TECHNICAL MANUAL

AVIATION UNIT AND AVIATION INTERMEDIATE MAINTENANCE MANUAL

ENGINE, GAS TURBINE
MODEL T55-L-712
NSN 2840-01-030-4890

HEADQUARTERS, DEPARTMENT OF THE ARMY

26 APRIL 1983

WARNING AND FIRST AID DATA

Warnings, cautions and notes emphasize important and critical instructions. They are defined as follows:

WARNING

An operating procedure or practice which, if not correctly followed, will result in personnel injury or loss of life.

CAUTION

An operating procedure or practice which, if not strictly observed, will result in damage or destruction of equipment.

NOTE

An operating procedure or condition which it is essential to highlight.

Personnel performing instructions involving operations, procedures, materials, and practices which are included or implied in this technical manual shall observe the following instructions. Disregard of these warnings and precautionary information can cause serious injury or death. Refer to FM 21-11 for first aid data to treat injuries resulting from working on the engine.

WARNING

Fuels

- Turbine fuels are very flammable. They may cause drying and irritation of skin or eyes.
- Handle only in well-ventilated areas away from heat and open flame.
- Drain and store in approved metal safety containers.
- Avoid prolonged or repeated contact with skin and do not take internally.
- Wash contacted area of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.

WARNING

Lubricating Oils

- Lubricating oils cause paralysis if swallowed. Prolonged contact with them may irritate the skin.
- Handle only in well-ventilated areas away from heat and flame.
- Drain and store in approved metal safety containers.
- Avoid prolonged or repeated contact with skin and do not take internally.
- Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.

WARNING

Dangerous Voltages

- The ignition exciter stores very high and possibly fatal voltage. Use extreme care when working around spark and ignition exciters.
- Serious injury could result if exciter or igniters are improperly discharged or accidentally grounded.
- Do not probe inside of output receptacles, ignition leads, or spark igniters with finger or metal objects.
- Discharge exciter only with insulated screwdriver.
- In case of shock or injury, get medical attention.

WARNING

Discharging Ignition Exciter

- When discharging ignition exciter, remove one lead at a time and discharge receptacle that lead was removed from. Failure to do so may result in serious shock when you are removing second lead.
- In case of serious shock, get medical attention.

WARNING

Compressed Air

- When using compressed air for cleaning, use approved protective equipment for eyes and face.
- Do not use more than 30 psig air pressure.
- Do not direct air toward yourself or another person. Failure to comply could result in injury to eyes or skin.
- In case of injury, get medical attention.

WARNING

Corrosion Preventive Compounds

- These materials are flammable and toxic.
- Use only in well-ventilated area away from heat, sparks and open flames.
- If swallowed, do not induce vomiting. Get medical attention.
- In case of contact immediately flush skin and eyes with water for 15 minutes. Get medical attention for eyes.

WARNING

Cleaning Solvents

- These materials are flammable and toxic. They can irritate skin and cause burns.
- Use only in well-ventilated area, away from heat, sparks and open flame.
- In case of contact, immediately flush skin and eyes with water for at least 15 minutes. Get medical attention for eyes.

WARNING

Handling of Heated Parts

- Wear asbestos gloves when handling heated parts for assembly and disassembly. Failure to comply may cause severe burns.
- Get medical attention for burns.

WARNING

Handling of Parts Treated with Dry Ice

- Dry ice is very cold. It can cause severe burns.
- Wear approved protective equipment and handle only in well-ventilated areas. Get medical attention for burns.

WARNING

Handling of Spring Loaded Parts

- Be careful when removing and installing retaining ring to spring loaded parts.
- Spring tension could cause parts to spring up and cause injury.
- If injury occurs, get medical attention.

WARNING

Nitric Acid

- Both nitric acid and its vapors are a personnel hazard.
- Avoid contact with skin, eyes or clothing. Avoid inhalation of vapors.
- In case of contact, immediately flush skin and eyes with water for at least 15 minutes. Get medical attention.

WARNING

Handling Engine Shipping Container

- Be careful when working with engine shipping container. Make sure both sections of container are grounded.
- Make sure container is opened in well-ventilated area. Failure to do so could result in explosion.
- Shipping container is pressurized. Make certain that all air pressure has been released before removing valve stem or loosening nuts. If nuts are removed before pressure is released, internal pressure could blow cover off and cause serious injury.
- If injury occurs, get medical attention.

WARNING

Handling of Skimming Maintenance Kit

- Contact with skimming maintenance kit rotating parts could cause injury. Exposure to maintenance kit noise may cause ringing in ears, and temporary or permanent hearing loss.
- Keep hands and clothing away from rotating parts and wear approved hearing protection.
- If injury occurs, or ringing in ears or loss of hearing persists, get medical attention.

WARNING

Sodium Dichromate

- Sodium bichromate is highly toxic, do not take internally.
- Use only with adequate ventilation. Avoid prolonged or repeated contact with skin.
- Wear approved gloves and goggles, or face shield and apron, and wash hands thoroughly after handling.
- Wear respirator if sodium bichromate is in powdered form.
- In case of contact, immediately flush skin and eyes with water for at least 15 minutes. Get medical attention.

WARNING

Welding Operations

- Welding operations are hazardous. Harmful light rays may injure eyes and burn skin. Poisonous fumes may cause illness. Burns and fires may result from hot sparks.
- Wear approved protective clothing and equipment.
- Perform welding operations in well-ventilated areas away from flammable liquids and gases.
- If fire occurs, call for assistance and use proper extinguishing procedures.
- If injury or illness occurs, get medical attention.

WARNING

Use of Engine Maintenance Sling

- Inspect sling prior to use for signs of abuse or wear. Failure to comply may cause injury to personnel and/or damage to engine.
- When using sling, make sure hoist lifting capacity is 1200 pounds.
- In case of injury get medical attention.

WARNING

Power Grinding

- Power grinding is hazardous to personnel. Sparks and metal chips may injure eyes.
- Wear approved goggles.
- If injury occurs, get medical attention.

WARNING

HANDLING TORQUE MULTIPLIER

• Make sure handle is fully seated and ratchet selector on torque pack is properly set before applying torque. Rotating ratchet selector with load on torque pack may damage unit and injure personnel.

• Do not change ratchet selector when torque load is on torque pack.

• In injury occurs, get medical attention.

WARNING

FLIGHT SAFETY CRITICAL AIRCRAFT PARTS (FSCAP)

The T–55 flight safety critical aircraft parts inclusion in this manual will be restricted to the flight safety critical aircraft parts section, including Table 1. Warnings will not be included throughout the manual. Flight safety critical aircraft parts require special handling during maintenance and compliance to all maintenance procedures are mandatory.

• Do not change ratchet selector when torque load is on torque pack.

• In injury occurs, get medical attention.

Acetone (Item E1, Appendix C) is extremely flammable and toxic to eyes, skin and respiratory tract. Wear protective gloves and goggles/face shield. Avoid repeated or prolonged contact. Use only in well–ventilated areas (or use approved respirator as determined by local safety/industrial hygiene personnel). Keep away from open flames, sparks, hot surfaces or other sources of ignition.

Positron (Item E77, Appendix C) is combustible and toxic to eyes, skin and respiratory tract. Wear protective gloves and goggles/face shield. Avoid repeated or prolonged contact. use only in well–ventilated areas. use approved organic vapor respirator, with dust and mist filter, if exposed to vapor mist. keep away from open flames, sparks, or other sources of ignition.

Electron (Item E76, Appendix C) is combustible and toxic to eyes, skin and respiratory tract. wear protective gloves and goggles/face shield. Avoid repeated or prolonged contact. use only in well–ventilated areas. Use approved organic vapor respirator, with dust and mist filter, if exposed to vapor mist. Keep away from open flames, sparks, or other sources of ignition.

Isopropyl Alcohol (Item E78, Appendix C) is flammable and toxic to eyes, skin and respiratory tract. wear protective gloves and goggles/face shield. Avoid repeated or prolonged contact. Use only in well–ventilated areas (or use approved respirator as determined by local safety/industrial hygiene personnel). keep away from open flames, sparks, hot surfaces or other sources of ignition.

DS–108 (Item E75, Appendix C) is combustible and toxic to eyes, skin and respiratory tract. wear protective gloves and goggles/face shield. Avoid repeated or prolonged contact. use only in well–ventilated areas. Use approved organic vapor respirator, with dust and mist filter, if exposed to vapor mist. Keep away from open flames, sparks, or other sources of ignition.

CHANGE
NO. 8

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C. 1 August 2005

AVIATION UNIT AND AVIATION INTERMEDIATE MAINTENANCE MANUAL

ENGINE, GAS TURBINE, MODEL T55-L-712 (NSN 2840-01-030-4890)

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

TM 1-2840-254-23-4, dated 26 April 1983, is changed as follows:

1. Remove and insert pages as indicated below. New or changed text material is indicated by a vertical bar in the margin. An illustration change is indicated by a miniature pointing hand.

Remove Pages	Insert Pages
A and B	A and B
9-13 and 9-14	9-13 and 9-14
C-1 and C-2	C-1 and C-2

2. Retain this sheet in front of manual for reference purposes.

By Order of the Secretary of the Army:

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

Official:

Sandra R. Riley

SANDRA R. RILEY
Administrative Assistant to the Secretary of the Army
0517303

DISTRIBUTION:
To be distributed in accordance with Initial Distribution Number (IDN) 310747, requirements for TM 55-2840-254-23

CHANGE

NO. 7

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 30 November 2002

Aviation Unit and Aviation Intermediate Maintenance Manual

ENGINE, GAS TURBINE, MODEL T55–L–712

(NSN 2840–01–030–4890)

OZONE DEPLETING CHEMICAL INFORMATION

This document has been reviewed for the presence of class I ozone depleting chemicals. As of the basic through change 05, dated 30 September 1996, all references to Class I ozone depleting chemicals have been removed from this document by substitution with chemicals by the Engineering, Environment, and Logistics Oversight Office that do not cause atmospheric ozone depletion.

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

TM 55–2840–254–23–4, 26 April 1983, is changed as follows:

1. Remove and insert pages as indicated below. New or changed text material is indicated by a vertical bar in the margin. An illustration change is indicated by a miniature pointing hand.

Remove pages	Insert pages
– –	A and B
g/(h blank)	g/(h blank)
i and ii	i and ii
7–85 and 7–86	7–85 and 7–86
9–7 and 9–8	9–7 and 9–8
9–9/(9–10 blank)	9–9/(9–10 blank)
9–13 and 9–14	9–13 and 9–14
9–31 and 9–32	9–31 and 9–32
9–37 and 9–38	9–37–and 9–38
A–1/(A–2 blank)	A–1/(A–2 blank)
C–3 and C–4	C–3 and C–4
C–7/(C–8 blank)	C–7/(C–8 blank)
Index–3 and Index–4	Index–3 and Index–4

2. Retain this sheet in front of manual for reference purposes.

TM 55-2840-254-23-4
C7

By Order of the Secretary of the Army:

Official:

ERIC K. SHINSEKI
General, United States Army
Chief of Staff

JOEL B. HUDSON
Administrative Assistant to the
Secretary of the Army
0228015

DISTRIBUTION:
To be distributed in accordance with Initial Distribution Number (IDN) 310747, requirements for TM 55-2840-254-23-4

CHANGE
NO. 6

HEADQUARTERS
DEPARTMENT OFTHE ARMY
WASHINGTON, D.C., 30 September 1996

Aviation Unit and Aviation Intermediate
Maintenance Manual

ENGINE, GAS TURBINE
MODEL T55-L-712
NSN 2840-01-030-4890

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

TM 55-2840-254-23-4, 26 April 1983, is changed as follows:

1. Remove and insert pages as indicated below. New or changed text material is indicated by a vertical bar in the margin. An illustration change is indicated by a miniature pointing hand.

Remove pages	Insert pages
g/(h blank)	g/(h blank)
i through iv	i through iv
6-18.1 and 6-18.2	6-18.1 and 6-18.2
---	6-18.3/(6-18.4 blank)
8-20.1 through 8-20.4	8-20.1 through 8-20.4
8-137 and 8-138	8-137 and 8-138
8-149 through 8-154	8-149 through 8-154
8-205/(8-206 blank)	8-205/(8-206 blank)
8-207 and 8-208	8-207 and 8-208
8-293 and 8-294	8-293 and 8-294
8-297 and 8-298	8-297 and 8-298
9-1/(9-2 blank)	9-1/(9-2 blank)
9-3 through 9-8	9-3 through 9-8
9-9/(9-10 blank)	9-9/(9-10 blank)
9-11 through 9-16	9-11 through 9-16
9-17/(9-18 blank)	9-17/(9-18 blank)
9-19 through 9-48	9-19 -through 9-48
9-48.1 and 9-48.2	9-48.1 and 9-48.2
9-49 through 9-62	9-49 through 9-62
A-I and A-2	A-1/(A-2 blank)
B-7 through B-20	B-7 through B-20
B-21/(B-22 blank)	B-21/(B-22 blank)
C-3 through C-6	C-3 through C-6
C-7/(C-8 blank)	C-7/(C-8 blank)
---	E-18.1 and E-18.2
---	E-20.1/(E-20.2 blank)
E-35 and E-36	E-35 and E-36
E-37/(E-38 blank)	E-37/(E-38 blank)
Index-i through Index-16	Index-1 through Index-16
---	Index-16.1/(Index-16.2 blank)
Index-17 through Index-32	Index-17 through Index-32

2. Retain this sheet in front of manual for reference purposes.

By Order of the Secretary of the Army:

DENNIS J. REIMER
General, *United States Army*
Chief of Staff

Official:

JOEL B. HUDSON
Administrative Assistant to the
Secretary of the Army
02658

DISTRIBUTION:

To be distributed in accordance with DA Form 12-31-E block no. 0747, requirements for TM 55-2840-254-23-4.

URGENT

TM 55-2840-254-23-4
C5

CHANGE

No. **5**

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 4 November 1994

Aviation Unit and Aviation Intermediate Maintenance Manual

Engine, Gas Turbine
Model T55-L712
NSN 2840-01-030-4890

DISTRIBUTION STATEMENT A: Approved for public released distribution is unlimited

TM 55-2840-254-234, 26 April 1983, is changed as follows:

1. Remove and insert pages as indicated below. New or changed text material is indicated by a vertical bar in the margin. An illustration change is indicated by a miniature pointing hand.

Remove pages	Insert pages
C-7/(C-8 blank)	C-7/(C-8 blank)

2. Retain this sheet in front of manual for reference purposes.

By Order of the Secretary of the Army:

GORDON R. SULLIVAN
General, United States Army
Chief of Staff

Official:

MILTON H. HAMILTON
Administrative Assistant to the
Secretary of the Army
07024

DISTRIBUTION:

To be distributed in accordance with DA Form 12-31-E, block no. 0747, requirements for TM 55-2840-254-234.

URGENT

CHANGE
NO. 4

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 31 August 1993

Aviation Unit and Aviation Intermediate Maintenance Manual

ENGINE, GAS TURBINE
MODEL T55-L-712
NSN 2840-01-030-4890

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

TM 55-2840-254-23-4, 26 April 1983, is changed as follows:

1. Remove and insert pages as indicated below. New or changed text material is indicated by a vertical bar in the margin. An illustration change is indicated by a miniature pointing hand.

Remove pages	Insert pages
6-213 and 6-214	6-213 and 6-214
7-69 and 7-70	7-69 and 7-70
8-255 and 8-256	8-255 and 8-256
8-297 and 8-298	8-297 and 8-298
9-7 and 9-8	9-7 and 9-8
9-13 and 9-14	9-13 and 9-14
9-45 through 9-48	9-45 through 9-48
----------	9-48.1 and 9-48.2
B-19 and B-20	B-19 and B-20
C-1 through C-6	C-1 through C-7/(C-8 blank)
E-35/(E-36 blank)	E-35 through E-37/(E-38 blank)
F-1/(F-2 blank)	F-1/(F-2 blank)
Index-1 through Index-36	Index-1 through Index-36

2. Retain this sheet in front of manual for reference purposes.

TM 55-2840-254-23-4
C 4

By Order of the Secretary of the Army:

GORDON R. SULLIVAN
General, United States Army
Chief of Staff

Official:

MILTON H. HAMILTON
Administrative Assistant to the
Secretary of the Army
05270

DISTRIBUTION:
To be distributed in accordance with DA Form 12-31-E, block no. 0747, requirements for TM 55-2840-254-23-4.

CHANGE NO. 3

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 13 June 1990

Aviation Unit and Aviation Intermediate
Maintenance Manual

ENGINE, GAS TURBINE
MODEL T55-L-712
NSN 2840-01-030-4890

TM 55-2840-254-23-4, 26 April 1983, is changed as follows:

1. Remove and insert pages as indicated below. New or changed text material is indicated by a vertical bar in the margin. An illustration change is indicated by a miniature pointing hand.

Remove pages	Insert pages
C-5 and C-6	C-5 and C-6

2. Retain this sheet in front of manual for reference purposes.

By Order of the Secretary of the Army:

CARL E. VUONO
General, United States Army
Chief of Staff

Official:

WILLIAM J. MEEHAN II
Brigadier General, United States Army
The Adjutant General

DISTRIBUTION:
To be distributed in accordance with DA Form 12-31A, AVUM and AVIM Maintenance requirements for Engine, Gas Turbine, T55-L-712 (TM 55-2840-254-Series).

CHANGE NO. 2

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 30 May 1990

AVIATION UNIT AND
AVIATION INTERMEDIATE
MAINTENANCE MANUAL

ENGINE, GAS TURBINE
MODEL T55-L-712
NSN 2840-01-030-4890

TM 55-2840-254-23-4, 26 April 1983, is changed as follows:

1. Remove and insert pages as indicated below. New or changed text material is indicated by a vertical bar in the margin. An illustration change is indicated by a miniature pointing hand.

Remove pages	Insert pages
xiii and xiv	xiii and xiv
6-1 and 6-2	6-1 and 6-2
6-17/6-18	6-17 and 6-18
- - - -	6-18.1 and 6-18.2
7-31 and 7-32	7-31 and 7-32
7-37 and 7-38	7-37 and 7-38
8-1 and 8-2	8-1 and 8-2
8-15 through 8-18	8-15 through 8-18
- - - -	8-20.1 through 8-20.4
9-35 through 9-38	9-35 through 9-38
C-5 and C-6	C-5 and C-6
Index-3 and Index-4	Index-3 and Index-4
Index-11 and Index-12	Index-11 and Index-12
Index-19 and Index-20	Index-19 and Index-20
Index-23 and Index-24	Index-23 and Index-24
Index-27 through Index-30	Index-27 through Index-30
Index-35 and Index-36	Index-35 and Index-36

2. Retain this sheet in front of manual for reference purposes.

By Order of the Secretary of the Army:

CARL E. VUONO
General, United States Army
Chief of Staff

Official:

WILLIAM J. MEEHAN II
Brigadier General, United States Army
The Adjutant General

DISTRIBUTION:
To be distributed in accordance with DA Form 12-31A-R, AVUM and AVIM Maintenance requirements for Engine, Gas Turbine, T55-L-712 (TM 55-2840-254 series).

CHANGE NO. 1

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 15 June 1989

Aviation Unit and Aviation Intermediate
Maintenance Manual

ENGINE, GAS TURBINE
MODEL T55-L-712
NSN 2840-01-030-4890

TM 55-2840-254-23-4, 26 April 1983, is changed as follows:

1. Remove and insert pages as indicated below. New or changed text material is indicated by a vertical bar in the margin. An illustration change is indicated by a miniature pointing hand.

Remove pages	Insert pages
6-1 and 6-2	6-1 and 6-2
6-121 and 6-122	6-121 and 6-122
----	6-122.1/6-122.2
6-123 and 6-124	6-123 and 6-124
----	6-124.1/6-124.2
6-125 and 6-126	6-125 and 6-126
6-129 and 6-130	6-129 and 6-130
----	6-130.1/6-130.2
6-131 and 6-132	6-131 and 6-132
----	6-132.1/6-132.2
6-133 through 6-136	6-133 through 6-136
----	6-136.1/6-136.2
6-137 and 6-138	6-137 and 6-138
----	6-138.1/6-138.2
6-147 through 6-150	6-147 through 6-150
6-169/6-170	6-169/6-170
7-1/7-2	7-1 and 7-2
7-99 through 7-110	7-99 through 7-110
----	7-110.1 through 7-110.12
7-111 and 7-112	7-111 and 7-112
----	7-112.1 and 7-112.2
7-113 and 7-114	7-113 and 7-114
----	7-114.1 and 7-114.2
7-115 and 7-116	7-115 and 7-116
----	7-116.1/7-116.2
7-117 through 7-126	7-117 through 7-126
----	7-126.1 through 7-126.10
7-127 through 7-136	7-127 through 7-136
7-137/7-138	7-137 and 7-138
----	7-139 through 7-149/7-150
A-1 and A-2	A-1 and A-2
E-7 through E-14	E-7 through E-14
E-21 and E-22	E-21 and E-22
E-29 through E-35/E-36	E-29 through E-35/E-36
F-1/F-2	F-1/F-2

Remove pages	Insert pages
Index-1 through Index-6	Index-1 through Index-6
Index-15 through Index-20	Index-15 through Index-20
Index-25 through Index-30	Index-25 through Index-30
Index-33 and Index-34	Index-33 and Index-34

2. Retain this sheet in front of manual for reference purposes.

By Order of the Secretary of the Army:

CARL E. VUONO
General, United States Army
Chief of Staff

Official:

WILLIAM J. MEEHAN II
Brigadier General, United States Army
The Adjutant General

DISTRIBUTION:
To be distributed in accordance with DA Form 12-31A, AVUM and AVIM Maintenance requirements for Engine, Gas Turbine, T55-L-712 (TM 55-2840-254-Series).

INSERT LATEST CHANGED PAGES. DESTROY SUPERSEDED PAGES.

LIST OF EFFECTIVE PAGES

NOTE

ON A CHANGED PAGE, THE PORTION OF THE TEXT AFFECTED BY THE LATEST CHANGE IS INDICATED BY A VERTICAL LINE OR OTHER CHANGE SYMBOL IN THE OUTER MARGIN OF THE PAGE. CHANGES TO ILLUSTRATIONS ARE INDICATED BY MINIATURE POINTING HANDS. CHANGES TO WIRING DIAGRAMS ARE INDICATED BY SHADED AREAS.

Dates of issue for original and changed pages are:

Original..... 0.....26 April 1983
Change..... 1.....15 June 1989
Change .....2.....30 May 1990
Change.....3.....13 June 1990
Change…….....4.....31 Aug 1993
Change.....5.....4 Nov 1994
Change.....6.....30 Sep 1996
Change.....7.....30 Nov 2002
Change.....8.....1 Aug 2005

Total number of pages in this publication is 20 consisting of the following:

Page No.	*Change No.
Cover	0
A and B	8
a through f	0
g	7
h blank	7
i	7
ii through iv	6
v through xiii	0
xiv	2
6-1	2
6-2	1
6-3 through 6-16	0
6-17 and 6-18	2
6-18.1	2
6-18.2 and 6-18.3	6
6-18.4 blank	6
6-19 through 6-120	0
6-121 through 6-124	1
6-124.1	1
6-124.2 blank	1
6-125	0
6-126	1
6-127 and 6-128	0
6-129 and 6-130	1
6-130.1	1
6-130.2 blank	1
6-131	0
6-132	1
6-132.1	1
6-132.2 blank	1
6-133	0
6-134 and 6-135	1
6-136.1	1
6-136.2 blank	1
6-137	0
6-138	1
6-138.1	1
6-138.2 blank	1
6-139 through 6-147	0
6-148 and 6-149	1
6-150 through 6-168	0
6-169	1
6-170 blank	1
6-171 through 6-213	0
6-214	4
6-215 through 6-272	0
7-1 and 7-2	1
7-3 through 7-31	0
7-32	2
7-33 through 7-36	0
7-37	2
7-38 through 7-68	0
7-69	4
7-70 through 7-84	0
7-85	7
7-86 through 7-97	0
7-98 blank	0
7-99 through 7-149	1
7-150 blank	1
8-1	2

*Zero in this column indicates an original pages.

LIST OF EFFECTIVE PAGES CONTINUED

Page No.	*Change No.
8-2 through 8-14	0
8-15	2
8-16 and 8-17	0
8-18	2
8-19 and 8-20	0
8-20.1 through 8-20.4	6
8-21 through 8-137	0
8-138	6
8-139 through 8-149	0
8-150	6
8-151	0
8-152 and 8-153	6
8-154 through 8-204	0
8-205 through 8-208	6
8-209 through 8-254	0
8-255	4
8-256 through 8-292	0
8-293	6
8-294 through 8-297	0
8-298	6
8-299 through 8-351	0
8-352 blank	0
9-1	6
9-2 blank	6
9-3 through 9-7	6
9-8 and 9-9	7
9-10 blank	7
9-11 and 9-12	6
9-13 and 9-14	8
9-15 through 9-30	6
9-31	7
9-32 through 9-37	6
9-38	7
9-39 through 9-62	6
A-1	7
A-2 blank	7
B-1 through B-6	0
B-7 through B-9	6
B-10	0
B-11 through B-13	6
B-14	0
B-15 through B-17	6
B-18	0
B-19	4
B-20 and B-21	6
B-22 blank	6
C-1 and C-2	8
C-3	7
C-4 and C-5	6
C-6	4
C-7	7
C-8 blank	6
D-1	0
D-2 blank	0
E-i and Eii	0
E-1 through E-7	0
E-8 through E-14	1
E-15 through E-18	0
E-18.1 and E-18.2	6
E-19 and E-20	0
E-20.1	6
E-20.2 blank	6
E-21	1
E-22 through E-29	0
E-30 and E-31	1
E-32	0
E-33 and E-34	1
E-35	0
E-36	6
E-37	0
E-38 blank	0
F-1	4
F-2 blank	4
Glossary-1 through Glossary-5	0
Glossary-6 blank	0
Index-1 through Index-3	6
Index-4	7
Index-5 through Index-32	6

*Zero in this column indicates an original pages.

Technical Manual

NO. 55–2840–254–23

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON D.C., 26 April 1983

Aviation Unit and Aviation Intermediate Maintenance Manual ENGINE, GAS TURBINE MODEL T55–L–712 (NSN 2840–01–030–4890)

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes, or if you know of a way to improve these procedures, please let us know. Mail your letter or DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2 located in the back of this manual directly to: Commander, US Army Aviation and Missile Command, ATTN: AMSAM-MMC-MA–NP, Redstone Arsenal, AL 35898–5000. A reply will be furnished to you. You may also provide DA Form 2028 information to AMCOM via e-mail, fax, or the World Wide Web. Our fax number is: DSN 788-6546 or Commercial 256–842–6546. Our e–mail address is: 2028@redstone.army.mil. Instructions for sending an electronic 2028 may be found at the back of this manual immediately preceding the hard copy 2028. For the World Wide Web use: https://amcom2028.redstone.army.mil.

OZONE DEPLETING CHEMICAL INFORMATION

This document has been reviewed for the presence of class I ozone depleting chemicals. As of the basic through change 05, dated 04 November 1994, all references to Class I ozone depleting chemicals have been removed from this document by substitution with chemicals by the Engineering, Environment, and Logistics Oversight Office that do not cause atmospheric ozone depletion.

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

TABLE OF CONTENTS

		PAGE
	HOW TO USE THIS MANUAL	vii
CHAPTER I.	INTRODUCTION	1–1
	Chapter Overview	1–1
Section I	General Information	1–1
Section II	Equipment Description and Data	1–3
Section III	Principles of Operation	1–13
Section IV	Repair Parts; Special Tools; Test, Measurement, and Diagnostic Equipment (TMDE); and Support Equipment	1–41
Section V	Service Upon Receipt	1–43
Section VI	Hoisting	1–109
Section VII	Troubleshooting	1–119
Section VIII	Servicing	1–219
Section IX	Preventive Maintenance Checks and Services	1–239
Section X	Maintenance Procedures	1–443
Section XI	Preparation for Storage and Shipment	1–553
Section XII	Standard Torque Limits	1–623
Section XIII	Standard Practices and Procedures	1–627

NOTE

This manual is printed in four volumes as follows:
TM 55–2840–254–23–1, consisting of Warning Pages, Table of Contents, Chapter 1, and alphabetical index.
TM 55–2840–254–23–2, consisting of Warning Pages, Table of Contents, Chapter 2, and alphabetical index.
TM 55–2840–254–23–3, consisting of Warning Pages, Table of Contents, Chapter 3 through 5 and Alphabetical Index.
TM 55–2840–254–23–4, consisting of Warning Pages, Table of Contents, Chapter 6 through 9, Appendixes AthroughF, Glossary, and Alphabetical Index.

TABLE OF CONTENTS (Continued)

CHAPTER 2	COMPRESSOR SECTION - MAINTENANCE INSTRUCTIONS	2-1
	Chapter Overview	2-1
Section I	Interstage Air-Bleed Actuator - Maintenance Procedures	2-5
Section II	Compressor Bleed Bland - Maintenance Procedures	241
Section III	Anti-Icing Air Gallery Cover - Maintenance Procedures	2-51
Section IV	Compressor Housing - Maintenance Procedures	2-71
Section V	Stator Vane Assemblies - Maintenance Procedures	2-219
Section VI	Compressor Rotor Blades - Maintenance Procedures	2-255
Section VII	Air Diffuser Assembly - Maintenance Procedures	2-351
Section VIII	No. 2 Bearing Package - Maintenance Procedures	2-395
Section IX	Output Shaft Seal and Housing Assembly - Maintenance Procedures	2-431
Section X	Inlet Housing Cover Assembly - Maintenance Procedures	2-455
Section XI	Output Shaft Support Housing - Maintenance Procedures	2-465
Section XII	Air Inlet Housing Assembly - Maintenance Procedures	2-497
Section XIII	No. 3 Bearing Package - Maintenance Procedures	2-501
Section XIV	Air Lines - Maintenance Procedures	2-525
CHAPTER 3	COMBUSTION SECTION	3-1
	Chapter Overview	3-1
Section I	Fuel Drain Valve - Maintenance Procedures	3-3
Section II	Combustion Section and Power Turbine - Maintenance Procedures	3-11
Section III	Combustion Section - Maintenance Procedures	3-151
Section IV	Compressor Chamber Vane Assembly - Maintenance Procedures	3-171
Section V	Combustion Chamber Liner - Maintenance Procedures	3-183
Section VI	Combustion Chamber Housing - Maintenance Procedures	3-213
CHAPTER 4	TURBINE SECTION - MAINTENANCE INSTRUCTIONS	4-1
	Chapter Overview	4-1
Section I	Thermocouple Jumper Lead - Maintenance Procedures	4-5
Section II	Left- and Right-Hand Bus Bar Assemblies - Maintenance Procedures	4-35
Section III	Fireshield Assembly - Maintenance Procedures	4-65
Section IV	Fireshield Section - Maintenance Procedures	4-79
Section V	Thermocouple Harness Assemblies - Maintenance Procedures	4-97
Section VI	Third Turbine Nozzle and Support - Maintenance Procedures	4-123
Section VII	Fourth Stage Power Turbine Rotor - Maintenance Procedures	4-151
Section VIII	No. 4 and 5 Bearing Package - Maintenance Procedures	4-185
Section IX	Fourth Stage Power Turbine Nozzle - Maintenance Procedures	4-269
Section X	Third Stage Power Turbine Rotor - Maintenance Procedures	4-303
Section XI	Second Turbine Disc Assembly - Maintenance Procedures	4-313
Section XII	Second Turbine Nozzle, Spacer, and Case - Maintenance Procedures	4-335
Section XIII	First Turbine Disc Assembly - Maintenance Procedures	4-397
Section XIV	First Turbine Nozzle - Maintenance Procedures	4-429
Section XV	Field Replacement First and Second Turbine Disc Assembly - Maintenance Procedures	4-469
Section XVI	Diffuser Curl - Maintenance Procedures	4-479
Section XVII	Exit Vane Assembly - Maintenance Procedures	4-489
CHAPTER 5	ACCESSORY GEAR SECTION - MAINTENANCE INSTRUCTIONS	5-1
	Chapter Overview	5-1
Section I	Accessory Gearbox Assembly - Maintenance Procedures	5-3
Section II	Accessory Gear Assembly - Maintenance Procedures	5-45
Section III	Starter Drive Assembly - Maintenance Procedures	5-81
Section IV	Overspeed Drive and Outlet Cover Assembly - Maintenance Procedures	5-99
CHAPTER 6	FUEL SYSTEM - MAINTENANCE INSTRUCTIONS	6-1
	Chapter Overview	6-1
Section I	Fuel Control - Maintenance Procedures	6-5
Section II	Fuel Control - Preparation for Storage or Shipment	6-31
Section III	Fuel Boost Pump Assembly - Maintenance Procedures	6-39
Section IV	Fuel Boost Pump Assembly - Preparation for Storage or Shipment	6-55

TABLE OF CONTENTS (Continued)

CHAPTER 6 (Continued)

Section V	Left- and Right-Hand Fuel Manifold Assemblies - Maintenance Procedures	6-57
Section VI	Primer Tube Assembly - Maintenance Procedures	6-101
Section VII	Start Fuel Nozzles - Maintenance Procedures	6-111
Section VIII	Main Fuel Filter and Bracket - Maintenance Procedures	6-119
Section IX	In-Line Fuel Filter Assembly - Maintenance Procedures	6-141
Section X	Flow Divider and Bracket - Maintenance Procedures	6-159
Section XI	Fuel Check Valve - Maintenance Procedures	6-171
Section XII	Starting Fuel Solenoid Valve - Maintenance Procedures	6-177
Section XIII	Fuel Lines - Maintenance Procedures	6-189
CHAPTER 7	ELECTRICAL AND IGNITION SYSTEMS - MAINTENANCE INSTRUCTIONS	7-1
	Chapter Overview	7-1
Section I	Ignition Coil and Cable Assembly - Maintenance Procedures	7-3
Section II	Spark Igniters - Maintenance Procedures	7-69
Section III	Ignition Exciter - Maintenance Procedures	7-85
Section IV	Main Electrical Cable Assembly - Maintenance Procedures	7-99
CHAPTER 8	LUBRICATION SYSTEM - MAINTENANCE INSTRUCTIONS	8-1
	Chapter Overview	8-1
Section I	Main Oil Pump and Scavenge Oil Screen - Maintenance Procedures	8-7
Section II	Oil Cooler Assembly - Maintenance Procedures	8-21
Section II. 1	Check Valve Assembly- Maintenance Procedures	8-40.1
Section III	Oil Temperature Transmitter - Maintenance Procedures	8-41
Section IV	Oil Filler Asembly and Oil Filler Strainer - Maintenance Procedures	8-47
Section V	Oil Filter Cap and Stem Assembly and Oil Filter Element - Maintenance Procedures	8-63
Section VI	Dual Chip Detector - Maintenance Procedures	8-73
Section VII	Oil Lines - Maintenance Procedures	8-93
Section VIII	Starter Gearbox Filter - Maintenance Procedures	8-249
Section IX	No. 2 Bearing Pressure Oil Strainer - Maintenance Procedures	8-257
Section X	No. 4 and 5 Bearing Filter - Maintenance Procedures	8-263
Section XI	Oil Drain Clock - Maintenance Procedures	8-279
Section XII	Chip Detector - Maintenance Procedures	8-287
Section XIII	Oil Level Indicator - Maintenance Procedures	8-301
Section XIV	Oil Level Float Assembly - Maintenance Procedures	8-335
CHAPTER 9	TORQUEMETER SYSTEM - MAINTENANCE INSTRUCTIONS	9-1
	Chapter Overview	9-1
Section I	Torquemeter Junction Box - Maintenance Procedures	9-3
Section II	Output Shaft - Maintenance Procedures	9-19
Section III	Torquemeter Head Assembly - Maintenance Procedures	9-39

TABLE OF CONTENTS (Continued)

APPENDIX A REFERENCES A-1

APPENDIX B MAINTENANCE ALLOCATION CHART B-1

APPENDIX C EXPENDABLE SUPPLIES AND MATERIALS LIST C-1

APPENDIX D WIRING DIAGRAMS D-1

APPENDIX E ILLUSTRATED LIST OF MANUFACTURED ITEMS E-1

APPENDIX F ABBREVIATIONS F-1

GLOSSARY Glossary-1

SUBJECT INDEX Index-1

HOW TO USE THIS MANUAL

OVERVIEW

This information gives a general description of the entire manual and how to use it along with the repair parts and special tools list (TM 55-2840-254-23P). If YOU cannot find information, YOU cannot do the job. Learning how to use this manual can help. Check how the manual is put together and how its system works.

1. DESCRIPTION OF MANUAL

This manual has nine chapters and six appendixes. Each chapter is divided into sections. Each section in Chapter 1 is divided into paragraphs or tasks. Each section in Chapters 2 thru 9 is divided into tasks. The tasks tell you what you need and how to do any job. The paragraphs have specific information you will need to know. The appendixes have general information you will need to know. They list references, expendable supplies and materials etc.

A. Chapters. Chapters divide the manual into usable engine maintenance groups. They align with standard groupings shown in the MAC chart. Refer to Appendix B.

B. Sections. Sections divide the chapters into smaller groups. They have information about the components of parts for which the chapter is titled. They align with components shown in the MAC chart. Refer to Appendix B.

C. Paragraphs/Tasks. Paragraphs make up some of the sections in Chapter 1. They contain specific information about the engine. Tasks make up some of the sections in Chapter 1 and the sections in Chapters 2 thru 9. It is the tasks that have the information you need to do any job. The upper heading after the task number is the task name. It tells the job to be done in the task. The task heading at the top of each page specifies the task to be performed and the lowest maintenance level authorized to perform that task. Tasks to be accomplished by the Aviation Intermediate Maintenance level only will be reflected by the term (AVIM) at the end of the task heading. If the term (AVIM) is not at the end of the task heading, then either the Aviation Unit or Aviation Intermediate Maintenance (AVUM) or (AVIM) level can accomplish that task. All paragraphs and tasks are numbered. This helps you find what you need when you need it. USE THE INDEX TO FIND THE PARAGRAPH OR TASK YOU NEED. DO NOT USE PAGE NUMBERS. Paragraphs and tasks are numbered as follows:

(1) Two-element numbers are used as shown in the examples:

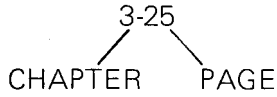


(2) The first number is the number of the chapter. The second number is the paragraph or task in that chapter. The two elements are separated by a dash.

HOW TO USE THIS MANUAL (Continued)

D. Page Numbers. Pages are numbered by order of chapters, from front to back of manual. They

(1) Two-element numbers are used as shown in the example:



(2) The first number is the number of the chapter. The second number is the page in that chapter.

E. Initial Setup Tables. An initial setup table is the first part of every task in the manual. It lists information you will need to know before you can do the job. How to prepare the work area, what tools will be needed, and other critical information are listed when they apply. The following headings are used when they apply.

(1) Applicable Configuration. If the task does not apply to all engine configurations, different configurations covered by the same procedure will be brought to your attention.

(2) Tools. Tools, tool kits, or shop sets needed to do the task are listed here. If tools from your repairman's tool kit are needed, the kit is listed. Individual tools from your shop set are listed, as needed, by name, type, and size. Tools you need that are not in the kit or set, are listed by name, type, and size. Special tools and test and support equipment are listed by a T-number. Find these items in Table 1-1.

(3) Materials. This heading lists all expendable items and support materials (things You normally use up doing a job). These are things like solvent, rags, grease, safety wire, etc. They are listed by an E-number; example: Grease (E23). Find these items in Appendix C.

(4) Parts. This heading lists all mandatory replacement parts (parts you must replace if you expose or remove them during the task). These are things like gaskets, packings, cotter pins, lockwashers, etc. They are listed by RPSTL nomenclature.

(5) Personnel Required. This heading lists the people needed to do the job. They are identified by their MOS. The heading identifies the MOS and the recommended skill level to accomplish the subject task. The assigned skill level should not be construed as the only skill level authorized to accomplish that task. The Maintenance Allocation Chart (MAC) (Ref. Appendix B) assigns maintenance functions to the authorized maintenance level without regard to the MOS skill level. When more than one of any MOS is needed, the number needed is shown in parentheses. The text will tell you when the additional MOS is needed.

(6) References. This heading lists related tasks and TM's you will need to do the job. The task steps tell you when these tasks and TM's are needed.

(7) Equipment Condition. This heading lists al the things to be done before you start the job. To help, the number of the task that tells you how to do them is given when applicable.

HOW TO USE THIS MANUAL (Continued)

NOTE

All tasks covered in this manual are off helicopter tasks. If a task is an off engine task, it will be brought to your attention under "Equipment Condition." Example: "Off Engine Task."

(8) General Safety Instructions. Safety precautions that must be observed when you are doing the job are described under this heading. Warnings also include basic first aid instructions.

F. Locator Illustrations. When needed (for removal, installation and other procedures) a locator illustration is included on or facing initial setup pages. They show you the area of the engine to be worked on. Parts involved in the task are called out.

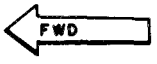
G. Illustration Arrows. You wiII find five types of arrows used. They areas shown below:



Locator arrow used to show parts that cannot be easily seen or to indicate area of engine being worked on.



Index arrow used to identify parts on artwork.



Direction arrow used to indicate position; i.e., fwd, aft.



Movement arrow used to indicate direction of movement.



Movement arrow used to indicate direction of rotation.

H. Procedures. Step by step procedures tell you how to do the job. They are arranged in logical sequence to help you get the job done efficiently.

HOW TO USE THIS MANUAL (Continued)

1. Use of Clock Positions. Many procedures contain references to or views of clock positions. Comparing engine to face of clock is an easy way to locate specific engine areas. To help find clock positions on the engine, remember the following:

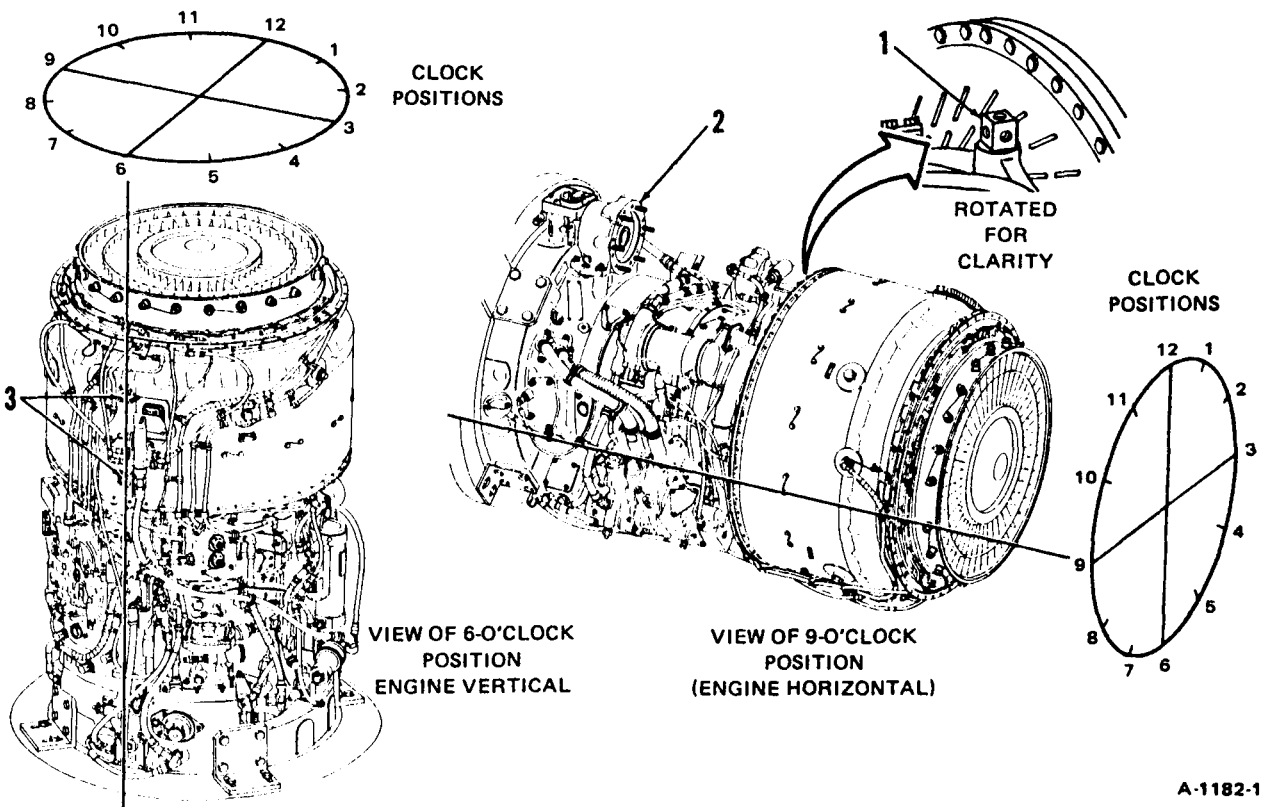
(1) Clock position is always determined from rear of engine.

(2) Once a clock position is determined from rear of engine, visualize that clock position along entire length of engine.

(3) Hoist adapter (1) and starter drive assembly (2) are mounted at the 12-o'clock position.

(4) Two fuel drain valves (3) are mounted at the 6-o'clock position.

(5) Some procedures show engine mounted vertical in maintenance stand. This does not change the method for finding clock positions on the engine.



HOW TO USE THIS MANUAL (Continued)

J. Appendix A - References. This appendix lists all referenced publications needed to perform the maintenance procedures in this manual.

K. Appendix B - Maintenance Allocation Chart (MAC). This appendix consists of four sections as follows:

Section I - Introduction. This section is a summary of what is in the MAC.

Section II. This section is the MAC. The MAC assigns maintenance functions in accordance with the Three Levels of Maintenance concept for Army Aviation. The MAC has six columns, containing the following information:

Columns 1 and 2 - Functional Groups. These columns identify maintenance significant components, assemblies, subassemblies, and modules.

Column 3 - Maintenance Function. This column lists the maintenance functions to be performed on the items listed in column 2.

Column 4 - Maintenance Categories. The maintenance categories (levels) AVUM, AVI M, and DEPOT are listed with individual columns. These columns identify the maintenance level at which each maintenance function is to be performed.

Column 5 - Tools and Equipment. This column lists the reference code identifying the tool or test equipment required, as listed in Section III.

Column 6 - Remarks. Remarks identified by an alphabetical code, where applicable, are listed in Section IV and identified in column 6.

Section III - Tool and Test Equipment Requirements. This section consists of five columns, containing the following information:

Tool or Test Equipment Reference Code. This column lists the reference code listed in Column 5 - Tools and Equipment in the MAC.

Maintenance Category. This column lists the maintenance category (level) authorized to use the tool or test equipment.

Nomenclature. This column lists the nomenclature of the tools and test equipment.

National/NATO Stock Number. This column lists the stock number applicable to each tool or test equipment.

Tool Number. The tool number is listed to aid in identifying the tool or test equipment.

Section IV - Remarks. This section has two columns, containing the following information:

Reference Code. This column contains alphabetical codes or numbers in parentheses corresponding to the codes appearing in the applicable columns in the MAC.

Remarks/Notes. This column contains the actual notes cross-referenced by the reference codes to the MAC.

L. Appendix C - Expendable Supplies and Materials List. This appendix lists all expendable supplies and materials called out in the manual. The following columns are provided.

(1) Item Number. This is the E-number assigned to the expendable item. it is referred to in the detail procedures. Example: “Use cleaning solution (E11).”

(2) National Stock Number. This is the national stock number assigned to the item. Use it to request or requisition the item.

(3) Description. This column lists the Federal name and, if required, a description to identify the item. The last line for each item shows the part number followed by the Federal Supply code for Manufacturer (FSCM) in parentheses, if applicable.

M. Appendix D - Wiring Diagrams. This appendix contains the engine wiring diagram. Use this appendix to help you understand the description of the engine electrical system.

N. Appendix E - Illustrated List of Manufactured Items. This appendix lists and illustrates any parts or tools you may have to make to do a job.

O. Appendix F - Abbreviations. This appendix lists abbreviations you will find in the manual.

P. Glossary. Definitions of terms you find in the manual are listed hereto help you.

Q Index. This appears at the end of the manual. It lists all subjects in the manual by alphabetical order. Items are listed as follows:

(1) Each paragraph/task number is listed with the subject it applies to:

Example:

	Para./ Task	Page
Fuel Boost Pump Assembly		
Clean	6-10	6-42
Inspect	6-11	6-43
Install	6-13	6-48
Package	6-15	6-56
Preserve	6-14	6-55
Remove	6-9	6-39
Repair	6-12	6-44

(2) Some tasks are listed by the job to be done. The subjects or components are listed under them.

Example:

	Para./ Task	Page
Remove		
Accessory Gear Assembly (AVIM)	5-8	5-45
Accessory Gearbox Assembly	5-1	5-3
Air Diffuser Assembly (AVIM)	2-36	2-351
Anti-Icing Air Gallery Cover	2-14	2-51

Check over the index and see how it can work for you. It can make finding information easy.

R. Part Numbers. Part numbers are not listed in this manual except where absolutely needed for clarity. You can find the part number you need in the Repair Parts and Special Tools List (RPSTL) (TM 55-2840-254-23P).

2. HOW TO FIND WHAT YOU NEED

A. General Information (Troubleshooting).

(1) Look at the "IN DEX." Find "Symptom Index." The "INDEX" gives the paragraph number for the symptom index. Go to the Symptom Index.

(2) Find your symptom in the "Symptom Index." Next to the symptom is the page number of the troubleshooting procedure that will help you solve your problem. Turn to the troubleshooting procedure page.

(3) Follow the troubleshooting procedure until you find the problem. The troubleshooting procedure gives you the task number of the maintenance procedure needed to fix the engine. Turn to that task.

(4) Follow the maintenance procedure and complete all work. Check again and make sure you are right. When the job is done, recheck that the trouble has been corrected.

B. Part Numbers. To find a part number go to the RPSTL (TM 55-2840-254-23P). Find the "How To Locate Repair Parts" paragraph in the introduction. It will tell you how to find your part number.

C. Tasks. To find any task, use the "INDEX." Find the subject you want. The "INDEX" gives you the task number you want.

HOW TO USE THIS MANUAL (Continued)

3. HOW TO PREPARE FOR A TASK

Read the initial setup page carefully before starting. It tells you what you will need and what you have to know to start the job. DO NOT START A JOB UNTIL:

You know what is needed
You have the things you need

A. If a tool has a T-number in front of it, go to the Special Tools and Test and Support Equipment List in Table 1-1. Read down the far left-hand column to your T-number. This is the tool you need for your task.

B. If an expendable material has an E-number in front of it, go to the Expendable Supplies and Materials List in Appendix C. Read down the Item Number column to your E-number. This is the expendable you need for your task.

C. If parts are listed, they can be drawn from supply. Before you start the job, check and make sure you can get the needed parts. Part numbers are listed in TM 55-2840-254-23P.

D. Check for personnel required.

E. If preliminary procedures are listed under "Equipment Conditions," BE SURE THE LISTED JOBS ARE DONE; then do this job.

4. HOW TO DO THE JOB

Before starting, read the entire task. Familiarize yourself with the entire procedure before you begin the task. As you read, remember the following:

A. PAY ATTENTION TO WARNINGS, CAUTIONS AND NOTES.

B. Always follow standard maintenance practices (Chapter 1, Section XIII).

C. When values are underlined or followed by the word INSPECT, an inspector must OK the completed step.

D. Major steps and key words are printed in bold type for experienced repairers.

E. A GLOSSARY is provided. It lists the special words and terms used inthis manual and gives their meaning. Use it. It may help you understand the instructions.

CHAPTER 6

FUEL SYSTEM - MAINTENANCE INSTRUCTIONS

CHAPTER OVERVIEW

This chapter contains maintenance procedures for the fuel system. It is divided into the following sections and tasks.

SECTION	TASK No.	TITLE	PAGE
I		FUEL CONTROL - MAINTENANCE PROCEDURES	
	6-1	Remove Fuel Control	6-5
	6-2	Disassemble Fuel Control	6-12
	6-3	Clean Fuel Control	6-14
	6-4	Inspect Fuel Control	6-16
	6-4.1	Repair Fuel Control	6-18.1
	6-5	Assemble Fuel Control	6-19
	6-6	Install Fuel Control	6-22
II		FUEL CONTROL - PREPARATION FOR STORAGE OR SHIPMENT	
	6-7	Preserve Fuel Control	6-31
	6-8	Package Fuel Control	6-36
III		FUEL BOOST PUMP ASSEMBLY - MAINTENANCE PROCEDURES	
	6-9	Remove Fuel Boost Pump Assembly	6-39
	6-10	Clean Fuel Boost Pump Assembly	6-42
	6-11	Inspect Fuel Boost Pump Assembly	6-43
	6-12	Repair Fuel Boost Pump Assembly	6-44
	6-13	Install Fuel Boost Pump Assembly	6-48
IV		FUEL BOOST PUMP ASSEMBLY - PREPARATION FOR STORAGE OR SHIPMENT	
	6-14	Preserve Fuel Boost Pump Assembly	6-55
	6-15	Package Fuel Boost Pump Assembly	6-56
V		LEFT-AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES - MAINTENANCE PROCEDURES	
	6-16	Remove Left- and Right-Hand Fuel Manifold Assemblies	6-57
	6-17	Clean Left- and Right-Hand Fuel Manifold Assemblies	6-68
	6-18	Inspect Left- and Right-Hand Fuel Manifold Assemblies	6-70
	6-19	Repair Left- and Right-Hand Fuel Manifold Assemblies	6-72
	6-20	Install Left- and Right-Hand Fuel Manifold Assemblies	6-78

SECTION	TASK NO.	TITLE	PAGE
VI		PRIMER TUBE ASSEMBLY- MAINTENANCE PROCEDURES	
	6-21	Remove Primer Tube Assembly	6-101
	6-22	Clean Primer Tube Assembly	6-104
	6-23	Inspect Primer Tube Assembly	6-106
	6-24	Install Primer Tube Assembly	6-107
VII		START FUEL NOZZLES – MAINTENANCE PROCEDURES	
	6-25	Remove Start Fuel Nozzles	6-111
	6-26	Clean Start Fuel Nozzles	6-114
	6-27	Inspect Start Fuel Nozzles	6-115
	6-28	Install Start Fuel Nozzles	6-116
VIII		MAIN FUEL FILTER AND BRACKET– MAINTENANCE PROCEDURES	
	6-29	Remove Main Fuel Filter and Bracket	6-119
	6-30	Disassemble Main Fuel Filter and Bracket	6-123
	6-31	Clean Main Fuel Filter and Bracket	6-126
	6-32	Inspect Main Fuel Filter and Bracket	6-128
	6-33	Repair Main Fuel Filter and Bracket (Ten Bolt Holes)	6-132
	6-33.1	Repair Main Fuel Filter and Bracket (Eight Bolt Holes)	6-132.1
	6-34	Assemble Main Fuel Filter and Bracket	6-133
	6-35	Install Main Fuel Filter and Bracket	6-136.1
IX		IN-LINE FUEL FILTER ASSEMBLY–MAINTENANCE PROCEDURES	
	6-36	Remove In-Line Fuel Filter Assembly	6-141
	6-37	Disassemble In-Line Fuel Filter Assembly	6-144
	6-38	Clean In-Line Fuel Filter Assembly	6-146
	6-39	Inspect In-Line Fuel Filter Assembly	6-148
	6-40	Assemble In-Line Fuel Filter Assembly	6-150
	6-41	Install In-Line Fuel Filter Assembly	6-153
X		FLOW DIVIDER AND BRACKET– MAINTENANCE PROCEDURES	
	6-42	Remove Flow Divider and Bracket	6-159
	6-43	Clean Flow Divider and Bracket	6-162
	6-44	Inspect Flow Divider and Bracket	6-164
	6-45	Install Flow Divider and Bracket	6-165
XI		FUEL CHECK VALVE– MAINTENANCE PROCEDURES	
	6-46	Remove Fuel Check Valve	6-171
	6-47	Clean Fuel Check Valve	6-173
	6-48	Install Fuel Check Valve	6-174

SECTION	TASK No.	TITLE	PAGE
XII		STARTING FUEL SOLENOID VALVE – MAINTENANCE PROCEDURES	
	6-49	Remove Starting Fuel Solenoid Valve	6-177
	6-50	Clean Starting Fuel Solenoid Valve	6-181
	6-51	Inspect Starting Fuel Solenoid Valve	6-182
	6-52	Repair Starting Fuel Solenoid Valve	6-183
	6-53	Install Starting Fuel Solenoid Valve	6-184
XIII		FUEL LINES – MAINTENANCE PROCEDURES	
	6-54	Remove Hose Assembly (Oil Cooler to In-Line Fuel Filter)	6-189
	6-55	Install Hose Assembly (Oil Cooler to In-Line Fuel Filter)	6-191
	6-66	Remove Hose Assembly (Fuel Control to Oil Cooler)	6-193
	6-57	Install Hose Assembly (Fuel Control to Oil Cooler)	6-196
	6-58	Remove Hose Assembly (in-Line Fuel Filter to Flow Divider)	6-199
	6-59	Install Hose Assembly (in-Line Fuel Filter to Flow Divider)	6-203
	6-60	Remove Hose Assembly (Fuel Boost Pump to Main Fuel Filter)	6-206
	6-61	Install Hose Assembly (Fuel Boost Pump to Main Fuel Filter)	6-210
	6-62	Remove Hose Assembly (Fuel Check Valve to Fuel Boost Pump)	6-214
	6-63	Install Hose Assembly (Fuel Check Valve to Fuel Boost Pump)	6-218
	6-64	Remove Hose Assembly (Flow Divider Left Side Primary to Manifold Assembly)	6-223
	6-65	Install Hose Assembly (Flow Divider Left Side Primary to Manifold Assembly)	6-225
	6-66	Remove Hose Assembly (Flow Divider Right Side Primary to Manifold Assembly)	6-227
	6-67	install Hose Assembly (Flow Divider Right Side Primary to Manifold Assembly)	6-229
	6-68	Remove Hose Assembly (Flow Divider Left Side Secondary to Manifold Assembly)	6-231
	6-69	Install Hose Assembly (Flow Divider Left Side Secondary to Manifold Assembly)	6-234
	6-70	Remove Hose Assembly (Flow Divider Right Side Secondary to Manifold Assembly)	6-237
	6-71	Install Hose Assembly (Flow Divider Right Side Secondary to Manifold Assembly)	6-240
	6-72	Remove Hose Assembly (Main Fuel Filter to Fuel Control)	6-244
	6-73	Install Hose Assembly (Main Fuel Filter to Fuel Control)	6-247
	6-74	Remove Hose Assembly (Fuel Control to Starting Fuel Solenoid Valve)	6-250
	6-75	Install Hose Assembly (Fuel Control to Starting Fuel Solenoid Valve)	6-253
	6-76	Remove Hose Assembly (Starting Fuel Solenoid Valve to Tube Assembly)	6-256

SECTION	TASK NO.	TITLE	PAGE
	6-77	Install Hose Assembly (Starting Fuel Solenoid Valve to Tube Assembly)	6-259
	6-78	Remove Tube Assembly (Hose Assembly to Primer Tube Assembly)	6-262
	6-79	Install Tube Assembly (Hose Assembly to Primer Tube Assembly)	6-267

Section I. FUEL CONTROL - MAINTENANCE PROCEDURES

6-1 REMOVE FUEL CONTROL 6-1

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Putty Knife

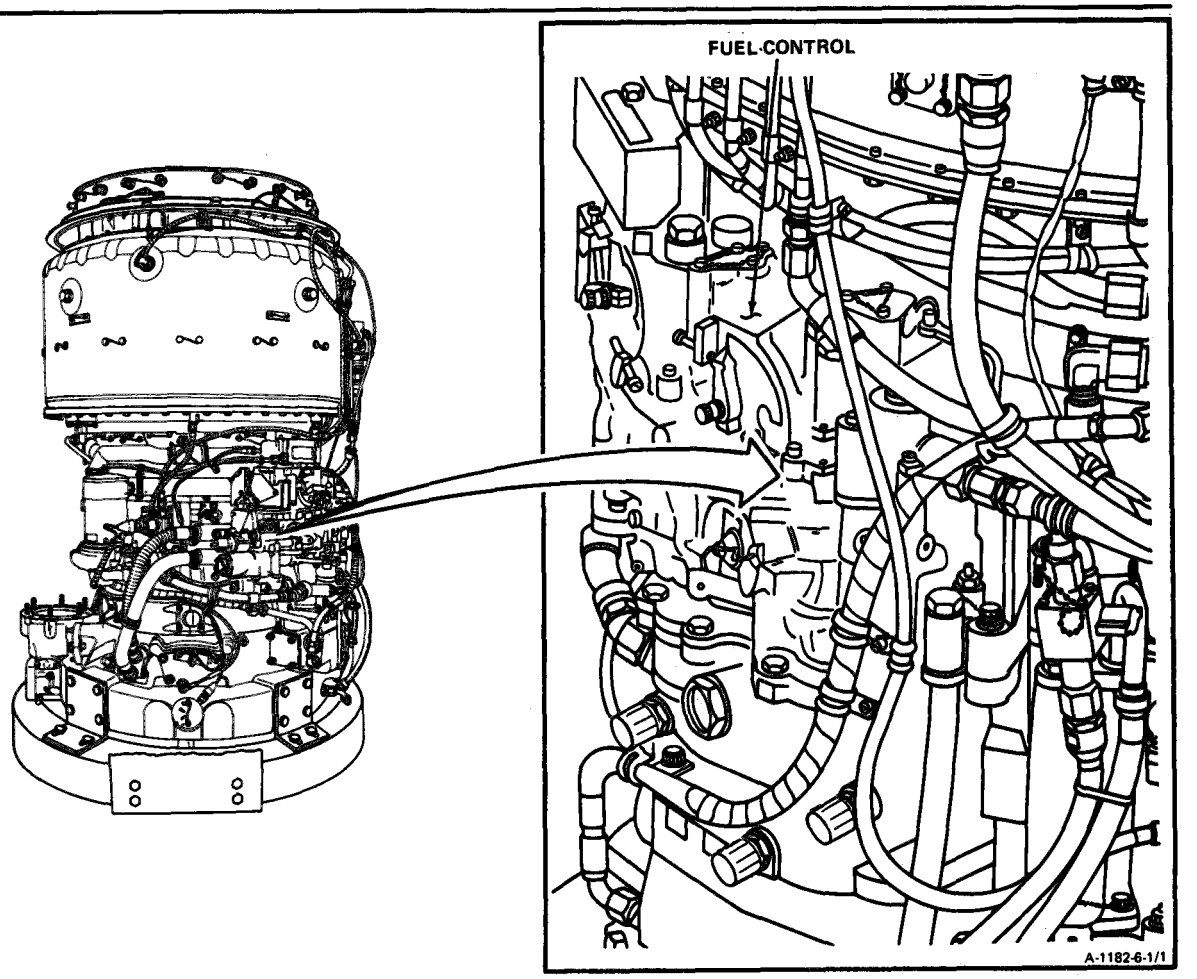
Materials:
Wiping Rag (E58)
Caps

Personal Required:
68B10 Aircraft Powerplant Repairer

General Safety Instructions:

WARNING

Turbine fuels are very flammable. They may cause drying and irritation of skin or eyes. Handle only in wall-ventilated areas away from heat and open flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin and do not take internally. Wash contacted area of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.



GO TO NEXT PAGE

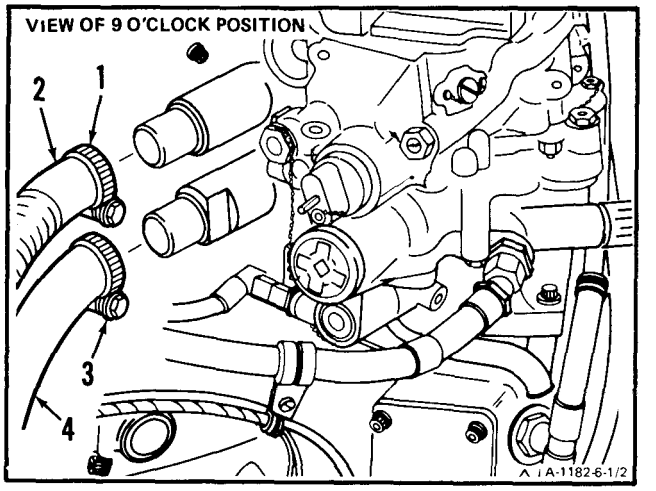
6-1 REMOVE FUEL CONTROL (Continued) 6-1

NOTE

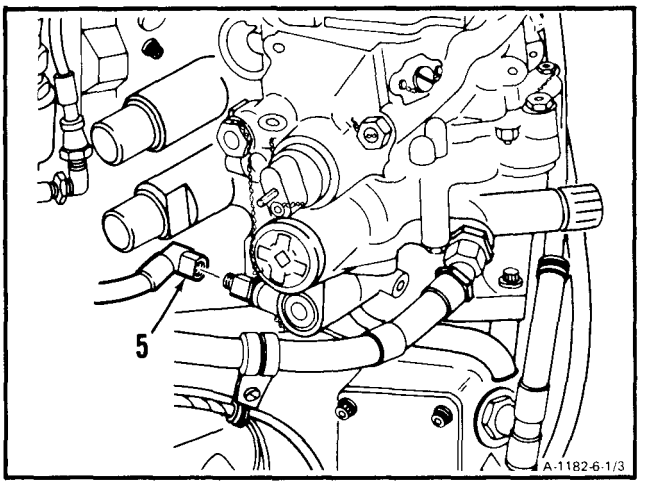
If fuel control is removed from engine and is not to be reinstalled for a period longer than 48 hours, it must be preserved.

1. Loosen clamp (1) and **disconnect hose (2).**

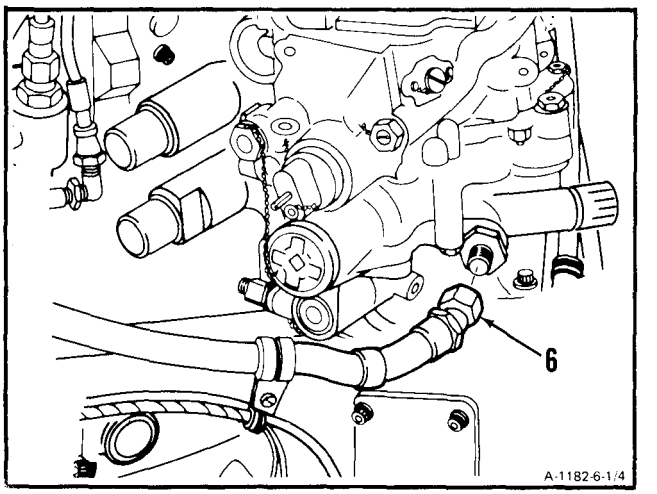
2. Loosen clamp (3) and **disconnect hose (4).**



3. **Disconnect hose assembly (5).**



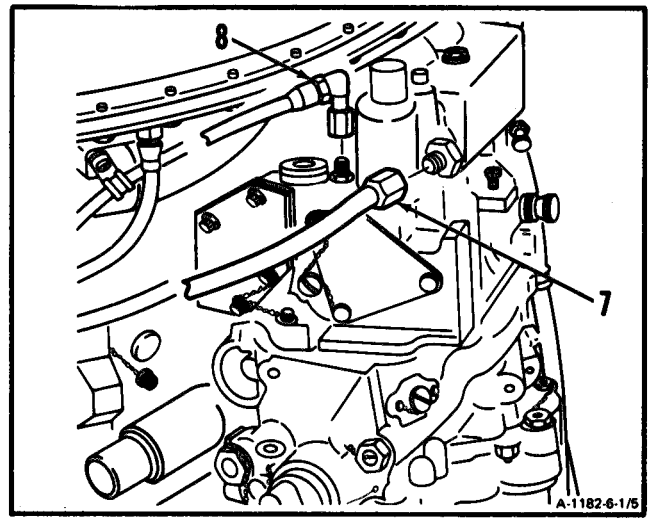
4. **Disconnect hose assembly (6).**



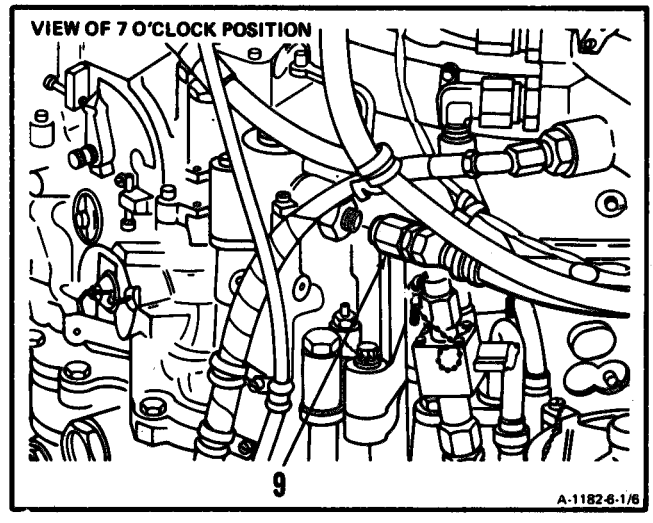
GO TO NEXT PAGE

5. **Disconnect hose assembly (7).**

6. **Disconnect hose assembly (8).**



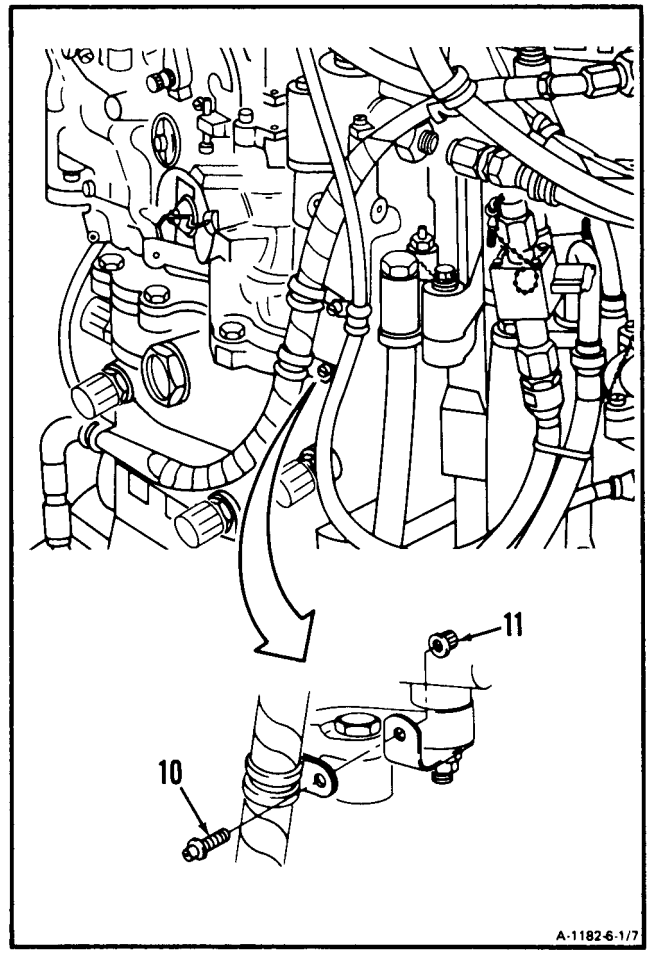
7. **Disconnect hose assembly (9).**



GO TO NEXT PAGE

6-1 REMOVE FUEL CONTROL (Continued) 6-1

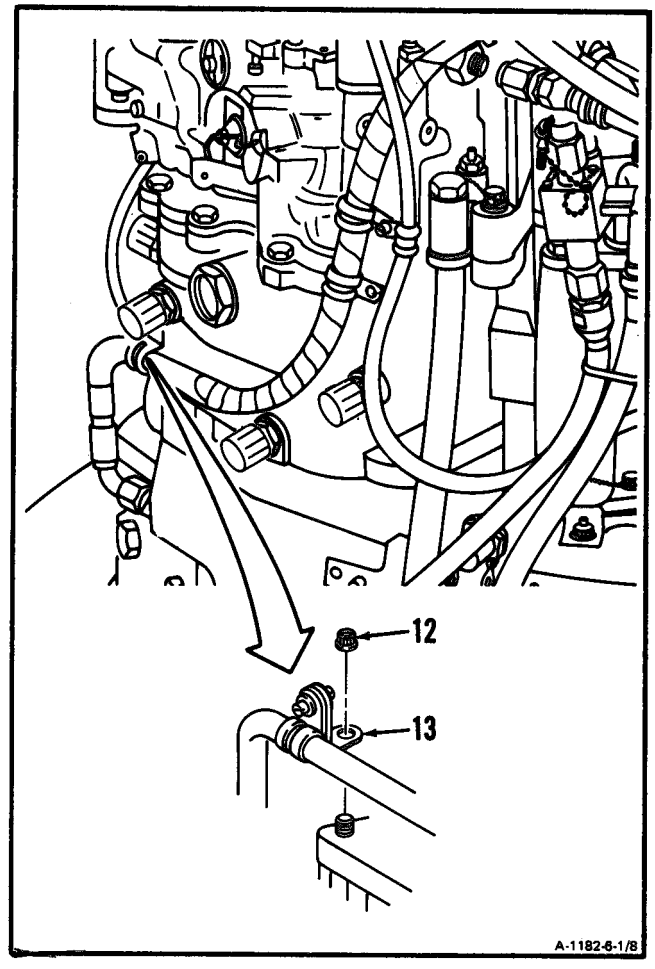
8. **Remove bolt (10) and nut (11).**



GO TO NEXT PAGE

6-1 REMOVE FUEL CONTROL (Continued) 6-1

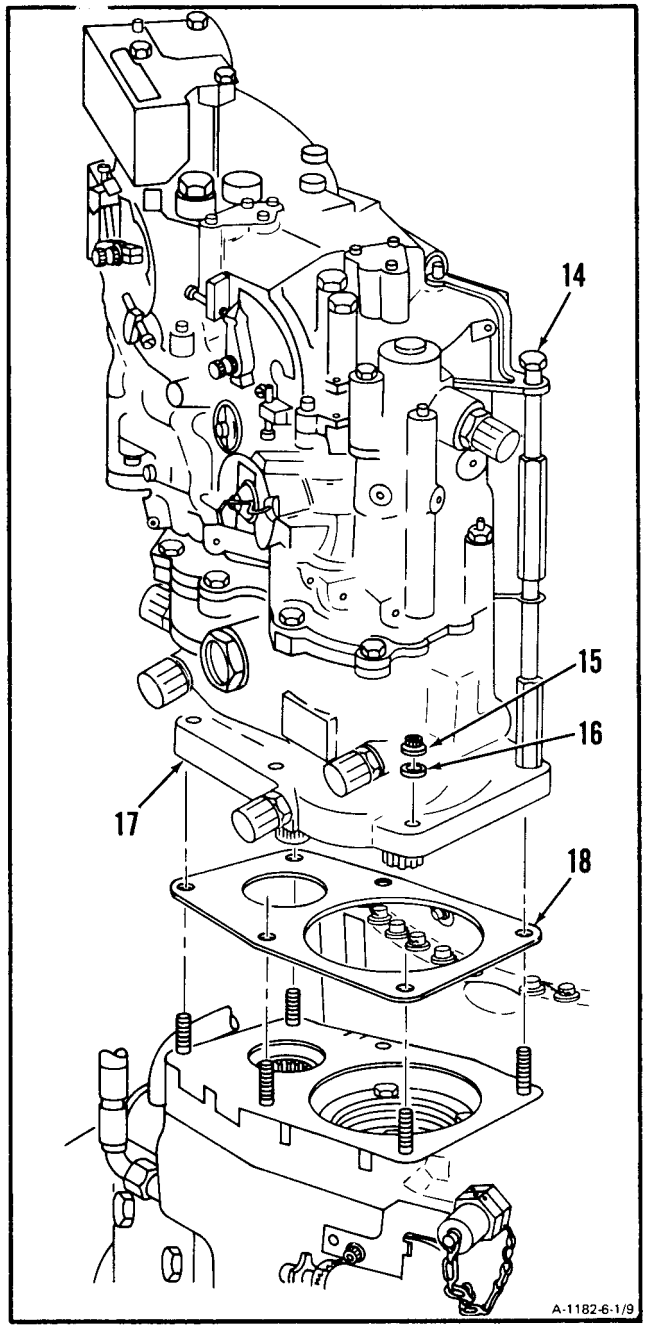
9. **Remove nut (12)** and bracket (13).



GO TO NEXT PAGE

6-1 REMOVE FUEL CONTROL (Continued) 6-1

10. Remove lockwire and loosen bolt (14).
11. Remove three nuts (15) and three washers (16).
12. **Remove fuel control (17)** and gasket (18). If necessary scrape off old gasket. Use putty knife.

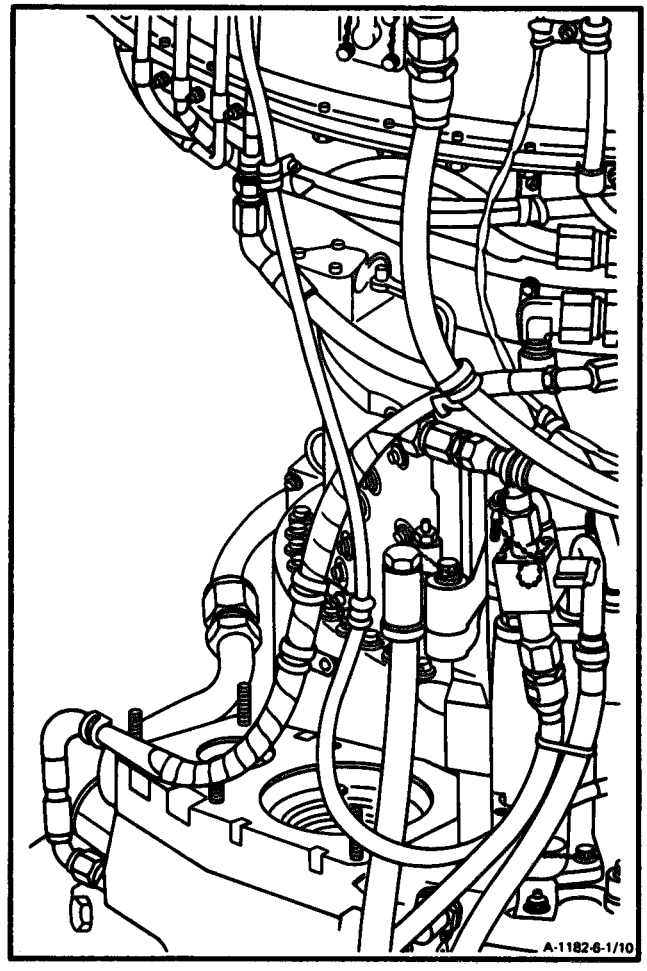


GO TO NEXT PAGE

6-1 REMOVE FUEL CONTROL (Continued) 6-1

FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-2 DISASSEMBLE FUEL CONTROL 6-2

INITIAL SETUP

Applicable Configurations:
All

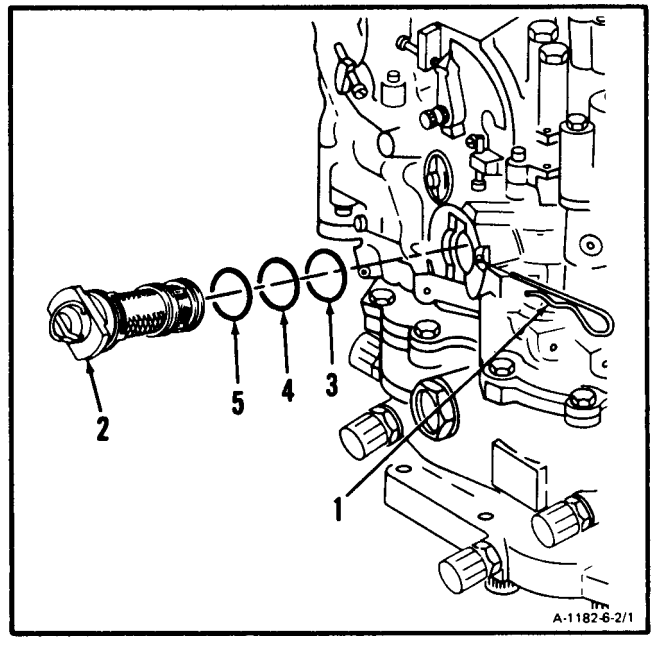
Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944

Materials:
None

Personnel Required:
68B10 Aircraft Powerplant Repairer

Equipment Condition:
Off Engine Task
Fuel Control Removed (Task 6-1)

1. Remove lockwire and lockpin (1).
2. Rotate filter (2) counterclockwise 90 degrees. **Remove filter (2).**
3. Remove packings (3, 4, and 5).

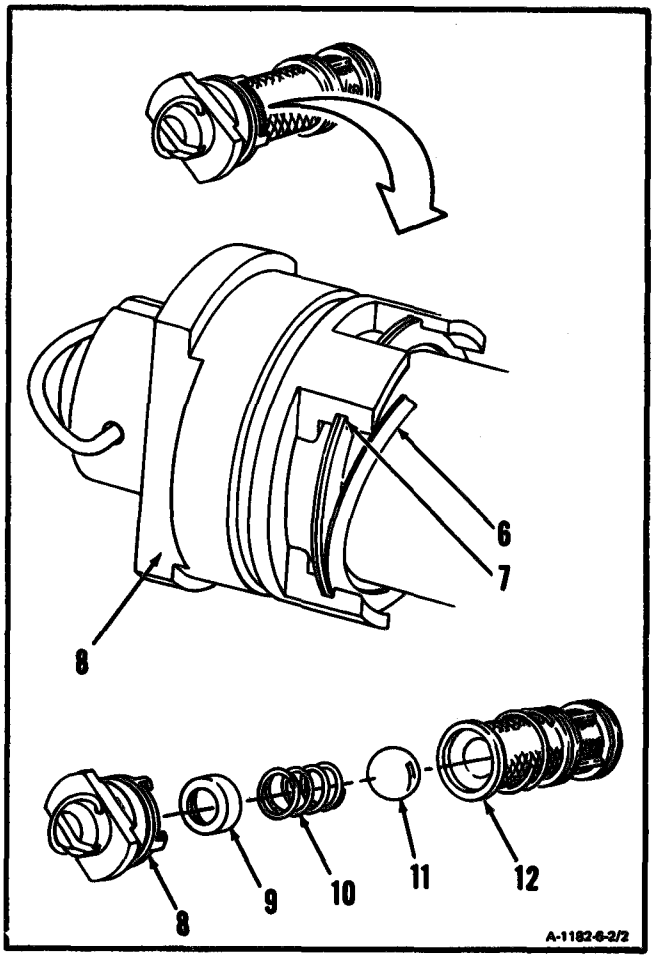


GO TO NEXT PAGE

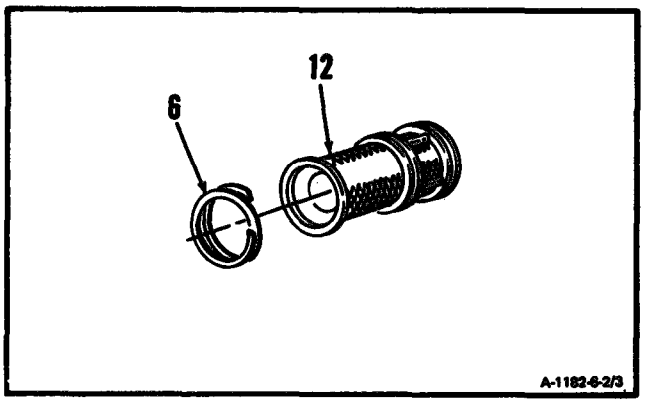
6-2 DISASSEMBLE FUEL CONTROL (Continued) 6-2

4. Push bottom end of retaining ring (6) out of cover groove (7) and **seperate retaining ring (6) from cover (8).**

5. **Remove (8), retainer (9), spring (10), and ball (11)** from strainer (12).



6. **Remove retaining ring (6)** from strainer



FOLLOW-ON MAINTENANCE:

None

END OF TASK

6-3 CLEAN FUEL CONTROL 6-3

INITIAL SETUP

Applicable Configurations:
All

Tools:
Goggles
Compressed Air Source

Materials:
Dry Cleaning Solvent (E17)
Gloves (E20)
Wiping Rag (E58)

Personnel Required:
68B10 Aircraft Powerplant Repairer

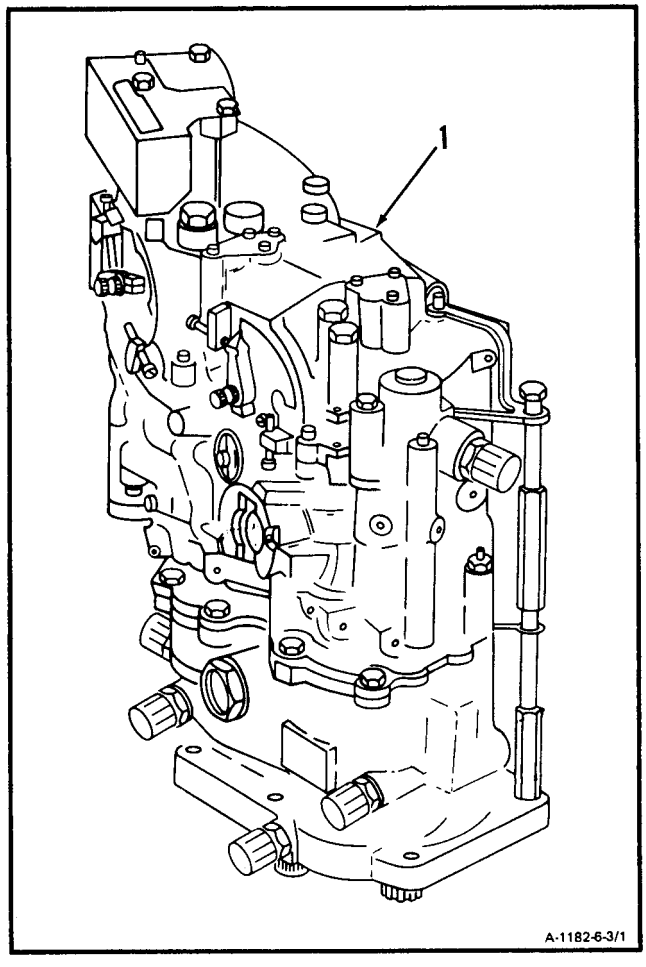
Equipment Condition:
Off Engine Task
Fuel Control Removed (Task 6-1)
Fuel Control Disassembled (Task 6-2)

General Safety Instructions:

WARNING

Dry cleaning solvent (E17) is flammable and toxic. It can irritate skin and cause burns. Use only in well-ventilated area, away from heat and open flame. In case of contact, immediately flush skin or eyes with water for at least 15 minutes. Get medical attention for eyes.

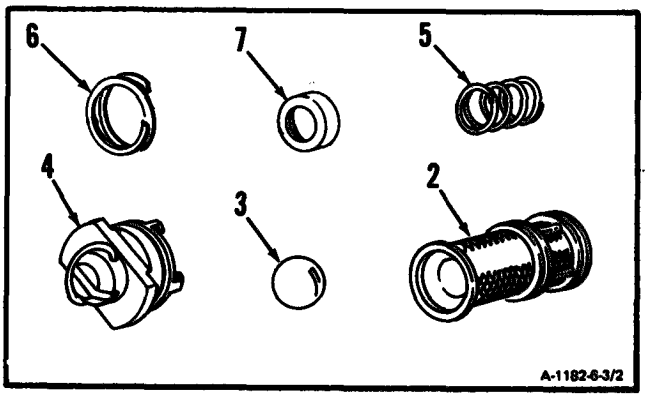
1. Wear gloves (E20). **Clean fuel control (1)** with wiping rag (E58) dampened in dry cleaning solvent (E17).



GO TO NEXT PAGE

6-3 CLEAN FUEL CONTROL (Continued) 6-3

2. **Clean strainer element (2),** ball (3), cover (4), spring (5), retaining ring (6), and retainer (7). Use dry cleaning solvent (E17).



WARNING

When using compressed air for cleaning, use approved proactive equipment for eyes and face. Do not use more than 30 psig air pressure. Do not direct air toward yourself or another person. Failure to comply could result in injury to eyes or skin. In case of injury, get medical attention.

3. Wear goggles. **Blow dry strainer element (2)** using clean, dry compressed air.

FOLLOW-ON MAINTENANCE:

Inspect Fuel Control (Task 6-4).

END OF TASK

6-4 INSPECT FUEL CONTROL 6-4

INITIAL SETUP

Applicable Configurations:
All

Tools:
Technical Inspection Tool Kit, NSN 5180-00-323-5114

Materials:
None

Personnel Required:
68B30 Aircraft Powerplant Inspector

References:
Task 1-118

Equipment Condition:
Off Engine Task

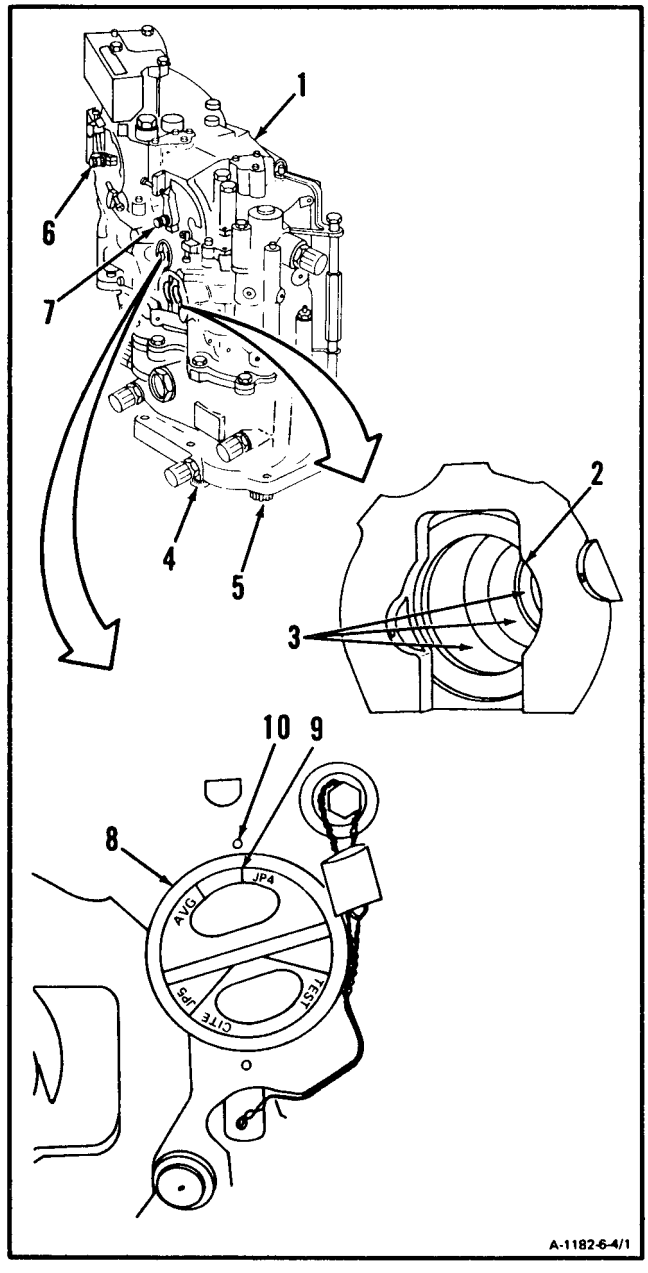
1. **Inspect fuel control housing (1).** There shall be no cracks. There shall be no evidence of leakage.

   a. Inspect filter cavity (2). There shall be no nicks, dents or scratches deeper than 0.010 inch on three packing sealing surfaces (3).

   b. Inspect splines (4 and 5). (Ref. Task 1-118). There shall be no wear deeper than 0.007 inch on splines (4 and 5).

   c. Inspect levers (6 and 7). They shall not be missing, broken or loose.

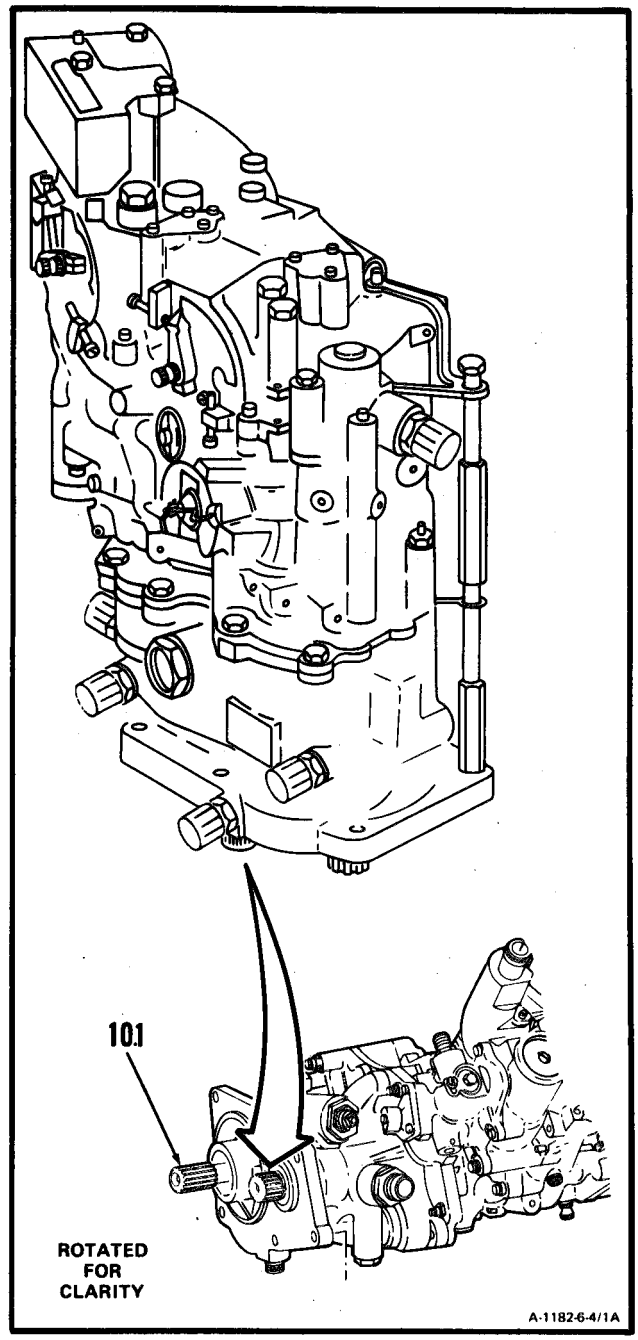
   d. Inspect fuel selector (8). Make sure JP4 index line (9) is aligned with index point (10).



GO TO NEXT PAGE

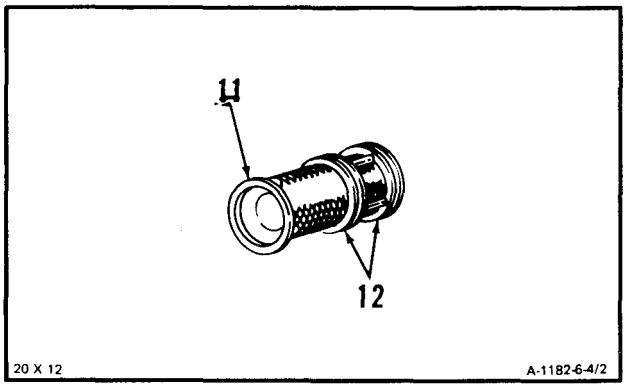
6-4 INSPECT FUEL CONTROL (Continued)

1.1. Inspect area around shaft (10.1). There shall be no evidence of leakage.

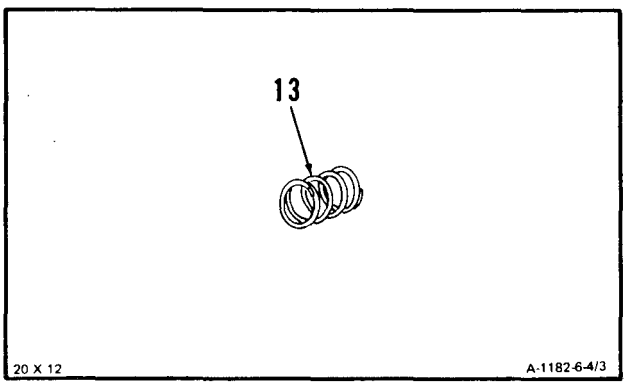


GO TO NEXT PAGE

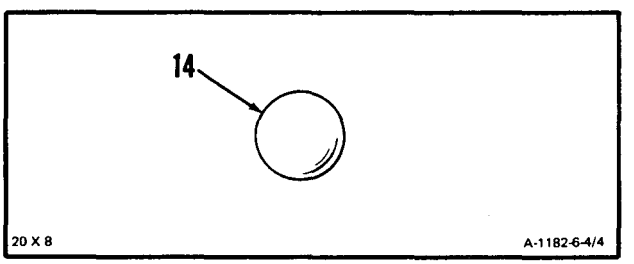
2. **Inspect strainer element (11).** There shall be no tears, punctures, or broken wires in screen. There shall be no nicks, dents or scratches deeper than 0.010 inch in two packing grooves (12).



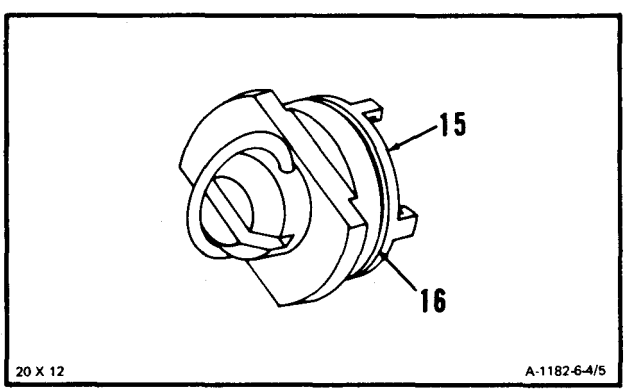
3. **Inspect spring (13).** There shall be no broken coils.



4. **Inspect ball (14).** There shall be no corrosion.



5. **Inspect cover (15).** There shall be no nicks, dents or scratches deeper than 0.010 inch in packing groove (16).



FOLLOW-ON MAINTENANCE:

None

END OF TASK

6-4.1 REPAIR FUEL CONTROL

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114
Retaining Ring Pliers

Materials:
None

Parts:
Packing
Packing
Ring and Seal Assembly

Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

References:
TM 55-2840-254-23P

Equipment Condition:
Off Engine Task

General Safety Instructions:

WARNING

Turbine fuels are very flammable. They may cause drying and irritation of skin or eyes. Handle only in well-ventilated areas away from heat and open flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin and do not take internally. Wash contacted area of skin thoroughly after handling. If irritation of skin results, get medical attenenticm. Get medical attention for eyes.

GO TO NEXT PAGE

NOTE

The repair procedures for both of the shafts is the same.

1. Repair leakage at shaft (1) or (2) as follows:

WARNING

Use care when removing the retaining ring. The seal retainer is spring loaded and exerts approximately 4.5 pounds of force.

a. Using retaining ring pliers remove retaining ring (3) from housing (12).

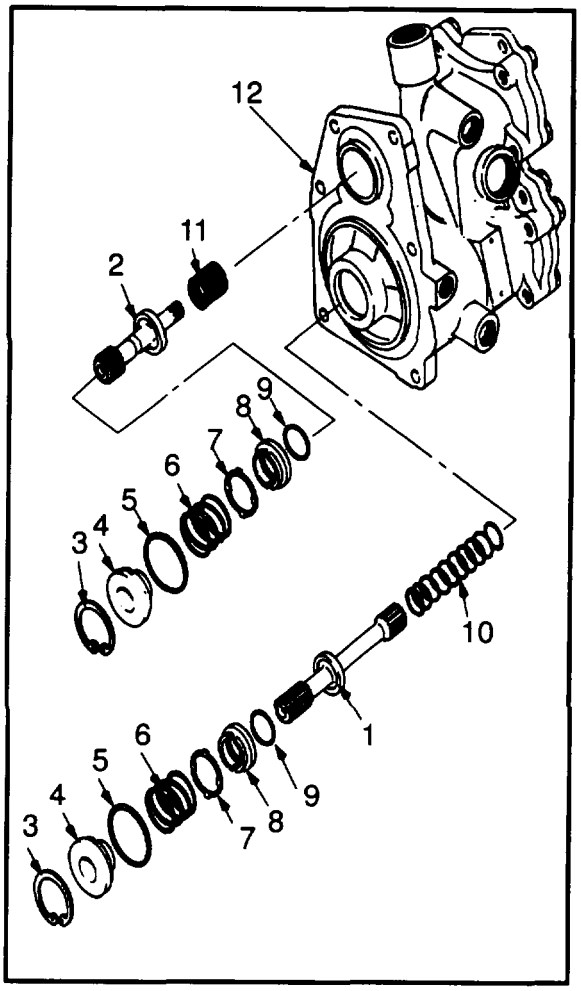
b. Remove shouldered shaft (1) or (2). If spring (10) or (11) is removed with the shaft, reinstall the spring in housing (12).

c. Remove packing retainer (4), packing (5), spring (6), key washer (7), seal ring assembly (8), and packing (9) from the shaft. Discard packings (5) and (9) and the seal ring assembly (8).

CAUTION

Be careful when handling seal ring assembly. Do not touch, scratch, or mar the contact face of seal ring. Leaking and premature failure may result.

d. Install a new packing (5) in the groove of the drive shaft bore of housing assembly (12). Install new packing (9), new seal ring assembly (8), key washer (7), spring (6), and packing retainer (4) on shaft (1) or (2). Make sure inner lugs of the key washers (7) engage grooves in the seal ring (8), and outer lugs engage grooves in the packing retainer (4).



GO TO NEXT PAGE

e. Position packing retainer (4), seal ring (8) and related parts on shouldered shaft (1) or (2) so that the face of the seal ring engages the polished surface of the shaft sealing flange. Hold parts in engagement and insert shouldered shaft (1) or (2) so that the splines engage the internal splines in the housing (12).

WARNING

Use care when installing the retaining ring. The seal retainer is spring loaded, exerting approximately 4.5 pounds of force.

f. Using retaining ring pliers install the retaining ring (3) into housing (12) with sharp edge facing out.

INSPECT

FOLLOW-ON MAINTENANCE:
None

END OF TASK

6-5 ASSEMBLE FUELCONTROL

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical InspectionTool Kit,
NSN 5180-00-323-5114

Materials:
Lockwire(E29)

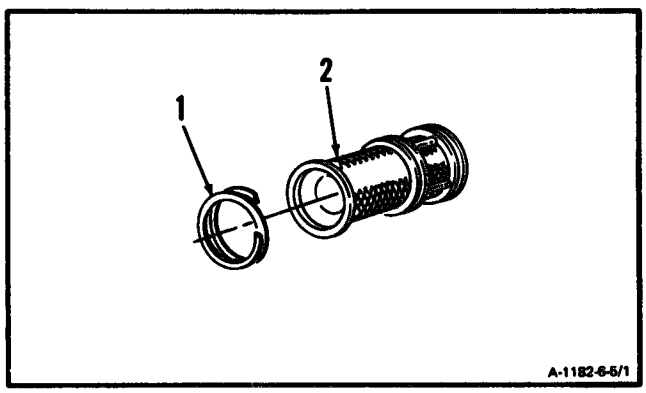
Parts:
Packings

Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

References:
TM 55-2840-254-23P

Equipment Condition:
Off Engine Task

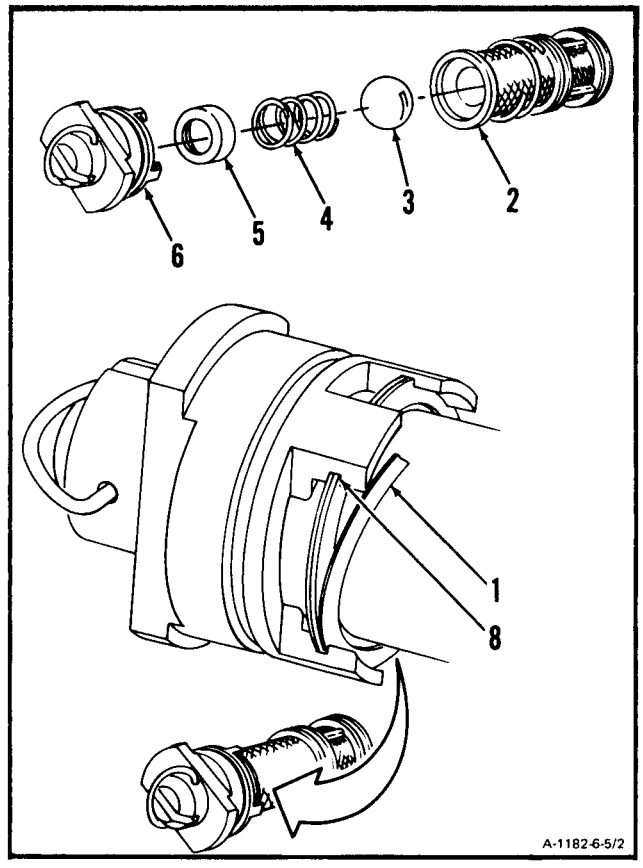
1. Slide retaining ring (1) on strainer (2).



GO TO NEXT PAGE

2. Install ball (3), spring (4), retainer (5), and cover (6) on strainer (2).

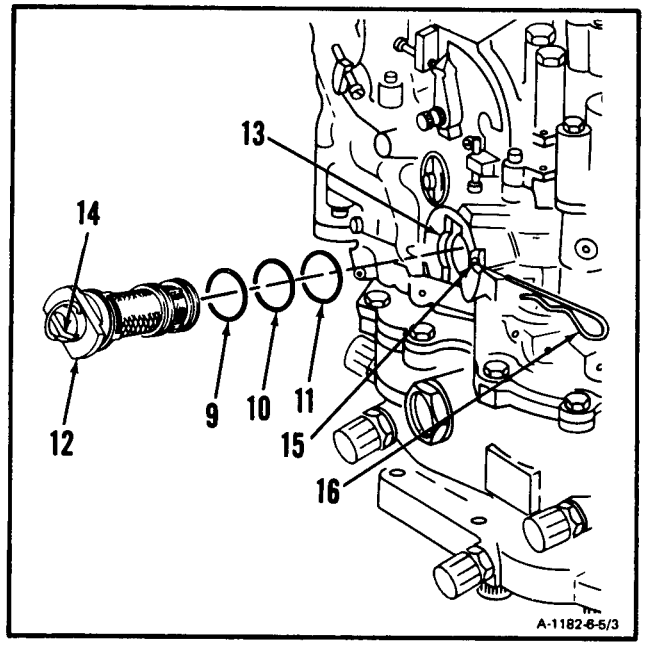
3. Push bottom end of retaining ring (1) into cover groove (8) and **install retaining ring.**



4. **Install packings (9, 10, and 11)** on filter (12).

5. **Push filter (12) into fuel control (13).** Rotate filter (12) clockwise, 90 degrees, and **align filter (12) and lockpin slot (14) with fuel control lockpin hole (15).**

6 **Install lockpin** (16) and lockwire. Use lockwire (E29).



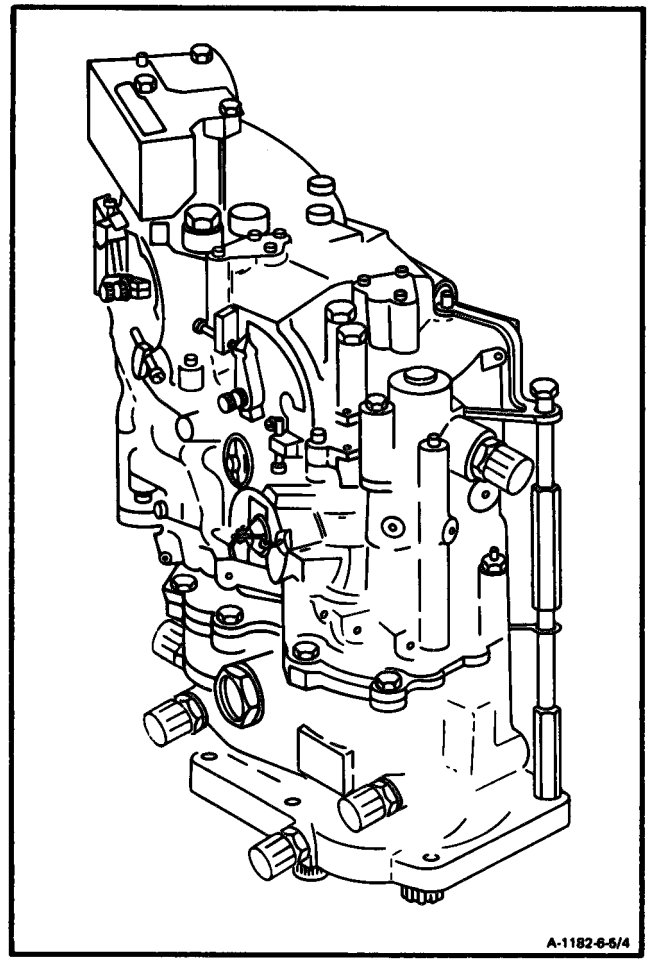
INSPECT

GO TO NEXT PAGE

6-5 ASSEMBLE FUEL CONTROL (Continued) 6-5

FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-6 INSTALL FUEL CONTROL 6-6

INITIAL SETUP

Applicable Configurations:
All

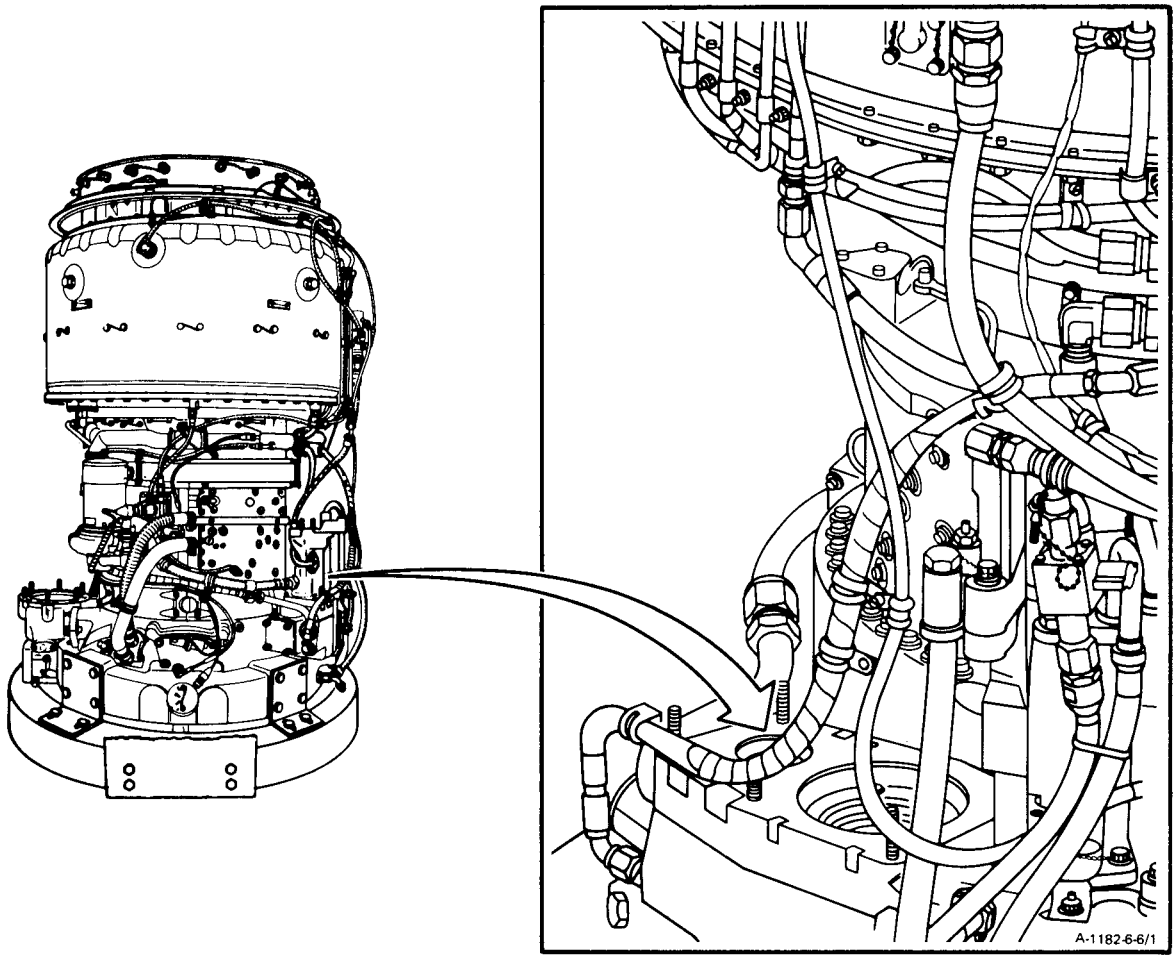
Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
Lockwire (E29)
Lubricant (E30)

Parts:
Gasket

Personnel Required:
68B10 Aircraft Powerplant Repairer (2)
68B30Aircraft Powerplant Inspector

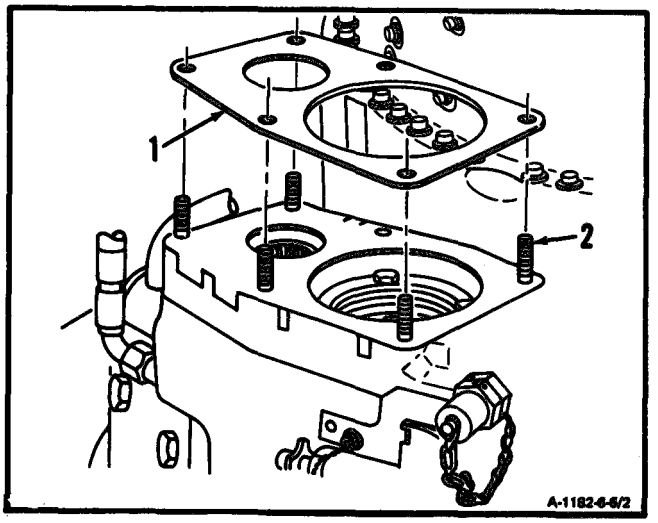
References:
TM 55-2840-254-23P



GO TO NEXT PAGE

6-6 INSTALL FUEL CONTROL (Continued)

1. **Position gasket (1)** over studs (2).



GO TO NEXT PAGE

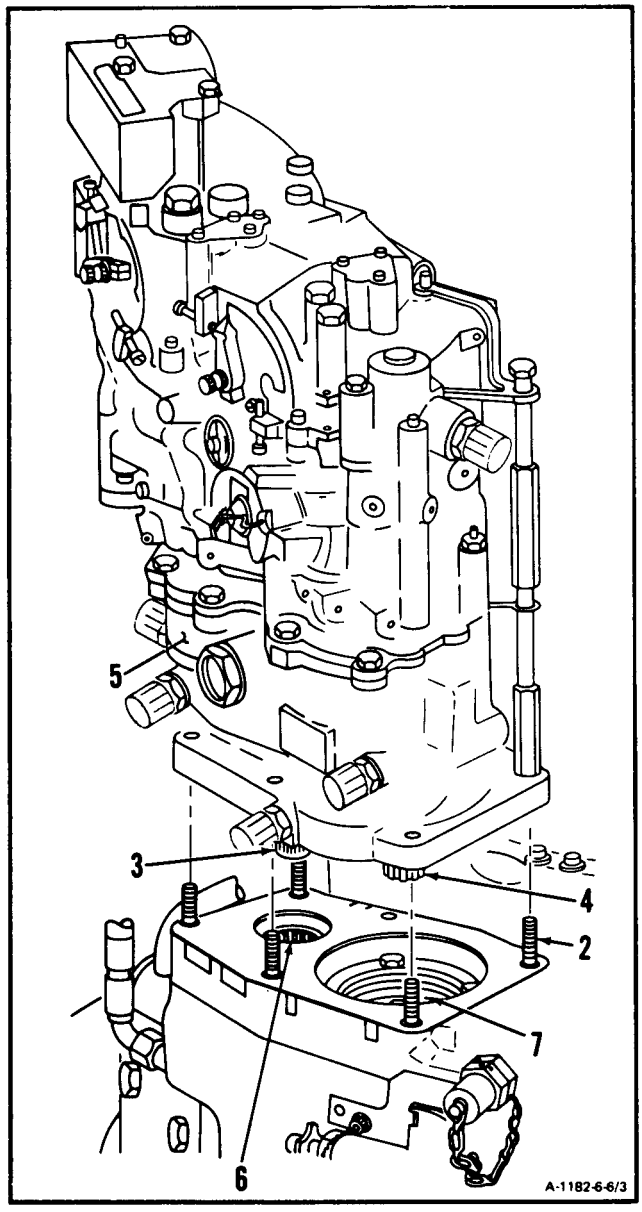
6-6 INSTALL FUEL CONTROL (Continued)

2. **Lubricate male splines (3 and 4) of fuel control (5)** with lubricant (E30).

NOTE

It may be necessary to have helper rotate compressor rotor and power turbine to mesh splines.

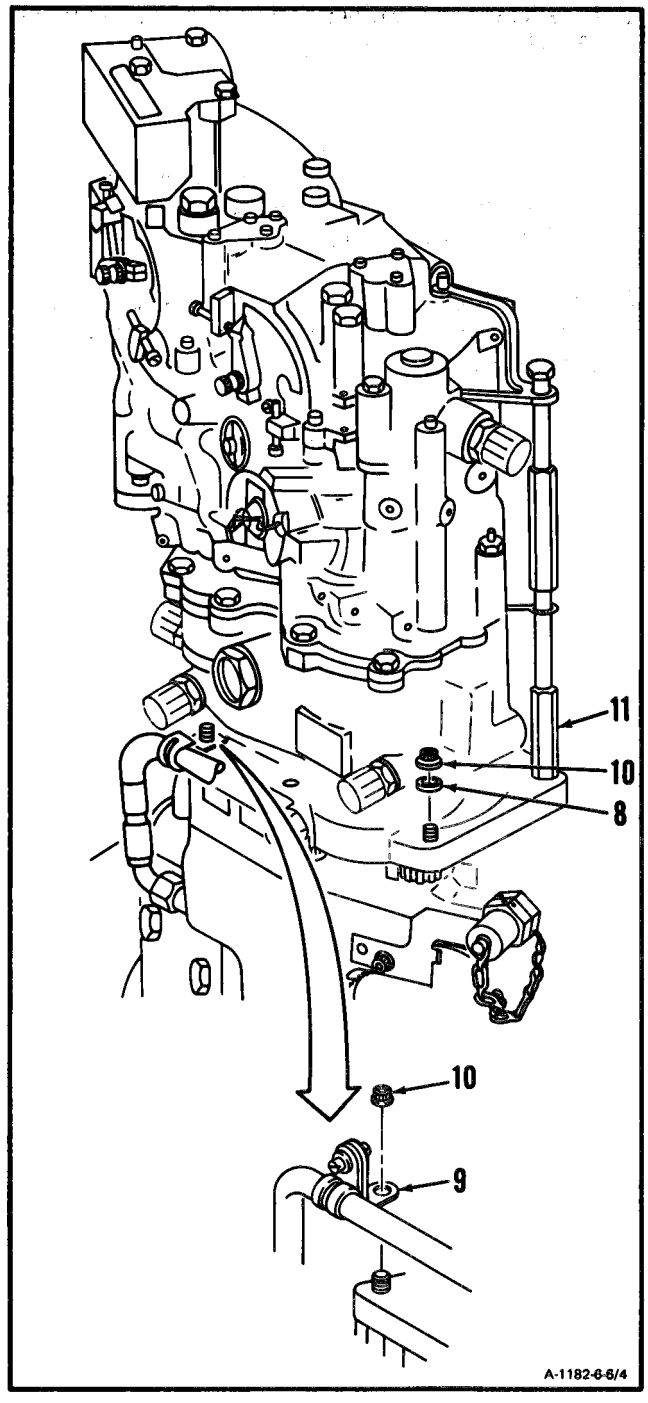
3. **Position fuel control (5) onto studs (2),** carefully meshing fuel control splines (3 and 4) with accessory drive gearbox splines (6 and 7).



GO TO NEXT PAGE

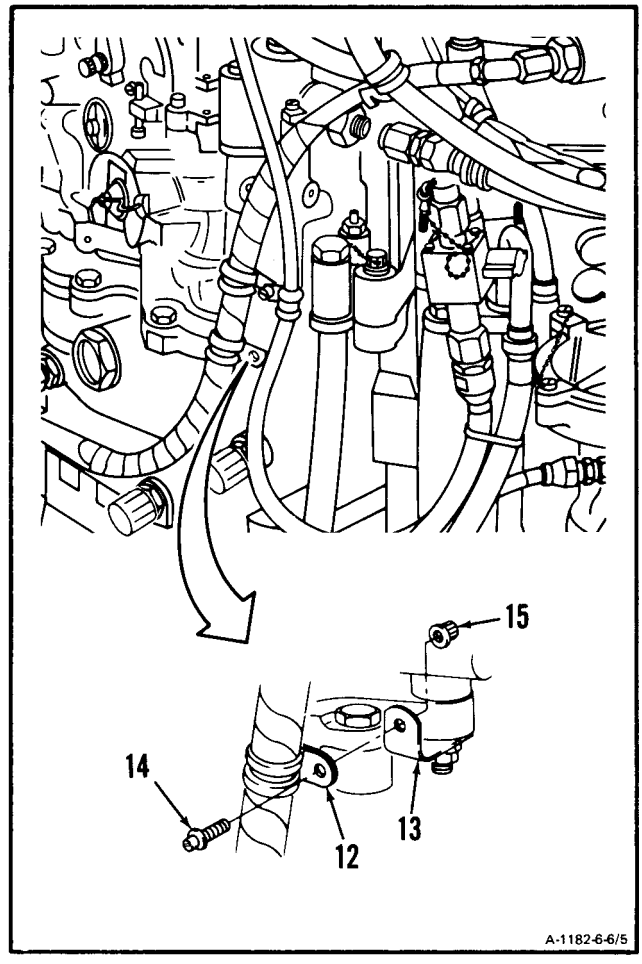
6-6 INSTALL FUEL CONTROL (Continued)

4. **Install** three washers (8), **bracket (9),** four nuts (10), and bolt (11). Tighten nuts and bolt. Lockwire bolt (11). Use Iockwire (E29).

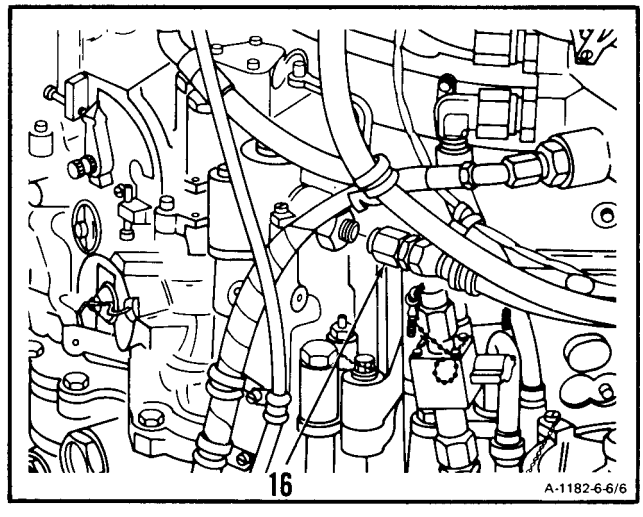


GO TO NEXT PAGE

5. **Position clamp (12)** on bracket (13), and **install bolt (14) and nut (15).**



6. Install hose assembly (16).

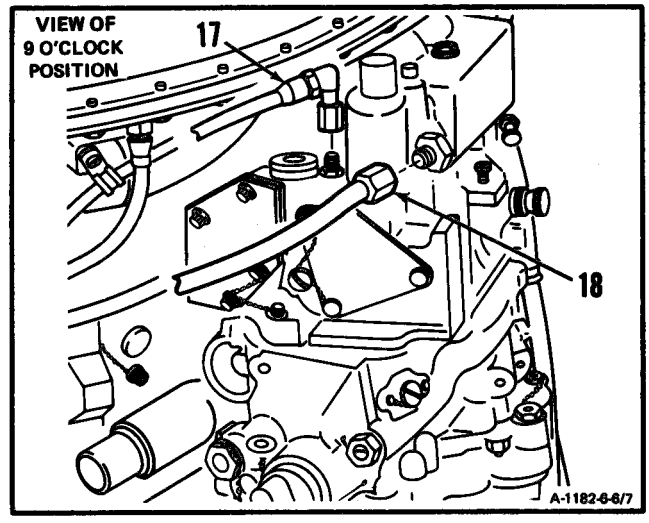


GO TO NEXT PAGE

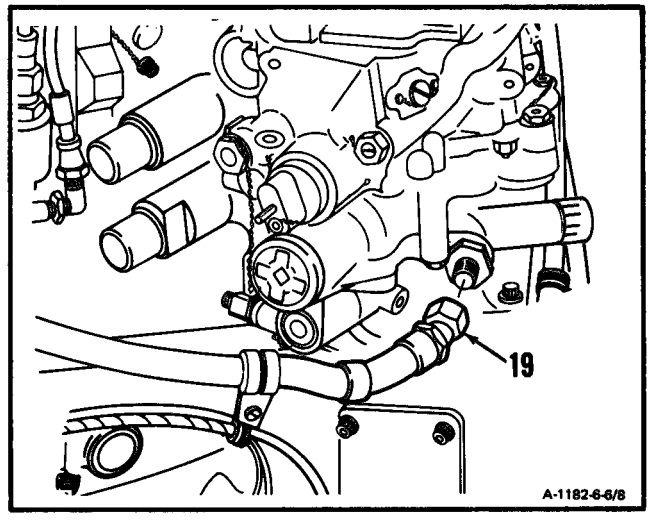
6-6 INSTALL FUEL CONTROL (Continued) 6-6

7. **Install hose assembly (17).**

8. **Install hose assembly (18).**



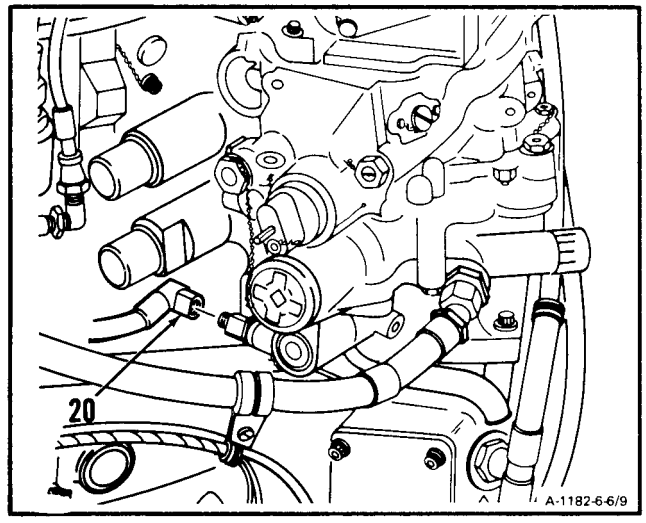
9. **Install hose assembly (19).**



GO TO NEXT PAGE

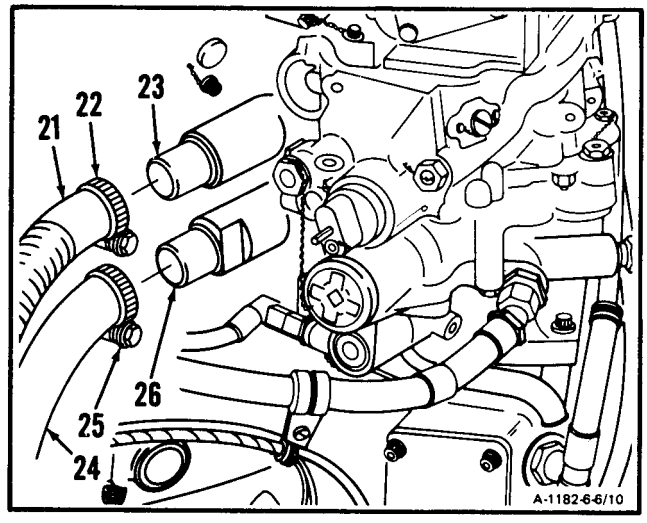
6-6 INSTALL FUEL CONTROL (Continued)

10. **Install hose assembly (20).**



11. **Slide hose (21)** and clamp (22) **over connector (23).** Tighten clamp.

12. **Slide hose (24)** and clamp (25) **over connector** (26). Tighten clamp.



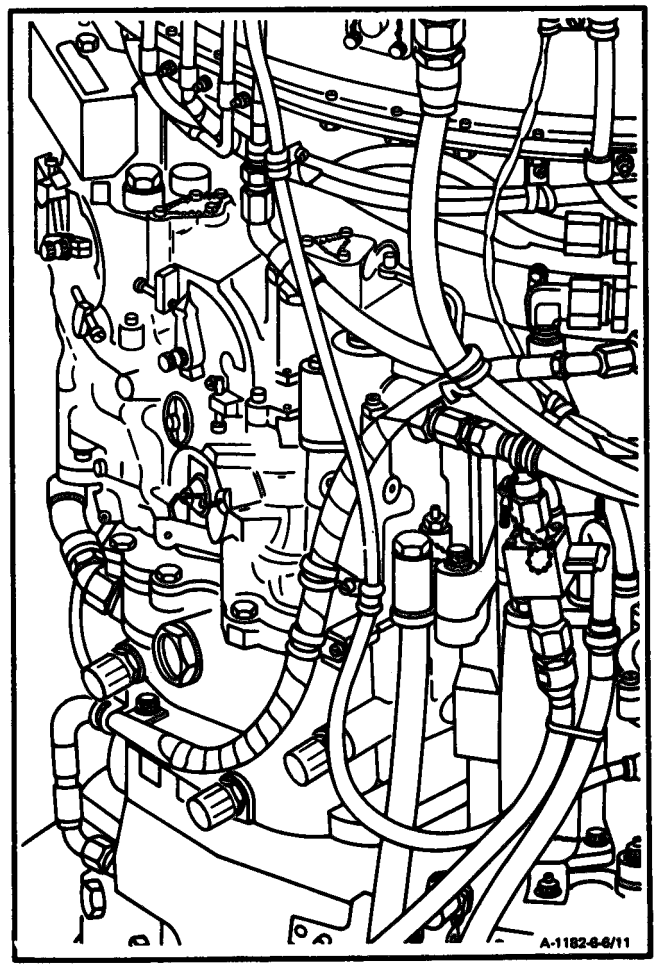
INSPECT

GO TO NEXT PAGE

6-6 INSTALL FUELCONTROL(Continued)

FOLLOW-ON MAINTENANCE:

Adjust Fuel Control (Task 1-108).



END OF TASK

6-7 PRESERVE FUEL CONTROL 6-7

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit, NSN 5180-00-323-4944
Hose Assembly (Appendix E) (2)
Socket Wrench Handle
Container, 2 Gallon (2)

Materials:
High Pressure Caps
Lubricating Oil (E31)

Personal Required:
681310 Aircraft Powerplant Repairer (2)

Equipment Condition:
Off Engine Task
Fuel Control Removal (Task 6-1)

General Safety Instructions:

WARNING

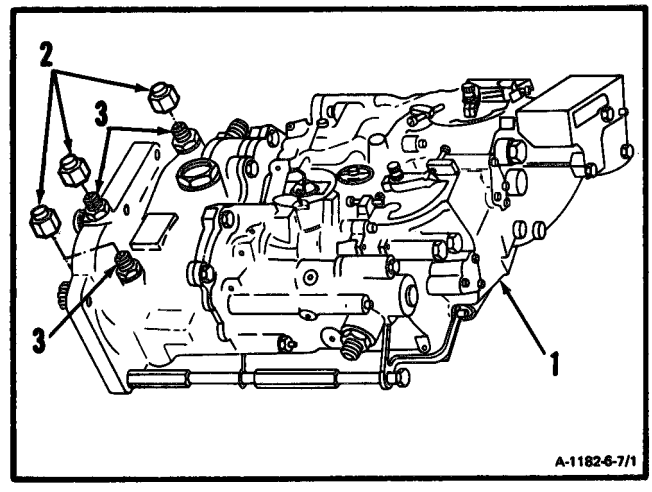
Lubricating oil (E31) can cause paralysis if swallowed. Prolonged contact with it may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.

NOTE

If fuel control is removed from engine and is not to be reinstalled for a period longer than 46 hours, it must be pre-Served.

1. Place fuel control (1) in horizontal position.

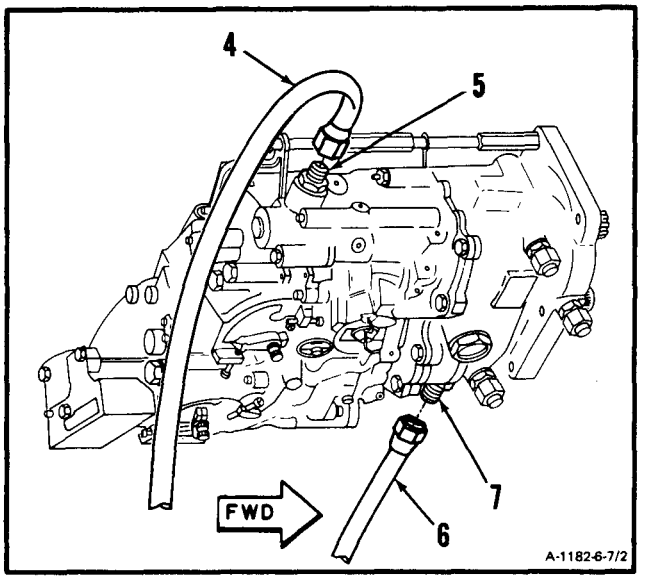
2. Install three high pressure caps (2) on three fittings (3).



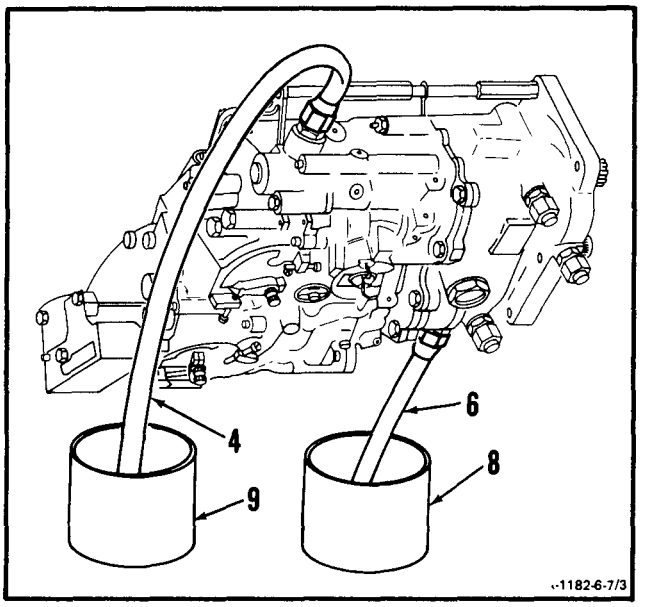
GO TO NEXT PAGE

6-7 PRESERVE FUEL CONTROL (Continued) 6-7

3. **Install hose assembly (Appendix E) (4)** to fitting (5).
4. **Install hose assembly (Appendix E) (6)** to fitting (7).



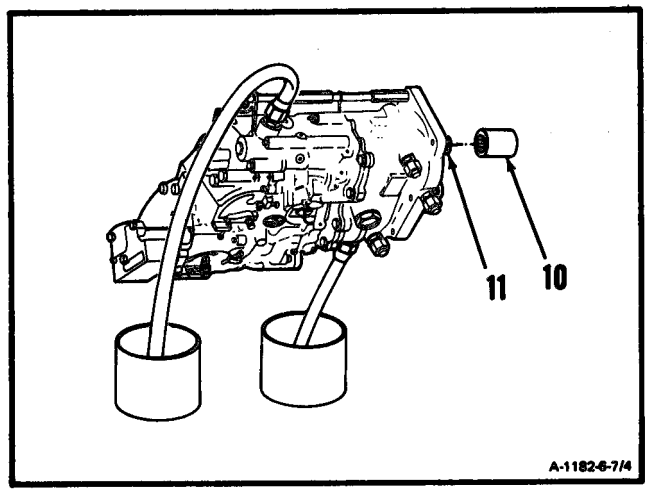
5. **Put** 2 quarts **lubricating oil** (E31) **in container (8).**
6. **Put hose assembly (4) in container (9).**
7. **Put hose assembly (6) in container (8).**



GO TO NEXT PAGE

6-7 PRESERVE FUEL CONTROL (Continued)

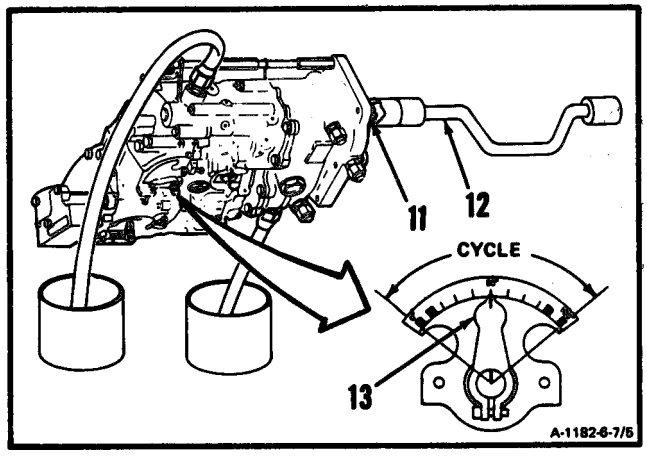
8.. Install 9/16 inch-12 point deep socket (10) on N1 drive spline (11).



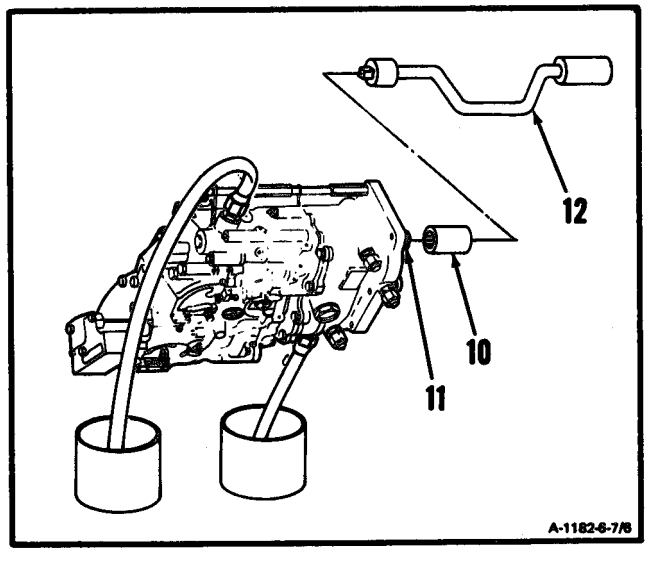
NOTE

In following step, N1 power lever pointer shall be cycled from N1 power lever low stop to N1 power lever high stop positions a minimum of three times.

9. Using helper to support fuel control, use socket wrench handle (12) **to rotate N1 drive spline (11) counterclockwise. Cycle N1 power lever (13) and continue rotating N1 drive spline(11) until all fuel is flushed out by oil.**



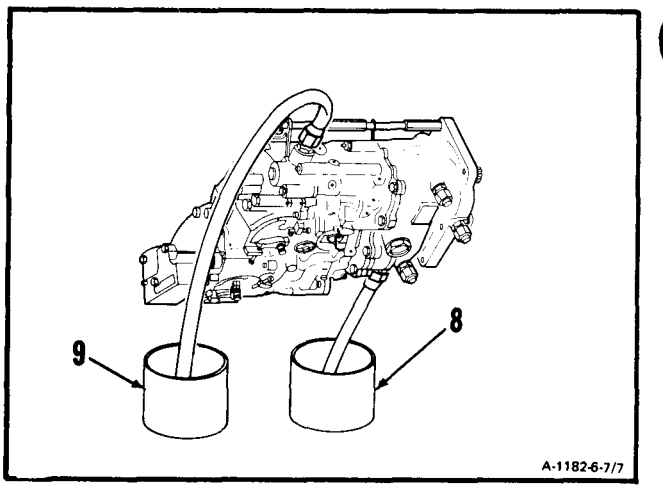
10. Remove socket wrench handle (12), and socket (10) from N1 drivespline(11).



GO TO NEXT PAGE

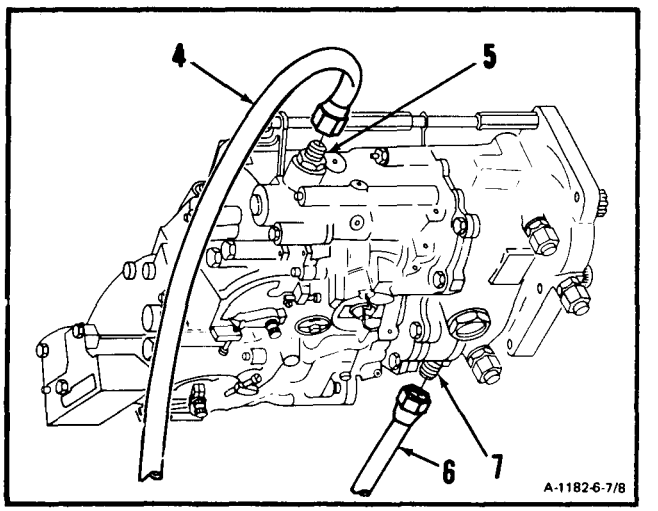
6-7 PRESERVE FUEL CONTROL (Continued) 6-7

11. Remove two containers (8 and 9). Discard lubricating oil (E31) from container (9).



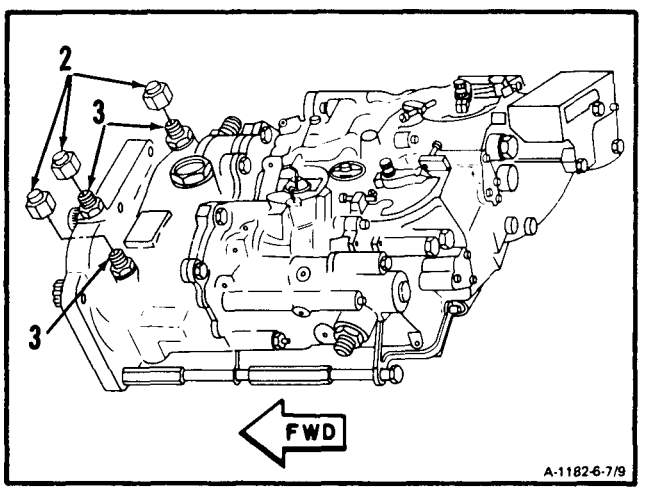
12. Remove hose assembly (Appendix E) (6) from fitting (7).

13. Remove hose assembly (Appendix E) (4) from fitting (5).



14. Remove three high pressure caps (2) from three fittings (3).

15. Install caps and plugs on all openings to keep contaminants out of fuel control.

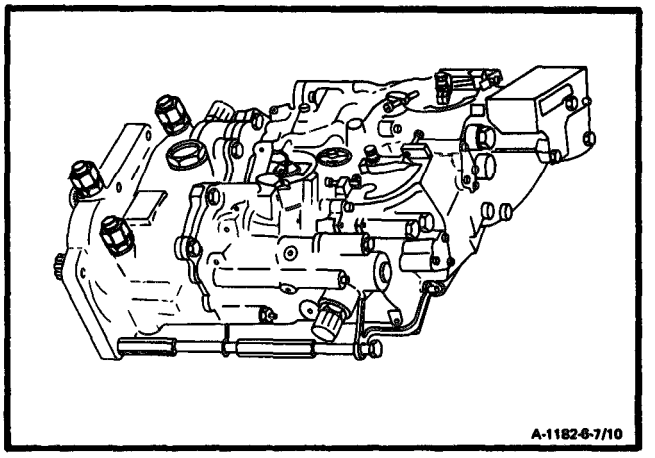


GO TO NEXT PAGE

6-7 PRESERVE FUEL CONTROL (Continued)

FOLLOW-ON MAINTENANCE:

Package Fuel Control (Task 6-8).



END OF TASK

6-8 PACKAGE FUEL CONTROL 6-8

INITIAL SETUP

Applicable Configurations:
All

Tools:
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
Barrier Material (E6)
Desiccant Bag (E16) (3)

Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powemlant Inspector

Equipment Condition:
Off Engine Task
Fuel Control Preserved (Task 6-7)

References:
TB 55-8100-200-25

GO TO NEXT PAGE

6-6 PACKAGE FUEL CONTROL (Continued)

1. Install molded bottom (1) in container (2).

2. **Wrap fuel control (3)** securely with barrier material (E6).

NOTE

In following step, place fuel control historical record in a greaseproof envelope and place in container with fuel control.

3. **Install fuel control (3)** in molded bottom (1). install historical record.

4. **Install 3 bags of desiccant (E16)** (4) in container (2).

5. **Install molded top support (5)** on fuel control (3).

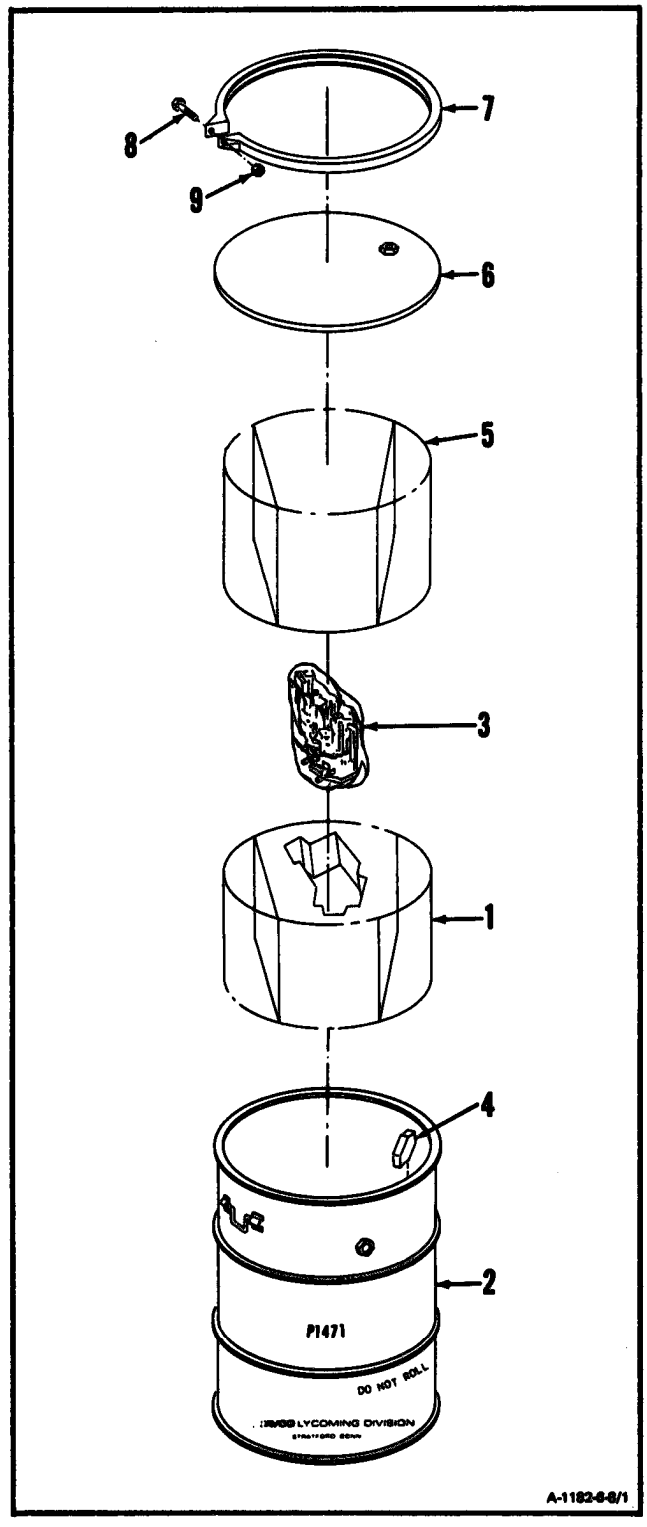
INSPECT

6. **Install lid (6)** on container (2).

7. **Install closure ring (7)** around lid (6) and metal shipping container (2).

8. Install bolt (8) and nut (9).

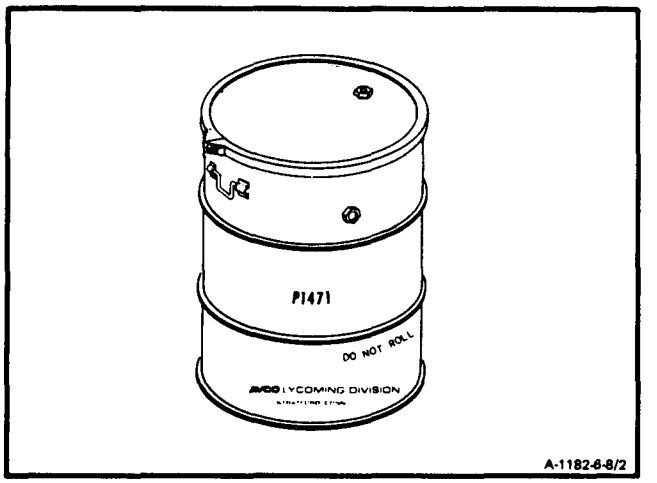
INSPECT



GO TO NEXT PAGE

FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-9 REMOVE FUEL BOOST PUMP ASSEMBLY

6-9

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Container, 1 Quart

Materials:
Wiping Rag(E58)

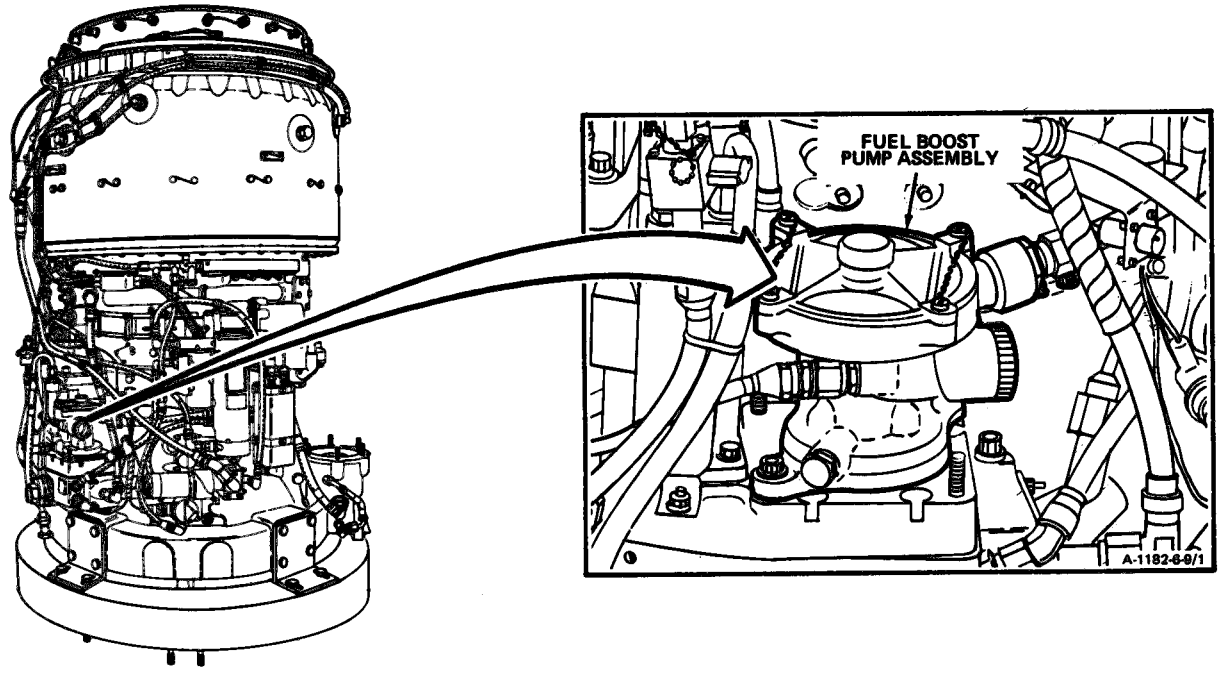
Personal Required:
68B10 Aircraft Powerplant Repairer

References:
Task 6-11

General Safety Instructions:

WARNING

Turbine fuels are very flammable. They may cause drying and irritation of skin or eyes. Handle only in well-ventilated areas away from heat and open flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin and do not take internally. Wash contacted area of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.



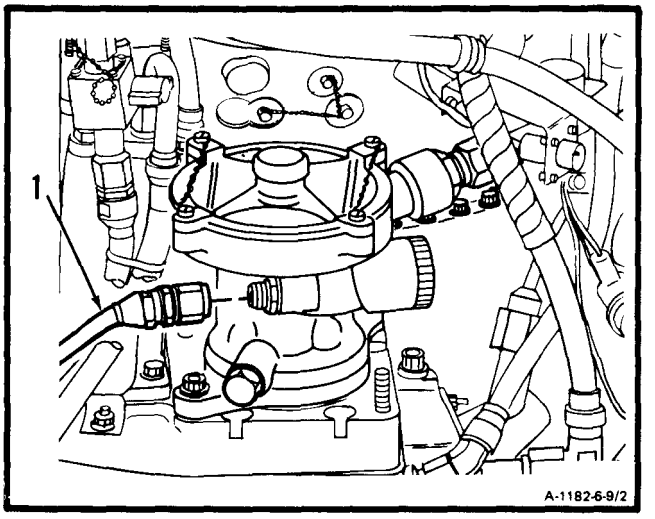
GO TO NEXT PAGE

6-9 REMOVE FUEL BOOST PUMP ASSEMBLY (Continued) 6-9

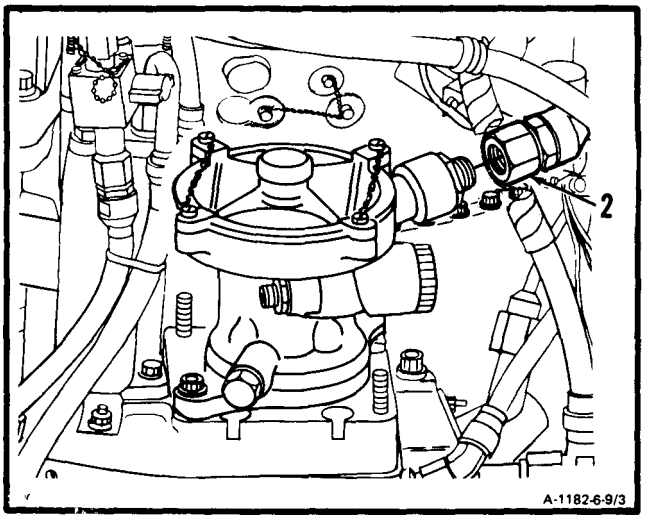
NOTE

Before removing fuel boost pump, check for evidence of fuel leakage between pump housing and cover and at seal drain. If evidence of leakage is found, have an aircraft powerplant inspector examine pump in accordance with Task 6-11.

1. **Disconnect hose assembly (1).**



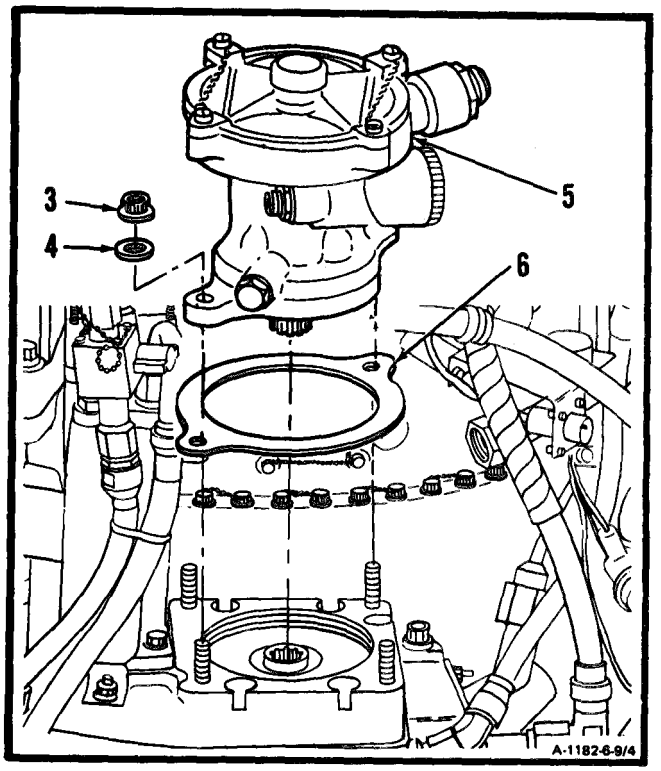
2. **Disconnect hose assembly (2).**



GO TO NEXT PAGE

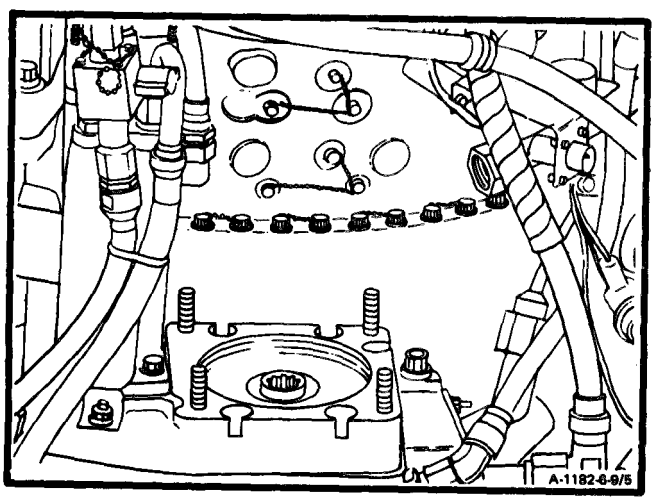
6-9 REMOVE FUEL BOOST PUMP ASSEMBLY (Continued)

3. **Remove** two nuts (3), washers (4), **fuel boost pump assembly (5),** and gasket (6).



FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-10 CLEAN FUEL BOOST PUMP ASSEMBLY 6-10

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944

Materials:
Dry Cleaning Solvent (E17)
Gloves (E20)
Lint-Free Cloth (E26)

Personnel Required:
68B10 Aircraft Powerplant Repairer

Equipment Condition:
Off Engine Task
Fuel Boost Pump Assembly Removed (Task 6-9)

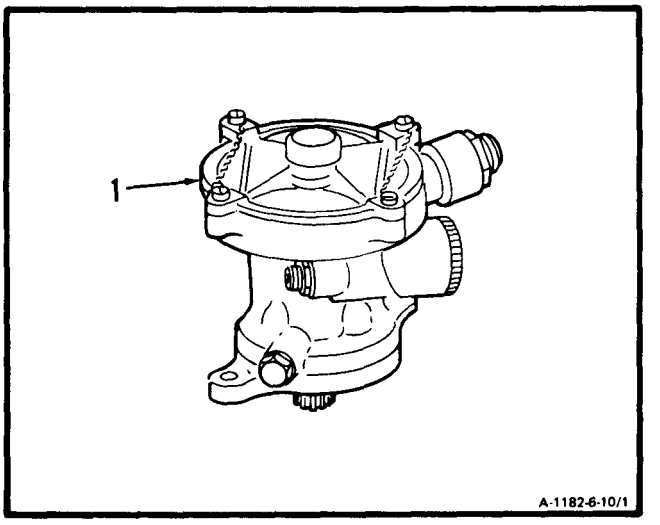
General Safety Instructions:

WARNING

Dry cleaning solvent (E17) is flammable and toxic. It can irritate skin and cause burns. Use only in well-ventilated area, away from heat and open flame. In case of contact, immediately flush skin or eyes with water for at least 15 minutes. Get medical attention for eyes.

1. Wear gloves (E20). **Clean fuel boost pump assembly (1).** Use dry cleaning solvent (E17) and brush.

2. **Remove any remaining solvent** with clean, lint-free cloth (E26).



FOLLOW-ON MAINTENANCE:

Inspect Fuel Boost Pump Assembly (Task 6-11).

END OF TASK

6-11 INSPECT FUEL BOOST PUMP ASSEMBLY 6-11

INITIAL SETUP

Applicable Configurations:
All

Tools:
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
None

Personnel Required:
68B30 Aircraft Powerplant Inspector

References:
Task 1-118

Equipment Condition:
Off Engine Task

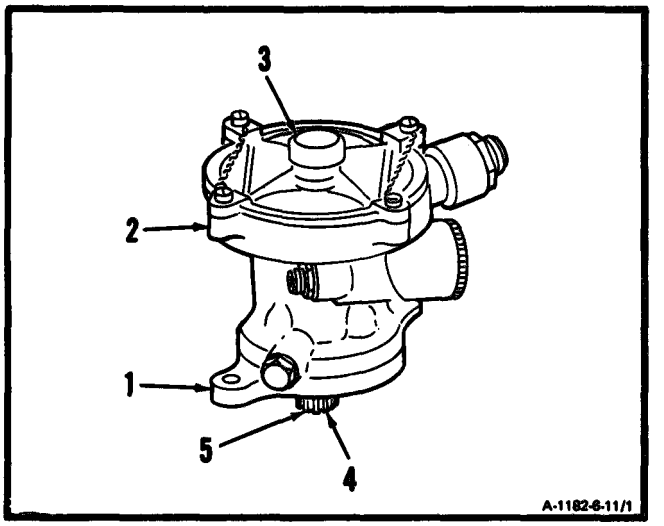
1. **Inspect fuel boost pump assembly (1).**

   a. There shall be no cracks.

   b. There shall be no evidence of leakage between housing (2) and cover (3).

   c. Turn shaft (4). There shall be no binding, roughness, or evidence of leakage around shaft.

   d. Inspect spline (5) (Ref. Task 1-1 18). There shall be no wear deeper than 0.007 inch on spline (5).



FOLLOW-ON MAINTENANCE:

None

END OF TASK

6-12 REPAIR FUEL BOOST PUMP ASSEMBLY 6-12

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114
Torque Wrench, 0-30 Inch-Pounds
Screwdriver Bit

Materials:
Lockwire (E29)
Wiping Rag (E58)

Parts:
Packing

Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

References:
TM 55-2840-254-23P

Equipment Condition:
Off Engine Task

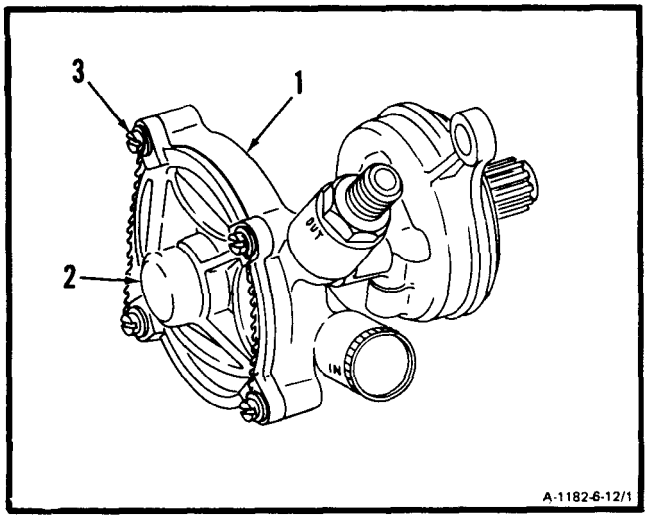
General Safety Instructions:

WARNING

Turbine fuels are very flammable. They may cause drying and irritation of skin or eyes. Handle only in well-ventilated areas away from heat and open flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin and do not take internally. Wash contacted area of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.

1. **Repair leak between housing (1) and cover (2)** as follows:

   a. Remove lockwire and **loosen four screws (3)** two full turns each.



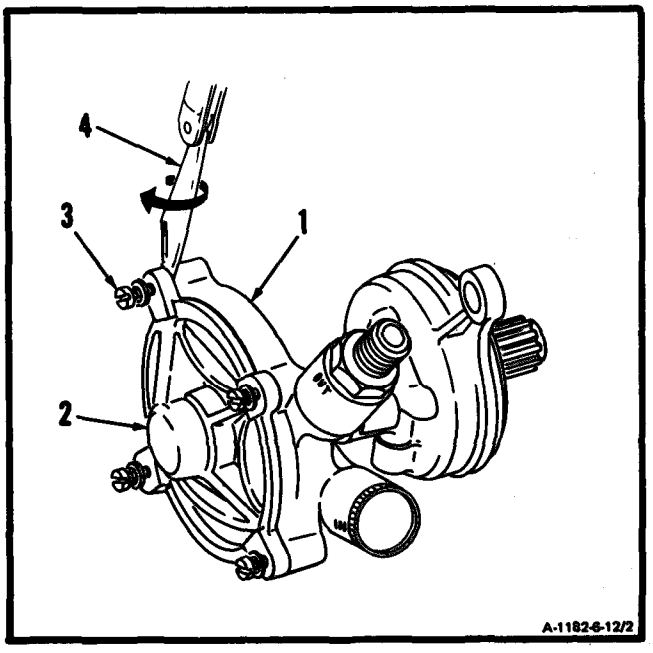
GO TO NEXT PAGE

6-12 REPAIR FUEL BOOST PUMP ASSEMBLY (Continued)

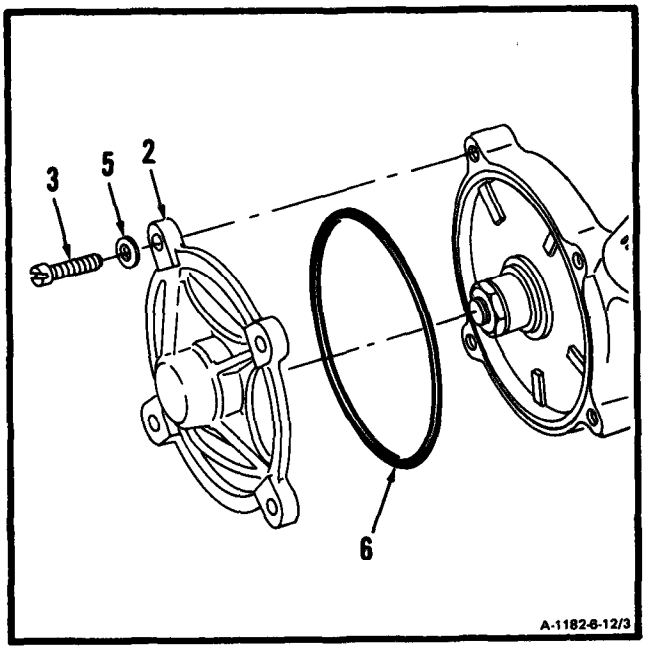
CAUTION

Do not tilt or cook cover during removal. Carbon bearing could be damaged.

b. Carefully **separate cover (2) from housing (1),** using pocketknife (4) at each screw (3).

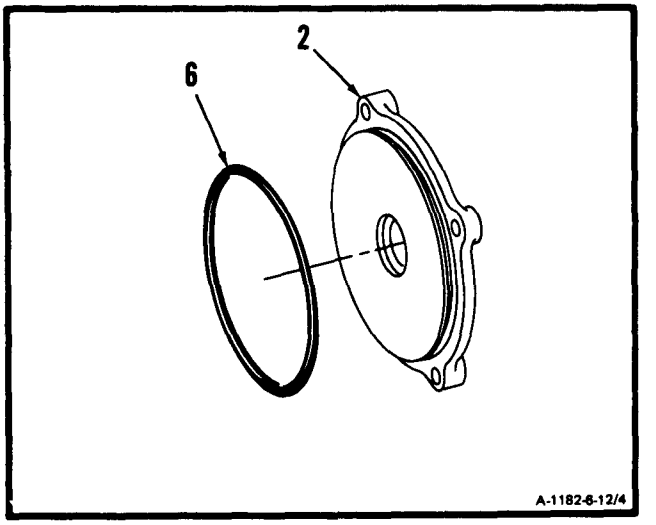


c. **Remove** four screws (3), washers (5), **cover (2),** and packing (6).



GO TO NEXT PAGE

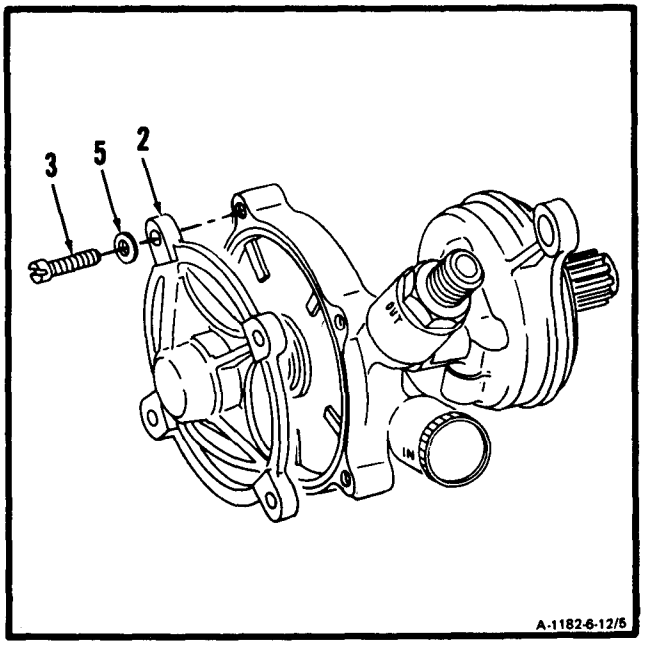
d. **Install new packing (6)** on cover **(2).**



CAUTION

Do not tilt or cock cover during installation. Carbon bearing could be damaged.

e. Loosely install cover (2), four washers (5), and screws (3).

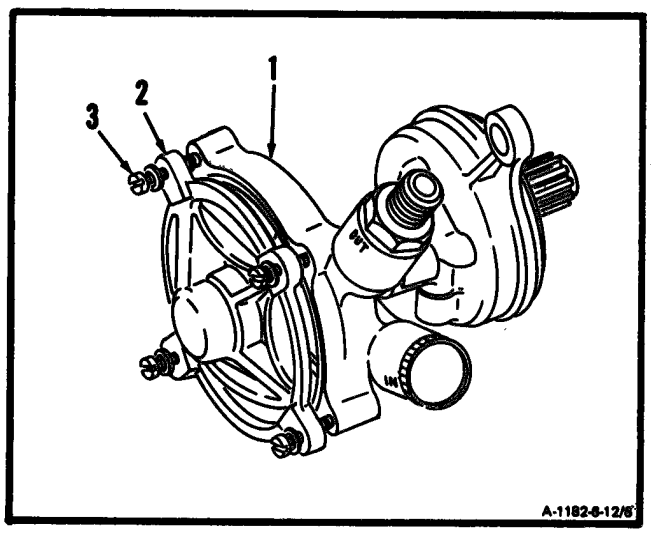


GO TO NEXT PAGE

6-12 REPAIR FUEL BOOST PUMP ASSEMBLY(Continued) 6-12

f. **Turn four screws (3) evenly until cover (2) is seated** against housing (1).

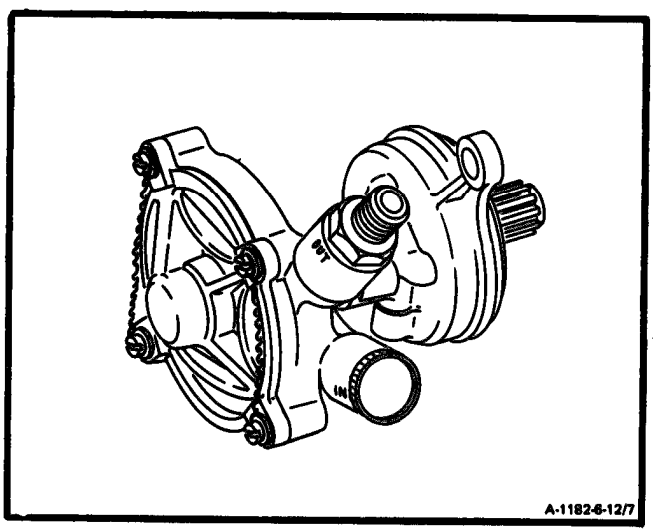
g. **Torque four screws (3) to 25 inch-pounds and lockwire. Use lockwire (E29).**



INSPECT

FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-13 INSTALL FUEL BOOST PUMP ASSEMBLY

INITIAL SETUP

Applicable Configurations:
All

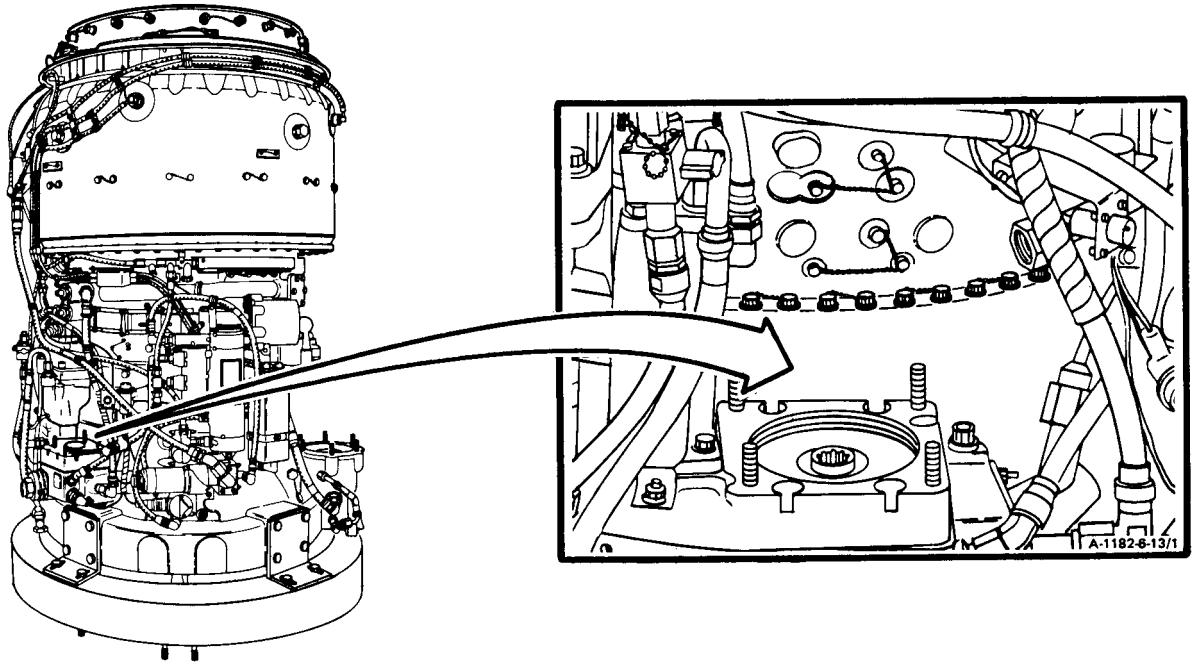
Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
Lubricant (E30)

Parts:
Gasket
Packings

Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

References:
TM 55-2840-254-23P



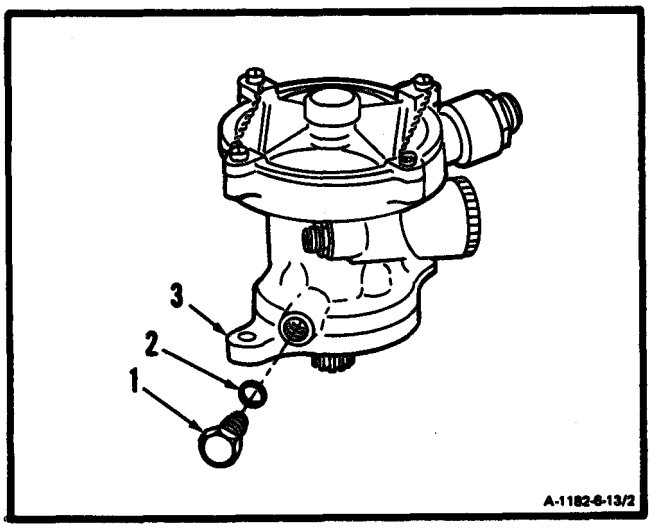
GO TO NEXT PAGE

6-13 INSTALL FUEL BOOST PUMP ASSEMBLY (Continued) 6-13

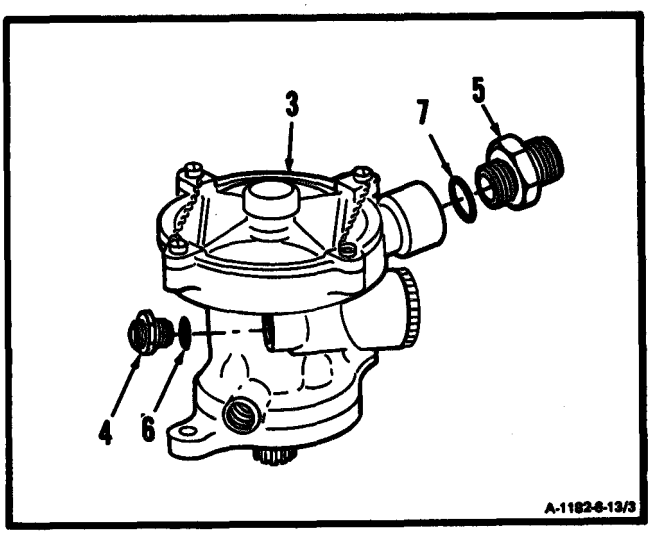
NOTE

If fuel boost pump is a replacement, do steps 1. thru 4. If same fuel boost pump that was removed is to be installed, skip steps 1. thru 4.

1. **Remove plug (1)** and packing (2) **from removed fuel boost pump (3).**



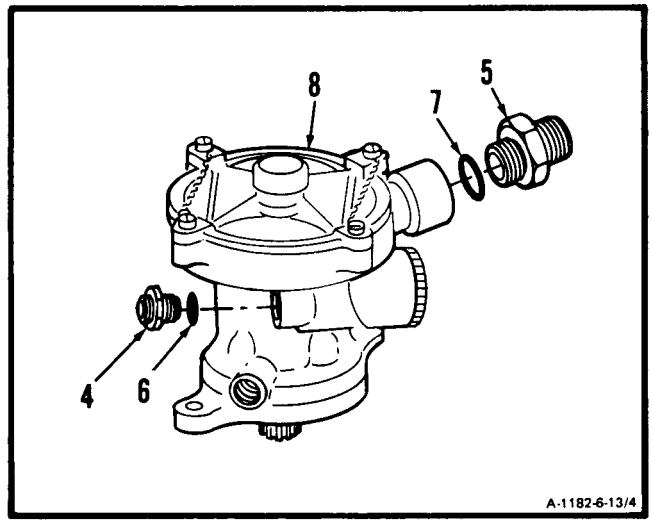
2. **Remove nipples (4 and 5)** and packings (6 and 7) **from removed fuel boost pump (3).**



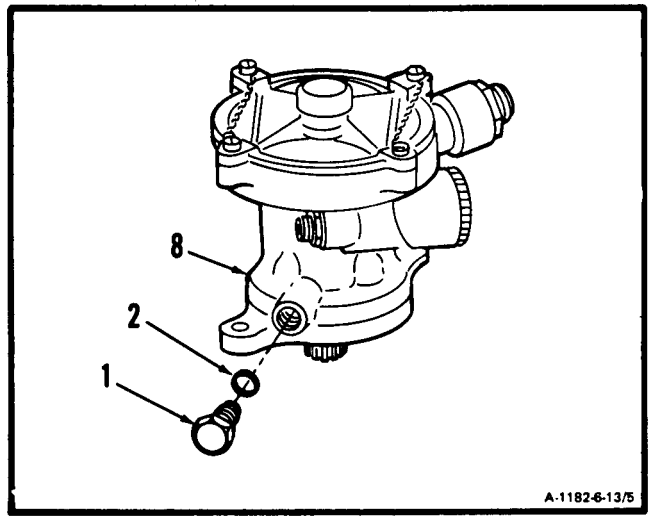
GO TO NEXT *PAGE*

6-13 INSTALL FUEL BOOST PUMP ASSEMBLY (Continued) 6-13

3. Install packings (6 and 7) and **nipples (4 and 5) in serviceable fuel boost pump (8).**



4. Install packing (2) and **plug (1) in serviceable fuel boost pump (8).**



GO TO NEXT *PAGE*

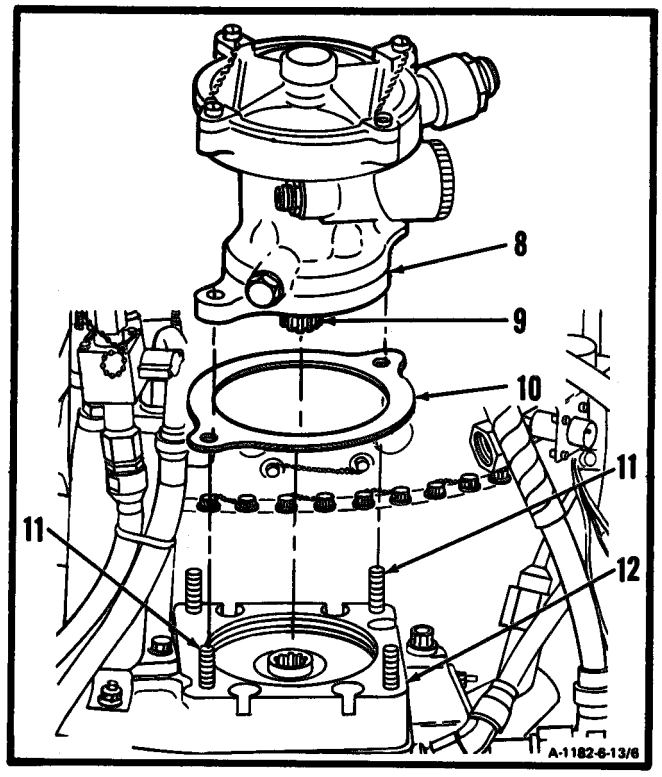
6-13 INSTALL FUEL BOOST PUMP ASSEMBLY (Continued)

5. Apply lubricant (E30) to splines (9).

6. Install gasket (10) and **fuel boost pump assembly (8) on studs (11) of accessory gearbox assembly (12).**

NOTE

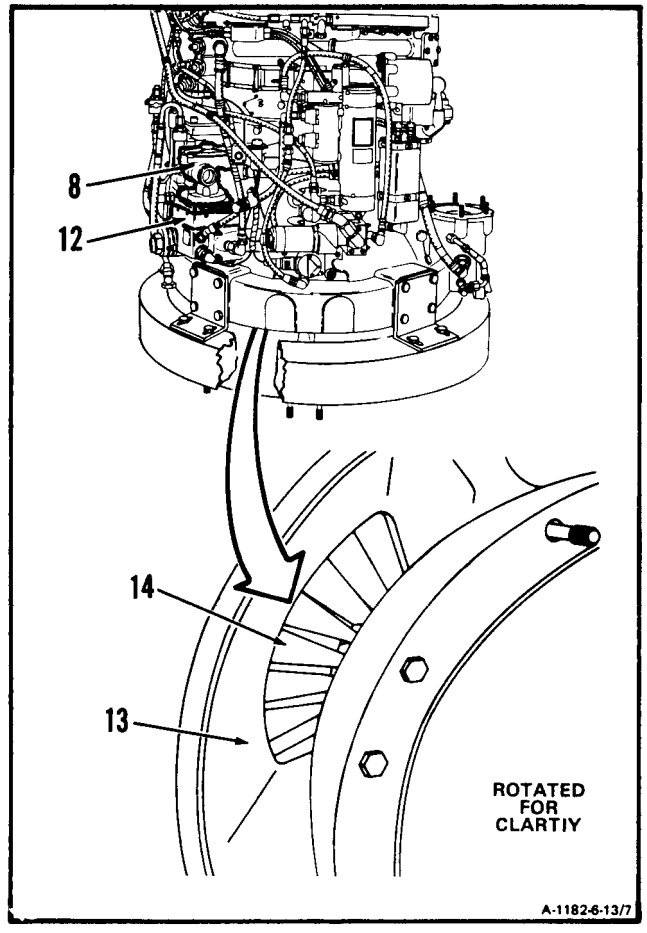
If splines of fuel boost pump shaft and accessory gearbox do not engage, do step 7. If splines do engage and pump assembly seats against gearbox assembly, skip step 7.



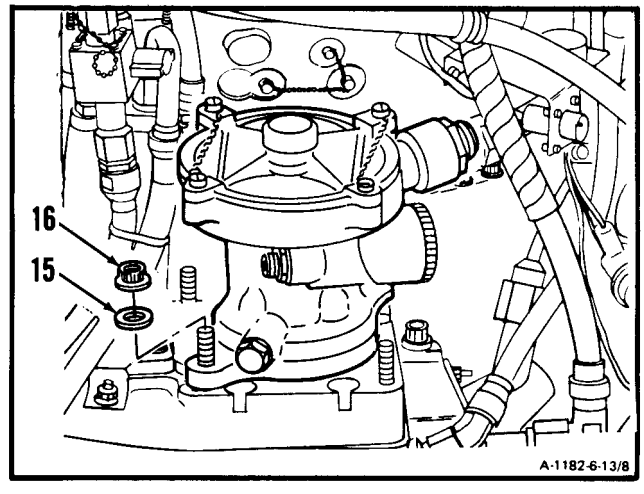
GO TO NEXT PAGE

6-13 INSTALL FUEL BOOST PUMP ASSEMBLY (Continued) 6-13

7. Reach into air inlet area (13) and **turn compressor rotor (14) until fuel boost pump assembly (8) seats** against gearbox assembly (12).

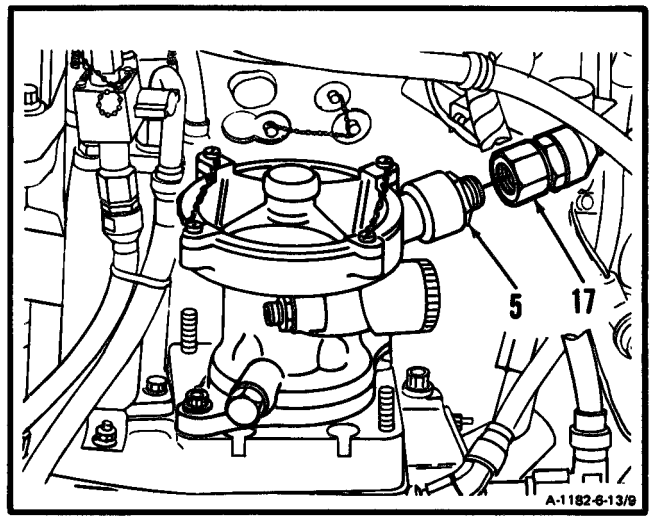


8. Install two washers (15) and nuts (16).

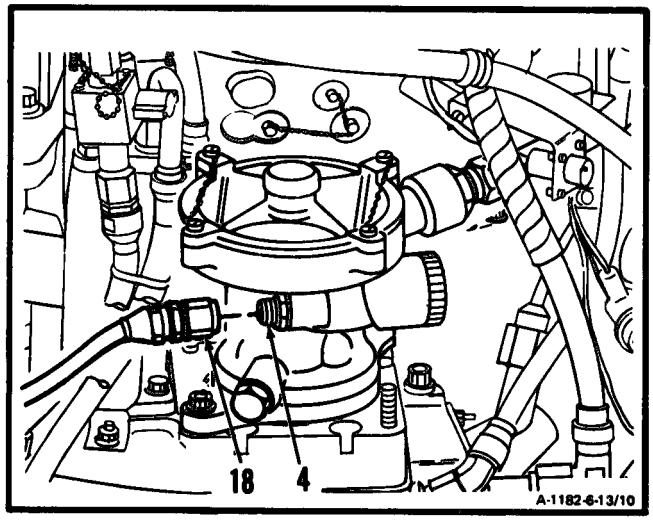


GO TO NEXT PAGE

9. Connect hose assembly (17) to nipple (5).



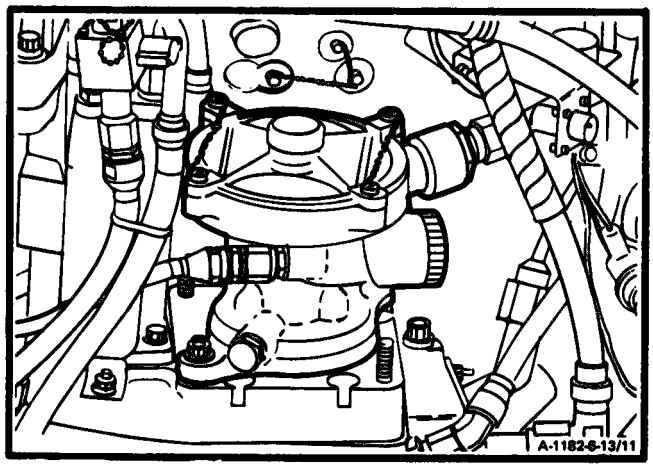
10. **Connect hose assembly (18)** to nipple (4).



INSPECT

FOLLOW-ON MAINTENANCE :

None



END OF TASK

6-14 PRESERVE FUEL BOOST PUMP ASSEMBLY 6-14

INITIAL SETUP

Applicable Configurations:
All

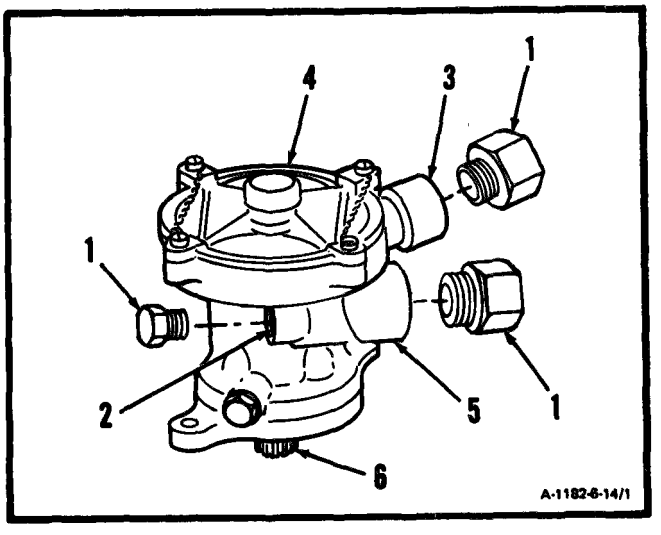
Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944

Materials:
Lubricating Oil (E31)
High Pressure Plugs

Personnel Requited:
68B10 Aircraft Powerplant Repairer

Equipment Condition:
Off Engine Task
Fuel Boost Pump Assembly Removed (Task 6-9).

1. **Install high pressure plugs** (1) in ports (2 and 3) on fuel boost pump assembly (4).
2. **Pour lubricating oil (E31) in port (5)** until port (5) is filled.
3. **Install high pressure plug (1)** in port (5).
4. **Rotate fuel boost pump spline (6)** counterclockwise by hand at least three revolutions.
5. **Remove high pressure plugs (1) and refill port (5)** with lubricating oil (E31).
6. **Install high pressure plugs (1)** in port (5).



FOLLOW-ON MAINTENANCE:

Package Fuel Boost Pump Assembly (Task 6-15).

END OF TASK

6-15 PACKAGE FUEL BOOST PUMP ASSEMBLY 6-15

INITIAL SETUP

Applicable Configurations:
All

Tools:
None

Materials:
Barrier Material (E6)
Tape (E35)

Personnel Required:
68B10 Aircraft Powerplant Repairer

Equipment Condition:
Fuel Boost Pump Assembly Removed (Task 6-9)
Fuel Boost Pump Assembly Preserved (Task 6-14)

1. **Wrap fuel boost pump** securely with barrier material (E6).

2. **Install fuel boost pump** in suitable fiberboard box.

3. **Package fiberboard box** securely to allow no movement of fuel boost pump.

4. **Seal box** with tape (E35).

FOLLOW-ON MAINTENANCE:

None

END OF TASK

6-16 REMOVE LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES 6-16

INITIAL SETUP

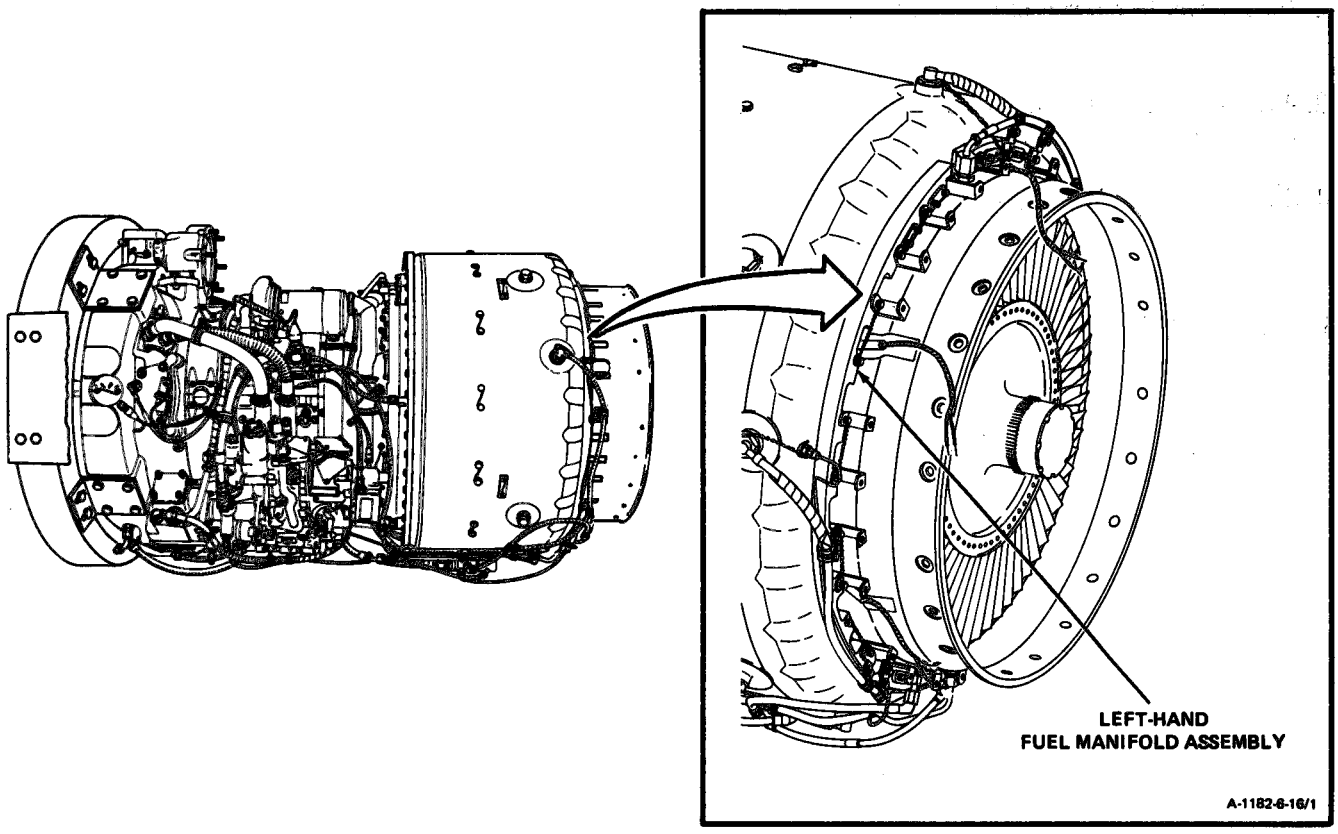
Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit, NSN 5180-00-323-4944

Materials:
None

***Personnel* Required:**
68B10 Aircraft Powerplant Repairer

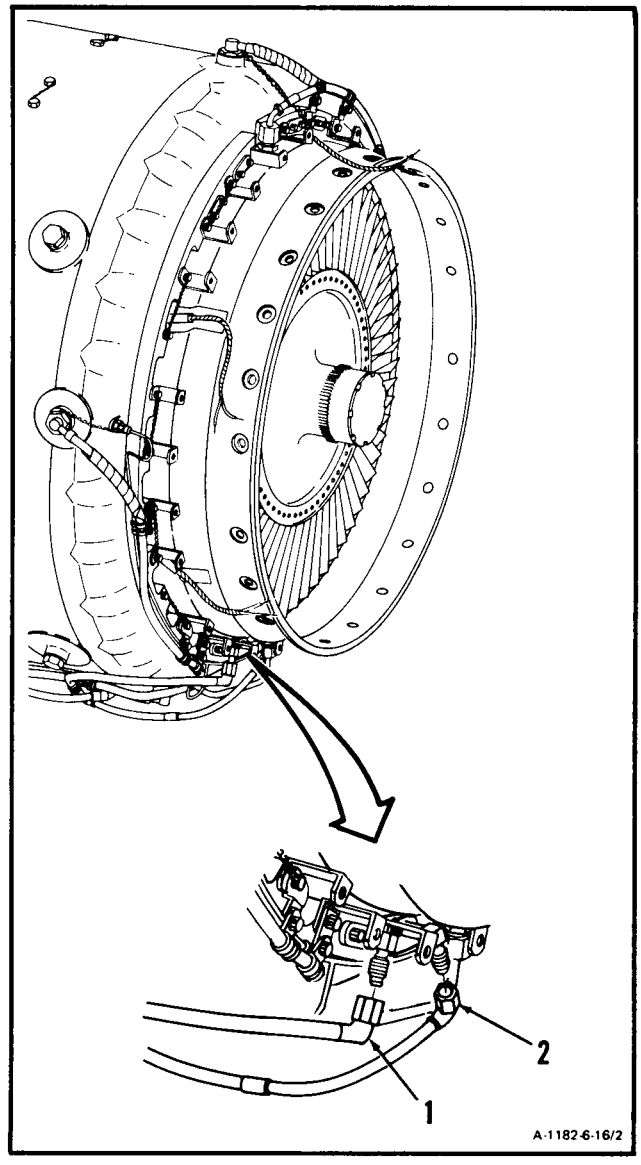
Equipment Condition:
Exit Vane Assembly Removed (Task 4-78)
Left- and Right-Hand Bus Bar Assemblies Removed (Task 4-7)
Fireshield Assembly Removed (Task 4-12)



GO TO NEXT PAGE

6-16 REMOVE LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued) 6-16

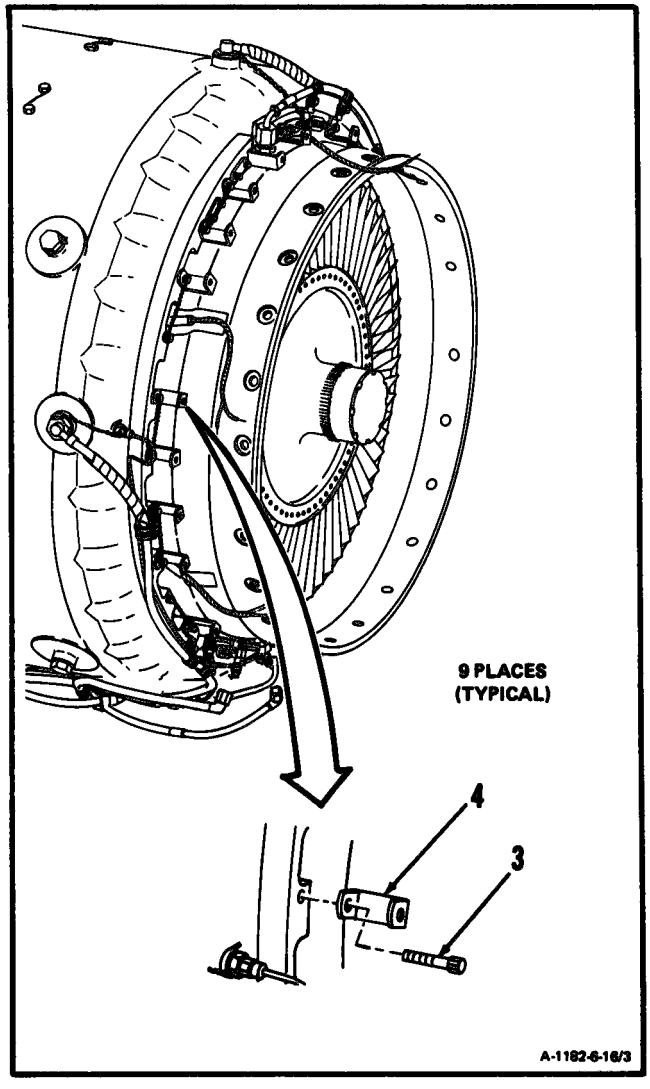
1. Disconnect hose assemblies (1 and 2).



GO TO NEXT PAGE

6-16 REMOVE LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued) 6-16

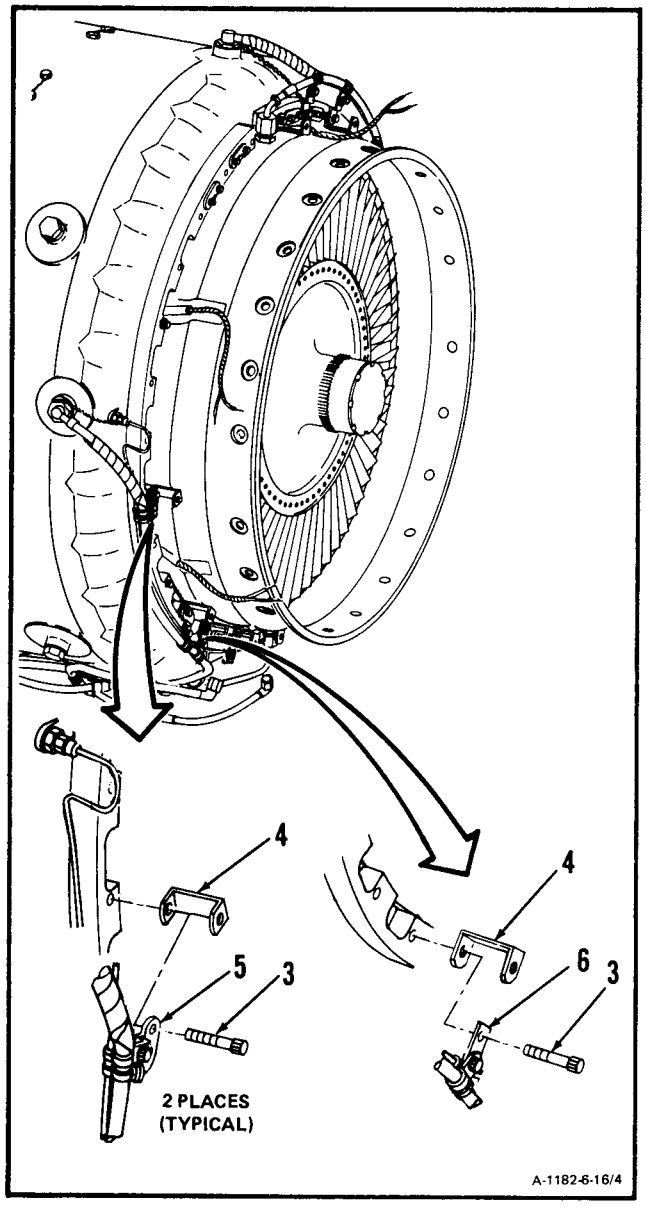
2. **Remove** lockwire, **nine bolts (3), and supports (4).**



GO TO NEXT PAGE

6-16 REMOVE LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued) 6-16

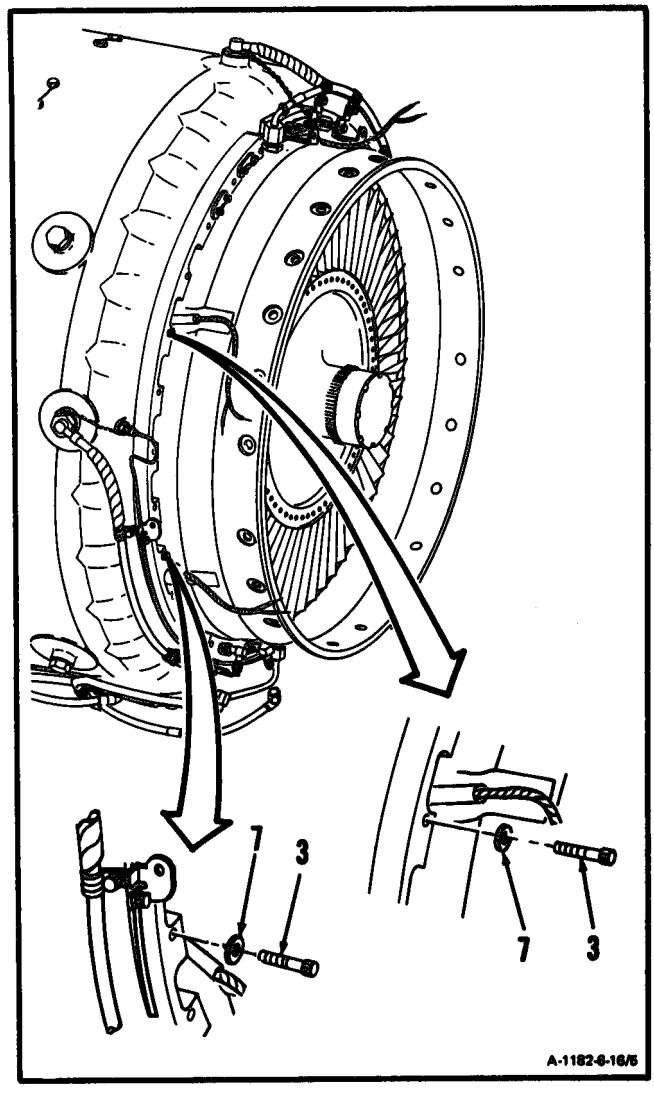
3. Remove lockwire, **three bolts (3), two brackets (5), plate (6), and three supports (4).**



GO TO NEXT PAGE

6-16 REMOVE LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continual) 6-16

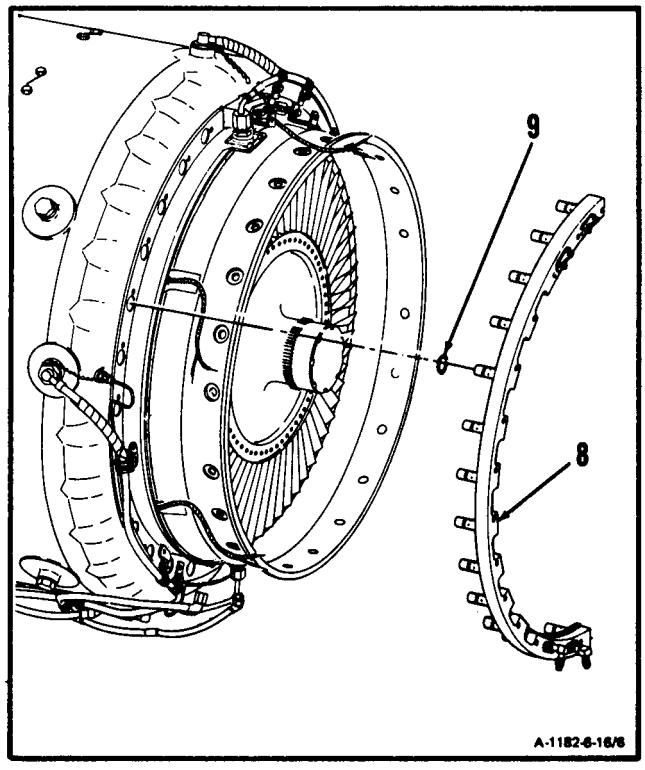
4. Remove lockwire, **two bolts (3), and washers (7).**



GO TO NEXT PAGE

6-16 REMOVE LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued) 6-16

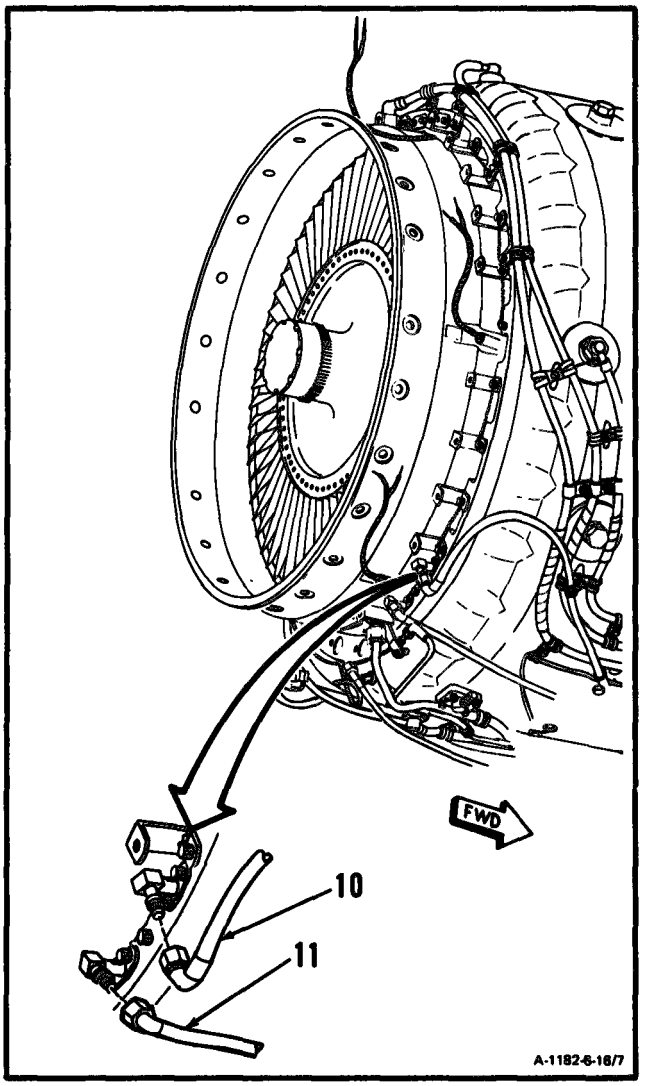
5. Remove left-hand fuel manifold assembly (8) and 14 seals (9).



GO TO NEXT PAGE

6-16 REMOVE LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued) 6-16

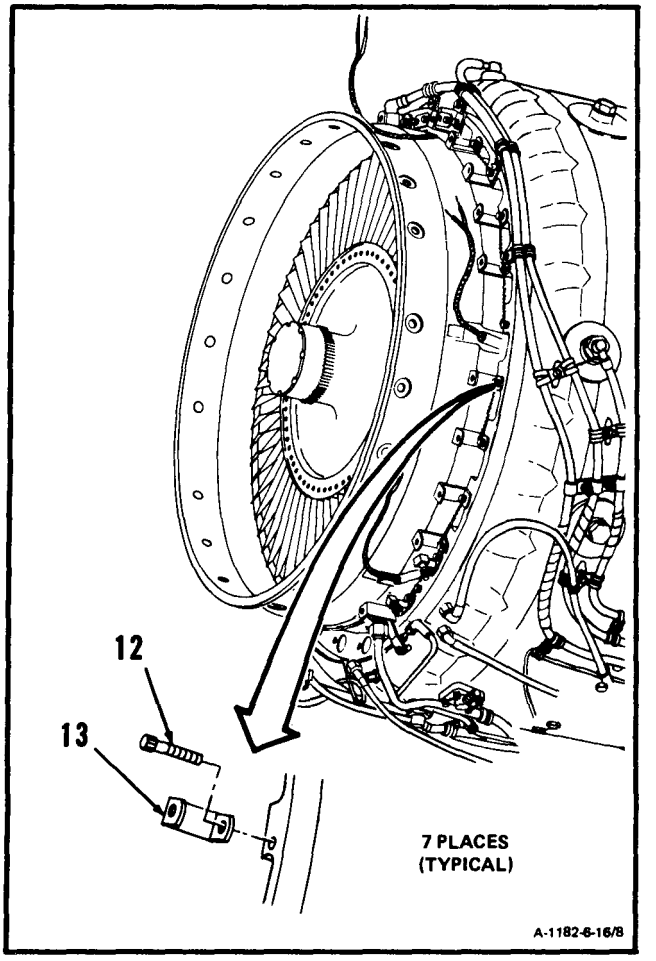
6. Disconnect hose assemblies (10 and 11).



GO TO NEXT PAGE

6-16 REMOVE LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued) 6-16

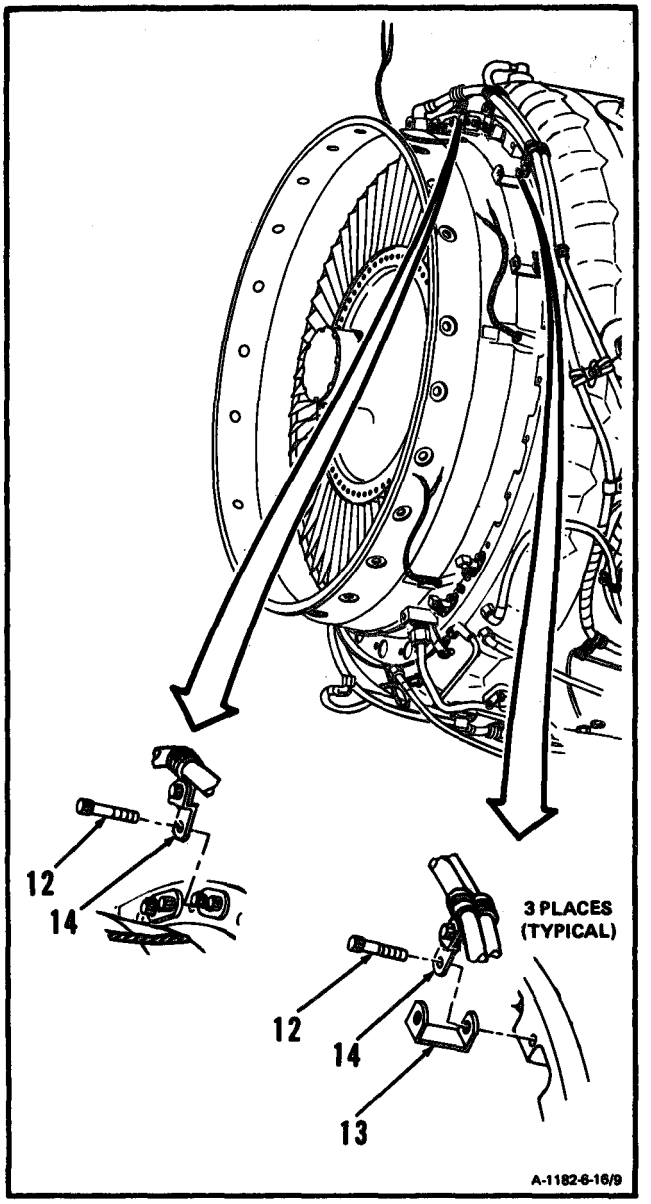
7. **Remove** lockwire, **seven bolts 12), and supports (13).**



GO TO NEXT PAGE

6-16 REMOVE LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued) 6-16

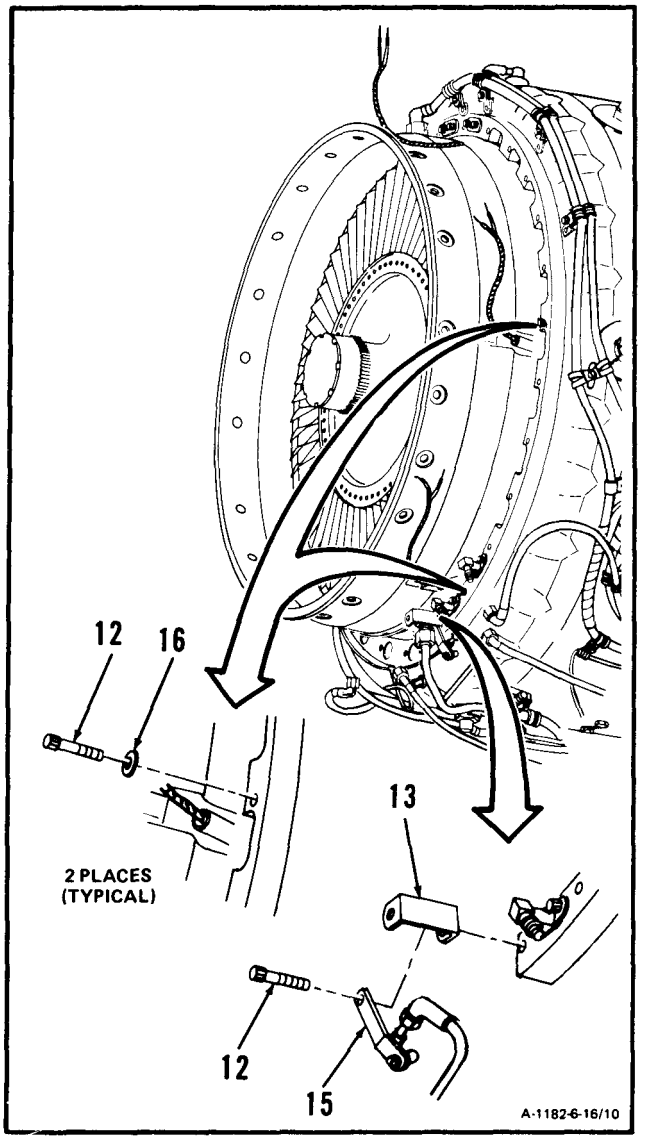
8. **Remove** lockwire, **four bolts (12), brackets (4), and three Supports (13).**



GO TO NEXT PAGE

6-16 REMOVE LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued) 6-16

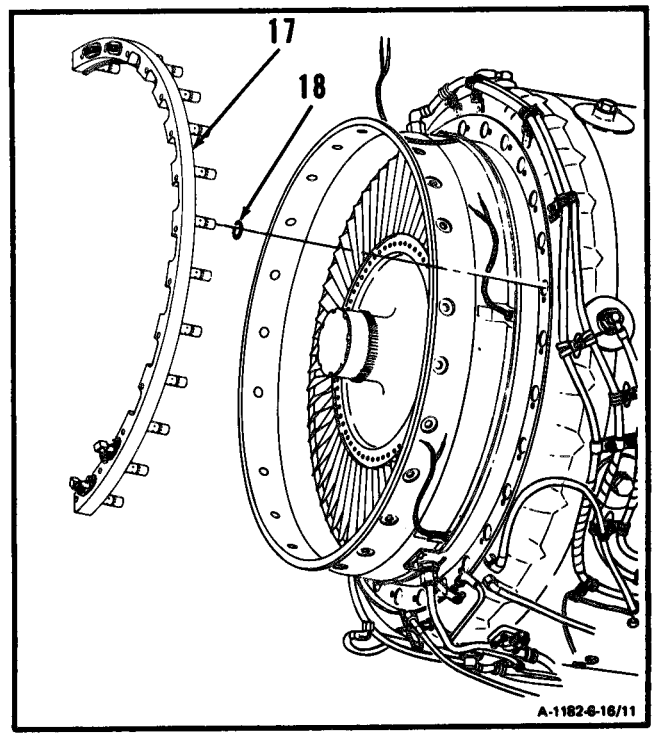
9. Remove lockwire, **three bolts (12), bracket (15), support (13), and two washers (16).**



GO TO NEXT PAGE

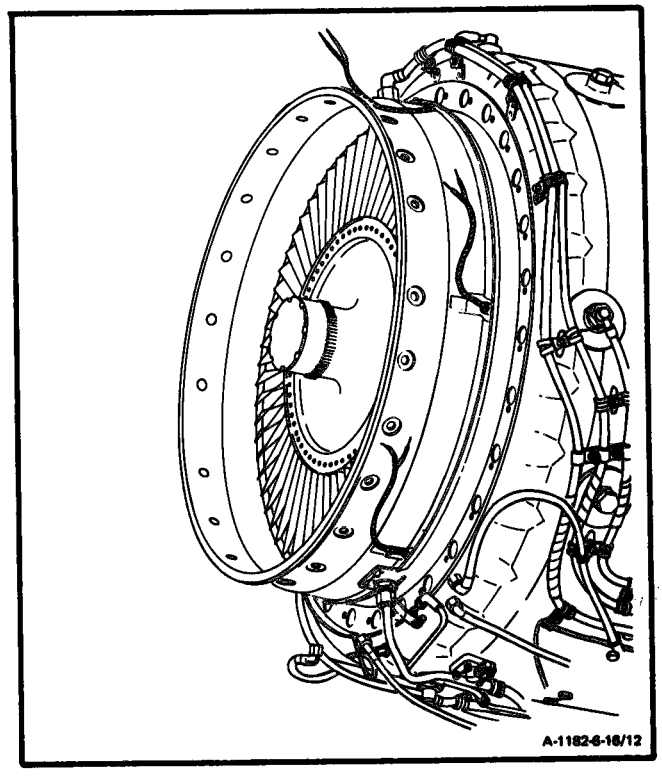
6-16 REMOVE LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued)

10. Remove right-hand fuel manifold assembly (17) and 14 seals (18).



FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-17 CLEAN LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES 6-17

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit, NSN 5180-00-323-4944
Goggles
Compressed Air Source

Materials:
Gloves (E20)
Lint-Free Cloth (E26)
Methyl Ethyl Ketone (E36)

Personnel Required:
68B10 Aircraft Powerplant Repairer

Equipment Condition:
Off Engine Task
Exit Vane Assembly Removed (Task 4-78)
Left- and Right-Hand Bus Bar Assemblies Removed (Task 4-7)
Fireshield Assembly Removed (Task 4-12)
Left- and Right-Hand Fuel Manifold Assemblies Removed (Task 6-16)

General Safety Requirements:

Methyl ethyl ketone (E36) is flammable and toxic. It can irritate skin and cause burns. Use only in well-ventilated area, away from heat and open flame. In case of contact, immediately flush skin or eyes with water for at least 15 minutes. Get medical attention for eyes.

GO TO NEXT PAGE

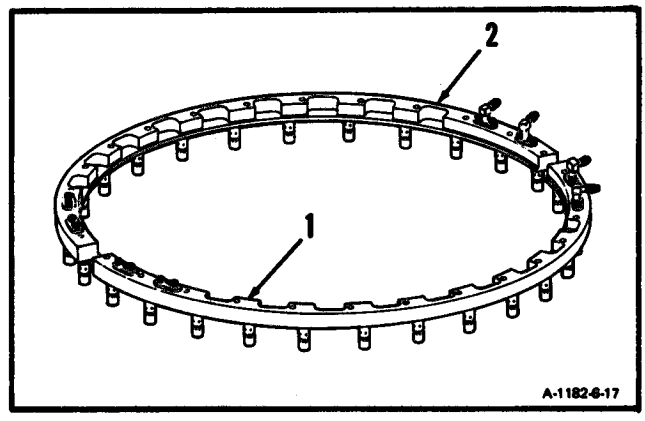
6-17 CLEAN LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued) 6-17

NOTE

Before cleaning left- and right-hand fuel manifolds, check for evidence of fuel leakage between covers, elbows and manifolds.

1. Wear gloves (E20) and goggles. **Clean left- and right-hand fuel manifold assemblies (1 and 2).** Immerse in methyl ethyl ketone (E36) and agitate. Use brush to remove loose carbon.

2. Wipe dry using clean, dry lint-free cloth (E26).



WARNING

When using compressed air for cleaning, use approved protective equipment for eyes and face. Do not use more than 30 psig-air pressure. Do not direct air toward yourself or another person. Failure to comply could result in injury to eyes or skin. In case of injury, get medical attention.

3. Wear goggles. Blow dry any remaining solvent. Use clean, dry compressed air.

FOLLOW-ON MAINTENANCE:

Inspect Left- and Right-Hand Fuel Manifold Assemblies (Task 6-1 8).

END OF TASK

6-18 INSPECT LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES 6-18

INITIAL SETUP

Applicable Configurations:
All

Tools:
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

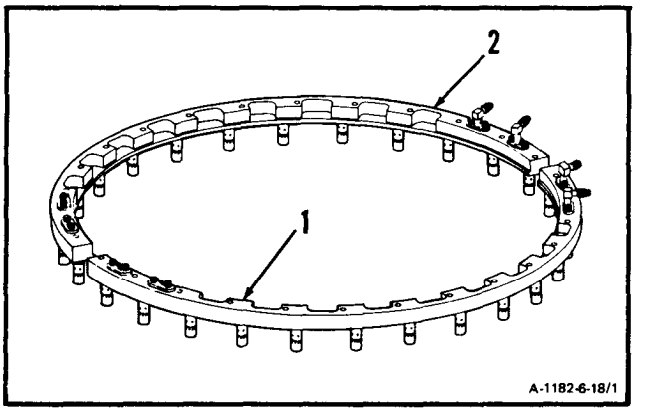
Materials:
None

Personnel Required:
68B30 Aircraft Powerplant Inspector

References:
Task 6-17

Equipment Condition:
Off Engine Task

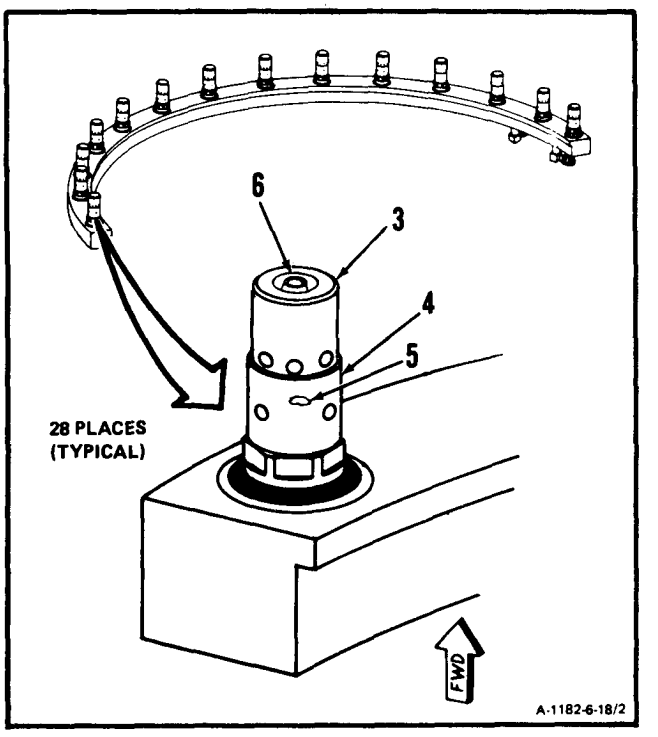
1. Inspect left- and right-hand fuel manifold assemblies (1 and 2). There shall be no cracks.



2. **Inspect nozzle tips (3).** There shall be no cracks or loss of material.

3. **Inspect nozzle (4)** for chafing (5). There shall be no chafing that causes material breakthrough.

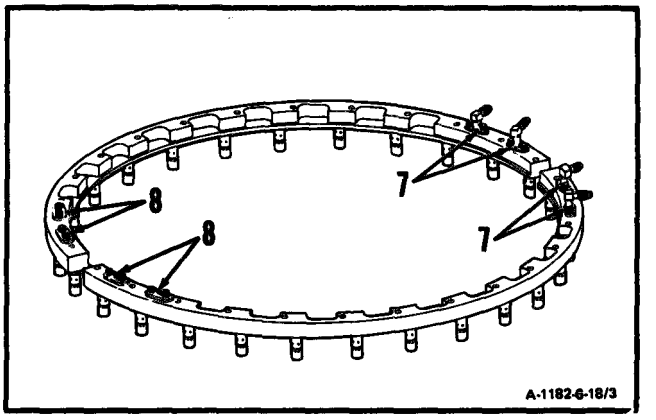
4. **Inspect nozzle spray hole (6)** for carbon deposits. If carbon deposits exist, clean left- and right-hand fuel manifold assemblies (Ref. Task 6-17).



GO TO NEXT PAGE

6-18 INSPECT LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued) 6-18

5. **Inspect elbows (7) and covers (8).** There shall be no signs of leakage.



FOLLOW-ON MAINTENANCE:

None

END OF TASK

6-19 REPAIR LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES 6-19

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114
Torque Adapter (T65)

Materials:
Lockwire (E29)

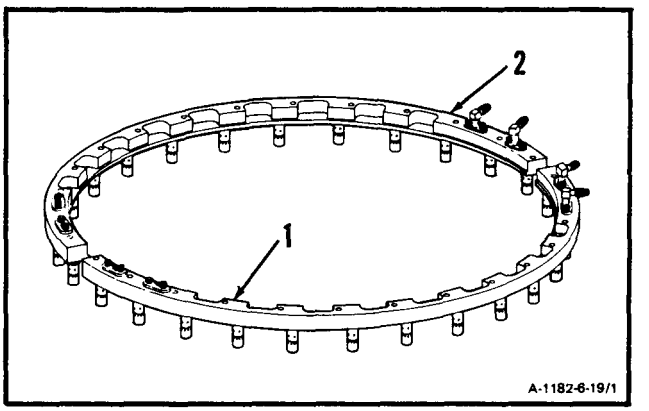
Parts:
Packings

Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

References:
TM 55-2840-254-23P

Equipment Condition:
Off Engine Task

1. **Repair leeks in left-hand manifold (1) and right-hand manifold (2)** as follows:



NOTE

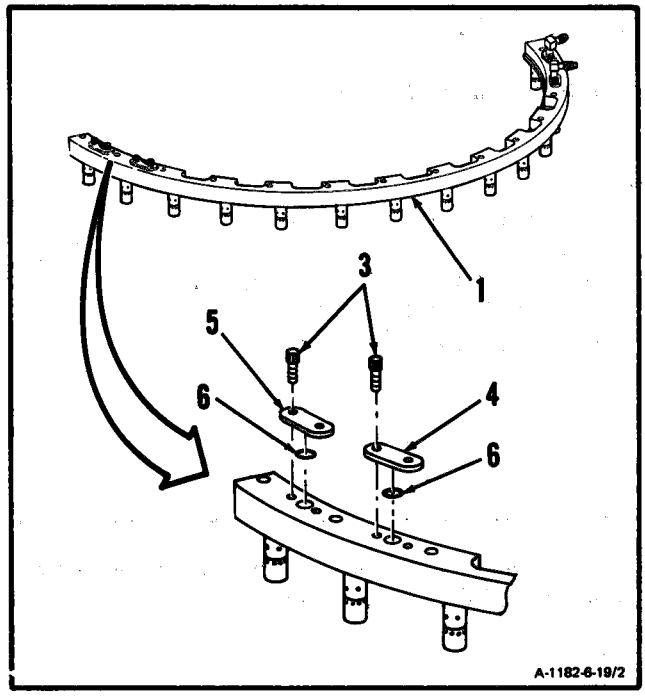
Only covers or elbows that had indications of leakage around them need be removed for replacement of packings. The following steps cover replacement of all packings.

GO TO NEXT PAGE

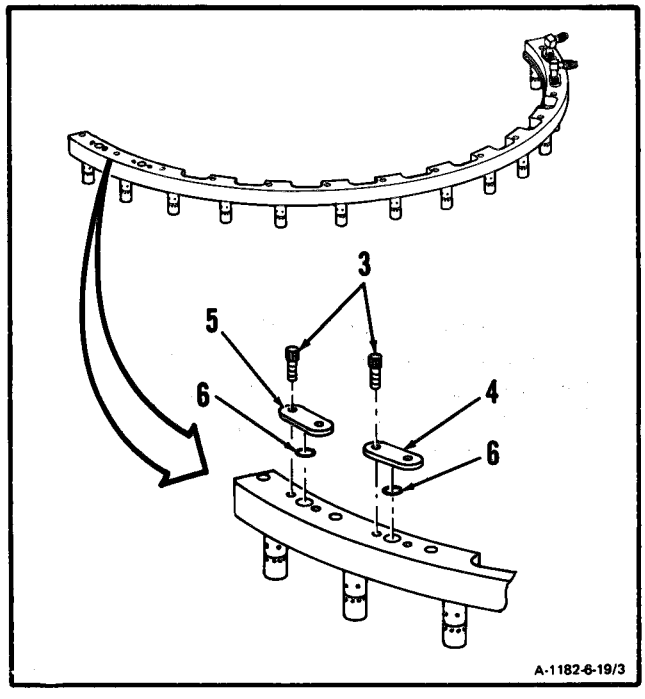
6-19 REPAIR LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued) 6-19

a. Repair leaks in left-hand manifold (1).

(1) Remove lockwire, four bolts (3), **covers (4 and 5)** and two packings (6).



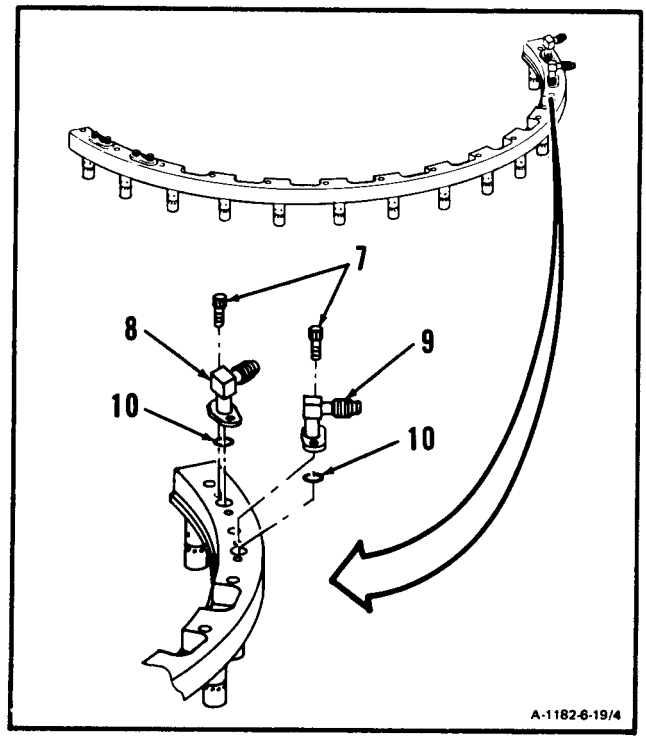
(2) **Install** two new packings (6), **covers *(4* and 5),** and four bolts (3). Lockwire bolts (3). Use lockwire (E29).



GO TO NEXT PAGE

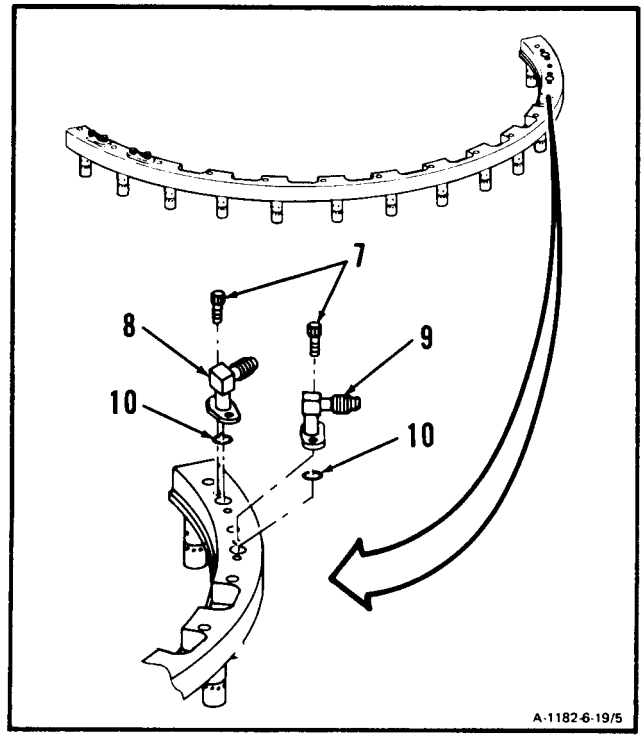
6-19 REPAIR LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued) 6-19

(3) **Remove** lockwire, four bolts (7), **elbows (8 and 9),** and two packings (10). Use 7/32-inch torque adapter.



(4) **Install** two new packings (10), **elbows (8 and 9),** and four bolts (7). Use 7/32-inch torque adapter.

(5) Lockwire bolts (7). Use lockwire (E29).

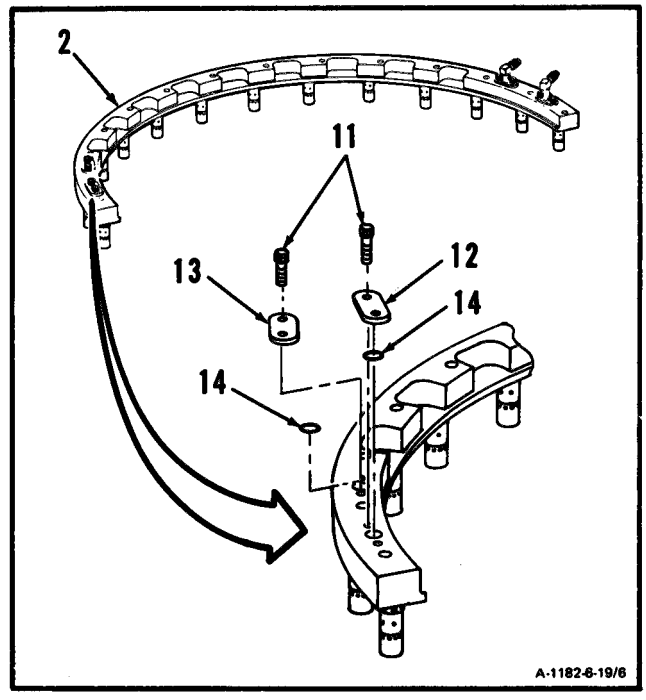


GO TO NEXT PAGE

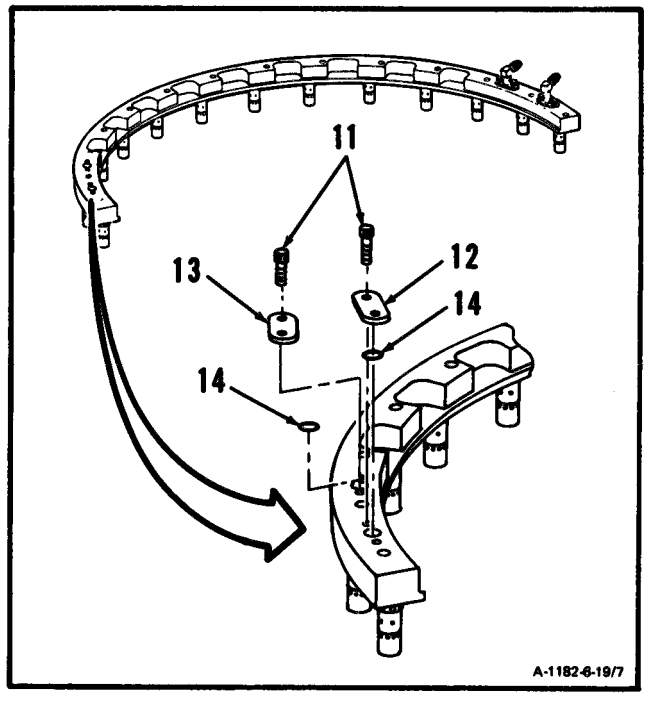
6-19 REPAIR LEFT-AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued) 6-19

b. Repair leaks in right-hand manifold (2).

(1) **Remove** lockwire, four bolts (11), **covers (12 and 13),** and two packings (14).



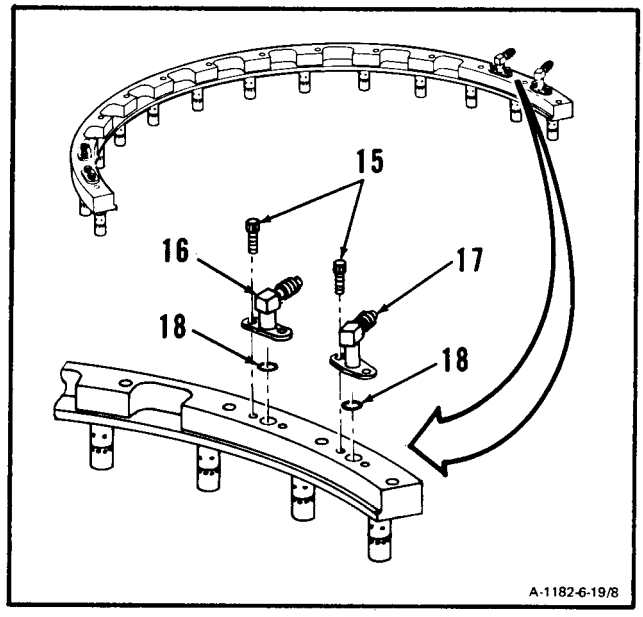
(2) Install two new packings (14), **covers (12 and 13),** and four bolts (11). Lockwire bolts (11). Use lockwire (E29).



GO TO NEXT PAGE

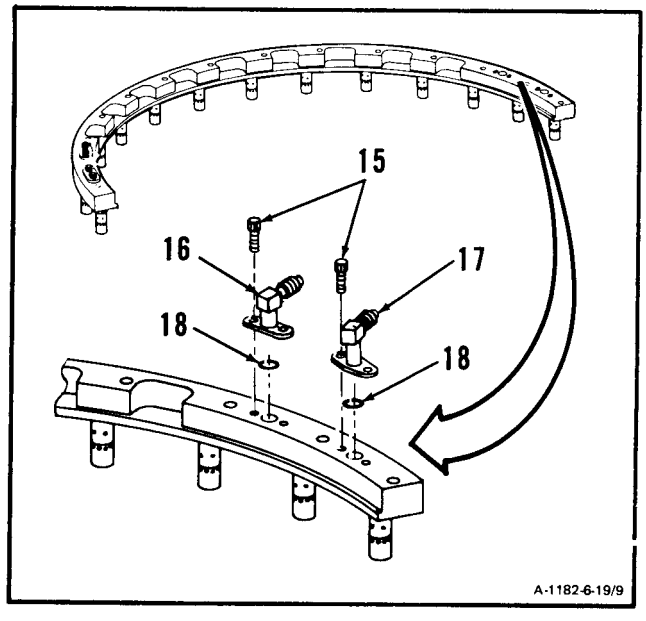
6-19 REPAIR LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued) 6-19

(3) **Remove** lockwire, four bolts (15), **elbows (16 and 17),** and two packings (18). Use 7/32-inch torque adapter.



(4) **Install** two new packings (18), **elbows (16 and 17),** and four bolts (15). Use 7/32-inch torque adapter.

(5) Lockwire bolts (15). Use lockwire (E29).



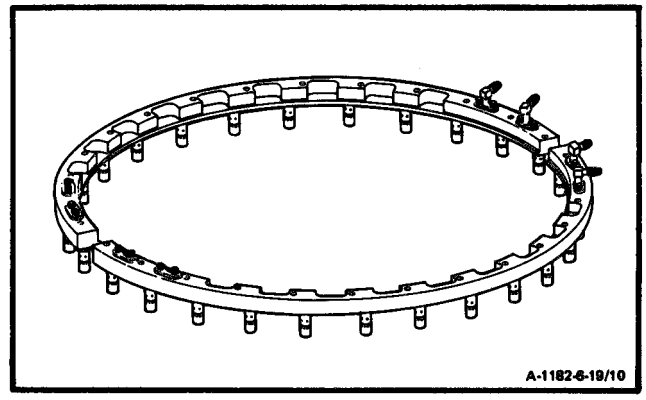
INSPECT

GO TO NEXT PAGE

6-19 REPAIR LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued) 6-19

FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-20 INSTALL LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES 6-20

INITIAL SETUP

Applicable Configurations:
All

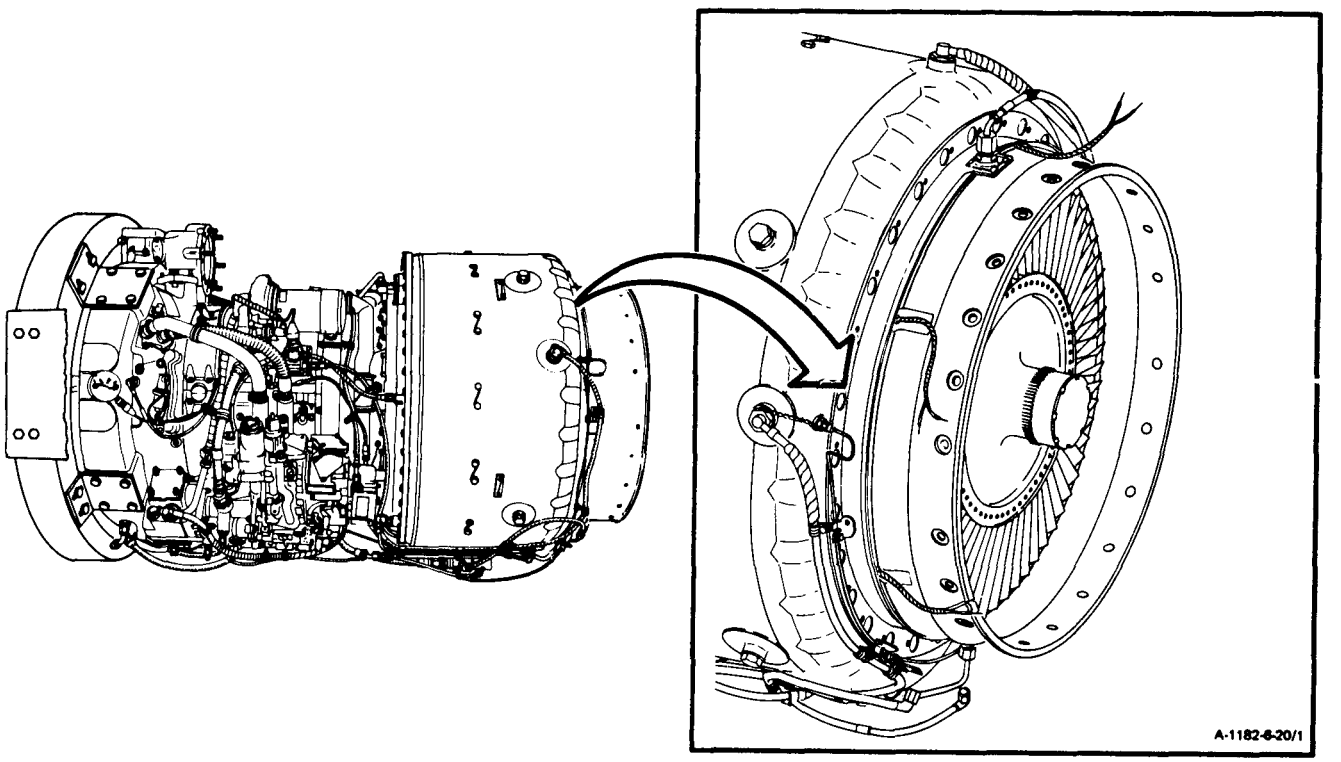
Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114
Torque Wrench, 0-30 Inch-Pounds
Torque Wrench, 30-150 Inch-Pounds
Torque Adapter Wrench (T15)

Materials:
Lockwire (E29)

Parts:
Seals

Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

References:
TM 55-2840-254-23P



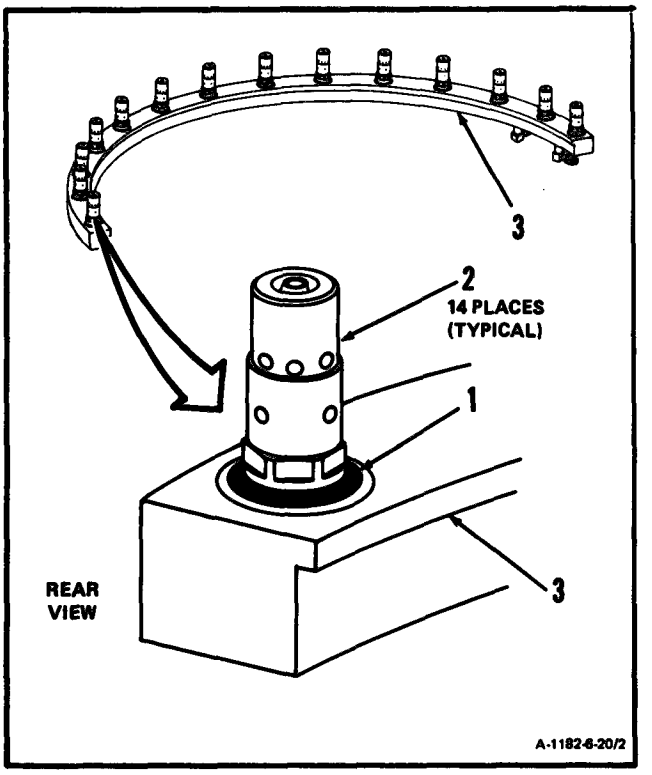
GO TO NEXT PAGE

6-20 INSTALL LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued) 6-20

CAUTION

In following step 1., seals must be fully seated must **be squarely against nozzle flanges. Failure to comply will cause interference with fireshield section, damage and leaks.**

1. **Install 14 seals (1)** on 14 nozzles (2) on left-hand fuel manifold assembly (3).



GO TO NEXT PAGE

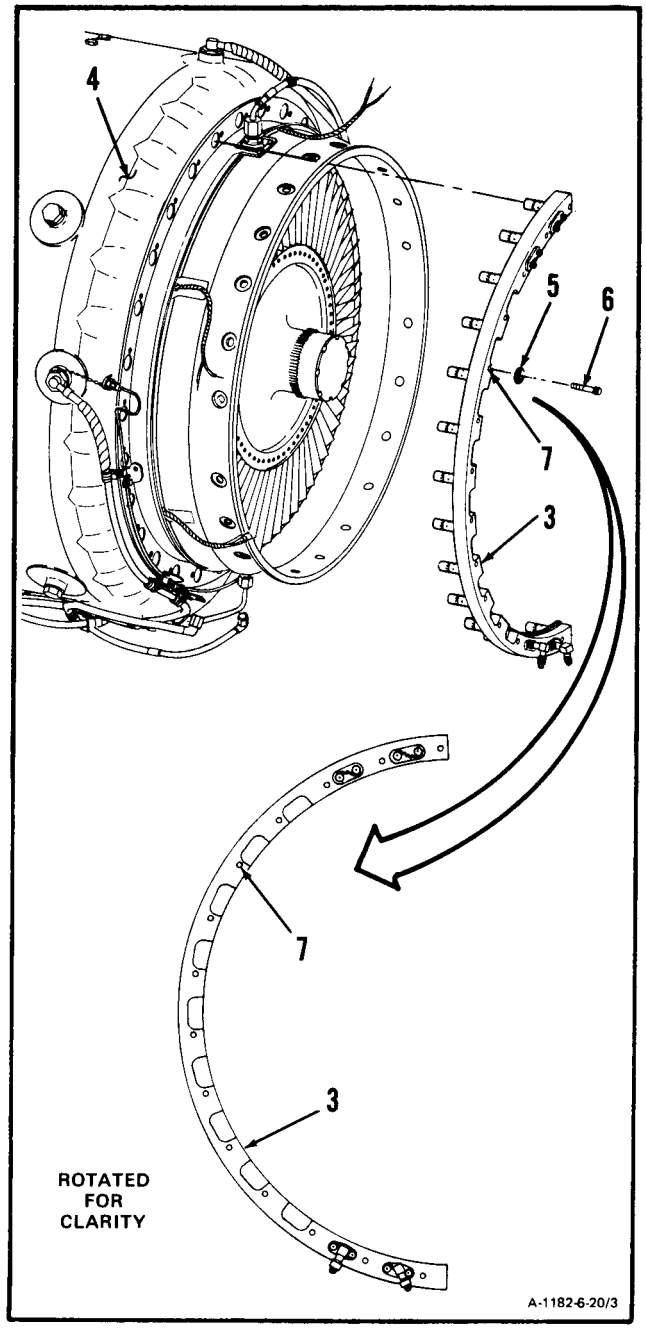
6-20 INSTALL LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued) 6-20

2. Install left-hand fuel manifold assembly (3) in housing (4).

NOTE

In following steps 3. thru 7., leave bolts loose to allow for fire shield alignment.

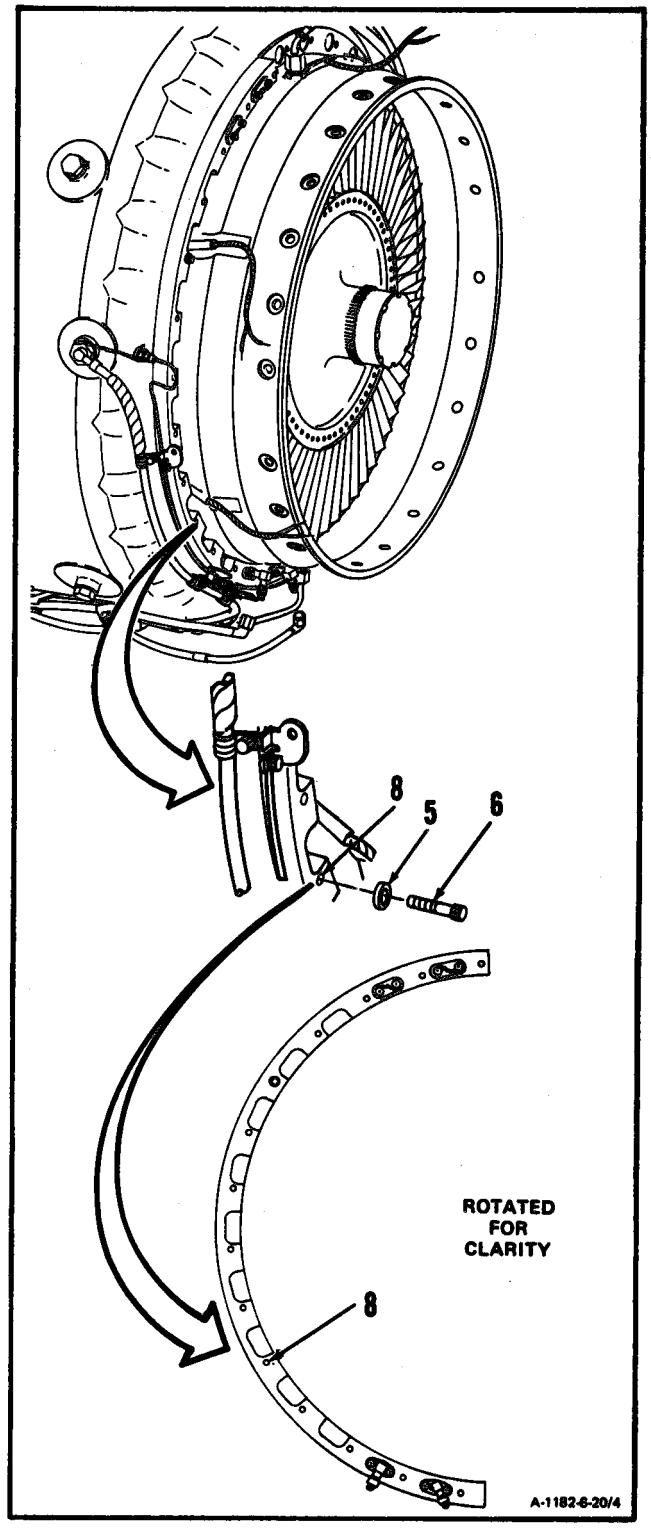
3. Install washer (5) and bolt (6) in hole (7).



GO TO NEXT PAGE

6-20 INSTALL LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued) 6-20

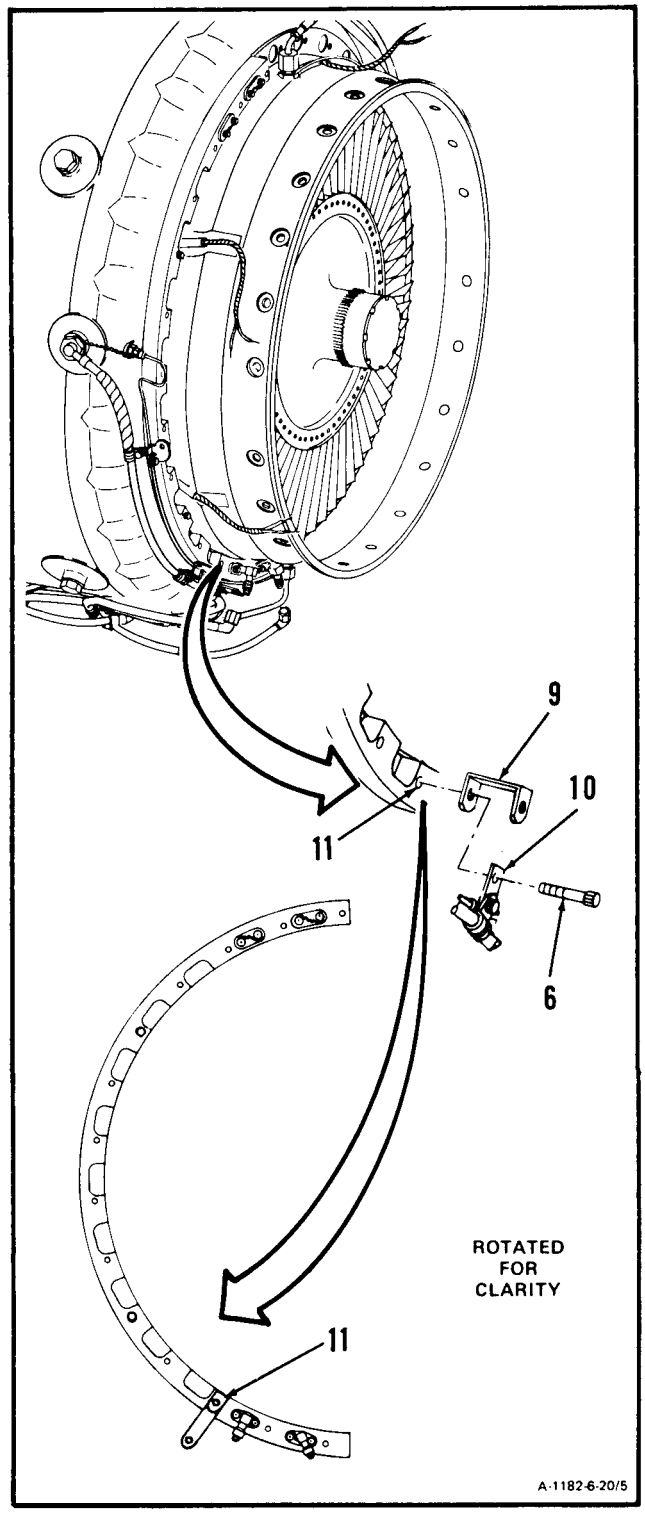
4. Install bolt (6) and washer (5) in hole (8).



GO TO NEXT PAGE

6-20 INSTALL LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued) 6-20

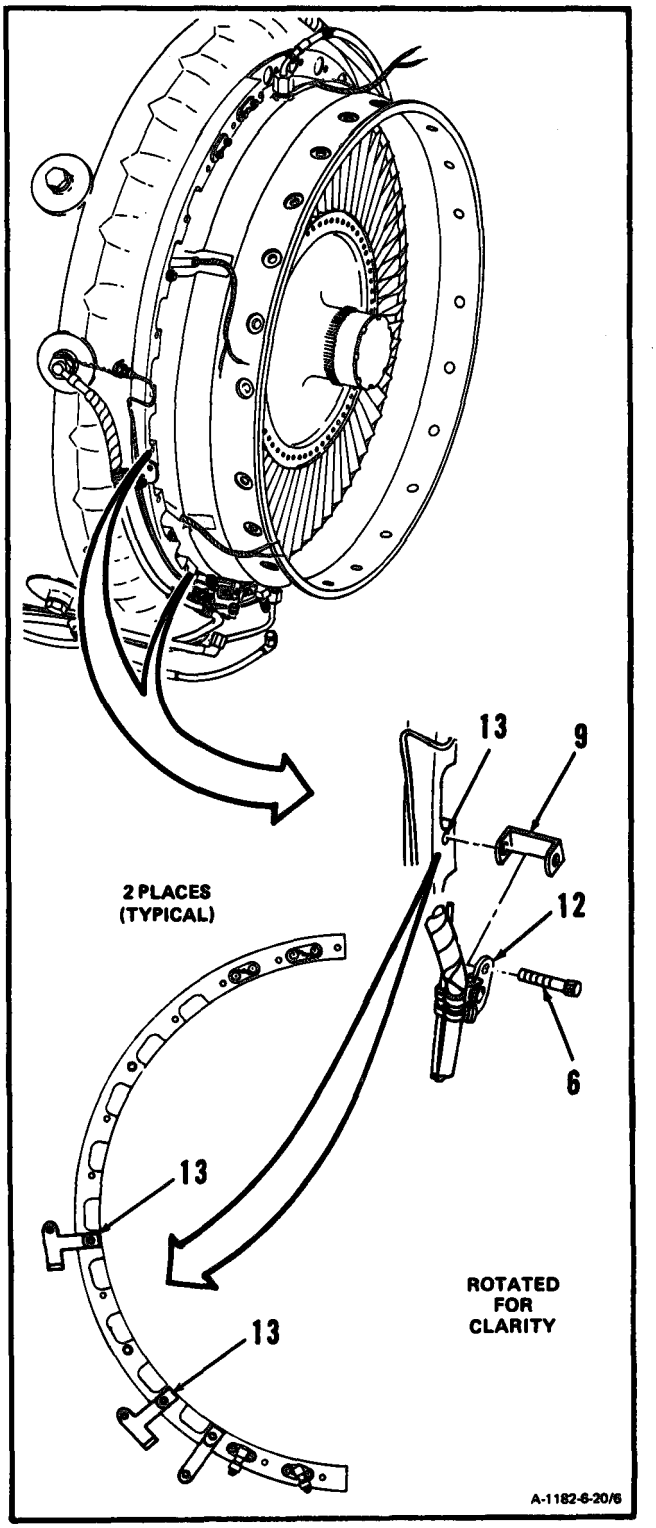
5. Install support (9), plate (10), and bolt (6) in hole(11).



GO TO NEXT PAGE

6-20 INSTALL LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued) 6-20

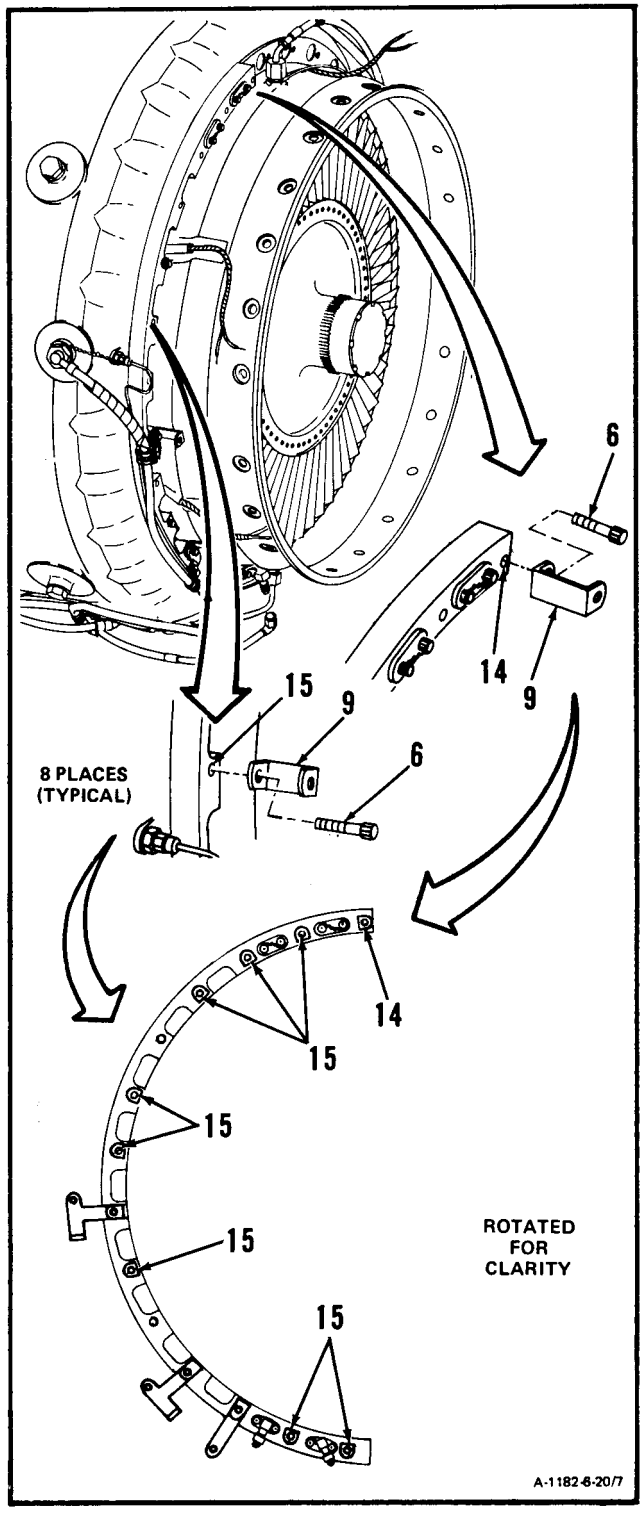
6. Install two supports (9), two brackets (12), and two bolts (6) in holes (13).



GO TO NEXT PAGE

6-20 INSTALL LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued) 6-20

7. Install support (9) and bolt (6) in hole (14).
8. Install eight supports (9) and bolts (6) in remaining holes (15).



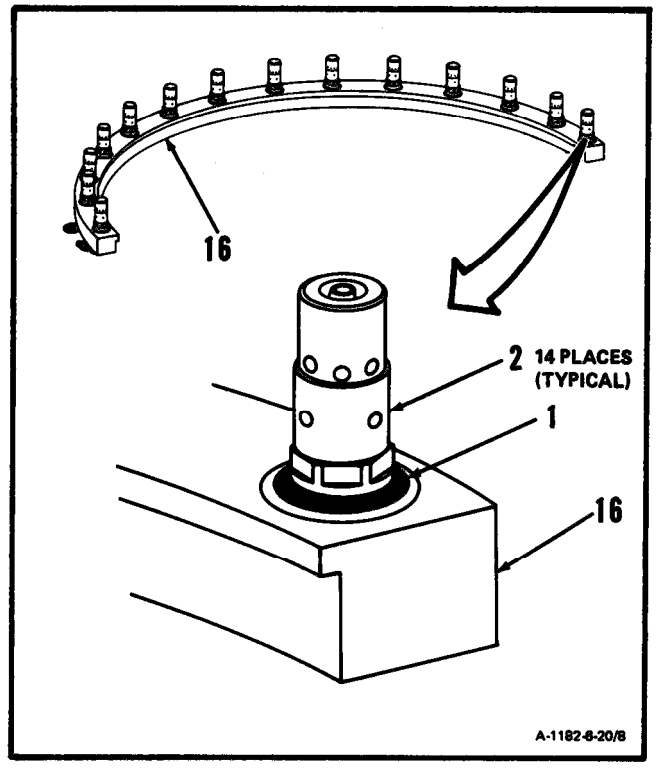
GO TO NEXT PAGE

6-20 INSTALL LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued) 6-20

CAUTION

In following step 9.,seals must be fully seated and must be squarely against nozzle flanges. Failure to comply will cause interference with fireshield section, damage and leaks.

9. Install 14 seals (1) on 14 nozzles (2) on right-hand fuel manifold assembly (16).



GO TO NEXT PAGE

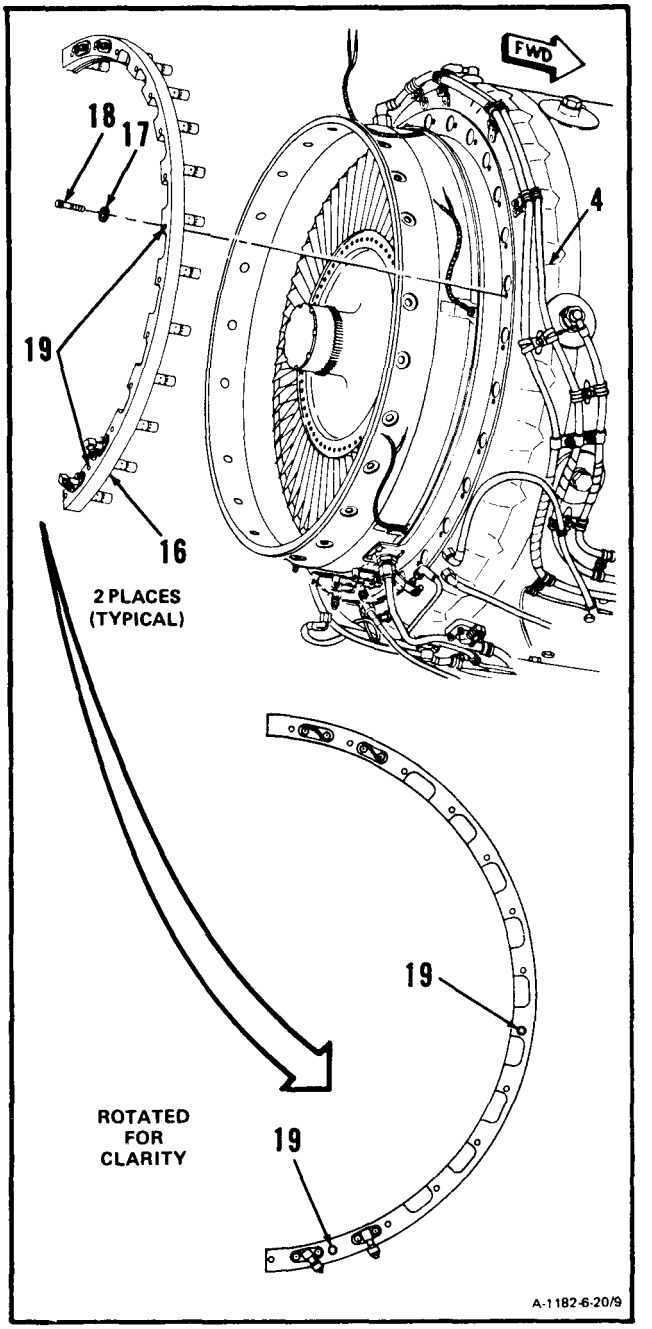
6-20 INSTALL LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued) 6-20

10. Install right-hand fuel manifold assembly (16) in housing (4).

NOTE

In following steps 11. thru 15., leave bolts loose to allow for fire shield alignment.

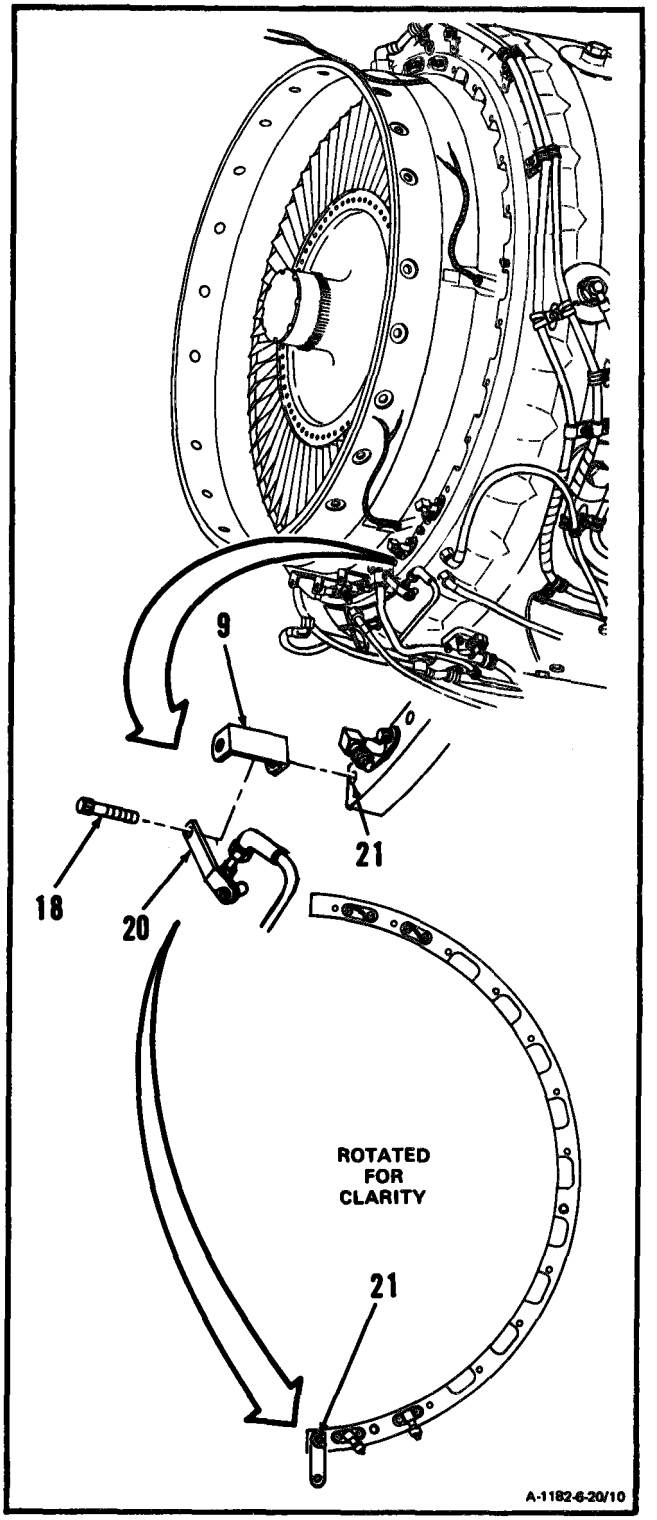
11. Install washers 17) and bolts (18) in holes (19).



GO TO NEXT PAGE

6-20 INSTALL LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued) 6-20

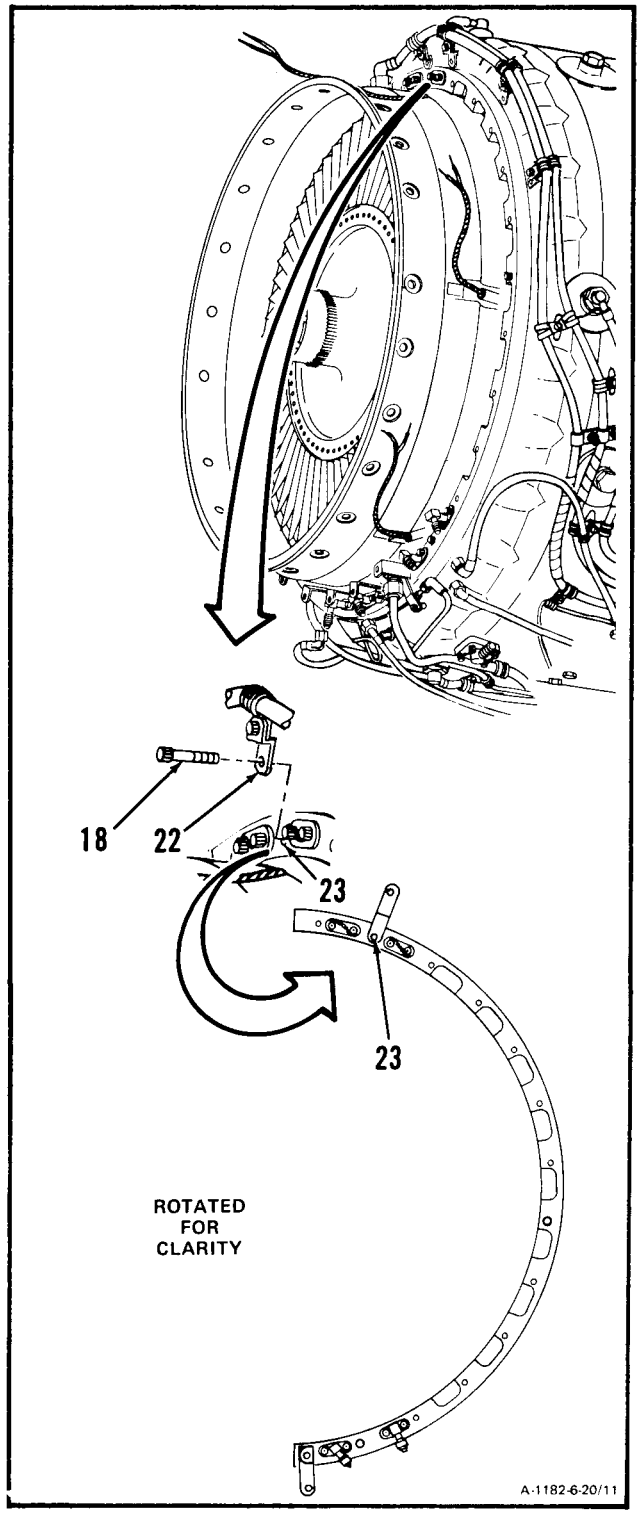
12. Install support (9), bracket (20), and bolt (18) in hole (21).



GO TO NEXT PAGE

6-20 INSTALL LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued) 6-20

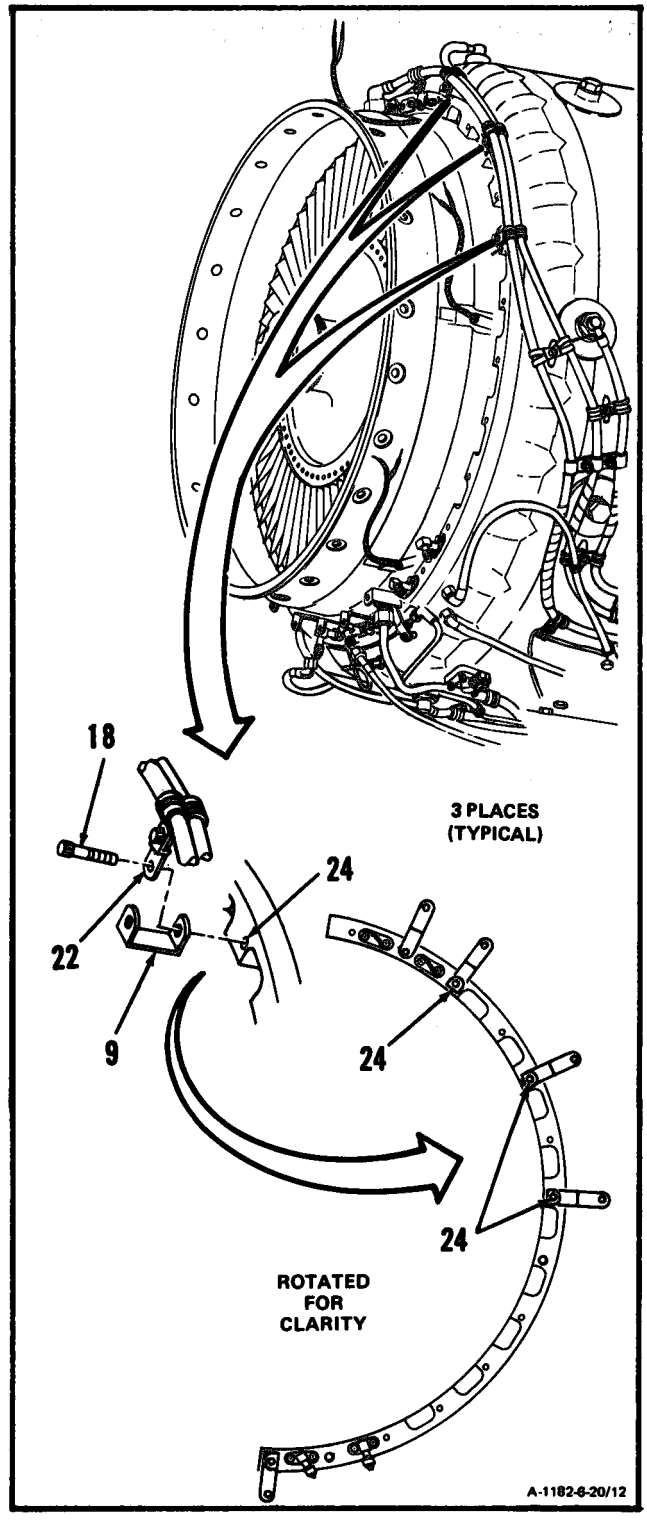
13. Install bracket (22) and bolt (18) in hole (23).



GO TO NEXT PAGE

6-20 INSTALL LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued) 6-20

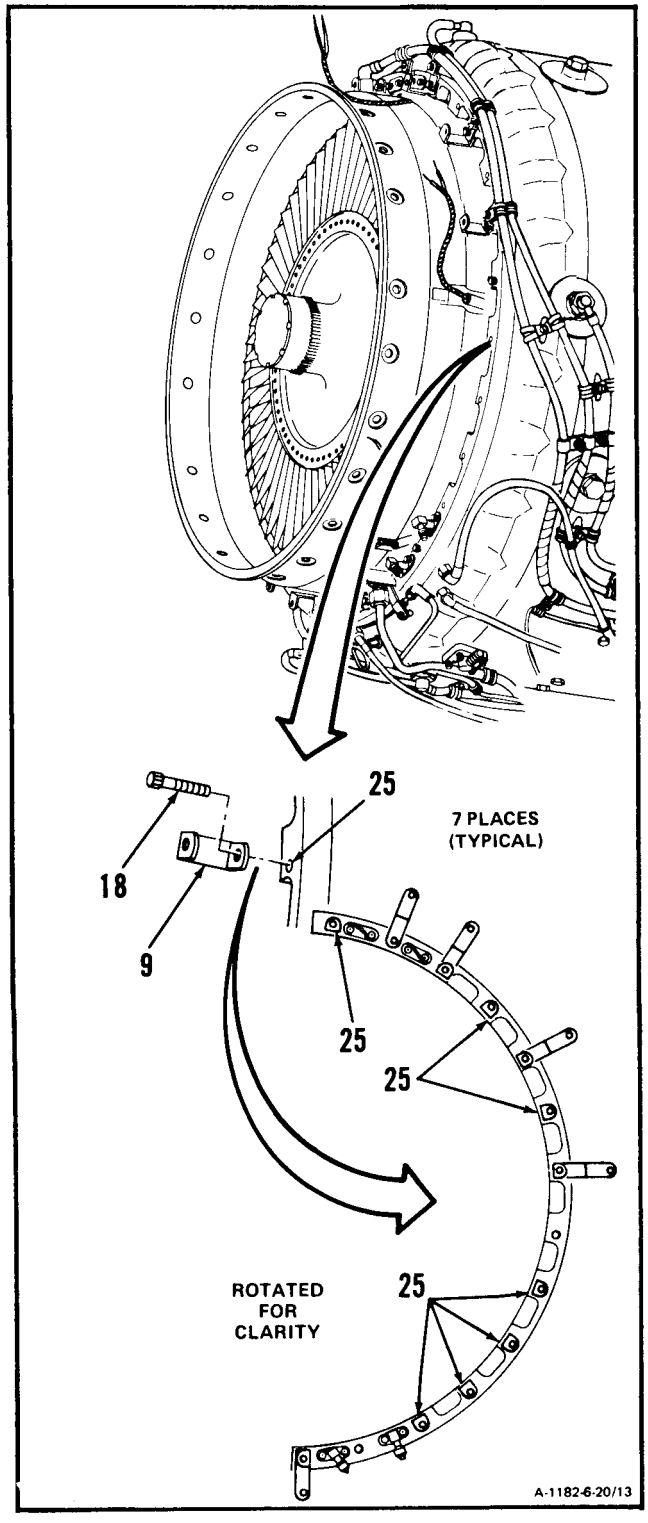
14. Install three supports (9), three brackets (22), and three bolts (18) in three holes (24).



GO TO NEXT PAGE

6-20 INSTALL LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued) 6-20

15. Install seven supports (9) and seven bolts (18) in seven remaining holes (25).

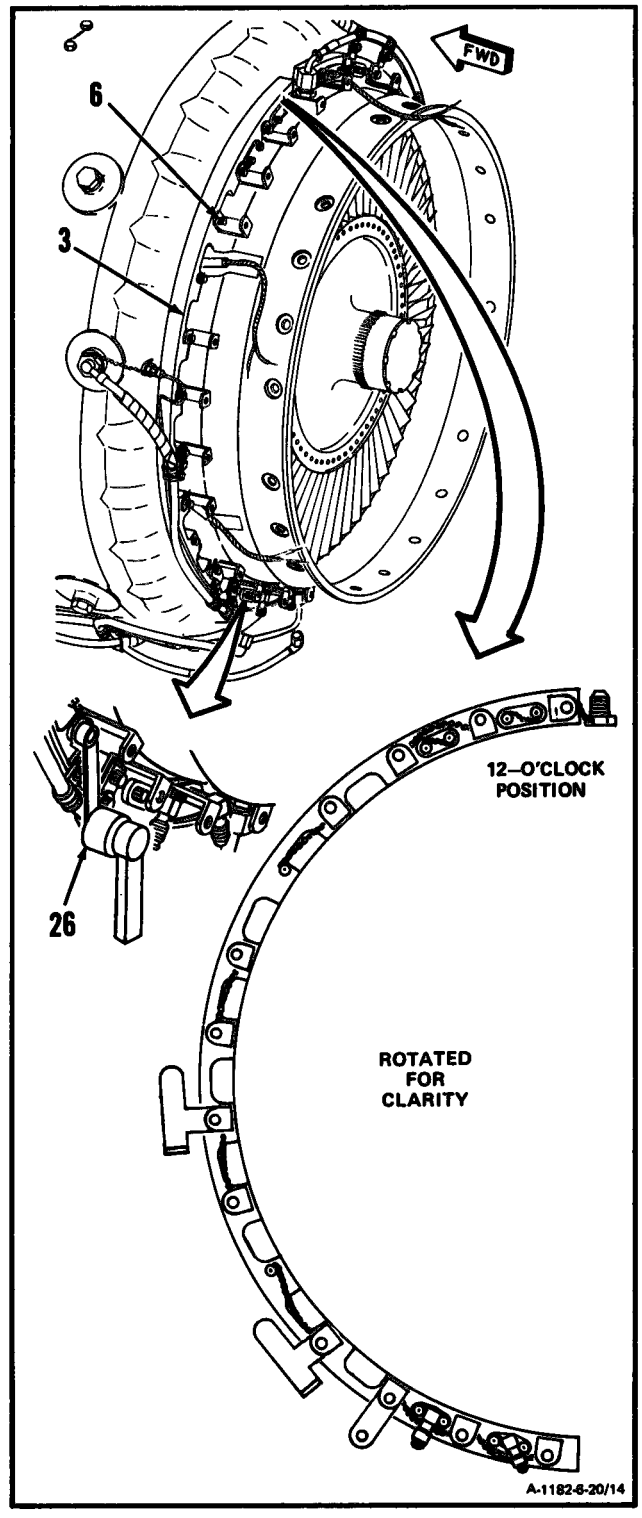


GO TO NEXT PAGE

6-20 INSTALL LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued) 6-20

16. Using torque adapter wrench (T15) (26), **torque all bolts (6) to 40 inch-pounds** on left-hand fuel manifold (3).

17. Lockwire 14 bolts (6) on left-hand fuel manifold (3). Use lockwire (E29).

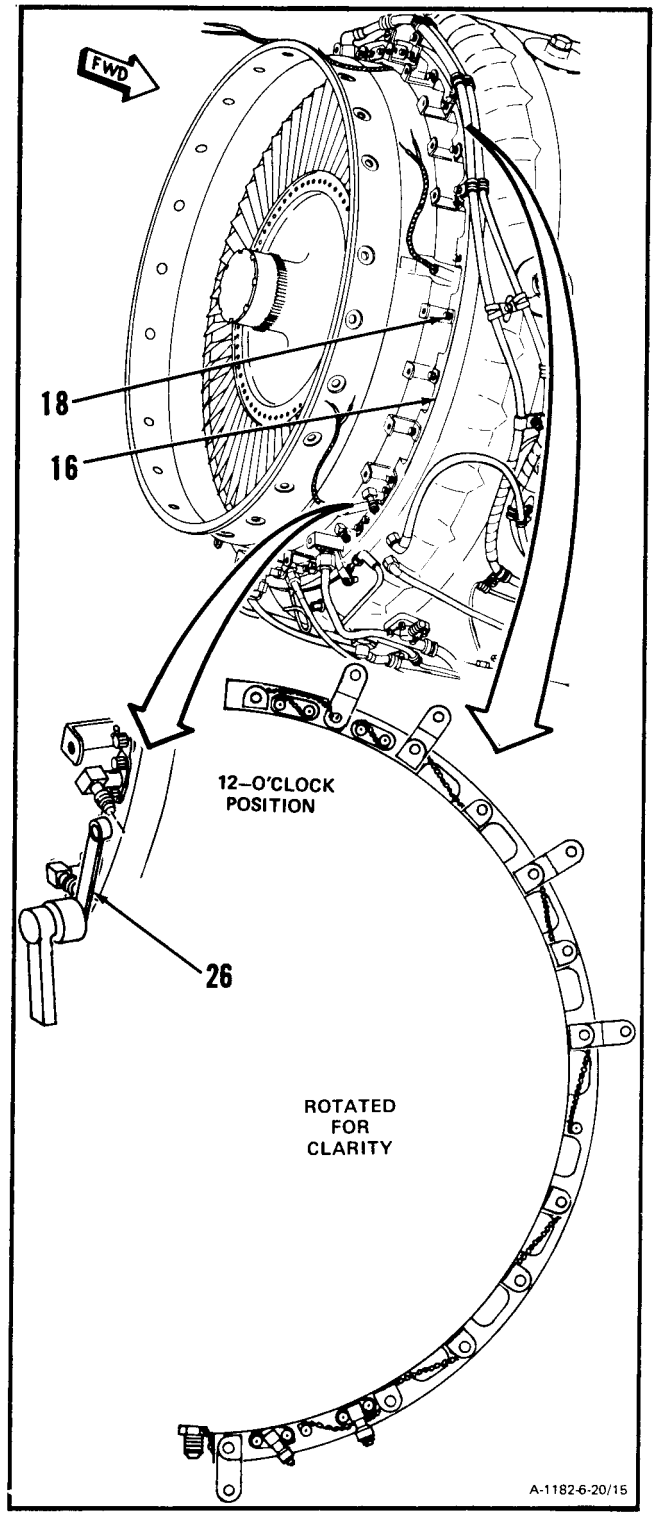


GO TO NEXT PAGE

6-20 INSTALL LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued) 6-20

18. Using torque adapter wrench (T15) (26), **torque all bolts (18) to 40 inch-pounds** on right-hand fuel manifold (16).

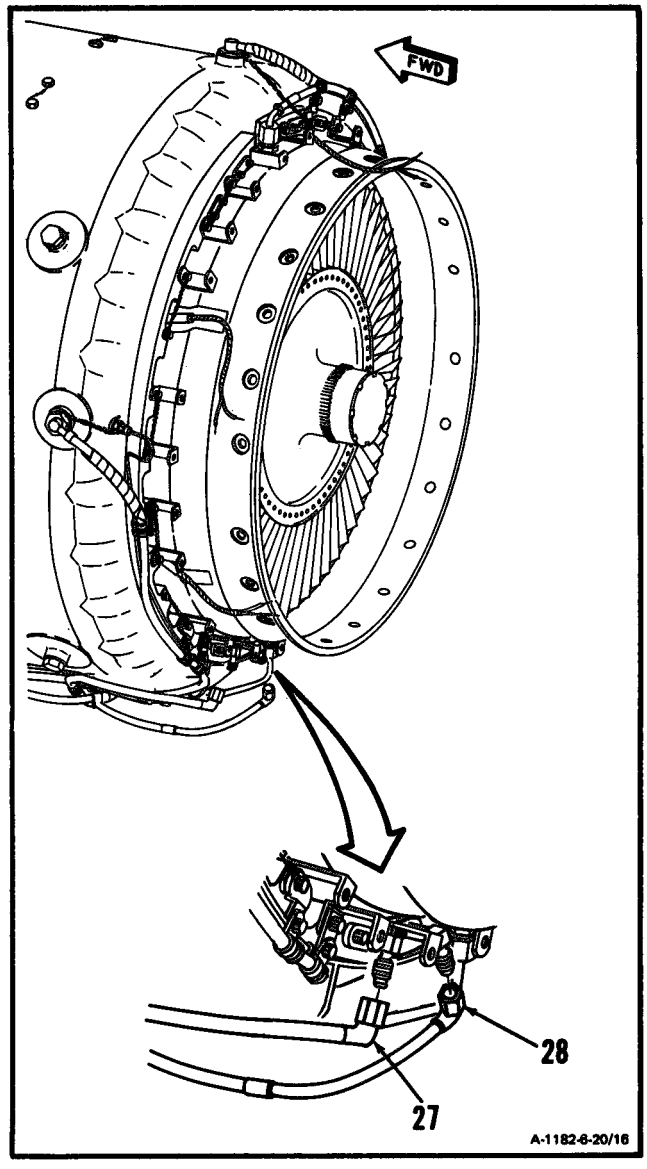
19. Lockwire 14 bolts (18) on right-hand fuel manifold (16). Use lockwire (E29).



GO TO NEXT PAGE

6-20 INSTALL LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued) 6-20

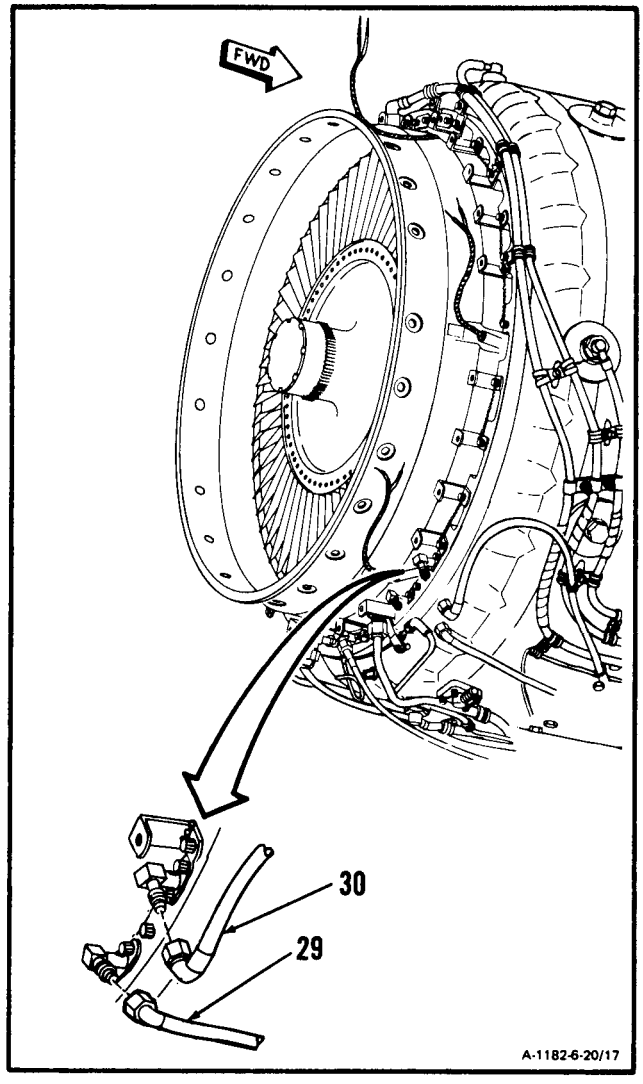
20. **Connect hose assemblies (27 and 28).**



GO TO NEXT PAGE

6-20 INSTALL LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued) 6-20

21. **Connect hose assemblies (29 and 30).**



GO TO NEXT PAGE

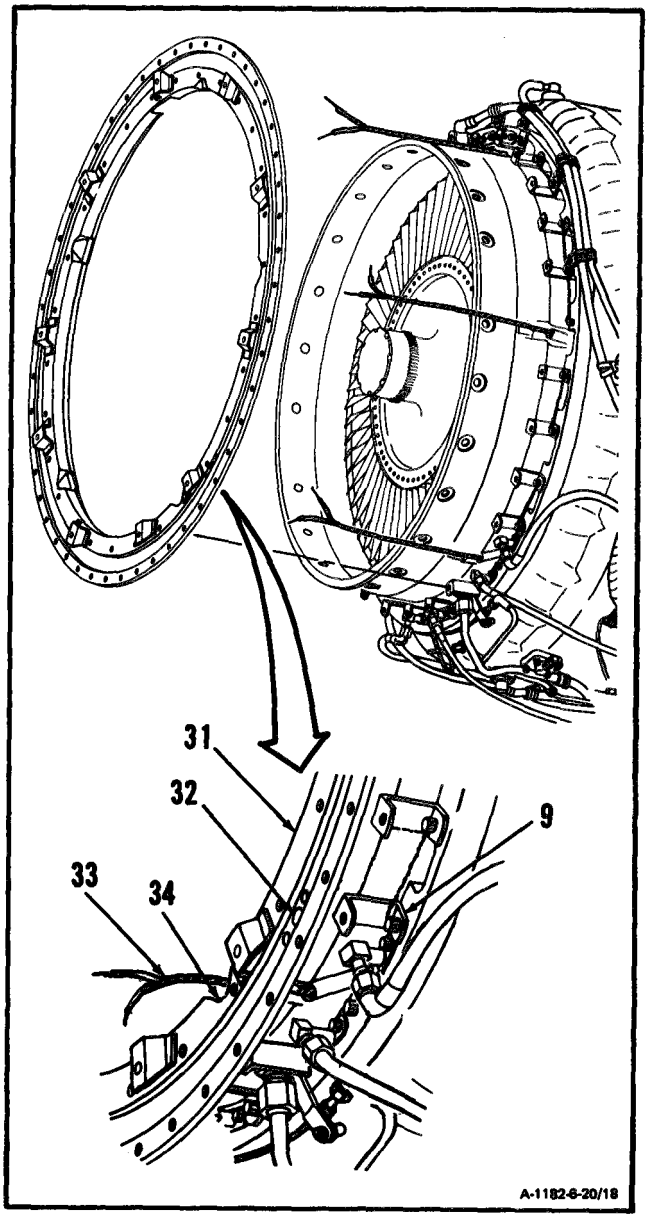
6-20 INSTALL LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued) 6-20

CAUTION

When installing fireshield assembly, be careful not to get five thermocouple harness assembly leads caught between fireshield and fourth turbine nozzle. Failure to comply may cause damage to harness assembly leads.

22. Align fireshield assembly (31) near 23 supports (9) with thermocouple jumper lead mounting hole (32) at 5-o'clock position.

23. Route five thermocouple harness assembly leads (33) through five cutouts (34) in fireshield assembly (31).



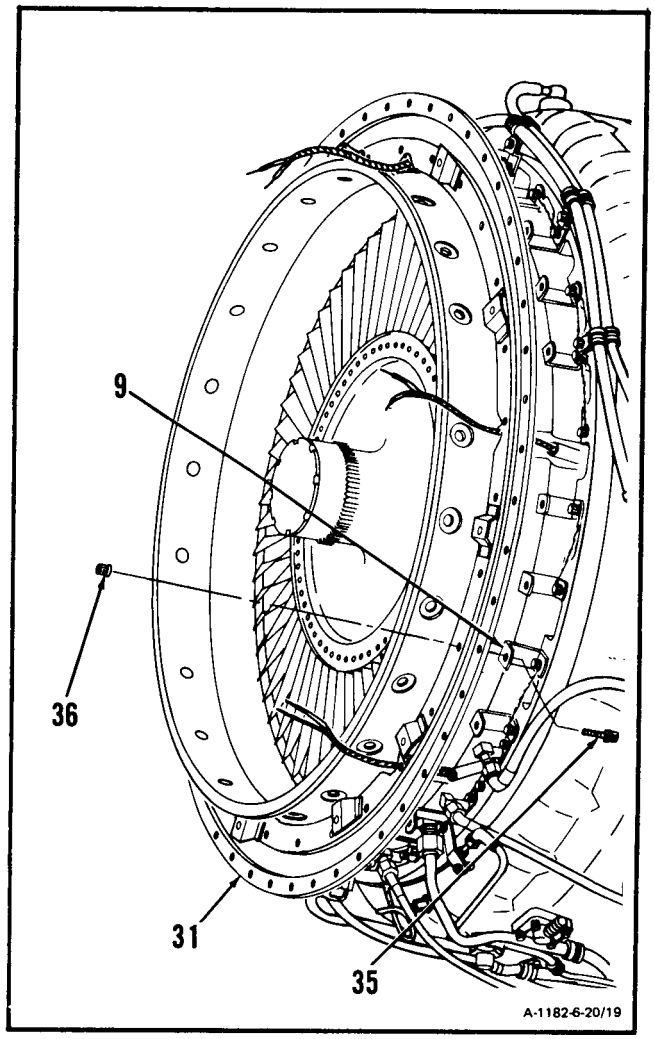
GO TO NEXT PAGE

6-20 INSTALL LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued) 6-20

NOTE

In following step 24., do not tighten bolts until supports are aligned.

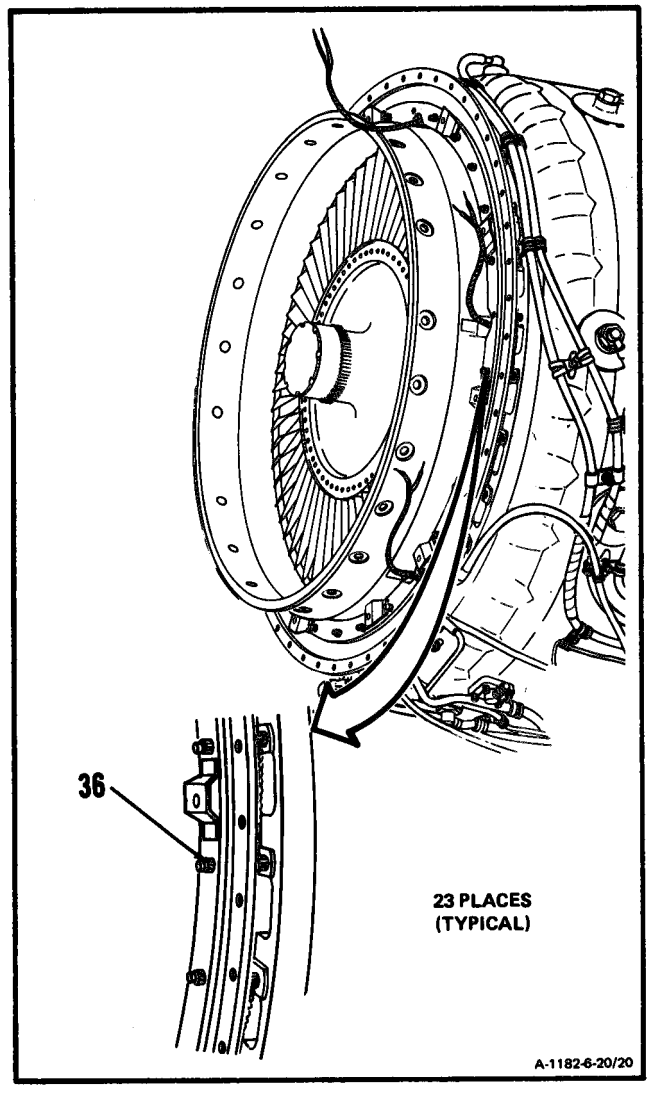
24. **Install fireshield assembly (31)** on 23 supports (9), and install 23 bolts (35) and 23 nuts (36).



GO TO NEXT PAGE

6-20 INSTALL LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued) 6-20

25. **Torque 23 nuts (36) to 30 inch-pounds.**

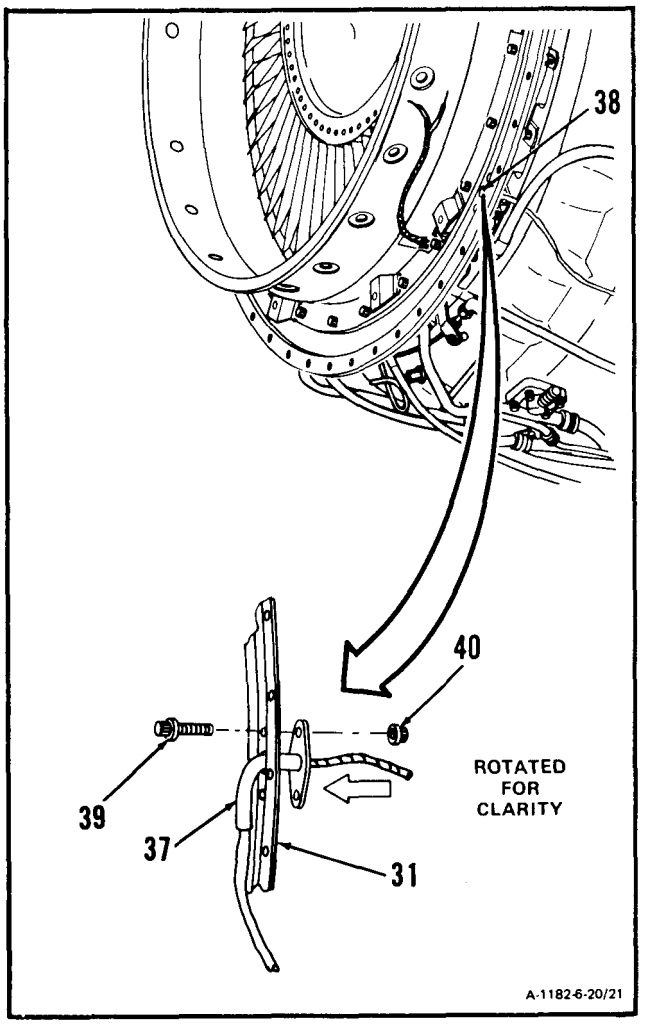


GO TO NEXT PAGE

6-20 INSTALL LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued) 6-20

26. **Insert thermocouple jumper lead (37)** through hole (38) in fireshield assembly (31).

