TECHNICAL MANUAL

AVIATION UNIT AND AVIATION INTERMEDIATE TROUBLESHOOTING MANUAL CH-47D HELICOPTER

This copy is a reprint which includes current pages from Changes 1 through 10.

HEADQUARTERS, DEPARTMENT OF THE ARMY

10 MAY 1983

WARNING AND FIRST AID DATA.

Warnings, cautions, and notes emphasize Important 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 helicopter.

Dangerous Static Charges. Ground the helicopter during parking, fueling, or defueling.

Dangerous Voltages Exit in the Electronic Equipment. Be careful when working on the 150- and 300-volt dc circuits and on the ac generator 115- and 200 volt ac outputs.

Dangerous Voltage may Exit at Antenna Terminals. Be careful when working near the antenna or the antenna terminals. Radio-frequency (rf) high voltages exist at these points when transmitters are operating. Contact with radiating antennas can cause serious rf burns.

Poisonous Carbon Monoxide Fumes. Toxic carbon monoxide fumes may be present inside the helicopter whenever the apu or engines are operating with the cargo ramp open. Ventilate the cockpit.

Dangerous Fuel Handing. Incorrect fuel handling causes fire hazards. Ground the helicopter when fueling or defueling.

Corrosive Battery Electrolyte (Potassium Hydroxide). Wear rubber gloves, apron, and face shield when handling leaking batteries. If potassium hydroxide is spilled on clothing, or other material wash immediately with clean water. If personnal contact is made, immediately start flushing the affected area with clean water. Continue washing until medical assistance arrives,

Acids and Alkalines. Do not add water to acids. A violent action will result. Acids should be added to water in small quantities. Ruststripper is an alkaline solution. Avoid contact with the skin. Wear protective clothing. Wash thoroughly after using.

Solvent and Cleaning Solutions. These materials are generally toxic and many (toluene. benzene, xylene, methyl-ethyl-ketone, perchlorethylene, naphtha, trichloroethylene) are highly flammable. Work in a well ventilated area away from open flames. Avoid inhaling fumes and prolonged contact with the skin. Wear protective clothing and goggles. Wash thoroughly after using.

Windshield Repellant. Do not let windshield rain repellant contact open flame. Deadly hydrogen fluoride gas could be generated. Wash hands with soap and water after handling repellant.

Antiseize Compounds. Some antiseize compounds are irritants. Avoid inhaling fumes and contact with the skin. Wear protective clothing. Wash thoroughly after using.

Paints, Varnishes, Dopes, Thinners, Lubricants, and Fuels. These materials are generally highly flammable and may be irritants. Work in a well ventilated area away from open flames. Avoid inhaling fumes and prolonged contact with the skin. Wash thoroughly after using.

Epoxy Resins, Cements, and Adhesives. These materials may contain toxic or irritating substances They may also be flammable. Work in a well ventilated area away from open flames. Wear protective clothing. Avoid contact with the skin. Wash thoroughly after using.

Radiation Hazard. Some instruments contain radioactive material. (See TB 55-1500-314-25.) Do not try to disassemble these instruments. They present no radiation hazard unless seal is broken. If you think seal is broken, do not remove instrument from aircraft until you consult Base Radioactive Protection Officer (AR 40-15). Use a beta-gamma radiac meter AN/PDR-27 or equivalent to determine if instrument contains radioactive material (radium).

Fin Extinguishing Agents. Avoid repeated or prolonged exposure to high concentration of bromochloromethane (CB) or decomposition products. CB is a narcotic agent of moderate intensity but prolonged duration. It is less toxic than carbon tetrachloride, methylbromide, or products of combustion, Take normal precautions while using bromochloromethane. Use oxygen masks when available. Monobromotrifluoromethane (CF_3Br) is highly volatile but is not easily detected by its odor. Although nontoxic, it is about the same as other freons and carbon dioxide, causing danger to personnel primarily by reduction of oxygen available for proper breathing. Do not allow the liquid to come into contact with your skin. It may cause frostbite or low temperature burns.

Noise. Sound pressure levels in this aircraft during some operating conditions exceed the Surgeon General's hearing conservation criteria, as defined in TB MED 251. Hearing protection devices, such as the aviator helmet or ear plugs. are required to be worn by all personnel in and around the aircraft during its operation.

FOD. Make sure area is clear of foreign objects before closing access doors, panels, and fairings. If the area is not cleared, damage to components and systems could result in personal injury or death.

Hydraulic Pressures. High pressures used in testing hydraulic components can cause line rupture or component failure. Only qualified personnel shall operate, service and maintain hydraulic test equipment. Use heavy plastic shielding, 1/2-inch thickness or more, when applying pressures over 250 psi, to prevent injury to personnel.

Compressed Air. Do not use more than 30 psi compressed air for cleaning purposes. Debris trajected under pressure can cause injury to eyes. Use source of compressed air under 30 psi and eye protection to prevent injury to personnel.

Flare Dispenser. Remove all power from helicopter before installing loaded payload module on dispenser assembly. Keep hands and face away from end of payload module during installation. Flares can accidentally fire, sometimes from stray voltage, resulting in injury or death,

URGENT

CHANGE

NO. 20

Aviation Unit and Aviation Intermediate Troubleshooting Manual

CH-47D HELICOPTER

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A through C/(D blank)	A through C/(D blank)
Blank and 8-298	Blank and 8-298
8-299 through 8-304	8-299 through 8-304

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

TM 55-1520-240-T-2
C 20

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Official:

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NO. 19

TM 55-1520-240-T-2
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Aviation Unit and Aviation Intermediate
Troubleshooting Manual

CH-47D HELICOPTER

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Remove pages	Insert pages
A through C/(D blank)	A through C/(D blank)
i through iii/(iv blank)	i through iii/(iv blank)
8-2.1 through 8-2.10	8-2.1 through 8-2.10.2
8-29 and 8-30	8-29 and 8-30
-----	8-30.1/(8-30.2 blank)
8-31 and 8-32	8-31 and 8-32
blank/8-34	blank/8-34
-----	8-36.1 and 8-36.2
8-37 and 8-38	8-37 and 8-38
-----	8-40.1 and 8-40.2
8-41 and 8-42	8-41 and 8-42
8-42.1/(8-42.2 blank)	8-42.1 through 8-42.3/(8-42.4 blank)
8-43 and 8-44	8-43 and 8-44
-----	8-44.1 and 8-44.2
8-45 and 8-46	8-45 and 8-46
blank/8-48	blank/8-48
-----	8-48.1 through 8-48.3/(8-48.4 blank)
8-49 through 8-52	8-49 through 8-52
-----	8-54.1 through 8-54.3/(8-54.4 blank)
8-55 and 8-56	8-55 and 8-56
-----	8-58.1 and 8-58.2
8-59/(8-60 blank)	8-59 and 8-60
8-61 and 8-62	8-61 and 8-62
-----	8-62.1/(8-62.2 blank)
8-63 through 8-68	8-63 through 8-68
-----	8-68.1 and 8-68.2
8-69 through 8-71/(8-72 blank)	8-69 through 8-72
-----	8-72.1/(8-72.2 blank)
8-73 and 8-74	8-73 and 8-74
8-74.1/(8-74.2 blank)	8-74.1 through 8-74.3/(8-74.4 blank)
blank/8-76	blank/8-76
-----	8-76.1/(8-76.2 blank)
8-77 and 8-78	8-77 and 8-78
8-81 through 8-84	8-81 through 8-84
-----	8-84.1 and 8-84.2
8-85 and 8-86	8-85 and 8-86
-----	8-86.1 and 8-86.2
	8-87 through 8-98
8-101 and 8-102	8-101 and 8-102
-----	8-102.1 and 8-102.2
8-103 and 8-104	8-103 and 8-104
-----	8-104.1 and 8-104.2
8-105 and 8-106	8-105 and 8-106
-----	8-106.1 and 8-106.2
8-107 through 8-110	8-107 through 8-110
-----	8-110.1 and 8-110.2
8-111 and 8-112	8-111 and 8-112
-----	8-114.1 through 8-114.3/(8-114.4 blank)
8-115 and 8-116	8-115 and 8-116
-----	8-118.1 through 8-118.3/(8-118.4 blank)
8-119 and 8-120	8-119 and 8-120
8-120.1 through 8-120.5/(8-120.6 blank)	8-120.1 through 8-120.5/(8-120.6 blank)
8-127 through 8-133/(8-134 blank)	8-127 through 8-133/(8-134 blank)
8-151 through 8-154	8-151 through 8-154
8-159 through 8-164	8-159 through 8-164
8-171 and 8-172	8-171 and 8-172
blank/8-174	blank/8-174
8-177 and 8-178	8-177 and 8-178
8-191 and 8-192	8-191 and 8-192
blank/8-194	blank/8-194
8-197 and 8-198	8-197 and 8-198
8-215 through 8-218	8-215 through 8-218
8-221 through 8-224	8-221 through 8-224
8-233 and 8-234	8-233 and 8-234
-----	8-234.1 and 8-234.2
8-235 and 8-236	8-235 and 8-236
-----	8-236.1 and 8-236.2
8-237 and 8-238	8-237 and 8-238
8-241 and 8-242	8-241 and 8-242
-----	8-244.1 and 8-244.2
blank/8-246 through 8-252	8-245 through 8-252
8-259 and 8-260	8-259 and 8-260
8-263 and 8-264	8-263 and 8-264
8-265 through 8-270	8-265 through 8-270
8-273 through 8-294	8-273 through 8-294
8-294.1 and 8-294.2	8-294.1 and 8-294.2
8-347 and 8-352	8-347 through 8-352
blank/8-356 through 8-358	blank/8-356 through 8-358
blank/8-362	blank/8-362
9-2.1 and 9-2.2	9-2.1 and 9-2.2
-----	9-2.2.1/(9-2.2.2 blank)
9-2.5 through 9-2.8	9-2.5 through 9-2.8
-----	9-2.8.1/(9-2.8.2 blank)
9-2.11 and 9-2.12	9-2.11 and 9-2.12
9-2.15/(9-2.16 blank)	9-2.15 and 9-2.16
9-2.17 and 9-2.18	9-2.17 through 9-2.19/(9-2.20 blank)
9-3 through 9-6	9-3 through 9-6
9-6.1 and 9-6.2	9-6.1 through 9-6.6
9-9 through 9-16	9-9 through 9-16
-----	9-16.1 and 9-16.2
9-17 and 9-18	9-17 and 9-18
blank/9-20 through 9-34	blank/9-20 through 9-34

Remove pages	Insert pages
blank/9-46 through 9-50	blank/9-46 through 9-50
9-55 through 9-62	9-55 through 9-62
9-65 through 9-72	9-65 through 9-72
9-72.1 through 9-72.4	9-72.1 through 9-72.4
9-73 through 9-98	9-73 through 9-98
blank/9-98.2 and 9-98.3/(9-98.4 blank)	blank/9-98.2 and 9-98.3/(9-98.4 blank)
9-109 through 9-114	9-109 through 9-114
9-117 through 9-120	9-117 through 9-120
9-123 through 9-138	9-123 through 9-138
9-167 through 9-174	9-167 through 9-174
9-177 and 9-178	9-177 and 9-178
9-178.1 through 9-178.7/(9-178.8 blank)	9-178.1 through 9-178.8
9-179 through 9-182	9-179 through 9-182
9-184.1 and 9-184.2	9-184.1 and 9-184.2
9-185/(9-186 blank)	9-185/(9-186 blank)
9-186.1 through 9-186.4	9-186.1 through 9-186.4
9-186.7/(9-186.8 blank)	9-186.7/(9-186.8 blank)
9-187 through 9-190	9-187 through 9-190
blank/9-192 through 9-194	blank/9-192 through 9-194
9-197 and 9-198	9-197 and 9-198
9-198.1 through 9-198.4	9-198.1 through 9-198.4
9-198.7/(9-198.8 blank)	9-198.7/(9-198.8 blank)
9-199 through 9-204	9-199 through 9-204
9-207 and 9-208	9-207 and 9-208
9-211 and 9-212	9-211 and 9-212
9-212.1 through 9-212.7/(9-212.8 blank)	9-212.1 through 9-212.7/(9-212.8 blank)
9-321 and 9-322	9-321 and 9-322
9-322.1/(9-322.2 blank)	9-322.1 and 9-322.2
9-323 through 9-338	9-323 through 9-338
-----	9-338.1/(9-338.2 blank)
9-339 and 9-340	9-339 and 9-340
9-340.1/(9-340.2 blank)	9-340.1 and 9-340.2
9-359 through 9-362	9-359 through 9-362
Index-1 through Index-9/(10 blank)	Index-1 through Index-9/(10 blank)

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NO. 18

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CH-47D HELICOPTER'

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A/(B Blank)	a/(b blank)
iii/(iv blank)	iii/(ii blank)
vii and viii	vii and viii
Index 5 and Index 6	Index 5 and Index 6

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i through iii/(iv blank)	i through iii/(iv blank)
8-311 and 8-312	8-311 and 8-312
Blank/8-314 through 8-316	Blank/8-314 through 8-316
9-99 through 9-104	9-99 through 9-104
---	9-104.1 and 9-104.2
9-105 and 9-106	9-105 and 9-106
9-178.1 through 9-178.4	9-178.1 through 9-178.4
9-178.7/(9-178.8 blank)	9-178.7/(9-178.8 blank)
9-198.1 through 9-198.4	9-198.1 through 9-198.4
9-198.7/(9-198.8 blank)	9-198.7/(9-198.8 blank)

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Iii/(iv blank)	iii/(iv blank)
vii and viii	vii and viii
1-15 and 1-16	1-15 and 1-16
Index-3 and Index-4	Index-3 and Index-4
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iii/(iv blank)	iii/i blank)
vii and viii	vii and viii
8-3 and 84	83 and 84
-.-.--	8-4.1 / (8-4.2 blank)
96.1 and 96.2	96.1 and 9-6.2
9-59 thru 9-62	9-59 thru 962
-.--	9-62.1 / (962.2 blank)
9-226.1 and 9-226.2	9-226.1 and 9226.2
9226.3 / (9226.4 blank)	
blank / 9-228.8 thru 9228.10	blank / 9-228.8 thru 9-228.10
9-228.13 thru 9-228.19 / (9-228.20 blank)	9-228.13 thru 9-228.20
Index-1 thru Index-8	Index-1 thru Index-9 / (Index-10 blank)

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i and ii	i and ii
9-2.1 and 9-2.2	9-2.1 and 9-2.2
9-6.1 and 9-6.2	9-6.1 and 9-6.2
- - - -	9-226.1 and 9-226.2
9-227 and 9-228	9-227 and 9-228
- - - -	9-375 through 9-382
Index-5 and Index-6	Index-5 and Index-6
2028's and Envelopes	2028's and Envelopes

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CH-47 HELICOPTER

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8-87 and 8-88	8-87 and 8-88
8-103 through 8-106	8-103 through 8-106
8-123 and 8-124	8-123 and 8-124

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TM 55-1520-240-T
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CH-47 HELICOPTER

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Remove pages	Insert pages
vii/(viii blank)	vii and viii
8-2.5 through 8-2.8	8-2.5 through 8-2.8
8-101 through 8-104	8-101 through 8-104
8-149 and 8-150	8-149 and 8-150
8-157 and 8-158	8-157 and 8-158
8-181 and 8-182	8-181 and 8-182
8-231 and 8-232	8-231 and 8-232
8-262	8-262
9-53 and 9-54	9-53 and 9-54
9-61 and 9-62	9-61 and 9-62
9-177 and 9-178	9-177 and 9-178
9-197 and 9-198	9-197 and 9-198
9-227 and 9-228	9-227 and 9-228
9-321 and 9-322	9-321 and 9-322
9-322.1/(9-322.2 blank)	9-322.1/(9-322.2 blank)

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NO. 11

TM 55-1520-240-T-2
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CH-47D HELICOPTER

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Remove pages	Insert pages
8-263 and 8-264	8-263 and 8-264
8-291 through 8-294	8-291 through 8-294
- - - -	9-184.1 and 9-184.2
9-185 and 9-186	9-185/(9-186 blank)
9-186.3 through 9-186.7/ (9-186.8 blank)	9-186.3 through 9-186.7/ (9-186.8 blank)

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CHANGE
NO. 10

Aviation Unit and Aviation Intermediate
Troubleshooting Manual

CH-47D HELICOPTER

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Remove pages	Insert pages
8-149 and 8-150	8-149 and 8-150
8-215 and 8-216	8-215 and 8-216
8-262 through 8-264	8-262 through 8-264
8-264.1 and 8-264.2	8-264.1 and 8-264.2
9-2.7 and 9-2.8	9-2.7 and 9-2.8
9-11 and 9-12	9-11 and 9-12

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Chief of Staff

Official:

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CHANGE
NO. 9

Aviation Unit and Aviation Intermediate
Troubleshooting Manual

CH-47D HELICOPTER

TM 55-1520-240-T-2, 10 May 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
vii and viii	vii/viii
8-2.1 and 8-2.2	8-2.1 and 8-2.2
8-45 through 8-52	8-45 through 8-52
8-55 and 8-56	8-55 and 8-56
8-103 through 8-108	8-103 through 8-108
8-113 and 8-114	8-113 and 8-114
8-117 through 8-119/8-120	8-117 through 8-120
------	8-120.1 through 8-120.5/8-120.6
8-157 and 8-158	8-157 and 8-158
8-275 and 8-276	8-275 and 8-276
9-2.1 and 9-2.2	9-2.1 and 9-2.2
9-11 through 9-14	9-11 through 9-14
9-52.1/9-52.2	9-52.1 and 9-52.2
9-369 and 9-370	9-369 and 9-370

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CHANGE
NO. 8

Aviation Unit and Aviation Intermediate
Troubleshooting Manual

CH-47D HELICOPTER

TM 55-1520-240-T-2, 10 May 1983, is changed as follows:

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Remove pages	Insert pages
i and ii	i and ii

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CHANGE
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WASHINGTON, D.C., 19 OCTOBER 1990

AVIATION UNIT AND AVIATION INTERMEDIATE
TROUBLESHOOTING MANUAL

CH-47D HELICOPTER

TM 55-1520-240-T-2, 10 May 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
vii and viii	vii and viii
8-2.1 and 8-2.2	8-2.1 and 8-2.2
8-31 and 8-32	8-31 and 8-32
8-41/8-42	8-41 and 8-42
- - - -	8-42.1/8-42.2
8-57 and 8-58	8-57 and 8-58
8-153 and 8-154	8-153 and 8-154
8-215 and 8-216	8-215 and 8-216
8-264.1 and 8-264.2	8-264.1 and 8-264.2
8-275 and 8-276	8-275 and 8-276
8-319 and 8-320	8-319 and 8-320
8-323 and 8-324	8-323 and 8-324
8-327 through 8-330	8-327 through 8-330
9-55 and 9-56	9-55 and 9-56
9-227 and 9-228	9-227 and 9-228
9-228.5 and 9-228.6	9-228.5 and 9-228.6
9-228.9 and 9-228.10	9-228.9 and 9-228.10
9-327 and 9-328	9-327 and 9-328
2028's and Envelopes	2028's and Envelopes

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CHANGE NO. 6

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Aviation Unit and Aviation Intermediate
Troubleshooting Manual

CH-47D HELICOPTER

TM 55-1520-240-T-2, 10 May 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
v through viii	v through viii
8-2.7 and 8-2.8	8-2.7 and 8-2.8
8-149 through 8-152	8-149 through 8-152
8-157 and 8-158	8-157 and 8-158
8-262	8-262
8-265 and 8-266	8-265 and 8-266
8-269 and 8-270	8-269 and 8-270
8-273 and 8-274	8-273 and 8-274
8-275 through 8-284	8-275 through 8-284
9-2.11 and 9-2.12	9-2.11 and 9-2.12
9-5 and 9-6	9-5 and 9-6
9-6.1 and 9-6.2	9-6.1 and 9-6.2
9-13 and 9-14	9-13 and 9-14
9-63 and 9-64	9-63 and 9-64
9-69 and 9-70	9-69 and 9-70
9-97 and 9-98	9-97 and 9-98
9-283 and 9-284	9-283 and 9-284
9-339 and 9-340	9-339 and 9-340
9-349/9-350	9-349/9-350

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CHANGE
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CH-47D HELICOPTER

TM 55-1520-240-T-2, 10 May 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
vii/viii	vii and viii
8-3 and 8-4	8-3 and 8-4
8-9 through 8-18	8-9 through 8-18
8-39 and 8-40	8-39 and 8-40
8-87 and 8-88	8-87 and 8-88
8-95 through 8-98	8-95 through 8-98
8-113 and 8-114	8-113 and 8-114
8-117 and 8-118	8-117 and 8-118
8-145 and 8-146	8-145 and 8-146
8-183 through 8-186	8-183 through 8-186
8-189 and 8-190	8-189 and 8-190
8-195 and 8-196	8-185 and 8-196
8-199 and 8-200	8-199 and 8-200
8-229 and 8-230	8-229 and 8-230
8-239 and 8-240	8-239 and 8-240
8-243 and 8-244	8-243 and 8-244
8-247 through 8-256	8-247 through 8-256
8-275 and 8-276	8-276 and 8-276
8-289 through 8-292	8-289 through 8-292
8-315 and 8-316	8-315 and 8-316
8-343 and 8-344	8-343 and 8-344
8-349 through 8-354	8-349 through 8-354
8-359 and 8-360	8-359 and 8-360
9-17 and 9-18	9-17 and 9-18
9-57 and 9-58	9-57 and 9-58
9-65 and 9-66	9-65 and 9-66
9-72.3 and 9-72.4	9-72.3 and 9-72.4
9-77 and 9-78	9-77 and 9-78
9-83 through 9-86	9-83 through 9-86
9-91 through 9-98/9-98.1	9-91 through 9-98
9-115 and 9-116	9-115 and 9-116
9-277 and 9-278/9-279	9-277 and 9-278/9-279
9-295 through 9-302	9-295 through 9-302
9-303 and 9-304	9-303 and 9-304
9-313 through 9-318	9-313 through 9-318
Index 1 through Index 8	----------

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This is a reprint of change 5.

CHANGE
NO. 4

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Aviation Unit and Aviation Intermediate
Troubleshooting Manual

CH-47D HELICOPTER

TM 55-1520-240-T-2, 10 May 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 minature pointing hand.

Remove pages	Insert pages
vii/viii	vii/viii
8-7 through 8-10	8-7 through 8-10
8-21 and 8-22	8-21 and 8-22
8-35 and 8-36	8-35 and 8-36
8-57 and 8-58	8-57 and 8-58
8-83 and 8-84	8-83 and 8-84
8-91 and 8-92	8-91 and 8-92
8-111 through 8-114	8-111 through 8-114
8-117 and 8-118	8-117 and 8-118
8-131 and 8-132	8-131 and 8-132
8-157 through 8-160	8-157 through 8-160
8-163 and 8-164	8-163 and 8-164
8-167 and 8-168	8-167 and 8-168
8-171 and 8-172	8-171 and 8-172
8-177 and 8-178	8-177 and 8-178
8-181 and 8-182	8-181 and 8-182
8-207 through 8-210	8-207 through 8-210
8-239 and 8-240	8-239 and 8-240
8-267 through 8-280	8-267 through 8-280
8-283 through 8-286	8-283 through 8-286
8-293 and 8-294	8-293 and 8-294
8-303 and 8-304	8-303 and 8-304
8-353 and 8-354	8-353 and 8-354
8-357 through 8-360	8-357 through 8-360
8-363/8-364	8-363/8-364
9-21 through 9-24	9-21 through 9-24
9-27 and 9-28	9-27 and 9-28
9-49 and 9-50	9-49 and 9-50
9-55 and 9-56	9-55 and 9-56
9-63 and 9-64	9-63 and 9-64
9-71 and 9-72	9-71 and 9-72
9-107 and 9-108	9-107 and 9-108
9-195 and 9-196	9-195 and 9-196
9-287 and 9-288	9-287 and 9-288
9-309 and 9-310	9-309 and 9-310
9-319/9-320	9-319/9-320
9-337 and 9-338	9-337 and 9-338
9-343 and 9-344	9-343 and 9-344

TM 55-1520-240-T-2
C 4

Remove pages	Insert pages
9-355 and 9-356	9-355 and 9-356
9-363/9-364	9-363/9-364

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TM 55-1520-240-T-2
C 3

CHANGE NO. 3

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 1 May 1987

Aviation Unit and Aviation Intermediate
Troubleshooting Manual

CH-47D HELICOPTER

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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
vii/viii	vii/viii
8-319 through 8-326	8-319 through 8-326
---	8-332.1/8-332.2
Index 5 and Index 6	Index 5 and Index 6

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Aviation Unit and Aviation Intermediate
Troubleshooting Manual

CH-47D HELICOPTER

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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
i through iii/iv	i through iii/iv
v and vi	v and vi
---	vii/viii
8-2.1 through 8-2.6	8-2.1 through 8-2.6
8-2.9 and 8-2.10	8-2.9 and 8-2.10
---	8-2.13/8-2.14
8-3 and 8-4	8-3 and 8-4
8-31 and 8-32	8-31 and 8-32
8-73 and 8-74	8-73 and 8-74
---	8-74.1/8-74.2
8-85 through 8-88	8-85 through 8-88
8-93 and 8-94	8-93 and 8-94
8-99/8-100	8-99/8-100
8-104	8-103/8-104
8-135 and 8-136	8-135 and 8-136
8-141 through 8-144	8-141 through 8-144
8-154	8-153 and 8-154
8-218	8-217 and 8-218
8-263 and 8-264	8-263 and 8-264
---	8-264.1 through 8-264.4
8-289 through 8-292	8-289 through 8-292
8-319 and 8-320	8-319 and 8-320
8-333 through 8-336	8-333 through 8-336
---	8-336.1 and 8-336.2
8-337 through 8-341/8-342	8-337 through 8-342
---	8-342.1 through 8-342.3/ 8-342.4
9-2.1 through 9-2.4	9-2.1 through 9-2.4
---	9-2.4.1/9-2.4.2
9-2.5 through 9-2.8	9-2.5 through 9-2.8
9-2.15/9-2.16	9-2.15/9-2.16
9-2.17 and 9-2.18	9-2.17 and 9-2.18
9-3 through 9-6	9-3 through 9-6
---	9-6.1 and 9-6.2
9-21 and 9-22	9-21 and 9-22
9-27 and 9-28	9-27 and 9-28
9-31 and 9-32	9-31 and 9-32
9-35 through 9-38	9-35 through 9-38
9-41 through 9-44	9-41 through 9-44
9-47 and 9-48	9-47 and 9-48
9-51 and 9-52	9-51 and 9-52
9-57 through 9-62	9-57 through 9-62
9-65 and 9-66	9-65 and 9-66
9-69 and 9-70	9-69 and 9-70
9-75 through 9-78	9-75 through 9-78
9-81 through 9-86	9-81 thrcugh 9-86
9-89 thrcugh 9-94	9-89 through 9-94
9-97 and 9-98	9-97 and 9-98/9-98.1
---	9-98.2 through 9-98.3/9-98.4
9-99 through 9-108	9-99 through 9-108
---	9-108.1/9-108.2
9-109 and 9-110	9-109 and 9-110/9-111
9-112 through 9-126	9-112 through 9-126/9-127
9-128 through 9-132	9-128 through 9-132/9-133
9-134 through 9-142	9-134 through 9-142/9-143
9-144	9-144/9-145
9-146 through 9-149/9-150	9-146 through 9-150
---	9-150.1 and 9-150.2/9-150.3
---	9-150.4 through 9-150.14
9-151 through 9-157/9-158	9-151 through 9-158
9-167 through 9-170	9-167 through 9-170/9-171
9-172 through 9-174	9-172 through 9-174
9-177/9-178	9-177 and 9-178
---	9-178.1 through 9-178.7/9-178.8
9-179 through 9-185/9-186	9-179 through 9-186
---	9-186.1 through 9-186.7/9-186.8
9-187 thrcugh 9-190	9-187 through 9-190/9-191
9-192 through 9-194	9-192 through 9-194
9-197/9-198	9-197 and 9-198
---	9-198.1 through 9-198.7/9-198.8
9-199 through 9-202	9-199 thrcugh 9-202/9-203
9-204	9-204
9-207 and 9-208	9-207 and 9-208
9-211/9-212	9-211 and 9-212
---	9-212.1 through 9-212.7/9-212.8
9-213 through 9-216	9-213 through 9-216/9-217
9-218	9-218
9-223 and 9-224	9-223 and 9-224
9-227/9-228	9-227 and 9-228
---	9-228.1 through 9-228.6/9-228.7
---	9-228.8 through 9-228.19/ 9-228.20

TM 55-1520-240-T-2
C 2

Remove pages	Insert pages
9-229 through 9-238	9-229 through 9-238
9-240 through 9-245/9-246	9-240 through 9-246
---	9-246.1 through 9-246.10/ 9-246.11
---	9-246.12 through 9-246.14
9-247 through 9-250	9-247 through 9-250/9-251
9-252 through 9-258	9-252 through 9-258
---	9-258.1 through 9-258.10
9-259 through 9-262	9-259 through 9-262/9-263
9-263 and 9-264	9-264
9-265 and 9-266	9-265 and 9-266
9-269 and 9-270	9-269 and 9-270/9-271
9-272 through 9-275/9-276	9-272 through 9-276
---	9-276.1 and 9-276.2/9-276.3
---	9-276.4 through 9-276.9/ 9-276.10
9-277 and 9-278	9-277 and 9-278/9-279
9-280 through 9-284	9-280 through 9-284
9-301/9-302	9-301 and 9-302
---	9-302.1/9-302.2
9-321 and 9-322	9-321 and 9-322
---	9-322.1/9-322.2
9-323 through 9-328	9-323 through 9-328
9-340.1/9-340.2	9-340.1/9-340.2
---	9-365 through 9-373/9-374

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CHANGE
1

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Aviation Unit and Aviation Intermediate
Troubleshooting Manual

CH-47D HELICOPTER

TM 55-1520-240-T-2, 10 May 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
v and vi	v and vi
8-2.3 through 8-2.6	8-2.3 through 8-2.6
8-31 and 8-32	8-31 and 8-32
8-35 and 8-36	8-35 and 8-36
8-39 and 8-40	8-39 and 8-40
8-53 and 8-54	8-53 and 8-54
8-61 and 8-62	8-61 and 8-62
8-69 through 8-74	8-69 through 8-74
8-77 through 8-94	8-77 through 8-94
8-97 through 8-99/8-100	8-97 through 8-99/8-100
8-105 through 8-108	8-105 through 8-108
8-113 and 8-114	8-113 and 8-114
8-117 and 8-118	8-117 and 8-118
8-131 and 8-132	8-131 and 8-132
8-135 and 8-136	8-135 and 8-136
8-143 through 8-146	8-143 through 8-146
8-149 through 8-152	8-149 through 8-152
8-161 and 8-162	8-161 and 8-162
8-199 and 8-200	8-199 and 8-200
8-207 and 8-208	8-207 and 8-208
8-213 through 8-216	8-213 through 8-216
8-223 and 8-224	8-223 and 8-224
8-226	8-225 and 8-226
8-229 through 8-234	8-229 through 8-234
8-251 through 8-256	8-251 through 8-256
8-259 and 8-260	8-259 and 8-260
8-263 and 8-264	8-263 and 8-264
8-266	8-265 and 8-266
8-267 through 8-272	8-267 through 8-272
8-293/8-294	8-293 and 8-294
	8-294.1 through 8-294.3/8-294.4
8-295 and 8-296	8-295 and 8-296
8-333 and 8-334	8-333 and 8-334
8-339 through 8-341/8-342	8-339 through 8-341/8-342
9-2.1 and 9-2.2	9-2.1 and 9-2.2
9-2.5 and 9-2.6	9-2.5 and 9-2.6
9-2.17 and 9-2.18	9-2.17 and 9-2.18
9-3 through 9-6	9-3 through 9-6
9-9 through 9-14	9-9 through 9-14
9-21 and 9-22	9-21 and 9-22
9-27 and 9-28	9-27 and 9-28
9-31 and 9-32	9-31 and 9-32
9-34	9-33 and 9-34
9-51/9-52	9-51 and 9-52
	9-52.1/9-52.2
9-53 and 9-54	9-53 and 9-54
9-59 through 9-62	9-59 through 9-62
9-65 through 9-72	9-65 through 9-72
	9-72.1 through 9-72.4
9-74	9-73 and 9-74
9-77 and 9-78	9-77 and 9-78
9-85 and 9-86	9-85 and 9-86
9-93 through 9-96	9-93 through 9-96
9-131 and 9-132	9-131 and 9-132
9-137 and 9-138	9-137 and 9-138
9-151 and 9-152	9-151 and 9-152
9-155 through 9-157/9-158	9-155 through 9-157/9-158
9-213 and 9-214	9-213 and 9-214
9-219 and 9-220	9-219 and 9-220
9-225 and 9-226	9-225 and 9-226
9-229 and 9-230	9-229 and 9-230
9-233 and 9-234	9-233 and 9-234
9-241 and 9-242	9-241 and 9-242
9-247 and 9-248	9-247 and 9-248
9-259 and 9-260	9-259 and 9-260
9-264	9-263 and 9-264
9-265 through 9-268	9-265 through 9-268
9-273 and 9-274	9-273 and 9-274
9-321 and 9-322	9-321 and 9-322
9-325 and 9-326	9-325 and 9-326
9-331 through 9-334	9-331 through 9-334
9-337 through 9-340	9-337 through 9-340
	9-340.1/9-340.2

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Insert latest changed pages; dispose of superseded pages in accordance with regulations.

N0TE: On a changed page, the portion of the text affected by the latest change is indicated by a vertical line in the outer margin of the page. Changes to illustrations are indicated by miniature pointing hands.

Dates of issue for original and changed pages are:

Original	10 May 1983	Change 6	1 November 1989	Change 12	29 April 1994	Change 18	30 April 1999
Change 1	19 April 1985	Change 7	19 October 1990	Change 13	31 January 1995	Change 19	15 July 2000
Change 2	5 December 1986	Change 8	5 July 1991	Change 14	12 July 1996	Change 20	7 May 2004
Change 3	1 May 1987	Change 9	30 April 1992	Change 15	30 September 1996		
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TECHNICAL MANUAL

No. 55-1520-240-T

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., *10 May 1983*

**Aviation Unit and Aviation Intermediate
Troubleshooting Manual
CH-47D HELICOPTER**

REPORTING OF ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2 located in the back of this manual direct to: Commander, U.S. Army Aviation and Missile Command, ATTN: AMSAM-MMC-LS-LP, Redstone Arsenal, AL 35898-5230. A reply will be furnished to you. You may also send your comments electronically to our e-mail address: ls-lp@redstone.army.mil or by fax 205-842-6546/DSN 788-6546. Instructions for sending an electronic 2028 may be found at the back of this manual immediately preceding the hard copy 2028.

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HOW TO USE THIS MANUAL (TM 55-1520-240-T)

This manual has 17 Chapters that have instructions for troubleshooting 72 CH-47 Helicopter Systems.

apter 1 has:

- The Complete List of Troubleshooting Symptoms you will find in this manual. This list outlines each chapter by system and symptom.
- Complete wiring for 300 Series Connectors and Receptacles, Terminal Boards, and Ground Devices.

