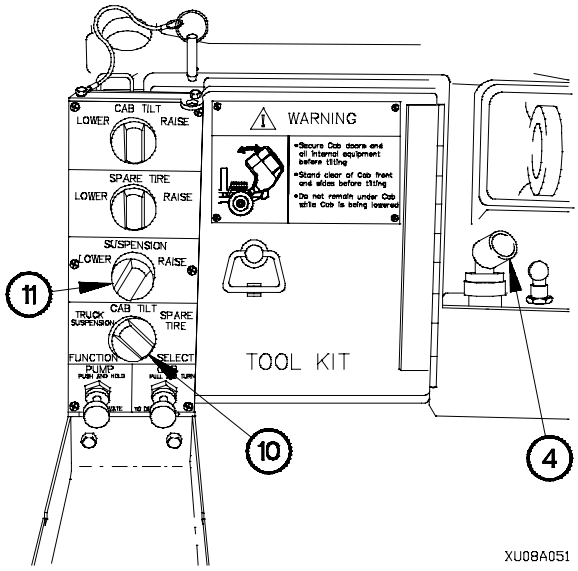
(17) Repeat steps (5) through (7).

(18) Raise spare tire with back-up hydraulic pump (4) (TM 9-2320-365-10).

(19) Repeat steps (5) through (7).

(20) Repeat steps (16) through (19) until hydraulic fluid is cleared of foam, grit, and other contaminants.





(21) Position FUNCTION SELECT knob (10) to TRUCK SUSPENSION.

(22) Position SUSPENSION knob (11) to RAISE.

(23) Extend suspension cylinder with back-up hydraulic pump (4) (TM 9-2320-365-10).

(24) Repeat steps (5) through (7).

(25) Position SUSPENSION knob (11) to LOWER.

(26) Retract suspension cylinder with back-up hydraulic pump (4) (TM 9-2320-365-10).

(27) Repeat steps (5) through (7).

(28) Repeat steps (22) through (27) until hydraulic fluid is cleared of foam, grit, and other contaminants.

19-7. AIR TRANSPORTABILITY HYDRAULIC SYSTEM SERVICE (CONT)

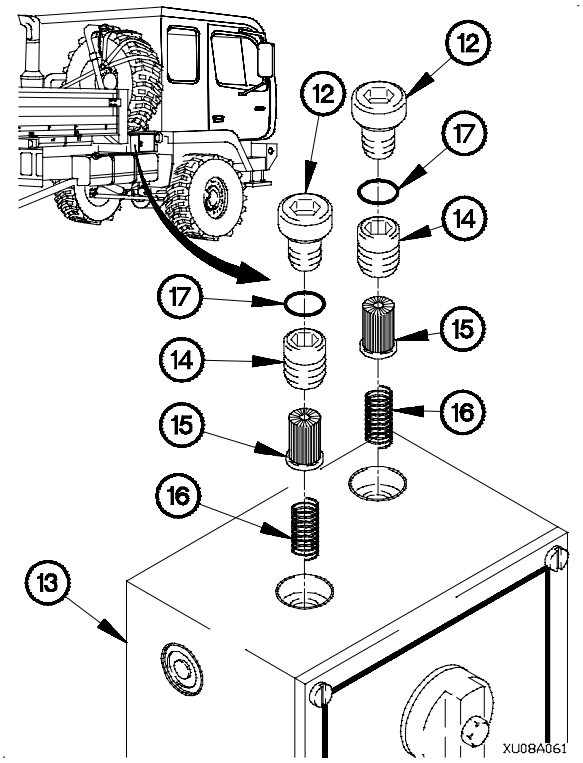
(29) Remove two plugs (12) from hydraulic manifold (13). Discard plugs.

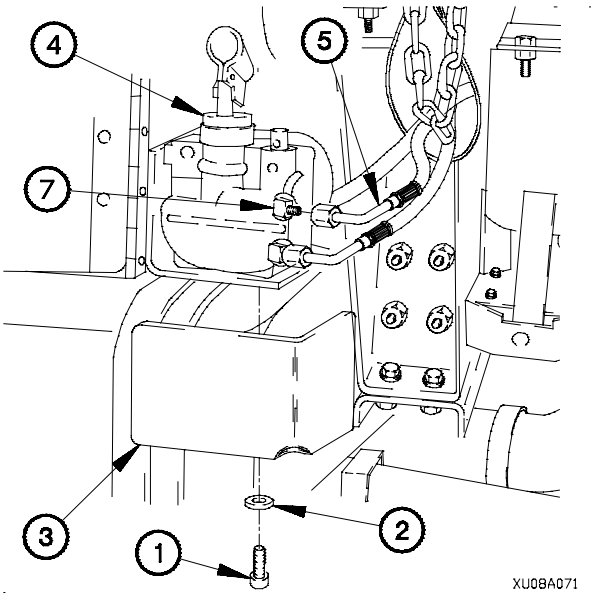
(30) Remove two retainers (14), filters (15), and springs (16) from hydraulic manifold (13). Discard retainers, filters, and springs.

(31) Position two springs (16) and filters (15) in hydraulic manifold (13) with two retainers (14).

(32) Install two preformed packings (17) on plugs (12).

(33) Install two plugs (12) in hydraulic manifold (13).





(34) Install top hydraulic hose (5) on 90-degree fitting (7).

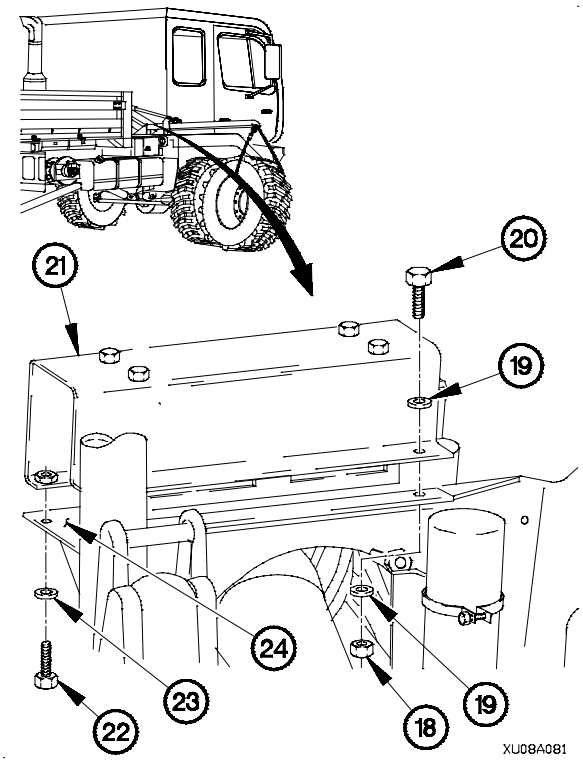
(35) Position cover (3) on back-up hydraulic pump (4) with two washers (2) and screws (1).

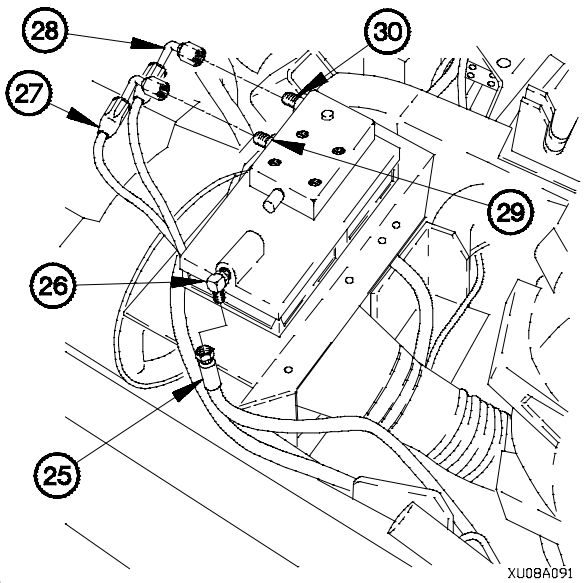
(36) Tighten two screws (1) to 19-28 lb-ft (24-38 N·m).

(37) Lower spare tire retainer with back-up hydraulic pump (TM 9-2320-365-10).

(38) Remove two nuts (18), four washers (19), and two screws (20) from decontamination unit mounting bracket (21).

(39) Remove two screws (22), washers (23), and decontamination unit mounting bracket (21) from spare tire retainer (24).





CAUTION

Cap or plug hoses and connection points prior to disconnecting to prevent contamination of system. Failure to comply may result in damage to equipment.

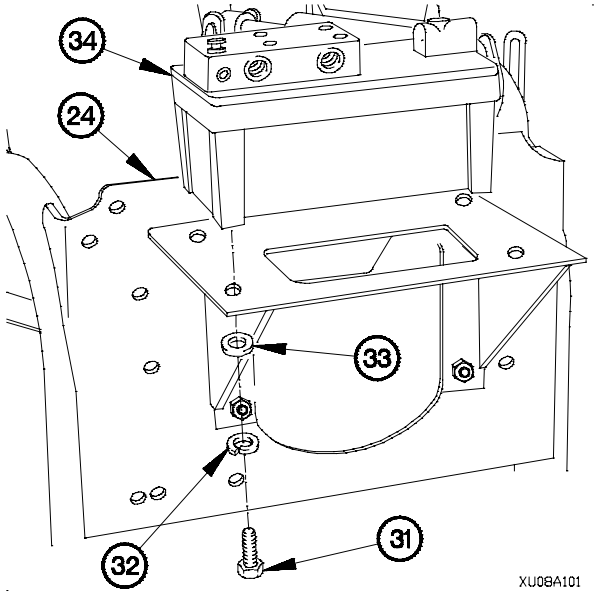
(40) Disconnect air hose (25) from 90-degree fitting (26).

(41) Disconnect hydraulic hoses (27 and 28) from fittings (29 and 30).

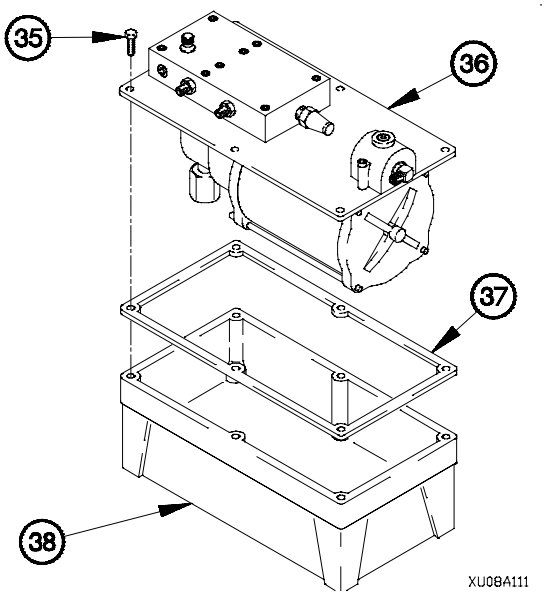
19-7. AIR TRANSPORTABILITY HYDRAULIC SYSTEM SERVICE (CONT)

(42) Remove four screws (31), spring washers (32), washers (33) and air/hydraulic power unit (34) from spare tire retainer (24). Discard spring washers.

(43) Remove air/hydraulic power unit (34) from vehicle.



(44) Remove six screws (35), pump assembly (36) and gasket (37) from reservoir (38). Discard gasket.



WARNING

- **Dry Cleaning Solvent (P-D-680) is TOXIC and flammable. Wear protective goggles and gloves; use only in well ventilated area; avoid contact with skin, eyes, and clothes, and do not breathe vapors. Keep away from heat or flame. Never smoke when using solvent; the flashpoint for Type I Dry Cleaning Solvent is 100°F (38°C) and for Type II is 130°F (50°C). Failure to comply may result in injury or death to personnel.**

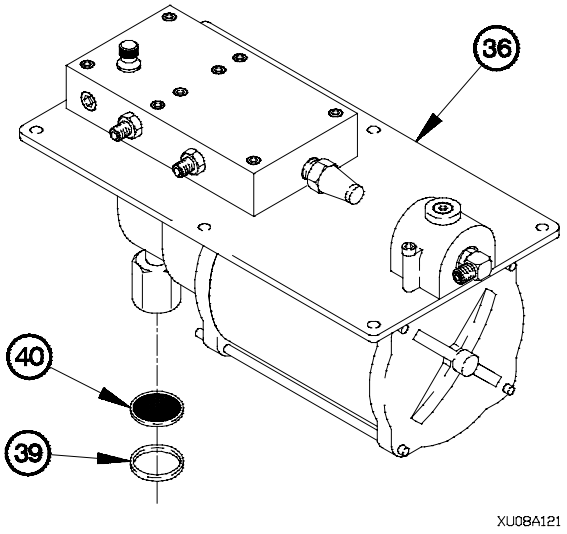
- **If personnel become dizzy while using dry cleaning solvent, immediately get fresh air and medical help. If dry cleaning solvent contacts skin or clothes, flush with cold water. If dry cleaning solvent contacts eyes, immediately flush eyes with water and get immediate medical attention. Failure to comply may result in injury to personnel.**

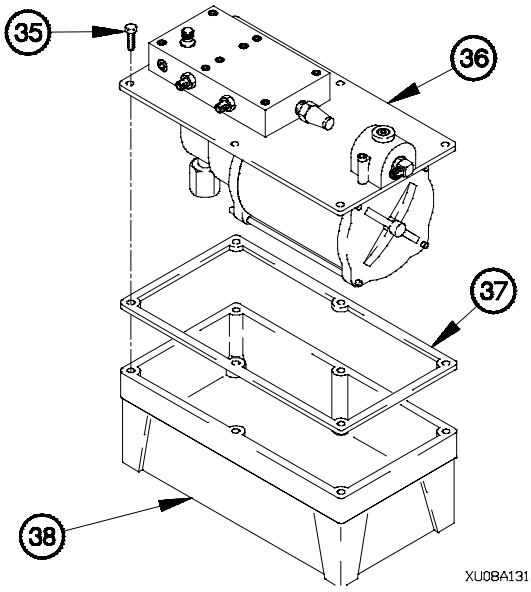
(45) Drain hydraulic oil from reservoir (38) and flush with dry cleaning solvent.

(46) Remove retaining ring (39) and strainer (40) from pump assembly (36).

(47) Flush strainer (40) and pump assembly (36) with dry cleaning solvent.

(48) Install strainer (40) on pump assembly (36) with retaining ring (39).

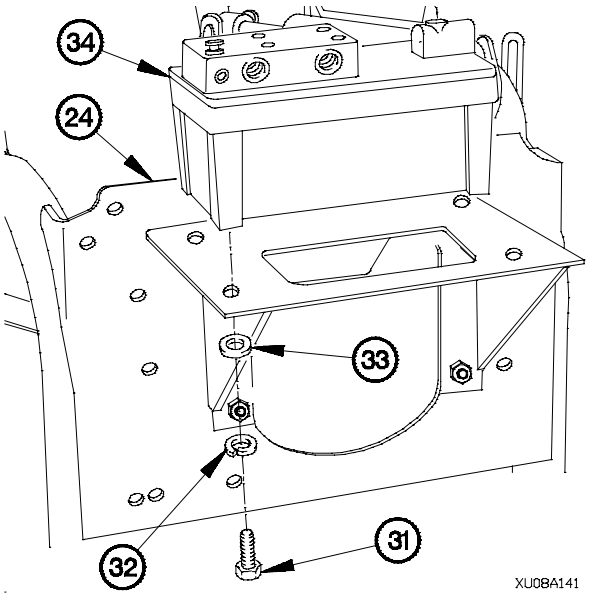




(49) Install gasket (37) and pump assembly (36) on reservoir (38) with six screws (35).

(50) Position air/hydraulic power unit (34) on spare tire retainer (24) with four washers (33), spring washers (32) and screws (31).

(51) Tighten four screws (31) to 18-22 lb-ft (24-34 N·m).



19-7. AIR TRANSPORTABILITY HYDRAULIC SYSTEM SERVICE (CONT)

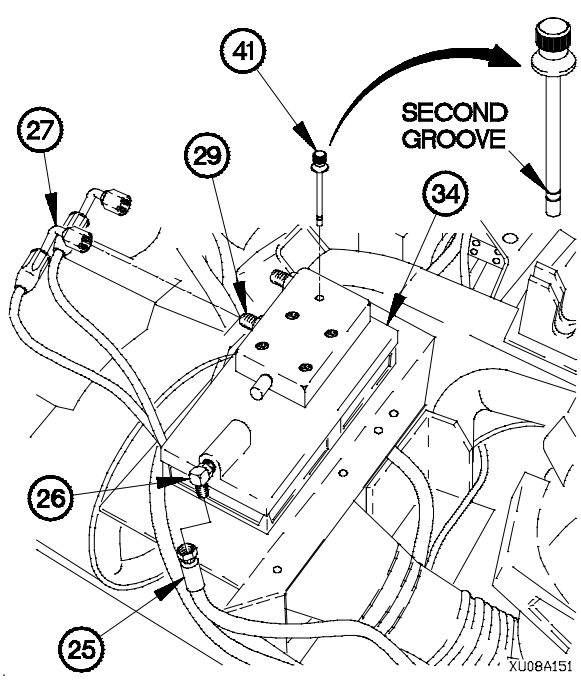
(52) Connect hydraulic hose (27) to fitting (29).

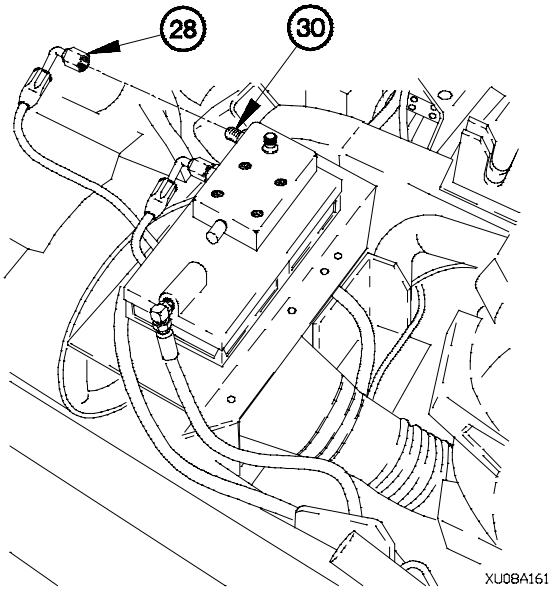
(53) Connect air hose (25) to 90-degree fitting (26).

(54) Remove dipstick (41) from air/hydraulic power unit (34).

(55) Fill air/hydraulic power unit (34) to second groove from bottom on dipstick (Appendix H).

(56) Install dipstick (41) in air/hydraulic power unit (34) and hand tighten.





(57) Start engine and allow air system to pressurize (TM 9-2320-365-10).

NOTE

Remove plug from end of hydraulic hose prior to performing step (58).

(58) Raise and lower cab using hydraulic manifold (TM 9-2320-365-10) until hydraulic fluid is cleared of foam, grit, and other contaminants.

(59) Repeat steps (54) through (56) as required.

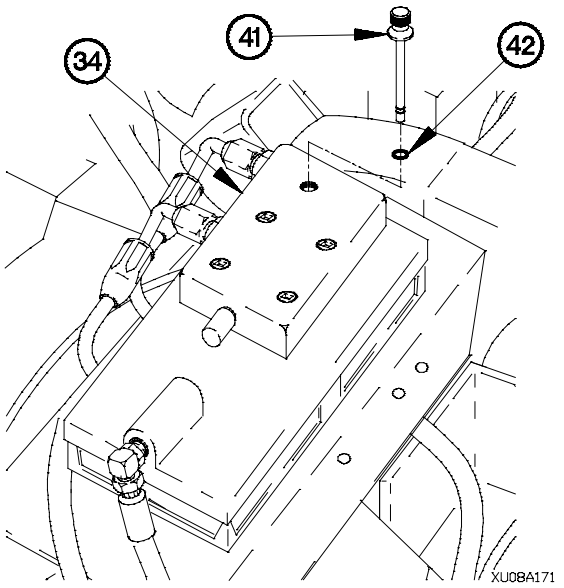
(60) Connect hydraulic hose (28) to fitting (30).

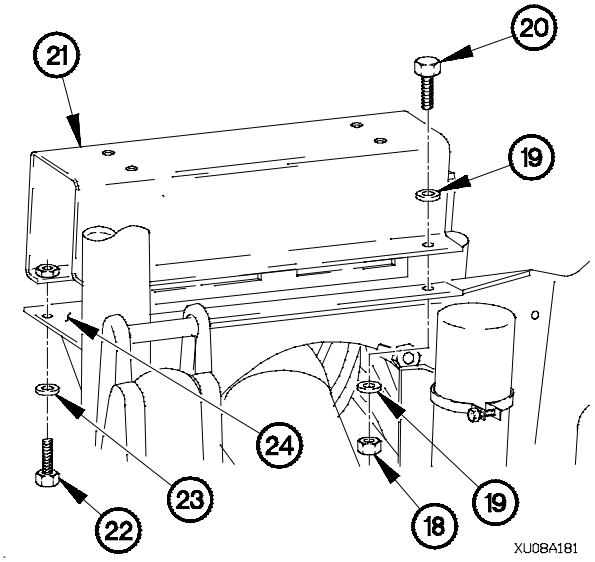
(61) Remove dipstick (41) from air/hydraulic power unit (34).

(62) Remove preformed packing (42) from dipstick (41). Discard preformed packing.

(63) Install preformed packing (42) on dipstick (41).

(64) Install dipstick (41) in air/hydraulic power unit (34) and hand tighten.





(65) Position decontamination unit mounting bracket (21) on spare tire retainer (24) with two washers (23) and screws (22).

(66) Position four washers (19), two screws (20), and nuts (18) in decontamination unit mounting bracket (21).

(67) Tighten two screws (22) and nuts (18) to 18-22 lb-ft (24-30 N·m).

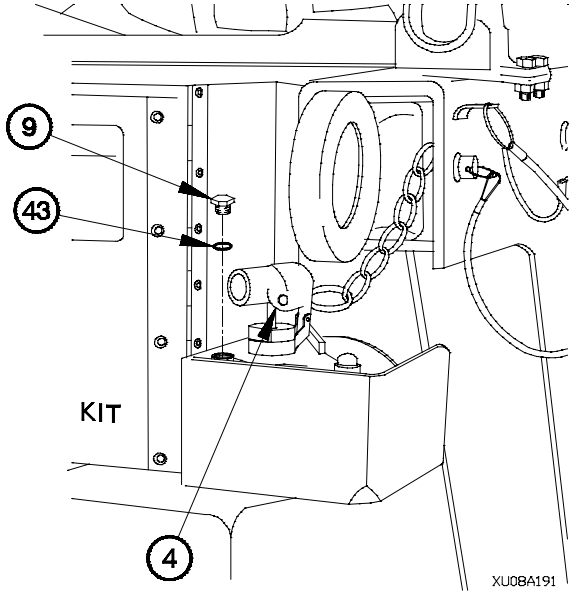
(68) Remove filler plug (9) from back-up hydraulic pump (4).

(69) Remove preformed packing (43) from filler plug (9). Discard preformed packing.

(70) Fill back-up hydraulic pump (4) with hydraulic fluid.

(71) Install preformed packing (43) on filler plug (9).

(72) Install filler plug (9) in back-up hydraulic pump (4).



19-7. AIR TRANSPORTABILITY HYDRAULIC SYSTEM SERVICE (CONT)

b. Follow-On Maintenance.

Raise and lower cab (TM 9-2320-365-10) and check for hydraulic fluid leaks around hoses and fittings.

End of Task.

19-8. EMERGENCY CAB LIFT PROCEDURE

This task covers:

a. Cab Lift

b. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
Engine shut down (TM 9-2320-365-10).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Goggles, Industrial (Item 15, Appendix C)
Gloves, Rubber (Item 13, Appendix C)
Pan, Drain (Item 24, Appendix C)

Tools and Special Tools (Cont)
Cab Support Tool (Item E-4, Appendix E)

Materials/Parts
Cap and Plug Set (Item 15, Appendix D)
Nut, Self-Locking (4) (Item 149, Appendix G)

Personnel Required
(2)

a. Cab Lift.

CAUTION

Perform this task in the event that the air/ hydraulic power unit and the back-up hydraulic pump are inoperative at the same time.

(1) Position drain pan under hydraulic hose (1).

WARNING

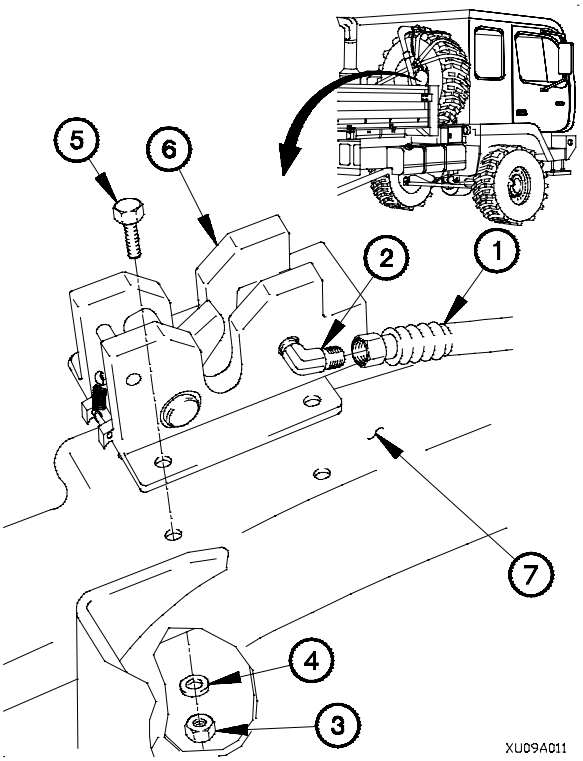
Hydraulic fluid (MIL-H-5606) is TOXIC. Wear protective goggles and gloves; use only in well-ventilated area; avoid contact with skin, eyes, and clothes. Skin and clothing that come in contact with hydraulic oil should be washed immediately. Saturated clothing should be removed immediately. Failure to comply may result in injury to personnel.

CAUTION

Cap or plug hose and connection point to prevent contamination of hydraulic system. Failure to comply may result in damage to equipment.

(2) Disconnect hydraulic hose (1) from 90-degree fitting (2).

(3) Remove four self-locking nuts (3), washers (4), and screws (5) from cab hydraulic latch (6) and cab support assembly (7). Discard self-locking nuts.



19-8. EMERGENCY CAB LIFT PROCEDURE (CONT)

WARNING

Cab weighs approximately 3000 lbs (1362 kgs) attach a suitable lifting device prior to raising cab. Failure to comply may result in injury to personnel.

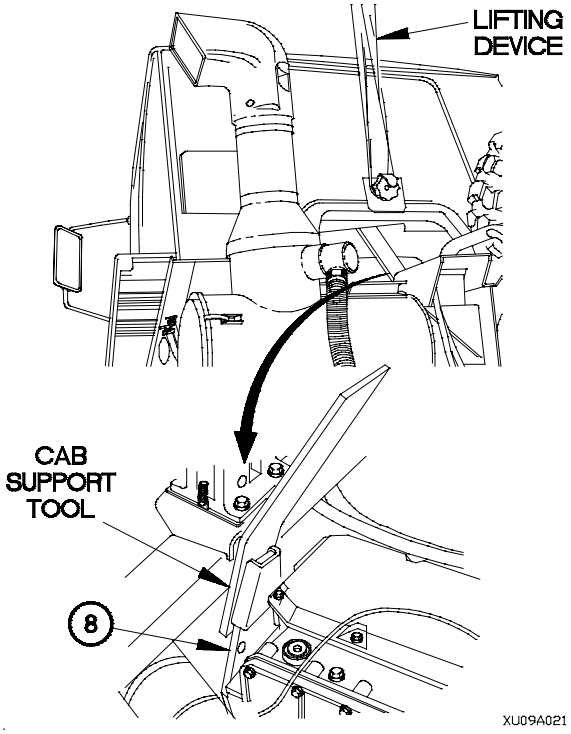
NOTE

Steps (4) through (6) require the aid of an assistant.

(4) Raise cab.

(5) Install cab support tool on rear engine lift bracket (8).

(6) Lower cab on cab support tool.



b. Follow-On Maintenance.

(1) Perform air transportability hydraulic system trouble-shooting to determine cause of malfunction.

(2) Install cab hydraulic latch (para 19-6).

End of Task.

19-9. SUSPENSION CYLINDER REPLACEMENT

This task covers:

a. Removal
b. Installation
c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
Engine shut down (TM 9-2320-365-10).
Cab raised (TM 9-2320-365-10).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Goggles, Industrial (Item 15, Appendix C)
Gloves, Rubber (Item 13, Appendix C)
Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C)
Wrench, Torque, 0-600 lb-ft (Item 59, Appendix C)
Wrench, Torque, 0-200 lb-in. (Item 58, Appendix C)
Socket Set, Socket Wrench (Item 34, Appendix C)
Wrench Set, Socket (Item 48, Appendix C)

Materials/Parts
Cap and Plug Set (Item 15, Appendix D)
Packing, Preformed (2) (Item 166, Appendix G)
Nut, Self-Locking (Item 116, Appendix G)
Pin, Cotter (Item 204, Appendix G)
Hydraulic Fluid A (Item 26, Appendix D)

Personnel Required
(2)

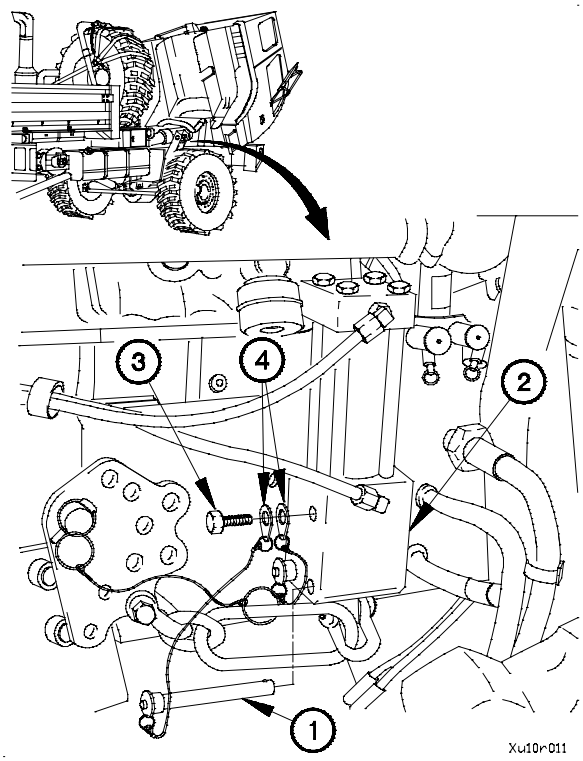
a. Removal.

NOTE

Left and right suspension cylinders are removed the same way. Right side shown.

(1) Remove two quick release pins (1) from suspension cylinder (2).

(2) Remove screw (3) and two lanyards (4) from suspension cylinder (2).



19-9. SUSPENSION CYLINDER REPLACEMENT (CONT)

WARNING

Hydraulic fluid (MIL-H-5606A) is TOXIC. Wear protective goggles and gloves; use only in well ventilated area; avoid contact with skin, eyes, and clothes. Skin and clothing that comes in contact with hydraulic oil should be washed immediately. Saturated clothing should be removed immediately. Failure to comply may result in injury to personnel.

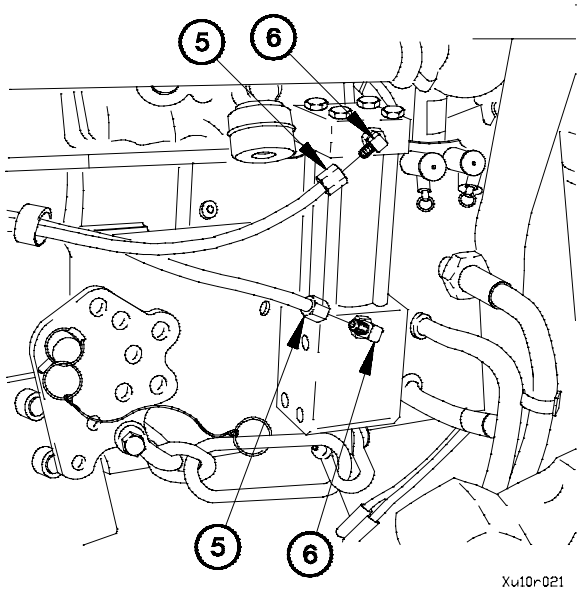
CAUTION

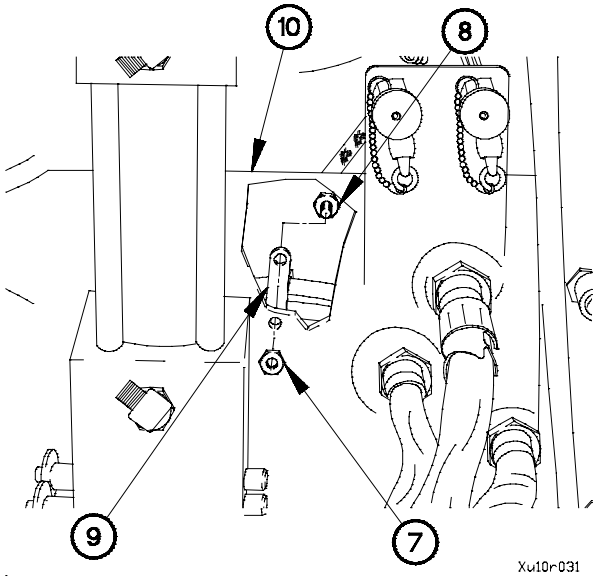
Cap or plug hydraulic hoses and connection points to prevent contamination of hydraulic system. Failure to comply may result in damage to equipment.

NOTE

Tag hydraulic hoses and connection points prior to disconnecting.

(3) Disconnect two hydraulic hoses (5) from 90-degree fittings (6).





WARNING

Wear appropriate eye protection when working under vehicle due to the possibility of falling debris. Failure to comply may result in injury to personnel.

NOTE

Step (4) requires the aid of an assistant.

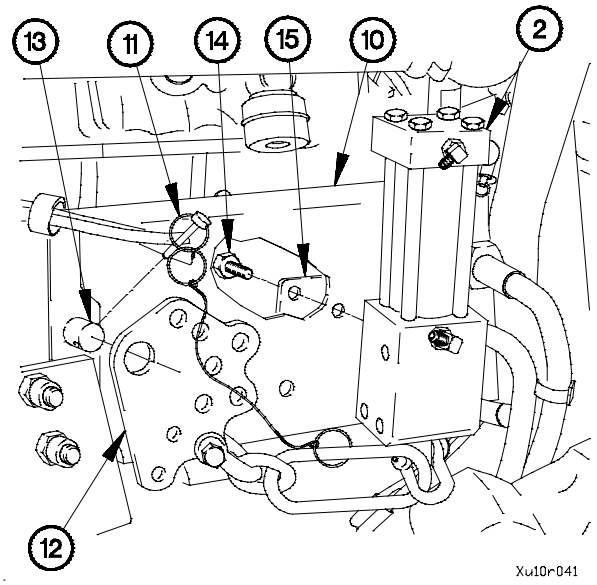
(4) Remove self-locking nut (7), screw (8), and clamp (9) from frame rail (10). Discard self-locking nut.

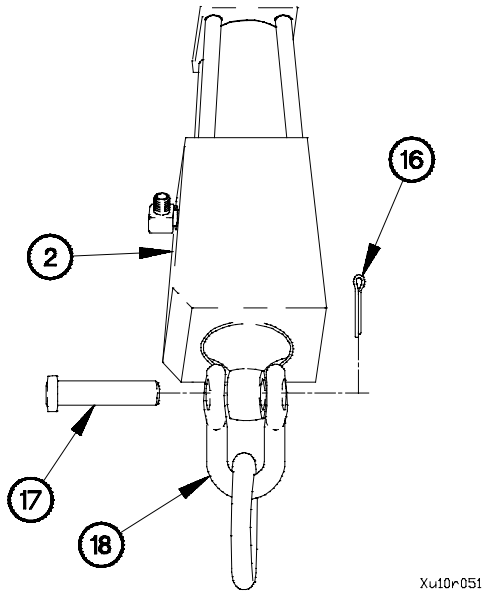
(5) Remove spring pin (11) and suspension compression plate (12) from suspension compression plate stud (13).

NOTE

Step (6) requires the aid of an assistant.

(6) Remove three screws (14), plate (15), and suspension cylinder (2) from frame rail (10).





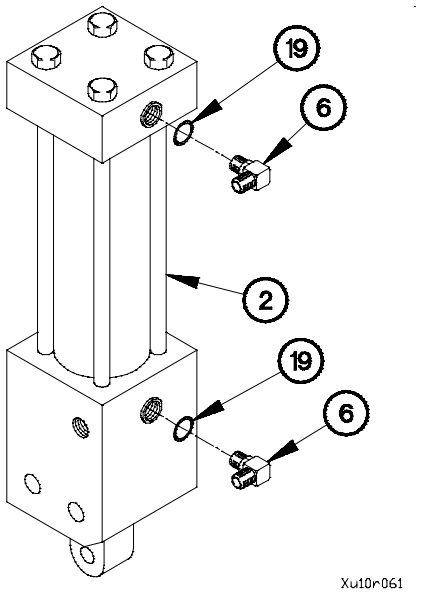
(7) Remove cotter pin (16), pin (17), and shackle (18) from suspension cylinder (2). Discard cotter pin.

NOTE

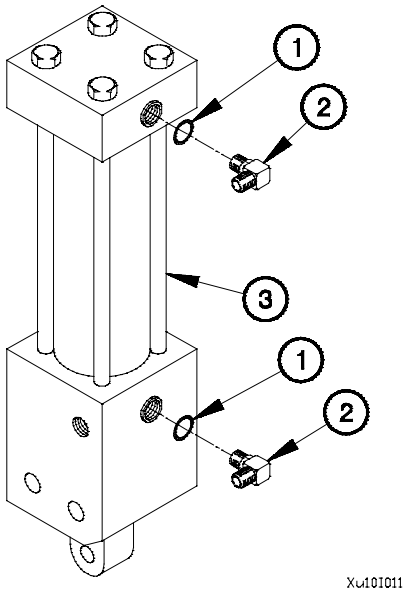
Note orientation of fittings prior to removal.

(8) Remove two 90-degree fittings (6) from suspension cylinder (2).

(9) Remove two preformed packings (19) from 90-degree fittings (6). Discard preformed packings.



19-9. SUSPENSION CYLINDER REPLACEMENT (CONT)



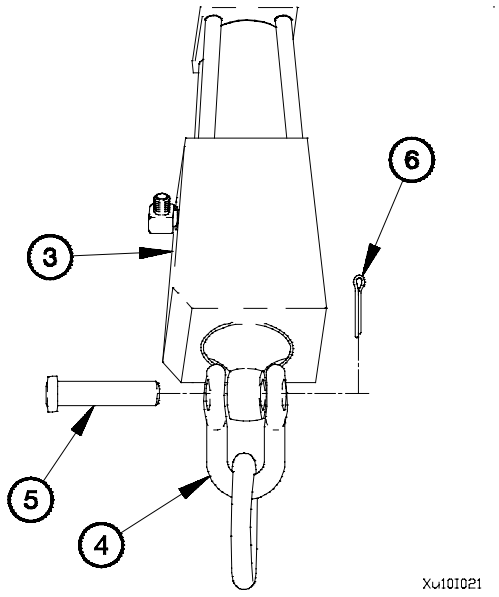
b. Installation.

NOTE

Left and right side suspension cylinders are installed the same way. Right side shown.

(1) Install two preformed packings (1) on 90-degree fittings (2).

(2) Install two 90-degree fittings (2) in suspension cylinder (3).



(3) Install shackle (4) on suspension cylinder (3) with pin (5) and cotter pin (6).

(4) Install suspension compression plate (7) on suspension compression plate stud (8) with spring pin (9).

WARNING

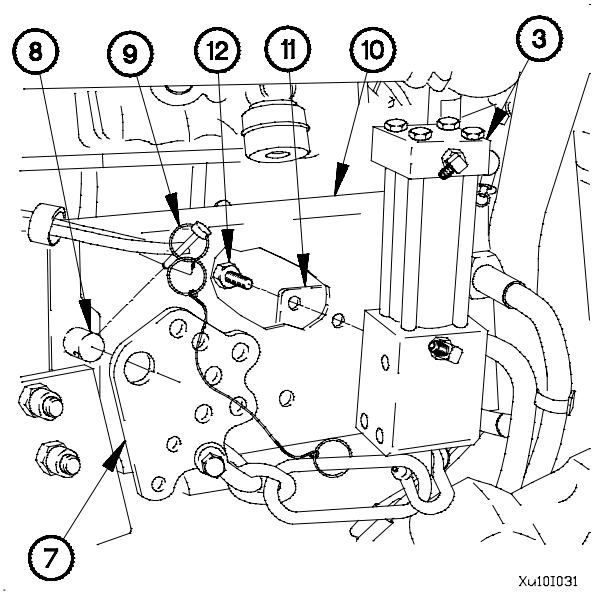
Wear appropriate eye protection when working under vehicle due to the possibility of falling debris. Failure to comply may result in injury to personnel.

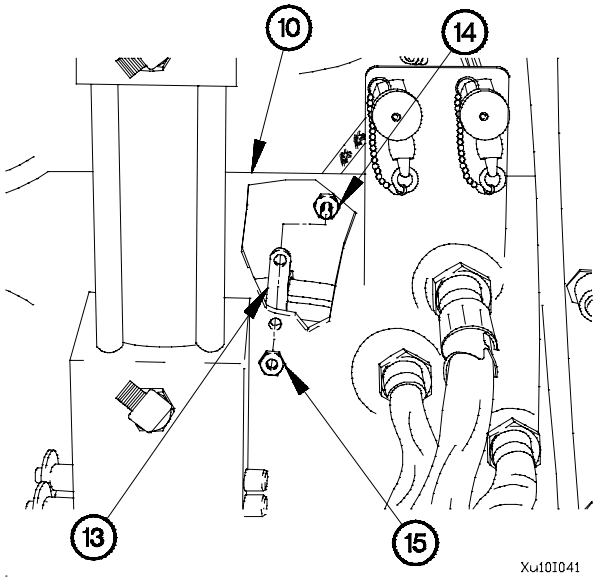
NOTE

Steps (5) through (8) require the aid of an assistant.

(5) Position suspension cylinder (3) on frame rail (10) with plate (11) and three screws (12).

(6) Tighten three screws (12) to 149-183 lb-ft (202-248 N·m).



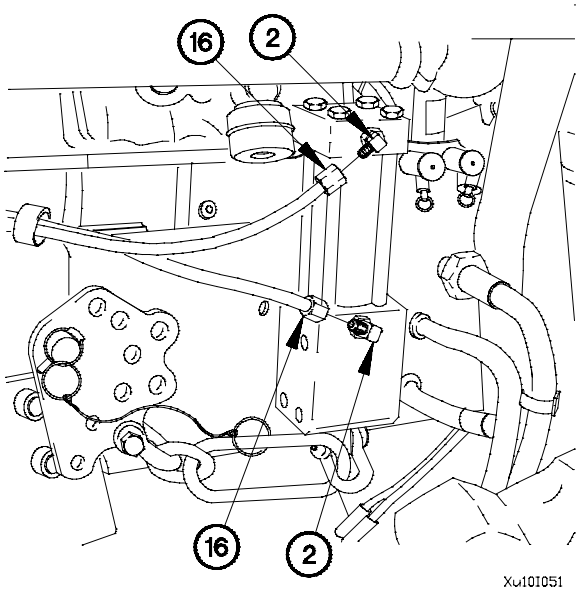


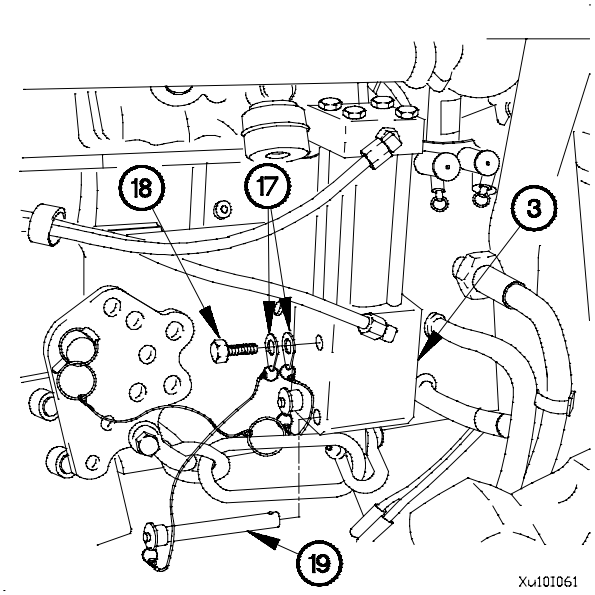
(7) Position clamp (13) on frame rail (10) with screw (14), and self-locking nut (15).

(8) Tighten self-locking nut (15) to 84-108 lb-in. (9-12 N·m).

19-9. SUSPENSION CYLINDER REPLACEMENT (CONT)

(9) Connect two hydraulic hoses (16) to 90-degree fittings (2).





(10) Position two lanyards (17) on suspension cylinder (3) with screw (18).

(11) Tighten screw (18) to 18-22 lb-ft (24-30 N·m).

(12) Install two quick release pins (19) in suspension cylinder (3).

c. Follow-On Maintenance.

(1) Fill air transportability hydraulic system (Appendix H).

(2) Lower cab (TM 9-2320-365-10).

End of Task.

19-10. CAB HYDRAULIC CYLINDER REPLACEMENT

This task covers:

a. Removal
b. Installation
c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
Engine shut down (TM 9-2320-365-10).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Wrench, Torque, 0-600 lb-ft (Item 59, Appendix C)
Wrench Set, Socket (Item 48, Appendix C)
Pan, Drain (Item 24, Appendix C)
Sling, Endless (Item 32, Appendix C)
Gloves, Rubber (Item 13, Appendix C)
Goggles, Industrial (Item 15, Appendix C)
Cab Support Tool (Item E-4, Appendix E)

Materials/Parts
Nipple, Tube (Item 35, Appendix D)
Grease, Automotive and Artillery (GAA) (Item 23, Appendix D)
Ties, Cable, Plastic (Item 76, Appendix D)
Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D)
Pin, Cotter (Item 207, Appendix G)
Nut, Self-Locking (Item 151, Appendix G)
Pin, Cotter (Item 206, Appendix G)
Washer, Spring (Item 274, Appendix G)
Packing, Preformed (2) (Item 161, Appendix G)
Washer, Spring (Item 282, Appendix G)
Packing, Preformed (Item 167, Appendix G)
Hydraulic Fluid A (Item 26, Appendix D)

Personnel Required
(2)

a. Removal.

(1) Position drain pan under cab hydraulic cylinder (1).

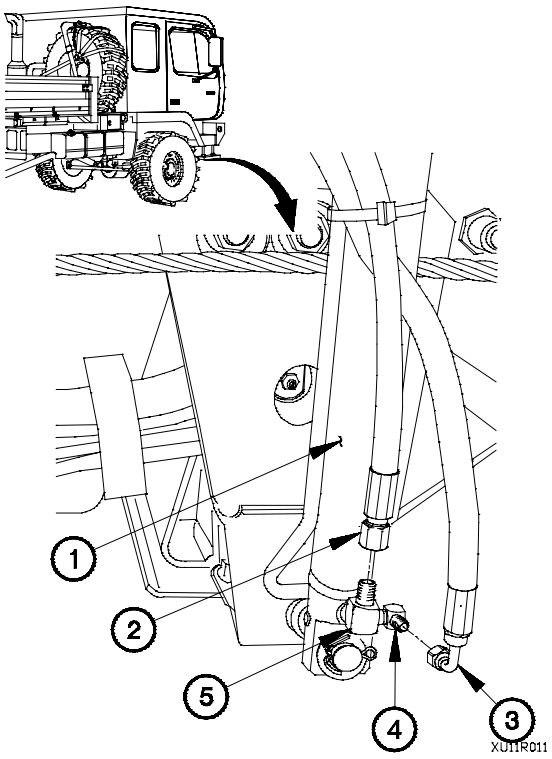
WARNING

Hydraulic fluid (MIL-H-5606) is TOXIC. Wear protective goggles and gloves; use only in well-ventilated area; avoid contact with skin, eyes, and clothes. Skin and clothing that come in contact with hydraulic oil should be washed immediately. Saturated clothing should be removed immediately. Failure to comply may result in injury to personnel.

NOTE

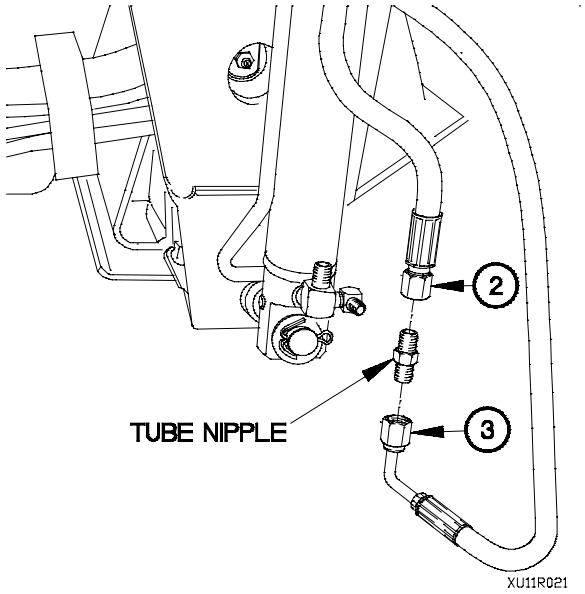
- Remove plastic cable ties as required.
- Tag hoses and connection points prior to disconnecting.

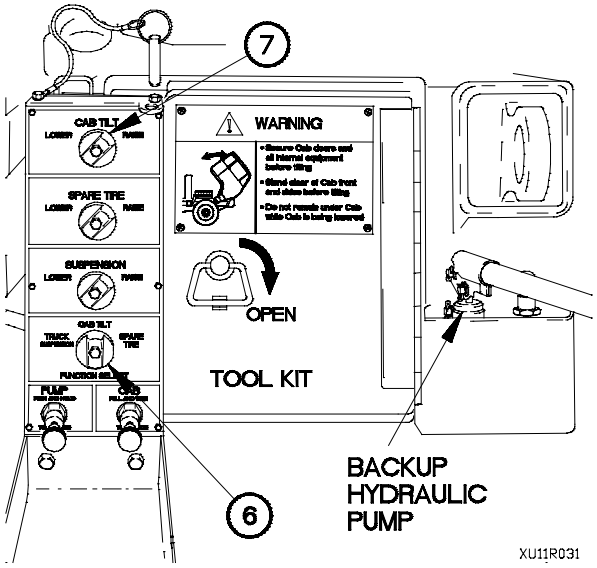
(2) Disconnect hoses (2 and 3) from 90-degree fittings (4 and 5).



19-10. CAB HYDRAULIC CYLINDER REPLACEMENT (CONT)

(3) Connect hoses (2 and 3) to tube nipple.





(4) Turn FUNCTION SELECT valve (6) to CAB TILT position.

(5) Turn CAB TILT valve (7) to the RAISE position.

CAUTION

Use only the backup hydraulic pump to unlatch cab. Failure to comply may result in damage to equipment.

(6) Operate backup hydraulic pump (TM 9-2320-365-10).

WARNING

Cab weighs approximately 3000 lbs (1362 kgs) attach a suitable lifting device prior to raising cab. Failure to comply may result in injury to personnel.

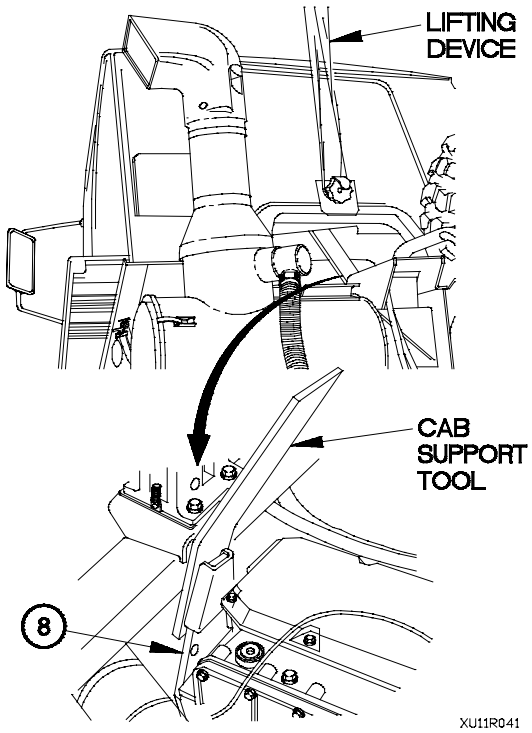
NOTE

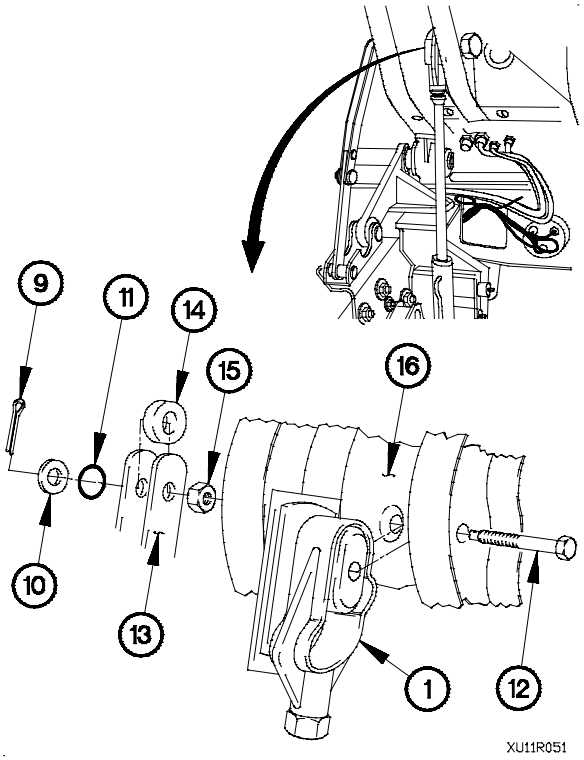
Steps (7) through (9) require the aid of an assistant.

(7) Raise cab.

(8) Install cab support tool on engine rear lifting bracket (8).

(9) Lower cab on cab support tool.





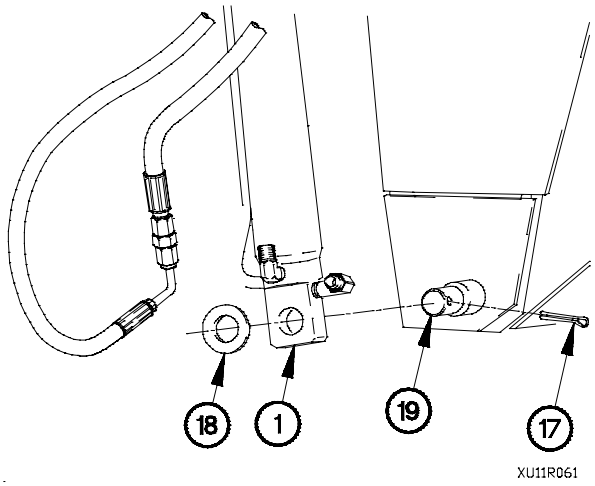
(10) Remove cotter pin (9), washer (10), and preformed packing (11) from cab hydraulic cylinder mounting bolt (12). Discard cotter pin and preformed packing.

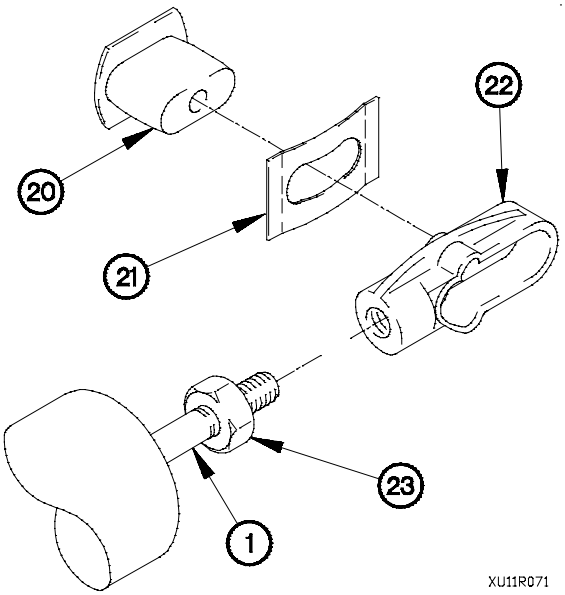
(11) Disengage pivot arm (13) and spacer (14) from cab hydraulic cylinder mounting bolt (12).

(12) Remove self-locking nut (15), cab hydraulic cylinder mounting bolt (12), and cab hydraulic cylinder (1) from cab frame (16). Discard self-locking nut.

19-10. CAB HYDRAULIC CYLINDER REPLACEMENT (CONT)

(13) Remove cotter pin (17), spring washer (18), and cab hydraulic cylinder (1) from stud (19). Discard cotter pin and spring washer.





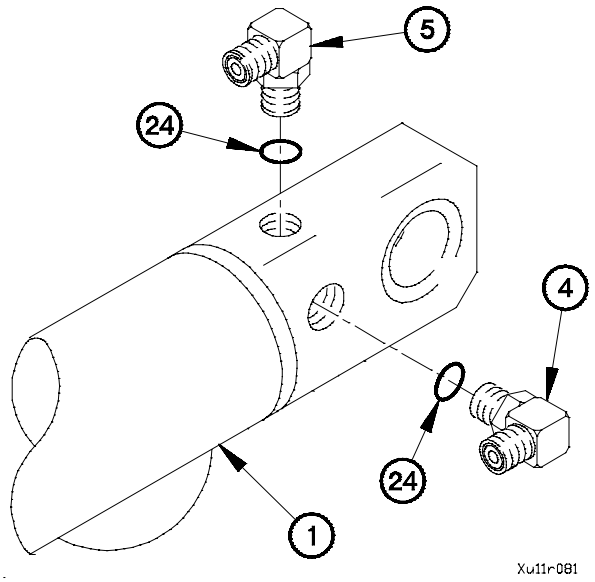
(14) Remove control cam (20) and spring washer (21) from mounting bracket (22). Discard spring washer.

(15) Loosen jamnut (23) under mounting bracket (22) until jamnut (23) bottoms out on threads.

(16) Remove mounting bracket (22) from cab hydraulic cylinder (1).

(17) Remove 90-degree fittings (4 and 5) from cab hydraulic cylinder (1).

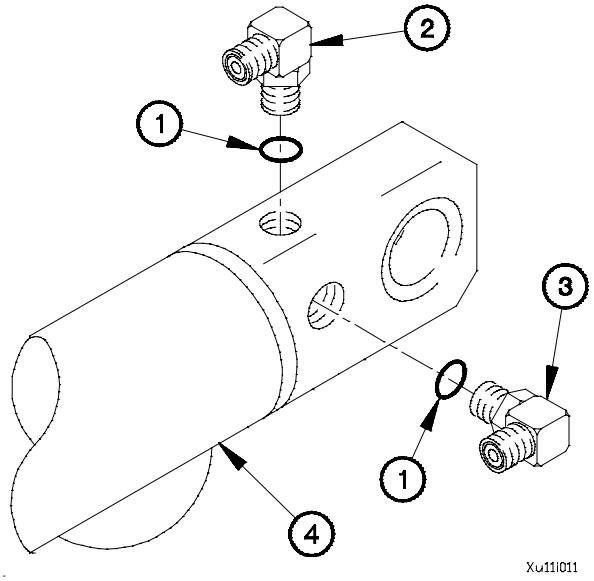
(18) Remove two preformed packings (24) from 90-degree fittings (4 and 5). Discard preformed packings.

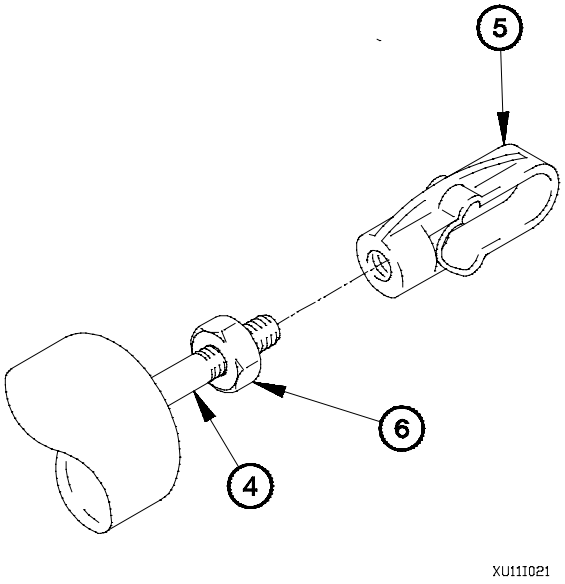


b. Installation.

(1) Install two preformed packings (1) on 90-degree fittings (2 and 3).

(2) Install 90-degree fittings (2 and 3) in cab hydraulic cylinder (4).

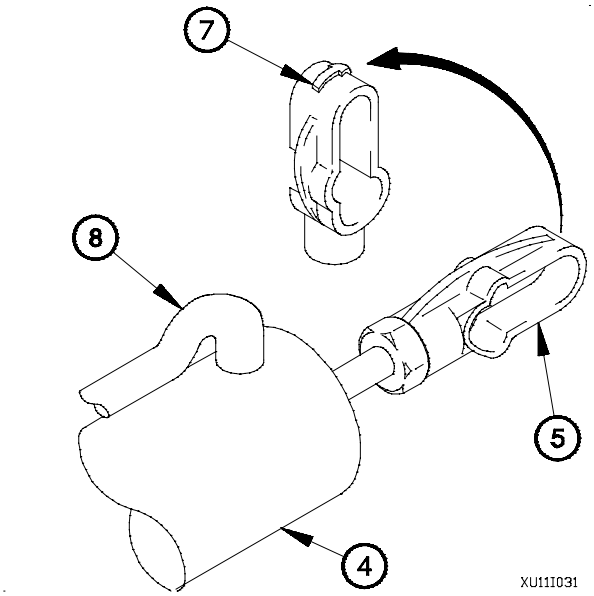




(3) Install mounting bracket (5) on cab hydraulic cylinder (4) until mounting bracket bottoms out on threads.

(4) Tighten jamnut (6) against mounting bracket (5).

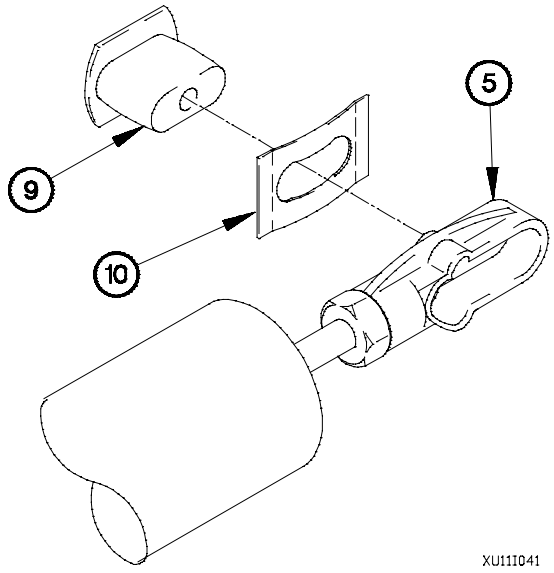
(5) Align mounting bracket (5) so arrow (7) on top of mounting bracket is aligned 180 degrees opposite tube (8) on cab hydraulic cylinder (4).

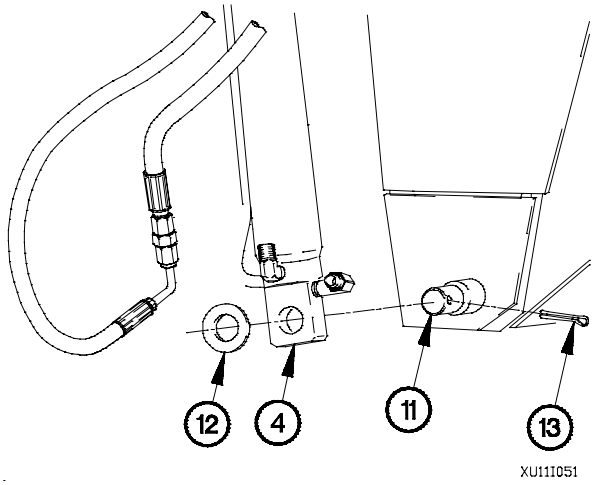


19-10. CAB HYDRAULIC CYLINDER REPLACEMENT (CONT)

(6) Apply grease to inside of mounting bracket (5).

(7) Assemble control cam (9) and spring washer (10) and insert in mounting bracket (5) with long side of control cam aligned in long slot of mounting bracket.



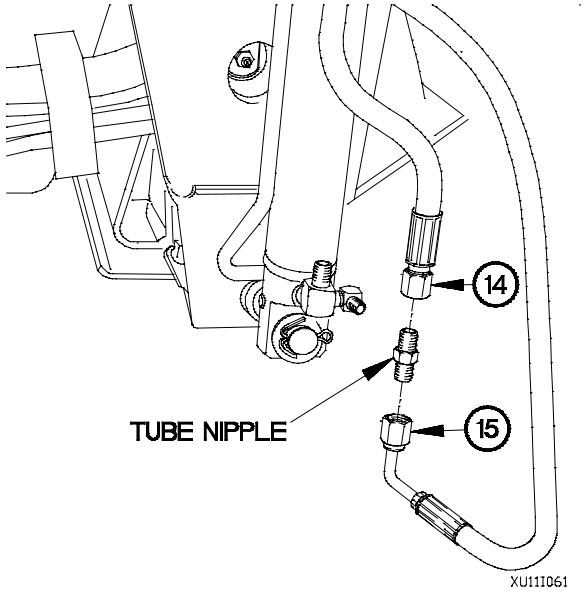


NOTE

Cab hydraulic cylinder is installed so that hydraulic fittings face away from engine and arrow on top of mounting bracket points toward front of vehicle.

(8) Install cab hydraulic cylinder (4) on stud (11) with spring washer (12) and cotter pin (13).

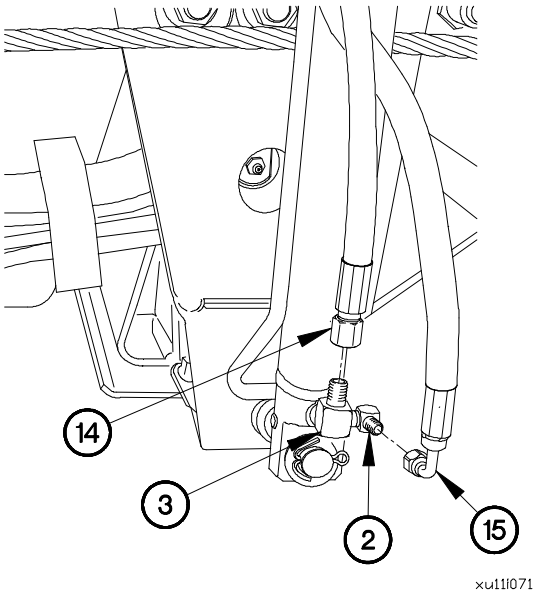
(9) Remove hoses (14 and 15) from tube nipple.

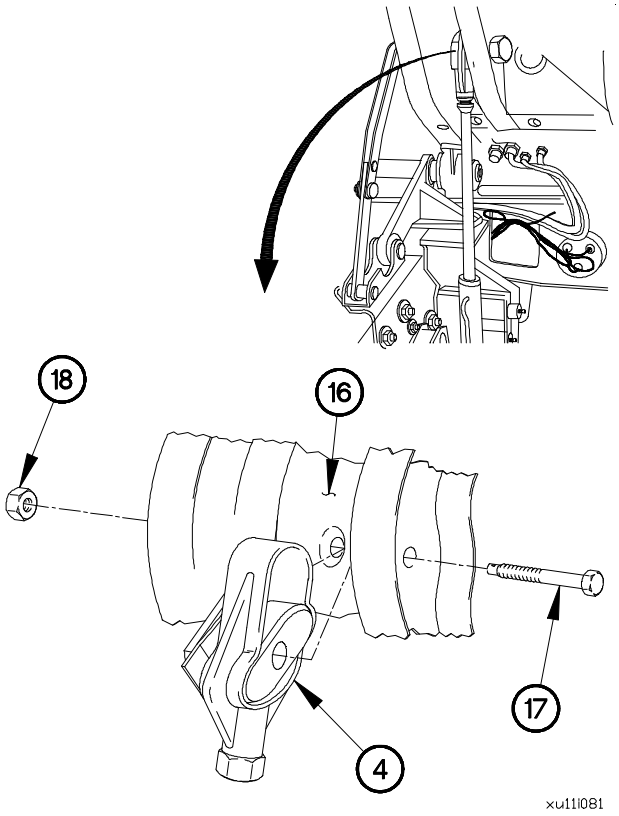


NOTE

Install plastic cable ties as required.

(10) Install hoses (14 and 15) on 90-degree fittings (2 and 3).





(11) Position cab hydraulic cylinder (4) between cab frame (16) with cab hydraulic cylinder mounting bolt (17) and self-locking nut (18).

CAUTION

Ensure long side of control cam remains aligned with short slot in mounting bracket. Failure to comply may result in damage to equipment.

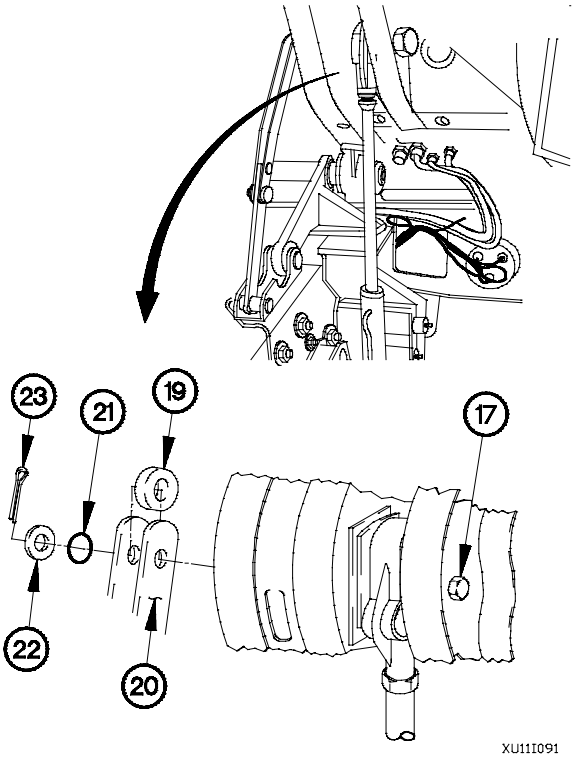
(12) Tighten self-locking nut (18) to 180-232 lb-ft (244-314 N•m).

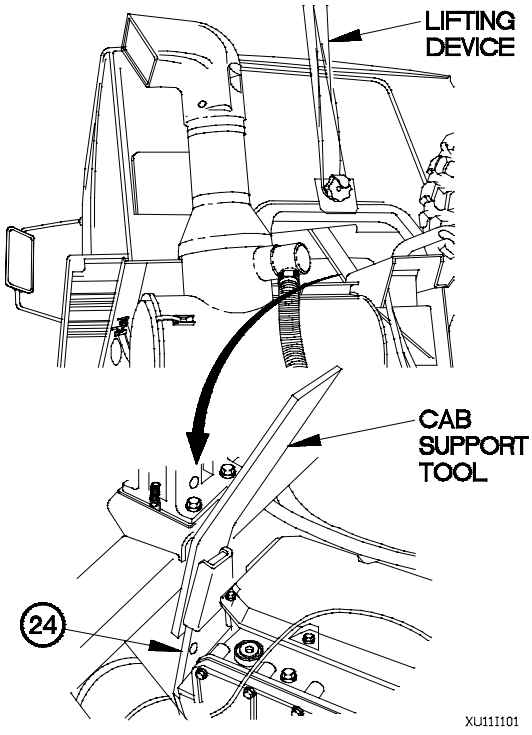
19-10. CAB HYDRAULIC CYLINDER REPLACEMENT (CONT)

(13) Position spacer (19) between pivot arm (20) and install cab hydraulic cylinder mounting bolt (17) through locking arms.

■ (14) Raise cab.

(15) Install preformed packing (21), washer (22), and cotter pin (23) on cab hydraulic cylinder mounting bolt (17).





■ (16) Remove lifting device.

(17) Remove cab support tool from engine rear lifting bracket (24).

(18) Lower cab.

c. Follow-On Maintenance.

Perform air transportability hydraulic system service (para 19-7).

End of Task.

19-11. AIR TRANSPORTABILITY HYDRAULIC HOSE REPLACEMENT

This task covers:

a. Hydraulic Hose Locations

b. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
Engine shut down (TM 9-2320-365-10).
Cab raised, if required (TM 9-2320-365-10).
Spare tire lowered, if required (TM 9-2320-365-10).
Manifold removed from tool box (para 19-4).
Hand pump protective cover removed, if required.
Air/hydraulic power unit protective cover removed, if required (para 19-3).

Tools and Special Tools
Tool Kit, General Mech (Item 44, Appendix C)
Pan, Drain (Item 24, Appendix C)
Goggles, Industrial (Item 15, Appendix C)
Gloves, Rubber (Item 13, Appendix C)

Materials/Parts
Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D)
Cap and Plug Set (Item 15, Appendix D)
Ties, Cable, Plastic (Item 76, Appendix D)
Rag, Wiping (Item 51, Appendix D)

a. Hydraulic Hose Locations.