27. Install two bolts (39 and nuts (40



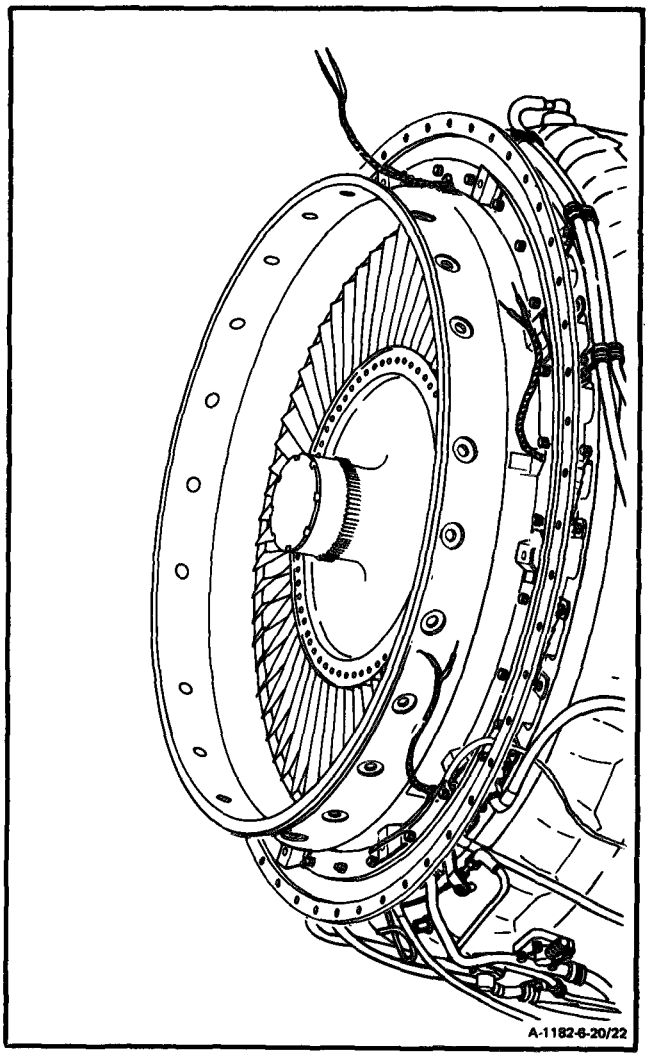
INSPECT

GO TO NEXT PAGE

6-20 INSTALL LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued) 6-20

FOLLOW-ON MAINTENANCE:

Install Left- and Right-Hand Bus Bar Assemblies (Task 4-11).
Install Exit Vane Assembly (Task 4-82).



END OF TASK

6-21 REMOVE PRIMER TUBE ASSEMBLY

6-21

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Container, 1 Quart

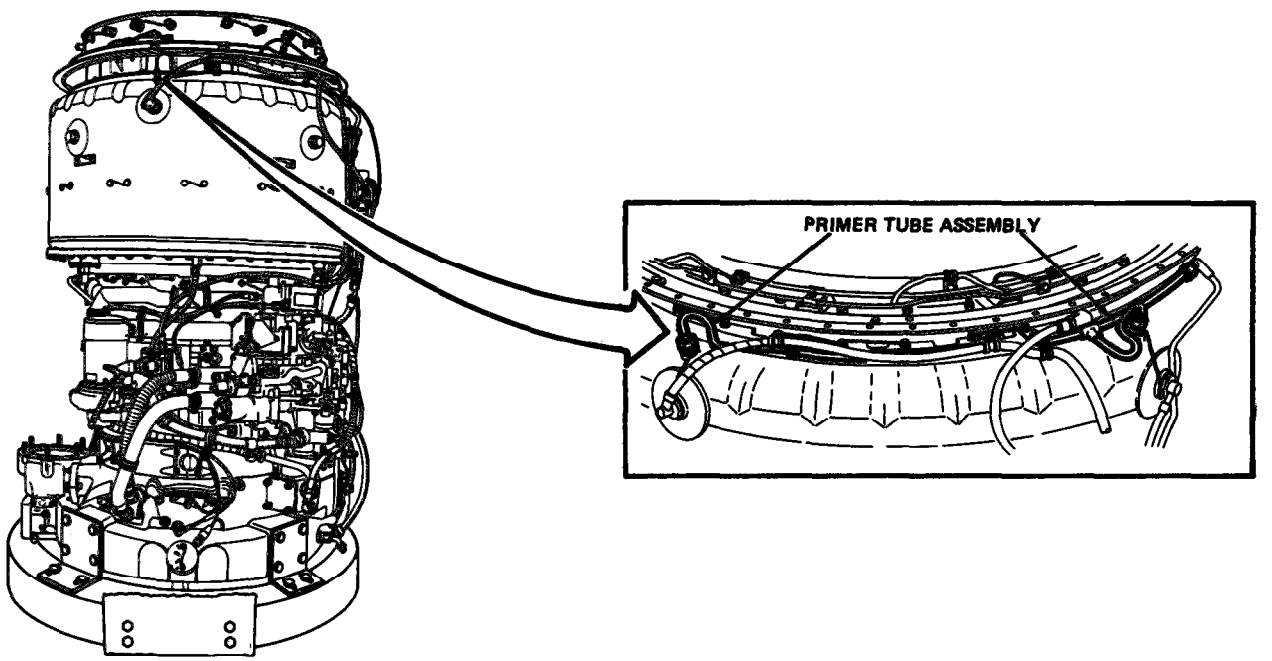
Materials:
Wiping Rag (E58)

Personnel Required:
68B10 Aircraft Powerplant Repairer

General Saftey Instructions:

WARNING

Turbine fuels are very flammable. They may cause drying and irritation of skin or eyes Handle only in well-ventilated areas away from heat and open flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.

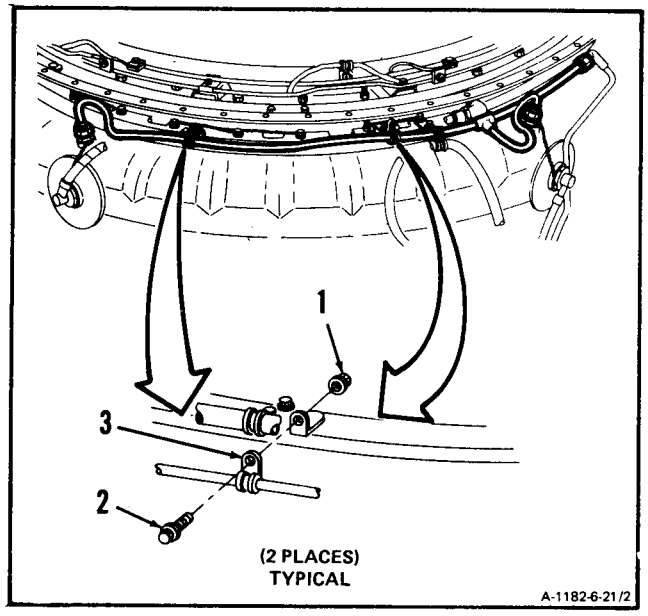


A-1182-6-21/1

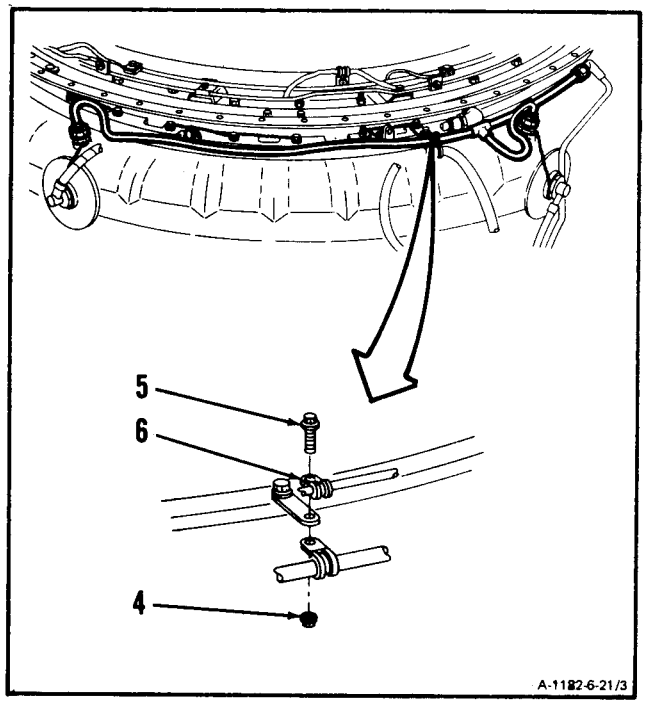
GO TO NEXT PAGE

6-21 REMOVE PRIMER TUBE ASSEMBLY (Continued)

1. **Remove** two nuts (1), bolts (2), **and clamps (3).**



2. **Remove** nut (4), bolt (5), and **clamp (6).**

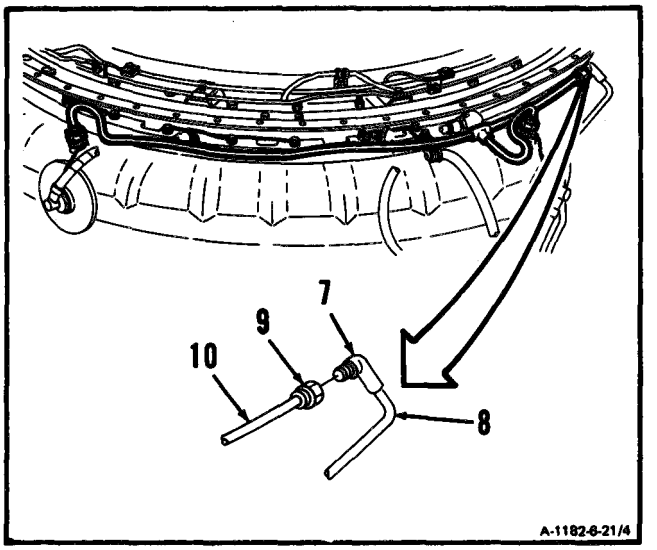


GO TO NEXT PAGE

6-21 REMOVE PRIMER TUBE ASSEMBLY (Continued) 6-21

3. Using two wrenches, hold elbow (7) on tube assembly (8) and loosen swivel nut (9).

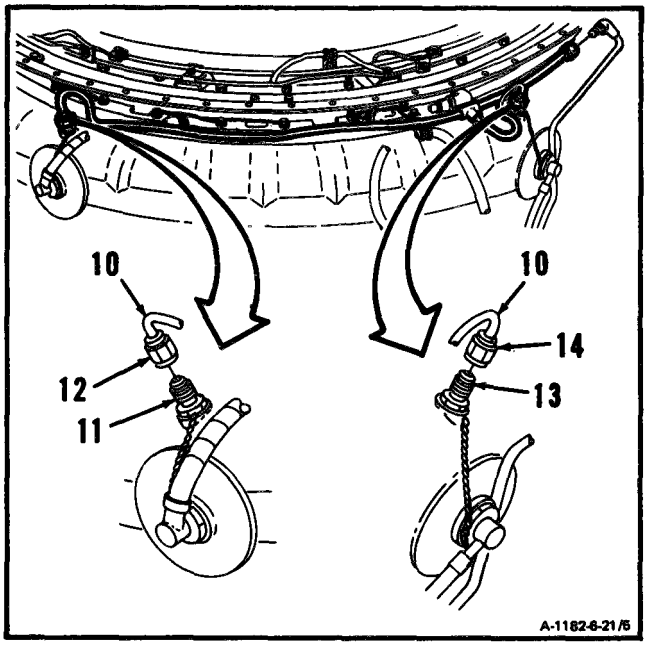
4. **Disconnect primer tube assembly (10)** from tube asembly (8).



5. Using two wrenches, hold start fuel nozzle (11) and loosen swivel nut (12).

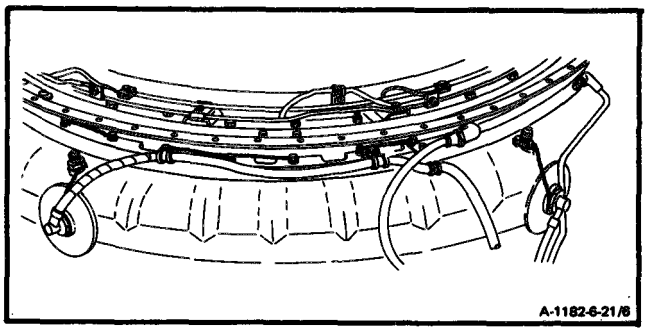
6. Using two wrenches, hold start fuel nozzle (13) and loosen swivel nut (14).

7. **Disconnect and remove primer tube assembly (10)** from start fuel nozzles (11 and 13).



FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-22 CLEAN PRIMER TUBE ASSEMBLY 6-22

INITIAL SETUP

Applicable Configurations:
All

Tools:
Goggles
Compressed Air Source

Materials:
Dry Cleaning Solvent (E17)
Gloves (E20)
Lint-Free Cloth (E26)

Personnel Required:
68610 Aircraft Powerplant Repairer

Equipment Condition:
Off Engine Task
Primer Tube Assembly Removed (Task 6-21)

General Safety Instructions:

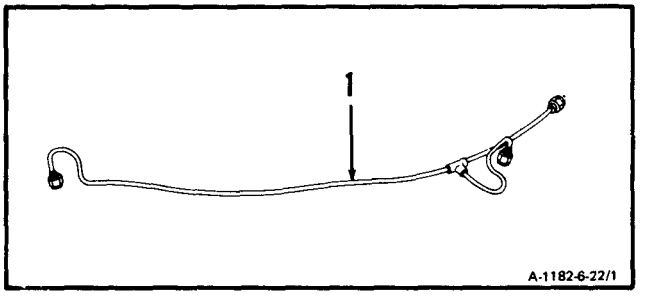
WARNING

Dry cleaning solvent (E17) is flammable and toxic. It can irritate skin and cause burns. Use only in well-ventilated area, away from heat and open flame. In case of contact, immediately flush skin or eyes with water for at least 15 minutes, Get medical attention for eyes.

1. **Clean primer tube assembly (1)** as follows:

   a. Wear gloves (E20). Immerse primer tube assembly (1) in dry cleaning solvent (E17) and agitate.

   b. Wipe dry. Use lint-free cloth (E26).



GO TO NEXT PAGE

WARNING

When using compressed air for cleaning, use approved protective equipment for eyes and face. Do not use more than 30 psig air pressure. Do not direct air to ward yourself or another parson. Failure to comply could result in injury to eyes or skin. In case of injury, get medical attention.

c. Wear goggles. Blow dry internal passages using clean, dry compressed air.

FOLLOW-ON MAINTENANCE:

Inspect Primer Tube Assembly (Task 6-23).

END OF TASK

6-23 INSPECT PRIMER TUBE ASSEMBLY 6-23

INITIAL SETUP

Applicable Configurations:
All

Tools:
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
None

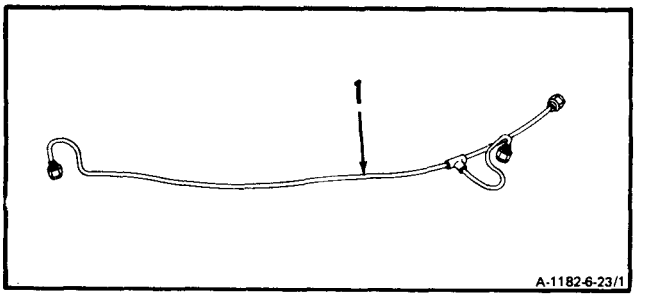
Personnel Required:
68B30 Aircraft Powerplant Inspector

Equipment Condition:
Off Engine Task

1. Inspect primer tube assembly (1) as follows:

a. There shall be no cracks.

b. There shall be no chafing wear deeper than 0.002 inch.



FOLLOW-ON MAINTENANCE:

None

END OF TASK

6-24 INSTALL PRIMER TUBE ASSEMBLY 6-24

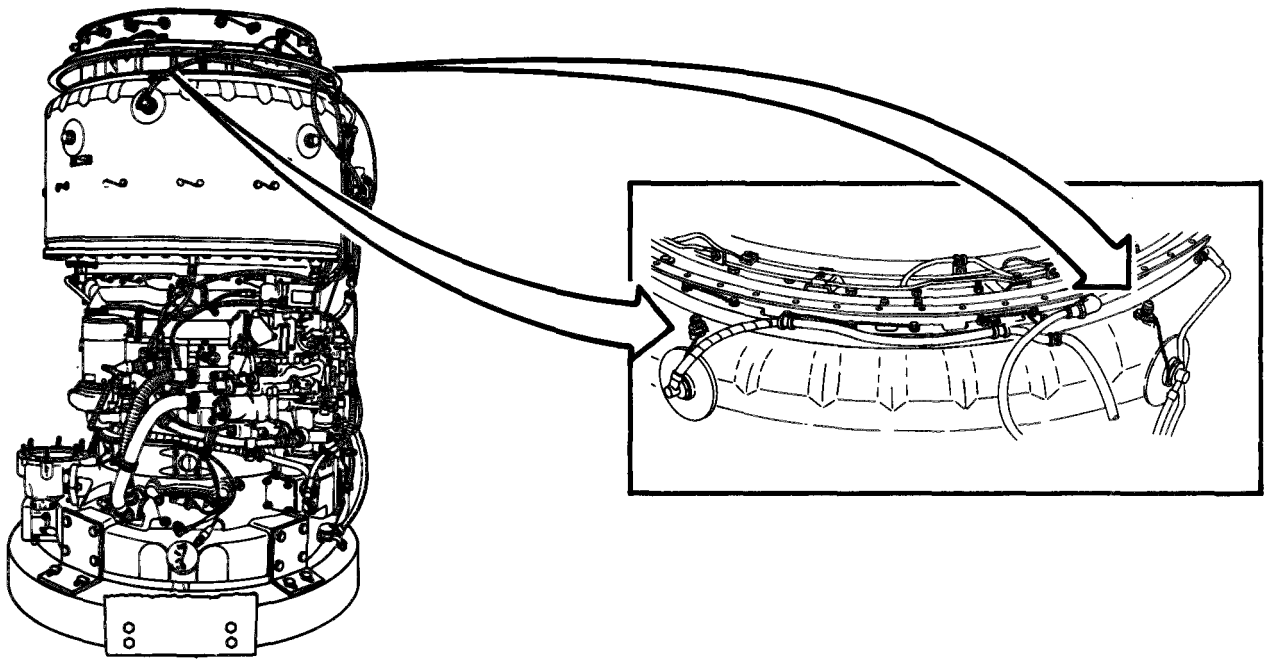
INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
None

Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

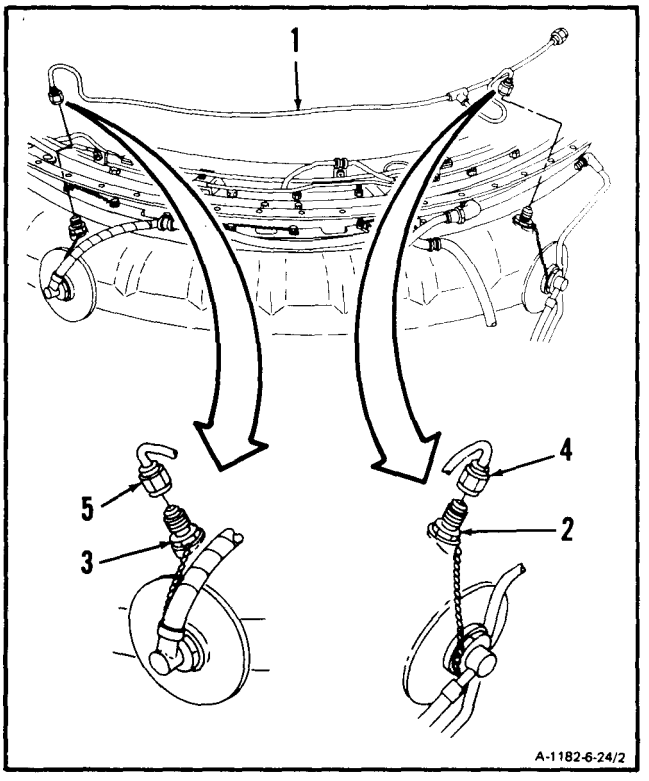


A-1182-6-24/1

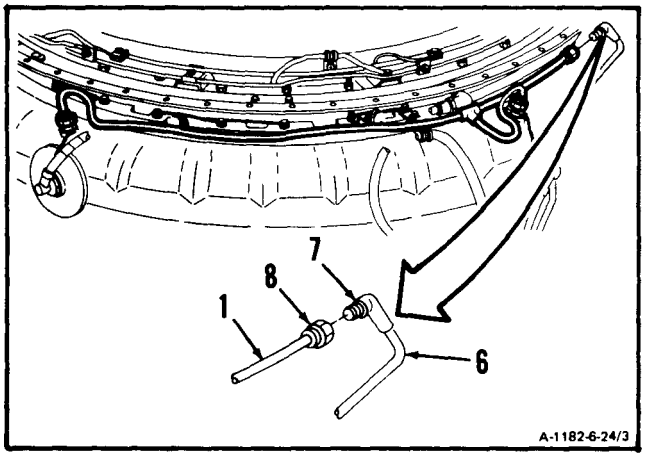
GO TO NEXT PAGE

6-24 INSTALL PRIMER TUBE ASSEMBLY (Continued)

1. **Connect primer tube assembly (1)** to start fuel nozzles (2 and 3).
2. Using two wrenches, hold start fuel nozzle (2) and tighten swivel nut (4).
3. Using two wrenches, hold start fuel nozzle (3) and tighten swivel nut (5).



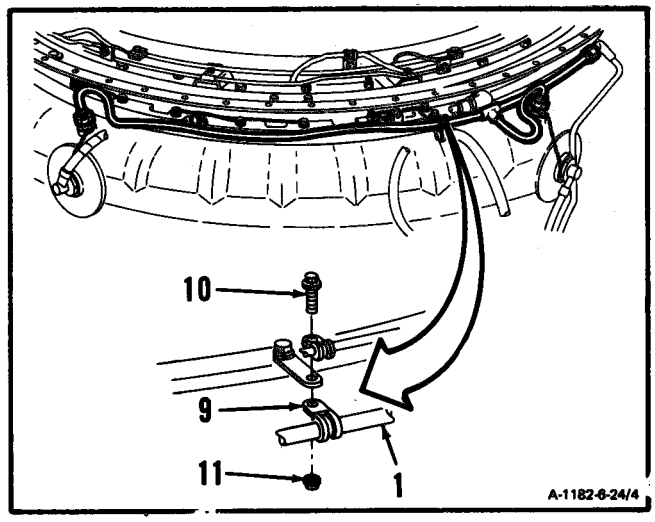
4. **Connect tube assembly (6)** to primer tube assembly (1).
5. Using two wrenches, hold elbow (7) on tube assembly (6) and tighten swivel nut (8).



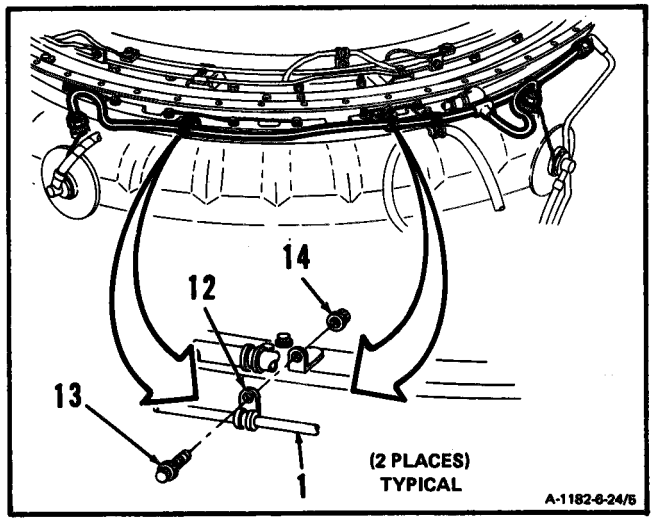
GO TO NEXT PAGE

6-24 INSTALL PRIMER TUBE ASSEMBLY (Continued) 6-24

6. **Install clamp (9)** on primer tube assembly (1), and install bolt (10) and nut (11).



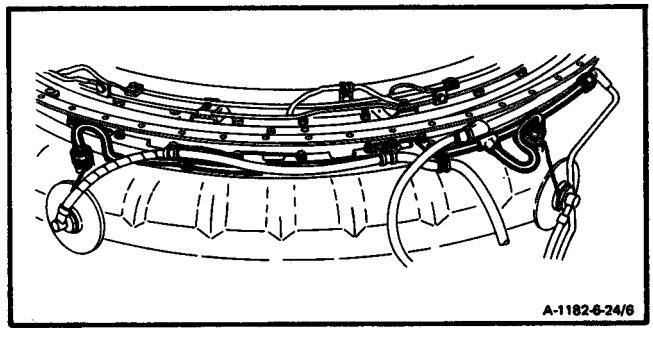
7. **Install two clamps (12)** on primer tube assembly (1), and install two bolts (13) and nuts (14).



INSPECT

FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-25 REMOVE START FUEL NOZZLES

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Container, 1 Quart

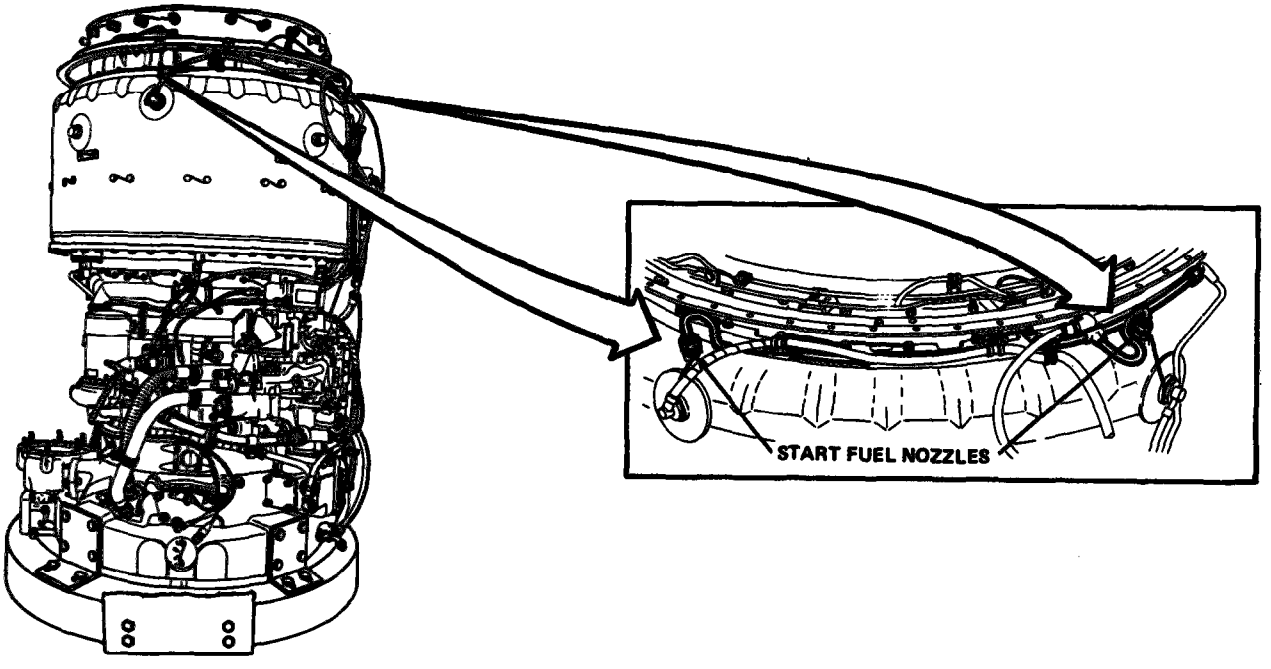
Materials:
Wiping Rag (E58)

Personnel Required:
68B10 Aircraft Powerplant Repairer

General Saftey Instructions:

WARNING

Turbine fuels are very flammable. They may cause drying and irritation of skin or eyes. Handle only in well-ventilated areas away from heat and open flame. Drain and stem in approved metal safety containers. Avoid prolonged or repeated contact with skin and do not take internally. Wash contacted areas of skin thoroughly aftar handling. If irritation of skin results, get medical attention. Get medical attention for eyes.

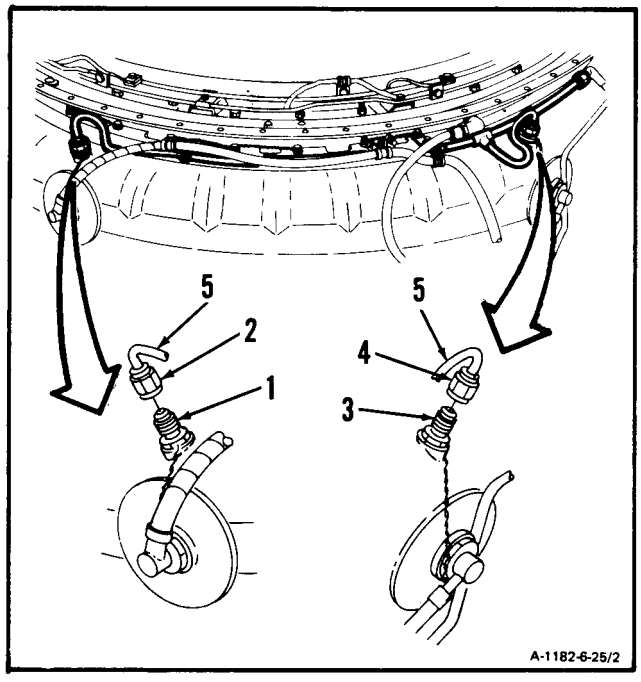


A-1182-6-25/1

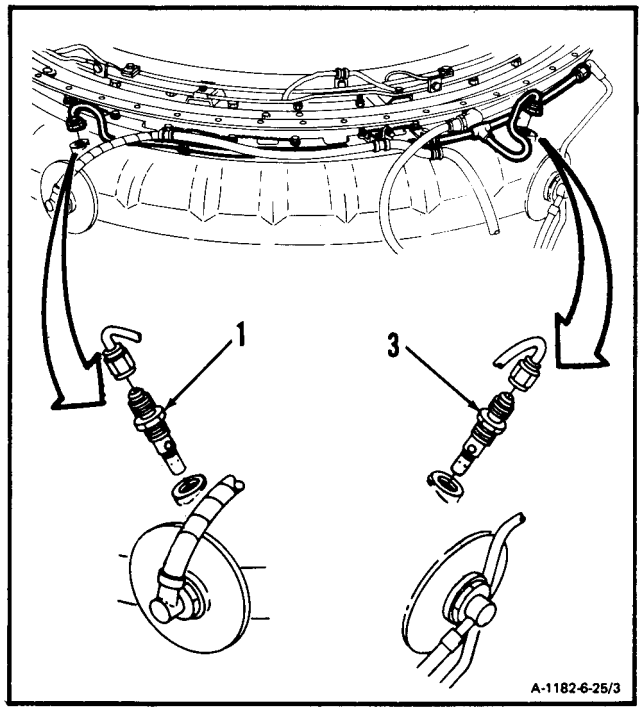
GO TO NEXT PAGE

6-25 REMOVE START FUEL NOZZLES (Continued) 6-25

1. Using two wrenches, hold start fuel nozzle (1) and loosen swivel nut (2).
2. Using two wrenches, hold start fuel nozzle (3) and loosen swivel nut (4).
3. **Disconnect primer tube assembly (5)** from start fuel nozzles (1 and 3).



4. **Remove** lockwire and remove two **start fuel nozzles (1 and 3).**

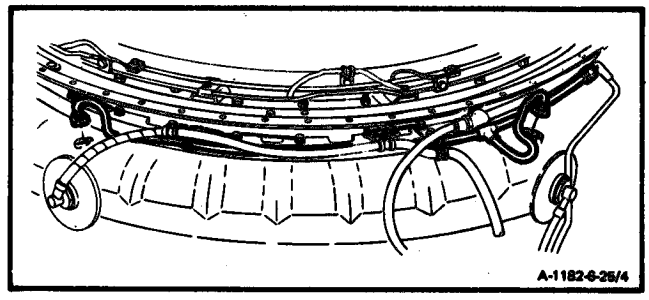


GO TO NEXT PAGE

6-25 REMOVE START FUEL NOZZLES (Continued)

FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-26 CLEAN START FUEL NOZZLES 6-26

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Goggles
Compressed Air Source

Materials:
Dry Cleaning Solvent (E17)
Gloves (E20)
Lint-Free Cloth (E26)

Personnel Required:
68B10 Aircraft Powerplant Repairer

Equipment Condition:
Off Engine Task
Start Fuel Nozzles Removed (Task 6-25)

General Safety Instructions:

WARNING

Dry cleaning solvent (E17) is flammable and toxic. It can irritate skin and cause burns. Use only in well-ventilated area, away from heat and open flame. In case of contact, immediately flush skin or eyes with water for at least 15 minutes. Get medical attention for eyes.

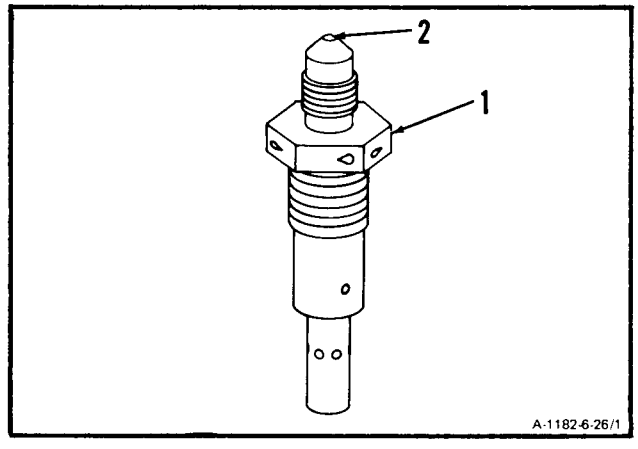
1. Wear gloves (E20). **Clean start fuel nozzles (1).** Use dry cleaning solvent (E17) and brush.

2. After cleaning, **remove residue** with clean lint-free cloth (E26).

WARNING

When using compressed air for cleaning, use approved protective equipment for eyes and face. Do not use more than 30 psig air pressure. Do not direct air toward yourself or another person. Failure to comply could result in injury to eyes or skin. In case of injury, get medical attention.

3. Wear goggles. **Blow out internal air passage (2).** To clean stuck ball, use clean, dry compressed air.



FOLLOW-ON MAINTENANCE:

Inspect Start Fuel Nozzles (Task 6-27).

END OF TASK

6-27 INSPECT START FUEL NOZZLES 6-27

INITIAL SETUP

Applicable Configurations:
All

Tools:
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
None

Personnel Required:
68B30 Aircraft Powerplant Inspector

Equipment Condition:
Off Engine Task

1. Inspect start fuel nozzle (1). There shall be no cracks.

NOTE

Chafing on start fuel nozzle tip may indicate damage in liner boss. Damage in liner boss can result in blocked or restricted spray pattern.

2. **Inspect start fuel nozzle air shroud ends (2)** as follows:

a. There shall be no bent shroud ends.

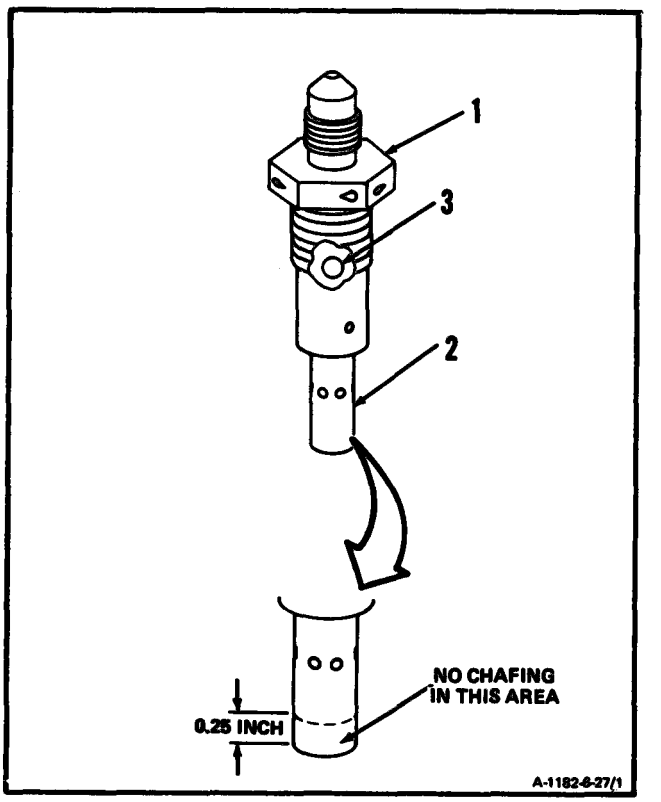
b. There shall be no distorted or burned out shroud ends.

c. There shall be no chafing in area 0.25-inch from bottom of shroud ends.

3. **Impact start fuel nozzle internal ball (3) for freedom of oparation.**

a. Shake start fuel nozzle (1) and listen for rattle.

b. There shall be no stuck ball.



FOLLOW-ON MAINTENANCE:

None

END OF TASK

6-28 INSTALL START FUEL NOZZLES 6-28

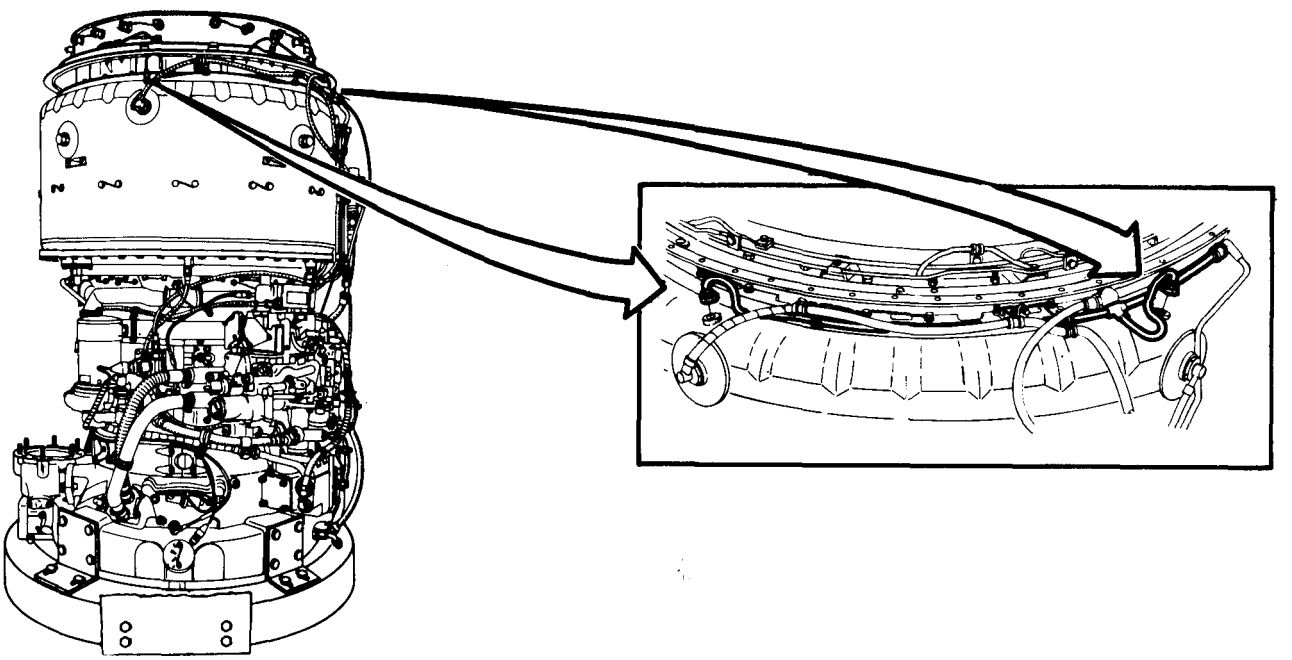
INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
Lockwire (E29)

Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector



A-1182-6-28/1

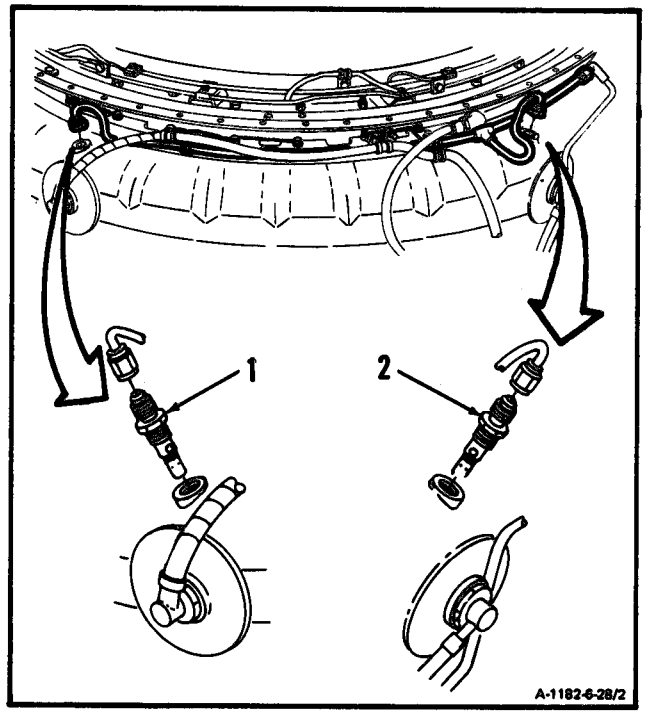
GO TO NEXT PAGE

6-28 INSTALL START FUEL NOZZLES (Continued)

CAUTION

In following step, insert nozzles hand tight to insure that they do not hit combustion chamber liner. Shift liner port as needed. Failure to comply may cause and leakage.

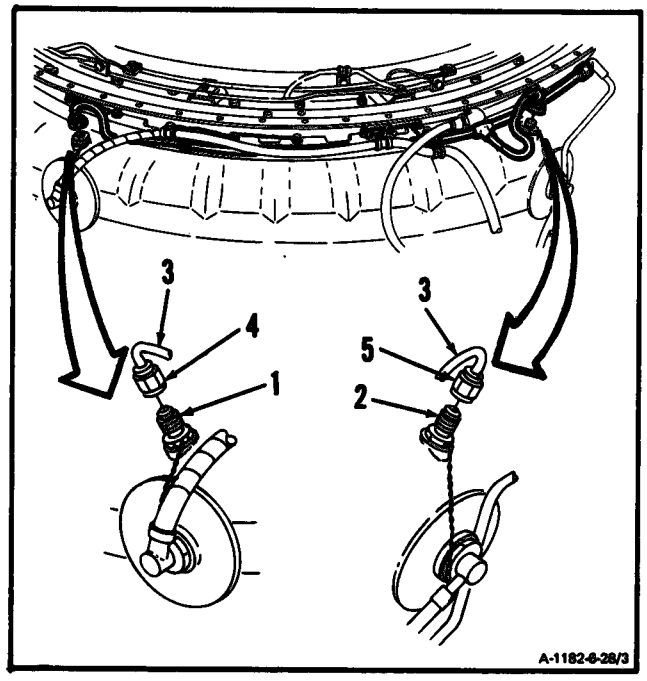
1. **Install two start fuel nozzles (1 and 2)** and lockwire. Use lockwire (E29).



2. **Connect primer tube assembly (3)** to start fuel nozzles (1 and 2).

3. Using two wrenches, hold start fuel nozzle (1) and tighten swivel nut (4).

4. Using two wrenches, hold start fuel nozzle (2) and tighten swivel nut (5).



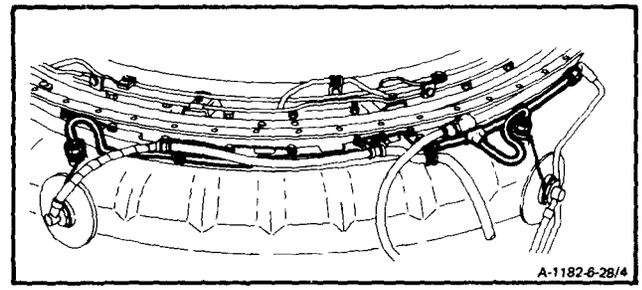
INSPECT

GO TO NEXT PAGE

6-28 INSTALL START FUEL NOZZLES (Continued) 6-28

FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-29 REMOVE MAIN FUEL FILTER AND BRACKET

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Container, 1 Quart

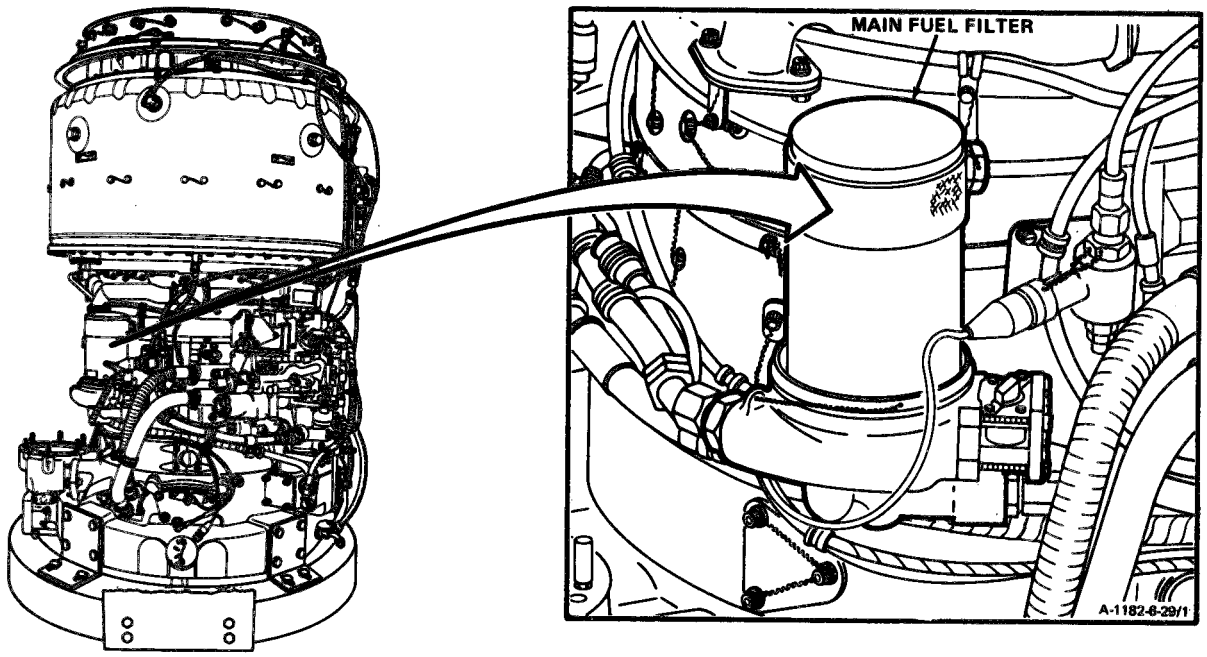
Materials:
Wiping Rag (E58)

Personnel Required:
68B10 Aircraft Powerplant Repairer

General Safety Instructions:

WARNING

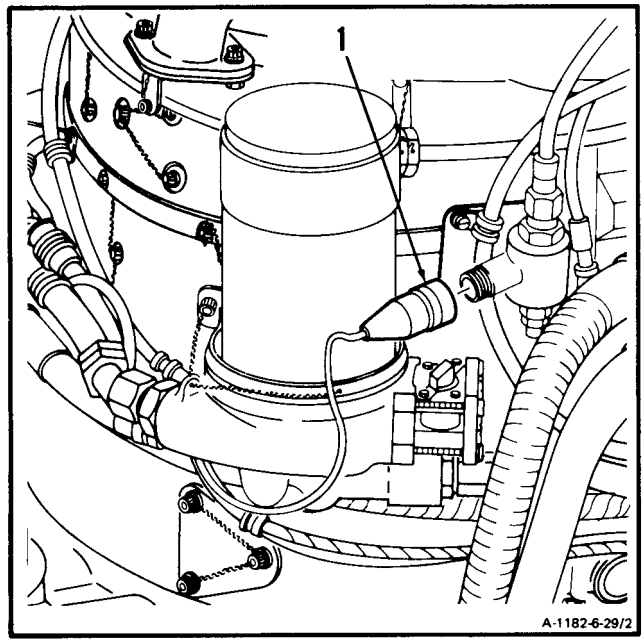
Turbine fuels are very flammable. They may cause drying and irritation of skin or eyes. Handle only in well-ventillated areas away from heat and open flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin and do not take internally. Wash contacted area of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.



GO TO NEXT PAGE

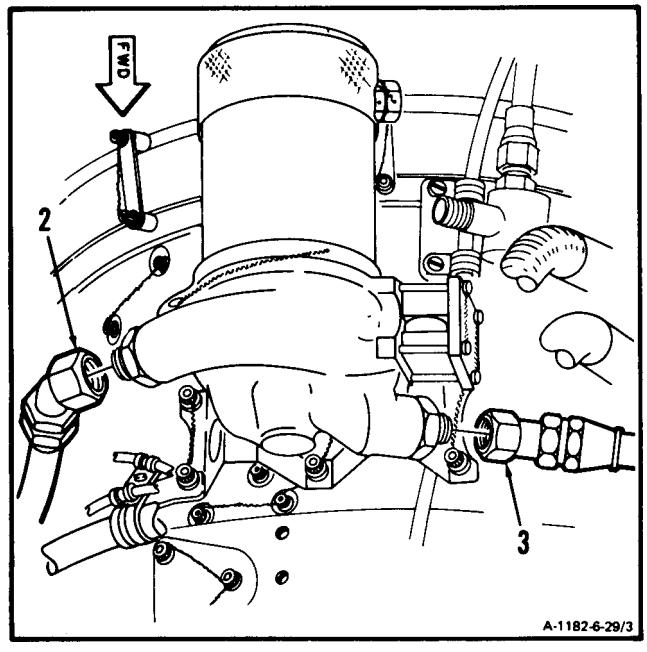
6-29 REMOVE MAIN FUEL FILTER AND BRACKET (Continued) 6-29

1. Remove lockwire and **disconnect electrical connector (1).**



2. **Disconnect hose assembly (2).**

3. **Disconnect hose assembly (3).**

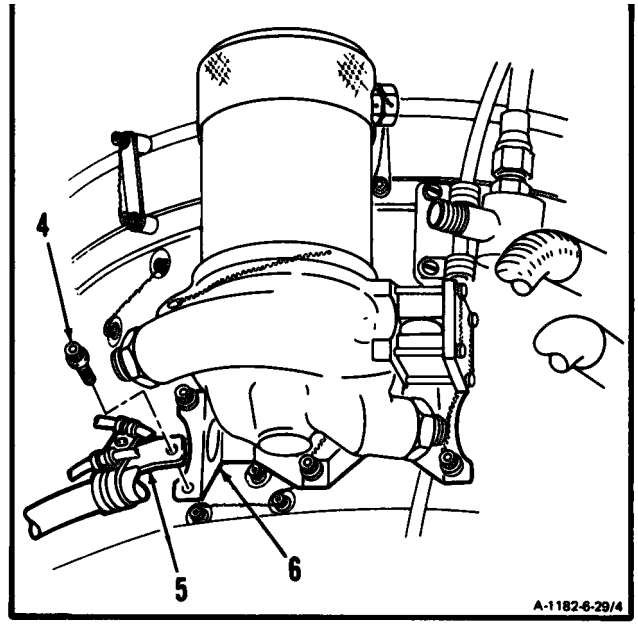


GO TO NEXT PAGE

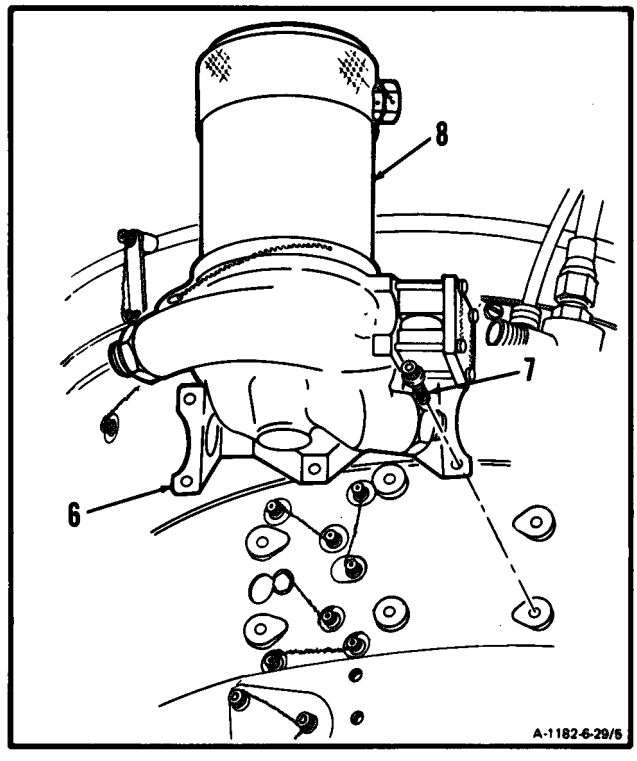
NOTE

If bracket that holds filter assembly to engine uses **six bolts,** do steps 4. and 5. and omit steps 5.1 and 5.2. If bracket that holds filter assembly to engine uses **four bolts** omit steps 4. and 5. and do steps 5.1 and 5.2.

4. Remove lockwire and bolt (4). **Remove bracket (5) away from bracket (6).**



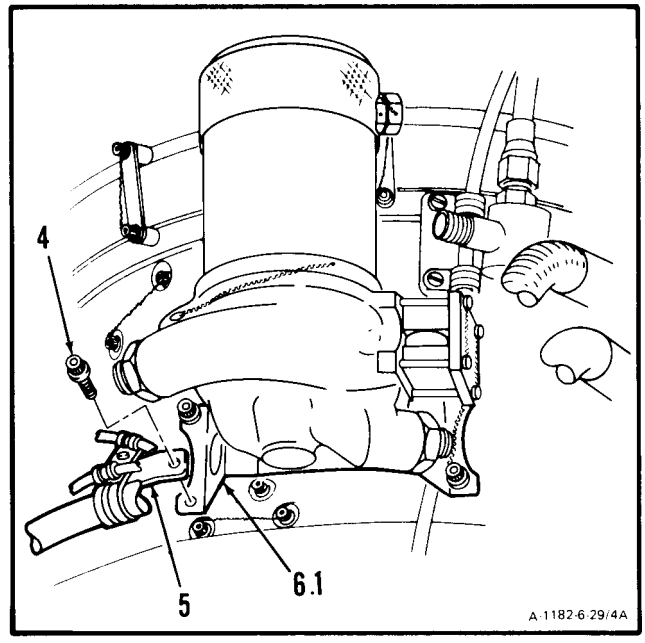
5. **Remove** lockwire, **remaining five bolts (7) and main fuel filter (8), with bracket (6)** attached.



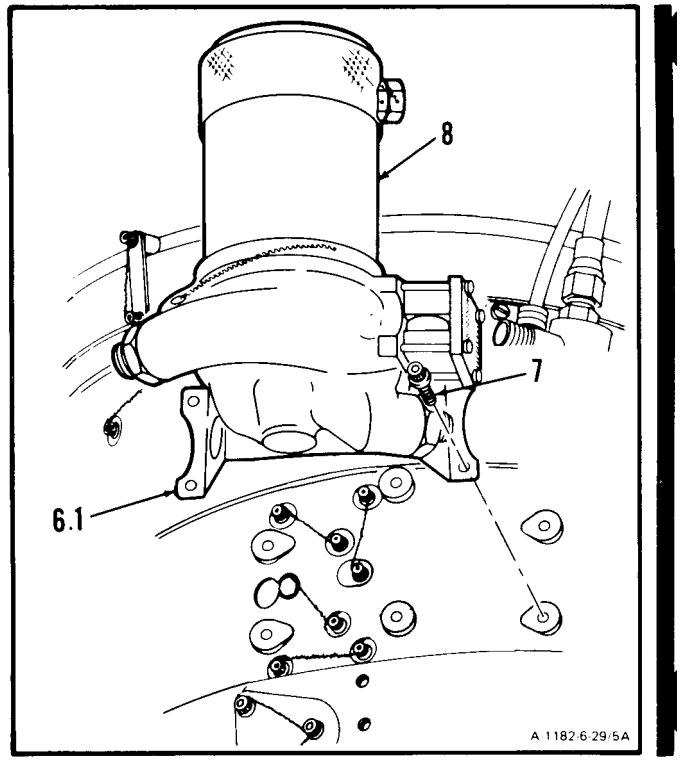
GO TO NEXT PAGE

6-29 REMOVE MAIN FUEL FILTER AND BRACKET (Continued) 6-29

5.1 Remove lockwire and bolt (4). **Remove bracket (5) away from bracket (6.1).**



5.2 **Remove** lockwire, remaining three bolts (7), and **main fuel filter (8), with bracket (6.1)** attached.

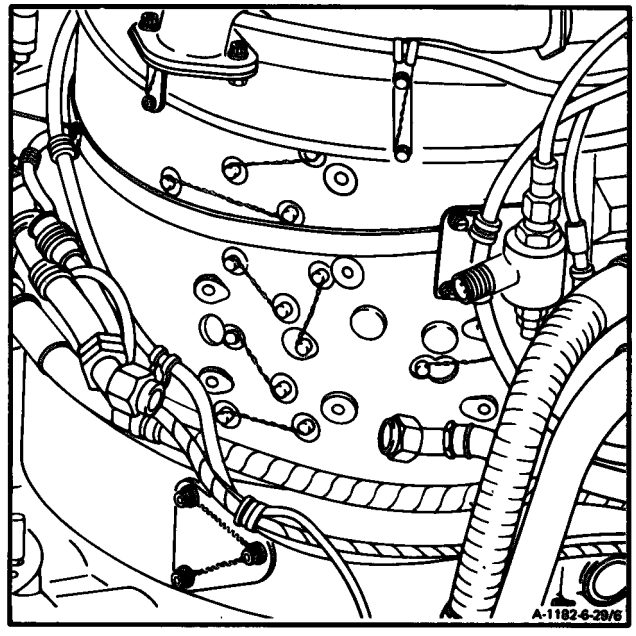


GO TO NEXT PAGE

6-29 REMOVE MAIN FUEL FILTER AND BRACKET (Continued) 6-29

FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-30 DISASSEMBLE MAIN FUEL FILTER AND BRACKET

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Vise
Jaw Caps
Strap Wrench

Materials:
Wiping Rag (E58)

Personnel Required:
6BB10 Aircraft Powerplant Repairer

Equipment Condition:
Off Engine Task
Main Fuel Filter and Bracket Removed
(Task 6-29)

General Safety Instructions:

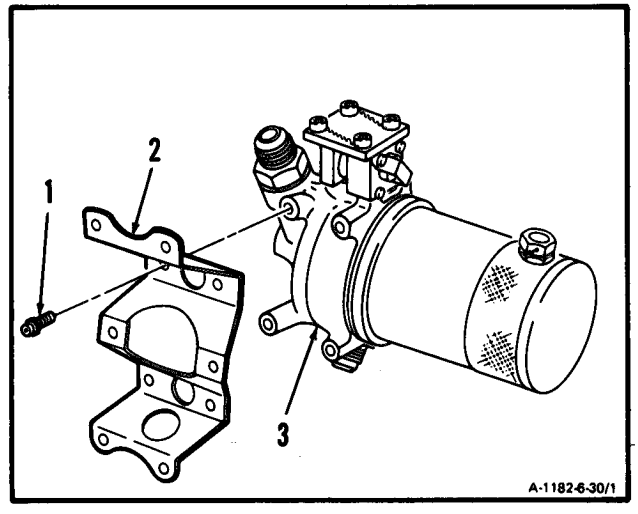
WARNING

Turbine fuels are very flammable. They may cause drying and irritation of skin or eyes. Handle only in well-ventilated areas away from heat and open flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin and do not take internally. Wash contacted area of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.

NOTE

If bracket has **ten bolt holes** do step 1. and omit step 1.1. If bracket has **eight bolt holes** omit step 1. and do step 1.1.

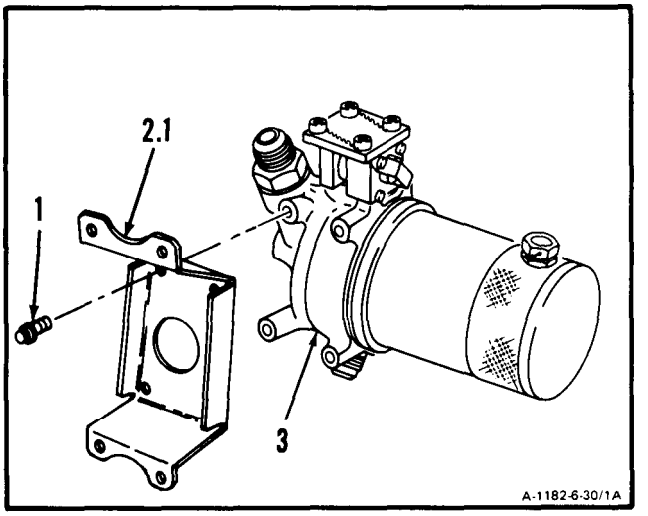
1. Remove lockwire and four bolts (1). **Remove bracket (2).**



GO TO NEXT PAGE

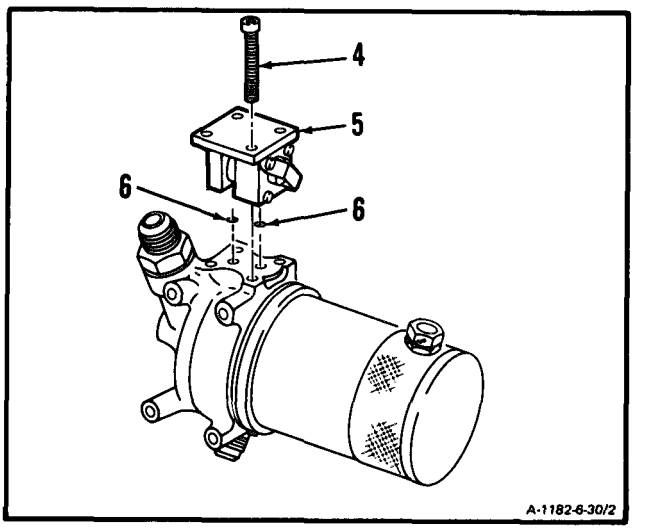
6-30 DISASSEMBLE MAIN FUEL FILTER AND BRACKET

1.1 Remove lockwlre and four bolts (1). **Remove bracket (2.1).**

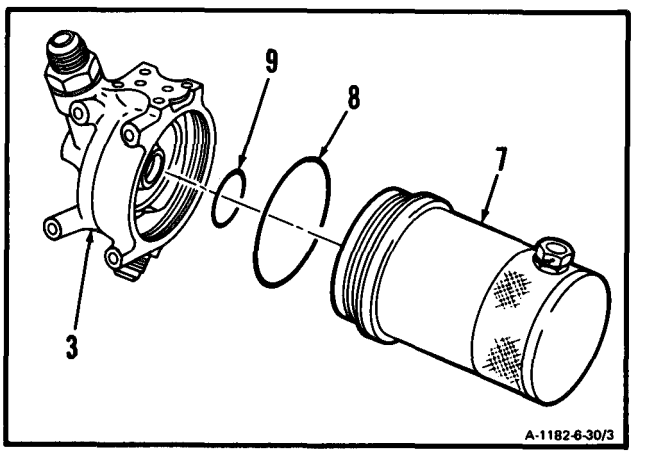


GO TO NEXT PAGE

2. **Remove** lockwire, four screws (4), **pressure differential switch (5),** and two packings (6).



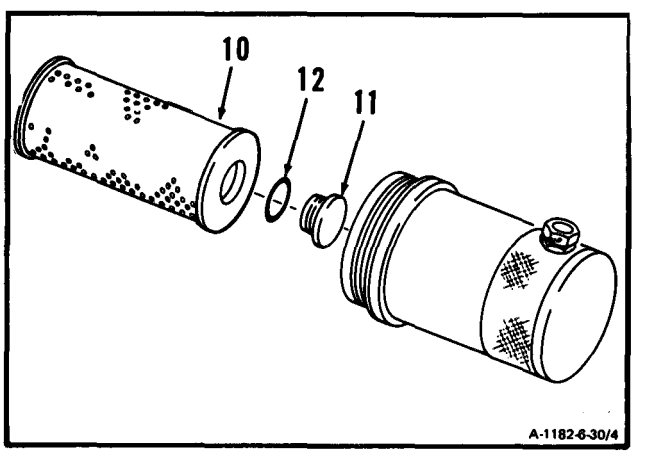
3. **Remove** lockwire, **filter bowl (7),** and packings (8 and 9) from filter head (3). Use vise with jaw caps and strap wrench.



NOTE

in following step, if **solid end filter element** is used, no plug or packing is necessary.

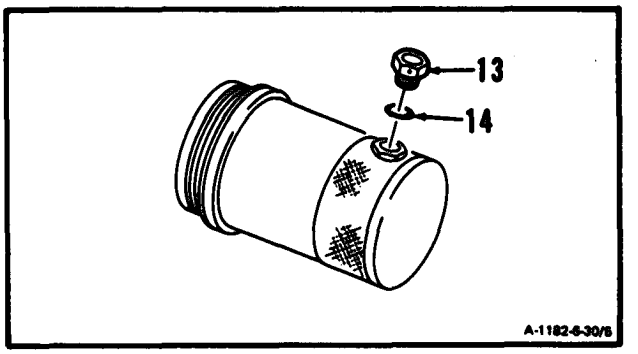
4. **Remove filter element (10),** plug (11), and packing (12).



GO TO NEXT PAGE

6-30 DISASSEMBLE MAIN FUEL FILTER AND BRACKET (Continued) 6-30

5. **Remove** lockwire, **drain plug (13), and packing (14).**



FOLLOW-ON MAINTENANCE:

None

END OF TASK

6-31 CLEAN MAIN FUEL FILTER AND BRACKET

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Goggles
Compressed Air Source

Materials:
Dry Cleaning Solvent (E17)
Gloves (E20)
Lint Free Cloth (E26)

Personnel Required:
68B10 Aircraft Powerplant Repairer

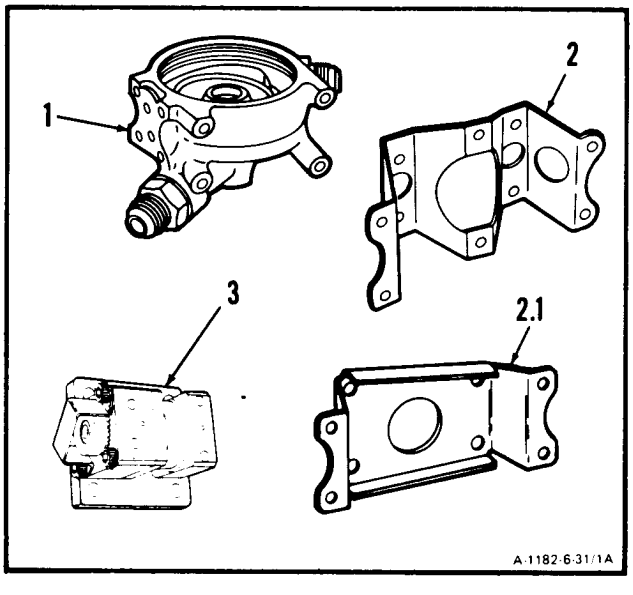
Equipment Condition:
Off Engine Task
Main Fuel Filter and Bracket Removed
(Task 6-29)
Main Fuel Filter and Bracket Disassembled
(Task 6-30)

General Safety Instructions:

WARNING

Dry cleaning solvent (E17) is flammable and toxic. It can irritate skin and cause burns. Use only in well-ventilated area, away from heat and open flame. In case of contact, immediately flush skin or eyes with water for at least 15 minutes. Get medical attention for eyes.

1. Wear gloves (E20). **Clean filter head (1), bracket (2) or (2.1), and pressure differential switch (3).** Use lint-free cloth (E26) dampened in drycleaning solvent (E17).



GO TO NEXT PAGE

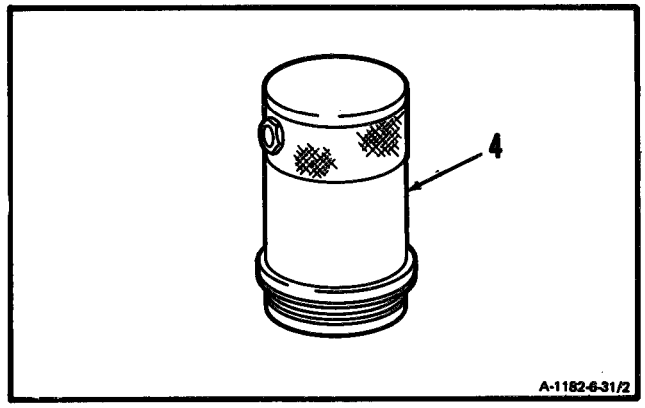
6-31 CLEAN MAIN FUEL FILTER AND BRACKET (Continued) 6-31

2. **Clean bowl (4).** Use dry cleaning solvent (E17) and brush.

WARNING

When using compressed air for cleaning use approved protective equipment for eyes and face. Do not use more than 30 psig air pressure. Do not direct airstream toward yourself or another person. Failure to comply could result in injury to eyes or skin. In case of injury, get medical attention.

3. Wear goggles. **Blow dry bowl (4)** using clean dry compressed air.



FOLLOW-ON MAINTENANCE:

Inspect Main Fuel Filter and Bracket (Task 6-32).

END OF TASK

6-32 INSPECT MAIN FUEL FILTER AND BRACKET

INITIAL SETUP

Applicable Configurations:
All

Tools:
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

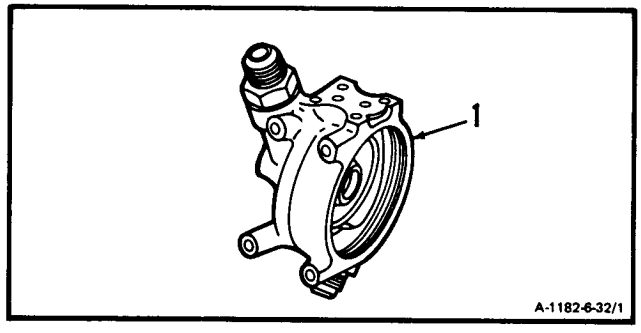
Materials:
Lockwire (E29)

Personnel Required:
68B30 Aircraft Powerplant Inspector

References:
Task 1-85

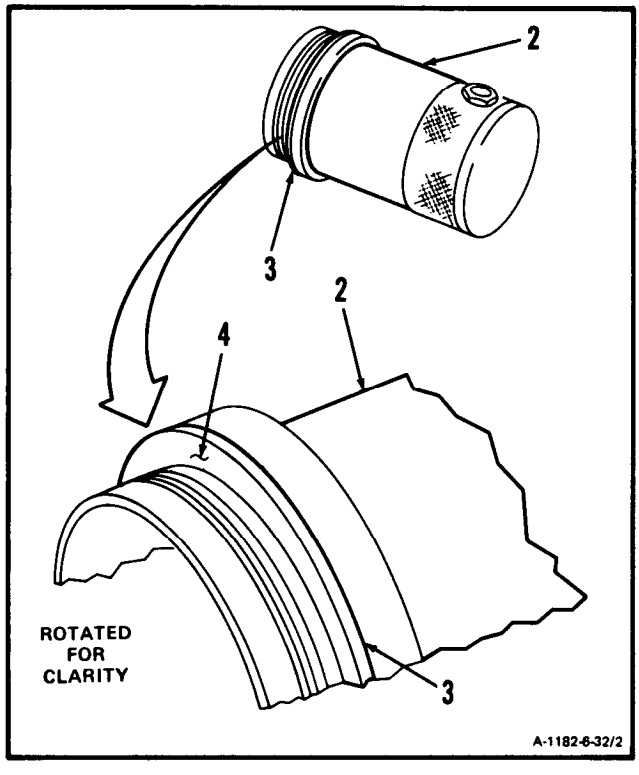
Equipment Condition:
Off Engine Task

1. **Inspect filter head (1).** There shall be no cracks.



2. **Inspect bowl (2).** There shall be no cracks.

3. **Inspect ring spacer (3)** on bowl (2). There shall be no cuts or tears on flat surface (4) of ring spacer (3).



GO TO NEXT PAGE

6-32 INSPECT MAIN FUEL FILTER AND BRACKET (Continued) 6-32

NOTE

If bracket has **ten bolt holes** do steps 4. and 5. and omit step 5.1. and 5.2. If bracket has **eight bolt holes** omit steps 4. and 5. and do steps 5.1. and 5.2.

4. **Inspect bracket (5).**

   a. There shall be no corrosion or pitting.

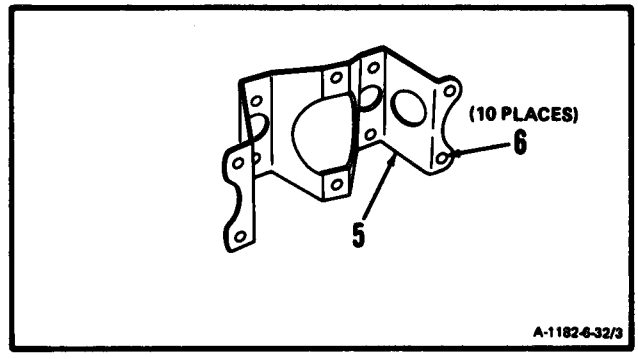
   b. There shall be no bends or distortion in area around ten bolt holes (6).

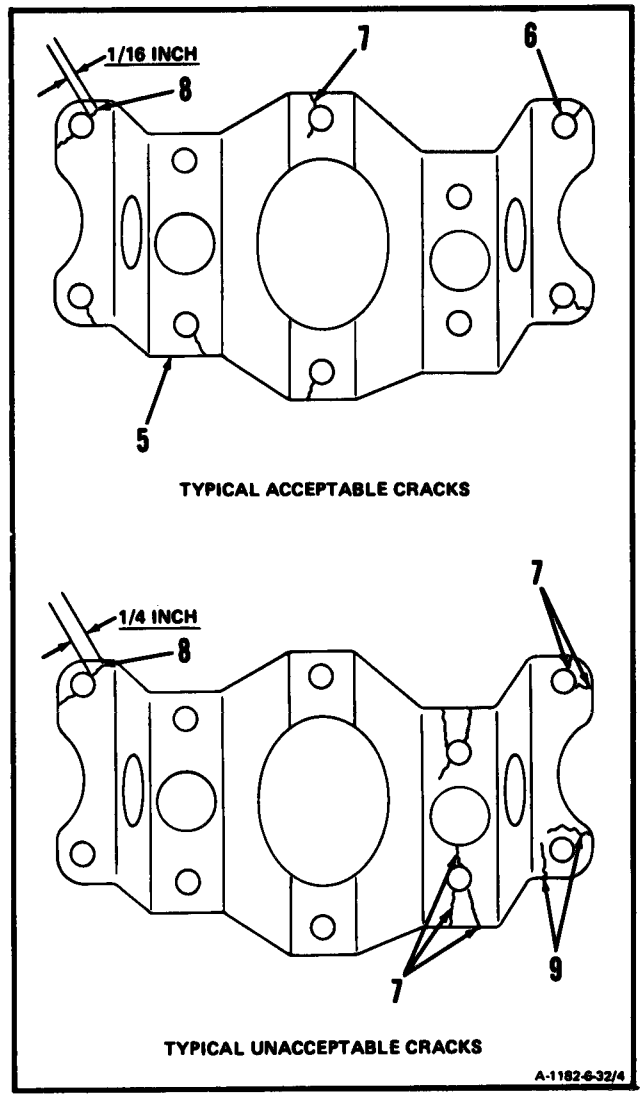
5. Inspect bracket (5). There shall be no cracks beyond the following limits:

   a. **There shall be no more than one edge-to-bolt hole crack (7)** per each bolt hole (6).

   b. At bolt holes with edge-to-bolt hole crack (7), **there shall be no more than one additional crack (8).** Crack (8) shall be no more than 1 /16 inch long.

   c. **There shall be no converging cracks (9)** that might cause material to fall out.





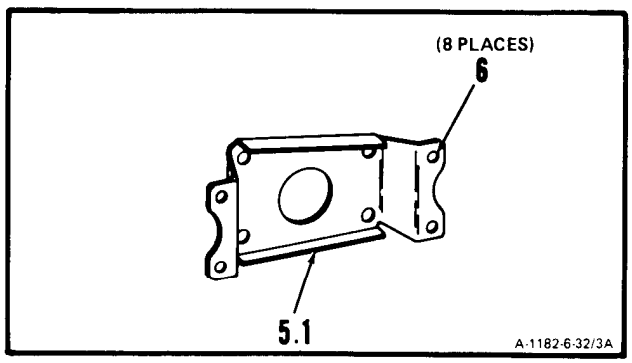
GO TO NEXT PAGE

6-32 INSPECT MAIN FUEL FILTER AND BRACKET (Continued) 6-32

5.1 **Inspect bracket (5.1).**

a. There shall be no corrosion or pitting.

b. There shall be no bends or distortion in area around eight bolt holes (6).

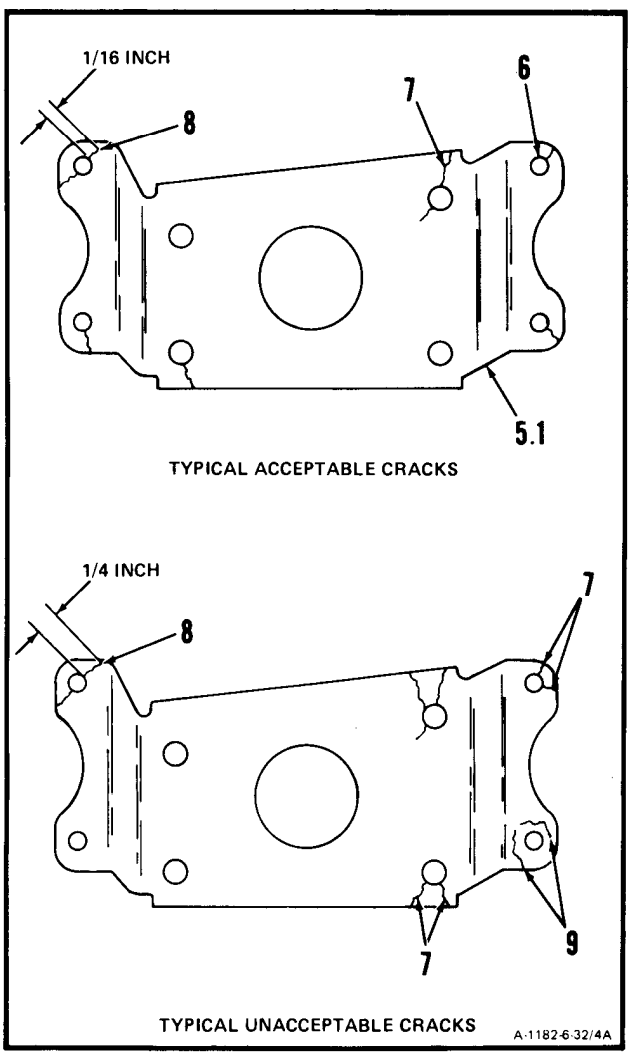


5.2 Inspect bracket (5.1). There shall be no cracks beyond the following limits:

a. **There shall be no more than one edge-to-bolt hole crack (7)** per each bolt hole (6).

b. At bolt holes with edge-to-bolt hole crack (7), **there shall be no more than one additional crack (8),** Crack (8) shall be no more than 1/16 inch long.

c. **There shall be no converging cracks (9)** that might cause material to fall out.

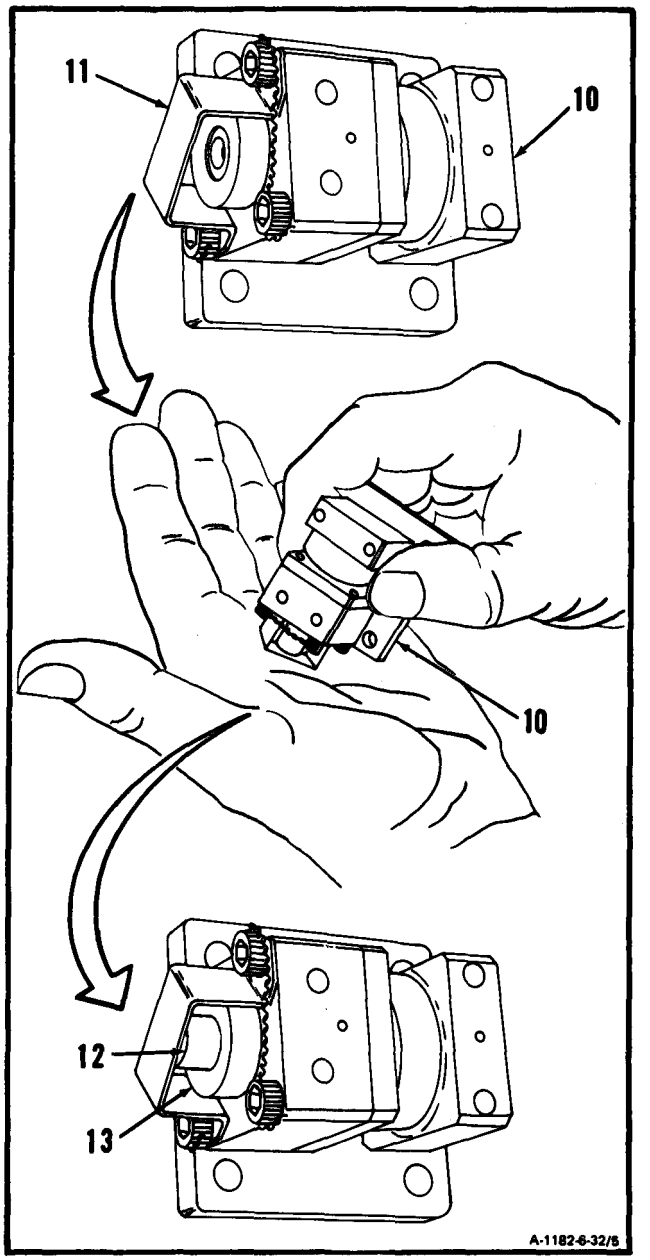


GO TO NEXT PAGE

6-32 INSPECT MAIN FUEL FILTER AND BRACKET (Continued) 6-32

6. **Inspect pressure differential switch (10)** as follows:

   a. Strike differential pressure switch (10), with bracket (11) down against palm of hand. Poppet (12) should extend out of housing (13) and stay that way.



GO TO NEXT PAGE

6-32 INSPECT MAIN FUEL FILTER AND BRACKET (Continued) 6-32

b. Using machinist's steel rule (14), push poppet (12) into housing (13). Poppet (12) should snap back into housing (13) smoothly with light pressure applied:

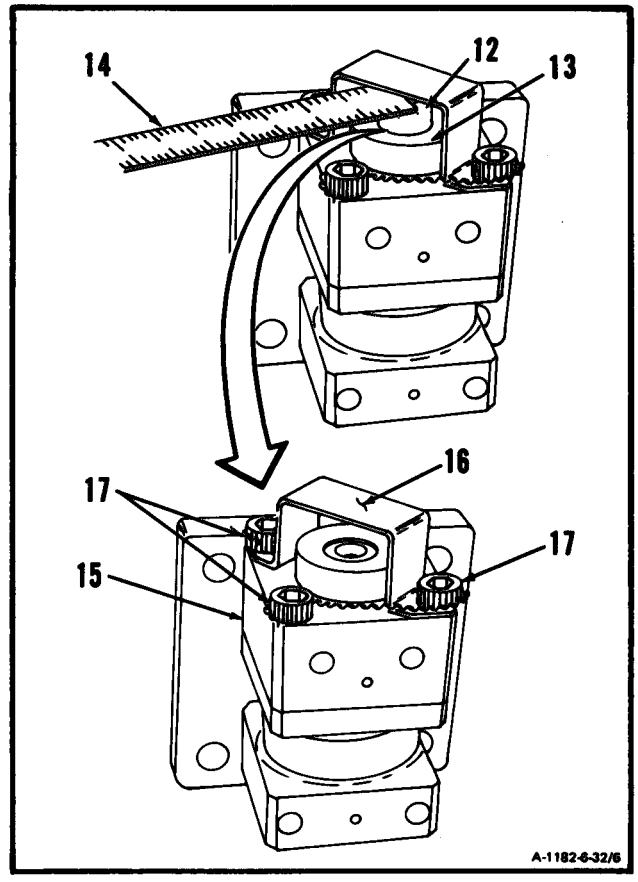
c. Inspect housing (15). There shall be no cracks.

d. Inspect bracket (16). There shall be no looseness. If looseness exists, proceed as follows:

(1) Remove lockwire.

(2) Tighten bolts (17).

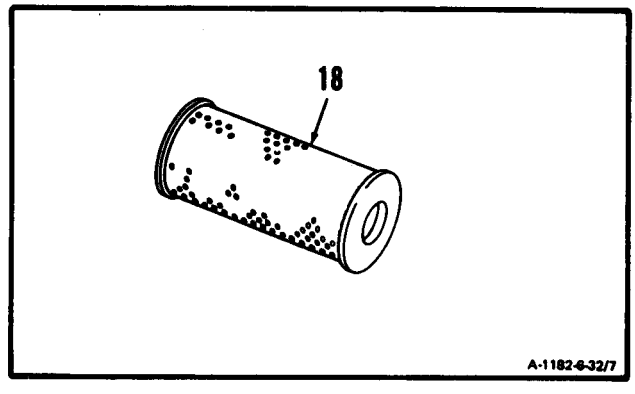
(3) Lockwire bolts (17). use lockwire (E29).



NOTE

New type filter has plug installed in element.

7. **Inspect filter element (18).** There shall be no contamination. If contamination is found, inspect contaminated fuel system (Ref. Task 1-85).



FOLLOW-ON MAINTENANCE:

None

END OF TASK

6-33 REPAIR MAIN FUEL FILTER AND BRACKET (TEN BOLT HOLES) 6-33

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
None

Personnel Required:
68B10 Aircraft Powerplant Repairer
68630 Aircraft Powerplant Inspector

Equipment Condition:
Off Engine Task

1. Straighten bends or distortion in area of bolt holes (1) in bracket (2).

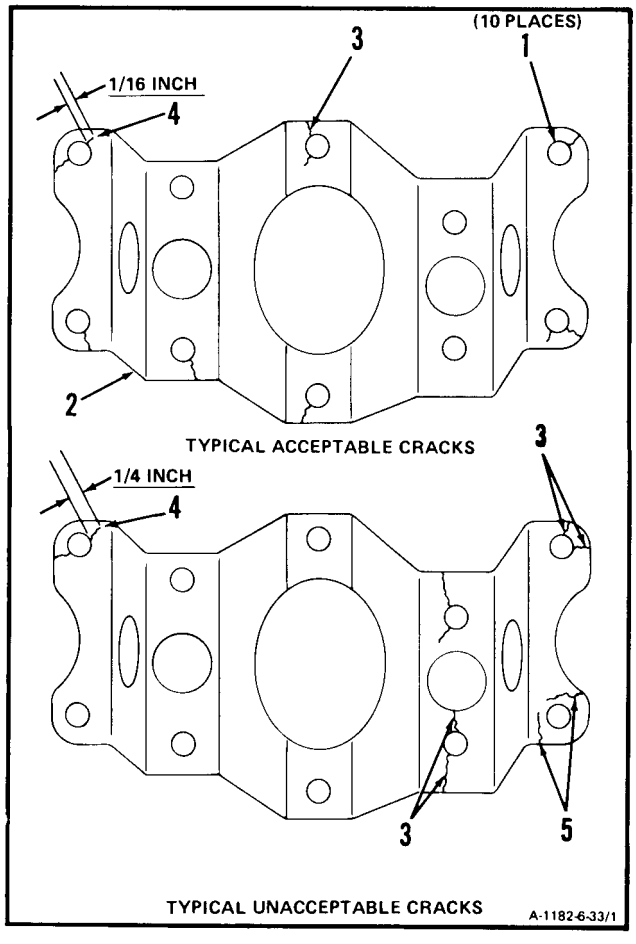
NOTE

This repair is allowed as long as it does not generate cracks beyond the following limits:

a. There shall be no more than one edge-to-bolt hole crack (3) per each bolt hole (1).

b. At bolt holes with edge-to-bolt hole crack (3), there shall be no more than one additional crack (4). Crack (4) shall be no more than 1/16 inch long.

c. There shall be no converging cracks (5) that might cause material to fall out.



INSPECT

FOLLOW-ON MAINTENANCE:

None

END OF TASK

6-33.1 REPAIR MAIN FUEL FILTER AND BRACKET (EIGHT BOLT HOLES) 6-33.1

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
None

Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

Equipment Condition:
Off Engine Task

1. **Straighten bends or distortion in area of bolt holes (1) in bracket (2).**

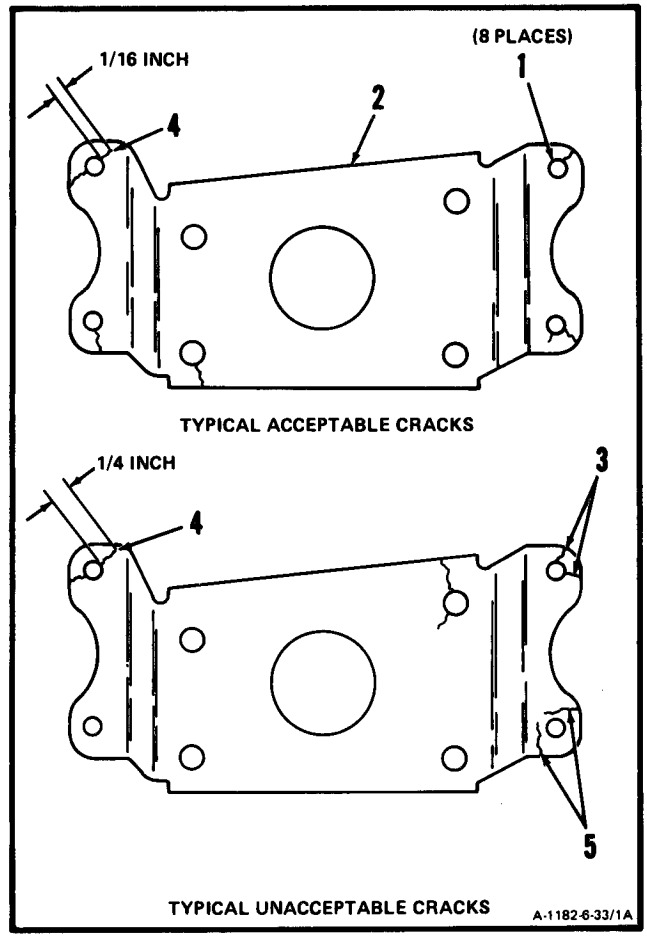
NOTE

This repair is allowed as long as it does not generate cracks beyond the following limits:

a. There shall be no more than one edge-to-bolt hole crack (3) per each bolt hole(1).

b. At bolt holes with edge-to-bolt hole crack (3), there shall be no more than one additional crack (4). Crack (4) shall be no more than 1 /16 inch long.

c. There shall be no converging cracks (5) that might cause material to fall out.



INSPECT

FOLLOW-ON MAINTENANCE:

None

END OF TASK

6-34 ASSEMBLE MAIN FUEL FILTER AND BRACKET 6-34

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
Lockwire (E29)

Parts:
Filter Element
Packings

Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

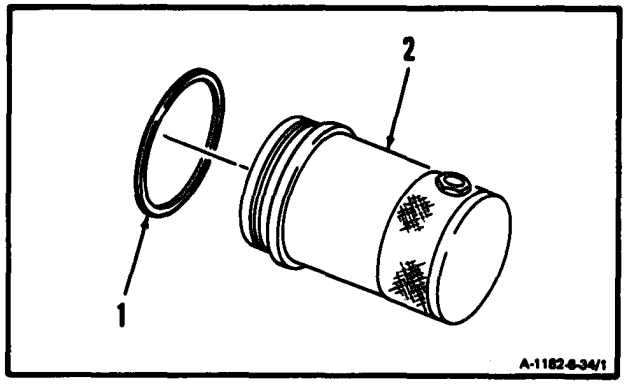
References:
TM 55-2840-254-23P

Equipment Condition:
Off Engine Task

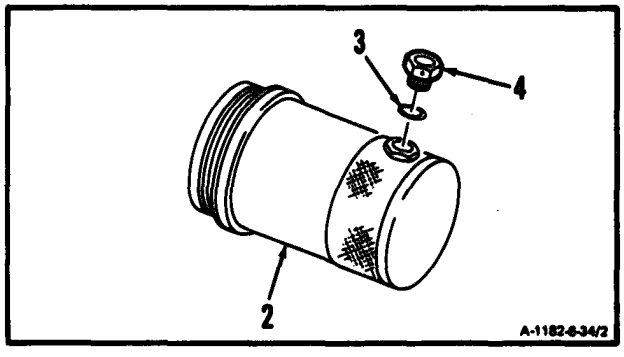
NOTE

If bowl or ring spacer is a replacement, do step 1.

1. **Install ring spacer (1)** on bowl (2).



2. **Install** packing (3) and **drain plug** (4) in bowl (2). Lockwire drain plug (4), Use lockwire (E29).



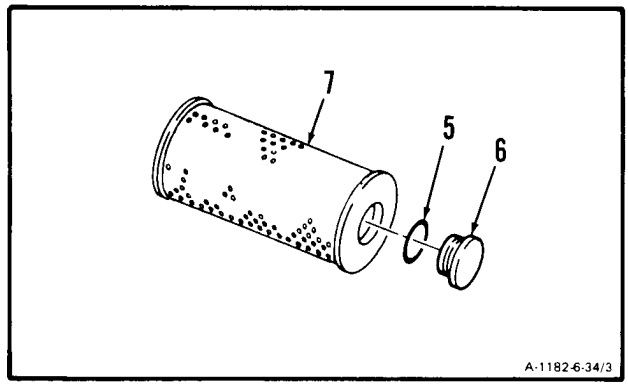
GO TO NEXT PAGE

6-34 ASSEMBLE MAIN FUEL FILTER AND BRACKET (Continued) 6-34

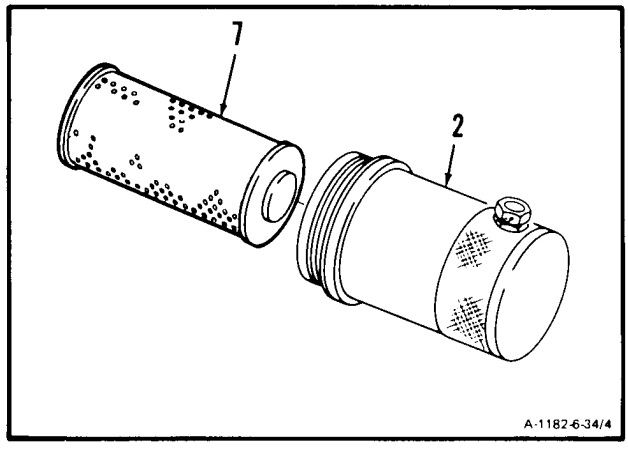
NOTE

In following step, if solid end filter element is used, no plug or packing is necessary.

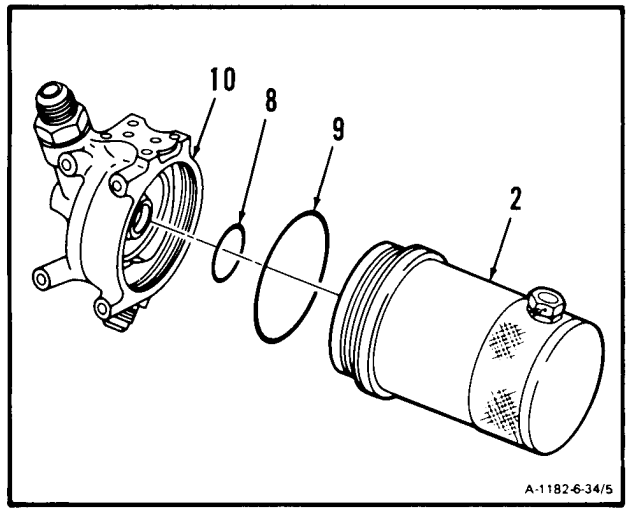
3 **Install** packing (5) and **plug (6)** in filter element (7).



4. Install filter element (7) in bowl (2)



5. Install packings (8 and 9) on filter head (10) **Install bowl (2).** Hand-tighten and lockwlre Use lockwire (E29).



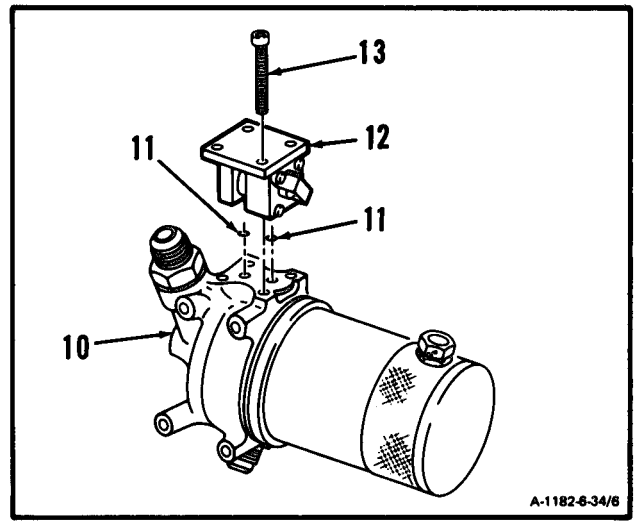
GO TO NEXT PA GE

6-34 ASSEMBLE MAIN FUEL FILTER AND BRACKET (Continued) 6-34

CAUTION

In following step, make sure indicator is positioned correctly. Failure to comply will prevent indicator from functioning.

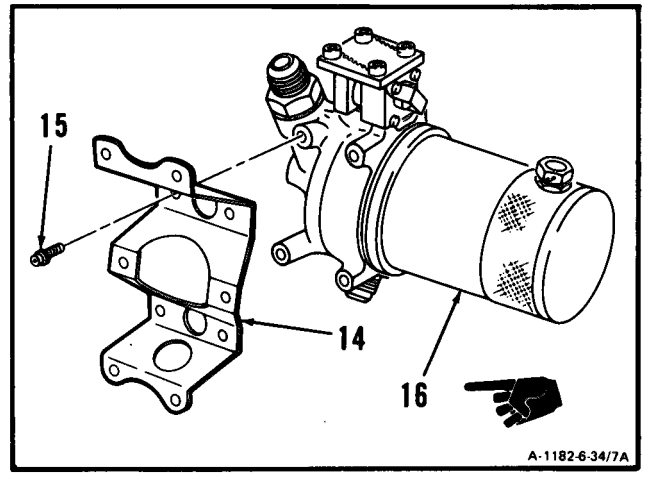
6. **Install** two packings (11) and **differential pressure indicator (12)** on filter head (10). Install four screws (13) and lockwire. Use lockwire (E29)



NOTE

If bracket has ten bolt holes do step 7. and omit step 7.1. If bracket has eight bolt holes, omit step 7. and do step 7.1.

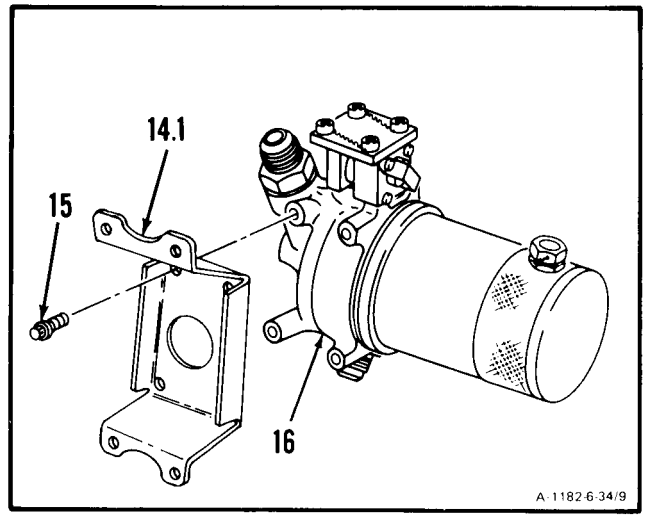
7. **Install bracket (14)** and four bolts (15) on main fuel filter (16). Lockwire bolts (15). Use lockwire (E29).



GO TO NEXT PAGE

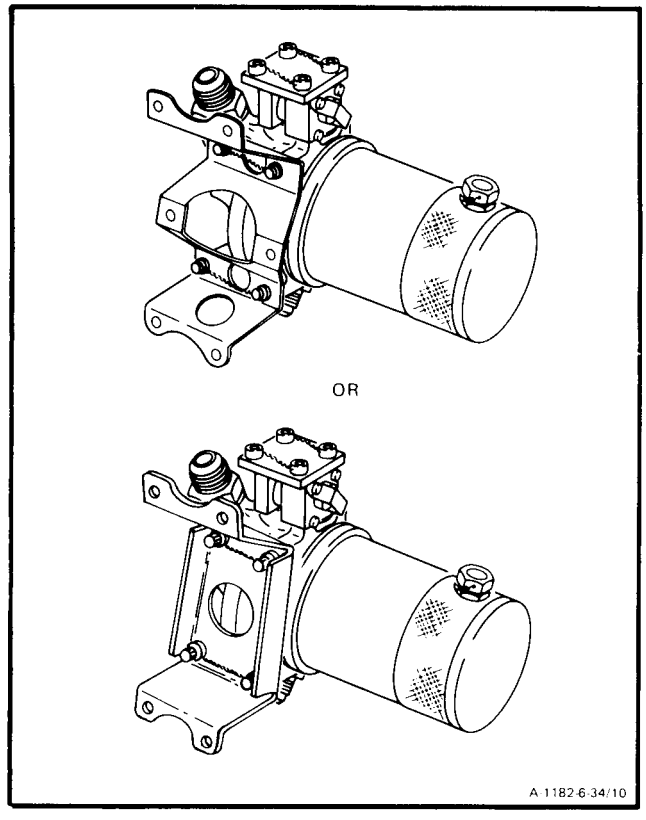
6-34 ASSEMBLE MAIN FUEL FILTER AND BRACKET (Continued) 6-34

7.1 **Install bracket (14.1)** and four bolts (15) on main fuel filter (16). Lockwire bolts (15), Use lockwire (E29).



INSPECT

FOLLOW-ON MAINTENANCE:
None



END OF TASK

6-35 INSTALL MAIN FUEL FILTER AND BRACKET 6-35

INITIAL SETUP

Applicable Configurations:
All

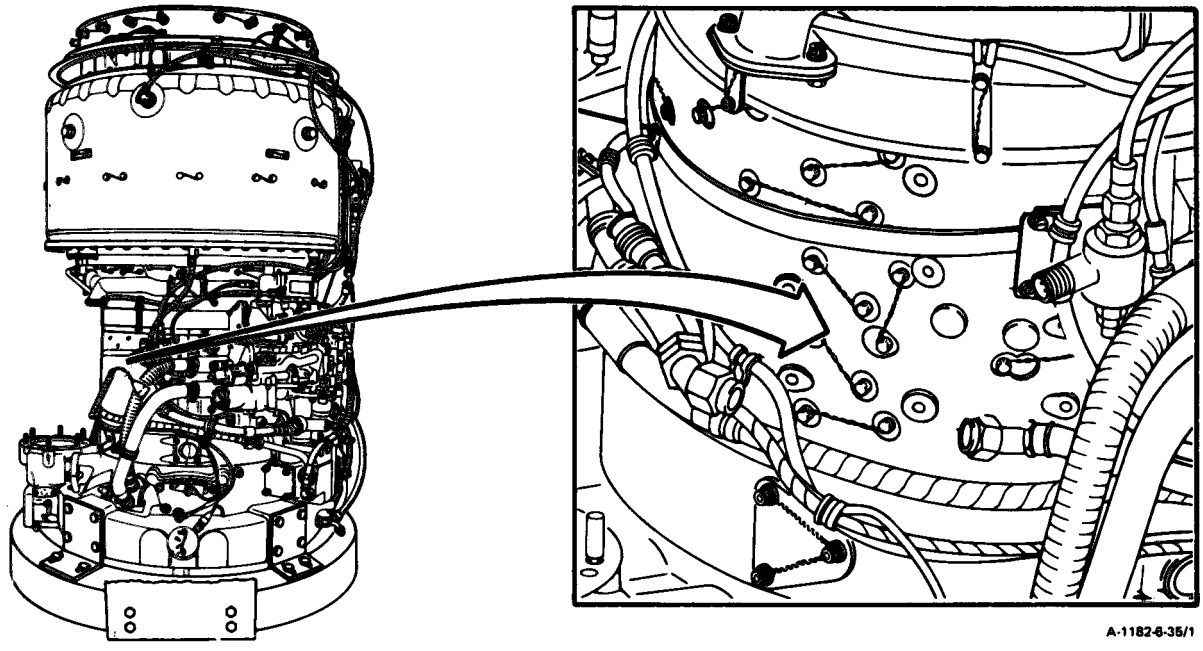
Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
Lockwire (E29)

Parts:
Packings

Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

References:
TM 55-2840-254-23P



A-1182-6-35/1

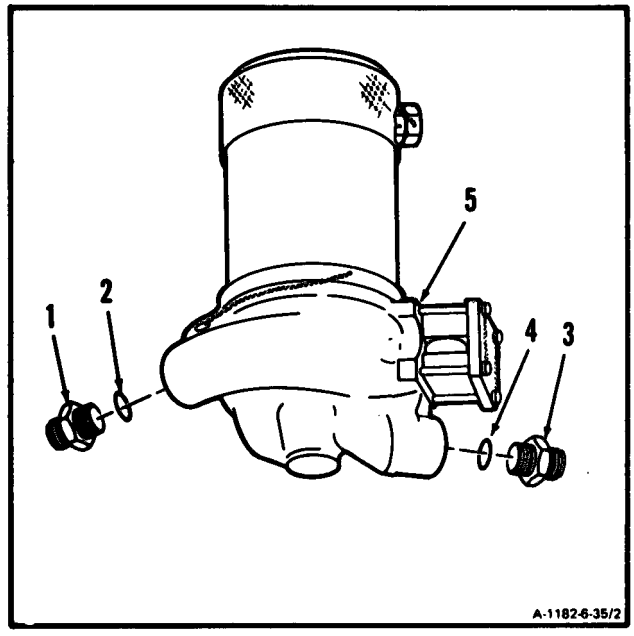
GO TO NEXT PAGE

6-35 INSTALL MAIN FUEL FILTER AND BRACKET (Continued) 6-35

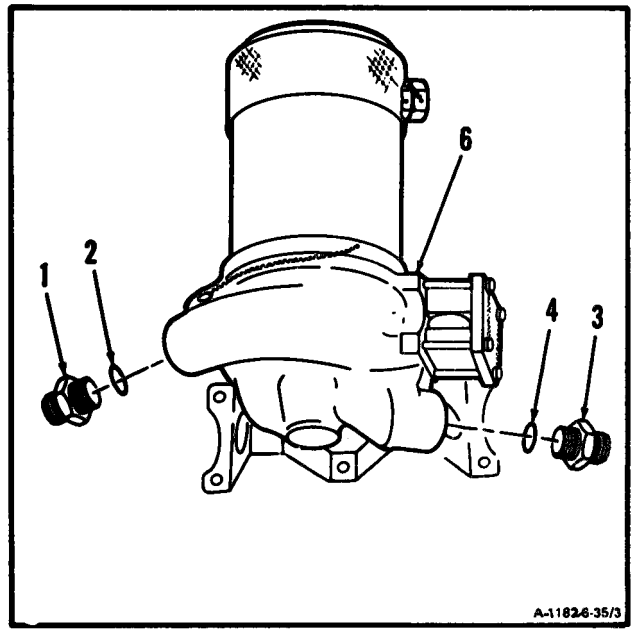
NOTE

If main fuel filter is a replacement, do steps 1. and 2. If same main fuel filter that was removed is to be installed, omit steps 1. and 2.

1. **Remove nipples (1 and 3)** and packings (2 and 4) **from old filter assembly (5).**



2. **Install** packings (2 and 4) and **nipples (1 and 3) in serviceable main fuel filter (6).**



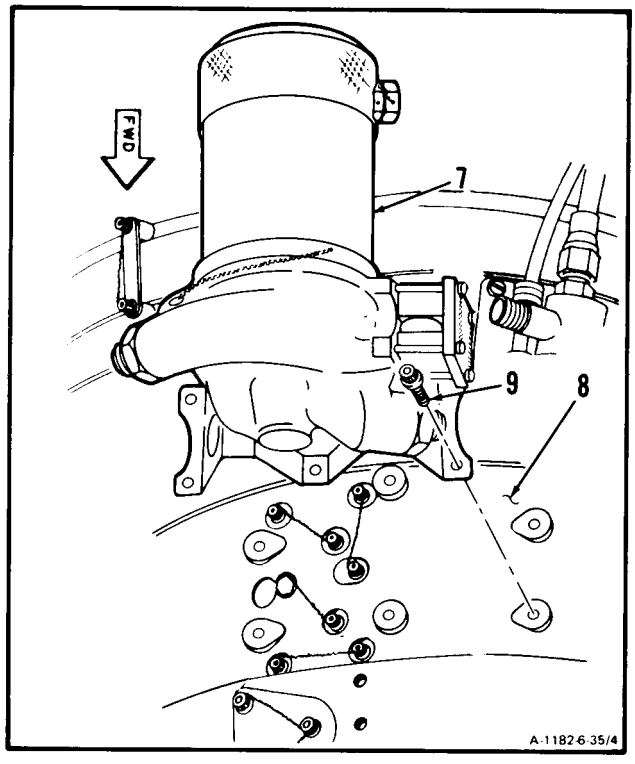
GO TO NEXT PAGE

6-35 INSTALL MAIN FUEL FILTER AND BRACKET (Continued) 6-35

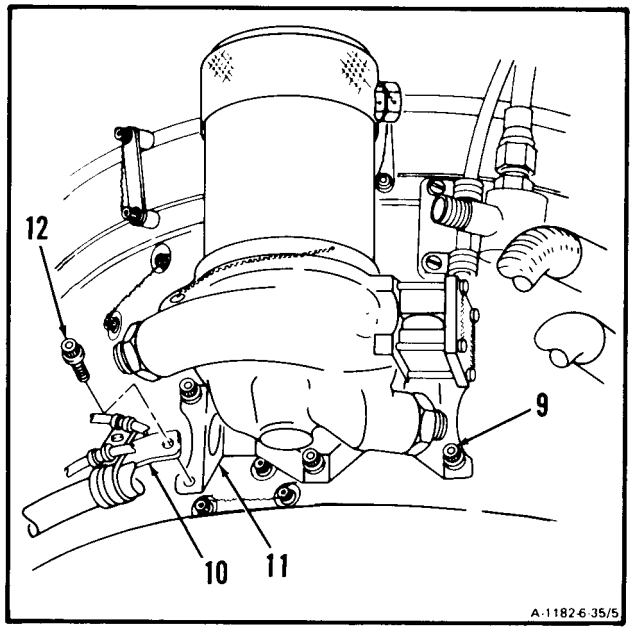
NOTE

If bracket that holds filter assembly to engine uses **six bolts** do steps 3. and 4. and omit steps 4,1. and 4.2. If bracket that holds filter assembly to engine uses **four bolts** omit steps 3. and 4. and do steps 4.1. and 4.2.

3. **Install main fuel filter and bracket (7)** on compressor housing (8). Install five bolts (9).



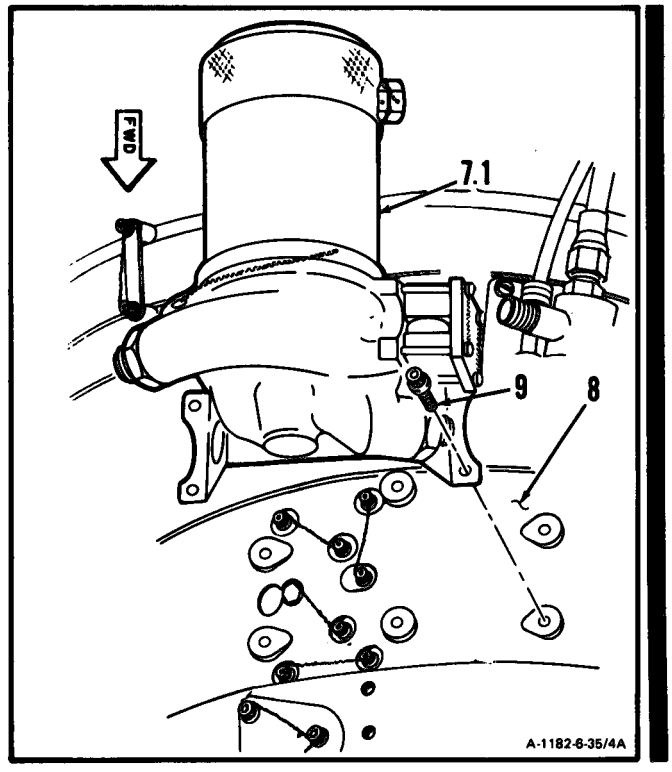
4. Align bracket (10) with bracket (11), and install bolt (12). Lockwire five bolts (9) and bolt (12). Use lockwire (E29).



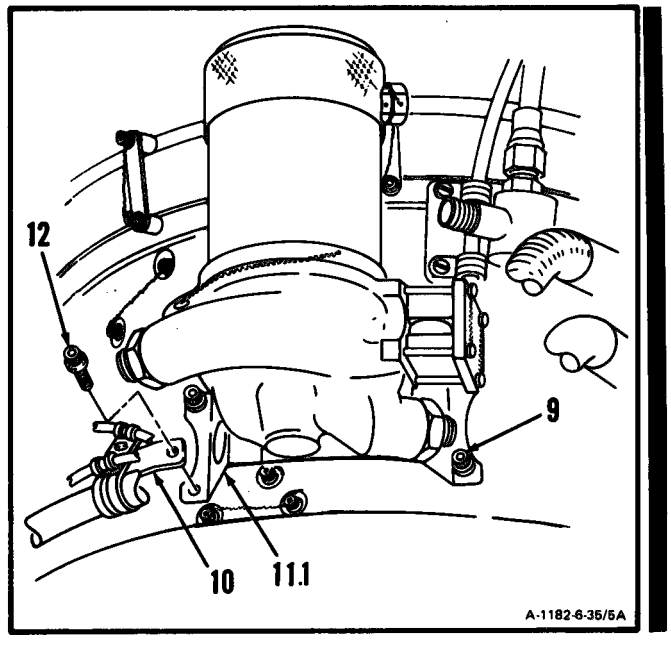
GO TO NEXT PAGE

6-35 INSTALL MAIN FUEL FILTER AND BRACKET (Continued) 6-35

4.1 Install main fuel filter and bracket (7.1) on compressor housing (8). Install three bolts (9).



4.2 Align bracket (10) with bracket (11.1) and install bolt (12). Lockwire three bolts (9) and bolt (12). Use lockwire (E29).

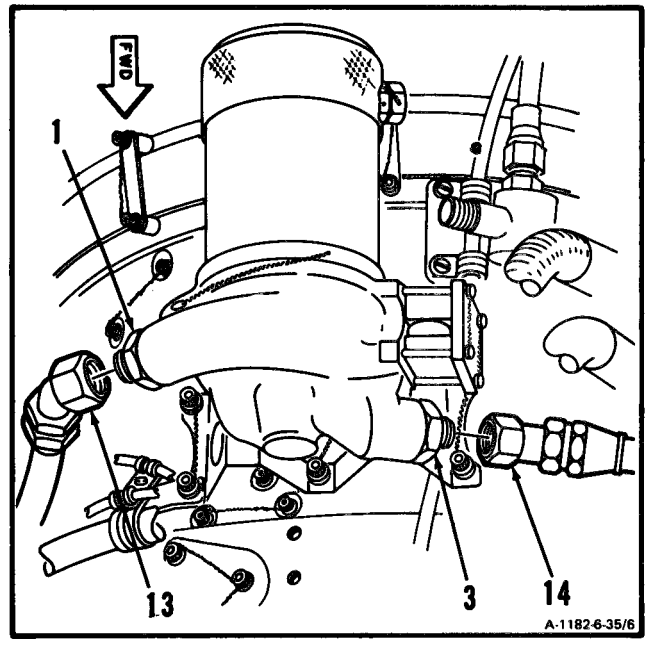


GO TO NEXT PAGE

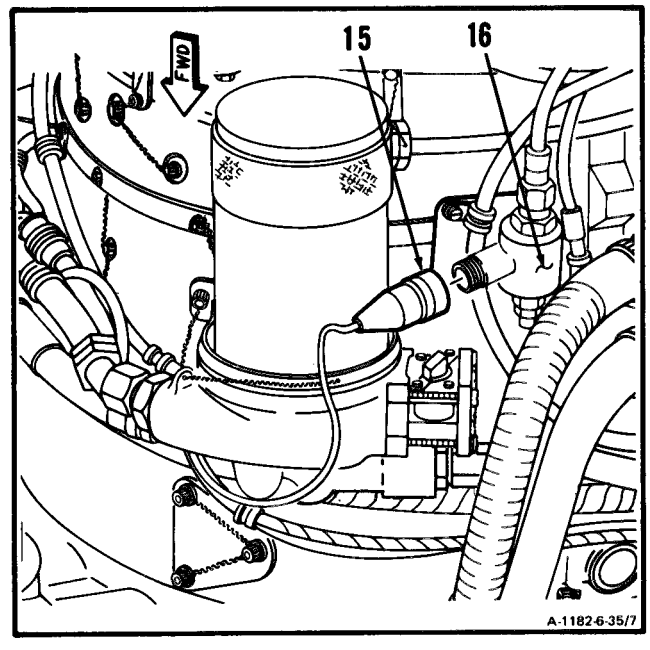
6-35 INSTALL MAIN FUEL FILTER AND BRACKET (Continued)

5. **Connect hose assembly (13)** to nipple (1).

6. **Connect hose assembly (14)** to nipple (3).



7. **Connect electrical connector (15)** to starting fuel solenoid valve (16). Lockwire electrical connector (15). Use lockwire (E29).



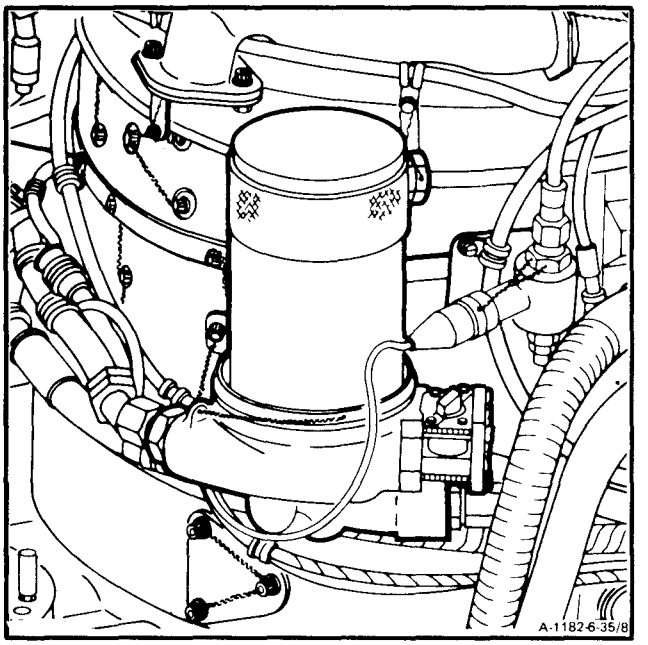
INSPECT

GO TO NEXT PAGE

6-35 INSTALL MAIN FUEL FILTER AND BRACKET (Continued)

FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-36 REMOVE IN-LINE FUEL FILTER ASSEMBLY

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Container, 1 Quart

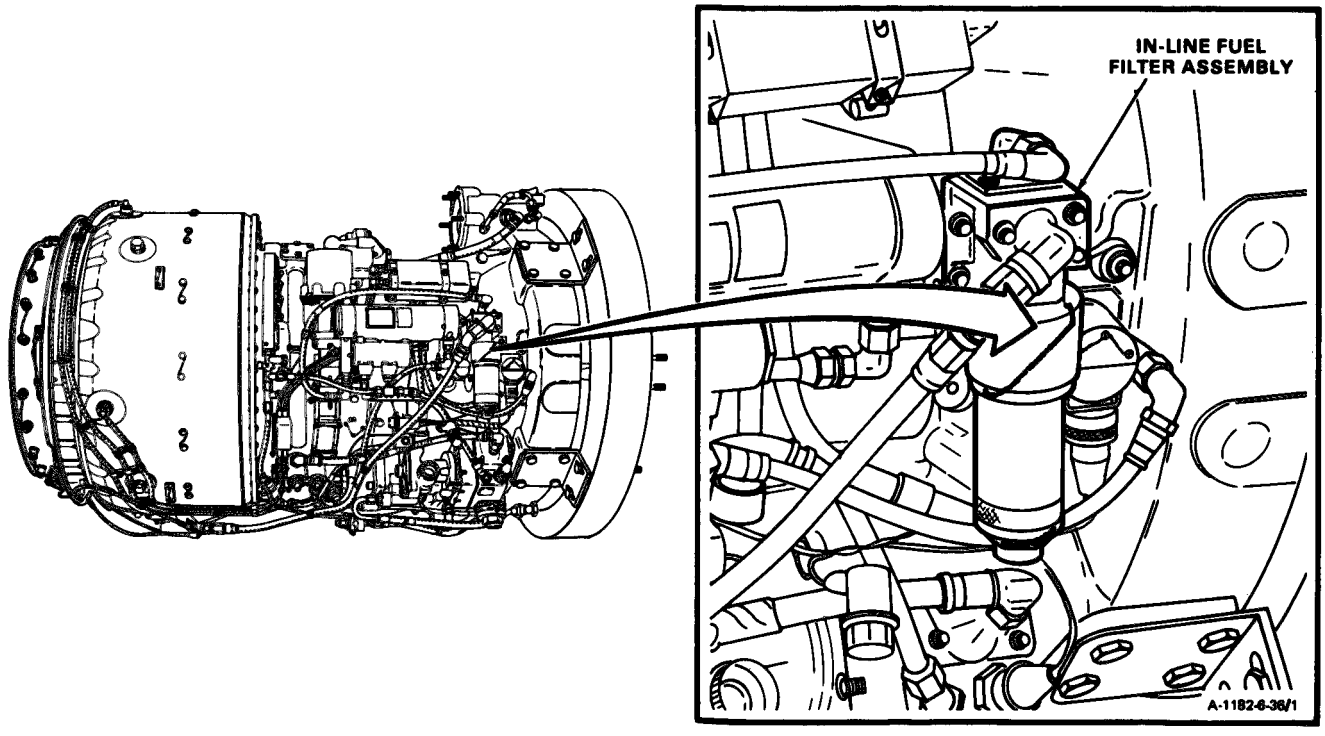
Materials:
Wiping Rag (E58)

Personnel Requited:
68B10 Aircraft Powerplant Repairer

General Safety Instructions:

WARNING

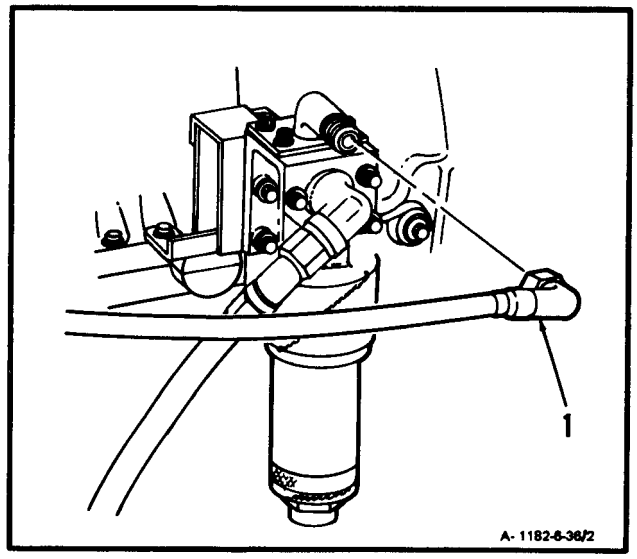
Turbine fuels are very flammable. They may cause drying and irritation of skin or eyes. Handle only in well-ventilated areas away from heat and open flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.



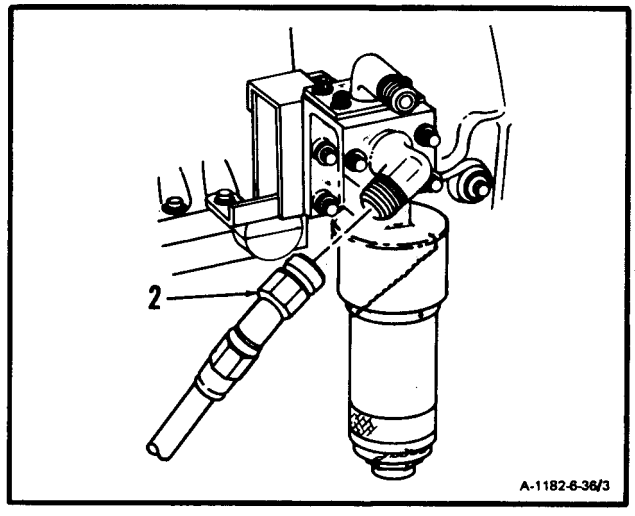
GO TO NEXT PAGE

6-36 REMOVE IN-LINE FUEL FILTER ASSEMBLY (Continued) 6-36

1. **Disconnect hose assembly (1).**



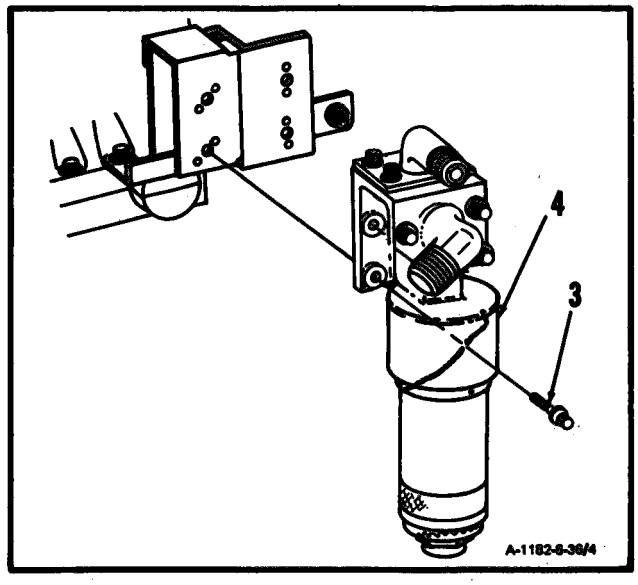
2. **Disconnect hose assembly (2).**



GO TO NEXT PAGE

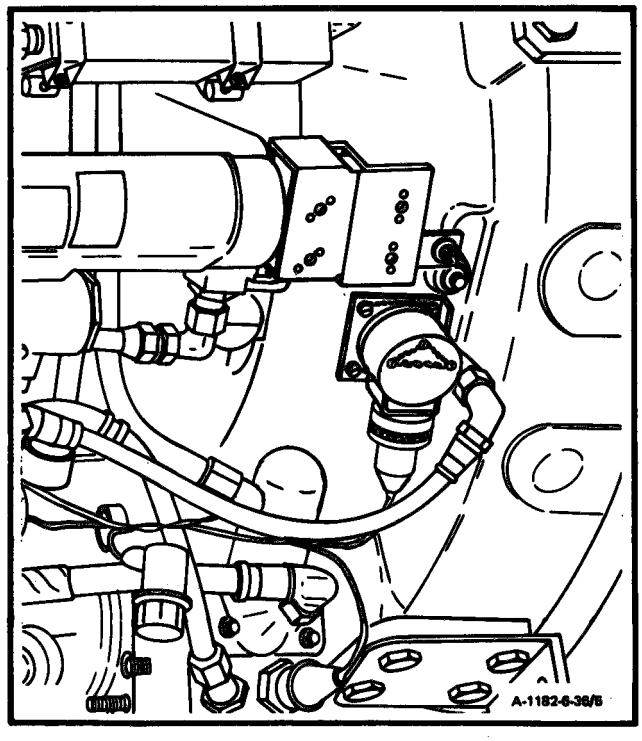
6-36 REMOVE IN-LINE FUEL FILTER ASSEMBLY (Continued)

3. **Remove** four bolts (3), and **in-line fuel filter assembly (4).**



FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-37 DISASSEMBLE IN-LINE FUEL FILTER ASSEMBLY

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Deep Style Socket, 1 -Inch
Vise
Jaw Caps
Strap Wrench

Materials:
Wiping Rag (E58)

Personnel Required:
68B10 Aircraft Powerplant Repairer

References:
Task 6-39

NOTE

Before disassembling in-line fuel filter assembly, check for evidence of fuel leakage between filter bowl and filter head. If evidence of leakage is found, have an aircraft powerplant inspector examine filter assembly in accordance with Task 6-39.

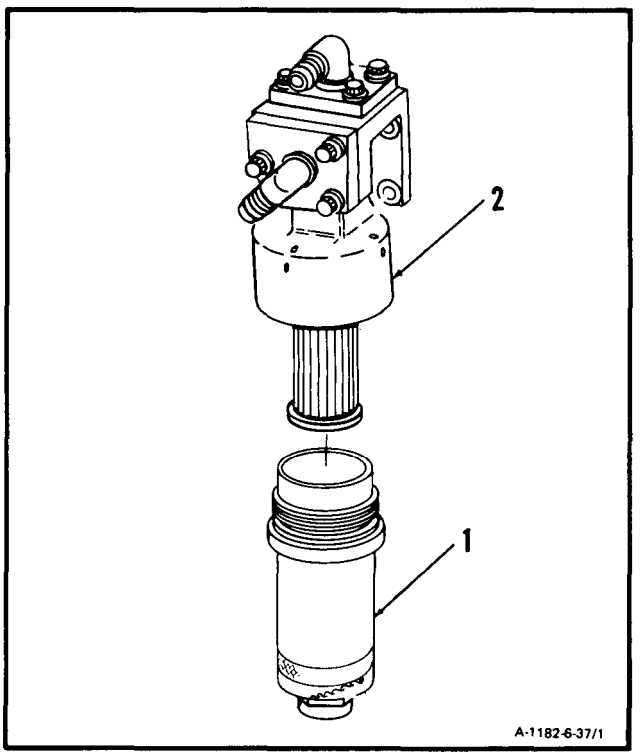
1. Remove lockwire and **unscrew filter bowl (1)** from filter head (2). Use vise with jaw caps and strap wrench.

Equipment Condition:
Off Engine Task
In-Line Fuel Filter Assembly Removed (Task 6-36)

General Safety Instructions:

WARNING

Turbine fuels are very flammable. They may cause drying and irritation of skin or eyes. Handle only in well-ventilated areas away from heat and open flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin-results, get medical attention. Get medical attention for eyes.



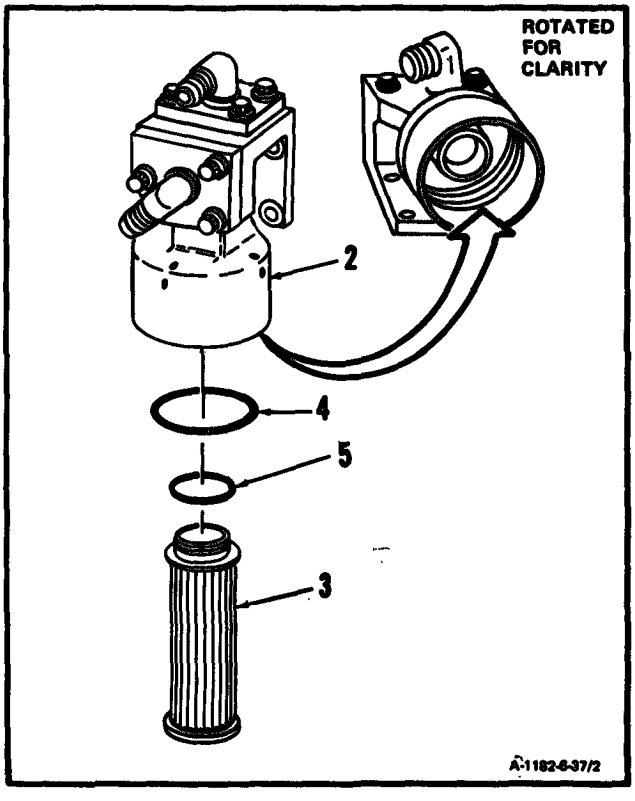
GO TO NEXT PAGE

6-37 DISASSEMBLE IN-LINE FUEL FILTER ASSEMBLY (Continued)

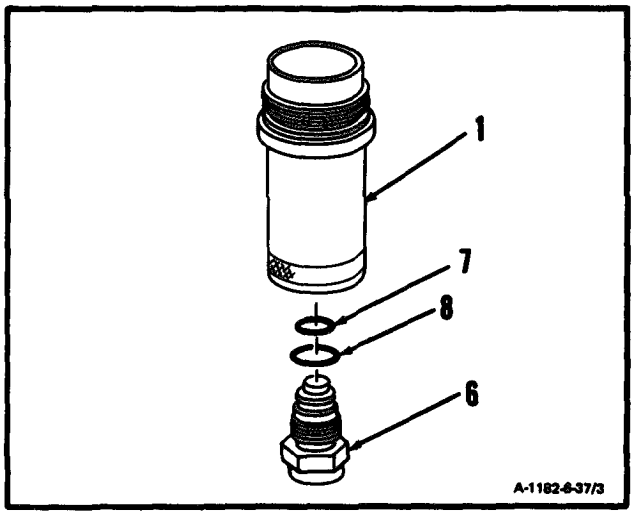
CAUTION

Do not use pliers to remove filter element. Damage to filter element may occur. If damaged, replece filter element.

2. **Pull filter element (3) and packing (4)** from filter head (21. Remove packing (5) from filter element (3).



3. **Remove** lockwire. **Hold** bowl (1) with strap wrench and **remove differential pressure indicator (6)** from bowl (1), using deep style socket. Remove packings (7 and 8).



FOLLOW-ON MAINTENANCE:

None

END OF TASK

6-38 CLEAN IN-LINE FUEL FILTER ASSEMBLY 6-38

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944

Materials:
Dry Cleaning Solvent (E17)
Gloves (E20)
Lint-Free Cloth (E26)

Personnel Required:
68B10 Aircraft Powerplant Repairer

Equipment Condition:
Off Engine Task
In-Line Fuel Filter Assembly Removed
(Task 6-36)
In-Line Fuel Filter Assembly Disassembled
(Task 6-37)

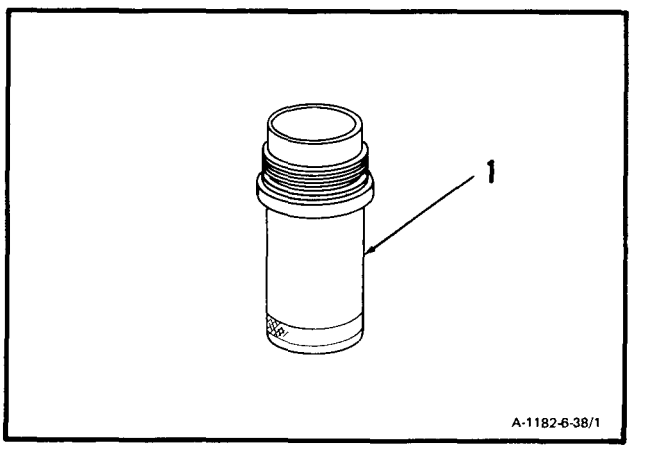
General Safety Instructions:

WARNING

Dry cleaning solvent (E17) is flammable and toxic. It can irritate skin and cause burns. Use only in well-ventilated area, away from heat and open flame. In case of contact, immediately flush skin or eyes with water for at least 15 minutes. Get medical attention for eyes.

1. Wear gloves (E20). **Clean filter bowl (1).** Use dry cleaning solvent (E17) and brush.

2. After cleaning, **remove residue** with clean lint-free cloth (E26)

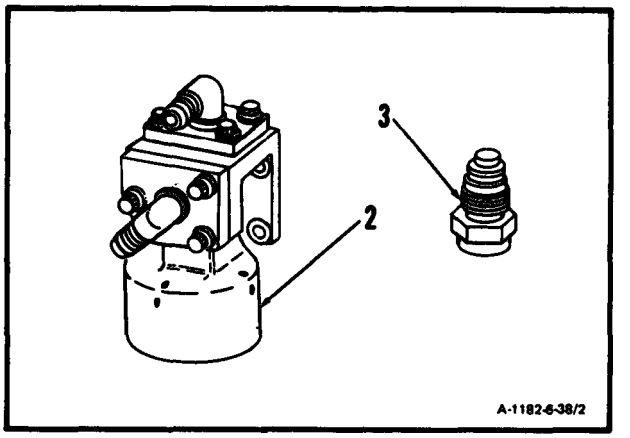


GO TO NEXT PAGE

6-38 CLEAN IN-LINE FUEL FILTER ASSEMBLY (Continued) 6-38

3. **Clean filter head (2) and differential pressure indicator (3)** with lint-free cloth (E26) dampened in dry cleaning solvent {E17).

4. After cleaning, **remove residue** with clean lint-free cloth (E26).



FOLLOW-ON MAINTENANCE:

Inspect In-Line Fuel Filter Assembly (Task 6-39).

END OF TASK

6-39 INSPECT IN-LINE FUEL FILTER ASSEMBLY 6-39

INITIAL SETUP

Applicable Configurations:
All

Tools:
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
None

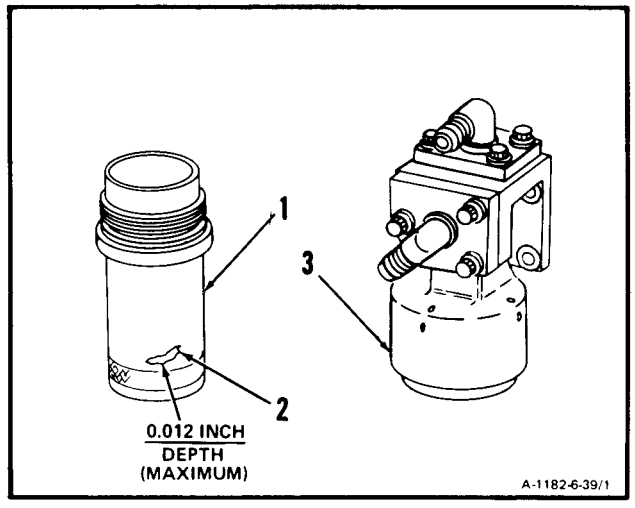
Personnel Required:
68B30 Aircraft Powerplant Inspector

References:
Task 1-85

Equipment Condition:
Off Engine Task

1. **Inspect filter bowl (1).** There shall be no cracks. There shall be no chafing (2) deeper than 0.012 inch.

2. **Inspect filter head (3).** There shall be no cracks.



3. Deleted

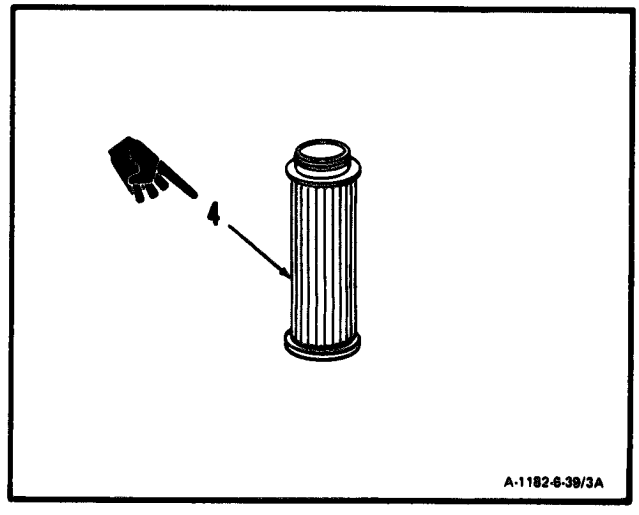
GO TO NEXT PAGE

6-39 INSPECT IN-LINE FUEL FILTER ASSEMBLY (Continued) 6-39

4. **Inspect filter element (4).** There shall be no contamination. If contaminated, throw away.

NOTE

If there is contamination, inspect contaminated fuel system (Ref. Task 1-85).



FOLLOW-ON MAINTENANCE:

None

END OF TASK

6-40 ASSEMBLE IN-LINE FUEL FILTER ASSEMBLY 6-40

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit, NSN 5180-00-323-4944
Technical Inspection Tool Kit, NSN 5180-00-323-5114
Deep Style Socket, 1-Inch
Strap Wrench

Materials:
Lockwire (E29)

Parts:
Packings
Filter Element

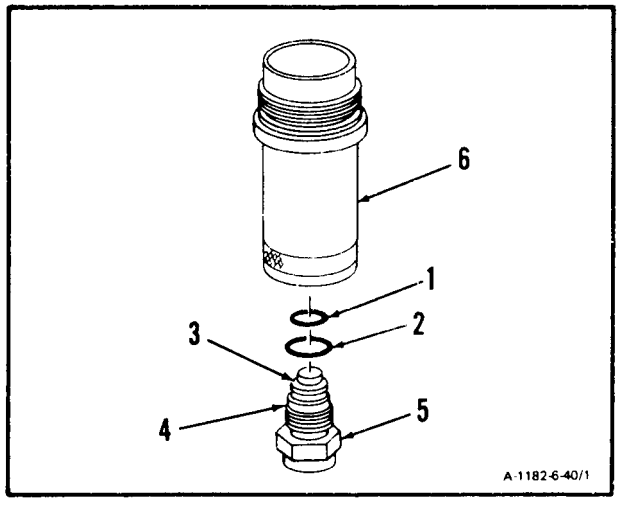
Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

References:
TM 55-2840-254-23P

Equipment Condition:
Off Engine Task

1. Install packings (1 and 2) in grooves (3 and 4) on differential pressure indicator (5).

2. **Install differential pressure indicator (5)** in filter bowl (6). Bottom by hand, then turn 1/4 to 1/2 turn. Use deep style socket and hold bowl (6) with strap wrench. Lockwire indicator (5). Use lockwire (E29).

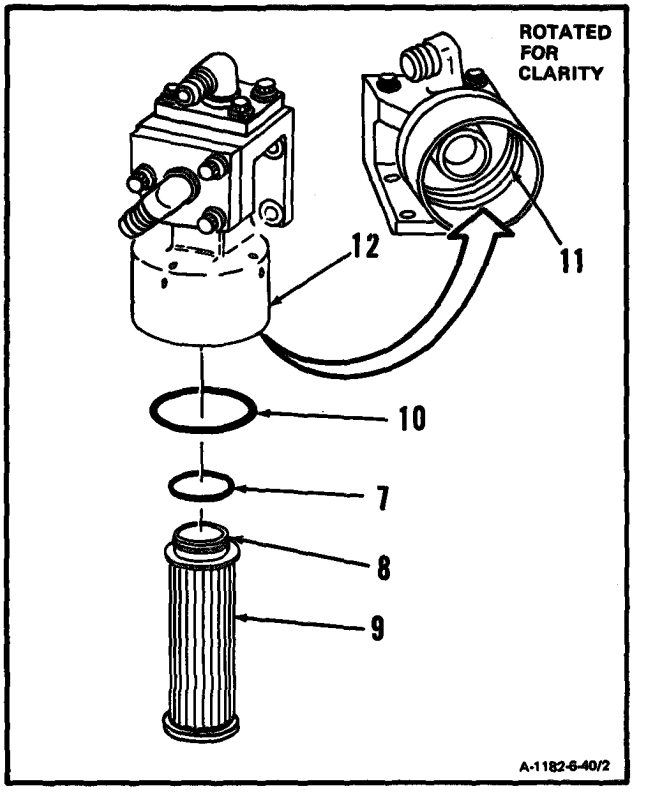


GO TO NEXT PAGE

6-40 ASSEMBLE IN-LINE FUEL FILTER ASSEMBLY (Continued) 6-40

3. Install packing (7) in groove (8) of serviceable filter element (9).

4. **Install packing (10) in groove (11) and filter element (9)** in filter head (12). Press in by hand.



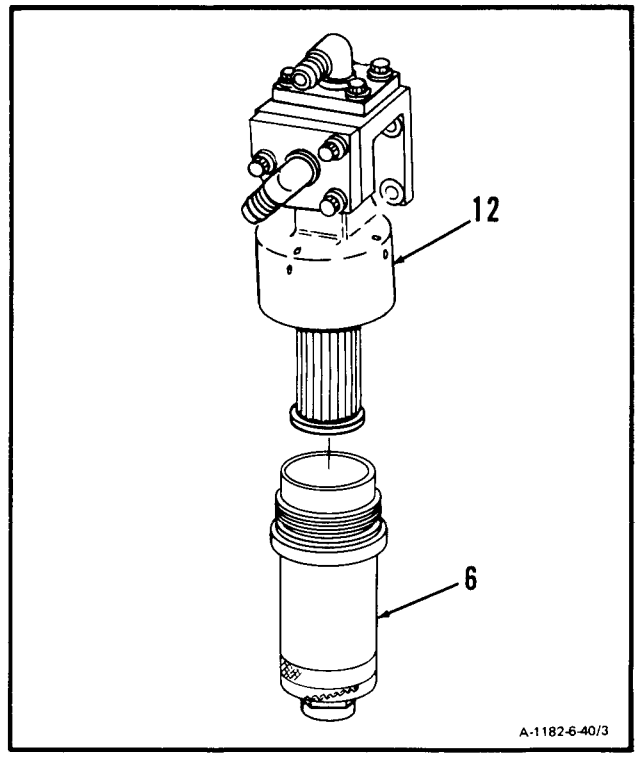
GO **TO** *NEXT PAGE*

6-40 ASSEMBLE IN-LINE FUEL FILTER ASSEMBLY (Continued) 6-40

CAUTION

Do not use wrench on indicator to tighten bowl or damage may occur.

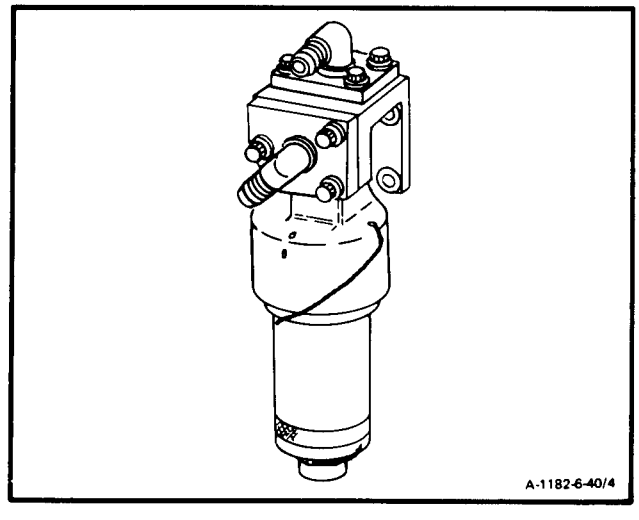
5. **Install filter bowl (6)** in filter head (12) and hand-tighten. Lockwire filter bowl (6). Use lockwire (E29).



INSPECT

FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-41 INSTALL IN-LINE FUEL FILTER ASSEMBLY

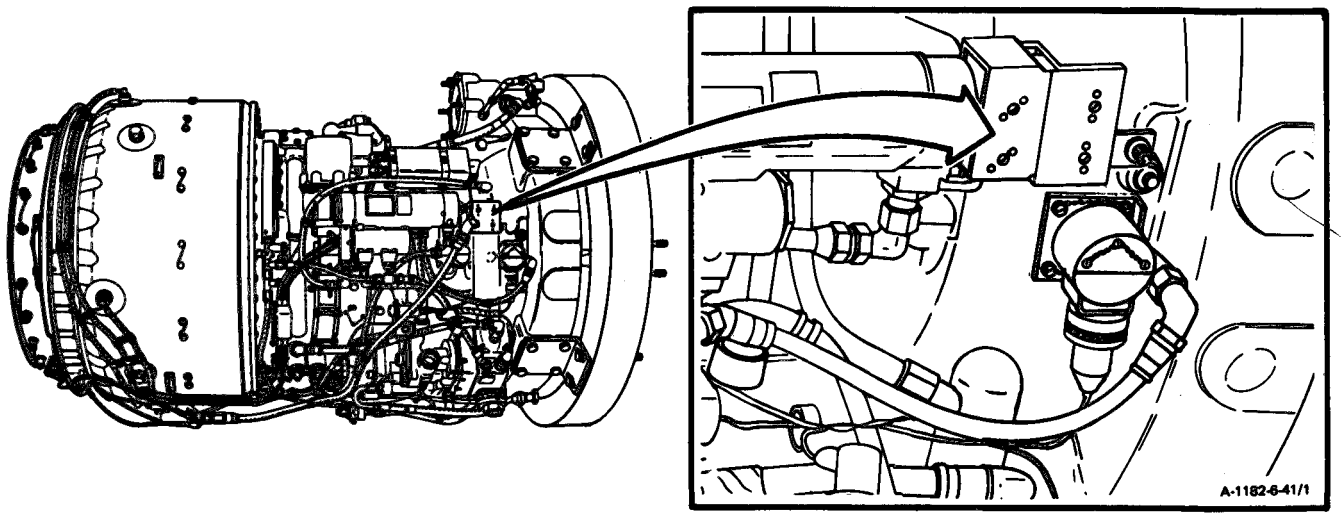
INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
None

Personnel Required:
68610 Aircraft Powerplant Repairer
68630 Aircraft Powerplant Inspector



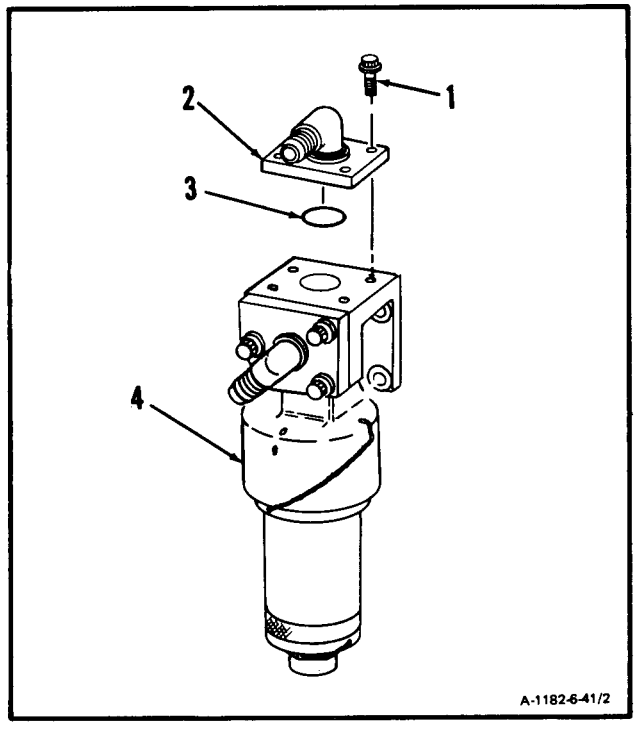
GO TO NEXT PAGE

6-41 INSTALL IN-LINE FUEL FILTER ASSEMBLY (Continued) 6-41

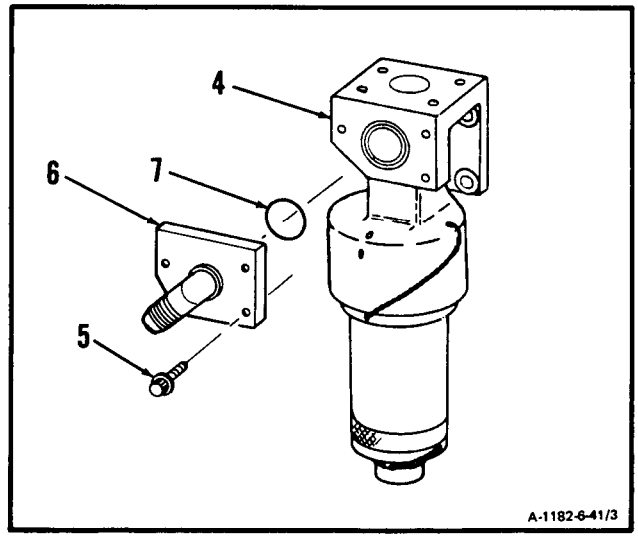
NOTE

If in-line fuel filter assembly is a replacement, do steps 1. thru 4. If same in-line fuel filter assembly that was removed is to be installed, omit steps 1. thru 4.

1. **Remove** four bolts (1), **fitting (2),** and packing (3) **from removed in-line fuel filter assembly (4).**



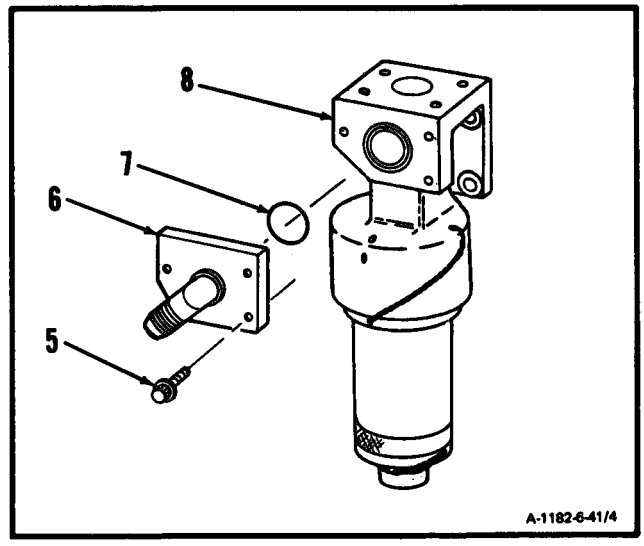
2. **Remove** three bolts (5), **fitting (6),** and packing (7) **from removed in-line fuel filter assembly (4).**



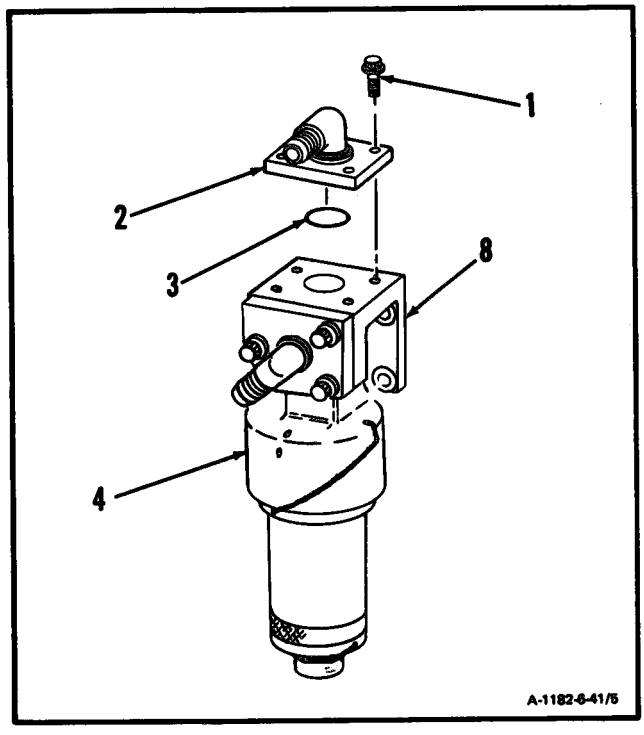
GO TO NEXT PAGE

6-41 INSTALL IN-LINE FUEL FILTER ASSEMBLY (Continued) 6-41

3. **Install** packing (7) and **fitting (6) on serviceable in-line fuel filter assembly (8).** Install three bolts (5).



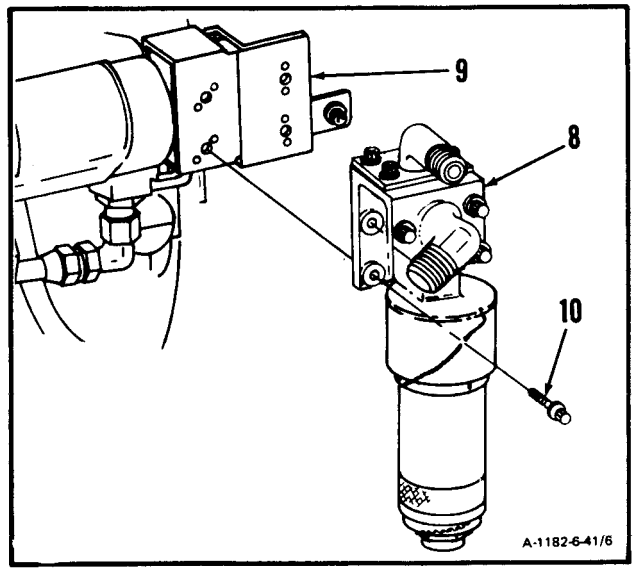
4. **Install** packing (3) and **fitting (2) on serviceable in-line fuel filter assembly (8).** Install four bolts (1).



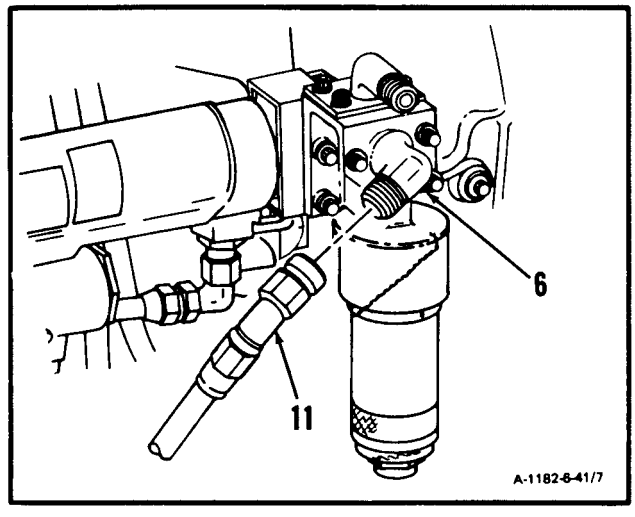
GO TO NEXT PAGE

6-41 INSTALL IN-LINE FUEL FILTER ASSEMBLY (Continued) 6-41

5. **Install in-line fuel filter assembly (8)** on bracket (9). Install four bolts (10).



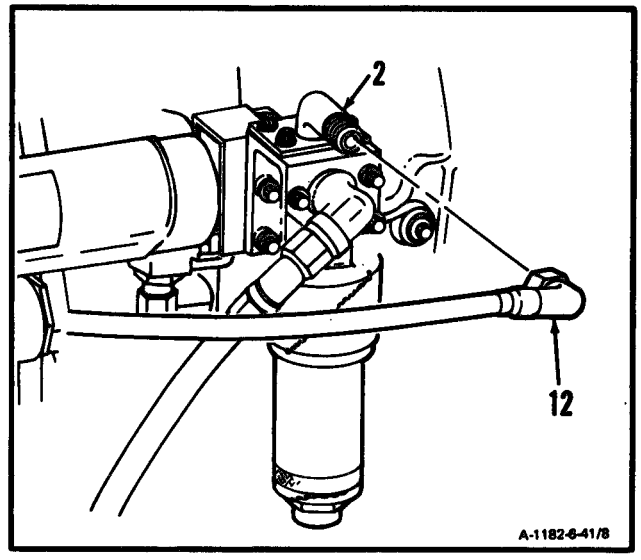
6. **Connect hose assembly (11)** to fitting (6).



GO TO NEXT PAGE

6-41 INSTALL IN-LINE FUEL FILTER ASSEMBLY (Continued)

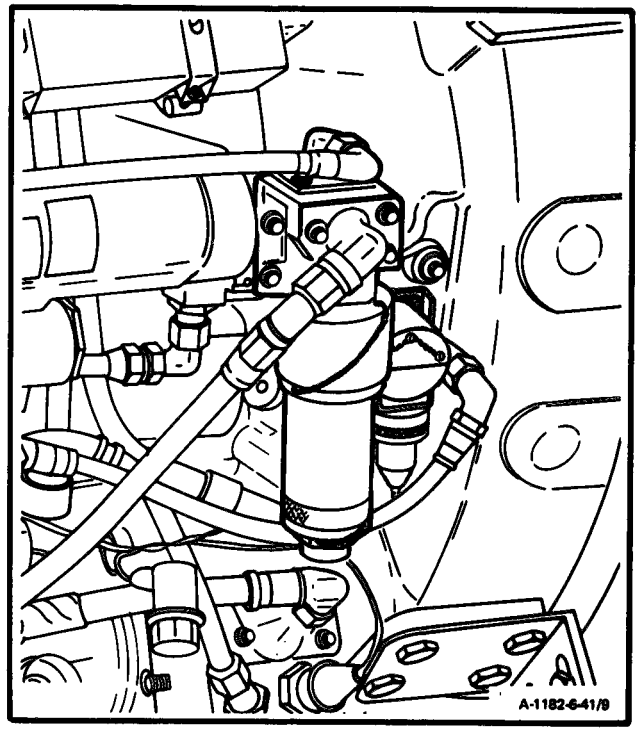
7. **Connect hose assembly (12)** to fitting (2).



INSPECT

FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-42 REMOVE FLOW DIVIDER AND BRACKET 6-42

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Container, 2 Quart

Materials:
Wiping Rag (E58)

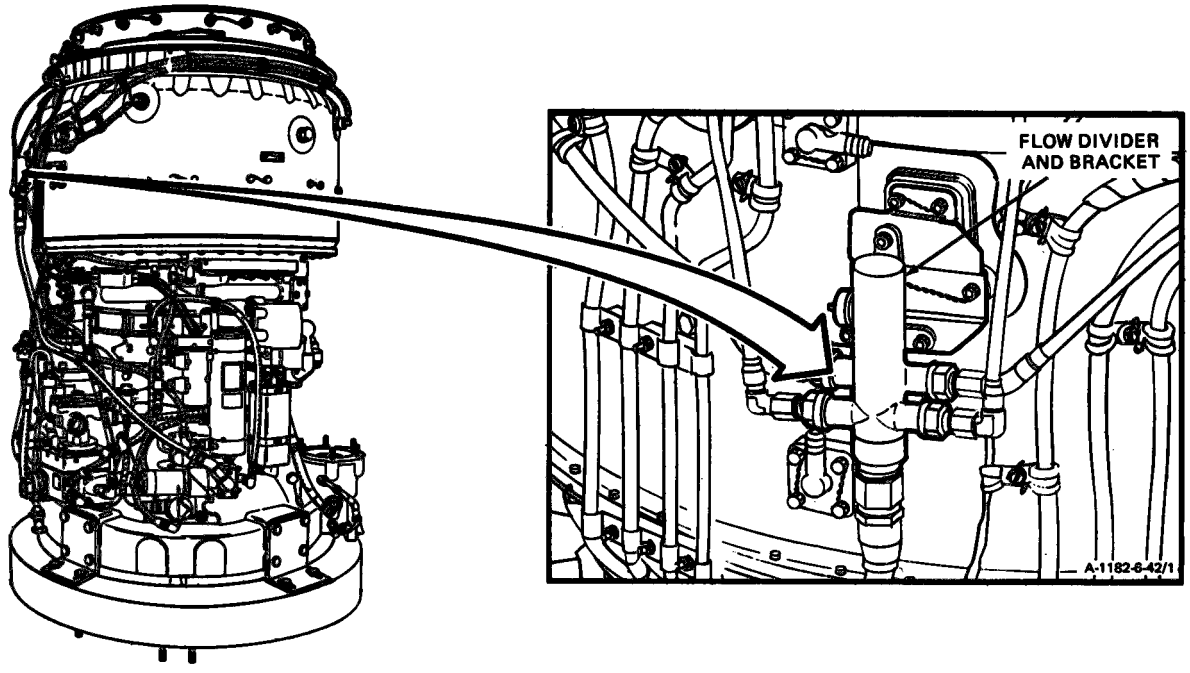
Personnel Required:
68610 Aircraft Powerplant Repairer

Equipment Condition:
Fuel Check Valve Removed (Task 6-46)

General Safety Instructions:

WARNING

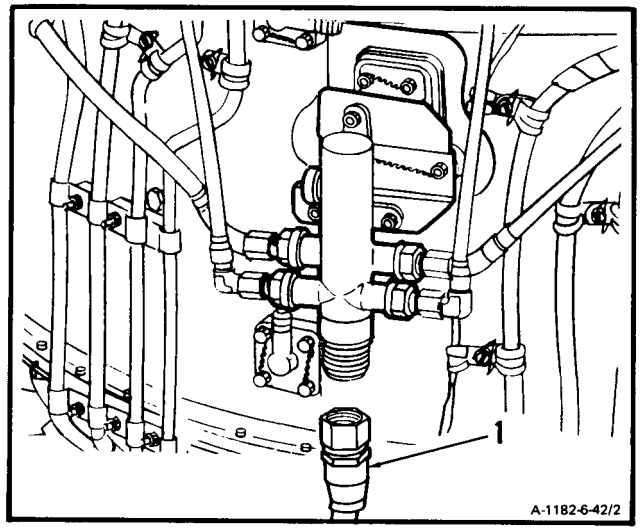
Turbine fuels are very flammable. They may cause drying and irritation of skin or eyes. Handle only in wall-ventilated areas away from heat and open flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin and do not take internally. Wash contacted area of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.



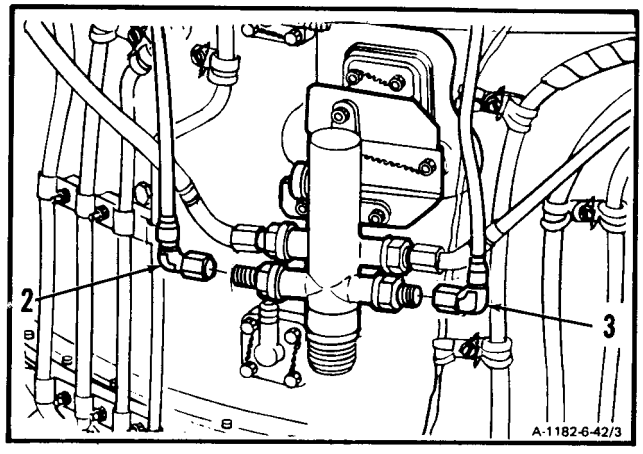
GO TO NEXT PAGE

6-42 REMOVE FLOW DIVIDER AND BRACKET (Continued)

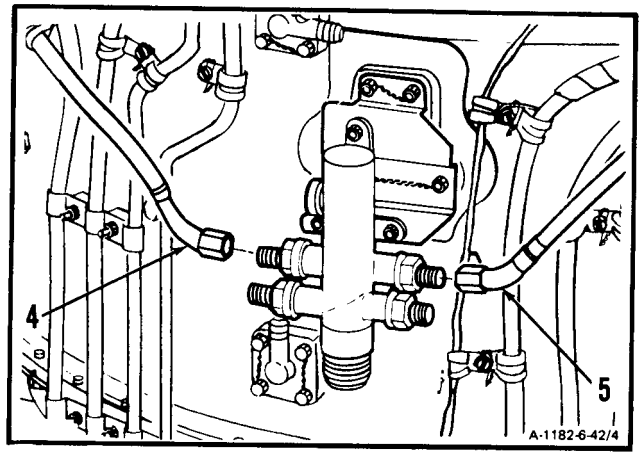
1. **Disconnect hose assembly (1).**



2. **Disconnect hose assemblies (2 and 3).**



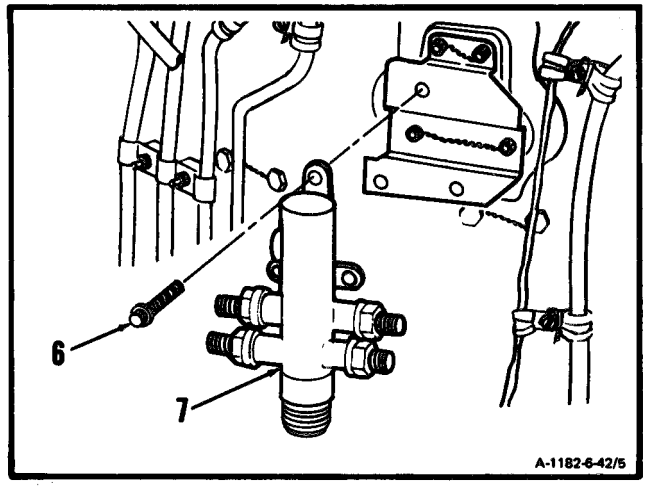
3. **Disconnect hose assemblies (4 and 5).**



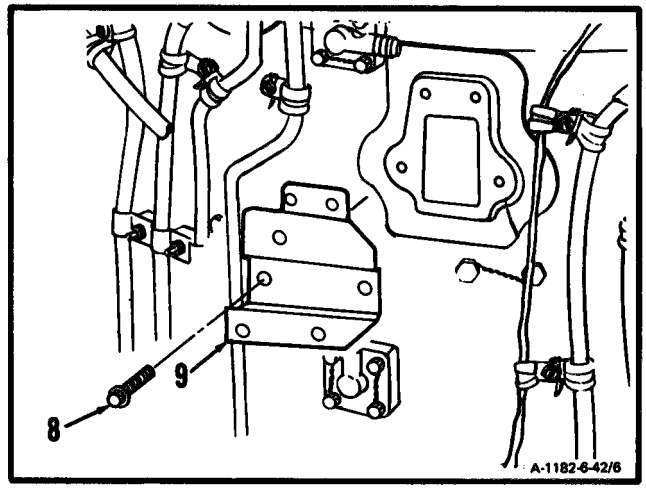
GO TO NEXT PAGE

6-42 REMOVE FLOW DIVIDER AND BRACKET (Continued)

4. **Remove** three bolts (6) and **flow divider (7).**

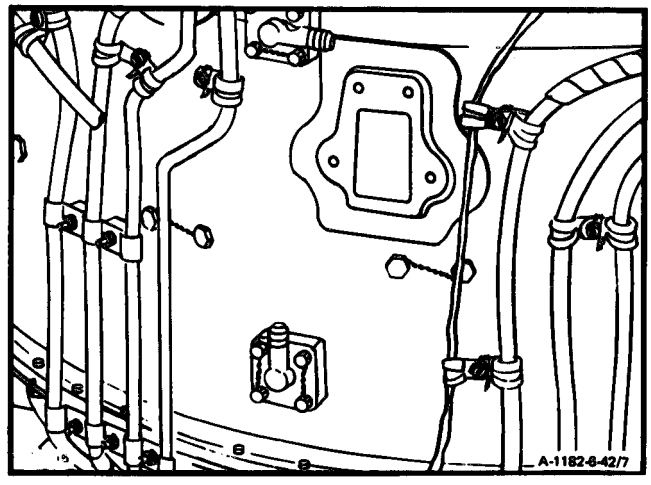


5. Remove lockwire and four bolts (8) and **bracket (9).**



FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-43 CLEAN FLOW DIVIDER AND BRACKET

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944

Materials:
Dry Cleaning Solvent (E17)
Gloves (E20)
Lint-Free Cloth (E26)

Personnel Required:
68610 Aircraft Powerplant Repairer

Equipment Condition:
Off Engine Task
Fuel Check Valve Removed (Task 6-46)
Flow Divider and Bracket Removed (Task 6-42)

General Safety Requirements:

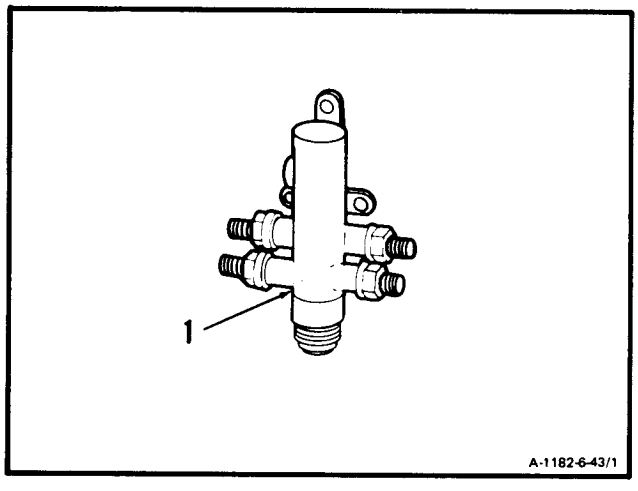
WARNING

Dry cleaning solvent (E17) is flammable and toxic. It can irritate skin and cause burns. Use only in well-ventilated area, away from heat and open flame. In case of contact, immediately flush skin or eyes with water for at least 15 minutes. Get medical attention for eyes.

1. Clean flow divider (1) as follows:

a. Wear gloves (E20). Clean flow divider using dry cleaning solvent (E17) and brush.

b. Wipe dry. Use lint-free cloth (E26).



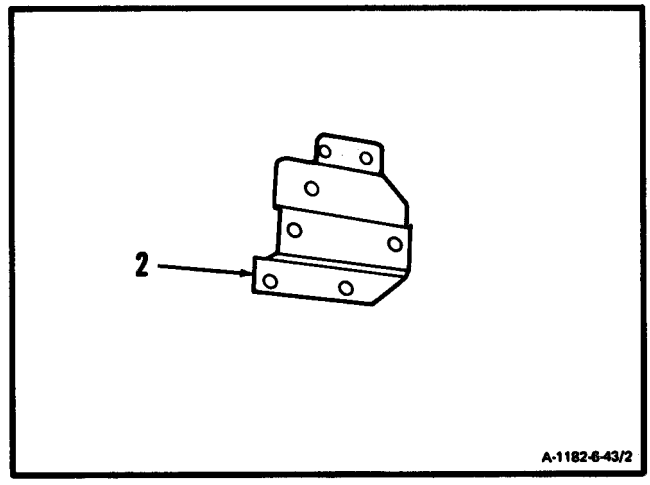
GO TO NEXT PAGE

6-43 CLEAN FLOW DIVIDER AND BRACKET (Continued) 6-43

2. Clean bracket (2) as follows:

   a. Use lint-free cloth (E26) dampened in dry-cleaning solvent (E17).

   b. Wipe dry. Use lint-free cloth (E26).



FOLLOW-ON MAINTENANCE:

Inspect Flow Divider and Bracket (Task 6-44).

END OF TASK

6-44 INSPECT FLOW DIVIDER AND BRACKET

INITIAL SETUP

Applicable Configurations:
All

Tools:
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

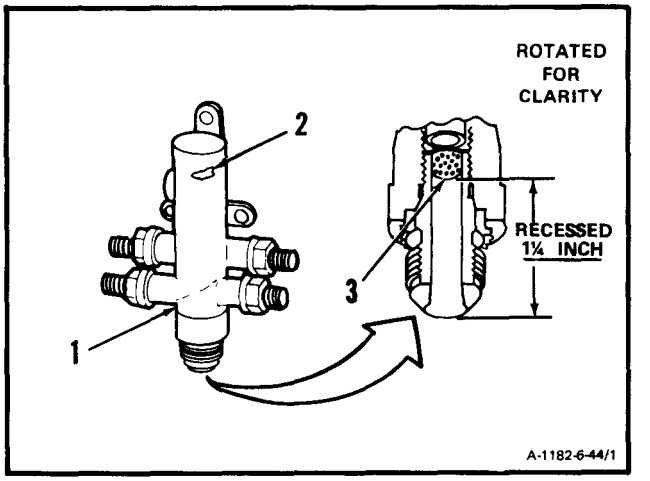
Materials:
None

Personnel Required:
68B30 Aircraft Powerplant Inspector

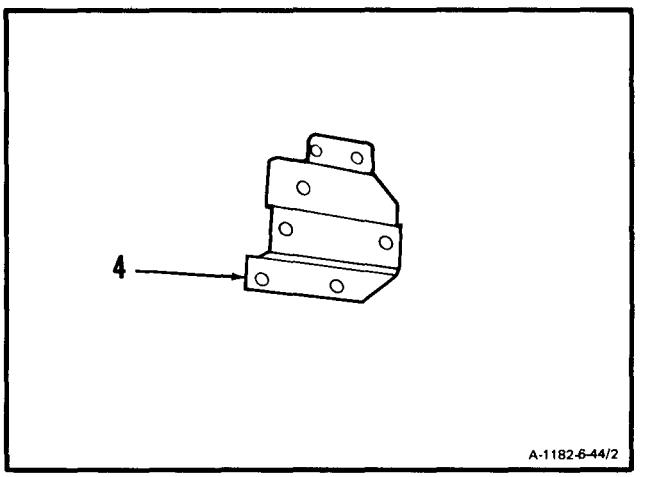
Equipment Condition:
Off Engine Task

1. **Inspect flow divider (1).** There shall be no cracks. There shall be no chafing (2) deeper than 0.031 inch.

2. Inspect inlet screen (3). There shall be no clogging.



3. **Inspect bracket (4).** There shall be no cracks.



FOLLOW-ON MAINTENANCE:

None

END OF TASK

6-45 INSTALL FLOW DIVIDER AND BRACKET

INITIAL SETUP

Applicable Configurations:
All

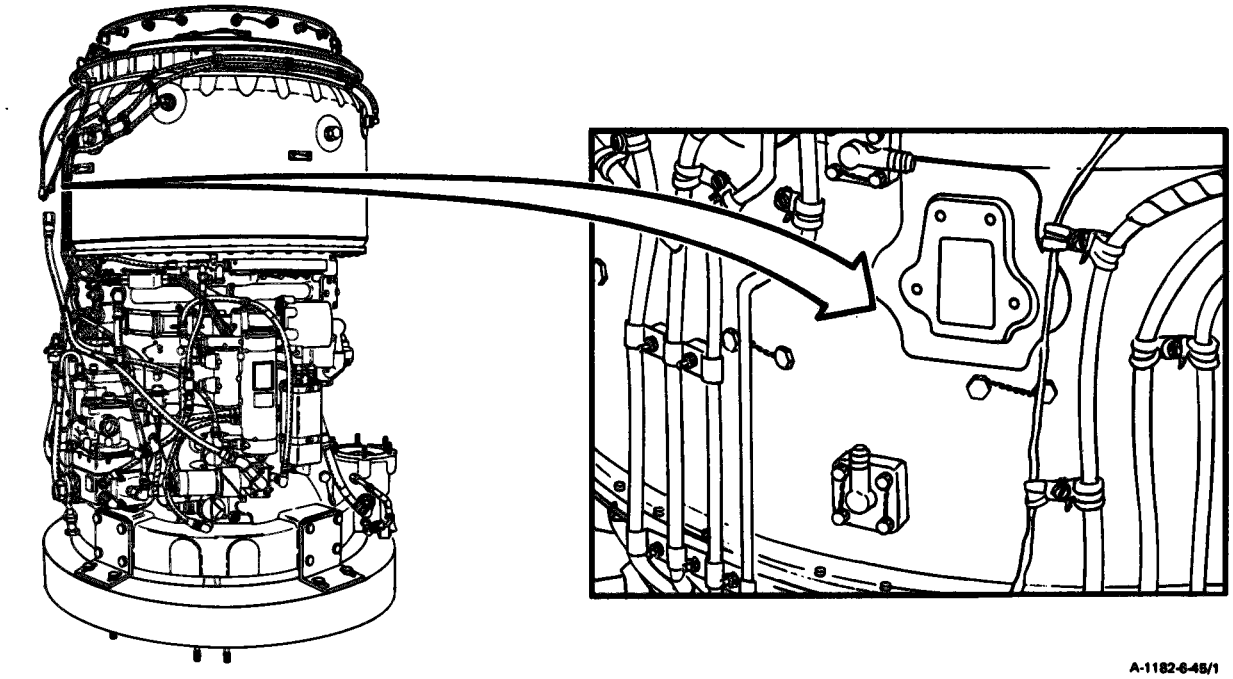
Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical inspection Tool Kit,
NSN 5180-00-323-5114
Vise
Jaw Caps

Materials:
Lockwire (E29)

Parts:
Packings

Personnel Required:
68010 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

References:
TM 55-2840-254-23P

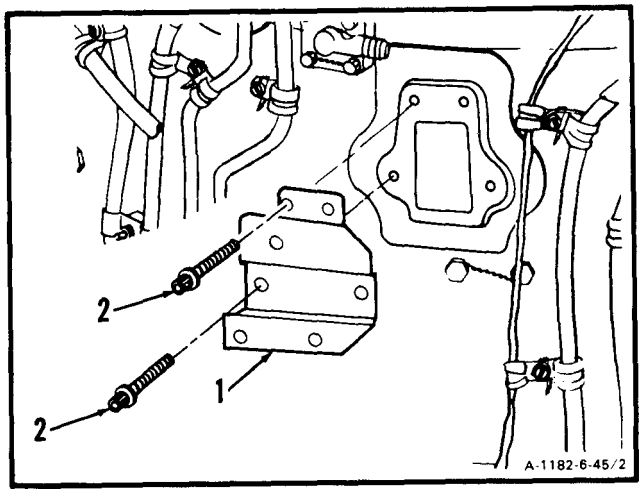


A-1182-6-45/1

GO TO NEXT PAGE

6-45 INSTALL FLOW DIVIDER AND BRACKET (Continued)

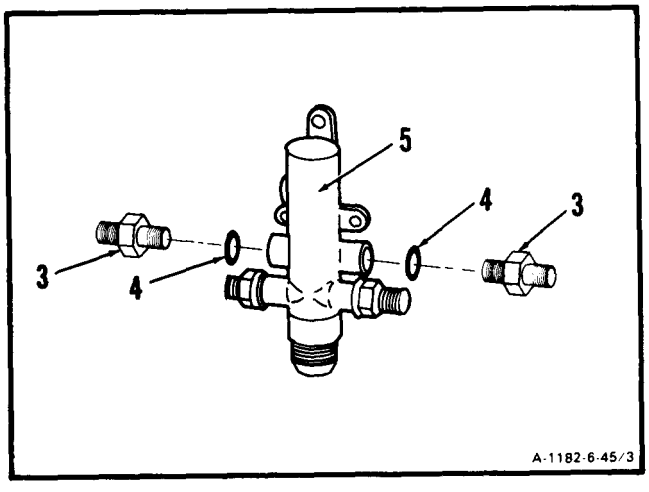
1. Install bracket (1) and four bolts (2). Lockwire bolts (2). Use lockwire (E29).



NOTE

If flow divider is a replacement, do steps 2. thru 5. If same flow divider that was removed is to be installed, omit steps 2. thru 5.

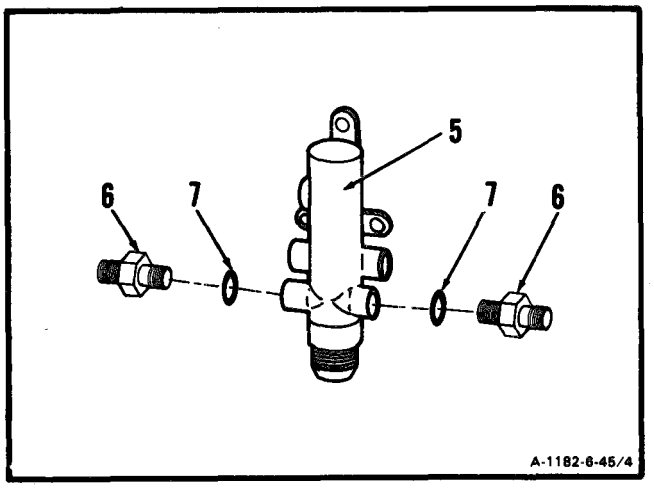
2. **Remove two reducers (3)** and packings (4) **from removed flow divider (5).** Use vise with jaw caps.



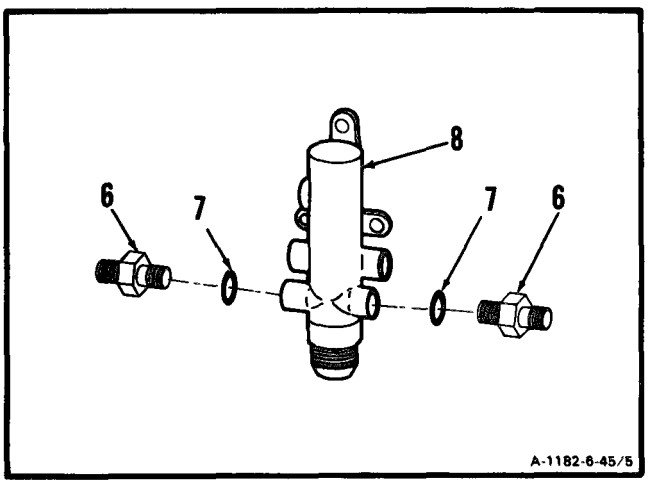
GO TO NEXT PAGE

6-45 INSTALL FLOW DIVIDER AND BRACKET (Continued)

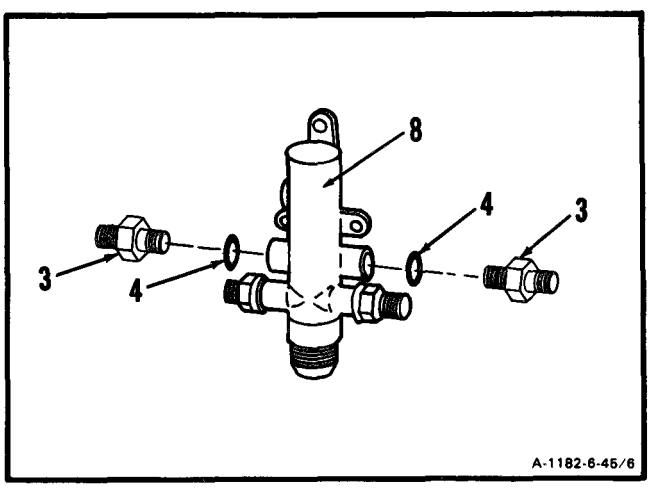
3. **Remove two nipples (6)** and packings **(7) from removed flow divider (5).**



4. **Install two** packings (7) and **nipples (6) on serviceable flow divider (8).**



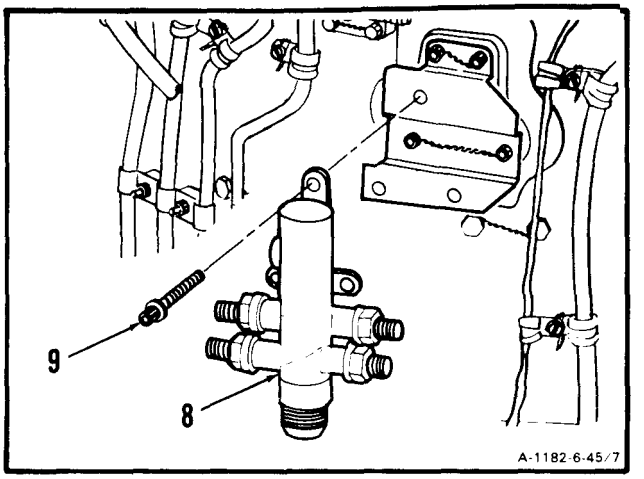
5. **Install two** packings (4) and **reducers (3) on serviceable flow divider (8).**



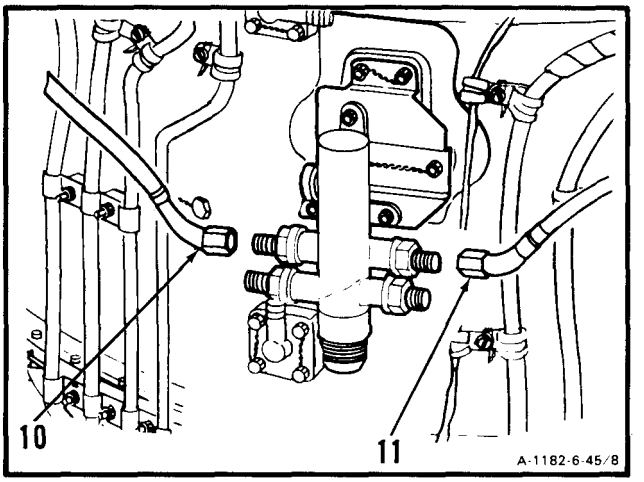
GO TO NEXT PAGE

6-45 INSTALL FLOW DIVIDER AND BRACKET (Continued) 6-45

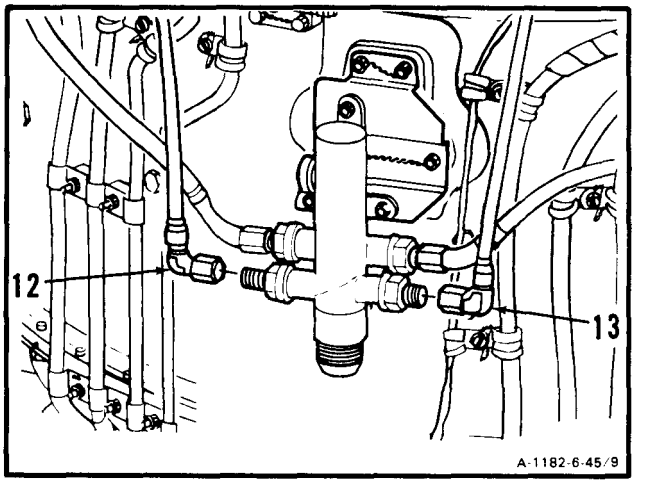
6. **Install flow divider (8)** and three bolts (9).



7. **Connect hose assemblies (10 and 11).**



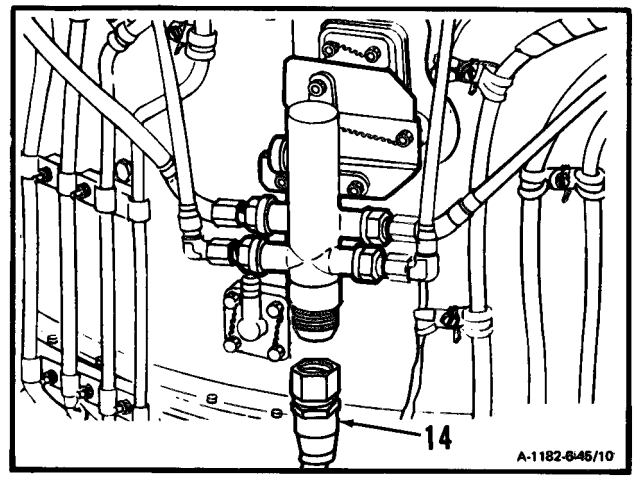
8. **Connect hose assemblies (12 and 13).**



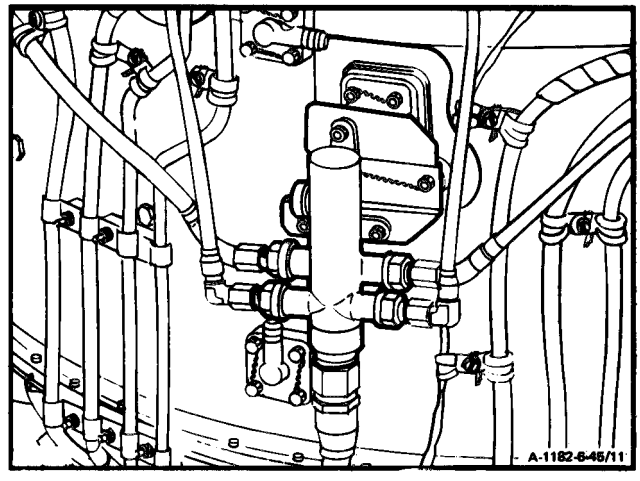
GO TO NEXT PAGE

6-45 INSTALL FLOW DIVIDER AND BRACKET (Continued) 6-45

9. **Connect hose assembly (14).** Torque hose assembly (14) to 300 pound-inches.



INSPECT



FOLLOW-ON MAINTENANCE:

Install Fuel Check Valve (Task 6-48).

END OF TASK

6-46 REMOVE FUEL CHECK VALVE

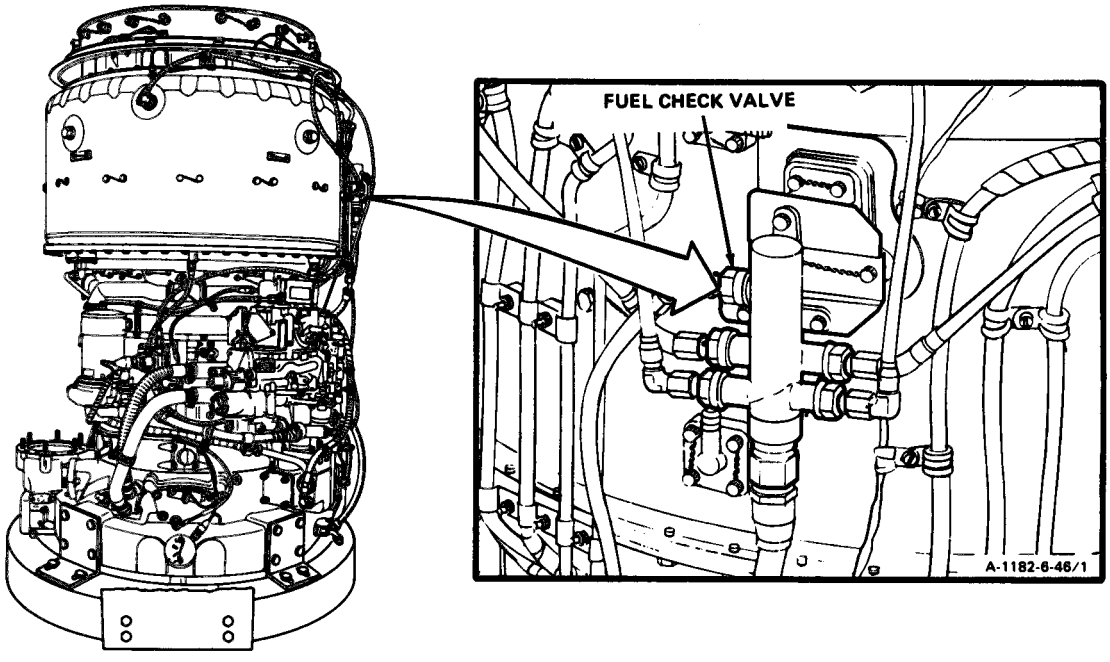
INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944

Materials:
Wiping Rag (E58)

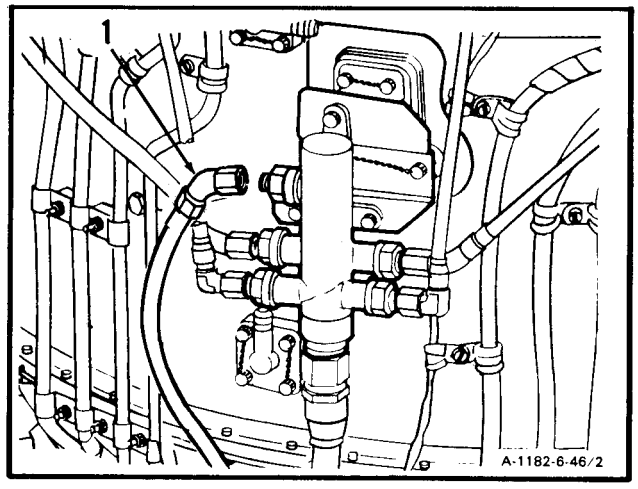
Personnel Required:
68B10 Aircraft Powerplant Repairer



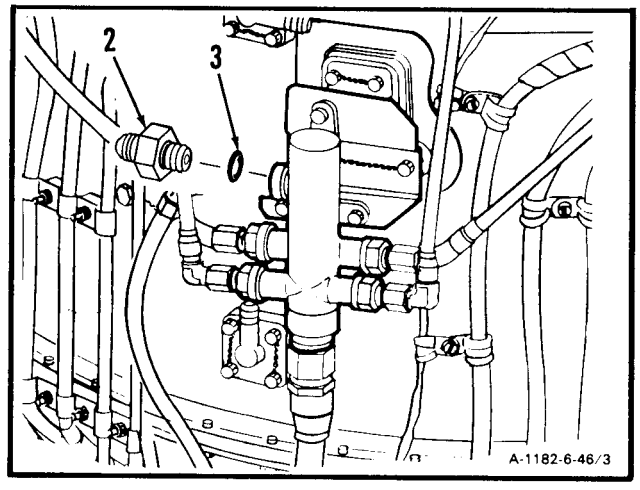
GO TO NEXT PAGE

6-46 REMOVE FUEL CHECK VALVE (Continued) 6-46

1. **Disconnect hose assembly (1).**

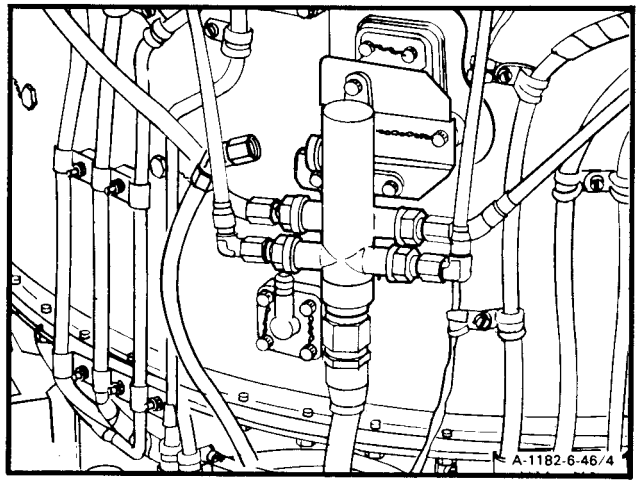


2. **Remove fuel check valve (2)** and packing (3).



FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-47 CLEAN FUEL CHECK VALVE 6-47

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944

Materials:
Dry Cleaning Solvent (E17)
Gloves (E20)
Lint-Free Cloth (E26)

Personnel Required:
68B10 Aircraft Powerplant Repairer

Equipment Condition:
Off Engine Task
Fuel Check Valve Removed (Task 6-46)

General Safety Instructions:

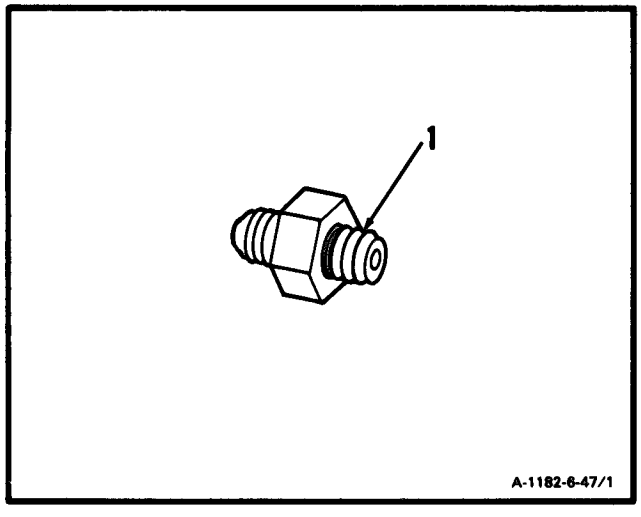
WARNING

Dry cleaning solvent (E17) is flammable and toxic. It can irritate skin and cause burns. Use only in wall-ventilated area, away from heat and open flame. In case of contact, immediately flush skin or eyes with water for at least 15 minutes. Get medical attention for eyes.

1. **Clean fuel check valve (1)** as follows:

   a. Wear gloves (E20). Immerse valve in dry cleaning solvent (E17) and agitate. Use brush on external surfaces.

   b. Use lint-free cloth (E26) to remove solvent.



FOLLOW-ON MAINTENANCE:

None

END OF TASK

6-48 INSTALL FUEL CHECK VALVE 6-48

INITIAL SETUP

Applicable Configurations:
All

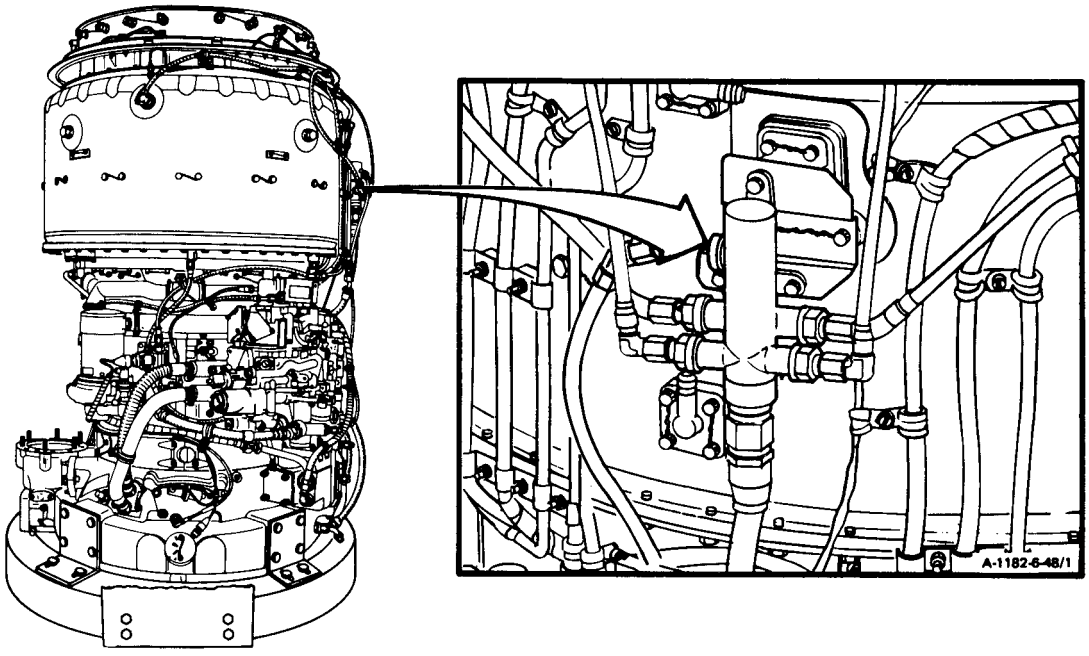
Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
None

Parts:
Packing

Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

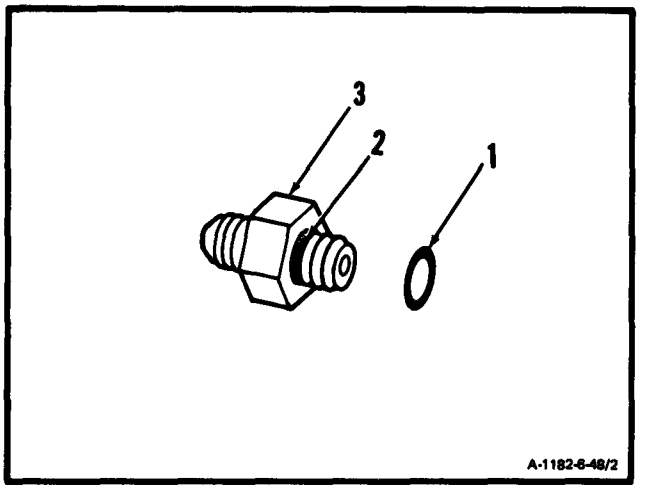
References:
TM 55-2840-254-23P



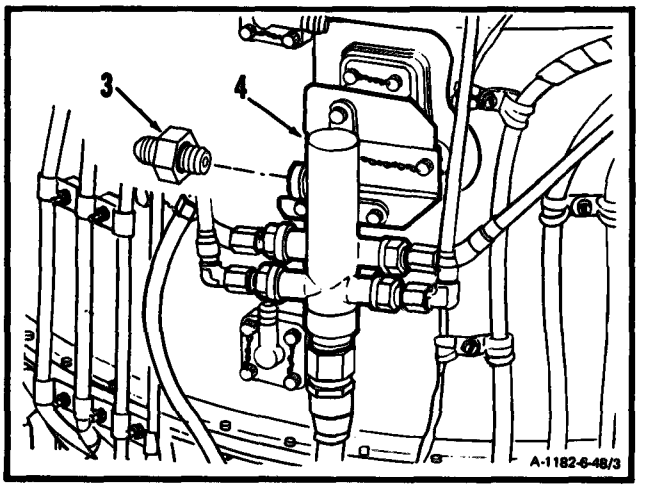
GO TO NEXT PAGE

6-48 INSTALL FUEL CHECK VALVE (Continued) 6-48

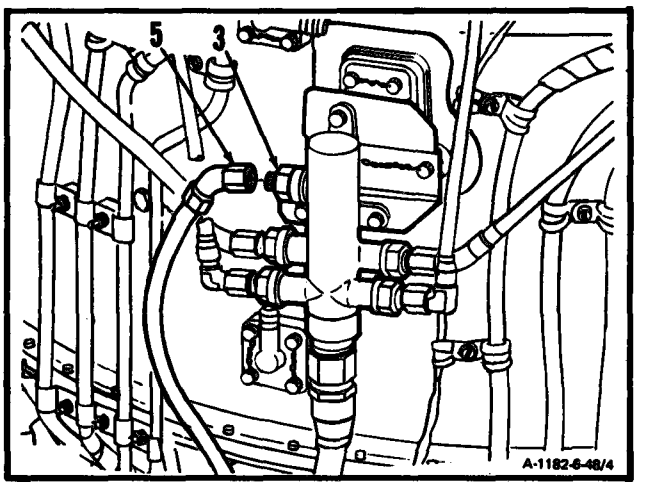
1. **Install packing (1)** in groove (2) in check valve (3).



2. **Install fuel check valve (3)** in flow divider (4).



3. **Connect hose assembly (5)** to check valve (3).



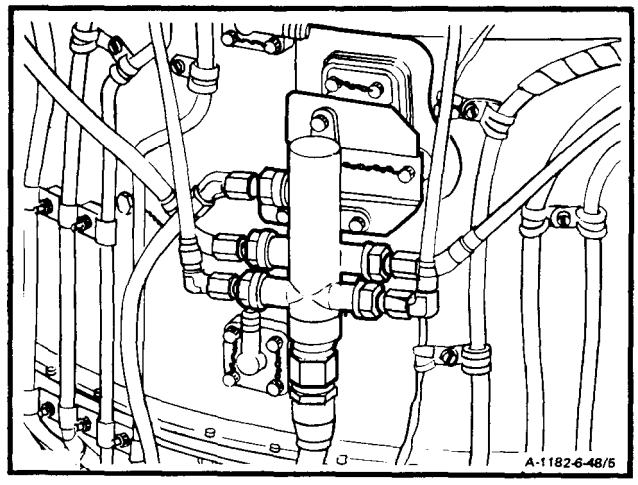
INSPECT

GO TO NEXT PAGE

6-48 INSTALL FUEL CHECK VALVE (Continued)

FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-49 REMOVE STARTING FUEL SOLENOID VALVE 6-49

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Container, 1 Quart

Matirials:
Wiping Rag (E58)

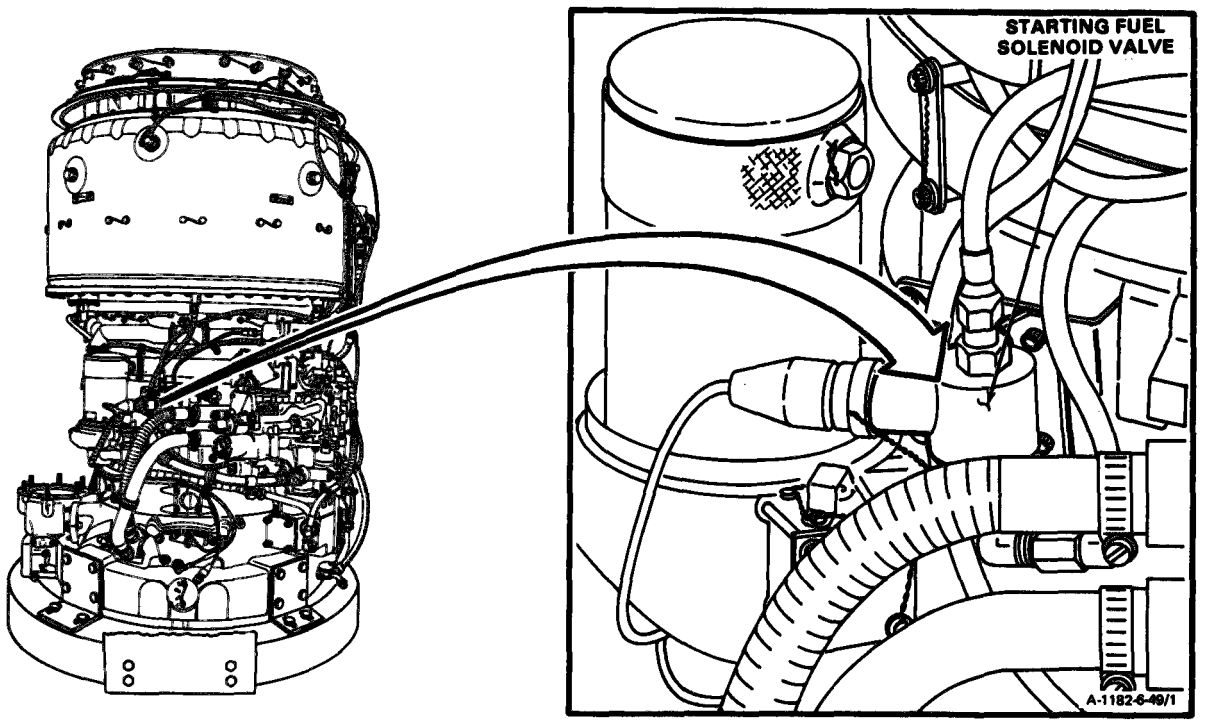
Personnel Required:
68B10 Aircraft Powerplant Repairer

References:
Task 6-51

General Safety Instructions:

WARNING

Turbine fuels are very flammable. They may cause drying and irritation of skin or eyes. Handle only in well-ventilated area away from heat and open flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin and do not take internally. Wash contacted area of skin thoroughly aftar handling. If irritation of skin results, get medical attention. Get medical attention for eyes.



GO TO NEXT PAGE

6-49 REMOVE STARTING FUEL SOLENOID VALVE (Continued) 6-49

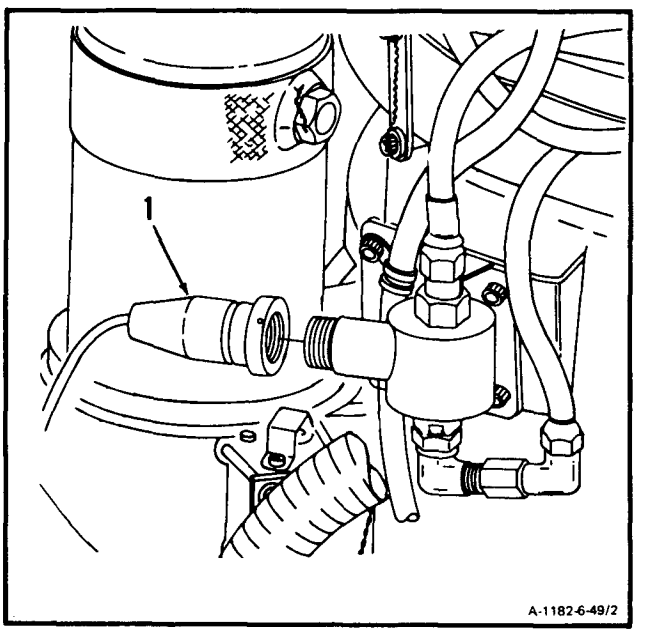
NOTE

Before removing starting fuel solenoid valve, check for evidence of fuel leakage between fittings and solenoid valve housing. If evidence of leakage is found, have an aircraft powerplant inspector examine valve in accordance with Task 6-51.

NOTE

It may be necessary to gently pry mounting bracket outward to disconnect electrical connector and remove mounting hardware.

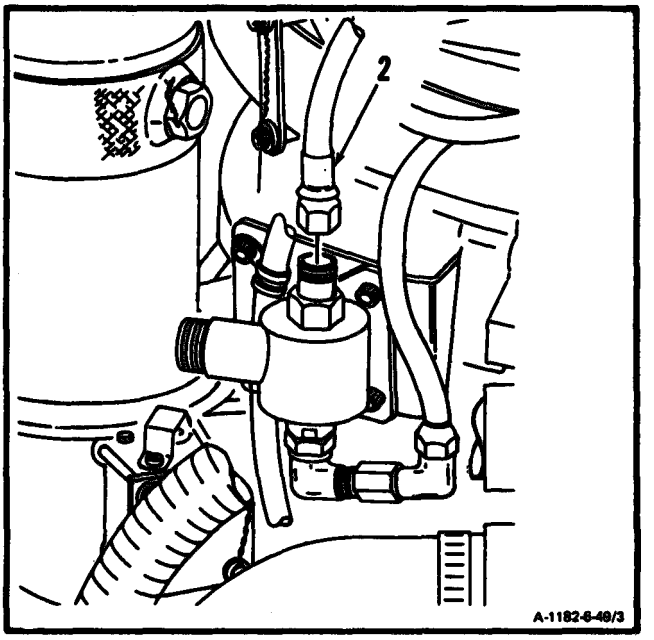
1. Remove lockwire and **disconnect electrical connector (1).**



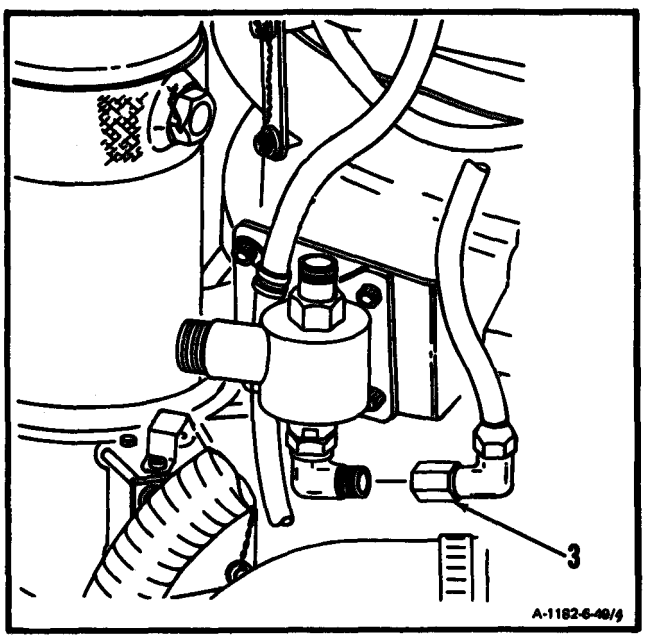
GO TO NEXT PAGE

6-49 REMOVE STARTING FUEL SOLENOID VALVE (Continued) 6-49

2. **Disconnect hose assembly (2).**



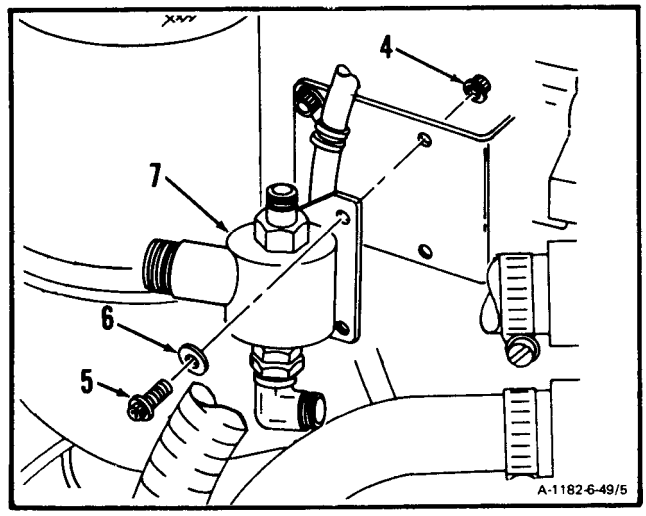
3. **Disconnect hose assembly (3).**



GO TO NEXT PAGE

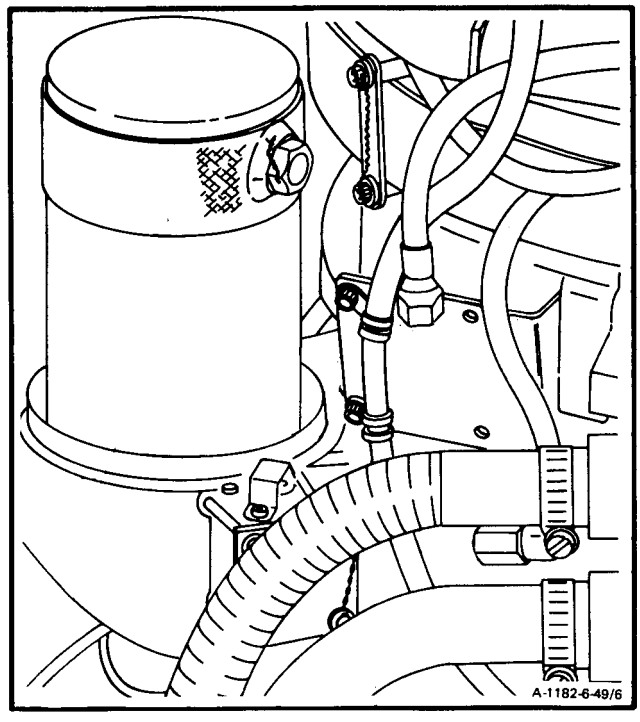
6-49 REMOVE STARTING FUEL SOLENOID VALVE (Continued) 6-49

4. **Remove** two nuts (4), screws (5), washers (6), and **starting fuel solenoid valve (7).**



FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-50 CLEAN STARTING FUEL SOLENOID VALVE 6-50

INITIAL SETUP

Applicable Conflgurations:
All

Tools:
None

Materials:
Dry Cleaning Solvent (E17)
Gloves (E20)
Lint-Free Cloth (E26)

Personnel Required:
68B10 Aircraft Powerplant Repairer

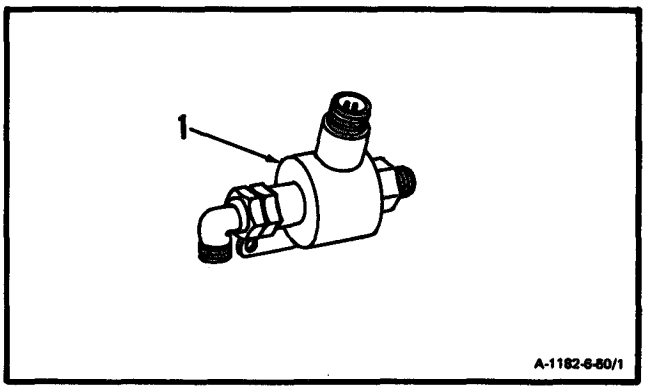
Equipment Condition:
Off Engine Task
Starting Fuel Solenoid Valve Removed
(Task 6-49)

General Safety Instructions:

WARNING

Dry cleaning solvent (E17) is flammable and toxic. It can irritate skin and cause burns. Use only in well-ventilatad area, away from heat and open flame. In case of contact, immediately flush skin or eyes with water for at least 15 minutes. Get medical attention for eyes.

1. Wear gloves (E20). **Clean starting fuel solenoid valve (1)** with clean, lint-free cloth dampened in dry cleaning solvent (E17).



FOLLOW-ON MAINTENANCE:

Inspect Starting Fuel Solenoid Valve
(Task 6-51).

END OF TASK

6-51 INSPECT STARTING FUEL SOLENOID VALVE 6-51

INITIAL SETUP

Applicable Configurations:
All

Tools:
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
None

Personnel Required:
68B30 Aircraft Powerplant Inspector

Equipment Condition:
Off Engine Task

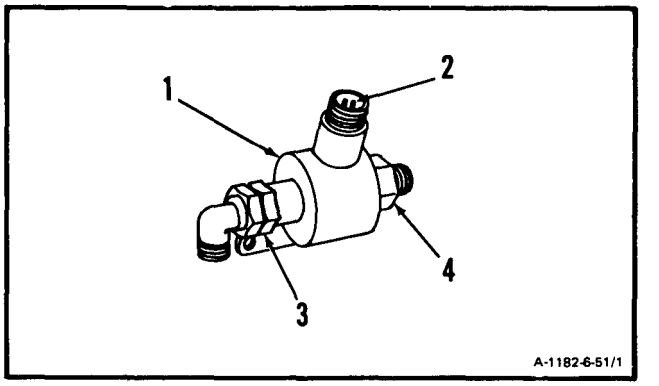
1. **Inspect starting fuel solenoid valve (1).**

   a. There shall be no cracks.

   b. Pins (2) shall not be broken or bent.

   c. There shall be no corrosion on pins (2).

   d. Fittings (3 and 4) shall not be loose. If fittings are loose, tighten fittings.



FOLLOW-ON MAINTENANCE:

None

END OF TASK

6-52 REPAIR STARTING FUEL SOLENOID VALVE 6-52

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mahanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114
Goggles
Compressed Air Source

Materials:
Crocus Cloth (E15)

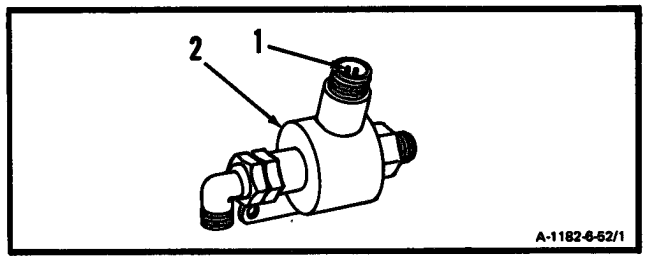
Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

Equipment Condition:
Off Engine Task

NOTE

This repair is allowed provided it does not cause pins to break or crack.

1. **Straighten bent pins (1)** of starting fuel solenoid valve (2). Using long-nose pliers, gently move pins (1) until they are straight.

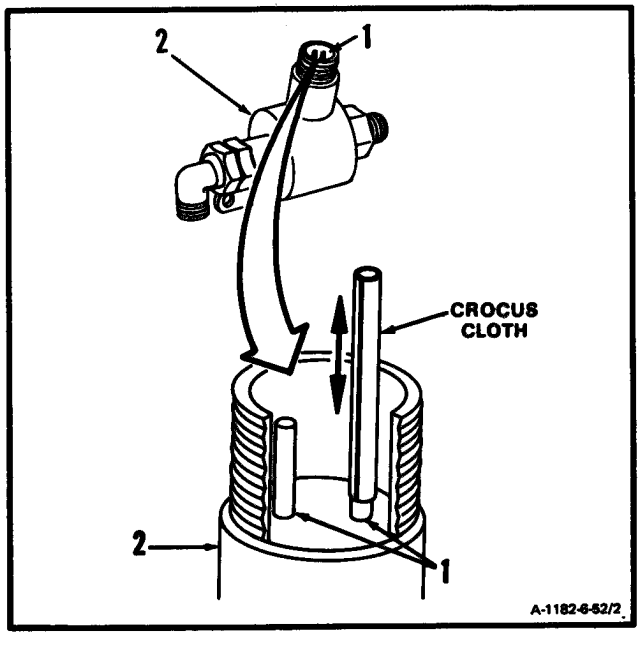


2. **Remove corrosion from pins (1)** of starting fuel solenoid valve (2). Polish pins, using in and out motion over entire length of pin until corrosion is removal. Use crocus cloth (E15).

WARNING

When using compressed air for cleaning, use approved protective equipment for eyes and face. Do not use more than 30 psig air pressure. Do not direct air toward yourself or another person. Failure to comply could result in injury to eyes or skin. In case of injury, get medical attention.

3. Wear goggles. **Remove loosened particles** from pins (1), using clean, dry compressed air.



INSPECT

FOLLOW-ON MAINTENANCE:

None

END OF TASK

6-53 INSTALL STARTING FUEL SOLENOID VALVE 6-53

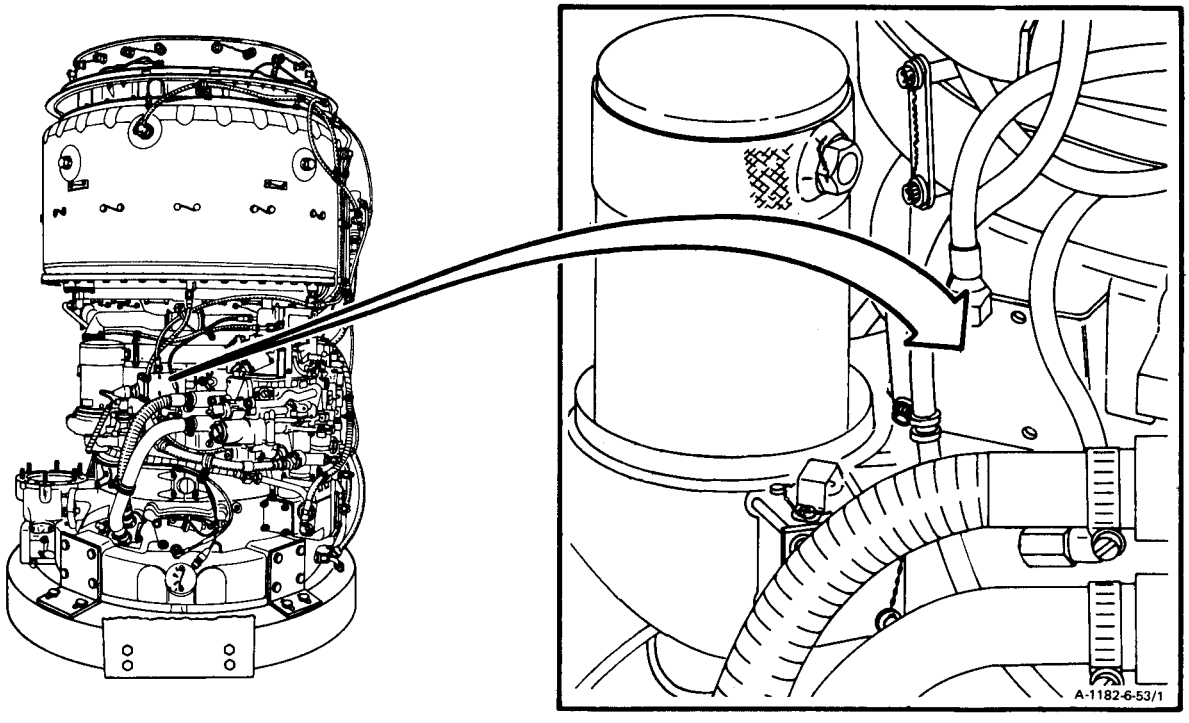
INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
Lockwire (E29)

Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector



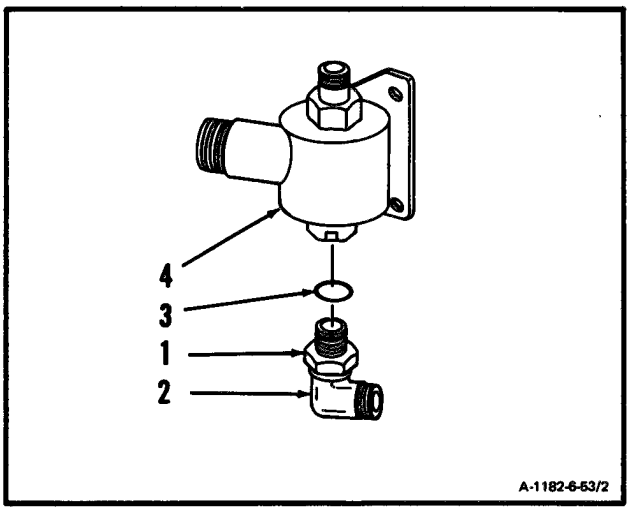
GO TO NEXT PAGE

6-53 INSTALL STARTING FUEL SOLENOID VALVE (Continued) 6-53

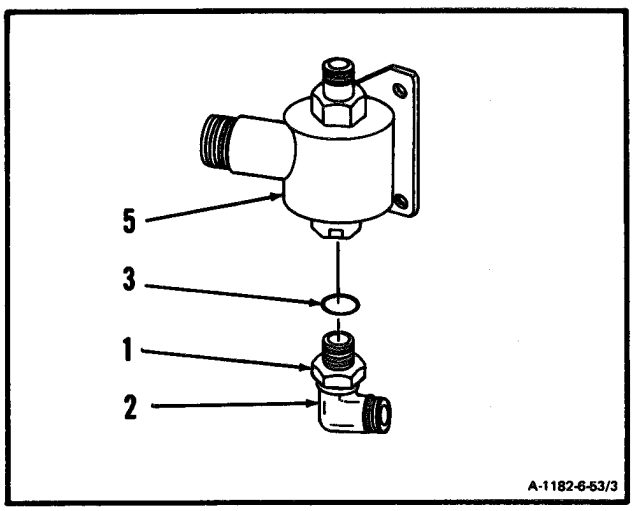
NOTE

If starting fuel solenoid valve is a replacement, do steps 1. and 2. If same starting fuel solenoid that was removed is to be installed, omit steps 1. and 2.

1. Loosen nut (1), and **remove elbow** (2) and packing (3) **from moved starting fuel solanoid valve (4).**



2. **Install elbow (2)** and packing (3) **in serviceable starting fuel solenoid valve (5).** Position elbow (2) as shown and tighten nut (1).



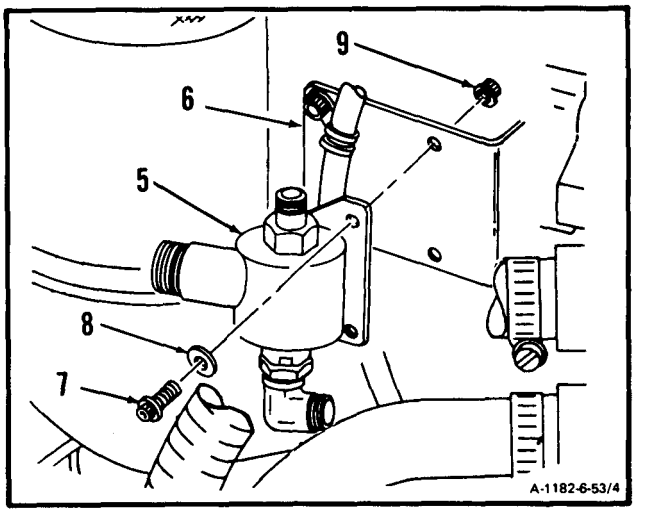
GO TO NEXT PAGE

6-53 INSTALL STARTING FUEL SOLENOID VALVE (Continued) 6-53

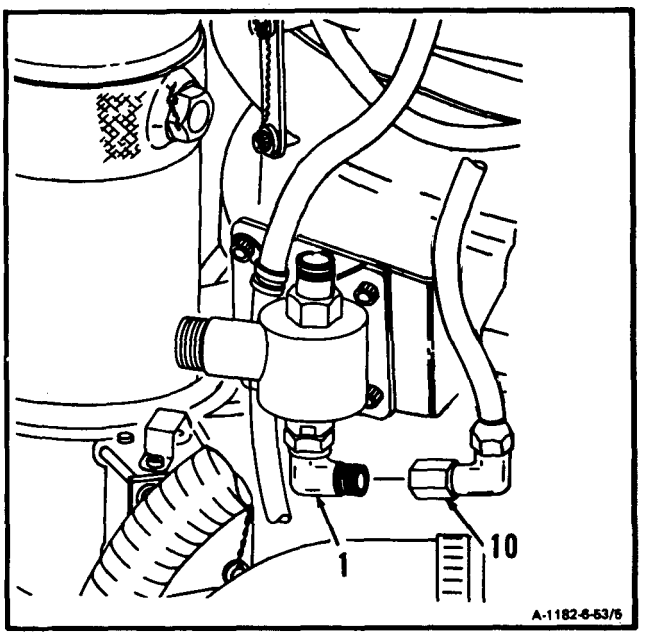
NOTE

It may be necessary to gently pry mounting bracket outward to install mounting hardware.

3. **Install starting fuel solenoid valve (5) on bracket (6).** Install two screws (7), two washers (8), and two nuts (9).

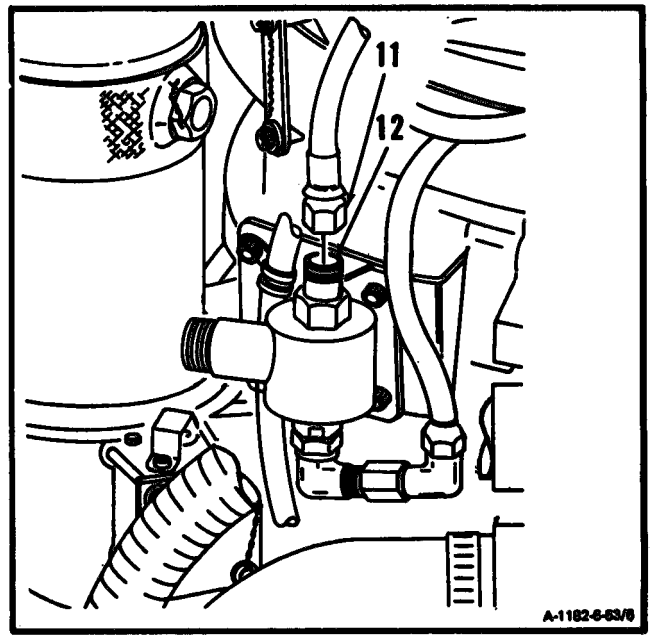


4. **Connect hose assembly (10)** to elbow (1).



GO TO NEXT PAGE

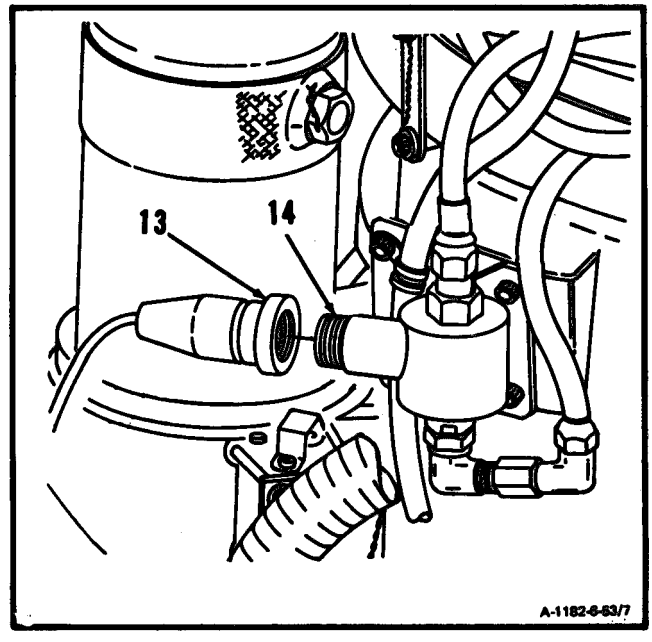
5. **Connect hose assembly (11)** to valve (12).



NOTE

It may be necessary to gently pry mounting bracket outward to connect electrical connector.

6. **Connect electrical connector (13)** to connector (14). Lockwire electrical connector (13). Use lockwire (E29).



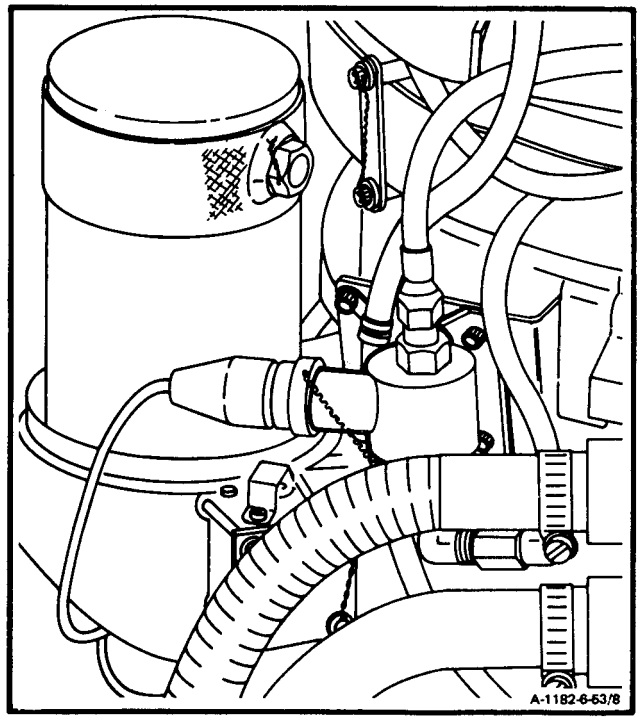
INSPECT

GO TO NEXT PAGE

6-53 INSTALL STARTING FUEL SOLENOID VALVE (Continued) 6-53

FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-54 REMOVE HOSE ASSEMBLY (OIL COOLER TO IN-LINE FUEL FILTER) 6-54

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Container, 1 Quart

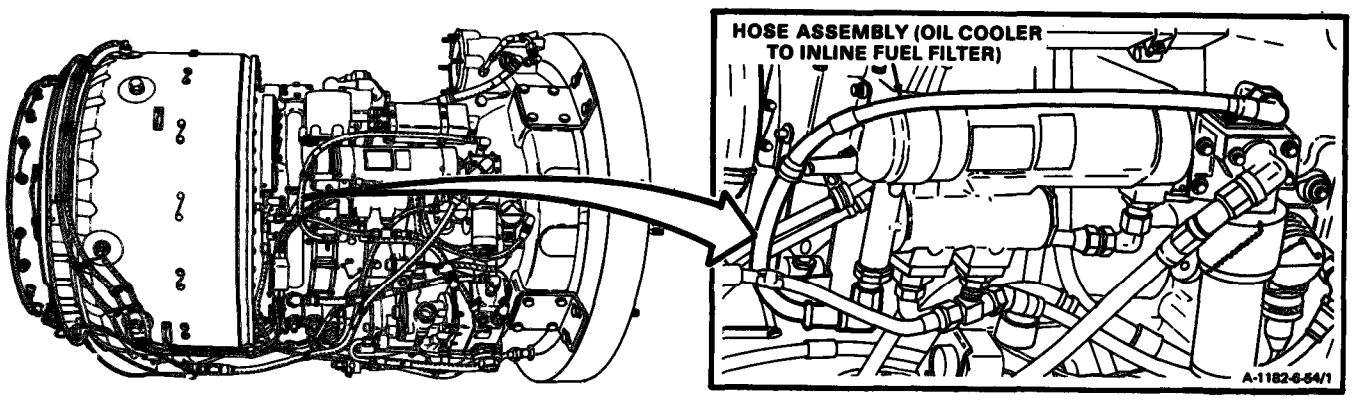
Materials:
Wiping Rag (E58)

Personnel Required:
68B10 Aircraft Powerplant Repairer

General Safety Instructions:

WARNING

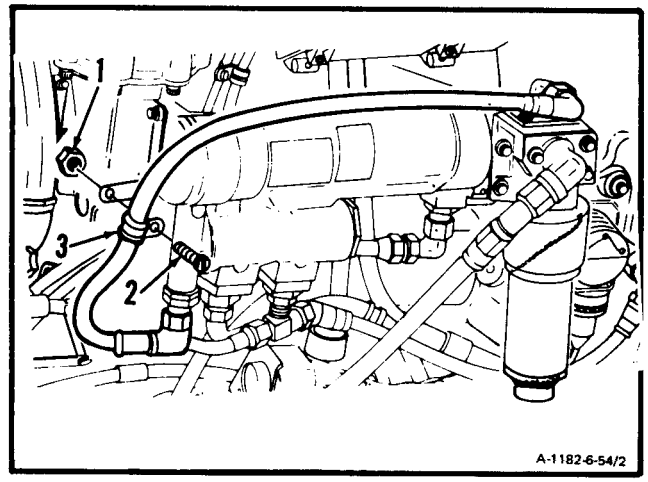
Turbine fuels are very flammable. They may cause drying end irritation of skin or eyes. Handle only in wall-ventilated areas away from heat and open flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin, and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.



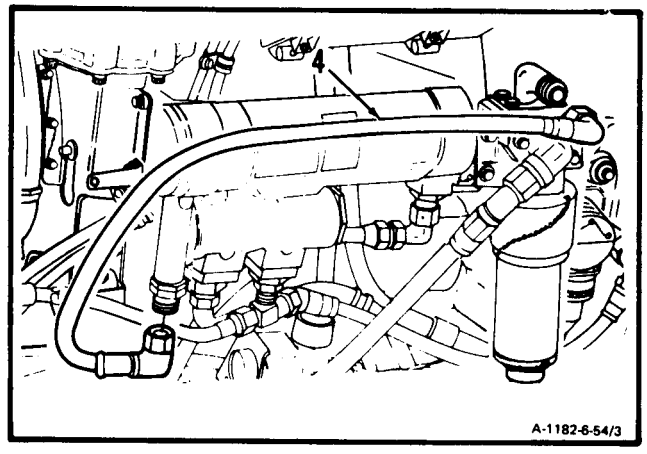
GO TO NEXT PAGE

6-54 REMOVE HOSE ASSEMBLY (OIL COOLER TO IN-LINE FUEL FILTER) (Continued) 6-54

1. **Remove** nut (1), screw (2), and **clamp (3).**

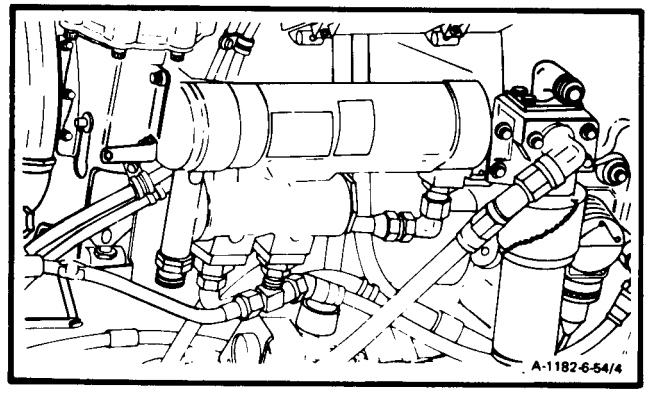


2. **Disconnect and remove hose assembly (4).**



FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-55 INSTALL HOSE ASSEMBLY (OIL COOLER TO IN-LINE FUEL FILTER) 6-55

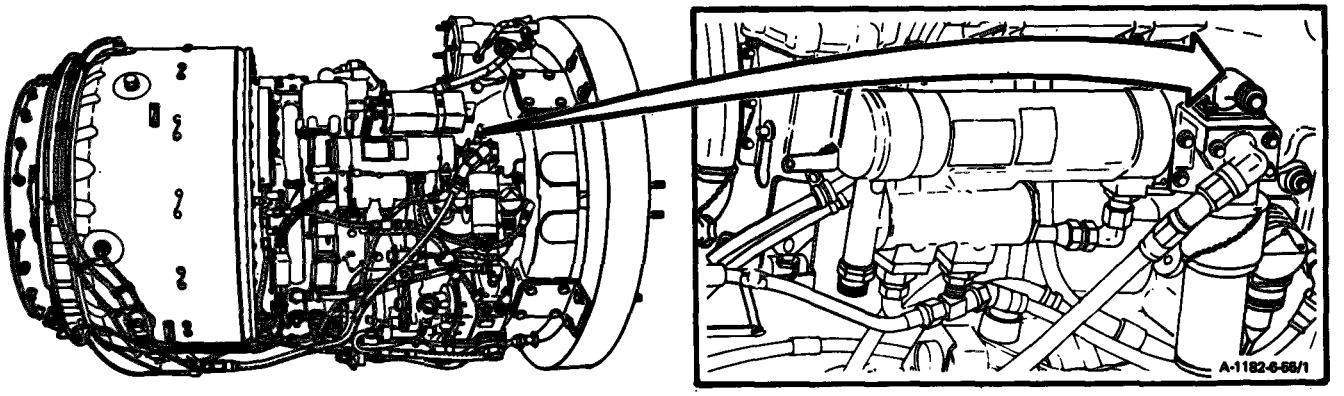
INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
None

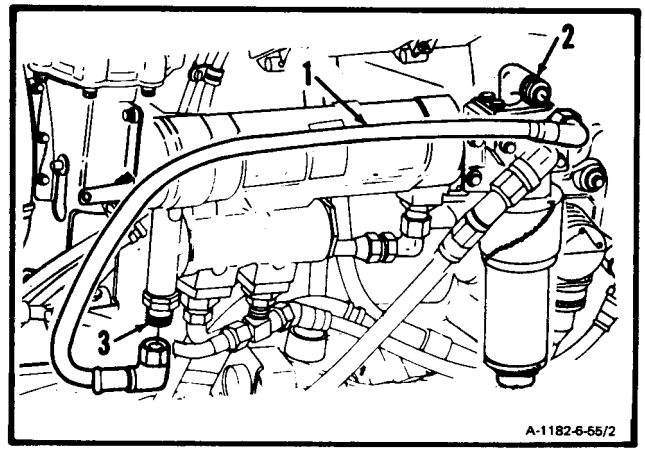
Personnel Required:
68610 Aircraft Powerplant Repairer
68630 Aircraft Powerplant Inspector



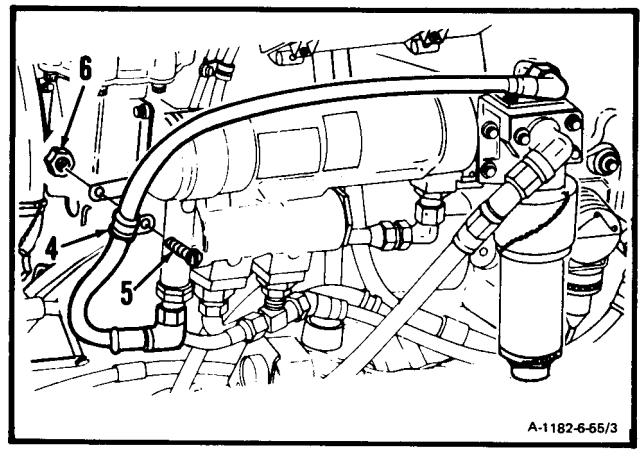
GO TO NEXT PAGE

6-55 INSTALL HOSE ASSEMBLY (OIL COOLER TO IN-LINE FUEL FILTER) (Continued) 6-55

1. **Install hose assembly (1)** on flange elbow (2) and tube assembly (3).



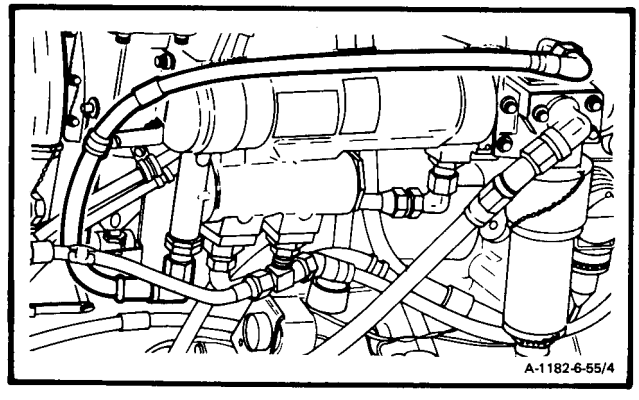
2. **Install clamp (4),** screw (5), and nut (6).



INSPECT

FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-56 REMOVE HOSE ASSEMBLY (FUEL CONTROL TO OIL COOLER) 6-56

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Container, 1 Quart

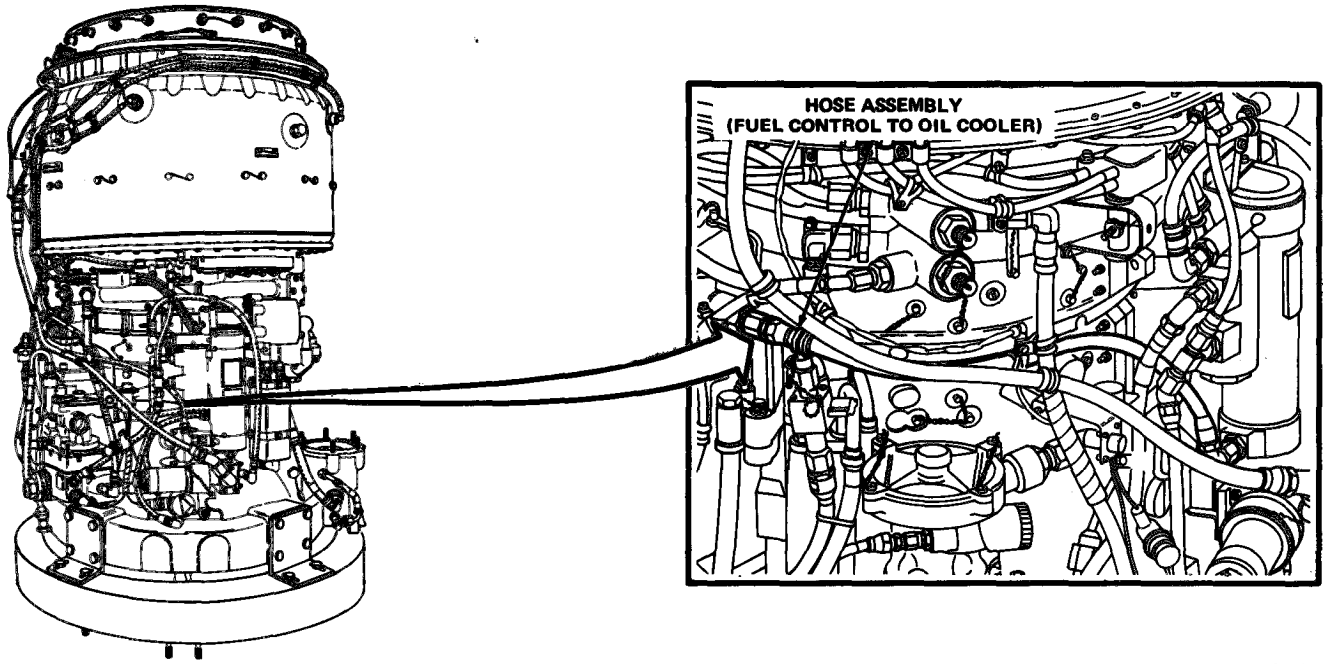
Materials;
Wiping Rag (E58)

Personnel Required:
68B10 Aircraft Powerplant Repairer

General Safety Instructions:

WARNING

Turbine fuels are very flammable, They cause drying and irritation of skin or eyes. Handle only in wall-ventilated areas away from heat and open flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin and do not take internally. Wash contacted area of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.

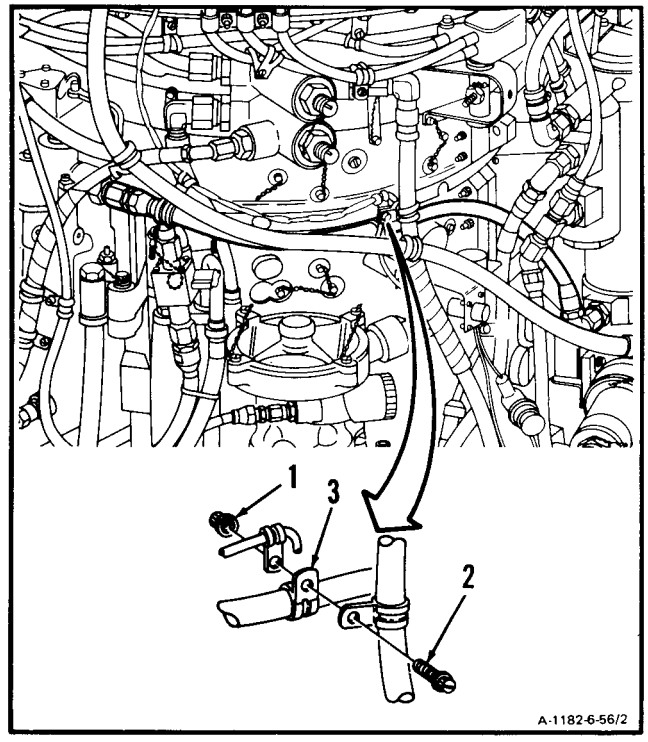


A-1182-6-56/1

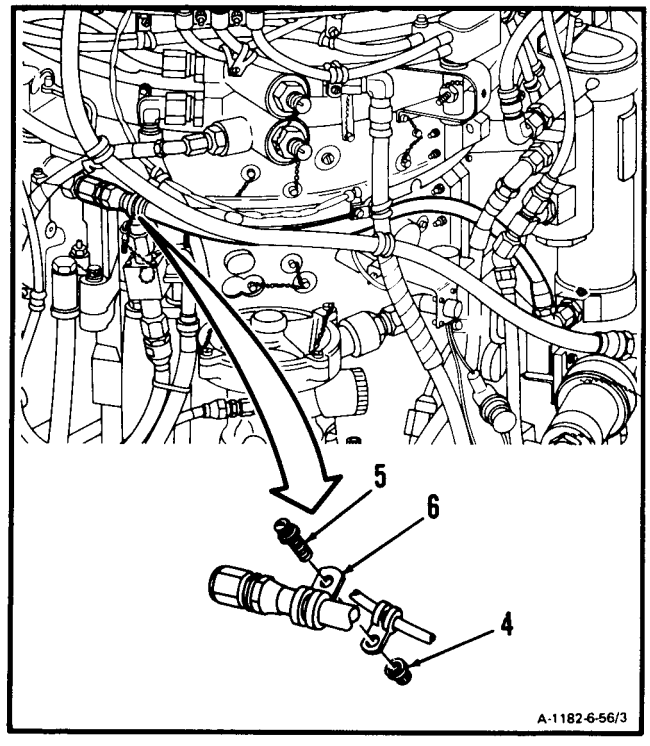
GO TO NEXT PAGE

6-56 REMOVE HOSE ASSEMBLY (FUEL CONTROL TO OIL COOLER) (Continued) 6-56

1. **Remove** nut (1), screw (2) and **clamp (3).**



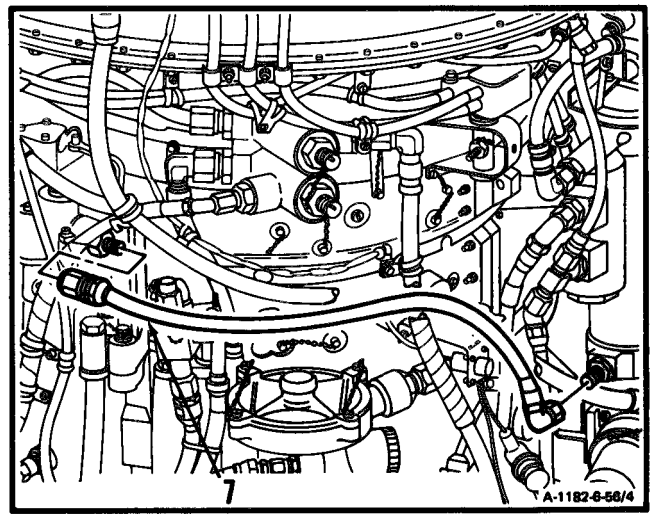
2. **Remove** nut (4), screw (5) and **clamp (6).**

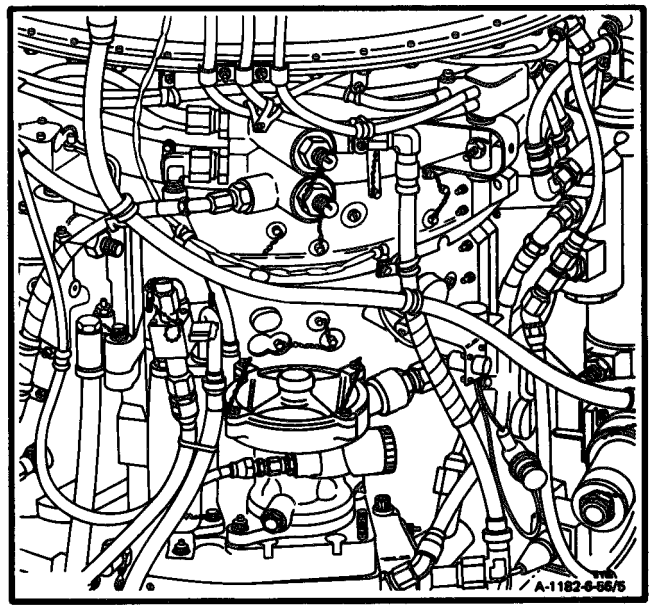


GO TO NEXT PAGE

6-56 REMOVE HOSE ASSEMBLY (FUEL CONTROL TO OIL COOLER) (Continued) 6-56

3. **Disconnect and remove hose assembly (7).**





FOLLOW-ON MAINTENANCE:

None

END OF TASK

6-57 INSTALL HOSE ASSEMBLY(FUEL CONTROL TOOL COOLER) 6-57

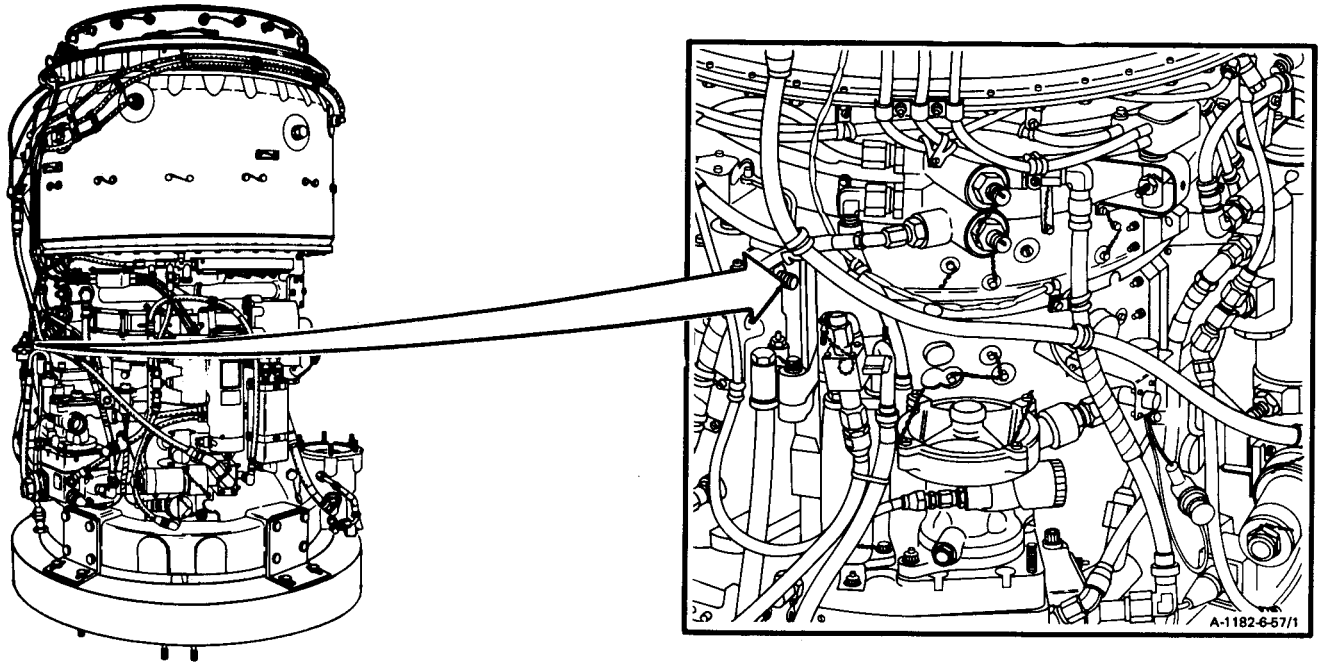
INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
None

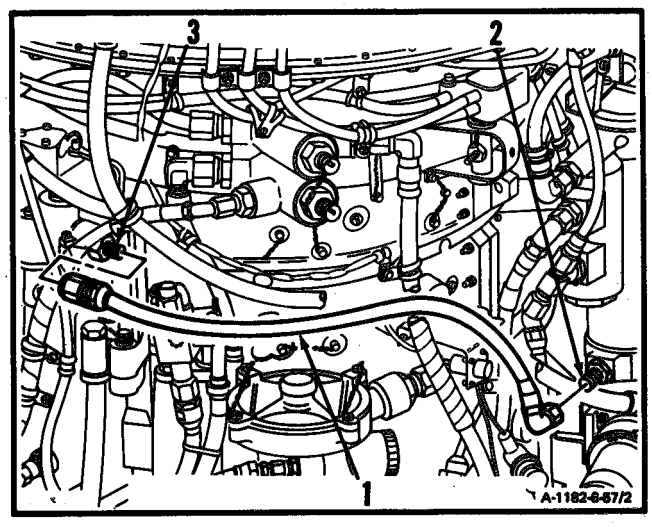
Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector



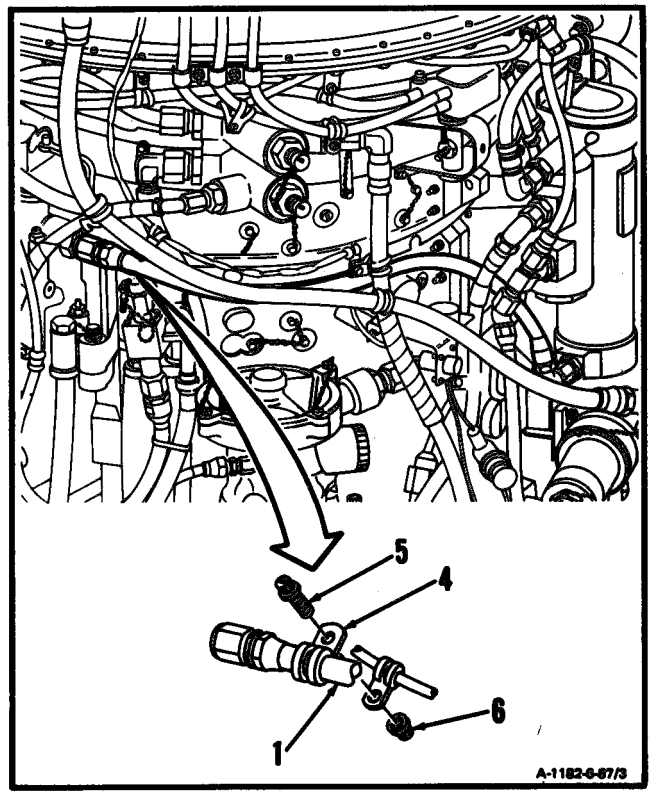
GO TO NEXT PAGE

6-57 INSTALL HOSE ASSEMBLY (FUEL CONTROL TO OIL COOLER) (Continual) 6-57

1. **Install boss assembly (1)** on unions (2 and 3).



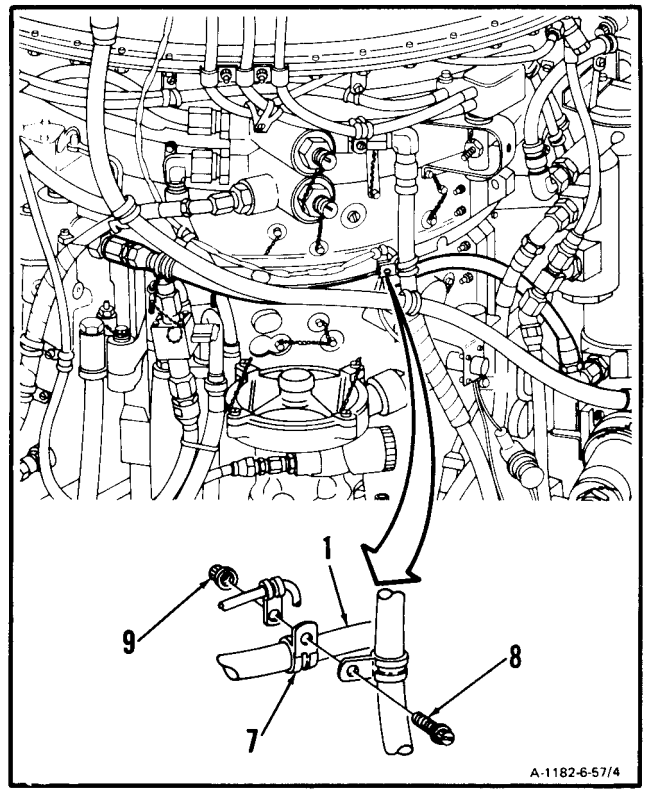
2. **Install clamp (4)** on hose assembly (1) and install screw (5) and nut (6).



GO TO NEXT PAGE

6-57 INSTALL HOSE ASSEMBLY (FUEL CONTROL TO OIL COOLER) (Continued) 6-57

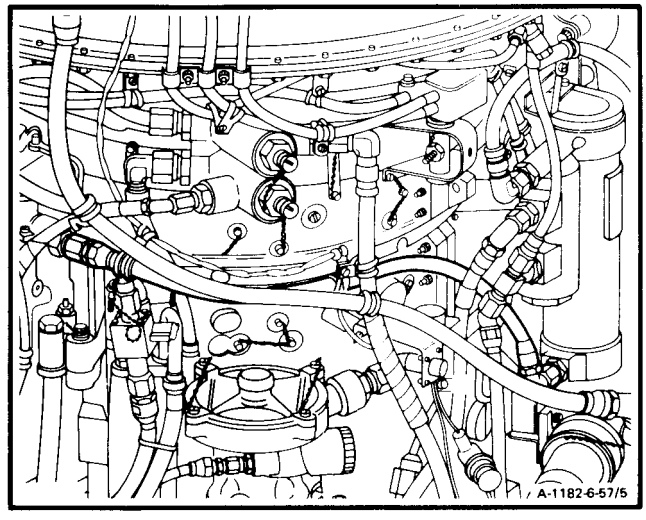
3. **Install clamp (7)** on hose assembly (1) and install screw (8) and nut (9).



INSPECT

FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-58 REMOVE HOSE ASSEMBLY (IN-LINE FUEL FILTER TO FLOW DIVIDER) 6-58

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Container, 1 Quart

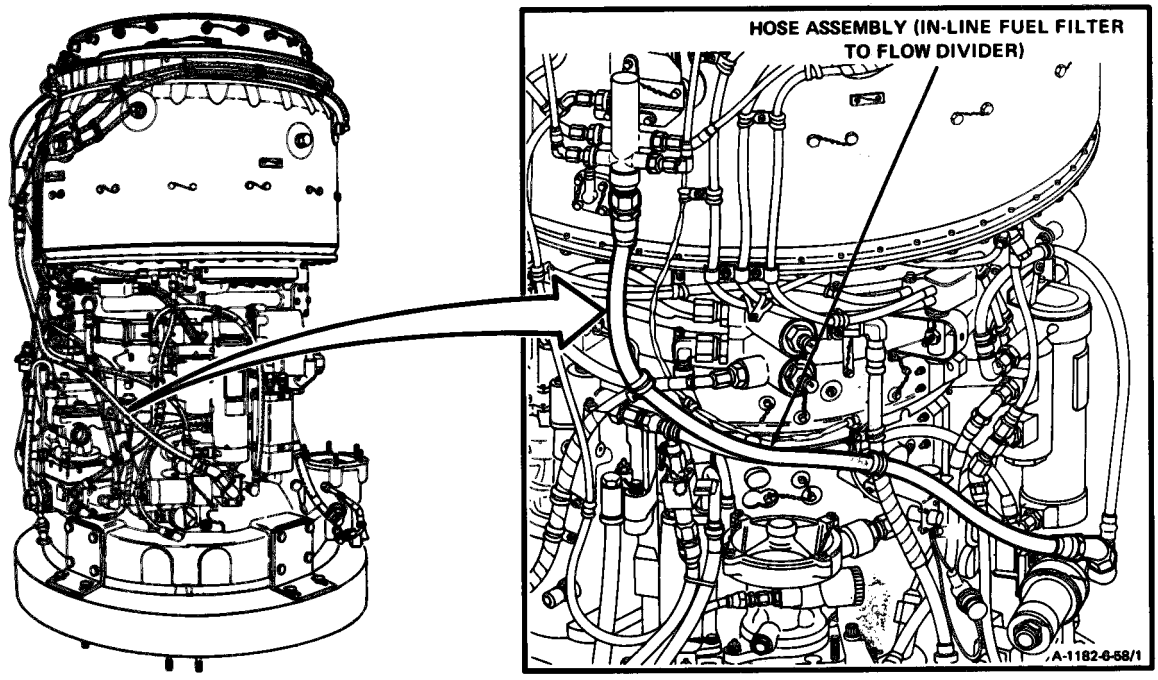
Materials:
Wiping Rag (E58)

Personnel Required:
68B10 Aircraft Powerplant Repairer

General Safety Instructions:

WARNING

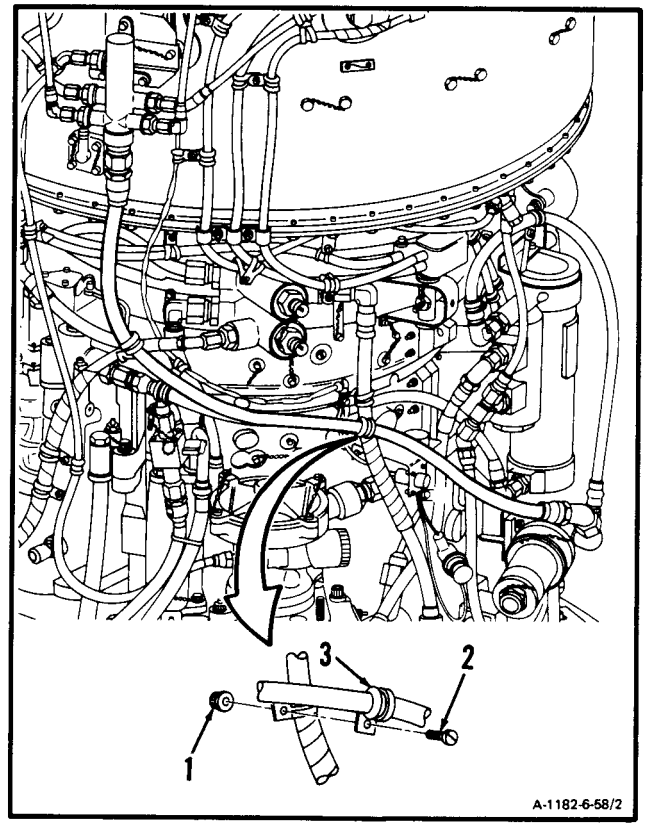
Turbine fuels are very flammable. They may cause drying and irritation of skin or eyes. Handle only in well-ventilated areas away from heat and open flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin and do not take internally. Wash contacted area of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.



GO TO NEXT PAGE

6-58 REMOVE HOSE ASSEMBLY (IN-LINE FUEL FILTER TO FLOW DIVIDER) (Continued) 6-58

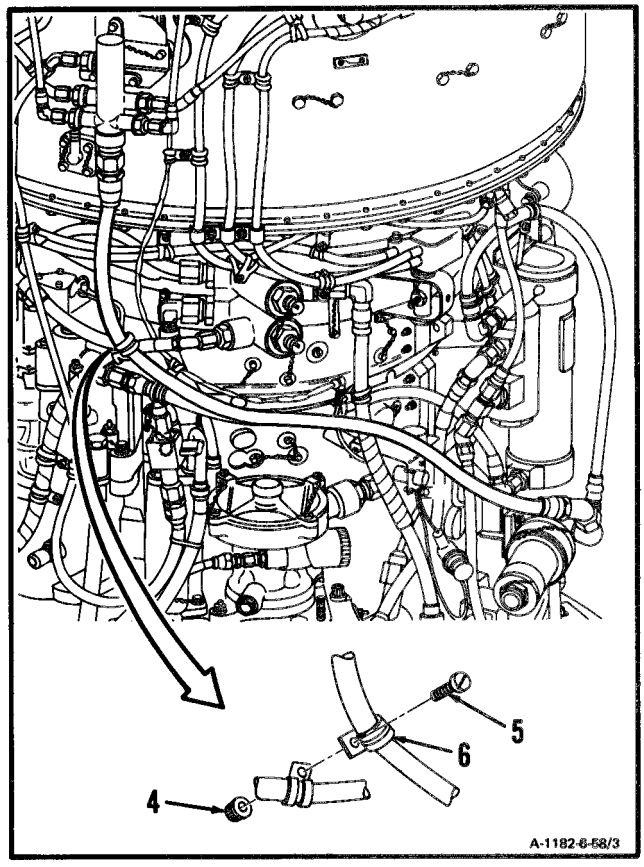
1. **Remove** nut (1), screw (2), and **clamp (3).**



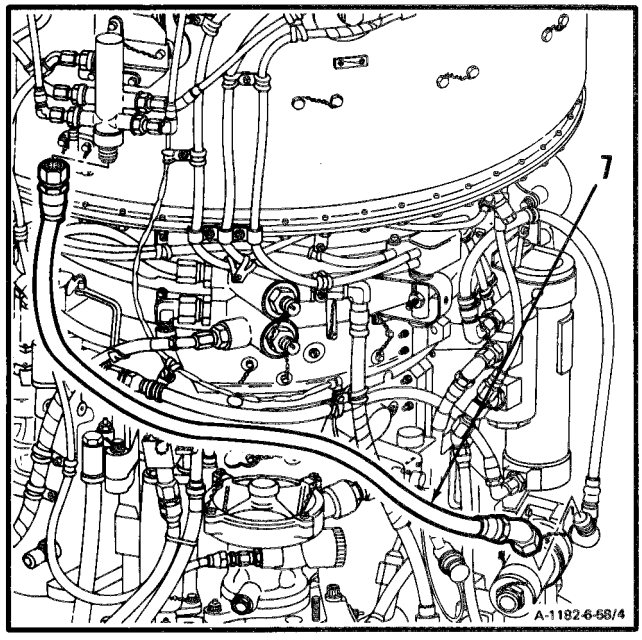
GO TO NEXT PAGE

6-58 REMOVE HOSE ASSEMBLY (IN-LINE FUEL FILTER TO FLOW DIVIDER) (Continual) 6-58

2. **Remove** nut (4), screw (5), **and clamp (6).**



3. **Disconnect and remove hose assembly (7).**

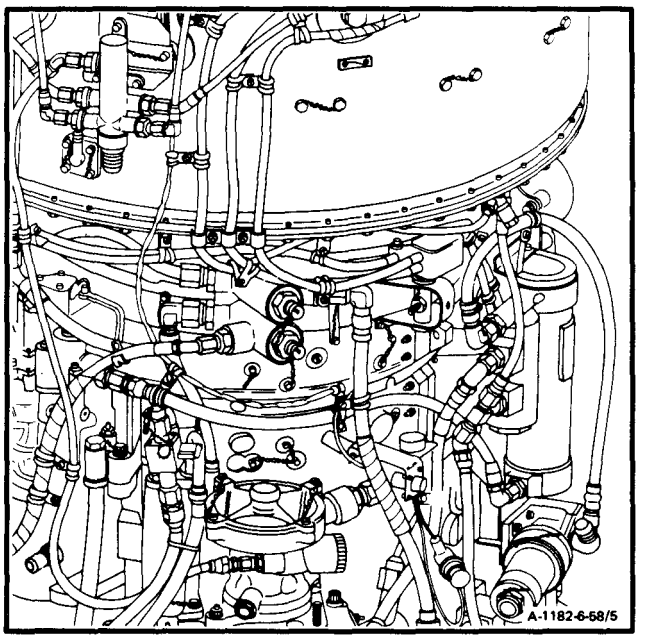


GO TO NEXT PAGE

6-58 REMOVE HOSE ASSEMBLY (IN-LINE FUEL FILTER TO FLOW DIVIDER) (Continued) 6-58

FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-59 INSTALL HOSE ASSEMBLY (IN-LINE FUEL FILTER TO FLOW DIVIDER) 6-59

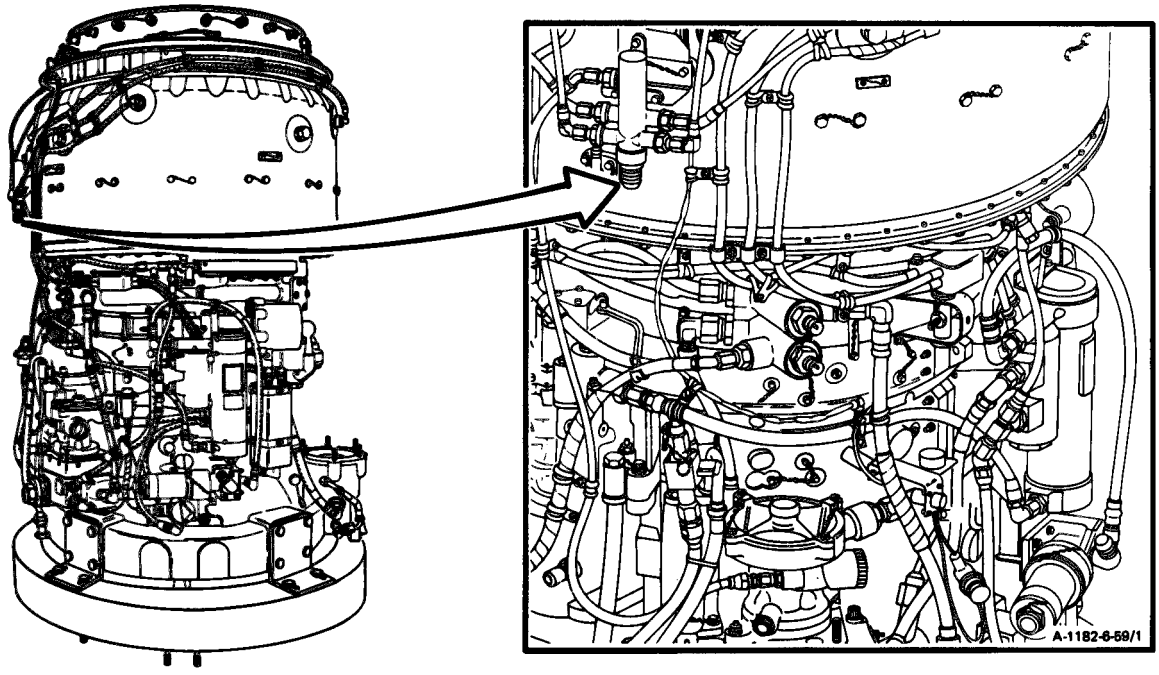
INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
None

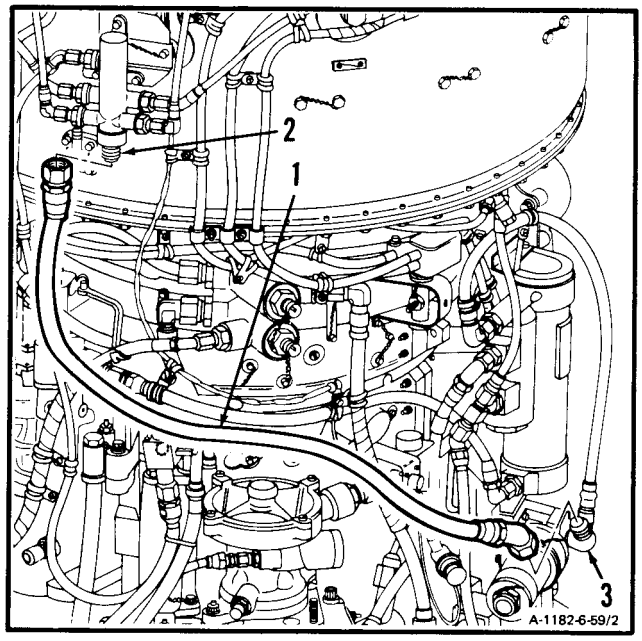
Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector



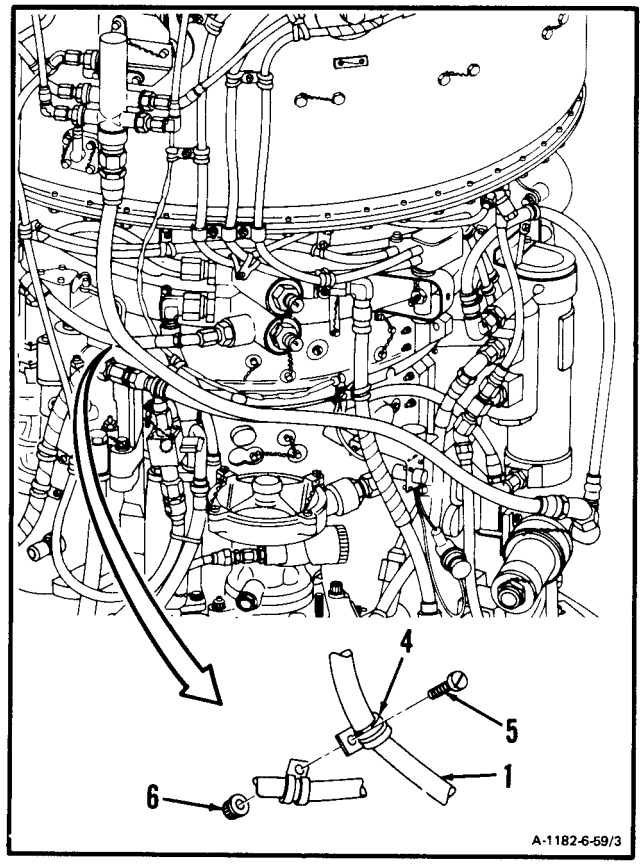
GO TO NEXT PAGE

6-59 INSTALL HOSE ASSEMBLY (IN-LINE FUEL FILTER TO FLOW DIVIDER) (Continued) 6-59

1. **Install hose assembly (1)** on unions (2 and 3).



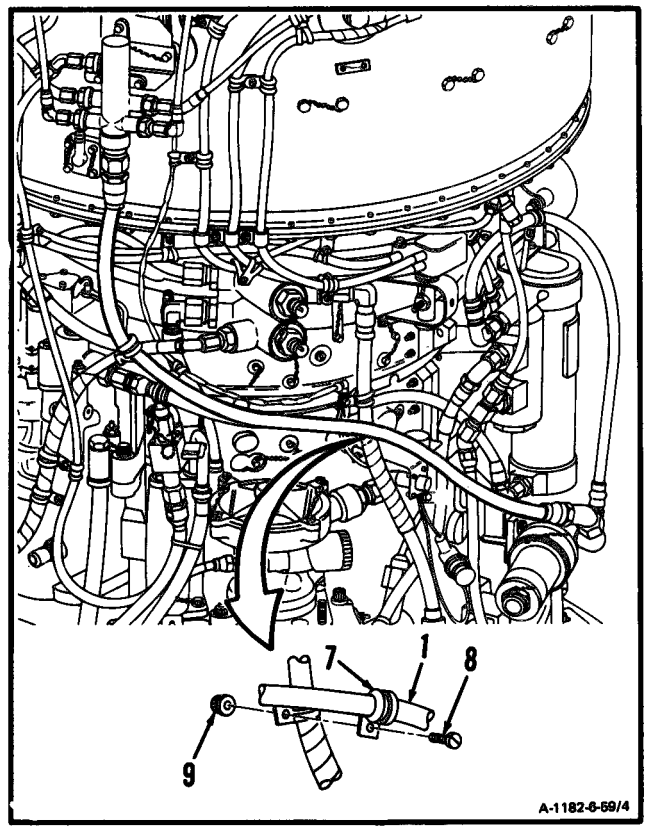
2. **Install clamp (4)** on hose assembly (1), and install screw (5) and nut (6).



GO TO NEXT PAGE

6-59 INSTALL HOSE ASSEMBLY (IN-LINE FUEL FILTER TO FLOW DIVIDER) (Continued) 6-59

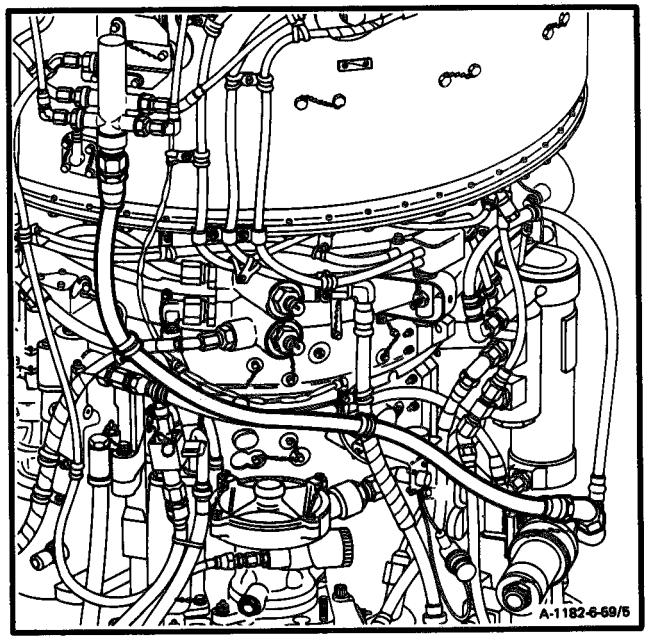
3. **Install clamp (7)** on hose assembly (1), and install screw (8) and nut (9).



INSPECT

FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-60 REMOVE HOSE ASSEMBLY (FUEL BOOST PUMP TO MAIN FUEL FILTER) 6-60

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Open-End Wrench, 1-Inch
Container, 1 Quart

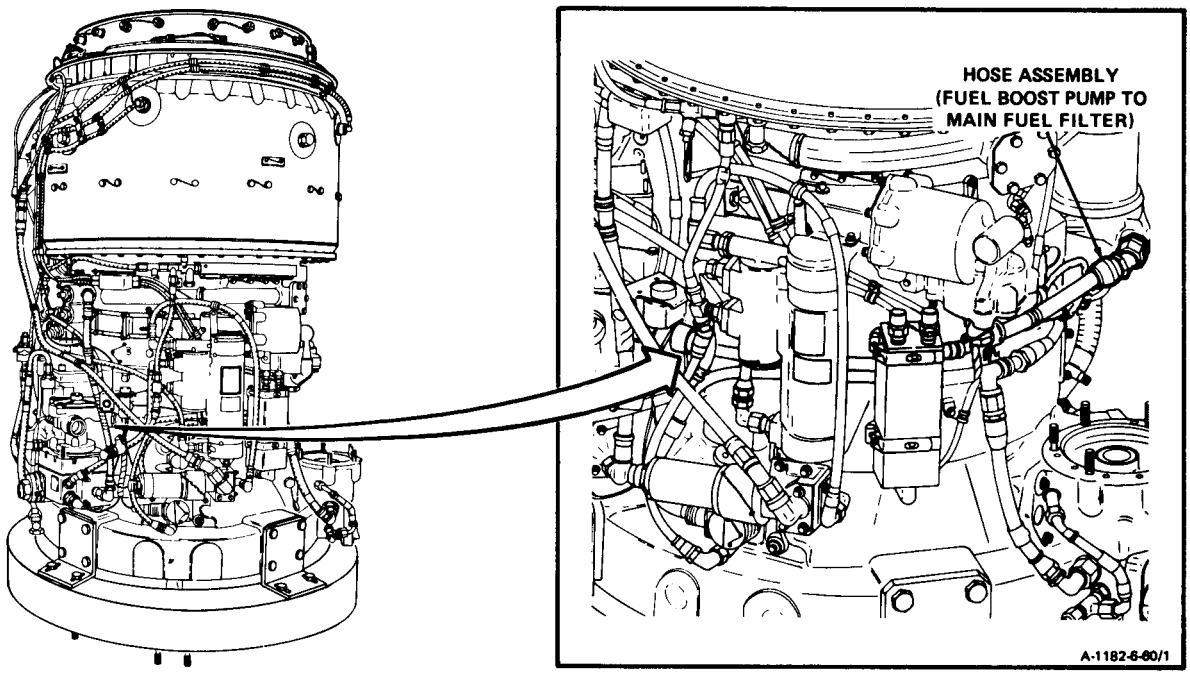
Materials:
Wiping Rag (E58)

Personnel Required:
68B10 Aircraft Powerplant Repairer

General Safety Instructions:

WARNING

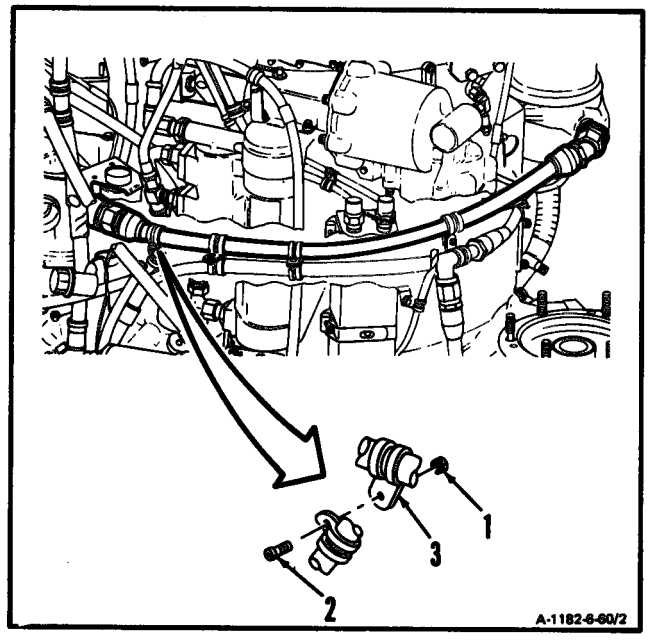
Turbine fuels are very flammable. They may cause drying and irritation of skin or eyes. Handle only in well-ventilated areas away from heat and open flame. Drain and store in approved metal safety containers. Avoid prolonged or repeatad contact with skin and do not take internally. Wash contacted area of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.



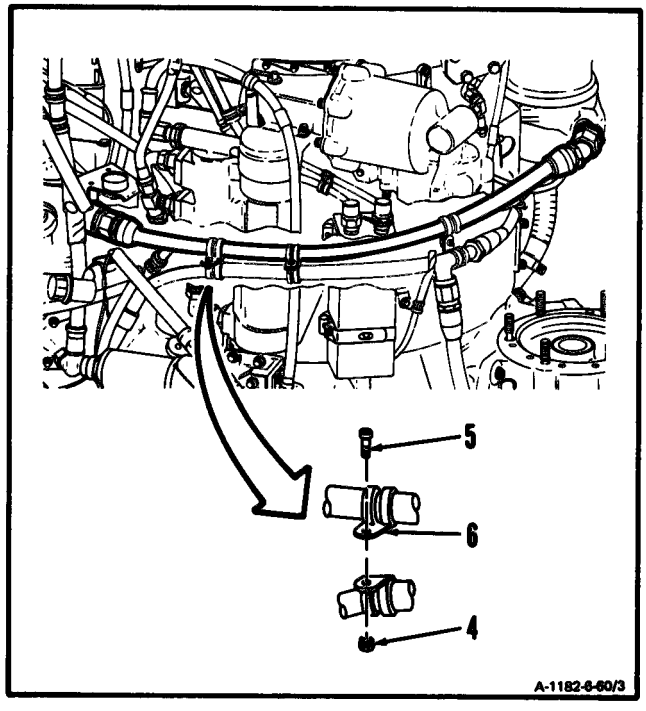
GO TO NEXT PAGE

6-60 REMOVE HOSE ASSEMBLY (FUEL BOOST PUMP TO MAIN FUEL FILTER) (Continued) 6-60

1. **Remove** nut (1), screw (2), and clamp (3).



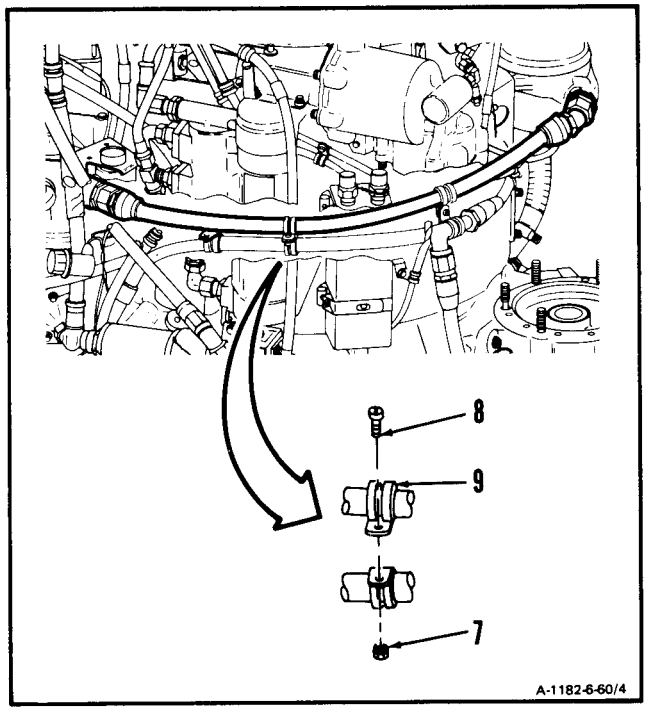
2. **Remove** nut (4), screw (5), and **clamp (6).**



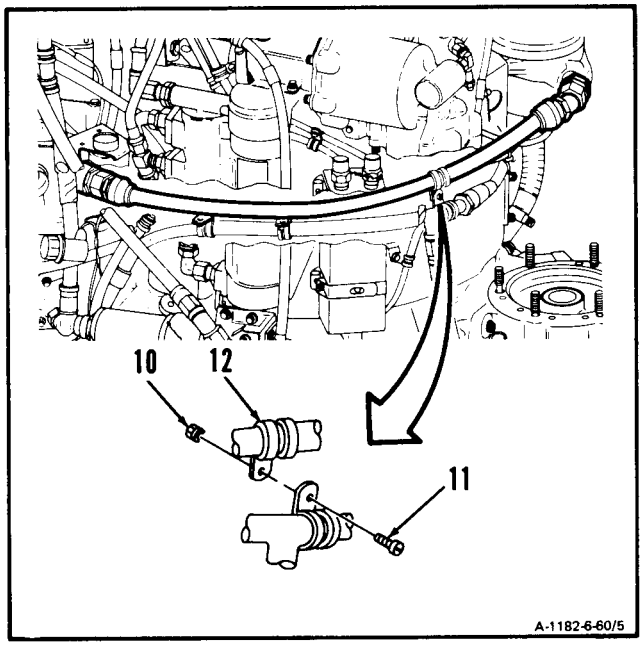
GO TO NEXT PAGE

6-60 REMOVE HOSE ASSEMBLY (FUEL BOOST PUMP TO MAIN FUEL FILTER) (Continued) 6-60

3. **Remove** nut (7), screw (8), and **clamp (9).**



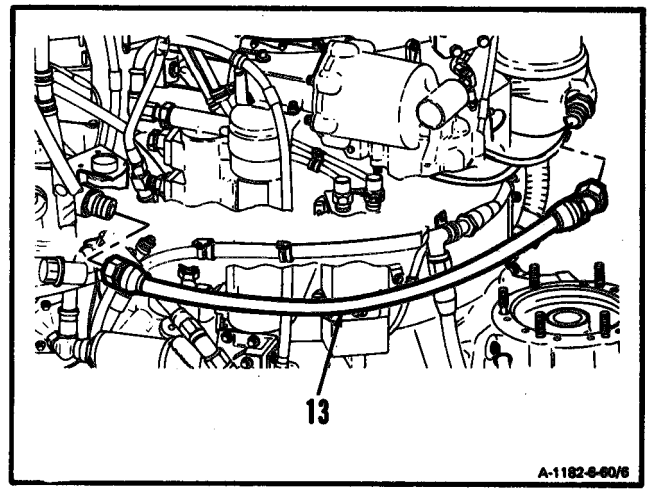
4. **Remove** nut (10), screw (11), and **clamp (12).**



GO TO NEXT PAGE

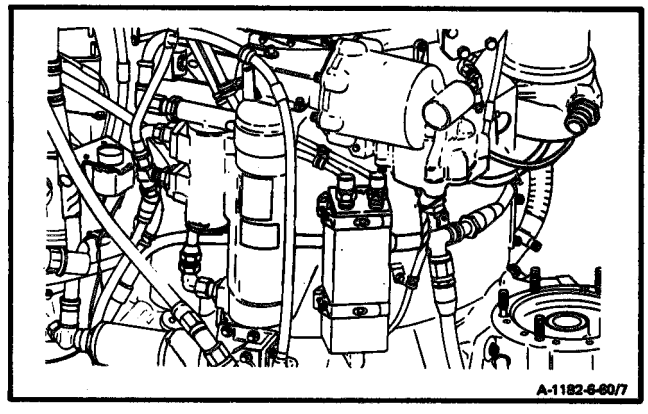
6-60 REMOVE HOSE ASSEMBLY (FUEL BOOST PUMP TO MAIN FUEL FILTER) (Continued) 6-60

5. Disconnect and **remove hose assembly (13).** Use 1-inch open-end wrench.



FOLLOW-ON MAINTENANCE;

None



END OF TASK

6-61 INSTALL HOSE ASSEMBLY (FUEL BOOST PUMP TO MAIN FUEL FILTER) 6-61

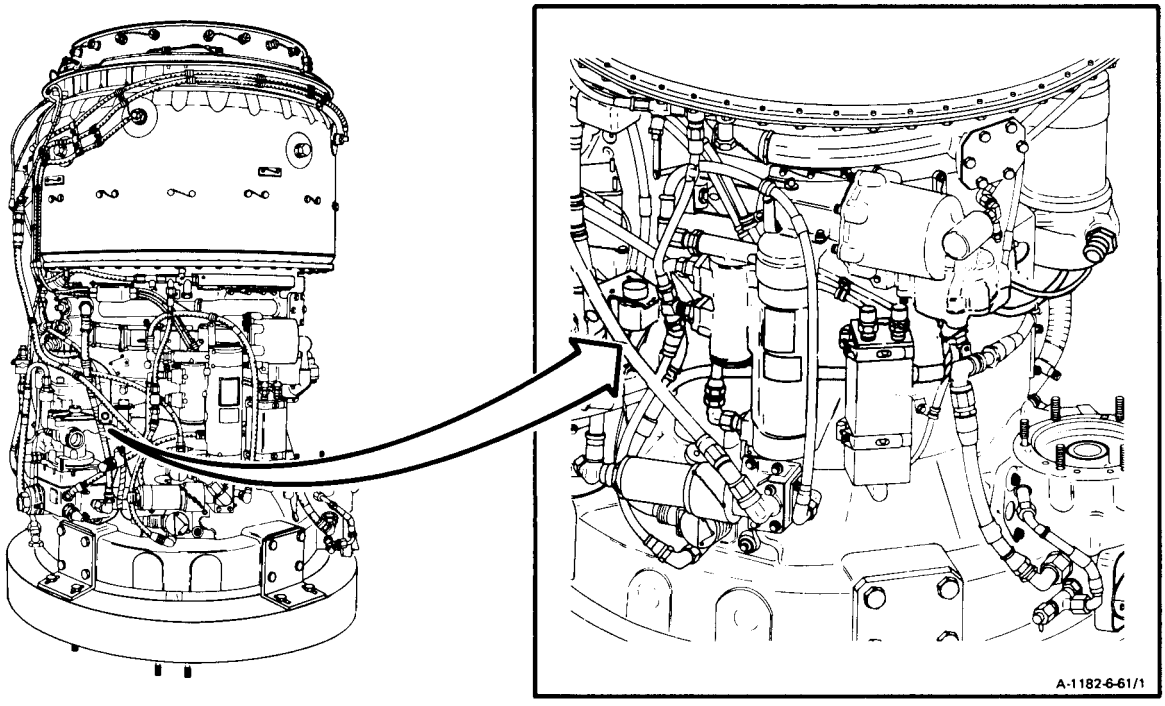
INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114
Open-End Wrench, 1-inch

Materials:
None

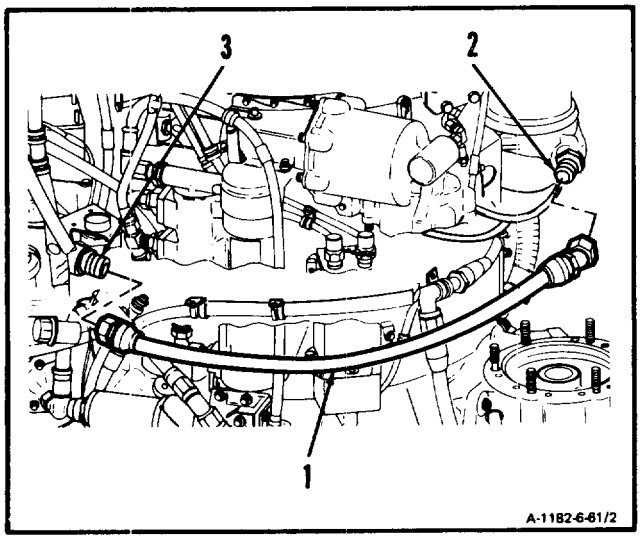
Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector



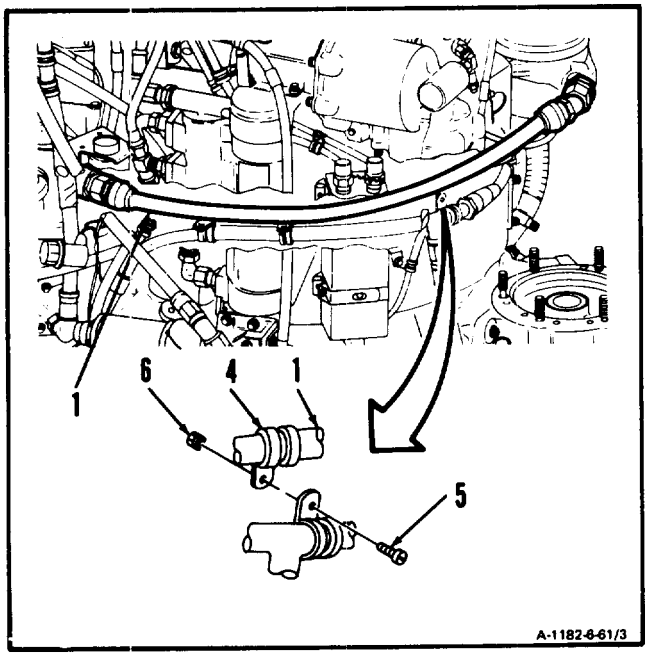
GO TO NEXT PAGE

6-61 INSTALL HOSE ASSEMBLY (FUEL BOOST PUMP TO MAIN FUEL FILTER) (Continued) 6-61

1. **Install hose assembly (1)** on nipples (2 and 3). Use 1-inch open-end wrench.



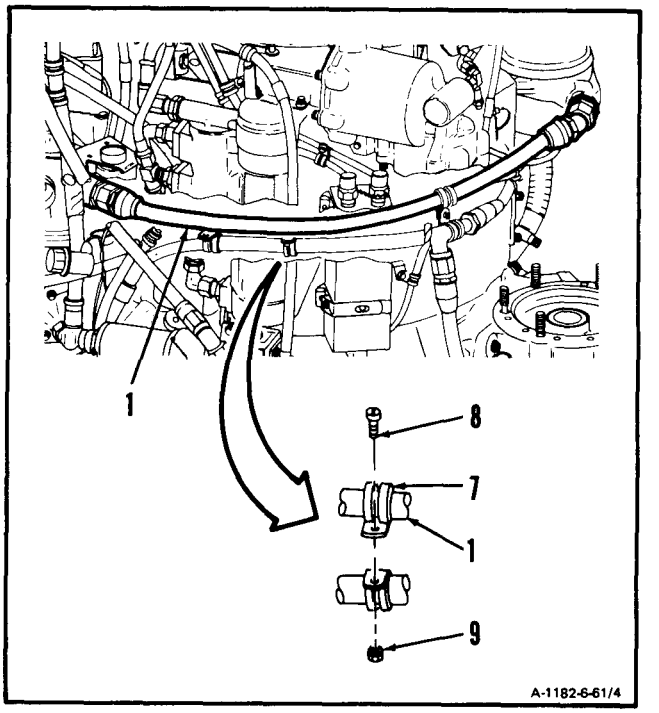
2. **Install clamp (4)** on hose assembly (1), and install screw (5) and nut (6).



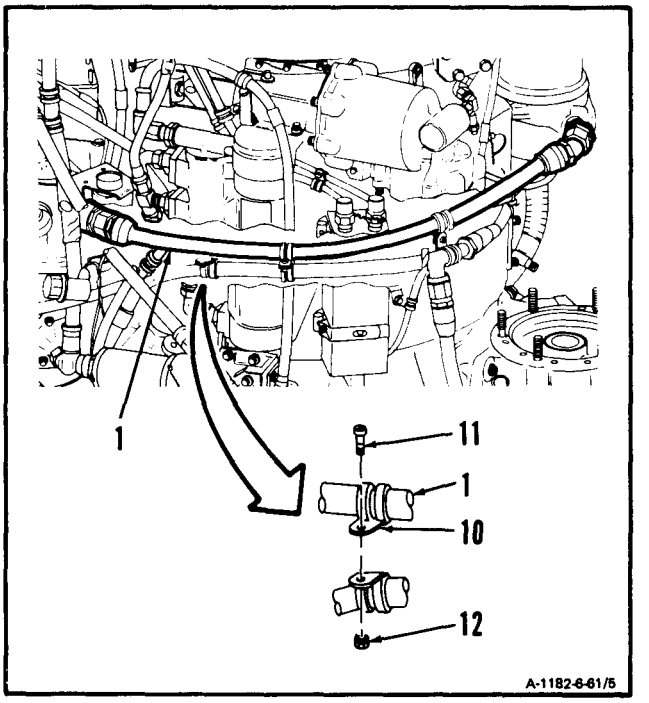
GO TO NEXT PAGE

6-61 INSTALL HOSE ASSEMBLY (FUEL BOOST PUMP TO MAIN FUEL FILTER) (Continued) 6-61

3. **Install clamp (7)** on hose assembly (1), and install screw (8) and nut (9).



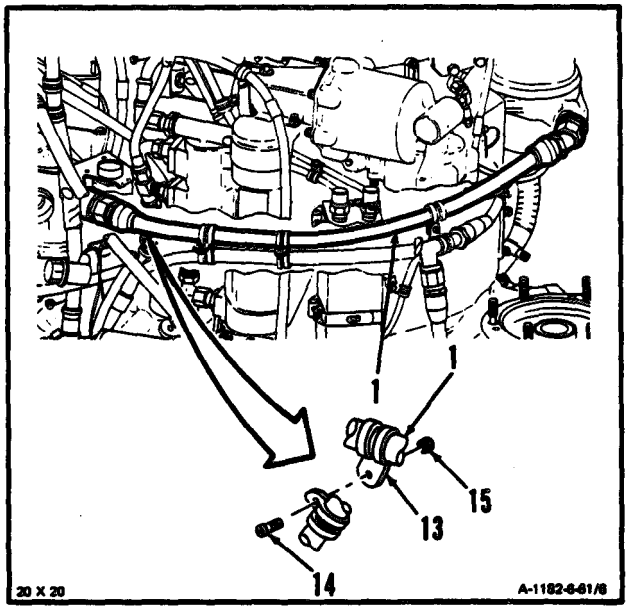
4. **Instal clamp (10)** on hose assembly (1), and install screw (1 1) and nut (12).