Chapters 2 thru 17 have sets of troubleshooting instructions that include:

- A Chapter outline of all systems and symptoms found in the beginning of each Chapter.
- Connector part numbers and pin patterns for each connector and receptacle in systems contained in chapter. Also included are relay termination views and ground termination types and location.
- System Schematics and/or Wiring Diagrams.
- Visual Checks with locator figures and step by step procedures.
- Operational Checks with locator figures and step by step procedures.
- Fault Isolation Procedures with locator figures and troubleshooting logic for specific system faults.

HOW TO FIND WHAT YOU NEED

Maintenance—Refer to TM 55-1520-240-23.

Troubleshooting—Use the index in Chapter 1 or in the beginning of each chapter. This is where you will find the system troubleshooting procedures (visual checks, operational checks and fault isolation procedures).

The troubleshooting procedures are listed under the name of the system that the component or system belongs to.

2. Each system has a number:

Example:

System No.	System
9-15	Cabin and Ramp Lights

3. Each item in your set of troubleshooting instructions has a task number. The system number is prefixed to each of the item task numbers.

Example:

System No.	System Symptom	Task No.
9-15	Cabin and Ramp Lights	
	Wiring Diagram	9-15.1
	Visual Check	9-15.2
	Operational Check	9-15.3
	Cabin and Ramp Circuit Breaker Does not Stay Closed	9-15.4

TASK PREPARATION

Each Troubleshooting procedure begins with INITIAL SETUP information. Read it carefully before starting. It tells you what you need and what you have to know before you begin the job.

1. Applicable Configurations. Tells you what configurations or effectivity the task applies to.
2. Tools. If any tools from your tool kit are needed, just the kit is listed. Tools needed that are not in the kit are called for by name. Special ground support tools, containers, and test equipment are listed by tool number (Txx). Find these items in TM 55-1520-240-23.
3. Materials. Materials needed are listed by expendable number (EXX). Find these items in TM 55-1520-240-23.
4. Parts. New parts required, such as gaskets, packings, and washers, are listed by name only. If parts are not needed, you will not see this heading.
5. Personnel Required. Each MOS needed to do the task is listed. When more than one of any MOS is needed, the number is shown in parentheses.
6. References. Lists references such as TM 55-1520-240-23. These references will provide where information can be found when you need to repair or replace a part or component. When more than one reference is listed, the Fault Isolation Procedure blocks will contain a refer to statement for all references other than TM 55-1520-240-23.
7. Equipment Condition. Procedures which must be done before starting the task are listed and task or TM number is given. Tasks that are not indented under a TM manual can be found in this manual. Refer to the TM manual listed above the indented tasks.
8. General Safety Instructions. These are safety precautions that must be observed throughout task. Warnings include basic first aid instructions.
9. Locator Figure. The area of the helicopter where the task will be performed is shown, with components to be worked on called out.

TASK PERFORMANCE

1. Visual Checks are performed to determine if the cause of the system fault is visually apparent.
2. Operational Checks are performed step by step on the system to determine the system fault. Continue the operational check TASK until the symptom is confirmed in the RESULT column.
3. Fault Isolation Procedures are performed to identify the specific trouble in the system. Start with the first block. Read it through and answer the question. The questions will always have a YES or NO answer, If you answer the question YES, follow the direction of the YES arrow to the next block. If you answer the question NO, follow the direction of the NO arrow to the next block. Continue troubleshooting until the symptom cause is identified.
4. Use the integrated schematic during troubleshooting for a view of system component connections and system interfaces.
5. Use the wiring diagram when the troubleshooting instructions require wire tests to isolate the symptom cause.

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6. Before starting, read the entire task. Familiarize yourself with the entire procedure before beginning the task,

7. As you read, pay attention to **WARNINGS, CAUTIONS,** and **NOTES.**

8. **When the word INSPECT** is in your procedures, an inspector must ok the completed step(s).

9. Major steps and key words are printed in **boldface** for experienced repairers.

10. A glossary is on page 1-87. It lists the abbreviations, special words and terms used in this manual and gives their meaning.

11. When a special tool is used or a common tool is used in an unusual way, the use of the tool will be shown.

12. When a block states, "Repair or replace wire as required.", refer to TM 55-1500-323-24 for recommended maintenance practices.

13. Voltages specified in blocks are nominal values unless a range is given. These nominal values and their acceptable ranges are as follows:

Nominal voltage	Range
28 VDC	24 to 30
26 VAC	24 to 28
24 VDC (Battery)	20 to 24
5 VAC	4 to 6
115 VAC	110 to 120

14 In the event of the necessity to add or replace electrical wiring, the colors of wire received from supply may not be the same as the original wire colors. Use wire numbers only for identification of wires. Tag or identify wires by proper number when disconnecting or replacing.

AIRCRAFT MODIFICATION (ECP/MWO) RETROFIT INFORMATION

Throughout this manual, black squares containing white numerals are used to distinguish information relating to helicopters modified by an MWO or ECP. Refer to Helicopter Configuration Legend on the following pages for specific modification and effectivities relating to each numeral. A list of delivered helicopters serial numbers is included with the legend.

Information pertaining only to unmodified helicopters is identified by the appropriate effectivity symbol preceded by WITHOUT. For example, WITHOUT 4 indicates that the information that follows is applicable only to helicopters **not** modified by ECP DO 18. Information pertaining only to helicopters that have been modified by ECP DO 18 is preceded by WITH 4. . All information not preceded by an effectivity symbol is common to all helicopters.

The following helicopter Designation Legend pages are solely for user convenience. They have no official status.

DELIVERED HELICOPTER SERIAL NUMBERS

81-23382	82-23762	83-24102	84-24152	85-24322
through	through	through	through	through
81-23389	82-23780	83-24125	84-24187	85-24336

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HELICOPTER CONFIGURATION LEGEND

CODE	ECP/MWO NO.	TITLE	EFFECTIVITY PRODUCTION (Serial Number)	EFFECTIVITY RETROFIT
1	ECP DO063R1	Improved Synch Shaft Vibration Mount	84-24108 and on	Attrition
2	ECP DO10R2C1	Fuel Cell Manifold Control Bracket	82-23389 and on	Attrition
3	ECP DO08	Rotor Hub Protective Cover Enlargement	85-24322 and on	Attrition
4	ECP DO18R2	Composite Fuel Pods	84-24162 and on	Attrition
5	ECP DO06	Removable Support Structure Pylon Hyd. Module	81-23385 and on	By Kit all D
6	ECP DO37R2	Shorter 114C1014 Yaw Connecting Link	85-24322 and on	Attrition
7	ECP DO34	Pilot and Co-Pilot Seat Armor	81-23386 and on	Attrition
8	ECP DO42	Redesign Link Assy for Increased Parked Blade Loads	83-24105 and on	Attrition
9	ECP DO48C1	Flare Dispenser Blanket Mod and Stowage Provision	83-24107 and on	None
10	ECP DO61R	Floor Former/Fuselage Bilge Paint (Special paint for 14 aircraft)	83-24107 and on (Interior) 83-24105 thru 83-24118 (Exterior)	None
11	ECP DO65	Second Source 114PS494 Fuel Shutoff Valve (Motorized)	82-23776 and on	Attrition
12	ECP DO71	2-Inch Dia. Fuel Breakaway Fittings	83-24110 and on	Attrition
13	ECP DO74C1	Install Steel Control Rods Aft Pylon	83-24103 and on	81-23381 thru 83-24102 by Tech Bulletin
14	ECP DO15C2	Install Bubble Windows	85-24322 and on	Attrition
15	ECP DO51C1	Rainshield Redesign	84-24158 and on	Attrition
16	ECP DO75	Heater Modification	85-24322 and on	Attrition
17	ECP DO27R1C1	Night Vision Goggles (NVG)	85-24322 and on	MWO
18	ECP DO36R1	Improved N1 System	85-24322 and on	Attrition
19	ECP DO69R4	Ferry Fuel Provisions	85-24322 and on	MWO
20	ECP DO64R1	Aft Pylon Work Platform Redesign	85-24322 and on	Attrition
21	ECP DO29C1	ILCA Actuator and Manifold Seal Change	85-24322 and on	Attrition
22	ECP DO60R1	Ramp Skin and Ramp End Former	85-24322 and on	Attrition
23	ECP DO01R1	Improved N2 Control Box	84-24156 and on	Attrition
24	ECP D056R2	Redesign Droop Stop Arm to Increase Clearance With Shroud; Modify Spring Limiter	85-24322 and on	Contractor Kit
25	ECP DO81R2	Ground Contact Annunciator	87-0669 and on	MWO

HELICOPTER CONFIGURATION LEGEND (Continued)

CODE	ECP/MWO NC	TITLE	EFFECTIVITY PRODUCTION (Serial Number)	EFFECTIVITY RETROFIT
26	ECP D118C1	Improved Heat Resistance of Flight Control System Bellcranks and Connecting Rods	85-24353 and on	MWO
27	ECP DO54R1	Combining Transmission Support Fitting Redesign	84-24154 and on	Attrition
28	ECP D126C1	Accumulator, APU/Flight Control Modules	86-1635 and on	Attrition
29	ECP DO85C1	Reduced Length Servo-Cylinder Safety Blocks	GSE	MWO
30	ECP 712R7	Portable Calculator and Hardware for Vibrex	OBSOLETE	-------
31	ECP D108	Aft Transmission Torque Reactor Improvement	GSE	MWO
32	ECP D111	Deletion of KY-28 Secure Voice Control Panel	87-0069 and on	AVSCOM MSG.
33	ECP D133	UH60/CH47D Common ESU	86-1650 and on	MWO
34	ECP D122	Change Droop Stop Shroud From Installed to Flyaway Equipment	85-24361 and on	N/A
35	ECP DO16R1	Single Handle Cargo Hook Release System	88-0079 and on	MWO
36	ECP D113	Hook Release Button Ring Guard on Cyclic Grip	88-0085 and on	MWO
37	ECP D115	Transmission end Engine Chip Bum-Off System	89-0139 and on	MWO
38	ECP D154R1 (Phase 1)	Installation of Stainless Steel Flight Control Connecting Links	88-0091 and on	MWO
39	ECP DO69R4	Ramp Extension/Center Skid Pad Modification for Compatibility With HICHS	90-0180 and on	Attrition
40	ECP D121R2	Fine Mesh Inlet Screen	88-0095 and on	Retrofit
41	ECP D105R1	Shotpeen Horizontal Hinge Pins	88-0107 and on	MWO
42	ECP 0135	Improved Rotor Blade Grounding Strap	88-0103 and on	MWO
43	ECP DO89	Delete Engine Anti-Ice System	87-0077 and on	MWO
44	ECP D101	Engine Oil Pressure Transmitter Vibration Absorber	90-0180 and on	MWO
45	ECP DO92R1	Elastomeric Lag Damper and Pitch Link Bearings	90-0180 and on	MWO
46	ECP D114C2	Upper and Middle Drive Scissors Positive Locking Bolts	90-0180 and on	MWO
47	ECP DO95R1	Airframe Structural Improvements	90-0180 and on	Attrition
48	ECP D173	Combining Transmission Sync Shaft Shielding Baffle	88-0099 and on	MWO
49	ECP D131R1	Transmission Drip Pan Material Change	90-0214 and on	Attrition

HELICOPTER CONFIGURATION LEGEND (Continued

CODE	ECP/MWO NO.	TITLE	EFFECTIVITY PRODUCTION (Serial Number)	EFFECTIVITY RETROFIT
50	ECP D145R1C1	Bolt/Bushing Assembly Improvements	90-0180 and on	MWO 1-1520-240-50-37
51	ECP D157R1	One Piece Engine Drive Shaft	90-0180 and on	MWO 55-1520-240-50-43
52	ECP D190R1	Improved Clamshell Door Latch	92-0282 and on	MWO 1-1520-240-50-62
53	ECP D164	Incorporation of Dome Light positive Locking Lever Switch	91-0252 and on	MWO 55-1520-240-50-50
54	ECP D154R1 (Phase 2)	Control System Hardening and Smoke Containment	81-23381 thru 89-0177	MWO 1-1520-240-50-40
55	ECP D185R1	Separate Fuel Control Relay Box Ground Connections	90-0202 and on	MWO 1-1520-240-50-58
56	ECP D183	Helicopter Internal Cargo Handling System (HICHS)	81-23381 thru 91-02277	MWO 1-1520-240-50-59
57	ECP D175	Engine Aft Mount Adjustable Link	81-23381 thru 92-0302	MWO 1-1520-240-50-60
58	ECP 0145R2	Improved Bolt/Bushing Connection	N/A	MWO 1-1520-240-50-69
59	ECP D19BA1	Polyurethane Paint for CH-47D Aircraft	____	Attrition
60	ECP A098	Heads Up Display System (HUD) AN/AVS-7	81-23381 thru 91-0271	MWO 1-1520-240-50-56
61	ECP A0027	Global Positioning System (GPS) AN/ASN-149CV)1	81-23381 thru 92-0302	MWO 1-1520-240-50-68
62	ECP AEEMH-03009	Altitude Voice Warning System Radar Altimeter, AN/APN-209(V)	81-23381 thru 93-0934	MWO 1-1520-240-50-61
63	ECP 0200 (Phase 2)	Replace Lower Pitch Link Elastomeric Bearing	90-0180 and on	MWO 1-1520-240-50-64 and MWO 1-1520-240-50-63

HELICOPTER CONFIGURATION LEGEND (Continued

CODE	ECP/MWO NO.	TITLE	EFFECTIVITY PRODUCTION (Serial Number)	EFFECTIVITY RETROFIT
64	ECP D194R1	Stainless Steel-Bellcranks in Combining Transmission Area	81-23381 and on	MWO 1-1520-240-50-65
65	ECP D16SR1	Cockpit Remote Emergency Ramp Extension System	81-23381, thru 92-0309	MWO 1-1520-240-50-48
66	ECP D199	Non-Metallic Spline Adapters for Combining Transmission Cooling Fan Drive Shaft	76-18479 and 81-23381 thru 93-0094	MWO 1-1520-240-50-67
67	ECP D214R1	Aft Position Lights Switch	(Draft)	____
68	ECP D216	Pressure Refueling Vacuum Relief Valve	(Draft)	____
69	ECP D215	NVG Bezel	(Draft)	____
70	ECP 13210111	Easily Replaceable Cabin Escape Hatch	78-18479 and 81-23381 thru 93-00934	TB 1-1520-240-30-02
71	ECP END HO30015	Installation of AN/ASN-128B Doppler GPS Navigation System	76-18479 and on	MWO 1-1520-240-50-73
73	ECP EJCHOO7016	Installation of AN/ARC-220 and TSEC/KY-100 HF Liaison Facility	81-23381 thru 93-00934	MWO 1-1520-240-50-74

CHAPTER 8

INSTRUMENT SYSTEMS TROUBLESHOOTING

CHAPTER 8

INSTRUMENT SYSTEM TROUBLESHOOTING

CHAPTER OVERVIEW

Chapter 8 contains procedures for Instrument System troubleshooting. Each system and failure symptom is listed below. Included in this chapter are locations and views of all electrical connectors, receptacles, relays, and ground connections for the Instrument System.

Refer to TM 55-1520-240-23 for required maintenance procedures.

SYSTEM	PARA
PITOT STATIC SYSTEM	8-1
GAS PRODUCER TACHOMETER SYSTEM	8-2
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FAILURE SYMPTOM LIST

PITOT STATIC SYSTEM

SYMPTOM	TASK
AIMS ALT CIRCUIT BREAKER WILL NOT STAY CLOSED	8-1.4
NO HEAT FELT ON LEFT OR RIGHT PITOT TUBE, PITOT SWITCH AT ON	8-1.4
NO HEAT FELT ON LOWER RIGHT OR LOWER LEFT SIDESLIP PORTS	8-1.4
NO. 1 GAS PRODUCER TACHOMETER READS 0 PERCENT RPM WHEN NO. 1 ENGINE IS MOTORED	8-2.3
NO. 2 GAS PRODUCER TACHOMETER READS 0 PERCENT RPM WHEN NO. 2 ENGINE IS MOTORED	8-2.3
NO HEAT FELT ON UPPER RIGHT OR UPPER LEFT SIDESLIP PORTS	8-1.4
NO. 1 OR NO. 2 PITOT SYSTEM LEAKS	8-1.4
NO. 1 OR NO. 2 SIDESLIP SYSTEM LEAKS	8-1.4
PILOT OR COPILOT ALTIMETER VIBRATOR DOES NOT OPERATE	8-1.4
PITOT HEAT CIRCUIT BREAKER WILL NOT STAY CLOSED	8-1.4
PITOT STATIC SYSTEM LEAKS	8-1.4
YAW PORT HEAT CIRCUIT BREAKER WILL NOT STAY CLOSED	8-1.4

GAS PRODUCER TACHOMETER SYSTEM

SYMPTOM	TASK
NO. 1 ENGINE GAS PRODUCER TACHOMETER READING FLUCTUATES OR IS ERRATIC	8-2.3
NO. 2 ENGINE GAS PRODUCER TACHOMETER READING FLUCTUATES OR IS ERRATIC	8-2.3

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FAILURE SYMPTOM LIST

ENGINE OIL PRESSURE INDICATING SYSTEM

SYMPTOM	TASK
ENGINE OIL PRESS CIRCUIT BREAKER DOES NOT STAY CLOSED	8-3.3
ENGINE OIL PRESSURE INDICATOR DOES NOT INDICATE 0	8-3.3
NO. 1 ENGINE OIL PRESS INDICATOR DOES NOT INDICATE 20 PSI MINIMUM OR POINTER FLUCTUATES MORE THAN 5 PSI	8-3.3
NO. 2 ENGINE OIL PRESS INDICATOR DOES NOT INDICATE 20 PSI MINIMUM OR POINTER FLUCTUATES MORE THAN 5 PSI	8-3.3

ENGINE OIL TEMPERATURE INDICATING SYSTEM

SYMPTOM	TASK
ENGINE OIL TEMP CIRCUIT BREAKER DOES NOT STAY CLOSED	8-4.3
NO. 1 ENGINE OIL TEMPERATURE INDICATOR INDICATION IS NOT WITHIN 10°C OF FAT INDICATOR	8-4.3
NO. 2 ENGINE OIL TEMPERATURE INDICATOR INDICATION IS NOT WITHIN 10°C OF FAT INDICATOR	8-4.3

PTIT AND EMERGENCY POWER INDICATING SYSTEM

SYMPTOM	TASK
NO. 1 ENGINE EMERGENCY POWER TIMER DOES NOT OPERATE WHEN NO. 1 ENGINE PTIT INDICATION IS 890°C TO 910°C (WITHOUT 74)	8-5.3
NO. 1 ENGINE PTIT INDICATOR DOES NOT INDICATE IN GREEN BAND (WITHOUT 74)	8-5.3
NO. 1 ENGINE PTIT INDICATOR DOES NOT INDICATE IN GREEN BAND (WITH 74)	8-5.5.1
NO. 1 OR NO. 2 ENGINE EMERGENCY POWER FLAG INDICATOR REMAINS BLACK WHEN NO. 1 OR NO. 2 ENGINE PTIT INDICATION IS 890°C TO 910°C (WITHOUT 74)	8-5.3
NO. 1 OR NO. 2 ENGINE EMERGENCY POWER FLAG INDICATOR WILL NOT RESET TO BLACK, FLAG RESET SWITCH AT RESET (WITHOUT 74)	8-5.3
NO. 1 OR NO. 2 ENGINE EMERGENCY POWER LIGHTS WILL NOT COME ON WHEN PRESSED TO TEST (WITHOUT 74)	8-5.3
NO. 2 ENGINE EMERGENCY POWER TIMER DOES NOT OPERATE WHEN NO. 2 ENGINE PTIT INDICATION IS 890°C TO 910°C (WITHOUT 74)	8-5.3
NO. 2 ENGINE PTIT INDICATOR DOES NOT INDICATE IN GREEN BAND (WITHOUT 74)	8-5.3
NO. 2 ENGINE PTIT INDICATOR DOES NOT INDICATE IN GREEN BAND (WITH 74)	8-5.6.1
PILOT'S AND COPILOT'S EMERGENCY POWER LIGHTS DO NOT COME ON WHEN NO. 1 OR NO. 2 ENGINE PTIT INDICATION IS 890°C TO 910°C (WITHOUT 74)	8-5.3
PILOT'S AND COPILOT'S EMERGENCY POWER LIGHTS ON, ROTOR AT 100 PERCENT ROTOR RPM, BOTH ENGINES OPERATING (WITHOUT 74)	8-5.3

TORQUE INDICATING SYSTEM

SYMPTOM	TASK
NO. 1 OR NO. 2 ENGINE TORQUE DC CIRCUIT BREAKERS WILL NOT STAY CLOSED (WITHOUT 74)	8-6.3
NO. 1 OR NO. 2 ENGINE TORQUE DC CIRCUIT BREAKERS WILL NOT STAY CLOSED (WITH 74)	8-6.3.1
NO. 1 OR NO. 2 ENGINE TORQUE AC CIRCUIT BREAKER WILL NOT STAY CLOSED	8-6.3 or 8-6.3.1
NO. 1 POINTER ON PILOT'S OR COPILOT'S INDICATOR DOES NOT INDICATE TORQUE (WITHOUT 74)	8-6.3
NO. 1 POINTER ON PILOT'S OR COPILOT'S INDICATOR DOES NOT INDICATE TORQUE (WITH 74)	8-6.3.1
NO. 1 POINTER ON PILOTS OR COPILOTS INDICATOR DOES NOT INDICATE PROPER TORQUE USING TORQUE SIGNAL SIMULATOR (WITHOUT 74)	8-6.3
NO. 1 POINTER ON PILOTS AND COPILOTS INDICATOR OPERATES ERRATICALLY	8-6.3 or 8-6.3.1
NO. 2 POINTER ON PILOT'S OR COPILOT'S INDICATOR DOES NOT INDICATE TORQUE (WITHOUT 74)	8-6.3
NO. 2 POINTER ON PILOT'S OR COPILOT'S INDICATOR DOES NOT INDICATE TORQUE (WITH 74)	8-6.3.1
NO. 2 POINTER ON PILOTS OR COPILOTS INDICATOR DOES NOT INDICATE PROPER TORQUE USING TORQUE SIGNAL SIMULATOR (WITHOUT 74)	8-6.3
NO. 2 POINTER ON PILOTS OR COPILOTS INDICATOR OPERATES ERRATICALLY	8-6.3 or 8-6.3.1

HYDRAULIC PRESSURE INDICATING SYSTEM

SYMPTOM	TASK
HYDRAULICS PRESS IND CIRCUIT BREAKER DOES NOT STAY CLOSED	8-7.3
NO. 1 FLT CONT HYDRAULICS PRESSURE INDICATOR DOES NOT INDICATE 2500 TO 3500 PSI OR POINTER FLUCTUATES MORE THAN 50 PSI	8-7.3
NO. 2 FLT CONT HYDRAULICS PRESSURE INDICATOR DOES NOT INDICATE 2500 TO 3500 PSI OR POINTER FLUCTUATES MORE THAN 50 PSI	8-7.3
UTILITY HYDRAULICS PRESSURE INDICATOR DOES NOT INDICATE 2500 TO 3500 PSI OR POINTER FLUCTUATES MORE THAN 50 PSI	8-7.3

HYDRAULIC OIL TEMPERATURE INDICATING SYSTEM

SYMPTOM	TASK
HYDRAULIC FLUID TEMP CIRCUIT BREAKER DOES NOT STAY CLOSED	8-8.3
NO. 1 FLT CONT HYDRAULIC TEMPERATURE INDICATOR POINTER DOES NOT MOVE UP SCALE OR EXCEEDS 120°C (PEGS)	8-8.3
NO. 2 FLT CONT HYDRAULICS TEMPERATURE INDICATOR POINTER DOES NOT MOVE UP SCALE OR EXCEEDS 120°C (PEGS)	8-8.3
UTILITY HYDRAULICS TEMPERATURE INDICATOR POINTER DOES NOT MOVE UP SCALE OR EXCEEDS 120°C (PEGS)	8-8.3

TRANSMISSION OIL PRESSURE INDICATING AND WARNING SYSTEM

SYMPTOM	TASK
FWD, COMB, AFT, AFT SHAFT, LEFT, OR RIGHT TRANSMISSION MAIN OIL PRESS LIGHT DOES NOT COME ON WHEN PRESSED	8-9.3
FWD, COMB, AFT, AFT SHAFT, LEFT, RIGHT, OR AFT TRANSMISSION MAIN OIL PRESS LIGHT IS OUT	8-9.3
FWD, COMB, AFT SHAFT, LEFT, OR RIGHT TRANSMISSION MAIN OIL PRESS LIGHT STILL ON WHEN ITS PRESSURE SWITCH DISCONNECTED	8-9.3
FWD, COMB, OR AFT TRANSMISSION AUX OIL PRESS LIGHT DOES NOT COME ON WHEN PRESSED	8-9.3
FWD, COMB, OR AFT TRANSMISSION AUX OIL PRESS LIGHT IS OUT	8-9.3
FWD, COMB, OR AFT TRANSMISSION AUX OIL PRESS LIGHT IS STILL ON WHEN IT'S PRESSURE SWITCH IS DISCONNECTED	8-9.3
XMSN AUX OIL PRESS CAPSULE DOES NOT COME ON DURING TEST	8-9.3
XMSN AUX OIL PRESS CAPSULE NOT LIT	8-9.3
XMSN AUX OIL PRESS CAPSULE ON WHEN ALL PRESSURE SWITCHES ARE DISCONNECTED	8-9.3
XMSN OIL PRESS CAPSULE DOES NOT COME ON DURING TEST	8-9.3
XMSN OIL PRESS CAPSULE NOT LIT	8-9.3
XMSN OIL PRESS CAPSULE STILL ON WHEN ALL MAIN OIL PRESS SWITCHES ARE DISCONNECTED	8-9.3
XMSN OIL PRESS CIRCUIT BREAKER DOES NOT STAY CLOSED	8-9.3
XMSN OIL PRESS INDICATOR DOES NOT READ IN NORMAL RANGE FOR ONE XMSN OIL PRESS SWITCH POSITION	8-9.3
XMSN OIL PRESS INDICATOR DOES NOT READ IN NORMAL RANGE WHEN XMSN OIL PRESS SWITCH IS AT SCAN	8-9.3

TRANSMISSION OIL TEMPERATURE INDICATING AND WARNING SYSTEM

SYMPTOM	TASK
ENG XMSN HOT CAPSULE LIT	8-10.3
NO. 1 OR NO. 2 ENG XMSN HOT CAPSULE DOES NOT COME ON DURING TEST	8-10.3
TRANSMISSION OVERTEMP INDICATORS DO NOT RESET	8-10.3
XMSN OIL HOT CAPSULE LIT	8-10.3
XMSN OIL HOT CAPSULE LIT OR AFT TRANSMISSION OVERTEMP INDICATOR IS BLACK DURING TEST	8-10.3
XMSN OIL HOT CAPSULE LIT OR COMB TRANSMISSION OVERTEMP INDICATOR IS BLACK DURING TEST	8-10.3
XMSN OIL HOT CAPSULE LIT OR FWD TRANSMISSION OVERTEMP INDICATOR IS BLACK DURING TEST	8-10.3
XMSN OIL HOT CAPSULE OR LEFT TRANSMISSION OVERTEMP INDICATOR IS BLACK DURING TEST	8-10.3
XMSN OIL HOT CAPSULE LIT OR RIGHT TRANSMISSION OVERTEMP INDICATOR IS BLACK DURING TEST	8-10.3
XMSN OIL TEMP CIRCUIT BREAKER WILL NOT STAY CLOSED	8-10.3
XMSN TEMP INDICATOR POINTER DOES NOT INDICATE AMBIENT TEMPERATURE AT SCAN	8-10.3
XMSN TEMP INDICATOR POINTER DOES NOT MOVE BELOW -70°C DURING TEST	8-10.3
XMSN TEMP INDICATOR DOES NOT READ AMBIENT TEMPERATURE AT SELECTED SWITCH POSITION	8-10.3

FUEL QUANTITY INDICATING SYSTEM

SYMPTOM	TASK
FUEL QUANTITY AC CIRCUIT BREAKER WILL NOT STAY CLOSED	8-11.3
FUEL QUANTITY DC CIRCUIT BREAKER WILL NOT STAY CLOSED	8-11.3
FUEL QUANTITY INDICATOR DIGITAL READOUT DOES NOT SHOW TOTAL FUEL QUANTITY WHEN FUEL QUANTITY SELECT SWITCH IS SET TO TOTAL	8-11.3
FUEL QUANTITY INDICATOR POINTER SPINS CONTINUOUSLY WHEN FUEL QUANTITY SELECT SWITCH IS SET TO ANY POSITION	8-11.3
FUEL QUANTITY INDICATION WRONG WHEN FUEL QUANTITY SELECT SWITCH IS SET TO L AFT	8-11.3
FUEL QUANTITY INDICATION WRONG WHEN FUEL QUANTITY SELECT SWITCH IS SET TO L FWD	8-11.3
FUEL QUANTITY INDICATION WRONG WHEN FUEL QUANTITY SELECT SWITCH IS SET TO L MAIN	8-11.3
FUEL QUANTITY INDICATION WRONG WHEN FUEL QUANTITY SELECT SWITCH IS SET TO R AFT	8-11.3
FUEL QUANTITY INDICATION WRONG WHEN FUEL QUANTITY SELECT SWITCH IS SET TO R FWD	8-11.3
FUEL QUANTITY INDICATION WRONG WHEN FUEL QUANTITY SELECT SWITCH IS SET TO R MAIN	8-11.3
L FUEL LOW (WITHOUT 74), L FUEL LVL (WITH 74) WARNING CAPSULE DOES NOT COME ON WHEN L MAIN TANK FUEL LEVEL IS BELOW 320 TO 420 POUNDS	8-11.3
L FUEL LOW (WITHOUT 74), L FUEL LVL (WITH 74) WARNING CAPSULE ON WHEN L MAIN FUEL TANK IS FULL	8-11.3
REFUEL PANEL FUEL QUANTITY INDICATOR DOES NOT INDICATE FUEL LEVEL AT ANY SWITCH POSITION	8-11.3
REFUEL PANEL FUEL QUANTITY INDICATOR INDICATES FUEL LEVEL FOR ALL BUT ONE SWITCH POSITION	8-11.3
R FUEL LOW (WITHOUT 74), R FUEL LVL (WITH 74) WARNING CAPSULE DOES NOT COME ON WHEN R MAIN TANK FUEL LEVEL IS BELOW 320 TO 420 POUNDS	8-11.3
R FUEL LOW (WITHOUT 74), R FUEL LVL (WITH 74) WARNING CAPSULE ON WHEN R MAIN FUEL TANK IS FULL	8-11.3

CRUISE GUIDE INDICATING SYSTEM

SYMPTOM	TASK
CRUISE GUIDE CIRCUIT BREAKER DOES NOT STAY CLOSED	8-12.3
CRUISE GUIDE INDICATOR POINTER NOT IN TEST BAND WITH CGI TEST SWITCH AT AFT	8-12.3
CRUISE GUIDE INDICATOR POINTER NOT IN TEST BAND WITH CGI TEST SWITCH AT FWD	8-12.3

TURN AND SUP INDICATORS

SYMPTOM	TASK
TURN AND SLIP CIRCUIT BREAKER DOES NOT STAY CLOSED	8-13.3
TURN AND SLIP INDICATOR POINTER DOES NOT MOVE IN DIRECTION OF TURN	8-13.3

MAINTENANCE PANEL POWER DISTRIBUTION

SYMPTOM	TASK
FILTER CHANGE AND PUMP CHANGE LIGHTS DO NOT COME ON WHEN PRESSED	8-14.3
HYDRAULICS MAINT PNL CIRCUIT BREAKER WILL NOT STAY CLOSED	8-14.3
HYDRAULICS MAINT PNL LTS CIRCUIT BREAKER WILL NOT STAY CLOSED	8-14.3
INDICATORS DO NOT TURN BLACK AND WHITE WITH GND TEST SWITCH AT TEST	8-14.3
INDICATORS WILL NOT TURN ALL BLACK WITH GND TEST SWITCH AT RESET	8-14.3
MAINTENANCE PANEL UTILITY LIGHT WILL NOT COME ON	8-14.3

ROTOR TACHOMETER

SYMPTOM	TASK
COPILOTS ROTOR TACHOMETER DOES NOT INDICATE 98 TO 101 PERCENT WHEN ROTOR TACH CIRCUIT BREAKER OPEN	8-15.3
COPILOT'S ROTOR TACHOMETER DOES NOT READ 98 TO 101 PERCENT	8-15.3
PILOTS OR COPILOT'S ROTOR TACHOMETER DOES NOT INDICATE 98 TO 101 PERCENT WHEN BATT SWITCH SET TO OFF	8-15.3
PILOT'S ROTOR TACHOMETER DOES NOT INDICATE 98 TO 101 PERCENT WHEN ROTOR TACH CIRCUIT BREAKER OPEN	8-15.3
PILOT'S ROTOR TACHOMETER DOES NOT READ 98 TO 101 PERCENT	8-15.3
ROTOR TACH CIRCUIT BREAKER WILL NOT STAY CLOSED	8-15.3

FUEL FLOW

SYMPTOM	TASK
ENGINE NO. 1 FUEL FLOW CIRCUIT BREAKER WILL NOT STAY CLOSED	8-16.3
ENGINE NO. 2 FUEL FLOW CIRCUIT BREAKER WILL NOT STAY CLOSED	8-16.3
FUEL FLOW INDICATOR NO. 1 DOES NOT INDICATE FUEL FLOW	8-16.3
FUEL FLOW INDICATOR NO. 1 POINTER DOES NOT INDICATE APPROXIMATE FUEL FLOW	8-16.3
FUEL FLOW INDICATOR NO. 2 POINTER DOES NOT INDICATE APPROXIMATE FUEL FLOW	8-16.3
FUEL FLOW INDICATOR NO. 2 POINTER DOES NOT INDICATE FUEL FLOW	8-16.3

INSTRUMENT SYSTEM ELECTRICAL COMPONENT LOCATION AND CONFIGURATION LIST

REF DESIG	PART NUMBER	TYPE	MATE WITH/LOCATION	STATION LOCATION FS	WL	BL
GD001		150	CONSOLE, FWD CTR INSTR PNL			
GD002		151	CENTER INSTRUMENT PANEL			
GD004		150	CONSOLE, FWD CTR INSTR PNL			
GD009		150	CONSOLE, FWD CTR INSTR PNL			
GD016		150	CONSOLE, FWD CTR INSTR PNL			
GD017		150	CONSOLE, FWD CTR INSTR PNL			
GD019		151	CONSOLE, FWD CTR INSTR PNL			
GD020		151	CONSOLE, FWD CTR INSTR PNL			
GD023		151		492	50	20R
GD024		151		477	30	52L
GD027		150	CONSOLE, FWD CTR INSTR PNL (WITH 74)			
GD028		150	CONSOLE, FWD CTR INSTR PNL (WITH 74)			
GD030		151	CONSOLE, FWD INSTR PNL			
GD031		151	CONSOLE, FWD CTR INSTR PNL			
GD036		151	COCKPIT OVHD	61	40	10L
GD037		151	COCKPIT OVHD	61	40	10L
GD040		150	CONSOLE, FWD CTR INSTR PNL			
GD056		151	AFT LH CABIN	474	50	50L
GD058		151	AFT LH CABIN	490	35	50L
GD066		151	PYLON	590	122	12L
GD068		151	PYLON	590	122	12L
GD077		151	PYLON	594	110	2L
GD080		151	PYLON	534	75	0
GD103		151	AFT CROWN	594	60	20R
GD110		151	AFT RH CABIN	492	20	55R
GD135		151	AFT CROWN	528	45	20L
GD138		151	CENTER INSTRUMENT PANEL			
GD152		151	LH CABIN	230	-10	50L
GD157		151	RH CABIN	230	-20	50R
GD188		151	RHAFT	518	10	50R
GD203		151	RH AFT	518	10	50R
GD219		151	CONSOLE, FWD CTR INSTR PNL			
GD324		151	LH AFT	594	50	24L
GD400		151	AFT LH CABIN (WITH 74)			
GD401		151	AFT RH CABIN (WITH 74)	492	20	55R
GD406		151	AFT LH CABIN (WITH 74)	490	35	50L
TB 1			PILOTS INSTR PNL			
TB 2			COPILOT'S INSTR PNL			
TB 5			CONSOLE, FWD CTR INSTR PNL			
TB 8			CONSOLE, FWD CTR INSTR PNL			
TB 36			COCKPIT, OVHD PNL- RH			
TB 37			COCKPIT, OVHD PNL- LH			
TB 55			FWD CABIN OVHD	120	42	28L
TB 56			FWD CABIN OVHD	120	42	28R
THE FOLLOWING TB'S ARE LOCATED IN MAINTENANCE PANEL, 146A3510				30	50R	
TB 2						
TB 3						
TB 4						