WARNING

- **Wear appropriate eye protection when working under vehicle due to the possibility of falling debris. Failure to comply may result in injury to personnel.**
- **Hydraulic fluid (MIL-H-5606A) is TOXIC. Wear protective goggles and gloves; use only in well ventilated areas; avoid contact with skin, eyes, and clothes. Skin and clothing that come in contact with hydraulic oil should be washed immediately. Saturated clothing should be removed immediately. Failure to comply may result in injury to personnel.**

CAUTION

Cap or plug hose connection points and hoses when removed to prevent contamination of air transportability hydraulic system. Failure to comply may result in damage to equipment.

NOTE

- Refer to **Table 19-1. Air Transportability Hydraulic Hose Locations** for location of hydraulic hoses on the air transportability system. It may not be necessary to remove all hydraulic hoses at one time.
- Tag hoses and connection points prior to removal.
- Remove plastic cable ties as required.
- Remove clamps and support brackets as required.
- Position drain pan to collect hydraulic fluid.

19-11. AIR TRANSPORTABILITY HYDRAULIC HOSE REPLACEMENT (CONT)

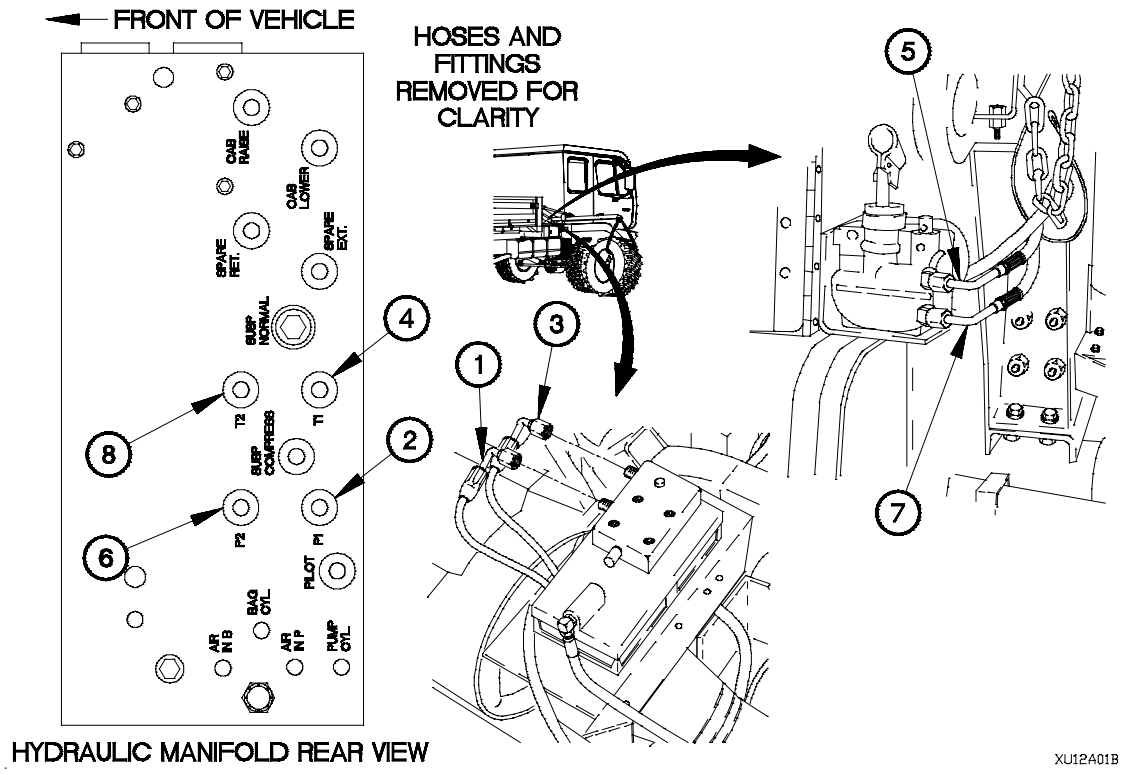


Figure 19-1.2. Air Transportability Hydraulic Hose Locations

Table 19-1. Air Transportability Hydraulic Hose Locations

Hydraulic Hose Name (Number)	From	To
Main Pressure (515)	Air/Hydraulic power unit fitting (1)	Fitting P1 (2)
Main Return (514)	Air/Hydraulic power unit fitting (3)	Fitting T1 (4)
Hand Pump Pressure (521)	Hand pump fitting (7)	Fitting P2 (6)
Hand Pump Return (520)	Hand pump fitting (5)	Fitting T2 (8)

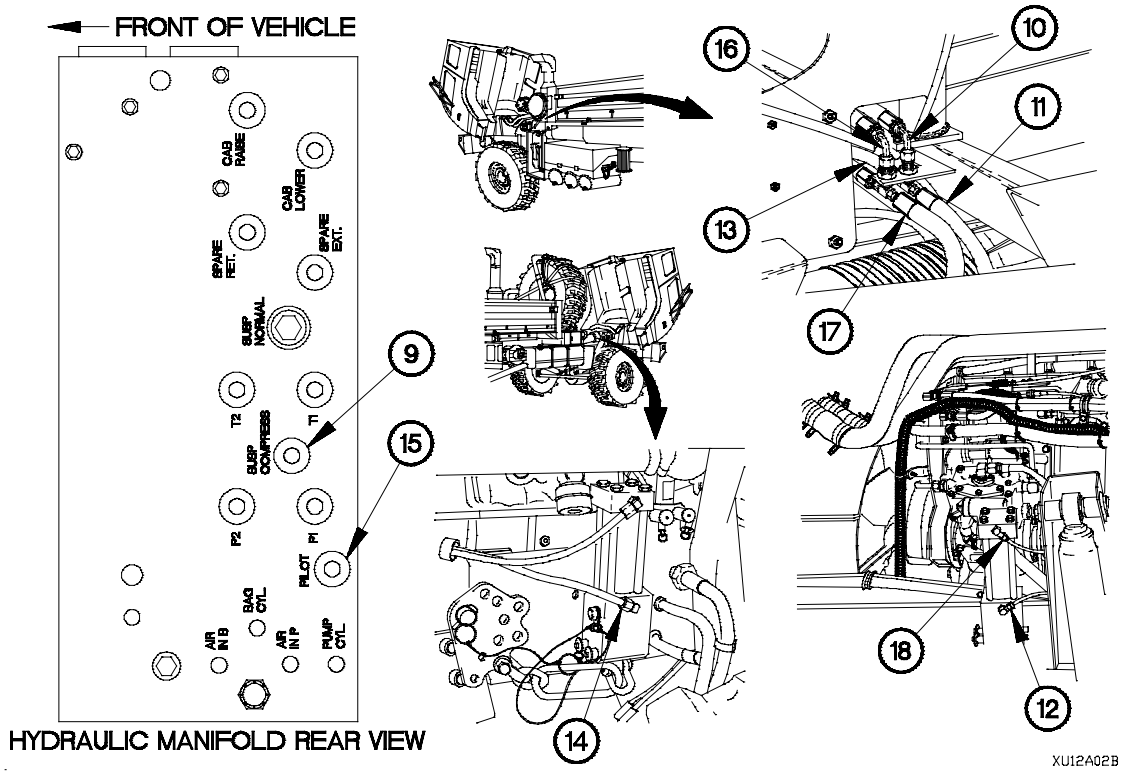


Figure 19-1.2. Air Transportability Hydraulic Hose Locations (Cont)

Table 19-1. Air Transportability Hydraulic Hose Locations (Cont)

Hydraulic Hose Name (Number)	From	To
Suspension Lower (512)	SUSP COMPRESS fitting (9)	Three way tee fitting (10)
Suspension Lower, Left (510)	Three way tee fitting (11)	Left suspension hydraulic cylinder fitting (12)
Suspension Lower, Right (508)	Three way tee fitting (13)	Right suspension hydraulic cylinder fitting (14)
Suspension Normal (513)	PILOT fitting (15)	Three way tee fitting (16)
Suspension Normal, Left (511)	Three way tee fitting (17)	Left suspension hydraulic cylinder fitting (18)

19-11. AIR TRANSPORTABILITY HYDRAULIC HOSE REPLACEMENT (CONT)

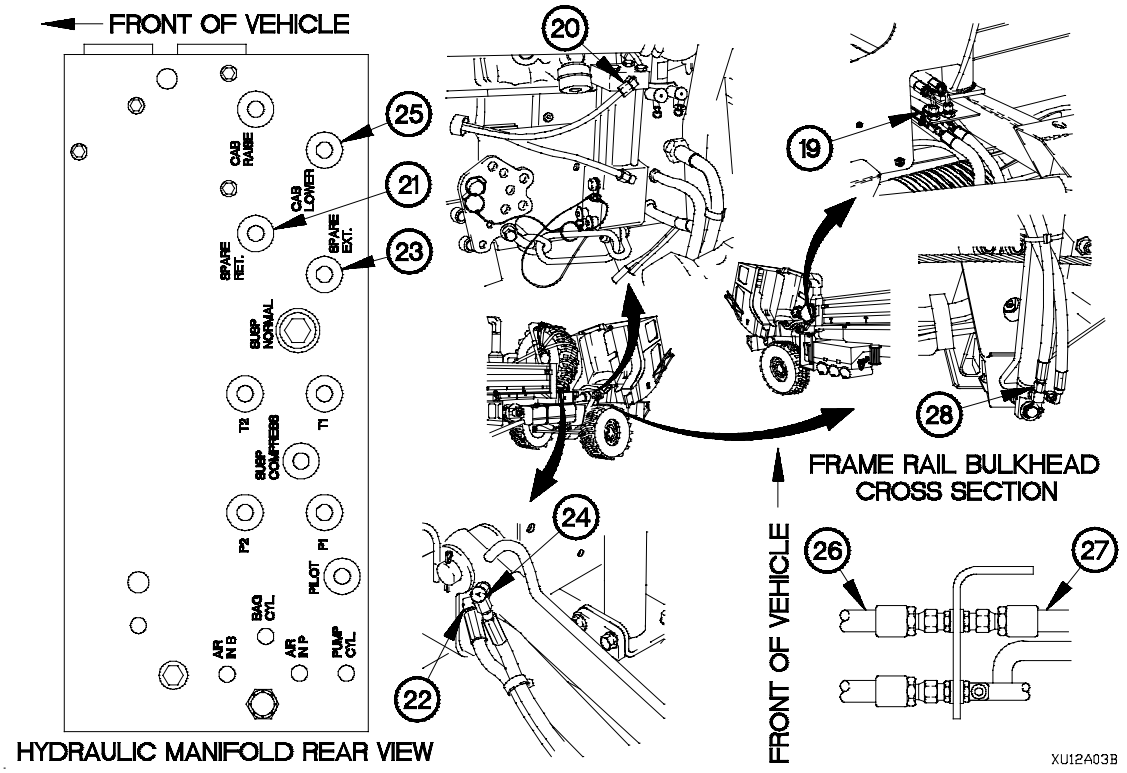


Figure 19-1.2. Air Transportability Hydraulic Hose Locations (Cont)

Table 19-1. Air Transportability Hydraulic Hose Locations (Cont)

Hydraulic Hose Name (Number)	From	To
Suspension Normal Right (509)	Three way tee fitting (19)	Right suspension hydraulic cylinder fitting (20)
Spare Tire Retract (517)	SPARE RET. fitting (21)	Spare tire carrier hydraulic cylinder fitting (22)
Spare Tire Extend (516)	SPARE EXT. fitting (23)	Spare tire carrier hydraulic cylinder fitting (24)
Cab Tilt Retract Rear (518)	CAB LOWER fitting (25)	Bulkhead fitting (26)
Cab Tilt Retract Forward	Bulkhead fitting (27)	Cab tilt hydraulic fitting (28)

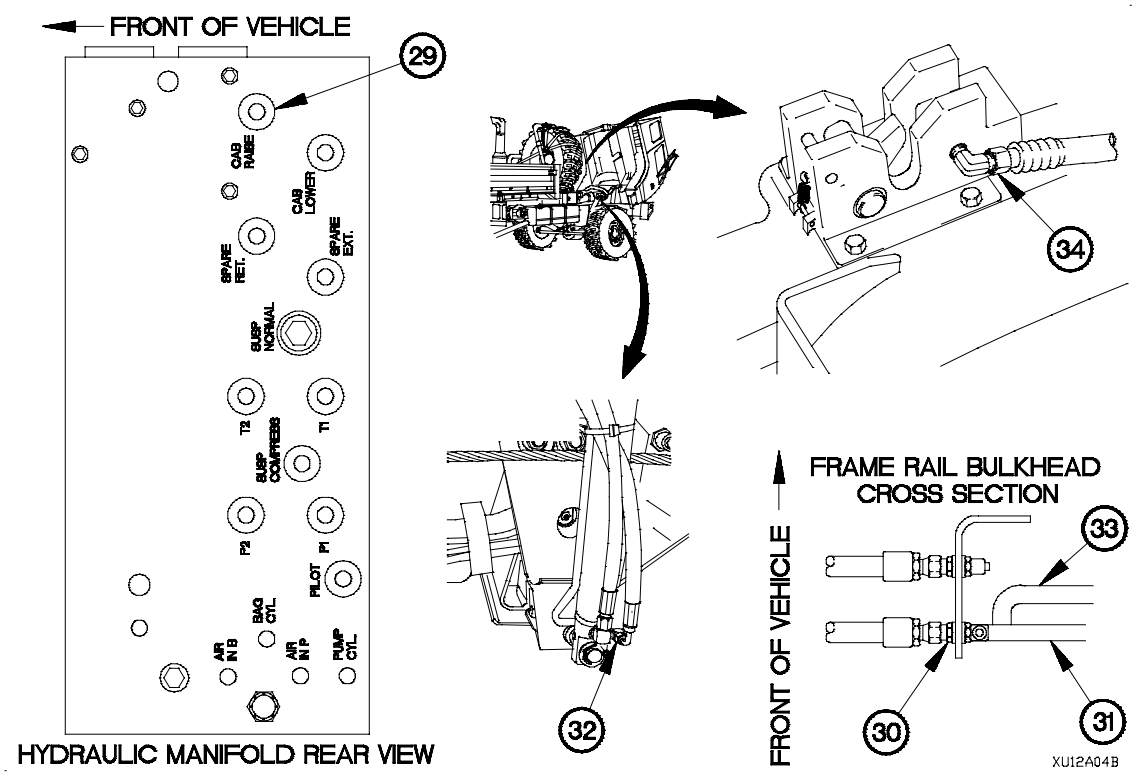


Figure 19-1.2. Air Transportability Hydraulic Hose Locations (Cont)

Table 19-1. Air Transportability Hydraulic Hose Locations (Cont)

Hydraulic Hose Name (Number)	From	To
Cab Tilt Extend Rear (519)	CAB RAISE fitting (29)	Bulkhead fitting (30)
Cab Tilt Extend Forward	Bulkhead fitting (31)	Cab tilt hydraulic cylinder fitting (32)
Cab Latch	Bulkhead fitting (33)	Rear cab latch fitting (34)

b. Follow-On Maintenance.

(1) Service air transportability hydraulic system as required (Appendix H).

(2) Operate air transportability system, check for proper operation (TM 9-2320-365-10).

(3) Check for hydraulic fluid leaks.

End of Task

19-12. HYDRAULIC OIL FILTER ASSEMBLY SERVICE/REPLACEMENT

This task covers:

a. Service
b. Removal
c. Installation
d. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
Engine shut down (TM 9-2320-365-10).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C)
Pan, Drain (Item 24, Appendix C)

Materials/Parts
Filter Element, Fluid (Item 17, Appendix G) (Service)
Seal, Plain (Item 255.1, Appendix G) (Service)
Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D)
Packing, Preformed (2) (Item 162, Appendix G)
Oil, Lubricating, OE/HDO 10W (Item 44, Appendix D)
Tape, Antiseizing (Item 73, Appendix D)

a. Service.

(1) Remove hydraulic oil filter assembly bowl (1) from filter assembly base (2).

(2) Remove fluid filter element (3) from oil filter assembly bowl (1). Discard fluid filter element.

(3) Remove seal (4) from hydraulic oil filter assembly bowl (1). Discard seal.

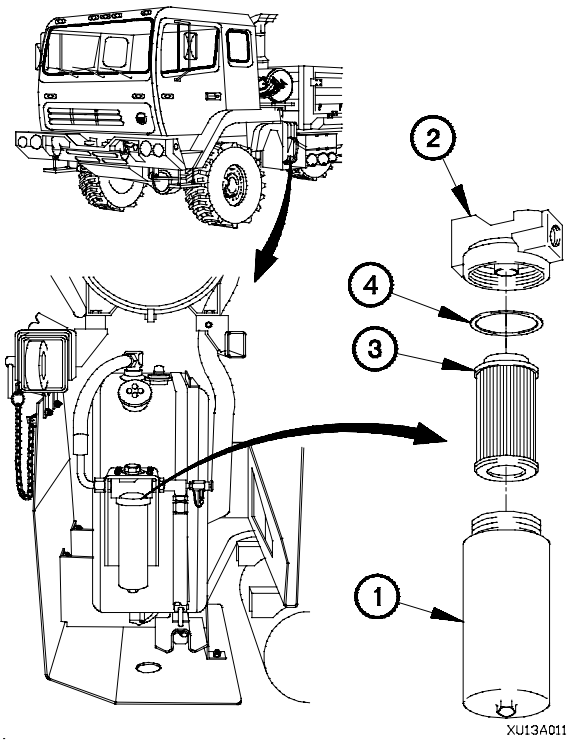
NOTE

Apply lubricating oil to seal prior to installation.

(4) Install seal (4) on hydraulic oil filter assembly bowl (1).

(5) Install fluid filter element (3) in hydraulic oil filter assembly bowl (1).

(6) Install hydraulic oil filter assembly bowl (1) on filter assembly base (2) and hand tighten.



b. Removal.

NOTE

Tag hoses and connection points prior to disconnecting.

(1) Position drain pan under hydraulic oil filter assembly (1).

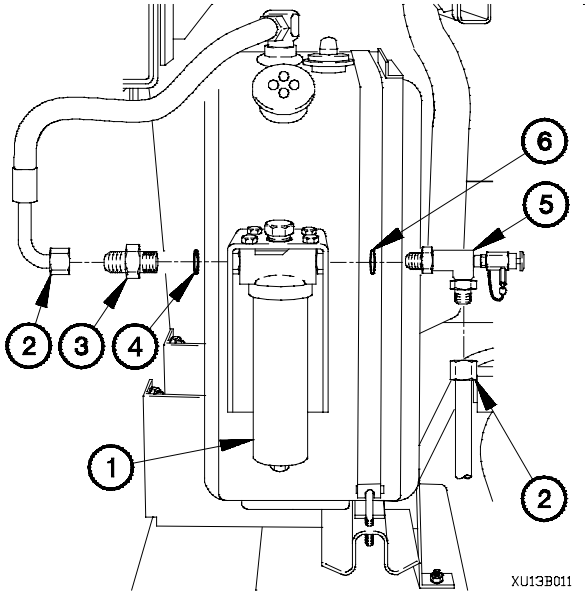
(2) Disconnect two hoses (2) from hydraulic oil filter assembly (1).

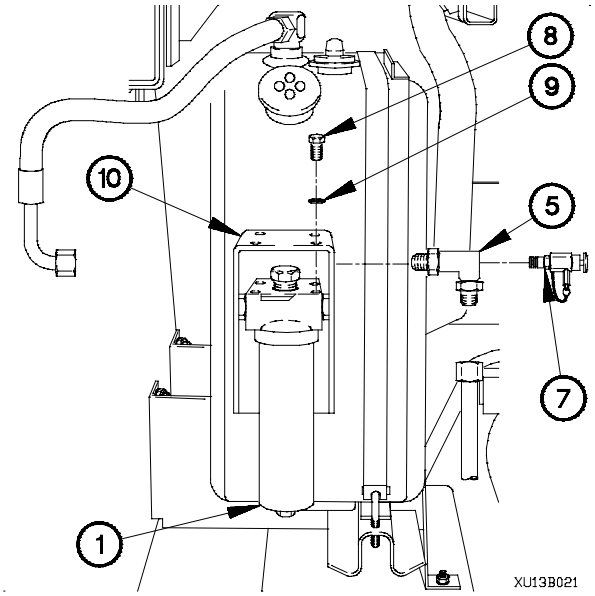
(3) Remove fitting (3) from hydraulic oil filter assembly (1).

(4) Remove preformed packing (4) from fitting (3). Discard preformed packing.

(5) Remove adapter (5) from hydraulic oil filter assembly (1).

(6) Remove preformed packing (6) from adapter (5). Discard preformed packing.





(7) Remove hydraulic oil sampling valve (7) from adapter (5).

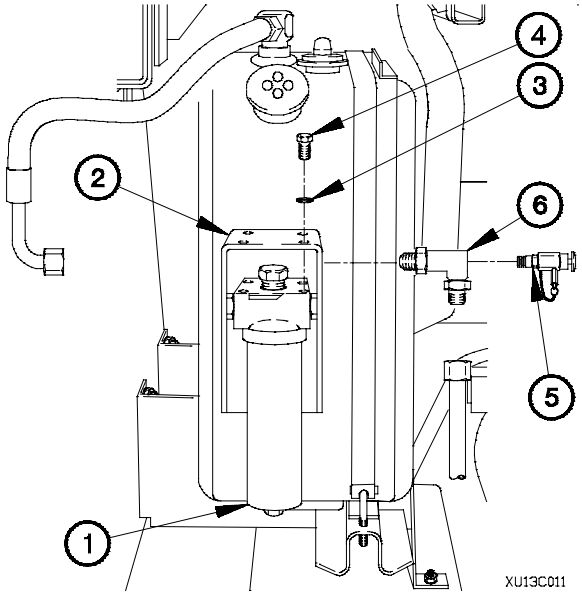
(8) Remove four screws (8), washers (9), and hydraulic oil filter assembly (1) from bracket (10).

19-12. HYDRAULIC OIL FILTER ASSEMBLY SERVICE/REPLACEMENT (CONT)

c. Installation.

NOTE

Apply lubricating oil to preformed packings during installation.

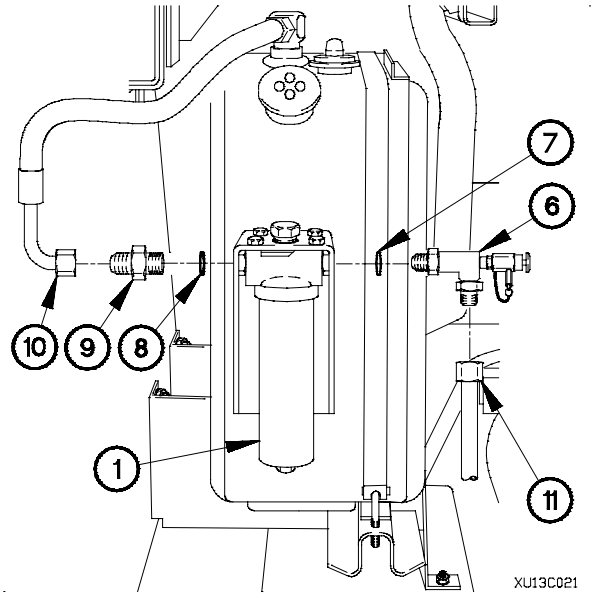


(1) Install hydraulic oil filter assembly (1) on bracket (2) with four washers (3) and screws (4).

(2) Tighten four screws (4) to 20-24 ft-lb (27-33 N•m).

(3) Apply antiseizing tape to threads of hydraulic oil sampling valve (5).

(4) Install hydraulic oil sampling valve (5) in adapter (6).



(5) Install preformed packing (7) on adapter (6).

(6) Install adapter (6) in hydraulic oil filter assembly (1).

(7) Install preformed packing (8) on fitting (9).

(8) Install fitting (9) on hydraulic oil filter assembly (1).

(9) Connect hose (10) to fitting (9).

(10) Connect hose (11) to adapter (6).

d. Follow-On Maintenance.

(1) Fill hydraulic reservoir (Appendix H).

(2) Start engine (TM 9-2320-365-10).

(3) Check for oil leaks around hydraulic oil filter.

(4) Shut down engine (TM 9-2320-365-10).

End of Task.

19-13. HYDRAULIC RESERVOIR AND BRACKET REPLACEMENT

This task covers:

a. Removal
b. Installation
c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions
Hydraulic oil filter assembly removed (para 19-12).

Tools and Special Tools
Tool Kit, Genl Mech (Item 44, Appendix C)
Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C)
Wrench Set, Socket (Item 49, Appendix C)
Container (30 gal (113 L) capacity)

Materials/Parts
Cap and Plug Set (Item 15, Appendix D)
Packing, Preformed (2) (Item 164, Appendix G)

Materials/Parts (Cont)
Sealing Compound (Item 62, Appendix D)
Oil, Lubricating, OE/HDO 10W (Item 44, Appendix D)
Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D)
Nut, Self-Locking (Item 136, Appendix G)
Nut, Self-Locking (4) (Item 140, Appendix G)
Insulator, Tank (Item 52, Appendix G)
Insulator, Tank (Item 53, Appendix G)

Personnel Required
(2)

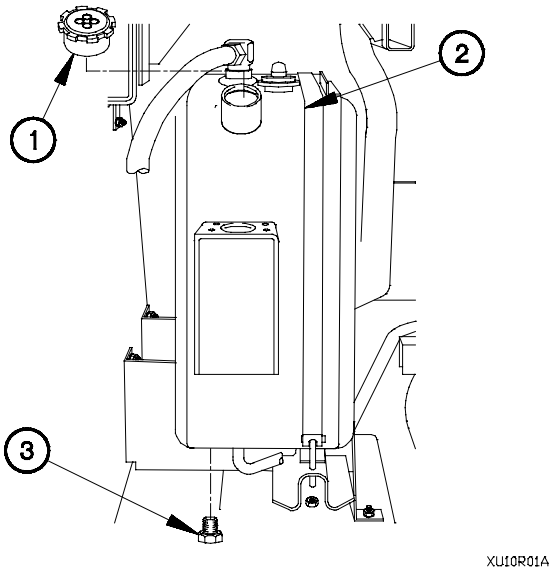
a. Removal.

CAUTION

Cap or plug hydraulic connections and connection points to prevent contamination of hydraulic system. Failure to comply may result in damage to equipment.

NOTE

Tag hoses and connection points prior to disconnecting.



(1) Remove cap (1) from hydraulic reservoir (2).

(2) Position container under drain plug (3).

(3) Remove drain plug (3) from hydraulic reservoir (2) and drain oil.

(4) Install drain plug (3) in hydraulic reservoir (2).

(5) Install cap (1) on hydraulic reservoir (2).

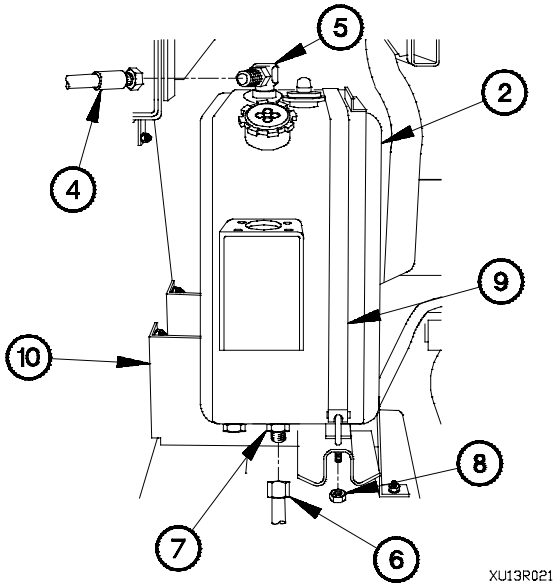
19-13. HYDRAULIC RESERVOIR AND BRACKET REPLACEMENT (CONT)

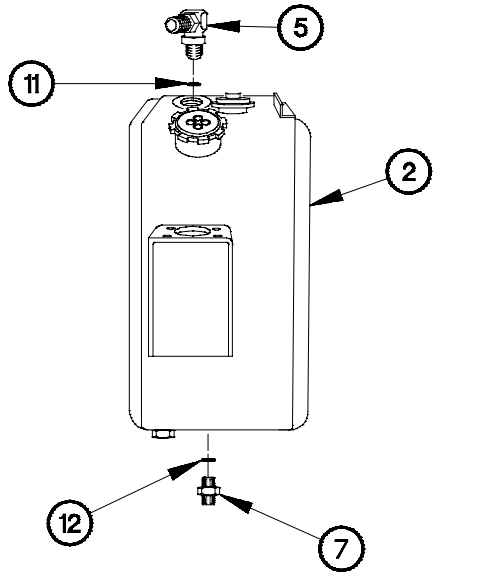
(6) Remove hose (4) from 90-degree fitting (5).

(7) Disconnect hose (6) from fitting (7).

(8) Remove nut (8) from strap (9).

(9) Remove hydraulic reservoir (2) from support (10).





(10) Remove 90-degree fitting (5) from hydraulic reservoir (2).

(11) Remove preformed packing (11) from 90-degree fitting (5). Discard preformed packing.

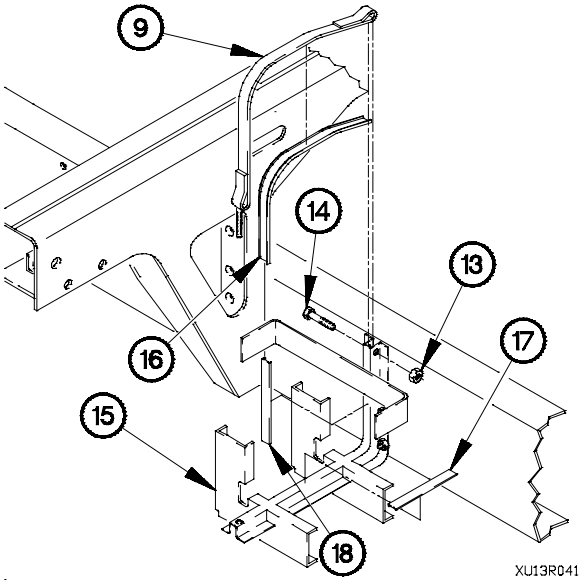
(12) Remove fitting (7) from hydraulic reservoir (2).

(13) Remove preformed packing (12) from fitting (7). Discard preformed packing.

(14) Remove self-locking nut (13), bolt (14), and strap (9) from bracket (15). Discard self-locking nut.

(15) Remove insulator strap (16) from strap (9).

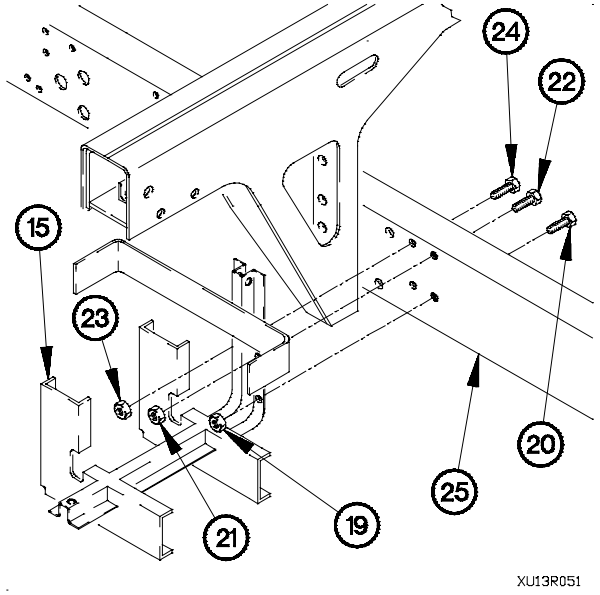
(16) Remove insulators (17 and 18) from bracket (15). Discard insulators.



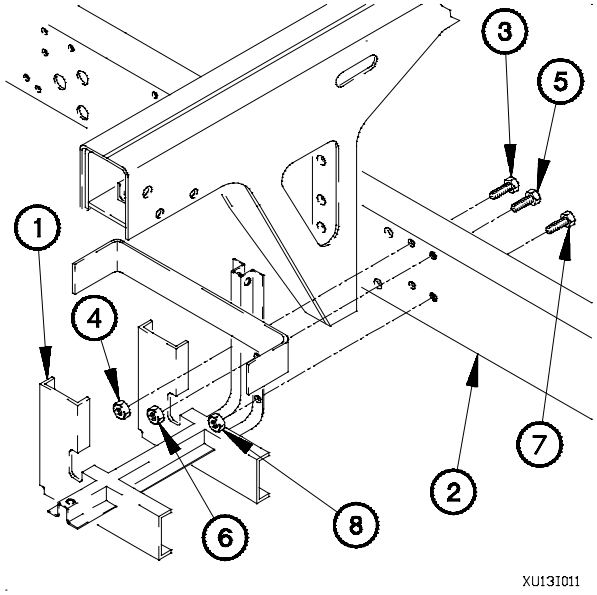
(17) Remove self-locking nut (19) and bolt (20) from bracket (15). Discard self-locking nut.

(18) Remove self-locking nut (21) and bolt (22) from bracket (15). Discard self-locking nut.

(19) Remove two self-locking nuts (23), bolts (24), and bracket (15) from frame rail (25). Discard self-locking nuts.



b. Installation.

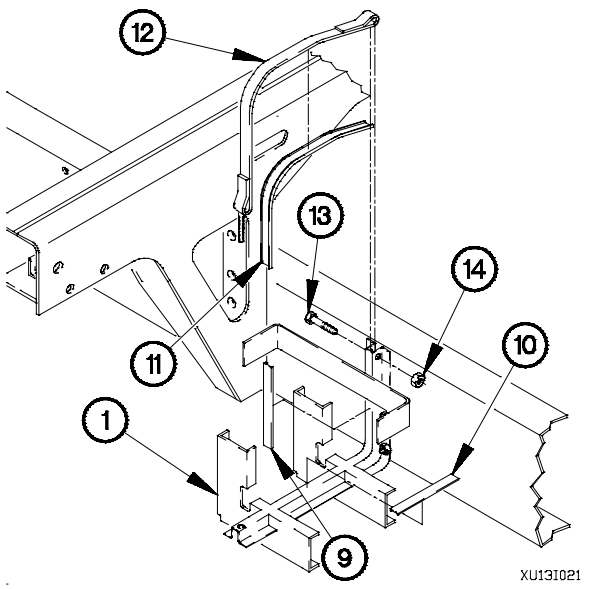


(1) Position bracket (1) on frame rail (2) with two bolts (3) and self-locking nuts (4).

(2) Position bolt (5) and self-locking nut (6) in bracket (1).

(3) Position bolt (7) and self-locking nut (8) in bracket (1).

(4) Tighten two self-locking nuts (4) and self-locking nuts (6 and 8) to 210-225 lb-ft (285-305 N·m).



(5) Install insulators (9 and 10) on bracket (1).

(6) Install insulator strap (11) on strap (12).

(7) Position strap (12) on bracket (1) with bolt (13) and self-locking nut (14).

(8) Tighten self-locking nut (14) to 39-47 lb-ft (52-64 N·m).

19-13. HYDRAULIC RESERVOIR AND BRACKET REPLACEMENT (CONT)

NOTE

Apply lubricating oil to preformed packings during installation.

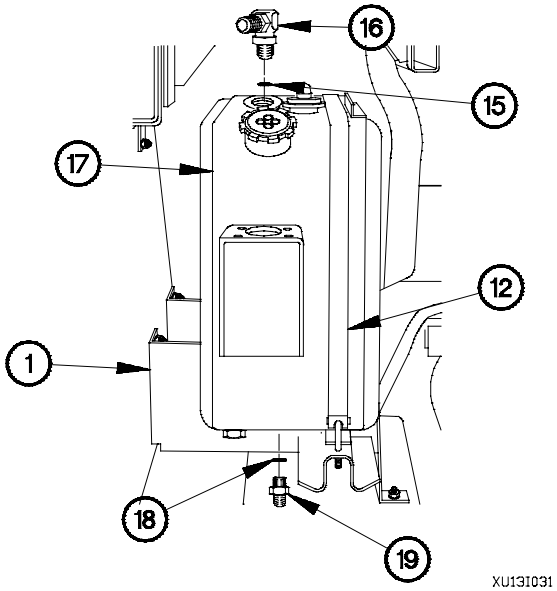
(9) Install preformed packing (15) on 90-degree fitting (16).

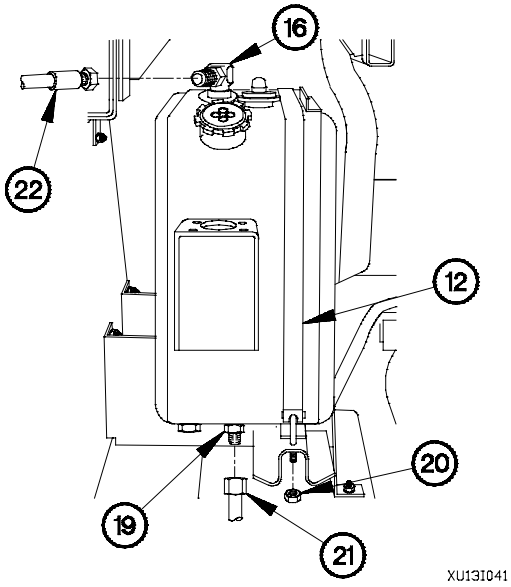
(10) Install 90-degree fitting (16) in hydraulic reservoir (17).

(11) Install preformed packing (18) on fitting (19).

(12) Install fitting (19) in hydraulic reservoir (17).

(13) Position hydraulic reservoir (17) in bracket (1) with strap (12) positioned around hydraulic reservoir (17).





WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, washer immediately with soap and water. Failure to comply may result in injury to personnel.

(14) Apply sealing compound to threads of nut (20).

(15) Position nut (20) on strap (12).

(16) Tighten nut (20) to 42-52 ft-lb (57-71 N•m).

(17) Connect hose (21) to fitting (19).

(18) Connect hose (22) to 90-degree fitting (16).

c. Follow-On Maintenance.

(1) Install hydraulic oil filter assembly (para 19-12).

(2) Fill hydraulic reservoir (TM 9-2320-365-10).

End of Task.

APPENDIX A
REFERENCES

A-1. SCOPE

This appendix lists all forms, field manuals, technical manuals, and other publications referenced in this manual. Those publications that should be consulted for additional information about vehicle operations are also listed.

A-2. PUBLICATIONS INDEX

The following index should be consulted frequently for latest changes or revisions and for new publications relating to material covered in this technical manual.

Consolidated Index of Army Publications and Blank Forms . . . . . DA Pam 25-30

A-3. FORMS

The following forms pertain to this manual. See DA Pam 25-30 for index of blank forms. See DA Pam 738-750, The Army Maintenance Management System (TAMMS), for instructions on the use of maintenance forms pertaining to this material.

Equipment Control Record . . . . . DA Form 2408-9
Equipment Inspection and Maintenance Worksheet . . . . . DA Form 2404
Maintenance Request . . . . . DA Form 2407
Packaging Improvement Report . . . . . DD Form 6
Processing and Deprocessing Record of Shipping, Storage, and Issue of Vehicles and Spare Engines . . . . . DD Form 1397
Product Quality Deficiency Report . . . . . SF 368
Recommended Changes to DA Publications and Blank Forms . . . . . DA Form 2028-2
Report of Item Discrepancy (ROID) . . . . . SF 364

A-4. OTHER PUBLICATIONS

The following publications contain information pertinent to the LMTV and associated equipment.

a. Safety.

First Aid for Soldiers . . . . . FM 21-11
Security of Tactical Wheeled Vehicles . . . . . TB 9-2300-422-20
Safety Inspection and Testing of Lifting Devices . . . . . TB 43-0142

A-4. OTHER PUBLICATIONS (CONT)

b. LMTV.

Direct Support and General Support Maintenance Manual for M1078 Series, 2 1/2-Ton, 4x4, Light Medium Tactical Vehicle (LMTV) . . . . . TM 9-2320-365-34
Hand Receipt Covering Contents of Components of End Item (COEI), Basic Issue Items (BII), and Additional Authorization List (AAL), for M1078 Series, 2 1/2-Ton, 4x4, Light Medium Tactical Vehicles (LMTV) . . . . . TM 9-2320-365-10-HR
Operator's Manual for M1078 Series, 2 1/2-Ton, 4x4, Light Medium Tactical Vehicle (LMTV) . . . . . TM 9-2320-365-10
Unit, Direct Support, and General Support Repair Parts and Special Tools List for M1078 Series, 2 1/2-Ton, 4x4, Light Medium Tactical Vehicle (LMTV) . . . . . TM 9-2320-365-24P
Warranty Program for M1078 Series, 2 1/2-Ton, 4x4, Light Medium Tactical Vehicle (LMTV) . . . . . TB 9-2300-365-15

c. General Vehicle Operation.

Army Motor Transport Units and Operations . . . . . FM 55-30
Deleted
Manual for the Wheeled Vehicle Driver . . . . . FM 21-305
Safety Prevention of Motor Vehicle Accidents . . . . . AR 385-55
Vehicle Recovery Operations . . . . . FM 20-22

d. General Maintenance and Repair.

Army Oil Analysis Program . . . . . TB 43-0211
Camouflage Pattern Painting . . . . . FM 5-20
Charging System Troubleshooting . . . . . DA Pam 750-33
Color, Marking, and Camouflage Painting of Military Vehicles . . . . . TB 43-0209
Cooling Systems: Tactical Vehicles . . . . . TM 750-254
Corrosion Prevention and Control Including Rustproofing Procedures for Tactical Vehicles and Trailers . . . . . TB 43-0213
Description, Use, Bonding Techniques, and Properties of Adhesives . . . . . TB ORD 1032
Equipment Improvement Report and Maintenance Digest: TACOM Equipment . . . . . TB 43-0001-39-1
Equipment Improvement Report and Maintenance Summary . . . . . TM 43-0143
Installation Instructions for Installation Kit, Electronic Equipment, MK-2700/VRC (NSN 5895-01-421-0814) (EIC: N/A) to Permit Installation of Radio Set AN/VRC-87/88/90 Series into M1078, M1080, M1081, M1083-M1086, M1088-M1094 and M1096 Family of Medium Tactical Vehicles . . . . . TB 11-5820-890-20-101
Installation Instructions for Installation Kit, Electronic Equipment, MK-2715/VRC (NSN 5895-01-421-0812) (EIC: N/A) to Permit Installation of Radio Set AN/VRC-89/91/92 Series into M1078, M1080, M1081, M1083-M1086, M1088-M1094 and M1096 Family of Medium Tactical Vehicles . . . . . TB 11-5820-890-20-92
Metal Body Repair and Related Operations . . . . . FM 43-2
Materials Used for Cleaning, Preserving, Abrading, and Cementing Ordnance Materiel and Related Materials Including Chemicals . . . . . TM 9-247
Operator's and Organizational Maintenance Manual for Radio Sets . . . . . TM 11-5820-498-12
Operator's and Organizational Maintenance Manual Including Repair Parts and Special Tools List Simplified Test Equipment for Internal Combustion Engines Reprogrammable (STE/ICE-R) (NSN 4910-01-222-6589) . . . . . TM 9-4910-571-12&P
Operator's Manual, Radio Set, AN/VRC-46 . . . . . TM 11-5820-401-10-1

Operator's Manual, Radio Set, AN/VRC-90A . . . . . TM 11-5820-890-10-1
Operator's, Unit, Direct Support, and General Support Maintenance Manual for Lead-Acid Storage Batteries . . . . . TM 9-6140-200-14
Ordnance Tracked and Wheeled Vehicle Hull and Chassis Wiring, Repair of . . . . . TB ORD 650
Organizational Care, Maintenance, and Repair of Pneumatic Tires and Inner Tubes . . . . . TM 9-2610-200-14
Painting Instructions for Field Use . . . . . TM 43-0139
Purging, Cleaning, and Coating Interior Ferrous and Terne Sheet Vehicle Fuel Tanks . . . . . TB 43-0212
Repair of Tents, Canvas, and Webbing . . . . . FM 10-16
Rigging Techniques, Procedures, and Applications . . . . . FM 5-125
Use and Care of Hand Tools and Measuring Tools . . . . . TM 9-243
Use of Antifreeze Solutions and Cleaning Compounds in Engine Cooling Systems . . . . . TB 750-651
Welding Theory and Application . . . . . TM 9-237

e. Cold Weather Operation.

Basic Cold Weather Manual . . . . . FM 31-70
Northern Operations . . . . . FM 31-71
Operation and Maintenance of Ordnance Materiel in Cold Weather (0° to -65°F) . . . . . FM 9-207

f. Decontamination.

Decontamination Operations Facilities & Equipment . . . . . TB 700-4
NBC Protection . . . . . FM 3-4
NBC Decontamination . . . . . FM 3-5

g. Maintenance of Special Purpose Kits.

Operator and Organizational Maintenance Manual for Chemical Alarm . . . . . TM 3-6665-225-12
Operator's and Unit Maintenance Manual Including Repair Parts and Special Tools List for Decontaminating Apparatus: M13 . . . . . TM 3-4230-214-12&P
Operator's, Organizational, Direct Support, and General Support Maintenance Manual Including Repair Parts and Special Tools List for Various Machine Gun Mounts . . . . . TM 9-1005-245-14
Operator's, Organizational, Direct Support, and General Support Maintenance Manual, Air Conditioner, Horizontal Compact, 18,000 BTU/HR, 208 Volt, 3 Phase, 50/60 Hertz, Model F18H-3S . . . . . TM 5-4120-384-14
Unit and Direct Support Maintenance, Repair Parts and Special Tools List for Heater, Space, Multifuel with Blower, 60,000 BTU/HR, 120V, Model UH-68G, NSN 4520-01-203-4410, and Model UH-68GI, NSN 4520-01-297-6803 . . . . . TM 5-4520-253-23P

h. General.

Operator's Manual (M998 Series) . . . . . TM 9-2320-280-10
Operator's Manual (M1008 Series) . . . . . TM 9-2320-289-10
Operator's Manual (M35 Series) . . . . . TM 9-2320-361-10
Operator's Manual (M939 Series) . . . . . TM 9-2320-272-10
Principles of Automotive Vehicles . . . . . TM 9-8000
Procedures for Destruction of Tank-Automotive Equipment to Prevent Enemy Use (US Army Tank-automotive and Armaments Command) . . . . . TM 750-244-6
Route Reconnaissance and Classification . . . . . FM 5-36
Soldier's Manual MOS 88M Motor Transport Operator, Skill Levels 1/2 . . . . . STP 55-88-M12-SM

A-4. OTHER PUBLICATIONS (CONT)

i. Land, Sea, and Air Shipment.

Airdrop of Supplies and Equipment: Rigging 2 1/2-Ton Trucks . . . . . FM 10-520
Containerization of Military Vehicles . . . . . MTMCTEA Ref 95-55-23
Lifting and Tiedown of U.S. Military Helicopters . . . . . MTMCTEA Ref 95-55-21
Marine Lifting and Lashing Handbook . . . . . MTMCTEA Ref 95-55-22
Marine Terminal Lifting Guidance . . . . . MTMCTEA Pam 56-1
Multiservice Helicopter External Air Transport: Basic Operations and Equipment . . . . . FM 55-450-3
Multiservice Helicopter External Air Transport: Dual-Point Load Rigging Procedures . . . . . FM 55-450-5
Multiservice Helicopter External Air Transport: Single-Point Load Rigging Procedures . . . . . FM 55-450-4
Standard Characteristics (Dimensions, Weight, and Cube) for Transportability of Military Vehicles and Other Outsize/Overweight Equipment (in TOE Line Sequence) . . . . . TB 55-46-1
Tiedown Handbook for Rail Movements . . . . . MTMCTEA Pam 55-19
Tiedown Handbook for Truck Movements . . . . . MTMCTEA Ref 92-55-20

APPENDIX B
MAINTENANCE ALLOCATION CHART (MAC)

SECTION I

INTRODUCTION

B-1. The Army Maintenance System MAC.

a.This introduction (Section I) provides a general explanation of all maintenance and repair functions authorized at various maintenance levels under the standard Army Maintenance System concept.

b.The Maintenance Allocation Chart (MAC) in Section II designates overall authority and responsibility for the performance of maintenance functions on the identified end item or component. The application of the maintenance functions to the end item or component will be consistent with the capacities and capabilities of the designated maintenance levels, which are shown on the MAC in column (4) as:

Unit/Field - includes two subcolumns, C (Operator/Crew) and O (Unit) maintenance.

Direct Support/Field - includes an F subcolumn.

General Support/Sustainment - includes an H subcolumn.

Depot/Sustainment - includes a D subcolumn.

c.Section III lists the tools and test equipment (both special tools and common tool sets) required for each maintenance function as referenced from Section II.

d.Section IV contains supplemental instructions and explanatory notes for a particular maintenance function.

B-2. Maintenance Functions. Maintenance functions are limited to and defined as follows:

a.**Inspect**. To determine the serviceability of an item by comparing its physical, mechanical, and/or electrical characteristics with established standards through examination (e.g. by sight, sound, or feel).

b.**Test**. To verify serviceability by measuring the mechanical, pneumatic, hydraulic, or electrical characteristics of an item and comparing those characteristics with prescribed standards.

c.**Service**. Operations required periodically to keep an item in proper operating condition; e.g. to clean (includes decontaminate, when required), to preserve, to drain, to paint, or to replenish fuel, lubricants, chemicals fluids, or gases.

d.**Adjust**. To maintain or regulate, within prescribed limits, by bringing into proper position, or by setting the operating characteristics to specified parameters.

e.**Align**. To adjust specified variable elements of an item to bring about optimum or desired performance.

f.**Calibrate**. To determine and cause corrections to be made or to be adjusted on instruments or Test, Measurement, and Diagnostic Equipment (TMDE) used in precision measurement. Consists of comparison of two instruments, one of which is a certified standard of known accuracy, to detect and adjust any discrepancy in the accuracy of the instrument being compared.

g.**Remove/Install**. To remove and install the same item when required to perform service or other maintenance functions. Install may be the act of emplacing, seating, or fixing into position a spare, repair part, or module (component or assembly) in a manner to allow the proper functioning of an equipment or system.

h.**Replace**. To remove an unserviceable item and install a serviceable counterpart in its place. "Replace " is authorized by the MAC and assigned maintenance level is shown as the 3d position code of the SMR code.

i. **Repair**. The application of maintenance services[1] including fault location/troubleshooting[2], removal/installation, and disassembly/assembly[3] procedures, and maintenance actions[4] to identify troubles and restore serviceability to an item by correcting specific damage, fault, malfunction, or failure in a part, subassembly, module (component or assembly), end item, or system.

j. **Overhaul**. That maintenance effort (service/action) prescribed to restore an item to a completely serviceable/operational condition as required by maintenance standards in appropriate technical publications (i.e., DMWR). Overhaul is normally the highest degree of maintenance performed by the Army. Overhaul does not normally return an item to like new condition.

k.**Rebuild**. Consists of those services/actions necessary for the restoration of unserviceable equipment to a like new condition in accordance with original manufacturing standards. Rebuild is the highest degree of material maintenance applied to Army equipment. The rebuild operation includes the act of returning to zero those age measurements (e.g., hours/miles) considered in classifying Army equipment/components.

B-3. Explanation of Columns in the MAC, Section II.

a.**Column 1, Group Number.** Column 1 lists functional group code numbers, the purpose of which is to identify maintenance significant components, assemblies, subassemblies, and modules with the next higher assembly.

b.**Column 2, Component/Assembly.** Column 2 contains the item names of components , assemblies, subassemblies, and modules for which maintenance is authorized.

c.**Column 3, Maintenance Function.** Column 3 lists the functions to be performed on the items listed in Column 2. (For detailed explanation of these functions, see Paragraph B-2.)

d.**Column 4, Maintenance Level.** Column 4 specifies each level of maintenance authorized to perform each function listed in Column 3, by indicating work time required (expressed in man-hours in whole hours or decimals) in the appropriate subcolumn. This work-time figure represents the active time required to perform that maintenance function at the indicated level of maintenance. If the number or complexity of the tasks within the listed maintenance function vary at different maintenance levels, appropriate work-time figures are to be shown for each level. The work-time figure represents the average time required to restore an item (assembly, subassembly, component, module, end item, or system) to a serviceable condition under typical field operating conditions.

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[1]Services - Inspect, test, service, adjust, align calibrate, and/or replace.

[2]Fault location/troubleshooting - The process of investigating and detecting the cause of equipment malfunction; the act of isolating a fault within a system or Unit Under Test (UUT).

[3]Disassembly/assembly - The step-by-step breakdown (taking apart) of a spare/functional group coded item, to the level of its least component, that is assigned an SMR code for the level of maintenance under consideration (i.e., identified as maintenance significant).

[4]Actions - Welding, grinding, riveting, straightening, facing, machining, and/or resurfacing.

This time includes preparation time (including any necessary disassembly/assembly time), troubleshooting/fault location time, and quality assurance time in addition to the time required to perform the specific tasks identified for the maintenance functions authorized in the maintenance allocation chart. The symbol designations for the various maintenance levels are as follows:

C ..... Operator or crew maintenance
O .....Unit/Field maintenance
F .....Direct Support/Field maintenance
L ..... Specialized Repair Activity (SRA)[5]
H ..... General Support/Sustainment maintenance
D .....Depot/Sustainment maintenance

e. **Column 5, Tools and Test Equipment Reference Code.** Column 5 specifies, by code, those common tools sets (not individual tools), common TMDE, and special tools, special TMDE, and special support equipment required to perform the designated functions. Codes are keyed to tools and test equipment in Section III.

f. **Column 6, Remarks.** When applicable, this column contains a letter code, in alphabetical order, which is keyed to the remarks contained in Section IV.

B-4. Explanation of Columns in Tool and Test Equipment Requirements, Section III.

a. **Column 1, Reference Code.** The tool and test equipment reference code correlates with a code used in the MAC, Section II column 5.

b. **Column 2, Maintenance Level.** The lowest level of maintenance authorized to use the tool or test equipment.

c. **Column 3, Nomenclature.** Name or identification of the tool or test equipment.

d. **Column 4, National Stock Number.** The National Stock Number of tool or test equipment.

e. **Column 5, Tool Number.** The manufacturer's part number, model number, or type number.

B-5. Explanation of Columns in Remarks, Section IV.

a. **Column 1, Remarks Code.** The code recorded in column 6, Section II.

b. **Column 2, Remarks.** This column lists information pertinent to the maintenance function being performed as indicated in the MAC, Section II.

[5]This maintenance level is not included in Section II, Column (4) of the Maintenance Allocation Chart. Functions to this level of maintenance are identified by a work-time figure in the "H" column of Section II, Column (4), and an associated reference code is used in the Remarks column (6). This code is keyed to Section IV, Remarks, and the SRA complete repair application is explained there.

Section II. MAINTENANCE ALLOCATION CHART FOR THE LMTV VEHICLE

(1) Group Number	(2) Component/Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment Ref Code	(6) Remarks Code
			FIELD			SUSTAINMENT			
			Unit		Direct Support	General Support	Depot		
			C	O	F	H	D		
0100	ENGINE ASSEMBLY	Inspect		0.1				78	
		Test		1.5	0.3			78,79	
		Adjust			3.0			56,60,78,80	
		Service		0.8				57,59,78	
		Replace			7.0			16,56,59,61,78,79	
		Repair		0.4	1.6	3.3		16,31,32,44,56,59,60,61,78,79	
0101	CYLINDER HEAD ASSEMBLY	Inspect			0.1			78	
		Replace			2.0			44,56,59,60,78	
		Repair				2.5		56,59,60,61,62,78,81	
0102	CRANKSHAFT	Replace				16.0		56,57,60,71,78	
		Repair			3.8	16.0		16,31,32,56,59,60,61,78	
0103	FLEXPLATE, ENGINE	Replace			6.5			56,59,78	
		Repair			1.0			56,49,78	
0104	PISTON ASSEMBLY	Replace				9.0		56,57,59,60,62,78,79	
		Repair				0.6		78	
0105	CAMSHAFT ASSEMBLY	Replace				3.1		14,56,57,49,60,78	
		Repair				1.2		56,78	
0105	ROCKER ARM AND PUSH RODS	Replace			2.0			44,59,60,61,78	
		Repair			0.3			44,78	
0106	COOLER, ENGINE OIL	Replace			1.3			56,78	
		Repair			0.3			56,78	
0108	MANIFOLDS, INLET AND EXHAUST	Replace			1.5			56,60,61,78,79	
0301	INJECTOR ASSEMBLY, FUEL	Replace			2.1			44,57,78,80	
		Adjust			1.6			56,78,79,80	
0304	AIR INTAKE SYSTEM	Service		0.3					
		Repair		0.3				46,57	

Section II. MAINTENANCE ALLOCATION CHART FOR THE LMTV VEHICLE (CONT)

(1) Group Number	(2) Component/Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment Ref Code	(6) Remarks Code
			FIELD			SUSTAINMENT			
			Unit		Direct Support	General Support	Depot		
			C	O	F	H	D		
0304	INTAKE AIR CLEANER	Service		0.2					
		Replace		0.8				6,46,57, 78	
		Repair		0.4				57,78	
0305	TURBOCHARGER	Replace			0.8			56,61,78,79	
0306	FUEL TANK	Inspect	0.1						
		Replace		1.5				57,59,78	
0308	GOVERNOR, ENGINE SPEED	Replace			1.0			57,60,76,78 ,79	
		Repair		0.5	0.7			57,78	
0309	FILTER, FUEL/WATER SEPARATOR	Inspect	0.2						
		Service	0.2	0.3				78	
		Replace		0.5				57,78	
0311	ETHER STARTING AID	Replace		0.6				57,59,78	
0312	ACCELERATOR/HAND THROTTLE	Replace		0.5				57,78	
		Adjust		0.2				57,78	
0401	EXHAUST MUFFLER/PIPES	Inspect	0.1	0.2					
		Replace		0.9				57,59,78	
0501	RADIATOR/CHARGE AIR COOLER	Inspect	0.1						
		Replace		2.5				2,27,53, 59,78	
		Service		1.5				59,79	
		Repair		0.6	2.0			2,27,53, 59,78	
0501	RADIATOR OVERFLOW TANK	Replace		0.5				46,57,78	
		Repair		0.3				78	
0502	SHROUD, FAN	Replace		1.0				57,59,78,86	
0503	HOSES, WATER	Replace		0.5				57,59,78,86	
0504	PUMP, WATER	Replace		0.8				15,57,59,78 ,86	
0505	CLUTCH, ENGINE FAN	Inspect		1.0				57	
		Replace		1.5				2,53,57, 78	
		Repair			1.2			56,59,60,61 ,78,79	

Section II. MAINTENANCE ALLOCATION CHART FOR THE LMTV VEHICLE (CONT)

(1) Group Number	(2) Component/Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment Ref Code	(6) Remarks Code
			FIELD			SUSTAINMENT			
			Unit		Direct Support	General Support	Depot		
			C	O	F	H	D		
0601	ALTERNATOR, 100 AMP	Inspect		0.2					
		Test		0.5	1.5			59,63,78	
		Replace		1.0				59,78	
		Repair		0.2	0.5			38,56,57,59 ,63,78,79	
0603	STARTING MOTOR, ENGINE	Inspect		0.1					
		Test		0.5	0.5			57,63	
		Replace		1.5				2,9,57, 59,78	
		Repair			2.1			52,56,59,60 ,76,78	
0606	SOLENOID, FUEL SHUTOFF	Replace			1.0			60,78,80	
0607	CABLE ASSEMBLY, DASHBOARD	Test		0.5				56	
		Replace		2.9				57,59,76, 78	
		Repair		1.0	0.6			56,57,61,78	
0607	DISPLAY, LIGHTED INDICATOR	Test		0.3					
		Replace		0.5				78,86	
		Repair		0.3				78	
0609	LIGHT ASSEMBLY, BACKUP	Inspect	0.1						
		Replace		0.8				57,78	
		Repair		0.3				78	
0609	LIGHT, BLACKOUT DRIVE	Inspect	0.1						
		Replace		0.8				57,59,78	
		Repair		0.5				78	
0609	TAILLIGHT ASSEMBLY, COMPOSITE	Inspect	0.1						
		Replace		0.8				57,59,78	
		Repair		0.5				78	
0609	LIGHT ASSEMBLY, FRONT TURN SIGNAL AND PARK	Inspect	0.1						
		Replace		0.8				57,59,78	
		Repair		0.5				78	
0609	HEADLIGHT	Inspect	0.1						
		Adjust		0.4				78	
		Replace		1.0				57,59,78	
0610	AUDIBLE ALARM	Inspect	0.1						
0611	HORN, CAB	Inspect	0.1						

Section II. MAINTENANCE ALLOCATION CHART FOR THE LMTV VEHICLE (CONT)

(1) Group Number	(2) Component/Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment Ref Code	(6) Remarks Code
			FIELD			SUSTAINMENT			
			Unit		Direct Support	General Support	Depot		
			C	O	F	H	D		
		Replace		0.4				57,78	
0612	BOX ASSEMBLY, BATTERY	Inspect	0.1						
		Test		0.5				57,78	
		Service		0.3				57	A
		Replace		1.0				57,59,78	
		Repair		0.2				63	
0613	CABLE ASSEMBLY, LH/RH CAB AND DOOR MARKER LIGHTS	Inspect	0.1						
		Replace		0.8				78	
		Repair		0.7				63	
0613	CABLE ASSEMBLY, LOWER, CAB MARKER LIGHTS, M1081	Inspect	0.1						
		Replace		0.6				78,86	
		Repair		0.5				63	
0613	CABLE ASSEMBLY, UPPER, CAB CLEARANCE AND MARKER LIGHTS, M1081	Inspect	0.1						
		Replace		0.8				78,86	
		Repair		0.5				63	
0613	CABLE ASSEMBLY, STE/ICE-R	Replace		1.0				78	
		Repair		0.5	0.8			63	
0613	CABLE ASSEMBLY, CAB CLEARANCE AND MARKER LIGHTS	Inspect	0.1						
		Replace		1.2				57,78	
		Repair		0.5	0.8			63	
0613	CABLE ASSEMBLY, WARNING LIGHT	Replace		0.5				48,78,86	
		Repair		0.3	0.5			63	
0613	CABLE ASSEMBLY, WINDSHIELD WASHER PUMP/EMI	Replace		0.5				78	
		Repair		0.3				63	
0613	CABLE ASSEMBLY, ENGINE CONTROL	Inspect	0.1						
		Replace		2.3				57,78	
		Repair		0.5	0.5			63	
0613	CABLE ASSEMBLY, FRONT INTERVEHICULAR, 12 VDC	Replace		0.8				59,78	
		Repair		0.2	1.3			63	

Section II. MAINTENANCE ALLOCATION CHART FOR THE LMTV VEHICLE (CONT)

(1) Group Number	(2) Component/Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment Ref Code	(6) Remarks Code
			FIELD			SUSTAINMENT			
			Unit		Direct Support	General Support	Depot		
			C	O	F	H	D		
0613	CABLE ASSEMBLY, FRONT LIGHTS	Replace		2.0				57,59,78,86	
		Repair		0.5	0.5			63	
0613	CABLE ASSEMBLY, REAR LIGHTS	Replace		2.8				57,59,78	
		Repair		0.5	0.5			63	
0613	CABLE ASSEMBLY, PTO	Replace		1.6				57,59,78	
		Repair		0.5	0.8			63	
0613	CABLE ASSEMBLY, REAR INTERVEHICULAR, 24 VDC	Replace		0.6				59,78	
		Repair		0.5	0.8			63	
0613	CABLE ASSEMBLY, START AND CHARGING	Replace		2.0				57,78	
		Repair		0.5	0.8			63	
0613	CABLE ASSEMBLY, WINCH CONTROL VALVE	Replace		1.8				57,59,78	
		Repair		0.5	0.8			63	
0705	WTEC II VEHICLE INTERFACE MODULE (VIM)	Replace		0.6				78	
		Repair		0.8				78	
0708	TORQUE CONVERTER	Adjust			0.9			18,59,60,78	
		Remove/ Install			0.8			56,59,60,61 ,78	
		Repair			1.3			30,56,59,60 ,62,78	
0710	TRANSMISSION	Inspect		0.4				78	
		Service		1.5				57,59,78	
		Replace			7.0			56,59,60,61 ,78,79,84	
		Repair		0.4	2.7	1.9		3,18,19, 24,25,27,41 ,56,57,59,6 0,61,78,79, 84	
0710	MODULE, FRONT SUPPORT	Remove/ Install				2.0		56,57,59,60 ,61,78	
		Repair				0.7		30,56,57,59 ,60,61,78	
0710	MODULE, PLANETARY GEAR (P1)	Remove/ Install				2.0		59,60,71,78	

Section II. MAINTENANCE ALLOCATION CHART FOR THE LMTV VEHICLE (CONT)

(1) Group Number	(2) Component/Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment Ref Code	(6) Remarks Code
			FIELD			SUSTAINMENT			
			Unit		Direct Support	General Support	Depot		
			C	O	F	H	D		
		Repair				1.5		59,60,71,78	
0710	MODULE, PLANETARY (P2)	Remove/ Install				2.0		3,56,59, 60,61,78	
		Repair				1.9		3,19,56, 59,60,61,71 ,78	
0710	PLANETARY CARRIER (P3)	Remove/ Install				2.0		3,56,60, 78	
		Repair				1.9		3,27,56, 60,78	
0710	MODULE, MAIN SHAFT	Remove/ Install				2.0		59,60,78	
		Repair				0.4		59,60,78	
0710	MODULE, CONVERTER HOUSING	Remove/ Install				4.3		3,56,57, 59,60,78	
		Repair				2.0		3,19,25, 56,57,59,60 ,78	
0713	CLUTCH ASSEMBLY, C3/C4/C5, TRANSMISSION	Remove/ Install				2.0		56,57,59,60 ,78	
		Repair				1.0		41,56,57,59 ,60,78	
0713	MODULE, ROTATING CLUTCH	Remove/ Install				2.0		3,56,59, 60,78	
		Repair				2.4		3,19,24, 56,59,60,78	
0714	VALVE ASSEMBLY, CONTROL MODULE	Remove/ Install			2.0			56,59,60,61 ,78,79	
		Repair		1.0	2.5			59,61,78,79	
0714	BODY ASSEMBLY, MAIN VALVE	Service		1.5				57,59,78	
		Remove/ Install			2.0			56,59,60,61 ,78,79	
		Repair		1.5	2.5			56,59,60,61 ,78,79	
0801	MODULE, TRANSFER CASE	Adjust				1.0			
		Remove/ Install				2.0		21,56,57,59 ,60,61,71,7 4,78,79	
		Repair				1.1		23,27,33,50 ,56,57,60,7 8	

Section II. MAINTENANCE ALLOCATION CHART FOR THE LMTV VEHICLE (CONT)

(1) Group Number	(2) Component/Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment Ref Code	(6) Remarks Code
			FIELD			SUSTAINMENT			
			Unit		Direct Support	General Support	Depot		
			C	O	F	H	D		
0802	HOUSING ASSEMBLY, C6 AND C7 CLUTCH	Remove/ Install				2.0		56,59,60,61 ,78	
		Repair				0.8		19,23,26,27 ,28,29,56,5 9,60,61,62, 71,78	
0802	CONTROL VALVE ASSEMBLY	Remove/ Install				2.0		56,59,61,78 ,79	
		Repair				1.0		56,59,61,78 ,79	
0804	PUMP ASSEMBLY, OIL	Replace				1.0		79	
		Repair				0.8		79	
0900	PROPELLER SHAFT	Inspect		0.1					
		Service		0.5				59	
		Repair		0.6				57,59,78	
		Replace		0.5				57,59,78	
1000	AXLE ASSEMBLY, FRONT	Inspect	0.1	0.3	0.7			78	
		Adjust			1.0			57,79	
		Service		0.5				59,78	
		Replace			4.5			56,57,59,60 ,61,70,78	
		Repair		2.3	2.2	6.0		56,57,59,60 ,61,78	
1002	CARRIER ASSEMBLY, DIFFERENTIAL	Inspect		0.1	0.1	0.1		78,79	
		Service			0.3			78	
		Replace				4.6		21,56,57,59 ,60,78,79	
		Repair				2.7		56,57,59,60 ,78,79	
1004	STEERING KNUCKLE, AXLE	Inspect			0.2				
		Adjust			2.5			79	
		Service			0.3			79	
		Replace			5.1			56,57,59,60 ,71,78	
1100	AXLE ASSEMBLY, REAR	Inspect	0.1	0.4	0.7				
		Service		0.8				57,59,78	
		Replace			4.5			34,56,57,59 ,60,78,84	

Section II. MAINTENANCE ALLOCATION CHART FOR THE LMTV VEHICLE (CONT)

(1) Group Number	(2) Component/Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment Ref Code	(6) Remarks Code
			FIELD			SUSTAINMENT			
			Unit		Direct Support	General Support	Depot		
			C	O	F	H	D		
		Repair			0.9	6.0		21,56,57,59,60,78,84,85	
1102	CARRIER ASSEMBLY, DIFFERENTIAL	Inspect		0.1	0.1	1.0		78,79	
		Service			0.3			78	
		Replace				4.6		21,56,57,59,60,78,79,85	
		Repair				2.7		21,37,56,57,59,60,71,73,78	
1202	BRAKE ASSEMBLY, FRONT AXLE	Inspect		0.1	1.0			59,78,79	
		Adjust		0.4				57,59,78	
		Repair		1.5	0.5			57,59,78,83	
1202	BRAKE ASSEMBLY, REAR AXLE	Inspect		0.1	1.0			59,78,79	
		Adjust		0.4				57,59,78	
		Repair		1.5	0.5			57,59,78,83	
1208	BRAKE AIR CHAMBER	Inspect		0.1					
		Replace		0.5				57,59,78	
1209	AIR COMPRESSOR	Adjust		0.6				59,78	
		Replace			1.2			56,60,61,78,79	
1311	WHEEL ASSEMBLY, PNEUMATIC TIRE	Inspect	0.1					57	B
		Replace	1.0	1.2				57,59	
		Repair		2.0				57,59	
1313	TIRE, PNEUMATIC	Replace		2.0				57,59	
1401	STEERING SYSTEM	Inspect		0.2					
		Adjust			1.0			56,60,78	
		Repair		1.0	1.5			54,56,57,59,60,61,78,79	
1407	STEERING GEAR ASSEMBLY	Replace			4.0			56,60,78	
1410	PUMP, POWER STEERING	Replace			1.5			47,56,59,60,78	
1411	HOSES, POWER STEERING	Replace		0.3				57,59,78,88	
1413	HYDRAULIC RESERVOIR,	Service	0.1	0.5				78	

Section II. MAINTENANCE ALLOCATION CHART FOR THE LMTV VEHICLE (CONT)

(1) Group Number	(2) Component/Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment Ref Code	(6) Remarks Code
			FIELD			SUSTAINMENT			
			Unit		Direct Support	General Support	Depot		
			C	O	F	H	D		
	POWER STEERING								
		Replace		0.8				59,78,86	
1501	FRAME ASSEMBLY	Inspect	0.1	0.3					
		Repair		0.8	14.0			56,57,59,60 ,61,78,79	
1504	RETAINER, SPARE TIRE	Inspect	0.1	0.1					
		Replace		3.0				57,59,78	
		Repair		0.6				57,59,78	
1601	LEAF SPRING ASSEMBLIES	Inspect	0.1	0.2					
		Service		0.3				57	
		Replace			2.7			56,57,59,60 ,78,79	
1604	SHOCK ABSORBERS	Inspect	0.1	0.3					
		Replace		0.5				57,59,78	
1605	STABILIZER BAR, REAR	Inspect		0.2					
		Replace		2.0				57,59,68,78	
		Repair		1.5				57,78	
1801	CAB BODY, STANDARD	Inspect	0.1						
		Replace			60.0			56,57,60,61 ,78,79	
		Repair		0.6				57,59,78	
1801	CAB BODY, AIR DROP	Inspect	0.1						
		Replace			60.0			56,57,60,61 ,78,79	
		Repair		0.6				57,59,78	
1801	CAB DOORS, STANDARD	Inspect	0.1						
		Replace			1.0			55,59,78	
		Repair		2.7				49,57,78	
1801	CAB DOORS, AIR DROP	Inspect	0.1						
		Replace			1.0			55,59,78	
		Repair		2.7				49,57,78	
1801	SUPPORT ASSEMBLY, CAB FRONT	Inspect	0.1						
		Repair		1.1				57,59,78	
		Replace			3.0			8,13,57, 59,60,78, 79	
1801	SUPPORT ASSEMBLY, CAB REAR	Inspect	0.1						

Section II. MAINTENANCE ALLOCATION CHART FOR THE LMTV VEHICLE (CONT)