GO TO NEXT PAGE

6-61 INSTALL HOSE ASSEMBLY (FUEL BOOST PUMP TO MAIN FUEL FILTER) (Continued) 6-61

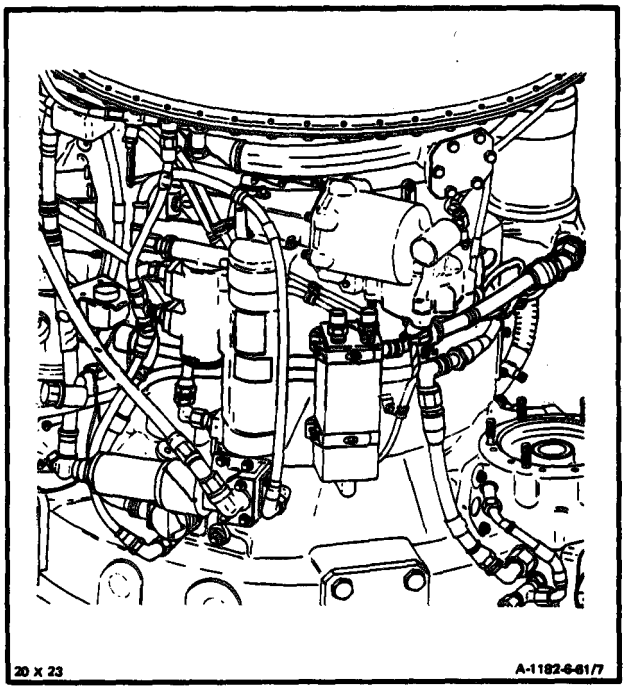
5. **Install clamp (13)** on hose assembly (1), and install straw (14) and nut (15).



INSPECT

FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-62 REMOVE HOSE ASSEMBLY (FUEL CHECK VALVE TO FUEL BOOST PUMP) 6-62

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Container, 1 Quart

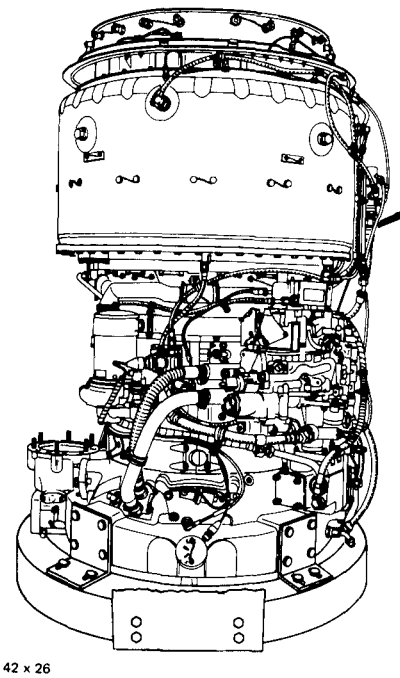
Materials:
Wiping Rag (E58)

Personnel Required:
68B10 Aircraft Powerplant Repairer

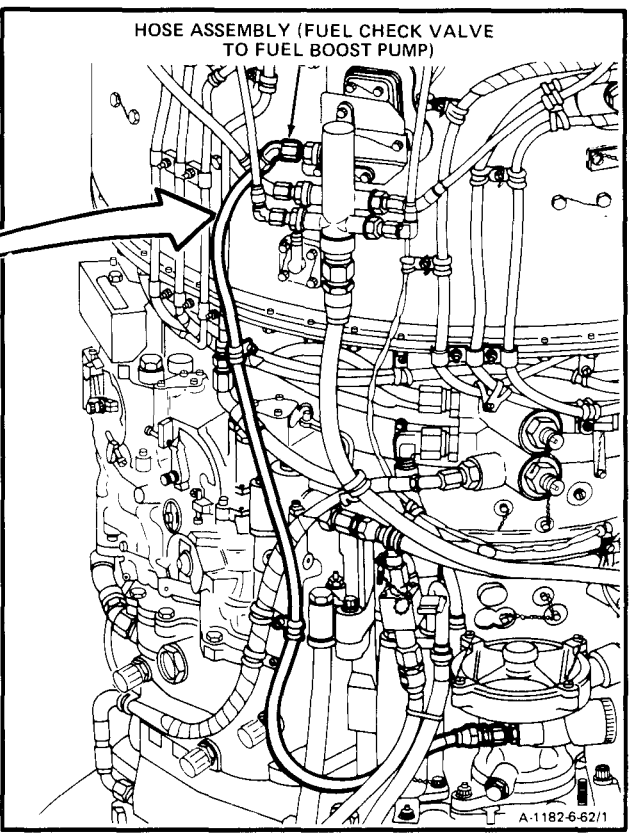
General Safety Instructions:

WARNING

Turbine fuels are very flammable. They may cause drying and irritation of skin or eyes. Handle only in well-ventilated areas away from heat and open flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin, and do not take internally. Wash contacted areas of skin thoroughly after handling, If irritation of skin results, get medical attention. Get medical attention for eyes.



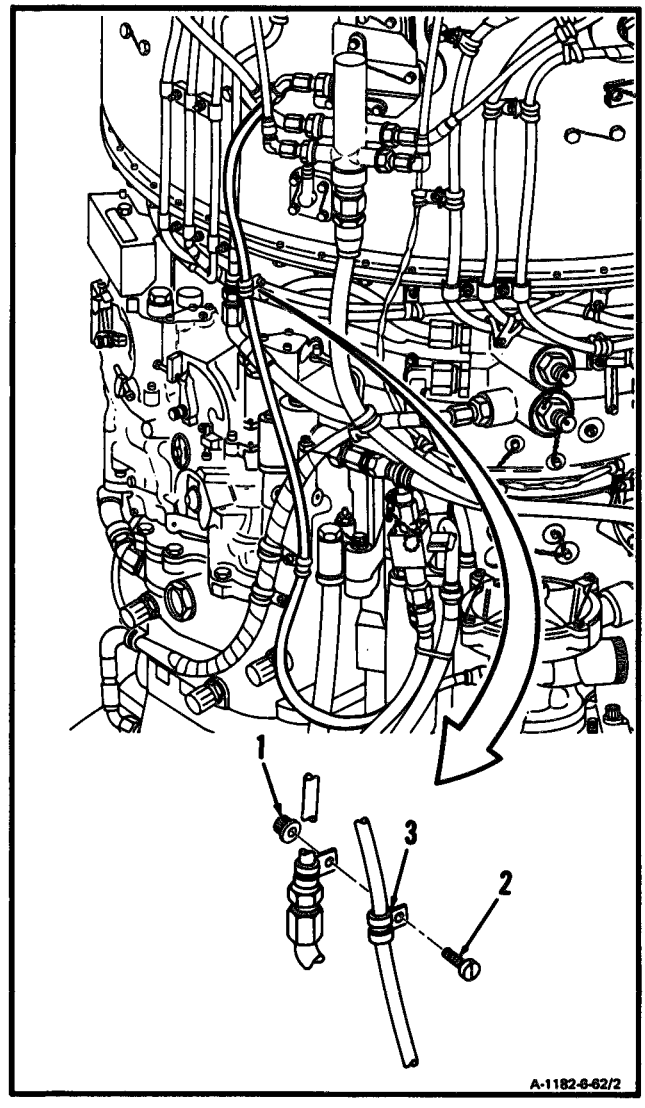
42 x 26



GO TO NEXT PAGE

6-62 REMOVE HOSE ASSEMBLY (FUEL CHECK VALVE TO FUEL BOOST PUMP) (Continued) 6-62

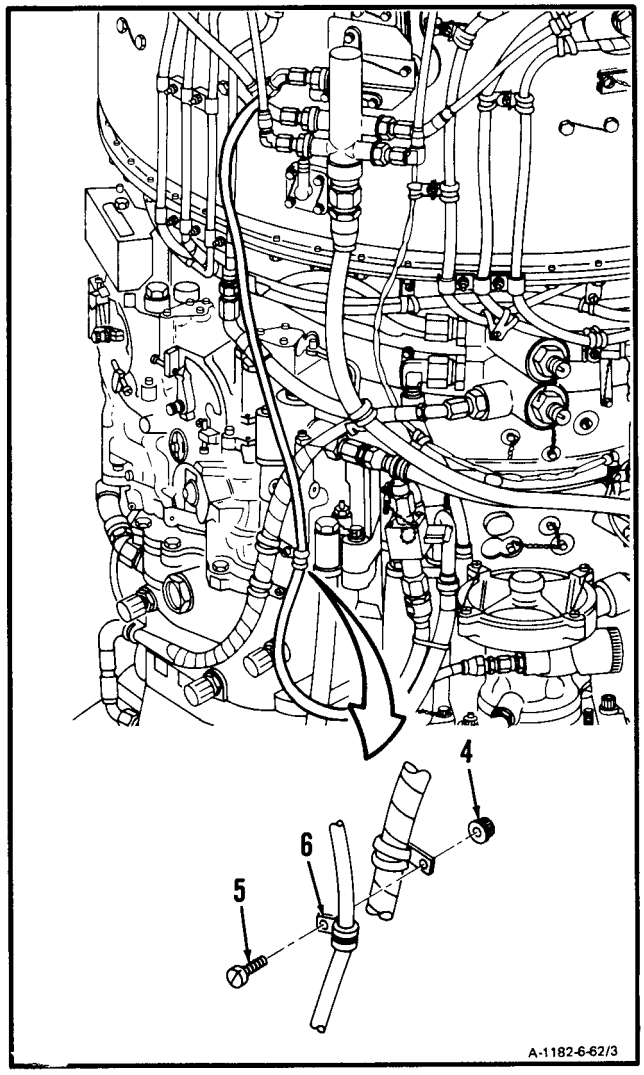
1. **Remove** nut (1), screw (2), and **clamp (3).**



GO TO NEXT PAGE

6-62 REMOVE HOSE ASSEMBLY(FUEL CHECK VALVE TO FUEL BOOST PUMP)(Continued) 6-62

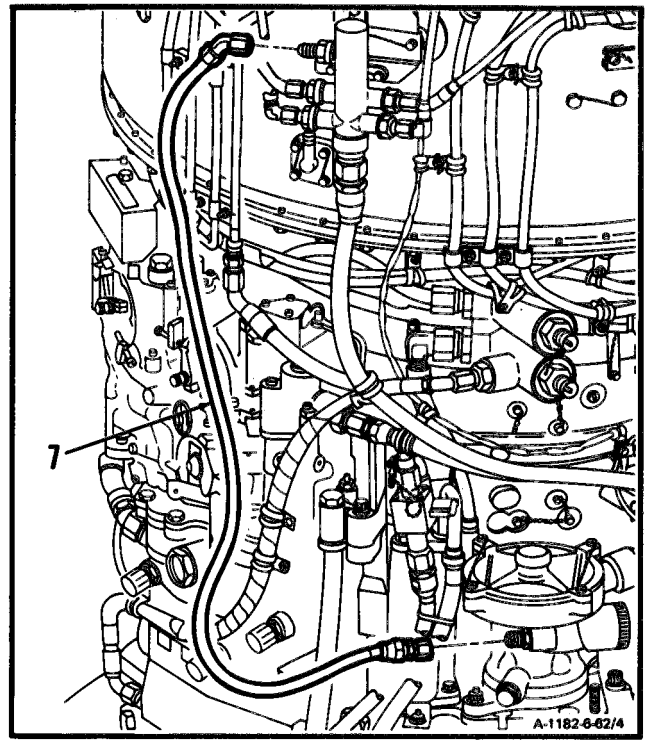
2. **Remove** nut (4), screw (5), and **clamp (6).**



GO TO NEXT PAGE

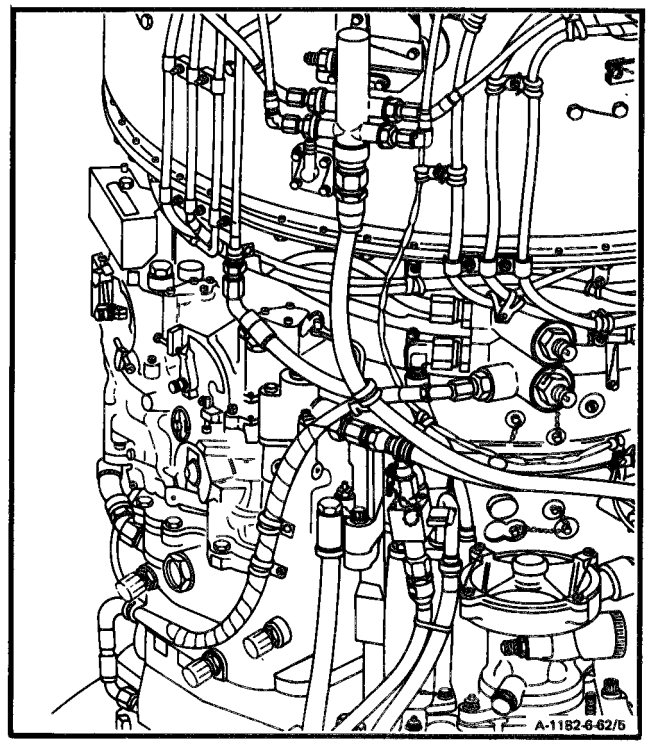
6-62 REMOVE HOSE ASSEMBLY (FUEL CHECK VALVE TO FUEL BOOST PUMP) (Continued) 6-62

3. Disconnect and **remove hose assembly (7).**



FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-63 INSTALL HOSE ASSEMBLY (FUEL CHECK VALVE TO FUEL BOOST PUMP) 6-63

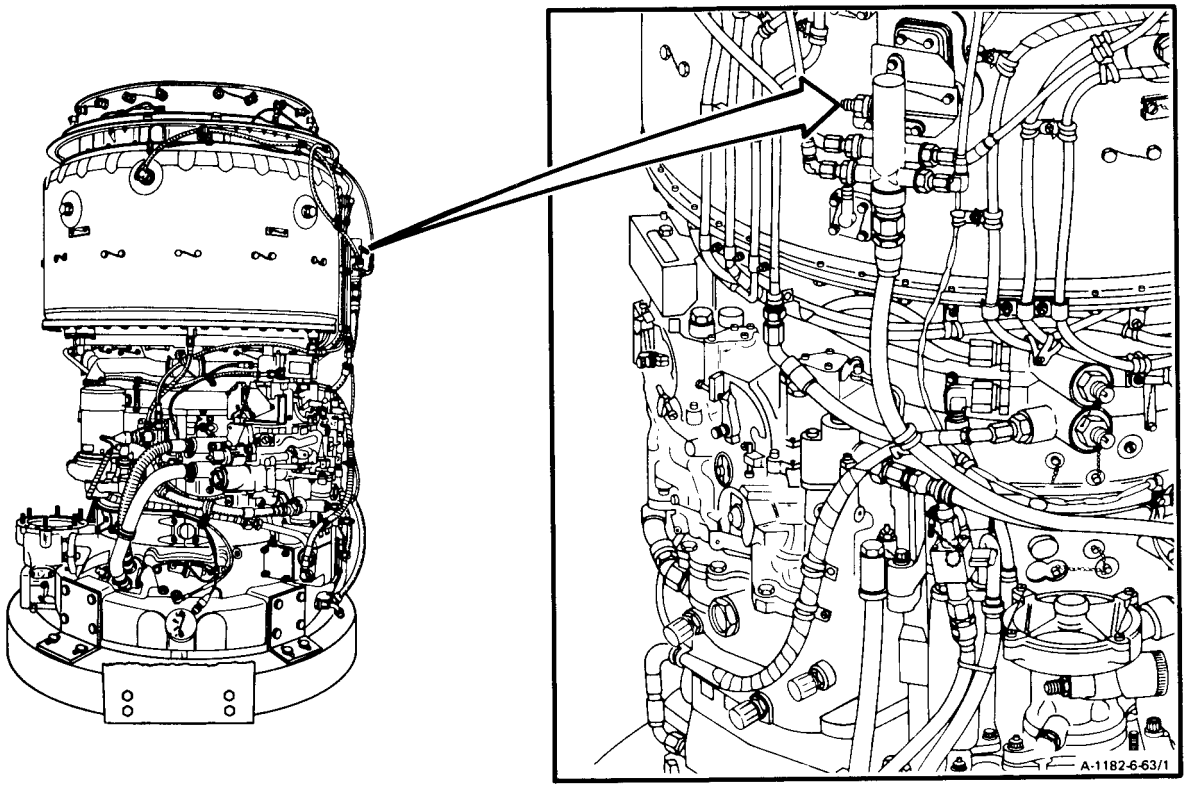
INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
None

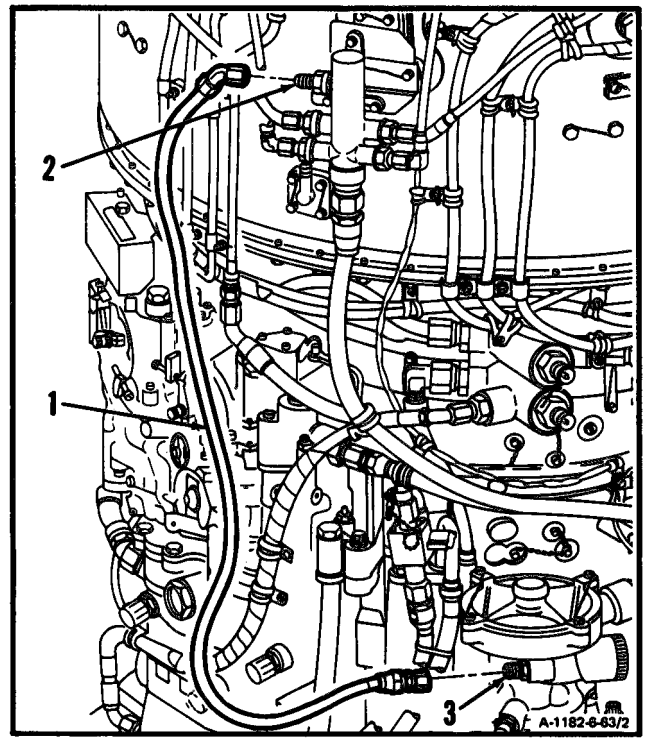
Personnel Required:
68B10 Aircraft Powerplant Repairer
681330 Aircraft Powerplant Inspector



GO TO NEXT PAGE

6-63 INSTALLHOSE ASSEMBLY (FUEL CHECK VALVE TO FUEL BOOST PUMP) (Continued) 6-63

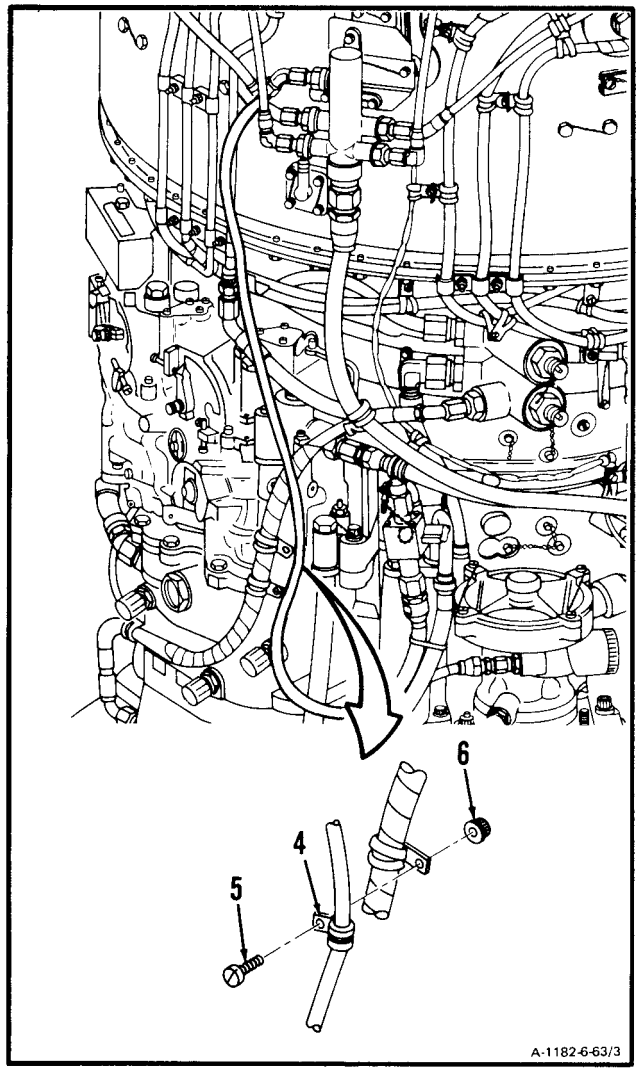
1. **Install hose assembly (1)** on check valve (2) and nipple (3).



GO TO NEXT PAGE

6-63 INSTALL HOSE ASSEMBLY (FUEL CHECK VALVE TO FUEL BOOST PUMP) (Continued) 6-63

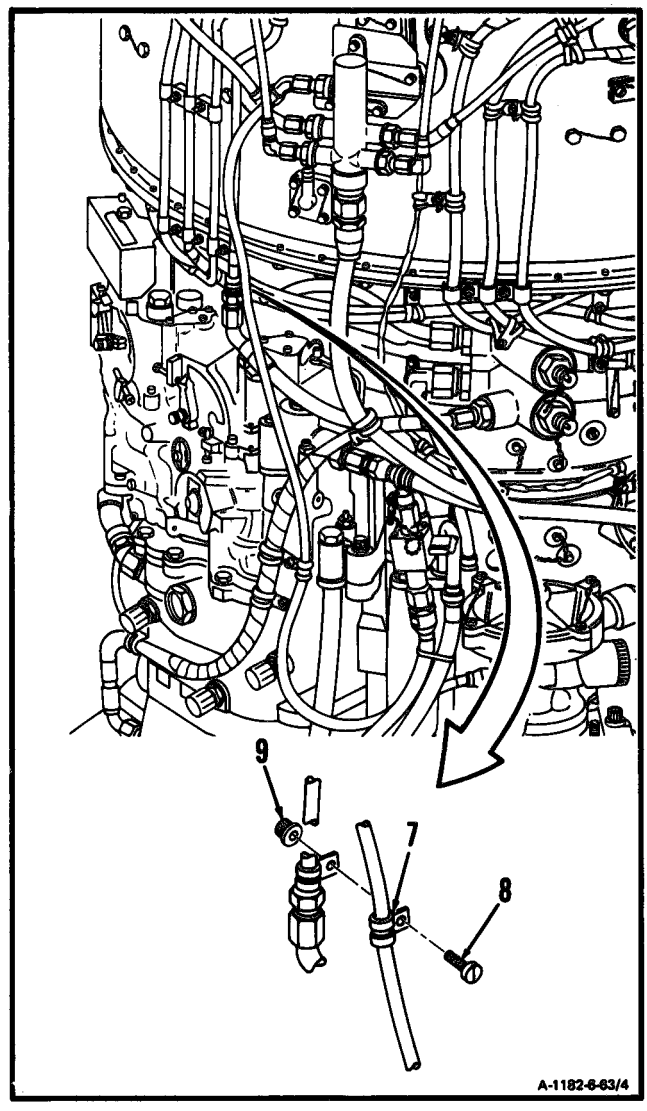
2. **Install clamp (4),** screw (5), and nut (6).



GO TO NEXT PAGE

6-63 INSTALL HOSE ASSEMBLY (FUEL CHECK VALVE TO FUEL BOOST PUMP) (Continued) 6-63

3. **Install clamp (7),** screw (8), and nut (9).



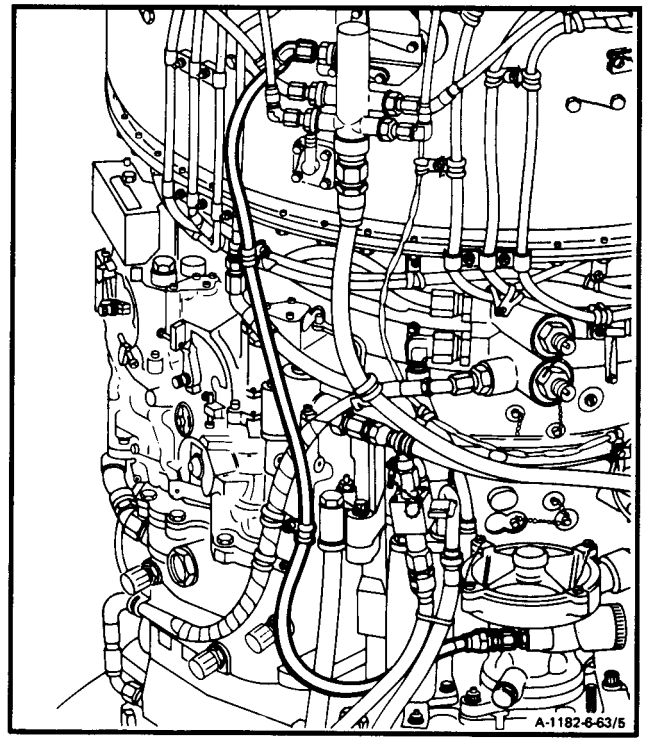
INSPECT

GO TO NEXT PAGE

6-63 INSTALL HOSE ASSEMBLY (FUEL CHECK VALVE TO FUEL BOOST PUMP) (Continua) 6-63

FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-64 REMOVE HOSE ASSEMBLY (FLOW DIVIDER LEFT SIDE PRIMARY TO MANIFOLD ASSEMBLY) 6-64

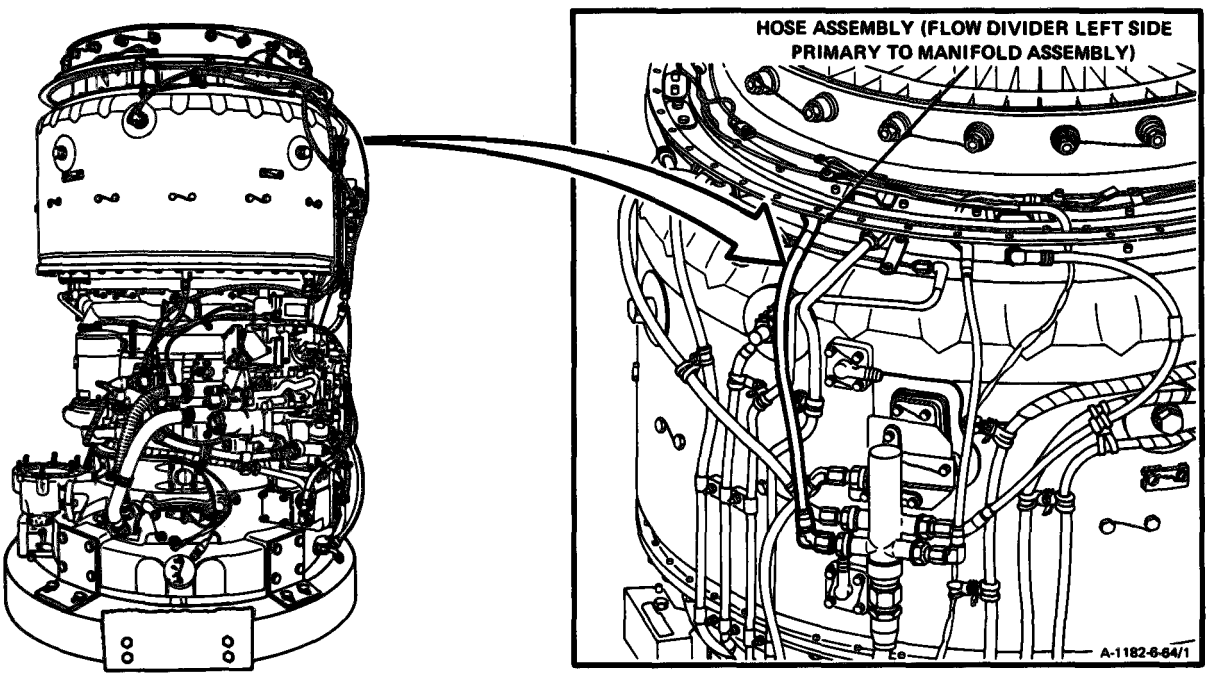
INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit, NSN 5180-00-323-4944
Container, 1 Quart

Materials:
Wiping Rag (E58)

Personnel Required:
68B10 Aircraft Powerplant Repairer



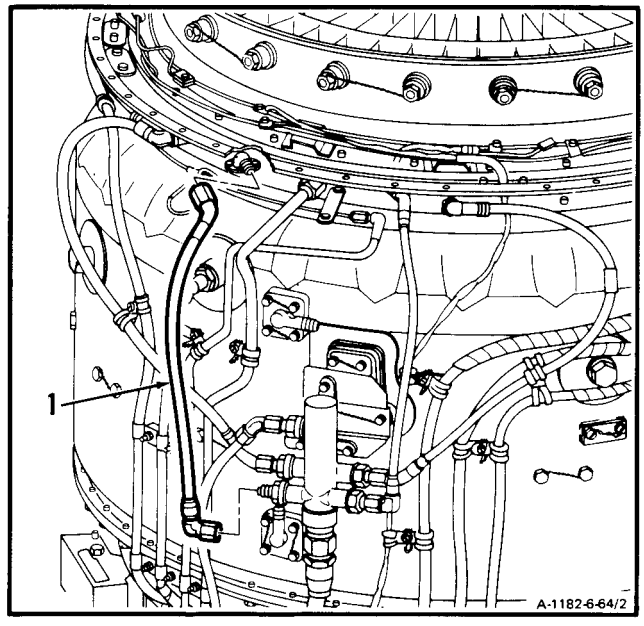
GO TO NEXT PAGE

6-64 REMOVE HOSE ASSEMBLY (FLOW DIVIDER LEFT SIDE PRIMARY TO MANIFOLD ASSEMBLY) (Continued)

WARNING

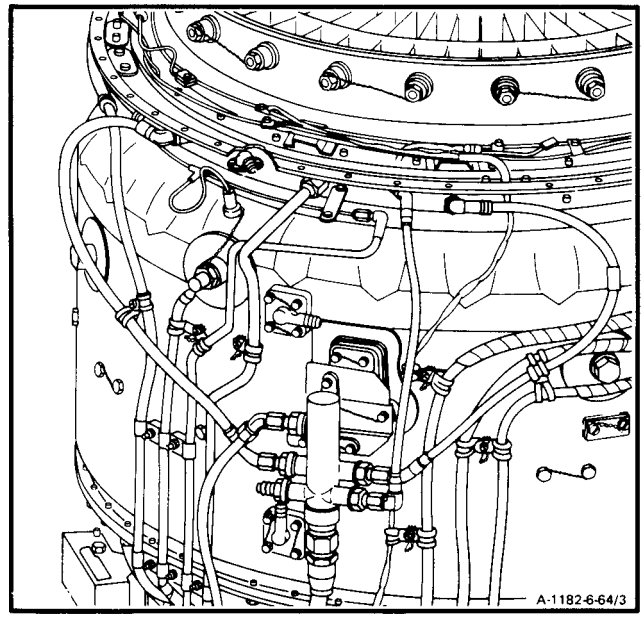
Turbine fuels are very flammable. They may cause drying and irritation of skin or eyes. Handle only in well-ventilated areas away from heat and open flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin, and do not take internally, Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.

1. **Disconnect and remove hose assembly (1).**



FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-65 INSTALL HOSE ASSEMBLY (FLOW DIVIDER LEFT SIDE PRIMARY TO MANIFOLD ASSEMBLY) 6-65

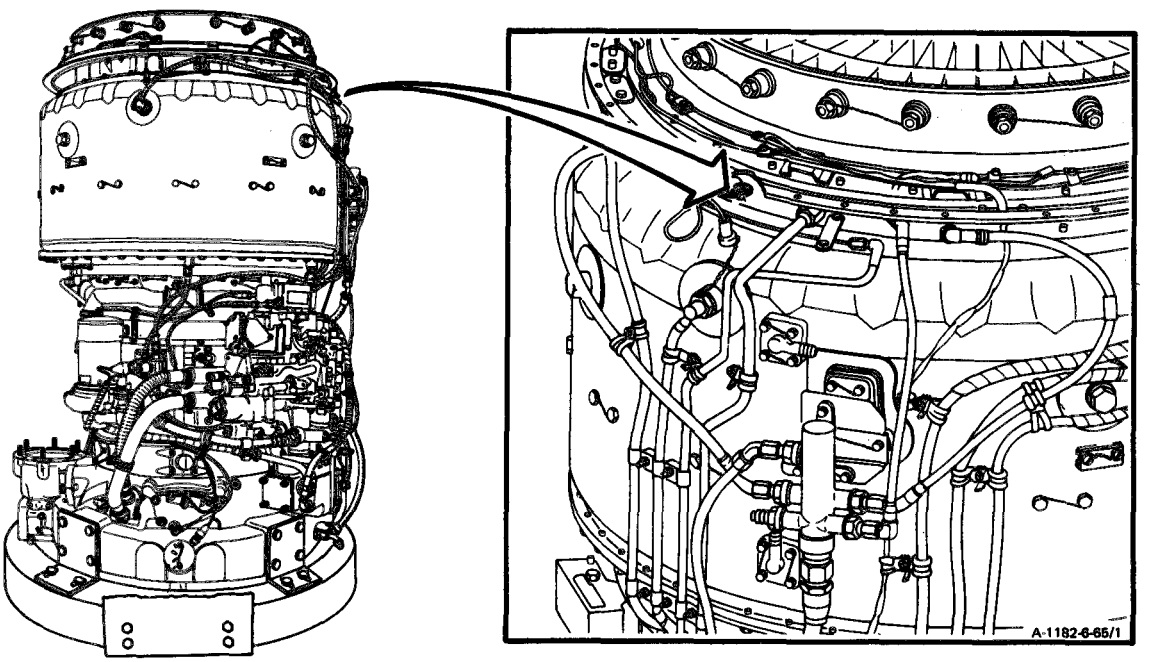
INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4994
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
None

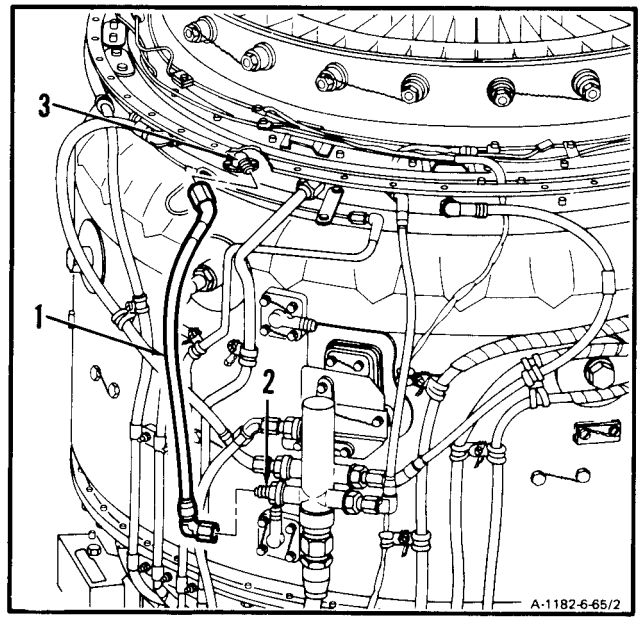
Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector



GO TO NEXT PAGE

6-65 INSTALL HOSE ASSEMBLY (FLOW DIVIDER LEFT SIDE PRIMARY TO MANIFOLD ASSEMBLY) (Continued) 6-65

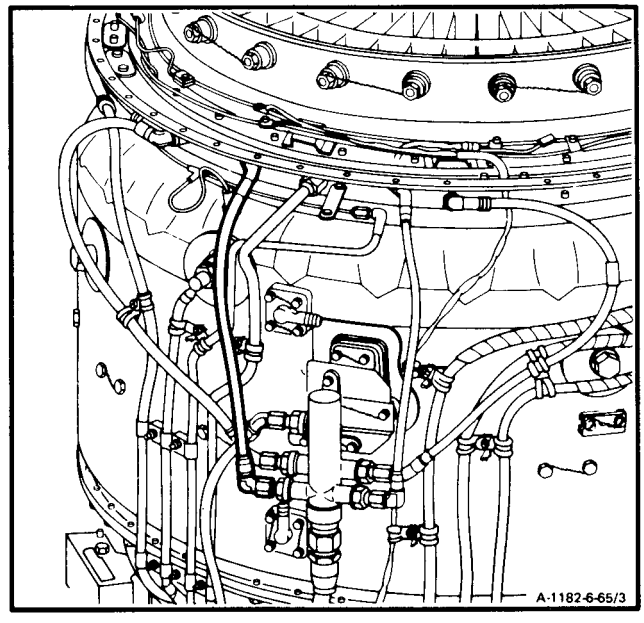
1. **Install hose assembly (1)** on nipple (2) and elbow (3).



INSPECT

FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-66 REMOVE HOSE ASSEMBLY (FLOW DIVIDER RIGHT SIDE PRIMARY TO MANIFOLD ASSEMBLY)

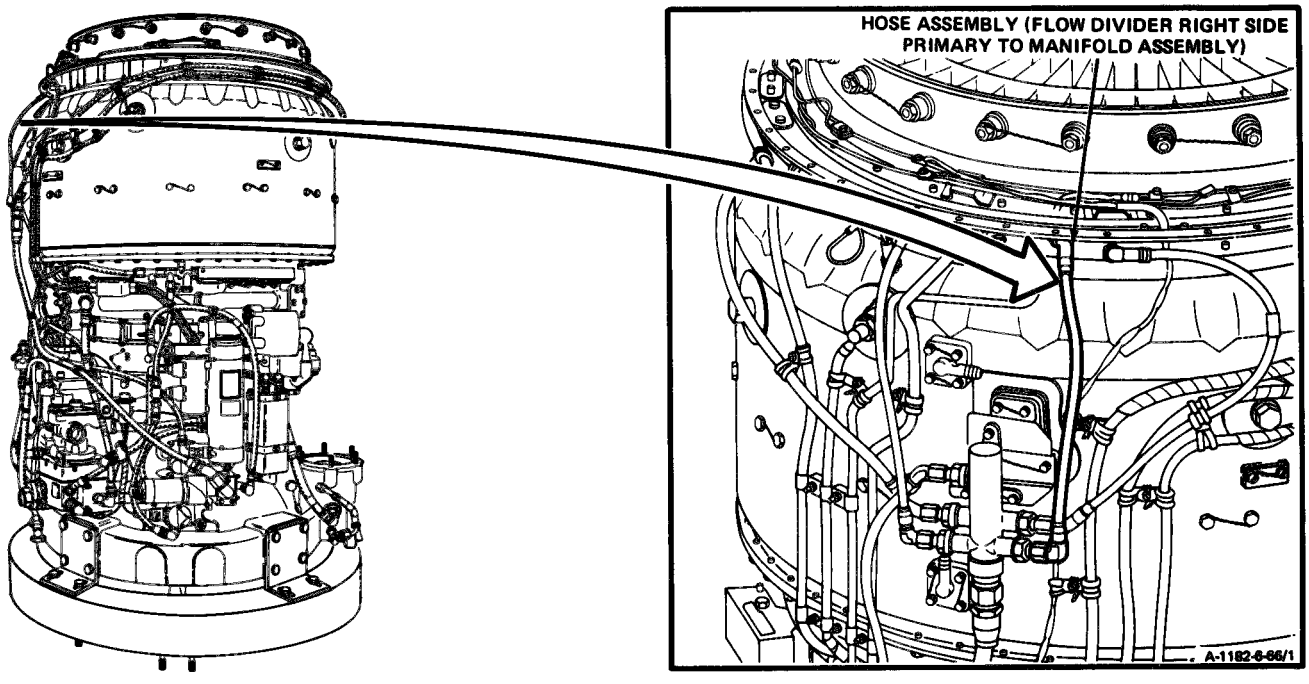
INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Container, 1 Quart

Materials:
Wiping Rag (E58)

Personnel Required:
68B10 Aircraft Powerplant Repairer



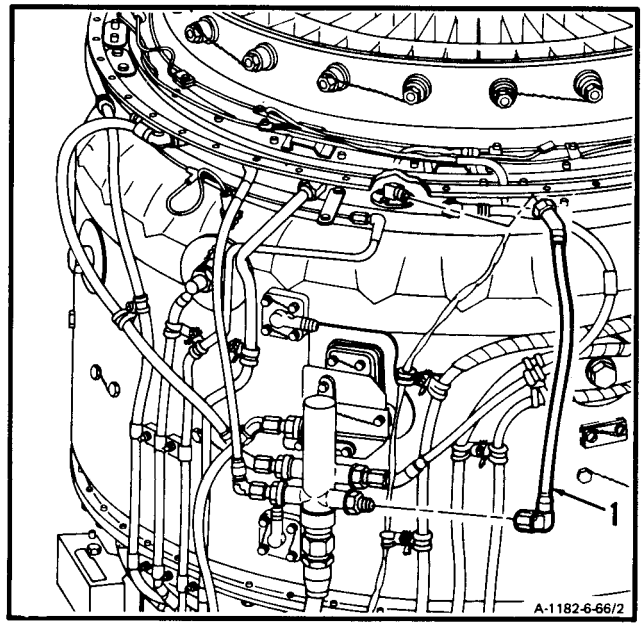
GO TO NEXT PAGE

6-66 REMOVE HOSE ASSEMBLY (FLOW DIVIDER RIGHT SIDE PRIMARY TO MANIFOLD ASSEMBLY) (Continued)

WARNING

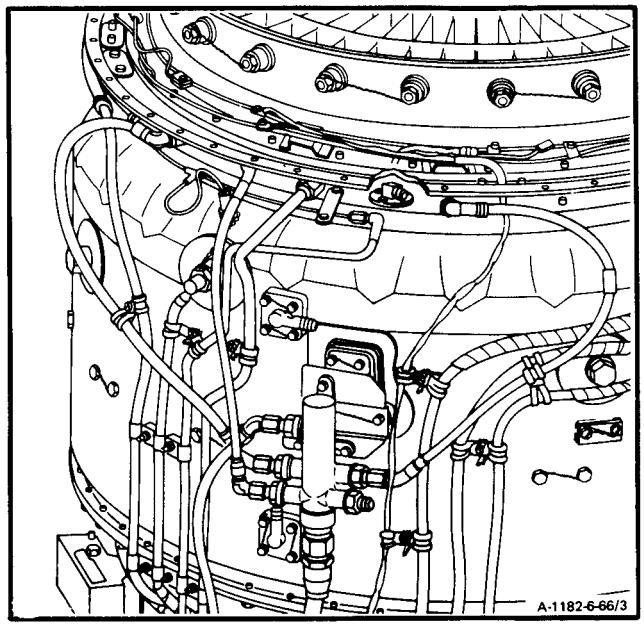
Turbine fuels are very flammable. They may cause drying and irritation of skin or eyes. Handle only in well-ventilated areas away from heat and open flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin, and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.

1. **Disconnect and remove hose assembly (1).**



FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-67 INSTALL HOSE ASSEMBLY (FLOW DIVIDER RIGHT SIDE PRIMARY TO MANIFOLD ASSEMBLY) 6-67

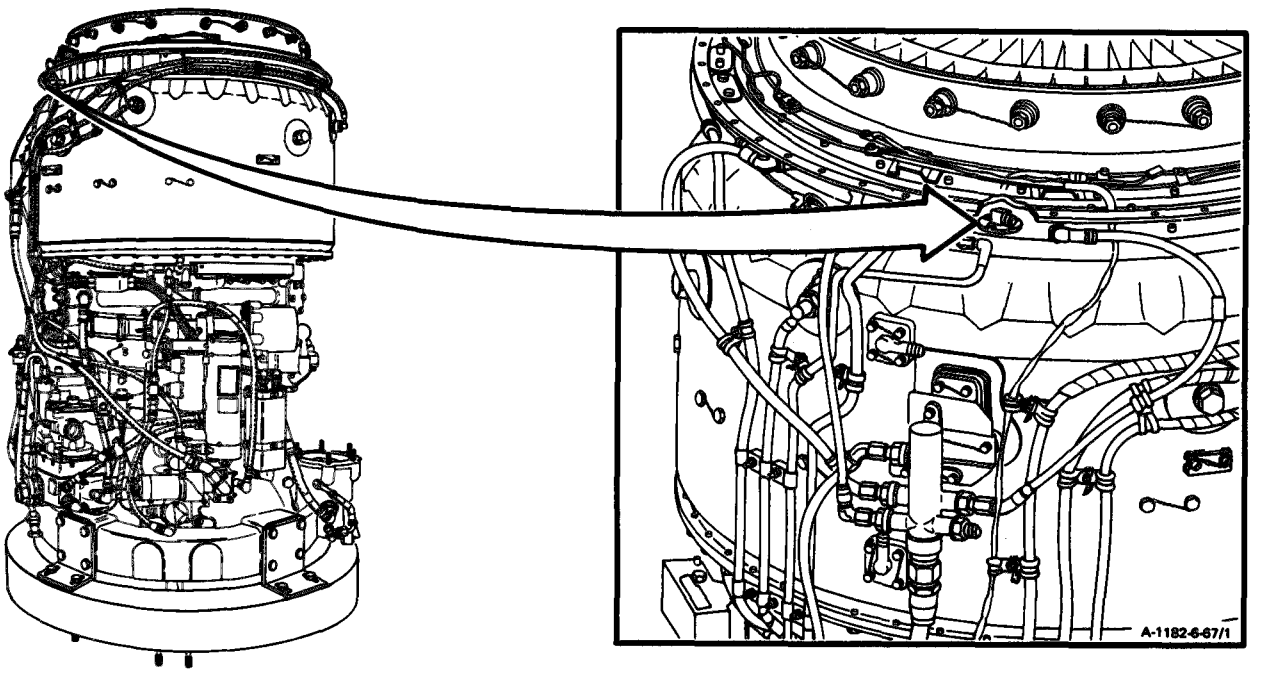
INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
None

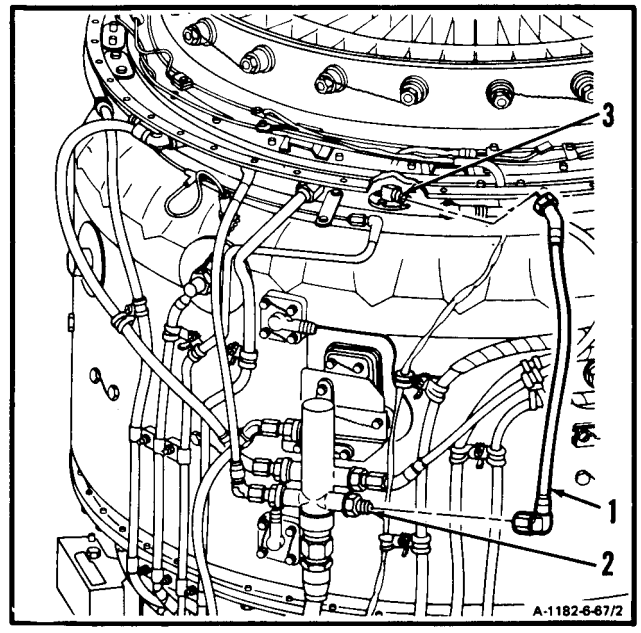
Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector



GO TO NEXT PAGE

6-67 INSTALL HOSE ASSEMBLY (FLOW DIVIDER RIGHT SIDE PRIMARY TO MANIFOLD ASSEMBLY) (Continued) 6-67

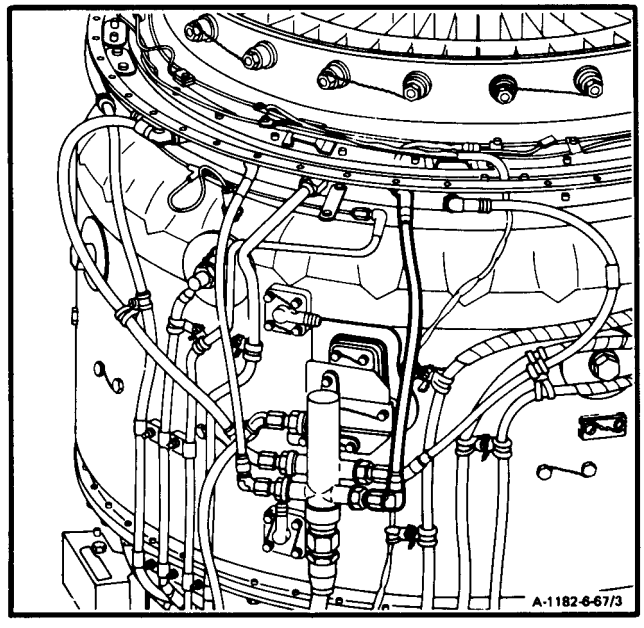
1. **Install hose assembly (1)** on nipple (2) and elbow (3).



INSPECT

FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-68 REMOVE HOSE ASSEMBLY (FLOW DIVIDER LEFT SIDE SECONDARY TO MANIFOLD ASSEMBLY)

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit, NSN 5180-00-323-4944
Container, 1 Quart

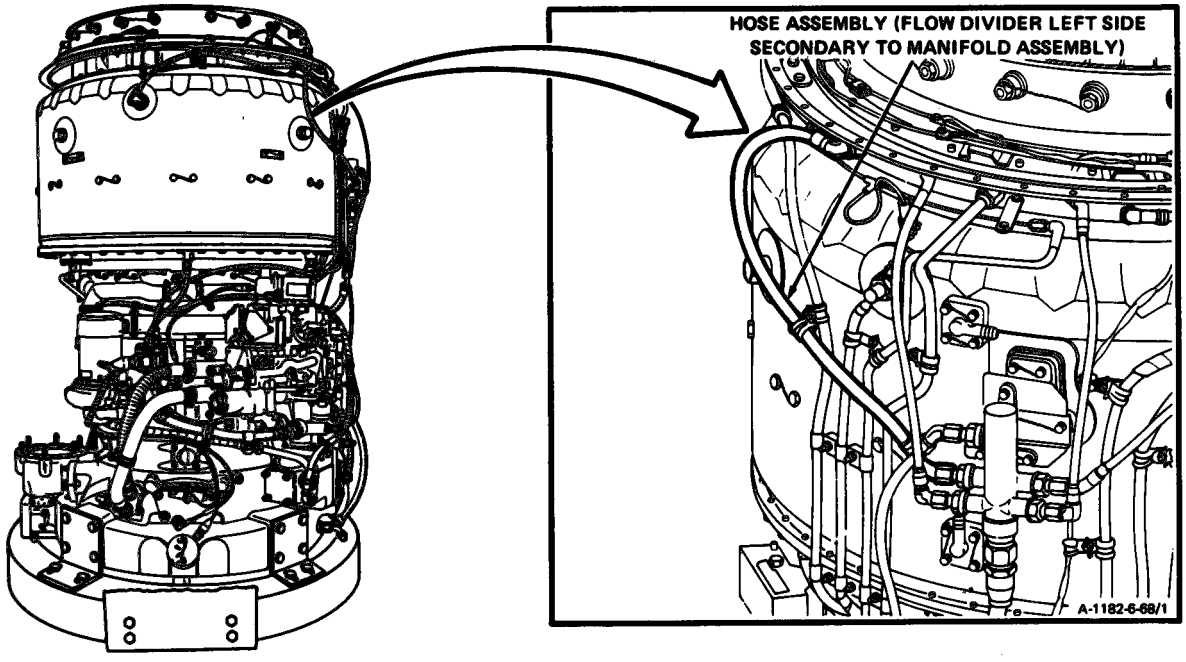
Materials:
Wiping Rag (E58)

Personnel Required:
68B10 Aircraft Powerplant Repairer

General Safety Precautions:

WARNING

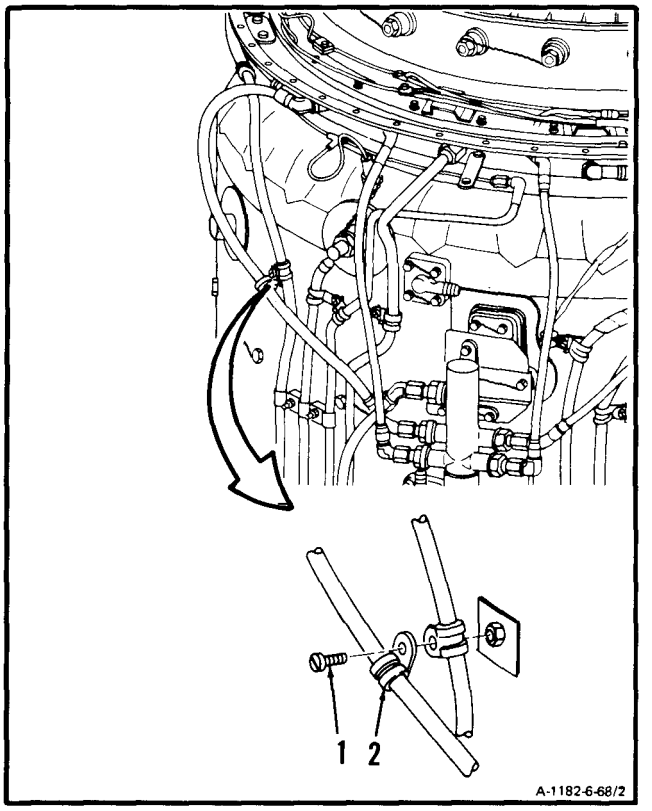
Turbine fuels are very flammable. They may cause drying and irritation of skin or eyes. Handle only in wall-ventilated areas away from heat and open flame. Drain and store in approved metal safety containers. Avoid prolonged or rapeatad contact with skin, and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.



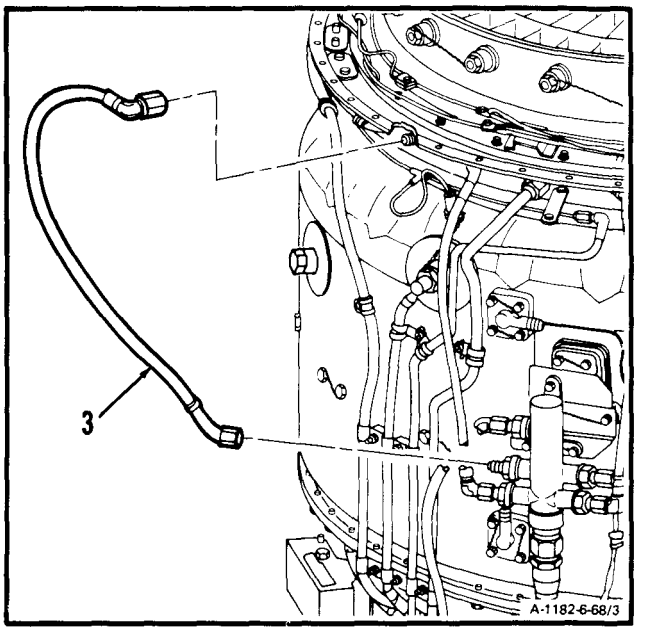
GO TO NEXT PAGE

6-68 REMOVE HOSE ASSEMBLY (FLOW DIVIDER LEFT SIDE SECONDARY TO MANIFOLD ASSEMBLY (Continued)

1. **Remove** lockwire, screw (1) and **clamp (2).**



2. Disconnect and **remove hose assembly (3).**

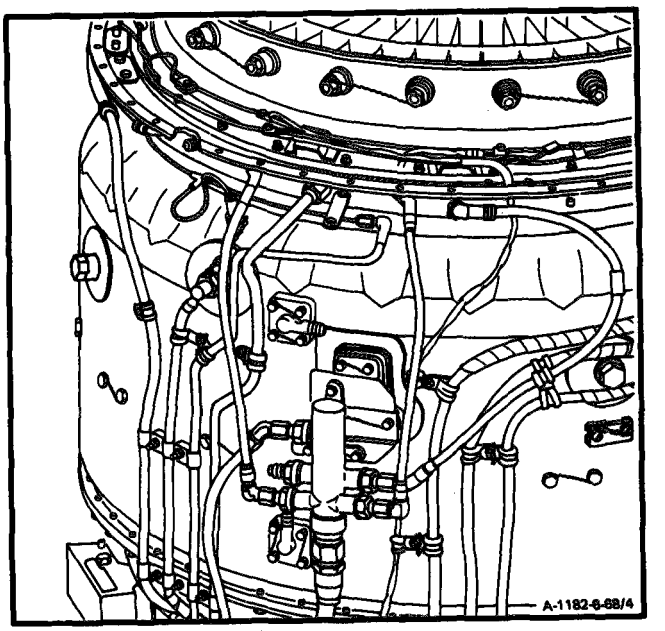


GO TO NEXT PAGE

6-68 REMOVE HOSE ASSEMBLY (FLOW DIVIDER LEFT SIDE SECONDARY TO MANIFOLD ASSEMBLY (Continued)

FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-69 INSTALL HOSE ASSEMBLY (FLOW DIVIDER LEFT SIDE SECONDARY TO MANIFOLD ASSEMBLY) 6-69

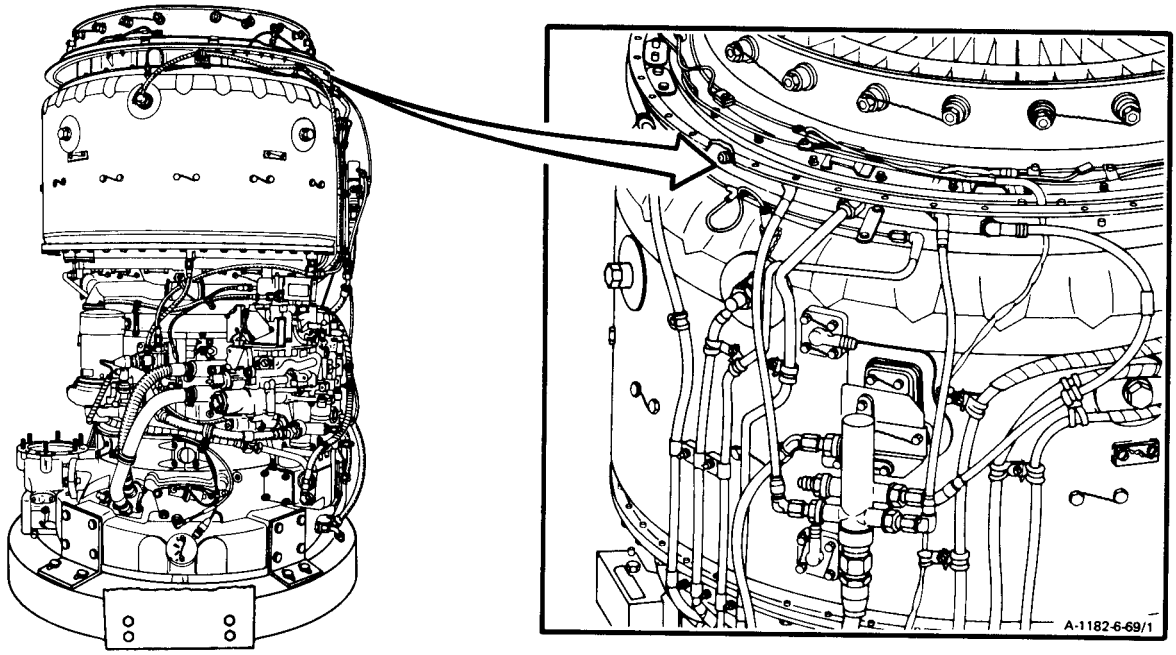
INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
Lockwire (E29)

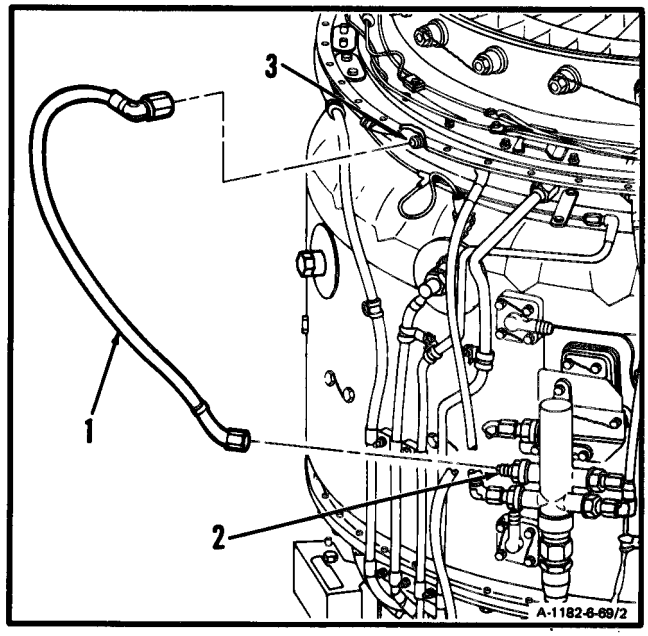
Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector



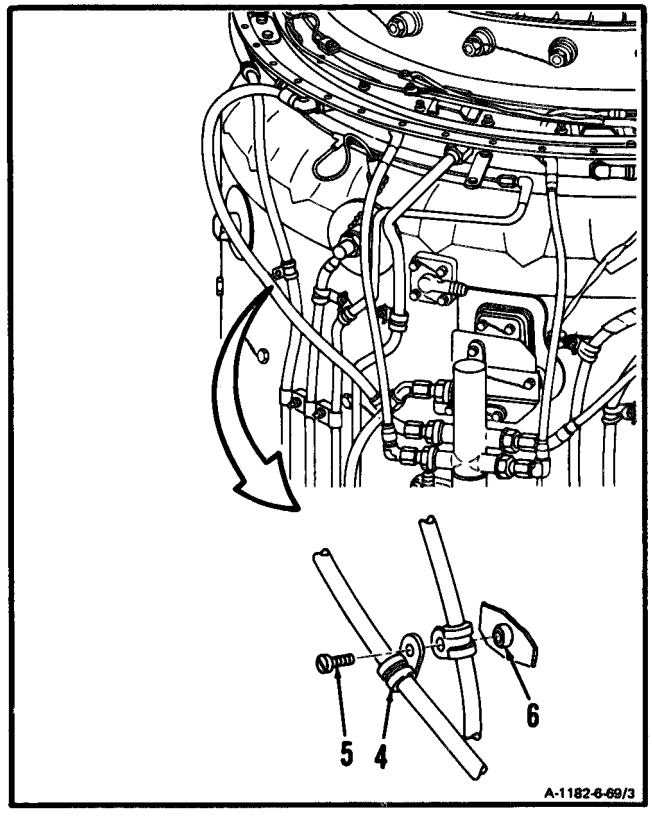
GO TO NEXT PAGE

6-69 INSTALL HOSE ASSEMBLY (FLOW DIVIDER LEFT SIDE SECONDARY TO MANIFOLD ASSEMBLY) (Continued)

1. **Install hose assembly (1)** on reducer (2) and elbow (3).



2. **Install clamp (4),** and screw (5) on nutplate (6). L.ockwire screw (5). Use Iockwire (E29).



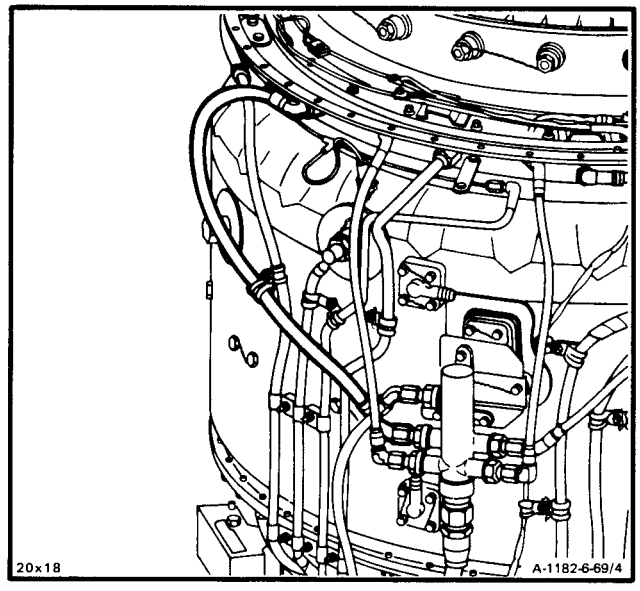
INSPECT

GO TO NEXT PAGE

6-69 INSTALL HOSE ASSEMBLY(FLOW DIVIDER LEFT SIDE SECONDARY TO MANIFOLD ASSEMBLY) (Continued) 6-69

FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-70 REMOVE HOSE ASSEMBLY (FLOW DIVIDER RIGHT SIDE SECONDARY TO MANIFOLD ASSEMBLY) 6-70

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Container, 1 Quart

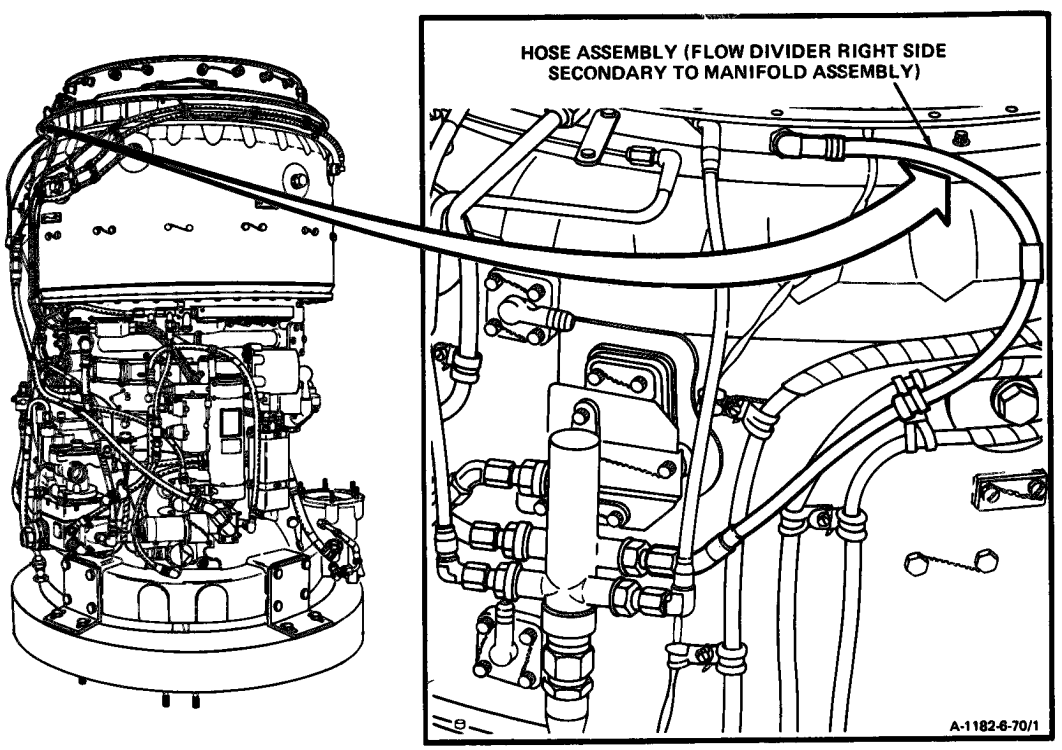
Materials:
Wiping Rag (E58)

Personnel Required:
68B10 Aircraft Powerplant Repairer

General Safety Instructions:

WARNING

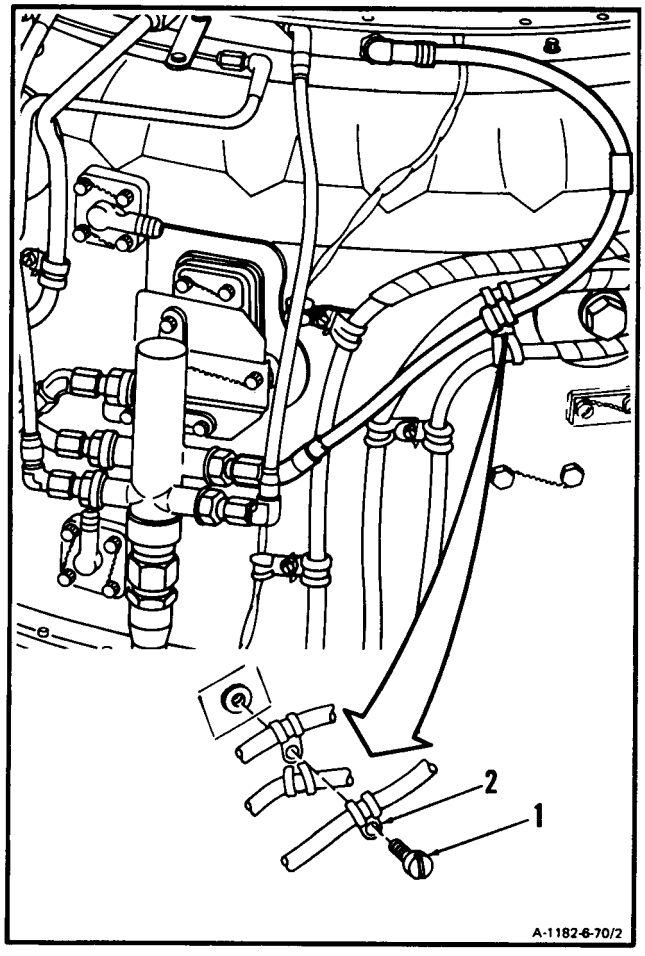
Turbine fuels are very flammable. They may cause drying and irritation of skin or eyes. Handle only in wall-ventilated areas away from heat and open flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin, and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.



GO TO NEXT PAGE

6-70 REMOVE HOSE ASSEMBLY (FLOW DIVIDER RIGHT SIDE SECONDARY TO MANIFOLD ASSEMBLY) (Continued)

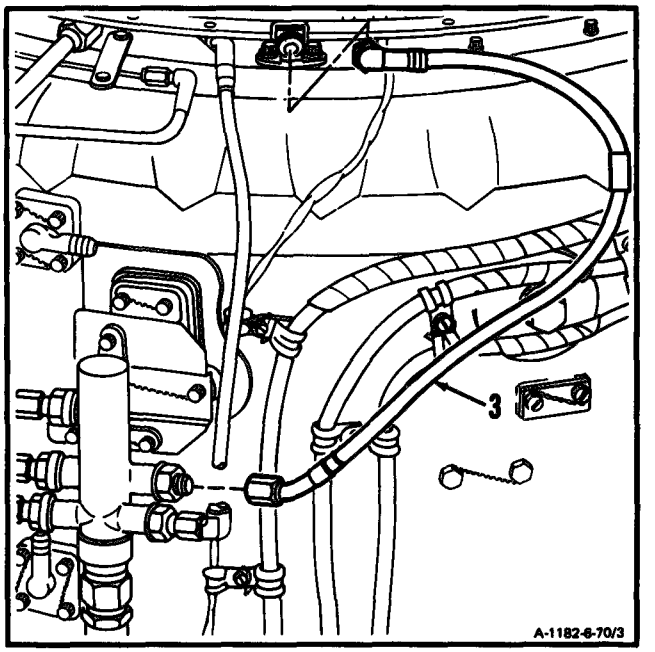
1. **Remove** lockwire, screw (1), and **clamp (2).**



GO TO NEXT PAGE

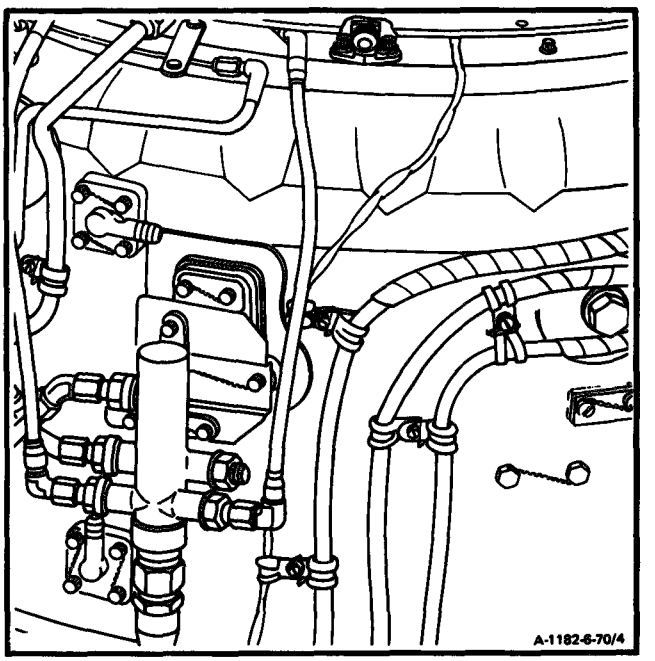
6-70 REMOVE HOSE ASSEMBLY (FLOW DIVIDER RIGHT SIDE SECONDARY TO MANIFOLD ASSEMBLY) (Continued) **6-70**

2. Disconnect and **remove hose assembly (3).**



FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-71 INSTALL HOSE ASSEMBLY (FLOW DIVIDER RIGHT SIDE SECONDARY TO MANIFOLD ASSEMBLY)

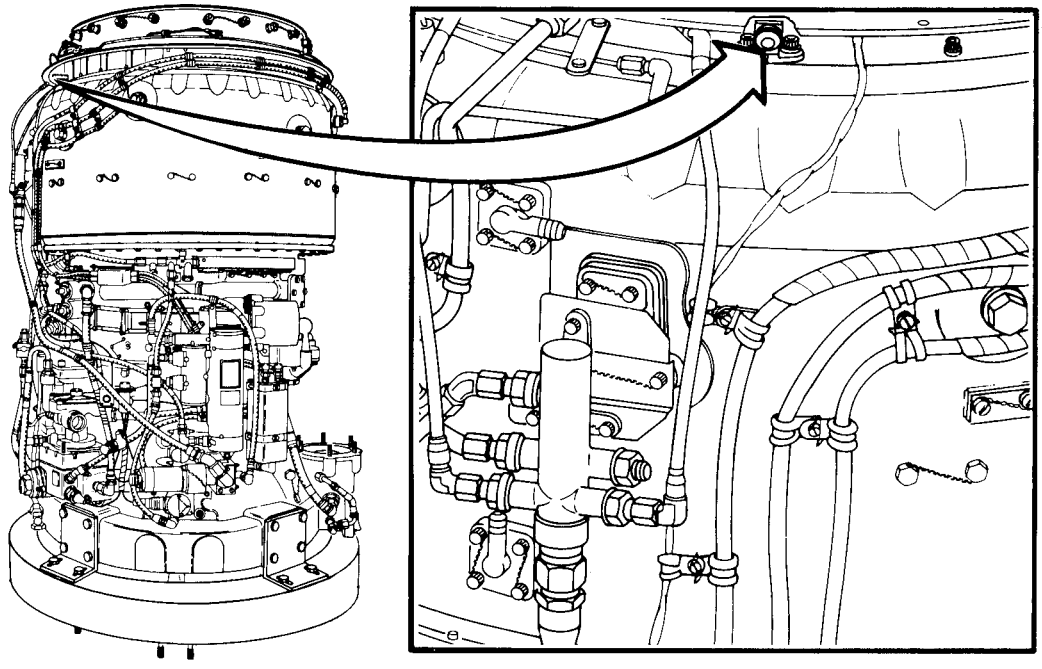
INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
Lockwire (E29)

Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

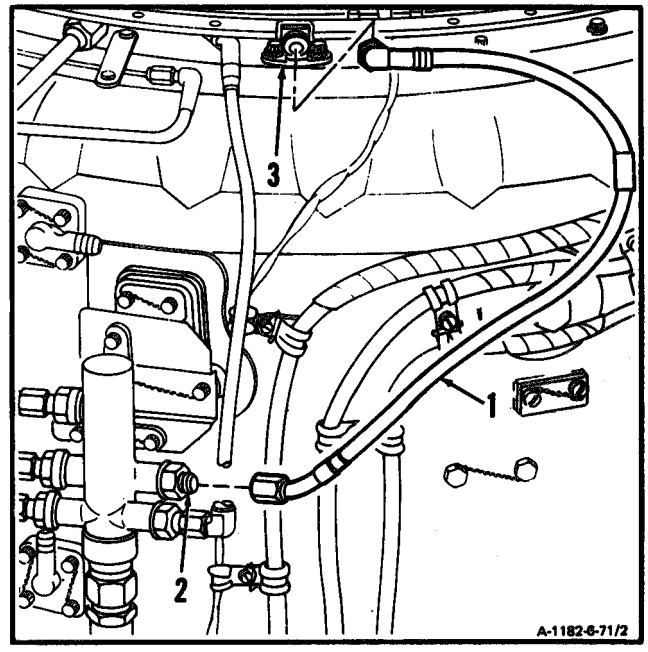


A-1182-6-71/1

GO TO NEXT PAGE

6-71 INSTALL HOSE ASSEMBLY (FLOW DIVIDER RIGHT SIDE SECONDARY TO MANIFOLD ASSEMBLY) (Continued)

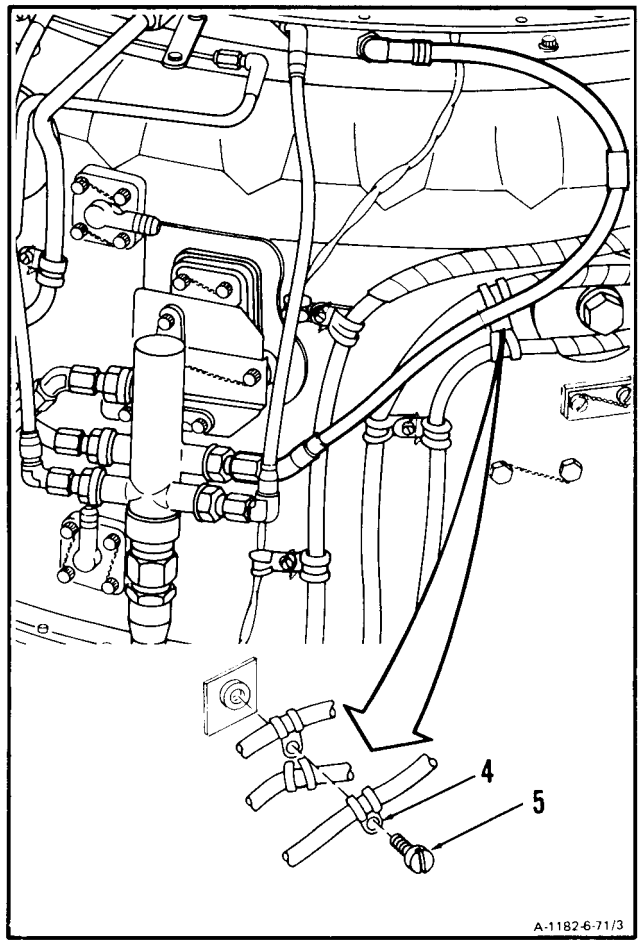
1. **Install hose assembly (1)** on reducer (2) and elbow (3).



GO TO NEXT PAGE

6-71 INSTALL HOSE ASSEMBLY (FLOW DIVIDER RIGHT SIDE SECONDARY TO MANIFOLD ASSEMBLY) (Continued)

2. **Install clamp (4)** and screw (5). Lockwire screw (5). Use lockwire (E29).



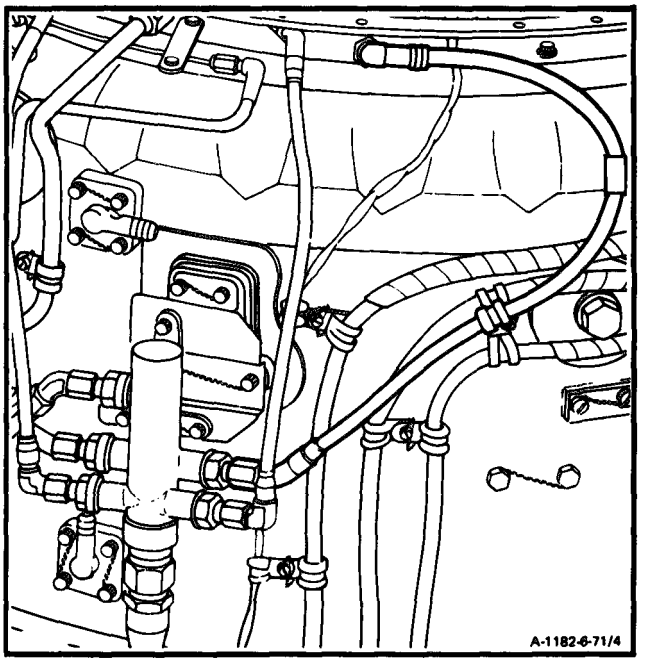
INSPECT

GO TO NEXT PAGE

6-71 INSTALL HOSE ASSEMBLY (FLOW DIVIDER RIGHT SIDE SECONDARY TO MANIFOLD ASSEMBLY) (Continued)

FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-72 REMOVE HOSE ASSEMBLY (MAIN FUEL FILTER TO FUEL CONTROL) 6-72

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Open-End Wrench, 1-Inch
Container, 1 Quart

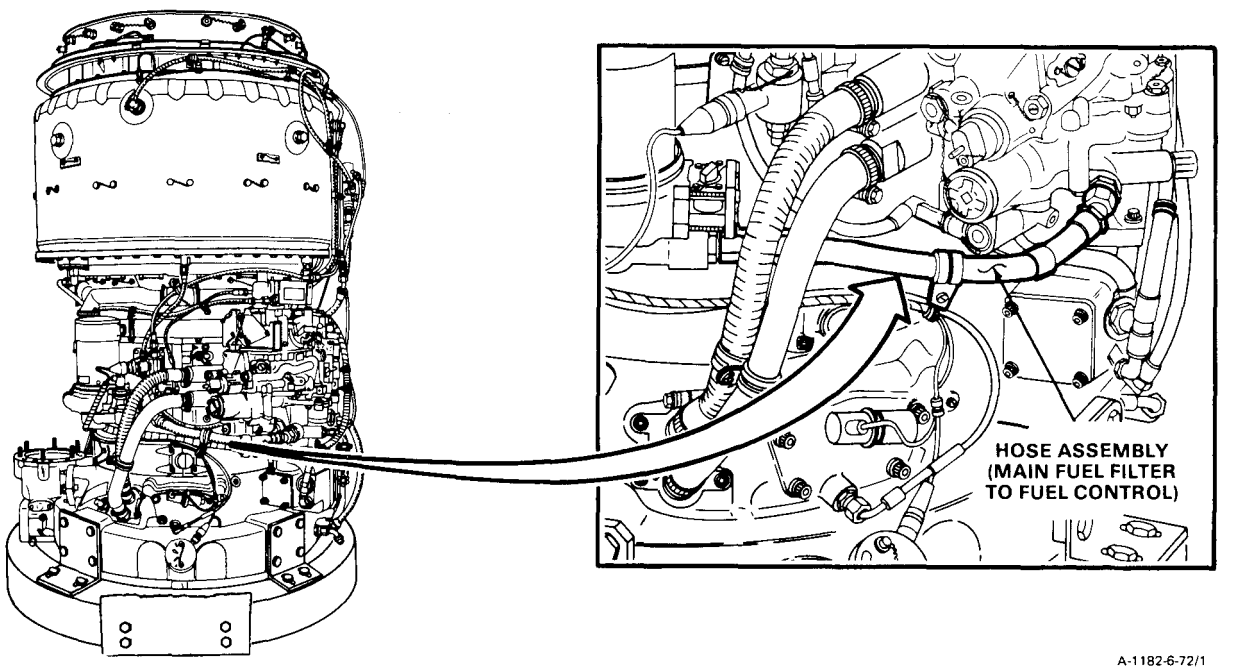
Materials:
Wiping Rag **(E58)**

Personnel Required:
68B10 Aircraft Powerplant Repairer

General Safety Instructions:

WARNING

Turbine fuels are very flammable. They may cause drying and irritation of skin or eyes. Handle only in well-ventilated areas away from heat and open flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin and do not take internally. Wash contacted area of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.

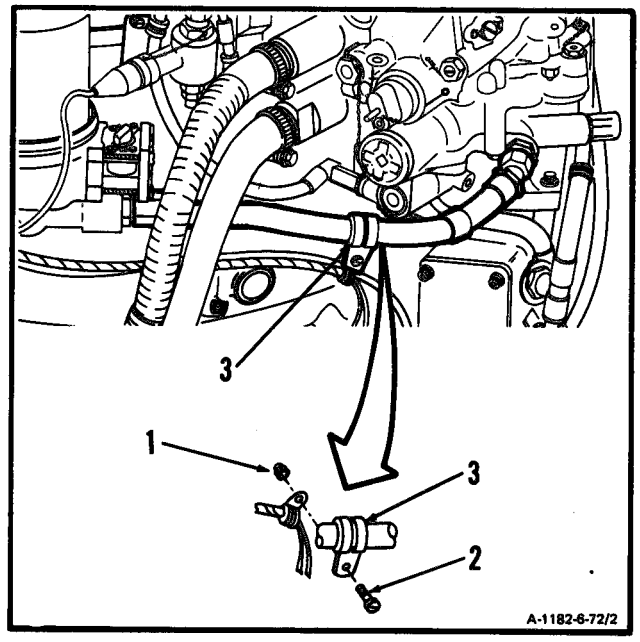


A-1182-6-72/1

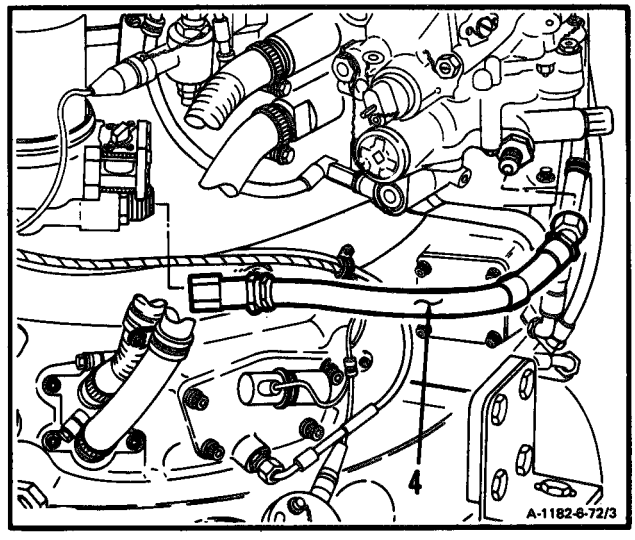
GO TO NEXT PAGE

6-72 REMOVE HOSE ASSEMBLY (MAIN FUEL FILTER TO FUEL CONTROL) (Continued) 6-72

1. **Remove** nut (1), screw (2), and clamp (3).



2. Disconnect and **remove hose assembly (4).** Use 1-inch open-and wrench.

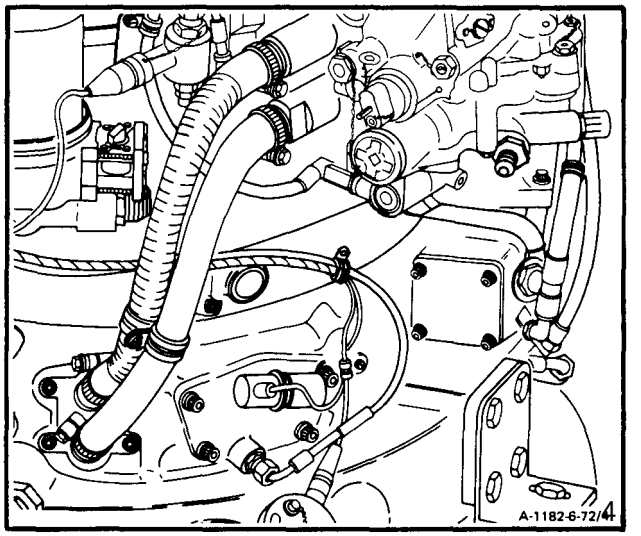


GO TO NEXT PAGE

6-72 REMOVE HOSE ASSEMBLY (MAIN FUEL FILTER TO FUEL CONTROL) (Continued) 6-72

FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-73 INSTALL HOSE ASSEMBLY (MAIN FUEL FILTER TO FUEL CONTROL) 6-73

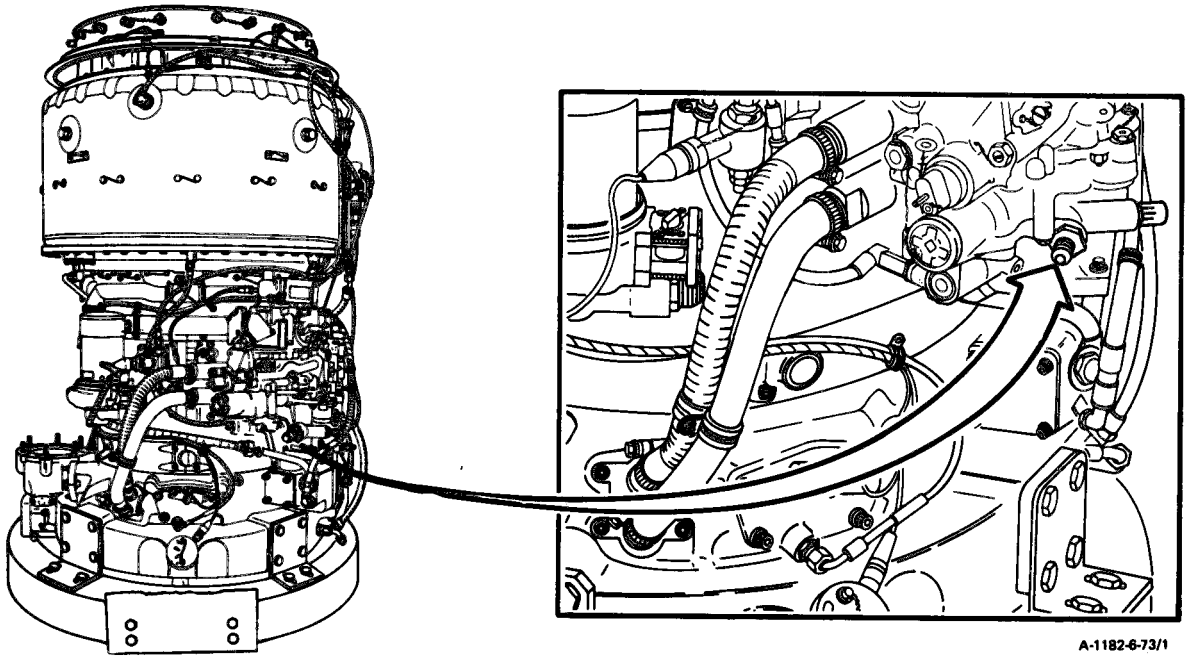
INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114
Open-End Wrench, 1-Inch

Materials:
None

Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

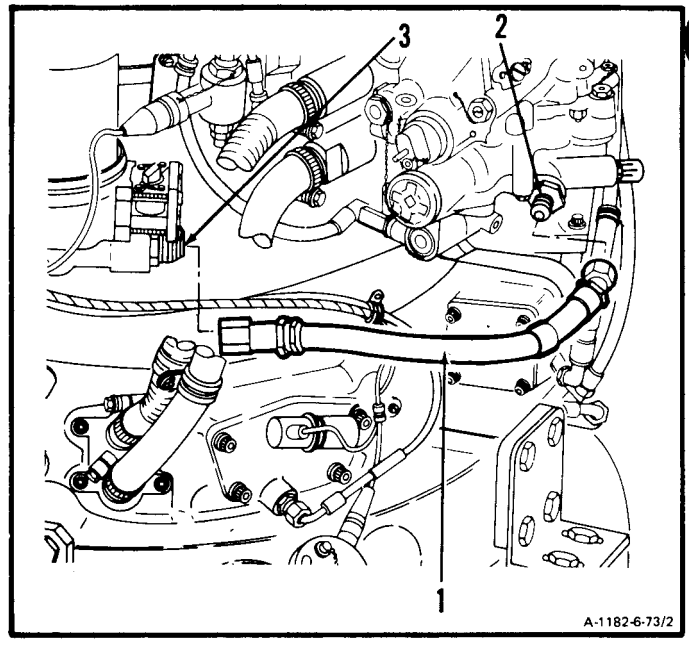


A-1182-6-73/1

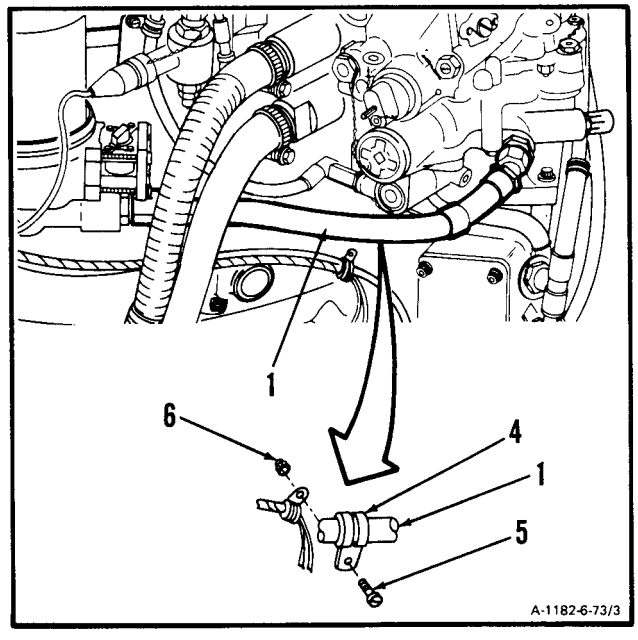
GO TO NEXT PAGE

6-73 INSTALL HOSE ASSEMBLY (MAIN FUEL FILTER TO FUEL CONTROL) (Continued) 6-73

1. **Install hose assembly (1)** on unions (2 and 3). Use 1-inch open-end wrench.



2. **Install clamp (4)** on hose assembly (1), and install screw (5) and nut (6).



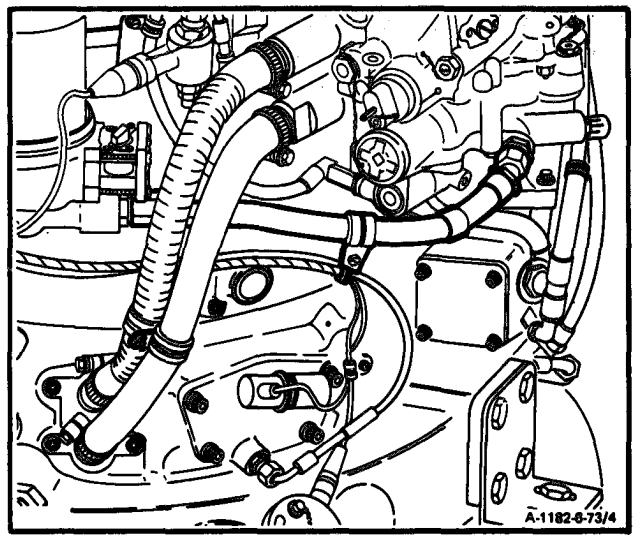
INSPECT

GO TO NEXT PAGE

6-73 INSTALL HOSE ASSEMBLY (MAIN FUEL FILTER TO FUEL CONTROL) (Continued) 6-73

FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-74 REMOVE HOSE ASSEMBLY (FUEL CONTROL TO STARTING FUEL SOLENOID VALVE)

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Container, 1 Quart

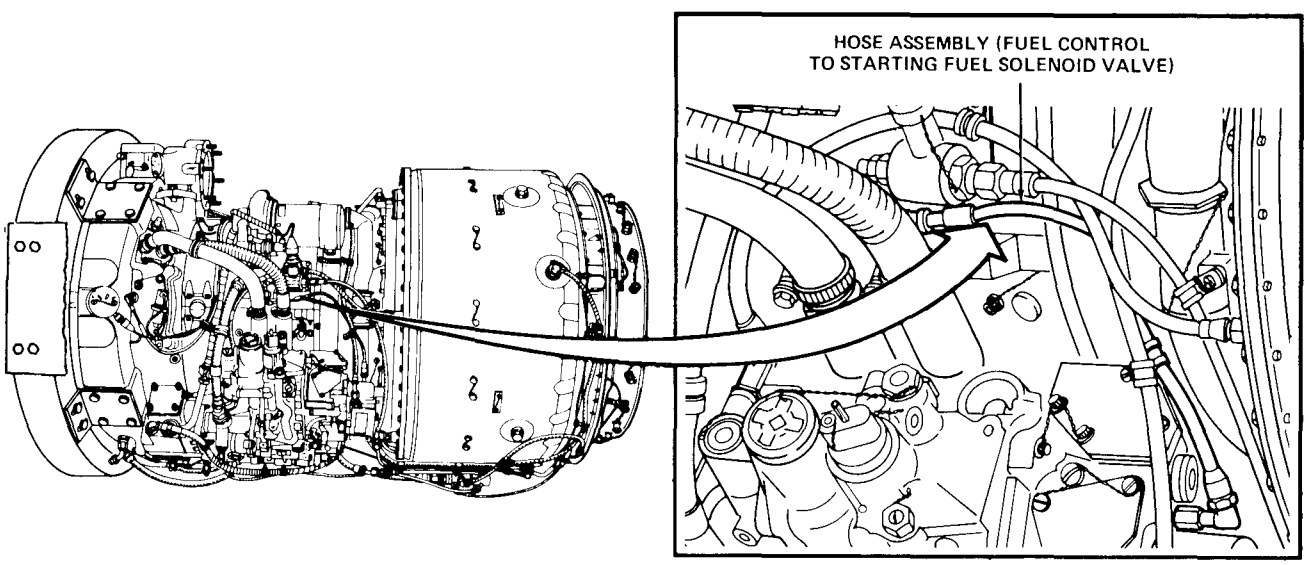
Materials:
Wiping Rag (E58)

Personnel Required:
68B10 Aircraft Powerplant Repairer

General Safety Instructions:

WARNING

Turbine fuels are very flammable. They may cause drying and irritation of skin or eyes. Handle only in well-ventilated areas away from heat and open flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin, and do not take internally. Wash contacted areas of skin thoroughly after handling, If irritation of skin results, get medical attention. Get medical attention for eyes.

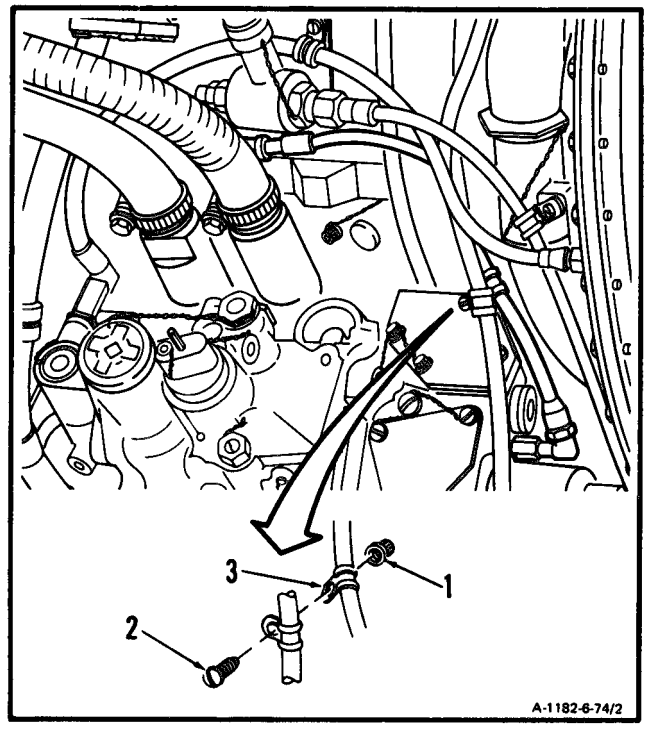


A-1182-6-74/1

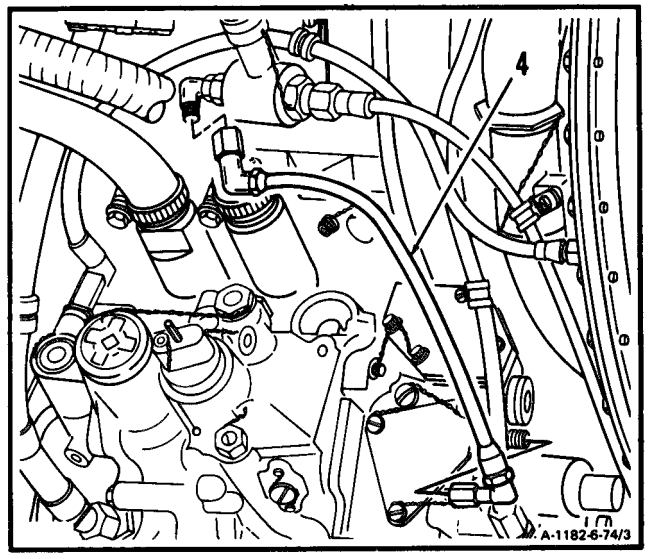
GO TO NEXT PAGE

6-74 REMOVE HOSE ASSEMBLY(FUEL CONTROL TO STARTING FUEL SOLENOID VALVE) (Continued)

1. **Remove** nut (1), screw (2), and clamp (3).



2. **Disconnect and remove hose assembly (4).**

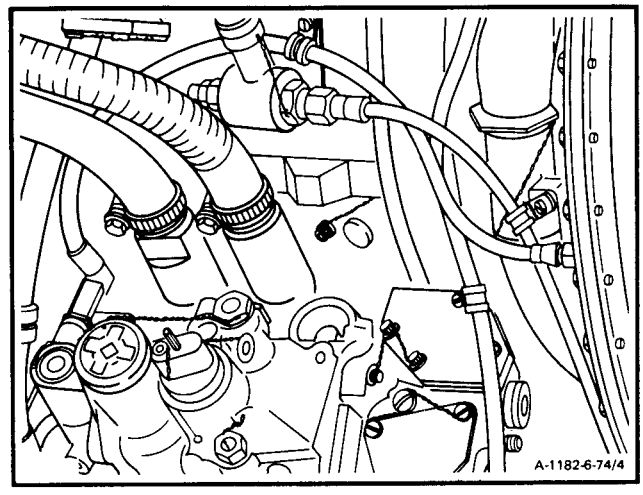


GO TO NEXT PAGE

6-74 REMOVE HOSE ASSEMBLY (FUEL CONTROL TO STARTING FUEL SOLENOID VALVE) (Continued)

FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-75 INSTALL HOSE ASSEMBLY (FUEL CONTROL TO STARTING FUEL SOLENOID VALVE) 6-75

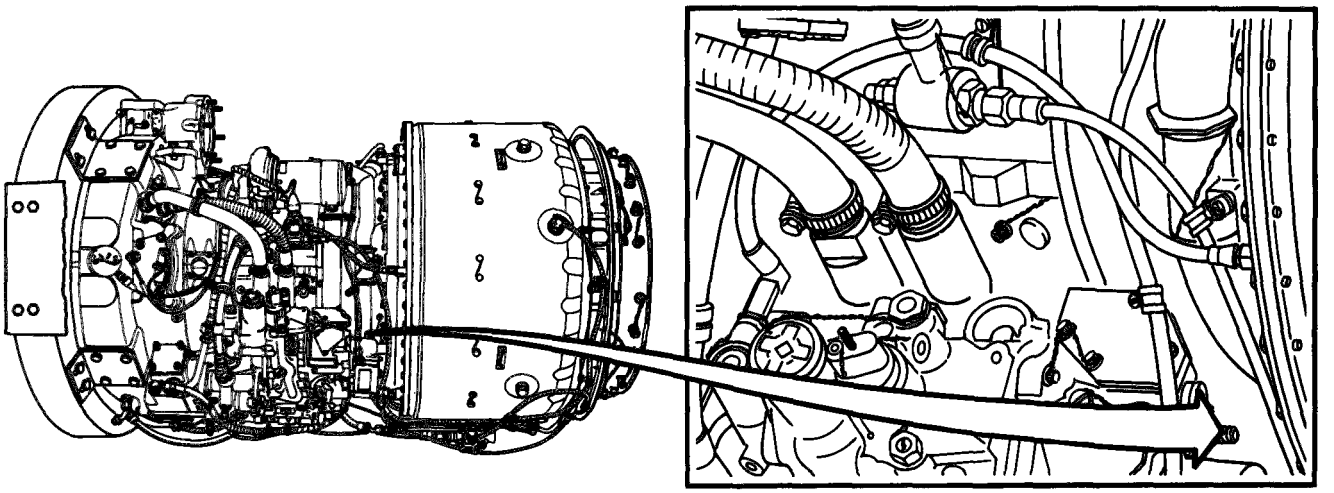
INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
None

Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

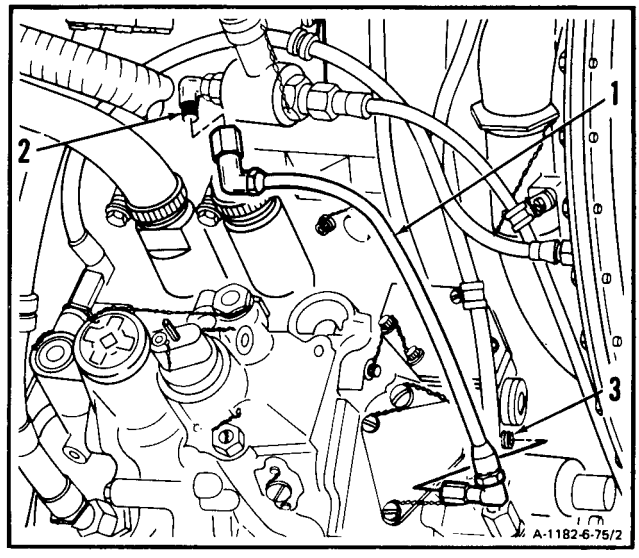


A-1182-6-75/1

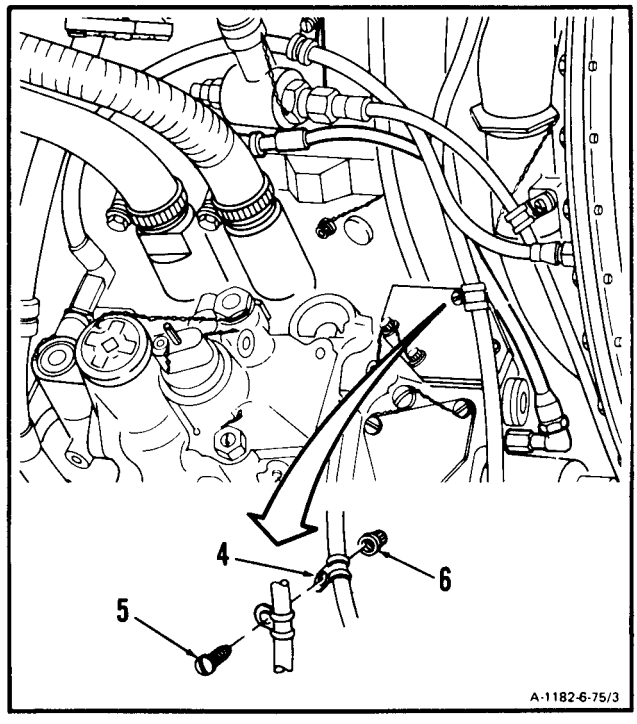
GO TO NEXT PAGE

6-75 INSTALL HOSE ASSEMBLY (FUEL CONTROL TO STARTING FUEL SOLENOID VALVE) (Continued) 6-75

1. **Install hose assembly (1)** on elbow (2) and nipple (3).



2. **Install clamp (4),** screw (5), and nut (6).



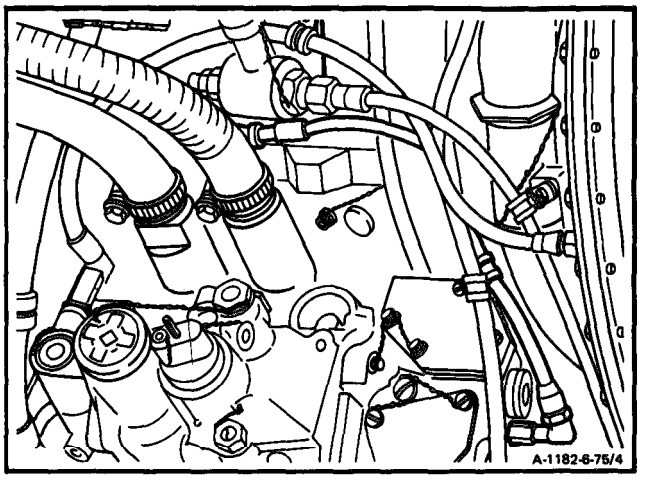
INSPECT

GO TO NEXT PAGE

6-75 INSTALL HOSE ASSEMBLY (FUEL CONTROL TO STARTING FUEL SOLENOID VALVE) (Continued)

FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-76 REMOVE HOSE ASSEMBLY (Starting FUEL SOLENOID VALVE TO TUBE ASSEMBLY) 6-76

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit, NSN 5180-00-323-4944
Container, 1 Quart

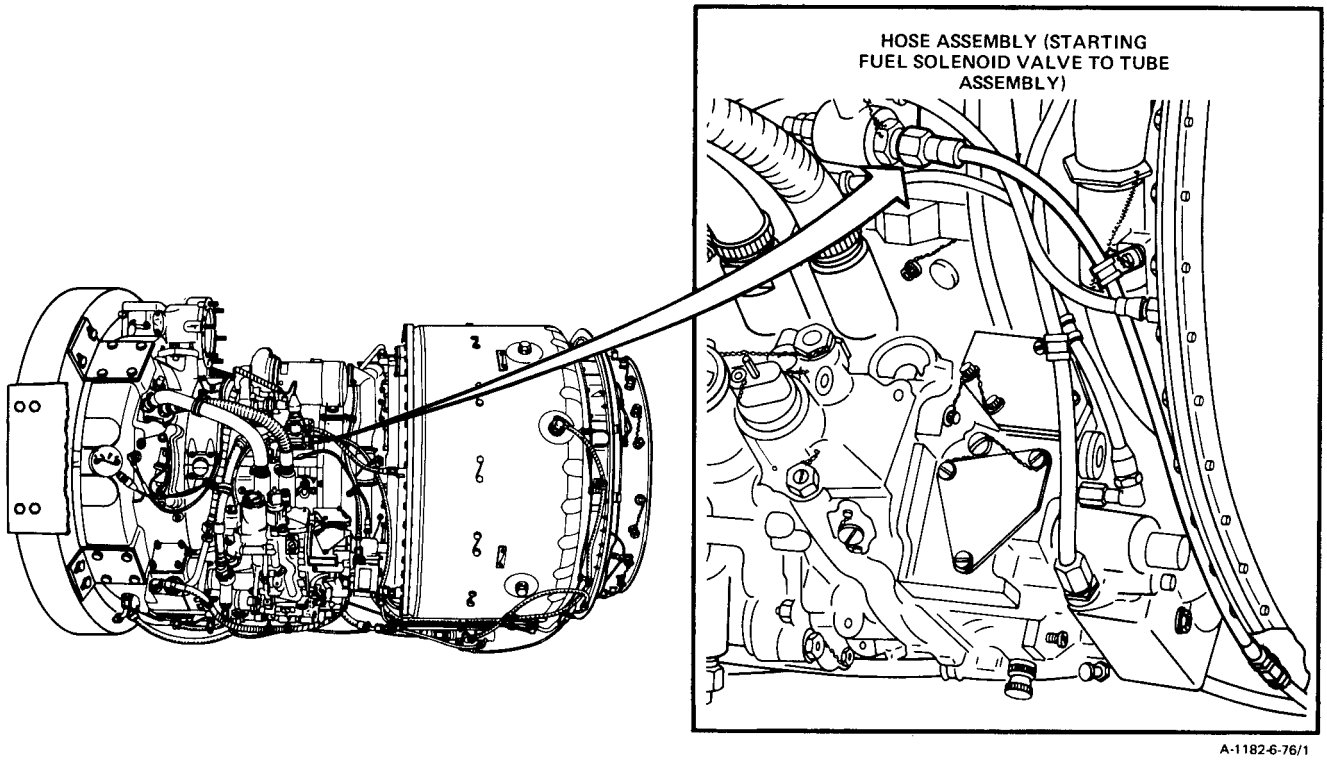
Materials:
Wiping Rag (E58)

Personnel Required:
68B10 Aircraft Powerplant Repairer

General Safety Instructions:

WARNING

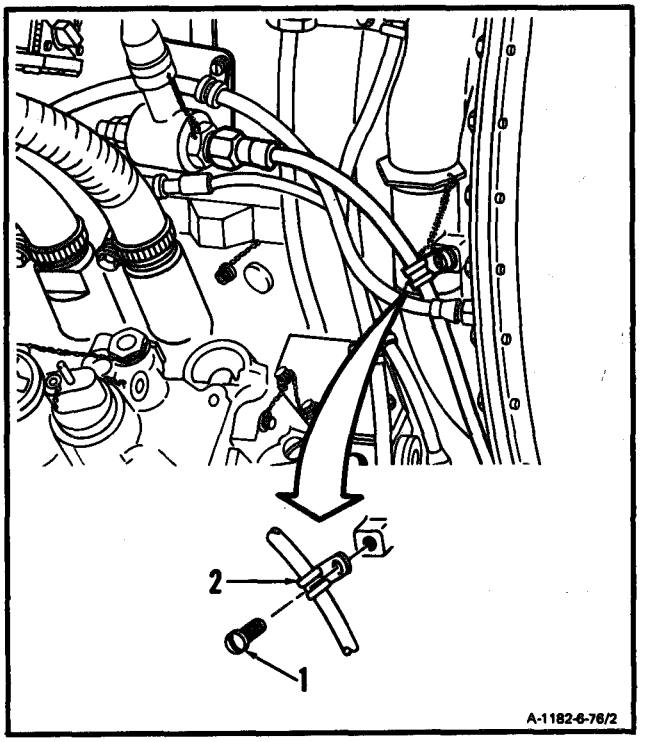
Turbine fuels are very flammable. They may cause drying and irritation of skin or eyes. Handle only in well-ventilated areas away from heat and open flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin, and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.



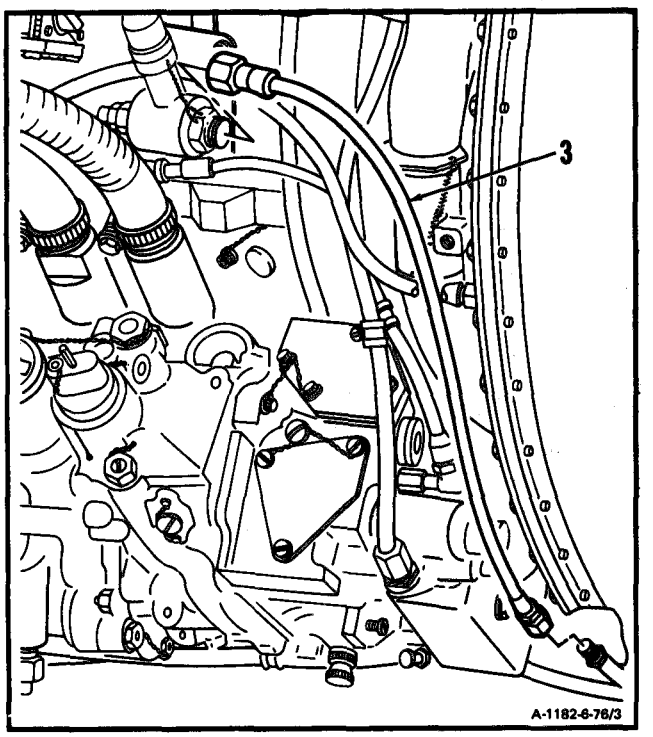
GO TO NEXT PAGE

6-76 REMOVE HOSE ASSEMBLY (Starting FUEL SOLENOID VALVE TO TUBE ASSEMBLY) (Continued) 6-76

1. **Remove** lockwire, screw (1) and **clamp (2).**



2. Disconnect and **remove hose assembly (3).**

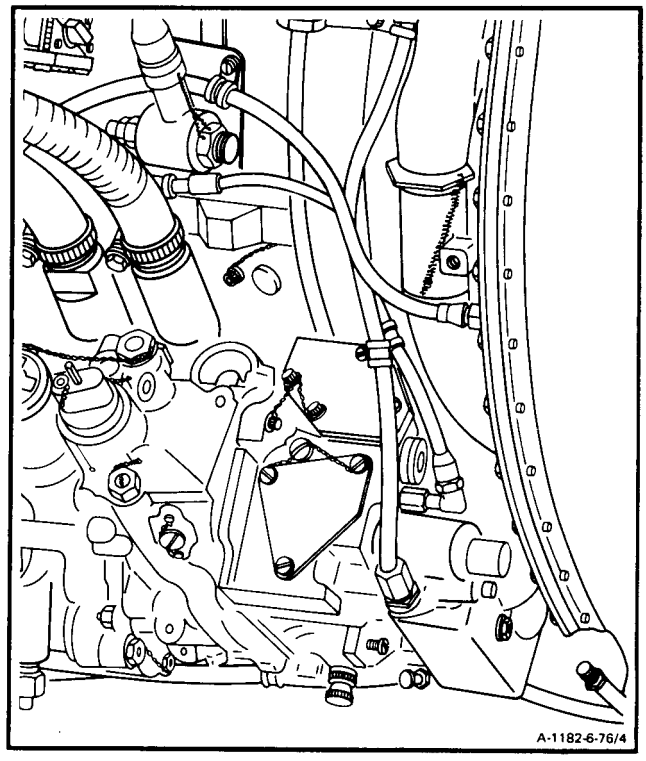


GO TO NEXT PAGE

6-76 REMOVE HOSE ASSEMBLY (Starting FUEL SOLENOID VALVE TO TUBE ASSEMBLY) (Continued) 6-76

FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-77 INSTALL HOSE ASSEMBLY (Starting FUEL SOLENOID VALVE TO TUBE ASSEMBLY) 6-77

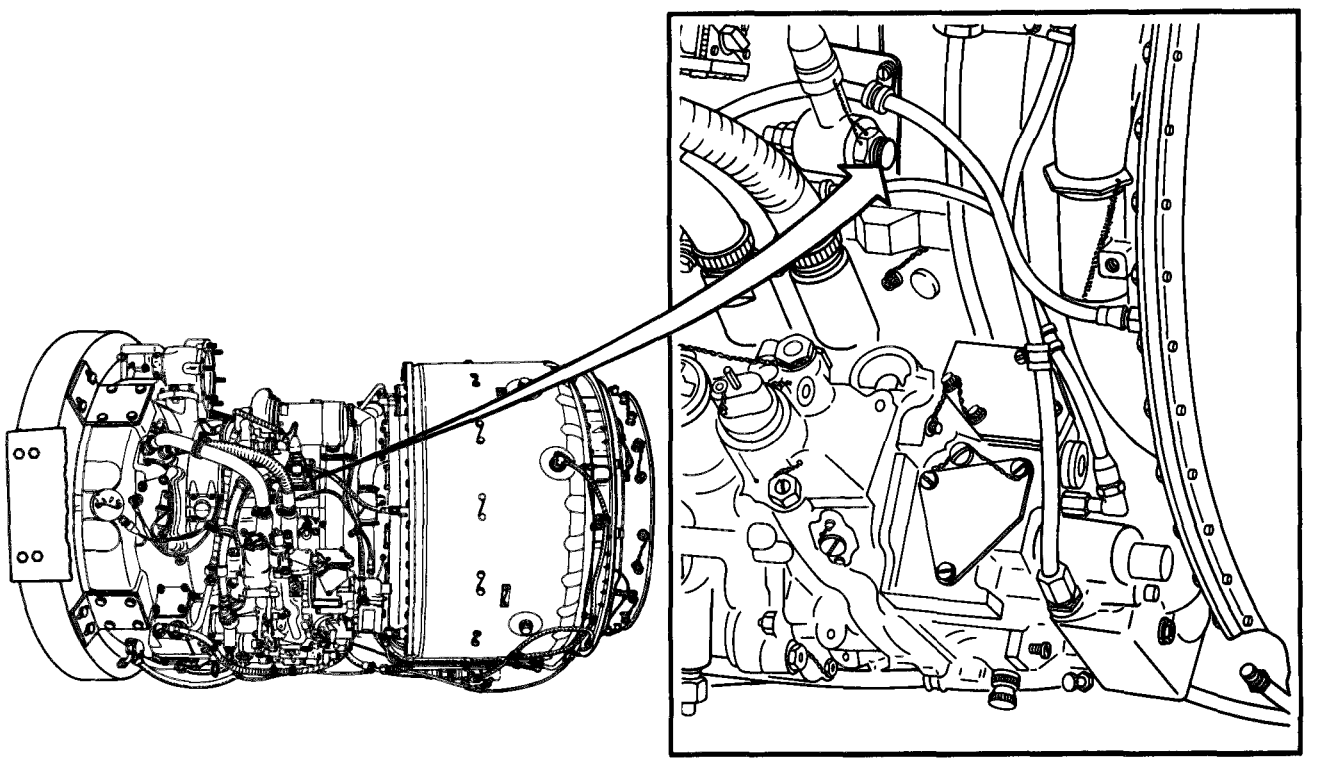
INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
Lockwire (E29)

Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

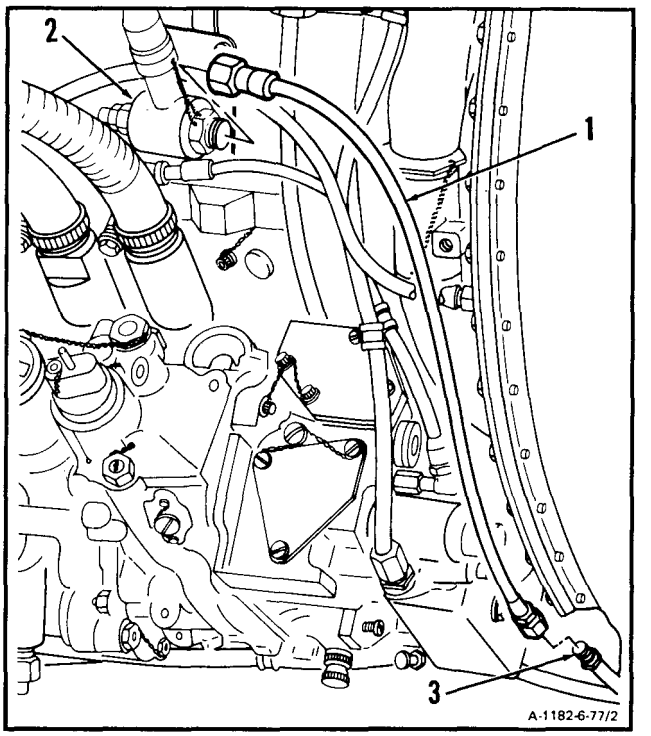


A-1182-6-77/1

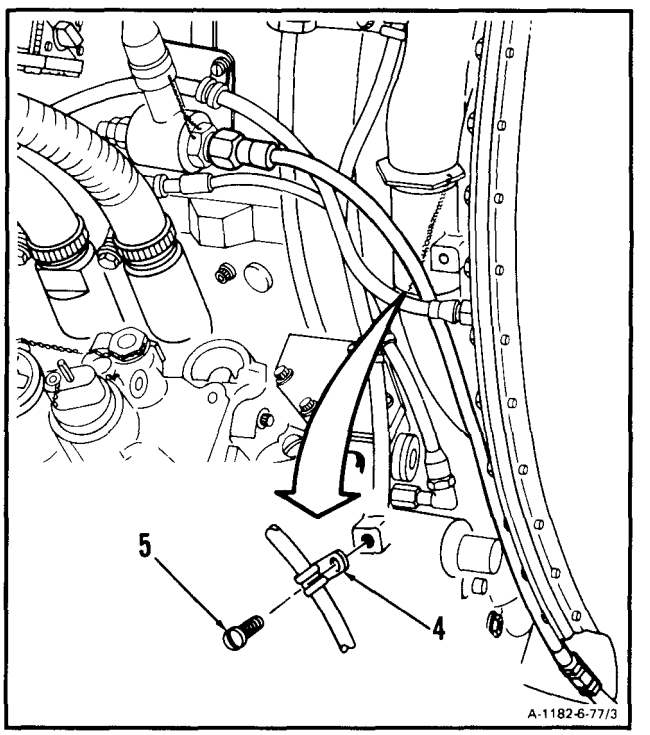
GO TO NEXT PAGE

6-77 INSTALL HOSE ASSEMBLY (Starting FUEL SOLENOID VALVE TO TUBE ASSEMBLY) (Continued) 6-77

1. **Install hose assembly (1)** on starting fuel solenoid valve (2) and tube assembly (3).



2. **Install clamp (4)** and screw (5). Lockwire screw (5). Use lockwire (E29).



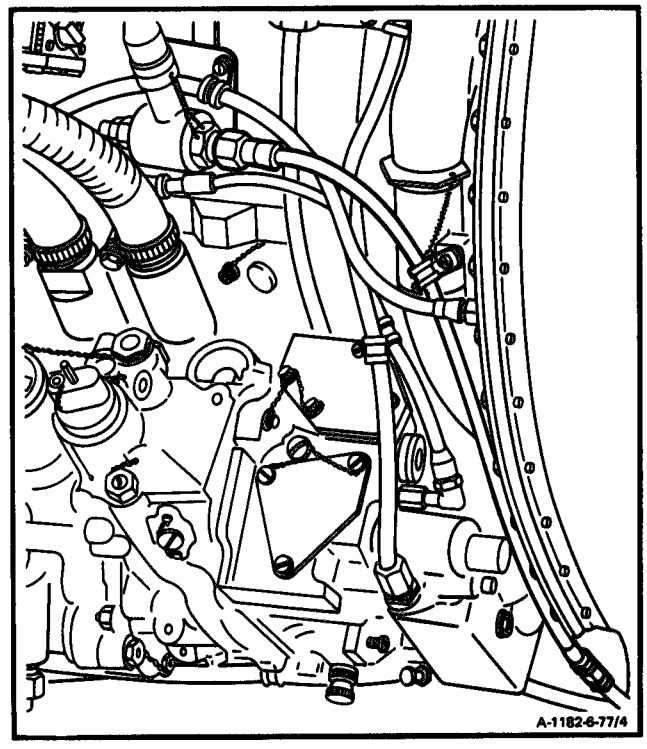
INSPECT

GO TO NEXT PAGE

6-77 INSTALL HOSE ASSEMBLY (STARTING FUEL SOLENOID VALVE TO TUBE ASSEMBLY) (Continued)

FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-78 REMOVE TUBE ASSEMBLY (HOSE ASSEMBLY TO PRIMER TUBE ASSEMBLY) 6-78

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Container, 1 Quart

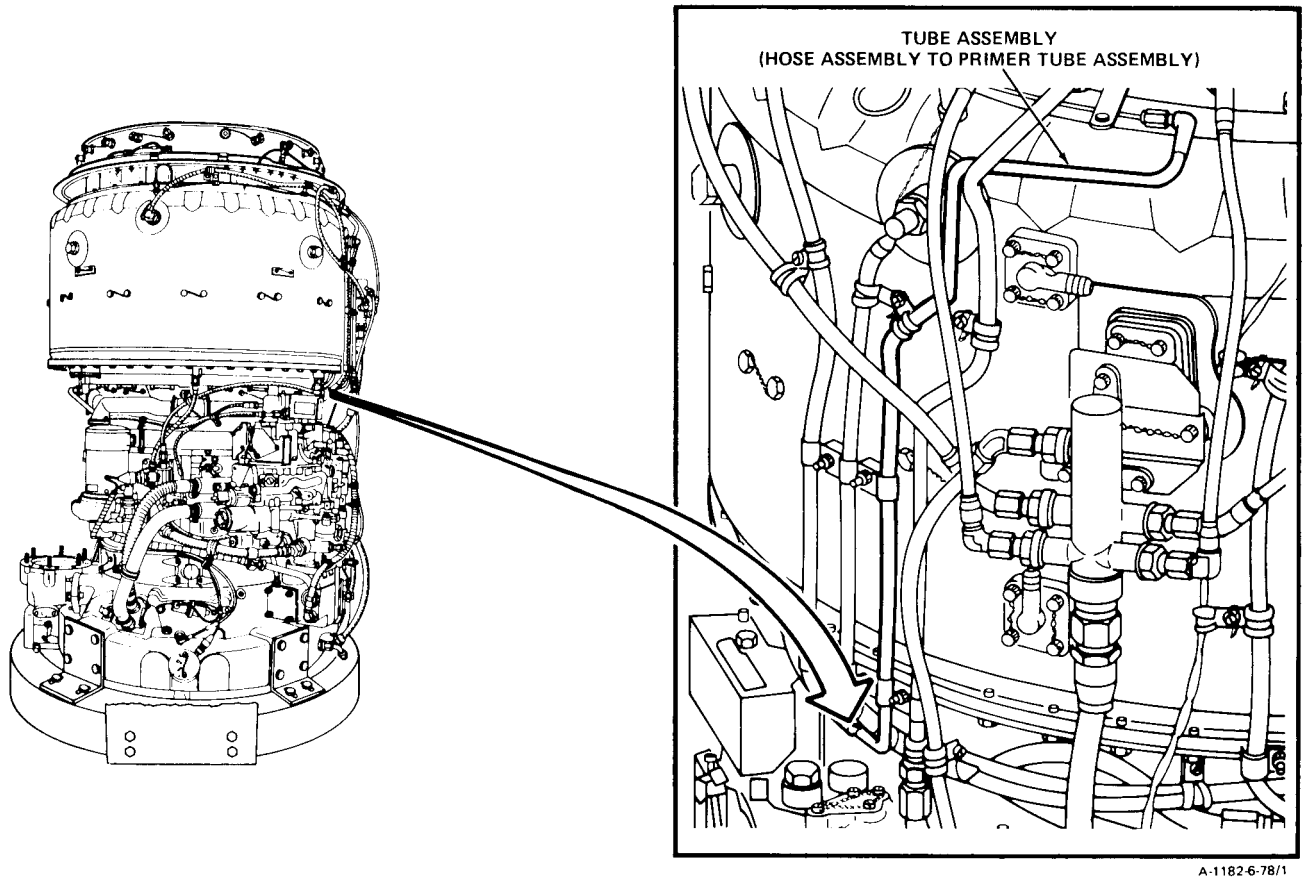
Materials:
Wiping Rag (E58)

Personnel Required:
68B10 Aircraft Powerplant Repairer

General Safety Instructions:

WARNING

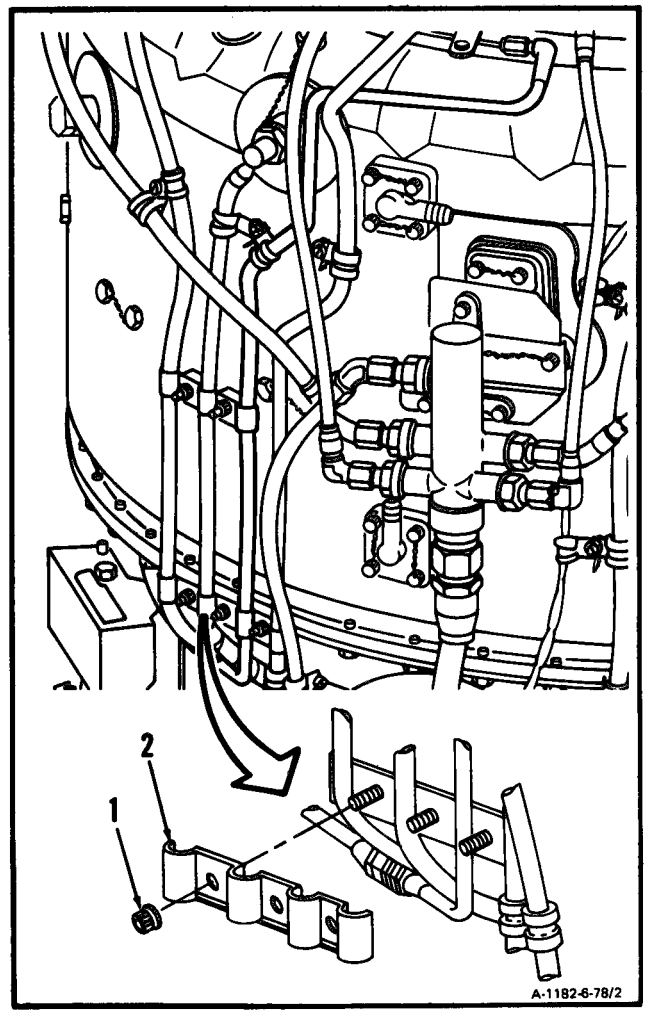
Turbine fuels are very flammable. They may cause drying and irritation of skin or eyes. Handle only in well-ventilated areas away from heat and open flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin, and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.



GO TO NEXT PAGE

6-78 REMOVE TUBE ASSEMBLY (HOSE ASSEMBLY TO PRIMER TUBE ASSEMBLY) (Continued)

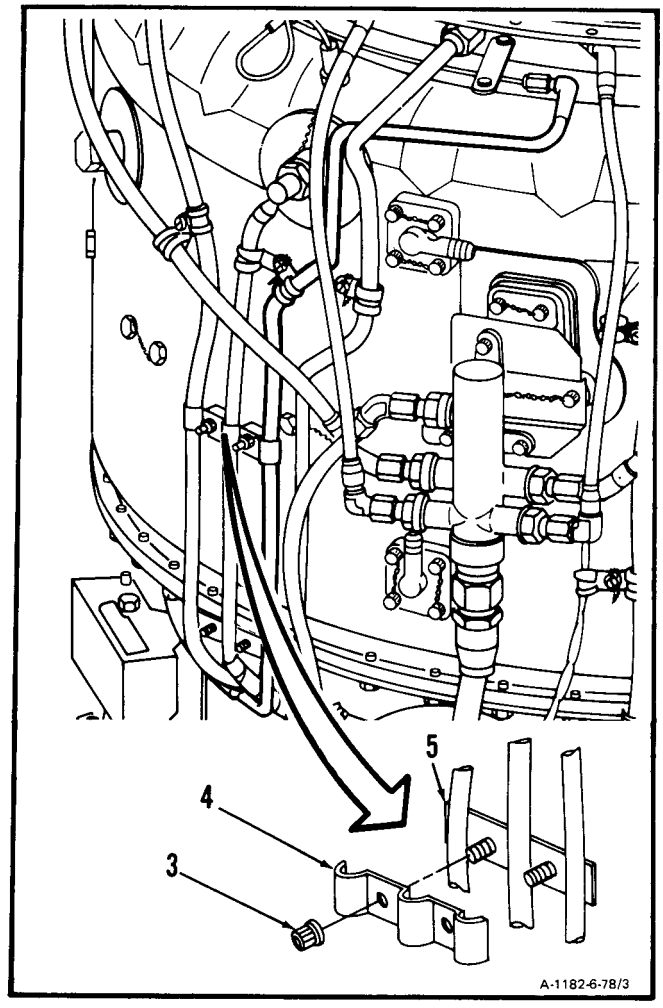
1. **Remove** three nuts (1) and **clamp (2).**



GO TO NEXT PAGE

6-78 REMOVE TUBE ASSEMBLY (HOSE ASSEMBLY TO PRIMER TUBE ASSEMBLY) (Continued) 6-78

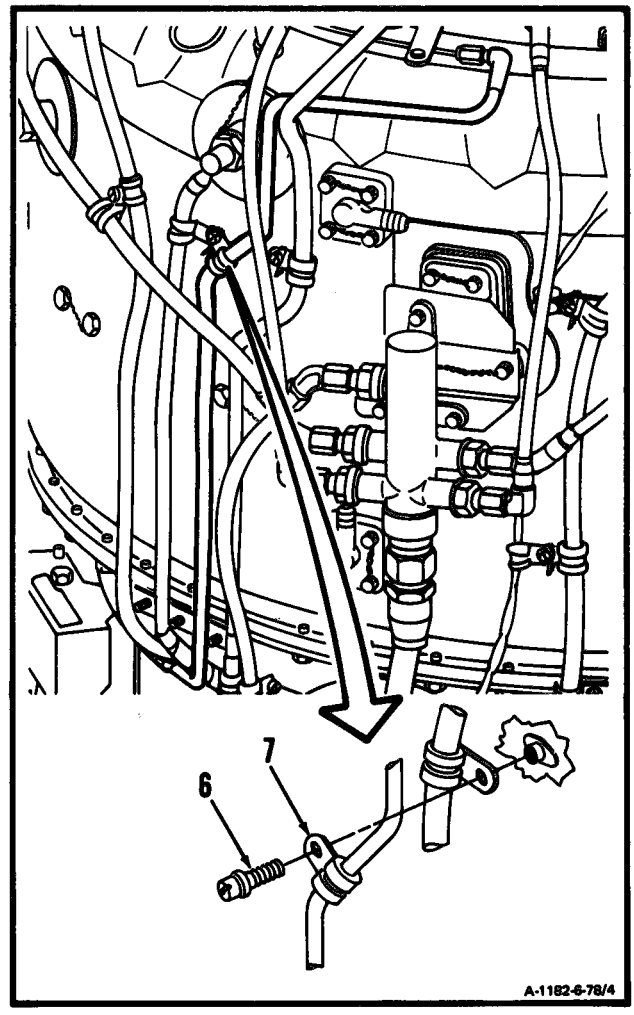
2. **Remove** two nuts (3) and **clamps (4 and 5).**



GO TO NEXT PAGE

6-78 REMOVE TUBE ASSEMBLY (HOSE ASSEMBLY TO PRIMER TUBE ASSEMBLY) (Continued) 6-78

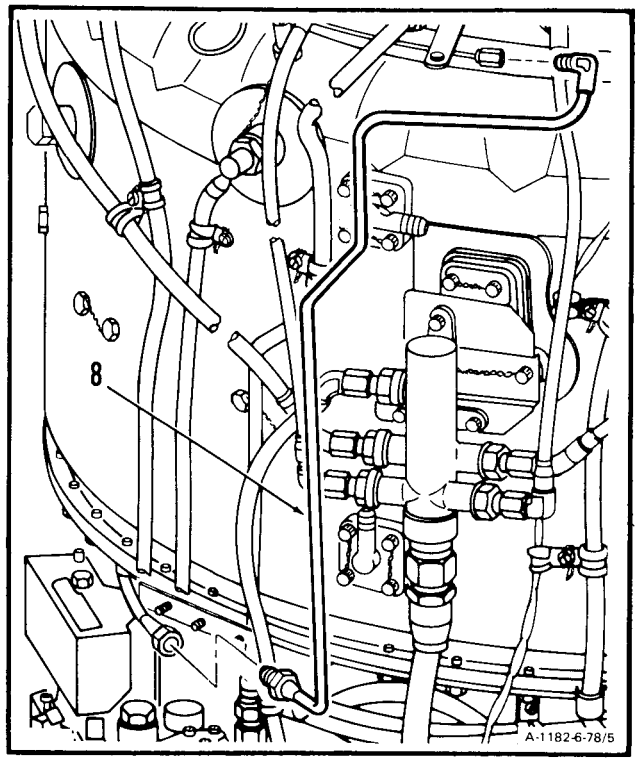
3. **Remove** lockwire, screw (6) and **clamp (7).**

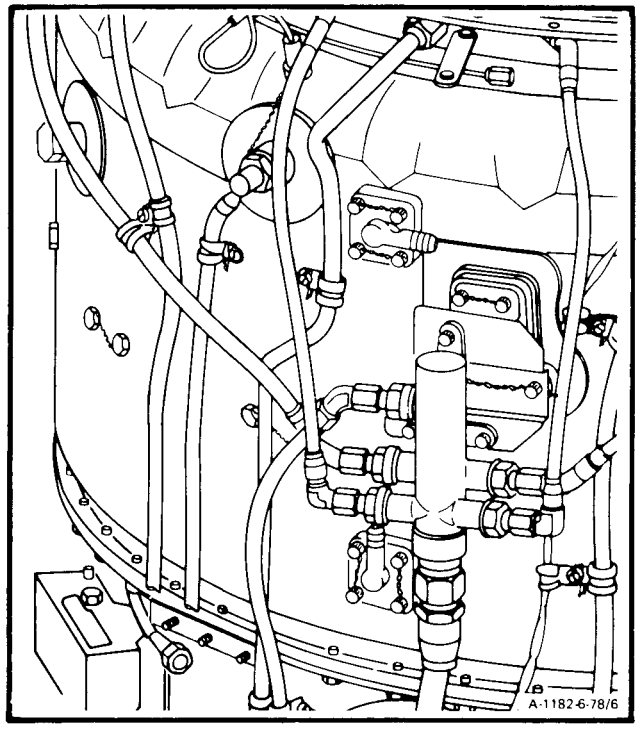


GO TO NEXT PAGE

6-78 REMOVE TUBE ASSEMBLY (HOSE ASSEMBLY TO PRIMER TUBE ASSEMBLY) (Continued)

4. Disconnect and **remove tube assembly (8).**





FOLLOW-ON MAINTENANCE:

None

END OF TASK

6-79 INSTALL TUBE ASSEMBLY (HOSE ASSEMBLY TO PRIMER TUBE ASSEMBLY) 6-79

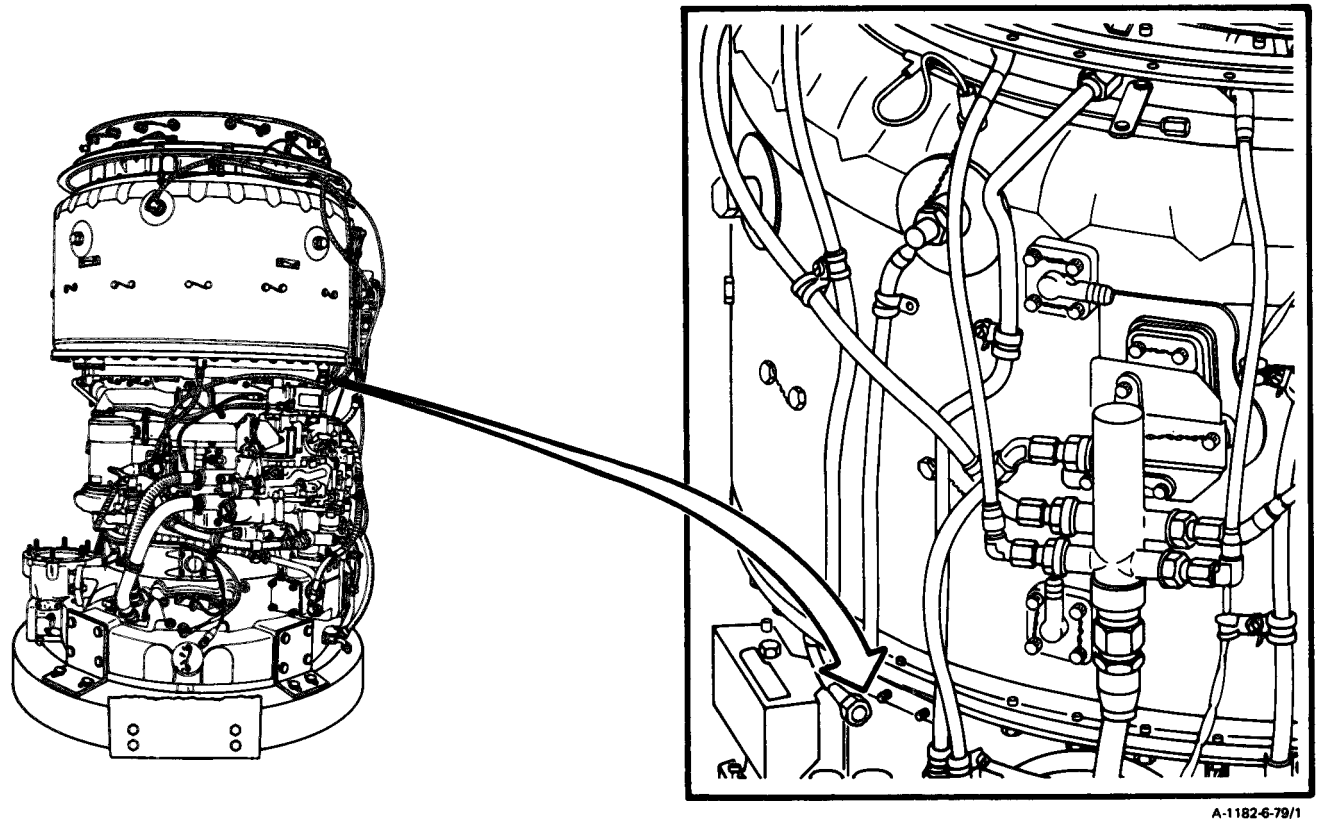
INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
Lockwire (E29).

Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

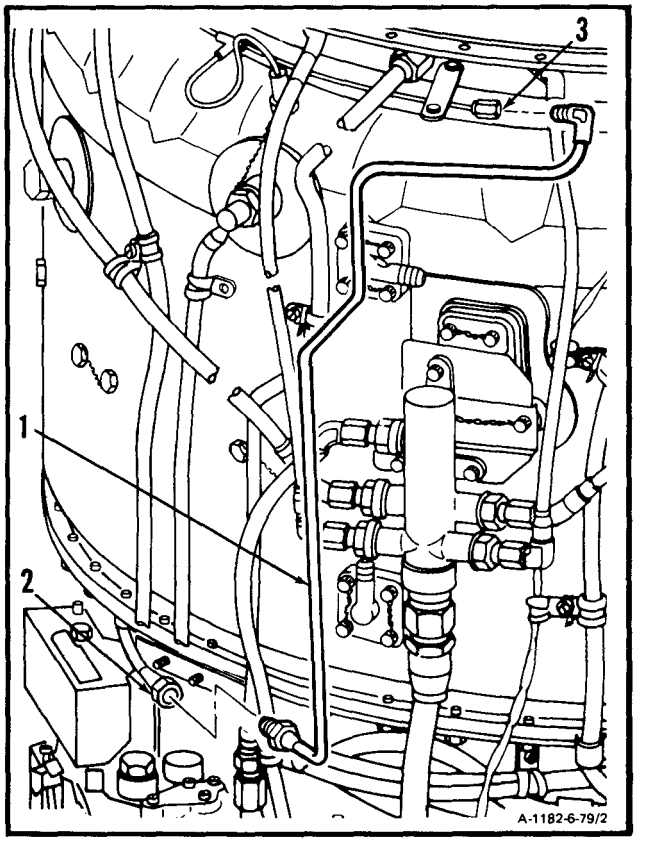


A-1182-6-79/1

GO TO NEXT PAGE

6-79 INSTALL TUBE ASSEMBLY (HOSE ASSEMBLY TO PRIMER TUBE ASSEMBLY) (Continued)

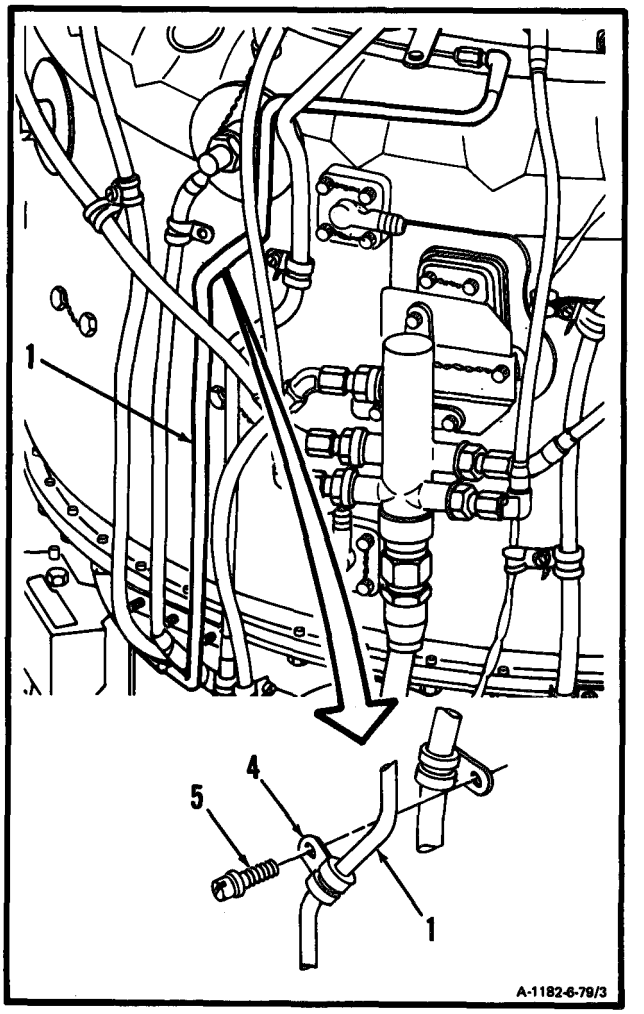
1. **Install tube assembly (1)** on hose assembly (2) and primer tube assembly (3).



GO TO NEXT PAGE

6-79 INSTALL TUBE ASSEMBLY (HOSE ASSEMBLY TO PRIMER TUBE ASSEMBLY) (Continued) 6-79

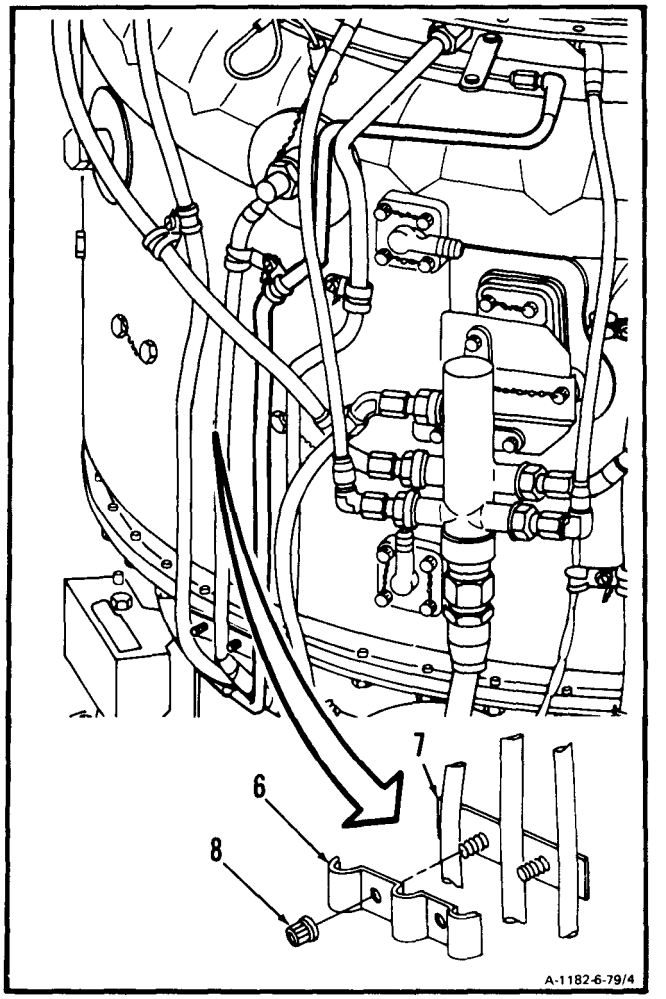
2. **Install clamp (4)** on tube assembly (1) and install screw (5). Lockwire screw (5). Use lockwire (E29).



GO TO NEXT PAGE

6-79 INSTALL TUBE ASSEMBLY (HOSE ASSEMBLY TO PRIMER TUBE ASSEMBLY) (Continued)

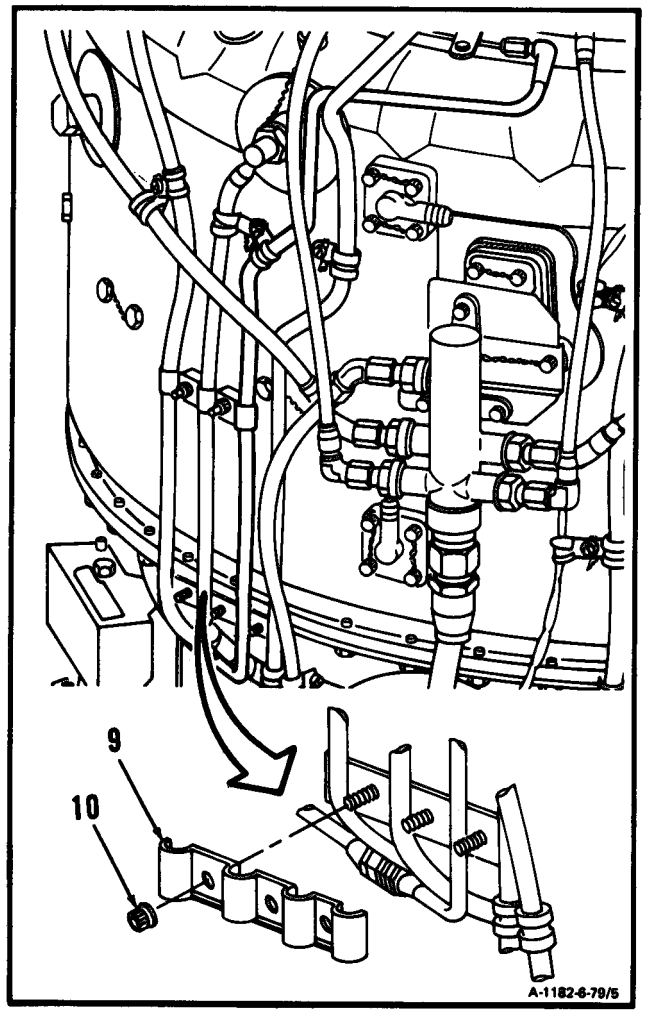
3. **Install two clamps (6 and 7)** and two nuts (8).



GO TO NEXT PAGE

6-79 INSTALL TUBE ASSEMBLY (HOSE ASSEMBLY TO PRIMER TUBE ASSEMBLY) (Continued) 6-79

4. **Install clamp (9)** and three nuts (10).



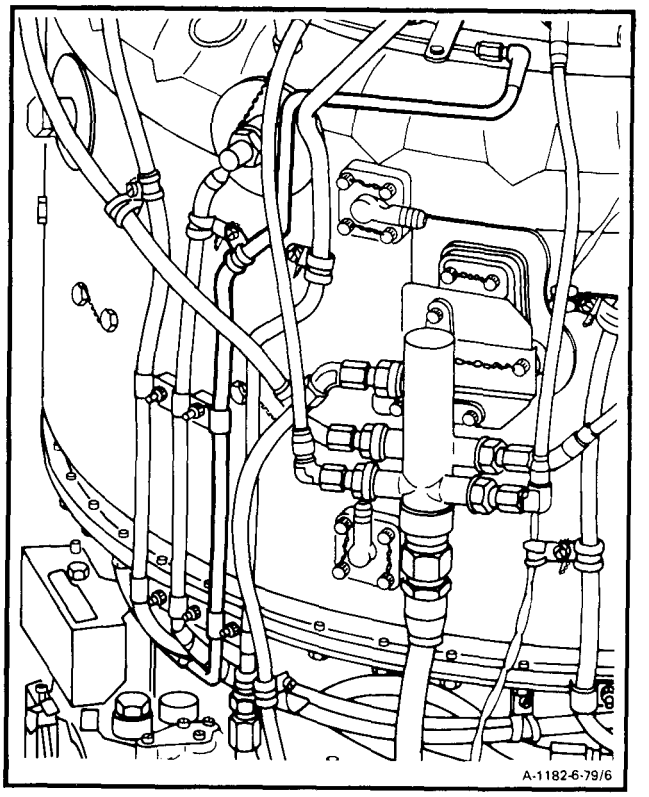
INSPECT

GO TO NEXT PAGE

6-79 INSTALL TUBE ASSEMBLY (HOSE ASSEMBLY TO PRIMER TUBE ASSEMBLY) (Continued)

FOLLOW-ON MAINTENANCE:

None



END OF TASK

CHAPTER 7

ELECTRICAL AND IGNITION SYSTEMS – MAINTENANCE INSTRUCTIONS

CHAPTER OVERVIEW

This chapter contains maintenance procedures for the electrical and ignition systems. It is divided into the following sections and tasks.

SECTION	TASK No.	TITLE	PAGE
I		IGNITION COIL AND CABLE ASSEMBLY– MAINTENANCE PROCEDURES	
	7-1	Remove Ignition Coil and Cable Assembly	7-3
	7-2	Clean Ignition Coil and Cable Assembly	7-30
	7-3	Inspect Ignition Coil and Cable Assembly	7-32
	7-4	Repair Ignition Coil and Cable Assembly	7-35
	7-5	Install Ignition Coil and Cable Assembly	7-41
II		SPARK IGNITERS–MAINTENANCE PROCEDURES	
	7-6	Remove Spark Igniters	7-69
	7-7	Clean Spark Igniters	7-73
	7-8	Inspect Spark Igniters	7-74
	7-9	Repair Spark Igniters	7-75
	7-10	Install Spark Igniters	7-78
III		IGNITION EXCITER–MAINTENANCE PROCEDURES	
	7-11	Remove Ignition Exciter	7-85
	7-12	Clean Ignition Exciter	7-89
	7-13	Inspect Ignition Exciter	7-91
	7-14	Repair Ignition Exciter	7-92
	7-15	Install Ignition Exciter	7-94
IV		MAIN ELECTRICAL CABLE ASSEMBLY– MAINTENANCE PROCEDURES	
	7-16	Remove Main Electrical Cable Assembly (Nine Connector)	7-99
	7-16.1	Remove Main Electrical Cable Assembly (Six Connector)	7-110.1
	7-17	Clean Main Electrical Cable Assembly (Nine Connector)	7-111
	7-17.1	Clean Main Electrical Cable Assembly (Six Connector)	7-112.1

SECTION	TASK NO.	TITLE	PAGE
IV		MAIN ELECTRICAL CABLE ASSEMBLY– MAINTENANCE PROCEDURES (Continued)	
	7-18	Inspect Main Electrical Cable Assembly (Nine Connector)	7-113
	7-18.1	Inspect Main Electrical Cable Assembly (Six Connector)	7-114.1
	7-19	Repair Main Electrical Cable Assembly (Nine Connector)	7-115
	7-19.1	Repair Main Electrical Cable Assembly (Six Connector)	7-116
	7-20	Test Main Electrical Cable Assembly (Nine Connector)	7-116.1
	7-20.1	Test Main Electrical Cable Assembly (Six Connector)	7-126
	7-21	Install Main Electrical Cable Assembly (Nine Connector)	7-126.10
	7-21.1	Install Main Electrical Cable Assembly (Six Connector)	7-138

7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY 7-1

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944

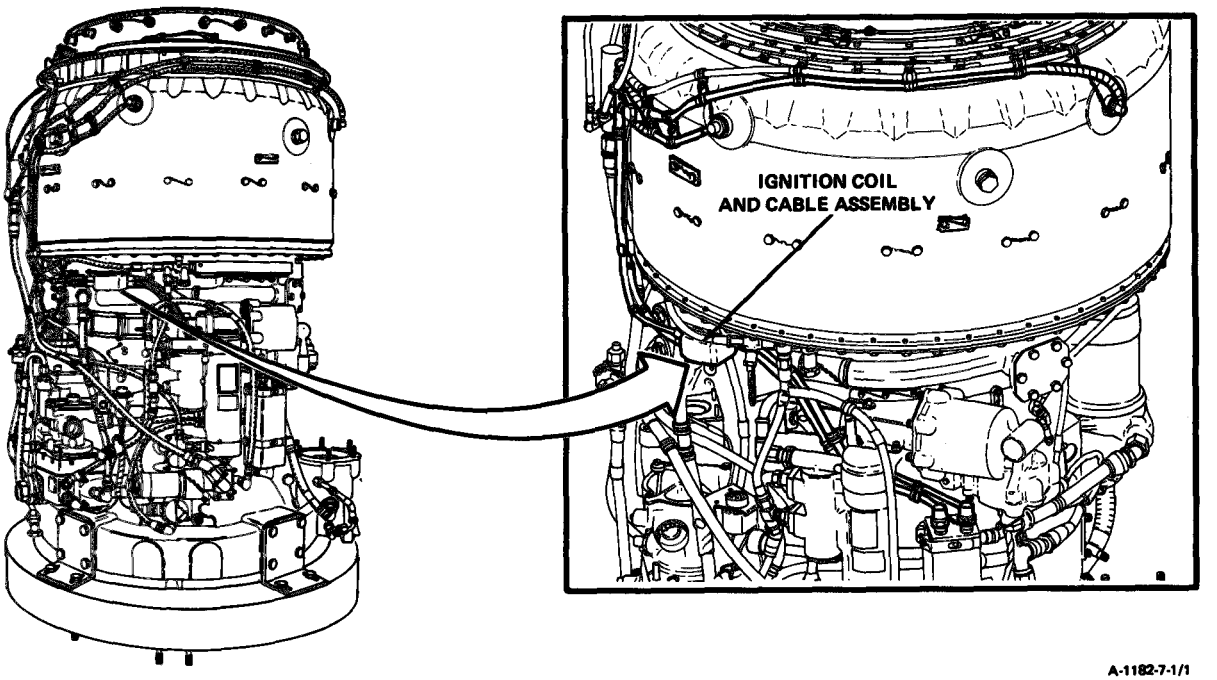
Materials:
None

Personnel Required:
68510 Aircraft Powerplant Repairer

General Safety Instructions:

WARNING

The ignition exciter stores very high and possibly fatal voltage. Use extreme care when working around ignition exciter. Serious injury could result if exciter is accidentally grounded. Do not probe inside of output receptacles with fingers or metal object. Discharge exciter only with insulated screwdriver. In case of shock or injury, get medical attention.

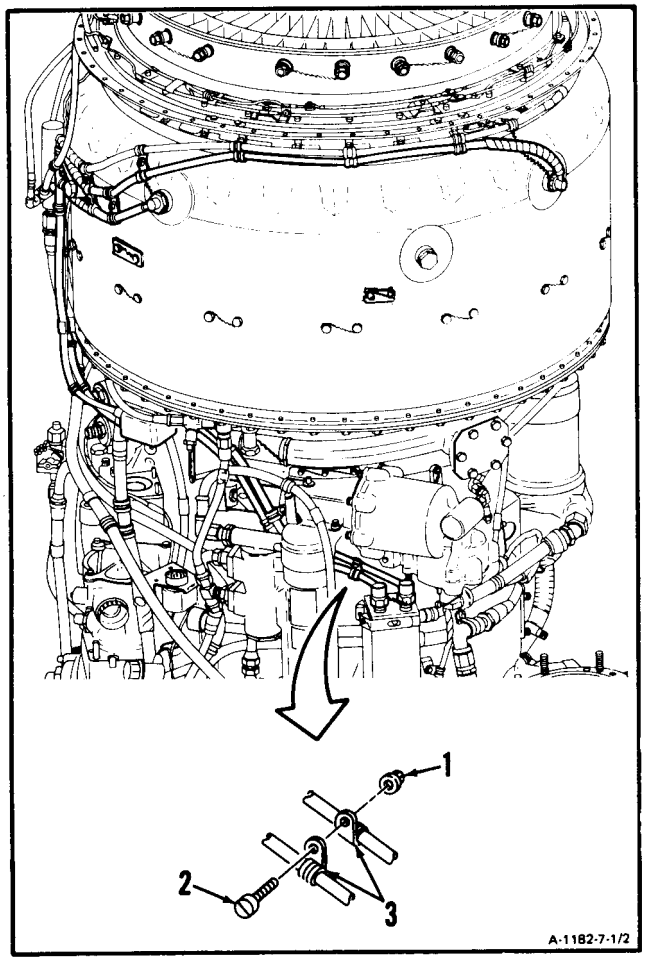


A-1182-7-1/1

GO TO NEXT PAGE

7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued)

1. **Remove** nut (1), screw (2), and **two clamps (3).**

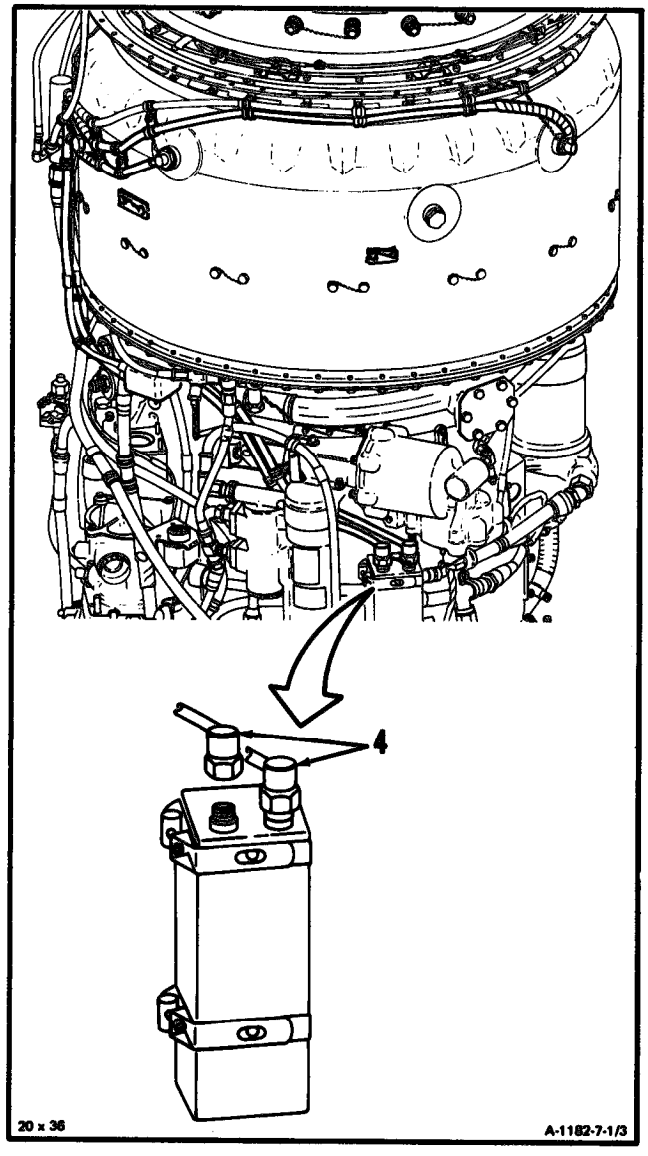


7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued)

WARNING

The ignition exciter stores very high and possibly fatal voltage. Use extreme care when working around ignition exciter. Serious injury could result if exciter is accidentally grounded. Do not probe inside of output receptacles with fingers or metal object. Discharge exciter only with insulated screwdriver. When discharging ignition exciter, remove one lead at a time and discharge receptacle that lead was removed from. In case of shock or injury, get medical attention.

2. Remove lockwire and **disconnect two coil and cable assembly leads (4).** Place leads to one side.



GO TO NEXT PAGE

7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued) 7-1

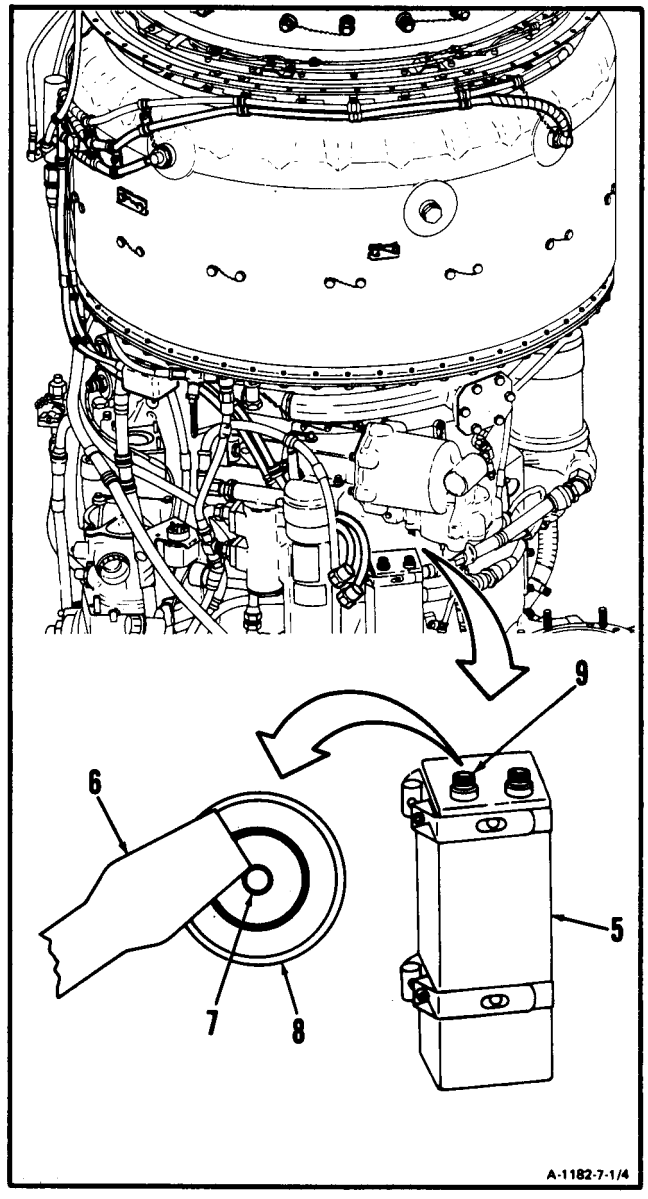
WARNING

When discharging ignition exciter, remove one lead at a time and discharge receptacle that lead was removed from. Failure to do so may result in serious shock when you are removing second lead. In case of serious shock, get medical attention.

NOTE

Step 3. applies to both output receptacles.

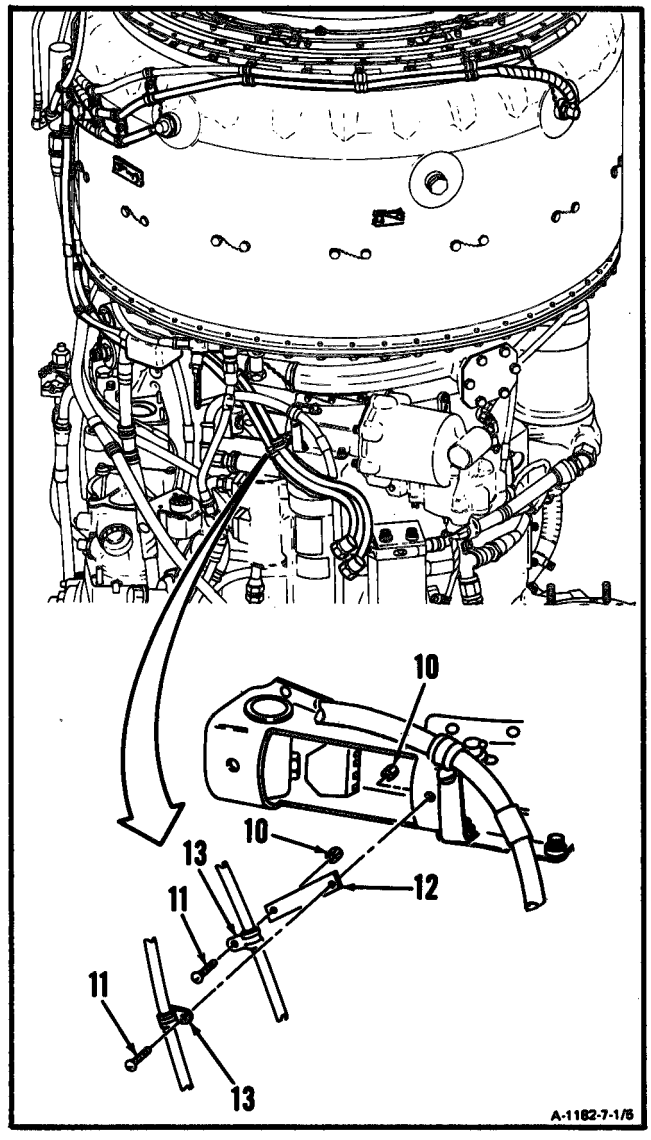
3. **Discharge ignition exciter (5)** by placing tip of insulated screwdriver (6) against pin (7) and edge (8) of receptacle (9).



GO TO NEXT PAGE

7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued)

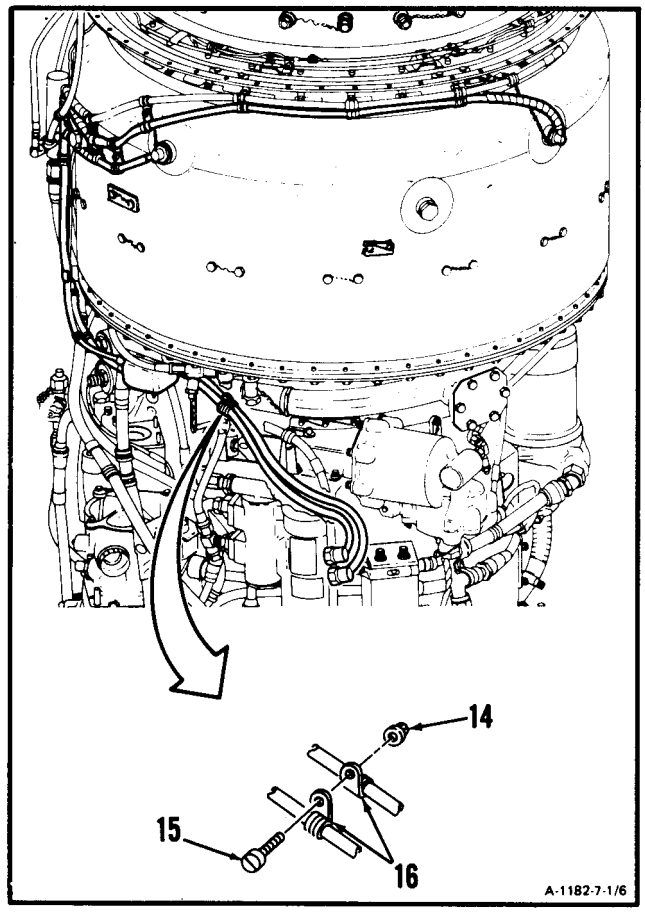
4. **Remove** two nuts (10), screws (11), **bracket (12), and two clamps (13).**



GO TO NEXT PAGE

7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued) 7-1

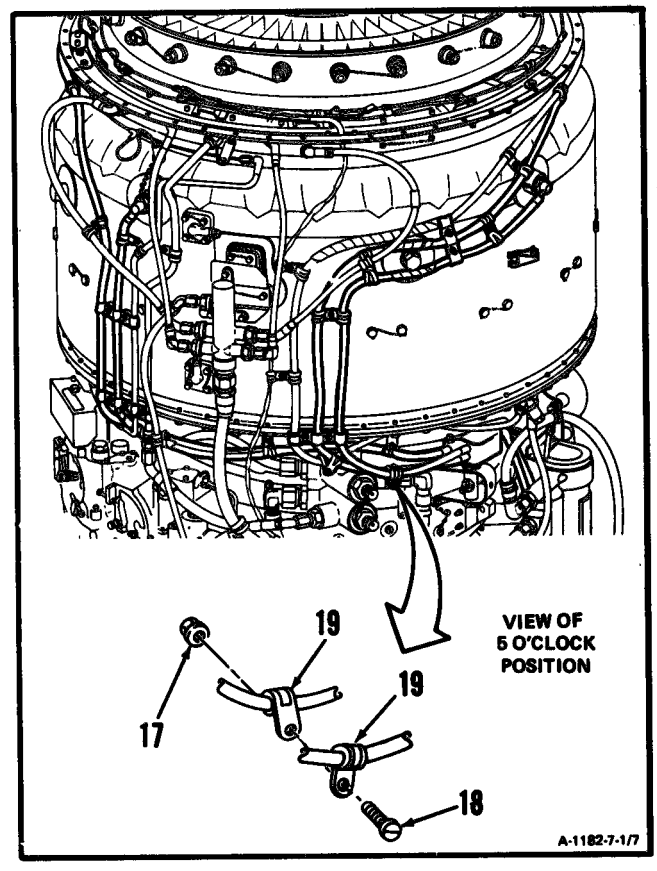
5. **Remove** nut (14), screw (15), and **two clamps (16).**



GO TO NEXT PAGE

7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued) 7-1

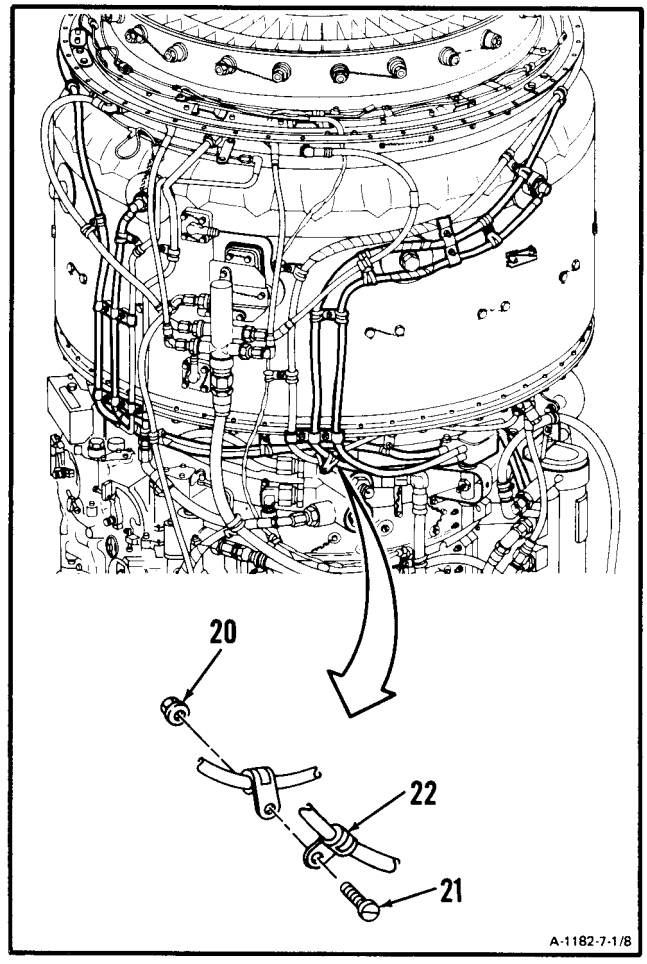
6. **Remove** nut (17), screw (18), and **two clamps (19).**



GO TO NEXT PAGE

7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued) 7-1

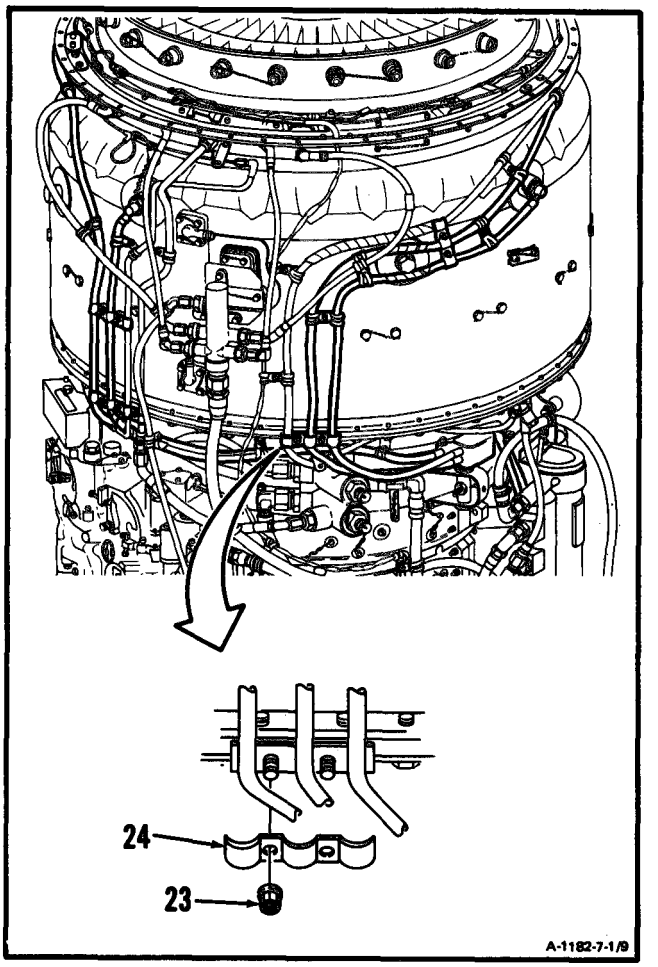
7. **Remove** nut (20), screw (21), and **clamp (22).**



GO TO NEXT PAGE

7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued) 7-1

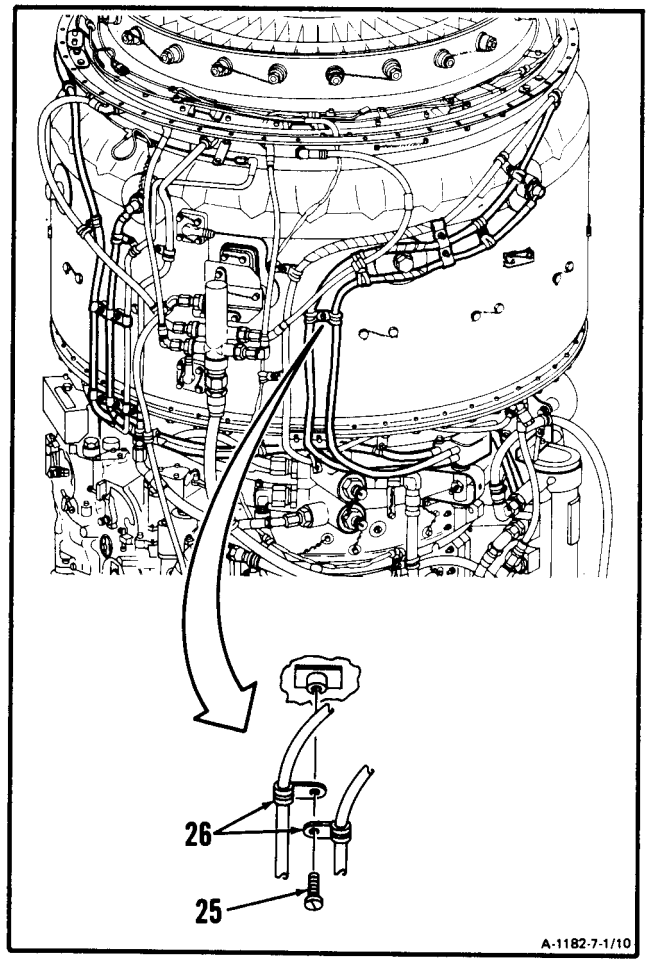
8. **Remove** two nuts (23) and **retaining strap (24).**



GO TO NEXT PAGE

7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued) 7-1

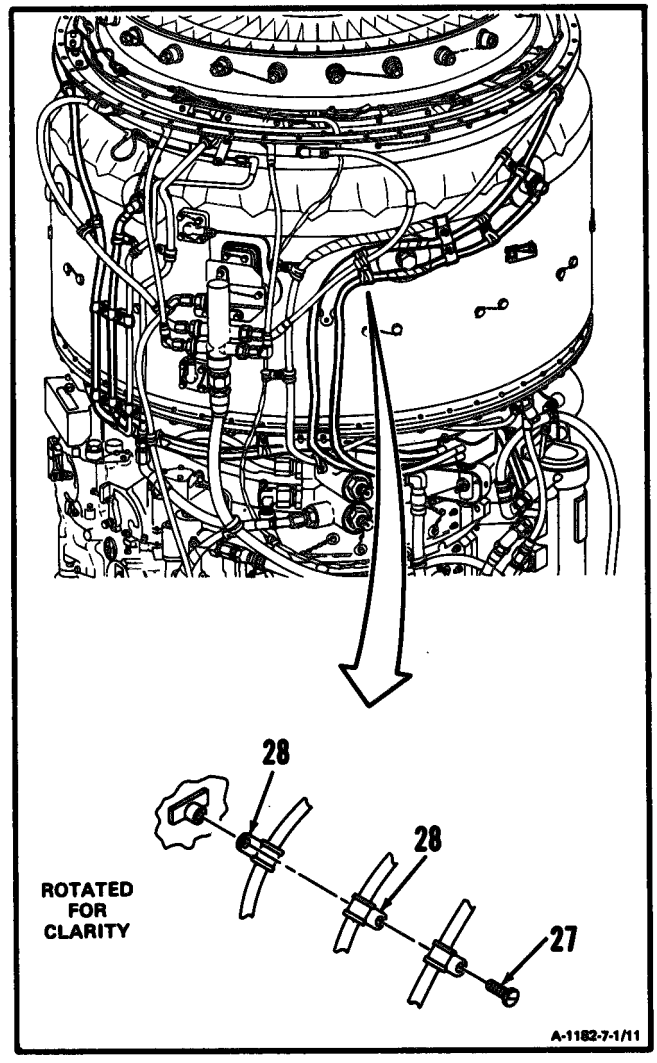
9. **Remove** lockwire, screw (25), and **two clamps (26).**



GO TO NEXT PAGE

7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued)

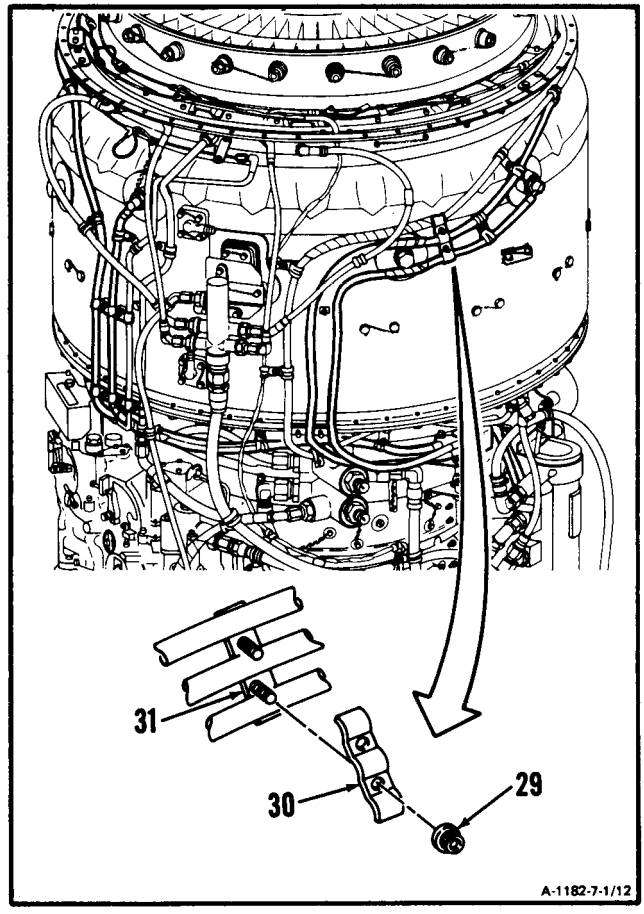
10. **Remove** lockwire, screw (27), and **two clamps (28).**



GO TO NEXT PAGE

7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued) 7-1

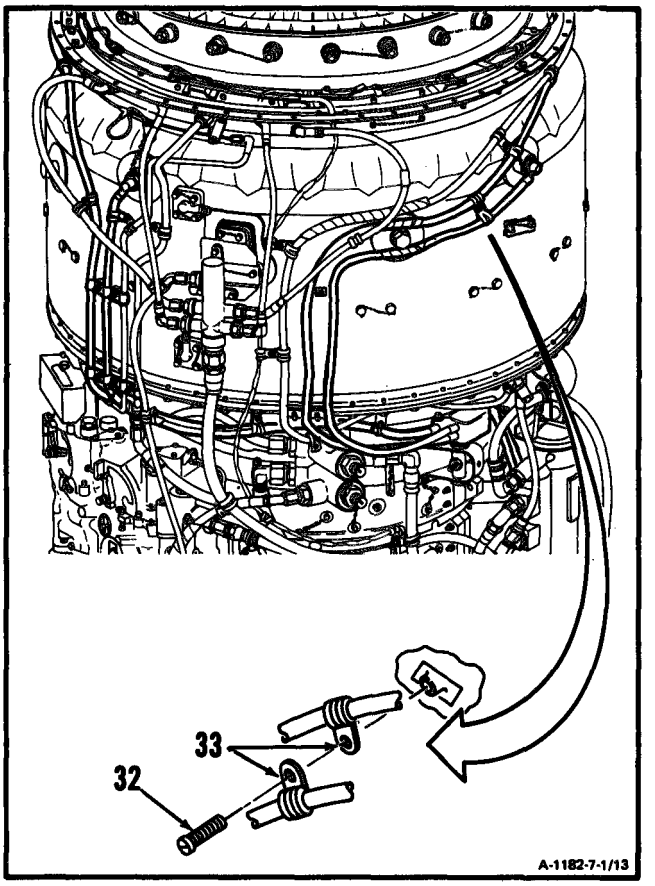
11. **Remove** two nuts (29) and **clamps (30 and 31).**



GO TO NEXT PAGE

7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued)

12. **Remove** lockwire, screw (32), and **two clamps (33).**



GO TO NEXT PAGE

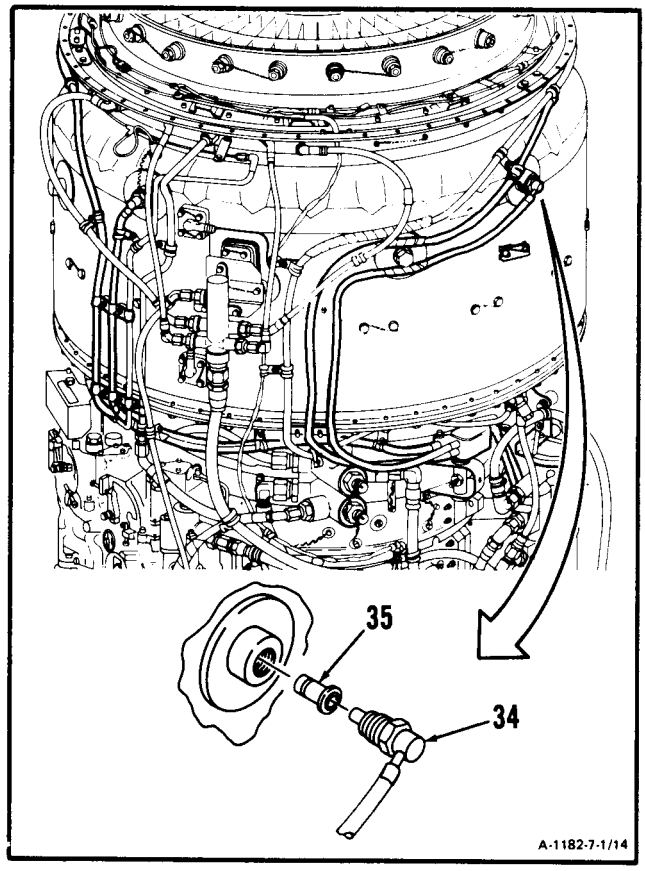
7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued)

13. Remove lockwire. **Disconnect and remove ignition lead (34).**

NOTE

Spark igniter may remain in combustion chamber housing or on ignition lead.

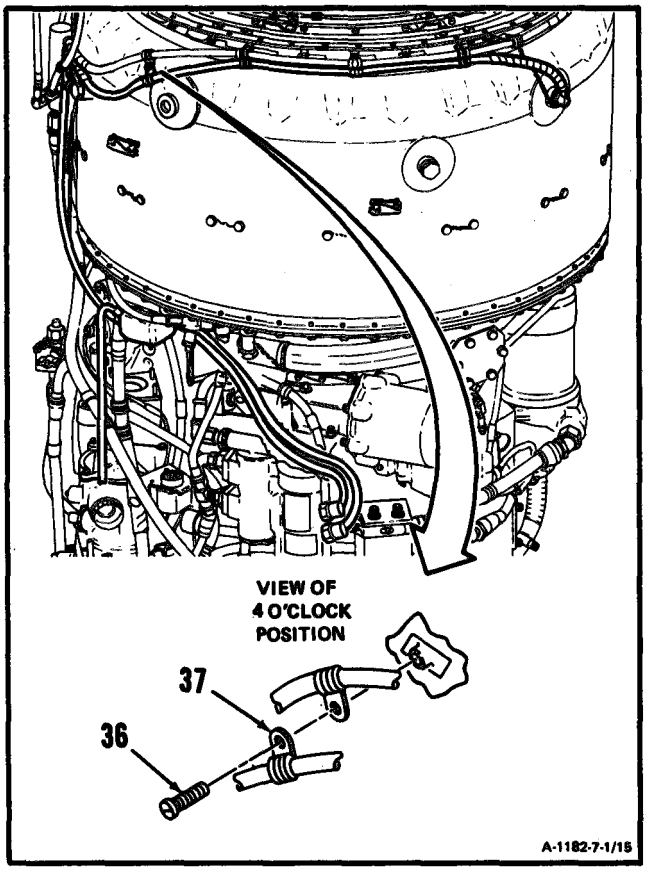
14. **Remove spark igniter (35).**



GO TO NEXT PAGE

7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued) 7-1

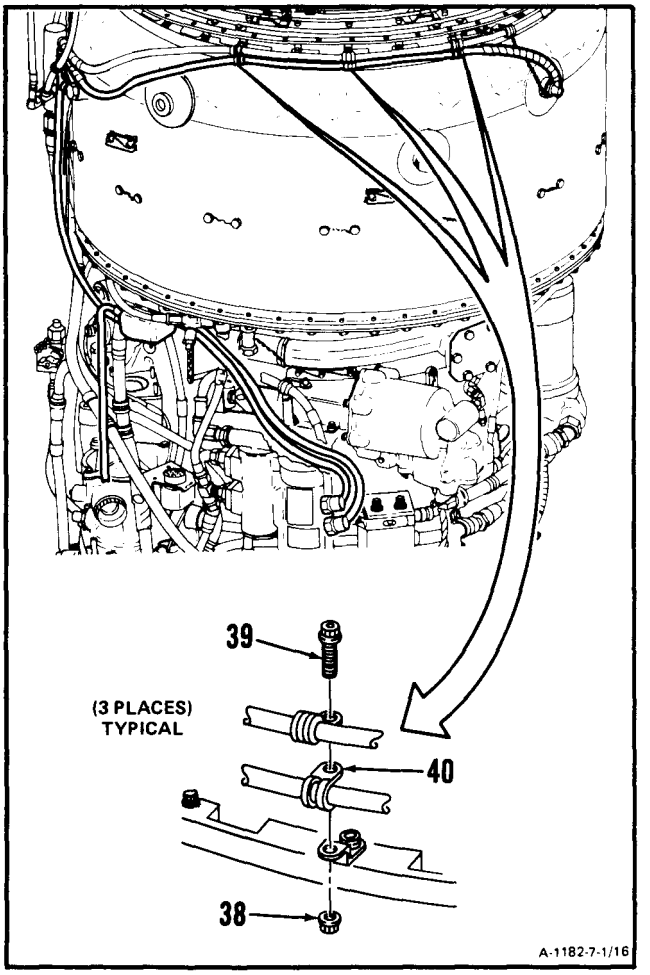
15. **Remove** lockwire, screw (36), and **clamp (37).**



GO TO NEXT PAGE

7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued) 7-1

16. **Remove** three nuts (38), bolts (39), and **clamps (40).**



GO TO NEXT PAGE

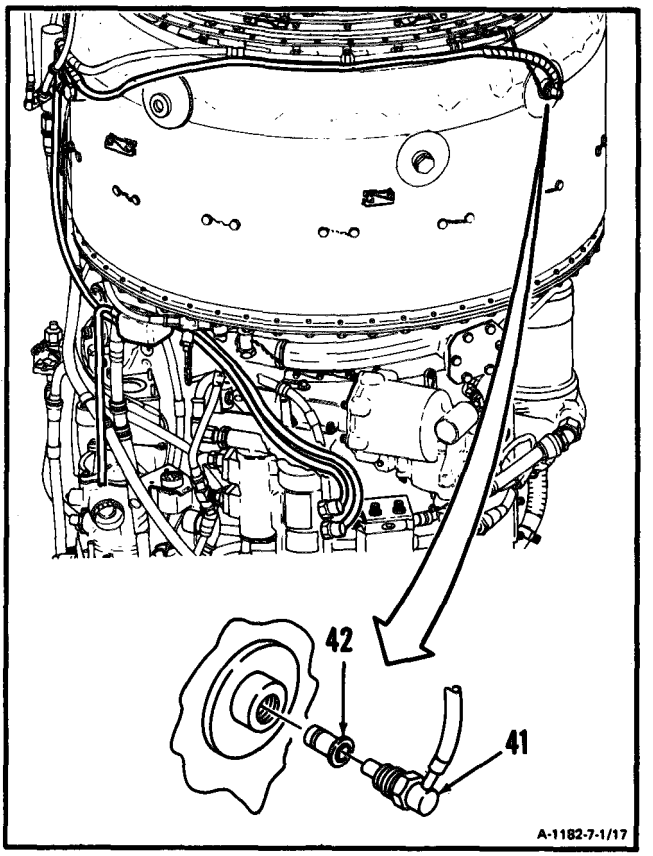
7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued) 7-1

17. Remove lockwire. **Disconnect and remove ignition lead (41).**

NOTE

Spark igniter may remain in combustion chamber housing or on ignition lead.

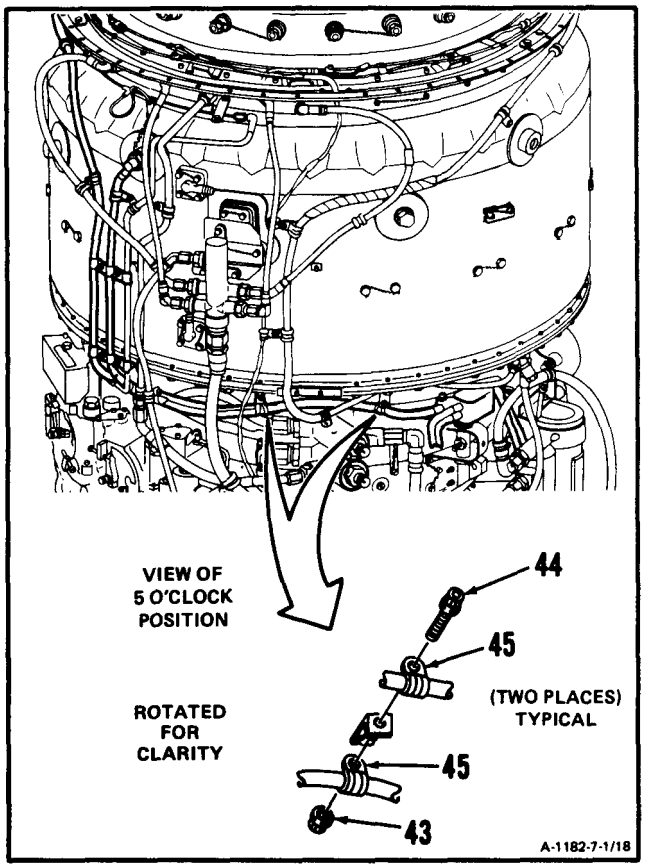
18. **Remove spark igniter (42).**



GO TO NEXT PAGE

7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued) 7-1

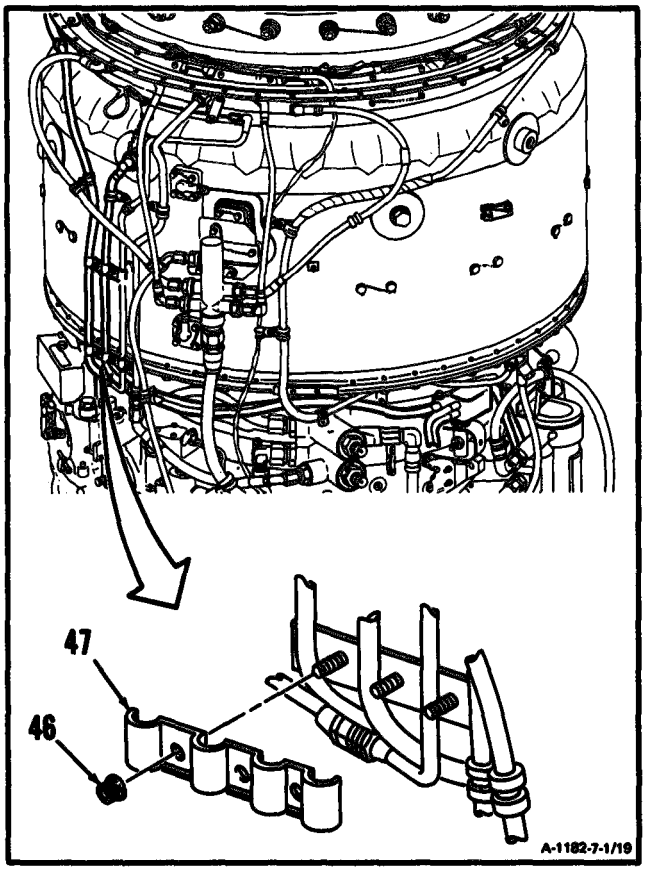
19. **Remove** two nuts (43), bolts (44), and **four clamps (45).**



GO TO NEXT PAGE

7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued) 7-1

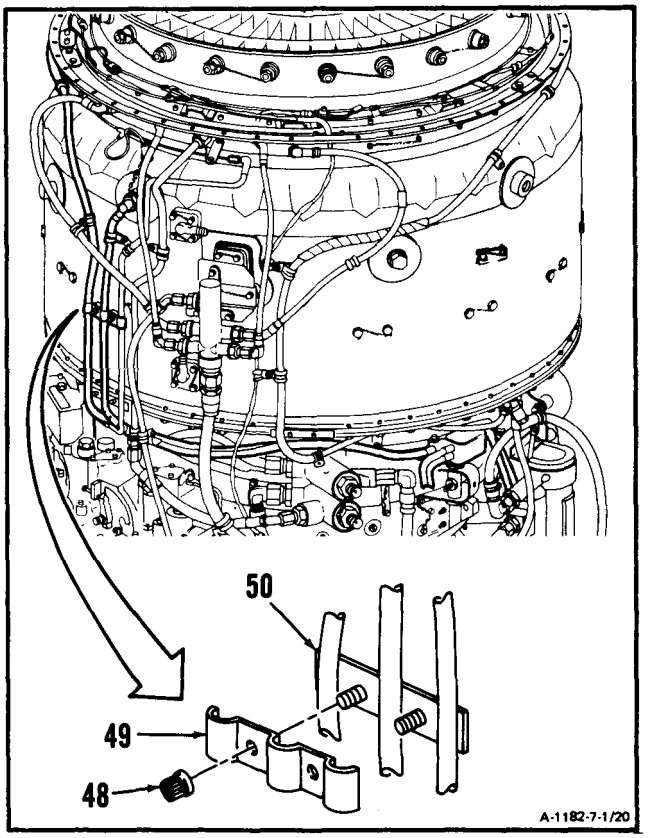
20. **Remove** three nuts (46) and **clamp (47).**



GO TO NEXT PAGE

7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued) 7-1

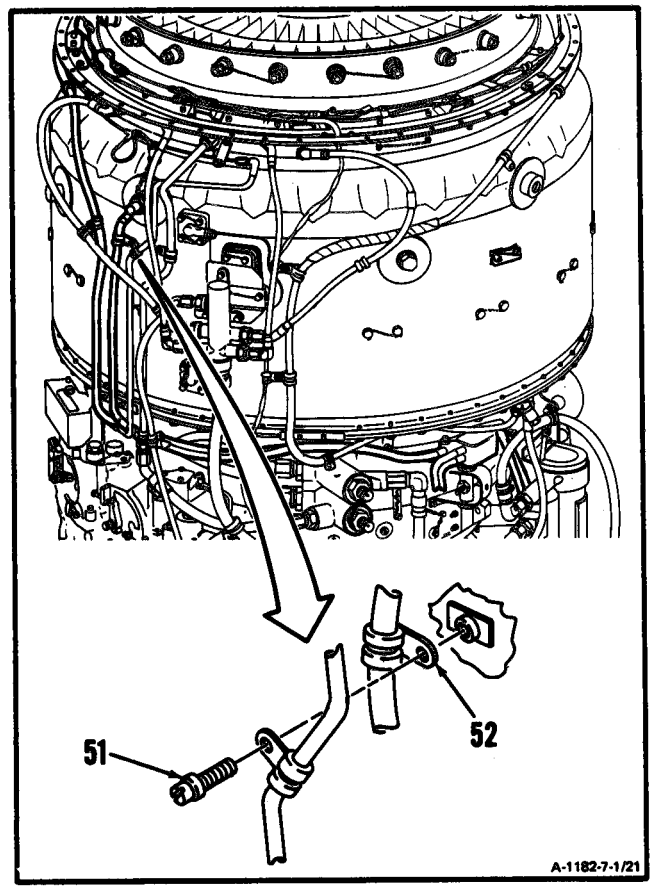
21. **Remove** two nuts (48) and **clamps (49 and 50).**



GO TO NEXT PAGE

7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued)

22. **Remove** lockwire, screw (51), and **clamp (52).**



GO TO NEXT PAGE

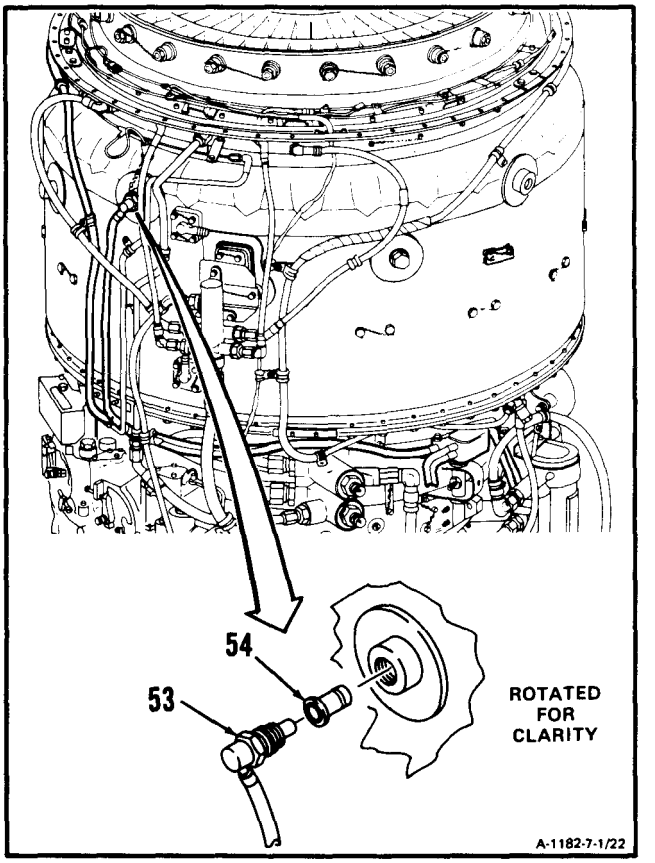
7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued) 7-1

23. Remove lockwire. **Disconnect and remove ignition lead (53).**

NOTE

Spark igniter may remain in combustion chamber housing or on ignition lead.

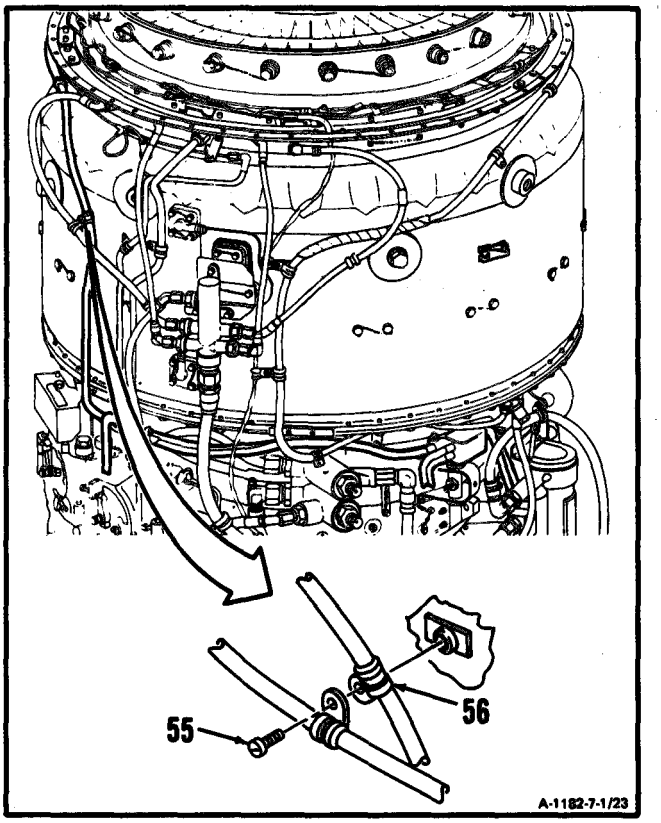
24. **Remove spark igniter (54).**



GO TO NEXT PAGE

7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued) 7-1

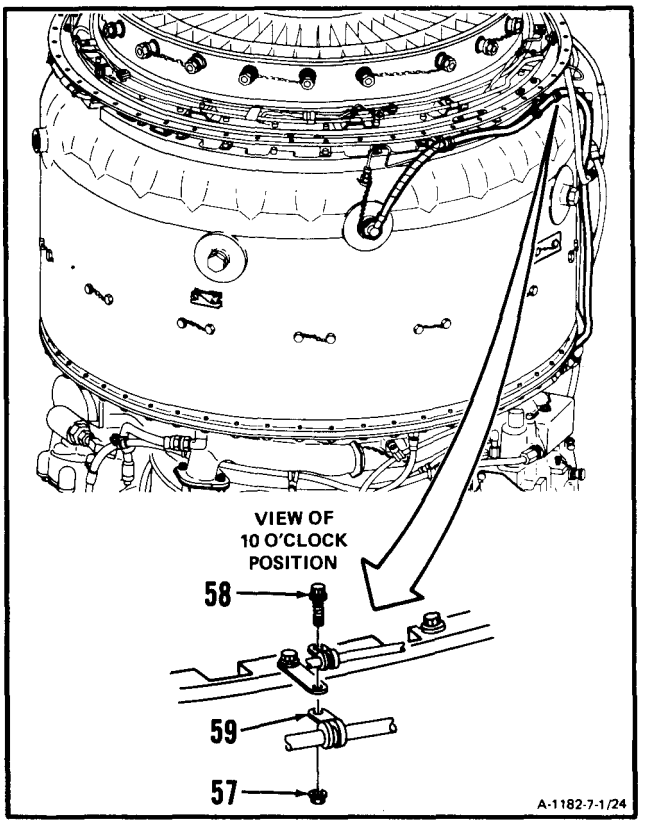
25. **Remove** lockwire, screw (55), and **clamp (56).**



GO TO NEXT PAGE

7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued) 7-1

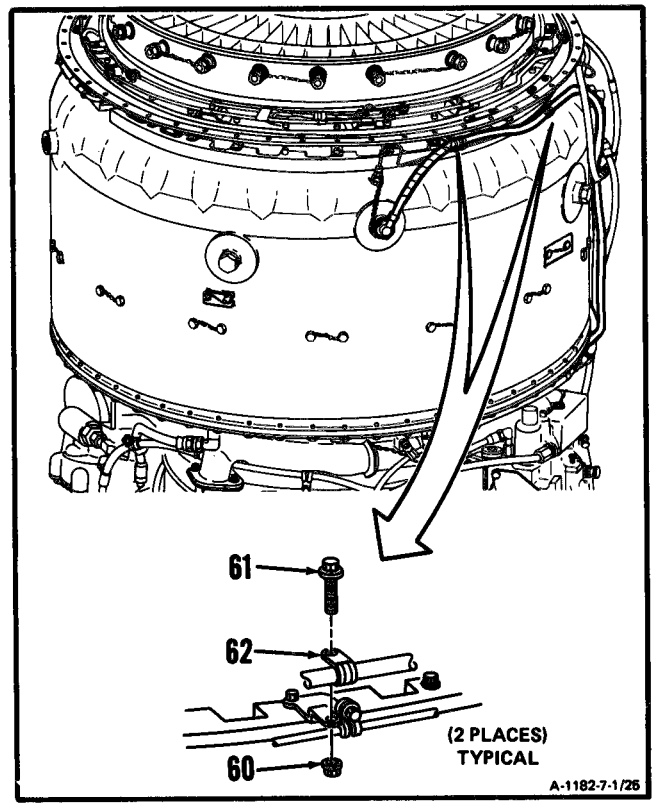
26. **Remove** nut (57), bolt (58), and **clamp (59).**



GO TO NEXT PAGE

7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued) 7-1

27. **Remove** two nuts (60), bolts (61), and **clamps (62).**



GO TO NEXT PAGE

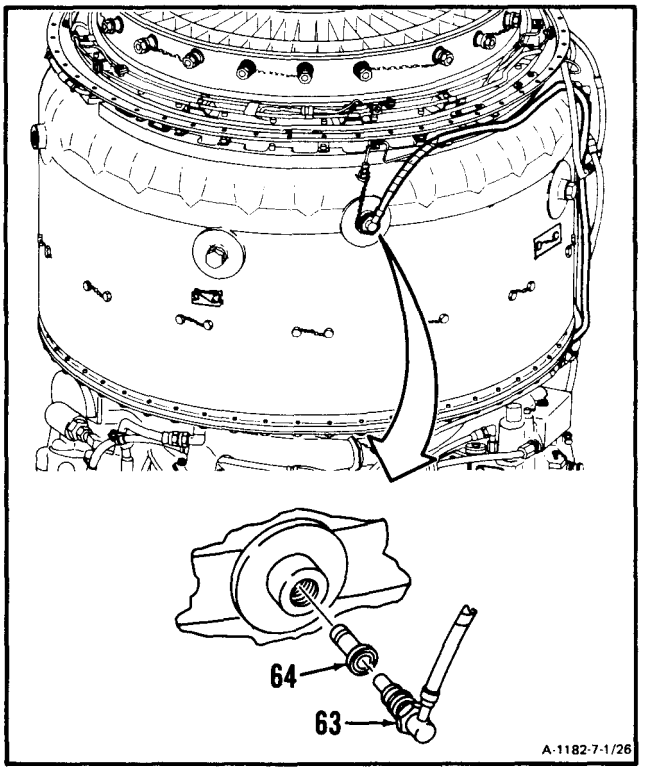
7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued) 7-1

28. Remove lockwire. **Disconnect and remove ignition lead (63).**

NOTE

Spark igniter may remain in combustion chamber housing or on igniter lead.

29. **Remove spark igniter (64).**

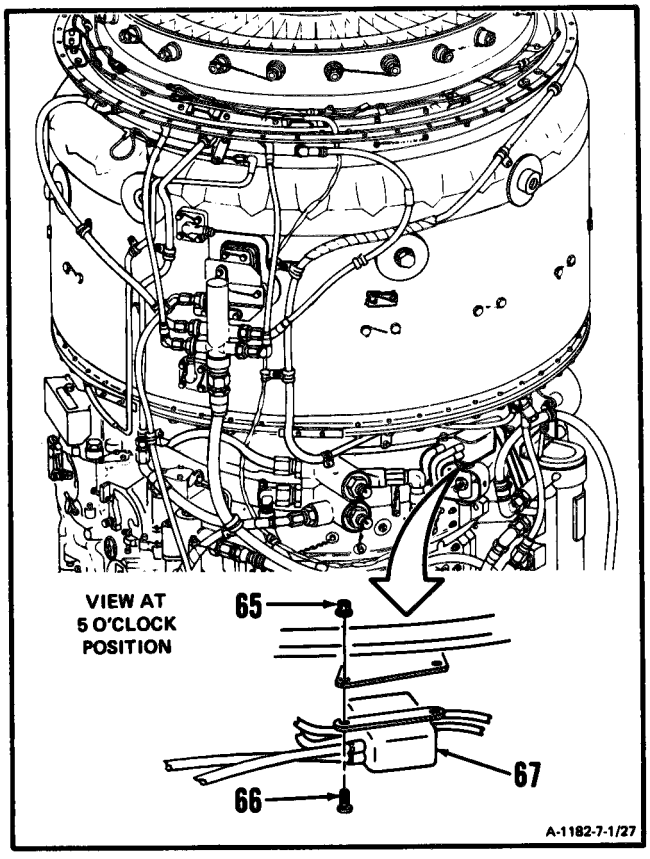


GO TO NEXT PAGE

7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued)

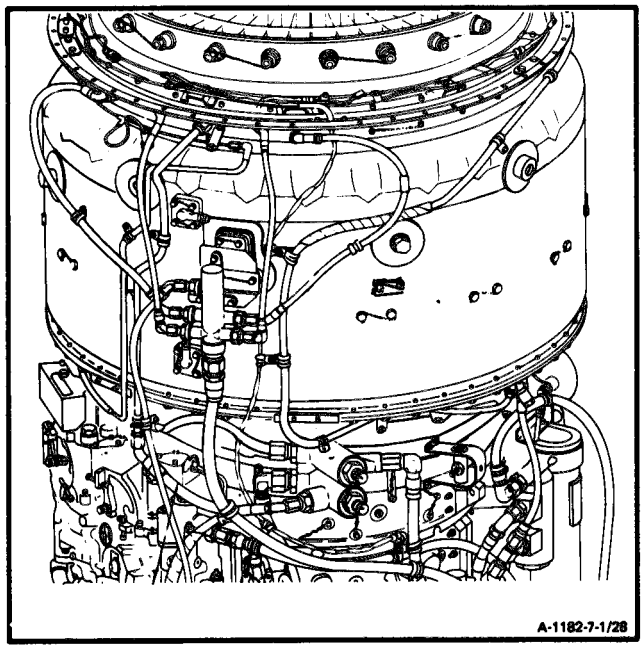
30. **Remove** two nuts (65) and **bolts (66).**

31. **Remove ignition coil and cable assembly (67).**



FOLLOW-ON MAINTENANCE:

None



END OF TASK

7-2 CLEAN IGNITION COIL AND CABLE ASSEMBLY

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Goggles
Compressed Air Source

Materials:
Dry Cleaning Solvent (E17)
Gloves (E20)
Lint-Free Cloth (E26)

Personnel Required:
68B0 Aircraft Powerplant Repairer

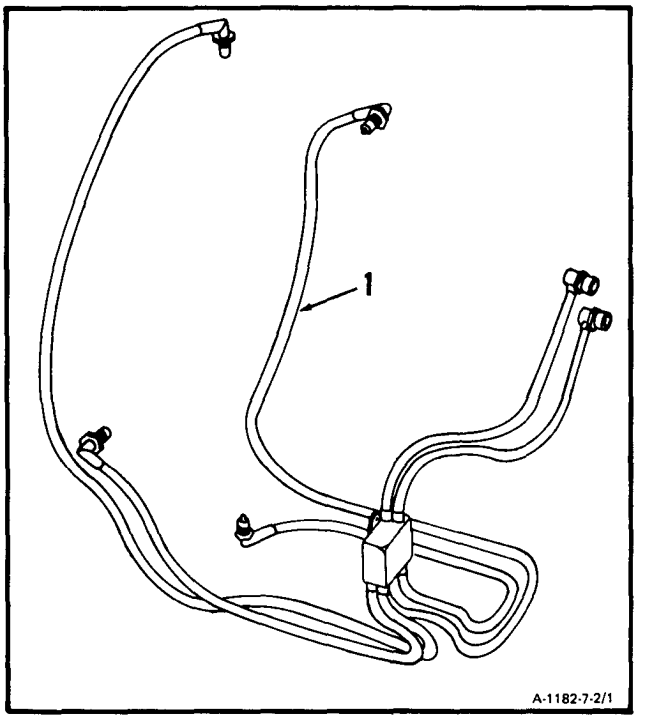
Equipment Condition:
Off Engine Task

General Safety Instructions:

WARNING

Dry cleaning solvent (E17) is flammable and toxic. It can irritate skin and cause burns. Use only in well-ventilated area, away from heat and open flame. In case of contact, immediately flush skin or eyes with water for at least 15 minutes. Get medical attention for eyes.

1. Wear gloves (E20). **Clean ignition coil and cable assembly (1)** with lint-free cloth (E26) and brush dampened in dry cleaning solvent (E17).



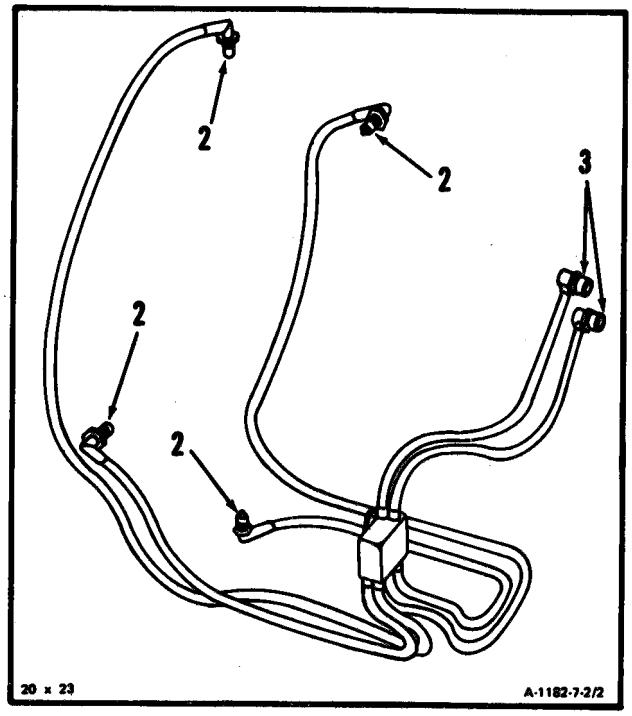
GO TO NEXT PAGE

7-2 CLEAN IGNITION COIL AND CABLE ASSEMBLY (Continued) 7-2

WARNING

When using compressed air for cleaning, use approved protective equipment for eyes and face. Do not use more than 30 psig air pressure. Do not direct air toward yourself or another person. Failure to comply could result in injury to eyes or skin. In case of injury, get medical attention.

2. Wear goggles. **Blow dry four spark plug connectors (2) and two exciter connectors (3)** thoroughly using clean, dry compassed air.



FOLLOW-ON MAINTENANCE:

Inspect Ignition Coil and Cable Assembly (Task 7-3).

END OF TASK

7-3 INSPECT IGNITION COIL AND CABLE ASSEMBLY 7-3

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4844
Multimeter

Materials:
None

Personnel Required:
68B30 Aircraft Powerplant Inspector

Equipment Condition:
Off Engine Task

1. **Inspect ignition coil and cable assembly (1).**

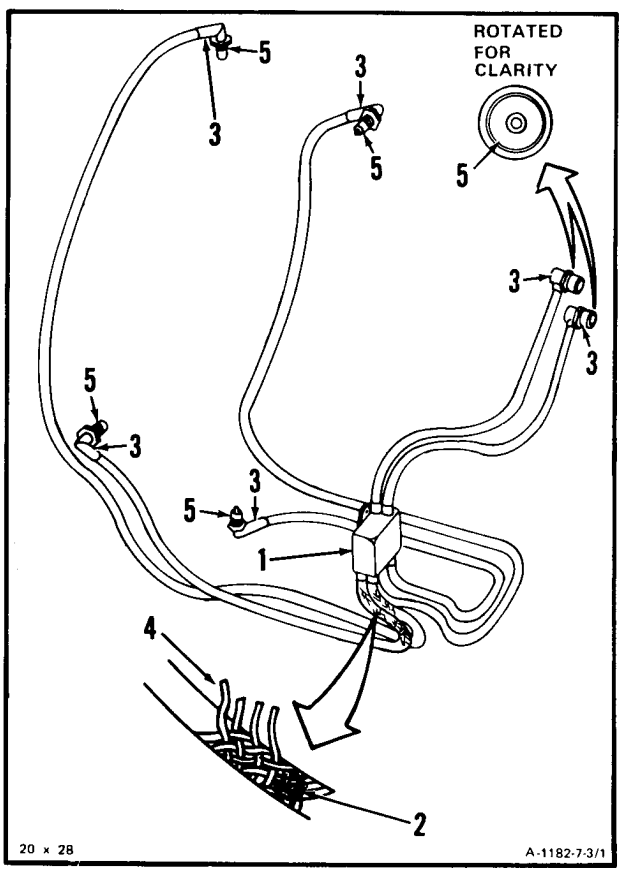
   a. There shall be no burned insulation (2).

   b. Check connectors (3) attached to sheathing. There shall be no loose connectors (3).

   c. Frayed or worn outer steel braid is acceptable up to 3/4 of the cable circumference; 1/4 of the cable circumference shall remain intact to provide continuity for ground. Repair frayed or broken wires (4) on sheathing (Ref. Task 7-4). Replace coil and cable assembly if damage is exceeded.

   d. The outer steel braid shall not be frayed or worn over more than 3/4 of the cable circumference. Remaining continuity for ground shall be over at least 1/4 of the braid.

   e. There shall be no cracked or broken insulators (5).



GO TO NEXT PAGE

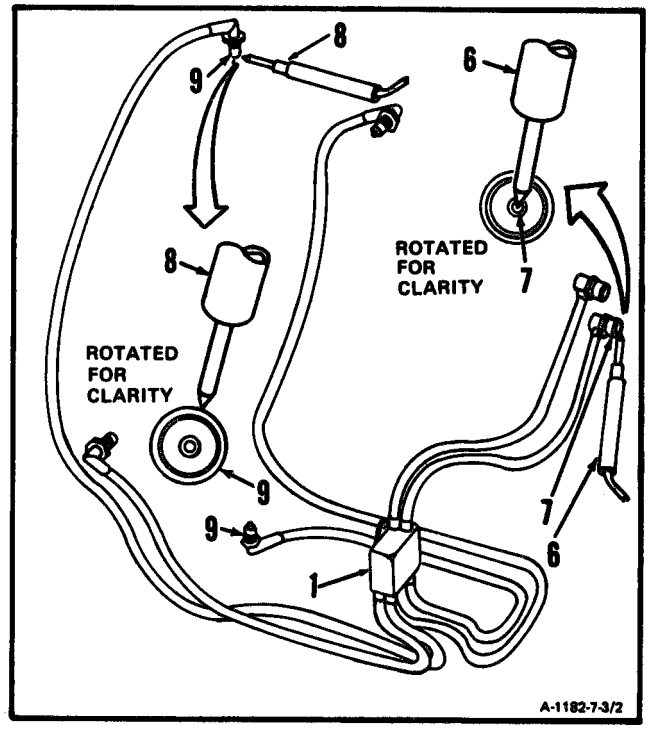
7-3 INSPECT IGNITION COIL AND CABLE ASSEMBLY (Continued)

2. **Measure insulation resistance on ignition coil and cable assembly (1)** as follows:

   a. Set multimeter- range switch to R x 1000. Touch red probe (6) to electrical connector conductor (7).

   b. Touch black probe (8) to electrical connector outer housing (9).

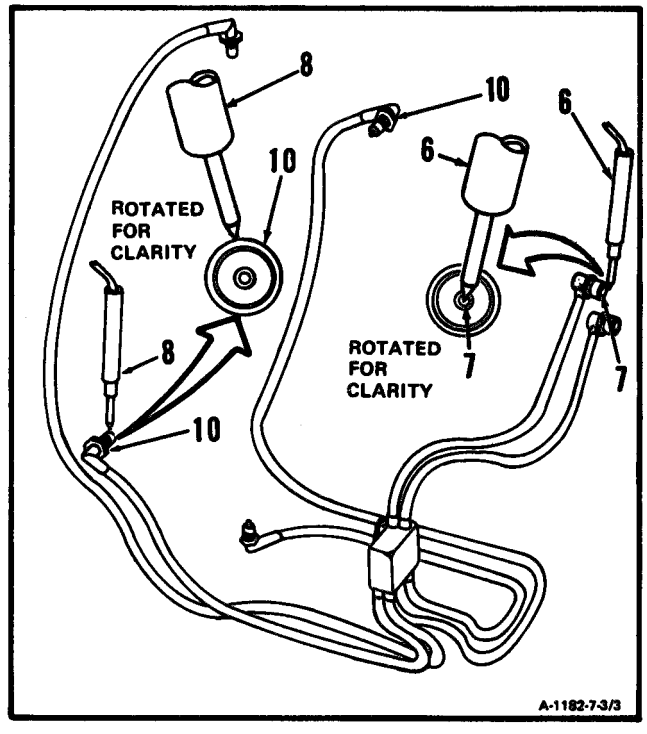
   c. Meter shall indicate 1000 ohms minimum.



   d. Touch red probe (6) to electrical connector conductor (7).

   e. Touch black probe (8) to electrical connector outer housing (10).

   f. Meter shall indicate 1000 ohms minimum.



GO TO NEXT PAGE

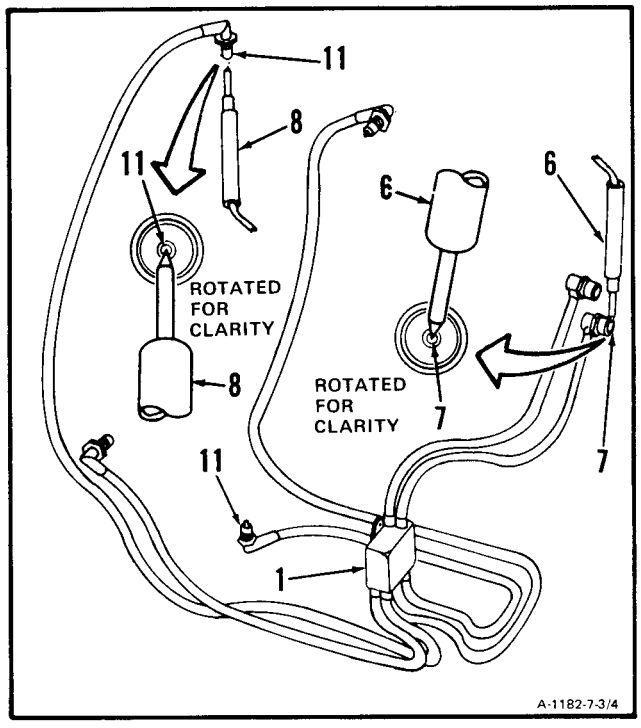
7-3 INSPECT IGNITION COIL AND CABLE ASSEMBLY (Continued) 7-3

3. **Measure continuity** on ignition coil and cable assembly (1) as follows:

   a. Set multi meter range switch to R x 1. Touch red probe (6) to electrical connector conductor (7).

   b. Touch black probe (8) to electrical connector conductors (11).

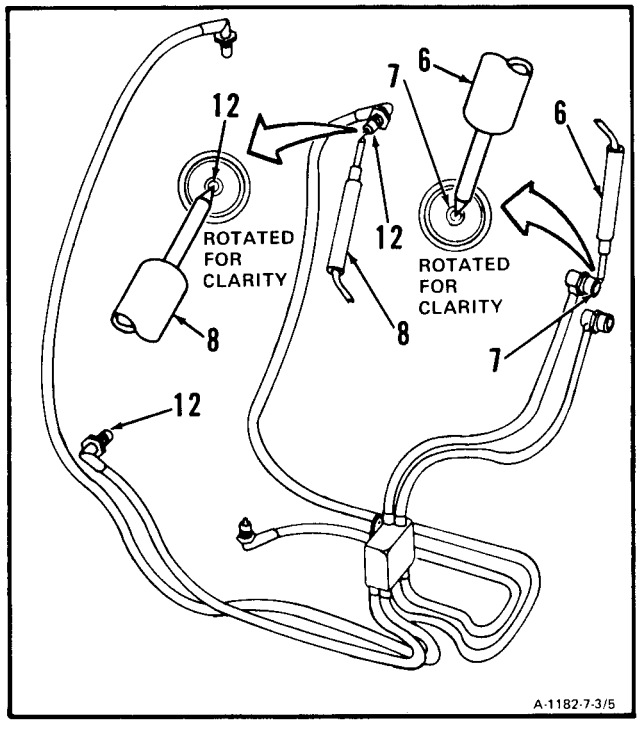
   c. Meter shall indicate 1 ohm maximum.



   d. Touch red probe (6) to electrical connector conductor (7).

   e. Touch black probe (8) to electrical connector center conductors (12).

   f. Meter shall indicate 1 ohm maximum.



FOLLOW-ON MAINTENANCE:

None

END OF TASK

7-4 REPAIR IGNITION COIL AND CABLE ASSEMBLY 7-4

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114
Retaining Ring Pliers

Materials:
Lockwire (E28)
Spiral Chafing Sleeve (E50)

Parts:
Insulator

Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

References:
TM 55-2840-254-23P

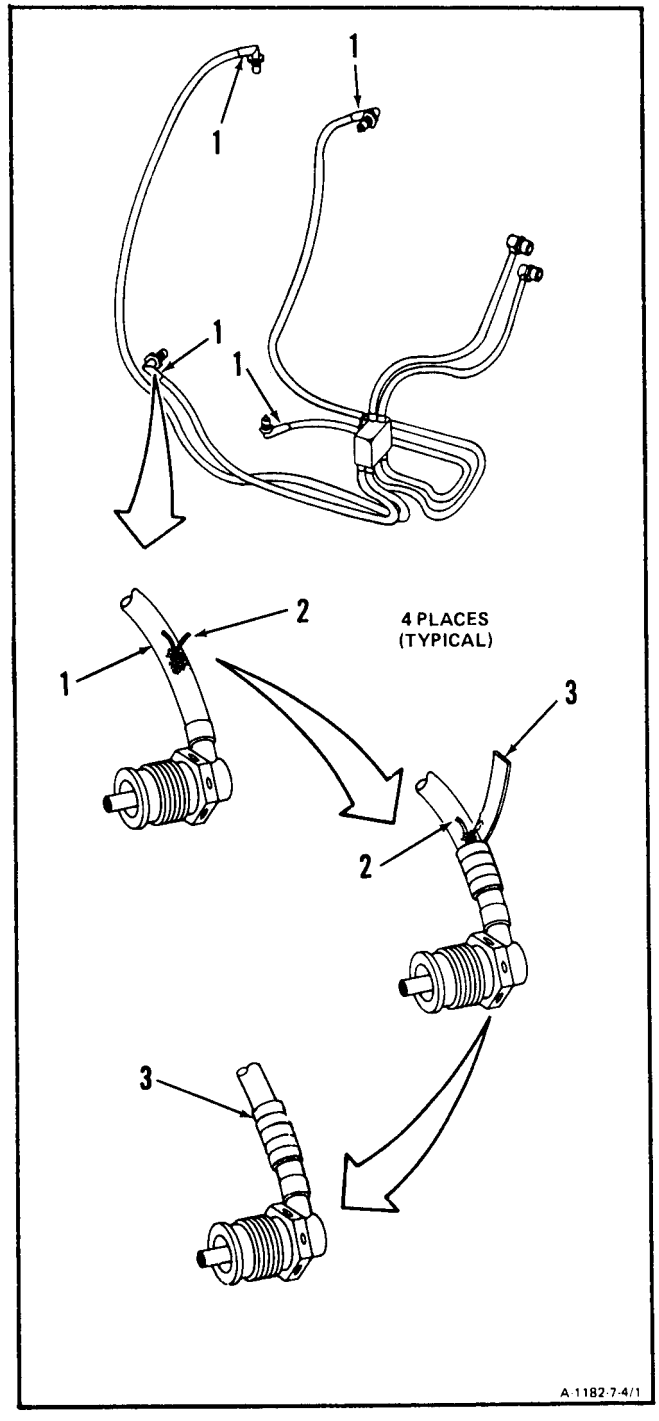
Equipment Condition:
Off Engine Task

GO TO NEXT PAGE

7-4 REPAIR IGNITION COIL AND CABLE ASSEMBLY (Continued) 7-4

1. **Repair fraying (broken) individual cable leads (1)** as follows:

   a. Wrap individual broken wires (2) in cable lead (1) with spiral chafing sleeve (E50) (3). Be sure that spiral chafing sleeve (3) extends beyond damaged area.



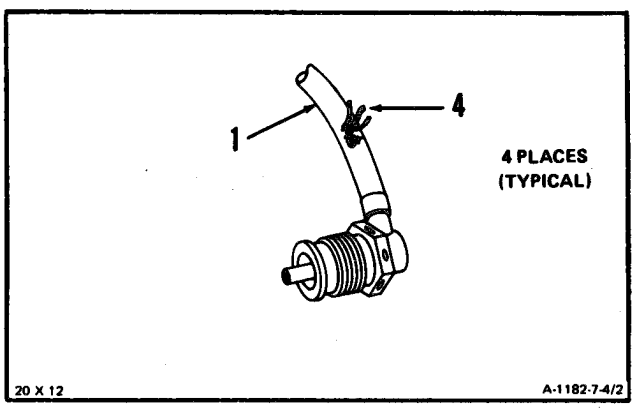
INSPECT

GO TO NEXT PAGE

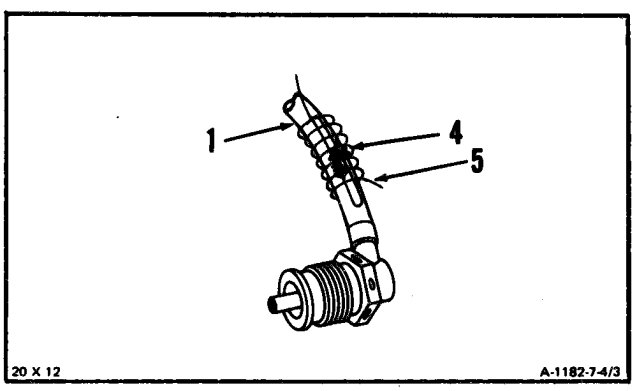
NOTE

This cable assembly consists of a transformer and shielded cabling which has six leads. Two leads are connected to the ignition exciter which carry high voltages to the transformer to be distributed equally to four individual cable leads. Two repairs total shall be allowed to the two shorter individual cable leads and three repairs total shall be allowed to the two longer individual cable leads.

b. **If three or more wires (4) of individual cable leads are broken, flatten broken wires (4) without damaging insulation of individual cable lead (1) at damaged area. The outer steel braid shall have a minimum of 1/4 of its circumference intact to provide continuity of grounding purposes. Damaged area shall be 3 inches minimum from either the transformer or spark igniter end of each cable lead (1). Damaged areas on each cable lead (1) shall be a minimum of 6 inches apart.**



c. **Use lockwire (E28) (5) to wind clockwise around damaged cable lead (1). Lockwire (5) should cover damaged area by 3/8-inch. Do not pass wrapping limits of 1-1/4 inch length.**



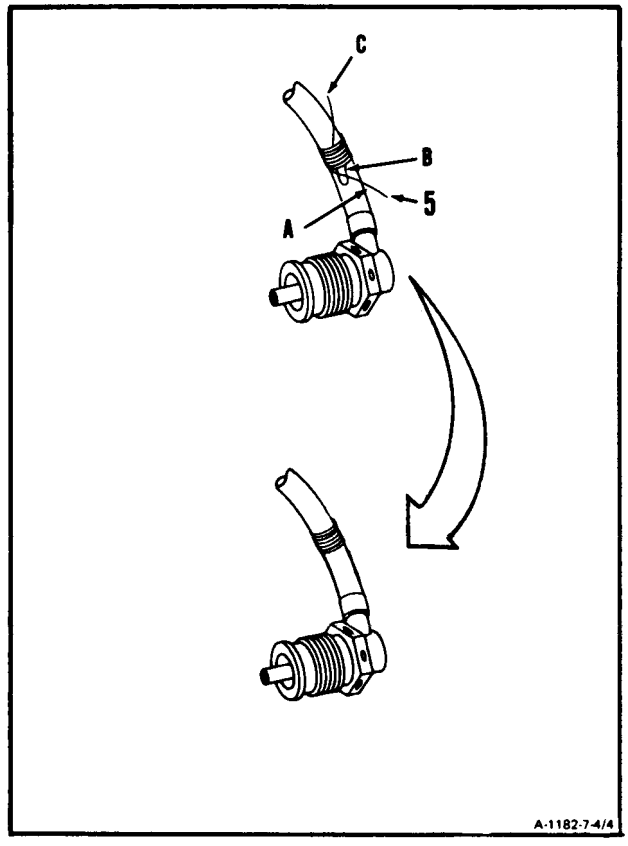
GO TO NEXT PAGE

7-4 REPAIR IGNITION COIL AND CABLE ASSEMBLY (Continued) 7-4

NOTE

In following step, use care when pulling end C. Pull only far enough to firmly anchor end A beneath several wraps of the lockwire.

d. Finish wrap by inserting lockwire (5) end A through loop B. Hold A tight while pulling C to close loop. Release A and carefully pull C until end A is anchored beneath wrapping. Cut excess wire ends.



INSPECT

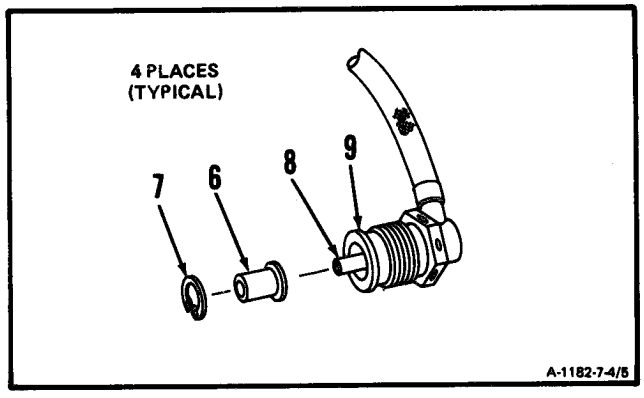
GO TO NEXT PAGE

7-4 REPAIR IGNITION COIL AND CABLE ASSEMBLY (Continued) 7-4

2. **Replace cracked insulator (6)** as follows:

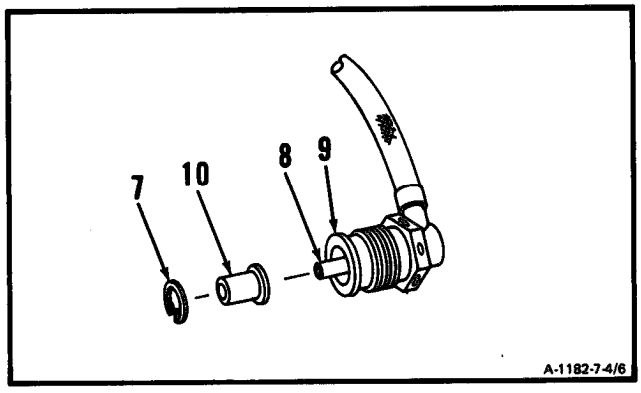
   a. Remove retaining ring (7).

   b. Remove insulator (6) from wire (8) and out of sleeve (9).



   c. Insert new insulator (10) in sleeve (9) and over wire (8).

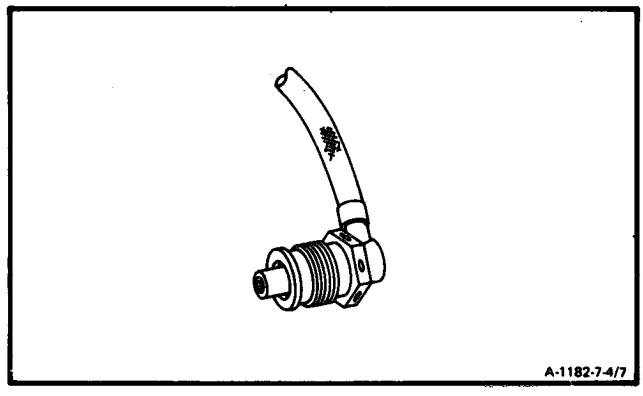
   d. Install retaining ring (7).



INSPECT

FOLLOW-ON MAINTENANCE:

None



END OF TASK

7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY

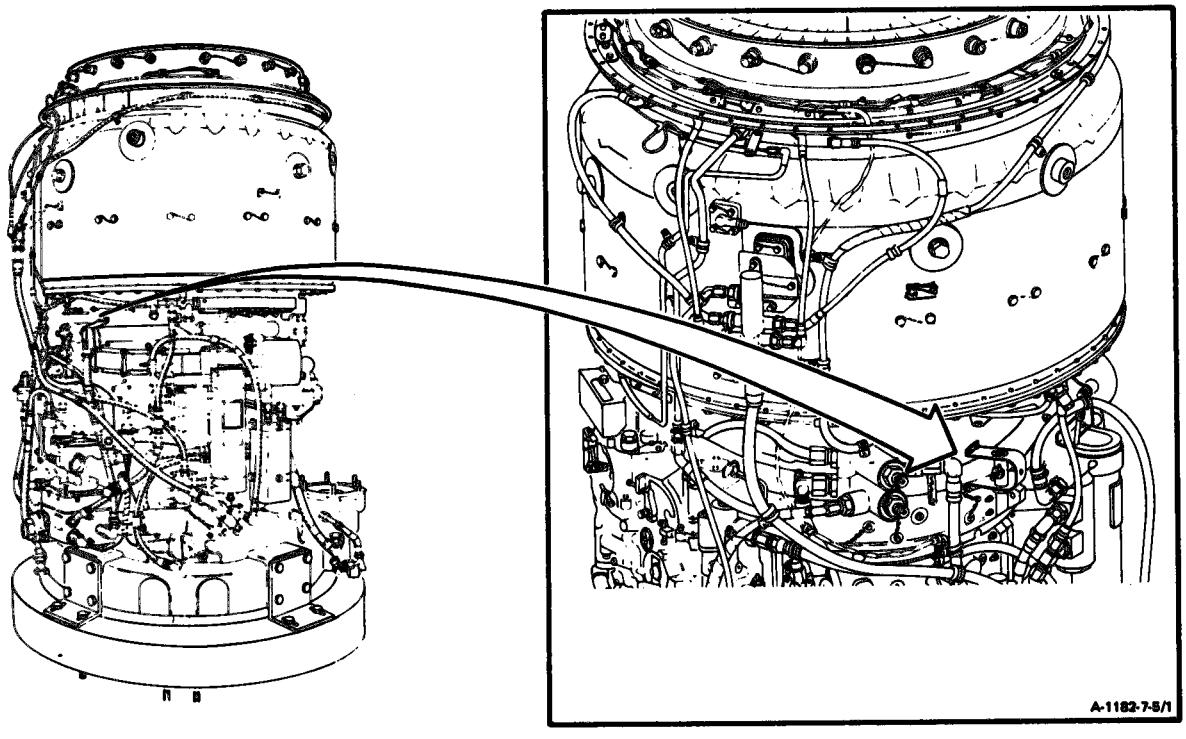
INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114
Torque Wrench, 30-150 Inch-Pounds
Crowfoot Attachment, 7/8-Inch

Materials:
Anti-Seize Compound (E5)
Lockwire (E29)

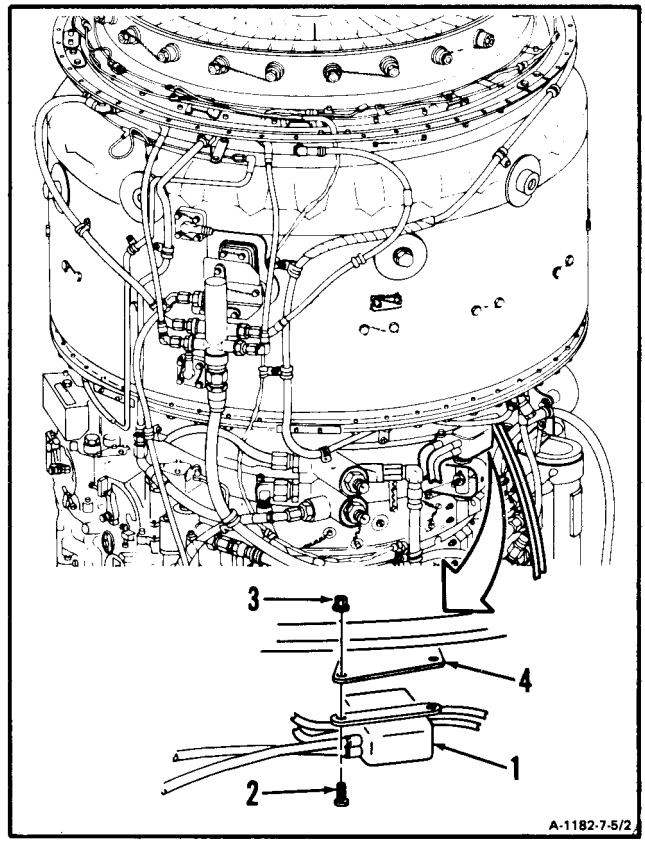
Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector



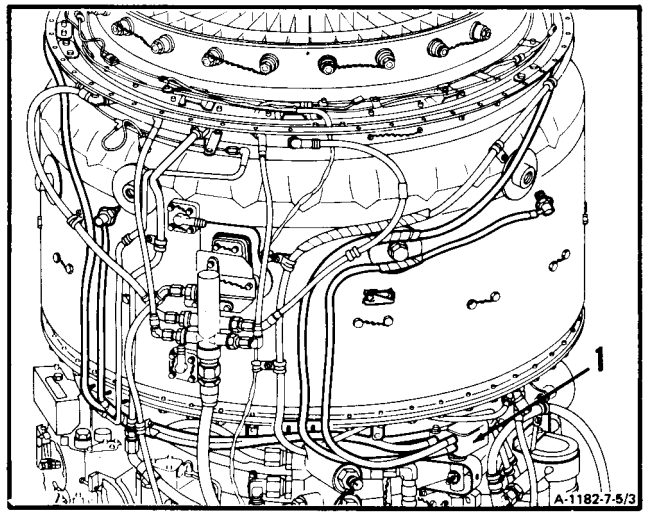
GO TO NEXT PAGE

7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued) 7-5

1. **Install ignition coil and cable assembly (1),** two bolts (2), and nuts (3) on bracket (4).



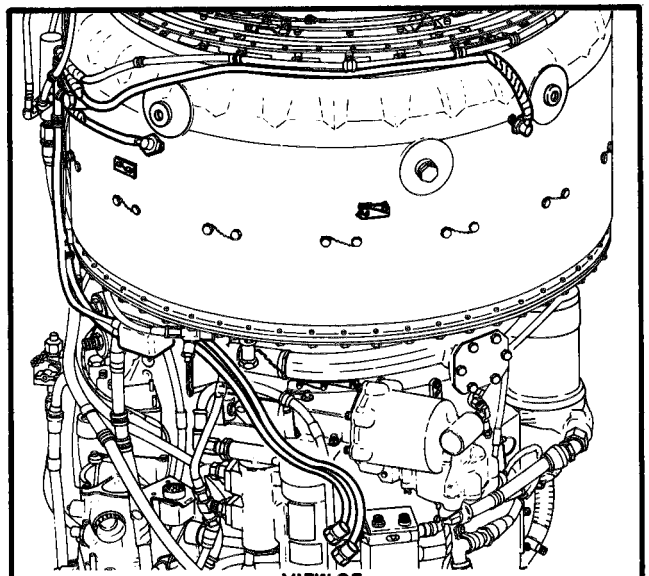
2. **Route ignition coil and cable assembly (1)** as shown.



GO TO NEXT PAGE

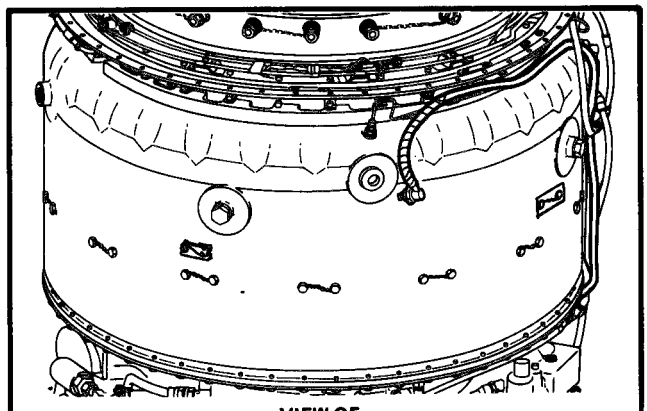
7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued)

2. (Continued)



VIEW OF
2 O'CLOCK
POSITION

A-1182-7-5/4



VIEW OF
10 O'CLOCK
POSITION

A-1182-7-5/5

GO TO NEXT PAGE

7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued)

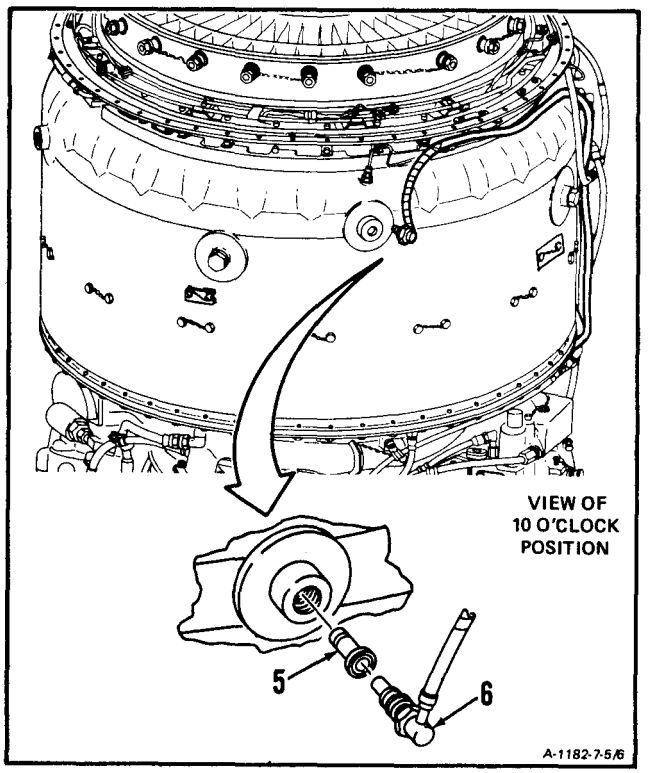
3. **Install spark igniter (5)** on ignition lead (6).

CAUTION

To prevent shorting of ignition lead, do not allow anti-seize compound to touch electrical contacts and insulators.

4. **Coat threads of ignition lead (6)** with anti-seize compound (E5).

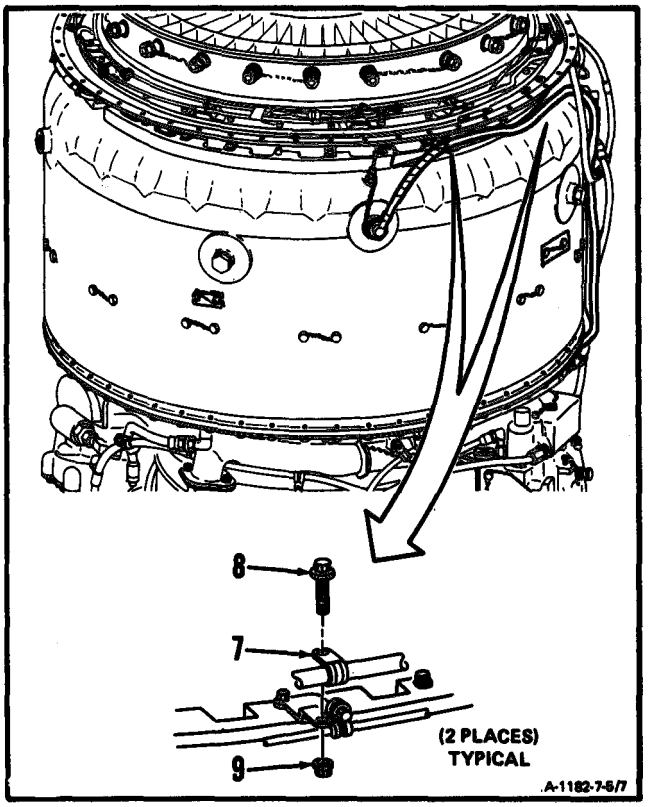
5. **Install ignition lead (6). Torque to 135 inch-pounds.** Use crowfoot attachment. Lockwire ignition lead (6). Use lockwire (E29).



GO TO NEXT PAGE

7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued) 7-5

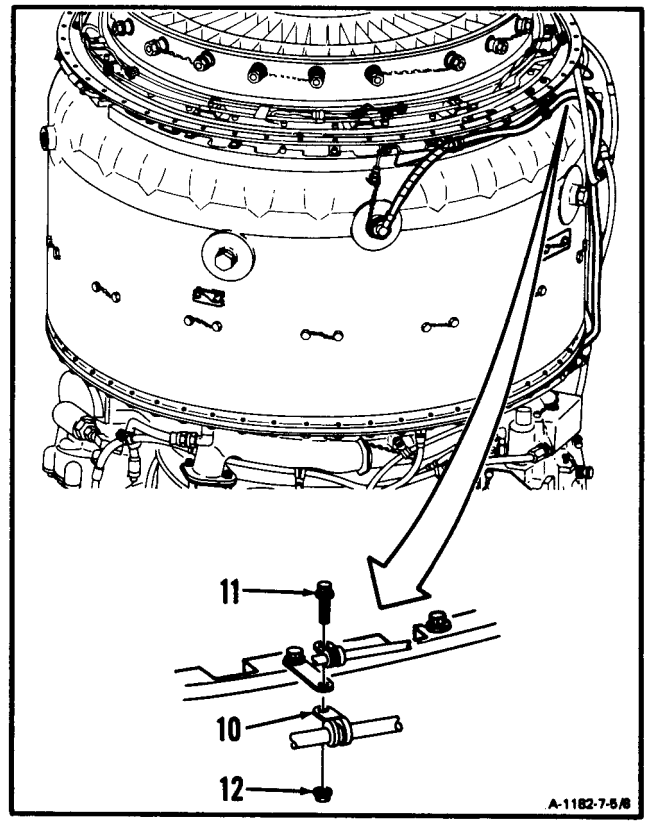
6. **Install two clamps (7),** bolts (8), and nuts (9).



GO TO NEXT PAGE

7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued)

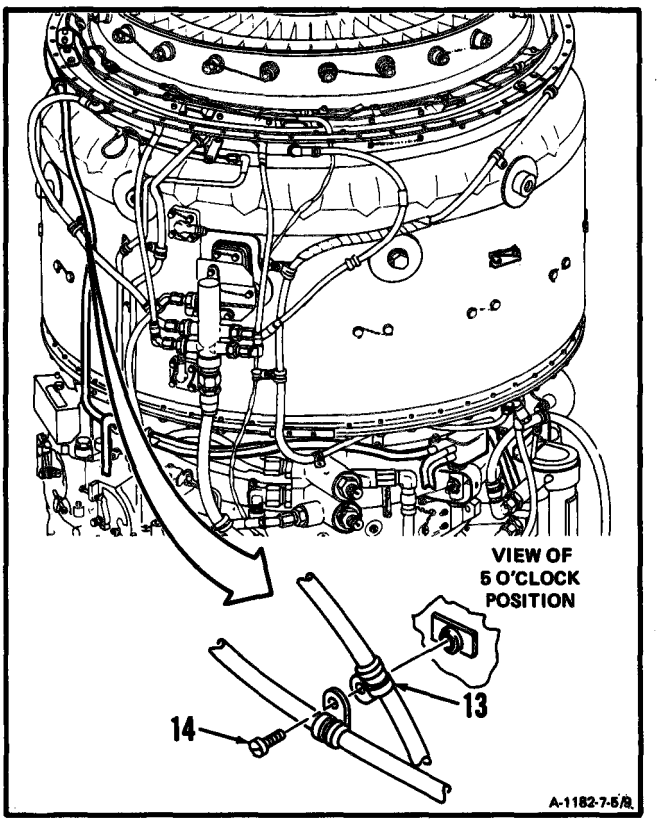
7. **Install clamp (10),** bolt (11), and nut (12).



GO TO NEXT PAGE

7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued) 7-5

8. **Install damp (13)** and screw (14). Lockwire screw (14). Use lockwire (E29).



GO TO NEXT PAGE

7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued) 7-5

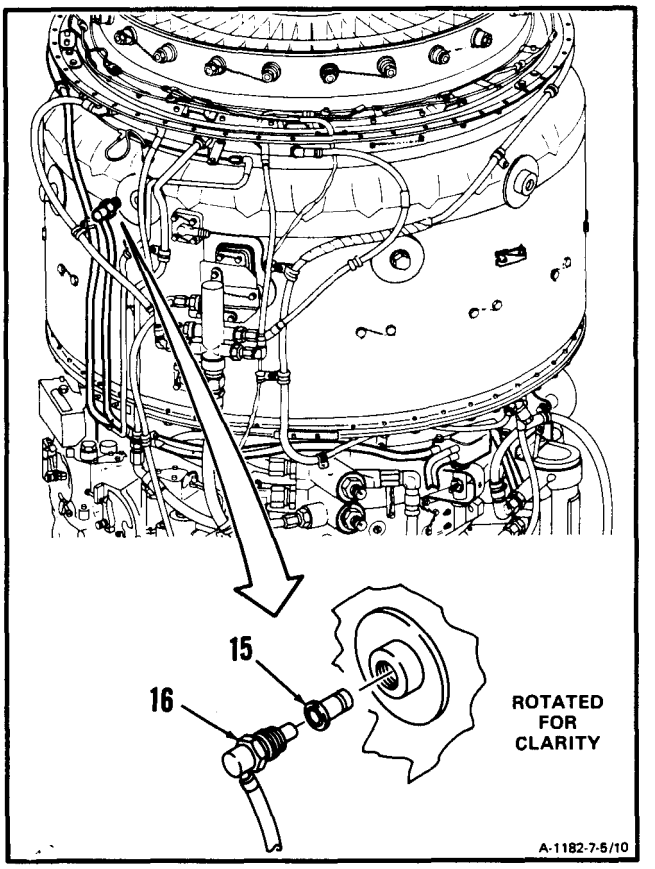
9. **Install spark igniter (15)** on ignition lead (16).

CAUTION

To prevent shorting of ignition lead, do not allow anti-seize compound to touch electrical contacts and insulators.

10. **Coat threads of ignition lead (16)** with anti-seize compound (E5).

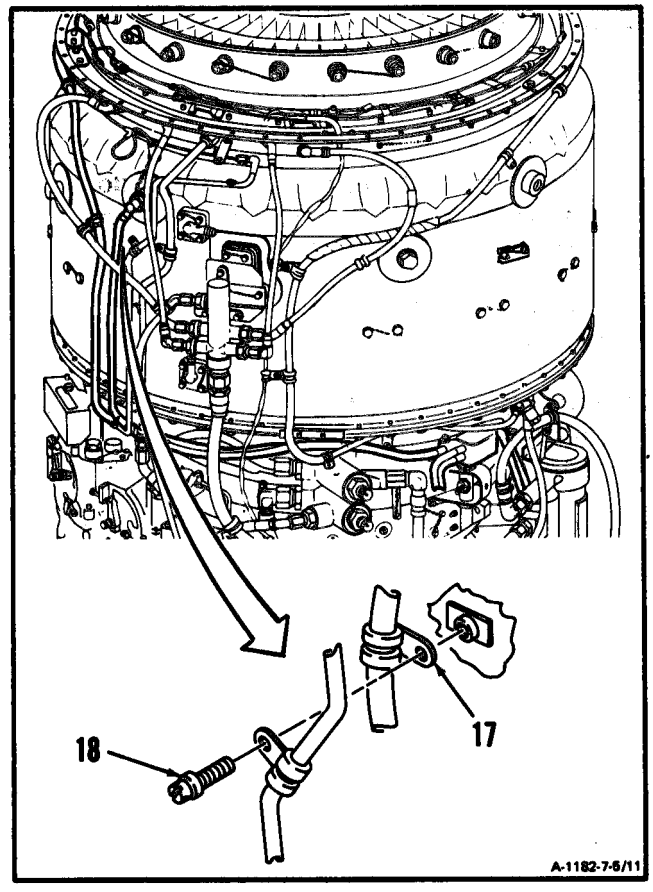
11. **Install ignition lead (16). Torque to 135 inch-pounds.** Use crowfoot attachment. Lockwire ignltlon lead (16). Use lockwire (E29).



GO TO NEXT PAGE

7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued)

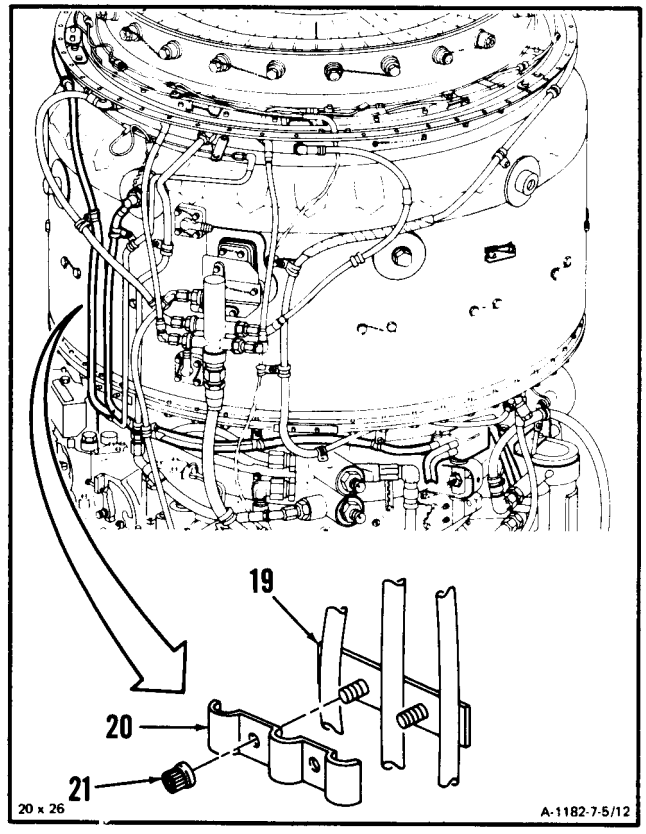
12. **Install clamp (17)** and screw (18). Lockwire screw (18). Use lockwire (E29).



GO TO NEXT PAGE

7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued) 7-5

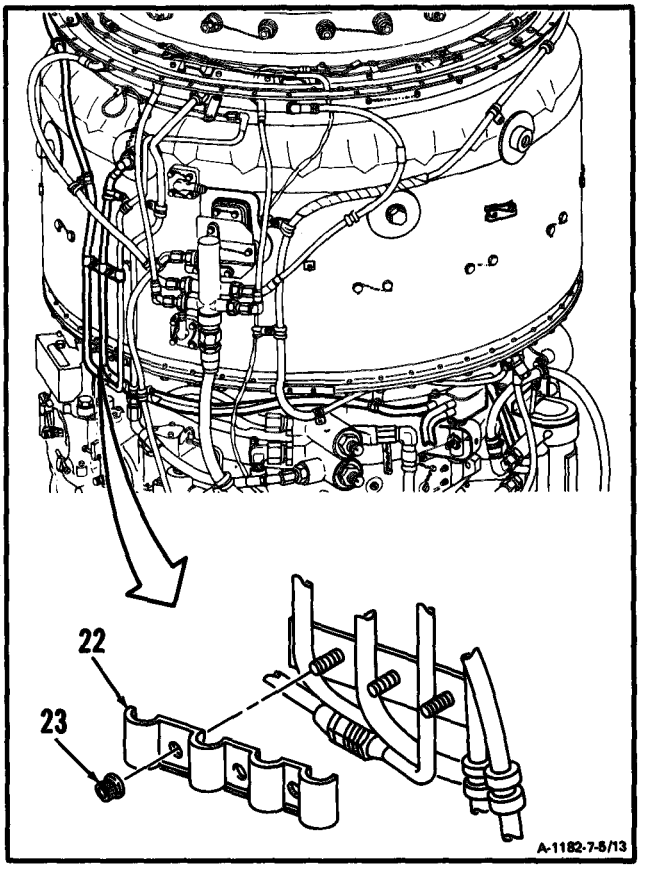
13. **Install clamps (19 and 20)** and two nuts (21).



GO TO NEXT PAGE

7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued) 7-5

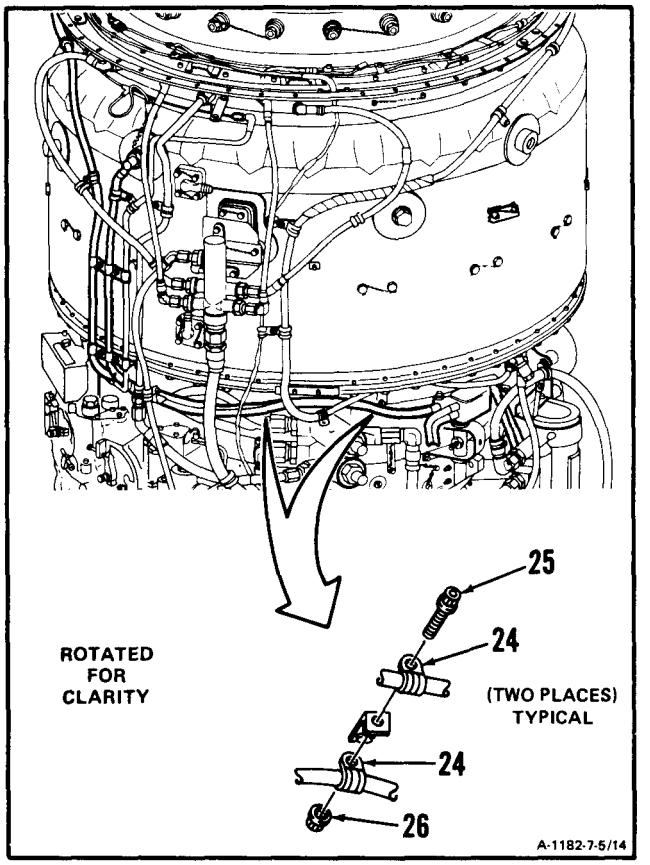
14. **Install clamp (22)** and three nuts (23).



GO TO NEXT PAGE

7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued) 7-5

15. **Install four clamps (24),** two bolts (25), and nuts (26).



GO TO NEXT PAGE

7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY(Continued)

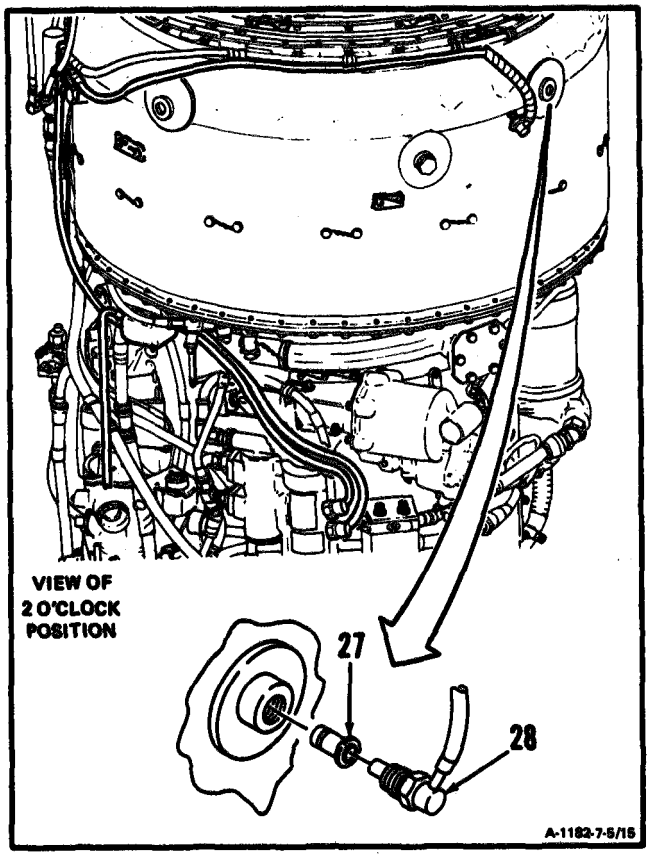
16. **Install spark ignitar (27)** on ignition lead (28).

CAUTION

To prevent shorting of ignition lead, do not allow anti-seized compound to touch electrical oontacts and insulators.

17. **Coat threads of ignition lead (28)** with anti-seize compound (E5).

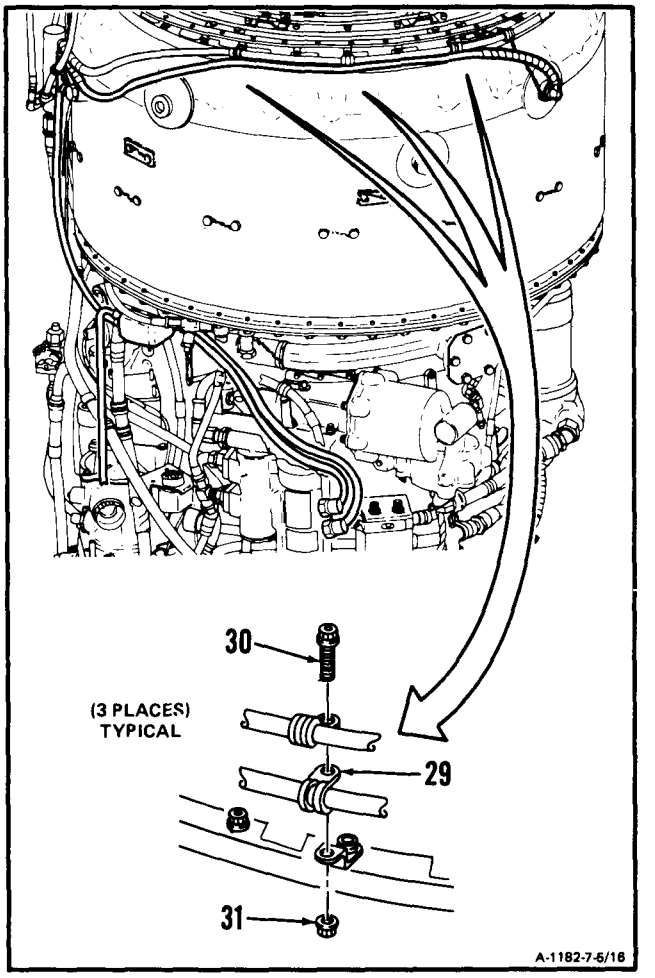
18. **Install ignition lead (28). Torque to 136 inch-pounds.** Use crowfoot attachment. Lockwire ignition lead (28). Use lockwire (E29).



GO TO NEXT PAGE

7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued) 7-5

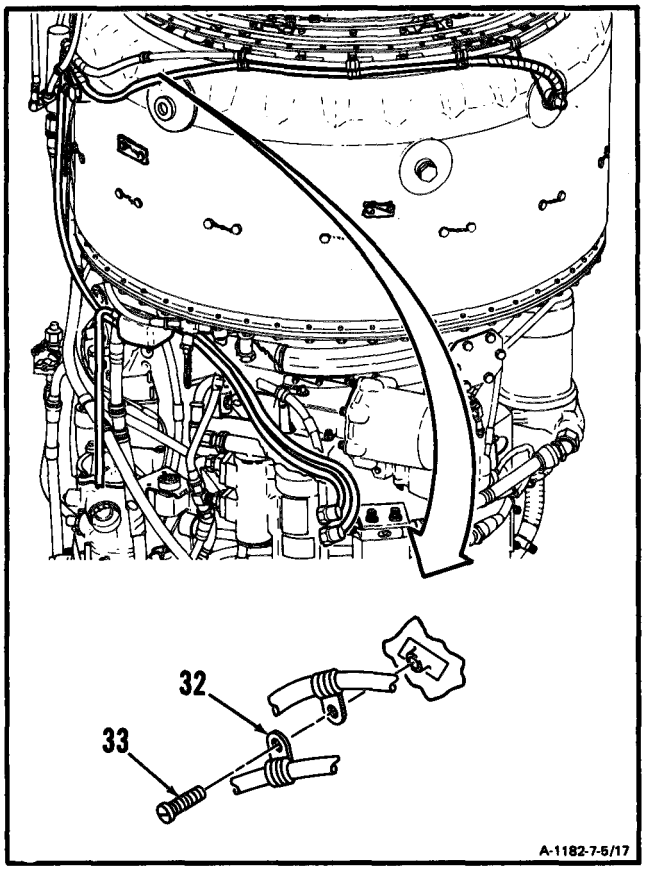
19. **Install three clamps (29),** bolts (30), and nuts (31).



GO TO NEXT PAGE

7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued) 7-5

20. **Install clamp (32),** and screw (33). Lockwire screw (33). Use lockwire (E29).



GO TO NEXT PAGE

7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued)

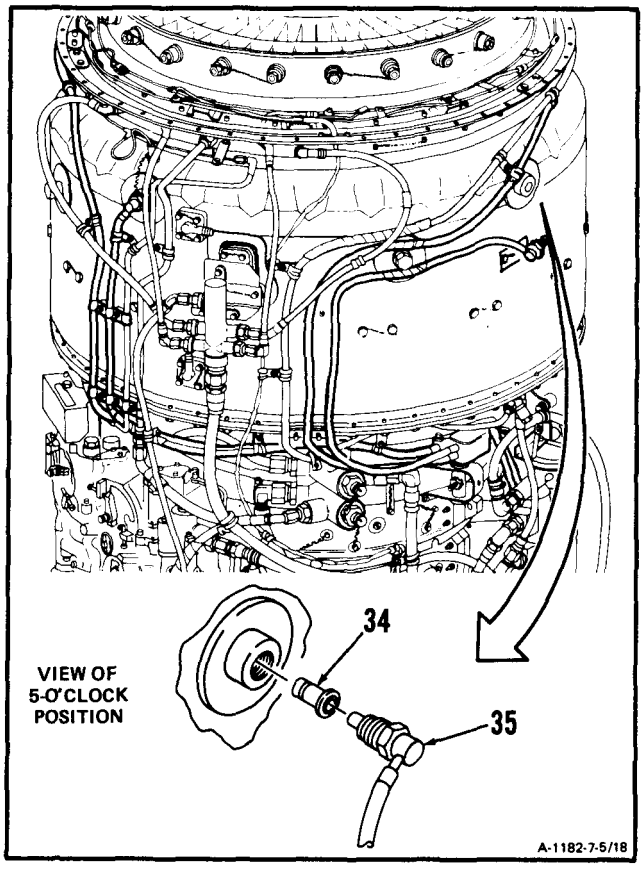
21. **Install spark igniter (34)** on ignition lead (35).

CAUTION

To prevent shorting of ignition lead, do not allow anti-seize compound to touch electrical contacts and insulators.

22. **Coat threads of ignition lead (35)** with anti-seize compound (E5).

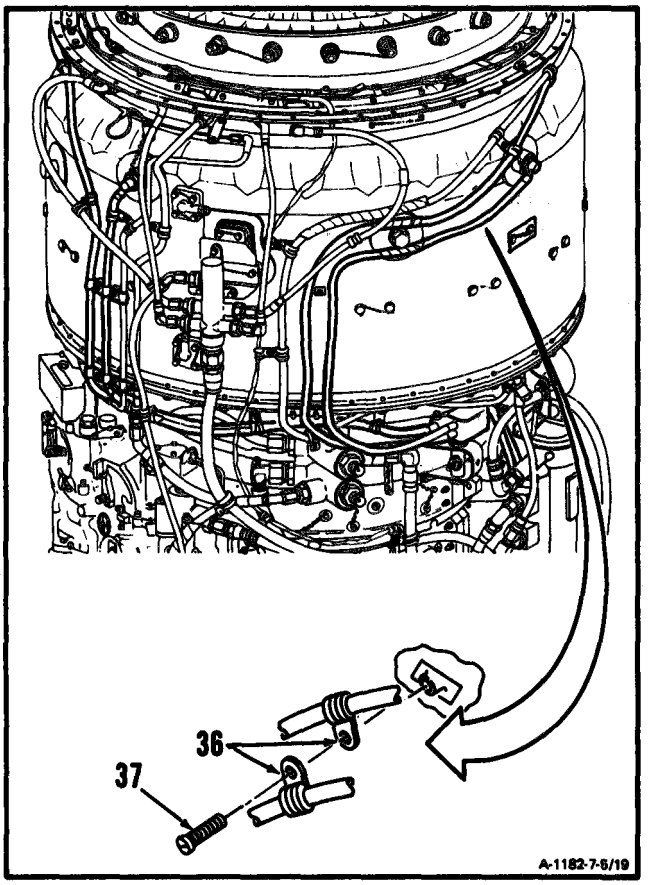
23. **Install ignition lead (35). Torque to 135 inch-pounds.** Use crowfoot attachment. Lockwire ignition lead (35). Use lockwire (E29).



GO TO NEXT PAGE

7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued) 7-5

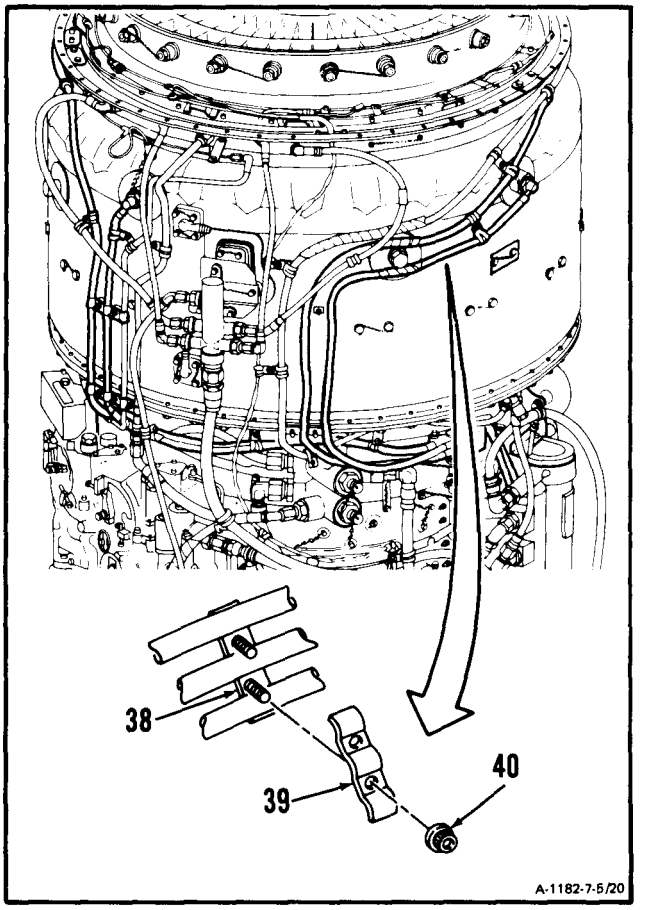
24. **Install two clamps (36),** and screw (37). Lockwire screw (37). Use lockwire (E29).



GO TO NEXT PAGE

7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued) 7-5

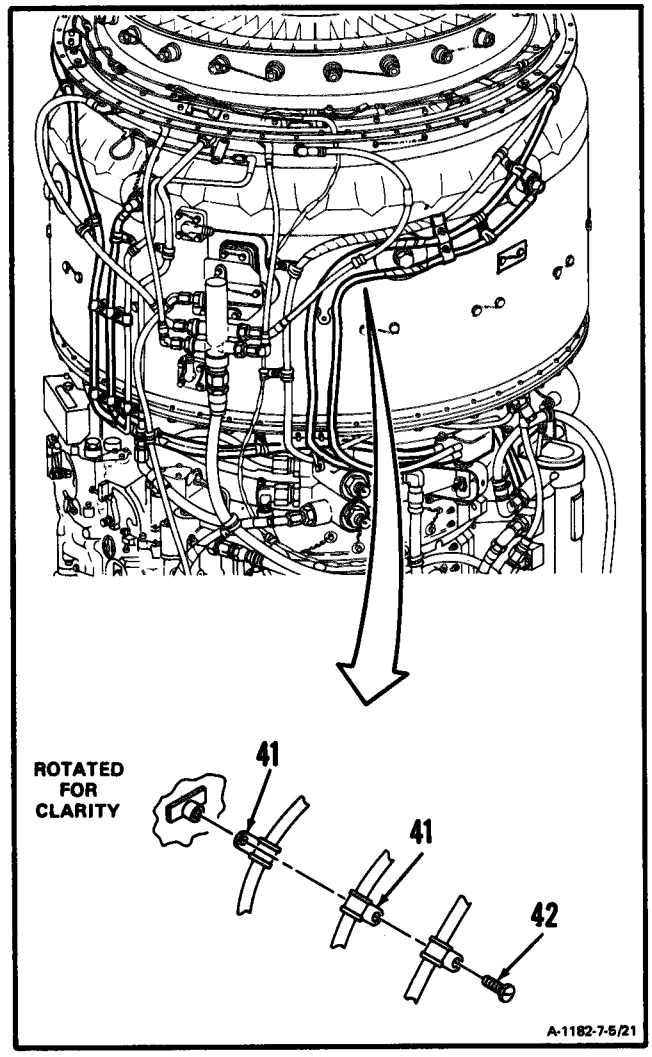
25. **Install clamps (38 and 39)** and two nuts (40).



GO TO NEXT PAGE

7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued)

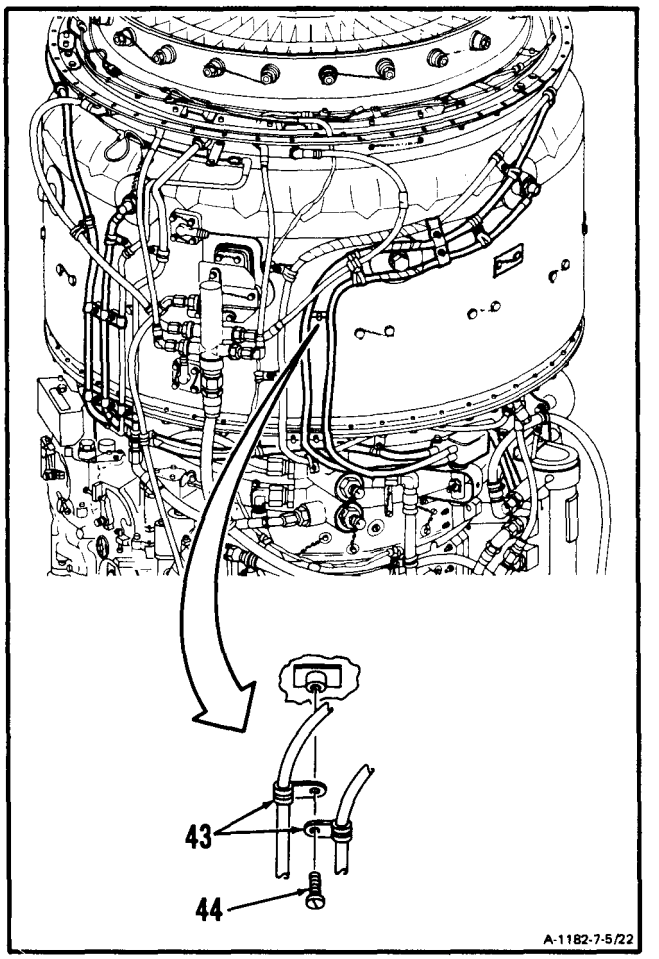
26. **Install two clamps (41)** and screw (42). Lockwire screw (42). Use lockwire (E29).



GO TO NEXT PAGE

7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued) 7-5

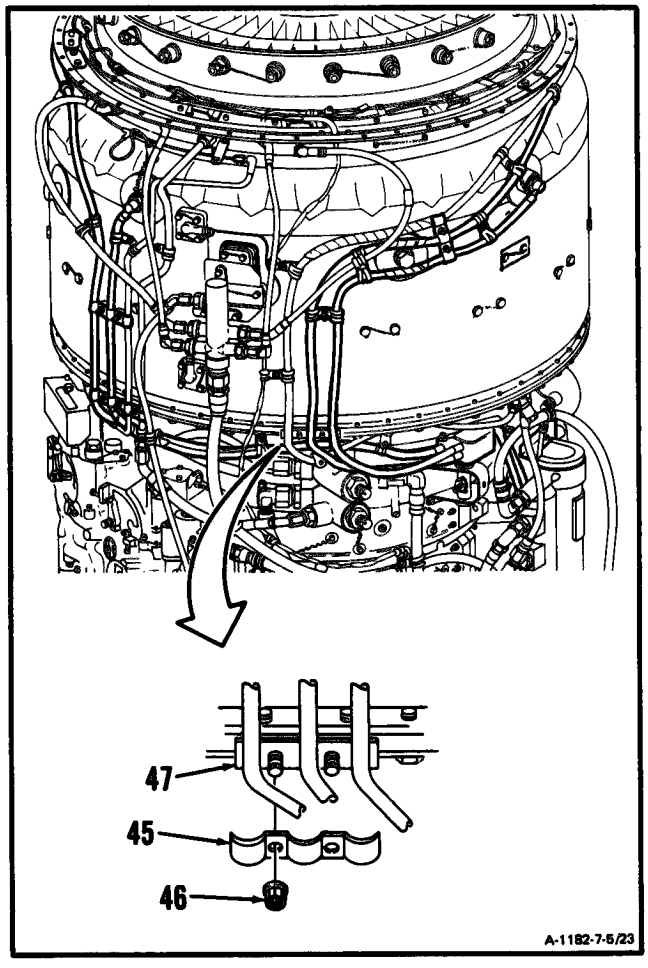
27. **Install two clamps (43)** and screw (44). Lockwire screw (44). Use lockwire (E29).



GO TO NEXT PAGE

7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued) 7-5

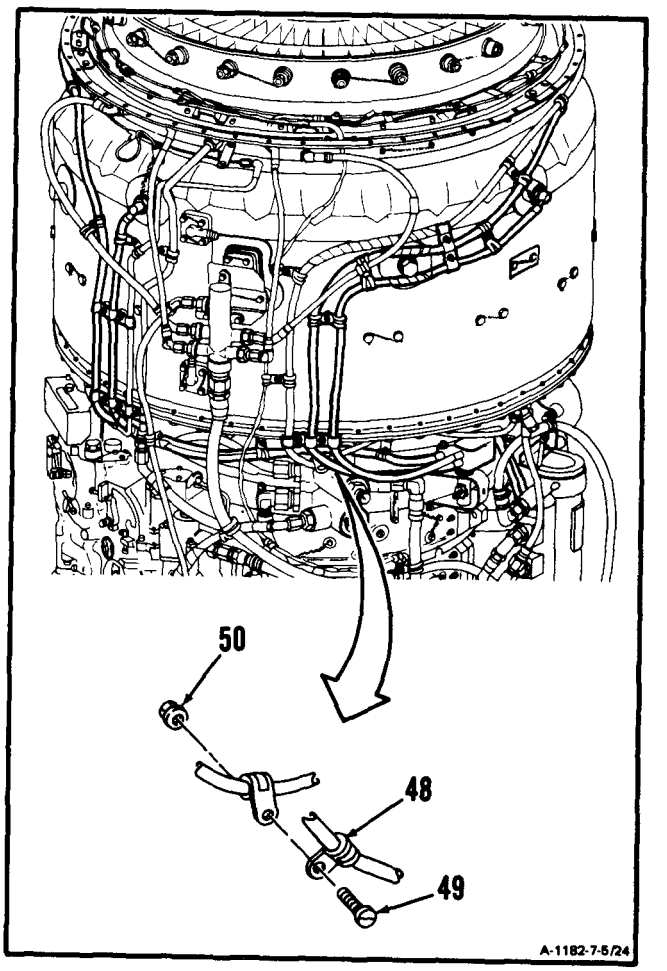
28. **Install retainig strap (45)** and two nuts (46) to bracket (47).



GO TO NEXT PAGE

7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued)

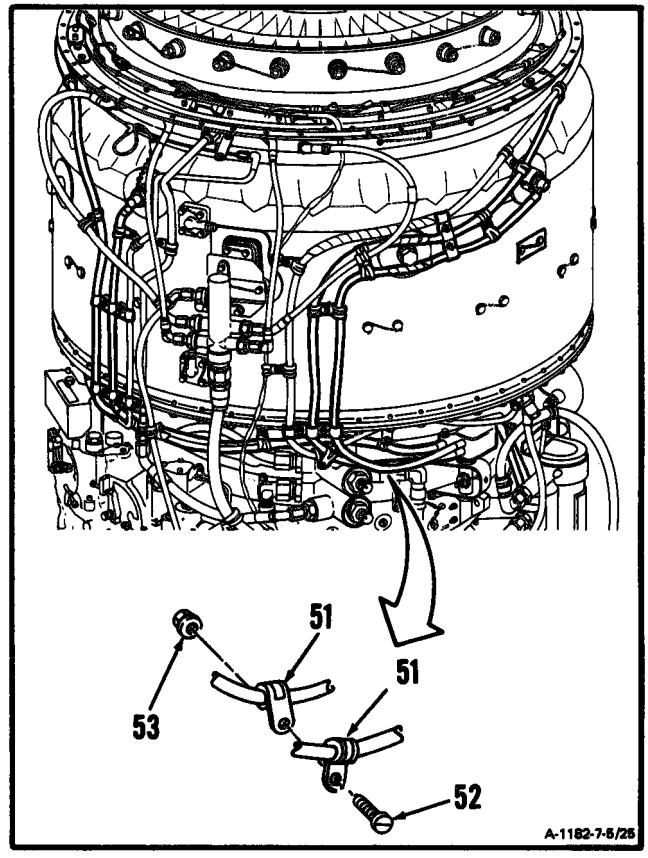
29. **Install clamp (48),** screw (49), and nut (50).



GO TO NEXT PAGE

7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued)

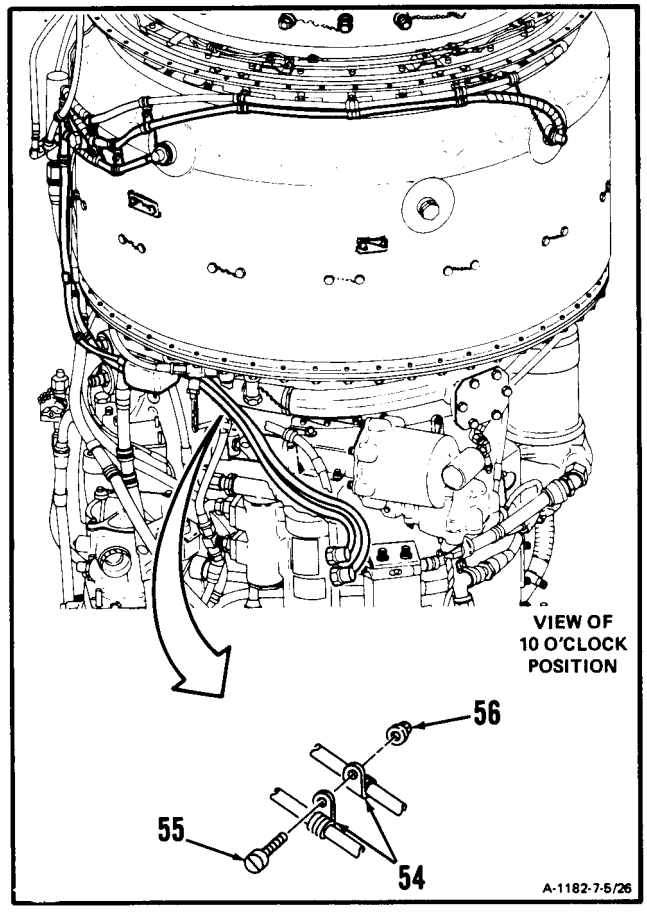
30. **Install two clamps (51),** screw (52), and nut (53).



GO TO NEXT PAGE

7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued) 7-5

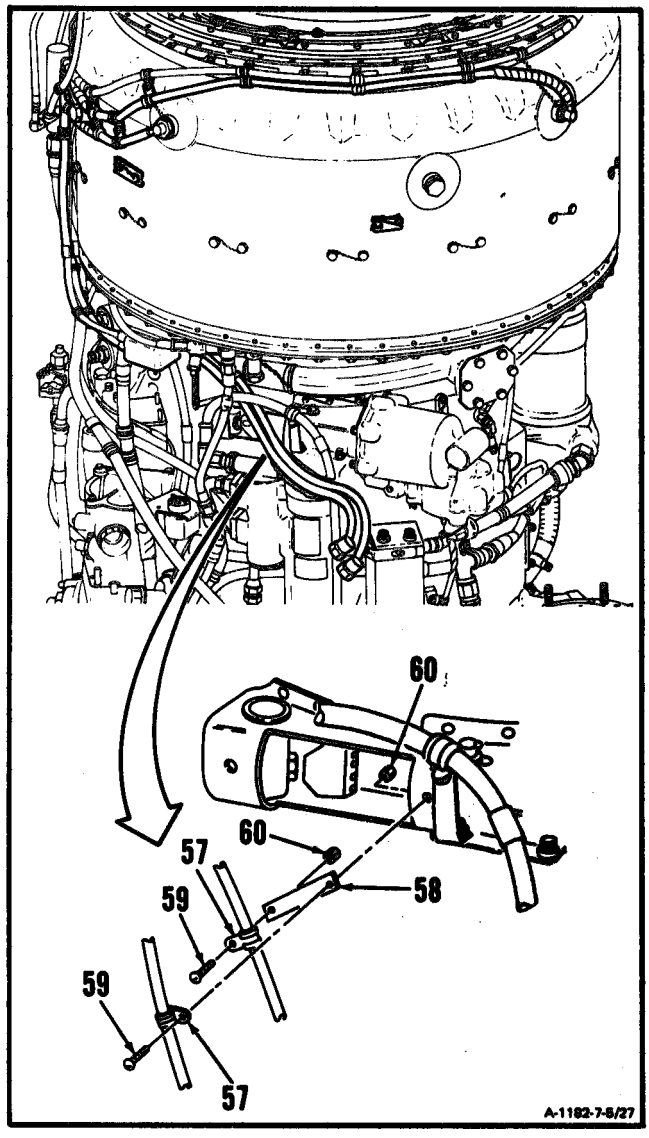
31. **Install two clamps (54),** screw (55), and nut (56).



GO TO NEXT PAGE

7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued)

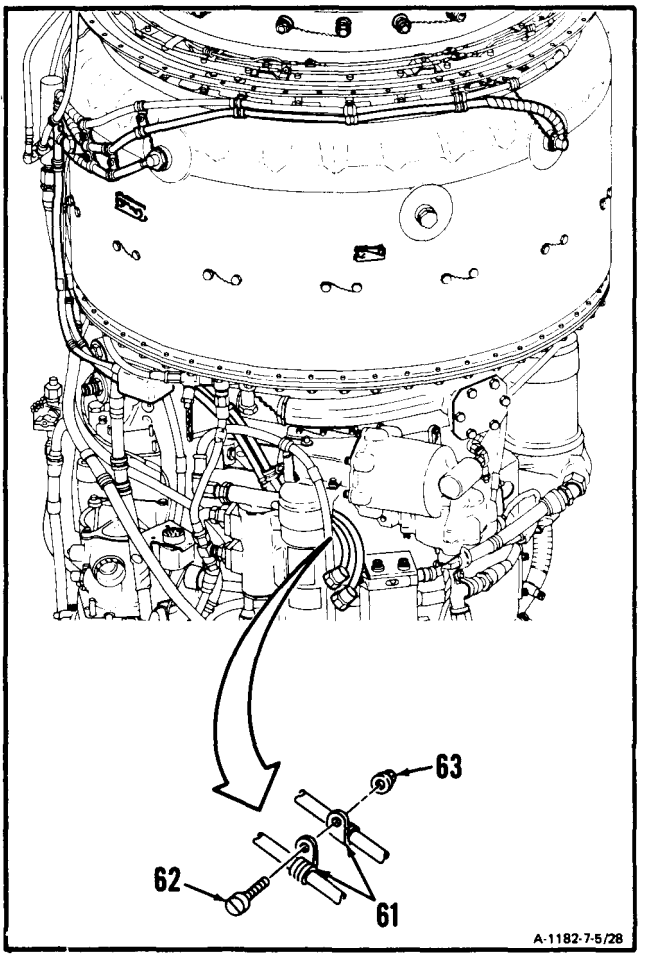
32. **Install two clamps (57), bracket (58),** two screws (53), and nuts (60).



GO TO NEXT PAGE

7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued) 7-5

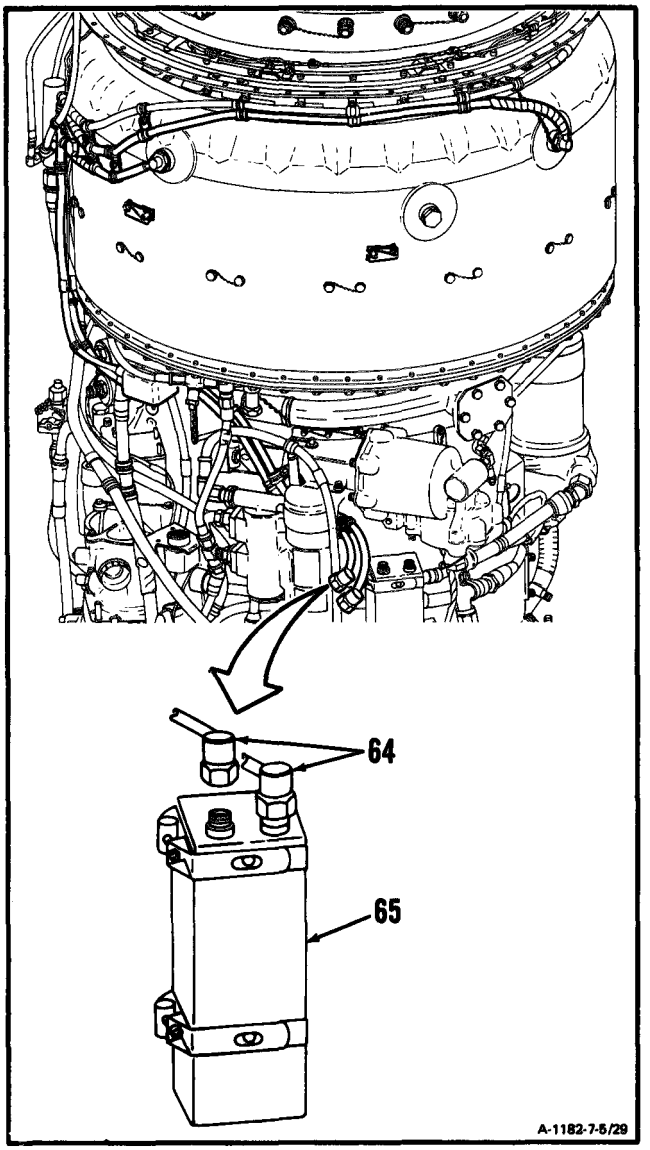
33. **Install two clamps (61),** screw (62), and nut (63).



GO TO NEXT PAGE

7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued) 7-5

34. **Connect two coil and cable assembly leads (64)** to ignition exciter (65). Lockwire leads (64). Use lockwire (E29).



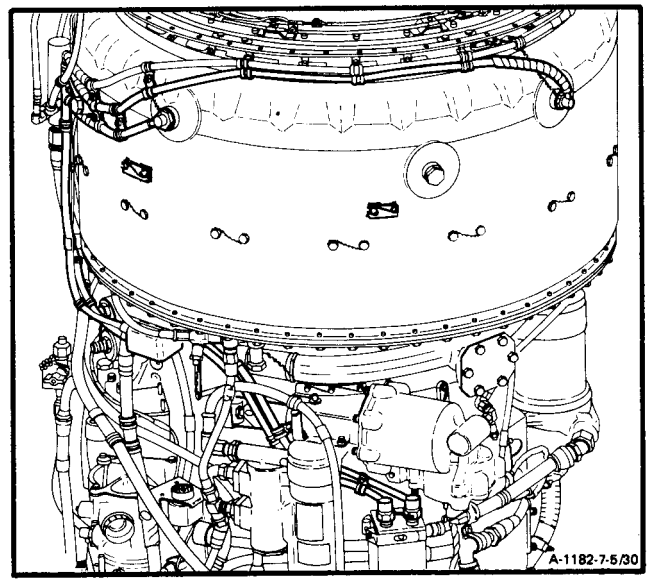
INSPECT

GO TO NEXT PAGE

7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued) 7-5

FOLLOW-ON MAINTENANCE:

None



END OF TASK

7-6 REMOVE SPARK IGNITERS

7-6

INITIAL SETUP

Applicable Configurations
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944

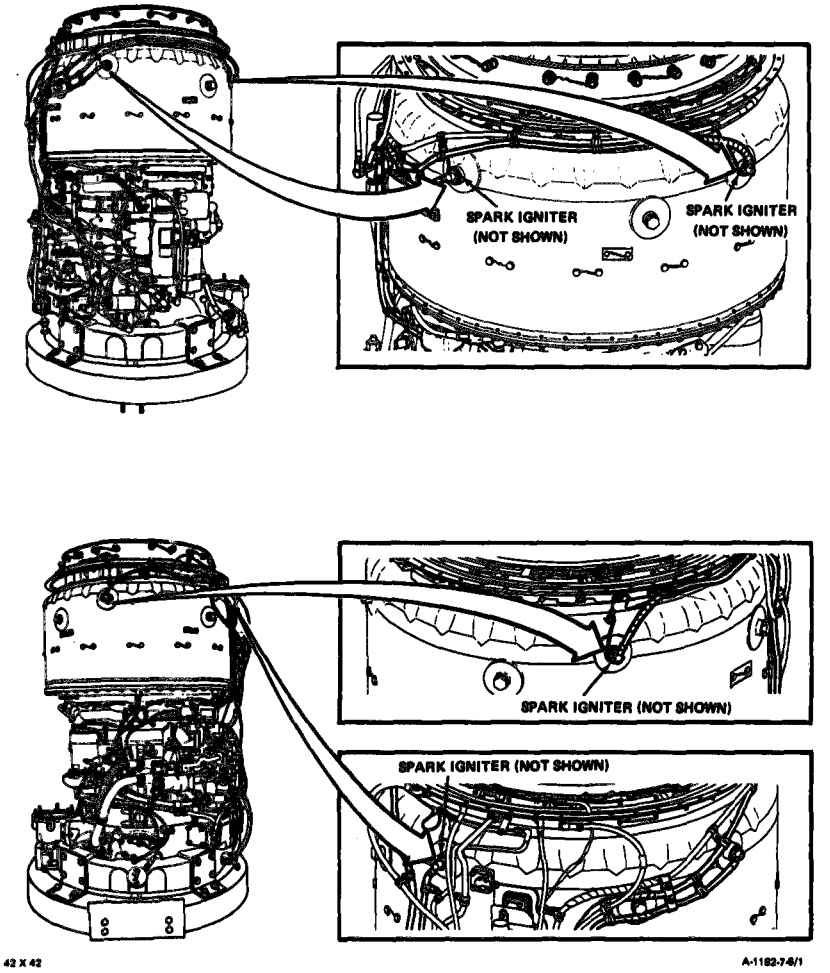
Materials:
None

Personnel Required:
68B10 Aircraft Powerplant Repairer

General *Safety Instructions:*

WARNING

The ignition exciter stores very high and possibly fetal voltage. Use extreme care when working around ignition igniter. Serious injury could result if exciter is accidentally grounded Do not probe inside of output receptacles with fingers or metal ofjects Discharge exciter only with insulated screwdriver. In case of shock or injury, get medical attention.



GO TO NEXT PAGE

7-6 REMOVE SPARK IGNITERS (Continued)

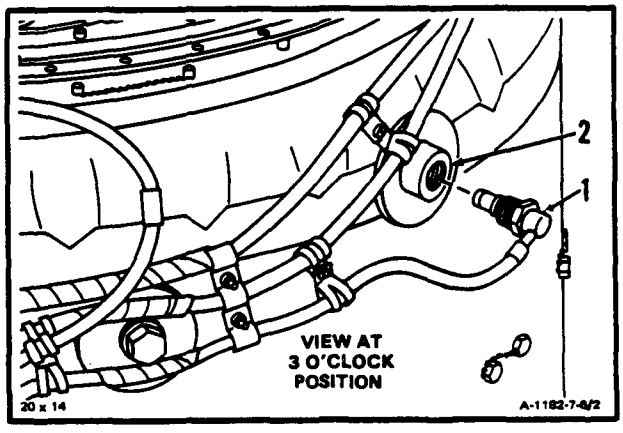
WARNING

When discharging ignition leads, remove one lead at a time and discharge to combustor housing. Failure to do so may result in serious shock when you are removing other leads. In case of serious shock, get medical attention.