REF DESIG	PART NUMBER	TYPE	MATE WITH/LOCATION	STATION LOCATION FS	WL	BL
TB 5						
036P1	MS3476W10-6S	15	PLT INSTR PNL, CRUISE GUIDE IND			
036P3	M83723-95A1212N	31	PYLON, CRUISE GUIDE SIG PROC - J1	582	120	5R
036P4	M83723-95A12127	31	PYLON, CRUISE GUIDE SIG PROC - J2	582	120	5R
036P5	M83723-95A1212N	31	FWD XMSN AREA, CRUISE GUIDE - J1	120	65	12L
041P4	M83723-95A10058	30	FWD XMSN AREA, NO. 1 HYD PRESS	125	70	0
041P5	M83723-95A10058	30	PYLON, NO. 2 HYD PRESS	534	97	15R
041P6	M83723-95A10058	30	AFT CROWN, UTILITY HYD PRESS	534	45	15L
043P1	MS3476W12-3S	16	NO. 1 ENG XMSN TRANSDUCER			
043P2	MS3476W12-3S	16	NO. 2 ENG XMSN TRANSDUCER			
043P3	MS3476W12-3S	16	COMB XMSN TRANSDUCER			
043P4	MS3476W12-3S	16	AFT XMSN TRANSDUCER			
043P5	MS3476W12-3S	16	FWD XMSN TRANSDUCER			
043P6	MS3476W14-15S	19	XMSN OIL PRESS INDICATOR			
043P7	MS3476W14-19S	21	OIL PRESS SELECTOR SWITCH			
043P8	MS83723-95A0803N	29	FWD XMSN MAIN PRESS SWITCH			
043P9	MS93723-95A08036	29	COMB MAIN PRESS SWITCH			
043P10	MS83723-95A0803N	29	AFT XMSN MAIN PRESS SWITCH			
043P11	MS83723-95A08037	29	AFT ROTOR SHAFT PRESS SWITCH			
043P12	MS83723-95A08036	29	NO. I ENG XMSN LOW PRESS SWITCH			
043P13	MS83723-95A08036	29	NO. 2 ENG XMSN LOW PRESS SWITCH			
043P14	MS83723-95A08036	29	FWD XMSN AUX PRESS SWITCH			
043P15	MS83723-95A08037	29	COMB AUX PRESS SWITCH			
043P16	MS83723-95A08036	29	AFT XMSN AUX PRESS SWITCH			
051P1	PT06CE8-4S	13	CPLT INSTR PNL TORQUE IND (WITHOUT 74)			
051P1	D38999-26WB35SN	317	CPLT INSTR PNL TORQUE IND (WITH 74)			
051P2	PT06CE8-4S	13	PLT INSTR PNL TORQUE IND (WITHOUT 74)			
051P2	D38999-26WB35SN	317	PLT INSTR PNL TORQUE IND (WITH 74)			
051P3	MS3476W12-10S	17	CPLT INSTR PNL TORQUE IND (WITHOUT 74)			
051P3	D38999-26WC98PN	316	J2 - NO. 1 ENG TORQUE SIGNAL PROCESSOR (WITH 74			
051P4	MS3476W12-10S	17	PLT INSTR PNL TORQUE IND (WITHOUT 74)			
051P4	D38999-26WC98PN	316	J2 - NO. 2 ENG TORQUE SIGNAL PROCESSOR (WITH 74)			
051P5	PT06CE8-4S	13	NOSE COMPT, NO. 1 TRQ PWR SUPPLY (WITHOUT 74)	22	-5	20L
051P5	D38999-26WB99SN	325	J1 - NO. 1 ENG TORQUE SIGNAL PROCESSOR (WITH 74)			
051P6	PT06CE8-4S	13	NOSE COMPT, NO. 2 TRQ PWR SUPPLY (WITHOUT 74)	22	-5	20R
051P6	D38999-26WB99SN	325	J1 - NO. 2 ENG TORQUE SIGNAL PROCESSOR (WITH 74)			
052P1	MS3456W14S-2S	48	CTR INSTR PNL NO. 1 ENG OIL TEMP IND (WITH-OUT 74)			
052P1	MS3456W14S-2S	48	CTR INSTR PNL NO. 1 ENG OIL TEMP IND (WITH 74)			
052P2	MS3456W14S-2S	48	CTR INSTR PNL, NO. 2 ENG OIL TEMP IND (WITH-OUT 74)			

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INSTRUMENT SYSTEM ELECTRICAL COMPONENT LOCATION AND CONFIGURATION LIST (Continued)

REF DESIG	PART NUMBER	TYPE	MATE WITH/LOCATION	STATION LOCATION FS	WL	BL
052P2	MS3456W14S-2S	48	CTR INSTR PNL NO. 2 ENG OIL TEMP IND (WITH 74)			
053P1	MS3456W14S-2S	48	CTR INSTR PNL, NO. 1 ENG OIL PRESS IND (WITHOUT 74)			
053P1	MS3456W14S-2S	48	CTR INSTR PNL NO. 1 ENG OIL PRESS IND (WITH 74)			
053P2	MS3456W14S-2S	48	CTR INSTR PNL, NO. 2 ENG OIL PRESS IND (WITHOUT 74)			
053P2	MS3456W14S-2S	48	CTR INTR PNL NO. 2 ENG OIL PRESS IND (WITH 74)			
054P1	MS3476W12-10S	17	CPLT INSTR PNL, ROTOR TACH			
054P2	MS3476W12-10S	17	PLT INSTR PNL, ROTOR TACH			
055P1	MS3456W10SL-3S	45	CTR INSTR PNL, NO. 1 ENG GAS PROD TACH (WITHOUT 74)			
055P1	M83723-75A1212N	31	CTR INSTR PNL, NO. I ENG GAS PROD TACH (WITH 74)			
055P2	MS3456W10SL-3S	45	CTR INSTR PNL, NO. 2 ENG GAS PROD TACH (WITHOUT 74)			
055P2	M83723-75A1212N	31	CTR INSTR PNL, NO. 2 ENG GAS PROD TACH (WITH 74)			
056P1	M83723-75A1407N	33	CTR INSTR PNL, NO. 1 PTIT IND (WITHOUT 74)			
056P1	M83723-75A1407N	33	CTR INSTR PNL, NO. 1 PTIT IND (WITH 74)			
056P2	M83723-75A1407N	33	CTR INSTR PNL, NO. 2 PTIT IND (WITHOUT 74)			
056P2	M83723-75A1407N	33	CTR INSTR PNL, NO. 2 PTIT IND (WITH 74)			
056P3	M24308/6-3	11	OVHD PNL, EMERG PWR PNL			
056J4	MS3450W10SL-3P	45	NO. 1 ENG DISC	490	45	50L
056P4	MS3456W10SL-3S	45	NO. 1 ENG DISC	490	45	50L
056J5	MS3450W10SL-3P	45	NO. 2 ENG DISC	490	45	50R
056P5	MS3476W10-6S	15	ENG, THERMOCOUPLE DISC			
057P3	MS3476W14-19S	21	CONSOL FLOOR, PILOT SIDE	57	-17	15R
057P4	M83723-75A2025N	153	J1 FUEL QTY SW BOX	232		2
057P6	M83723-75A20257	153	J3 FUEL QTY SW BOX	232		2
057P11	M83723-75A1624N	35	REFUEL PRECHECK PANEL			
061P1	MS3456W10SL-3S	45	CPLT INSTR PNL, TURN AND SLIP IND			
061P2	MS3456W10SL-3S	45	PLT INSTR PNL, TURN AND SLIP IND			
104P1	D38999-26WJ61SN	305	J1 - DECU NO. 1 (WITH 74)			
104P2	D38999-26WJ61SN	305	J1 - DECU NO. 2 (WITH 74)			
104P3	D38999-26WJ61SA	305	J3 - DECU NO. 1 (WITH 74)			
104P4	D38999-26WJ61SA	305	J3 - DECU NO. 2 (WITH 74)			
142P1	M83723-95A08036	29	FWD XMSN AREA, NO. 1 HYD TEMP BULB	150	50	6R
142P2	M83723-95A08036	29	PYLON, NO. 2 HYD TEMP BULB	510	80	12L
142P3	M83723-95A08036	29	PYLON, UTILITY HYD TEMP BULB	502	80	15R
146J1	MS3474W20-41P	26	RHAFT, MAINTENANCE PANEL	510	25	50R
146J2	MS3474W22-55P	27	RH AFT, MAINTENANCE PANEL	510	25	50R
146P3	MS3476W10-6S	15	MAINT PNL, UTILITY HYD PRESS IND	510	30	50R
146P4	MS3476W10-6S	15	MAINT PNL, NO. 2 FLT HYD PRESS IND	510	30	50R
146P5	MS3476W10-6S	15	MAINT PNL, NO. 1 FLT HYD PRESS IND	510	30	50R
146P6	MS3476W10-6S	15	MAINT PNL, UTILITY HYD TEMP IND	510	30	50R
146P7	MS3476W10-6S	15	MAINT PNL, NO. 2 FLT HYD TEMP IND	510	30	50R
146P8	MS3476W10-6S	15	MAINT PNL, NO. 1 FLT HYD TEMP IND	510	30	50R
232P1	35303-11	26	CTR INSTR PNL-MSTR CAUTION PNL (WITHOUT 74)			
232P1	MS3476W622-5526S	27	CTR INSTR PNL-MSTR CAUTION PNL (WITH 74)			
232P2	M83476W16-26S	24	CTR INSTR PNL-MSTR CAUTION PNL (WITH 74)			
241P1	M83723-95A1212N	31	NO. 2 GENERATOR	575	60	15L
300J1	M83723-7495A1212N	31	NO. 2 GENERATOR	575	60	15R
300P1	M83723-74A2041N	40	NO. 1 PDP			
300P1	M83723-75A2041N	40	NO. 1 PDP			
300J2	M83723-74A2255N	42	NO. 1 PDP			
300P2	M83723-75A2255N	42	NO. 1 PDP			
300J4	M83723-74A2461N	43	NO. 1 PDP			
300P4	M83723-75A2461N	43	NO. 1 PDP			
300J5	M83723-74A2041N	40	NO. 2 PDP			
300P5	M83723-75A2041N	40	NO. 2 PDP			
300J6	M83723-74A24616	43	NO. 2 PDP			
300P6	M83723-75A24616	43	NO. 2 PDP			
300J7	M83723-74A2255N	42	NO. 2 PDP			
300P7	M83723-75A2255N	42	NO. 2 PDP			
300J8	M83723-74A2461N	42	NO. 2 PDP			
300P8	M83723-75A2461N	42	NO. 2 PDP			
300J11	M83723-73A2255N	42	CONSOLE-UNDERFLOOR DISCONNECT	85	-20	
300P11	M83723-76A2255N	42	CONSOLE-UNDERFLOOR DISCONNECT	85	-20	
300J15	M83723-74A24617	43	CONSOLE-UNDERFLOOR DISCONNECT	85	-20	
300P15	M83723-75A24617	43	CONSOLE-UNDERFLOOR DISCONNECT	85	-20	
300J17	M83723-74A2255N	42	CONSOLE-UNDERFLOOR DISCONNECT (WITHOUT 74)	85	-20	
300J17	M83723-74W2255N	27	CONSOLE-UNDERFLOOR DISCONNECT (WITH 74)	85	-20	
300P17	M83723-75A2255N	42	CONSOLE-UNDERFLOOR DISCONNECT (WITHOUT 74)	85	-20	
300P17	M83723-75W2255N	27	CONSOLE-UNDERFLOOR DISCONNECT (WITH 74)	85	-20	
300W18	M83723-73A2041N	40	OVERHEAD PANEL-COCKPIT			
300P18	M83723-76A2041N	40	OVERHEAD PANEL-COCKPIT			
300J19	M83723-73A2041N	40	OVERHEAD PANEL-COCKPIT			
300P19	M83723-76A2041N	40	OVERHEAD PANEL-COCKPIT			
300J22	M83723-73A20416	40	OVERHEAD PANEL-COCKPIT			
300P22	M83723-76A20416	40	OVERHEAD PANEL-COCKPIT			
300J23	M83723-74A2255N	42	OVERHEAD PANEL-COCKPIT			
300P23	M83723-75A2255N	42	OVERHEAD PANEL-COCKPIT			
300P28	MS3476W22-55S	27	MAINTENANCE PANEL-J2	510	25	50R
300P31	MS3476W20-41S	26	MAINTENANCE PANEL-J1	510	25	50R
300J32	M83723-84K2255N	42	NO. 2 ENG DISCONNECT PAN, RCPT	590	40	50R
300J33	M83723-84K2255N	42	NO. 1 ENG DISCONNECT PAN, RCPT	590	40	50L
300J35	MS3474W16-26P	24	LH CABIN L MAIN TANK RCPT	260	-10	50L
300J37	MS3474W16-26P	24	RH CABIN R MAIN TANK RCPT	260	-10	50R

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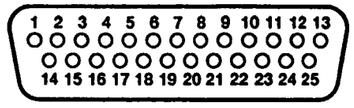
INSTRUMENT SYSTEM ELECTRICAL COMPONENT LOCATION AND CONFIGURATION LIST (Continued)

REF DESIG	PART NUMBER	TYPE	MATE WITH/LOCATION	STATION LOCATION FS	WL	BL
300J42	M83723-74A2255N	42	ELECTRONICS COMPARTMENT (WITHOUT 74)	105	40	20L
300J42	M83723-74W2255N	27	ELECTRONICS COMPARTMENT (WITH 74)	105	40	20L
300P42	M83723-75A2255N	42	ELECTRONICS COMPARTMENT (WITHOUT 74)	105	40	20L
300P42	M83723-75W2255N	27	ELECTRONICS COMPARTMENT (WITH 74)	105	40	20L
300J43	M83723-74A2255N	42	HEATER COMPARTMENT (WITHOUT 74)	105	40	30R
300J43	M83723-74W2255N	27	HEATER COMPARTMENT (WITH 74)	105	40	30R
300P43	M83723-75A2255N	42	HEATER COMPARTMENT (WITHOUT 74)	105	40	30R
300P43	M83723-75W2255N	27	HEATER COMPARTMENT (WITH 74)	105	40	30R
300J44	M83723-74A2461N	43	PYLON WL 72, DISC	528	72	18L
300P44	M83723-75A2461N	43	PYLON WL 72, DISC	528	72	18L
300J45	M83723-73A2461N	43	HEATER COMPARTMENT	105	40	30R
300P45	M83723-76A2461N	43	HEATER COMPARTMENT	105	40	30R
300J47	M83723-74A2461N	43	HEATER COMPARTMENT	105	40	30R
300P47	M83723-75A2461N	43	HEATER COMPARTMENT	105	40	30R
300J48	M83723-74A2461N	43	ELECTRONICS COMPARTMENT	105	40	20L
300P48	M83723-75A2461N	43	ELECTRONICS COMPARTMENT	105	40	20L
300J50	M83723-73A2461N	43	ELECTRONICS COMPARTMENT-OVHD	120	40	20L
300P50	M83723-76A2461N	43	ELECTRONICS COMPARTMENT-OVHD	120	40	20L
300J51	M83723-74A2461N	43	AFT CROWN-OVHD	460	45	20R
300P51	M83723-75A2461 N	43	AFT CROWN-OVHD	460	45	20R
300J53	M83723-74A2255N	42	AFT CROWN-OVHD	460	45	20R
300P53	M83723-75A2255N	42	AFT CROWN-OVHD	460	45	20R
300J54	M83723-74A2461N	43	AFT CROWN-OVHD	460	50	20L
300P54	M83723-75A2461N	43	AFT CROWN-OVHD	460	50	20L
300J55	M83723-73A2255N	42	ELECTRONICS COMPARTMENT (WITHOUT 74)	105	40	20L
300J55	M83723-73W2255N	27	ELECTRONICS COMPARTMENT (WITH 74)	105	40	20L
300P55	M83723-76A2255N	42	ELECTRONICS COMPARTMENT (WITHOUT 74)	105	40	20L
300P55	M83723-76W2255N	27	ELECTRONICS COMPARTMENT (WITH 74)	105	40	20L
300J56	M83723-73A2255N	42	HEATER COMPARTMENT	105	40	25R
300P56	M83723-76A2255N	42	HEATER COMPARTMENT	105	40	25R
300J58	M83723-73A22558	42	CONSOLE-UNDERFLOOR DISCONNECT	85	-20	
300P58	M83723-76A22558	42	CONSOLE-UNDERFLOOR DISCONNECT	85	-20	
300J61	M83723-73A24619	43	CONSOLE-UNDERFLOOR DISCONNECT (WITHOUT 74)	85	-20	
300J61	M83723-73W24619	28	CONSOLE-UNDERFLOOR DISCONNECT (WITH 74)	85	-20	
300P61	M83723-76A 24619	43	CONSOLE-UNDERFLOOR DISCONNECT (WITHOUT 74)	85	-20	
300P61	M83723-76W24619	28	CONSOLE-UNDERFLOOR DISCONNECT (WITH 74)	85	-20	
300J62	M83723-73A2028N	39	CONSOLE-UNDERFLOOR DISCONNECT	85	-20	
300P62	M83723-76A2028N	39	CONSOLE-UNDERFLOOR DISCONNECT	85	-20	
300J63	M83723-73A2232N	41	CONSOLE-UNDERFLOOR DISCONNECT	85	-20	
300P63	M83723-76A2232N	41	CONSOLE-UNDERFLOOR DISCONNECT	85	-20	
300J74	D38999-24KH53SN	302	NO. 2 ENG DISC PAN RCPT (WITH 74)	590	40	50R
300J75	D38999-24KH53SN	302	NO. 1 ENG DISC PAN RCPT (WITH 74)	590	40	50L
300J77	D38999-24KH53SA	302	NO. 1 ENG DISC PAN RCPT (WITH 74)	590	40	50L
300J78	D38999-24KA98SN	12	NO. 2 ENG DISC PAN RCPT (WITH 74)	590	40	50R
300J80	D38999-24KD18SN	401	NO. 1 ENG DISC PAN RCPT (WITH 74)	590	40	50L
300J81	D38999-24KD18SN	401	NO. 2 ENG DISC PAN RCPT (WITH 74)	590	40	50R

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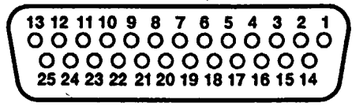
INSTRUMENT SYSTEM ELECTRICAL COMPONENT LOCATION AND CONFIGURATION LIST (Continued)

RECEPTACLE

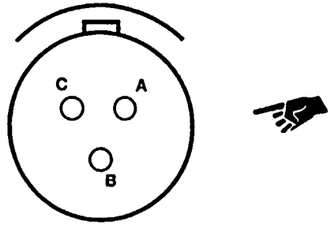


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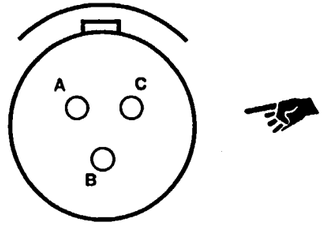
PLUG



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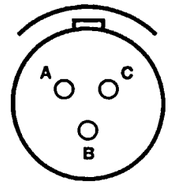


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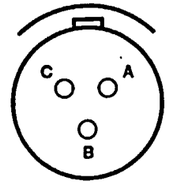
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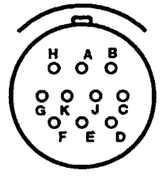


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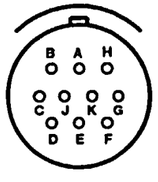
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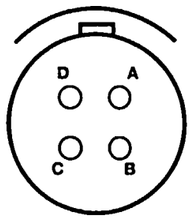
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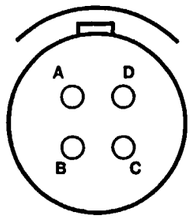
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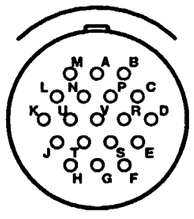
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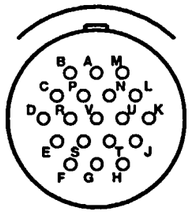
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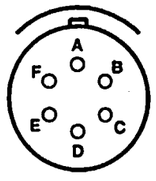
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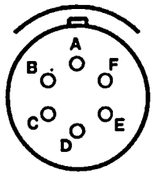
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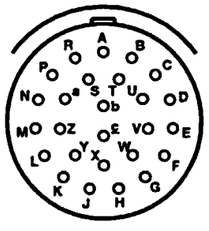
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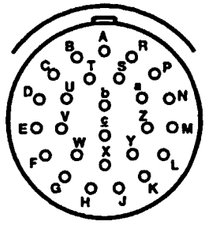
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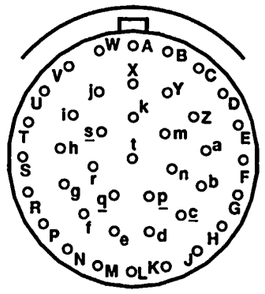
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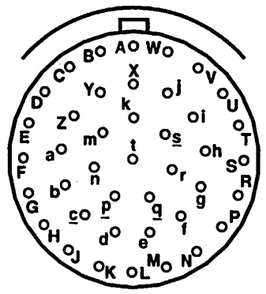
INSTRUMENT SYSTEM ELECTRICAL COMPONENT LOCATION AND CONFIGURATION LIST (Continued)

RECEPTACLE



26

PLUG



26

RECEPTACLE

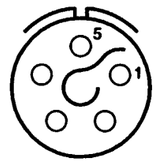


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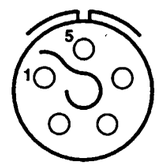
PLUG



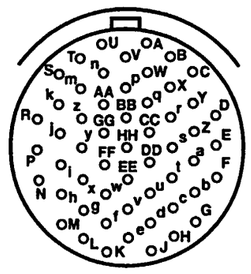
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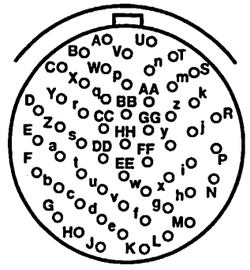
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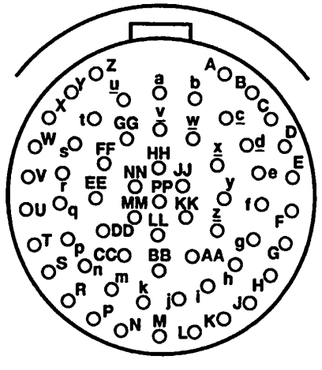
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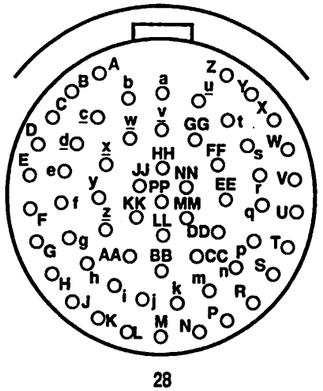
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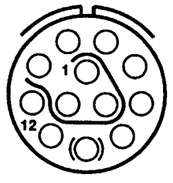
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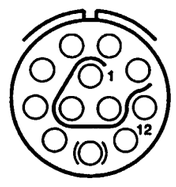
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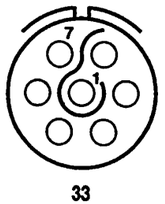
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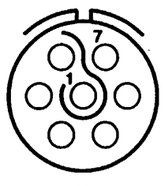
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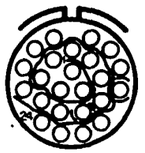
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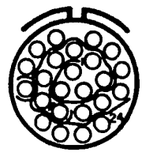
INSTRUMENT SYSTEM ELECTRICAL COMPONENT LOCATION AND CONFIGURATION LIST (Continued)

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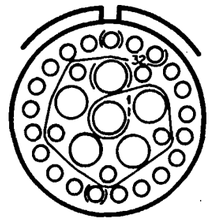
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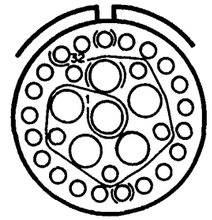
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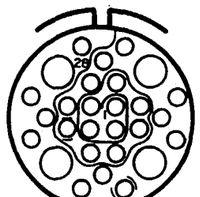
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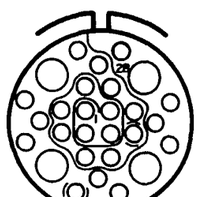
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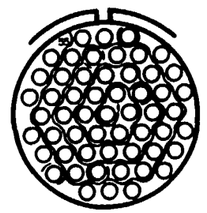
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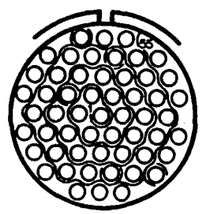
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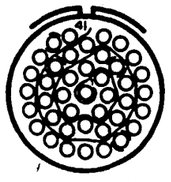
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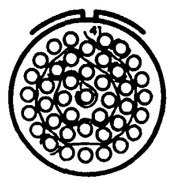
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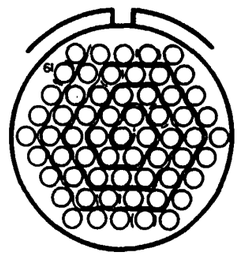
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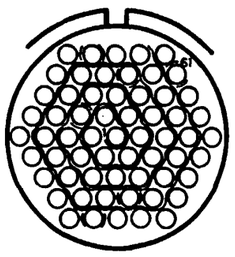
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RECEPTACLE



43

PLUG



43

10248

90 x 48

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INSTRUMENT SYSTEM ELECTRICAL COMPONENT LOCATION AND CONFIGURATION LIST (Continued)

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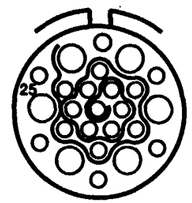
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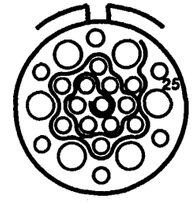
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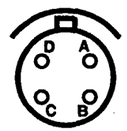


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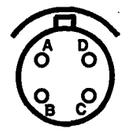
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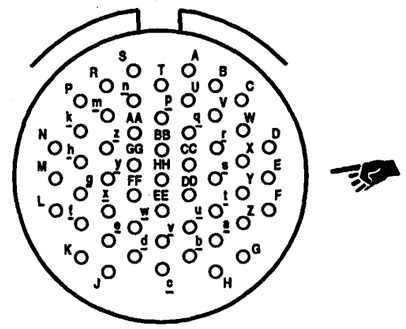
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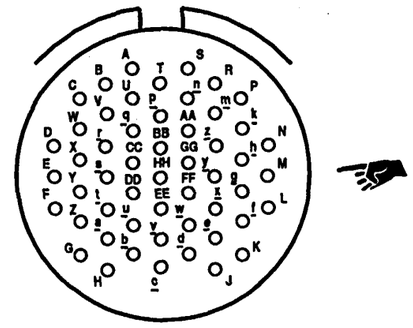
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GND MODULE



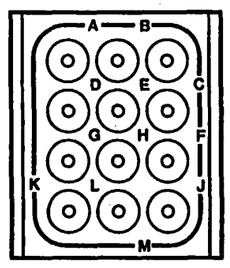
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302



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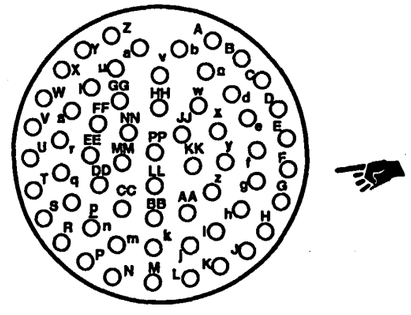


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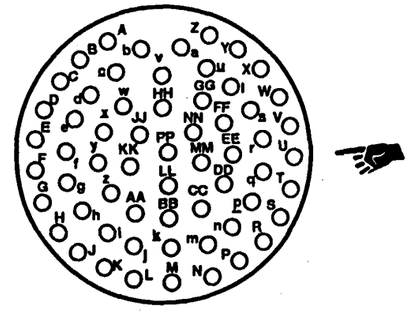
GND STUD



151



305



305

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INSTRUMENT SYSTEM ELECTRICAL COMPONENT LOCATION AND CONFIGURATION LIST (Continued)

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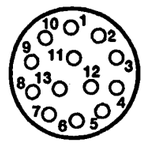


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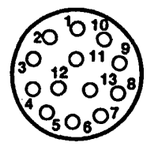
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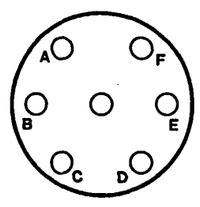
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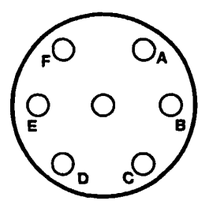
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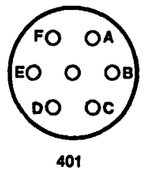
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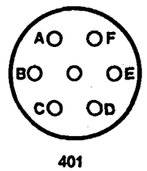
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401