(1) Group Number	(2) Component/Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment Ref Code	(6) Remarks Code
			FIELD			SUSTAINMENT			
			Unit		Direct Support	General Support	Depot		
			C	O	F	H	D		
		Replace		1.0				57,59,78	
		Repair		0.8				57,78	
1802	WINDSHIELD	Replace			0.6			55,59,78	
1802	FENDER, VEHICULAR, FRONT	Inspect	0.1						
		Replace		2.0				57,59,78	
		Repair		0.5				57,78	
1803	ROOF, CAB, M1081	Replace		1.0				45,50,57,59,78	
1805	FLOOR COVERING, CAB	Replace		1.0				57,78	
1806	SEATS	Replace							
1808	TOOL BOX ASSEMBLY	Inspect	0.1						
		Replace		0.5				47,57,59,78	
		Repair		0.5				57,59,78	
1808	STOWAGE BOX, CAB	Replace		0.8				57,78	
		Repair		0.5				57,78	
1810	BODY, CARGO	Inspect	0.1						
		Replace			4.0			56,57,59,60,78	
		Repair		0.5				57,59,78	
1812	BODY ASSEMBLY, VAN	Inspect	0.1	0.1					
		Repair		0.5				20,35,36,42,43,47,57,59,64,72,76,78	
		Replace		1.9				36,64,78	
1812	DOOR, ACCESS, LEFT	Inspect	0.1						
		Replace		2.3				78	
		Repair		0.1				57,59,78	
1812	DOOR, ACCESS, RIGHT	Inspect	0.1						
		Replace		1.4				78	
		Repair		0.4				57,59,78	
1812	WINDOW SASH ASSEMBLY	Inspect	0.1						
		Replace		0.2				78	
		Repair		0.4				57,59,78	
1812	BOX ASSEMBLY, RELAY	Inspect	0.1	0.1					
		Replace		0.6				78	
		Repair		0.1				78	
		Test	0.1	0.5				59,78	
1812	FAN ASSEMBLY	Inspect	0.1						

Section II. MAINTENANCE ALLOCATION CHART FOR THE LMTV VEHICLE (CONT)

(1) Group Number	(2) Component/Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment Ref Code	(6) Remarks Code
			FIELD			SUSTAINMENT			
			Unit		Direct Support	General Support	Depot		
			C	O	F	H	D		
		Replace		1.8				20,76,78	
		Repair		0.5				78	
2001	WINCH, 11K SELF-RECOVERY (SRW)	Inspect	0.1	4.0					
		Service		0.2				59	
		Replace			1.0			59,60,78	
		Repair			0.9			59,60,78	
2004	POWER TAKEOFF ASSEMBLY (PTO)	Inspect	0.1						
		Replace			1.0			56,57,59,60,78	
		Repair			0.8			56,57,59,60,78	
2202	MOTOR, WIPER, WINDSHIELD	Test		0.5					
		Replace		1.0				78	
2207	HEATER ASSEMBLY, PERSONNEL	Replace		2.0				57,59,78	
		Repair		1.0				57,59,78	
2210	DECALS	Inspect	0.1						
		Replace		1.0				78	
2401	POWER UNIT, AIR/HYDRAULIC	Inspect	0.1						
		Test		0.2					
		Service		1.0					
		Replace		3.0				57,59,78	
		Repair			2.0			57,59,60,69,78,79	
2402	MANIFOLD, HYDRAULIC	Inspect	0.1						
		Test		0.2					
		Replace		1.5				51,57,59,78	
		Repair		1.0				51,57,59,78	
2402	LATCH, HYDRAULIC, CAB	Inspect	0.1						
		Adjust		0.5				57,59,78	
		Replace		0.5				57,59,78	
2404	SUSPENSION CYLINDER	Inspect							
		Replace							
2406	FILTER, HYDRAULIC	Service		0.3				59,78	
		Replace		0.2				59,78	
2408	RESERVOIR, HYDRAULIC	Replace		1.0				57,59,78	

Section II. MAINTENANCE ALLOCATION CHART FOR THE LMTV VEHICLE (CONT)

(1) Group Number	(2) Component/Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment Ref Code	(6) Remarks Code
			FIELD			SUSTAINMENT			
			Unit		Direct Support	General Support	Depot		
			C	O	F	H	D		
		Repair		0.5				57,59,78	
3303	HEATER KIT, M1079	Inspect	0.1						
		Remove/ Install		2.5				78	
3307	ALTERNATOR KIT, 200 AMP	Inspect	0.1	0.2					
		Test		0.5				59	
		Remove/ Install		2.0				57,59,78	
		Replace		1.0				57,59,78	
		Repair			0.5			56,57,60,62 ,78	
3307	ALTERNATOR, 200 AMP	Inspect		0.2					
		Test		0.5	1.5			59,63,78	
		Replace		1.0				57,59,78	
		Repair		0.2	0.5			56,57,60,61 ,63,78	
3307	CRANE (LMHC), MATERIAL HANDLING, LIGHT	Inspect	0.1	0.1					
		Repair		0.5				59,76,78	
		Replace		0.5					
		Test		0.5					
3307	WEIGHT BLOCK AND WIRE ROPE, LMHC	Inspect	0.1						
		Replace		0.1				59,78	
		Repair		0.5				59,78	
		Test			0.5				
3307	WINCH, LMHC	Inspect	0.1						
		Replace			0.5			59,78	
		Repair			1.0			59,78	
		Test		0.5					
3307	MAST/SWING ASSEMBLY, LMHC	Inspect	0.1						
		Repair		1.0				59,78	
		Test		0.5					
3307	CONTROL BOX, LMHC	Inspect	0.1						
		Replace		0.1					
		Repair		0.5				76,78	
		Test	0.1	0.5					
3307	TROOPSEAT KIT	Remove/ Install	1.0						

Section II. MAINTENANCE ALLOCATION CHART FOR THE LMTV VEHICLE (CONT)

(1) Group Number	(2) Component/Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment Ref Code	(6) Remarks Code
			FIELD			SUSTAINMENT			
			Unit		Direct Support	General Support	Depot		
			C	O	F	H	D		
		Inspect	0.1						
		Replace		1.0					
		Repair		0.5				78	
3307	COVER KIT, CARGO SOFT TOP	Remove/ Install	1.5						
		Inspect	0.1						
		Replace		2.0					
		Repair		0.5					
3307	AIR CONDITIONER KIT, M1079	Inspect	0.1						
		Remove/ Install		1.5				59,78	
3307	WARNING LIGHT ASSEMBLY, AMBER	Inspect	0.1						
		Repair		0.4				78	
		Test		0.2					
3401	MACHINE GUN RING KIT	Inspect	0.1						
		Remove/ Install			4.0			56,57,60,78 ,79,84	
		Repair		1.1				10,57,78	
3402	MOUNT, SMALL ARMS	Inspect	0.1						
		Replace		0.3				78	
3909	CABLE ASSEMBLY, WARNING LIGHT	Inspect	0.1						
		Replace		0.5				78	
4316	AIR HOSE, CTIS	Inspect	0.1						
		Replace		0.4				59,78	
4317	VALVE, INVERSION	Replace		0.5				59,78	
4321	AIR DRYER	Inspect	0.1	0.1					
		Replace		1.0				57,59,78	
		Repair		0.6				57,59,78	
4702	GAUGE, AIR FILTER RESTRICTION	Replace		0.5				78	

Section III. TOOLS AND TEST EQUIPMENT FOR LMTV VEHICLES

Tool or Test Equipment REF Code	Maintenance Level	Nomenclature	National Stock Number	Tool Number
1	O,F	ADAPTER, RADIATOR	4910-01-170-4928	J29003-A
2	O	ADAPTER, SOCKET WRENCH	5120-00-240-8702	11655788-2
2.1	O	BASE, MAGNETIC		P5646
3	H	BUSHING DRIVER SET	5120-01-391-3541	J35922
4	O	CRIMPING TOOL, TERMINAL, HAND	5120-00-165-3912	M22520/1-01
5	O	CROWFOOT ATTACHMENT, SOCKET WRENCH	5120-00-078-3809	10935497
6	O	CROWFOOT ATTACHMENT, SOCKET WRENCH	5120-00-293-1010	5120-293-1282
7	F	CROWFOOT ATTACHMENT, SOCKET WRENCH	5120-00-181-6754	GGG-C-1507
8	F	CROWFOOT ATTACHMENT, SOCKET WRENCH	5120-01-074-7557	FCOM19
9	O	CROWFOOT ATTACHMENT, SOCKET WRENCH	5120-01-236-9996	FCOM15
10	O	CROWFOOT ATTACHMENT, SOCKET WRENCH	5120-01-335-1091	FCO32
11	O	CROWFOOT ATTACHMENT, SOCKET WRENCH	5120-01-335-1119	SCO34
12	O	CROWFOOT ATTACHMENT, SOCKET WRENCH	5120-01-335-1122	SCO40
12.1	O	CROWFOOT ATTACHMENT, SOCKET WRENCH	5120-01-335-1126	SCO48
13	F	CROWFOOT ATTACHMENT, SOCKET WRENCH	5120-01-348-9473	AN8508-19A
13.1	O	DISPENSER, SEALANT	5120-00-061-1283	45RCT
13.2	F	DRILL SET, STOPCOLLAR	5133-01-383-7665	1955
14	H	DRIVER KIT, BEARING	4910-01-032-3128	8S0602
14.1	O	FRAME, HAND HACKSAW	5110-00-289-9657	163-20
15		DELETED		
16	O,F	GAGE, BELT TENSION	6635-01-143-2237	GA-424
17	O,F	GAGE, PRESSURE, 0-150 psi	6685-00-474-5721	111T1D05A01
18	F,H	GAGE, PROFILE	5220-01-388-1460	J-38548-1
19	H	HANDLE, DRIVE	5120-00-377-2259	J8092
20	O	HEATER, GUN TYPE, ELECTRIC	4940-00-561-1002	500A
21	F,H	HOLDING BAR, PINION	5120-01-166-0573	J3453
21.1	O	INDICATOR, DIAL		P36491
22	O	INSERTER AND REMOVER, ELECTRICAL CONTACT	5120-00-915-4588	MS3447-16
23	H	INSERTER AND REMOVER, SPRING	5120-01-388-3660	J38573
24	H	INSERTER AND REMOVER, SPRING	5120-01-388-4436	J35923
25	H	INSERTER, BEARING AND BUSHING	5120-01-388-7841	J-38565

Section III. TOOLS AND TEST EQUIPMENT FOR LMTV VEHICLES (Cont)

Tool or Test Equipment REF Code	Maintenance Level	Nomenclature	National Stock Number	Tool Number
26	H	INSERTER, BEARING AND BUSHING	5120-01-389-0658	J35921-1
27	H	INSERTER, BEARING AND BUSHING	5120-01-390-1104	J 38569
28	H	INSERTER, BEARING AND BUSHING	5120-01-390-1105	J 38568-3
29	H	INSERTER, BEARING AND BUSHING	5120-01-391-5133	J 38579
30	F,H	INSERTER, BEARING AND BUSHING	5120-01-414-7398	J38566
31	F	INSERTER, SEAL	5120-01-362-2026	1U7430
32	F	INSERTER, SEAL	5120-01-362-2027	1U7598
33	F	INSTALLER, SEAL	N/A	J38574
33.1	F	JACK, DOLLY TYPE HYDRAULIC	4910-01-396-5044	TTJ3
34	F	JACK, LEVELING SUPPORT, VEHICLE	2590-00-231-7418	10876244
35.1	O	KEY, SOCKET HEAD SCREW	5120-01-355-1670	AWML2.5
35.2	F	LIFTING SADDLE ASSEMBLY		TTJ-ZIFA
36	O	LINK, CHAIN, END	4010-00-932-5013	NAS1049-16
36.1	F	NOSE ASSEMBLY		99-3307
36.2	O	PLIERS, HOG RING STAPLE	5120-01-413-8837	0012
37	H	PULLER KIT, UNIVERSAL	5180-00-089-3660	A57QB
38	F	PULLER KIT, UNIVERSAL	5180-01-124-1903	1P3075
39	O	REMOVER, ELECTRICAL CONTACT	5120-00-148-9844	MS3448-001B
40	F	RIVETER, BLIND, HAND	5120-01-289-4310	HP-2
40.1	F	RIVETER, BLIND, PNEUMATIC	5130-01-232-4042	245
41	H	RIVETER, YOKE, HAND	5120-01-415-3558	J-39354
42	O	SCREWDRIVER ATTACHMENT, SOCKET WRENCH	5120-00-180-0881	5120-00-180-0881
43	O	SCREWDRIVER ATTACHMENT, SOCKET WRENCH	5120-01-053-4158	FAM5A
44	O,F,H	SCREWDRIVER ATTACHMENT, SOCKET WRENCH	5120-01-055-1308	ANSIB18.3.2M
45	O	SCREWDRIVER ATTACHMENT, SOCKET WRENCH	5120-01-079-8032	SAM8A
46	O	SCREWDRIVER ATTACHMENT, SOCKET WRENCH	5120-01-160-8862	S 6 HBS
47	O,F	SCREWDRIVER ATTACHMENT, SOCKET WRENCH	5120-01-367-3462	SA10A
47.1	O,F	SCREWDRIVER ATTACHMENT, SOCKET WRENCH	5120-01-367-3483	FA5LE
48	O,F	SCREWDRIVER ATTACHMENT, SOCKET WRENCH	5120-01-367-3497	TMP12A
49	O	SCREWDRIVER ATTACHMENT, SOCKET WRENCH	5120-01-367-3519	F23D
50	O	SCREWDRIVER ATTACHMENT, SOCKET WRENCH	5120-01-367-3526	FP24
51	O	SCREWDRIVER ATTACHMENT, SOCKET WRENCH	5120-01-367-3527	FP32A
52	F,H	SCREWDRIVER ATTACHMENT, SOCKET WRENCH	5120-01-367-3536	FTX40A
53	O	SCREWDRIVER ATTACHMENT, SOCKET WRENCH	5120-01-367-3574	GFA8A

Section III. TOOLS AND TEST EQUIPMENT FOR LMTV VEHICLES (Cont)

Tool or Test Equipment REF Code	Maintenance Level	Nomenclature	National Stock Number	Tool Number
53.1	F	SCREWDRIVER ATTACHMENT, SOCKET WRENCH	5120-01-430-5715	SZ-21
54	O	SEPARATOR, BALL JOINT	5120-01-255-8238	2287
55	F	SETTING TOOL, WINDSHIELD	5120-01-316-4995	CRL216
56	O,F	SHOP EQUIPMENT, AUTOMOTIVE VEHICLE	4910-00-348-7696	SC4910-95CLA02
57	O,F,H	SHOP EQUIPMENT, AUTOMOTIVE VEHICLE	4910-00-754-0650	SC4910-95CLA72
58	O	SHOP EQUIPMENT, AUTOMOTIVE VEHICLE	4910-00-754-0653	SC4910-95CLA73
59	O,F,H	SHOP EQUIPMENT, AUTOMOTIVE VEHICLE	4910-00-754-0654	SC4910-95CLA74
60	F,H	SHOP EQUIPMENT, AUTOMOTIVE VEHICLE	4910-00-754-0705	SC4910-95CLA31
61	F,H	SHOP EQUIPMENT, AUTOMOTIVE VEHICLE	4910-00-754-0706	SC4910-95CLA62
62	O,F,H	SHOP EQUIPMENT, AUTOMOTIVE VEHICLE	4910-00-754-0707	SC4910-95CLA63
63	O,F	SHOP EQUIPMENT, FUEL AND ELECTRICAL	4910-00-754-0714	SC4910-95CLA01
64	O	SLING, EYE	3940-01-334-0749	EE1-202
65	F	SLING, MULTIPLE LEG	3940-00-777-5744	A170
66	H	SOCKET SET, SOCKET WRENCH	5120-01-195-0640	208FA
67	F,H	SOCKET, SOCKET WRENCH	5120-01-068-5643	5555M
68	O	SOCKET, SOCKET WRENCH	5120-01-161-5907	GLDH382
69	F	SOCKET, SOCKET WRENCH	5120-01-335-0784	TW321
70	O	SOCKET, SOCKET WRENCH	5120-01-144-5324	ANS 1913A
71	F	SOLDERING AND BRAZING OUTFIT, RESISTANCE HEATING	3439-00-460-7198	SC4940-95-CLB20
72	O	SOLDERING IRON, ELECTRIC	3439-01-036-3308	3112-S3-40W
73	H	STAND, DIFFERENTIAL CARRIER REPAIR	4910-01-085-7729	J3409-D
74	H	STAND, MAINTENANCE, AUTOMOTIVE ENGINE	4910-00-808-3372	J29109
75	F	TOOL, DISTORTER	5120-01-119-1748	5P-7312
76	O,F	TOOL KIT, AUTO FUEL AND ELECTRICAL SYSTEM REPAIR	5180-00-754-0655	SC4910-95CLA50
77	F	TOOL KIT, BODY AND FENDER	5180-00-754-0643	SC5180-90-N34
78	O,F,H	TOOL KIT, GENERAL MECHANIC'S	5180-00-177-7033	SC5180-90-CL-N26
79	F,H	TOOL KIT, GENERAL MECHANIC'S	5180-00-699-5273	SC5180-90-CL-N05
80	F	TOOL KIT, INTERNAL COMBUSTION ENGINE	5180-01-356-8155	1U6680
81	H	TOOL KIT, DIESEL INJECTOR	5180-01-466-3966	143-2099
82	F	TOOL OUTFIT, HYDRAULIC	4940-01-036-5784	SC4940-95-CL-B07

Section III. TOOLS AND TEST EQUIPMENT FOR LMTV VEHICLES (Cont)

Tool or Test Equipment REF Code	Maintenance Level	Nomenclature	National Stock Number	Tool Number
83	O	TOOL, SPRING REMOVAL	5120-01-360-1918	TV940010
84	F	WRENCH SET, CROWFOOT, RATCHETING	5120-00-293-0013	GGG-W-646
85	F	WRENCH SET, SOCKET	5120-00-148-3706	ANSI-B107.5
86	O	WRENCH, TORQUE, 0-75 LB-IN.	5120-01-112-9532	TQSC6A

Section IV. REMARKS FOR THE LMTV VEHICLE

Remarks Code	Remarks
A	Battery service will be in accordance with TM 9-6140-200-14.
B	Repair of tires will be in accordance with TM 9-2610-200-14.

APPENDIX C
TOOLS IDENTIFICATION LIST

Section I. INTRODUCTION

C-1. INTRODUCTION

This appendix lists common tools, supplements, and special tools/fixtures that are suggested for maintenance tasks performed at the Unit Maintenance level.

C-2. EXPLANATION OF COLUMNS

a. Column (1) - Item Number. This number is assigned to the entry in the listing and is referenced in the narrative instructions to identify the item, e.g., "Bar, Pry (Item 1, Appendix C)."

b. Column (2) - Item Name. This column contains the nomenclature for the item.

c. Column (3) - National Stock Number. This is the national stock number assigned to the item which you can use to requisition it.

d. Column (4) - Part Number. This provides the Government, manufacturer, or vendor part number for the item.

e. Column (5) - Reference. This column contains the shop catalog (SC), technical manual, or other publication which provides an illustration and description of the item, or lists whether the item is fabricated.

APPENDIX C
Section II. TOOLS IDENTIFICATION LIST

(1) ITEM NUMBER	(2) ITEM NAME	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) REFERENCE
1	ADAPTER, SOCKET WRENCH	5120-00-227-8088	A-A-2172	SC 4910-95-CL-A74
2	ADJUSTING TOOL, BRAKE SHOE	5120-00-154-3029	J34061	SC 4910-95-CL-A74
3	APRON, RUBBER	8145-00-082-6108	MIL-A-41829	SC 4910-95-CL-A74
4	CAPS, VISE JAW	5120-00-221-1506	GGG-C-137	SC 4910-95-CL-A74
5	DISPENSING PUMP, HAND DRIVEN	4930-00-263-9886	43D15069	SC 4910-95-CL-A74
6	DRILL SET, TWIST	5130-00-293-0983	58	SC 4910-95-CL-A74
7	DRILL, PORTABLE, ELECTRIC	5130-00-293-1849	W-D-661	SC 4910-95-CL-A74
8	DRILL, TWIST	5133-01-120-3519		SC 4910-95-CL-A74

Section II. TOOLS IDENTIFICATION LIST (CONT)

(1) ITEM NUMBER	(2) ITEM NAME	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) REFERENCE
9	FISHING TOOL, PNEUMATIC TIRE VALVE	5120-00-516-4220	991	SC 4910-95-CL-A74
10	GAGE, DEPTH, MICROMETER	5210-00-619-4045	445BZ-6RL	CTA 50-909
11	GAGE, TIRE PRESSURE	4910-01-117-2994	955	SC 4910-95-CL-A72
12	GAGE, WHEEL ALIGNMENT	5210-01-223-3701	WA361	SC 4910-95-CL-A72
13	GLOVES, RUBBER	8415-00-641-4601	ZZ-G-381	SC 4910-95-CL-A74
14	GLOVES, WELDER'S	8415-00-268-7859	A-A-50022	SC 4910-95-CL-A72
15	GOGGLES, INDUSTRIAL	4240-00-052-3776	A-A-1110	SC 4910-95-CL-A74
16	GUN, LUBRICATING	4930-00-253-2478	1142	SC 4910-95-CL-A74
17	HAMMER, HAND	5120-00-224-4130	A-A-1292	SC 4910-95-CL-A74
18	HAMMER, HAND	5120-01-065-9037	57-533	SC 4910-95-CL-A72
19	HOSE ASSEMBLY, NONMETALLIC	4720-00-356-8557	ZZ-H-461	SC 4910-95-CL-A74
20	IRON, TIRE	5120-00-765-8536	T48A	SC 4910-95-CL-A74
21	JACK, HYDRAULIC, HAND	5120-00-224-7330	D120	SC 4910-95-CL-A74
22	MULTIMETER, DIGITAL	6625-01-139-2512	T00377	SC 4910-95-CL-A74
23	MULTIPLIER, TORQUE WRENCH	5120-00-574-9318	292	SC 4910-95-CL-A72
24	PAN, DRAIN	4910-00-387-9592	450	SC 4910-95-CL-A72
25	PAN, WASH	4940-00-617-9859	5582281	SC 4910-95-CL-A72
26	PRESSURE TESTER, RADIATOR	4910-01-170-4929	J24460-01	SC 4910-95-CL-A74
27	PULLER KIT, MECHANICAL	5120-00-313-9496	1178	SC 4910-95-CL-A74
28	PULLER, BATTERY TERMINAL	5120-00-944-4268	21	SC 4910-95-CL-A74
29	RESPIRATOR, AIR FILTER	4240-00-022-2524	GGG-M-125/6	SC 4910-95-CL-A72
30	SCALE, WEIGHING	6670-00-254-4634	AAA-5-133	SC 4910-95-CL-A72
31	SLING, CARGO	1670-00-823-5043	63J4261-13	CTA 50-970
32	SLING, ENDLESS	3940-00-675-5003	PD101-96	CTA 50-970
33	SOCKET SET, IMPACT	5120-01-117-0466	4151MMY	SC 4910-95-CL-A74
34	SOCKET SET, SOCKET WRENCH	5120-01-073-2821	217FMY	SC 4910-95-CL-A72

Section II. TOOLS IDENTIFICATION LIST (CONT)

(1) ITEM NUMBER	(2) ITEM NAME	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) REFERENCE
35	SOCKET SET, SOCKET WRENCH	5120-01-117-3876	221FSMY	SC 4910-95-CL-A02
36	SOCKET, SOCKET WRENCH	5120-00-181-6813	5530	SC 4910-95-CL-A74
37	SOCKET, SOCKET WRENCH	5120-00-232-5681	1242	SC 4910-95-CL-A74
38	SOCKET, SOCKET WRENCH	5120-01-112-0581	SIMM190	SC 4910-95-CL-A74
39	STE/ICE-R	4910-01-222-6589	12259266	SC 4910-95-CL-A74
40	TAPE, MEASURING	5210-00-081-4719	GA508A	CTA 50-970
40.1	TEST KIT, RADIATOR	4910-00-728-8227		SC 4910-95-CL-A74
40.2	TAP AND DIE SET	5136-01-119-0005	TDM99117	SC 4910-95-CL-A72
40.3	TAP, THREAD, CUTTING	5136-00-729-5692	B94.9 ½13 UNCHSGH3	SC 4910-95-CL-A72
41	TESTER, ANTIFREEZE AND BATTERY	6630-00-105-1418	10425	SC 4910-95-CL-A74
42	TOOL KIT, AUTO FUEL	5780-00-754-0655		SC 5180-95-CL-A50
43	TOOL KIT, BLIND RIVET	5180-01-201-4978	D-100-MIL-1	SC 4910-95-CL-A72
44	TOOL KIT, GENERAL MECHANIC'S	5180-00-177-7033		SC 5180-90-N26
44.1	TOOL KIT, ELECTRICAL CONTACT REPAIR	5780-00-876-9336	7550526	SC 4940-95-B09
45	TRESTLE, MOTOR VEHICLE MAINTENANCE	4910-00-251-8013	306	SC 4910-95-CL-A72
46	VISE, MACHINIST	5120-00-293-1439	504M2	SC 4910-95-CL-A74
47	WRENCH SET, SOCKET	5120-00-081-2305	GGG-W-641	SC 4910-95-CL-A74
48	WRENCH SET, SOCKET	5120-00-204-1999	GGG-W-641	SC 4910-95-CL-A74
49	WRENCH SET, SOCKET	5120-00-322-6231	51200017510	SC 4910-95-CL-A74
50	WRENCH, ADJUSTABLE	5120-00-264-3793	2117080	SC 4910-95-CL-A72
51	WRENCH, ADJUSTABLE, AUTOMOTIVE	5120-00-449-8083	1B7536	SC 4910-95-CL-A74
51.1	WRENCH, BOX AND OPEN END	5120-00-228-9518	1174	SC 4910-95-CL-A74
52	WRENCH, BOX AND OPEN END	5120-00-277-8833	1244	SC 4910-95-CL-A74
53	WRENCH, BOX AND OPEN END	5120-00-277-8834	GGG-W-636	SC 4910-95-CL-A74
54	WRENCH, PIPE	5120-00-277-1461		SC 4910-95-CL-A74

Section II. TOOLS IDENTIFICATION LIST (CONT)

(1) ITEM NUMBER	(2) ITEM NAME	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) REFERENCE
55	WRENCH, PIPE	5120-00-277-1485		SC 4910-95-CL-A74
56	WRENCH, STRAP, ADJUSTABLE	5120-00-020-2947	A91C	SC 4910-95-CL-A74
57	WRENCH, TORQUE, 0-175 lb-ft	5120-00-640-6364	1753LDF	SC 4910-95-CL-A72
58	WRENCH, TORQUE, 0-200 lb-in.	5120-00-853-4538	F2001	SC 4910-95-CL-A72
58.1	WRENCH, TORQUE, 0-300 lb-in.	5120-00-776-1841	2163993	SC 4910-95-CL-A74
59	WRENCH, TORQUE, 0-600 lb-ft	5120-00-221-7983	SW130-301	SC 4910-95-CL-A72

APPENDIX D
EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST

Section I. INTRODUCTION

D-1. SCOPE

This appendix lists expendable and durable items that you will need to operate and maintain the LMTV vehicle. This listing is for information only and is not authority to requisition the listed items. These items are authorized to you by CTA 50-970, Expendable/Durable Items (except medical, class V repair parts, and heraldic items), or CTA 8-100, Army Medical Department Expendable/Durable Items.

D-2. EXPLANATION OF COLUMNS

a. Column (1) - Item Number. This number is assigned to the entry in the listing and is referenced in the narrative instructions to identify the item, e.g., "Oil, Lubricating (Item 25, Appendix D).

b. Column (2) - Level. This column identifies the lowest level of maintenance that requires the item.

c. Column (3) - National Stock Number. This is the national stock number assigned to the item which you can use to requisition it.

d. Column (4) - Item Name, Description, Commercial and Government Entity Code (CAGEC), and Part Number. This provides the other information you need to identify the item.

e. Column (5) - Unit of Measure. This code shows the physical measurement or count of an item, such as gallon, dozen, gross, etc.

Section II. EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST

(1) Item Number	(2) Level	(3) National Stock Number	(4) Description	(5) U/M
1	O	4730-00-248-9340	Adapter, Pipe to Tube (81343) 4-4 010103B	ea
1.1	O	4730-01-453-9651	Adapter, Straight, Pipe to Boss (19207) 12421890-001	ea
1.2	O	4730-01-457-4025	Adapter, Straight, Pipe to Tube (96906) MS51503B4-4	ea
1.3	O	4730-00-760-3525	Adapter, Straight, Tube to Boss (81361) C116-3-71	ea
2	O	8040-00-273-8717	Adhesive (81348) MMM-A-121	pt
3	O	8040-00-152-0063	Adhesive (81348) MMM-A-1617 TY 3	bt
4	O	8040-01-250-3969	Adhesive (05972) 242	ea
5	O	8040-01-117-7872	Adhesive (04963) 08031	tu
6	O	8040-00-117-8510	Adhesive (71984) 3145 RTV Clear	tu
7	O	8040-00-776-9602	Adhesive (73168) 80055-31	kt
8	O	8040-00-118-2695	Adhesive (72799) RTV162	kt

Section II. EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST (CONT)

(1) Item Number	(2) Level	(3) National Stock Number	(4) Description	(5) U/M
9	O	8040-01-446-7842	Adhesive (01139) RTV123	ca
10	O	8040-01-331-7473	Adhesive (81349) (MIL-A-46106 GP3TY1)	tu
11	O	8040-01-331-7470	Adhesive (81349) (MIL-A-46106 GP1TY1)	tu
11.1	O	8040-00-728-3088	Adhesive (78500) 1199-T-3842 6 oz	kt
12	C	6850-00-174-1806	Antifreeze, Arctic Type (81349) (MIL-A-11755) 55 gl drum	dr
13	C		Antifreeze, Multi-Engine Type (58536) (A-A-52624A)	dr
		6850-01-441-3218	Type I (Green) – 1 gal	gal
		6850-01-441-3221	Type I (Green) - 5 gal	co
		6850-01-441-3257	Type II (Purple) - 5 gal	co
14	O	8030-00-597-5367	Antiseize Compound (81349) (MIL-A-907)	lb
14.1	O	5110-00-277-4588	Blade, Hand Hacksaw (54940) 31-51024	ea
14.2	O	5340-01-454-4336	Bracket, Angle (0FW39) 12421859-001	ea
15	O	5340-00-450-5718	Cap and Plug Set 10935405	ea
15.1	O	5340-01-423-0972	Clamp, Loop (18076) S630H-20	ea
16	O	6850-00-926-2275	Cleaning Compound, Windshield (81349) O-C-1901 16 oz bottle	bt
17	O	7920-00-044-9281	Cloth, Cleaning (81349) (MIL-C-85043)	bx
18	O		Corrosion Preventive Compound (81349) (MIL-C-16173)	
		8030-00-062-6950	Grade 1 - 1 qt can	qt
		8030-01-149-1731	Grade 2 - 1 qt can	qt
		8030-00-837-6557	Grade 3 - 1 pt can	pt
		8030-00-903-0931	Grade 4 - 1 pt can	pt
19	O	8030-00-033-4291	Corrosion Preventive Compound (MIL-C-82594) 8 oz can	bt
19.1	O	2540-01-460-8048	Cover, Seat, Vehicular (27797) WM1059	ea
19.2	O	2540-01-463-8394	Cover, Seat, Vehicular (0FW39) WM1058	ea
20	C	9150-00-664-0047	Damping Fluid (81348) VV-D-1078 1 lb can	lb
21	O	7520-01-209-1152	Dispenser, Pressure Sensitive Adhesive Tape (75037) STD-0-9	ea
21.1	O	4730-01-454-1233	Elbow, Pipe to Boss (19207) 12421891-001	ea
21.2	O	4730-00-863-9098	Elbow, Pipe to Tube (30780) 4VBTXB	ea
22	O	5330-01-325-6993	Gasket Forming Compound (05972) 515	ea
22.1	O		Gasket Maker, RTV Silicone (05972) 5699	ea

Section II. EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST (CONT)

(1) Item Number	(2) Level	(3) National Stock Number	(4) Description	(5) U/M
23	C		Grease, Automotive and Artillery (GAA) (81349) (MIL-G-10924)	
		9150-01-197-7688	2-1/4 oz tube	tu
		9150-01-197-7690	1.75 lb can	cn
		9150-01-197-7689	6.5 lb can	cn
		9150-01-197-7692	35 lb can	cn
24	O	9150-00-530-6814	Grease, Wire Rope-Exposed Gear (81349) (MIL-G-18458) 35 lb can	cn
25	O	9150-00-935-4018	Grease, Molybenum Disulfide (81349) (MIL-G-21164) 14 oz cartridge	ca
25.1	O	4720-00-988-3842	Hose Assembly, Nonmetallic (50599) R25679-1	ea
25.2	O	4720-01-384-0995	Hose Assembly, Nonmetallic (19207) 12421858-006	ea
25.3	O	4720-01-453-9530	Hose Assembly, Nonmetallic (0FW39) 12421857	ea
25.4	O	4720-01-469-9208	Hose Assembly, Nonmetallic (19207) 12418004-002	ea
26	C		Hydraulic Fluid A (MIL-H-5606)	
		9150-00-252-6383	1 qt can	cn
		9150-00-223-4134	1 gl can	cn
27	O	7510-00-145-0559	Ink, Marking Stencil (MIL-l-43553)	oz
28	O	7510-01-386-0787	Inking Pad, Rubber Stamp	ea
29	O	9150-01-360-1905	Insulating Compound, Electrical	tu
30	O	5970-00-838-5951	Insulation Sleeving, Electrical (06090) CRN3-16BLACK	ft
30.1	O	5970-01-378-3018	Insulation Sleeving, Electrical (06090) ATUM-1/4-0-4FT	lg
31	O	5970-01-422-3579	Insulation Sleeving, Electrical (06090) ATUM 1/2 4 ft length	lg
32	O	1650-00-166-4834	Lockwire (90166) 68A32	ea
33	O	9150-01-360-1905	Lubricant, Solid Film (MIL-L-46147) 16 oz can	cn
34	O	4730-00-019-0608	Nipple, Pipe	ea
35	O	4730-00-825-7304	Nipple, Tube MS51501B4	ea
36	O	5310-00-059-4265	Nut, Plain, Hex	ea

Section II. EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST (CONT)

(1) Item Number	(2) Level	(3) National Stock Number	(4) Description	(5) U/M
36.1	C		Oil, Commercial Burner Fuel, Grade FO-1 (ASTM D396)	
36.2	C		Oil, Commercial Burner Fuel, Grade FO-2 (ASTM D396)	
37	C		Oil, Fuel Diesel, DF-A, Arctic (VV-F-800) (81348)	
		9140-00-286-5282	5 gl can	cn
		9140-00-286-5283	Bulk	gl
		9140-00-286-5284	55 gl drum, 16 gauge	dr
		9140-00-286-5285	55 gl drum, 18 gauge	dr
38	C		Oil, Fuel, Diesel, DF-1, Winter (VV-F-800) (81348)	
		9140-00-286-5286	Bulk	gl
		9140-00-286-5287	5 gl can	cn
		9140-00-286-5288	55 gl drum, 16 gauge	dr
		9140-00-286-5289	55 gl drum, 18 gauge	dr
39	C		Oil, Fuel, Diesel, DF-2, Regular (VV-F-800) (81348)	
		9140-00-286-5294	Bulk	gl
		9140-00-286-5295	Can	cn
		9140-00-286-5296	55 gl drum, 16 gauge	dr
		9140-00-286-5297	55 gl drum, 18 gauge	dr
40	C		Oil, Lubricating, Arctic (MIL-L-46167)	
		9150-00-402-2372	5 gl can	cn
		9150-00-491-7197	55 gl drum	dr
41	C		Oil, Lubricating, Gear, GO 75W (MIL-L-2105C)	
		9150-00-035-5390	1 qt can	cn
		9150-00-035-5391	5 gl can	cn
42	C		Oil, Lubricating, Gear, 80W-90 (MIL-L-2105C)	
		9150-01-035-5392	1 qt can	qt
		9150-01-035-5393	5 gl can	cn
		9150-01-035-5394	55 gl drum, 16 gauge	dr
43	C		Oil, Lubricating, OE/HDO 10 (MIL-L-2104)	
		9150-00-183-7807	Bulk	gl
		9150-00-186-6668	5 gl can	cn
		9150-00-191-2772	55 gl drum	dr
44	C	9150-00-189-6727	Oil, Lubricating, OE/HDO 10W (MIL-L-2104) 1 qt can	cn
45	C		Oil, Lubricating, OE/HDO 15W-40 (MIL-L-2104)	
		9150-01-152-4117	1 qt can	cn
		9150-01-152-4118	5 gl can	cn
		9150-01-152-4119	55 gl drum	dr

Section II. EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST (CONT)

(1) Item Number	(2) Level	(3) National Stock Number	(4) Description	(5) U/M
46	C		Oil, Lubricating, OE/HDO 30 (SAE 30) (MIL-L-2104)	
		9150-00-183-7808	Bulk	gl
		9150-00-186-6681	1 qt can	cn
		9150-00-188-9858	5 gl can	cn
		9150-00-189-6729	55 gl drum, 18 gauge	dr
47	C		Oil, Lubricating, OE/HDO 40 (MIL-L-2104)	
		9150-00-405-2987	Bulk	gl
		9150-00-189-6730	1 qt can	cn
		9150-00-188-9862	5 gl can	cn
48	O	5350-00-067-7639	Paper, Abrasive (28124) 02347 pg contains 100 sheets	pg
49	O	8010-01-146-2650	Polyurethane Coating (MIL-C-46168)	kt
50	O	8030-00-181-8372	Primer, Sealing Compound (05972) 747-56	cn
51	C	7920-00-205-1711	Rag, Wiping A-A-531	be
52		DELETED		
53	O	4020-00-855-2767	Rope, Fibrous (MIL-R-17343) 75 ft	cl
54	O	7520-00-634-2442	Rubber Stamp Set, Fixed Type	ea
55	O	5330-01-337-1108	Rubber Strip (12624) V4062	ft
56	O	5330-01-181-6482	Rubber Strip (19207) 12328583-3	ft
56.1	O	5305-00-021-3740	Screw, Cap, Hex Hd (97942) 645A560H43	ea
56.2	O	5305-01-299-4602	Screw, Cap, Hex Hd (64678) 000933 006058	ea
56.3	O	5305-01-454-5938	Screw, Cap, Hex Hd (19207) 12419954-093	ea
57	O	5305-01-296-0019	Screw, Cap, Socket Head (06888) SHCM75275 50 ct box	bx
58	O	1015-01-255-4144	Sealant, Pipe, Teflon (19207) 12297953 50 ml tube	tu
59	O	8030-00-081-2327	Sealing Compound (05972) 079-21	bx
60	O	8030-00-111-2762	Sealing Compound (05972) 290-31	bt
61	O	8030-00-133-3164	Sealing Compound (05972) 571-31	bt
62	O	8030-00-148-9833	Sealing Compound (05972) 271-21	bx
63	O	8030-00-204-9149	Sealing Compound (05972) 592-41	tu
64	O	8030-00-656-1426	Sealing Compound (81349) (MIL-S-45180)	pt
65	O	8030-01-025-1692	Sealing Compound (05972) 242-41 (MIL-S-46163)	bt
66	O	8030-01-088-8140	Sealing Compound (52571) 9001512-0011	bt

Section II. EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST (CONT)

(1) Item Number	(2) Level	(3) National Stock Number	(4) Description	(5) U/M
67	O		Sealing Compound (81349) (MIL-S-8802TY2CLB-2)	
		8030-00-753-5006	2 oz cartridge	ca
		8030-00-753-4599	6 oz can	kt
		8030-00-723-2746	12 oz can	kt
		8030-00-685-0915	24 oz can	kt
68	O	8030-01-155-3238	Sealing Compound (11083) 6V6640	ml
68.1	O	8030-01-371-8405	Sealing Compound (83574) PR-1422 B-1/2 6 oz	ca
68.2	O	8030-01-255-4144	Sealant (19207) 12297953	tb
68.3	O	8030-00-956-2397	Sealing Compound 104	tb
69	C	7930-00-634-3935	Soap, Laundry (81348) P-S-1792	lb
70	O	3439-00-006-7764	Solder, Tin Alloy (81348) SN63WRAP3	sl
71	C		Solvent, Dry Cleaning SD (P-D-680)	
		6850-00-281-1985	1 gl can	cn
		6850-00-664-5685	1 qt can	cn
71.1	O		Strap, Tiedown, Electrical Components (06383) PLP2S	ea
72	O		Tape, Adhesive (0SHR6) 70P00002	ea
72.1	O	9320-01-244-0046	Tape, Adhesive, Rubber (18876) MIS-41157-08 180 ft	ro
73	O	8030-00-889-3534	Tape, Antiseizing (81349) (MIL-T-27730)	ea
74	O	5640-00-103-2254	Tape, Duct (39428) 1791K70	ea
75	O	5970-00-644-3167	Tape, Insulation, Electrical (80063) TL83	ro
75.1	O	4730-00-138-8050	Tee, Pipe (81343) 8-8-8 140424C	ea
76	O	5975-01-379-4997	Ties, Cable, Plastic (06383) PLT 35-C-O	hd
	C		Turbine Fuel, Aviation, Kerosene Type (MIL-T-83133), Grade JP-8	
	C		Turbine Fuel, (MIL-F-16884), (NATO Code No. F75 or F-72)	
		9140-00-255-7764	5 gl can	cn
		9140-00-273-2378	55 gl drum	dr
		9140-00-273-2377	1 gl can	cn
	C		Turbine Fuel, (MIL-F-5624), Grade JP-4 (NATO Code No. F40)	
		9130-00-273-2380	Drum, 16 gage	dr
	C		Turbine Fuel, (MIL-T-5624), Grade JP-5 (NATO Code No. F-44)	
		9130-01-305-5596	Bulk	gl
		9130-01-250-6353	Drum, 16 gage	dr
77	O	6145-01-148-2263	Wire, Electrical (80009) 175-0825-00 50 ft	ft

APPENDIX E
ILLUSTRATED LIST OF MANUFACTURED ITEMS

Section I. INTRODUCTION

E-1. INTRODUCTION

This appendix includes complete instructions for manufacturing or fabricating authorized items locally. All bulk materials needed to manufacture an item are listed by part number or specification number. Figures are provided as needed. See standards and specifications DoD-Std-00100D(AR) and ANSI Y14.5M1982 for required details.

Section II. MANUFACTURED ITEMS INDEX

ITEM NAME/PART NUMBER	ITEM DESCRIPTION	PARA NO.
Brake Adjusting Tool Support		E-2
Brake Plunger Seal Driver		E-3
Cab Support Tool		E-4
Headlight Adjustment Screen		E-5
M1079 Blackout Shield Seals		E-6
M1079 Door Gaskets		E-7
M1079 Window Sash Glazing Seals		E-8
Relay Test Wire		E-9
Wheel Bearing Shim Tool Rest		E-10
12414690-001	Pneumatic Tube	E-11
12414690-002	Pneumatic Tube	E-11
12414690-004	Pneumatic Tube	E-11
12414690-005	Pneumatic Tube	E-11
12414690-010	Pneumatic Tube	E-11
12414690-101	Pneumatic Tube	E-11
12414690-102	Pneumatic Tube	E-11
12414690-103	Pneumatic Tube	E-11
12414690-104	Pneumatic Tube	E-11
12414690-105	Pneumatic Tube	E-11
12414690-106	Pneumatic Tube	E-11
12414690-107	Pneumatic Tube	E-11
12414690-108	Pneumatic Tube	E-11
12414690-109	Pneumatic Tube	E-11
12414690-112	Pneumatic Tube	E-11
12414690-113	Pneumatic Tube	E-11
12414690-115	Pneumatic Tube	E-11
12414690-117	Pneumatic Tube	E-11
12414690-118	Pneumatic Tube	E-11
12414690-119	Pneumatic Tube	E-11
12414690-120	Pneumatic Tube	E-11
12414690-121	Pneumatic Tube	E-11
12414690-122	Pneumatic Tube	E-11
12414690-123	Pneumatic Tube	E-11
12414690-124	Pneumatic Tube	E-11
12414690-125	Pneumatic Tube	E-11
12414690-126	Pneumatic Tube	E-11
12414690-127	Pneumatic Tube	E-11
12414690-201	Pneumatic Tube	E-11
12414690-202	Pneumatic Tube	E-11

Section II. MANUFACTURED ITEMS INDEX (CONT)

ITEM NAME/PART NUMBER	ITEM DESCRIPTION	PARA NO.
12414690-203	Pneumatic Tube	E-11
12414690-205	Pneumatic Tube	E-11
12414690-206	Pneumatic Tube	E-11
12414690-207	Pneumatic Tube	E-11
12414690-208	Pneumatic Tube	E-11
12414690-209	Pneumatic Tube	E-11
12414690-210	Pneumatic Tube	E-11
12414690-211	Pneumatic Tube	E-11
12414690-212	Pneumatic Tube	E-11
12414690-213	Pneumatic Tube	E-11
12414690-214	Pneumatic Tube	E-11
12414690-215	Pneumatic Tube	E-11
12414690-216	Pneumatic Tube	E-11
12414690-217	Pneumatic Tube	E-11
12414690-218	Pneumatic Tube	E-11
12414690-219	Pneumatic Tube	E-11
12414690-220	Pneumatic Tube	E-11
12414690-221	Pneumatic Tube	E-11
12414690-222	Pneumatic Tube	E-11
12414690-223	Pneumatic Tube	E-11
12414690-224	Pneumatic Tube	E-11
12414690-225	Pneumatic Tube	E-11
12414690-226	Pneumatic Tube	E-11
12414690-227	Pneumatic Tube	E-11
12414690-228	Pneumatic Tube	E-11
12414690-229	Pneumatic Tube	E-11
12414690-230	Pneumatic Tube	E-11
12414690-231	Pneumatic Tube	E-11
12414690-301	Pneumatic Tube	E-11
12414690-302	Pneumatic Tube	E-11
12414690-303	Pneumatic Tube	E-11
12416381P1	Non-Metallic Electrical Cable Conduit	E-12
12416381P10	Non-Metallic Electrical Cable Conduit	E-12
12416381P11	Non-Metallic Electrical Cable Conduit	E-12
12416381P12	Non-Metallic Electrical Cable Conduit	E-12
12416381P13	Non-Metallic Electrical Cable Conduit	E-12
12416381P14	Non-Metallic Electrical Cable Conduit	E-12
12416381P15	Non-Metallic Electrical Cable Conduit	E-12
12416381P16	Non-Metallic Electrical Cable Conduit	E-12
12416381P17	Non-Metallic Electrical Cable Conduit	E-12
12416381P2	Non-Metallic Electrical Cable Conduit	E-12
12416381P20	Non-Metallic Electrical Cable Conduit	E-12
12416381P21	Non-Metallic Electrical Cable Conduit	E-12
12416381P22	Non-Metallic Electrical Cable Conduit	E-12
12416381P23	Non-Metallic Electrical Cable Conduit	E-12
12416381P26	Non-Metallic Electrical Cable Conduit	E-12
12416381P3	Non-Metallic Electrical Cable Conduit	E-12
12416381P30	Non-Metallic Electrical Cable Conduit	E-12
12416381P32	Non-Metallic Electrical Cable Conduit	E-12
12416381P34	Non-Metallic Electrical Cable Conduit	E-12
12416381P35	Non-Metallic Electrical Cable Conduit	E-12

ITEM NAME/PART NUMBER	ITEM DESCRIPTION	PARA NO.
12416381P36	Non-Metallic Electrical Cable Conduit	E-12
12416381P37	Non-Metallic Electrical Cable Conduit	E-12
12416381P38	Non-Metallic Electrical Cable Conduit	E-12
12416381P4	Non-Metallic Electrical Cable Conduit	E-12
12416381P5	Non-Metallic Electrical Cable Conduit	E-12
12416381P6	Non-Metallic Electrical Cable Conduit	E-12
12416381P7	Non-Metallic Electrical Cable Conduit	E-12
12416381P8	Non-Metallic Electrical Cable Conduit	E-12
12416381P9	Non-Metallic Electrical Cable Conduit	E-12
12418037	Steering Gear Return Hose	E-13
12418460-001	Transmission Oil Cooler Hose	E-13
12418460-002	Transmission Oil Cooler Hose	E-13
12418763	Lanyard Assembly	E-14
12420196	Lanyard Assembly	E-14
12420197-001	Non-Metallic Vent Air Hose	E-15
12420197-002	Non-Metallic Vent Air Hose	E-15
12420197-003	Non-Metallic Vent Air Hose	E-15
12420197-004	Non-Metallic Vent Air Hose	E-15
12420197-005	Non-Metallic Vent Air Hose	E-15
12420197-006	Non-Metallic Vent Air Hose	E-15
12420198-001	Non-Metallic Vent Air Hose	E-15
12420198-002	Non-Metallic Vent Air Hose	E-15
12420308-457	Personnel Heater Air Duct Hose	E-16
12420308-760	Personnel Heater Air Duct Hose	E-16
12420489	Block Seal	E-17
3256-H-1048	CTIS Seal Driver	E-18
3256-K-1051	Wheel Hub Grease Seal Driver	E-19
Dimmer Switch Test Wire		E-20
Purge Valve Tool		E-21

Section III. MANUFACTURED ITEMS

E-2. BRAKE ADJUSTING TOOL SUPPORT

Make the brake adjusting tool support from 0.134 in. (3.4 mm) flat steel stock according to the following instructions. Refer to the parts list and **Figure E-1. Brake Adjusting Tool Support** for details.

Item	Part Number	Material Description	Size	Qty
1	N/A	Steel, ASTM A569 Sheet, Hot Rolled	6.0 in. (152.4 mm) x 6.0 in. (152.4 mm) x 0.134 in. (3.4 cm)	2

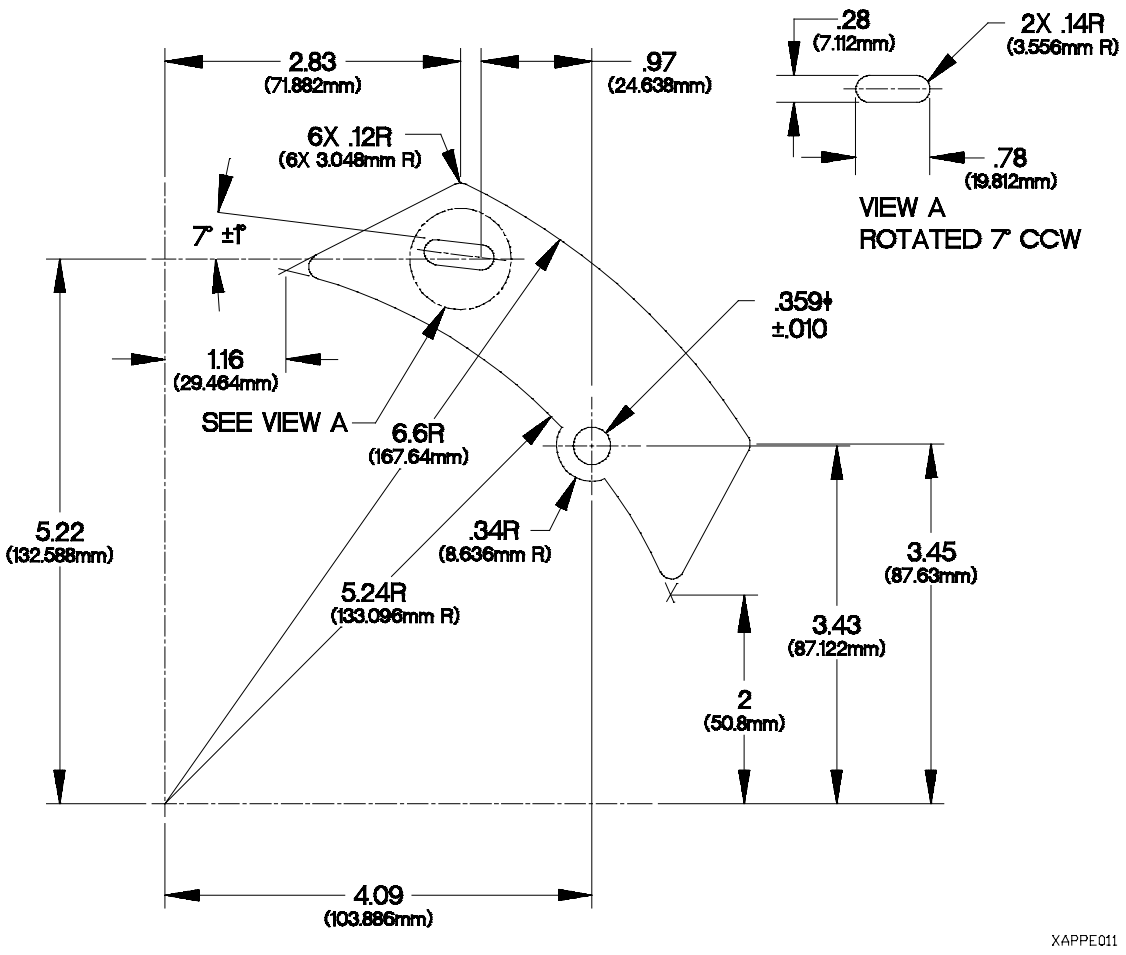


Figure E-1. Brake Adjusting Tool Support

a. All dimensions are in inches (millimeters).
b. Cut steel sheet as shown by dimensions on **Figure E-1. Brake Adjusting Tool Support**.
c. De-burr and remove sharp edges.

E-3. BRAKE PLUNGER SEAL DRIVER

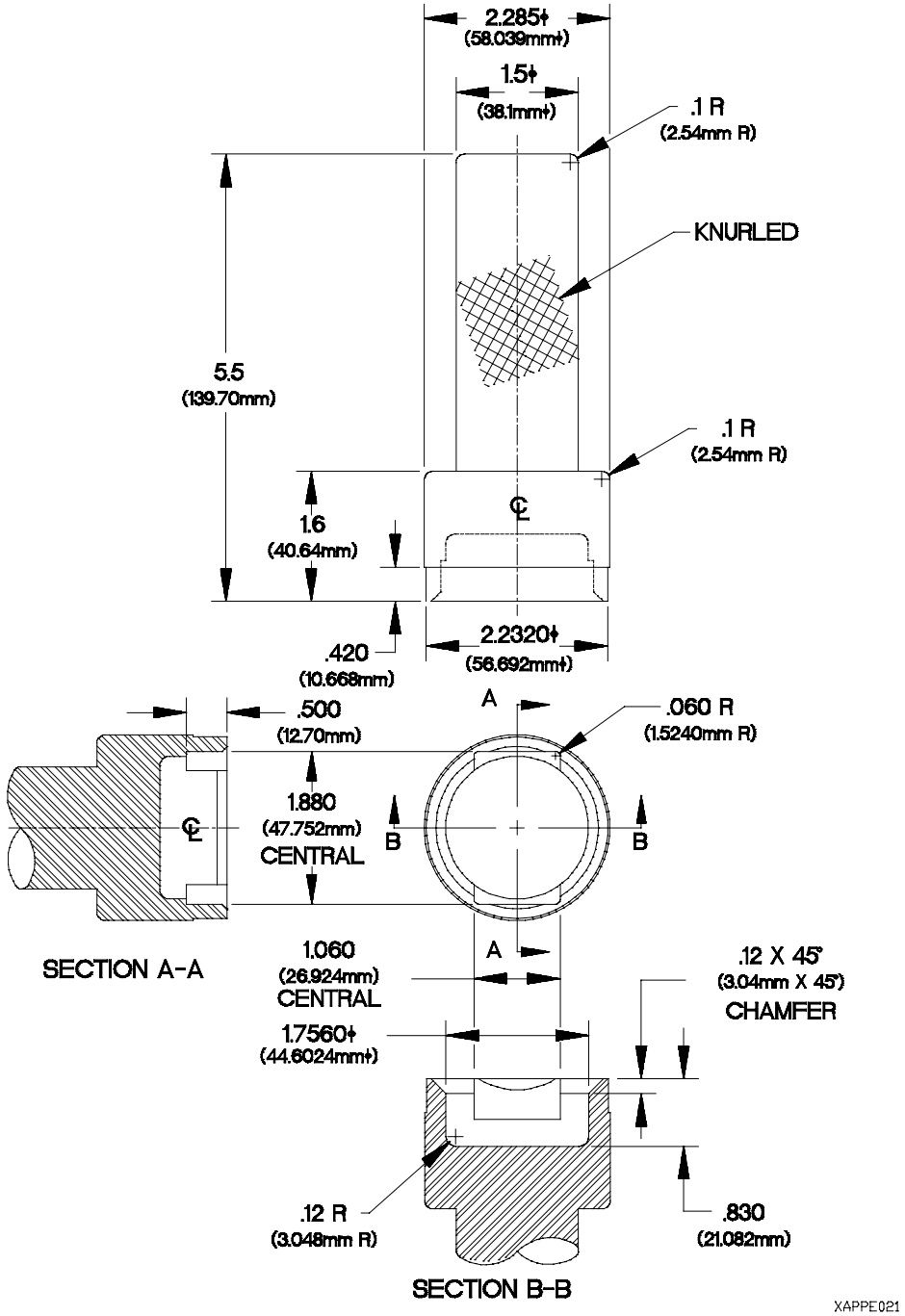


Figure E-2. Brake Plunger Seal Driver

a. All dimensions are in inches (millimeters).
b. Manufacture from round steel stock.
c. De-burr and remove sharp edges.

E-4. CAB SUPPORT TOOL

Make the cab support tool from .38 inch (.96 cm) flat steel stock and angle iron stock according to the following instructions. Refer to the parts list and **Figure E-3. Cab Support Tool Strut and Cab Rest** for details.

Item	Part Number	Material Description	Size	Qty
1	N/A	Steel, Flat Bar	4.0 in. (10.2 cm) X 33.38 in. X (84.8 cm) X 0.38 in. (0.96 cm)	1
2	N/A	Steel, Flat Bar	4.0 in. (10.2 cm) X 12.0 in. (30.5 cm) X 0.38 in. (0.96 cm)	1
3	N/A	Angle Iron	2.0 in. (5.1 cm) X 2.0 in. (5.1 cm) X 3.5 in. (8.9 cm)	2
4	H.S.105VW-1	Insulgrip, CSA 105 C		

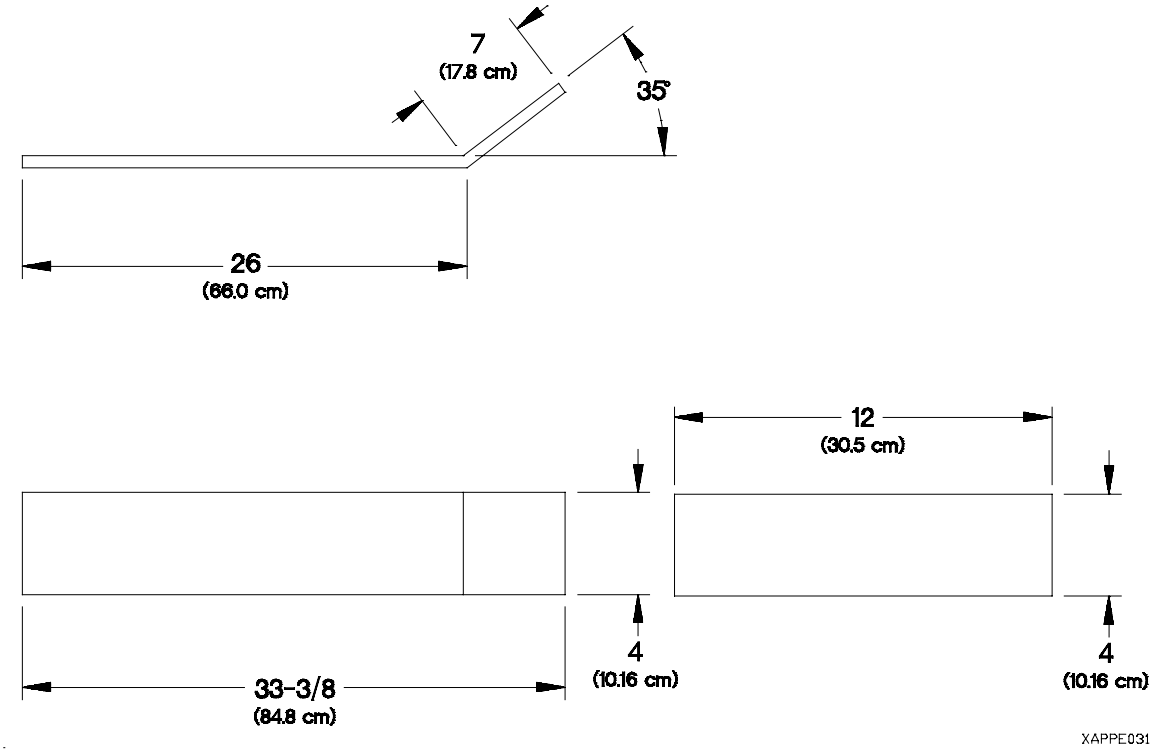


Figure E-3. Cab Support Tool Strut and Cab Rest

a. All dimensions are in inches (centimeters).
b. Cut cab support tool strut (1) from steel flat bar and bend to shape as shown in **Figure E-3. Cab Support Tool Strut and Cab Rest**.
c. Cut cab support tool cab rest (2) from steel flat bar.
d. De-burr and remove sharp edges.

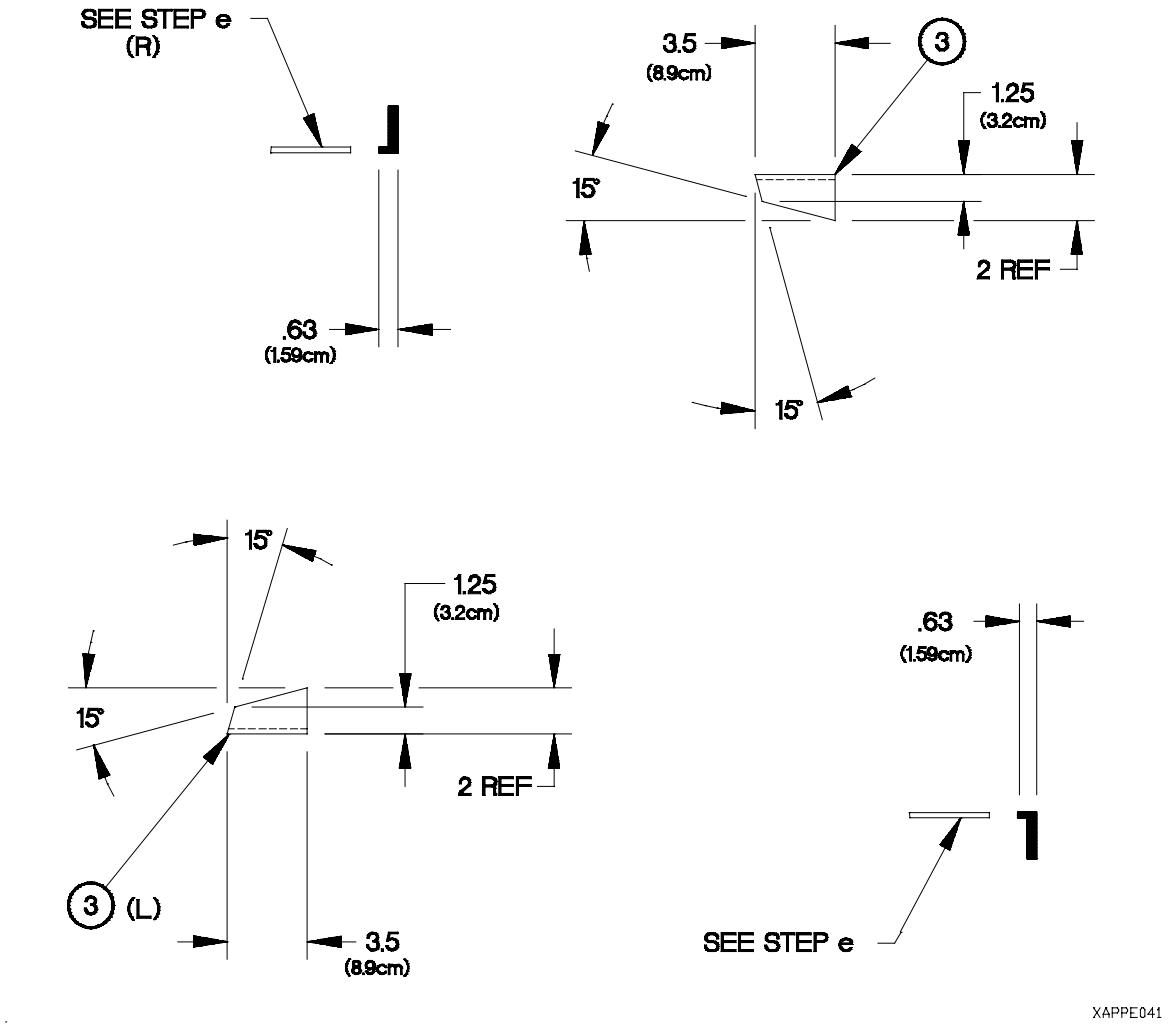


Figure E-4. Cab Support Tool Seat

e. Remove flange side of cab support tool seats (3) as shown in **Figure E-4. Cab Support Tool Seat**.
f. Cut cab support tool seats (3) L and (3) R according to dimensions and left\right orientation shown on **Figure E-4. Cab Support Tool Seat**.
g. De-burr and remove sharp edges.

E-4. CAB SUPPORT TOOL (CONT)

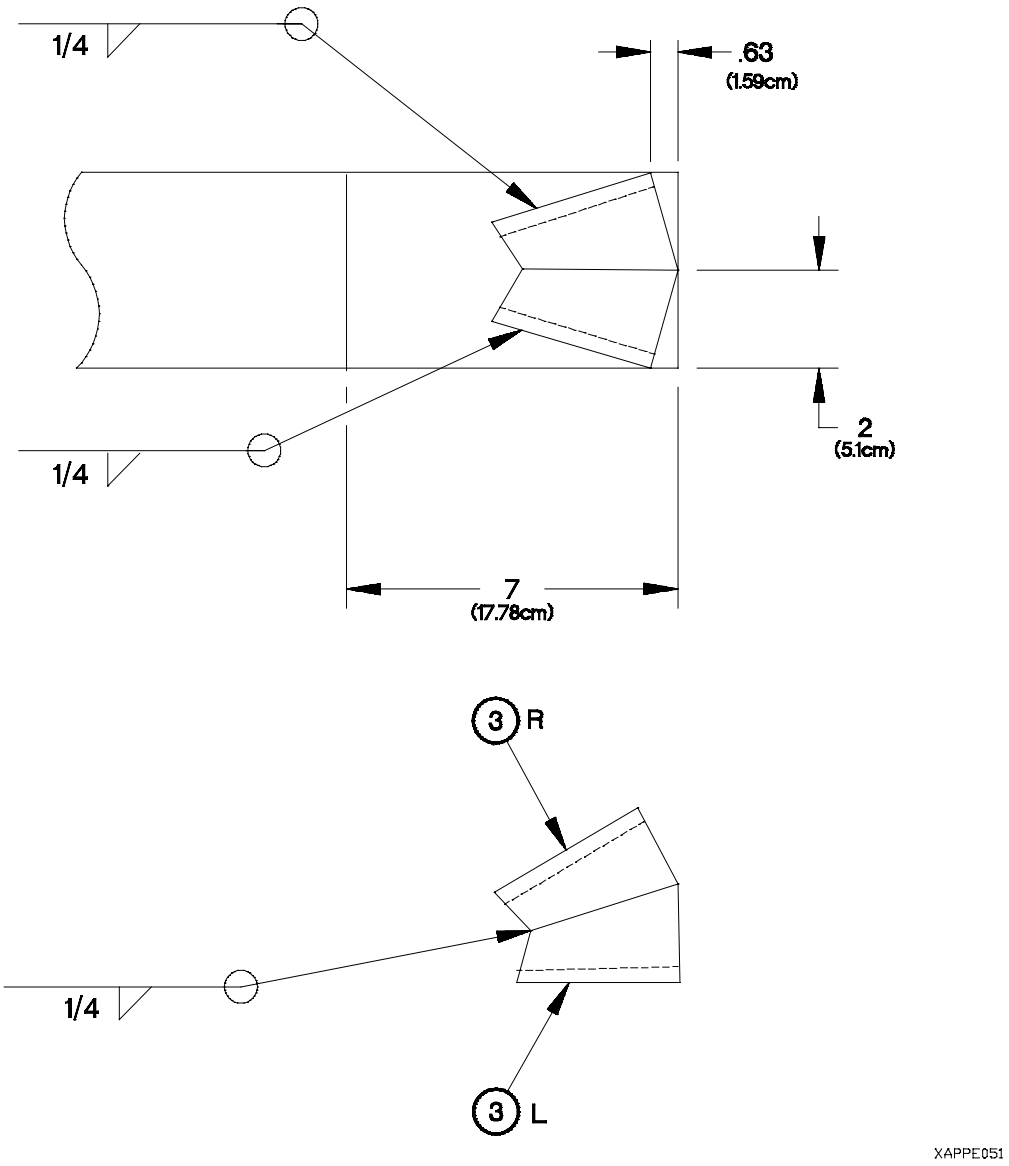


Figure E-5. Cab Support Tool Seat Layout

h. Position and clamp cab support tool seats (3) L and (3) R together as shown by dimensions on **Figure E-5. Cab Support Tool Seat Layout**.
i. Weld cab support tool seat (3) L to cab support tool seat (3) R as identified on assembly table and **Figure E-5. Cab Support Tool Seat Layout**.
j. Position and clamp cab support tool seats (3) L and (3) R to cab support tool strut (1) as shown by dimensions on **Figure E-5. Cab Support Tool Seat Layout**.
k. Weld items clamped in step (f) as shown in **Figure E-5. Cab Support Tool Seat Layout**.
l. De-burr and remove sharp edges.

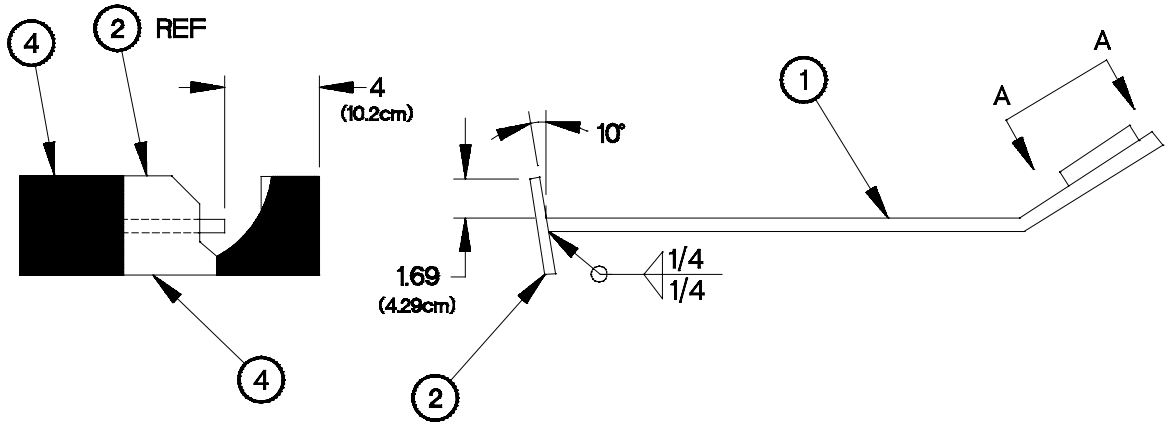


Figure E-6. Cab Support Tool Assembly

m. Position and clamp cab support tool strut (1) to cab support tool cab rest (2) as shown by dimensions on **Figure E-6. Cab Support Tool Assembly**, before insulgrip (4) is applied.
n. Weld cab support tool strut (1) to cab support tool cab rest (2).
o. Apply Insulgrip (4) to cab support tool cab rest (2) as described on material container.

E-5. HEADLIGHT ADJUSTMENT SCREEN

The headlight adjustment screen may be drawn on any vertical surface at least 50 in. (127 cm) high and 100 in. (254 cm) wide.

a. Draw two vertical lines (1) 50 in. (127 cm) high and 90.6 in. (230 cm) apart (centered on headlight adjustment screen).

b. Locate two points 40 in. (101.6 cm) from floor and 13 in. (33 cm) toward the center from each vertical line (1).

c. Draw vertical line (2) about 3-5 in. (8-13 cm) centered on each of the two points.

d. Draw horizontal line (3) about 3-5 in. (8-13 cm) centered on each of the two points.

e. Measure out 4 in. (10 cm) along each vertical line (2) and horizontal line (3) from each of the two points to make 8 in. (20 cm) squares (4).