NOTE

The procedure for removal of four spark igniters located at the 3-, 6-, 9-, and 12-o'clock positions is the same. Only the 3-o'clock position is shown.

1. **Remove** lockwire and **ignition lead (1)** from combustor housing (2).



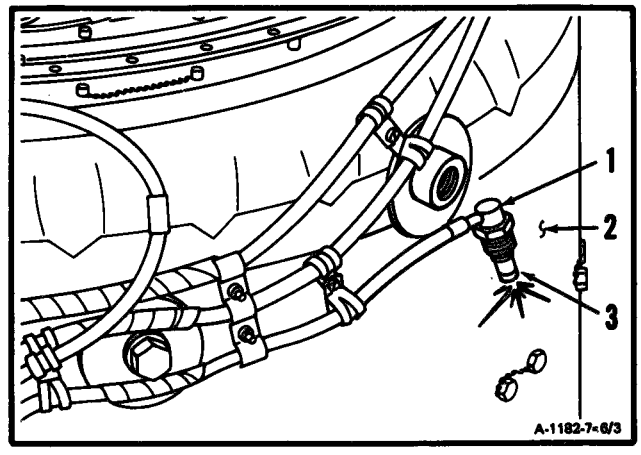
GO TO NEXT PAGE

7-6 REMOVE SPARK IGNITERS (Continued)

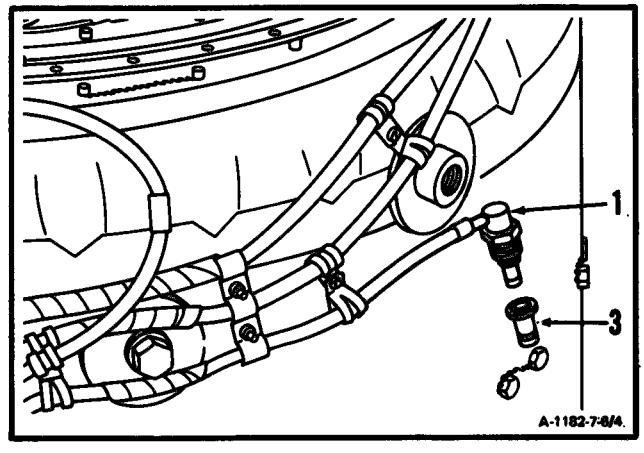
NOTE

If spark igniter stays with ignition lead, do steps 2 and 3. If spark igniter stays in combustor housing do steps 4. and 5.

2. **Discharge ignition lead (1) and spark igniter (3)** by touching to combustor housing (2).



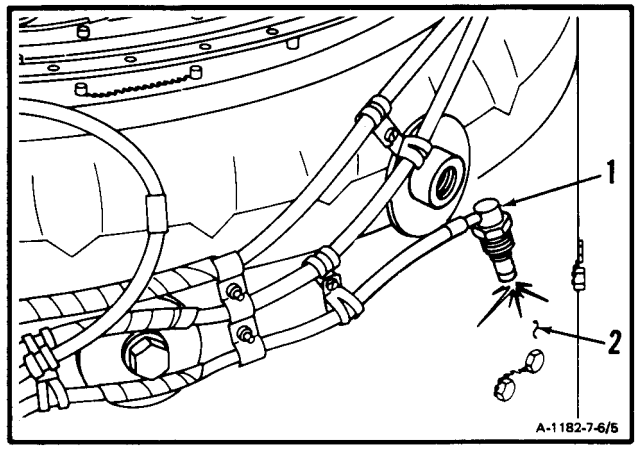
3. **Remove spark ignitar (3)** from ignition lead (1).



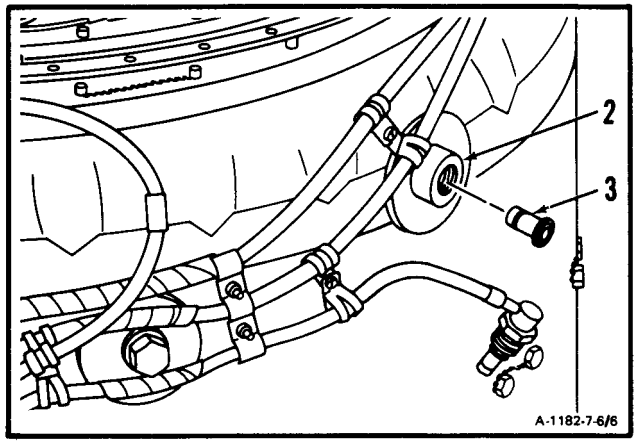
GO TO NEXT PAGE

7-6 REMOVE SPARK IGNITERS (Continued) 7-6

4. **Discharge ignition lead (1)** by touching to combustor housing (2).

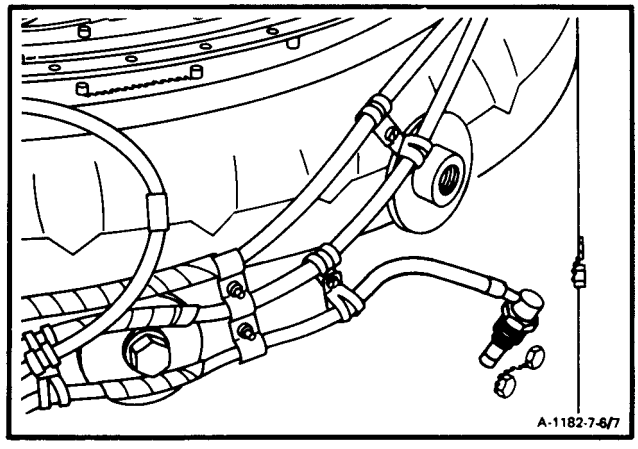


5. **Remove spark igniter (3)** from combustor housing (2).



FOLLOW-ON MAINTENANCE:

None



END OF TASK

7-7 CLEAN SPARK IGNITERS 7-7

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944

Materials:
Dry Cleaning Solvent (E17)
Gloves (E20)
Lint-Free Cloth (E26)

Personnel Required:
68B10 Aircraft Powerplant Repairer

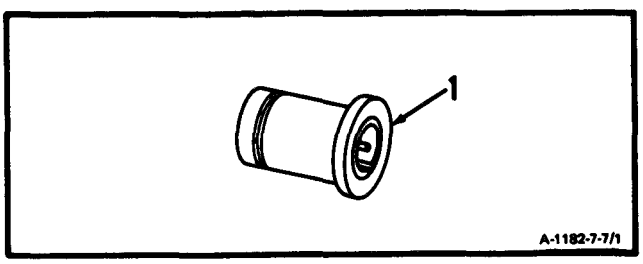
Equipment Condition:
Off Engine Task
Spark igniters Removed (Task 7-6)

General Safety Instructions:

WARNING

Dry cleaning solvent (E17) is flammable and toxic. It can irritate skin and cause burns. Use only in wall-ventilated area, away from heat and open flame. In case of contact, immediately flush skin or eyes with water for at least 15 minutes. Get medical attention for eyes.

1. Wear gloves (E20). **Clean Tour spark igniters (1),** using dry cleaning solvent (El 7) and brush.
2. Remove any **remaining solvent** using clean, dry lint-free cloth (E26).



FOLLOW-ON MAINTENANCE:

Inspect Spark Igniters (Task 7-8).

END OF TASK

7-8 INSPECT SPARK IGNITERS 7-8

INITIAL SETUP

Applicable Configurations:
All

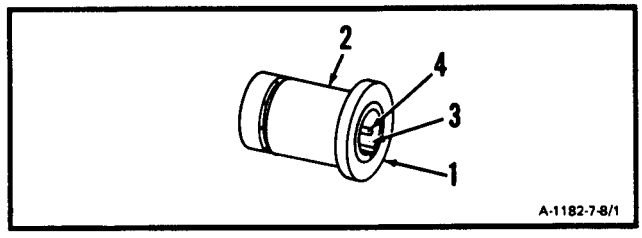
Tools:
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
None

Personnel Required:
68630 Aircraft Powerplant Inspector

Equipment Condition:
Off Engine Task

1. Inspect four spark igniters (1).



a. There shall be no cracks or gouges in shank (2). Chafing allowed to 0.010 inch depth.

b. There shall be no chips or cracks in ceramic surface (3).

c. Pin (4) shall not be bent or broken.

FOLLOW-ON MAINTENANCE:

None

END OF TASK

7-9 REPAIR SPARK IGNITERS

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114
Goggles
Compressed Air Source

Materials:
Crocus Cloth (E15)

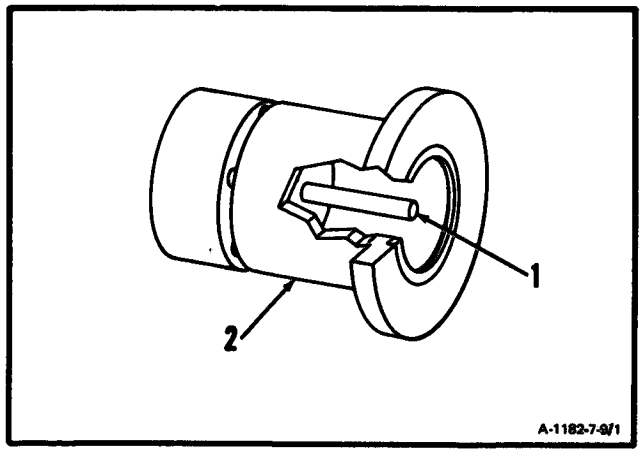
Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

Equipment Condition:
Off Engine Task

NOTE

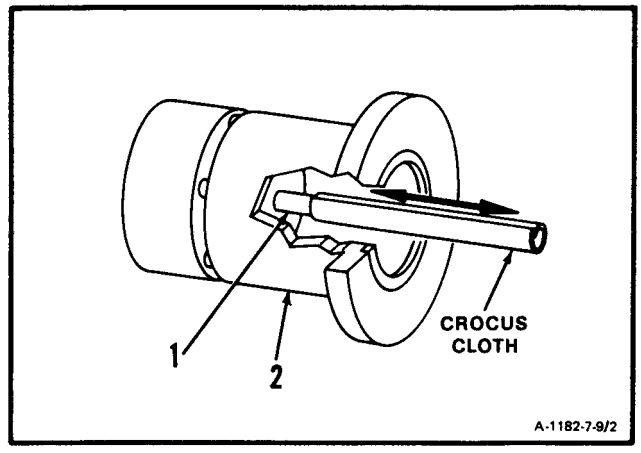
This repair is allowed provided it does not cause pin to break or crack.

1. **Straighten bent pin (1)** of spark igniter (2). Using long-nose pliers, gently move pin (1) until straight.



GO TO NEXT PAGE

2. **Remove corrosion from pin (1)** of spark igniter (2). Polish pin, using in and out motion over entire length of pin until corrosion is removed. Use crocus cloth (E15).



WARNING

When using compressed air for cleaning, use approved protective equipment for eyes and face. Do not use more than 30 psig air pressure. Do not direct air toward yourself or another person. Failure to comply could result in injury to eyes or skin. In case of injury, get medical attention.

3. Wear goggles. **Remove loosened particles** from pin (1), using clean, dry compressed air.

INSPECT

FOLLOW-ON MAINTENANCE:

Clean Spark Igniters (Task 7-7).

END OF TASK

7-10 INSTALL SPARK IGNITERS 7-10

INITIAL SETUP

Applicable Configurations:
All

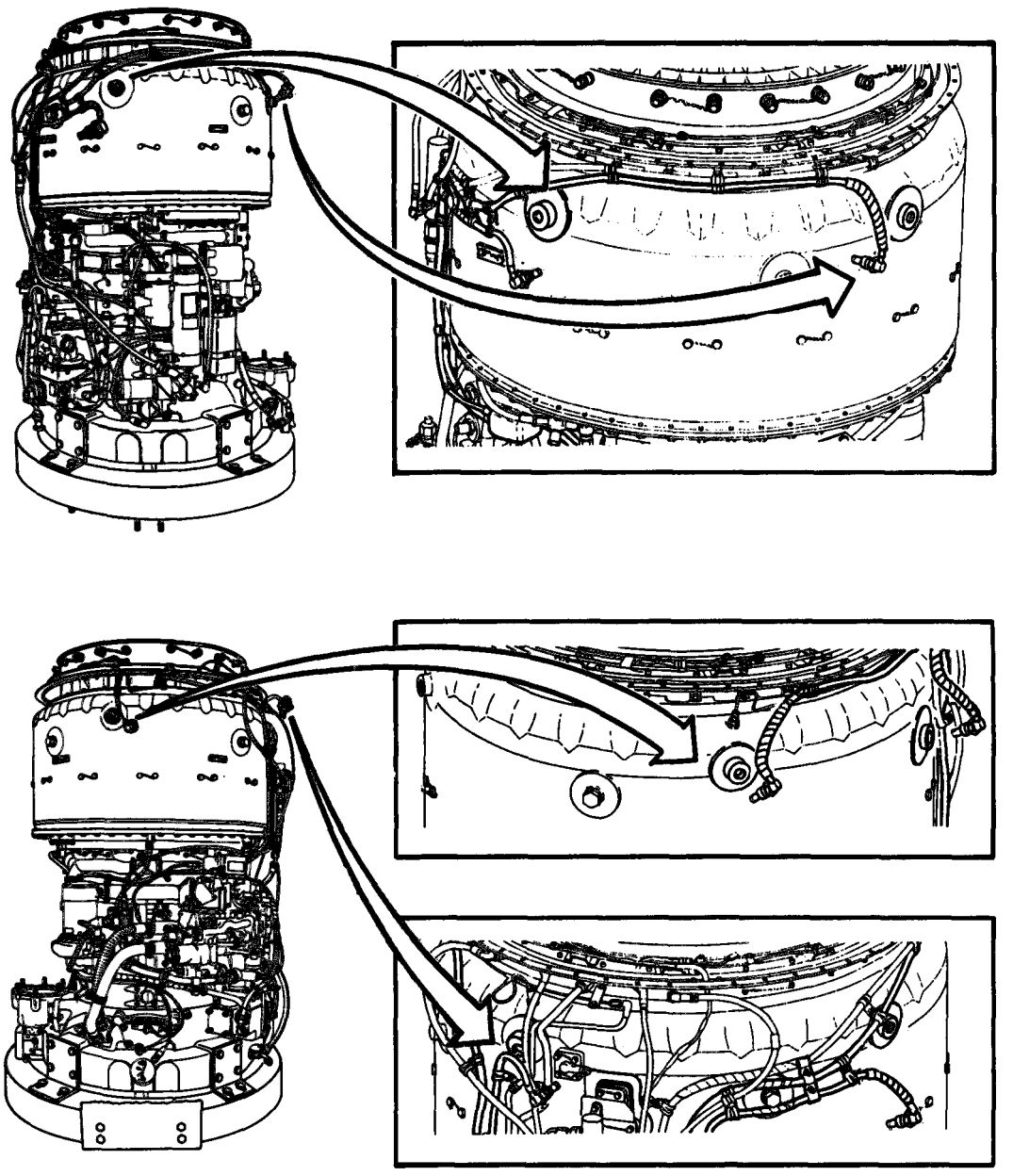
Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114
Torque Wrench, 30-150 Inch-Pounds
Crowfoot Attachment, 7/8 Inch

Materials:
Anti-Seize Compound (E5)
Lockwire (E29)

Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

GO TO NEXT PAGE

7-10 INSTALL SPARK IGNITERS (Continued) 7-10



A-1182-7-10/1

GO TO NEXT PAGE

7-10 INSTALL SPARK IGNITERS (Continued)

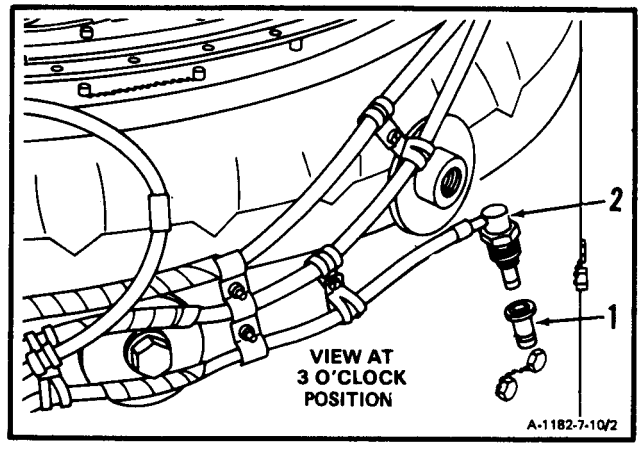
NOTE

The procedure for installing four spark igniters at 3-, 6-,9-, and 12-o'clock positions is the same except for lockwiring. Only the 3-o'clock position is shown for installation.

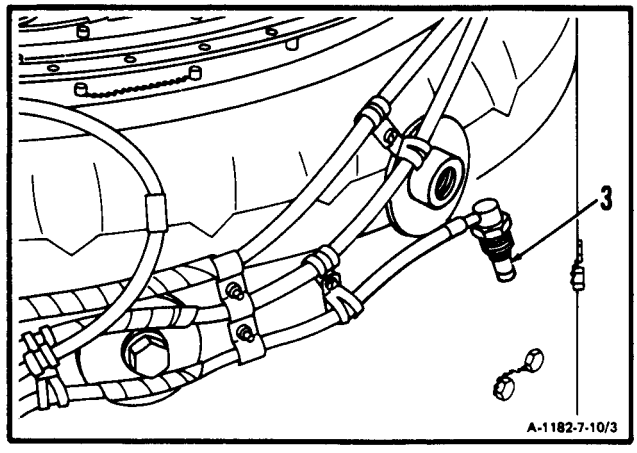
NOTE

Install gently by hand until fully engaged.

1. **Install spark igniter (1) on ignition lead (2).**



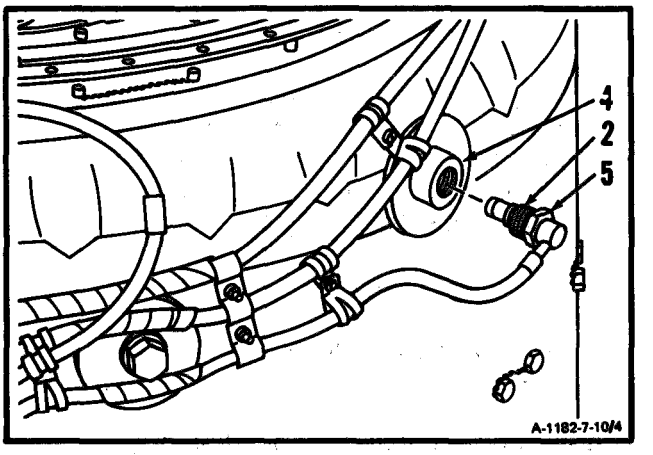
2. Apply a light coat of anti-seize compound (E5) to ignition lead threads (3).



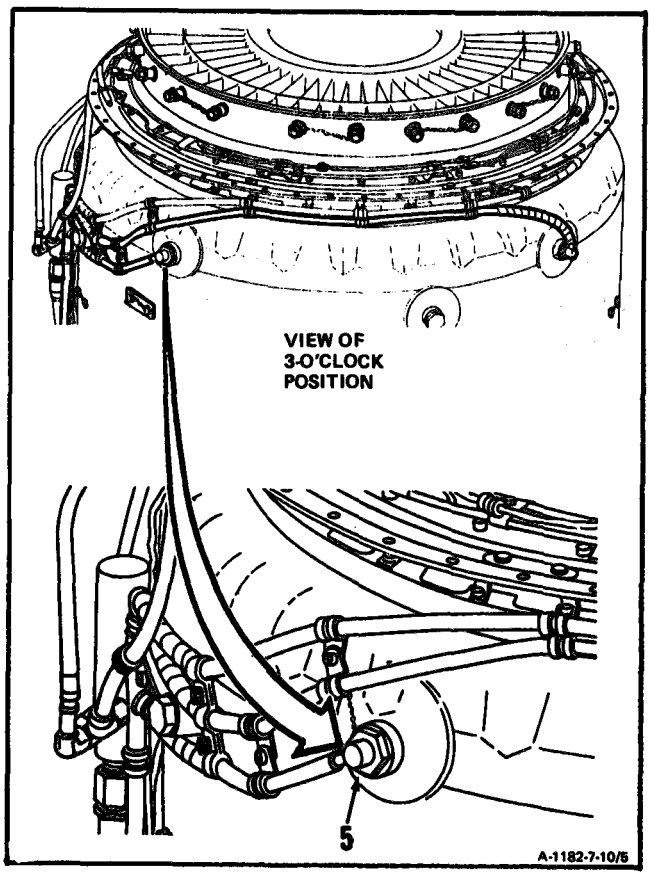
GO TO NEXT PAGE

7-10 INSTALL SPARK IGNITERS (Continued)

3. Install ignition lead (2) in combustor housing (4). Torque ignition lead connector (5) to 135 inch-pounds. Use crowfoot attachment.



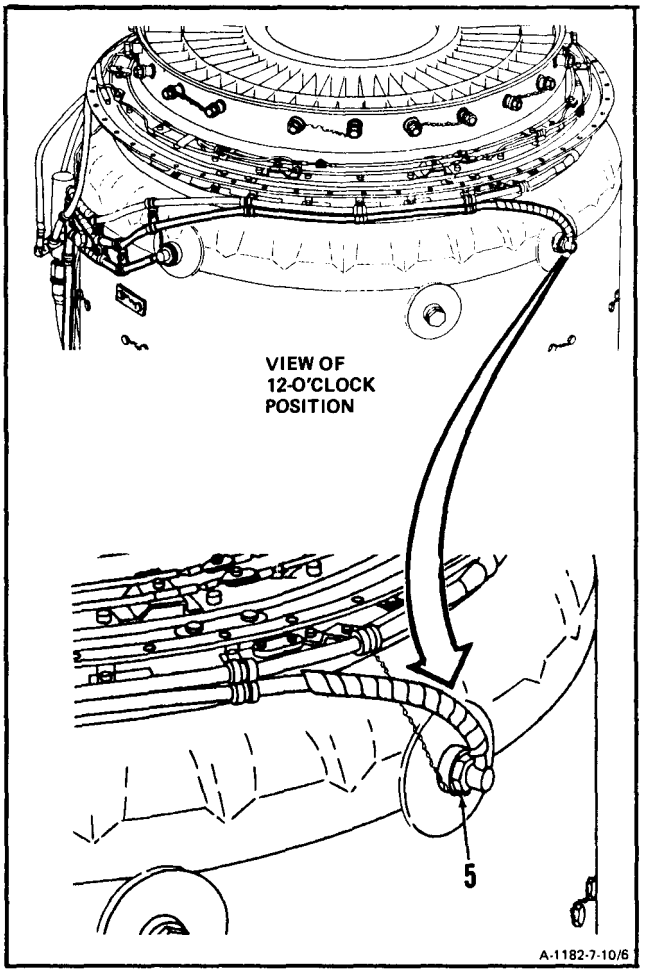
4. Lockwire connector (5) at 3-o'clock position. Use lockwire (E29).



GO TO NEXT PAGE

7-10 INSTALL SPARK IGNITERS (Continued) 7-10

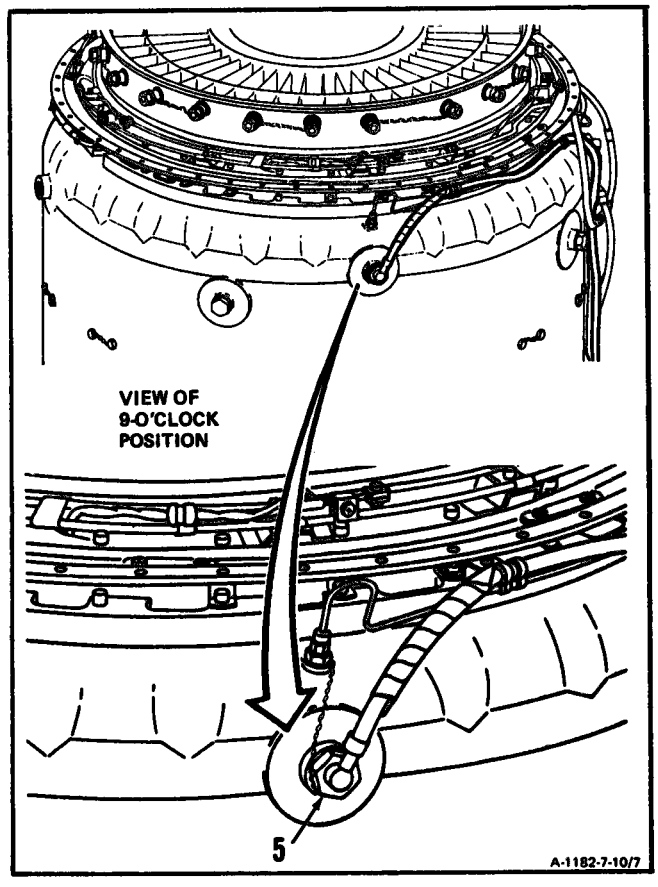
5. Lockwire connector (5) at 12-o'clock position. Use lockwire (E29).



GO TO NEXT PAGE

7-10 INSTALL SPARK IGNITERS (Continued)

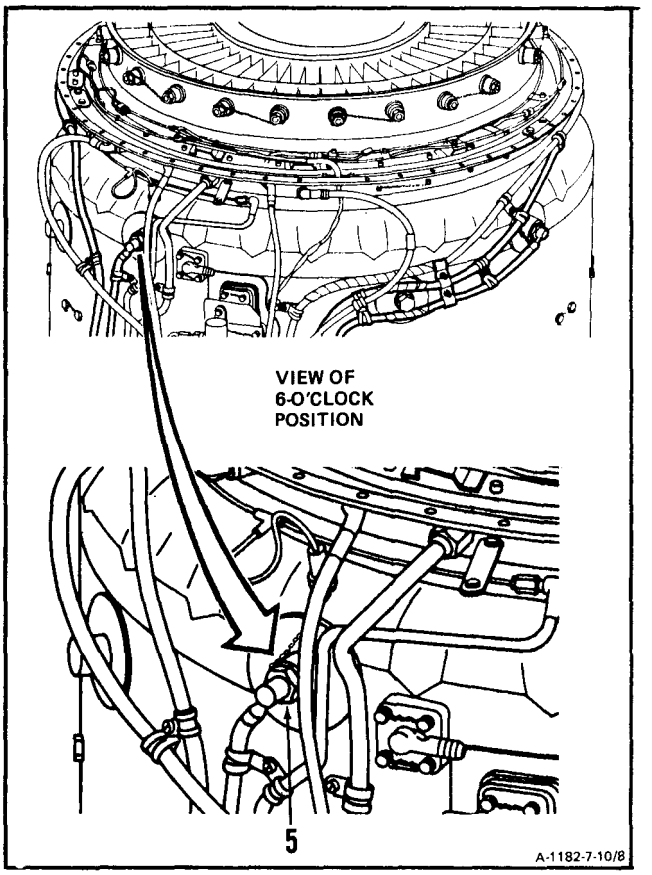
6. Lockwire corrector (5) at 9-o'clock position. Use lockwire (E29).



GO TO NEXT PAGE

7-10 INSTALL SPARK IGNITERS (Continued) 7-10

7. Lockwire connector (5) at 6-o'clock position. Use lockwire (E29).



INSPECT

FOLLOW-ON MAINTENANCE:

None

END OF TASK

Section III. IGNITION EXCITER – MAINTENANCE PROCEDURES

7–11 REMOVE IGNITION EXCITER 7–11

INITIAL SETUP

Applicable Configurations:

All

Tools:

Powerplant Mechanic's Tool Kit,
NSN 5180–00–323–4994

Materials:

None

Personnel Required:

68B10 Aircraft Powerplant Repairer

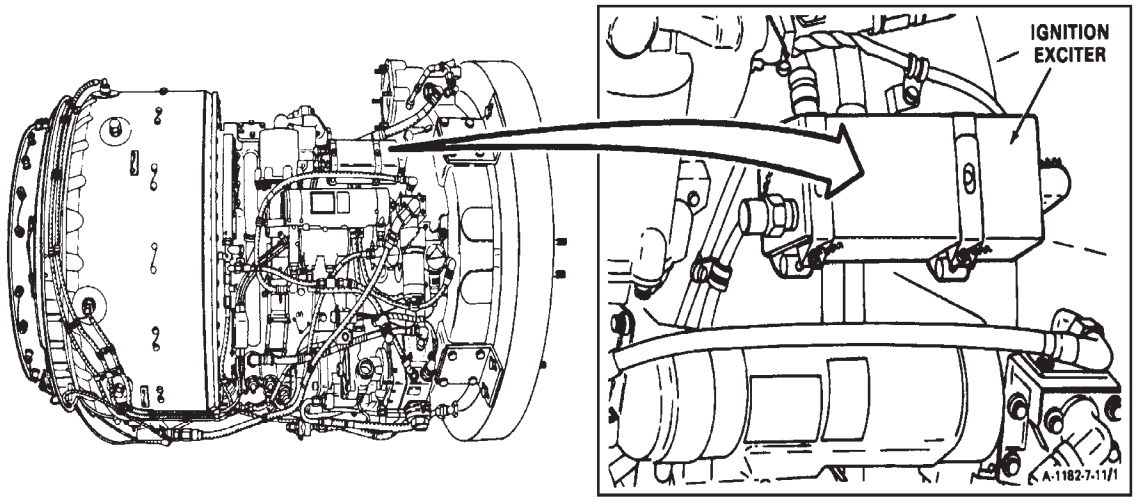
General Safety Instructions:

WARNING

The ignition exciter stores very high and possibly fatal voltage. Use extreme care when working around ignition exciter. Serious injury could result if exciter is accidentally grounded. Do not probe inside of output receptacles with fingers or metal object. Discharge exciter only with insulated screwdriver. In case of shock or injury, get medical attention.

WARNING

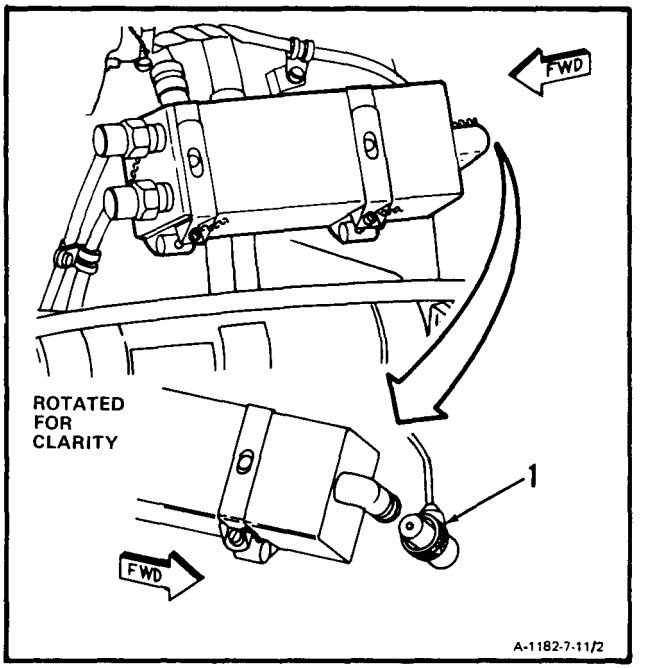
The ignition unit contains a very small amount of radioactive material (CESIUM–BARIUM 137) and normally requires no handling precautions. However, severely damaged units that have been broken open, must be handled with forceps or lead gloves and disposed of in accordance with TB 43–0108 and AR 385–11.



GO TO NEXT PAGE

7-11 REMOVE IGNITION EXCITER (Continued) 7-11

1. Remove lockwire and **disconnect electrical connector (1).**



GO TO NEXT PAGE

7-11 REMOVE IGNITION EXCITER (Continued) 7-11

WARNING

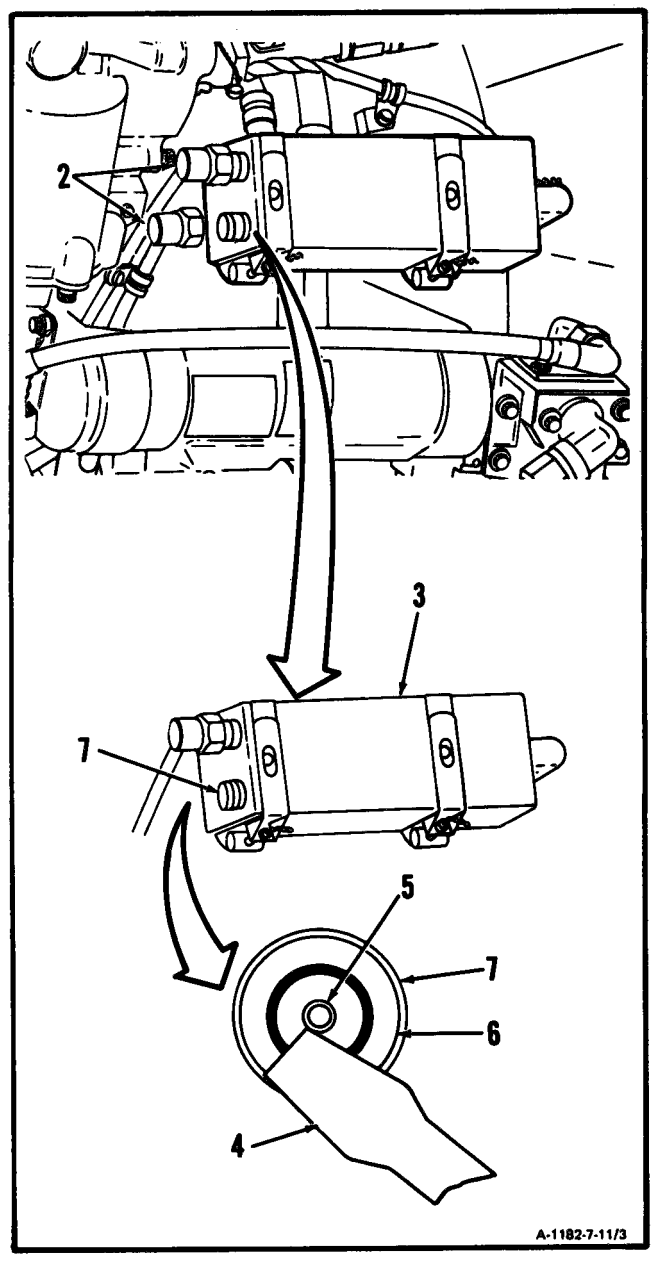
When discharging ignition exciter, remove one lead at a time and discharge receptacle that lead was removed from. Failure to do so may result in serious shock when you are removing second lead. In case of serious shock, get medical attention.

NOTE

Step 2. applies to both output receptacles.

2. Remove lockwire and **disconnect coil and cable assembly lead (2).**

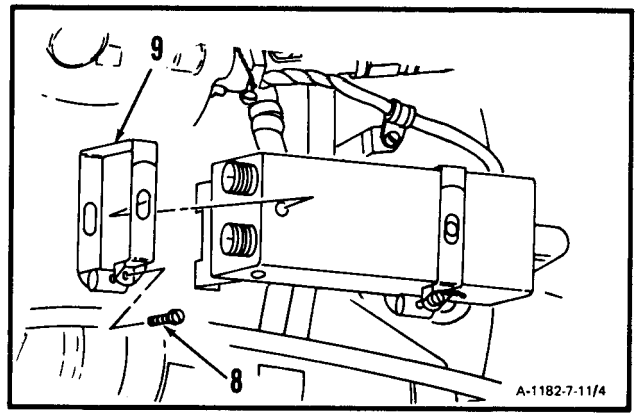
3. **Discharge ignition exciter (3)** by placing tip of insulated screwdriver (4) against pin (5) and edge (6) of receptacle (7).



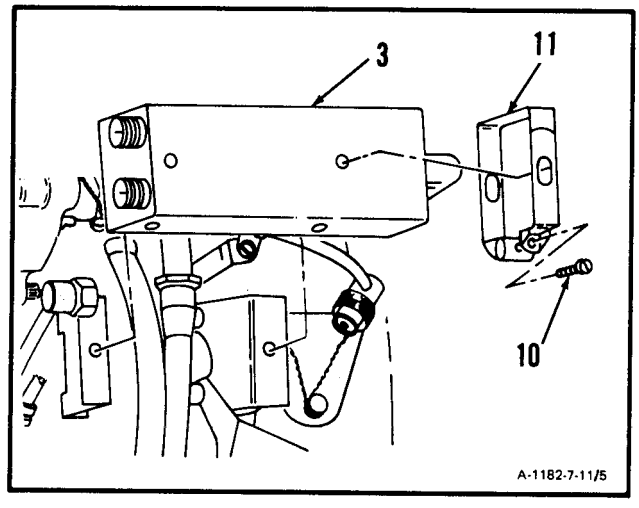
GO TO NEXT PAGE

7-11 REMOVE IGNITION EXCITER (Continued) 7-11

4. **Remove** lockwire, screw (8), and **clamp (9).**

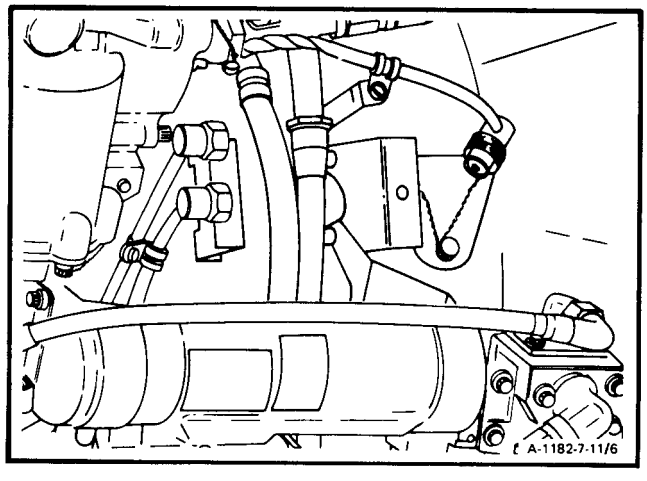


5. **Remove** lockwire, screw (10), clamp (11), and **ignition exciter (3).**



FOLLOW-ON MAINTENANCE:

None



END OF TASK

7-12 CLEAN IGNITION EXCITER

INITIAL SETUP

Applicable Configurations:
All

Tools:
None

Materials:
Dry Cleaning Solvent (E17)
Gloves (E20)
Lint-Free Cloth (E26)

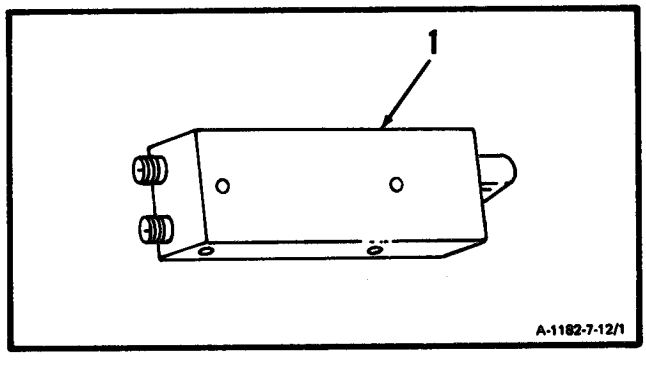
Personnel Required:
68B10 Aircraft Powerplant Repairer

Equipment Condition:
Off Engine Task
Ignition Exciter Removed (Task 7-11)

WARNING

Dry cleaning solvent (E17) is flammable and toxic. It can irritate skin and cause burns. We only in well-ventilated area, away from heat and open flame. In case of contact, immediately flush skin or eyes with water for at least 15 minutes. Get medical attention for eyes.

1. Wear gloves (E20). **Clean ignition exciter (1)** with clean lint-free cloth (E26) dampened in dry cleaning solvent (E17).



FOLLOW-ON MAINTENANCE:

Inspect Ignition Exciter (Task 7-13).

END OF TASK

7-13 INSPECT IGNITION EXCITER

INITIAL SETUP

Applicable Configurations:
All

Tools:
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
None

Personnel Required:
68B30 Aircraft Powerplant Inspector

Equipment Condition:
Off Engine Task

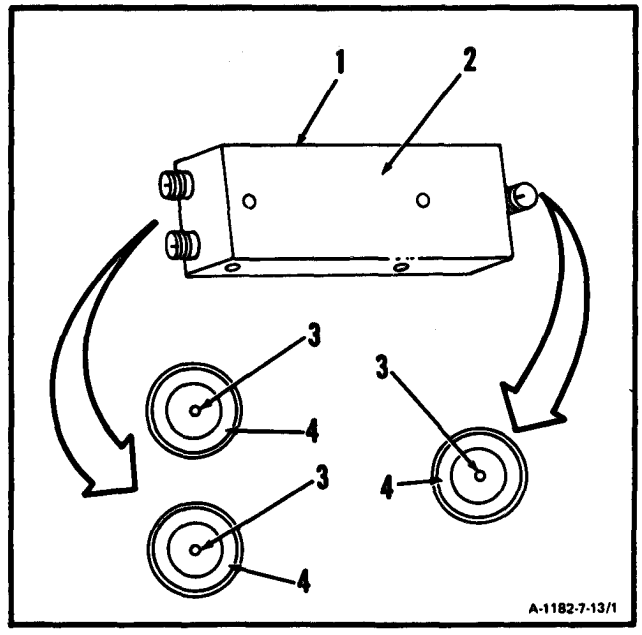
1. **Inspect ignition exciter (1).**

   a. There shall be no cracks or dents in housing (2).

   b. There shall be no bent or broken pins (3).

   c. There shall be no cracks in insulators (4).

   d. There shall be no corrosion.



FOLLOW-ON MAINTENANCE:

None

END OF TASK

7-14 REPAIR IGNITION EXCITER 7-14

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114
Goggles
Compressed Air Source

Materials:
Crocus Cloth (E15)

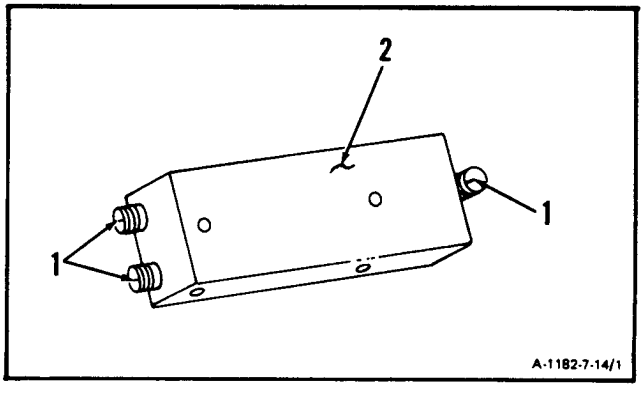
Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

Equipment Condition:
Off Engine Task

NOTE

This repair is allowed provided it does not cause pins to break or crack.

1. **Straighten bent pins (1)** of ignition exciter (2). Using long-nose pliers, gently move pins (1) until they are straight.

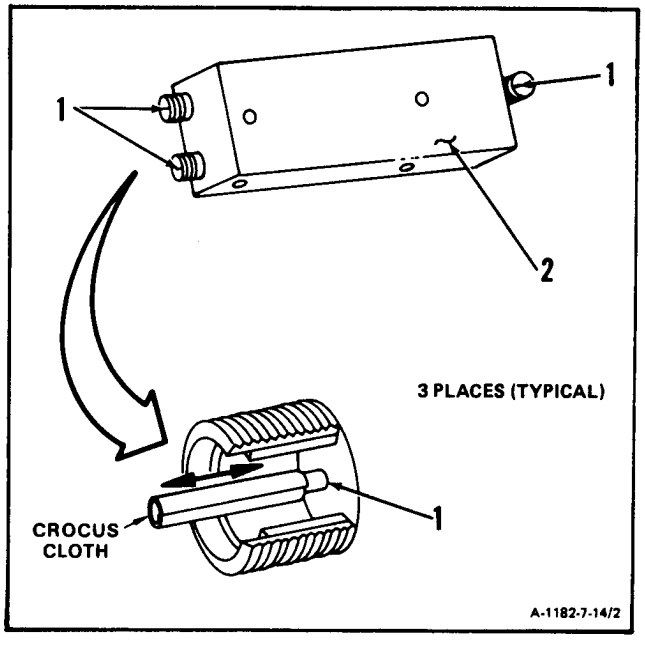


2. **Remove corrosion from pins (1)** of ignition exciter (2). Polish pins, using in and out motion over entire length of pin until corrosion is removed. Use crocus cloth (E15).

WARNING

When using compressed air for cleaning, use approved protective equipment for eyes and face. Do not use more than 30 psig air pressure. Do not direct air toward yourself or another person. Failure to comply could result in injury to eyes or skin. In case of injury, get medical attention.

3. Wear goggles. **Remove loosened particles** from pins (1), using clean, dry compressed air.



INSPECT

GO TO NEXT PAGE

FOLLOW-ON MAINTENANCE:

None

END OF TASK

7-15 INSTALL IGNITION EXCITER 7-15

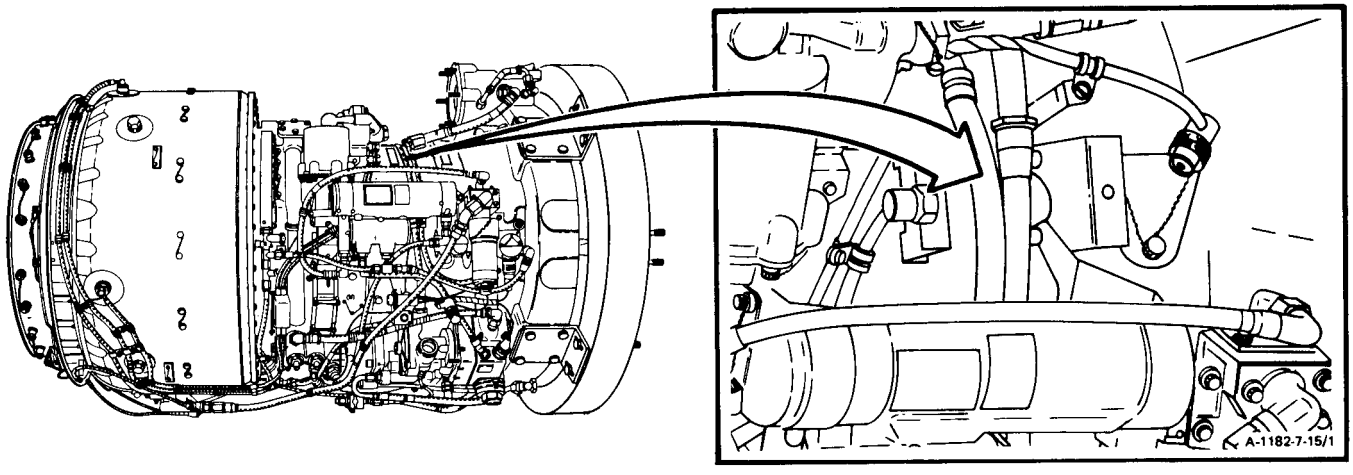
INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
Lockwire (E29)

Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

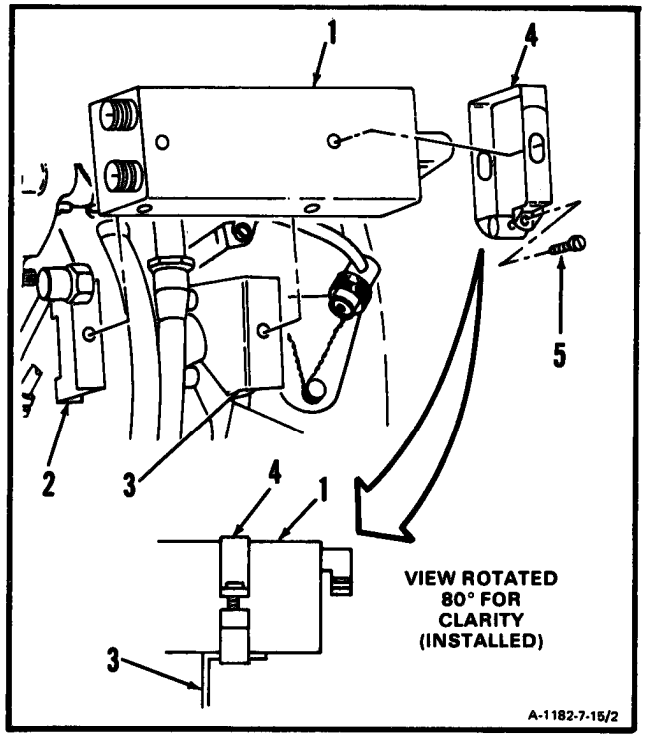


GO TO NEXT PAGE

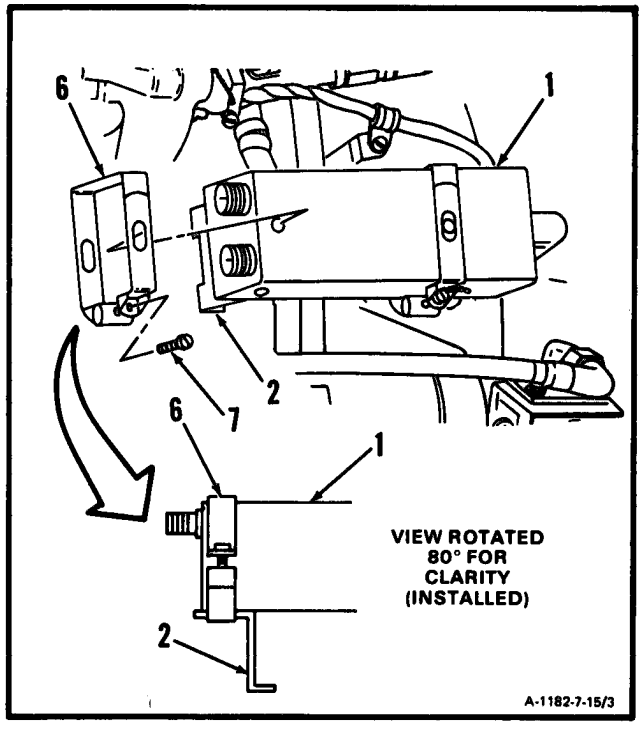
7-15 INSTALL IGNITION EXCITER (Continued) 7-15

1. Install ignition exciter (1) on brackets (2 and 3).

a. Loosely install clamp (4) and screw (5) on ignition exciter (1) and bracket (3).



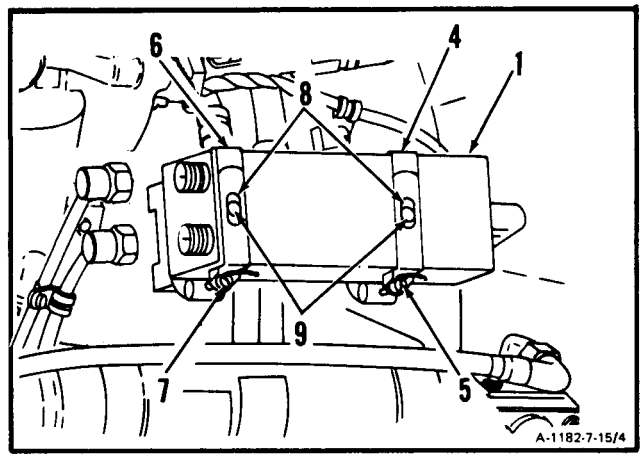
b. Loosely install clamp (6) and screw (7) on ignition exciter (1) and bracket (2).



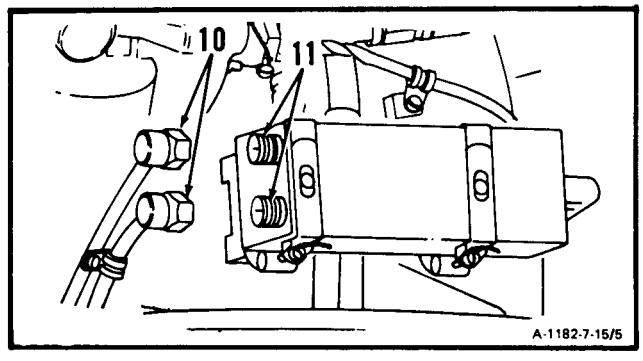
GO TO NEXT PAGE

7-15 INSTALL IGNITION EXCITER (Continued)

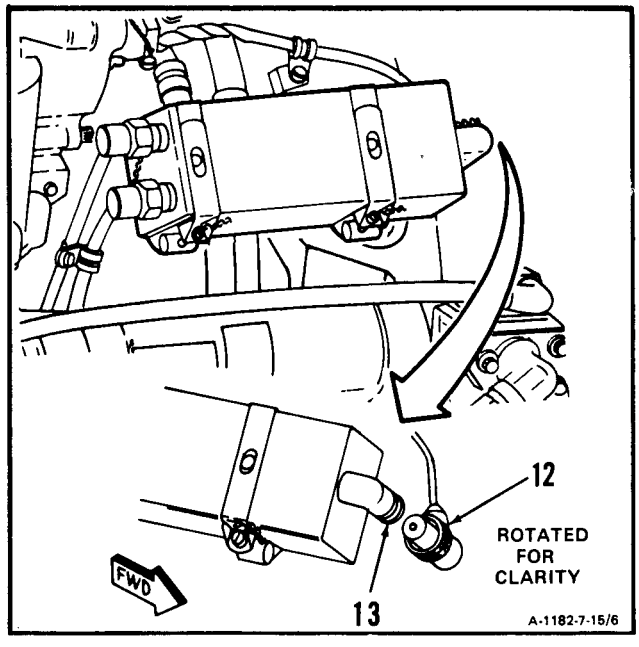
c. Align slots (8) in clamps (4 and 6) with locating lugs (9) on ignition exciter (1). Tighten screws (5 and 7) and lockwire. Use lockwire (E29).



2. **Connect two coil and cable assembly leads (10)** to ignition exciter output receptacles (11) . Lockwire leads. Use lockwire (E29).



3. **Connect electrical connector (12)** to input receptacle (13). Lockwire electrical connector (12). Use lockwire (E29).



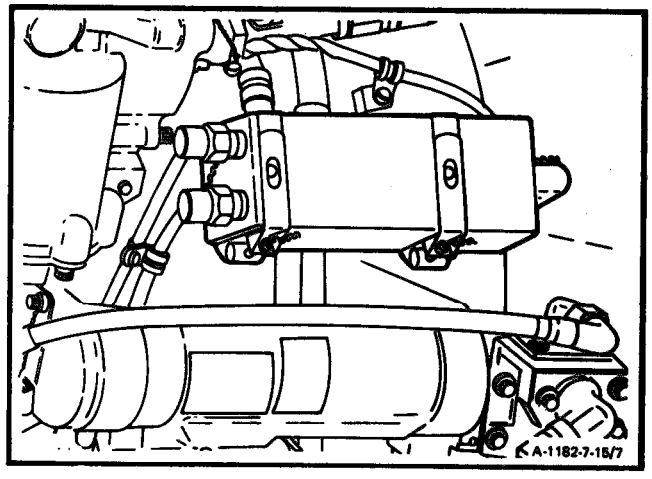
INSPECT

GO TO NEXT PAGE

7-15 INSTALL IGNITION EXCITER (Continued)

FOLLOW-ON MAINTENANCE:

None



END OF TASK

7-16 REMOVE MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) 7-16

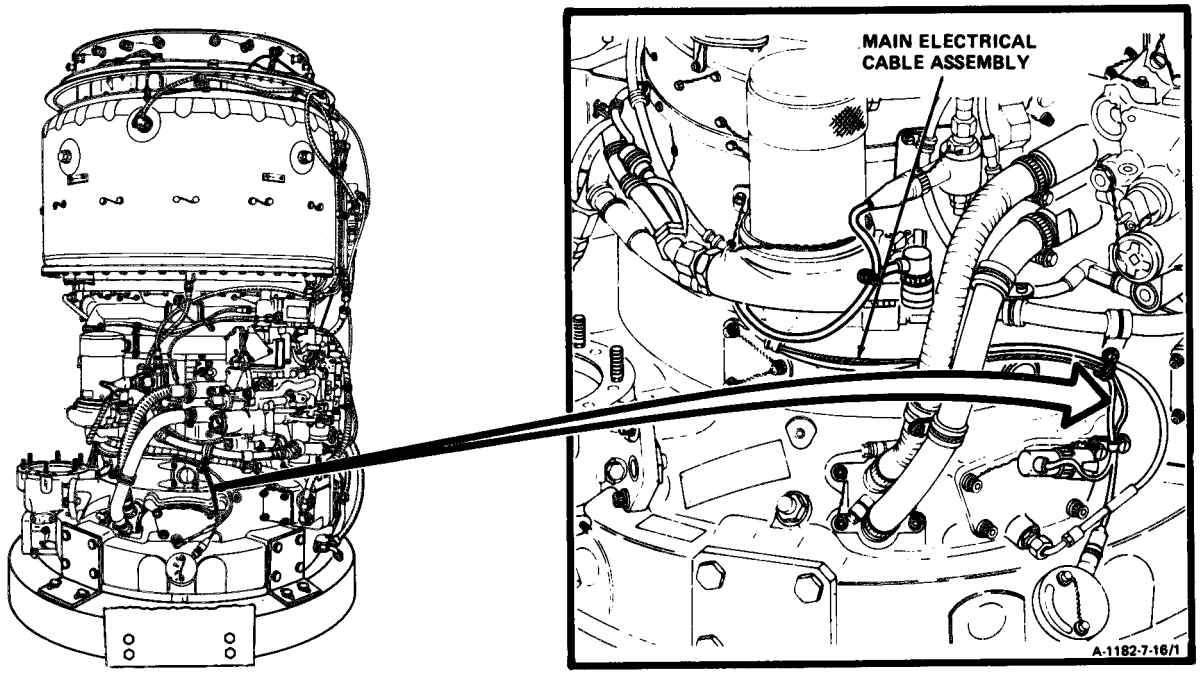
INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944

Materials:
None

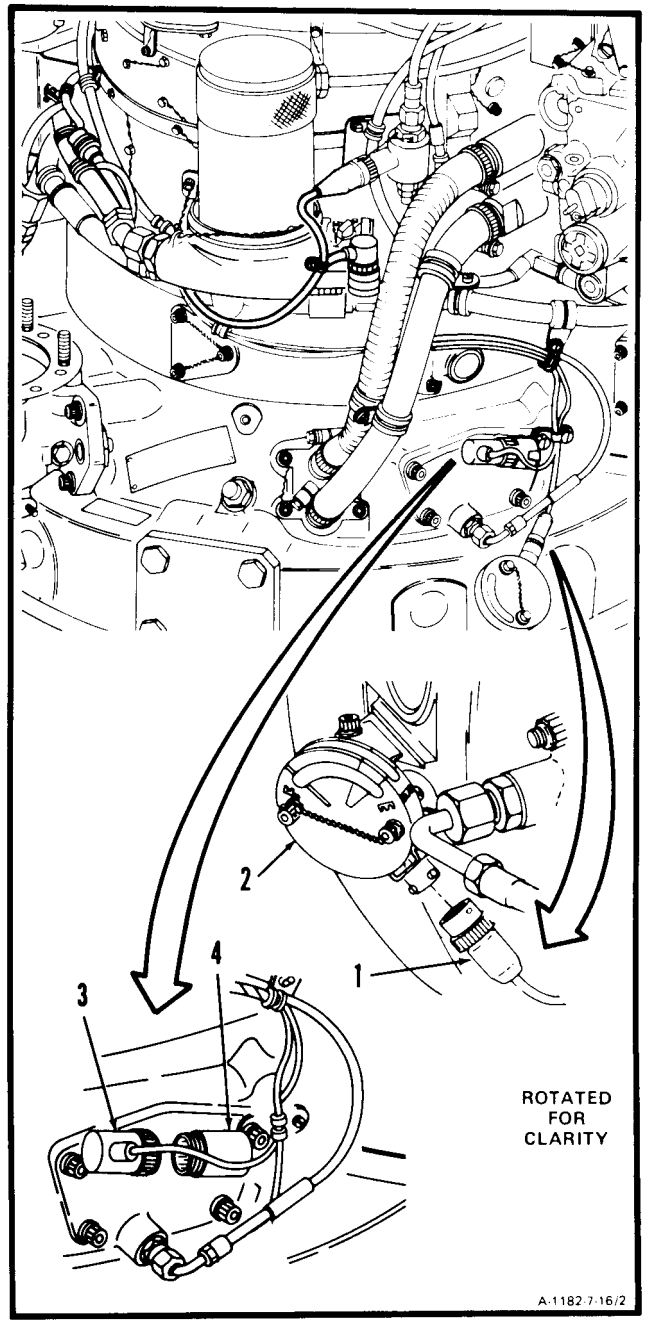
Personnel Required:
68B10 Aircraft Powerplant Repairer



GO TO NEXT PAGE

7-16 REMOVE MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) (Continued) 7-16

1. **Disconnect electrical connector (1)** from oil level indicator (2).
2. **Remove lockwire.** Disconnect electrical connector (3) from plug (4).

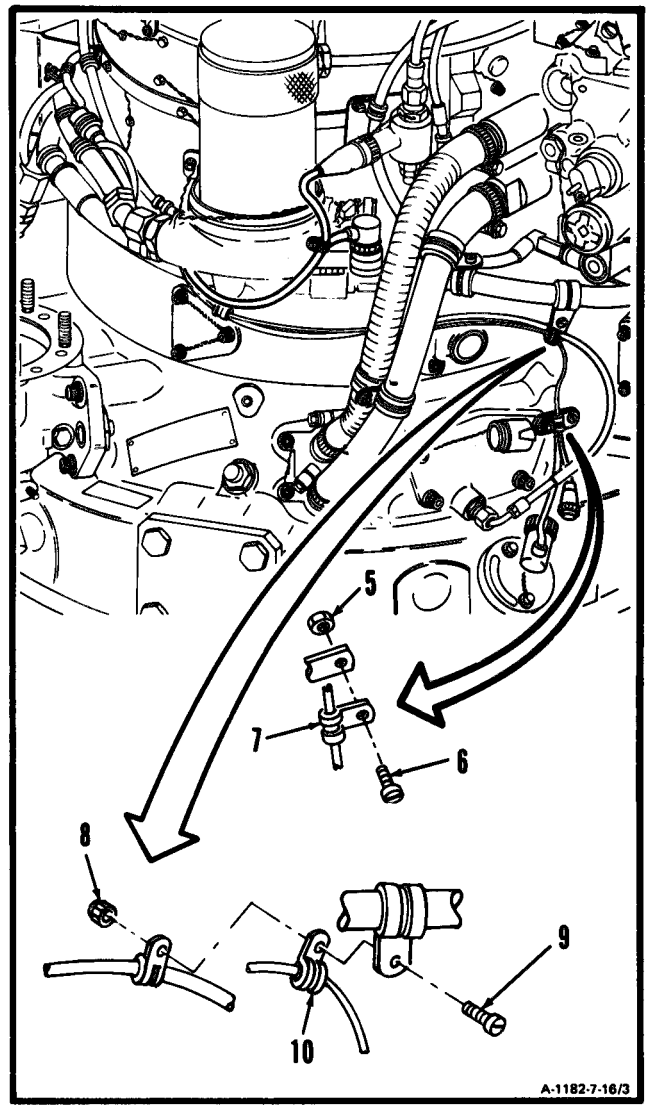


GO TO NEXT PAGE

7-16 REMOVE MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR)(Contin.ed) 7-16

3. **Remove** nut (5), screw (6), and **clamp (7).**

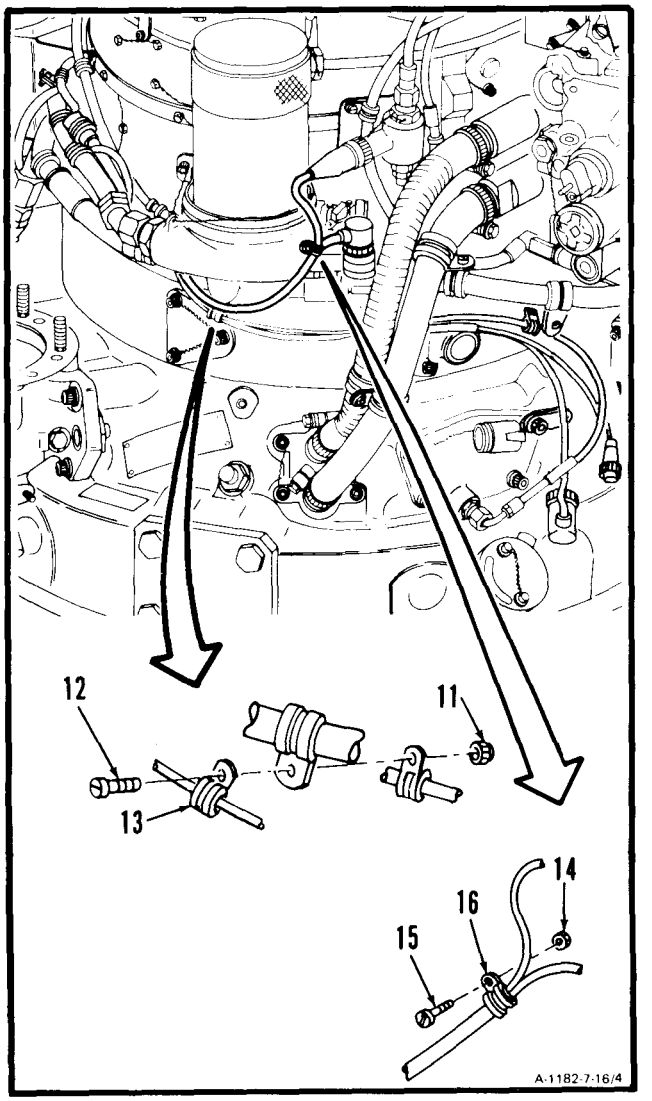
4. **Remove** nut (8), screw (9), and **clamp (10).**



GO TO NEXT PAGE

7-16 REMOVE MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) (Continued) 7-16

5. **Remove** nut (11), screw (12), and **clamp (13).**
6. **Remove** nut (14), screw (15), and **clamp (16).**

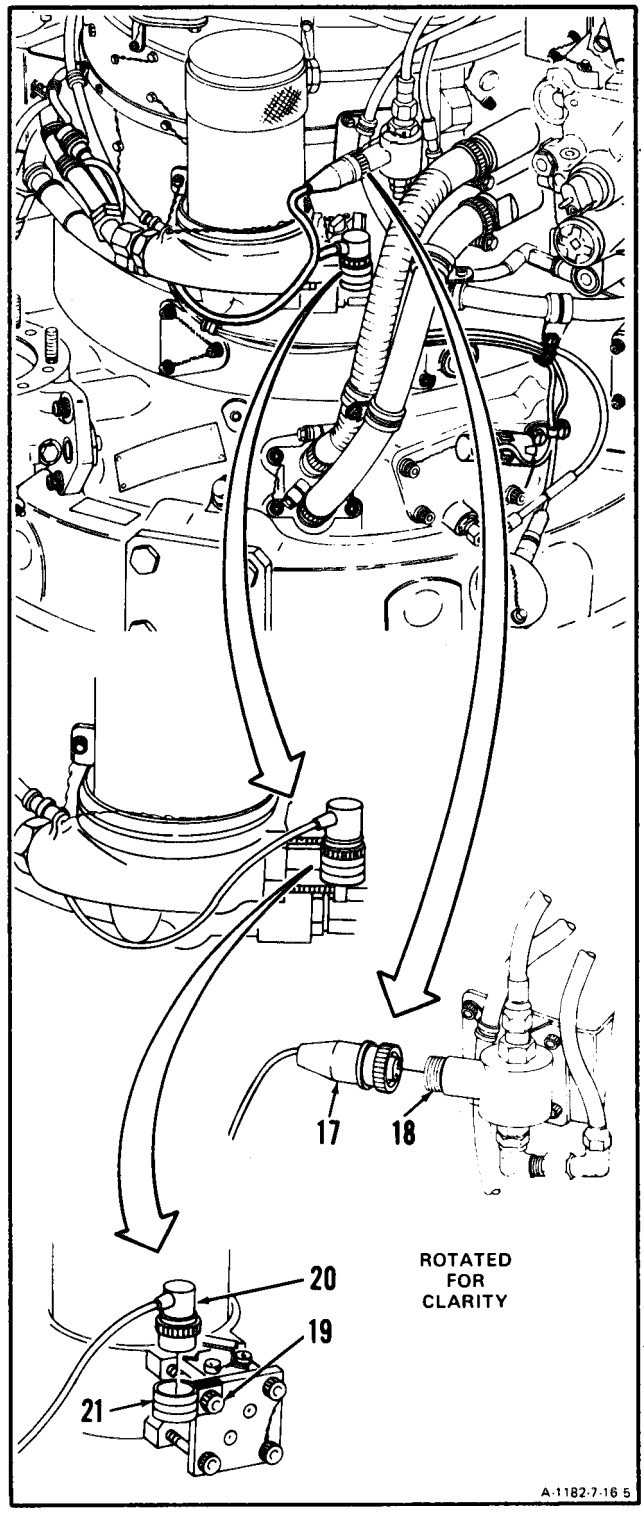


GO TO NEXT SPAGE

7-16 REMOVE MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) (Continued) 7-16

7. Remove lockwire and disconnect electrical connector (17) from starting fuel solenoid valve (18).

8. Remove lockwire. Loosen screw (19) and remove electrical connector (20) from clamp (21).

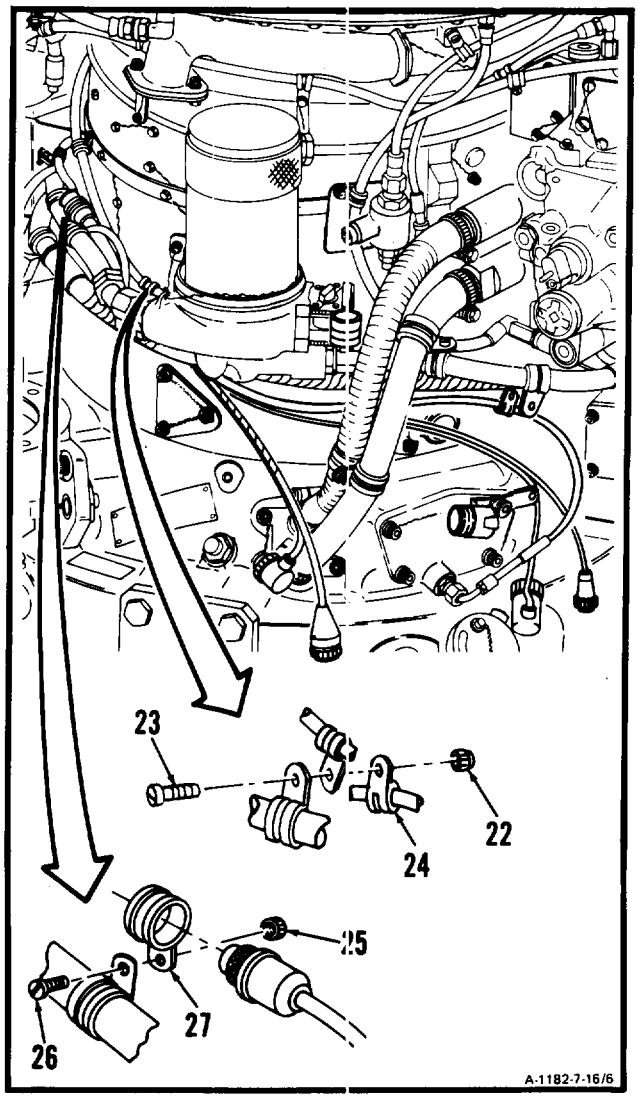


GO TO NEXT PAGE

7-16 REMOVE MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) (Continued) 7-16

9. **Remove** nut (22), screw (23), and **clamp (24).**

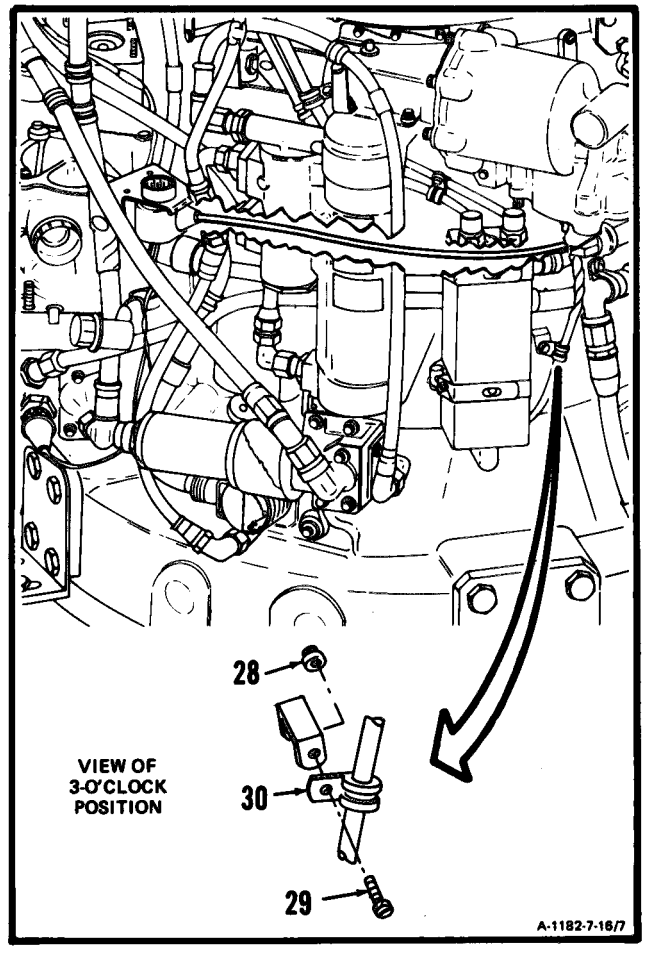
10. **Remove** nut (25), screw (26), and **clamp (27).**



GO TO NEXT PAGE

7-16 REMOVE MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) (Continued) 7-16

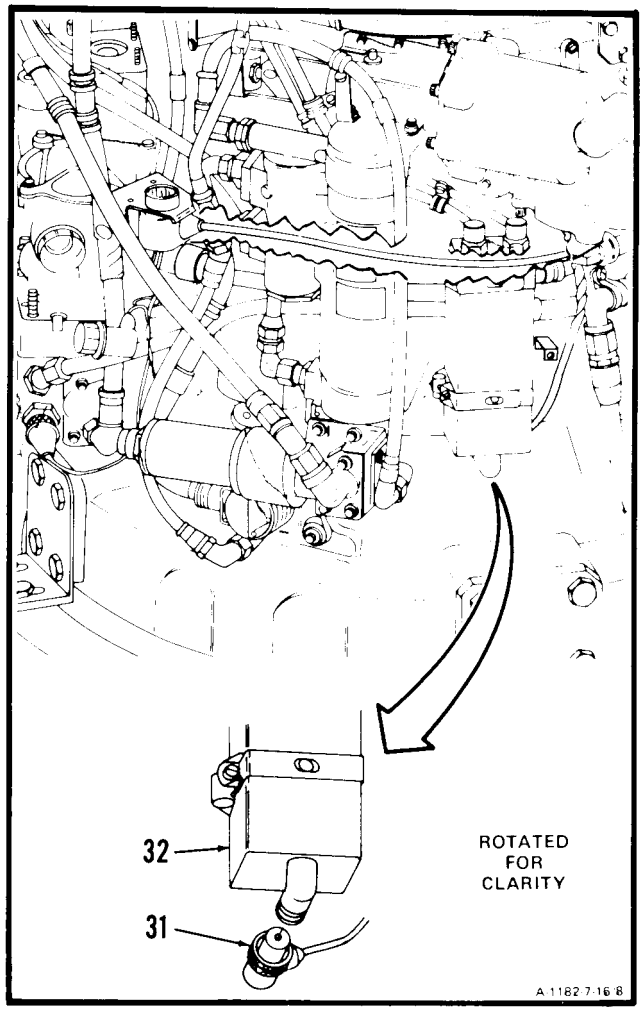
11. Remove nut (28), screw (29), and **clamp (30).**



GO TO NEXT PAGE

7-16 REMOVE MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR)(Continued) 7-16

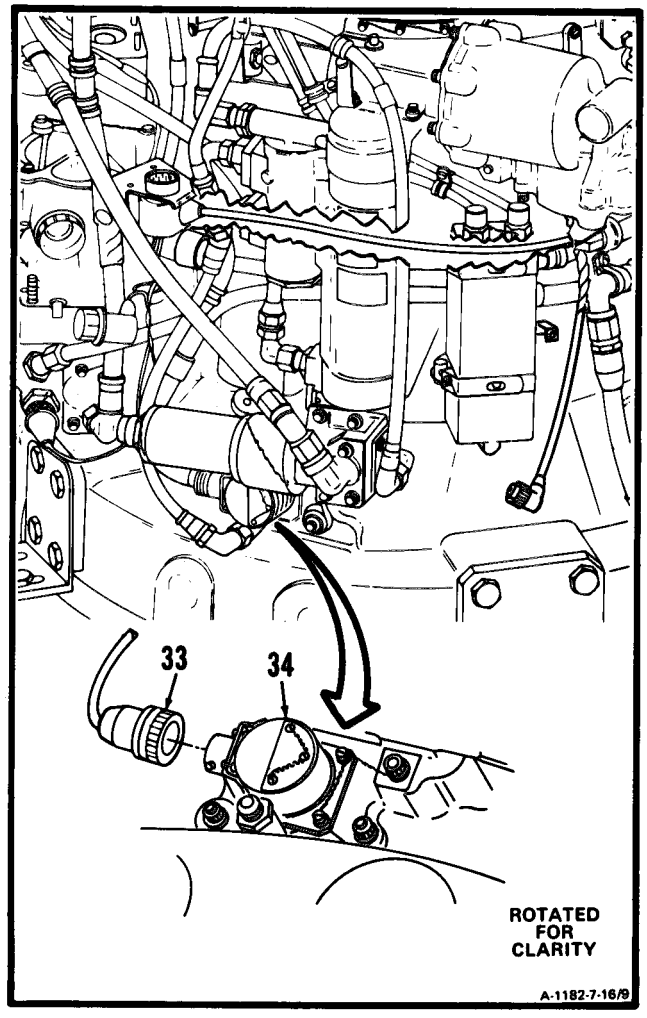
12. Remove lockwire and **disconnect electrical connector (31)** from ignition exciter (32).



GO TO NEXT PAGE

7-16 REMOVE MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) (Continued) 7-16

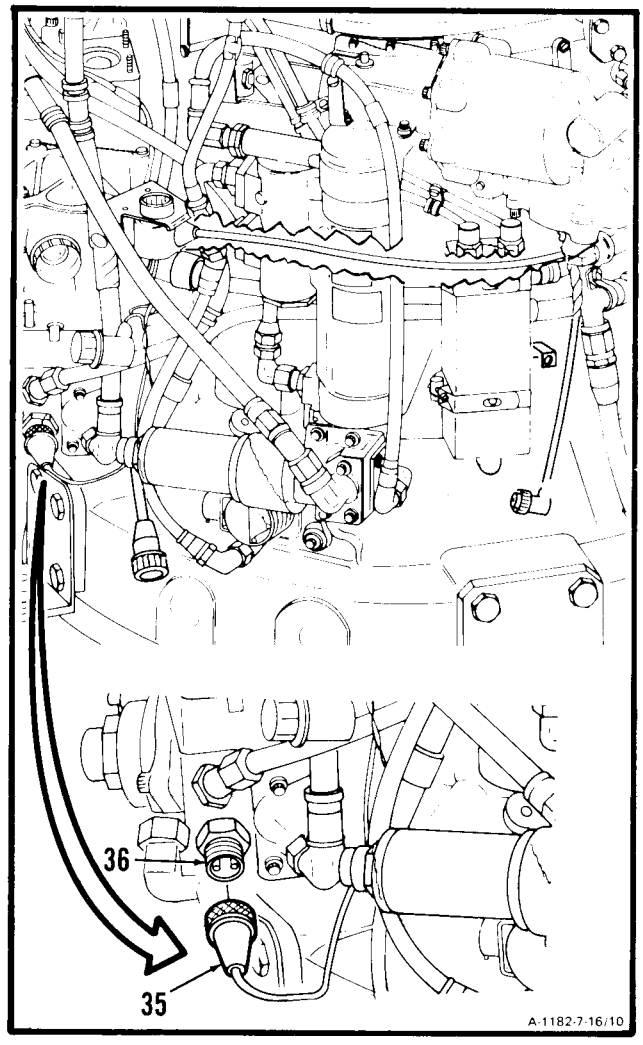
13. **Disconnect electrical connector (33)** from torquemeter junction box (34).



GO TO NEXT PAGE

7-16 REMOVE MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR)(Continued) 7-16

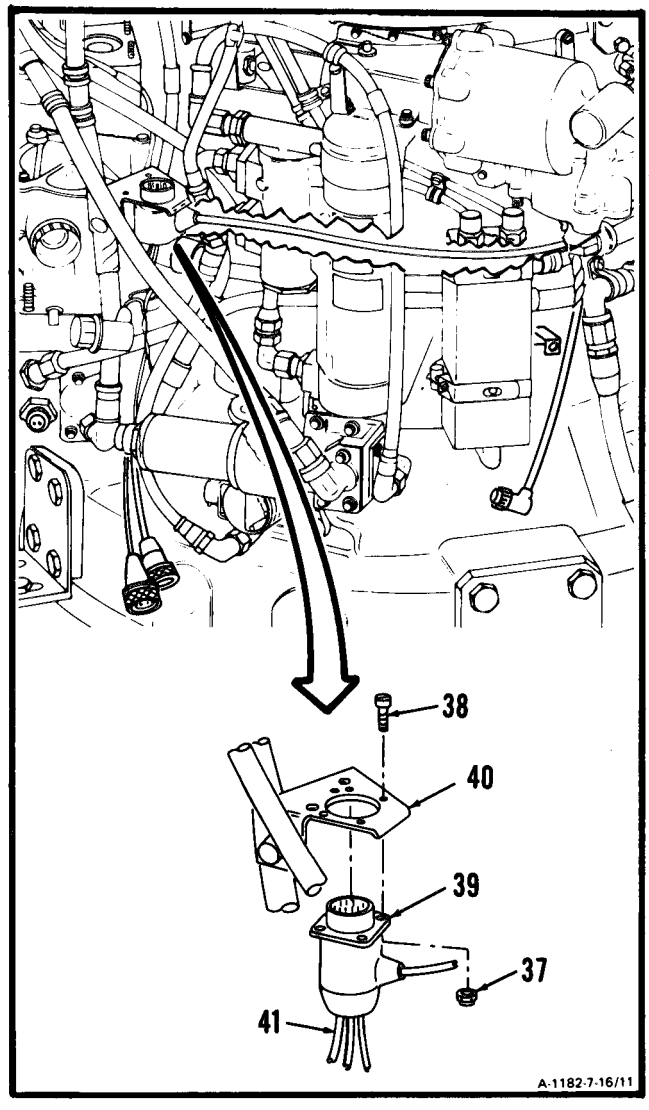
14. **Remove lockwire. Disconnect electrical connector (35)** from oil temperature transmitter (36).



GO TO NEXT PAGE

7-16 REMOVE MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) (Continued) 7-16

15. **Remove** four nuts (37), four screws (38), and **electrical connector (39)** from bracket (40), Remove main electrical cable assembly (41).

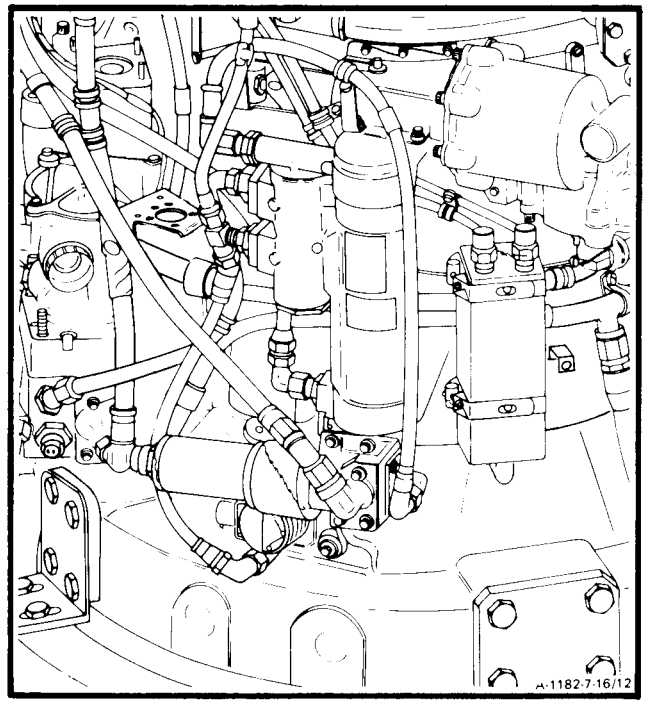


GO TO NEXT PAGE

7-16 REMOVE MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) (Continued) 7-16

FOLLOW-ON MAINTENANCE:

None



END OF TASK

7-16.1 REMOVE MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) 7-16.1

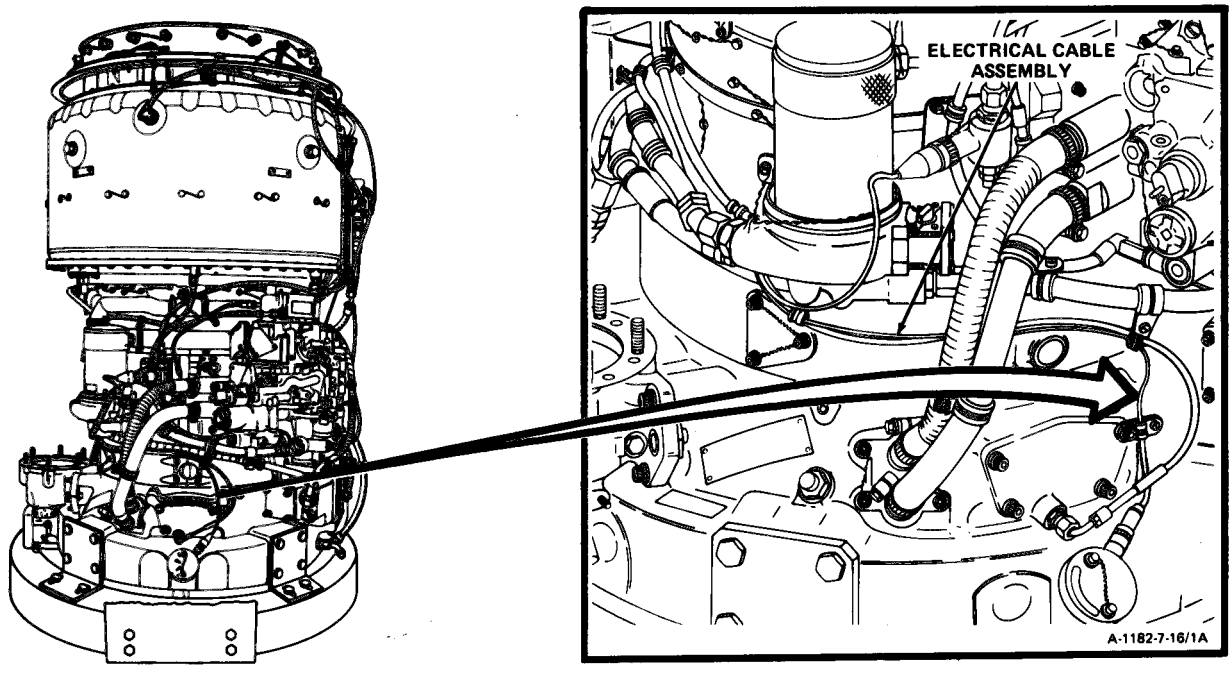
INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944

Materials:
None

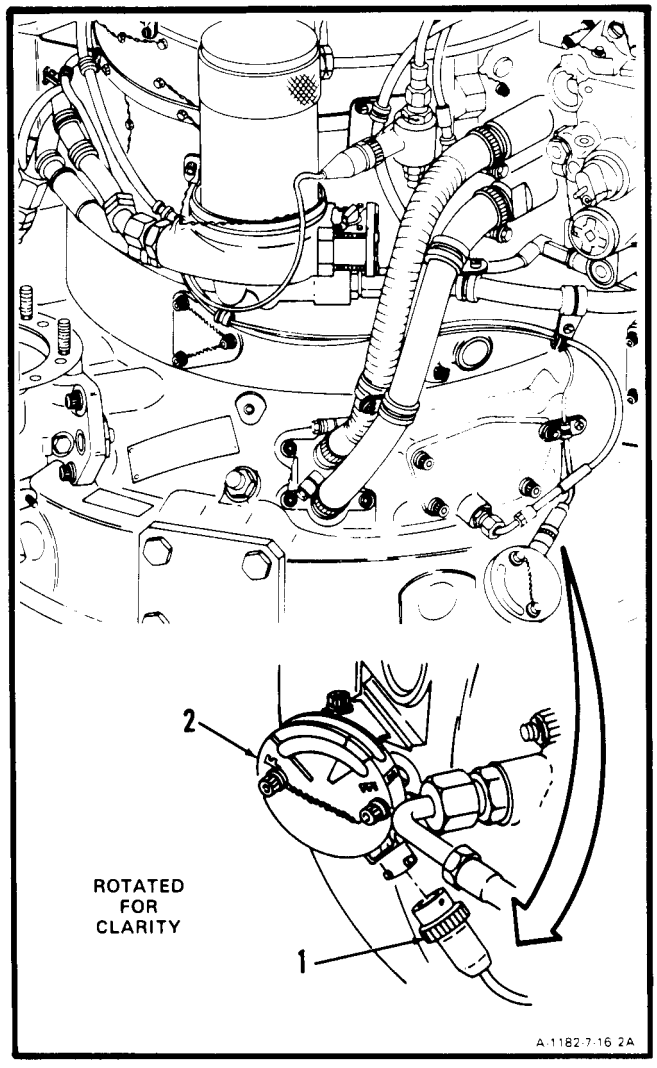
Personnel Required:
68B10 Aircraft Powerplant Repairer



GO TO NEXT PAGE

7-16.1 REMOVE MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued) 7-16.1

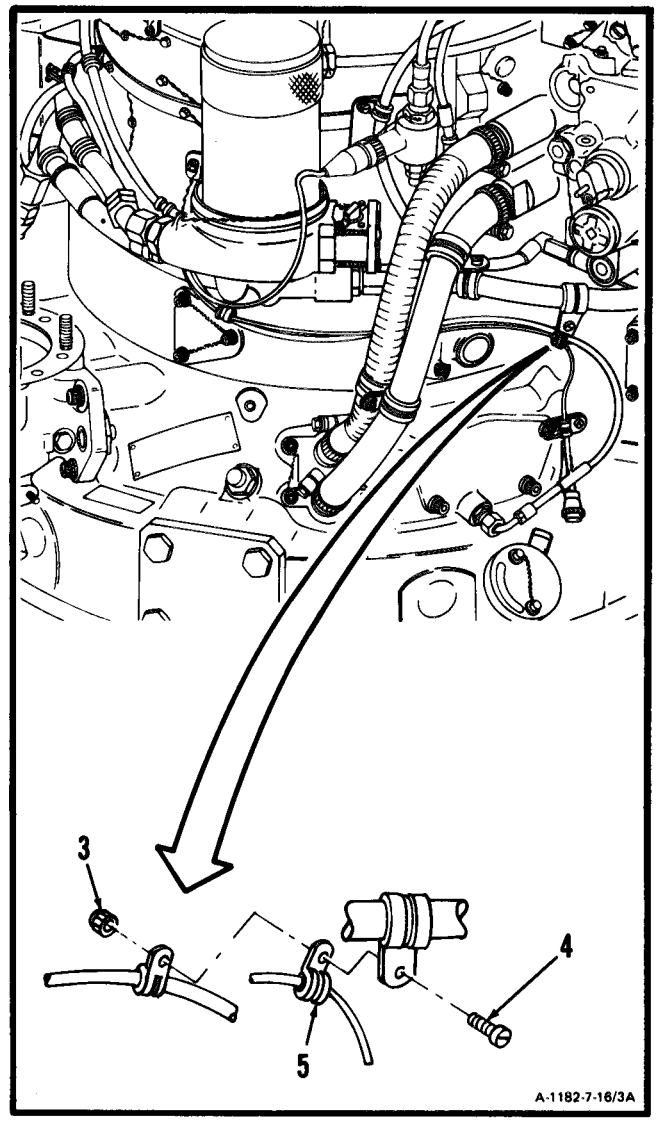
1. **Disconnect electrical connector (1)** from oil level indicator (2).



GO TO NEXT PAGE

7-16.1 REMOVE MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued) 7-16.1

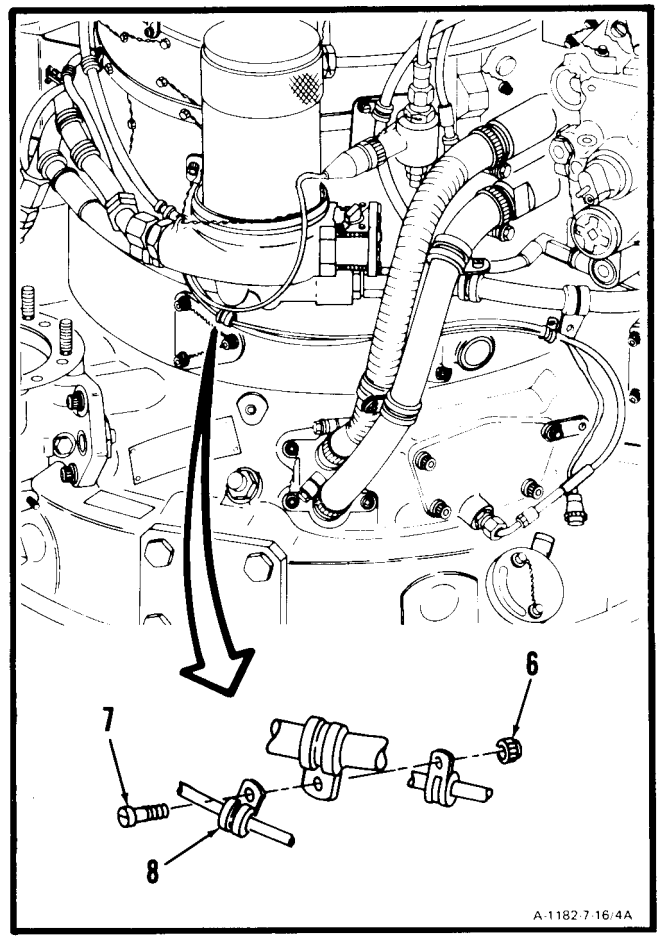
2. **Remove** nut (3), screw (4), and **clamp (5).**



GO TO NEXT PAGE

7-16.1 REMOVE MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued) 7-16.1

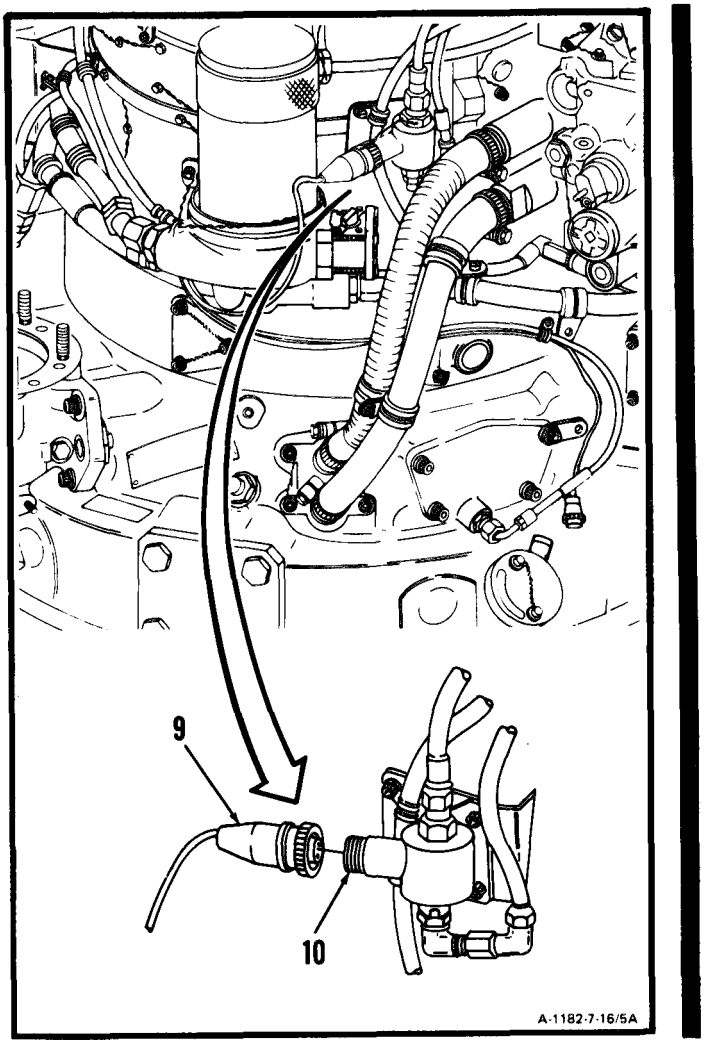
3. **Remove** nut (6), screw (7), and **clamp (8).**



GO TO NEXT PAGE

7-16.1 REMOVE MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued) 7-16.1

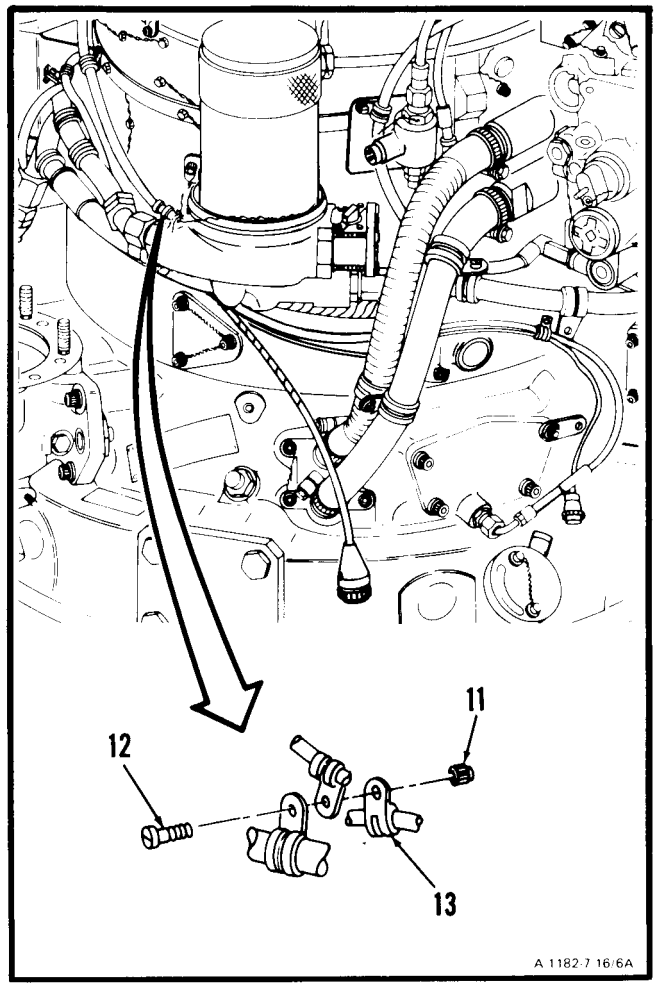
4. Remove lockwire and **disconnect electrical connector (9)** from starting fuel solenoid valve (10).



GO TO NEXT PAGE

7-16.1 REMOVE MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued) 7-16.1

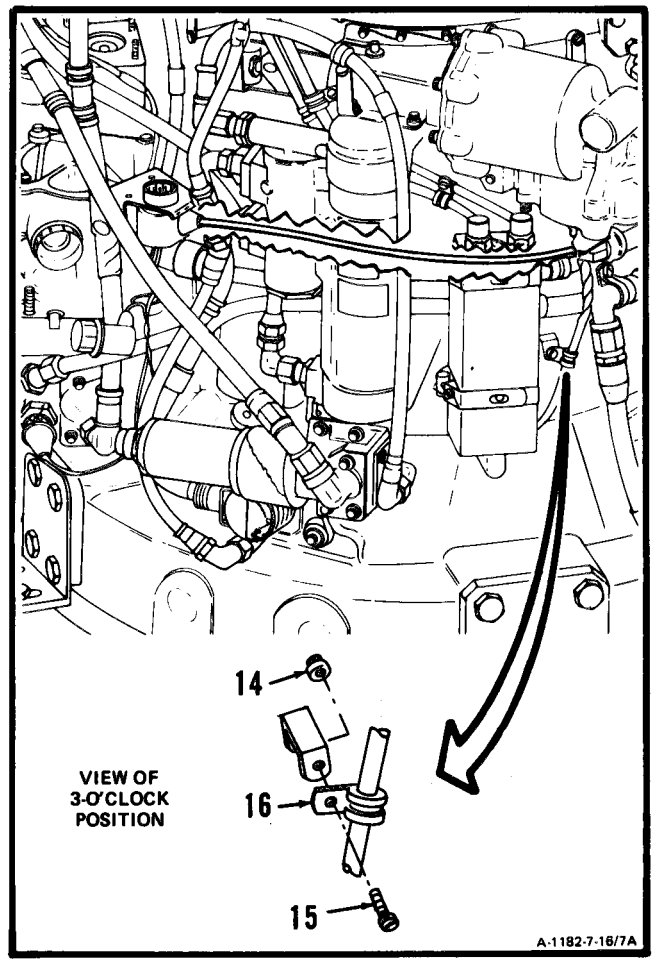
5. **Remove** nut (11), screw (12), and **clamp (13).**



GO TO NEXT PAGE

7-16.1 REMOVE MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued) 7-16.1

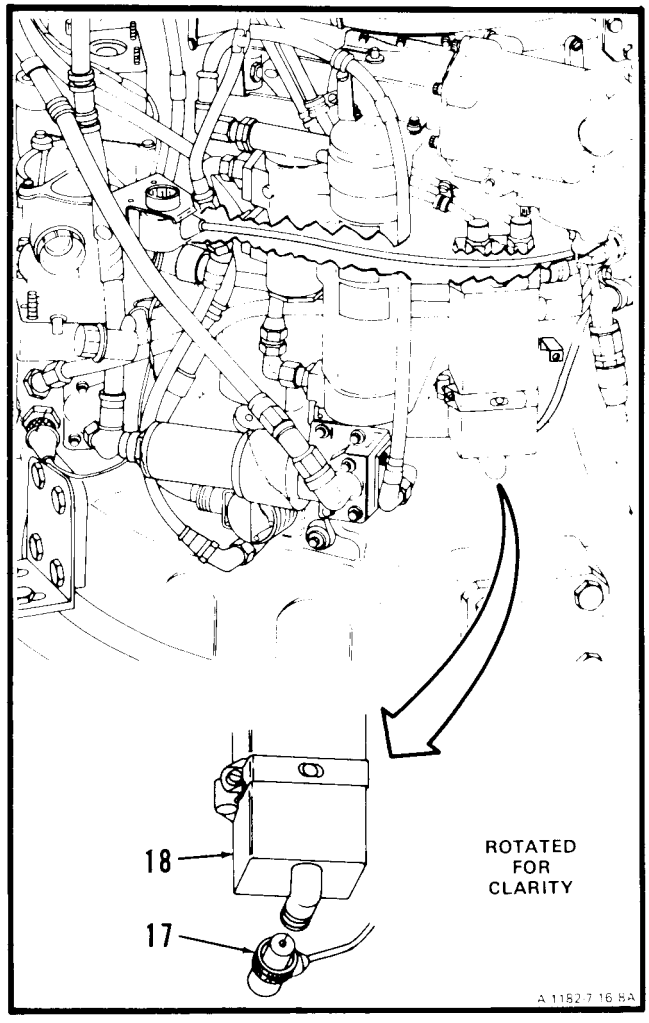
6. **Remove** nut (14), screw (15), and **clamp (16).**



GO TO NEXT PAGE

7-16.1 REMOVE MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR)(Continued) 7-16.1

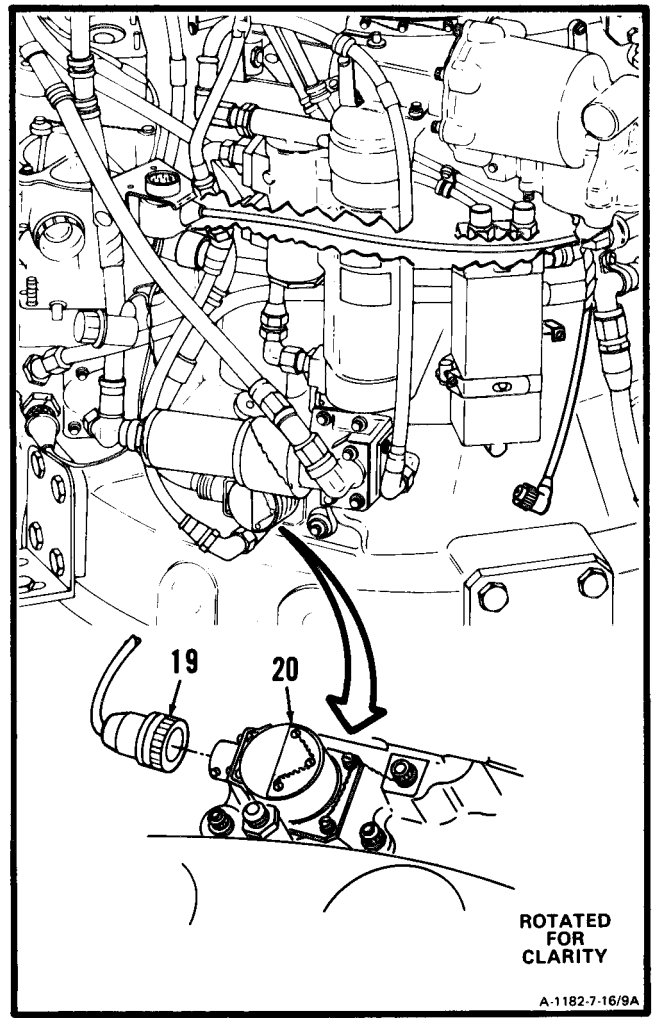
7. Remove lockwire and **disconnect electrical connector (17)** from Ignition exciter (18)



GO TO NEXT PAGE

7-16.1 REMOVE MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued) 7-16.1

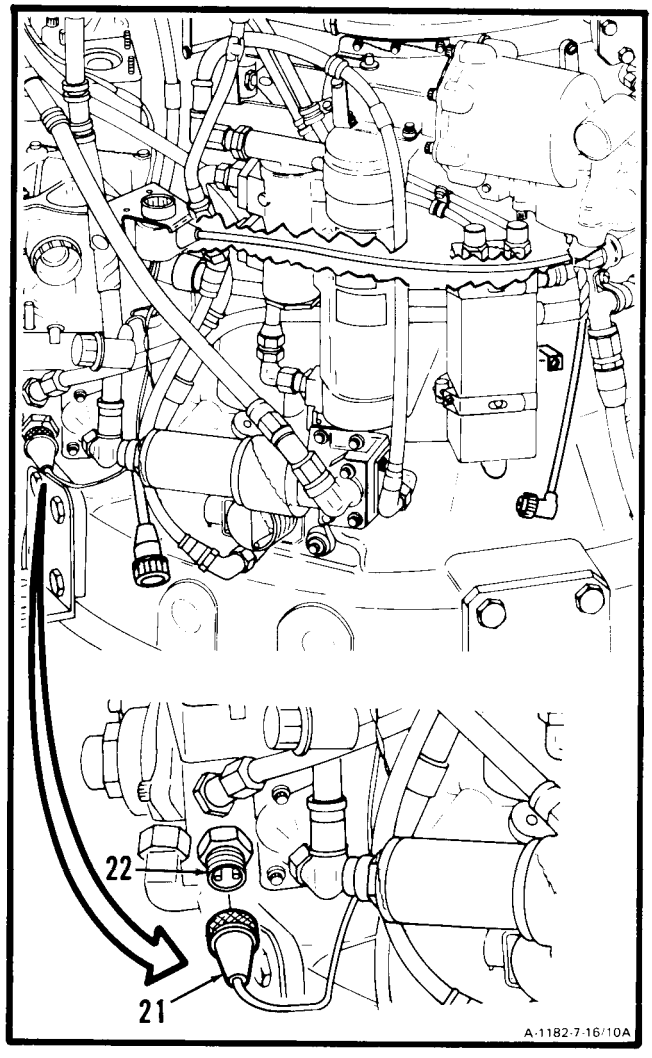
8. **Disconnect electrical connector (19)** frorn torquemeter junction box (20).



GO TO NEXT PAGE

7-16.1 REMOVE MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued) 7-16.1

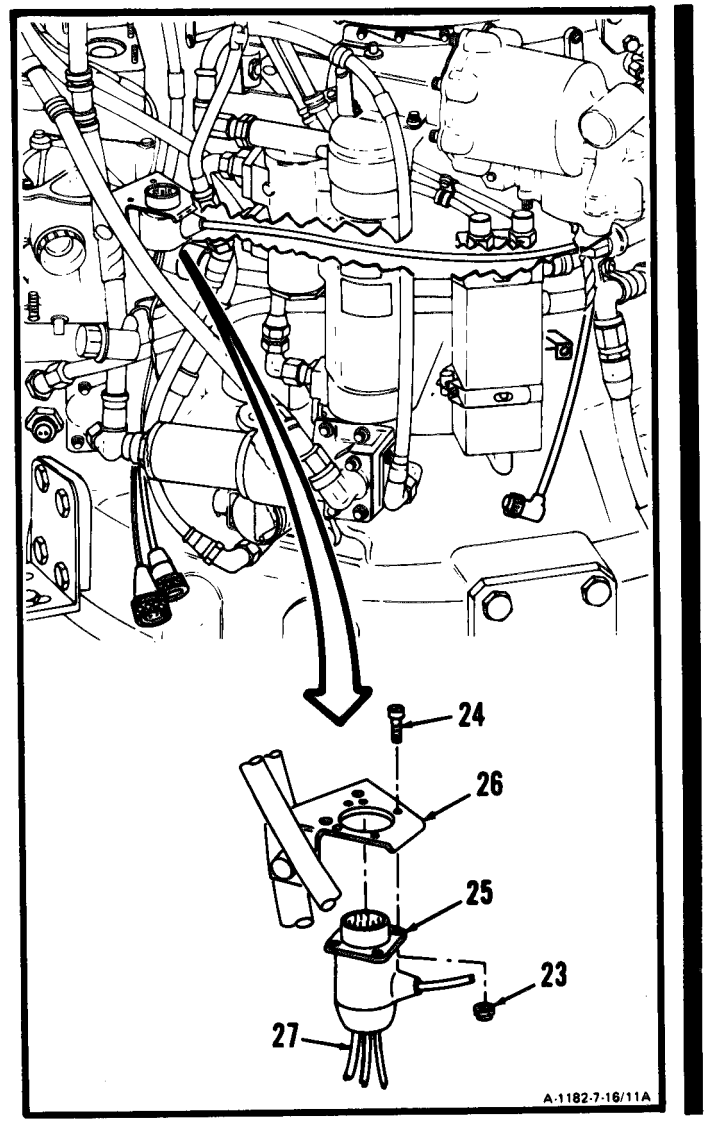
9. **Remove lockwire. Disconnect electrical connector (21)** from oil temperature transmitter (22).



GO TO NEXT PAGE

7-16.1 REMOVE MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued) 7-16.1

10. **Remove** four nuts (23), four screws (24), and **electrical connector (25)** from bracket (26). Remove main electrical cable assembly (27).

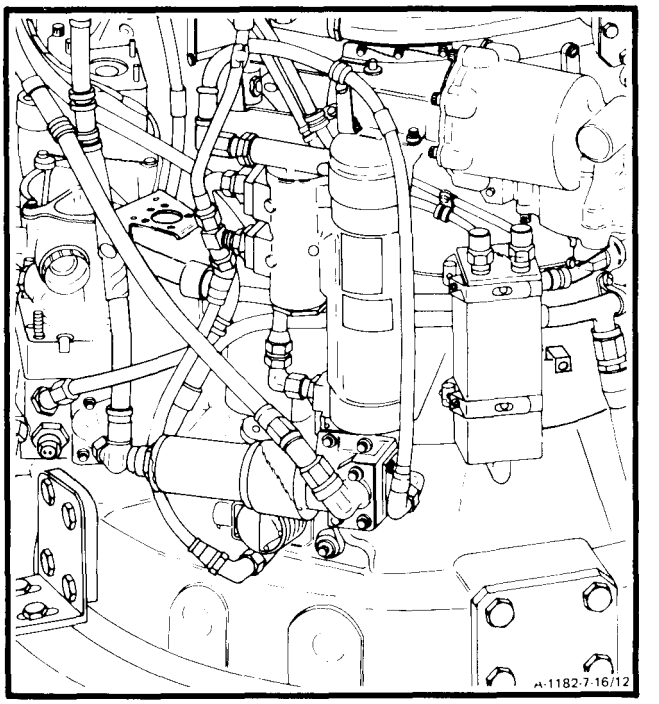


GO TO NEXT PAGE

7-16.1 REMOVE MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued) 7-16.1

FOLLOW-ON MAINTENANCE

None



END OF TASK

7-17 CLEAN MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) 7-17

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Goggles
Compressed Air Source

Materials:
Gloves (E20)
Lint-Free Cloth (E26)
Methyl Ethyl Ketone (E36)

Personnel Required:
68B10 Aircraft Powerplant Repairer

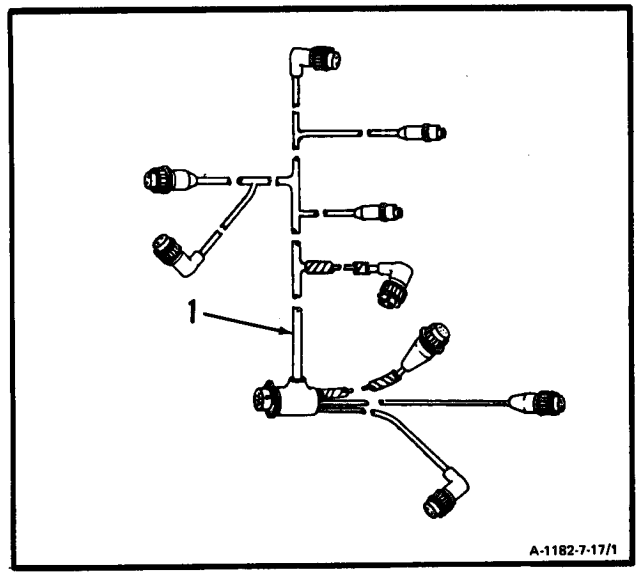
Equipment Condition:
Off Engine Task
Main Electrical Cable Assembly Removed
(Task 7-16)

General Safety Instructions:

WARNING

Methyl ethyl ketone (E36) is flammable and toxic. It can irritate skin and cause burns. Use only in well-ventilated area, away from heat and open flame. In case of contact, immediately flush skin or eyes with water for at least 15 minutes. Get medical attention for eyes.

1. Wear gloves (E20). **Clean main electrical cable assembly (1).** Use lint-free cloth (E26) dampened with methyl ethyl ketone (E36). Wipe dry using clean, dry, lint-free cloth (E26).



GO TO NEXT PAGE

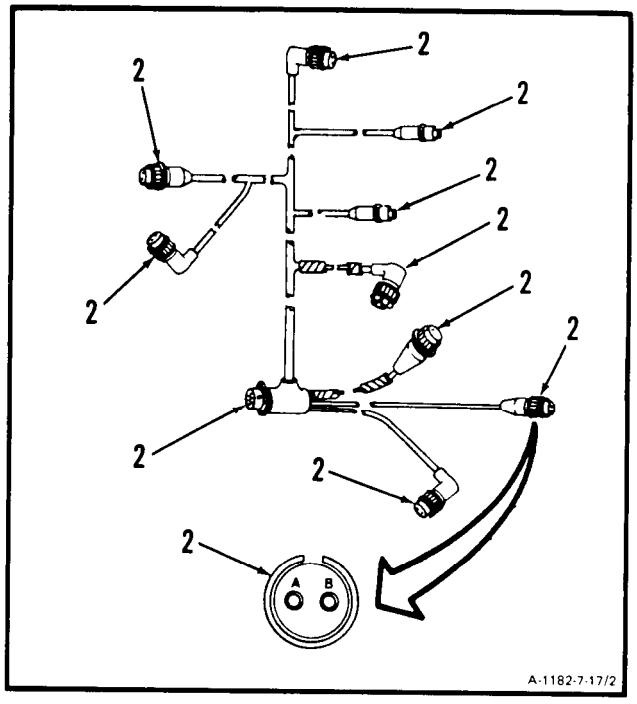
7-17 CLEAN MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) (Continued) 7-17

2. **Clean ten electrical connectors (2).** Use methyl ethyl ketone (E36) and brush.

WARNING

When using compressed air for cleaning, use approved protective equipment for eyes and face. Do not use more than 30 psig air pressure. Do not direct air toward yourself or another person. Failure to comply could result in injury to eyes or skin. In case of injury, get medical attention.

3. Wear goggles. **Blow dry electrical connectors (2).** Use clean, dry compressed air.



FOLLOW-ON MAINTENANCE:

Inspect Main Electrical Cable Assembly (Task 7-18)

END OF TASK

7-17.1 CLEAN MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) 7-17.1

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Goggles
compressed Air Source

Materials:
Gloves (E20)
Lint-Free Cloth (E26)
Methyl Ethyl Ketone (E36)

Personnel Required:
68B10 Aircraft Powerplant Repairer

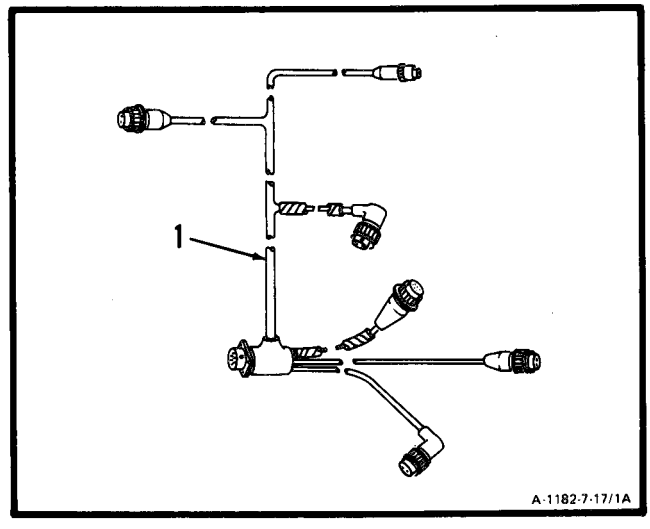
Equipment Condition:
Off Engine Task
Main Electrical Cable Assembly Removed
(Task 7-16)

General Safety Instructions:

WARNING

Methyl ethyl ketone (E36) is flammable and toxic. It can irritate skin and cause burns. Use only in well-ventilated area, away from heat and open flame. In case of contact, immediately flush skin or eyes with water for at least 15 minutes. Get medical attention for eyes.

1. Wear gloves (E20). **Clean main electrical cable assembly (1).** Use lint-free cloth (E26) dampened with methyl ethyl ketone (E36). Wipe dry using clean, dry, lint-free cloth (E26).



GO TO NEXT PAGE

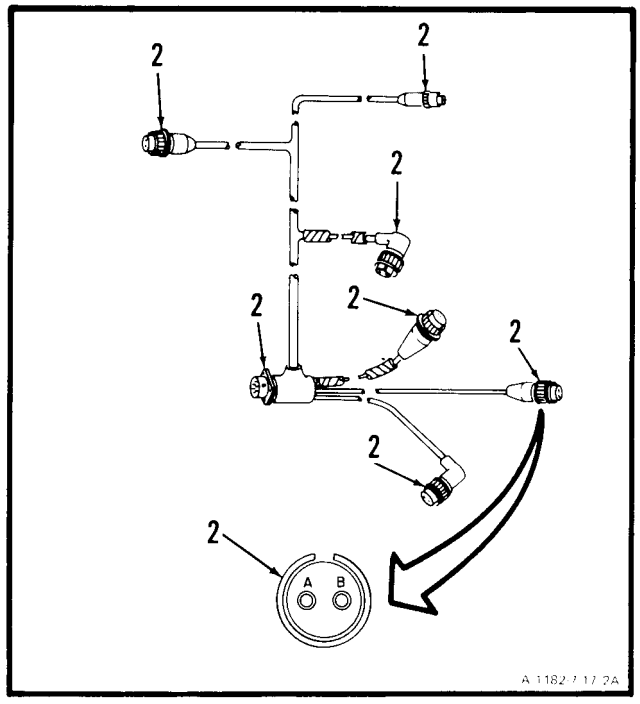
7-17.1 CLEAN MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued) 7-17.1

2. **Clean seven electrical connectors (2).** Use methyl ethyl ketone (E36) and brush.

WARNING

When using compressed air for cleaning, use approved protective equipment for eyes and face. Do not use more than 30 psig air pressure. Do not direct air toward yourself or another person. Failure to comply could result in injury to eyes or skin. In case of injury, get medical attention.

3. Wear goggles. Blow dry electrical connectors (2). Use clean, dry compressed air.



FOLLOW-ON MAINTENANCE:

Inspect Main Electrical Cable Assembly (Task 7-18.1)

END OF TASK

7-18 INSPECT MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) 7-18

INITIAL SETUP

Applicable Configurations:
All

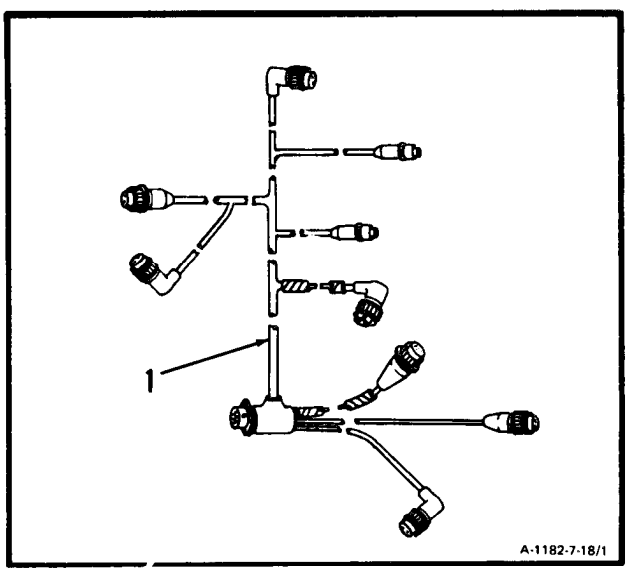
Tools:
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
None

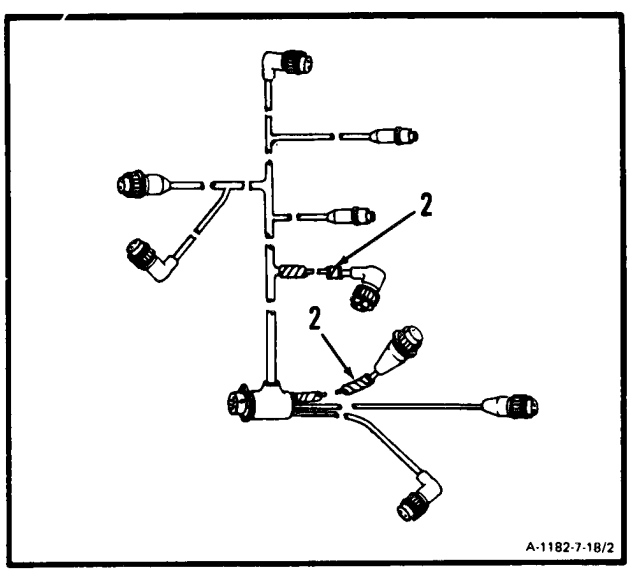
Personnel Required:
68B30 Aircraft Powerplant Inspector

Equipment Condition:
Off Engine Task

1 **Inspect main electrical cable assembly (1).** There shall be no frayed or burned insulation. There shall be no loose connections or broken wires.



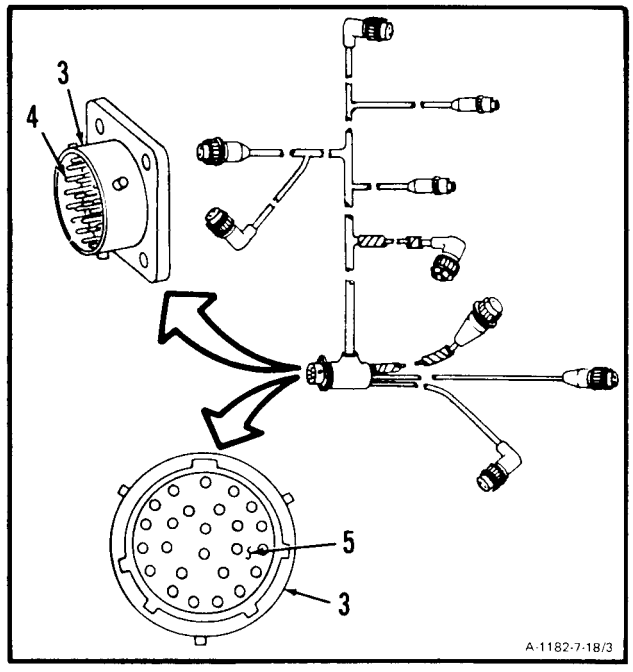
2 **Inspect sleeving (2).** There shall be no frayed or broken sleeving.



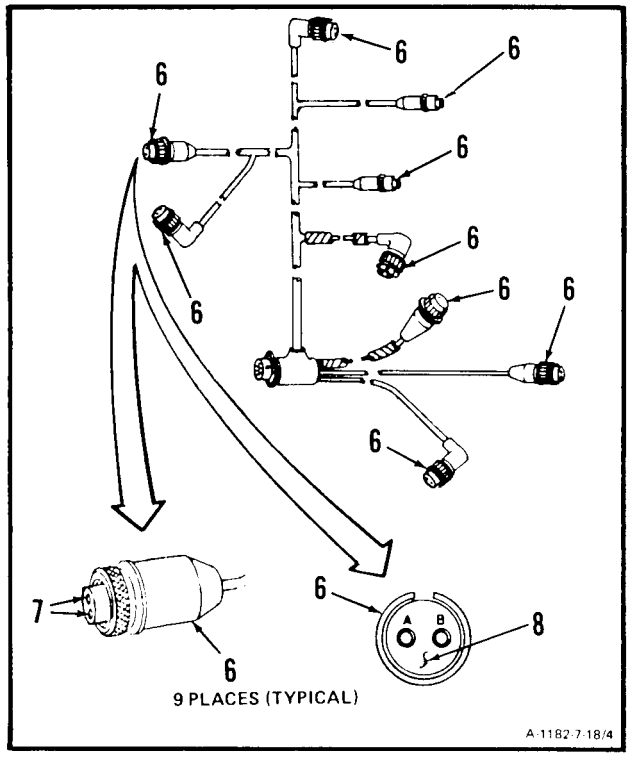
GO TO NEXT PAGE

7-18 INSPECT MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) (Continued) 7-18

3. **Inspect electrical connector (3).** There shall be no corrosion, broken or bent pins (4), or cracked insulation (5).



4. **Inspect nine electrical connectors (6).** There shall be no corrosion, broken or bent sleeves (7) or cracked insulation (8).



FOLLOW-ON MAINTENANCE:

None

END OF TASK

7-18.1 INSPECT MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) 7-18.1

INITIAL SETUP

Applicable Configurations:
All

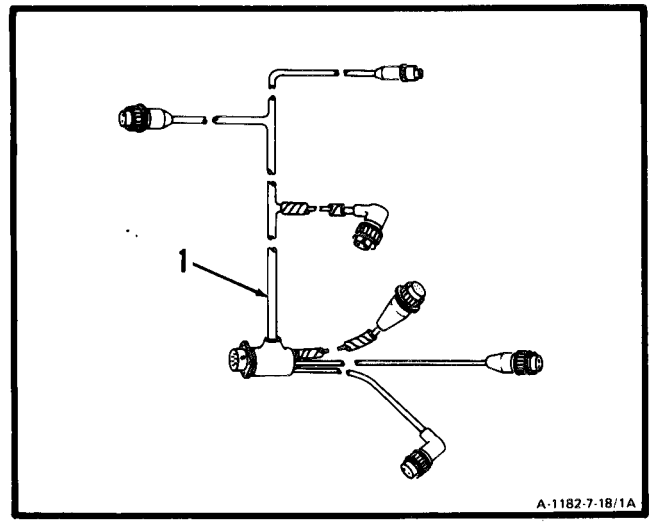
Tools:
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
None

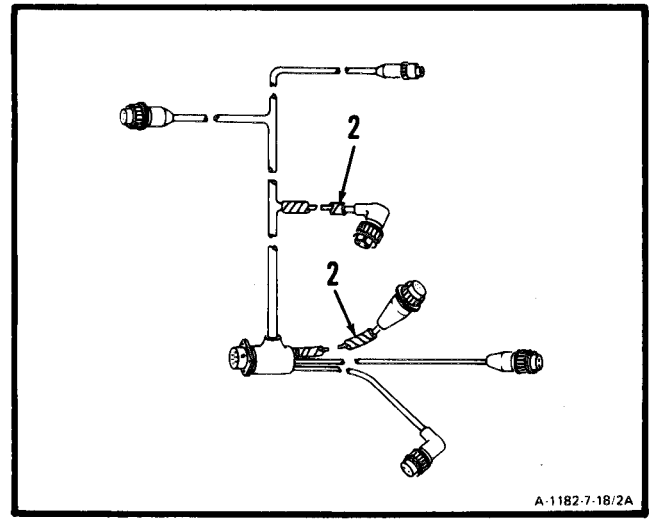
Personnel Required:
68B30 Aircraft Powerplant Inspector

Equipment Condition:
Off Engine Task

1. **Inspect main electrical cable assembly (1).** There shall be no frayed or burned insulation. There shall be no loose connections or broker wires.



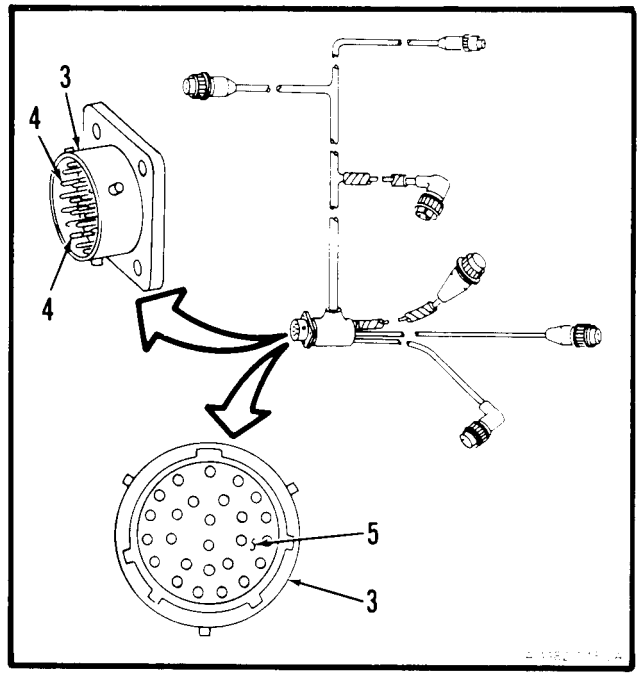
2. **Inspect sleeving (2).** There shall be no frayed or broken sleeving.



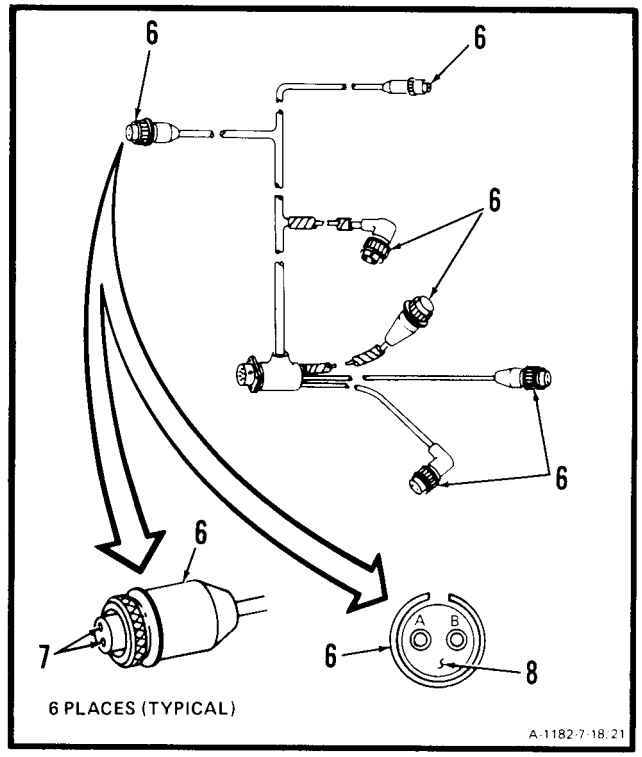
GO TO NEXT PAGE

7-18.1 INSPECT MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued) 7-18.1

3. **Inspect electrical connector (3).** There shall be no corrosion, broken or bent pins (4), or cracked insulation (5).



4. **Inspect six electrical connectors (6).** There shall be no corrosion, broken or bent sleeves (7) or cracked insulation (8).



FOLLOW-ON MAINTENANCE:

None

END OF TASK

7-19 REPAIR MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) 7-19

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114
Hand File Set

Materials:
Crocus Cloth (E15)

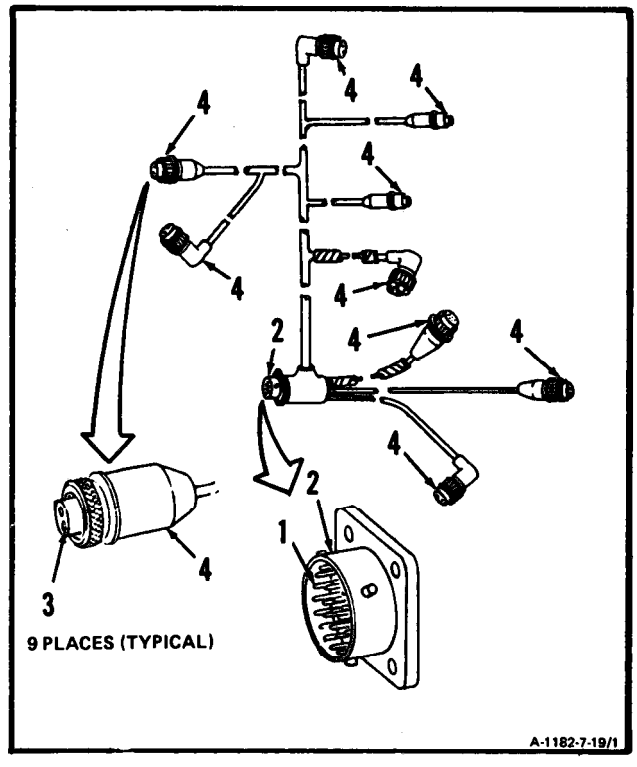
Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

Equipment Condition:
Off Engine Task

NOTE

This repair is allowed provided it does not cause pin to break or crack.

1. **Straighten bent pin (1)** of electrical connector (2). Use long nose pliers to gently move pin (1) until it is straight.
2. **Remove corrosion from pin (1)** of electrical connector (2). Use crocus cloth (E15).
3. **Remove corrosion from sleeve (3)** of electrical connectors (4). Use round hand file.



INSPECT

FOLLOW-ON MAINTENANCE:

None

END OF TASK

7-19.1 REPAIR MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) 7-19.1

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114
Hand File Set

Materials:
Crocus Cloth (E15)

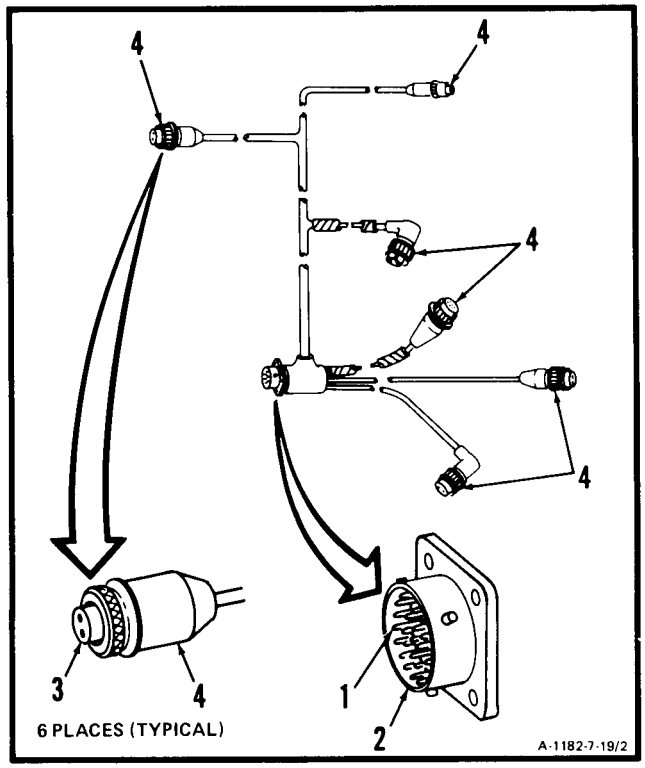
Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

Equipment Condition:
Off Engine Task

NOTE

This repair is allowed provided it does not cause pin to break or crack.

1. **Straighten bent pin (1)** of electrical connector (2). Use long nose pliers to gently move pin (1) until it is straight.
2. **Remove corrosion from pin (1)** of electrical connector (2). Use crocus cloth (E15).
3. **Remove corrosion from sleeve (3)** of electrical connectors (4). Use round hand file.



INSPECT

FOLLOW-ON MAINTENANCE:

None

END OF TASK

7-20 TEST MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) 7-20

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Multimeter

Materials:
None

Personnel Required:
68B10 Aircraft Powerplant Repairer

1. Using multimeter, **measure continuity and insulation resistance of electrical cable assembly (1)** as follows:

   a. Set multimeter range switch to R x 1.

   b. Touch red probe (2) to electrical connector (3), pin A (4).

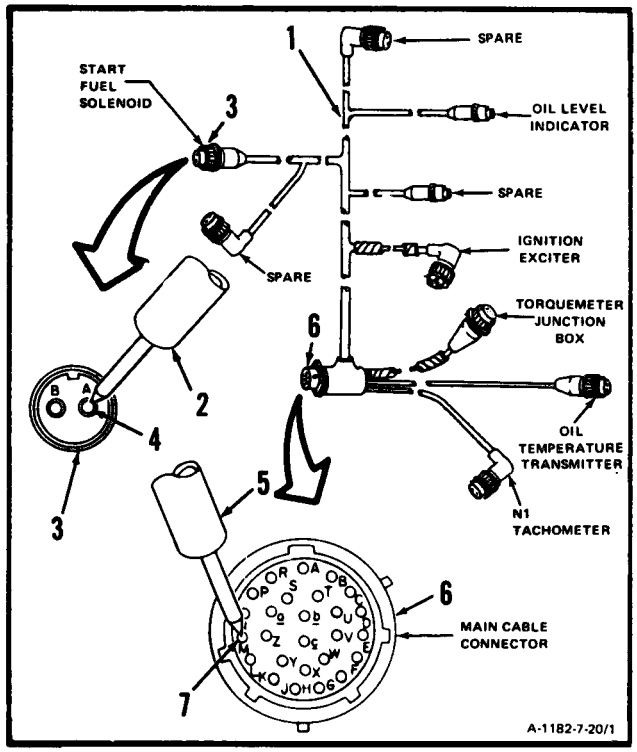
   c. Touch black probe (5) to electrical connector (6), pin M (7).

   d. Meter shall indicate **zero ohms.**

   e. Set multimeter range switch to R x 1000.

   f. Touch black probe (5) to all other pins on electrical connector (6).

   g. Meter shall indicate **1000 ohms** minimum.



GO TO NEXT PAGE

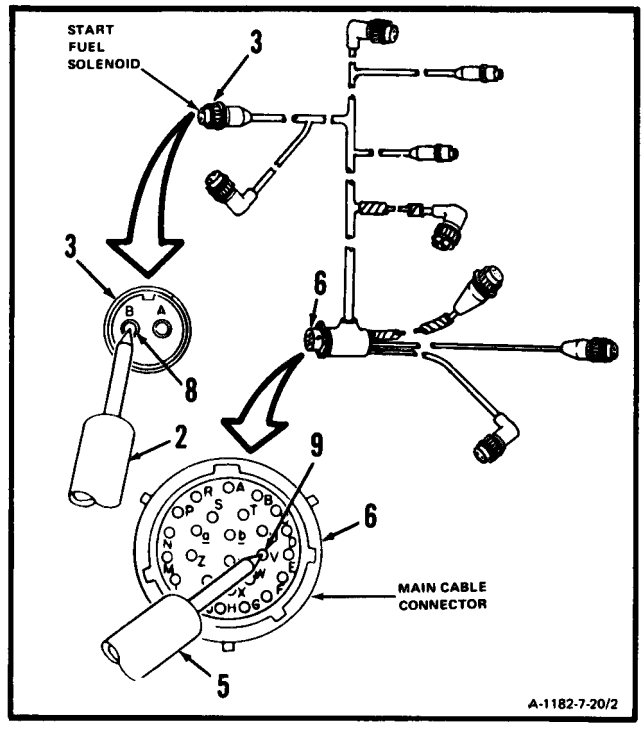
7-20 TEST MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) (Continued) 7-20

h. Set multimeter range switch to R x 1.

i. Touch red probe (2) to electrical connector (3), pin B (8).

j. Touch black probe (5) to electrical connector (6), pin V (9).

k. Meter shall indicate **zero ohms.**



l. Set multimeter range switch to R x 1.

m. Touch red probe (2) to electrical connector (10), center pin(11).

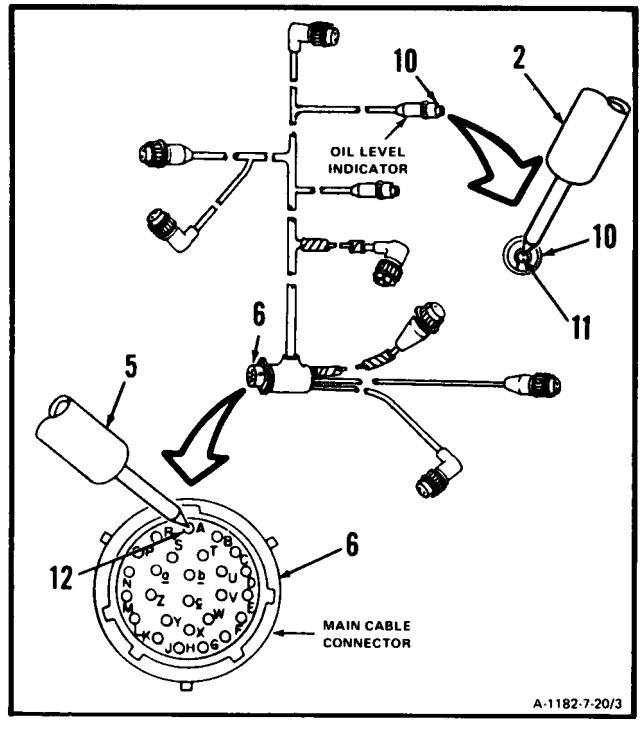
n. Touch black probe (5) to electrical connector (6), pin A (12).

o. Meter shall indicate **zero ohms**

p. Set multimeter range switch to R x 1000

q. Touch black probe (5) to all other pins on electrical connector (6).

r. Meter shall indicate **1000 ohms** minimum.



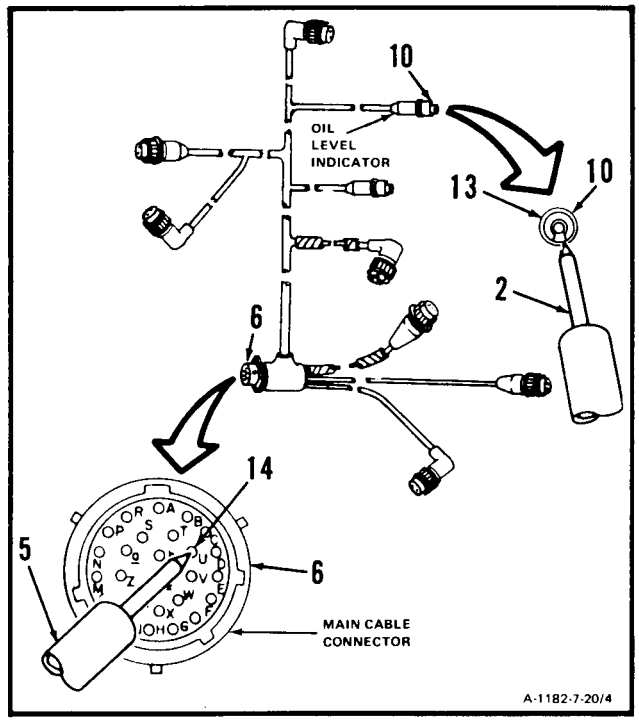
GO TO NEXT PAGE

7-20 TEST MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) (Continued) 7-20

s. Touch red probe (2) to electrical connector (10), shell (13).

t. Touch black probe (5) to electrical connector (6), pin U (14).

u. Meter shall indicate **zero ohms.**



v. Set multi meter range switch to R x 1,

w. Touch red probe (2) to electrical connector (15), center pin (16).

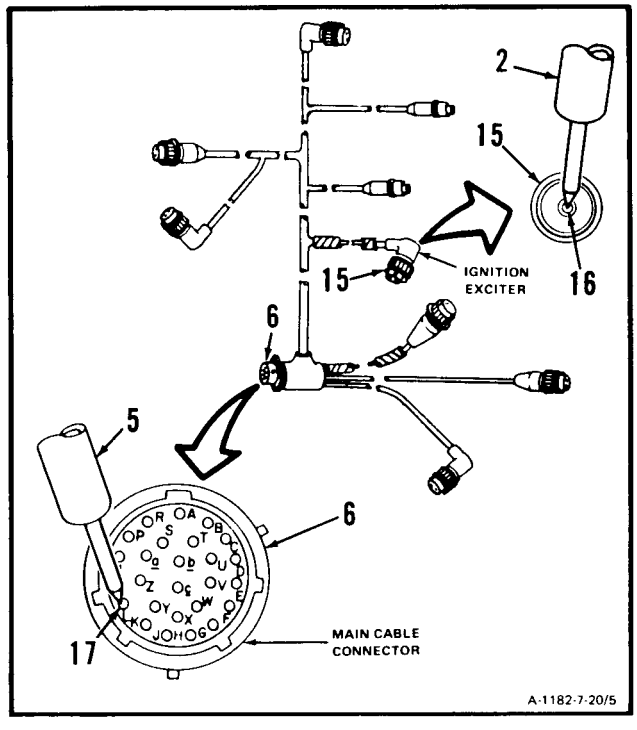
x. Touch black probe (5) to electrical connector (6), pin L (17).

y. Meter shall indicate **zero ohms,**

z. Set multimeter range switch to R x 1000.

aa. Touch black probe (5) to all other pins on electrical connector (6).

ab. Meter shall indicate **1000 ohms** minimum.



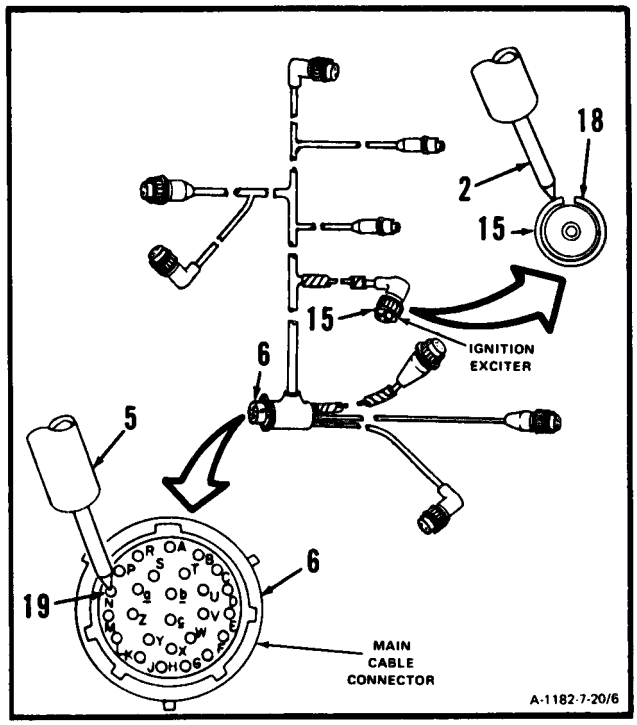
GO TO NEXT PAGE

7-20 TEST MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) (Continued) 7-20

ac. Touch red probe (2) to electrical connector (15), shell (18).

ad. Touch black probe (5) to electrical connector (6), pin N (19).

ae. Meter shall indicate **zero ohms.**



af. Set multimeter range switch to R x 1.

ag. Touch red probe (2) to electrical connector (20), pin A (21).

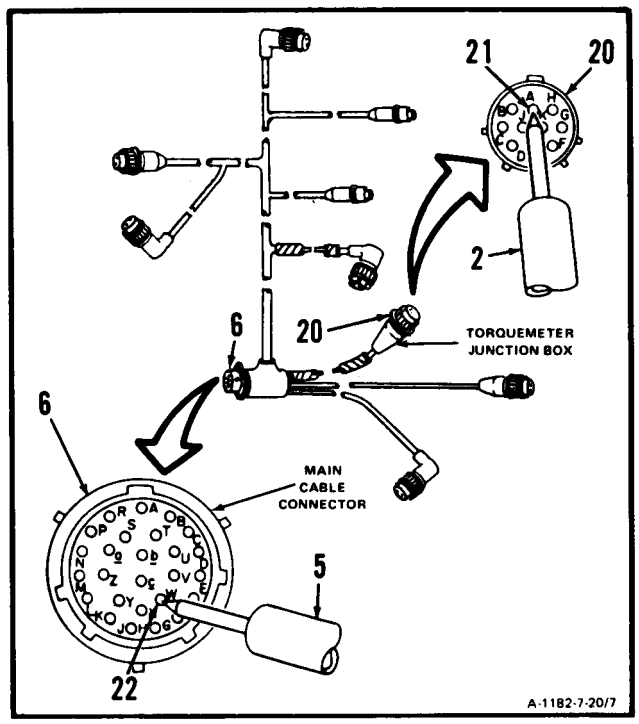
ah. Touch black probe (5) to electrical connector (6), pin W (22).

ai. Meter shall indicate **zero ohms.**

aj. Set multimeter range switch to R x 1000.

ak. Touch black probe (5) to all other pins on electrical connector (6).

al. Meter shall indicate **1000 ohms** minimum.



GO TO NEXT PAGE

7-20 TEST MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) (Continued) 7-20

am. Set multimeter range switch to R x 1.

an. Touch red probe (2) to electrical connector (20), pin B (23).

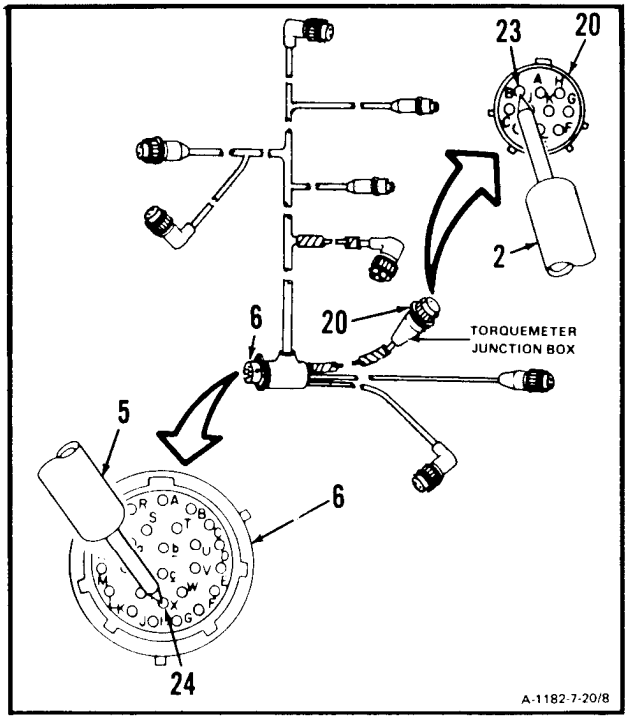
ao. Touch black probe (5) to electrical connector (6), pin X (24).

ap. Meter shall indicate **zero ohms.**

aq. Set multimeter range switch to R x 1000.

a r. Touch black probe (5) to all other pins on electrical connector (6).

as. Meter shall indlcate **1000 ohms** minimum.



at. Set multimeter range switch to R x 1.

au. Touch red probe (2) to electrical connector (20), pin C (25).

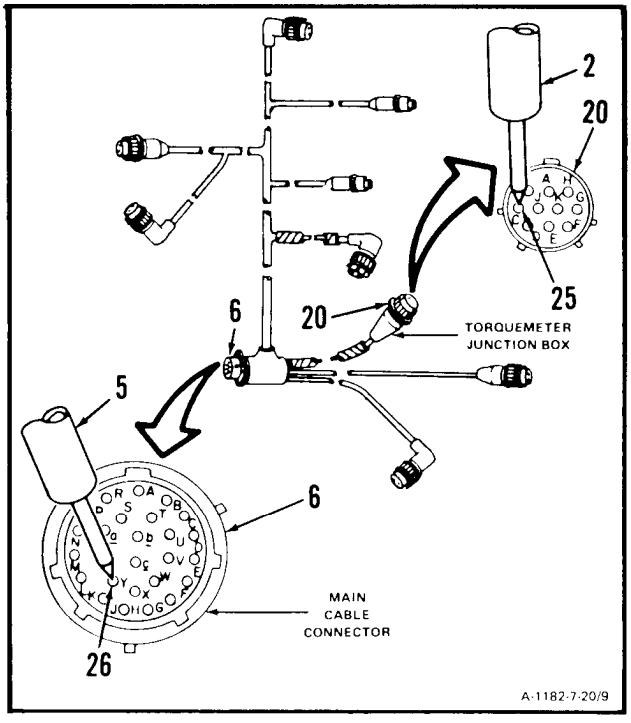
av. Touch black probe (5) to electrical connector (6), pin Y (26).

aw. Meter shall Indicate **zero ohms.**

ax. Set multimeter range switch to R x 1000.

ay. Touch black probe (5) to all ether pins on electrical connector (6).

az. Meter shall lndlcate **1000 ohms** minimum.



GO TO NEXT PAGE

7-20 TEST MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) (Continued) 7-20

ba. Touch red probe (2) to electrical connector (20), pin D (27).

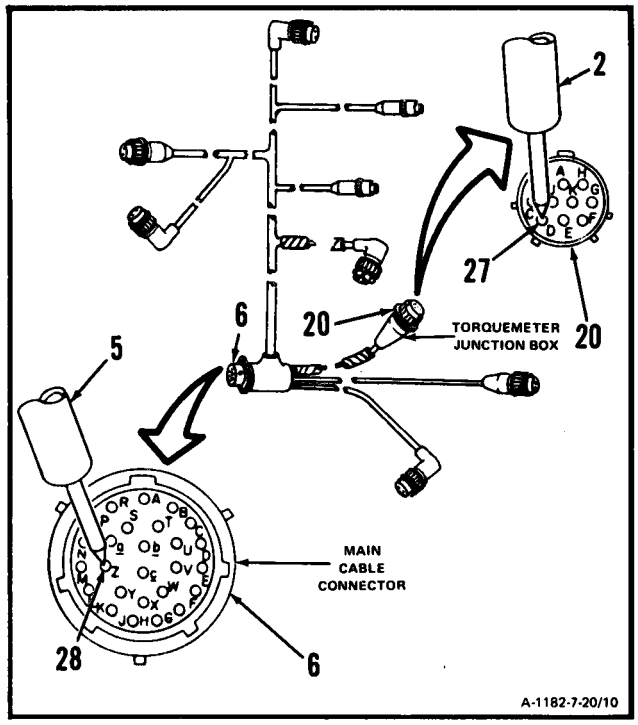
bb. Touch black probe (5) to electrical connector (6), pin Z (28).

bc. Meter shall indicate **zero ohms.**

bd. Set multimeter range switch to R x 1000.

be. Touch black probe (5) to all other pins on electrical connector (6).

bf. Meter shall indicate **1000 ohms** minimum.



bg. Set multimeter range switch to R x 1.

bh. Touch red probe (2) to electrical connector (20), pin E (29).

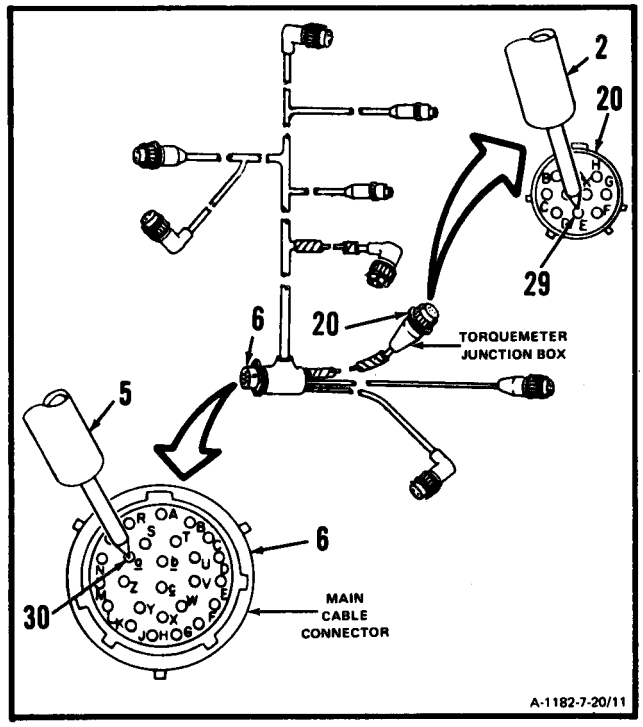
bi. Touch black probe (5) to electrical connector (6), pin a (30).

bj. Meter shall indicate **zero ohms.**

bk. Set multimeter range switch to R x 1000

bl. Touch black probe (5) to all other pins on electrical connector (6).

bm. Meter shall indicate **1000 ohms** minimum.



GO TO NEXT PAGE

7-20 TEST MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) (Continued) 7-20

bn. Set multimeter range switch to R x 1.

bo. Touch red probe (2) to electrical connector (20), pin F (31).

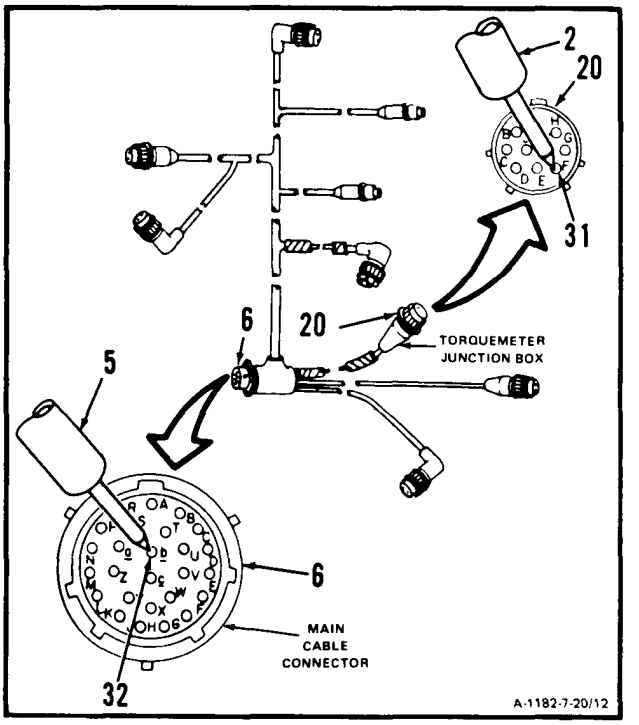
bp. Touch black probe (5) to electrical connector (6), pin b (32).

bq. Meter shall indicate **zero ohms.**

br. Set multimeter range switch to R x 1000.

bs. Touch black probe (5) to all other pins on electrical connector (6).

bt. Meter shall indicate **1000 ohms** minimum.



bu. Set multimeter range switch to R x 1.

bv. Touch red probe (2) to electrical connector (33), pin A (34).

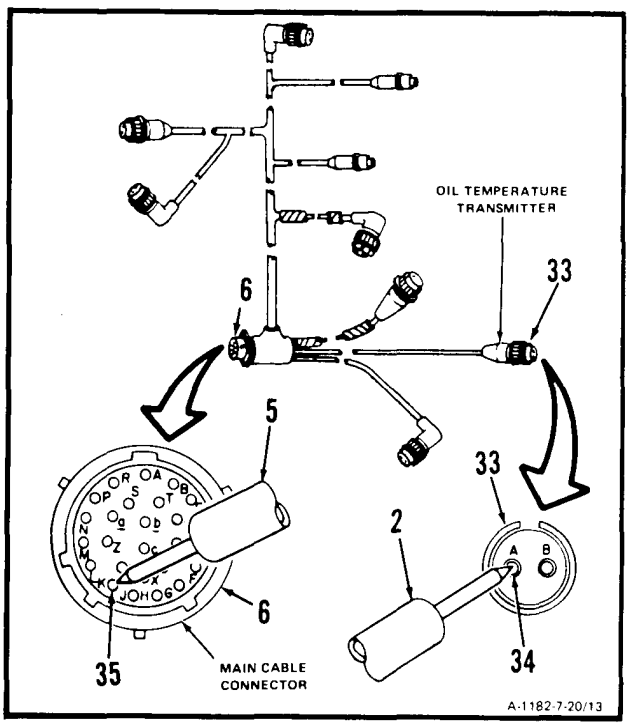
bw. Touch black probe (5) to electrical connector (6), pin K (35).

bx. Meter shall indicate **zero ohms.**

by. Set multimeter range switch to R x 1000.

bz. Touch black probe (5) to all other pins on electrical connector (6).

ca. Meter shall indicate **1000 ohms** minimum.



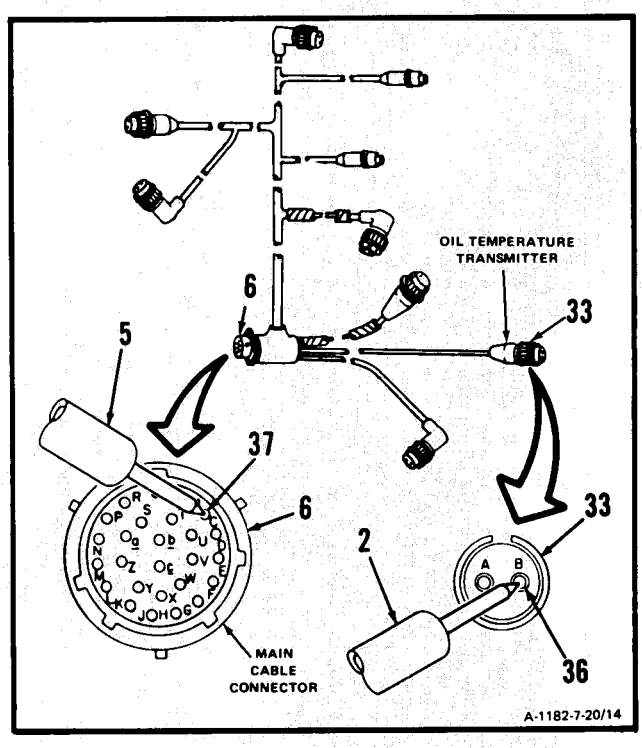
GO TO NEXT PA GE

7-20 TEST MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) (Continued) 7-20

cb. Touch red probe (2) to electrical connector (33), pin B (36).

cc. Touch black probe (5) to electrical connector (6), pin C (37).

cd. Meter shall indicate **zero ohms.**



ce. Set multimeter range switch to R x 1.

cf. Touch red probe (2) to electrical connector (3B), pin A (39).

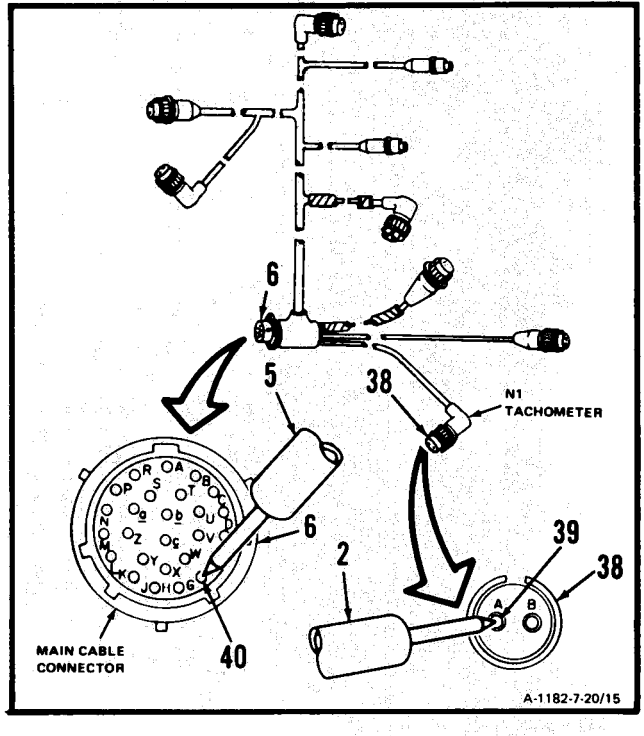
cg. Touch black probe (5) to electrical connector (6), pin G (40).

ch. Meter shall indicate **zero ohms.**

ci. Set multimeter range switch to R x 1000.

cj. Touch black probe (5) to all other pins on electrical connector (6).

ck. Meter shall indicate **1000 ohms** minimum.



GO TO NEXT PAGE

7-20 TEST MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) (Continued) 7-20

cl. Set multimeter range switch to R x 1.

cm. Touch red probe (2) to electrical connector (38), pin B (41).

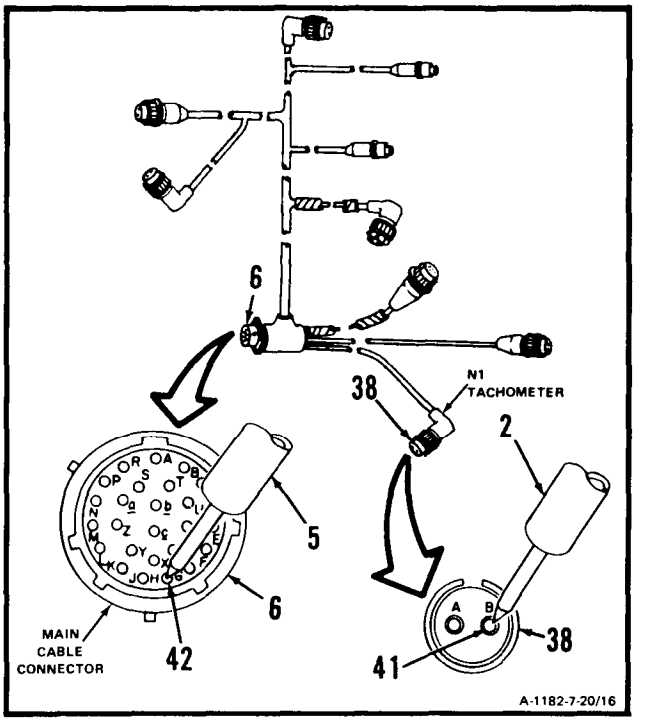
cn. Touch black probe (5) to electrical connector (6), pin H (42).

co. Meter shall indicate **zero ohms.**

cp. Set multimeter range switch to R x 1000.

cq. Touch black probe (5) to all other pins on electrical connector (6).

cr. Meter shall indicate **1000 ohms** minimum.



cs. Set multimeter range switch to R x 1

ct. Touch red probe (2) to electrical connector (38), shell (43).

cu. Touch black probe (5) to electrical connector (6), pin J (44).

cv. Meter shall indicate **zero ohms.**

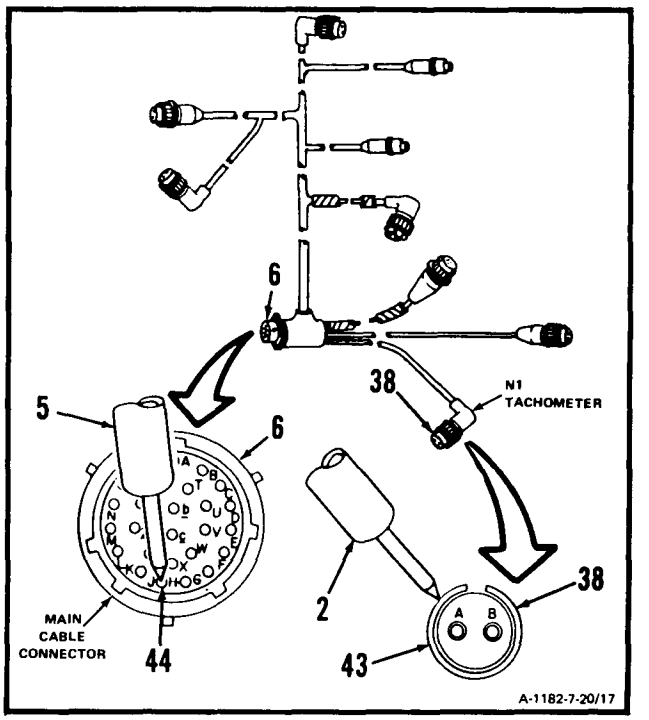
cw. Set multimeter range switch to R x 1000.

cx. Touch black probe (5) to all other pins on electrical connector (6).

cy. Meter shall indicate **1000 ohms** minimum.

NOTE

It is not necessary to test three remaining electrical connectors, They will not be used.



GO TO NEXT PA GE

7-20 TEST MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) (Continued) 7-20

FOLLOW-ON MAINTENANCE:

None

END OF TASK

7-20.1 TEST MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) 7-20.1

INITIAL SETUP

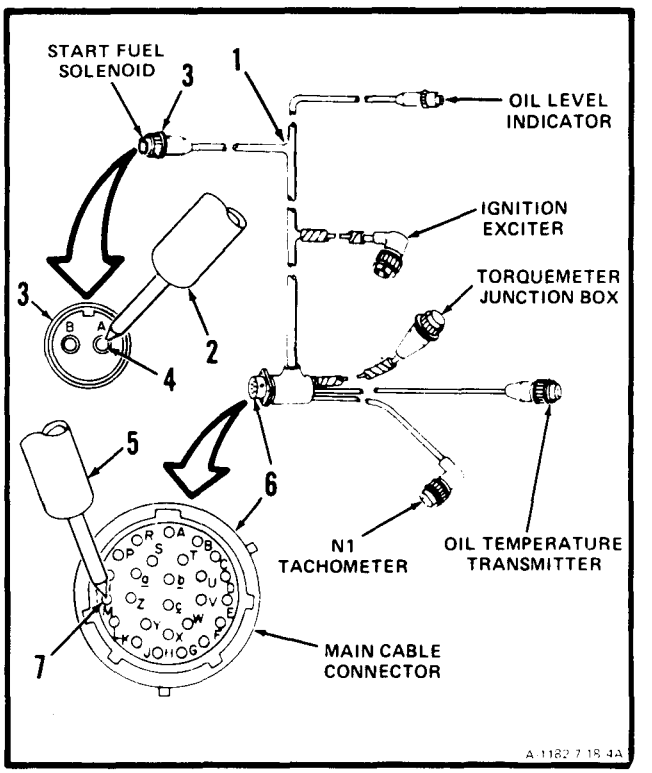
Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Multimeter

Materials:
None

Personnel Required:
68B10 Aircraft Powerplant Repairer

1. Using multimeter, measure continuity and insulation resistance of electrical cable assembly (1) as follows:
   a. Set multimeter range switch to R x 1.
   b. Touch red probe (2) to electrical connector (3), pin A (4).
   c. Touch black probe (5) to electrical connector (6), pin M (7).
   d. Meter shall indicate **zero ohms.**
   e. Set multimeter range switch to R x 1000.
   f. Touch black probe (5) to all other pins on electrical connector (6).
   g. Meter shall indicate **1000 ohms** minimum.



GO TO NEXT PAGE

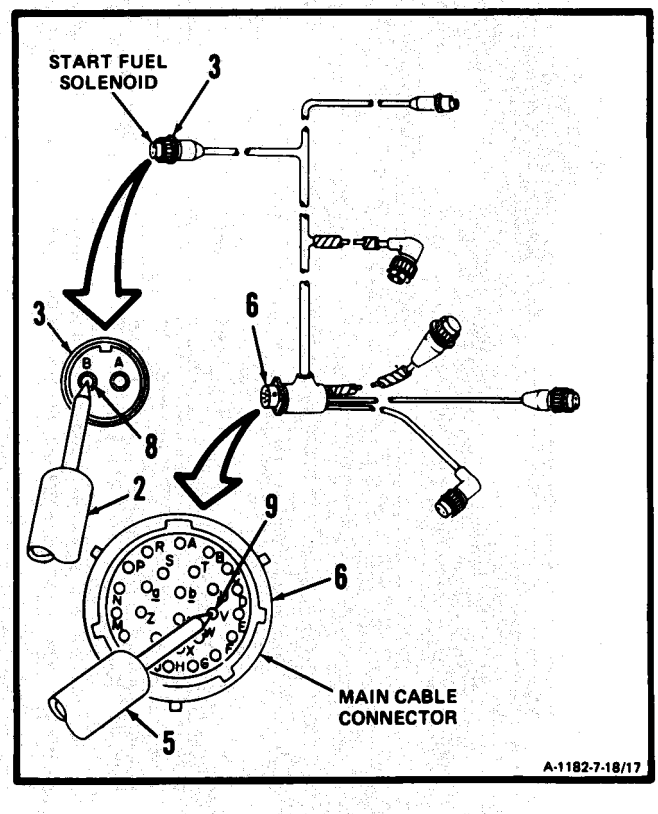
7-20.1 TEST MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued)

h. Set multimeter range switch to R x 1.

i. Touch red probe (2) to electrical connector (3), pin B (8).

j. Touch black probe (5) to electrical connector (6), pin V (9).

k. Meter shall indicate **zero ohms.**



l. Set multimeter range switch to R x 1.

m. Touch red probe (2) to electrical connector (10), center pin (11).

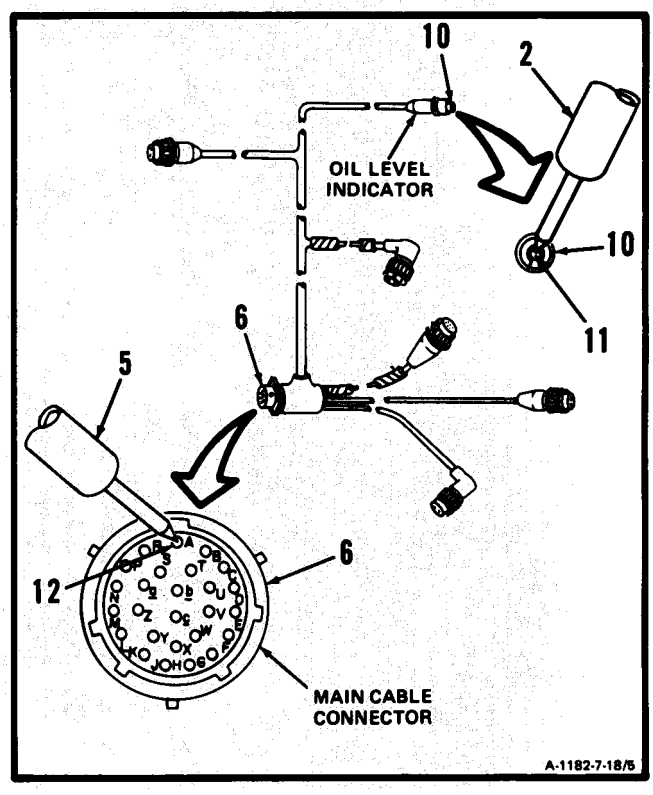
n. Touch black probe (5) to electrical connector (6), pin A (12).

o. Meter shall indicate **zero ohms.**

p. Set multimeter range switch to R x 1000.

q. Touch black probe (5) to all other pins on electrical connector (6).

r. Meter shall indicate **1000 ohms** minimum.



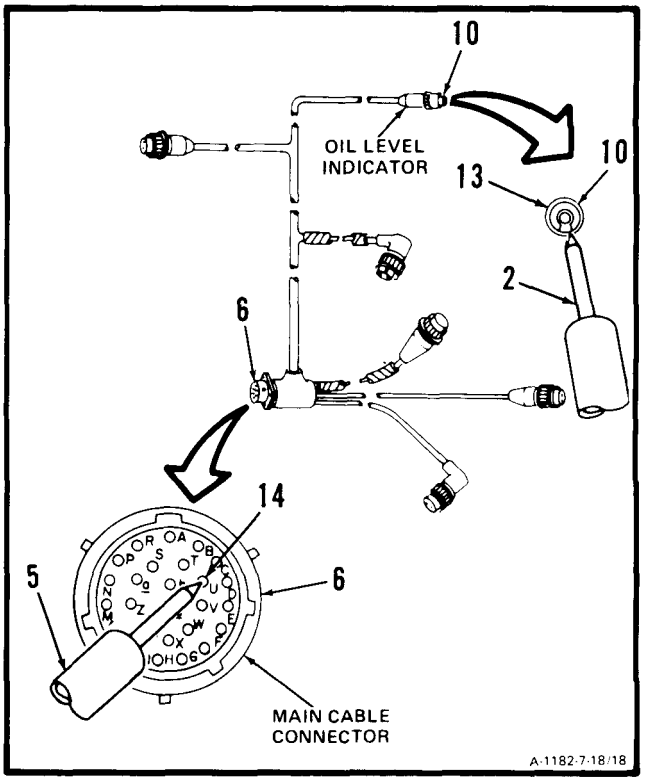
GO TO NEXT PAGE

7-20.1 TEST MAiN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR)(Continued) 7-20.1

s. Touch red probe (2) to electrical connector (10), shell (13).

t. Touch black probe (5) to electrical connector (6), pin U (14).

u. Meter shall indicate **zero ohms.**



v. Set multimeter range switch to R x 1.

w. Touch red probe (2) to electrical connector (15), center pin (16).

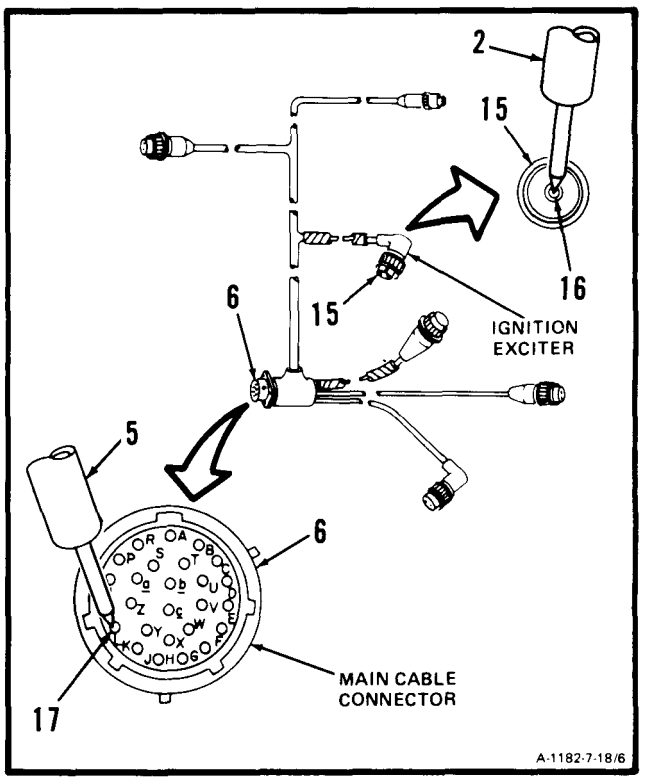
x. Touch black probe (5) to electrical connector (6), pin L (17).

y. Meter shall indicate **zero ohms.**

z. Set multimeter range switch to R x 1000.

aa. Touch black probe (5) to all other pins on electrical connector (6).

ab. Meter shall indicate **1000 ohms** minimum.



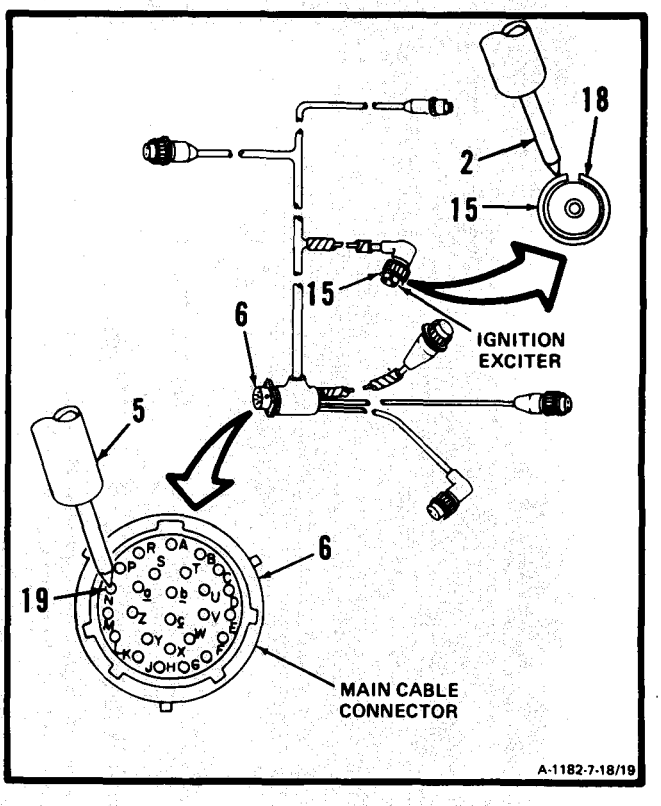
GO TO NEXT PAGE

7-20.1 TEST MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued) 7-20.1

ac. Touch red probe (2) to electrical connector (15), shell (18).

ad. Touch black probe (5) to electrical connector (6), pin N (19).

ae. Meter shall indicate **zero ohms.**



af. Set multimeter range switch to R x 1.

ag. Touch red probe (2) to electrical connector (20), pin A (21).

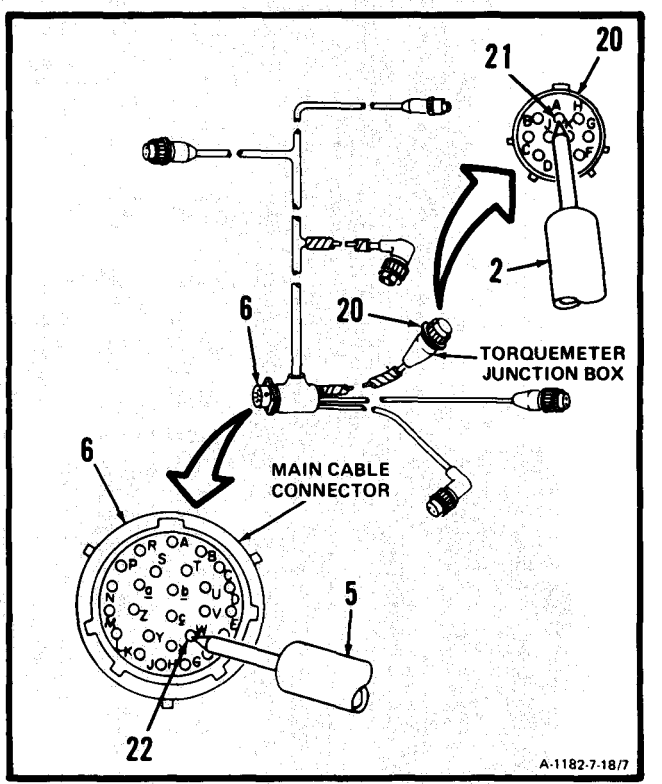
ah. Touch black probe (5) to electrical connector (6), pin W (22).

ai. Meter shall indicate **zero ohms.**

aj. Set multimeter range switch to R x 1000.

ak. Touch black probe (5) to all other pins on electrical connector (6).

al. Meter shall indicate **1000 ohms** minimum.



GO TO NEXT PAGE

7-20.1 TEST MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued) 7-20.1

am. Set multimeter range switch to R x 1.

an. Touch red probe (2) to electrical connector (20), pin B (23).

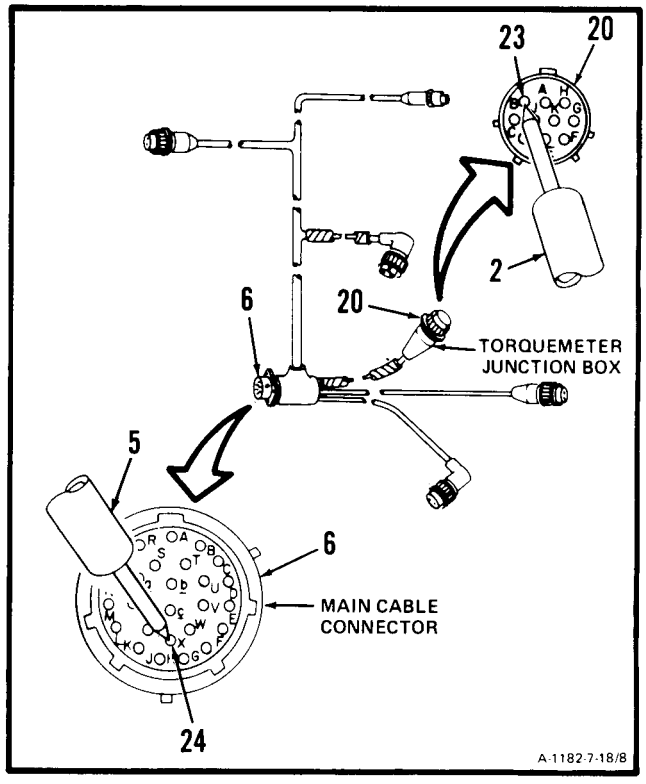
ao. Touch black probe (5) to electrical connector (6), pin X (24).

ap. Meter shall indicate **zero ohms.**

aq. Set multimeter range switch to R x 1000.

ar. Touch black probe (5) to all other pins on electrical connector (6).

as. Meter shall indicate **1000 ohms** minimum.



at. Set multimeter range switch to R x 1.

au. Touch red probe (2) to electrical connector (20), pin C (25).

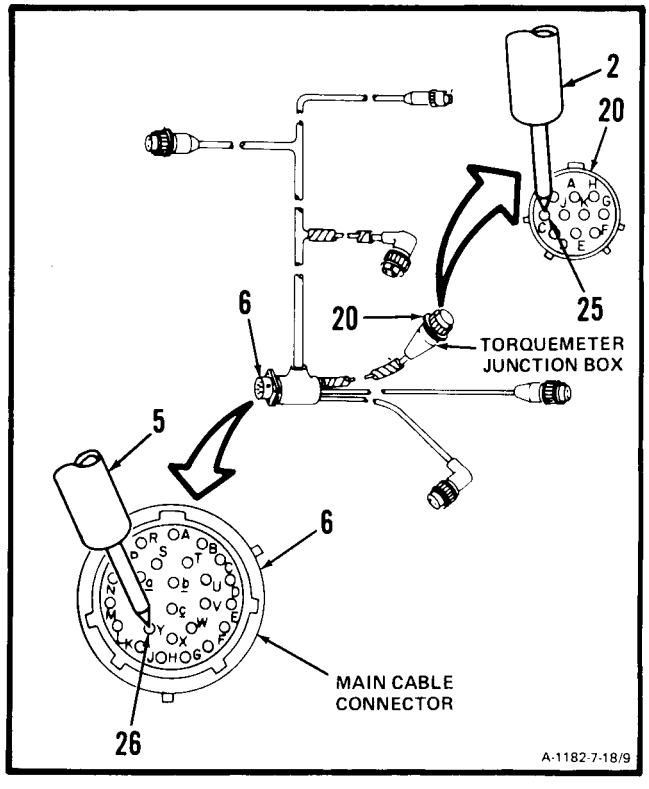
av. Touch black probe (5) to electrical connector (6), pin Y (26).

aw. Meter shall indicate **zero ohms.**

ax. Set multimeter range switch to R x 1000.

ay. Touch black probe (5) to all other pins on electrical connector (6).

az. Meter shall indicate **1000 ohms** minimum.



GO TO NEXT PAGE

7-20.1 TEST MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued) 7-20.1

ba. Touch red probe (2) to electrical connector (20), pin D (27).

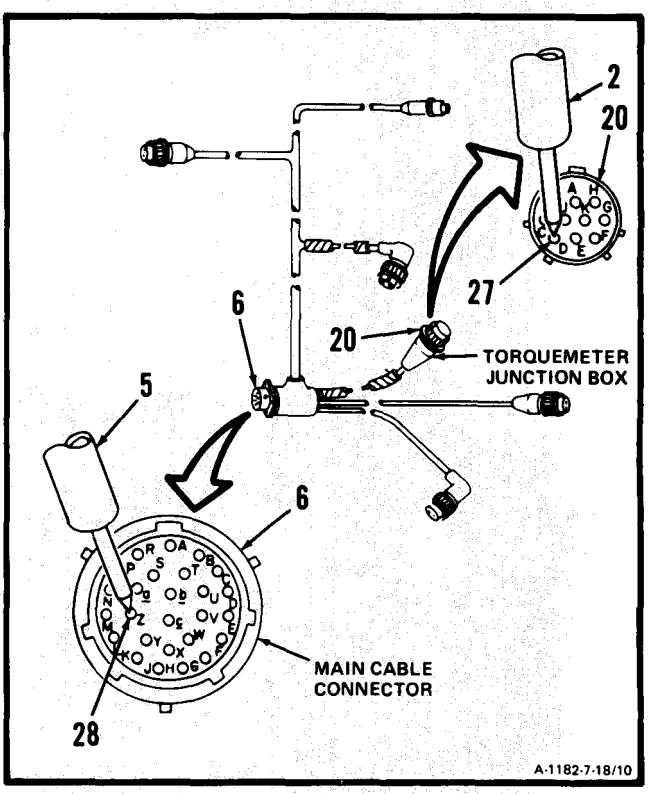
bb. Touch black probe (5) to electrical connector (6), pin Z (28).

bc. Meter shall indicate **zero ohms.**

bd. Set multimeter range switch to R x 1000.

be. Touch black probe (5) to all other pins on electrical connector (6).

bf. Meter shall indicate **1000 ohms** minimum.



bg. Set multimeter range switch to R x 1.

bh. Touch red probe (2) to electrical connector (20), pin E (29).

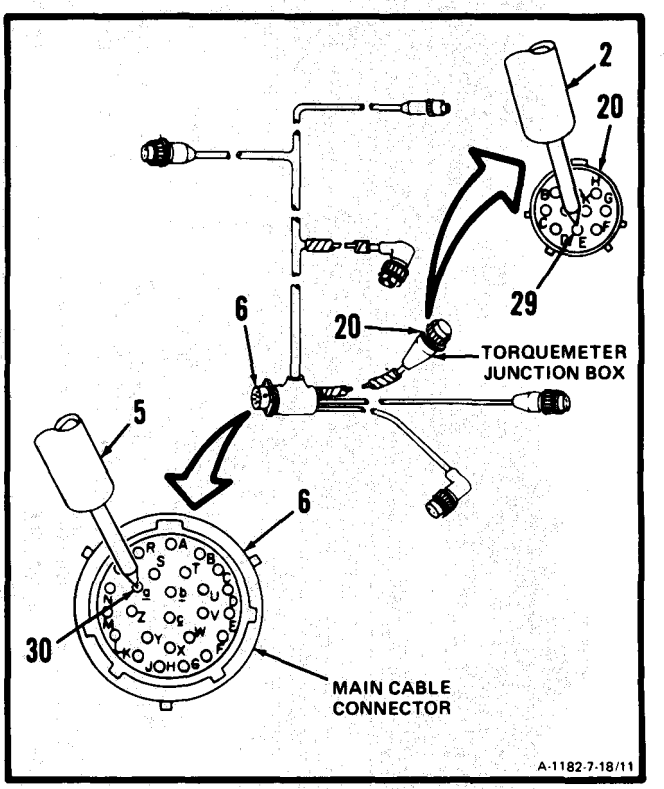
bi. Touch black probe (5) to electrical connector (6), pin a (30).

bj. Meter shall indicate **zero ohms.**

bk. Set multimeter range switch to R x 1000.

bl. Touch black probe (5) to all other pins on electrical connector (6).

bm. Meter shall indicate **1000 ohms** minimum



GO TO NEXT PAGE

7-20.1 TEST MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued) 7-20.1

bn. Set multimeter range switch to R x 1.

bo. Touch red probe (2) to electrical connector (20), pin F (31).

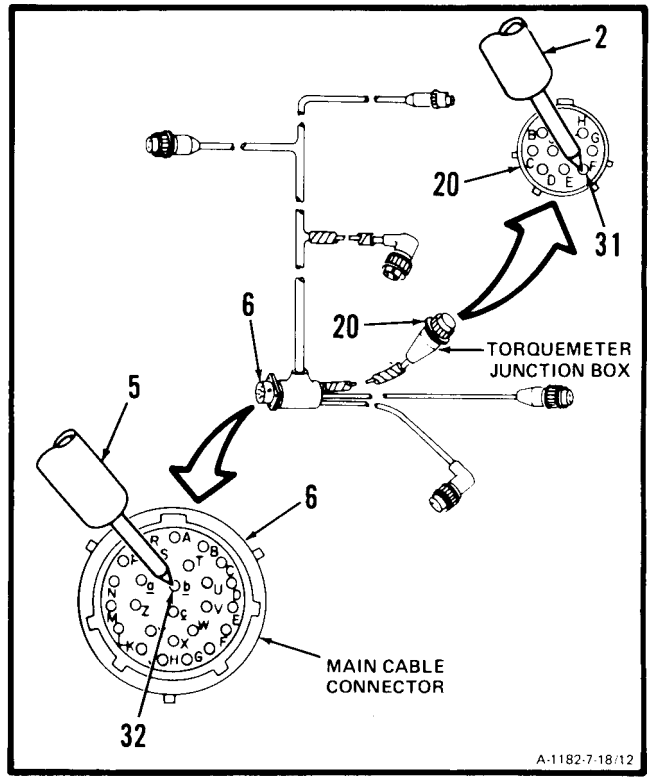
bp. Touch black probe (5) to electrical connector (6), pin b (32).

bq. Meter shall indicate **zero ohms.**

br. Set multimeter range switch to R x 1000.

bs. Touch black probe (5) to all other pins on electrical connector (6).

bt. Meter shall indicate **1000 ohms** minimum.



bu. Set multlmeter range switch to R x 1.

bv. Touch red probe (2) to electrical connector (33), pin A (34).

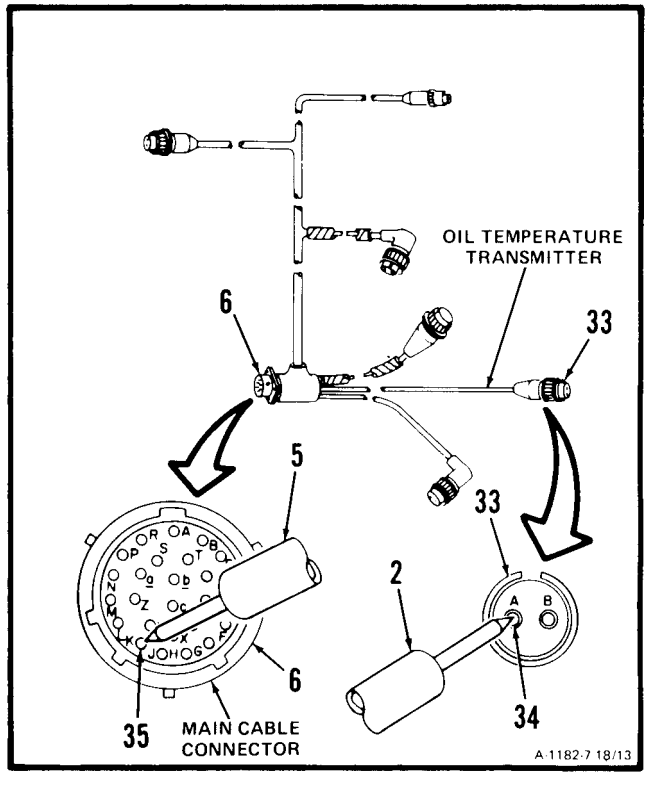
bw. Touch black probe (5) to electrical connector (6), pin K (35).

bx. Meter shall indicate **zero ohms.**

by. Set multlmeter range switch to R x 1000.

bz. Touch black probe (5) to all other pins on electrical connector (6).

ca. Meter shall indicate **1000 ohms** minimum.



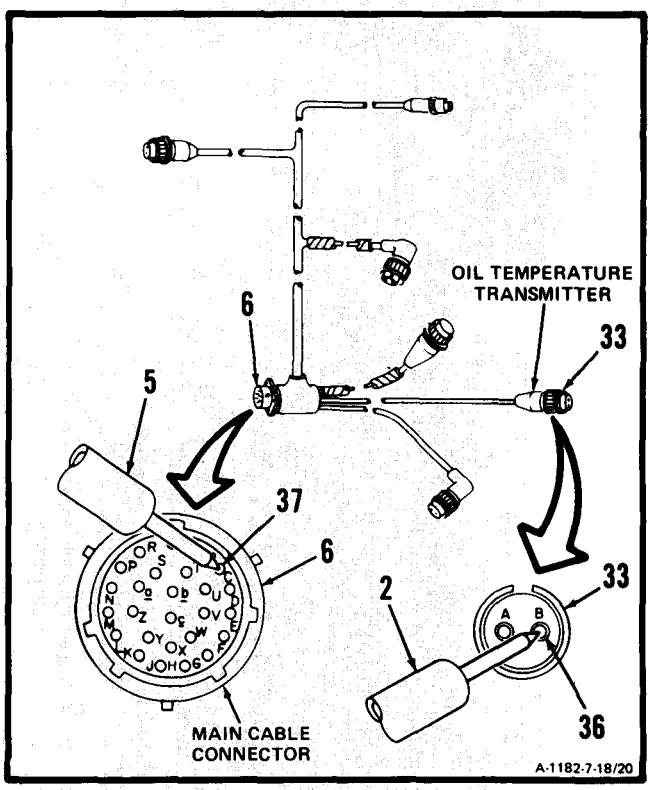
GO TO NEXT PAGE

7-20.1 TEST MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued) 7-20.1

cb. Touch red probe (2) to electrical connector (33), pin B (36).

cc. Touch black probe (5) to electrical connector (6), pin C (37).

cd. Meter shall indicate **zero ohms.**



ce. Set multimeter range switch to R x 1.

cf. Touch red probe (2) to electrical connector (3B), pin A (39).

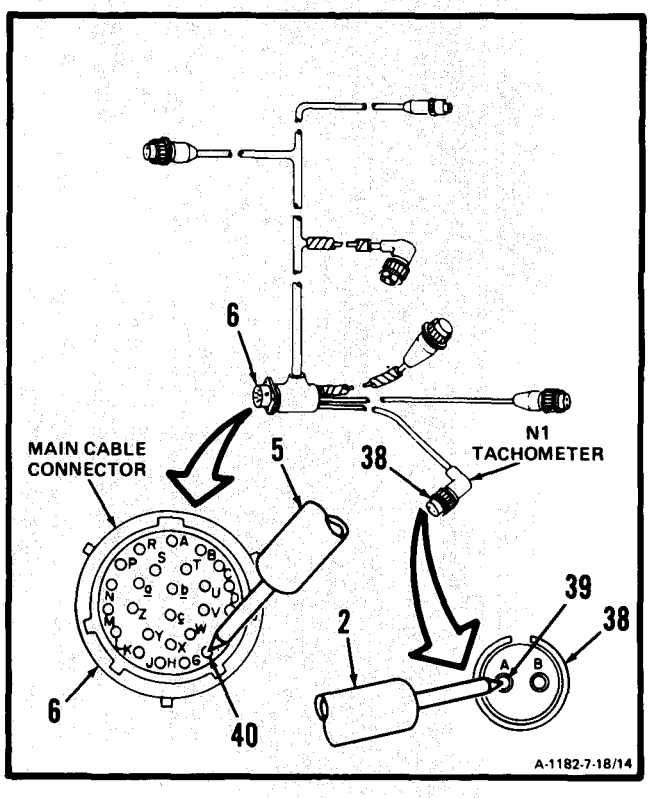
cg. Touch black probe (5) to electrical connector (6), pin G (40).

ch. Meter shall indicate **zero ohms.**

ci. Set multimeter range switch to R x 1000.

cj. Touch black probe (5) to all other pins on electrical connector (6).

ck. Meter shall indicate **1000 ohms** minimum.



GO TO NEXT PAGE

7-20.1 TEST MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued) 7-20.1

cl. Set multimeter range switch to R x 1.

cm. Touch red probe (2) to electrical connector (38), pin B (41).

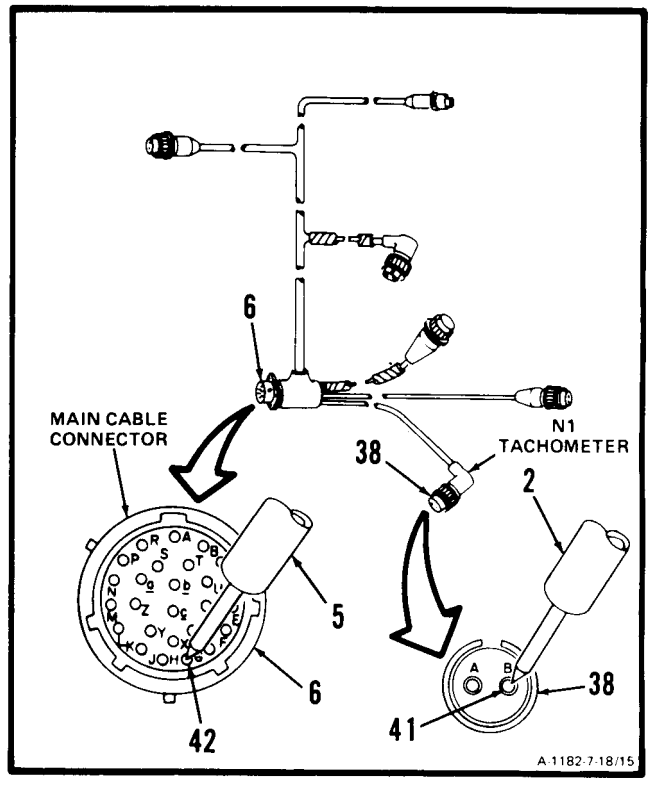
cn. Touch black probe (5) to electrical connector (6), pin H (42).

co. Meter shall indicate **zero ohms.**

cp. Set multimeter range switch to R x 1000.

cq. Touch black probe (5) to all other pins on electrical connector (6).

cr. Meter shall indicate **1000 ohms** minimum.



cs. Set multimeter range switch to R x 1.

ct. Touch red probe (2) to electrical connector (38), shell (43).

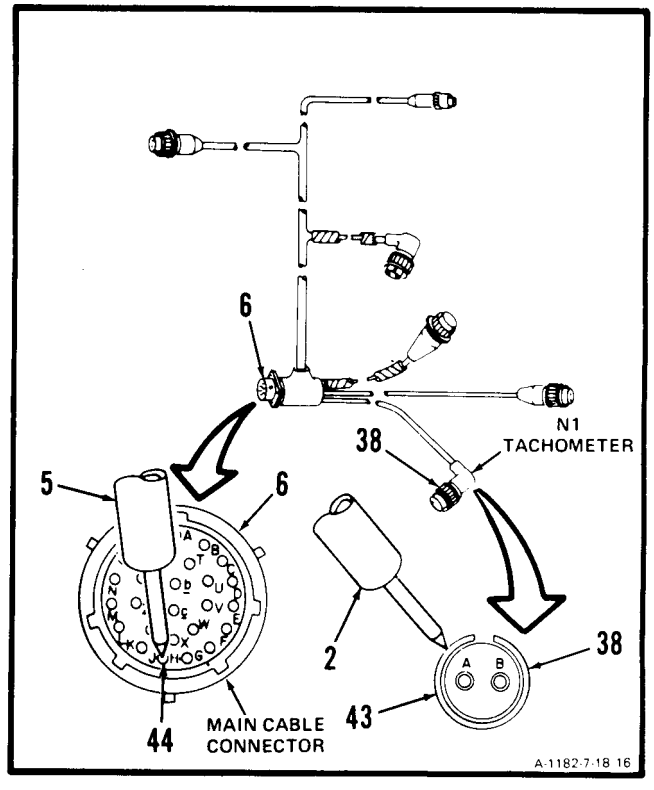
cu. Touch black probe (5) to electrical connector (6), pin J (44).

cv. Meter shall indicate **zero ohms.**

cw. Set multimeter range switch to R x 1000.

cx. Touch black probe (5) to all other pins on electrical connector (6).

cy. Meter shall indicate **1000 ohms** minimum.



GO TO NEXT PAGE

7-20.1 TEST MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued) 7-20.1

FOLLOW-ON MAINTENANCE:

None

END OF TASK

7-21 INSTALL MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) 7-21

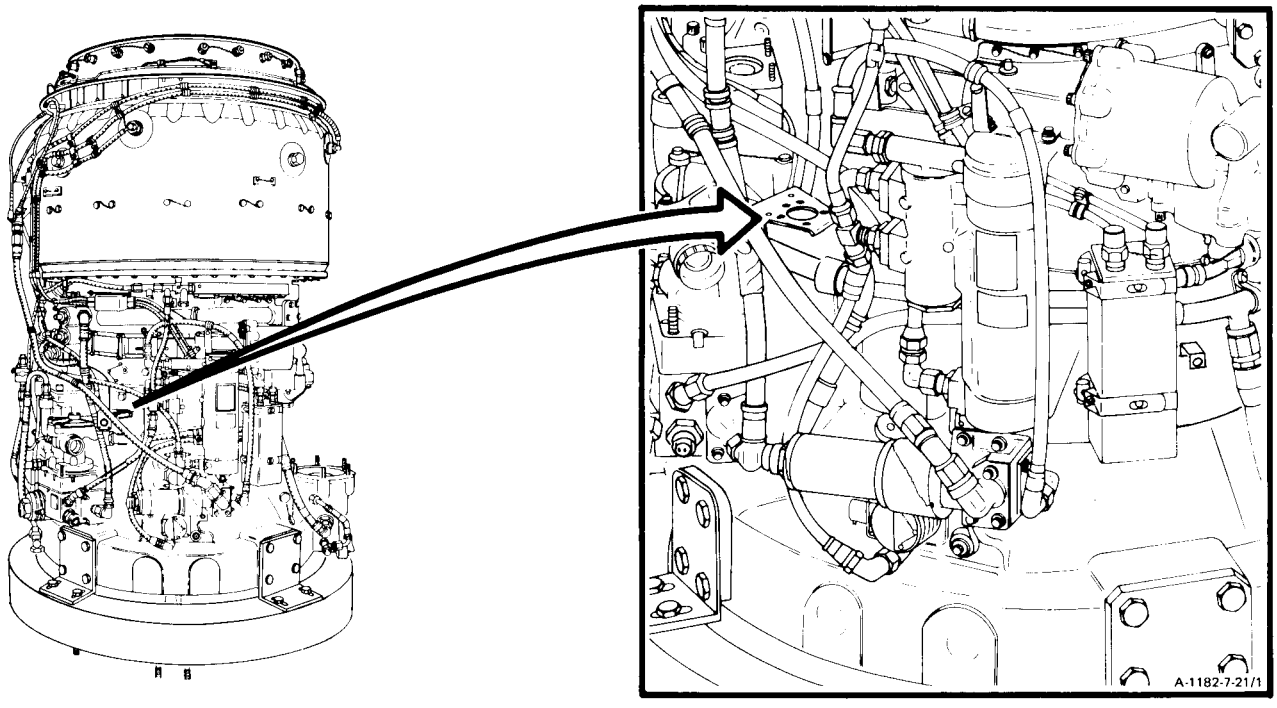
INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
Lockwire (E29)

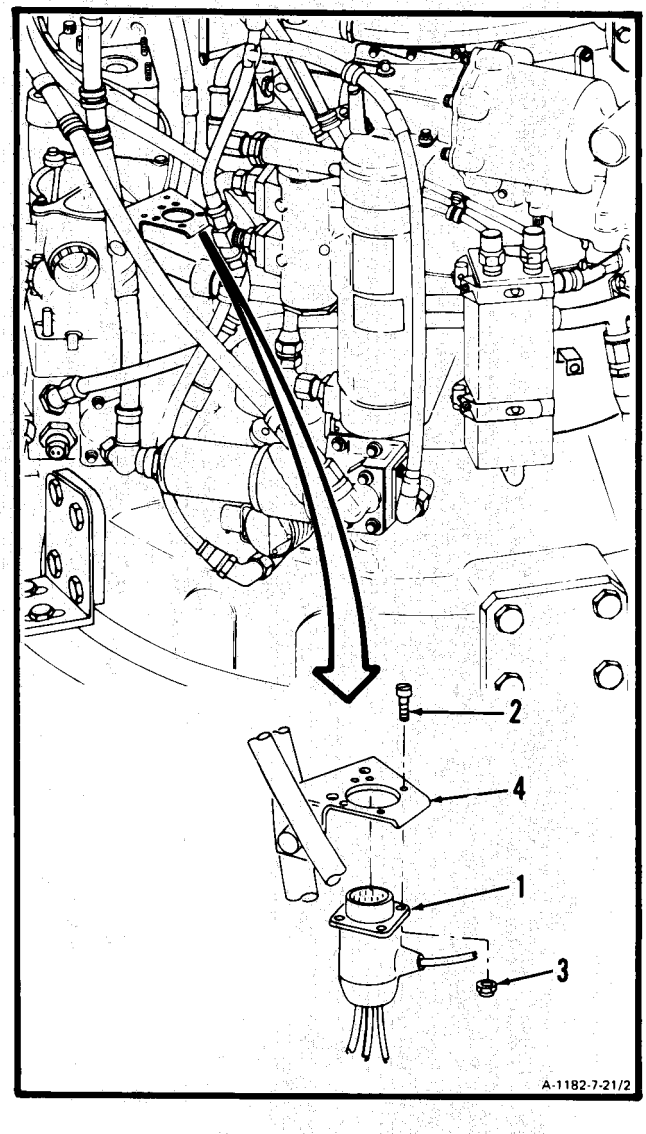
Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector



GO TO NEXT PAGE

7-21 INSTALL MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) (Continued) 7-21

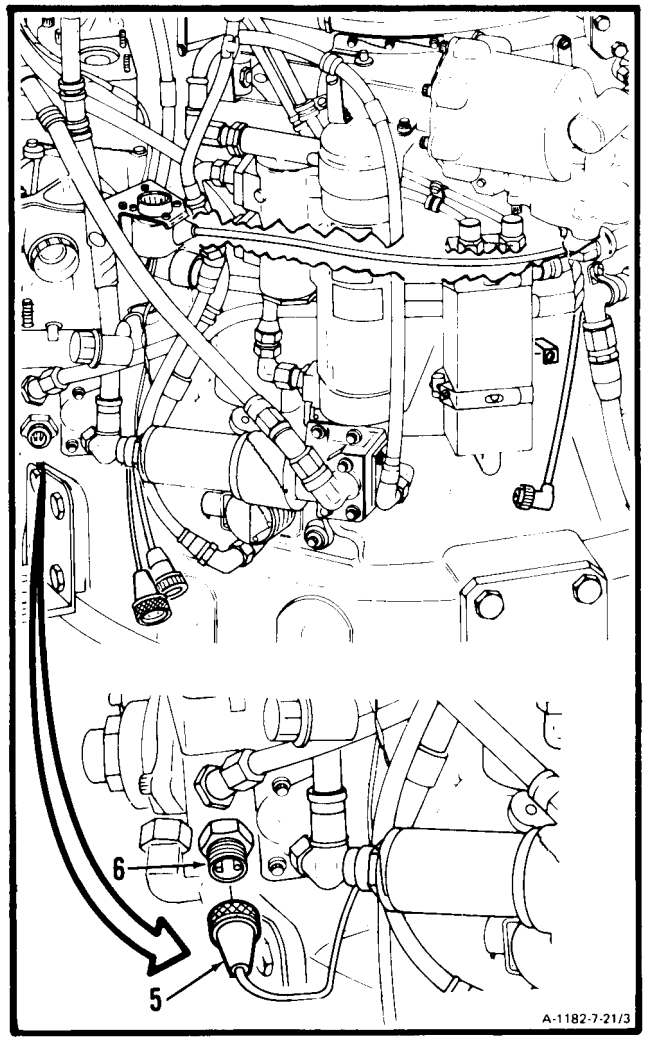
1. **Install electrical connector (1),** four screws (2), and nuts (3) in bracket (4).



GO TO NEXT PAGE

7-21 INSTALL MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) (Continued) 7-21

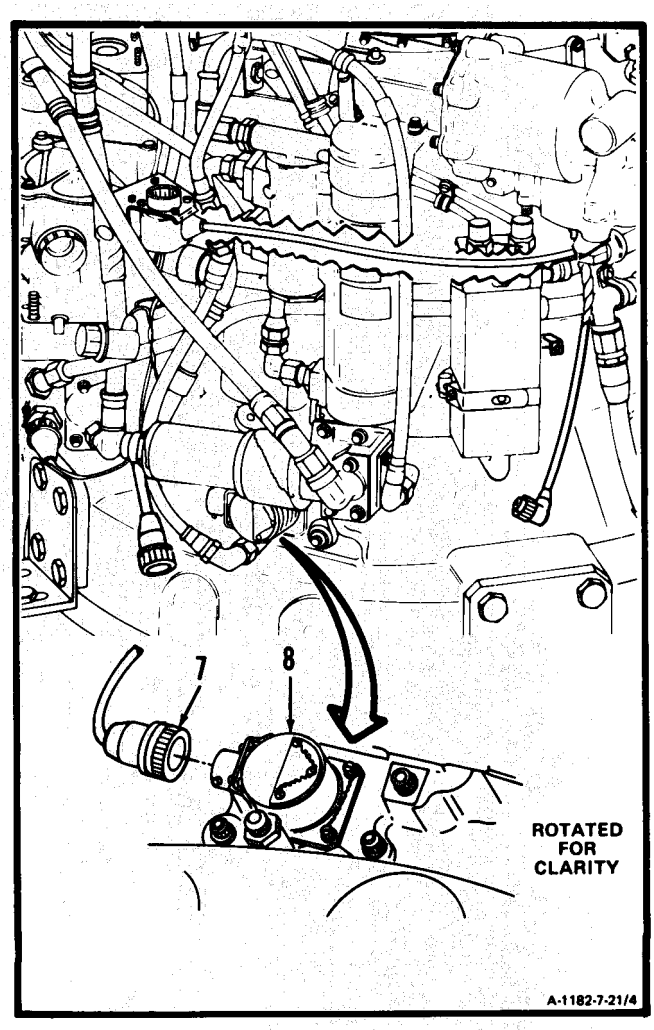
2. Connect electrical connector (5) to oil temperature transmitter (6). **Lockwire connector (5).** Use lockwire (E29).



GO TO NEXT PA GE

7-21 INSTALL MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) (Continued) 7-21

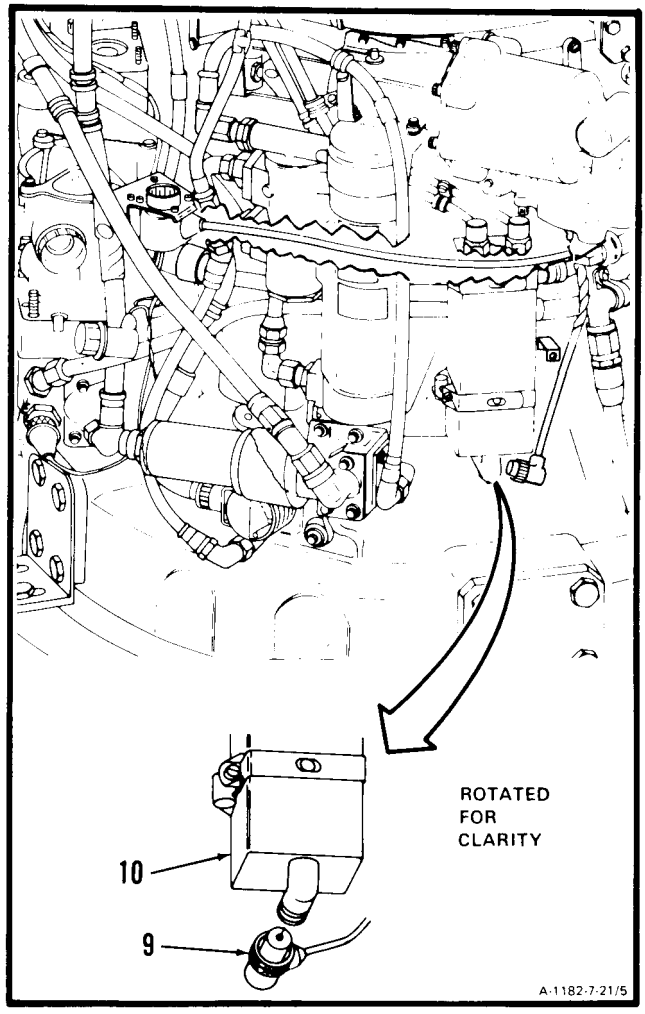
3. **Connect electrical connector (7)** to torquemeter junction box (8).



GO TO NEXT PAGE

7-21 INSTALL MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) (Continued) 7-21

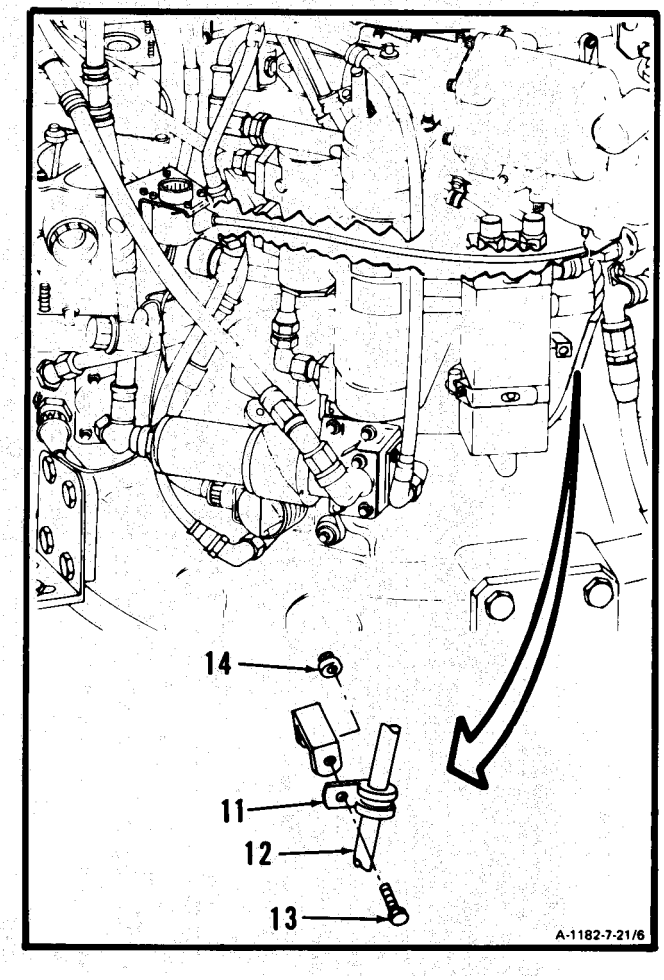
4. **Connect electrical connector (9)** to ignition exciter (10). Lockwire electrical connector (9), Use lockwire (E29).



GO TO NEXT PAGE

7-21 INSTALL MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) (Continued) 7-21

5. **Install clamp (11)** on electrical cable assembly (12), and install screw (13) and nut (14).

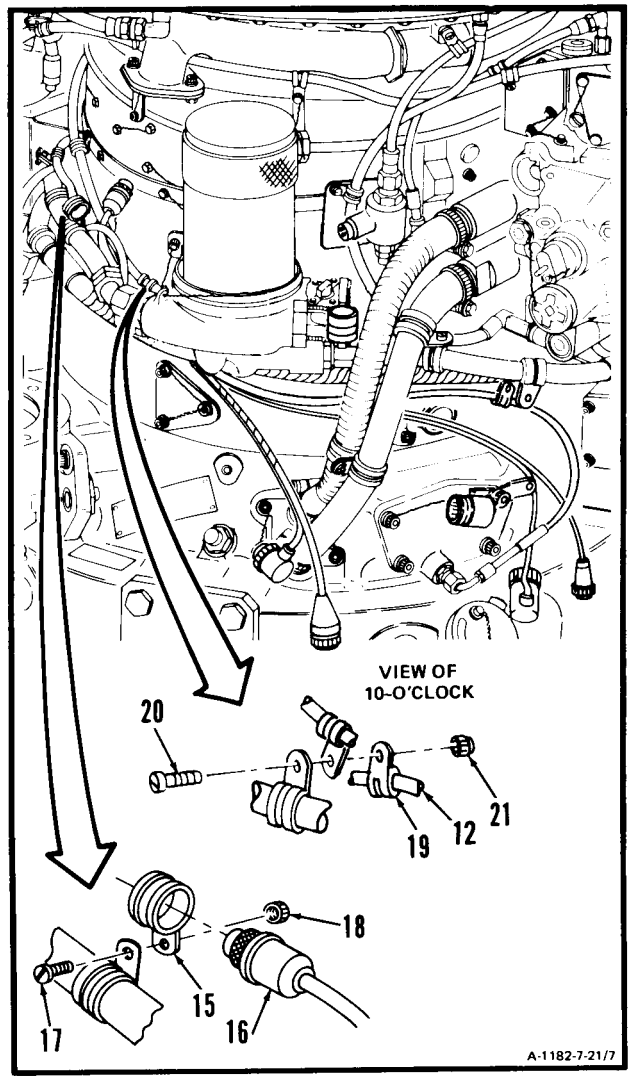


GO TO NEXT PAGE

7-21 INSTALL MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) (Continued) 7-21

6. **Install clamp (15)** on electrical connector (16). Install screw (17) and nut (18).

7. **Install clamp (19)** on electrical cable assemby (12). Install screw (20) and nut (21).

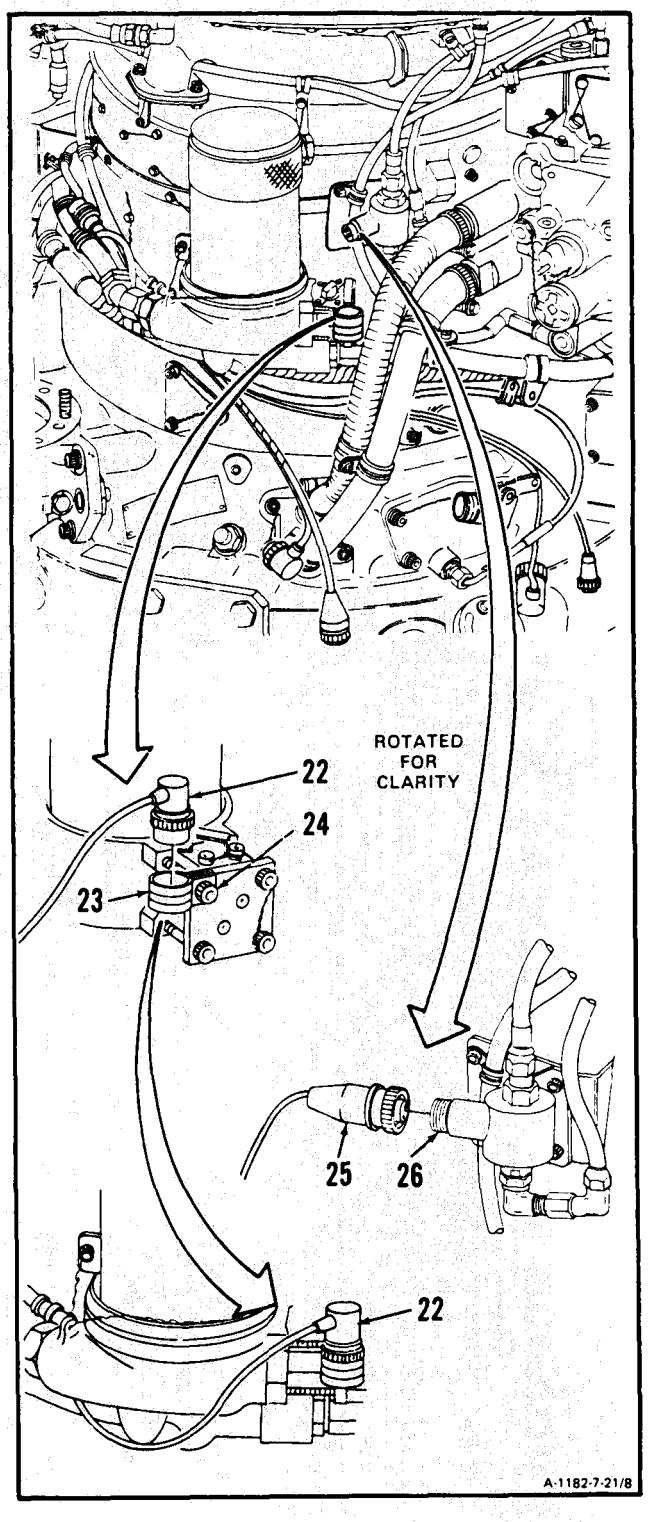


GO TO NEXT PAGE

7-21 INSTALL MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR)(Continued) 7-21

8. Install right-angle electrical connector (22) in clamp (23). Tighten screw (24) and lockwire. Use lockwire (E29).

9. **Connect electrical connector (25)** to starting fuel solenoid valve (26). Lockwire electrical connector (25). Use lockwire (E29).

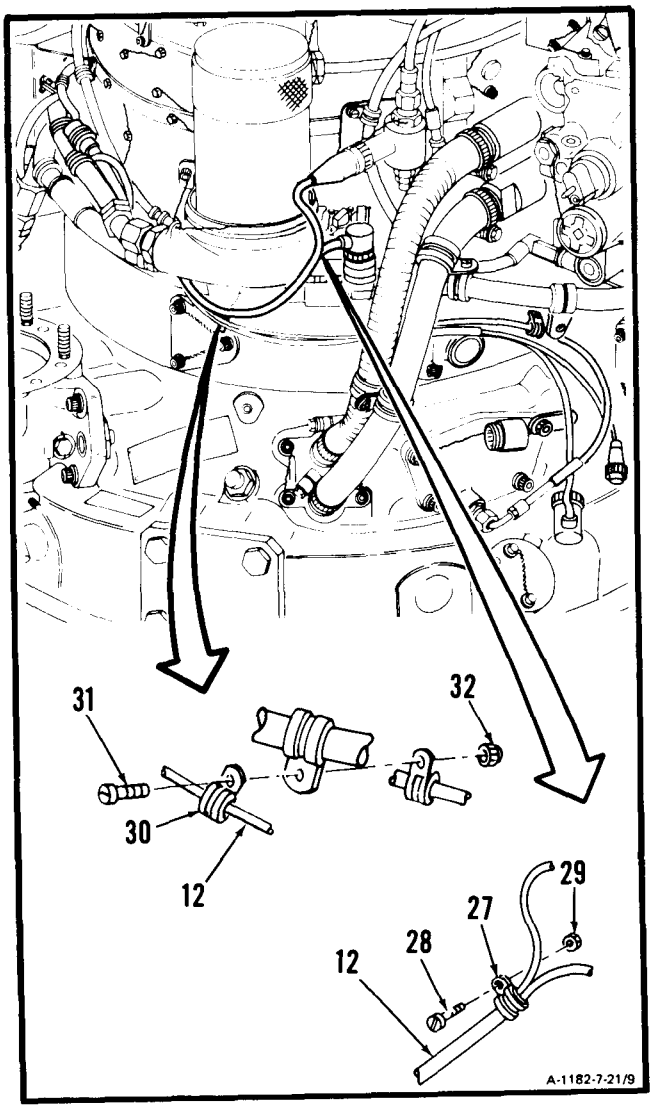


GO TO NEXT PAGE

7-21 INSTALL MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) (Continued)

10. **Install clamp (27)** on electrical cable assembly (12), and install screw (28) and nut (29).

11. **Install clamp (30)** on electrical cable assembly (12), and install screw (31) and nut (32).

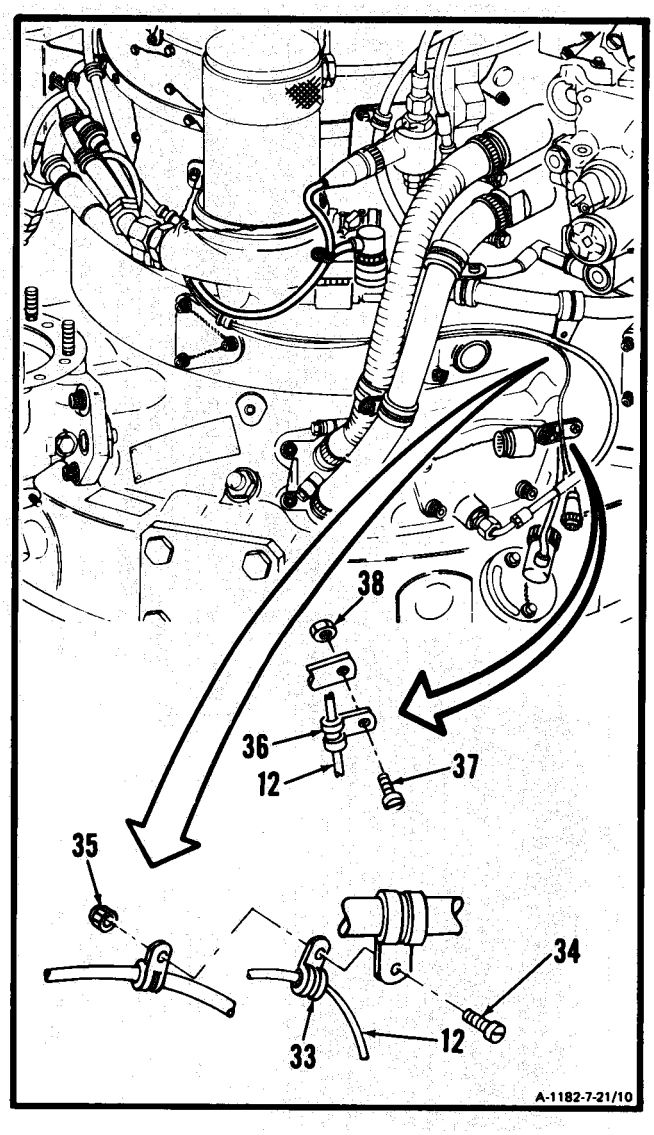


GO TO NEXT PAGE

7-21 INSTALL MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) (Continued) 7-21

12. **Install clamp (33)** on electrical cable asembly (12), and install screw (34) and nut (35).

13. **Install clamp (36)** on electrical cable assembly (12), and install screw (37) and nut (38).

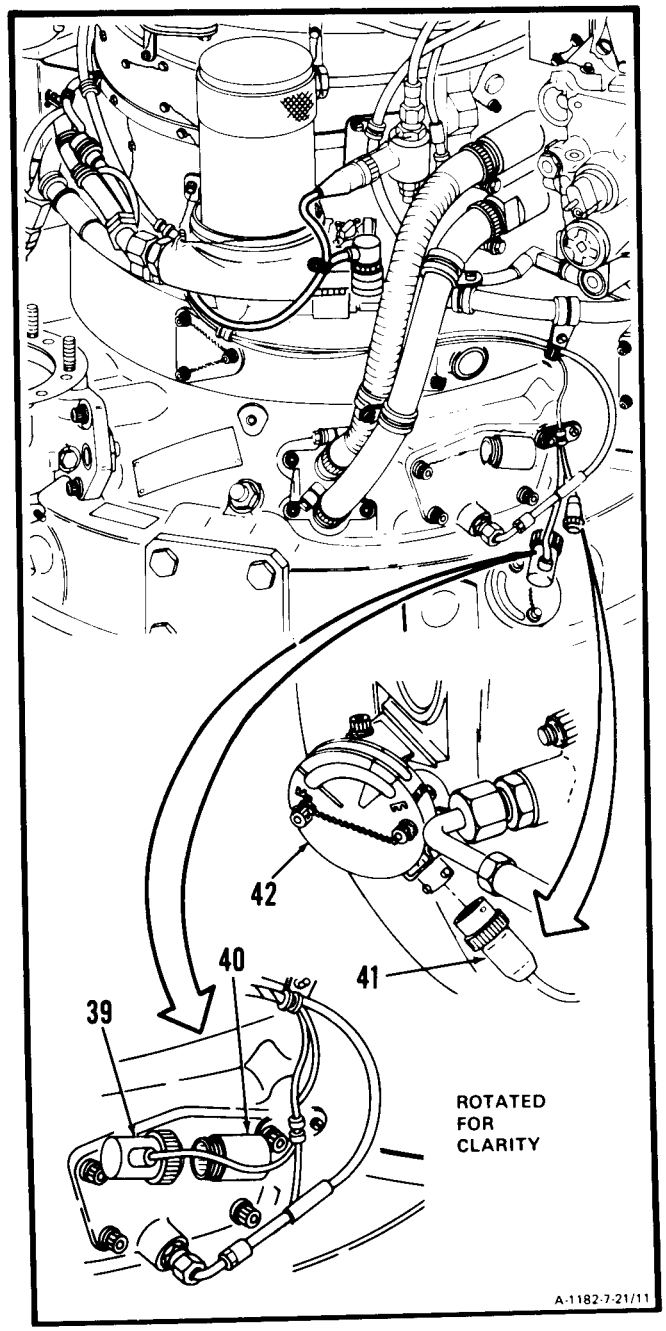


GO TO NEXT PAGE

7-21 INSTALL MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) (Continued) 7-21

14. **Connect right-angle electrical connector (39)** to plug **(40). Lockwire connector (39).** Use lockwire (E29).

15. **Connect electrical connector (41)** to oil level indicator (42).



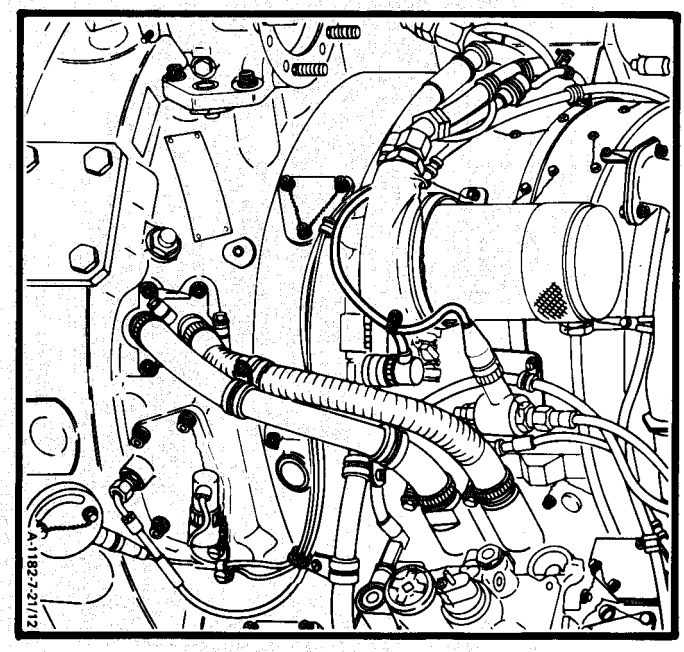
INSPECT

GO TO NEXT PAGE

7-21 INSTALL MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR)(Continued) 7-21

FOLLOW-ON MAINTENANCE:

None



END OF TASK

7-21.1 INSTALL MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) 7-21.1

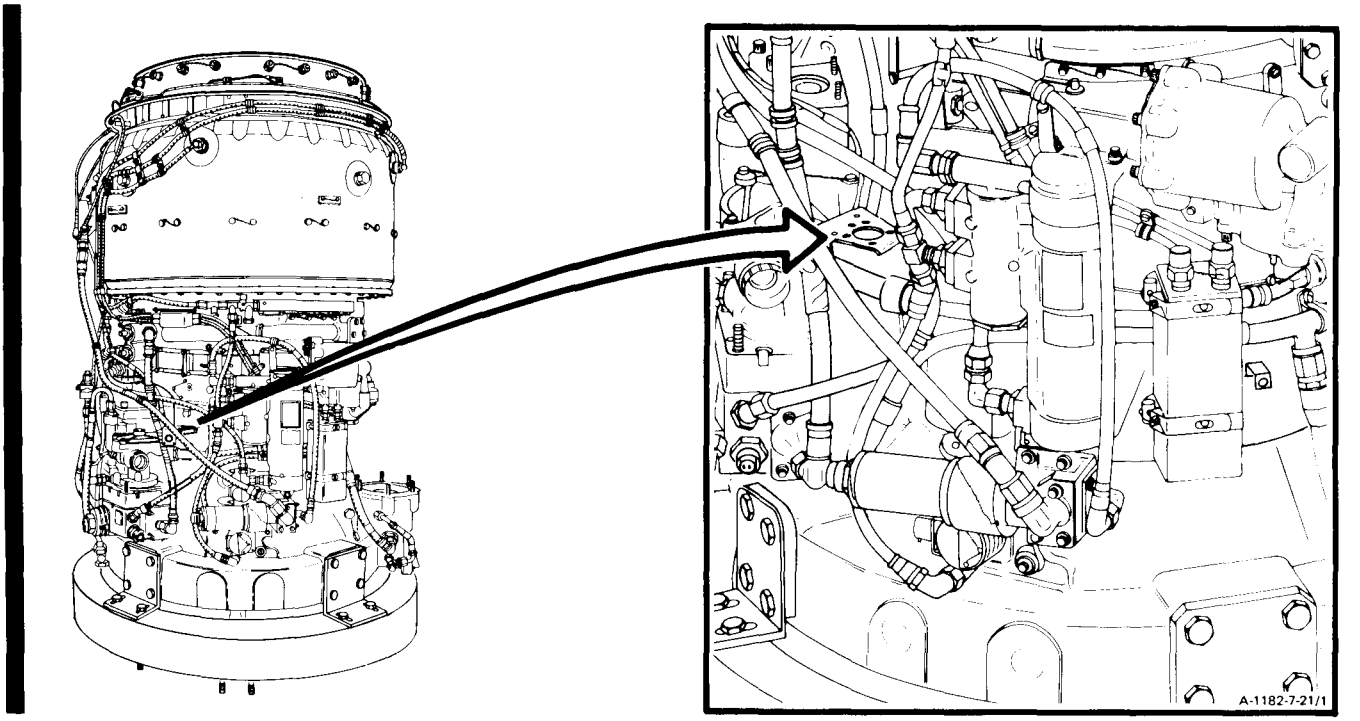
INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
Lockwire (E29)

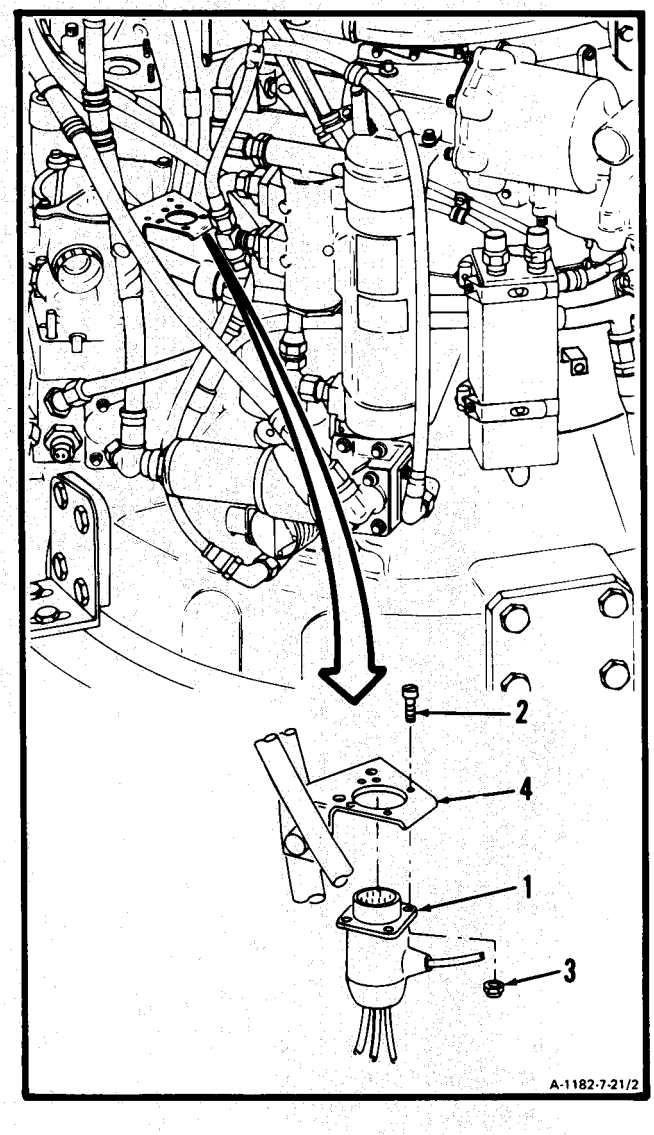
Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector



GO TO NEXT PA GE

7-21.1 INSTALL MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued) 7-21.1

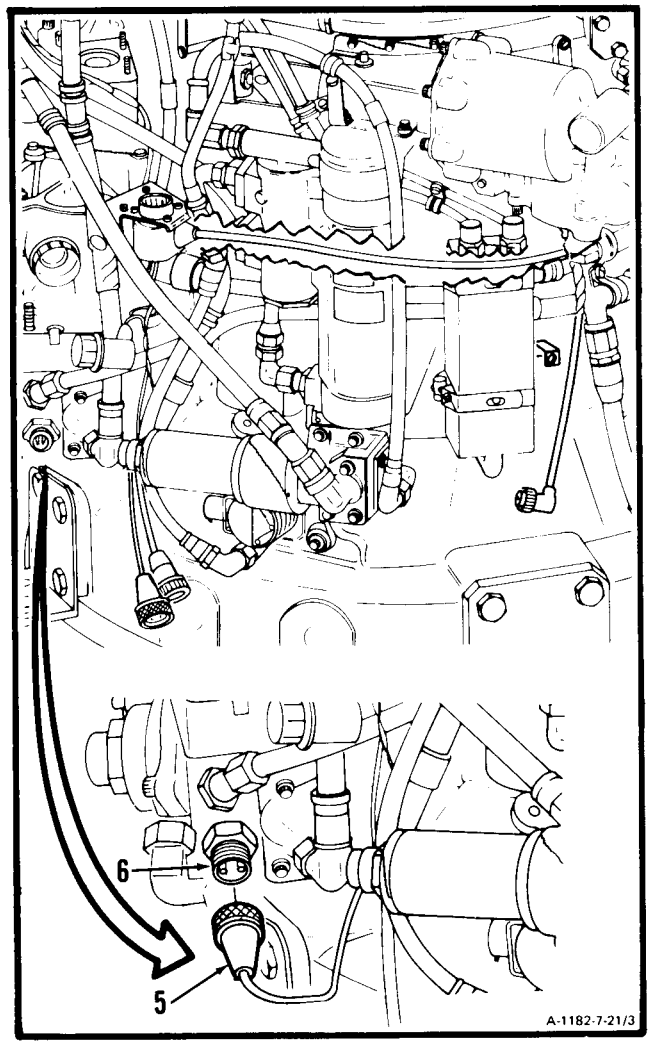
1. **Install electrical connector (1),** four screws (2), and nuts (3) in bracket (4).



GO TO NEXT PAGE

7-21.1 INSTALL MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued) 7-21.1

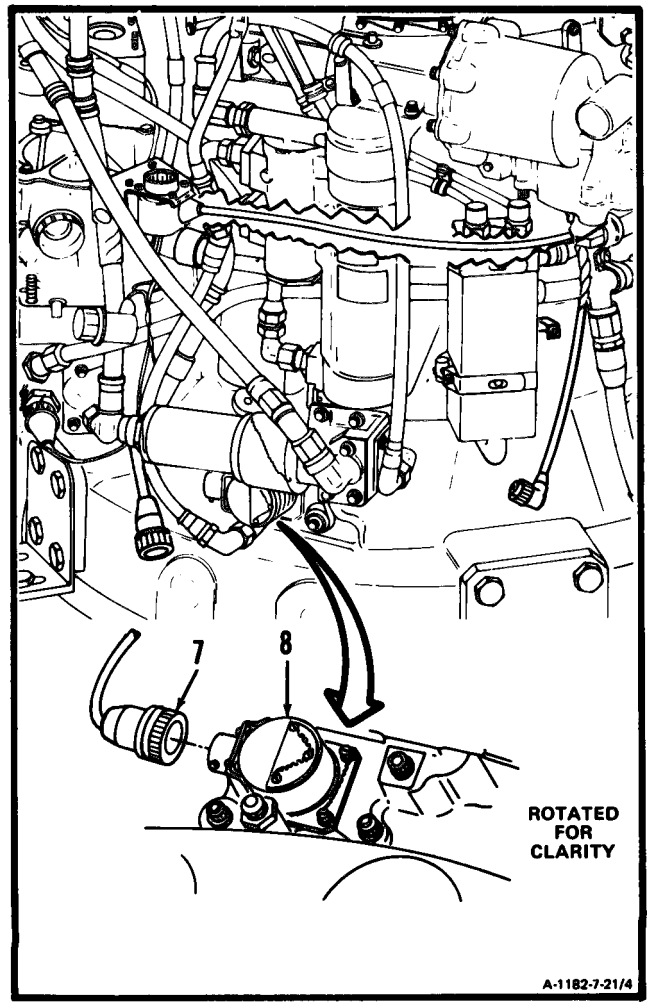
2. **Connect electrical connector (5)** to oil temperature transmitter (6). **Lockwire connector (5).** Use lockwire (E29).



GO TO NEXT PAGE

7-21.1 INSTALL MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued) 7-21.1

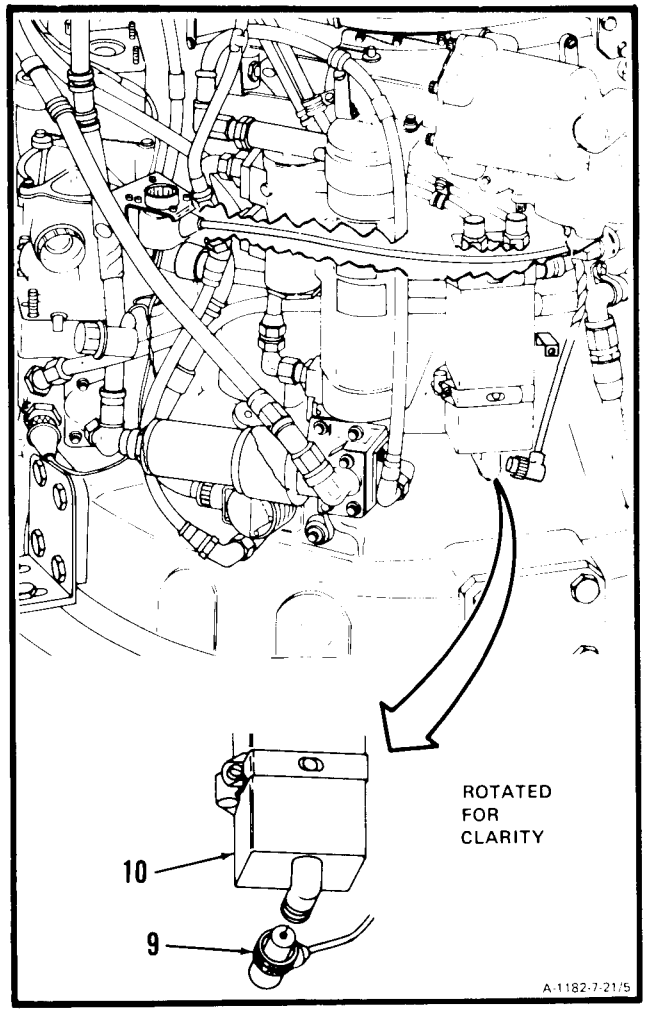
3. **Connect electrical connector (7)** to torquemeter junction box (8).



GO TO NEXT PAGE

7-21.1 INSTALL MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued) 7-21.1

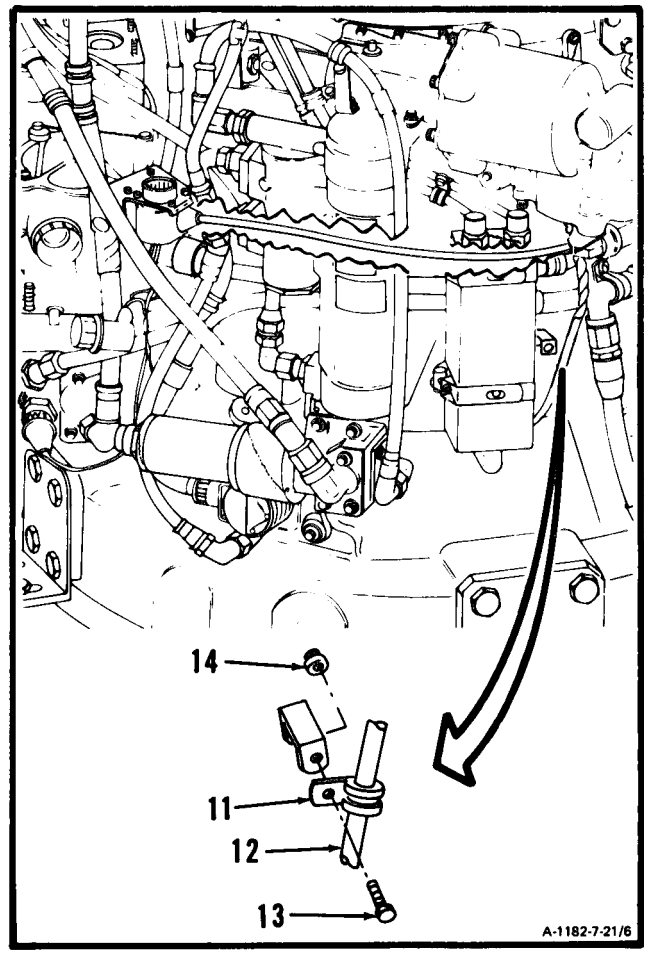
4. **Connect electrical connector (9)** to ignition exciter (10). Lockwire electrical connector (9). Use lockwire (E29).



GO TO NEXT PAGE

7-21.1 INSTALL MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR)(Continued) 7-21.1

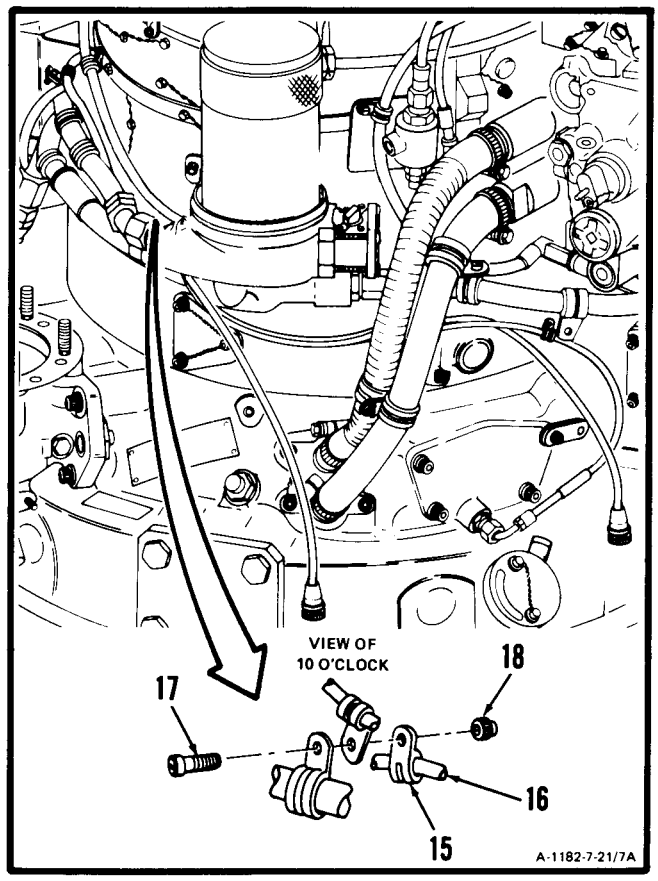
5. **Install clamp (11)** on electrical cable assembly (12), and install screw (13) and nut (14).



GO TO NEXT PAGE

7-21.1 INSTALL MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued) 7-21.1

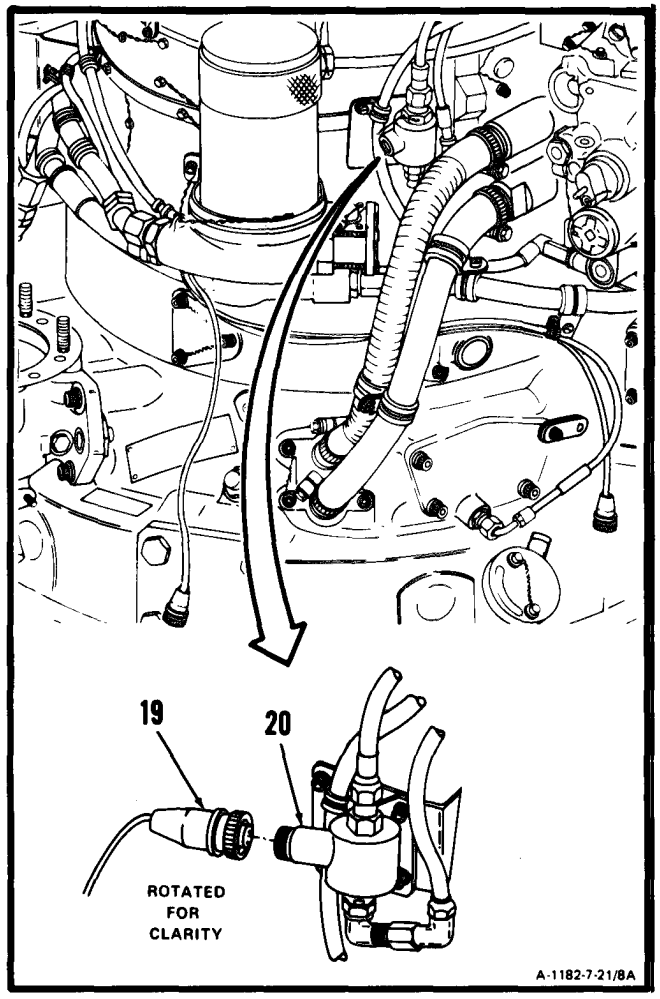
6. **Install clamp (15)** on electrical cable assembly (16). Install screw (17) and nut (18).



GO TO NEXT PAGE

7-21.1 INSTALL MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued) 7-21.1

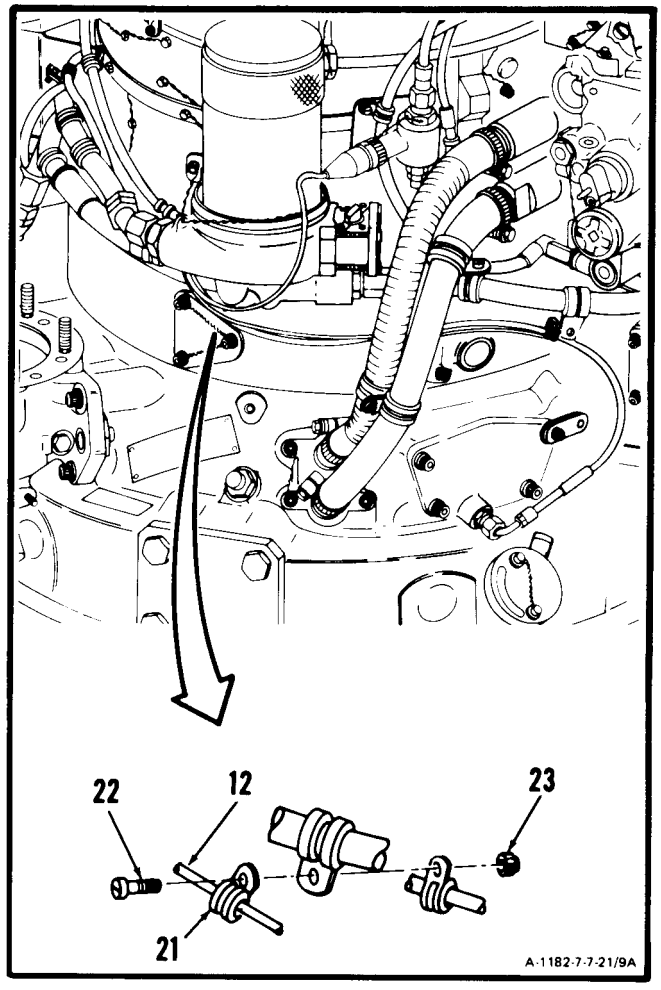
7. **Connect electrical connector (19)** to starting fuel solenoid valve (20). Lockwire electrical connector (19). Use lockwire (E29).



GO TO NEXT PAGE

7-21.1 INSTALL MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued) 7-21.1

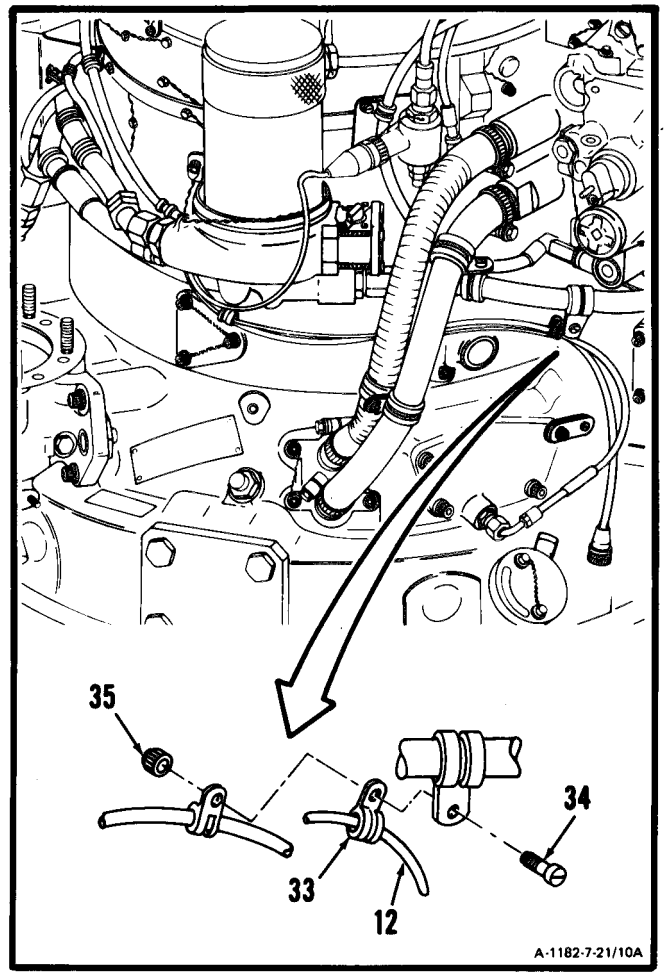
8. **Install clamp (21)** on electrical cable assembly (12), and install screw (22) and nut (23).



GO TO NEXT PAGE

7-21.1 INSTALL MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued) 7-21.1

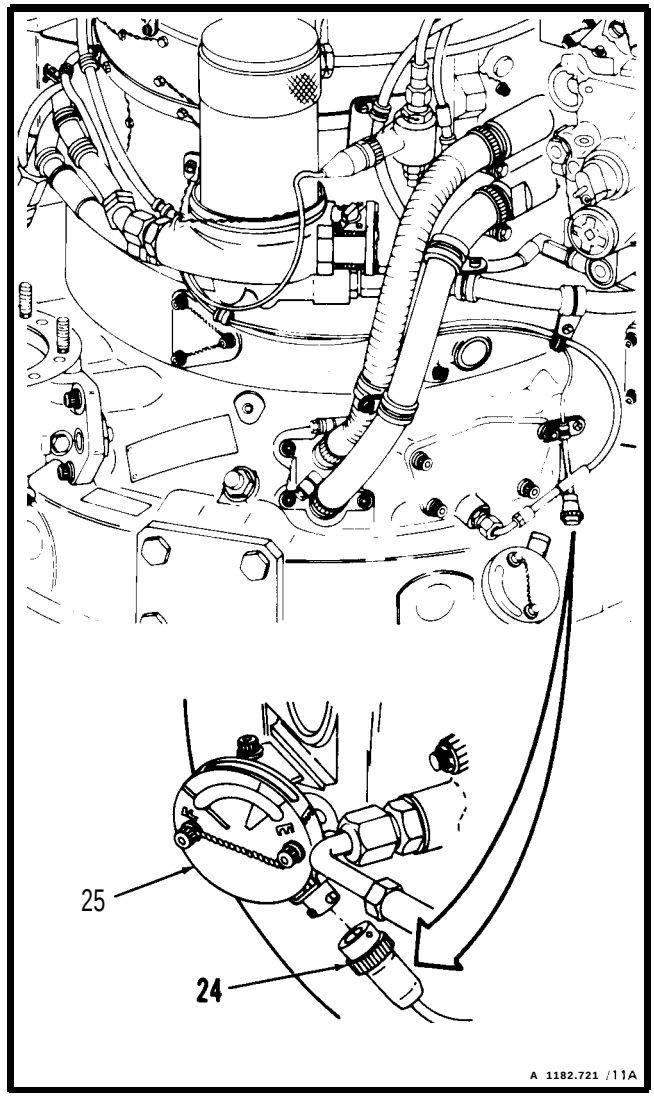
9. **Install clamp (33) on electrical cable assembly (12), and install screw (34) and nut (35).**



GO TO NEXT PAGE

7-21.1 INSTALL MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued) 7-21.1

10. Connect electrical connector (24) to oil level indicator (25).



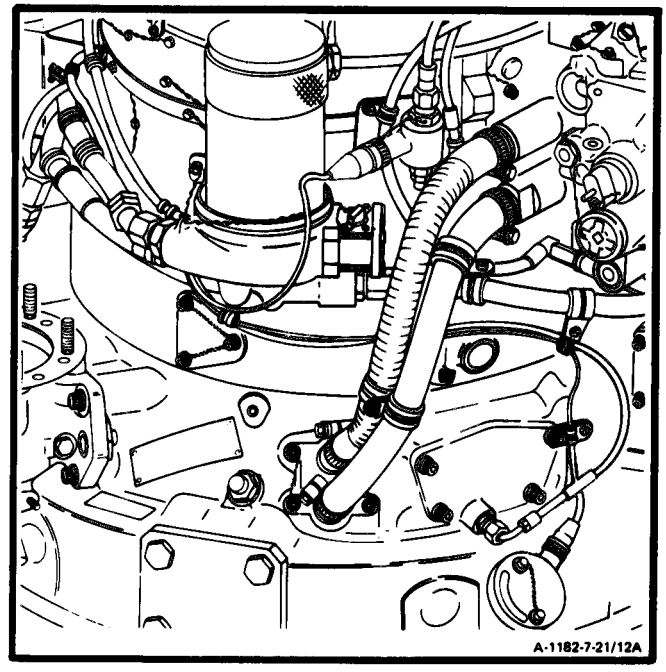
INSPECT

GO TO NEXT PA GE

7-21.1 INSTALL MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued) 7-21.1

FOLLOW-ON MAINTENANCE:

None



END OF TASK

CHAPTER 8

LUBRICATION SYSTEM – MAINTENANCE INSTRUCTIONS

CHAPTER OVERVIEW

This chapter contains maintenance procedures for the lubrication system. It is divided into the following sections-and tasks.

SECTION	TASK NO.	TITLE	PAGE
I		MAIN OIL PUMP AND SCAVENGE OIL SCREEN – MAINTENANCE PROCEDURES	
	8-1	Remove Main Oil Pump and Scavenge Oil Screen	8-7
	8-2	Clean Main Oil Pump and Scavenge Oil Screen	8-12
	8-3	Inspect Main Oil Pump and Scavenge Oil Screen	8-14
	8-4	Install Main Oil Pump and Scavenge Oil Screen	8-15
	8-4.1	Remove Oil Pump Check Valve (AVIM)	8-20.1
	8-4.2	Install Oil Pump Check Valve (AVIM)	8-20.3
II		OIL COOLER ASSEMBLY – MAINTENANCE PROCEDURES	
	8-5	Remove Oil Cooler Assembly	8-21
	8-6	Disassemble Oil Cooler Assembly	8-26
	8-7	Clean Oil Cooler Assembly	8-29
	8-8	Inspect Oil Cooler Assembly	8-31
	8-9	Repair Oil Cooler Assembly	8-32
	8-10	Assemble Oil Cooler Assembly	8-33
	8-11	Install Oil Cooler Assembly	8-35
III		OIL TEMPERATURE TRANSMITTER – MAINTENANCE PROCEDURES	
	8-12	Remove Oil Temperature Transmitter	8-41
	8-13	Clean Oil Temperature Transmitter	8-43
	8-14	Inspect Oil Temperature Transmitter	8-44
	8-15	Install Oil Temperature Transmitter	8-45
IV		OIL FILLER ASSEMBLY AND OIL FILLER STRAINER – MAINTENANCE PROCEDURES	
	8-16	Remove Oil Filler Assembly and Oil Filler Strainer	8-47
	8-17	Disassemble Oil Filler Assembly and Oil Filler Strainer	8-50
	8-18	Clean Oil Filler Assembly and Oil Filler Strainer	8-52
	8-19	Inspect Oil Filler Assembly and Oil Filler Strainer	8-54
	8-20	Repair Oil Filler Assembly and Oil Filler Strainer	8-56
	8-21	Assemble Oil Filler Assembly and Oil Filler Strainer	8-57
	8-22	Install Oil Filler Assembly and Oil Filler Strainer	8-60

SECTION	TASK NO.	TITLE	PAGE
v		OIL FILTER CAP AND STEM ASSEMBLY AND OIL FILTER ELEMENT - MAINTENANCE PROCEDURES	
	8-23	Remove Oil Filter Cap and Stem Assembly and Oil Filter Element	8-63
	8-24	Clean Oil Filter Cap and Stem Assembly and Oil Filter Element	8-66
	8-25	Inspect Oil Filter Cap and Stem Assembly and Oil Filter Element	8-68
	8-26	Repair Oil Filter Cap and Stem Assembly and Oil Filter Element	8-69
	8-27	Install Oil Filter Cap and Stem Assembly and Oil Filter Element	8-70
VI		DUAL CHIP DETECTOR – MAINTENANCE PROCEDURES	
	8-28	Remove Dual Chip Detector	8-73
	8-29	Disassemble Dual Chip Detector	8-77
	8-30	Clean Dual Chip Detector	8-79
	8-31	Inspect Dual Chip Detector	8-81
	8-32	Repair Dual Chip Detector	8-83
	8-33	Assemble Dual Chip Detector	8-85
	8-34	Test Dual Chip Detector	8-87
	8-35	Install Dual Chip Detector	8-88
VII		OIL LINES – MAINTENANCE PROCEDURES	
	8-36	Remove Hose Assembly (Oil Cooler to Inlet Housing)	8-93
	8-37	Install Hose Assembly (Oil Cooler to Inlet Housing)	8-95
	8-38	Remove Hose Assembly (Oil Cooler to Accessory Gearbox Assembly)	8-97
	8-39	Install Hose Assembly (Oil Cooler to Accessory Gearbox Assembly)	8-100
	8-40	Remove Hose Assembly (Oil Cooler to Pressure Connector)	8-103
	8-41	Install Hose Assembly (Oil Cooler to Pressure Connector)	8-105
	8-42	Remove Hose Assembly (Dual Chip Detector to Accessory Gearbox Assembly)	8-107
	8-43	Install Hose Assembly (Dual Chip Detector to Accessory Gearbox Assembly)	8-113
	8-44	Remove Hose Assembly (Dual Chip Detector to Accessory Gearbox Collector)	8-118
	8-45	Install Hose Assembly (Dual Chip Detector to Accessory Gearbox Collector)	8-123
	8-46	Remove Hose Assembly (Dual Chip Detector to Air Diffuser Assembly)	8-128
	8-47	Install Hose Assembly (Dual Chip Detector to Air Diffuser Assembly)	8-131
	8-48	Remove Hose Assembly (Main Oil Pump to Dual Chip Detector)	8-133

SECTION	TASK NO.	TITLE	PAGE
VII	8-49	Install Hose Assembly (Main Oil Pump to Dual Chip Detector)	8-135
	8-50	Remove Tube Assembly (Inlet Housing to Main Oil Pump)	8-137
	8-51	Install Tube Assembly (Inlet Housing to Main Oil Pump)	8-140
	8-52	Remove Hose Assembly (Main Oil Pump to Inlet Housing Oil Scavenge Tee)	8-148
	8-53	Install Hose Assembly (Main Oil Pump to Inlet Housing Oil Scavenge Tee)	8-152
	8-54	Remove Hose Assembly (Main Oil Pump to No. 4 and 5 Bearing Scavenge Tube Assembly)	8-156
	8-55	Install Hose Assembly (Main Oil Pump to No. 4 and 5 Bearing Scavenge Tube Assembly)	8-159
	8-56	Remove Tube Assembly (No. 4 and 5 Bearing Scavenge Connector to Hose Assembly)	8-162
	8-57	Install Tube Assembly (No. 4 and 5 Bearing Scavenge Connector to Hose Assembly)	8-170
	8-58	Remove Hose Assembly (Pressure Connector to No. 4 and 5 Bearing Filter)	8-178
	8-59	Install Hose Assembly (Pressure Connector to No. 4 and 5 Bearing Filter)	8-191
	8-60	Remove Hose Assembly (Inlet Housing to Oil Scavenge Tee)	8-204
	8-61	Install Hose Assembly (Inlet Housing to Oil Scavenge Tee)	8-207
	8-62	Remove Hose Assembly (Inlet Housing to Oil Drain Cock)	8-209
	8-63	Install Hose Assembly (Inlet Housing to Oil Drain Cock)	8-215
	8-64	Remove Hose Assembly (Oil Filler to Starter Drive)	8-221
	8-65	Install Hose Assembly (Oil Filler to Starter Drive)	8-224
	8-66	Remove Hose Assembly (Starter Drive to Tube and Hose Assembly)	8-226
	8-67	Install Hose Assembly (Starter Drive to Tube and Hose Assembly)	8-229
	8-68	Remove Tube and Hose Assembly (Accessory Gearbox Collector to Tube Assembly)	8-231
	8-69	Install Tube and Hose Assembly (Accessory Gearbox Collector to Tube Assembly)	8-237
	8-70	Remove Tube Assembly (Tube and Hose Assembly to Accessory Gearbox Assembly)	8-243
	8-71	Install Tube Assembly (Tube and Hose Assembly to Accessory Gearbox Assembly)	8-246
VIII	STARTER GEARBOX FILTER – MAINTENANCE PROCEDURES		
	8-72	Remove Starter Gearbox Filter	8-249
	8-73	Clean Starter Gearbox Filter	8-252
	8-74	Inspect Starter Gearbox Filter	8-253
	8-75	Install Starter Gearbox Filter	8-254

SECTION	TASK NO.	TITLE	PAGE
IX		NO. 2 BEARING PRESSURE OIL STRAINER - MAINTENANCE PROCEDURES	
	8-76	Remove No. 2 Bearing Pressure Oil Strainer	8-257
	8-77	Clean No. 2 Bearing Pressure Oil Strainer	8-259
	8-78	Inspect No. 2 Bearing Pressure Oil Strainer	8-260
	8-79	Install No. 2 Bearing Pressure Oil Strainer	8-261
x		N0. 4 AND 5 BEARING FILTER–MAINTENANCE PROCEDURES	
	8-80	Remove No. 4 and 5 Bearing Filter	8-263
	8-81	Clean No. 4 and 5 Bearing Filter	8-269
	8-82	inspect No. 4 and 5 Bearing Filter	8-270
	8-83	Install No. 4 and 5 Bearing Filter	8-271
XI		OIL DRAIN COCK - MAINTENANCE PROCEDURES	
	8-84	Remove Oil Drain Cock	8-279
	8-85	Clean Oil Drain Cock	8-281
	8-86	Inspect Oil Drain Cock	8-283
	8-87	Install Oil Drain Cock	8-284
XII		CHIP DETECTOR – MAINTENANCE PROCEDURES	
	8-88	Remove Chip Detector	8-287
	8-89	Disassemble Chip Detector	8-289
	8-90	Clean Chip Detector	8-291
	8-91	Inspect Chip Detector	8-293
	8-92	Test Chip Detector	8-294
	8-93	Assemble Chip Detector	8-295
	8-94	Install Chip Detector	8-297
XIII		OIL LEVEL INDICATOR – MAINTENANCE PROCEDURES	
	8-95	Remove Oil Level Indicator	8-301
	8-96	Disassemble Oil Level Indicator	8-305
	8-97	Clean Oil Level Indicator	8-309
	8-98	Inspect Oil Level Indicator	8-311
	8-99	Repair Oil Level Indicator	8-313
	8-100	Assemble Oil Level Indicator	8-315
	8-101	Install Oil Level Indicator	8-321
	8-102	Adjust Oil Level Indicator	8-327

SECTION	TASK NO.	TITLE	PAGE
XIV		OIL LEVEL FLOAT ASSEMBLY - MAINTENANCE PROCEDURES	
	8-103	Remove Oil Level Float Assembly (AVIM)	8-335
	8-104	Disassemble Oil Level Float Assembly (AVIM)	8-339
	8-105	Clean Oil Level Float Assembly (AVIM)	8-340
	8-106	Inspect Oil Level Float Assembly (AVIM)	8-342
	8-107	Repair Oil Level Float Assembly (AVIM)	8-343
	8-108	Assemble Oil Level Float Assembly (AVIM)	8-344
	8-109	Install Oil Level Float Assembly (AVIM)	8-346

8-1 REMOVE MAIN OIL PUMP AND SCAVENGE OIL SCREEN 8-1

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit, NSN 5180-00-323-4944
Container, 1 Quart

Materials:
Lockwire (E29)
Wiping Flag (E58)

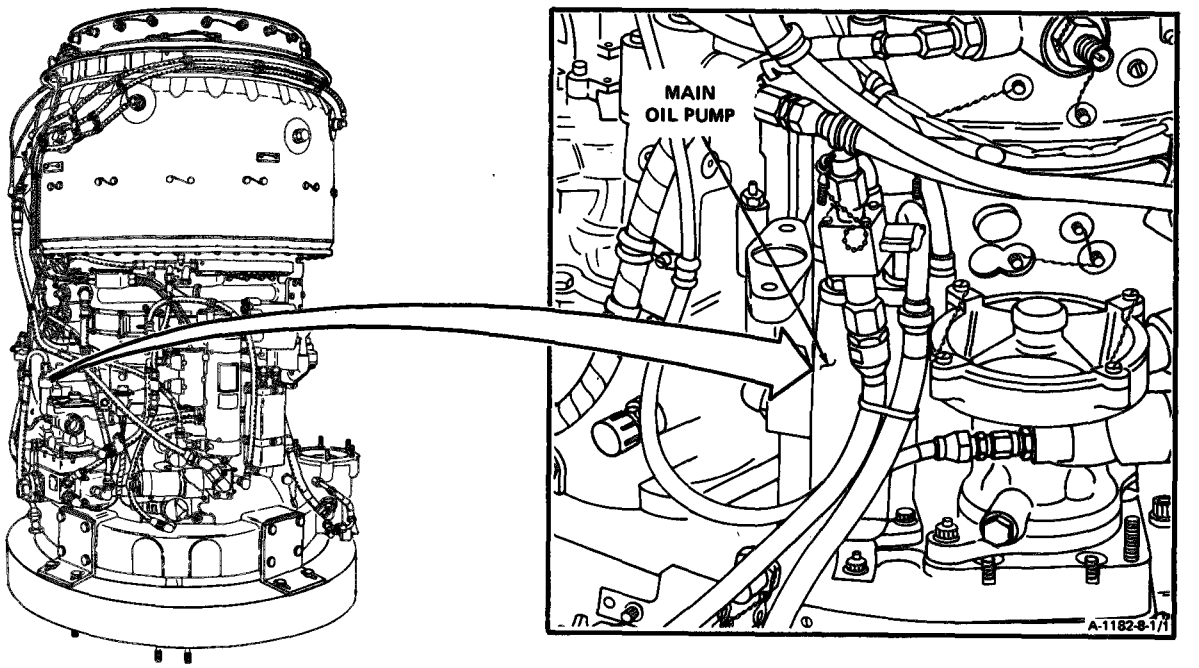
Personnel Required:
68B10 Aircraft Powerplant Repairer

Equipment Condition:
Tube Assembly Removed {Inlet Housing to Main Oil Pump) (Task 8-50)

General Safety Instructions:

WARNING

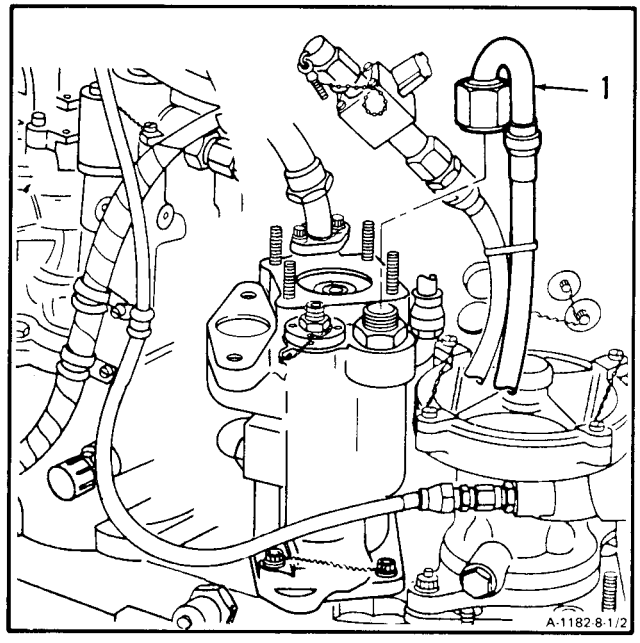
Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.



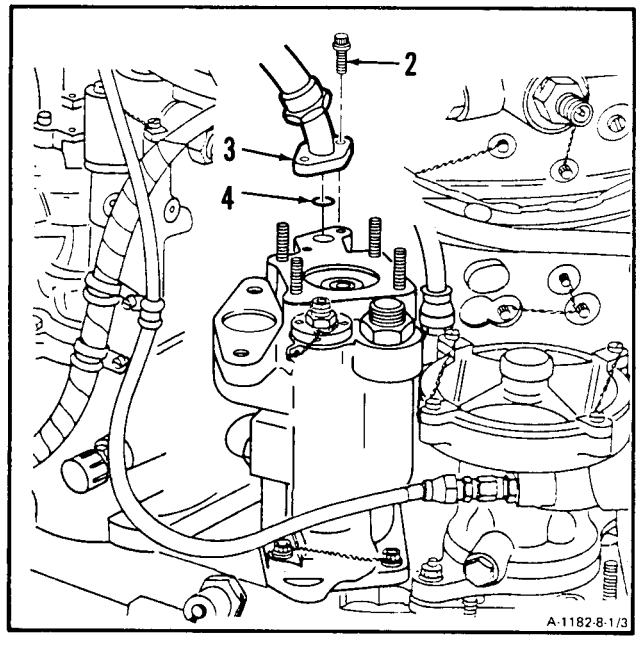
GO TO NEXTPAGE

8-1 REMOVE MAIN OIL PUMP AND SCAVENGE OIL SCREEN (Continued) 8-1

1. **Disconnect tube assembly (1).**



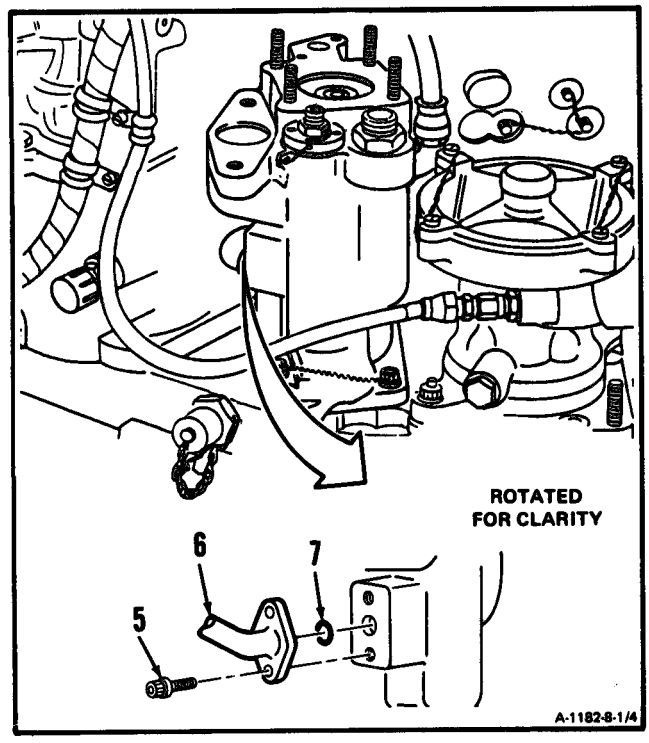
2. **Remove** lockwire, two bolts (2), **end of tube assembly (3),** and packing (4).



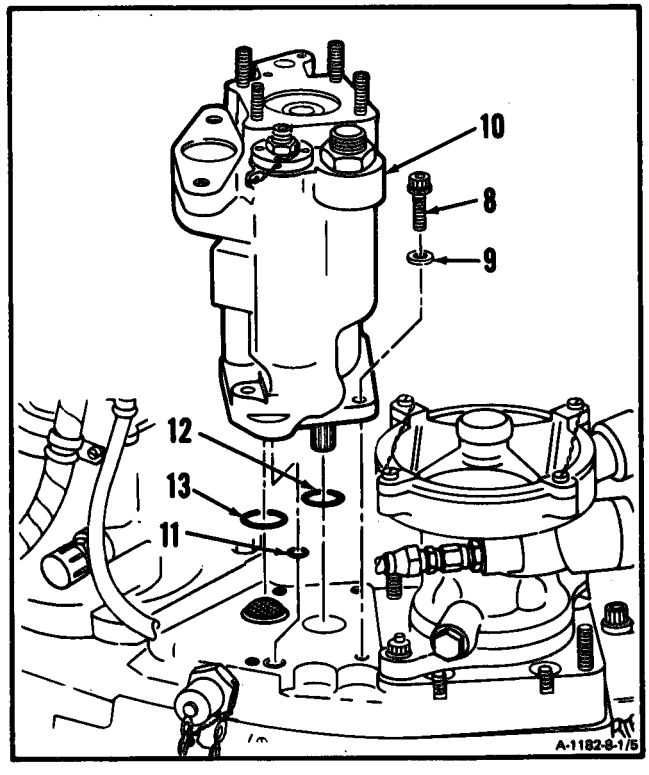
GO TO NEXT PAGE

8-1 REMOVE MAIN OIL PUMP AND SCAVENGE OIL SCREEN (Continued)

3. **Remove** lockwire, two bolts (5), **end of tube assembly (6), and packing (7).**



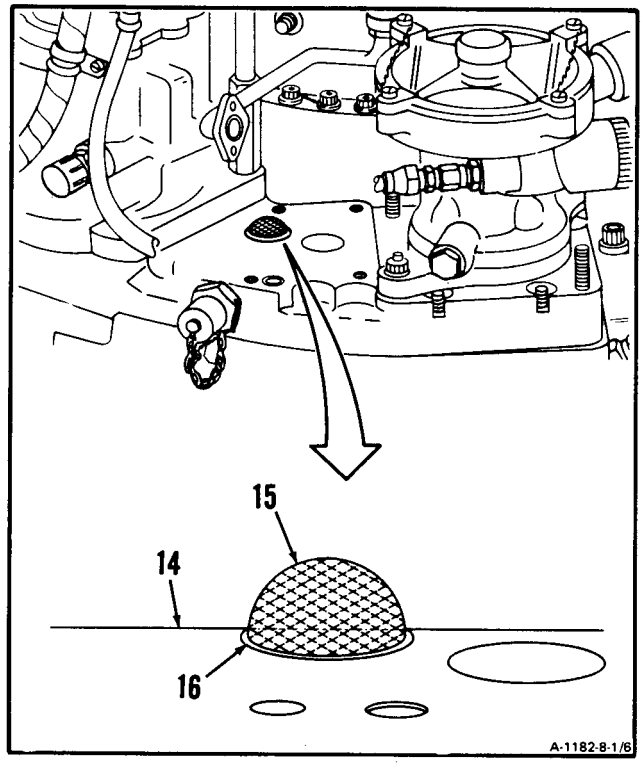
4. **Remove** lockwire, four bolts (8), washers (9), **main oil pump (10),** and packings (11, 12, and 13).



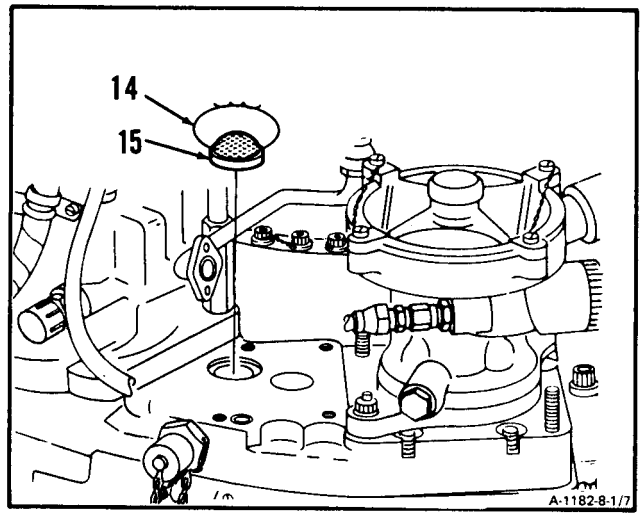
GO TO NEXT PAGE

8-1 REMOVE MAIN OIL PUMP AND SCAVENGE OIL SCREEN (Continued) 8-1

5. Insert 9 inch length of lockwire (E29) (14) through center of screen (15) near base (16) and form loop by twisting ends.



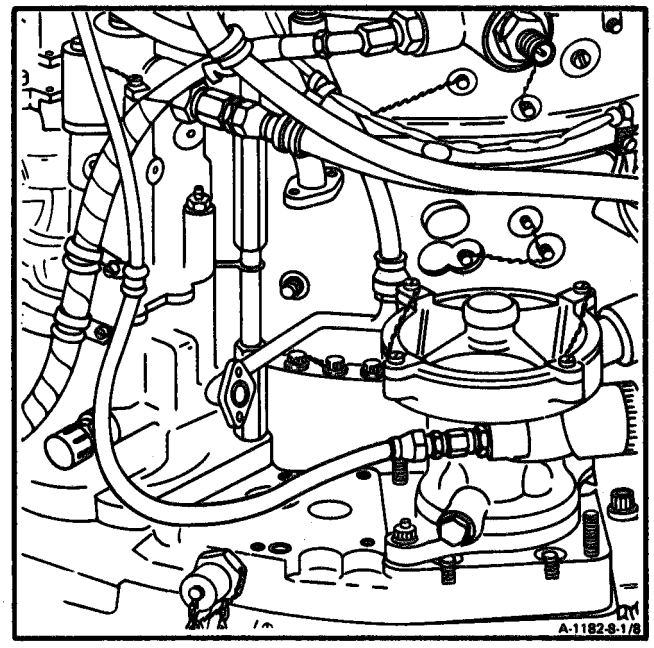
6. Using lockwire (14), **remove screen (15).** Remove lockwire (14).



GO TO NEXT PAGE

FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-2 CLEAN MAIN OIL PUMP AND SCAVENGE OIL SCREEN 8-2

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Goggles
Compressed Air Source

Materials:
Dry Cleaning Solvent (E17)
Gloves (E20)
Lint-Free Cloth (E26)

Personnel Required:
68B10 Aircraft Powerplant Repairer

Equipment Condition:
Off Engine Task
Main Oil Pump and Scavenge Oil Screen
Removed (Task 8-1)

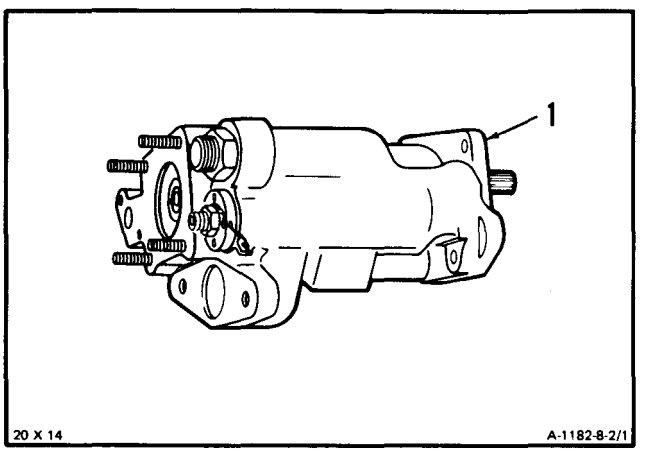
General Safety Instructions:

WARNING

Dry cleaning solvent (E17) is flammable and toxic. It can irritate skin and cause burns. Use only in well-ventilated area, away from heat and open flame. In case of contact, immediately flush skin or eyes with water for at least 15 minutes. Get medical attention for eyes.

1. Wear gloves (E20). **Clean oil pump (1)** using dry cleaning solvent (E17) and brush.

2. **Remove any remaining solvent** using clean, dry lint-free cloth (E26).



GO TO NEXT PAGE

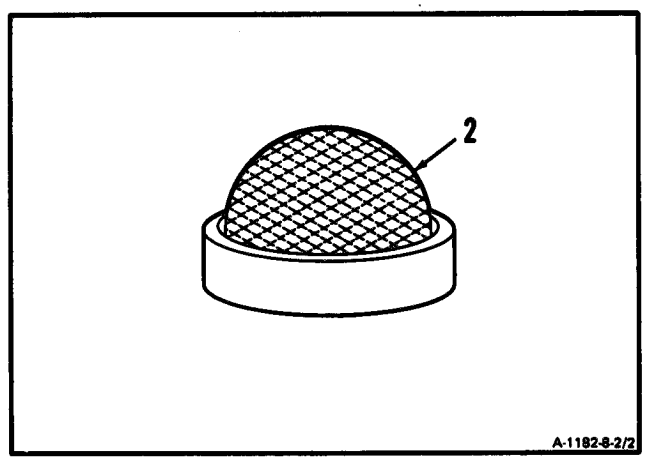
8-2 CLEAN MAIN OIL PUMP AND SCAVENGE OIL SCREEN (Continued) 8-2

3. **Clean scavenge oil screen (2).** Use dry cleaning solvent (E17) and brush.

WARNING

When using compressed air for cleaning, use approved protective equipment for eyes and face. Do not use more than 30 psig air pressure. Do not direct air toward yourself or another parson. Failure to comply could result in injury to eyes or skin. In case of injury, get medical attention.

4. Wear goggles. **Blow dry screen (2)** using clean, dry compressed air.



FOLLOW-ON MAINTENANCE:

Inspect Main Oil Pump and Scavenge Oil Screen (Task 8-3).

END OF TASK

8-3 INSPECT MAIN OIL PUMP AND SCAVENGE OIL SCREEN 8-3

INITIAL SETUP

Applicable Configurations:
All

Tools:
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
None

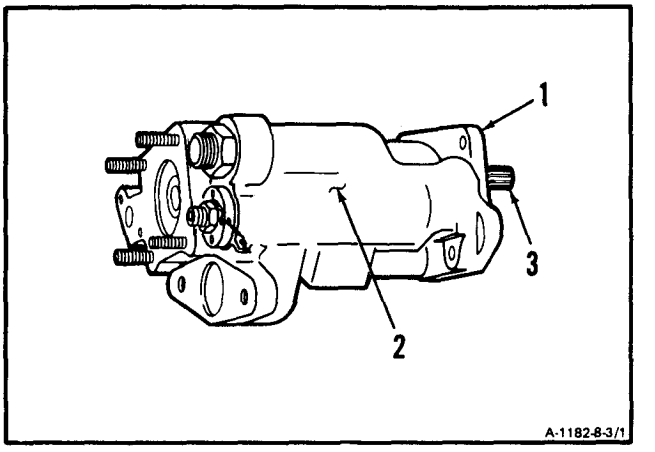
Personnel Required:
68630 Aircraft Powerplant Inspector

References:
Task 1-118

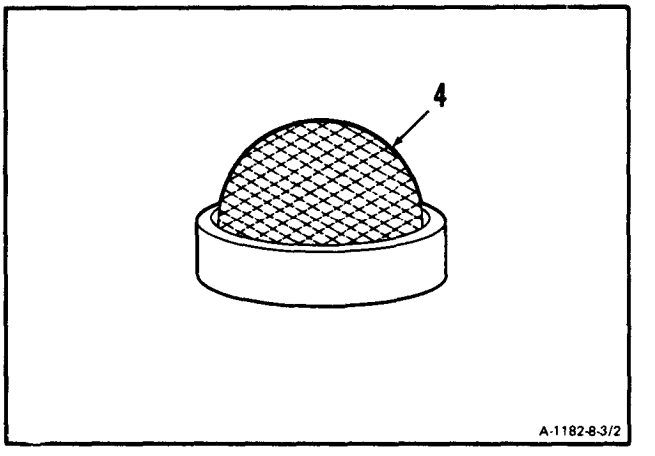
Equipment Condition:
Off Engine Task

1. **Inspect main oil pump (1).** There shall be no cracks in housing (2) or, nicks or cracks in splines of gearshaft (3).

2. **Inspect gearshaft (3).** There shall be no improper wear pattern. Inspect gearshaft (3) for wear (Ref. Task 1-118).



3. **Inspect scavenge oil screen (4).** There shall be no tears in screen.



FOLLOW-ON MAINTENANCE:

None

END OF TASK

8-4 INSTALL MAIN OIL PUMP AND SCAVENGE OIL SCREEN

INITIAL SETUP

Applicable Configurations:
All

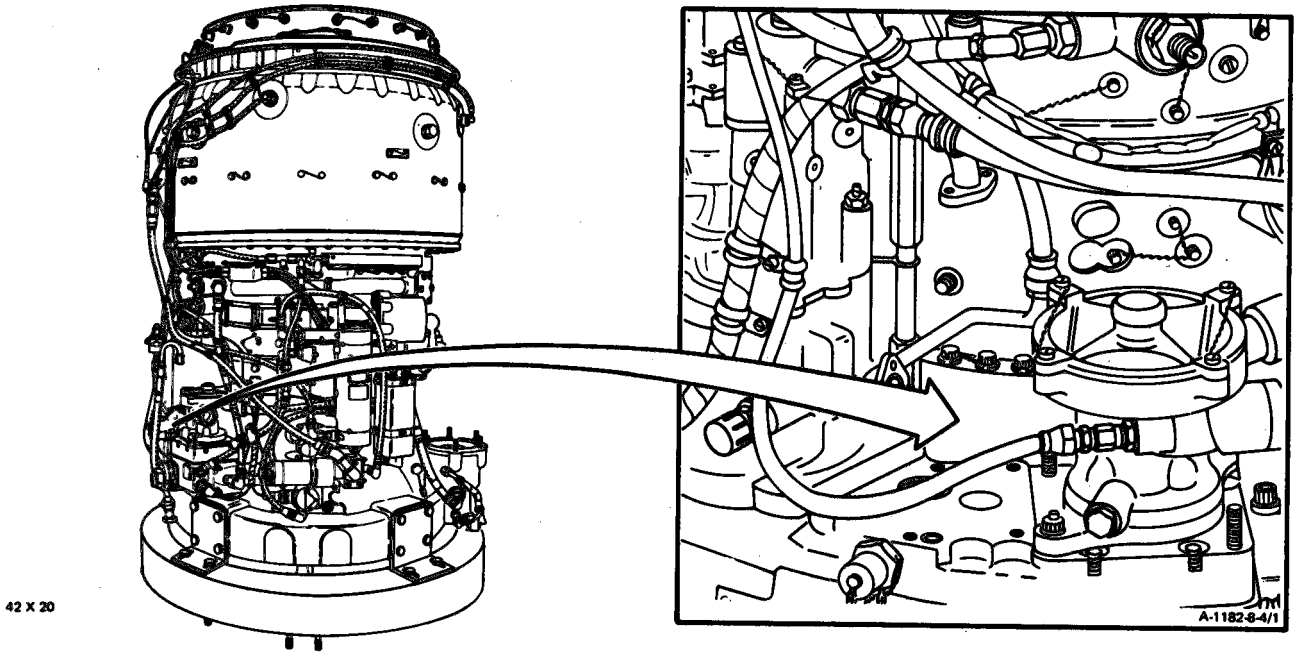
Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114
Torque Wrench, 30-150 Inch-Pounds

Materials:
Lockwire (E29)
Lubricant (E30)

Pam:
Packings

Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

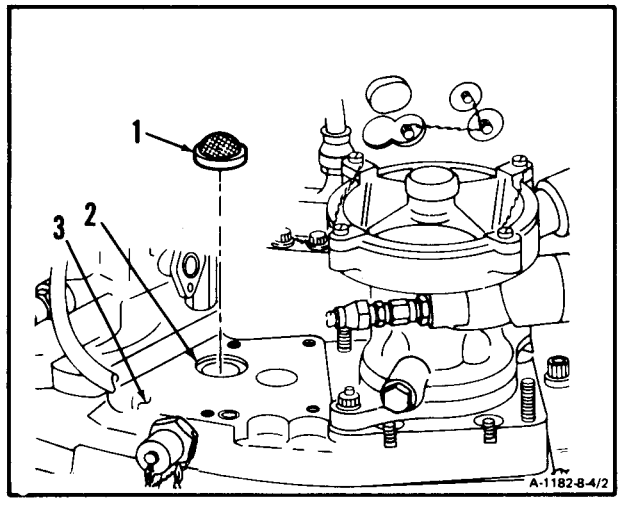
References:
TM 55-2840-254-23P



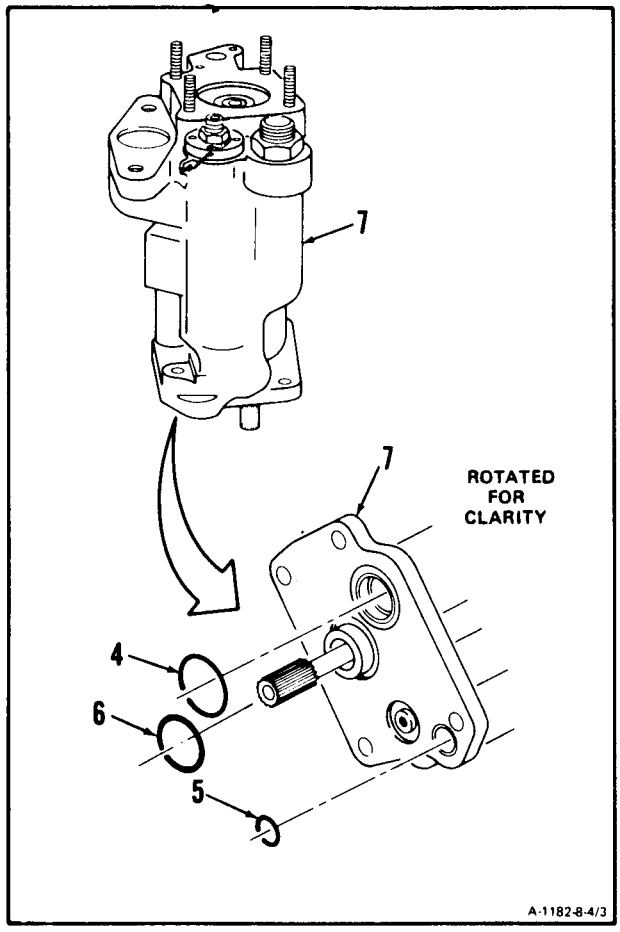
GO TO NEXT PAGE

8-4 INSTALL MAIN OIL PUMP AND SCAVENGE OIL SCREEN (Continued) 8-4

1. **Install scavenge oil screen (1)** in hole (2) in accessory gearbox assembly (3).



2. Install packings (4, 5, and 6) on main oil pump (7).



GO TO NEXT PAGE

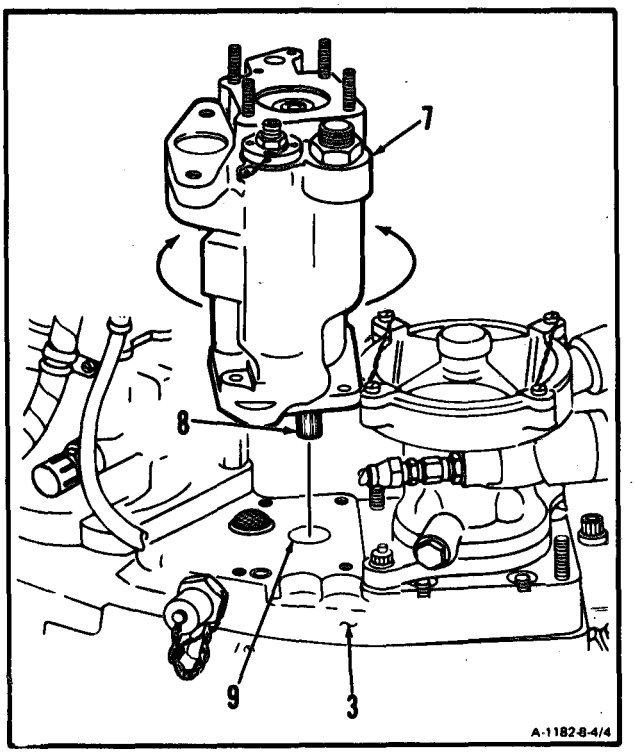
8-4 INSTALL MAIN OIL PUMP AND SCAVENGE OIL SCREEN (Continued) 8-4

3. Apply lubricant (E30) to splines (8).

4. Position main oil pump (7) over accessory gearbox assembly (3).

5. If required, rotate main oil pump (7) slightly left or right to align splines (8) with coupling in hole (9).

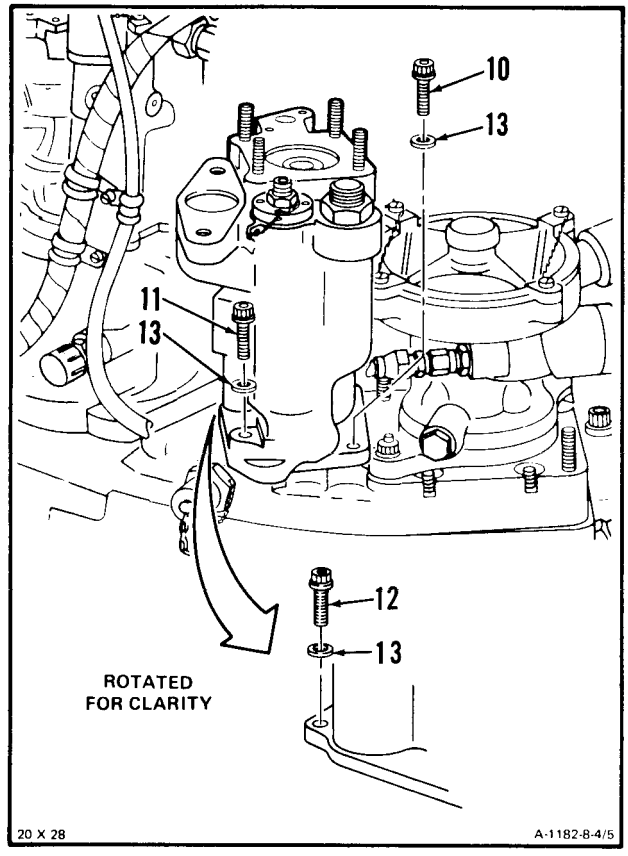
6. **Install main oil pump (7)** on accessory gearbox assembly (3).



GO TO NEXT PAGE

8-4 INSTALL MAIN OIL PUMP AND SCAVENGE OIL SCREEN (Continued) 8-4

7. Install bolt (10), bolt (11), two bolts (12), and four washers (13). Torque bolts (10, 11, and 12) to 70 to 75 inch-pounds. Lockwire bolts (10 and 11). Use lockwire (E29).



GO TO NEXT PAGE

8-4.1 REPAIR FUEL CONTROL 8-4.1

INITIAL SETUP

Applicable Configurations:
All
Tools:
Powerplant Mechanic's Tool Kit, NSN 5180-00-323-4944
Machine Screw - 8132
Machinist's Scriber

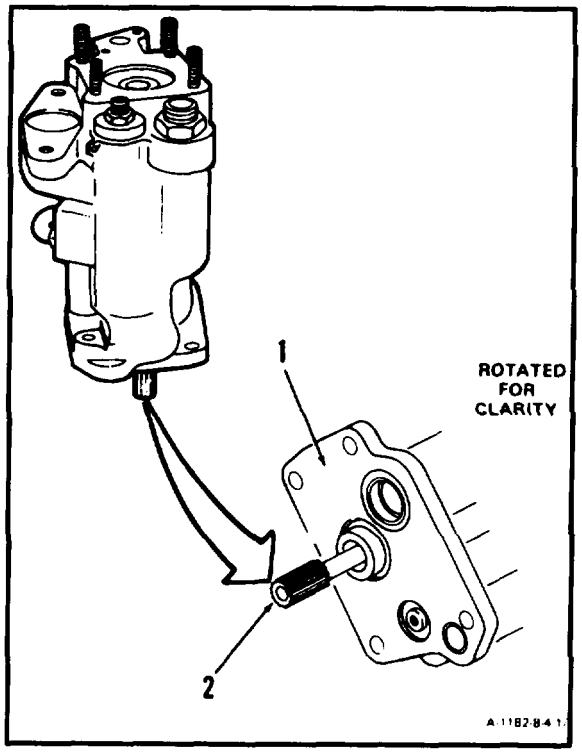
Materials:
Wiping Rag (E58)
Personnel Required:
68B 10 Aircraft Powerplant Repairer
Equipment Condition:
Off Engine Task
Main Oil Pump and Scavenge Oil Screen Removed (Task 8-1)
Main Oil Pump and Scavenge Oil Screen Cleaned (Task 8-2)

General Safety Instructions:

WARNING

Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.