401

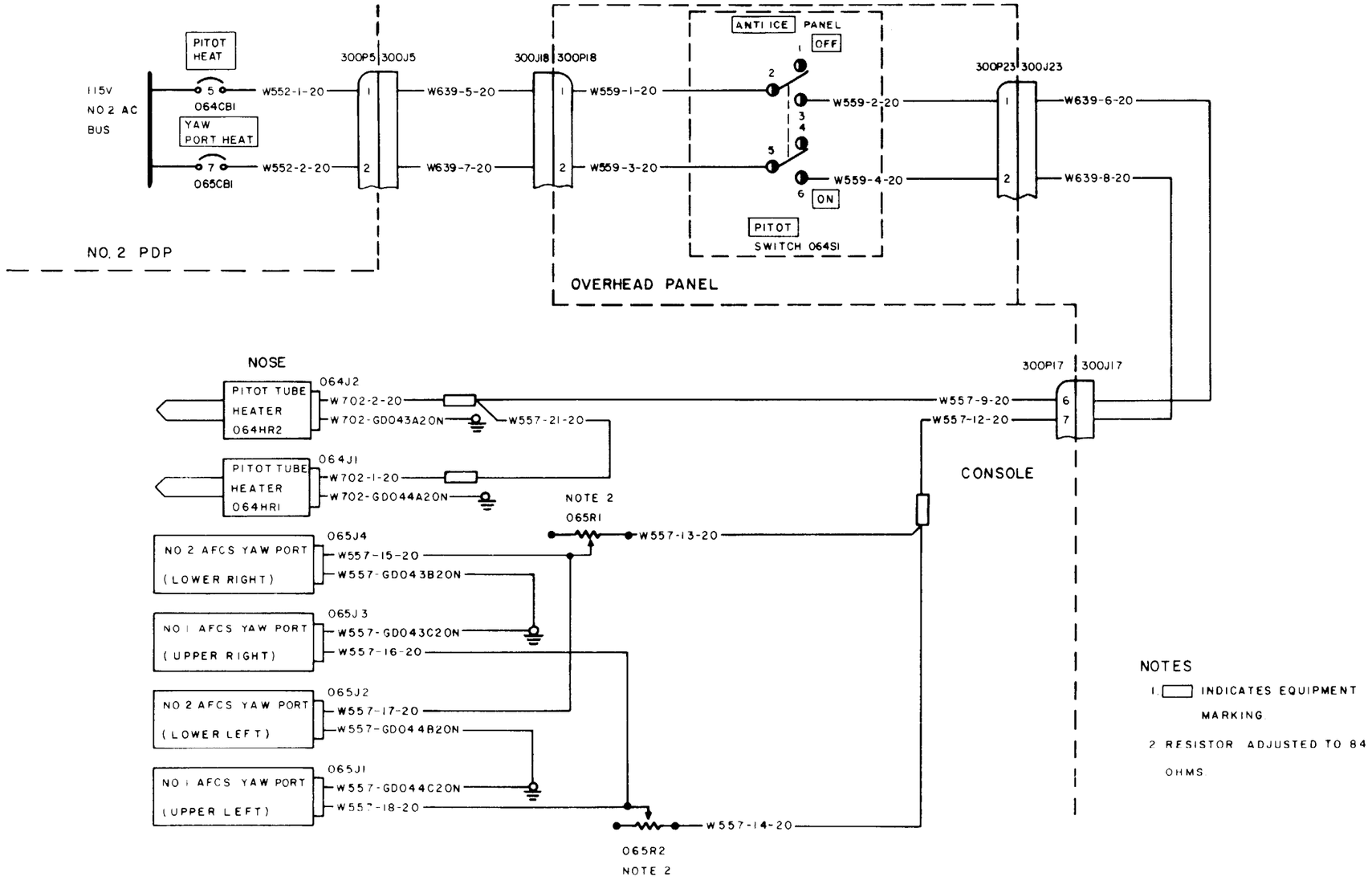
A72184

END OF TASK

8-1 PITOT STATIC SYSTEM

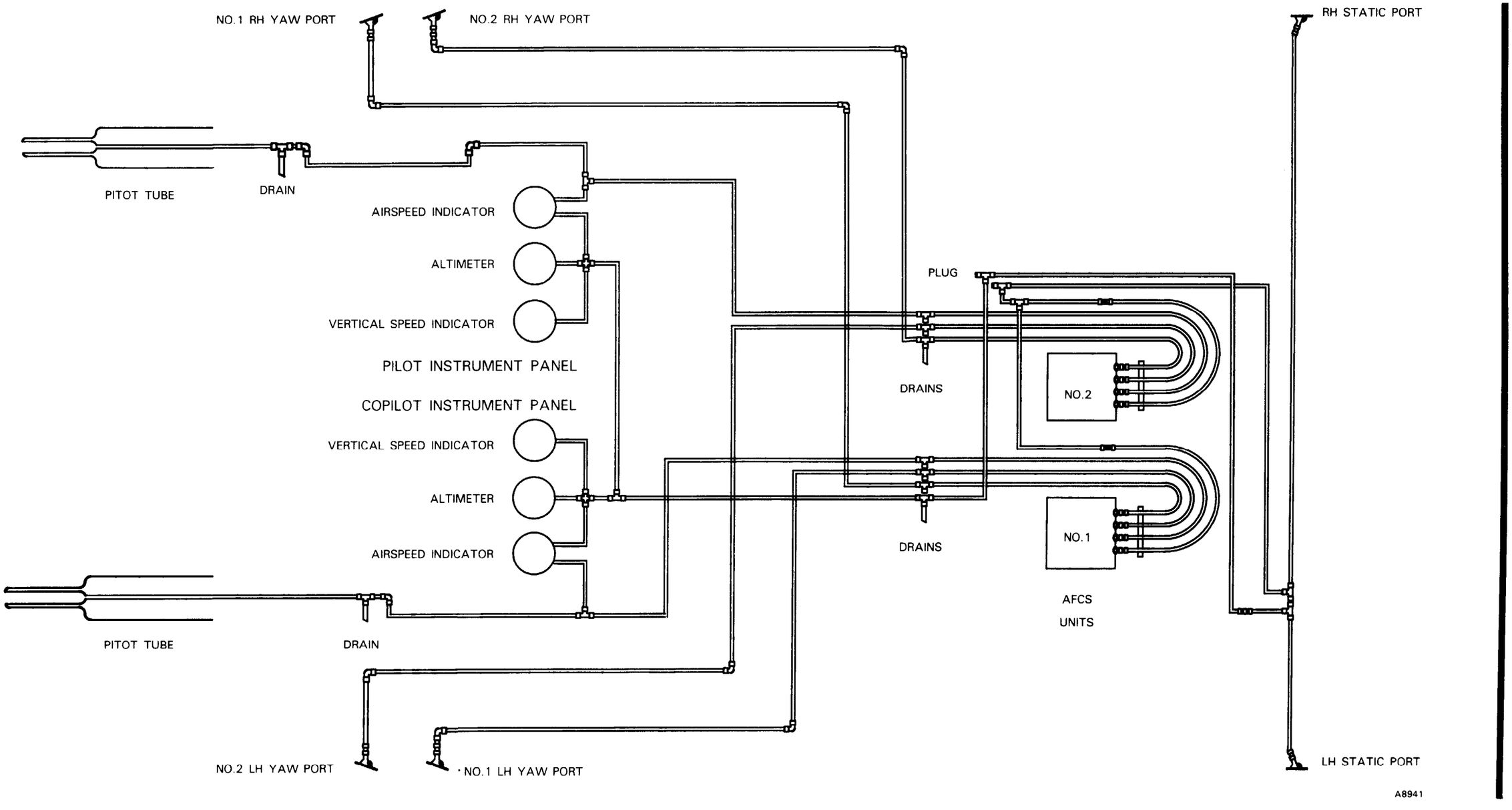
8-1 PITOT STATIC SYSTEM

8-1.1 PITOT TUBE AND YAW PORT HEATERS WIRING DIAGRAM

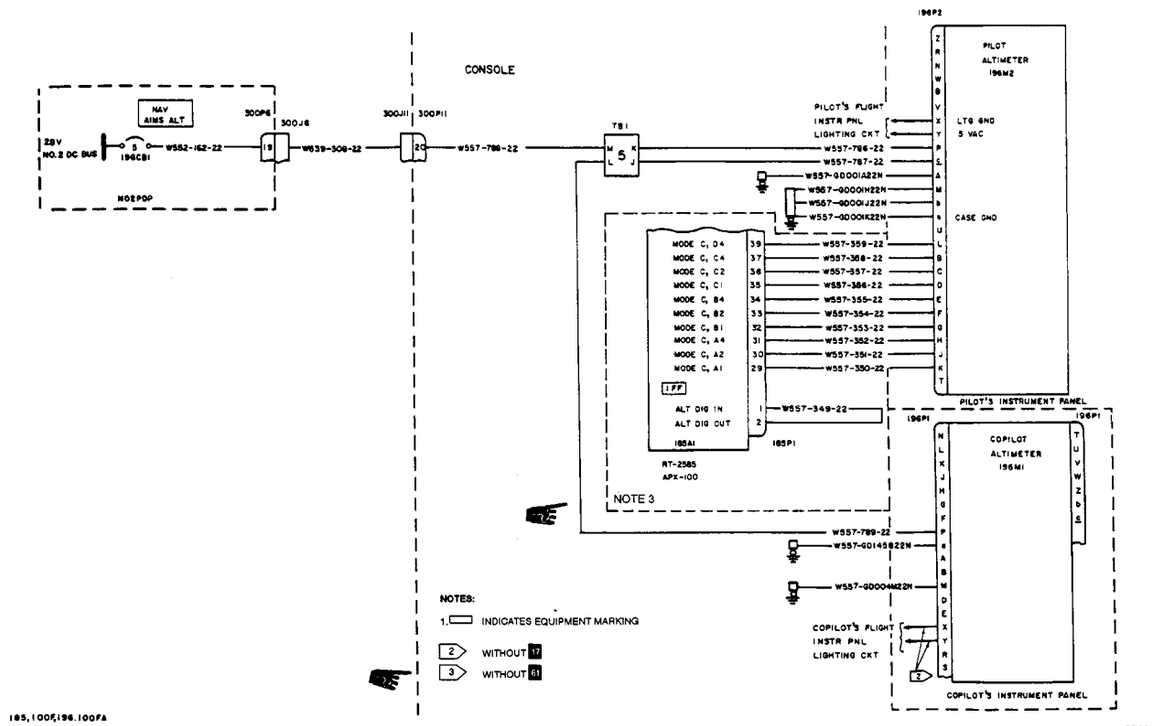


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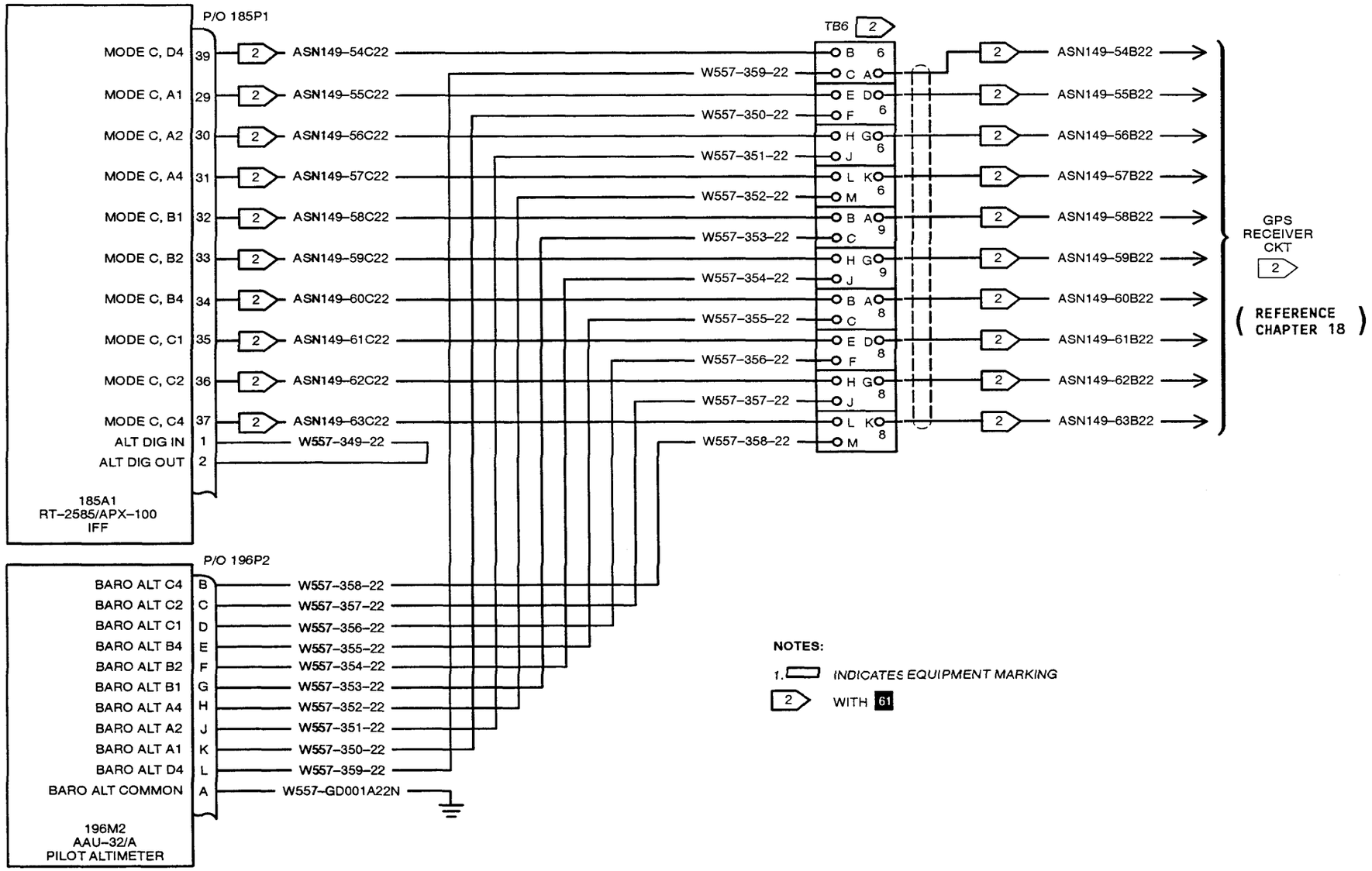
DI45-8959-SPA


NO.1 RH YAW PORT
NO.2 RH YAW PORT
RH STATIC PORT
PITOT TUBE
DRAIN
AIRSPEED INDICATOR
ALTIMETER
VERTICAL SPEED INDICATOR
PILOT INSTRUMENT PANEL
COPILOT INSTRUMENT PANEL
VERTICAL SPEED INDICATOR
ALTIMETER
AIRSPEED INDICATOR
PLUG
DRAINS
NO.2
NO.1
DRAINS
AFCS
UNITS
PITOT TUBE
DRAIN
NO.2 LH YAW PORT
NO.1 LH YAW PORT
LH STATIC PORT
A8941

END OF TASK



GO TO NEXT PAGE


P/O 185P1
MODE C, D4 39
MODE C, A1 29
MODE C, A2 30
MODE C, A4 31
MODE C, B1 32
MODE C, B2 33
MODE C, B4 34
MODE C, C1 35
MODE C, C2 36
MODE C, C4 37
ALT DIG IN 1
ALT DIG OUT 2
185A1
RT-2585/APX-100
IFF
ASN149-54C22
ASN149-55C22
ASN149-56C22
ASN149-57C22
ASN149-58C22
ASN149-59C22
ASN149-60C22
ASN149-61C22
ASN149-62C22
ASN149-63C22
W557-349-22
P/O 196P2
BARO ALT C4 B
BARO ALT C2 C
BARO ALT C1 D
BARO ALT B4 E
BARO ALT B2 F
BARO ALT B1 G
BARO ALT A4 H
BARO ALT A2 J
BARO ALT A1 K
BARO ALT D4 L
BARO ALT COMMON A
196M2
AAU-32/A
PILOT ALTIMETER
W557-358-22
W557-357-22
W557-356-22
W557-355-22
W557-354-22
W557-353-22
W557-352-22
W557-351-22
W557-350-22
W557-359-22
W557-GD001A22N
TB6
W557-359-22
W557-350-22
W557-351-22
W557-352-22
W557-353-22
W557-354-22
W557-355-22
W557-356-22
W557-357-22
W557-358-22
ASN149-54B22
ASN149-55B22
ASN149-56B22
ASN149-57B22
ASN149-58B22
ASN149-59B22
ASN149-60B22
ASN149-61B22
ASN149-62B22
ASN149-63B22
GPS
RECEIVER
CKT
REFERENCE
CHAPTER 18
NOTES:
1. INDICATES EQUIPMENT MARKING
WITH 61

8-1.3 PITOT STATIC SYSTEM VISUAL CHECK 8-1.3

INITIAL SETUP

Applicable Configurations:
All

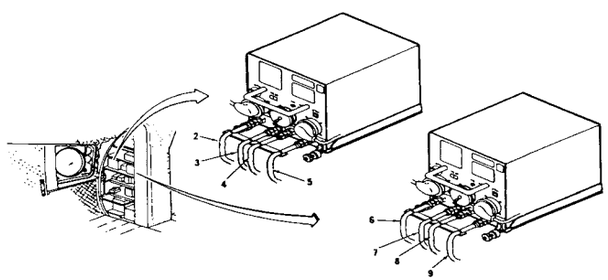
References:
TM 55-1520.240-23

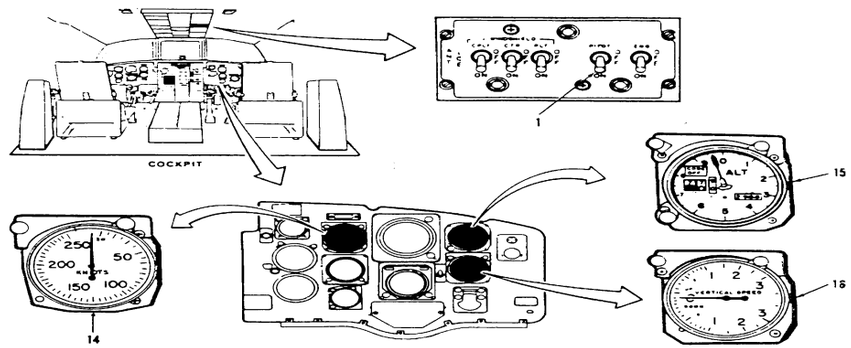
Tools.'
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915

Materials:
None

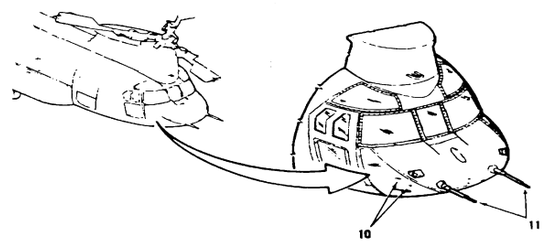
Personnel Required:
68F10 Aircraft Electrician

Equipment Condition.
TM 55-1520-240-23
Battery Disconnected
Electrical Power Off
Hydraulic Power Off
Electronic Compartment Acoustic
Blanket Removed





PILOT'S INSTRUMENT PANEL SHOW
COPILOT'S INSTRUMENT PANEL SAME



RIGHT YAW PORTS SHOWN
LEFT YAW PORTS SAME

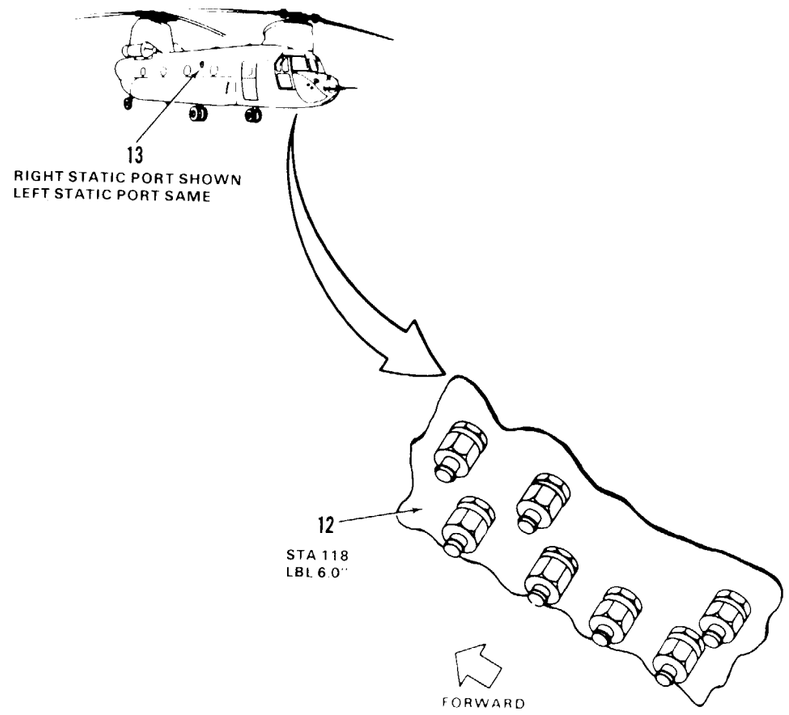
GO TO NEXT PAGE

8-1.3 PITOT STATIC SYSTEM VISUAL CHECK (Continued)

TASK	RESULT
1. **Check PITOT switch (1).**	If switch (1) is loose or damaged, tighten or replace as required.
2. **Check NO. 1 AFCS computer static (2), pitot (3), left (4), and right (5) sideslip line and fittings.**	If lines are kinked or damaged, straighten or replace them as required. If fittings are loose or damaged, tighten or replace them as required.
3. **Check NO. 2 AFCS computer static (6), pitot (7), left (8), and right (9) sideslip lines and fittings.**	If lines are kinked or damaged, straighten or replace them as required. If fittings are loose or damaged, tighten or replace them as required.
4. **Check left** and **right yaw ports (10).**	If holes in ports (10) are clogged or ports are damaged, clean ports or replace them as required.
5. **Check left** and **right pitot masts (11).**	If eithier pitot mast (11) is loose or damaged, tighten or replace it as required.
6. **Check pitot static system drains (12).**	If drains (12) are loose or damaged, tighten or replace them as required.
7. **Check static ports (13).**	If holes in ports (13) are clogged, or ports are damaged, clean parts or replace them as required.
8. **Check pilot's** and **copilot's airspeed indicators (14).**	If either Indicator (14) is loose or damaged tighten or replace it as required
9. **Check pilot's** and **copilot's altimeters (15).**	If either altimeter (15) is loose or damaged, tighten or replace it as required.
10. **Check pilot's** and **copilot's vertical speed indicators (16).**	If either indicator (16) is loose or damaged tighten or replace it as required.

FOLLOW-ON MAINTENANCE

None



45 X 54

D145 11479-SPA

END OF TASK

8-1.4 PITOT STATIC SYSTEM OPERATIONAL CHECK

INITIAL SETUP

Applicable Configurations:
All

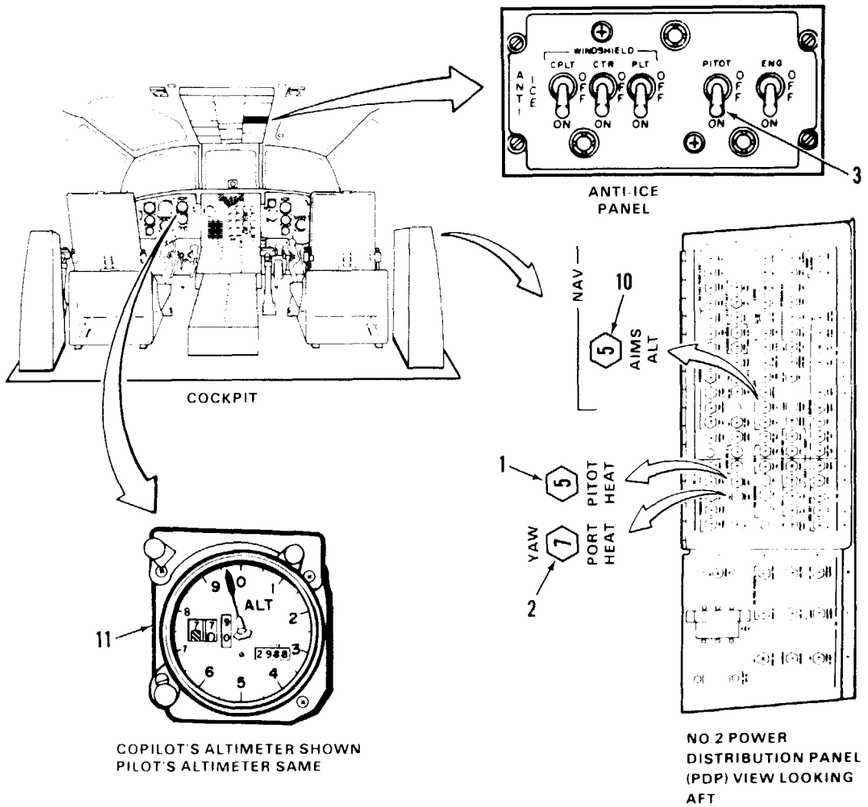
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Pitot and Static Systems Tester
NSN 4920-00-475-7161
Workstand

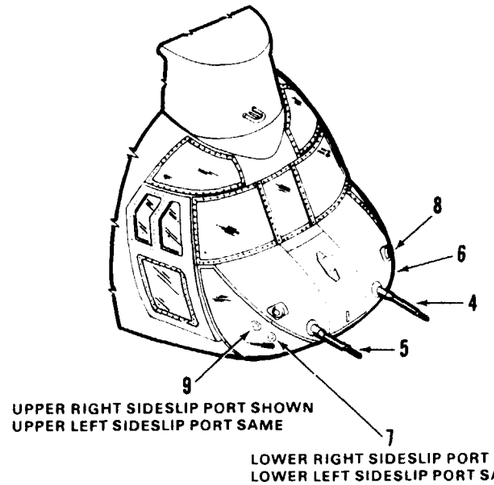
Materials:
Barrier Material (E80)
Masking Tape (E388)

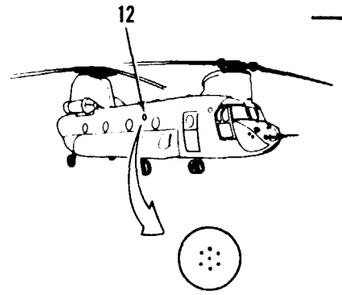
Personnel Required:
68F10 Aircraft Electrician
68F20 Aircraft Electrician

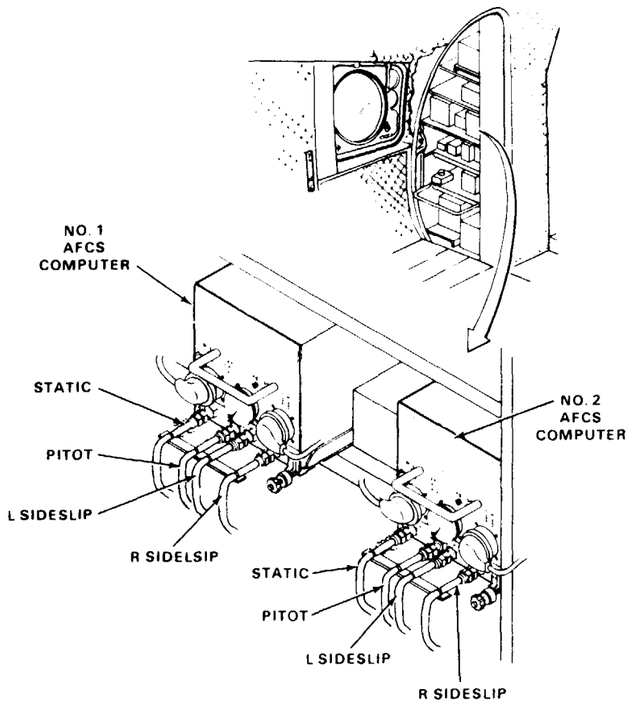
References:
TM 55-1520-240-23
TM 55-4920-231-14

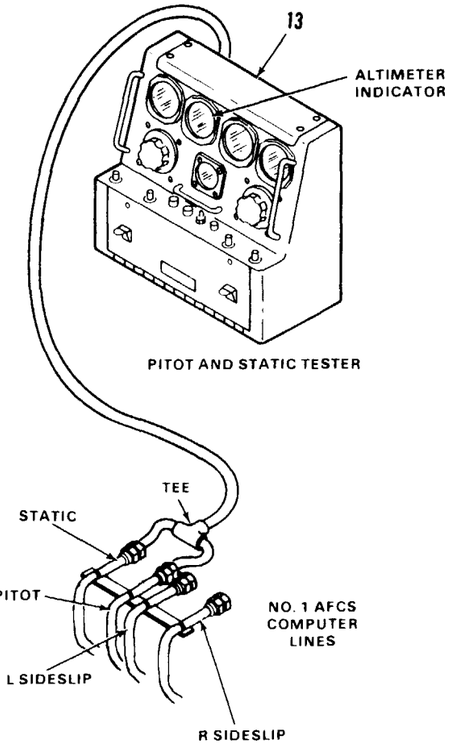
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off
Visual Check of Pitot Static
System Performed (Task 8-1.3)











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0145 - 11480 - SPA

GO TO NEXT PAGE

8-1.4 PITOT STATIC SYSTEM OPERATIONAL CHECK (Continued)

TASK	RESULT

PITOT MAST AND SIDESLIP PORTS HEATER CHECK

1. Check that PITOT HEAT circuit breaker (1) is **closed.**

If circuit breaker (1) is open, close it. If it opens again go to task 8-1.5.

2. Check that YAW PORT HEAT circuit breaker (2) is **closed.**

If circuit breaker (2) in open, close it. If it opens again go to task 8-1.6.

3. Set PITOT switch (3) to ON.

Hold hand close to left and right pitot tubes (4 and 5) but do not touch them and feel for heat. If heat is not present go to task 8-1.7.

WARNING

The pitot tube and sideslip ports get very hot and can burn personnel when heaters are on.

Hold hand close to lower left and lower right sideslip ports (6 and 7) but do not touch them and feel for heat. If heat is not felt go to task 8-1.8.

CAUTION

Do not leave heaters on for more than 5 minutes. Ground operation shortens their service life.

Hold hand close to upper left and upper right sideslip ports (8 and 9) but do not touch them and feel for heat. If heat is not felt, go to task 8-1.9.

4. Set PITOT switch (3) to OFF.

ALTIMETER VIBRATOR CHECK

5. Check that **NAV AIMS ALT** circuit breaker (10) is **closed.**

If circuit breaker (10) is open, close it if it opens again, go to task 8-1.10.

6. **Check pilot's and copilot's altimeters (11).**

Place ear close to altimeters (11) and listen for a vibration if vibration can not be heard, go to task 8-1.11.

PITOT/STATIC SYSTEM CHECK

CAUTION

Do not put tape directly over holes in static ports or pitot tube drain holes. Adhesive on tape will clog holes.

TASK	RESULT

7 Cover holes in static ports (12). Use barrier material (E67). Secure material with masking tape (E337). Cap the right and left pitot masts (4 and 5). Seal drain holes in each pitot mast using barrier material and masking tape.

8. At NO. 1 AFCS computer, disconnect pitot and static tubing compression sleeve fittings anp connect pitot and static lines to tester (13).

9. At NO. 2 AFCS computer, disconnect pitot and static tubing compression sleeve fittings anp connect lines together.

CAUTION

Do not apply pressure to static line. Damage to altimeters can result.

10. Adjust vacuum at a rate less than 3,000 feet per minute until tester (13) altimeter reads 20,000 feet. Shut off vacuum pressure.

Tester (13) altimeter reading shall not decrease more than 2,000 feet in 5 minutes. If it does, go to task 8-1.12.

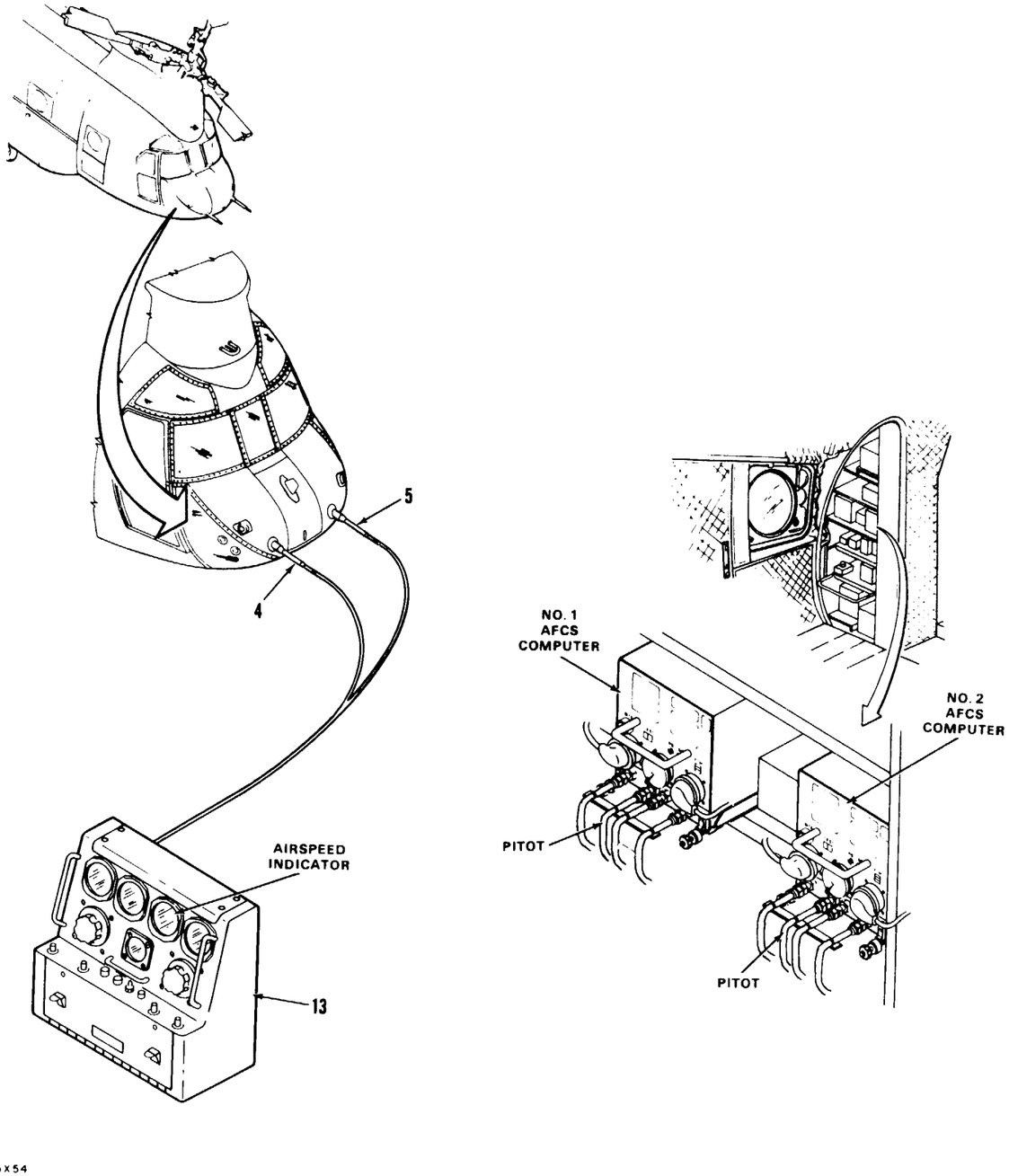
NOTE

Altimeter reading must be corrected for tester leak rate. Refer to TM 55-4920-231-14.

11. Disconnect tester (13). At both AFCS computers disconnect pitot and static lines from test circuit and connect them to their respective AFCS computers.

GO TO NEXT PAGE

TASK	RESULT
PITOT SYSTEM CHECK	
CAUTION **Do not apply vacuum to pitot lines. Damage to airspeed indicators can result.**	
12. At both AFCS computers disconnect and cap off both pitot tube compression sleeve fittings.	
13. Connect tester (13) to both pitot masts (4 and *5)* and adjust pressure for an airspeed indication of 150 knots on tester airspeed indicator. Shut off pressure.	Airspeed shall not decrease more than 10 knots in 5 minutes. If it does leak, go to task 8-1.13.
NOTE ● Airspeed must be corrected for tester leak rate. Refer to TM 55-4920-231-14. ● If PITOT system does not leak and there is a log book entry indicating a pitot leak, check AFCS computer in suspected system and replace AFCS computer.	
14. Disconnect tester (13) from both pitot masts (4 and 5). Remove caps and connect compression sleeve fittings to their respective AFCS computers.	