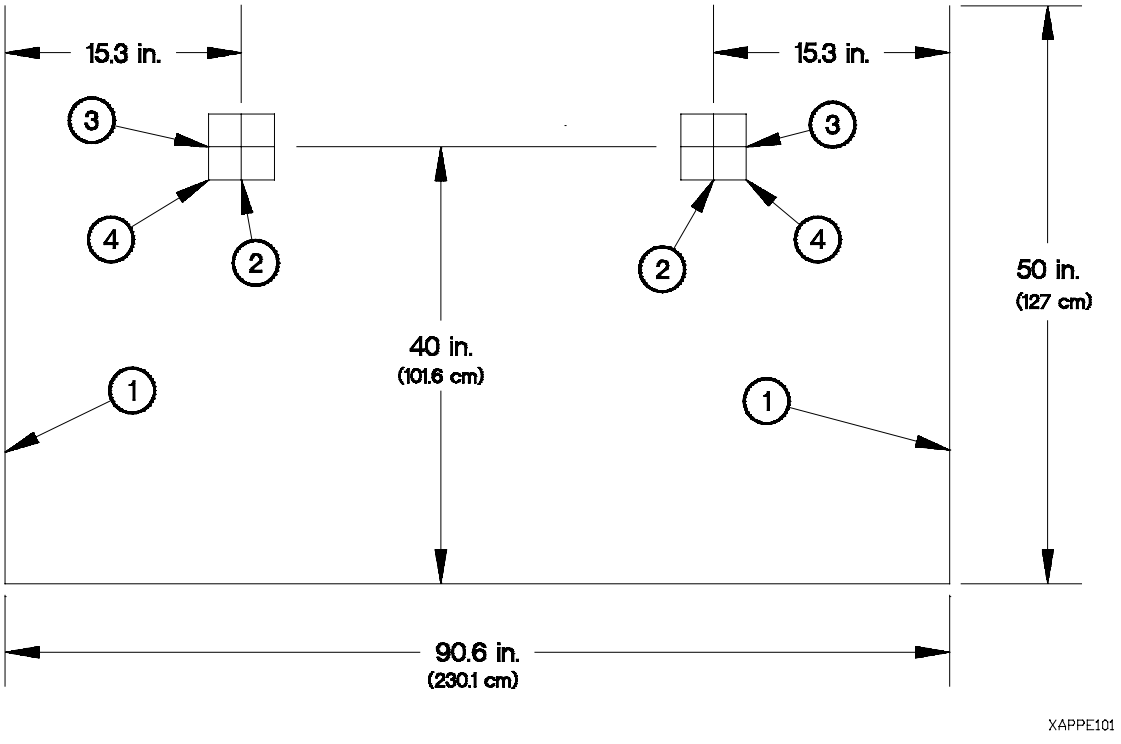


Figure E-7. Headlight Adjustment Screen

E-6. M1079 BLACKOUT SHIELD SEALS

Fabricate the M1079 blackout shield seals according to the following steps. Refer to the following parts list for materials.

Description	Material Part Number	CAGE Code	Cut Length
Blackout Shield Header Seal	942P00001	0SHR6	28-3/4 in. (730 mm)
Blackout Shield Jamb Seal (van body serial numbers 001 through 190)	942P00001	0SHR6	63-3/8 in. (1610 mm)
Blackout Shield Jamb Seal (van body serial number 191 and higher)	942P00001	0SHR6	33 in. (838 mm)

a. Dimensions are in inches (millimeters).
b. Cut seal material to the specified length using a fine-toothed hacksaw or other suitable cutting tool.

E-7. M1079 DOOR GASKETS

Fabricate the M1079 door gaskets according to the following steps. Refer to the following parts list for materials.

Description	Material Part Number	CAGE Code	Cut Length
LH Door Gasket	12416417	19207	214 in. (5435 mm)
RH Door Gasket	12416417	19207	197 in. (5004 mm)

a. Dimensions are in inches (millimeters).
b. Cut seal material to the specified length using a fine-toothed hacksaw or other suitable cutting tool.
c. Glue ends of gasket to each other using adhesive MIL-A-46106 GP1TY1 (Item 11, Appendix D).

E-8. M1079 WINDOW SASH GLAZING SEALS

Fabricate the M1079 window sash glazing seals according to the following steps. Refer to the following parts list for materials.

Description	Material Part Number	CAGE Code	Cut Length
Window Sash Top/Bottom Seal	941P00001	0SHR6	26-13/16 in. (681 mm)
Window Sash Side Seal (van body serial numbers 001 through 190)	941P00001	0SHR6	28-1/2 in. (724 mm)
Window Sash Side Seal (van body serial number 191 and higher)	941P00001	0SHR6	12-11/16 in. (322 mm)

a. Dimensions are in inches (millimeters).
b. Cut seal material to the specified length using a fine-toothed hacksaw or other suitable cutting tool.

NOTE

Cut miters so that short side of seal faces toward glass.

c. Cut 45-degree miters on ends of window sash seals.

E-9. RELAY TEST WIRE

Fabricate the relay test wire according to the following steps. Refer to the following parts list for materials.

Material Description	National Stock Number	Cut Length
Wire, Electrical (MIL-W-16878)	6145-00-330-3318	6 in. (152 mm)

a. Dimensions are in inches (millimeters).
b. Cut a length of wire six inches (152 mm) long.
c. Remove approximately 3/4 in. (19 mm) of electrical insulation from each end of wire.

E-10. WHEEL BEARING SHIM TOOL REST

Fabricate the wheel bearing shim tool rest according to the following steps. Refer to the following parts list for materials.

Part Number	National Stock Number	Description
QQ-T-570	9510-00-866-1037	Bar, Metal

a. Dimensions are in inches (millimeters).
b. Cut metal bar to 9.0 inches (228.6 mm) long.
c. De-burr and remove sharp edges from ends of metal bar.

E-11. PNEUMATIC TUBES FABRICATION

Cut pneumatic tubes from bulk tubing stock listed **Table E-1. Pneumatic Tube Lengths**. Use a fine-toothed hacksaw or suitable cutting device and cut tubing to required length.

Table E-1. Pneumatic Tube Lengths

Tube Part Number	Bulk Tubing Part Number	Cut Length	
		inches	cm
12414690-001	NT-100-4 (79470)	18.1	46.0
12414690-002	NT-100-4 (79470)	16.0	40.6
12414690-004	NT-100-4 (79470)	74.8	190.0
12414690-005	NT-100-4 (79470)	69.7	177.0
12414690-010	NT-100-4 (79470)	180.0	457.2
12414690-101	J844TYBSIZE 3/8 (81343)	18.0	45.7
12414690-102	J844TYBSIZE 3/8 (81343)	35.4	90.0
12414690-103	J844TYBSIZE 3/8 (81343)	20.9	53.0
12414690-104	J844TYBSIZE 3/8 (81343)	13.8	35.0
12414690-105	J844TYBSIZE 3/8 (81343)	11.8	30.0
12414690-106	J844TYBSIZE 3/8 (81343)	20.5	52.0
12414690-107	J844TYBSIZE 3/8 (81343)	39.0	99.0
12414690-108	J844TYBSIZE 3/8 (81343)	15.4	39.0
12414690-109	J844TYBSIZE 3/8 (81343)	23.0	58.4
12414690-112	J844TYBSIZE 3/8 (81343)	80.0	198.0
12414690-113	J844TYBSIZE 3/8 (81343)	11.4	29.0
12414690-115	J844TYBSIZE 3/8 (81343)	82.8	210.2
12414690-117	J844TYBSIZE 3/8 (81343)	156.5	397.5
12414690-118	J844TYBSIZE 3/8 (81343)	11.8	30.0
12414690-119	J844TYBSIZE 3/8 (81343)	269.5	684.5
12414690-120	J844TYBSIZE 3/8 (81343)	11.9	30.2
12414690-121	J844TYBSIZE 3/8 (81343)	43.0	109.2
12414690-122	J844TYBSIZE 3/8 (81343)	44.1	112.0
12414690-123	J844TYBSIZE 3/8 (81343)	259.4	659.0
12414690-124	J844TYBSIZE 3/8 (81343)	288.2	732.0
12414690-125	J844TYBSIZE 3/8 (81343)	10.8	27.3
12414690-126	J844TYBSIZE 3/8 (81343)	17.0	43.2
12414690-127	J844TYBSIZE 3/8 (81343)	17.0	43.2

E-11. PNEUMATIC TUBES FABRICATION (CONT)

Table E-1. Pneumatic Tube Lengths (Cont)

Tube Part Number	Bulk Tubing Part Number	Cut Length	
		inches	cm
12414690-201	C608-100BLK (13174)	14.8	37.5
12414690-202	C608-100BLK (13174)	14.0	35.7
12414690-203	C608-100BLK (13174)	6.5	16.5
12414690-205	C608-100BLK (13174)	14.5	36.8
12414690-206	C608-100BLK (13174)	14.9	37.7
12414690-207	C608-100BLK (13174)	15.5	39.5
12414690-208	C608-100BLK (13174)	6.7	17.0
12414690-209	C608-100BLK (13174)	19.5	49.5
12414690-210	C608-100BLK (13174)	15.5	39.3
12414690-211	C608-100BLK (13174)	8.0	20.3
12414690-212	C608-100BLK (13174)	16.9	43.0
12414690-213	C608-100BLK (13174)	118.5	301.0
12414690-214	C608-100BLK (13174)	124.0	315.0
12414690-215	C608-100BLK (13174)	163.0	414.0
12414690-216	C608-100BLK (13174)	160.0	406.4
12414690-217	C608-100BLK (13174)	62.6	159.0
12414690-218	C608-100BLK (13174)	119.8	304.2
12414690-219	C608-100BLK (13174)	69.0	175.3
12414690-220	C608-100BLK (13174)	45.5	115.6
12414690-221	C608-100BLK (13174)	12.6	32.0
12414690-222	C608-100BLK (13174)	5.5	14.0
12414690-223	C608-100BLK (13174)	14.6	37.1
12414690-224	C608-100BLK (13174)	170.0	431.8
12414690-225	C608-100BLK (13174)	174.0	442.0
12414690-226	C608-100BLK (13174)	103.5	263.0
12414690-227	C608-100BLK (13174)	32.8	83.2
12414690-228	C608-100BLK (13174)	3.5	8.9
12414690-229	C608-100BLK (13174)	62.2	158.1
12414690-230	C608-100BLK (13174)	14.6	37.0
12414690-231	C608-100BLK (13174)	60.5	153.7
12414690-301	PFT-10B-BLK-100 (61424)	19.0	48.3
12414690-302	PFT-10B-BLK-100 (61424)	56.0	142.2
12414690-303	PFT-10B-BLK-100 (61424)	118.1	300.0

E-12. NON-METALLIC ELECTRICAL CABLE CONDUIT FABRICATION

Make conduit to cover electrical cables described on 1241638 from bulk tube stock listed in **Table E-2. Non-Metallic Electrical Cable Conduit Lengths**. Use a fine-toothed hacksaw or suitable cutting device and cut hose/tube to required length.

Table E-2. Non-Metallic Electrical Cable Conduit Lengths

Tube Part Number	Bulk Tube Part Number	Cut Length	
		inch	cm
12416381P1	49008	8.9	22.6
12416381P10	49008	17.8	45.2
12416381P11	49008	29.9	75.9
12416381P12	49008	33.0	83.8
12416381P13	49008	13.9	35.3
12416381P14	49008	4.0	10.2
12416381P15	49008	17.4	44.2
12416381P16	49008	3.2	8.1
12416381P17	49008	4.5	11.4
12416381P2	49008	16.2	41.1
12416381P20	27413	32.8	83.3
12416381P21	27413	9.2	23.4
12416381P22	27413	8.0	20.3
12416381P23	27413	23.3	59.2
12416381P26	49008	2.5	6.4
12416381P3	27413	7.3	18.5
12416381P30	49007	17.0	43.2
12416381P32	49005	1.7	4.3
12416381P34	49005	20.7	52.6
12416381P35	49005	21.8	55.4
12416381P36	49005	5.5	14.0
12416381P37	49005	8.0	20.3
12416381P38	49008	3.7	9.4
12416381P4	49008	12.0	30.5
12416381P5	49008	26.0	66.0
12416381P6	49008	7.7	19.6
12416381P7	49008	26.7	67.8
12416381P8	49008	5.2	13.2
12416381P9	49008	16.8	42.7

E-13. STEERING GEAR RETURN HOSE AND TRANSMISSION OIL COOLER HOSES FABRICATION

Cut the following hoses from bulk hose using a fine-toothed hacksaw or suitable cutting device.

Hose Part Number	Bulk Hose Part Number	Cut Length	
		inches	cm
12418037	A110 (30327)	75.5	191.7
12418460-001	MS521302B110360 (96906)	17.5	44.4
12418460-002	MS521301A206R (96906)	16.0	40.6

E-14. LANYARD ASSEMBLIES P/N 12418763 AND 12420196 FABRICATION

Make the following lanyard assemblies from bulk cable material, sleeves, and tab material and assemble according to **Figure E-8. Lanyard Assembly**. The following parts list identifies part numbers and lengths of cut pieces.

Item	Part Number	Material Description	Size	Qty
1	MIL-W-83420 Type 1, Comp B	1/16 in. stranded wire cable	4 in. (102 mm)	1
2	MS51844-22	Sleeve		2
3	N/A	Tab, Stainless Steel ASTM A617	.06 in. (16 cm) X .37 in. (9.5 mm) X 1.25 in. (32 mm)	1

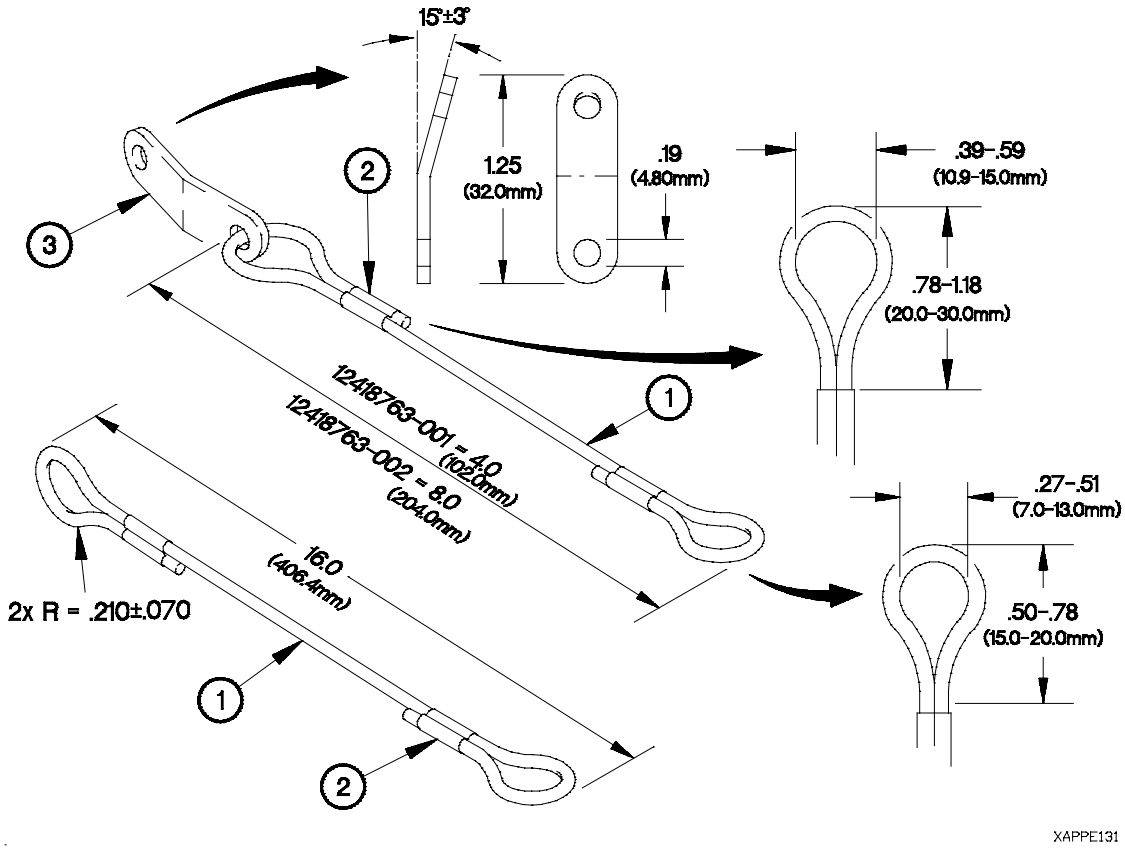


Figure E-8. Lanyard Assembly

a. All dimensions are in inches (millimeters).
b. Make from bulk cable and flat steel material as identified in parts list.
c. Drill two 0.19 in. (4.8 mm) diameter holes through tab material as shown on **Figure E-14. Lanyard Assembly**.
d. De-burr and remove sharp edges.
e. Bend tab as shown on **Figure E-14. Lanyard Assembly**.
f. Form loops on cable ends and insert sleeve material over cable on one end of cable and over cable and through sleeve at other end of cable as shown in **Figure E-14. Lanyard Assembly**.
g. Crimp two sleeves over cable ends.

E-15. NON-METALLIC VENT AIR HOSES FABRICATION

Cut the following vent air hoses from bulk hose using a fine-toothed hacksaw or suitable cutting device.

Hose Part Number	Bulk Hose Part Number	Cut Length	
		inches	cm
12420197-001	483666 (02280)	180.0	457.2
12420197-002	483666 (02280)	120.0	304.8
12420197-003	483666 (02280)	96.0	243.8
12420197-004	483666 (02280)	36.0	91.4
12420197-005	483666 (02280)	156.0	396.2
12420197-006	483666 (02280)	72.0	182.9
12420198-001	881-16 (98441)	120.0	304.8
12420198-002	11657469	36.0	91.4

E-16. PERSONNEL HEATER AIR DUCT HOSE FABRICATION

Cut the following hoses from bulk hose using a fine-toothed hacksaw or suitable cutting device.

Hose Part Number	Bulk Hose Part Number	Cut Length	
		inches	cm
12420308-457	8711054 (19207)	18.3	46.4
12420308-760	8711054 (19207)	30.4	77.2

E-17. BLOCK SEAL 12420489 FABRICATION

Make block seal from P/N (0VXY8) STN2.38X.5. Use a suitable cutting tool to cut seal to 0.52 inch (1.3 cm) long.

E-18. CTIS SEAL DRIVER 3256-H-1048

Used on Front and Rear Axle CTIS Seals.

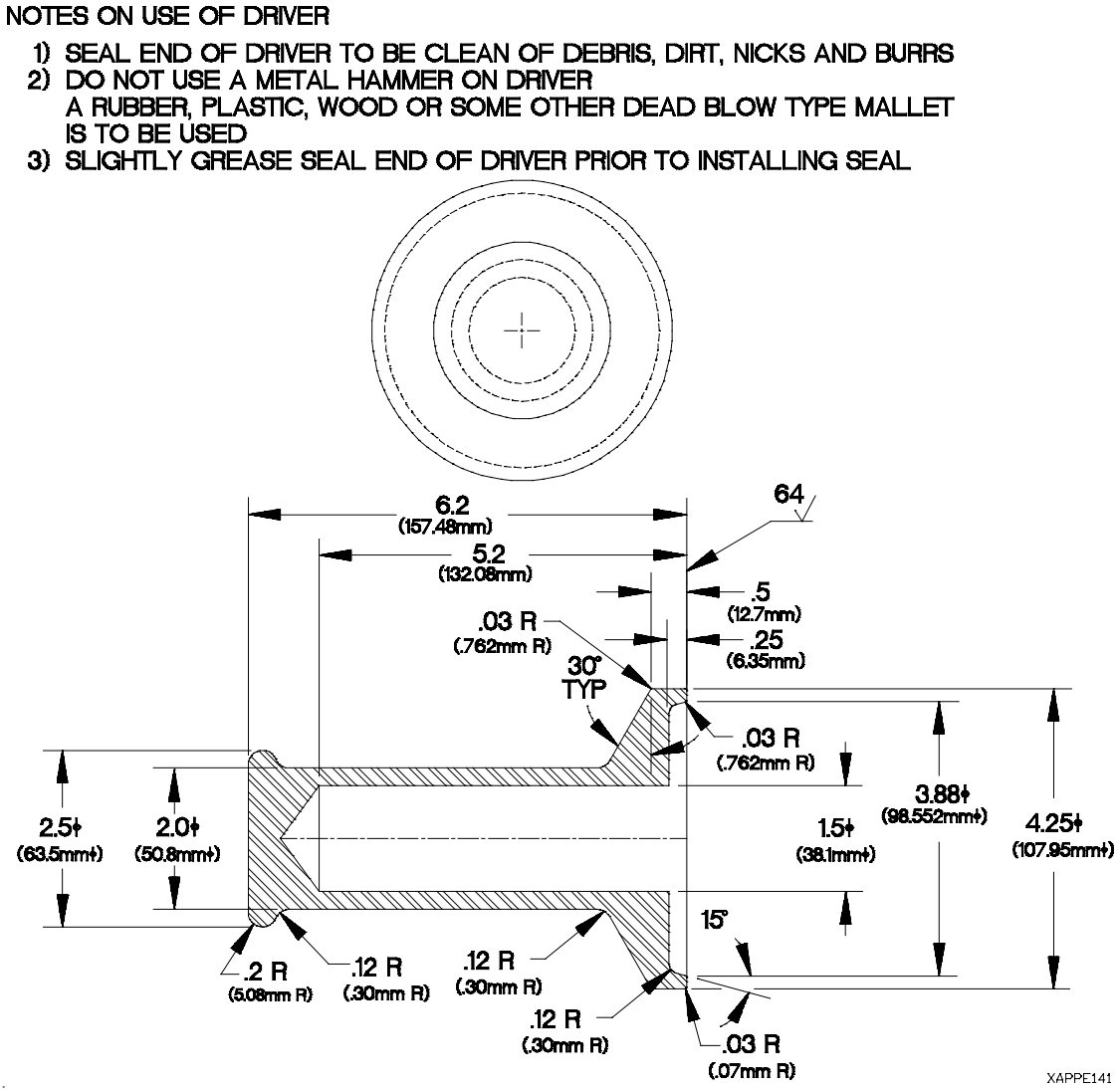


Figure E-9. CTIS Seal Driver

a. All dimensions are in inches (millimeters).
b. Manufacture from round steel stock.
c. De-burr and remove sharp edges.

E-19. WHEEL HUB GREASE SEAL DRIVER 3256-K-1051

NOTES ON USE OF DRIVER

1) SEAL END OF DRIVER TO BE CLEAN OF DEBRIS, DIRT, NICKS AND BURRS
2) DO NOT USE A METAL HAMMER ON DRIVER
   A RUBBER, PLASTIC, WOOD OR SOME OTHER DEAD BLOW TYPE MALLET
   IS TO BE USED
3) SLIGHTLY GREASE SEAL END OF DRIVER PRIOR TO INSTALLING SEAL

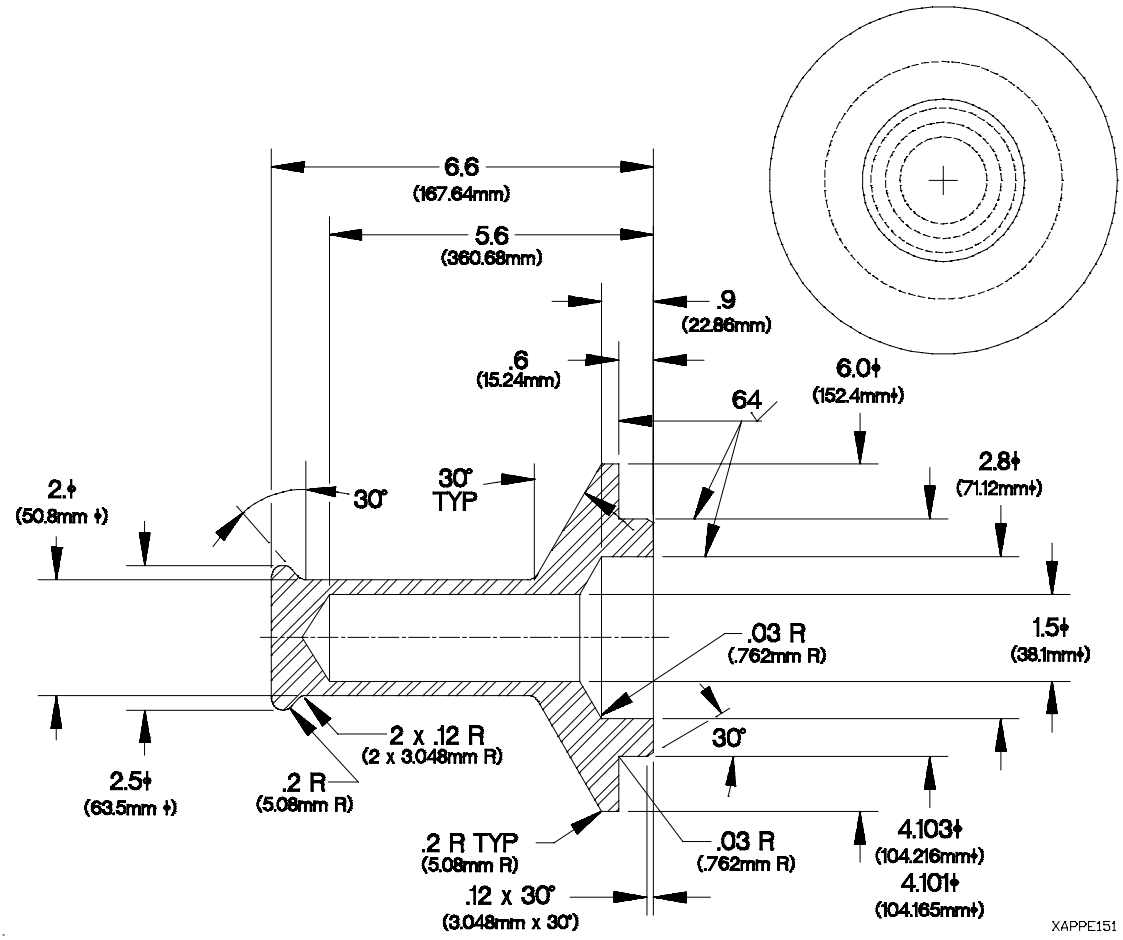


Figure E-10. Wheel Hub Grease Seal Driver

a. All dimensions are in inches (millimeters).
b. Manufacture from round steel stock.
c. De-burr and remove sharp edges.

E-20. DIMMER SWITCH TEST WIRE

Fabricate the dimmer switch test wire according to the following steps. Refer to the following parts list for materials.

Material Description	National Stock Number	Quantity	Cut Length
Wire, Electrical (M168678/14BKE9)	6145-01-229-4134	1	12 in (305 mm)
Pin, Grooved, Headless (12258939-1)	5315-01-156-6314	1	
Contact, Electrical (12258939-2)	5999-01-150-8808	1	

a. Dimensions are in inches (millimeters).
b. Cut a length of electrical wire approximately 12 in. (305 mm) long.
c. Remove approximately 1/4 in. (6 mm) of insulation from each end of electrical wire.
d. Crimp headless grooved pin on one end of electrical wire.
e. Crimp electrical contact on opposite end of electrical wire.

E-21. PURGE VALVE TOOL

Fabricate Purge Valve Tool according to the following instructions. Refer to Figure E-11. Purge Valve Tool for details.

Item	Part Number	Material Description	Size	Qty
1	N/A	Steel, ASTM A 108 or A576 Grade 1015-1025, BAR (Ref UNS G10150-G10250). Finish Black Oxide Coat, Class I, IAW MIL-C-13924.	14.0 in. (356 mm)	1

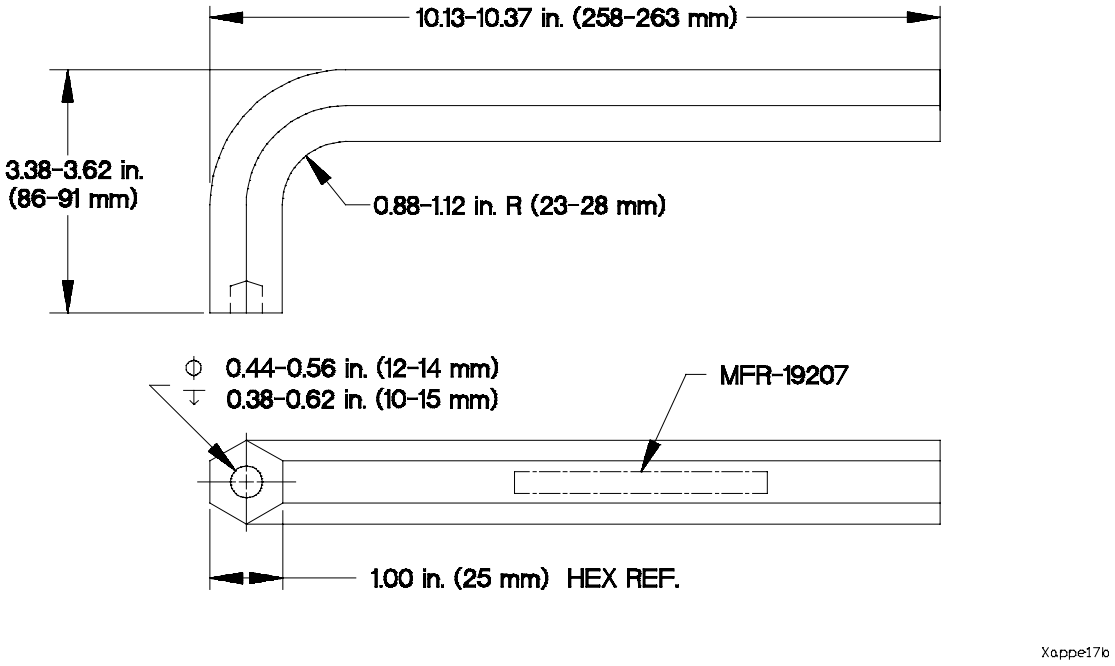


Figure E-11. Purge Valve Tool

a. All dimensions are in inches (cm).
b. Cut steel bar (1) and bend to shape as shown in Figure E-11.
c. Dimensional limits apply after coating.
d. All edges shall be broken and free from burrs.
e. Metal Stamp, electro etch, or engrave with the following marking IAW MIL-STD-130: 19207-12379968 MFR-19207.

APPENDIX F
TORQUE LIMITS

F-1. GENERAL

This appendix provides general torque limits for screws and nuts used on the vehicle. Special torque limits are shown in the maintenance procedures for applicable components. Use the general torque limit given in this appendix when specific torque limits are not given in the maintenance procedure. These general torque limits can not be applied to screws that retain rubber components. The rubber components will be damaged before the torque limit is reached. If a special torque limit is not given in the maintenance instructions for a fastener which retains a rubber component, tighten the screw or nut until it touches metal, then tighten one more turn. Whenever possible, the tightening force (torque) should be applied to the nut side of the fastener group.

F-2. TORQUE LIMITS

Refer to **Table F-1. Torque Limits for SAE and ANSI Fasteners** for torque limits on standard (SAE and ANSI) screws and free spinning nuts. Refer to **Table F-2. Torque Limits for SAE and ANSI Prevailing Torque Nuts** for torque limits on standard (SAE and ANSI) self-locking nuts. Refer to **Table F-3. Torque Limits for Metric Screws and Free Spinning Nuts** for torque limits on metric screws and free spinning nuts. Refer to **Table F-4. Torque Limits for Metric Prevailing Torque Nuts** for torque limits on metric self-locking nuts.

F-3. USE OF TORQUE TABLES

(1) Measure the diameter of the screw to be installed.

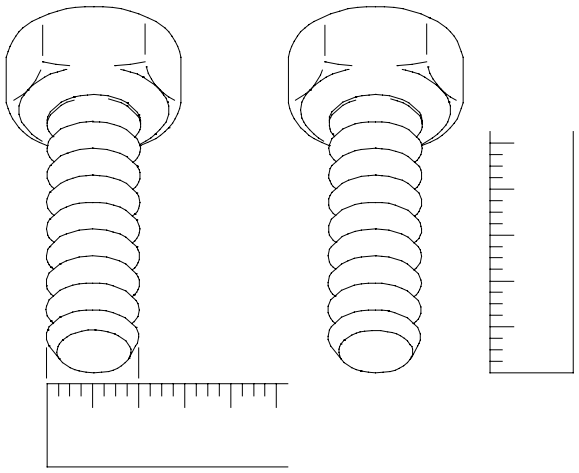
(2) Count the number of threads per inch.

(3) Under the heading DIAMETER look down the column until the diameter of the screw is found. (There are usually two lines beginning with the same diameter.)

(4) Under the heading THREADS PER INCH (SAE and ANSI) or THREAD PITCH (metric), find the number of threads per inch that matches the number counted in step (2).

(5) To find the grade of the screw, match the markings on the head to the correct picture under CAPSCREW HEAD MARKINGS on the torque table.

(6) Look down the column under the picture found in step (5) until the torque limit (lb-ft or N·m) for the diameter and threads per inch (or thread pitch, in the case of metric fasteners) of the screw are located.



XAPPF01A

APPENDIX F
TORQUE LIMITS

Table F-1. Dry Torque Limits for SAE and ANSI Screws and Free Spinning Nuts

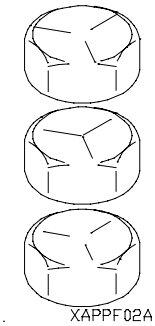
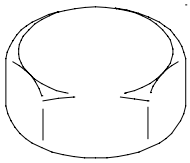
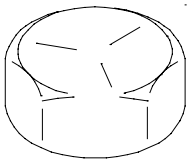
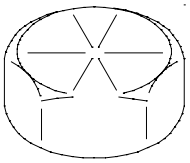
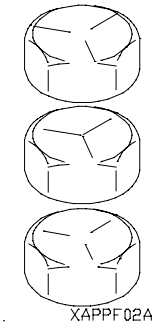
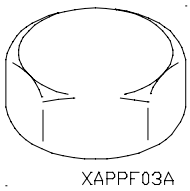
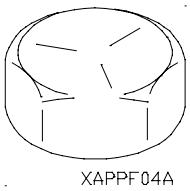
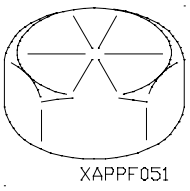
 XAPPF02A **NOTE Manufacturer's marks may vary. These are all SAE Grade 5.**		Material Grade Markings					
		 XAPPF03A **SAE Grade 2**		 XAPPF04A **SAE Grade 5**		 XAPPF051 **SAE Grade 8**	
Diameter	**Threads per inch**	**Torque**					
inch		**lb-ft**	**N·m**	**lb-ft**	**N·m**	**lb-ft**	**N·m**
1/4	20	3-5	5-7	5-7	8-10	8-10	10-14
1/4	28	4-6	5-7	6-8	9-11	8-12	12-16
1/4	32	4-6	5-7	7-9	9-11	9-13	12-16
5/16	18	7-9	9-13	11-15	15-21	15-21	21-29
5/16	24	8-10	11-15	12-16	17-23	17-23	24-32
5/16	32	9-11	12-16	14-18	18-24	19-25	27-34
3/8	16	13-17	17-23	20-26	27-35	28-38	38-50
3/8	24	15-19	20-26	22-30	31-41	32-42	43-57
3/8	32	15-21	21-27	24-32	33-43	33-45	55-61
7/16	14	20-28	28-38	32-42	43-57	44-60	61-81
7/16	20	23-31	31-41	35-47	48-64	49-67	68-90
7/16	28	25-33	33-45	37-51	51-69	54-72	73-97
1/2	13	32-42	43-57	49-65	66-88	68-92	93-123
1/2	20	35-47	48-64	55-73	74-98	77-103	105-139
1/2	28	38-50	51-67	58-78	79-105	82-110	111-149
9/16	12	55-61	62-82	70-94	95-127	98-132	134-178
9/16	18	50-68	69-91	78-104	105-141	109-147	149-199
9/16	24	53-71	72-96	82-110	111-149	115-155	158-210
5/8	11	62-84	85-113	95-129	131-175	136-182	184-246
5/8	18	70-94	96-128	108-146	148-198	154-206	209-279
5/8	24	73-99	100-134	114-154	155-207	161-217	219-293

Table F-1. Dry Torque Limits for SAE and ANSI Screws and Free Spinning Nuts (Cont)

 XAPPF02A Manufacturer's marks may vary. These are all SAE Grade 5		Material Grade Markings					
		 XAPPF03A SAE Grade 2		 XAPPF04A SAE Grade 5		 XAPPF051 SAE Grade 8	
Diameter	Threads per inch	Torque					
inch		lb-ft	N·m	lb-ft	N·m	lb-ft	N·m
11/16	24	99-133	135-181	153-207	209-279	217-291	296-394
3/4	10	110-148	150-200	171-229	232-310	240-324	328-438
3/4	16	123-165	168-224	190-256	259-345	269-361	366-488
3/4	20	127-171	174-232	197-265	268-358	278-374	379-505
13/16	20			252-340	345-459	357-481	487-649
7/8	9			275-369	374-498	387-521	528-704
7/8	14			303-407	413-551	427-575	583-777
7/8	20			319-429	435-579	450-606	614-818
15/16	20			395-531	538-718	558-750	760-1014
1	8			411-553	560-748	581-781	792-1056
1	12			450-606	614-818	636-856	867-1155
1	20			483-649	658-878	681-917	929-1239
1-1/16	18			576-776	782-1044	813-1095	1109-1479
1-1/8	7			507-683	693-923	824-1108	1123-1497
1-1/8	12			570-766	776-1034	923-1241	1258-1678
1-1/8	18			600-806	817-1089	971-1307	1324-1766
1-3/16	18			709-953	966-1288	1149-1545	1566-2088
1-1/4	7			716-964	976-1302	1161-1563	1584-2112
1-1/4	12			793-1067	1081-1441	1286-1730	1754-2338
1-1/4	18			831-1117	1132-1510	1346-1812	1835-2447
1-5/16	18			965-1299	1316-1754	1565-2105	2134-2846
1-3/8	6			939-1263	1281-1707	1523-2049	2076-2768

APPENDIX F
TORQUE LIMITS

Table F-2. Dry Torque Limits for SAE and ANSI Prevailing Torque Nuts

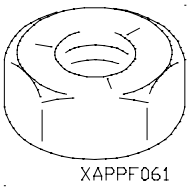
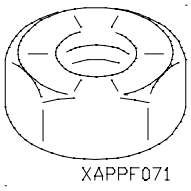
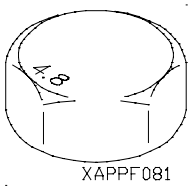
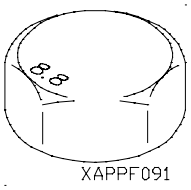
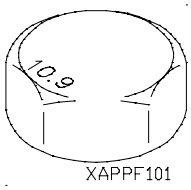
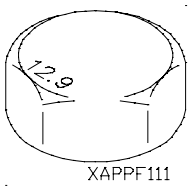
		Material Grade Markings			
		 XAPPF061		 XAPPF071	
		SAE Grade 5		SAE Grade 8	
Hole Diameter	Threads per inch	Torque			
inch		lb-ft	N·m	lb-ft	N·m
1/4	20	10-12	14-16	15-17	20-24
1/4	28	12-14	16-18	14-18	21-25
5/16	18	20-24	27-33	26-32	36-44
5/16	24	22-26	30-36	29-35	40-48
3/8	16	35-41	47-55	48-58	65-77
3/8	24	38-46	53-63	53-63	72-86
7/16	14	55-65	74-88	75-91	103-123
7/16	20	60-70	81-97	80-98	110-132
1/2	13	86-102	116-138	113-137	154-184
1/2	20	92-110	125-149	127-153	177-207
9/16	12	120-144	162-194	168-202	229-273
9/16	18	135-161	183-219	179-217	244-294
5/8	11	165-199	226-270	226-272	306-368
5/8	18	181-219	246-296	244-296	331-401
3/4	10	296-354	402-480	395-479	538-648
3/4	16	310-376	422-508	424-516	576-698
7/8	9	460-554	625-749	612-746	833-1009
7/8	14	503-607	684-822	652-800	888-1082
1	8	686-828	933-1121	941-1141	1280-1544

Table F-3. Dry Torque Limits for Metric Screws and Free Spinning Nuts

		Material Grade Markings							
		 Metric Grade 4.8		 Metric Grade 8.8		 Metric Grade 10.9		 Metric Grade 12.9	
Diameter	Thread Pitch	Torque							
mm		lb-ft	N·m	lb-ft	N·m	lb-ft	N·m	lb-ft	N·m
6	1	3	4-5	5-7	7-9	7-9	10-13	8-11	11-15
8	1.25	7-9	9-11	13-17	17-23	17-23	23-31	21-27	27-37
8	1	7-9	9-13	14-18	18-24	19-25	25-33	21-29	29-39
10	1.5	13-17	17-23	25-33	33-45	34-46	46-62	40-54	54-72
10	1.25	14-18	18-24	26-34	35-47	36-48	49-65	42-56	57-77
10	0.75	15-19	21-27	29-39	39-53	40-54	54-72	47-63	63-85
12	1.75	22-30	30-40	43-57	58-78	60-80	81-107	69-93	94-126
12	1.5	23-31	32-42	46-60	61-81	63-83	85-113	73-97	99-131
12	1.25	24-32	33-45	47-63	65-85	65-87	88-118	76-102	104-138
12	1	26-34	34-46	49-65	67-89	68-90	93-123	80-106	108-144
14	2	36-48	48-74	69-91	93-125	95-127	129-173	112-148	151-201
14	1.5	39-51	52-70	75-99	99-135	103-137	140-186	120-160	163-217
15	1	51-69	69-93	100-132	135-179	137-183	187-249	160-214	218-290
16	2	55-73	75-99	107-143	145-193	148-198	201-267	173-231	235-313
16	1.5	59-79	80-106	114-152	155-207	158-210	214-286	184-246	250-334
18	1.5			166-222	225-301	230-306	311-415	268-358	364-486
20	2.5			209-279	283-377	289-385	392-522	338-450	458-610
20	1.5			232-308	315-419	321-427	435-579	375-499	508-678
20	1			244-324	330-440	337-449	457-609	394-524	534-712
22	2.5			285-379	387-515	394-524	534-712	461-613	624-832
22	1.5			313-417	424-566	432-576	586-782	664-884	900-1200
24	3			361-481	489-653	499-665	677-903	584-778	791-1055
24	2			394-524	534-712	545-725	738-984	725-965	982-1310
25	1.5			467-621	633-843	645-859	875-1167	754-1004	1023-1363

APPENDIX F
TORQUE LIMITS

Table F-4. Dry Torque Limits for Metric Prevailing Torque Nuts

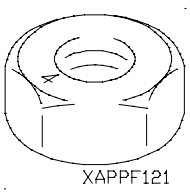
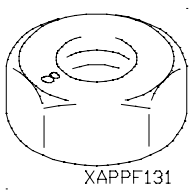
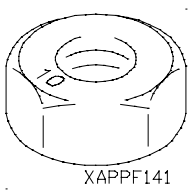
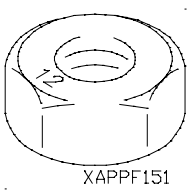
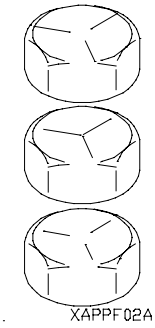
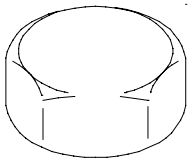
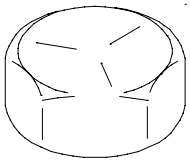
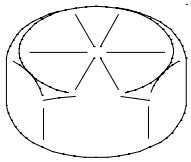
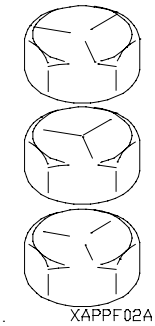
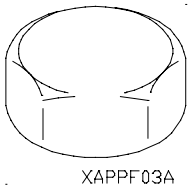
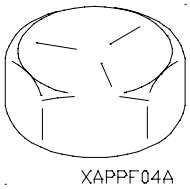
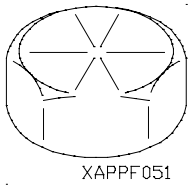
		Material Grade Markings							
									
		Metric Grade 4.8		Metric Grade 8.8		Metric Grade 10.9		Metric Grade 12.9	
Diameter	Thread Pitch	Torque							
mm		lb-ft	N·m	lb-ft	N·m	lb-ft	N·m	lb-ft	N·m
6	1	5-6	7-8	7-9	10-12	10-12	14-17	11-14	15-19
8	1.25	12-14	16-18	18-22	24-30	24-30	32-40	27-33	36-46
8	1	12-14	16-20	19-23	25-31	25-31	34-42	28-36	38-48
10	1.5	21-25	28-34	33-41	44-56	44-56	60-76	50-64	68-86
10	1.25	21-25	29-35	34-42	46-58	46-58	63-79	53-67	71-91
10	0.75	23-27	31-37	37-47	49-63	50-64	68-86	57-73	77-99
12	1.75	33-41	46-56	55-69	74-94	75-95	102-128	85-109	115-147
12	1.5	35-43	47-57	56-72	77-97	78-98	106-134	89-113	120-152
12	1.25	36-44	48-60	58-74	79-101	81-103	109-139	91-117	125-159
12	1	37-45	50-62	61-77	82-104	84-106	114-144	95-121	129-165
14	2	53-65	72-88	87-109	117-149	118-150	160-204	134-172	182-232
14	1.5	57-69	76-94	92-116	125-159	126-160	171-217	143-183	194-248
16	2	79-97	107-131	130-166	177-225	178-228	243-309	204-262	277-355
16	1.5	82-102	112-138	138-176	187-239	189-241	256-328	215-277	292-376
18	1.5			197-253	267-343	271-347	367-471	309-399	420-542
20	2.5			248-318	337-431	342-438	464-594	391-503	530-682
20	1.5			271-349	369-473	374-480	507-651	428-552	580-750
20	1			283-365	384-494	390-502	529-681	447-577	606-784
22	2.5			335-429	455-583	460-592	624-802	526-680	714-922
22	1.5			363-467	492-634	499-643	676-872	730-950	990-1290
24	3			420-540	569-733	577-743	783-1009	662-856	897-1161
24	2			453-583	614-792	622-804	844-1090	803-1043	1088-1416

Table F-5. Wet Torque Limits for SAE and ANSI Screws and Free Spinning Nuts

 XAPPF02A **NOTE Manufacturer's marks may vary. These are all SAE Grade 5.**		Material Grade Markings					
		 XAPPF03A **SAE Grade 2**		 XAPPF04A **SAE Grade 5**		 XAPPF051 **SAE Grade 8**	
Diameter	**Threads per inch**	**Torque**					
inch		**lb-ft**	**N·m**	**lb-ft**	**N·m**	**lb-ft**	**N·m**
1/4	20	4	6	6	8	9	12
1/4	28	5	7	7	9	10	14
5/16	18	8	11	13	18	18	24
5/16	24	9	12	14	19	20	27
3/8	16	15	20	23	31	35	47
3/8	24	17	23	25	34	35	47
7/16	14	24	33	35	47	55	75
7/16	20	25	34	40	54	60	81
1/2	13	35	47	55	75	80	108
1/2	20	40	54	65	88	90	122
9/16	12	50	68	80	108	110	149
9/16	18	55	75	90	122	130	176
5/8	11	70	95	110	149	170	231
5/8	18	80	108	130	176	180	244
3/4	10	120	163	200	271	280	380
3/4	16	140	190	220	298	320	434
7/8	9	110	149	300	407	460	624
7/8	14	120	163	320	434	500	678
1	8	160	217	440	597	680	922
1	12	170	231	480	651	740	1003
1-1/8	7	220	298	600	814	960	1302
1-1/8	12	260	353	660	895	1080	1464

APPENDIX F
TORQUE LIMITS

Table F-5. Wet Torque Limits for SAE and ANSI Screws and Free Spinning Nuts (Cont)

 XAPPF02A **Manufacturer's marks may vary. These are all SAE Grade 5**		**Material Grade Markings**					
		 XAPPF03A **SAE Grade 2**		 XAPPF04A **SAE Grade 5**		 XAPPF051 **SAE Grade 8**	
Diameter	**Threads per inch**	**Torque**					
inch		**lb-ft**	**N·m**	**lb-ft**	**N·m**	**lb-ft**	**N·m**
1-1/4	7	320	434	840	1139	1360	1844
1-1/4	12	360	488	920	1248	1500	2034
1-3/8	6	420	570	1100	1492	1780	2414
1-3/8	12	460	624	1260	1709	2040	2766

APPENDIX G
MANDATORY REPLACEMENT PARTS

Section I. INTRODUCTION

G-1. SCOPE

This appendix lists mandatory replacement parts you will need to maintain the LMTV vehicle.

G-2. EXPLANATION OF COLUMNS

a.Column (1) - Item Number. This number is assigned to each entry in the listing and is referenced in the Initial Setup of the applicable task under Materials/Parts.

b.Column (2) - Nomenclature. Name or identification of the part.

c.Column (3) - Part Number. The manufacturer's part number.

d.Column (4) - National Stock Number. The National stock number of the part.

Section II. MANDATORY REPLACEMENT PARTS LIST

(1) ITEM NO.	(2) NOMENCLATURE	(3) PART NUMBER	(4) NATIONAL STOCK NUMBER
1	BLADE, WINDSHIELD WIPER	105.384	2540-01-364-1621
2	BOLT, MACHINE	12414307-065	5306-01-382-5054
3	BOOT KIT, EXHAUST	DQ6025	4730-01-417-3197
4	BUMPER, RUBBER	12419182	5340-01-410-8397
5	BUSHING, SLEEVE	7-199-002668	3120-01-367-6894
6	CHANNEL, RUBBER	ZZR765/2-001A7	9390-01-420-4560
7	CLAMP	12421183-005	4730-01-447-4312
8	CLAMP	12421183-006	4730-01-447-4313
9	DECAL	12340917	7690-01-256-4909
10	FASTENER TAPE	MIL-F-21840	8315-00-006-9855
11	FASTENER TAPE	50-534718-19	8315-00-935-6762
12	FILTER ASSEMBLY	75223-11	2940-01-417-9333
13	FILTER ELEMENT	1048011	2940-01-385-8931
14	FILTER ELEMENT, FLUID	R22146	2910-01-360-6366
14.1	FILTER ELEMENT, FLUID	ST117073098-000	2910-01-467-4594
15	FILTER ELEMENT, FLUID	29507750	2940-01-361-2406
16	FILTER ELEMENT, FLUID	599791	4460-01-284-2344

Section II. MANDATORY REPLACEMENT PARTS LIST (CONT)

(1) ITEM NO.	(2) NOMENCLATURE	(3) PART NUMBER	(4) NATIONAL STOCK NUMBER
17	FILTER ELEMENT, FLUID	931558	2940-01-363-4377
18	FILTER ELEMENT, INTAKE AIR CLEANER	P52-7750	2940-01-361-2407
19	FILTER, AIR	12416539	
20	FILTER, AIR	12416563	4730-01-398-5654
21	FILTER, FUEL	7E9763	2940-01-363-3089
22	FILTER, OIL	1R0739	2940-00-029-0388
23	GASKET	F337576M6	
24	GASKET	M28840/24HA	5935-01-421-9754
25	GASKET	QS-1181	5330-01-058-3788
26	GASKET	10-36675-18	5330-00-298-0190
26.1	GASKET	11446	5330-00-247-4174
27	GASKET	119-2940	5330-01-424-7905
28	GASKET	12421469	5330-01-453-2980
29	GASKET	12422254	
30	GASKET	13848	5330-01-211-0717
31	GASKET	350700	5330-01-295-3053
32	GASKET	350903	5330-00-576-4626
33	GASKET	352200	5330-01-421-6105
34	GASKET	352302	5330-01-421-6107
35	GASKET	353400	5330-01-421-6102
36	GASKET	353806	5330-01-421-6103
37	GASKET	353810	5330-01-450-6666
38	GASKET	355148	5330-01-423-0596
39	GASKET	355175	5330-01-423-0623
40	GASKET	3K3257	5330-01-305-6550
40.1	GASKET	3N4087	5330-01-061-8003
41	GASKET	4P1624	5330-01-360-5934
42	GASKET	9Y8103	5330-01-360-5931
42.1	GASKET AND PREFORMED PACKING SET	9X8318	5330-01-360-9098
43	GASKET, FUEL FILTER	7C1159	5330-01-360-5941
44	NOT USED		

Section II. MANDATORY REPLACEMENT PARTS LIST (CONT)

(1) ITEM NO.	(2) NOMENCLATURE	(3) PART NUMBER	(4) NATIONAL STOCK NUMBER
45	GASKET, THERMOSTAT	2W7212	5330-01-347-3206
46	GROMMET, NONMETALLIC	MS35489-6	5325-00-263-6632
47	GROMMET, NONMETALLIC	12417598	5325-01-375-1299
48	GROMMET, NONMETALLIC	12421402	5325-01-440-2178
49	GROMMET, NONMETALLIC	4082-37634-01	5325-01-194-3076
50	GROMMET, NONMETALLIC	50S12-1-1AA	5325-01-145-0105
51	GROMMET, NONMETALLIC	8741442	5325-00-088-6147
51.1	HEAD, FLUID FILTER	7632-002-144	2940-01-387-4397
52	INSULATOR, TANK	A1394J	5970-01-385-7317
53	INSULATOR, TANK	A1394K	5970-01-385-7262
54	KIT, FILTER	29503829	
55	KIT, FILTER	29526899	5330-01-453-0770
56	NOT USED		
57	LAMP, INCANDESCENT	CM7-7373	6240-00-270-6824
58	LAMP, INCANDESCENT	CM7376	6240-00-499-6278
59	LATCH, BAIL HEAD	68-20-101-10	2540-01-232-2470
60	LOCKNUT	0770-023-003	5310-01-423-3725
61	LOCKWASHER	ABCH207-LW-1/2	
62	LOCKWASHER	ABCH207-LW-3/8	
63	LOCKWASHER	B7949000161	
64	LOCKWASHER	D70336/1-20	5310-01-110-7933
65	LOCKWASHER	D70336/3-50	5310-01-439-2542
66	LOCKWASHER	D70336/3-52	5310-01-439-2543
66.1	LOCKWASHER	MS35333-78	5310-01-110-7953
66.2	LOCKWASHER	ERNA245	5310-00-584-5272
67	LOCKWASHER	MS35335-30	5310-00-209-0788
68	LOCKWASHER	MS35335-31	5310-00-596-7693
69	LOCKWASHER	MS35335-33	5310-00-209-0786
70	LOCKWASHER	MS35335-36	5310-00-550-3503
71	LOCKWASHER	MS35335-38	5310-00-616-6354
72	LOCKWASHER	MS35335-58	5310-00-209-1366
73	LOCKWASHER	MS35335-61	5310-00-527-3634
74	LOCKWASHER	MS35335-62	5310-00-184-9562

Section II. MANDATORY REPLACEMENT PARTS LIST (CONT)

(1) ITEM NO.	(2) NOMENCLATURE	(3) PART NUMBER	(4) NATIONAL STOCK NUMBER
75	LOCKWASHER	MS35337-25	5310-00-013-8502
76	LOCKWASHER	MS35338-100	5310-00-261-8278
77	LOCKWASHER	MS35338-102	5310-00-167-0671
78	LOCKWASHER	MS35338-103	5310-00-184-8971
79	LOCKWASHER	MS35338-135	5310-00-933-8118
80	LOCKWASHER	MS35338-136	5310-00-929-6395
81	LOCKWASHER	MS35338-137	5310-00-933-8119
82	LOCKWASHER	MS35338-138	5310-00-933-8120
83	LOCKWASHER	MS35338-139	5310-00-933-8121
84	LOCKWASHER	MS35338-140	5310-00-974-6623
85	LOCKWASHER	MS35338-141	5310-00-984-7042
86	LOCKWASHER	MS35338-143	5310-00-933-8778
87	LOCKWASHER	MS35338-158	5310-00-883-9417
88	LOCKWASHER	MS35338-171	5310-01-130-9066
89	LOCKWASHER	MS35338-42	5310-00-045-3299
90	LOCKWASHER	MS35338-43	5310-00-045-3296
91	LOCKWASHER	MS35338-45	5310-00-407-9566
92	LOCKWASHER	MS35338-46	5310-01-334-4710
93	LOCKWASHER	MS35338-51	5310-00-584-7888
94	LOCKWASHER	MS35340-44	5310-00-682-5930
95	LOCKWASHER	MS51414-1	5310-01-235-2057
96	LOCKWASHER	MS51414-2	5310-01-310-1098
97	LOCKWASHER	MS51848-50	5310-01-033-8615
98	LOCKWASHER	N9015	5310-01-369-6073
99	LOCKWASHER	N9018	5310-01-032-4827
100	LOCKWASHER	N9459	5310-01-348-8393
101	LOCKWASHER	N9461	5310-01-348-8392
101.1	LOCKWASHER	XP1113	5310-01-460-5991
101.2	LOCKWASHER	10241	5310-01-416-3010
101.3	LOCKWASHER	10030	
102	LOCKWASHER	1229-S-513C	5310-01-062-3384
102.1	LOCKWASHER	12414570-011	5310-01-374-3292

Section II. MANDATORY REPLACEMENT PARTS LIST (CONT)

(1) ITEM NO.	(2) NOMENCLATURE	(3) PART NUMBER	(4) NATIONAL STOCK NUMBER
102.2	LOCKWASHER	12414570-013	5310-01-374-4515
103	LOCKWASHER	12414570-015	5310-01-388-2043
103.1	LOCKWASHER	12414570-019	5310-01-470-2362
104	LOCKWASHER	12414570-021	5310-01-374-4516
105	LOCKWASHER	MS35338-40	5310-00-543-2410
106	LOCKWASHER	MS35338-47	5310-00-550-3741
107	NOT USED		
108	LOCKWASHER	1729B262	5310-00-964-7811
109	NOT USED		
110	NUT, BLIND RIVET	MS27130-S136	5310-01-409-4435
111	NUT, BLIND RIVET	MS27130-S148	5310-01-370-5548
112	NUT, BLIND RIVET	12421403-060	
113	NUT, BLIND RIVET	12421403-065	
114	NUT, BLIND RIVET	12421634-017	
115	NUT, BLIND RIVET	12442158-5	
115.1	NUT, PLAIN, ROUND	1727N40	5310-00-123-2572
116	NUT, SELF-LOCKING	DIN-934STM6	5310-01-342-2739
117	NUT, SELF-LOCKING	MS16228-10C	5310-00-245-8826
118	NUT, SELF-LOCKING	MS16228-5C	5310-00-584-7992
119	NUT, SELF-LOCKING	MS20500-524	5310-00-208-4023
120	NUT, SELF-LOCKING	MS21042-04	5310-00-811-6419
121	NUT, SELF-LOCKING	MS21042-5	5310-00-807-1469
122	NUT, SELF-LOCKING	MS21044C08	5310-00-982-6814
122.1	NUT, SELF-LOCKING	MS21045L5	5310-00-857-5559
123	NUT, SELF-LOCKING	MS21083N08	5310-00-941-6019
124	NUT, SELF-LOCKING	MS21083N6	5310-00-926-1852
125	NUT, SELF-LOCKING	MS51922-1	5310-00-088-1251
126	NUT, SELF-LOCKING	MS51922-2	5310-00-929-1807
127	NUT, SELF-LOCKING	MS51922-33	5310-00-225-6993
128	NUT, SELF-LOCKING	MS51922-5	5310-00-959-7600
129	NUT, SELF-LOCKING	N9406	5310-01-362-6171
130	NUT, SELF-LOCKING	N9410	5310-01-348-8398

Section II. MANDATORY REPLACEMENT PARTS LIST (CONT)

(1) ITEM NO.	(2) NOMENCLATURE	(3) PART NUMBER	(4) NATIONAL STOCK NUMBER
130.1	NUT, SELF-LOCKING	N9453	5310-01-348-8314
131	NUT, SELF-LOCKING	N9467	5310-01-350-4257
131.1	NUT, SELF-LOCKING	N9556	5310-01-423-0880
132	NUT, SELF-LOCKING	12301125	5310-01-210-0199
132.1	NUT, SELF-LOCKING	12411174-008	
133	NUT, SELF-LOCKING	12412476-04	5310-01-466-0565
134	NUT, SELF-LOCKING	12414308-002	5310-01-381-2819
135	NUT, SELF-LOCKING	12414308-003	5310-01-377-1549
136	NUT, SELF-LOCKING	12414308-004	5310-01-369-5703
137	NUT, SELF-LOCKING	12414308-007	5310-01-046-0186
138	NUT, SELF-LOCKING	12414308-017	5310-01-381-9830
139	NUT, SELF-LOCKING	12414308-018	5310-01-369-3337
140	NUT, SELF-LOCKING	12414308-019	5310-01-369-9522
141	NUT, SELF-LOCKING	12414308-020	5310-01-381-9849
142	NUT, SELF-LOCKING	12414308-021	5310-01-369-3338
143	NUT, SELF-LOCKING	12414308-022	5310-01-417-1262
144	NUT, SELF-LOCKING	12414308-025	5310-01-367-6706
145	NUT, SELF-LOCKING	12414308-027	5310-01-369-3339
146	NUT, SELF-LOCKING	12414315-003	5310-01-374-1382
147	NUT, SELF-LOCKING	12414315-005	5310-01-372-3023
148	NUT, SELF-LOCKING	12414315-006	5310-01-369-3332
149	NUT, SELF-LOCKING	12414315-009	5310-01-365-7236
150	NUT, SELF-LOCKING	12414315-012	5310-01-369-3331
151	NUT, SELF-LOCKING	12414315-017	5310-01-368-8065
152	NUT, SELF-LOCKING	12414420-004	5310-01-370-0010
152.1	NUT, SELF-LOCKING	12417642-002	5310-01-374-3288
153	NUT, SELF-LOCKING	12419003	5310-01-376-0773
154	NUT, SELF-LOCKING	270W10000	
155	NUT, SELF-LOCKING	29514660	
156	NUT, SELF-LOCKING	7951286	5310-00-789-0398
157	PACKING, PREFORMED	A82777	5330-00-579-6495
158	PACKING, PREFORMED	F4001-16	5331-01-466-0354
158.1	PACKING, PREFORMED	J515-16-3	5331-01-465-3634

Section II. MANDATORY REPLACEMENT PARTS LIST (CONT)

(1) ITEM NO.	(2) NOMENCLATURE	(3) PART NUMBER	(4) NATIONAL STOCK NUMBER
158.2	PACKING, PREFORMED	J515-4-1	5331-01-387-9490
159	PACKING, PREFORMED	J515-8-1	5330-00-292-8171
160	PACKING, PREFORMED	5999807	5331-01-456-9156
161	PACKING, PREFORMED	MS28775-011	5330-00-582-2133
162	PACKING, PREFORMED	MS28775-227	5330-00-576-9731
162.1	PACKING, PREFORMED	MS28775-910	5331-00-448-6753
163	PACKING, PREFORMED	MS28778-10	5330-00-285-9842
164	PACKING, PREFORMED	MS28778-12	5330-00-251-8839
165	PACKING, PREFORMED	MS28778-16	5330-00-816-3546
166	PACKING, PREFORMED	MS28778-4	5330-00-805-2966
166.1	PACKING, PREFORMED	MS28778-6	5331-00-804-5695
167	PACKING, PREFORMED	MS9955-113	5330-01-374-2325
168	PACKING, PREFORMED	M25988/1-246	5330-01-189-6351
168.1	PACKING, PREFORMED	M83461/1-442	5330-01-183-0987
169	PACKING, PREFORMED	OR42OA	5330-01-389-6028
170	PACKING, PREFORMED	11639519-1	5330-00-463-0200
170.1	PACKING, PREFORMED	12422548-004	5331-01-059-1141
171	PACKING, PREFORMED	1509	5330-00-172-1919
171.1	PACKING, PREFORMED	195045	5331-00-618-5361
171.2	PACKING, PREFORMED	19755	5331-01-415-9632
171.3	PACKING, PREFORMED	198336	5331-00-584-1840
172	PACKING, PREFORMED	2M4453	5330-00-074-3768
173	PACKING, PREFORMED	22617-16	5330-01-168-0885
174	PACKING, PREFORMED	23043446	5330-01-424-6629
174.1	PACKING, PREFORMED	250192	5331-01-417-5105
174.2	PACKING, PREFORMED	251216	5330-01-417-5107
175	PACKING, PREFORMED	29500969	5330-01-360-7852
176	PACKING, PREFORMED	29503383	5330-01-360-6017
177	PACKING, PREFORMED	3-906N522-90	5330-01-104-1093
178	PACKING, PREFORMED	3-908N522-90	5330-00-929-8171
179	PACKING, PREFORMED	3D2824	5330-00-944-8281
180	PACKING, PREFORMED	3J1907	5330-01-333-6444

Section II. MANDATORY REPLACEMENT PARTS LIST (CONT)

(1) ITEM NO.	(2) NOMENCLATURE	(3) PART NUMBER	(4) NATIONAL STOCK NUMBER
181	PACKING, PREFORMED	3J7354	5330-00-954-8008
182	PACKING, PREFORMED	3K0360	5330-00-948-6482
183	PACKING, PREFORMED	4J5477	5330-00-855-8059
184	PACKING, PREFORMED	4L9564	5330-00-828-8639
184.1	PACKING, PREFORMED	420828	5340-01-417-3788
185	PACKING, PREFORMED	5-X-1155	5330-01-392-1637
186	PACKING, PREFORMED	5F7054	5330-00-339-6224
187	PACKING, PREFORMED	5P7813	5330-01-335-0042
188	PACKING, PREFORMED	6V8397	5330-00-579-6495
189	PACKING, PREFORMED	673268	
190	PACKING, PREFORMED	673269	5330-01-395-1252
191	PACKING, PREFORMED	7F8267	5330-01-291-7353
192	PACKING, PREFORMED	7320658	5330-00-297-7106
193	PACKING, PREFORMED	9604792-001	5330-01-429-3089
194	PAD, CUSHIONING	12416479-001	2590-01-397-7844
195	PAD, CUSHIONING	12416479-002	2590-01-412-2663
196	PARTS KIT, DEHYDRATOR	RN-60-A	4440-01-337-7324
197	PARTS KIT, SEAL REPLACEMENT	SK10-2	5330-01-350-4474
198	PARTS KIT, SEAL REPLACEMENT	SK10-3	5330-01-350-4472
199	PARTS KIT, SEAL REPLACEMENT	SK10-4	5330-01-343-2745
200	PIN, COTTER	K-2412-Z	5315-01-179-9882
201	PIN, COTTER	MS171659	5315-00-846-8337
202	PIN, COTTER	MS24665-151	5315-00-815-1405
203	PIN, COTTER	MS24665-298	5315-00-234-1861
204	PIN, COTTER	MS24665-385	5315-00-187-9382
205	PIN, COTTER	MS24665-423	5315-00-013-7228
206	PIN, COTTER	MS24665-457	5315-00-187-9393
207	PIN, COTTER	MS24665-459	5315-00-187-9394
208	PIN, COTTER	MS24665-69	5315-00-828-8190
208.1	PIN, COTTER	XB-781-1	5315-01-369-1346
209	NOT USED		

Section II. MANDATORY REPLACEMENT PARTS LIST (CONT)

(1) ITEM NO.	(2) NOMENCLATURE	(3) PART NUMBER	(4) NATIONAL STOCK NUMBER
210	PIN, SPRING	MS16562-142	5315-00-058-6115
211	PIN, SPRING	MS16552-146	5315-00-853-3814
212	PLASTIC STRIP	352700	5330-01-296-2109
213	RECEPTACLE	50R4-1-1AA	5325-01-049-2049
213.1	REPAIR KIT, GOVERNOR	RN32W	
213.2	RETAINER, PACKING	11863-012	5330-01-417-7795
213.3	RETAINER, PACKING	202624	5330-01-417-7794
214	RETAINER	A-1205-D-2344	5330-01-360-5253
215	RIVET, BLIND	AK42H	5320-00-874-4477
216	RIVET, BLIND	AK43H	5320-00-143-6149
217	RIVET, BLIND	MS20600AD5W12	5320-01-047-0467
217.1	RIVET, BLIND	MS20601B4W2	5320-00-616-5274
218	RIVET, BLIND	MS20604B3W2	5320-00-721-9075
219	RIVET, BLIND	M24243/1-A806	5320-00-850-3256
220	RIVET, BLIND	M24243/1-B302	5320-00-999-0397
221	RIVET, BLIND	M24243/1-D502	5320-00-850-3248
222	RIVET, BLIND	M24243/1-D608	5320-00-850-3246
223	RIVET, BLIND	M24243/1-F402	5320-00-129-9706
223.1	RIVET, BLIND	M24243/1-F608	5320-01-392-0699
223.2	RIVET, BLIND	M24243/1-F610	
224	RIVET, BLIND	M24243/6-A403H	5320-00-882-8388
225	RIVET, BLIND	M24243/6-A405H	5320-01-291-9121
226	RIVET, BLIND	M24243/6-A406H	5320-01-421-0484
227	RIVET, BLIND	M24243/6-A602H	5320-00-956-7362
228	RIVET, BLIND	M24243/6-A604H	5320-00-956-7355
229	RIVET, BLIND	M24243/6-A606H	5320-00-882-8385
230	RIVET, BLIND	M24243/6-A608H	5320-01-032-6534
231	RIVET, BLIND	M24243/7-A402H	5320-00-874-4477
232	RIVET, BLIND	M24243/7-A403H	5320-00-143-6149
233	RIVET, BLIND	M24243/7-A604H	5320-00-420-2165
234	RIVET, BLIND	M24243/7-A606H	5320-00-490-5523

Section II. MANDATORY REPLACEMENT PARTS LIST (CONT)

(1) ITEM NO.	(2) NOMENCLATURE	(3) PART NUMBER	(4) NATIONAL STOCK NUMBER
235	RIVET, BLIND	SD64BSLF	5320-01-397-3347
236	RIVET, BLIND	206057	5320-01-411-0081
237	RIVET, COMPRESSION	12418469	5320-01-376-0699
237.1	SCREW, CAP	CSH5-24-39	5305-01-479-7857
238	SCREW, CAP	12414475-131	5303-01-363-0703
239	SCREW, CAP	6V-2315	5306-01-433-4753
240	SCREW, MACHINE	MS24693-144	
241	SCREW, MACHINE	MS51958-83	5305-00-071-2095
242	SCREW, SELF-LOCKING	MS16998-61L	5305-01-211-3097
243	SEAL	VC08G1R0B	5330-01-389-6109
244	SEAL	12421431	9320-01-398-6317
245	SEAL	125128-5	
246	SEAL	125128-6	
247	SEAL	355150	5330-01-423-0689
247.1	SEAL	12422401-001	5999-01-478-5940
247.2	SEAL	12422401-002	5999-01-478-5932
247.3	SEAL	12422401-003	5999-01-478-5937
248	SEAL ASSEMBLY, CTIS	A1205-Q-2435	5330-01-360-7753
249	SEAL ASSEMBLY, HUB	A1205-R-2254	5330-01-360-5252
250	SEAL, DOOR	12416467	5330-01-385-3769
251	SEAL RING, METAL	29505809	5330-01-360-5329
252	SEAL, NONMETALLIC	CC3550	5330-01-431-7575
253	SEAL, NONMETALLIC	12417725	5330-01-375-2908
254	SEAL, NONMETALLIC	2418974-1	5330-01-257-1709
255	SEAL, NONMETALLIC	673999	5310-01-454-5553
255.1	SEAL, PLAIN	N72143	5330-01-453-4462
255.2	SEAL, SHAFT	SERUR25-2	5330-01-135-3376
256	SEAL, URETHANE FOAM	12420420-001	5680-01-453-8912
257	SEAL, URETHANE FOAM	12420420-002	5680-01-453-8485
258	SEAL, URETHANE FOAM	12420420-003	5680-01-453-8486
259	SEAL, WEATHER	147P00039	
259.1	SPACER	12422545	5365-01-490-6790

Section II. MANDATORY REPLACEMENT PARTS LIST (CONT)

(1) ITEM NO.	(2) NOMENCLATURE	(3) PART NUMBER	(4) NATIONAL STOCK NUMBER
260	SPACER, RING	4P2987	5365-01-433-8407
260.1	SPIDER, UNIVERSAL JOINT, VEHICULAR	R279X	
261	SPLICE, CONDUCTOR	12420927-001	5940-01-456-1319
262	SPLICE, CONDUCTOR	12420927-002	5940-01-421-6955
263	STRAIN RELIEF	10280870-3	5975-00-376-1585
263.1	STRIP, RUBBER	12412581	9320-01-399-4888
264	TERMINAL, LUG	MS20659-163	5940-00-113-3145
265	TERMINAL, LUG	MS20659-164	5940-00-113-3148
266	TERMINAL, LUG	MS25036-108	5940-00-143-4780
267	TERMINAL, LUG	MS25036-122	5940-00-113-8190
268	TERMINAL, LUG	12414275-001	
269	TERMINAL, LUG	12416409-006	
269.1	TERMINAL, LUG	12420344	5940-01-082-3321
270	WASHER, FLAT	MS27183-10	5310-00-809-4058
270.1	WASHER, FLAT	12414473-010	5310-01-374-6990
271	WASHER, FLAT	12417948-004	5365-01-436-8308
271.1	WASHER, FLAT	251391	5310-01-417-1041
272	WASHER, FLAT RUBBER	900.032	5330-01-378-7541
273	WASHER, NYLON	MS51859-16	5310-00-964-7811
274	WASHER, SPRING	D63474/1-30	5310-01-413-8475
275	WASHER, SPRING	WW579S18	
276	WASHER, SPRING	110 7289	5310-01-246-1387
277	WASHER, SPRING	12414559-021	5310-01-374-4517
278	WASHER, SPRING	12414560-017	5310-01-395-0820
279	WASHER, SPRING	12414560-018	5310-01-381-3281
280	WASHER, SPRING	12414560-019	5310-01-369-6074
281	WASHER, SPRING	12417503	5310-01-406-6326
282	WASHER, SPRING	12418220	5310-01-372-3495
283	WASHER, SPRING	12414560-009	5310-01-333-5517

APPENDIX H
LUBRICATION ORDER AND SERVICES

SECTION I. INTRODUCTION

H-1. GENERAL

The information contained in this appendix provides the lubrication/services requirements for the LMTV vehicle.

a. Adherence. Intervals (on-condition or hardtime) and the related man-hour times are based on normal operation. The man-hour time specified is the time needed to do all the services prescribed for a particular interval. On-condition (OC) oil sample intervals will be applied unless changed by the Army Oil Analysis Program (AOAP) laboratory. Change the hardtime interval if the lubricants are contaminated or if operating the equipment under adverse operating conditions, including longer-than-usual operating hours. The calendar interval may be extended during periods of low activity. If extended, adequate preservation precautions must be taken. Hardtime intervals will be applied in the event AOAP laboratory support is not available. Hardtime intervals must be applied during the warranty period.