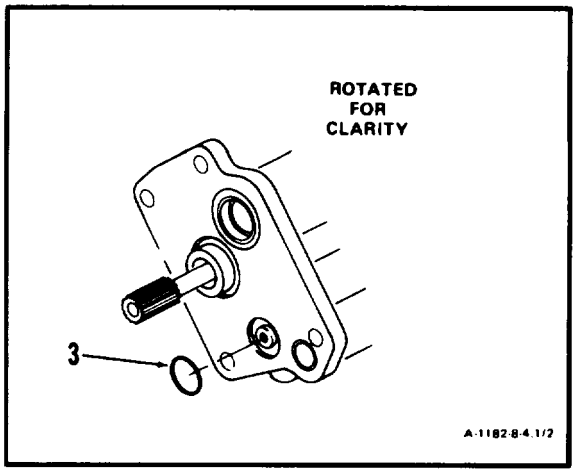
1. Check that main oil pump (1) turns freely by turning shaft (2). If shaft (2) does not turn freely, replace main oil pump (1).



GO TO NEXT PAGE

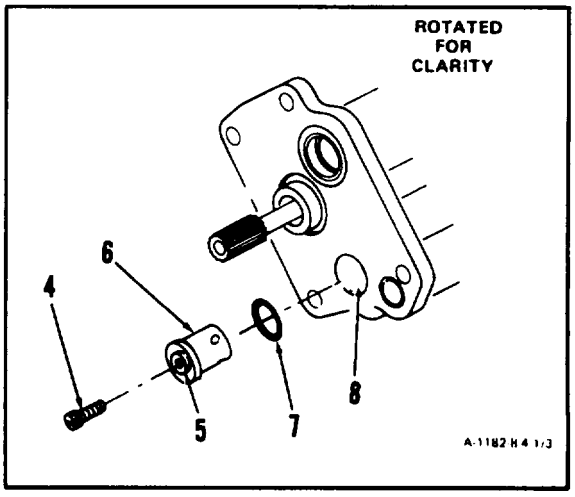
E 8-4.1 REMOVE OIL PUMP CHECK VALVE (Continued) 8-4.1

2. **Remove retaining ring (3)**. Use machinist's scriber.



3. Thread machine screw (4) into hole (5). Using machine screw (4), carefully remove check valve (6) with a twisting motion. Remove packing (7) and machine screw (4).

4. Inspect check valve (6) and oil pump bore (8). There shall be no metal chips or other objects. If metal chips or other objects are present, clean check valve (6) with lint-free cloth (E26) dampened in dry cleaning solvent (El7).



FOLLOW-ON MAINTENANCE:
None

END OF TASK

8-4.2 INSTALL OIL PUMP CHECK VALVE 8.4.2

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechnaic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114
Machine Screw - 8f32

Materials:

Shortening Compound (E46)

Parts:

Check Valve
Packing

Personnel Required:

68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

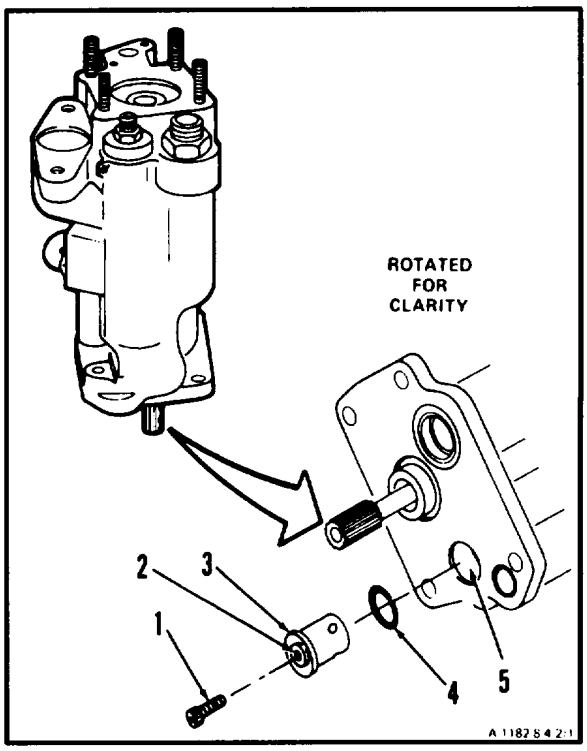
References:

TM 55-2840-254-23P

Equipment Condition:

Off Engine Task

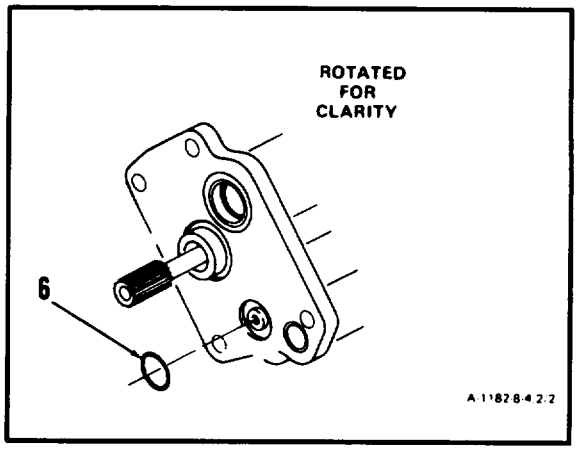
1. Thread machine screw (1) into hole (2) of check valve (3).
2. Install packing (4). Using machine screw (1), install check v by twisting into place.
3. Remove machine screw (1).

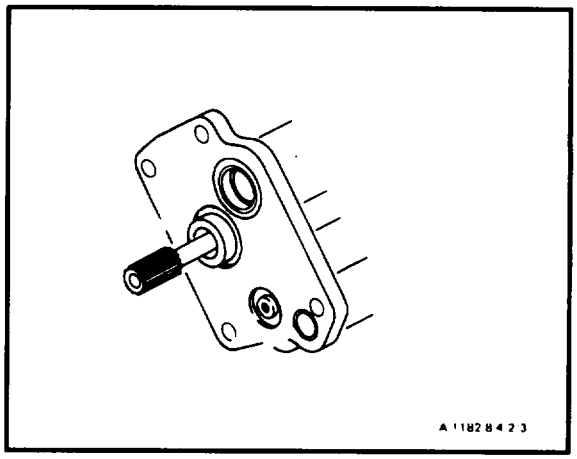


GO TO NEXT PAGE

8-4.2 INSTALL OIL PPUMP CHECK VALVE (Continued) 8-4.2

4. Install retaining ring (6).





INSPECT

FOLLOW-ON MAINTENANCE
Install Main Oil Pump and Scavenge Oil Screen
(Task 8-4)

END OF TASK

8-5 REMOVE OI L COOLER ASSEMBLY 8-5

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Container, 2 Quart

Materials:
Wiping Rag (E58)

Personnel Required:
68610 Aircraft Powerplant Repairer

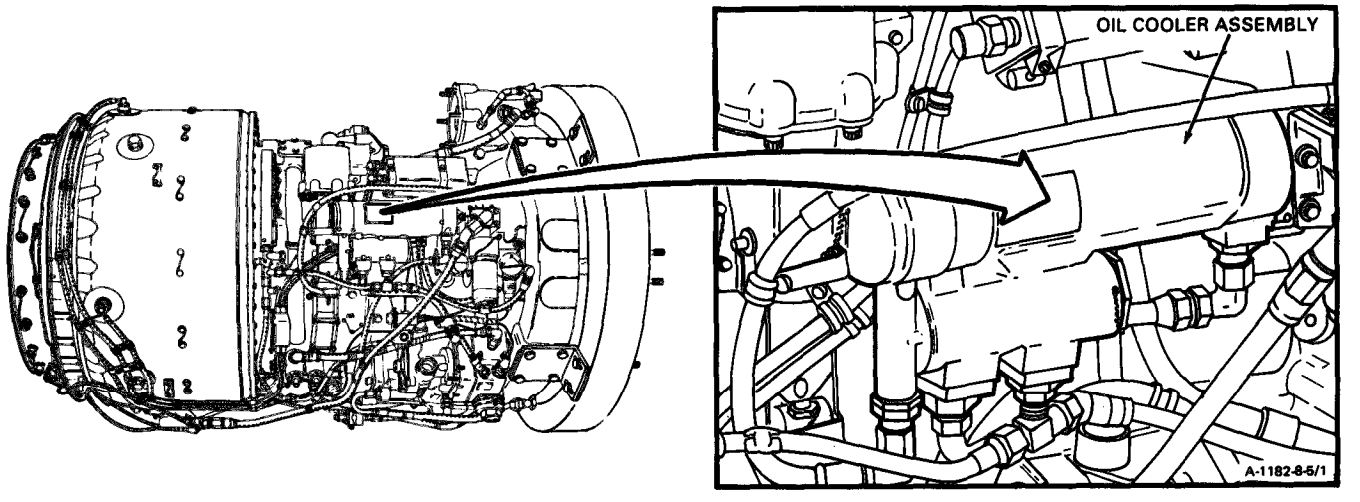
General Safety Instructions:

WARNING

Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and open flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.

WARNING

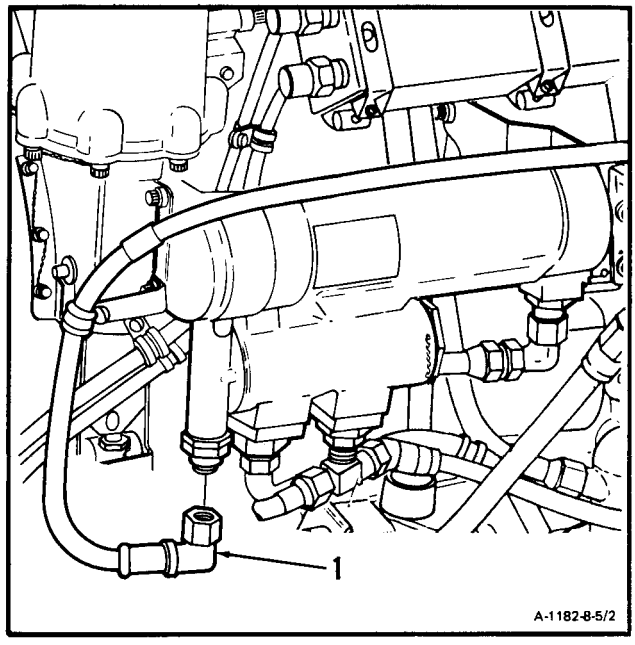
Turbine fuels are very flammable. They may cause drying and irritation of skin or eyes. Handle only in well-ventilated areas away from heat and open flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin and do not take internally. Wash contacted area of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.



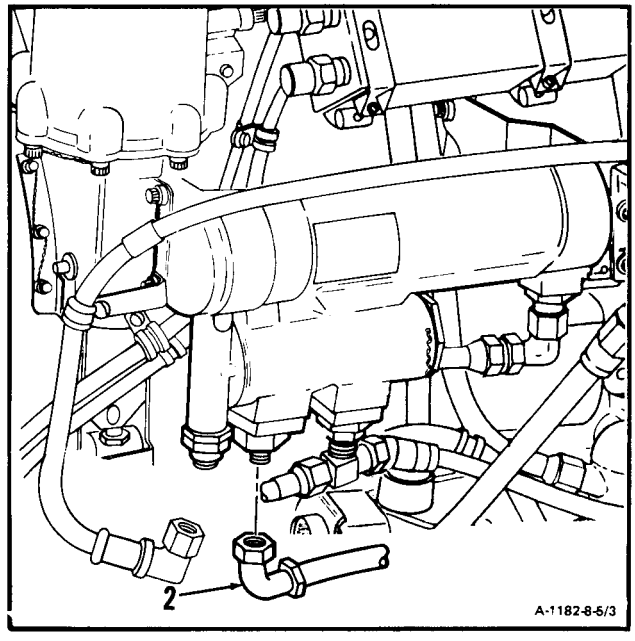
GO TO NEXT PAGE

8-5 REMOVE OIL COOLER ASSEMBLY (Continued) 8-5

1. **Disconnect hose assembly (1).**



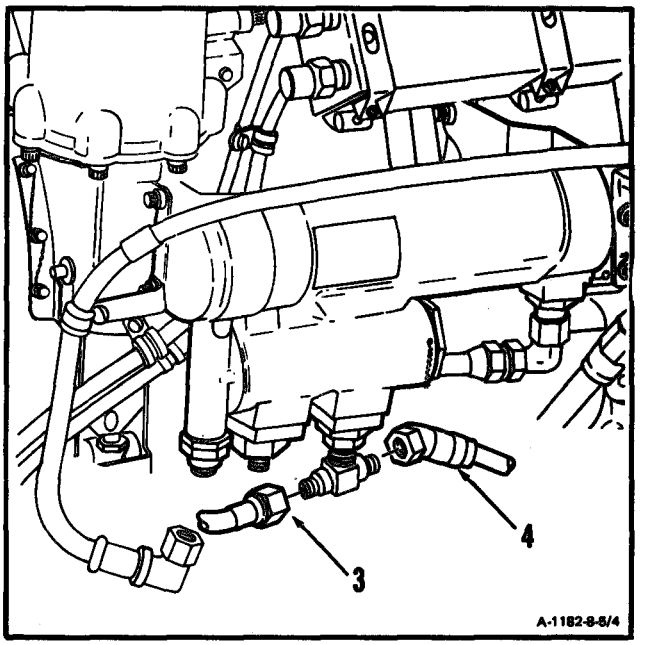
2. **Disconnect hose assembly (2).**



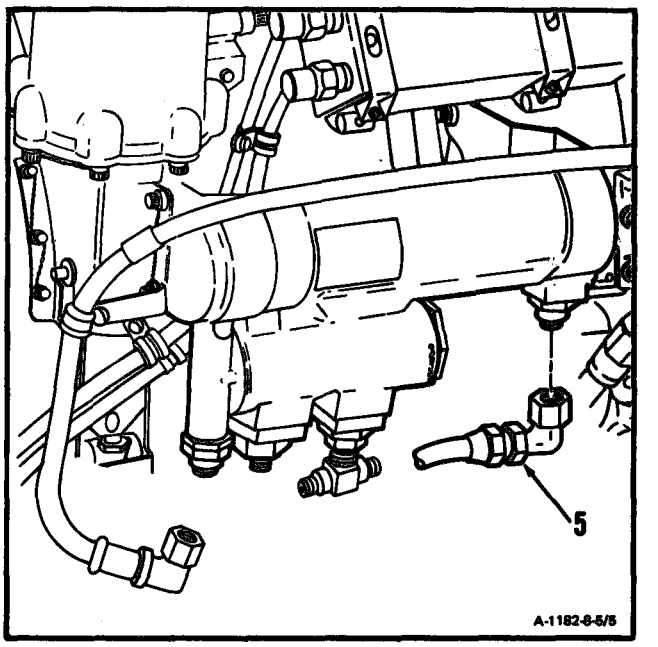
GO TO NEXT PAGE

8-5 REMOVE OIL COOLER ASSEMBLY (Continued) 8-5

3. **Disconnect hose assemblies (3 and 4).**



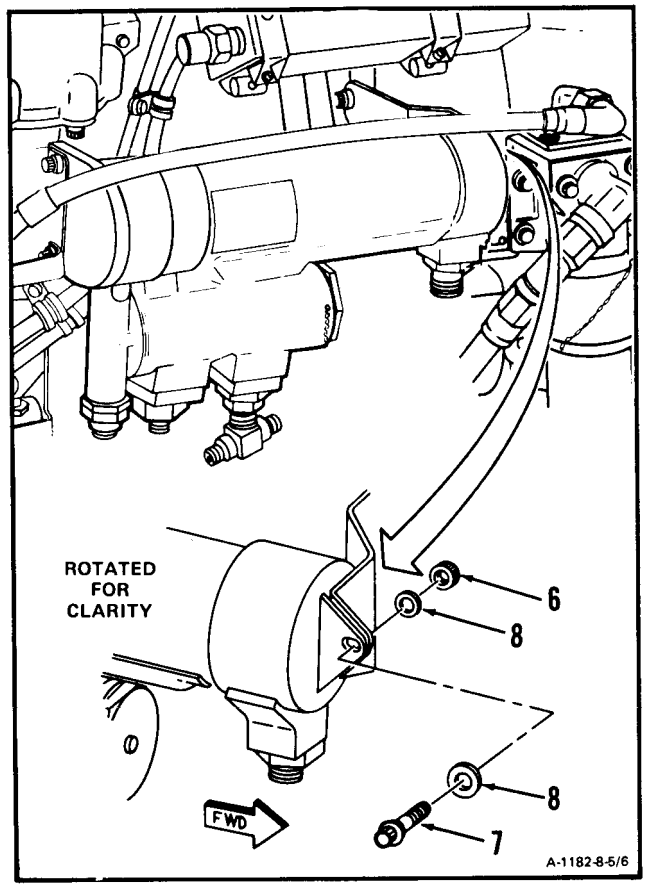
4. **Disconnect hose assembly (5).**



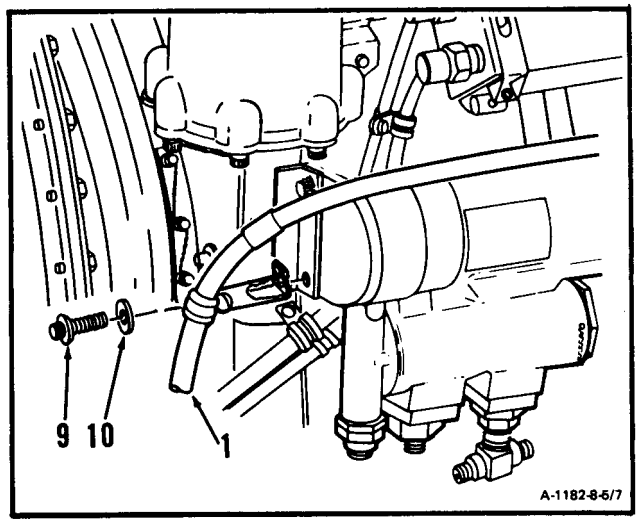
GO TO NEXT PAGE

8-5 REMOVE OIL COOLER ASSEMBLY (Continued)

5. Remove nut (6), bolt (7), and two washers (8).



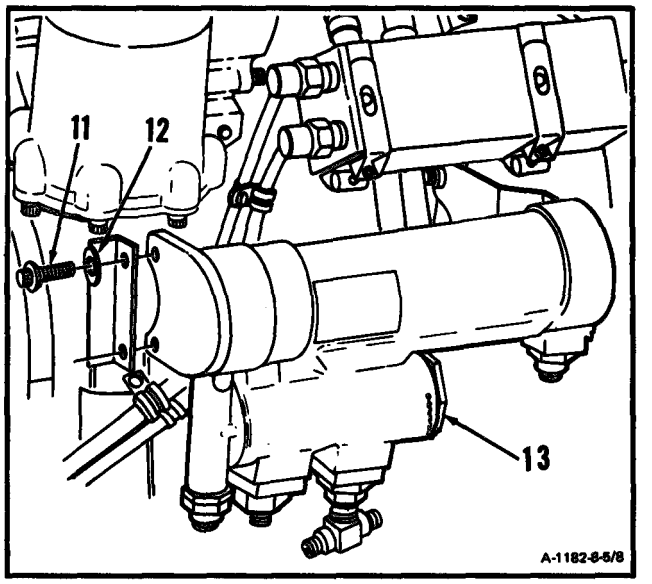
6. Remove lockwire, bolt (9), and washer (10). Place hose assembly (1) to one side.



GO TO NEXT PAGE

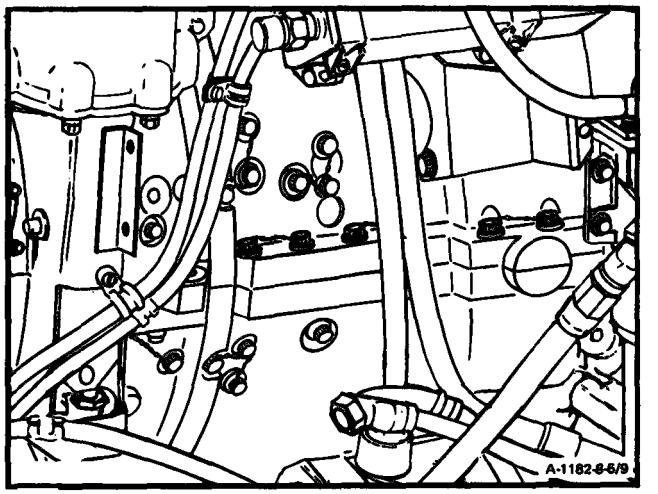
8-5 REMOVE OIL COOLER ASSEMBLY (Continued)

7. **Remove** bolt (11), washer (12), and **oil cooler assembly (13).**



FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-6 DISASSEMBLE OIL COOLER ASSEMBLY 8-6

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Deep Style Socket, 1-Inch
Machinist's Vise
Jaw Caps

Materials:
Wiping Rag (E58)

Personnel Required:
68B10 Aircraft Powerplant Repairer

Equipment Condition:
Off Engine Task
Oil Cooler Assembly Removed (Task 8-5)

General Safety Instructions:

WARNING

Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention, Get medical attention for eyes.

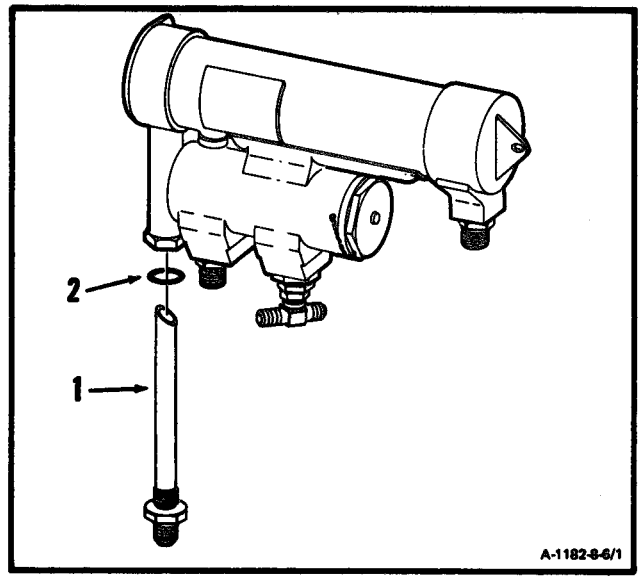
WARNING

Turbine fuels are very flammable. They may cause drying and irritation of skin or eyes. Handle only in well-ventilated areas away from heat and open flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin and do not take internally. Wash contacted area of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.

GO TO NEXT PAGE

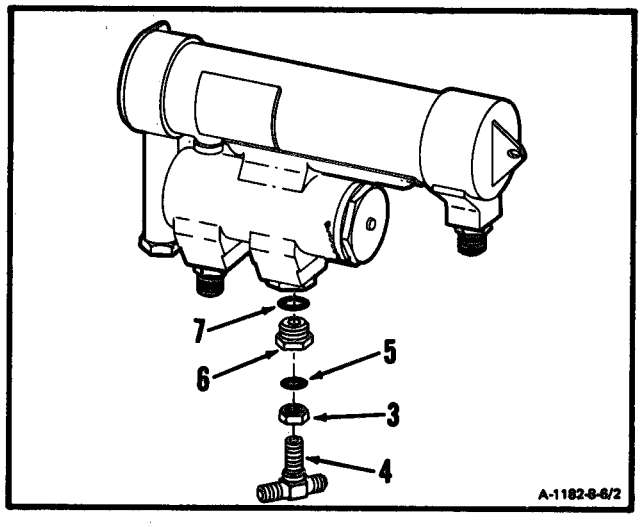
8-6 D1SASSEMBLE OIL COOLER ASSEMBLY (Continued)

1. **Remove tube assembly (1)** and packing (2). Use vise with jaw caps.



2. Loosen nut (3). **Remove fitting (4),** packing (5) and nut (3).

3. **Remove bushing (6)** and packing (7).

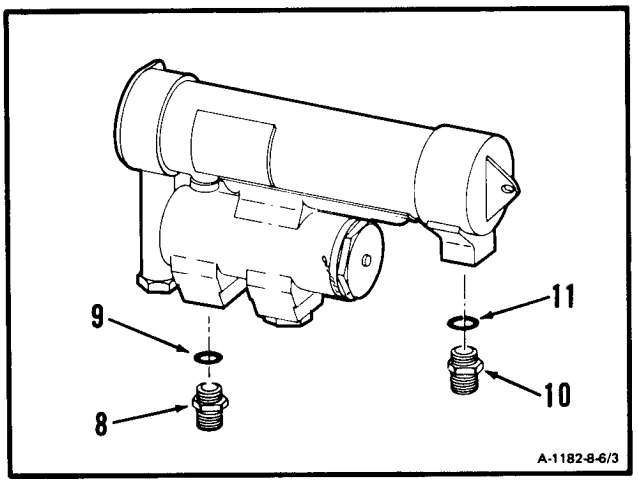


GO TO NEXT PAGE

8-6 DISASSEMBLE OIL COOLER ASSEMBLY (Continued) 8-6

4. Using deep style socket, **remove reducer (8).** Remove packing (9).

5. **Remove nipple (10)** and packing (11).



FOLLOW-ON MAINTENANCE:

None

END OF TASK

8-7 CLEAN OIL COOLER ASSEMBLY

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944

Materials:
Dry Cleaning Solvent (E17)
Gloves (E20)

Personnel Required:
68B10 Aircraft Powerplant Repairer

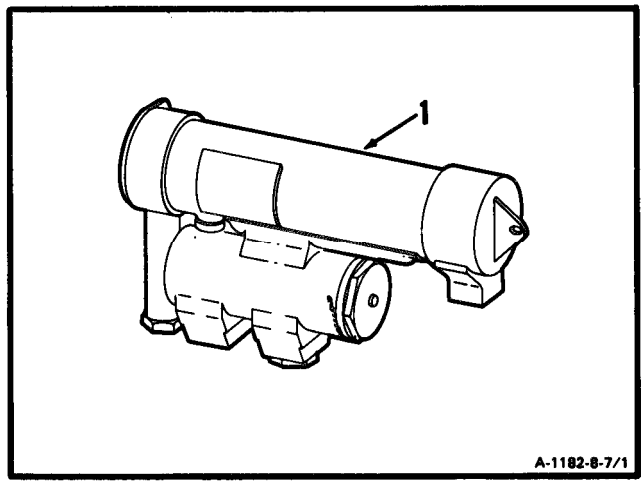
Equipmnt Condition:
Off Engine Task
Oil Cooler Assembly Removed (Task 8-5)
Oil Cooler Assembly Disassembled (Task 8-6)

General Safety Instructions:

WARNING

Dry cleaning solvent (E17) is flammable and toxic. It can irritate skin and cause burns. Use only in well-ventilated area, away from heat and open flame. In case of contact, immediately flush skin or eyes with water for at least 15 minutes. Get medical attention for eyes.

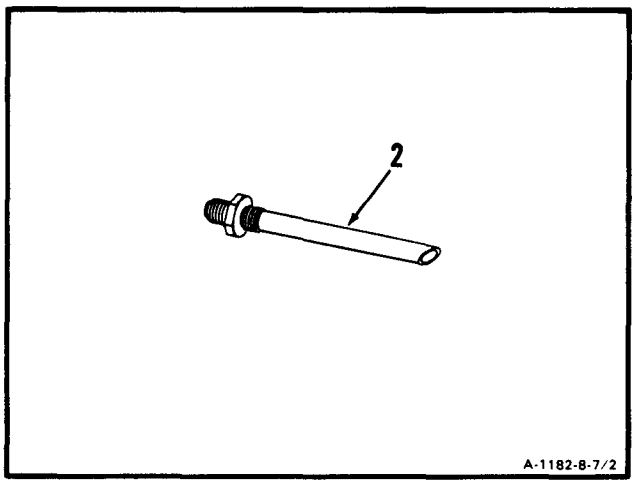
1. Wear gloves (E20). **Flush internal passages** of oil cooler (1) with dry cleaning solvent (E17).
2. **Clean external surfaces** of oil cooler (1). Use dry cleaning solvent (E17) and brush.
3. Allow to drain and air-dry.



GO TO NEXT PAGE

8-7 CLEAN OIL COOLER ASSEMBLY (Continued) 8-7

4. **Clean tube assembly (2).** Use dry cleaning solvent (E17).



FOLLOW-ON MAINTENANCE:

Inspect Oil Cooler Assembly (Task 8-8).

END OF TASK

8-8 INSPECT OIL COOLER ASSEMBLY

INITIAL SETUP

Applicable Configurations:
All

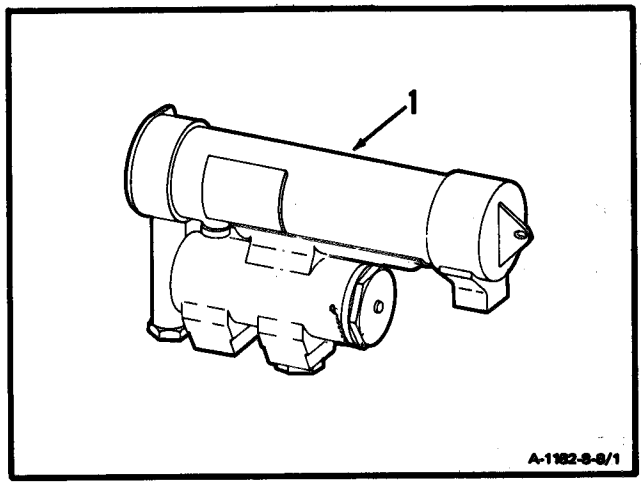
Tools:
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
None

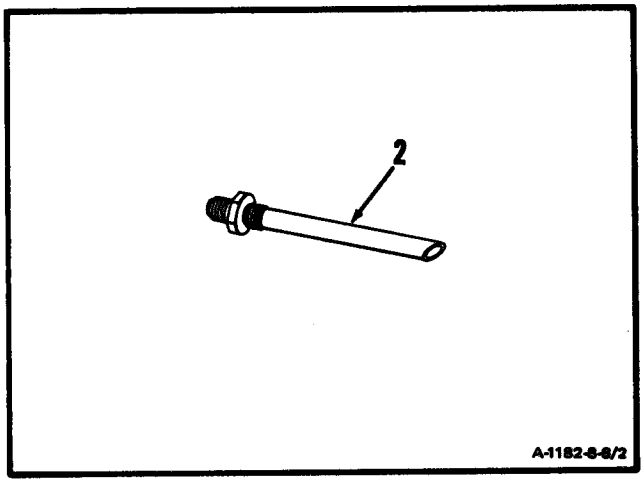
Personnel Required:
68B30 Aircraft Powerplant Inspector

Equipment Condition:
Off Engine Task

1. **Inspect oil cooler (1).** There shall be no cracks.



2. **Inspect tube assembly (2).** There shall be no cracks, dents or bends.



FOLLOW-ON MAINTENANCE:

None

END OF TASK

8-9 REPAIR OIL COOLER ASSEMBLY

INITIAL SETUP

Applicable Configurations:
All

Tools:
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

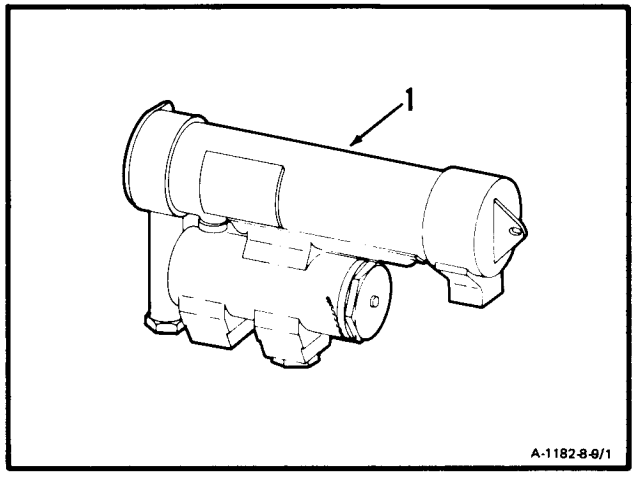
Materials:
Acid Swabbing Brush (E2)
Engine Gray Enamel (E22)

Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

References:
Task 1-119

Equipment Condition:
Off Engine Task

1. **Repair damaged paint on oil cooler assembly (1).** (Ref. Task 1-119). Use engine gray enamel (E22).



INSPECT

FOLLOW-ON MAINTENANCE:

None

END OF TASK

8-10 ASSEMBLE OIL COOLER ASSEMBLY

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit, NSN 5180-00-323-4944
Technical inspection Tool Kit, NSN 5180-00-323-5114
Deep Style Socket, 1-Inch
Machinist's Vise
Jaw Caps

Materials:
None

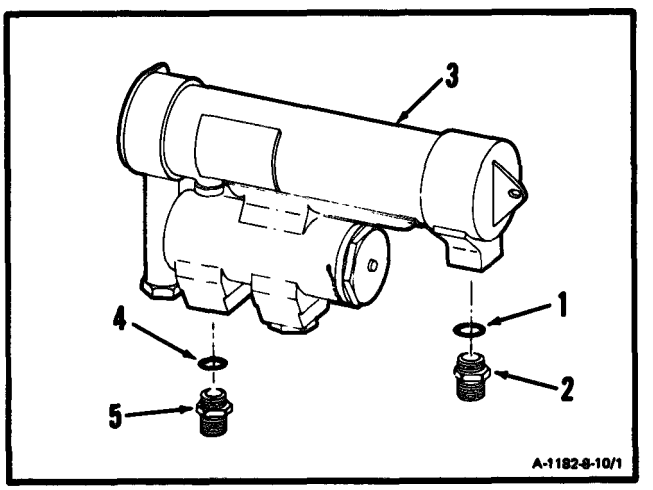
Parts:
Packings

Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

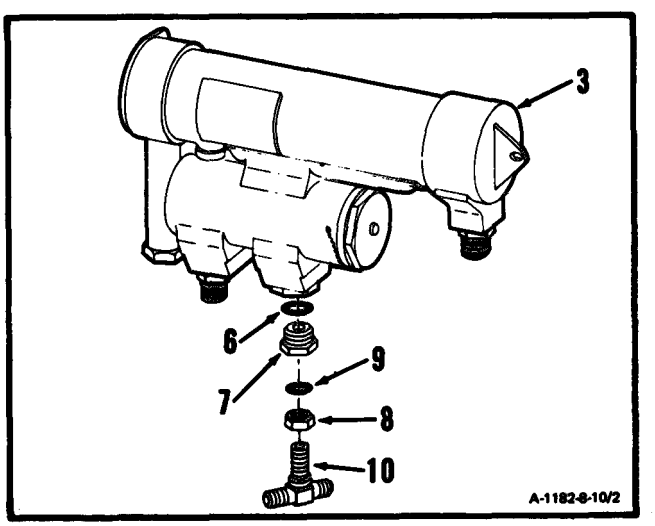
References:
TM 55-2840-254-23P

Equipment Condition:
Off Engine Task

1. **Install** packing (1) and **nipple (2)** in oil cooler (3). Use vise and jaw caps.
2. **Install** packing (4) and **reducer** (5) in oil cooler (3). Use deep style socket.



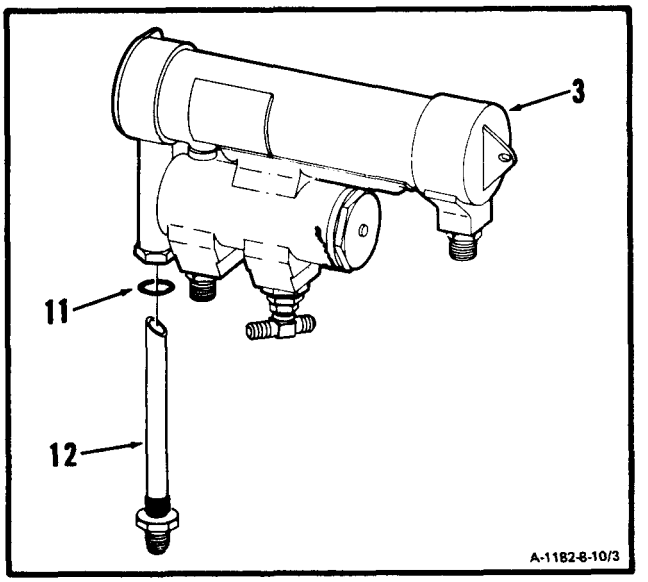
3. **Install** packing (6) and **bushing** (7) in oil cooler (3).
4. Install nut (8) on fitting (10). **Install** packing (9) and **fitting (10)** in oil cooler (3).



GO TO NEXT PAGE

8-10 ASSEMBLE Oil COOLER ASSEMBLY (Continued)

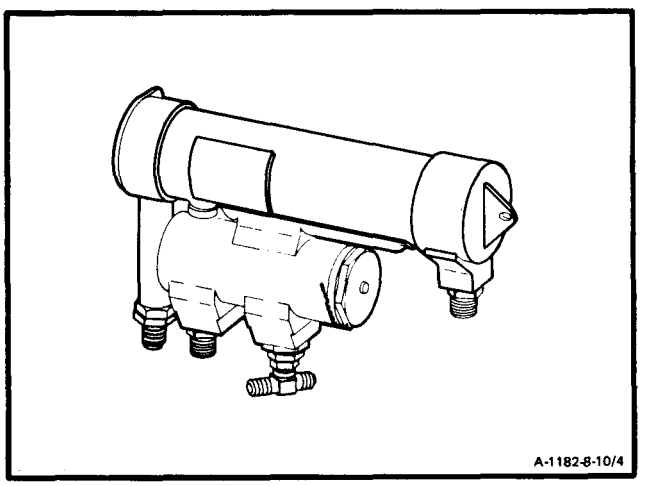
5. **Install** packing (11) and tube **assembly (12)** in oil cooler (3).



INSPECT

FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-11 INSTALL OIL COOLER ASSEMBLY 8-11

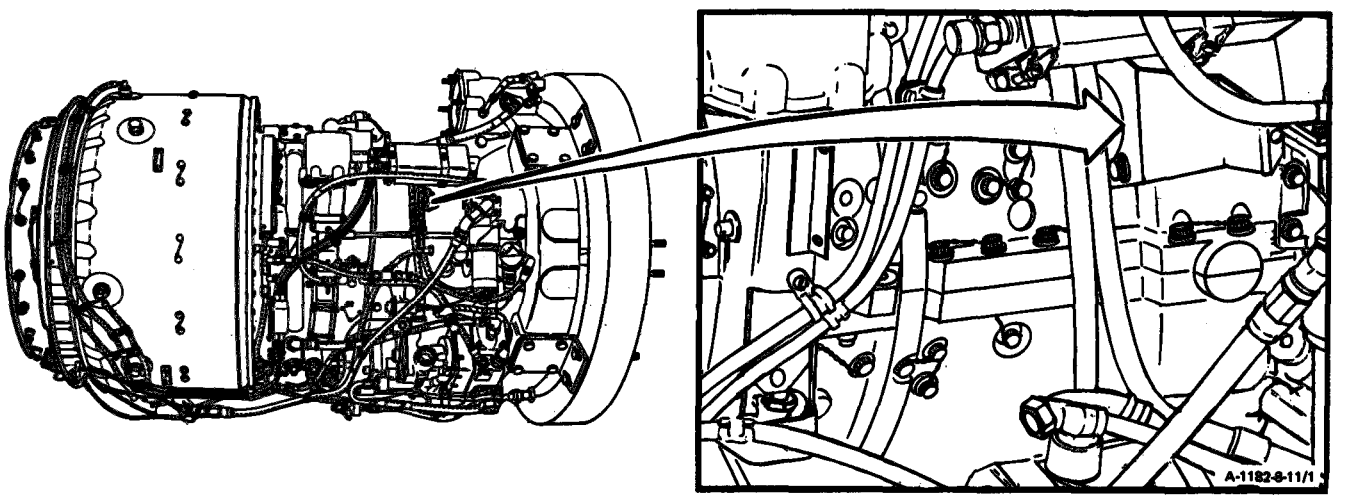
INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
Lockwire (E29)

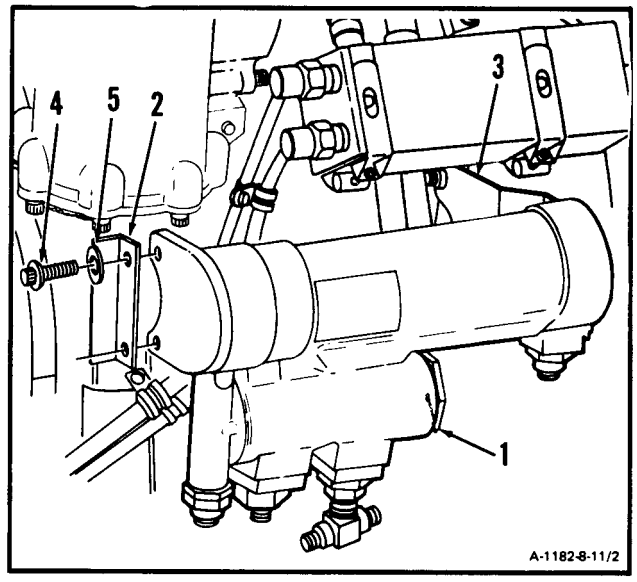
Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector



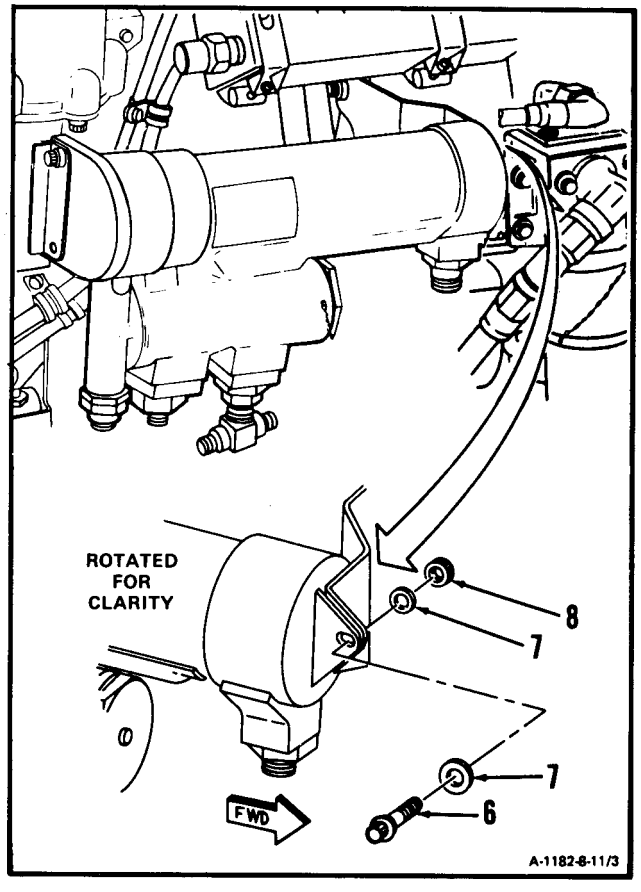
GO TO NEXT PAGE

8-11 INSTALL OIL COOLER ASSEMBLY (Continued) 8-11

1. **Install oil cooler assembly (1) on interstage air-bleed actuator (2) and bracket (3).** Loosely install bolt (4) and washer (5).



2. Install bolt (6), two washers (7), and nut (8).

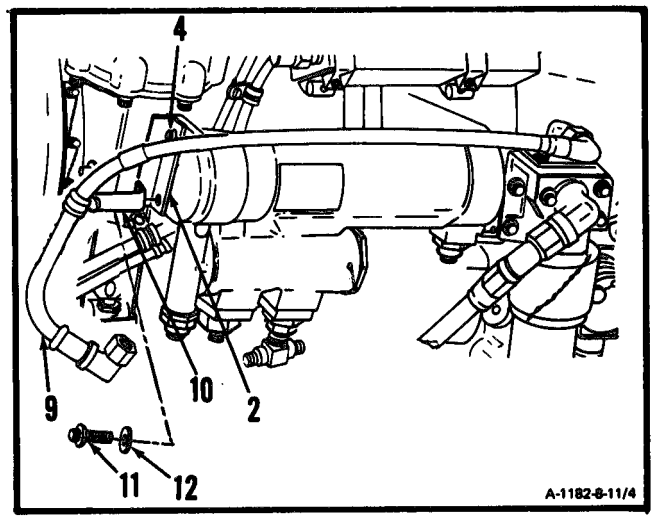


GO TO NEXT PAGE

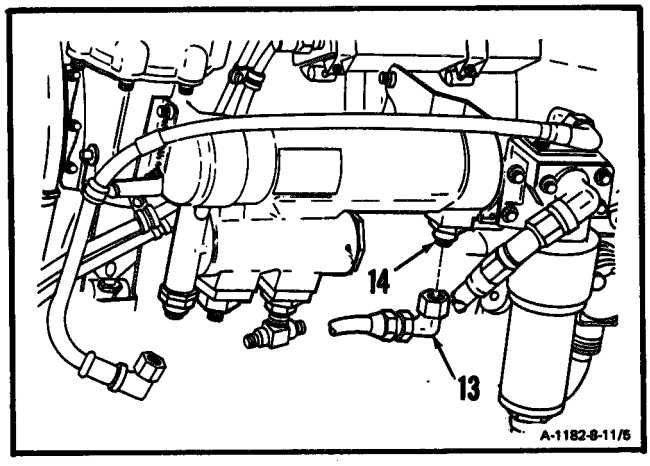
8-11 INSTALL OIL COOLER ASSEMBLY (Continued)

3. Route hose assembly (9), and install bracket (10) on interstate air-bleed actuator (2).

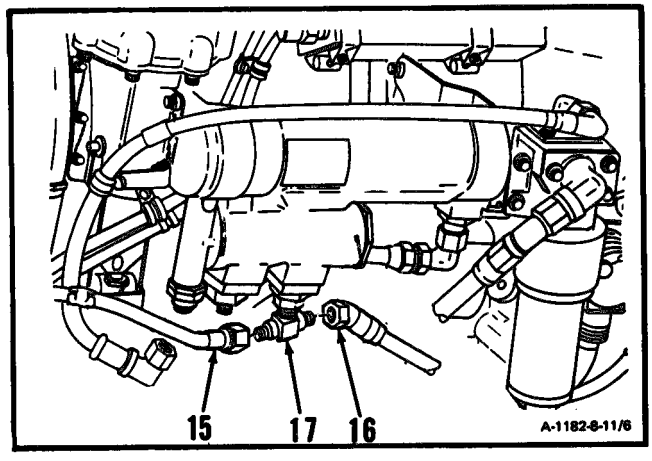
4. Install bolt (11) and washer (12), and tighten bolt (4). Lockwire bolts (4 and 11). Use lockwire (E29).



5. **Connect hose assembly (13)** to nipple (14).



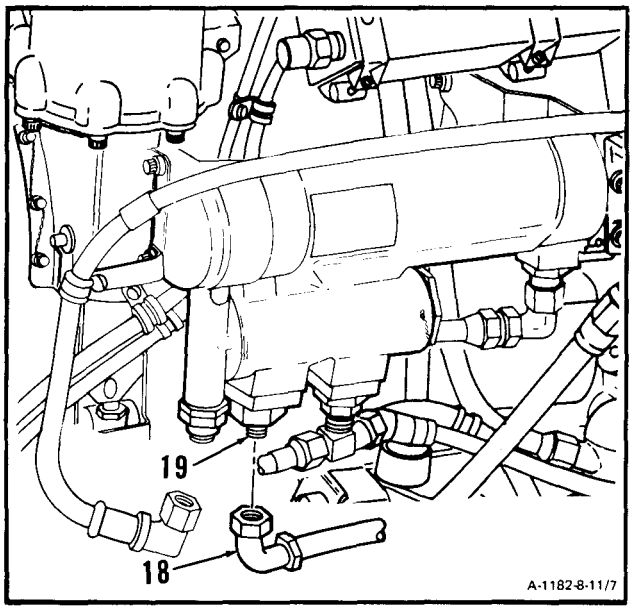
6. **Connect hose assemblies 15 and 16)** to fitting (17).



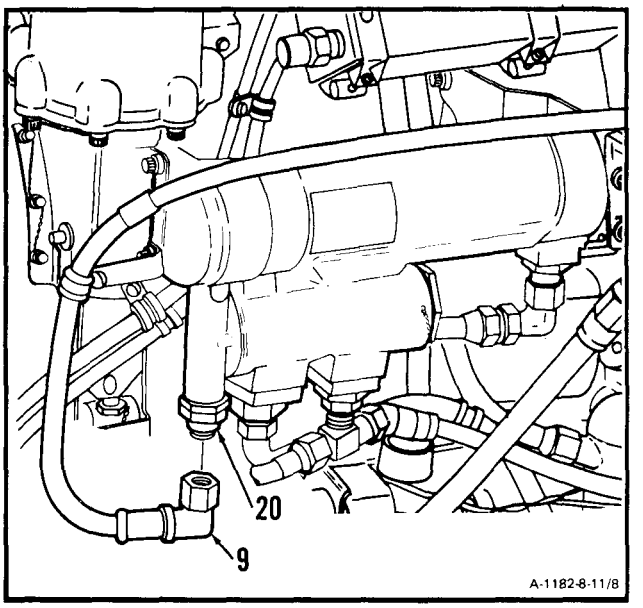
GO TO NEXT PAGE

8-11 INSTALL OIL COOLER ASSEMBLY (Continued)

7. **Connect hose assembly (18)** to reducer (19).



8. **Connect hose assembly (9)** to tube assembly (20).



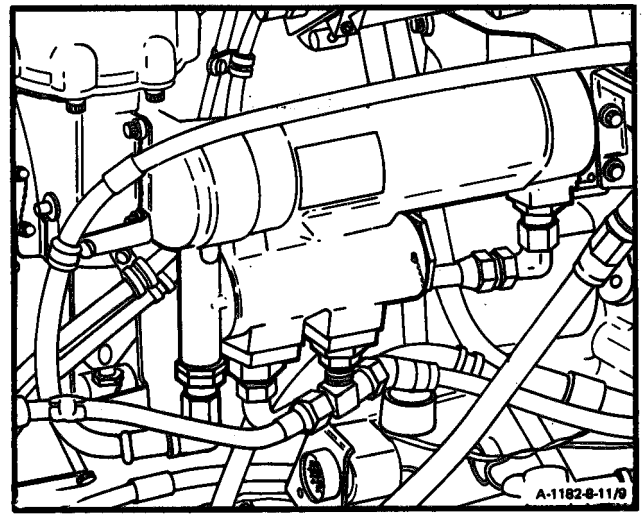
INSPECT

GO TO NEXT PAGE

8-11 INSTALL OIL COOLER ASSEMBLY (Continued)

FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-12 REMOVE OIL TEMPERATURE TRANSMITTER

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944

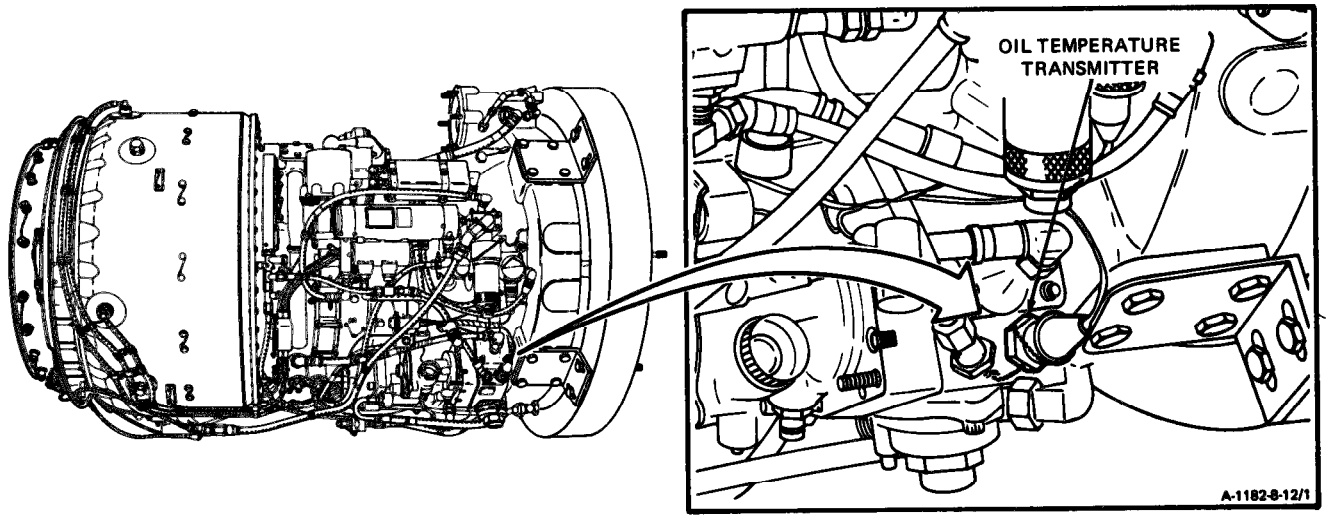
Materials:
None

Personnel Required:
68B10 Aircraft Powerplant Repairer

General Safety Instructions:

WARNING

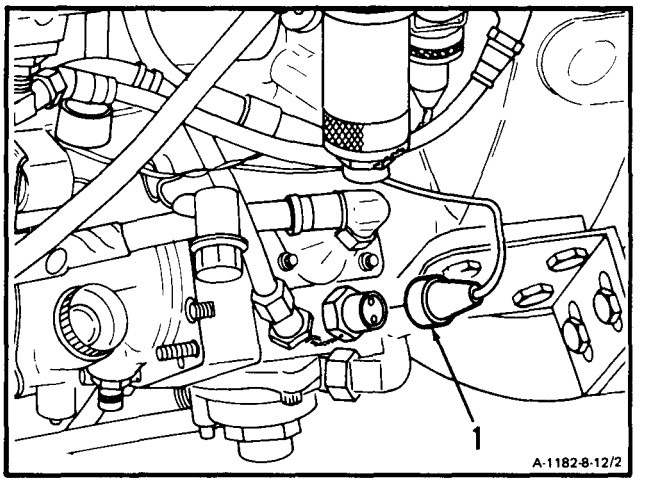
Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. They may burn if exposed to heat or flame. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin and eyes results, get medical attention.



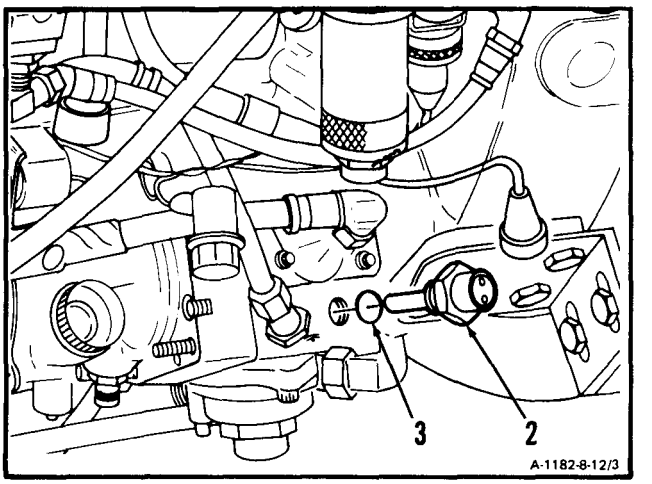
GO TO NEXT PAGE

8-12 REMOVE OIL TEMPERATURE TRANSMITTER (Continued)

1. **Remove** lockwire and **electrical connector (1).**

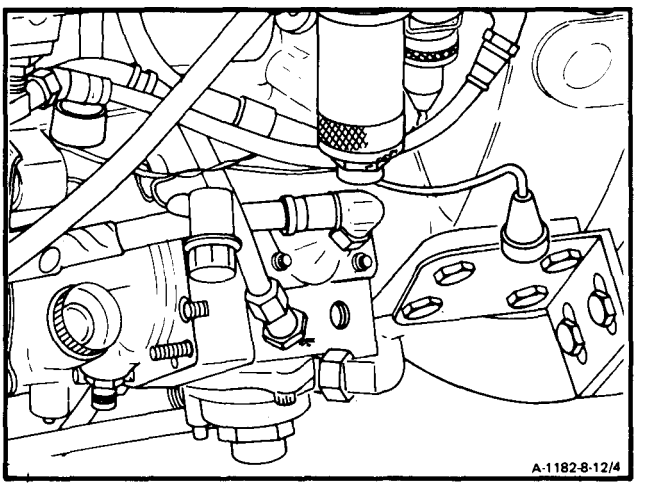


2. Remove lockwire, **oil temperature transmitter (2),** and gasket (3).



FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-13 CLEAN OIL TEMPERATURE TRANSMITTER

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944

Materials:
Dry Cleaning Solvent (E17)
Gloves (E20)
Lint-Free Cloth (E26)

Personnel Required:
68610 Aircraft Powerplant Repairer

Equipment Condition:
Off Engine Task
Oil Temperature Transmitter Removed
(Task 8-12)

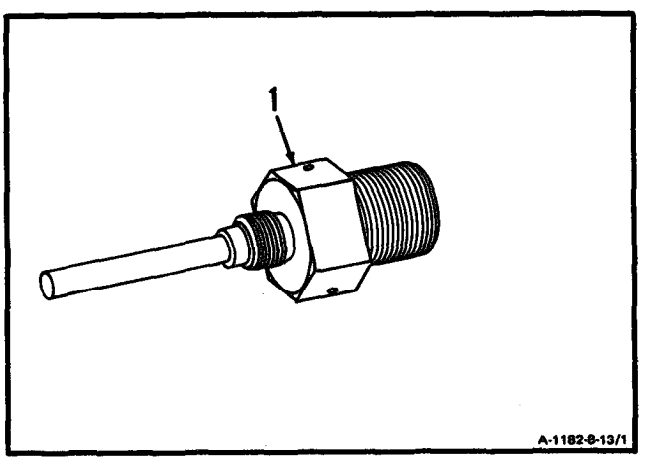
General Safety Instructions:

WARNING

Dry cleaning solvent (E17) is flammable and toxic. It can irritate akin and cause burns. Use only in well-ventilated area, away from heat and open flame. In case of contact, immediately flush skin or eyes with water for at least 15 minutes. Get medical attention for eyes.

1. Wear gloves (E20). **Clean oil temperature transmittal (1).** Use dry cleaning solvent (E17) and brush.

2. **Wipe dry** using clean, dry, lint-free cloth (E26).



FOLLOW-ON MAINTENANCE:

Inspect Oil Temperature Transmitter (Task 8-14).

END OF TASK

8-14 INSPECT OIL TEMPERATURE TRANSMITTER 8-14

INITIAL SETUP

Applicable Configurations:
All

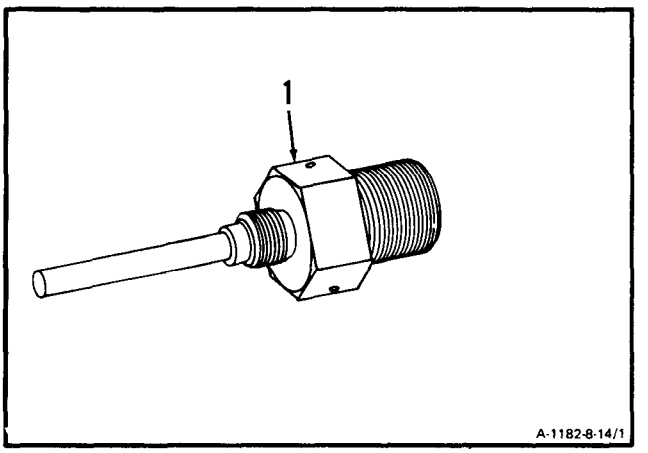
Tools:
Technical Inspection Tool Kit,
NSN 5181-00-323-5114

Materials:
None

Personnel Required:
68B30 Aircraft Powerplant Inspector

Equipment Condition:
Off Engine Task

1. **Inspect oil temperature transmitter (1).** There shall be no cracks.



FOLLOW-ON MAINTENANCE:

None

END OF TASK

8-15 INSTALL OIL TEMPERATURE TRANSMITTER

INITIAL SETUP

Applicable Configurations:
All

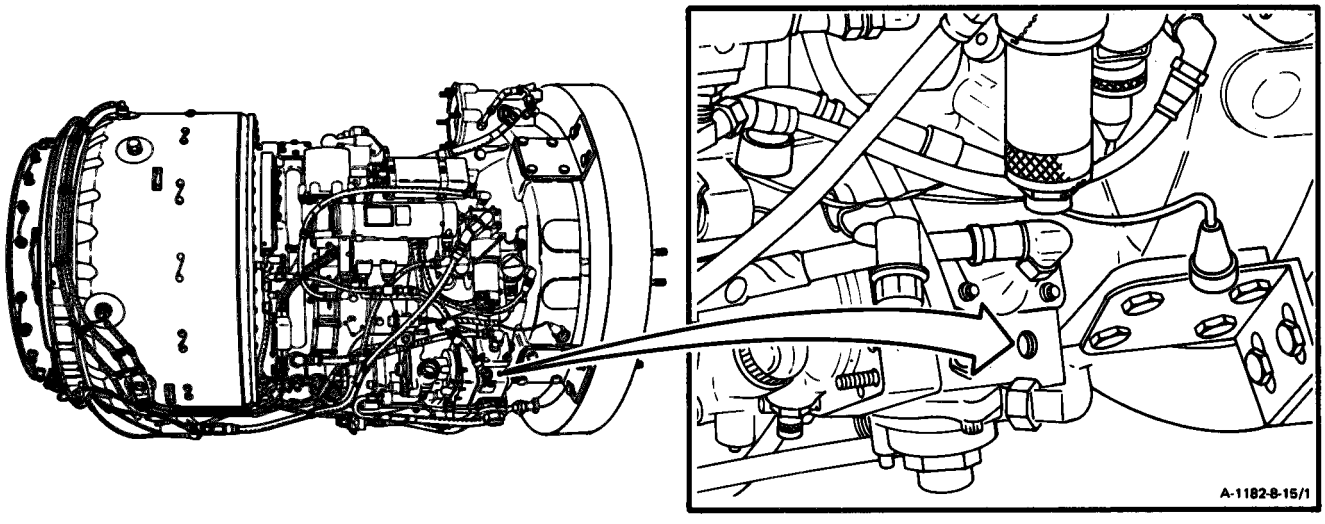
Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
Lockwire (E29)

Parts:
Gasket

Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

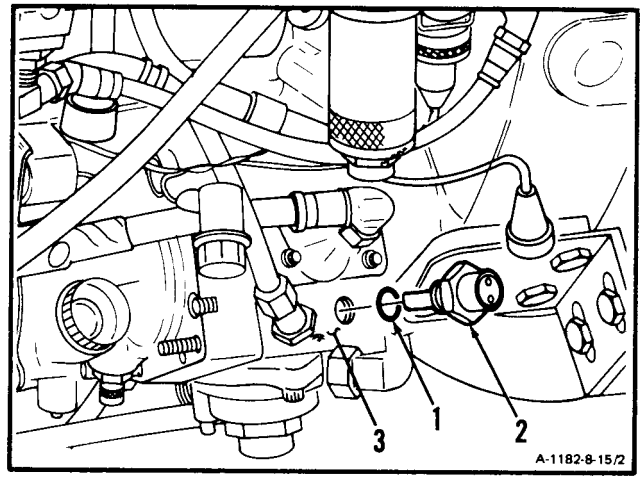
References:
TM 55-2840-254-23P



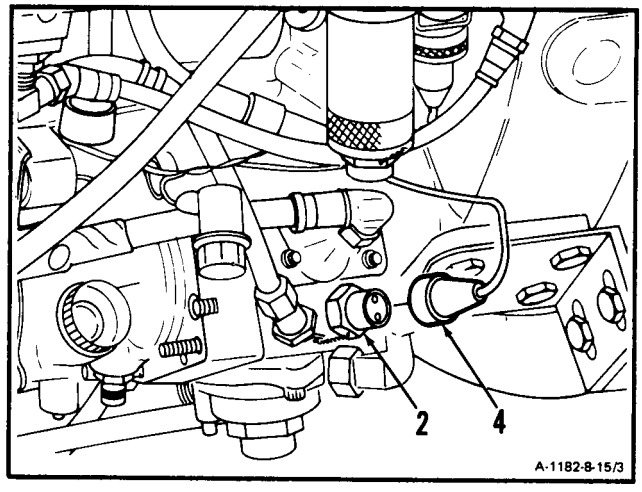
GO TO NEXT PAGE

8-15 INSTALL OIL TEMPERATURE TRANSMITTER (Continued)

1. **Install** gasket (1) and **oil temperature transmitter (2)** in accessory gearbox assembly (3). Lockwire oil temperature transmitter (2). Use lockwire (E29).



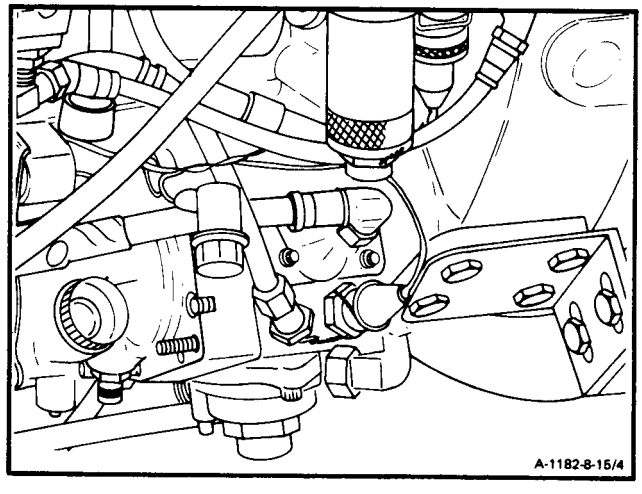
2. **Install electrical connector** (4) on oil temperature transmitter (2). Lockwire electrical connector (4). Use lockwire (E29).



INSPECT

FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-16 REMOVE OIL FILLER ASSEMBLY AND OIL FILLER STRAINER 8-16

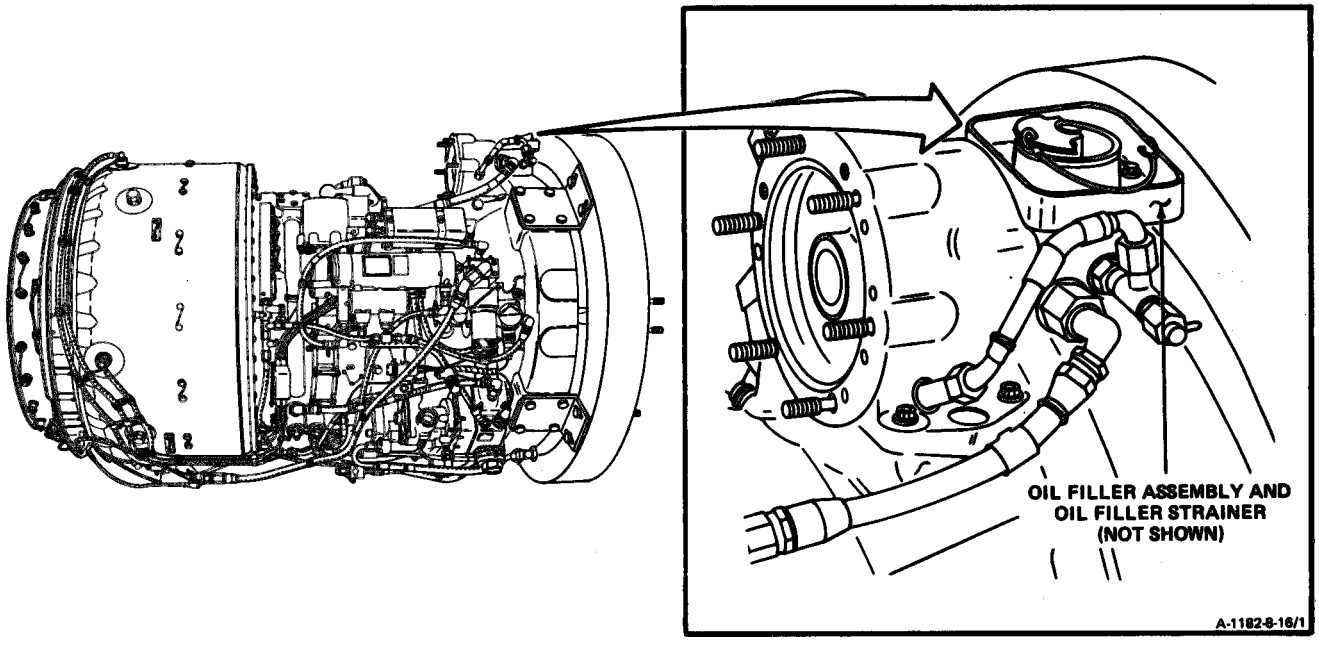
INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944

Materials:
Wiping Rag (E58)

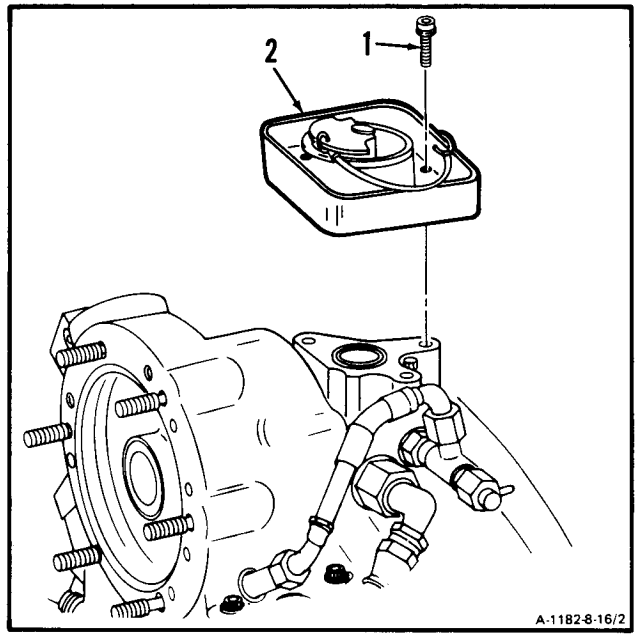
Personnel Required:
68B10 Aircraft Powerplant Repairer



GO TO NEXT PAGE

8-16 REMOVE OIL FILLER ASSEMBLY AND OIL FILLER STRAINER (Continued) 8-16

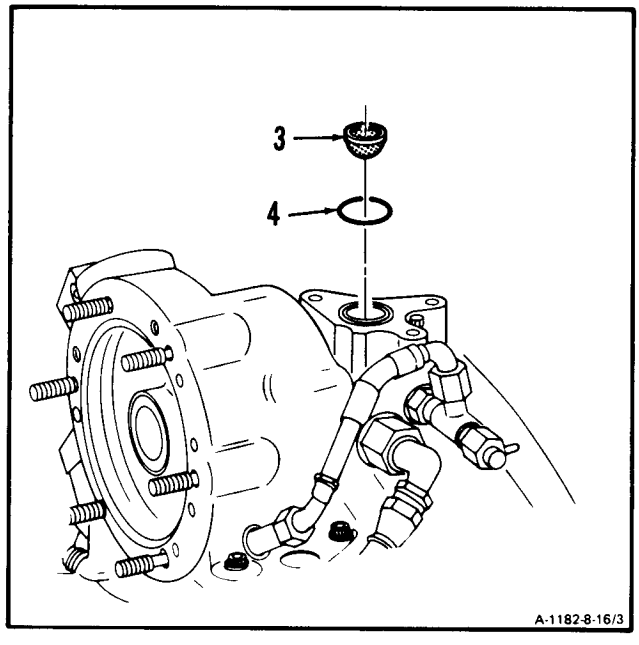
1. **Remove** lockwire, three bolts (1) and **oil filler assembly (2).**



CAUTION

If tools must be used to remove strainer care must be exercised to prevent damage to mating surfaces.

2. **Remove oil filler strainer (3) and packing (4).**

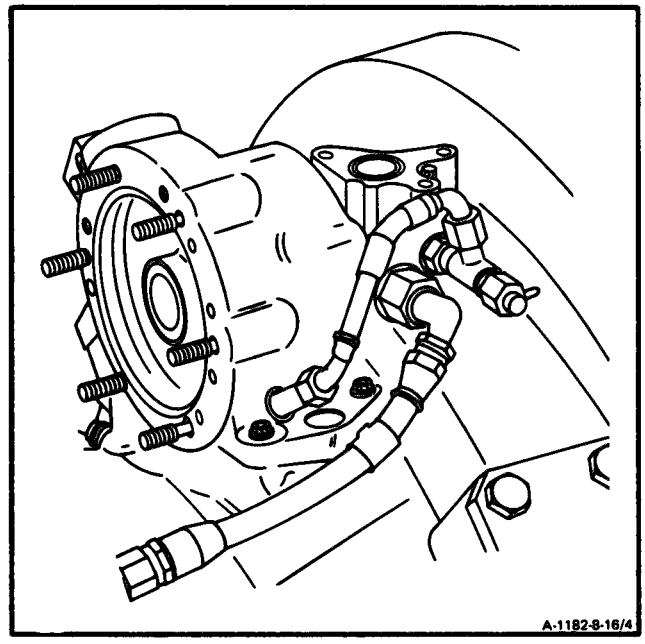


GO TO NEXT PAGE

8-16 REMOVE OIL FILLER ASSEMBLY AND OIL FILLER STRAINER (Continued) 8-16

FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-17 DISASSEMBLE OIL FILLER ASSEMBLY AND OIL FILLER STRAINER 8-17

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944

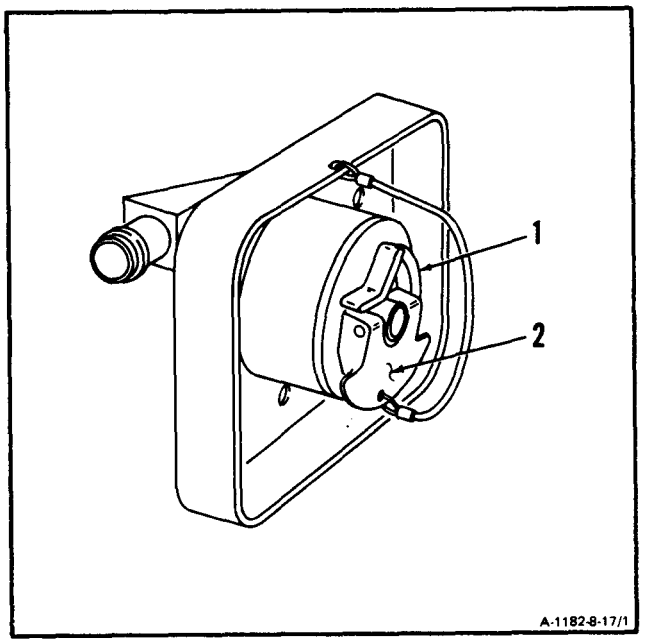
Materials
None

Personnel Required:
68B10 Aircraft Powerplant Repairer

Equipment Condition:
Off Engine Task
Oil Filler Assembly and Oil Filler Strainer Removed (Task 8-16)

1. **Remove cap assembly (1)** as follows:

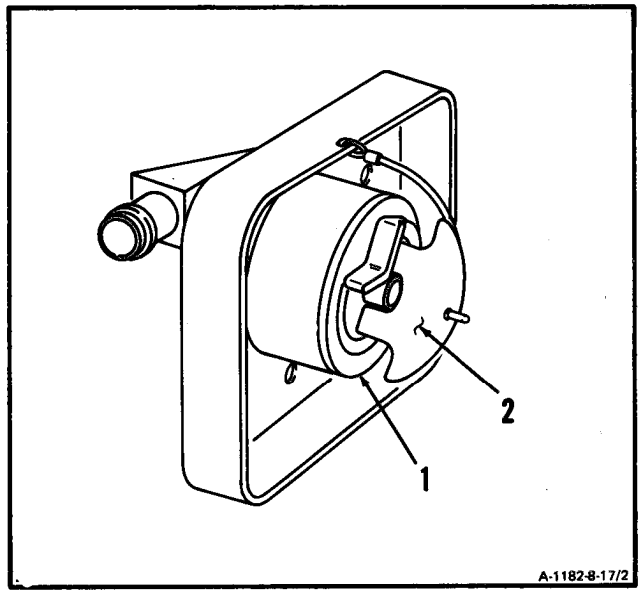
   a. Lift handle (2).



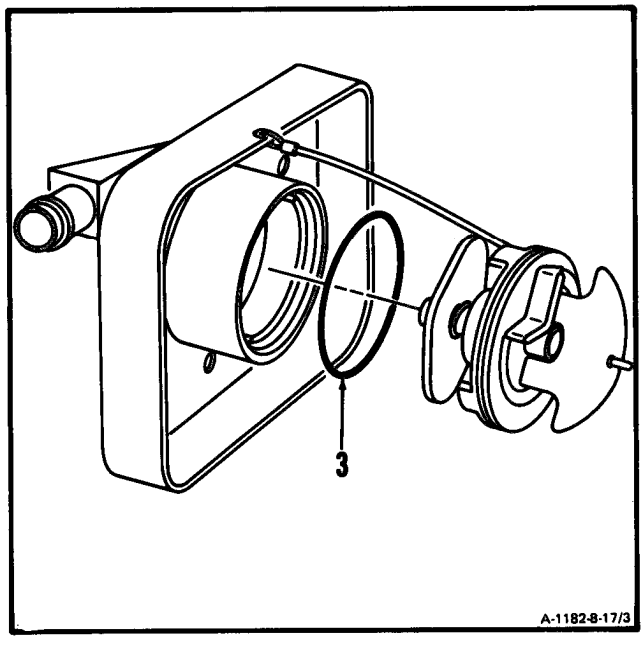
GO TO NEXT PAGE

8-17 DISASSEMBLE OIL FILLER ASSEMBLY AND OIL FILLER STRAINER (Continued) 8-17

b. Turn handle (2) counterclockwise and remove cap assembly (1).



c. Remove packing (3).



FOLLOW-ON MAINTENANCE:

None

END OF TASK

8-18 CLEAN OIL FILLER ASSEMBLY AND OIL FILLER STRAINER 8-18

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit, NSN 5180-00-323-4944
Goggles
Compressed Air Source

Materials:
Dry Cleaning Solvent (E17)
Gloves (E20)

Personnel Required:
68B10 Aircraft Powerplant Repairer

Equipment Condition:
Off Engine Task
Oil Filler Assembly and Oil Filler Strainer Removed (Task 8-16)
Oil Filler Assembly and Oil Filler Strainer Disassembled (Task 8-17)

General Safety Instructions:

WARNING

Dry cleaning solvent (E17) is flammable and toxic. It can irritate skin and cause burns. Use only in well-ventilated area, away from heat and open flame. In case of contact, immediately flush skin or eyes with water for at least 15 minutes. Get medical attention for eyes.

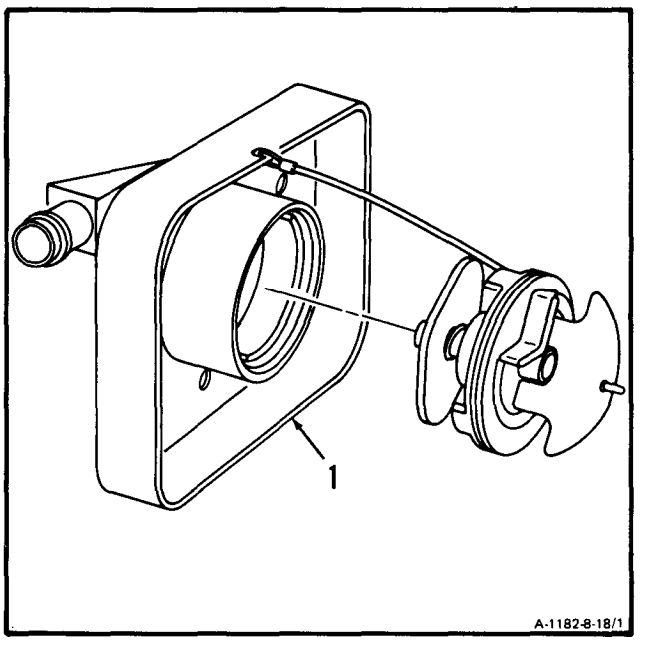
WARNING

When using compressed air for cleaning, use approved protective equipment for eyes and face. Do not use more than 30 psig air pressure. Do not direct air toward yourself or another person. Failure to comply could result in injury to eyes or skin. In case of injury, get medical attention.

1. **Clean oil filler assembly (1)** as follows:

   a. Wear gloves (E20). Immerse filler assembly (1) in dry cleaning solvent (E17) and agitate. Use brush on inner surfaces.

   b. Wear goggles and blow dry any remaining solvent. Use clean, dry compressed air.



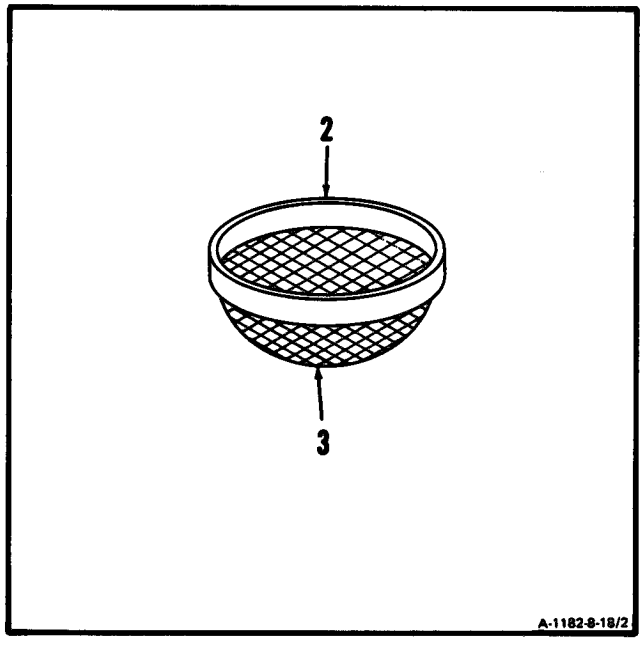
GO TO NEXT PAGE

8-18 CLEAN OIL FILLER ASSEMBLY AND OIL FILLER STRAINER (Continued) 8-18

2. **Clean oil filler strainer (2)** as follows:

   a. Immerse in dry cleaning solvent (E17) and agitate. Use brush on screen (3).

   b. Blow dry screen (3). Use clean, dry compressed air.



FOLLOW-ON MAINTENANCE:

Inspect Oil Filler Assembly and Oil Filler Strainer (Task 8-19).

END OF TASK

8-19 INSPECT OIL FILLER ASSEMBLY AND OIL FILLER STRAINER 8-19

INITIAL SETUP

Applicable Configurations:
All

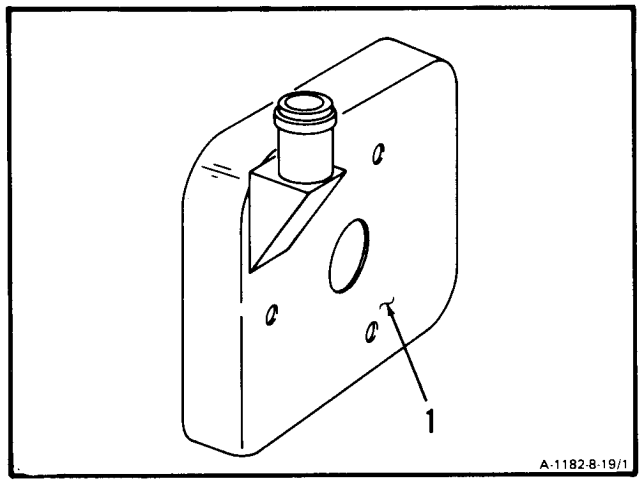
Tools:
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
None

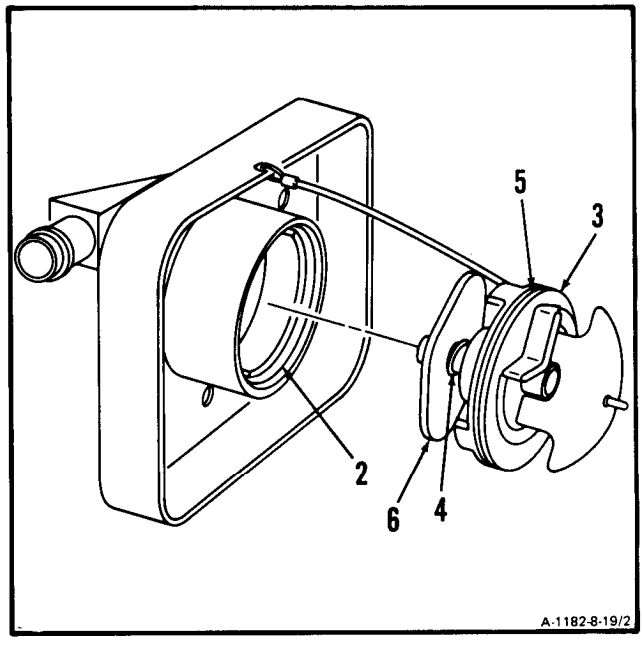
Personnel Required:
68B30 Aircraft Powerplant Inspector

Equipment Condition:
Off Engine Task

1. **Inspect pan mounting surface (1).** There shall be no cracks.



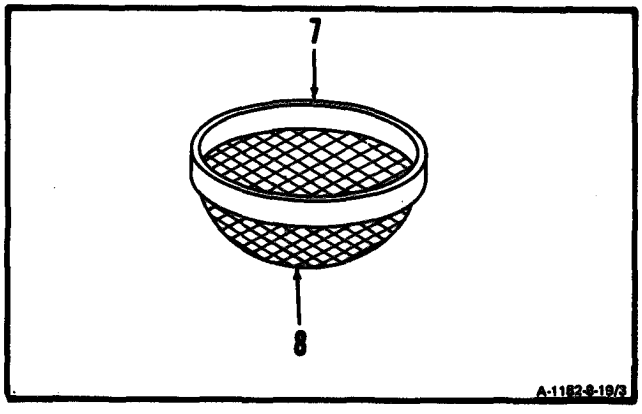
2. **Inspect packing sealing surface (2).** There shall be no nicks, dents and scratches greater than 0.015 inch. Inspect cap assembly (3). Spring (4) shall not be broken. There shall be no nicks, dents or scratches deeper than 0.015 inch in packing groove (5). Locking tabs (6) shall not be bent or distorted.



GO TO NEXT PAGE

8-19 INSPECT OIL FILLER ASSEMBLY AND OIL FILLER STRAINER (Continued) 8-19

3. **Inspect oil filler strainer (7). There shall be no broken wires (8).**



FOLLOW-ON MAINTENANCE:

None

END OF TASK

8-20 REPAIR OIL FILLER ASSEMBLY AND OIL FILLER STRAINER 8-20

INITIAL SETUP

Applicable Configurations:
All

Tools:
Technical Inspection Tool Kit,
NSN 5180-00-323-5114
Hand File Set

Materials:
Crocus Cloth (E15)

Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

Equipment Condition:
Off Engine Task

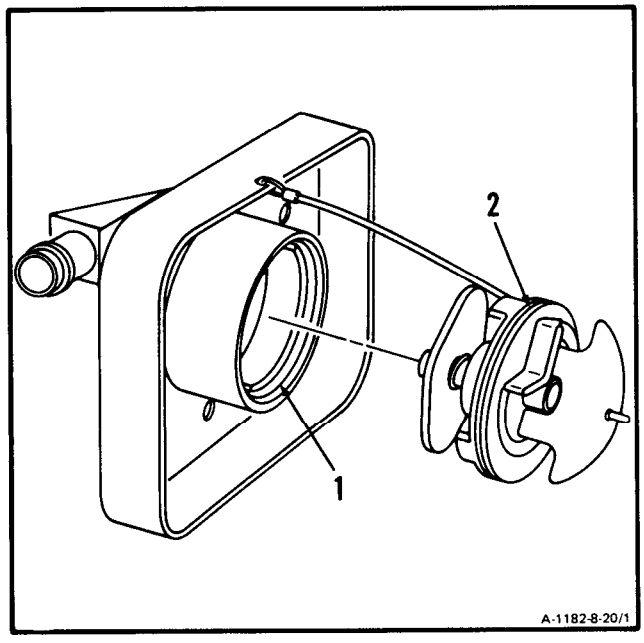
1. **Repair nicks, dents and scratches in packing sealing surface (1) or in packing groove (2)** as follows:

NOTE

Repair is allowed only if depth after repair is not more than 0.015 inch.

a. Blend-repair using file.

b. Polish repaired area. Use crocus cloth (E15).



INSPECT

FOLLOW-ON MAINTENANCE:

None

END OF TASK

8-21 ASSEMBLE OIL FILLER ASSEMBLY AND OIL FILLER STRAINER 8-21

INITIAL SETUP

Applicable Configurations:
All

Tools:
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
None

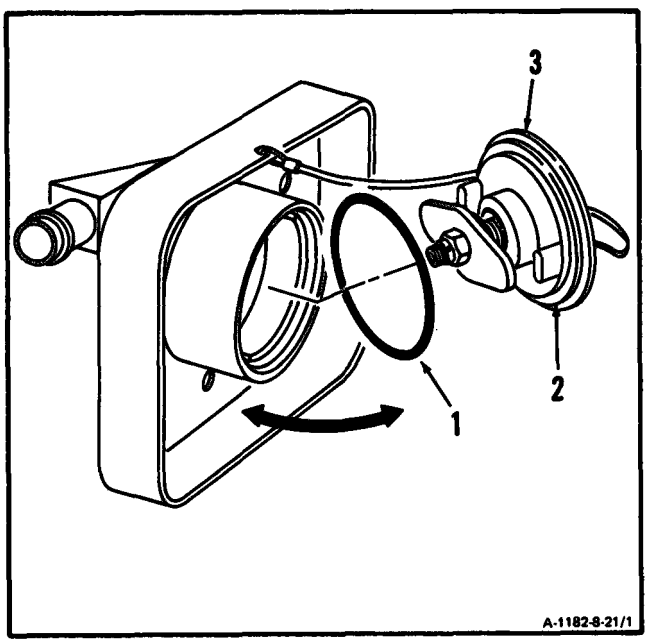
Parts:
Packing

Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

References:
TM 55-2840-254-23P

Equipment Condition:
Off Engine Task

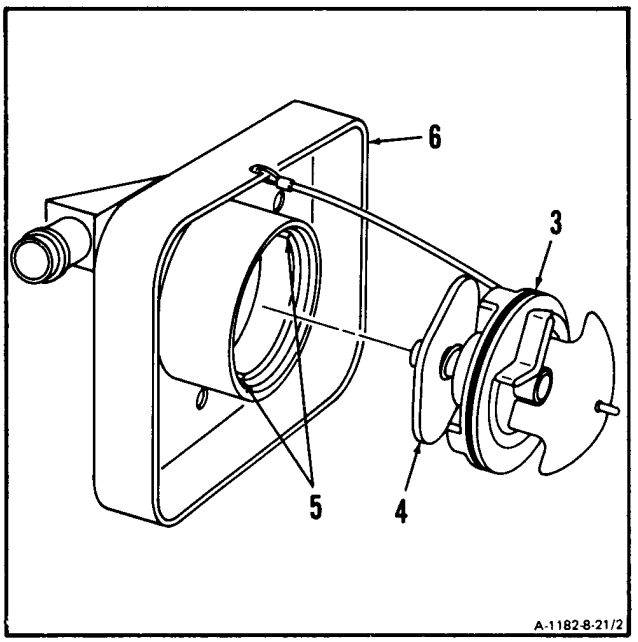
1. **Install packing (1)** in groove (2) of cap assembly (3).



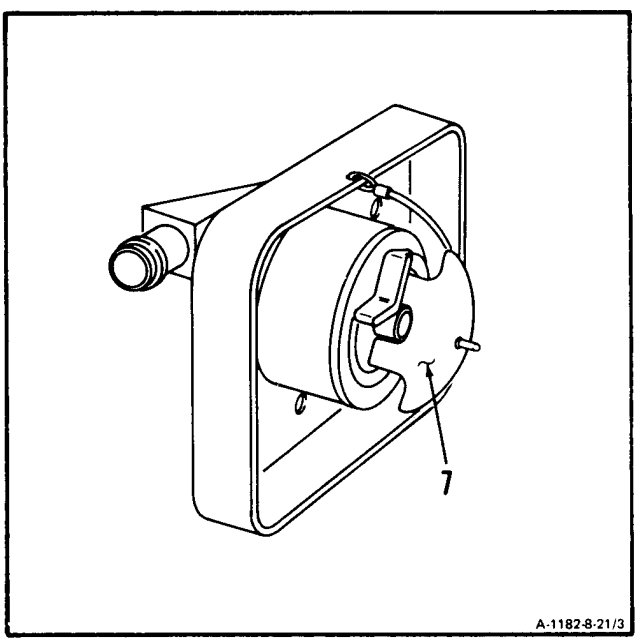
GO TO NEXT PAGE

8-21 ASSEMBLE OIL FILLER ASSEMBLY AND OIL FILLER STRAINER (Continued) 8-21

2. Align ends of lug (4) with slots (5) and **install cap assembly (3)** in pan (6).



3. Turn handle (7) 1/8-turn clockwise and press down.



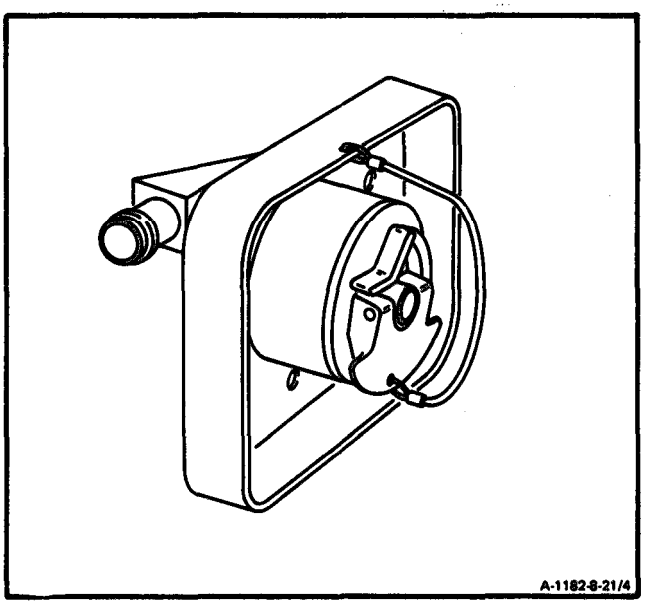
INSPECT

GO TO NEXT PAGE

8-21 ASSEMBLE OIL FILLER ASSEMBLY AND OIL FILLER STRAINER (Continued) 8-21

FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-22 INSTALL OIL FILLER ASSEMBLY AND OIL FILLER STRAINER 8-22

INITIAL SETUP

Applicable Configurations:
All

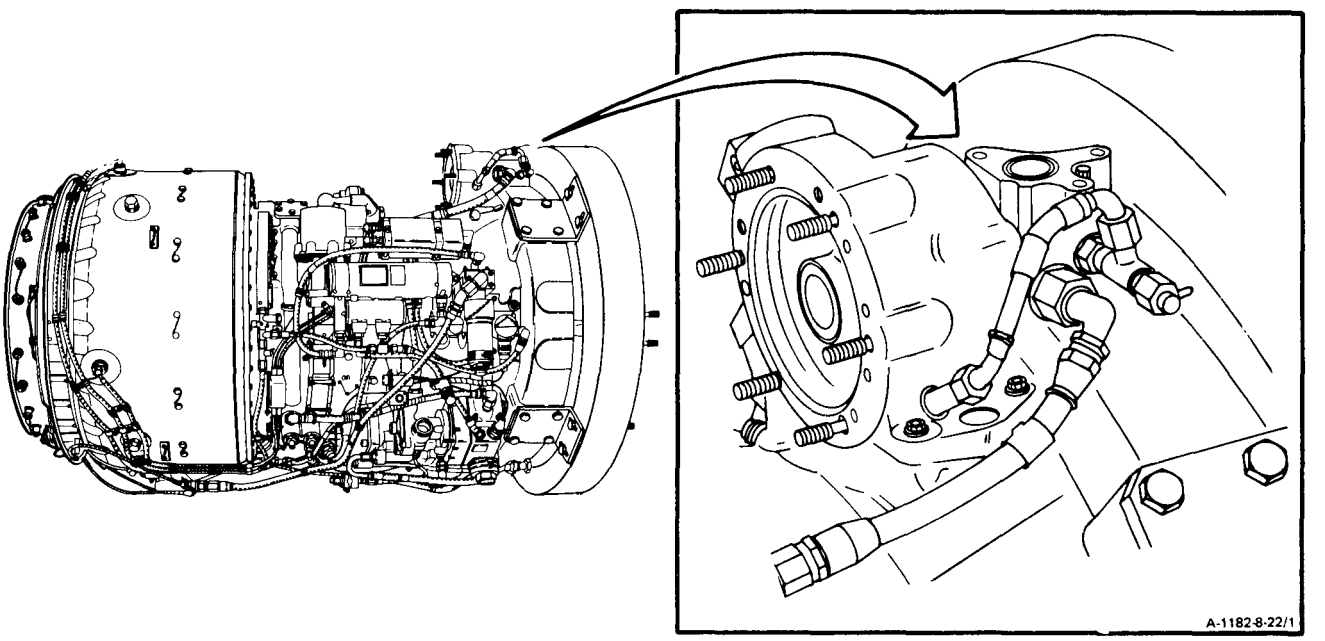
Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
Lockwire (E29)

Parts:
Packing

Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

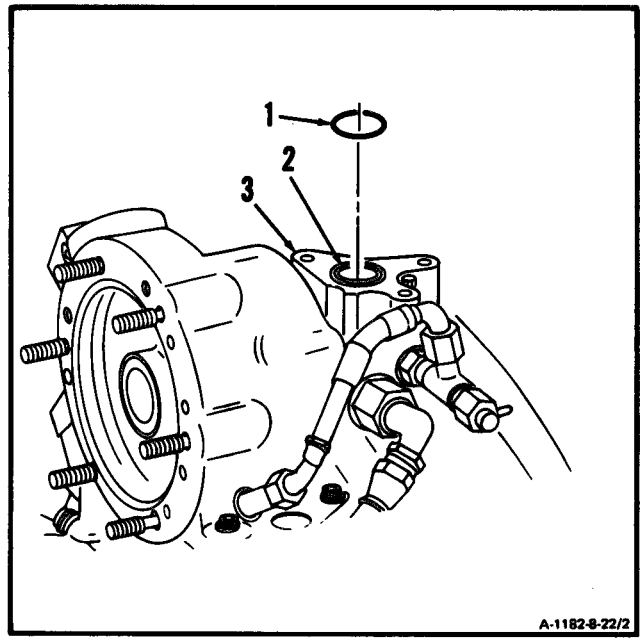
References:
TM 55-2840-254-23P



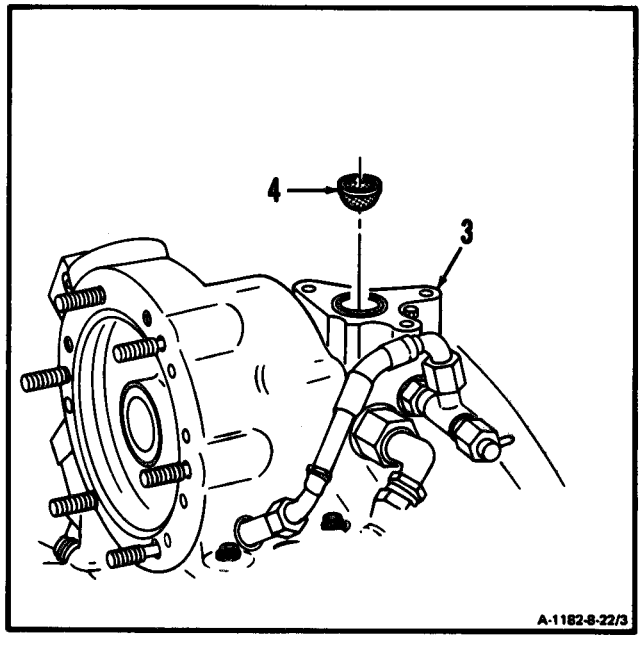
GO TO NEXT PAGE

8-22 INSTALL OIL FILLER ASSEMBLY AND OIL FILLER STRAINER (Continued) 8-22

1. **Install packing (1)** in groove (2) in housing (3).



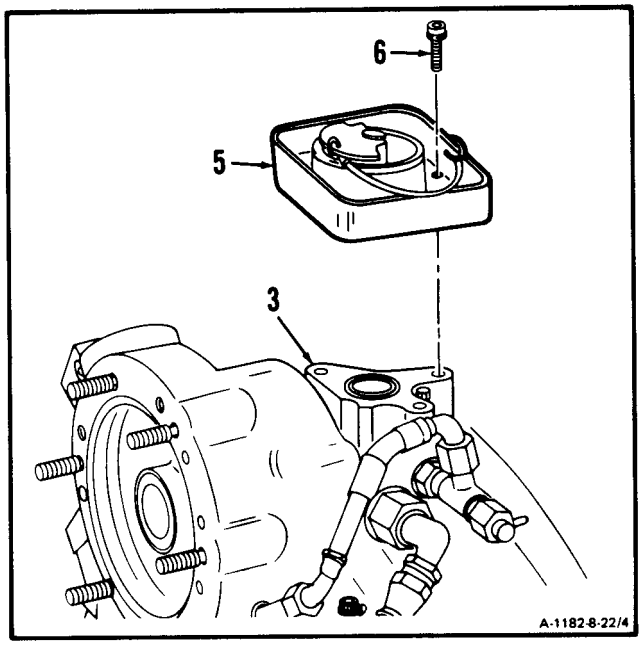
2. **Install oil filler strainer (4)** in housing (3).



GO TO NEXT PAGE

8-22 INSTALL OIL FILLER ASSEMBLY AND OIL FILLER STRAINER (Continued) 8-22

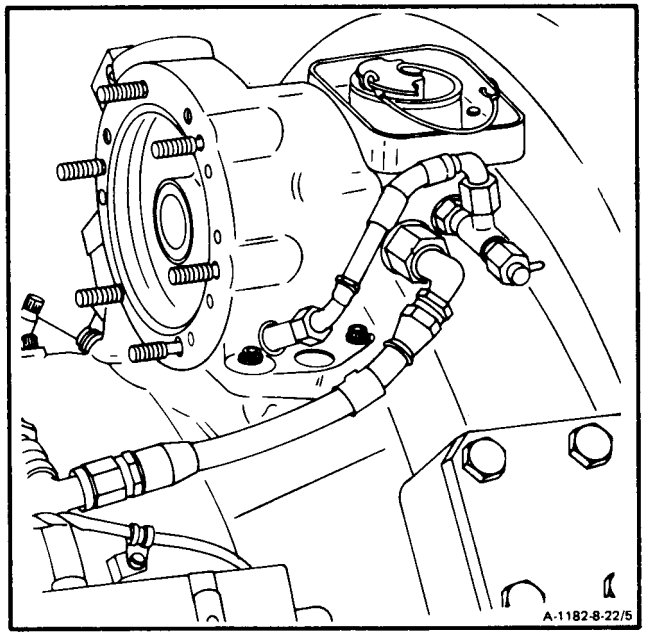
3. **Install oil filler assembly (5)** and three bolts (6) on housing (3). Lockwire bolts (6). Use lockwire (E29).



INSPECT

FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-23 REMOVE OIL FILTER CAP AND STEM ASSEMBLY AND OIL FILTER ELEMENT 8-23

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit, NSN 5180-00-323-4944
Open-End Wrench, 1-5/16 Inch
Container, 1-Quart

Materials:
Wiping Rag (E58)

Personnel Required:
68B10 Aircraft Powerplant Repairer

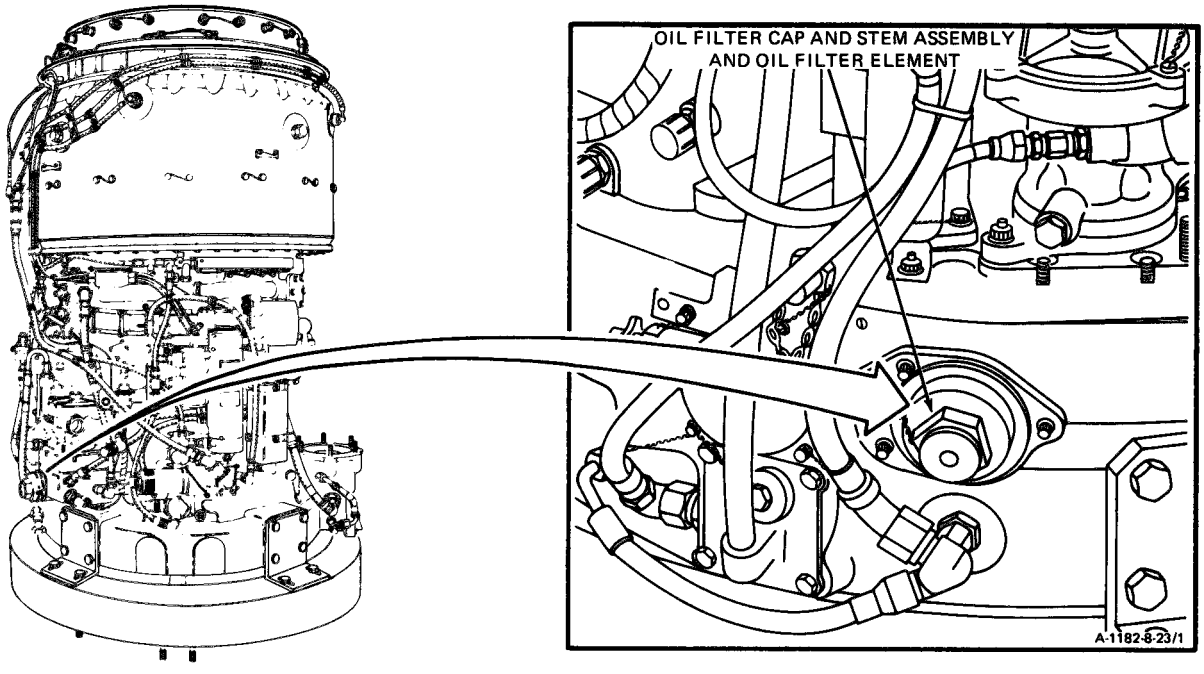
References:
Task 1-86

Equipment Condition:
Engine Oil System Drained (Task 1-75)

General Safety Instructions:

WARNING

Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.



GO TO NEXT PAGE

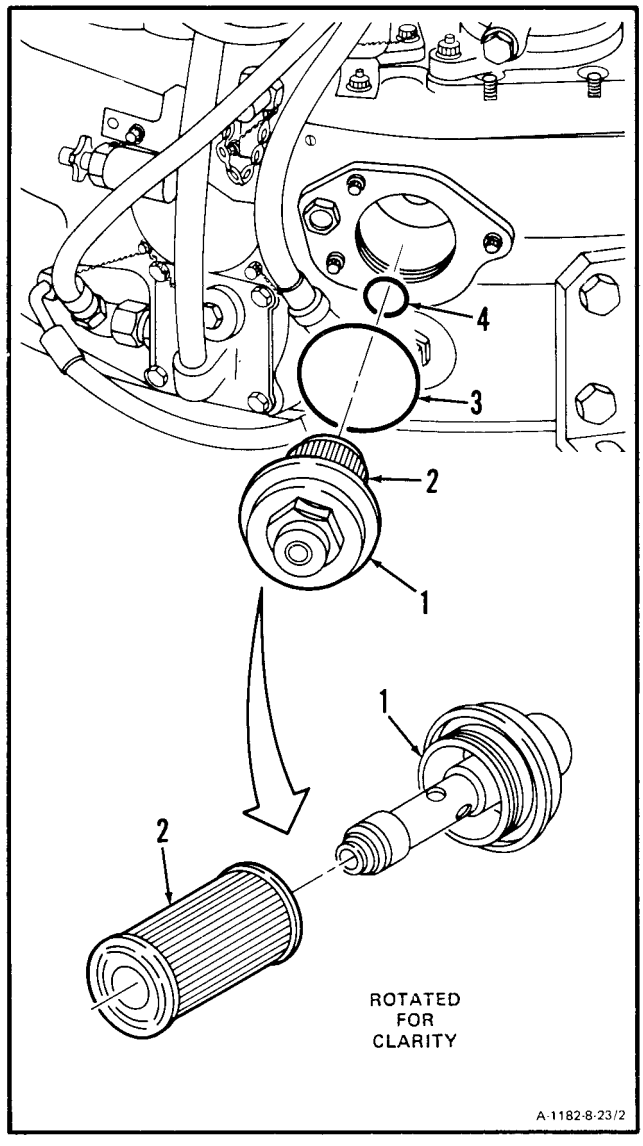
8-23 REMOVE OIL FILTER CAP AND STEM ASSEMBLY AND OIL FILTER ELEMENT (Continued) 8-23

1. **Remove** lockwire and **oil filter cap and stem assembly (1) with oil filter element (2).** Use 1-5/16 inch open-end wrench.

2. Remove packings (3 and 4) from oil filter cap and stem assembly (1).

3. **Remove oil filter element (2)** from oil filter cap and stem assembly (1).

4. **Inspect oil filter element (2).** There shall be no contamination. If contamination is found, inspect contaminated oil system (Ref. Task 1-86).

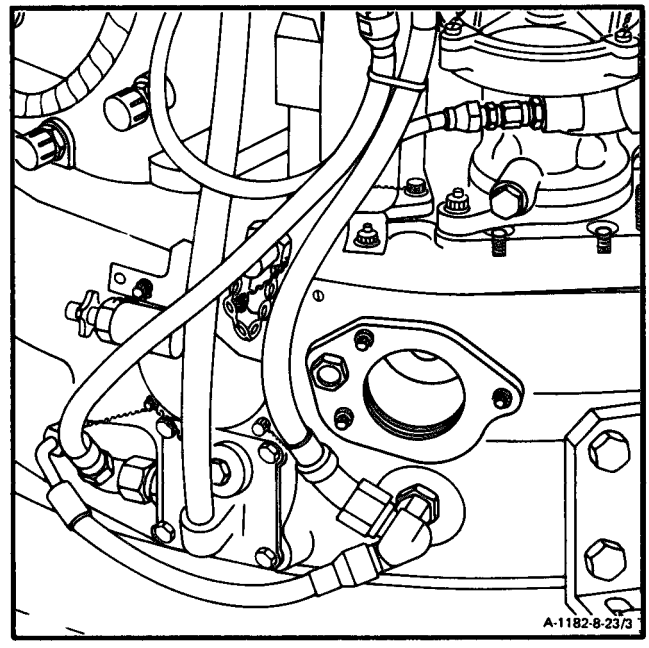


GO TO NEXT PAGE

8-23 REMOVE OIL FILTER CAP AND STEM ASSEMBLY AND OIL FILTER ELEMENT (Continued)

FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-24 CLEAN OIL FILTER CAP AND STEM ASSEMBLY AND OIL FILTER ELEMENT 8-24

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit, NSN 5180-00-323-4944
Goggles
Compressed Air Source

Materials:
Dry Cleaning Solvent (E17)
Gloves (E20)
Lint-Free Cloth (E26)

Personnel Required:
68B10 Aircraft Powerplant Repairer

Equipment Condition:
Off Engine Task
Engine Oil System Drained (Task 1-75).
Oil Filter Cap and Stem Assembly and Oil Filter Element Removed (Task 8-23).

General Safety Instructions:

WARNING

Dry cleaning solvent (E17) is flammable and toxic. It can irritate skin and cause burns. Use only in well-ventilated area, away from heat and open flame. In case of contact, immediately flush skin or eyes with water for at least 15 minutes. Get medical attention for eyes.

1. **Clean oil filter cap and stem assembly (1)** as follows:

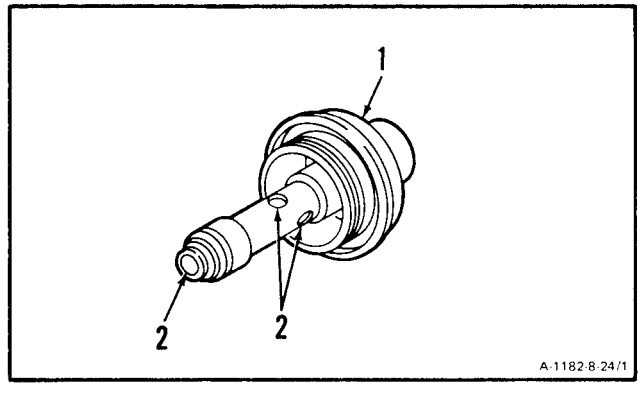
   a. Wear gloves (E20). Immerse and agitate oil filter cap and stem assembly (1) in dry cleaning solvent (E17). Use brush on outside surfaces.

   b. Wipe outside surfaces dry with clean, dry, lint-free cloth (E26).

WARNING

When using compressed air for cleaning, use approved protective equipment for eyes and face. Do not use more than 30 psig air pressure. Do not direct air toward yourself or another person. Failure to comply could result in injury to eyes or skin. In case of injury, get medical attention.

   c. Wear goggles. Blow dry internal passages (2) using clean, dry compressed air.



FOLLOW-ON MAINTENANCE:

Inspect Oil Filter Cap and Stem Assembly and Oil Filter Element (Task 8-25).

END OF TASK

8-25 INSPECT OIL FILTER CAP AND STEM ASSEMBLY AND OIL FILTER ELEMENT 8-25

INITIAL SETUP

Applicable Configurations:
All

Tools:
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
None

Personnel Required:
68B30 Aircraft Powerplant Inspector

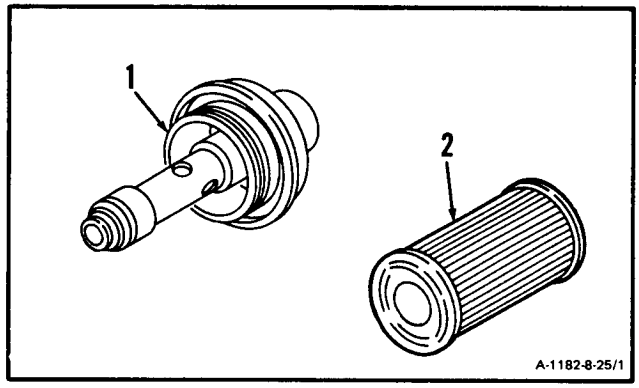
Equipment Condition:
Off Engine Task

1. **Inspect oil filter cap and stem assembly (1)** as follows:

   a. There shall be no cracks.

   b. There shall be no nicks, dents or scratches deeper than 0.015 inch.

2. **Inspect oil filter element (2).** There shall be no damage.



FOLLOW-ON MAINTENANCE:

None

END OF TASK

8-26 REPAIR OIL FILTER CAP AND STEM ASSEMBLY AND OIL FILTER ELEMENT 8-26

INITIAL SETUP

Applicable Configurations:
All

Tools:
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

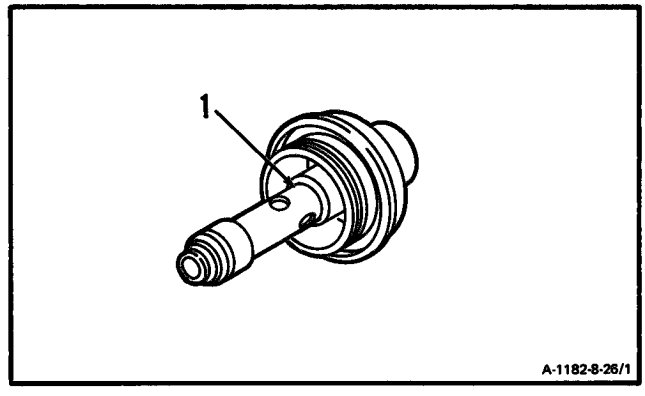
Materials:
Carborundum Stone (E10)
Crocus Cloth (E15)

Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

Equipment Condition:
Off Engine Task

1. **Repair nicks, dents, and scratches on oil filter cap and stem assembly (1)** up to 0.015 inch deep. Blend repair. Use Carborundum stone (E10).

2. Final polish using crocus cloth (E15).



INSPECT

FOLLOW-ON MAINTENANCE:

None

END OF TASK

8-27 INSTALL OIL FILTER CAP AND STEM ASSEMBLY AND OIL FILTER ELEMENT 8-27

INITIAL SETUP

Applicable Configurations:
All

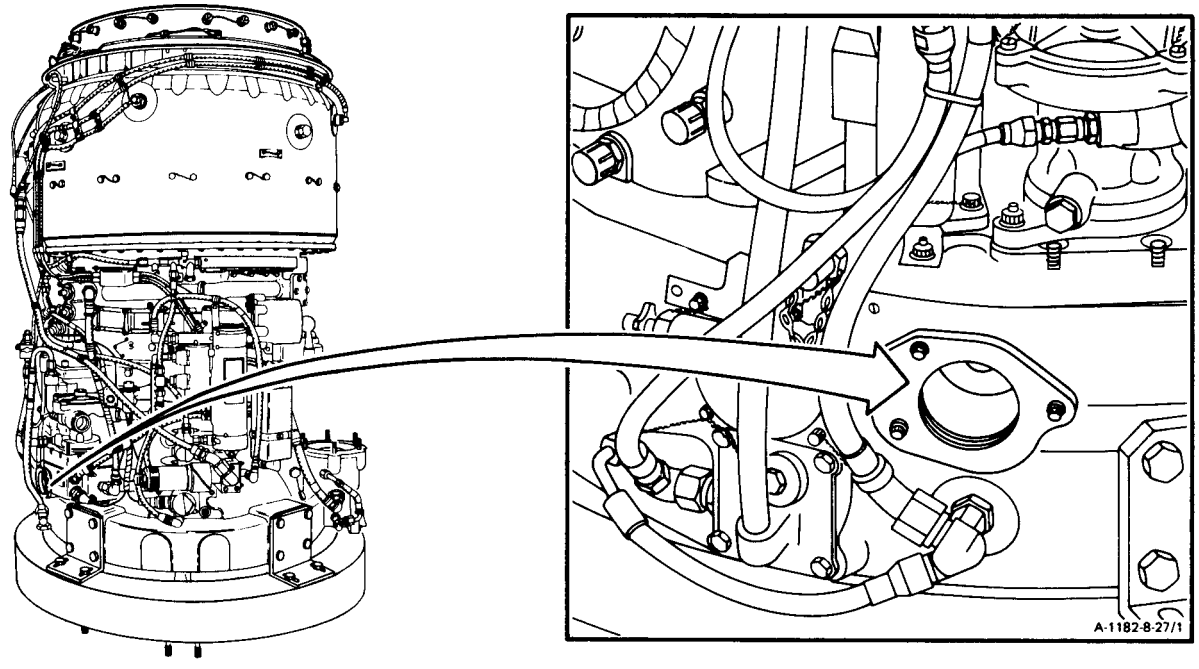
Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114
Torque Wrench, 30-150 Inch-Pounds
Deep-Style Socket, 1-5/16 Inch

Materials:
Lockwire (E29)

Parts:
Packings

Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

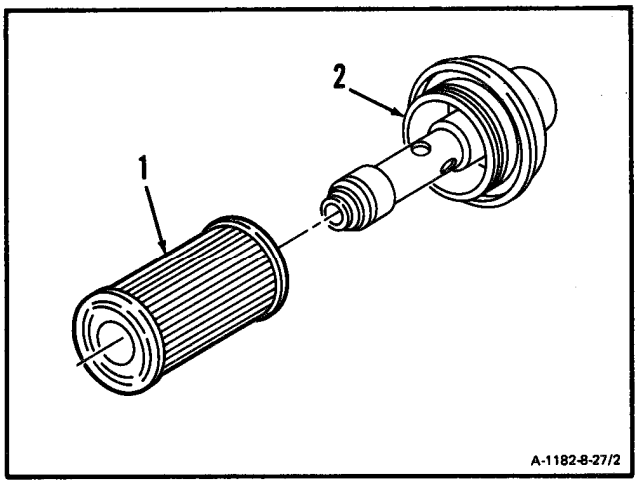
References:
TM 55-2840-254-23P



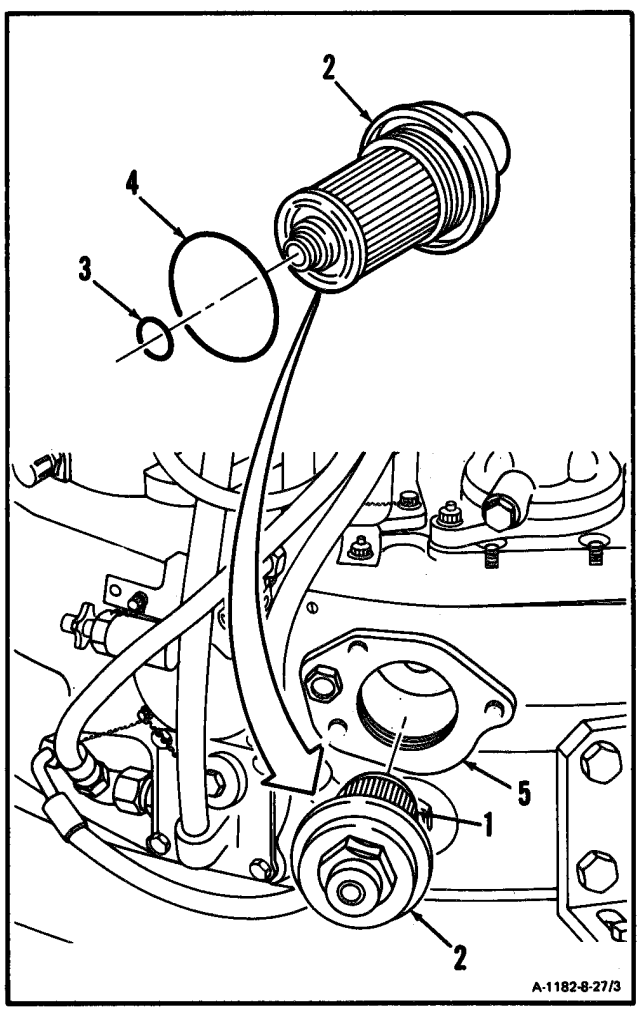
GO TO NEXT PAGE

8-27 INSTALL OIL FILTER CAP AND STEM ASSEMBLY AND OIL FILTER ELEMENT (Continued) 8-27

1. **Install oil filter element (1)** on oil filter cap and stem assembly (2).



2. Install packings (3 and 4) on oil filter cap and stem assembly (2).



CAUTION

Do not torque oil filter cap and stem assembly more than 50 inch-pounds. Failure to comply may cause damage to oil filter cover.

3. **Install oil filter cap and stem assembly (2),** with oil filter element (1), on oil filter cover (5). **Torque oil filter cap and stem assembly (2) to 50 inch- pounds.** Lockwire oil filter cap and stem assembly (2). Use lockwire (E29).

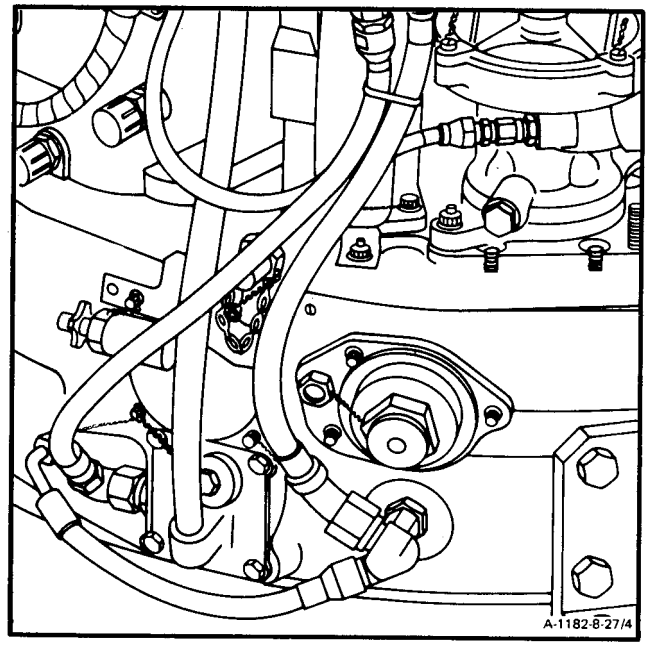
INSPECT

GO TO NEXT PAGE

8-27 INSTALL OIL FILTER CAP AND STEM ASSEMBLY AND OIL FILTER ELEMENT (Continued) 8-27

FOLLOW-ON MAINTENANCE:

Service Engine Oil System (Task 1-74).



END OF TASK

8-28 REMOVE DUAL CHIP DETECTOR

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Container, 1-Quart

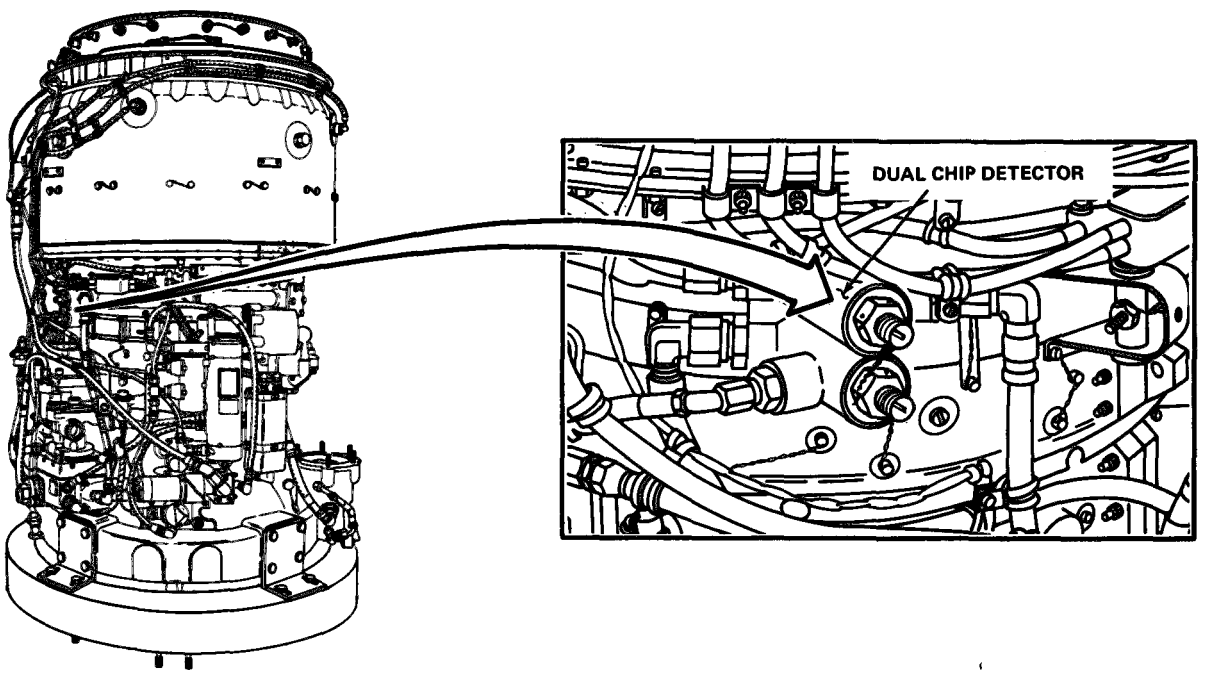
Materials:
Wiping Rag (E58)

Personnel Required:
68B10 Aircraft Powerplant Repairer

General Safety Instructions:

WARNING

Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.

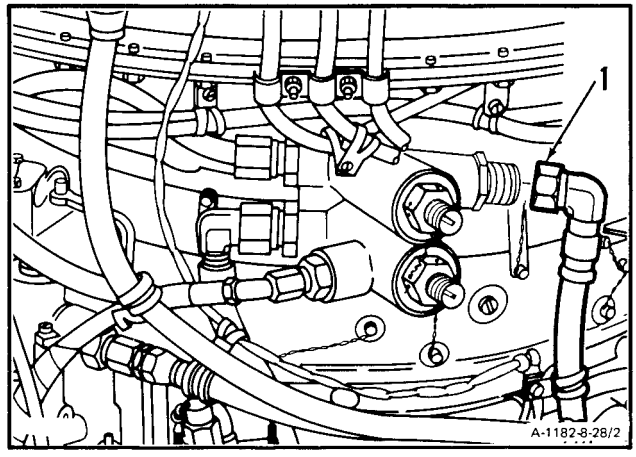


A-1182-8-28/1

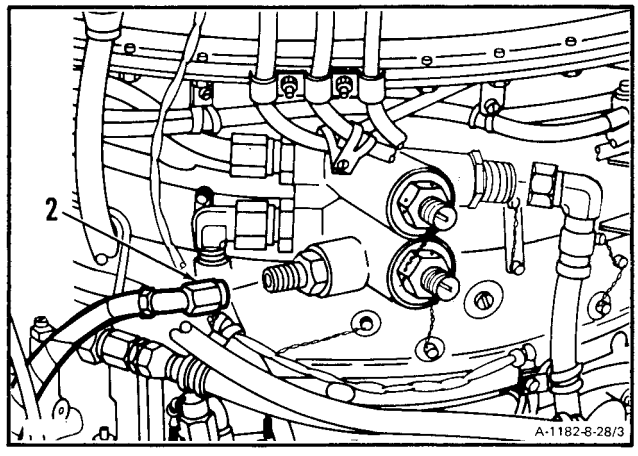
GO TO NEXT PAGE

8-28 REMOVE DUAL CHIP DETECTOR (Continued)

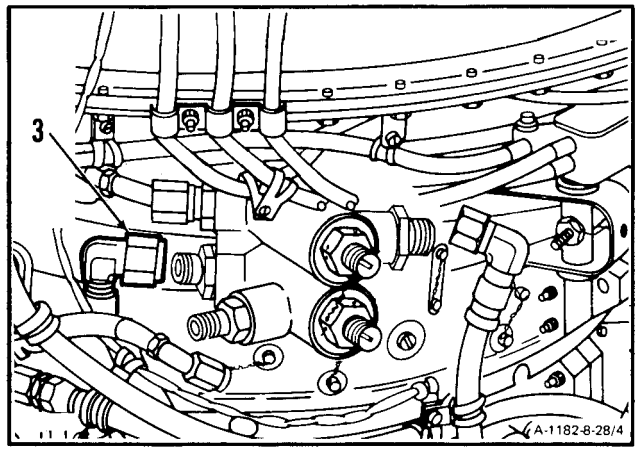
1. **Disconnect hose assembly (1).**



2. **Disconnect hose assembly (2).**



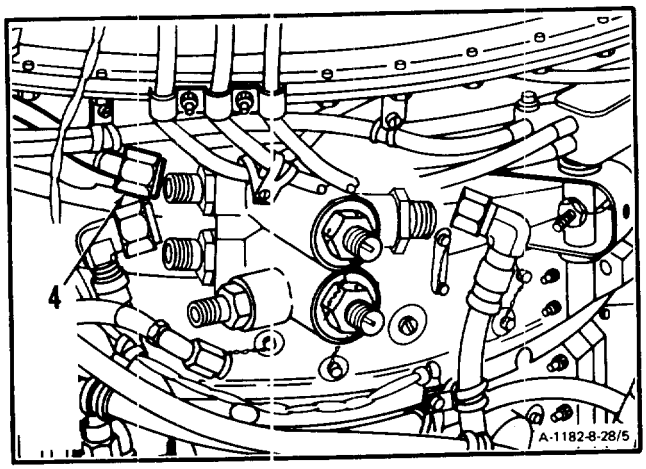
3. **Disconnect hose assembly (3).**



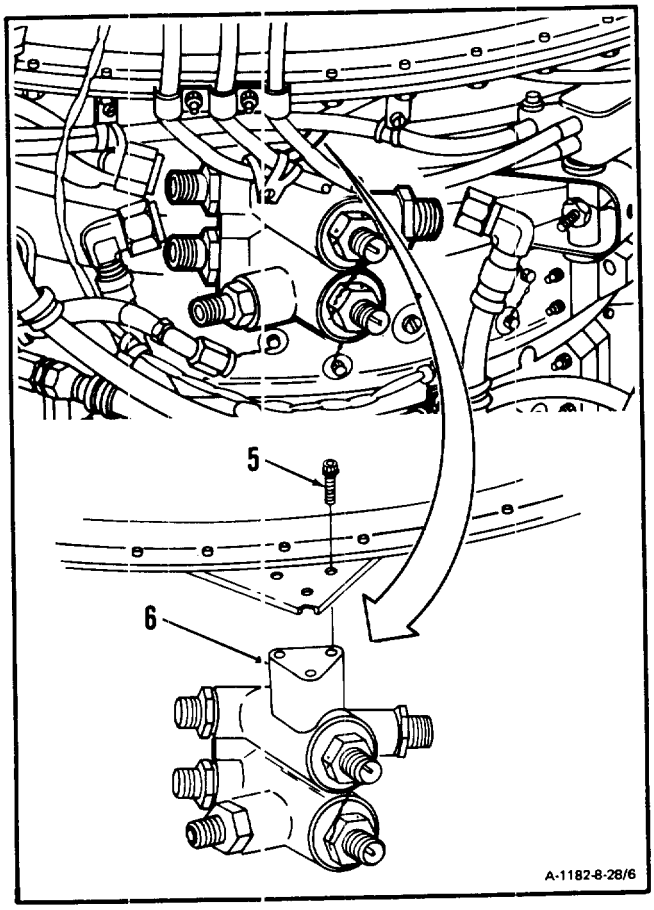
GO TO NEXT PAGE

8-28 REMOVE DUAL CHIP DETECTOR (Continued)

4. Disconnect tube assembly (4).



5. **Remove** lockwire, three bolts (5), and **dual chip detector (6).**

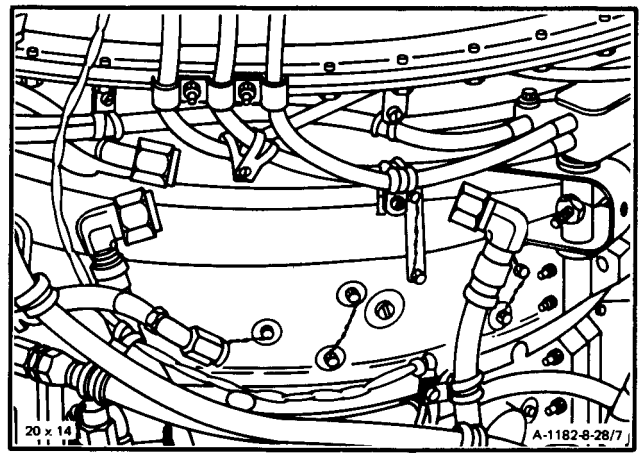


GO TO NEXT PAGE

8-28 REMOVE DUAL CHIP DETECTOR (Continued) 8-28

FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-29 DISASSEMBLE DUAL CHIP DETECTOR

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Vise
Jaw Caps

Materials:
Wiping Rag (E58)

Personnel Required:
68B10 Aircraft Powerplant Repairer

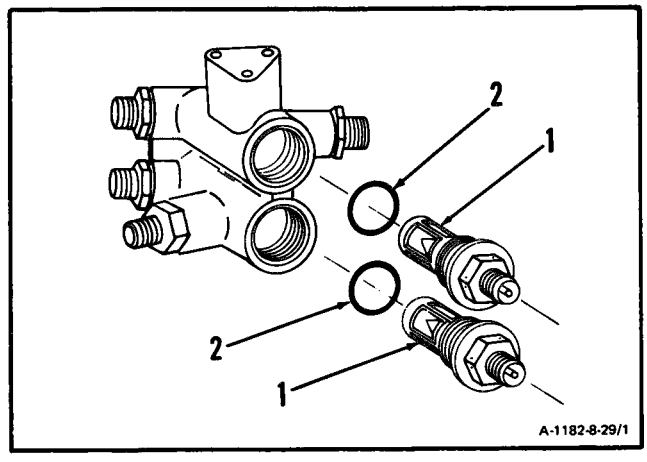
Equipment Condition:
Off Engine Task
Dual Chip Detector Removed (Task 8-28)

General Safety Instructions:

WARNING

Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin, and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.

1. **Remove** lockwire, **two magnetic chip detectors (1)** and packings (2). Use vise with jaw caps.



GO TO NEXT PAGE

8-29 DISASSEMBLE DUAL CHIP DETECTOR (Continued)

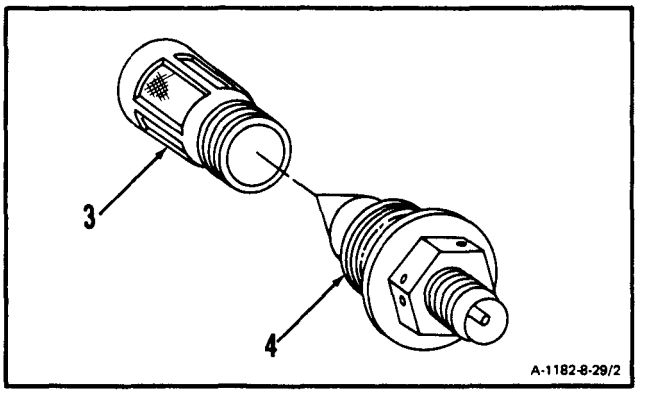
CAUTION

When removing filter from connector, be careful not to push in or deform screen of filter. Pushed in or deformed screen are cause for rejection.

NOTE

The following step applies to both magnetic chip detectors.

2. Unscrew and **remove filter (3)** from connector (4).



FOLLOW-ON MAINTENANCE:

None

END OF TASK

8-30 CLEAN DUAL CHIP DETECTOR

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Goggles
Compressed Air Source

Materials:
Dry Cleaning Solvent (E17)
Gloves (E20)
Lint-Free Cloth (E26)

Personnel Required:
68B10 Aircraft Powerplant Repairer

Equipment Condition:
Off Engine Task
Dual Chip Detector Removed (Task 8-28)
Dual Chip Detector Disassembled (Task 8-29)

General Safety Instructions:

WARNING

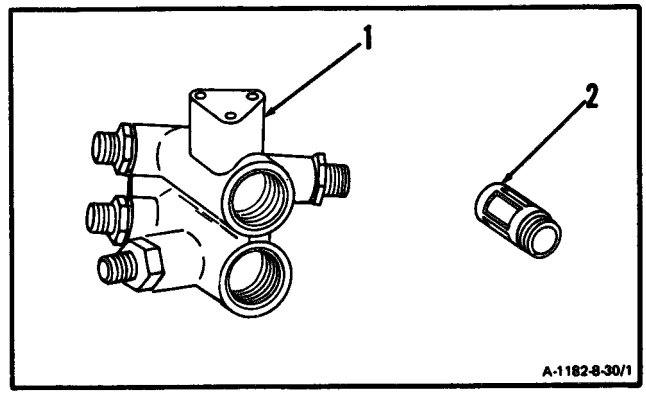
Dry cleaning solvent (E17) is flammable and toxic. It can irritate skin and cause burns. Use only in wall-ventilated area, away from heat and open flame. In case of contact, immediately flush skin or eyes with water for at least 15 minutes. Get medical attention for eyes.

1. Wear gloves (E20). **Clean housing (1) and two filters (2).** Use dry cleaning solvent (E17) and brush.

WARNING

When using compressed air for cleaning, use approved protective equipment for eyes and face. Do not use more than 30 psig air pressure. Do not direct air toward yourself or another person. Failure to comply could result in injury to eyes or skin. In case of injury, get medical attention.

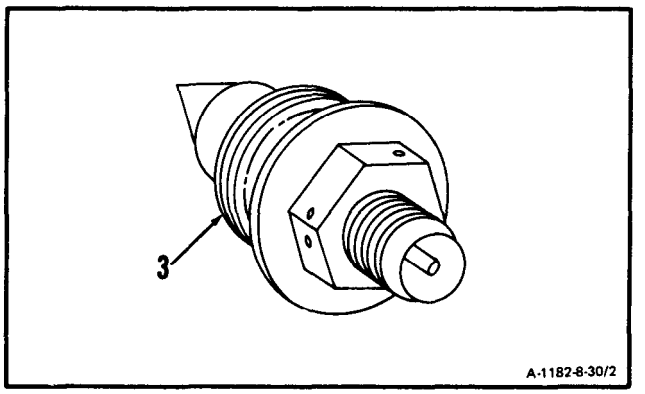
2. Wear goggles. **Blow dry housing (1) and filters (2),** using clean, dry compressed air.



GO TO NEXT PAGE

8-30 CLEAN DUAL CHIP DETECTOR (Continued) 8-30

3. **Clean two connectors (3)** with lint-free cloth (E26) dampened in dry cleaning solvent (E17).



FOLLOW-ON MAINTENANCE:

Inspect Dual Chip Detector (Task 8-31).

END OF TASK

8-31 INSPECT DUAL CHIP DETECTOR

INITIAL SETUP

Applicable Configurations:
All

Tools:
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

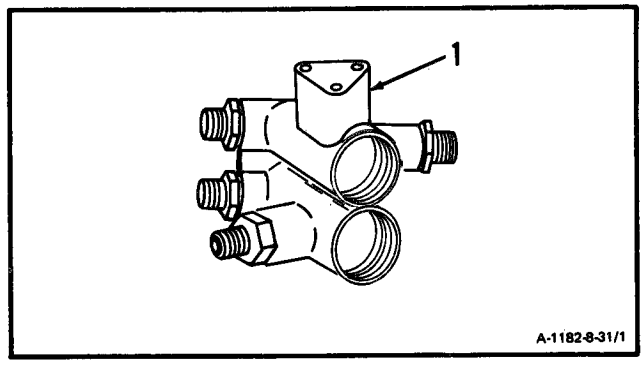
Materials:
None

Personnel Required:
68B30 Aircraft Powerplant Inspector

References:
Task 1-86

Equipment Condition:
Off Engine Task

1. **Inspect housing (1).** There shall be no cracks.



NOTE

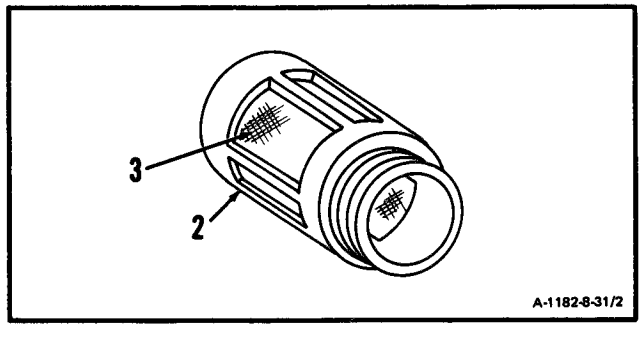
Following steps apply to both filters.

2. **Inspect filter (2).**

   a. There shall be no tears, punctures, or broken wires in screen (3).

   b. Screen (3) shall not be pushed in or broken away from filter (2).

   c. There shall be no contamination.



NOTE

If there is contamination, further inspection of oil system must be done to determine cause. Inspect contaminated oil system (Ref. Task 1-86).

GO TO NEXT PAGE

8-31 INSPECT DUAL CHIP DETECTOR (Continued) 8-31

NOTE

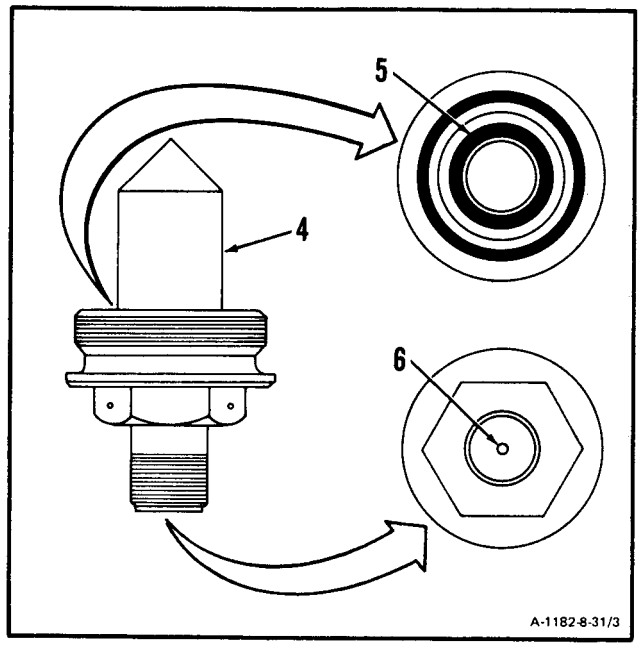
Following steps apply to both connectors.

3. **Inspect connector (4).**

   a. There shall be no cracks in phenolic insert (5).

   b. Pin (6) shall not be broken or bent.

   c. There shall be no corrosion on pin (6).



FOLLOW-ON MAINTENANCE:

None

END OF TASK

8-32 REPAIR DUAL CHIP DETECTOR 8-32

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical inspection Tool Kit,
NSN 5180-00-323-5114
Goggles
Compressed Air Source

Materials:
Crocus Cloth (E15)

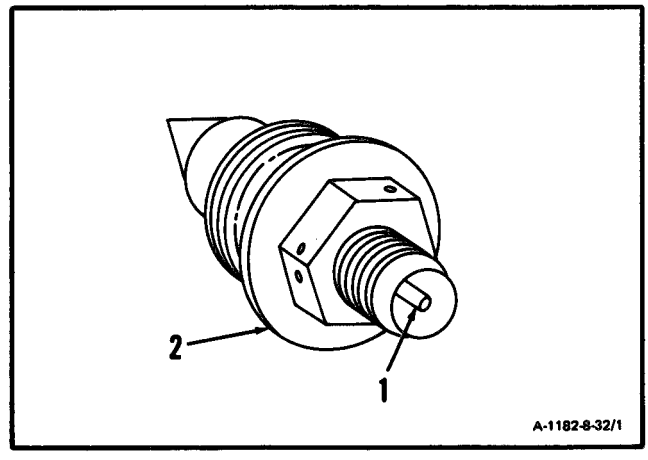
Personnel Rewired:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

Equipment Condition:
Off Engine Task

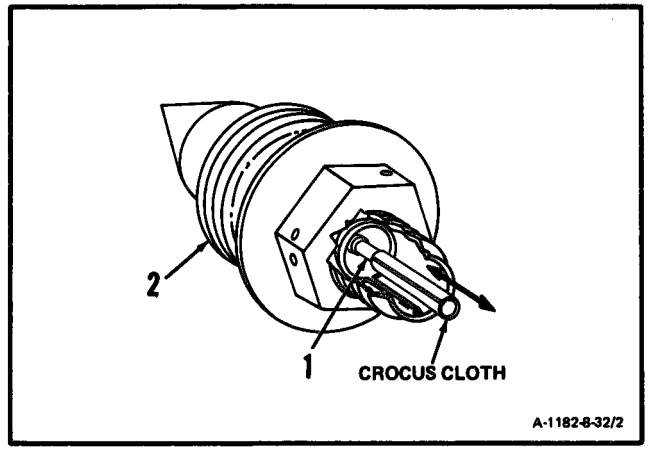
NOTE

This repair is allowed, provided it does not cause pin to break or crack.

1. **Straighten bent pin (1) of connector (2).** Use long-nose pliers to gently move pin (1) until it is straight.



2. **Remove corrosion from pin (1) of connector (2).** Polish pin, using in and out motion over entire length of pin until corrosion is removed. Use crocus cloth (E15).



GO TO NEXT PAGE

WARNING

When using compressed air for cleaning, use approved protective equipment for eyes and face. Do not use more than 30 psig air pressure. Do not direct air toward yourself or another person. Failure to comply could result in injury to eyes or skin. In case of injury, get medical attention.

3. Wear goggles. **Remove loosened particles,** using clean, dry compressed air.

INSPECT

FOLLOW-ON MAINTENANCE:

None

END OF TASK

8-33 ASSEMBLE DUAL CHIP DETECTOR 8-33

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit, NSN 5180-00-323-4944
Technical Inspection Tool Kit, NSN 5180-00-323-5114
Vise
Jaw Caps

Materials:
Lockwire (E29)

Parts:
Packings

Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

References:
TM 55-2840-254-23P

Equipment Condition:
Off Engine Task

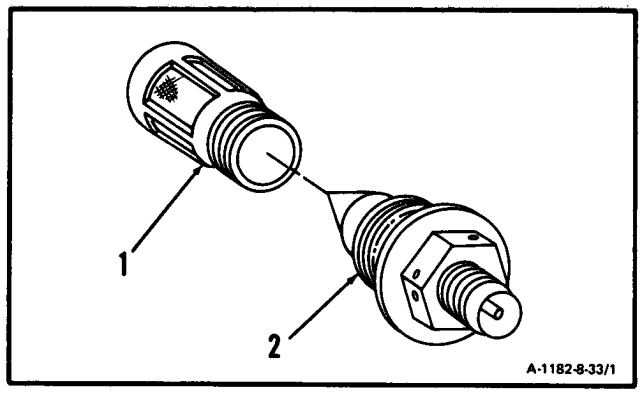
NOTE

The following step applies to both magnetic chip detectors.

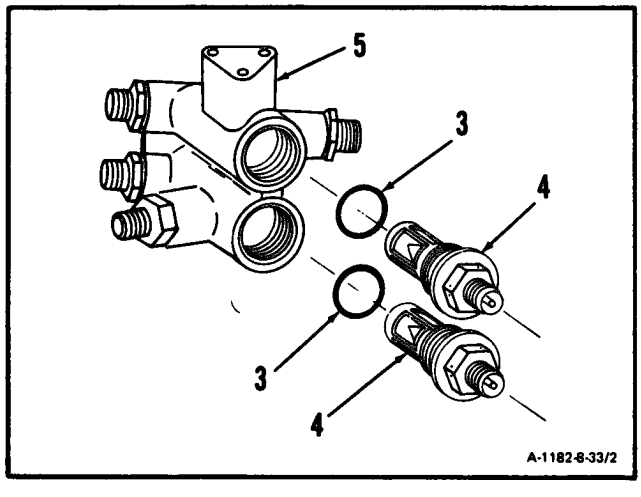
CAUTION

When installing filtar on connector, be careful not to push in or deform screen or filter. Pushed in or deformed screen may cause false chip indications.

1. **Install filter (1)** on connector (2).



2. **Install** two packings (3) and **magnetic chip detectors (4)** in housing (5). Lockwire chip detector (4). Use lockwire (E29). Use vise with jaw caps.



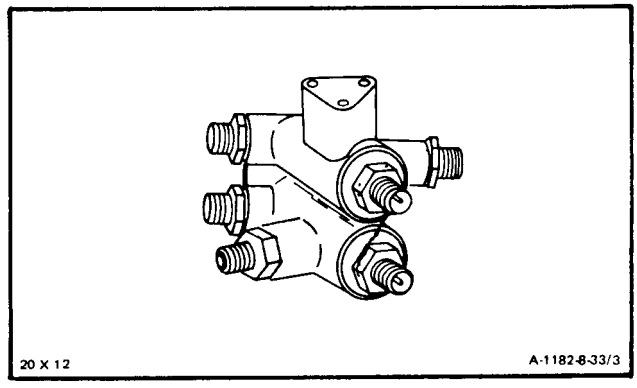
INSPECT

GO TO NEXT PAGE

8-33 ASSEMBLE DUAL CHIP DETECTOR (Continued) 8-33

FOLLOW-ON MAINTENANCE:

Test Dual Chip Detector (Task 8-34)



END OF TASK

8-34 TEST DUAL CHIP DETECTOR

INITIAL SETUP

Applicable Configurations:
All

Tools:
Multimeter

Materials:
None

Personnel Required:
68B10 Aircraft Powerplant Repairer

Equipment Condition:
Off Engine Task

1. **Measure insulationresistance of magnetic chip detectors (1)** as follows: Use multimeter.

NOTE

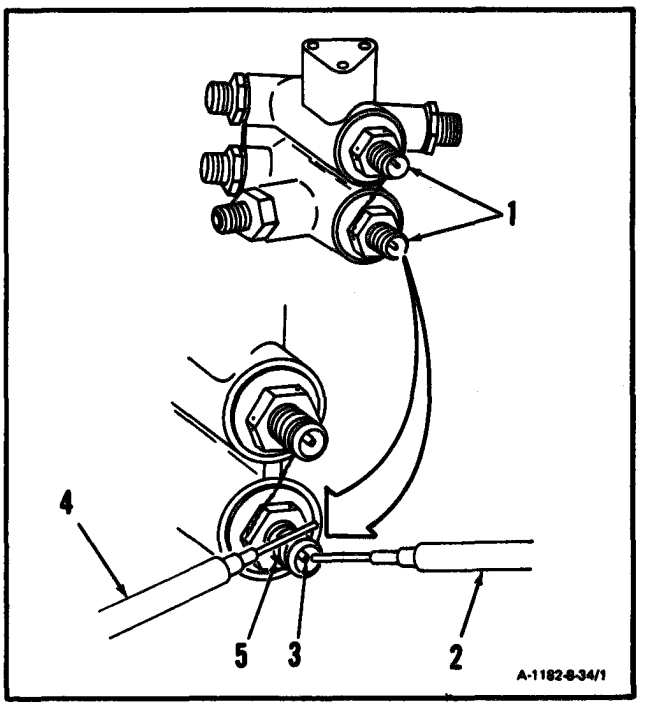
The following steps apply to both magnetic chip detectors.

a. Set rnultimeter range switch to R x 1000.

b. Touch red probe (2) to pin (3).

c. Touch black probe (4) to threads (5).

d. Meter shall indicate 10,000 ohms, minimum.



FOLLOW-ON MAINTENANCE:

None

END OF TASK

8-35 INSTALL DUAL CHIP DETECTOR

INITIAL SETUP

Applicable Configurations:
All

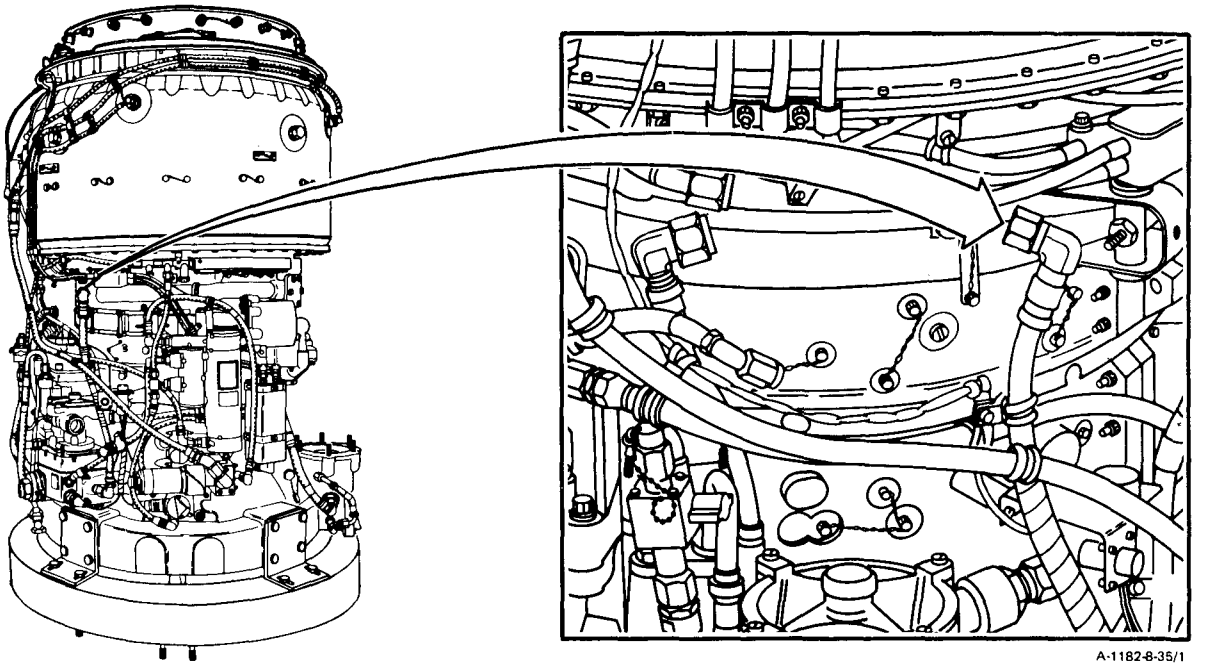
Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit.
NSN 5180-00-323-5114

Materials:
Lockwire (E29)

Parts:
Packing

Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

References:
TM 55-2840-254-23P



A-1182-8-35/1

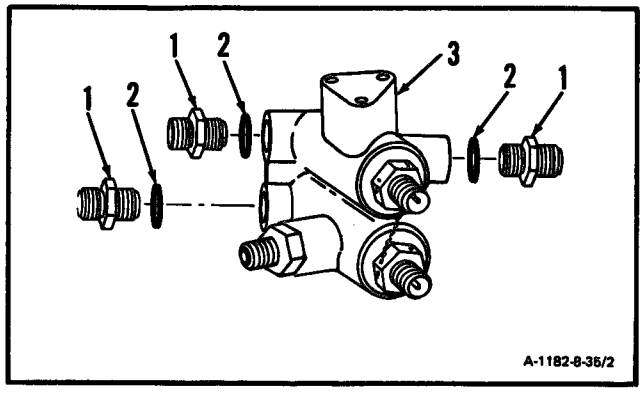
GO TO NEXT PAGE

8-35 INSTALL DUAL CHIP DETECTOR (Continued)

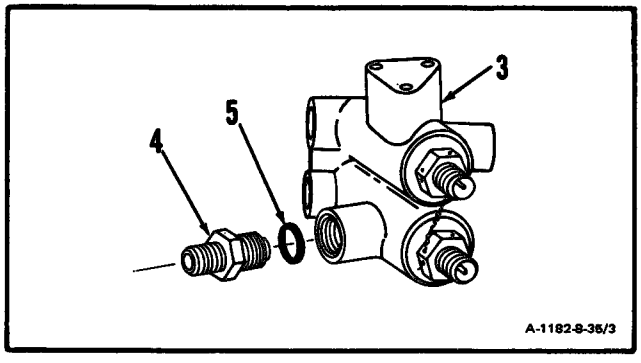
NOTE

If dual chip detector is a replacement, do steps 1. through 4. If same dual chip detector that was removed is to be installed, skip steps 1. through 4.

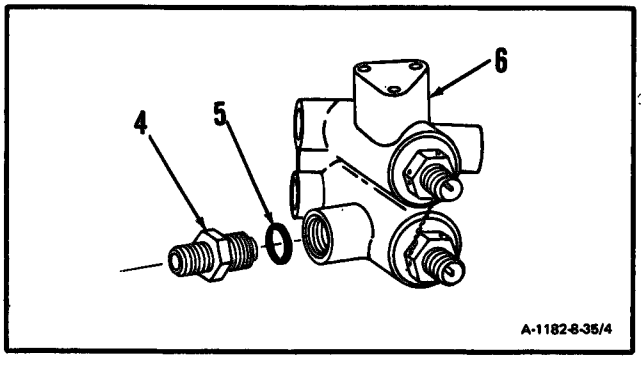
1. **Remove three nipples (1)** and packings (2) **from ramoved dual chip detector (3).**



2. **Remove reducar (4)** and packing (5) **from removed dual chip detector (3).**



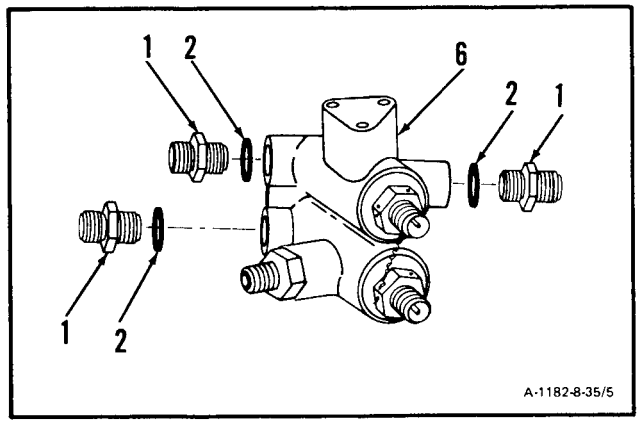
3. **Install** packing (5) and **reducer (4) in serviceable dual chip detector (6).**



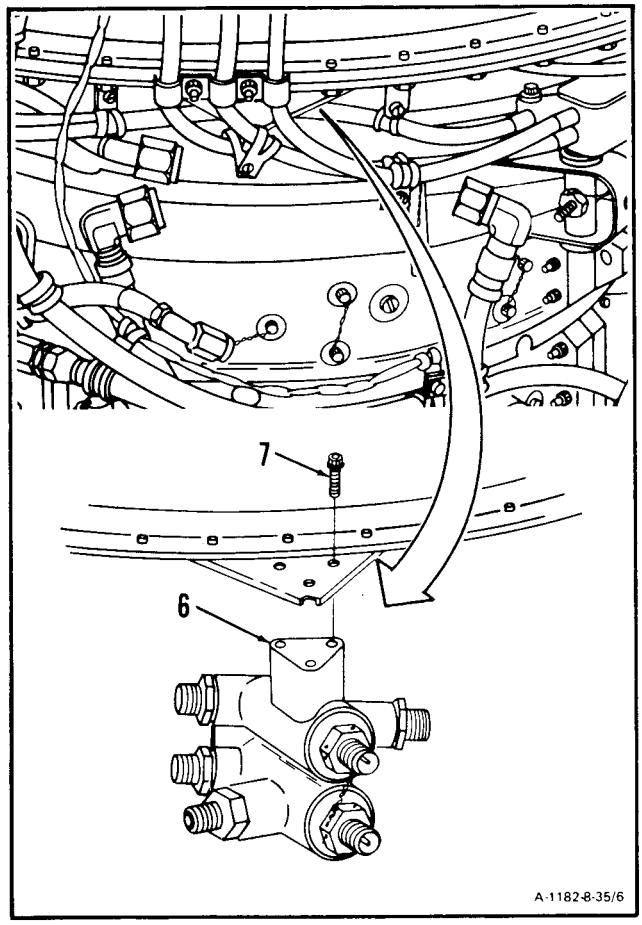
GO TO NEXT PAGE

8-35 INSTALL DUAL CHIP DETECTOR (Continued)

4. **Install three** packings (2) and **nipples (1) in serviceable dual chip detector (6).**



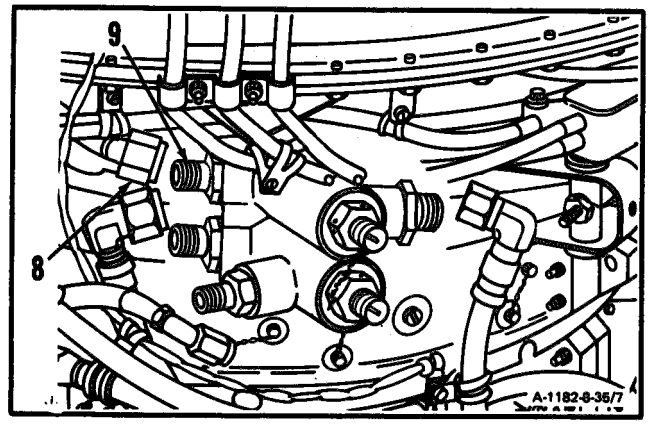
5. **Install dual chip detector (6)** and three bolts (7). Lockwire bolts (7). Use lockwire (E29).



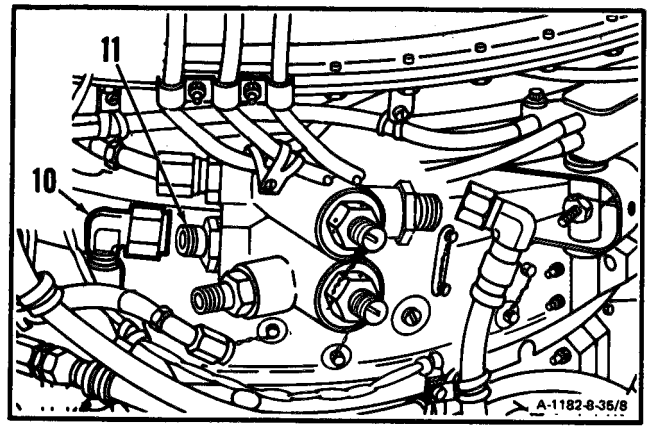
GO TO NEXT PAGE

8-35 INSTALL DUAL CHIP DETECTOR (Continued)

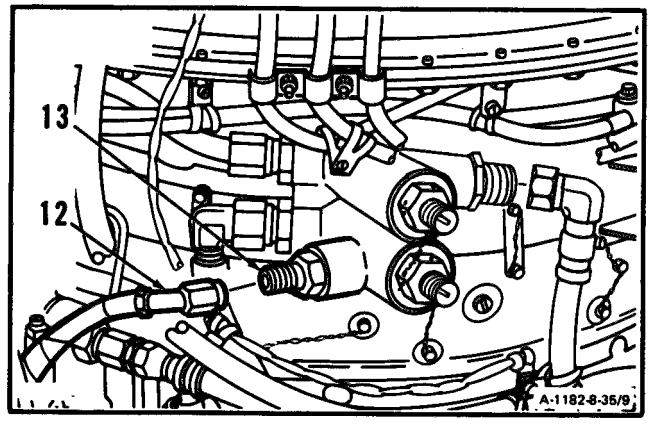
6. **Connect hose assembly (8)** to nipple (9).



7. **Connect hose assembly (10)** to nipple (11).



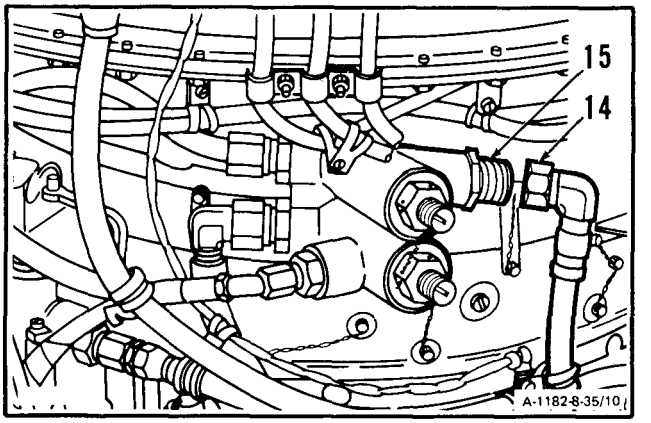
8. **Connect hose assembly (12)** to reducer (13).



GO TO NEXT PAGE

8-35 INSTALL DUAL CHIP DETECTOR (Continued) 8-35

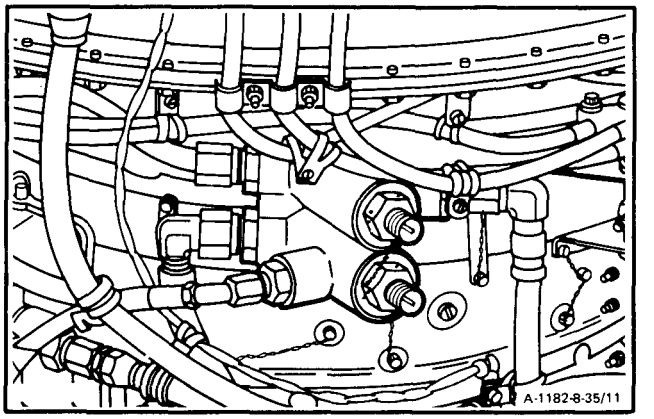
9. **Connect hose assembly (14)** to nipple (15).



INSPECT

FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-36 REMOVE HOSE ASSEMBLY (OIL COOLER TO INLET HOUSING) 8-36

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Container, 1 Quart

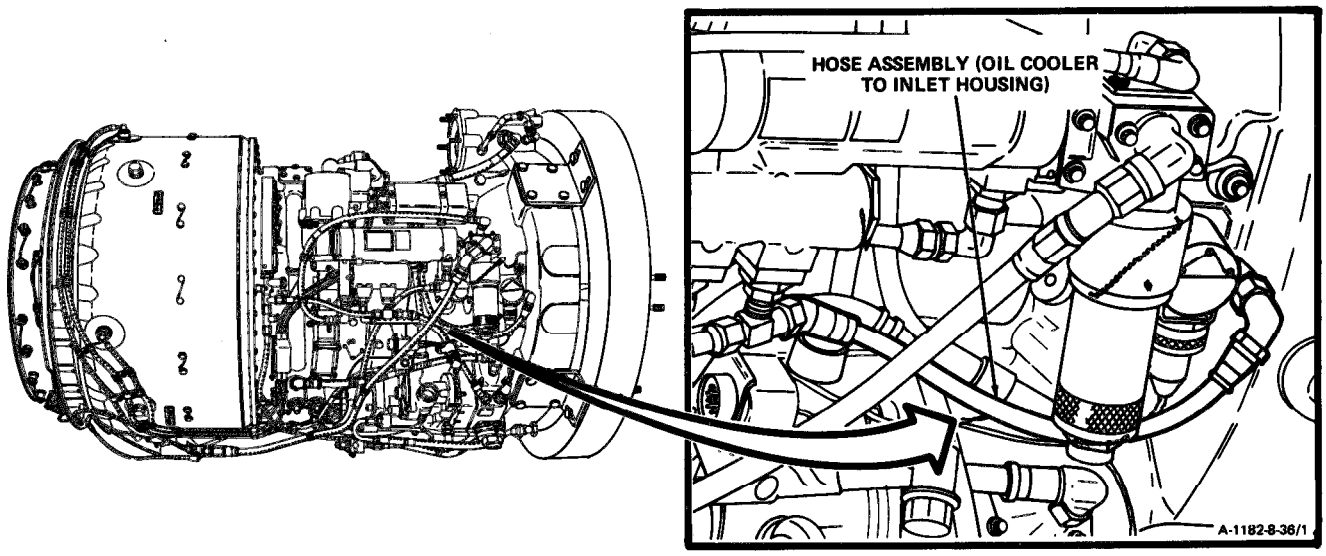
Materials:
Wiping Rag (E58)

Personnel Required:
68B10 Aircraft Powerplant Repairer

General Safety Instructions:

WARNING

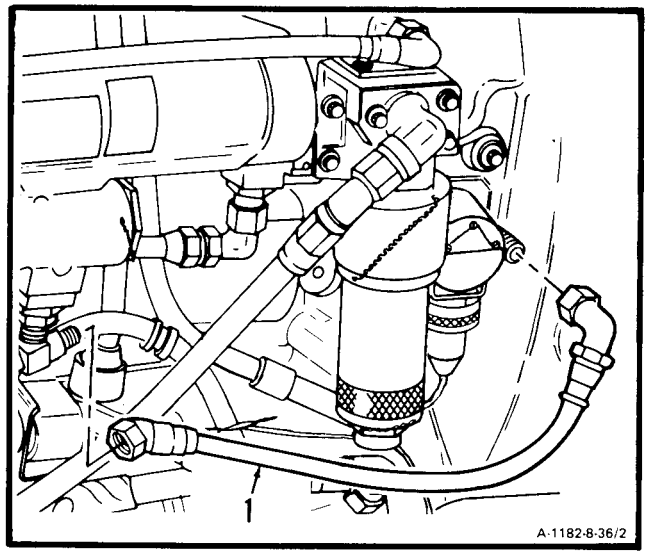
Lubricating oils (E32 and E33) cause paralysis it swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin, and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.



GO TO NEXT PAGE

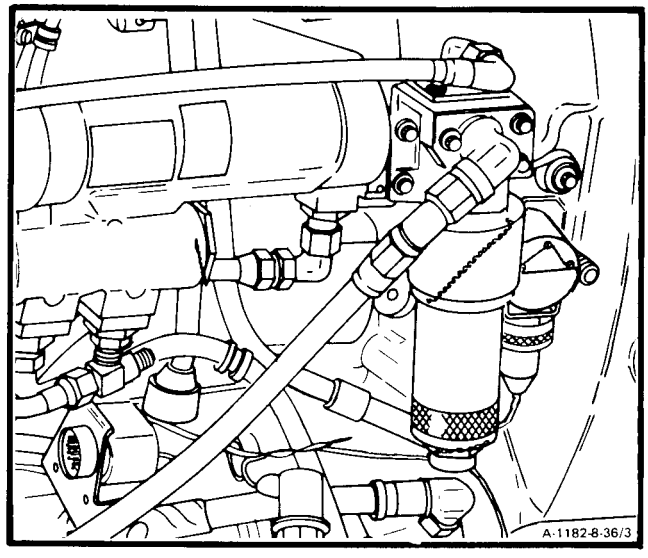
8-36 REMOVE HOSE ASSEMBLY (OIL COOLER TO INLET HOUSING) (Continued) 8-36

1. **Disconnect and remove hose assembly (1).**



FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-37 INSTALL HOSE ASSEMBLY (OIL COOLER TO INLET HOUSING) 8-37

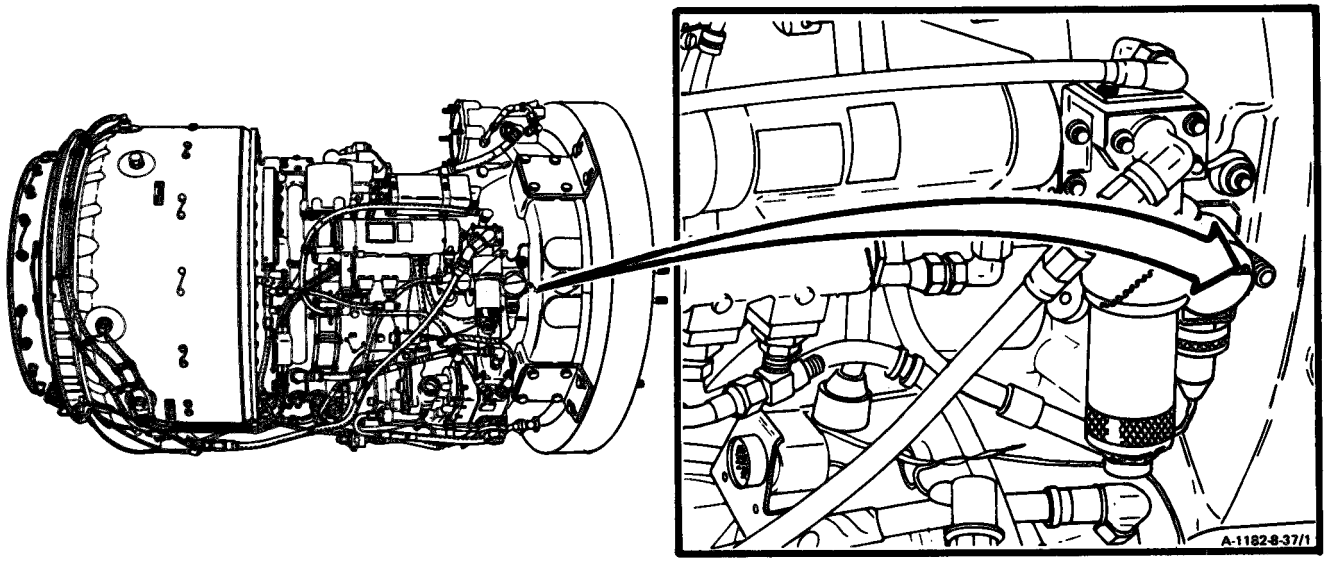
INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
None

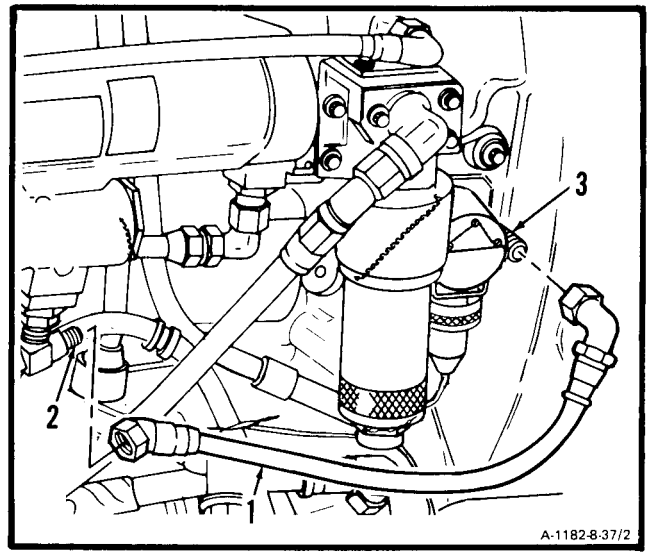
Personnel Required:
68610 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector



GO TO NEXT PAGE

8-37 INSTALL HOSE ASSEMBLY (OIL COOLER TO INLET HOUSING) (continued) 8-37

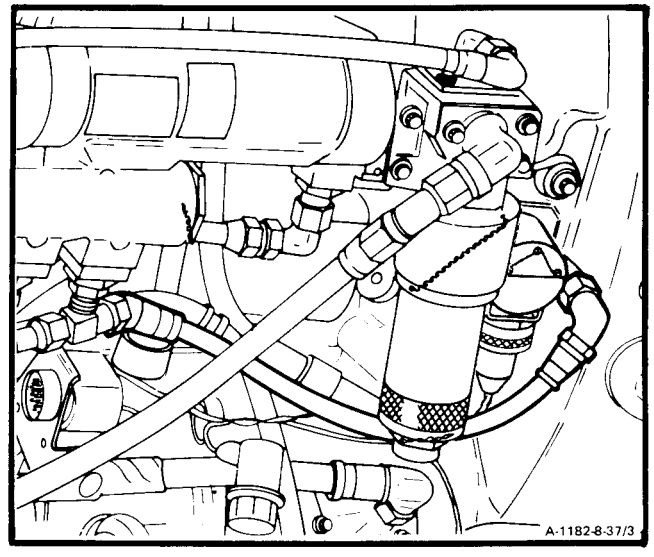
1. **Install hose assembly (1)** on tee (2) and nipple (3).



INSPECT

FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-38 REMOVE HOSE ASSEMBLY (OIL COOLER TO ACCESSORY GEARBOX ASSEMBLY) 8-38

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Container, 1 Quart

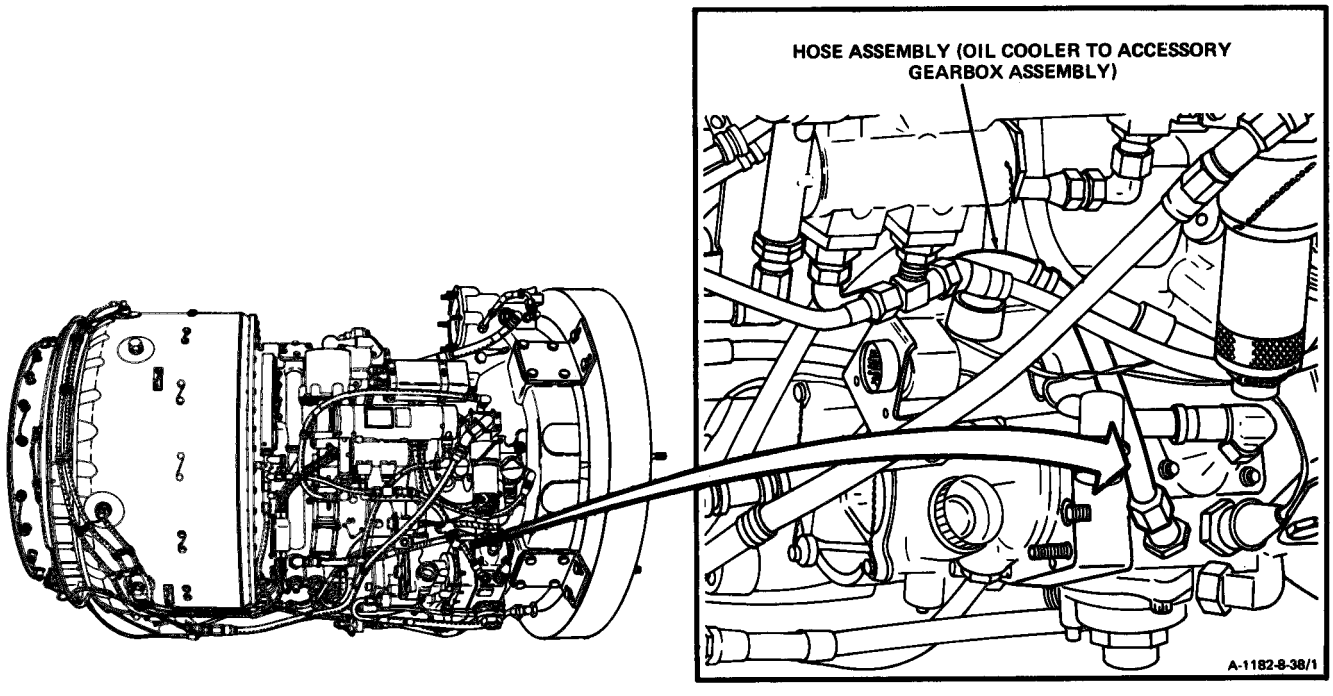
Materials:
Wiping Rag (E58)

Personnel Requird:
68B10 Aircraft Powerplant Repairer

General Safety Instructions:

WARNING

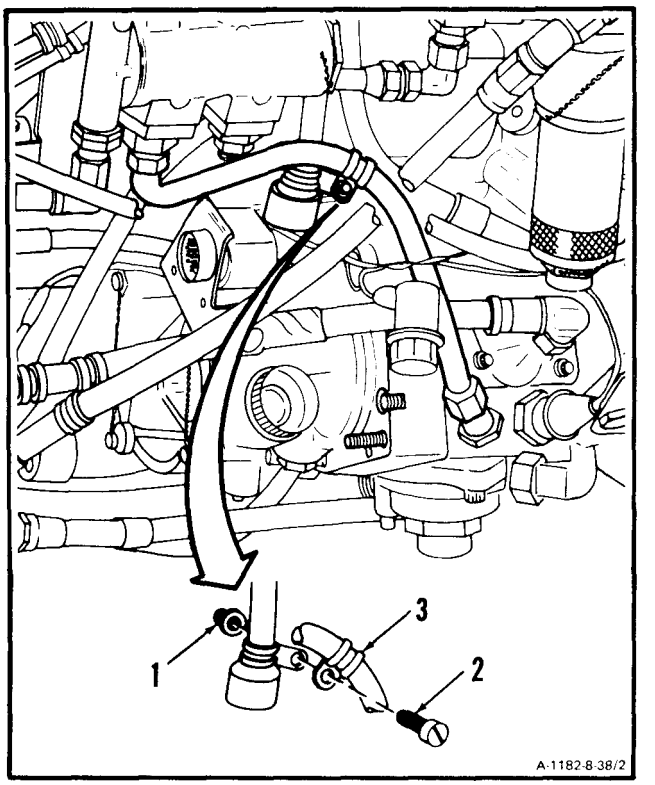
Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin, and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.



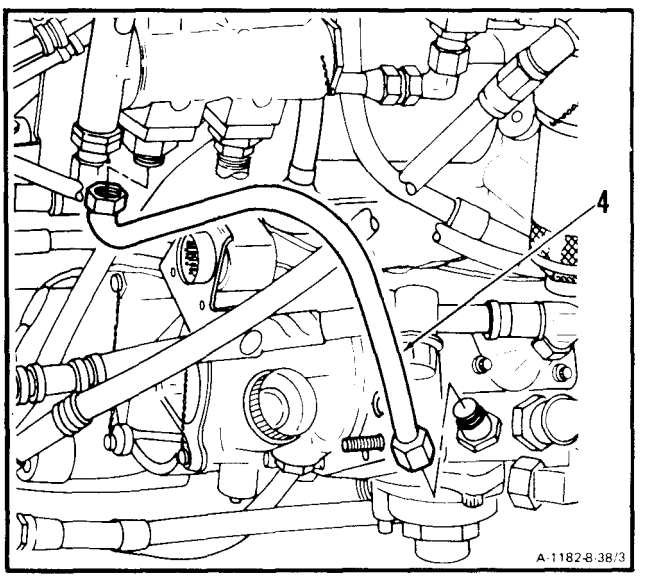
GO TO NEXT PAGE

8-38 REMOVE HOSE ASSEMBLY (OIL COOLER TO ACCESSORY GEARBOX ASSEMBLY) (Continued)

1. **Remove** nut (1), screw (2), and **clamp (3).**



2. **Disconnect and remove hose assembly (4).**

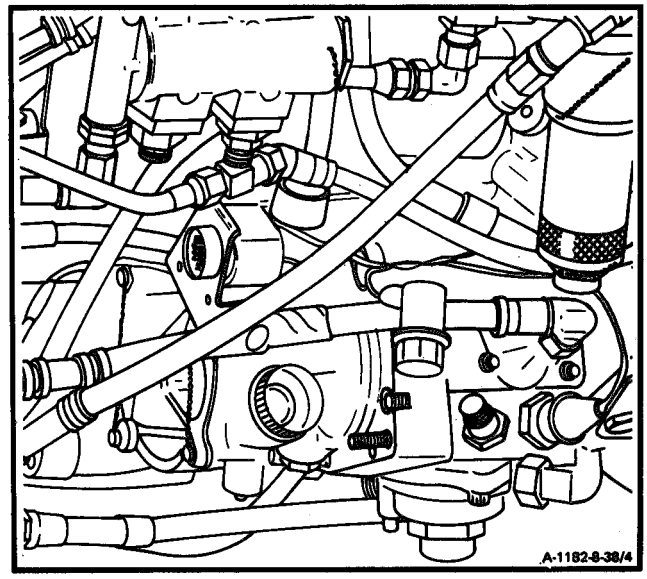


GO TO NEXT PAGE

8-38 REMOVE HOSE ASSEMBLY (OIL COOLER TO ACCESSORY GEARBOX ASSEMBLY) (Continued)

FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-39 INSTALL HOSE ASSEMBLY (OIL COOLER TO ACCESSORY GEARBOX ASSEMBLY) 8-39

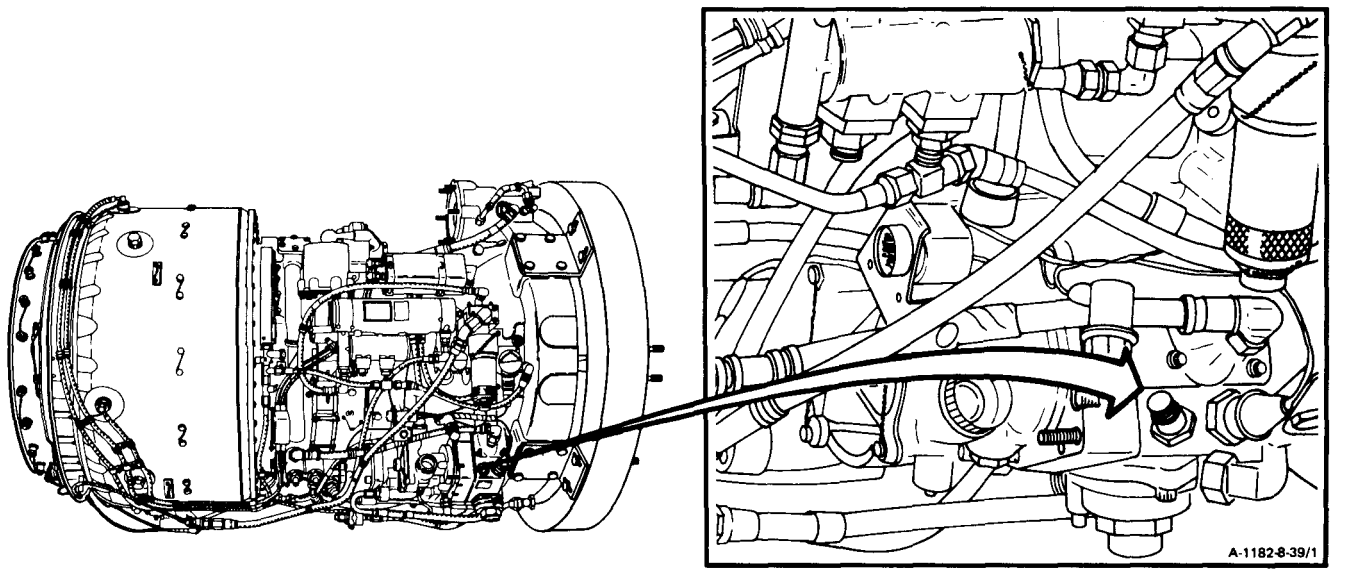
INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
None

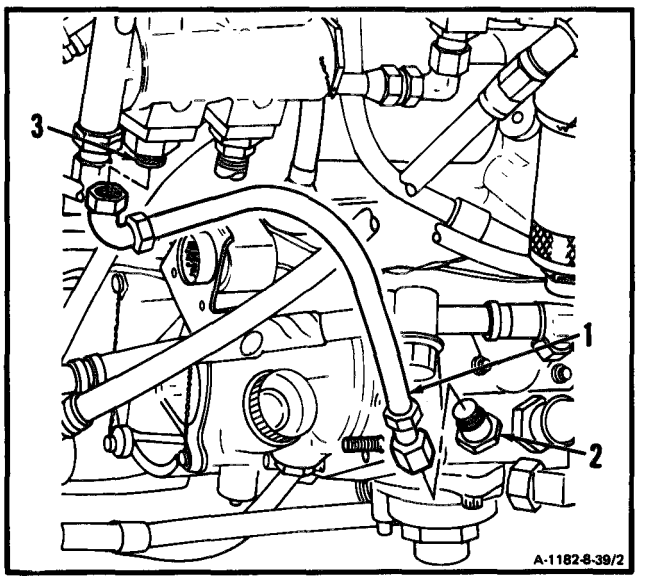
Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector



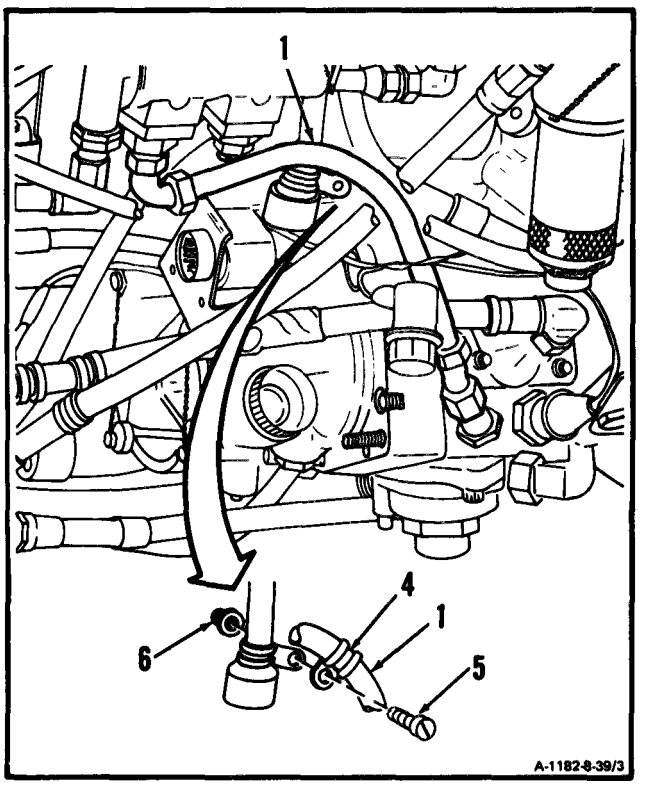
GO TO NEXT PAGE

8-39 INSTALL HOSE ASSEMBLY (OIL COOLER TO ACCESSORY GEARBOX ASSEMBLY) (Continued) 8-39

1. **Install hose assembly (1)** on nipple (2) and reducer (3).



2. **Install clamp (4)** on hose assembly (1), and install screw (5) and nut (6).



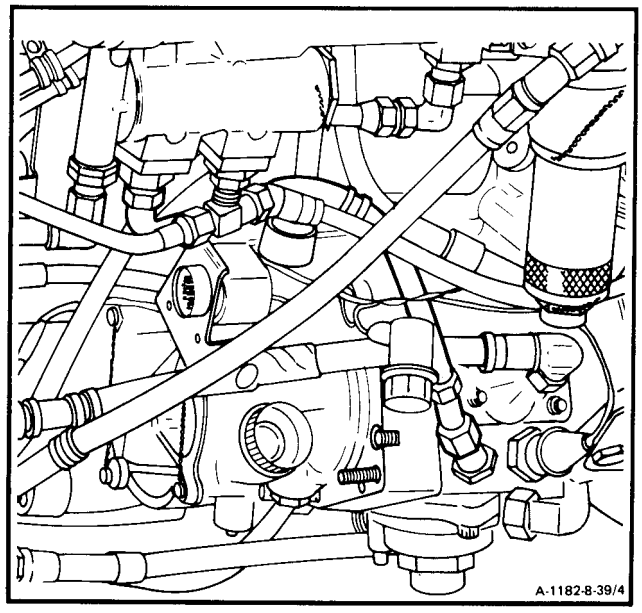
INSPECT

GO TO NEXT PAGE

8-39 INSTALL HOSE ASSEMBLY (OIL COOLER TO ACCESSORY GEARBOX ASSEMBLY) (Continued)

FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-40 REMOVE HOSE ASSEMBLY (OIL COOLER TO PRESSURE CONNECTOR) 8-40

INITIAL SETUP

Applicable ***Configurations:***
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Container, 1 Quart

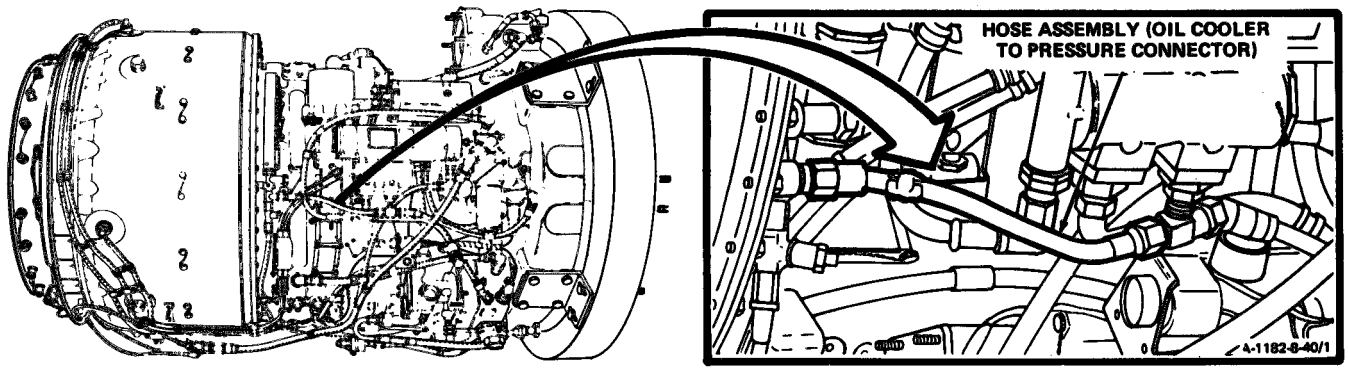
Materials:
Wiping Rag (E58)

Personnel Required:
68B10 Aircraft Powerplant Repairer

General Safety Instructions:

WARNING

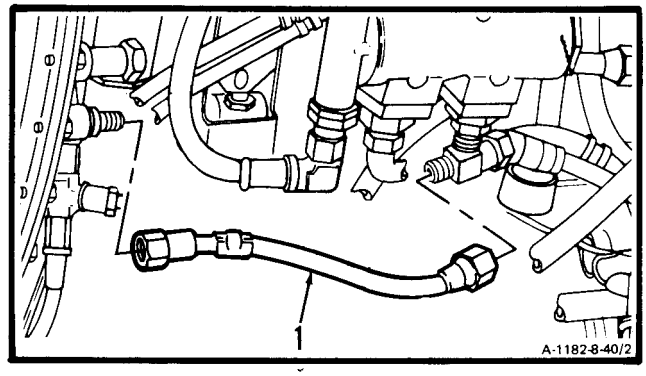
Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin, and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.



GO TO NEXT PAGE

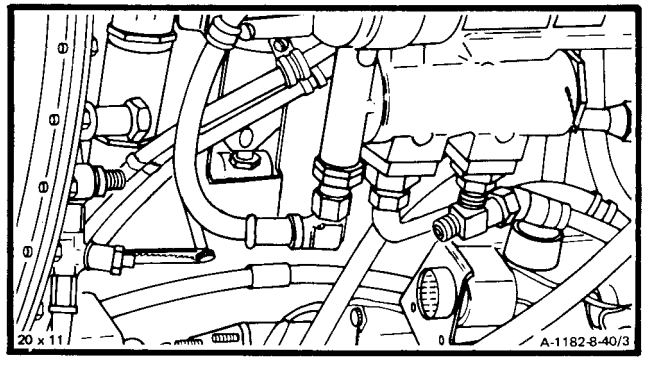
8-40 REMOVE HOSE ASSEMBLY (OIL COOLER TO PRESSURE CONNECTOR) (Continued) 8-40

1. **Disconnect and remove hose assembly (1).**



FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-41 INSTALL HOSE ASSEMBLY (OIL COOLER TO PRESSURE CONNECTOR) 8-41

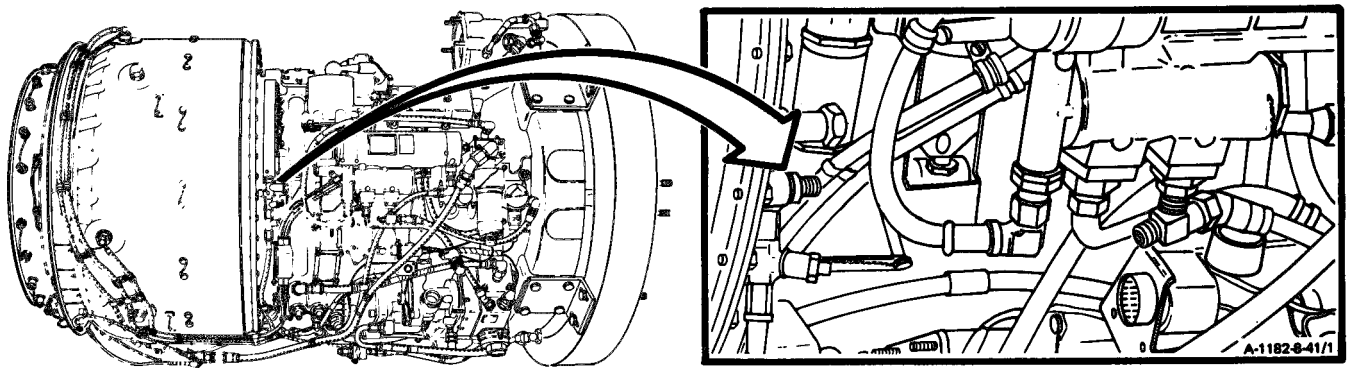
INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
None

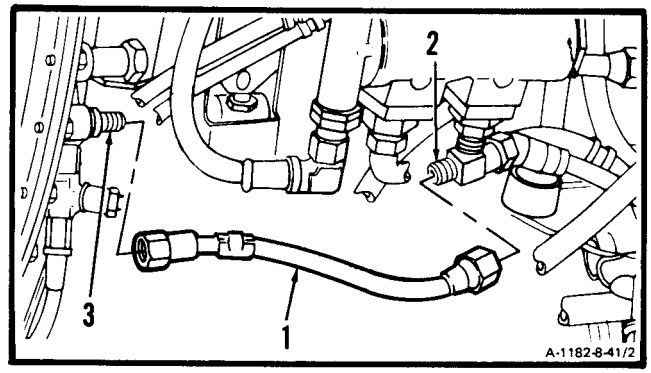
Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector



GO TO NEXT PAGE

8-41 INSTALL HOSE ASSEMBLY (OIL COOLER TO PRESSURE CONNECTOR) (Continued) 8-41

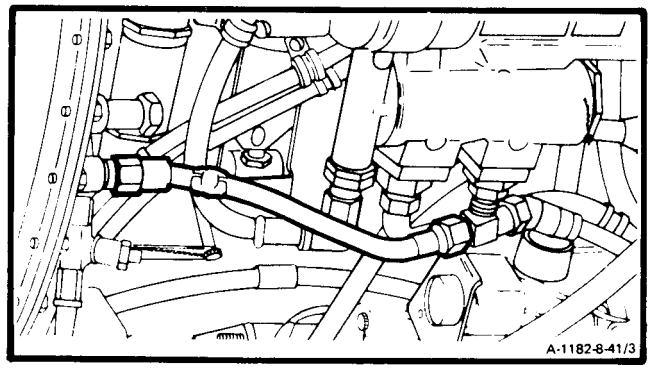
1. **Install hose assembly (1)** on tee (2) and pressure connector (3).



INSPECT

FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-42 REMOVE HOSE ASSEMBLY (DUAL CHIP DETECTOR TO ACCESSORY GEARBOX ASSEMBLY) 8-42

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant lvlechanic's Tool Kit, NSN 5180-00-323-4944
Container, 1 Quart

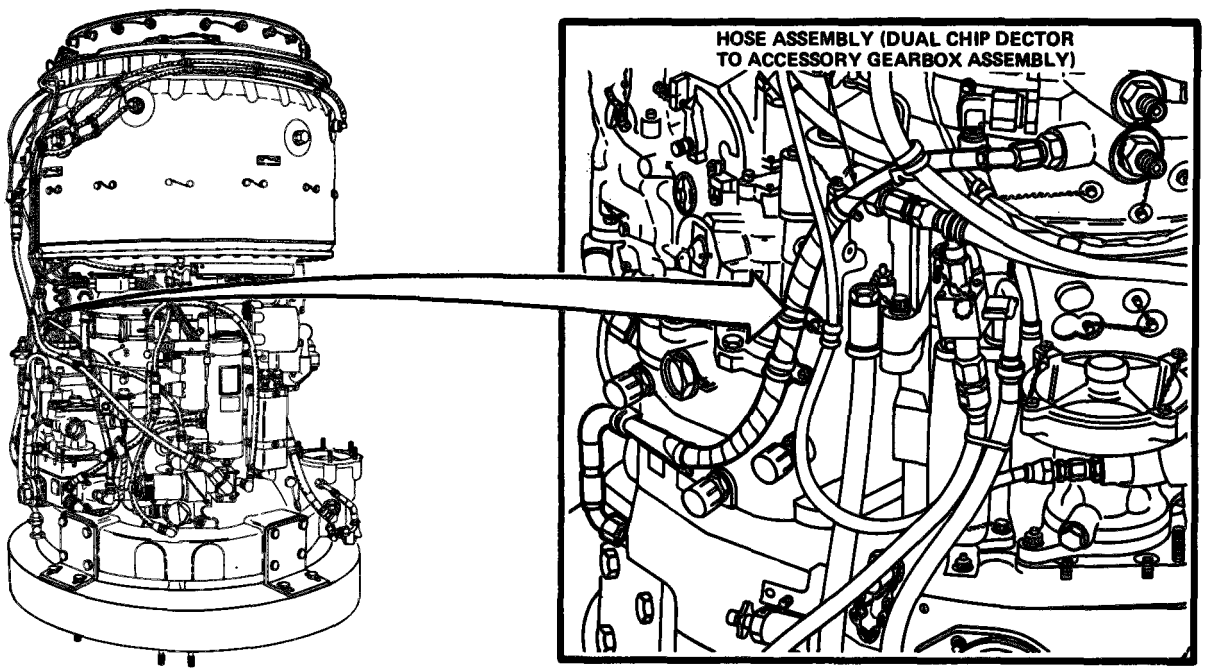
Materials:
Wiping Rag (E58)

Personnel Requird:
68B10 Aircraft Powerplant Repairer

General Safety Instructions:

WARNING

Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin, and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.

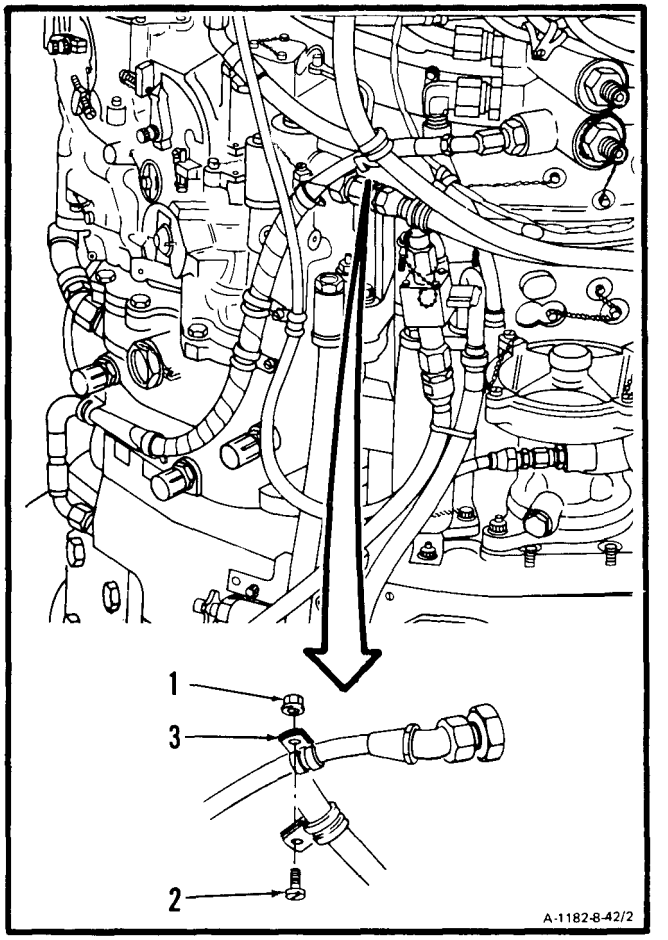


A-1182-8-42/1

GO TO NEXT PAGE

8-42 REMOVE HOSE ASSEMBLY (DUAL CHIP DETECTOR TO ACCESSORY GEARBOX ASSEMBLY) (Continued)

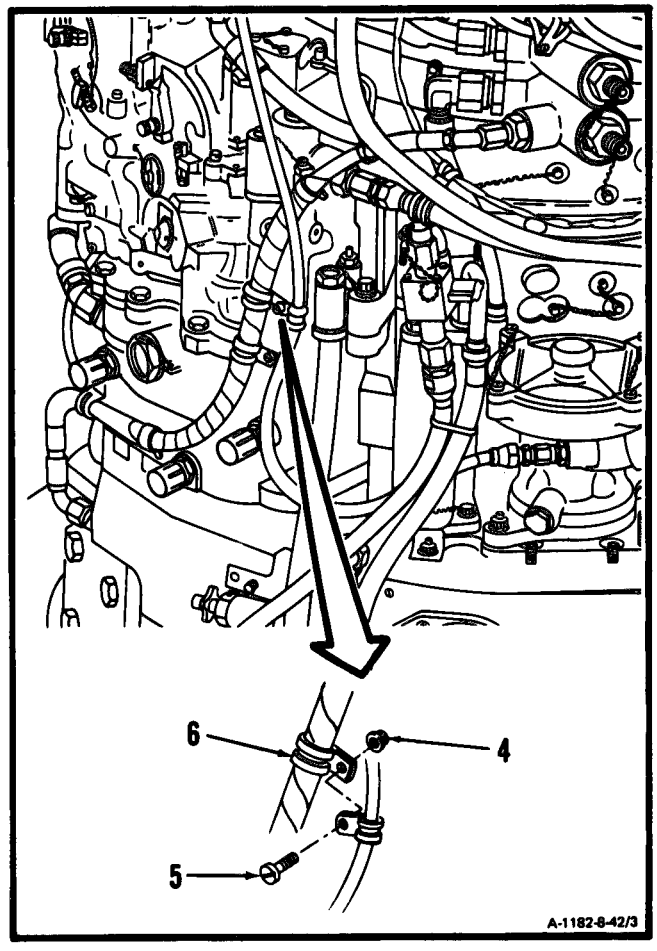
1. **Remove** nut (1), screw (2), and **clamp (3).**



GO TO NEXT PAGE

8-42 REMOVE HOSE ASSEMBLY (DUAL CHIP DETECTOR TO ACCESSORY GEARBOX ASSEMBLY) (Continued)

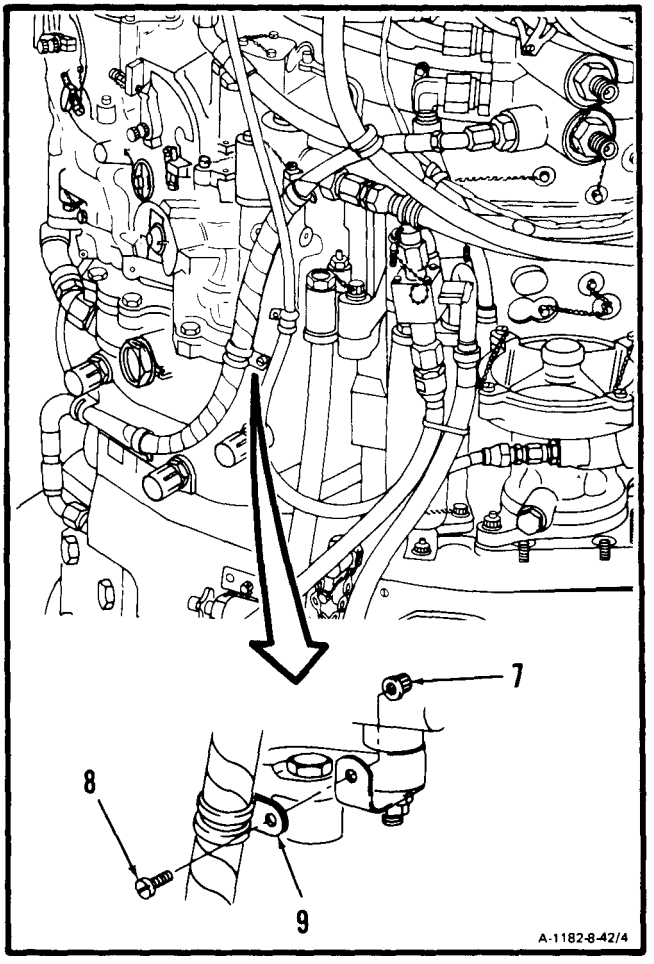
2. **Remove** nut (4), screw (5), and **clamp (6).**



GO TO NEXT PAGE

8-42 REMOVE HOSE ASSEMBLY (DUAL CHIP DETECTOR TO ACCESSORY GEARBOX ASSEMBLY) (Continued)

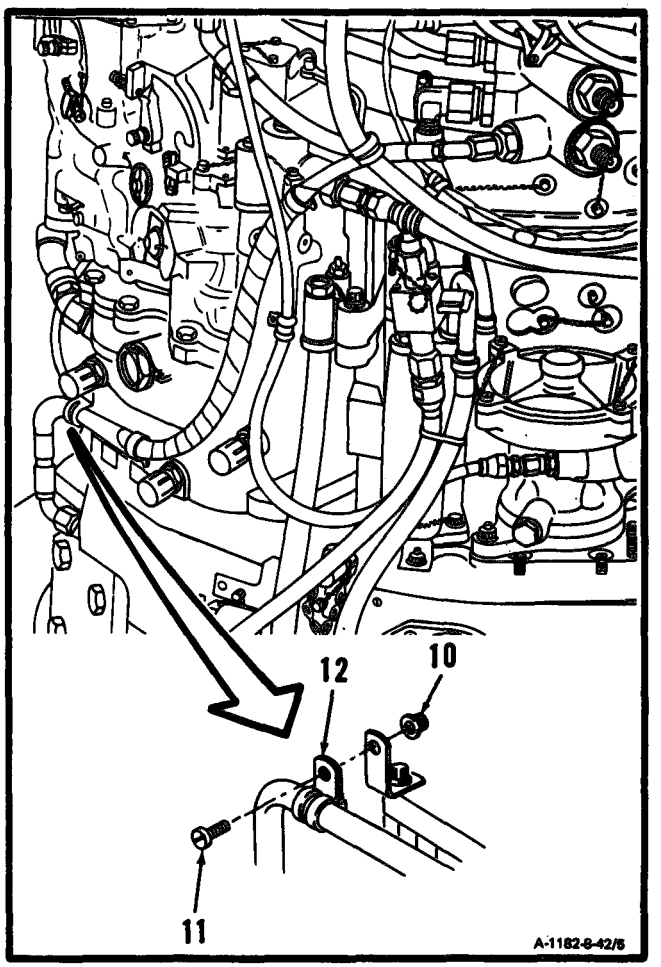
3. **Remove** nut (7), screw (8), and **clamp (9).**



GO TO NEXT PAGE

8-42 REMOVE HOSE ASSEMBLY (DUAL CHIP DETECTOR TO ACCESSORY GEARBOX ASSEMBLY) (Continued)

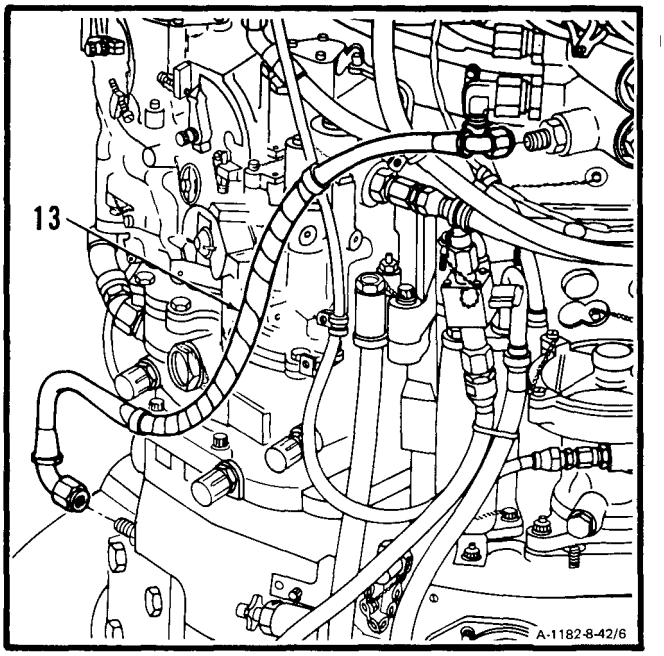
4. **Remove** nut (10), screw (11), and **clamp (12).**



GO TO NEXT PAGE

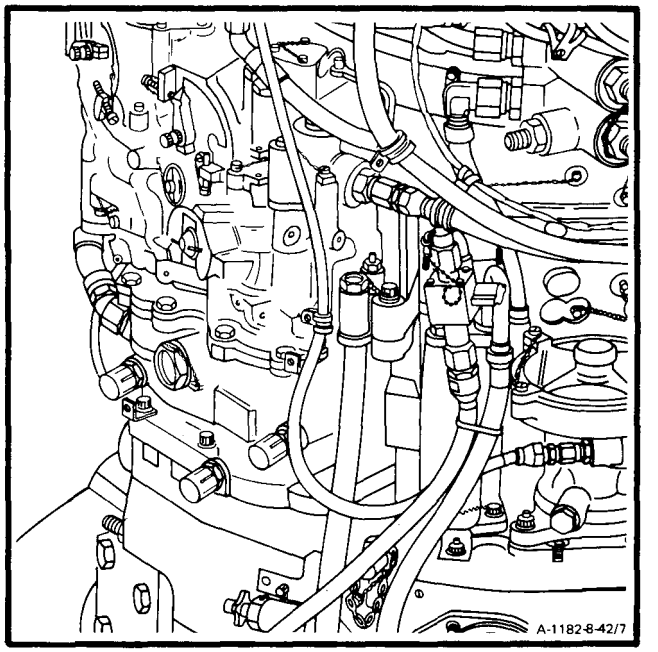
8-42 REMOVE HOSE ASSEMBLY (DUAL CHIP DETECTOR TO ACCESSORY GEARBOX ASSEMBLY) (Continued)

5. **Disconnect and remove hose assembly (13).**



FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-43 INSTALL HOSE ASSEMBLY (DUAL CHIP DETECTOR TO ACCESSORY GEARBOX ASSEMBLY)

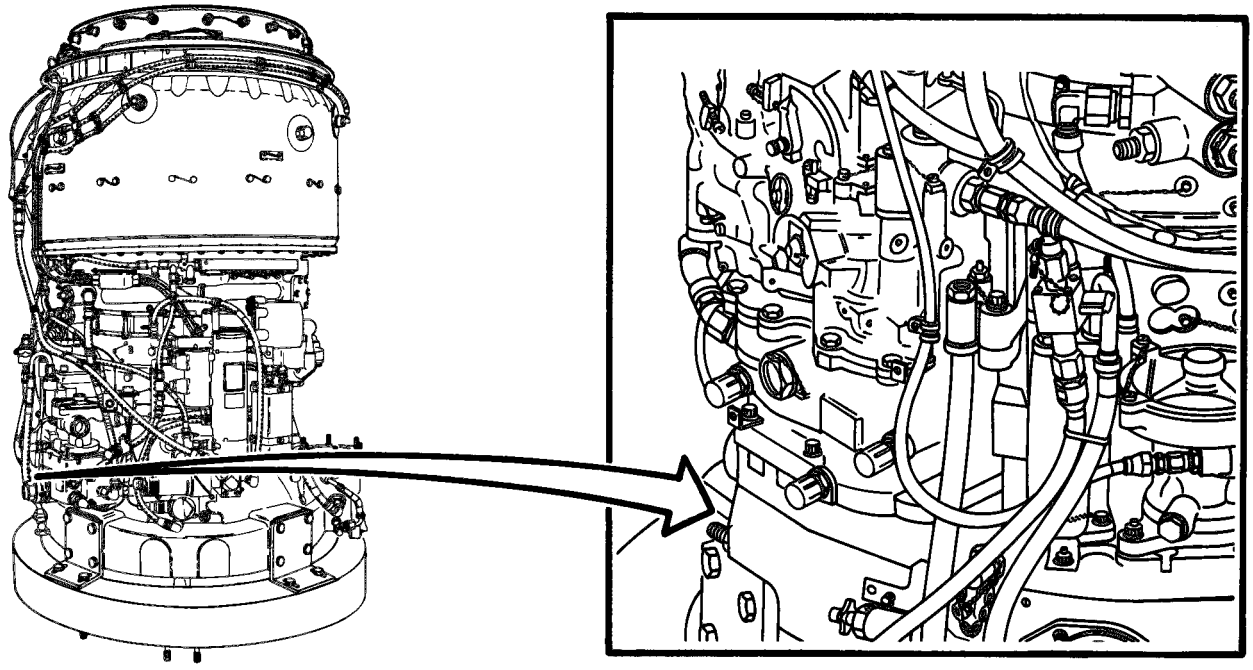
INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
None

Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

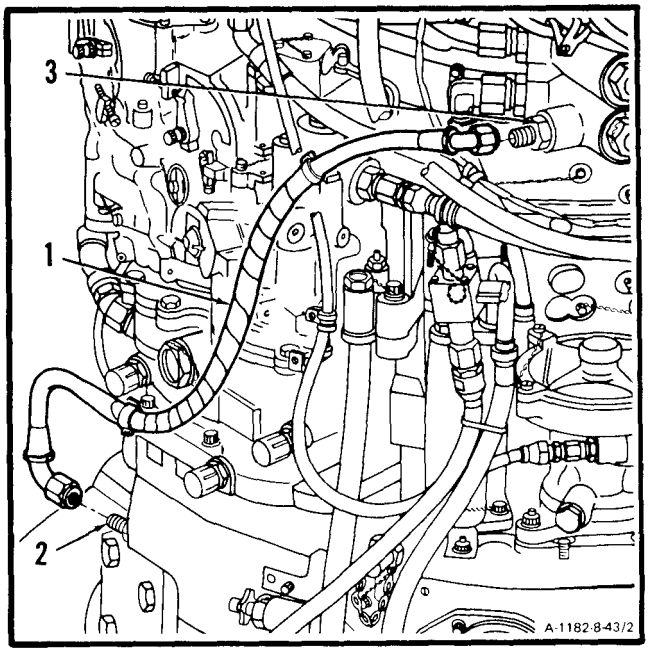


A-1182-8-43/1

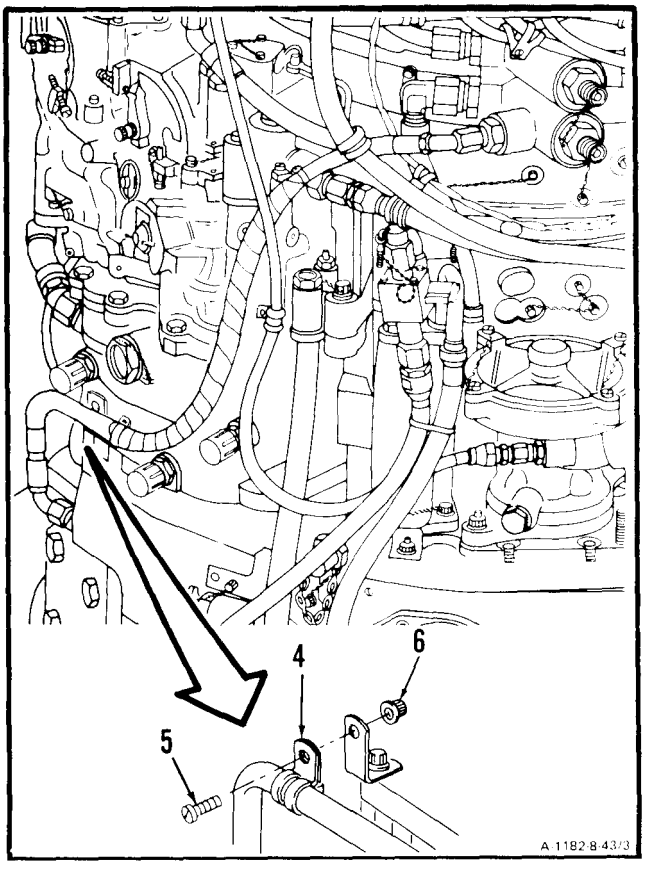
GO TO NEXT PAGE

8-43 INSTALL HOSE ASSEMBLY (DUAL CHIP DETECTOR TO ACCESSORY GEARBOX ASSEMBLY) (Continued)

1. **Install hose assembly (1)** on adapter (2) and reducer (3).



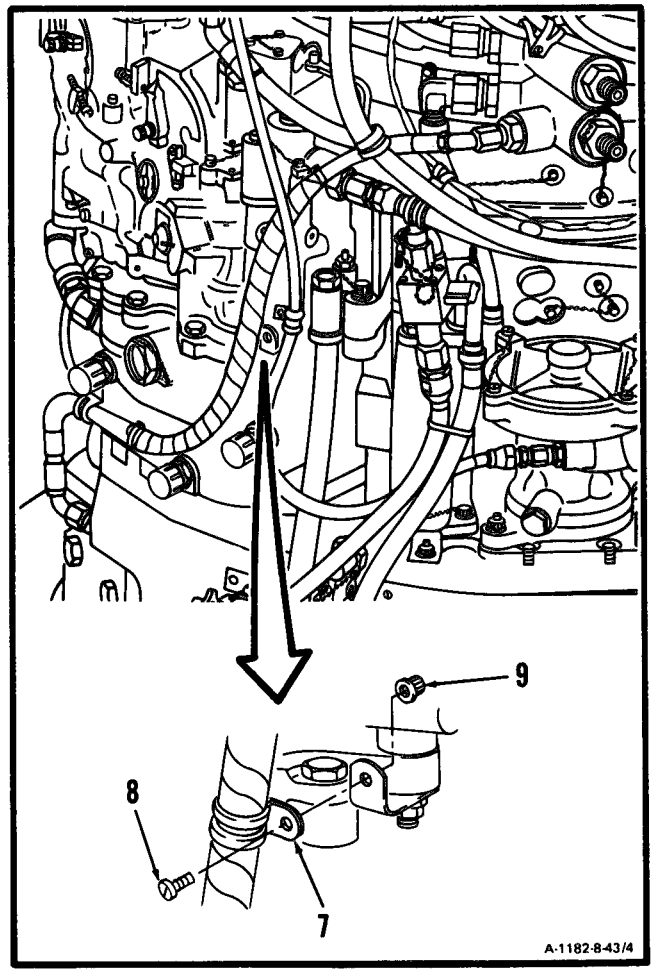
2. **install clamp (4),** screw (5), and nut (6).



GO TO NEXT PAGE

8-43 INSTALL HOSE ASSEMBLY (DUAL CHIP DETECTOR TO ACCESSORY GEARBOX ASSEMBLY) (Continued)

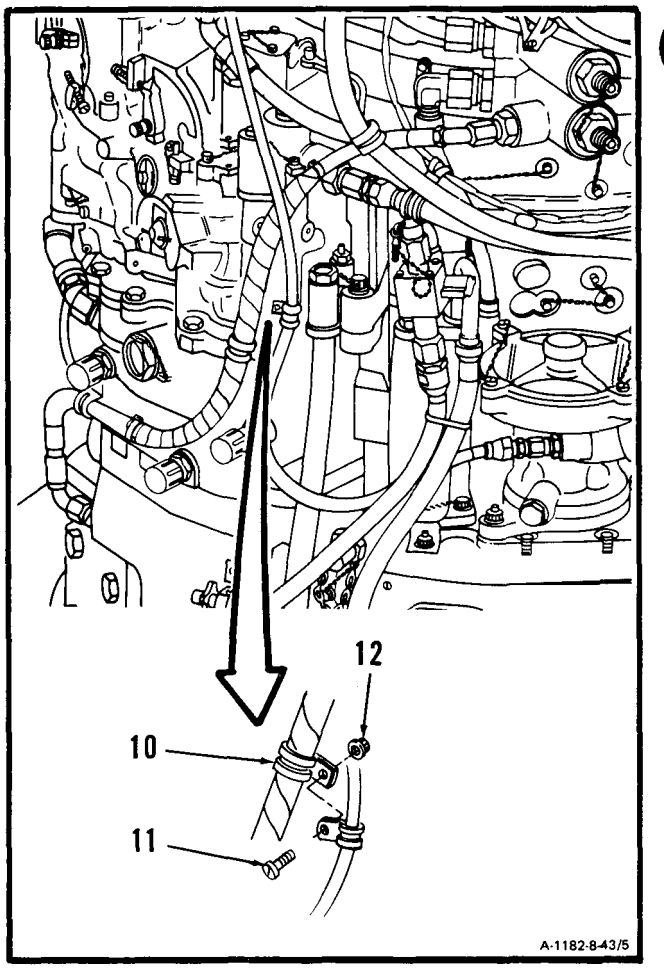
3. **Install clamp (7),** screw (8), and nut (9).



GO TO NEXT PAGE

8-43 INSTALL HOSE ASSEMBLY (DUAL CHIP DETECTOR TO ACCESSORY GEARBOX ASSEMBLY) (Continued)

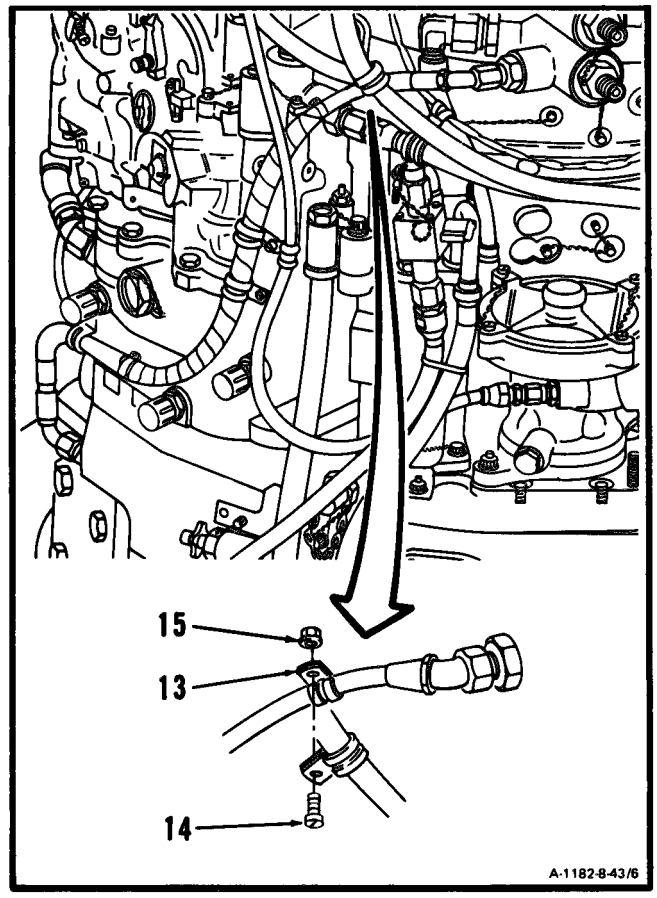
4. **Install clamp (10),** screw (11), and nut (12).



GO TO NEXT PAGE

8-43 INSTALL HOSE ASSEMBLY (DUAL CHIP DETECTOR TO ACCESSORY GEARBOX ASSEMBLY) (Continued)

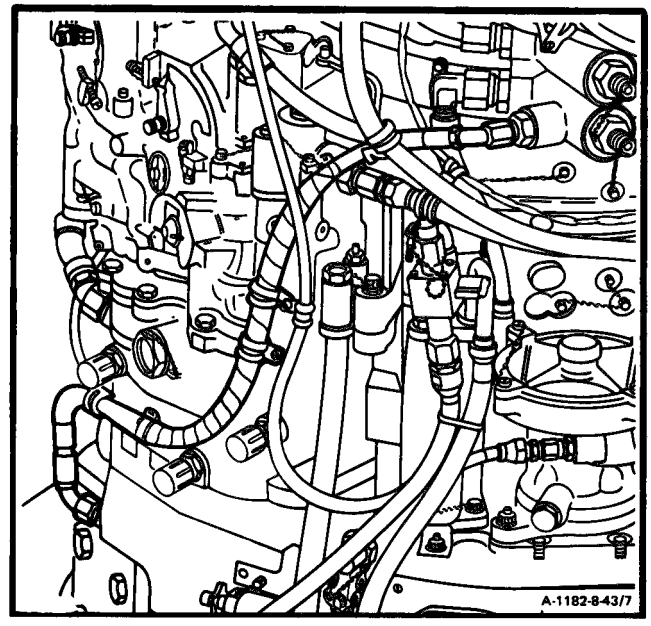
5. **Install clamp (13),** screw (14), and nut (15).



INSPECT

FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-44 REMOVE HOSE ASSEMBLY (DUAL CHIP DETECTOR TO ACCESSORY GEARBOX COLLECTOR)

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Container, 1 Quart

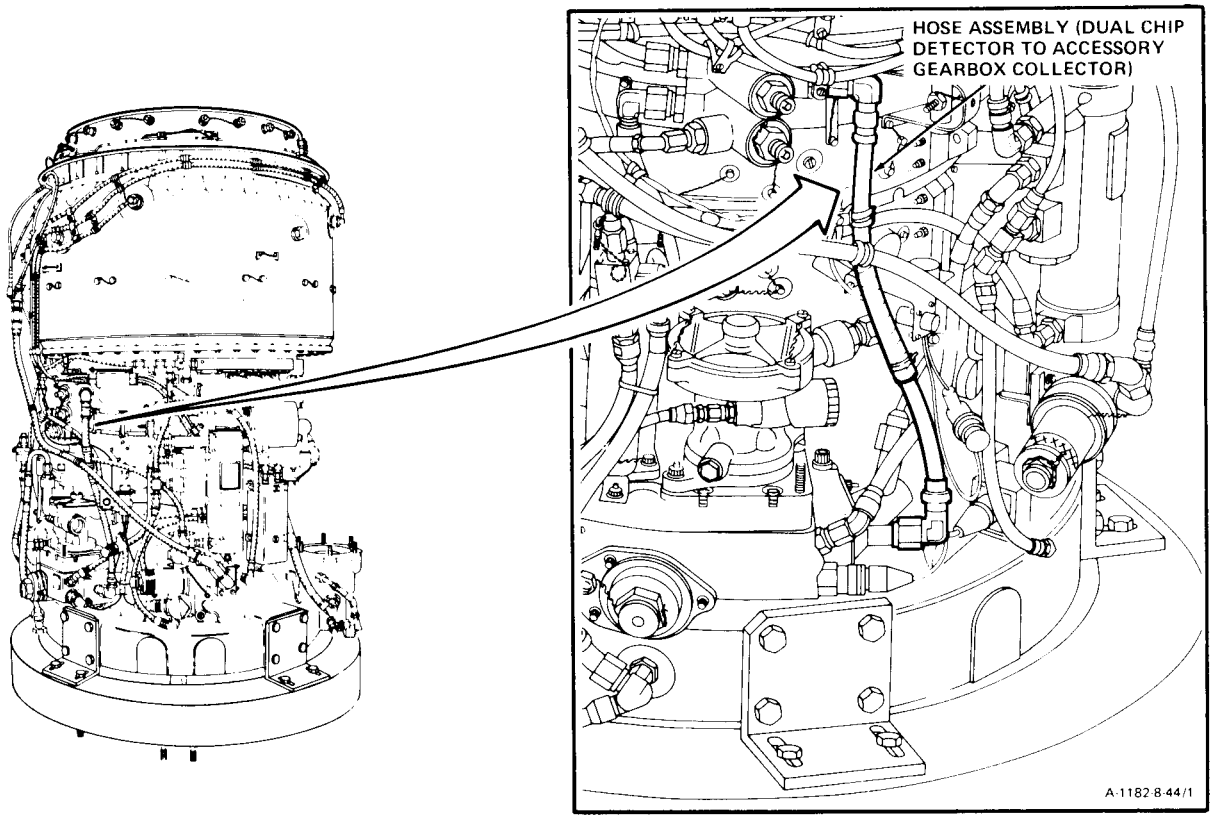
Materials:
Wiping Flag (E58)

Personnel Required:
68B10 Aircraft Powerplant Repairer

General Safety Instructions:

WARNING

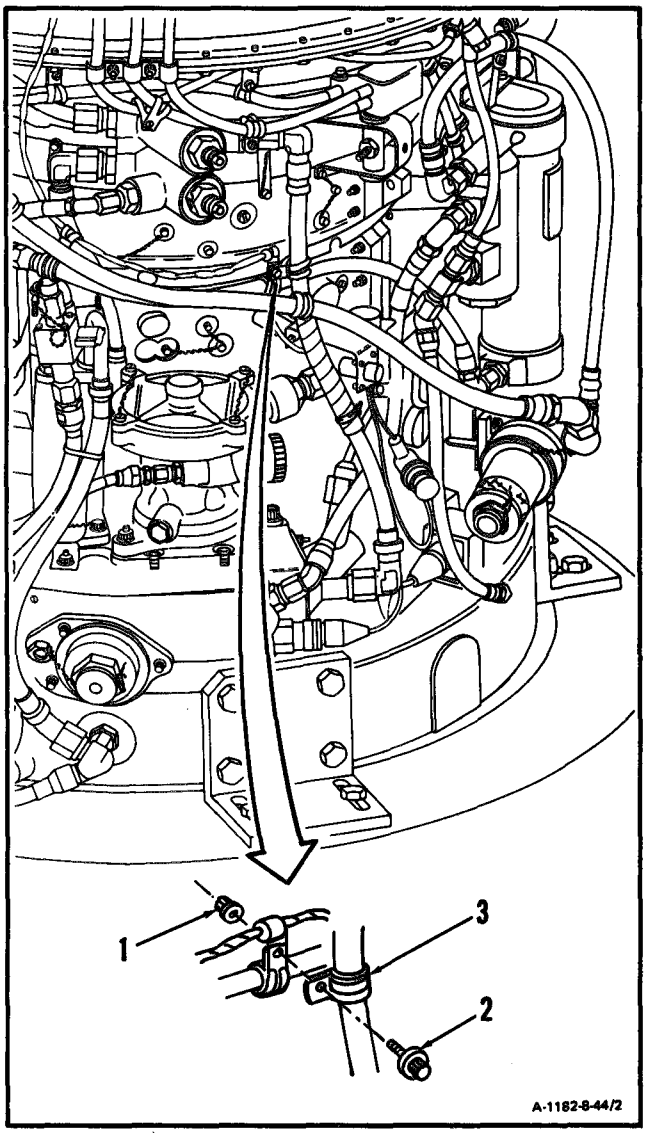
Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin, and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.



GO TO NEXT PAGE

8-44 REMOVE HOSE ASSEMBLY (DUAL CHIP DETECTOR TO ACCESSORY GEARBOX COLLECTOR) (Continued)

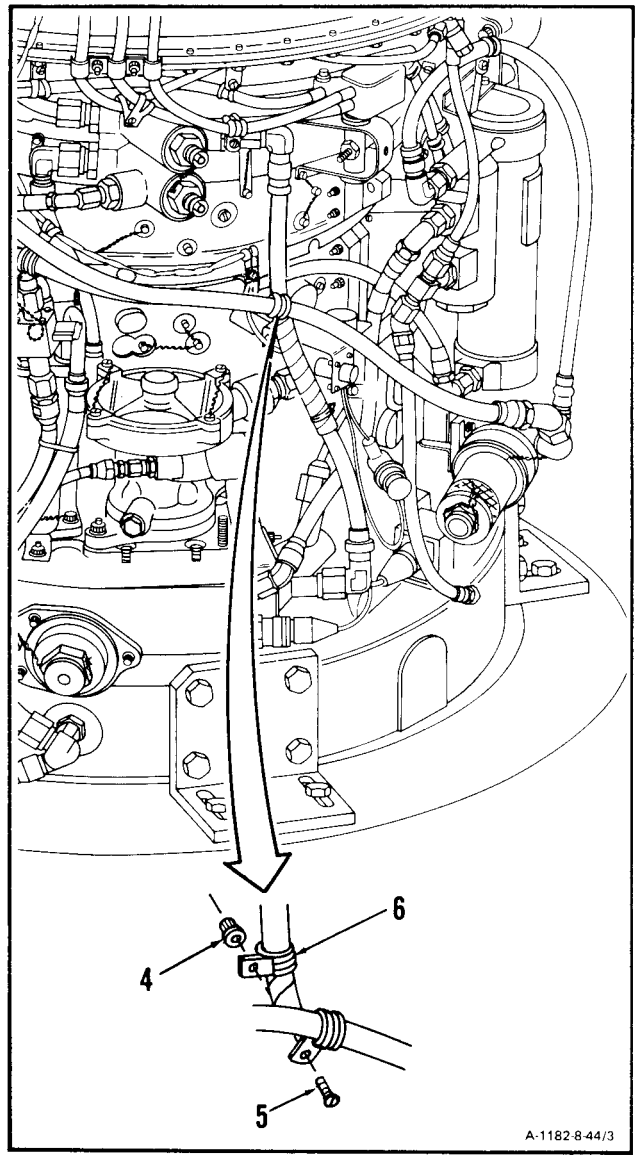
1. **Remove** nut (1), screw (2) and **clamp (3).**



GO TO NEXT PAGE

8-44 REMOVE HOSE ASSEMBLY (DUAL CHIP DETECTOR TO ACCESSORY GEARBOX COLLECTOR) (Continued)

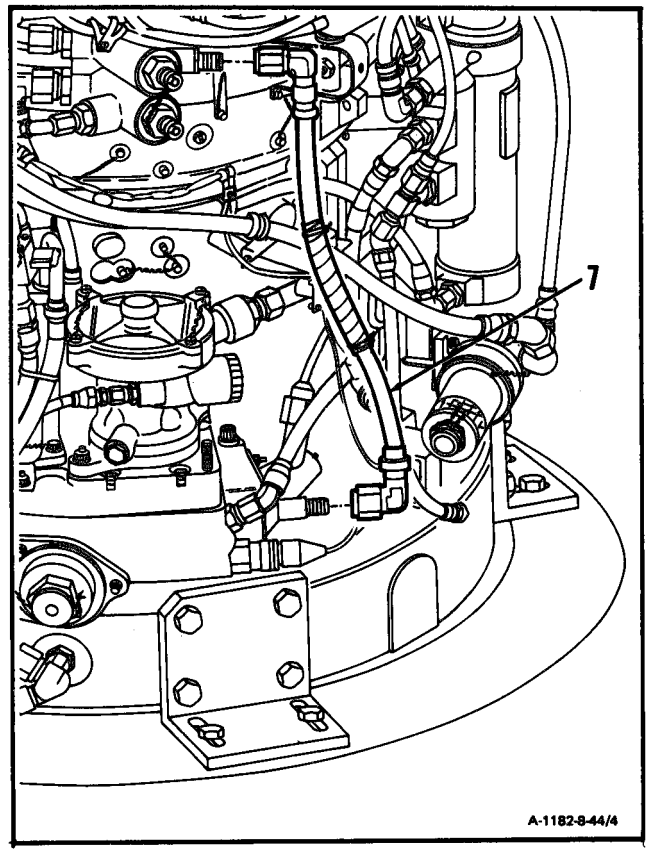
2. **Remove** nut (4), screw (5), and **clamp (6).**



GO TO NEXT PAGE

8-44 REMOVE HOSE ASSEMBLY (DUAL CHIP DETECTOR TO ACCESSORY GEARBOX COLLECTOR) (Continued)

3. Disconnect and **remove hose assembly (7).**

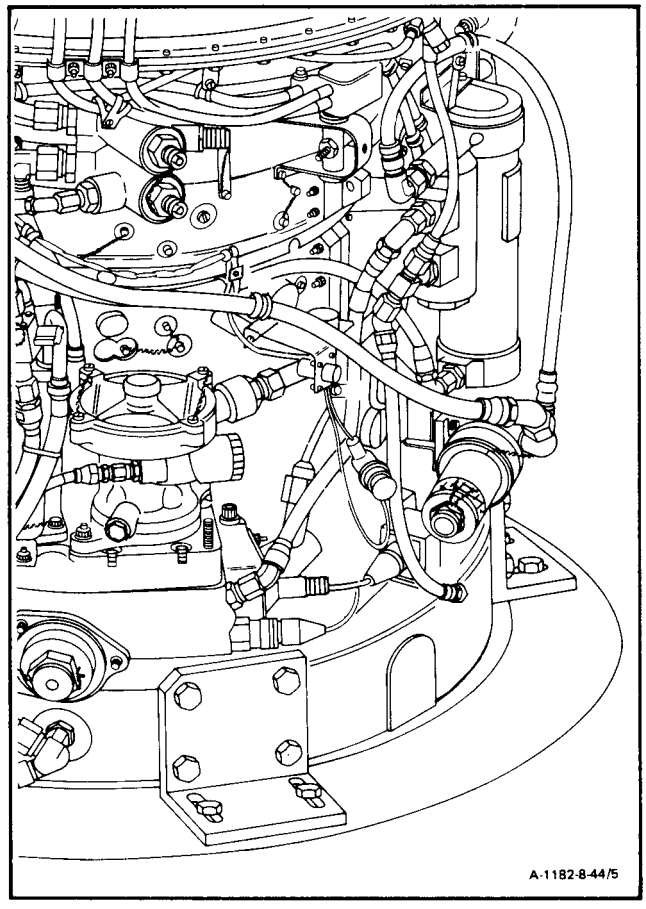


GO TO NEXT PAGE

8-44 REMOVE HOSE ASSEMBLY (DUAL CHIP DETECTOR TO ACCESSORY GEARBOX COLLECTOR) (Continued)

FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-45 INSTALL HOSE ASSEMBLY (DUAL CHIP DETECTOR TO ACCESSORY GEARBOX COLLECTOR) 8-45

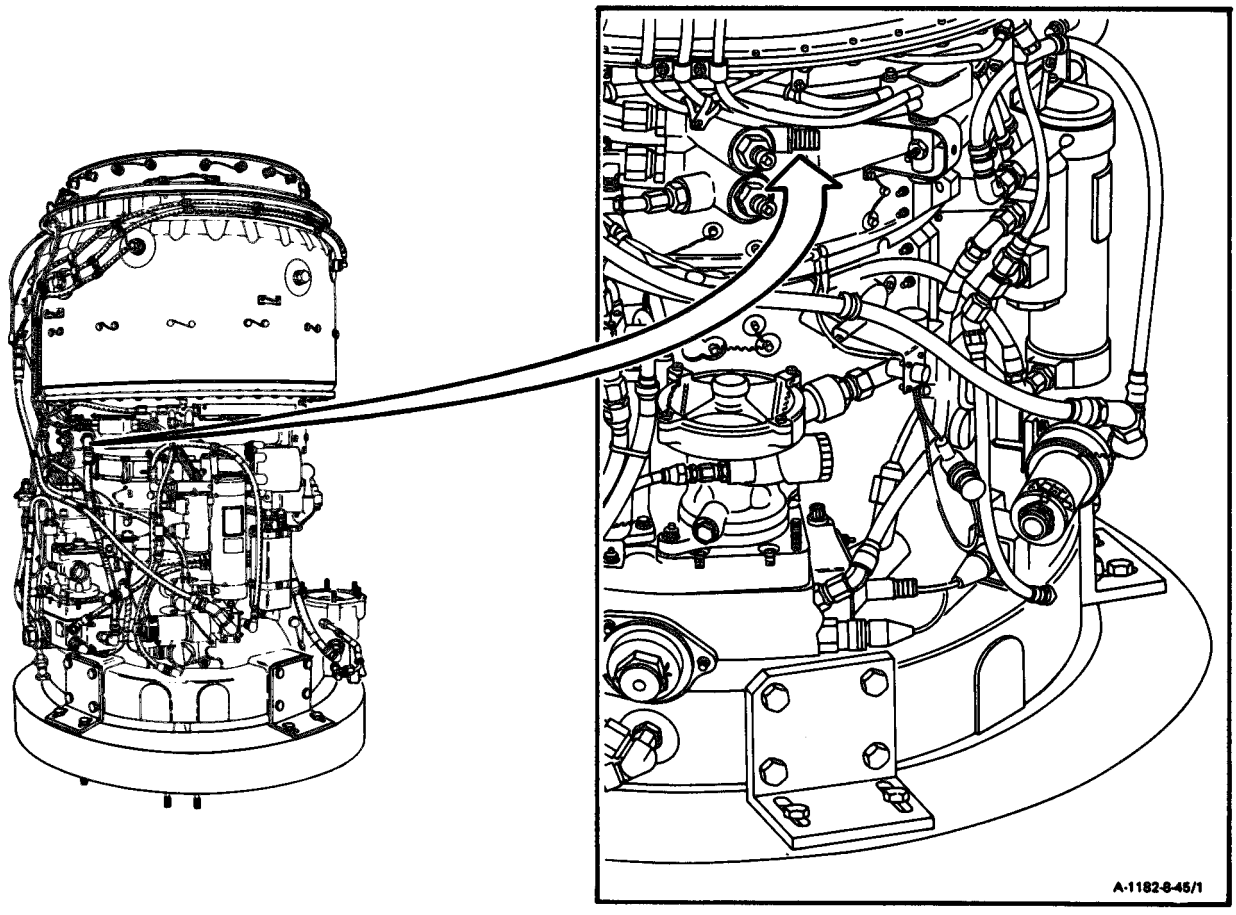
INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
None

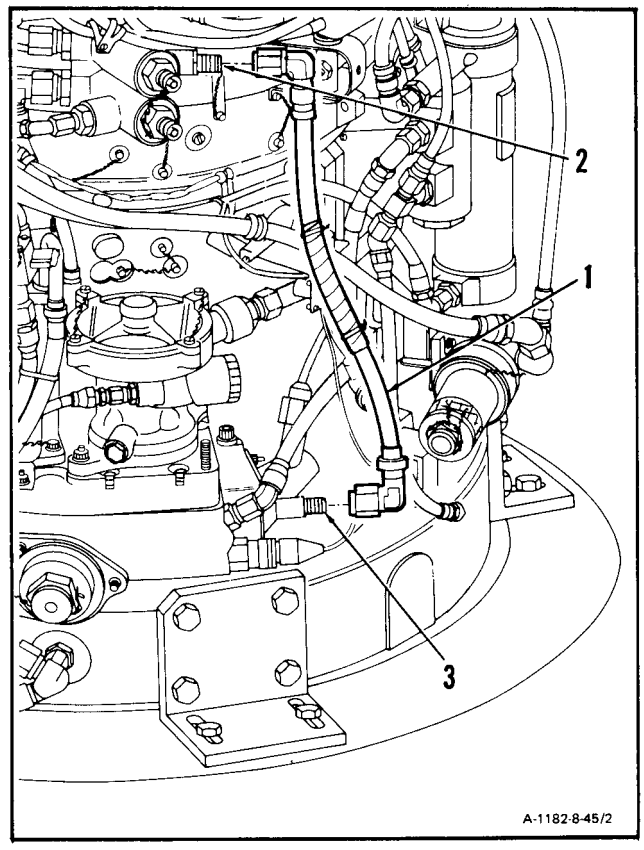
Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector



GO TO NEXT PAGE

8-45 INSTALL HOSE ASSEMBLY (DUAL CHIP DETECTOR TO ACCESSORY GEARBOX COLLECTOR) (Continued)

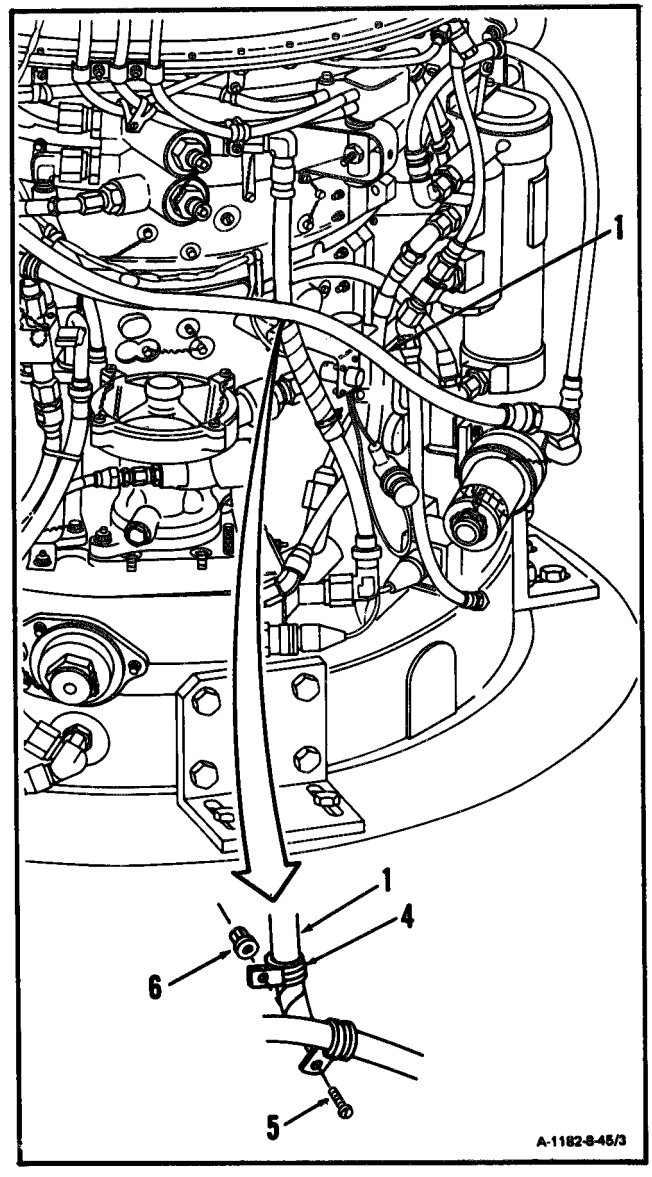
1. **Install hose assembly (1)** on nipples (2 and 3).



GO TO NEXT PAGE

8-45 INSTALL HOSE ASSEMBLY (DUAL CHIP DETECTOR TO ACCESSORY GEARBOX COLLECTOR) (Continued)

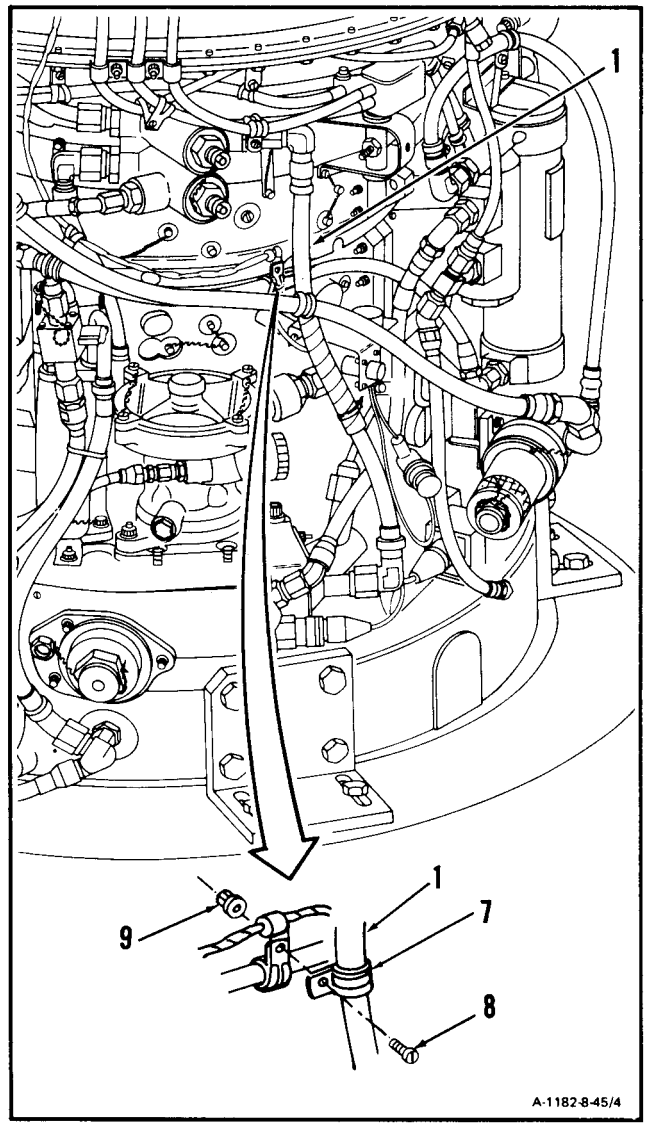
2. **Install clamp (4)** on hose assembly (1) and install screw (5) and nut (6).



GO TO NEXT PAGE

8-45 INSTALL HOSE ASSEMBLY (DUAL CHIP DETECTOR TO ACCESSORY GEARBOX COLLECTOR) (Continued)

3. **Install clamp (7)** on hose assembly (1) and install screw (8) and nut (9).



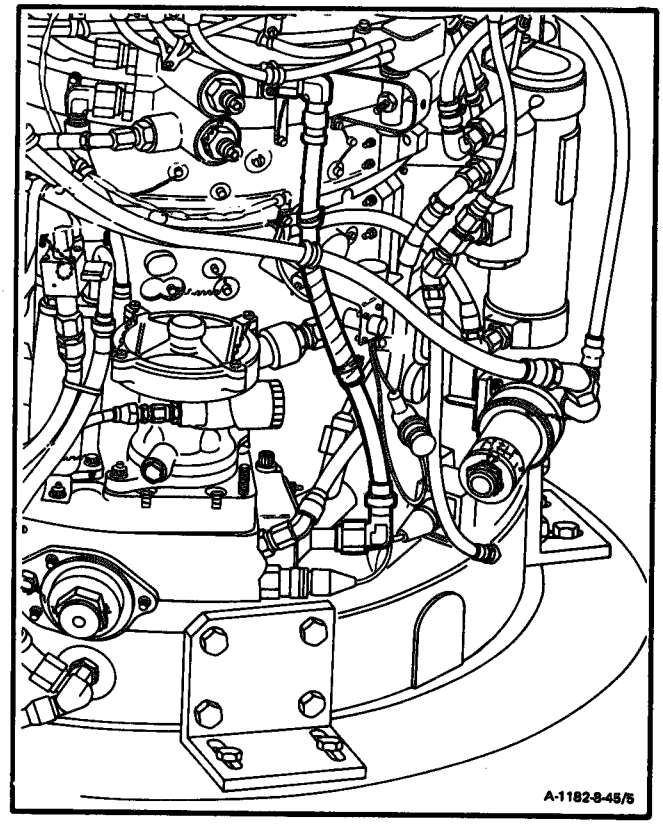
INSPECT

GO TO NEXT PAGE

8-45 INSTALL HOSE ASSEMBLY (DUAL CHIP DETECTOR TO ACCESSORY GEARBOX COLLECTOR) (Continued)

FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-46 REMOVE HOSE ASSEMBLY (DUAL CHIP DETECTOR TO AIR DIFFUSER ASSEMBLY) 8-46

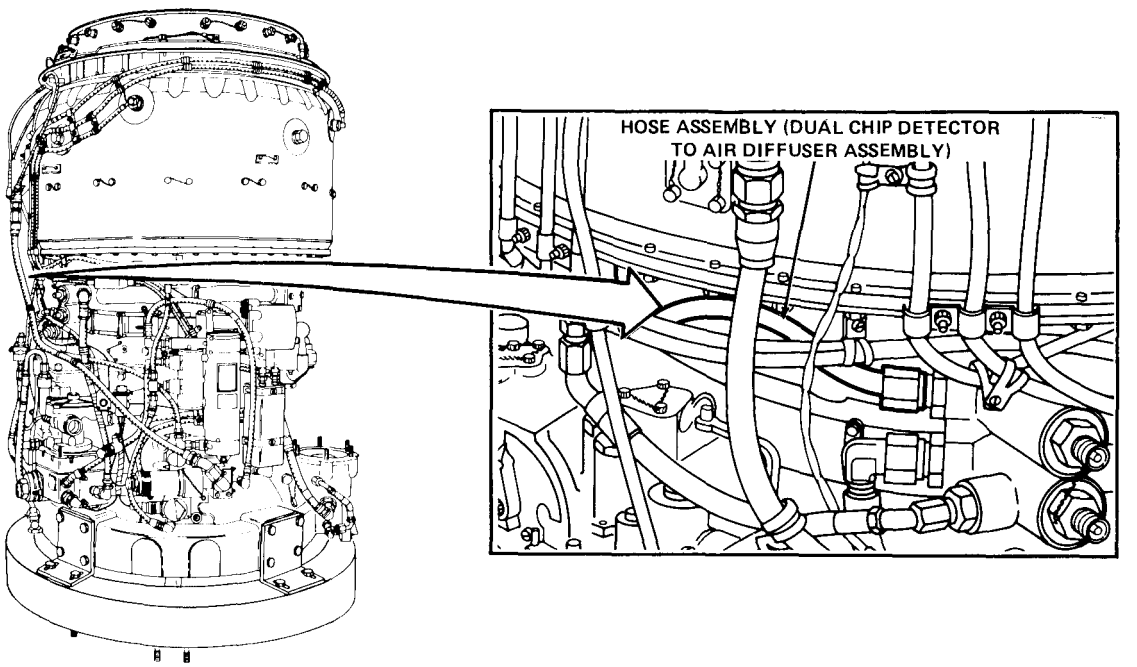
INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Container, 1 Quart

Materials:
Wiping Rag (E58)

Personnel Required:
68910 Aircraft Powerplant Repairer



A-1182-8-46/1

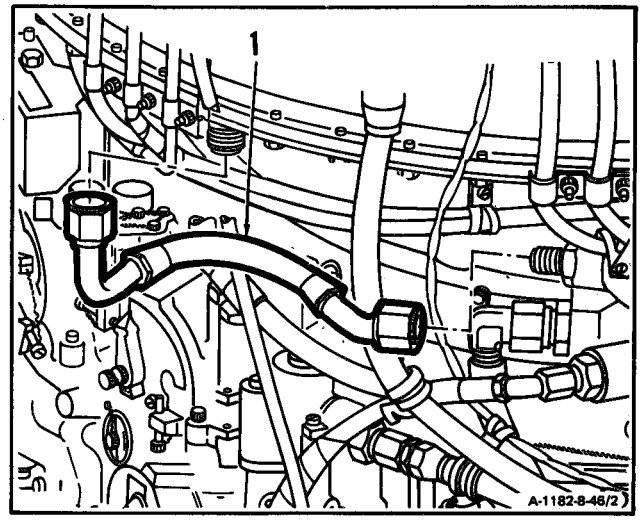
GO TO NEXT PAGE

8-46 REMOVE HOSE ASSEMBLY (DUAL CHIP DETECTOR TO AIR DIFFUSER ASSEMBLY) 8-46 (Continued)

WARNING

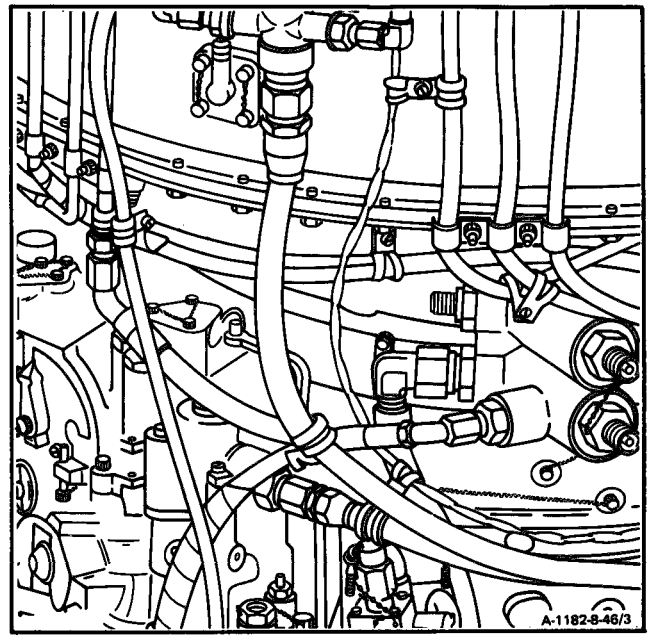
Lubricating oils (E32 and E33) cause paralysis if swallowd. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approval metal safety containers. Avoid prolonged or repeated contact with skin, and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.

1. Disconnect and **remove hose assembly (1).**



FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-47 INSTALL HOSE ASSEMBLY (DUAL CHIP DETECTOR TO AIR DIFFUSER ASSEMBLY) 8-47

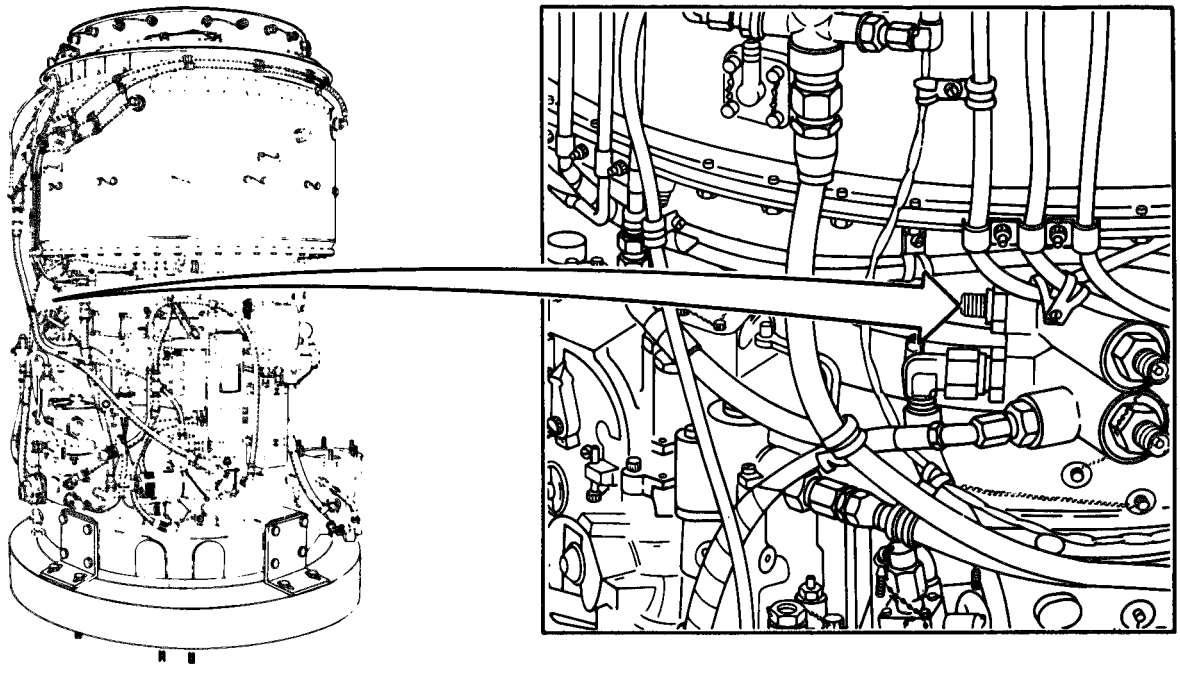
INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
None

Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

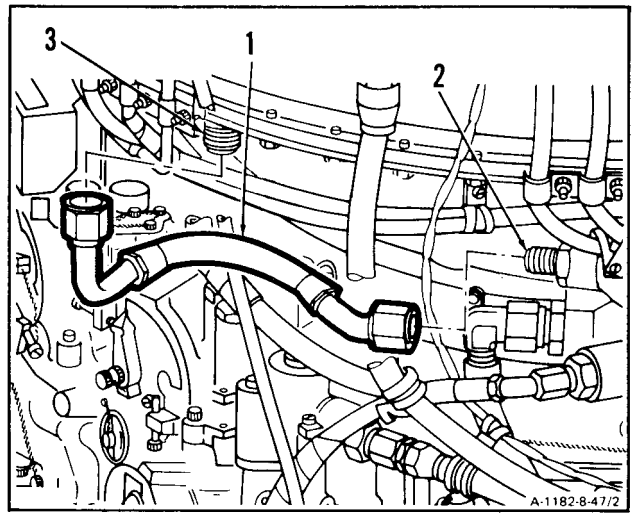


A-1182-8-47/1

GO TO NEXT PAGE

8-47 INSTALL HOSE ASSEMBLY (DUAL CHIP DETECTOR TO AIR DIFFUSER ASSEMBLY) (Continued) 8-47

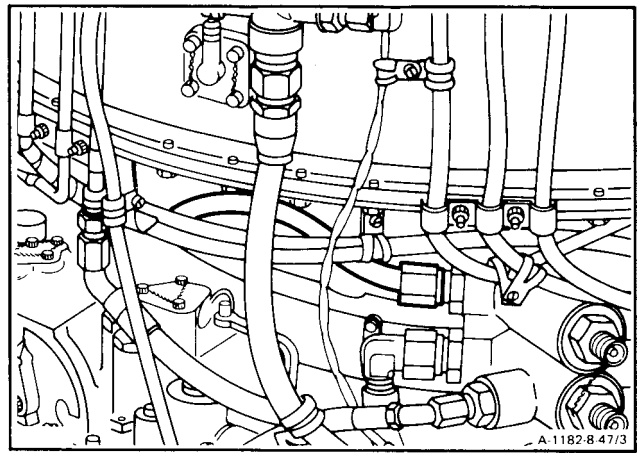
1. **Install hose assembly (1)** to nipple (2) and adapter (3).



INSPECT

FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-48 REMOVE HOSE ASSEMBLY (MAIN OIL PUMP TO DUAL CHIP DETECTOR) 8-48

INITIAL SETUP

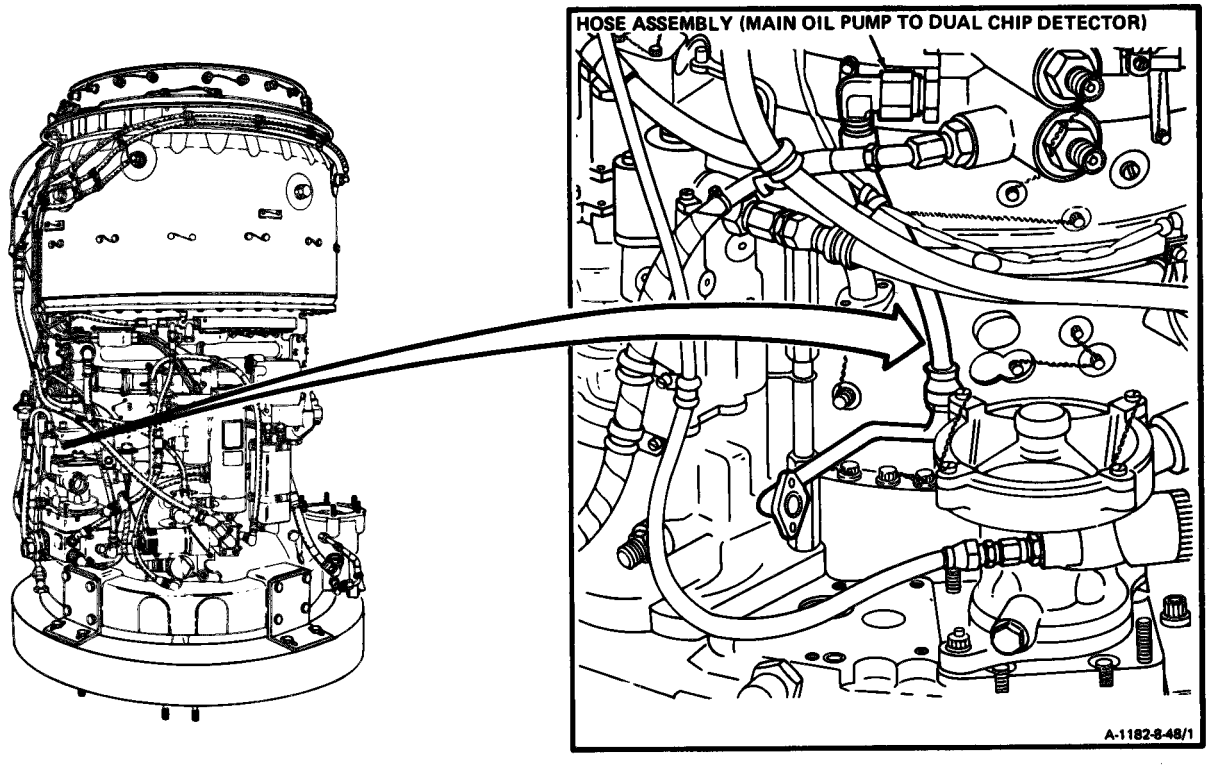
Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944

Materials:
Wiping Rag (E58)

Personnel Required:
68B10 Aircraft Powerplant Repairer

Equipment Condition:
Main Oil Pump and Scavenge Oil Screen Removed (Task 8-1)
Tube Assembly Removed (Inlet Housing to Main Oil Pump) (Task 8-50)



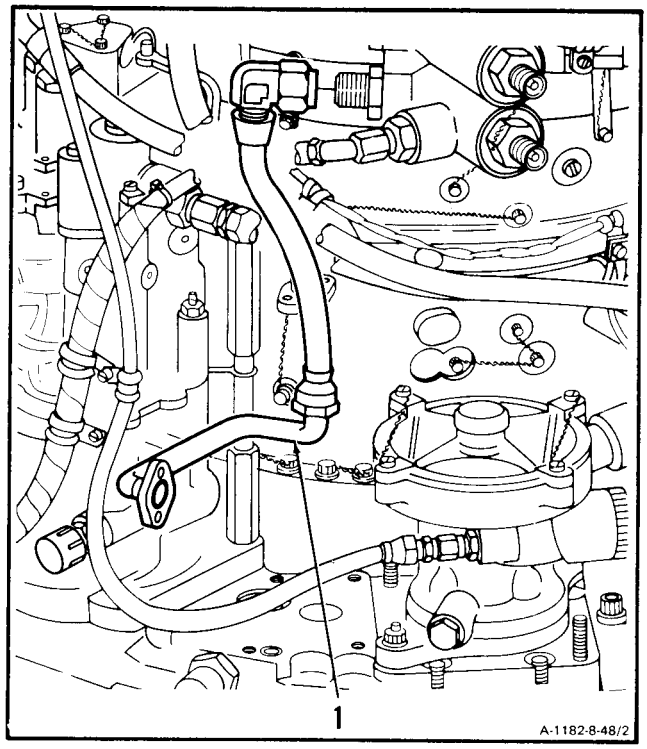
GO TO NEXT PAGE

8-48 REMOVE HOSE ASSEMBLY (MAIN OIL PUMP TO DUAL CHIP DETECTOR) (Continued) 8-48

WARNING

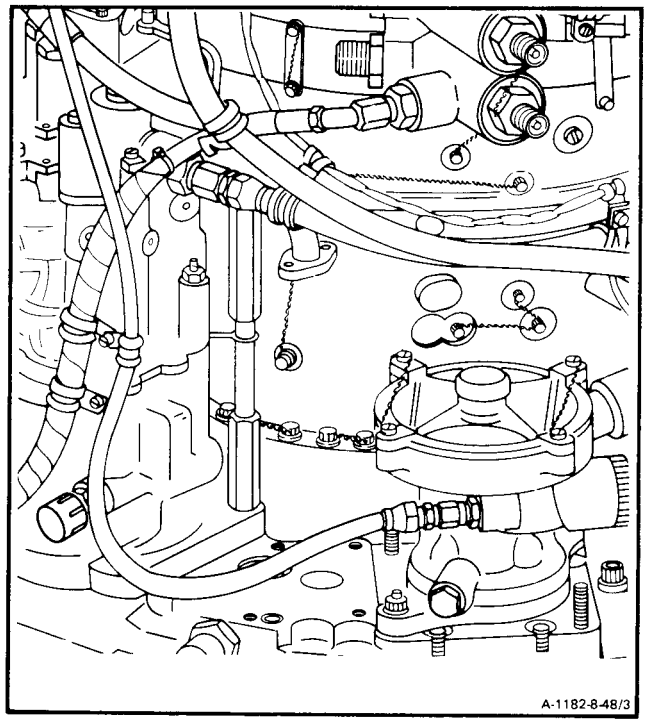
Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.

1. Disconnect and **remove hose assembly (1).**



FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-49 INSTALL HOSE ASSEMBLY (MAIN OIL PUMP TO DUAL CHIP DETECTOR) 8-49

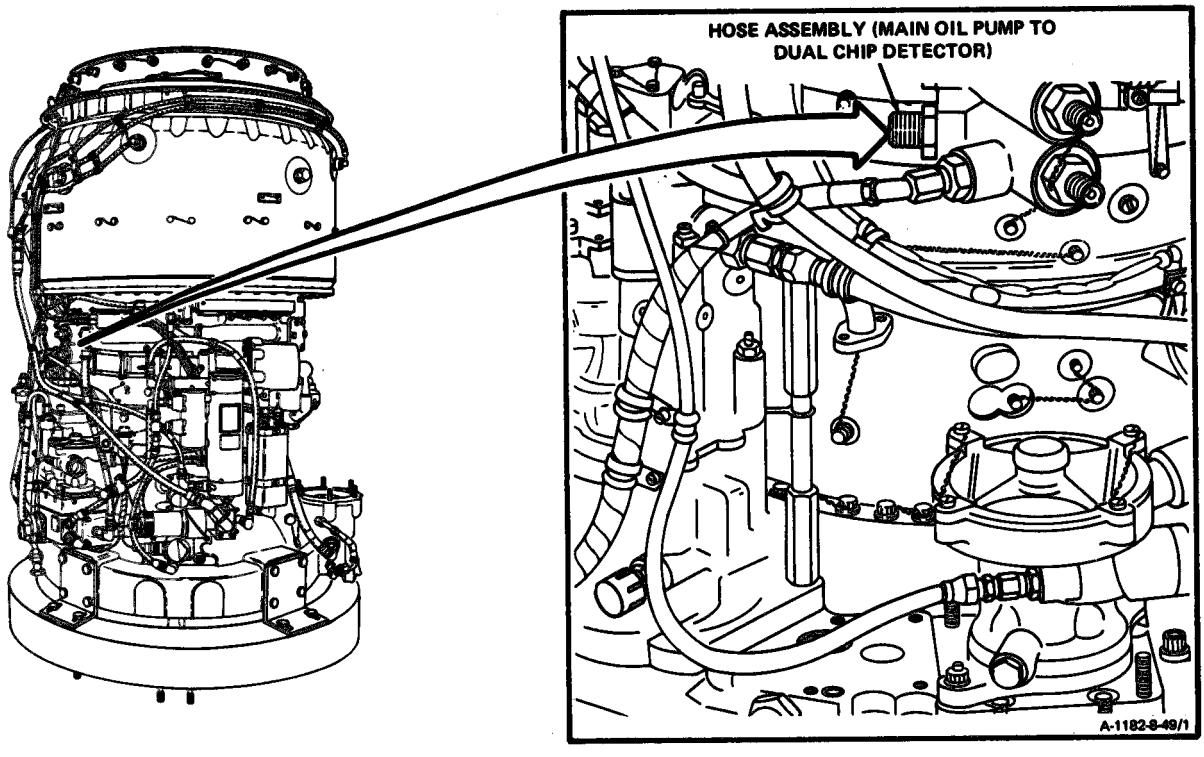
INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
None

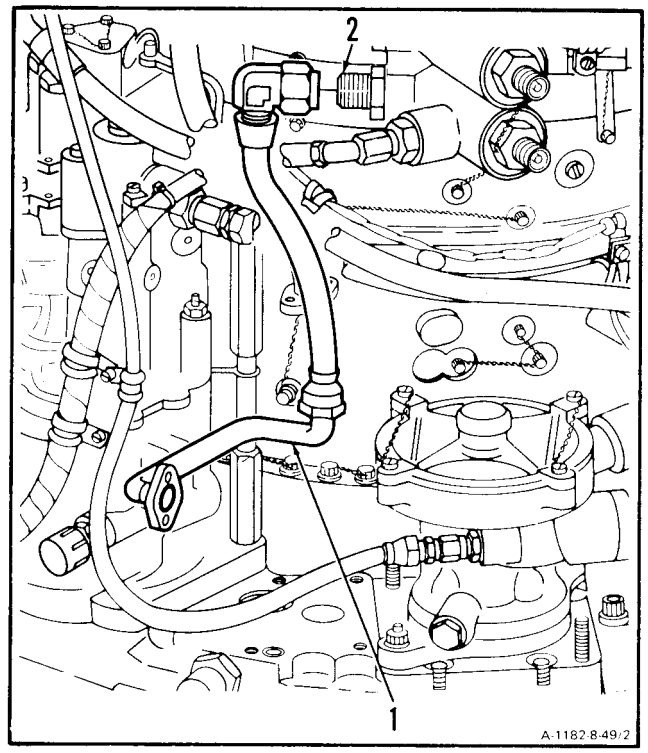
Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector



GO TO NEXT PAGE

8-49 INSTALL HOSE ASSEMBLY (MAIN OIL PUMP TO DUAL CHIP DETECTOR) (Continued) 8-49

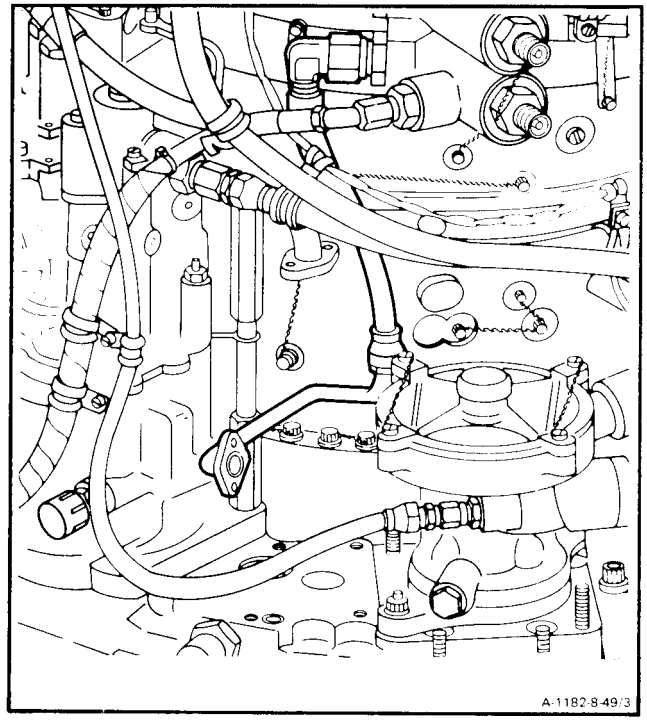
1. **Install hose assembly (1)** on nipple (2).



INSPECT

FOLLOW-ON MAINTENANCE:

Install Main Oil Pump and Scavenge Oil Screen (Task 8-4).
Install Tube Assembly (Inlet Housing to Main Oil Pump) (Task 8-51)



END OF TASK

8-50 REMOVE TUBE ASSEMBLY (INLET HOUSING TO MAIN OIL PUMP) 8-50

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Container, 1 Quart

Materials:
Wiping Rag (E58)

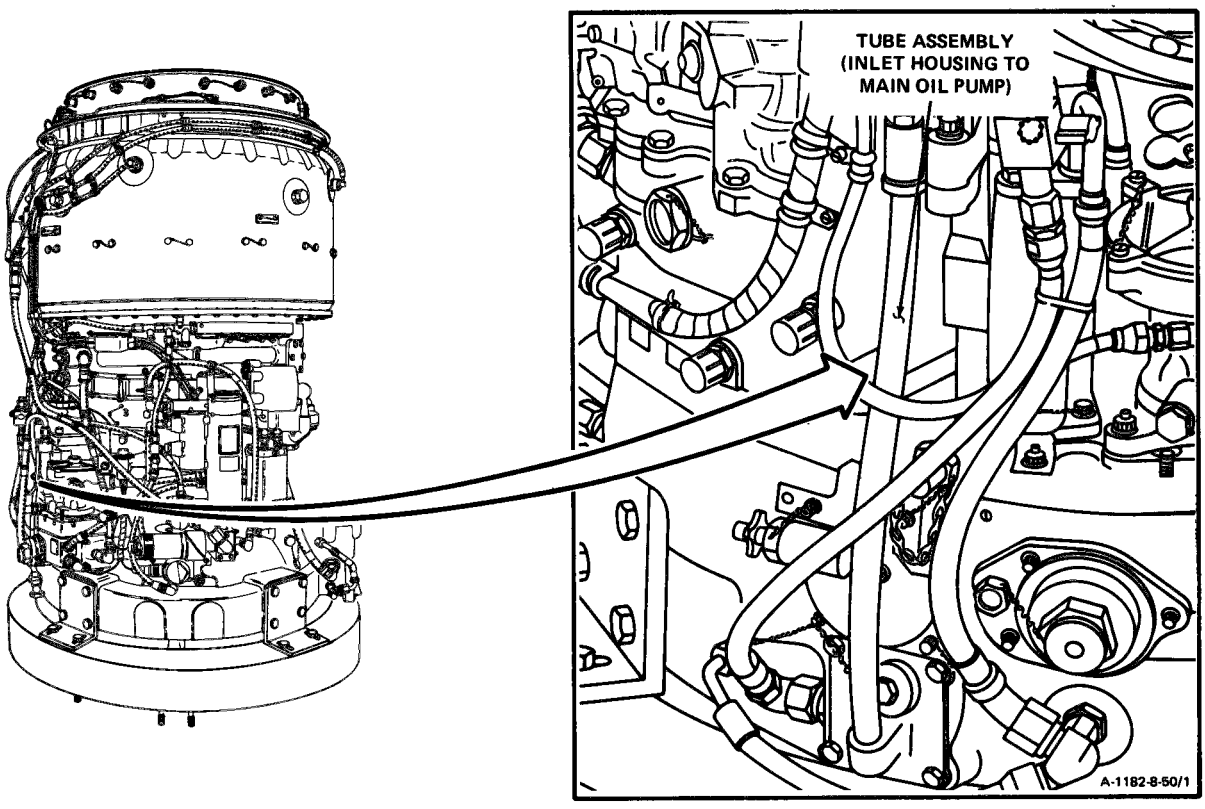
Personnel Required:
68510 Aircraft Powerplant Repairer

References:
Task 1-75

General Safety Instructions:

WARNING

Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.

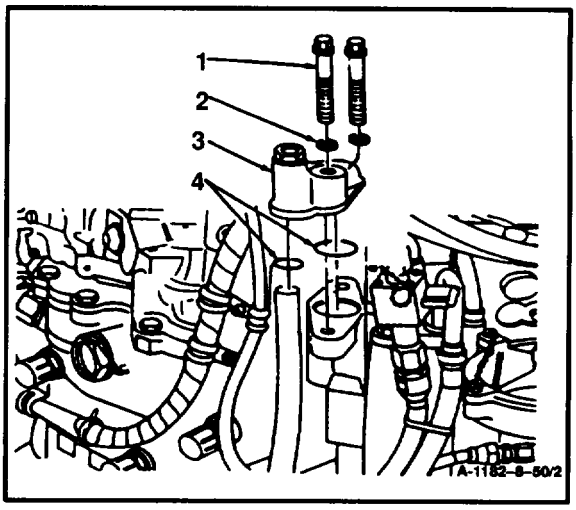


GO TO N*EXT PAGE*

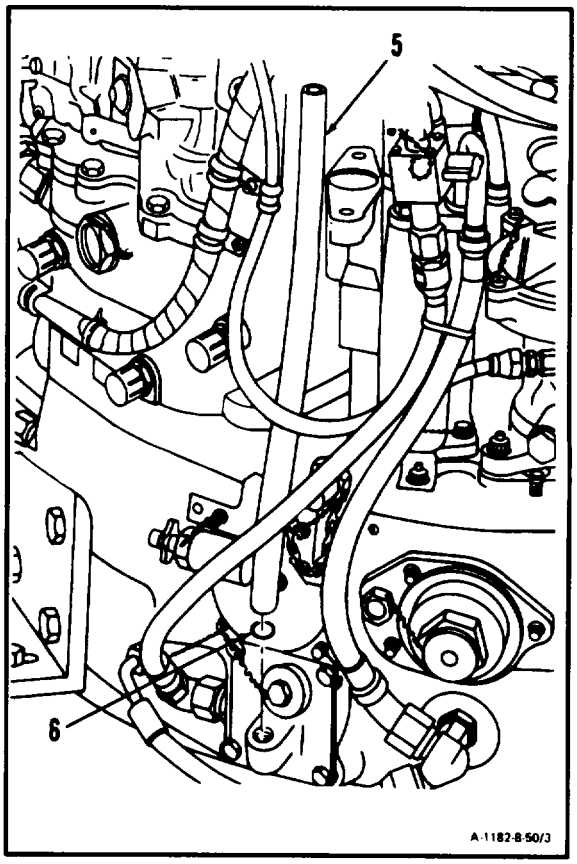
8-50 REMOVE TUBE ASEMBLY (INLET HOUSING TO MAIN OIL PUMP) (Continued) 8-50

1. **Drain engine oil system** (Ref. Task 1-75).

2. **Remove** lockwire, two bolts (1), two washers (2), connector (3), and two packings (4).



3. **Remove tube assembly (5)** and packing (6).

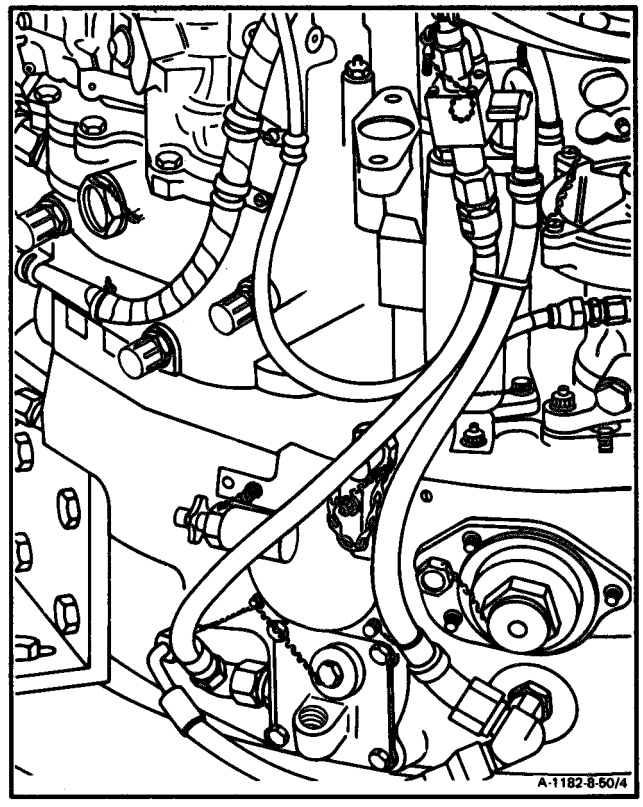


GO TO NEXT PAGE

8-50 REMOVE TUBE ASSEMBLY (INLET HOUSING TO MAIN OIL PUMP) (Continued) 8-50

FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-51 INSTALL TUBE ASSEMBLY (INLET HOUSING TO MAIN OIL PUMP) 8-51

INITIAL SETUP

Applicable Configurations:
All

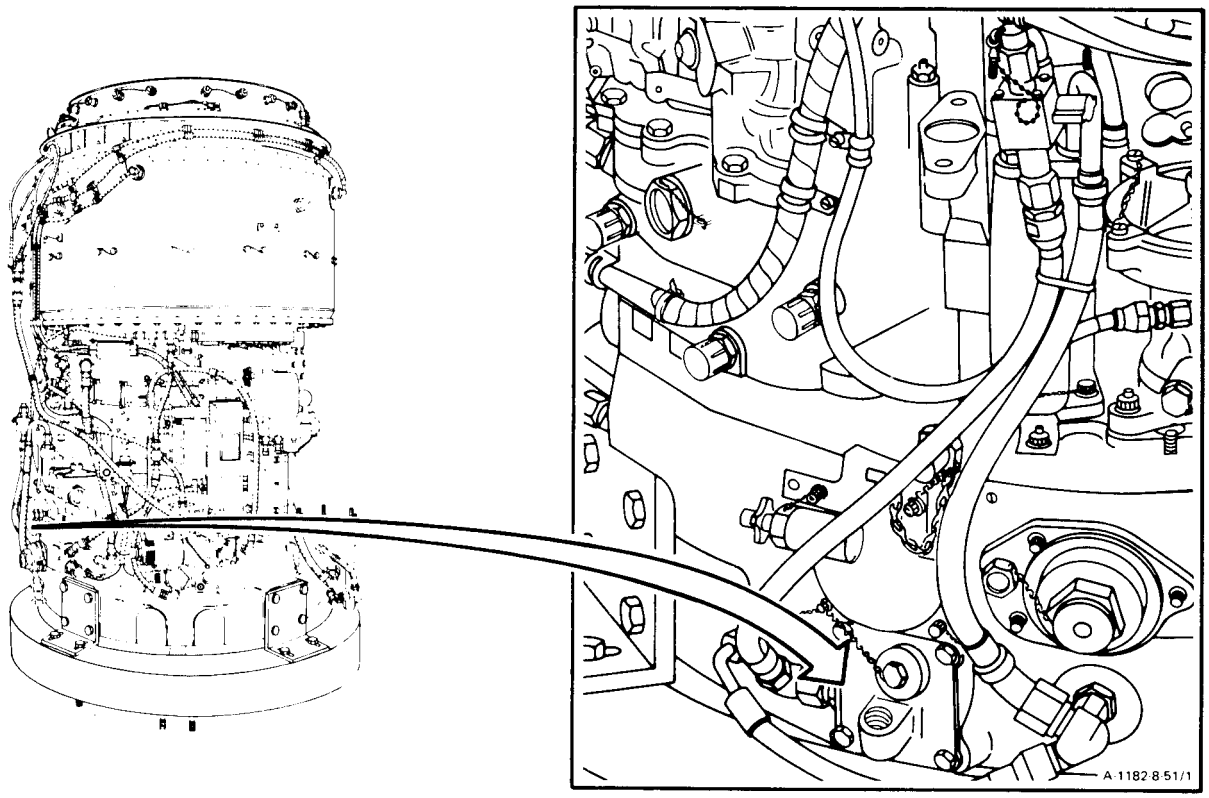
Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
Lockwire (E29)

Parts:
Packings

Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

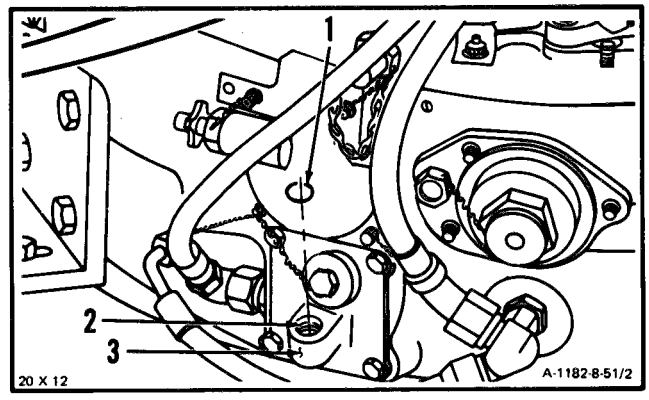
References:
TM 55-2840-254-23P
Task 8-50



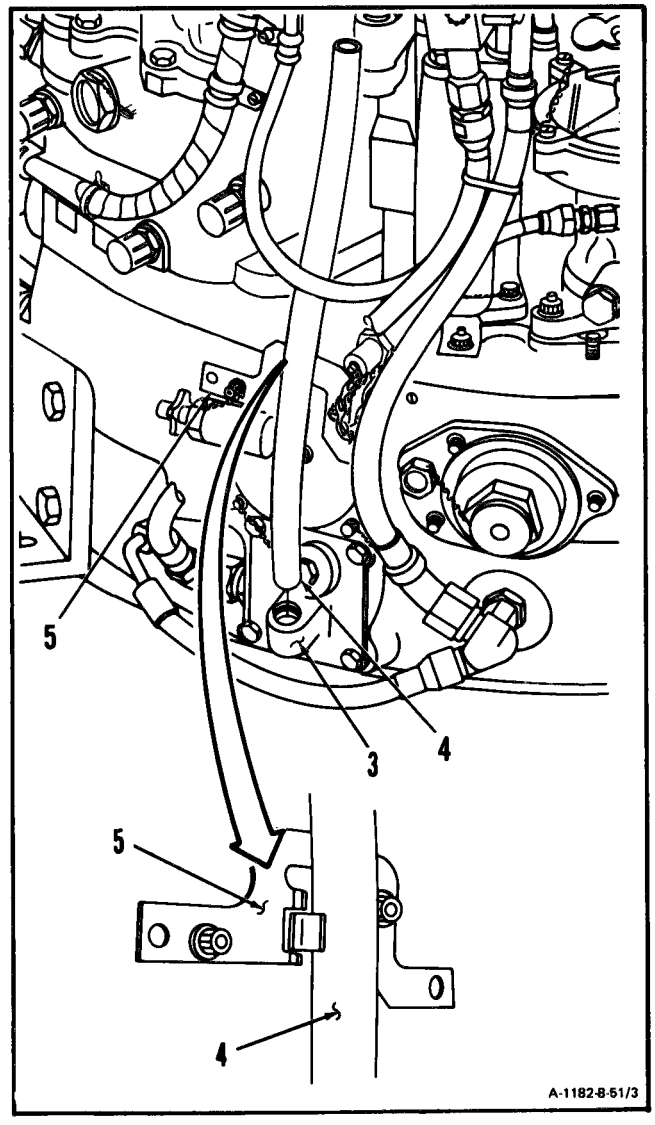
GO TO NEXT PAGE

8-51 INSTALL TUBE ASSEMBLY (INLET HOUSING TO MAIN OIL PUMP) (Continued) 8-51

1. Install packing (1) in groove (2) in cover assembly (3).



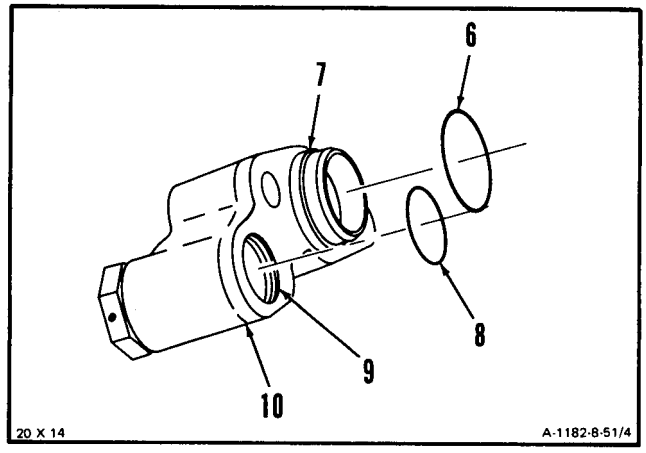
2. **Install tube assembly (4)** in cover assembly (3) and bracket (5).



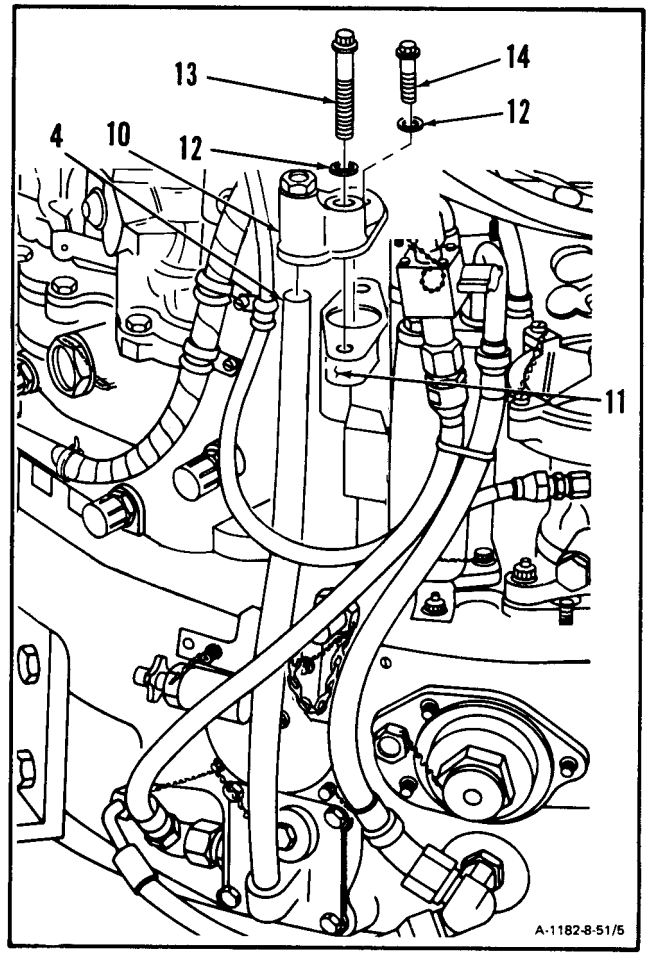
GO TO NEXT PAGE

8-51 INSTALL TUBE ASSEMBLY (INLET HOUSING TO MAIN OIL PUMP) (Continued) 8-51

3. Install packing (6) in groove (7) and packing (8) in groove (9) of connector (10).



4. **Install connector (10)** on tube assembly (4), and oil pump (11), install two washers (12), bolt (13), and bolt (14).

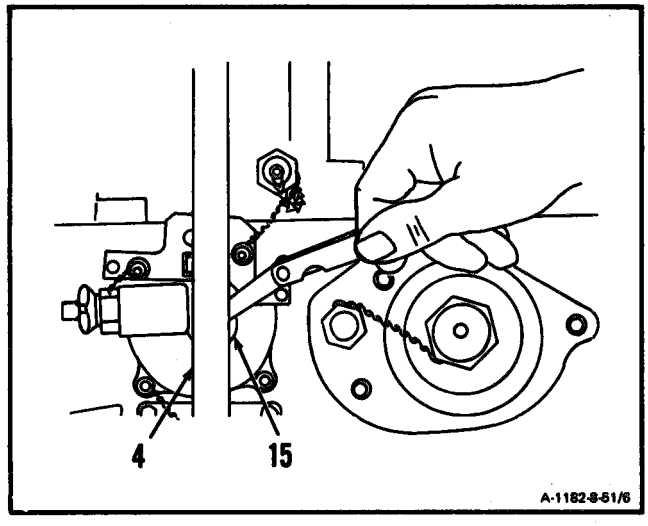


GO TO NEXT PAGE

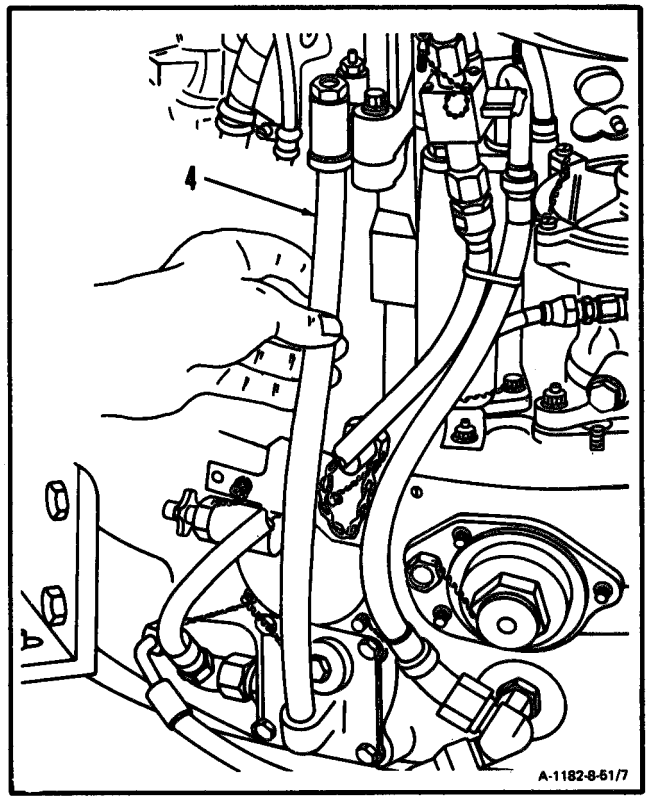
8-51 INSTALL TUBE ASSEMBLY (INLET HOUSING TO MAIN OIL PUMP) (Continued) 8-51

5. **Check for proper installation of tube assembly (4)** as follows:

   a. Check clearance between tube assembly (4) and washer (15). Clearance shall be 0.002 inch minimum.



   b. Check tube assembly (4) for freedom of movement in all directions. Tube assembly (4) shall be free to move forward and aft a total of 3/32-inch minimum. Tube assembly (4) shall be free to move sideways a total of 0.002 inch minimum. Tube assembly (4) shall be free to move radially a total of 0.004 inch minimum.



INSPECT

NOTE

If clearance is not obtained or if tube assembly is not free to move, go to step 6.
If proper clearance is obtained and tube assembly is free to move, go to step 9.

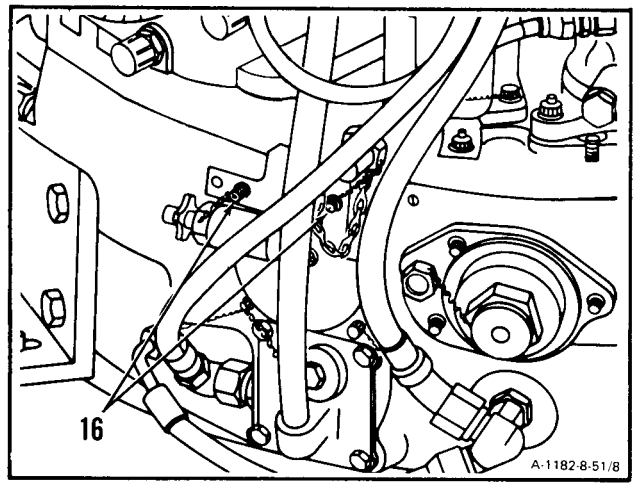
GO TO *NEXT PAGE*

8-51 INSTALL TUBE ASSEMBLY (INLET HOUSING TO MAIN OIL PUMP (Continued) 8-51

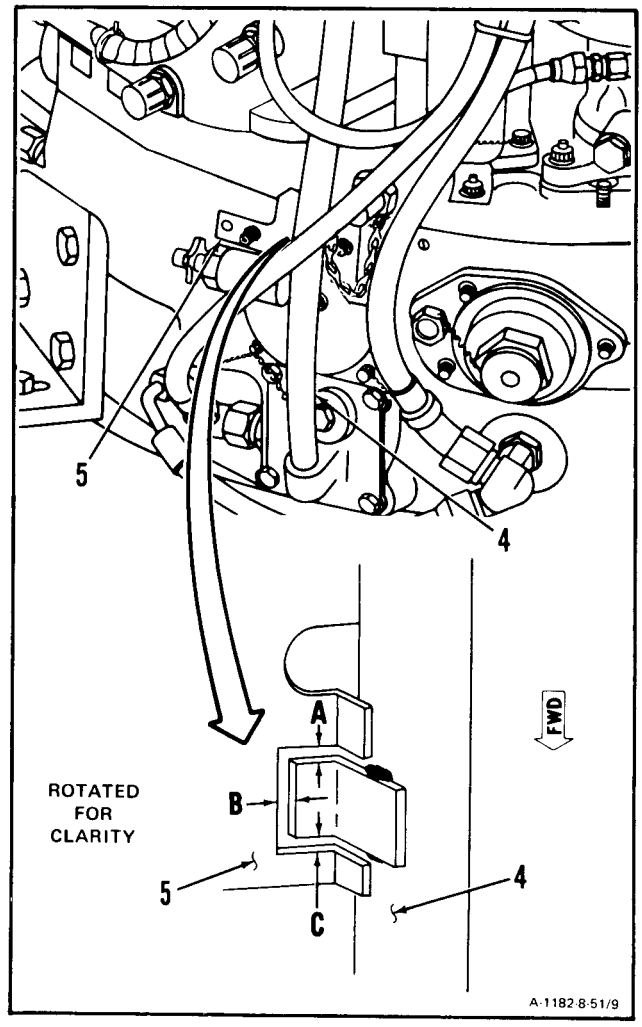
6. Remove lockwire and loosen bolts (16).

CAUTION

In following step 7., make sure bracket is positioned properly. This will ensure that tube assembly does not hit housing at either end when engine is hot. This could cause tube assembly to bend and result in oil leakage.