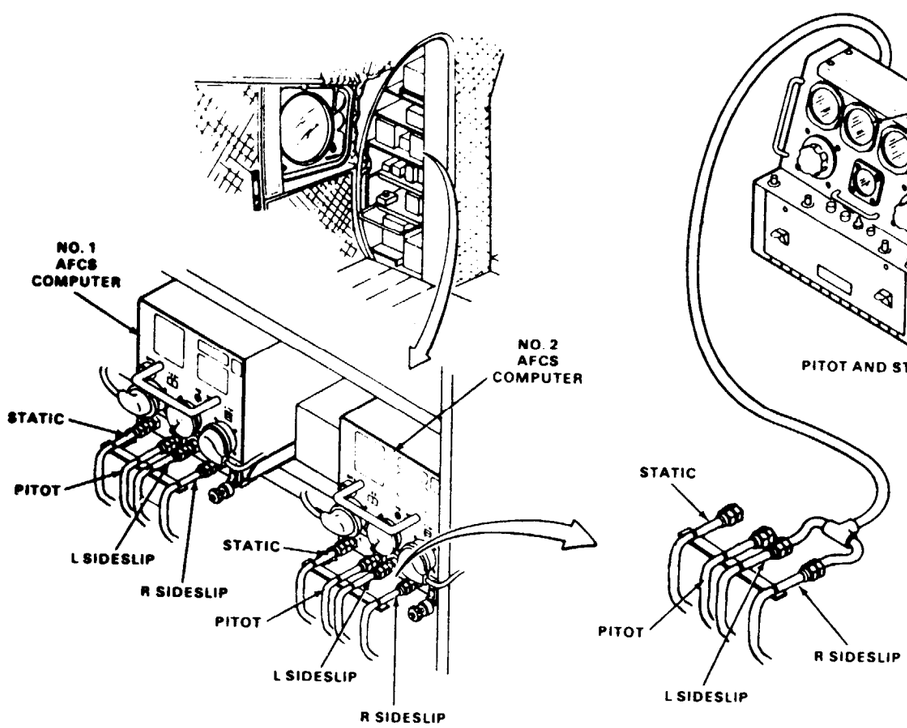
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TASK	RESULT
SIDESLIP LEAK TEST	
15. Cover holes in sideslip ports (6, 7, 8, and 9). Use barrier material (C67) and secure with masking tape (C337).	
16. Disconnect NO. 1 AFCS left and right sideslip tubes from computer. Connect to vacuum port on tester (13).	
17. Adjust vacuum at a rate less than 3,000 feet per minute until tester (13) altimeter reads 20.000 feet.	Shut off vacuum pressure. Tester (13) altimeter readings shall not decrease more than 2,000 feet in 5 minutes. If it does, go to task 8-1.14.
18. Remove tester (13) from NO. 1 AFCS left and right sideslip tubes and connect to their respective fittings on NO. 1 AFCS computer.	
19. Disconnect NO. 2 AFCS left and right sideslip tubes from computer. Connect to vacuum port on tester.	
20. Adjust vacuum at a rate less than 3,000 feet per minute until tester (13) altimeter reads 20,000 feet.	Shut off vacuum pressure. Tester (13) altimeter readings shall not decrease more than 2,000 feet in 5 minutes. If it does, go to task 8-1.14.
21. Remove tester (13) from NO. 2 AFCS left and right sideslip tubes and connect to their respective fittings on NO. 2 AFCS computer.	
22. Remove tape and barrier material from all four sideslip ports	

FOLLOW-ON MAINTENANCE:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off
Electronic Compartment Acoustic Blanket Installed



13150

END OF TASK

8-1.5 PITOT HEAT CIRCUIT BREAKER WILL NOT STAY CLOSED

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

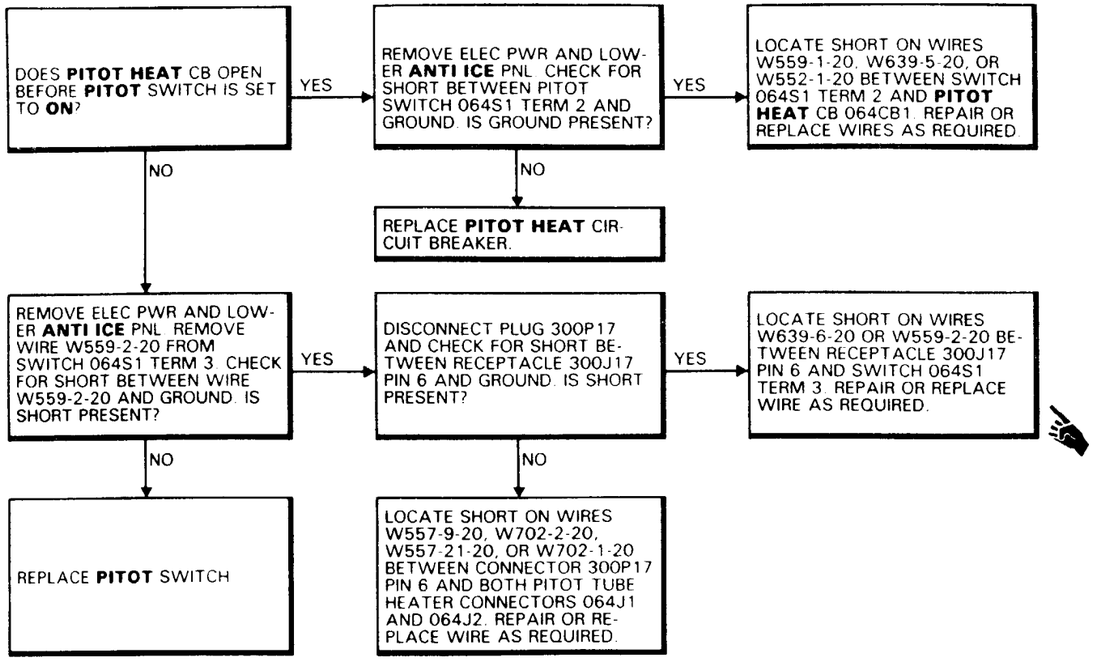
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

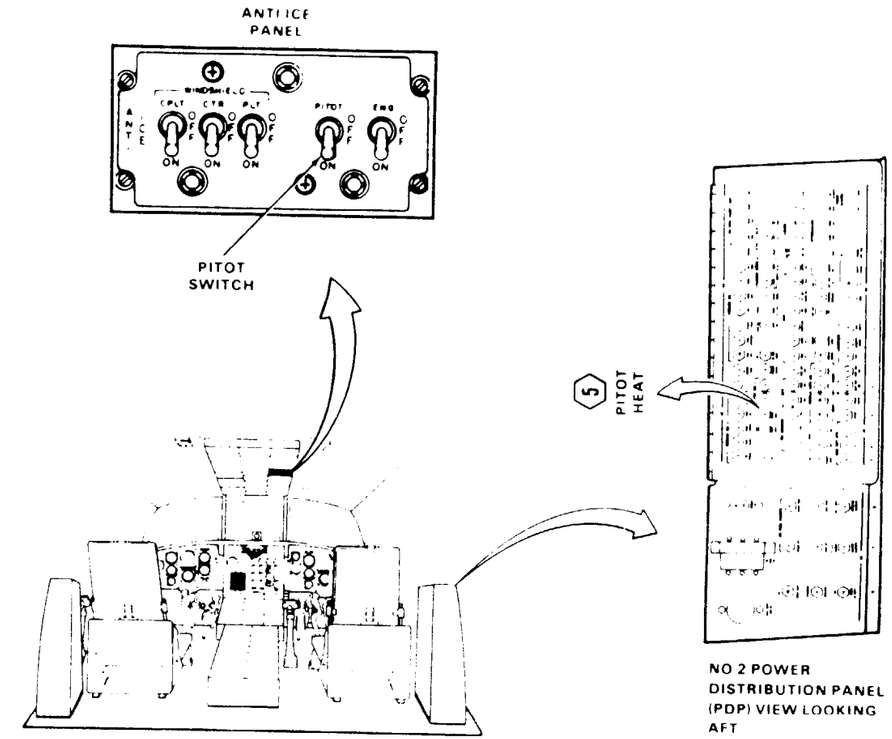
Materials:
None

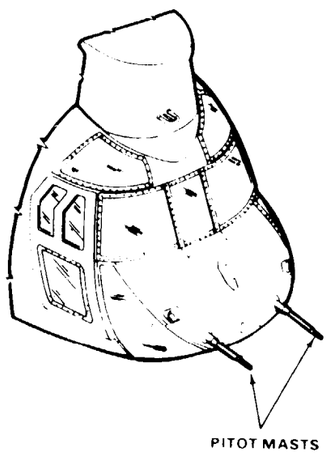
Personnel Required:
Aircraft Electrician (2)

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off







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END OF TASK

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

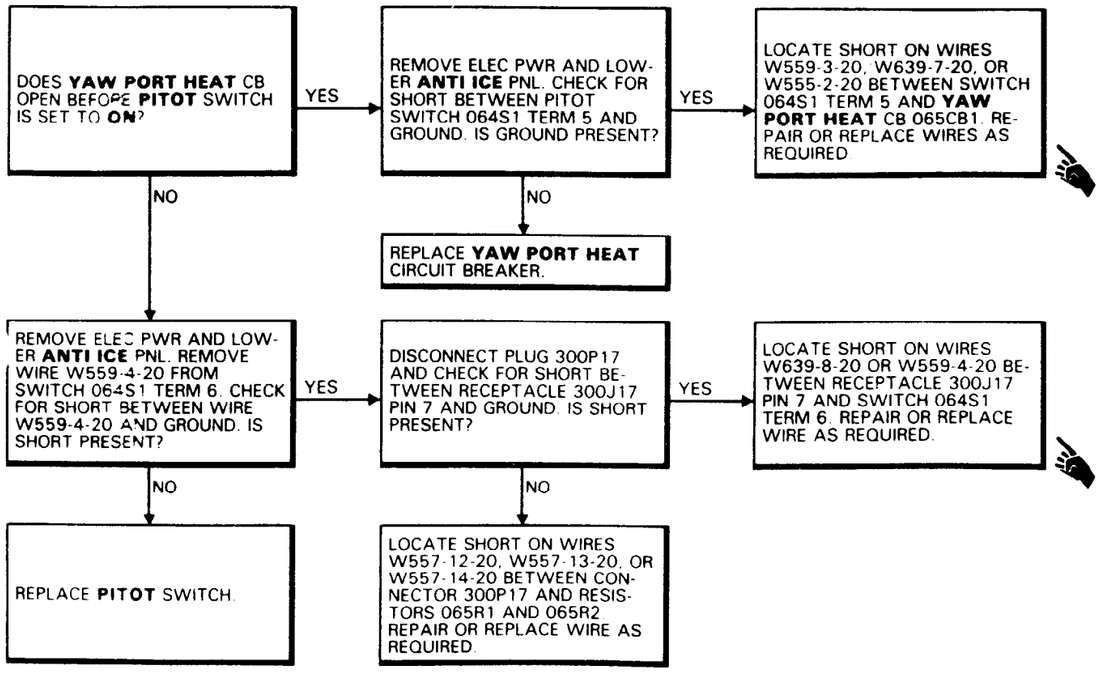
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

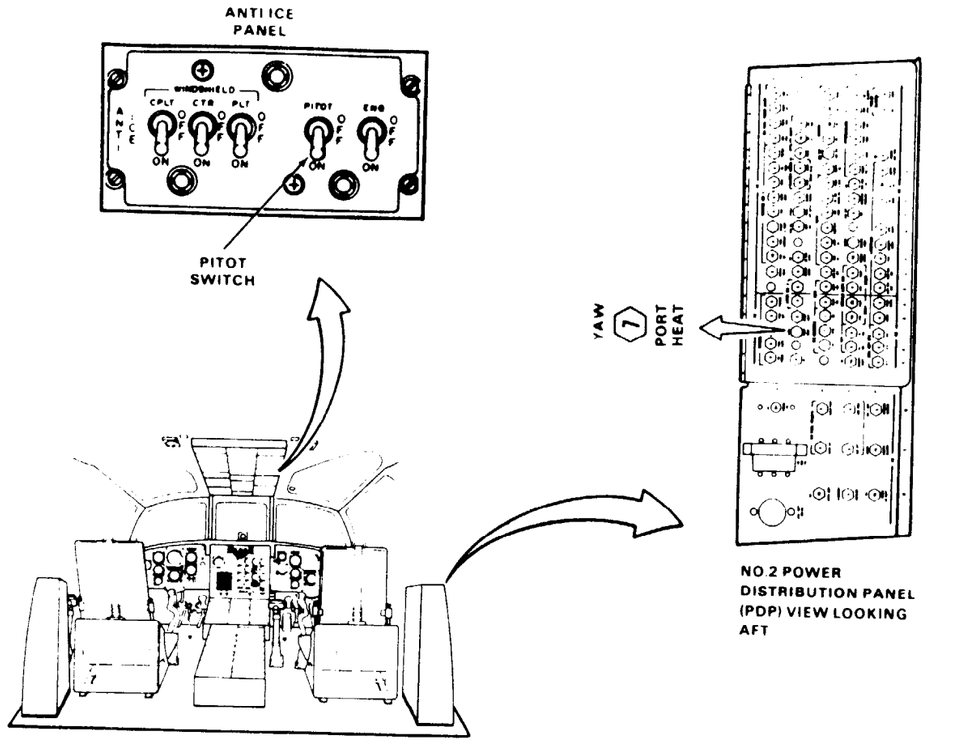
Materials:
None

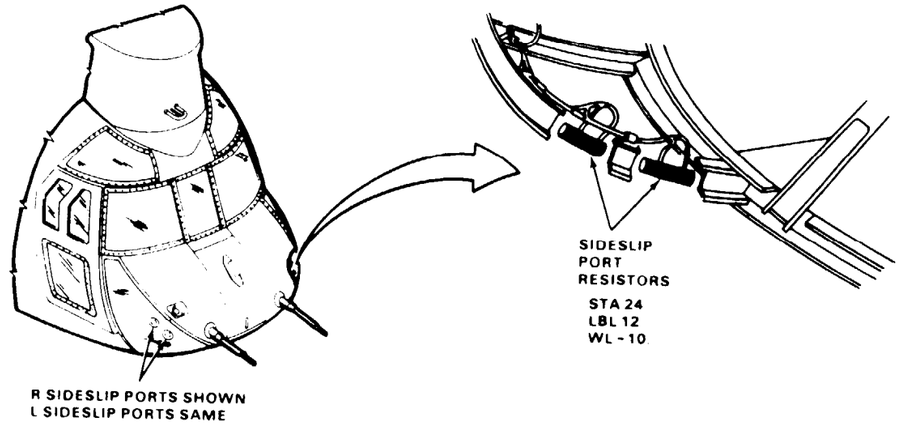
Personnel Required:
Aircraft Electrician (2)

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off







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END OF TASK

8-1.7 NO HEAT FELT ON LEFT OR RIGHT PITOT TUBE, PITOT SWITCH AT ON

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

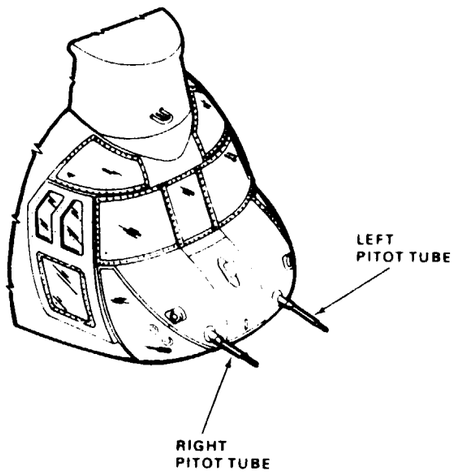
Tools:
Electrical Repairer's Tool Kit.
NSN 5180-00-323-4915
Multimeter

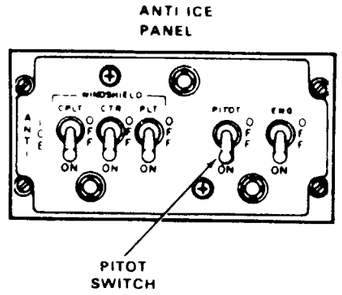
Materials:
None

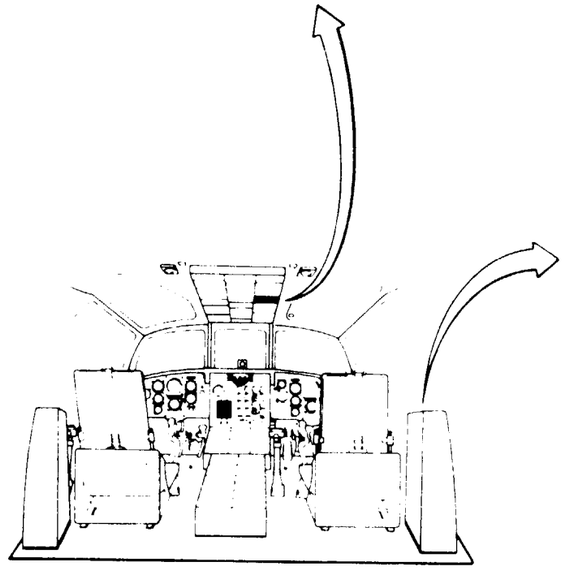
Personnel Required:
68F10 Aircraft Electrician
68F20 Aircraft Electrician

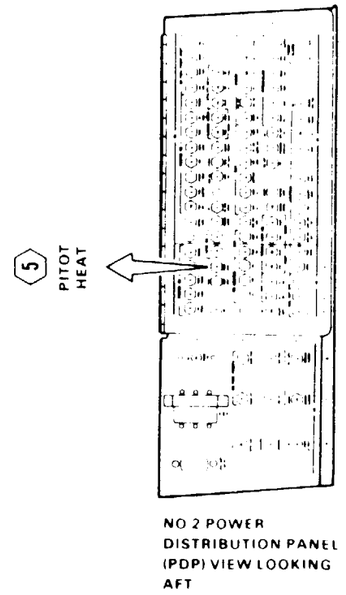
References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23
Battery Connected
Electrical Power On
Hydraullc Power Off

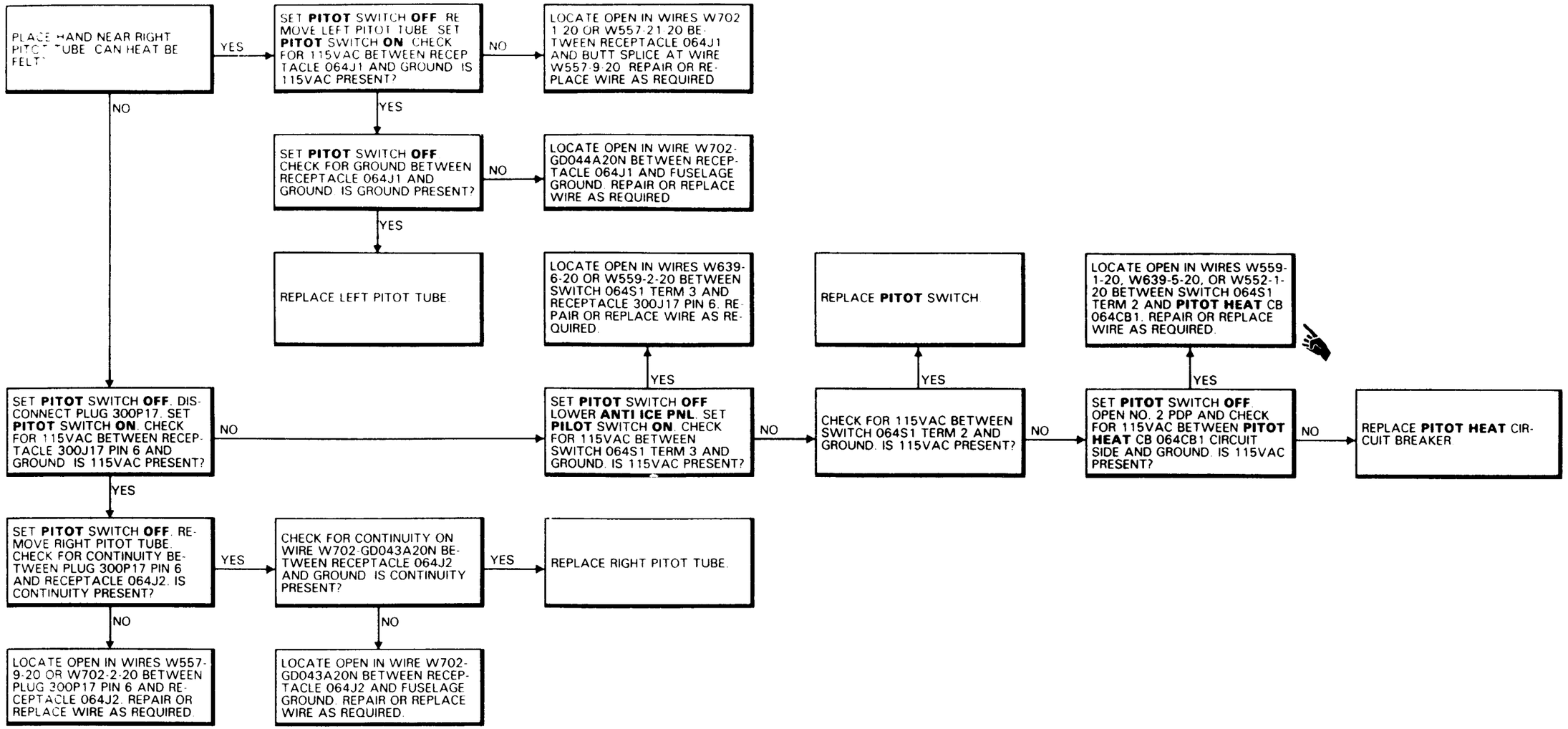








GO TO NEXT PAGE


PLACE HAND NEAR RIGHT PITOT TUBE. CAN HEAT BE FELT?
YES
NO
SET PITOT SWITCH OFF. REMOVE LEFT PITOT TUBE. SET PITOT SWITCH ON. CHECK FOR 115VAC BETWEEN RECEPTACLE 064J1 AND GROUND. IS 115VAC PRESENT?
NO
YES
LOCATE OPEN IN WIRES W702-1-20 OR W557-21-20 BETWEEN RECEPTACLE 064J1 AND BUTT SPLICE AT WIRE W557-9-20. REPAIR OR REPLACE WIRE AS REQUIRED.
SET PITOT SWITCH OFF. CHECK FOR GROUND BETWEEN RECEPTACLE 064J1 AND GROUND. IS GROUND PRESENT?
NO
YES
LOCATE OPEN IN WIRE W702-GD044A20N BETWEEN RECEPTACLE 064J1 AND FUSELAGE GROUND. REPAIR OR REPLACE WIRE AS REQUIRED.
REPLACE LEFT PITOT TUBE.
SET PITOT SWITCH OFF. DISCONNECT PLUG 300P17. SET PITOT SWITCH ON. CHECK FOR 115VAC BETWEEN RECEPTACLE 300J17 PIN 6 AND GROUND. IS 115VAC PRESENT?
NO
YES
LOCATE OPEN IN WIRES W639-6-20 OR W559-2-20 BETWEEN SWITCH 064S1 TERM 3 AND RECEPTACLE 300J17 PIN 6. REPAIR OR REPLACE WIRE AS REQUIRED.
SET PITOT SWITCH OFF LOWER ANTI ICE PNL. SET PILOT SWITCH ON. CHECK FOR 115VAC BETWEEN SWITCH 064S1 TERM 3 AND GROUND. IS 115VAC PRESENT?
NO
YES
REPLACE PITOT SWITCH.
CHECK FOR 115VAC BETWEEN SWITCH 064S1 TERM 2 AND GROUND. IS 115VAC PRESENT?
NO
YES
LOCATE OPEN IN WIRES W559-1-20, W639-5-20, OR W552-1-20 BETWEEN SWITCH 064S1 TERM 2 AND PITOT HEAT CB 064CB1. REPAIR OR REPLACE WIRE AS REQUIRED.
SET PITOT SWITCH OFF. OPEN NO. 2 PDP AND CHECK FOR 115VAC BETWEEN PITOT HEAT CB 064CB1 CIRCUIT SIDE AND GROUND. IS 115VAC PRESENT?
NO
REPLACE PITOT HEAT CIRCUIT BREAKER.
SET PITOT SWITCH OFF. REMOVE RIGHT PITOT TUBE. CHECK FOR CONTINUITY BETWEEN PLUG 300P17 PIN 6 AND RECEPTACLE 064J2. IS CONTINUITY PRESENT?
YES
NO
LOCATE OPEN IN WIRES W557-9-20 OR W702-2-20 BETWEEN PLUG 300P17 PIN 6 AND RECEPTACLE 064J2. REPAIR OR REPLACE WIRE AS REQUIRED.
CHECK FOR CONTINUITY ON WIRE W702-GD043A20N BETWEEN RECEPTACLE 064J2 AND GROUND. IS CONTINUITY PRESENT?
YES
NO
LOCATE OPEN IN WIRE W702-GD043A20N BETWEEN RECEPTACLE 064J2 AND FUSELAGE GROUND. REPAIR OR REPLACE WIRE AS REQUIRED.
REPLACE RIGHT PITOT TUBE.

END OF TASK

8-1.8 NO HEAT FELT ON LOWER RIGHT OR LOWER LEFT SIDESLIP PORTS

FAULT ISOLATION PROCEDURE

NITIAL SETUP

Applicable Configurations:
All

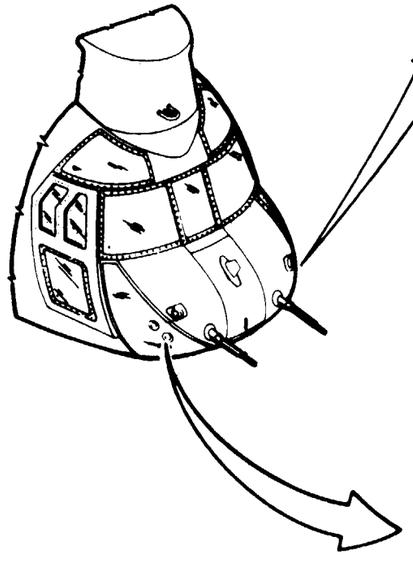
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

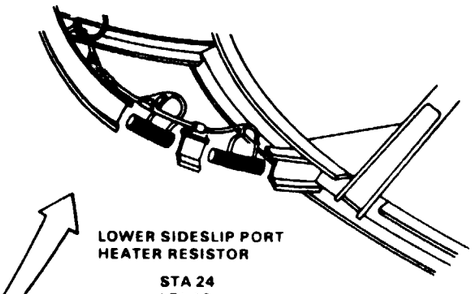
Materials:
None

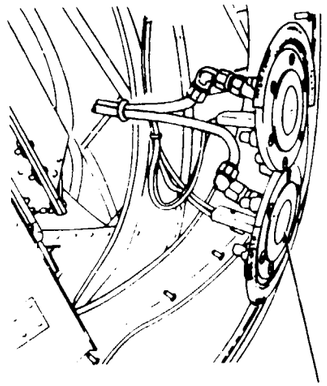
Personnel Requirad:
68F10 Aircraft Electrician
68F20 Aircraft Electrician

References
TM 55-1520-240-23

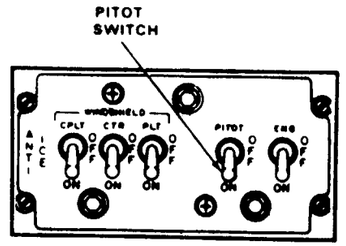
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off
Nose Access Door Open

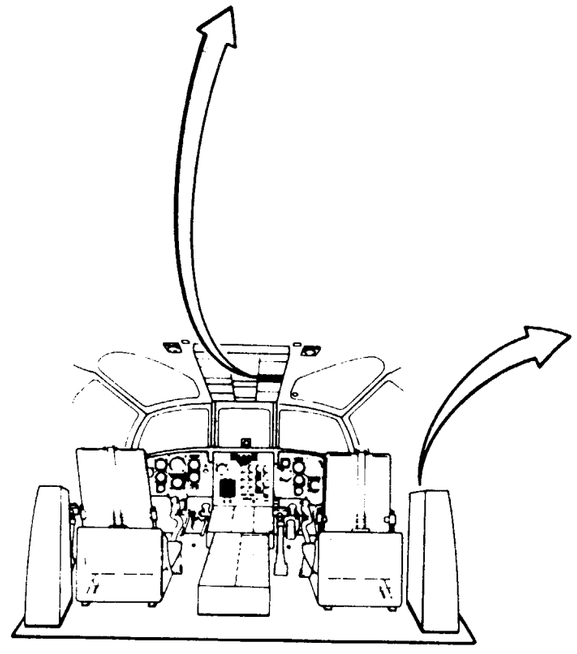




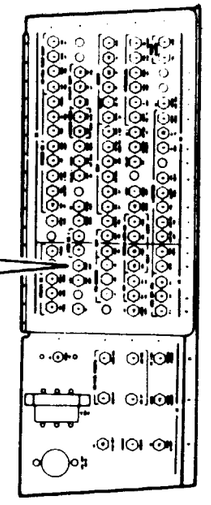


LOWER RIGHT SIDESLIP PORT SHOWN
LOWER LEFT SIDESLIP PORT SAME





COCKPIT

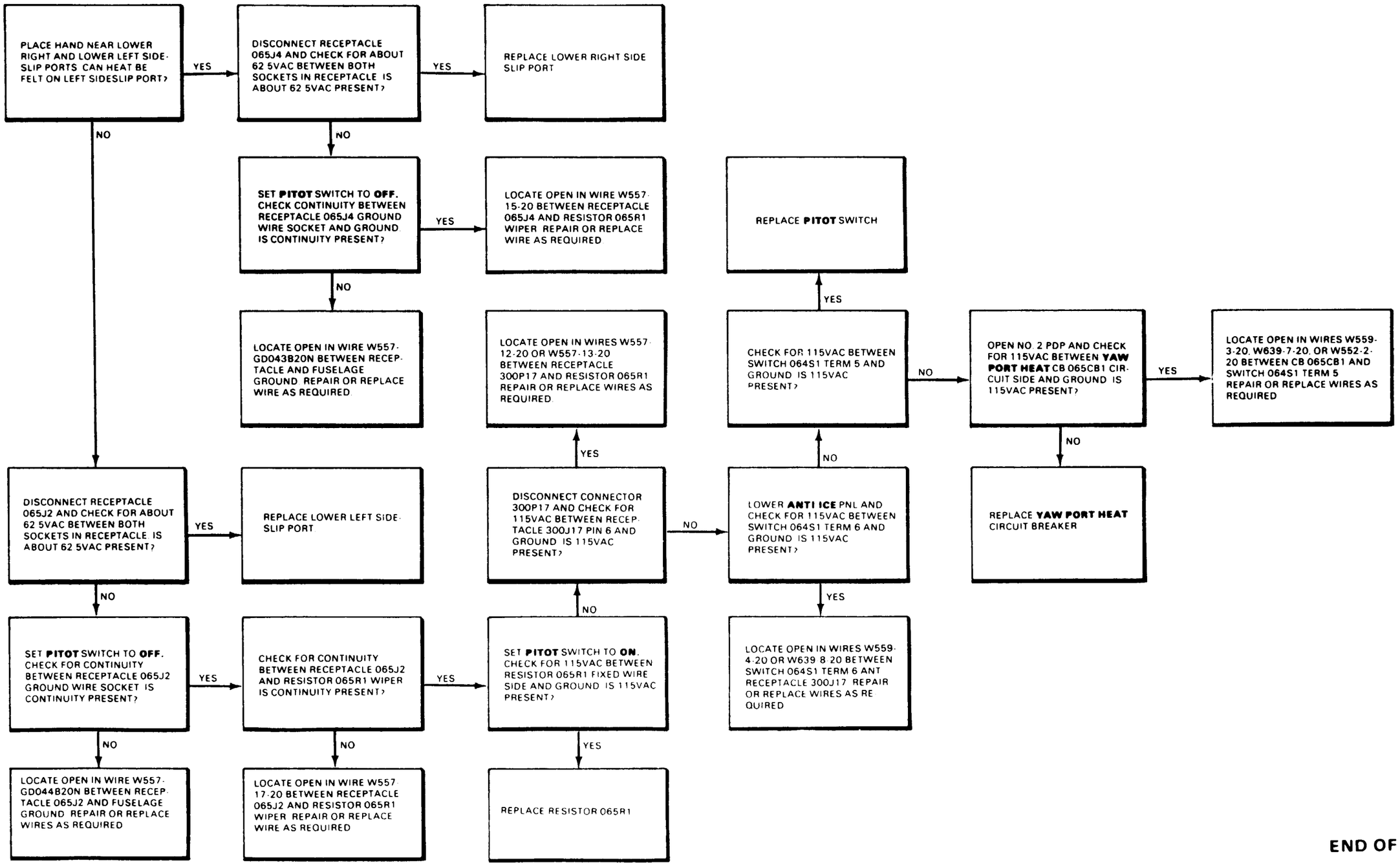


NO.2 POWER DISTRIBUTION PANEL (PDP) VIEW LOOKING AFT

D145-11486-SPA

GO TO NEXT PAGE

8-1.8 NO HEAT FELT ON LOWER RIGHT OR LOWER LEFT SIDESLIP PORTS (Continued)



END OF TASK

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

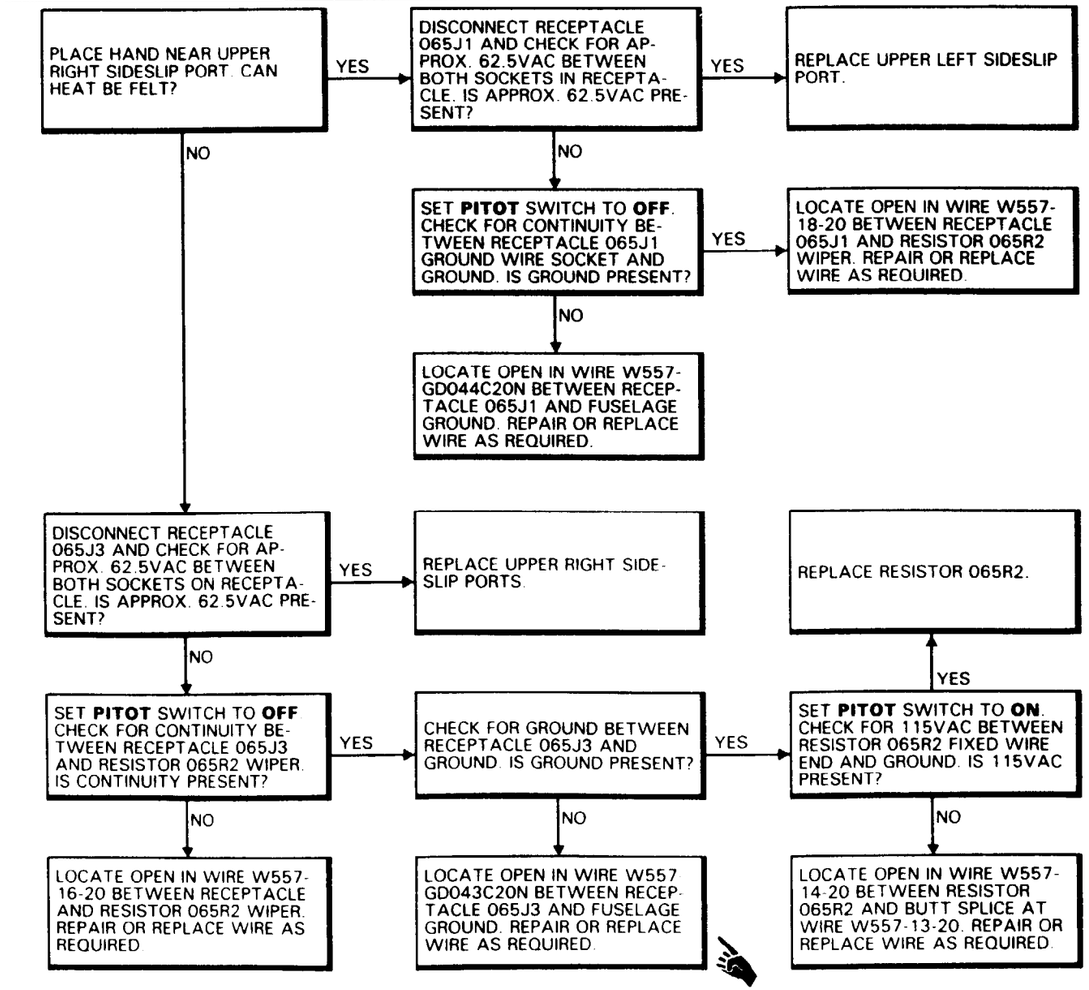
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

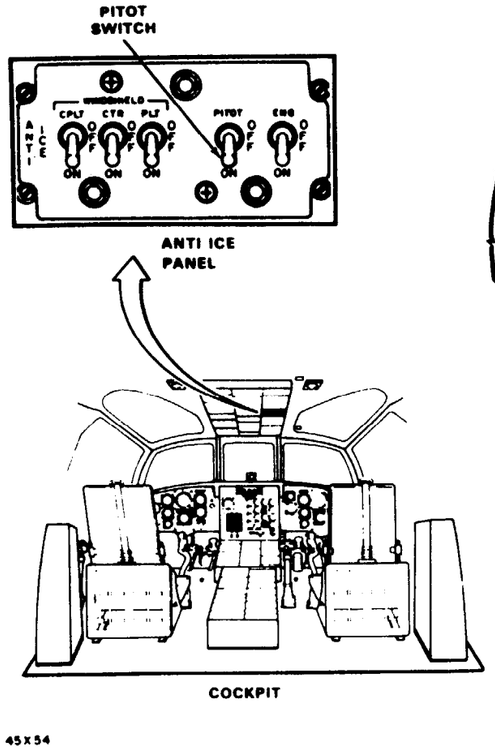
Materials:
None

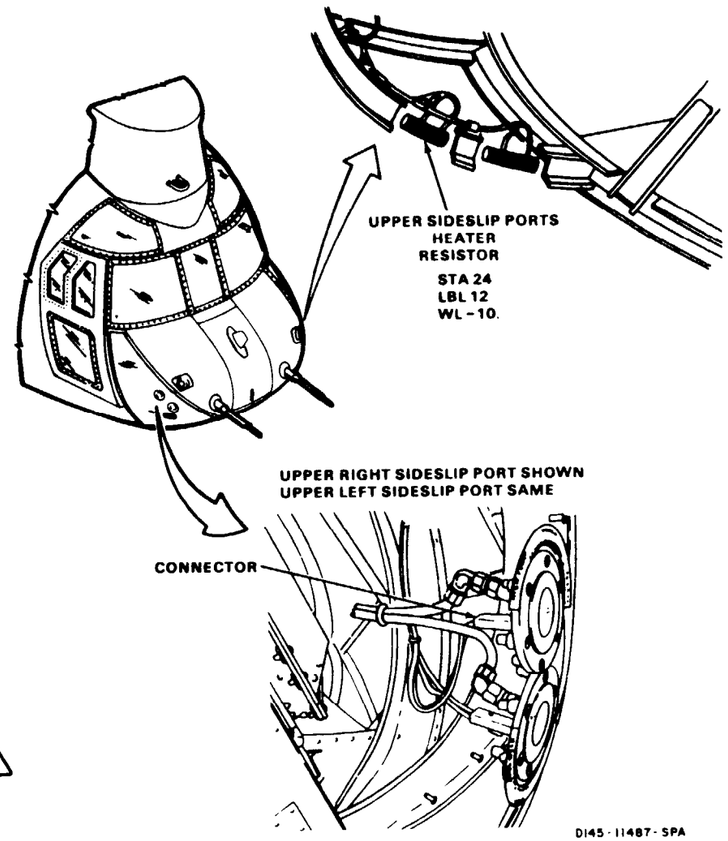
Personnel Required:
Aircraft Electrician (2)