Intervals shown in this lubrication order and services are based on mileage/calendar, and in some cases mileage alone. An example of a mileage/calendar interval is: **Q**, which means every 3,000 miles (4,827 km) or quarterly (every three months). The lubrication is to be performed at whichever interval occurs first for the vehicle. An example of a mileage alone interval is: **6K**, which stands for every 6,000 miles (9,654 km). The lubrication/services is to be performed at the mileage indicated regardless of the calendar interval.

WARNING

- **Dry Cleaning Solvent (P-D-680) is TOXIC and flammable. Wear protective goggles and gloves; use only in well-ventilated area; avoid contact with skin, eyes, and clothes, and do not breath vapors. Keep away from heat or flame. Never smoke when using solvent; the flashpoint for Type I Dry Cleaning Solvent is 100°F (38 C) and for Type II is 138 F (50 C). Failure to comply may result in serious injury or death to personnel.**

- **If personnel become dizzy while using cleaning solvent, immediately get fresh air and medical help. If solvent contacts skin or clothes, flush with cold water. If solvent contacts eyes, immediately flush eyes with water and get medical attention. Failure to comply may result in injury to personnel.**

b. Cleaning fittings before lubricating. Clean parts with dry cleaning solvent (SD P-D-680) (Item 71, Appendix D) or equivalent. Dry before lubricating. Dashed arrows indicate lubrication on both sides of the equipment.

c. Lubricating after fording. If fording occurs, lubricate all fittings below fording depth and check submerged gearboxes for presence of water.

d. Lubricating after high-pressure washing. After a thorough washing, lubricate all grease fittings and oil can points outside and underneath vehicle.

e. Level of Maintenance. The lowest level of maintenance authorized to lubricate a point is Operator/Unit Maintenance (O). Operator/crew (C) may lubricate points authorized for Unit Maintenance (O) when authorized by Unit Maintenance (O).

f. Localized views. A reference to the appropriate localized view is given after most lubrication entries. Localized views begin on page H-9.

H-1. GENERAL (CONT)

g. Interval Symbols. The lubrication/service interval symbols will be used as applicable:

Q-quarterly/3,000 mi (4,827 km) (whichever occurs first)
S-semiannually/6,000 mi (9,654 km) (whichever occurs first)
A-annually/12,000 mi (19,308 km) (whichever occurs first)
B-biennially/24,000 mi (38,616 km) (whichever occurs first)
3K-every 3,000 mi (4,827 km) (no calendar interval)
6K-every 6,000 mi (9,654 km) (no calendar interval)
12K-every 12,000 mi (19,308 km) (no calendar interval)
24K-every 24,000 mi (38,616 km) (no calendar interval)

H-2. OIL FILTERS

Oil filters shall be serviced/changed as applicable, when:

a. They are known to be contaminated, or clogged;

b. Service is recommended by AOAP laboratory analysis; or

c. At prescribed hardtime intervals while vehicle is under warranty, or if AOAP is not available/used as required.

H-3. AOAP SAMPLING INTERVAL

WARNING

- **Engine oil is hot and under pressure. The oil sampling valve releases oil proportionally to the amount of pressure applied to valve. Activate oil sampling valve by pressing in slowly to prevent injury to personnel. Failure to comply may result in injury to personnel.**
- **Wear safety goggles when taking oil sample. Oil is under pressure and could cause injury to personnel. Failure to comply may result in injury to personnel.**

Units participating in AOAP will sample engine oil every 3,000 miles (4,827 km) or 6 months, whichever occurs first and change engine oil as directed by AOAP. Units participating in AOAP will sample transmission oil every 6,000 miles (9,654 km) or 12 months, whichever occurs first and change transmission oil as directed by AOAP. Units participating in AOAP will sample hydraulic system oil initially after 6 weeks or 10 hours of operation, whichever occurs first. After initial oil change samples should be taken every 12 months or 50 hours of operation, whichever occurs first and change hydraulic oil as directed by AOAP.

H-4. WARRANTY HARDTIME STATEMENT

"For equipment under manufacturer's warranty, hardtime oil service intervals shall be followed. Intervals shall be shortened if lubricants are known to be contaminated or if operation is under adverse conditions (such as longer than usual operating hours, extended idling periods, extreme dust)."

SECTION II. LUBRICATION/SERVICE CHART

H-5. LUBRICATION/SERVICE KEY

LUBRICANTS	
Specification	**Type**
MIL-L-2104 (OE/HDO)	Lubricating Oil, Internal Combustion Engine, Combat/Tactical Service
MIL-L-46167 (OEA)	Lubricating Oil, Internal Combustion Engine, Arctic
MIL-L-2105 (GO)	Lubricating Oil, Gear, Multipurpose
MIL-G-10924 (GAA)	Grease, Automotive and Artillery
MIL-G-18458 (GW)	Grease, Wire-Rope and Exposed Gear
MIL-H-5606 (OHA)	Hydraulic Fluid, Petroleum Base, Aircraft, Missile, and Ordnance

DESCRIPTION	CAPACITY	EXPECTED TEMPERATURES		
		Above +40 F (Above +4 C)	+40 F to -15 F (+4 C to -26 C)	-15 F to -50 F (-26 C to -46 C)
Engine crankcase	25 qt (24 L)	OE/HDO-15/40	OE/HDO-15/40	OEA
Transmission (total system)	43.3 qt (41 L)	OE/HDO-15/40	OE/HDO-10	OEA
Transmission (at oil change)	31.8 qt (30.0 L)	OE/HDO-15/40	OE/HDO-10	OEA
Transmission (after overhaul)	39.0 qt (37.0 L)	OE/HDO-15/40	OE/HDO-10	OEA
Steering system	5 qt (4.8 L)	OE/HDO-10	OE/HDO-10	OEA
Hydraulic reservoir	27 gal (102.2 L)	OE/HDO-10	OE/HDO-10	OEA
Front axle differential (maximum capacity)	9.5 qt (9.0 L)	GO-80/90	GO-80/90	SAE 75W90 OR GO-75
Rear axle differential (maximum capacity)	18.05 qt (17.1 L)	GO-80/90	GO-80/90	SAE 75W90 OR GO-75
Front axle planetary hubs	11-13 oz (0.33-0.38 L)	GO-80/90	GO-80/90	SAE 75W90 OR GO-75
11K Self-Recovery Winch (SRW)	As Required	GO-85/140	GO-80/90	GO-75
Propeller shaft universal and slip joints	As Required	GAA	GAA	GAA
Tie rod ends	As Required	GAA	GAA	GAA
Towing pintle assembly	As Required	GAA	GAA	GAA
Spring bolts and spring shackles	As Required	GAA	GAA	GAA
Front axle shaft U-joints and steering knuckles	As Required	GAA	GAA	GAA

H-5. LUBRICATION/SERVICE KEY (CONT)

DESCRIPTION	CAPACITY	EXPECTED TEMPERATURES		
		Above +40 F (Above +4 C)	+40 F to -15 F (+4 C to -26 C)	-15 F to -50 F (-26 C to -46 C)
Front axle inner wheel bearing	As Required	GAA	GAA	GAA
Rear axle inner wheel bearing	As Required	GAA	GAA	GAA
Front lifting beam	As Required	GAA	GAA	GAA
11K Self-Recovery Winch (SRW) cable	As Required	GW	GW	GW
Air/hydraulic power unit	3 pt (1.4 L)	OHA	OHA	OHA
Backup hydraulic pump	19 oz (562 ml)	OHA	OHA	OHA

COOLANT	
Specification	**Type**
A-A-52624A	Antifreeze, Multi-Engine Type
MIL-A-11755	Antifreeze, Arctic-Type

DESCRIPTION	CAPACITY	EXPECTED TEMPERATURES		
		Above +40 F (Above +4 C)	+40 F to -15 F (+4 C to -26 C)	-15 F to -50 F (-26 C to -46 C)
Cooling system (engine only)	14 qt (13 L)	A-A-52624A	A-A-52624A	N/A
Cooling system (total system)	43.8 qt (41.5 L)	A-A-52624A	A-A-52624A	N/A
Cooling system, Arctic (total system)	58.3 qt (55.2 L)	N/A	N/A	MIL-A-11755

CLEANING AGENT	
Specification	**Type**
P-D-680	Dry Cleaning Solvent, SD-II
O-C-1901	Cleaning Compound, Windshield

DESCRIPTION	CAPACITY	EXPECTED TEMPERATURES		
		Above +15 F (Above -9 C)	+15 F to -15 F (-9 C to -26 C)	-15 F to -50 F (-26 C to -46 C)
All metal parts as required	N/A	SD-II (all temperatures)		
Windshield washer reservoir	7.5 qt (7.1 L)	2/3 water to 1/3 O-C-1901	1/2 water to 1/2 O-C-1901	1/3 water to 2/3 O-C-1901

For arctic operation refer to FM 9-207.

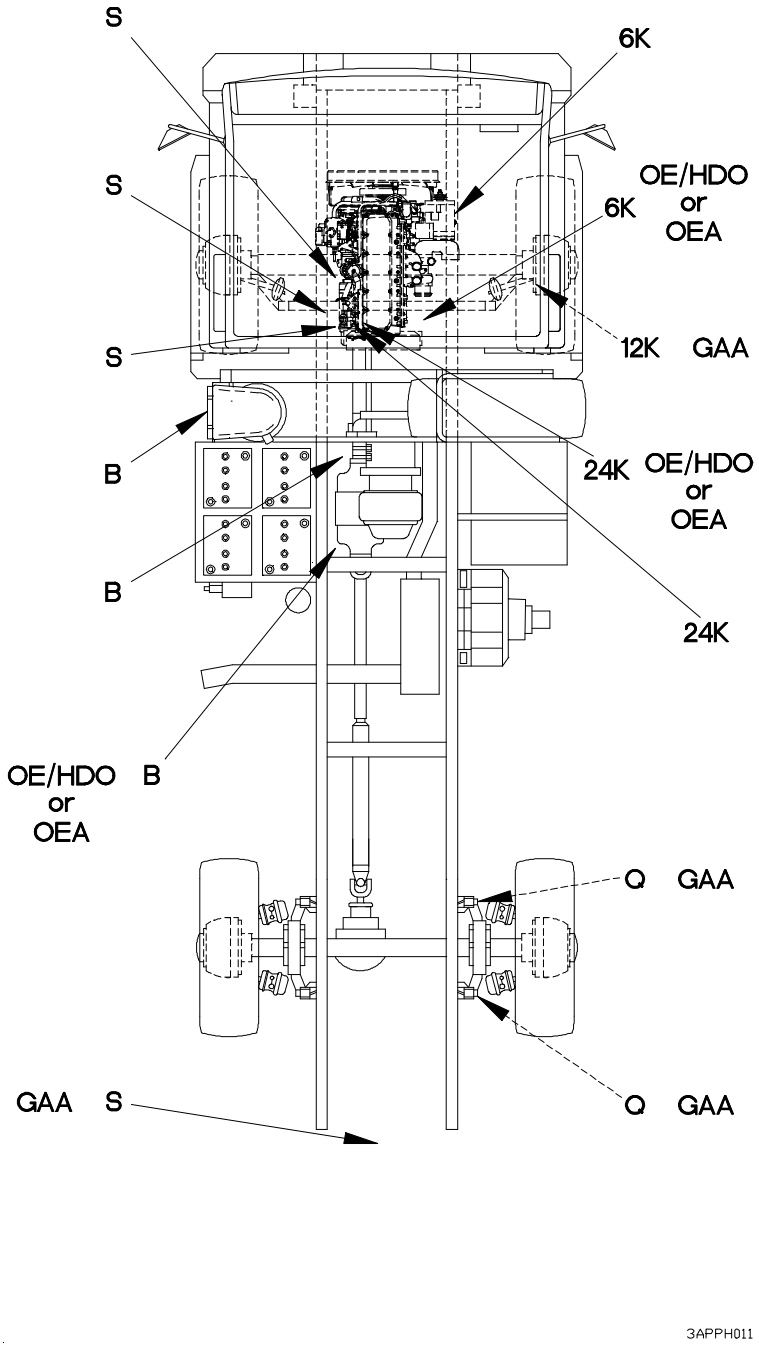
H-6. LUBRICATION/SERVICE INTERVALS

Intervals		Total Man-Hours
Quarterly (Q)	Lubrication performed once every three months or 3,000 mi (4,827 km).*	2.0
Semi-annually (S)	Lubrication performed once every six months or 6,000 mi (9,654 km).*	2.5
Annually (A)	Lubrication performed once every year or every 12,000 mi (19,308 km).*	1.5
Biennially (B)	Lubrication performed once every two years or every 24,000 mi (38,616 km).*	3.5
3K	Lubrication performed once every 3,000 mi (4,827 km).**	1.0
6K	Lubrication performed once every 6,000 mi (9,654 km).**	1.0
12K	Lubrication performed once every 12,000 mi (19,308 km).**	4.0
24K	Lubrication performed once every 24,000 mi (38,616 km).**	0.5

* Whichever occurs first.
** No calendar interval.

H-7. LOCATOR VIEWS

LUBRICANT INTERVAL **INTERVAL LUBRICANT**



Engine Crankcase Breather (O)
(See note 17 and view A)

Fuel Filter (O)
(See note 6 and view A)

Fuel/Water Separator (O)
(See note 5 and view B)

Cooling System (O)
(See note 7)

Transmission Filter (O)
(See note 3 and view F)

Transmission Drain and Fill (O)
(See note 3 and views D, E, and F)

Towing Pintle Fill (O)
(See note 16 and views J and K)

Engine Oil Filter (O)
(See note 2 and view C)

Crankcase Drain and Fill (O)
(See note 1 and views C and D)

Front Axle Inner Wheel Bearing Repack (O)
(See note 22)

Power Steering Reservoir Drain and Fill (O)
(See note 4 and view G)

Power Steering Filter (O)
(See note 4 and view G)

Spring Bolt Fill (O)
(See note 18 and view H)

Spring Shackle Fill (O)
(See note 18 and view AE)

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NOTE: Dashed arrows indicate lubrication on both sides of vehicle.

LUBRICANT	INTERVAL	LUBRICANT	INTERVAL

Spring Bolt
Fill (O)
(See note 18 and view H)

Spring Shackle
Fill (O)
(See note 18 and view I)

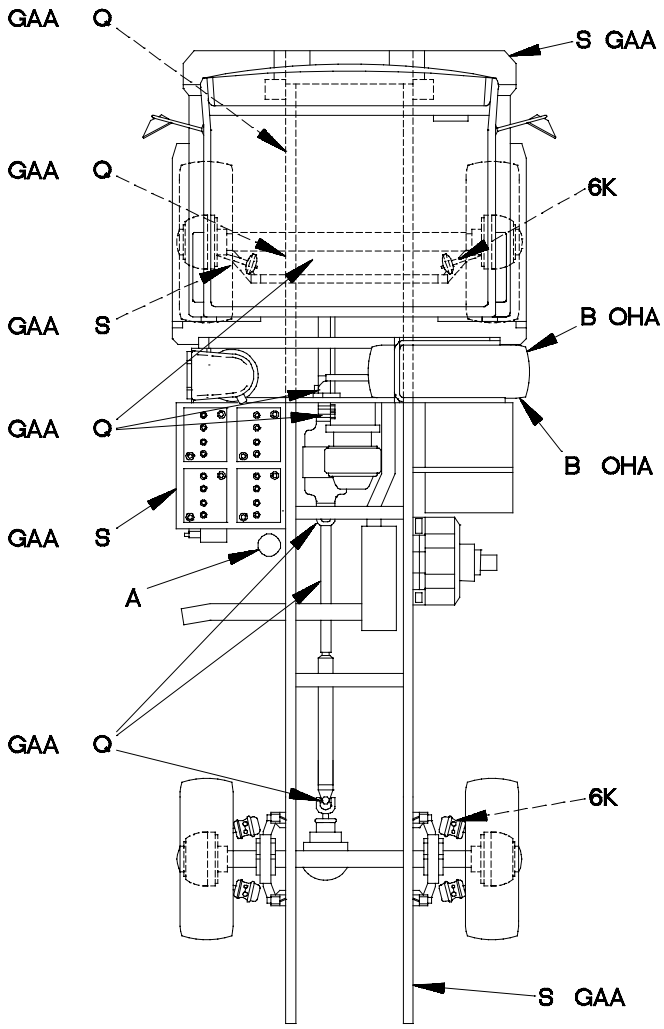
Tie Rod Ends
Fill (O)
(See note 13 and view N)

Universal and Slip Joints
Fill (O)
(See note 9 and view P)

Battery Posts (O)
(See note 19 and view Q)

Air Dryer (O)
(See note 25 and view AF)

Universal and Slip Joints
Fill (O)
(See note 9 and view P)



11K Self-Recovery Winch (SRW) Cable Front Roller Fairlead
Fill (O)
(See note 23 and views Z and AA)

Brake Wedge and Air Chamber (O)
(See note 21 and view L)

Backup Hydraulic Pump
Drain and Fill (O)
(See note 10 and view R)

Air/Hydraulic Power Unit
Drain and Fill (O)
(See note 10 and view S)

Brake Wedge and Air Chamber (O)
(See note 21 and view M)

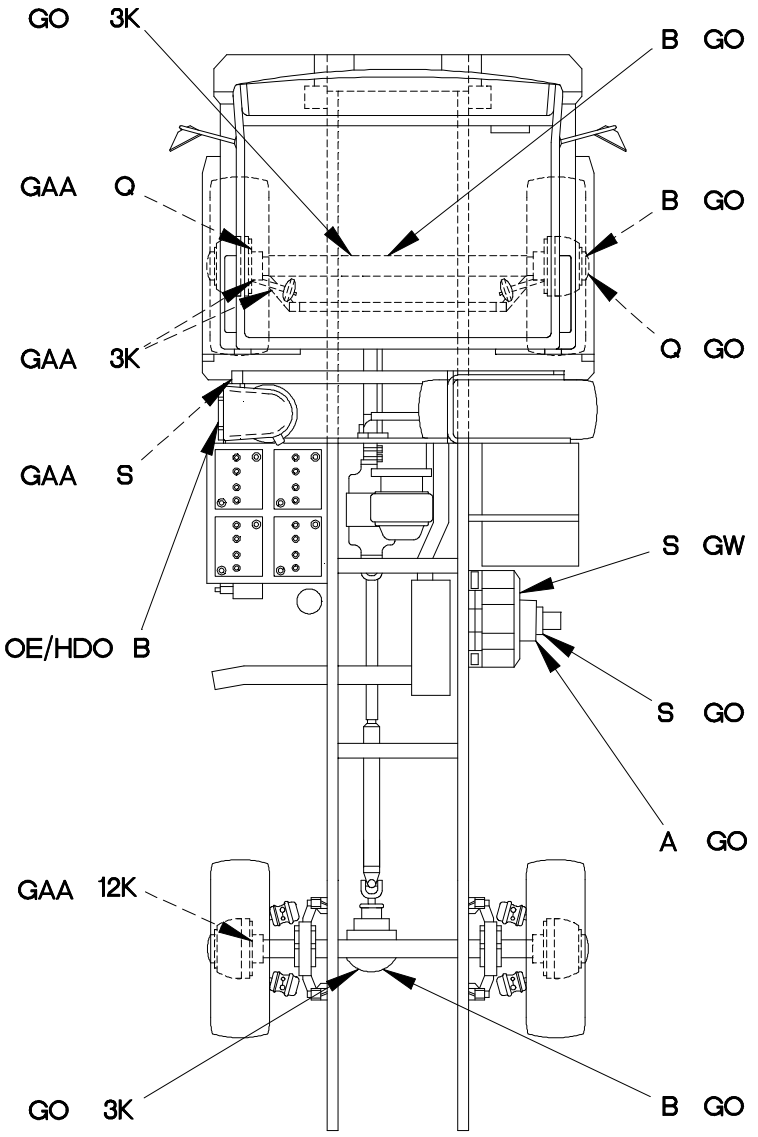
11K Self-Recovery Winch (SRW) Cable Rear Roller Fairlead
Fill (O)
(See note 23 and views AB and AC)

CHASSIS

NOTE: Dashed arrows indicate lubrication on both sides of vehicle.

H-7. LOCATOR VIEWS (CONT)

LUBRICANT INTERVAL **INTERVAL LUBRICANT**



Front Axle
Check and Fill (O)
(See note 11 and view T)

Axle Shaft U-Joints
Fill (O)
(See note 20 and view U)

Steering Knuckles
Fill (O)
(See note 20 and view U)

Front Lifting Beam
Clean and Grease (O)
(See note 24 and view AD)

Hydraulic Reservoir and Filter
Drain and Fill (O)
(See note 8 and view X)

Rear Axle Inner Wheel Bearing Repack (O)
(See note 22)

Rear Axle
Check and Fill (O)
(See note 11 and view T)

Front Axle
Drain and Fill (O)
(See note 11 and view T)

Wheel End Planetary Hubs
Drain and Fill (O)
(See note 12 and view V)

Wheel End Planetary Hubs
Check and Fill (O)
(See note 12 and view V)

11K Self-Recovery Winch (SRW) Cable
Fill (O)
(See note 14 and view W)

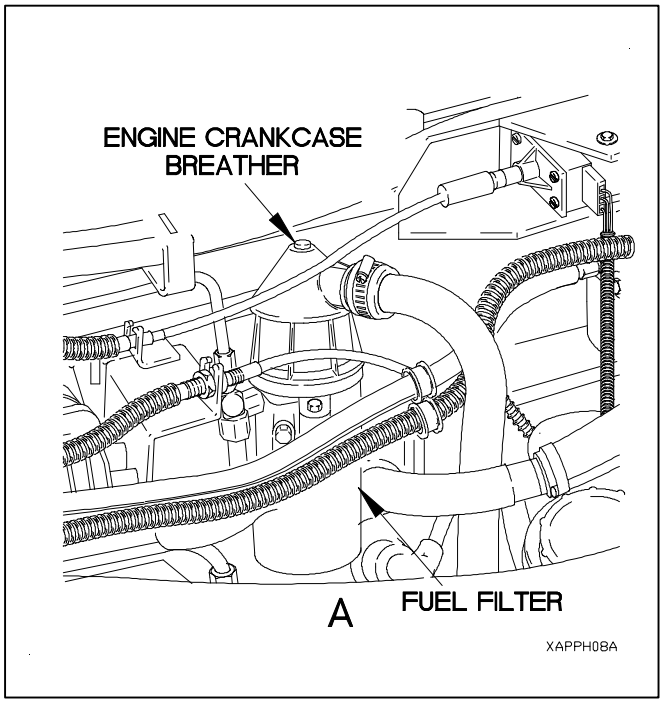
11K Self-Recovery Winch (SRW)
Check and Fill (O)
(See note 15 and view Y)

11K Self-Recovery Winch (SRW)
Drain and Fill (O)
(See note 15 and view Y)

Rear Axle
Drain and Fill (O)
(See note 11 and view T)

CHASSIS

NOTE: Dashed arrows indicate lubrication on both sides of vehicle.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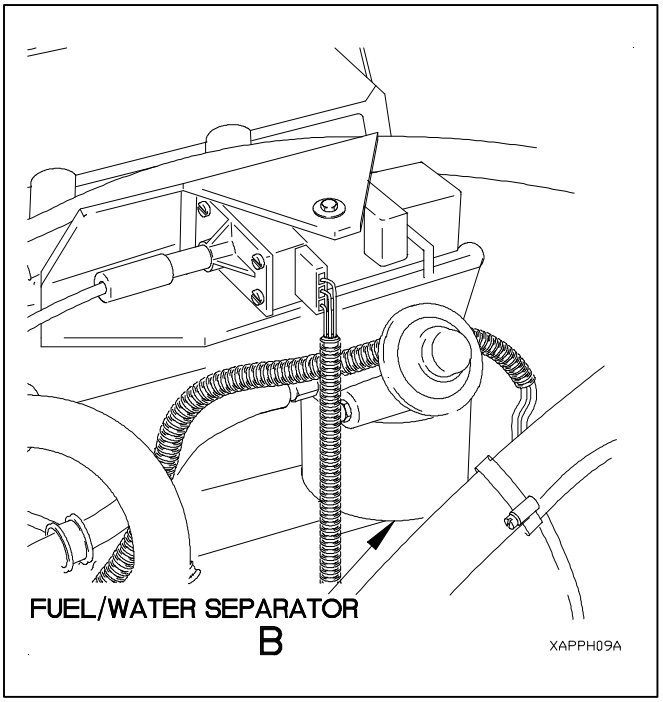
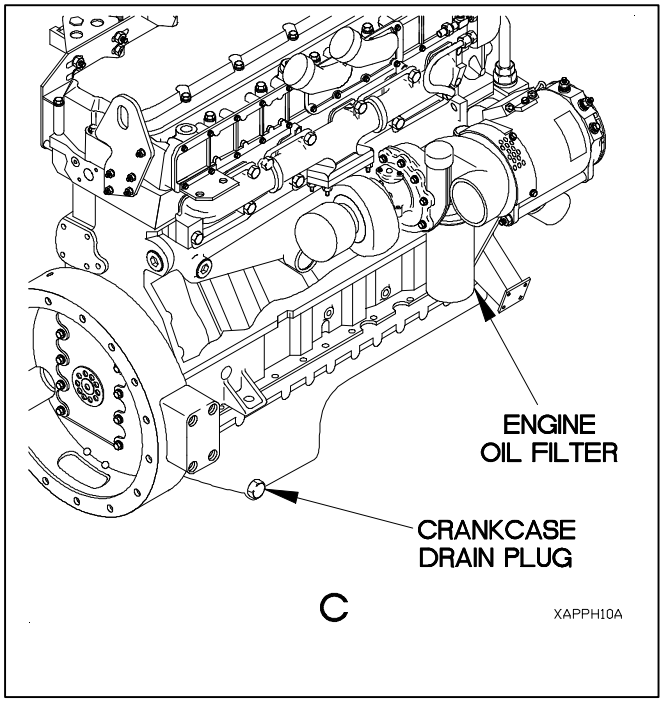
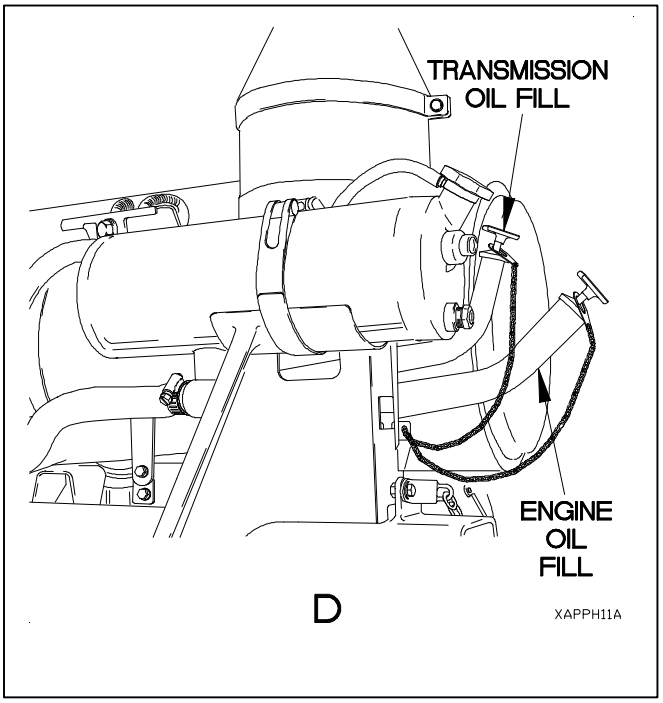
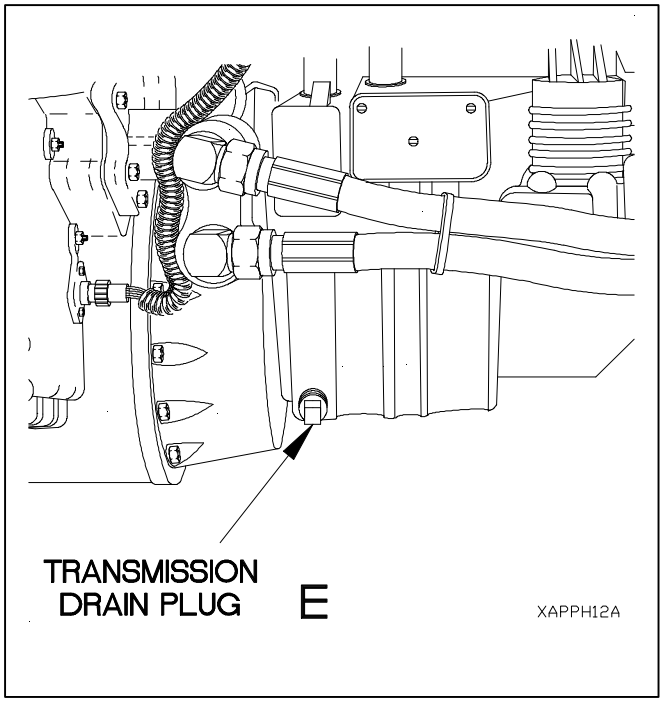
BREATHER
FUEL FILTER
A
XAPPH08A

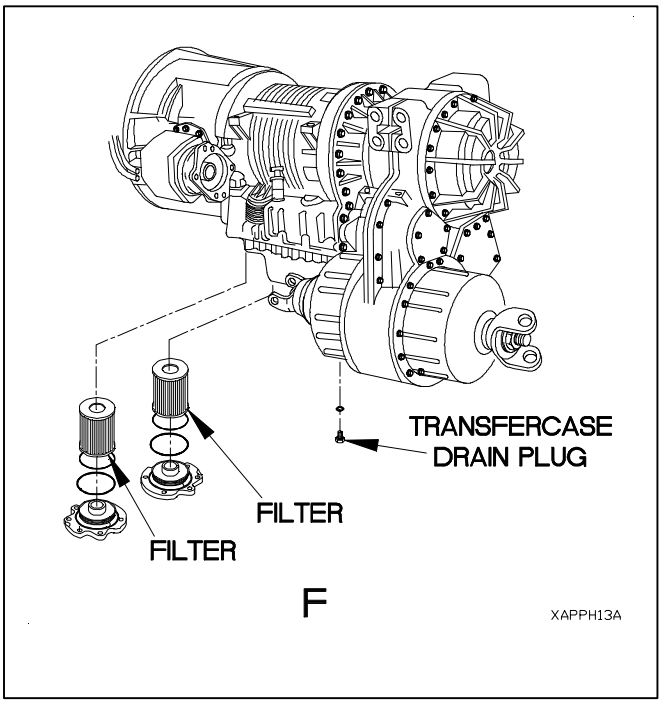

FUEL/WATER SEPARATOR
B
XAPPH09A

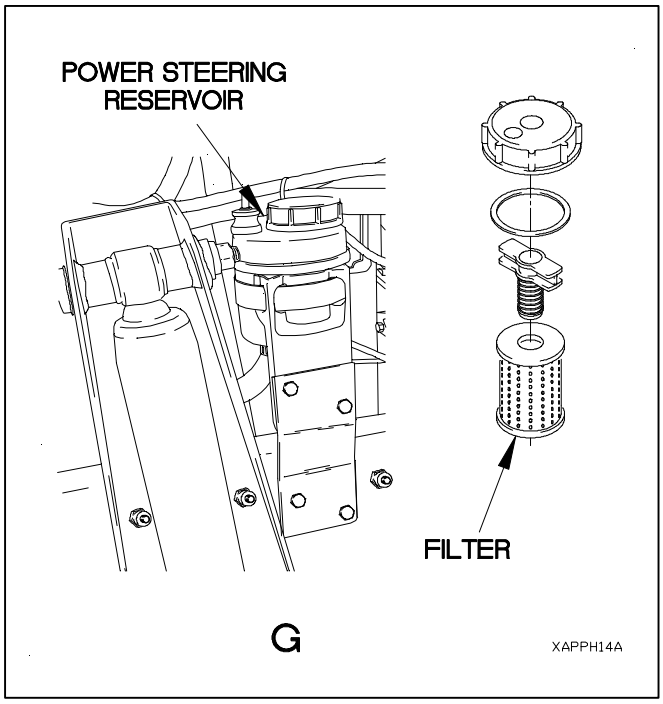

ENGINE
OIL FILTER
CRANKCASE
DRAIN PLUG
C
XAPPH10A

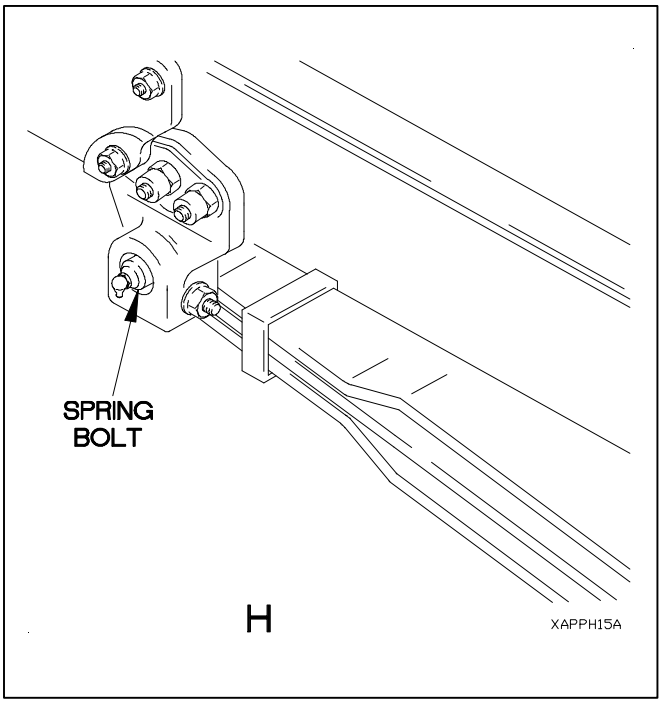

TRANSMISSION
OIL FILL
ENGINE
OIL
FILL
D
XAPPH11A

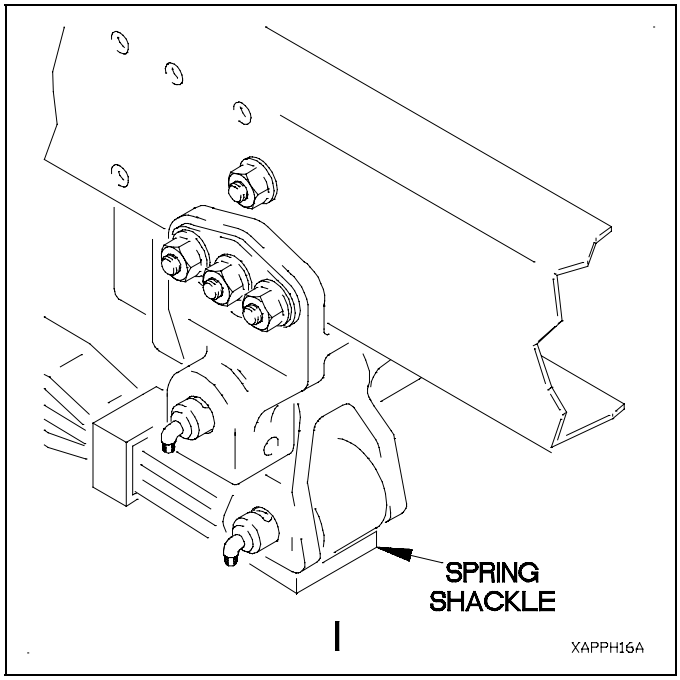
H-8. LOCAL VIEWS (CONT)



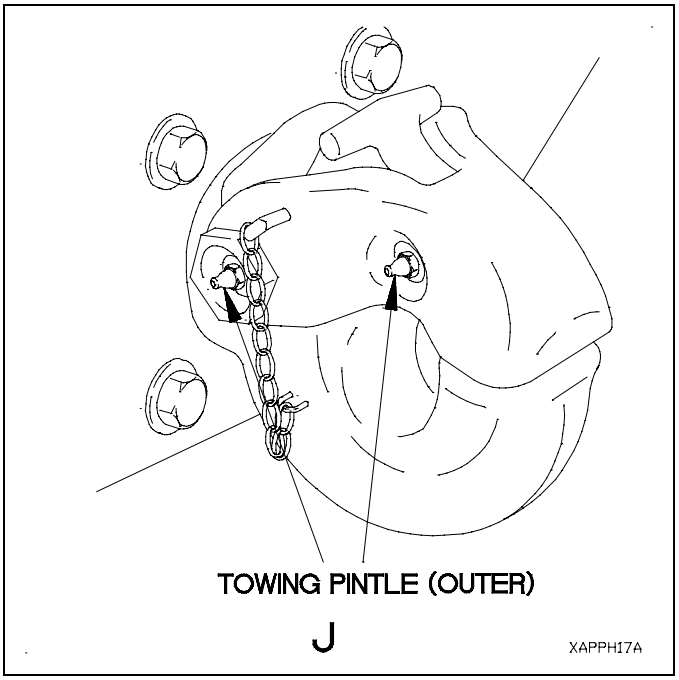







SPRING
SHACKLE
XAPPH16A

I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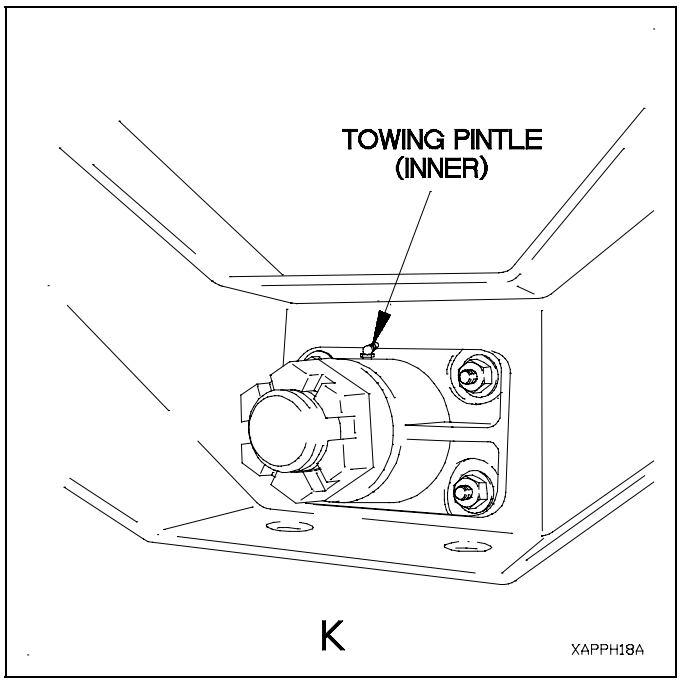
TOWING PINTLE
(INNER)
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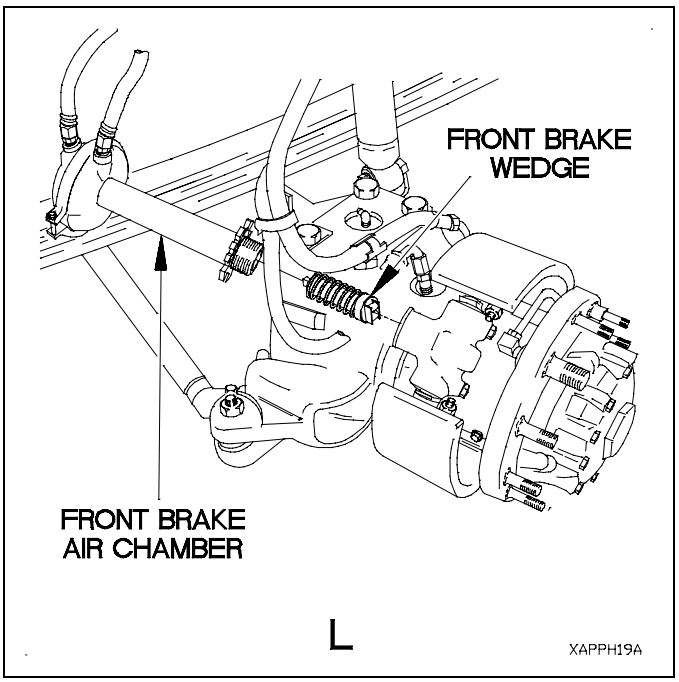
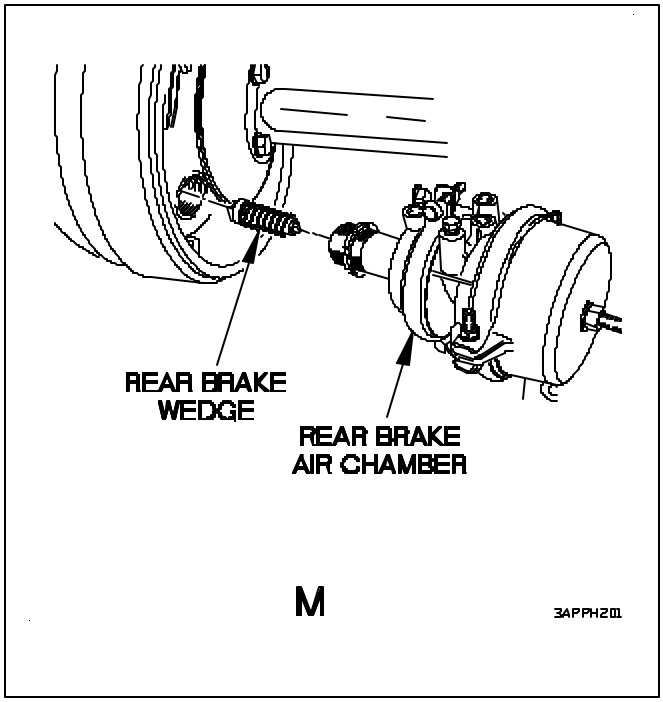
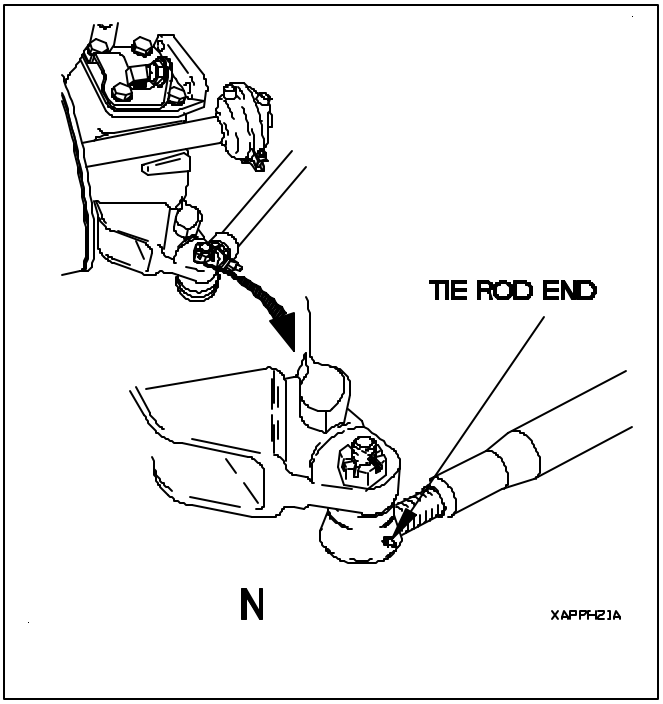
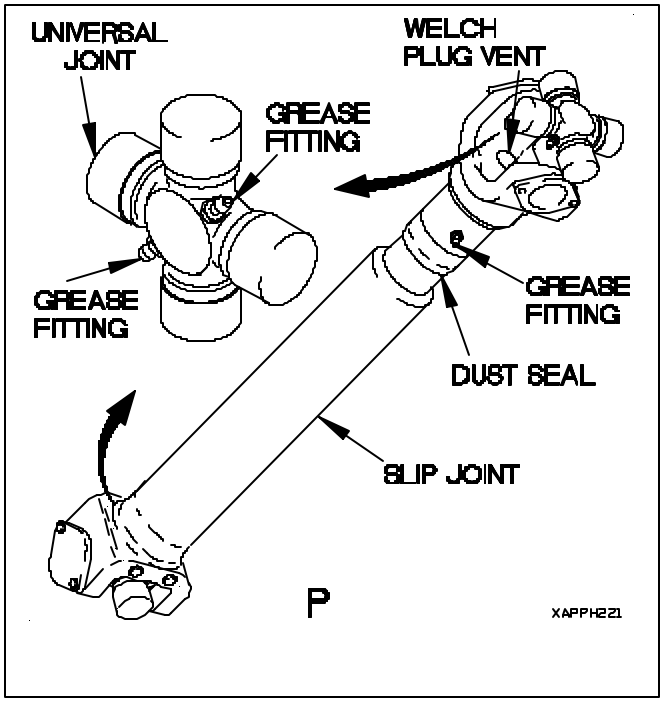

FRONT BRAKE
WEDGE
FRONT BRAKE
AIR CHAMBER
XAPPH19A

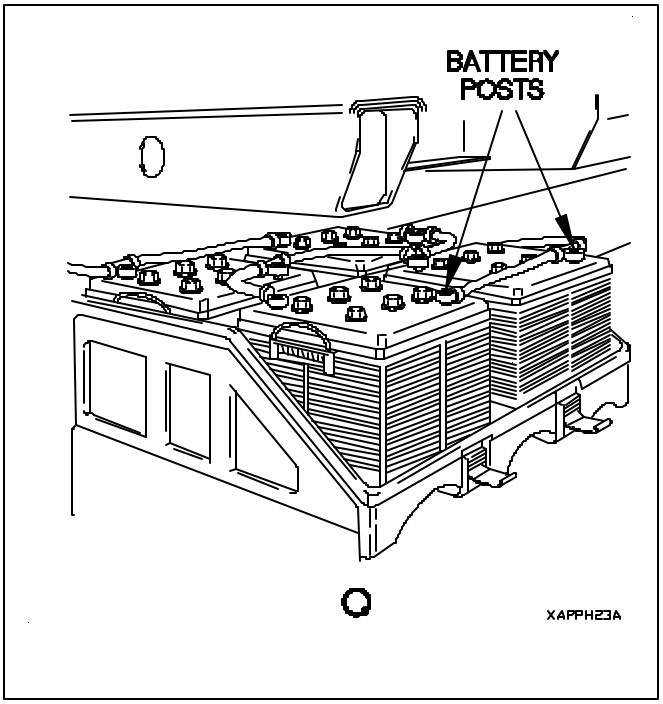
L

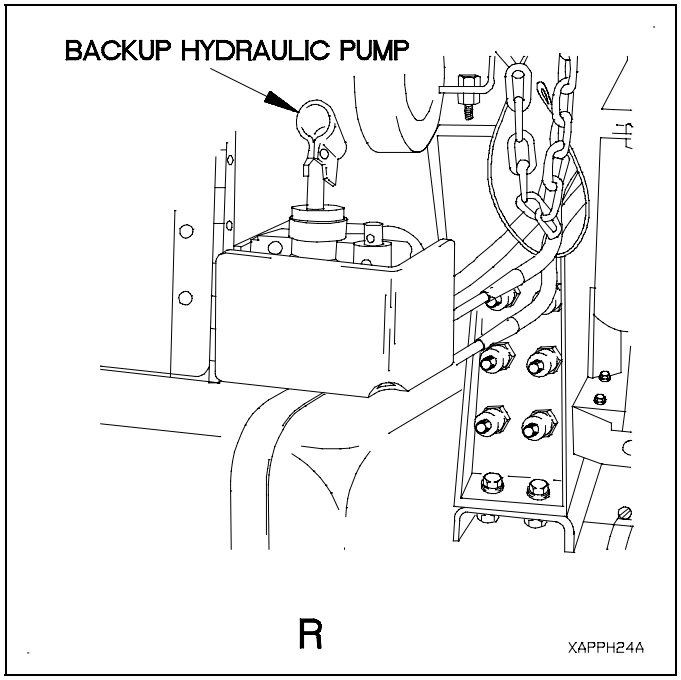
H-8. LOCAL VIEWS (CONT)











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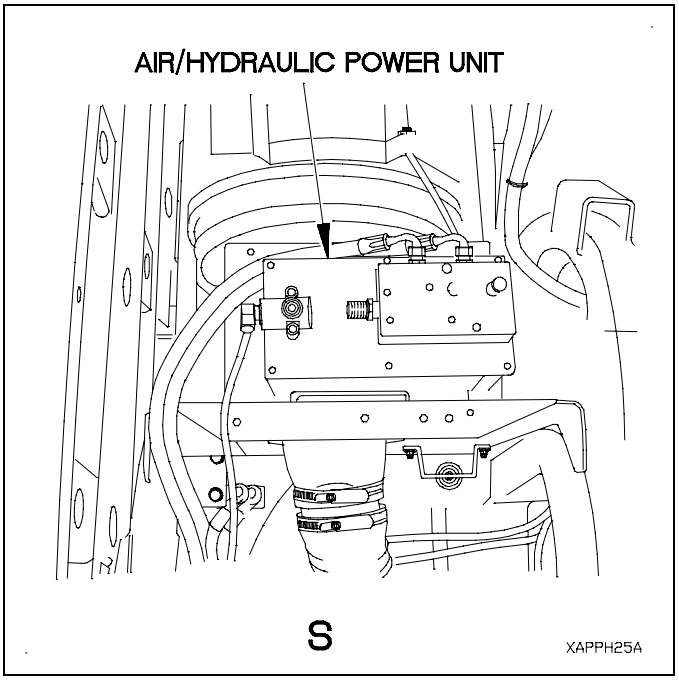

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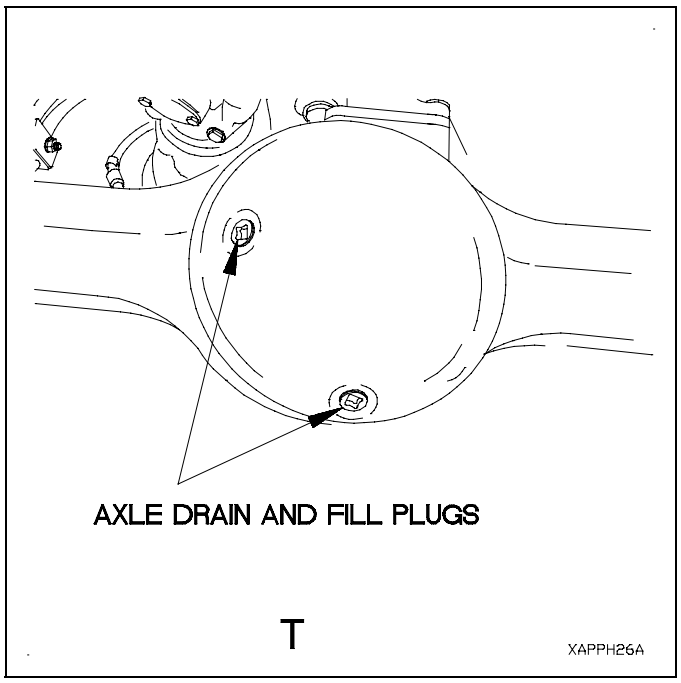

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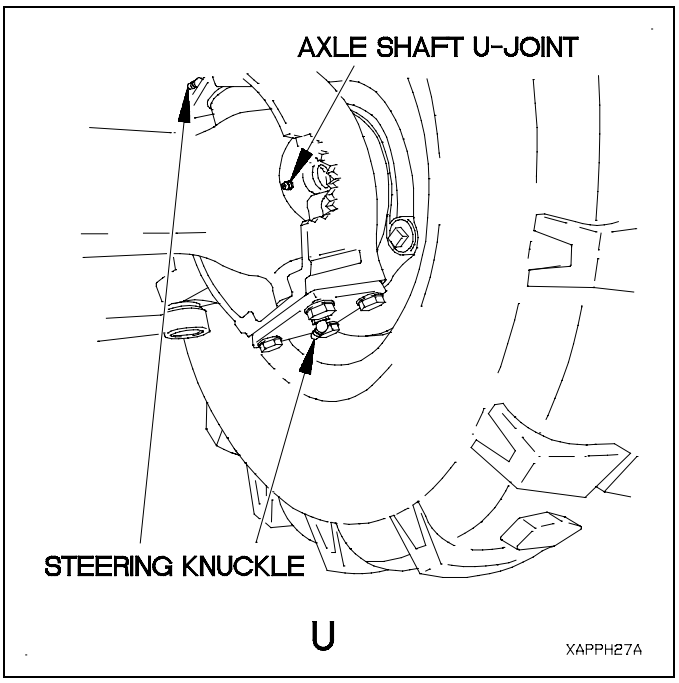

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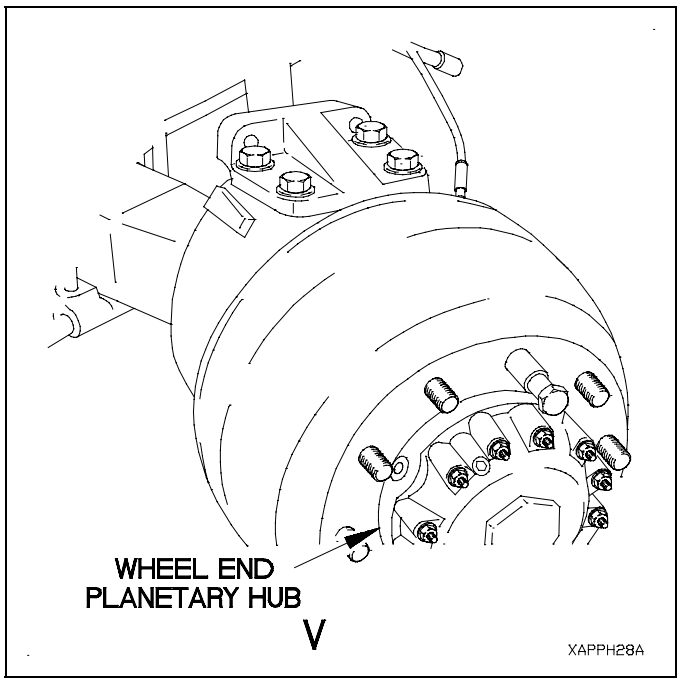
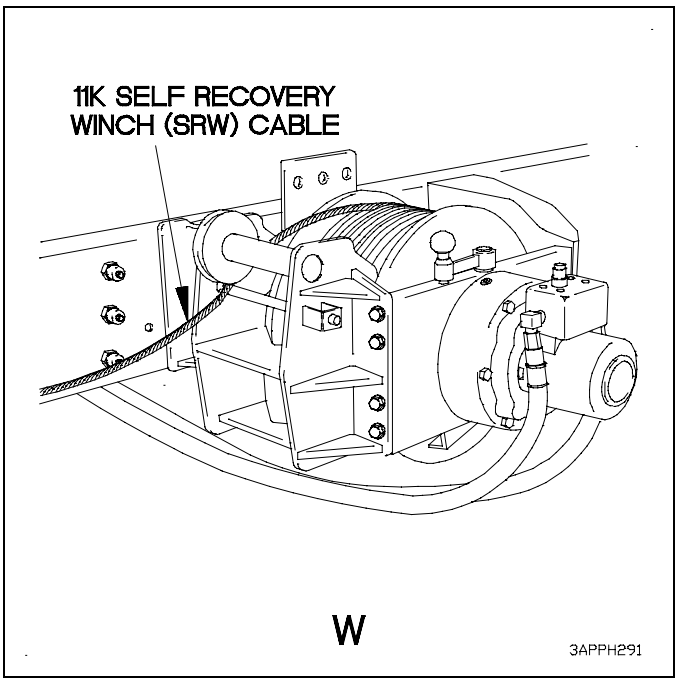
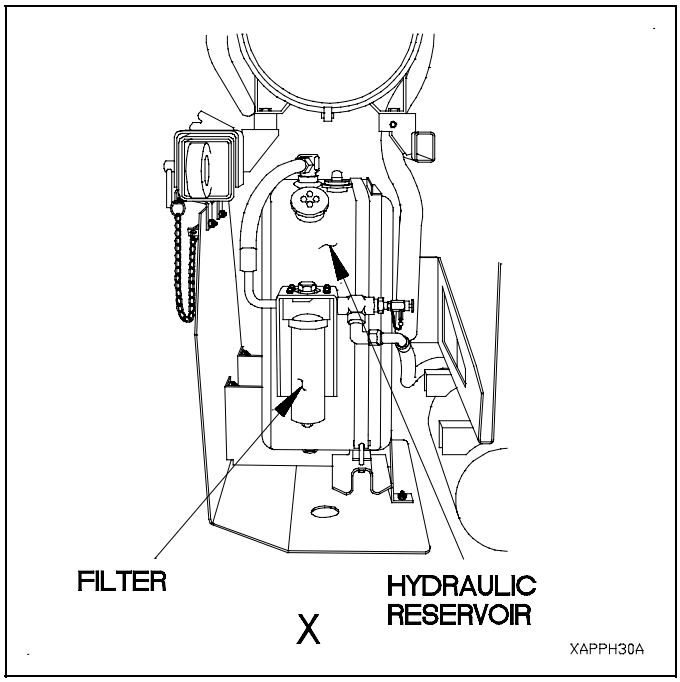
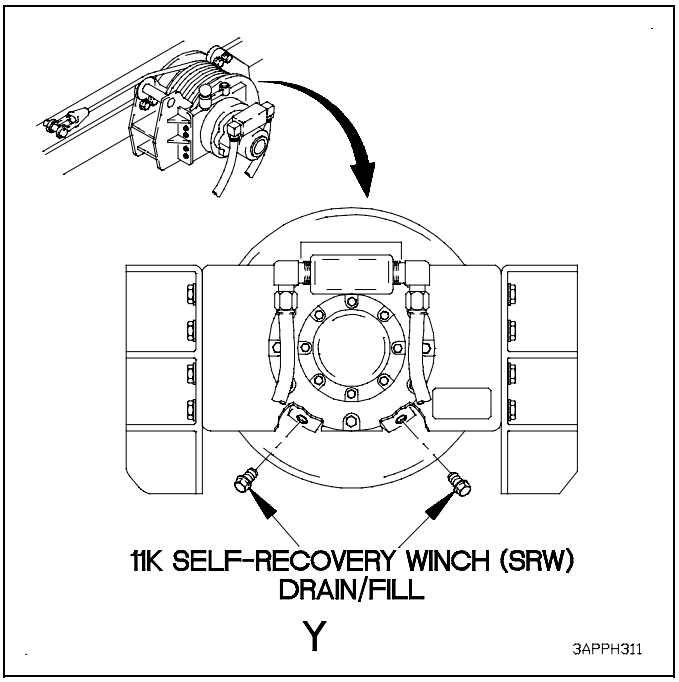
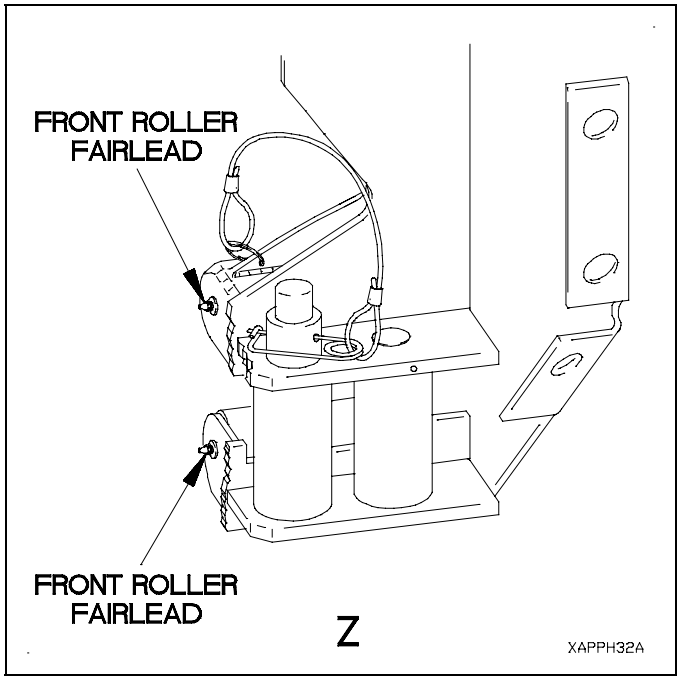
H-8. LUBRICATION LOCAL VIEWS (CONT)

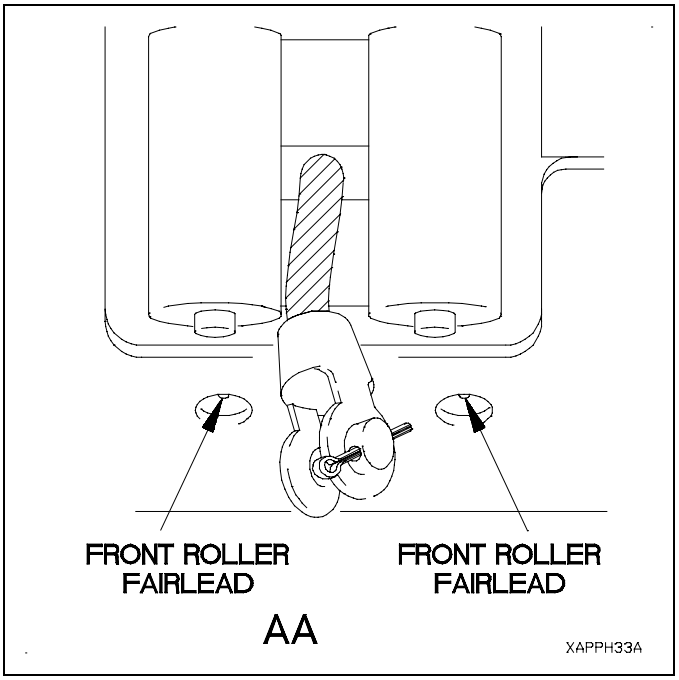


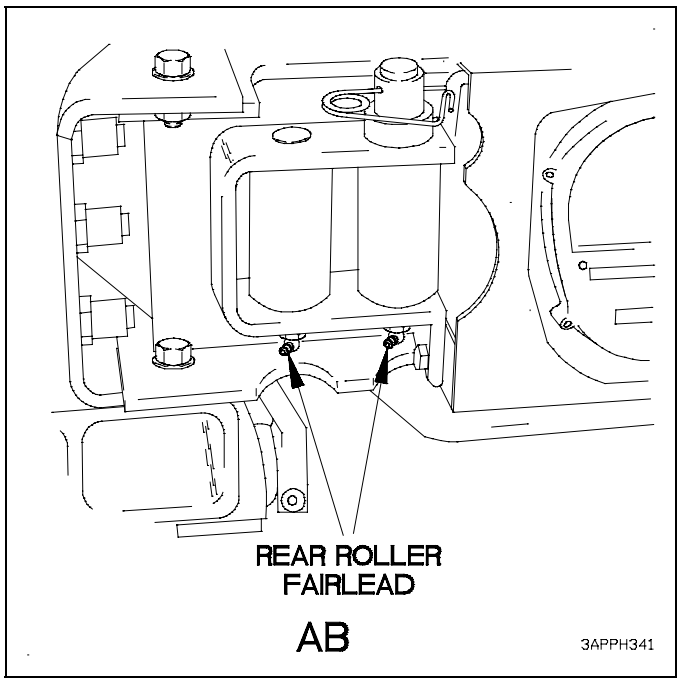







FRONT ROLLER
FAIRLEAD
FRONT ROLLER
FAIRLEAD
Z
XAPPH32A


FRONT ROLLER
FAIRLEAD
FRONT ROLLER
FAIRLEAD
AA
XAPPH33A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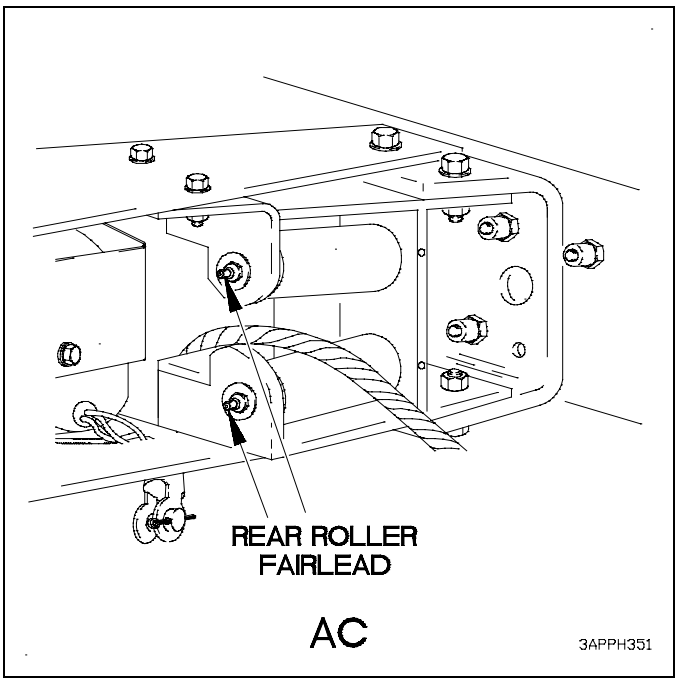
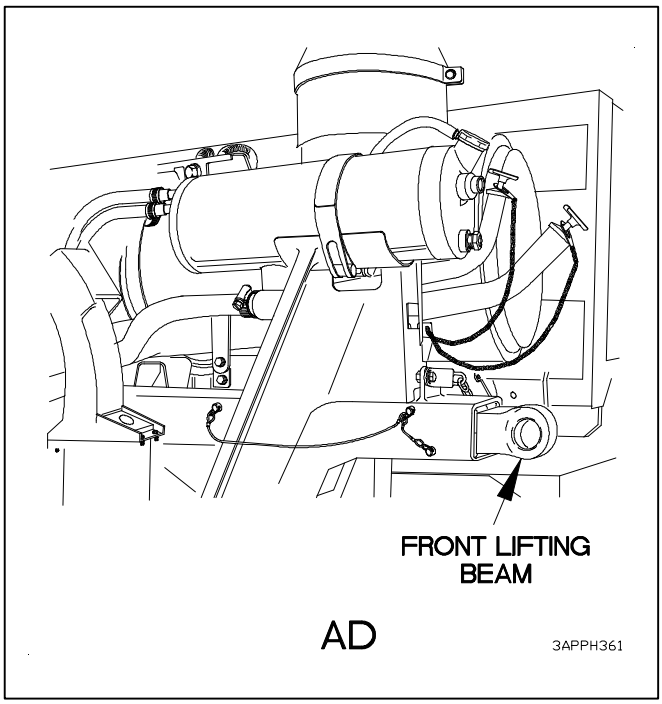
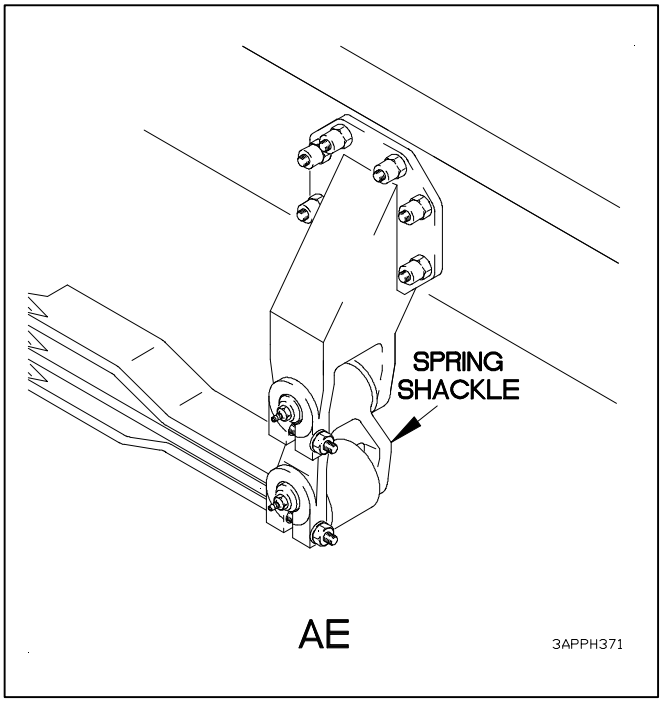
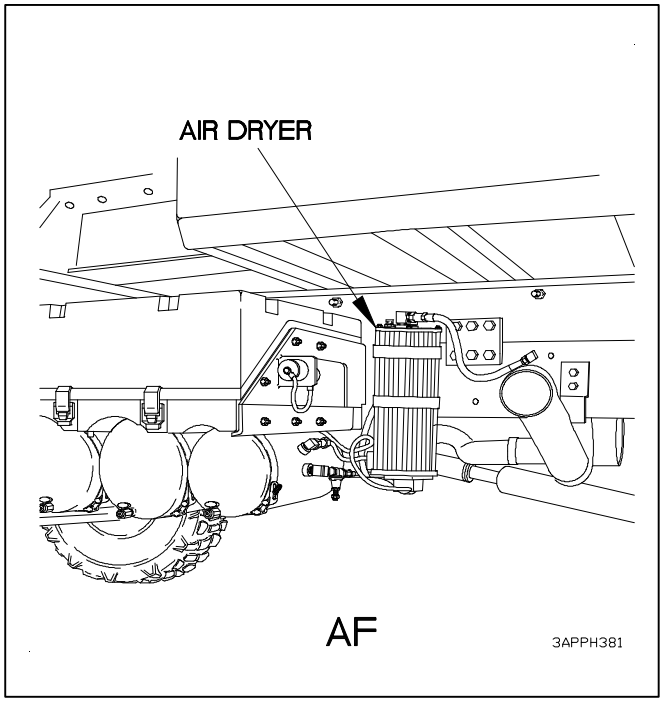
FAIRLEAD
AB
3APPH341


REAR ROLLER
FAIRLEAD
AC
3APPH351

H-8. LOCAL VIEWS (CONT)







H-9. LUBRICATION/SERVICES NOTES

1. ENGINE CRANKCASE. Check engine oil level daily. Change engine oil at initial 5,000 miles (8,045 km). During the remainder of the 12,000 mile (19,308 km)/18 month warranty period, Units participating in AOAP will sample engine oil every 3,000 miles (4,827 km) or 6 months, whichever occurs first and change engine oil as directed by AOAP. Units not participating in AOAP, will change engine oil every 6,000 miles (9,654 km) or every six months, whichever occurs first. After expiration of engine warranty period, Units participating in AOAP will perform engine oil change as directed by AOAP. Units not participating in AOAP will change engine oil every 6,000 miles (9,654 km) or every six months, whichever occurs first, or when operating in dusty areas or under severe operating conditions, change the oil every 3,000 miles (4,827 km) or every three months, whichever occurs first. Drain engine oil when engine is warm. Refill engine crankcase with OE/HDO specified for the ambient temperature. Engine oil is full when level is within crosshatch marks on the dipstick. Do not overfill.

2. ENGINE OIL FILTER. Filter is replaced each time the crankcase is drained. If water or metal particles are detected during oil filter replacement, notify Direct Support Maintenance personnel before refilling crankcase (para 3-4).

3. TRANSMISSION. Check transmission oil level daily. Change transmission oil at initial 5,000 miles (8,045 km). During the remainder of the 24 month/unlimited mileage warranty, Units participating in AOAP will sample transmission oil every 6,000 miles (9,654 km) or 12 months, whichever occurs first and change transmission oil as directed by AOAP. Units not participating in AOAP will perform transmission oil change every 24,000 miles (38,616 km) or once every two years, whichever occurs first. Drain transmission oil when engine is warm. Refill with OE/HDO specified for ambient temperature. Add oil until the proper level is reached (TM 9-2320-365-10). Do not overfill. Replace oil filters each time transmission oil is changed (para 8-9).

4. POWER STEERING. Check power steering oil level weekly. Change the oil every 24,000 miles (38,616 km). Disconnect upper and lower hoses from steering gear and drain oil. Refill power steering pump reservoir with OE/HDO specified for the ambient temperature. Reservoir is full when oil is between the two marks on the dipstick. Do not overfill. Remove dipstick, wipe clean and install dipstick fully into reservoir. Remove dipstick and read oil level. Replace oil filter each time power steering oil is changed (para 13-8).

5. FUEL/WATER SEPARATOR. Replace filter element every 6,000 miles (9,654 km) or once every six months, whichever occurs first (para 4-13).

6. FUEL FILTER. The fuel particle filter is replaced when a new fuel/water separator filter element is installed. The normal replacement interval is every 6,000 miles (9,654 km) or once every six months, whichever occurs first (para 4-14).

7. ENGINE COOLANT. Check engine coolant level daily. Change the coolant and flush the cooling system every 24,000 miles (38,616 km) or once every two years, whichever occurs first. Fill radiator overflow tank with an Ethylene Glycol/water mixture as specified in 0-A-548D. Service the cooling system before the specified interval if:

- Coolant is heavily contaminated.
- Engine overheats.
- Oil cooler has failed allowing oil and coolant to mix.