7. Reposition bracket (5) to obtain equal clearance at points A, B, and C between bracket (5) and tube assembly (4).

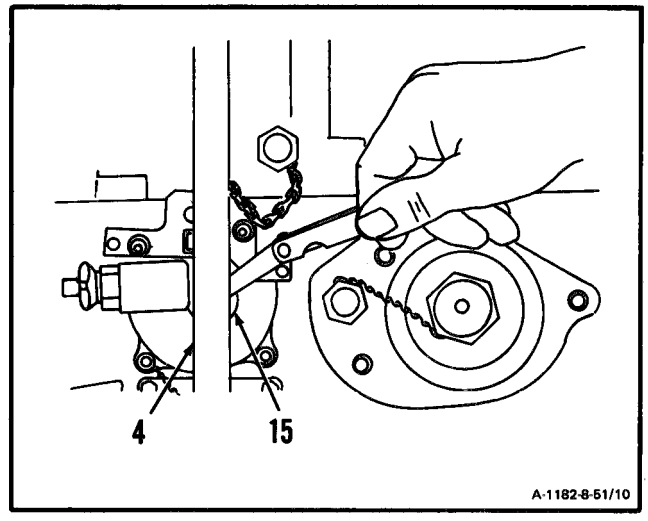


GO TO NEXT PAGE

8-51 INSTALL TUBE ASSEMBLY (INLET HOUSING TO MAIN OIL PUMP) (Continued) 8-51

8. **Check for proper installation of tube assembly (4)** as follows:

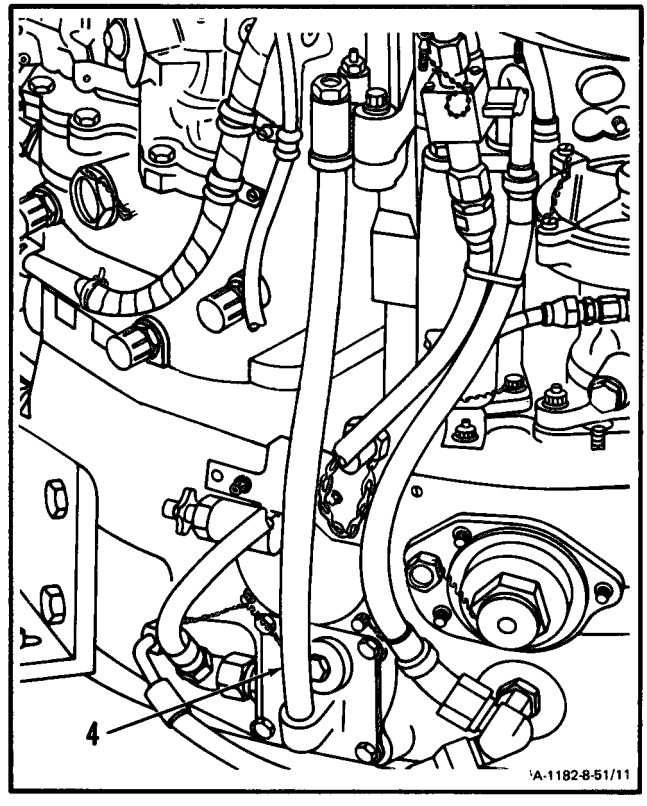
   a. Check clearance between tube assembly (4) and washer (15). Clearance shall be 0.002 inch minimum.



   b. Check tube assembly (4) for freedom of movement in all directions. Tube assembly (4) shall be free to move forward and aft a total of 3/32-inch minimum. Tube assembly (4) shall be free to move sideways a total of 0.002 inch minimum. Tube assembly (4) shall be free to move radially a total of 0.004 inch minimum.

NOTE

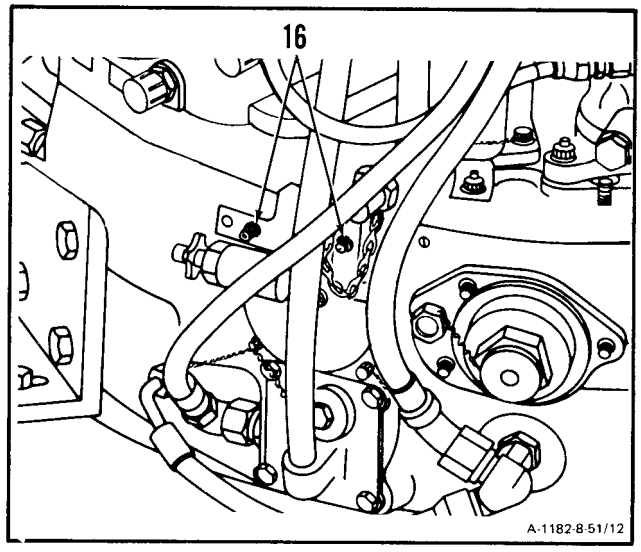
If proper clearance and freedom of movement is still not obtained, remove tube assembly (Ref. Task 8-50) and install serviceable tube assembly (Steps 1 thru 8).



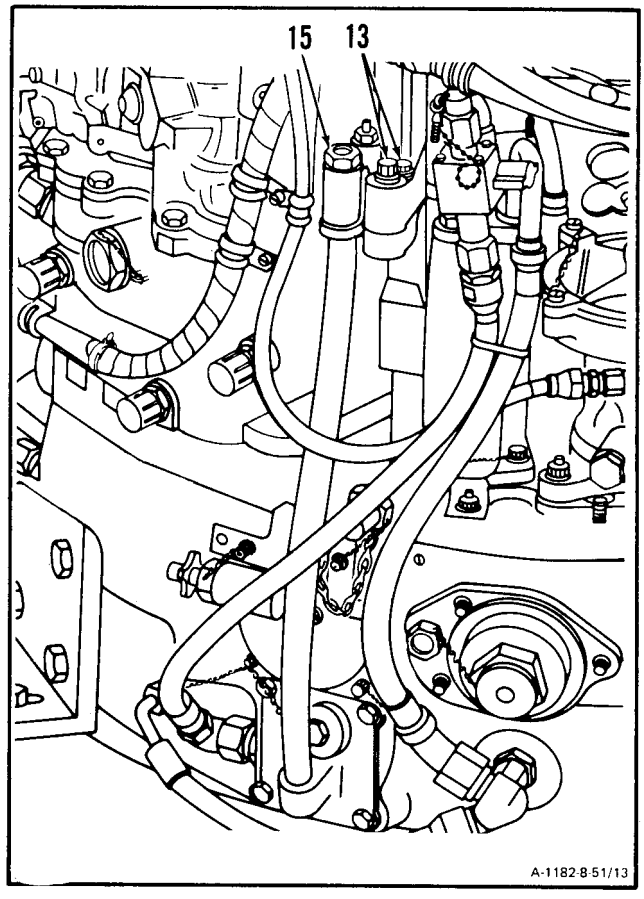
GO TO NEXT PAGE

8-51 INSTALL TUBE ASSEMBLY (INLET HOUSING TO MAIN OIL PUMP) (Continued) 8-51

9. Install two bolts (16) and lockwire. Use lockwire (E29).



10. Lockwire bolts (13) and plug (15). Use lockwire (E29).



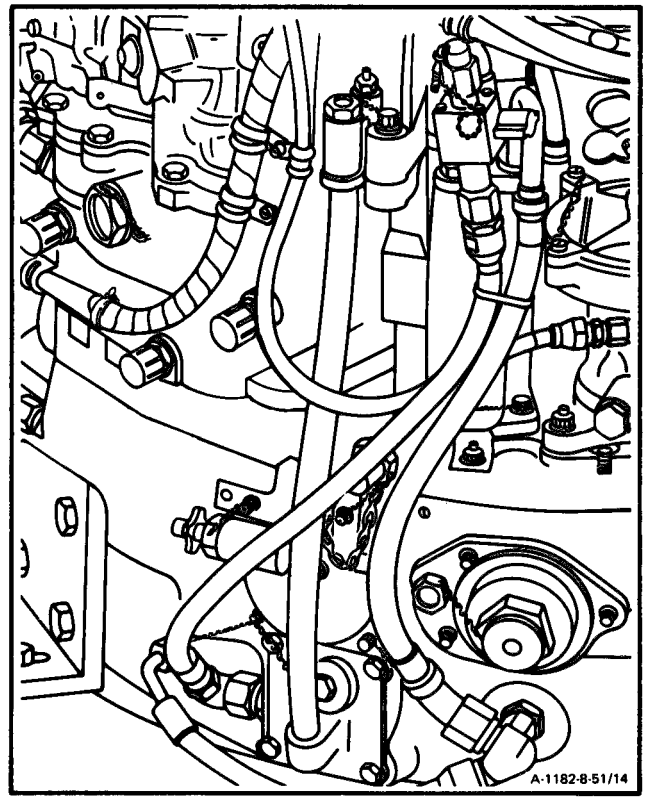
INSPECT

GO TO NEXT PAGE

8-51 INSTALL TUBE ASSEMBLY (INLET HOUSING TO MAIN OIL PUMP) (Continued) 8-51

FOLLOW-ON MAINTENANCE:

Service Engine Oil System (Task 1-74).



END OF TASK

8-52 REMOVE HOSE ASSEMBLY (MAIN OIL PUMP TO INLET HOUSING OIL SCAVENGE TEE) 8-52

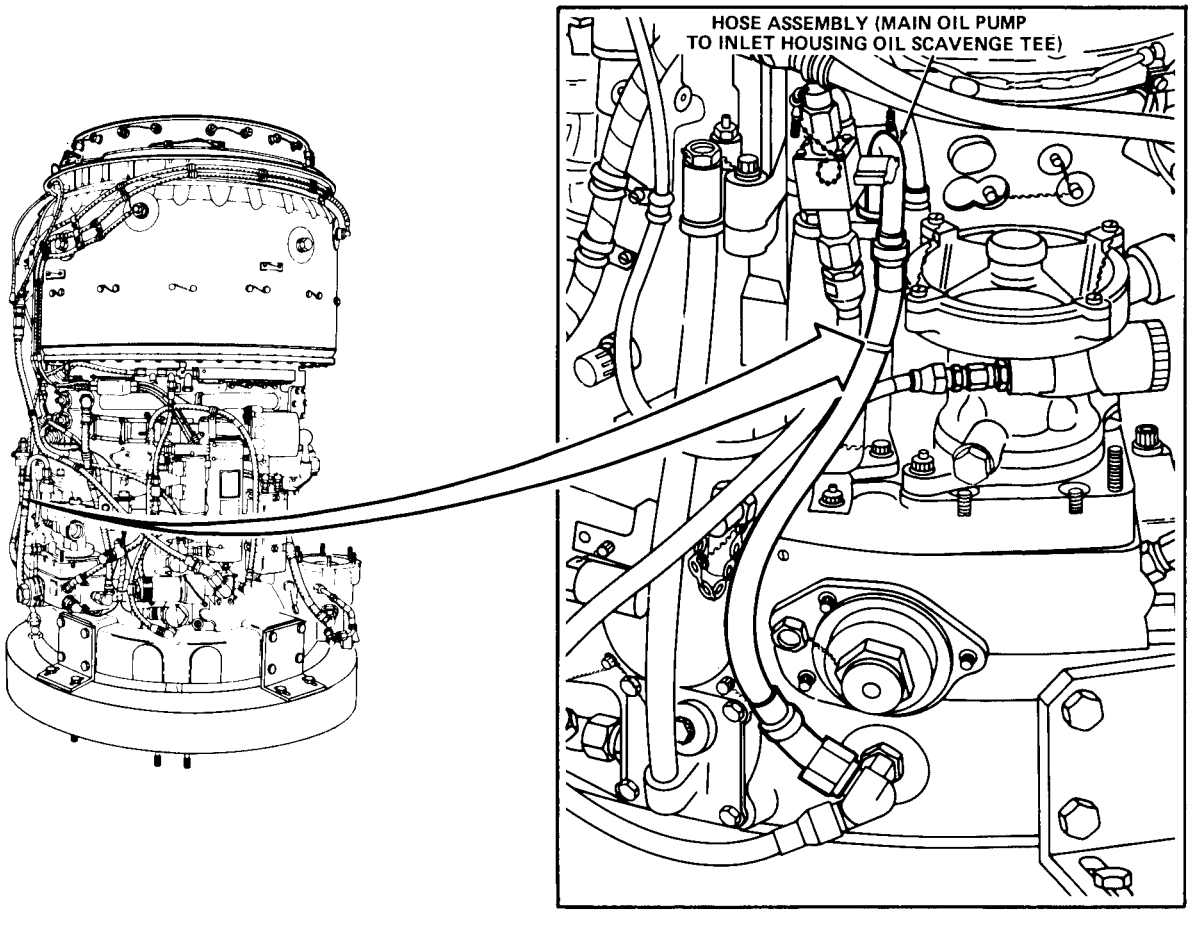
INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Container, 1 Quart

Materials:
Wiping Rag (E58)

Personnel Required:
68B10 Aircraft Powerplant Repairer

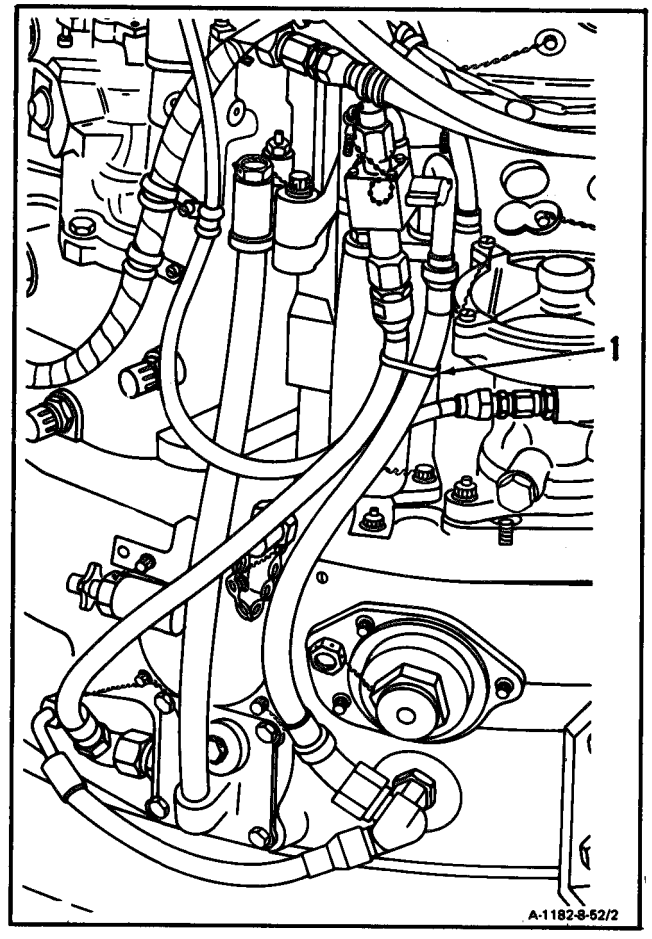


A-1182-8-52/1

GO TO NEXT PAGE

8-52 REMOVE HOSE ASSEMBLY (MAIN OIL PUMP TO INLET HOUSING OIL SCAVENGE TEE) (Continued)

1. Cut and remove cable tie (1).



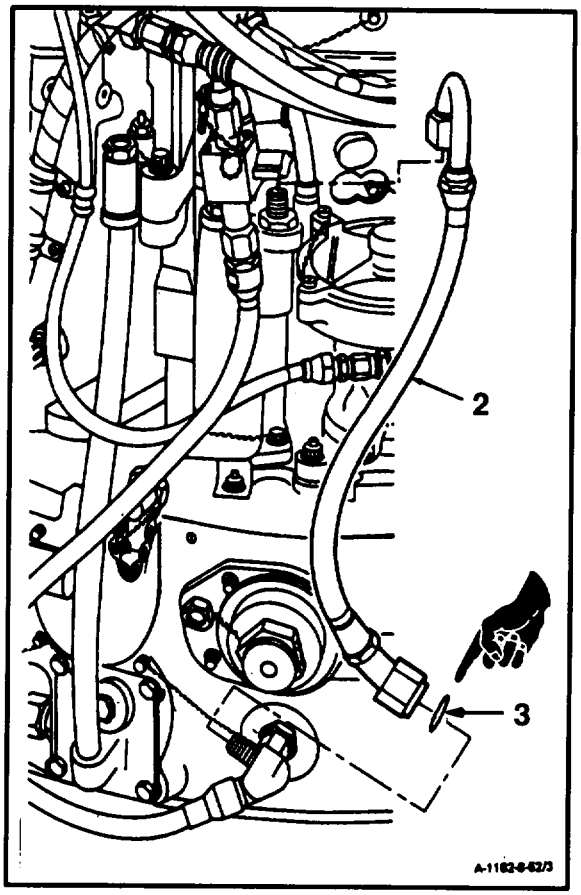
GO TO NEXT PAGE

8-52. REMOVE HOSE ASSEMBLY (MAIN OIL PUMP TO INLET HOUSING OIL SCAVENGE TEE) (Continued) **8-52**

WARNING

Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin, and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.

2. Disconnect and remove hose assembly (2) and gasket (3).

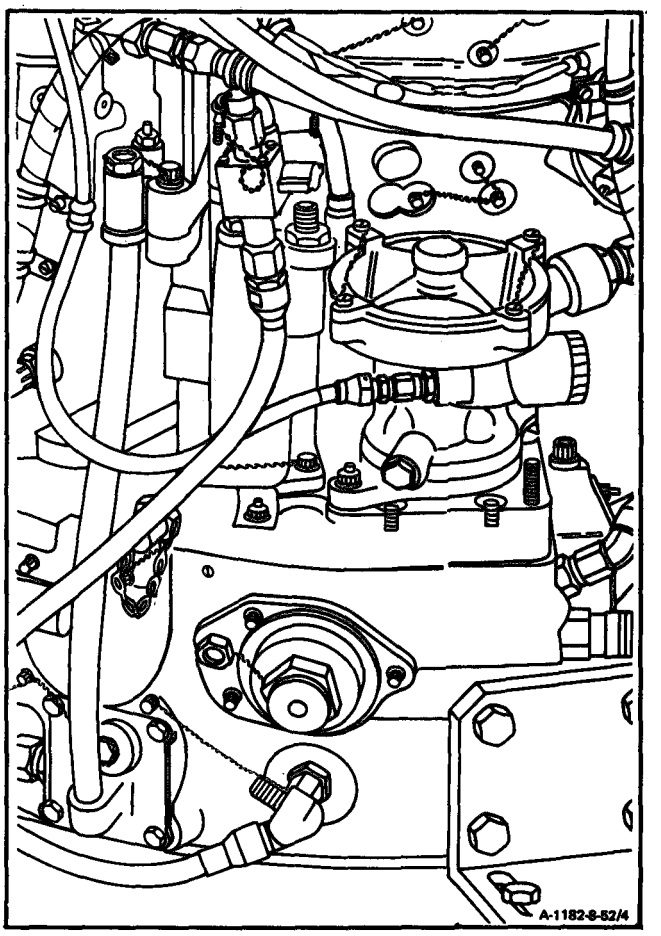


GO TO NEXT PAGE

8-52 REMOVE HOSE ASSEMBLY (MAIN OIL PUMP TO INLET HOUSING OIL SCAVENGE TEE) (Continued)

FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-53. INSTALL HOSE ASSEMBLY (MAIN OIL PUMP TO INLET HOUSING OIL SCAVENGE TEE) 8-53

INITIAL SETUP

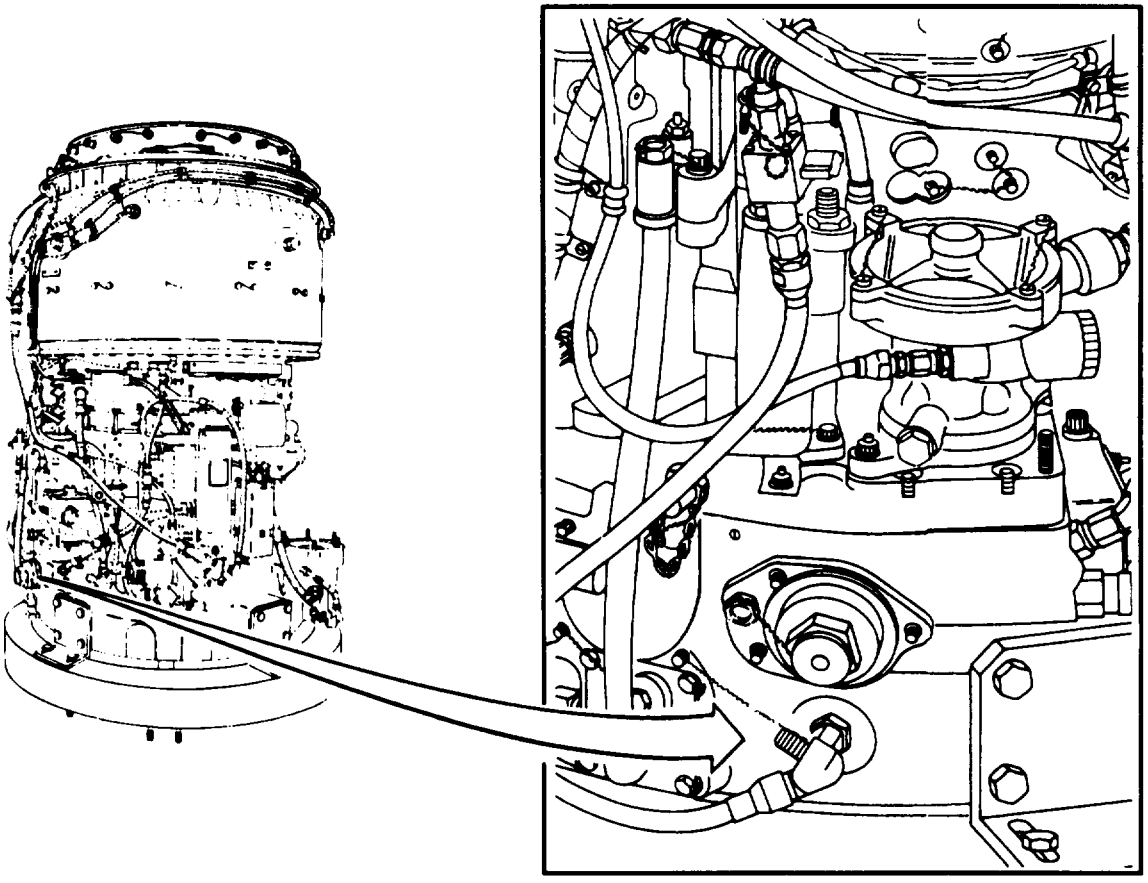
Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit.
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5810-99-323-5114

Materials:
None

Parts:
Cable Tie
Gasket

Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspection

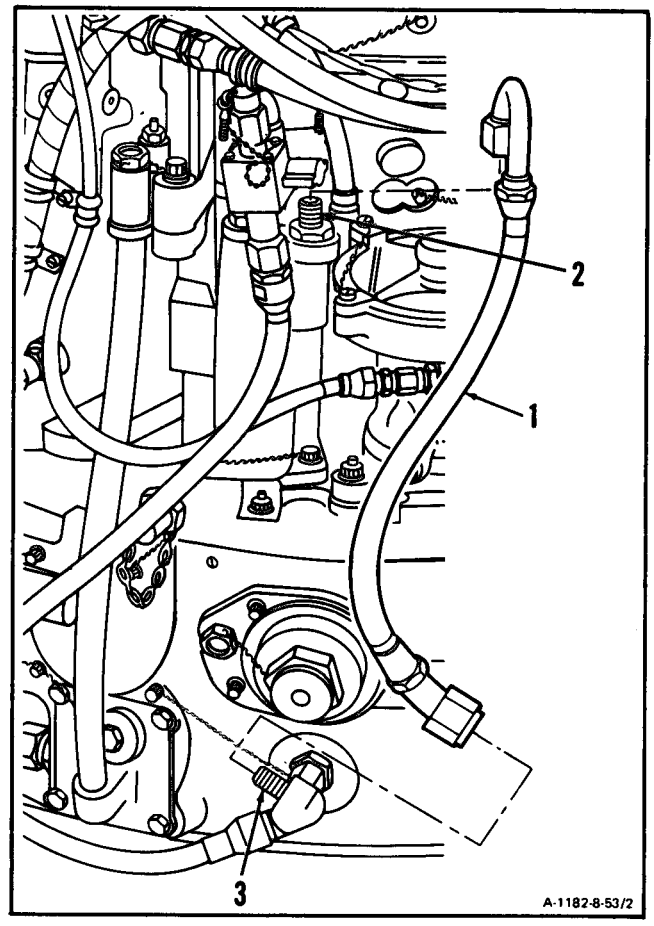


A-1182-8-53/1

GO TO NEXT PAGE

8-53 INSTALL HOSE ASSEMBLY (MAIN OIL PUMP TO INLET HOUSING OIL SCAVENGE TEE) (Continued)

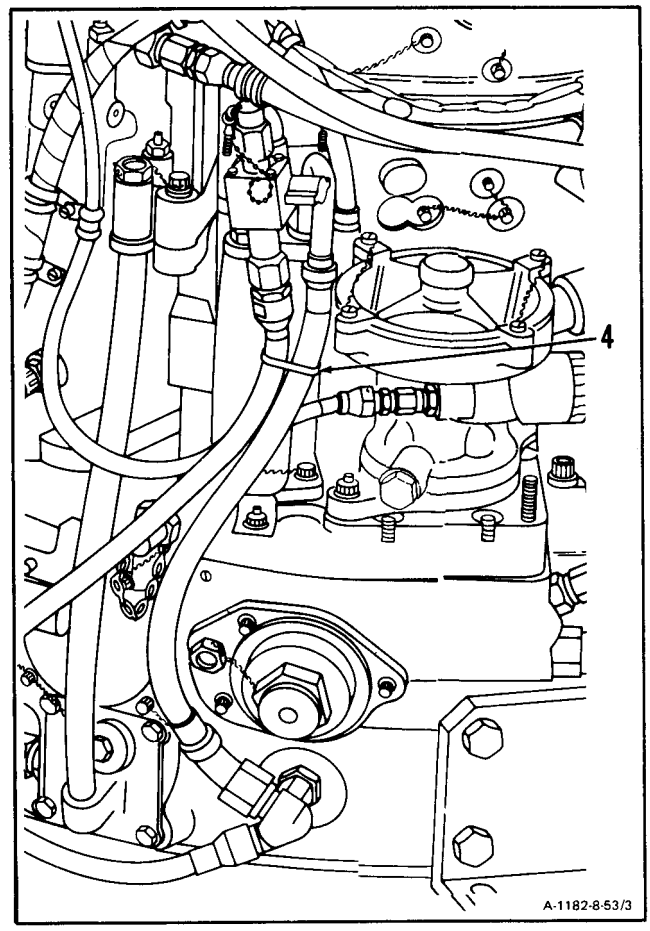
1. **Install hose assembly (1)** on nipple (2) and tee (3).



GO TO NEXT PAGE

8-53 INSTALL HOSE ASSEMBLY (MAIN OIL PUMP TO INLET HOUSING OIL SCAVENGE TEE) (Continued)

2. Install cable tie (4).



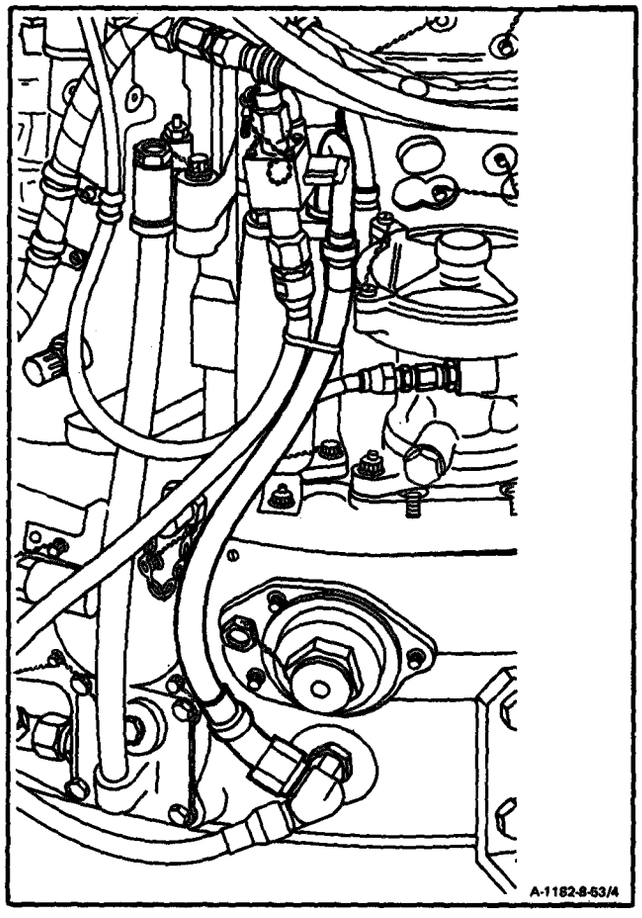
INSPECT

GO TO NEXT PAGE

8-53 INSTALL HOSE ASSEMBLY (MAIN OIL PUMP TO INLET HOUSING OIL SCAVENGE TEE) (Continued) **8-53**

FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-54 REMOVE HOSE ASSEMBLY (MAIN OIL PUMP TO NO. 4 AND 5 BEARING SCAVENGE TUBE ASSEMBLY) 8-54

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
1/4-1 Inch Universal Joint Socket,
12 Point, 1/4-inch Drive,
NSN 5120-00-018-1553
Container, 1 Quart

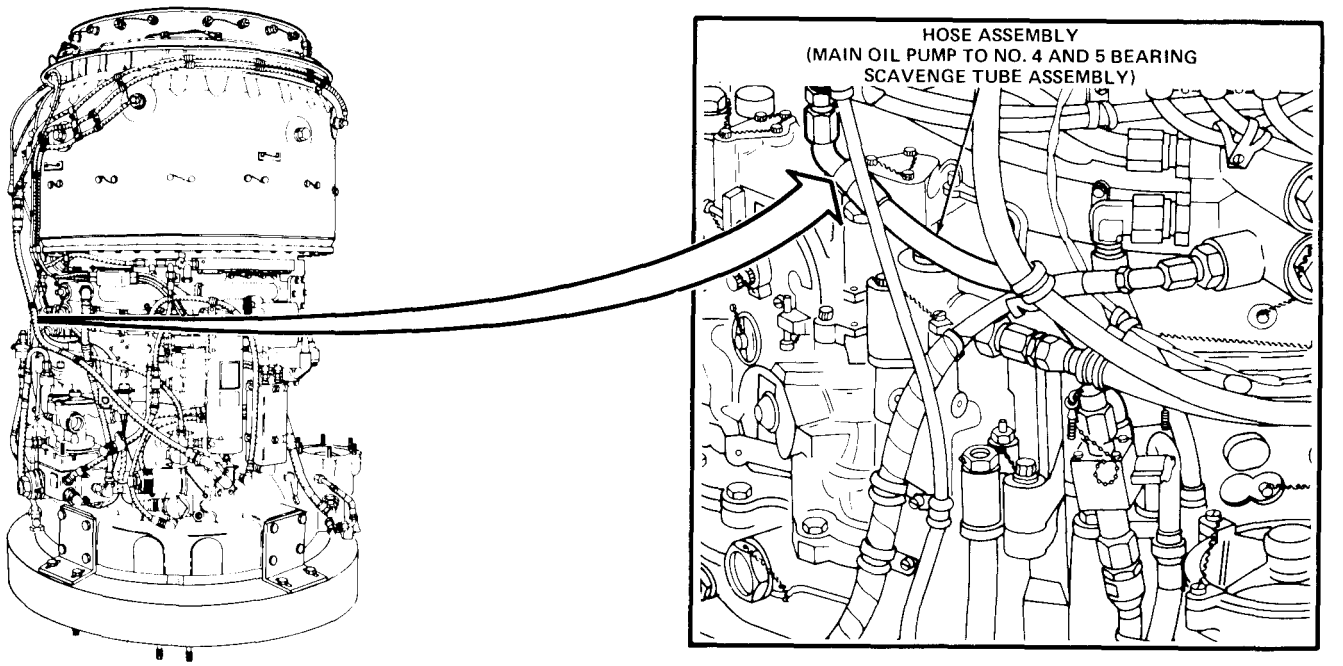
Materials:
Wiping Rag (E58)

Personnel Required:
68B10 Aircraft Powerplant Repairer

General Safety Instructions:

WARNING

Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin, and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.



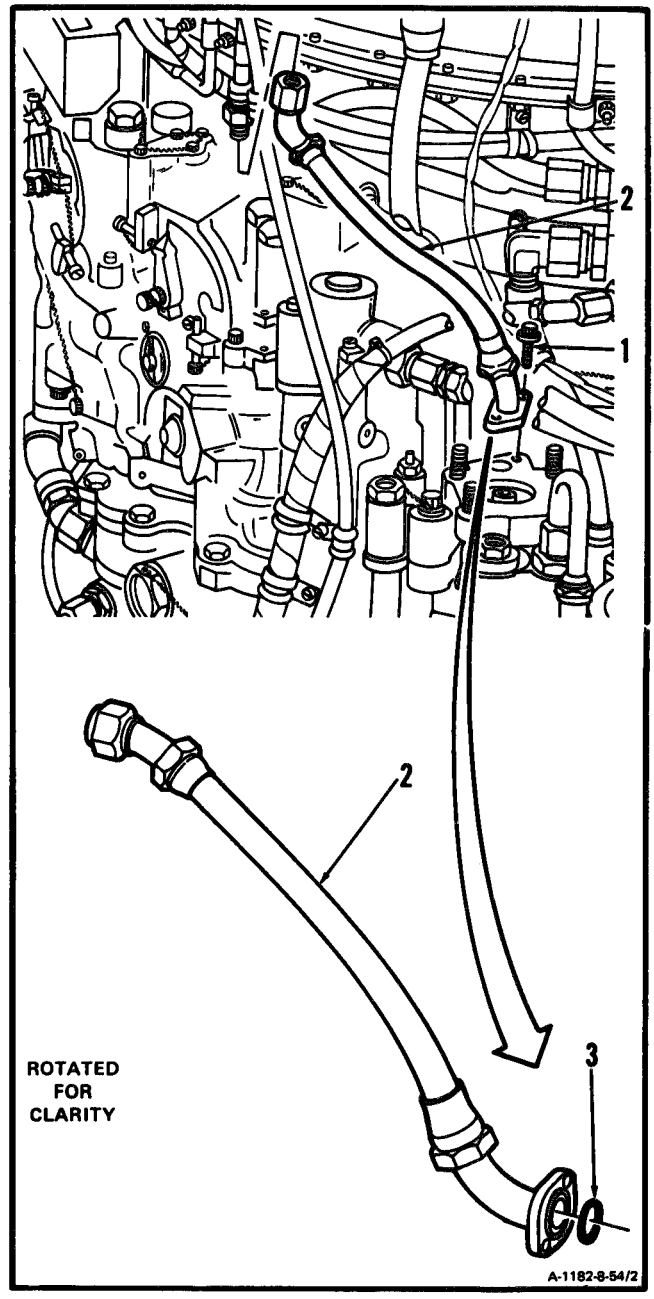
A-1182-8-54/1

GO TO NEXT PAGE

8-54 REMOVE HOSE ASSEMBLY (MAIN OIL PUMP TO NO. 4 AND 5 BEARING SCAVENGE TUBE ASSEMBLY) (Continued)

1. **Remove** lockwire and two bolts (1). Use 1/4-inch universal joint socket. Disconnect and remove **hose assembly (2).**

2. **Remove packing (3)** from hose assembly (2).

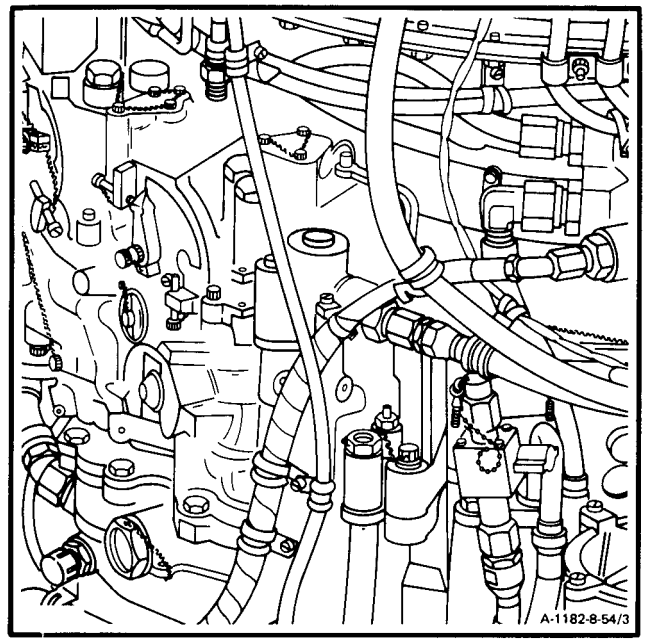


GO TO NEXT PAGE

8-54 REMOVE HOSE ASSEMBLY (MAIN OIL PUMP TO NO. 4 AND 5 BEARING SCAVENGE TUBE ASSEMBLY) (Continued)

FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-55 INSTALL HOSE ASSEMBLY (MAIN OIL PUMP TO NO. 4 AND 5 BEARING SCAVENGE TUBE ASSEMBLY) 8-55

INITIAL SETUP

Applicable Configurations:
All

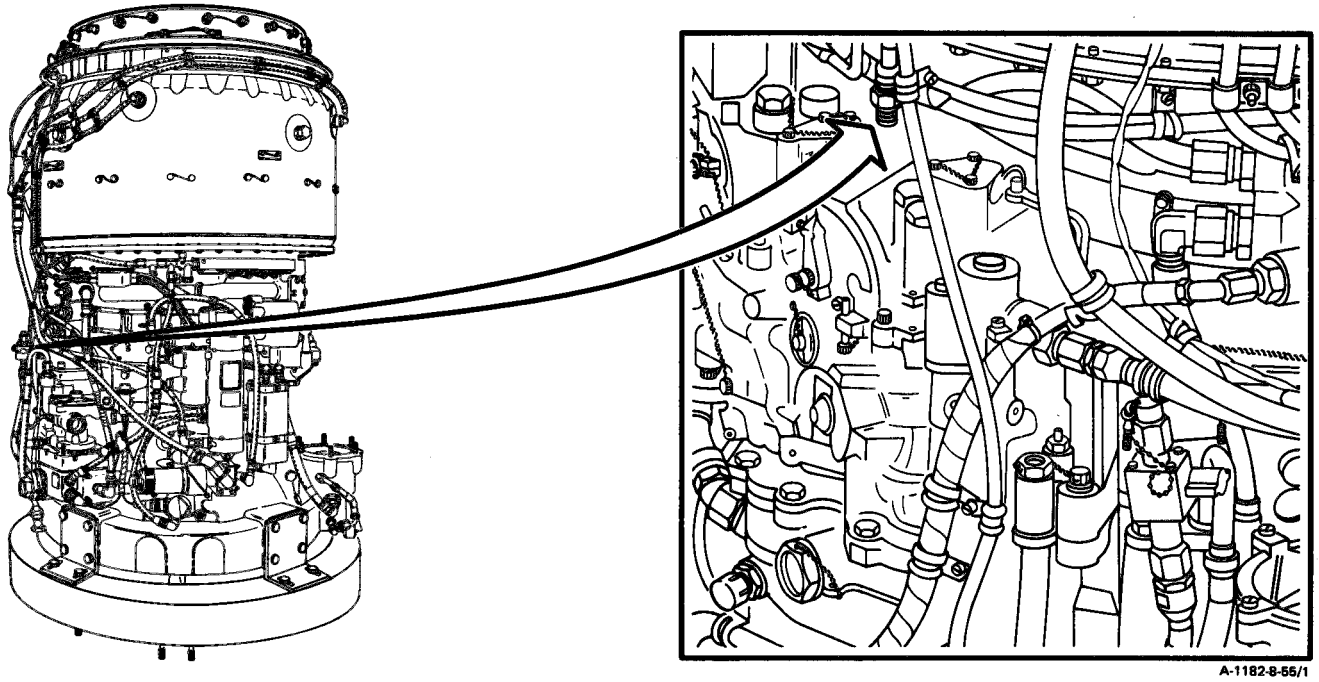
Tools:
Powerplant Mechanic's Tool Kit, NSN 5180-00-323-4944
Technical Inspection Tool Kit, NSN 5180-00-323-5114
1/4-Inch Universal Joint Stocket, 12 Point, 1/4-inch Drive, NSN 5120-00-018-1553

Materials:
Lockwire (E29)

Parts:
Packing

Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

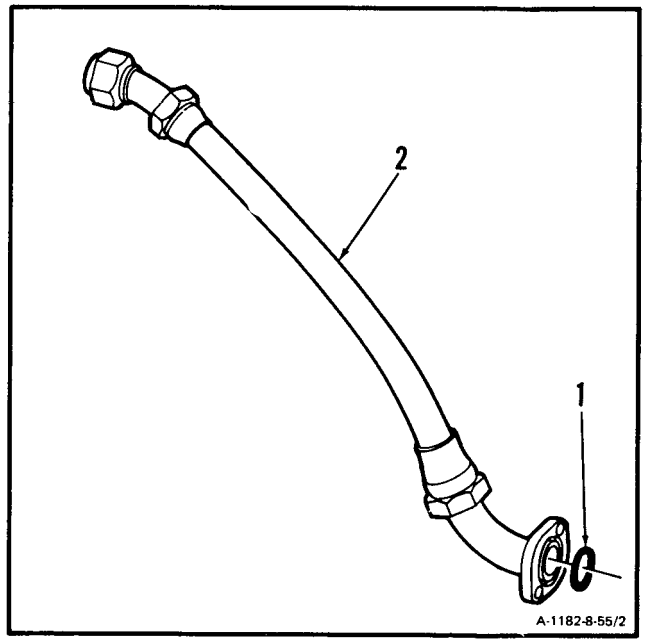
References:
TM 55-2840-254-23P


A-1182-8-55/1

GO TO NEXT PAGE

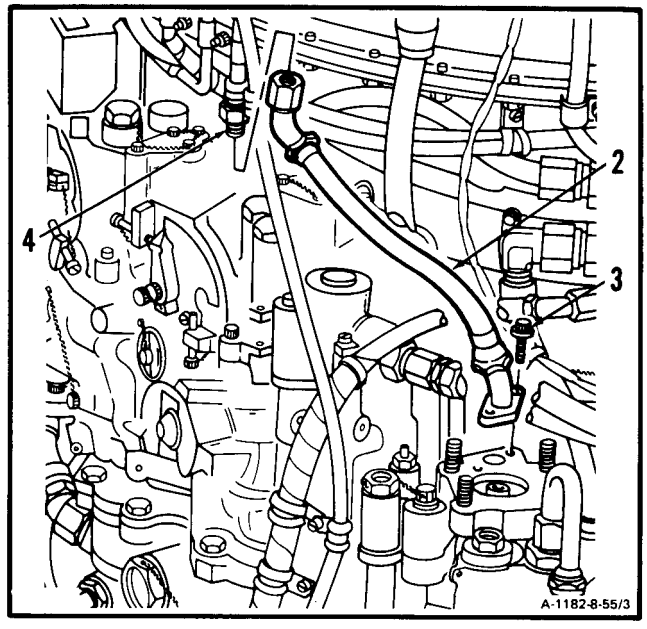
8-55 INSTALL HOSE ASSEMBLY (MAIN OIL PUMP TO NO. 4 AND 5 BEARING SCAVENGE TUBE ASSEMBLY) (Continued)

1. **Install packing (1)** in hose assembly (2).



2. **Install hose assembly (2)** and two bolts (3). Use 1/4-inch universal joint socket. Lockwire bolts (3). Use lockwire (E29).

3. **Connect hose assembly (2)** to tube assembly (4).



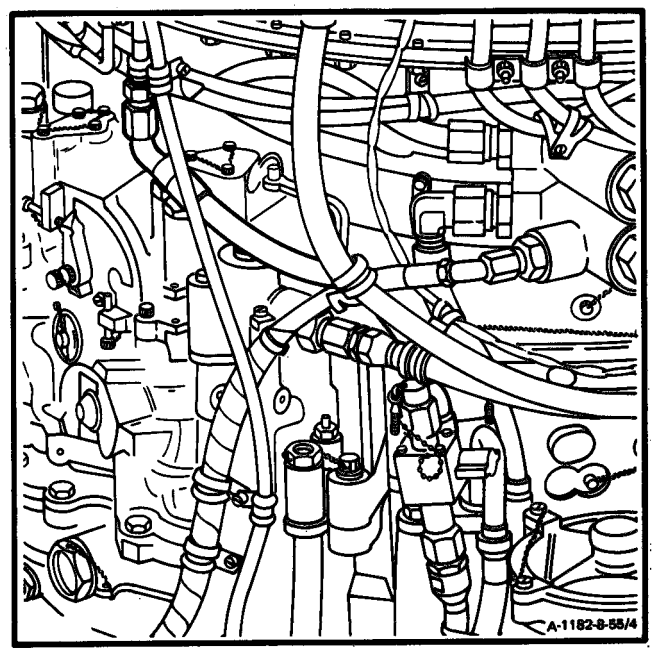
INSPECT

GO TO NEXT PAGE

8-55 INSTALL HOSE ASSEMBLY (MAIN OIL PUMP TO NO. 4 AND 5 BEARING SCAVENGE TUBE ASSEMBLY) (Continued)

FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-56 REMOVE TUBE ASSEMBLY (NO. 4 AND 5 BEARING SCAVENGE CONNECTOR TO HOSE ASSEMBLY) 8-56

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Container, 1 Quart
Open-End Wrench (T53)

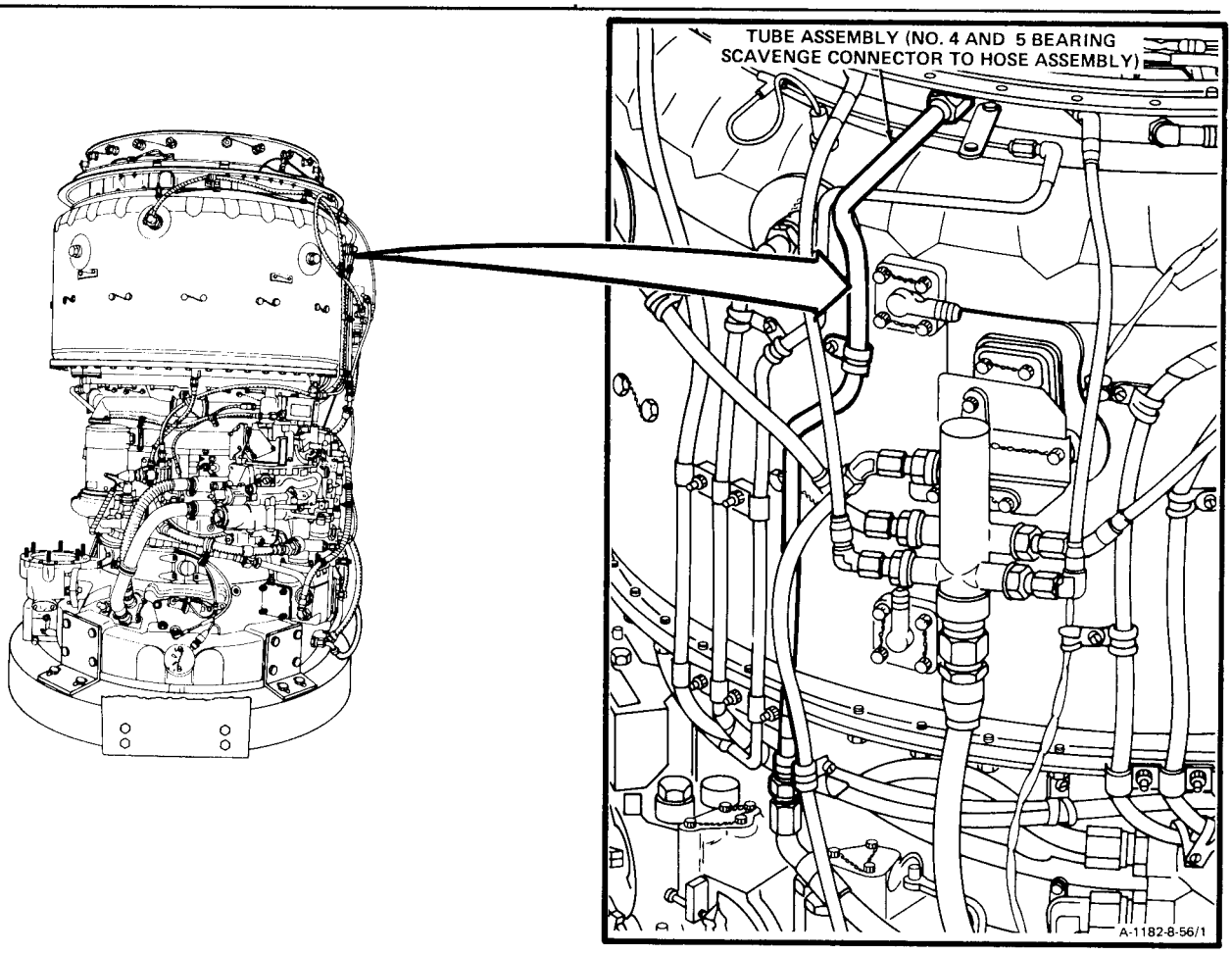
Materials:
Wiping Rag (E58)

Personnel Required:
68B10 Aircraft Powerplant Repairer

General Safety Instructions:

WARNING

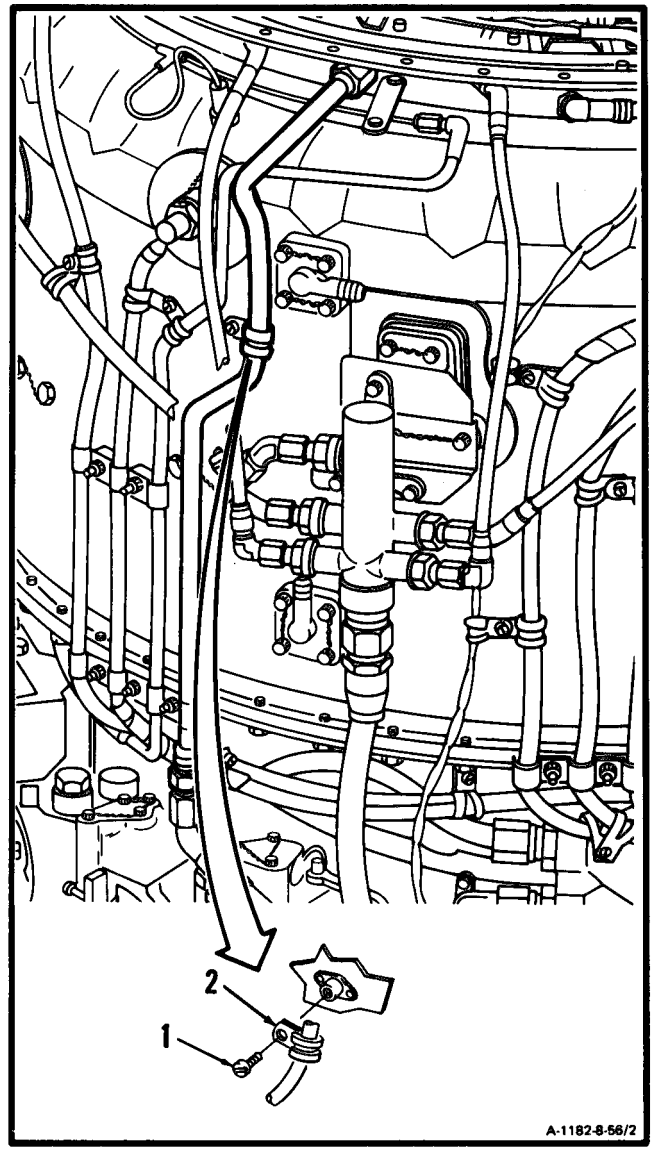
Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin, and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.



GO TO NEXT PAGE

8-56 REMOVE TUBE ASSEMBLY (N0. 4 AND 5 BEARING SCAVENGE CONNECTOR TO HOSE ASSEMBLY) (Continued)

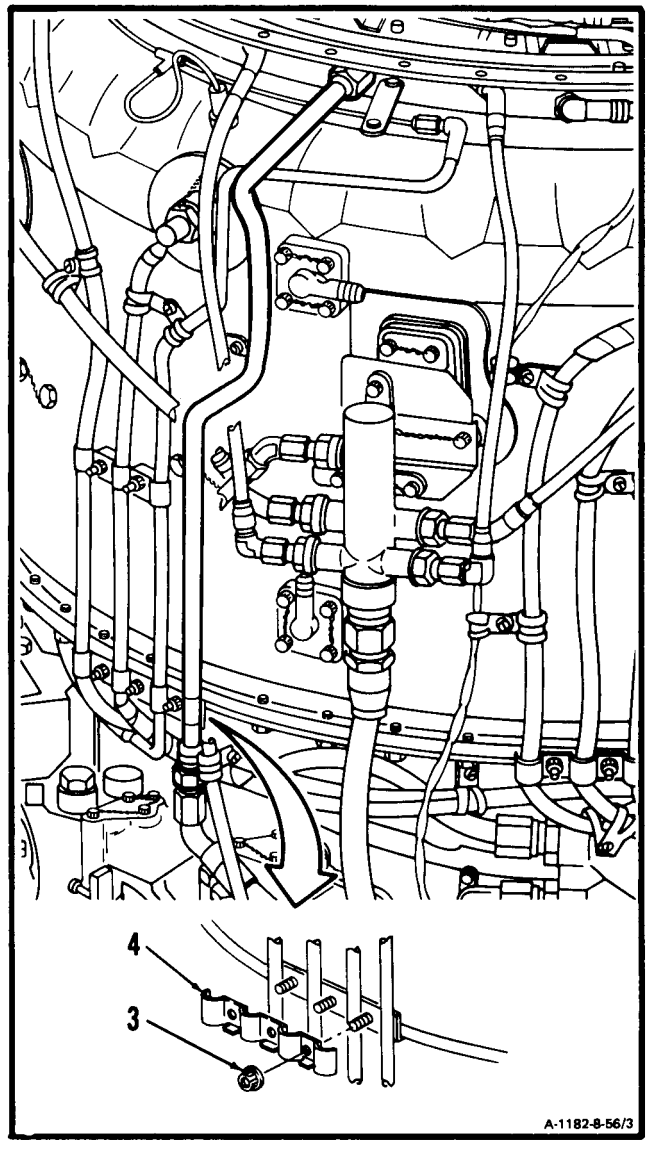
1. **Remove** lockwire, screw (1), and **clamp (2).**



GO TO NEXT PAGE

8-56 REMOVE TUBE ASSEMBLY (NO. 4 AND 5 BEARING SCAVENGE CONNECTOR TO HOSE ASSEMBLY) (Continued)

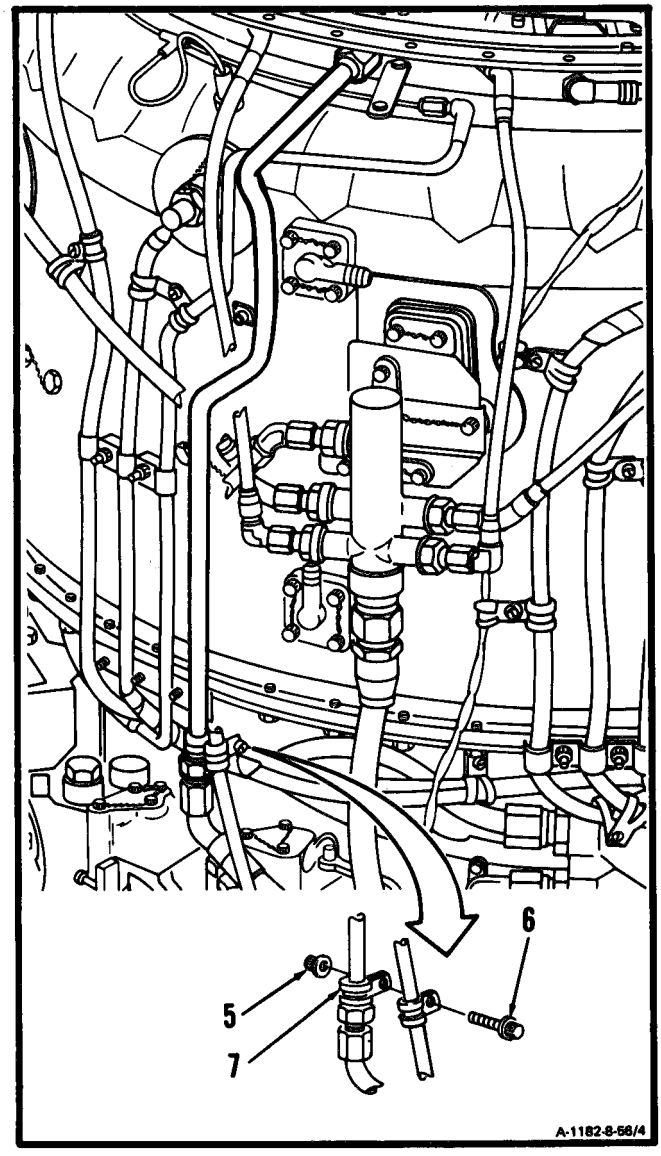
2. **Remove** three nuts (3) and **strap (4).**



GO TO NEXT PAGE

8-56 REMOVE TUBE ASEMBLY (N0. 4 AND 5 BEARING SCAVENGE CONNECTOR TO HOSE ASSEMBLY) (Continued)

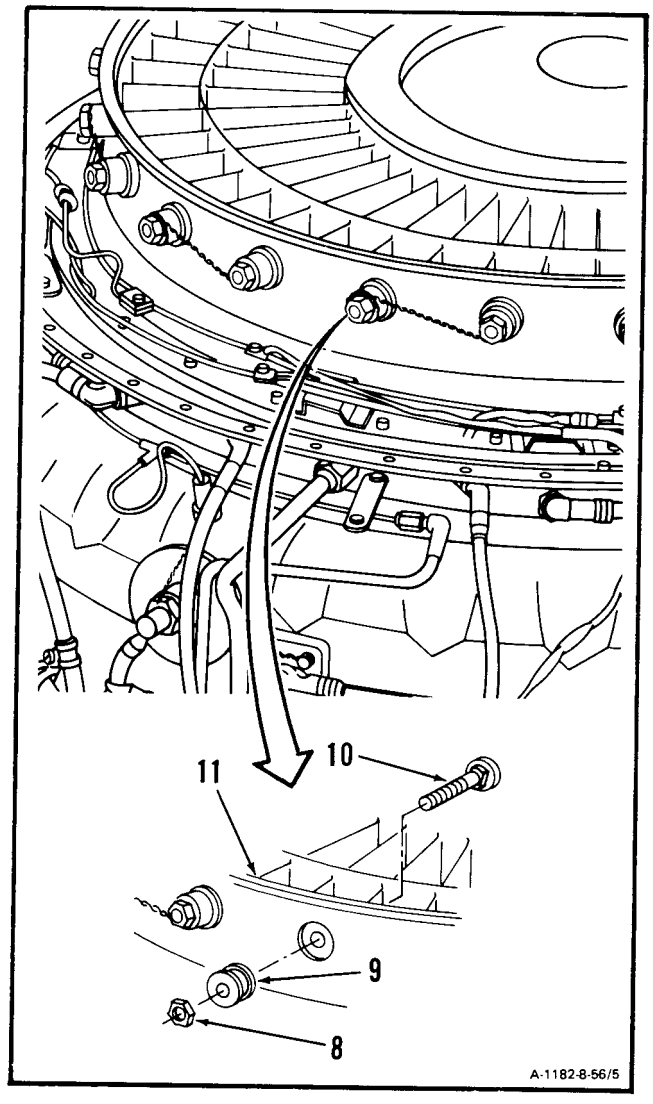
3. **Remove** nut (5), screw (6), and **clamp (7).**



GO TO NEXT PAGE

8-56 REMOVE TUBE ASSEMBLY (N0. 4 AND 5 BEARING SCAVENGE CONNECTOR TO HOSE ASSEMBLY (Continued)

4. **Remove** lockwire, nut (8), spacer (9), and bolt (10) from exit vane assembly (11).



GO TO NEXT PAGE

8-56 REMOVE TUBE ASSEMBLY (N0. 4 AND 5 BEARING SCAVENGE CONNECTOR TO HOSE ASSEMBLY (Continued)

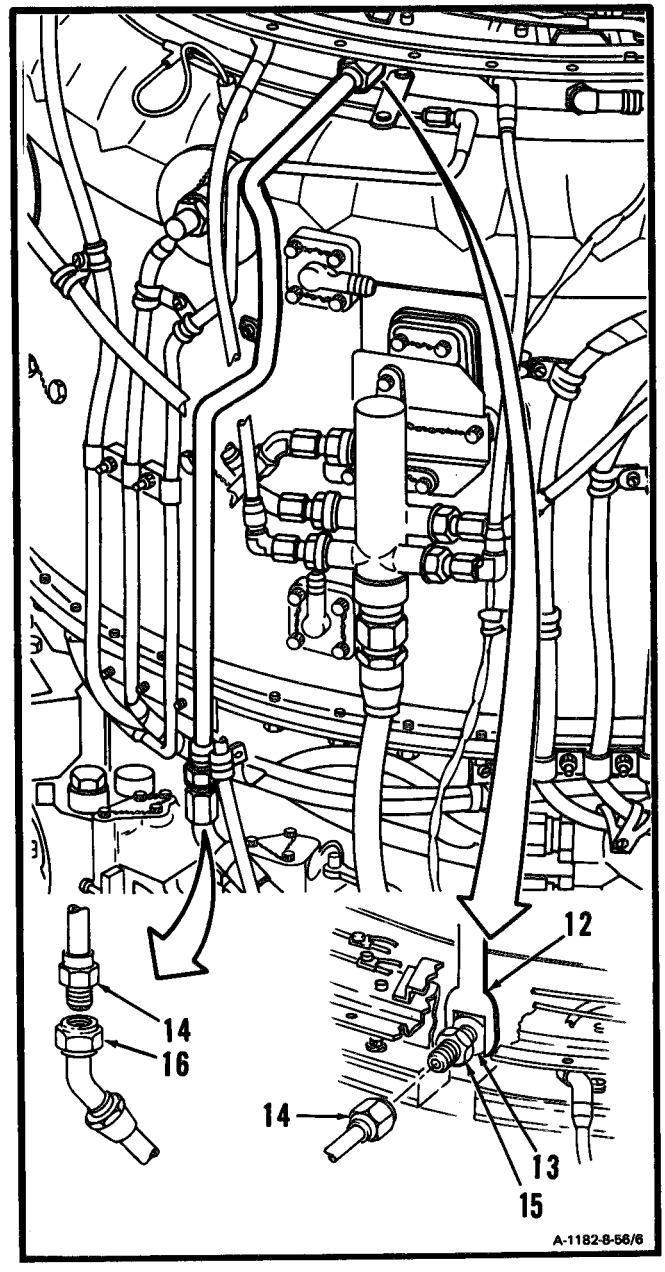
CAUTION

In following step, hold No. 4 and 5 bearing scavvenge adapter using open-end wrench (T53). Failure to use wrench may result in damage and mis-location of oil transfer tube resulting in oil leaks.

5. PIace open-end wrench (T53) (12) on No. 4 and 5 bearing scavenge adapter (13).

6. Disconnect tube assembly (14) from reducer (15).

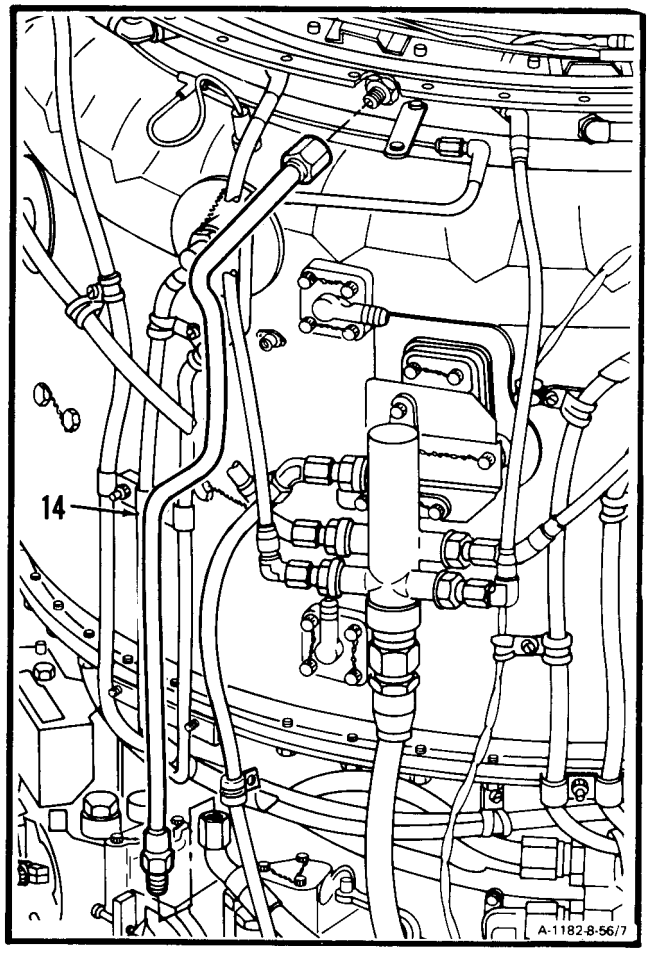
7. Disconnect tube assembly (14) from hose assembly (16).



GO TO NEXT PAGE

8-56 REMOVE TUBE ASSEMBLY (N0. 4 AND 5 BEARING SCAVENGE CONNECTOR TO HOSE ASSEMBLY) (Continued) 8-56

8. **Remove tube assembly (14).**

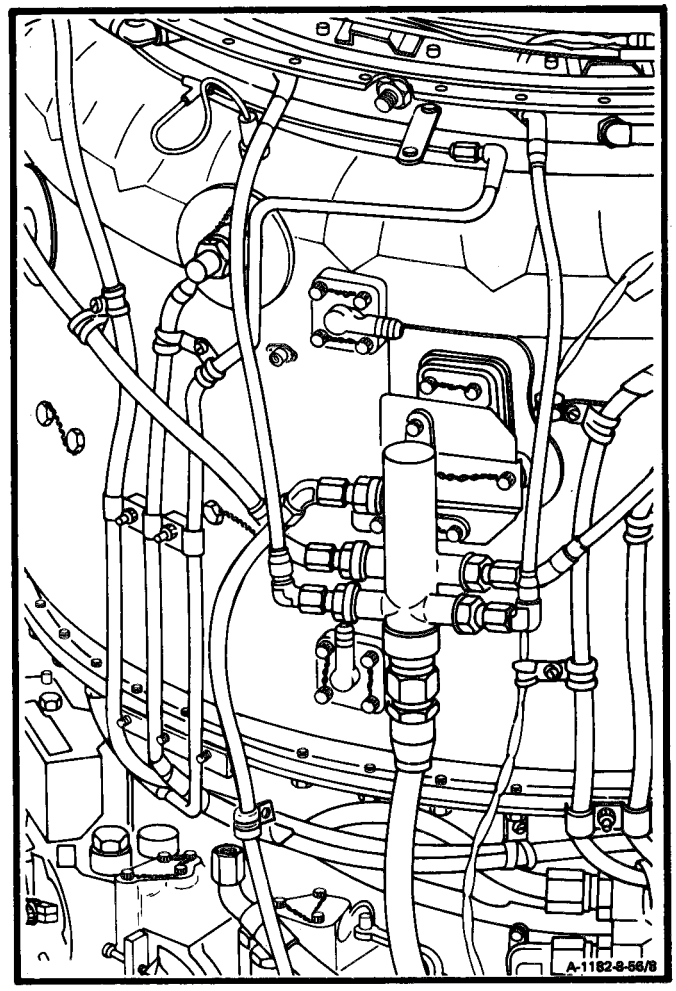


GO TO NEXT PAGE

8-56 REMOVE TUBE ASSEMBLY (N0. 4 AND 5 BEARING SCAVENGE CONNECTOR TO HOSE ASSEMBLY) (Continued)

FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-57 INSTALL TUBE ASSEMBLY (N0. 4 AND 5 BEARING SCAVENGE CONNECTOR TO HOSE ASSEMBLY) 8-57

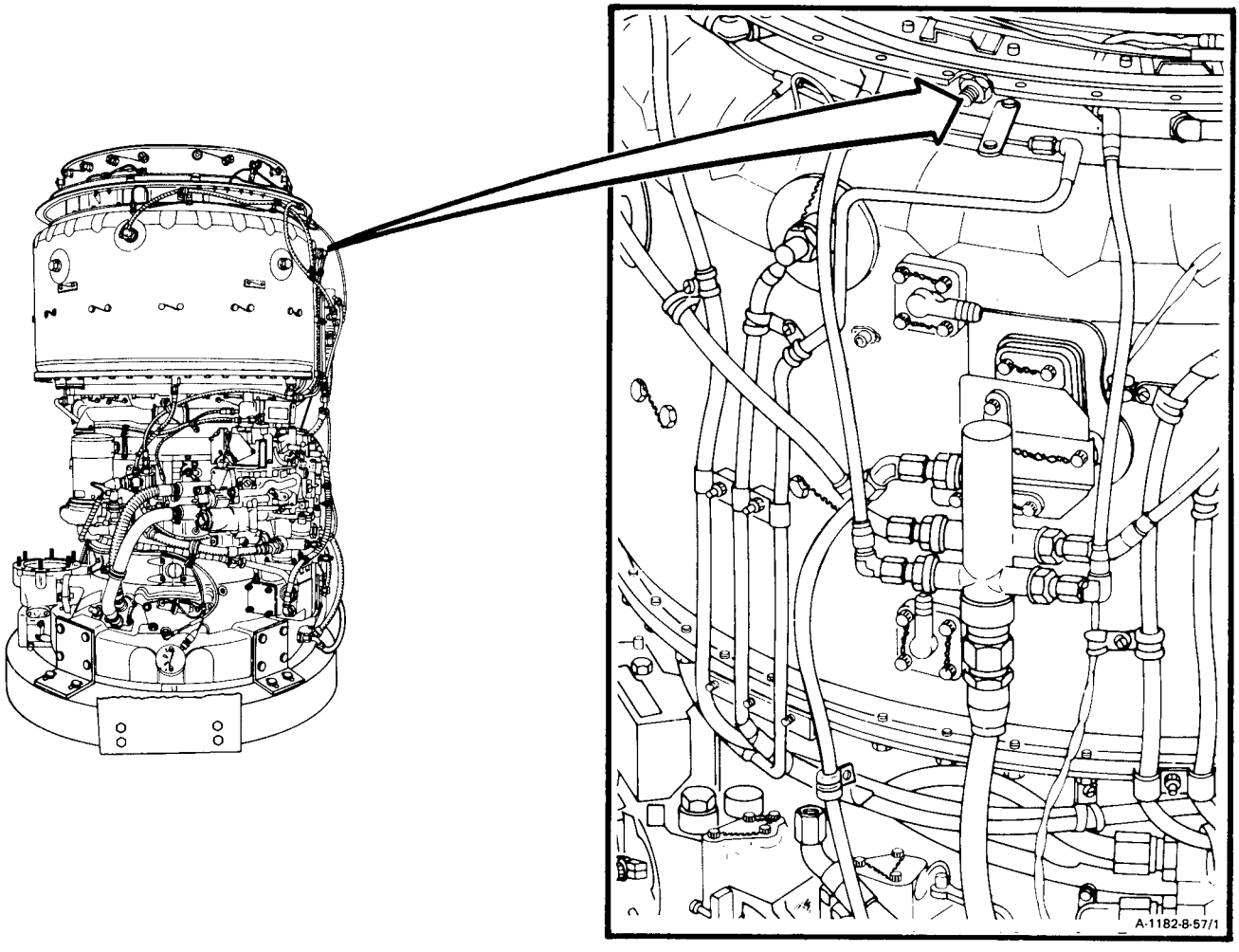
INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114
Open-End Wrench (T53)
Torque Wrench, 30-150 Inch-Pounds

Materials:
Lockwire (E29)

Personnel Required:
68610 Aircraft Powerplant Repairer
68630 Aircraft Powerplant Inspector



GO TO NEXT PAGE

8-57 INSTALL TUBE ASSEMBLY(N0. 4 AND 5 BEARING SCAVENGE CONNECTOR TO HOSE ASSEMBLY) (Continued)

CAUTION

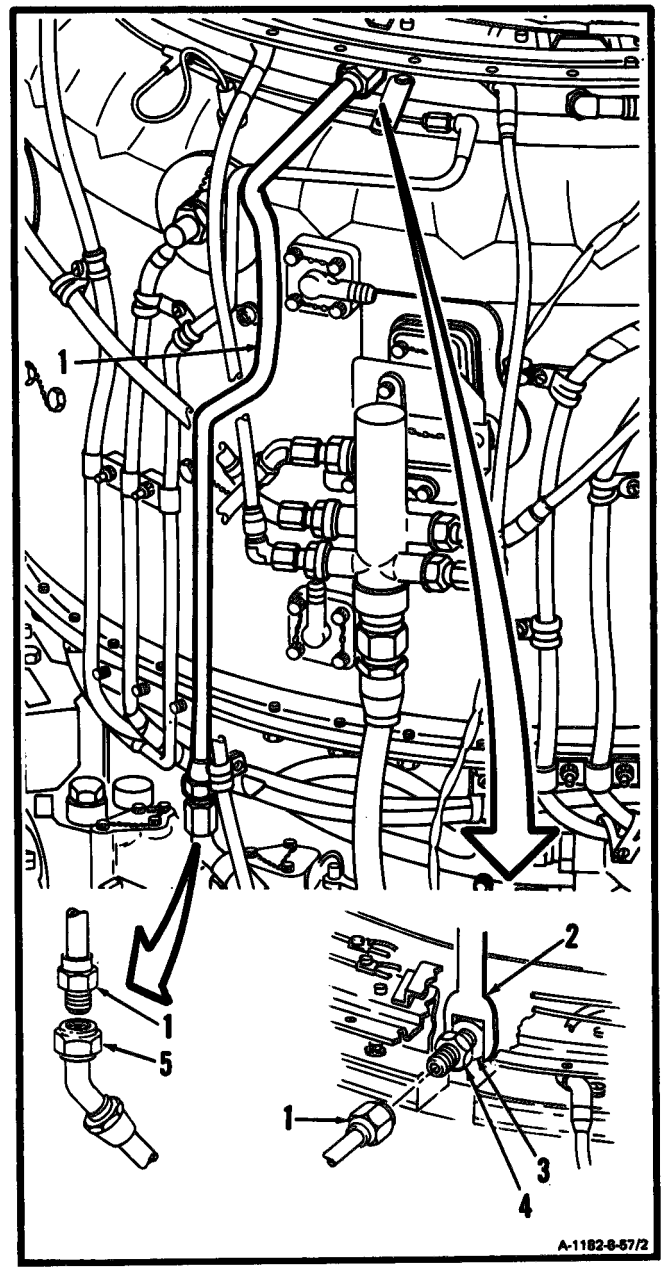
In following step, hold No. 4 and 5 bearing and scavenge adapter using open-and wrench (T53). Failure to use wrench may result in damage and mislocation of oil transfer tuba resulting in oil leads.

1. **Install tube assembly (1)** as follows:

   a. Place open-end wrench (T53) (2) on No. 4 and 5 bearing scavenge adapter (3).

   b. Connect tube assembly (1) to reducer (4).

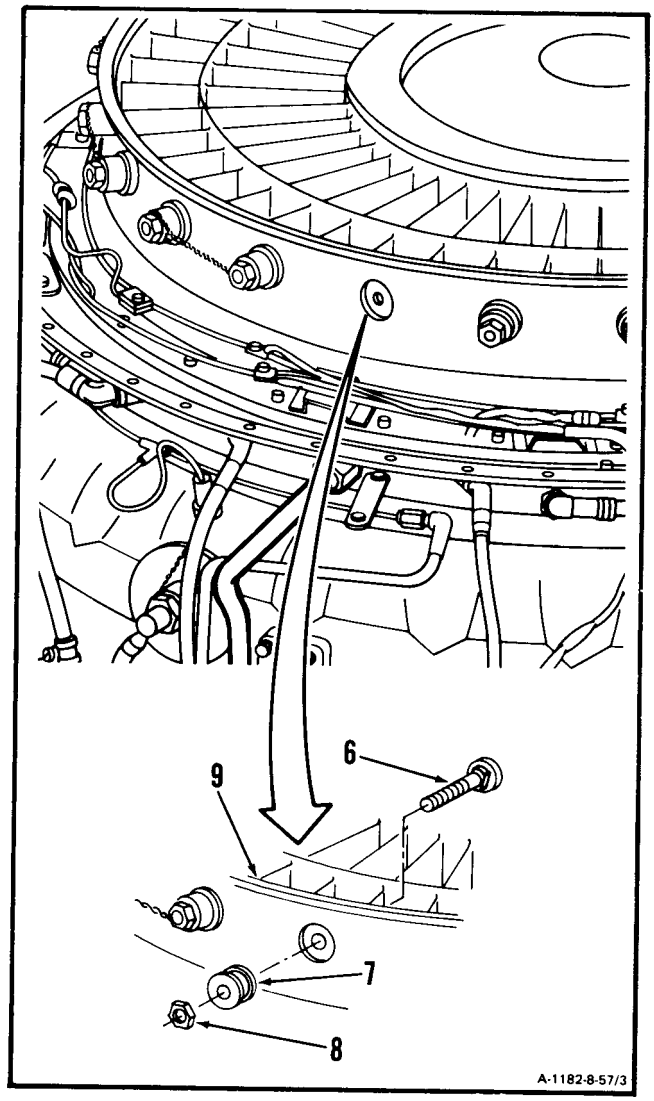
   c. Connect tube assembly (1) to hose assembly (5).



GO TO NEXT PAGE

8-57 INSTALL TUBE ASSEMBLY (NO. 4 AND 5 BEARING SCAVENGE CONNECTOR TO HOSE ASSEMBLY) (Continued)

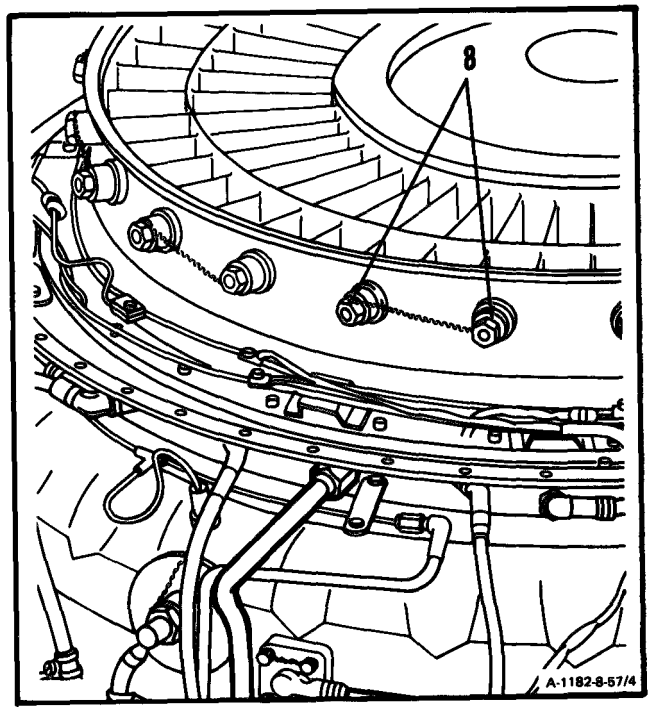
2. **Install bolt (6),** spacer (7) and nut (8) in exit vane assembly (9). **Torque nut (8) to 125-inch-pounds.**



GO TO NEXT PAGE

8-57 INSTALL TUBE ASSEMBLY (N0. 4 AND 5 BEARING SCAVENGE CONNECTOR TO HOSE ASSEMBLY) (Continued)

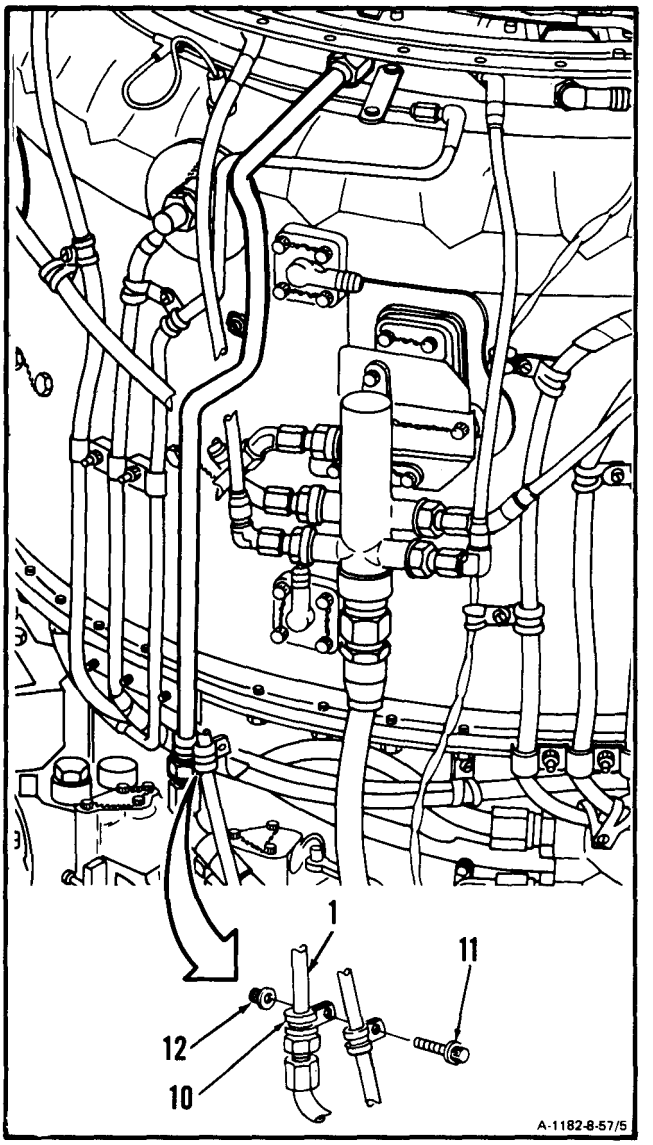
3. LockWire nuts (8) toegether. Use lockwire (E29).



GO TO NEXT PAGE

8-57 INSTALL TUBE ASSEMBLY (N0. 4 AND 5 BEARING SCAVENGE CONNECTOR TO HOSE ASSEMBLY) (Continued)

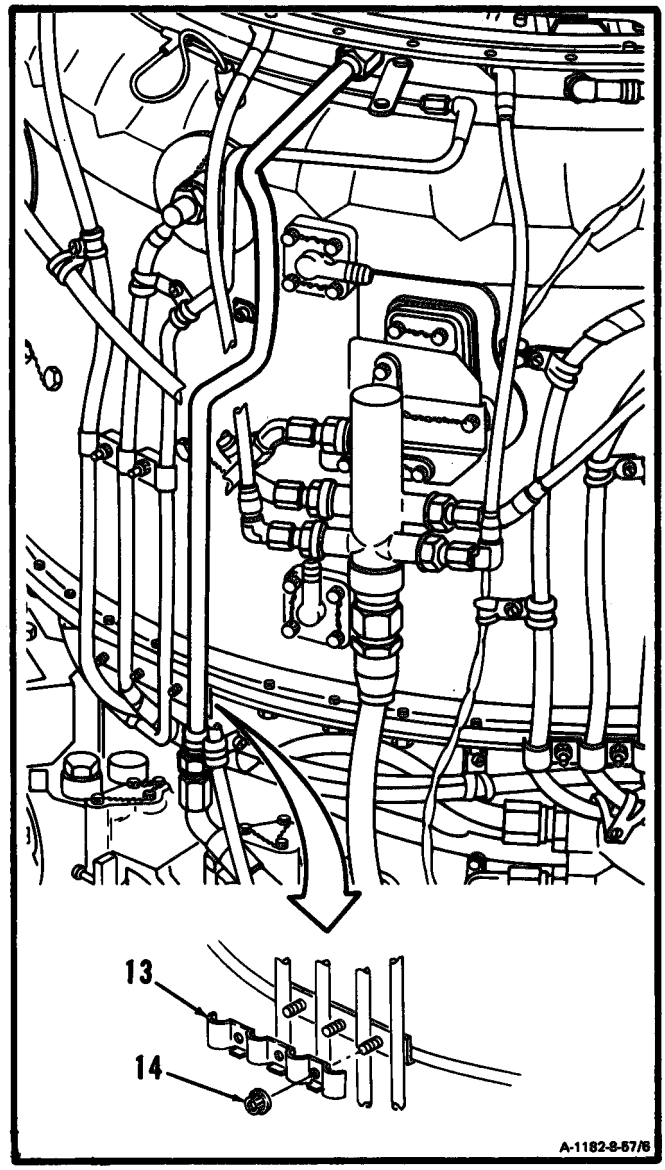
4. **Install clamp (10)** on tube assembly (1), and install screw (11) and nut (12).



GO TO NEXT PAGE

8-57 INSTALLTUBE ASSEMBLY (No. 4 AND 5 BEARING SCAVENGE CONNECTOR TO HOSE ASSEMBLY) (Continued)

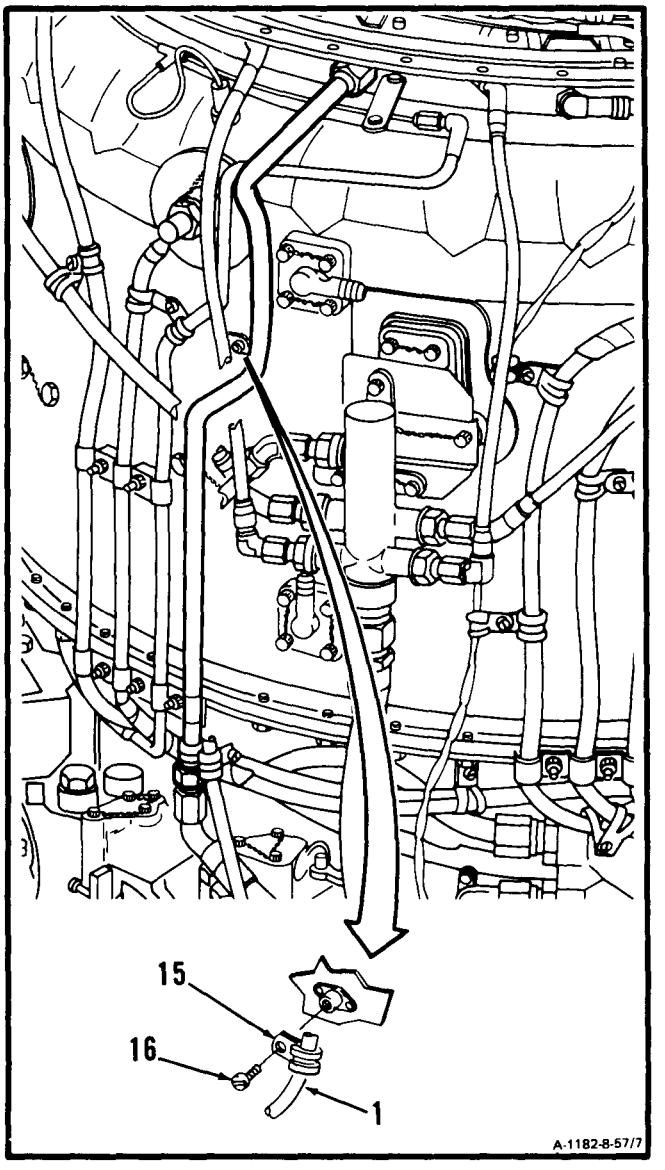
5. **Install strap (13)** and three nuts (14).



GO TO NEXT PAGE

8-57 INSTALL TUBE ASSEMBLY (NO. 4 AND 5 BEARING SCAVENGE CONNECTOR TO HOSE ASSEMBLY) (Continued)

6. **Install clamp (15)** on tube assembly (1), and install screw (16). Lockwire screw. Use lockwire (E29).



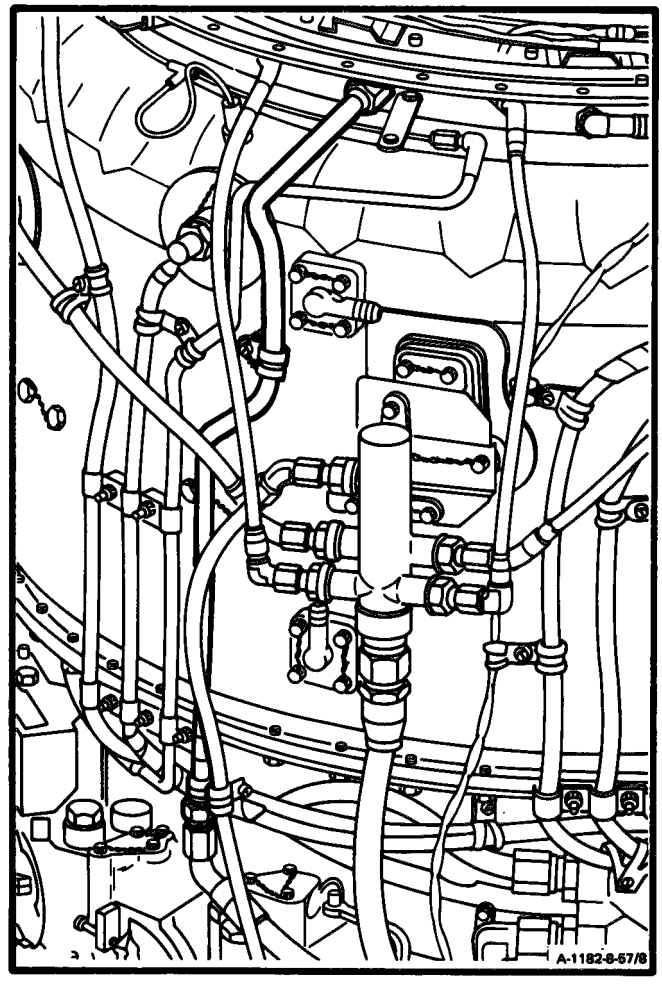
INSPECT

GO TO NEXT PAGE

8-57 INSTALL TUBE ASSEMBLY (N0. 4 AND 5 BEARING SCAVENGE CONNECTOR TO HOSE ASSEMBLY) (Continued) 8-57

FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-58 REMOVE HOSE ASSEMBLY (PRESSURE CONNECTOR TO NO. 4 AND 5 BEARING FILTER)

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Container, 1 Quart
Open-End Wrench (T53)

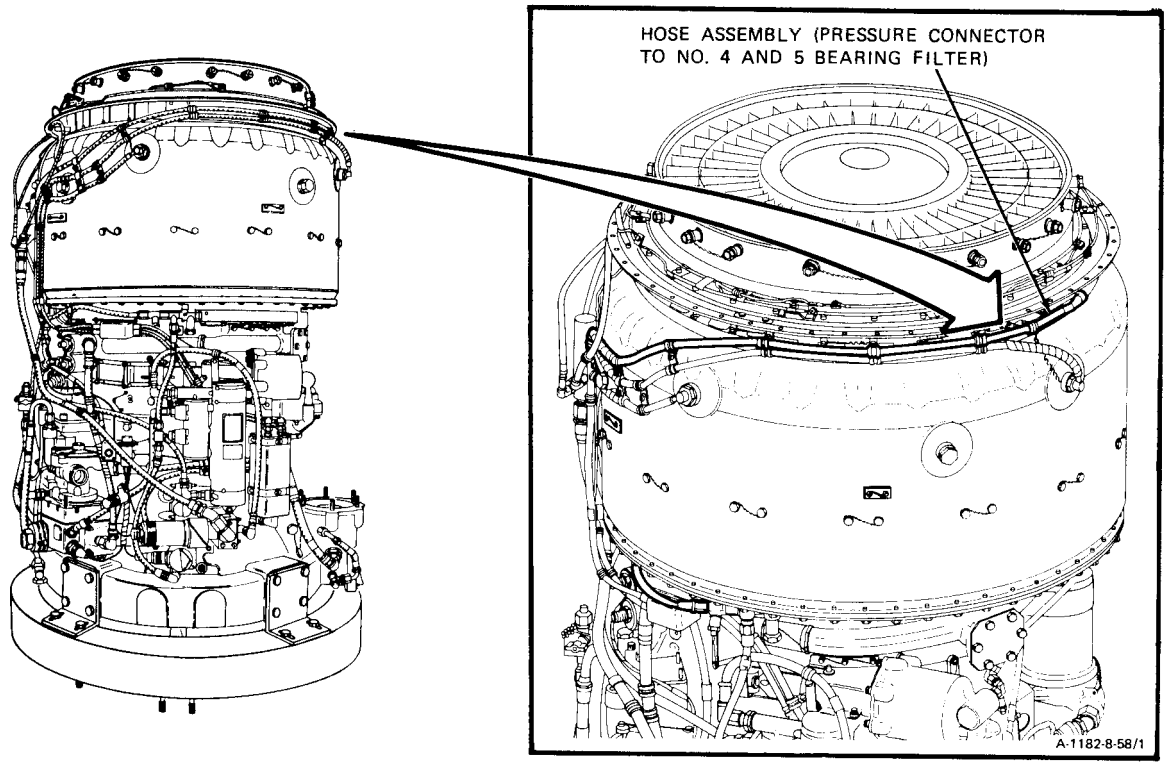
Materials:
Wiping Rag (E58)

Personnel Required:
68B10 Aircraft Powerplant Repairer

General Safety Instructions:

WARNING

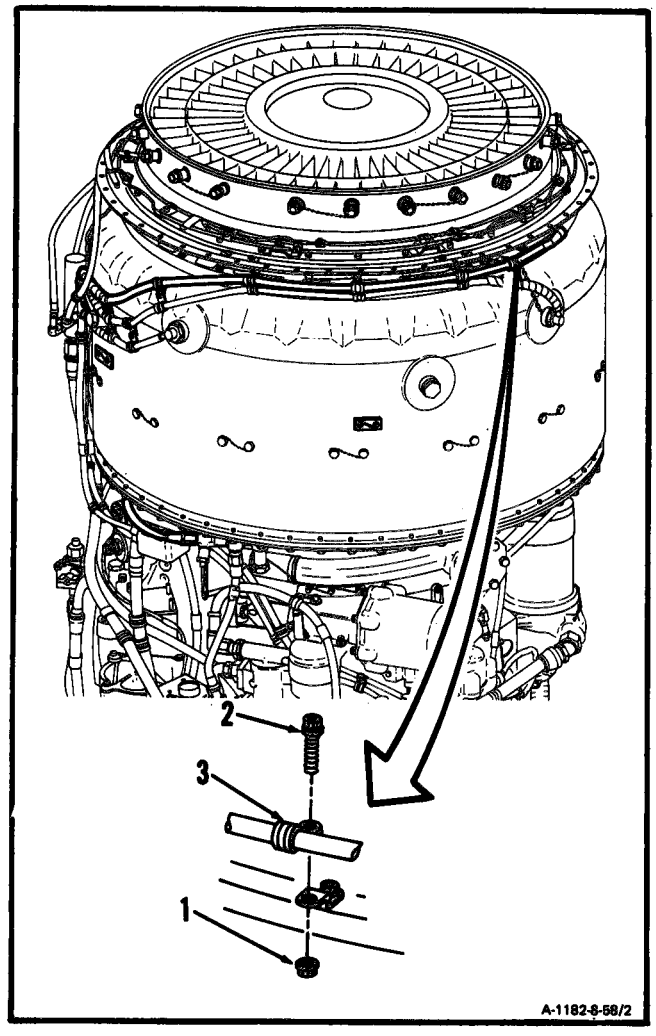
Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin, and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.



GO TO NEXT PAGE

8-58 REMOVE HOSE ASSEMBLY (PRESSURE CONNECTOR TO NO. 4 AND 5 BEARING FILTER) (Continued) 8-58

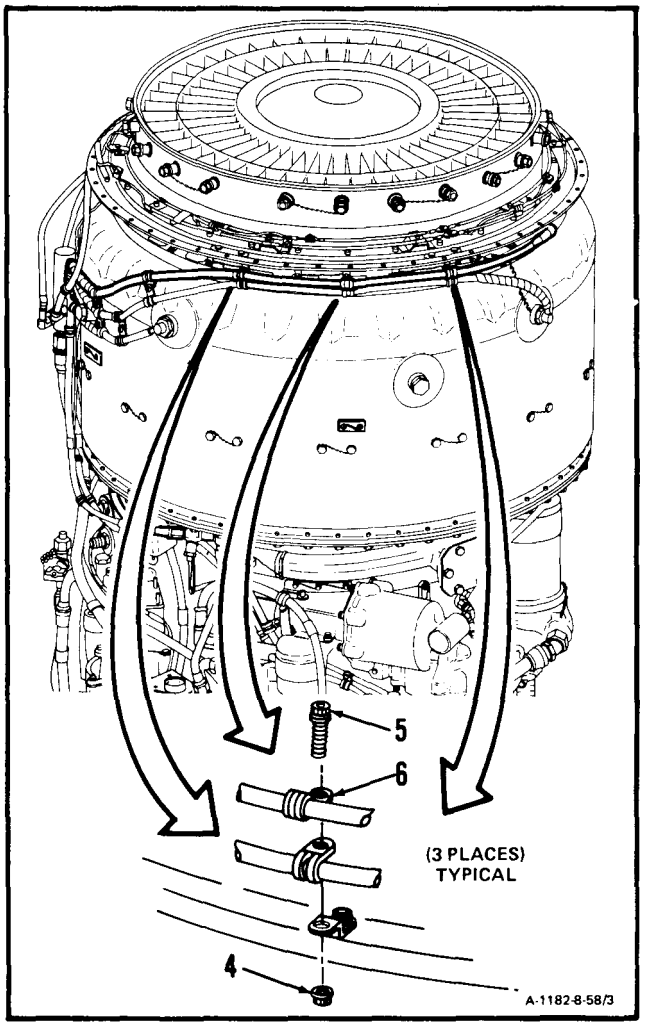
1. **Remove** nut (1), bolt (2), and **clamp (3).**



GO TO NEXT PAGE

8-58 REMOVE HOSE ASSEMBLY (PRESSURE CONNECTOR TO N0. 4 AND 5 BEARING FILTER) (Continued)

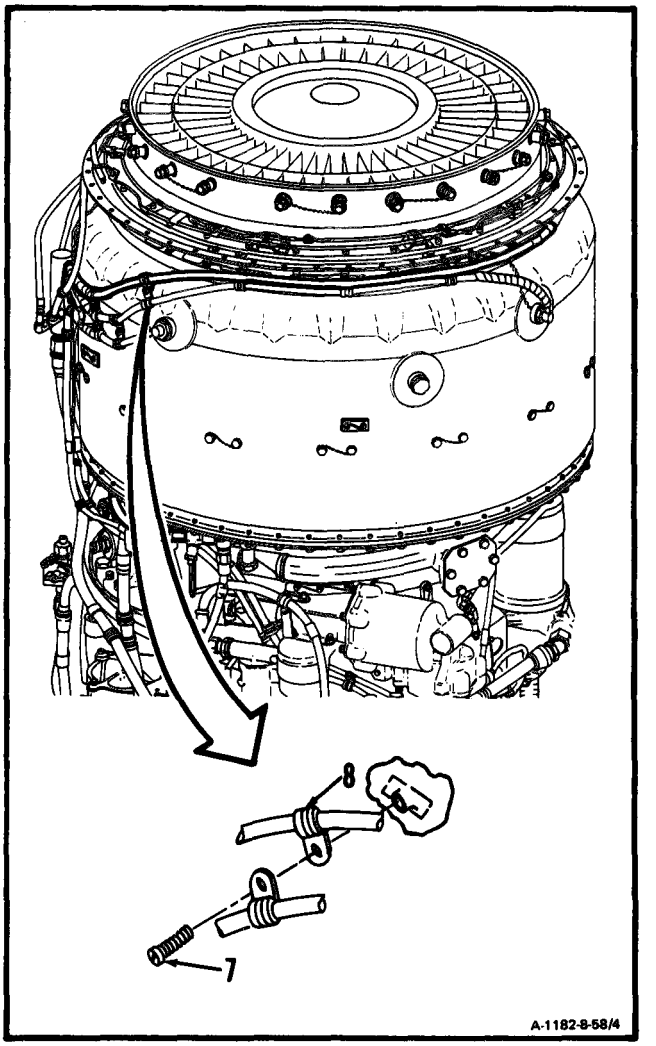
2. **Remove** three nuts (4), bolts (5), and **clamps (6).**



GO TO NEXT PAGE

8-58 REMOVE HOSE ASSEMBLY (PRESSURE CONNECTOR TO NO. 4 AND 5 BEARING FILTER) (Continued)

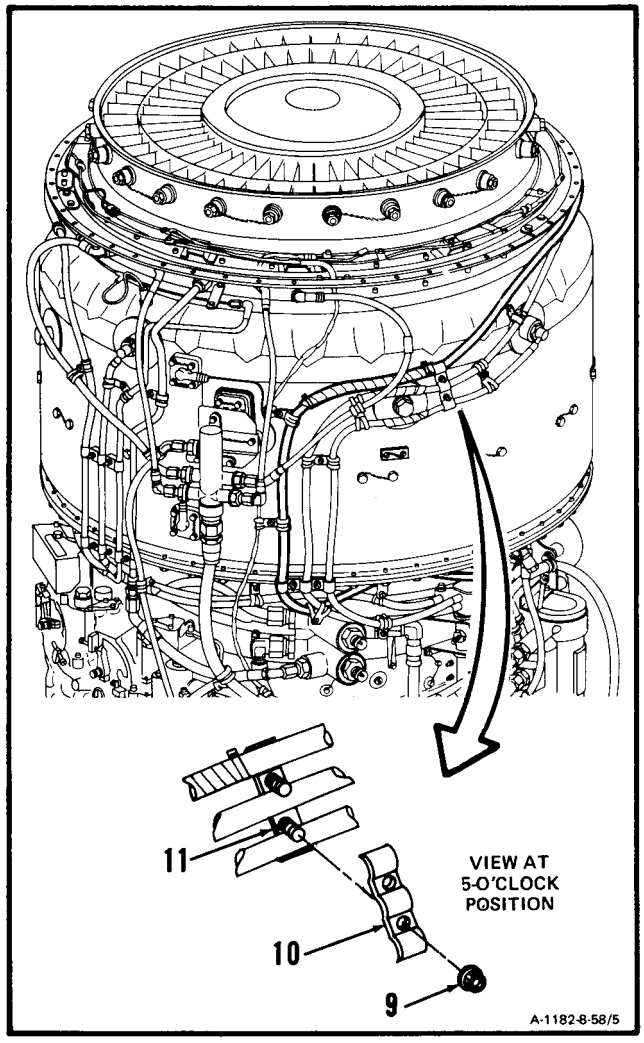
3. **Remove** lockwire, screw (7), and **clamp (8).**



GO TO NEXT PAGE

8-58 REMOVE HOSE ASSEMBLY (PRESSURE CONNECTOR TO NO. 4 AND 5 BEARING FILTER) (Continued)

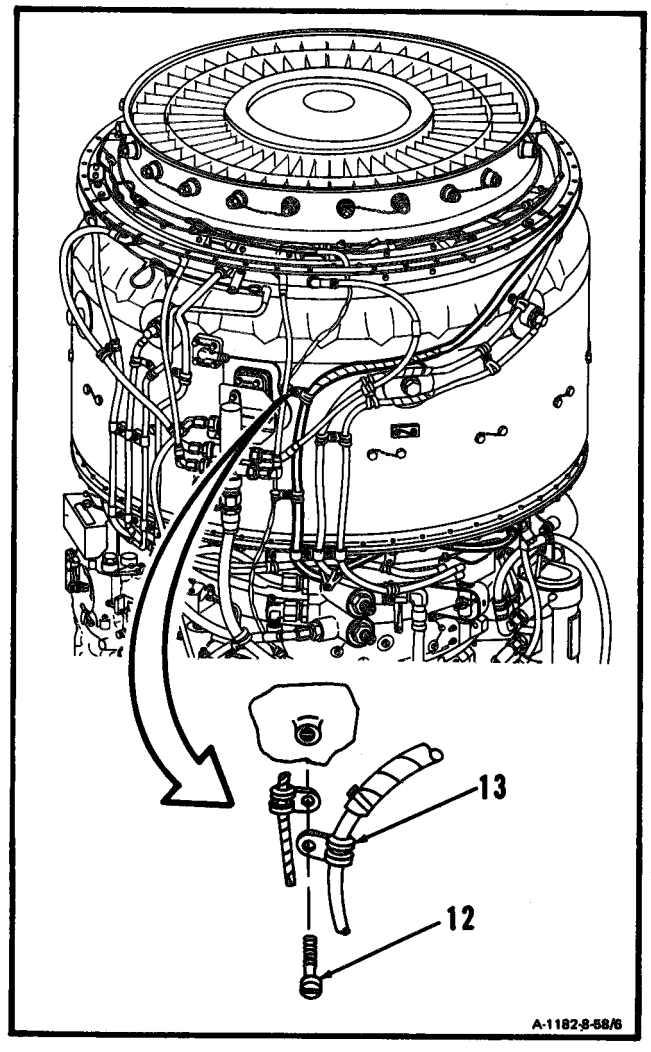
4. **Remove** two nuts (9) and **clamps (10 and 11).**



GO TO NEXT PAGE

8-58 REMOVE HOSE ASSEMBLY (PRESSURE CONNECTOR TO NO. 4 AND 5 BEARING FILTER) (Continued) 8-58

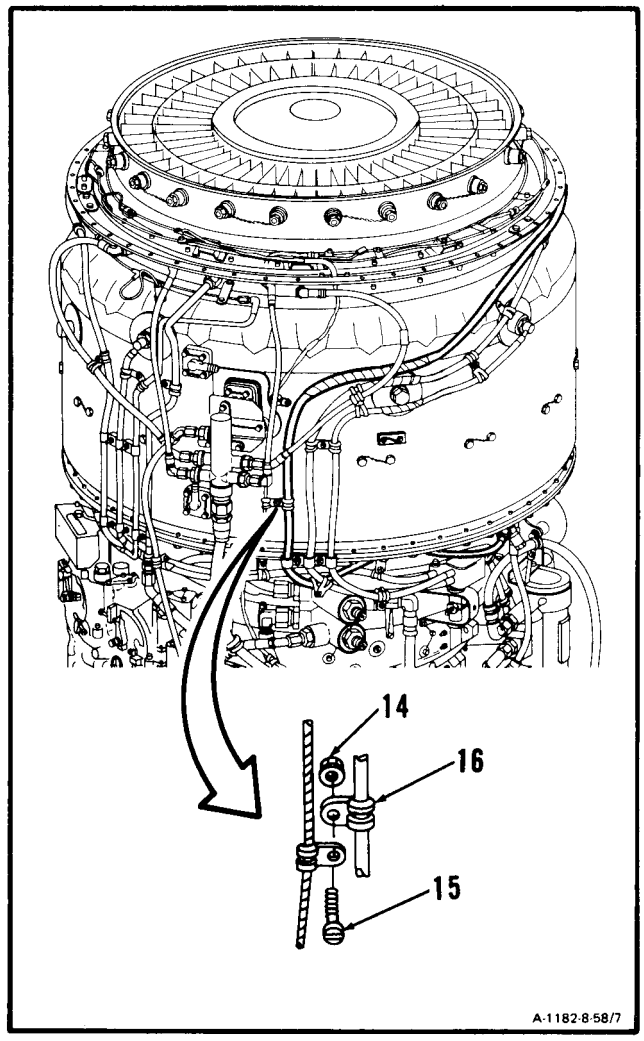
5. **Remove** lockwire, screw (12), and **clamp (13).**



GO TO NEXT PAGE

8-58 REMOVE HOSE ASSEMBLY (PRESSURE CONNECTOR TO N0. 4 AND 5 BEARING FILTER) (Continued)

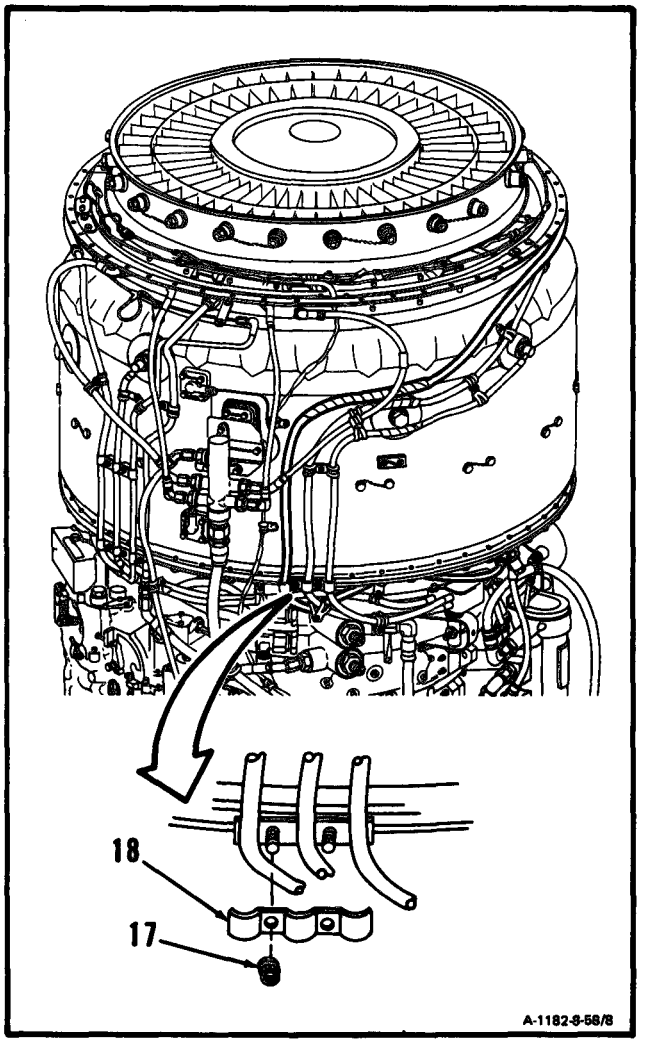
6. **Remove** nut (14), screw (15), and **clamp (16).**



GO TO NEXT PAGE

8-58 REMOVE HOSE ASSEMBLY (PRESSURE CONNECTOR TO N0. 4 AND 5 BEARING FILTER) (Continued)

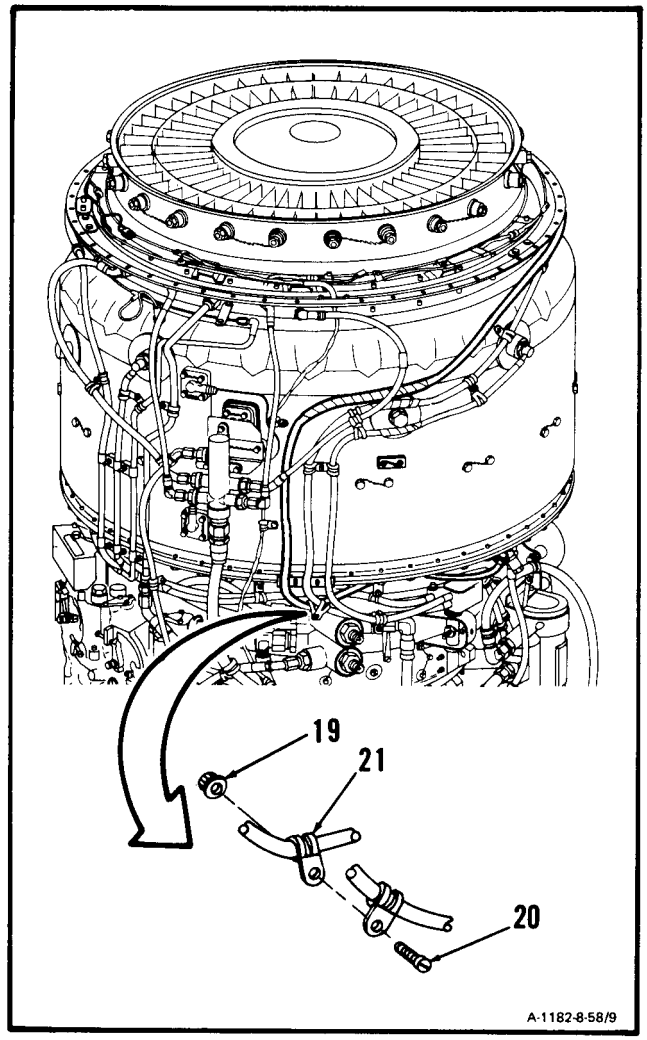
7. **Remove** two nuts (17) and **strap (18).**



GO TO NEXT PAGE

8-58 REMOVE HOSE ASSEMBLY (PRESSURE CONNECTOR TO NO. 4 AND 5 BEARING FILTER) (Continued)

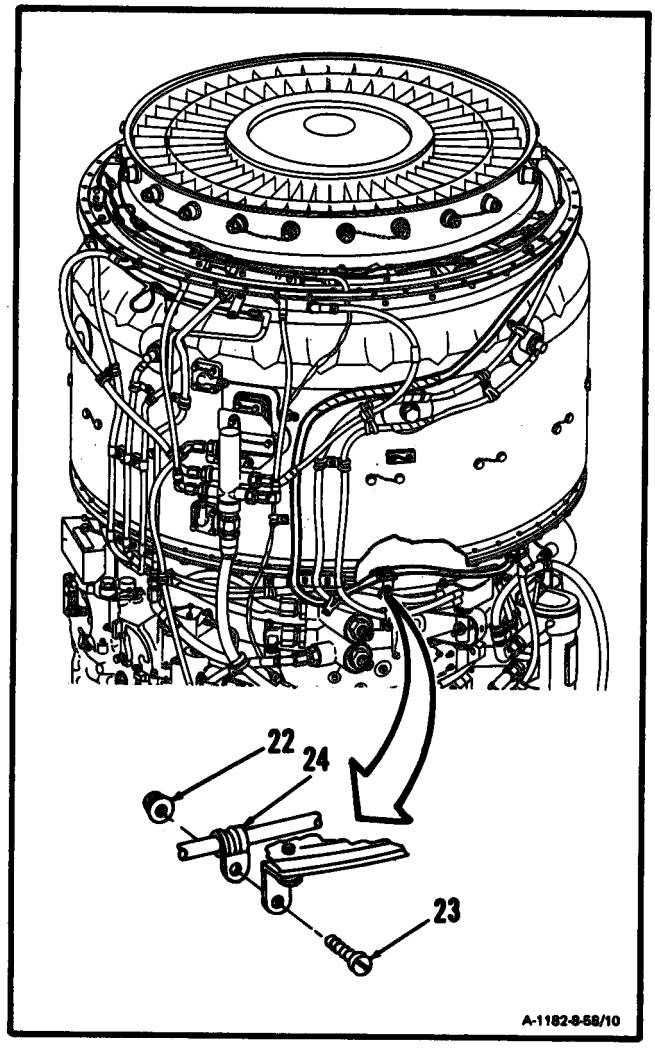
8. **Remove** nut (19), screw (20), and **clamp (21).**



GO TO NEXT PAGE

8-58 REMOVE HOSE ASSEMBLY (PRESSURE CONNECTOR TO NO. 4 AND 5 BEARING FILTER) (Continued)

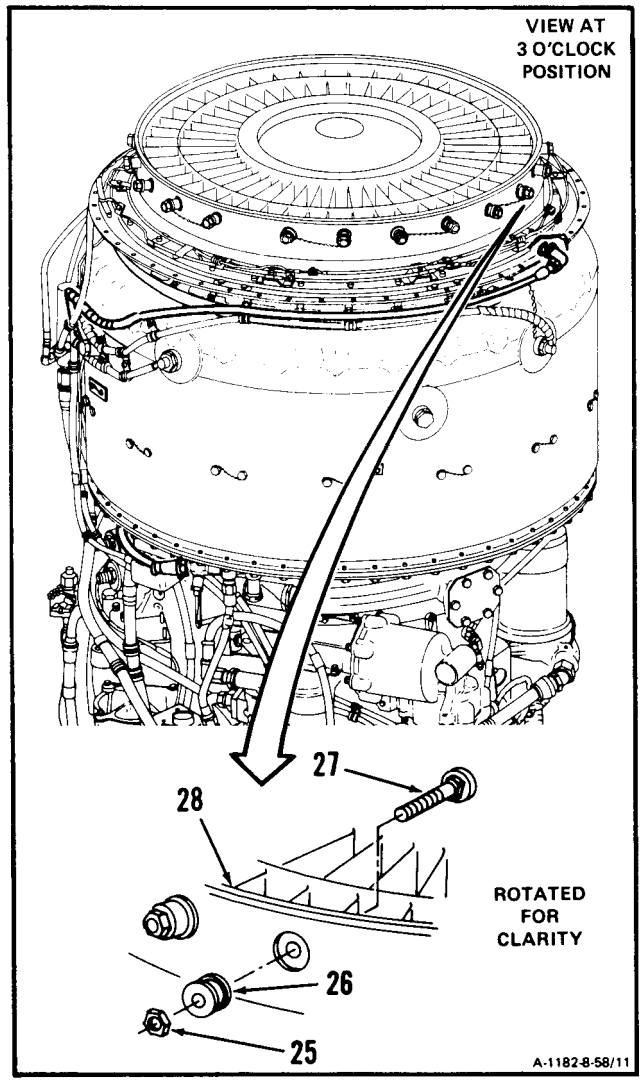
9. **Remove** nut (22), screw (23), and **clamp (24).**



GO TO NEXT PAGE

8-58 REMOVE HOSE ASSEMBLY (PRESSURE CONNECTOR TO NO. 4 AND 5 BEARING FILTER) (Continued)

10. **Remove** lockwire, nut (25), spacer (26), and **bolt (27),** from exit vane assembly (28).



GO TO NEXT PAGE

8-58 REMOVE HOSE ASSEMBLY (PRESSURE CONNECTOR TO NO. 4 AND 5 BEARING FILTER) (Continued)

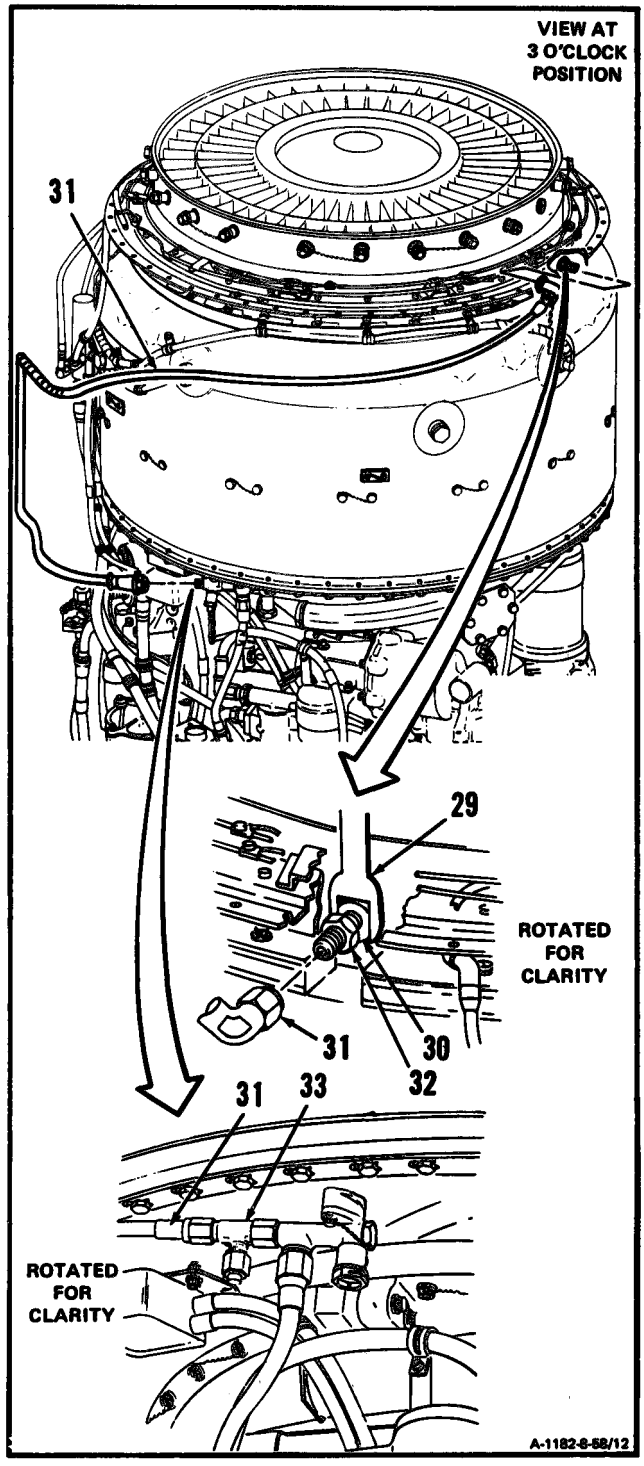
CAUTION

In following step, hold No. 4 and 5 bearing lube adapter using open-end wrench (T53). Failure to use wrench may result in damage and dislocation of oil transfar tube resulting in oil leaks.

11. Place open-end wrench (T53) (29) on No. 4 and 5 bearing lube adapter (30).

12. Disconnect hose assembly (31) from reducer (32).

13. Disconnect hose assembly (31) from oil tee and snubber (33) and remove hose assembly (31).

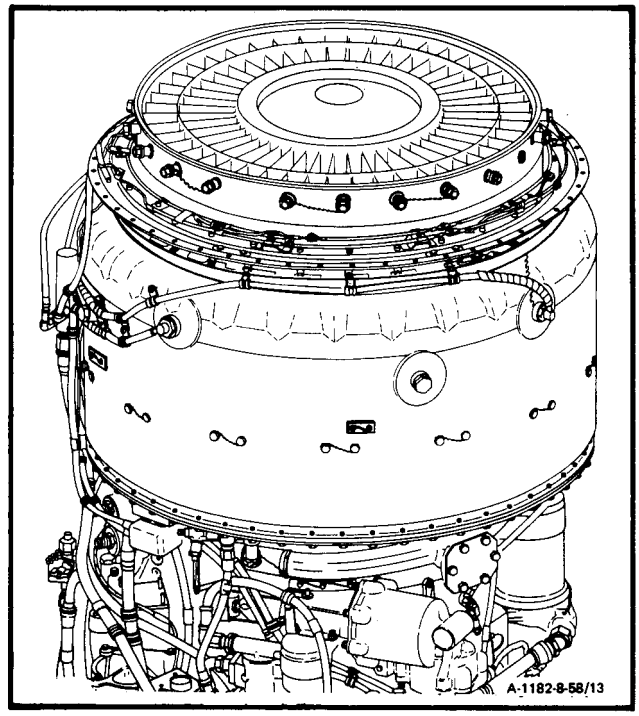


GO TO NEXT PAGE

8-58 REMOVE HOSE ASSEMBLY (PRESSURE CONNECTOR TO NO. 4 AND 5 BEARING FILTER) (Continued)

FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-59 INSTALL HOSE ASSEMBLY (PRESSURE CONNECTOR TO NO. 4 AND 5 BEARING FILTER) 8-59

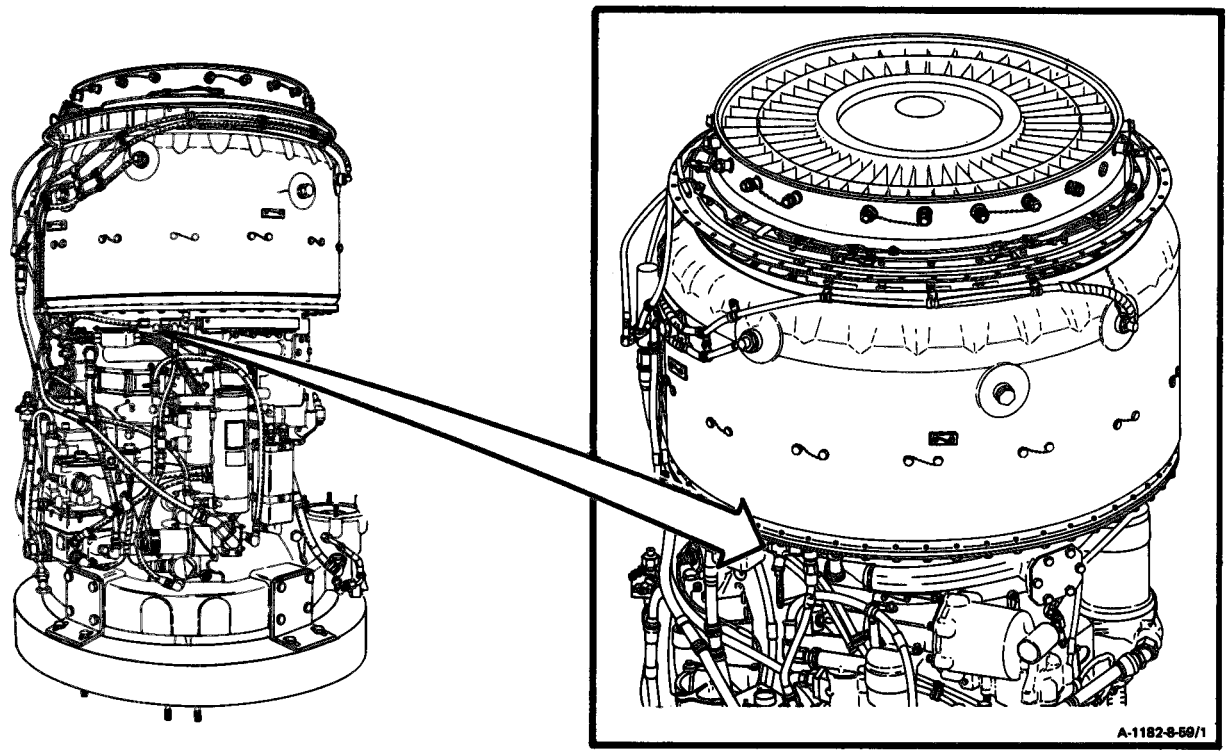
INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114
Open-End Wrench (T53)
Torque Wrench, 30-150 Inch-Pounds

Materials:
Lockwire (E29)

Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector



GO TO NEXT PAGE

8-59 INSTALL HOSE ASSEMBLY (PRESSURE CONNECTOR TO NO. 4 AND 5 BEARING FILTER) (Continued)

CAUTION

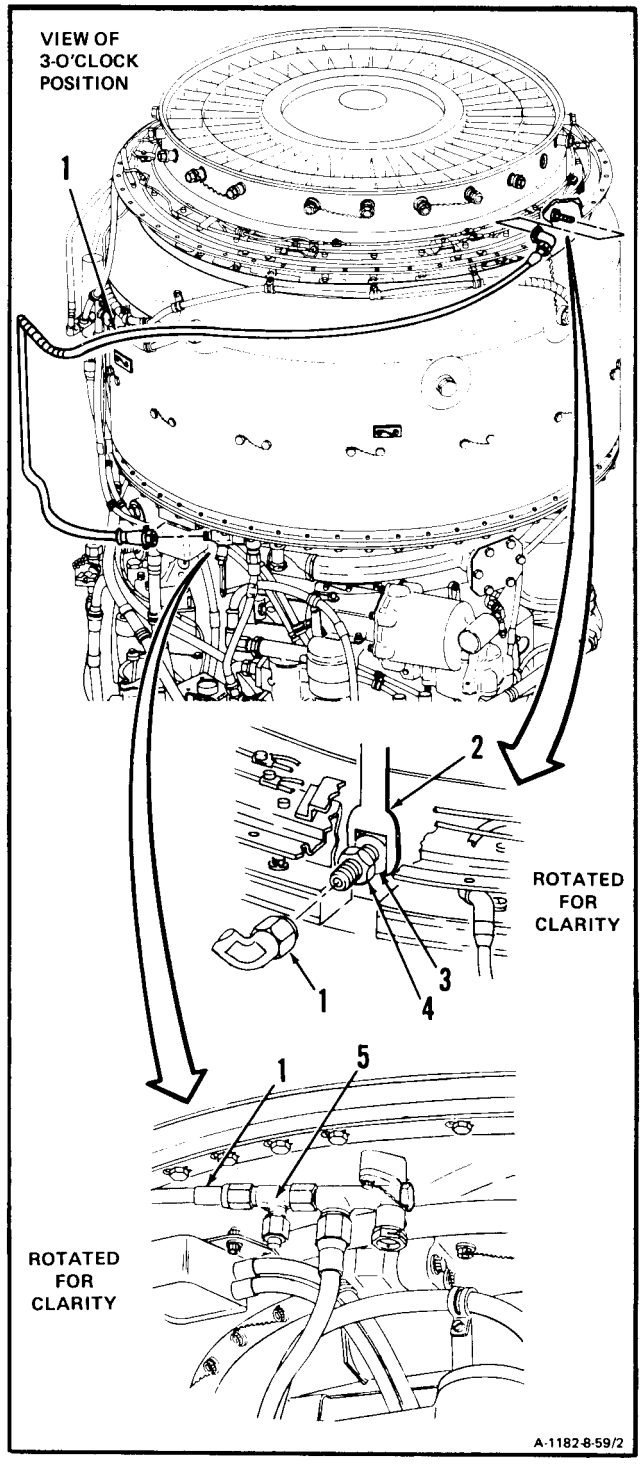
In following step, hold No. 4 and 5 bearing lube adapter, using open-end wrench (T53). Failure to use wrench may result in damage and dislocation of oil transfer tube resulting in oil leaks.

1. **Install hose assembly (1)** as follows:

   a. Place open-end wrench (T53) (2) on No. 4 and 5 bearing lube adapter (3).

   b. Connect hose assembly (1) to reducer (4).

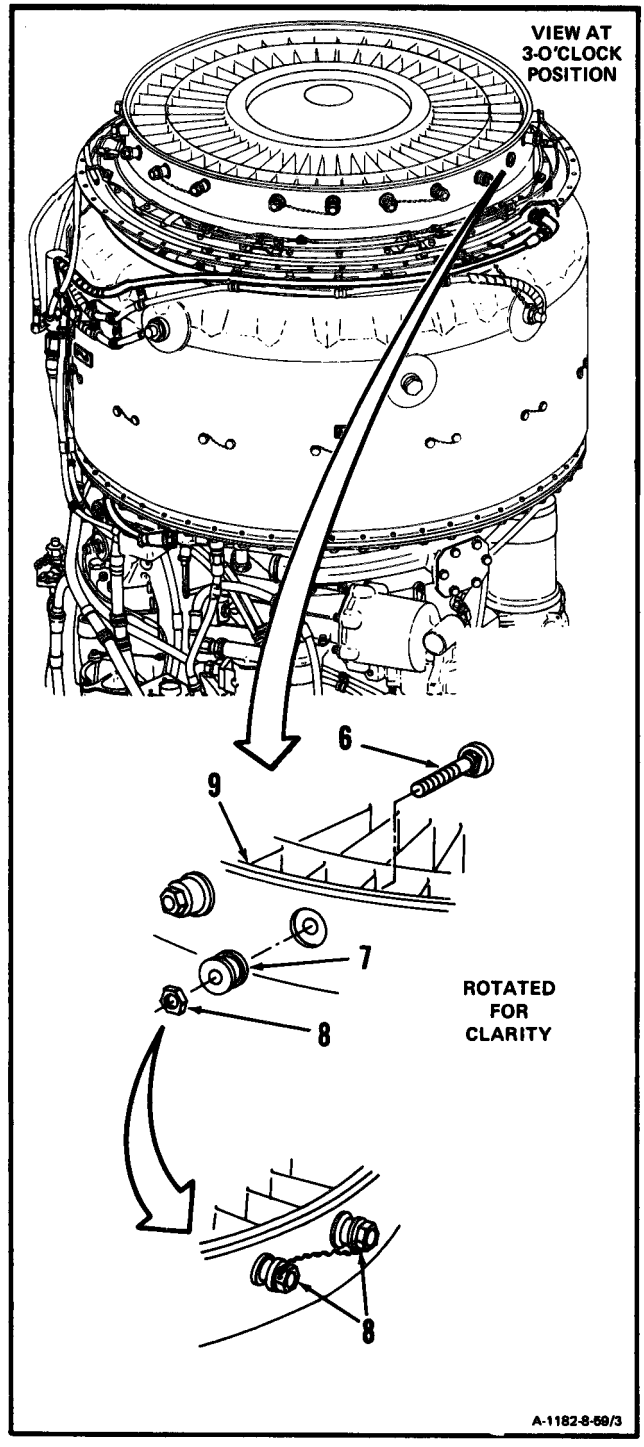
   c. Connect hose assembly (1) to tee and snubber (5).



GO TO NEXT PAGE

8-59 INSTALL HOSE ASSEMBLY (PRESSURE CONNECTOR TO NO. 4 AND 5 BEARING FILTER) (Continued)

2. **Install bolt (6),** spacer (7), and nut (8) in exit vane assembly (9). **Torque nut (8) to 125 inch-pounds.**

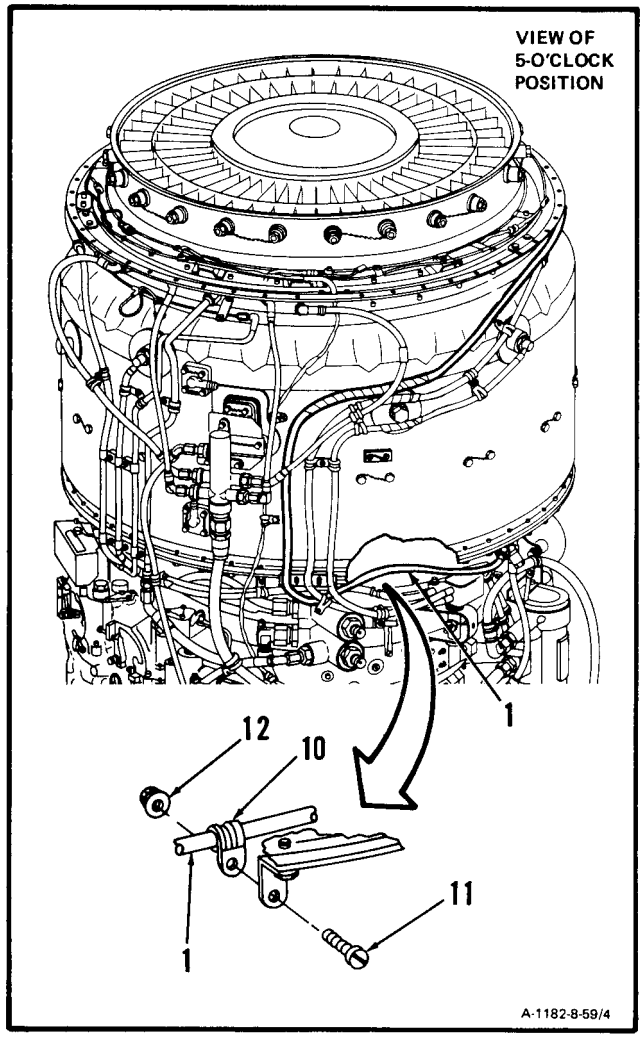


3. Lockwire nuts (8) together. Use lockwire (E29).

GO TO NEXT PAGE

8-59 INSTALL HOSE ASSEMBLY (PRESSURE CONNECTOR TO NO. 4 AND 5 BEARING FILTER) (Continued) 8-59

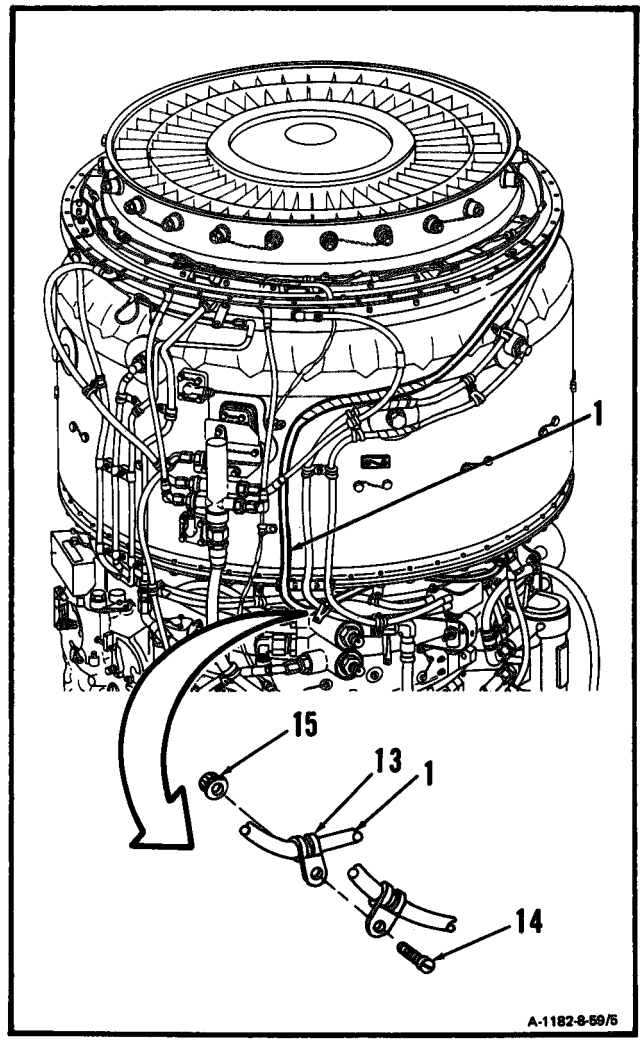
4. **Install clamp (10)** on hose assembly (1), and install screw (11) and nut (12).



GO TO NEXT PAGE

8-59 INSTALL HOSE ASSEMBLY (PRESSURE CONNECTOR TO NO. 4 AND 5 BEARING FILTER) (Continued)

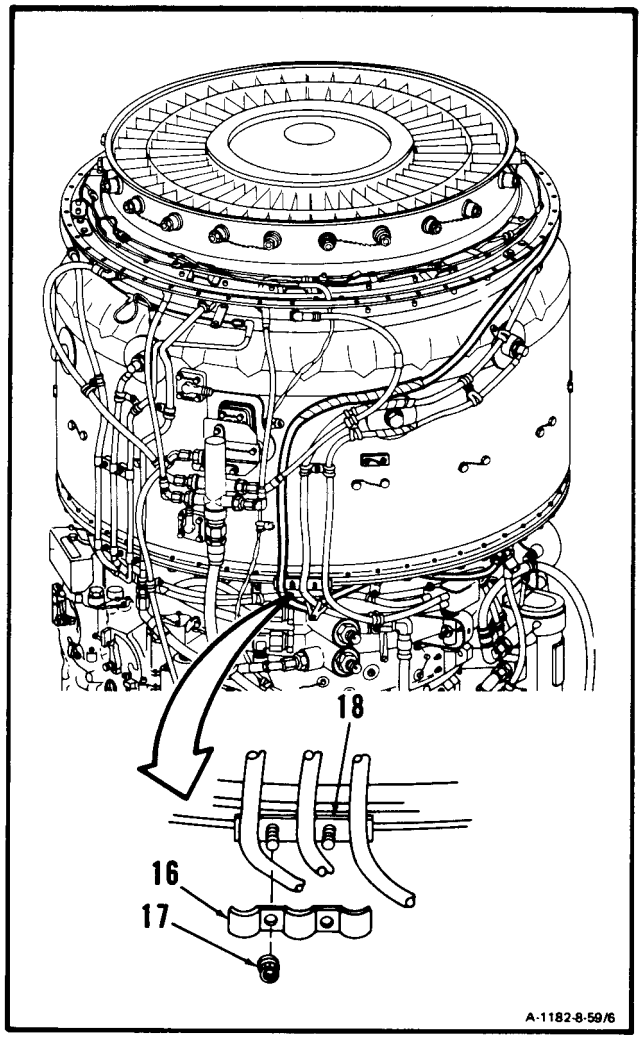
5. **Install clamp (13)** on hose assembly (1), and install screw (14) and nut (15).



GO TO NEXT PAGE

8-59 INSTALL HOSE ASSEMBLY (PRESSURE CONNECTOR TO NO. 4 AND 5 BEARING FILTER) (Continued) 8-59

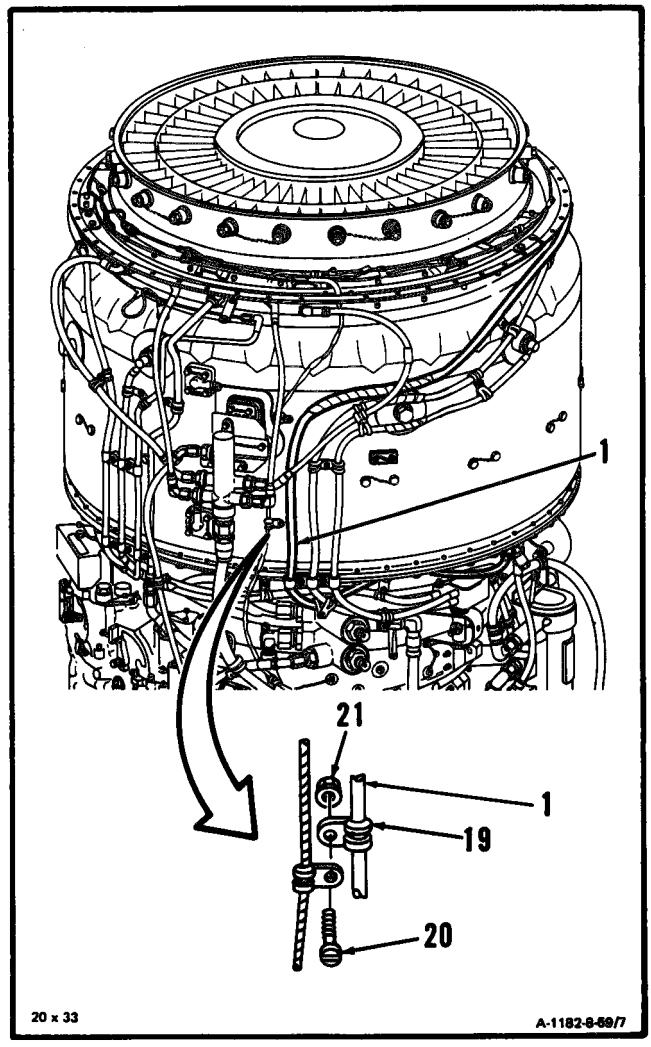
6. **Install strap (16)** and two nuts (17) on bracket (18).



GO TO NEXT PAGE

8-59 INSTALL HOSE ASSEMBLY (PRESSURE CONNECTOR TO NO. 4 AND 5 BEARING FILTER) (Continued)

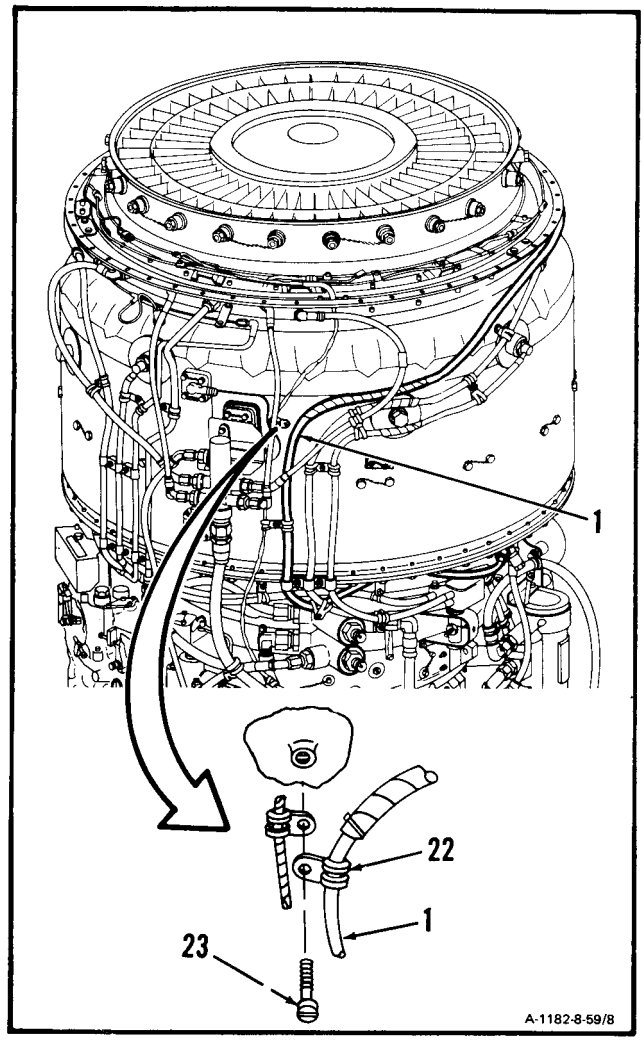
7. **Install clamp (19)** on hose assembly (1), and install screw (20) and nut (21).



GO TO NEXT PAGE

8-59 INSTALL HOSE ASSEMBLY (PRESSURE CONNECTOR TO NO. 4 AND 5 BEARING FILTER) (Continued)

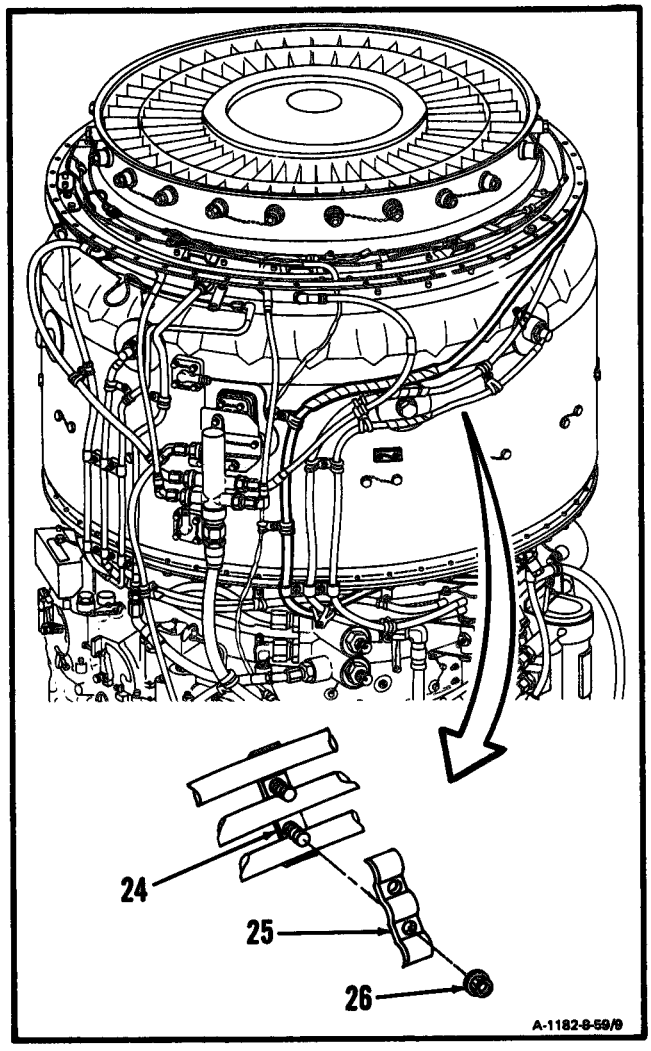
8. **Install clamp (22)** on hose assembly (1), and install screw (23). Lockwire screw. Use lockwire (E29).



GO TO NEXT PAGE

8-59 INSTALL HOSE ASSEMBLY (PRESSURE CONNECTOR TO NO. 4 AND 5 BEARING FILTER) (Continued)

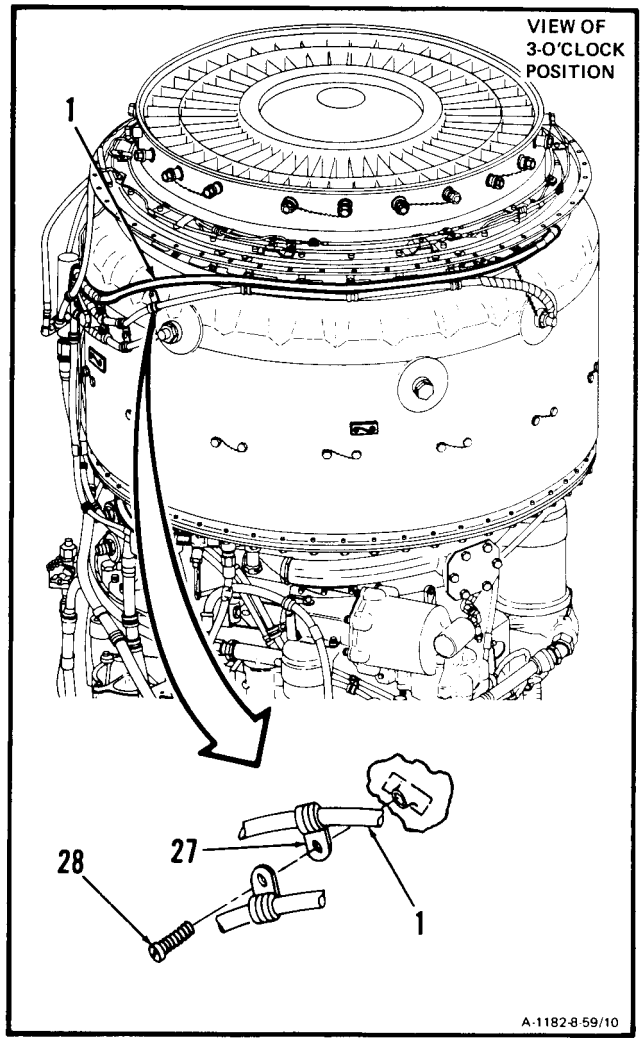
9. **Install clamps (24 and 25)** and two nuts (26).



GO TO NEXT PAGE

8-59 INSTALL HOSE ASSEMBLY (PRESSURE CONNECTOR TO NO. 4 AND 5 BEARING FILTER) (Continued)

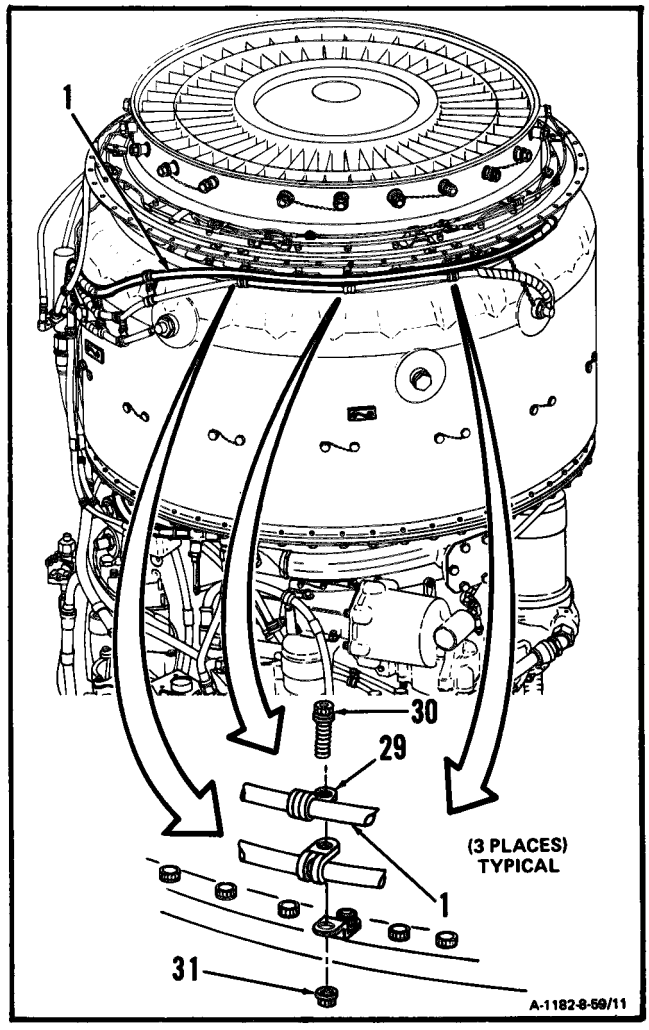
10. **Install clamp (27)** on hose assembly (1) and install screw (28). Lockwire screw. Use lockwire (E29).



GO TO NEXT PAGE

8-59 INSTALL HOSE ASSEMBLY (PRESSURE CONNECTOR TO NO. 4 AND 5 BEARING FILTER) (Continued)

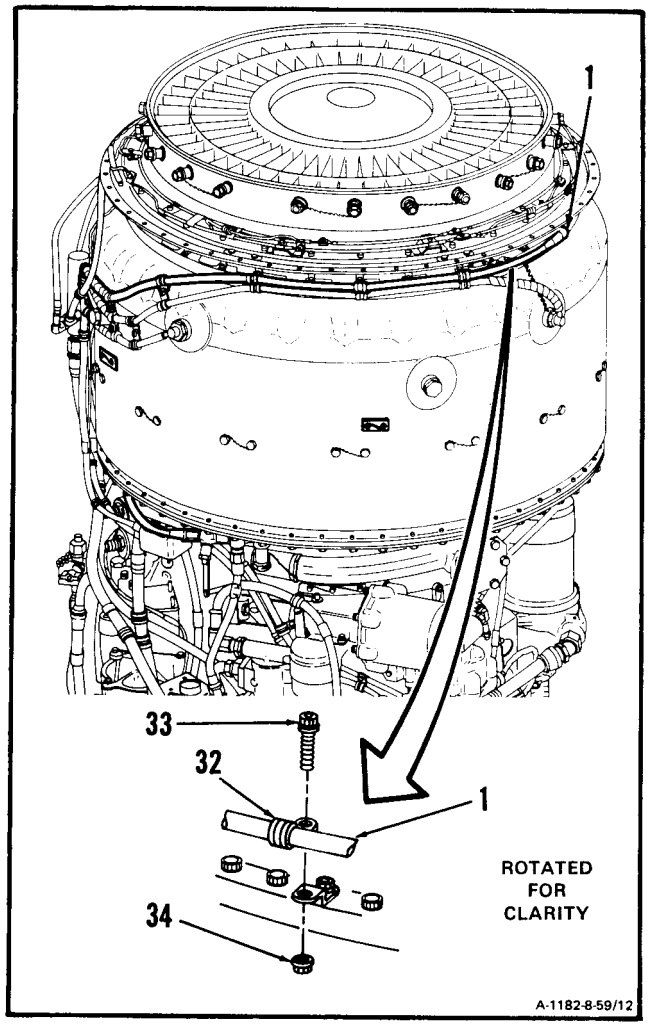
11. **Install three clamps (29)** on hose assembly (1), and install three bolts (30) and nuts (31).



GO TO NEXT PAGE

8-59 INSTALL HOSE ASSEMBLY (PRESSURE CONNECTOR TO NO. 4 AND 5 BEARING FILTER) (Continued) 8-59

12. **Install clamp** (32) on hose assembly (1), and install bolt (33) and nut (34).



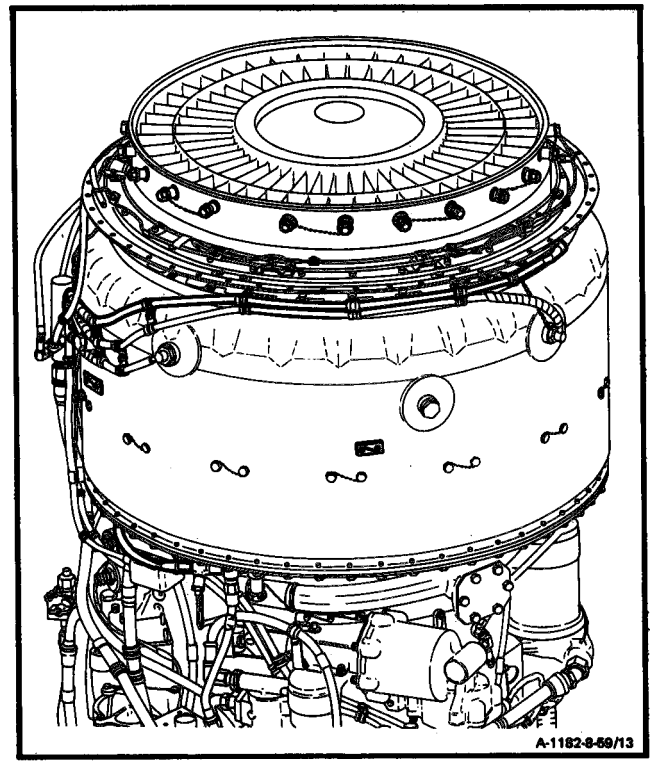
INSPECT

GO TO NEXT PAGE

8-59 INSTALL HOSE ASSEMBLY (PRESURE CONNECTOR To NO. 4 AND 5 BEARING FILTER) (Continued)

FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-60 REMOVE HOSE ASSEMBLY (INLET HOUSING TO OIL SCAVENGE TEE) 8-60

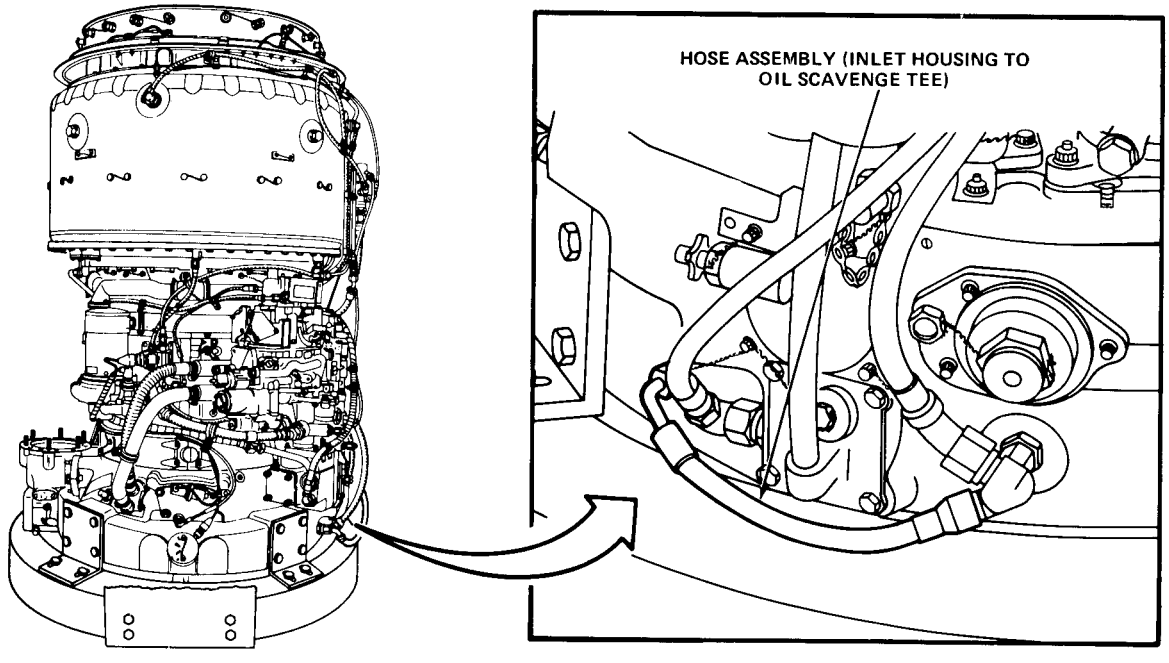
INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Container, 1 -Quart

Materials:
Wiping Rag (E58)

Personnel Required:
68B10 Aircraft Powerplant Repairer



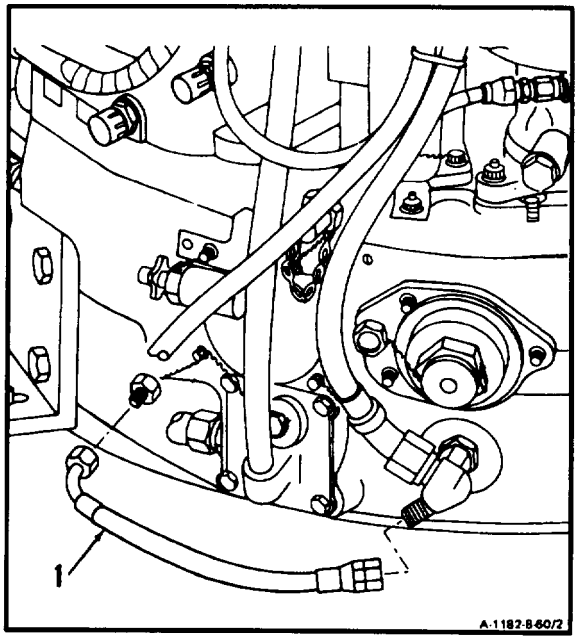
A-1182-8-60/1

GO TO NEXT PAGE

WARNING

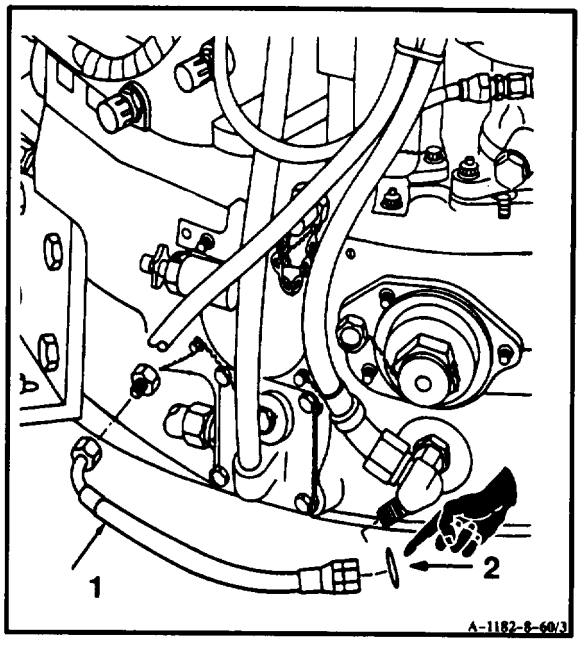
Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin, and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.

1. Disconnect and remove hose assembly (1) and gasket (2).



FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-61 INSTALL HOSE ASSEMBLY (INLET HOUSING TO OIL SCAVENGE TEE) 8-61

INITIAL SETUP

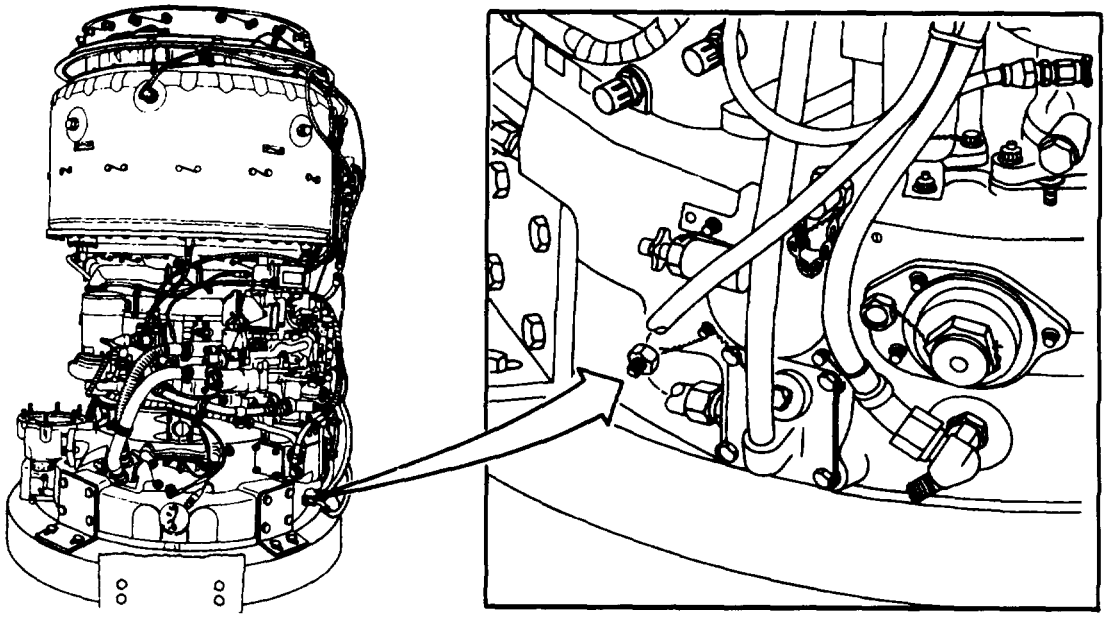
Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
None

Parts:
Gasket

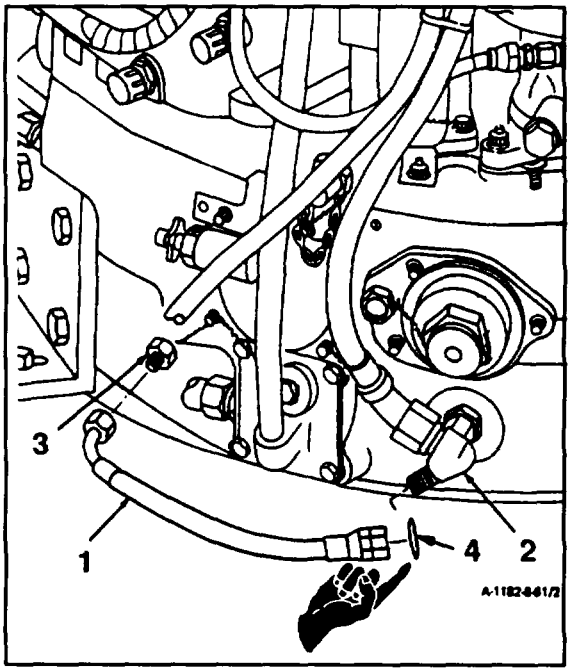
Personnel Required:
68B 10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector



A-1182-8-61/1

GO TO NEXT PAGE

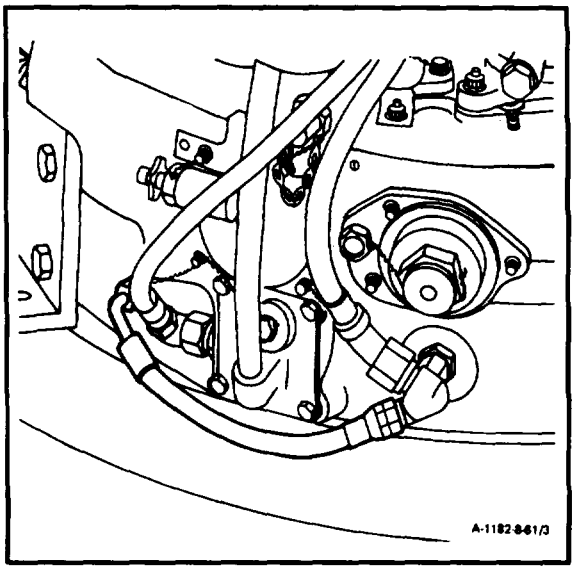
1. Install gasket (4) on oil scavenge tee (2) and install hose assembly 91) on oil scavenge tee (2) and fluid pasage bolt (3).



INSPECT

FOLLOW-ON MAINTENANCE:

NONE



END OF TASK

8-62 REMOVE HOSE ASSEMBLY (INLET HOUSING TO OIL DRAIN COCK) 8-62

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Container, 1 Quart

Materials:
Wiping Rag (E58)

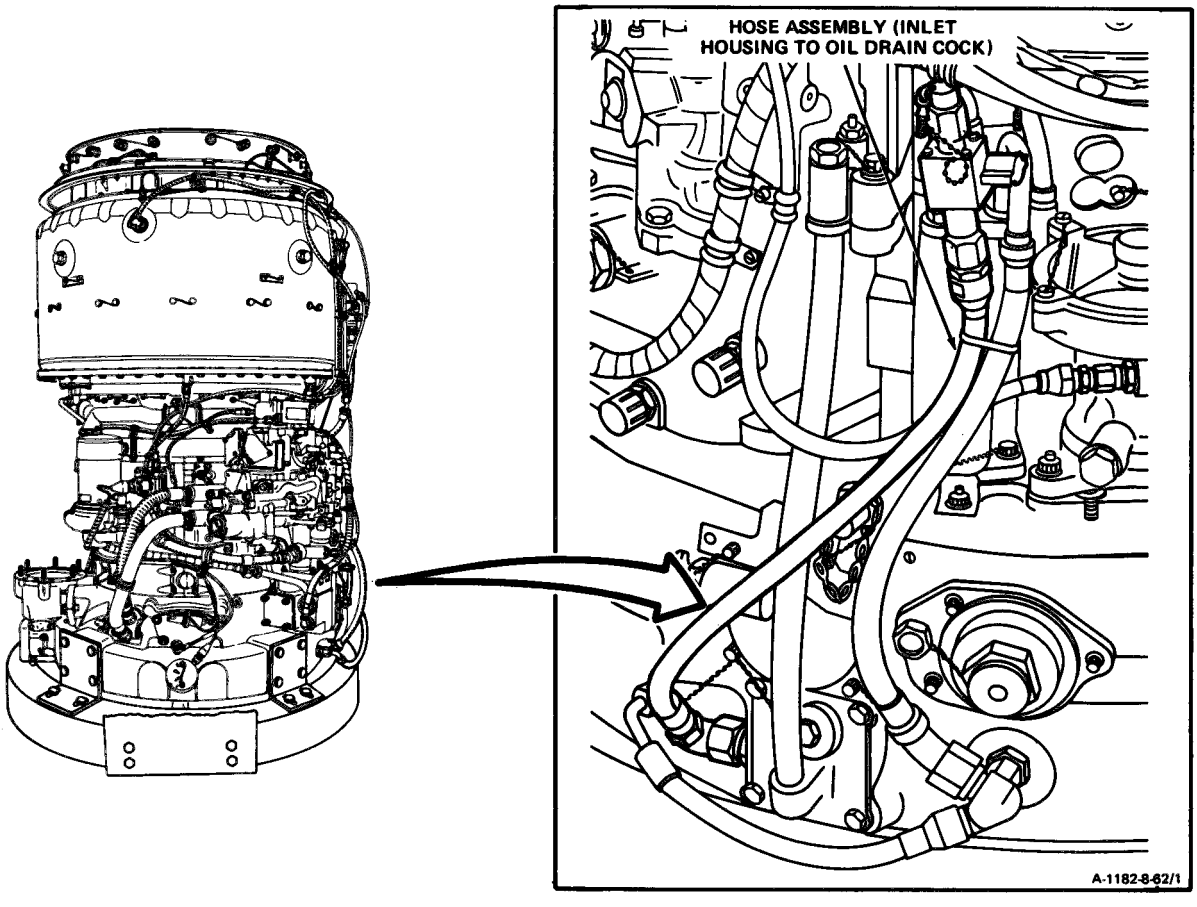
Personnel Required:
68B10 Aircraft Powerplant Repairer

Equipment Condition:
Engine Oil System Drained (Task 1-75)

General Safety Instructions:

WARNING

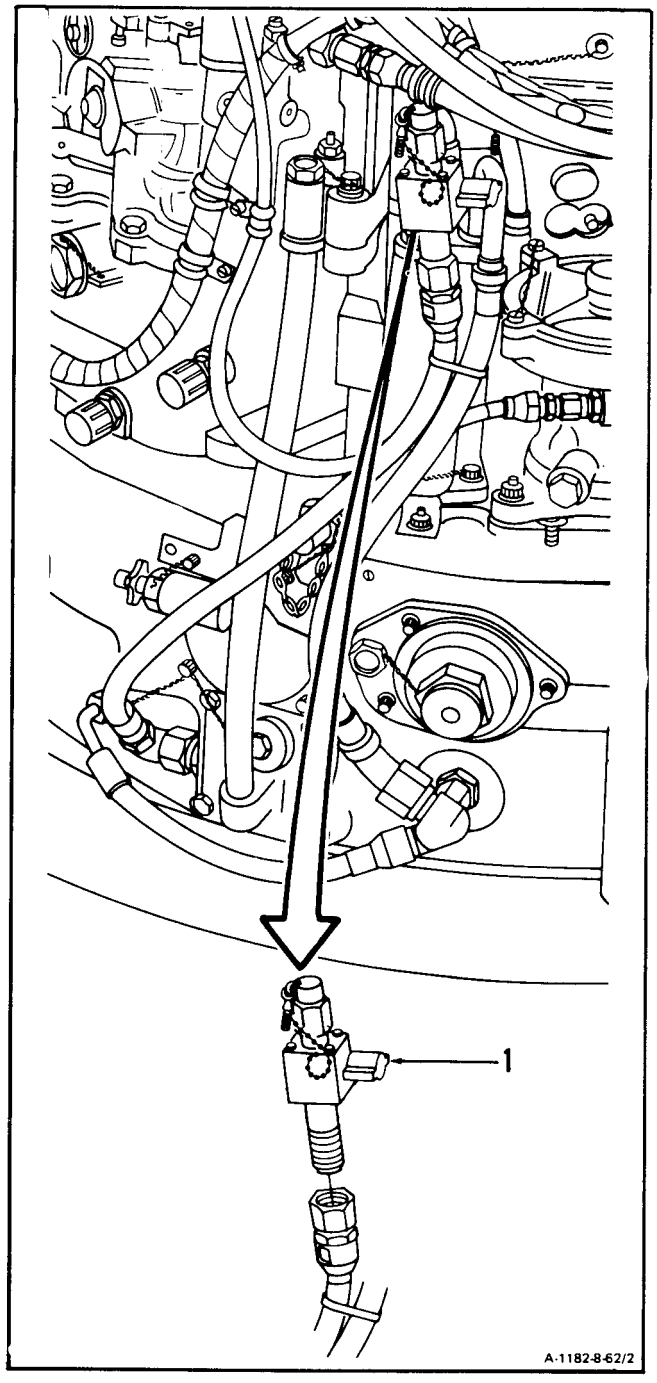
Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin, and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.



GO TO NEXT PAGE

8-62 REMOVE HOSE ASSEMBLY (INLET HOUSING TO OIL DRAIN COCK) (Continued) 8-62

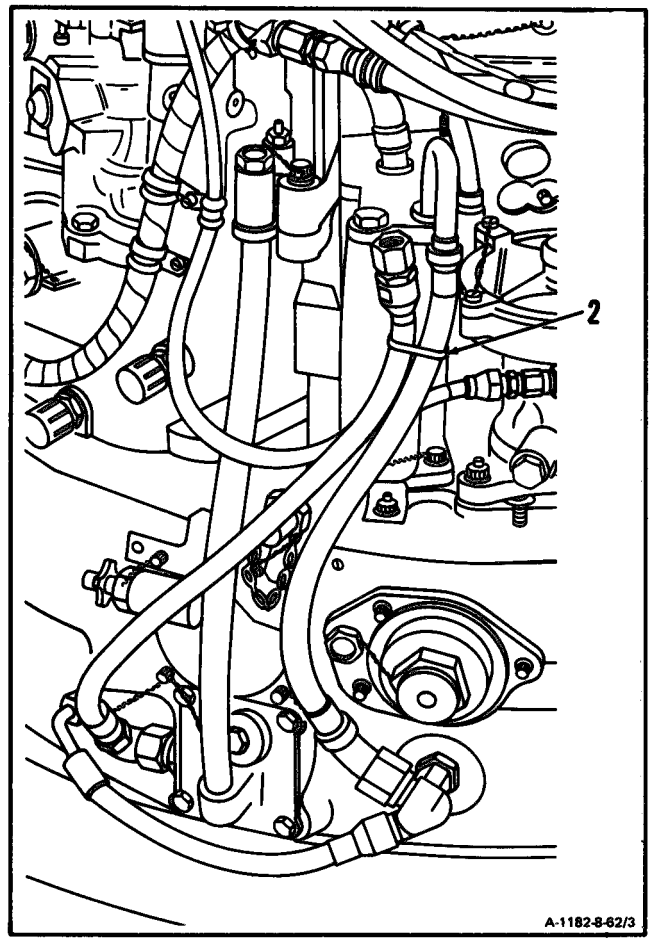
1. **Remove oil drain cock (1).**



GO TO NEXT PAGE

8-62 REMOVE HOSE ASSEMBLY (INLET HOUSING TO OIL DRAIN COCK) (Continued) 8-62

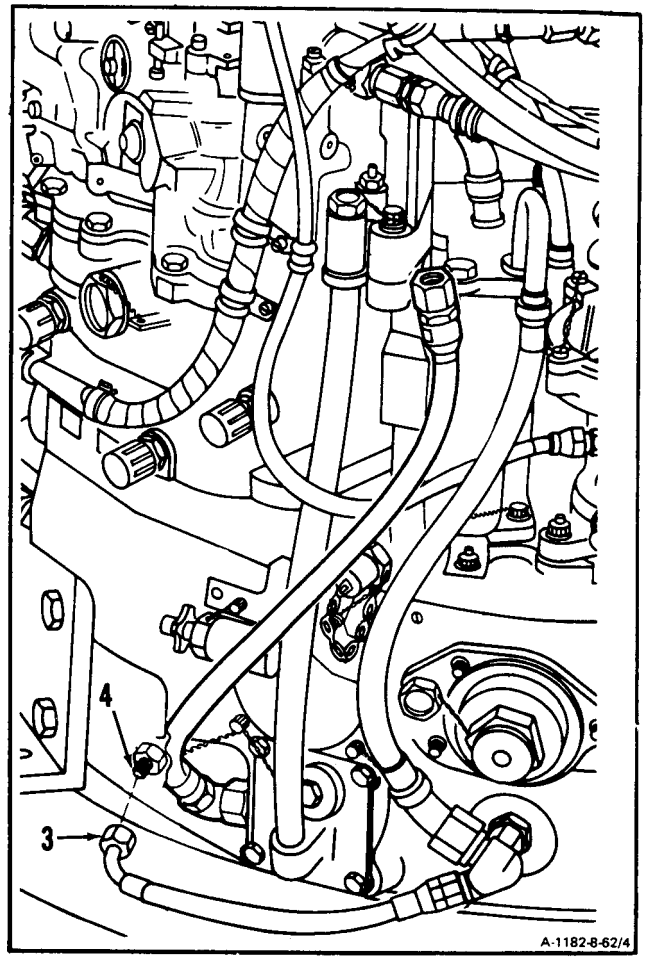
2. Remove cable tie (2).



GO TO NEXT PAGE

8-62 REMOVE HOSE ASSEMBLY (INLET HOUSING TO OIL DRAIN COCK) (Continued) 8-62

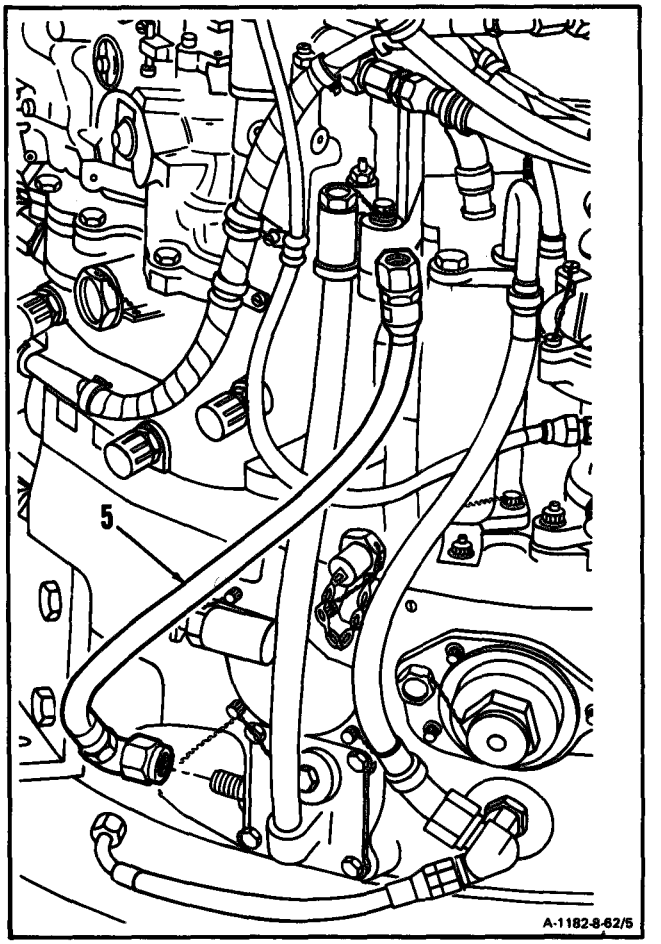
3. Disconnect hose assembly (3) from fluid passage bolt (4).



GO TO NEXT PAGE

8-62 REMOVE HOSE ASSEMBLY (INLET HOUSING TO OIL DRAIN COCK) (Continued) 8-62

4. Disconnect and **remove hose assembly (5).**

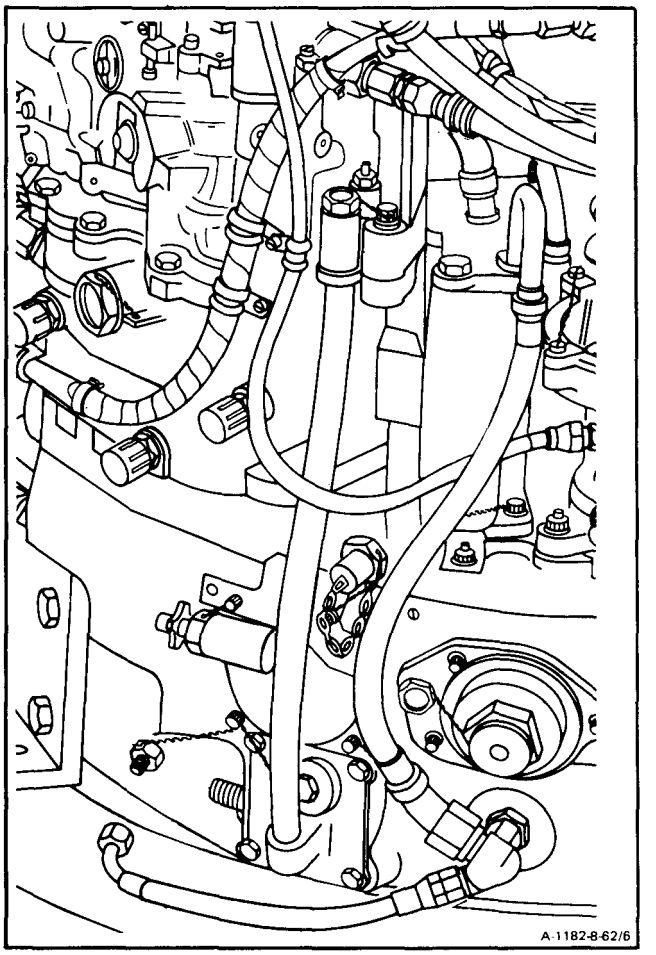


GO TO NEXT PAGE

8-62 REMOVE HOSE ASSEMBLY (INLET HOUSING TO OIL DRAIN COCK) (Continued) 8-62

FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-63 INSTALL HOSE ASSEMBLY (INLET HOUSING TO OIL DRAIN COCK)

INITIAL SETUP

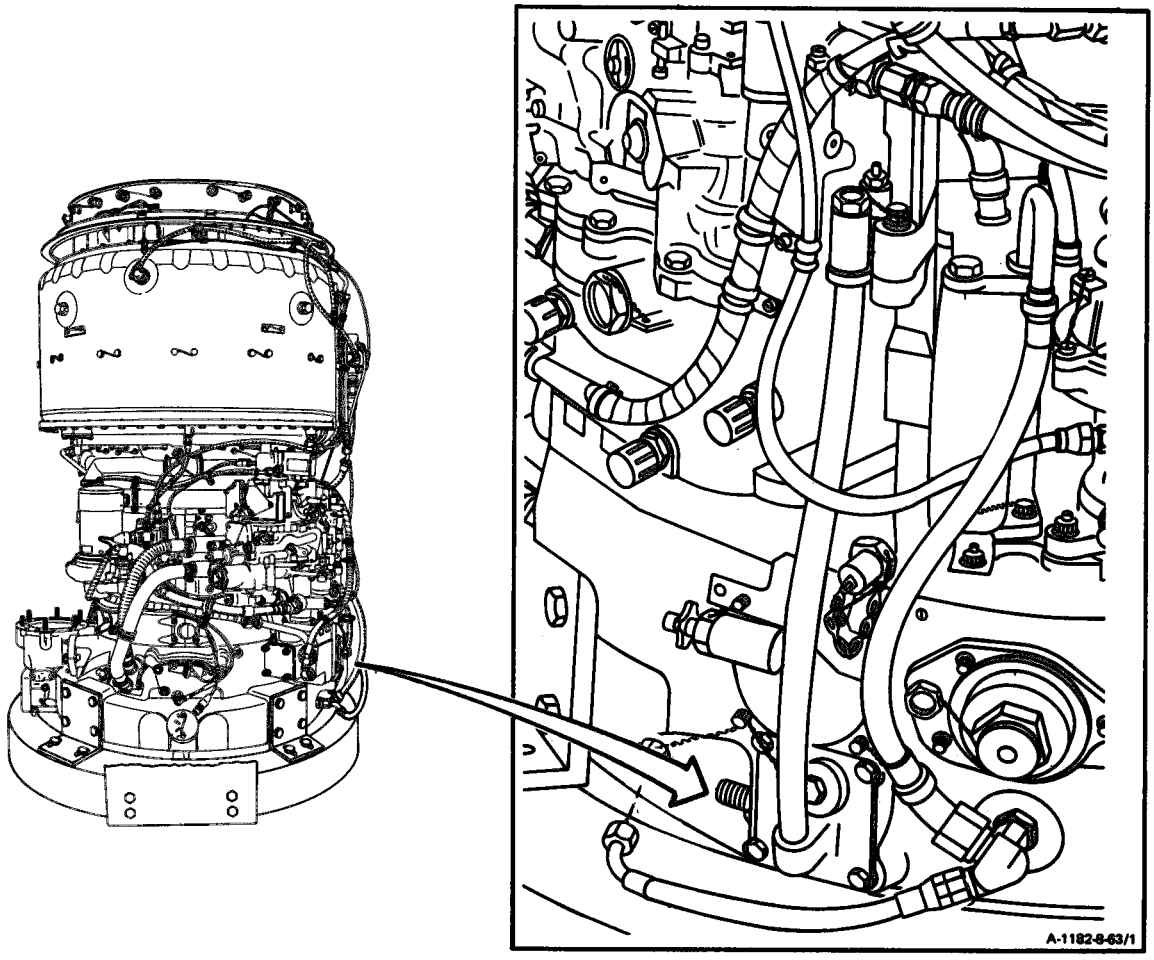
Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
None

Parts:
Cable Tie

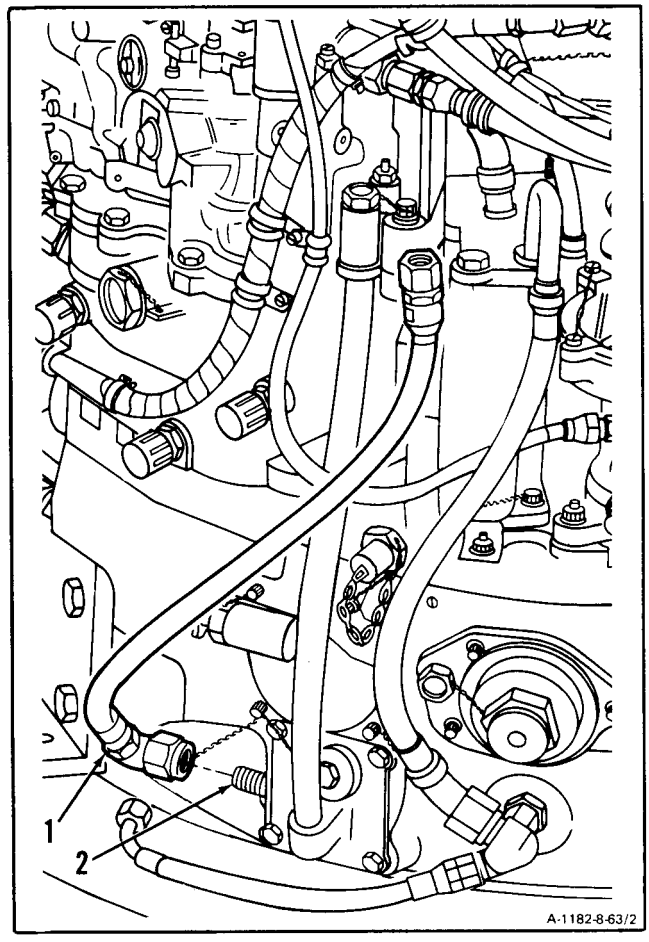
Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector



GO TO NEXT PAGE

8-63 INSTALL HOSE ASSEMBLY (INLET HOUSING TO OIL DRAIN COCK) (Continued) 8-63

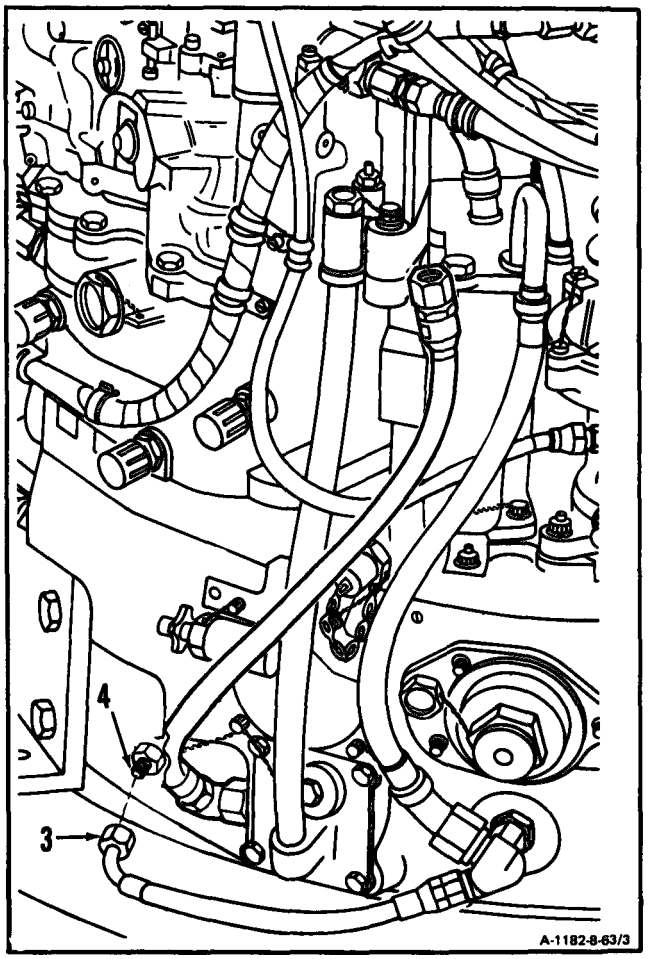
1. **Install hose assembly (1)** on nipple (2).



GO TO NEXT PAGE

8-63 INSTALL HOSE ASSEMBLY (INLET HOUSING TO OIL DRAIN COCK) (Continued) 8-63

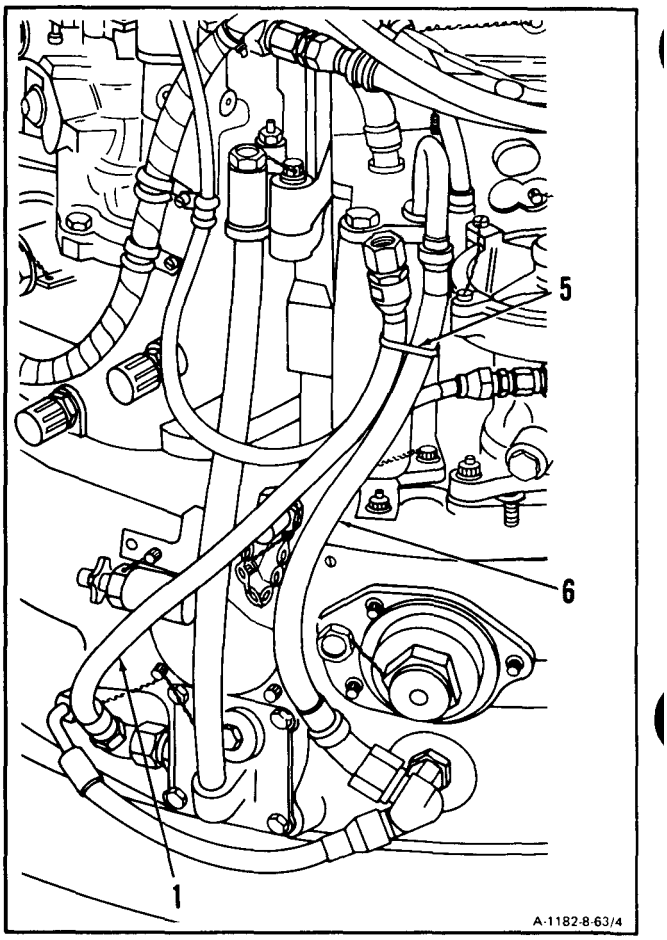
2. Connect hose assembly (3) to fluid passage bolt (4).



GO TO NEXT PAGE

8-63 INSTALL HOSE ASSEMBLY (INLET HOUSING TO OIL DRAIN COCK) (Continued) 8-63

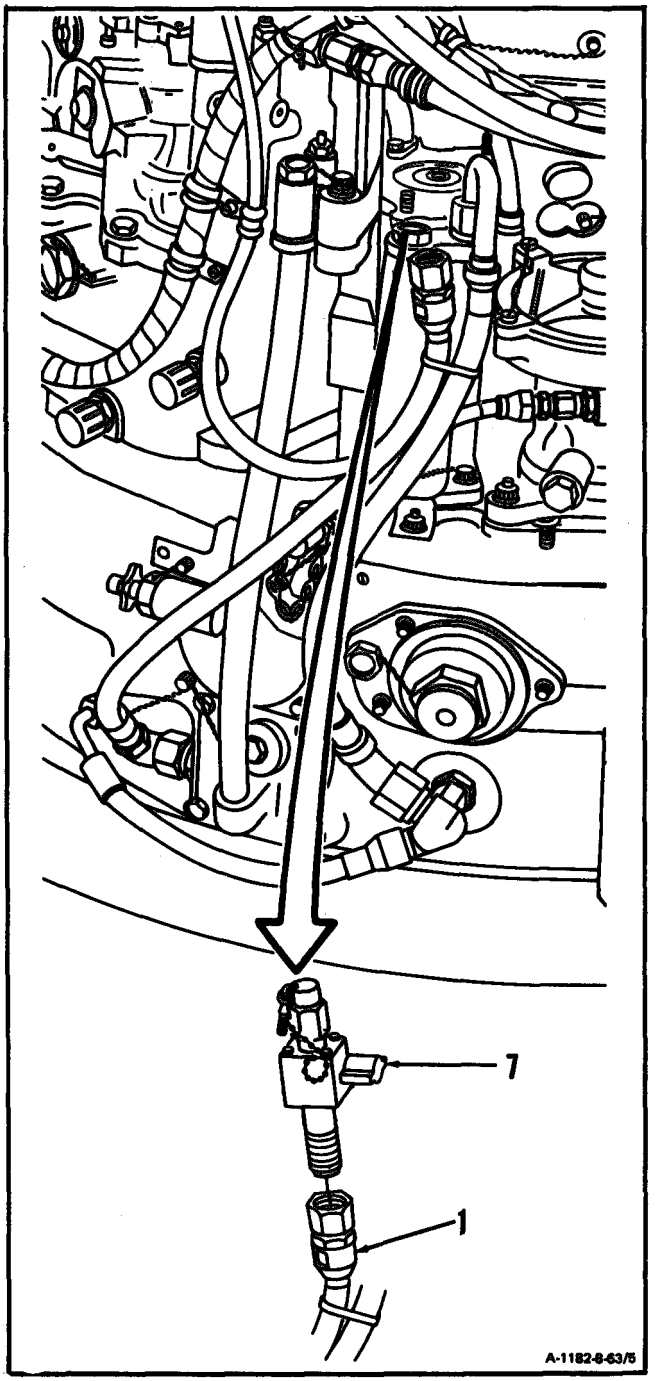
3. Install cable tie (5) on hose assembly (1) and hose assembly (6).



GO TO NEXT PAGE

8-63 INSTALL HOSE ASSEMBLY (INLET HOUSING TO OIL DRAIN COCK) (Continued) 8-63

4. **Install oil drain cock (7)** on hose assembly (1).



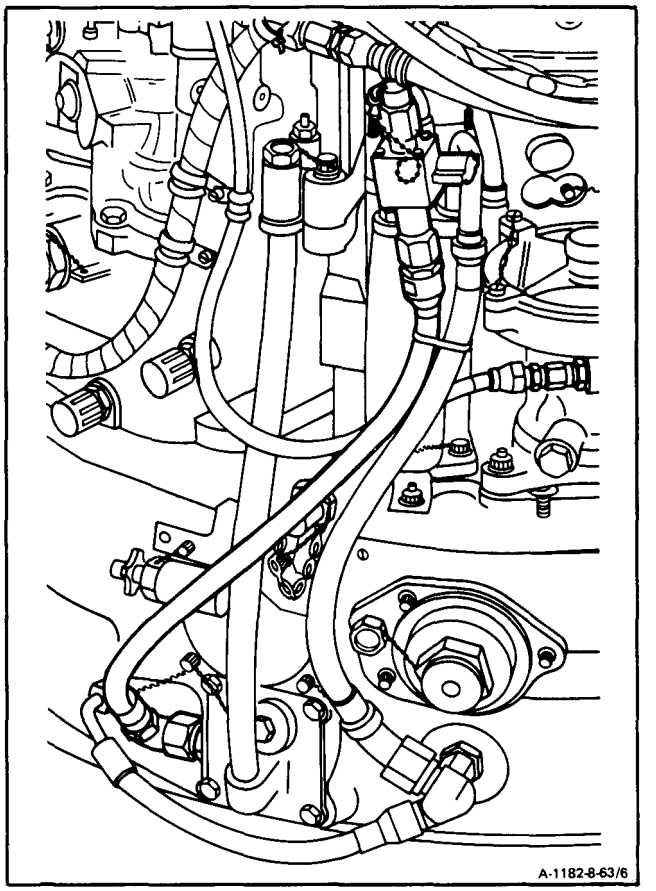
INSPECT

GO TO NEXT PAGE

8-63 INSTALL HOSE ASSEMBLY (INLET HOUSING TO OIL DRAIN COCK) (Continued) 8-63

FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-64 REMOVE HOSE ASSEMBLY (OIL FILLER TO STARTER DRIVE)

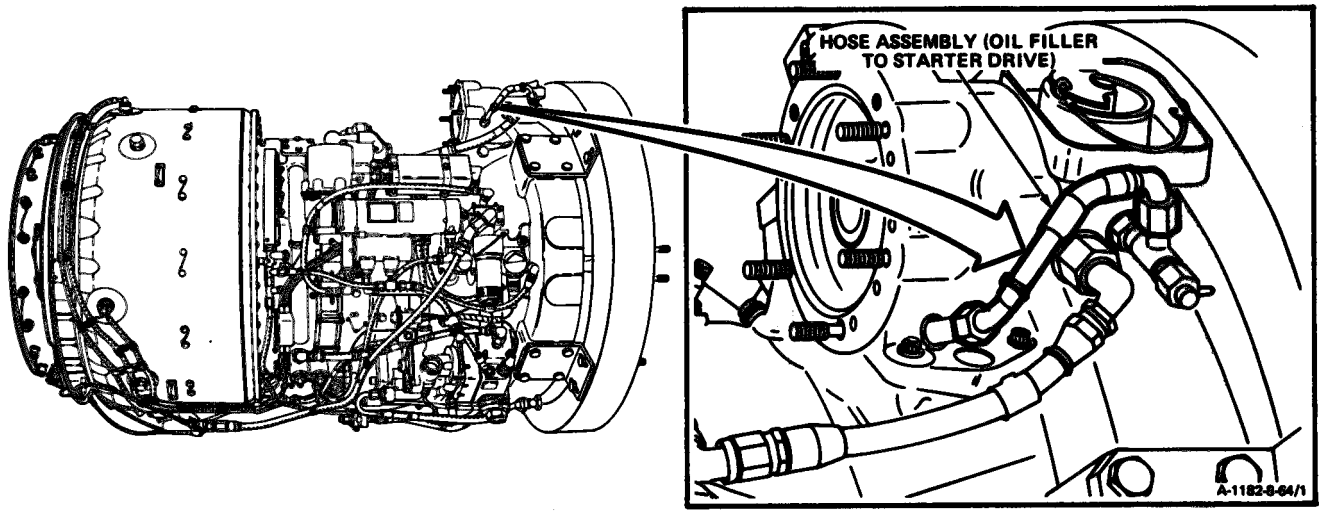
INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Container, 1-Quart

Materials:
Wiping Rag (E58)

Personnel Required:
68B10 Aircraft Powerplant Repairer



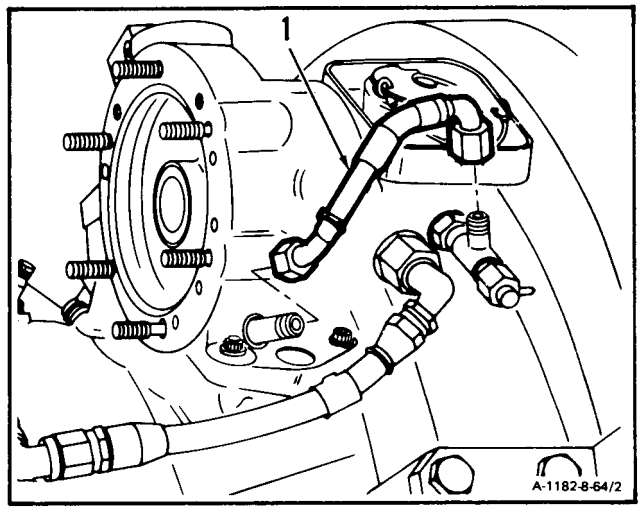
GO TO NEXT PAGE

8-64 REMOVE HOSE ASSEMBLY (OIL FILLER TO STARTER DRIVE) (Continued)

WARNING

Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin, Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin, and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.

1. Disconnect and **remove hose assembly (1).**

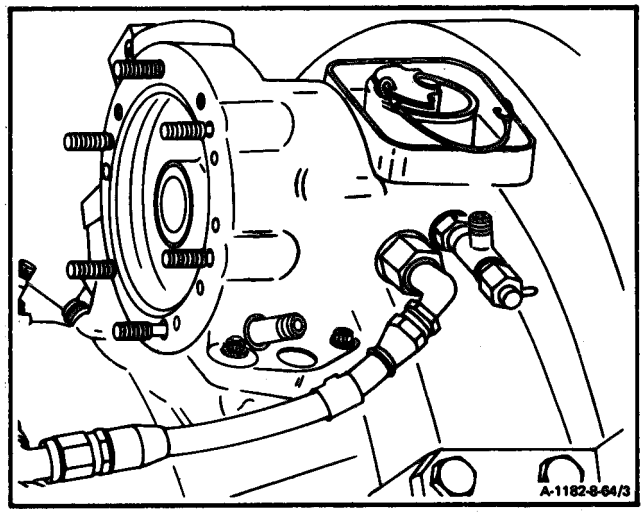


GO TO NEXT PAGE

8-64 REMOVE HOSE ASSEMBLY OIL FILLER TO STARTER DRIVE) (Continued) 8-64

FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-65 INSTALL HOSE ASSEMBLY (OIL FILLER TO STARTER DRIVE) 8-65

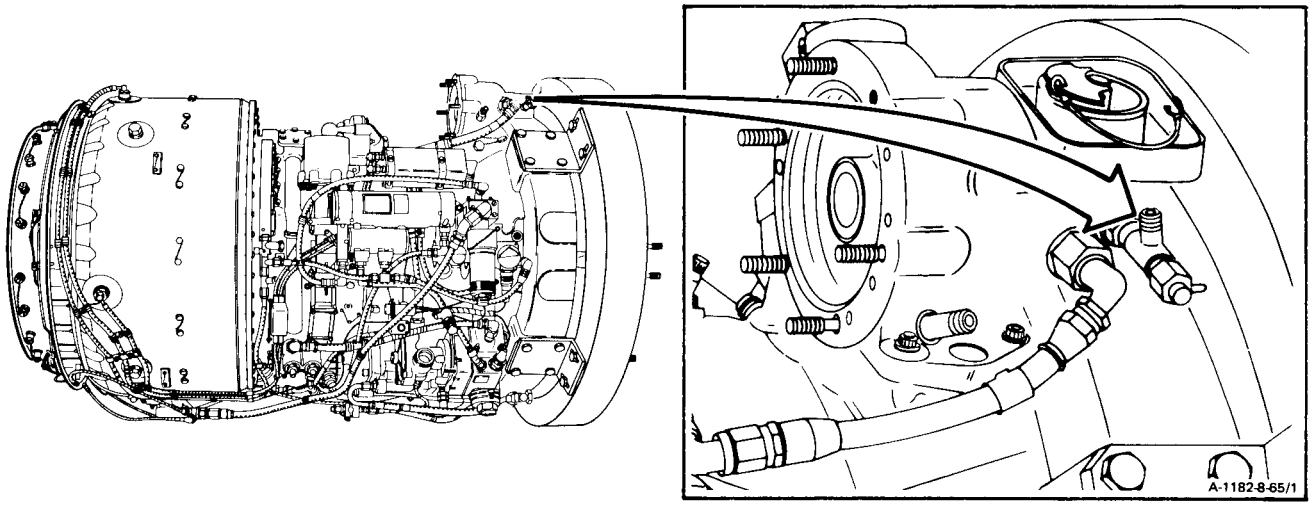
INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
None

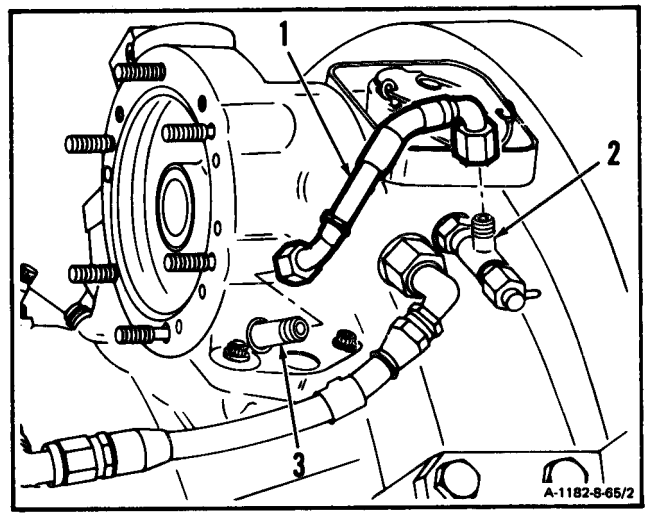
Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector



GO TO NEXT PAGE

8-65 INSTALL HOSE ASSEMBLY OIL FILLER TO STARTER DRIVE) (Continua)

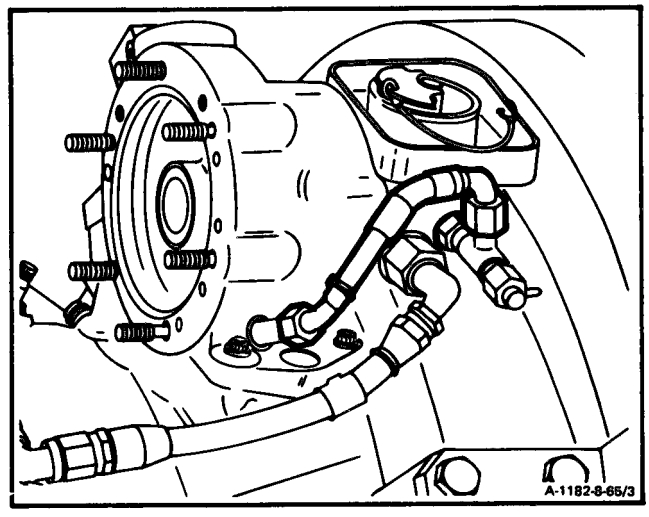
1. **Install hose assembly (1)** on tee (2) and fitting (3)



INSPECT

FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-66 REMOVE HOSE ASSEMBLY (STARTER DRIVE TO TUBE AND HOSE ASSEMBLY) 8-66

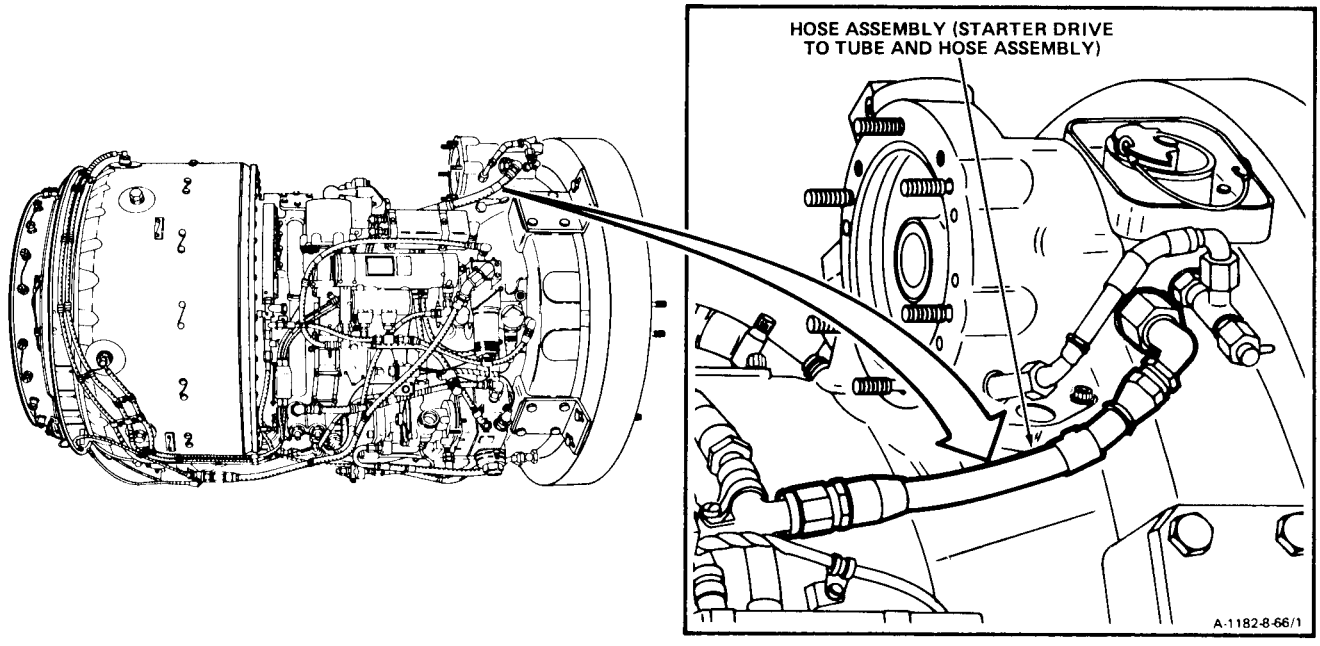
INITIAL SETUP

Applicable Configurations:
All

Tools:
Open-End Wrench, 1-Inch
Container, 1-Quart

Materials:
Wiping Rag (E58)

Personnel Required:
68B10 Aircraft Powerplant Repairer



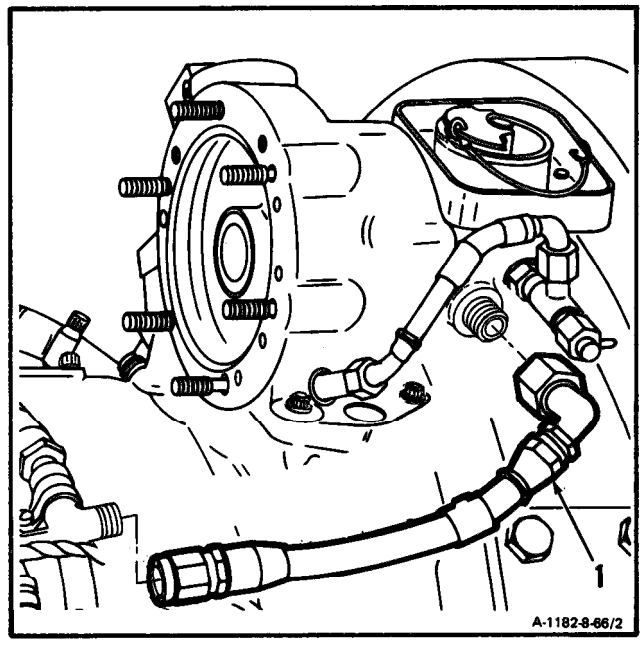
GO TO NEXT PAGE

8-66 REMOVE HOSE ASSEMBLY (STARTER DRIVE TO TUBE AND HOSE ASSEMBLY) (Continued) 8-66

WARNING

Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin, and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.

1. Disconnect and **remove hose assembly (1),** using open-end wrench.

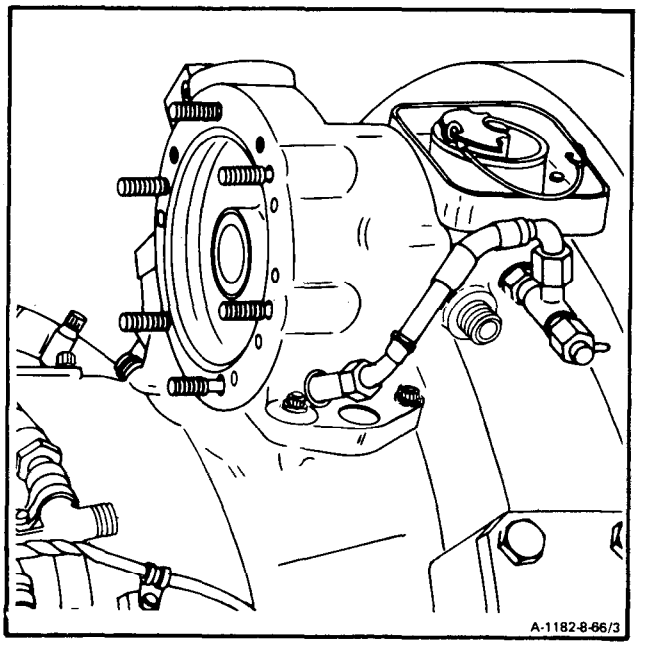


GO TO NEXT PAGE

8-66 REMOVE HOSE ASSEMBLY (STARTER DRIVE TO TUBE AND HOSE ASSEMBLY) (Continued)

FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-67 INSTALL HOSE ASSEMBLY (STARTER DRIVE TO TUBE AND HOSE ASSEMBLY 8-67

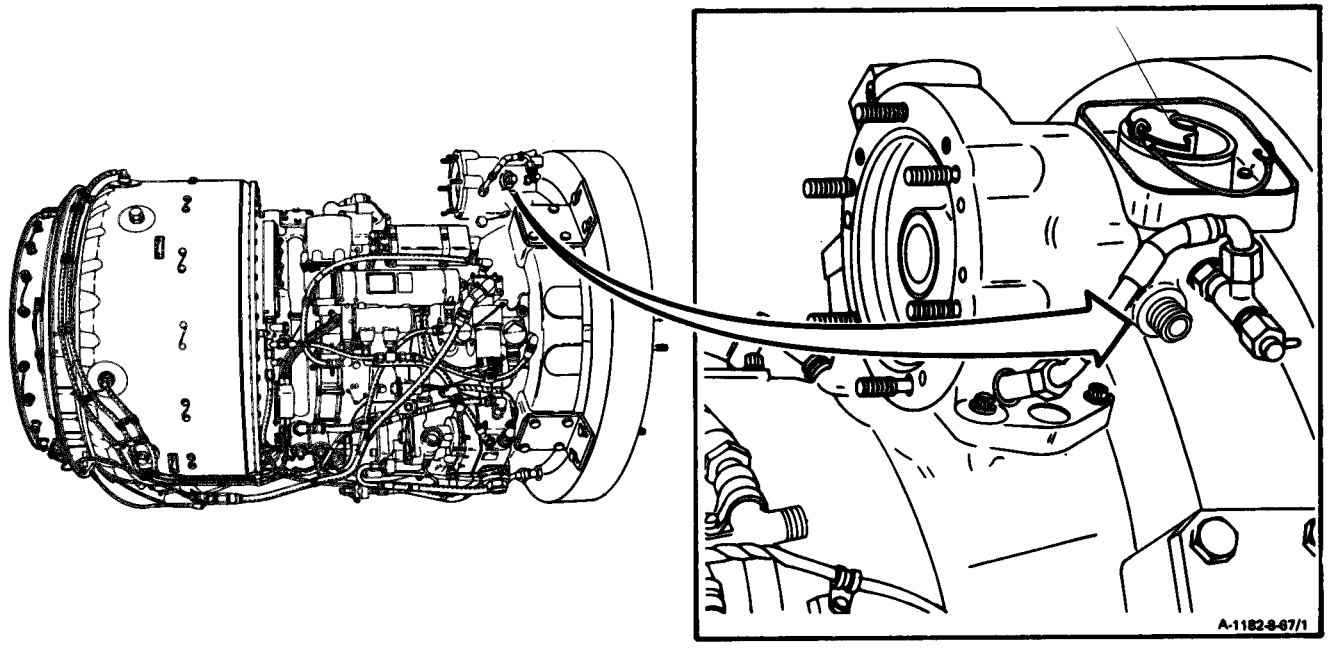
INITIAL SETUP

Applicable Configurations:
All

Tools:
Technical Inspection Tool Kit,
NSN 5180-00-323-5114
Open-End Wrench, 1-inch

Materials:
None

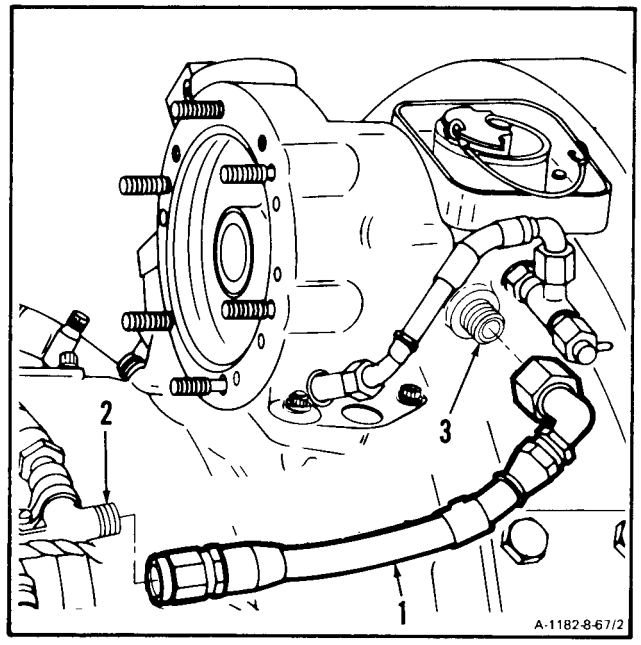
Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector



GO TO NEXT PAGE

8-67 INSTALL HOSE ASSEMBLY (STARTER DRIVE TO TUBE AND HOSE ASSEMBLY) (Continued) 8-67

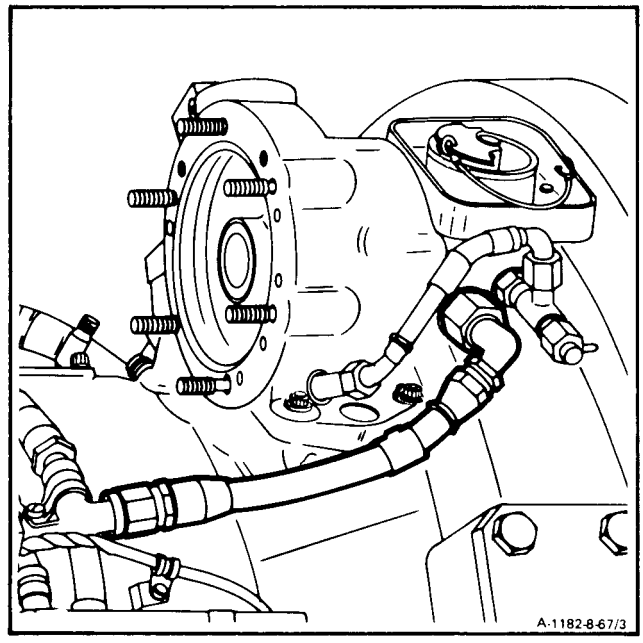
1. **Install hose assembly (1)** on tube and hose assembly (2) and reducer (3). Use open-end wrench.



INSPECT

FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-68 REMOVE TUBE AND HOSE ASSEMBLY (ACCESSORY GEARBOX COLLECTOR TO TUBE ASSEMBLY) 8-68

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Open-End Wrench, 1-Inch

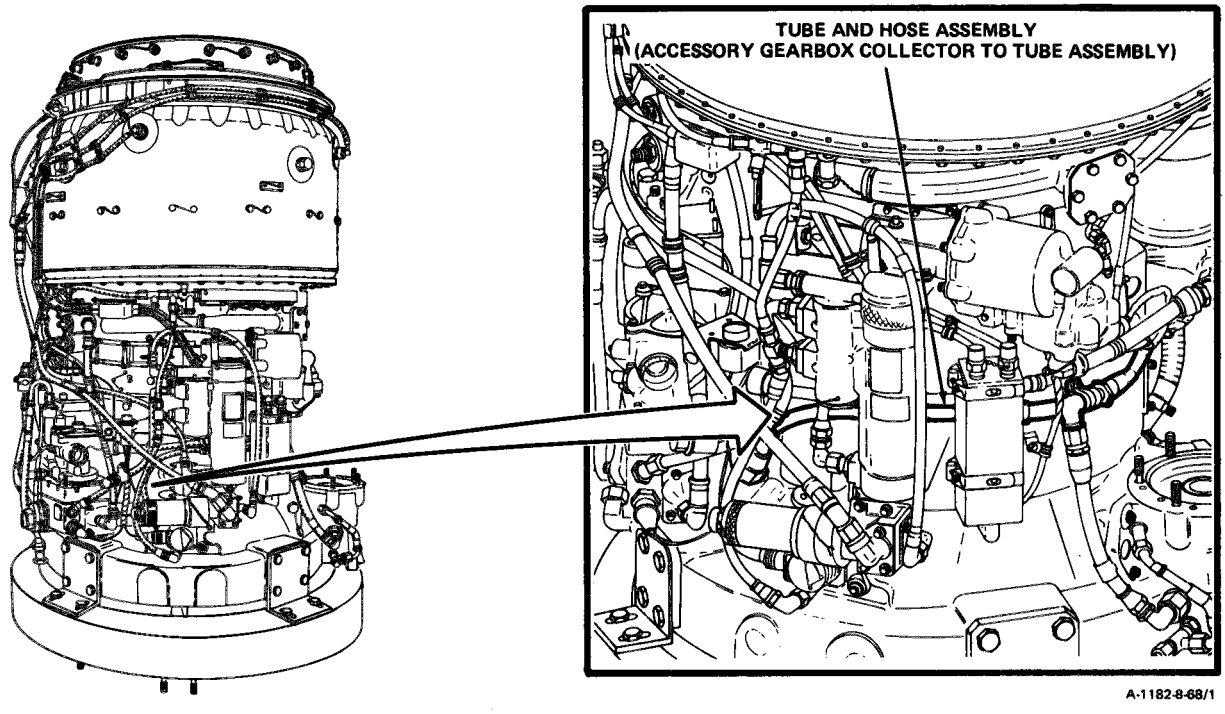
Materials:
Wiping Rag (E58)

Personnel Required:
68B10 Aircraft Powerplant Repairer

General Safety Instructions:

WARNING

Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.

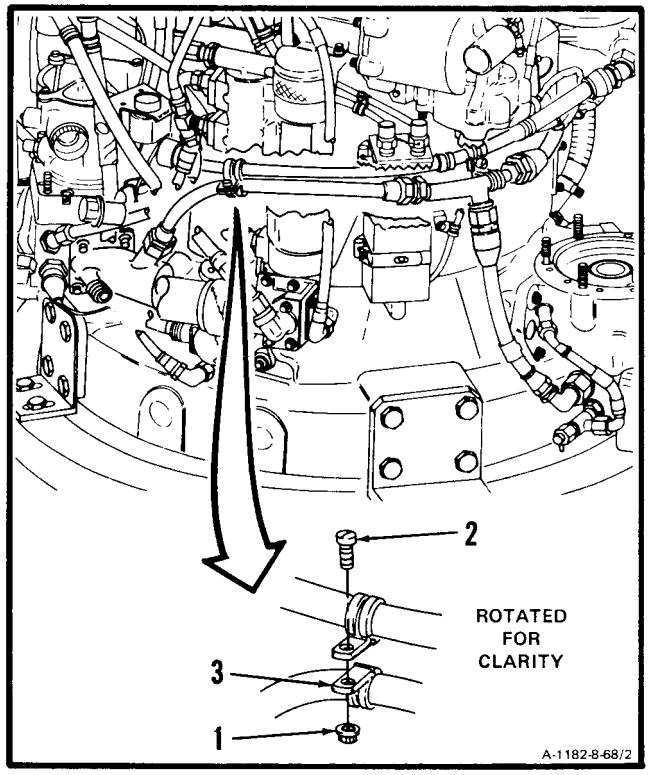


A-1182-8-68/1

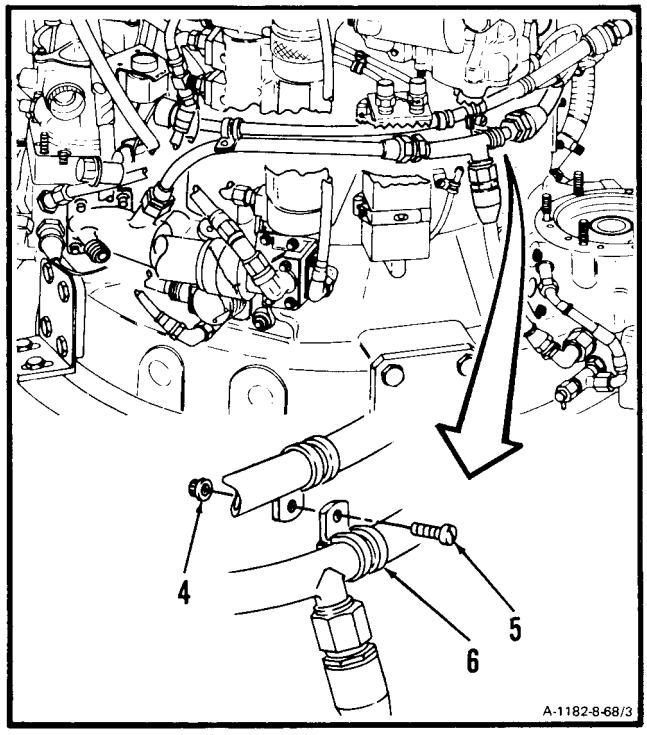
GO TO NEXT PAGE

8-68 REMOVE TUBE AND HOSE ASSEMBLY (ACCESSORY GEARBOX COLLECTOR TO TUBE ASSEMBLY) (Continued)

1. **Remove** nut (1), screw (2), **and clamp (3).**



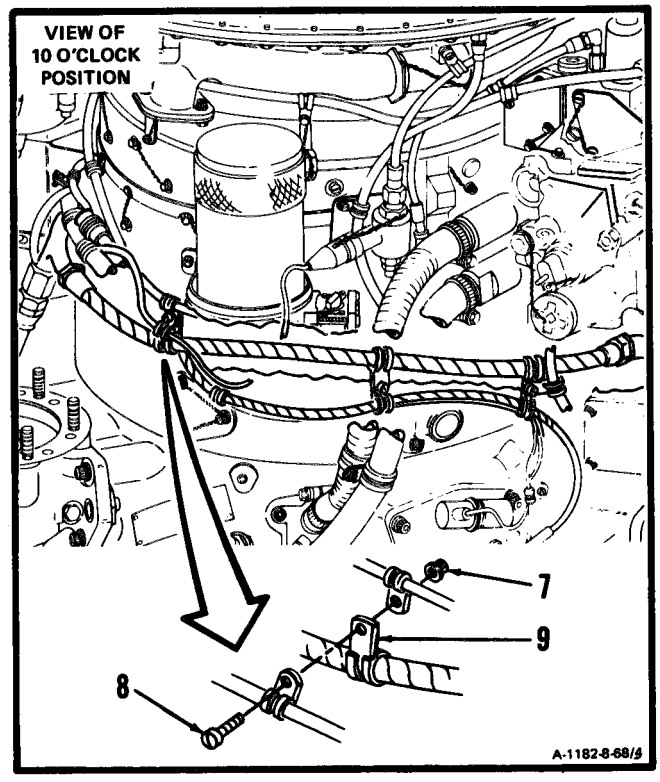
2. **Remove** nut (4), screw (5), **and clamp (6).**



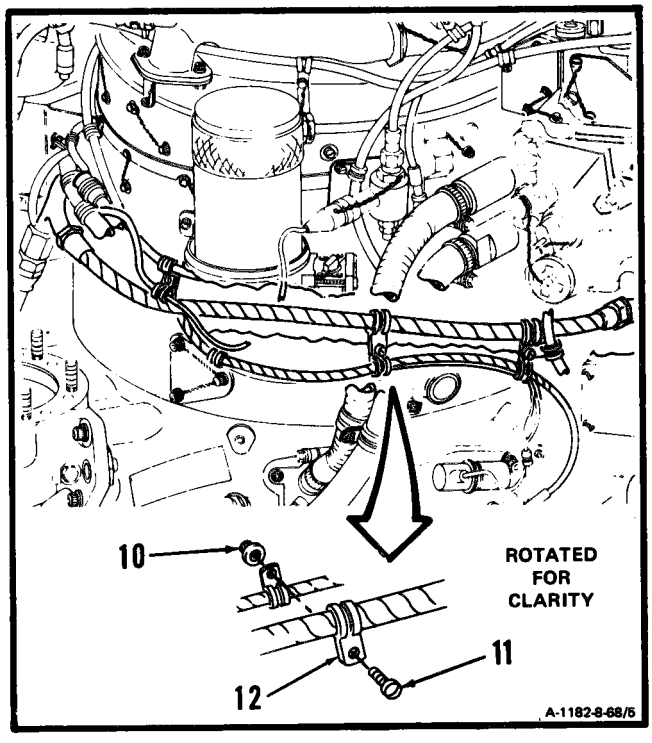
GO TO NEXT PAGE

8-68 REMOVE TUBE AND HOSE ASSEMBLY (ACCESSORY GEARBOX COLLECTOR TO TUBE ASSEMBLY) (Continued)

3. **Remove** nut (7), screw (8), and **clamp (9).**



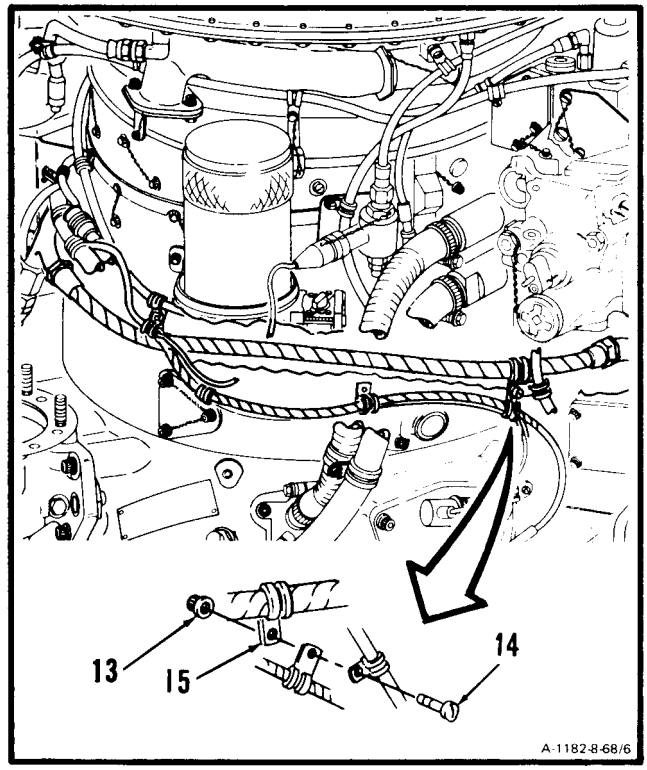
4. **Remove** nut (10), screw (11), and **clamp (12).**



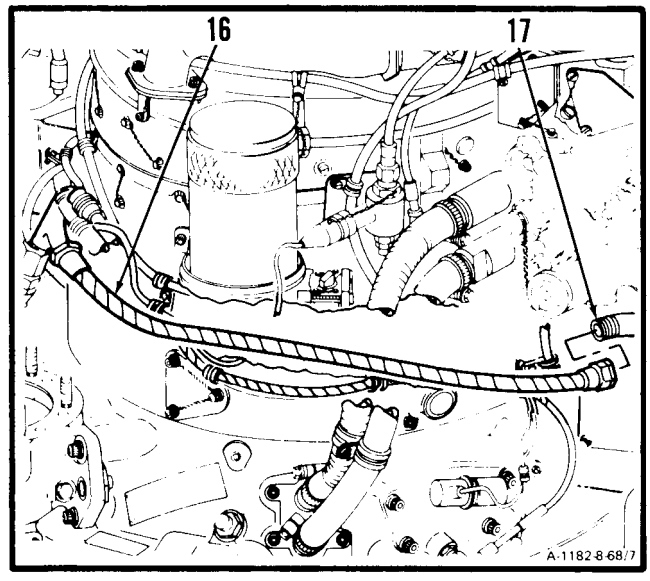
GO TO NEXT PAGE

8-68 REMOVE TUBE AND HOSE ASSEMBLY (ACCESSORY GEARBOX COLLECTOR TO TUBE ASSEMBLY) (Continued) 8-68

5. Remove nut (13), screw (14), and **clamp (15).**



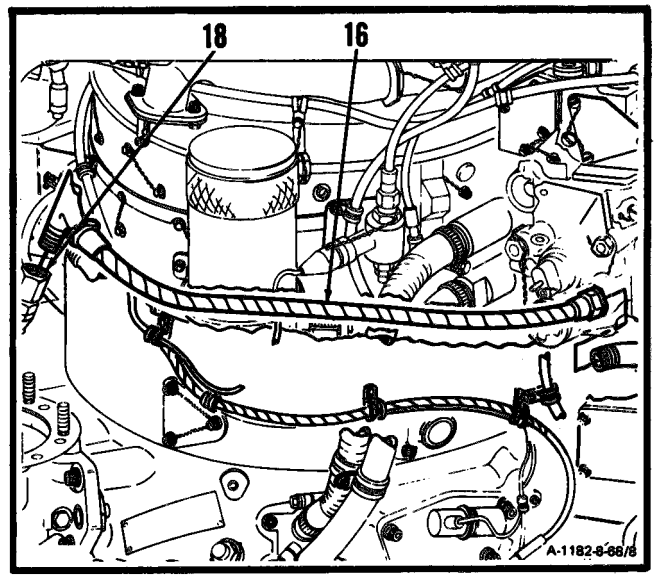
6. **Disconnect tube and hose assembly (16)** from tube assembly (17). Use open-end wrench.



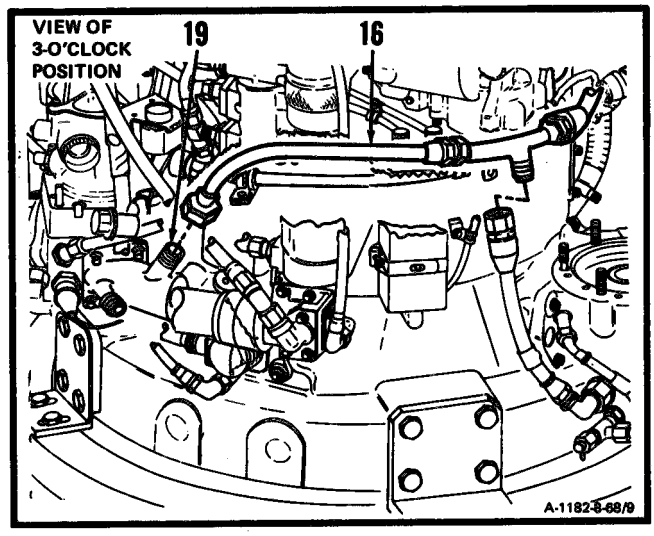
GO TO NEXT PAGE

8-68 REMOVE TUBE AND HOSE ASSEMBLY (ACCESSORY GEARBOX COLLECTOR TO TUBE ASSEMBLY) (Continued)

7. **Disconnect hose assembly (18)** from tube and hose assembly (16).



8. Disconnect tube and hose assembly (16) from nipple (19). **Remove tube and hose assembly (16).**

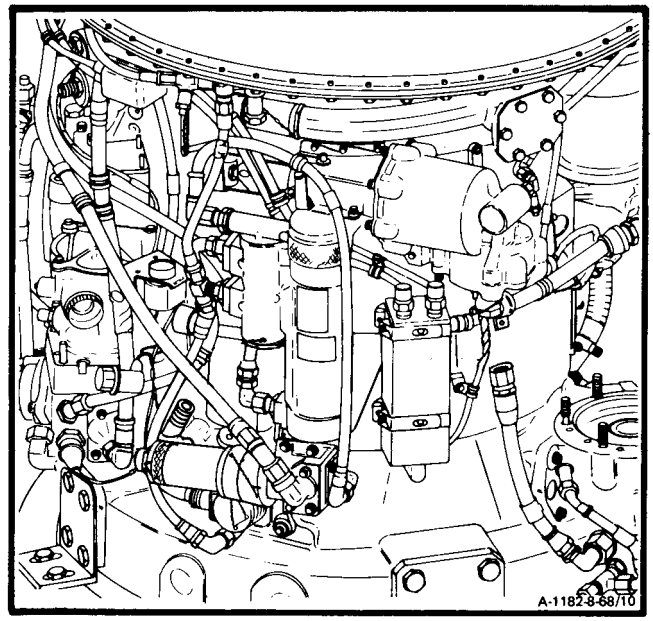


GO TO NEXT PAGE

8-68 REMOVE TUBE AND HOSE ASSEMBLY (ACCESSORY GEARBOX COLLECTOR TO TUBE ASSEMBLY) (Continued) 8-68

FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-69 INSTALL TUBE AND HOSE ASSEMBLY (ACCESSORY GEARBOX COLLECTOR TO TUBE ASSEMBLY)

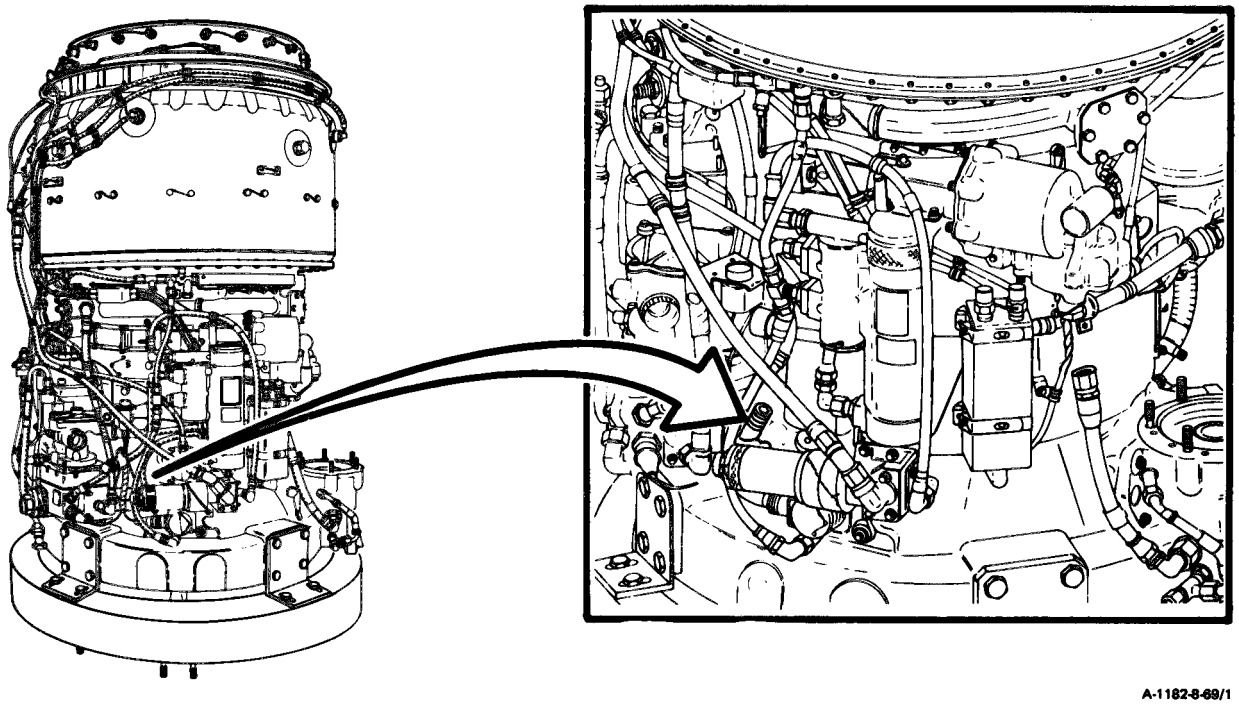
INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit, NSN 5180-00-323-4944
Technical Inspection Tool Kit, NSN 5180-00-323-5114
Open-End Wrench, 1-Inch

Materials:
None

Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

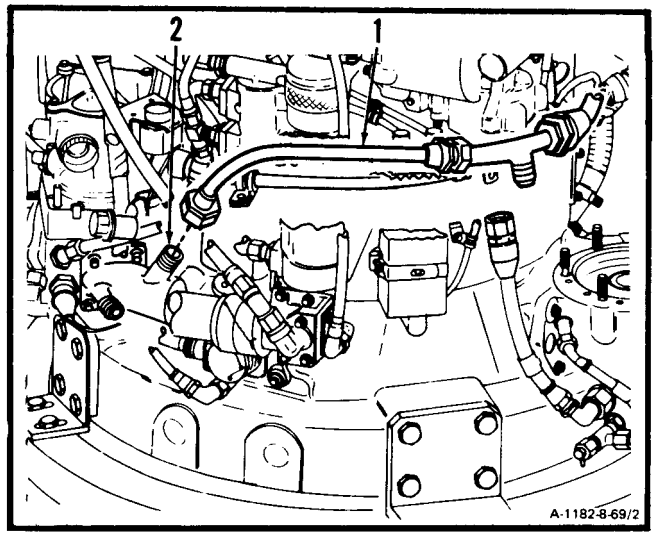


A-1182-8-69/1

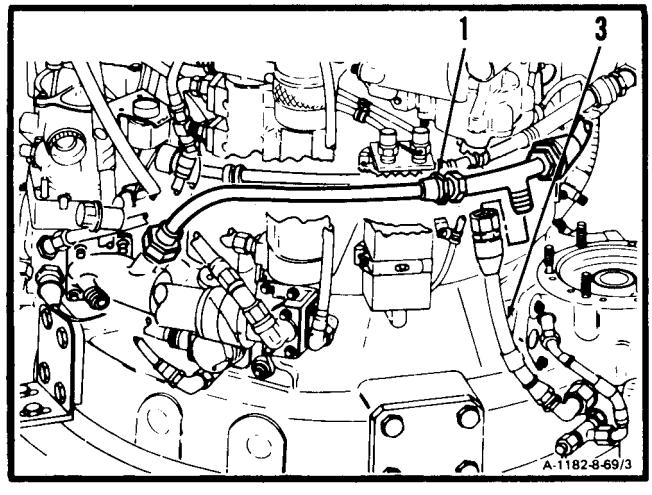
GO TO NEXT PAGE

8-69 INSTALL TUBE AND HOSE ASSEMBLY (ACCESSORY GEARBOX COLLECTOR TO TUBE ASSEMBLY) (Continued)

1. **Connect tube and hose assembly (1)** to nipple (2).



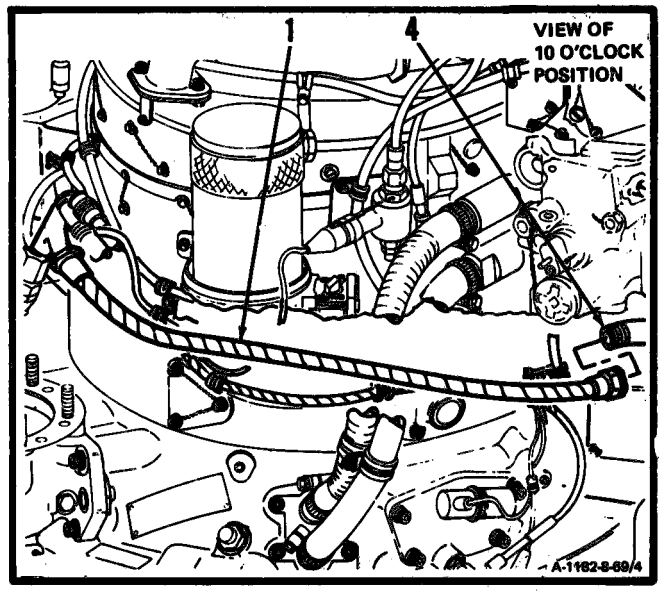
2. **Connect hose assembly (3)** to tube and hose assembly (1).



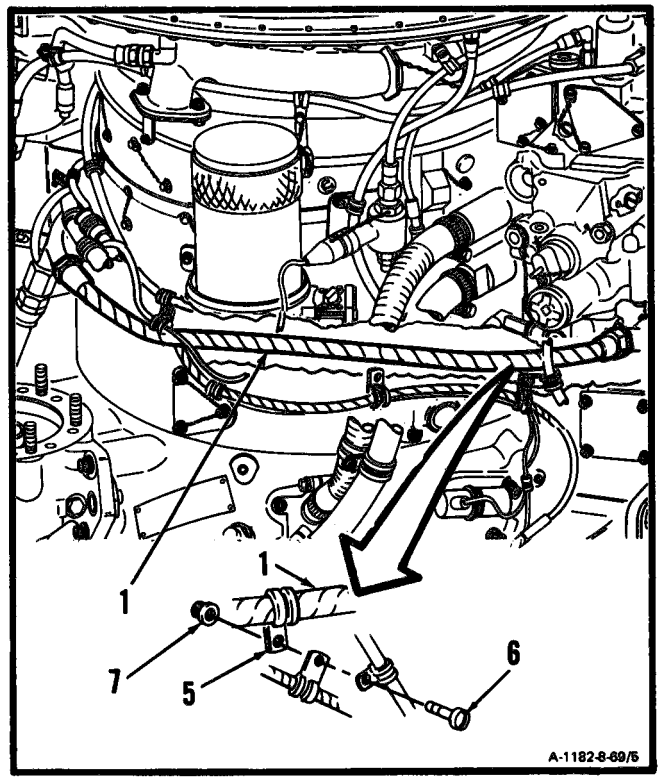
GO TO NEXT PAGE

8-69 INSTALL TUBE AND HOSE ASSEMBLY (ACCESSORY GEARBOX COLLECTOR TO TUBE ASSEMBLY) (Continued)

3. Connect tube and hose assembly (1) to tube assembly (4). Use open-end wrench.



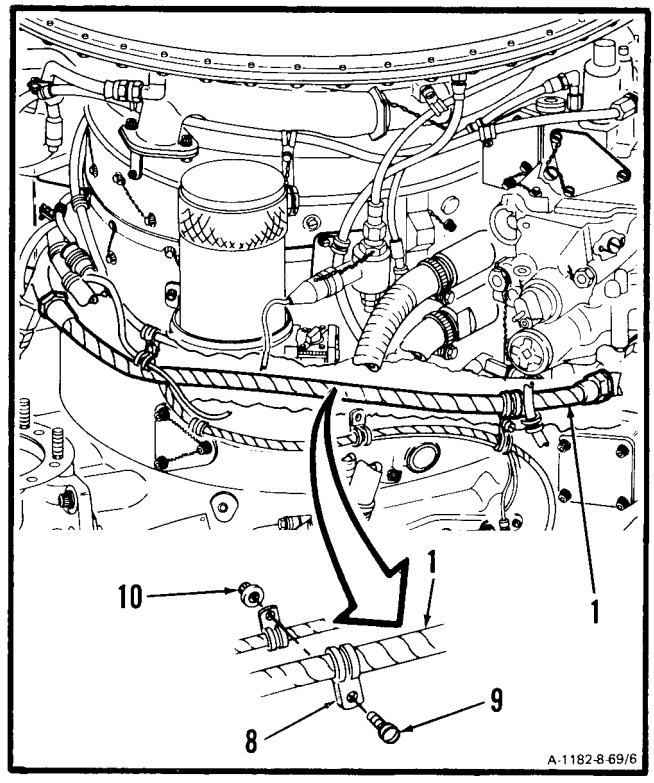
4. **Install clamp (5)** on tube and hose assembly (1) and install screw (6) and nut (7).



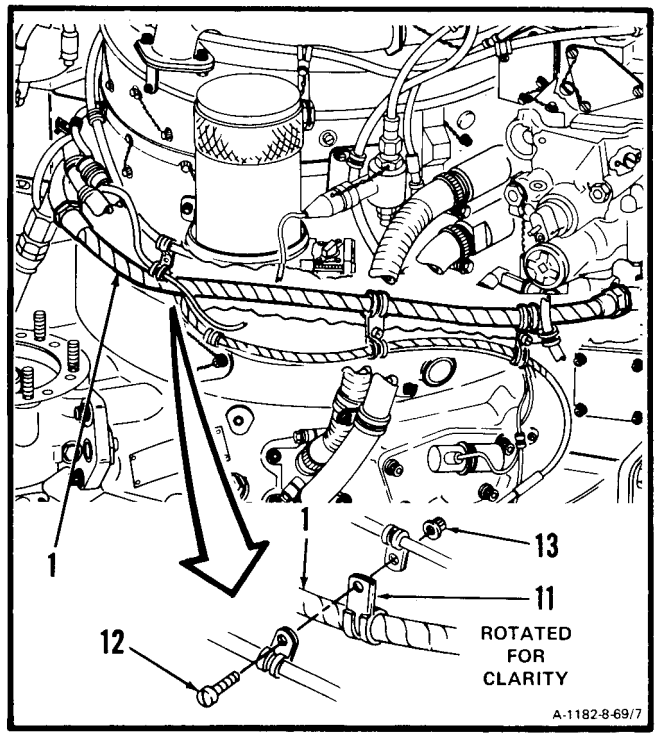
GO TO NEXT PAGE

8-69 INSTALL TUBE AND HOSE ASSEMBLY (ACCESSORY GEARBOX COLLECTOR TO TUBE ASSEMBLY) (Continued) 8-69

5. **Install clamp (8)** on tube and hose assembly (1) and install screw (9) and nut (10).



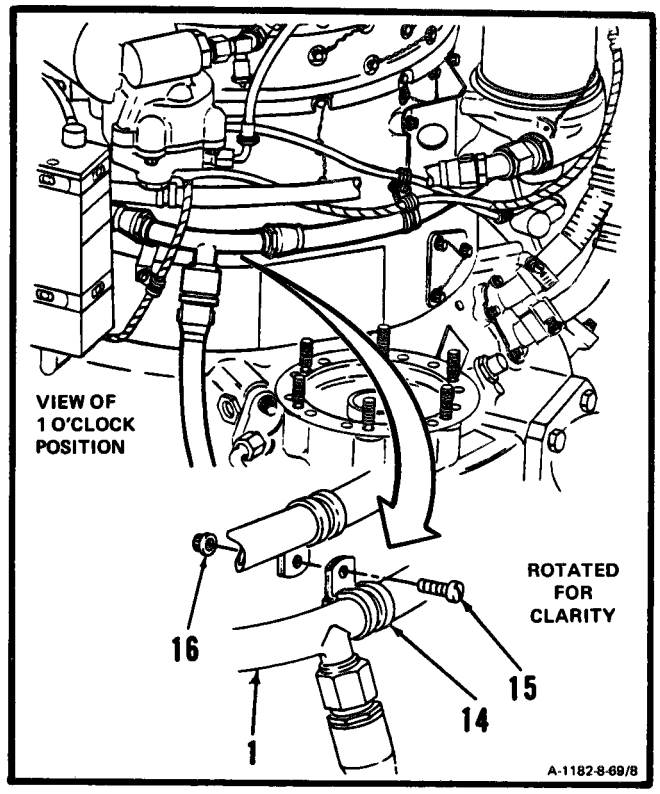
6. **Install clamp (11)** on tube and hose assembly (1) and install screw (12) and nut (13).



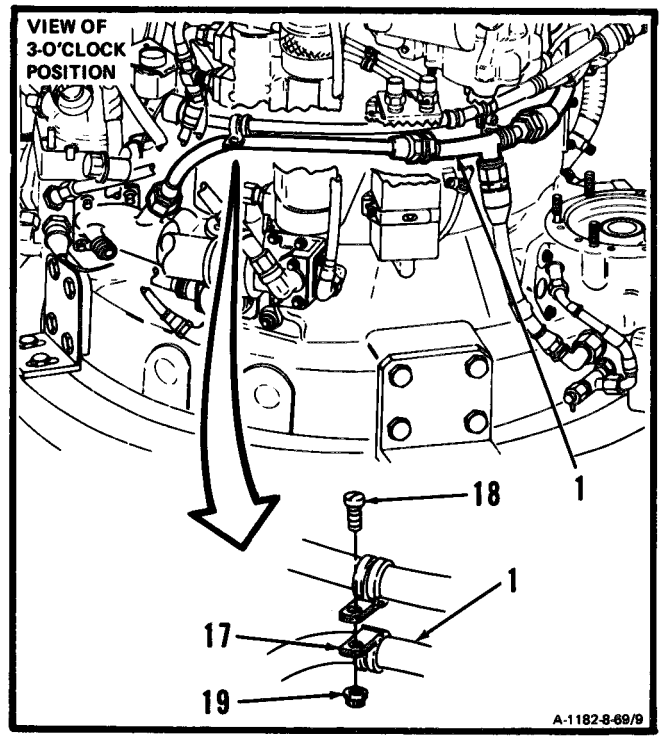
GO TO NEXT PAGE

8-69 INSTALL TUBE AND HOSE ASSEMBLY (ACCESSORY GEARBOX COLLECTOR TO TUBE ASSEMBLY) (Continued)

7. **Install clamp (14)** on tube and hose assembly (1) and install screw (15) and nut (16).



8. **Install clamp (17)** on tube and hose assembly (1) and install screw (18) and nut (19).



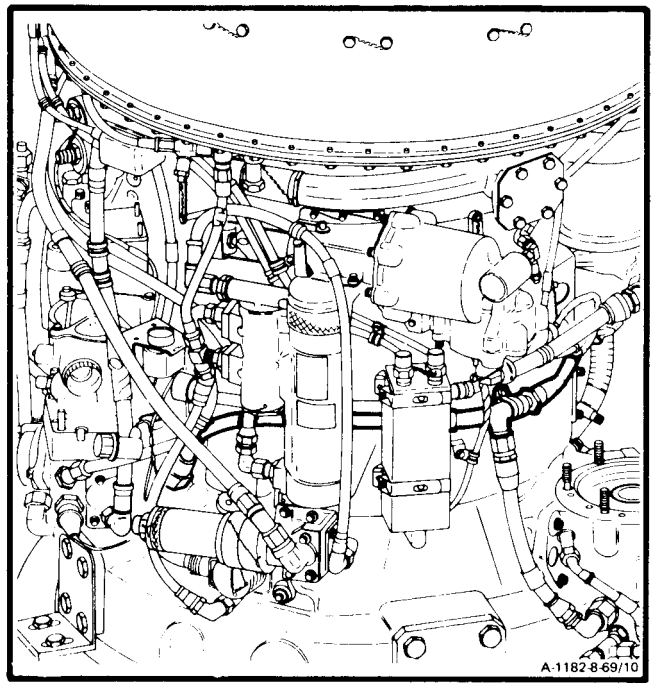
INSPECT

GO TO NEXT PAGE

8-69 INSTALL TUBE AND HOSE ASSEMBLY (ACCESSORY GEARBOX COLLECTOR TO TUBE ASSEMBLY) (Continued)

FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-70 REMOVE TUBE ASSEMBLY (TUBE AND HOSE ASSEMBLY T0 ACCESSORY GEARBOX ASSEMBLY) 8-70

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Container, 1 Quart
Open-End Wrench, 1-Inch

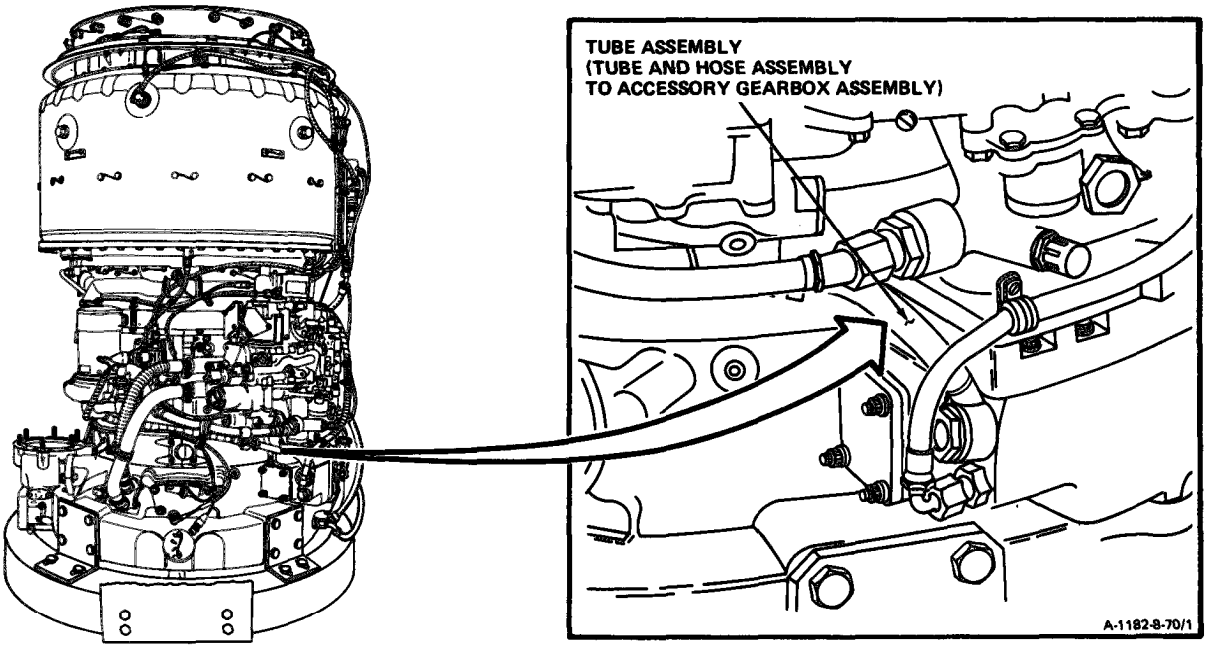
Materials:
Wiping Rag (E58)

Personnel Required:
68B10 Aircraft Powerplant Repairer

General Safety Instructions:

WARNING

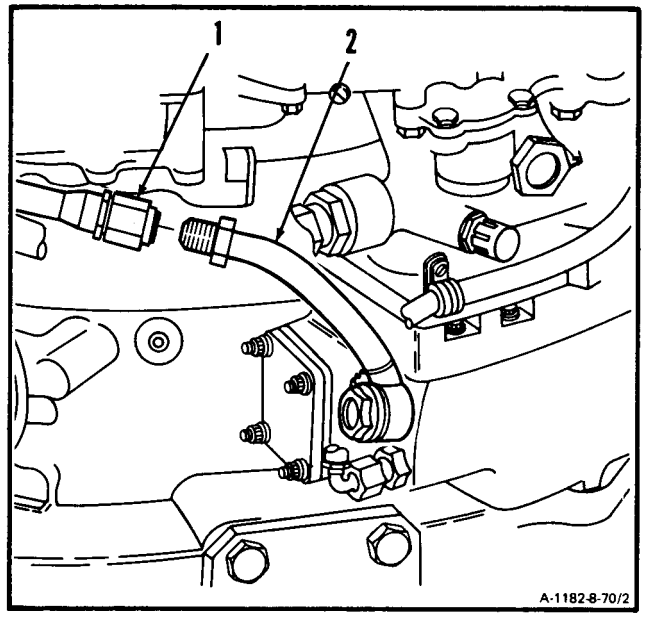
Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin, and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.



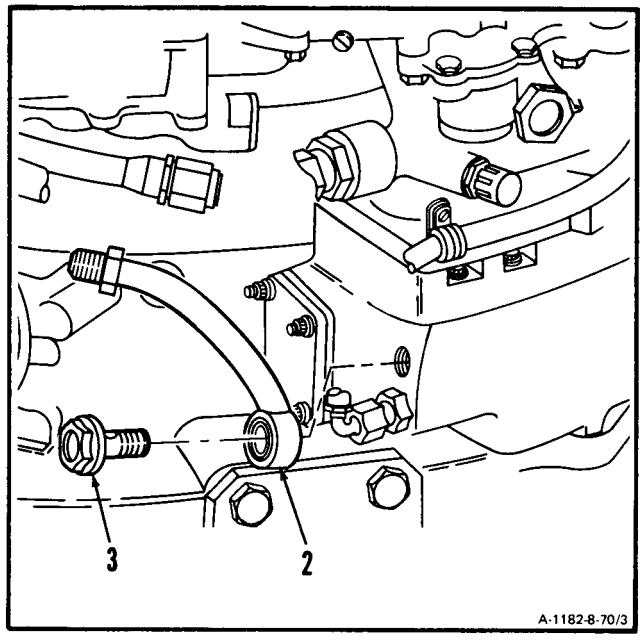
GO TO NEXT PAGE

8-70 REMOVE TUBE ASSEMBLY (TUBE AND HOSE ASSEMBLY TO ACCESSORY GEARBOX ASSEMBLY) (Continued) 8-70

1. Disconnect tube and hose assembly (1) from tube assembly (2). Use 1-inch open-end wrench.



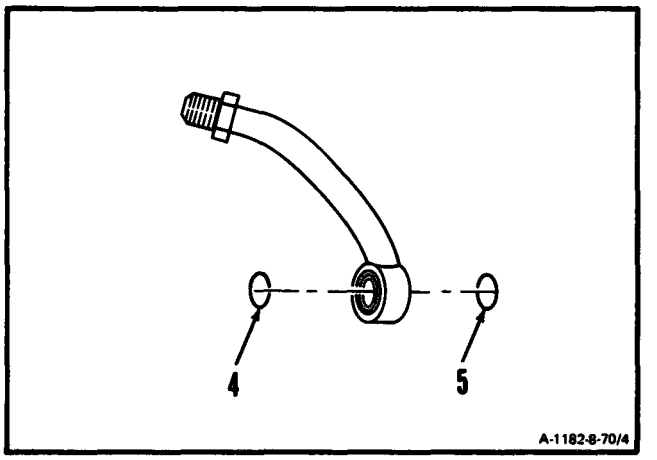
2. Remove lockwire and bolt (3). **Remove tube assembly (2).**



GO TO NEXT PAGE

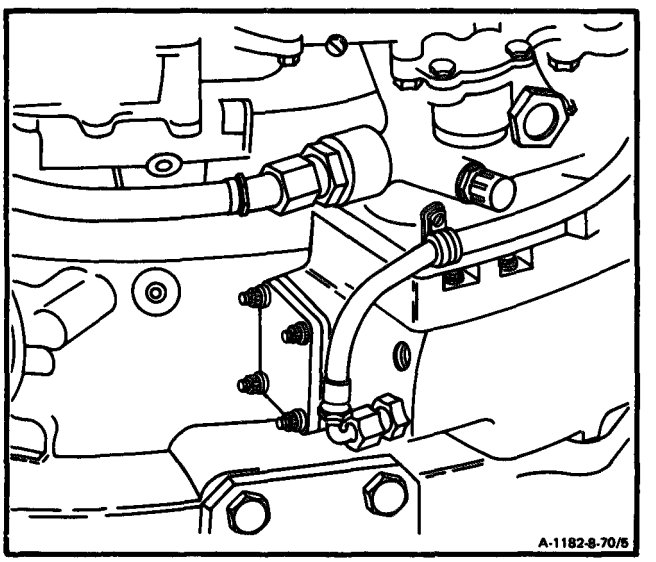
8-70 REMOVE TUBE ASSEMBLY (TUBE AND HOSE ASSEMBLY TO ACCESSORY GEARBOX ASSEMBLY) (Continued) 8-70

3. Remove packings (4 and 5).



FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-71 INSTALL TUBE ASSEMBLY (TUBE AND HOSE ASSEMBLY TO ACCESSORY GEARBOX ASSEMBLY)

INITIAL SETUP

Applicable Configurations:
All

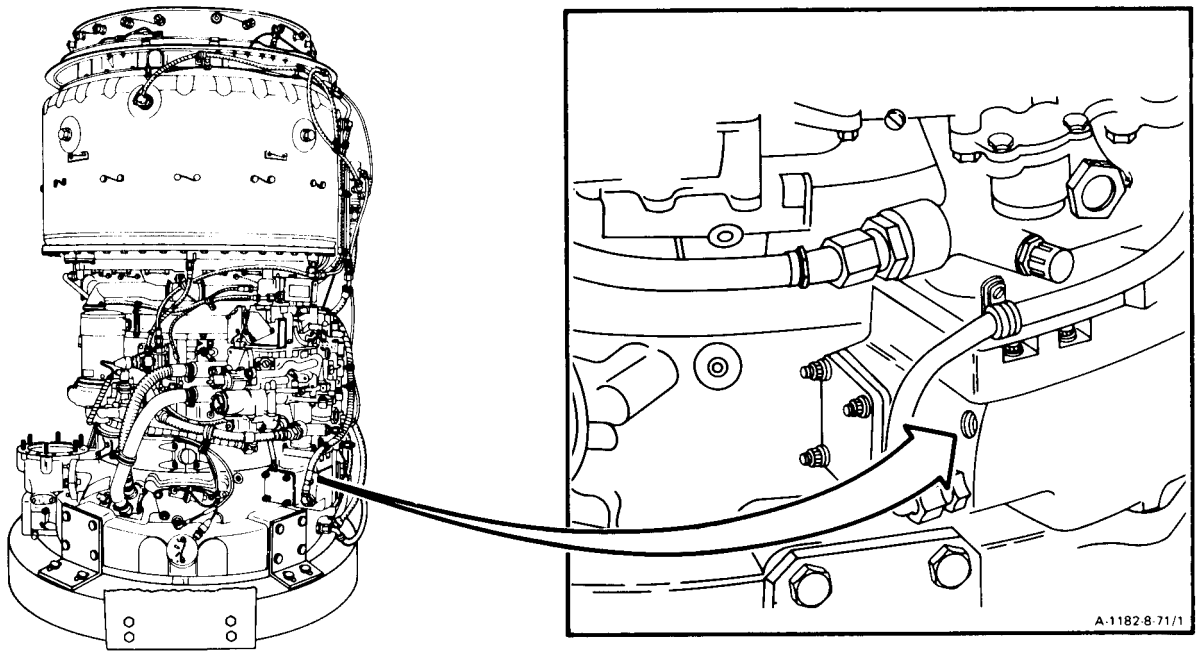
Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114
Open-End Wrench, 1-Inch

Materials:
Lockwire (E29)

Parts:
Packings

Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

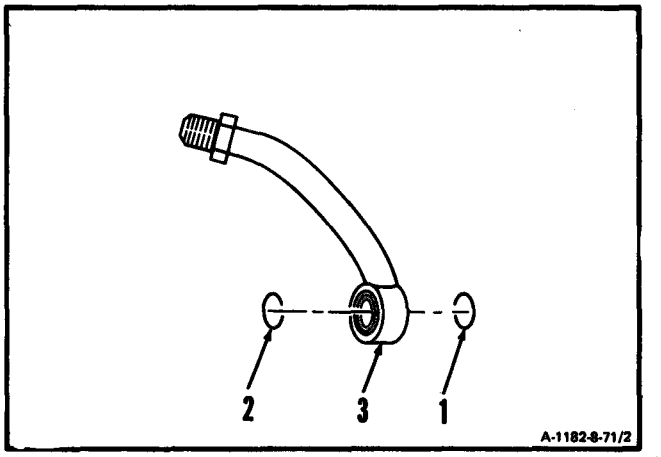
References:
TM 55-2840-254-23P



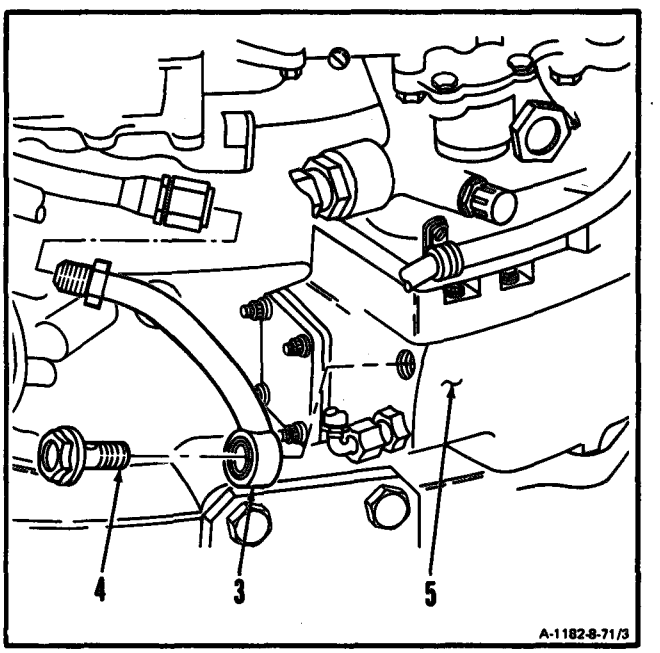
GO TO NEXT PAGE

8-71 INSTALL TUBE ASSEMBLY (TUBE AND HOSE ASSEMBLY TO ACCESSORY GEARBOX ASSEMBLY) (Continued) 8-71

1. Install packings (1 and 2) into tube assembly (3).



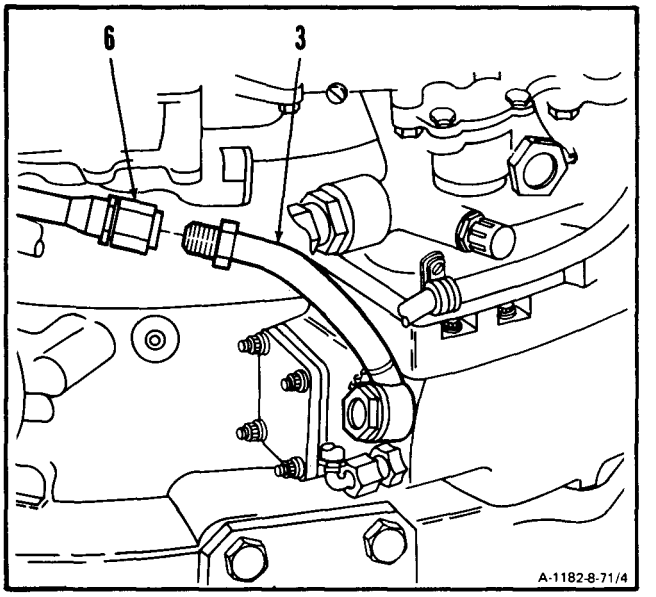
2. **Install tube assembly (3)** and bolt (4) on accessory gearbox assembly (5). Lockwire bolt (4). Use lockwire (E29).



GO TO NEXT PAGE

8-71 INSTALL TUBE ASSEMBLY (TUBE AND HOSE ASSEMBLY TO ACCESSORY GEARBOX ASSEMBLY) (Continued) 8-71

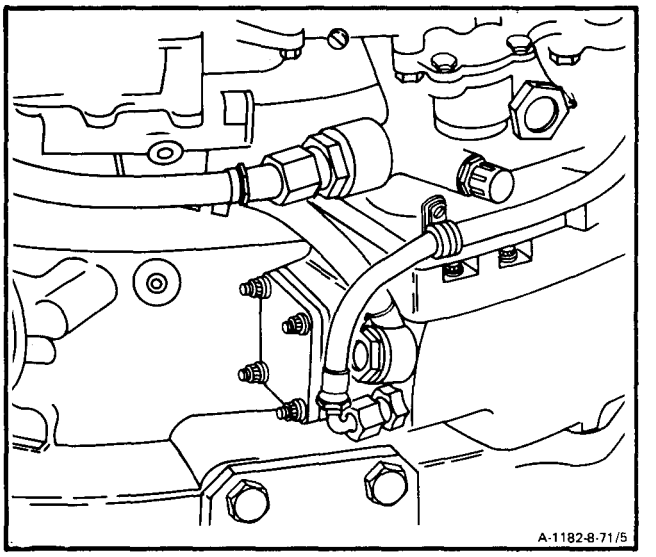
3. Connect tube and hose assembly (6) to tube assembly (3). Use 1-inch open-end wrench.



INSPECT

FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-72 REMOVE STARTER GEARBOX FILTER

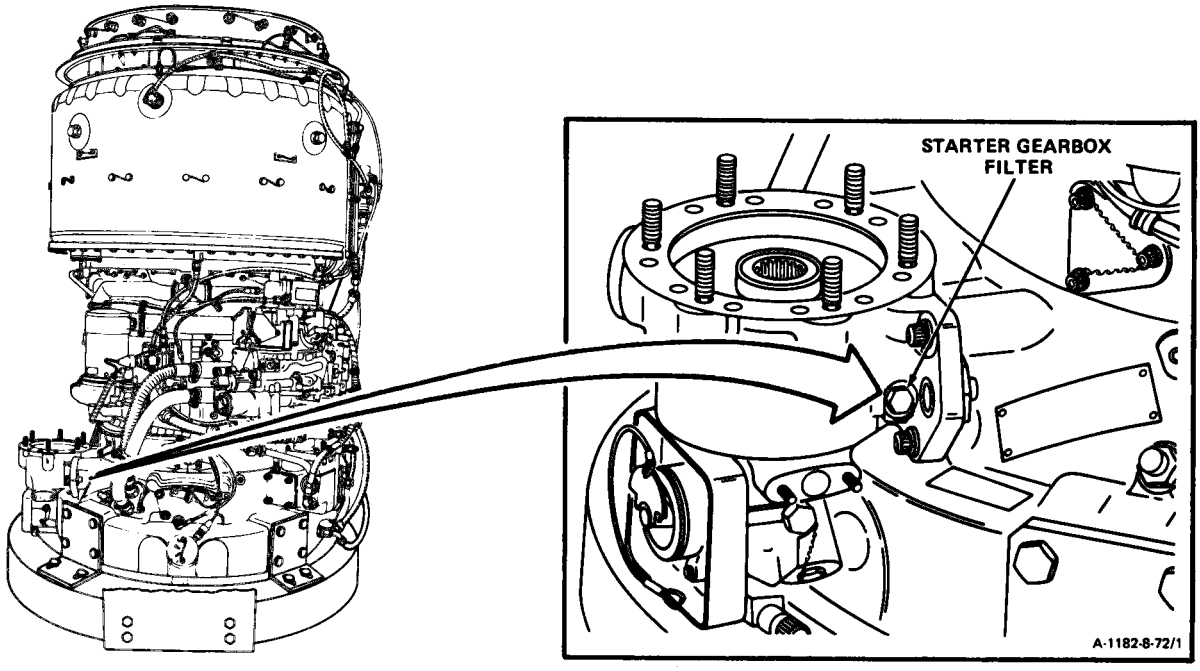
INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944

Materials:
Wiping Rag (E58)

Personnel Required:
68B10 Aircraft Powerplant Repairer



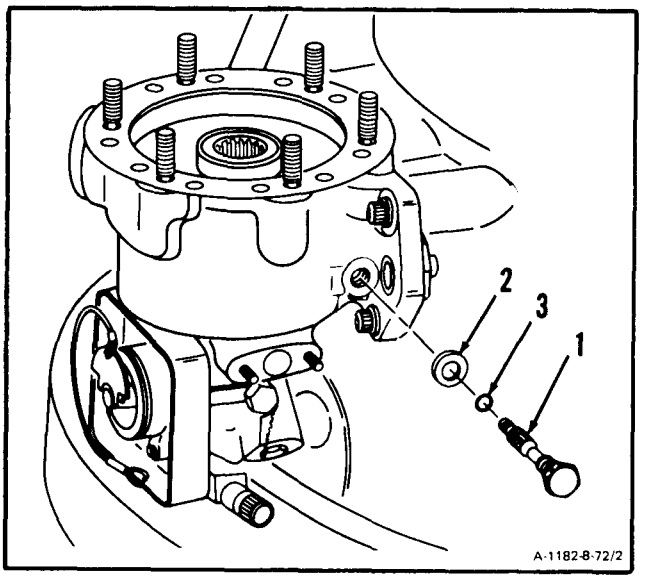
GO TO NEXT PAGE

8-72 REMOVE STARTER GEARBOX FILTER (Continued) 8-72

WARNING

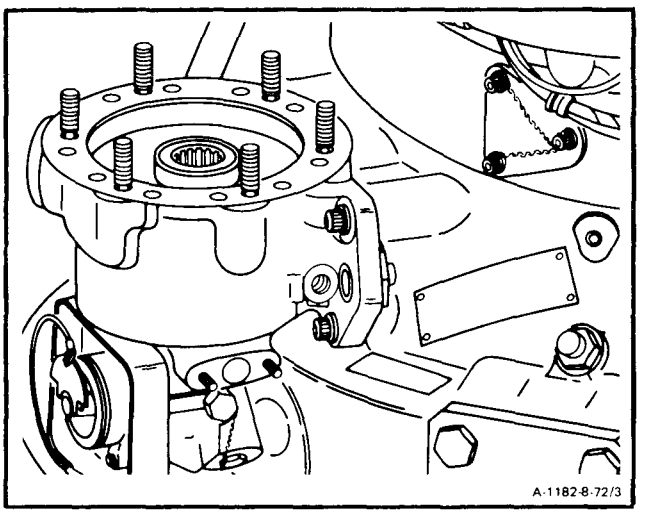
Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.

1. **Remove** lockwire, **starter gearbox filter (1),** washer (2), and packing (3).



FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-73 CLEAN STARTER GEARBOX FILTER

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Goggles
Compressed Air Source

Materials:
Dry Cleaning Solvent (E17)
Gloves (E20)
Lint-Free Cloth (E26)

Personnel Required:
68B10 Aircraft Powerplant Repairer

Equipment Condition:
Off Engine Task
Starter Gearbox Filter Removed (Task 8-72)

General Safety Instructions:

WARNING

Dry cleaning solvent (E17) is flammable and toxic. It can irritate skin and cause burns. Use only in well-ventilated area, away from heat and open flame. In case of contact, immediately flush skin or eyes with water for at least 15 minutes. Get medical attention for eyes.

1. **Clean starter gearbox filter (1)** as follows:

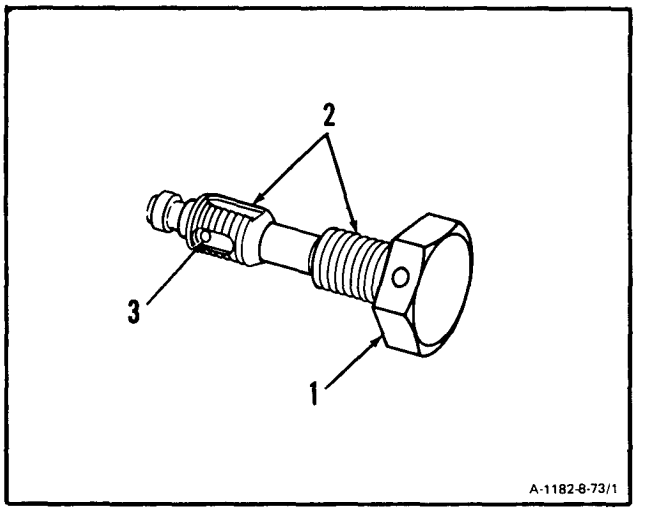
   a Wear gloves (E20). Immerse filter in dry cleaning solvent (E17) and agitate. Use brush on external surfaces (2).

   b. Use lint-free cloth (E26) to remove solvent.

   WARNING

   When using compressed air for cleaning, use approved protective equipment for eyes and face. Do not use more than 30 psig air Pressure. Do not direct air toward yourself or another person. Failure to comply could result in injury to eyes or skin. In case of injury, get medical attention.

   c. Wear goggles. **Blow dry internal passage (3).** Use clean, dry compressed air.



FOLLOW-ON MAINTENANCE:

Inspect starter gearbox filter (Task 8-74).

END OF TASK

8-74 INSPECT STARTER GEARBOX FILTER 8-74

INITIAL SETUP

Applicable Configurations:
All

Tools:
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
None

Personnel Required:
68B30 Aircraft Powerplant Inspector

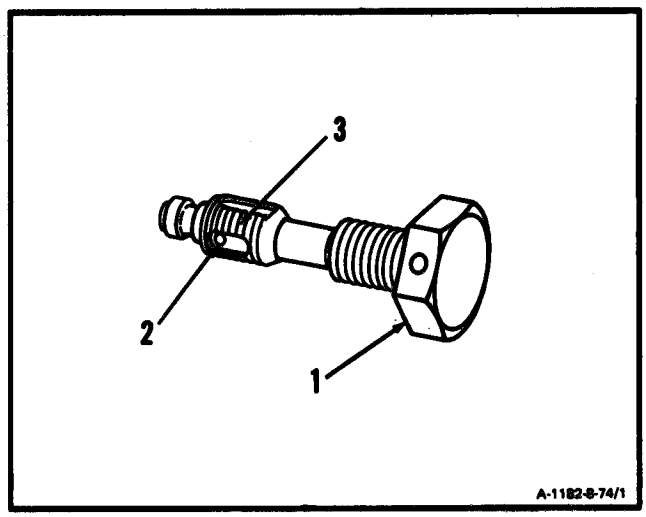
Equipment Condition:
Off Engine Task

1. **Inspect starter gearbox filter (1).**

   a. There shall be no cracks.

   b. There shall be no clogged holes (2).

   c. There shall be no clogged threads (3).



FOLLOW-ON MAINTENANCE:

None

END OF TASK

8-75 INSTALL STARTER GEARBOX FILTER

INITIAL SETUP

Applicable Configurations:
All

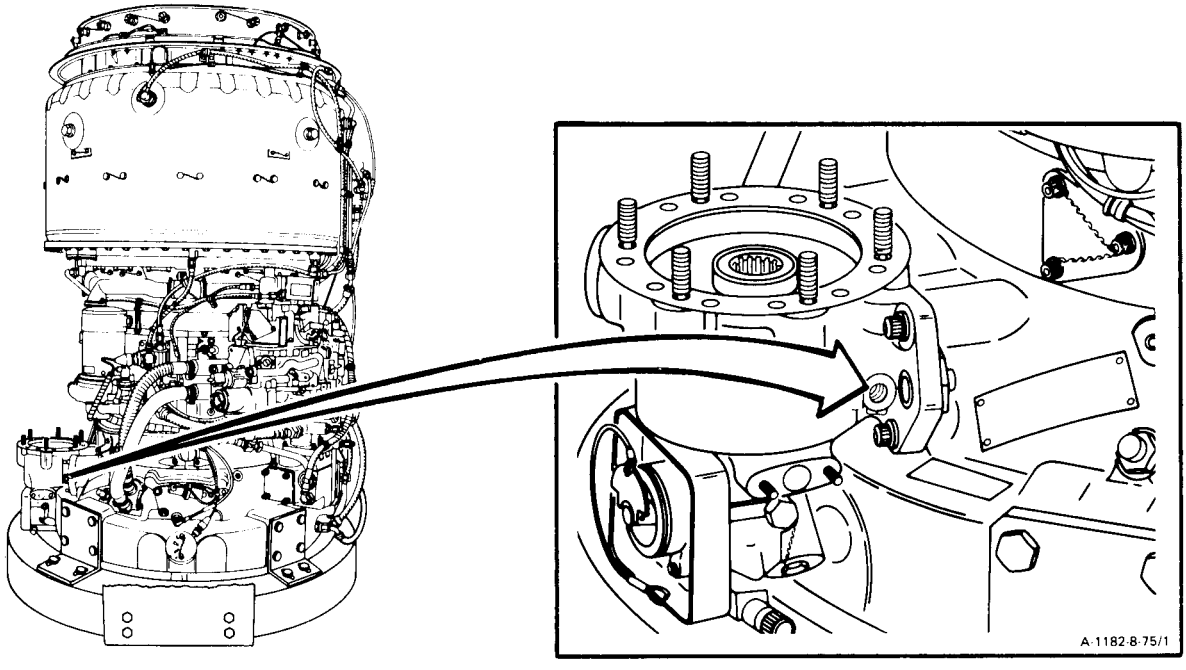
Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
Lockwire (E29)

Parts:
Packing
Washer

Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

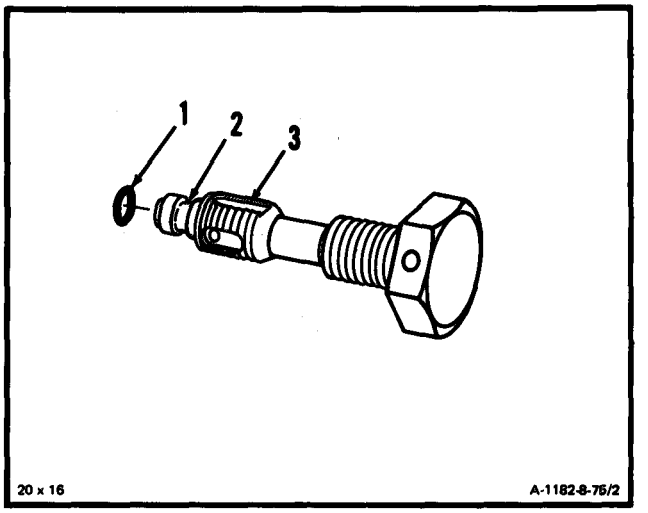
References:
TM 55-2840-254-23P



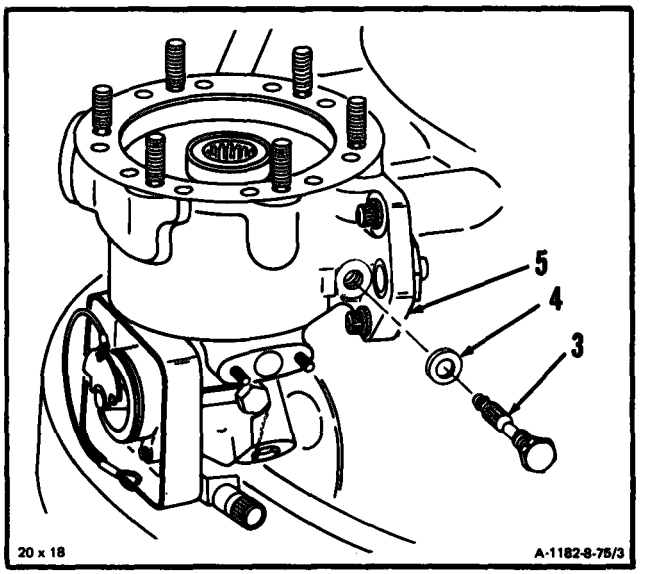
GO TO NEXT PAGE

8-75 INSTALL STARTER GEARBOX FILTER (Continued)

1. **Install packing (1)** in groove (2) on starter gearbox filter (3).



2. **Install** washer (4) and **starter gearbox fitter (3)** in housing (5). Torque starter gearbox filter (3) 20 to 25 inch-pounds. Lockwire starter gearbox filter (3). Use lockwire (E29).



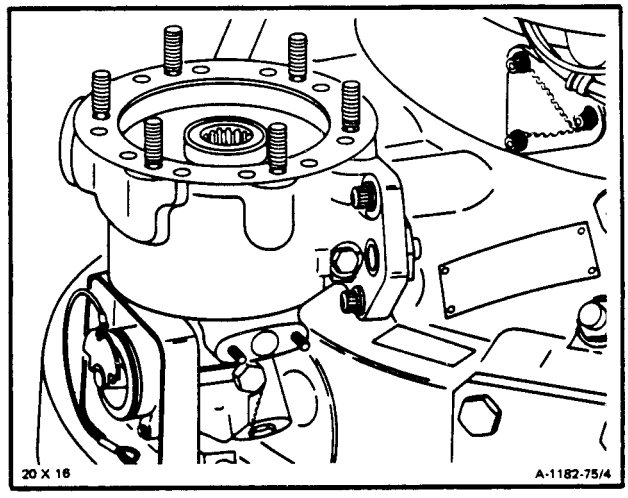
INSPECT

GO TO NEXT PAGE

8-75 INSTALL STARTER GEARBOX FILTER (Continued) 8-75

FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-76 REMOVE NO. 2 BEARING PRESSURE OIL STRAINER 8-76

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944

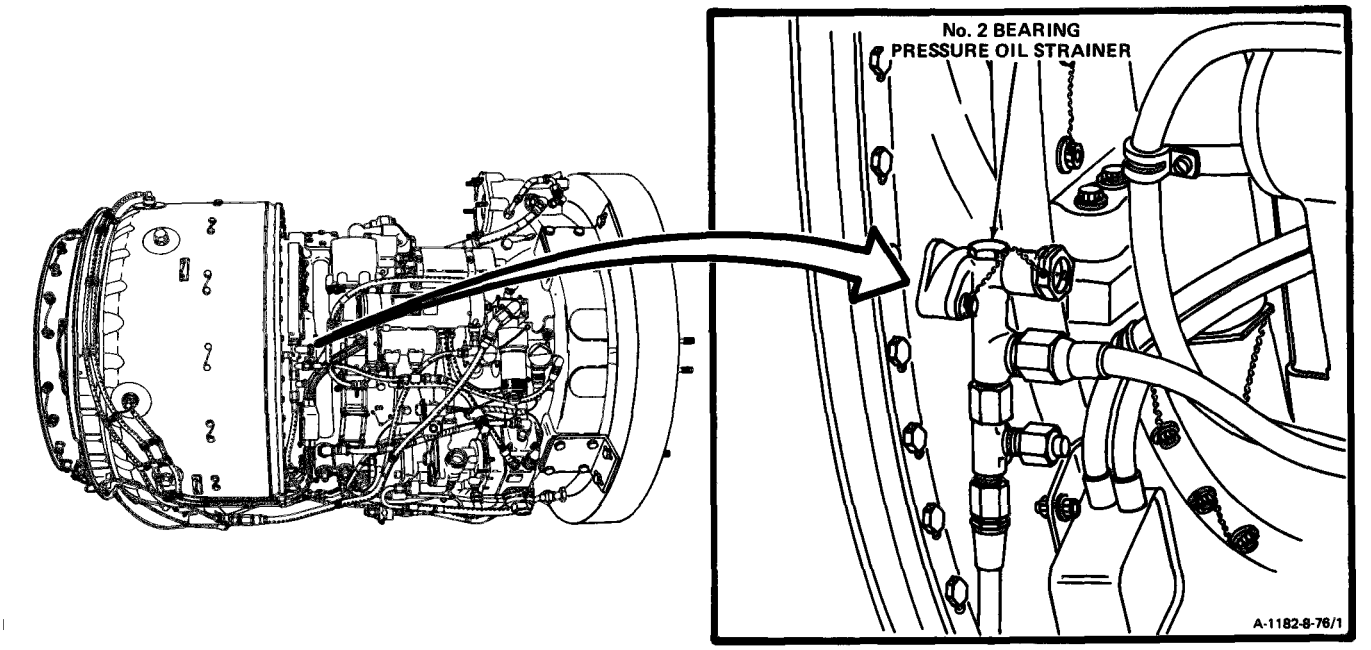
Materials:
None

Personnel Required:
68B10 Aircraft Powerplant Repairer

General Safety Instructions:

WARNING

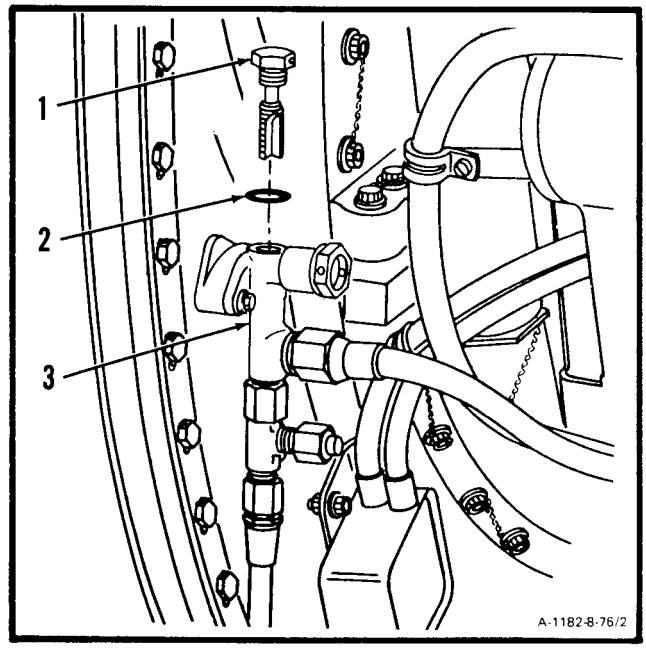
Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.



GO TO ***NEXT PAGE***

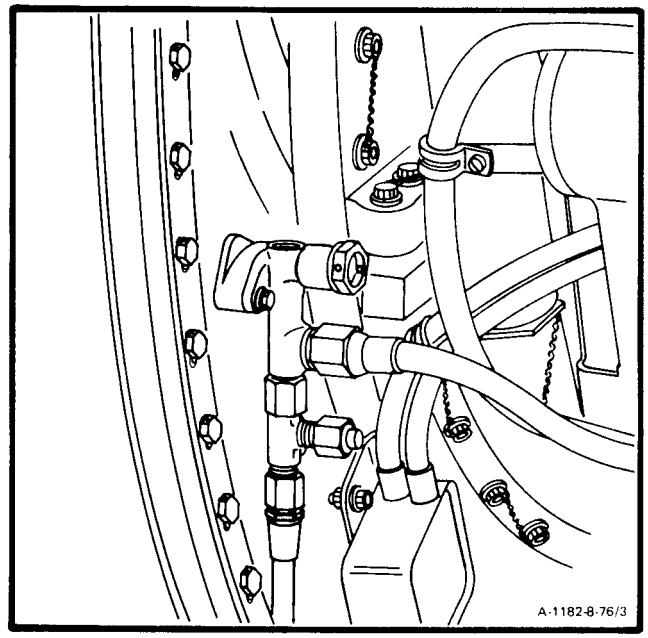
8-76 REMOVE NO. 2 BEARING PRESSURE OIL STRAINER (Continued) 8-76

1. **Remove** lockwire, **No. 2 bearing pressure oil strainer (1)** and packing (2) from connector (3).



FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-77 CLEAN NO. 2 BEARING PRESSURE OIL STRAINER 8-77

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Compressed Air Source
Goggles

Materials:
Dry Cleaning Solvent (E17)
Gloves (E20)

Personnel Required:
68B10 Aircraft Powerplant Repairer

Equipment Condition:
Off Engine Task
No. 2 Bearing Pressure Oil Strainer Removed
(Task 8-76)

General Safety Instructions:

WARNING

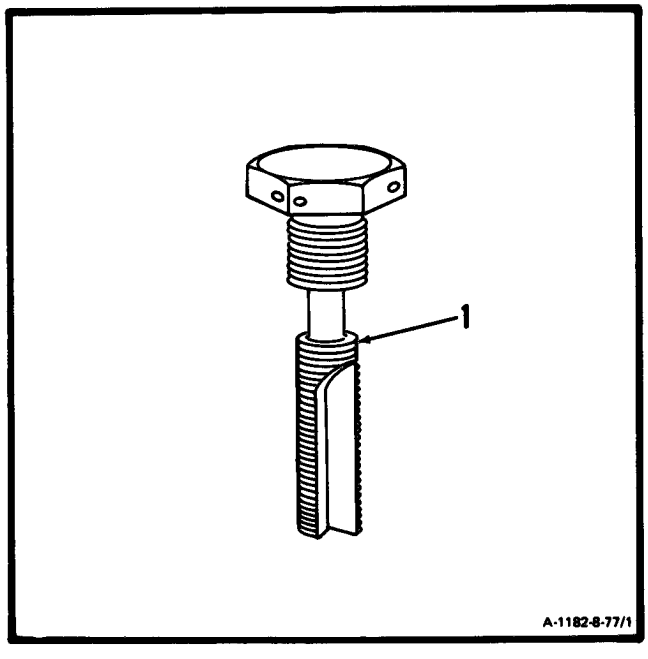
Dry cleaning solvent (E17) is flammable and toxic. It can irritate skin and cause burns. Use only in well-ventilated area, away from heat and open flame. In case of contact, immediately flush skin or eyes with water for at least 15 minutes. Get medical attention for eyes.

1. Wear gloves (E20). **Clean strainer (1),** using brush and dry cleaning solvent (E17).

WARNING

When using compressed air for cleaning, use approved protective equipment for eyes and face. Do not use more than 30 psig air pressure. Do not direct air toward **yourself or another person. Failure to comply could result in injury to eyes or skin. In case of injury, get medical attention.**

2. Wear goggles. **Blow dry strainer (1),** using clean, dry compresed air.



FOLLOW-ON MAINTENANCE:

Inspect No. 2 Bearing Pressure Oil Strainer
(Task 8-78).

END OF TASK

8-78 INSPECT N0. 2 BEARING PRESSURE OIL STRAINER 8-78

INITIAL SETUP

Applicable Configurations:
All

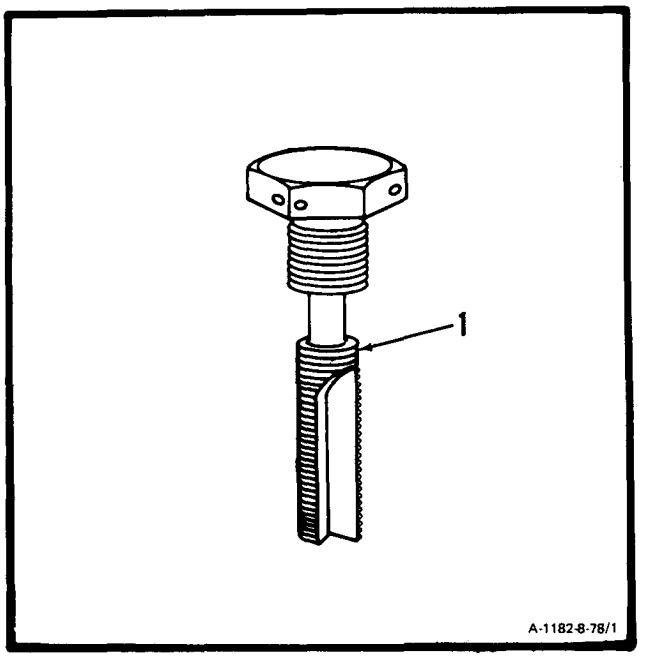
Tools:
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
None

Personnel Required:
68B30 Aircraft Powerplant Inspector

Equipment Condition:
Off Engine Task

1. Inspect No. 2 bearing pressure oil strainer
(1). There shall be no cracks.



FOLLOW-ON MAINTENANCE:

None

END OF TASK

8-79 INSTALL NO. 2 BEARING PRESSURE OIL STRAINER

INITIAL SETUP

Applicable Configurations:
All

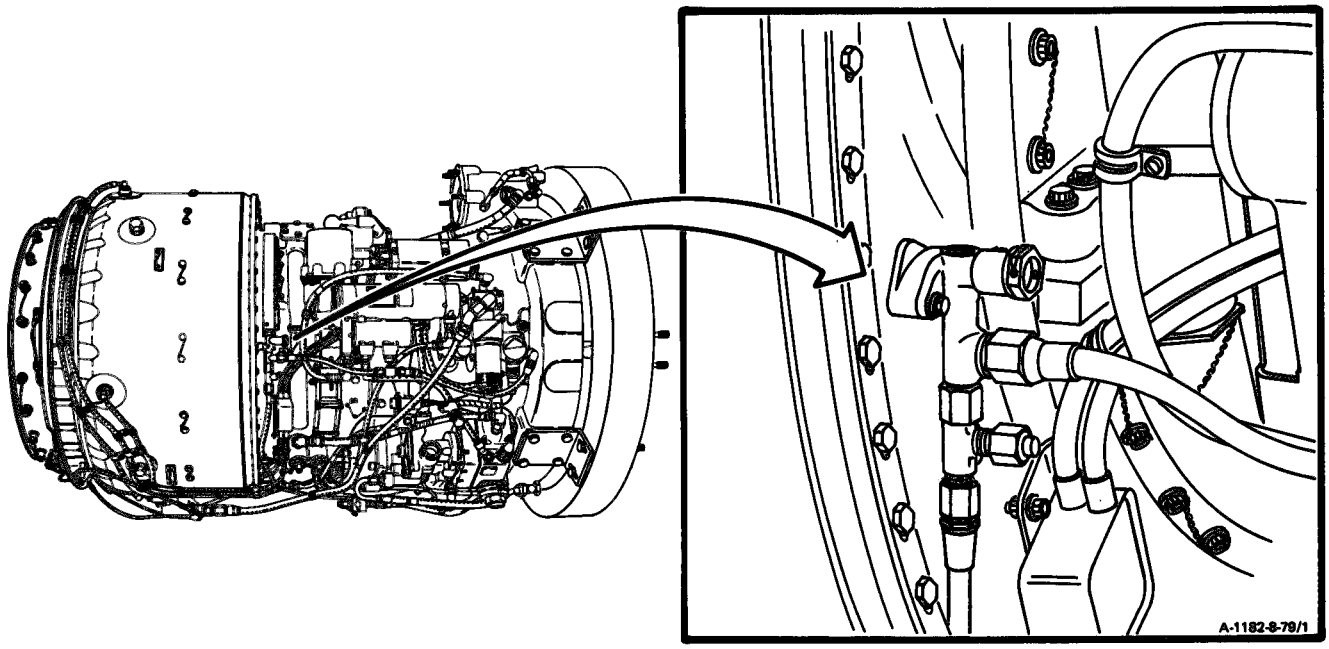
Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
Lockwire (E29)

Parts:
Packing

Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

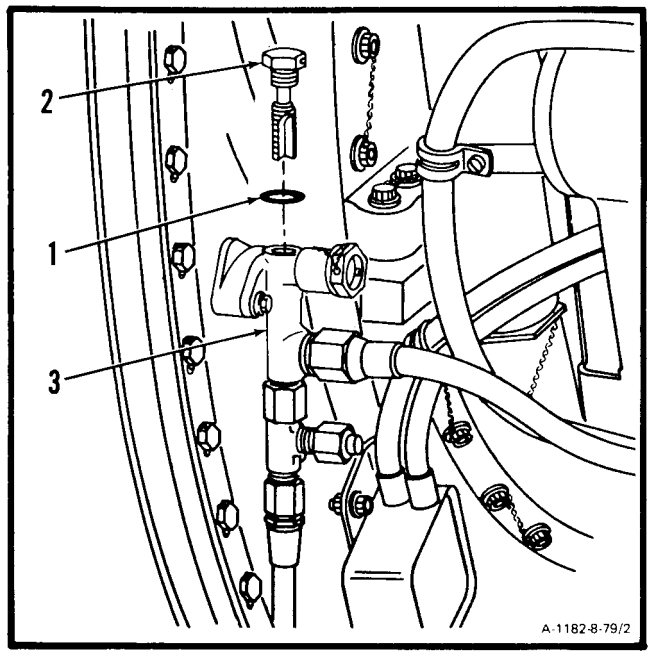
References:
TM 55-2840-254-23P



GO TO NEXT PAGE

8-79 INSTALL NO. 2 BEARING PRESSURE OIL STRAINER (Continued) 8-79

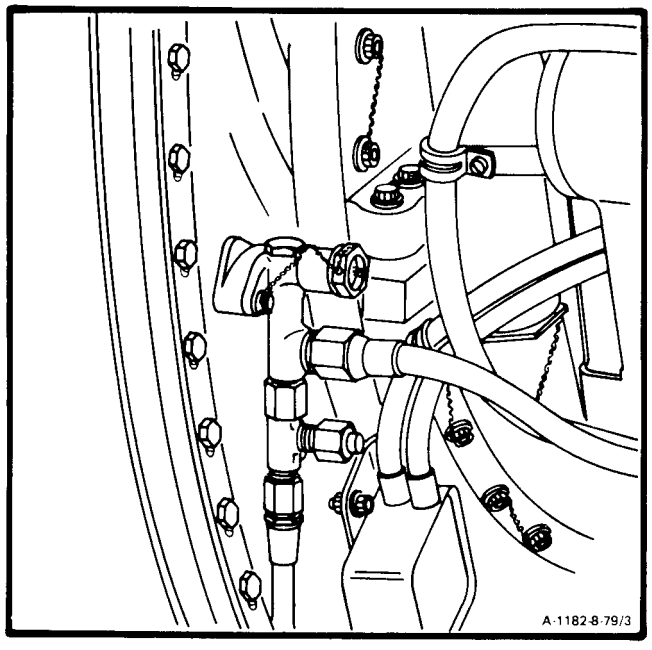
1. **Install** packing (1) and No. 2 **bearing pressure oil strainer (2)** in connector (3). Lockwire strainer (2). Use lockwire (E29).