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power On
Nose Access Door Open







END OF TASK

FAULT ISOLATION PROCEDURE

IAL SETUP

Applicable Configurations:
All

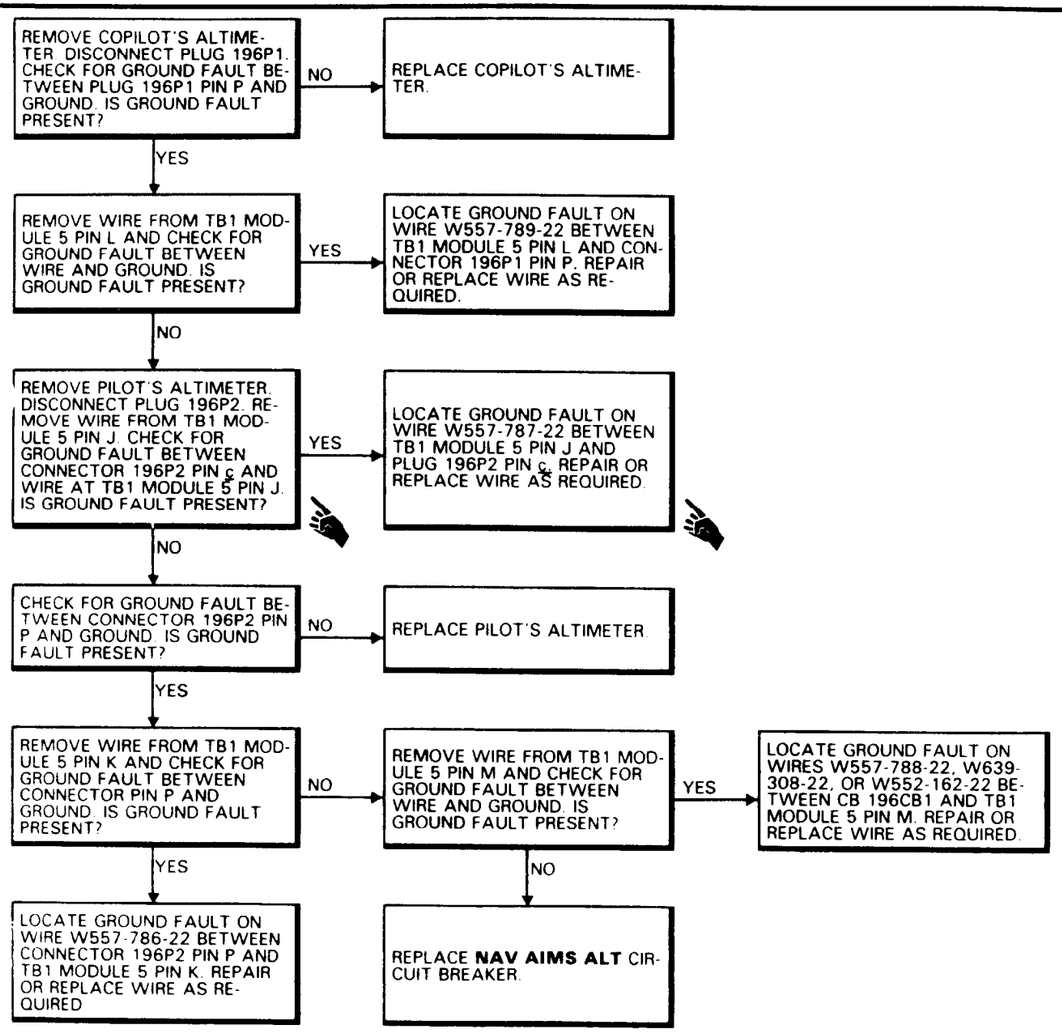
Is:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:
None

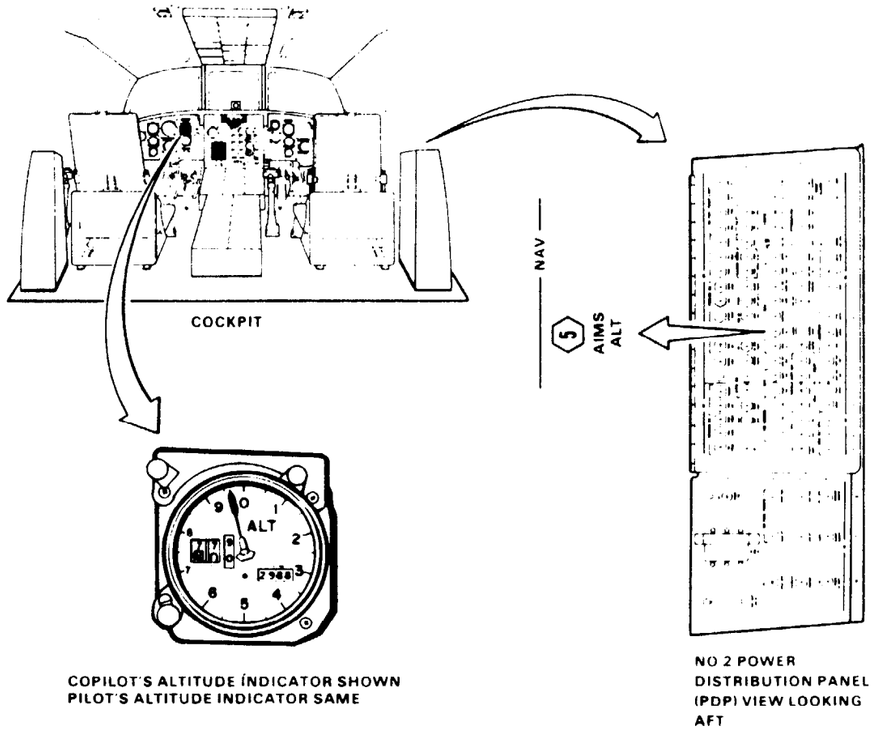
Personnel Required:
Aircraft Electrician (2)

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off



45 X 54



COPILOT'S ALTITUDE INDICATOR SHOWN
PILOT'S ALTITUDE INDICATOR SAME

NO 2 POWER DISTRIBUTION PANEL (PDP) VIEW LOOKING AFT

D145-11488-SPA

END OF TASK

8-1.11 PILOT'S OR COPILOT'S ALTIMETER VIBRATOR DOES NOT OPERATE

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

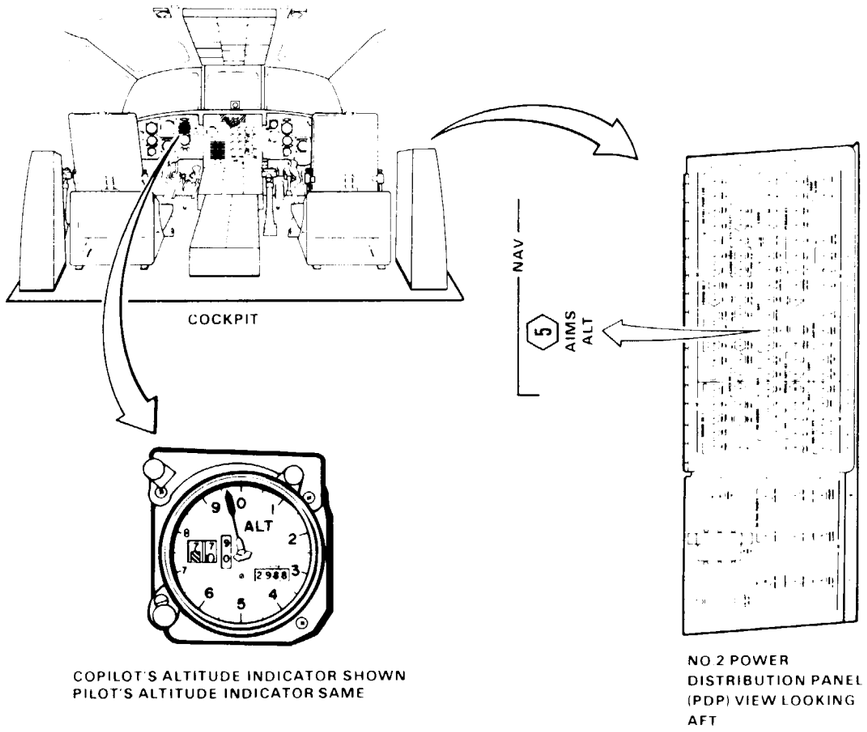
Tools:
Electrical Repairer's Tool Kit, NSN 5180-00-323-4915
Multimeter

Materials:
None

Personnel Required:
68F10 **Aircraft Electrician**
68F20 Aircraft Electrician

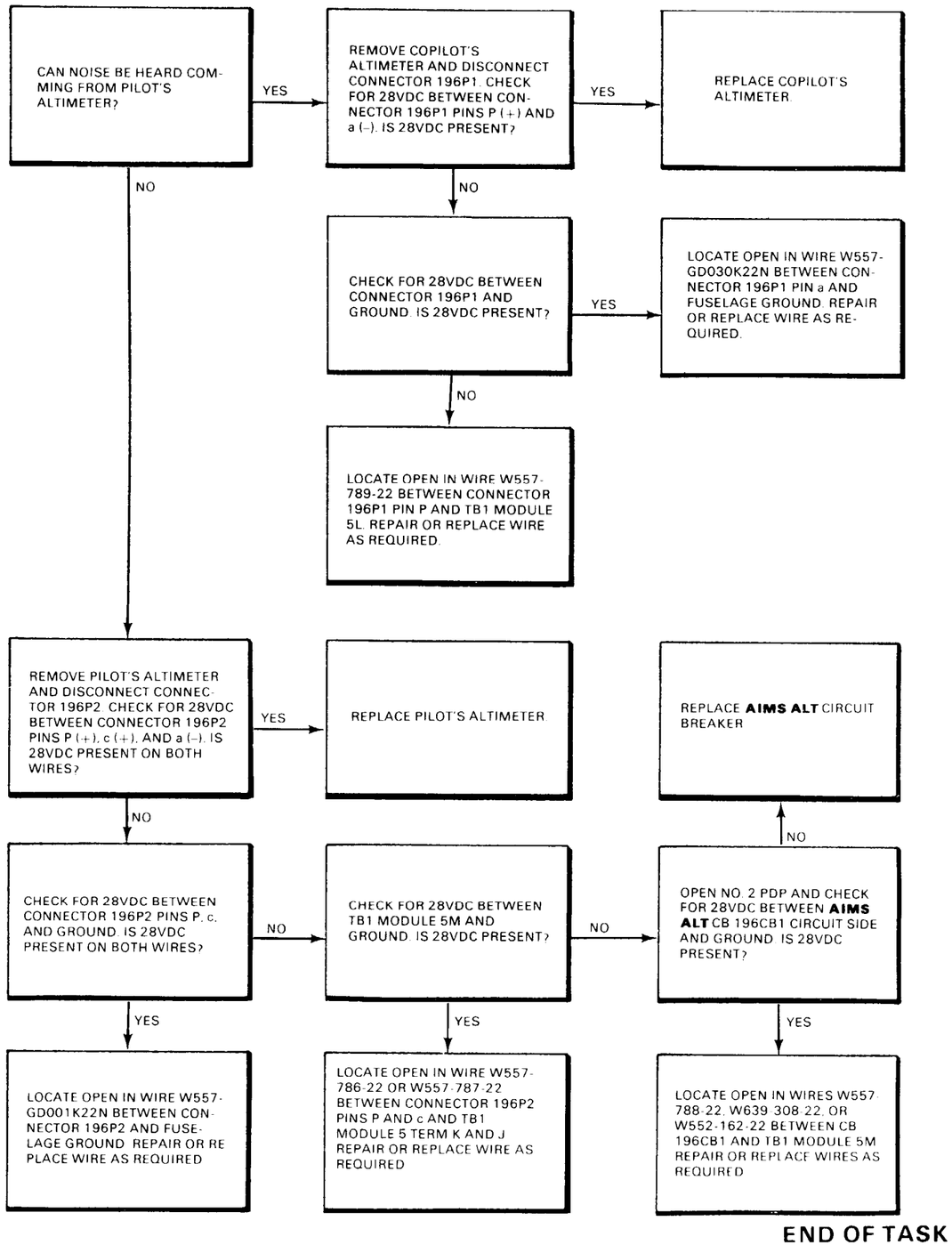
References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off



45 X 54

D145 11489 SPA



END OF TASK

8-1.12 PITOT STATIC SYSTEM LEAKS

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

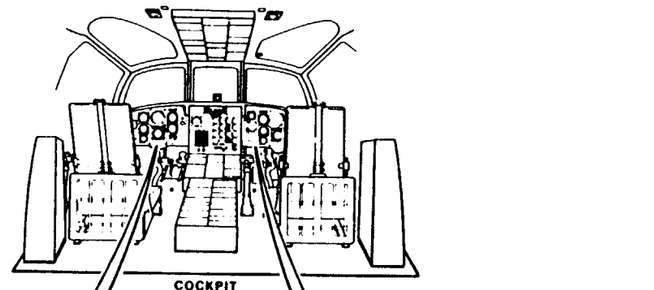
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Pitot Static System Tester,
NSN 4920-00-475-7161
Workstand

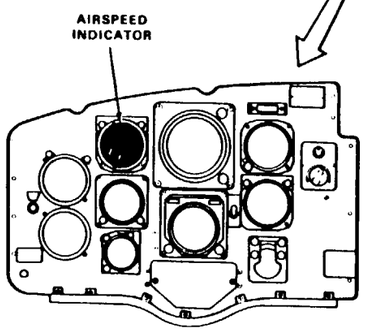
Materials:
Barrier Material (E80)
Masking Tape (E388)

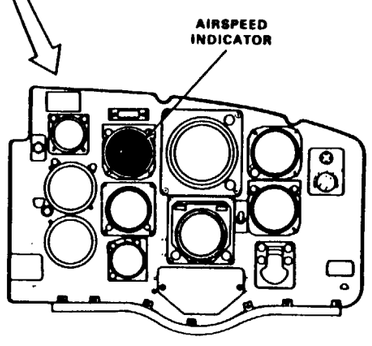
Personnel Required:
68F10 Aircraft Electrician
68F20 Aircraft Electrician

References:
TM 55-1520-240-23
TM 55-4920-231-14

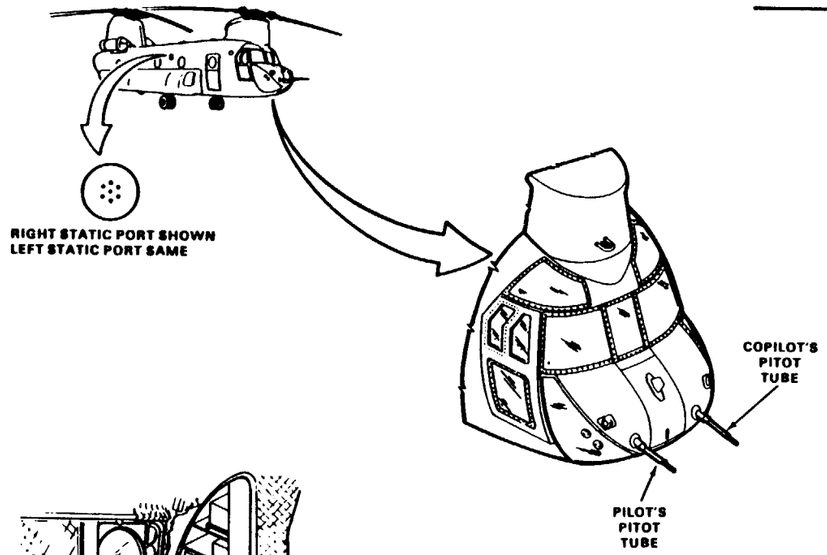
Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off
Nose Access Door Open
Electronic Compartment Acoustic Blanket Removed

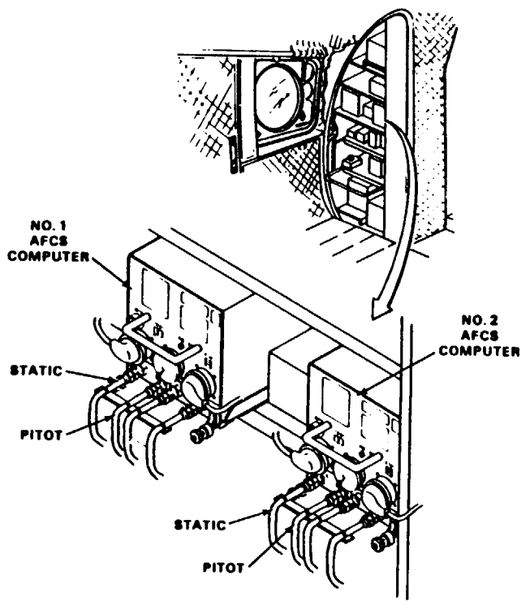


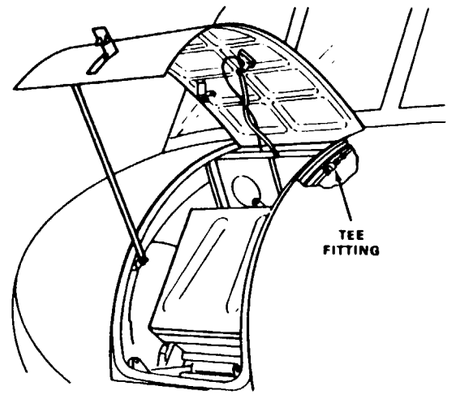




90X54





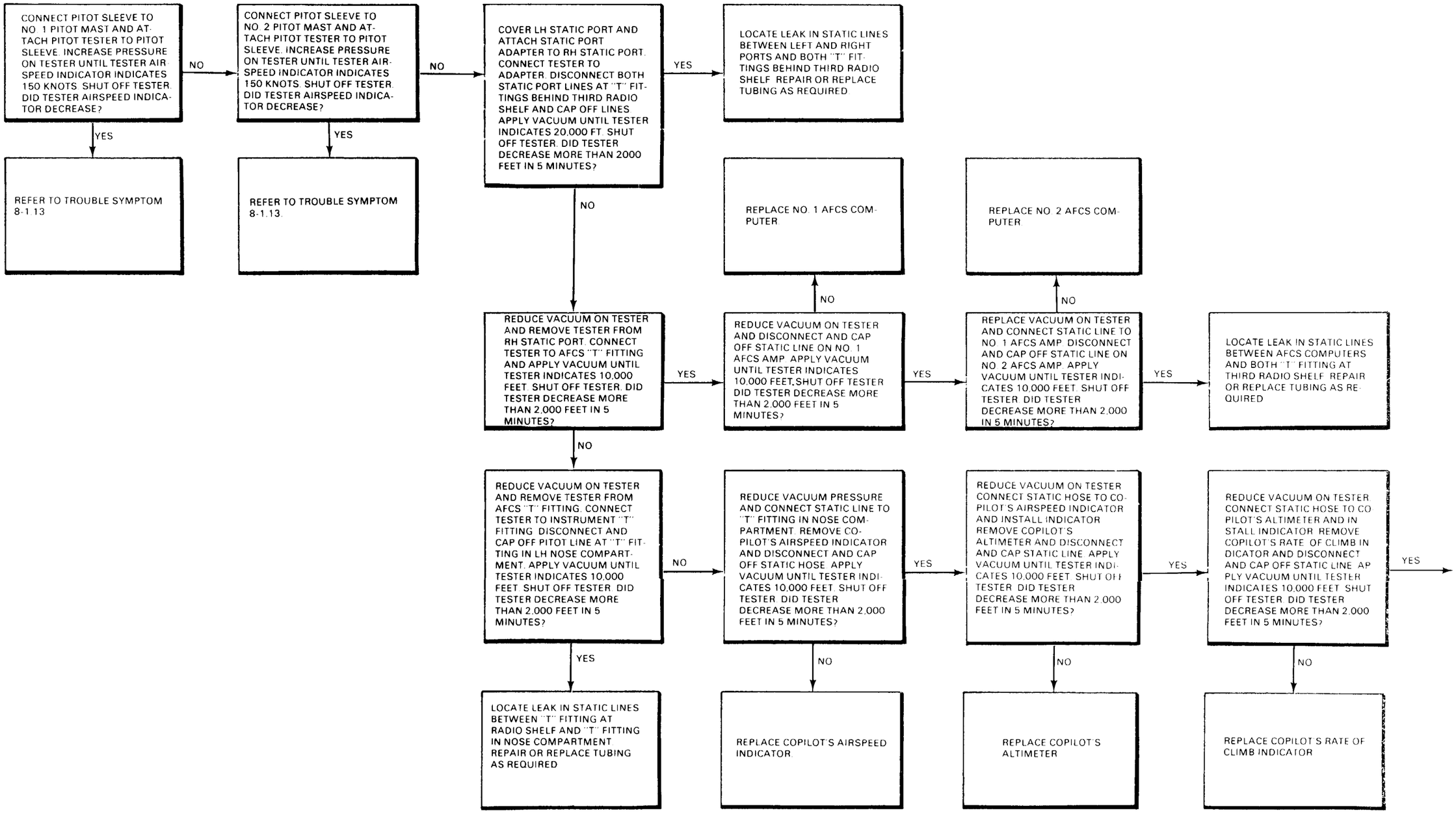


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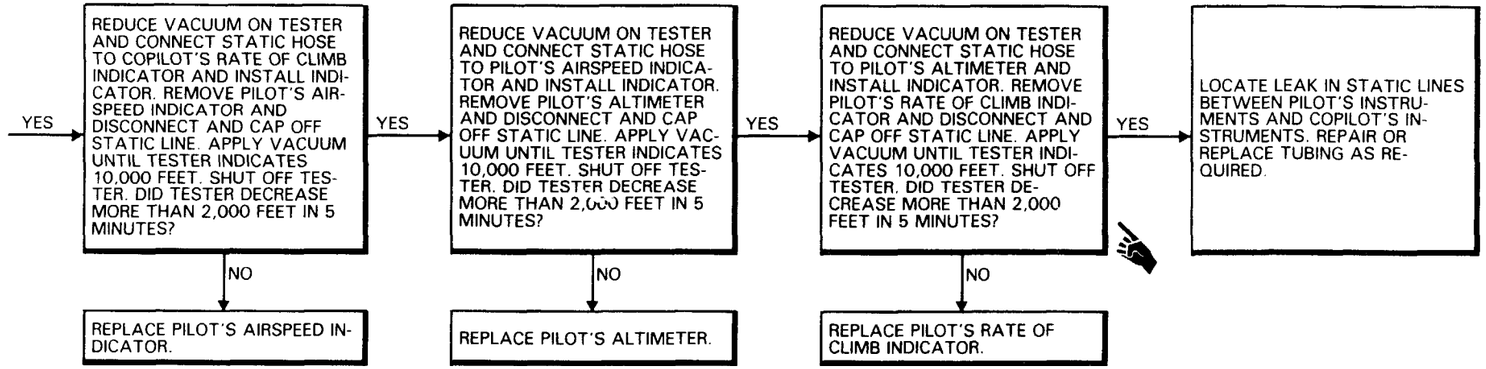
D145-11490-SPA

GO TO NEXT PAGE

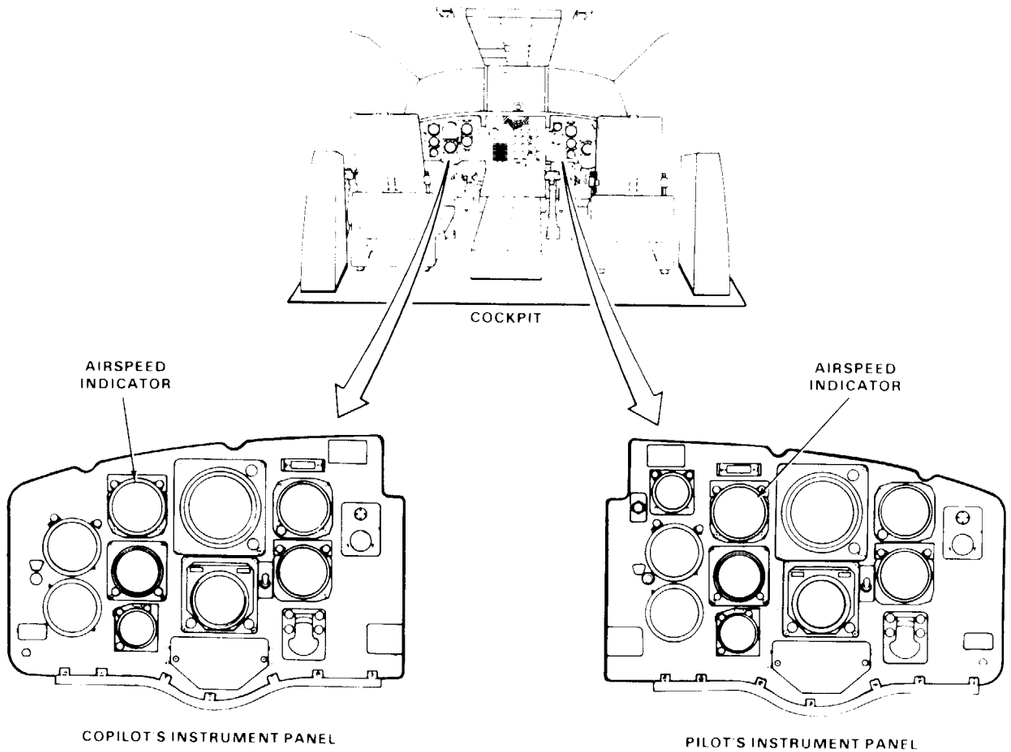
8-1.12 PITOT STATIC SYSTEM LEAKS (Continued)

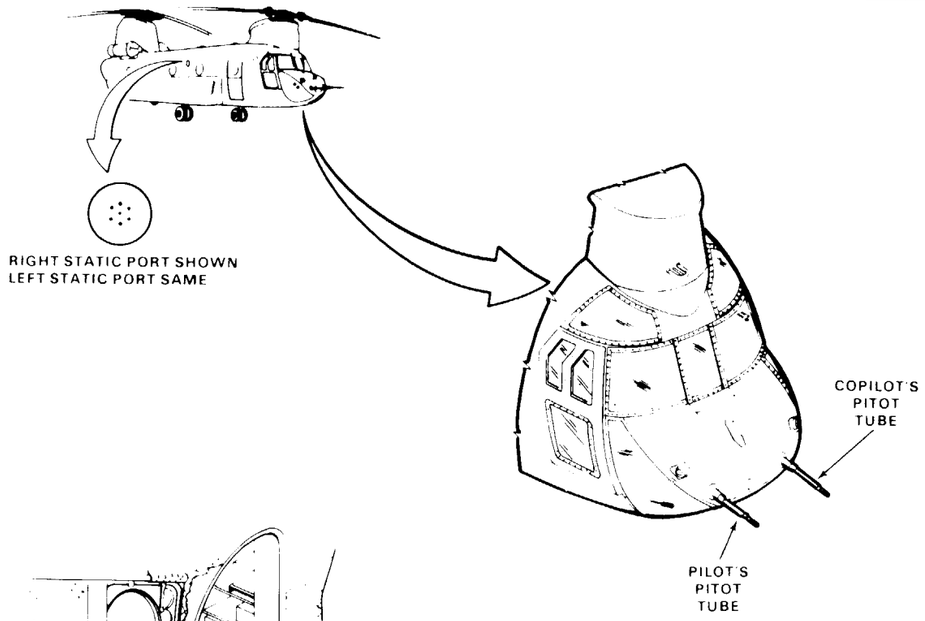


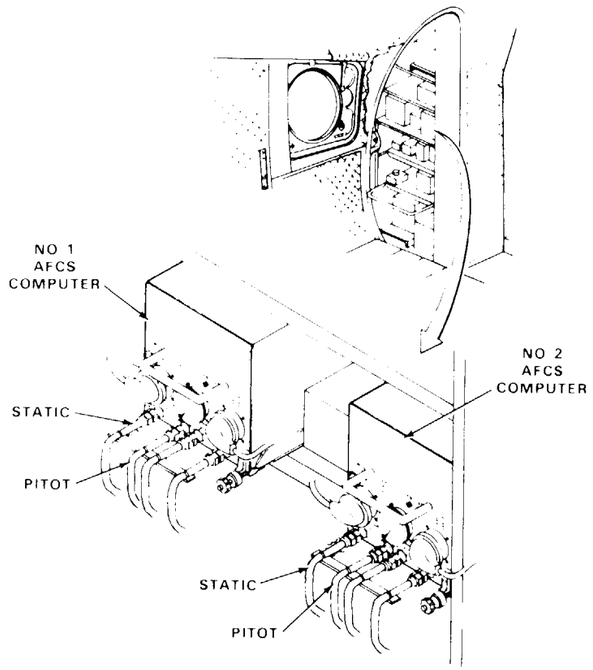
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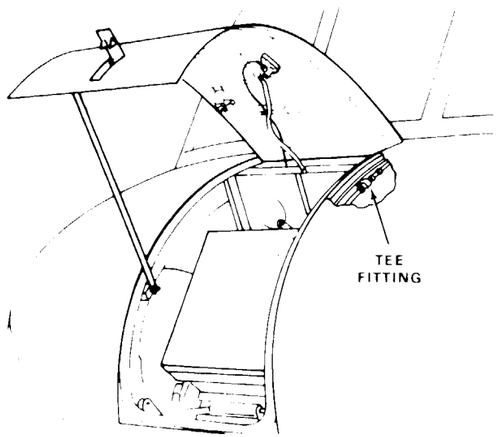


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90 X 54

D145-11491-SPA

END OF TASK

8-1.13 NO. 1 OR NO. 2 PITOT SYSTEM LEAKS

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

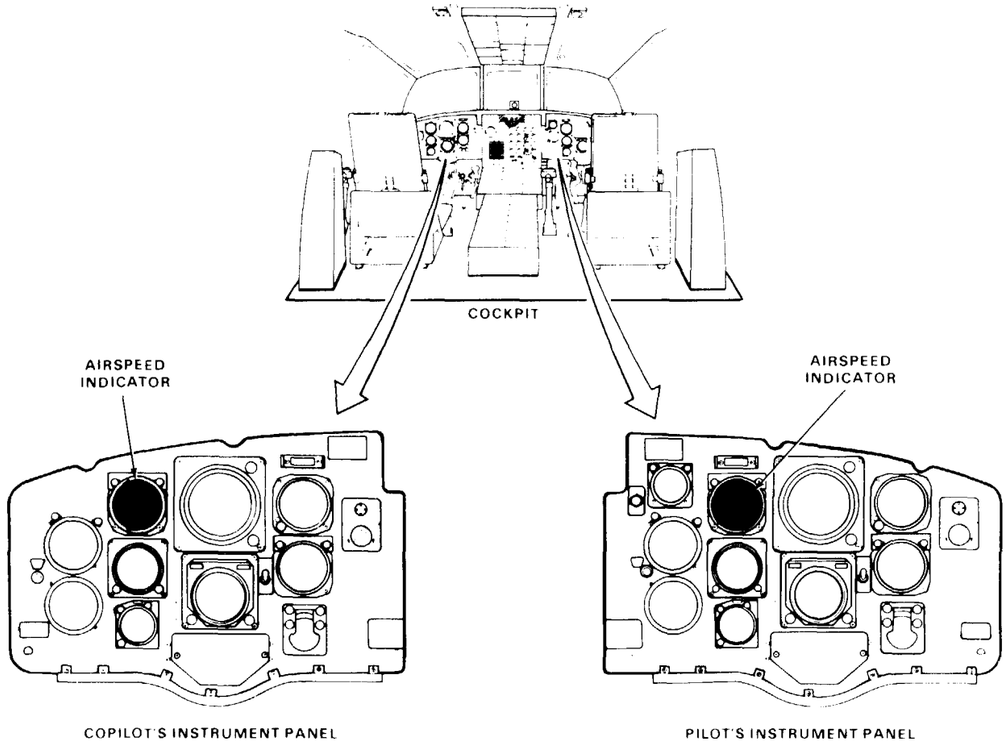
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Pitot Static System Tester,
NSN 4920-00-475-7161

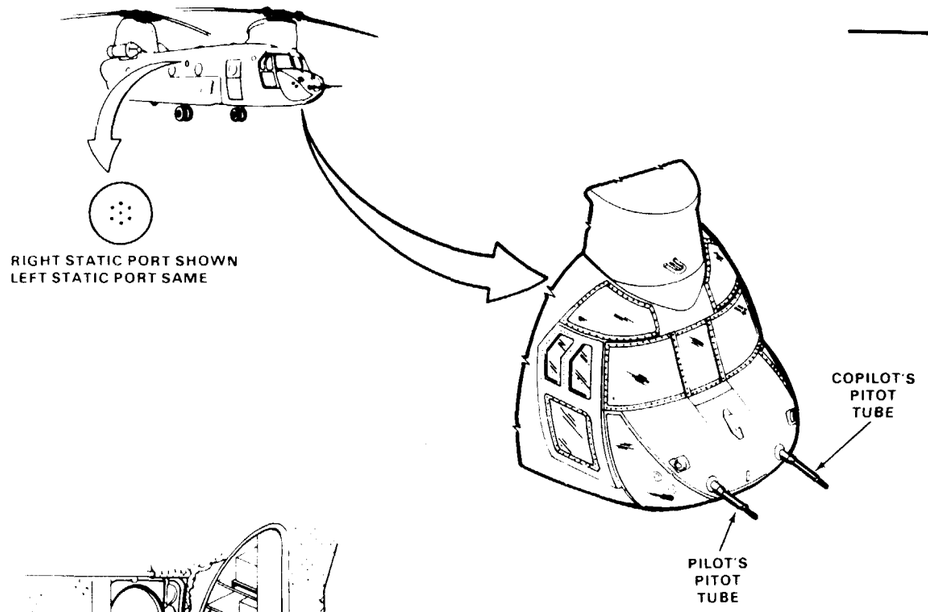
Materials:
None

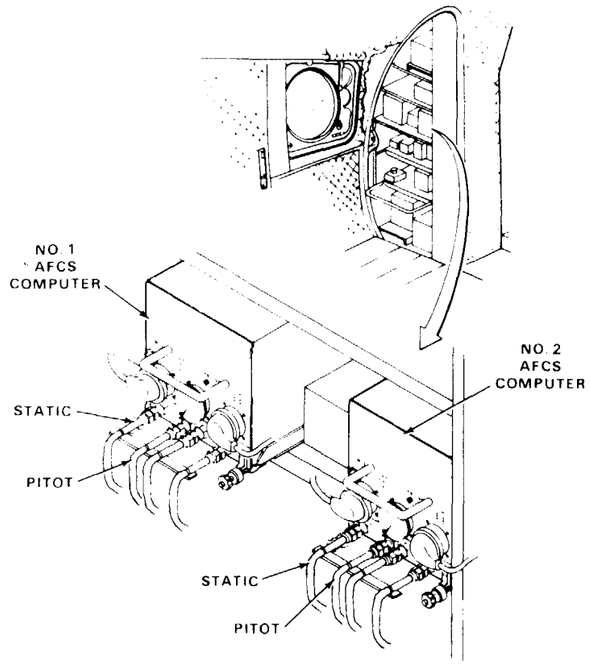
Personnel Required:
68F10 Aircraft Electrician