8. HYDRAULIC RESERVOIR and FILTER. Check oil level weekly and make sure oil level gage reads **F (full)**. Units participating in AOAP will sample oil annually and change oil and filter as directed by AOAP. Units not participating in AOAP will change oil and filter every two years. Drain oil and refill hydraulic reservoir with OE/HDO specified for ambient operating temperature. Fill hydraulic reservoir until oil level gage reads **F (full).** Do not overfill. Replace oil filter each time oil is changed (para 9-12).

H-9. LUBRICATION/SERVICE NOTES (CONT)

9. DRIVE SHAFT UNIVERSAL and SLIP YOKE.
Lubricate drive shafts with GAA every 3,000 miles (4,827 km) or once every three months, whichever occurs first, using a low pressure lubrication gun. If operating conditions are severe or abnormal, service at 1,000 miles (1,609 km) or once every month, whichever occurs first. Perform drive shaft hinging inspection every time drive shafts are serviced (para 9-3).

- UNIVERSAL JOINT:
  A. Apply grease to both grease fittings until new grease purges from all four bearing caps.
  B. If grease does not purge from all four bearing caps, perform the following steps:
  (1) Loosen two screws on bearing cap that does not purge, approximately 1/4 in.
  (2) Apply grease to grease fitting for bearing cap that does not purge until bearing cap purges.
  (3) Remove and discard the two screws loosened in step (1).
  (4) Position two replacement screws in bearing cap and tighten down evenly.
  (5) Tighten two screws to 26-35 lb-ft (35-47 N m).

- SLIP JOINT:
  A. Apply grease until grease appears at the vent in the welch plug.
  B. Place your finger over the welch plug vent and add grease until grease purges from the dust seal.
  C. If grease does not purge from the dust seal, inspect drive shaft slip yoke (para 9-2).

10. AIR/HYDRAULIC POWER UNIT and BACKUP HYDRAULIC PUMP. Change OHA oil every 24,000 miles (38,616 km) or once every two years, whichever occurs first. To service air/hydraulic power unit and backup hydraulic pump refer to vehicle para 19-7, Air Transportability Hydraulic System Service.

11. ALL AXLE DIFFERENTIALS. Check oil level in differentials every 3,000 miles (4,827 km). Check oil level with vehicle parked on level surface and axle differential at ambient temperature, allowing at least one hour to cool down after vehicle operation. If oil is checked when axle differential is hot, it is normal for oil to spill out of the port due to expansion from the heat. Oil level is considered full if it is within one inch of the bottom of the fill port. If oil spills from the fill port when the axle differential is cool, it is overfull. Allow oil to drain until no more drains out. If the oil level is more than one inch below the bottom of the fill port, refill axle differential with GO specified for the ambient temperature until level with bottom of fill port. Change the oil every 24,000 miles (38,616 km) or once every two years, whichever occurs first. Drain oil when hot after operation.

12. FRONT AXLE WHEEL END PLANETARY HUBS. There are two lube intervals for the front axle wheel end planetary hubs.

a. Check and fill front axle wheel end planetary hubs every 3,000 miles (4,827 km) or once every three months, whichever occurs first, as follows:

(1) Position vehicle on a level surface. Allow 15 minutes for vehicle to cool before checking oil levels.
(2) Position fill port at 4 o'clock position. If oil flows from fill port when plug is loosened, let oil drain to correct level. If oil level is below fill port, fill hub with GO specified for the ambient temperature until oil is level with fill port.

b. Drain and fill front axle wheel end planetary hubs every 24,000 miles (38,616 km) or once every two years, whichever occurs first, following the repacking of the inner wheel bearings or whenever wheel end assemblies are taken apart for other maintenance as follows:

(1) Position vehicle on a level surface.
(2) Position fill port at the 6 o'clock (down) position.
(3) Drain hub oil (allow a minimum of 15 minutes for oil to drain down from vent tubes).
(4) Refill hubs with 11-13 ounces of GO specified for the ambient temperature.

13. TIE ROD ENDS. Lubricate tie rod ends with GAA every 6,000 miles (9,654 km) or once every six months, whichever occurs first, using a low pressure lubrication gun, until new grease is seen purging from the boot area. If operating conditions are severe or abnormal, service at 1,000 miles (1,609 km) or once every month, whichever occurs first.

14. 11K SELF-RECOVERY WINCH (SRW) CABLE:

CAUTION

Do not use dry cleaning solvent to clean 11K Self-Recovery Winch (SRW) cables. Use of dry cleaning solvent will remove lubricant from inner strands of 11K SRW cables. Failure to comply may result in damage to equipment.

a. After winch operation:

Refer to FM 5-125.

b. Care of wire rope:

Refer to FM 5-125.

c. Inspection of wire rope:

Refer to FM 5-125.

d. Every six months:

(1) Unwind entire length of 11K SRW cable (TM 9-2320-365-10).
(2) Soak and clean 11K SRW cable with new OE/HDO 30.
(3) Wipe off excess OE/HDO 30.
(4) Coat 11K SRW cable with GW.
(5) Rewind 11K SRW cable (TM 9-2320-365-10).

15. 11K SRW. Check 11K SRW gear oil level every 6,000 miles (9,654 km) or once every six months, whichever occurs first. Refill 11K SRW with GO specified for ambient temperature. Change oil every 12,000 miles (19,308 km) or once every year, whichever occurs first. Use procedure (a) to check and fill oil level; use procedure (b) to change oil.

a. Check and fill oil level as follows:

(1) Shift the freespool mechanism to the disengage position so the drum can be freely rotated.
(2) Rotate the drum to where either plug is near the top of the 11K SRW. Remove the plug.
(3) Rotate the drum 90 degrees in the direction that allows the other plug to be near the top of the 11K SRW. Remove the plug.

NOTE

Oil level is full if a small amount of oil runs out of lower plug.

(4) Add oil until a small amount of oil runs out of lower plug hole.
(5) Apply adhesive (Item 2, Appendix D) to plug and position plug in top hole.
(6) Rotate drum until open hole is at top.
(7) Apply adhesive (Item 2, Appendix D) to plug and position plug in top hole.
(8) Tighten plugs to 13-15 lb-ft (18-20 N·m).

H-9. LUBRICATION/SERVICE NOTES (CONT)

b. Change oil as follows:

(1) Shift the freespool mechanism to the disengage position so the drum can be freely rotated.
(2) Rotate the drum to where either plug is near the top of the 11K SRW. Remove the plug.
(3) Rotate the drum 90 degrees in the direction that allows the other plug to be near the top of the 11K SRW. Remove the plug.
(4) Position drain pan (Item 17, Appendix C) under 11K SRW.
(5) Rotate the drum until either hole is straight down to the bottom of the 11K SRW. Allow the oil to drain completely.
(6) Rotate the drum until either hole is at top.

NOTE

Oil level is full if a small amount of oil runs out of lower plug.

(7) Add oil until a small amount of oil runs out of lower plug hole.
(8) Apply adhesive (Item 2, Appendix D) to plug and position plug in top hole.
(9) Rotate drum until open hole is at top.
(10) Apply adhesive (Item 2, Appendix D) to plug and position plug in top hole.
(11) Tighten plugs to 13-15 lb-ft (18-20 N•m).

16. TOWING PINTLE. Lubricate towing pintle with GAA every 6,000 miles (9,654 km) or once every six months, whichever occurs first, using a low pressure lubrication gun until new grease is seen purging.

WARNING

- **Dry Cleaning Solvent (P-D-680) is TOXIC and flammable. Wear protective goggles and gloves; use only in well-ventilated area; avoid contact with skin, eyes, and clothes, and do not breath vapors. Keep away from heat or flame. Never smoke when using solvent; the flashpoint for Type I Dry Cleaning Solvent is 100°F (38°C) and for Type II is 138°F (50°C). Failure to comply may result in serious injury or death to personnel.**

- **If personnel become dizzy while using cleaning solvent, immediately get fresh air and medical help. If solvent contacts skin or clothes, flush with cold water. If solvent contacts eyes, immediately flush eyes with water and get medical attention. Failure to comply may result in injury to personnel.**

17. ENGINE CRANKCASE BREATHER. Remove crankcase breather and clean with Dry Cleaning Solvent (SD P-D-680) (Item 71, Appendix D) or equivalent, and replace o-ring seal every 6,000 miles (9,654 km) or once every six months, whichever occurs first (para 3-5).

18. FRONT and REAR AXLE SPRING BOLT and SPRING SHACKLE. Lubricate front and rear axle spring bolts and spring shackles with GAA every 3,000 miles (4,827 km) or once every three months, whichever occurs first, using a low pressure lubrication gun until grease appears between pins and bushings at both ends of spring bolt and spring shackle. If pins do not accept grease, notify Direct Support to remove pins. Clean and inspect pins and bushings, replace if necessary. If operating conditions are severe or abnormal, service at 1,000 miles (1,609 km) or once every month, whichever occurs first.

19. BATTERY POSTS. Service batteries in accordance with TM 9-6140-200-14, every 6,000 miles (9,654 km) or once every six months, whichever occurs first.

20. FRONT AXLE SHAFT UNIVERSAL JOINTS and STEERING KNUCKLES. Lubricate universal joints every 3,000 miles (4,827 km) or once every three months, whichever occurs first. Lubricate steering knuckles with GAA every 6,000 miles (9,654 km) or once every six months, whichever occurs first, using a low pressure lubrication gun. If operating conditions are severe or abnormal, service at 1,000 miles (1,609 km) or once every month, whichever occurs first.

21. BRAKE WEDGE and AIR CHAMBER: BRAKE SPIDER, SELF-ADJUSTER MECHANISM, AND WEDGE ASSEMBLY. Clean and lubricate (with GAA) areas of spider and hardware that contact the brake shoes. Disassemble, clean and lubricate the self-adjuster mechanism. Clean and lubricate the wedge head, rollers and ramps in the plungers. Clean and lubricate every 6,000 miles (9,654 km). If operating conditions are severe or abnormal, service at 3,000 miles (4,827 km) or once every three months, whichever occurs first, or when any of the following occur: Refer to para 11-4 and 11-5.

- Seals are replaced
- Plungers are removed
- Brakes are relined
- Grease becomes contaminated or hardened

22. FRONT and REAR AXLE INNER WHEEL BEARINGS. Repack inner wheel bearings with GAA every 12,000 miles (19,308 km), when semiannual PMCS inspection of service brakes reveals oil leak from inner hub, or whenever wheel end assemblies are taken apart for other maintenance (para 10-2).

23. 11K SRW CABLE ROLLER FAIRLEADS. Lubricate with GAA every 6,000 miles (9,654 km) or once every six months, whichever occurs first, using a low pressure lubrication gun. If operating conditions are severe or abnormal, service at 1,000 miles (1,609 km) or once every month, whichever occurs first.

WARNING

- **Dry Cleaning Solvent (P-D-680) is TOXIC and flammable. Wear protective goggles and gloves; use only in well-ventilated area; avoid contact with skin, eyes, and clothes, and do not breath vapors. Keep away from heat or flame. Never smoke when using solvent; the flashpoint for Type I Dry Cleaning Solvent is 100 F (38 C) and for Type II is 138 F (50 C). Failure to comply may result in serious injury or death to personnel.**

- **If personnel become dizzy while using cleaning solvent, immediately get fresh air and medical help. If solvent contacts skin or clothes, flush with cold water. If solvent contacts eyes, immediately flush eyes with water and get medical attention. Failure to comply may result in injury to personnel.**

24. FRONT LIFTING BEAM. Remove left and right lifting beams and clean with Dry Cleaning Solvent (SD P-D-680) (Item 71, Appendix D) or equivalent, every 6,000 miles (9,654 km) or once every six months, whichever occurs first. Apply a light coat of GAA to lifting beams. If operating conditions are severe or abnormal, service at 1,000 miles (1,609 km) or once every month, whichever occurs first.

25. AIR DRYER. Service air dryer (para 23-6) every 12,000 miles (19,308 km) or annually, whichever occurs first.

26. FRONT AND REAR LEAF SPRING. At initial 1000 miles (1609 km) of vehicle operation, tighten U-bolts to 390-510 lb-ft (529-692 N•m).

APPENDIX J
ADDITIONAL AUTHORIZATION LIST (AAL)

Section I. INTRODUCTION

J-1. SCOPE

This appendix lists additional items you are authorized for the support of the LMTV.

J-2. GENERAL

This list identifies items that do not have to accompany the LMTV and that do not have to be turned in with it. These items are all authorized to you by Common Tables of Allowance (CTA), Modification Table of Organization and Equipment (MTOE), Tables of Distribution and Allowances (TDA), or Joint Table of Allowance (JTA).

J-3. EXPLANATION OF LISTING

National Stock Numbers, description, and quantities are provided to help you identify and request the additional items you require to support this equipment.

Section II. ADDITIONAL AUTHORIZATION LIST

(1) National Stock Number	(2) Description (CAGE) Part Number	(3) U/M	(4) Qty Auth
6685-01-193-1733	10,000 PSI Transducer: (19207) 12258956	EA	1

APPENDIX K
TRANSMISSION/TRANSMISSION CONTROLS ADAPTABILITY CHART

Section I. INTRODUCTION

K-1. INTRODUCTION

This appendix lists the various transmission controls and configuration modifications that may be required to permit the transmission to function correctly. This appendix will guide the mechanic through the hardware selection process by identifying compatibility issues between the transmission controls (WTEC II/WTEC III) and the numerous revisions of the Allison MD3070PT transmission (PRE-ID w/ 24-pin connector, PRE-ID w/ 31-pin connector, TID 1, TID 2, and TID 3). Refer to Figure 1. After replacing any component of the transmission controls or the transmission assembly, perform calibration procedures in TM 9-2320-365-20-3 paragraph 8-2 or 8-3.

K-2. EXPLANATION OF COLUMNS

a. Column (1) - Installed Controls or Controls Being Installed. This column lists all of the variables concerning which version of transmission controls are installed in the vehicle, or may need to be installed, to communicate correctly with the transmission.

b. Column (2) - Installed Transmission or Transmission Being Installed. This column lists all of the various revisions of the Allison MD3070PT transmissions that may be installed in the vehicle.

c. Column (3) - Required Modification. This column lists the various electrical interface (hardware) modifications that may be required to allow the transmission controls to communicate with the transmission.

K-3. HOW TO USE THIS CHART

a. Determine which controls and transmission are installed in the vehicle.

b. Determine which component requires replacement.

c. Read across the row to column (3) to determine the required modification.

Section II.

TRANSMISSION/TRANSMISSION CONTROLS ADAPTABILITY CHART

(1) Installed Controls or Controls Being Installed	(2) Installed Transmission or Transmission Being Installed	(3) Required Modification (Refer to Section III)
WTEC II (with 24-pin connector)	PRE-ID w/ 24-pin connector (transmission serial number prior to 6510032369)	No modification required.
WTEC II (with 24-pin connector)	PRE-ID w/ 31-pin connector (transmission serial number 6510032369 to 6510090785)	Install 31-pin connector.
WTEC II (with 24-pin connector)	TID 1 (transmission serial number 6510090786 to 6510142171)	Install 31-pin connector.
WTEC II (with 24-pin connector)	TID 2 (transmission serial number 6510142172 to 6510262116)	Install 31-pin connector and replace transmission internal wiring harness.

TRANSMISSION/TRANSMISSION CONTROLS ADAPTABILITY CHART (CONT)

(1) Installed Controls or Controls Being Installed	(2) Installed Transmission or Transmission Being Installed	(3) Required Modification (Refer to Section III)
WTEC II (with 24-pin connector)	TID 3 (transmission serial number 6510262117 and subsequent)	Install 31-pin connector, replace transmission internal wiring harness, and reprogram WTEC II TEPSS. [1]
WTEC II (with 31-pin connector)	PRE-ID w/ 24-pin connector (transmission serial number prior to 6510032369)	Install adapter cable assembly.
WTEC II (with 31-pin connector)	PRE-ID w/ 31-pin connector (transmission serial number 6510032369 to 6510090785)	No modification required.
WTEC II (with 31-pin connector)	TID 1 (transmission serial number 6510090786 to 6510142171)	No modification required.
WTEC II (with 31-pin connector)	TID 2 (transmission serial number 6510142172 to 6510262116)	Replace transmission internal wiring harness.
WTEC II (with 31-pin connector)	TID 3 (transmission serial number 6510262117 and subsequent)	Replace transmission internal wiring harness and reprogram WTEC II TEPSS. [1]
WTEC III (with ECU manufactured prior to October 1999) [2]	PRE-ID w/ 24-pin connector (transmission serial number prior to 6510032369)	Install adapter cable assembly and ID harness.
WTEC III (with ECU manufactured prior to October 1999) [2]	PRE-ID w/ 31-pin connector (transmission serial number 6510032369 to 6510090785)	Install ID harness.
WTEC III (with ECU manufactured prior to October 1999) [2]	TID 1 (transmission serial number 6510090786 to 6510142171)	No modification required.
WTEC III (with ECU manufactured prior to October 1999) [2]	TID 2 (transmission serial number 6510142172 to 6510262116)	No modification required.
WTEC III (with ECU manufactured prior to October 1999) [2]	TID 3 (transmission serial number 6510262117 and subsequent)	Reprogram WTEC III ECU [1] or install new WTEC III ECU (P/N 12421787-002).
WTEC III (with ECU manufactured after October 1999) [3]	PRE-ID w/ 24-pin connector (transmission serial number prior to 6510032369)	Install adapter cable assembly and ID harness.
WTEC III (with ECU manufactured after October 1999) [3]	PRE-ID w/ 31-pin connector (transmission serial number 6510032369 to 6510090785)	Install ID harness.
WTEC III (with ECU manufactured after October 1999) [3]	TID 1 (transmission serial number 6510090786 to 6510142171)	No modification required.

[1] Reprogramming can only be accomplished by an authorized Allison Transmission distributor. You must provide the transmission serial number of the transmission being installed to ensure correct reprogramming. If at a later time, an earlier version transmission is installed in a WTEC II equipped vehicle, WTEC II TEPSS will require reprogramming again.
[2] Vehicle serial number 012477 and lower. Refer to Figure 1.
[3] Vehicle serial number 012478 and higher. Refer to Figure 1.

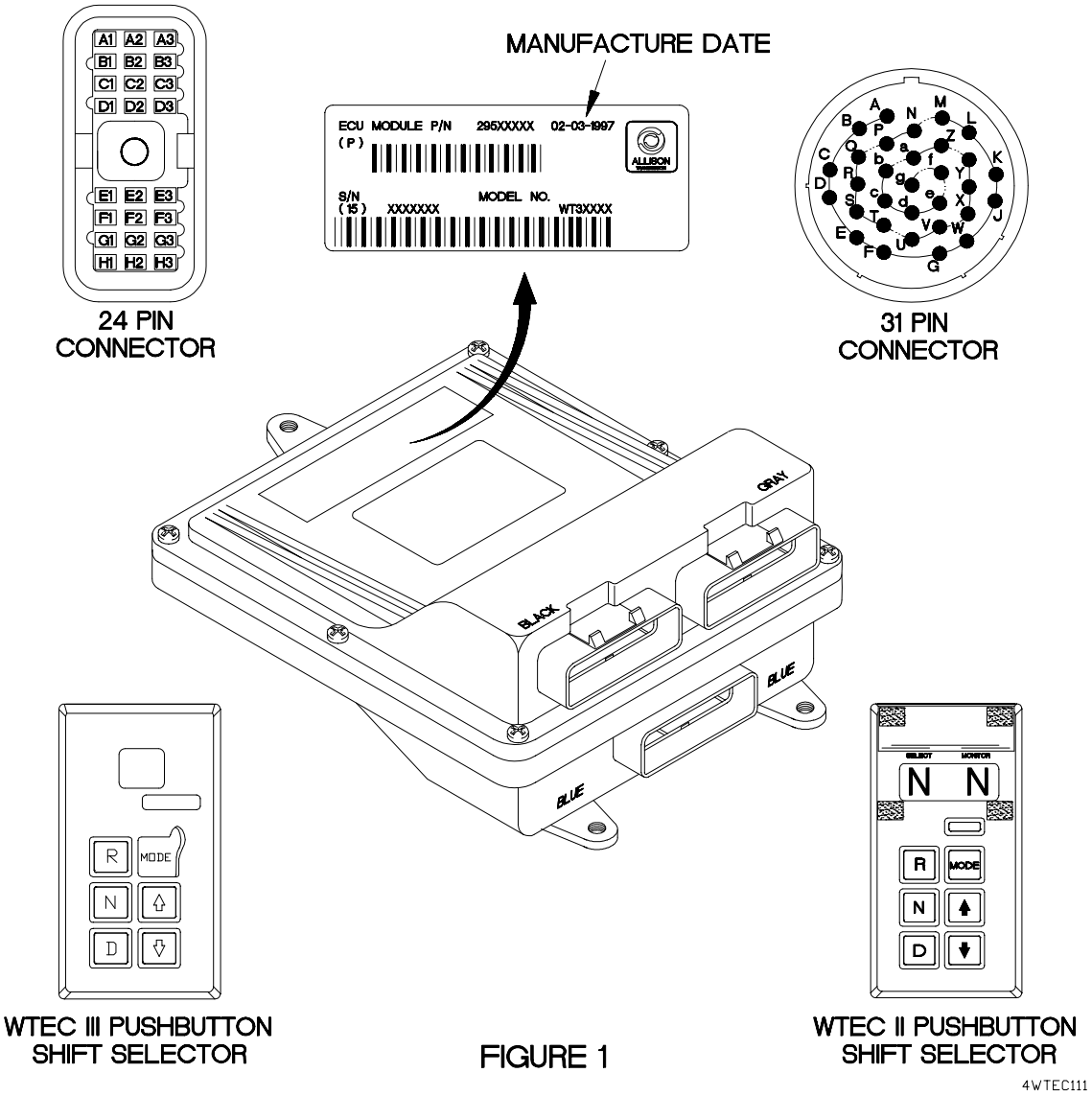
(1) Installed Controls or Controls Being Installed	(2) Installed Transmission or Transmission Being Installed	(3) Required Modification (Refer to Section III)
WTEC III (with ECU manufactured after October 1999) [3]	TID 2 (transmission serial number 6510142172 to 6510262116)	No modification required.
WTEC III (with ECU manufactured after October 1999) [3]	TID 3 (transmission serial number 6510262117 and subsequent)	No modification required.

Section III.

MODIFICATION PARTS IDENTIFICATION

Identification	Part Number/NSN	Description
31-pin connector	300130 5935-21-921-1813	Converts a transmission external wiring harness from a 24-pin ("D" type) connector to a 31-pin (round type) connector.
Transmission internal wiring harness	29529474 6150-01-481-8088	Converts a TID 2 transmission to a TID 1 configuration to allow WTEC II controls to communicate with the transmission.
Gasket	29503283 5330-01-360-9035	Required when replacing transmission internal wiring harness.
ID harness	200100 6150-21-921-1191	Allows WTEC III controls to communicate with a PRE-ID transmission.
Adapter cable assembly	29519210 6150-01-420-5987	Adapts a PRE-ID transmission with 24-pin ("D" type) connector to a transmission external wiring harness with a 31-pin (round) connector.

MODIFICATION PARTS IDENTIFICATION (CONT)



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GLOSSARY
ABBREVIATIONS

A/C . . . . . Air Conditioner

AC . . . . . Alternating Current

ANSI . . . . . American National Standards Institute

CCW . . . . . Counterclockwise

CTIS . . . . . Central Tire Inflation System

CW . . . . . Clockwise

ECU . . . . . Electronic Control Unit

EMI . . . . . Electromagnetic Interference

LED . . . . . Light Emitting Diode

LH . . . . . Left Hand

LMHC . . . . . Light Material Handling Crane

MAC . . . . . Maintenance Allocation Chart

NATO . . . . . North Atlantic Treaty Organization

NBC . . . . . Nuclear, Biological, or Chemical

NO/NC . . . . . Normally Open/Normally Closed

PDP . . . . . Power Distribution Panel

PMCS . . . . . Preventive Maintenance Checks and Services

PTO . . . . . Power Takeoff

RH . . . . . Right Hand

SAE . . . . . Society of Automotive Engineers

SRW . . . . . Self-Recovery Winch

STE/ICE-R . . . . . Simplified Test Equipment/Internal Combustion Engine-Reprogrammable

TEPSS . . . . . Transmission ECU Pushbutton Shift Selector

TPS . . . . . Throttle Position Sensor

TPSS . . . . . Transmission Pushbutton Shift Selector

VAC . . . . . Volts Alternating Current

VDC . . . . . Volts Direct Current

VIM . . . . . Vehicle Interface Module

WTEC II . . . . . World Transmission Electronic Controls (version 2)

WTEC III . . . . . World Transmission Electronic Controls (version 3)

By Order of the Secretary of the Army:

DENNIS J. REIMER
General, United States Army
Chief of Staff

Official:

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Administrative Assistant to the
Secretary of the Army
04994

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RECOMMENDED CHANGES TO PUBLICATIONS AND BLANK FORMS For use of this form, see AR 25-30; the proponent agency is OAASA	Use Part II *(reverse)* for Repair Parts and Special Tool Lists (RPSTL) and Supply Catalogs/Supply Manuals (SC/SM).	DATE Date you filled out this form
TO: *(Forward to proponent of publication or form) (Include ZIP Code)*	FROM: *(Activity and location) (Include ZIP Code)* Enter your mailing address	

PART I - ALL PUBLICATIONS (EXCEPT RPSTL AND SC/SM) AND BLANK FORMS

PUBLICATION/FORM NUMBER	DATE	TITLE
	Publication Date	Publication Title

ITEM	PAGE	PARA-GRAPH	LINE	FIGURE NO.	TABLE	RECOMMENDED CHANGES AND REASON
10	15-33 19-6	15-7 19-2		4		Item 10. Change Illustration. Reason: Text calls out 90-degree fitting. Art shows straight fitting. Text is correct. Step (4) of removal says to disconnect four hydraulic hoses from manifold. The correct number of hydraulic hoses is five. correct the text to reflect the actual quantity of hydraulic hoses. The supporting illustration is correct.

SAMPLE

* *Reference to line numbers within the paragraph or subparagraph.*

TYPED NAME, GRADE OR TITLE	TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION	SIGNATURE
Your title	Your telephone number	Your signature

TO: *(Forward direct to addressee listed in publication)*	FROM: *(Activity and location) (Include ZIP Code)*	DATE
	Enter your mailing address	Date you filled out this form.

PART II - REPAIR PARTS AND SPECIAL TOOL LISTS AND SUPPLY CATALOGS/SUPPLY MANUALS

PUBLICATION NUMBER	DATE	TITLE
	Publication Date	Your Title

PAGE NO.	COLM NO.	LINE NO.	NATIONAL STOCK NUMBER	REFERENCE NO.	FIGURE NO.	ITEM NO.	TOTAL NO. OF MAJOR ITEMS SUPPORTED	RECOMMENDED ACTION

PART III - REMARKS *(Any general remarks or recommendations, or suggestions for improvement of publications and blank forms. Additional blank sheets may be used if more space is needed.)*

TYPED NAME, GRADE OR TITLE	TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION	SIGNATURE
Your title	Your telephone number	Your signature

SAMPLE

RECOMMENDED CHANGES TO PUBLICATIONS AND BLANK FORMS For use of this form, see AR 25-30; the proponent agency is OAASA	Use Part II *(reverse)* for Repair Parts and Special Tool Lists (RPSTL) and Supply Catalogs/Supply Manuals (SC/SM).	DATE
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TYPED NAME, GRADE OR TITLE	TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION	SIGNATURE

HORN	BLACKOUT LAMP	LAMP	DUALBEAM LAMP	GROUND	POWER LAMP	OPEN CONTACT	BATTERY	FLUORESCENT LIGHT
TEMPERATURE SWITCH OPEN	TEMPERATURE SWITCH CLOSED	MAGNETIC PICKUP	SENSOR	NORMALLY OPEN	NORMALLY CLOSED	CONNECTOR	RECEPTACLE	ELECTRICAL OUTLET
MOTOR	SOLENOID	LEVEL SENSOR	FILTER	LED	METER OR GAGE	CLOSED CONTACT	DIMMER MODULE	TELEPHONE RECEPTACLE
CIRCUIT BREAKER	TWO-WAY SWITCH	PUSHBUTTON	CIRCULATING PUMP	DPDT SWITCH	DPST SWITCH	PHOTOCELL	FUSE	RELAY
PRESSURE SWITCH OPEN	PRESSURE SWITCH CLOSED	NORMALLY OPEN	NORMALLY CLOSED	ALTERNATOR	RESISTOR	TERMINAL LUG	ELECTRONIC IGNITION UNIT	
DIODE	SPLICE	SENSING SWITCH	MOTOR	GROUND RELAY	RELAY	CIRCUIT BREAKER	FLASHER	

FIGURE FO-1 ELECTRICAL SYSTEM SCHEMATIC
FOLDOUT 1 OF 34

SIZE	ILL NO.	
B	5WD01L1B	FP-1/ (FP-2 BLANK)

CONNECTORS			
NUMBER	ZONE	SH	DESCRIPTION
A13	A66	8	WTEC II TRANSMISSION CONNECTOR A
A13	A70	8	WTEC II TRANSMISSION CONNECTOR B
A13	A74	9	WTEC II TRANSMISSION CONNECTOR C
J1	D285	32	VAN 110 VAC POWER ENTRY
J2	A185	21	EMI FILTER
J2	E285	32	VAN 110 VAC POWER ENTRY
J3	D205	23	AIRDROP ONLY
J5	A38	5	VEHICLE HORN
J6	A38	5	VEHICLE HORN
J7	A188	21	WTEC II TRANSMISSION DIMMER MODULE
J8	B38	5	BLACKOUT MARKER RIGHT FRONT
J9	C38	5	FRONT RIGHT TURN SIGNAL
J10	B38	5	PARKING LIGHT FRONT RIGHT
J12	D38	5	RIGHT HEADLIGHT
J13	C38	5	RIGHT HEADLIGHT
J14	C38	5	RIGHT HEADLIGHT
J17	H38	5	BLACKOUT DRIVE LIGHT
J18	D38	5	LEFT HEADLIGHT
J19	E38	5	LEFT HEADLIGHT
J19	C177	20	CAB - DASH - LEFT - UNDERDASH
J20	D38	5	LEFT HEADLIGHT
J22	G38	5	PARKING LIGHT FRONT LEFT
J23	F38	5	FRONT LEFT TURN SIGNAL
J24	H38	5	BLACKOUT MARKER LEFT FRONT
J25	G85	10	WINDSHIELD WASHER ROTARY PUMP (B3)
J27	A43	5	CHASSIS - FRONT
J31	E55	7	ENGINE
J31X	F175	20	CAB - DASH - LEFT - UNDERDASH
J39	G61	7	ENGINE
J43	G42	5	CHASSIS - FRONT
J43X	F42	5	CHASSIS - FRONT
J43X	G175	20	CAB - DASH - LEFT - UNDERDASH
J50	E85	10	CAB MARKER LIGHT FRONT UPPER LEFT
J51	D42	5	CHASSIS - FRONT
J52	E38	5	CHASSIS - FRONT BUMPER
J52	B203	23	CHASSIS - FRONT
J53	F200	23	AIRDROP ONLY
J55	C85	10	CAB MARKER LIGHT FRONT UPPER RIGHT
J57	D85	10	CAB MARKER LIGHT FRONT UPPER MIDDLE LEFT
J59	C85	10	CAB MARKER LIGHT FRONT UPPER MIDDLE RIGHT
J60	D85	10	CAB MARKER LIGHT FRONT UPPER MIDDLE MIDDLE
J62	E88	10	ROTARY WARNING LIGHT CONNECTOR
J65	E186	21	ROTARY WARNING LIGHT CONNECTOR
J78	F185	21	CAB RADIO CONNECTOR
J80	D78	9	AIR DRYER (EXCEPT DUMP)
J93	B50	6	CHASSIS - SPARE TIRE
J95	E38	5	12V INTERVEHICULAR
J95	B206	23	ENGINE
J99	E187	21	CHEMICAL ALARM CONNECTOR
J106	F50	6	CHEMICAL DETECTOR RECEPTACLE
J108	B222	25	CAB - DASH - CENTER - OPTIONS PANEL
J111	E122	14	CTIS ELECTRONIC CONTROL UNIT
J113	G186	21	CTIS PRESSURE TRANSDUCER
J114	B165	21	CAB - DASH - LEFT - WTEC II TRANSMISSION HARNESS
J114	D298	34	WTEC III TRANSMISSION HARNESS (TID1)
J114	D303	34	WTEC III TRANSMISSION HARNESS (TID2)
J115	C154	18	CAB - DASH - LEFT - WTEC II TRANSMISSION HARNESS
J116	C159	18	CAB - DASH - LEFT - WTEC II TRANSMISSION HARNESS
J117	F161	18	CAB - DASH - LEFT - WTEC II TRANSMISSION HARNESS
J117	B289	33	WTEC III DIAGNOSTIC CONNECTOR
J118	D161	18	CAB - DASH - LEFT - WTEC II TRANSMISSION HARNESS
J119	B169	19	CAB - DASH - LEFT - WTEC II TRANSMISSION HARNESS
J119	D301	34	WTEC III CAB TRANSMISSION HARNESS (TID1)
J119	D305	34	WTEC III CAB TRANSMISSION HARNESS (TID2)
J129	F85	10	CAB MARKER LIGHT FRONT LOWER LEFT
J130	F85	10	CAB MARKER LIGHT LEFT DOOR
J130	F202	23	12 PIN CONNECTOR
J131	B85	10	CAB MARKER LIGHT RIGHT DOOR
J132	B85	10	CAB MARKER LIGHT FRONT LOWER RIGHT
J150	B271	31	VAN FRONT MARKER LIGHT
J151	B271	31	VAN FRONT MARKER LIGHT
J152	B271	31	VAN FRONT MARKER LIGHT
J153	A271	31	VAN FRONT MARKER LIGHT

CONNECTORS (CONTINUED)			
NUMBER	ZONE	SH	DESCRIPTION
J154	A271	31	VAN FRONT MARKER LIGHT
J155	B287	32	VAN CURBSIDE MARKER LIGHT
J156	B287	32	VAN CURBSIDE MARKER LIGHT
J157	C287	32	VAN ROADSIDE MARKER LIGHT
J158	C287	32	VAN ROADSIDE MARKER LIGHT
J159	D287	32	VAN REAR CENTER MARKER LIGHT
J160	E287	32	VAN REAR CENTER MARKER LIGHT
J161	E287	32	VAN REAR CENTER MARKER LIGHT
J162	B273	31	VAN CURBSIDE BLACKOUT LIGHT
J163	B274	31	VAN CURBSIDE EMERGENCY LIGHT
J164	H274	31	VAN ROADSIDE BLACKOUT LIGHT
J165	H275	31	VAN ROADSIDE EMERGENCY LIGHT
J166	C271	31	VAN FRONT EMERGENCY LIGHT
J167	D287	32	VAN REAR EMERGENCY LIGHT
J173	G272	31	VAN 12/24 VDC POWER RECEPTACLE
J209A	C230	26	PTO EQUIPPED
J209B	D230	26	PTO EQUIPPED
J210	F222	25	CAB - DASH - CENTER - OPTIONS PANEL
J215	E230	26	PTO EQUIPPED
J230	A282	32	VAN CURBSIDE 110 VAC OUTLET
J231	A283	32	VAN CURBSIDE 110 VAC OUTLET
J232	A284	32	VAN CURBSIDE 110 VAC OUTLET
J233	H282	32	VAN ROADSIDE 110 VAC OUTLET
J234	H283	32	VAN ROADSIDE 110 VAC OUTLET
J235	H284	32	VAN ROADSIDE 110 VAC OUTLET
J236	H275	31	VAN ROADSIDE 24 VDC OUTLET
J237	275	31	VAN CURBSIDE 24 VDC OUTLET
J242	D271	31	VAN A/C
J244	E271	31	VAN THERMOSTAT
J245	F271	31	VAN HEATER
J912	B124	14	CAB - DASH - CENTER - HEATER / CTIS ECU
J912	D209	24	CAB - DASH - CENTER - OPTIONS PANEL
J913	B122	14	CAB - DASH - CENTER - HEATER / CTIS ECU
J921	G62	7	TROOP TRANSPORT ALARM
P2	A185	21	EMI FILTER
P3	D204	23	AIRDROP ONLY
P5	A38	5	VEHICLE HORN
P6	A38	5	VEHICLE HORN
P8	B38	5	BLACKOUT MARKER RIGHT FRONT
P9	C38	5	FRONT RIGHT TURN SIGNAL
P10	B38	5	PARKING LIGHT FRONT RIGHT
P12	D38	5	RIGHT HEADLIGHT
P13	C38	5	RIGHT HEADLIGHT
P14	C38	5	RIGHT HEADLIGHT
P17	H38	5	BLACKOUT DRIVE LIGHT
P18	D38	5	LEFT HEADLIGHT
P18	A177	20	CAB - DASH - LEFT - UNDERDASH
P19	E38	5	LEFT HEADLIGHT
P20	D38	5	LEFT HEADLIGHT
P22	G38	5	PARKING LIGHT FRONT LEFT
P23	F38	5	FRONT LEFT TURN SIGNAL
P24	H38	5	BLACKOUT MARKER LEFT FRONT
P25	G85	10	WINDSHIELD WASHER ROTARY PUMP (B3)
P27	A43	5	CHASSIS - FRONT
P31	E56	7	ENGINE
P31X	D56	7	ENGINE
P32	F59	7	ENGINE OIL PRESSURE SENSOR
P33	H59	7	FUEL/WATER SEPARATOR
P34	E59	7	OIL PRESSURE WARNING LIGHT SWITCH
P36	A57	7	WATER COOLER TEMPERATURE
P37	C57	7	WATER TEMPERATURE SWITCH
P38	F61	7	ENGINE SPEED MAGNETIC PICKUP
P39	G61	7	ENGINE
P41	B57	7	WATER TEMPERATURE SENSOR
P410	E240	27	ARCTIC KIT W/PTO EQUIPPED
P42	F57	7	ETHER SENSOR SWITCH
P43	G42	5	CHASSIS - FRONT
P43X	F42	5	CHASSIS - FRONT
P50	E85	10	CAB MARKER LIGHT FRONT UPPER LEFT
P50	F206	23	LH FRONT TOP CAB MARKER LIGHT
P51	D190	22	CAB - DASH - RIGHT - POWER DISTRIBUTION PANEL
P52F	E38	5	CHASSIS - FRONT
P52R	E196	22	ALL MODELS EXCEPT WRECKER, TRACTOR, AND LONG WHEEL BASE

CONNECTORS (CONTINUED)			
NUMBER	ZONE	SH	DESCRIPTION
P53R	D196	22	ALL MODELS EXCEPT WRECKER, TRACTOR, AND LONG WHEEL BASE
P54	D197	22	LEFT REAR MARKER
P55	C85	10	CAB MARKER LIGHT FRONT UPPER RIGHT
P55	D206	23	RH FRONT TOP CAB MARKER LIGHT
P56	E197	22	MIDDLE REAR MARKER
P57	D85	10	CAB MARKER LIGHT FRONT UPPER MIDDLE LEFT
P57	F206	23	LH FRONT TOP CAB CLEARANCE LIGHT
P58	E197	22	RIGHT REAR MARKER
P59	C85	10	CAB MARKER LIGHT FRONT UPPER MIDDLE RIGHT
P59	D206	23	RH FRONT TOP CAB CLEARANCE LIGHT
P60	D85	10	CAB MARKER LIGHT FRONT UPPER MIDDLE MIDDLE
P60	E206	23	MIDDLE FRONT TOP CLEARANCE LIGHT
P61	F197	22	RH COMPOSITE LIGHT
P62	F197	22	RH COMPOSITE LIGHT
P63	G197	22	RH COMPOSITE LIGHT
P64	F197	22	RH COMPOSITE LIGHT
P65	E186	21	ROTARY WARNING LIGHT CONNECTOR
P67	A74	9	PRE-BLOCK SEVEN W/PIGTAIL TRANSMISSION EXTERNAL
P67	B69	8	WIRING HARNESS TO TRANSMISSION CONNECTOR TID1, TID2, AND TID3 TRANSMISSION EXTERNAL WIRING
			HARNESS TO TRANSMISSION CONNECTOR
P69	D59	7	ENGINE
P71	E66	8	PRE-BLOCK SEVEN TRANSMISSION OUTPUT SPEED SENSOR
P71	E70	8	CONNECTOR TID1, TID2, AND TID3 TRANSMISSION OUTPUT SPEED
P71	E75	9	SENSOR CONNECTOR PRE-BLOCK SEVEN W/PIGTAIL TRANSMISSION OUTPUT
P72	F66	8	SPEED SENSOR CONNECTOR PRE-BLOCK SEVEN TRANSMISSION ENGINE SPEED
P72	F70	8	SENSOR CONNECTOR TID1, TID2, AND TID3 TRANSMISSION ENGINE SPEED
P72	E75	9	SENSOR CONNECTOR PRE-BLOCK SEVEN W/PIGTAIL TRANSMISSION ENGINE
P73	F66	8	SPEED SENSOR CONNECTOR PRE-BLOCK SEVEN TRANSMISSION THROTTLE POSITION
P73	F70	8	SENSOR CONNECTOR TID1, TID2, AND TID3 TRANSMISSION THROTTLE POSITION
P73	F75	9	SENSOR CONNECTOR PRE-BLOCK SEVEN W/PIGTAIL TRANSMISSION THROTTLE
			POSITION SENSOR CONNECTOR
P74	B197	22	LH COMPOSITE LIGHT
P76	C197	22	LH COMPOSITE LIGHT
P77	C197	22	LH COMPOSITE LIGHT
P78	B197	22	LH COMPOSITE LIGHT
P80	G51	6	CHASSIS - REAR
P81	C47	6	CHASSIS - FRONT
P81	D62	7	STARTER THERMO SWITCH
P82	B51	6	FUEL TANK LEVEL SENSOR
P83	B172	20	CAB - DASH - LEFT - UNDERDASH
P84	F51	6	CHASSIS - REAR
P85	A197	22	LH SIDE MARKER LIGHT
P86	A197	22	LH REAR MARKER LIGHT
P87	C197	22	BACKUP LIGHT
P88	H197	22	RH SIDE MARKER LIGHT
P89	G197	22	RH REAR MARKER LIGHT
P99	F186	21	CHEMICAL ALARM CONNECTOR
P10	B38	5	PARKING LIGHT FRONT RIGHT
P110	E119	14	CTIS ELECTRONIC CONTROL UNIT
P111	E122	14	CTIS ELECTRONIC CONTROL UNIT
P112	G123	14	CAB - DASH - CENTER - HEATER / CTIS ECU
P113	F123	14	CTIS ELECTRONIC CONTROL UNIT
P115	C290	33	WTEC III - CAB - DASH - RIGHT - KICK PANEL
P116	C185	21	CAB - DASH - RIGHT - UNDERDASH
P118	D161	18	CAB - DASH - LEFT - WTEC II TRANSMISSION HARNESS
P116	E291	33	WTEC III - CAB - DASH - RIGHT - KICK PANEL
P119	A64	8	PRE-BLOCK SEVEN TRANSMISSION CONNECTOR
P119	A69	8	TID1, TID2, AND TID3 TRANSMISSION CONNECTOR
P119	A73	9	PRE-BLOCK SEVEN W/PIGTAIL TRANSMISSION CONNECTOR
P119	B169	19	CAB - DASH - LEFT - WTEC II TRANSMISSION HARNESS
P125	G84	10	WINDSHIELD WASHER ROTARY PUMP (B3)
P129	F85	10	CAB MARKER LIGHT FRONT LOWER LEFT
P130	F85	10	CAB MARKER LIGHT LEFT DOOR
P131	A85	10	CAB MARKER LIGHT RIGHT DOOR

CONNECTORS (CONTINUED)			
NUMBER	ZONE	SH	DESCRIPTION
P132	B85	10	CAB MARKER LIGHT FRONT LOWER RIGHT
P150	B272	31	VAN FRONT MARKER LIGHT
P151	B272	31	VAN FRONT MARKER LIGHT
P152	B272	31	VAN FRONT MARKER LIGHT
P153	A272	31	VAN FRONT MARKER LIGHT
P154	A272	31	VAN FRONT MARKER LIGHT
P155	B287	32	VAN CURBSIDE MARKER LIGHT
P156	B287	32	VAN CURBSIDE MARKER LIGHT
P157	C287	32	VAN ROADSIDE MARKER LIGHT
P158	C287	32	VAN ROADSIDE MARKER LIGHT
P159	D287	32	VAN REAR CENTER MARKER LIGHT
P160	E287	32	VAN REAR CENTER MARKER LIGHT
P161	D287	32	VAN REAR CENTER MARKER LIGHT
P162	B273	31	VAN CURBSIDE BLACKOUT LIGHT
P163	B274	31	VAN CURBSIDE EMERGENCY LIGHT
P164	G274	31	VAN ROADSIDE BLACKOUT LIGHT
P165	G275	31	VAN ROADSIDE EMERGENCY LIGHT
P166	C272	32	VAN FRONT EMERGENCY LIGHT
P167	D287	31	VAN REAR EMERGENCY LIGHT
P172	E264	30	DUMP BODY CONNECTOR
P173	G271	31	VAN 12/24 VDC POWER
P201	G61	7	ENGINE
P210	F222	25	CAB - DASH - CENTER - OPTIONS PANEL
P210	C227	26	PTO EQUIPPED
P215	E230	26	PTO EQUIPPED
P216	E229	26	PTO EQUIPPED
P217	C229	26	PTO EQUIPPED
P217	B268	30	PTO EQUIPPED
P901	A209	24	CAB - DASH - CENTER - OPTIONS PANEL
P902A	D214	24	CAB - DASH - CENTER - OPTIONS PANEL
P903	C212	24	CAB - DASH - CENTER - OPTIONS PANEL
P903A	D212	24	CAB - DASH - CENTER - OPTIONS PANEL
P904	C211	24	CAB - DASH - CENTER - OPTIONS PANEL
P904A	D211	24	CAB - DASH - CENTER - OPTIONS PANEL
P905	A211	24	CAB - DASH - CENTER - OPTIONS PANEL
P905A	B211	24	CAB - DASH - CENTER - OPTIONS PANEL
P906	A212	24	CAB - DASH - CENTER - OPTIONS PANEL
P906A	B212	24	CAB - DASH - CENTER - OPTIONS PANEL
P908	A215	24	CAB - DASH - CENTER - OPTIONS PANEL
P908A	B215	24	CAB - DASH - CENTER - OPTIONS PANEL
P909	A220	25	CAB - DASH - CENTER - OPTIONS PANEL
P909A	B220	25	CAB - DASH - CENTER - OPTIONS PANEL
P910	C215	24	CAB - DASH - CENTER - OPTIONS PANEL
P910A	D215	24	CAB - DASH - CENTER - OPTIONS PANEL
P911	C220	25	CAB - DASH - CENTER - OPTIONS PANEL
P911A	D220	25	CAB - DASH - CENTER - OPTIONS PANEL
P912	B124	14	CAB - DASH - CENTER - HEATER / CTIS ECU
P913	B122	14	CAB - DASH - CENTER - HEATER / CTIS ECU
P913	F209	24	CAB - DASH - CENTER - OPTIONS PANEL
P914	A214	24	CAB - DASH - CENTER - OPTIONS PANEL
P914A	B214	24	CAB - DASH - CENTER - OPTIONS PANEL
P921	G62	7	TROOP TRANSPORT ALARM
PBSS	C93	11	WTEC II PUSHBUTTON SHIFT SELECTOR
PX1	A92	11	ENGINE FAN OFF SWITCH
PX10	D107	12	CAB - DASH - LEFT - INSTRUMENT PANEL
PX11	G107	12	CAB - DASH - LEFT - INSTRUMENT PANEL
PX12	C112	13	ROTATING WARNING LIGHT SWITCH
PX12A	E112	13	CAB - DASH - LEFT - INSTRUMENT PANEL
PX13	F92	11	ETHER STARTER SWITCH
PX13A	G92	11	CAB - DASH - LEFT - INSTRUMENT PANEL
PX14	F112	13	FULL HAZARD WARNING SWITCH
PX14A	H112	13	CAB - DASH - LEFT - INSTRUMENT PANEL
PX15	C115	13	MAIN LIGHT SWITCH
PX17	A112	13	IGNITION SWITCH
PX17A	C112	13	CAB - DASH - LEFT - INSTRUMENT PANEL
PX1A	B92	11	CAB - DASH - LEFT - INSTRUMENT PANEL
PX2	D92	11	LAMP TEST SWITCH
PX20	C188	21	TURN SIGNAL FLASHER
PX21	A134	15	WIPER DELAY MODULE

FIGURE FO-1 ELECTRICAL SYSTEM SCHEMATIC
FOLDOUT 2 OF 34

SIZE B | ILL. NO. 5WD01L2B | FP-3/ (FP-4 BLANK)

CONNECTORS (CONTINUED)			
NUMBER	ZONE	SH	DESCRIPTION
PX22	A184	21	EMI FILTER
PX24	G115	13	INSTRUMENT PANEL LIGHTS DIMMER MODULE
PX25	C119	14	CAB DASH CENTER HEATER / CTIS ECU
PX26	B179	20	CAB - DASH - LEFT - UNDERDASH
PX2A	E92	11	CAB - DASH - LEFT - INSTRUMENT PANEL
PX33	B182	21	CAB - DASH - RIGHT - UNDERDASH
PX33	G292	33	WTEC III TRANSMISSION PUSHBUTTON SHIFT SELECTOR
PX34	E188	21	FRONT AIR PRESSURE METER
PX4	F97	11	FAN SOLENOID
PX5	B97	11	REAR AIR PRESSURE METER
PX6	B107	12	CAB - DASH - LEFT - INSTRUMENT PANEL
PX7	A104	12	CAB - DASH - LEFT - INSTRUMENT PANEL
PX8	G102	12	CAB - DASH - LEFT - INSTRUMENT PANEL
PX9	D97	11	FUEL LEVEL METER

LIGHTS			
NUMBER	ZONE	SH	DESCRIPTION
D51	B257	29	POWER LAMP
D52	B257	29	POWER LAMP
DS1	D96	11	CAB - DASH - LEFT - INSTRUMENT PANEL
DS2	G106	12	CAB - DASH - LEFT - INSTRUMENT PANEL
DS3	F96	11	CAB - DASH - LEFT - INSTRUMENT PANEL
DS4	B96	11	CAB - DASH - LEFT - INSTRUMENT PANEL
DS5	B106	12	CAB - DASH - LEFT - INSTRUMENT PANEL
DS6	G101	12	CAB - DASH - LEFT - INSTRUMENT PANEL
DS7	D106	12	CAB - DASH - LEFT - INSTRUMENT PANEL
DS8	C91	11	CAB - DASH - LEFT - INSTRUMENT PANEL
DS9	B101	12	DUMP BODY UP
DS10	E111	13	CAB - DASH - LEFT - INSTRUMENT PANEL
DS11	G91	11	CAB - DASH - LEFT - INSTRUMENT PANEL
DS12	H111	13	CAB - DASH - LEFT - INSTRUMENT PANEL
DS13	C111	13	CAB - DASH - LEFT - INSTRUMENT PANEL
DS14	B101	12	LEFT TURN SIGNAL
DS15	B101	12	RIGHT TURN SIGNAL
DS16	E101	12	HIGH BEAM
DS17	D119	14	HEATER CONTROL PANEL ILLUMINATION
DS18	A208	24	CAB - DASH - CENTER - OPTIONS PANEL
DS19	E101	12	RADIATOR FAN OFF
DS21	C101	12	EMERGENCY BRAKE
DS22	D101	12	PARKING BRAKE
DS23	C101	12	PTO ON
DS24	D101	12	OIL PRESSURE
DS25	C101	12	WATER TEMPERATURE
DS27	C101	12	REAR BRAKE AIR
DS28	E101	12	FRONT AIR BRAKE
DS29	D101	12	ENGINE OIL LEVEL
DS30	F101	12	MASTER STOP
DS31	D213	24	CAB - DASH - CENTER - OPTIONS PANEL
DS32	B101	12	CHEMICAL DETECT
DS34	C101	12	CTIS OVERSPEED
DS35	C198	22	REAR LH COMPOSITE LIGHT
DS36	G198	22	REAR RH COMPOSITE LIGHT
DS37	B198	22	REAR LH COMPOSITE LIGHT
DS38	F198	22	REAR RH COMPOSITE LIGHT
DS39	F37	5	FRONT LEFT TURN SIGNAL
DS41	D101	12	TRANSMISSION OIL TEMPERATURE
DS42	C38	5	FRONT RIGHT TURN SIGNAL
DS43	D212	24	CAB - DASH - CENTER - OPTIONS PANEL
DS44	D37	5	RIGHT HEADLIGHT
DS45	C198	22	BACKUP LIGHT
DS46	D210	24	CAB - DASH - CENTER - OPTIONS PANEL
DS47	G37	5	PARKING LIGHT FRONT LEFT
DS48	B38	5	PARKING LIGHT FRONT RIGHT
DS49	G37	5	BLACKOUT MARKER LEFT FRONT
DS50	B38	5	BLACKOUT MARKER RIGHT FRONT
DS51	C198	22	REAR LH COMPOSITE LIGHT
DS52	F198	22	REAR RH COMPOSITE LIGHT
DS53	H37	5	BLACKOUT DRIVE LIGHT
DS54	D84	10	CAB MARKER LIGHT FRONT UPPER MIDDLE LEFT
DS54	F206	23	LH FRONT TOP CAB CLEARANCE LIGHT
DS55	D84	10	CAB MARKER LIGHT FRONT UPPER MIDDLE MIDDLE
DS55	E206	23	MIDDLE FRONT TOP CLEARANCE LIGHT

LIGHTS (CONTINUED)			
NUMBER	ZONE	SH	DESCRIPTION
DS56	C84	10	CAB MARKER LIGHT FRONT UPPER MIDDLE RIGHT
DS56	D206	23	RH FRONT TOP CAB CLEARANCE LIGHT
DS57	C84	10	CAB MARKER LIGHT FRONT UPPER RIGHT
DS57	D206	23	RH FRONT TOP CAB MARKER LIGHT
DS58	E84	10	CAB MARKER LIGHT FRONT UPPER LEFT
DS58	F206	23	LH FRONT TOP CAB MARKER LIGHT
DS59	B84	10	CAB MARKER LIGHT RIGHT DOOR
DS60	F84	10	CAB MARKER LIGHT FRONT LOWER LEFT
DS61	A84	10	CAB MARKER LIGHT RIGHT DOOR
DS62	F84	10	CAB MARKER LIGHT LEFT DOOR
DS63	B210	24	CAB - DASH - CENTER - OPTIONS PANEL
DS64	B212	24	CAB - DASH - CENTER - OPTIONS PANEL
DS65	A198	22	LH SIDE MARKER LIGHT
DS66	A198	22	LH REAR MARKER LIGHT
DS67	H198	22	RH SIDE MARKER LIGHT
DS68	G198	22	RH REAR MARKER LIGHT
DS69	D198	22	LEFT REAR MARKER
DS70	E198	22	MIDDLE REAR MARKER
DS71	E198	22	RIGHT REAR MARKER
DS72	B198	22	REAR LH COMPOSITE LIGHT
DS73	F198	22	REAR RH COMPOSITE LIGHT
DS74	D37	5	LEFT HEADLIGHT
DS75	A273	31	VAN CURBSIDE BLACKOUT LIGHT
DS76	H274	31	VAN ROADSIDE BLACKOUT LIGHT
DS78	A274	31	VAN CURBSIDE EMERGENCY LIGHT
DS79	H275	31	VAN ROADSIDE EMERGENCY LIGHT
DS80	H284	32	VAN ROADSIDE FLUORESCENT LIGHT
DS81	H286	32	VAN ROADSIDE FLUORESCENT LIGHT
DS82	A286	32	VAN CURBSIDE FLUORESCENT LIGHT
DS83	A284	32	VAN CURBSIDE FLUORESCENT LIGHT
DS84	B271	31	VAN FRONT MARKER LIGHT
DS85	B271	31	VAN FRONT MARKER LIGHT
DS86	B271	31	VAN FRONT MARKER LIGHT
DS87	A271	31	VAN FRONT MARKER LIGHT
DS88	A271	31	VAN FRONT MARKER LIGHT
DS89	B288	32	VAN CURBSIDE MARKER LIGHT
DS90	B288	32	VAN CURBSIDE MARKER LIGHT
DS91	C288	32	VAN ROADSIDE MARKER LIGHT
DS92	C288	32	VAN ROADSIDE MARKER LIGHT
DS93	D288	32	VAN REAR CENTER MARKER LIGHT
DS94	E288	32	VAN REAR CENTER MARKER LIGHT
DS95	E288	32	VAN REAR CENTER MARKER LIGHT
DS96	B215	24	CAB - DASH - CENTER - OPTIONS PANEL
DS96	C271	31	VAN FRONT EMERGENCY LIGHT
DS97	B219	25	CAB - DASH - CENTER - OPTIONS PANEL
DS97	C271	32	VAN REAR EMERGENCY LIGHT
DS100	B213	24	CAB - DASH - CENTER - OPTIONS PANEL
DS101	D119	14	HEATER CONTROL PANEL ILLUMINATION
DS108	E91	11	CAB - DASH - LEFT - INSTRUMENT PANEL

CIRCUIT BREAKERS			
NUMBER	ZONE	SH	DESCRIPTION
CB1	C285	32	VAN 110 VAC MAIN CIRCUIT BREAKER
CB2	C284	32	VAN A/C
CB3	D284	32	VAN 110 VAC POWER OUT
CB4	D284	32	VAN NOT USED
CB5	E284	32	VAN BLACKOUT OVERRIDE
CB6	E284	32	VAN LIGHTS
CB7	E284	32	VAN 110 VAC OUTLETS
CB8	E284	32	VAN THERMOSTAT/FAN
CB9	E284	32	VAN 110 VAC OUTLETS
CB10	D277	31	VAN BLACKOUT LIGHTS
CB11	D277	31	VAN EMERGENCY/BLACKOUT LIGHTS
CB20	C140	16	CAB RADIO
CB21	C149	17	WTEC II VIM STE/ICE
CB22	C149	17	FAN/ETHER
CB23	C147	17	HEATER BLOWER
CB30	C139	16	CHEMICAL ALARM
CB35	D149	17	WTEC II VIM POWER
CB36	C147	17	HORN POWER
CB37	C151	17	WINDSHIELD WIPER/WASHER
CB38	D147	17	ROTATING BEACON
CB39	C146	17	TRAILER BLACKOUT STOP

CIRCUIT BREAKERS (CONTINUED)			
NUMBER	ZONE	SH	DESCRIPTION
CB40	C150	17	CTIS COOLER
CB41	C142	16	TRAILER REAR LIGHTS POWER
CB42	C142	16	BLACKOUT MARKER LIGHTS POWER
CB43	C143	16	REAR COMPOSITE LIGHTS/WTEC III ECU
CB44	C143	16	REAR COMPOSITE LIGHTS
CB45	C139	16	FUEL PREHEAT
CB48	C140	16	ARCTIC CAB/ENGINE KILL
CB49	C151	17	PTO POWER
CB50	F256	29	MAIN POWER CIRCUIT BREAKER SWITCH
CB53	D140	16	CAB - DASH - RIGHT - POWER DISTRIBUTION PNL
CB54	D142	16	BLACKOUT HEADLIGHT
CB61	D153	17	CAB - DASH - RIGHT - POWER DISTRIBUTION PNL
CB62	D153	17	CAB - DASH - RIGHT - POWER DISTRIBUTION PNL
CB63	D151	17	CAB - DASH - RIGHT - POWER DISTRIBUTION PNL
CB64	D151	17	CAB - DASH - RIGHT - POWER DISTRIBUTION PNL
CB65	D140	16	PARKING LIGHTS
CB66	D143	16	BLACKOUT MARKER POWER
CB67	D139	16	MARKER LIGHTS
CB68	C152	17	CAB - DASH - RIGHT - POWER DISTRIBUTION PNL
CB70	D146	17	IGNITION/MAIN LIGHT SWITCH
CB71	D149	17	HAZARD/FLASHER WORKLIGHTS
CB72	D139	16	CAB - DASH - RIGHT - POWER DISTRIBUTION PNL
CB73	D150	17	BACK-UP LIGHT POWER
CB74	D150	17	CAB - DASH - RIGHT - POWER DISTRIBUTION PNL
CB76	D143	16	BLACKOUT STOP RELAY POWER
CB77	C152	17	ENGINE INSTR POWER
CB78	D147	17	HEADLIGHTS
CB79	C150	17	WTEC II VIM POWER/WTEC III REVERSE WARNING RELAY
CB80	D142	16	TAILLIGHTS

TERMINAL LUGS			
NUMBER	ZONE	SH	DESCRIPTION
TL1	B54	6	POLARITY PROTECTION
TL1	E60	7	ALTERNATOR
TL2	B53	6	POLARITY PROTECTION
TL2	D60	7	ALTERNATOR
TL2	D53	6	POLARITY PROTECTION (P/P)
TL3	C85	10	CAB MARKER LIGHT FRONT UPPER RIGHT
TL3	D206	23	RH FRONT TOP CAB MARKER LIGHT
TL4	C85	10	CAB MARKER LIGHT FRONT UPPER MIDDLE RIGHT
TL4	D206	23	RH FRONT TOP CAB CLEARANCE LIGHT
TL5	D60	7	ALTERNATOR
TL6	D60	7	ALTERNATOR
TL8	D85	10	CAB MARKER LIGHT FRONT UPPER MIDDLE MIDDLE
TL8	E206	23	MIDDLE FRONT TOP CLEARANCE LIGHT
TL9	D47	6	24V AUXILIARY STARTER SOLENOID
TL10	C52	6	CHASSIS - REAR (REF E1)
TL12	C49	6	BATTERIES
TL12	C62	7	STARTER/STARTER SOLENOID
TL14	E88	10	ROTARY WARNING LIGHT CONNECTOR
TL15	A198	22	LH SIDE MARKER LIGHT
TL16	A198	22	LH REAR MARKER LIGHT
TL17	C198	22	BACKUP LIGHT
TL18	C198	22	LONG WHEEL BASE
TL19	H198	22	RH SIDE MARKER LIGHT
TL20	G198	22	RH REAR MARKER LIGHT
TL21	G198	22	RH COMPOSITE LIGHT
TL22	D85	10	CAB MARKER LIGHTS
TL22	E206	23	LH FRONT TOP CAB CLEARANCE LIGHT
TL23	D47	6	24V AUXILIARY STARTER SOLENOID
TL24	D47	6	24V AUXILIARY STARTER SOLENOID
TL25	C47	6	CHASSIS - FRONT
TL25	C62	7	STARTER/STARTER SOLENOID
TL26	C47	6	CHASSIS - FRONT
TL26	C62	7	STARTER/STARTER SOLENOID
TL27	E85	10	CAB MARKER LIGHT FRONT UPPER RIGHT
TL27	F206	23	CAB MARKER LIGHTS FRONT UPPER RIGHT
TL28	G57	7	FUEL SOLENOID
TL29	H57	7	FUEL SOLENOID
TL30	D198	22	LEFT REAR MARKER

TERMINAL LUGS (CONTINUED)			
NUMBER	ZONE	SH	DESCRIPTION
TL31	E198	22	MIDDLE REAR MARKER
TL32	E198	22	RIGHT REAR MARKER
TL33	E47	6	24V AUXILIARY STARTER SOLENOID
TL35	D61	7	ALTERNATOR
TL36	B54	6	POLARITY PROTECTION
TL37	F54	6	POLARITY PROTECTION
TL37	C54	6	POLARITY PROTECTION
TL38	E50	6	SHUNT
TL39	C52	6	CHASSIS - REAR (REF E1)
TL41	C53	6	POLARITY PROTECTION
TL42	B54	6	POLARITY PROTECTION
TL44	B54	6	POLARITY PROTECTION
TL44	E54	6	POLARITY PROTECTION
TL45	D50	6	SHUNT
TL46	D49	6	SHUNT
TL46	D62	7	STARTER/STARTER SOLENOID
TL47	C54	6	POLARITY PROTECTION
TL48	E52	6	CHASSIS - REAR (REF E2)
TL49A	D52	6	CHASSIS - REAR (REF E1)
TL49A	F52	6	NATO SLAVE RECEPTACLE
TL50	G121	14	CHASSIS GROUND
TL50A	F52	6	NATO SLAVE RECEPTACLE
TL51	E50	6	SHUNT
TL52	E50	6	SHUNT
TL53	B47	6	CHASSIS - FRONT
TL53	B62	7	STARTER/STARTER SOLENOID
TL55	B47	6	CHASSIS - FRONT
TL55	C62	7	STARTER/STARTER SOLENOID
TL56	F136	16	X3 GROUND
TL57	F136	16	CAB GROUND
TL58	D60	7	ALTERNATOR
TL59	C61	7	ALTERNATOR
TL60	C53	6	POLARITY PROTECTION
TL60	D60	7	ALTERNATOR
TL61	C54	6	POLARITY PROTECTION
TL61	E60	7	ALTERNATOR
TL62	C47	6	CHASSIS - FRONT
TL63	C47	6	CHASSIS - FRONT
TL63	B62	7	STARTER/STARTER SOLENOID
TL66	H61	7	ENGINE (REF P201)
TL68	D224	25	CAB - DASH - CENTER - OPTIONS PANEL
TL69	E224	25	CAB - DASH - CENTER - OPTIONS PANEL
TL70	B38	5	FRONT RH COMPOSITE LIGHT
TL71	A85	10	CAB MARKER LIGHT RIGHT DOOR
TL72	H38	5	BLACKOUT DRIVE LIGHT
TL73	B86	10	CAB - MARKER LIGHTS
TL74	D86	10	CAB - MARKER LIGHTS
TL74	E204	23	AIRDROP ONLY
TL75	F87	10	CAB - MARKER LIGHTS
TL76	D229	26	PTO EQUIPPED
TL79	F38	5	FRONT LH COMPOSITE LIGHT
TL80	C54	6	POLARITY PROTECTION
TL80	F54	6	200 AMP
TL81	C39	5	CHASSIS GROUND
TL82	F38	5	CHASSIS GROUND
TL83	B52	6	FUEL TANK LEVEL SENSOR
TL84	B49	6	CHASSIS - SPARE TIRE (REF J93)
TL85	G52	6	CHASSIS - REAR
TL86	C86	10	CAB - MARKER LIGHTS
TL86	D204	23	AIRDROP ONLY
TL87	F86	10	CAB - MARKER LIGHTS
TL92	F195	22	ALL MODELS EXCEPT WRECKER, TRACTOR, AND LONG WHEEL BASE
TL93	G194	22	ALL MODELS EXCEPT WRECKER, TRACTOR, AND LONG WHEEL BASE
TL94	G85	10	WINDSHIELD WASHER ROTARY PUMP (B3)
TL96	H271	31	VAN BODY GROUND
TL97	B88	10	CHEMICAL ALARM CONNECTOR
TL98	B88	10	CHEMICAL ALARM CONNECTOR

TERMINAL LUGS (CONTINUED)			
NUMBER	ZONE	SH	DESCRIPTION
TL99	D52	6	CHASSIS - REAR (REF E2)
TL100	E54	6	POLARITY PROTECTION
TL110	D61	7	ALTERNATOR
TL111	D230	26	PTO EQUIPPED
TL123	E38	5	CHASSIS - FRONT (REF J19)
TL126	E126	14	CHASSIS GROUND
TL130	F85	10	CAB - MARKER LIGHTS
TL131	A85	10	CAB - MARKER LIGHTS
TL133	F85	10	CAB - MARKER LIGHTS
TL134	B85	10	CAB - MARKER LIGHTS
TL150	F177	20	SENSOR/FRONT AIR PRESSURE TRANSMITTER
TL151	G177	20	SENSOR/REAR AIR PRESSURE TRANSMITTER
TL152	C179	20	STOPLIGHT SWITCH
TL153	C179	20	STOPLIGHT SWITCH
TL154	D179	20	STOPLIGHT SWITCH
TL154	D179	20	STOPLIGHT SWITCH
TL155	D179	20	STOPLIGHT SWITCH
TL156	F177	20	SWITCH/FRONT AIR PRESSURE TRANSMITTER
TL157	G177	20	SWITCH/REAR AIR PRESSURE TRANSMITTER
TL158	E137	16	START INHIBIT PUSHBUTTON
TL159	E136	16	START INHIBIT PUSHBUTTON
TL160	H102	12	AUDIBLE ALARM
TL161	H102	12	AUDIBLE ALARM
TL162	B114	13	STARTER PUSHBUTTON
TL163	B114	13	STARTER PUSHBUTTON
TL164	G62	7	ENGINE (REF J921)
TL165	G62	7	ENGINE (REF J921)
TL166	F54	6	TERMINAL BLOCK
TL167	E54	6	TERMINAL BLOCK
TL169	D53	6	POLARITY PROTECTION (P/P)
TL171	F54	6	TERMINAL BLOCK
TL172	F54	6	TERMINAL BLOCK
TL173	E54	6	POLARITY PROTECTION (P/P)
TL174	D54	6	POLARITY PROTECTION (P/P)
TL190	D290	33	WTEC III PRESSURE SWITCH GROUND
TL201	E125	14	PARKING BRAKE SWITCH
TL202	E125	14	PARKING BRAKE SWITCH
TL320	E232	26	PTO EQUIPPED
TL320	C241	27	ARCTIC KIT W/PTO EQUIPPED

SWITCHES			
NUMBER	ZONE	SH	DESCRIPTION
S3	A177	20	COLUMN SWITCH
S3	C177	20	COLUMN SWITCH
S4	D114	13	MAIN LIGHT SWITCH
S5/1	B111	13	IGNITION SWITCH
S5/11	A91	11	ENGINE FAN OFF SWITCH
S5/14	C213	24	WINCH ON OFF
S5/15	B212	24	WINCH IN-OUT
S5/16	F91	11	ETHER STARTER SWITCH
S5/2	D91	11	LAMP TEST SWITCH
S5/2	D111	13	ROTATING WARNING LIGHT SWITCH
S5/22	G111	13	FULL HAZARD WARNING SWITCH
S5/25	A219	25	SWINGFIRE PUMP SWITCH
S5/6	B210	24	PTO ON/OFF SWITCH
S5/8	A213	24	BLACKOUT OVERRIDE SWITCH
S5/9	A214	24	FUEL PRE-HEAT SWITCH
S6	A114	13	STARTER PUSHBUTTON
S7	F137	16	START INHIBIT PUSHBUTTON
S10A	C179	20	STOPLIGHT SWITCH
S10B	D179	20	STOPLIGHT SWITCH
S11	A287	32	VAN CURBSIDE WINDOW BLACKOUT SWITCH
S12	A287	32	VAN CURBSIDE WINDOW BLACKOUT SWITCH
S13	G288	32	VAN ROADSIDE WINDOW BLACKOUT SWITCH
S14	G288	32	VAN ROADSIDE WINDOW BLACKOUT SWITCH
S15	G288	32	VAN ROADSIDE WINDOW BLACKOUT SWITCH
S17	G288	32	VAN DOOR WINDOW BLACKOUT SWITCH (S/N 191 AND HIGHER)

FIGURE FO-1. ELECTRICAL SYSTEM SCHEMATIC
FOLDOUT 3 OF 34

SIZE B | ILL. NO. 5WD01L3B | FP-5/ (FP-6 BLANK)

28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36

SWITCHES (CONTINUED)			
NUMBER	ZONE	SH	DESCRIPTION
S17	G288	32	VAN CURBSIDE WINDOW BLACKOUT SWITCH (S/N 001 THROUGH 190)
S18	D269	30	PTO PRESSURE SWITCH
S20	E177	20	SWITCH/FRONT AIR PRESSURE TRANSMITTER
S23	F52	6	AIR PRESSURE SWITCH FOR CTIS
S24	E125	14	PARKING BRAKE SWITCH
S26	C57	7	WATER TEMPERATURE SENSOR
S27	E59	7	OIL PRESSURE WARNING LIGHT SWITCH
S29	G177	20	SWITCH/REAR AIR PRESSURE TRANSMITTER
S31	A216	24	ARCTIC TROOP HEATER SWITCH
S32	F288	32	VAN LIGHTS ON/OFF SWITCH
S33	E277	31	VAN BLACKOUT SWITCH
S34	D278	31	VAN BLACKOUT SWITCH
S35	H273	31	VAN BLACKOUT OVERRIDE SWITCH
S40	F58	7	ETHER SENSOR SWITCH
S45	E62	7	TROOP ALARM SWITCH
S45	G62	31	VAN FAN ON/OFF SWITCH
S56	A57	7	WATER TEMPERATURE SWITCH
S57	G77	9	LMHC IN/OUT SWITCH

GAGES			
NUMBER	ZONE	SH	DESCRIPTION
M2	D106	12	VOLTMETER
M3	B106	12	ENGINE OIL PRESSURE METER
M4	F96	11	FRONT AIR PRESSURE METER
M5	B96	11	REAR AIR PRESSURE METER
M6	G107	12	WATER TEMPERATURE METER
M7	D96	11	FUEL LEVEL METER
M8	G102	12	SPEEDOMETER
M9	A210	24	TACHOMETER