INSPECT

FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-80 REMOVE NO. 4 AND 5 BEARING FILTER 8-80

INITIAL SETUP

Applicable Configurations:
All

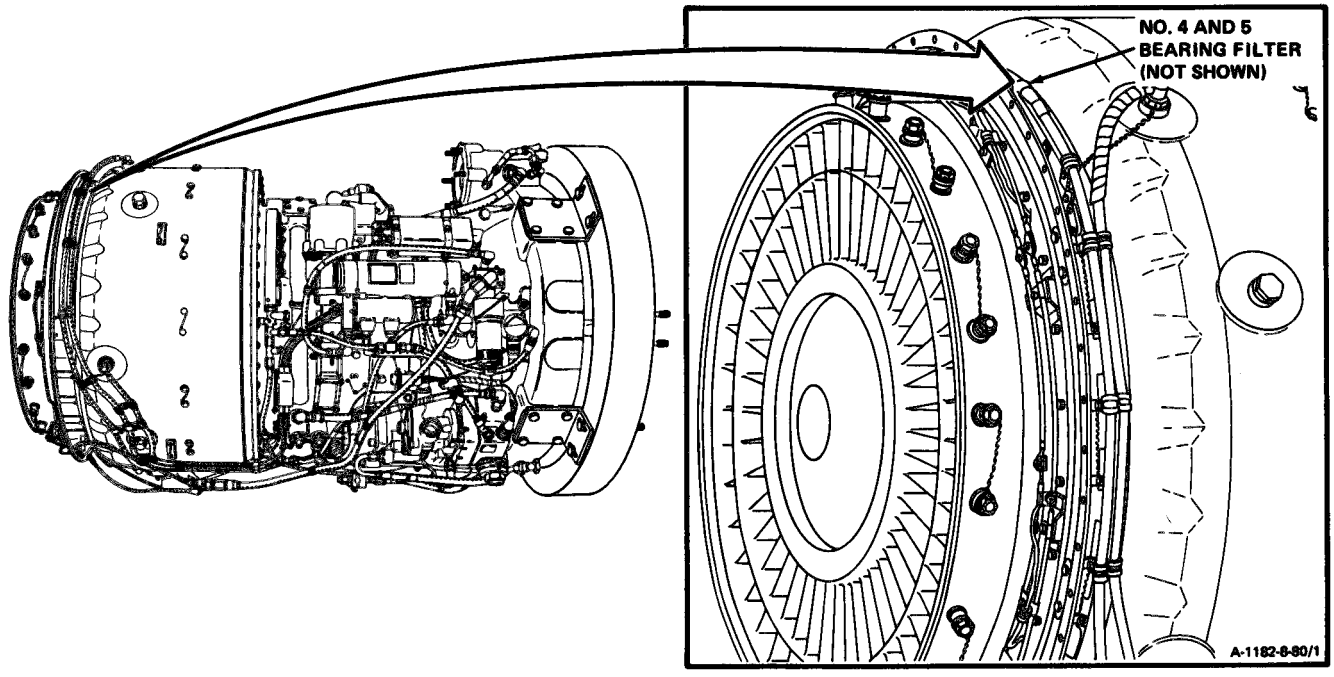
Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Open-End Wrench (T53)
Container, 1-Quart
Goggles
Slave Screw, Part Number NAS1352-01-6,
NSN 5305-00-224-1168

Materials:
Wiping Rag (E58)

General Safety Instructions:

WARNING

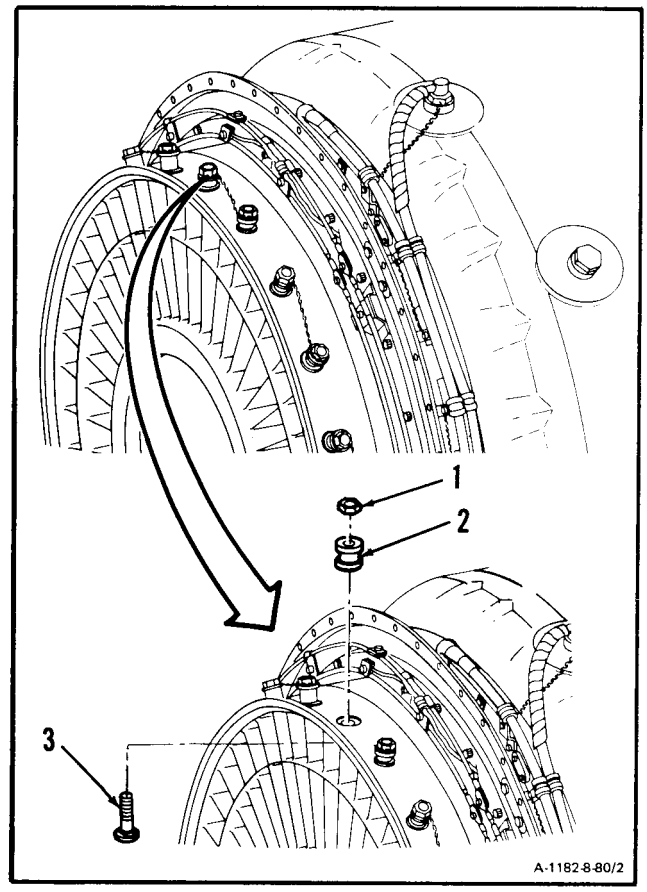
Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin, and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.



GO TO NEXT PAGE

8-80 REMOVE NO. 4 AND 5 BEARING FILTER (Continued) 8-80

1. **Remove** lockwire, nut (1), spacer (2), and **bolt (3).**



GO TO NEXT PAGE

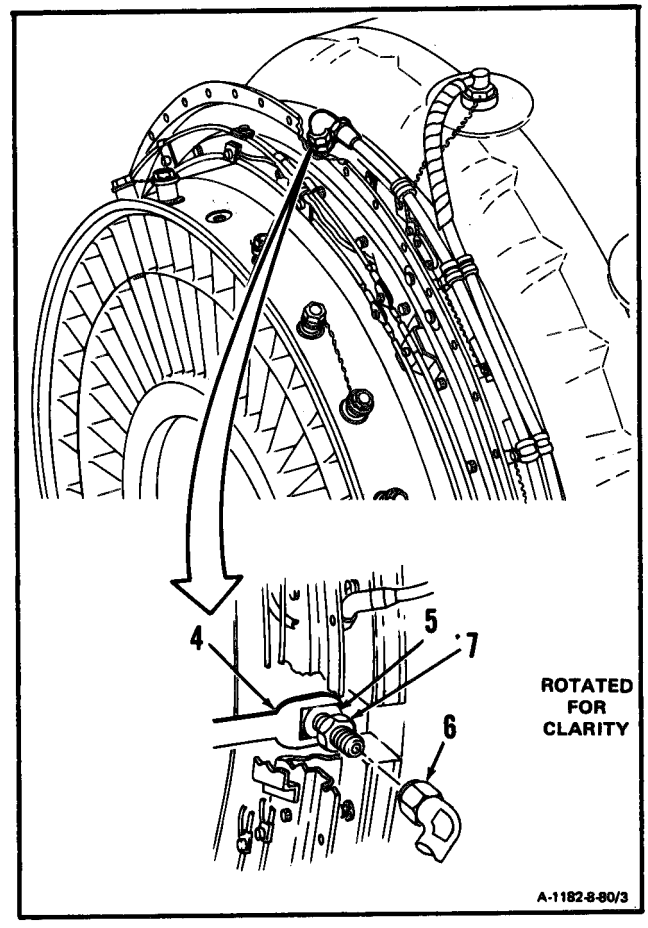
8-80 REMOVE NO. 4 AND 5 BEARING FILTER (Continued)

CAUTION

In following step, hold No. 4 and 5 bearing lube adapter using open-and wrench (T53). Failure to use wrench my result in damage and dislocation of oil transfer tube resulting in oil leaks.

2. Place open-end wrench (T53) (4) on No. 4 and 5 bearing lube adapter (5).

3. **Disconnect hose assembly (6)** from reducer (7).



GO TO NEXT PAGE

8-80 REMOVE NO. 4 AND 5 BEARING FILTER (Continued) 8-80

WARNING

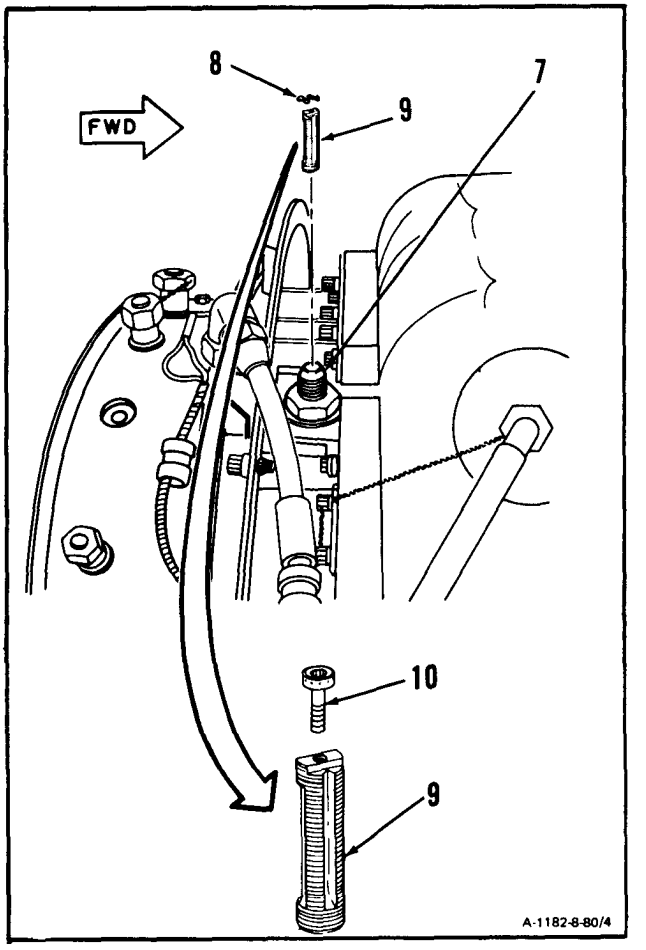
In following step, wear goggles when removing spring. Spring may fly apart when removed. Failure to comply may cause serious eye injury. If eye injury occurs, get medical attention.

4. **Remove spring (8).**

5. **Remove filter (9)** from reducer (7). Use slave screw (10).

NOTE

If it is not possible to remove filter from reducer, do steps 6. thru 8.

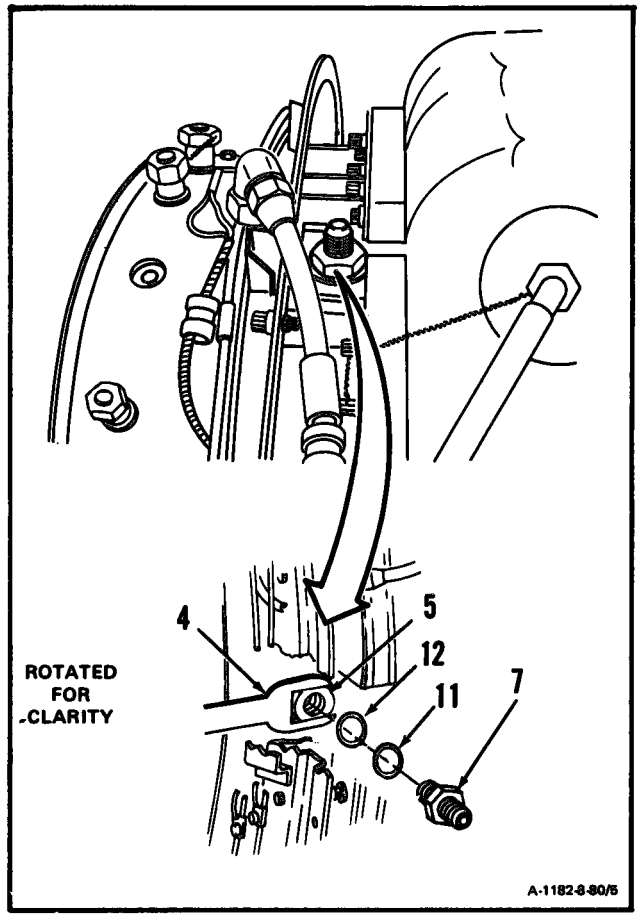


GO TO NEXT PAGE

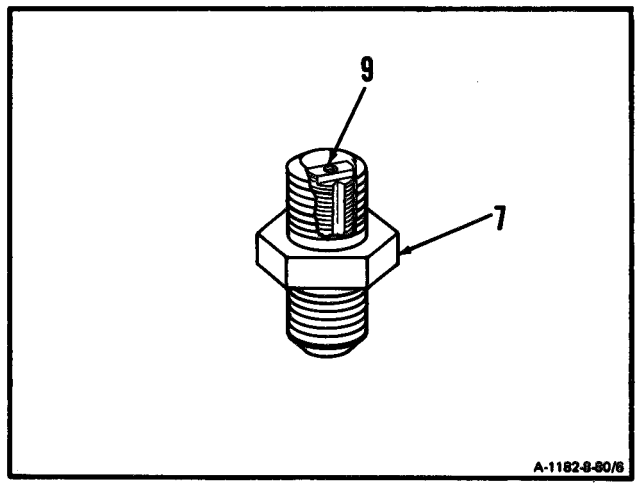
8-80 REMOVE NO. 4 AND 5 BEARING FILTER (Continued)

6. Place open-end wrench (T53) (4) on No. 4 and 5 bearing lube adapter (5).

7. **Remove reducer (7),** washer (11), and shim (12) from adapter (5).



8. **Discard reducer (7) and filter (9).**



FOLLOW-ON MAINTENANCE:

None

END OF TASK

8-81 CLEAN N0. 4 AND 5 BEARING FILTER 8-81

INITIAL SETUP

Applicable Configuration:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Goggles
Compressed Air Source

Personnel Required:
68510 Aircraft Powerplant Repairer

Materials:
Dry Cleaning Solvent (E17)
Gloves (E20)
Lint-Free Cloth (E26)

Equipment Condition:
Off Engine Task
No. 4 and 5 Bearing Filter Removed (Task 8-80)

General Saftey Instructions:

WARNING

Dry cleaning solvent (E17) is flammable and toxic. It can irritate skin and cause burns. Use only in well-ventilated area, away from heat and open flame. In case of contact, immediately flush skin or eyes with water for at least 15 minutes. Get medical attention for eyes.

1. Wear gloves (E20). **Clean No. 4 and 5 bearing filter (1).** Use brush and dry cleaning solvent (E17).

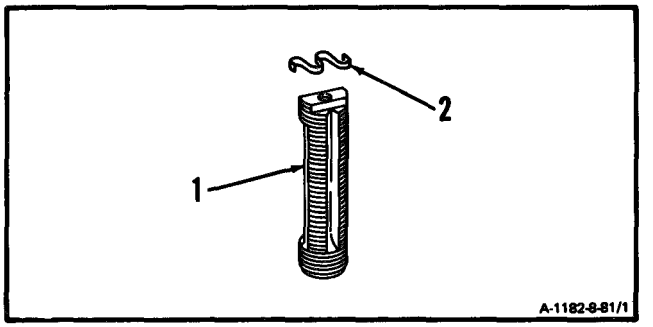
2. Clean spring (2). Immerse in dry cleaning solvent (E17) and agitate.

WARNING

When using compressed air for cleaning, use approved protective equipment for eyes and face. Do not use more than 30 psig air pressure. Do not direct air toward yourself or another person. Failure to comply could result in injury to eyes or skin. In case of injury, get medical attention.

3. Wear goggles. **Blow dry No. 4 and 5 bearing filter (1).** Use clean, dry compressed air.

4. Wipe spring (2) dry. Use clean, dry lint-free cloth (E26).



FOLLOW-ON MAINTENANCE:

inspect No. 4 and 5 Bearing Filter (Task 8-82).

END OF TASK

8-82 INSPECT N0. 4 AND 5 BEARING FILTER 8-82

INITIAL SETUP

Applicable Configurations:
All

Tools:
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

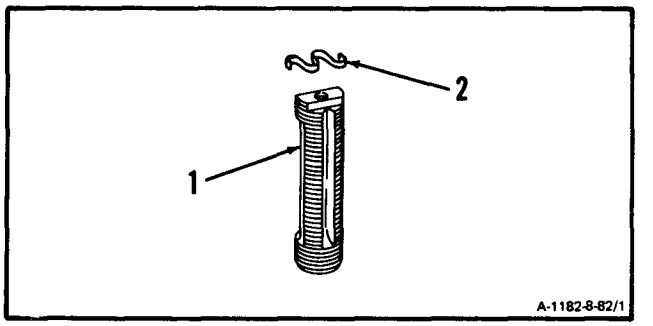
Materials:
None

Personnel Required:
68B30 Aircraft Powerplant Inspector

Equipment Condition
Off Engine Task

1. **Inspect No. 4 and 5 bearing filter (1).** There shall be no nicks, tears, or broken segments.

2. Inspect spring (2). Spring shall not be broken.



FOLLOW-ON MAINTENANCE:

None

END OF TASK

8-83 INSTALL NO. 4 AND 5 BEARING FILTER

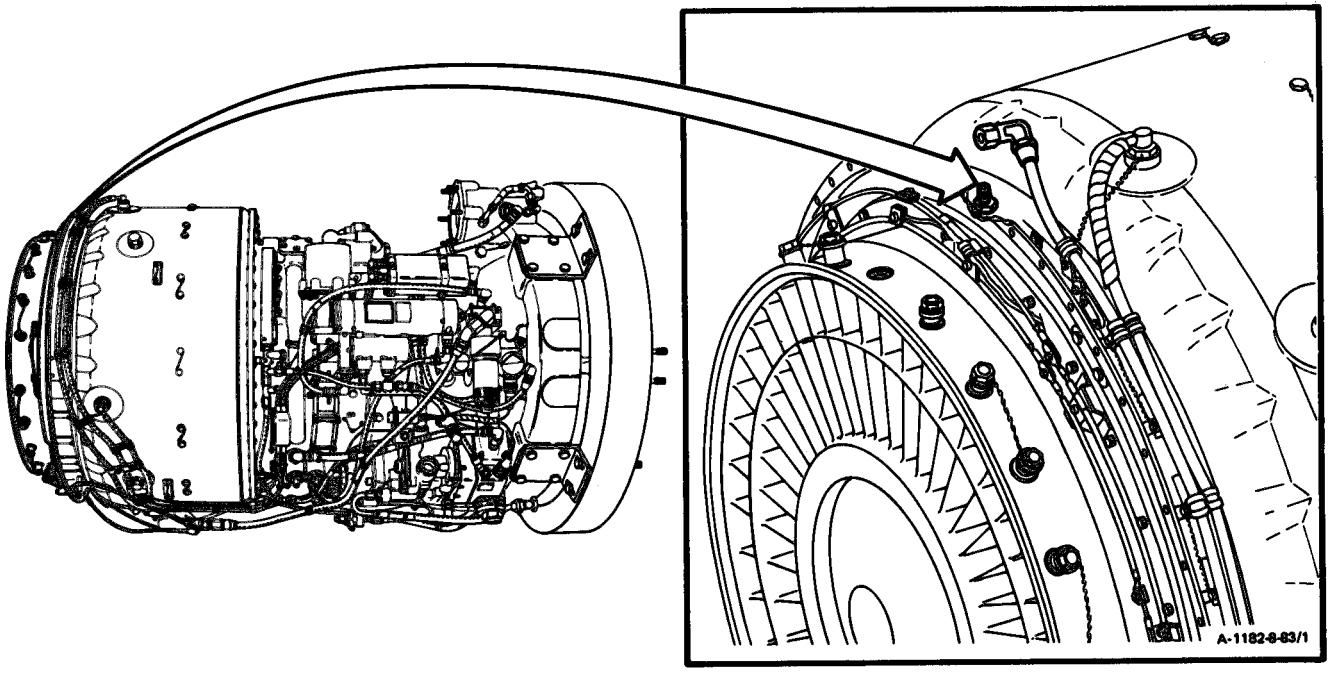
INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114
Open-End Wrench (T53)
Torque Wrench, 30-150 Inch-Pounds
Outside Micrometer Caliper Set
Goggles

Materials:
Lockwire (E29)

Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector



GO TO NEXT PAGE

8-83 INSTALL NO. 4 AND 5 BEARING FILTER (Continued) 8-83

NOTE

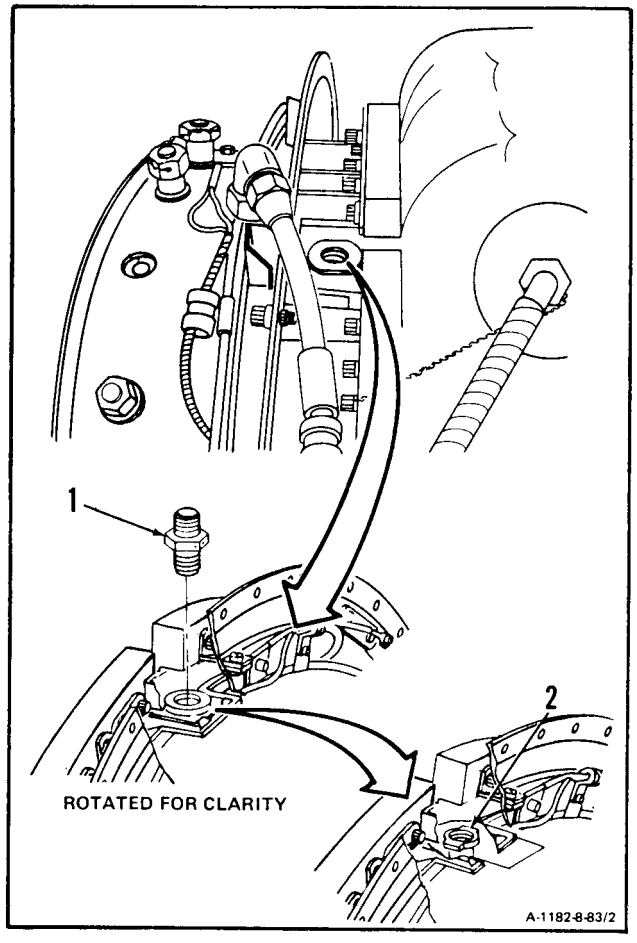
If reducer was removed in Task 8-80, perform steps 1 thru 3. If reducer was not removed, omit steps 1 thru 3.

1 **Determine shims needed under reducer (1)** as follows:

CAUTION

Do not tighten reducer in following step. Tightening of reducer may damage internal oil tube.

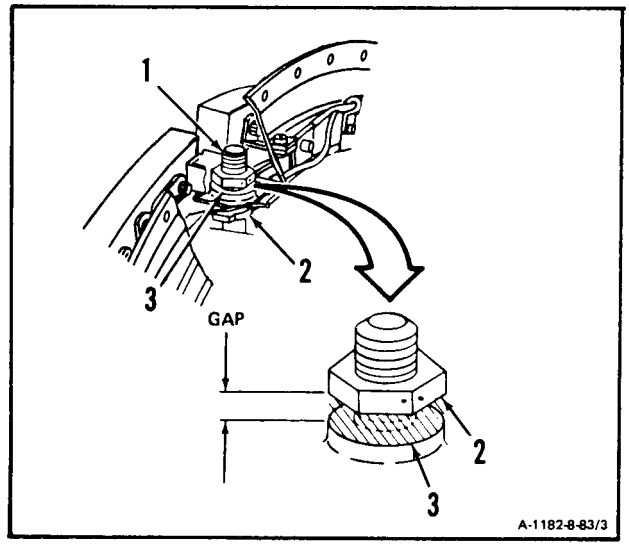
a. Thread reducer (1) in adapter (2) until it is seated.



CAUTION

In following step, fireshield must be seated against adapter to obtain correct measurement. Failure to do so will result in incorrect gap.

b. Seat fireshield section (3) against adapter (2) and measure gap between fireshield section and reducer (1).



GO TO NEXT PAGE

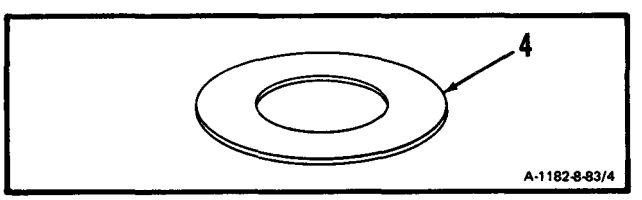
8-83 INSTALL N0. 4 AND 5 BEARING FILTER (Continued)

c. Find gap measured in shim selection table. Read across table to find shim thickness needed.

SHIM SELECTION TABLE

IF GAP MEASURES	SHIM THICKNESS REQUIRED
INCH	INCH
0.060	NONE
0.061	NONE
0.062	0.003 to 0.005
0.063	0.003 to 0.005
0.064	0.003 to 0.005
0.065	0.006 to 0.010
0.066	0.006 to 0.010
0.067	0.006 to 0.010
0.068	0.008 to 0.012
0.069	0.008 to 0.012
0.070	0.008 to 0.012
0.071	0.009 to 0.015
0.072	0.011 to 0.017
0.073	0.011 to 0.017
0.074	0.011 to 0.017
0.075	0.012 to 0.020
0.076	0.014 to 0.022
0.077	0.014 to 0.022
0.078	0.016 to 0.024
0.079	0.016 to 0.024
0.080	0.016 to 0.024
0.081	0.016 to 0.024
0.082	0.019 to 0.029
0.083	0.019 to 0.029
0.084	0.019 to 0.029
0.085	0.022 to 0.034
0.086	0.022 to 0.034
0.087	0.022 to 0.034
0.088	0.022 to 0.034
0.089	0.024 to 0.036
0.090	0.024 to 0.035

d. Measure thickness of shims (4). Check against shim selection table. Use outside micrometer caliper.



GO TO NEXT PAGE

8-83 INSTALL NO. 4 AND 5 BEARING FILTER (Continued) 8-83

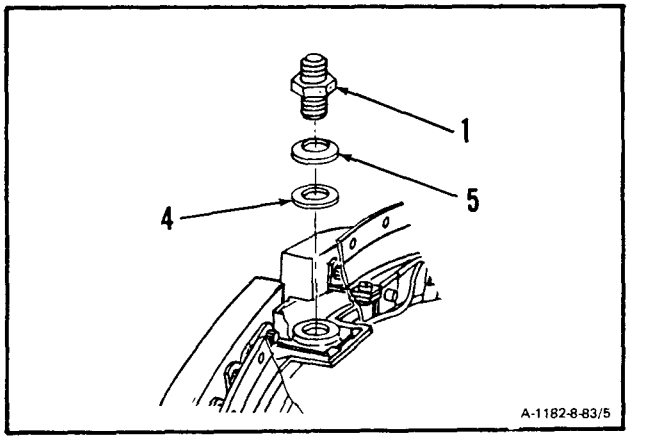
CAUTION

Concave side of washer must face fire-shield section. Failure to comply will place wrong tension on internal oil tube.

CAUTION

Do not tighten reducer in following step. Tightening of reducer may damage internal oil tube.

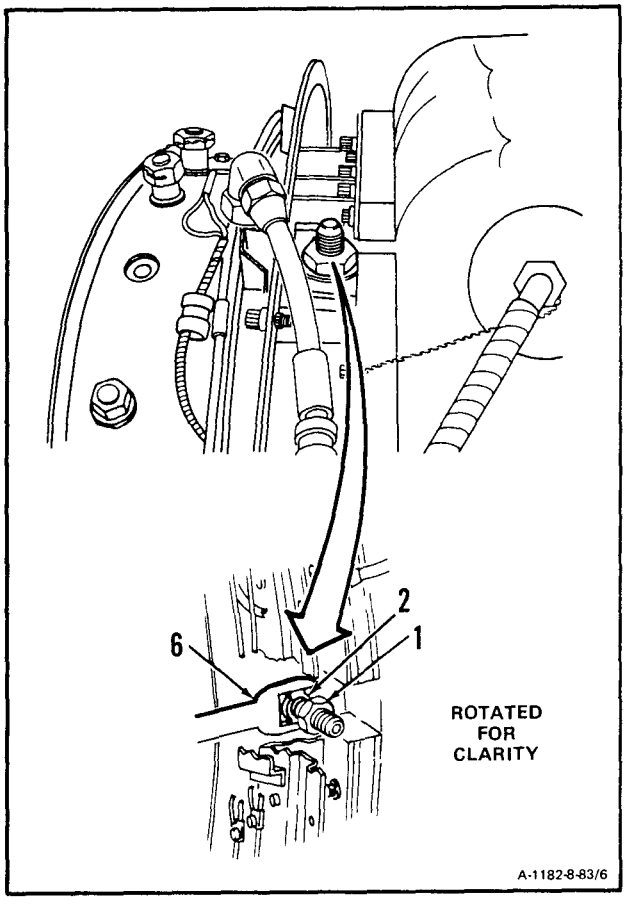
2. Remove reducer (1). **Loosely install shims (4), washer (5),** concave side down, **and reducer (1).**



CAUTION

Adapter must be held firmly when tightening reducer. Failure to comply will cause damage to internal tube assembly.

3. Hold adapter (2) with open-end wrench (T53) (6). **Torque reducer (1) to <u>115 inch-pounds.</u>**



GO TO NEXT PAGE

8-83 INSTALL NO. 4 AND 5 BEARING FILTER (Continued) 8-83

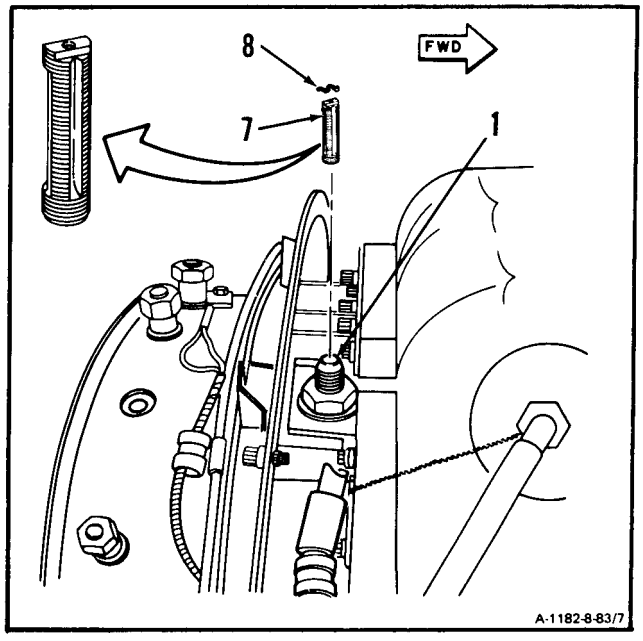
WARNING

In following step, wear goggles when installing spring. Spring may fly apart when installing. Failure to comply may cause serious eye injury. If eye injury occurs, get medical attention.

CAUTION

In following step, be sure that filter is installed in reducer with small diameter hole facing up. Failure to comply will cause less oil flow to bearings and result in bearing failure.

4. Wear goggles. Install No. 4 and 5 bearing filter (7) and spring (8) in reducer (1).

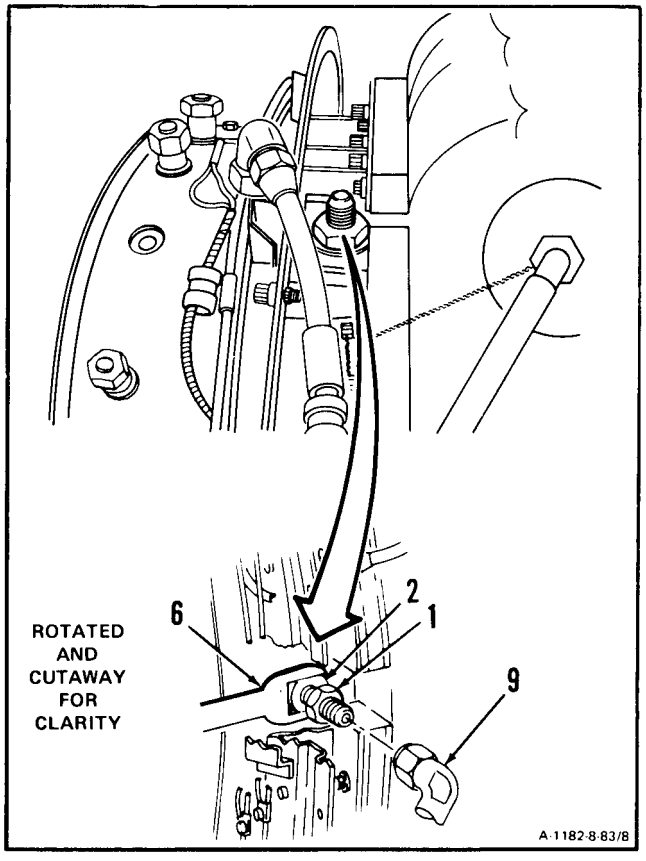


CAUTION

In following step, hold No. 4 and 5 bearing lube adapter using open-end wrench (T53). Failure to use wrench may result in damage and dislocation of oil transfer tube resulting in oil leaks.

5. Place open-end wrench (T53) (6) on adapter (2).

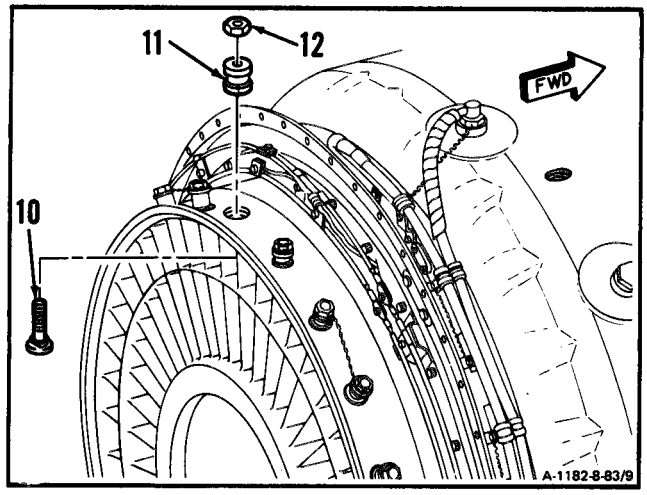
6. **Install hose assembly (9)** on reducer (1).



GO TO NEXT PAGE

8-83 INSTALL NO. 4 AND 5 BEARING FILTER (Continued)

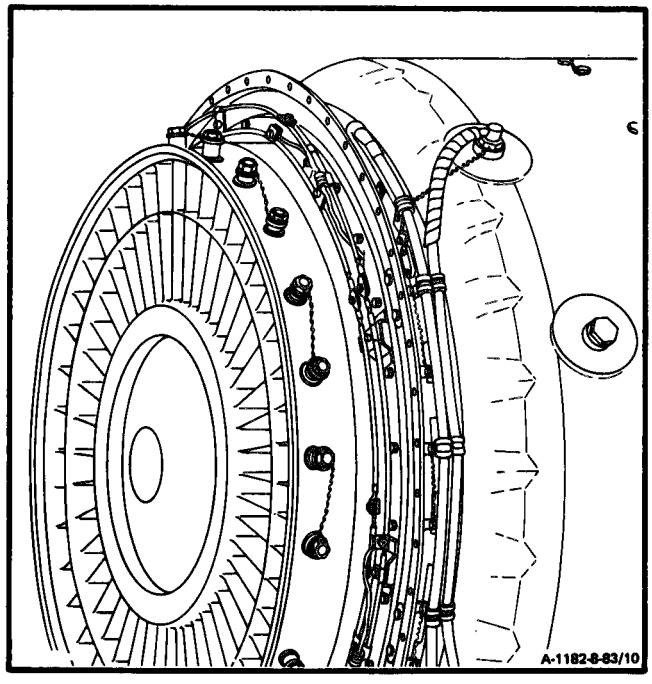
7. **Install bolt (10), spacer (11), and nut (12). Torque nut (12) to 125 inch-pounds.** Lockwire nut (12). Use lockwire (E29).



INSPECT

FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-84 REMOVE OIL DRAIN COCK

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Container, 1-Quart

Materials:
Wiping Rag (E58)

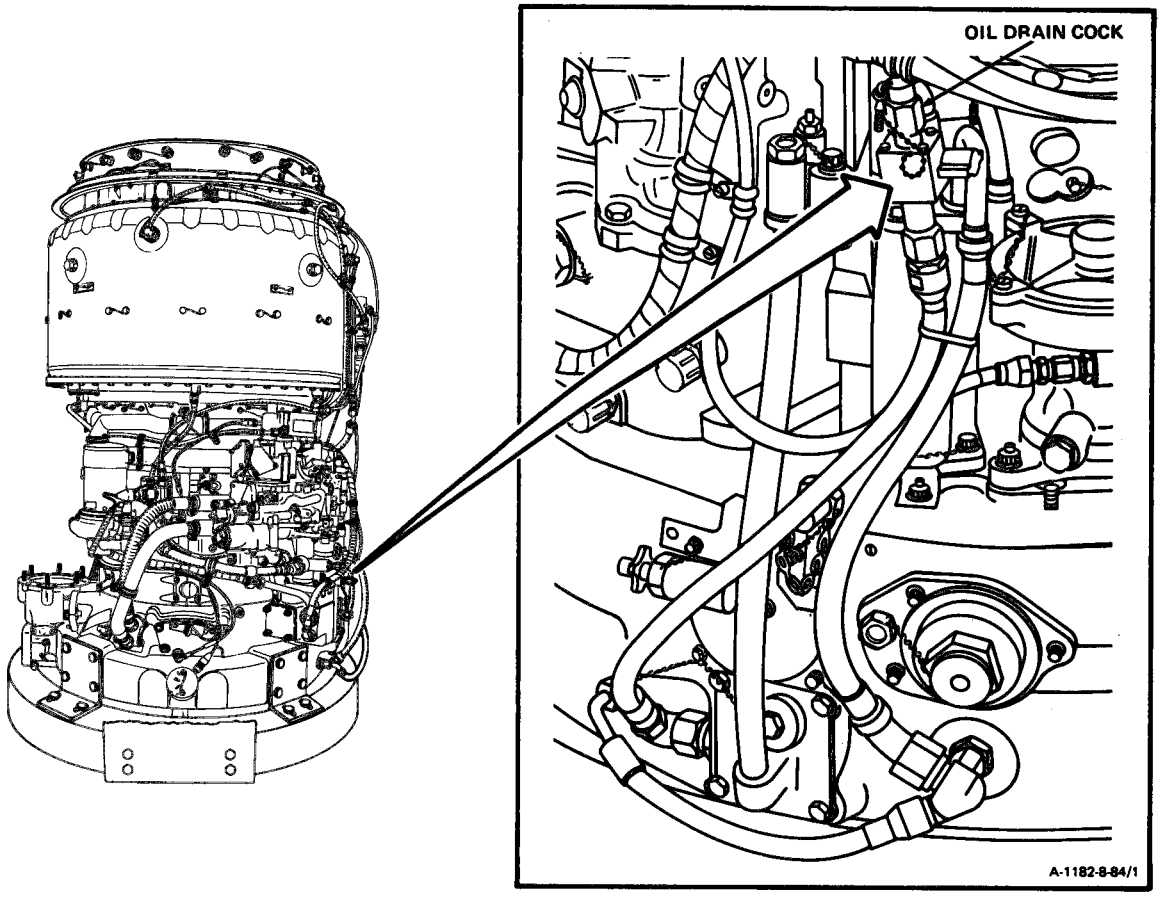
Personnel Required:
68510 Aircraft Powerplant Repairer

Equipment Condition:
Engine Oil System Drained (Task 1-75)

General Safety Instructions:

WARNING

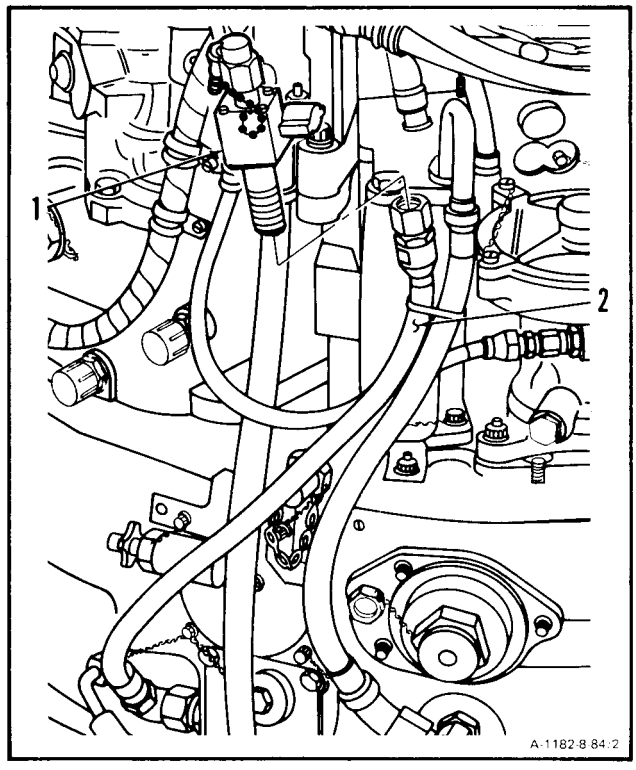
Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventailted areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin, and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.



GO TO NEXT PAGE

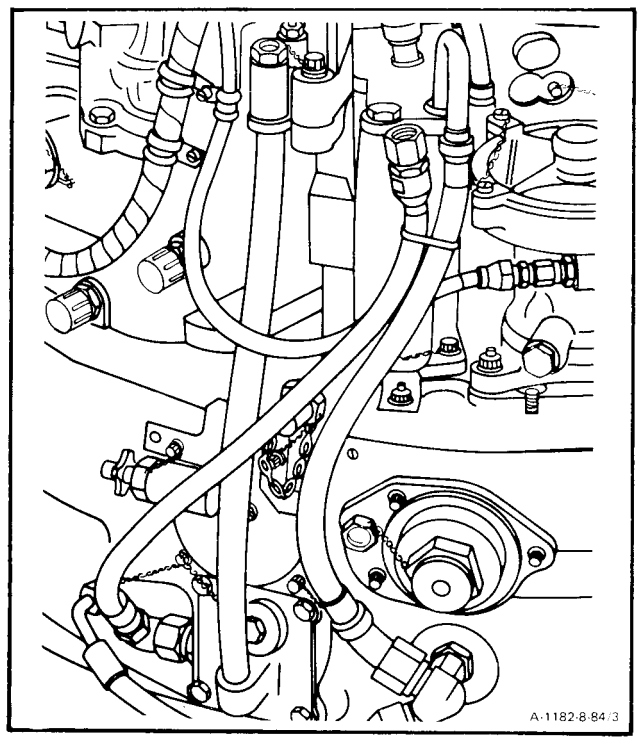
8-84 REMOVE OIL DRAIN COCK (Continued)

1. **Remove oil drain cock (1)** from hose assembly (2).



FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-85 CLEAN OIL DRAIN COCK 8-85

INITIAL SETUP

Applicable Configurations:
All

Tools:
Goggles
Compressed Air Source

Materials:
Dry Cleaning Solvent (E17)
Gloves (E20)
Lint-Free Cloth (E269

Personnel Required:
68510 Aircraft Powerplant Repairer

Equipment Condition:
Off Engine Task
Oil Drain Cock Removed (Task 8-84)

WARNING

Dry cleaning solvent (E17) is flammable and toxic. It can irritate skin and cause burns. Use only in well-ventilatad area, away from heat and open flame. In case of contact, immediately flush skin or eyes with water for at least 15 minutes. Get medical attention for eyes.

1. Remove cap (1).

NOTE

Make sure valve is in open position in following step 2.

2. **Clean oil drain cock (2)** as follows:

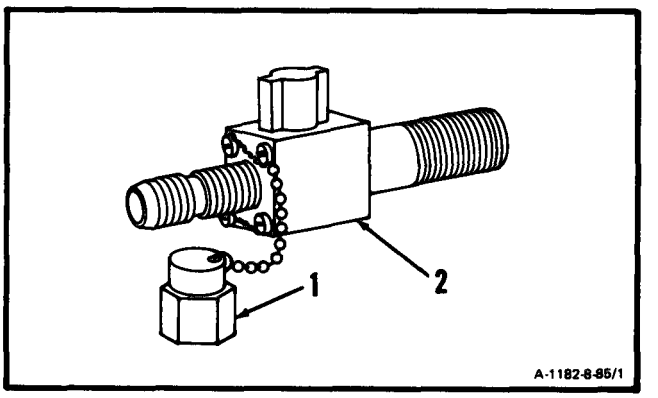
a. Wear gloves (E20). Immerse in dry cleaning solvent (E17) and agitate. Use brush on external surfaces.

b. Use lint-free cloth (E26) to remove solvent.

WARNING

When using compresssed air for cleaning, use protective equipment for eyes and face. Do not use more than 30 psig air pressure. Do not direct air toward yourself or another person. Failure to comply could result in injury to eyes or skin. In case of injury get medical attention.

c. Wear goggles and **blow dry internal passage.** Use clean, dry compressed air.



GO TO NEXT PAGE

8-85 CLEAN OIL DRAIN COCK (Continued) **8-85**

FOLLOW-ON MAINTENANCE:

Inspect Oil Drain Cock (Task 8-86).

END OF TASK

8-86 INSPECT OIL DRAIN COCK

INITIAL SETUP

Applicable Configurations:
All

Tools:
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
None

Personnel Required:
68B30 Aircraft Powerplant Inspector

Equipment Condition:
Off Engine Task

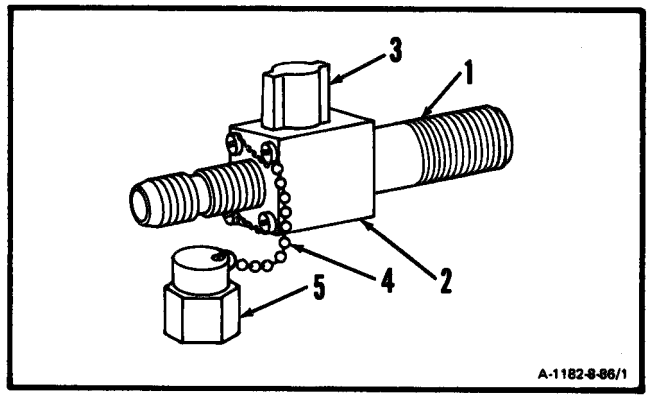
1. **Inspect oil drain cock (1)** as follows:

   a. Inspect housing (2). There shall be no cracks.

   b. Turn valve (3). There shall be no binding.

   c. Inspect chain (4). There shall be no broken links.

2. Install cap (5).



FOLLOW-ON MAINTENANCE:

None

END OF TASK

8-87 INSTALL OIL DRAIN COCK

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspector's Tool Kit,
NSN 5180-00-323-5114

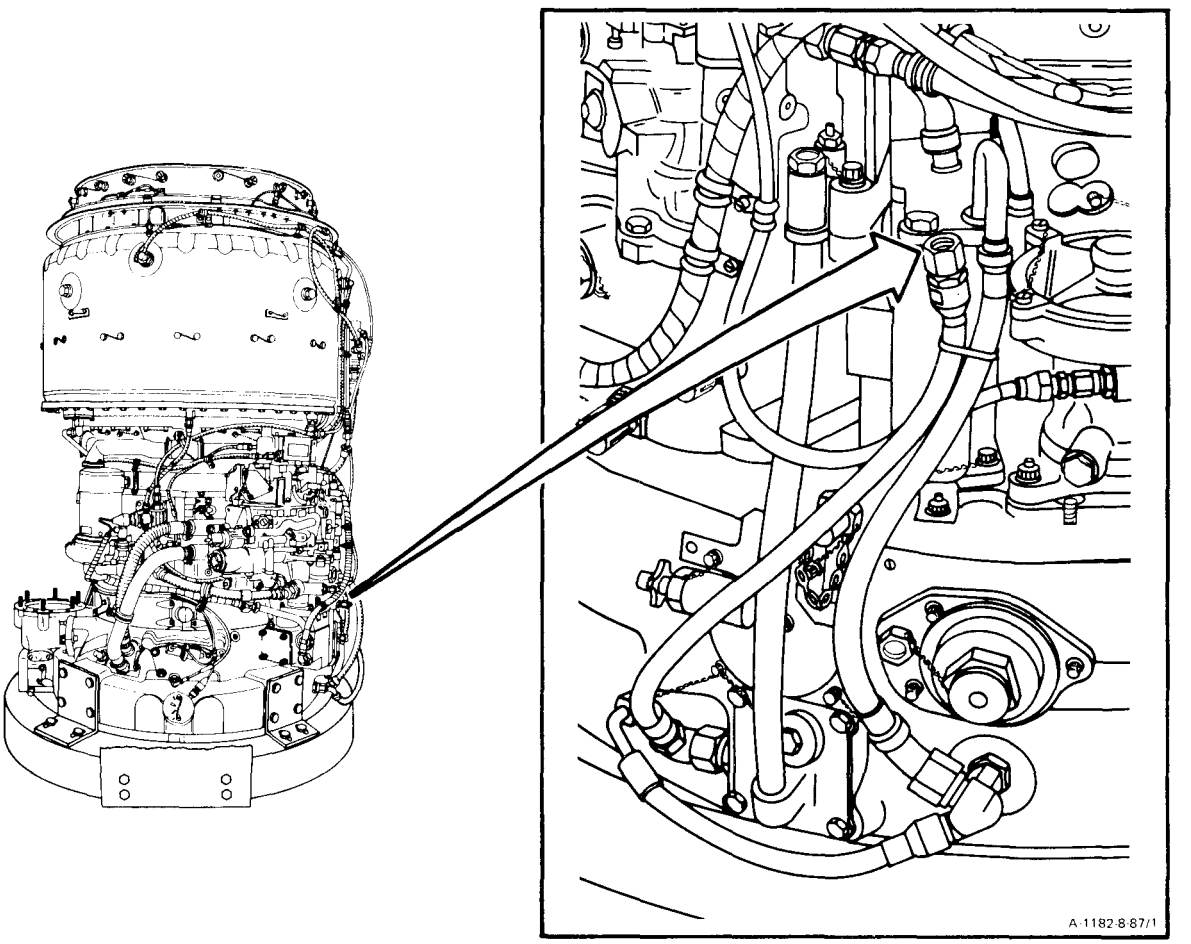
Materials:
Wiping Rag (E58)

Personnel Required:
68610 Aircraft Powerplant Repairer
68630 Aircraft Powerplant Inspector

General Safety Instructions:

WARNING

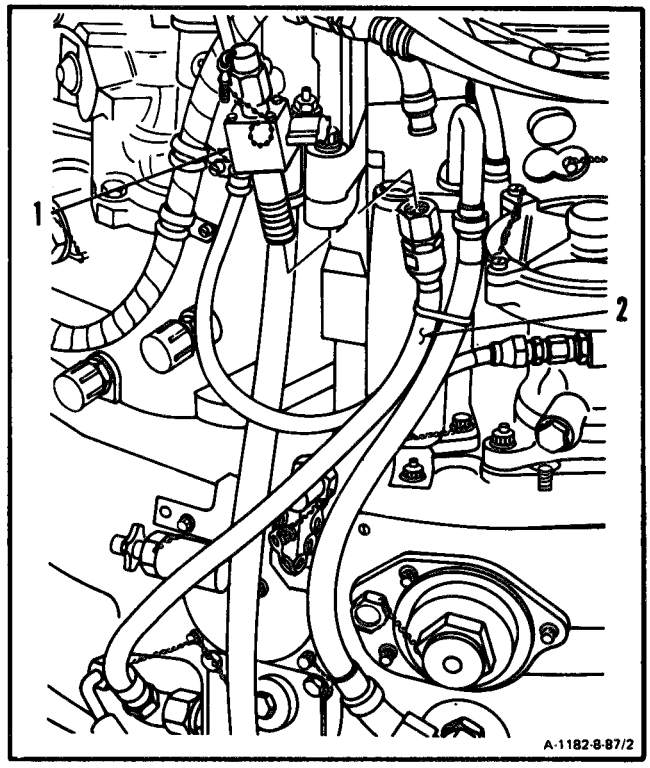
Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin, and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.



GO TO NEXT PAGE

8-87 INSTALL OIL DRAIN COCK (Continued)

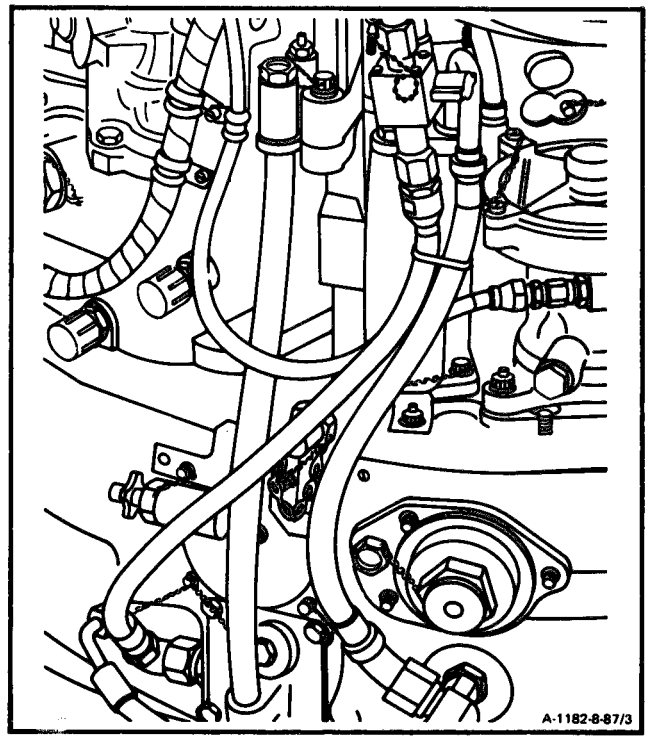
1. **Install oil drain cock (1)** on hose assembly (2).



INSPECT

FOLLOW-ON MAINTENANCE:

Service Engine Oil System (Task 1-74).



END OF TASK

8-88 REMOVE CHIP DETECTOR

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944

Materials:
Wiping Rag (E58)

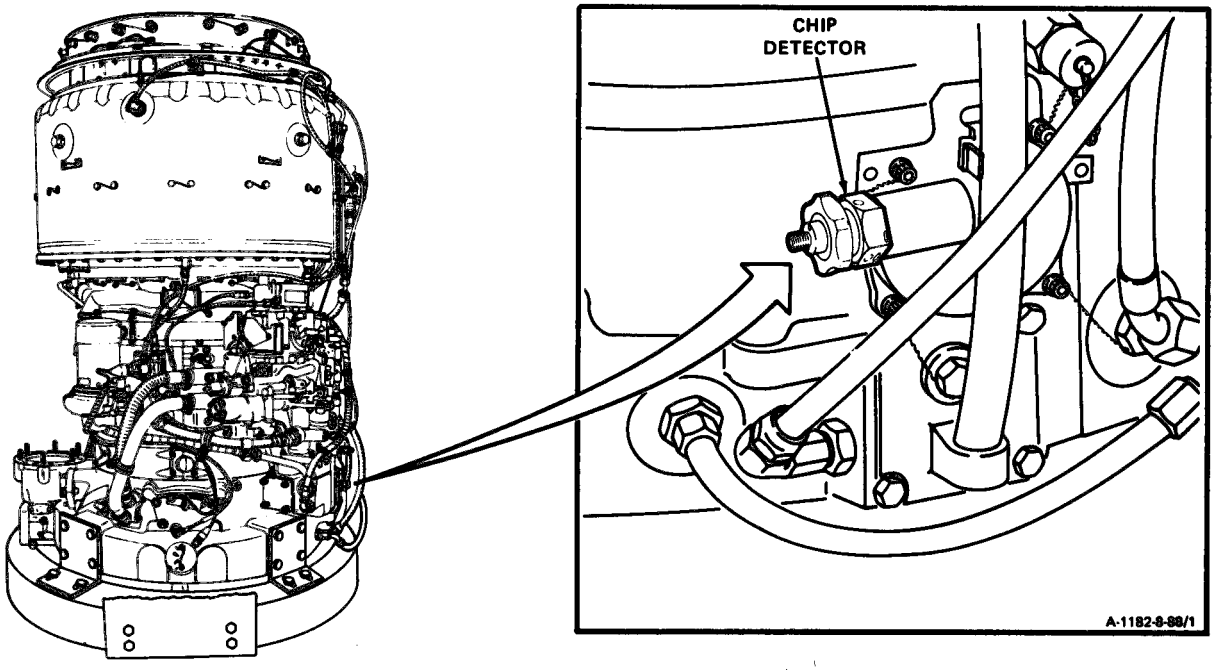
Personnel Required:
68B10 Aircraft Powerplant Repairer

Equipment Condition:
Engine Oil System Drained (Task 1-75)

General Safety Instructions:

WARNING

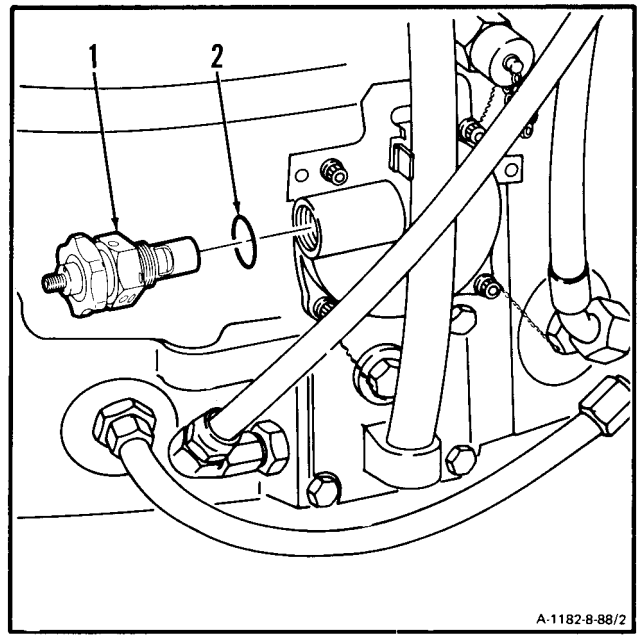
Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin, and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.



GO TO NEXT PAGE

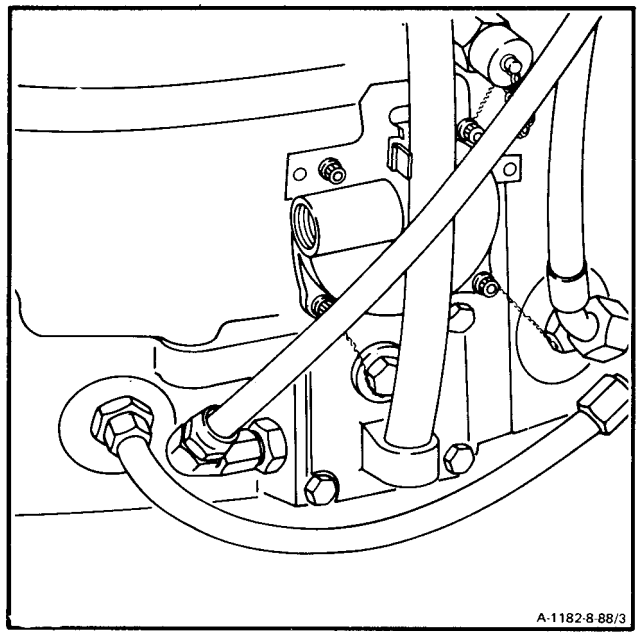
8-88 REMOVE CHIP DETECTOR (Continued)

1. **Remove** lockwire, **chip detector (1) and packing (2).**



FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-89 DISASSEMBLE CHIP DETECTOR

INITIAL SETUP

Applicable Configurations:
All

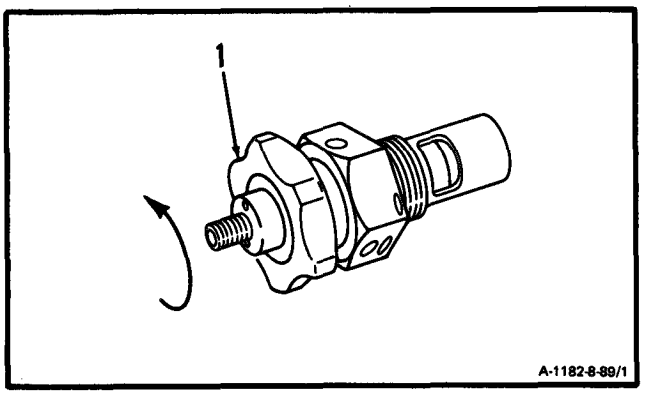
Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944

Materials:
None

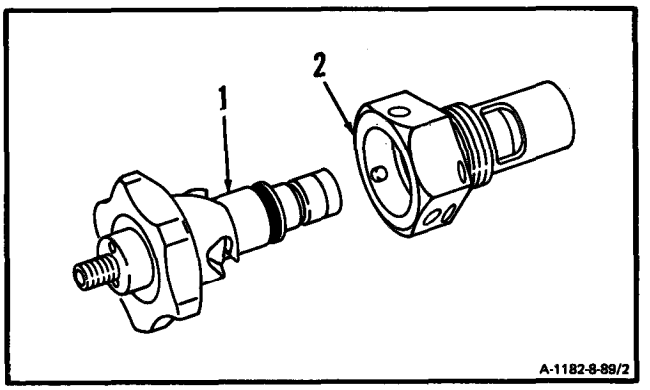
Personnel Required:
68B10 Aircraft Powerplant Repairer

Equipment Condition:
Off Engine Task
Engine Oil System Drained (Task 1-75)
Chip Detector Removed (Task 8-88)

1. **Unlock plug (1). Push in on plug and turn counterclockwise.**



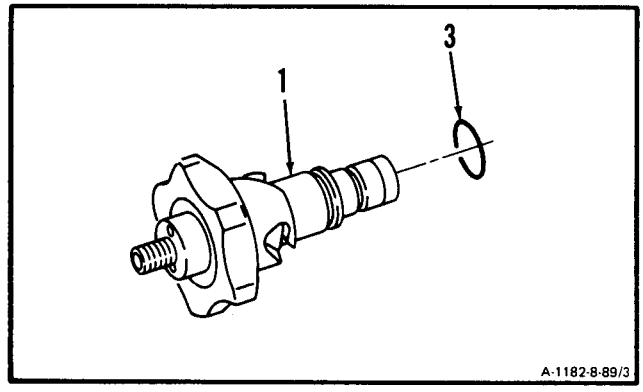
2. **Remove plug (1)** from housing (2).



GO TO NEXT PAGE

8-89 DISASSEMBLE CHIP DETECTOR (Continued) 8-89

3. **Remove packing (3)** from plug (1).



FOLLOW-ON MAINTENANCE:

None

END OF TASK

8-90 CLEAN CHIP DETECTOR

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Goggles
Compressed Air Source

Materials:
Dry Cleaning Solvent (E17)
Gloves (E20)
Lint-Free Cloth (E26)

Personnel Required:
68B10 Aircraft Powerplant Repairer

Equipment Condition:
Off Engine Task
Engine Oil System Drained (Task 1-75)
Chip Detector Removed (Task 8-88)
Chip Detector Disassembled (Task 8-89)

General Safety Instructions:

WARNING

Dry cleaning solvent (E17) is flammable and toxic. It can irritate skin and cause burns. Use only in well-ventilated area, away from heat end open flame. In case of contact, immediately flush skin or eyes with water for at least 15 minutes. Get medical attention for eyes.

WARNING

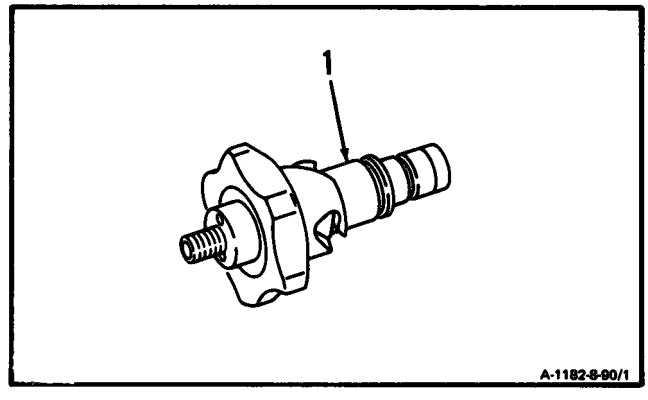
When using compressed air for cleaning, use approved protective equipment for eyes and face. Do not use more than 30 psig air pressure. Do not direct air toward yourself or another person. Failure to comply could result in injury to eyes or skin. In case of injury, get medical attention.

1. **Clean** plug (1) as follows:

   a. Wear gloves (E20). Immerse plug (1) in dry cleaning solvent (E17) and agitate. Use brush on external surfaces.

   b. Use lint-free cloth (E26) to remove solvent.

   c. Wear goggles. **Blow dry plug.** Use clean, dry compressed air.



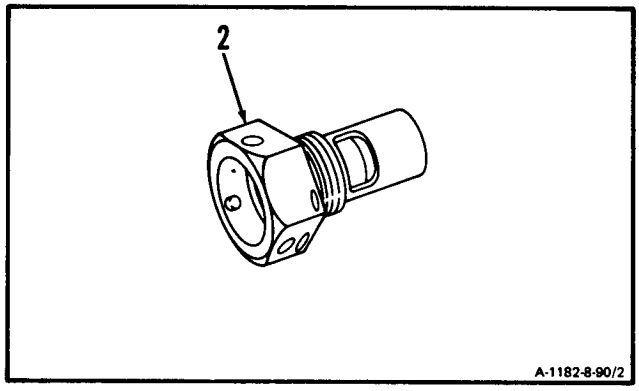
GO TO NEXT PAGE

2. **Clean housing (2)** as follows:

   a. Immerse in dry cleaning solvent (E17) and agitate. Use brush on external surfaces.

   b. Use lint-free cloth (E26) to remove solvent.

   c. Wear goggles and **blow dry internal passage.** Use clean, dry compressed air.



FOLLOW-ON MAINTENANCE:

Inspect Chip Detector (Task 8-91).

END OF TASK

8-91 INSPECT CHIP DETECTOR 8-91

INITIAL SETUP

Applicable Configurations:
All

Tools:
Technical Inspection Tool Kit,
NSN 5180-00-323-5114
Steel Nut, 1/4-28

Materials
None

Personnel Required:
68B30 Aircraft Powerplant Inspector

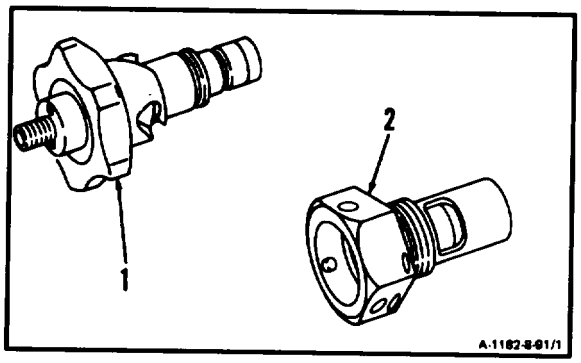
Equipment Condition:
Off Engine Task

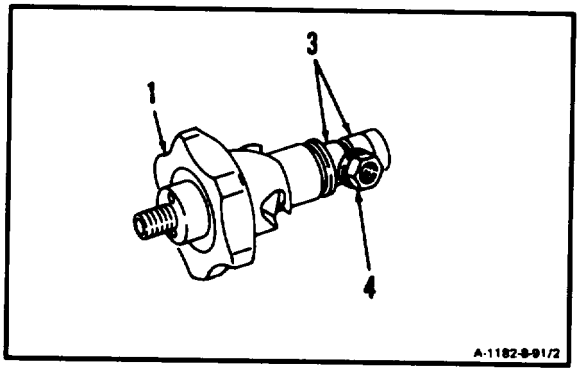
1. **Inspect plug (1) and housing (2).** There shall be no cracks.

NOTE

Do not drain oil solely for the purpose of removing the housing (2) for inspection. Inspect housing (2) for cracks without removal from engine when inspection is performed while engine oil is not drained.

2. **Check strength of magnets (3)** on plug (1) by placing 1/4-28 steel nut (4) against them. Magnets (3) shall be strong enough to support weight of steel nut (4).





FOLLOW-ON MAINTENANCE:
None

END OF TASK

8-92 TEST CHIP DETECTOR 8-92

INITIAL SETUP

Applicable Configurations:
All

Tools:
Multimeter

Materials:
None

Personnel Required:
68B10 Aircraft Powerplant Repairer

Equipment Condition:
Chip Detector Assembled (Task 8-93)

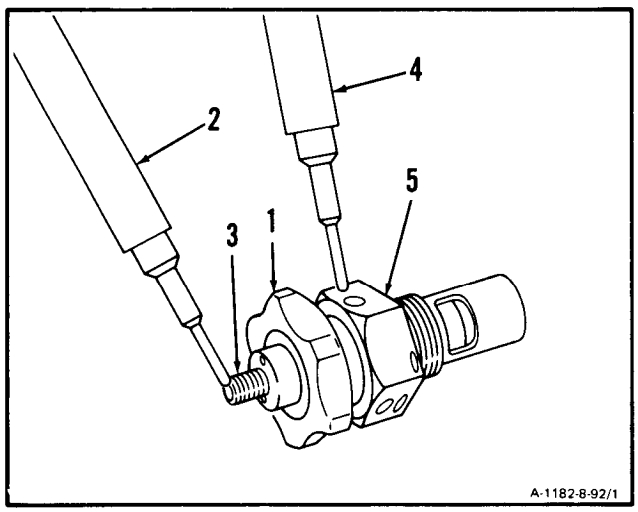
1. Measure insulation resistance of chip detector (1) as follows: Use multi meter.

a. Set multi meter range switch to R x 1000.

b. Touch red probe (2) to stud (3).

c. Touch black probe (4) to housing (5).

d. Meter shall indicate 10,000 ohms minimum.



FOLLOW-ON MAINTENANCE:

None

END OF TASK

8-93 ASSEMBLE CHIP DETECTOR 8-93

INITIAL SETUP

Applicable Configurations:
All

Tools:
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
None

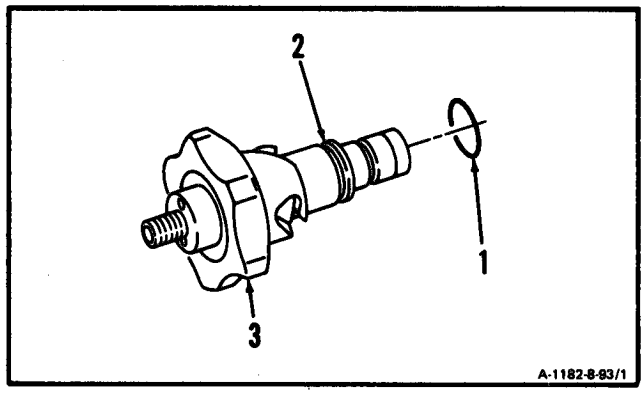
Parts:
Packing

Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

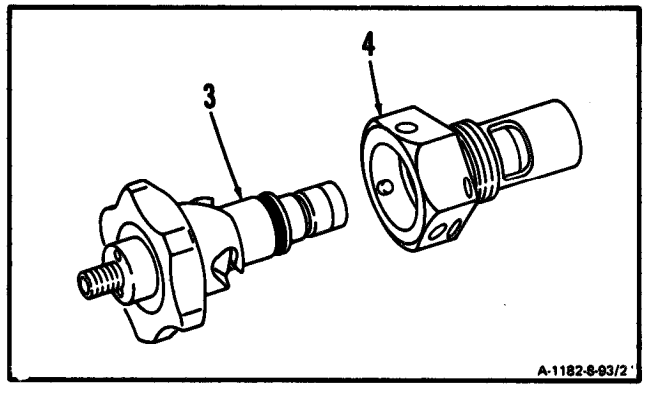
References:
TM 55-2840-254-23P

Equipment Condition:
Off Engine Task

1. **Install packing (1)** in groove (2) on plug (3).



2. **Install plug** (3) in housing (4).



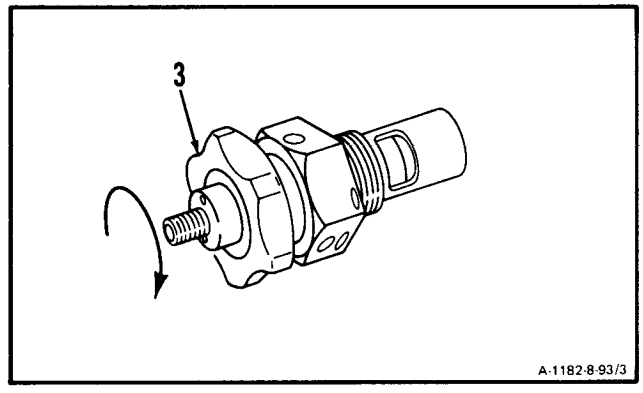
GO TO NEXT PAGE

8-93 ASSEMBLE CHIP DETECTOR (Continued)

CAUTION

Plug shall be fully seated and firmly locked into housing. A loose fitting plug will cause oil leakage, resulting in engine damage.

3. **Lock plug (3)** by pushing and turning plug 1/8-inch clockwise.



INSPECT

FOLLOW-ON MAINTENANCE:

Test Chip Detector (Task 8-92).

END OF TASK

8-94 INSTALL CHIP DETECTOR

INITIAL SETUP

Applicable Configurations:
All

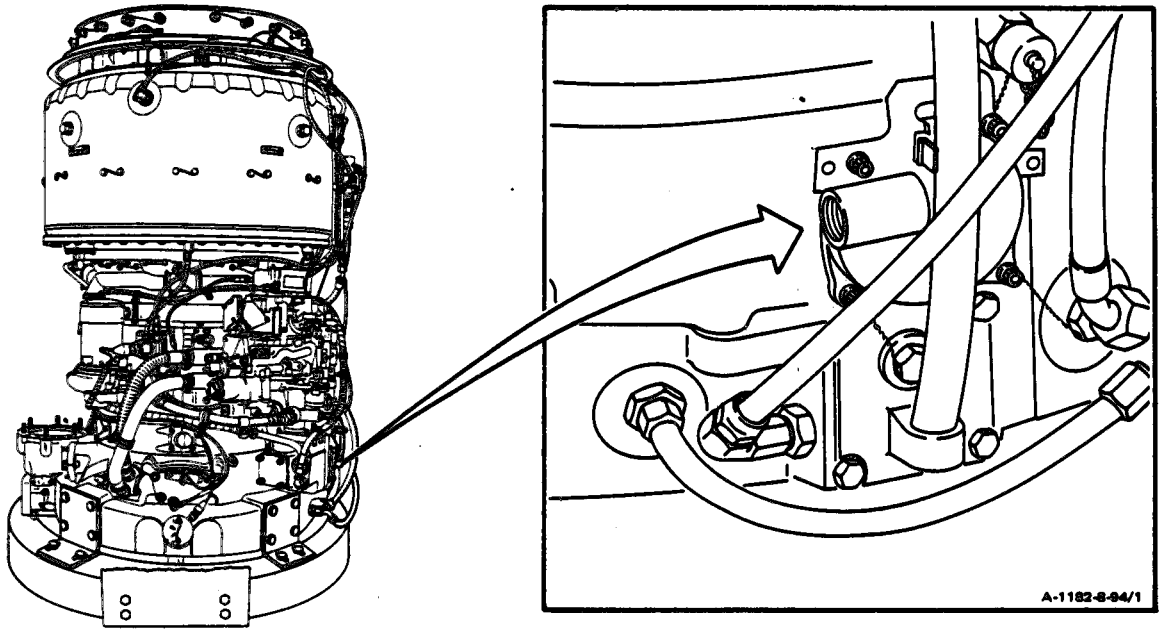
Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114
Crowfoot Attachment, 7/8-Inch
Torque Wrench, 30-150 Inch-Pounds

Materials:
Lockwire (E29)

Parts:
Packing

Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

References:
TM 55-2840-254-23P



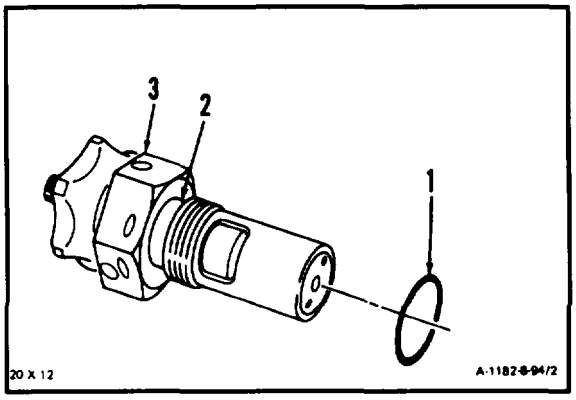
42 X 20

GO TO NEXT PAGE

8-94 INSTALL CHIP DETECTOR (Continued) 8-94

NOTE

If airframe MWO 55-1520-240-50-24 has been complied with, chip detector P/N IB737P must be installed. If MWO has not been complied with, chip detector P/N 2-300-809-01 or K203AG must be used.



1. **Install packing (1)** in groove (2) on chip detector (3).

2. **Install chip detector (3)** in housing (4). **Torque to 95 inch-pounds. Use crowfoot attachment.**

3. Lockwire chip detector (3) to bolt (5). Use lockwire (E29).

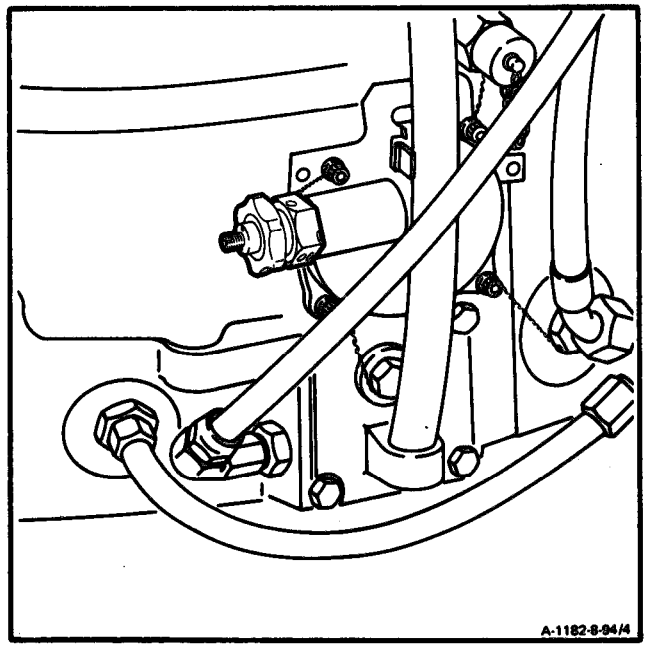
INSPECT

GO TO NEXT PAGE

8-94 INSTALL CHIP DETECTOR (Continued)

FOLLOW-ON MAINTENANCE:

Service Engine Oil System (Task 1-74).



END OF TASK

8-95 REMOVE OIL LEVEL INDICATOR 8-95

INITIAL SETUP

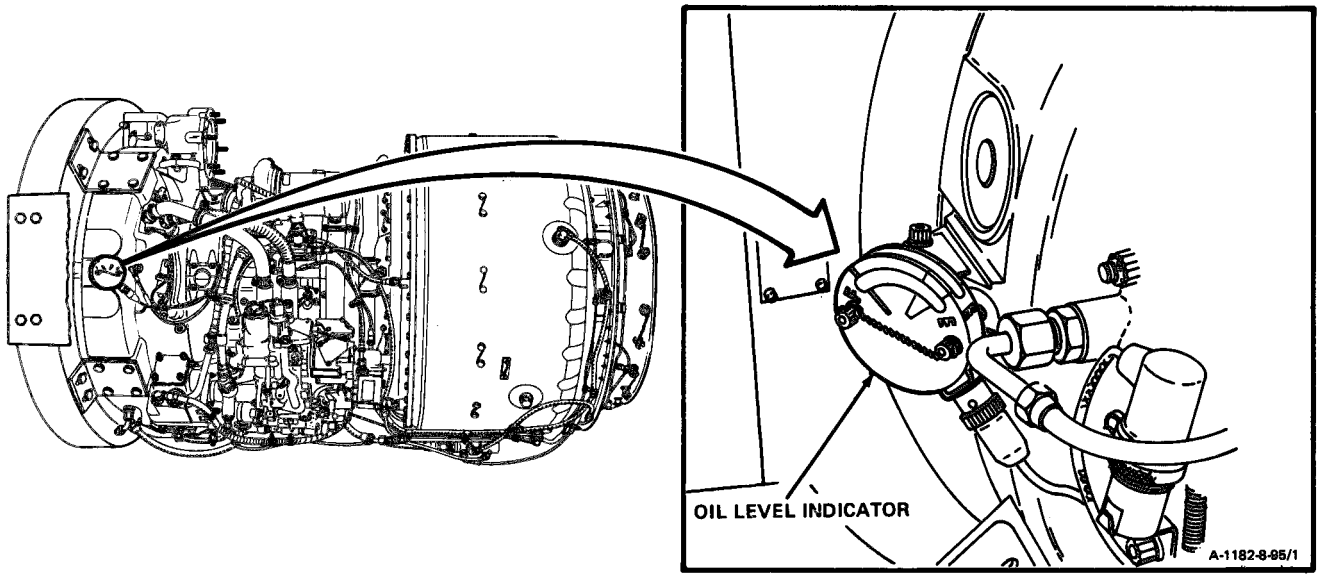
Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944

Materials:
Twine (E47)
Wiping Rag (E58)

Personnel Required:
68B10 Aircraft Powerplant Repairer

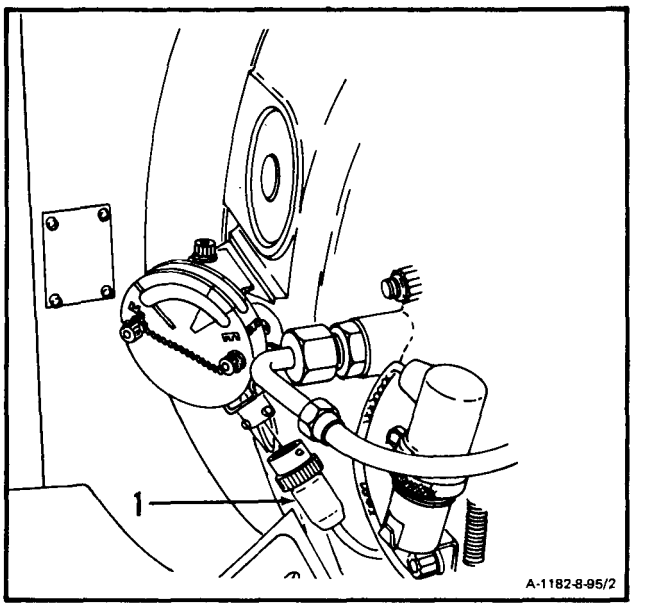
Equipment Condition:
Engine Oil System Drained (Task 1-75)



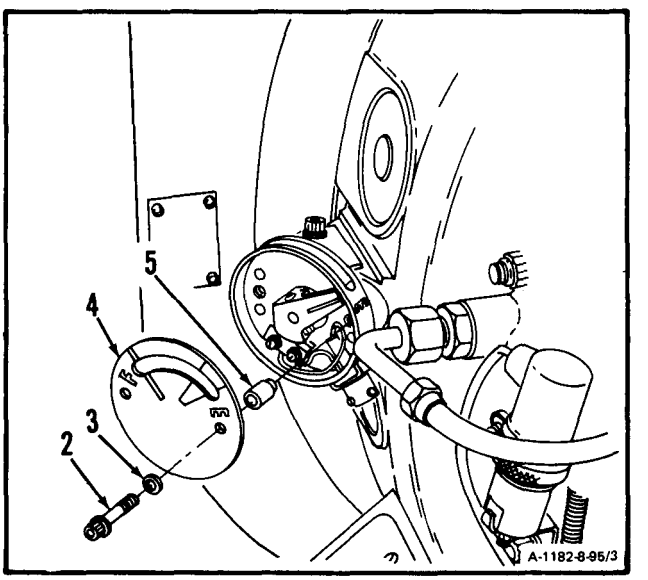
GO TO NEXT PAGE

8-95 REMOVE OIL LEVEL INDICATOR (Continued) 8-95

1. **Disconnect electrical connector (1).**



2. **Remove** lockwire, two bolts (2), two washers (3), **cover (4),** and two spacers (5).



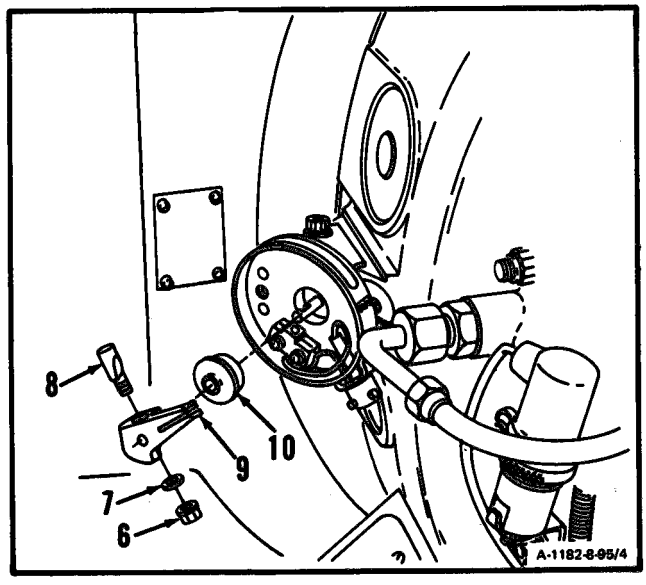
GO TO NEXT PAGE

8-95 REMOVE OIL LEVEL INDICATOR (Continued)

NOTE

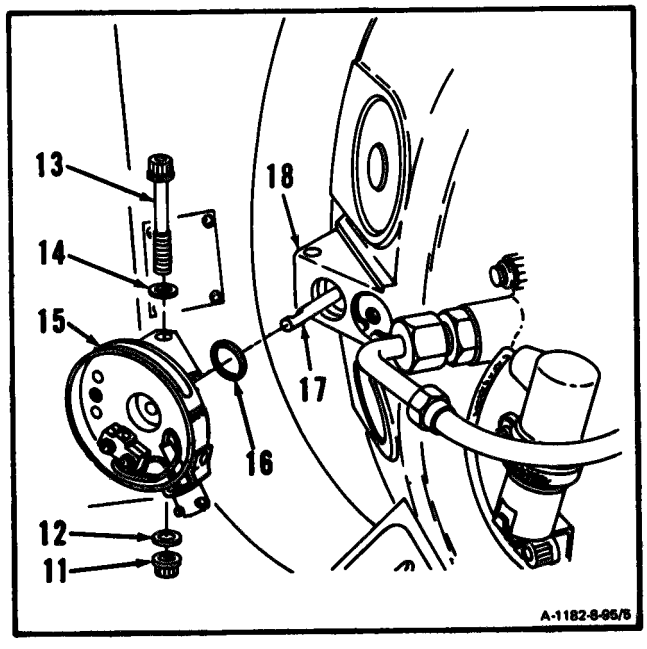
In following steps 3. and 4., do not let shaft of float slip back into housing.

3. **Remove** nut (6), washer **(7), bolt (8), pointer (9),** and washer (10).



4. **Remove** nut (11),washer (12), bolt (13), washer (14), **housing assembly (15),** and packing (16).

5. **Secure shaft (17)** with twine (E47) to keep it from slipping back into inlet housing (18).

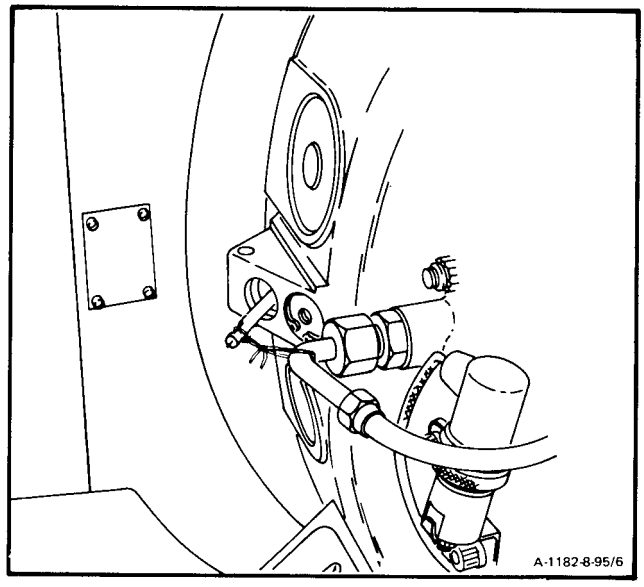


GO TO NEXT PAGE

8-95 REMOVE OIL LEVEL INDICATOR (Continued)

FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-96 DISASSEMBLE OIL LEVEL INDICATOR

INITIAL SETUP

Applicable Configurations:
All

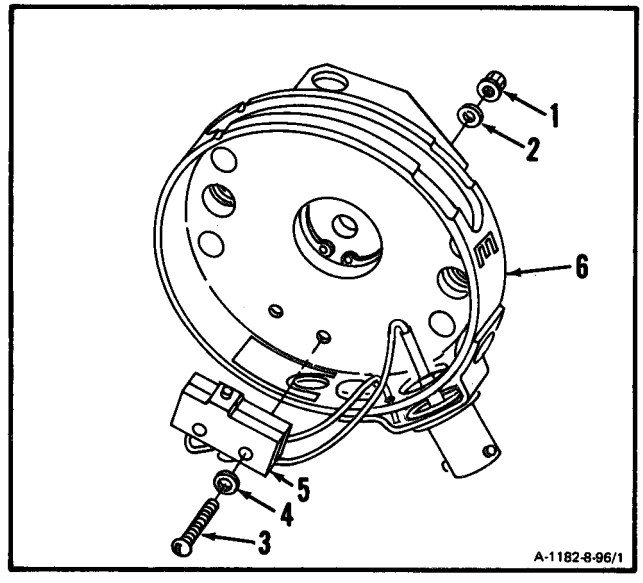
Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Soldering Iron, 15/32-Pound
Twist Drill, 15/64-inch
Retaining Ring Pliers

Materials:
None

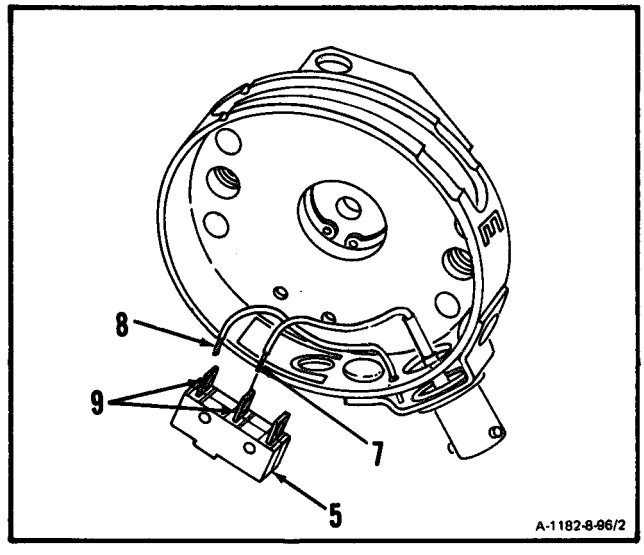
Personnel Required:
68B10 Aircraft Powerplant Repairer
68F10 Aircraft Electrician

Equipment Condition:
Off Engine Task
Oil Level Indicator Removed
(Task 8-95)

1. Remove two nuts (1), two washers (2), two screws (3), two washers (4), and pull switch (5) clear of housing (6).



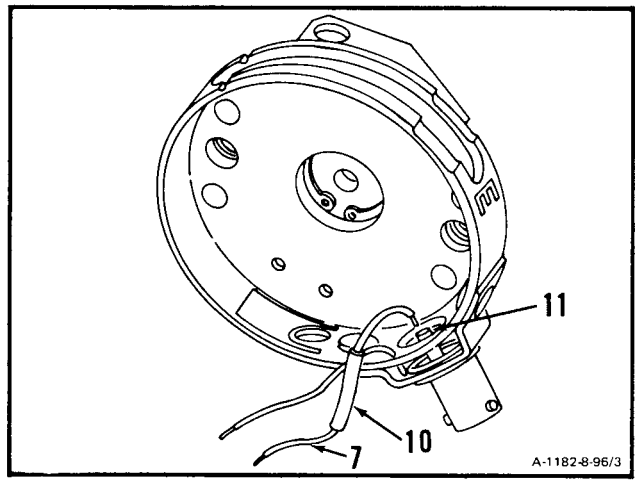
2. Unsolder two wires (7 and 8) from two switch terminals (9) and **remove switch (5).**



GO TO NEXT PAGE

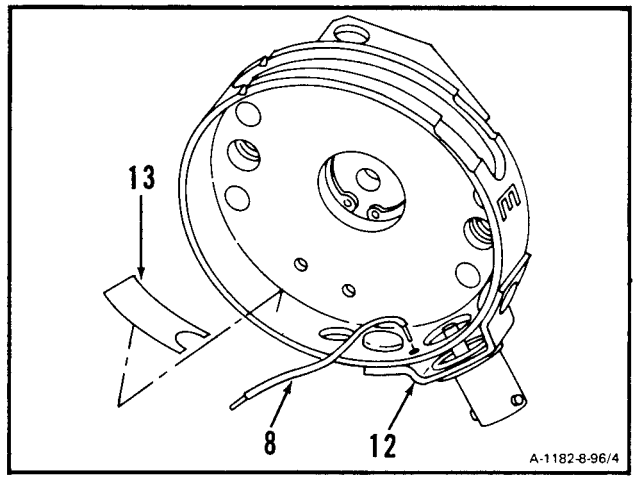
8-96 DISASSEMBLE OIL LEVEL INDICATOR (Continued) 8-96

3. Slide insulation sleeving (10) back along wire (7). Unsolder and **remove wire (7)** from electrical connector pin (11).

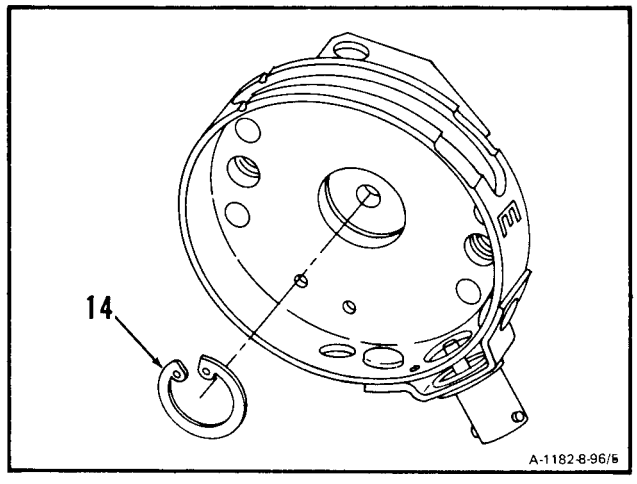


4. Unsolder and **remove wire (8)** from bracket (12).

5. **Remove tape (13).**



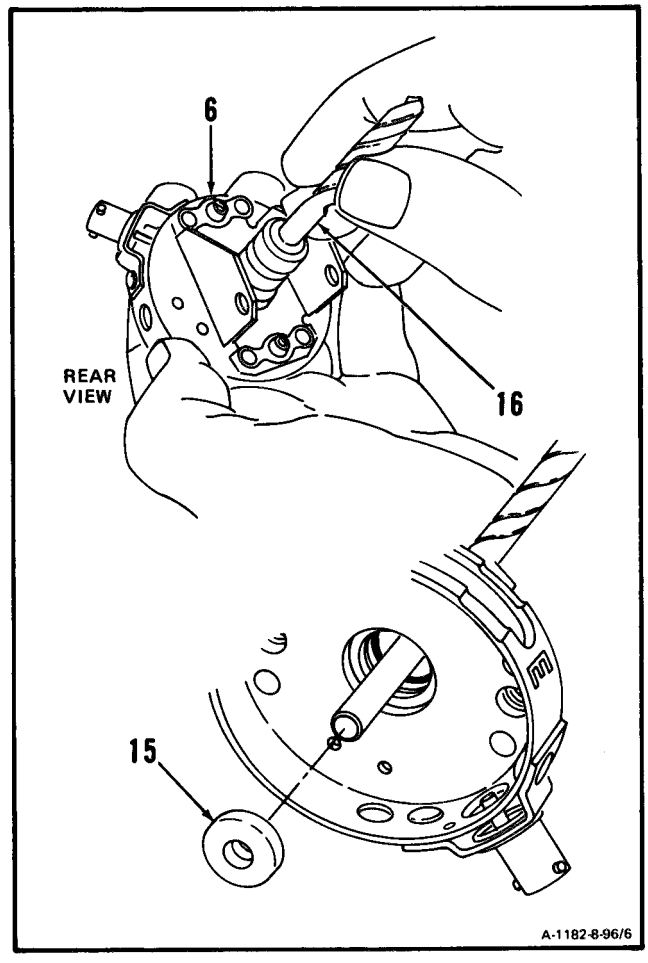
6. **Remove retaining ring (14).** Use retaining ring pliers.



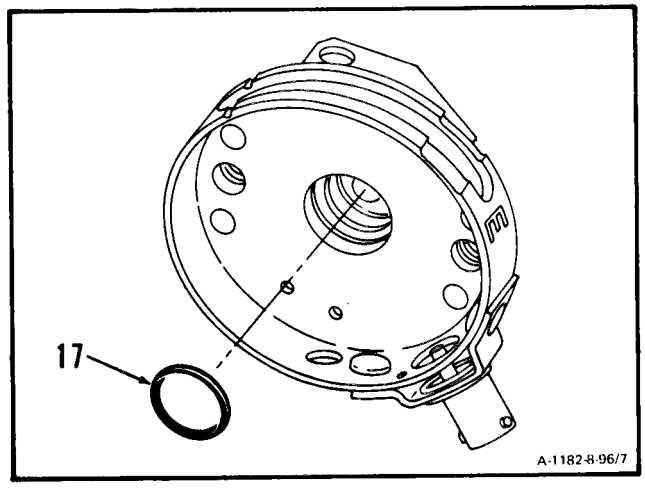
GO TO NEXT PAGE

8-96 DISASSEMBLE OIL LEVEL INDICATOR (Continued)

7. **Remove seal (15).** Push out from rear of housing (6). Use shaft of twist drill (16) as pusher.



8. **Remove packing (17).**



FOLLOW-ON MAINTENANCE:

None

END OF TASK

8-97 CLEAN OIL LEVEL INDICATOR

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit, NSN 5180-00-323-4944
Goggles
Compressed Air Source

Materials:
Dry Cleaning Solvent (E17)
Gloves (E20)
Lint-Free Cloth (E26)

Personnel Required:
68B10 Aircraft Powerplant Repairer

Equipment Condition:
Off Engine Task
Oil Level Indicator Removed (Task 8-95)
Oil Level Indicator Disassembled (Task 8-96)

General Safety Instructions:

WARNING

Dry cleaning solvent (E17) is flammable and toxic. It can irritate skin and cause burns. Use only in well-ventilated area, away from heat and open flame. In case of contact, immediately flush skin or eyes with water for at least 15 minutes. Get medical attention for eyes.

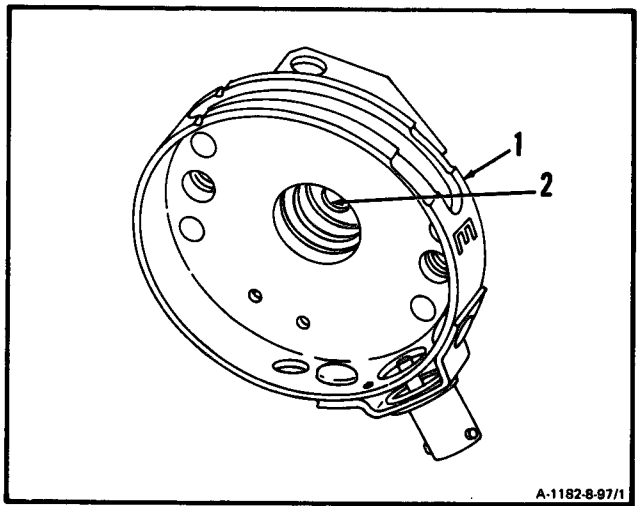
WARNING

When using compressed air for cleaning, use approved protective equipment for eyes and face. Do not use more than 30 psig air pressure. Do not direct air toward yourself or another person. Failure to comply could result in injury to eyes or skin. In case of injury, get medical attention.

1. Wear gloves (E20) and **clean housing (1).** Use dry cleaning solvent (E17) and brush.

2. Wipe dry using lint-free cloth (E26).

3. Wear goggles and **blow dry internal passage (2).** Use clean, dry compressed air.

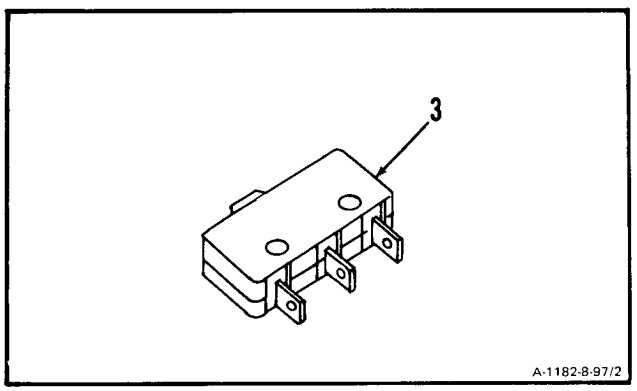


GO TO NEXT PAGE

8-97 CLEAN OIL LEVEL INDICATOR (Continued) 8-97

4. **Clean switch (3)** using lint-free cloth (E26) dampened in dry cleaning solvent (E17).

5. **Blow dry switch (3)** using clean, dry compressed air.



FOLLOW-ON MAINTENANCE:

Inspect Oil Level Indicator (Task 8-98).

END OF TASK

8-98 INSPECT OIL LEVEL INDICATOR

INITIAL SETUP

Applicable Configurations:
All

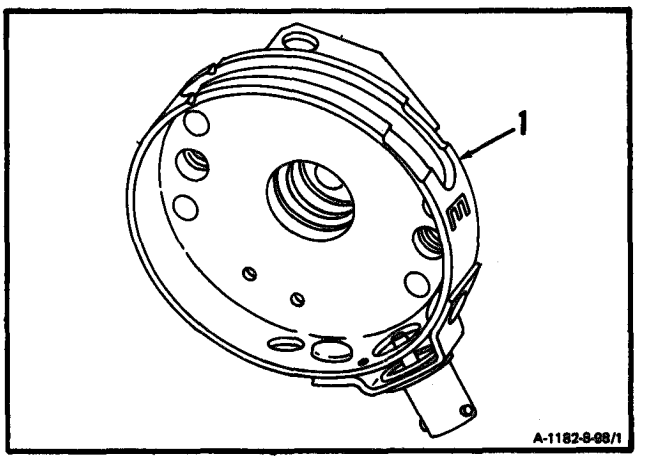
Tools:
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
None

Personnel Required:
68B30 Aircraft Powerplant Inspector

Equipment Condition:
Off Engine Task

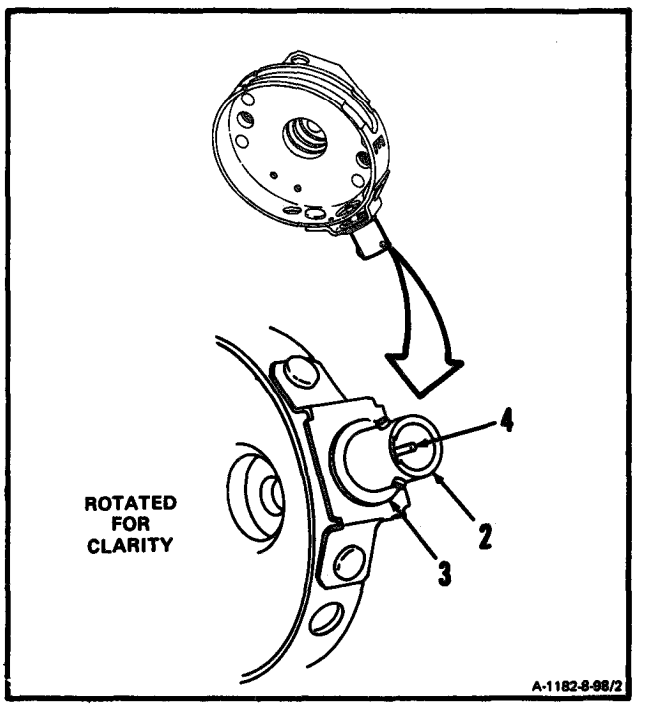
1. **Inspect housing (1).** There shall be no cracks.



2. **Inspect electrical connector (2).**

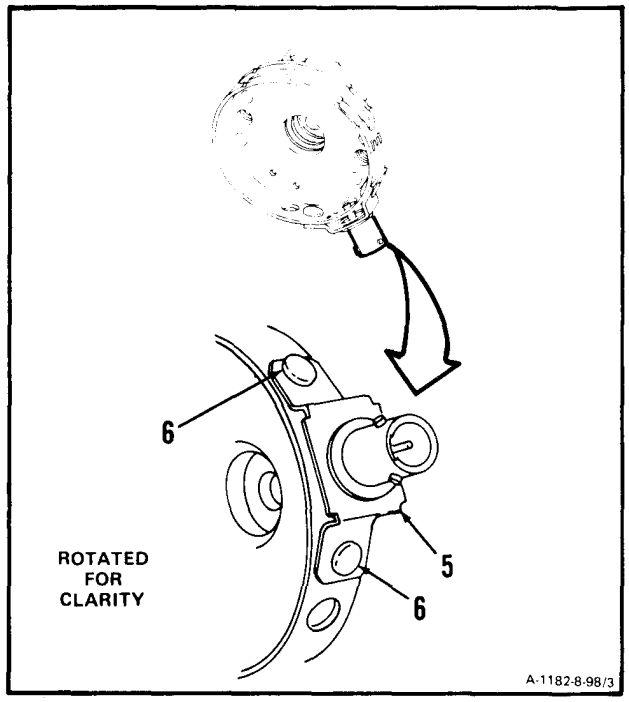
   a. There shall be no cracks, corrosion, or looseness at joint (3).

   b. Pin (4) shall not be bent, broken, or corroded.

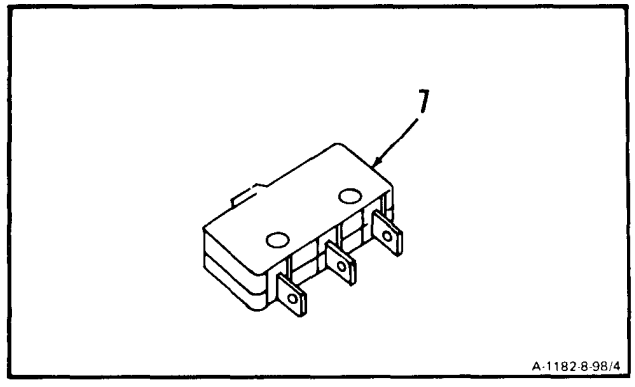


GO TO NEXT PAGE

3. **Inspect bracket (5).** There shall be no cracks or loose rivets (6).



4. **Inspect switch (7).** There shall be no cracks.



FOLLOW-ON MAINTENANCE:

None

END OF TASK

8-99 REPAIR OIL LEVEL INDICATOR

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit, NSN 5180-00-323-4944
Technical Inspection Tool Kit, NSN 5180-00-323-5114
Soldering Iron, 15/32-Pound
Stainless Steel Wire Brush

Materials:
Black Baking Enamel (E8)
Crocus Cloth (E15)
Solder (E49)

Personnel Required:
68610 Aircraft Powerplant Repairer
68F10 Aircraft Electrician
68B30 Aircraft Powerplant Inspector

Equipment Condition:
Off Engine Task

1. **Repair loose electrical connector (1)** as follows:

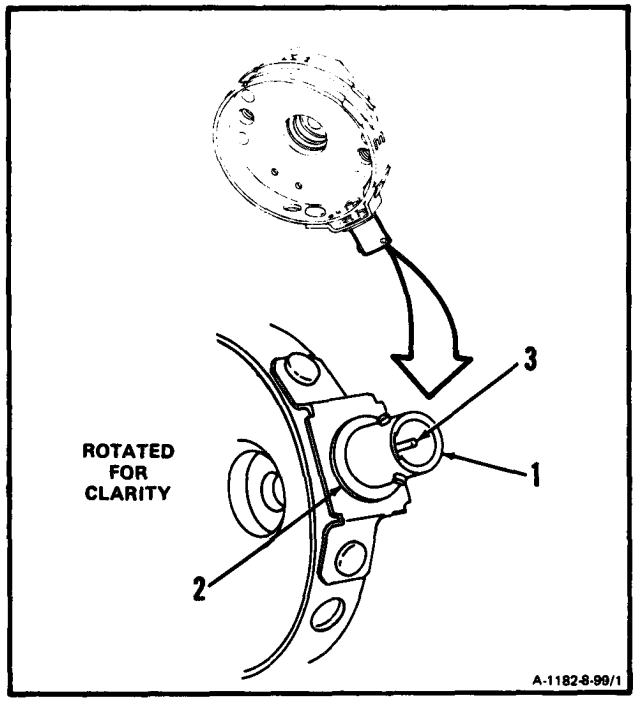
   a. Remove all surface contamination near joint (2). Use stainless steel wire brush.

   b. Soider joint (2). Use solder (E49) and soldering iron.

2. **Repair electrical connector pin (3)** as follows:

   a. Straighten bent pin (3). Use long nose-pliers to gently move pin (3) until it is straight.

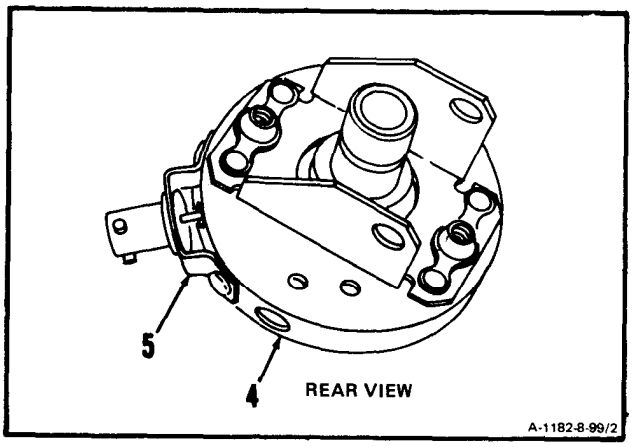
   b. Remove corrosion from pin (3). Polish pin (3), using in and out motion over entire length of pin until corrosion is removed. Use crocus cloth (E15).



GO TO NEXT PAGE

8-99 REPAIR OIL LEVEL INDICATOR (Continued) 8-99

3. **Repair damaged paint** on outside of housing (4) and bracket (5). Use black baking enamel (E8).



INSPECT

FOLLOW-ON MAINTENANCE:

None

END OF TASK

8-100 ASSEMBLE OIL LEVEL INDICATOR 8-100

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit, NSN 5180-00-323-4944
Technical Inspection Tool Kit, NSN 5180-00-323-5114
Twist Drill, 15/64-Inch
Retaining Ring Pliers
Soldering Iron, 15/32-Pound

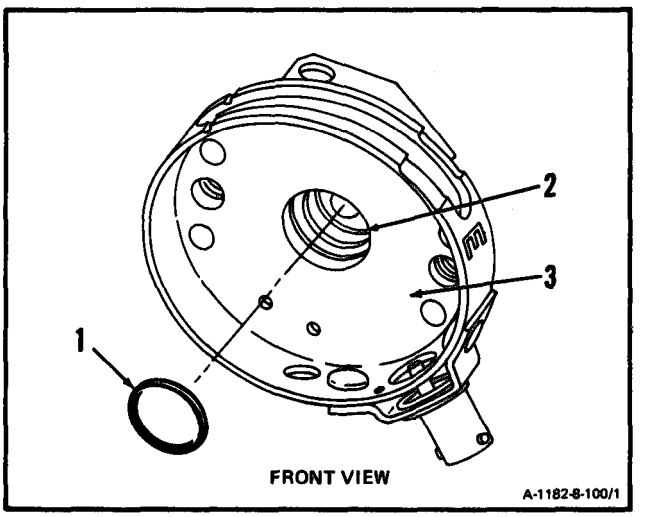
Materials:
Insulation Sleeving (E24)
Insulation Tape (E42)
Solder (E49)
Wire (E59)

Parts:
Packing
Seal

Personnel Required:
68B10 Aircraft Powerplant Repairer
68F10 Aircraft Electrician
68B30 Aircraft Powerplant Inspector

References:
TM 55-2840-254-23P

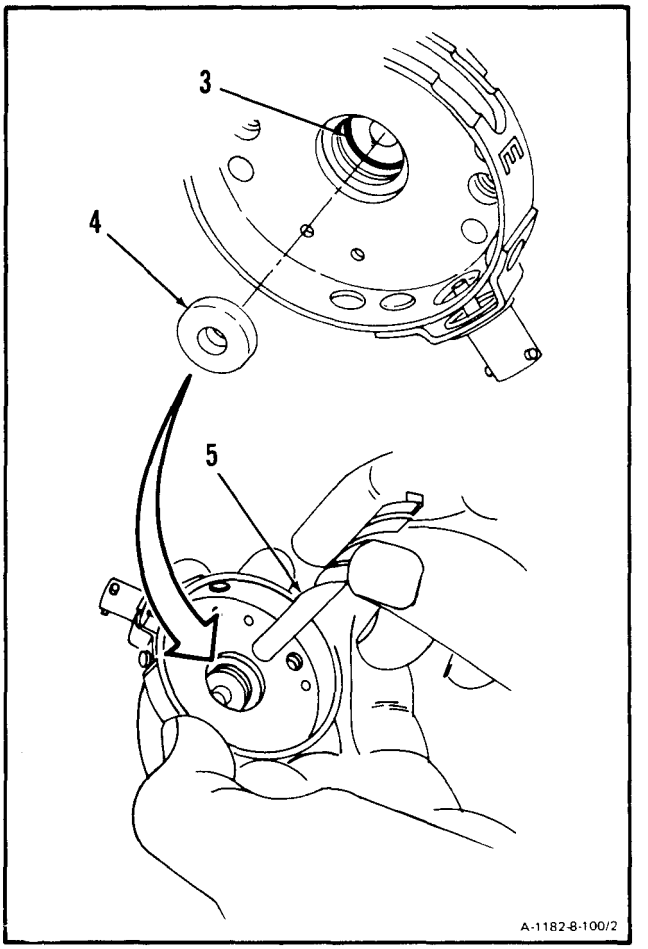
1. **Install packing (1)** in groove (2) in housing (3).



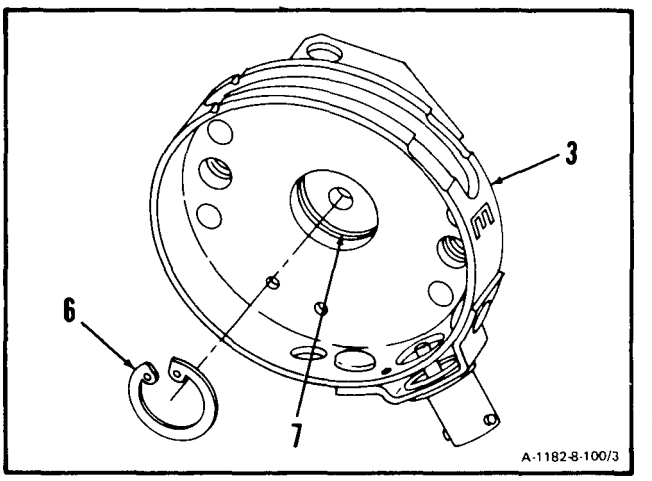
GO TO NEXT PAGE

8-100 ASSEMBLE OIL LEVEL INDICATOR (Continued) 8-100

2. **Install seal (4)** in housing (3). Use shaft of twist drill (5) to push seal (4) into housing until fully seated.



4. **Install retaining ring (6)** in groove (7) in housing (3). Use retaining ring pliers.



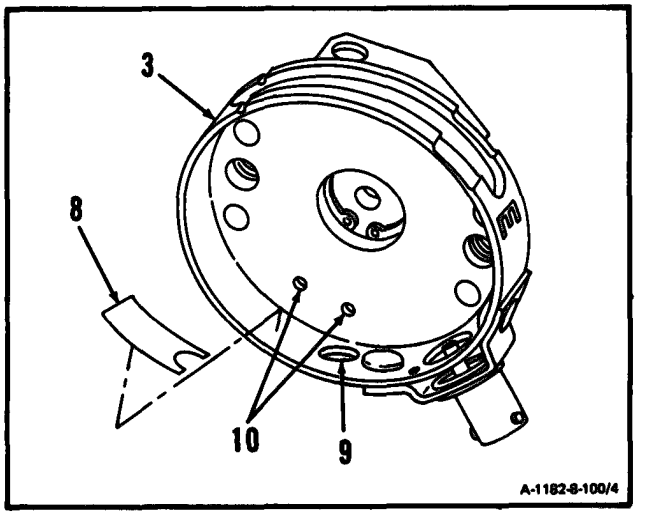
GO TO NEXT PAGE

8-100 ASSEMBLE OIL LEVEL INDICATOR (Continued)

CAUTION

In following step 4., do not cover drain hole with tape. Failure to comply could cause accumulation of oil. This could cause faulty oil level indication.

4. **Install insulation tape (8)** inside housing (3). Use insulation tape (E42). Do not cover drain hole (9). Center insulation tape between switch mounting holes (10).



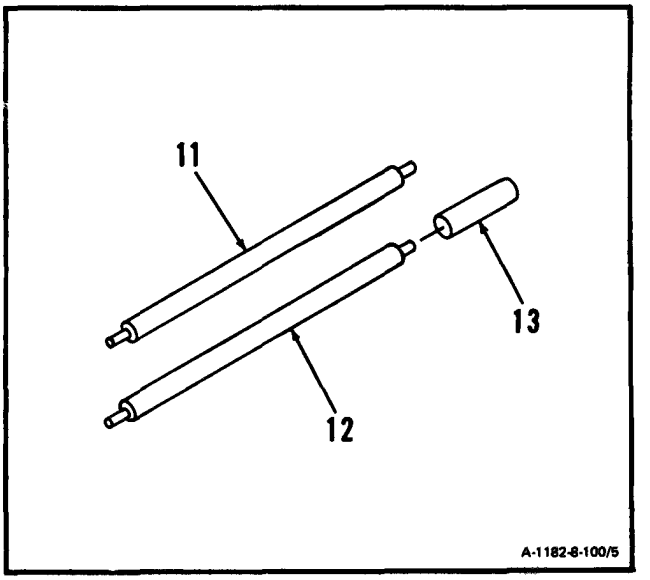
5. **Install two wires(11 and 12)** as follows:

   a. Cut wires (11 and 12) to 1 1/2-inch length. Use wire (E59).

   b. Strip both ends of wires (11 and 12) to 1/4 inch length.

   c. Tin both ends of wires (11 and 12). Use solder (E49) and soldering iron.

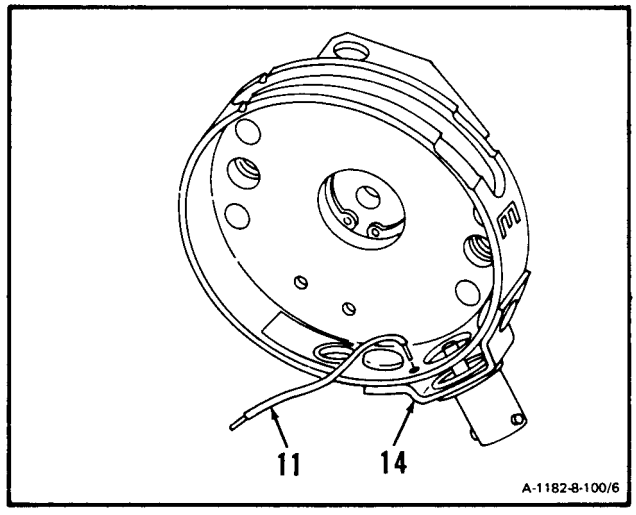
   d. Cut 1/2-inch piece of insulation sleeving (E24). Slide sleeving (13) over wire (12).



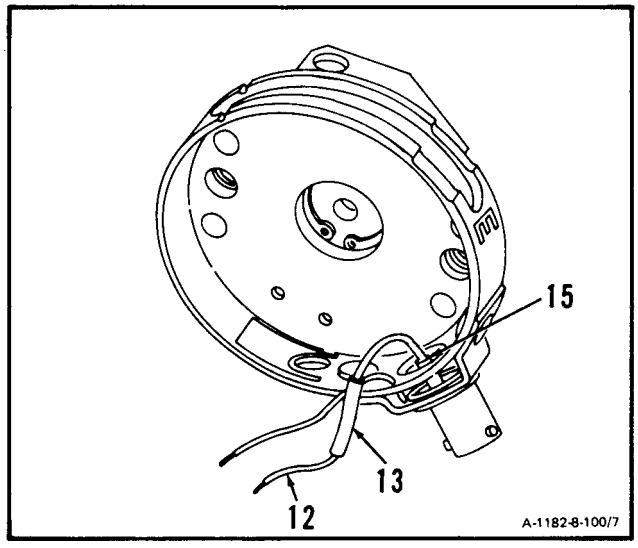
GO TO NEXT PAGE

8-100 ASSEMBLE OIL LEVEL INDICATOR (Continued) 8-100

e. Solder wire (11) to bracket (14). Use solder (E49) and soldering iron.



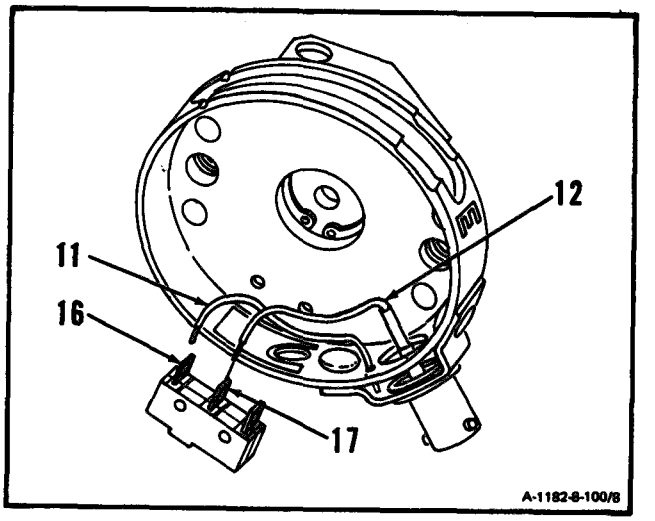
f. Solder wire (12) to electrical connector pin (15). Use solder (E49) and soldering iron. Slide insulation sleeving (13) over pin (15).



GO TO NEXT PAGE

g. Solder wire (11) to switch terminal (16), Use solder (E49) and soldering iron.

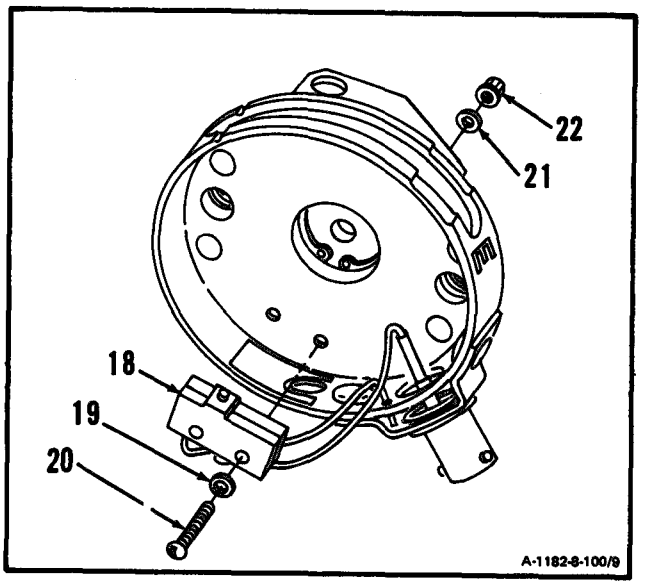
h. Solder wire (12) to switch terminal (17). Use solder (E49) and soldering iron.



CAUTION

In following step 6., do not strain or kink wires. Defective wiring could cause faulty oil level indication.

6. **Install switch (18),** two washers (19), two screws (20), two washers (21), and two nuts (22).



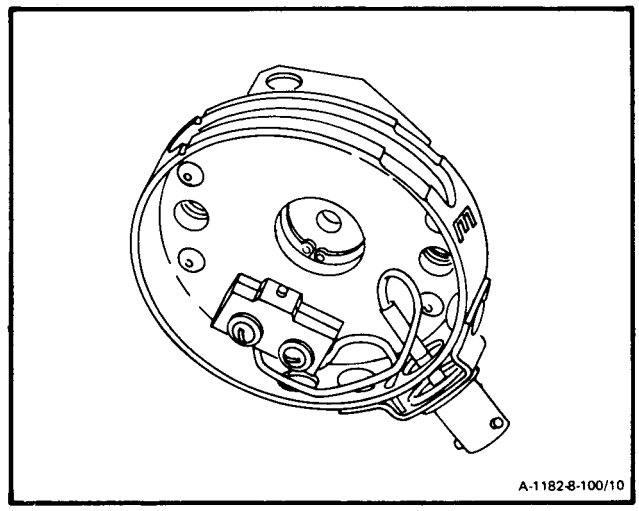
INSPECT

GO TO NEXT PAGE

8-100 ASSEMBLE OIL LEVEL INDICATOR (Continued) 8-100

FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-101 INSTALL OIL LEVEL INDICATOR

INITIAL SETUP

Applicable Configurations:
All

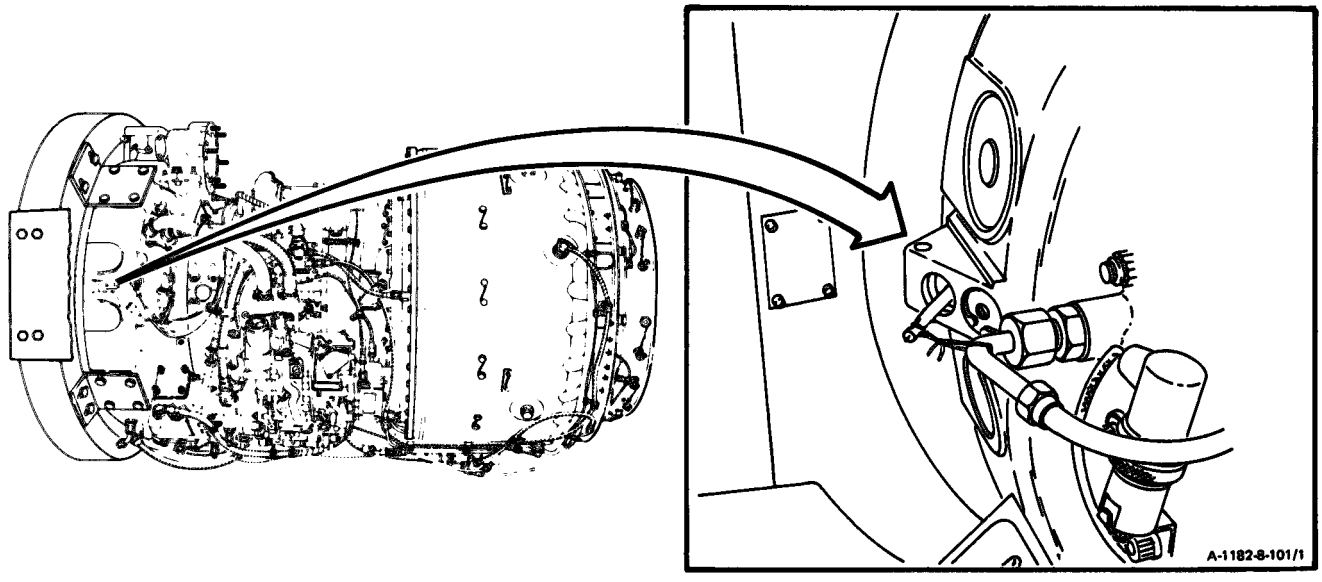
Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114
Torque Wrench, 0-30 Inch-Pounds

Materials:
Lockwire (E29)

Parts:
Packing

Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Power plant Inspector

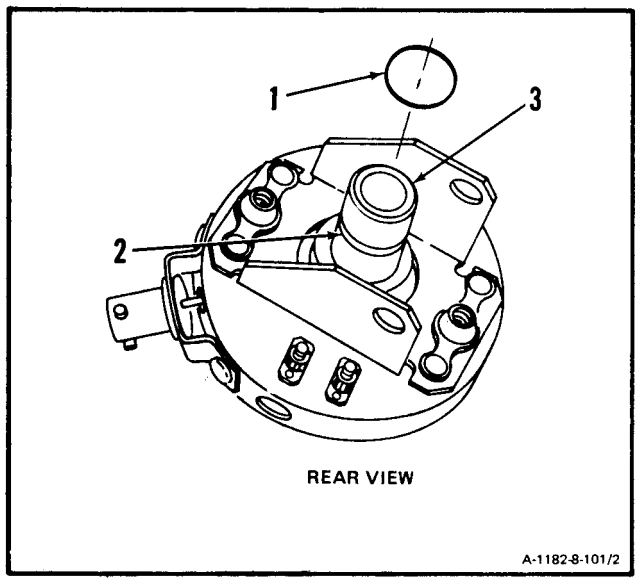
References:
TM 55-2840-254-23P
Task 8-102



GO TO NEXT PAGE

8-101 INSTALL OIL LEVEL INDICATOR (Continued) 8-101

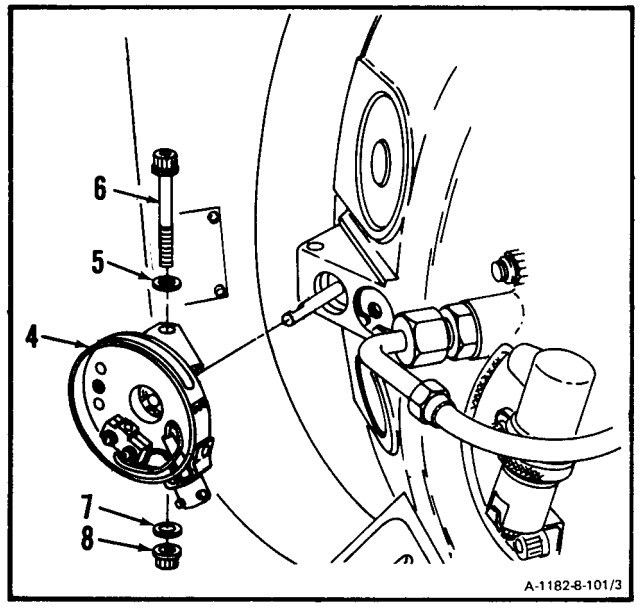
1. **Install packing (1)** in groove (2) in shaft (3).



NOTE

In following steps 2. thru 5. do not let shaft of float slip back into inlet housing.

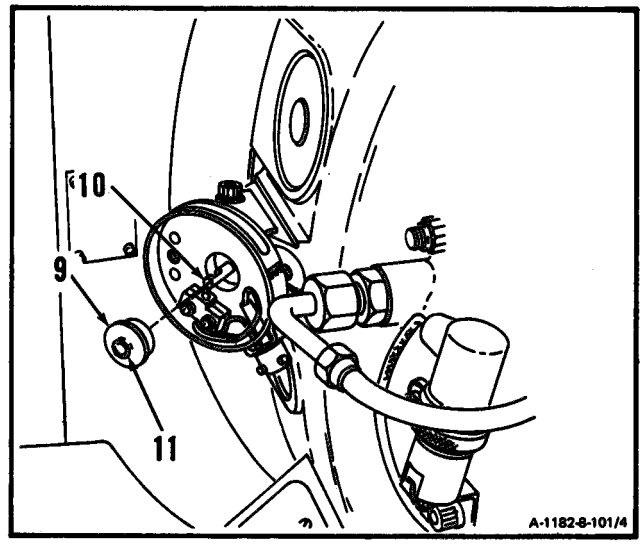
2. Remove twine. **Install assembly (4),** washer (5), bolt (6), washer (7), and nut (8).



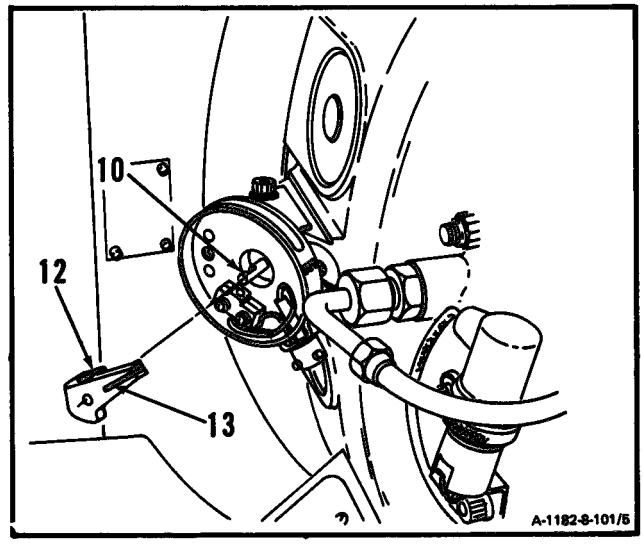
GO TO NEXT PAGE

8-101 INSTALL OIL LEVEL INDICATOR (Continued) 8-101

3. **Install washer (9)** on shaft (10) with smaller diameter (11) facing out.



4. **Position pointer (12)** on shaft (10) with white stripe (13) facing out.

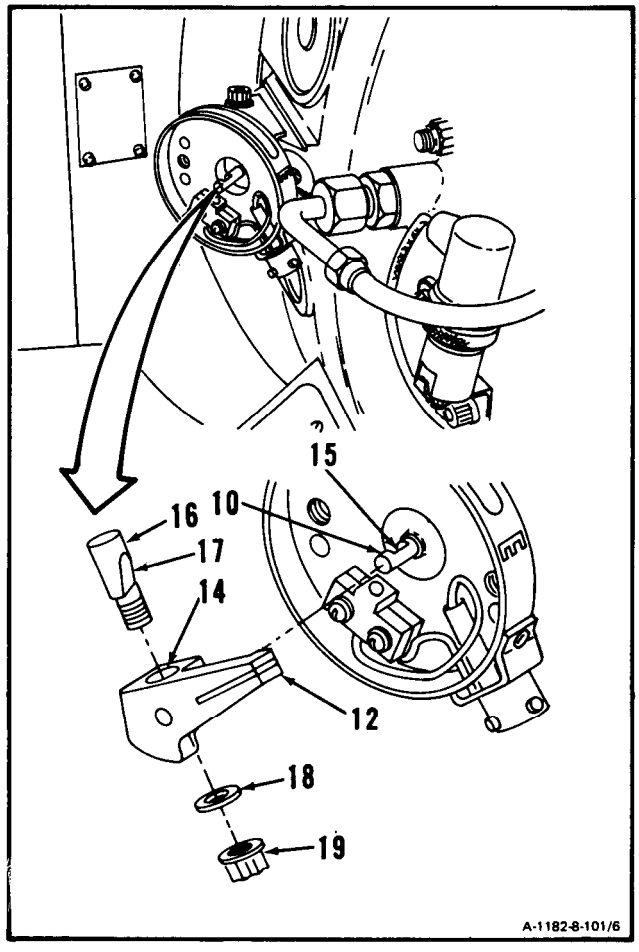


GO TO NEXT PAGE

8-101 INSTALL OIL LEVEL INDICATOR (Continued) 8-101

5. **Install pointer (12)** on shaft (10), with hole (14) aligned with notch (15).

6. **Install bolt (16)** with flat (17) against notch (15). Install washer (18) and nut (19).

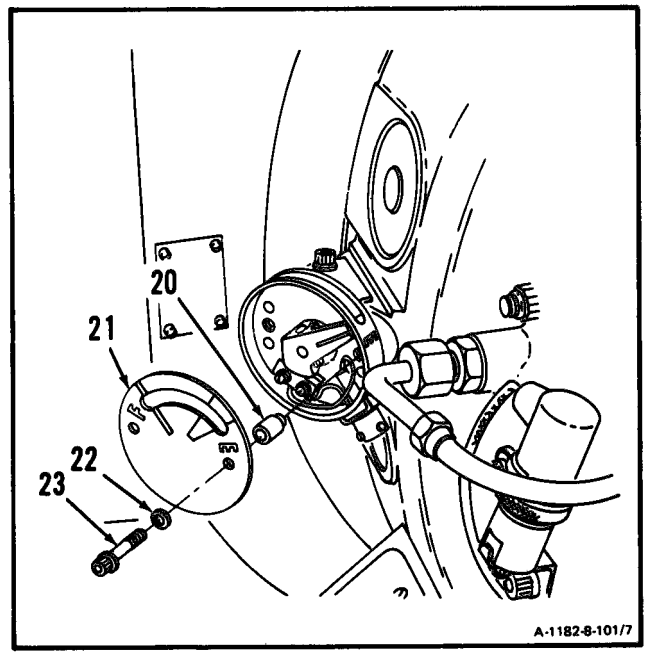


GO TO NEXT PAGE

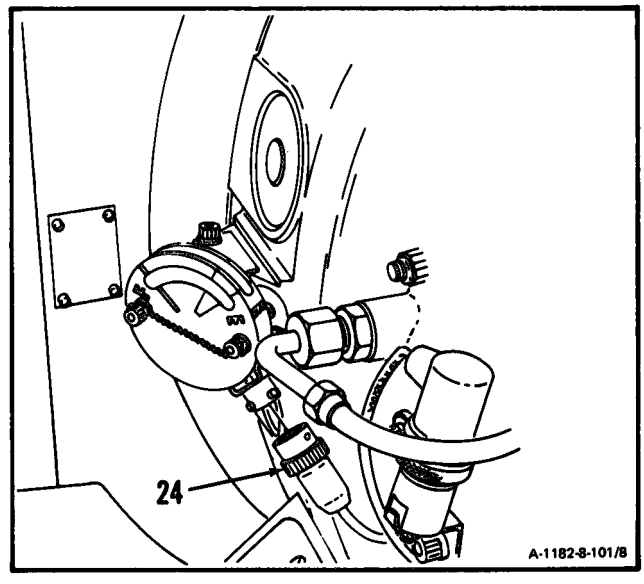
8-101 INSTALL OIL LEVEL INDICATOR (Continued)

7. **Adjust oil level indicator** (Ref. Task 8-102, steps 3. thru 7.).

8. **Install** two spacers (20), **cover (21),** two washers (22). and bolts (23). **Torque two bolts (23) to 15 inch-pounds.** Lockwire bolts (23). Use lockwire (E29).



9. **Connect electrical connector (24).**



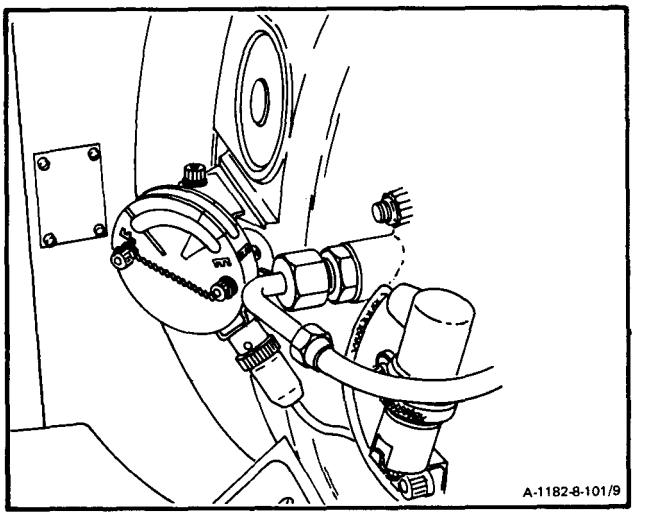
INSPECT

GO TO NEXT PAGE

8-101 INSTALL OIL LEVEL INDICATOR (Continued) 8-101

FOLLOW-ON MAINTENANCE:

Service Engine Oil System (Task 1-74).



END OF TASK

8-102 ADJUST OIL LEVEL INDICATOR

INITIAL SETUP

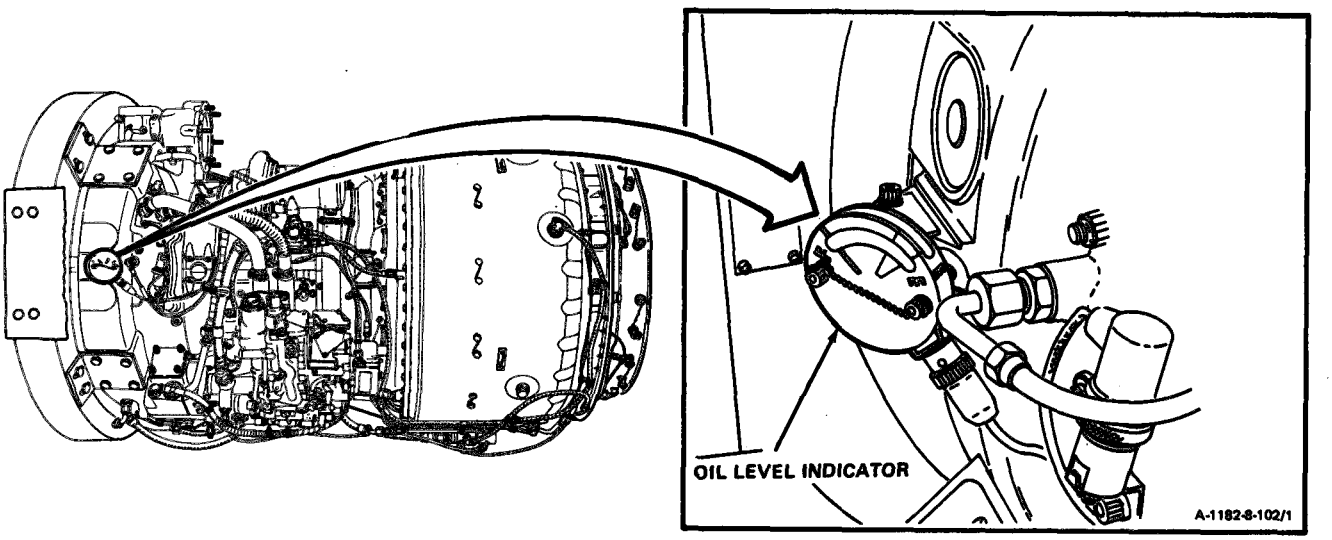
Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114
Oil Level Test Light (T11)
Torque Wrench, 0-30 Inch-Pounds

Materials:
Lockwire (E29)

Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

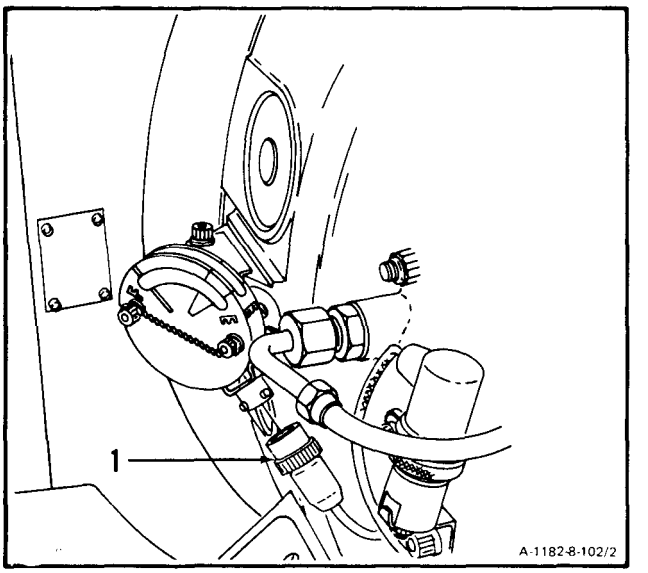
Equipment Condition:
Engine Oil System Drained (Task 1-75)



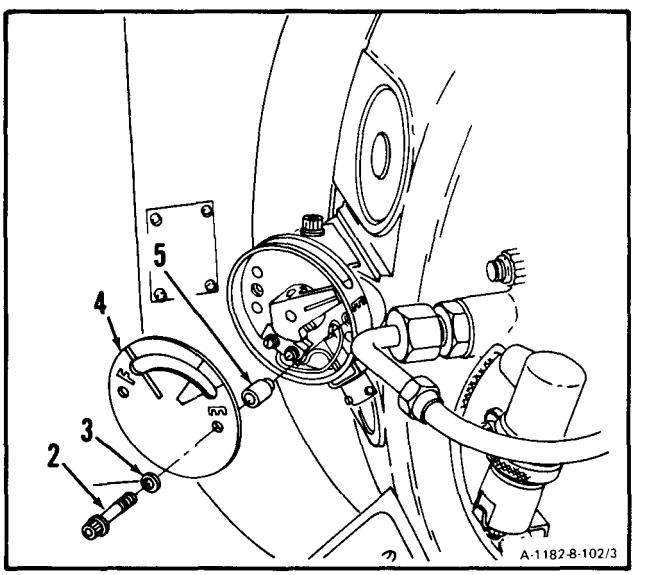
GO TO NEXT PAGE

8-102 ADJUST OIL LEVEL INDICATOR (Continued)

1. **Disconnect electrical connector (1).**



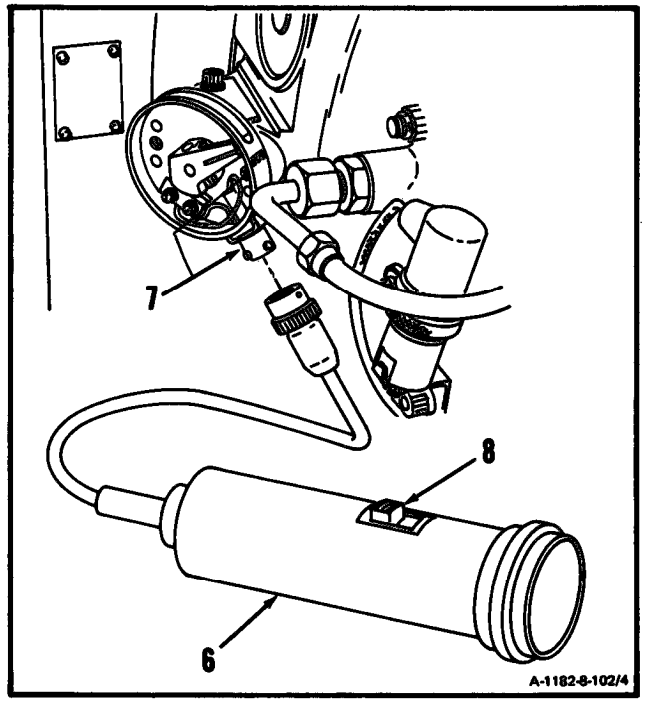
2. **Remove** lockwire, two bolts (2), two washers (3), cover (4), and two spacers (5).



GO TO NEXT PAGE

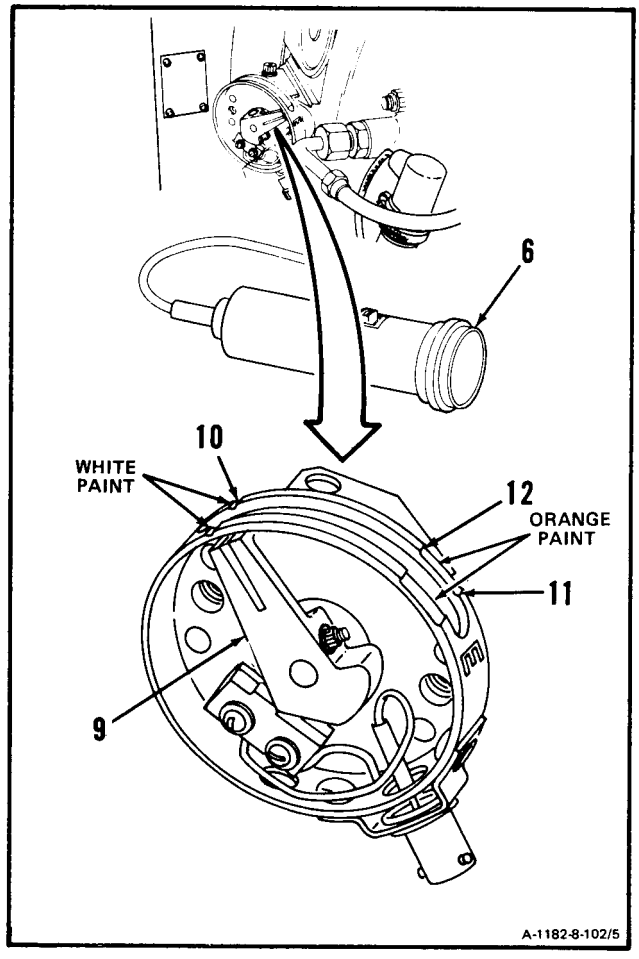
8-102 ADJUST OIL LEVEL INDICATOR (Continued)

3. **Connect oil level test light (T11) (6)** to electrical connector (7) and turn switch (8) on.



GO TO NEXT PAGE

4. Move pointer (9) from full position (10) toward empty position (11). **Test light (T11) (6) shall come on at low oil level warning position (12).**



GO TO NEXT PAGE

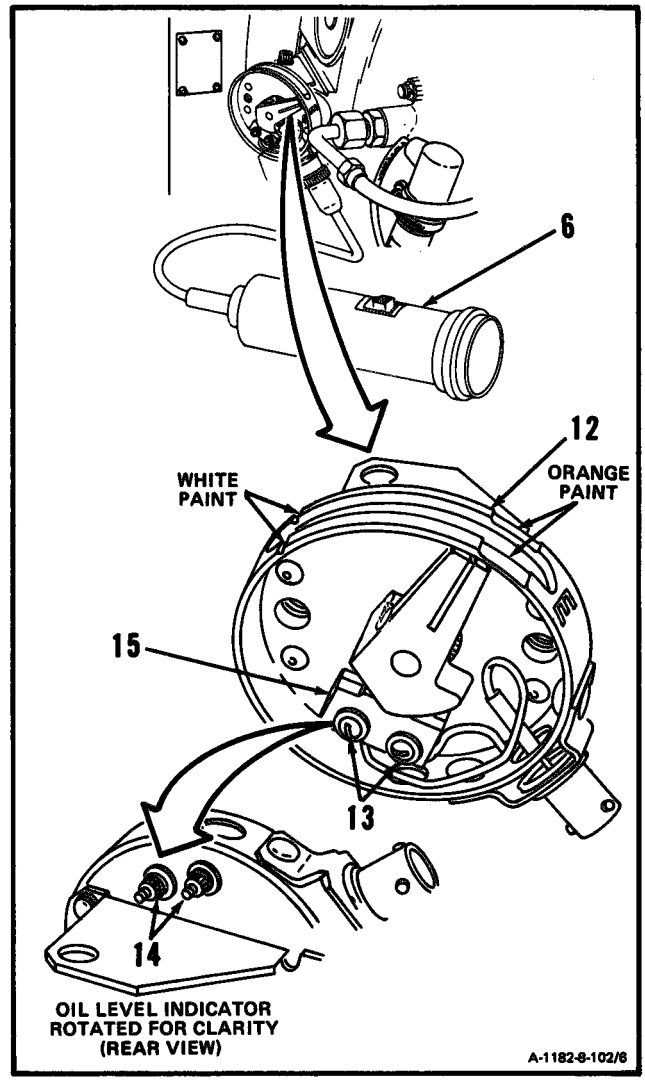
8-102 ADJUST OIL LEVEL INDICATOR (Continued)

NOTE

If test light indicates adjustment is needed, do steps 5. and 6. If test light indicates adjustment is not needed, omit steps 5 and 6.

5. Loosen two screws (13) and two nuts (14). **Move switch (15) until test light (T11) (6) comes on** at low oil level warning position (12).

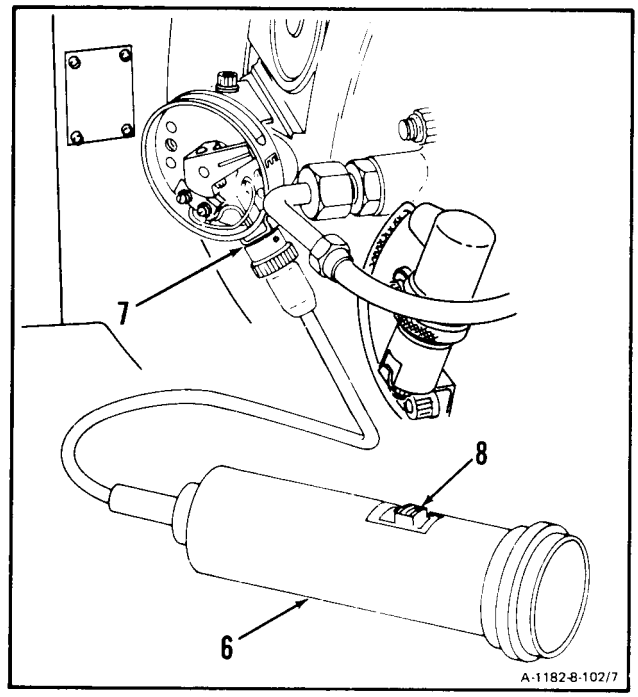
6. Tighten two nuts (14) and two screws (13).



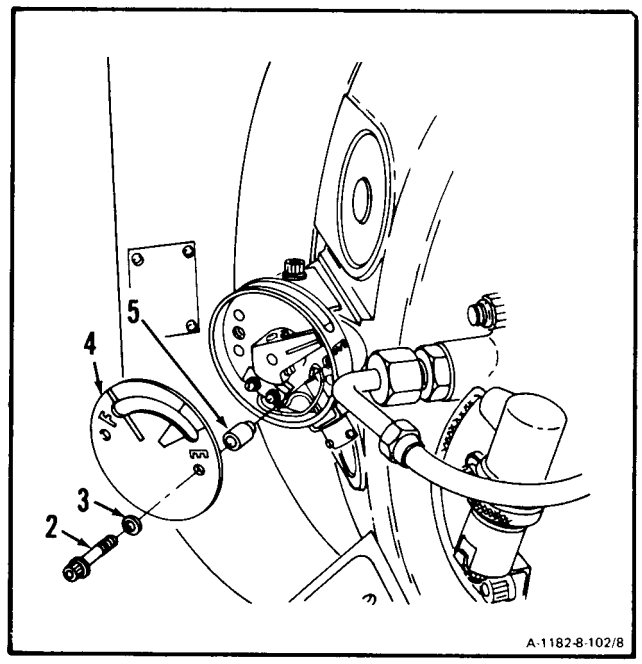
GO TO NEXT PAGE

8-102 ADJUST OIL LEVEL INDICATOR (Continued) 8-102

7. Turn switch (8) off and **disconnect test light (T11) (6)** from electrical connector (7).

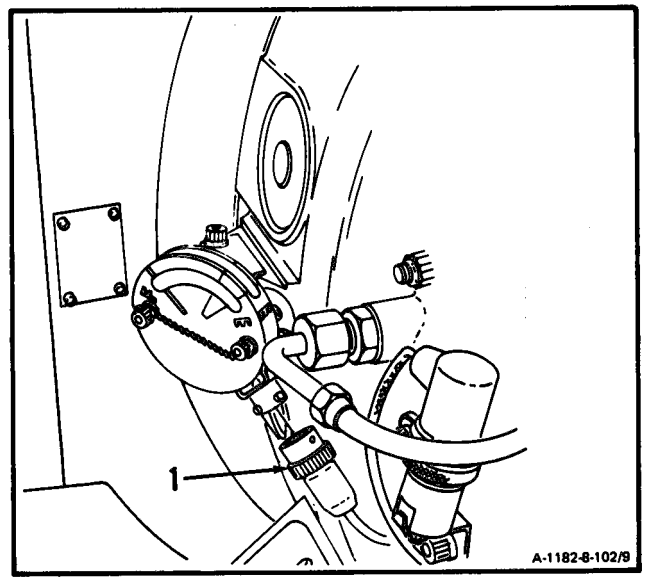


8. **Install** two spacers (5), **cover (4),** two washers (3), and two bolts (2). **Torque two bolts (2) to 15 inch-pounds.** Lockwire two bolts (2). Use lockwire (E29).



GO TO NEXT PAGE

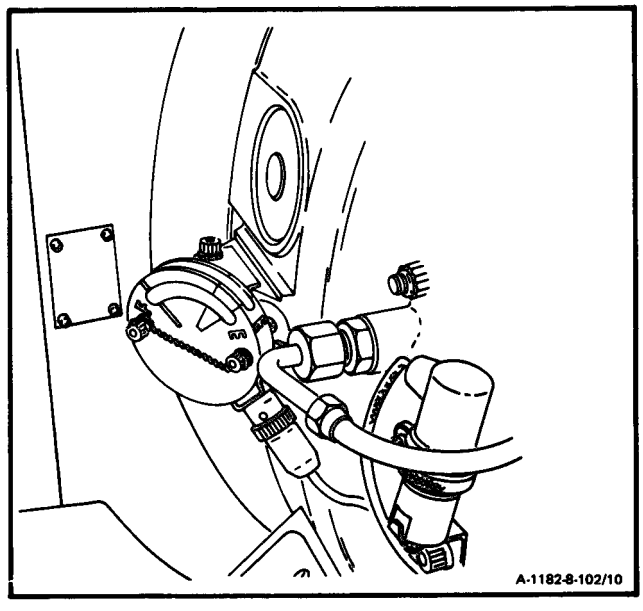
9. **Connect electrical connector (1).**



INSPECT

FOLLOW-ON MAINTENANCE:

Service Engine Oil System (Task 1-74).



END OF TASK

8-103 REMOVE OIL LEVEL FLOAT ASSEMBLY (AVIM)

INITIAL SETUP

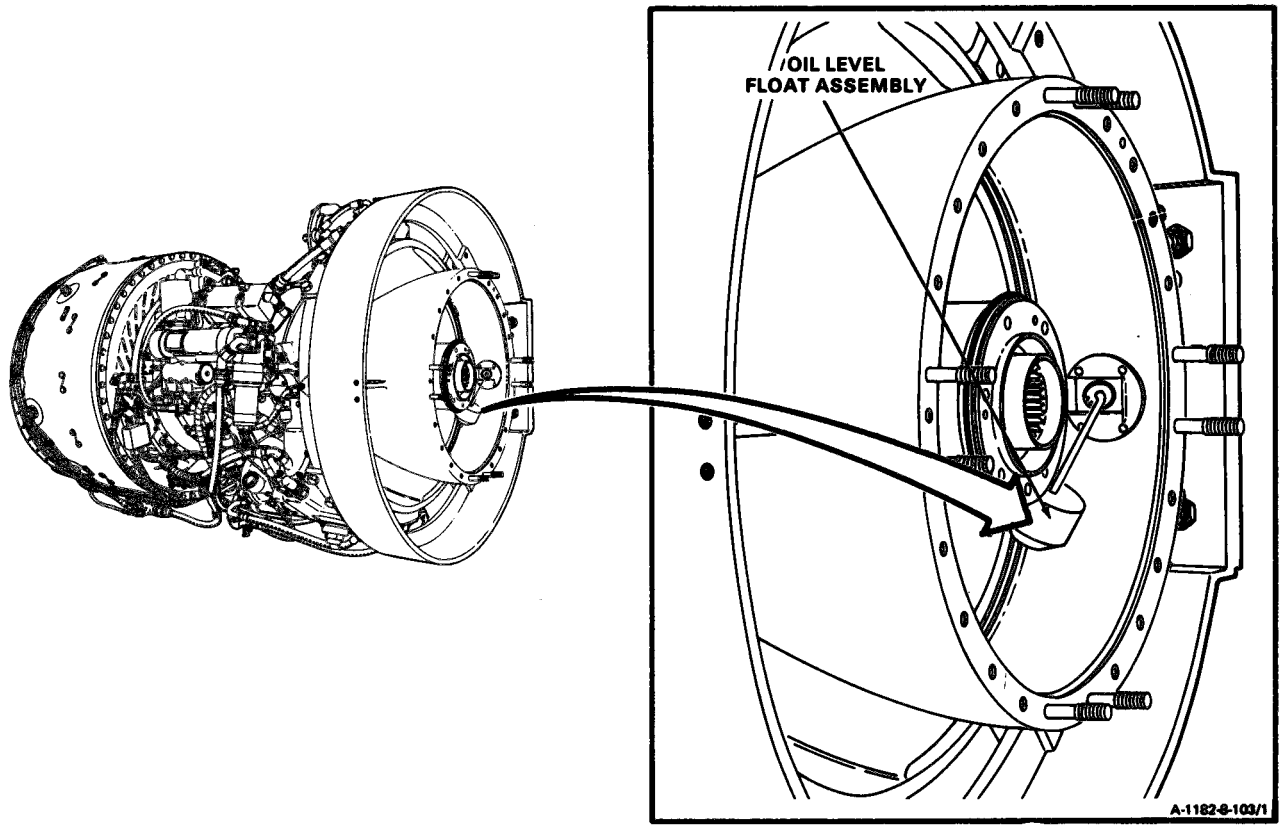
Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944

Materials:
Wiping Rag (E58)

Personnel Required:
68B10 Aircraft Powerplant Repairer

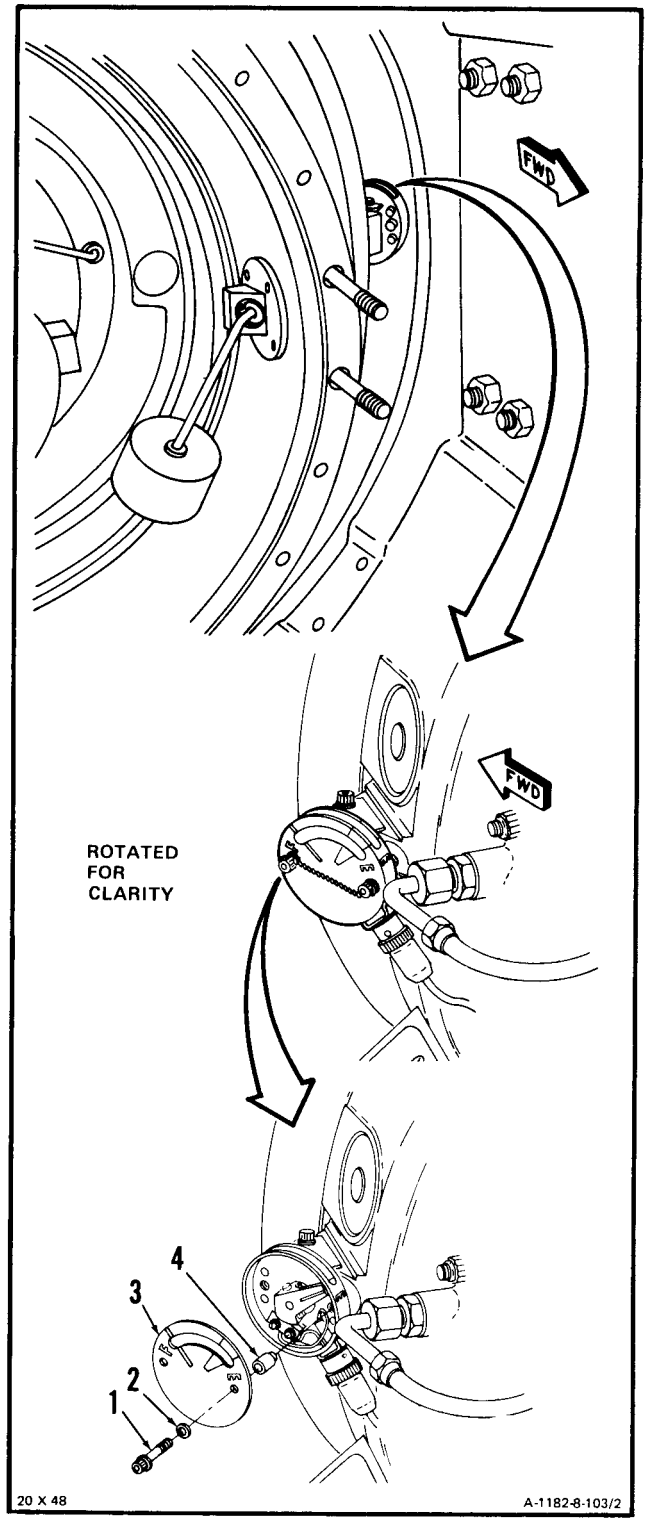
Equipment Condition:
Engine Oil System Drained (Task 1-75)
Output Shaft Seal and Housing Assembly Removed (Task 2-48)
Inlet Housing Cover Assembly Removed (Task 2-53)



GO TO NEXT PAGE

8-103 REMOVE OIL LEVEL FLOAT ASSEMBLY (AVIM) (Continued) 8-103

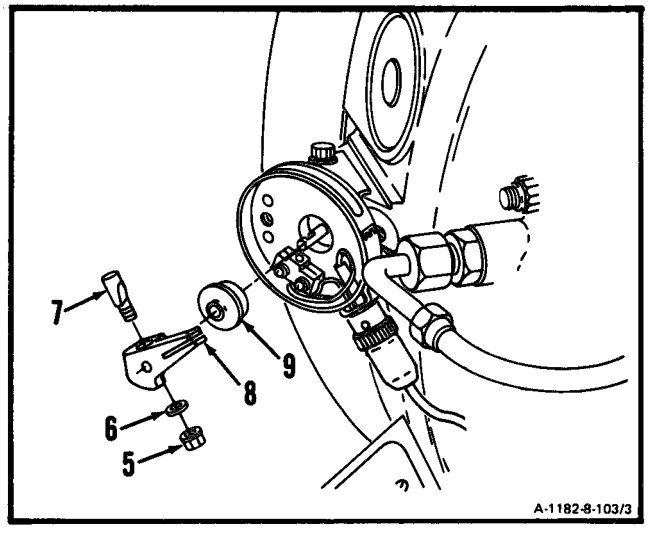
1. **Remove** lockwire, two bolts (1), two washers (2), **cover** (3), and two spacers (4).



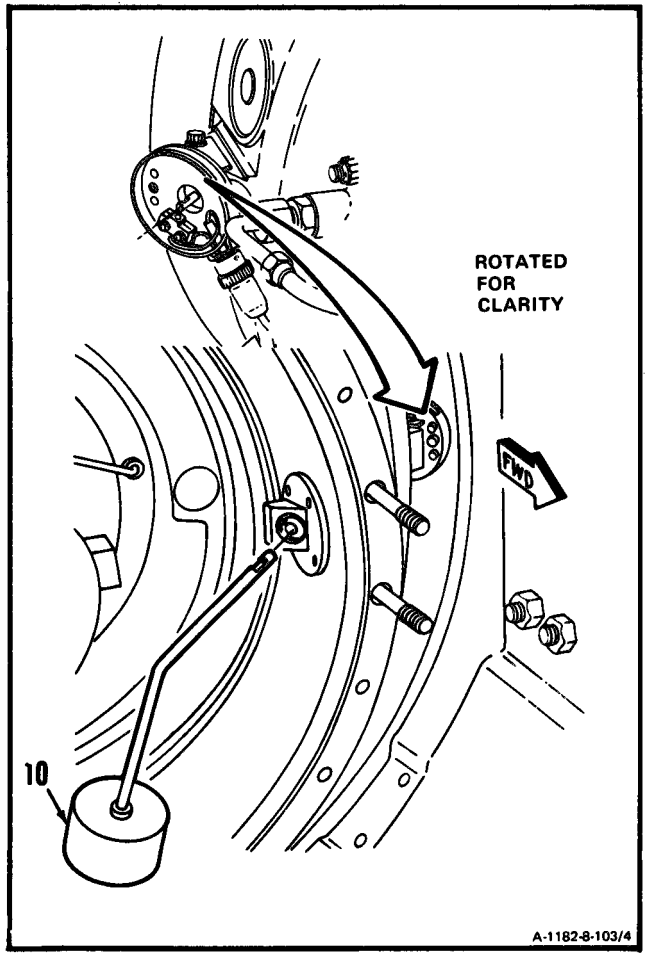
GO TO NEXT PAGE

8-103 REMOVE OIL LEVEL FLOAT ASSEMBLY (AVIM) (Continued)

2. **Remove** nut (5), washer (6), bolt **(7), pointer (8),** and washer (9).



3. **Remove oil level float assembly (10).**

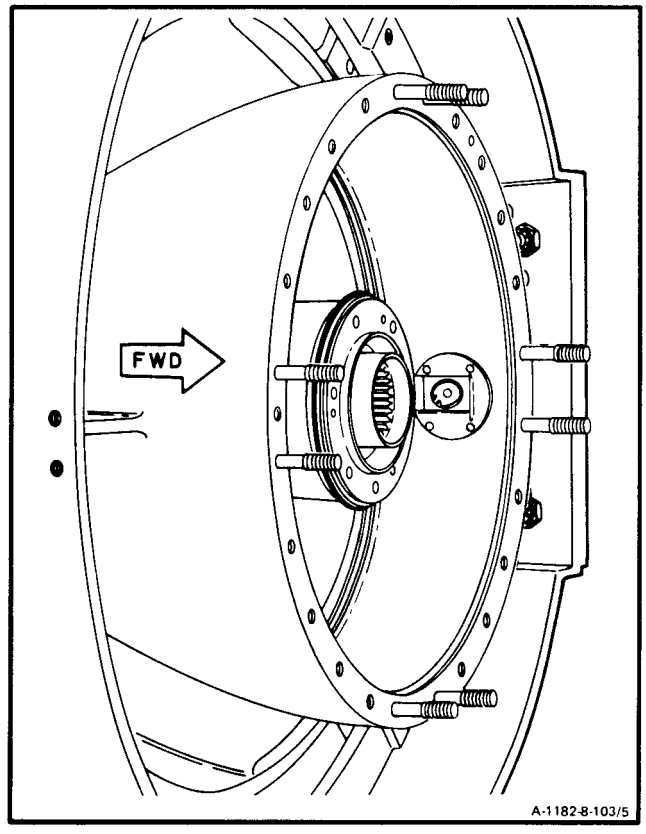


GO TO NEXT PAGE

8-103 REMOVE OIL LEVEL FLOAT ASSEMBLY (AVIM) (Continued) 8-103

FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-104 DISASSEMBLE OIL LEVEL FLOAT ASSEMBLY (AVIM) 8-104

INITIAL SETUP

Applicable Configurations:
All

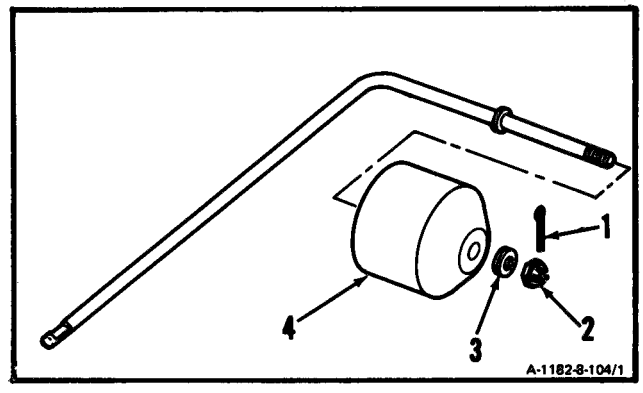
Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944

Materials:
None

Personnel Required:
68B10 Aircraft Powerplant Repairer

Equipment Condition:
Off Engine Task
Engine Oil System Drained (Task 1-75)
Output Shaft Seal and Housing Assembly Removed (Task 2-48)
Inlet Housing Cover Assembly Removed (Task 2-53)
Oil Level Float Assembly Removed (Task 8-103)

1. **Remove** cotter pin (1), nut (2), washer (3), and **float (4).**



FOLLOW-ON MAINTENANCE:

None

END OF TASK

8-105 CLEAN OIL LEVEL FLOAT ASSEMBLY (AVIM) 8-105

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944

Materials:
Dry Cleaning Solvent (E17)
Gloves (E20)
Lint-Free Cloth (E26)

Personnel Required:
68B10 Aircraft Powerplant Repairer

Equipment Condition:
Off Engine Task
Output Shaft Engine Oil System Drained (Task 1-75)
Output Shaft Seal and Housing Assembly Removed (Task 2-48)
Inlet Housing Cover Assembly Removed (Task 2-53)
Oil Level Float Assembly Removed (Task 8-103)
Oil Level Float Assembly Disassembled (Task 8-104)

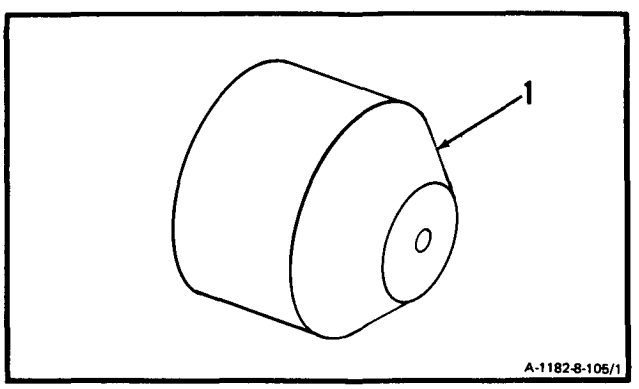
General Safety Instructions:

WARNING

Dry cleaning solvent (E17) is flammable and toxic. It can irritate skin and cause burns. Use only in well-ventilated area, away from heat and open flame. In case of contact, immediately flush skin or eyes with water for at least 15 minutes. Get medical attention for eyes.

1. Wear gloves (E20) and **clean float (1).** Use dry-cleaning solvent (E17) and brush.

2. Wipe dry using lint-free cloth (E26).

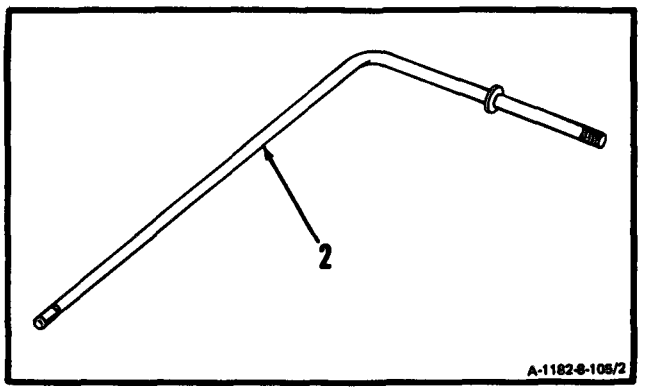


GO TO NEXT PAGE

8-105 CLEAN OIL LEVEL FLOAT ASSEMBLY (AVIM) (Continued) 8-105

3. **Clean shaft (2).** Use dry-cleaning solvent (E17) and brush.

4. Wipe dry using lint-free cloth (E26).



FOLLOW-ON MAINTENANCE:

Inspect Oil Level Float Assembly (Task 8-106).

END OF TASK

8-106 INSPECT OIL LEVEL FLOAT ASSEMBLY (AVIM) 8-106

INITIAL SETUP

Applicable Configurations:
All

Tools:
Technical Inspection Tool Kit,
NSN 5180-00-323-5114
Outside Micrometer Caliper Set

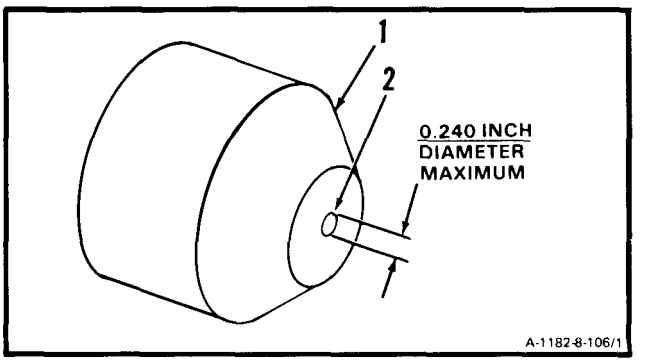
Materials:
None

Personnel Required:
68B30 Aircraft Powerplant Inspector

Equipment Condition:
Off Engine Task

1. **Inspect float (1).** There shall be no cracks.

2. **Inspect hole (2) in float (1).** Hole diameter shall be 0.240 inch maximum.

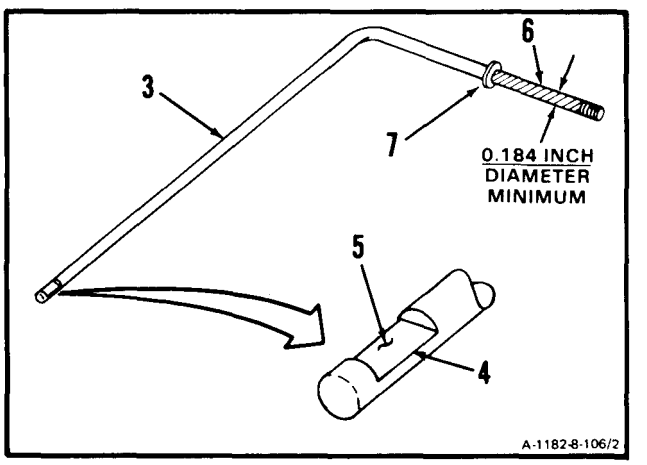


3. **Inspect shaft (3).** There shall be no cracks.

4. **Inspect notch (4).** There shall be no nicks, burrs, or scratches deeper than 0.020 inch on flat surface (5).

5. **Inspect float mounting area (6).** Use outside micrometer caliper. Shaft diameter shall be 0.184 inch minimum.

6. **Inspect washer (7).** Washer (7) shall not be cracked, loose, or missing.



FOLLOW-ON MAINTENANCE:

None

END OF TASK

8-107 REPAIR OIL LEVEL FLOAT ASSEMBLY (AVIM) 8-107

INITIAL SETUP

Applicable Configurations:
All

Tools:
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
Carborundum Stone (E10)
Crocus Cloth (E15)

Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Arcraft Powerplant Inspector

Equipment Condition:
Off Engine Task

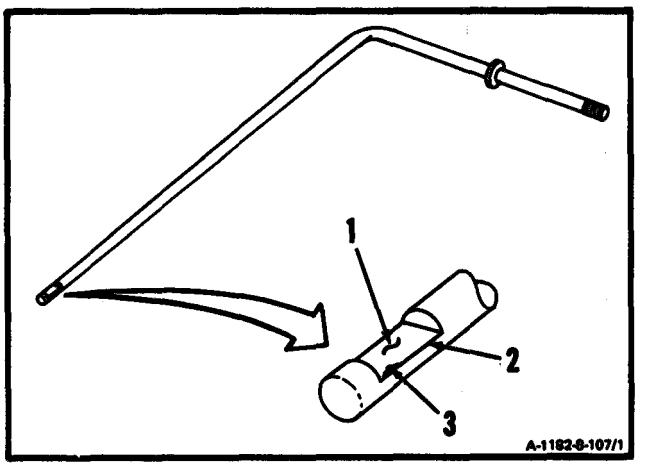
1. Repair nicks, burrs and scratches on flat surface (1) of float shaft notch (2) as follows:

NOTE

Repair is allowed only if depth of defect after repair is not more than 0.020 inch.

a. Blend all raised edges (3). Use Carborundum stone (E10).

b. Polish to smooth finish. Use crocus cloth



INSPECT

FOLLOW-ON MAINTENANCE:

None

END OF TASK

8-108 ASSEMBLE OIL LEVEL FLOAT ASSEMBLY (AVIM)

INITIAL SETUP

Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
None

Parts:
Cotter Pin

Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

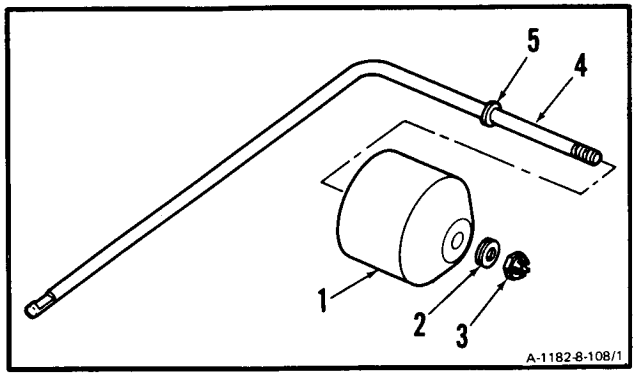
References:
TM 55-2840-254-23P

Equipment Condition:
Off Engine Task

CAUTION

When installing float, tighten nut only enough to seat flow against washer. If nut is overtightened, damage to float will occur.

1. **Install float (1),** washer (2), and nut (3) on shaft (4).
2. **Hand-tighten nut (3)** until float (1) is seated against washer (5).

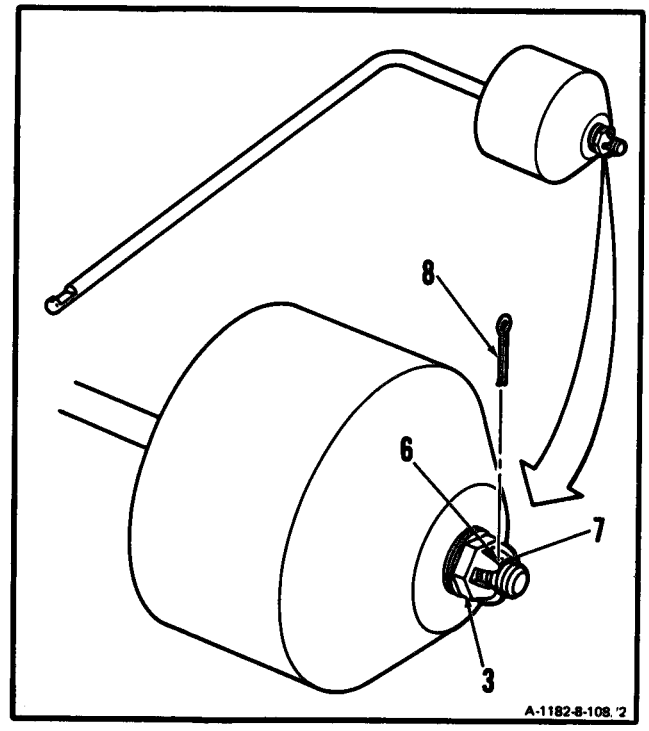


GO TO NEXT PAGE

8-108 ASSEMBLE OIL LEVEL FLOAT ASSEMBLY (AVIM) (Continued) 8-108

3. Back off nut (3), a maximum of one slot, until nut slot (6) aligns with shaft hole (7).

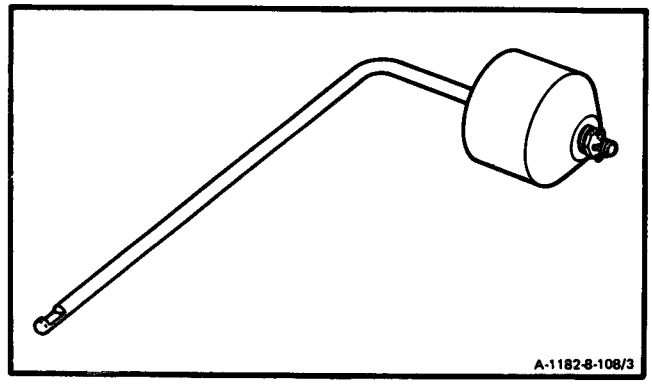
4. **Install cotter pin (8).**



INSPECT

FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-109 INSTALL OIL LEVEL FLOAT ASSEMBLY (AVIM)

INITIAL SETUP

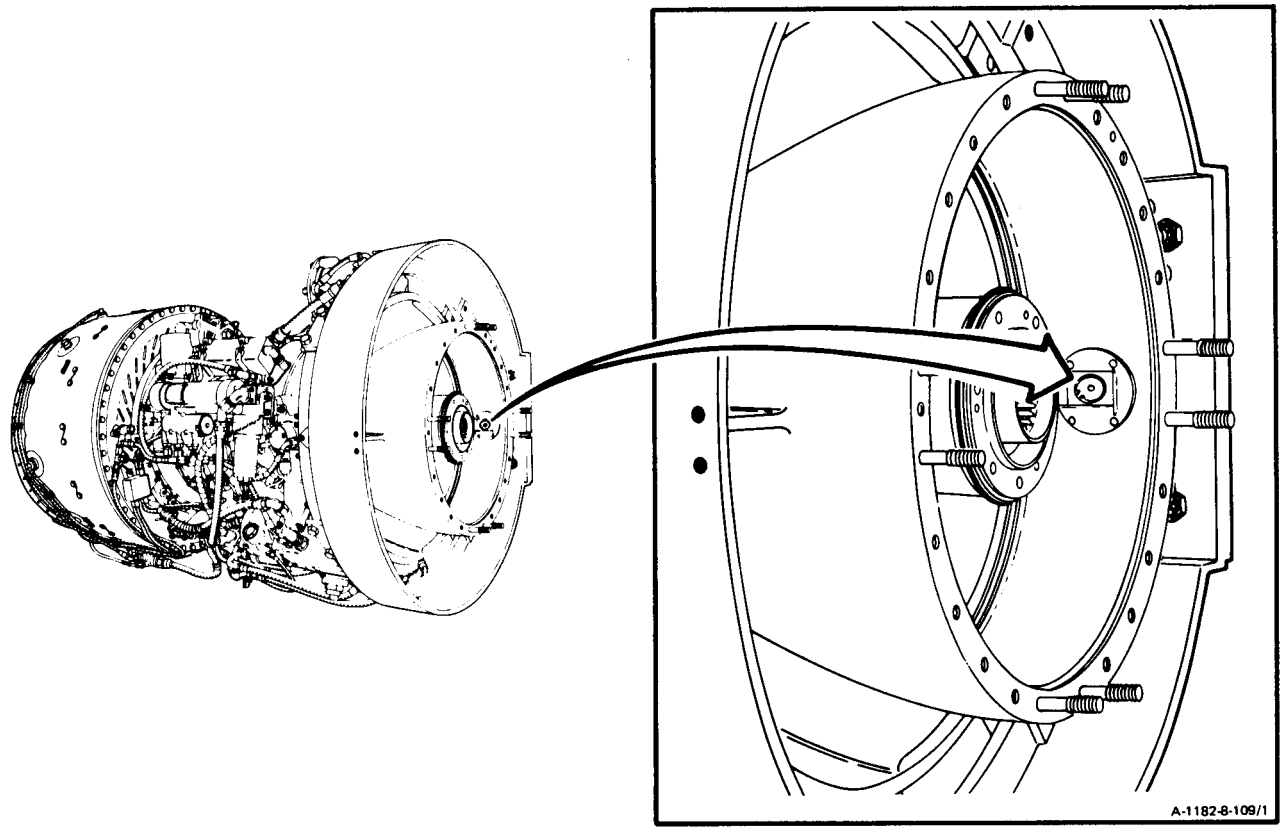
Applicable Configurations:
All

Tools:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114
Torque Wrench, 0-30 Inch-Pounds

Materials:
Lockwire (E29)

Personnel Required:
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

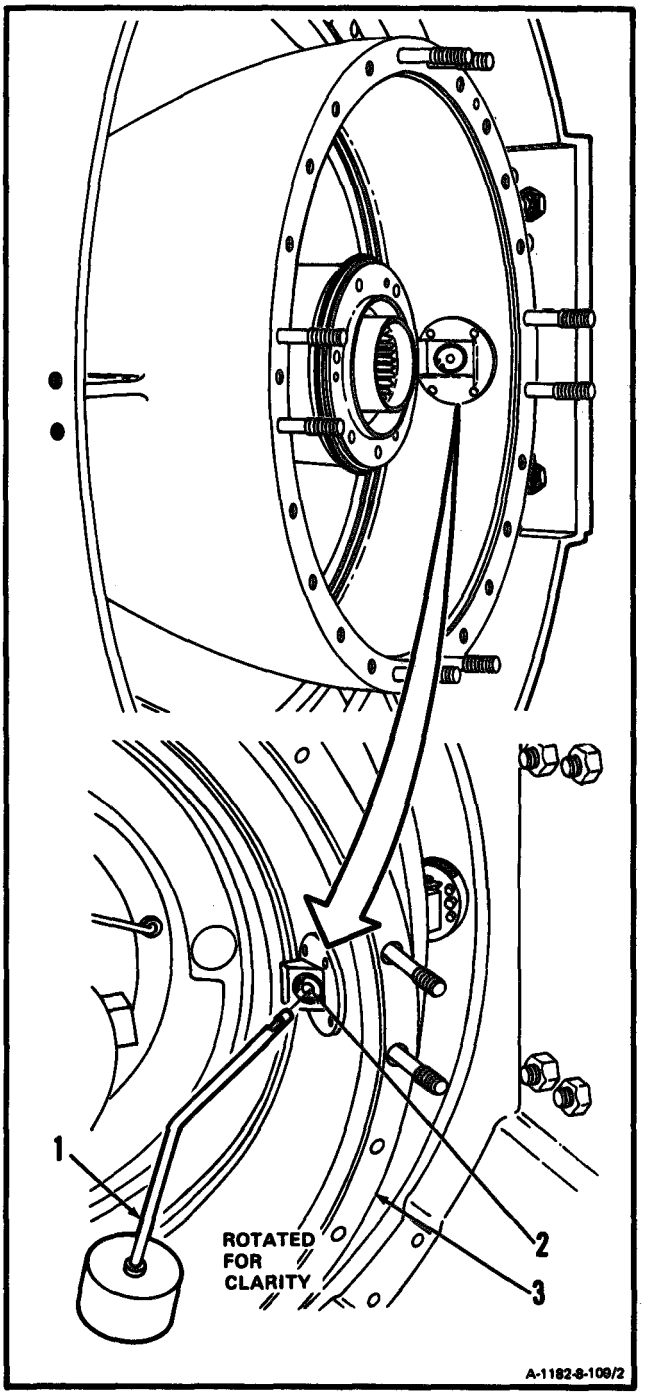
References:
Task 8-102



GO TO NEXT PAGE

8-109 INSTALL OIL LEVEL FLOAT ASSEMBLY (AVIM) (Continued) 8-109

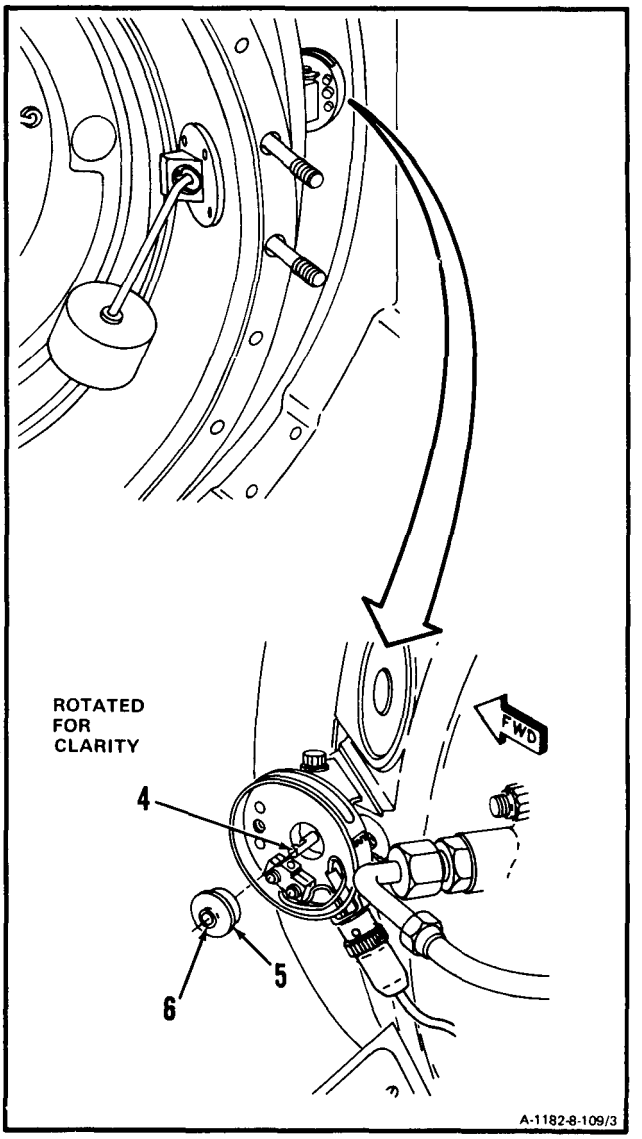
1. **Install oil level float assembly (1)** in hole (2) in inlet housing (3).



GO TO NEXT PAGE

8-109 INSTALL OIL LEVEL FLOAT ASSEMBLY (AVIM) (continued) 8-109

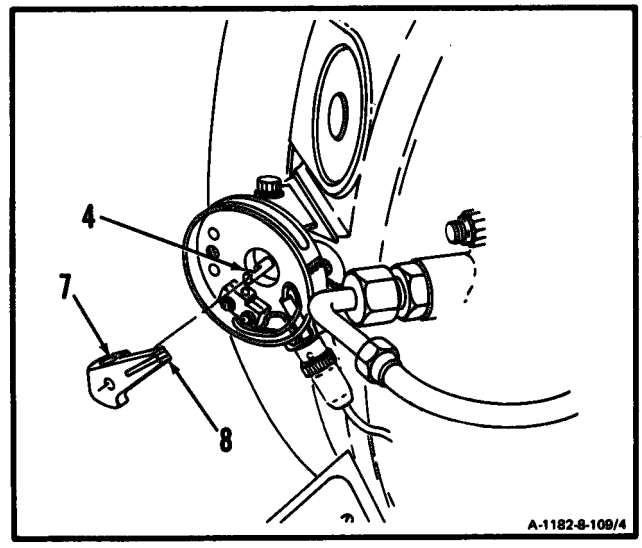
2. Hold shaft (4) in place. **Install washer (5)** on shaft (4) with smaller diameter (6) facing out.



GO TO NEXT PAGE

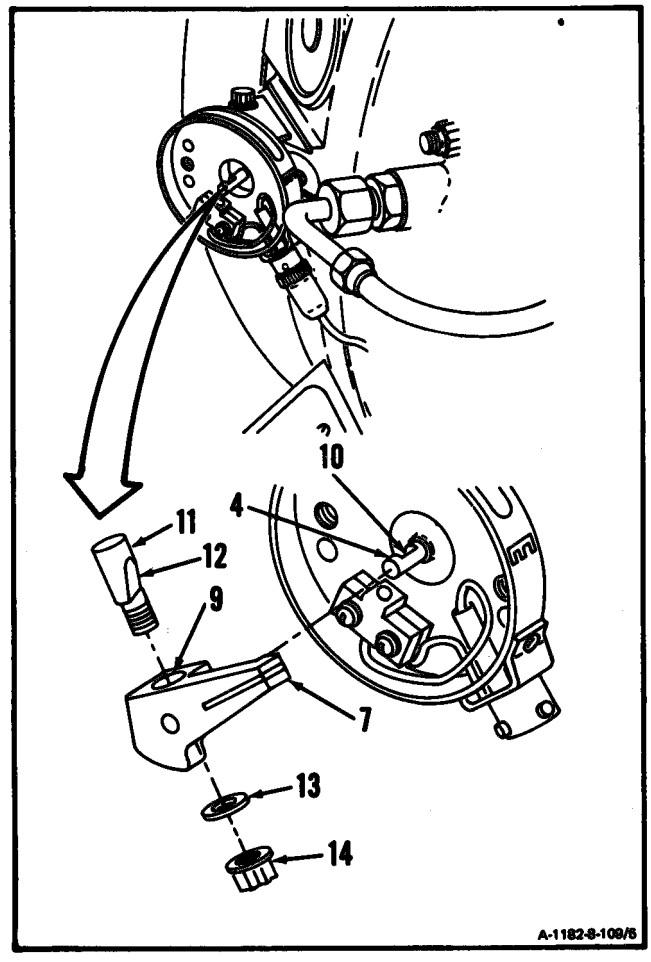
8-109 INSTALL OIL LEVEL FLOAT ASSEMBLY (AVIM) (Continued) 8-109

3. **Position pointer (7)** on shaft (4) with white stripe (8) facing out.



4. **Install pointer (7)** on shaft (4) with hole (9) aligned with notch (10).

5. **Install bolt (11)** with flat (12) against notch (10). Install washer (13) and nut (14).

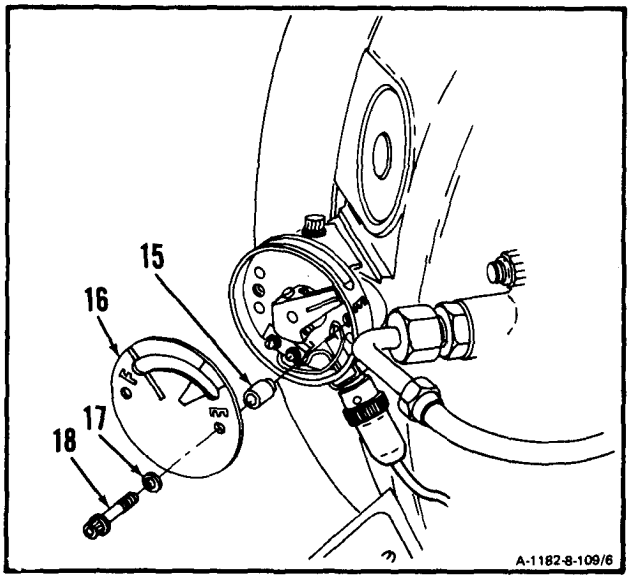


GO TO NEXT PAGE

8-109 INSTALL OIL LEVEL FLOAT ASSEMBLY (AVIM) (Continued) 8-109

6. **Adjust oil level indicator** (Ref. Task 8-102, steps 3. thru 7.)

7. **Install** two spacers (15), **cover (16),** two washers (17), and two bolts (18). **Torque bolts (18) to 15 inch-pounds.** Lockwire bolts (18), Use lockwire (E29).



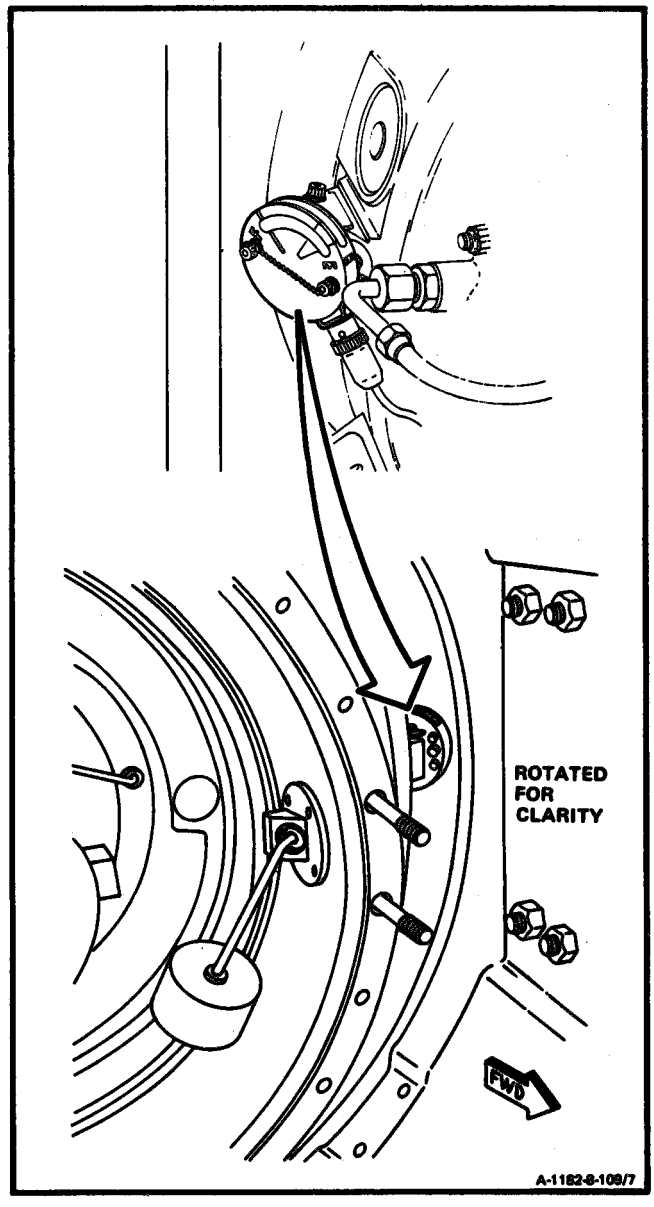
INSPECT

GO TO NEXT PAGE

8-109 INSTALL OIL LEVEL FLOAT ASSEMBLY (AVIM) (Continued)

FOLLOW-ON MAINTENANCE:

Install Inlet Housing Cover Assembly (Task 2-57).
Install Output Shaft Seal and Housing Assembly (Task 2-52) .
Service Engine Oil System (Task 1-74).



END OF TASK

CHAPTER 9

TORQUEMETER SYSTEM - MAINTENANCE INSTRUCTIONS

CHAPTER OVERVIEW

This chapter contains maintenance procedures for the torquemeter system. It is divided into the following sections and tasks:

SECTION	TASK NO.	TITLE	PAGE
I		TORQUEMETER JUNCTION BOX - MAINTENANCE PROCEDURES	
	9-1	Remove Torquemeter Junction Box	9-3
	9-2	Clean Torquemeter Junction Box	9-8
	9-3	Inspect Torquemeter Junction Box	9-9
	9-4	Repair Torquemeter Junction Box	9-11
	9-5	Install Torquemeter Junction Box	9-13
II		OUTPUT SHAFT - MAINTENANCE PROCEDURES	
	9-6	Remove Output Shaft	9-19
	9-7	Clean Output Shaft	9-26
	9-8	Inspect Output Shaft	9-28
	9-9	Repair Output Shaft	9-30
	9-10	Install Output Shaft	9-31
III		TORQUEMETER HEAD ASSEMBLY - MAINTENANCE PROCEDURES	
	9-11	Remove Torquemeter Head Assembly	9-39
	9-12	Clean Torquemeter Head Assembly	9-44
	9-13	Inspect Torquemeter Head Assembly	9-46
	9-14	Install Torquemeter Head Assembly	9-49

GO TO NEXT PAGE

Section I. TORQUEMETER JUNCTION BOX - MAINTENANCE PROCEDURES

9-1 REMOVE TORQUEMETER JUNCTION BOX 9-1

INITIAL SETUP

Applicable Configurations:

All

Tools:

Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944

Materials:

Wiping Rag (E58)

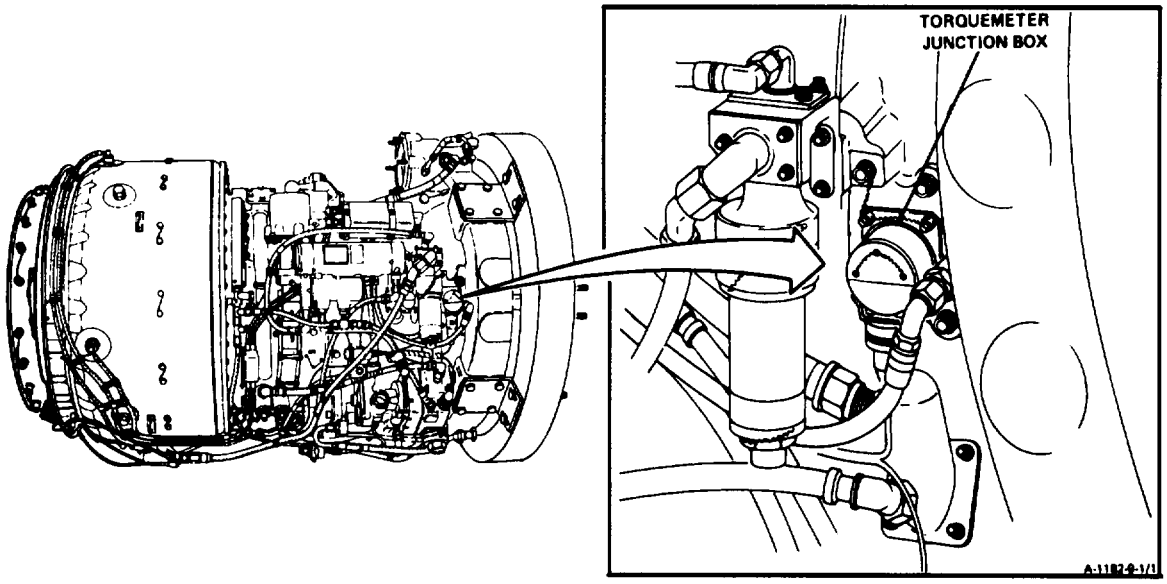
Personnel Required:

68B10 Aircraft Powerplant Repairer

General Safety Instructions:

WARNING

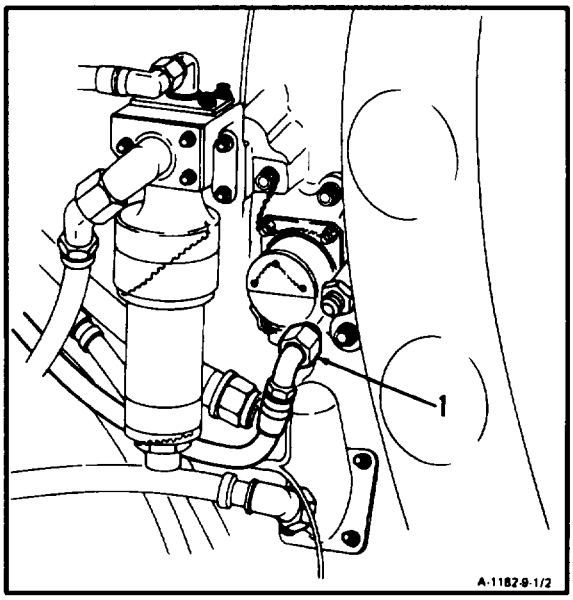
Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.



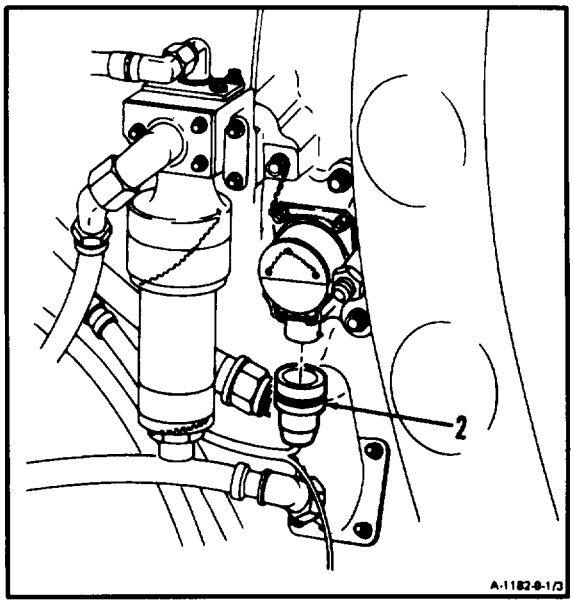
GO TO NEXT PAGE

9-1 REMOVE TORQUEMETER JUNCTION BOX (Continued) 9-1

1. Disconnect hose assembly (1).



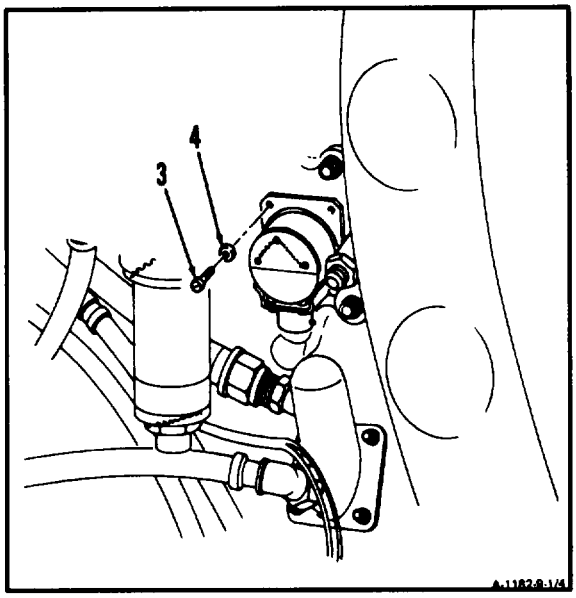
2. Disconnect electrical connector (2).



GO TO NEXT PAGE

9-1 REMOVE TORQUEMETER JUNCTION BOX (Continued) 9-1

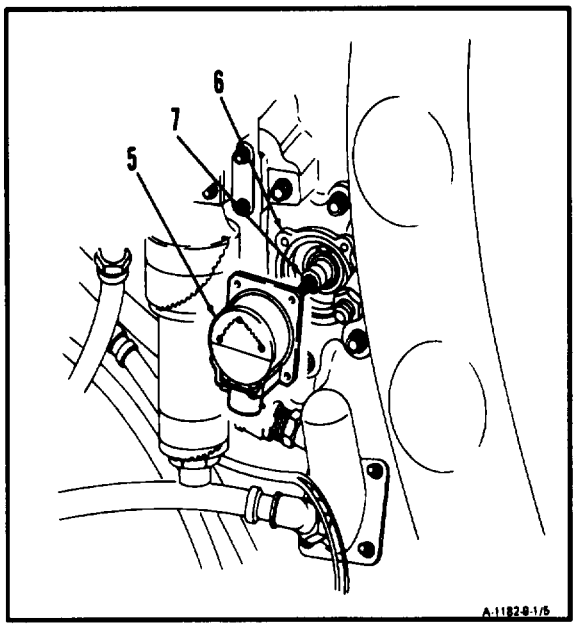
3. Remove lockwire, four screws (3), and washers (4).



CAUTION

In following step 4, do not jerk torquemeter junction box away from flange. This will strain electrical connectors and cause damage to wiring.

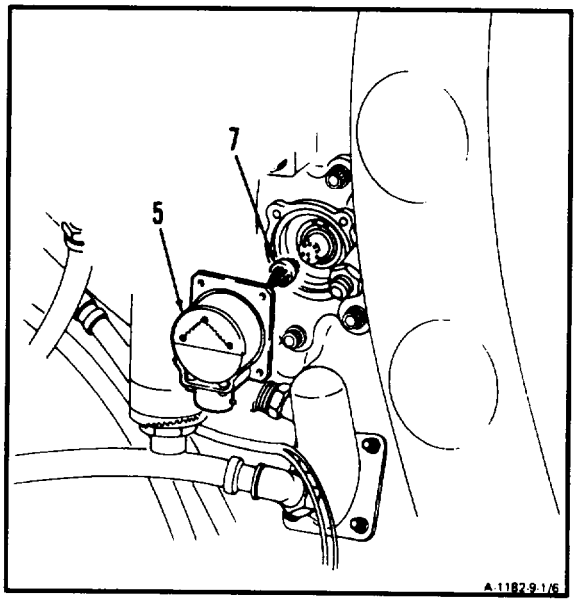
4. Carefully **separate torquemeter junction box (5)** from flange (6) to permit access to electrical connector (7).



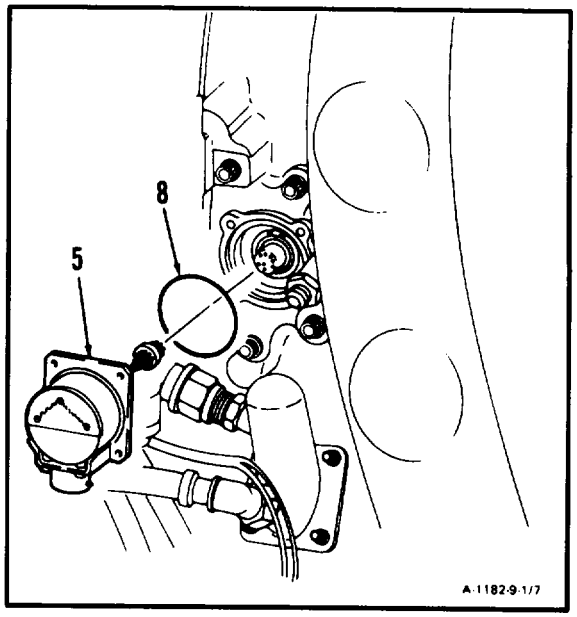
GO TO NEXT PAGE

9-1 REMOVE TORQUEMETER JUNCTION BOX (Continued) 9-1

5. Hold torquemeter junction box (5) and **disconnect electrical connector (7)**.



6. **Remove torquemeter junction box (5)** and packing (8).

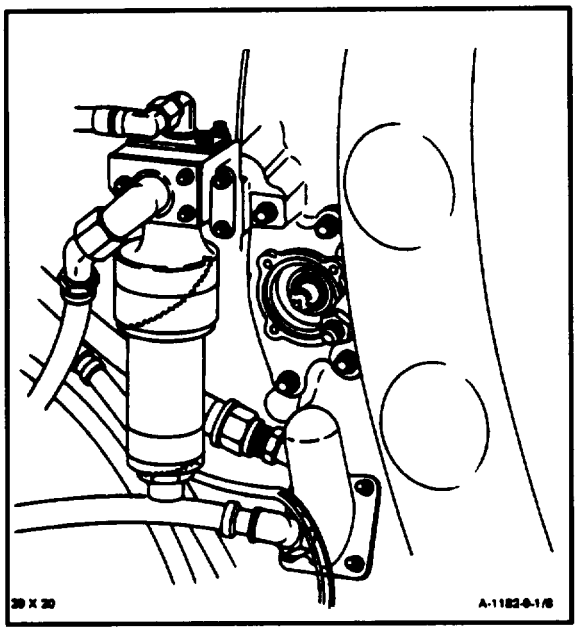


GO TO NEXT PAGE

9-1 REMOVE TORQUEMETER JUNCTION BOX (Continued) **9-1**

FOLLOW-ON MAINTENANCE:

None



END OF TASK

9–2 CLEAN TORQUEMETER JUNCTION BOX 9–2

INITIAL SETUP

Applicable Configurations:

All

Tools:

Powerplant Mechanics Tool Kit,
NSN 5180–00–323–4944

Goggles

Compressed Air Source

Materials/Parts:

Solvent (E48.1)

Gloves (E20)

Lint Free Cloth (E26)

Personnel Required:

68B10 Aircraft Powerplant Repairer

Equipment Condition:

Off Engine Task

Torquemeter Junction Box Removed (Task 9–1)

WARNING

Dry cleaning solvent (E17) is flammable and toxic. It can irritate skin and cause burns. Use only in well–ventilated area, away from heat and open flame. In case of contact, immediately flush skin or eyes with water for at least 15 minutes. Get medical attention for eyes.

1. **Clean torquemeter junction box (1)** as follows:
   a. Wear gloves (E20) and clean junction box (1). Use lint–free cloth (E26) dampened with solvent (E49.1).
   b. Use dry, lint–free cloth (E26) to remove solvent.

WARNING

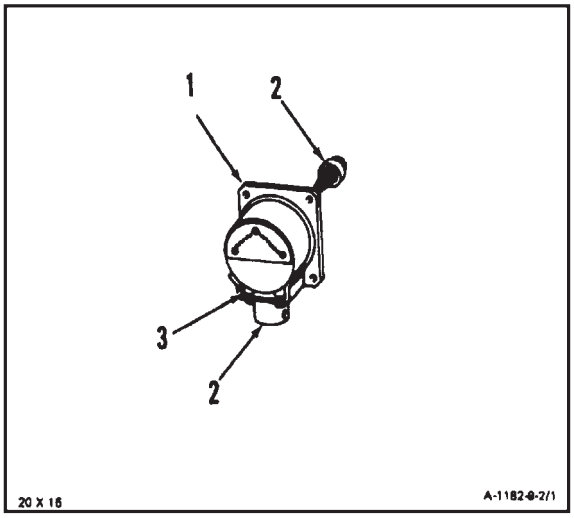
When using compressed air for cleaning, use approved protective equipment for eyes and face. Do not use more than 30 psig air pressure. Do not direct air toward yourself or another person. Failure to comply could result in injury to eyes or skin. In case of injury, get medical attention.

   c. Wear goggles. Blow dry electrical connectors (2) and inside surfaces (3). use clean, dry compressed air.

FOLLOW–ON MAINTENANCE:

Install Torquemeter Junction Box (Task 9–3)

END OF TASK



9–3 INSPECT TORQUEMETER JUNCTION BOX 9–3

INITIAL SETUP

Applicable Configurations:

All

Tools:

Technical Inspection Tool Kit,
NSN 5180–00–323–5114

Materials/Parts:

None

Personnel Required:

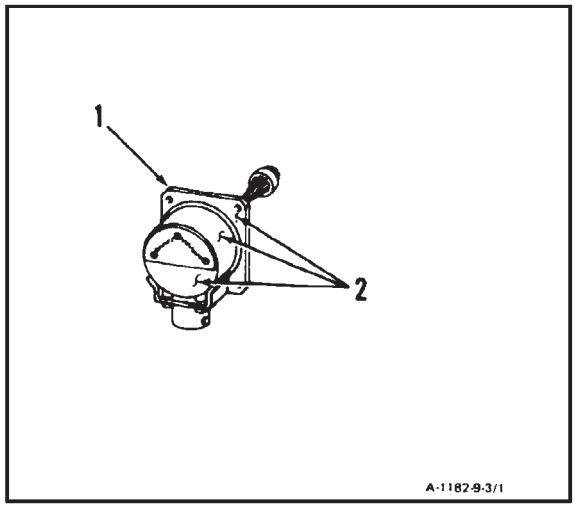
68B30 Aircraft Powerplant Inspector

Equipment Condition:

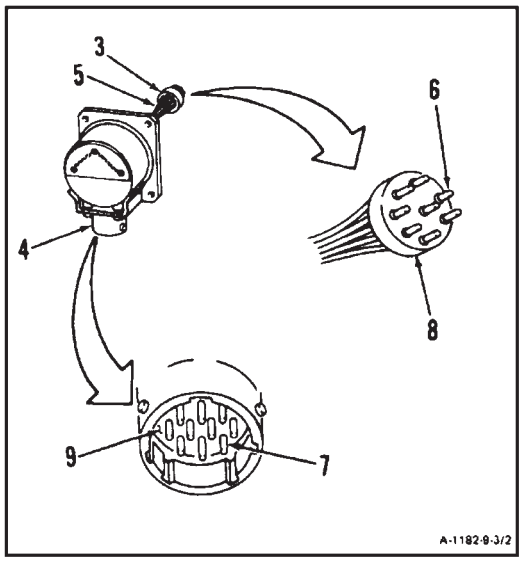
Off Engine Task

1. **Inspect torquemeter junction box (1)** as follows:

   a. **Inspect body (2).** There shall be no cracks, distortion or dents.



   b. **Inspect electrical connectors (3 and 4)** and wires (5). There shall be no broken wires (5), broken, corroded or bent pins (6 and 7), or damaged insulation (8 and 9).



FOLLOW–ON MAINTENANCE

None

END OF TASK

9-4 REPAIR TORQUEMETER JUNCTION BOX 9-4

INITIAL SETUP

Applicable Configurations:

All

Tools:

Powerplant Mechnaic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114
Goggles
Compressed Air Source

Materials:

Crocus Cloth (E15)

Personnel Required:

68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

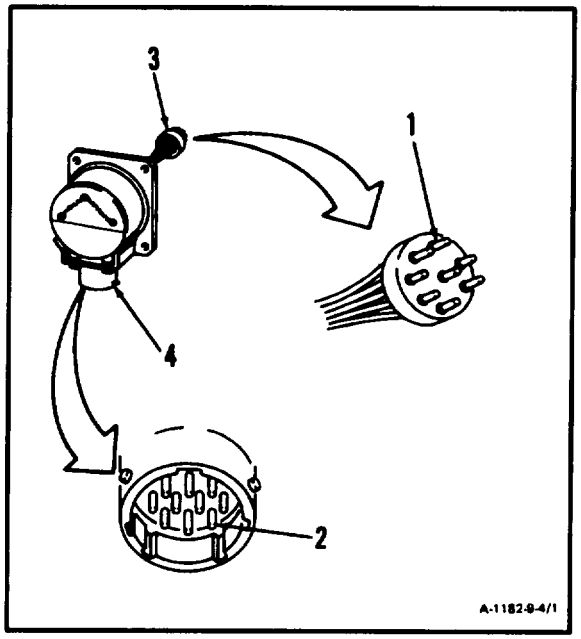
Equipment Condition:

Off Engine Task

NOTE

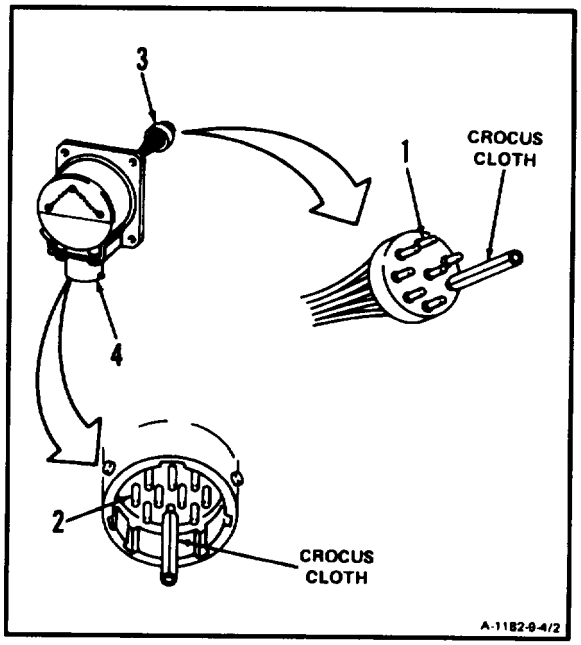
This repair is allowed provided it does not cause pins to break or crack.

1. Straighten bent pins (1 and 2) of electrical connectors (3 and 4). Using long-nose pliers, gently move pins (1 and 2) until they are straight.



GO TO NEXT PAGE

2. Remove corrosion from pins (I and 2) of electrical connectors (3 and 4). Polish pins using in and out motion over entire length of pin until corrosion is removed. Use crocus cloth (El5).



WARNING

When using compressed air for cleaning, use approved protective equipment for eyes and face. Do not use more than 30 psig air pressure. Do not direct air toward yourself or another person. Failure to comply could result in injury to eyes or skin. In case of injury, get medical attention.

INSPECT

FOLLOW-ON MAINTENANCE:

None

END OF TASK

9-5. INSTALL TORQUEMETER JUNCTION BOX 9-5

INITIAL SETUP

Applicable Configurations:

All

Tools:

Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:

Adhesive (3145 RTV)(E2.1)
Grease Silicone (E23.1)
Lockwire (E29)
Alcohol, Denatured (MIL-A-6091)(E2.2)

Parts:

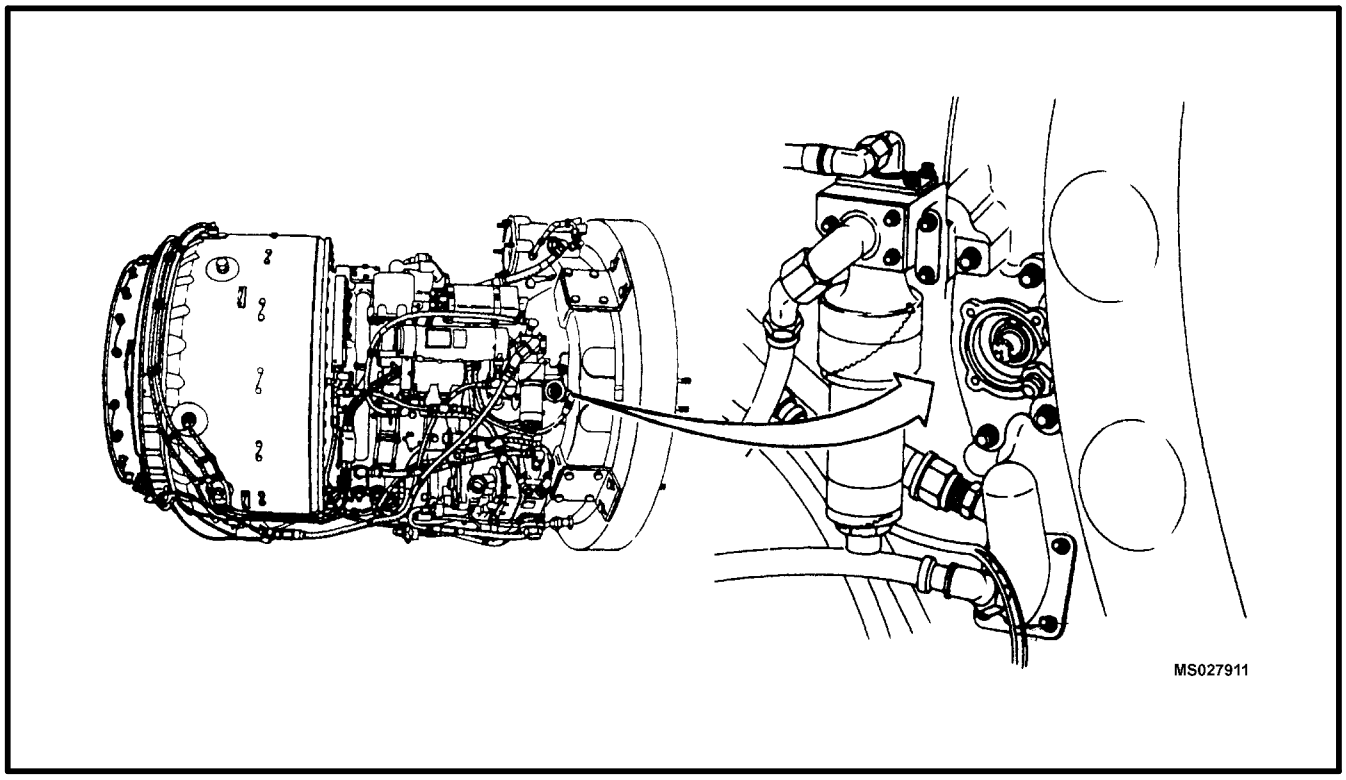
Packings

Personnel Required:

68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

References:

TM 55-2840-254-23P
Task 9-6
Task 9-10
Task 9-11
Task9-14



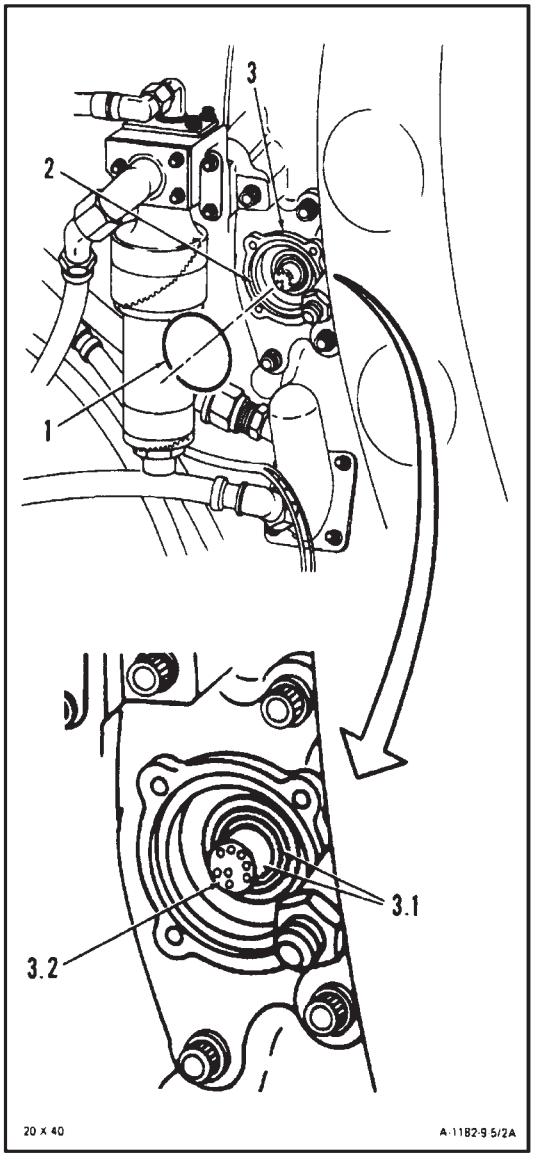
GO TO NEXT PAGE

9–5 INSTALL TORQUEMETER JUNCTION BOX (Continued) 9–5

NOTE

The output shaft, torquemeter head and torquemeter junction box are supplied as a calibrated set. If you replace the torquemeter junction box, you must replace the output shaft (Tasks 9–6 and 9–10) and the torquemeter head assembly (Tasks 9–11 and 9–14).

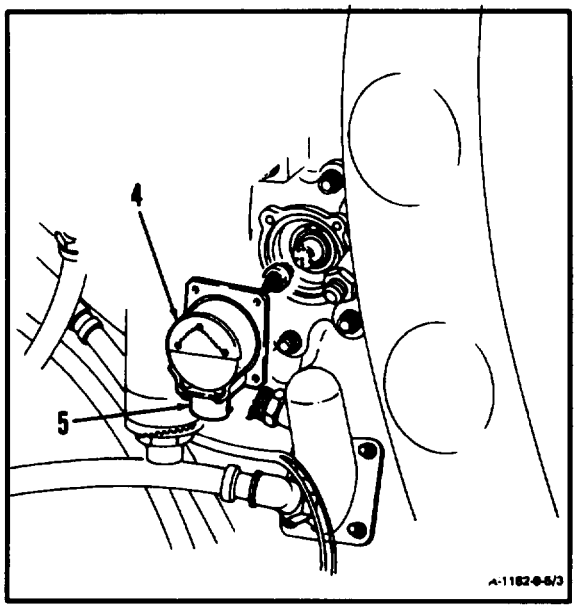
1. Install packing (1) in groove (2) of flange (3). Coat torquemeter head assembly connector and flange area (3.1) (screened area) with silicone grease (E23.1). Coat pin area (3.2) of connector with silicone grease (E23.1).



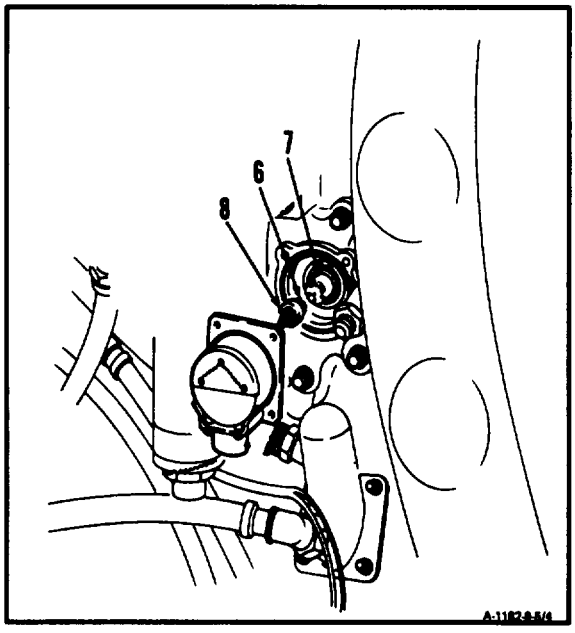
GO TO NEXT PAGE

9-5 INSTALL TORQUEMETER JUNCTION BOX (CONTINUED) **9-5**

2. Position torquemeter junction box (4) with electrical connector (5) at 6-o'clock location.



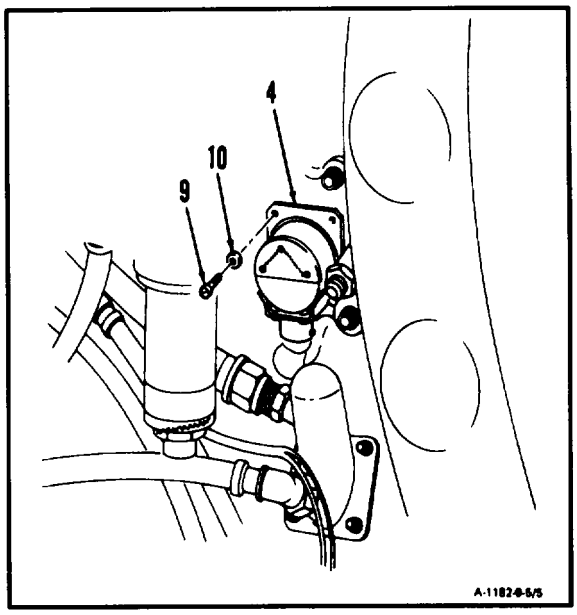
3. Align pins (6) with holes (7) and **connect electrical connector (8).**

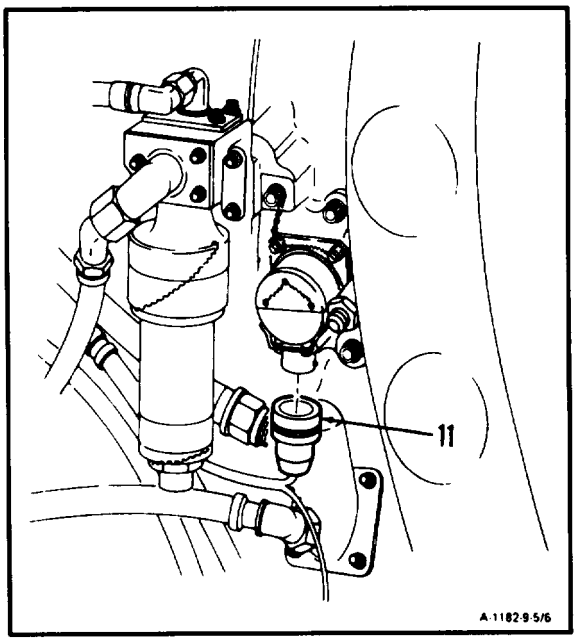


GO TO NEXT PAGE

4. **Install torquemeter junction box (4),** four screws (9), and washers (10). Lockwire screws (9). Use lockwire (E29).

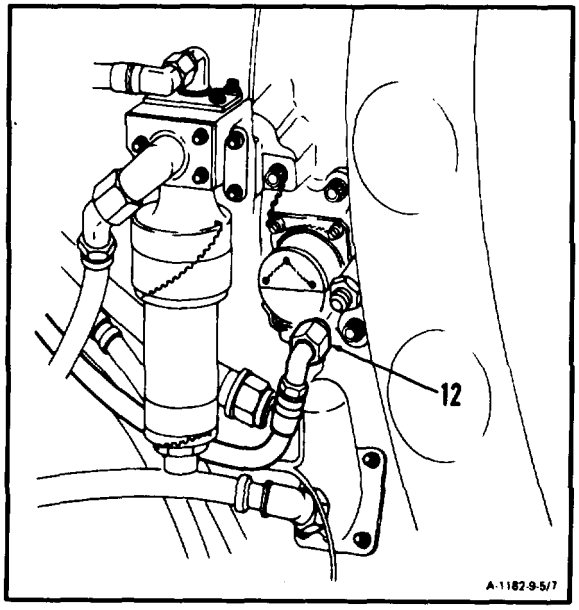
5. **Connect electrical connector (11).**





GO TO NEXT PAGE

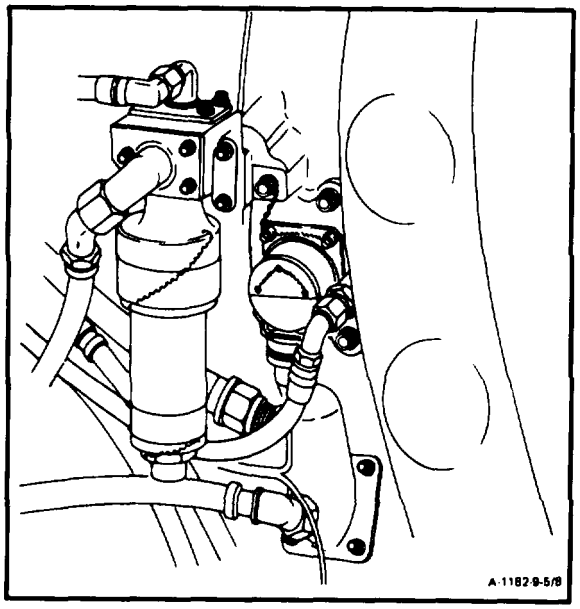
6. Connect hose assembly (12).



INSPECT

FOLLOW-ON MAINTENANCE

None



END OF TASK

Section II. OUTPUT SHAFT - MAINTENANCE PROCEDURES

9-6 REMOVE OUTPUT SHAFT 9-6

INITIAL SETUP

Applicable Configurations:
All

Tools:

Powerplant Mechnaic's Tool Kit, NSN 5180-00-323-4944
Mechanical Puller (T6)
Socket Wrench Assembly (T22)
Shaft Holding Tool (T23)
Output Shaft Puller Adapter (T35)
Bearing Removal Tool (T59)
Arbor Press
Breaker Bar, 1/2-inch
Socket Wrench Adapter, 1/2-inch Female to 3/4-Inch Male
Work Table

Materials:

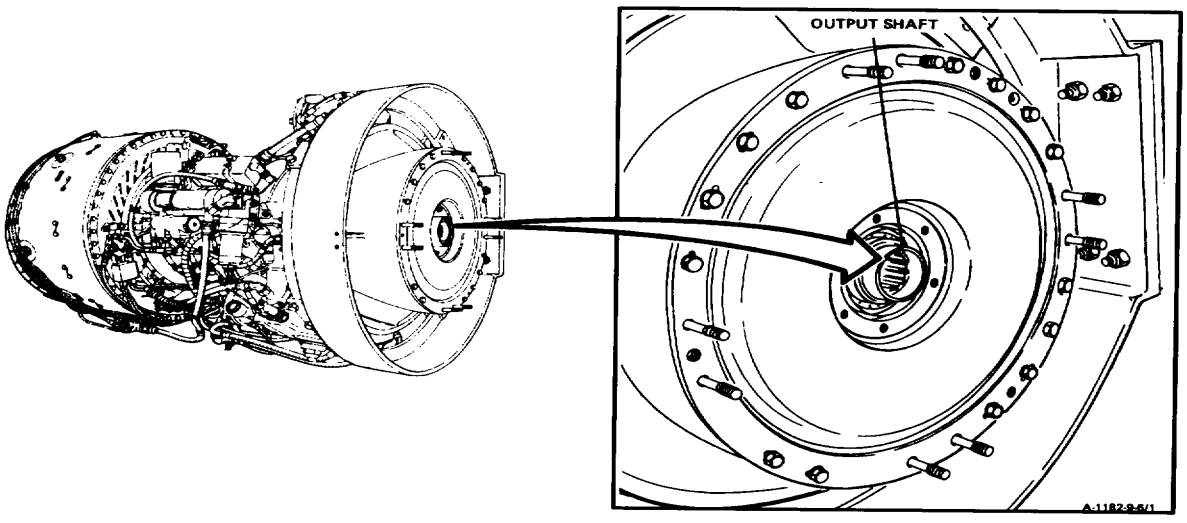
Lint-Free Cloth (E26)
Wiping Rag (E58)

Personnel Required:

68B10 Aircraft Powerplant Repairer

Equipment Condition:

Engine Oil System Drained (Task 1-75)
Output Shaft Seal and Housing Assembly Removed (Task 2-48)

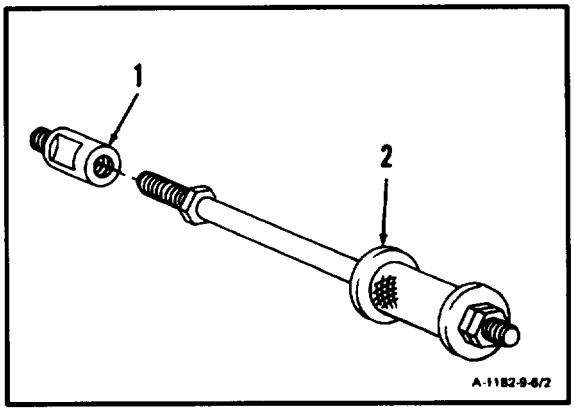


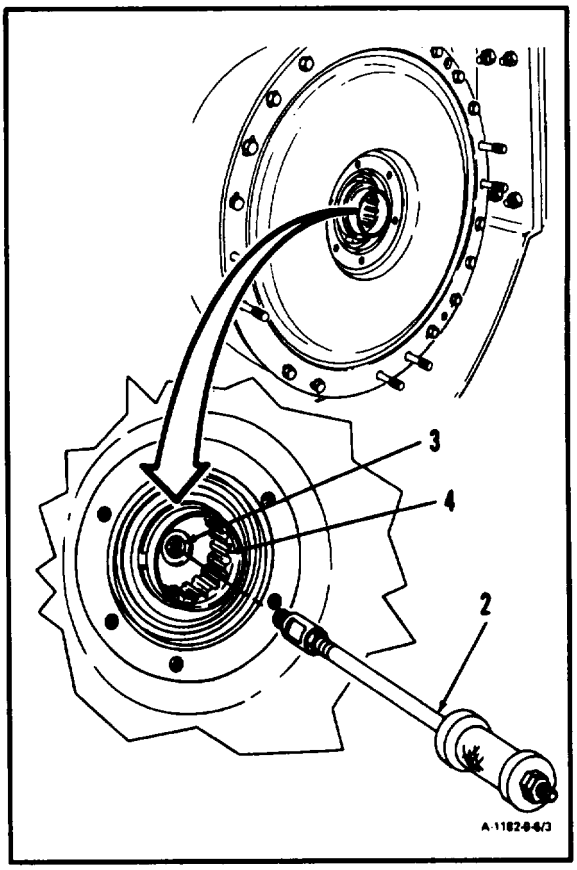
GO TO NEXT PAGE

9-6 REMOVE OUTPUT SHAFT (Continued) 9-6

1. **Install output shaft puller adapter (T35) (1) on mechnaical puller (T6) (2).**

2. **Install mechanical puller (T6) (2)** in threaded hole (3) in **output shaft (4).**





GO TO NEXT PAGE

9-6 REMOVE OUTPUT SHAFT (Continued) 9-6

CAUTION

In following step 3, be sure to remove out-put shaft carefully. Failure to lift rear of shaft as it is being removed will cause damage to internal components.

3. **Carefully pull and lift output shaft (4) from housing (5).**

4. Remove mechanical puller (T6) (2).

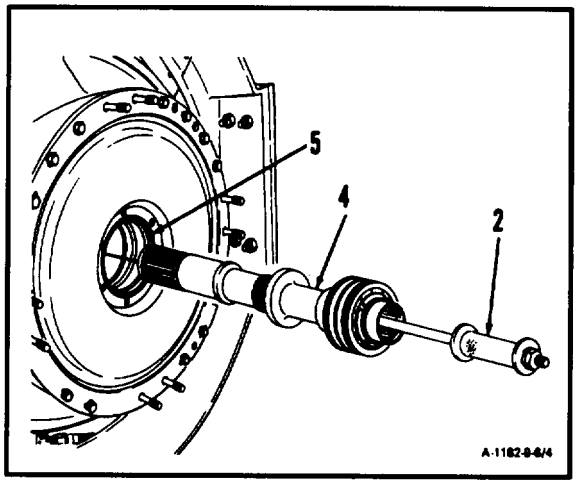
NOTE

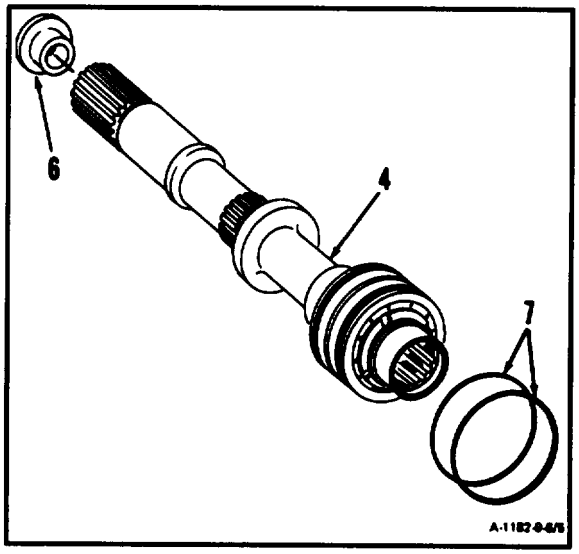
If output shaft is not being replaced, bearings should not be removed.

5. **Remove spacer** (6) from output shaft (4). Remove packings (7).

NOTE

Remove packing pieces from output shaft housing.





GO TO NEXT PAGE

CAUTION

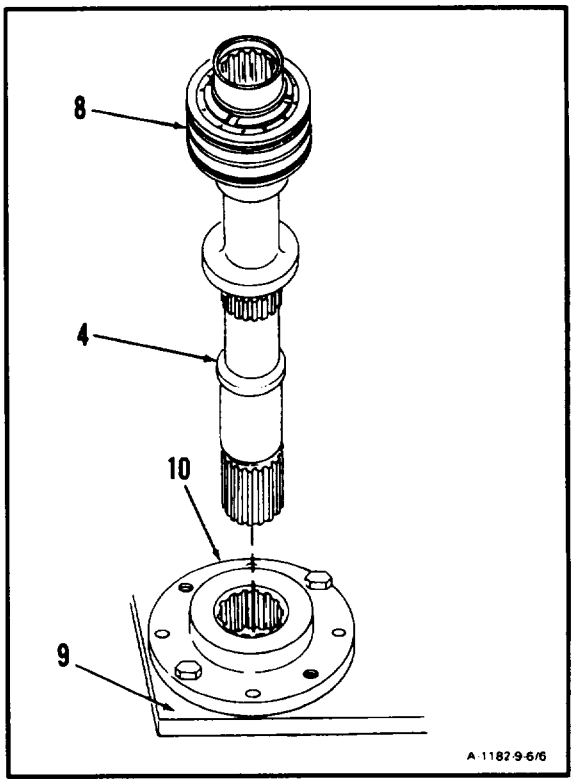
Protect bearings from damage. Handle only in clean area. Use clean, lint-free cloth (E26). Damaged bearings can cause engine failure.

6. Remove bearings (8) from output shaft (4) as follows:

WARNING

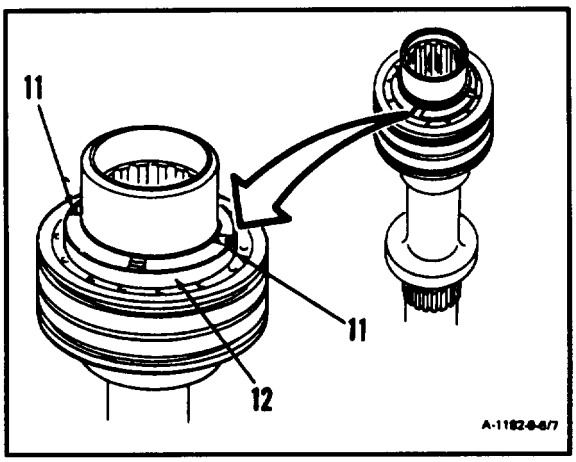
To prevent slipping, ensure that shaft holding tool is secured to work table. Injury could result.

a. Secure shaft holding tool (T23) (10) to work table (9). Install output shaft (4) in shaft holding tool (T23) (10).



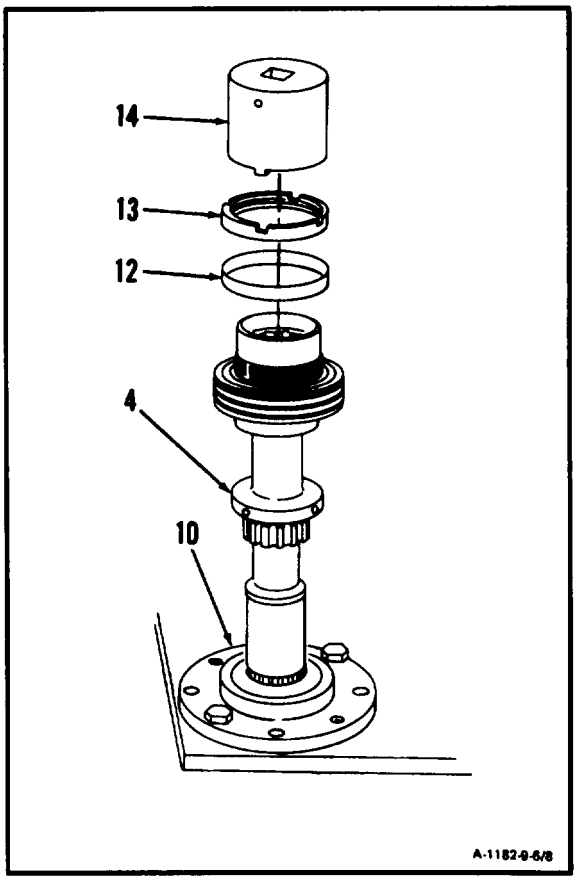
GO TO NEXT PAGE

b. **Straighten** bent portions (11) of **locking cup (12).**



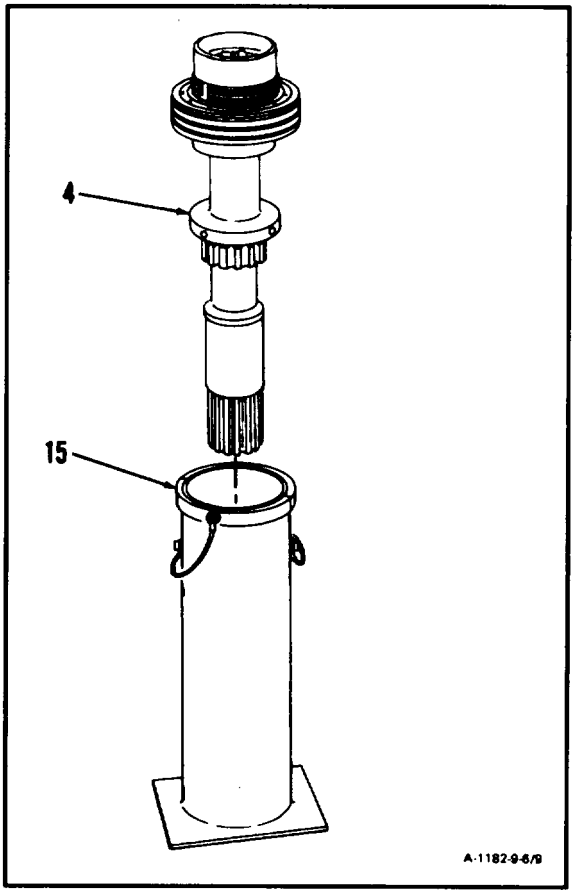
c. **Remove nut (13) and recessed washer (12).** Use socket wrench assembly (T22) (14), socket wrench adapter, and 1/2-inch breaker bar.

d. Remove output shaft (4) from shaft holding tool (T23) (10).



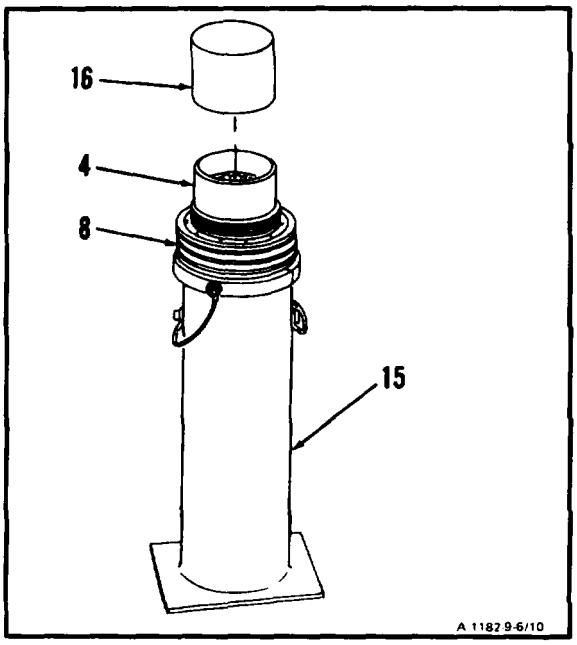
GO TO NEXT PAGE

e. Install output shaft (4) in bearing removal tool (T59) base (15).



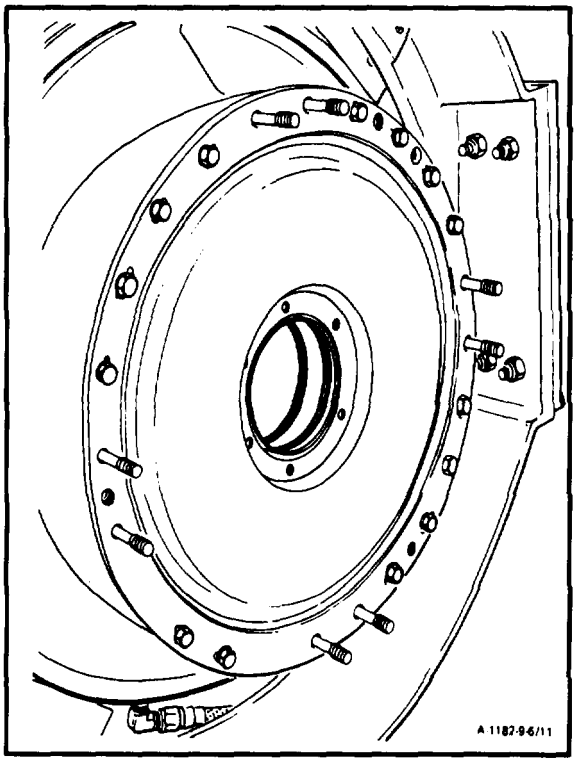
GO TO NEXT PAGE

f. **Press output shaft (4) through bearings (8).** Use bearing removal tool (T59) (15), ram (16), and an arbor press.



FOLLOW-ON MAINTENANCE

None



END OF TASK

9-7 CLEAN OUTPUT SHAFT 9-7

INITIAL SETUP

Applicable Configurations:

All

Tools:

Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Goggles
Compressed Air Source

Materials:

Dry Cleaning Solvent (E17)
Gloves (E20)
Lint-Free Cloth (E26)
Lubricating Oil (E32)

Personnel Required:

68B 10 Aircraft Powerplant Repairer

Equipment Condition:

Off engine Task
Engine Oil System Drained (Task 1-75)
Output Shaft Seal and Housing Assembly Removed (Task 2-48)
Output Shaft Removed (Task 9-6)

General Safety Instructions:

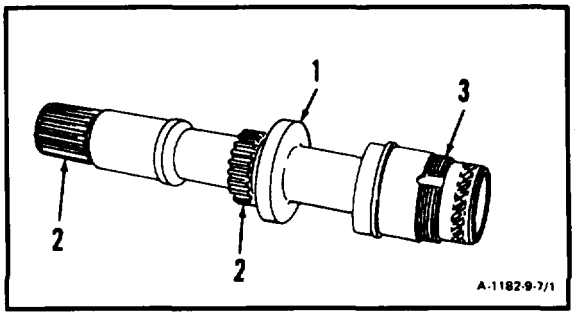
WARNING

Dry cleaning solvent (E17) is flammable and toxic. It can irritate skin and cause burns. Use only in well-ventilated area, away from heat and open flame. In case of contact, immediately flush skin or eyes with water for at least 15 minutes. Get medical attention for eyes.

WARNING

When using compressed air for cleaning, use approved protective equipment for eyes and face. Do not use more than 30 psig air pressure. Do not direct air toward yourself or another person. Failure to comply could result in injury to eyes or skin. In case of injury, get medical attention.

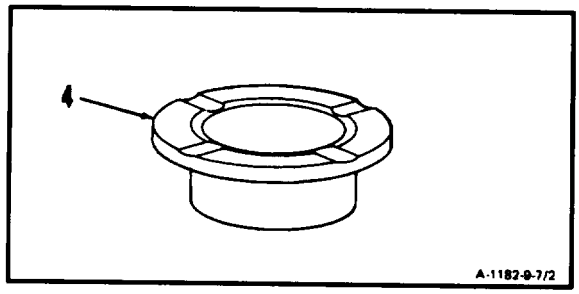
1. Clean output shaft (1). Wear gloves (E20). Immerse dry-cleaning solvent (E17) and agitate. Use brush on splines (2) and threads (3).
2. Wipe dry. Use clean, dry lint-free cloth (E26).
3. Wear goggles. Blow dry. Use clean, dry compressed air.



GO TO NEXT PAGE

9-7 CLEAN OUTPUT SHAFT (Continued) 9-7

4. Wear gloves (E20). Clean spacer (4). Immerse in dry cleaning solvent (El 7) and agitate. Wipe with lint-free cloth (E26) dampened in dry cleaning solvent (E17).

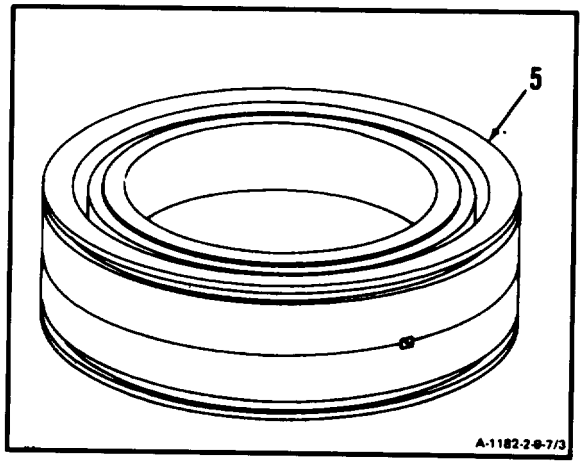


5. Wipe dry. Use clean, dry lint-free cloth (E26).

6. Wear goggles. Blow dry. Use clean, dry compressed air.

CAUTION

Protect bearings from damage. Handle only in clean area. Use clean, lint-free cloth (E26). Damaged bearings can cause engine failure.



7. Wear gloves (E20). **Clean bearing (5).** Immerse in clean dry-cleaning solvent (El7) and agitate. Rinse in clean dry-cleaning solvent (E17).

8. Wipe dry. Use clean, dry lint-free cloth (E26).

9. Wear goggles. Blow dry. Use clean, dry compressed air.

10. Coat with lubricating oil (E32) and wrap in clean, lint-free cloth (E26).

FOLLOW-ON MAINTENANCE:

Inspect Output Shaft (Task 9-8).

END OF TASK

9-8 INSPECT OUTPUT SHAFT 9-8

INITIAL SETUP

Applicable Configurations:

All

Tools:

Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:

Lint-Free Cloth (E26)

Personnel Required:

68B30 Aircraft Powerplant Inspector

References:

Task 1-118

Equipment Condition:

Off Engine Task

1. **Inspect output shaft (1)** as follows:

   a. There shall be no cracks.

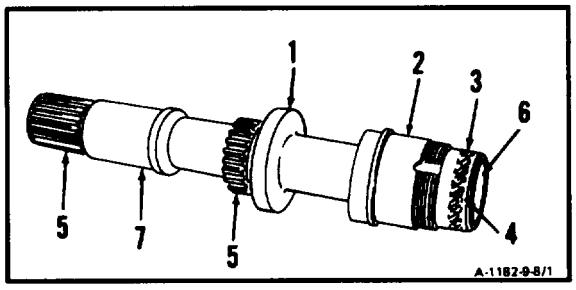
   b. There shall be no scratches on bearing journal (2) deeper than 0.002 inch.

   c. There shall be no nicks or scratches on seal contact area (3).

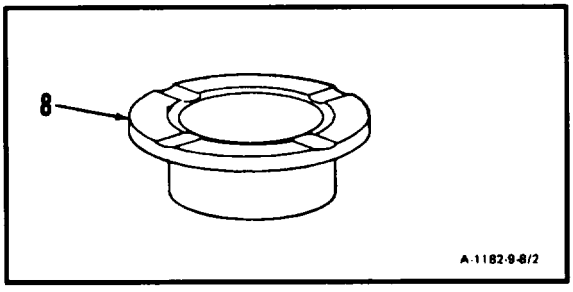
   d. There shall be no nicks or scratches deeper than 0.002 inch on edge of seal flange (4).

   e. Inspect splines (5 and 6) (Ref. Task 1-118). There shall be no chips. There shall be no wear deeper than 0.007 inch on splines (5) and 0.005 inch on spline (6).

   f. There shall be no nicks or scratches on magnetic pickup area (7) deeper than 0.008 inch.



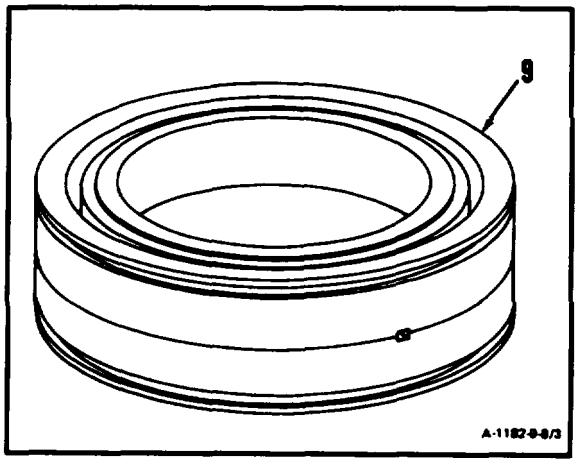
2. **Inspect spacer (8).** There shall be no cracks.



GO TO NEXT PAGE

CAUTION

Protect bearings from damage. Handle only in clean area. Use clean, lint-free cloth (E26). Damaged bearings can cause engine failure.



3. **Inspect bearing (9)** as follows:

   a. There shall be no rust or broken parts.

   b. There shall be no pits or dents deeper than 0.002 inch.

   c. There shall be no foreign matter clogging the bearing which would obstruct free rotation.

   d. There shall be no purple, red-purple or blue discoloration.

FOLLOW-ON MAINTENANCE:

None

END OF TASK

9-9 REPAIR OUTPUT SHAFT 9-9

INITIAL SETUP

Applicable Configurations:

All

Tools:

Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:

Carborundum Stone (El0)
Crocus Cloth (El 5)

Personnel Required:

68B 10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

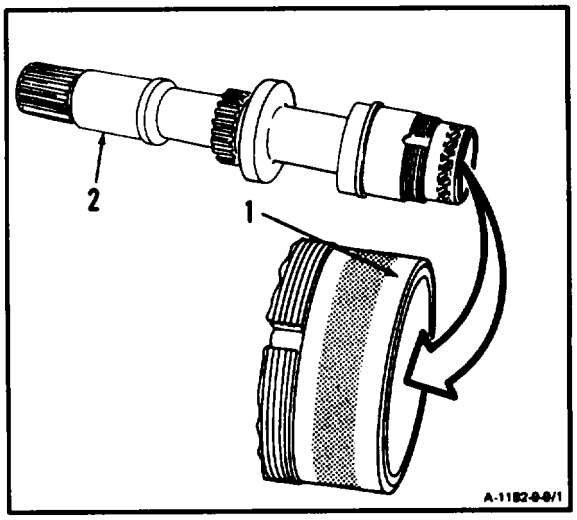
References:

Off Engine Task

1. Repair nicks and scratches less than 0.002 inch deep on edge of seal flange (1) and less than 0.008 inch deep on magnetic pickup area (2) as follows:

   a. **Blend all sharp edges** next to nicks and scratches. Use carborundum stone (e10).

   b. **Polish to smooth finish**. Use crocus cloth (E15).



INSPECT

FOLLOW-ON MAINTENANCE:

None

END OF TASK

9–10 INSTALL OUTPUT SHAFT 9–10

INITIAL SETUP

Applicable Configurations:

All

Tools:

Powerplant Mechanic's Tool Kit, NSN 5180–00–323–4994
Technical Inspection Tool Kit NSN 5180–00–323–5114
Mechanical Puller (T6)
Socket Wrench Assembly (T22)
Shaft Holding Tool (T23)
Output Shaft Puller Adapter (T35)
2–3/8 Inch Inside Diameter Sleeve (Appendix E)
Torque Wrench, 100–750 Inch–Pounds
Work Table
Outside Micrometer Caliper Set
Arbor Press
Micrometer Depth Gage
Socket Wrench Adapter, 1/2–Inch Female to 3/4–Inch Male

Materials:

Lint–Free Cloth (E26)

Parts:

Packings
Spacer

Personnel Required:

68B10 Aircraft Powerplant Repairer

68B30 Aircraft Powerplant Inspector

References:

TM 55–2840–240–23

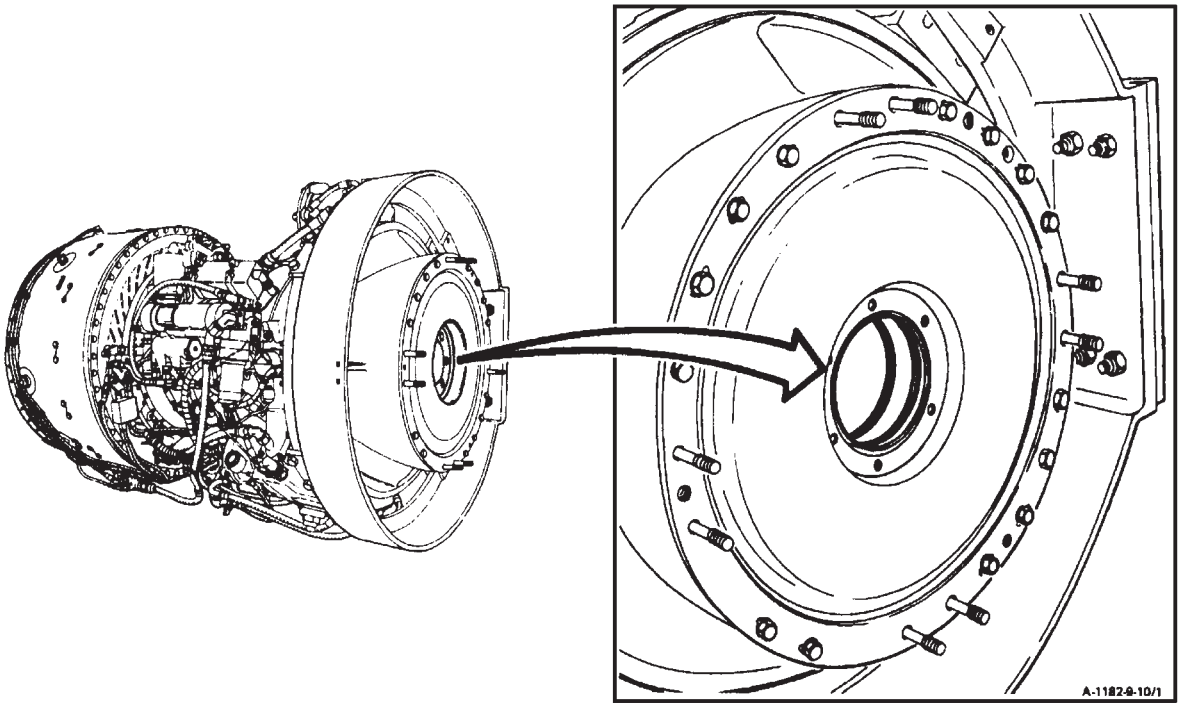
TM 55–2840–254–23P

Task 9–1

Task 9–5

Task 9–11

Task 9–14



GO TO NEXT PAGE

9-10 INSTALL OUTPUT SHAFT (Continued) 9-10

NOTE

The output shaft, torquemeter head, and torquemeter junction box are supplied as a calibrated, matched set. If you replace the output shaft, you must also replace the torquemeter junction box (Tasks 9-1 and 9-5) and torque- meter head (Tasks 9-11 and 9-14).

CAUTION

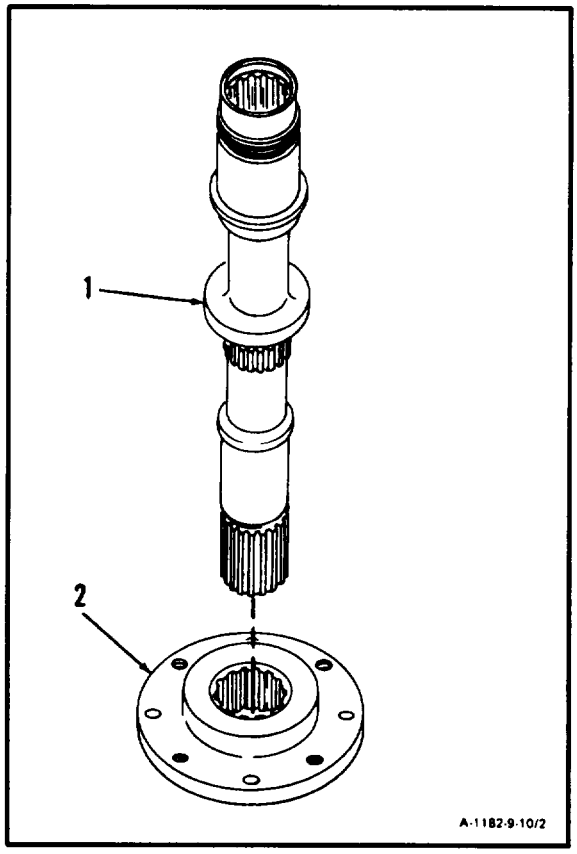
Protect bearings from damage. Handle only in clean area. Use clean, lint-free cloth (E26). Damaged bearings can cause engine failure.

NOTE

If bearings have not been removed omit step 1.

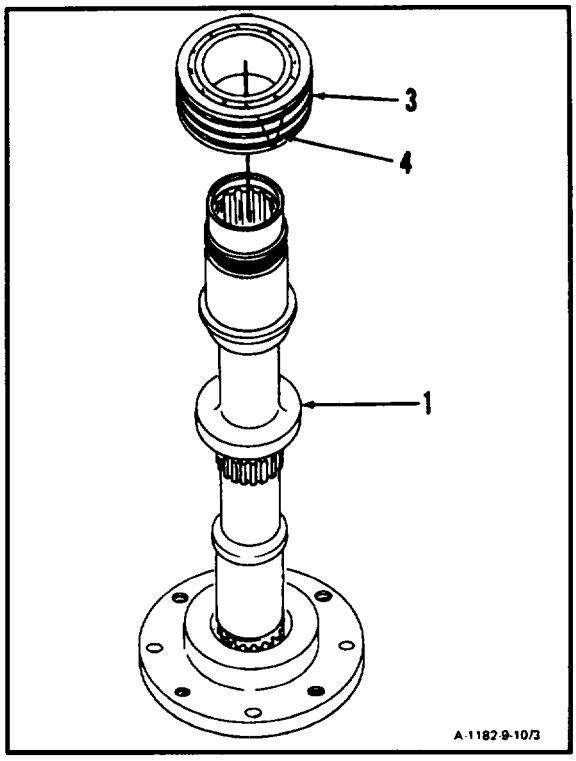
1. Install bearing on output shaft (1) as follows:

   a. Install output shaft (1) in shaft holding tool (T23) (2).

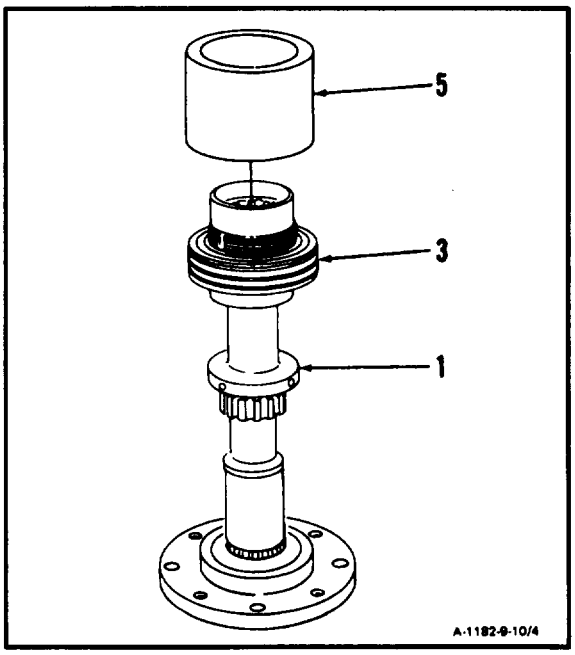


GO TO NEXT PAGE

b. **Position bearings (3) on output shaft (1)** with V mark (4) pointing down.



c. **Press bearing (3) onto output shaft (1).** Use 2-3/8 inch inside diameter sleeve (Appendix E) (5) and arbor press.



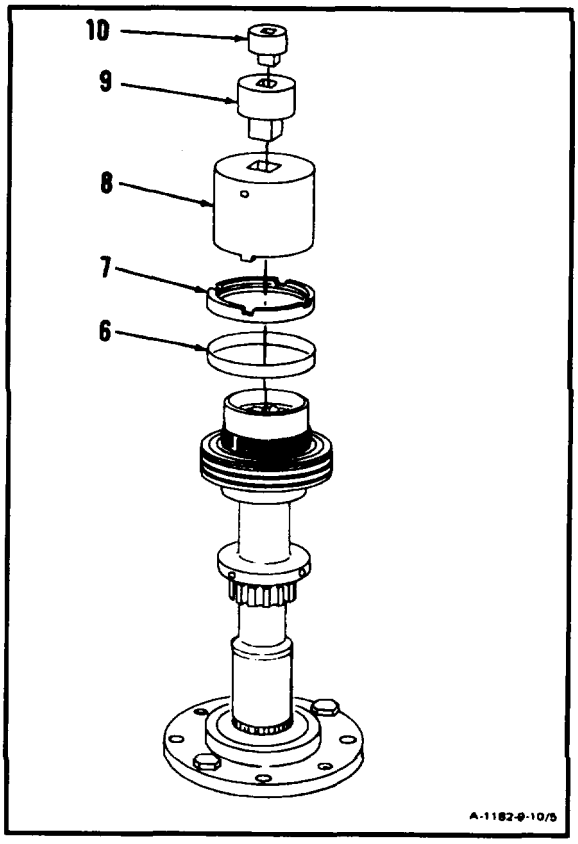
GO TO NEXT PAGE

9-10 INSTALL OUTPUT SHAFT (Continued) 9-10

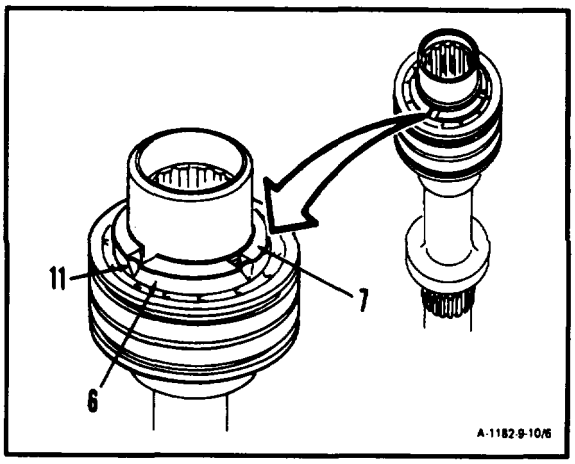
WARNING

To prevent slipping, ensure that shaft hold- ing tool is secured to work table. Injury could result.

d. **Install recessed washer (6) and nut (7).** Use socket wrench assembly (T22) (8) and adapters (9 and 10). **Torque to 675 inch-pounds.**

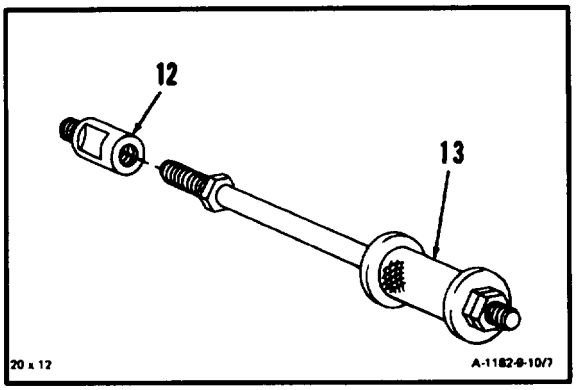


e. **Bend recessed washer (6) into** two opposite slots (11) in **nut (7).**

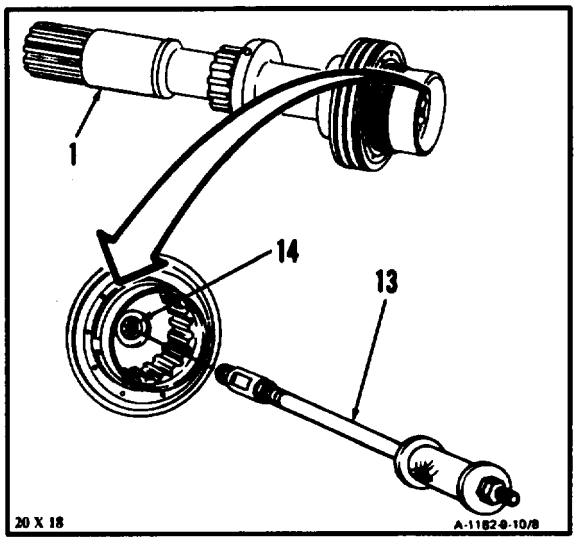


GO TO NEXT PAGE

2. **Install output shaft puller adapter (T35) (12) on mechanical puller (T6) (13).**



3. **Install mechanical puller (T6) (13)** in threaded hole (14) in **output shaft (1).**

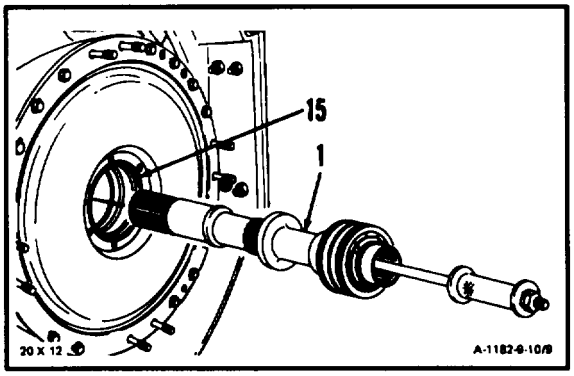


CAUTION

In following step 4; be sure all gear teeth are aligned when installing output shaft.

4. Determine what spacer you will need as follows:

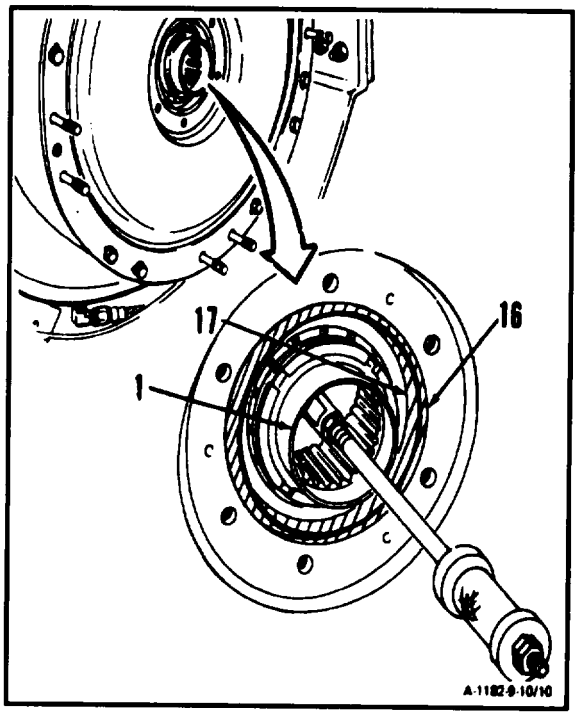
   a. Carefully install output shaft (1) on housing (15).



GO TO NEXT PAGE

9-10 INSTALL OUTPUT SHAFT (Continued) 9-10

b. Push on output shaft (1) and **measure depth from flange (16) to edge of bearing (17).**



c. **Find** your measurement in spacer selection table and read across to find spacer thickness and **part number needed**. Use outside micrometer to check thickness of spacer.

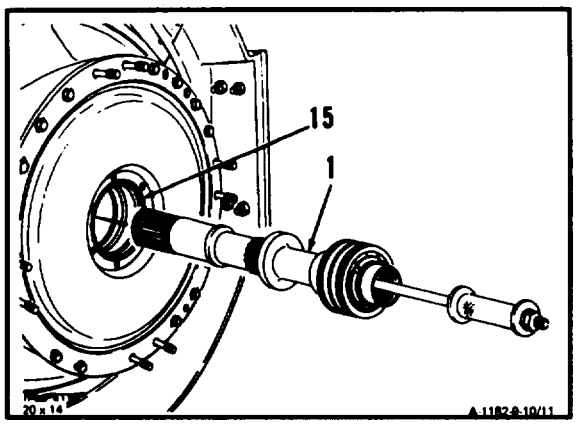
SPACER SELECTION TABLE		
IN DEPTH MEASURES	SPACER THICKNESS REQUIRED	USE SPACER PART NUMBER
INCHES	INCHES	
0.620 to 0.644	0.110	2-141-341-03
0.645 to 0.664	0.130	2-141-341-04
0.665 to 0.684	0.150	2-141-341-05
0.685 to 0.704	0.170	2-141-341-06
0.705 to 0.724	0.190	2-141-341-07
0.725 to 0.744	0.210	2-141-341-08
0.745 to 0.764	0.230	2-141-341-09
0.765 to 0.784	0.250	2-141-341-10
0.785 to 0.810	0.270	2-141-341-11

GO TO NEXT PAGE

CAUTION

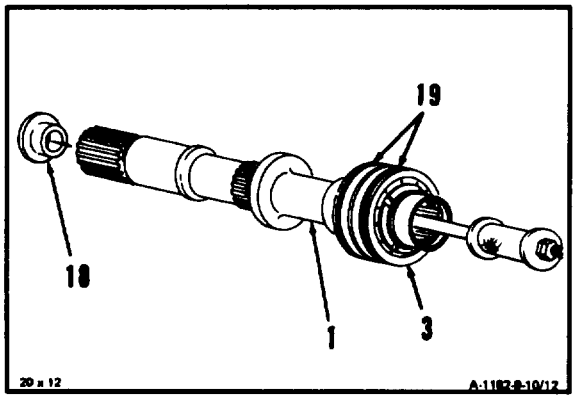
In following step 5., be sure to remove output shaft carefully. If shaft is not lifted as it is being removed, it may damage internal components.

5. **Carefully pull and lift output shaft (1) from housing (15).**



6. **Install spacer (18)** in output shaft (1).

7. Install packings (19) on bearings (3).

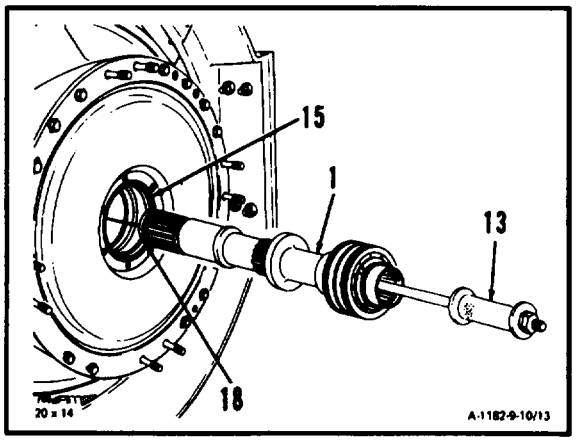


CAUTION

In following step 8., be sure all gear teeth are aligned when installing the output shaft.

8. **Carefully install output shaft (1) and spacer (18)** in housing (15).

9. Remove mechanical puller (T6) (13).

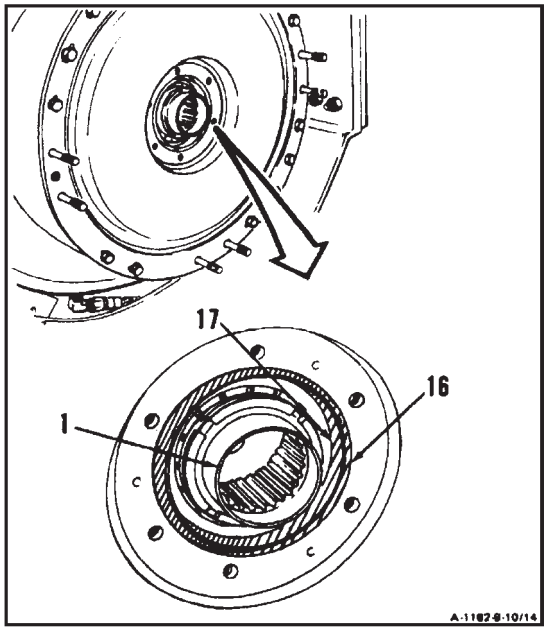


GO TO NEXT PAGE

9–10 INSTALL OUTPUT SHAFT (Continued) **9–10**

10. Push on output shaft (1) and **check depth from flange (16) to edge of bearing (17). Depth shall not be less than 0.510 inches or more than 0.540 inches.**

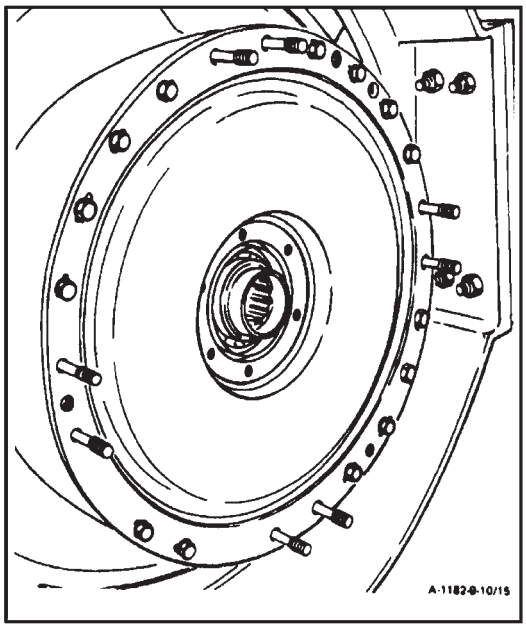
11. Disassemble and repeat steps 4, thru 10. if dimensions are not within limits.



NOTE

After replacement of the output shaft a Turbine Engine Analysis Check and Baseline Hit Check are required (Ref. TM 55–1520–240–23).

INSPECT



FOLLOW–ON MAINTENANCE:

Install Output Shaft Seal and Housing Assembly (Task 2–52)

Service Engine Oil System (Task 1–74)

GO TO NEXT PAGE

9-11 REMOVE TORQUEMETER HEAD ASSEMBLY 9-11

INITIAL SETUP

Applicable Configurations:

All

Tools:

Powerplant Mechanic's Tool Kit, NSN 5180-00-323-4944
Retaining Ring Pliers

Materials:

Wiping Rag (E58)

Personnel Required:

68B 10 Aircraft Powerplant Repairer

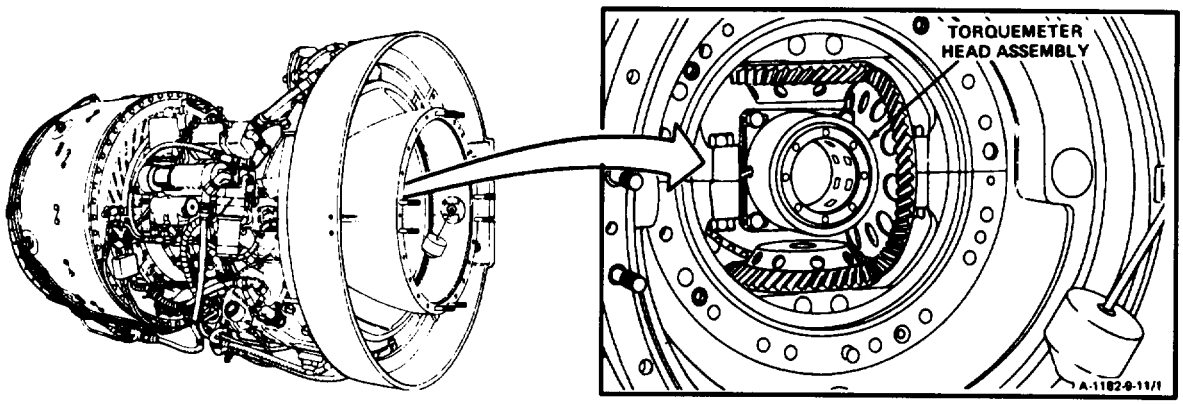
Equipment Condition:

Engine Oil System Drained (Task 1-75)
Torquemeter Junction Box Removed (Task 9-1)
Tube Assembly Removed (Inlet Housing to Main Oil Pump) (Task 8-50)
Overspeed Drive and Outlet Cover Assembly Removed (Task 5-17)
Output Shaft Seal and Housing Assembly Removed (Task 2-48)
Output Shaft Removed (Task 9-6)
Inlet Housing Cover Assembly Removed (Task 2-53)
Output Shaft Support Housing Removed (Task 2-58)

General Safety Instructions:

WARNING

Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.

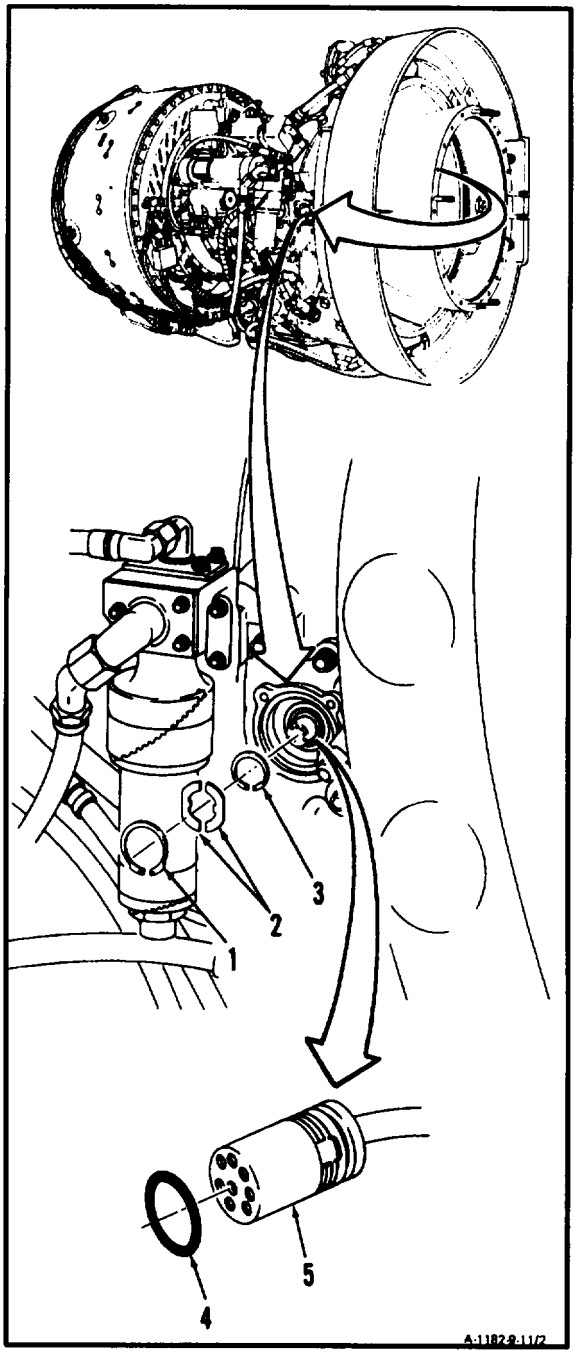


GO TO NEXT PAGE

9-11 REMOVE TORQUEMETER HEAD ASSEMBLY 9-11

1. **Remove retaining ring (1), two spacers (2), and retaining ring (3).**

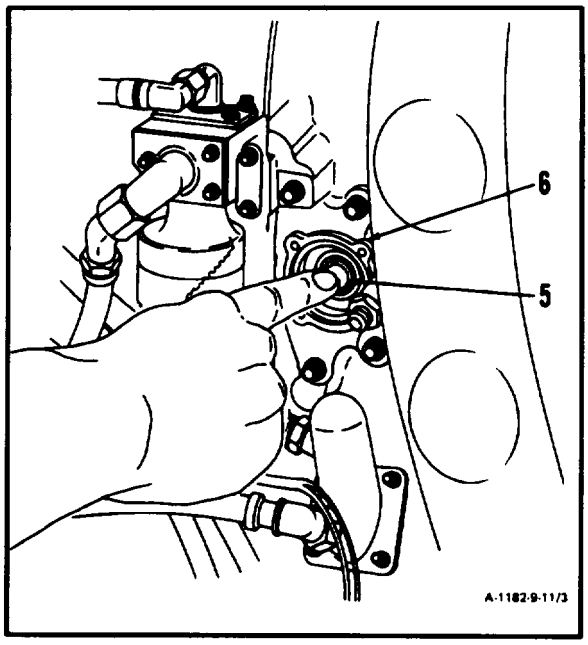
2. Remove packing (4) from electrical connector (5).



GO TO NEXT PAGE

9-11 REMOVE TORQUEMETER HEAD ASSEMBLY (Continued) 9-11

3. **Push electrical connector (5) through flange (6).**



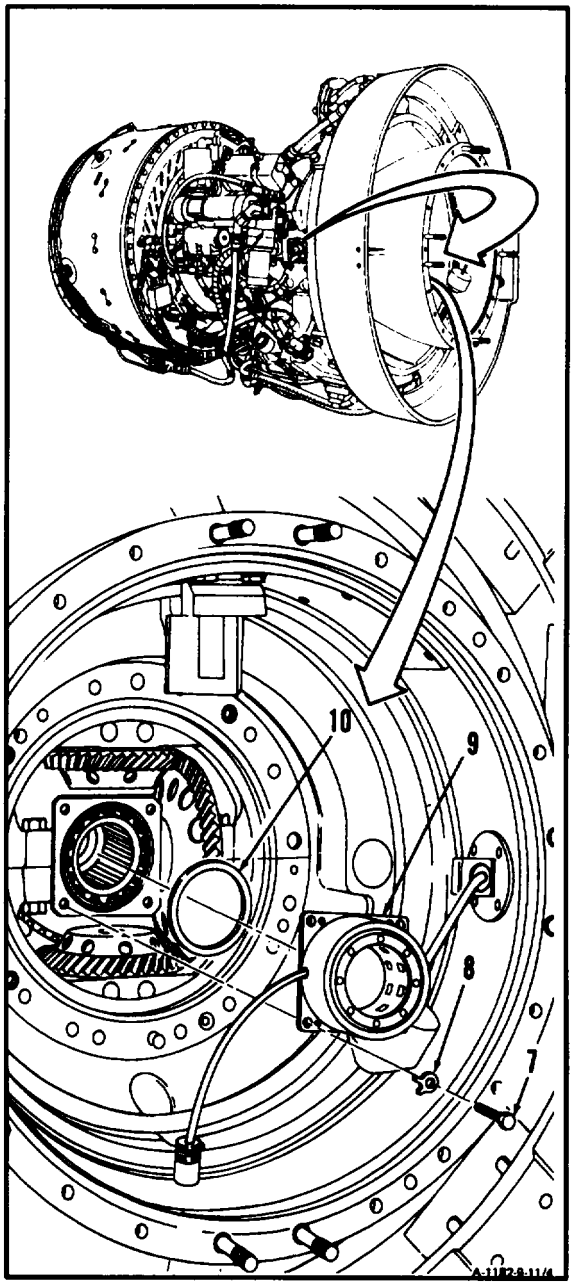
GO TO NEXT PAGE

9-11 REMOVE TORQUEMETER HEAD ASSEMBLY (Continued) 9-11

CAUTION

In following step, be sure to pull electrical cable carefully as torquemeter head assembly is removed. Failure to comply could cause damage to wiring which would result in improper indication of engine operation.

4. **Remove** four bolts (7), four key washers (8), **torquemeter head assembly (9),** and shim (10).

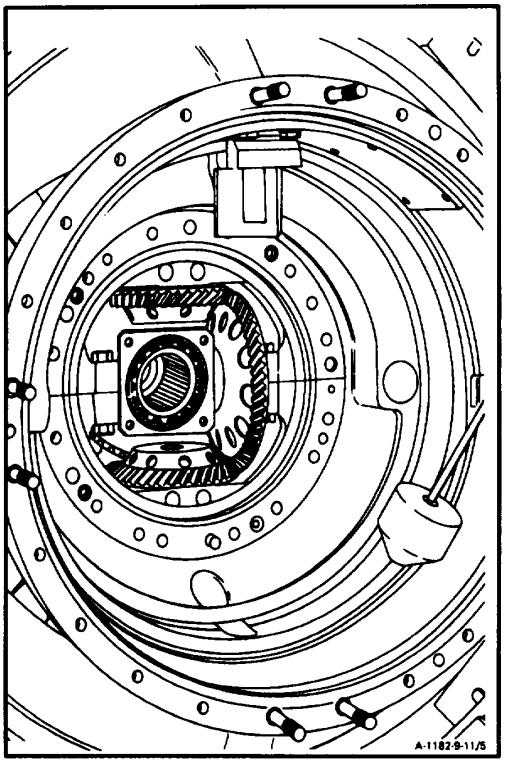


GO TO NEXT PAGE

9-11 REMOVE TORQUEMETER HEAD ASSEMBLY (Continued) 9-11

FOLLOW-ON MAINTENANCE:

None



END OF TASK

9-12 CLEAN TORQUEMETER HEAD ASSEMBLY 9-12

INITIAL SETUP

Applicable Configurations:

All

Tools:

Goggles
Compressed Air Source

Materials:

Dry Cleaning Solvent (E17)
Gloves (E20)
Lint-Free Cloth (E26)

Personnel Required:

68B10 Aircraft Powerplant Repairer

Equipment Condition:
Engine Oil System Drained (Task 1-75)
Torquemeter Junction Box Removed (Task 9-1)
Tube Assembly Removed (Inlet Housing to Main Oil Pump) (Task 8-50)
Overspeed Drive and Outlet Cover Assembly Removed (Task 5-17)
Output Shaft Seal and Housing Assembly Removed (Task 2-48)
Output Shaft Removed (Task 9-6)
Inlet Housing Cover Assembly Removed (Task 2-53)
Output Shaft Support Housing Removed (Task 2-58)
Torquemeter Head Assembly Removed

General Safety Instructions:

WARNING

Dry cleaning solvent (E17) is flammable and toxic. It can irritate skin and cause burns. Use only in well-ventilated area, away from heat and open name. In case of contact, immediately flush skin or eyes with water for at least 15 minutes. Get medical attention for eyes.

GO TO NEXT PAGE

9-12 CLEAN TORQUEMETER HEAD ASSEMBLY (Continued) 9-12

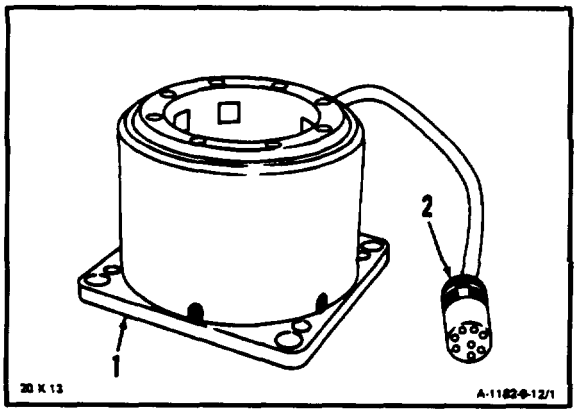
1. **Clean torquemeter head assembly (1).** Wear gloves (E20). Use lint-free cloth (E26) dampened in dry cleaning solvent (El7).

2. Wipe dry. Use clean, dry lint-free cloth (E26).

WARNING

When using compressed air for cleaning, use approved protective equipment for eyes and face. Do not use more than 30 psig air pressure. Do not direct air toward yourself or another person. Failure to comply could result in injury to eyes or skin. In case of injury, get medical attention.

3. Wear goggles. Blow dry electrical connector (2). Use clean, dry, compressed air.



FOLLOW-ON MAINTENANCE:

Inspect Torquemeter Head Assembly (Task 9-13).

END OF TASK

9-13 INSPECT TORQUEMETER HEAD ASSEMBLY 9-13

INITIAL SETUP

Applicable Configurations:

All

Tools:

Technical Inspection Tool Kit
NSN 5180-00-323-5114

Materials:

Insulation Sleeving Flexite (E24)

Personnel Required:

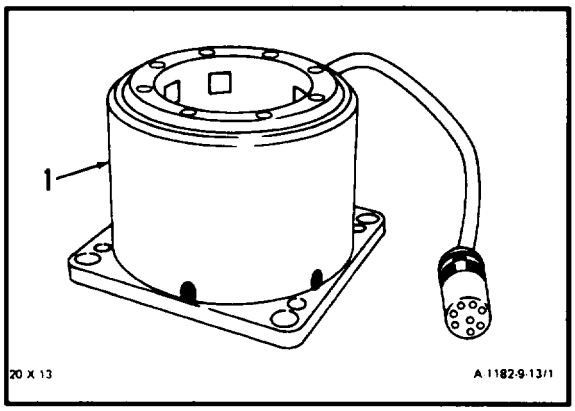
68B30 Aircraft Powerplant Inspector

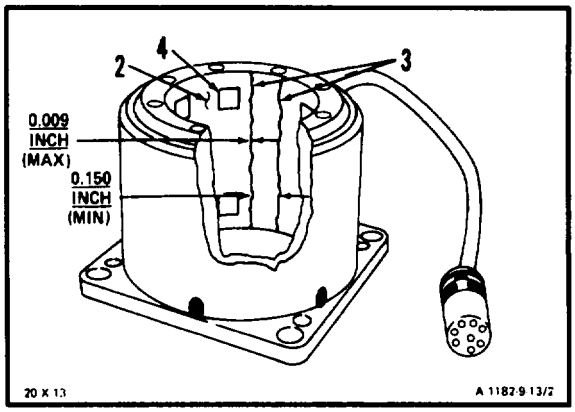
Equipment Condition:

Off Engine Task

1. **Inspect housing (1).** There shall be no cracks.

2. **Inspect potting (2).** There is no limit to the number of cracks; however, there shall be no more than four full length axial cracks (3). Cracks shall not be wider than 0.009 inch or less than 0.150 inch apart. There shall be no loose or missing material. There shall be no bulges or warpage. There shall be no rubs on metal poles (4).

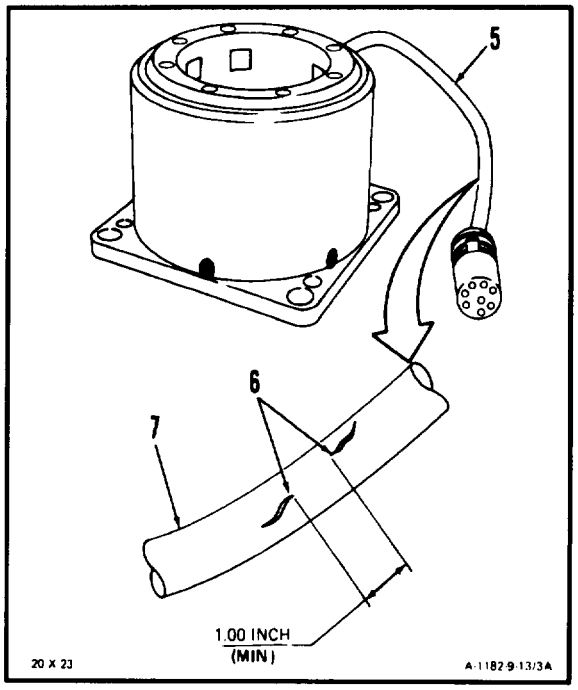




GO TO NEXT PAGE

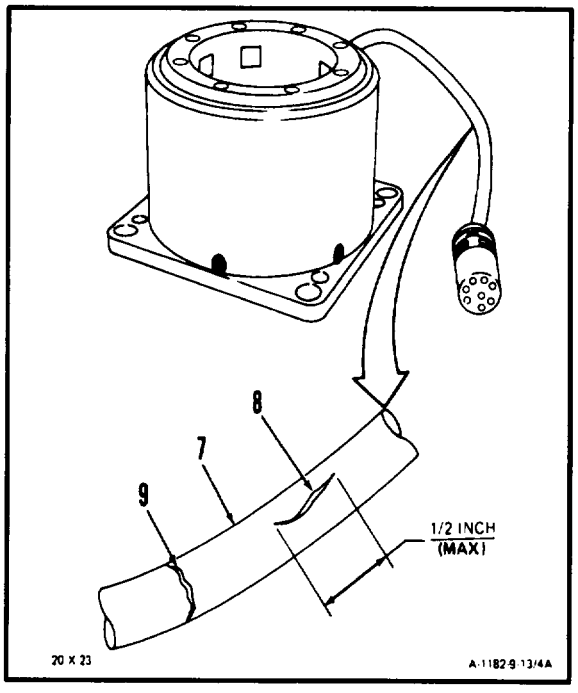
3. **Inspect outer sheathing of electrical cable (5) as follows:**

   a. There shall be more than five cracks or tears (6) and (9) total in outer covering (7). These cracks or tears shall not be less than 1.00 inch apart.



   b. There shall be no longitudinal cracks or tears (8) that exceed 1/2 inch in length.

   c. There shall be no circumferential cracks or tears (9) that extend more than half way around the outer covering (7). These cracks or tears shall not exceed 1/2 inch in length.

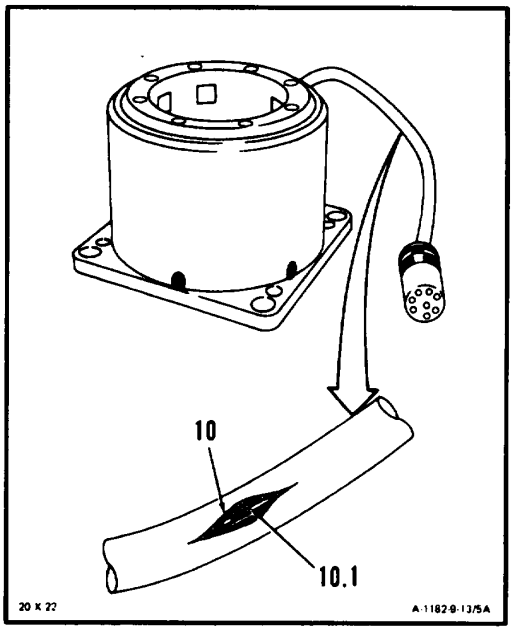


GO TO NEXT PAGE

9-13 CLEAN TORQUEMETER HEAD ASSEMBLY (Continued) 9-13

d. There shall be no cracks in wire insulation (10).

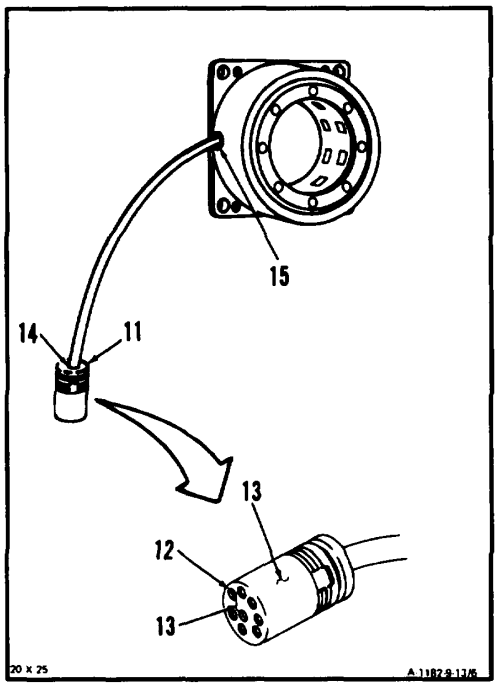
e. There shall be no permissible circumstances allowing damage to the individual stranded wire insulation (10.1).



GO TO NEXT PAGE

4. **Inspect electrical connector (11).** There shall be no corrosion in sleeves (12) or cracked insulation (13). There shall be no cracks in seal (14).

5. **Inspect seal (15).** There shall be no cracks.