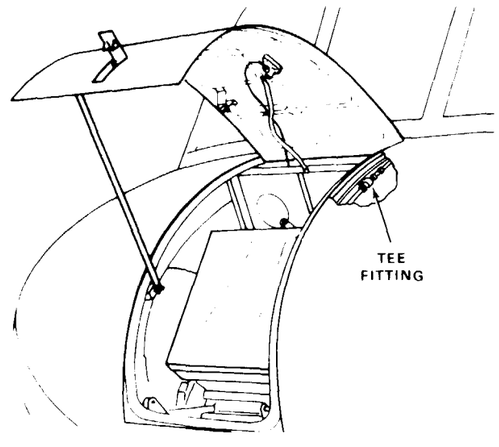
References:
TM 55-1520-240-23
TM 55-4920-231-14

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off
Electronic Compartment Acoustic Blanket Removed







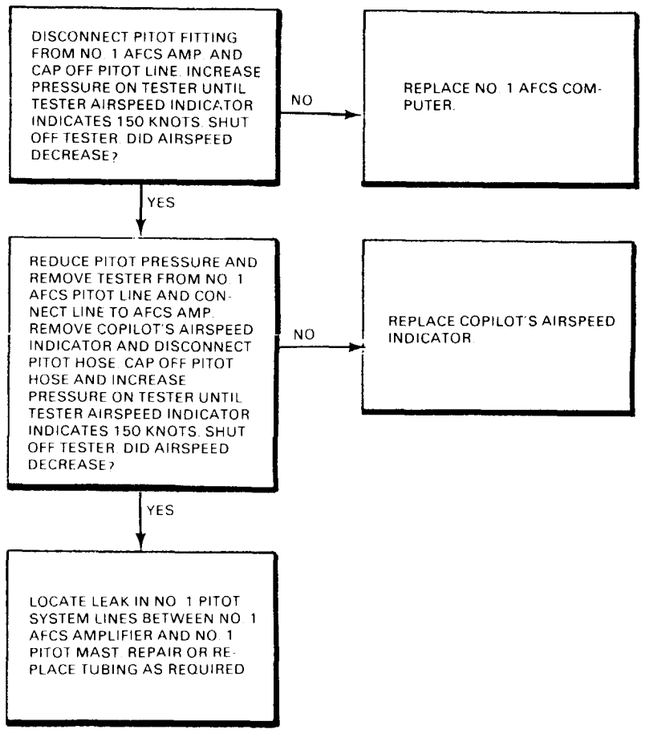


90 x 54

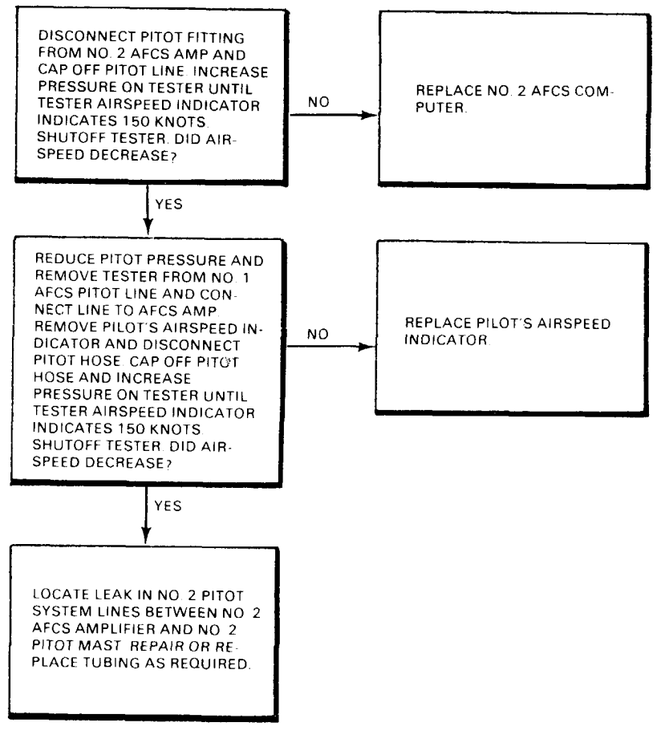
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GO TO NEXT PAGE

NO. 1 PITOT SYSTEM LEAKS



NO. 2 PITOT SYSTEM LEAKS



END OF TASK

8-1.14 NO. 1 OR NO. 2 SIDESLIP SYSTEM LEAKS

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configuration:
All

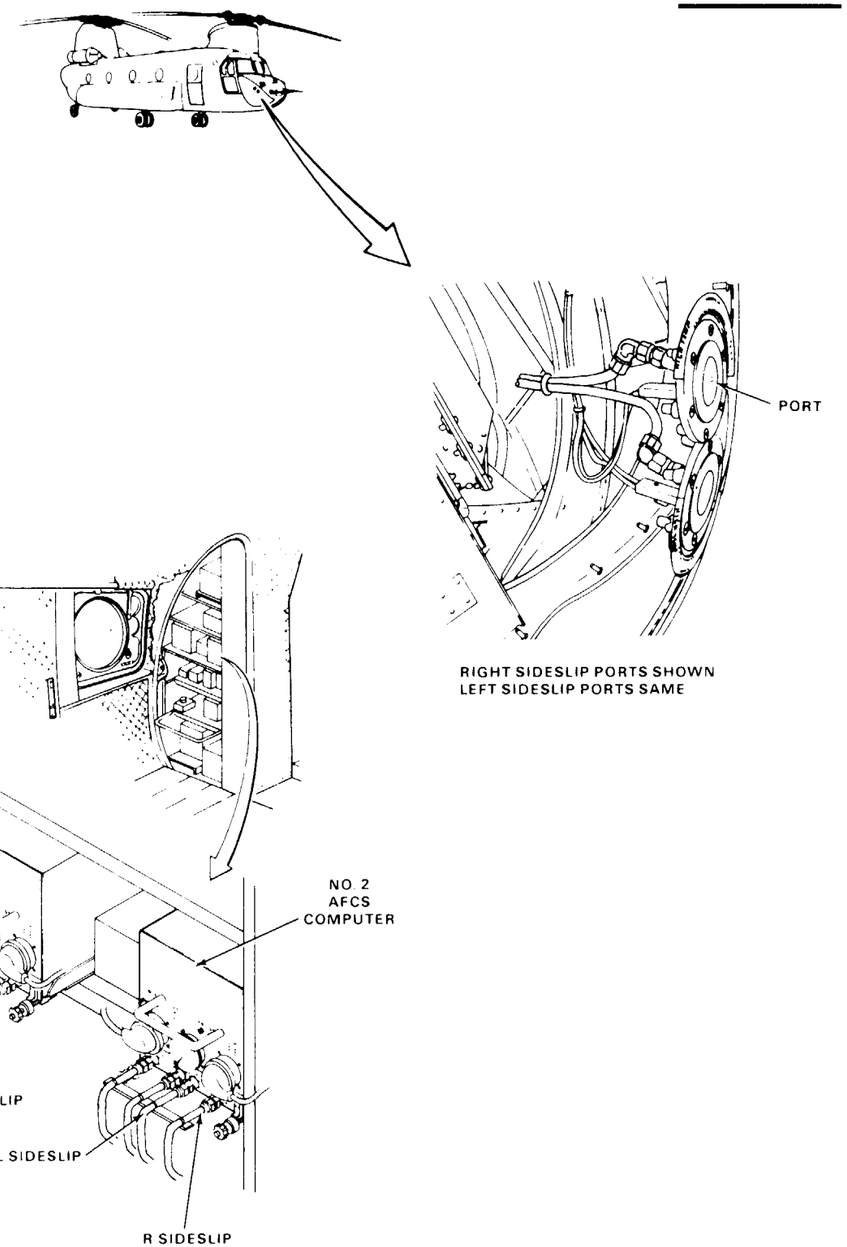
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Pltot Static System Tester,
NSN 4920-00-475-7161
Workstand

Materials:
Barrier Material (E80)
Masking Tape (E388)

Personnel Required:
68F10 Aircraft Electrician
68F20 Aircraft Electrician

References:
TM 55-1520-240-23
TM 55-4920-231-14

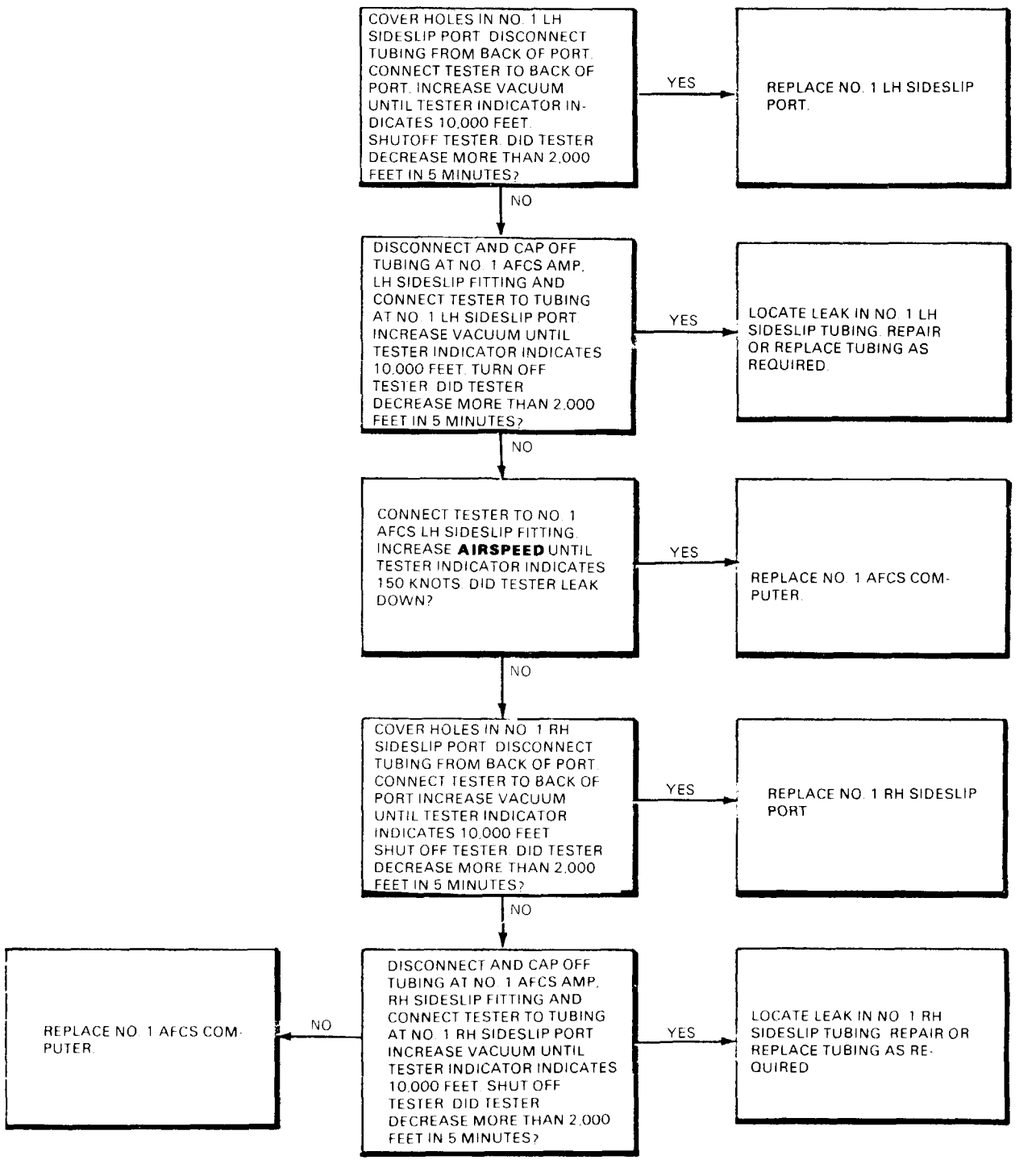
Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off
Nose Access Door Open
Electronic Compartment Acoustic Blanket Removed



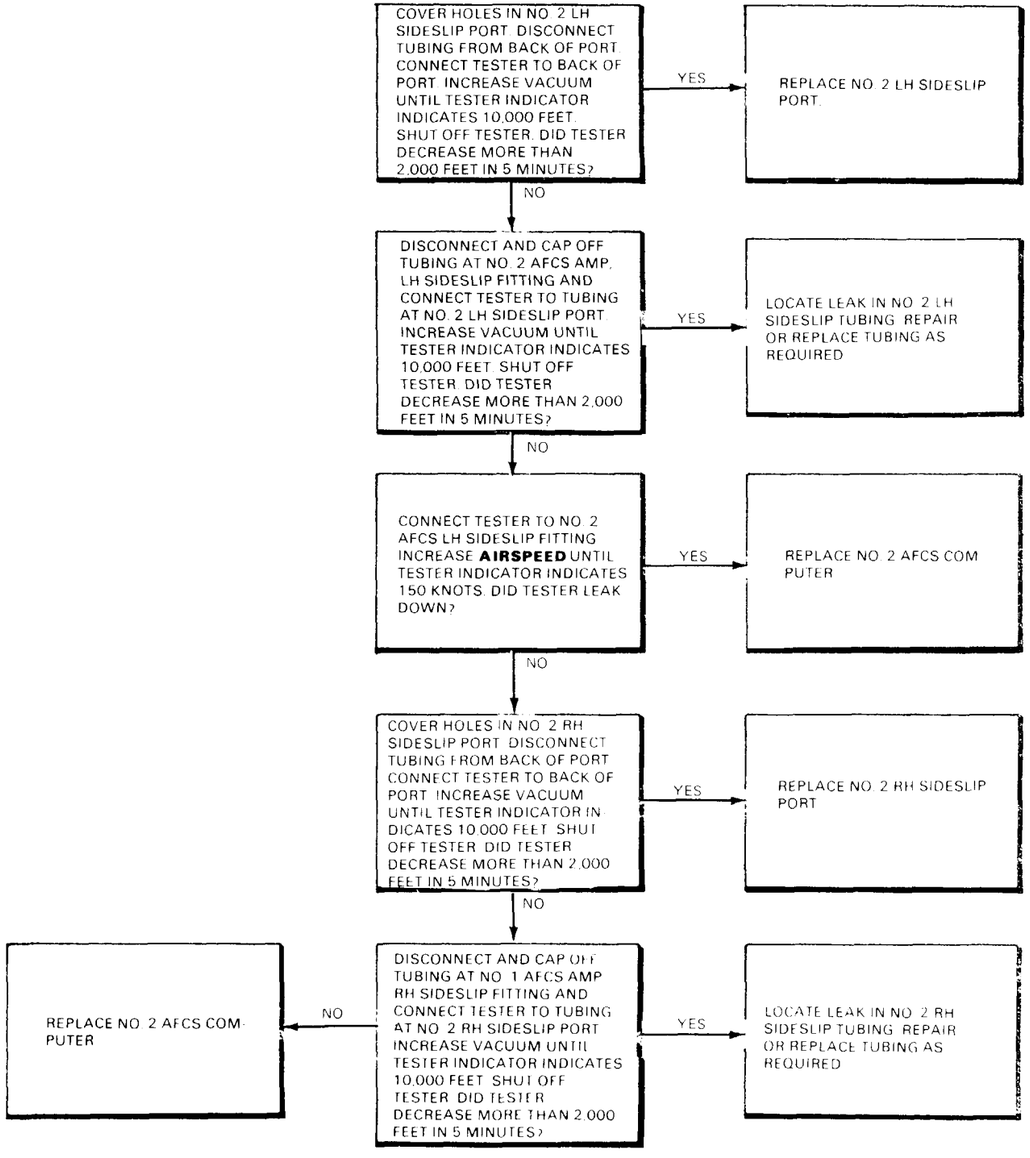
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NO. 1 SIDESLIP SYSTEM LEAKS



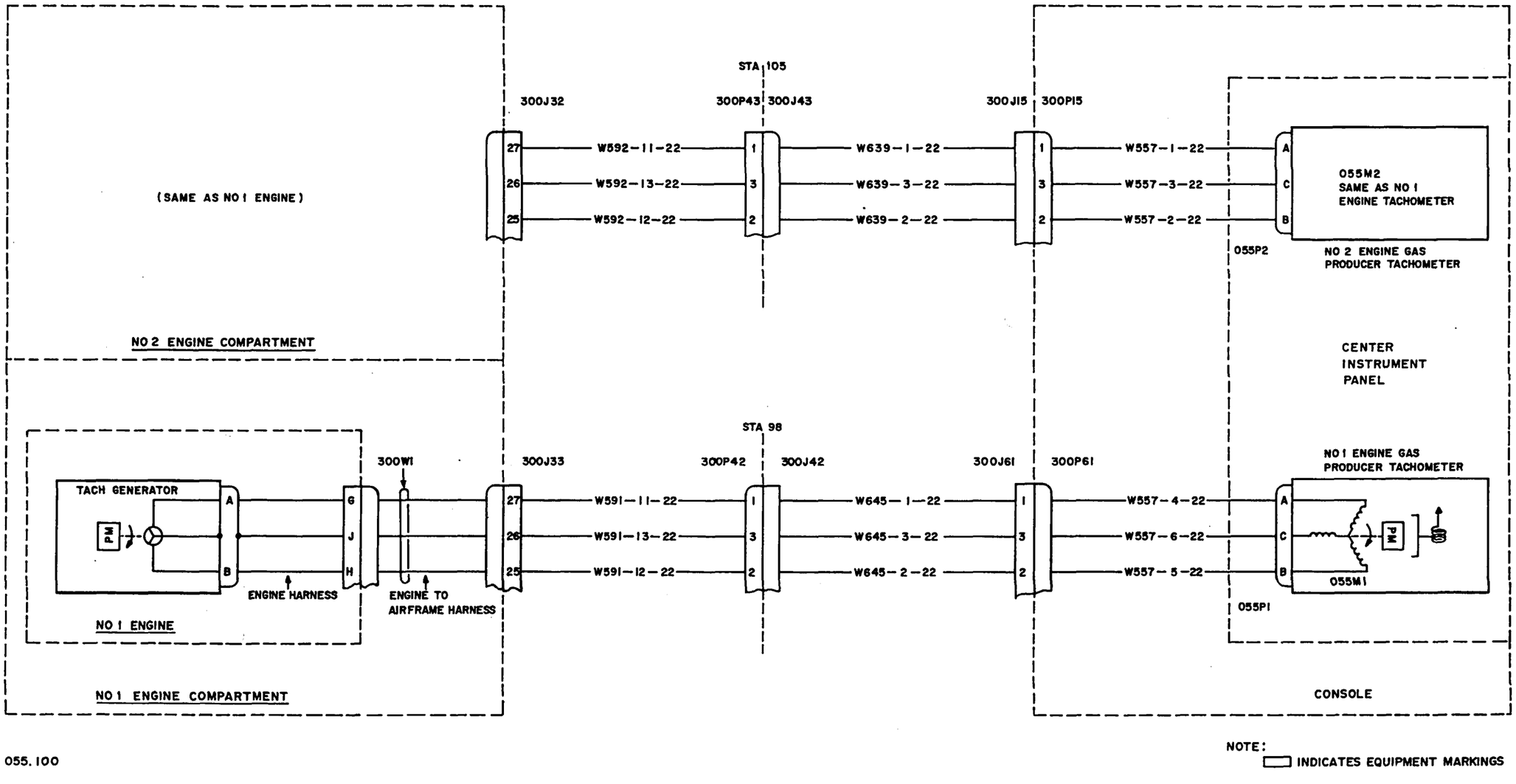
NO. 2 SIDESLIP SYSTEM LEAKS



END OF TASK

8-2 GAS PRODUCER TACHOMETER SYSTEM

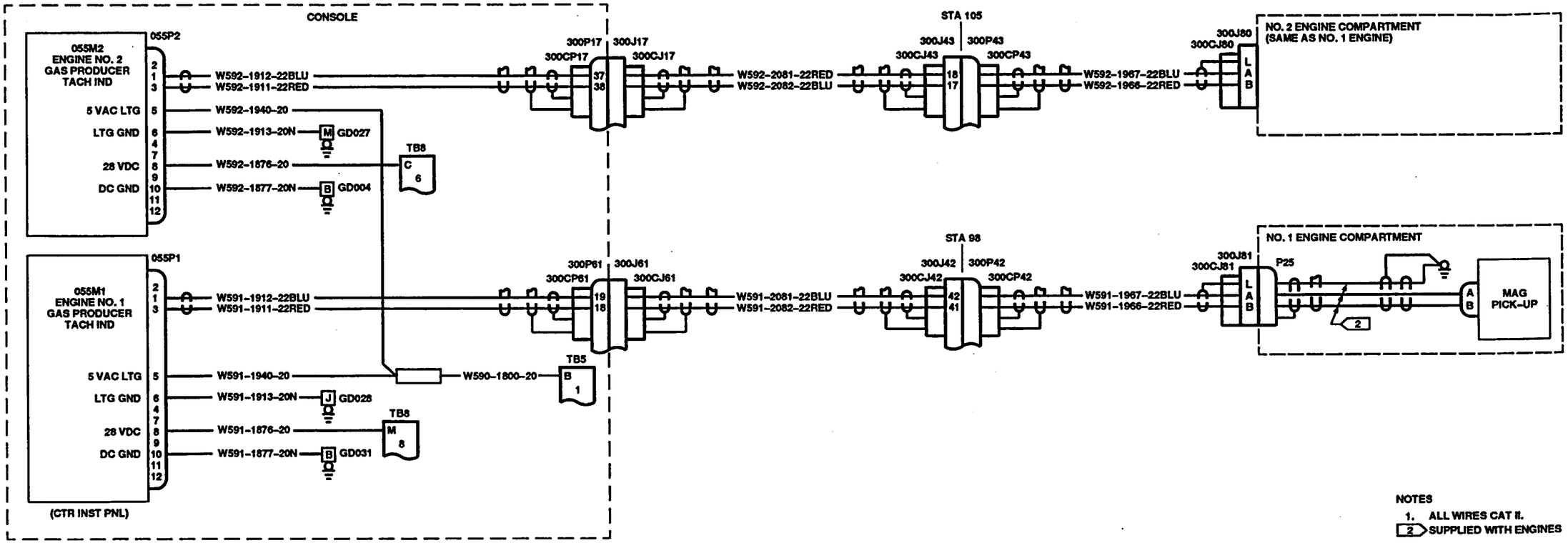
WITHOUT 74



NOTE:
▭ INDICATES EQUIPMENT MARKINGS

END OF TASK

WITH 74



NOTES
1. ALL WIRES CAT II.
2 SUPPLIED WITH ENGINES

A67627

END OF TASK
Change 19 8-30.1/(8-30.2 blank)

8-2.2 GAS PRODUCER TACHOMETER SYSTEM VISUAL CHECK

INITIAL SETUP

Applicable Configurations:
All

Tools:
Aircraft Mechanic's Tool Kit,
NSN 5180-00-323-4692
NSN 5180-00-323-4692
Electrical Repairer's Tool Kit,

Materials:
None

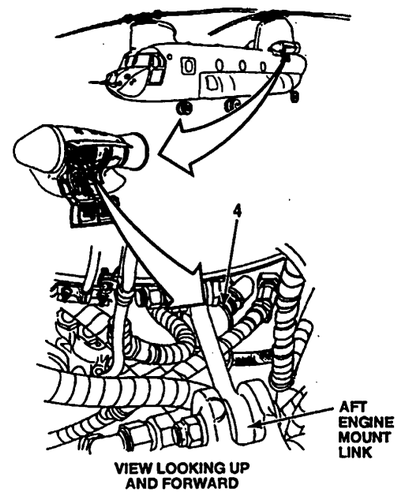
Personnel Required:
Medium Helicopter Repairer
Aircraft Electrician

References:
TM 55-1520-240-23

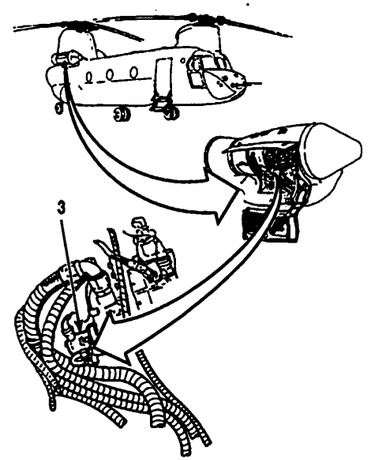
Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off
No. 1 and No. 2 Engine Upper and Lower Access Covers Open
No. 1 and No. 2 Engine Work Platforms Open

TASK	RESULT
1. **Check NO. 1 ENGINE gas producer tachometer (1).**	If tachometer (1) is loose or damaged, tighten it or replace it.
2. **Check NO. 2 ENGINE gas producer tachometer (2).**	If tachometer (2) is loose or damaged, tighten it or replace it.
3. **Check No. 2 engine gas producer generator (3).**	If tachometer generator (3) is loose or damaged, tighten or replace it as required. If electrical connector or harness to tachometer generator is damaged, replace it.
4. **Check No. 1 engine gas producer generator (4).**	If tachometer generator (4) is loose or damaged, tighten or replace it as required. If electrical connector or harness to tachometer generator is damaged, replace it.

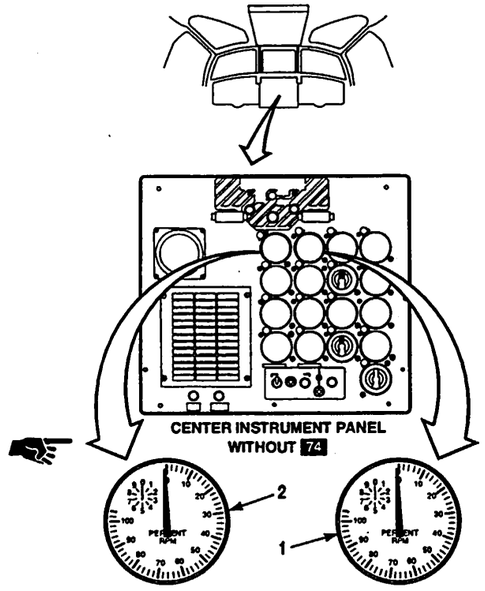
FOLLOW-ON MAINTENANCE:
TM 55-1520-240-23:
No. 1 and No. 2 engine upper and lower access covers closed.
No. 1 and No. 2 engine work platforms closed.

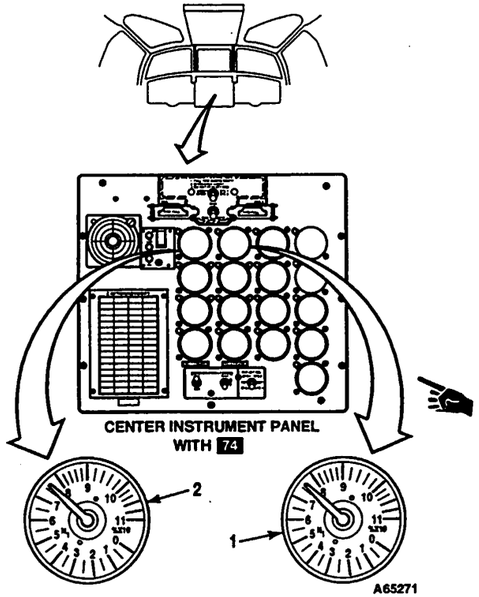


VIEW LOOKING UP AND FORWARD



VIEW LOOKING INBOARD





END OF TASK

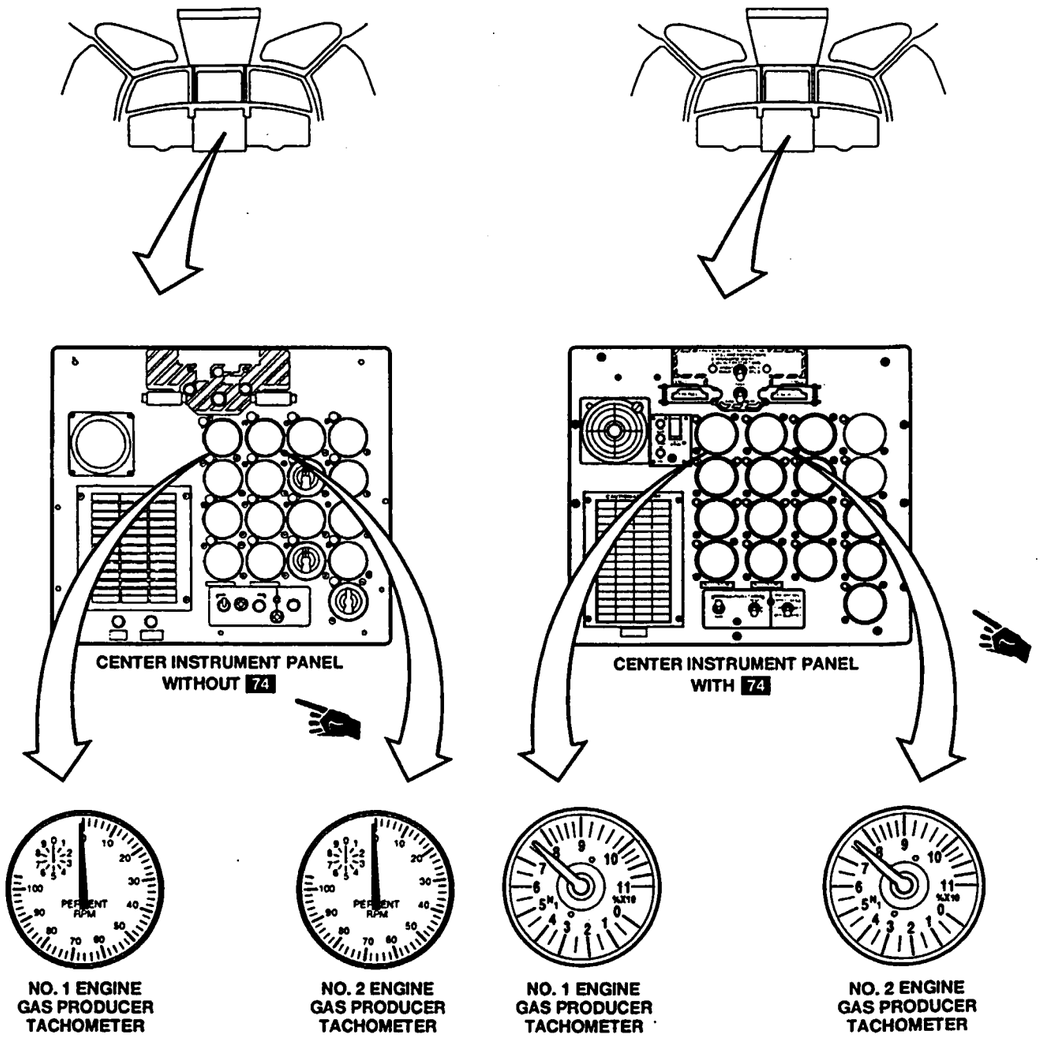
8-2.3 GAS PRODUCER TACHOMETER SYSTEM OPERATIONAL CHECK

INITIAL SETUP
Applicable Configurations:
All
Tools:
None
Materials:
None
Personnel Required:
Rotary Wing Aviator
Aircraft Electrician

References:
TM 55-1520-240-10
TM 55-1520-240-23
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power On
Visual Check of Gas Producer Tachometer System Performed (Task 8-2.2)

TASK	RESULT
1. Have pilot motor **NO. 1 ENGINE.**	(Without 74) No. 1 gas producer tachometer shall indicate more than 10 percent. If it does not, but is accompanied by the sounds of a normal engine start, go to task 8-2.4. If tachometer fluctuates or is erratic, go to task 8-2.6. If the start attempt is not accompanied by the sound of a normal engine start, go to task 4-4.11. (With 74) No. 1 gas producer tachometer shall indicate a nominal reading between 10 and 15 percent. If it does not, go to task 8-2.4.1. If tachometer reading fluctuates or is erratic, go to task 8-2.6.1.
2. Have pilot motor **NO. 2 ENGINE.**	(Without 74) No. 2 gas producer tachometer shall indicate more than 10 percent. If it does not, but is accompanied by the sounds of a normal engine start, go to task 8-2.5. If tachometer fluctuates or is erratic, go to task 8-2.7. If the start attempt is not accompanied by the sound of a normal engine start, go to task 4-4.15. (With 74) No. 2 gas producer tachometer shall indicate a nominal reading between 10 and 15 percent. If it does not, go to task 8-2.5.1. If tachometer reading fluctuates or is erratic, go to task 8-2.7.1.

FOLLOW-ON MAINTENANCE:
TM 55-1520-240-23:
Engines shut down.
Hydraulic power off.
Electrical power off.
Battery disconnected.