RELAYS			
NUMBER	ZONE	SH	DESCRIPTION
K1	F149	17	STARTER RELAY
K2	B143	16	CONTROL PANEL RELAY
K6	F144	16	STOPLIGHT RELAY
K7	G153	17	HEADLIGHT RELAY
K8	G151	17	HEADLIGHT LO/HI-BEAM RELAY
K9	A142	16	HAZARD FLASHER BLACKOUT OVERRIDE
K10	F150	17	STOP HAZARD FLASHER RELAY
K11	F146	17	ALTERNATOR EXCITATION RELAY
K12	B139	16	WORKLIGHT RELAY
K13	B149	17	ROTATING BEACON BLACKOUT OVERRIDE RELAY
K15	B140	16	AUXILIARY COOLER RELAY
K19	B150	17	START INHIBIT RELAY
K20	H138	16	MARKER LIGHTS RELAY
K24	B151	17	CRANKING LOCKOUT RELAY
K25	B292	33	WTEC III REVERSE WARNING RELAY
K26	B290	33	WTEC III NEUTRAL START RELAY
K27	H143	16	BLACKOUT STOP RELAY
K28	H142	16	TRAILER REAR LIGHTS RELAY
K29	F142	16	BLACKOUT MARKER RELAY/WTEC III BLACKOUT DRIVE RELAY
K30	H147	17	REAR LEFT COMPOSITE LAMP RELAY
K31	H149	17	REAR RIGHT COMPOSITE LAMP RELAY
K32	B147	17	HORN RELAY
K35	E277	31	VAN 110 VAC OUTLETS
K36	F277	31	VAN FLUORESCENT LIGHTS
K37	B294	33	WTEC III PTO ENABLE OUTPUT RELAY
K52	H139	16	CTIS OVERSPEED INDICATION RELAY
K53	H140	16	RADIO POWER RELAY

RESISTORS			
NUMBER	ZONE	SH	DESCRIPTION
R2	E172	20	CAB - DASH - LEFT - UNDERDASH
R4	D175	20	CAB - DASH - LEFT - UNDERDASH
R5	C175	20	CAB - DASH - LEFT - UNDERDASH
R6	F172	20	CAB - DASH - LEFT - UNDERDASH

SOLENOIDS			
NUMBER	ZONE	SH	DESCRIPTION
KS	D47	6	24V AUXILIARY STARTER SOLENOID
L1	E189	21	FAN SOLENOID
L2	H57	7	FUEL SOLENOID
L3	D269	30	PTO SOLENOID
L4	E233	26	WINCH IN SOLENOID
L5	D233	26	SOLENOID
L15	B51	6	CHASSIS - SPARE TIRE
	E80	9	LMHC IN SOLENOID
	F80	9	LMHC OUT SOLENOID

HORNS AND ALARMS			
NUMBER	ZONE	SH	DESCRIPTION
LS1	A37	5	VEHICLE HORN
LS2	H101	12	AUDIBLE ALARM

MOTORS			
NUMBER	ZONE	SH	DESCRIPTION
B2	A183	21	WINDSHIELD WIPER MOTOR
B4	C118	14	FAN MOTOR
	F81	9	LMHC HOIST MOTOR

BATTERIES			
NUMBER	ZONE	SH	DESCRIPTION
BT1	C52	6	BATTERY
BT2	D52	6	BATTERY
BT3	D52	6	BATTERY
BT4	E52	6	BATTERY

MISCELLANEOUS			
NUMBER	ZONE	SH	DESCRIPTION
10A	C183	21	WTECII VEHICLE INTERFACE MODULE
10A	E183	21	WTECII VEHICLE INTERFACE MODULE
A2	F118	14	CTIS ELECTRONIC CONTROL UNIT
A3	G114	13	INSTRUMENT PANEL LIGHTS DIMMER MODULE
A5	A135	15	WIPER DELAY MODULE
A7	B179	20	FREQUENCY DIVIDER
A18	A103	12	LIGHTED INDICATOR DISPLAY
A20	H59	7	FUEL/WATER SEPARATOR
B1	C63	7	STARTER/STARTER SOLENOID
B3	G83	10	WINDSHIELD WASHER ROTARY PUMP
B10	E67	8	WTEC II TRANSFER CASE (SERIAL # 29513233)
B10	E70	8	WTEC II TRANSFER CASE (SERIAL # 29513233)
B10	E66	8	WTEC II TRANSMISSION (SERIAL # 29513233)
B10	E71	8	WTEC II TRANSFER CASE (SERIAL # 29517497)
B10	E70	8	WTEC II TRANSMISSION (SERIAL # 29517497)
B10	E76	9	WTEC II TRANSFER CASE (SERIAL # 29513233)
B10	E74	9	WTEC II TRANSMISSION (SERIAL # 29513233)
BJ1	A175	20	JUNCTION BOX
BL1	F257	29	FURNACE CONTROL UNIT
BL2	F256	29	FURNACE CONTROL UNIT
BL3	F256	29	FURNACE CONTROL UNIT
D1A	C138	16	CAB - DASH - RIGHT - POWER DISTRIBUTION PNL
D1B	C138	16	CAB - DASH - RIGHT - POWER DISTRIBUTION PNL
D2A	D138	16	CAB - DASH - RIGHT - POWER DISTRIBUTION PNL
D2B	D138	16	CAB - DASH - RIGHT - POWER DISTRIBUTION PNL
D3A	B138	16	CAB - DASH - RIGHT - POWER DISTRIBUTION PNL
D3B	B138	16	CAB - DASH - RIGHT - POWER DISTRIBUTION PNL
E1	C52	6	BATTERY
E1	D52	6	BATTERY
E1	D52	6	BATTERY
E1	E52	6	BATTERY
E2	C43	5	CHASSIS FRONT BUMPER (REF J27)
E2	C52	6	BATTERY
E2	D52	6	BATTERY
E2	E52	6	BATTERY
E2	E52	6	BATTERY
E3	H148	17	CAB - DASH - RIGHT - POWER DISTRIBUTION PNL
E4	H150	17	CAB - DASH - RIGHT - POWER DISTRIBUTION PNL
E5	B151	17	CAB - DASH - RIGHT - POWER DISTRIBUTION PNL
E14	E194	22	ALL MODELS EXCEPT WRECKER, TRACTOR, AND LONG WHEEL BASE

MISCELLANEOUS (CONTINUED)			
NUMBER	ZONE	SH	DESCRIPTION
E15	E197	22	ALL MODELS EXCEPT WRECKER, TRACTOR, AND LONG WHEEL BASE
E16	A197	22	ALL MODELS EXCEPT WRECKER, TRACTOR, AND LONG WHEEL BASE
E17	G195	22	ALL MODELS EXCEPT WRECKER, TRACTOR, AND LONG WHEEL BASE
E18	G194	22	ALL MODELS EXCEPT WRECKER, TRACTOR, AND LONG WHEEL BASE
E19	F194	22	ALL MODELS EXCEPT WRECKER, TRACTOR, AND LONG WHEEL BASE
E20	E194	22	ALL MODELS EXCEPT WRECKER, TRACTOR, AND LONG WHEEL BASE
E21	D195	22	ALL MODELS EXCEPT WRECKER, TRACTOR, AND LONG WHEEL BASE
E22	B86	10	CAB - MARKER LIGHTS
E23	D86	10	CAB - MARKER LIGHTS
E23	D205	23	AIRDROP ONLY
E24	C85	10	CAB - MARKER LIGHTS
E24	D205	23	AIRDROP ONLY
E25	F86	10	CAB - MARKER LIGHTS
E60	B41	31	24 VDC VAN POWER
E65	B41	5	CHASSIS - FRONT
E66	C41	5	CHASSIS - FRONT
E66	D300	34	WTEC III CAB TRANSMISSION HARNESS (TID1)
E66	D305	34	WTEC III CAB TRANSMISSION HARNESS (TID2)
E67	D38	5	CHASSIS - FRONT
E68	D40	5	CHASSIS - FRONT
E70	C229	26	PTO EQUIPPED
E71	F173	20	CAB - DASH - LEFT - UNDERDASH
E88	B106	12	CAB - DASH - LEFT - INSTRUMENT PANEL
E89	C106	12	CAB - DASH - LEFT - INSTRUMENT PANEL
E90	D300	34	WTEC III CAB TRANSMISSION HARNESS (TID1)
E90	D305	34	WTEC III CAB TRANSMISSION HARNESS (TID2)
E91	C300	34	WTEC III CAB TRANSMISSION HARNESS (TID1)
E91	C305	34	WTEC III CAB TRANSMISSION HARNESS (TID2)
E501	B275	31	VAN EMERGENCY/BLACKOUT LIGHT/24 VDC OUTLET
E502	G274	31	VAN EMERGENCY/BLACKOUT LIGHT
E503	B273	31	VAN MARKER LIGHT
E504	B272	31	VAN MARKER LIGHT
E505	B287	32	VAN REAR MARKER LIGHTS
E506	C287	32	VAN REAR MARKER LIGHTS
E514	C274	31	VAN EMERGENCY LIGHT
E516	H272	31	VAN 24 VDC
F2	H271	31	VAN 24 VDC POWER
FL	E183	21	WTEC II VEHICLE INTERFACE MODULE
FL1	G85	10	EMI FILTER
FL2	A184	21	EMI FILTER
FL3	C118	14	FAN MOTOR
G1	D60	7	ALTERNATOR
MPU1	F61	7	ENGINE SPEED MAGNETIC PICKUP
MT3	F60	7	ENGINE OIL PRESSURE SENSOR
MT4	E177	20	SENSOR/FRONT AIR PRESSURE TRANSMITTER
MT5	G177	20	SENSOR/REAR AIR PRESSURE TRANSMITTER
MT6	B57	7	WATER COOLER TEMPERATURE
MT7	B52	6	FUEL TANK LEVEL SENSOR
NS	E183	21	WTEC II VEHICLE INTERFACE MODULE
P/P	B54	6	POLARITY PROTECTION
P/P	D54	6	POLARITY PROTECTION
R11	D50	6	SHUNT
R1	D79	9	AIR DRYER
TB1	C128	15	CAB - DASH - RIGHT - POWER DISTRIBUTION PNL
TB2	F130	15	CAB - DASH - RIGHT - POWER DISTRIBUTION PNL
X1	C137	16	24 VDC
X11	F52	6	NATO SLAVE RECEPTACLE
X2	D137	16	24 VDC
X3	F137	16	GROUND
X5	D137	16	24 VDC
X7	D137	16	24 VDC
PHONE 1	A285	32	VAN PHONE 1
PHONE 2	H287	32	VAN PHONE 2

MISCELLANEOUS (CONTINUED)			
NUMBER	ZONE	SH	DESCRIPTION
	E77	9	LIGHT MATERIAL HANDLING CRANE (LMHC)
	E77	9	LMHC REMOTE CONTROL BOX
	E77	9	LMHC POWER CABLE
	G78	9	LMHC REMOTE CONTROL IN/OUT
	G302	34	WTEC III TRANSMISSION PRESSURE SWITCH
	B304	34	WTEC III OUTPUT SPEED SENSOR
	C304	34	WTEC III ENGINE SPEED SENSOR
	E304	34	WTEC III SUMP TEMP SENSOR

TRANSMISSION			
NUMBER	ZONE	SH	DESCRIPTION
A10	B183	21	WTEC II VEHICLE INTERFACE MODULE
A13	B67	8	WTEC II TRANSMISSION A13 (SERIAL # 29513233)
A13	A72	8	WTEC II TRANSMISSION A13 (SERIAL # 29517497)
A13	A76	9	WTEC II TRANSMISSION A13 (SERIAL # 29513233)
B10	E67	8	PRE-BLOCK SEVEN TRANSMISSION OUTPUT SPEED SENSOR
B10	E72	8	TID1, TID2, AND TID3 TRANSMISSION OUTPUT SPEED SENSOR
B10	E76	9	PRE-BLOCK SEVEN W/PIGTAIL TRANSMISSION OUTPUT SPEED SENSOR
MT9	F67	8	PRE-BLOCK SEVEN TRANSMISSION ENGINE SPEED SENSOR
MT9	F72	8	TID1, TID2, AND TID3 TRANSMISSION ENGINE SPEED SENSOR
MT9	F76	9	PRE-BLOCK SEVEN W/PIGTAIL TRANSMISSION ENGINE SPEED SENSOR
MT11	F67	8	PRE-BLOCK SEVEN TRANSMISSION THROTTLE POSITION SENSOR
MT11	F72	8	TID1, TID2, AND TID3 TRANSMISSION THROTTLE POSITION SENSOR
MT11	F76	9	PRE-BLOCK SEVEN W/PIGTAIL TRANSMISSION THROTTLE POSITION SENSOR
REV	C183	21	WTEC II VEHICLE INTERFACE MODULE
RW	D183	21	WTEC II VEHICLE INTERFACE MODULE
S02	F183	21	WTEC II VEHICLE INTERFACE MODULE
S03	F183	21	WTEC II VEHICLE INTERFACE MODULE
SF01	D183	21	WTEC II VEHICLE INTERFACE MODULE
SF01	D183	21	WTEC II VEHICLE INTERFACE MODULE
SF02	C183	21	WTEC II VEHICLE INTERFACE MODULE
SF02	D183	21	WTEC II VEHICLE INTERFACE MODULE
SF04	C183	21	WTEC II VEHICLE INTERFACE MODULE
SF3	F183	21	WTEC II VEHICLE INTERFACE MODULE
SF4	D183	21	WTEC II VEHICLE INTERFACE MODULE

A | B | C | D | E | F | G | H

FIGURE FO-1. ELECTRICAL SYSTEM SCHEMATIC
FOLDOUT 4 OF 34

SIZE B | ILL. NO. 5WD01L4B | FP-7/ (FP-8 BLANK)

28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36

CHASSIS - FRONT BUMPER

CHASSIS - FRONT

VEHICLE HORN (LS1)

FRONT RH COMPOSITE LIGHT ASSEMBLY

DS50 BLACKOUT MARKER RIGHT FRONT

DS48 PARKING LIGHT FRONT RIGHT

DS42 FRONT RIGHT TURN SIGNAL

RIGHT HEADLIGHT DS44

LEFT HEADLIGHT DS74

12V CONNECTOR INTERVEHICULAR J95

GROUND
MARKER LIGHTS
LEFT TURN SIGNAL
STOPLIGHTS
RIGHT TURN SIGNAL
TAILLIGHTS
AUXILIARY

FRONT LH COMPOSITE LIGHT ASSEMBLY

DS39 FRONT LEFT TURN SIGNAL

DS47 PARKING LIGHT FRONT LEFT

DS49 BLACKOUT MARKER LEFT FRONT

BLACKOUT DRIVE LIGHT DS53

E65 E66 E67 (HIGH) E68 (LOW)

TL81 TL123 TL82 TL79 TL72

P27 J27

26	1	26	to K32-87 (A148)
489G	2	489G	to TB1-24 (C127)
20	3	20	to TB1-52 (D129)
to P25-2 (H86) 1424	4	1424	to PX21-5 (B133)
461B	5	461B	to K30-86 (H148)
17	6	17	to K8-87 (G152)
19	7	19	to CB54/4 (E142)
489F	8	489F	to tb1-22 (C127)
491	9	491	to CB65/8 (E141)
460B	10	460B	to K31-86 (H150)
460	11	460	to TB1-42 (F129)
21A	12	21A	to TB1-23 (C127)
18	13	18	to K8-87A (F151)
461	14	461	to TB1-47 (D128)
22C	15	22C	to TB1-28 (B128)
to TL202 (E124)	16	1616	to PX7-11 (B105) / to PX7-22 (D105)

E2

J51 D190

to K12-87 (B139)	2002 490	1
(WTEC III) to K25-87	490	2
(WTEC III) to PX33-A1 (B181)	21	3
to CB80/2 (E141)	460B	4
to K31-86 (H149)	461B	5
to K30-86 (H148)	23	6
to K27-86 (G144)	489	7
to TB1-11 (E127)	23T	8
to K27-87 (H144)	489T	9
to K28-87 (H142)	484T	10
to K29-87 (F142)	460B	11
to K31-86 (H149)	461B	12
to K30-86 (H148)	22C	13
to TB1-31 (B127)	1404	14
to K6-87 (F144)	461T	15
to K30-87 (H147)	460T	16
to K31-87 (H149)	24	17
to TB1-54 (C129)		

J43X P43X — G175 — E46

1	1471	1471
2	1472	1472
3	1474	1474
4	1480	1480
5	1479	1479
6	1478	1478
7	1475	1475
8	1476	1476
9	1477	1477

J43 P43 — F46 — G46

to J31-15 (G55)	1403	1	1403
to J111-F (F122)	1790	2	1790
to PX9-4 (D97)	28	3	28
to TB2-32 (F134)	3029	4	3029
to CB30/2 (C139)	1802	5	1802
to P99-1 (F186)	1803	6	1803
to PX7-2 (A105)	1803	7	1804
to P99-2 (F186)	1804	8	74 1481 — 74 1481
to K1-87 (F149)	74	9	
to TB1-35 (G128)	1481		

FIGURE F0-1. ELECTRICAL SYSTEM SCHEMATIC
FOLDOUT 5 OF 34

SIZE B | ILL. NO. 5WD0101B | FP-9/ (FP-10 BLANK)

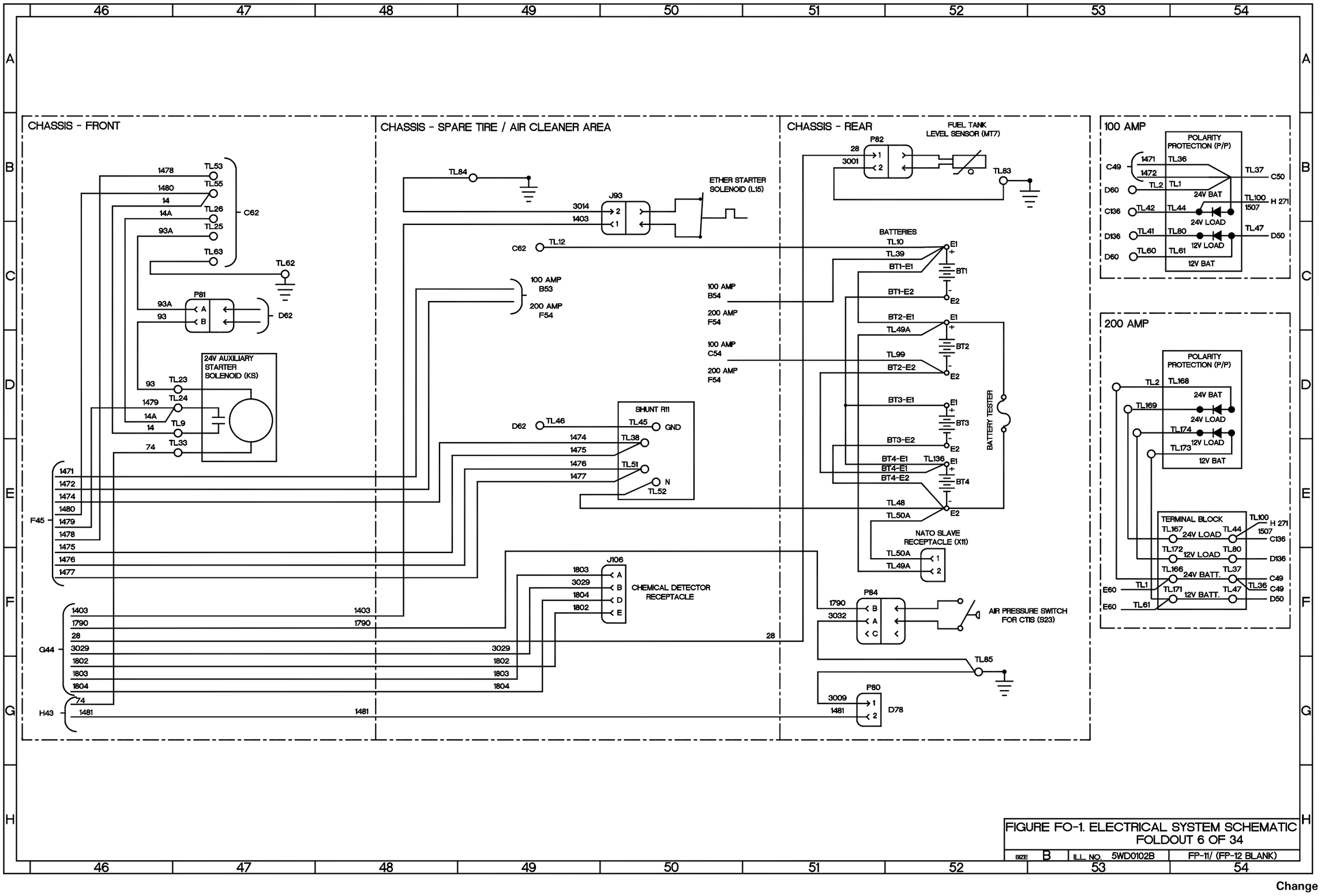


FIGURE FO-1. ELECTRICAL SYSTEM SCHEMATIC
FOLDOUT 6 OF 34

SIZE	ILL. NO.	
B	5WD0102B	FP-11/ (FP-12 BLANK)

ENGINE

WATER COOLER TEMPERATURE (S56)
P36
1807
1805

WATER TEMPERATURE SENSOR (MT6)
P41
33
MT6

WATER TEMPERATURE SWITCH (S26)
P37
3026
35

P31X
F176
1441
1452
3A
1432
1433
1430
1435
1434
1428
1453

P69
Not Used

TL59
100 AMP/200 AMP ALTERNATOR (G1)
VOLTAGE REGULATOR
1452
TL6
TL2
TL58
3A
TL5
24V
GND G1
12V
TL35
TL110
TL60
1453
568A
TL61
F53 (200 AMP) C53 (100 AMP)
TL1
F53 (200 AMP) B53 (100 AMP)

MT11
F66 124
F70 135A
F75 156
C
A
B
THROTTLE POSITION SENSOR (MT11)

STARTER/STARTER SOLENOID (B1)
TL63
TL53
B47
TL55
L
B1
TL26
TL25
C49
TL12
D49
TL46

STARTER THERMO SWITCH
P81
C47
A
B

P31 J31
to K11-87A (F146) 568A 1 568A
to PX13-3 (F92) 1402 2 1402
to TB1-38 (F129) 1807 3 1807
to PX1-1 (A92) 1806 4 1805
to TB2-18 (F132) 3015 5 3015
to TB2-10 (F131) 3006 7 3006
to PX26-1 (B180) 1444 8 1444
to TB2-36 (F135) 3028 9 3028
to TB2-28 (F134) 3026 10 3026
to PX6-4 (B107) 36 11 36
to CB49/3 (C152) 1460 13 1460
to K19-87B (B151) 54 14 54
to J43-1 (G42) 1403 15 1403
to PX26-4 (B180) 3083 16 3083
to TL178 (D102) 32 17 32
to K11-87 (F146) 1538 18 1538
to PX7-1 (A105) 1523 19 1523
to PX11-4 (H107) 33 20 33
to K11-85 (H146) 34 21 34
to PX7-12 (C106) 35 22 35
to PX26-5 (B180) 1432 25 1432
to PX26-2 (B180) 1433 26 1433

P42
1402
1403
ETHER SENSE SWITCH (S40)

P34
34
3006
OIL PRESSURE WARNING LIGHT SWITCH (S27)

ENGINE SPEED MAGNETIC PICKUP (MPU1)
P38
3083
1444
(-)
(+)

P32
36
P
ENGINE OIL PRESSURE SENSOR (MT3)

TROOP TRANSPORT ALARM
P39 J39
P921 J921
3028
32
1538
TL164
TL165
1
2
TROOP ALARM SWITCH (S45)

1441 TL28
54
3015 TL29
3017 TL29
L
FUEL SOLENOID (L2)

P33
1460
3017
FUEL/WATER SEPARATOR (A20)

P201
1523
3027
TL66
NOT USED

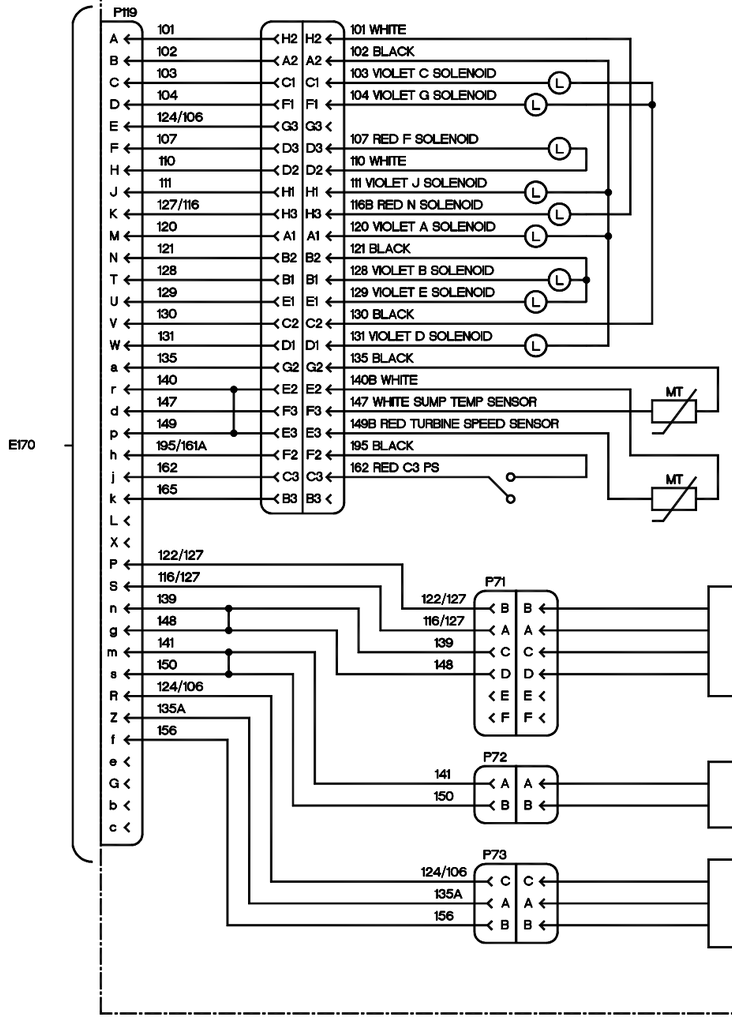
FIGURE FO-1. ELECTRICAL SYSTEM SCHEMATIC
FOLDOUT 7 OF 34

SIZE B | ILL. NO. 5WD0103B | FP-13/ (FP-14 BLANK)

PRIOR TO SERIAL NUMBER 6510032369

PRE-BLOCK SEVEN TRANSMISSION

EXTERNAL WIRING HARNESS TO TRANSMISSION CONNECTOR



SERIAL NUMBER 6510032369 AND HIGHER

TID1, TID2, AND TID3 TRANSMISSIONS

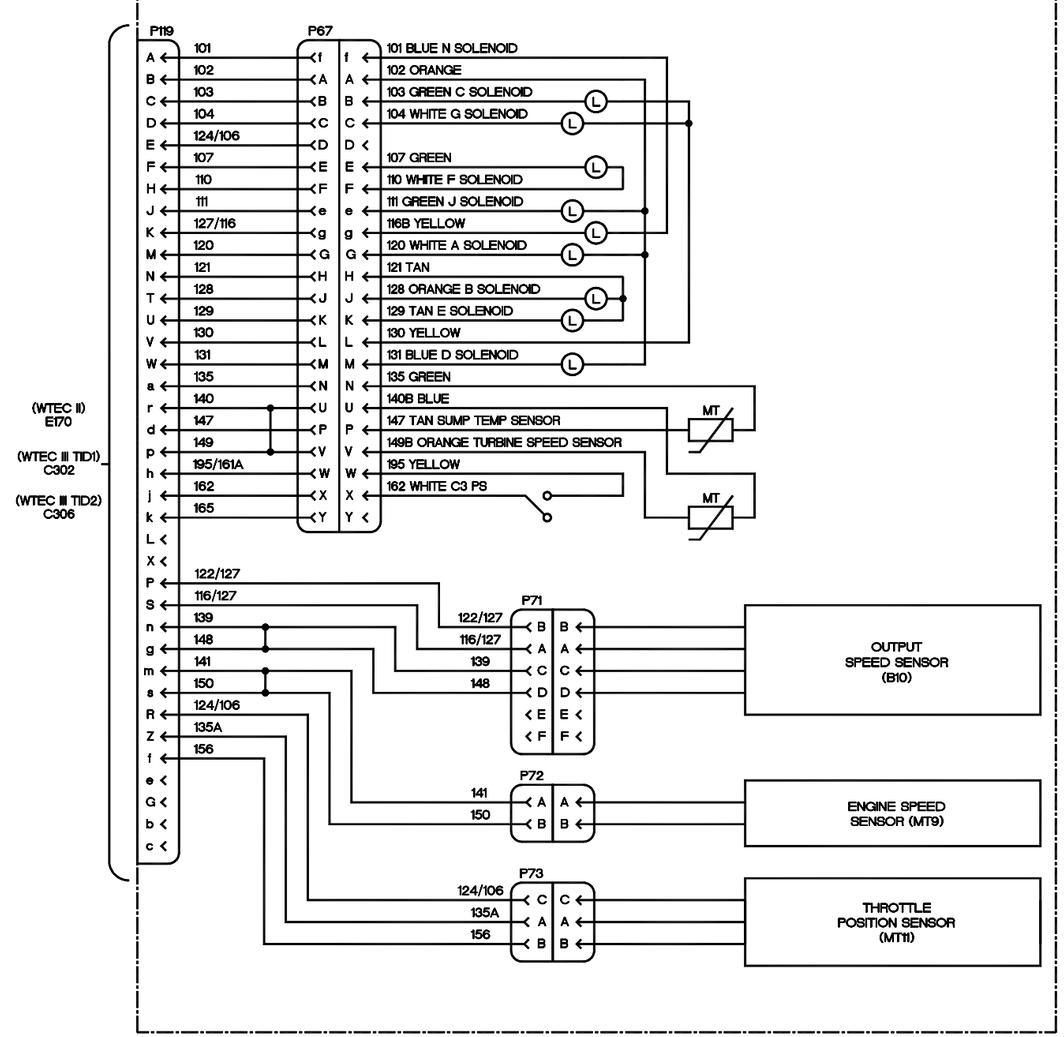


FIGURE F0-1. ELECTRICAL SYSTEM SCHEMATIC
FOLDOUT 8 OF 34

SIZE	B	ILL. NO. 5WD0104B	FP-15/ (FP-16 BLANK)

PRIOR TO SERIAL NUMBER 6510032369 WITH ADAPTER CABLE ASSEMBLY

PRE-BLOCK SEVEN WITH PIGTAIL TRANSMISSION

200-100 AMPIER CABLE ASSEMBLY (WTEC III ONLY)

TRANSMISSION CONNECTOR P67

TRANSMISSION CONNECTOR

EXTERNAL WIRING HARNESS TO TRANSMISSION CONNECTOR

P119

P119		P67				EXTERNAL WIRING HARNESS TO TRANSMISSION CONNECTOR	
A	101	f	f	101	H2	H2	101 WHITE
B	102	A	A	102	A2	A2	102 BLACK
C	103	B	B	103	C1	C1	103 VIOLET C SOLENOID (L)
D	104	C	C	104	F1	F1	104 VIOLET G SOLENOID (L)
E	124/106	D	D	124/106	G3	G3	
F	107	E	E	107	D3	D3	107 RED F SOLENOID (L)
H	110	F	F	110	D2	D2	110 WHITE
J	111	e	e	111	H1	H1	111 VIOLET J SOLENOID (L)
K	127/116	g	g	127/116	H3	H3	116B RED N SOLENOID (L)
M	120	G	G	120	A1	A1	120 VIOLET A SOLENOID (L)
N	121	H	H	121	B2	B2	121 BLACK
T	128	J	J	128	B1	B1	128 VIOLET B SOLENOID (L)
U	129	K	K	129	E1	E1	129 VIOLET E SOLENOID (L)
V	130	L	L	130	C2	C2	130 BLACK
W	131	M	M	131	D1	D1	131 VIOLET D SOLENOID (L)
a	135	N	N	135	G2	G2	135 BLACK
r	140	U	U	140	E2	E2	140B WHITE
d	147	P	P	147	F3	F3	147 WHITE SUMP TEMP SENSOR (MT)
p	149	V	V	149	E3	E3	149B RED TURBINE SPEED SENSOR
h	195/161A	W	W	195/161A	F2	F2	195 BLACK
j	162	X	X	162	C3	C3	162 RED C3 PS (MT)
k	165	Y	Y	165	B3	B3	
L							
X							
P	122/127						
S	116/127						
n	139						
g	148						
m	141						
s	150						
R	124/106						
Z	135A						
f	156						
e							
G							
b							
c							

(WTEC II) E170

(WTEC III TID1) C301

(WTEC III TID2) C305

P71

122/127	B	OUTPUT SPEED SENSOR (B10)
116/127	A	
139	C	
148	D	

P72

141	A	ENGINE SPEED SENSOR (MT9)
150	B	

P73

124/106	C	THROTTLE POSITION SENSOR (MT11)
135A	A	
156	B	

J80

1	AIR DRYER (R1)
2	

LIGHT MATERIAL HANDLING CRANE (LMHC)

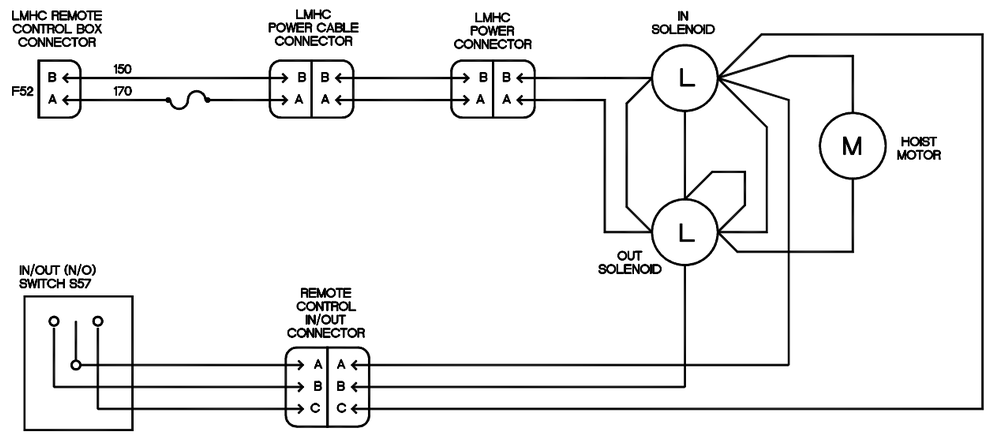


FIGURE FO-1. ELECTRICAL SYSTEM SCHEMATIC
FOLDOUT 9 OF 34

SIZE	ILL. NO.	
B	5WD0105B	FP-17/ (FP-18 BLANK)

CAB - MARKER LIGHTS

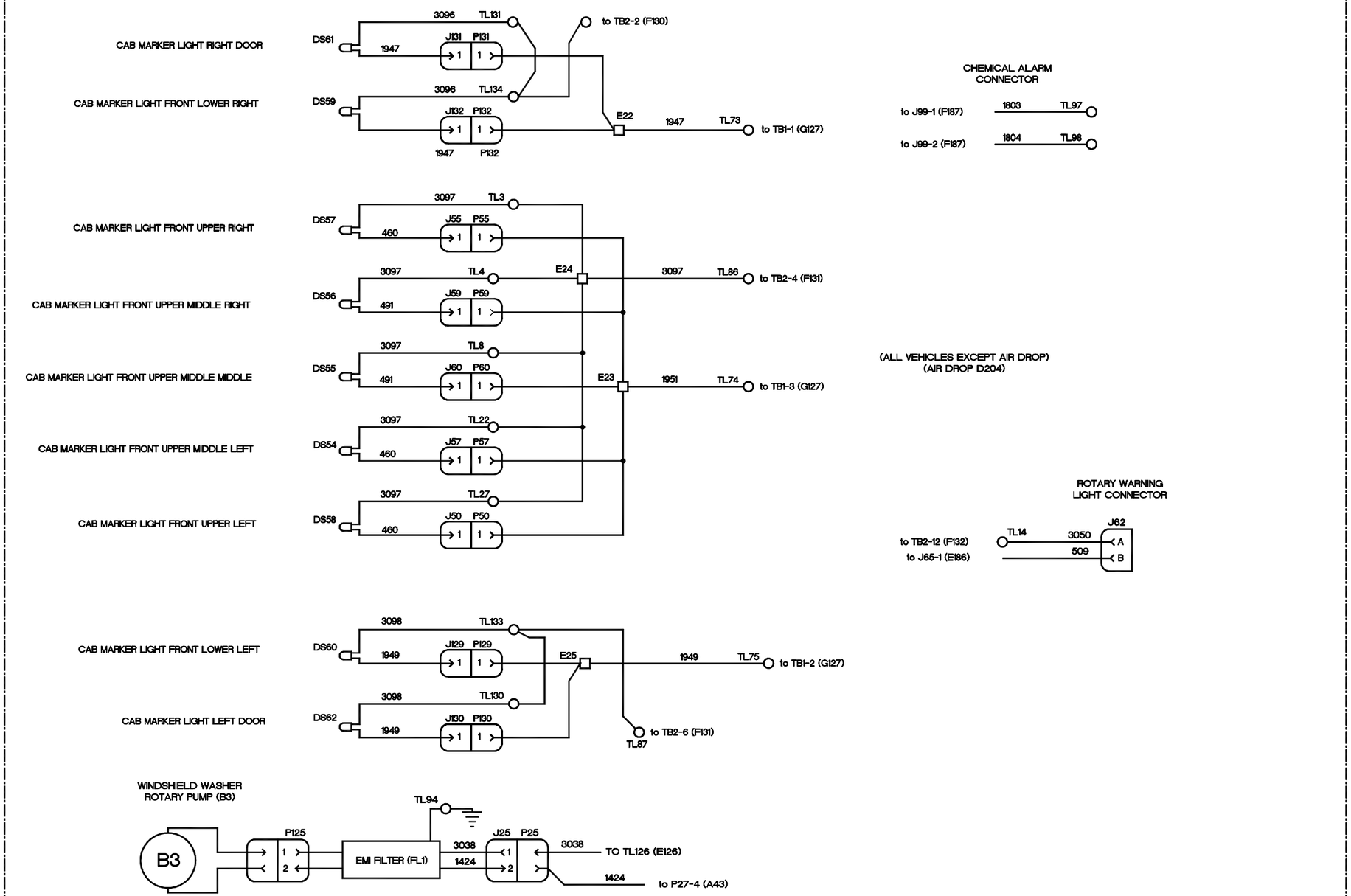


FIGURE FO-1. ELECTRICAL SYSTEM SCHEMATIC
FOLDOUT 10 OF 34

SIZE	ILL. NO.	
B	5WD0106B	FP-19/ (FP-20 BLANK)

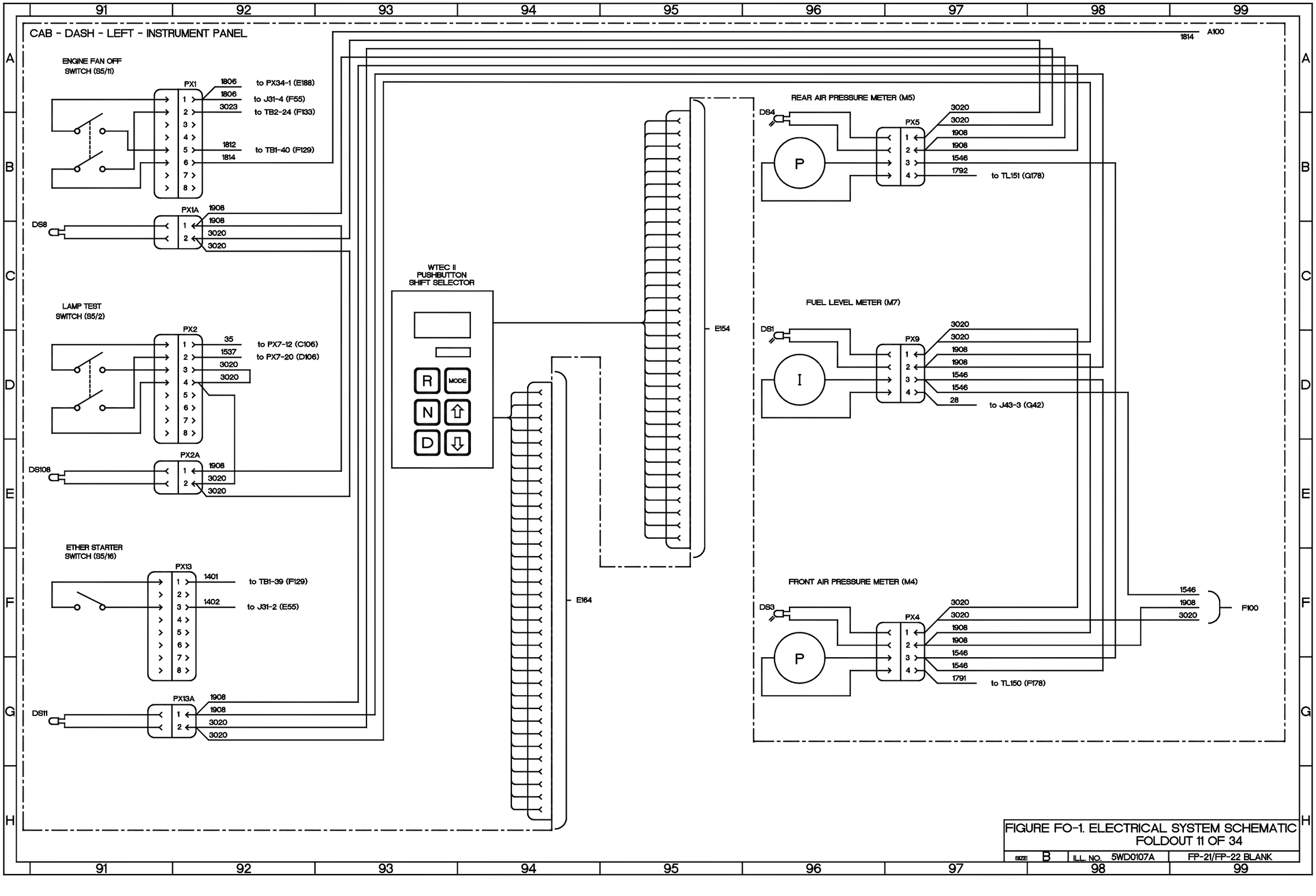


FIGURE FO-1. ELECTRICAL SYSTEM SCHEMATIC
FOLDOUT 11 OF 34

SIZE	ILL. NO.	
B	5WD0107A	FP-21/FP-22 BLANK

CAB - DASH - LEFT - INSTRUMENT PANEL

A99 — 1814

LIGHTED INDICATOR DISPLAY (A18)

		PX7	
CHEM DETECT	DS32	1	1523 to J31-19 (G55)
RIGHT TURN SIGNAL	DS15	2	1803 to J43-6 (H42)
LEFT TURN SIGNAL	DS14	4	1580 to TB1-41 (E129)
	DS9	6	1570 to TB1-47 (E129)
CTIS OVRSPD	DS34	7	3021 to TB2-25 (G133)
PTO ON	DS23	8	2034 to P912-9 (C124)
EMER BRAKE	DS21	9	1528 to J111-D (F122)
WATER TEMPERATURE	DS25	10	2021 to J913-13 (C121)
REAR BRAKE AIR	DS27	11	1616 to J27-16 (C43)
TRANS OIL TEMP	DS41	12	35
ENGINE OIL LEVEL	DS29	13	1525 to TL157 (H178)
PARK BRAKE	DS22	16	1532
OIL PRESSURE	DS24	17	3030 to TB2-33 (G134)
HIGH BEAM	DS16	19	1536
FRONT AIR BRAKE	DS28	20	1537
RADIATOR FAN OFF	DS19	22	1616 to J27-16 (C43)
MASTER STOP	DS30	23	34A to D3B-4 (A138)
		24	1681 to K8-87 (F152)
		25	1530 to TL156 (F178)
		26	1814
		27	1658 to TB1-61 (B129)
		28	2010 to P912-7 (B124)

ENGINE OIL PRESSURE METER (M3)

DS5 — OP — PX6

1	3020	
2	3020	
3	1908	
4	1908	B109
	1546	
	1546	
	36	to J31-11 (F55)

E88: 35 to PX2-1 (D92); 35 to J31-22 (H55)

E89: 1537 to PX2-2 (D92); 1537 to J118-1 (D162); 105 to P115-19

VOLTMETER (M2)

DS7 — V — PX10

1	3020	
2	3020	D109
3	1908	
4	1908	
	1546	
	1546	to J913-9 (C121) E109
	3004	to TB2-9 (G131)

F99: 1546, 1908, 3020 — 3020, 1908 F109

SPEEDOMETER (M8)

DS6 — KM — PX8

1	3020	
2	3020	
3	1908	
4	1908	
	1546	
	1546	
	1793	to PX33-H2 (E181) (WTEC II)
	1793	to J111-B (F122) (WTEC II)
	157	to J111-B (F122) (WTEC III)
	157	to P116-30 (F291) (WTEC III)

AUDIBLE ALARM (LS2)

32 TL178 32 to J31-17 (G55)

1536 TL160 (−)

1532 TL161 (+)

WATER TEMPERATURE METER (M6)

DS2 — t° — PX11

1	3020	
2	3020	
3	1908	
4	1908	
	1546	
	1546	G109
	33	to J31-20 (G55)

FIGURE FO-1. ELECTRICAL SYSTEM SCHEMATIC
FOLDOUT 12 OF 34

SIZE	ILL. NO.	
B	5WD0108B	FP-23/ (FP-24 BLANK)

CAB - DASH - LEFT - INSTRUMENT PANEL

IGNITION SWITCH (S5/1)

PX17
1 1548 to K2-86 (A143)
2
3
4
5 1586 to CB70/4 (E146)
6
7
8

B108
3020
3020
1908
1908
1546
1546

DS13
PX17A
1 1908
2 1908
3020
3020

STARTER PUSHBUTTON (S6)

TL163
TL162 1405 to K24-87 (A152)
3007 to TB2-11 (G131)

ROTATING WARNING LIGHT SWITCH (S5/2)

PX12
1 1559 to K13-86 (A149)
2
3
4
5 1575
6 1575 to K20-86 (G138)
7
8

PX12A
DS10
1 1908
2 1908
3020
3020

MAIN LIGHT SWITCH (S4)

PX15
A
B 1542
C 22 to D1A-2 (C138)
D 19 to CB54/3 (D142)
E 1572 to CB66/1 (D143)
F 1586 to CB70/4 (D146)
H 1575
J 1577 to CB74/5 (D150)
K 1404 to K6-87 (F143)
L 491 to CB65/7 (D141)
M 16 to P18-3 (B178)
N 23 to K27-86 (G143)

D108
3020
3020
1908
1908
1546

E108
1546

F108
3020
1908

G108
3020
3020
1908
1908
1546

FULL HAZARD WARNING SWITCH (S5/22)

PX14
1 1565 to K9-87 (B142)
2 1566 to J19-5 (D177)
3 1566 to K10-87A (F150)
4
5 1567 to PX20-B (C188)
6 1568 to J19-12 (E177)
7 1568 to PX20-A (C188)
8 1514 to CB74/6 (E150)

PX14A
DS12
1 1908
2 1908 to J913-11 (C121)
3020
3020 to J913-10 (C121)

INSTRUMENT PANEL LIGHTS DIMMER MODULE (A3)

PX24
2 1908
1 1908
1542

FIGURE FO-1. ELECTRICAL SYSTEM SCHEMATIC
FOLDOUT 13 OF 34

SIZE B | ILL. NO. 5WD0109A | FP-25/FP-26 BLANK

CAB - DASH - CENTER - HEATER / CTIS ECU

PERSONNEL HEATER

FAN MOTOR
B4
FL3
3 HIGH
2 MED
1 LOW
OFF

PX25
1 1601 to CB23/7 (C147)
2 1908
3 3003
4 3003 to TB2-8 (F131)

HEATER CONTROL PANEL ILLUMINATION
DS17
DS101

J913 P913 — G208
1 1673 ← to K12-86 (A139) 1673
2 1674 ← to CB72/2 (D139) 1674
3 1672 ← to D2B-3 (D138) 1672
4 1670 ← to CB45/4 (C139) 1670
5 1925 ← to CB49/3 (C152) 1925
6 1954 ← to J118-9 (E162) 1954
7 161 ← (WTEC II) to PX33-A3 (C181) 161
8 153 ← (WTEC II) to J118-13 (E162) 161
9 1546 ← (WTEC III) to P115-31 (D291) 161/1952
10 3020 ← (WTEC II) to J118-8 (D162) 153
11 1908 ← (WTEC III) to P115-12 (D291) 153
12 1550 ← to TB1-61 (B129) 1546
13 2021 ← to PX10-3 (E107) 1546
14 2019 ← to TB2-31 (G134) 3020
15 1904 ← to PX14A-2 (H112) 3020
to PX14A-1 (H112) 1908
to PX26-1 (B179) 1908
to PX7-10 (B105) 1550
(WTEC II) to PX33-E2 (D181) 2021
(WTEC III) to K37-87 (B294) 2019
(WTEC II) to PX33-E3 (D181) 2019
(WTEC III) to K37-30 (B294) 1904
1904

P912 J912 — E208
1 1 2006 ← to CB50/2 (C145) 2006
2 2 2069 ← to CB48/8 (C141) 2069
3 3 2006
4 4 2004 ← to K12-87 (B139) 2004
5 5 1328 ← to CB63/1 (D151) 1328
6 6 2010
7 7 2010 ← to PX7-28 (D105) 2010
8 8 2033 ← to CB53/6 (E140) 2033
9 9 2034 ← to PX7-8 (B105) 2034
10 10 2040 ← to TB1-20 (D127) 2040
11 11 2041 ← to TB1-50 (D129) 2041
12 12 1650 ← to X1 (C136) 1650
13 13 1653 ← to X1 (C136) 1653
14 14 2037 ← to K19-87 (B150) 2037
15 15 1811 ← to K15-87A (A140) 1811
2006
2006
2069
2069
2012
2004
1328
2033
2033
2034
2040
2041
1650
1653
2037
1811

PARKING BRAKE SWITCH

C42 — 1616 — S24 — 3024 — TL201 — TL126
TL202
to P25-1 (G86)
3038

CTIS ELECTRONIC CONTROL UNIT (A2)

P110
H 01
F 02
Z
M 01
U 03
S 04
E 05
T 06
P 07
b 08
c 09
j 10
R 11
B 12
C 13

P111 J111
01 E E 1911 to CB40/7 (C150)
02 A A 3031 to TB2-35 (G135)
03 B B 1793 to PX8-4 (G103) (WTEC II)
04 G G 157 to PX8-4 (G103) (WTEC III)
05 D D 1911 to K52-87A (G139)
06 F F 1528 to PX7-9 (B105)
1790 to J43-2 (G42)

P113
B
C
A

P112 — G186
D
F
E
A
B

TL50
CHASSIS GROUND

FIGURE FO-1. ELECTRICAL SYSTEM SCHEMATIC
FOLDOUT 14 OF 34

SIZE B | ILL. NO. 5WD0110B | FP-27/ (FP-28 BLANK)

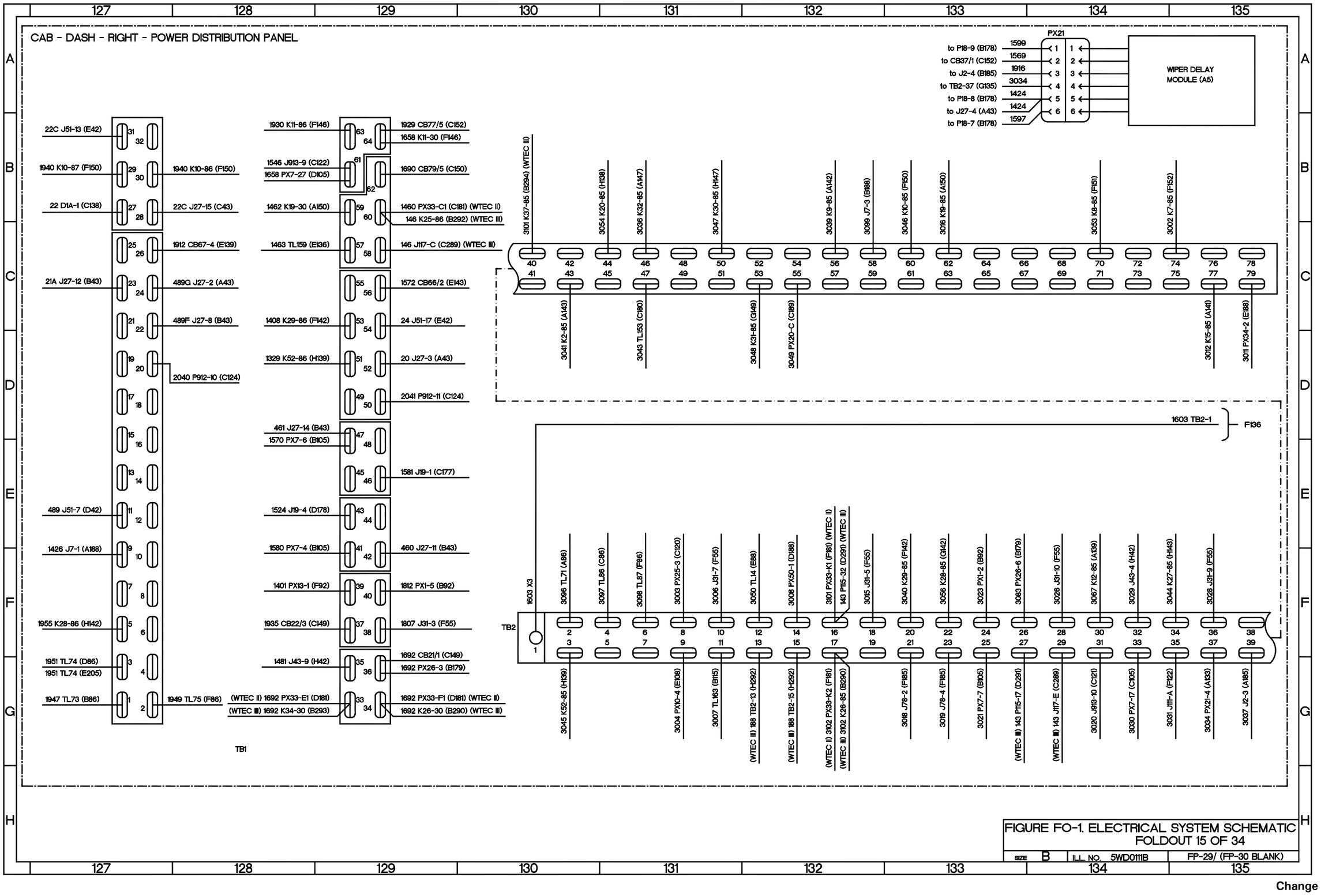


FIGURE FO-1. ELECTRICAL SYSTEM SCHEMATIC
FOLDOUT 15 OF 34

SIZE	ILL. NO.	
B	5WD0111B	FP-29/ (FP-30 BLANK)

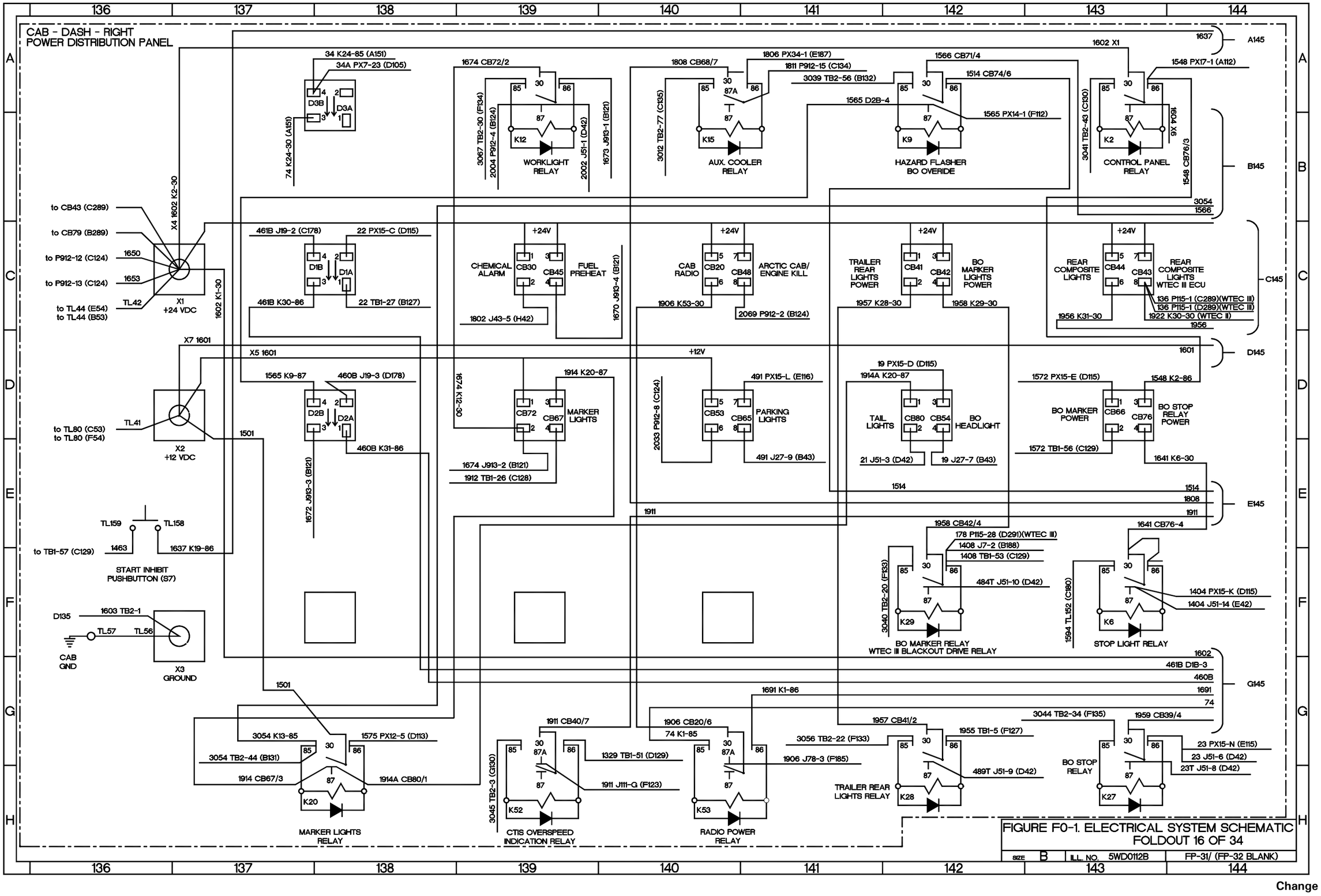


FIGURE F0-1. ELECTRICAL SYSTEM SCHEMATIC
FOLDOUT 16 OF 34

SIZE B | ILL. NO. 5WD0112B | FP-31/ (FP-32 BLANK)

CAB - DASH - RIGHT
POWER DISTRIBUTION PANEL

A144 1637
B144 1604 X6
3054
1566
C144
D144 1601
E144 1514 1808 1911
G145 1602 461B D1B-3 460B 1691 74 1959

1637 TL158
1658 K11-30
74 D3B-3(B137)
74 K1-85
34 K11-85
1405 TL162 (B115)

26 CB36/5
25 P18-12 (C178)
26 J27-1 (A43)
3036 TB2-46 (B131)
K32 HORN RELAY

509 CB38/8
3054 K20-85
K13 ROTATING BEACON BO OVRD RELAY
509 P65-1 (E186)
1559 PX12-1 (D113)

1462 TB1-59 (B129)
3016 TB2-62 (B133)
K19 START INHIBIT RELAY
2037 P912-14 (C124)
54 J31-14 (Q55)

34 D3B-4 (B138)
K24 CRANKING LOCKOUT RELAY

+24V
SWING FIRE PUMP POWER — CB50 CB39 — TRAILER BO STOP LIGHTS
2006 P912-1 (B124)
1959 K27-30
1922
1956

26 K32-30
1601 PX25-1 (C120)
HORN POWER — CB36 CB23 — HEATER BLOWER

1692 TB1-36 (G129)
WTEC II VIM STE/ICE — CB21 CB22 — FAN/ ETHER
1935 TB1-37 (F129)

1690 TB1-62 (B129)
1911 J111-E (E123)
1911 K52-30
WTEC II VIM POWER — CB79 CB40 — CTIS COOLER

E5
1569 J2-2 (A185)
1569 P18-4 (B177)
1569 PX21-2 (A133)
1925 J913-5 (B121)
1460 J31-13 (F55)
WINDSHIELD WIPER/WASHER — CB37 CB49 — PTO POWER
1929 TB1-64 (B129)
1808 K15-30
ENGINE INSTR POWER — CB77 CB68

+12V
IGNITION/MAIN LIGHT SWITCH — CB70
1586 PX15-F (D115)
1586 PX17-5 (B112)

HEAD LIGHTS — CB78 CB38 — ROTATING BEACON
509 K13-30

VIM POWER — CB35 CB71 — HAZARD/ FLASHER WORKLIGHTS
1566 K9-30
1900 PX33-J1 (E182)
1900 PX33-J2 (E182)

1577 PX15-J (D115)
BACK-UP LIGHT POWER — CB74 CB73
1514 PX14-7 (G113)
1903 PX33-B1 (C181)(WTEC II)
1903 K25-30 (B292)(WTEC III)
1514 K9-86

1328 P912-5 (B124)
CB63 CB64
CB61 CB62

1416 K7-30
1416
1911

34 K24-85
1658 K24-86
1658 TB1-64 (B129)
1930 TB1-63 (B129)
568A J31-1 (E55)
1538 J31-18 (G55)
34 J31-21 (Q55)
K11 ALTERNATOR EXCITATION RELAY

1691 K26-87 (B290)(WTEC III)
1602 X1
1691 PX33-G1 (E181)(WTEC II)
1691 K53-86
74 K24-30
74 K53-85
74 J43-8 (H42)
K1 STARTER RELAY

1594 J19-6 (D178)
1940 TB1-30 (B128)
3046 TB2-60 (B133)
K10 STOP/HAZARD FLASHER RELAY
1940 TB1-29 (B127)
1566 PX14-2 (GN13)

18 J27-13 (B43)
3053 TB2-70 (B134)
1417 K7-87
16A P18-2 (B178)
K8 HEADLIGHT LO/HI-BEAM RELAY
17 J27-6 (B43)
1681 PX7-24 (D105)

3002 TB2-74 (B135)
1416 CB78/6
16 P18-3 (B178)
1417 K8-30
K7 HEADLIGHT RELAY

1922 CB43/8
3047 TB2-50 (B131)
461T J51-15 (E42)
K30 REAR LEFT COMPOSITE LAMP RELAY
461B
461B J51-12 (E42)
461B J27-5 (B43)
461B J51-5 (D42)
461B D1B-3
E3

1956 CB44/6
3048 TB2-53 (C132)
K31 REAR RIGHT COMPOSITE LAMP RELAY
460T J51-16 (E42)
E4
460B D2A-1
460B J51-4 (D42)
460B J51-11 (E42)
460B J27-10 (B43)

FIGURE FO-1. ELECTRICAL SYSTEM SCHEMATIC
FOLDOUT 17 OF 34

SIZE B | ILL. NO. 5WD0113B | FP-33/ (FP-34 BLANK)

CAB - DASH - LEFT - WTEC II TRANSMISSION HARNESS

G166: 123 118 115 113 105 / 125 119 117 114 112

H168: 135A/B 156 147 149 161A/B / 162 148 150 165

G167 G167 G167

G165

C95

J115: 1 135A/B; 2 136A/D; 3 137; 4 <; 5 139; 6 140; 7 141; 8 142A/B; 9 143A/D; 10 144; 11 136C/D; 12 146; 13 147; 14 148; 15 149; 16 150; 17 151A/B; 18 143C/D; 19 153; 20 154; 21 155; 22 156; 23 157; 24 158; 25 <; 26 <; 27 161A/B; 28 162; 29 163; 30 <; 31 165; 32 <; 33 <; 34 <

J116: A1 143A; B1 132; C1 <; D1 123; E1 136A; F1 146; A2 143C; B2 157; C2 125; D2 112; E2 136C; F2 113; A3 115; B3 <; C3 158; D3 <; E3 <; F3 114

D185

P118 J118: 105 1 1537 PX7-20 (C105); 118 2 <; 119 3 <; 4 <; 137 5 <; 142B 6 <; 151B 7 <; 153 8 153 J913-8 (B121); 155 9 1954 J913-6 (B121); 10 <; 11 <; 154 12 <; 161B 13 161 J913-7 (B121); 163 14 163 PX33-A2 (C181); 15 <; 117 16 <

J117: 143D A; B; C; D; E; F; G; 136D H; 142A J; 151A K; L; M

WTEC II DIAGNOSTIC CONNECTOR

FIGURE FO-1. ELECTRICAL SYSTEM SCHEMATIC
FOLDOUT 18 OF 34

SIZE B | ILL. NO. 5WD0114B | FP-35/ (FP-36 BLANK)

CAB - DASH - LEFT - WTEC II TRANSMISSION HARNESS

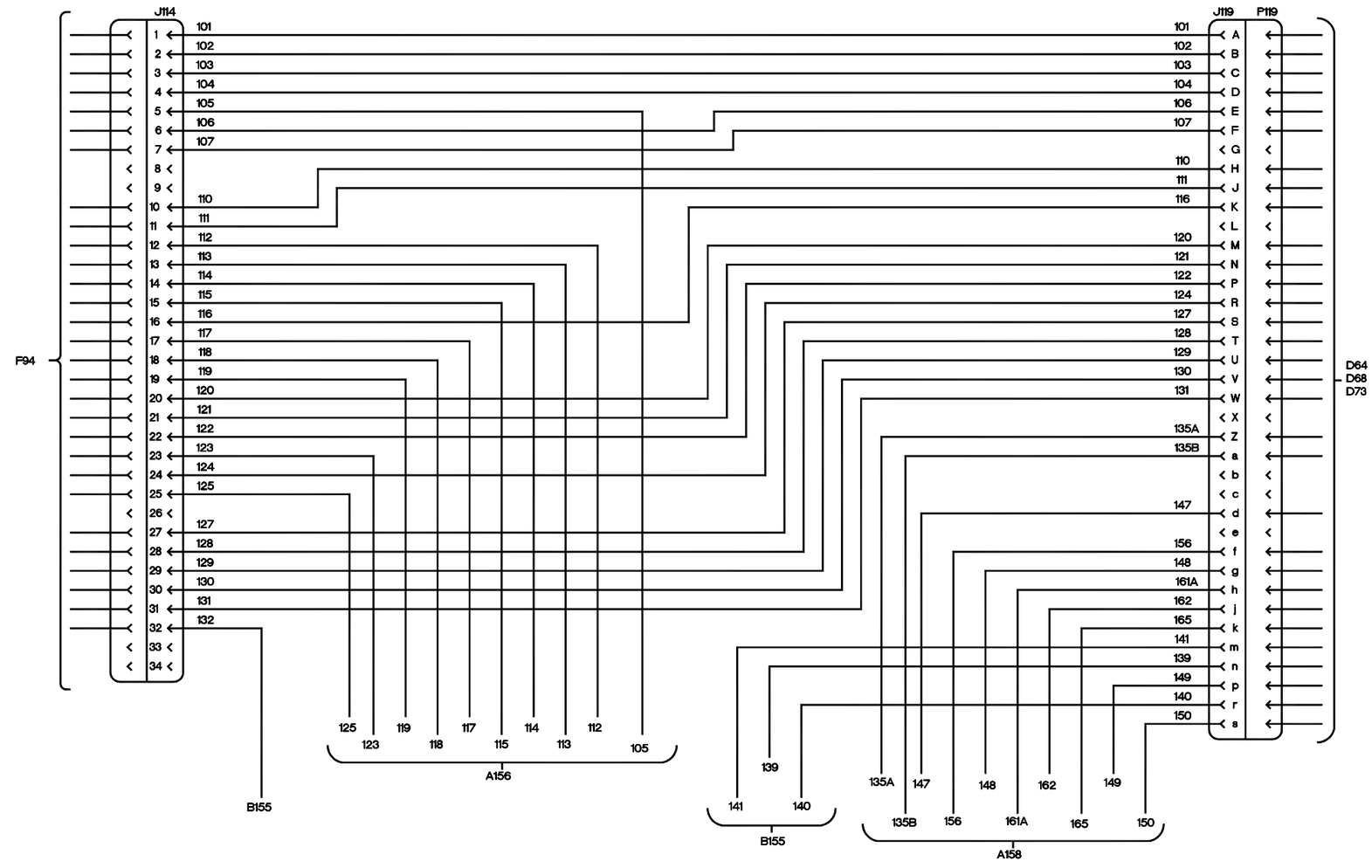


FIGURE FO-1. ELECTRICAL SYSTEM SCHEMATIC
FOLDOUT 19 OF 34

SIZE	ILL. NO.	
B	5WD0115B	FP-37/ (FP-38 BLANK)

CAB - DASH - LEFT - UNDERDASH

JUNCTION BOX (BJ1)

STE / ICE RECEPTACLE

P83

f	1610	1610
AB	1437	1430
AD	1431	
z	1446	
x	1427	
p	1423	
m	1438	
AA	1436	
g	1612	
k	1439	1437
n	1421	1431
w	1425	1446
y	1447	1427
AC	1429	1423
R	1441	1438
N	1452	1436
P	3A	1612
d	1432	1434
c	1433	
v	1435	1439
u	1428	1421
O	1453	1425
E	1471	1447
V	1472	1429
Y	1474	
T	1480	
S	1479	
M	1478	
F	1475	
X	1476	
W	1477	
h	R2	
j		
s	R6	
U	1482	
Z	1482	E71
a	1482	
b	1482	

BLUE
BROWN
GREEN
RED
YELLOW
BLACK
WHITE

R5
R4

J31X

1441	1
1452	2
3A	3
1432	4
1433	5
1430	6
1435	7
1434	8
1428	9
1453	10

D55

J43X

1471	1
1472	2
1474	3
1480	4
1479	5
1478	6
1475	7
1476	8
1477	9

F42

COLUMN SWITCH (S3)

P18

1	16A	to K8-86 (F152)
2	16	to K7-86 (F153)
3	16	to PX15-M (E116)
4	1569	to CB37/1 (B152)
5	1527	to J2-5 (B186)
6	1590	to J2-1 (A186)
7	1597	to PX21-6 (B133)
8	1424	to PX21-5 (B133)
9	1599	to PX21-1 (A133)
10		
11		
12	25	to K32-86 (A147)

HORN PUSHBUTTON SWITCH

COLUMN SWITCH (S3)

J19

1	1581	to TB1-46 (E129)
2	461B	to D1B-4 (C138)
3	460B	to D2A-2 (D138)
4	1524	to TB1-43 (E129)
5	1566	to PX14-2 (G113)
6	1594	to K10-30 (F150)
7		
8		
9		
10		
11		
12	1568	to PX14-6 (G113)

FREQUENCY DIVIDER (A7)

INPUT (+)
OUTPUT (+)
+24V POWER
INPUT (-)
OUTPUT (-)
GROUND

PX26

1	1550	to J913-12 (C121)
2	1444	to J31-8 (F55)
3	1433	to J31-26 (H55)
4	1692	to TB1-36 (G129)
5	3083	to J31-16 (G55)
6	1432	to J31-25 (H55)
	3083	to TB2-26 (F133)

STOP LIGHT SWITCH (S10A)

TL152 — TL153 — 3043 — 3043 to TB2/47 (C131)
1594 — 1594 to K6-85 (F143)

STOP LIGHT SWITCH (S10B)

TL154 — TL155 — 3043
1594

FRONT AIR PRESSURE TRANSMITTER

SENSOR (MT4) / SWITCH (S20)

TL150 — 1791 — to PX4-4 (G97)
P
N/C
TL156 — 1530 — to PX7-25 (D105)

REAR AIR PRESSURE TRANSMITTER

SENSOR (MT5) / SWITCH (S29)

TL151 — 1792 — to PX5-4 (B97)
P
N/C
TL157 — 1525 — to PX7-13 (C105)

FIGURE FO-1. ELECTRICAL SYSTEM SCHEMATIC
FOLDOUT 20 OF 34

SIZE B | ILL. NO. 5WD0116B | FP-39/ (FP-40 BLANK)

CAB - DASH - RIGHT - UNDERDASH

WINDSHIELD WIPER MOTOR (B2)

B2

PX22

EMI FILTER (FL2)

P2 J2

1590 to P18-6 (B178)
1569 to CB37/1 (B152)
3037 to TB2-39 (G135)
1916 to PX21-3 (A133)
1527 to P18-5 (B178)

TRANSMISSION DIMMER MODULE

J7

1426 to TB1-9 (F127)
1408 to K29-86 (F142)
3099 to TB2-58 (B132)
158

WTEC II VEHICLE INTERFACE MODULE (A10)

PX33

to J51-2 (D42) 490
to J118-14 (E162) 163
to J913-7 (B121) 161
to CB73/8 (E150) 1903
to TB1-60 (B129) 1460
1697
to TB1-33 (G129) 1692
to J913-14 (D121) 2019
to J913-15 (D121) 1904
to TB1-34 (G129) 1692
to K1-86 (F149) 1691
to PX8-4 (G103) 1793
to CB35/2 (E149) 1900
to CB35/2 (E149) 1900
158
to TB2-16 (F132) 3101
to TB2-17 (G132) 3102