FOLLOW-ON MAINTENANCE:

None

END OF TASK

9-13.1 REPAIR TORQUEMETER HEAD ASSEMBLY 9-13.1

INITIAL SETUP

Applicable Configurations:

All

Tools:

Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114
Goggles
Hot Air Gun

Materials:

Insulation Sleeving Flexite (E24)

Personnel Required:

68B10 Aircraft Powerplant Repairer

68B30 Aircraft Powerplant Inspector

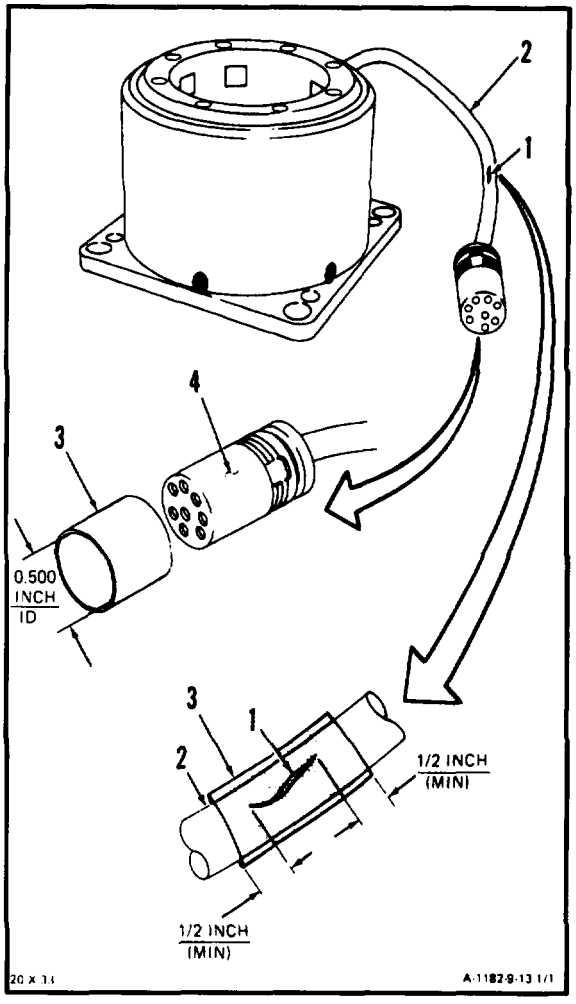
Equipment Condition:

Off Engine Task

1. **Repair cracks (1) in sheathing of electrical cable (2).**

   a. Cut a length of 1/2 inch ID insulation sleeving flexite (E24). Shrink sleeving (3) shall belong enough to overlap damaged area by ½ inch minimum.

   b. Slide sleeving (3) over connector (4) and using a **hot air gun, shrink sleeving to fit over crack (1).**



INSPECT

FOLLOW-ON MAINTENANCE:

None

END OF TASK

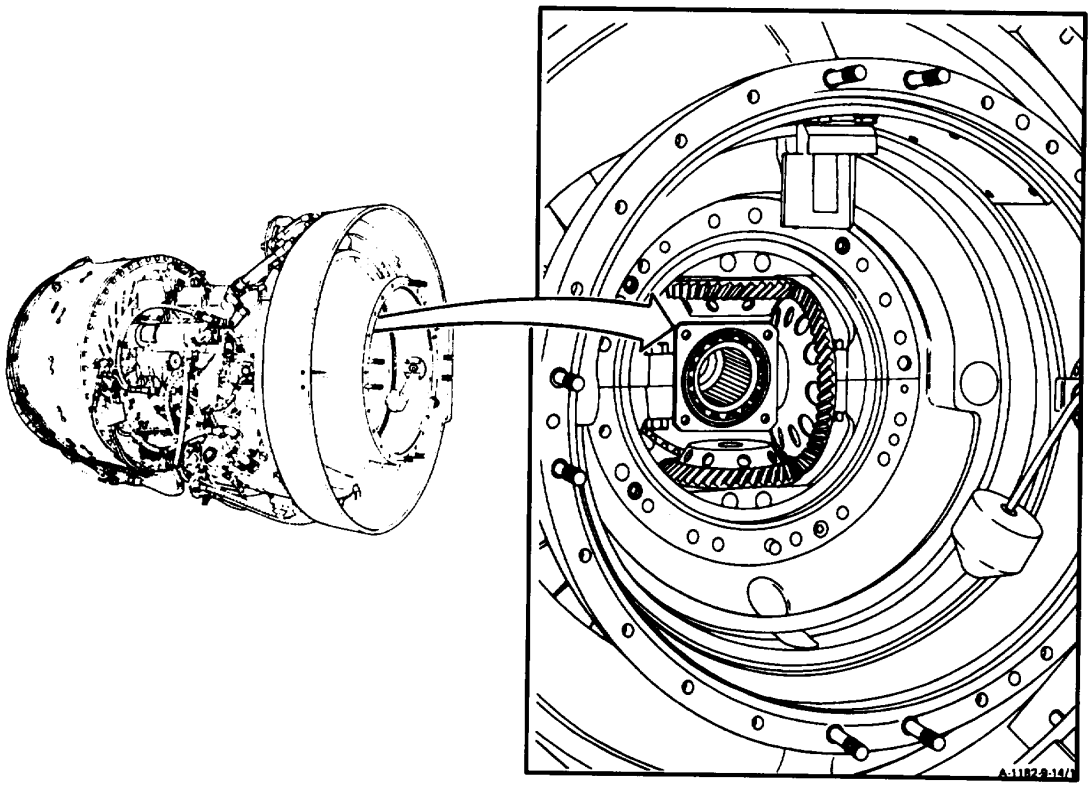
9-14 INSTALL TORQUEMETER HEAD ASSEMBLY 9-14

INITIAL SETUP: ***Parts:***

Applicable Configurations: Tabwashers
All Packing
Shim

Tools:

Personnel Required:
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-494468B 10 Aircraft Powerplant Repairer
Technical Inspection Tool Kit, 68B30 Aircraft Powerplant Inspector
NSN 5180-00-323-5114
Micrometer Depth Gage ***References:***
Retaining Ring Pliers
Outside Micrometer Caliper Set TM 55-2840-254-23P
Task 9-1
Materials: Task 9-5
Task 9-6
None Task 9-10



GO TO NEXT PAGE

9-14 INSTALL TORQUEMETER HEAD ASSEMBLY (Continued) 9-14

NOTE

The output shaft, torquemeter head assembly, and torquemeter junction box are supplied as a calibrated, matched set. If you replace the torquemeter head assembly, you must also replace the output shaft (Tasks 9-6 and 9-10) and the torquemeter junction box (Tasks 9-1 and 9-5).

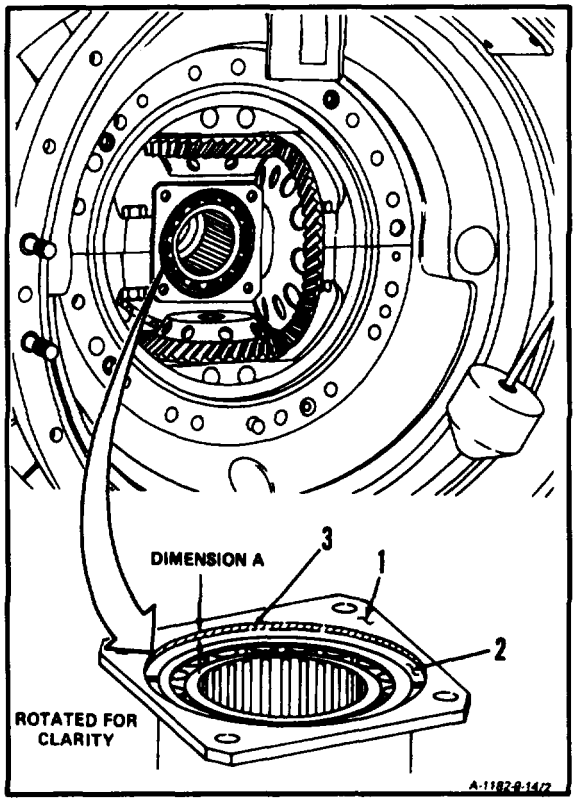
NOTE

If same torquemeter head assembly and shim that were removed are being installed, omit steps 1. and 2. If replacement torquemeter head assembly or shim is being installed, do all steps.

1. Determine what size shim you will need as follows:

   a. **Measure from flange (1) to bearing outer race** (2). Result is Dimension A (3).

   b. Record Dimension A (3).



INSPECT

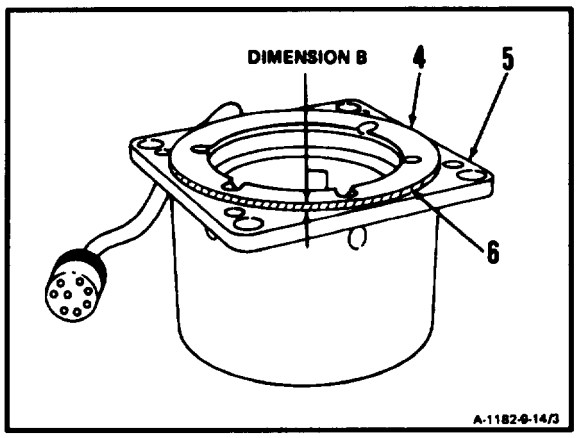
GO TO NEXT PAGE

c. **Measure from surface (4) to flange** (5). Result is Dimension B (6).

d. Record Dimension B (6).

e. Subtract Dimension B (6) from Dimension A (3).

f. Record result.



INSPECT

GO TO NEXT PAGE

9-14 INSTALL TORQUEMETER HEAD ASSEMBLY (Continued) 9-14

g. Find result recorded in step f. in shim selection table and read across to determine **shim(s) thickness you will need.**

h. Select required shim(s) (7).

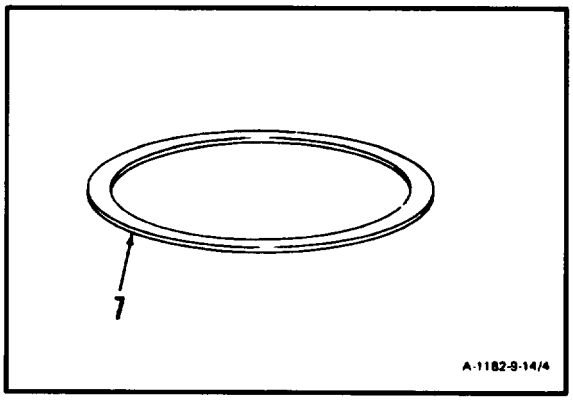
SHIM SELECTION TABLE

IF RESULT IS (INCHES)	SHIM THICKNESS NEEDED (INCHES)
–0.003	0.000 to 0.003
–0.002	0.001 to 0.004
–0.001	0.002 to 0.005
0.000	0.003 to 0.006
0.001	0.004 to 0.007
0.002	0.005 to 0.008
0.003	0.006 to 0.009
0.004	0.007 to 0.010
0.005	0.008 to 0.011
0.006	0.009 to 0.012
0.007	0.010 to 0.013
0.008	0.011 to 0.014
0.009	0.012 to 0.015
0.010	0.013 to 0.016
0.011	0.014 to 0.017
0.012	0.015 to 0.018
0.013	0.016 to 0.019
0.014	0.017 to 0.020
0.015	0.018 to 0.021
0.016	0.019 to 0.022
0.017	0.020 to 0.023
0.018	0.021 to 0.024
0.019	0.022 to 0.025
0.020	0.023 to 0.026
0.021	0.024 to 0.027
0.022	0.025 to 0.028
0.023	0.026 to 0.029
0.024	0.027 to 0.030
0.025	0.028 to 0.031
0.026	0.029 to 0.032
0.027	0.030 to 0.033

GO TO NEXT PAGE

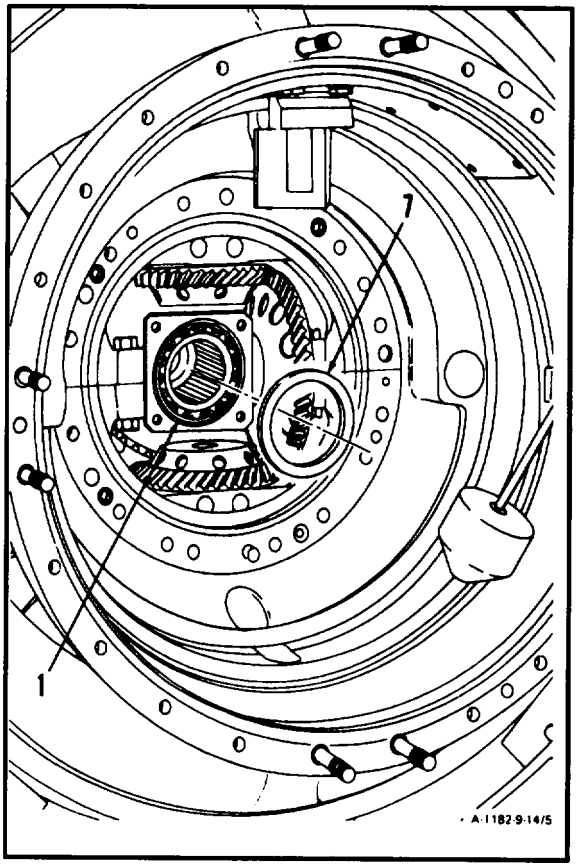
9-14 INSTALL TORQUEMETER HEAD ASSEMBLY (Continued) 9-14

2. **Measure thickness of shim** (7) and check against shim selection table.



INSPECT

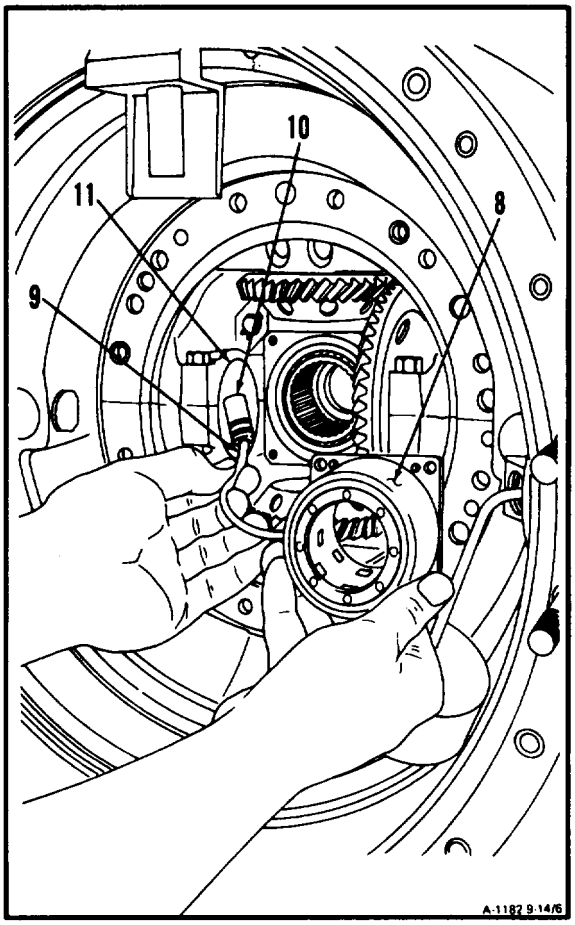
3. **Install shim** (7) inside flange (1).



GO TO NEXT PAGE

9-14 INSTALL TORQUEMETER HEAD ASSEMBLY (Continued) 9-14

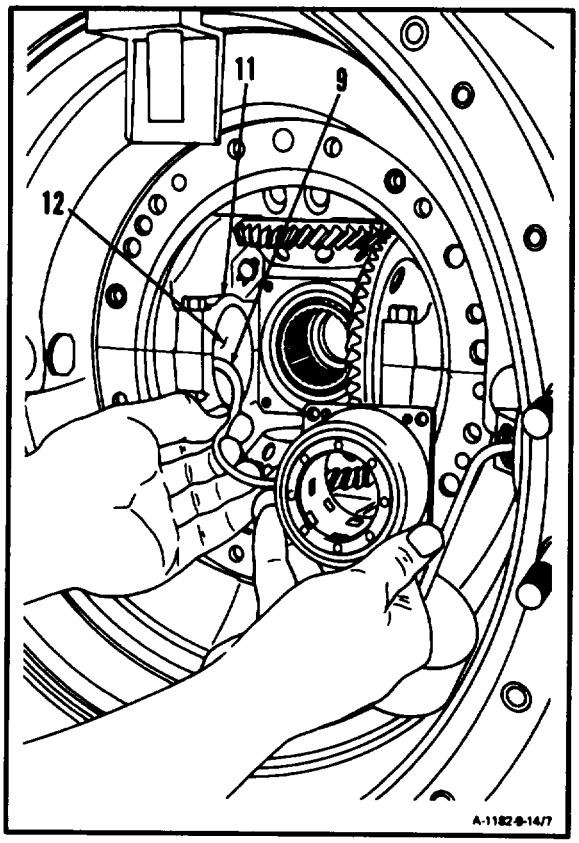
4. Position torquemeter head assembly (8) with electrical cable (9) at 9-o'clock position (looking aft) and insert electrical connector (10) through carrier (110.



GO TO NEXT PAGE

9-14 INSTALL TORQUEMETER HEAD ASSEMBLY (Continued) 9-14

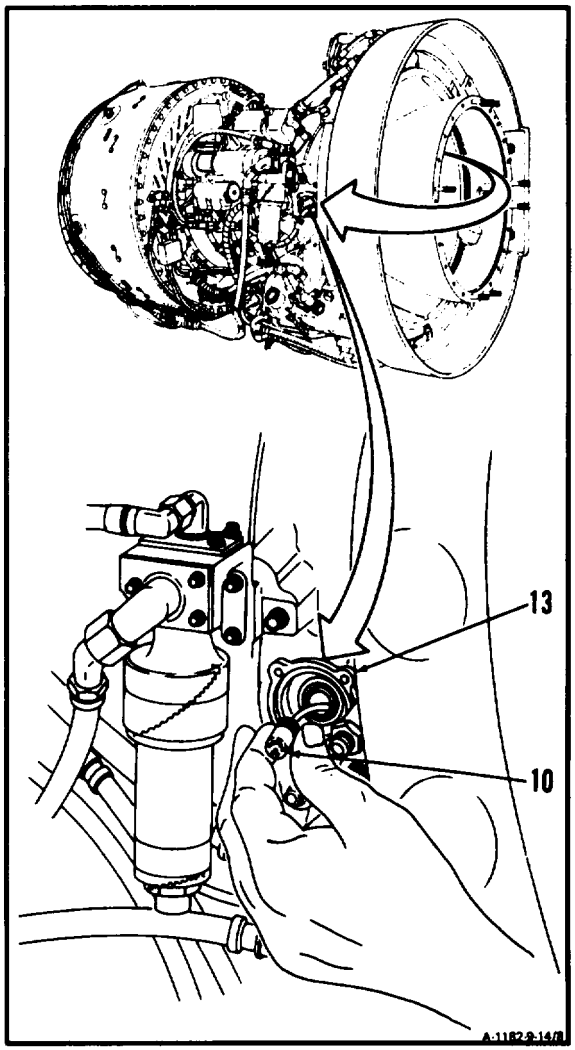
5. Feed electrical cable (9) through carrier (11) into inlet housing hollow strut (12).



GO TO NEXT PAGE

9-14 INSTALL TORQUEMETER HEAD ASSEMBLY (Continued) 9-14

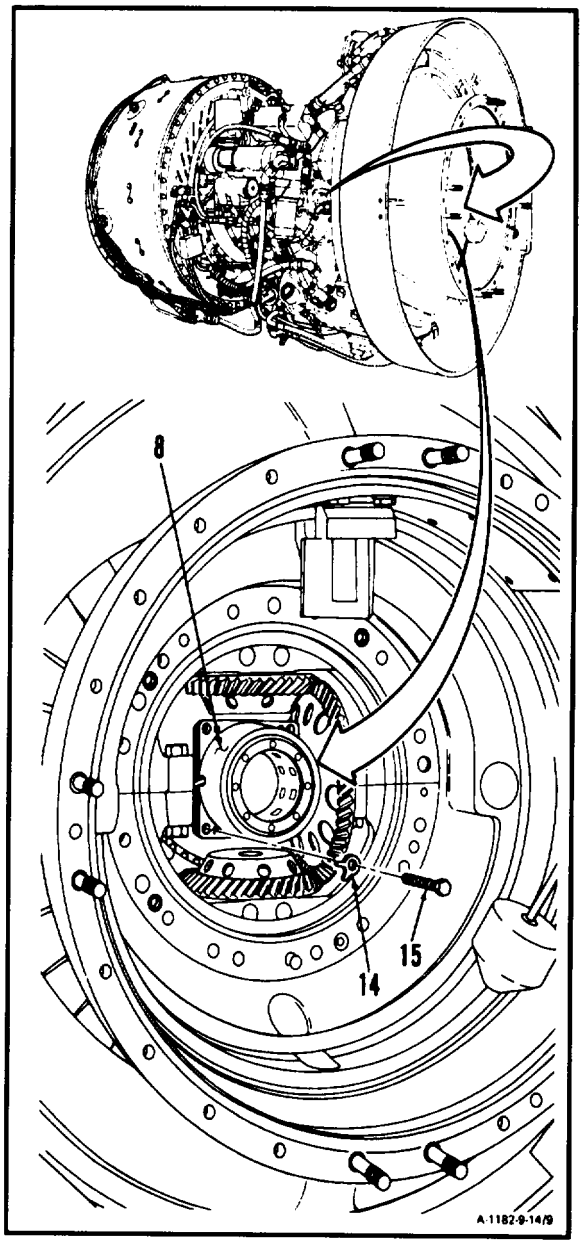
6. **Pull electrical connector (10) through housing (13).**



GO TO NEXT PAGE

9-14 INSTALL TORQUEMETER HEAD ASSEMBLY (Continued) 9-14

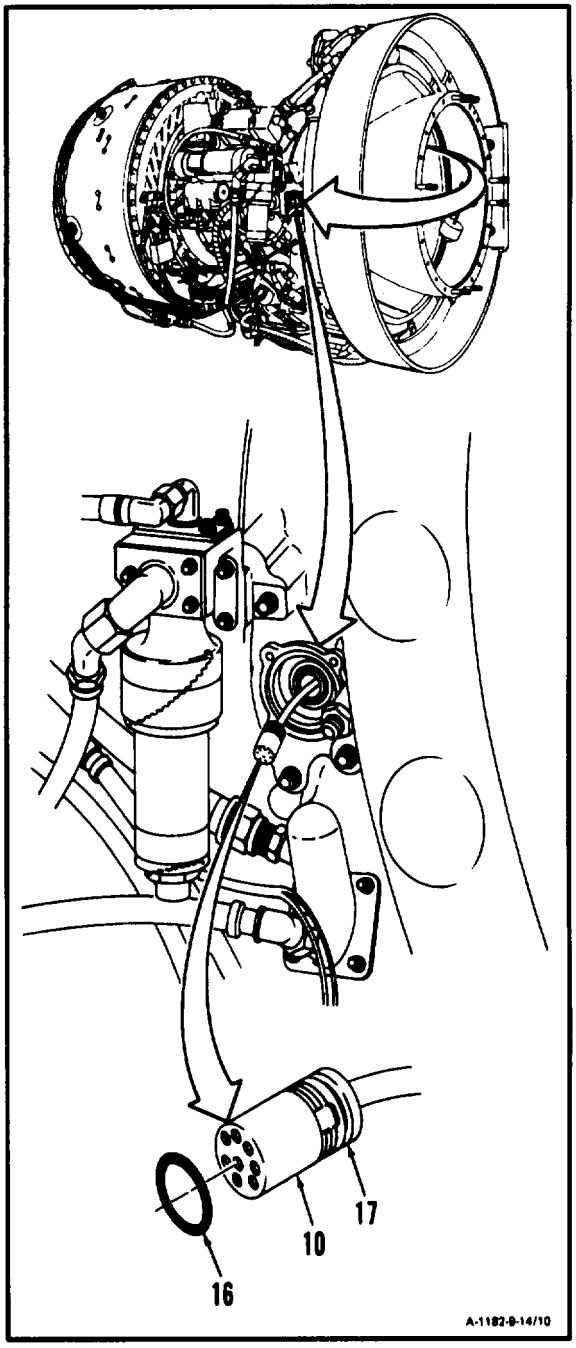
7. **Install torquemeter head assembly (8),** four key washers (14), and four bolts (15). Bend key washers (14).



GO TO NEXT PAGE

9-14 INSTALL TORQUEMETER HEAD ASSEMBLY (Continued) 9-14

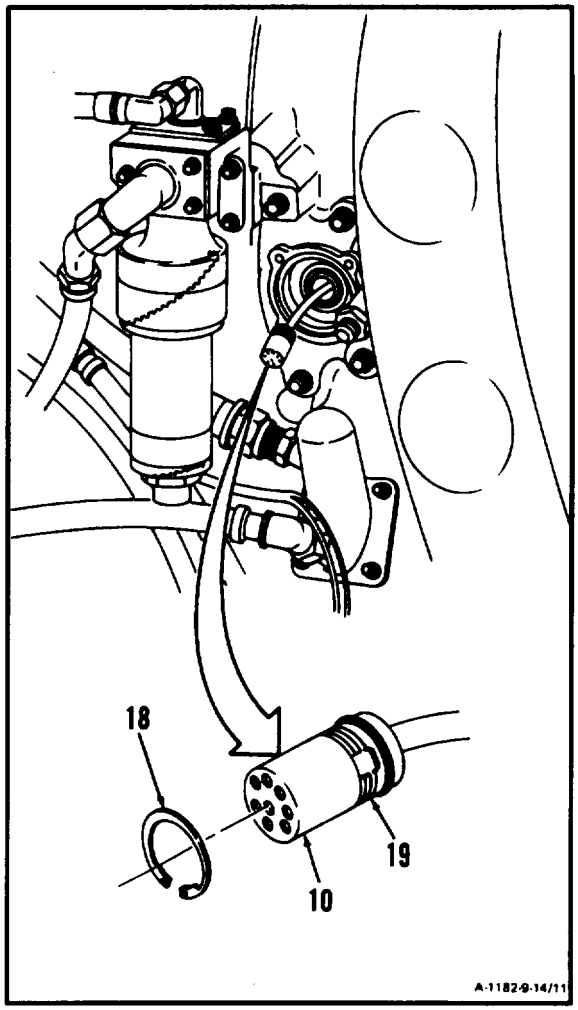
8. **Install packing (16) in groove (17) on electrical connector (10).**



GO TO NEXT PAGE

9-14 INSTALL TORQUEMETER HEAD ASSEMBLY (Continued) 9-14

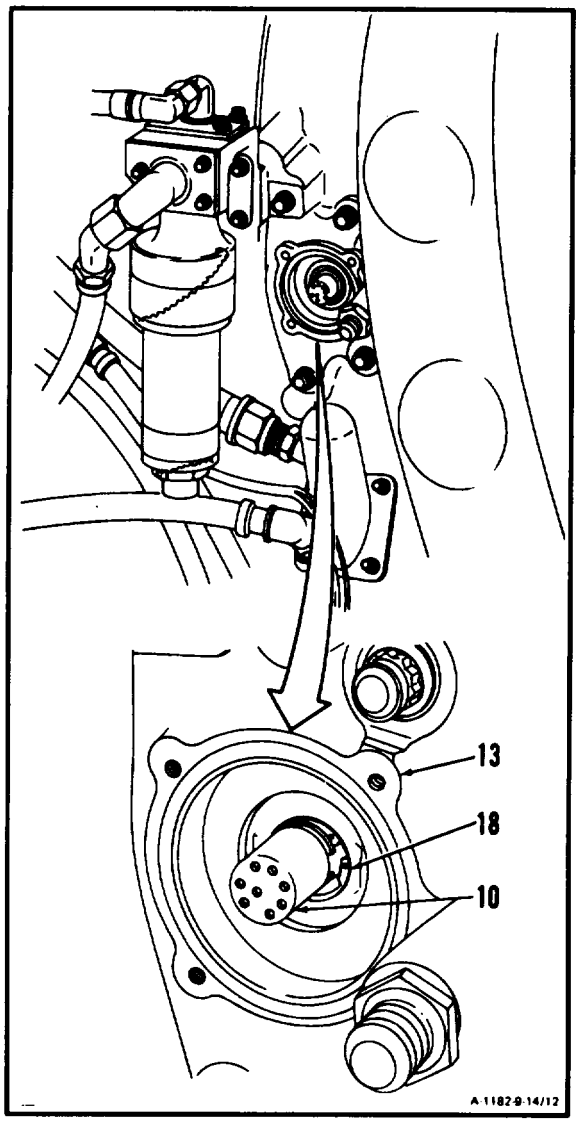
9. **Install retaining ring (18)** in groove (19) **on electrical connector (10).**



GO TO NEXT PAGE

9-14 INSTALL TORQUEMETER HEAD ASSEMBLY (Continued) 9-14

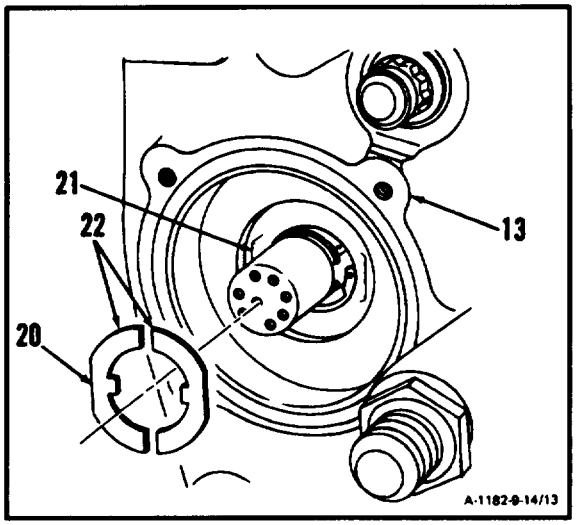
10. Carefully push electrical connector (10) back into housing (13) until retaining ring (18) is fully seated.



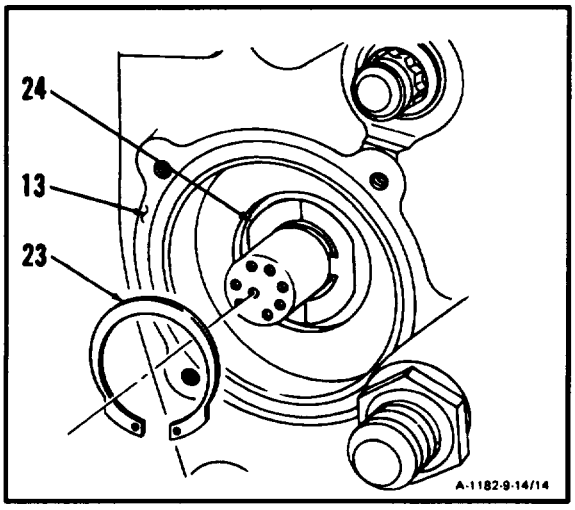
GO TO NEXT PAGE

9-14 INSTALL TORQUEMETER HEAD ASSEMBLY (Continued) 9-14

11. Align spacer flats (20) with housing flats (21). Install two spacers (22) in housing (13).



12. **Install retaining ring (23)** in groove (24) **in housing (13).**



INSPECT

GO TO NEXT PAGE

9-14 INSTALL TORQUEMETER HEAD ASSEMBLY (Continued) 9-14

FOLLOW-ON MAINTENANCE:

Install Output Shaft Support Housing (Task 2-63).

Install Inlet Housing Cover Assembly (Task 2-57).

Install Output Shaft (Task 9-10).

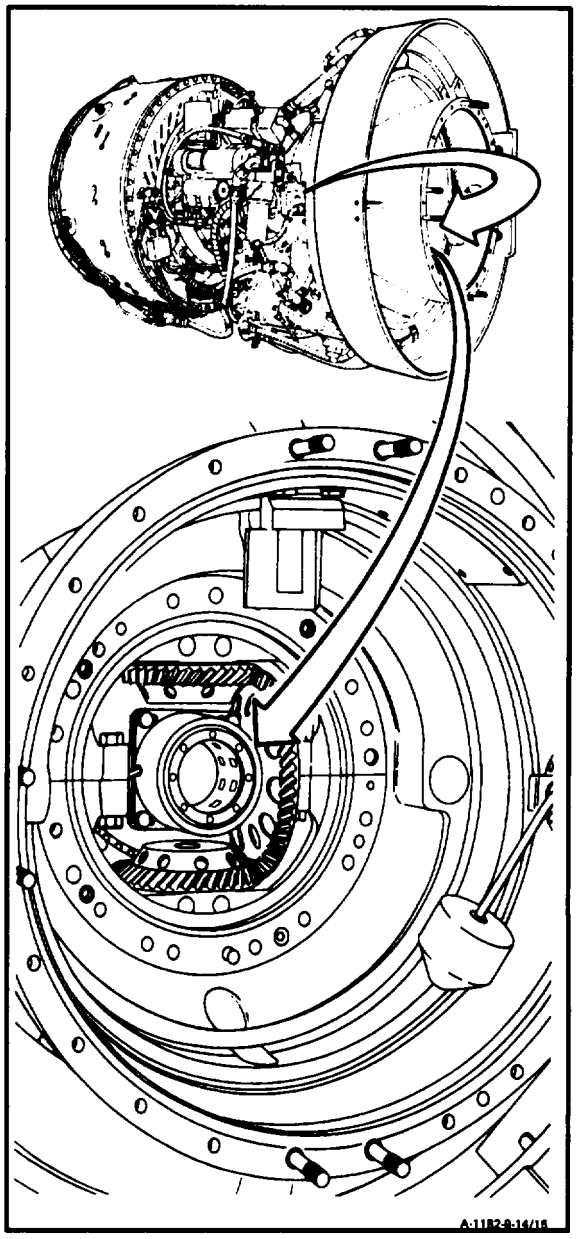
Install Output Shaft Seal and Housing Assembly (Task 2-52).

Install Overspeed Drive and Outlet Cover Assembly (Task 5-23).

Install Hose Assembly (Inlet Housing to Main Oil Pump) (Task 8-51).

Install Torquemeter Junction Box (Task 9-5).

Service Engine Oil System (Task 1-74).



END OF TASK

APPENDIX A

REFERENCES

PUBLICATION NUMBER	TITLE
AR 750–50	Army Material Maintenance Concepts and Policies.
CTA 50–970	Expendable Items (Except Medical, Class V, Repair Parts, and Heraldic Items).
TB 43–0106	Spectrographic Oil Analysis.
TB 43–0142	Lifting Devices, Inspection, Testing and Maintenance.
TB 55–8100–200–25	Maintenance of Specialized Reusable Containers for Aircraft Equipment.
TB 55–9150–200–25	Engine and Transmission Oils, Fuels, and additives for Army Aircraft.
TM 1–1500–335–23	Non Destructive Inspection Methods
TM 1–1500–204–23	General Aircraft Maintenance Manual
TM 55–1500–328–25	Aeronautical Equipment Maintenance Management Policies and Procedures.
TM 55 1520–240–MTF	Maintenance Test Flight Manual Army Model CH47D Helicopter
TM 55–1520–240–T	Aviation Unit and Aviation Intermediate Troubleshooting Manual Army CH47D Helicopter.
TM 55–1520–240–10	Operator’s Manual Army CH47D Helicopter Aircraft.
TM 55–1520–240–23	Aviation Unit and Aviation Intermediate Maintenance Manual Army CH47D Helicopter.
TM 1–2840–254–23P	Aviation Unit and Aviation Intermediate Maintenance Repair Parts and Special Tools List.
TM 55–4920–328–13	Modular Engine Test Systems Maintenance Manual.
FM 1–500	Army Aviation Maintenance.
FM 1–511	Maintenance Quality Control and Technical Inspection Guide for Army Aircraft.
DA PAM 738–751	The Army Maintenance Management System (TAMMS).
TM 750–244–1–5	Procedures for the Destruction of Aircraft and Associated Equipment to Prevent Enemy Use.

APPENDIX B

MAINTENANCE ALLOCATION CHART

Section I. INTRODUCTION

B-1 MAINTENANCE ALLOCATION CHART

a. This Maintenance Allocation Chart (MAC) assigns maintenance functions in accordance with the Three Levels of Maintenance concept for Army aviation. These maintenance levels (categories) - Aviation Unit Maintenance (AVUM), Aviation Intermediate Maintenance (AVIM), and Depot Maintenance - are depicted on the MAC as:

AVUM, which corresponds to an O Code in the Repair Parts and Special Tools List (RPSTL)

AVIM, which corresponds to an F Code in the Repair Parts and Special Tools List (RPSTL)

DEPOT, which corresponds to a D Code in the Repair Parts and Special Tools List (RPSTL)

b. The maintenance to be performed below depot and in the field is described as follows:

(1) Aviation Unit Maintenance (AVUM) activities will be staffed and equipped to perform high frequency “On-Aircraft” maintenance tasks required to retain or return aircraft systems to a serviceable condition. The maintenance capability of the AVUM will be governed by the Maintenance Allocation Chart (MAC) and limited by the amount and complexity of ground support equipment (GSE), facilities required, authorized manning strength, and critical skills available. The range and quantity of authorized spare modules/components will be consistent with the mobility requirements dictated by the air mobility concept. (Assignments of maintenance tasks to divisional company size aviation units will consider the overall maintenance capability of the division, the requirement to conserve personnel and equipment resources, and air mobility requirements.)

(a) Company Size Aviation Units: Perform those tasks which consist primarily of preventive maintenance and maintenance repair and replacement functions associated with sustaining a high level of aircraft operational readiness. Perform maintenance inspections and servicing to include preflight, daily, intermediate, periodic (or phased), and special inspections as authorized by the MAC or high headquarters. Identify the cause of equipment/system malfunctions using applicable technical manual troubleshooting instructions, built-in test equipment (BITE), installed aircraft instruments, or test, measurement, and diagnostic equipment (TMDE). Replace worn or damaged modules/components that do not require complex adjustments or system alinement and which can be removed/installed with available skills, tools, and ground support equipment. Perform operational and continuity checks and make minor repairs to the electrical system. Inspect, service and make operational, capacity, and pressure checks to hydraulic systems. Perform servicing, functional adjustments, and minor repair/replacement to the flight control, propulsion, power train, and fuel systems. Accomplish airframe repair that does not require extensive disassembly, jigging, or alignment. The manufacture of airframe repair will be limited to those items which can be fabricated with tools and equipment found in current air mobile tool and shop sets. Evacuate unserviceable modules/components and end items beyond the repair capability of AVUM to the supporting AVIM.

(b) Less than Company Size Aviation Units: Aviation elements organic to brigade, group, battalion headquarters, and detachment size units are normally small and have less than ten aircraft assigned. Maintenance tasks performed by these units will be those which can be accomplished by the aircraft crew chief or assigned aircraft repairman and will normally be limited to preventive maintenance, inspections, servicing, spot painting, stop drilling, application of nonstress patches, minor adjustments, module/component fault diagnosis, and replacement of selected modules/components. Repair functions will normally be accomplished by the supporting AVIM unit.

(2) Aviation Intermediate Maintenance (AVIM) provides mobile, responsive "One-Stop" maintenance support. (Maintenance functions which are not conducive to sustaining air mobility will be assigned to depot maintenance). AVIM may perform all maintenance functions authorized to be done at AVUM. Repair of equipment for return to user will emphasize support or operational readiness requirements. Authorized maintenance includes replacement and repair of modules/components and end items which can be accomplished efficiently with available skills, tools, and equipment. AVIM establishes the Direct Exchange (DX) program for AVUM units by repairing selected items for return to stock when such repairs cannot be accomplished at the AVUM level. The AVIM level inspects, troubleshoots, performs diagnostic tests, repairs, adjusts, calibrates, and aligns aircraft system modules/components. AVIM units will have capability to determine the serviceability of specified modules/components removed prior to the expiration of the Time Between Overhaul (TBO) or finite life. Module/component disassembly and repair will support the DX program and will normally be limited to tasks requiring cleaning and the replacement of seals, fittings, and items of common hardware. Airframe repair and fabrication of parts will be limited to those maintenance tasks which can be performed with available tools and test equipment. Unserviceable repairable modules/components and end items which are beyond the capability of AVIM to repair will be evacuated to Depot Maintenance. AVIM will perform aircraft weight and balance inspections and other special inspections which exceed AVUM capability. Provides quick response maintenance support, including aircraft recovery and air evacuation, on-the-job training, and technical assistance through the use of mobile maintenance contact teams. Maintains authorized operational readiness float aircraft. Provides collection and classification services for serviceable/unserviceable material. Operates a cannibalization activity in accordance with AR 750-1. (The aircraft maintenance company within the maintenance battalion of a division will perform AVIM functions consistent with air mobility requirements and conservation of personnel and equipment resources. Additional intermediate maintenance support will be provided by the supporting nondivisional AVIM unit.)

B-2 USE OF THE MAINTENANCE ALLOCATION CHART (SECTION II)

NOTE

Nomenclatures used throughout the MAC are approved item names. Those terms/nomenclatures expressed in parentheses are generic in nature and are not to be considered as official terminology.

a. The Maintenance Allocation Chart assigns maintenance functions based on past experience and the following consideration:

(1) Skills available.

(2) Work time required.

(3) Tools and test equipment required and/or available.

b. The assigned levels of maintenance authorized to perform a maintenance function are indicated.

c. A maintenance function assigned to a maintenance category will automatically be authorized to be performed at any higher maintenance category.

d. A maintenance function that cannot be performed at the assigned category of maintenance for any reason may be evacuated to the next higher maintenance category. Higher maintenance categories will perform the maintenance functions of lower maintenance categories when required or directed by the commander that has the authority to direct such tasking.

e. The assignment of a maintenance function will not be construed as authorization to carry the related repair parts or spares in stock. Information to requisition or otherwise secure the necessary repair parts will be as specified in the associated Repair Parts and Special Tools List (RPSTL).

f. Normally there will be no deviation from the assigned level of maintenance. In cases of operational necessity, maintenance functions assigned to a maintenance level may, on a one-time basis and at the request of the lower maintenance level, be specifically authorized by the maintenance officer of the level of maintenance to which the function is assigned. The special tools, equipment, etc., required by the lower level of maintenance to perform this function will be furnished by the maintenance level to which the function is assigned. This transfer of a maintenance function to a lower maintenance level does not relieve the higher maintenance level of the responsibility for the function. The higher level of maintenance will provide technical supervision and inspection of the function being performed at the lower level.

g. Changes to the Maintenance Allocation Chart will be based on continuing evaluation and analysis by responsible technical personnel and on reports received from field activities.

B-3 MAINTENANCE FUNCTIONS

Maintenance functions wiII be 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, i.e., to clean (includes decontaminate, when required), to preserve, to drain, to paint, or to replenish fuel, lubricants, chemical fluids, or gases.

d. Adjust. To maintain or regulate, within prescribed limits, by bringing into proper or exact 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, measuring, and diagnostic equipment used in precision measurement. Consists of comparisons 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 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 is shown as the third 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 (hours/miles, etc.) considered in classifying Army equipment/components.

---

[1] Services - inspect, test, service, adjust, align, calibrate, and/or replace.

[2] Fault locate/troubleshoot - The process of investigating and detecting the cause of equipment malfunctioning; the act of isolating a fault within a system or unit under test (UUT).

[3] Disassemble/assemble - encompasses the step-by-step taking apart (or breakdown) of a spare/functional group coded item to the level of its least componency identified as maintenance significant (i.e., assigned an SMR code) for the category of maintenance under consideration.

[4] Actions - welding, grinding, riveting, straightening, facing, remachining and/or resurfacing.

B-4 FUNCTIONAL GROUPS (COLUMNS 1 and 2)

The functional groupings shown in the sample below identify maintenance significant components, assemblies, subassemblies, and modules with the next higher assembly.

GROUP NUMBER	DESCRIPTION
04	POWERPLANT
0401	ENGINE GENERAL Servicing, handling, inspection requirements, lubrication charts, overhaul and retirement schedules, External lines & hoses. (As applicable)
0402	COMPRESSOR SECTION (COLD SECTION MODULE) Rotor, blades, vanes, impeller, stators, inlet guide vanes, main frame, particle separator, bleed valve, bearings, seals, external lines & hoses.
0403	COMBUSTION SECTION (HOT SECTION MODULE) Liners, nozzles, stators, rotor, seals, couplings, blades.
0404	POWER-TURBINE (POWER TURBINE MODULE) Nozzles, rotors, blades, exit guide vanes, exhaust frame, drive shaft, bearings, seals, external lines and hoses.
0405	ACCESSORY GEAR SECTION Input/and output gears, seals, chip detector, housings, drive shaft, bearings, and seals.
0406	FUEL SYSTEM Fuel control, fuel boost pump, governors, fuel filter assembly, sequence valve, fuel manifold, fuel nozzle, external lines and hoses.
0407	ELECTRICAL SYSTEM Electrical control units, exciters, thermocouples, ignition harness, electrical cables, history record, torque overspeed sensor, Np sensor, alternate stator, blowers.
0408	OIL SYSTEM Tanks, oil filter, oil cooler, lube and scavenge pumps, oil filter bypass sensor, external lines and hoses.
0409	DRIVE SYSTEM Reduction gear assembly, output shaft, seal, bearing.
0410	MISCELLANEOUS EQUIPMENT (As applicable)

B-5 MAINTENANCE FUNCTION (COLUMN 3)

Column 3 lists the functions to be performed on the items listed in column 2.

B-6 MAINTENANCE CATEGORIES AND WORK TIMES (COLUMN 4)

The maintenance categories (levels) AVUM, AVIM, and DEPOT are listed on the Maintenance Allocation Chart with individual columns that include the work times for maintenance functions at each maintenance level. Work time presentations such as “0.1” indicate the average time it requires a maintenance level to perform a specified maintenance function. If a work time has not been established, the columnar presentation shall indicate “-.-.” Maintenance levels higher than the level of maintenance indicated are authorized to perform the indicated function.

B-7 TOOLS AND TEST EQUIPMENT (COLUMN 5 AND SECTION III)

Common tool sets (not individual tools), special tools, test, and support equipment required to perform maintenance functions are listed alphabetically in Section III with a reference number to permit cross-referencing to column 5 in the MAC. In addition, the maintenance category authorized to use the device is listed along with the item National stock number (NSN), and, if applicable, the tool number to aid in identifying the tool/device.

B-8 REMARKS (COLUMN 6 AND SECTION IV)

Remarks (identified by an alphabetic code in column 6) and other notes (identified by a number in parentheses in the applicable column) are listed in Section IV to provide a ready reference to the definition of the remark/note.

Section II

MAINTENANCE ALLOCATION CHART

NOMENCLATURE OF END ITEMS

T55-L-712

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE CATEGORY AVUM	AVIM	DEPOT	(5) TOOLS AND EQUIPMENT	(6) REMARKS
		NOTE The Maintenance functions identified herein, are restricted to company size units. These units are authorized (AVUM #2) Tool Set SC4920-49-CL-A92 and have 10 or more aircraft assigned. Refer to paragraph B- 1.					
0400	POWERPLANT AND RELATED SYSTEMS						
0401	ENGINE, COMPLETE ASSEMBLY	INSPECT	-.-			56, 57	
		TEST	-.-			60	A, N
				-.-		5, 33, 46	B
		ADJUST	-.-			56, 57	H, I
		SERVICE	-.-			56, 57	
		REPLACE	-.-			50, 56, 57, 60	
		REPAIR	-.			-56, 57	C, D, E, K
				-.-		47, 48, 49, 56, 57	
		OVERHAUL			-.-		
0402	COMPRESSOR SECTION						
040201	COMPRESSOR HOUSINGS	INSPECT	-.-			56, 57	
		REPLACE	-.-			36, 45, 48, 56, 57	
		REPAIR	-.			-56, 57	C, D, E, G
040202	ANTI-ICING GALLERY	INSPECT	-.-			56, 57	
		REPLACE	-.-			56, 57	C
		REPAIR	-.-			56, 57	C, D, E, G

MAINTENANCE ALLOCATION CHART

NOMENCLATURE OF END ITEMS

T55-L-712

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE CATEGORY			(5) TOOLS AND EQUIPMENT	(6) REMARKS
			AVUM	AVIM	DEPOT		
040203	STATOR VANES	INSPECT	-.-			56, 57	
		REPLACE	-.-			36, 45, 56, 57	
		REPAIR	-.-			56, 57	C, D, E, G
040204	ROTOR BLADES	INSPECT	-.-			56, 57	
		REPLACE	-.-			11, 51, 55,O 56, 57, 58	
		REPAIR	-.-			57C, D, E	
040205	IMPELLER	INSPECT	-.-			56, 57	
		REPAIR	-.-			56, 57D	
		REPLACE			-.-		
040206	NO. 1 BEARING	INSPECT			-.-		
		REPLACE			-.-		
040207	NO. 2 BEARING	INSPECT		-.-		48, 51, 53, 56	
		REPLACE		-.-		22, 28, 41, 53, 57	
040208	NO.3 BEARING	INSPECT		-.-		48, 58	
		REPLACE		-.-		2, 23, 48, 57	
040209	INTERSTAGE AIR BLEED BAND	INSPECT	-.-			56, 57	
		REPLACE	-.-			56, 57A	
040210	BLEED ACTUATOR	INSPECT	-.-			56, 57	
		ADJUST	-.-			56, 57A, I, H	

MAINTENANCE ALLOCATION CHART

NOMENCLATURE OF END ITEMS

T55-L-712

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE CATEGORY AVUM	AVIM	DEPOT	(5) TOOLS AND EQUIPMENT	(6) REMARKS
040210	BLEED ACTUATOR	REPLACE	-.-			56, 57	C
		REPAIR	-.-			56, 57	D, E, G
		OVERHAUL			-.-		
040211	AIR DIFFUSER HOUSING	INSPECT	-.-			56, 57	
		REPLACE		-.-		2, 40, 48, 57	
		REPAIR		-.-		48, 49	D, E, F, G
040212	AIR INLET HOUSING	INSPECT	-.-			56, 57	
		REPLACE			-.-		
		REPAIR		-.-		56	D, E
040213	OUTPUT SHAFT SUPPORT	INSPECT		-.-		48, 57	
		REPLACE		-.-		8, 36, 48, 57	
		REPAIR		-.-		47, 48	D, E
040214	OUTPUT SHAFT SEAL HOUSING ASSEMBLY	INSPECT	-.-			56, 57	
		REPLACE	-.-			2, 22, 27, 56, 57	C, K
		REPAIR	-.-			26, 57	M
040215	NO. 6 AND NO. 7 BEARING	INSPECT		-.-		47, 48, 57	
		REPLACE		-.-		25, 47, 48, 57, 61	
0403	COMBUSTION SECTION						
040301	HOUSING	INSPECT	-.-			56, 57	
		REPLACE		-.-		16, 39, 47, 48	
		REPAIR		-.-		47, 48, 49	D, E, F, G
040302	LINER	INSPECT		-.-		48, 57	
		REPLACE		-.-		48, 57	
		REPAIR		-.-		47, 48	D, E, F, G

MAINTENANCE ALLOCATION CHART

NOMENCLATURE OF END ITEMS

T55-L-712

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE CATEGORY			(5) TOOLS AND EQUIPMENT	(6) REMARKS
			AVUM	AVIM	DEPOT		
40303	VANE ASSEMBLY	INSPECT		-.-		48,57	
		REPLACE		-.-		48,57	
		REPAIR		-.-		47,48	D,E,F,
40304	DRAIN VALVE	INSPECT	-.-			56,57	
		REPLACE	-.-			56,57	
		OVERHAUL			-.-		
404	TURBINE SECTION						
40401	1ST AND 2ND STAGE GAS PRODUCER TURBINE ROTORS (MATCHED SET)	INSPECT		-.-		48,57	
		REPLACE		-.-		3,6,13, 18,35, 37,42,48, 51,57	
		REPAIR		-.-		47,48	D,E
40402	CYLINDER ASSEMBLY 1ST G.P.	INSPECT		-.-		48,57	
		REPLACE		-.-		3,6,13, 18,35,37, 42,48,51, 57	
		REPAIR		-.-		47,48	D,E,F, G
40403	1ST AND 2ND STAGE GAS PRODUCER NOZZLES	INSPECT		-.-		48,57	
		REPLACE		-.-		2,3,37, 42,48,51, 57	
		REPAIR		-.-		47,48	D,E,F, G

MAINTENANCE ALLOCATION CHART

NOMENCLATURE OF END ITEMS

T55-L-712

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE CATEGORY			(5) TOOLS AND EQUIPMENT	(6) REMARKS
			AVUM	AVIM	DEPOT		
040404	CURL ASSEMBLY	INSPECT		-.-		48, 57	
		REPLACE		-.-		48, 57	
		REPAIR		-.-		47, 48	D, E, F, G
040405	POWER TURBINE ASSEMBLY	INSPECT		-.-		48, 57	
		REPLACE		-.-		16, 21, 48	
		REPAIR		-.-		47, 48	D, E, F, G
040406	NO. 4 AND NO. 5 BEARING PACKAGE SEALS	INSPECT		-.-		48, 53, 56, 57, 65	
		REPLACE		-.-		17, 38, 48, 53, 57, 59, 65	K
040407	3RD AND 4TH STAGE POWER TURBINE ROTORS/POWER SHAFF	INSPECT		-.-		48, 57	
		REPLACE			-.-		
		REPAIR		-.-		14, 48, 57	D, E
040408	3RD STAGE POWER TURBINE NOZZLE	INSPECT		-.-		48, 57	
		REPLACE		-.-		19, 39, 48, 57	
		REPAIR		-.-		47, 48, 49	D, E, F, G
040409	FOURTH STAGE POWER TURBINE NOZZLE	INSPECT		-.-		48, 57	
		REMOVE		-.-		19.39, 48, 57	
		REPAIR		-.-		57, 72	
		INSTALL		-.-		19, 39, 48, 57	
		OVERHAUL			-.-	47, 48, 49	D, E, F, G

MAINTENANCE ALLOCATION CHART

NOMENCLATURE OF END ITEMS

T55-L-712

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE CATEGORY AVUM	AVIM	DEPOT	(5) TOOLS AND EQUIPMENT	(6) REMARKS
040410	THERMOCOUPLE HARNESS SYSTEM	TEST	-.-			52, 56	A, H
		REPLACE		-.-		48	
040411	THERMOCOUPLE AND HARNESS ASSEMBLIES	INSPECT		-.-		48	
		REPAIR		-.-		48	
		REPLACE		-.-		48	
		TEST		-.-		48	
040412	BUS BAR R/H	INSPECT	-.-			56, 57	
		TEST	-.-			56, 57	
		REPLACE				56, 57	C
040413	BUS BAR L/H	INSPECT	-.-			56, 57	
		TEST	-.-			56, 57	
		REPLACE	-.-			56, 57	C
040414	THERMOCOUPLE JUMPER	INSPECT				56, 57	
		TEST				56, 57	
		REPLACE	--			56, 57	C
040415	FIRE SHIELDS	INSPECT	-.-			56, 57	
		REPLACE	-.-			56, 57	C
		REPAIR				56, 57	
040416	EXHAUST EXIT VANE	INSPECT				56, 57	
	ASSEMBLY	REPLACE				39, 56, 57	
		REPAIR				56, 57	D, E, F
						48, 49	G

MAINTENANCE ALLOCATION CHART

NOMENCLATURE OF END ITEMS

T55-L-712

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE CATEGORY AVUM	AVIM	DEPOT	(5) TOOLS AND EQUIPMENT	(6) REMARKS
0405	ACCESSORY GEAR SECTION						
040501	ACCESSORY GEAR BOX	INSPECT	-.-			56, 57	
		REPLACE	-.-			2, 4, 21, 23, 34, 52, 56, 57, 62, 63	
		REPAIR	-.-			56, 57	D, E
				-.-		47, 48	C, D, E, G, J, K
		OVERHAUL			-.-		
040502	ACCESSORY DRIVE GEAR	INSPECT		-.-		48, 57	
		REPLACE		-.-		15, 20, 23, 48, 57	
040503	STARTER DRIVE	INSPECT	-.-			56, 57	
		REPLACE	-.-			56, 57	C
		REPAIR	-.-			4, 21, 56, 57	D, E, G, J, M
		OVERHAUL			-.-		
0406	FUEL SYSTEM						
040601	FUEL CONTROL	INSPECT	-.-			56, 57	
		ADJUST	-.-			56, 57	A, H, I
		REPLACE	-.-			56, 57	
		REPAIR	-.-			56, 57	C, D, E
		OVERHAUL			-.-		
040602	FUEL BOOST PUMP	INSPECT	-.-			56, 57	
		REPLACE	-.-			56, 57	
		REPAIR	-.-			56, 57	D, E, G, M
		OVERHAUL			-.-		

MAINTENANCE ALLOCATION CHART

OMENC LATURE OF END ITEMS

T55-L-712

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE CATEGORY			(5) TOOLS AND EQUIPMENT	(6) REMARKS
			AVUM	AVIM	DEPOT		
40603	MAIN FUEL MANIFOLDS	INSPECT	-.-			56,57	
		REPLACE	-.-			56,57,69	C
		REPAIR	-.-			48	K
		OVERHAUL			-.-		
040604	START FUEL PRIMER TUBES	INSPECT	-.-			56,57	
		REPLACE	-.-			56,57	C
040605	MAIN FUEL FILTER	INSPECT	-.-			56,57	
		REPLACE	-.-			56,57	C
40606	FUEL FILTER IMPENDING BY-PASS INDICATOR	INSPECT	-.-			56,57	
		REPLACE	-.-			56,57	C
		REPAIR			-.-		
40607	INLINE FUEL FILTER AND ELEMENT ASSEMBLY	INSPECT	-.-			56,57	
		REPLACE	-.-			56.57	C,D,E, J
040608	FLOW DIVIDER	INSPECT	-.-			56,57	
		REPLACE	-.-			56,57	C
40609	FUEL CHECK VALVE	INSPECT	-.-			56,57	
		REPLACE	-.-			56,57	C
40610	START FUEL SOLENOID VALVE	INSPECT	-.-			56,57	
		REPLACE	-.-			56,57	C
40611	START FUEL NOZZLES	INSPECT	-.-			56,57	
		REPLACE	-.-			56.57	C

MAINTENANCE ALLOCATION CHART

NOMENCLATURE OF END ITEMS

T55-L-712

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE CATEGORY AVUM	AVIM	DEPOT	(5) TOOLS AND EQUIPMENT	(6) REMARKS
040612	FUEL CONTROL FILTERS AND STRAINERS	INSPECT	-.-			56, 57	
		SERVICE	-.-			56, 57	C
		REPLACE	--			56, 57	C
040613	FUEL LINES	INSPECT	-.-			56, 57	
		REPLACE	-.-			56, 57	C
0407	ELECTRICAL AND IGNITION SYSTEM						
040701	IGNITION EXCITER	INSPECT	-.-			56, 57	A
		REPAIR	-.-			56	E
		REPLACE	-.-			56, 57	C
040702	SPARK IGNITERS	INSPECT	--			56, 57	A
		REPLACE	-.-			56, 57	C
		SERVICE	-.-			56	E
040703	IGNITION COIL AND CABLE ASSEMBLY	INSPECT	--			56, 57	A
		REPLACE	-.-			56, 57	C
		REPAIR	-.-			52, 56, 57	A, C, E
		TEST	-.-			52, 56, 57	
040704	MAIN ELECTRICAL CABLE ASSEMBLY	INSPECT	-.-			56, 57	
		TEST	-.-			56, 57	
		REPAIR	-.-			52, 56, 57	A, C, E
		REPLACE	-.-			56, 57	C
0408	LUBRICATION SYSTEM						
040801	OIL PUMP	INSPECT	-.-			56, 57	
		ADJUST	-.-			56, 57	
		REPLACE	-.-			56, 57	
		REPAIR	-.-			56, 57	D, G, J, M
		OVERHAUL			-.-		

MAINTENANCE ALLOCATION CHART

NOMENCLATURE OF END ITEMS

T55-L-712

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE CATEGORY			(5) TOOLS AND EQUIPMENT	(6) REMARKS
			AVUM	AVIM	DEPOT		
040802	OIL COOLER	INSPECT	-.-			56, 57	
		REPLACE	-.-			56, 57	C
		REPAIR	-.-			56, 57	D, E
		OVERHAUL			-.-		
040803	OIL TEMPERATURE TRANSMITTER	INSPECT	-.-			56, 57	
		REPLACE	-.-			56, 57	C
040804	STARTER GEARBOX FILTER	INSPECT	-.-			56, 57	
		SERVICE	-.-			56, 57	C
		REPLACE	-.-			56, 57	C
040805	OIL FILTER STRAINER	INSPECT	-.-			56, 57	
		SERVICE	-.-			56, 57	
		REPLACE	-.-			56, 57	
040806	NO.2 AND NO.4 AND NO. 5 BEARING FILTERS	INSPECT	-.-			56, 57, 65	
		SERVICE	-.-			56, 57, 65	C
		REPLACE	-.-			56, 57, 65	C
040807	OIL FILTER CAP AND STEM, ELEMENT AND INTEGRAL BYPASS INDICATOR	INSPECT	-.-			56, 57	
		SERVICE	-.-			56, 57	C
		REPLACE	-.-			56, 57	C
		REPAIR	-.-			56, 57	D
040808	SCAVENGE OIL SCREEN	INSPECT	-.-			56, 57	
		SERVICE	-.-			56, 57	C
		REPLACE	-.-			56, 57	C
040809	DUAL CHIP DETECTOR	INSPECT	-.-			56, 57	
		TEST	-.-			56, 57	C
		SERVICE	-.-			56, 57	C
		REPLACE	-.-			56, 57	C
		REPAIR	-.-			56, 57	A, E

MAINTENANCE ALLOCATION CHART

NOMENCLATURE OF END ITEMS

T55-L-712

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL AVUM	AVIM	DEPOT	(5) TOOLS AND EQUIPMENT	(6) REMARKS
040810	OIL LINES	INSPECT	-.-			56,57	
		REPLACE	--			56,57	C
040811	OIL FILLER ASSEMBLY	INSPECT	-.-			56, 57	
		REPLACE	-			56,57	C
		REPAIR	-.-			56,57	C,D,E
040812	OIL LEVEL INDICATOR	INSPECT	-.-			32, 56,57	
		ADJUST	-.-			32,56,57	
		REPLACE	-.-			32,56, 57	C
		REPAIR	-.-			32, 56, 57	C
040813	OIL LEVEL FLOAT	INSPECT		-.-		48,57	
		REPLACE		-.-		48, 57	
		REPAIR		-.-		47,48, 49	
040814	OIL DRAIN VALVE	INSPECT	-.-			56,57	
		REPLACE	-.-			56, 57	C
040815	CHIP DETECTOR SELF SEALING	INSPECT	-.-		56,57		
		SERVICE	-.-			56,57	
		REPLACE	-.-			56,57	
0409	TORQUEMETER SYSTEM	INSPECT	-.-			56,57	
		REPLACE	-.-			56, 57	A
		OVERHAUL	--				
		CALIBRATE	- -				
040901	TORQUEMETER JUNCTION BOX	OVERHAUL	- -				
		CALIBRATE	- -				
040902	OUTPUT SHAFT	OVERHAUL	- -				
		CALIBRATE	- -				
040903	TORQUEMETER HEAD ASSEMBLY	OVERHAUL	- -				
		CALIBRATE					

TOOL AND TEST EQUIPMENT REQUIREMENTS

NOMENCLATURE OF END ITEMS

Tool and Test Equipment Requirements, T55-L-712 Turbine Engine

TOOL OR TEST EQUIPMENT REFERENCE CODE	MAINTENANCE CATEGORY	NOMENCLATURE	NATIONAL/NATO STOCK NUMBER	TOOL NUMBER
1	AVIM	Adapter Engine	4920-00-020-2687	LTCT 1255
2	AVIM	Alignment Pin	5120-00-898-0697	LTCT 387
3	AVIM	Alignment Pin	5120-00-178-0974	LTCT 13038
4	AVIM	Bar, Locating	5120-00-671-2129	LTCT 153
5	AVIM	Cable Assembly, Special	4920-00-409-8222	LTCT 13476-02
6	AVIM	Control Unit	6110-00-631-7196	LTCT 14547
7	AVIM	Coupling Half, Clamp	5340-00-156-1191	LTCT 9917
8	AVIM	Cover, Aircraft Group	1730-00-134-0979	LTCT 6271
9	AVIM	Cover, Aircraft Group	1730-00-133-9550	LTCT 3936
10	AVUM	Cover, Protective Engine	4920-00-916-2448	LTCT 1278
11	AVUM	Drift Assembly	4920-00-891-4653	LTCT 1643
12	AVIM	Fixture, Oil Tube	4920-01-137-3557	LTCT 7202
13	AVIM	Fixture, Assembling (Bore-heater)	4920-00-134-0162	LTCT 6354
14	DELETED			
15	AVIM	Fixture, Holding Gear	4920-00-012-8780	LTCT 1042
16	AVIM	Fixture, Power Turbine	4920-00-834-2182	LTCT 14360
17	AVIM	Fixture, Pressure	4920-00-866-0849	LTCT 13442
18	AVIM	Fixture, Torque	4920-00-866-0863	LTCT 13344
19	AVIM	Fixture, Torque	4920-00-372-4596	LTCT 13857-01
20	AVIM	Gage, Backlash	5220-00-015-6985	LTCT 1039
21	AVUM	Handling Tool	5120-00-959-7633	LTCT 1428
22	AVUM	Handling Tool	5120-00-959-7635	LTCT 1430
23	AVUM	Handling Tool	5120-00-959-7636	LTCT 1431
24	AVIM	Heater, Induction	4920-00-372-4595	LTCT 13873

TOOL AND TEST EQUIPMENT REQUIREMENTS

Nomenclature of End Items

Tool and Test Equipment Requirements, T55-L-712 T55-L-712 Turbine Engine

TOOL OR TEST EQUIPMENT REFERENCE CODE	MAINTENANCE CATEGORY	NOMENCLATURE	NATIONAL/NATO STOCK NUMBER	TOOL NUMBER
25	AVIM	Holding Tool, Shaft	5120-00-109-4669	LTCT3927
26	AVUM	Installation Tool	4920-00-475-2552	LTCT1
27	AVUM	Installation Tool	4920-00-509-8087	LTCT1
28	AVIM	Installing Tool	5120-00-109-4568	LTCT4968
29	AVIM	Installing Tool, Bearing	5120-00-370-3939	LTCT1
30	AVIM	Kit, Maintenance (Skimming)	4920-00-134-0163	LTCT6629
31	AVIM	Kit, Torquemeter	4920-00-187-5728	LTCT1
32	AVUM	Light, Test, Oil Level	4920-00-940-2910	LTCT1
33	AVIM	Mobil, Engine, Test Stand	4920-00-167-9178	LTCT1
34	AVIM	Multiplier, Torque	5120-00-482-2543	PD2501
35	AVIM	Puller	5120-01-111-4312	LTCT1
36	AVUM	Puller, Mechanical	5120-00-509-2965	LTCT121
36.1	AVUM	Masking Kit, First Stage Stator, RTV		LTCT7612
37	AVIM	Puller, Mechanical	5120-00-110-4235	LTCT1
38	AVIM	Puller, Mechanical	5120-00-370-3934	LTCT1
38.1	AVUM	Application Kit, RTV		LTCT1
39	AVUM	Puller, Mechanical	5120-00-784-1276	LTCT1
40	AVIM	Puller, Mechanical	5120-00-109-4670	LTCT3961
41	AVIM	Puller, Mechanical	5120-00-109-4674	LTCT6173
42	AVIM	Puller, Turbine Disc	5120-01-111-4311	LTCT1
43	AVIM	Puller	5120-01-137-3852	LTCT1
44	AVIM	Puller, Wheel, Hydraulic	5130-01-115-6996	LTCT1
45	AVUM	Punch, Locking Cup	5120-00-951-8622	LTCT1
46	AVIM	Screwdriver, Special	5120-00-125-4015	LTCT6909
47	AVIM	Shop Set, Machine	4920-00-405-9279	SC492099-CLA91
48	AVIM	Shop Set, Turbine	4920-00-224-3684	SC492099-CLA91

TOOL AND TEST EQUIPMENT REQUIREMENTS

NOMENCLATURE OF END ITEMS
Tool and Test Equipment Requirements, T55-L-712 Turbine Engine

TOOL OR TEST EQUIPMENT REF CODE	MAINTENANCE CATEGORY	NOMENCLATURE	NATIONAL/NATO STOCK NUMBER	TOOL NUMBER
49	AVIM	Shop Set, Welding	4920-00-163-5093	SC492099CLA 1WEAM
50	AVUM	Sling, Aircraft Maintenance	1730-01-007-6990	LTCT14700
51	AVIM	Support, Dial Indicator	4920-00-110-9986	LTCT6098
52	AVIM	Plate, Wrenching Pin	4920-00-509-8060	LTCT1252
53	AVIM	Tester, Seal Leakage	4920-00-444-2362	LTCT13606
54	AVIM	Tool, Bearing Removal	5120-01-137-3558	LTCT14686
55	AVUM	Tool, Installing	4920-00-898-7925	LTCT1644
56	AVUM	Tool Kit, AVUM #2	4920-00-567-0476	SC492099CLA 92
57	AVUM	Tool Kit, Mechanics	5180-00-323-4944	SC5180-99CLA07
58	AVIM	Tool Kit, Installation	5180-00-125-4106	LTCT6623
59	AVUM	Tool Set, Seal Removal	4920-00-866-0858	LTCT13868
60	AVUM	VIB, Monitoring Kit	4920-00-879-0331	171170-0104
61	AVIM	Wrench, Assembly Socket	5120-00-918-1883	LTCT3009
62	AVIM	Fixture, Torque	4920-00-834-2178	LTCT13771
63	AVUM	Fixture, Gear Holding	4920-00-872-7858	LTCT1260
64	AVIM	Puller, Mechanical	5120-00-012-8865	LTCT1009
65	AVUM	Wrench, Open End	5120-00-834-2141	LTCT13911
66	AVIM	Fixture, Holding Gear	4920-00-115-6995	LTCT14616
67	AVUM	Adapter, Puller, Output Shaft		LTCT7285
68	AVUM	Plate, Turbine Disc Separating		LTCT7309
69	AVUM	Torque Adapter, Wrench	5120-00-972-8191	LTCT1409
70	AVUM	Clinching Tool	5120-00-481-3117	LTCT13411
71	AVUM	Crawfoot, Open-End	5120-00-184-8414	FRES7
72	AVUM	Tool Kit, Technical Inspector	5180-00-323-5114	SC5180-99-A09

Section IV. REMARKS

REFERENCE CODE	REMARKS
A	Functional Test at AVUM - Engine in Airframe
B	Functional Test at AVIM - Engine in METS
C	Repairs at AVUM includes minor repair of the engine and minor repair/replacement of components and accessories
D	Blend Repair
E	Corrosion Control, Pitting
F	Magnetic-Particle Inspection
G	Nicks, Dents, Burrs, Cracks & Distortion
H	Adjust, Engine in Airframe
I	Bleed Band, Ground Idle, Maximum Power, Engine in Airframe
J	O-Rings, Drive Shaft Seal, Solenoid Valve
K	Seals and O-Rings
L	Torquemeter Junction Box, Output Shaft, Torquemeter Head Assembly, replace as a complete Calibrated Assembly
M	Repair is limited to Blend Repair and Seal/O-Ring Replacement
N	Refer to the airframe manual, TM 55-1520-240-23.
O	Less than 50 blades total since new or last depot repair.

APPENDIX C

EXPENDABLE SUPPLIES AND MATERIALS LIST

Section I. INTRODUCTION

C-1 SCOPE

This appendix lists expendable supplies and materials you will need to operate and maintain the engine. These items are authorized to you by CTA 50-970, Expendable Items (Except Medical, Class V, Repair Parts, and Heraldic Items).

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 material, e.g., “Use dry cleaning solvent (E17) .“

b. Column 2- National Stock Number. This is the National Stock Number assigned to the item; use it to request or requisition the item.

c. Column 3- Description. Indicates the Federal item name and, if required, a description to identify the item. The last line for each item indicates the part number followed by the Federal Supply Code for Manufacturer (FSCM) in parenthesis, if applicable.

EXPENDABLE SUPPLIES AND MATERIALS LIST

(1) Item Number	(2) National Stock Number	(3) Description
E1	6810-00-184-4796	Acetone, Technical (O-A-51)
E2	7920-00-514-2417	Acid Swabbing Brush
E2.1	8040-00-145-0020	Adhesive (RTV 3145)
E3	5350-00-224-7201	Aluminum Oxide Abrasive Paper (180 to 320 Grit)
E2.2	6810-00-201-0906	Alcohol, Denatured (MIL-A-6091)
E4	5350-00-161-9715	Aluminum Oxide Cloth Carborundum Co. Niagara Falls, New York
E4.1		Anti-Detonating Injection Fluid Mixture Lyndhurst Chemical Corp. (or equivalent)
E5	7030-00-778-4277	Anti-Seize CompoundEase Off 990 Texacone Co. Dallas, Texas
E6	8335-00-224-8885	Barrier Material MIL-B-121, Grade A
E7	8135-00-282-0565	Barrier Material MIL-B-130
E8	8030-00-664-6146	Black Baking Enamel (AMS3120)
E9	5340-00-292-0886	Bonding Seal
E10		Carborundum Stone Carborundum Co. Niagara Falls, New York
E11	6850-00-181-7594	Cleaning Solution B&B 3100 B&B Chemical Co. Miami, Florida
E12		Clear Synthetic Sealant Reliance 456 Reliance Varnish Co. Irvington, New Jersey

EXPENDABLE SUPPLIES AND MATERIALS LIST (Continued)

(1) Item Number	(2) National Stock Number	(3) Description
E13	8030-00-231-2354	Corrosion Preventative Compound, MIL–C–11796, Class3
E14	8030-01-118-0666	Corrosion Preventive Compound, LPS3 LPS Research Laboratories Inc. Los Angeles, California
E15	5350-00-221-0572	Crocus Cloth (P–C–458)
E16	6850-00-264-6562	Desicant Bag MIL–D–3464, Type III W.R. Grace & Co. Davison Chemical Div. Baltimore, MD 21203
E17	6850-00-285-8011	Dry Cleaning Solvent (P–D–680) Type II
E17.1		Dry Ice BB–C–104 Commercial
E18		Emery Cloth (No. 500) Carborundum Co. Niagara Falls, NY
E19	6850–00–782–2732 6850–00–782–2730	Fluorescent Penetrant Materials, Group, V, VI MIL–I–25135 Magnaflux Corp. Chicago, Illinois 60656
E19.1	8030–01–105–8625	Mold Release Compound
E20	8415–00–227–1220 8415–00–227–1221 8415–00–227–1222	Gloves MIL–G–10902
E21	6810–00–264–6548	Glycerol (O–G–491)
E22	8010–00–584–3078	Gray Enamel (TT–E–489)
E23	9150–00–269–2855	Grease, MIL–G–4343 Dow Corning Corp. Midland, Michigan

EXPENDABLE SUPPLIES AND MATERIALS LIST (Continued)

(1) Item Number	(2) National Stock Number	(3) Description
E23.1	9150-00-119-9291 9150-00-273-8633	2 Ounce Tube 8 Ounce Tube Grease, Silicone Molycote 55M or equivalent
E24	5970-00-929-8595	Insulation Sleeving Flexite HTI05C for No. 18 Wire MIL-I-23053/12
E25	8010-00-007-8165	Iron Blue Pigment (TT-P-385)
E26	7920-00-205-3453	Lint-Free Cloth (CCC-C-46A)
E27	8520-00-141-2519	Liquid Soap (P-S-624)
E28	9505-00-221-2650	Lockwire, MS20995C20
E29	9505-00-847-1663	Lockwire, MS20995C32
E30	9150-00-141-4481	Lubricant, Plastilube Moly No. 3 Warren Refining and Chemical Co. Cleveland, Ohio
E31	9150-00-274-2388	Lubricating Oil MIL-L-6081, Grade 1010
E32	9150-00-782-2627	Lubricating Oil MIL-L-7808
E33	9150-00-180-6266	Lubricating Oil MIL-L-23699
E34	7510-00-465-0994	Marking Pencil, Yellow Colorbrite No. 2127 or 4127 Eberhard Faber Inc. Crestwood Industrial Park Wilkes Barre, Pennsylvania 18703
E35	7510-00-266-6712	Masking Tape (UU-T-106)
E35.1	Methanol (O-M-232)	
E36	6810-00-281-2785	Methyl Ethyl Ketone (Tr-M-261)

EXPENDABLE SUPPLIES AND MATERIALS LIST (Continued)

(1) Item Number	(2) National Stock Number	(3) Description
E37	8030-00-105-0270	Nickel Ease, Nickel Special Fel-Pro Inc. Division of Felt Product Manufacturing Co Skokie, Illinois
E38 E38.1	6810-00-237-2918 3030-00-213-3079	Nitric Acid (O-N-350) Non-Lead Gear Marking Compound G-2 Stutz Company Chicago, Illinois
E39	9150-00-261-7899	Penetrating Oil (WVV-P-216)
E40	9150-00-250-0926	Petrolatum (W-P-236)
E41	1730-00-181-202	Plastic Covers (PSK 3355)
E42	5970-00-833-1702	Pressure Sensitive Teflon Tape, 3/8-inch wide by 0.006 inch thick with temperature range of -65 to 350°F Connecticut Hard Rubber Co. New Haven, Connecticut 06509
E43	6850-01-013-9937	Layout Dye, Red DX-296
E44	8030-00-213-3279	Rust Inhibitor and Preservative MIL-C-81309D
E45	5350-00-214-7203	Sandpaper (P-P-101)
E45.1		Silicone Ruibber Adhesive Sealant RTV (106) General Electric Co. Waterford, NY 12188 or equivalent
E46	8945-00-125-6338	Shortening Compound (EE-S-321)
E47		Sisal Twine 2 ply hard fiber, light manila color, 265 pound tensile strength (minimum)
E48	6810-00-143-2000	Sodium Dichromate (D-S-595)
E49	3439-00-224-3567	Solder, 60/40 Tin Lead (QQ-S-571D)

EXPENDABLE SUPPLIES AND MATERIALS LIST (Continued)

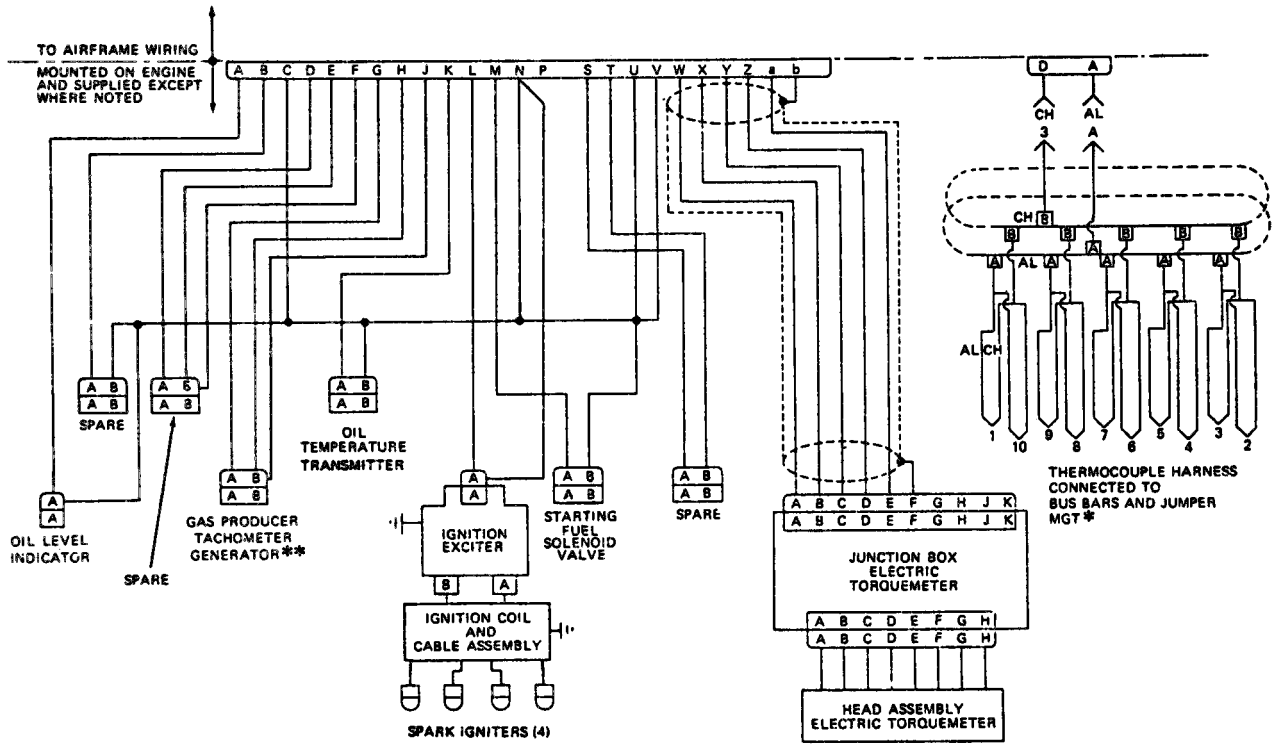
(1) Item Number	(2) National Stock Number	(3) Description
E49.1	6850-00-360-6588	Solvent LPS3 Freon Type TF (MIL-C-81302, Type IIA LPS Research Laboratory Los Angeles, CA (or equivalent)
E50	9330-00-890-3104	Spiral Chafing Sleeve 94835-1 Titeflex Co. Inc. Springfield, Massachusetts
E51	9330-00-890-3104	Spiral Chafing Sleeve 94835-2 Titeflex Co. Inc. Springfield, Massachusetts
E52	9330-00-890-3104	Spiral Chafing Sleeve 94835-3 Titeflex Co. Inc. Springfield, Massachusetts
E53	8135-00-066-0043	Tag (UU-T-81)
E54	7510-00-663-0196	Tape Masking (PPP-T-60) Type IV
E54.1	4470-01-011-3748	Tape, Acetate Fiber, 3-inch (PPP-T-60B, Class 2) Scratch 27 Minnesota Mining & Manufacturing St. Paul, MN (or equivalent)
E55	6505-01-050-8714	Tar Ashland Petroleum Co. Division of Ashland Oil Inc. Ashland, Kentucky 41101
E55.1		Ultrachem Assembly Fluid 1 Ultrachem Inc. 1400 North Walnut St. Wilmington, Delaware
E56		Vexar Nylon Webbing E.I. Dupont de Nemours Wilmington, Delaware
E57	8010-00-515-1596	White Enamel (TT-E-527)
E58	7920-00-205-1711	Wiping Rag 50 Pound Bale (A-A-531)

EXPENDABLE SUPPLIES AND MATERIALS LIST (Continued)

(1) Item number	(2) National stock number	(3) Description
E59		Wire, 22 Gauge Standard No. 8522–1 Type 4 (71002) Birnback Co. Inc. Freeport, NY
E60	3439-00-166-9584	Wire, Welding AMS5786
E61	3439-00-882-7350	Wire Welding AMS5794
E62	8010-00-155-2208	Zinc Chromate Primer MIL–P–8585, or MIL–P–6899 Type II
E63	6850-01-372-8303	MIL–C–85704 Type II, 5 Gal
E64	6850–01–372–8304	MIL–C–85704 Type II, 55 Gal
E65	6850–01–370–5245	MIL–C–85704 Type IIA, 5 Gal
E66	6850-01-370-5244	MIL–C–85704 Type IIA, 55 Gal
E67		Compound Retaining MIL–R–46082 Type II Loctite 640 Loctite Corp. 705 North Mountain Rd. Newington, CT 06111
E68		Perchloroethylene O–T–236
E69		Isopropyl Alcohol TT–I–735

APPENDIX D

WIRING DIAGRAM



* NOT PART OF MAIN ELECTRICAL CABLE ASSEMBLY

** NOT SUPPLIED WITH ENGINE

A-1182-D1

Electrical System Schematic

APPENDIX E

ILLUSTRATED LIST OF MANUFACTURED ITEMS

APPENDIX E

TABLE OF CONTENTS

Nomenclature	Reference Task No.	Page No.
Bent Wire Gage (0.066 inch) (AVIM)	4-61	E-1
Bent Wire Gage (0.100 inch) (AVIM)	4-66	E-2
Bent Wire Gage (0.101 inch) (AVIM)	4-32	E-3
Bent Wire Gage (0.104 inch) (AVIM)	4-36	E-4
Bent Wire Gage (0.115 inch) (AVIM)	4-36	E-5
Bent Wire Gage (0.228 inch) (AVIM)	4-36	E-6
Bent Wire Gage (0.290 inch) (AVIM)	4-36	E-7
Chain With Hooks	1-26, 1-112,	E-8
	1-113	E-8
Drain Hose	1-27,1-111	E-9
Drain Hose	1-111	E-10
Guide Pin (AVIM) (3)	2-41	E-11
Hose Assembly	1-111	E-12
Hose Assembly	6-7	E-13
Hose Assembly	6-7	E-14
Inside Diameter Sleeve (AVIM)	9-10	E-15
Installation Tool (AVIM)	2-71	E-16
Oil Seal Installation Tool (AVIM)	2-46	E-17
Oil Seal Installation Tool	5-15	E-18
Oil Seal Removal Tool (AVIM)	2-43	E-19
Oil Seal Removal Tool	5-15	E-20
Phenolic Drift (AVIM)	2-72, 3-9	E-21
Pressure Gage Tube Assembly	1-110	E-22
Removal Tool (AVIM)	2-68	E-23
Sleeve	2-51	E-24
Sleeve	5-22	E-25
Sleeve Bushing (AVIM)	2-43	E-26
Sleeve Bushing (AVIM)	2-46	E-27
Sleeve Bushing (AVIM)	2-68,2-71	E-28
Sleeve Bushing	5-15	E-29
Stirring Rod	1-119	E-30
Swirler Installation Tool (AVIM)	3-18	E-31
Thickness Gage (AVIM)	1-93,4-57,	E-32
	4-61	
Third Turbine Rotor Support Block (AVIM)	4-37	E-33
Wooden Block (AVIM)	3-15	E-34
Wrench	5-18,5-22	E-35

GO TO NEXT PAGE

ILLUSTRATED LIST OF MANUFACTURED ITEMS

Nomenclature	Reference Task No.	Material Required
Bent Wire Gage (AVIM)	4-61	AMS5645 QQ-S-763 (CRES321) or AMS5754 (Hastelloy X)

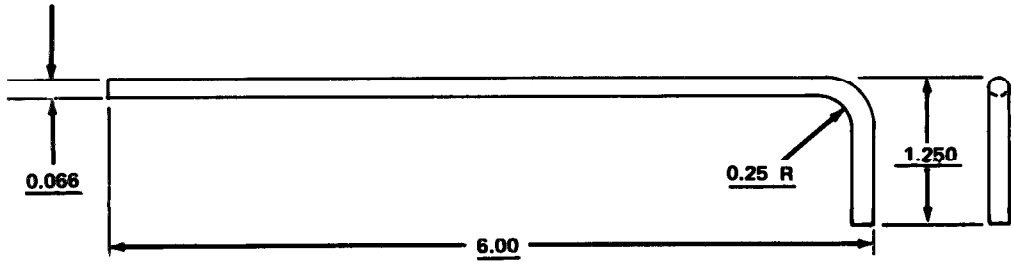
Fabrication Instructions:

Fabricate bent wire gage out of specified material as follows:

1. Form in accordance with sketch shown below.
2. Break all sharp edges.

NOTE: All dimensions are in inches.

Sketch or Diagram:



A-1182-E1

ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No.	Material Required
Bent Wire Gage (AVIM)	4-66	AMS5645 QQ-S-763 (CRES321) or AMS5754 (Hastelloy X)

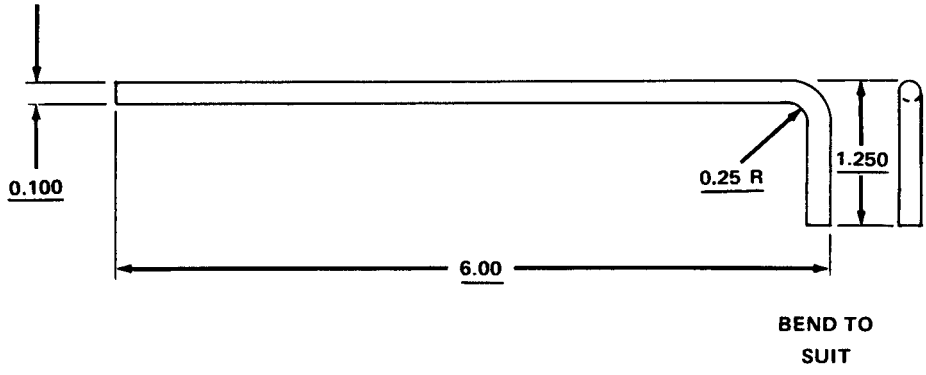
Fabrication Instructions:

Fabricate bent wire gage out of specified material as follows:

1. Fabricate in accordance with sketch shown below.
2. Break all sharp edges.

NOTE: All dimensions are in inches.

Sketch or Diagram:



A-1182-E2

ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No.	Material Required
Bent Wire Gage (AVIM)	4-32	AMS5645 QQ-S-763 (CRES321) or AMS5754 (Hastelloy X)

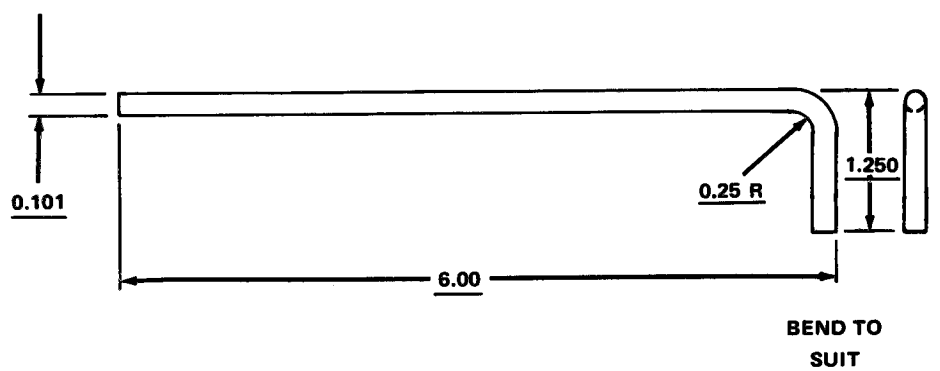
Fabrication Instructions:

Fabricate bent wire gage out of specified material as follows:

1. Fabricate in accordance with sketch shown below.
2. Break all sharp edges.

NOTE: All dimensions are in inches.

Sketch or Diagram:



A-1182-E3

ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No.	Material Required
Bent Wire Gage (AVIM)	4-36	AMS5645 QQ-S-763 (CRES321) or AMS5754 (Hastelloy X)

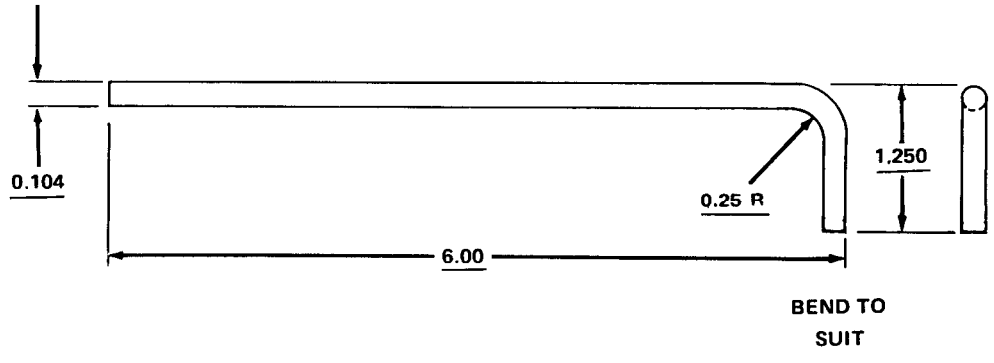
Fabrication Instructions:

Fabricate bent wire gage out of specified material as follows:

1. Form in accordance with sketch shown below.
2. Break all sharp edges.

NOTE: All dimensions are in inches.

Sketch or Diagram:



A-1182-E4

ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No.	Material Required
Bent Wire Gage (AVIM)	4-36	AMS5645 QQ-S-763 (CRES321) or AMS5754 (Hastelloy X)

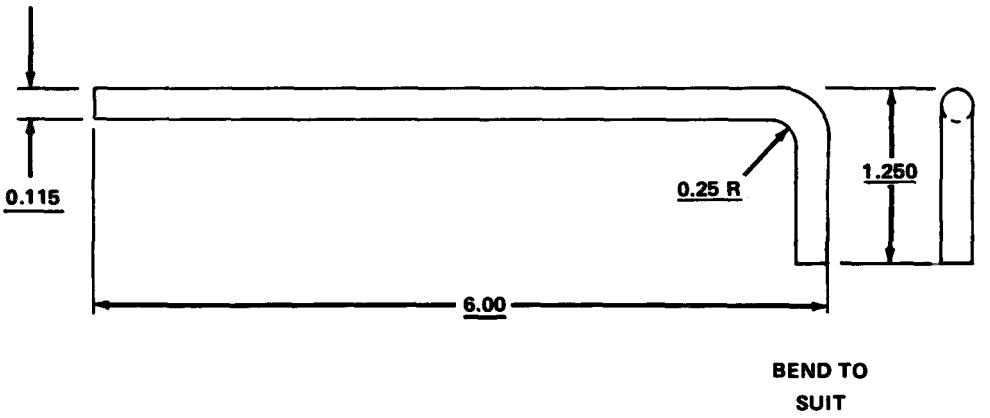
Fabrication Instructions:

Fabricate bent wire gage out of specified material as follows:

1. Form in accordance with sketch shown below.
2. Break all sharp edges.

NOTE: All dimensions are in inches.

Sketch or Diagram:



A-1182-E5

ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No.	Material Required
Bent Wire Gage (AVIM)	4-36	AMS5645 QQ-S-763 (CRES321) or AMS5754 (Hastelloy X)

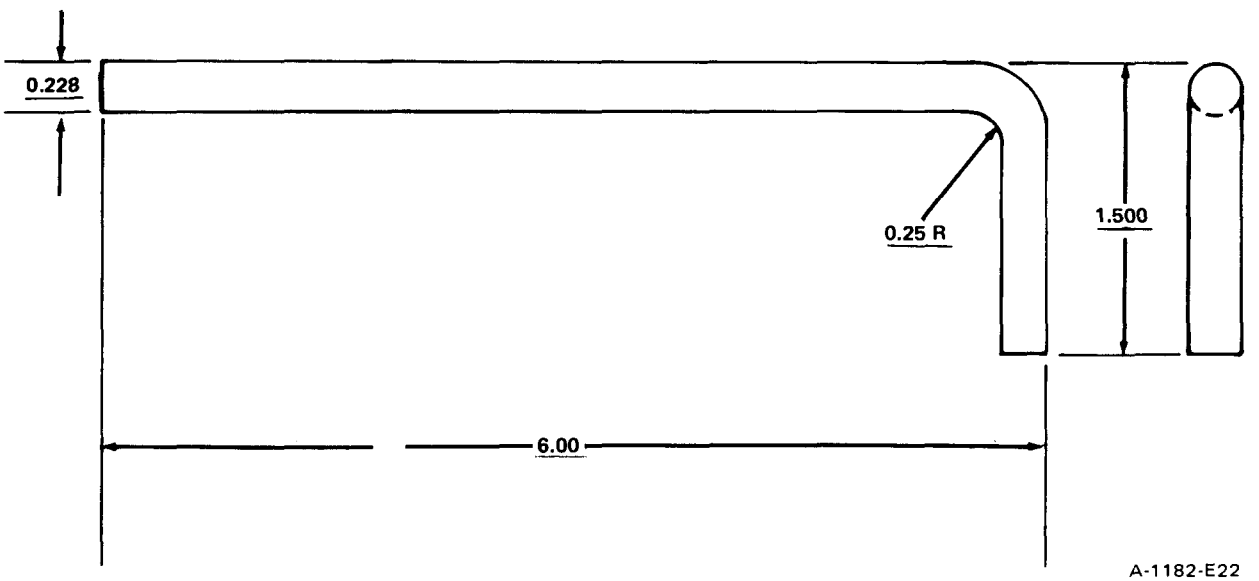
Fabrication Instructions:

Fabricate bent wire gage out of specified material as follows:

1. Form in accordance with sketch shown below.
2. Break all sharp edges.

NOTE: All dimensions are in inches.

Sketch or Diagram:



ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No.	Material Required
Bent Wire Gage (AVIM)	4-36	AMS5645 QQ-S-763 (CRES321) or AMS5754 (Hastelloy X)

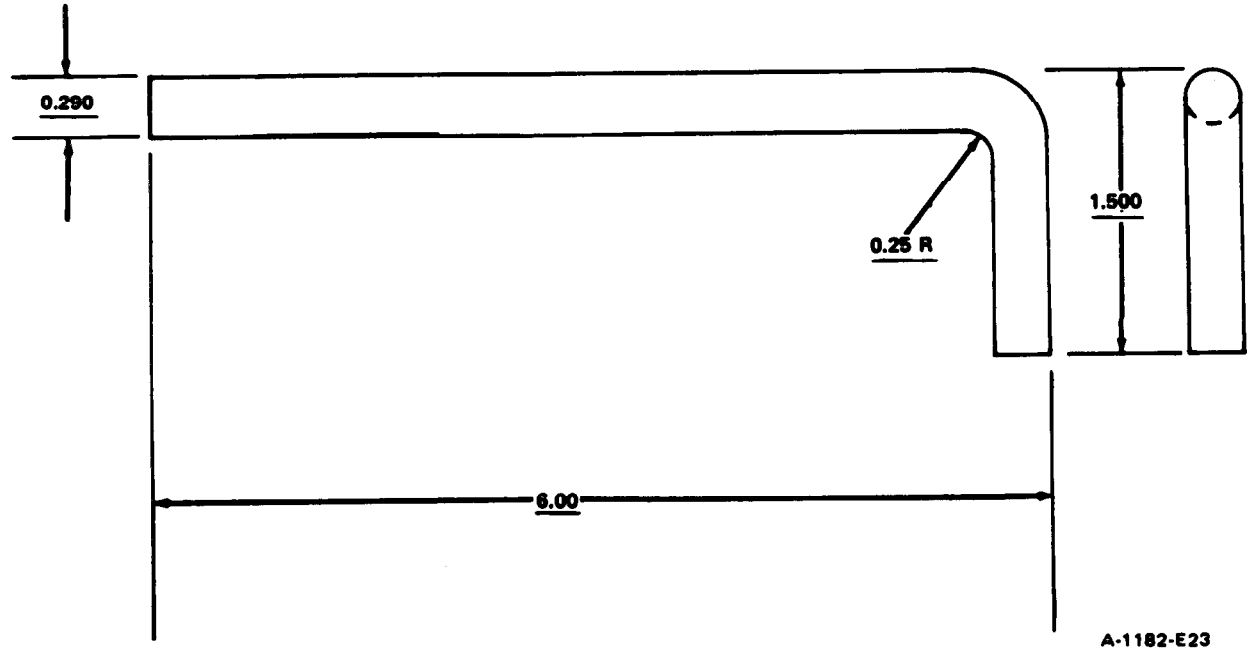
Fabrication Instructions:

Fabricate bent wire gage out of specified material as follows:

1. Form in accordance with sketch shown below.
2. Break all sharp edges.

NOTE: All dimensions are in inches.

Sketch or Diagram:



ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No.	Material Required
Chain with Hooks	1-26,1-112,1-113	(1) Slip hooks (2ea), (2) pins (2ea), (3) 3/8-inch welded link steel alloy chain (2ea), (4) couplings (2), (5) crosby 1/2 oblong link (1). (See sketch).

Fabrication Instructions:

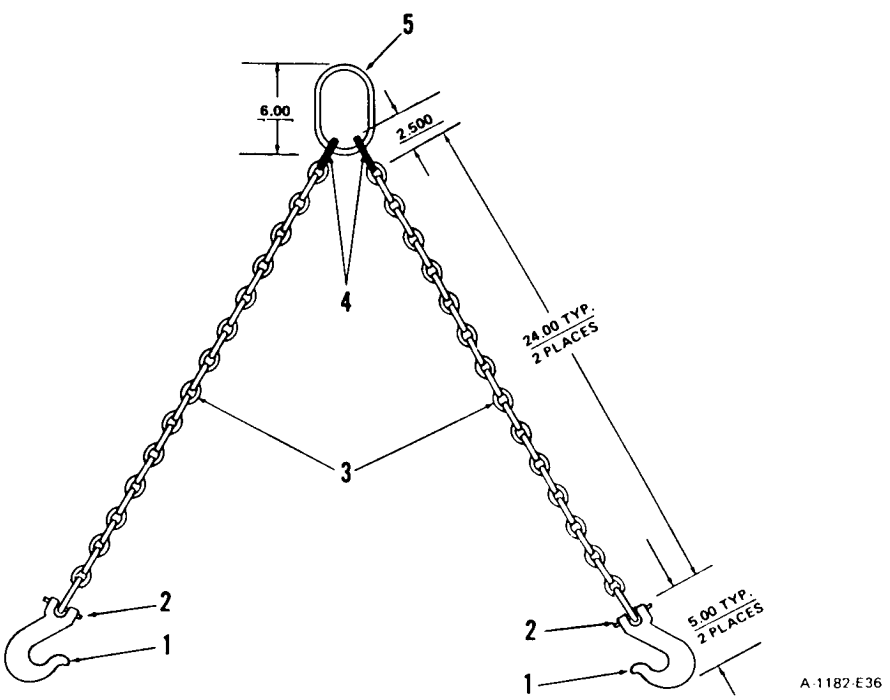
NOTE: The chain and hooks must have a certified 1 ton load limit capacity. Therefore it is suggested that only certified vendors be used to procure this item, The specifications require a (1) ton steel heavy duty chain hoist.

Suggested certified vendors are: (1) Paul's Wire, Rope & Sling Inc., 4 Indian Neck Ave., Branford, CT 06405.
(2) McMaster-Carr Supply, P.0. Box 4355, Chicago, IL., 60680.

NOTE: All dimensions are in inches.

NOTE: Any suitable substitute may be utilized, i.e. cargo tiedown, rotor head sling etc. (Head sling NSN 1730-00-099-8099).

Sketch or Diagram:



ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

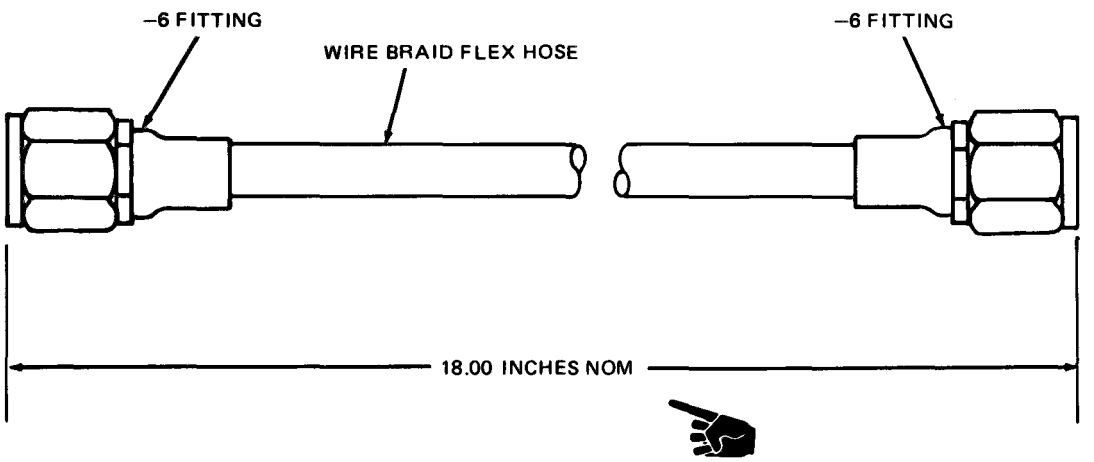
Nomenclature	Reference Task No.	Material Required
Drain Hose	1-27, 1-111	Scrap flexible hose with -6 fittings or hose assembly NSN 4720-01-114-1017.

Fabrication Instructions:

NOTE: Use suitable scrap hose (see sketch). If no such hose is available, use any scrap hose providing priming task can be accomplished successfully.

NOTE: If scrap hose is not available, hose assembly 2-300-845-01 or 2-300-845-02 (NSN 4720-01-114-1017) may be used to accomplish priming task.

Sketch or Diagram:



A-1182–E6A

ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

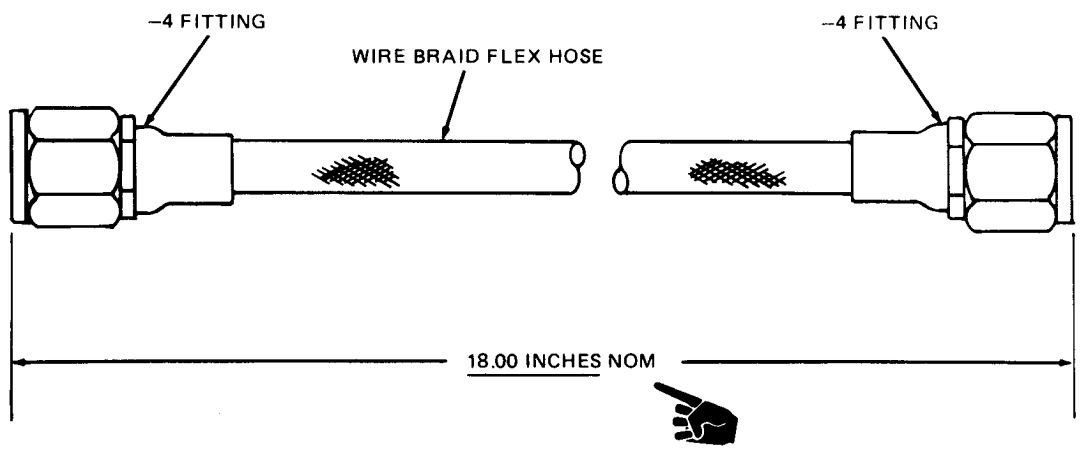
Nomenclature	Reference Task No.	Material Required
Drain Hose	1-111	Scrap flexible hose with -4 fittings or hose assembly NSN 4720-00-725-5659.

Fabrication Instructions:

NOTE: Use suitable scrap hose (see sketch). If no such hose is available, use any scrap hose providing draining task can be accomplished successfully.

NOTE: If scrap hose is not available, hose assembly P/N 2-300-234-01 (NSN 4720-00-725-5659) may be used to accomplish draining task.

Sketch or Diagram:



ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No.	Material Required
Guide Pin (AVIM)	2-41	MS 9501-22 bolt (NSN 5306-00-392-0749)

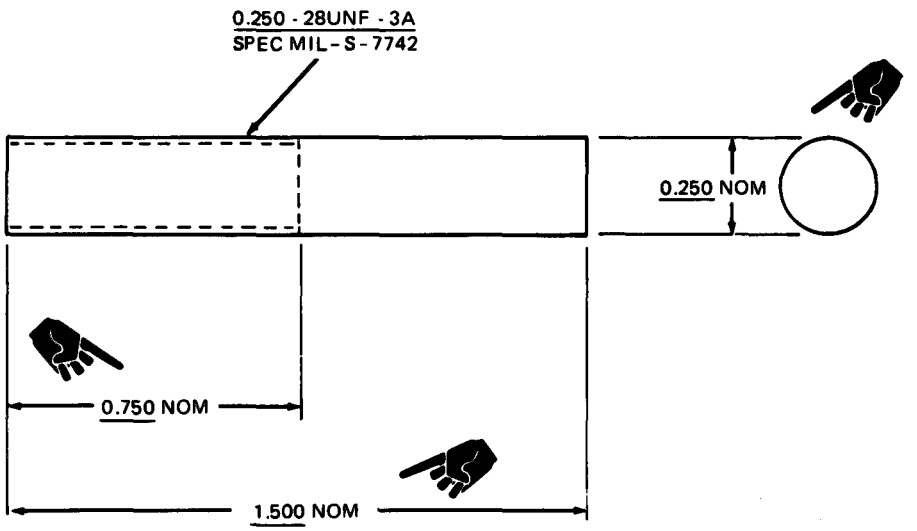
Fabrication Instructions:

Fabricate guide pin out of AN 106522 Bolt as follows:

1. Cut bolt in accordance with sketch shown below.
2. Lightly sand or file rough edges.
3. Surface treat with black oxide per MIL-C- 13924 CLASS

NOTE: All dimensions are in inches.

Sketch or Diagram:



A-1182-E7A

ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

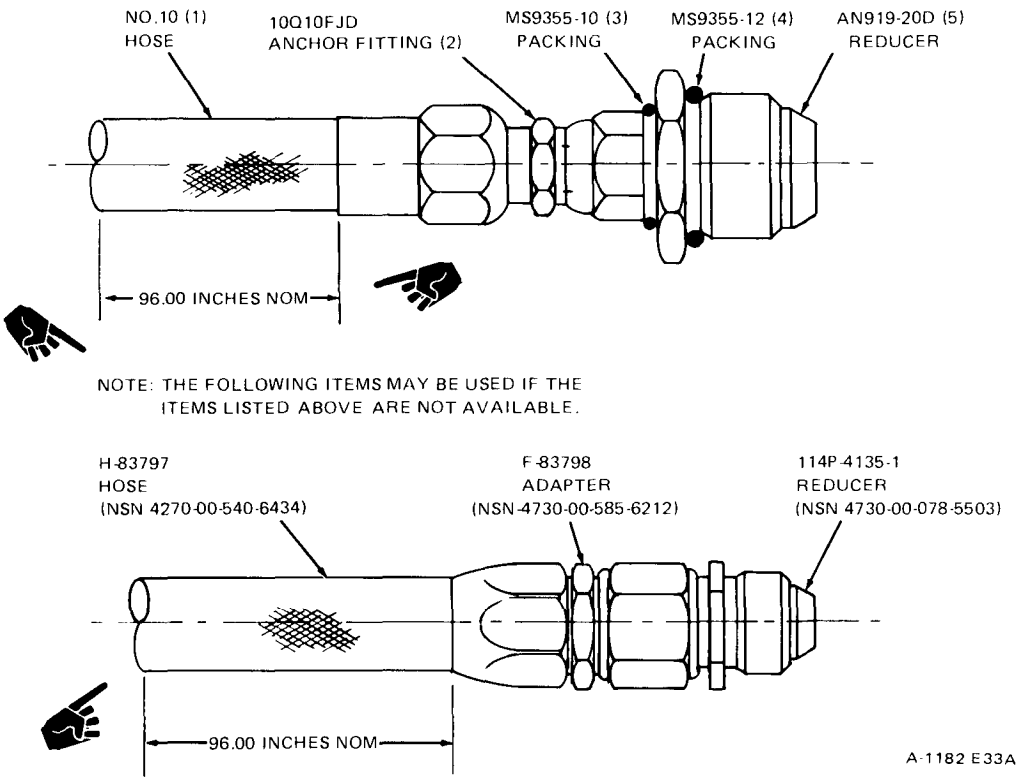
Nomenclature	Reference Task No.	Material Required
Hose Assembly	1-111	(8 Feet) No. 10 Hose, (1) 10Q10FJD Anchor Fitting, (2) MS9355-10 Packing, (3) MS9355-12 Packing, (4) AN919-20D Reducer, (5)

Fabrication Instructions:

Assemble hose assembly from material required and sketch shown below as follows:

1. Install 10Q10FJD Anchor fitting (2) on No. 10 hose (1).
2. Coat MS9355-10 Packing (3) and MS9355-12 Packing (4) with silicone grease MIL-G-4343.
3. Install Packing (3) and Packing (4) on AN919-20D Reducer (5).
4. Connect reducer (5) to anchor fitting (2).

Sketch or Diagram:



ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

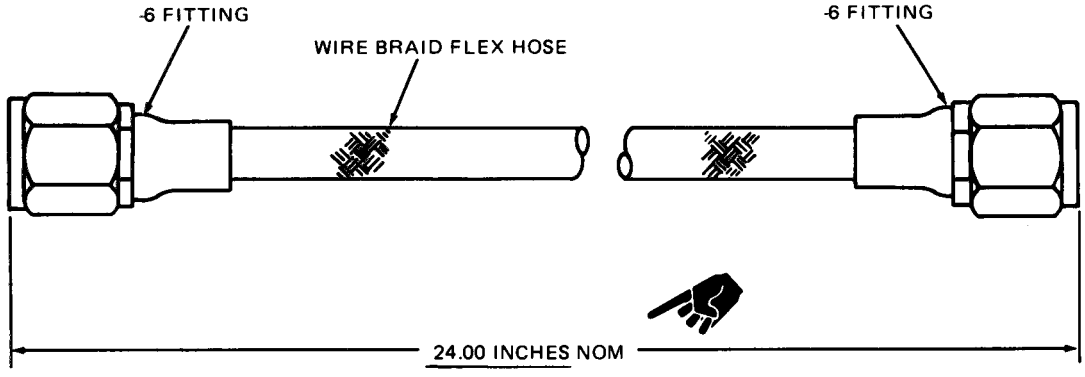
Nomenclature	Reference Task No.	Material Required
Hose Assembly	6-7	Scrap flexible hose with -6 fittings or hose assembly NSN 4720-00-105-2957

Fabrication Instructions:

NOTE: Use suitable scrap hose (see sketch). If no such hose is available, use any scrap hose providing preservation task can be successfully accomplished.

NOTE: If scrap hose is not available, hose assembly, P/N 2-300-241-01 (NSN 4720-00-105-2957) may be used to accomplish preservation task.

Sketch or Diagram:



A-1182-E34A

ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

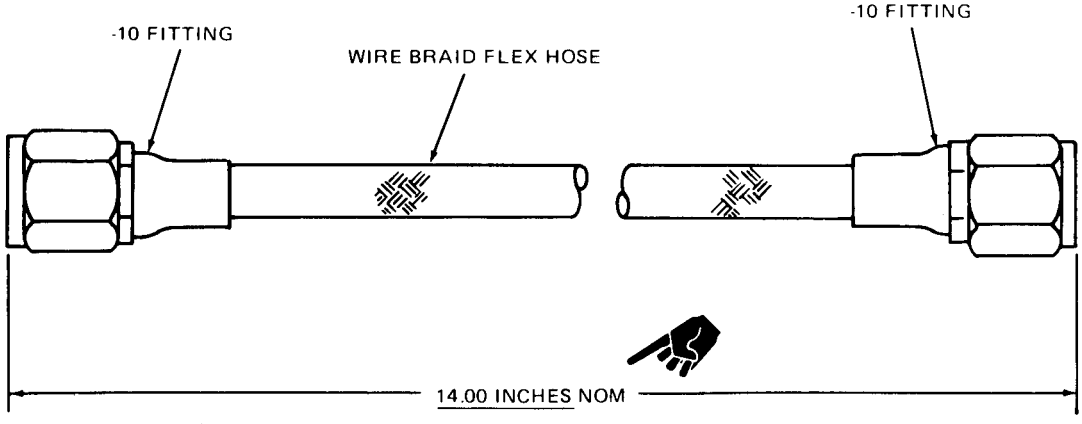
Nomenclature	Reference Task No.	Material Required
Hose Assembly	6-7	Scrap flexible hose with -10 fittings or hose assembly NSN 4720-00-103-9439

Fabrication Instructions:

NOTE: Use suitable scrap hose (see sketch). If no such hose is available, use any scrap hose providing preservation task can be successfully accomplished.

NOTE: If scrap hose is not available, hose assembly P/N 2-300-251 -01 (NSN 4720-00-103-9439) may be used to accomplish preservation task.

Sketch or Diagram:



A-1182-E35A

ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No.	Material Required
Inside Diameter Sleeve (AVIM)	9-10	Aluminum QQ-A-200/8T6

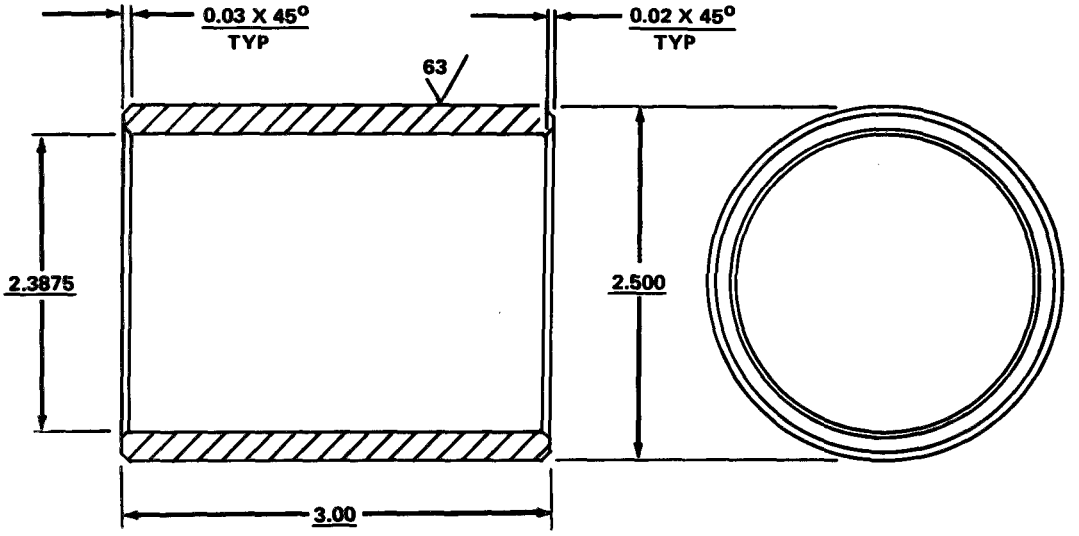
Fabrication Instructions:

Fabricate sleeve bushing out of Aluminum Stock as follows:

1. Machine in accordance with sketch shown below.
2. Surface treat with Anodize MIL-A-8625 Type II

NOTE: All dimensions are in inches.

Sketch or Diagram:



A-1182-E8

ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No.	Material Required
Installation Tool (AVIM)	2-71	Aluminum QQ-A-325/T6

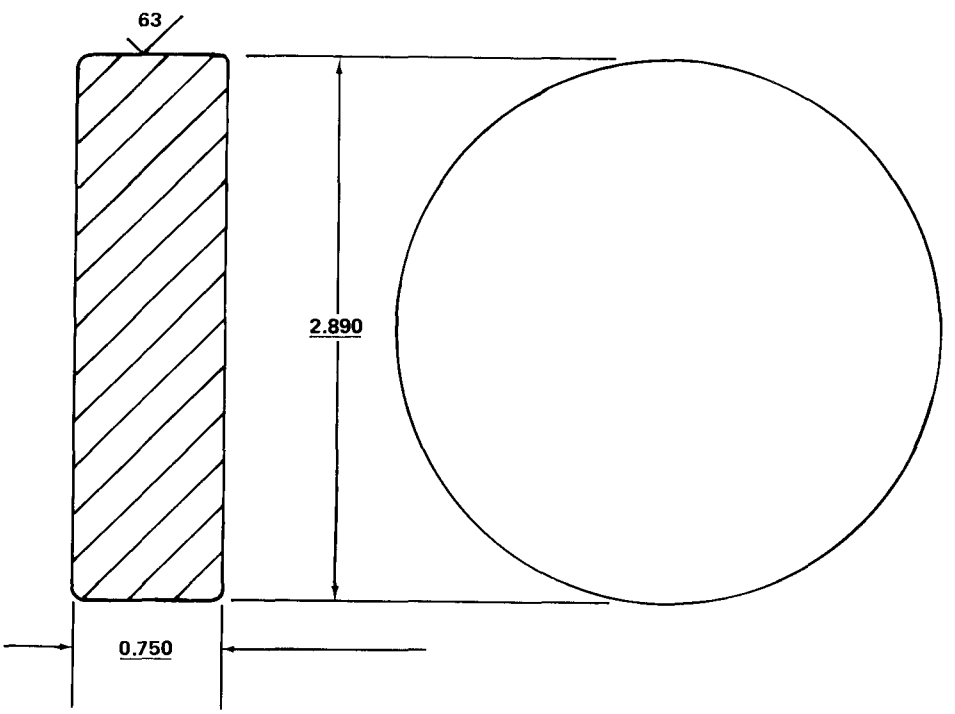
Fabrication Instructions:

Fabricate installation tool out of aluminum stock as follows:

1. Machine in accordance with sketch shown below:
2. Break all sharp edges.
3. Surface treat with anodize per MIL-A-8625 Type I

NOTE: All dimensions are in inches.

Sketch or Diagram:



A-1182-E25

ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No.	Material Required
Oil Seal Installation Tool (AVIM)	2-46	Aluminum QQ-A-325/T6

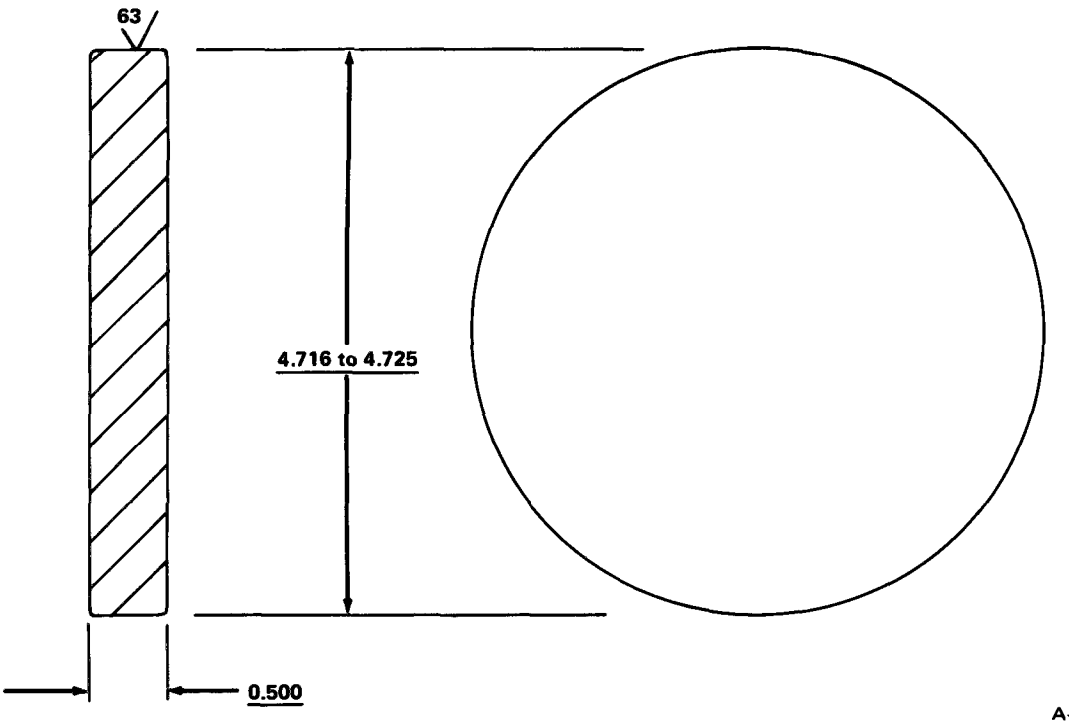
Fabrication Instructions:

Fabricate oil seal installation tool out of aluminum stock as follows:

1. Machine in accordance with sketch shown below:
2. Break all sharp edges.
3. Surface treat with anodize per MIL-A-8625 Type I

NOTE: All dimensions are in inches.

Sketch or Diagram:



ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No.	Material Required
Oil Seal Installation Tool	5-15	Aluminum QQ-A-200/8T6

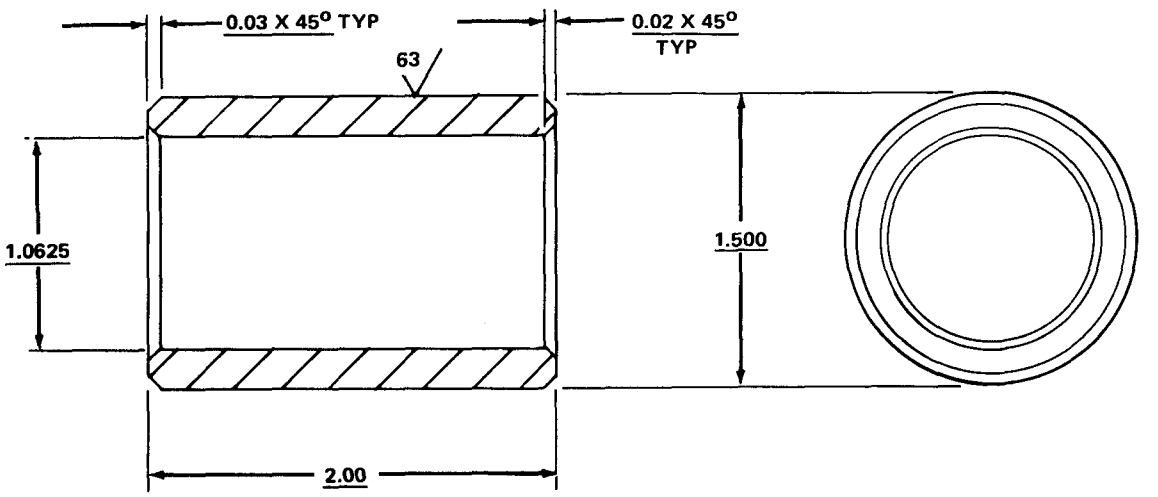
Fabrication Instructions:

Fabricate oil seal installation tool out of aluminum stock as follows:

1. Machine in accordance with sketch shown below.
2. Surface treat with anodize MIL-A-8625 Type II.

NOTE: All dimensions are in inches.

Sketch or Diagram:



A-1182-E10

ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No	Material Required
Oil Seal Installation Tool (E-39)	5-5.6	Aluminum QQ-A-200/8T6

FABRICATION INSTRUCTIONS:

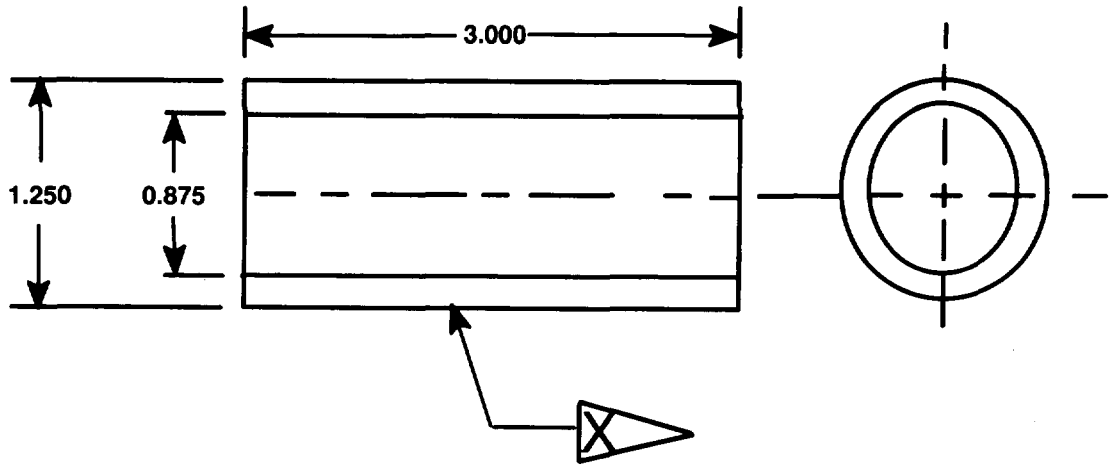
1. Machine in accordance with sketch shown below.

2. Surface treat with anodizk MIL-A-8625 Type II.

NOTE

1. All dimensions are in inches.
2. Break all sharp edges 0.005 - 0.015 radius.
3. X Mark tool number E-39. Vibro-peen method 0.001 to 0.006 deep.

Sketch or Diagram:



ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No	Material Required
Oil Seal Installation Tool (E-39)	5-5.6	Aluminum QQ-A-200/8T6

FABRICATION INSTRUCTIONS:

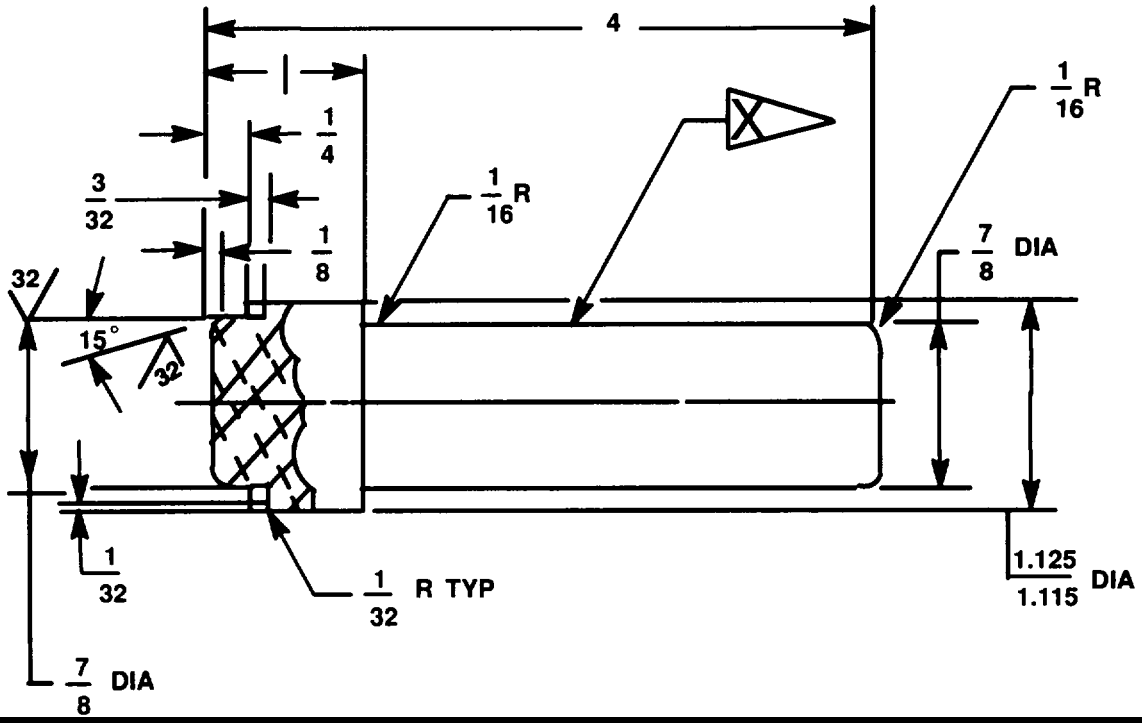
1. Machine in accordance with sketch shown below.

2. Surface treat with anodizk MIL-A-8625 Type II.

NOTE

1. All dimensions are in inches.
2. Break all sharp edges 0.005 - 0.015 radius.
3. X Mark tool number E-38. Vibro-peen method 0.001 to 0.006 deep.

Sketch or Diagram:



ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No.	Material Required
Oil Seal Removal Tool (AVIM)	2-43	Aluminum QQ-A-225/8T6

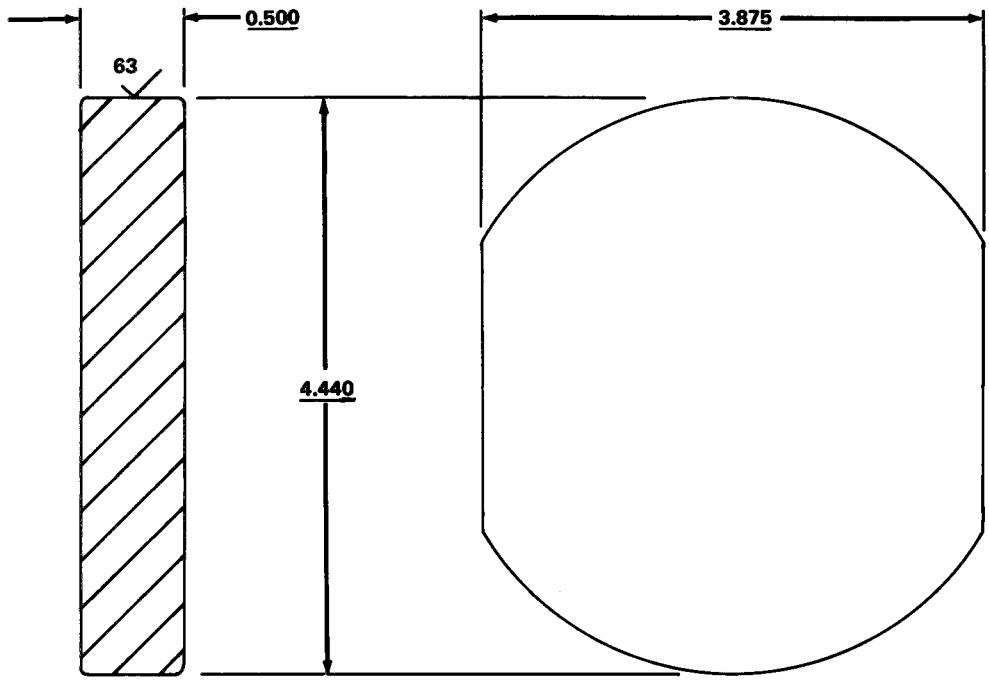
Fabrication Instructions:

Fabricate oil seal removal tool out of aluminum stock as follows:

1. Machine in accordance with sketch shown below.
2. Break all sharp edges.
3. Surface treat with anodize per MIL-A-8625 Type I.

NOTE: All dimensions are in inches.

Sketch or Diagram:



A-1182-E11

ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No.	Material Required
Oil Seal Removal Tool	5-15	Aluminum QQ-A-225/8T6

Fabrication Instructions:

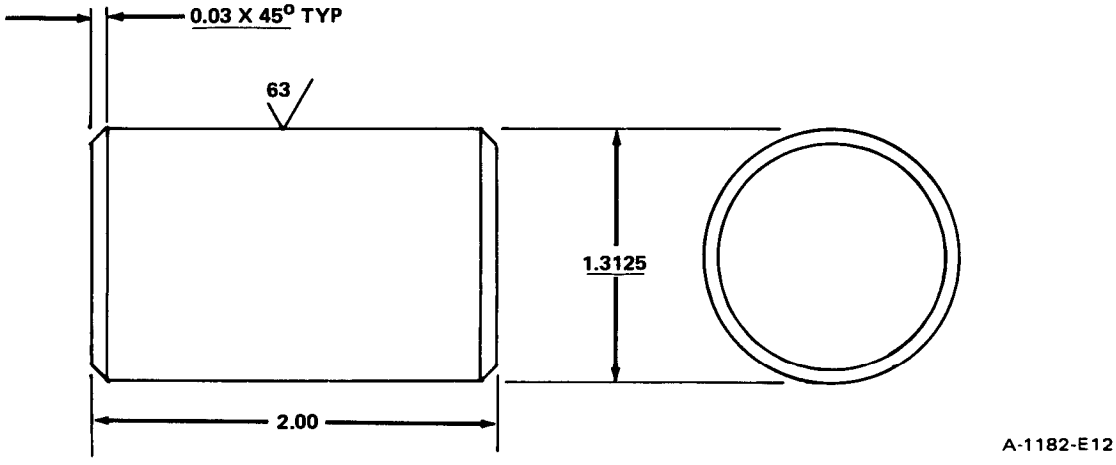
Fabricate oil seal removal tool out of aluminum stock as follows:

1, Machine in accordance with sketch shown below.

2. Surface treat with anodize per MIL-A-8625 Type I.

NOTE: All dimensions are in inches.

Sketch or Diagram:



ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No	Material Required
Oil Seal Installation Tool (E-40)	5-5.2	Aluminum QQ-A-200/8T6

FABRICATION INSTRUCTIONS:

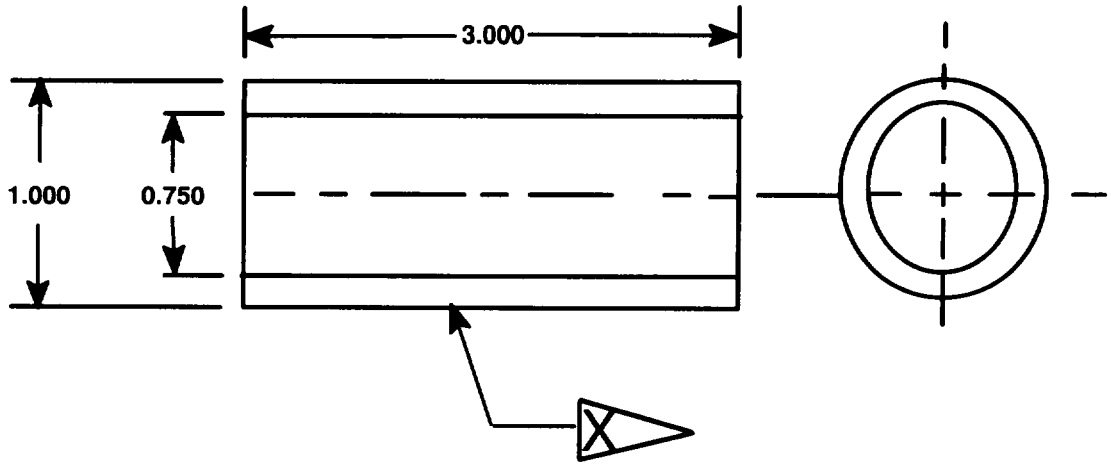
1. Machine in accordance with sketch shown below.

2. Surface treat with anodizk MIL-A-8625 Type II.

NOTE

1. All dimensions are in inches.
2. Break all sharp edges 0.005 - 0.015 radius.
3. X Mark tool number E-39. Vibro-peen method 0.001 to 0.006 deep.

Sketch or Diagram



ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No.	Material Required
Phenolic Drift (AVIM)	2-72,3-9	Plastic Phenolic LP513 NSN 9330-00-912-2572

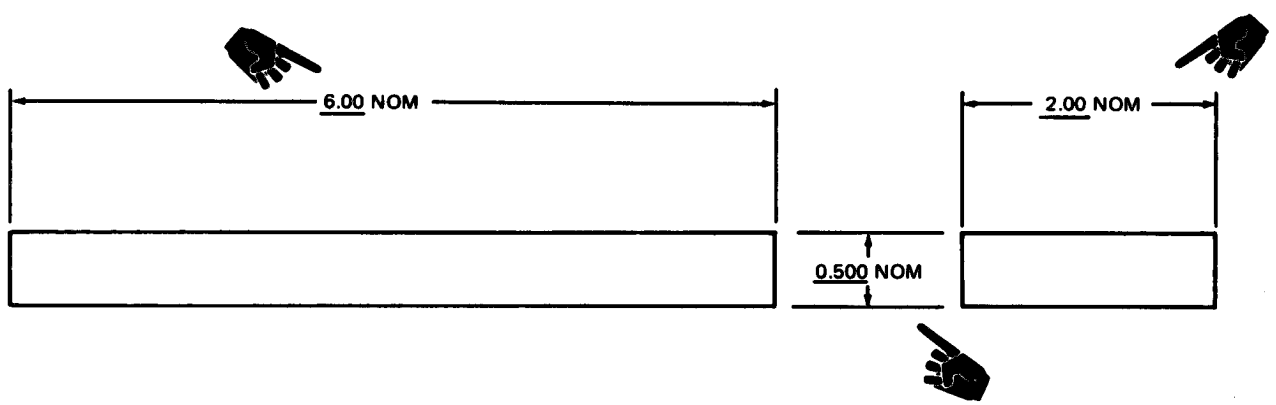
Fabrication Instructions:

Fabricate phenolic drift out of specified material as follows:

1. Cut in accordance with sketch shown below.

NOTE: All dimensions are in inches.

Sketch or Diagram:



A-1182-E13A

ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

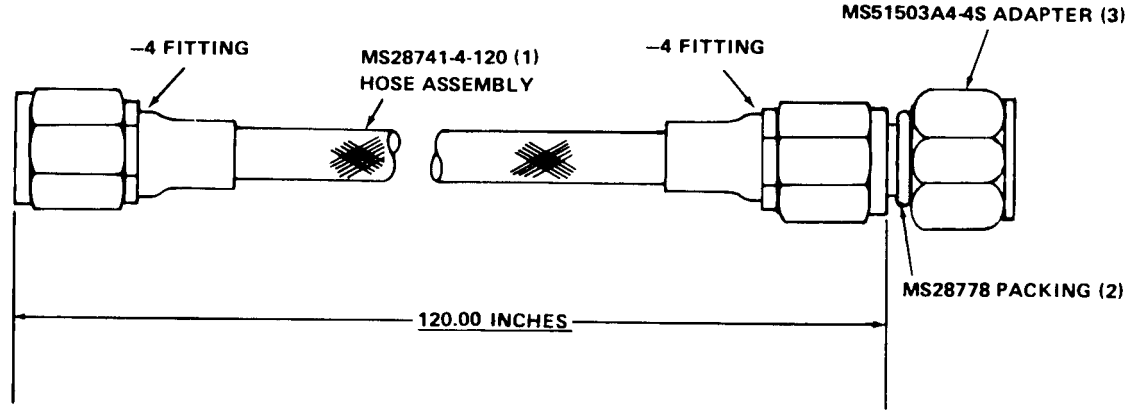
Nomenclature	Reference Task No.	Material Required
Pressure Gage Tube Assembly	1-110	(2) MS28741-H-120 Hose Assembly (2) MS28778 Packing (2) MS51503A4-4S Adapter

Fabrication Instructions:

Assemble two pressure gage tube assemblies from material required and sketch shown below as follows:

1. Coat MS28778 packing (2) with silicone grease MIL-G-4343.
2. Install packing (2) on MS51503A4-4S adapter (3)
3. Connect adapter (3) to MS28741-4-120 hose assembly (1).

Sketch or Diagram:



A-1182-E30

ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No.	Material Required
Phenolic Drift (AVIM)	2-72,3-9	AMS3903 - Cloth Organic Fiber-Epoxy Resin Impregnated

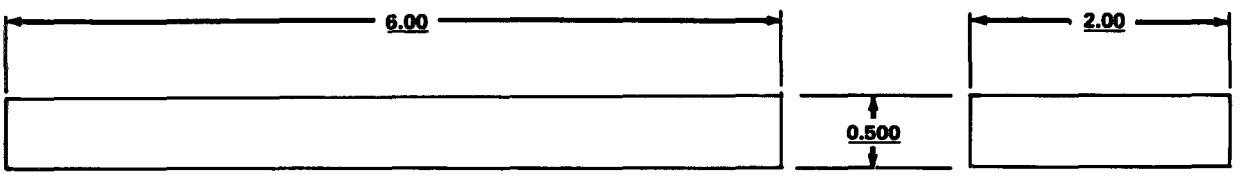
Fabrication Instructions:

Fabricate phenolic drift out of specified material as follows:

1. Machine in accordance with sketch shown below.

NOTE: All dimensions are in inches.

Sketch or Diagram:



A-1182-E13

ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

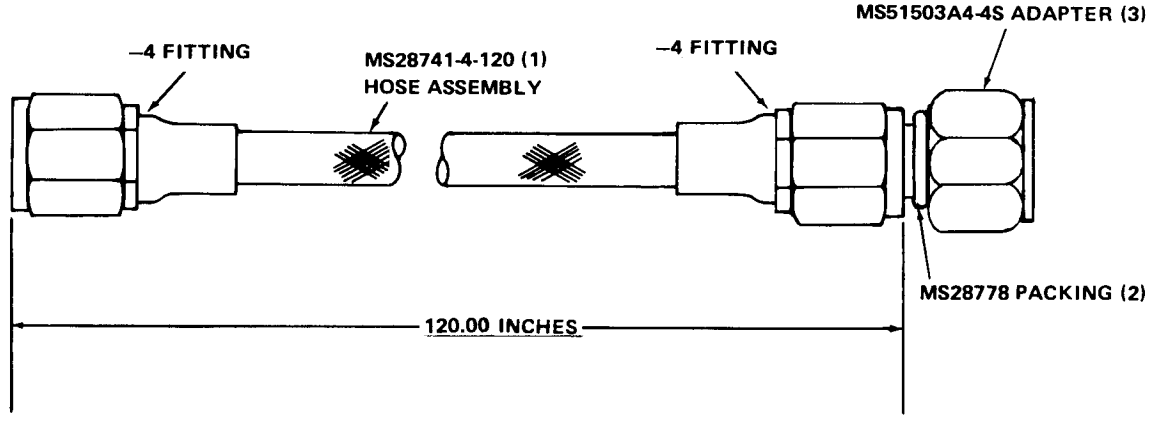
Nomenclature	Reference Task No.	Material Required
Pressure Gage Tube Assembly	1-110	(2) MS28741-H-120 Hose Assembly (2) MS28778 Packing (,2) MS51503A4-4S Adapter

Fabrication Instructions:

Assemble two pressure gage tube assemblies from material required and sketch shown below as follows:

1. Coat MS28778 packing (2) with silicone grease MIL-G-4343.
2. Install packing (2) on MS51503A4-4S adapter (3).
3. Connect adapter (3) to MS28741-4-120 hose assembly (1).

Sketch or Diagram:



A-1182-E30

ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No.	Material Required
Removal Tool (AVIM)	2-68	Aluminum QQ-A-325/T6

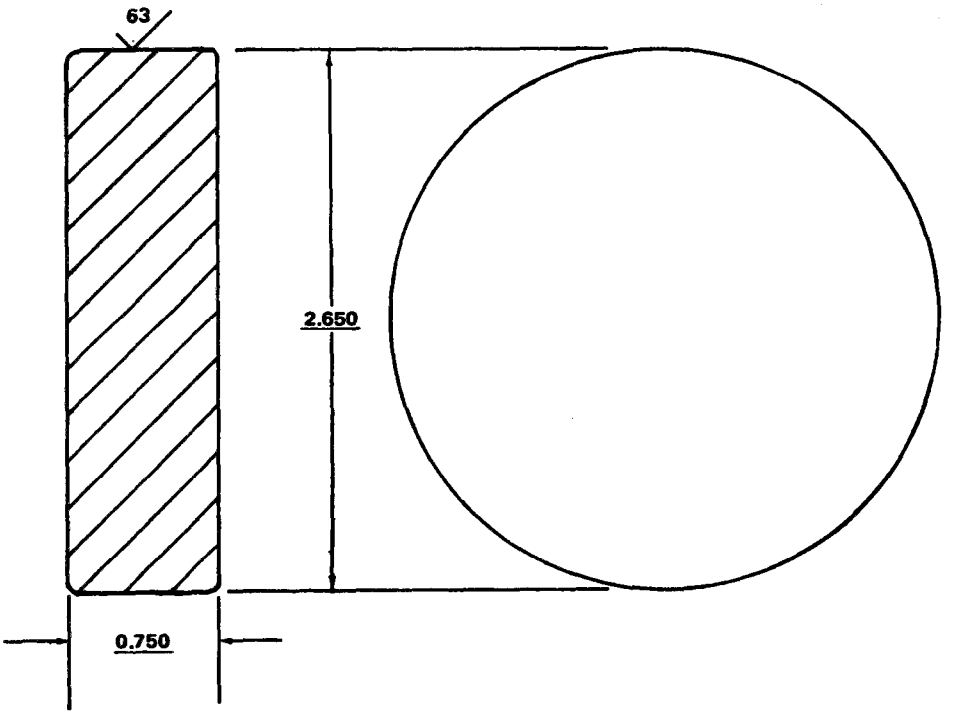
Fabrication Instructions:

Fabricate seal/bearing removal tool out of aluminum stock as follows:

1. Machine in accordance with sketch shown below.
2. Break all sharp edges.
3. Surface treat with anodize per MIL-A-8625 Type I

NOTE: All dimensions are in inches.

Sketch or Diagram:



E-1182-E26

ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No.	Material Required
Sleeve	2-51	Aluminum QQ-A-200/8T6

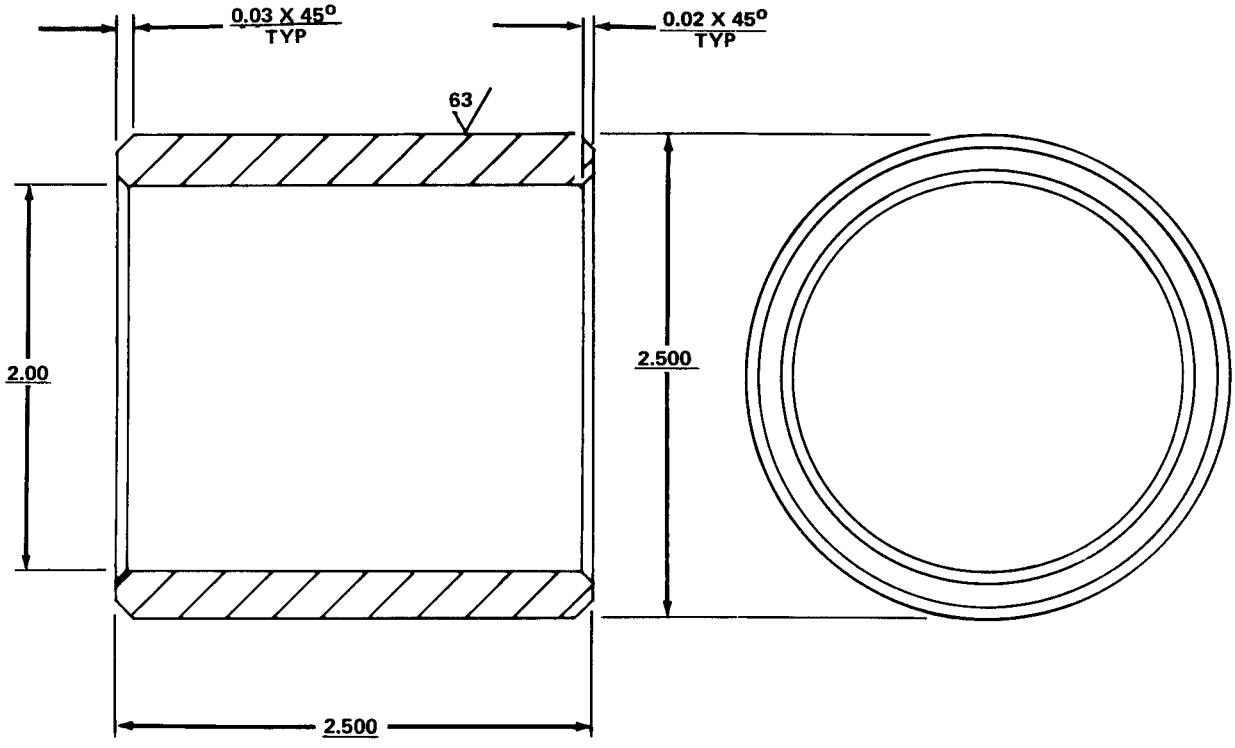
Fabrication Instructions:

Fabricate sleeve bushing out of aluminum stock as follows:

1. Machine in accordance with sketch shown below.
2. Surface treat with anodize MIL-A-8625 Type II

NOTE: All dimensions are in inches.

Sketch or Diagram:



A-1182-E14

ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No.	Material Required
Sleeve	5-22	Aluminum QQ-A-200/8T6

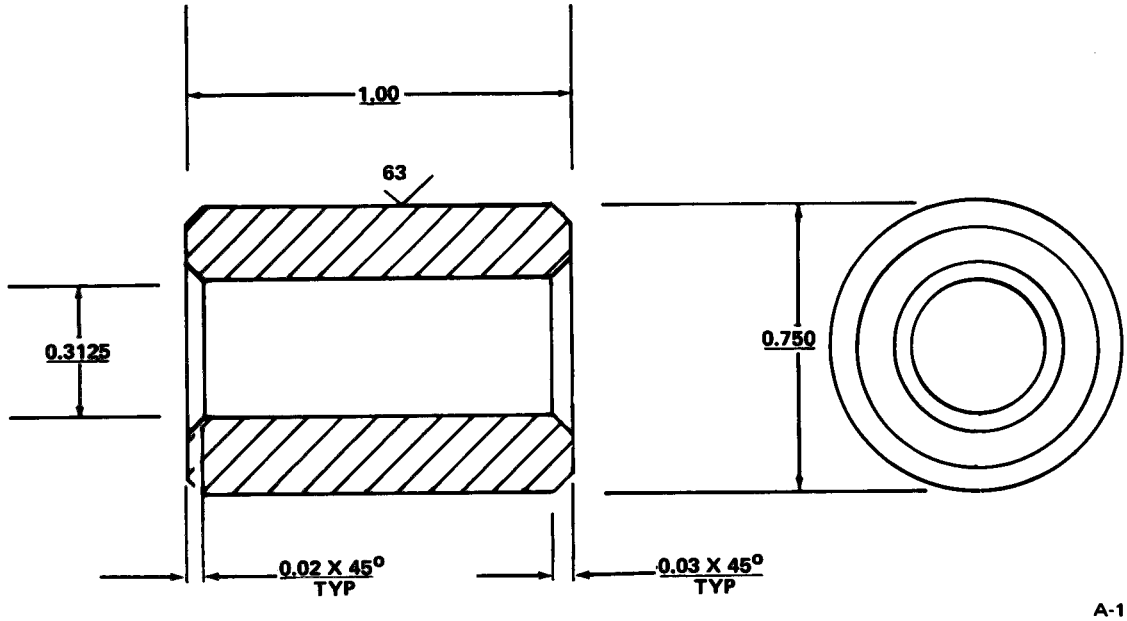
Fabrication Instructions:

Fabricate sleeve bushing out of aluminum stock as follows:

1. Machine in accordance with sketch shown below:
2. Surface treat with anodize per MIL-A-8625 Type II.

NOTE: All dimensions are in inches.

Sketch or Diagram:



A-1182-E15

ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No.	Material Required
Sleeve Bushing (AVIM)	2-43	Aluminum QQ-A-200/8T6

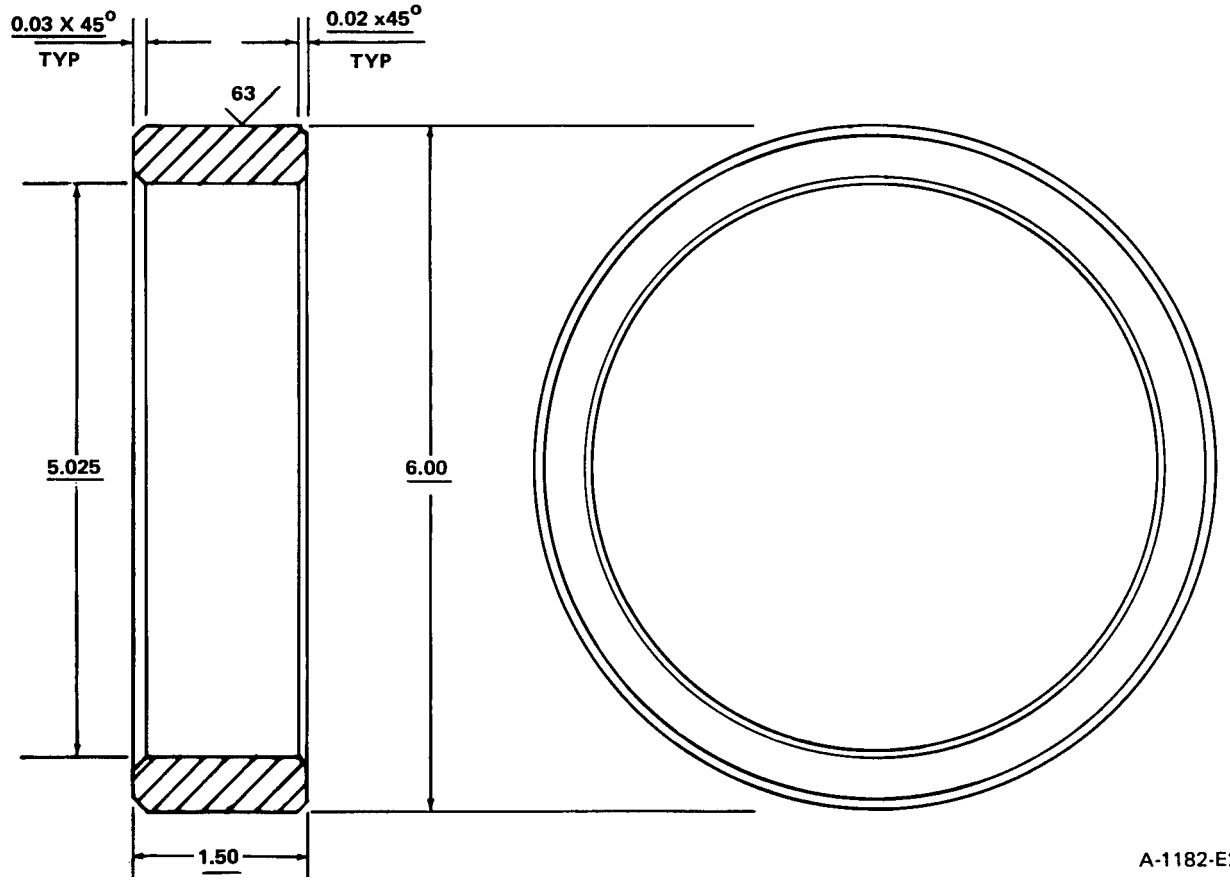
Fabrication Instructions:

Fabricate sleeve bushing out of aluminum stock as follows:

1. Machine in accordance with sketch shown below.
2. Surface treat with anodize MIL-A-8625 Type II.

NOTE: All dimensions are in inches.

Sketch or Diagram:



ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No.	Material Required
Sleeve Bushing (AVIM)	2-46	Aluminum QQ-A-200/8T6

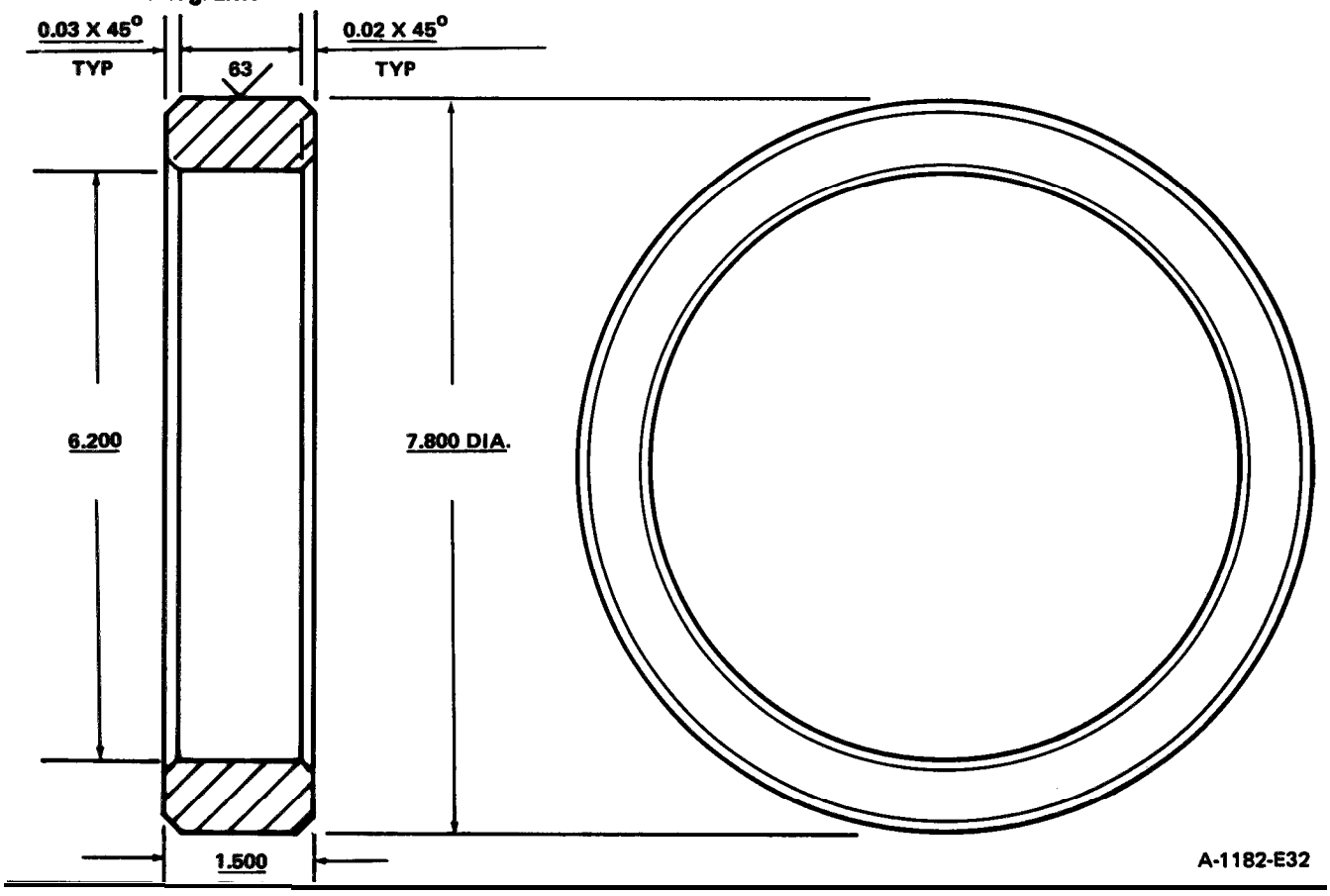
Fabrication Instructions:

Fabricate sleeve bushing out of aluminum stock as follows:

1. Machine in accordance with sketch shown below.
2. Surface treat with anodize MIL-A-825 Type II.

NOTE: All dimensions are in inches.

Sketch or Diagram:



ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No.	Material Required
Sleeve Bushing (AVIM)	2-68,2-71	Aluminum QQ-A-200/8T6

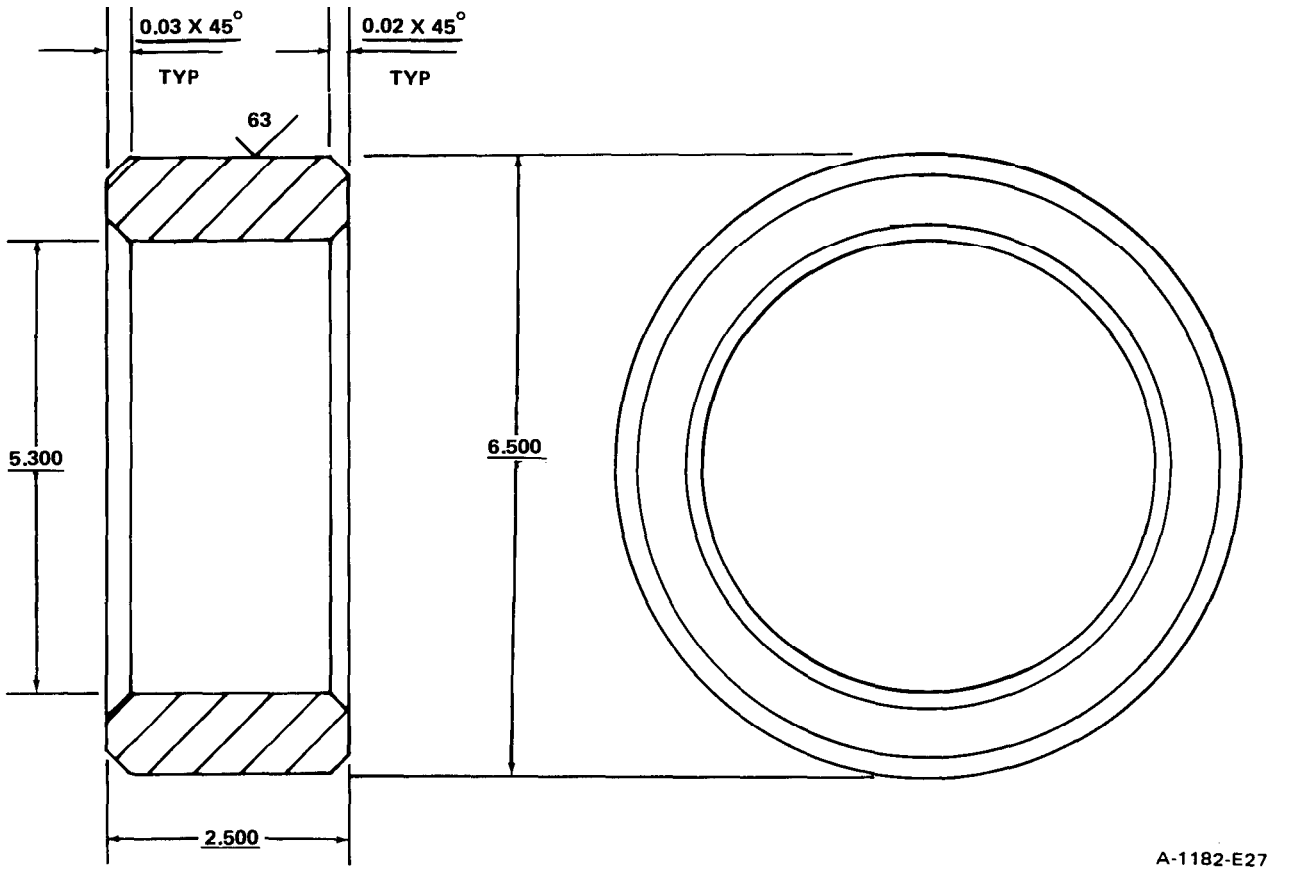
Fabrication Instructions:

Fabricate sleeve bushing out of aluminum stock as follows:

1. Machine in accordance with sketch shown below.
2. Surface treat with anodize MIL-A-8625 Type II.

NOTE: All dimensions are in inches

Sketch or Diagram:



ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No.	Material Required
Sleeve Bushing	5-15	Aluminum QQ-A-200/8T6

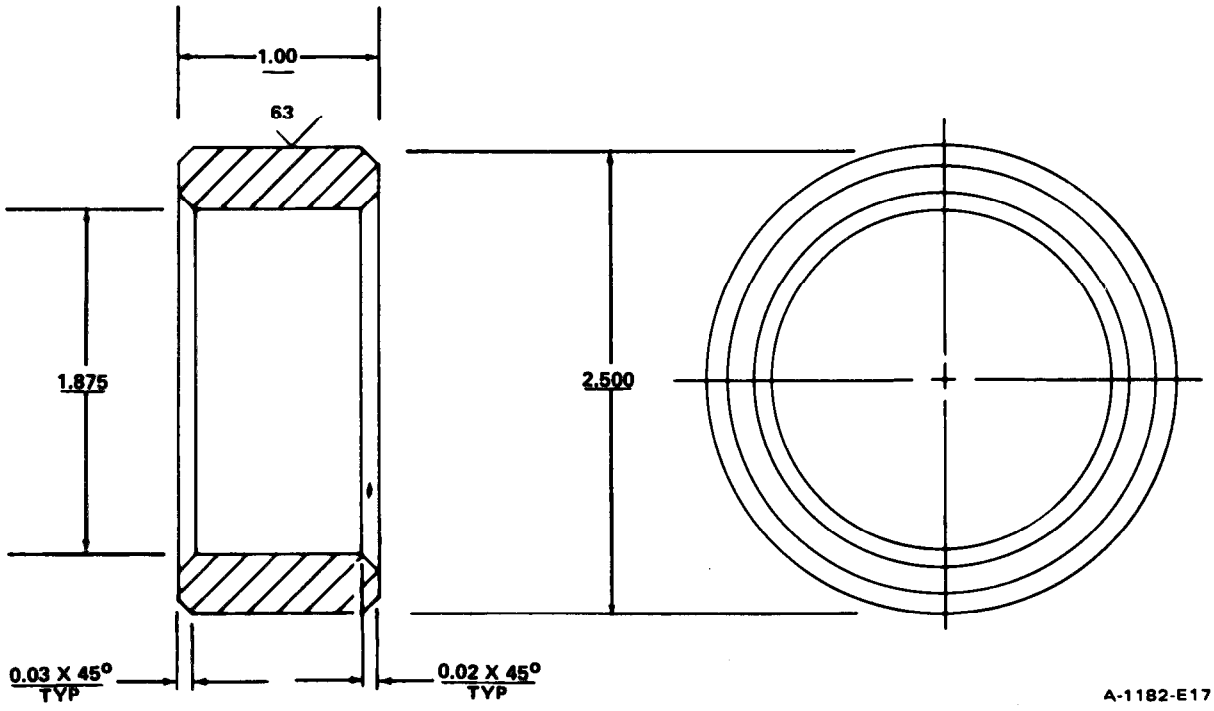
Fabrication Instructions:

Fabricate sleeve bushing out of aluminum stock as follows:

1. Machine in accordance with sketch shown below.
2. Surface treat with anodize per MIL-A-8625 Type II.

NOTE: All dimensions are in inches.

Sketch or Diagram:



ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No.	Material Required
Stirring Rod	1-119	Hardwood Stock

Fabrication Instructions:

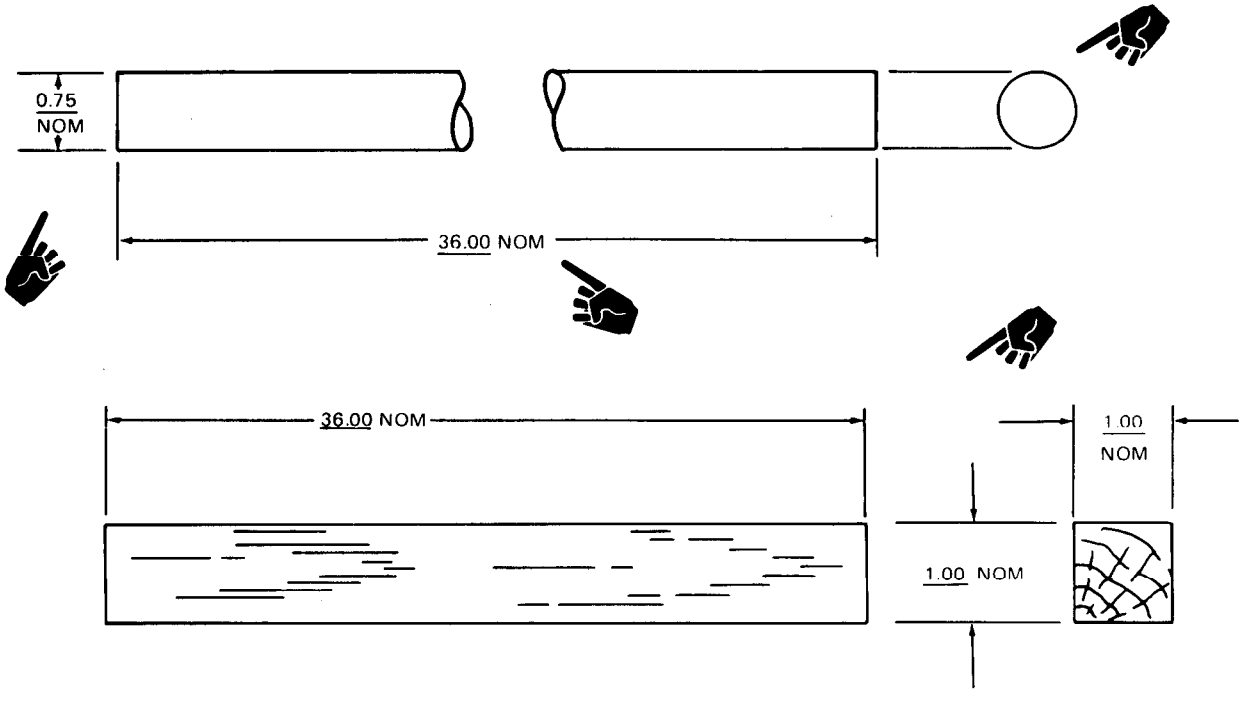
Fabricate stirring rod from hardwood stock as follows:

1. Cut wood in accordance with sketch shown below.
2. Remove all rough edges with fine grain sandpaper.

NOTE: All dimensions are in inches.

NOTE: Either of the following stirring rods maybe used.

Sketch or Diagram:



A 1182 E31A

ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No.	Material Required
Swirler Installation Tool (AVIM)	3-18	Hardwood Stock

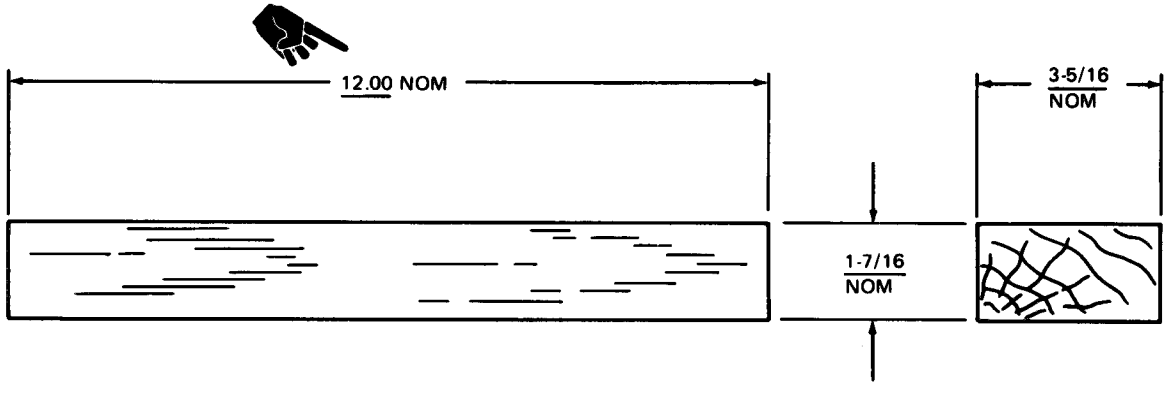
Fabrication Instructions:

Fabricate swirler installation tool out of hardwood stock as follows:

1. Saw wood in accordance with sketch shown below.
2. Remove all rough edges with fine grain sandpaper.

NOTE: All dimensions are in inches.

Sketch or Diagram:



A-1182-E18A

ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No.	Material Required
Thickness Gage (AVIM)	1-93,4-57,4-61	AMS5519 (CRES301) Steel

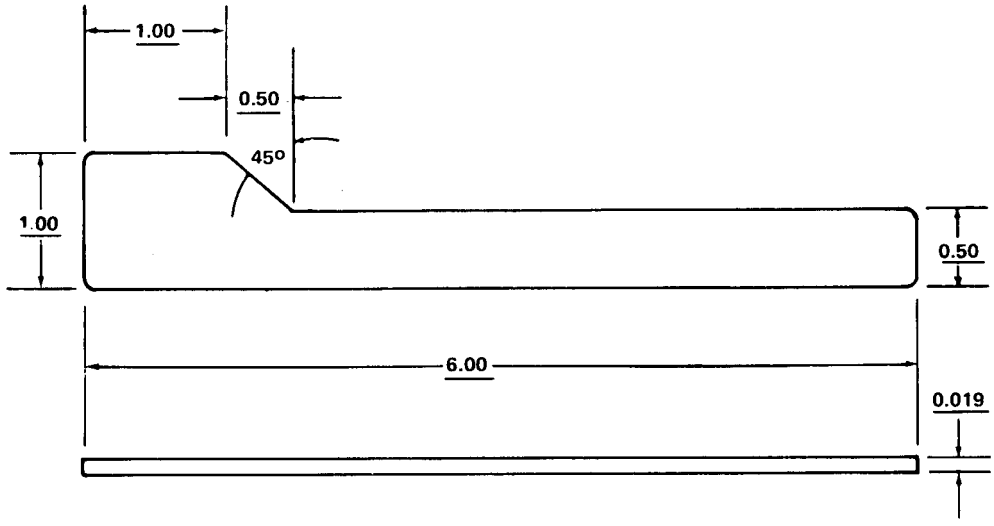
Fabrication Instructions:

Fabricate feeler gage out of steel as follows:

1. Fabricate in accordance with sketch shown below.
2. Break all sharp edges.

NOTE: All dimensions are in inches.

Sketch or Diagram:



A-1182-E19

ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No.	Material Required
Third Turbine Rotor Support Block (AVIM)	4-37	Hardwood Stock

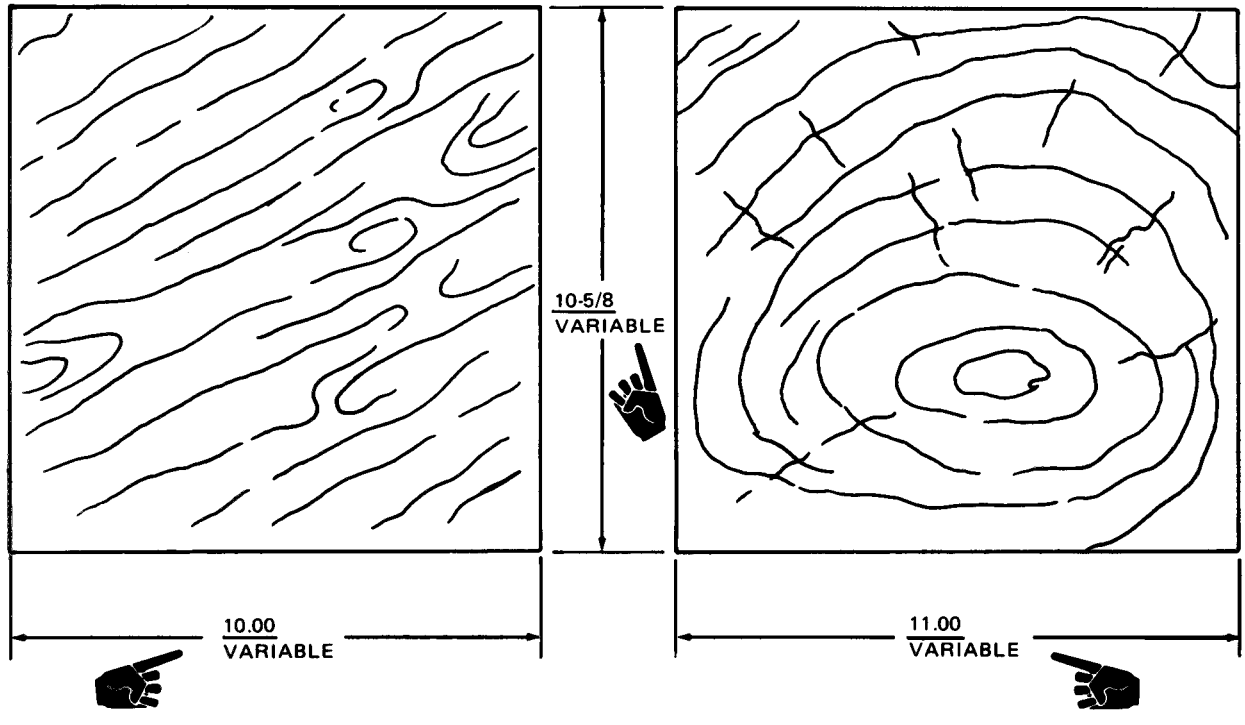
Fabrication Instructions:

Fabricate third turbine rotor support block out of hardwood stock as follows:

1. Saw wood in accordance with sketch shown below.
2. Remove all rough edges with fine grain sandpaper.

NOTE: Size of required block will vary with distance from floor to turbine shaft. All dimensions are in inches. Dimensions given below are examples only.

Sketch or Diagram:



A-1182-E37A

ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No.	Material Required
Wooden Block (AVIM)	3-15	Hardwood Stock

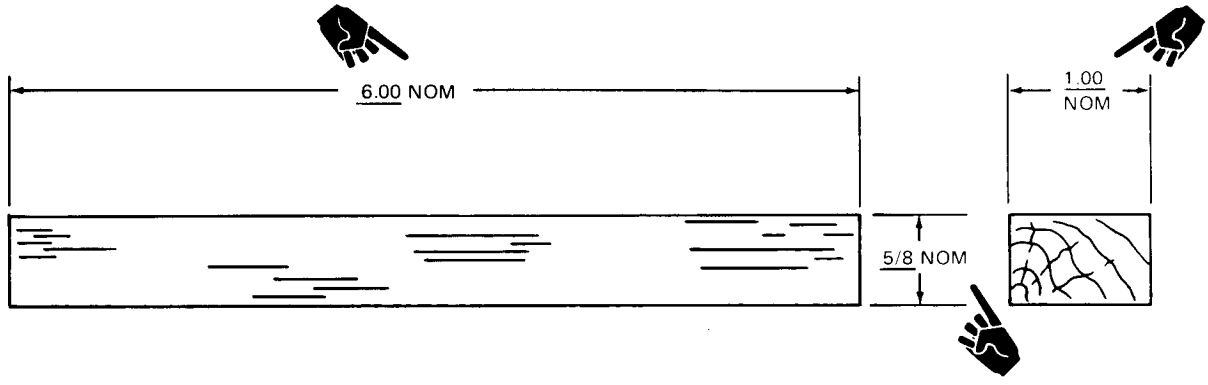
Fabrication Instructions:

Fabricate wooden block out of hardwood stock as follows:

1. Saw wood in accordance with sketch shown below.
2. Remove all rough edges with fine grain sandpaper.

NOTE: All dimensions are in inches.

Sketch or Diagram:



ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No.	Material Required
Wrench	5-18,5-22	Crowfoot Wrench NSN 5120-00-541-4071

Fabrication Instructions:

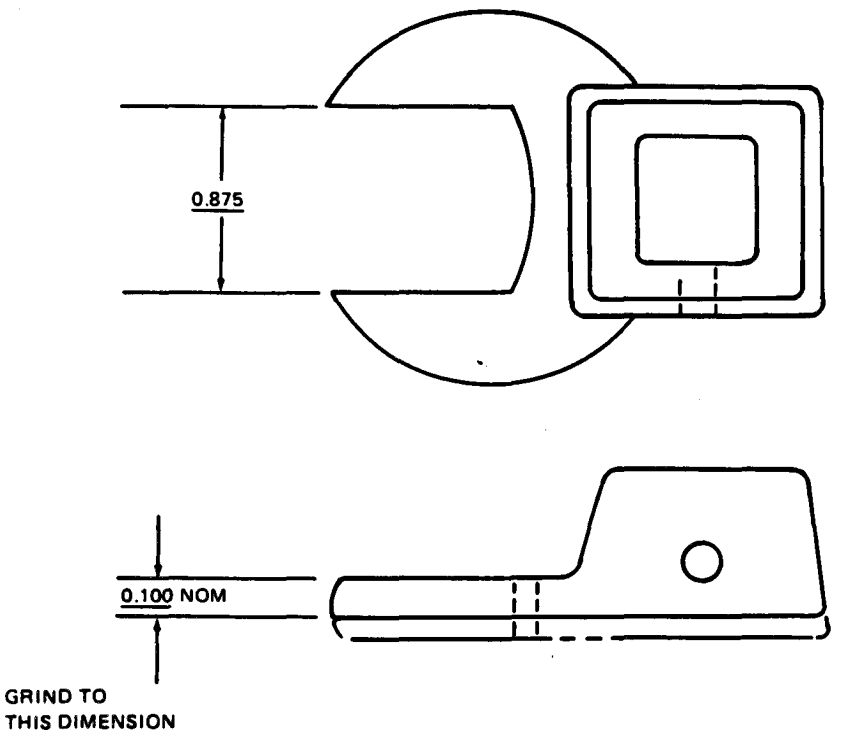
Fabricate crowfoot wrench out of specified material as follows:

1. Using bench grinder, grind sufficient material from bottom of crowfoot until approximately 0.100 inch of material remains.

2. Sand or file rough edges

NOTES: All dimensions are in inches.

Sketch or Diagram:



ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No	Material Required
Oil Seal Installation Tool (E-39)	5-5.6	Aluminum QQ-A-200/8T6

FABRICATION INSTRUCTIONS:

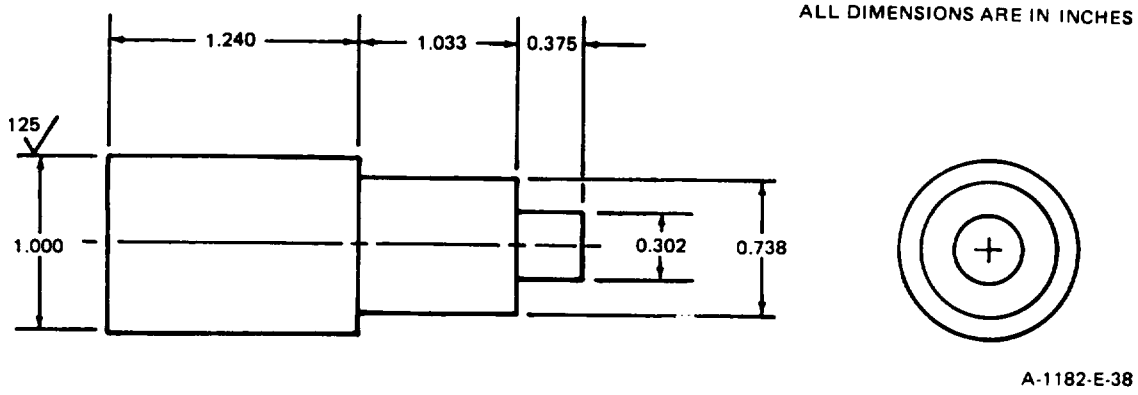
Fabricate top seal installation tool out of aluminum stock as follows:

1. Machine in accordance with sketch shown below.
2. Surface treat with anodize MIL-A-8625 Type II.

NOTES:

1. All dimensions are in inches.
   Tolerance 0.005

Sketch or Diagram:



ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomemclature	Reference Task No.	Material Required
Bottom Seal Installation Tool	2-62	Aluminum QQ-A-200/8T6

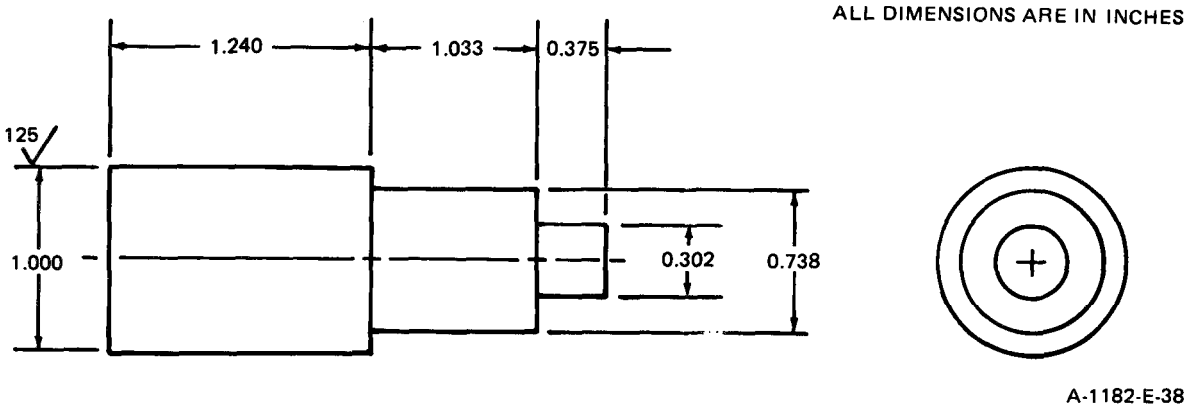
Fabrication Instructions:

Fabricate bottom seal installation tool out of aluminum stock as follows:

1. Machine in accordance with sketch shown below.
2. Surface treat with anodize MIL-A-8625 Type II.

NOTES: All dimensions are in inches.
Tolerance ±0.005

Sketch or Diagram



APPENDIX F

ABBREVIATIONS

AVIM	Aviation Intermediate Maintenance
AVUM	Aviation Unit Maintenance
BITE	Built-In Test Equipment
°C	Degrees Celsius
CC	Cubic Centimeters
DMWR	Depot Maintenance Work Requirement
DX	Direct Exchange
EIR	Equipment Improvement Recommendations
°F	Degrees Fahrenheit
FOD	Foreign Object Damage
FSCM	Federal Supply Code for Manufacturers
FWD	Forward
G I.	Ground Idle
GSE	Ground Suppot Equipment
Hg	Mercury
Hz	Hertz
L/H	Left Hand
MAC	Maintenance Allocation Chart
Max	Maximum
METS	Modular Engine Test Systems
Min	Minimum
MOS	Military Occupation Specialty
MTOE	Modified Table of Organization and Equipment
N1	Compressor Rotor RPM
N2	PowerTurbine RPM
NATO	North Atlantic Treaty Organization
No	Number
NOM	Nominal
NSN	National Stock Numbr
PHR	Pounds per Hour
P/N	Part Number
PSI	Pounds per Square Inch
PSIG	Pounds per Square Inch Gage
PT	PowerTurbine
PTIT	Power Turbine Inlet Temperature
QA	Quality Assurance
QC	QualityControl
R/H	Right Hand
RPM	Revolutions per Minute
RPSTL	Repair Parts and Special Tool List
RTV	Room Temperature Vulcanizing
SHP	Shaft Horsepower
SMR	Source, Maintenance and Recoverability
TBO	Time Between Overhaul
TM	Tehnical Manual
TMDE	Test Measurement and Diagnostic Equipment
UUT	Unit UnderTest
Vac	Volts Alternating Current
Vdc	Volts Direct Current
W f	Fuel Flow

GLOSSARY

	Definition
A	
Abrasion	A roughened surface.
B	
Bend	Distortion in a part.
Binding	To confine and restrict the liberty of a free moving part, material, or component. May cause serious damage if a chafing force is being imposed.
Break	Separation of a part.
Buckling	A large-scale deformation of the original contour of a part, usually due to pressure or impact from a foreign object, structural stresses, excessive localized heating, high pressure differentials, or to any-combination of these.
Burn	A rapid destructive oxidizing action usually caused by higher temperatures than the material can withstand structurally. Change in color and appearance often indicates this condition.
Burr	A rough or sharp edge on a hole or corrner, usually caused by machining, sometimes by wearing.
c	
Carborundum	The trade name for a manufactured aluminum oxide abrasive similar to natural emery. It is used for grinding wheels and for abrasive papers.
Chafing	A worn or rubbed area caused by friction: refers to the wear produced by parts such as fuel, air and oil lines rubbing against other parts.
Chipping	Breaking away of metallic particles.
Concave	A hollow surface curved like the inside of a bowl.
Contamination (Foreign Material)	Any foreign substance such as metal chips, lint, rust, and water that would be harmful to the functioning of a part or system.

GLOSSARY (Continued)

	Definition
C (Continued)	
Converging	Tending to move toward one point or another.
Convex	A surface shaped like the outside of a sphere or a ball.
Corrosion	A mass of small pits which cumulatively create a large cavity (usually shallow) in the surface of the parent metal.
Corrosion Pitting	Irregular surface depressions having ragged edges due to metal removal caused by corrosive substance adhering to exposed surfaces.
Corrugated	The forming and shaping of sheet metal into wrinkles or folds or into alternating ridges and grooves.
Crack	Parting of parent metal.
D	
Dent	A completely smooth surface depression caused by pressure or impact from a smooth ball-like foreign object. The parent material is displaced, but usually none is separated.
Desiccant	A drying agent; usually placed in containers along with parts being stored, to absorb moisture and prevent corrosion.
Diagnostic Equipment	Test equipment used to determine what the defective part is.
Distortion	Twisting or bending out of a normal, natural or original shape, usually caused from being exposed to excessive pressure or temperature either when restrained or unrestrained.
F	
Fatigue	The progressive weakening of a material under repeated cycles of stress.
Foreign Material	See Contamination.
Foreign Object	Any object such as a tool, piece of equipment, engine part (nut, bolt, Iockwire) that could in any way damage the engine.
Fraying	Wearing or rubbing of areas, generally used in reference to damage on wire-braid covering (of teflon hose) or on thermocouple harness.

GLOSSARY (Continued)

	Definition
G	
Gouge	A wide rough scratch or group of scratches, usually, with one or more sharply impressed corners, and frequently accompanied by deformation or removal of parent metal.
H	
Heat Discoloration	Characterized by a discoloring film. Color varies from light straw, tan, or light brown changing to red-purple, purple, or blue. Caused by high temperature operation.
I	
Insulation	A material or device used to prevent passage of heat electricity, or sound from one medium to another.
K	
Kinks	Short, tight twists or curls caused by a doubling or winding of a hose or line upon itself. Likely to cause difficulties in the operation.
L	
Loose	Abnormal movement of a part.
N	
Nick	A surface impression with sharp corners or bottom, usually caused by pressure or impact from a sharp-edged foreign body. The parent material is displaced but usually none is separated.
O	
Overhaul	To restore an item to a completely serviceable condition as prescribed by serviceability standards developed and published by the Government.
Overshooting	When the expected N1 or N2 speed is exceeded momentarily and then drops below the expected level.
Overspend	When the expected N1 or N2 speed is exceeded.
Oxidation	A chemical action in which a metallic element is united with oxygen causing deterioration of the metal or material.

GLOSSARY (Continued)

	Definition
P	
Parent Metal	The basic metal of a part, sometimes referred to as base metal; the term is used particularly in connection with welding, where the parent metal is that being welded rather than that used in welding rod.
Peening	Surface deformation.
Phenolic	A thermosetting resin or plastic made especially for molding and insulating, coatings and adhesives.
Pitting	Very shallow depressions in a surface, usually caused by chemical reaction (rusting chemical corrosion).
Popping	Sharp abrupt noise normally caused by erratic bleed band operation.
Protrusion	Projection sticking out from the rest of the surrounding material or surface.
Puncture	A hole that is pierced in a material.
R	
Repair	To restore a defective part, component, subassembly or assembly to a serviceable condition.
Rollover	A curl usually on the leading edge of a blade, resulting from deformation by the peening action of foreign objects.
Rub	When one component contacts another and is moved in relationship to it causing material to be removed from it.
Rust	Oxidation of iron. A red, crusty product which forms on iron or steel when it unites with oxygen.
S	
Scoring	Multiple scratches, usually parallel and resulting from the same cause.
Scratch	A long, narrow sharp-cornered impression caused by the movement of a sharp object across the surface of parent material.

GLOSSARY (Continued)

	Definition
S (Continued)	
Serviceable	Equipment or parts that are in a condition which allows them to be returned to operational statuson an aircraft.
Subassembly	A self-contained unit of an assembly that can be removed, replaced and repaired separately; turbine nozzles and combustion liners are typical subassemblies.
T	
Tear	A forcible, somewhat crude pulling or wrenching awayof material so that ragged or irregular edges result.
Testing	Testing of equipment to determine that the unit functions properly within specified limits.
Tolerance	Therange of variation allowed in maintaining a specified dimension in making part.
Torque	To tighten a nut, bolt, or fitting, using a torque wrench, to a specified torque value expressed as inch-pounds or as foot-pounds.
U	
Undershooting	When theexpected Nl or N2 speed isnotreached and then creeps up to the expected level.
Underspeed	When the expected N1 or N2 speed is not reached.
V	
Void	A continuous lack of braze material through a braze joint cross-section caused by improper repair.
W	
Wear	Relatively slow removal of parent material from any cause, frequently not visible to the naked eye.

INDEX

Subject	Para/ Task	Page
A		
Abbreviations	F-1	
Acceleration Checks	1-107	1-488
Accessory Gear Assembly (AVIM)		
Clean	5-9	5-53
Inspect	5-10	5-54
Install	5-11	5-56
Remove	5-8	5-45
Accessory Gear Section	1-17	1-23
Accessory Gearbox Assembly		
Assemble	5-6	5-25
Clean	5-3	5-19
Disassemble	5-2	5-13
Inspect	5-4	5-22
Install	5-7	5-32
Remove	5-1	5-3
Repair	5-5	5-24
Accessory Gearbox Chip Detector, Service - See Service Accessory Gearbox Chip Detector		
Activate Engine After Storage	1-27	1-88
Actuator, Interstage Air-Bleed (With Water Wash Kit P/N 2-200-071-4 Installed) - (See Interstage Air-Bleed Actuator (With Water Wash Kit P/N 2-200-07154 Installed))		
Actuator, Interstage Air-Bleed (Without Water Wash Kit P/N 2-200-071-54 Installed) - (See Interstage Air-Bleed Actuator (Without Water Wash Kit P/N 2-200-071-54 Installed))		
Adjust		
Interstage Air-Bleed Actuator (With Water Wash Kit P/N 2-200-071-54 Installed)	2-8.1	2-40.1
Interstage Air-Bleed Actuator (Without Water Wash Kit PIN 2-200-071-4 Installed)	2-8	2-28
Adjust Fuel Control	1-108	1-526
Adjust Fuel Control (AVIM)	1-109	1-538
Adjust Maximum Power	1-107	1-481
Adjust Maximum Trim	1-107	1-478
Adjust Oil Pump	1-110	1-542
Air-Bleed Actuator, Interstage (With Water Wash Kit P/N 2-200-071-54 Installed) - (See Interstage Air-Bleed Actuator (With Water Wash Kit P/N 2-200-071-54 Installed))		
Air-Bleed Actuator, Interstage (Without Water Wash Kit PIN 2-200-071-54 Installed) - (See Interstage Air-Bleed Actuator (Without Water Wash Kit P/N 2-200-071-54 Installed))		
Air Diffuser Assembly		
Clean (AVIM)	2-37	2-361
Inspect (AVIM)	2-38	2-363
Install (AVIM)	2-41	2-383
Remove (AVIM)	2-36	2-351
Repair (AVIM)	2-39	2-371
Repair	2-40	2-375
Air Gallery Cover, Anti-Icing - See Anti-Icing Air Gallery Cover		
Air Inlet Housing Assembly		
Clean	2-64	2-497
Inspect	2-65	2-498
Repair	2-66	2-499
Air Lines - See Hose Assembly		
Alloys, Touch Up Magnesium and Magnesium - See Touch Up Magnesium and Magnesium Alloys		
Anti-icing Air Gallery Cover		
Clean	2-15	2-55
Inspect	2-16	2-58
Install	2-18	2-62
Remove	2-14	2-51
Repair	2-17	2-60

INDEX (Continued)

Subject	Para/ Task	Page
Army Material to Prevent Enemy Use, Destruction of - See Destruction of Army Material to Prevent Enemy Use		
Assemble		
Accessory Gearbox Assembly	5-6	5-25
Chip Detector	.8-93	8-295
Combustion Section	3-12	3-169
Combustion Section (AVIM)	3-10	3-157
Combustion Section and Power Turbine (AVIM)	3-7	3-77
Dual Chip Detector	8-33	8-85
Fuel Control	6-5	6-19
In-Line Fuel Filter Assembly	6-40	6-150
Interstage Air-Bleed Actuator	2-6	2-19
Main Fuel Filter and Bracket	6-34	6-133
No.2 Bearing Package (AVIM)	2-46	2-417
No.3 Bearing Package (AVIM)	2-71	2-513
Oil Cooler Assembly	8-10	8-33
Oil Filter Assembly and Oil Filter Strainer	8-21	8-57
Oil Level Float Assembly (AVIM)	8-108	8-344
Oil Level Indicator	8-100	8-315
Output Shaft Support Housing (AVIM)	2-62	2-484
Overspeed Drive and Outlet Cover Assembly	5-22	5-110
Third Turbine Nozzle and Support (AVIM)	4-31	4-141
Assurance/Quality Control *(OA/QA),* Quality - See Quality Assurance/ Quality Control *(QA/QC)*		

B

Backlash Check - Overspeed Drive and Outlet Cover Assembly	5-23.1	5-116
Band Closure Check, Bleed - See Bleed Band Closure Check		
Band, Compressor Bleed - See Compressor Bleed Band		
Bar Assemblies, Left- and Right-Hand Bus - See Left- and Right-Hand Bus Bar Assemblies		
Bearing (AVIM), Check for Seal Leakage (No. 4 and 5) - See Check for Seal Leakage (No.4 and 5 Bearing (AVIM)		
Bearing Filter, No.4 and 5 See No.4 and 5 Bearing Filter		
Bearing Oil Filter, Service No.4 and 5 - See Service NO.4 and 5 Bearing Oil Filter		
Bearing Oil Tubes (AVIM), No.4 and 5- See No.4 and 5 Bearing Oil Tubes (AVIM)		
Bearing Package (AVIM), Check 'for Seal Leakage (No.2) -See Check for Seal Leakage (No.2 Bearing Package) (AVIM)		
Bearing Package (AVIM), No.2 See No.2 Bearing Package (AVIM)		
Bearing Package (AVIM), No.3 See No.3 Bearing Package (AVIM)		
Bearing Package (AVIM) No.4 and 5 See No.4 and 5 Bearing Package (AVIM)		
Bearing Package Seals, (AVIM), No.4 and 5 - See No.4 and 5 Bearing Package Seals (AVIM)		
Bearing Pressure Oil Strainer, No.2 See No; 2 Bearing Pressure Oil Strainer		
Bearing Pressure Oil Strainer, Service No.2 - See Service No.2 Bearing Pressure Oil Strainer		
Blades, Compressor Rotor See Compressor Rotor Blades		
Bleed Band Closure Check	1-107	1-470
Bleed Band, Compressor - See Compressor Bleed Band		
Boost Pump Assembly, Fuel See Fuel Boost Pump Assembly		
Bracket, Main Fuel Filter and See Main Fuel Filter and Bracket		
Bus Bar Assemblies, Left- and Right-Hand - See Left- and Right-Hand Bus Bar Assemblies		

Subject	Para/ Task	Page
C		
Cable Assembly, Ignition Coil and *See* Ignition Coil and Cable Assembly		
Cable Assembly, Main Electrical See Main Electrical Cable Assembly		
Cap and Stem Assembly and Oil Filter Element. Oil Filter - See Oil Filter Cap and Stem Assembly and Oil Filter Element		
Cap and Stem Assembly and Oil Filter Element, Service Oil Filter - See Service Oil Filter Cap and Stem Assembly and Oil Filter Element		
Capabilities, and Features, Equipment, Characteristics - See Equipment Characteristics, Capabilities, and Features		
Care, and Handling, Safety - See Safety, Care, and Handling		
Case (AVIM), First Turbine Rotor See First Turbine Rotor Case (AVIM)		
Case (AVIM), Second Turbine Nozzle, Spacer, and - See Second Turbine Nozzle, Spacer, and Case		
Chafing, Denting, Scratching, Gouging, or Wear, Determine Depth of Damage from - See Determine Depth of Damage from Chafing, Denting, Scratching, Gouging, or Wear		
Chafing Sleeve on Hoses, Install Spiral-See Install Spiral Chafing Sleeve on Hoses		
Chamber Housing (AVIM), Combustion See Combustion Chamber Housing (AVIM)		
Chamber Liner (AVIM), Combustion See Combustion Chamber Liner (AVIM)		
Change from MIL-L-7808 to MIL-L 23699 lubricating Oil	1-76	1-234
Change from MIL-L-23699 to MIL-L 7808 Lubricating Oil	1-77	1-237
Characteristics. Capabilities, and Features, Equipment -See Equipment Characteristics. Capabilities, and Features		
Chart, Maintenance Allocation See Maintenance Allocation Chart		
Check, Bleed Band Closure See Bleed Band Closure Check		
Check Engine Coast down Time	1-81	1-245
Check, Flight Idle See Flight Idle Check		
Check for Seal Leakage (No.2 Bearing Package) (AVIM)	1-87	1-273
Check for Seal leakage (No.4 and 5 Bearing) (A VIM)	1-88	1-283
Check for Static Oil Leakage	1-89	1-300
Check Forty Percent Maximum Continuous Power - See Forty Percent Maximum Continuous Power Check		
Check Ground Idle See Ground Idle Check		
Check, Ground Idle Trim See Ground Idle Trim Check		
Check, Intermediate Power See Intermediate Power Check		
Check, Maximum Continuous Power-See Maximum Continuous Power Check		
Check, Maximum Power See Maximum Power Check		
Check, N2 Governor Operation See N2 Governor Operation Check		
Check, Overspeed Drive and Outlet. Cover Assembly, Backlash	5-23.1	5-116
Check Procedure, Prestart See Prestart Check Procedure		
Check Runs, Inspect Engine after See Inspect Engine after Check Runs		

INDEX (Continued)

Subject	Para/ Task	Page
Check, Seventy–Five Percent Maximum Continuous Power – See Seventy–Five Percent Maximum Continuos Power Check		
Check Valve Assembly		
Clean	8–4.1	8–20.2
Inspect	8–4.1	8–20.2
Install	8–4.2	8–20.3
Remove	8–4.1	8–20.1
Check Valve, Fuel – See Fuel Check Valve		
Check, Vibration Meter – See Vibration Meter Check		
Check, Waveoff – See Waveoff Check		
Checks, Acceleration – See Acceleration Checks		
Checks and Services, Preventive Maintenance – See Preventive Maintenance Checks and Services		
Chip Detector		
Assemble	8–93	8–295
Clean	8–90	8–291
Disassemble	8–89	8–289
Inspect	8–91	8–293
Install	8–94	8–297
Remove	8–88	8–287
Test	8–92	8–294
Chip Detector, Accessory Gearbox, Service – See Service Accessory Gearbox Chip Detector		
Chip Detector Dual – See Dual Chip Detector		
Chip Detector, Dual Service – See Service Dual Chip Detector		
Clean		
Accessory Gear Assembly (AVIM)	5–9	5–53
Accessory Gearbox Assembly	5–3	5–19
Air Diffuser Assembly (AVIM)	2–37	2–361
Air Inlet Housing Assembly	2–64	2–497
Anti–Icing Air Gallery Cover	2–15	2–55
Check Valve Assembly	8–18.2	8–40.3
Chip Detector	8–90	8–291
Clean (cont)		
Combustion Chamber Housing (AVIM)	3–19	3–213
Combustion Chamber Liner (AVIM)	3–16	3–183
Combustion Chamber Vane Assembly (AVIM)	3–13	3–171
Compressor Bleed Band	2–10	2–44
Compressor Housing	2–21	2–144
Compressor Rotor Blades	2–32	2–278
Diffuser Curl	4–74	4–481
Dual Chip Detector	8–30	8–79
Exit Vane Assembly	4–79	4–494
Fireshield Assembly	4–13	4–69
Fireshield Section	4–17	4–84
First Turbine Disc Assembly (AVIM)	4–63	4–406
First Turbine Nozzle (AVIM)	4–68	4–433
Flow Divider and Bracket	6–43	6–162
Fourth Stage Power Turbine Nozzle (AVIM)	4–46	4–271
Fourth Stage Power Turbine Rotor (AVIM)	4–34	4–158
Fuel Boost Pump Assembly	6–10	6–42
Fuel Check Valve	6–47	6–173
Fuel Control	6–3	6–14
Fuel Drain Valve	3–2	3–6
Ignition Coil and Cable Assembly	7–2	7–30
Ignition Exciter	7–12	7–89
Inlet Housing Cover Assembly (AVIM)	2–54	2–458
In–Line Fuel Filter Assembly	6–38	6–146
Interstage Air–Bleed Actuator	2–3	2–14
Left– and Right–Hand Bus Bar Assemblies	4–8	4–42
Left– and Right–Hand Fuel Manifold Assemblies	6–17	6–68
Main Electrical Cable Assembly (Nine Connector)	7–17	7–111
Main Electrical Cable Assembly (Six Connector)	7–17.1	7–112.1
Main Fuel Filter and Bracket	6–31	6–126
Main Oil Pump and Scavenge Oil Screen	8–2	8–12
No. 2 Bearing Package (AVIM)	2–44	2–411
No. 2 Bearing Pressure Oil Strainer	8–77	8–259
No. 3 Bearing Package (AVIM)	2–69	2–508
No. 4 and 5 Bearing Filter	8–81	8–269
No. 4 and 5 Bearing Oil Tubes (AVIM)	4–42	4–249
No. 4 and 5 Bearing Package (AVIM)	4–38	4–198
Oil Cooler Assembly	8–7	8–29

INDEX (Continued)

Subject	Para/ Task	Page
Clean (cont)		
Oil Drain Cock	8-85	8-281
Oil Filter Assembly and Oil Filter Strainer	8-18	8-52
Oil Filter Cap and Stem Assembly and Oil Filter Element	8-24	8-66
Oil Level Float Assembly (AVIM)	8-105	8-340
Oil Level Indicator	8-97	8-309
Oil Temperature Transmitter	8-13	8-43
Output Shaft (AVIM)	9-7	9-26
Output Shaft Seal and Housing Assembly	2-49	2-436
Output Shaft Support Housing (AVIM)	2-60	2-478
Overspeed Drive and Outlet Cover Assembly	5-19	5-105
Primer Tube Assembly	6-22	6-104
Second Turbine Disc Assembly (AVIM)	4-54	4-320
Second Turbine Nozzle, Spacer, and Case (AVIM)	4-58	4-345
Spark Igniters	7-7	7-73
Start Fuel Nozzles	6-26	6-114
Starter Drive Assembly	5-13	5-85
Starter Gearbox Filter	8-73	8-252
Starting Fuel Solenoid Valve	6-50	6-181
Stator Vane Assemblies	2-27	2-228
Thermocouple Harness Assemblies (AVIM)	4-21	4-102
Thermocouple Jumper Lead	4-2	4-11
Third Stage Power Turbine Rotor (AVIM)	4-50	4-303
Third Turbine Nozzle and Support (AVIM)	4-28	4-130
Torquemeter Head Assembly (AVIM)	9-12	9-44
Torquemeter Junction Box (AVIM)	9-2	9-8
Clean, Inspect and Repair Splines and Gears	1-118	1-630
Closure Check, Bleed Band - See Bleed Band Closure Check		
Coastdown Time, Check Engine - See Check Engine Coastdown Time		
Coil and Cable Assembly, Ignition - See Ignition Coil and Cable Assembly		
Combustion Chamber Housing (AVIM)		
Clean	3-19	3-213
Inspect	3-20	3-215
Repair	3-21	3-217
Combustion Chamber Liner (AVIM)		
Clean	3-16	3-183
Inspect	3-17	3-185
Repair	3-18	3-197
Combustion Chamber Vane Assembly (AVIM)		
Clean	3-13	3-171
Inspect	3-14	3-173
Repair	3-15	3-180
Combustion Section	1-15	1-19
Combustion Section		
Assemble	3-12	3-169
Assemble (AVIM)	3-10	3-157
Disassemble	3-11	3-168
Disassemble (AVIM)	3-9	3-151
Combustion Section and Power Turbine (AVIM)		
Assemble	3-7	3-77
Disassemble	3-6	3-40
Install	3-8	3-116
Remove	3-5	3-11
Common Tools and Equipment	1-22	1-41
Components, Location and Description of Major - See Location and Description of Major Components		
Compressor Bleed Band		
Clean	2-10	2-44
Inspect	2-11	2-45
Install	2-13	2-47
Remove	2-9	2-41
Repair	2-12	2-46

INDEX (Continued)

Subject	Para/ Task	Page
Compressor Housing		
Clean	2-21	2-144
Inspect	2-22	2-146
Install Lower	2-25	2-178
Install Upper	2-24	2-149
Remove Lower	2-20	2-104
Remove Upper	2-19	2-71
Repair	2-23	2-147
Compressor Rotor Blades		
Clean	2-32	2-278
Inspect	2-33	2-281
Install	2-35	2-317
Remove	2-31	2-255
Repair	2-34	2-312
Compressor Section	1-14	1-15
Compressor Stall (Surge), Inspect Engine After - See Inspert Engine After Compressor Stall (Surge)		
Compressor Wash (With Water Wash Kit P/N 2-200-071-54 Installed) - See Wash Compressor (With Water Wash Kit P/N 2-200-071-54 Installed)		
Compressor, Wash (Without Water Wash Kit P/N 2-200-071-54 Installed) - See Wash Compressor (Without Water Wash Kit P/N 2-200-071-54 Installed)		
Container, Inspect Pressurized Shipping and Storage - See Inspect Pressurized Shipping and Storage Container		
Container, Install Engine into Shipping and Storage - See Install Engine into Shipping and Storage Container		
Container, Mark Shipping and Storage - See Mark Shipping and Storage Container		
Container, Prepare and Inspect Storage and Shipping - See Prepare and Inspect Storage and Shipping Container		
Container, Remove Engine from Shipping and Storage - See Remove Engine from Shipping and Storage Container		
Contaminated Fuel System. Inspect - See Inspect Contaminated Fuel System		
Contaminated Oil System, Inspect - See Inspect Contaminated Oil System		
Continuous Power Check, Forty Percent Maximum - See Forty Percent Maximum Continuous Power Check		
Continuous Power Check, Maximum - See Maximum Continuous Power Check		
Continuous Power Check, Seventy-Five Percent Maximum - See Seventy-Five Percent Maximum Continuous Power Check		
Control, Adjust Fuel - See Adjust Fuel Control		
Control, (AVIM) Adjust Fuel - See Adjust Fuel Control (AVIM)		
Control, Fuel - See Fuel Control		
Control Priming, Fuel- See Fuel Control Priming		
Control (QAIQC), Quality Assurance/ Quality - See Quality Assurance/ Quality Control (QAIQC)		
Cooler Assembly, Oil - See Oil Cooler Assembly		
Cover, Anti-Icing Air Gallery - See Anti-Icing Air Gallery Cover		
Cover Assembly (AVIM), Inlet Housing - See Inlet Housing Cover Assembly (AVIM)		
Curl (AVIM), Diffuser - See Diffuser Curl (AVIM)		
D		
Damage from Chafing, Denting, Scratching, Gouging, or Wear, Determine Depth of - See Determine Depth of Damage from Chafing, Denting, Scratching, Gouging, or Wear		

Subject	Para/ Task	Page
Data, Equipment - See Equipment Data		
Data, Equipment Description-and - See Equipment Description and Data		
Denting, Scratching, Gouging, or Wear, Determine Depth of Damage from Chafing - See Determine Depth of Damage from Chafing, Denting, Scratching, Gouging, or Wear		
Depth of Damage from Chafing, Denting, Scratching, Gouging, or Wear, Determine - See Determine Depth of Damage from Chafing, Denting, Scratching, Gouging, or Wear		
Description and Data, Equipment - See Equipment Description and Data		
Description of Major Components, Location and - See Location and Description of Major Components		
Designations, Official Nomenclature, Names and - See Official Nomenclature, Names, and Designations		
Destruction of Army Material to Prevent Enemy Use	1-3	1-2
Detector, Chip - See Chip Detector		
Detector, Dual Chip - See Dual Chip Detector		
Detector, Service Accessory Gearbox Chip - See Service Accessory Gearbox Chip Detector		
Detector, Service Dual Chip - See Service Dual Chip Detector		
Determine Depth of Damage from Chafing, Denting, Scratching, Gouging, or Wear	1-120	1-646
Diffuser Assembly (AVIM), Air - See Air Diffuser Assembly (AVIM)		
Diffuser Curl (AVIM)		
Clean	4-74	4-481
Inspect	4-75	4-483
Install	4-77	4-486
Remove	4-73	4-479
Repair	4.76	4-485
Directional References	1-10	1-10
Disassemble		
Accessory Gearbox Assembly	5-2	5-13
Chip Detector	8-89	8-289
Combustion Section	3-11	3-168
Combustion Section (AVIM)	3-9	3-151
Combustion Section and Power Turbine (AVIM)	3-6	3-40
Dual Chip Detector	8-29	8-77
Fuel Control	6-2	6-12
In-Line Fuel Filter Assembly	6-37	6-144
Interstage Air-Bleed Actuator	2-2	2-12
Main Fuel Filter and Bracket	6-30	6-123
No. 2 Bearing Package (AVIM)	2-43	2-402
No. 3 Bearing Package (AVIM)	2-68	2-506
Oil Cooler Assembly	8-6	8-26
Oil Filler Assembly and Oil Filler Strainer	8-17	8-50
Oil Level Float Assembly (AVIM)	8-104	8-339
Oil Level Indicator	8-96	8-305
Output Shaft Support Housing (AVIM)	2-59	2-470
Overspeed Drive and Outlet Cover Assembly	5-18	5-101
Third Turbine Nozzle and Support (AVIM)	4-27	4-128
Disc Assembly (AVIM), First Turbine - See First Turbine Disc Assembly (AVIM)		
Disc Assembly (AVIM), Second Turbine - See Second Turbine Disc Assembly (AVIM)		
Divider and Bracket, Flow - See Flow Divider and Bracket		
Drain Cock, Oil - See Oil Drain Cock		
Drain Engine Oil System	1-75	1-226
Drain Valve, Fuel - See Fuel Drain Valve		
Drive Assembly, Starter - See Starter Drive Assembly		

INDEX (Continued)

Subject	Para/ Task	Page
Dropped Engine, Inspect - See Inspect Dropped Engine		
Dual Chip Detector		
Assemble	8-33	8-85
Clean	8-30	8-79
Disassemble	8-29	8-77
Inspect	8-31	8-81
Install	8-35	8-88
Remove	8-28	8-73
Repair	8-32	8-83
Test	8-34	8-87
Dual Chip Detector, Service - See Service Dual Chip Detector		
E		
Electrical and Ignition System	1-191-32	
Electrical Cable Assembly, Main - See Main Electrical Cable Assembly		
Element, Oil Filter Cap and Stem Assembly and Oil Filter - See Oil Filter Cap and Stem Assembly and Oil Filter Element		
Element, Service Oil Filter Cap and Stem Assembly and Oil Filter - See Service Oil Filter Cap and Stem Assembly and Oil Filter Element		
Enemy Use, Destruction of Army Material to Prevent - See Destruction of Army Material To Prevent Enemy Use		
Engine	1-13	1-13
Engine after Check Runs, Inspect - See Inspect Engine after Check Runs		
Engine after Compressor Stall (Surge), Inspect - See Inspect Engine after Compressor Stall (Surge)		
Engine after Foreign Object Ingestion, Inspect - See Inspect Engine after Foreign Object Ingestion		
Engine after N1 Overspeed (AVIM), Inspect - See Inspect Engine after N1 Overspeed (AVIM)		
Engine after N2 Overspeed (AVIM), Inspect - See Inspect Engine after N2 Overspeed (AVIM)		
Engine after Power Turbine Overtorque (AVIM), Inspect - See Inspect Engine after Power Turbine Overtorque (AVIM)		
Engine after Storage, Activate - See Activate Engine after Storage		
Engine (AVIM), Test - See Test Engine (AVIM)		
Engine Coastdown Time, Check - See Check Engine Coastdown Time		
Engine for Shipment or Storage, Preserve and Prepare - See Preserve and Prepare Engine for Shipment or Storage		
Engine from Maintenance Stand, Remove - See Remove Engine from Maintenance Stand		
Engine from Shipping and Storage Container, Remove - See Remove Engine from Shipping and Storage Container		
Engine Hot End (AVIM), Inspect - See Inspect Engine Hot End (AVIM)		
Engine Identification	1-107	1-525
Engine in Storage Over Six Months, Represerve - See Represerve Engine in Storage Over Six Months		
Engine, Inspect Dropped - See Inspect Dropped Engine		
Engine into Shipping and Storage Container, Install - See Install Engine into Shipping and Storage Container		
Engine Maintenance Sling, Install - See Install Engine Maintenance Sling		
Engine Maintenance Sling, Remove - See Remove Engine Maintenance Sling		
Engine Oil System, Drain - See Drain Engine Oil System		

INDEX (Continued)

Subject	Para/ Task	Page
Engine Oil System, Service - See Service Engine Oil System		
Engine on Maintenance Stand, Install - See Install Engine on Maintenance Stand		
Engine Rating	1-107	1-523
Engine Starting Procedure	1-107	1-460
Engine Serviceability, Inspect - See Inspect Engine Serviceability		
Engine Subjected to Excessive GLoads, Inspect - See Inspect Engine Subjected to Excessive G-Loads		
Equipment Characteristics, Capabilities, and Features	1-8	1-3
Equipment, Common Tools and - See Common Tools and Equipment		
Equipment Data -	1-11	1-11
Equipment Description and Data		1-3
Equipment Improvement Recommendations (EIR), Reporting - See Reporting Equipment Improvement Recommendations (EIR)		
Excessive G-Loads, Inspect Engine Subjected to - See Inspect Engine Subjected to Excessive G-Loads		
Exciter, Ignition - See Ignition Exciter		
Exit Vane Assembly		
Clean	4-79	4-494
Inspect	4-80	4-496
Install	4-82	4-504
Remove	4-78	4-489
Repair	4-81	4-501
Expendable Supplies and Materials List	C-1	

F

Subject	Para/ Task	Page
Features, Equipment Characteristics, Capabilities, and - See Equipment Characteristics, Capabilities, and Features		
Field Replacement First and Second Turbine Disc Assembly (AVIM), Place in Service - See Place in Service Field Replacement First and Second Turbine Disc Assembly (AVIM)		
Filler Assemby and Oil Filler Strainer, Oil - See Oil Filler Assembly and Oil Filler Strainer		
Filler Strainer, Oil Filler Assembly and Oil - See Oil Filler Assembly and Oil Filler Strainer		
Filler Strainer, Service Oil - See Service Oil Filler Strainer		
Filter and Bracket, Main Fuel - See Main Fuel Filter and Bracket		
Filter Assembly, In-Line Fuel - See In-Line Fuel Filter Assembly		
Filter Cap and Stem Assembly and Oil Filter Element, Oil - See Oil Filter Cap and Stem Assembly and Oil Filter Element		
Filter Cap and Stem Assembly and Oil Filter Element, Service Oil - See Service Oil Filter Cap and Stem Assembly and Oil Filter Element		
Filter Element, Oil Filter Cap and Stem Assembly and Oil - See Oil Filter Cap and Stem Assembly and Oil Filter Element		
Filter Element, Service Oil Filter Cap and Stem Assembly and Oil - See Service Oil Filter Cap and Stem Assembly and Oil Filter Element		
Filter, No. 4 and 5 Bearing - See No. 4 and 5 Bearing Filter		
Filter, Service No. 4 and 5 Bearing Oil Filter - See Service No. 4 and 5 Bearing Oil Filter		
Filter, Service Starter Gearbox - See Service Starter Gearbox Filter		
Fireshield Assembly		
Clean	4-13	4-69
Inspect	4-14	4-71
Install	4-15	4-72
Remove	4-12	4-65

INDEX (Continued)

Subject	Para/ Task	Page
Fireshield Section		
Clean	4 17	4-84
Inspect	4-18	4-86
Install	4-19	4-87
Remove	4-16	4-79
First and Second Turbine Disc Assembly (AVIM), Place in Service Field Replacement - See Place in Service Field Replacement First and Second Turbine Disc Assembly (AVIM)		
First Turbine Disc Assembly (AVIM)		
Clean	4-63	4-406
Inspect	4-64	4-408
Install	4-66	4-411
Remove	4-62	4-397
Repair	4-65	4-410
First Turbine Nozzle (AVIM)		
Clean	4-68	4-433
Inspect	4-69	4-435
Install	4-71	4-464
Remove	4-67	4-429
First Turbine Rotor Case (AVIM)		
Repair	4-70	4-445
Flight Idle Check	1-107	1-468
Float Assembly (AVIM), Oil Level - See Oil Level Float Assembly (AVIM)		
Flow Divider and Bracket		
Clean	6-43	6-162
Inspect	6-44	6-164
Install	6-45	6-165
Remove	6-42	6-159
Foreign Object Ingestion, Inspect Engine After - See Inspect Engine after Foreign Object Ingestion		
Forms, Records and Reports, Maintenance - See Maintenance Forms, Records and Reports		
Forty Percent Maximum Continuous Power Check	1-107	1-505
Fourth Stage Power Turbine Nozzle (AVIM)		
Clear	4-46	4-271
Inspect	4 47	4-272
Install	4-49	4-282
Remove	4-45	4-269
Repair	4-48	4-280
Fourth Stage Power Turbine Rotor (AVIM)		
Clean	4-34	4-158
Inspect	4-35	4-160
Install	4-36	4-164
Remove	4-33	4-151
Fuel Boost Pump Assembly		
Clean	6-10	6-42
Inspect	6-11	6-43
Install	6-13	6-48
Package	6-15	6-56
Preserve	6-14	6-55
Remove	6-9	6-39
Repair	6-12	6-44
Fuel Check Valve		
Clean	6-47	6-173
Install	6-48	6-174
Remove	6-46	6-171
Fuel Control		
Assembly	6-5	6-19
Clean	6-3	6-14
Disassemble	6-2	6-12
Inspect	6-4	6-16
Install	6-6	6-22
Package	6-8	6-36
Preserve	6-7	6-31
Remove	6-1	6-5
Repair	6-4.1	6-18 1
Fuel Control, Adjust - See Adjust Fuel Control		
Fuel Control (AVIM), Adjust - See Adjust Fuel Control (AVIM)		
Fuel Control Priming	1-27	1-89

INDEX (Continued)

Subject	Para/ Task	Page
Fuel Drain Valve		
Clean	3-2	3-6
Inspect	3-3	3-7
Install	3-4	3-8
Remove	3-1	3-3
Fuel Filter and Bracket, Main - See Main Fuel Filter and Bracket		
Fuel Filter Assembly, In—Line – See In-Line Fuel Filter Assembly		
Fuel Lines - See Hose Assembly and Tube Assembly		
Fuel Manifold Assemblies - See Left- and Right—Hand Fuel Manifold Assemblies		
Fuel Nozzles, Start - See Start Fuel Nozzles		
Fuel Solenoid Valve, Starting - See Starting Fuel Solenoid Valve		
Fuel System	1-18	1-28
Fuel System, Inspect Contaminated - See Inspect Contaminated Fuel System		
G		
G—Loads , Inspect Engine Subjected to Excessive - See Inspect Engine Subjected to Excessive G Loads		
Gallery Cover, Anti-Icing Air - See Anti Icing Air Gallery Cover		
Gear Assembly (AVIM), Accessory - See Accessory Gear Assembly (AVIM)		
Gear Section, Accessory - See Accessory Gear Section (AVIM)		
Gears, Clean, Inspect and Repair Splines and - See Clean, Inspect and Repair Splines and Gears		
Gearbox Assembly, Accessory - See Accessory Gearbox Assembly		
Gearbox Chip Detector Service, Accessory - See Service Accessory Gearbox Chip Detector		
Gearbox Filter, Service Starter - See Service Starter Gearbox Filter		
General Information	1-1	
Glossary		
Glossary-1		
Gouging, or Wear, Determine Depth of Damage from Chafing, Denting, Scratching - See Determining Depth of Damage from Chafing, Denting, Scratching, Gouging. or Wear		
Governor Operation Check, N2 – See N2 Governor Operation Check		
Ground Idle Check	1-107	1-463
Ground Idle Trim Check	1-107	1-487
H		
Handling, Safety, Care and - See Safety, Care, and Handling		
Harness Assemblies (AVIM), Thermocouple - See Thermocouple Harness Assemblies (AVIM)		
Head Assembly (AVIM), Torquemeter- See Torquemeter Head Assembly (AVIM)		
Hoisting		1-109
Hose Assembly (Air Diffuser Assembly to Fuel Control)		
Install	2-80	2-553
Remove	2-79	2-550
Hose Assembly (Compressor Housing to Inlet Housing)		
Install	2-78	2-543
Remove	2-77	2-536
Hose Assembly (Dual Chip Detector to Accessory Gearbox Assembly)		
Install	8-43	8-113
Remove	8-42	8-107
Hose Assembly (Dual Chip Detector to Accessory Gearbox Collector)		
Install	8-45	8-123
Remove	8-44	8-118

INDEX (Continued)

Subject	Para/ Task	Page
Hose Assembly (Dual Chip Detector to Air Diffuser Assembly)		
Install	8-47	8-131
Remove	8-46	8-128
Hose Assembly (Flow Divider Left Side Primary to Manifold Assembly)		
Install	6-65	6-225
Remove	6-64	6-223
Hose Assembly (Flow Divider Left Side Secondary to Manifold Assembly)		
Install	6-69	6-234
Remove	6-68	6-231
Hose Assembly (Flow Divider Right Side Primary to Manifold Assembly)		
Install	6-67	6-229
Remove	6-66	6-227
Hose Assembly (Flow Divider Right Side Secondary to Manifold Assembly)		
Install	6-71	6-240
Remove	6-70	6-237
Hose Assembly (Fuel Boost Pump to Main Fuel Filter)		
Install	6-61	6-210
Remove	6-60	6-206
Hose Assembly (Fuel Check Valve to Fuel Boost Pump)		
Install	6-63	6-218
Remove	6-62	6-214
Hose Assembly (Fuel Control to Oil Cooler)		
Install	6-57	6-196
Remove	6-56	6-193
Hose Assembly (Fuel Control to Starting Fuel Solenoid Valve)		
Install	6-75	6-253
Remove	6-74	6-250
Hose Assembly (Inlet Housing to Oil Drain Cock)		
Install	8-63	8-215
Remove	8-62	8-209
Hose Assembly (Inlet Housing to Oil Scavenge Tee)		
Install	8-61	8-207
Remove	8-60	8-204
Hose Assembly (In-Line Fuel Filter to Flow Divider)		
Install	6-59	6-203
Remove	6-58	6-199
Hose Assembly (Interstage Air-Bleed Actuator to Air Diffuser Assembly)		
Install	2-76	2-534
Remove	2-75	2-532
Hose Assembly (Interstage Air-Bleed Actuator to Fuel Control)		
Install	2-74	2-528
Remove	2-73	2-525
Hose Assembly (Main Fuel Filter to Fuel Control)		
Install	6-73	6-247
Remove	6-72	6-244
Hose Assembly (Main Oil Pump to Dual Chip Detector)		
Install	8-49	8-135
Remove	8-48	8-133
Hose Assembly (Main Oil Pump to Inlet Housing Oil Scavenge Tee)		
Install	8-53	8-152
Remove	8-52	8-148
Hose Assembly (Main Oil Pump to No. 4 and 5 Bearing Scavenge Tube Assembly)		
Install	8-55	8-159
Remove	8-54	8-156
Hose Assembly (Accessory Gearbox Assembly to Check Valve Assembly)		
Install	8-39	8-100
Remove	8-38	8-97
Hose Assembly (Oil Cooler to Inlet Housing)		
Install	8-37	8-95
Remove	8-36	8-93

INDEX (Continued)

Subject	Para/ Task	Page
Hose Assembly (Oil Cooler to In-Line Fuel Filter)		
Install	6-55	6-191
Remove	6-54	6-189
Hose Assembly (Oil Cooler to Pressure Connector		
Install	8-41	8-105
Remove	8-40	8-103
Hose Assembly (Oil Filler to Starter Drive)		
Install	8-65	8-224
Remove	8-64	8-221
Hose Assembly (Pressure Connector to No. 4 and 5 Bearing Filter)		
Install	8-59	8-191
Remove	8-58	8-178
Hose Assembly (Starter Drive to Tube and Hose Assembly)		
Install	8-67	8-229
Remove	8-66	8-226
Hose Assembly (Starting Fuel Solenoid Valve to Tube Assembly)		
Install	6-77	6-259
Remove	6-76	6-256
Hose Assembly (Water Wash Check Valve Elbow to Interstage Air-Bleed Actuator T/C Inlet)		
Install	2-80.8	
Remove	2-80.7	
Hose Assembly (Water Wash Check Valve Reducer to Interstage Air-Bleed Actuator P3 Inlet)		
Install	2-80.4	
Remove	2-80.3	
Hose Assembly (Water Wash Tee Check Valve to Interstage Air-Bleed Actuator P3 Inlet)		
Install	2-80.6	
Remove	2-80.5	
Hose Assembly (Water Wash Kit Installation to Interstage Airtrame Quick Disconnect Shelf)		
Install	2-80.10	
Remove	2-80.9	
Hoses, Install Spiral Chafing Sleeve on - See Install Spiral Chafing Sleeve on Hoses		
Hot End (AVIM), Inspect Engine - See Inspect Engine Hot End (AVIM)		
Housing Assembly (AVIM), Air Inlet - See Air Inlet Housing Assembly (AVIM)		
Housing Assembly, Output Shaft Seal and - See Output Shaft Seal and Housing Assembly		
Housing (AVIM), Combustion Chamber- See Combustion Chamber Housing (AVIM)		
Housing (AVIM), Output Shaft Support - See Output Shaft Support Housing (AVIM)		
Housing, Compressor - See Compressor Housing		
Housing Cover Assembly (AVIM), Inlet - See Inlet Housing Cover Assembly (AVIM)		
I		
Identification, Engine - See Engine Identification		
Idle Check, Flight - See Flight Idle Check		
Idle Check, Ground - See Ground Idle Check		
Idle Trim Check, Ground - See Ground Idle Trim Check		
Igniters, Spark - See Spark Igniters		
Ignition Coil and Cable Assembly		
Clean	7-2	7-30
Inspect	7-3	7-32
Install	7-5	7-41
Remove	7-1	7-3
Repair	7-4	7-35

INDEX (Continued)

Subject	Para/ Task	Page
Ignition Exciter		
Clean	7-12	7-89
Inspect	7-13	7-91
Install.	7-15	7-94
Remove	7-11	7-85
Repair	7-14	7-92
Ignition System - Electrical and - See Electrical and Ignition System		
Illustrated List of Manufactured Items		E-1
Improvement Recommendations (EIR), Reporting Equipment - See Reporting Equipment Improvement Recommendations (EIR)		
Index, Symptom - See Symptom Index		
Indicator, Oil Level - See Oil Level Indicator		
Information, General - See General Information		
Ingestion, Inspect Engine after Foreign Object - See Inspect Engine after Foreign Object Ingestion		
Inlet Housing Assembly (AVIM), Air- See Air Inlet Housing Assembly (AVIM)		
Inlet Housing Cover Assembly (AVIM)		
Clean	2-54	2-458
Inspect	2-55	2-459
Install	2-57	2-461
Remove	2-53	2-455
Repair	2-56	2-460
In-Line Fuel Filter Assembly		
Assemble	6-40	6-150
Clean	6-38	6-146
Disassemble	6-37	6-144
Inspect	6-39	6-148
Install	6-41	6-153
Remove	6-36	6-141
Inspect		
Accessory Gear Assembly (AVIM)	5-10	5-54
Accessory Gearbox Assembly	5-4	5-22
Air Diffuser Assembly (AVIM)	2-38	2-363
Inspect (cont)		
Air Inlet Housing Assembly	2-65	2-498
Check Valve Assembly	8-18 3	8-40.4
Anti-Icing Air Gallery Cover	2-16	2-58
Chip Detector	8-91	8-293
Combustion Chamber Housing (AVIM)	3-20	3-215
Combustion Chamber Liner (AVIM)	3-17	3-185
Combustion Chamber Vane Assembly (AVIM)	3-14	3-173
Compressor Bleed Band	2-11	2-45
Compressor Housing	2-22	2-146
Compressor Rotor Blades	2-33	2-281
Diffuser Curl	4-75	4-483
Dual Chip Detector	8-31	8-81
Exit Vane Assembly	4-80	4-496
Fireshield Assembly	4-14	4-71
Fireshield Section	4-18	4-86
First Turbine Disc Assembly (AVIM)	4-64	4-408
First Turbine Nozzle (AVIM)	4-69	4-435
Flow Divider and Bracket	6-44	6-164
Fourth Stage Power Turbine Nozzle (AVIM)	4-47	4-273
Fourth Stage Power Turbine Rotor (AVIM)	4-35	4-160
Fuel Boost Pump Assembly	6-11	6-43
Fuel Control	6-4	6-16
Fuel Drain Valve	3-3	3-7
Ignition Coil and Cable Assembly	7-3	7-32
Ignition Exciter	7-13	7-91
Inlet Housing Cover Assembly (AVIM)	2-55	2-459
In-Line Fuel Filter Assembly	6-39	6-148
Interstage Air-Bleed Actuator	2-4	2-16
Left- and Right-Hand Bus Bar Assemblies	4-9	4-43
Left- and Right-Hand Fuel Manifold Assemblies	6-18	6-70
Main Electrical Cable Assembly (Nine Connector)	7-18	7-113
Main Electrical Cable Assembly (Six Connector)	7-18.1	7-114 1
Main Fuel Filter and Bracket	6-32	6-128
Main Oil Pump and Scavenge Oil Screen	8-3	8-14
No. 2 Bearing Package (AVIM)	2-45	2-414
No. 2 Bearing Pressure Oil Strainer	8-78	8-260
No. 3 Bearing Package (AVIM)	2-70	2-511
No. 4 and 5 Bearing Filter	8-82	8-270
No. 4 and 5 Bearing Oil Tubes (AVIM)	4-43	4-250

INDEX (Continued)

Subject	Para/ Task	Page
Inspect (cant)		
No. 4 and 5 Bearing Package (AVIM)	4-39	4-200
Oil Cooler Assembly	8-8	8-31
Oil Drain Cock	8-86	8-283
Oil Filler Assembly and Oil Filler Strainer	8-19	8-54
Oil Filter Cap and Stem Assembly and Oil Filter Element	8-25	8-68
Oil Level Float Assembly (AVIM)	8-106	8-342
Oil Level Indicator	8-98	8-311
Oil Temperature Transmitter	8-14	8-44
Output Shaft (AVIM)	8	9-28
Output Shaft Seal and Housing Assembly	2-50	2-437
Output Shaft Support Housing (AVIM)	2-61	2-481
Overspeed Drive and Outlet Cover Assembly	5-20	5-107
Primer Tube Assembly	6-23	6-106
Second Turbine Disc Assembly (AVIM)	4-55	4-322
Second Turbine Nozzle, Spacer, and Case (AVIM)	4-59	4-347
Spark Igniters	7-8	7-74
Start Fuel Nozzles	6-27	6-115
Starter Drive Assembly	5-14	5-86
Starter Gearbox Filter	8-74	8-253
Starting Fuel Solenoid Valve	6-51	6-182
Stator Vane Assemblies	2-28	2-230
Thermocouple Harness Assemblies (AVIM)	4-22	4-103
Thermocouple Jumper Lead	4-3	4-12
Third Stage Power Turbine Rotor (AVIM)	4-51	4-305
Third Turbine Nozzle and Support (AVIM)	4-29	4-132
Torquemeter Head Assembly (AVIM)	9-13	9-46
Torquemeter Junction Box (AVIM)	9-3	9-9
Inspect and Repair Splines and Gears, Clean - See Clean, Inspect and Repair Splines and Gears		
Inspect Contaminated Fuel System	1-85	1-255
Inspect Contaminated Oil System	1-86	1-264
Inspect Dropped Engine	1-83	1-249
Inspect Engine after Check Runs	1-91	1-308
Inspect Engine Serviceability	1-851	1-262 1
Inspect Engine after Compressor Stall (Surge)	1-90	1-306
Inspect Engine after Foreign Object Ingestion	1-92	1-309
Inspect Engine after N1 Overspeed (AVIM)	1-79	1-241
Inspect Engine after N2 Overspeed (AVIM)	1-80	1-243
Inspect Engine after Power Turbine Overtorque (AVIM)	1-84	1-253
Inspect Engine Hot End (AVIM)	1-93	1-313
Inspect Engine Subjected to Excessive G-Loads	1-82	1-247
Inspect Pressurized Shipping and Storage Container	1-25	1-45
Inspect Shipping and Storage Container, Prepare and - See Prepare and Inspect Shipping and Storage Container		
Inspections, Special - See Special Inspections		
Install		
Accessory Gear Assembly (AVIM)	5-11	5-56
Accessory Gearbox Assembly	5-7	5-32
Air Diffuser Assembly (AVIM)	2-41	2-383
Anti-Icing Air Gallery Cover	2-18	2-62
Check Valve Assembly	8-18.4	8-40.5
Chip Detector	8-94	8-297
Combustion Section and Power Turbine (AVIM)	3-8	3-116
Compressor Bleed Band	2-13	2-47
Compressor Rotor Blades	2-35	2-317
Diffuser Curl	4-77	4-486
Dual Chip Detector	8-35	8-88
Exit Vane Assembly	4-82	4-504
Fireshield Assembly	4-15	4-72
Fireshield Section	4-19	4-87
First Turbine Disc Assembly (AVIM)	4-66	4-411
First Turbine Nozzle (AVIM)	4-71	4-464
Flow Divider and Bracket	6-45	6-165
Fourth Stage Power Turbine Nozzle (AVIM)	4-49	4-282

INDEX (Continued)

Subject	Para/ Task	Page
Install (cont)		
Fourth Stage Power Turbine Rotor (AVIM)	4-36	4-164
Fuel Boost Pump Assembly	6-13	6-48
Fuel Check Valve	6-48	6-174
Fuel Control	6-6	6-22
Fuel Drain Valve	3-4	3-8
Hose Assembly (Ar Diffuser Assembly to Fuel Control)	2-80	2-553
Hose Assembly (Compressor Housing to Inlet Housing)	2-78	2-543
Hose Assembly (Dual Chip Detector to Accessory Gearbox Assembly)	8-43	8-113
Hose Assembly (Dual Chip Detector to Accessory Gearbox Collector)	8-45	8-123
Hose Assembly (Dual Chip Detector to Air Diffuser Assembly)	8-47	8-131
Hose Assembly (Flow Divider Left Side Primary to Manifold Assembly)	6-65	6-225
Hose Assembly (Flow Divider Left Side Secondary to Manifold Assembly)	6-69	6-234
Hose Assembly (Flow Divider Right Side Primary to Manifold Assembly)	6-67	6-229
Hose Assembly (Flow Divider Right Side Secondary to Manifold Assembly)	6-71	6-240
Hose Assembly (Fuel Boost Pump to Main Fuel Filter)	6-61	6-210
Hose Assembly (Fuel Check Valve to Fuel Boost Pump)	6-63	6-218
Hose Assembly (Fuel Control to Oil Cooler)	6-57	6-196
Hose Assembly (Fuel Control to Starting Fuel Solenoid Valve)	6-75	6-253
Hose Assembly (Inlet Housing to Oil Drain Cock)	8-63	8-215
Hose Assembly (Inlet Housing to Oil Scavenge Tee)	8-61	8-207
Hose Assembly (In-Line Fuel Filter to Flow Divider)	6-59	6-203
Hose Assembly (Interstage Air-Bleed Actuator to Air Diffuser Assembly)	2-76	2-534
Hose Assembly (Interstage Air-Bleed Actuator to Fuel Control)	2-74	2-528
Hose Assembly (Main Fuel Filter to Fuel Control)	6-73	6-247
Hose Assembly (Main Oil Pump to Dual Chip Detector)	8-49	8-135
Hose Assembly (Main Oil Pump to Inlet Housing Oil Scavenge Tee)	8-53	8-152
Hose Assembly (Main Oil Pump to No. 4 and 5 Bearing Scavenge Tube Assembly)	8-55	8-159
Hose Assembly (Accessory Gearbox Assembly to Check Valve Assembly)	8-39	8-100
Hose Assembly (Oil Cooler to Inlet Housing)	8-37	8-95
Hose Assembly (Oil Cooler to In-Line Fuel Filter)	6-55	6-191
Hose Assembly (Oil Cooler to Pressure Connector)	8-41	8-105
Hose Assembly (Oil Filter to Starter Drive)	8-65	8-224
Hose Assembly (Pressure Connector to No. 4 and 5 Bearing Filter)	8-59	8-191
Hose Assembly Starter Drive to Tube and Hose Assembly)	8-67	8-229
Hose Assembly (Starting Fuel Solenoid Valve to Tube Assembly)	6-77	6-259
Hose Assembly (Water Wash Check Valve Elbow to Interstage Air-Bleed Actuator T/C Inlet)	2-80.8	
Hose Assembly (Water Wash Check Valve Reducer to Interstage Air-Bleed Actuator P3 Inlet)	2-80.4	
Hose Assembly (Water Wash Tee Check Valve to Interstage Air-Bleed Actuator P3 Inlet)	2-80.6	
Hose Assembly (Water Wash Kit Installation to Airframe Quick Disconnect Shef)	2-80.10	
Ignition Coil and Cable Assembly	7-5	7-41
Ignition Exciter	7-15	7-94
Inlet Housing Cover Assembly (AVIM)	2-57	2-461
In-Line Fuel Filter Assembly	6-41	6-153
Interstage Air-Bleed Actuator (With Water Wash Kit P/N 2-200-071-54 Installed)	2-8.1	2-40 1
Interstage Air Bleed Actuator (Without Water Wash Kit P/N 2-200-071-54 Installed)	2-8	2-28
Interstage Air-Bleed Actuator	2-7	2-21
Left- and Right-Hand Bus Bar Assemblies	4-11	4-51
Left- and Right-Hand Fuel Manifold Assemblies	6-20	6-78
Lower Compressor Housing	2-25	2-178
Main Electrical Cable Assembly (Nine Connector)	7-21	7-26.10

INDEX (Continued)

Subject	Para/ Task	Page
Install (cont)		
Main Electrical Cable Assembly (Six Connector)	7-21.1	7-138
Main Fuel Filter and Bracket	6-35	6-136.1
Main Oil Pump and Scavenge Oil Screen	8-4	8-15
No. 2 Bearing Package (AVIM)	2-47	2-427
No. 2 Bearing Pressure Oil Strainer	8-79	8-261
No. 3 Bearing Package (AVIM)	2-72	2-515
No. 4 and 5 Bearing Filter	8-83	8-271
No. 4 and 5 Bearing Oil Tubes (AVIM)	4-44	4-252
No. 4 and 5 Bearing Package Seals (AVIM)	4-40	4-202
Oil Cooler Assembly	8-11	8-35
Oil Drain Cock	8-87	8-284
Oil Filler Assembly and Oil Filler Strainer	8-22	8-60
Oil Filter Cap and Stem Assembly and Oil Filter Element	8-27	8-70
Oil Level Float Assembly (AVIM)	8-109	8-346
Oil Level Indicator	8-101	8-321
Oil Pump Check Valve (AVIM)	8-4.2	8-20.3
Oil Temperature Transmitter	8-15	8-45
Output Shaft (AVIM)	9-10	9-31
Output Shaft Seal and Housing Assembly	2-52	2-447
Output Shaft Support Housing (AVIM)	2-63	2-490
Overspeed Drive and Outlet Cover Assembly	5-23	5-114
Primer Tube Assembly	6-24	6-107
RTV in First Stage Stator Vane Assembly	2-30.1	2-253.1
Seal	5-5.3	5-24.3
Seal and Liner Assembly	5-5.4	5-24.4
Seal Assembly	5-5.6	5-24.7
Second Turbine Disc Assembly (AVIM)	4-56	4-324
Second Turbine Nozzle, Spacer, and Case (AVIM)	4-61	4-387
Spark Igniters	7-10	7-78
Start Fuel Nozzles	6-28	6-116
Starter Drive Assembly	5-16	5-95
Starter Gearbox Filter	8-75	8-254
Starter Fuel Solenoid Valve	6-53	6-184
Stator Vane Assemblies	2-30	2-234
Thermocouple Harness Assemblies (AVIM)	4-25	4-110
Thermocouple Jumper Lead	4-6	4-21
Third Turbine Nozzle Support (AVIM)	4-32	4-143
Torquemeter Head Assembly (AVIM)	9-14	9-49
Torquemeter Junction Box (AVIM)	9-5	9-13
Tube and Hose Assembly (Accessory Gearbox Collector to Tube Assembly)	8-69	8-237
Tube Assembly (Hose Assembly to Primer Tube Assembly)	6-79	6-267
Tube Assembly (Inlet Housing to Main Oil Pump)	8-51	8-140
Tube Assembly (No. 4 and 5 Bearing Scavenge Connector to Hose Assembly)	8-57	8-170
Tube Assembly (Tube and Hose Assembly to Accessory Gearbox Assembly)	8-71	8-246
Tube Assembly (Water Wash Check Valve to Air Diffuser Assembly)	2-80.2	2-556.3
Upper Compressor Housing	2-24	2-149
Install Engine Into Shipping and Storage Container	1-113	1-589
Install Engine Maintenance Sling	1-30	1-111

INDEX (Continued)

Subject	Para/ Task	Page
Install (Cont)		
Install Engine on Maintenance Stand	1-28	1-99
Install Spiral Chafing Sleeve on Hoses	1-121	1-652
Intermediate Power Check	1-107	1-510
Interstage Air-Bleed Actuator		
Adjust (With Water Wash Kit P/N 2-200-071-54 Installed)	2-8.1	2-40.1
Adjust (Without Water Wash Kit P/N 2-200-071-54 Installed)	2-8	2-40
Interstage Air-Bleed Actuator (Cont)		
Assemble	2-6	2-19
Clean	2-3	2-14
Disassemble	2-2	2-12
Inspect	2-4	2-16
Install (With Water Wash Kit P/N 2-200-071-54 Installed)	2-7.1	2-27.1
Install (Without Water Wash Kit P/N 2-200-071-54 Installed)	2-7	2-21
Remove (Without Water Wash Kit P/N 2-200-071-54 Installed)	2-1.1	2-11
Remove (Without Water Wash Kit P/N 2-200-071-54 Installed)	2-1	2-5
Repair	2-5	2-18

INDEX (Continued)

Subject	Para/ Task	Page
J		
Jumper Lead, Thermocouple, See Thermocouple Jumper Lead		
Junction Box (AVIM), Torquemeter- See Torquemeter Junction Box (AVIM)		
L		
Lead, Thermocouple Jumper - See Thermocouple Jumper Lead		
Leakage, Check for Static Oil - See Check for Static Oil Leakage		
Leakage (No. 2 Bearing Package) (AVIM), Check for Seal - See Check for Seal Leakage (No. 2 Bearing Package) (AVIM)		
Leakage (No 4 and 5 Bearing) (AVIM), Check for Seal - See Check for Seal Leakage (No. 4 and 5 Bearing) (AVIM)		
Left- and Right-Hand Bus Bar Assemblies		
Clean	4-8	4-42
Inspect	4-9	4-43
Install	4-11	4-51
Remove	4-7	4-35
Test	4-10	4-44
Left- and Right-Hand Fuel Manifold Assemblies		
Clean	6-17	6-68
Inspect	6-18	6-70
Left- and Right-Hand Fuel Manifold Assemblies (cont)		
Install	6-20	6-78
Remove	6-16	6-57
Repair	6-19	6-72
Level Float Assembly (AVIM), Oil - See Oil Level Float Assembly (AVIM)		
Level Indicator, Oil, - See Oil Level Indicator		
Limits, Standard Torque - See Standard Torque Limits		
Liner (AVIM), Combustion Chamber -See Combustion Chamber Liner (AVIM)		
Location and Description of Major Components	1-9	1-5
Lubrication System	1-20	1-34
Lubricating Oil, Change from MIL-L-7808 to MIL-L-23699 - See Change from MIL-L-7808 to MIL-L-23699 Lubricating Oil		
Lubricating Oil, Change from MIL-L-23699 to MIL-L-7808 - See Change from MIL-L-23699 to MIL-L-7808 Lubricating Oil		
M		
Magnesium Alloys, Touch Up Magnesium and - See Touch Up Magnesium and Magnesium Alloys		
Magnesium and Magnesium Alloys, Touch Up - See Touch Up Magnesium and Magnesium Alloys		
Main Electrical Cable Assembly (Nine Connector)		
Clean	7-17	7-111
Inspect	7-18	7-113
Install	7-21	7-26.10
Main Electrical Cable Assembly (Nine Connector) (cont)		
Remove	7-16	7-99
Repair	7-19	7-115
Test	7-20	7-116.1
Main Electrical Cable Assembly (Six Connector)		
Clean	7-17.1	7-112.1
Inspect	7-18.1	7-114.1
Install	7-21.1	7-138
Remove	7-16.1	7-110.1
Repair	7-19.1	7-116
Test	7-20.1	7-126
Main Fuel Filter and Bracket		
Assemble	6-34	6-133
Clean	6-31	6-126
Disassemble	6-30	6-123
Inspect	6-32	6-128
Install	6-35	6-136
Remove	6-29	6-119

INDEX (Continued)

Subject	Para/ Task	Page
Main Fuel Filter and Bracket (cont)		
Repair (Ten Bolt Holes)	6-33	6-132
Repair (Eight Bolt Holes)	6-33.1	6-132.
Main Oil Pump and Scavenge Oil Screen		
Clean	8-2	8-12
Inspect	8-3	8-14
Install	8-4	8-15
Remove	8-1	8-7
Maintenance Allocation Chart		B-1
Maintenance Checks and Services, Preventive - See Preventive Maintenance Checks and Services		
Maintenance Forms, Records and Reports	1-2	1-1
Maintenance Practices, Standard - See Standard Maintenance Practices		
Maintenance Procedures		1-443
Maintenance Sling, Install Engine - See Install Engine Maintenance Sling		
Maintenance Sling, Remove Engine - See Remove Engine Maintenance Sling		
Maintenance Stand, Install Engine on - See Install Engine on Maintenance Stand		
Maintenance Stand, Remove Engine from - See Remove Engine from Maintenance Stand		
Major Components, Location and Description of - See Location and Description of Major Components		
Manifold Assemblies - See Left- and Right-Hand Fuel Manifold Assemblies		
Manufactured Items, Illustrated List of - See Illustrated List of Manufactured Items		
Mark Shipping and Storage Container	1-114	1-615
Materials List, Expendable Supplies and - See Expendable Supplies and Materials List		
Maximum Continuous Power Check	1-107	1-497
Maximum Continuous Power Check, Forty Percent- See Forty Percent Maximum Continuous Power Check		
Maximum Continuous Power Check, Seventy-Five Percent - See Seventy-Five Percent Maximum Continuous Power Check		
Maximum Power, Adjust - See Adjust Maximum Power		
Maximum Power Check	1-107	1-502
Maximum Trim, Adjust - See Adjust Maximum Trim		
Meter Check, Vibration - See Vibration Meter Check		
MIL-L-7808 Lubricating Oil, Change from MIL-L-23699 - See Change from MIL-L-23699 to MIL-L-7808 Lubricating Oil		
MIL-L-7808 to MIL-L-23699 Lubricating Oil, Change from - See Change from MIL-L-7808 to MIL-L-23699 Lubricating Oil		
MIL-L-23699 Lubricating Oil, Change from MIL-L-7808 - See Change from MIL-L-7808 to MIL-L-23699 Lubricating Oil		
MIL-L-23699 to MIL-L-7808 Lubricating Oil, Change from - See Change from MIL-L-23699 to MIL-L-7808 Lubricating Oil		
Minor Servicing	1-94	1-369
Months, Represerve Engine in Storage Over Six - See Represerve Engine in Storage Over Six Months		
N		
Names and Designations, Official Nomenclature - See Official Nomenclature, Names and Designations		
N1 Overspeed (AVIM), Inspect Engine after- See Inspect Engine after N1 Overspeed (AVIM)		
N2 Governor Operation Check	1-107	1-512
N2 Overspeed (AVIM), Inspect Engine after- See Inspect Engine after N2 Overspeed (AVIM)		

INDEX (Continued)

Subject	Para/ Task	Page
No. 2 Bearing Package (AVIM)		
Assemble	2-46	2-417
Clean	2-44	2-411
Disassemble	2-43	2-402
Inspect	2-45	2-414
Install	2-47	2-427
Remove	2-42	2-395
No. 2 Bearing Package (AVIM), Check for Seal Leakage - See Check for Seal Leakage (No. 2 Bearing Package) (AVIM)		
No. 2 Bearing Pressure Oil Strainer		
Clean	8-77	8-259
Inspect	8-78	8-260
Install	8-79	8-261
Remove	8-76	8-257
No. 2 Bearing Pressure Oil Strainer, Service - See Service No. 2 Bearing Pressure Oil Strainer		
No. 3 Bearing Package (AVIM)		
Assemble	2-71	2-513
Clean	2-69	2-508
Disassemble	2-68	2-506
Inspect	2-70	2-511
Install	2-72	2-515
Remove	2-67	2-501
No. 4 and 5 Bearing (AVIM), Check for Seal Leakage - See Check for Seal Leakage (No. 4 and 5 Bearing) (AVIM)		
No. 4 and 5 Bearing Filter		
Clean	8-81	8-269
Inspect	8-82	8-270
Install	8-83	8-271
Remove	8-80	8-263
No. 4 and 5 Bearing Oil Filter, Service - See Service No. 4 and 5 Bearing Oil Filter		
No. 4 and 5 Bearing Oil Tubes (AVIM)		
Clean	4-42	4-249
Inspect	4-43	4-250
Install	4-44	4-252
Remove	4-41	4-245
No. 4 and 5 Bearing Package (AVIM)		
Clean	4-38	4-198
Inspect	4-39	4-200
No. 4 and 5 Bearing Package Seals (AVIM)		
Install	4-40	4-202
Remove	4-37	4-185
Nomenclature, Names, and Designations, Official - See Official Nomenclature, Names, and Designations		
Normal Shutdown Procedure	1-107	1-521
Nozzle and Support (AVIM), Third Turbine - See Third Turbine Nozzle and Support (AVIM)		
Nozzle (AVIM), First Turbine - See First Turbine Nozzle (AVIM)		
Nozzle (AVIM), Fourth Stage Power Turbine - See Fourth Stage Power Turbine Nozzle (AVIM)		
Nozzle, Spacer, and Case (AVIM), Second Turbine - See Second Turbine Nozzle, Spacer, and Case (AVIM)		
Nozzles, Start Fuel - See Start Fuel Nozzles		
O		
Object Ingestion, Inspect Engine after Foreign - See Inspect Engine after Foreign Object Ingestion		
Official Nomenclature, Names, and Designations	1-6	1-2
Oil, Change from MIL-L-7808 to MIL-L-23699 Lubricating - See Change from MIL-L-7808 to MIL-L-23699 Lubricating Oil		
Oil, Change from MIL-L-23699 to MIL-L-7808 Lubricating - See Change from MIL-L-23699 to MIL-L-7808 Lubricating Oil		

INDEX (Continued)

Subject	Para/ Task	Page
Oil Cooler Assembly		
Assemble	8-10	8-33
Clean	8-7	8-29
Disassemble	8-6	8-26
Inspect	8-8	8-31
Install	8-11	8-35
Remove	8-5	8-21
Repair	8-9	8-32
Oil Drain Cock		
Clean	8-85	8-281
Inspect	8-86	8-283
Install	8-87	8-284
Remove	8-84	8-279
Oil Filler Assembly and Oil Filler Strainer		
Assemble	8-21	8-57
Clean	8-18	8-52
Disassemble	8-17	8-50
Inspect	8-19	8-54
Install	8-22	8-60
Remove	8-16	8-47
Repair	8-20	8-56
Oil Filler Strainer, Oil Filler Assembly and - See Oil Filler Assembly and Oil Filler Strainer		
Oil Filler Strainer, Service - See Service Oil Filler Strainer		
Oil Fitter Cap and Stem Assembly and Oil Filter Element		
Clean	8-24	8-66
Inspect	8-25	8-68
Install	8-27	8-70
Remove	8-23	8-63
Repair	8-26	8-69
Oil Filter Cap and Stem Assembly and Oil Filter Element, Service - See Service Oil Filter Cap and Stem Assembly and Oil Filter Element		
Oil Filter Element, Oil Filter Cap and Stem Assembly and - See Oil Filter Cap and Stem Assembly and Oil Filter Element		
Oil Filter Element, Service Oil Filter Cap and Stem Assembly and - See Service Oil Filter Cap and Stem Assembly and Oil Filter Element		
Oil Filter, Service No. 4 and 5 Bearing - See Service No. 4 and 5 Bearing Oil Filter		
Oil Leakage, Check for Static - See Check for Static Oil Leakage		
Oil Level Float Assembly (AVIM)		
Assemble	8-108	8-344
Clean	8-105	8-340
Disassemble	8-104	8-339
Inspect	8-106	8-342
Install	8-109	8-346
Remove	8-103	8-335
Repair	8-107	8-343
Oil Level Indicator		
Adjust	8-102	8-327
Assemble	8-100	8-315
Clean	8-97	8-309
Disassemble	8-96	8-305
Inspect	8-98	8-311
Install	8-101	8-321
Remove	8-95	8-301
Repair	8-99	8-313
Oil Lines - See Hose Assembly and Tube Assembly		
Oil Pump, Adjust - See Adjust Oil Pump		
Oil Pump and Scavenge Oil Screen, Main -See Main Oil Pump and Scavenge Oil Screen		
Oil Screen, Main Oil Pump and Scavenge - See Main Oil Pump and Scavenge Oil Screen		
Oil Screen, Service Scavenge - See Service Scavenge Oil Screen		
Oil Strainer, No. 2 Bearing Pressure - See No. 2 Bearing Pressure Oil Strainer		
Oil Strainer, Service No. 2 Bearing Pressure - See Service No. 2 Bearing Pressure Oil Strainer		
Oil System, Drain Engine - See Drain Engine Oil System		

INDEX (Continued)

Subject	Para Task	Page
Oil System, Inspect Contaminated - See Inspect Contaminated Oil System		
Oil System, Service Engine - See Service Engine Oil System		
Oil Temperature Transmitter		
Clean	8-13	8-43
Inspect	8-14	8-44
Install	8-15	8-45
Remove	8-12	8-41
Oil Tubes (AVIM), No. 4 and 5 Bearing - See No. 4 and 5 Bearing Oil Tubes (AVIM)		
Operation Check, N2 Governor - See N2 Governor Operation Check		
Outlet Cover Assembly, Overspeed Drive and - See Overspeed Drive and Outlet Cover Assembly		
Output Shaft (AVIM)		
Clean	9-7	9-26
Inspect	9-8	9-28
Install	9-10	9-31
Remove	9-6	9-19
Repair	9-9	9-30
Output Shaft Seal and Housing Assembly		
Clean	2-49	2436
Inspect	2-50	2-437
Install	252	2-447
Remove	2-48	2-431
Repair	2-51	2-438
Output Shaft Support Housing (AVIM)		
Assemble	2-62	2-484
Clean	2-60	2-478
Disassemble	2-59	2-470
Inspect	2-61	2-481
Install	2-63	2-490
Remove	2-58	2-465
Overhaul and Retirement Schedule	1-105	1-441
Overspeed (AVIM), Inspect Engine after N1 - See Inspect Engine after N1 Overspeed (AVIM)		
Overspeed (AVIM), Inspect Engine alter N2 - See Inspect Engine after N2 Overspeed (AVIM)		
Overspeed Drive and Outlet Cover Assembly		
Assemble	5-22	5-110
Backlash Check	5-23.1	5-116
Clean	5-19	5-105
Disassemble	5-28	5-101
Inspect	5-20	5-107
Install	5-23	5-114
Remove	5-17	5-99
Repair	5-21	5-109
Overtorque (AVIM), Inspect Engine after Power Turbine - See Inspect Engine after Power Turbine Overtorque (AVIM)		
P		
Package		
Fuel Boost Pump Assembly	6-15	6-56
Fuel Control	6-8	6-36
Package (AVIM), No. 2 Bearing - See No. 2 Bearing Package (AVIM)		
Parts, Repair - See Repair Parts		
Percent Maximum Continuous Power Check, Forty - See Forty Percent Maximum Continuous Power Check		
Percent Maximum Continuous Power Check, Seventy-Five - See Seventy-Five Percent Maximum Continuous Power Check		
Place in Service Field Replacement First and Second Turbine Disc Assembly (AVIM)	4-72	4-469
Power, Adjust Maximum - See Adjust Maximum Power		
Power Check, Maximum - See Maximum Power Check		
Power Check, Maximum Continuous - See Maximum Continuous Power Check		
Power Check, Forty Percent Maximum Continuous - See Forty Percent Maximum Continuous Power Check		

INDEX (Continued)

Subject	Para/ Task	Page
Power Check, Intermediate - See Intermediate Power Check		
Power Check, Seventy-Five Percent Maximum Continuous - See Seventy-Five Percent Maximum Continuous Power Check		
Power Turbine (AVIM), Combustion Section and - See Combustion Section and Power Turbine (AVIM)		
Power Turbine Nozzle (AVIM), Fourth Stage - See Fourth Stage Power Turbine Nozzle (AVIM)		
Power Turbine Overtorque (AVIM), Inspect Engine after - See Inspect Engine after Power Turbine Overtorque (AVIM)		
Power Turbine Rotor (AVIM), Fourth Stage - See Fourth Stage Power Turbine Rotor (AVIM)		
Power Turbine Rotor (AVIM), Third Stage - See Third Stage Power Turbine Rotor (AVIM)		
Practices and Procedures, Standard - See Standard Practices and Procedures		
Practices, Standard Maintenance - See Standard Maintenance Practices		
Preparation for Storage and Shipment.....	1-4	1-2
Preparation for Storage or Shipment, Fuel Boost Pump Assembly - See Fuel Boost Pump Assembly		
Preparation for Storage or Shipment, Fuel Control - See Fuel Control		
Prepare and Inspect Shipping and Storage Container.....	1-112	1-581
Prepare Engine for Shipment or Storage, Preserve and - See Preserve and Prepare Engine for Shipment or Storage		
Preserve		
Fuel Boost Pump Assembly	6-14	6-55
Fuel Control	6-7	6-31
Preserve and Prepare Engine for Shipment or Storage	1-111	1-555
Pressure Oil Strainer, No 2 Bearing - See No. 2 Bearing Pressure Oil Strainer		
Pressure Oil Strainer, Service No. 2 Bearing - See Service No. 2 Bearing Pressure Oil Strainer		
Pressurized Shipping and Storage Container, Inspect -See Inspect Pressurized Shipping and Storage Container		
Prestart Check Procedure	1-107	1-458
Prevent Enemy Use, Destruction of Army Material to - See Destruction of Army Material to Prevent Enemy Use		
Preventive Maintenance Checks and Services		1-239
Primer Tube Assembly		
Clean.....	6-22	6-104
Inspect	6-23	6-106
Install	6-24	6-107
Remove.....	6-21	6-101
Priming, Fuel Control - See Fuel Control Priming		
Principles of Operation		1-13
Procedure, Engine Starting - See Engine Starting Procedure		
Procedure, Normal Shutdown - See Normal Shutdown Procedure		
Procedure, Prestart Check - See Prestart Check Procedure		
Procedures, Maintenance - See Maintenance Procedures		
Procedures, Standard Practices and - See Standard Practices and Procedures		
Procedures, Troubleshooting - See Troubleshooting Procedures		
Pump, Adjust Oil - See Adjust Oil Pump		
Pump and Scavenge Oil Screen, Main Oil - See Main Oil Pump and Scavenge Oil Screen		

INDEX (Continued)

Subject	Para/ Task	Page
Pump Assembly, Fuel Boost - See Fuel Boost Pump Assembly		
Q		
Quality Assurance/Quality Control (QAIQC)	1-5	1-2
Quality Control (QA/QC), Quality Assurance/ - See Quality Assurance/Quality Control (QA/QC)		
R		
Rating, Engine - See Engine Rating		
Receipt, Service Upon - See Service Upon Receipt		
Recommendations (EIR), Reporting Equipment Improvement - See Reporting Equipment Improvement Recommendations (EIR)		
Records and Reports, Maintenance Forms - See Maintenance Forms, Records and Reports		
References		A-1
References, Directional - See Directional References		
Remove		
Accessory Gear Assembly (AVIM)	5-8	5-45
Accessory Gearbox Assembly	5-1	5-3
Air Diffuser Assembly (AVIM)	2-36	2-351
Anti-Icing Air Gallery Cover	2-14	2-51
Check Valve Assembly	8-18.1	8-40.1
Chip Detector	8-88	8-287
Combustion Section and Power Turbine (AVIM)	3-5	3-11
Compressor Bleed Band	2-9	2-41
Compressor Rotor Blades	2-31	2-255
Diffuser Curl	4-73	4-479
Dual Chip Detector	8-28	8-73
Exit Vane Assembly	4-78	4-489
Fireshield Assembly	4-12	4-65
Fireshield Section	4-16	4-79
First Turbine Disc Assembly (AVIM)	4-62	4-397
First Turbine Nozzle (AVIM)	4-67	4-429
Remove (cont)		
Flow Divider and Bracket	6-42	6-159
Fourth Stage Power Turbine Nozzle (AVIM)	4-45	4-269
Fourth Stage Power Turbine Rotor (AVIM)	4-33	4-151
Fuel Boost Pump Assembly	6-9	6-39
Fuel Check Valve	6-46	6-171
Fuel Control	6-1	6-5
Fuel Drain Valve	3-1	3-3
Hose Assembly (Air Diffuser Assembly to Fuel Control)	2-79	2-550
Hose Assembly (Compressor Housing to Inlet Housing)	2-77	2-536
Hose Assembly (Dual Chip Detector to Accessory Gearbox Assembly)	8-42	8-107
Hose Assembly (Dual Chip Detector to Accessory Gearbox Collector)	8-44	8-118
Hose Assembly (Dual Chip Detector to Air Diffuser Assembly)	8-46	8-128
Hose Assembly (Flow Divider Left Side Primary to Manifold Assembly)	6-64	6-223
Hose Assembly (Flow Divider Left Side Secondary to Manifold Assembly)	6-68	6-231
Hose Assembly (Flow Divider Right Side Primary to Manifold Assembly)	6-66	6-227
Hose Assembly (Flow Divider Right Side Secondary to Manifold Assembly)	6-70	6-237
Hose Assembly (Fuel Boost Pump to Main Fuel Filter)	6-60	6-206
Hose Assembly (Fuel Check Valve to Fuel Boost Pump)	6-62	6-214
Hose Assembly (Fuel Control to Oil Cooler)	6-56	6-193
Hose Assembly (Fuel Control to Starting Fuel Solenoid Valve)	6-74	6-250
Hose Assembly (Inlet Housing to Oil Drain Cock)	8-62	8-209
Hose Assembly (Inlet Housing to Oil Scavenge Tee)	8-60	8-204
Hose Assembly (In-Line Fuel Filter to Flow Divider)	6-58	6-199
Hose Assembly (Interstage Air- Bleed Actuator to Air Diffuser Assembly)	2-75	2-532
Hose Assembly (Interstage Air-Bleed Actuator to Fuel Control)	2-73	2-525
Hose Assembly (Main Fuel Filter to Fuel Control)	6-72	6-244
Hose Assembly (Main Oil Pump to Dual Chip Detector)	8-48	8-133

INDEX (Continued)

Subject	Para/ Task	Page
Remove (cont)		
Hose Assembly (Main Oil Pump to Inlet Housing Oil Scavenge Tee)	8-52	8-148
Hose Assembly (Main Oil Pump to No. 4 and 5 Bearing Scavenge Tube Assembly)	8-54	8-156
Hose Assembly (Accessory Gearbox Assembly to Check Valve Assembly)	8-38	8-97
Hose Assembly (Oil Cooler to Inlet Housing)	8-36	8-93
Hose Assembly (Oil Cooler to In-Line Fuel Filter)	6-54	6-189
Hose Assembly (Oil Cooler to Pressure Connector)	8-40	8-103
Hose Assembly (Oil Filter to Starter Drive)	8-64	8-221
Hose Assembly (Pressure Connector to No. 4 and 4 Bearing Filter)	8-58	8-178
Hose Assembly (Starter Drive to Tube and Hose Assembly)	8-66	8-226
Hose Assembly (Starting Fuel Solenoid Valve to Tube Assembly)	6-76	6-256
Hose Assembly (Water Wash Check Valve Elbow to Interstage Air-Bleed Actuator T/C Inlet)	2-80.7	
Hose Assembly (Water Wash Check Valve Reducer to Interstage Air-Bleed Actuator P3 Inlet)	2-80.3	
Hose Assembly (Water Wash Tee Check Valve to Interstage Air-Bleed Actuator P3 Inlet)	2-80.5	
Hose Assembly (Water Wash Kit Installation to Interstage Airframe Quick Disconnect Shelf)	2-80.9	
Ignition Coil and Cable Assembly	7-1	7-3
Ignition Exciter	7-11	7-85
Inlet Housing Cover Assembly (AVIM)	2-53	2-455
In-Line Fuel Filter Assembly	6-36	6-141
Interstage Air-bleed Actuator (With Water Wash Kit P/N 2-300-071-54 Installed)	2-1.1	2-11.1
Interstage Air-Bleed Actuator (Without Water Wash Kit P/N 2-200-011-54 Installed)	2-1	2-5
Left-and Right-Hand Bus Bar Assemblies	4-7	4-35
Left-and Right-Hand Fuel Manifold Assemblies	6-16	6-57
Lower Compressor Housing	2-20	2-104
Main Electrical Cable Assembly (Nine Connector)	7-16	7-99
Remove (cont)		
Main Electrical Cable Assembly (Six Connector)	7-16.1	7-110.1
Main Fuel Filter and Bracket	6-29	6-119
Main Oil Pump and Scavenge Oil Screen	8-1	8-7
No. 2 Bearing Package (AVIM)	2-42	2-395
No. 2 Bearing Pressure Oil Strainer	8-76	8-257
No. 3 Bearing Package Seals (AVIM)	2-67	2-501
No. 4 and 5 Bearing Filter	8-80	8-263
No. 4 and 5 Bearing Oil Tubes (AVIM)	4-41	4-245
No. 4 and 5 Bearing Package (AVIM)	4-37	4-185
Oil Cooler Assembly	8-5	8-21
Oil Drain Cock	8-84	8-279
Oil Filler Assembly and Oil Filler Strainer	8-16	8-47
Oil Filter Cap and Stem Assembly and Oil Filter Element	8-23	8-63
Oil Level Float Assembly (AVIM)	8-103	8-335
Oil Level Indicator	8-95	8-301
Oil Pump Check Valve (AVIM)	8-4.1	8-20.1
Oil Temperature Transmitter	8-12	8-41
Output Shaft (AVIM)	9-6	9-19
Output Shaft Seal and Housing Assembly	2-48	2-431
Output Shaft Support Housing (AVIM)	2-58	2-465
Overspeed Drive and Outlet Cover Assembly	5-17	5-99
Primer Tube Assembly	6-21	6-101
Seal	5-5.2	5-24.2
Seal and Liner Assembly	5-5.1	5-24.1
Seal Assembly	5-5.5	5-24.5
Second Turbine Disc Assembly (AVIM)	4-53	4-313
Second Turbine Nozzle, Spacer, and Case (AVIM)	4-57	4-335
Spark Igniters	7-6	7-69
Start Fuel Nozzles	6-25	6-111
Starter Drive Assembly	5-12	5-81
Starter Gearbox Filter	8-72	8-249
Starting Fuel Solenoid Valve	6-49	6-177
Stator Vane Assemblies	2-26	2-219
Thermocouple Harness Assemblies (AVIM)	4-20	4-97
Thermocouple Jumper Lead	4-1	4-5
Third Turbine Nozzle and Support (AVIM)	4-26	4-123
Torquemeter Head Assembly (AVIM)	9-11	9-39
Torquemeter Junction Box (AVIM)	9-1	9-3
Tube and Hose Assembly (Accessory Gearbox Collector to Tube Assembly)	8-68	8-231
Tube Assembly (Hose Assembly to Primer Tube Assembly)	6-78	6-262

INDEX (Continued)

Subject	Para/ Task	Page
Remove: (cont)		
Tube Assembly (Inlet Housing to Main Oil Pump)	8-50	8-137
Tube Assembly (No. 4 and 5 Bearing Scavenge Connector to Hose Assembly)	8-56	8-162
Tube Assembly (Tube and Hose Assembly to Accessory Gearbox Assembly)	8-70	8-243
Tube Assembly (Water Wash Check Valve to Air Diffuser Assembly)	2-80.3	
Upper Compressor Housing	2-19	2-71
Remove Engine from Maintenance Stand	1-29	1-105
Remove Engine from Shipping and Storage Container	1-26	1-63
Remove Engine Maintenance Sling	1-31	1-116
Repair		
Accessory Gearbox Assembly	6-5	6-24
Air Diffuser Assembly	2-40	2-375
Air Diffuser Assembly (AVIM)	2-39	2-371
Air Inlet Housing Assembly	2-66	2-499
Anti-Icing Ar Gallery Cover	2-17	2-60
Combustion Chamber Housing (AVIM)	3-21	3-217
Combustion Chamber Liner (AVIM)	3-18	3-197
Combustion Chamber Vane Assembly (AVIM)	3-15	3-180
Compressor Bleed Band	2-12	2-46
Compressor Housing	2-23	2-147
Compressor Rotor Blades	2-34	2-312
Diffuser Curl	4-76	4-485
Dual Chip Detector	8-32	8-83
Exit Valve Assembly	4-81	4-501
First Turbine Disc Assembly (AVIM)	4-65	4-410
First Turbine Rotor Case (AVIM)	4-70	4-445
Fourth Stage Power Turbine Nozzle (AVIM)	4-48	4-280
Fuel Boost Pump Assembly	6-12	6-44
Fuel Control	6-4.1	6-18.1
Ignition Coil and Cable Assembly	7-4	7-35
Ignition Exciter	7-14	7-92
Inlet Housing Cover Assembly (AVIM)	2-56	2-460
Interstage Air-Bleed Actuator	2-5	2-18
Repair (cont)		
Left- and Right-Hand Fuel Manifold Assemblies	6-19	6-72Main
Electrical Cable Assembly (Nine Connector)	7-19	7-115
Main Electrical Cable Assembly (Six Connector)	7-19 1	7-116
Main Fuel Filter and Bracket (Ten Bolt Holes)	6-33	6-132
Main Fuel Filter and Bracket (Eight Bolt Holes)	6-33 1	6-132.1
Oil Cooler Assembly	8-9	8-32
Oil Filter Assembly and Oil Filter Strainer	8-20	8-56
Oil Filter Cap and Stem Assembly and Oil Filter Element	8-26	8-69
Oil Level Float Assembly (AVIM)	8-107	8-343
Oil Level Indicator	8-99	8-313
Output Shaft (AVIM)	9-9	9-30
Output Shaft Seal and Housing Assembly	2-51	2-438
Overspeed Drive and Outlet Cover Assembly	5-21	5-109
Second Turbine Nozzle, Spacer, and Case (AVIM)	4-60	4-369
Spark Igniters	7-9	7-75
Starter Drive Assembly	5-15	5-87
Starting Fuel Solenoid Valve	6-52	6-183
Stator Vane Assemblies	2-29	2-232
Thermocouple Harness Assemblies (AVIM)	4-23	4-105
Thermocouple Jumper Lead	4-4	4-14
Third Stage Power Turbine Rotor (AVIM)	4-52	4-309
Third Turbine Nozzle and Support (AVIM)	4-30	4-140
Torquemeter Junction Box (AVIM)	9-4	9-11
Torquemeter Head Assembly (AVIM)	9-13.1	9-48.2
Repair Parts	1-24	1-42
Repair Parts; Special Tools; Test, Measurement, and Diagnostic Equipment (TMDE), and Support Equipment		1-41
Repair Splines and Gears, Clean, Inspect and - See Clean, Inspect and Repair Splines and Gears		
Reporting Equipment Improvement Recommendations (EIR)	1-7	1-3
Reports, Maintenance Forms, Records and - See Maintenance Forms, Records and Reports		

INDEX (Continued)

Subject	Para/ Task	Page
Represerve Engine In Storage Over Six Months	1-115	1-620
Retirement Schedule, Overhaul and - See Overhaul and Retirement Schedule		
Right- and Left-Hand Bus Bar Assemblies - See Left- and Right-Hand Bus Bar Assemblies		
Rotor (AVIM), Fourth Stage Power Turbine - See Fourth Stage Power Turbine Rotor (AVIM)		
Rotor (AVIM), Third Stage Power Turbine - See Third Stage Power Turbine Rotor (AVIM)		
Rotor Blades, Compressor - See Compressor Rotor Blades		
Rotor Case (AVIM), First Turbine - See First Turbine Rotor Case (AVIM)		
RTV in First Stage Stator Vane Assembly, Install	2-30.1	2-253.1
S		
Safety, Care, and Handling	1-12	1-11
Scavenge Oil Screen, Main Oil Pump and - See Main Oil Pump and Scavenge Oil Screen		
Scavenge Oil Screen, Service - See Service Scavenge Oil Screen		
Schedule, Overhaul and Retirement - See Overhaul and Retirement Schedule		
Scope	1-1	1-1
Scratching, Gouging, or Wear, Determine Depth of Damage from Chafing, Denting - See Determine Depth of Damage from Chafing, Denting, Scratching, Gouging, or Wear		
Screen, Main Oil Pump and Scavenge Oil - See Main Oil Pump and Scavenge Oil Screen		
Screen, Service Scavenge Oil - See Service Scavenge Oil Screen		
Seal and Housing Assembly. Output Shaft - See Output Shaft Seal and Housing Assembly		
Seal Leakage (No. 2 Bearing Package) (AVIM), Check for - See Check for Seal Leakage (No. 2 Bearing Package) (AVIM)		
Seal Leakage (No. 4 and 5 Bearing) (AVIM), Check for - See Check for Seal Leakage (No. 4 and 5 Bearing) (AVIM)		
Seals (AVIM), No. 4 and 5 Bearing Package - See No. 4 and 5 Bearing Package Seals (AVIM)		
Second Turbine Disc Assembly (AVIM)		
Clean	4-54	4-320
Inspect	4-55	4-322
Install	4-56	4-324
Remove	4-53	4-313
Second Turbine Nozzle, Spacer, and Case (AVIM)		
Clean	4-58	4-345
Inspect	4-59	4-347
Install	4-61	4-387
Remove	4-57	4-335
Repair	4-60	4-369
Section, Accessory Gear - See Accessory Gear Section		
Section, Combustion - See Combustion Section		
Section, Compressor - See Compressor Section		
Section, Turbine - See Turbine Section		
Service Accessory Gearbox Chip Detector	1-86	1-268
Service Dual Chip Detector	1-86	1-270
Service Engine Oil System	1-74	1-221
Service Fuel Control Filter and Air-Bleed Poppet Valve	1-101	1-414
Service In-Line Fuel Filter	1-103	1-429
Service Interstage Air-Bleed Actuator Strainer	1-104	1-434

INDEX (Continued)

Subject	Para/ Task	Page
Service Main Fuel Filter	1-102	1-425
Service No 2 Bearing Pressure Oil Strainer	1-97	1-380
Service No 4 and 5 Bearing Oil Filter	1-98	1-384
Service Oil Filler Strainer	1-96	1-375
Service Oil Filter Cap and Stem Assembly and Oil Filter Element	1-99	1-397
Service Scavenge Oil Screen	1-100	1-402
Service Starter Gearbox Filter	1-95	1-371
Service Upon Receipt		1-43
Services, Preventive Maintenance Checks and - See Preventive Maintenance Checks and Services		
Servicing		1-219
Servicing, Minor - See Minor Servicing		
Seventy-Five Percent Maximum Continuous Power Check	1-107	1-493
Shaft (AVIM), Output - See Output Shaft (AVIM)		
Shaft Seal and Housing Assembly, Output - See Output Shaft Seal and Housing Assembly		
Shaft Support Housing (AVIM), Output - See Output Shaft Support Housing (AVIM)		
Shipment, Fuel Boost Pump Assembly, Preparation for Storage or - See Fuel Boost Pump Assembly, Preserve and Package		
Shipment, Fuel Control, Preparation for Storage or - See Fuel Control, Preserve and Package		
Shipment or Storage, Preserve and Prepare Engine for - See Preserve and Prepare Engine for Shipment or Storage		
Shipment, Preparation for Storage and - See Preparation for Storage and Shipment		
Shipping and Storage Container, Inspect Pressurized - See Inspect Pressurized Shipping and Storage Container		
Shipping and Storage Container, Install Engine into - See Install Engine into Shipping and Storage Container		
Shipping and Storage Container, Mark - See Mark Shipping and Storage Container		
Shipping and Storage Container, Prepare and Inspect - See Prepare and Inspect Shipping and Storage Container		
Shipping and Storage Container, Remove Engine from - See Remove Engine from Shipping and Storage Container		
Shutdown Procedure, Normal - See Normal Shutdown Procedure		
Six Months, Represerve Engine in Storage Over - See Represerve Engine in Storage Over Six Months		
Sleeve on Hoses, Install Spiral Chafing - See Install Spiral Chafing Sleeve on Hoses		
Sling, Install Engine Maintenance - See Install Engine Maintenance Sling		
Sling, Remove Engine Maintenance - See Remove Engine Maintenance Sling		
Solenoid Valve, Starting Fuel - See Starting Fuel Solenoid Valve		
Spacer, and Case (AVIM), Second Turbine Nozzle - See Second Turbine Nozzle, Spacer, and Case (AVIM)		

INDEX (Continued)

Subject	Para/ Task	Page
Spark Igniters		
Clean	7-7	7-73
Inspect	7-8	7-74
Install	7-10	7-78
Remove	7-6	7-69
Repair	7-9	7-75
Special Inspections	1-78	1-239
Special Tools, TMDE, and Support Equipment	1-23	1-41
Spiral Chafing Sleeve on Hoses, Install - See Install Spiral Chafing Sleeve on Hoses		
Splines and Gears, Clean, Inspect and Repair - See Clean, Inspect and Repair Splines and Gears		
Stall (Surge), Inspect Engine after Compressor - See Inspect Engine after Compressor Stall (Surge)		
Stand, Install Engine on Maintenance - See Install Engine on Maintenance Stand		
Stand, Remove Engine from Maintenance - See Remove Engine from Maintenance Stand		
Standard Maintenance Practices	1-117	1-627
Standard Practices and Procedures		1-627
Standard Torque Limits		1-623
Standard Torque Values	1-116	1-623
Start Fuel Nozzles		
Clean	6-26	6-114
Inspect	6-27	6-115
Install	6-28	6-116
Remove	6-25	6-111
Starter Drive Assembly		
Clean	5-13	5-85
Inspect	5-14	5-86
Install	5-16	5-95
Remove	5-12	5-81
Repair	5-15	5-87
Starter Gearbox Filter		
Clean	8-73	8-262
Inspect	8-74	8-253
Install	8-75	8-254
Remove	8-72	8-249
Starter Gearbox Filter, Service - See Service Starter Gearbox Filter		
Starting Fuel Solenoid Valve		
Clean	6-50	6-181
Inspect	6-51	6-182
Install	6-53	6-184
Remove	6-49	6-177
Repair	6-52	6-183
Starting Procedure, Engine - See Engine Starting Procedure		
Static Oil Leakage, Check for - See Check for Static Oil Leakage		
Stator Vane Assemblies		
Clean	2-27	2-228
Inspect	2-28	2-230
Install	2-30	2-234
Remove	2-26	2-219
Repair	2-29	2-232
Stem Assembly and Oil Filter Element, Oil Filter Cap and - See Oil Filter Cap and Stem Assembly and Oil Filter Element		
Stem Assembly and Oil Filter Element, Service Oil Filter Cap and - See Service Oil Filter Cap and Stem Assembly and Oil Filter Element		
Storage, Activate Engine after - See Activate Engine after Storage		
Storage and Shipment, Preparation for - See Preparation for Storage and Shipment		
Storage Container, Inspect Pressurized Shipping and - See Inspect Pressurized Shipping and Storage Container		

INDEX (Continued)

Subject	Para/ Task	Page
Storage Container, Install Engine into Shipping and - See Install Engine into Shipping and Storage Container		
Storage Container, Mark Shipping and - See Mark Shipping and Storage Container		
Storage Container, Prepare and Inspect Shipping and - See Prepare and Inspect Shipping and Storage Container		
Storage Container, Remove Engine from Shipping and - See Remove Engine from Shipping and Storage Container		
Storage or Shipment, Fuel Boost Pump Assembly, Preparation for - See Fuel Boost Pump Assembly, Preserve and Package		
Storage or Shipment, Fuel Control, Preparation for - See Fuel Control, Preserve and Package		
Storage Over Six Months, Engine in - See Engine in Storage Over Six Months		
Storage, Preserve and Prepare Engine for Shipment or Storage - See Preserve and Prepare Engine for Shipment or Storage		
Strainer, No. 2 Bearing Pressure Oil - See No. 2 Bearing Pressure Oil Strainer		
Strainer, Oil Filler Assembly and Oil Filler - See Oil Filler Assembly and Oil Filler Strainer		
Strainer, Service No. 2 Bearing Pressure Oil - See Service No. 2 Bearing Pressure Oil Strainer		
Strainer, Service Oil Filler - See Service Oil Filler Strainer		
Support (AVIM), Third Turbine Nozzle and - See Third Turbine Nozzle and Support (AVIM)		
Support Equipment, Special Tools, TMDE, and - See Special Tools, TMDE, and Support Equipment		
Support Housing (AVIM), Output Shaft - See Output Shaft Support Housing (AVIM)		
(Surge), Inspect Engine after Compressor Stall - See Inspect Engine after Compressor Stall (Surge)		
Symptom Index	1-32	1-119
System, Drain Engine Oil - See Drain Engine Oil System		
System, Electrical and Ignition - See Electrical and Ignition System		
System, Fuel - See Fuel System		
System, Inspect Contaminated Fuel - See Inspect Contaminated Fuel System		
System, Inspect Contaminated Oil - See Inspect Contaminated Oil System		
System, Lubrication - See Lubrication System		
System, Service Engine Oil - See Service Engine Oil System		
System, Torquemeter - See Torquemeter System		
T		
Temperature Transmitter, Oil - See Oil Temperature Transmitter		
Test		
Chip Detector	8-92	8-294
Dual Chip Detector	8-34	8-87
Left- and Right-Hand Bus Bar Assembles	4-10	4-44
Main Electrical Cable Assembly (Nine Connector)	7-20	7-116.1
Main Electrical Cable Assembly (Six Connector)	7-20.1	7-126
Thermocouple Harness Assemblies (AVIM)	4-24	4-108
Thermocouple Jumper Lead	4-5	4-16
Test Engine (AVIM)	1-107	1-457
Test, Vibration - See Vibration Test		

INDEX (Continued)

Subject	Para/ Task	Page
Thermocouple Harness Assemblies (AVIM)		
Clean	4-21	4-102
Inspect	4-22	4-103
Install	4-25	4-110
Remove	4-20	4-97
Repair	4-23	4-105
Test	4-24	4-108
Thermocouple Jumper Lead		
Clean	4-2	4-11
Inspect	4-3	4-12
Install	4-6	4-21
Remove	4-1	4-5
Repair	4-4	4-14
Test	4-5	4-16
Third Stage Power Turbine Rotor (AVIM)		
Clean	4-50	4-303
Inspect	4-51	4-305
Repair	4-52	4-309
Third Turbine Nozzle and Support (AVIM)		
Assemble	4-31	4-141
Clean	4-28	4-130
Disassemble	4-27	4-128
Inspect	4-29	4-132
Install	4-32	4-143
Remove	4-26	4-123
Repair	4-30	4-140
Time, Check Engine Coastdown - See Check Engine Coastdown Time		
Tools and Equipment, Common - See Common Tools and Equipment		
Tools, TMDE and Support, Special - See Special Tools, TMDE, and Support Equipment		
Torque Limits, Standard - See Standard Torque Limits		
Torque Values, Standard - See Standard Torque Values		
Torquemeter Head Assembly (AVIM)		
Clean	9-12	9-44
Inspect	9-13	9-46
Install	9-14	9-49
Remove	9-11	9-39
Repair	9-13 1	9-48 2
Torquemeter Junction Box (AVIM)		
Clean	9-2	9-8
Inspect	9-3	9-9
Install	9-5	9-13
Remove	9-1	9-3
Repair	9-4	9-11
Torquemeter System	1-21	1-40
Touch Up Magnesium and Magnesium Alloys	1-119	1-642
Transmitter, Oil Temperature - See Oil Temperature Transmitter		
Trim, Adjust Maximum - See Adjust Maximum Trim		
Trim Check, Ground Idle - See Ground Idle Trim Check		
Troubleshooting		1-119
Troubleshooting Procedures	1-33	1-121
Tube and Hose Assembly (Accessory Gearbox Collector to Tube Assembly)		
Install	8-69	8-237
Remove	8-68	8-231
Tube Assembly (Hose Assembly to Primer Tube Assembly)		
Install	6-79	6-267
Remove	6-78	6-262
Tube Assembly (Inlet Housing to Main Oil Pump)		
Install	8-51	8-140
Remove	8-50	8-137
Tube Assembly (No. 4 and 5 Bearing Scavenge Connector to Hose Assembly)		
Install	8-57	8-170
Remove	8-56	8-162
Tube Assembly, Primer - See Primer Tube Assembly		

INDEX (Continued)

Subject	Task	Para/ Page
Tube Assembly (Tube and Hose Assem bly to Accessory Gearbox Assembly)		
Install	8-71	8-246
Remove	8-70	8-243
Tube Assembly (Water Wash Check Valve to Air Diffuser Assembly)		
Install	2-80.2	
Remove	2-80.3	
Tubes (AVIM), No. 4 and 5 Bearing Oil - See No. 4 and 5 Bearing Oil Tubes (AVIM)		
Turbine Disc Assembly (AVIM), First - See First Turbine Disc Assembly (AVIM)		
Turbine Disc Assembly (AVIM), Second - See Second Turbine Disc Assembly (AVIM)		
Third Nozzle and Support (AVIM), Third - See Third Turbine Nozzle and Support (AVIM)		
Turbine Nozzle (AVIM), First - See First Turbine Nozzle (AVIM)		
Turbine Nozzle (AVIM), Fourth Stage Power - See Fourth Stage Power Turbine Nozzle (AVIM)		
Turbine Nozzle, Spacer, and Case (AVIM), Second - See Second Turbine Nozzle, Spacer, and Case (AVIM)		
Turbine Overtorque (AVIM), Inspect Engine after Power - See Inspect Engine after Power Turbine Overtorque (AVIM)		
Turbine Rotor (AVIM), Fourth Stage Power -See Fourth Stage Power Turbine Rotor (AVIM)		
Turbine Rotor (AVIM), Third Stage Power - See Third Stage Power Turbine Rotor (AVIM)		
Turbine Rotor Case (AVIM), First - See First Turbine Rotor Case (AVIM)		
Turbine Section	1-161-20	

Subject	Task	Para/ Page
V		
Values, Standard Torque - See Standard Torque Values		
Valve, Fuel Check - See Fuel Check Valve		
Valve, Fuel Drain - See Fuel Drain Valve		
Valve Assembly, Check - See Check Valve Assembly		
Valve, Starting Fuel Solenoid - See Starting Fuel Solenoid Valve		
Vane Assemblies, Stator - See Stator Vane Assemblies		
Vane Assembly (AVIM), Combustion Chamber - See Combustion Chamber Vane Assembly		
Vane Assembly, Exit - See Exit Vane Assembly		
Vibration Meter Check	1-107	1-475
Vibration Test	1-107	1-474
W		
Wash Compressor (With Water Wash Kit 2-200-271-54 Installed)	1-106.1	1-446 1
Wash Compressor (Without Water Wash Kit 2-200-271-54 Installed)	1-106	1-445
Waveoff Check	1-107	1-492
Wiring Diagram		D-1
Wear, Determine Depth of Damage from Chafing, Denting, Scratching, Gouging, or - See Determine Depth of Damage from Chafing, Denting, Scratching, Gouging, or Wear		

By Order of the Secretary of the Army:

E. C. MEYER
General, United States Army
Chief of Staff

Official:

ROBERT M. JOYCE
Major *General, United States Army*
The Adjutant General

DISTRIBUTION:
To be distributed in accordance with DA Form 12-31, Organizational Maintenance requirements for CH-47 B/C&D Aircraft.

U.S. GOVERNMENT PRINTING OFFICE: 1983-664028/2090

These are the instructions for sending an electronic 2028

The following format must be used if submitting an electronic 2028. The subject line must be exactly the same and all fields must be included; however only the following fields are mandatory: 1, 3, 4, 5, 6, 7, 8, 9, 10, 13, 15, 16, 17, and 27.

From: "Whomever" <whomever@wherever.army.mil>
To: 2028@redstone.army.mil

Subject: DA Form 2028

1. ***From:*** Joe Smith
2. *Unit:* home
3. ***Address:*** 4300 Park
4. ***City:*** Hometown
5. ***St:*** MO
6. ***Zip:*** 77777
7. ***Date Sent:*** 19–OCT–93
8. ***Pub no:*** 55–2840–229–23
9. ***Pub Title:*** TM
10. ***Publication Date:*** 04–JUL–85
11. *Change Number:* 7
12. *Submitter Rank:* MSG
13. ***Submitter FName:*** Joe
14. *Submitter MName:* T
15. ***Submitter LName:*** Smith
16. ***Submitter Phone:*** 123–123–1234
17. ***Problem:*** **1**
18. *Page:* 2
19. *Paragraph:* 3
20. *Line:* 4
21. *NSN:* 5
22. *Reference:* 6
23. *Figure:* 7
24. *Table:* 8
25. *Item:* 9
26. *Total:* 123
27. ***Text:***

This is the text for the problem below line 27.

RECOMMENDED CHANGES TO PUBLICATIONS AND BLANK FORMS

For use of this form, see AR 25–30; the proponent agency is ODISC4.

Use Part II (*reverse)* for Repair Parts and Special Tool Lists (RPSTL) and Supply Catalogs/ Supply Manuals (SC/SM)

DATE: 8/30/02

TO: (*Forward to proponent of publication or form)(Include ZIP Code)*
Commander, U.S. Army Aviation and Missile Command
ATTN: AMSAM–MMC–MA–NP
Redstone Arsenal, AL 35898

FROM: (*Activity and location)(Include ZIP Code)*
MSG, Jane Q. Doe
1234 Any Street
Nowhere Town, AL 34565

PART 1 – ALL PUBLICATIONS (EXCEPT RPSTL AND SC/SM) AND BLANK FORMS

PUBLICATION/FORM NUMBER	DATE	TITLE
TM 9–1005–433–24	16 Sep 2002	Organizational, Direct Support, And General Support Maintenance Manual for Machine Gun, .50 Caliber M3P and M3P Machine Gun Electrical Test Set Used On Avenger Air Defense Weapon System

ITEM NO.	PAGE NO.	PARA–GRAPH	LINE NO. *	FIGURE NO.	TABLE NO.	RECOMMENDED CHANGES AND REASON
1	WP0005 PG 3		2			Test or Corrective Action column should identify a different WP number.

EXAMPLE

** Reference to line numbers within the paragraph or subparagraph.*

TYPED NAME, GRADE OR TITLE	TELEPHONE EXCHANGE/ AUTOVON, PLUS EXTENSION	SIGNATURE
MSG, Jane Q. Doe, SFC	788–1234	

TO: (*Forward direct to addressee listed in publication*)	**FROM:** (*Activity and location) (Include ZIP Code)*	**DATE**
Commander, U.S. Army Aviation and Missile Command ATTN: AMSAM–MMC–MA–NP Redstone Arsenal, AL 35898	MSG, Jane Q. Doe 1234 Any Street Nowhere Town, AL 34565	8/30/02

PART II – REPAIR PARTS AND SPECIAL TOOL LISTS AND SUPPLY CATALOGS/SUPPLY MANUALS

PUBLICATION NUMBER	DATE	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.)*

EXAMPLE

TYPED NAME, GRADE OR TITLE	TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION	SIGNATURE
MSG, Jane Q. Doe, SFC	788–1234	

RECOMMENDED CHANGES TO PUBLICATIONS AND BLANK FORMS For use of this form, see AR 25–30; the proponent agency is ODISC4.	Use Part II (*reverse)* for Repair Parts and Special Tool Lists (RPSTL) and Supply Catalogs/ Supply Manuals (SC/SM)	DATE
TO: (*Forward to proponent of publication or form)(Include ZIP Code)* Commander, U.S. Army Aviation and Missile Command ATTN: AMSAM–MMC–MA–NP Redstone Arsenal, AL 35898	FROM: (*Activity and location)(Include ZIP Code)*	

PART 1 – ALL PUBLICATIONS (EXCEPT RPSTL AND SC/SM) AND BLANK FORMS

PUBLICATION/FORM NUMBER	DATE	TITLE
TM 55–2840–254–23–4	26 April 1983	Engine, Gas Turbine Model T55–L–712

ITEM NO.	PAGE NO.	PARA–GRAPH	LINE NO. *	FIGURE NO.	TABLE NO.	RECOMMENDED CHANGES AND REASON

** Reference to line numbers within the paragraph or subparagraph.*

TYPED NAME, GRADE OR TITLE	TELEPHONE EXCHANGE/ AUTOVON, PLUS EXTENSION	SIGNATURE

TO: (*Forward direct to addressee listed in publication*) Commander, U.S. Army Aviation and Missile Command ATTN: AMSAM–MMC–MA–NP Redstone Arsenal, AL 35898	**FROM:** (*Activity and location) (Include ZIP Code)*	**DATE**

PART II – REPAIR PARTS AND SPECIAL TOOL LISTS AND SUPPLY CATALOGS/SUPPLY MANUALS

PUBLICATION NUMBER	DATE	TITLE
TM 55–2840–254–23–4	26 April 1983	Engine, Gas Turbine, Model T55–L–712

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

RECOMMENDED CHANGES TO PUBLICATIONS AND BLANK FORMS For use of this form, see AR 25–30; the proponent agency is ODISC4.	Use Part II (*reverse)* for Repair Parts and Special Tool Lists (RPSTL) and Supply Catalogs/ Supply Manuals (SC/SM)	DATE
TO: (*Forward to proponent of publication or form)(Include ZIP Code)* Commander, U.S. Army Aviation and Missile Command ATTN: AMSAM–MMC–MA–NP Redstone Arsenal, AL 35898	FROM: (*Activity and location)(Include ZIP Code)*	

PART 1 – ALL PUBLICATIONS (EXCEPT RPSTL AND SC/SM) AND BLANK FORMS

PUBLICATION/FORM NUMBER	DATE	TITLE
TM 55–2840–254–23–4	26 April 1983	Engine, Gas Turbine Model T55–L–712

ITEM NO.	PAGE NO.	PARA–GRAPH	LINE NO. *	FIGURE NO.	TABLE NO.	RECOMMENDED CHANGES AND REASON

** Reference to line numbers within the paragraph or subparagraph.*

TYPED NAME, GRADE OR TITLE	TELEPHONE EXCHANGE/ AUTOVON, PLUS EXTENSION	SIGNATURE

TO: (*Forward direct to addressee listed in publication*) Commander, U.S. Army Aviation and Missile Command ATTN: AMSAM–MMC–MA–NP Redstone Arsenal, AL 35898	**FROM:** (*Activity and location) (Include ZIP Code)*	**DATE**

PART II – REPAIR PARTS AND SPECIAL TOOL LISTS AND SUPPLY CATALOGS/SUPPLY MANUALS

PUBLICATION NUMBER	DATE	TITLE
TM 55–2840–254–23–4	26 April 1983	Engine, Gas Turbine, Model T55–L–712

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

RECOMMENDED CHANGES TO PUBLICATIONS AND BLANK FORMS For use of this form, see AR 25–30; the proponent agency is ODISC4.	Use Part II (*reverse)* for Repair Parts and Special Tool Lists (RPSTL) and Supply Catalogs/ Supply Manuals (SC/SM)	DATE
TO: (*Forward to proponent of publication or form)(Include ZIP Code)* Commander, U.S. Army Aviation and Missile Command ATTN: AMSAM–MMC–MA–NP Redstone Arsenal, AL 35898	FROM: (*Activity and location)(Include ZIP Code)*	

PART 1 – ALL PUBLICATIONS (EXCEPT RPSTL AND SC/SM) AND BLANK FORMS

PUBLICATION/FORM NUMBER	DATE	TITLE
TM 55–2840–254–23–4	26 April 1983	Engine, Gas Turbine Model T55–L–712

ITEM NO.	PAGE NO.	PARA–GRAPH	LINE NO. *	FIGURE NO.	TABLE NO.	RECOMMENDED CHANGES AND REASON

** Reference to line numbers within the paragraph or subparagraph.*

TYPED NAME, GRADE OR TITLE	TELEPHONE EXCHANGE/ AUTOVON, PLUS EXTENSION	SIGNATURE

TO: (*Forward direct to addressee listed in publication*) Commander, U.S. Army Aviation and Missile Command ATTN: AMSAM–MMC–MA–NP Redstone Arsenal, AL 35898	**FROM:** (*Activity and location) (Include ZIP Code)*	**DATE**

PART II – REPAIR PARTS AND SPECIAL TOOL LISTS AND SUPPLY CATALOGS/SUPPLY MANUALS

PUBLICATION NUMBER	DATE	TITLE
TM 55–2840–254–23–4	26 April 1983	Engine, Gas Turbine, Model T55–L–712

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

The Metric System and Equivalents

Linear Measure

1 centimeter = 10 millimeters = .39 inch
1 decimeter = 10 centimeters = 3.94 inches
1 meter = 10 decimeters = 39.37 inches
1 dekameter = 10 meters = 32.8 feet
1 hectometer = 10 dekameters = 328.08 feet
1 kilometer = 10 hectometers = 3,280.8 feet

Weights

1 centigram = 10 milligrams = .15 grain
1 decigram = 10 centigrams = 1.54 grains
1 gram = 10 decigram = .035 ounce
1 decagram = 10 grams = .35 ounce
1 hectogram = 10 decagrams = 3.52 ounces
1 kilogram = 10 hectograms = 2.2 pounds
1 quintal = 100 kilograms = 220.46 pounds
1 metric ton = 10 quintals = 1.1 short tons

Liquid Measure

1 centiliter = 10 milliters = .34 fl. ounce
1 deciliter = 10 centiliters = 3.38 fl. ounces
1 liter = 10 deciliters = 33.81 fl. ounces
1 dekaliter = 10 liters = 2.64 gallons
1 hectoliter = 10 dekaliters = 26.42 gallons
1 kiloliter = 10 hectoliters = 264.18 gallons

Square Measure

1 sq. centimeter = 100 sq. millimeters = .155 sq. inch
1 sq. decimeter = 100 sq. centimeters = 15.5 sq. inches
1 sq. meter (centare) = 100 sq. decimeters = 10.76 sq. feet
1 sq. dekameter (are) = 100 sq. meters = 1,076.4 sq. feet
1 sq. hectometer (hectare) = 100 sq. dekameters = 2.47 acres
1 sq. kilometer = 100 sq. hectometers = .386 sq. mile

Cubic Measure

1 cu. centimeter = 1000 cu. millimeters = .06 cu. inch
1 cu. decimeter = 1000 cu. centimeters = 61.02 cu. inches
1 cu. meter = 1000 cu. decimeters = 35.31 cu. feet

Approximate Conversion Factors

To change	*To*	*Multiply by*	*To change*	*To*	*Multiply by*
inches	centimeters	2.540	ounce-inches	Newton-meters	.007062
feet	meters	.305	centimeters	inches	.394
yards	meters	.914	meters	feet	3.280
miles	kilometers	1.609	meters	yards	1.094
square inches	square centimeters	6.451	kilometers	miles	.621
square feet	square meters	.093	square centimeters	square inches	.155
square yards	square meters	.836	square meters	square feet	10.764
square miles	square kilometers	2.590	square meters	square yards	1.196
acres	square hectometers	.405	square kilometers	square miles	.386
cubic feet	cubic meters	.028	square hectometers	acres	2.471
cubic yards	cubic meters	.765	cubic meters	cubic feet	35.315
fluid ounces	milliliters	29,573	cubic meters	cubic yards	1.308
pints	liters	.473	milliliters	fluid ounces	.034
quarts	liters	.946	liters	pints	2.113
gallons	liters	3.785	liters	quarts	1.057
ounces	grams	28.349	liters	gallons	.264
pounds	kilograms	.454	grams	ounces	.035
short tons	metric tons	.907	kilograms	pounds	2.205
pound-feet	Newton-meters	1.356	metric tons	short tons	1.102
pound-inches	Newton-meters	.11296			

Temperature (Exact)

°F	Fahrenheit temperature	5/9 (after subtracting 32)	Celsius temperature	°C

PIN: 053082-000