A1 A2 A3 B1 B2 B3 C1 C2 C3 D1 D2 D3 E1 E2 E3 F1 F2 F3 G1 G2 G3 H1 H2 H3 J1 J2 J3 K1 K2 K3

490 REV
1903
10A
1460
163 SF01
161
1697 SF4
1692
2019 SF02
1904
1692 NS
1691
FL
1793
1900
10A
1900
158
3101
3102

SF02 132
SF04 125
RW 113
SF01 114
NS 123
SF3 112
115
S02
S03

P116

143A 132 123 136A 146 143C 157 125 112 136C 113 115 158 114

A1 B1 C1 D1 E1 F1 A2 B2 C2 D2 E2 F2 A3 B3 C3 D3 E3 F3

D159

157 136A 136C 158 143A 143C

TURN SIGNAL FLASHER (A1)

OUTPUT
INPUT
GROUND

PX20

1568 to PX14-6 (G113)
1567 to PX14-5 (G113)
3049 to TB2-55 (C132)

PX50

to TB2-14 (F132) 3008
(WTEC II) 1697
(WTEC III) K34-87A (B293) 1697

ROTARY WARNING LIGHTS CONNECTION

P65 J65

to K13-87 (B149) 509 — 509 to J62-B (E88)

CHEMICAL ALARM CONNECTION

P99 J99

to J43-6 (H42) 1803 — 1803 to TL88 (B88)
to J43-7 (H42) 1804 — 1804 to TL98 (B88)

FAN SOLENOID (L1)

to K15-86 (A141) 1806
to PX1-1 (A92) 1806
to TB2-79 (C135) 3011

PX34

L

CAB RADIO CONNECTION

J78

to TB2-21 (G133) 3018
to K53-87A (H141) 1906
to TB2-23 (G133) 3019

J113

G123

CTIS PRESSURE TRANSDUCER

CTIS PNEUMATIC CONTROLLER

FIGURE FO-1. ELECTRICAL SYSTEM SCHEMATIC
FOLDOUT 21 OF 34

SIZE B | ILL. NO. 5WD0117B | FP-41/ (FP-42 BLANK)

REAR LIGHTS

CAB-DASH-RIGHT-POWER DISTRIBUTION PANEL

D43 — P51

1	490
2	21
3	460B
4	461B
5	23
6	489
7	23T
8	489T
9	484T
10	460B
11	461B
12	22C
13	1404
14	461T
15	460T
16	24
17	

E21 — P53R — F200

3094	1
489T	2
3094	3
1404	4
460T	5
23T	6
484T	7
461T	8
484T	9
484T	10

E14 — E20 — P52R — B203

21	1
	2
489	3
3045	4
461B	5
22C	6
460B	7

3045 / 3095 — TL92

E19

E18

TL93

E17

E16

P85	489	TL15	3094	DS65	LH SIDE MARKER LIGHT
P86	489	TL16	3094	DS66	LH REAR MARKER LIGHT
P74	461B			DS37	LH TURN AND STOPLIGHT
P78	21			DS72	LH TAILLIGHT
P76	24			DS51	BLACKOUT MARKER LH REAR
P77	23	TL18	3094 / 3094	DS35	BLACKOUT STOP LH REAR
P87	490	TL17	3094	DS45	BACKUP LIGHT

LH REAR COMPOSITE LIGHT

E15

P54	489	TL30	3094	DS69	LEFT REAR MARKER
P56	489	TL31	3094	DS70	MIDDLE REAR MARKER
P58	489	TL32	3094	DS71	RIGHT REAR MARKER

P61	460B			DS38	RH TURN AND STOPLIGHT
P64	21			DS73	RH TAILLIGHT
P62	24			DS52	BLACKOUT MARKER RH REAR
P63	23	TL21	3095 / 3095	DS36	BLACKOUT STOP RH REAR
P89	489	TL20	3095 / 3095	DS68	RH REAR MARKER LIGHT
P88	489	TL19	3095	DS67	RH SIDE MARKER LIGHT

RH REAR COMPOSITE LIGHT

FIGURE FO-1. ELECTRICAL SYSTEM SCHEMATIC
FOLDOUT 22 OF 34

SIZE B | ILL. NO. 5WD0118B | FP-43/ (FP-44 BLANK)

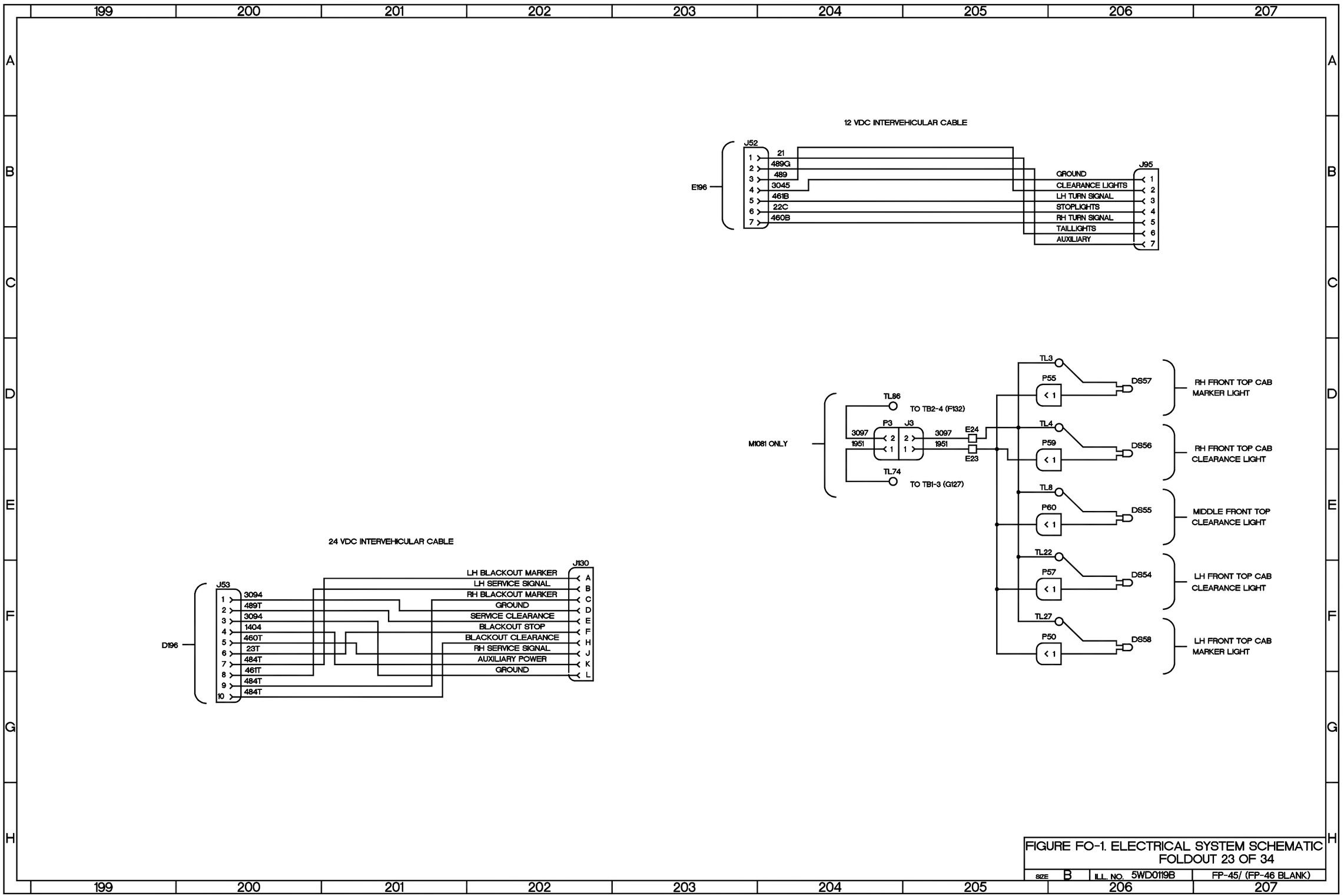


FIGURE FO-1. ELECTRICAL SYSTEM SCHEMATIC
FOLDOUT 23 OF 34

SIZE B | ILL. NO. 5WD0119B | FP-45/ (FP-46 BLANK)

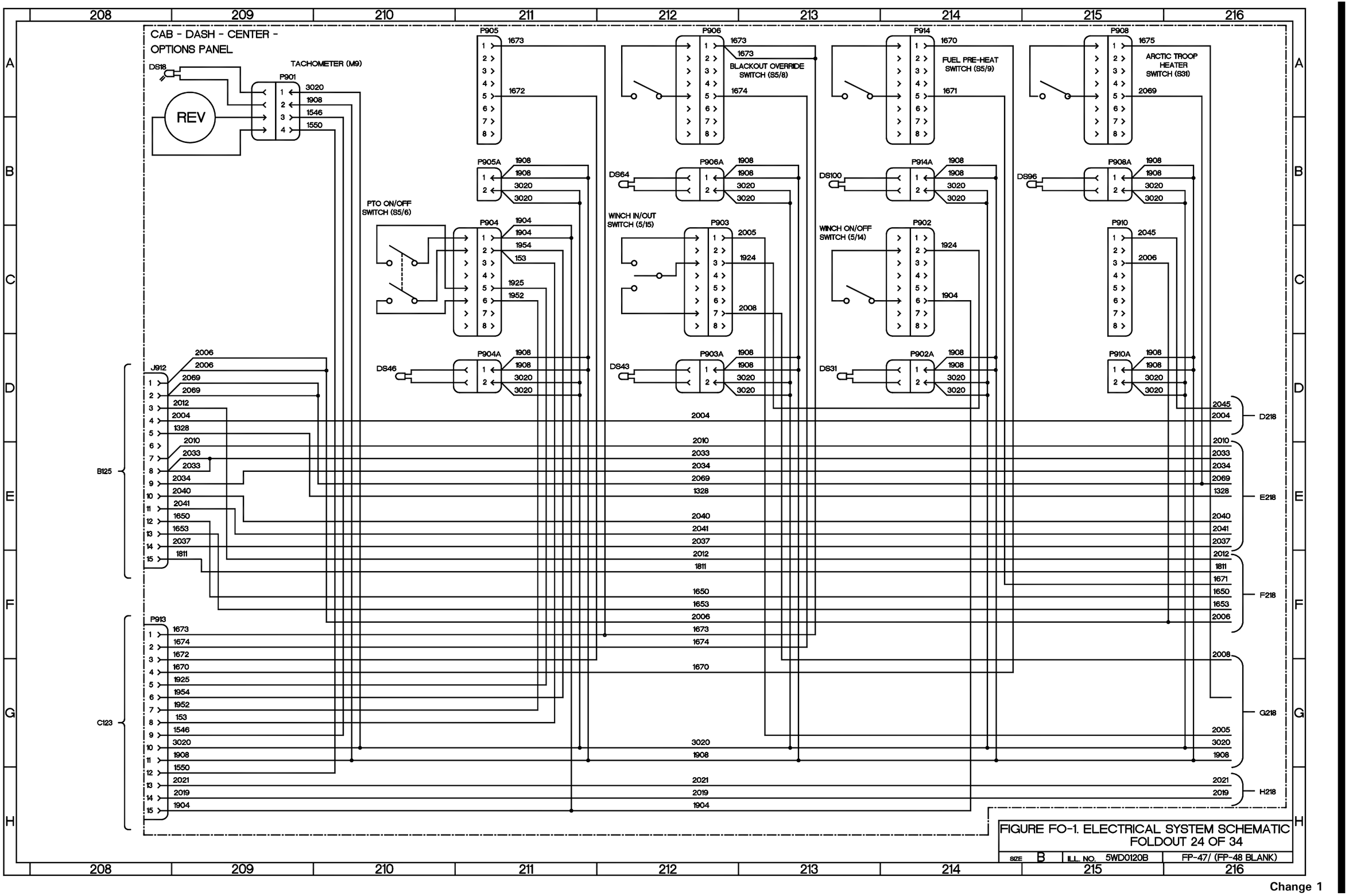


FIGURE FO-1. ELECTRICAL SYSTEM SCHEMATIC
FOLDOUT 24 OF 34

SIZE B | ILL. NO. 5WD0120B | FP-47/ (FP-48 BLANK)

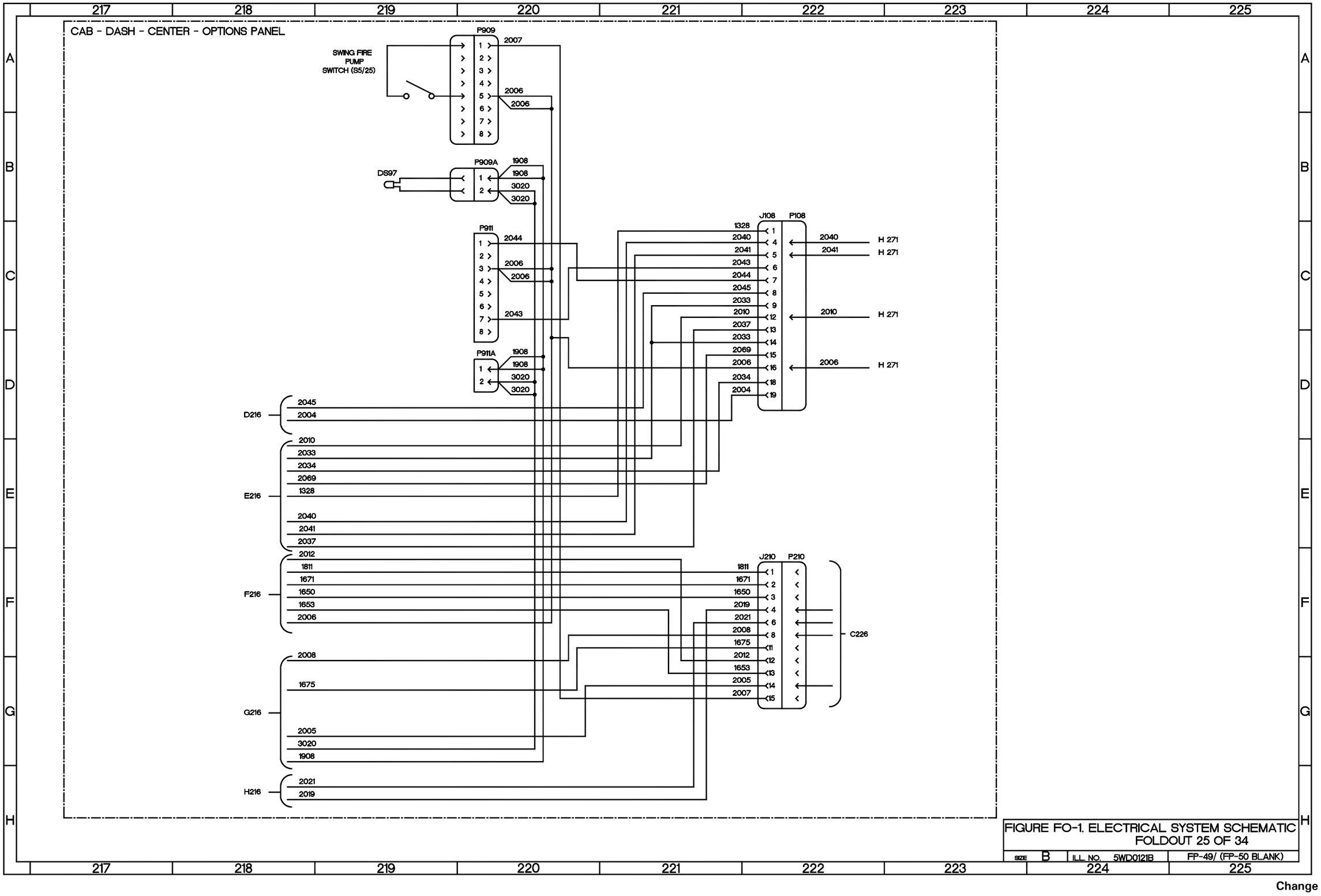


FIGURE FO-1. ELECTRICAL SYSTEM SCHEMATIC
FOLDOUT 25 OF 34

SIZE	ILL. NO.	
B	5WD0121B	FP-49/ (FP-50 BLANK)

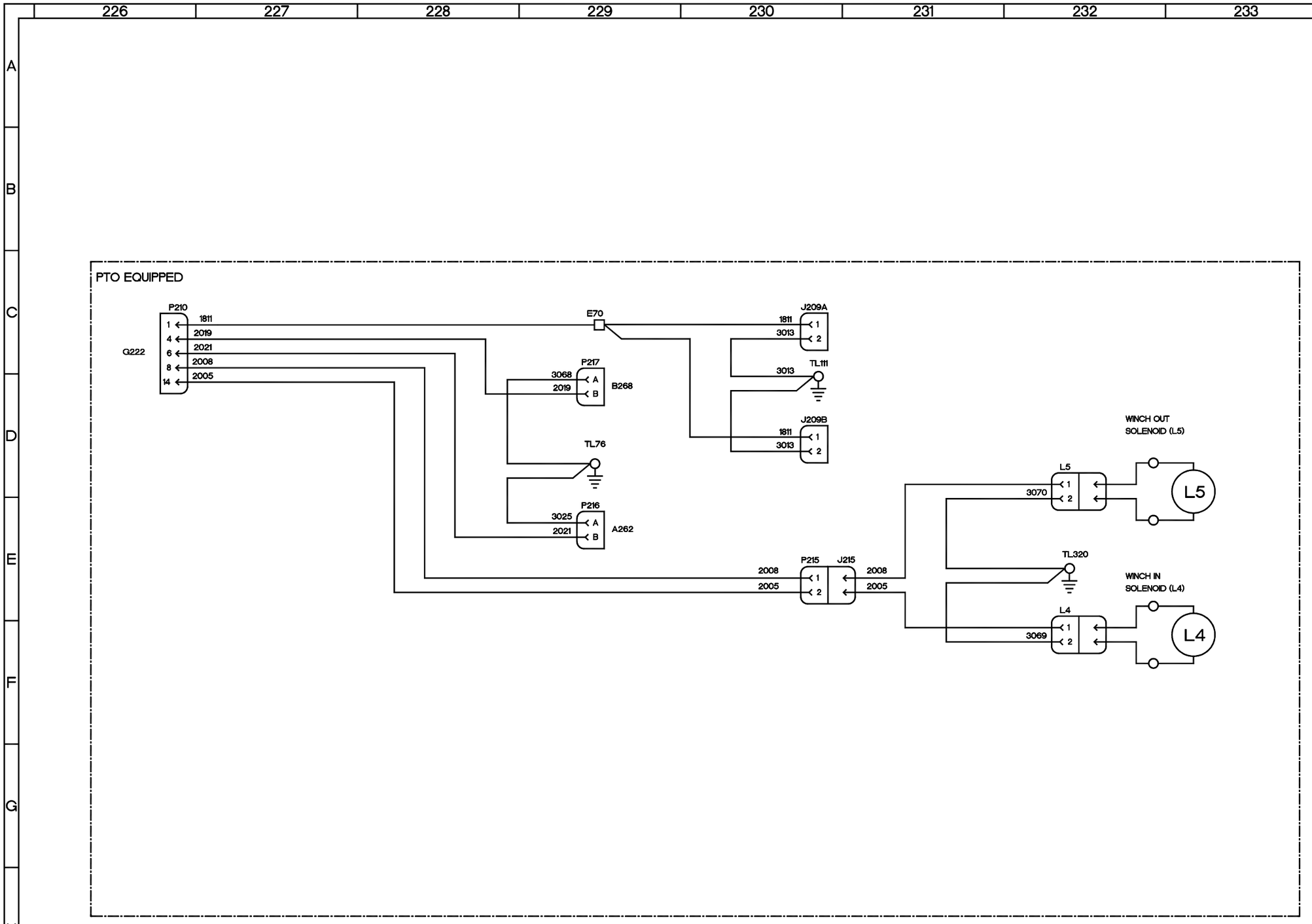


FIGURE FO-1. ELECTRICAL SYSTEM SCHEMATIC
FOLDOUT 26 OF 34

SIZE	ILL NO.	
B	5WD0122B	FP-51/ (FP-52 BLANK)

DELETED

FIGURE FO-1. ELECTRICAL SYSTEM SCHEMATIC
FOLDOUT 27 OF 34

SIZE B | ILL. NO. 5WD0123B | FP-53/ (FP-54 BLANK)

DELETED

FIGURE FO-1. ELECTRICAL SYSTEM SCHEMATIC
FOLDOUT 28 OF 34

SIZE B | ILL. NO. 5WD0124B | FP-55/ (FP-56 BLANK)

DELETED

FIGURE FO-1. ELECTRICAL SYSTEM SCHEMATIC
FOLDOUT 29 OF 34

SIZE B | ILL. NO. 5WD0125B | FP-57/ (FP-58 BLANK)

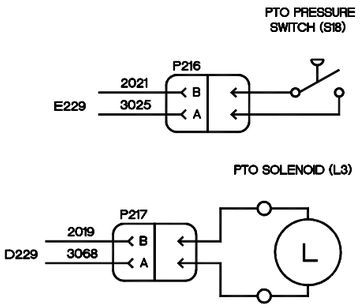


FIGURE FO-1. ELECTRICAL SYSTEM SCHEMATIC
FOLDOUT 30 OF 34

SIZE B | ILL. NO. 5WD0126B | FP-59/ (FP-60 BLANK)

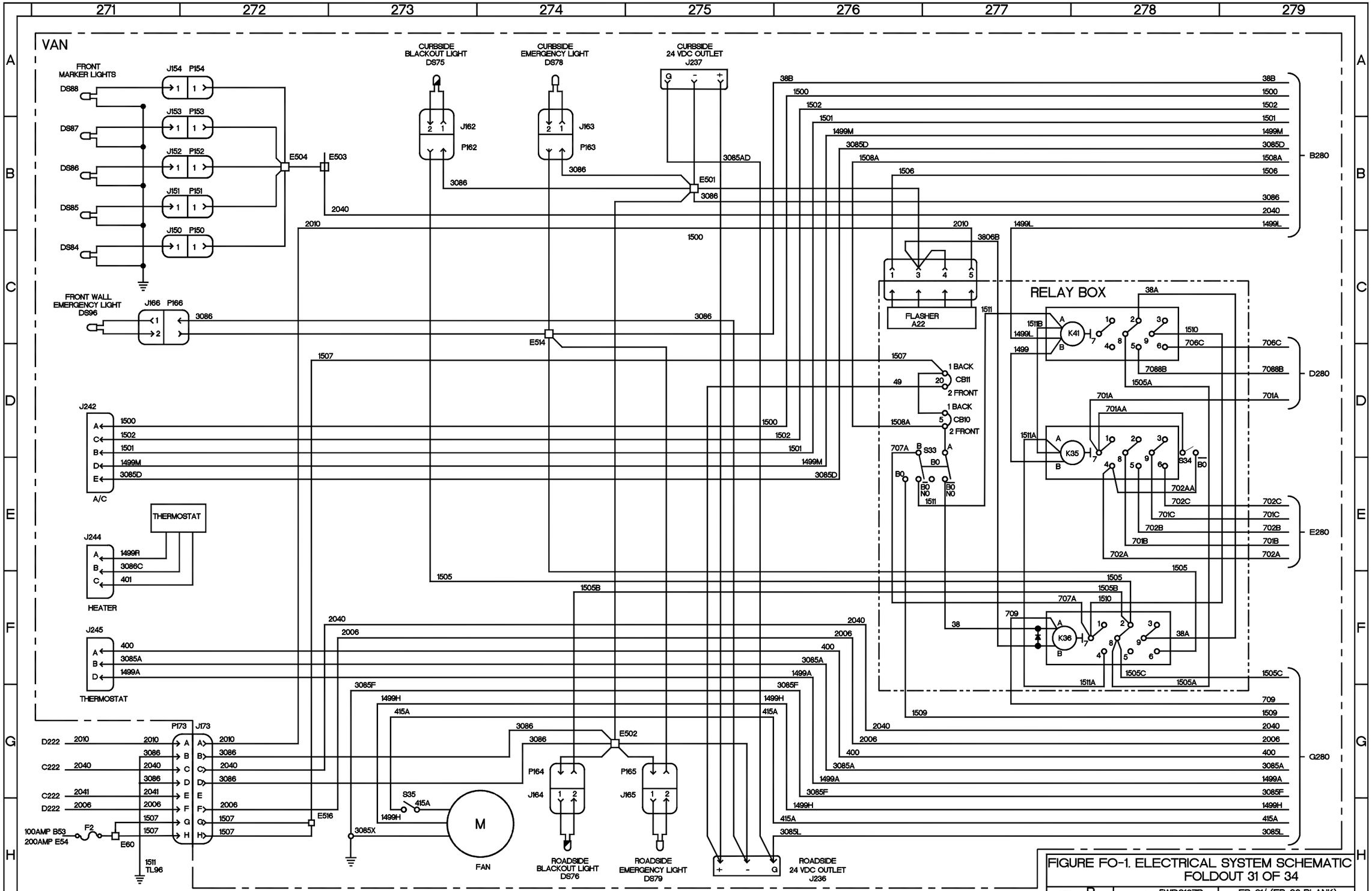


FIGURE FO-1. ELECTRICAL SYSTEM SCHEMATIC
FOLDOUT 31 OF 34

SIZE B | ILL NO. 5WD0127B | FP-61/ (FP-62 BLANK)

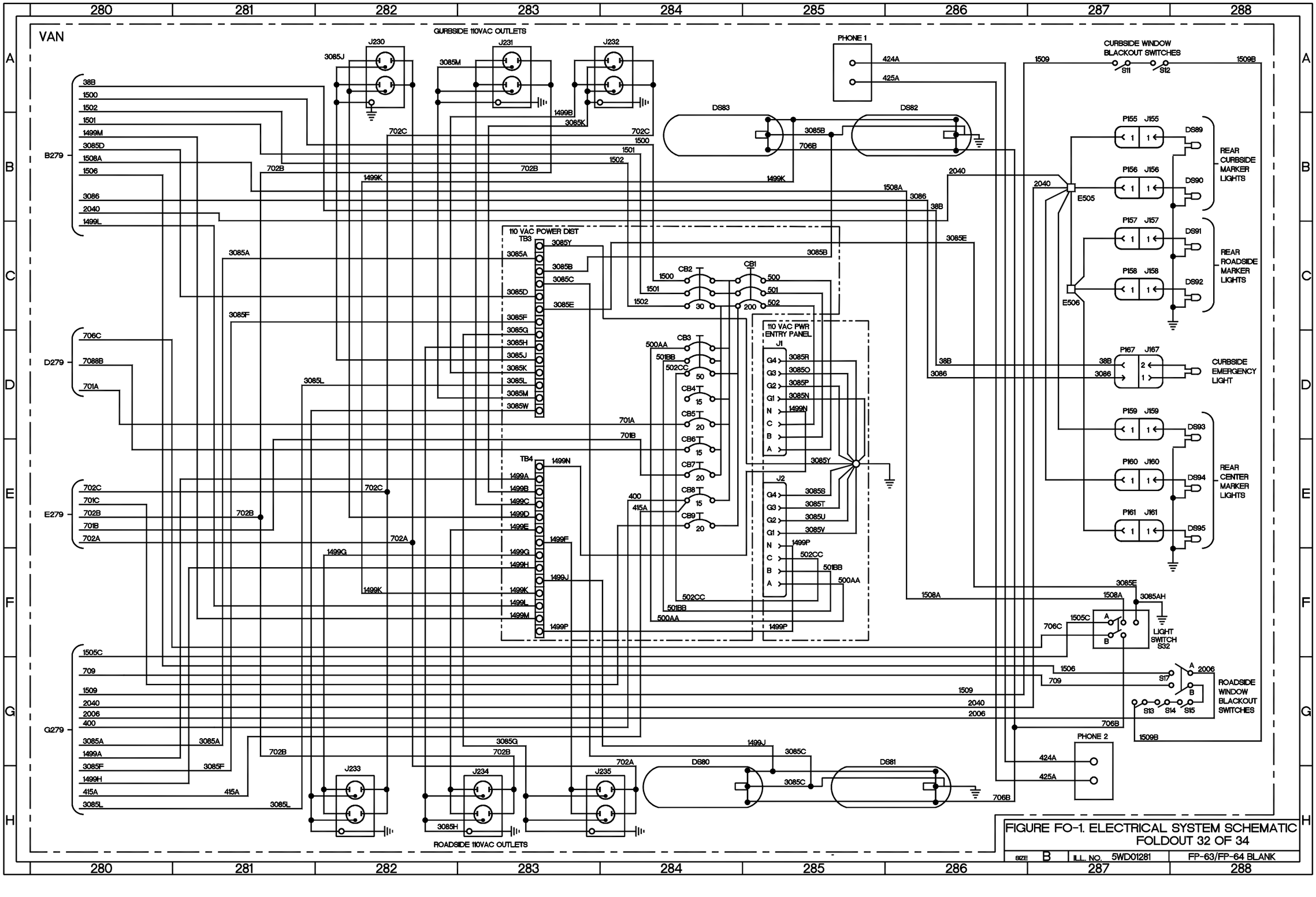


FIGURE FO-1. ELECTRICAL SYSTEM SCHEMATIC
FOLDOUT 32 OF 34

SIZE	ILL. NO.	
B	5WD01281	FP-63/FP-64 BLANK

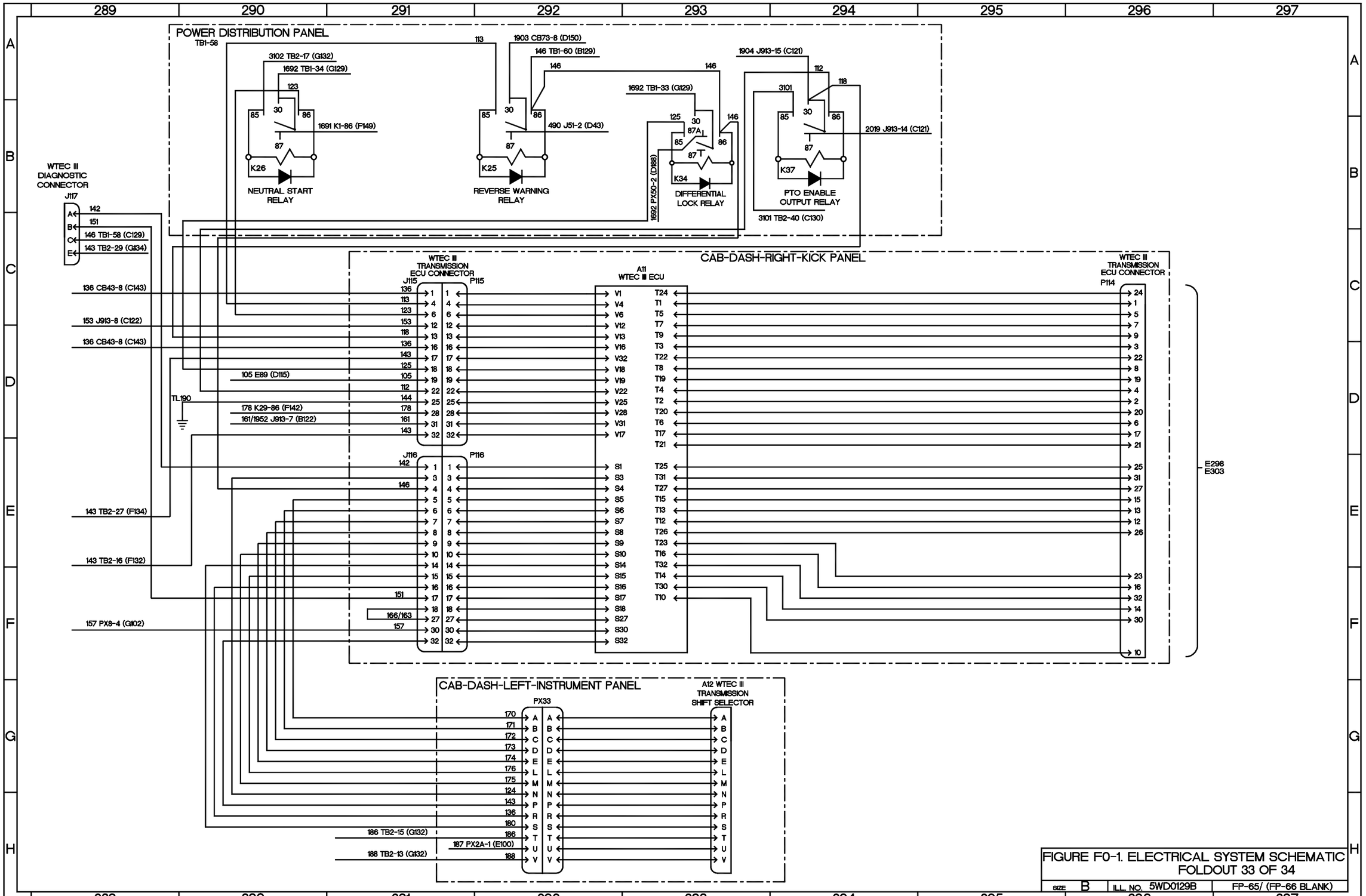


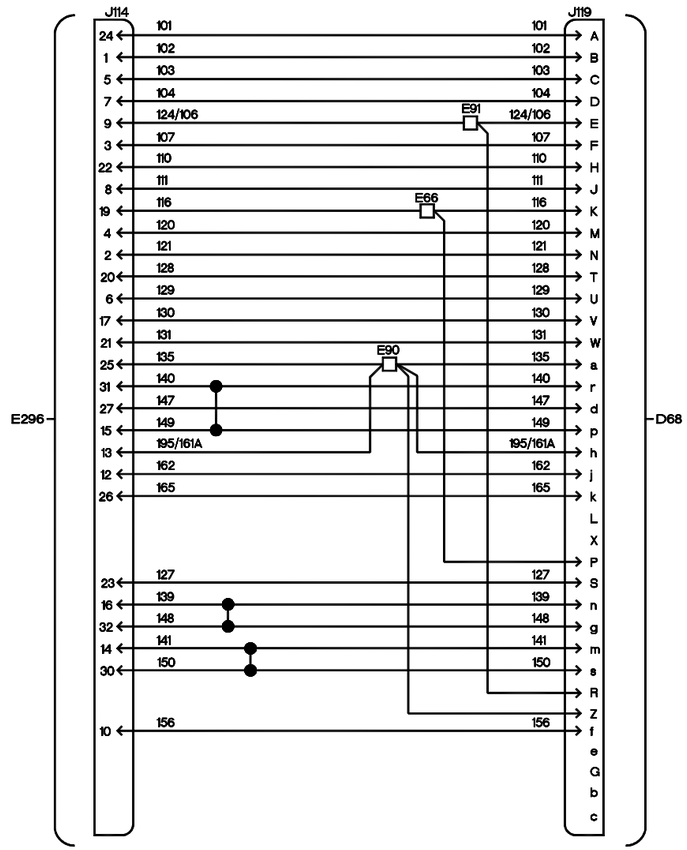
FIGURE F0-1. ELECTRICAL SYSTEM SCHEMATIC
FOLDOUT 33 OF 34

SIZE B | ILL. NO. 5WD0129B | FP-65/ (FP-66 BLANK)

298 299 300 301 302 303 304 305 306

TRANSMISSION SERIAL #: 6510090785 AND LOWER

WTEC III CAB TRANSMISSION HARNESS (TID1)



TRANSMISSION SERIAL #: 6510090786 AND HIGHER

WTEC III CAB TRANSMISSION HARNESS (TID2)

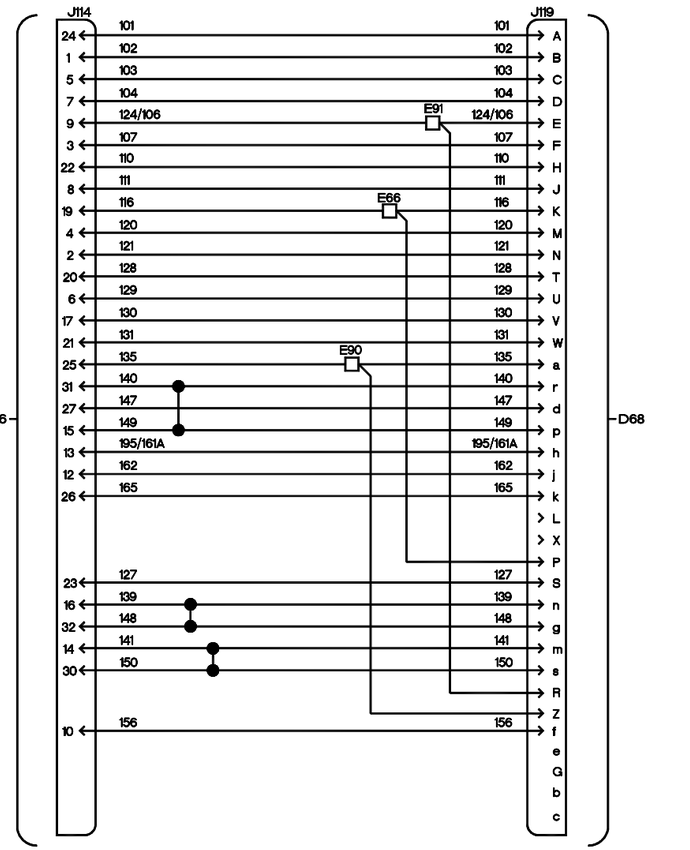


FIGURE F0-1. ELECTRICAL SYSTEM SCHEMATIC
FOLDOUT 34 OF 34

SIZE B | ILL. NO. 5WD0130B | FP-67/ (FP-68 BLANK)

REAR AXLE BRAKE CHAMBER	FRONT AXLE BRAKE CHAMBER	COUPLER AIR BRAKE	AIR DRYER	AIR CLEANER INTAKE	AIR COMPRESSOR WITH GOVERNOR	AIR TANKS	DASH GAUGE
MANUAL VALVE	ONE WAY CHECK VALVE	FAN CLUTCH	MODULATED CONTROL VALVE	QUICK RELEASE VAVLE	TWO WAY CHECK VALVE	TIRE	PRESSURE SWITCH
PRESSURE RELIEF VALVE	FOOT CONTROL VALVE	PARK CONTROL VALVE (HAND OPERATED)	TRAILER AIR SUPPLY VALVE (HAND OPERATED)	LOAD SENSING VALVE (MECHANICALLY CONTROLLED)	DIRECTIONAL RELAY VALVE	CONTROL VALVE WITH TWO WAY CHECK VALVE	STOPLIGHT SWITCH
CONNECTION	SUPPLY AIR HOSE	NO CONNECTION	DELIVERY AIR HOSE	PARK/EMERGENCY AIR HOSE	AIR BRAKE PROTECTING VALVE	CTIS MANIFOLD VALVE	AIR BR AKE PRESSURE TRANSMITTER
EXH KNEELING VALVE	AIR/HYDRAULIC INVERSION VALVE	DELIVERY AIR HOSE NO CONNECTION	WHEEL VALVE	EXH BLEED VALVE			

FIGURE F0-2 PNEUMATIC SYSTEM SCHEMATIC
FOLDOUT 1 OF 4

SIZE B | ILL. NO. 5PD01AL1 | FP-1/FP-2 BLANK

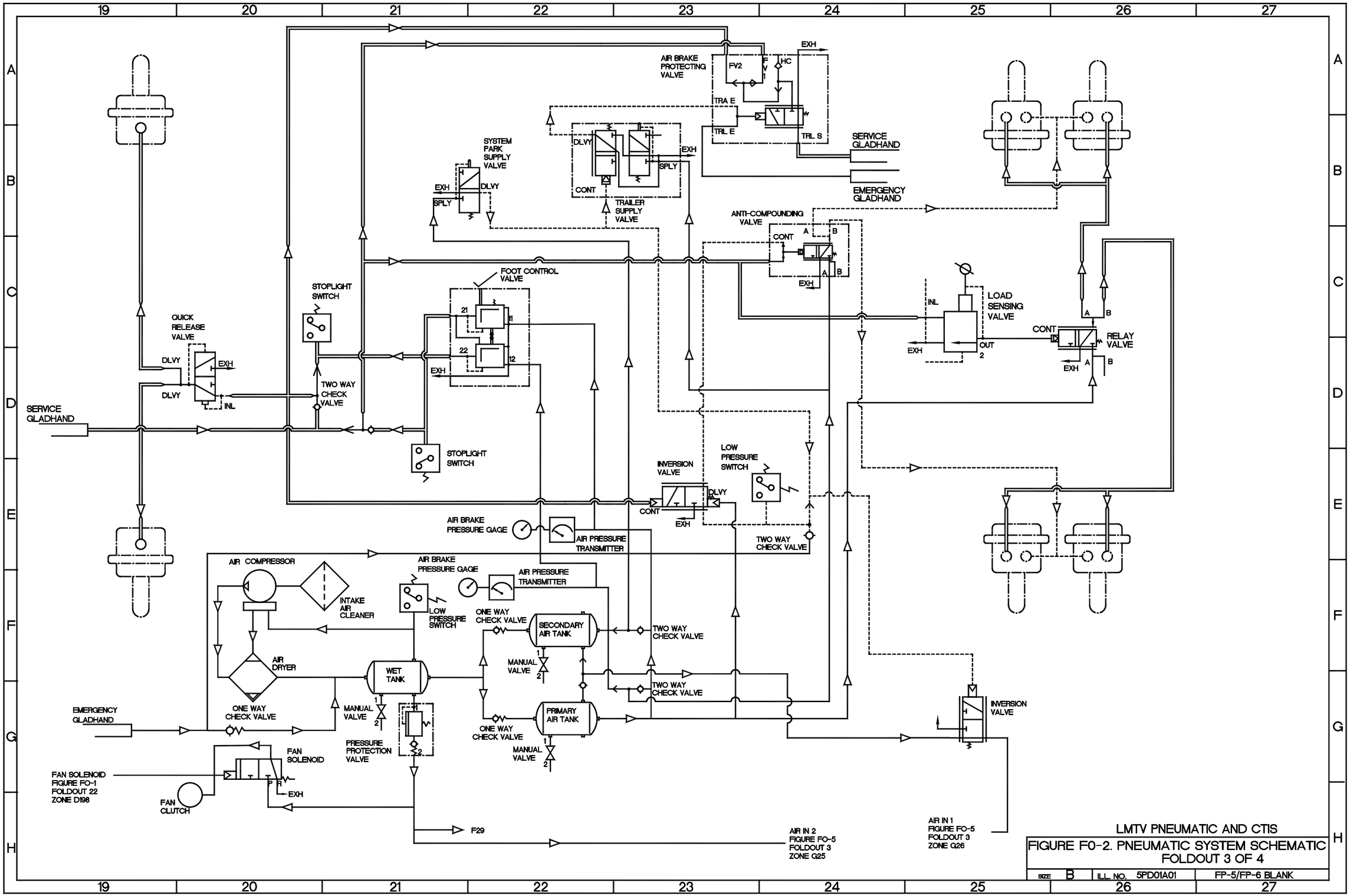
SH	ZONE	DESCRIPTION
3	E22	AIR BRAKE PRESSURE GAGE
3	F22	AIR BRAKE PRESSURE GAGE
3	A23	AIR BRAKE PROTECTING VALVE
3	F20	AIR COMPRESSOR
3	F20	AIR DRYER
3	E22	AIR PRESSURE TRANSMITTER
3	E22	AIR PRESSURE TRANSMITTER
3	C24	ANTI-COMPOUNDING VALVE
4	E31	CONTROL VALVE
4	E31	CTIS MANIFOLD VALVE
4	E32	DEFLATE VALVE
3	G19	EMERGENCY GLADHAND
3	B24	EMERGENCY GLADHAND
3	H20	FAN CLUTCH
3	G20	FAN SOLENOID
3	C22	FOOT CONTROL VALVE
3	F20	INTAKE AIR CLEANER
3	G25	INVERSION VALVE
3	E23	INVERSION VALVE
4	C28	KNEELING VALVE
4	E28	KNEELING VALVE
3	C25	LOAD SENSING VALVE
3	E23	LOW PRESSURE SWITCH
3	F21	LOW PRESSURE SWITCH
3	F22	MANUAL VALVE
3	G22	MANUAL VALVE
3	G21	MANUAL VALVE
3	F22	ONE WAY CHECK VALVE
3	G22	ONE WAY CHECK VALVE
3	G20	ONE WAY CHECK VALVE
3	G21	PRESSURE PROTECTION VALVE
3	G22	PRIMARY AIR TANK
3	C20	QUICK RELEASE VALVE
4	C34	QUICK RELEASE VALVE
4	D30	QUICK RELEASE VALVE
3	D26	RELAY VALVE
3	F22	SECONDARY AIR TANK

SH	ZONE	DESCRIPTION
3	D19	SERVICE GLADHAND
3	B24	SERVICE GLADHAND
3	C20	STOPLIGHT SWITCH
3	E21	STOPLIGHT SWITCH
4	F32	SUPPLY VALVE
3	B21	SYSTEM PARK SUPPLY VALVE
3	B22	TRAILER SUPPLY VALVE
3	D21	TWO WAY CHECK VALVE
3	E24	TWO WAY CHECK VALVE
3	F23	TWO WAY CHECK VALVE
3	G23	TWO WAY CHECK VALVE
3	F21	WET TANK
4	C29	WHEEL VALVE
4	C33	WHEEL VALVE
4	E29	WHEEL VALVE
4	E33	WHEEL VALVE

LMTV PNEUMATIC AND CTIS

FIGURE F0-2. PNEUMATIC SYSTEM SCHEMATIC
FOLDOUT 2 OF 4

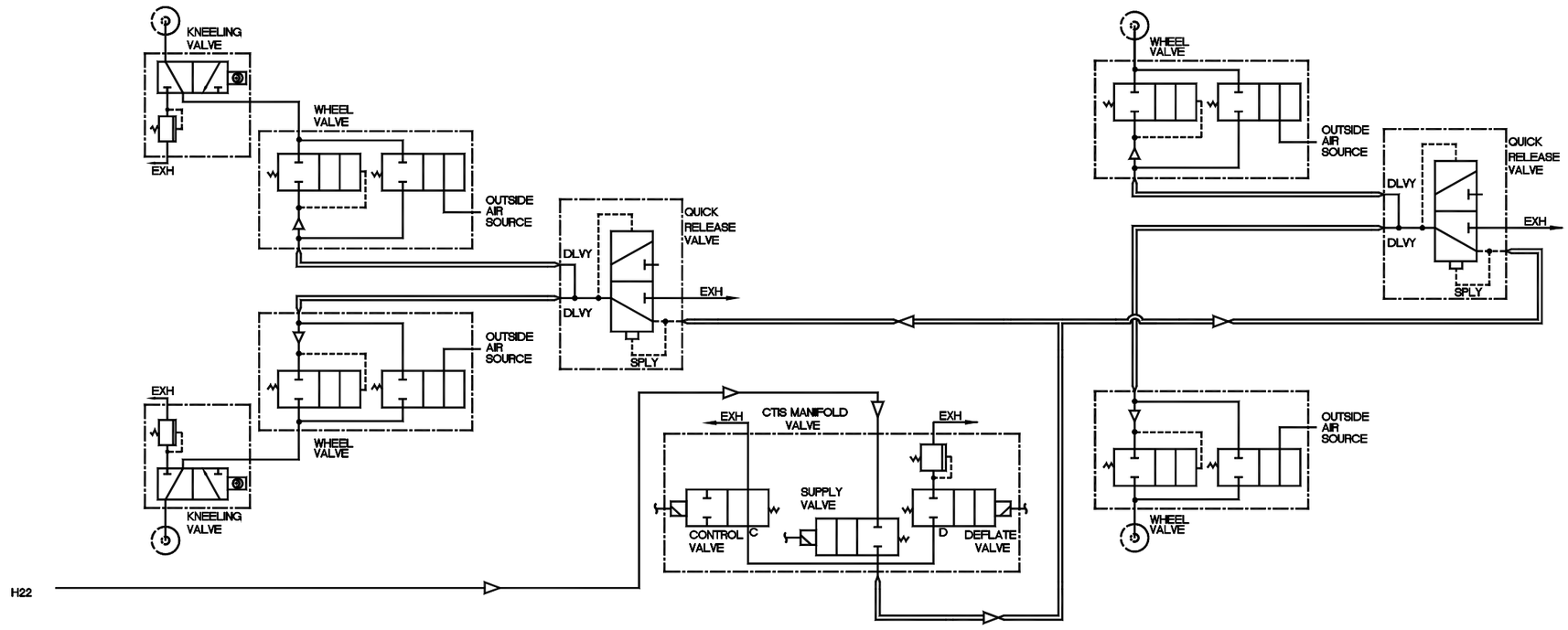
SIZE	ILL. NO.	
B	5PD01AL2	FP-3/FP-4 BLANK



LMTV PNEUMATIC AND CTIS

FIGURE FO-2. PNEUMATIC SYSTEM SCHEMATIC FOLDOUT 3 OF 4

SIZE	ILL. NO.	
B	5PD01A01	FP-5/FP-6 BLANK



LMTV PNEUMATIC AND CTIS

FIGURE F0-2. PNEUMATIC SYSTEM SCHEMATIC FOLDOUT 4 OF 4

SIZE B | ILL. NO. 5PD01A02 | FP-7/FP-8 BLANK

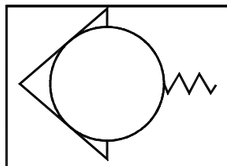
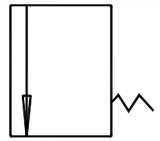
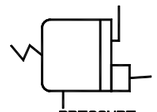
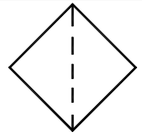
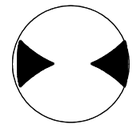
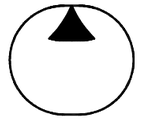
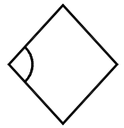
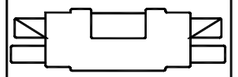
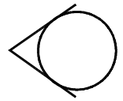
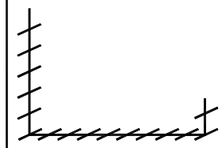
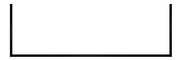
 CHECK VALVE	 BYPASS VALVE	 PRESSURE CONTROL VALVE	 AIR OR OIL FILTER	 MOTOR	 PUMP	PTO
 AIR LINE LUBRICATOR	 CYLINDER	 CHECK VALVE	FLOW CONTROL VALVE	 SUCTION LINE	 RESERVOIR	

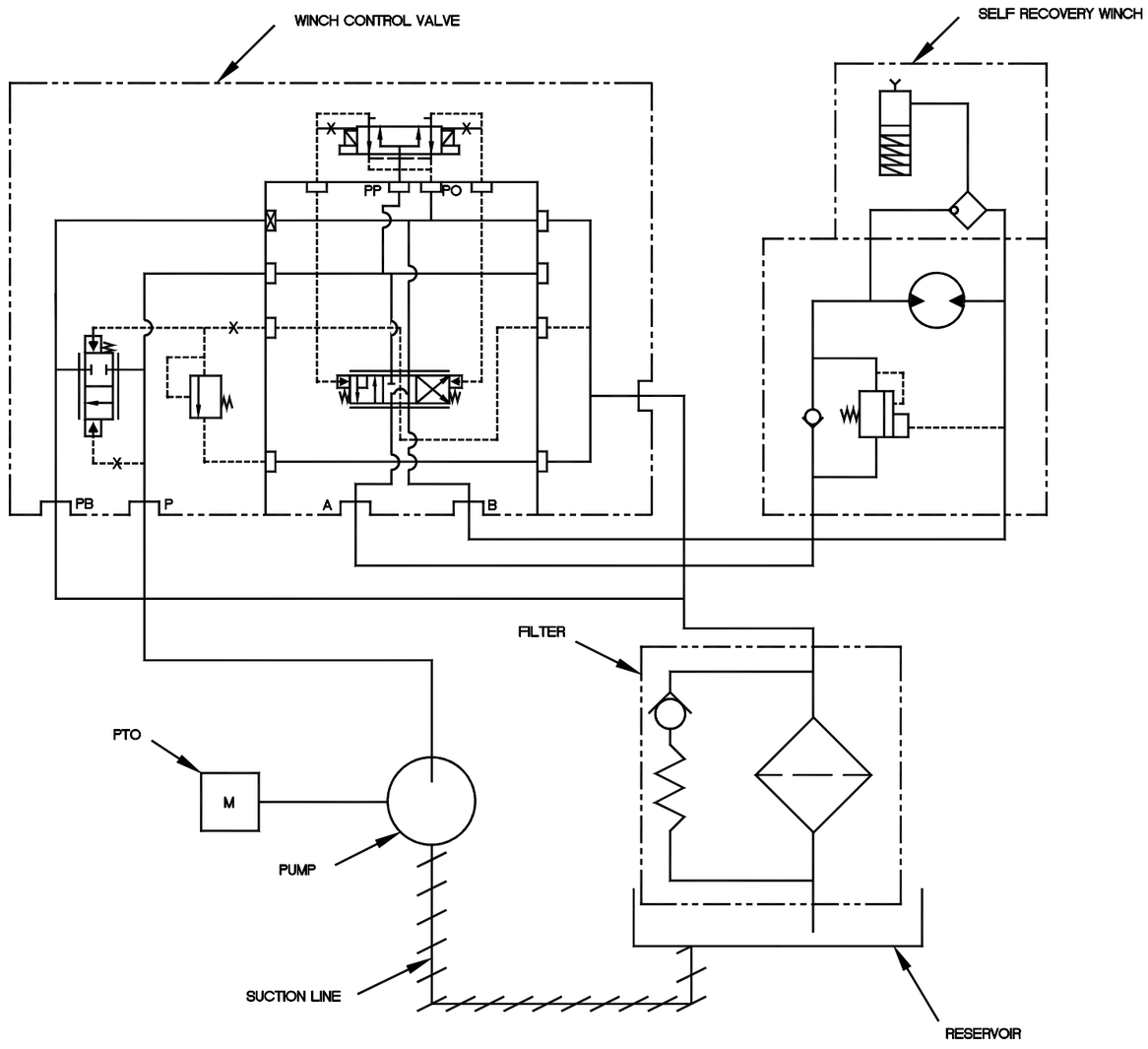
FIGURE FO-3 HYDRAULIC SYSTEM SCHEMATIC
FOLDOUT 1 OF 3

SIZE B | ILL. NO. 5HD01AL1 | FP-1/FP-2 BLANK

SHEET	ZONE	DESCRIPTION
3	B21	WINCH CONTROL VALVE
3	B24	SELF RECOVERY WINCH
3	F21	PTO
3	F22	PUMP
3	E23	FILTER
3	G23	RESERVOIR
3	G22	SUCTION LINE

FIGURE FO-3 HYDRAULIC SYSTEM SCHEMATIC
FOLDOUT 2 OF 3

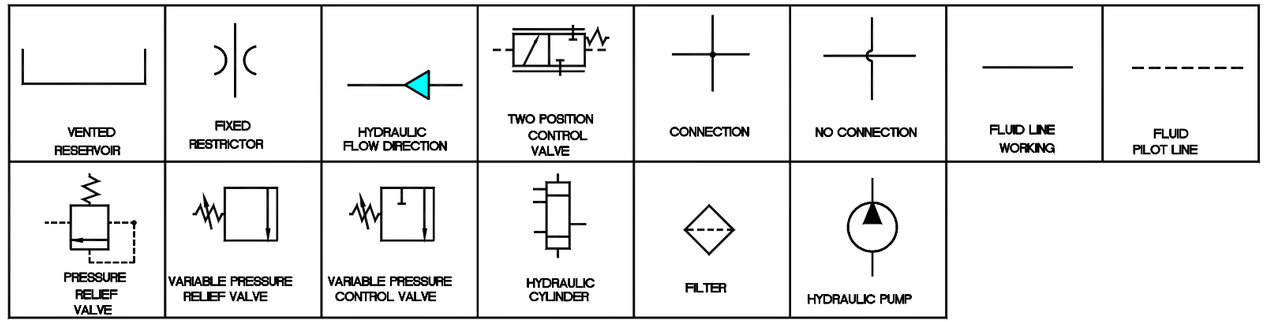
SIZE B | ILL NO. 5HD01-L2 | FP-3/FP-4 BLANK



LMTV TRUCK W/WINCH

FIGURE F0-3. HYDRAULIC SYSTEM SCHEMATIC
FOLDOUT 3 OF 3

SIZE	ILL. NO.	
B	5HD01-01	FP-5/FP-6 BLANK



SH	ZONE	DESCRIPTION
2	D11	FILTER
2	D14	FIXED RESTRICTOR
2	E17	HYDRAULIC CYLINDER
2	E13	HYDRAULIC PUMP
2	C13	PRESSURE RELIEF VALVE
2	D13	TWO POSITION CONTROL VALVE
2	E16	VARIABLE PRESSURE CONTROL VALVE
2	E16	VARIABLE PRESSURE RELIEF VALVE
2	C11	VENTED RESERVOIR

FIGURE FO-4 HYDRAULIC STEERING SYSTEM

FOLDOUT 1 OF 2

SIZE B | ILL NO. YSD01AL1 | FP-1/FP-2 BLANK

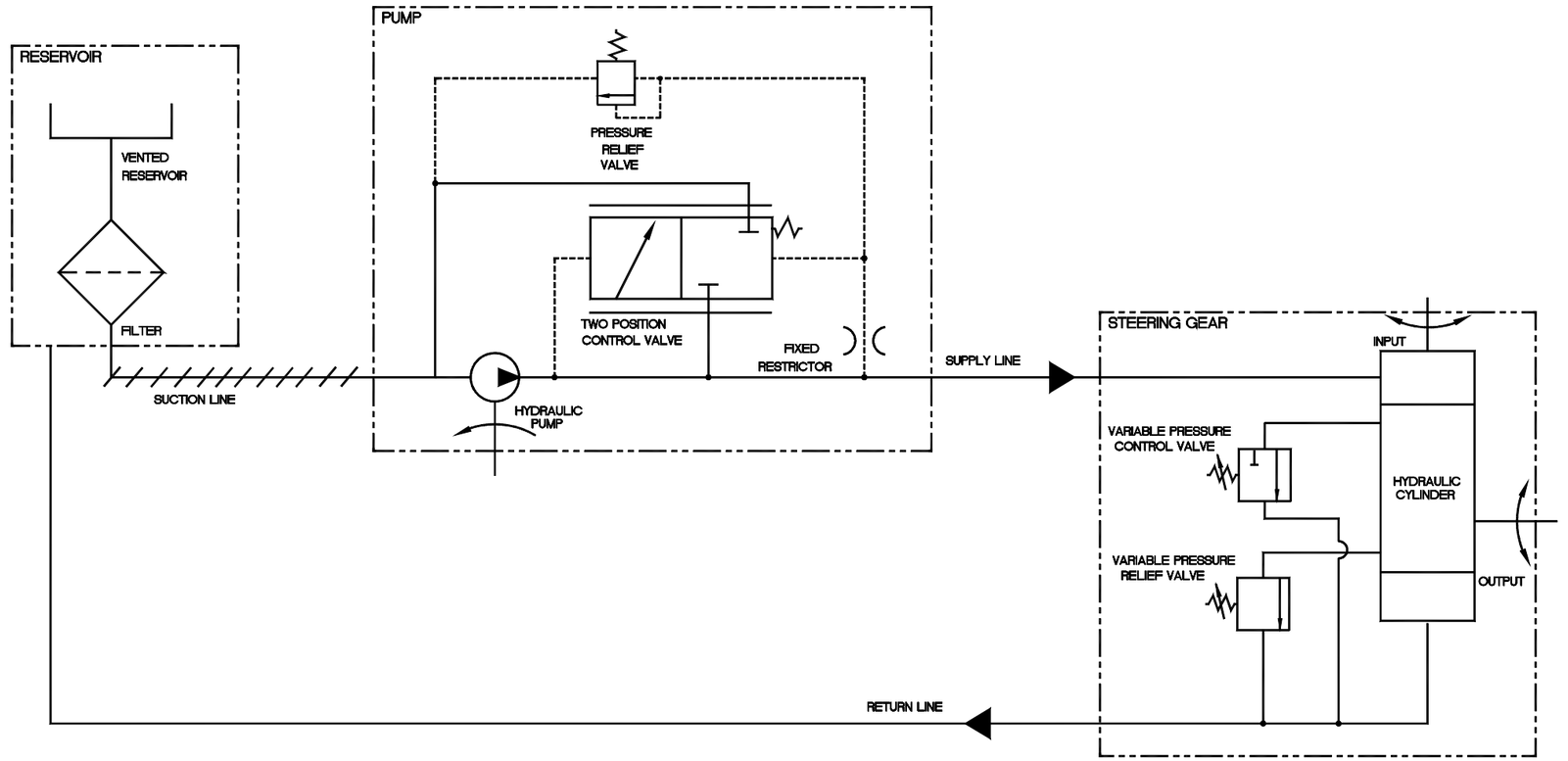


FIGURE FO-4 HYDRAULIC STEERING SYSTEM

FOLDOUT 2 OF 2

SIZE	ILL. NO.	
B	YSD01A01	FP-3/FP-4 BLANK

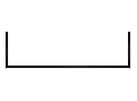
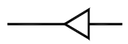
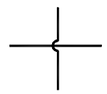
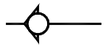
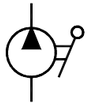
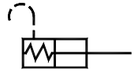
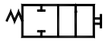
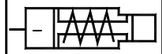
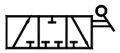
 VENTED RESERVOIR	ABOVE FLUID LEVEL RESERVOIR	HYDRAULIC FLOW DIRECTION	 PNEUMATIC FLOW DIRECTION	CONNECTION	 NO CONNECTION	FLUID LINE WORKING	FLUID PILOT LINE
FIXED RESTRICTOR	 CHECK VALVE	VARIABLE CONTROL CHECK VALVE	CHECK PILOT	PRESSURE RELIEF VALVE	FILTER	 HAND PUMP	DETENT
TWO POSITION CAB SUSPENSION VALVE	MUFFLER	HYDRAULIC CYLINDER	CAB AIR SUSPENSION W/DAMPER	 REAR CAB LATCH	 TWO POSITION AIR PUMP VALVE	 PRESSURE INTENSIFIER	 HEIGHT CONTROL VALVE
TWO POSITION CAB TILT VALVE	TWO POSITION SUSPENSION VALVE	TWO POSITION SPARE TIRE VALVE	THREE POSITION SELECTION VALVE				

FIGURE F0-5 AIR TRANSPORTABILITY
HYDRAULIC/PNEUMATIC SYSTEM SCHEMATIC

FOLDOUT 1 OF 3

SIZE B | ILL NO. YAD01AL1 | FP-1/FP-2 BLANK

SH	ZONE	DESCRIPTION
3	A25	CAB AIR SUSPENSION W/DAMPER
3	F21	CHECK PILOT
3	A22	CHECK VALVE
3	A23	CHECK VALVE
3	B22	CHECK VALVE
3	B23	CHECK VALVE
3	B25	CHECK VALVE
3	C20	CHECK VALVE
3	C21	CHECK VALVE
3	E19	CHECK VALVE
3	E24	CHECK VALVE
3	E25	CHECK VALVE
3	F19	CHECK VALVE
3	F21	CHECK VALVE
3	G21	CHECK VALVE
3	A22	FILTER
3	B22	FILTER
3	A24	FILTER
3	B24	FILTER
3	D19	FILTER
3	D20	FILTER
3	D21	FILTER
3	E19	FILTER
3	G19	FILTER
3	G21	FILTER
3	A22	FIXED RESTRICTOR
3	B22	FIXED RESTRICTOR
3	A23	FIXED RESTRICTOR
3	B23	FIXED RESTRICTOR
3	F19	HAND PUMP
3	B25	HEIGHT CONTROL VALVE
3	B22	HYDRAULIC CYLINDER
3	B23	HYDRAULIC CYLINDER
3	C21	HYDRAULIC CYLINDER
3	F20	MUFFLER
3	F21	PRESSURE INTENSIFIER
3	F19	PRESSURE RELIEF VALVE
3	A24	REAR CAB LATCH
3	E21	THREE POSITION SELECTION VALVE
3	D26	TWO POSITION AIR PUMP VALVE
3	D25	TWO POSITION CAB SUSPENSION VALVE
3	C24	TWO POSITION CAB TILT VALVE
3	C23	TWO POSITION SPARE TIRE VALVE
3	D21	TWO POSITION SUSPENSION VALVE
3	G22	VARIABLE CONTROL CHECK VALVE
3	G22	VENTED RESERVOIR

FIGURE F0-5 AIR TRANSPORTABILITY
HYDRAULIC/PNEUMATIC SYSTEM SCHEMATIC
FOLDOUT 2 OF 3

SIZE B | ILL NO. YAD01AL2 | FP-3/FP-4 BLANK

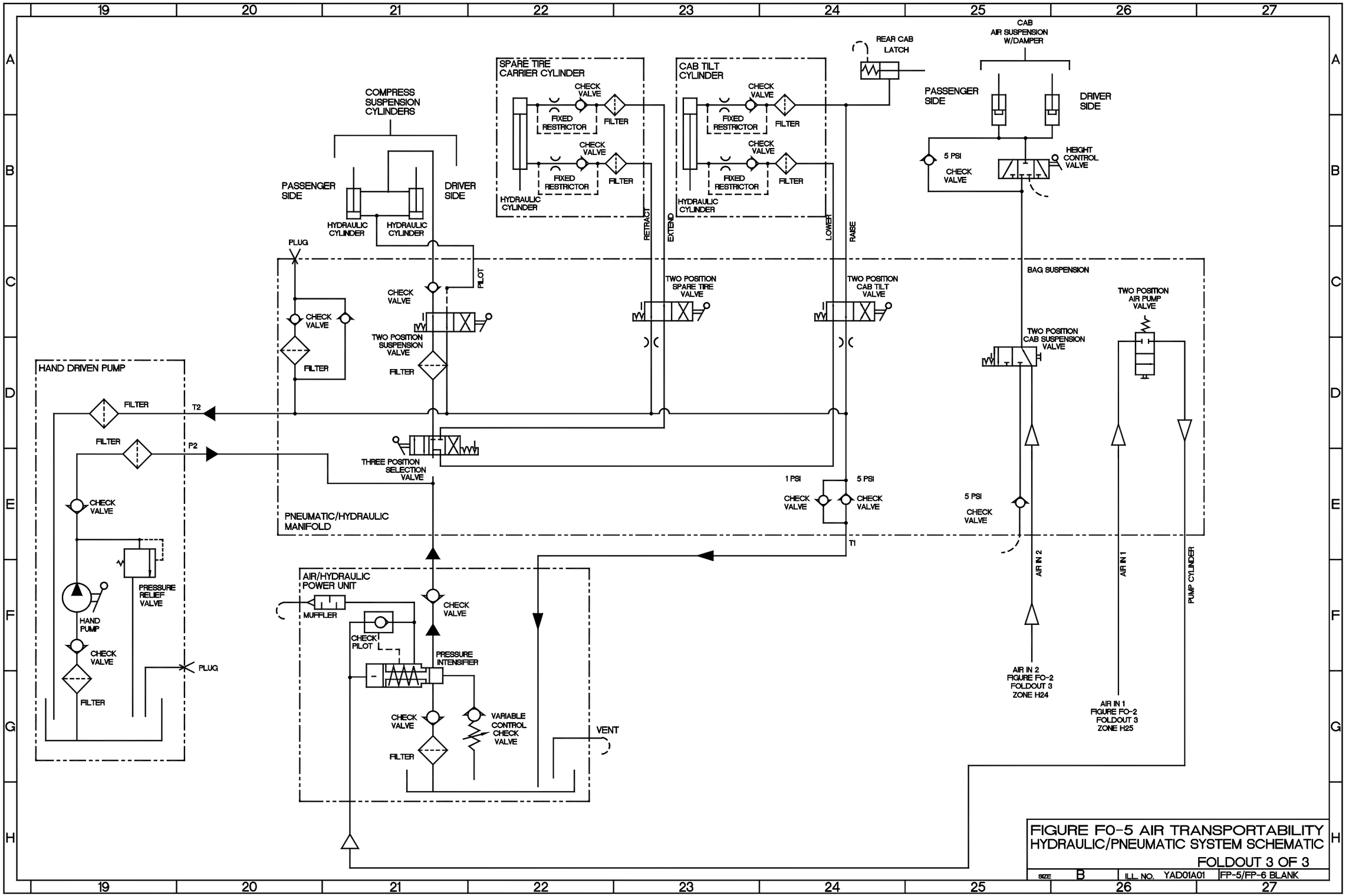


FIGURE FO-5 AIR TRANSPORTABILITY HYDRAULIC/PNEUMATIC SYSTEM SCHEMATIC
FOLDOUT 3 OF 3

SIZE B | ILL NO. YAD01A01 | FP-5/FP-6 BLANK

THE METRIC SYSTEM AND EQUIVALENTS

LINEAR MEASURE
1 Centimeter = 10 Millimeters = 0.01 Meters = 0.3937 Inches
1 Meter = 100 Centimeters = 1000 Millimeters = 39.37 Inches
1 Kilometer = 1000 Meters = 0.621 Miles

SQUARE MEASURE
1 Sq Centimeter = 100 Sq Millimeters = 0.155 Sq Inches
1 Sq Meter = 10,000 Sq Centimeters = 10.76 Sq Feet
1 Sq Kilometer = 1,000,000 Sq Meters = 0.386 Sq Miles

WEIGHTS
1 Gram = 0.001 Kilograms = 1000 Milligrams = 0.035 Ounces
1 Kilogram = 1000 Grams = 2.2 Lb
1 Metric Ton = 1000 Kilograms = 1 Megagram = 1.1 Short Tons

CUBIC MEASURE
1 Cu Centimeter = 1000 Cu Millimeters = 0.06 Cu Inches
1 Cu Meter = 1,000,000 Cu Centimeters = 35.31 Cu Feet

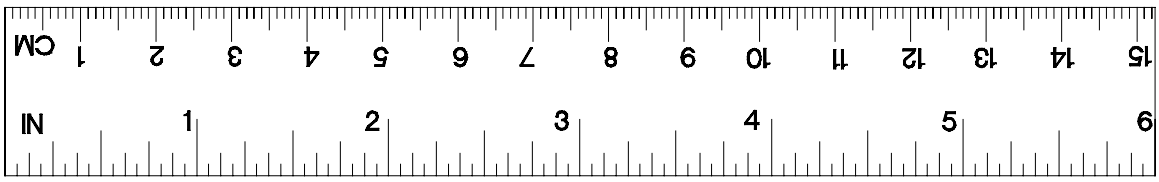
LIQUID MEASURE
1 Milliliter = 0.001 Liters = 0.0338 Fluid Ounces
1 Liter = 1000 Milliliters = 33.82 Fluid Ounces

TEMPERATURE
5/9 (°F - 32) = °C
212° Fahrenheit is equivalent to 100° Celsius
90° Fahrenheit is equivalent to 32.2° Celsius
32° Fahrenheit is equivalent to 0° Celsius
9/5 C° + 32 = F°

APPROXIMATE CONVERSION FACTORS

TO CHANGE	TO	MULTIPLY BY
Inches	Centimeters	2.540
Inches	Millimeters	25.4
Feet	Meters	0.305
Yards	Meters	0.914
Miles	Kilometers	1.609
Square Inches	Square Centimeters	6.451
Square Feet	Square Meters	0.093
Square Yards	Square Meters	0.836
Square Miles	Square Kilometers	2.590
Acres	Square Hectometers	0.405
Cubic Feet	Cubic Meters	0.028
Cubic Yards	Cubic Meters	0.765
Fluid Ounces	Milliliters	29.57
Pints	Liters	0.473
Quarts	Liters	0.946
Gallons	Liters	3.785
Ounces	Grams	28.35
Pounds	Kilograms	0.454
Pounds (force)	Newtons	4.448
Short Tons	Metric Tons	0.907
Pound-Feet	Newton-Meters	1.356
Pounds/Sq Inch	Kilopascals	6.895
Miles per Gallon	Kilometers per Liter	0.425
Miles per Hour	Kilometers per Hour	1.609

TO CHANGE	TO	MULTIPLY BY
Centimeters	Inches	0.394
Millimeters	Inches	0.0394
Meters	Feet	3.280
Meters	Yards	1.094
Kilometers	Miles	0.621
Sq Centimeters	Square Inches	0.155
Square Meters	Square Feet	10.764
Square Meters	Square Yards	1.196
Square Kilometers	Square Miles	0.386
Sq Hectometers	Acres	2.471
Cubic Meters	Cubic Feet	35.315
Cubic Meters	Cubic Yards	1.308
Milliliters	Fluid Ounces	0.034
Liters	Pints	2.113
Liters	Quarts	1.057
Liters	Gallons	0.264
Grams	Ounces	0.035
Kilograms	Pounds	2.205
Newtons	Pounds (force)	0.2248
Metric Tons	Short Tons	1.102
Newton-Meters	Pound-Feet	0.738
Kilopascals	Pounds per Sq Inch	0.145
Km per Liter	Miles per Gallon	2.354
Km per Hour	Miles per Hour	0.621



YMET001A

PIN: 076697-000