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END OF TASK

8-2.4 NO. 1 GAS PRODUCER TACHOMETER READS 0 PERCENT RPM WHEN NO. 1 ENGINE IS MOTORED 8-2.4

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
Without 74

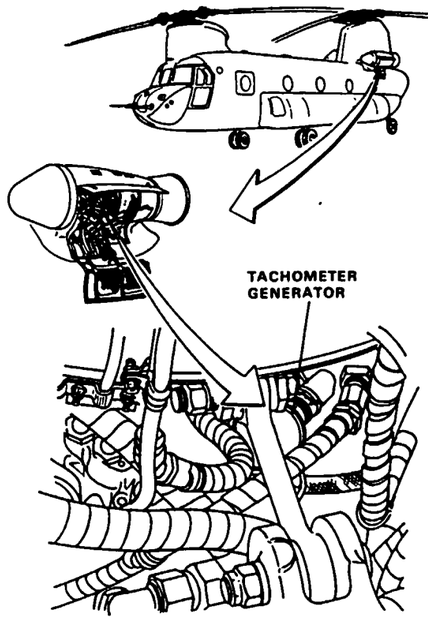
Tools:
Electrical Repair Tool Kit,
NSN 5180-00-323-4915
Multimeter

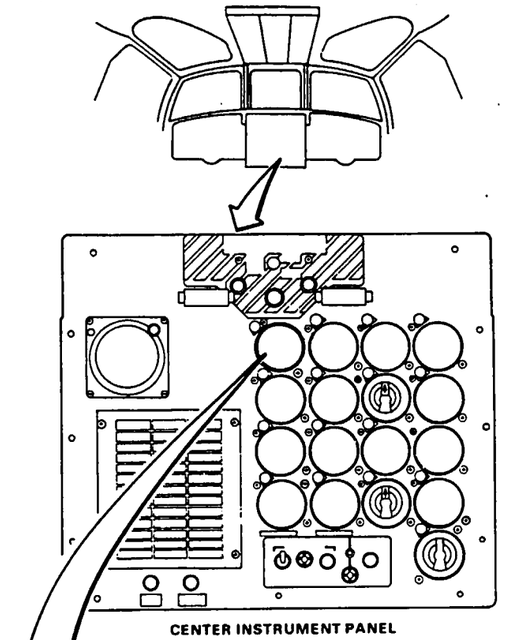
Materials:
None

Personnel Required:
Aircraft Electrician

References:
TM 55-1520240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off





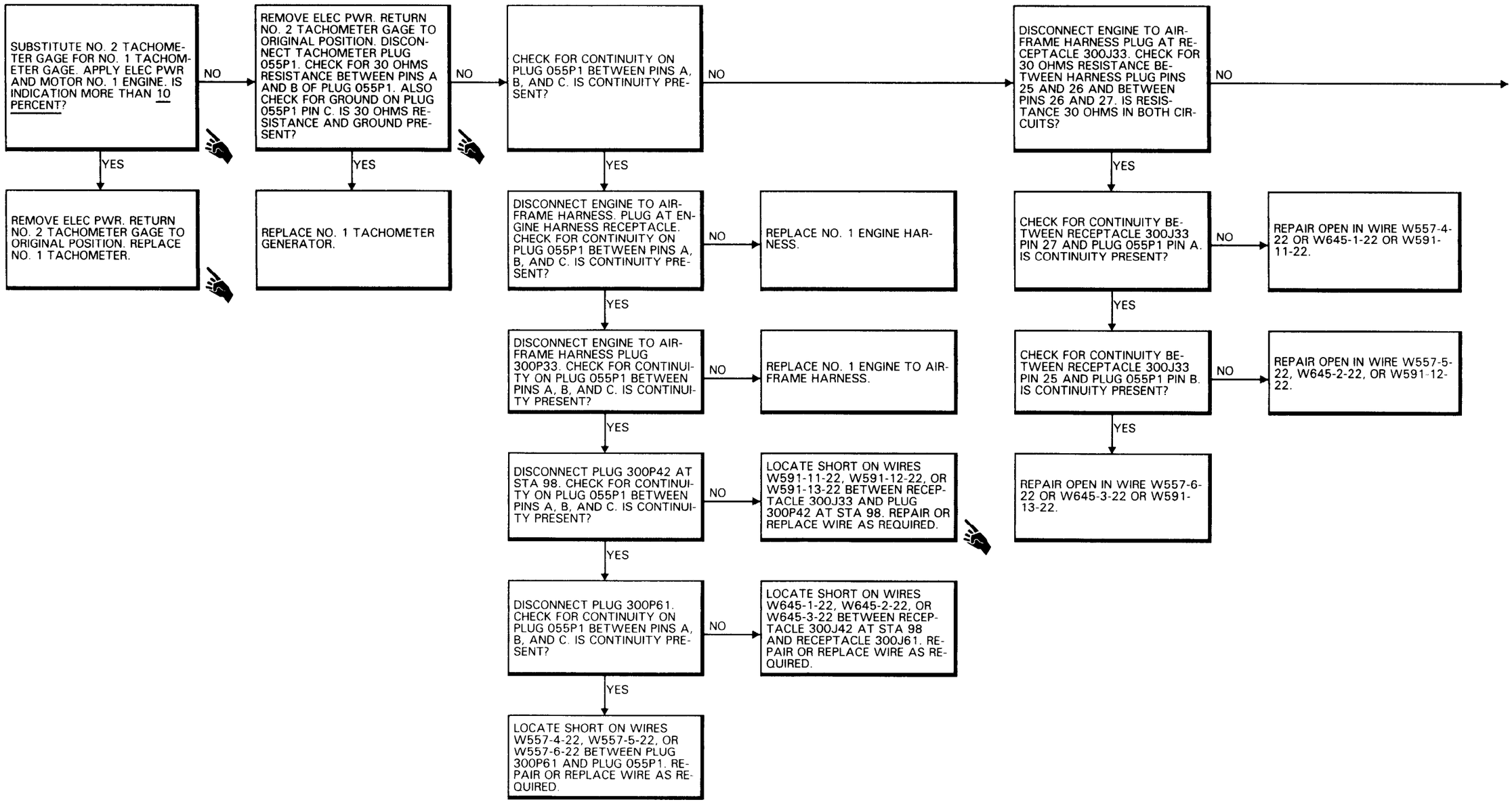


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D145-8313-SPA

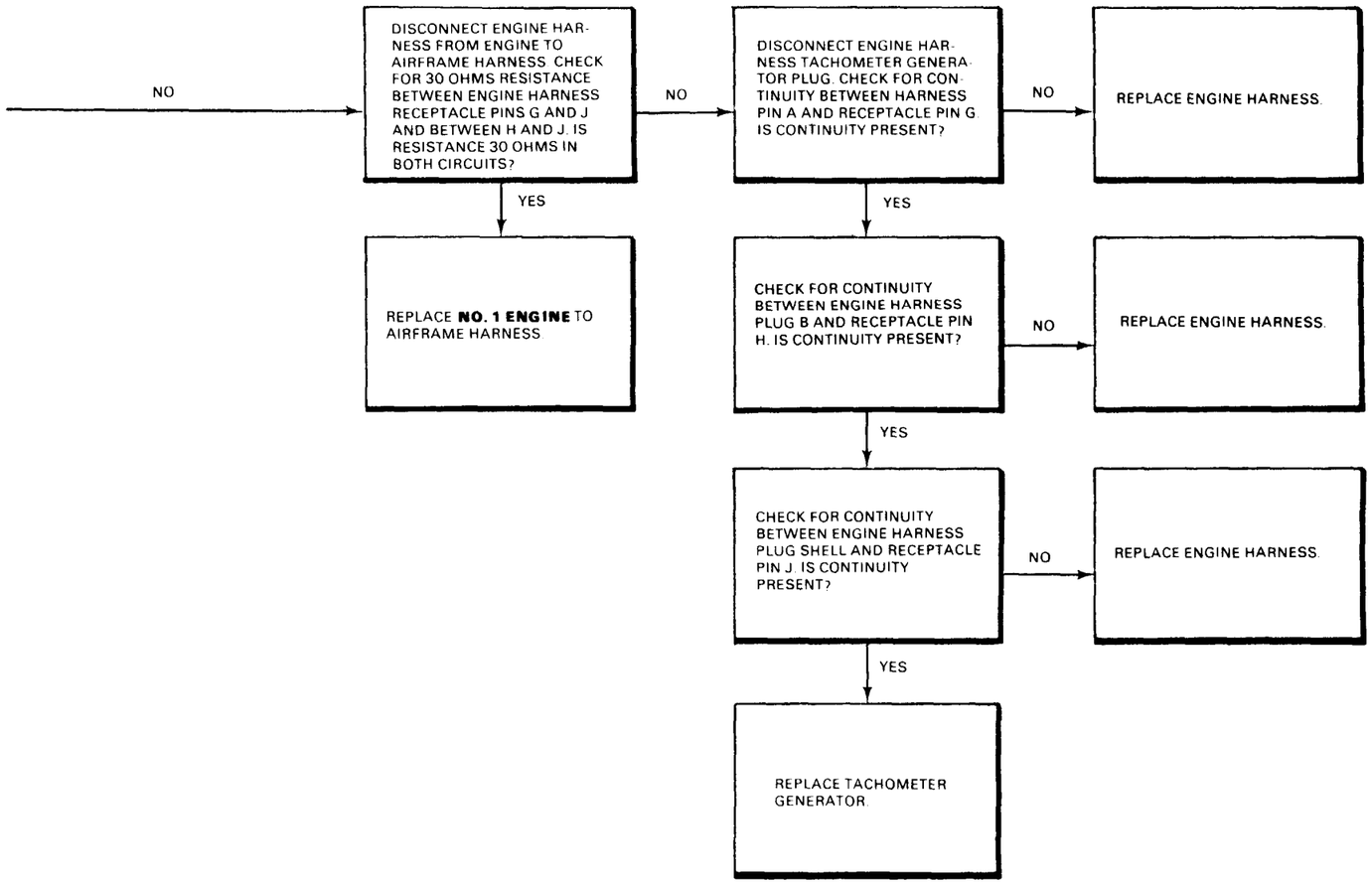
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8-2.4 NO. 1 GAS PRODUCER TACHOMETER READS 0 PERCENT RPM WHEN NO. 1 ENGINE IS MOTORED (Continued)

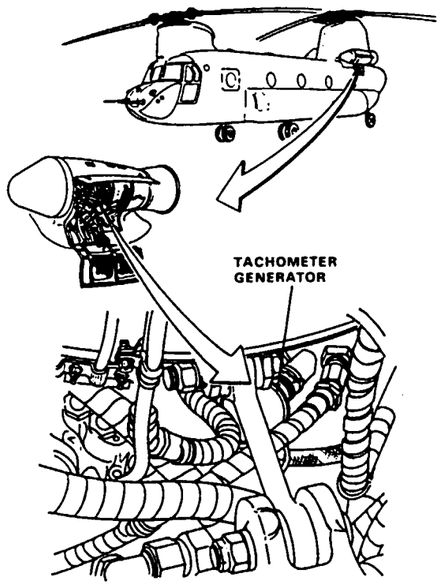


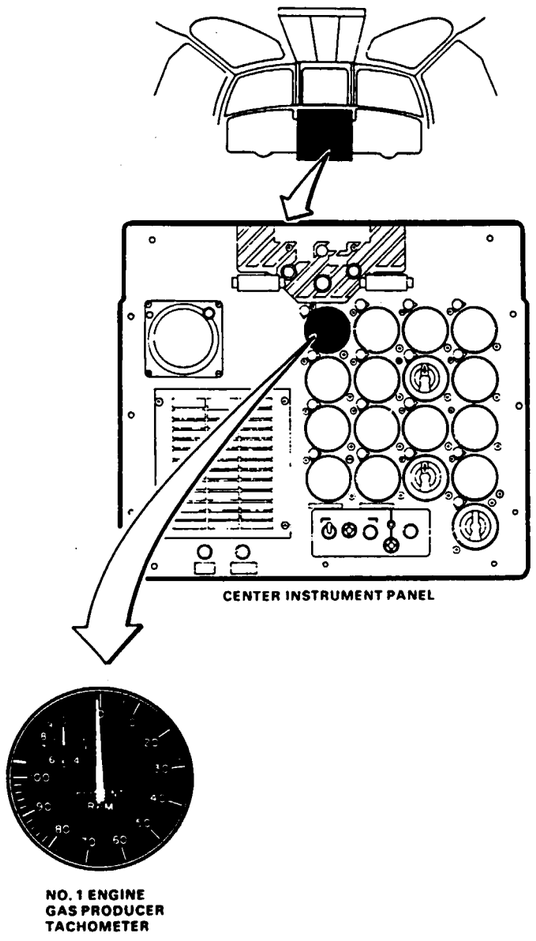
GO TO NEXT PAGE

8-2.4 NO. 1 GAS PRODUCER TACHOMETER READS 0 PERCENT RPM WHEN NO. 1 ENGINE IS MOTORED (Continued)



GO TO NEXT PAGE





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11845 - SPA

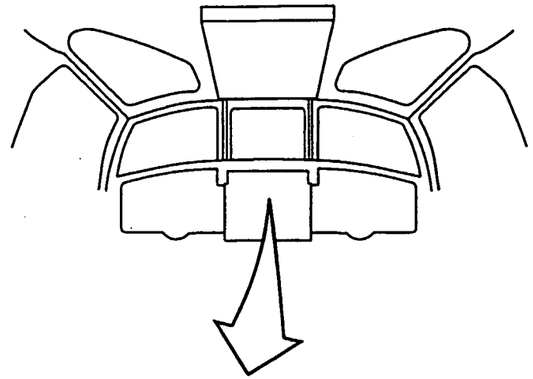
8-2.4.1 NO. 1 GAS PRODUCER TACHOMETER READS 0 PERCENT RPM WHEN NO. 1 ENGINE IS MOTORED 8-2.4.1

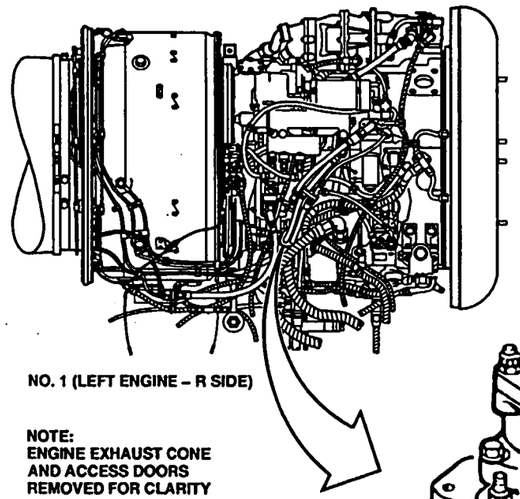
FAULT ISOLATION PROCEDURE
INITIAL SETUP
Applicable Configurations:
With 74
Tools:

Electrical Repair Tool Kit,
NSN 5180-00-323-4915
Multimeter
Materials:
None

Personnel Required:
Aircraft Electrician
References:
TM 55-1520-240-23:
Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off

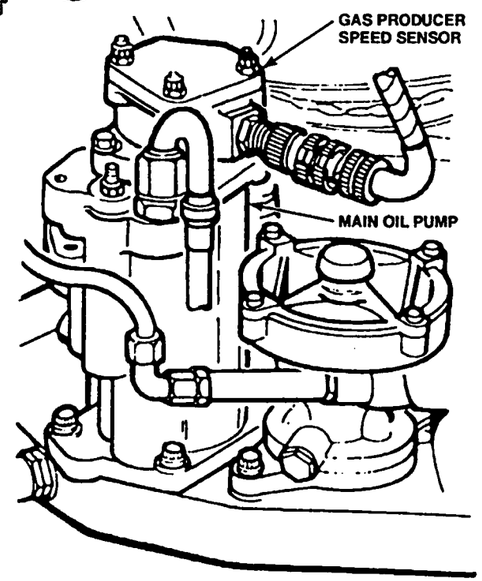


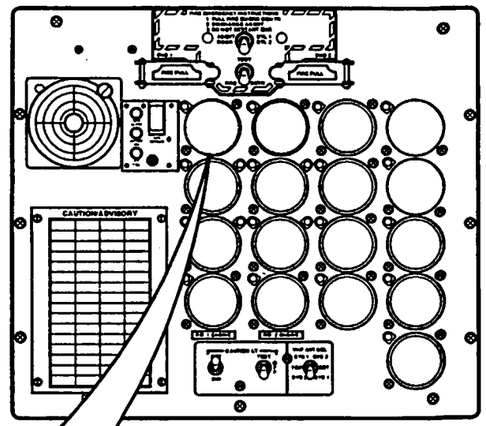




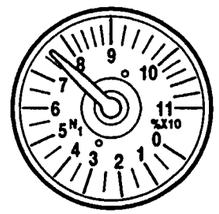
NO. 1 (LEFT ENGINE – R SIDE)

NOTE:
ENGINE EXHAUST CONE
AND ACCESS DOORS
REMOVED FOR CLARITY





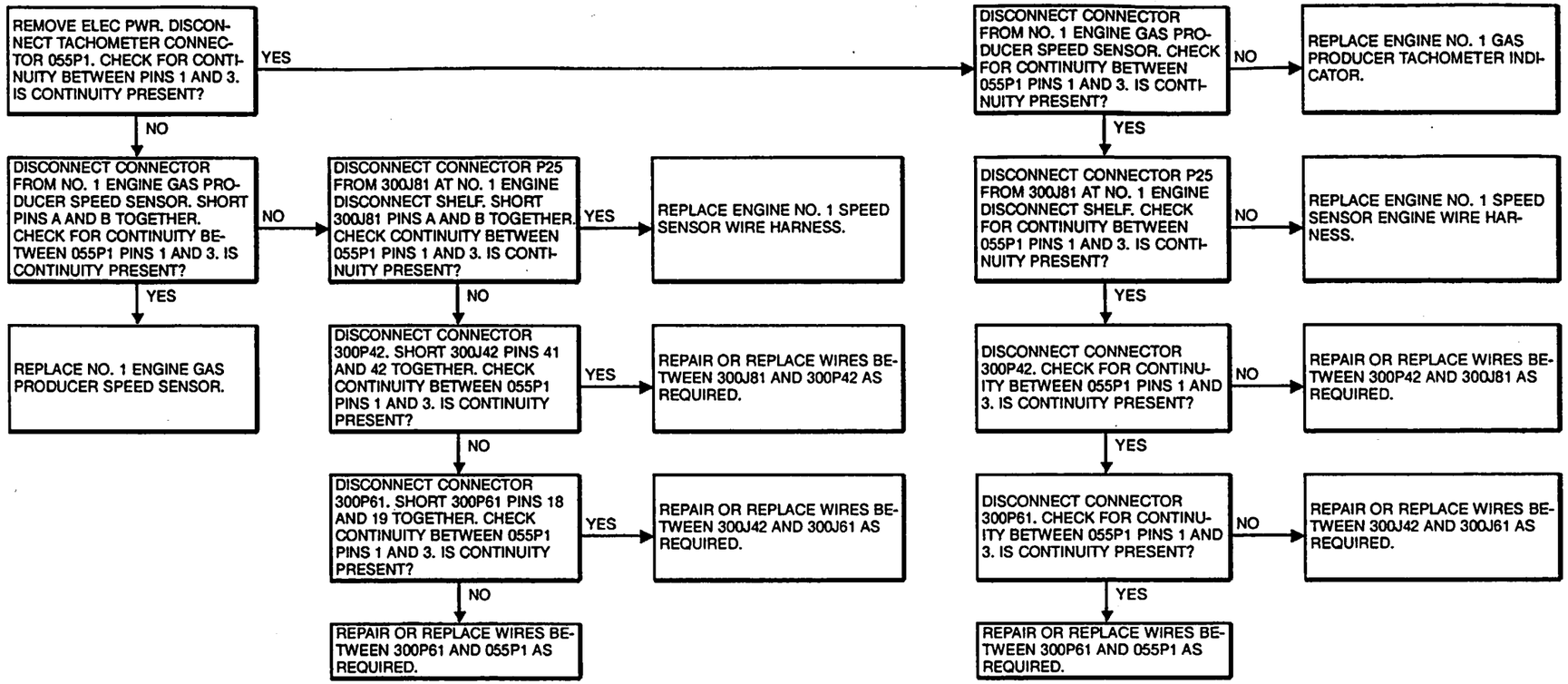
CENTER INSTRUMENT PANEL



NO. 1 ENGINE
GAS PRODUCER
TACHOMETER

A65269

GO TO NEXT PAGE

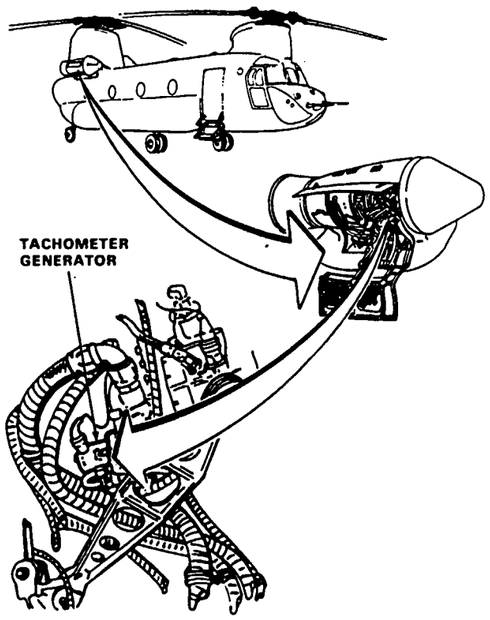

REMOVE ELEC PWR. DISCONNECT TACHOMETER CONNECTOR 055P1. CHECK FOR CONTINUITY BETWEEN PINS 1 AND 3. IS CONTINUITY PRESENT?
YES
NO
DISCONNECT CONNECTOR FROM NO. 1 ENGINE GAS PRODUCER SPEED SENSOR. SHORT PINS A AND B TOGETHER. CHECK FOR CONTINUITY BETWEEN 055P1 PINS 1 AND 3. IS CONTINUITY PRESENT?
NO
DISCONNECT CONNECTOR P25 FROM 300J81 AT NO. 1 ENGINE DISCONNECT SHELF. SHORT 300J81 PINS A AND B TOGETHER. CHECK CONTINUITY BETWEEN 055P1 PINS 1 AND 3. IS CONTINUITY PRESENT?
YES
REPLACE ENGINE NO. 1 SPEED SENSOR WIRE HARNESS.
YES
REPLACE NO. 1 ENGINE GAS PRODUCER SPEED SENSOR.
NO
DISCONNECT CONNECTOR 300P42. SHORT 300J42 PINS 41 AND 42 TOGETHER. CHECK CONTINUITY BETWEEN 055P1 PINS 1 AND 3. IS CONTINUITY PRESENT?
YES
REPAIR OR REPLACE WIRES BETWEEN 300J81 AND 300P42 AS REQUIRED.
NO
DISCONNECT CONNECTOR 300P61. SHORT 300P61 PINS 18 AND 19 TOGETHER. CHECK CONTINUITY BETWEEN 055P1 PINS 1 AND 3. IS CONTINUITY PRESENT?
YES
REPAIR OR REPLACE WIRES BETWEEN 300J42 AND 300J61 AS REQUIRED.
NO
REPAIR OR REPLACE WIRES BETWEEN 300P61 AND 055P1 AS REQUIRED.
DISCONNECT CONNECTOR FROM NO. 1 ENGINE GAS PRODUCER SPEED SENSOR. CHECK FOR CONTINUITY BETWEEN 055P1 PINS 1 AND 3. IS CONTINUITY PRESENT?
NO
REPLACE ENGINE NO. 1 GAS PRODUCER TACHOMETER INDICATOR.
YES
DISCONNECT CONNECTOR P25 FROM 300J81 AT NO. 1 ENGINE DISCONNECT SHELF. CHECK FOR CONTINUITY BETWEEN 055P1 PINS 1 AND 3. IS CONTINUITY PRESENT?
NO
REPLACE ENGINE NO. 1 SPEED SENSOR ENGINE WIRE HARNESS.
YES
DISCONNECT CONNECTOR 300P42. CHECK FOR CONTINUITY BETWEEN 055P1 PINS 1 AND 3. IS CONTINUITY PRESENT?
NO
REPAIR OR REPLACE WIRES BETWEEN 300P42 AND 300J81 AS REQUIRED.
YES
DISCONNECT CONNECTOR 300P61. CHECK FOR CONTINUITY BETWEEN 055P1 PINS 1 AND 3. IS CONTINUITY PRESENT?
NO
REPAIR OR REPLACE WIRES BETWEEN 300J42 AND 300J61 AS REQUIRED.
YES
REPAIR OR REPLACE WIRES BETWEEN 300P61 AND 055P1 AS REQUIRED.

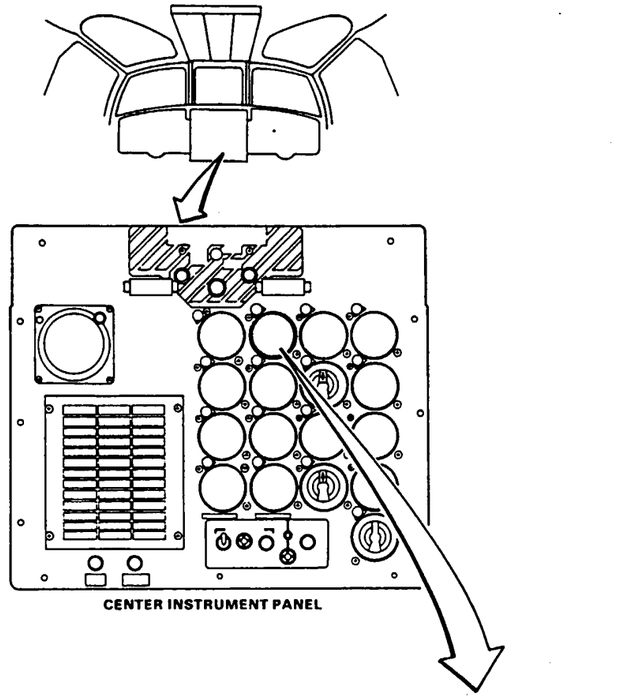
END OF TASK

8-2.5 NO. 2 GAS PRODUCER TACHOMETER READS 0 PERCENT RPM WHEN NO. 2 ENGINE IS MOTORED 8-2.5

FAULT ISOLATION PROCEDURE

INITIAL SETUP
Applicable Configurations:
Without 74
Tools:
Electrical Repairer Tool Kit,
NSN 5180-00-323-4915
Multimeter
Materials:
None I
Personnel Required:
Aircraft Electrician
References:
TM 55-1520-240-23
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power Off
Hydraulic Power Off



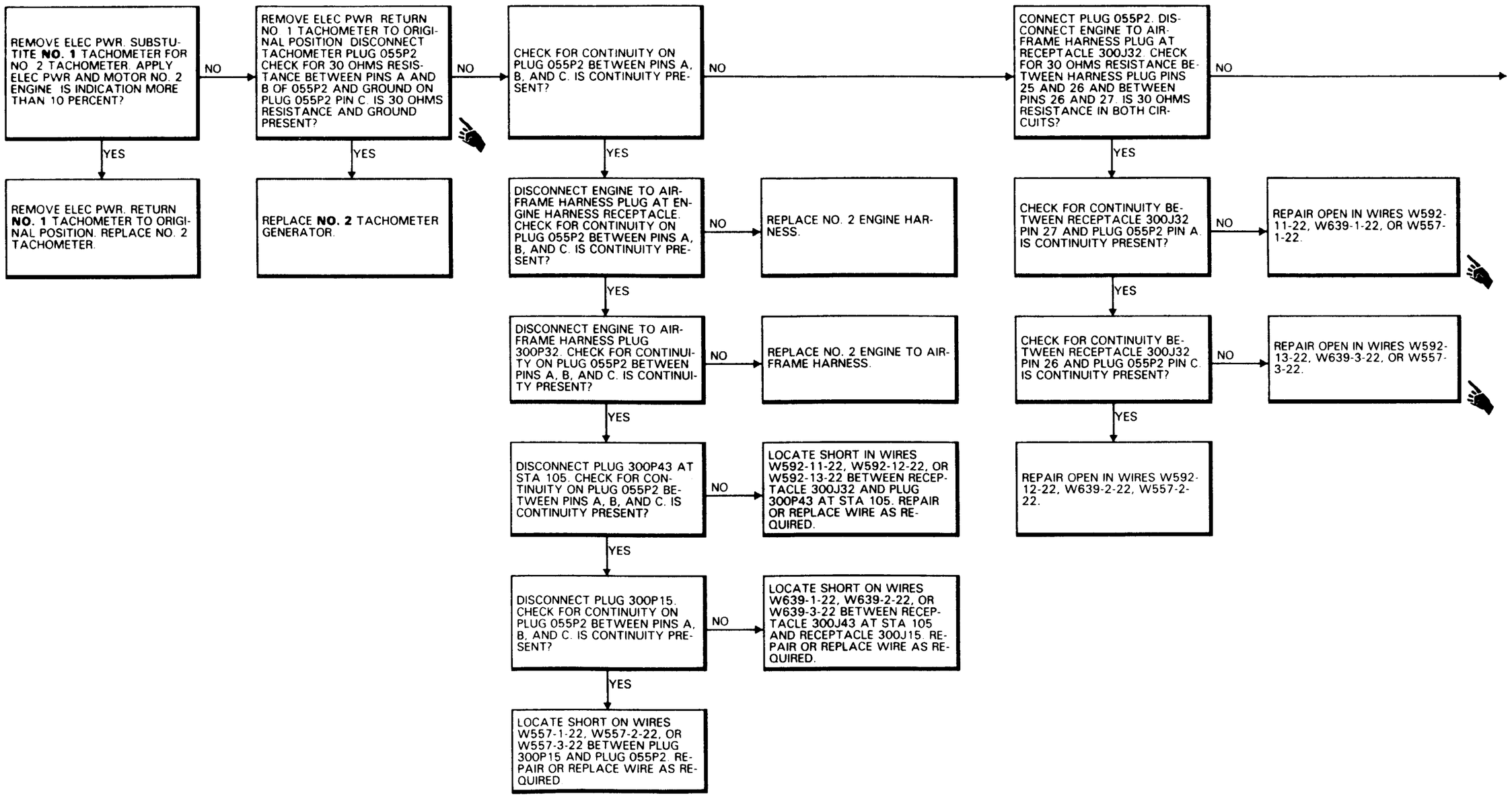




D145-8314-SPA

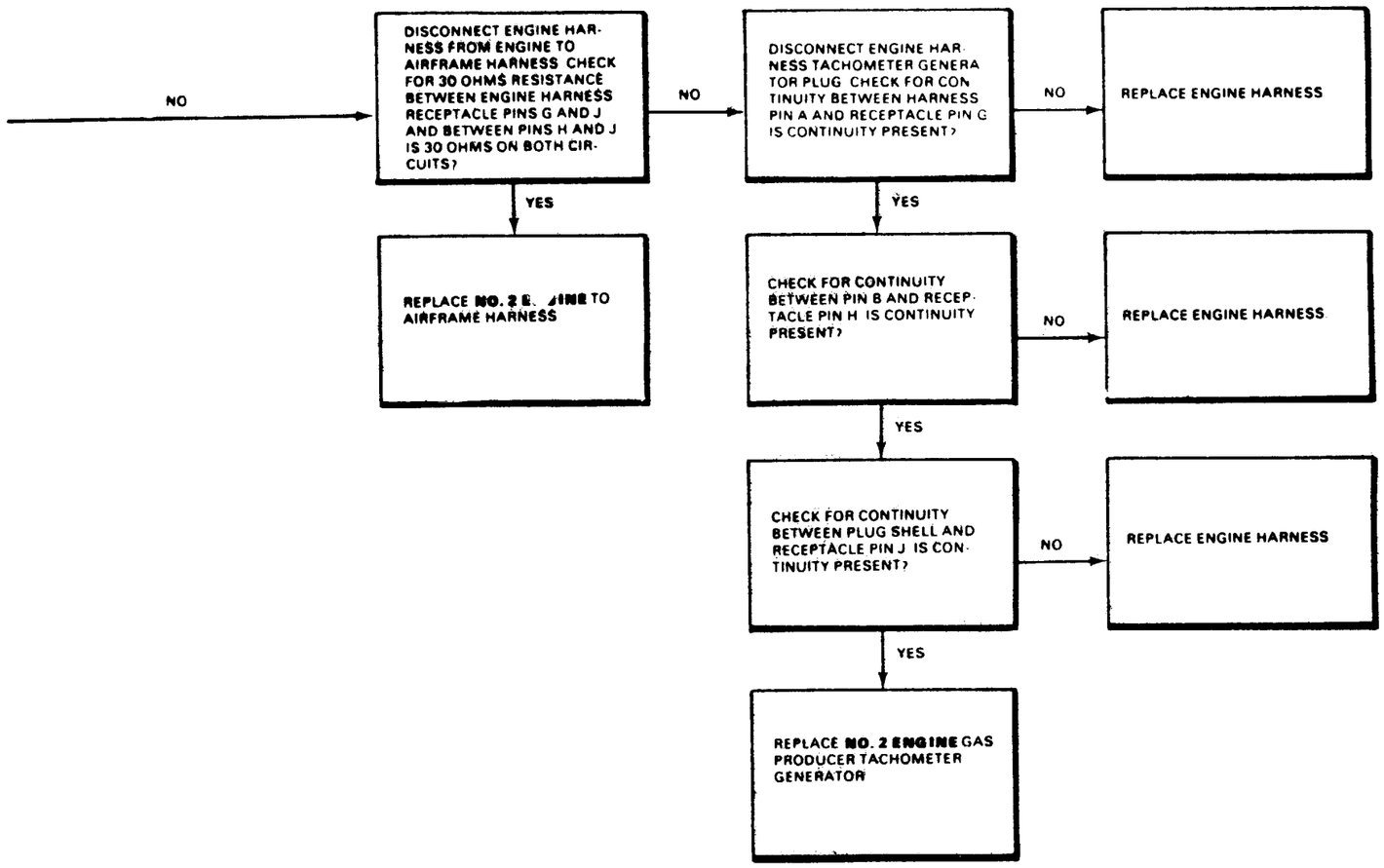
90.54

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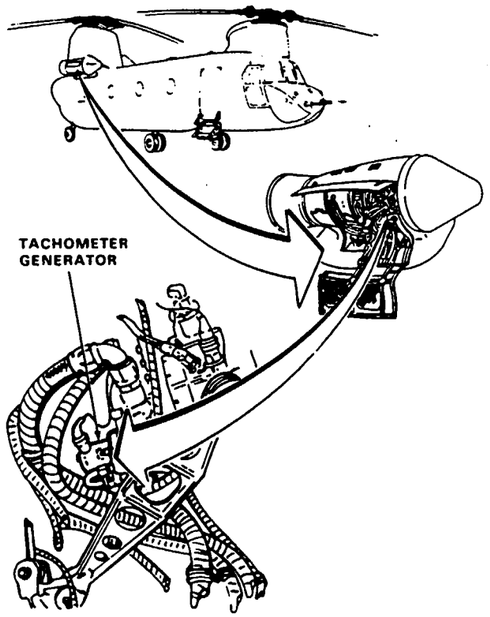


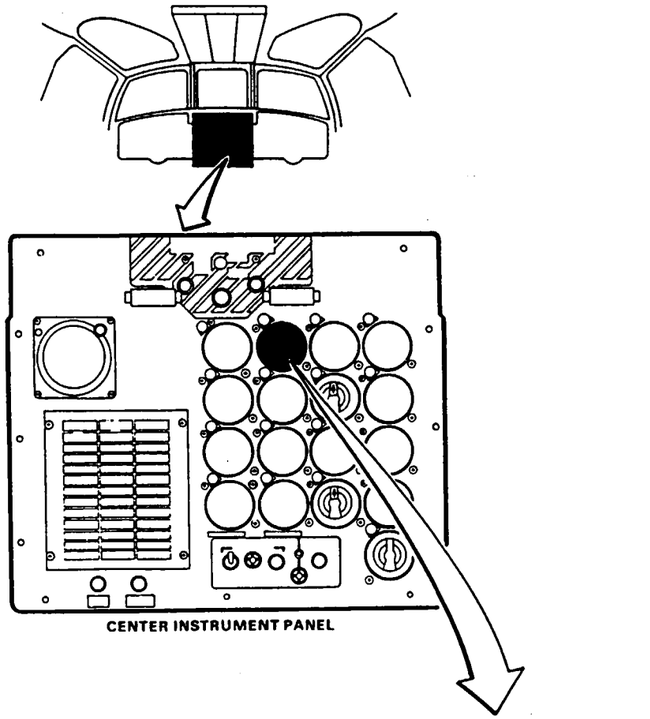
GO TO NEXT PAGE

8-2.5 NO. GAS PRODUCER TACHOMETER READS 0 PERCENT RPM WHEN NO. 2 ENGINE IS MOTORED (Continued)



GO TO NEXT PAGE







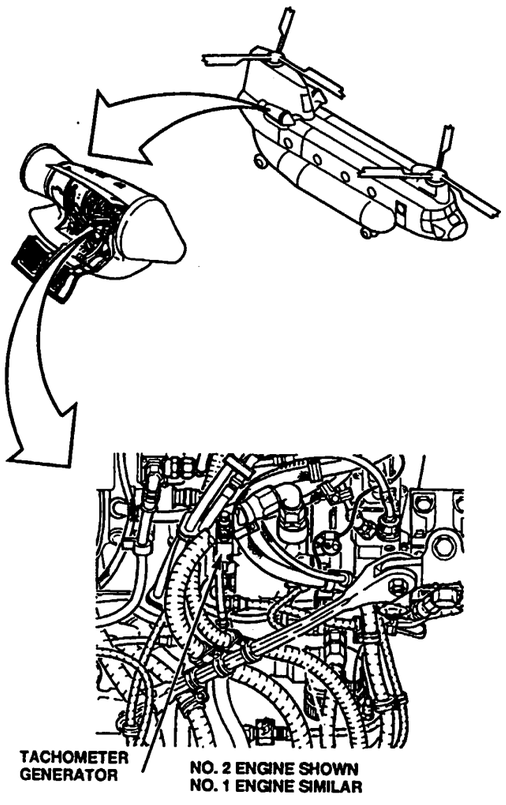
D145-11844- SPA

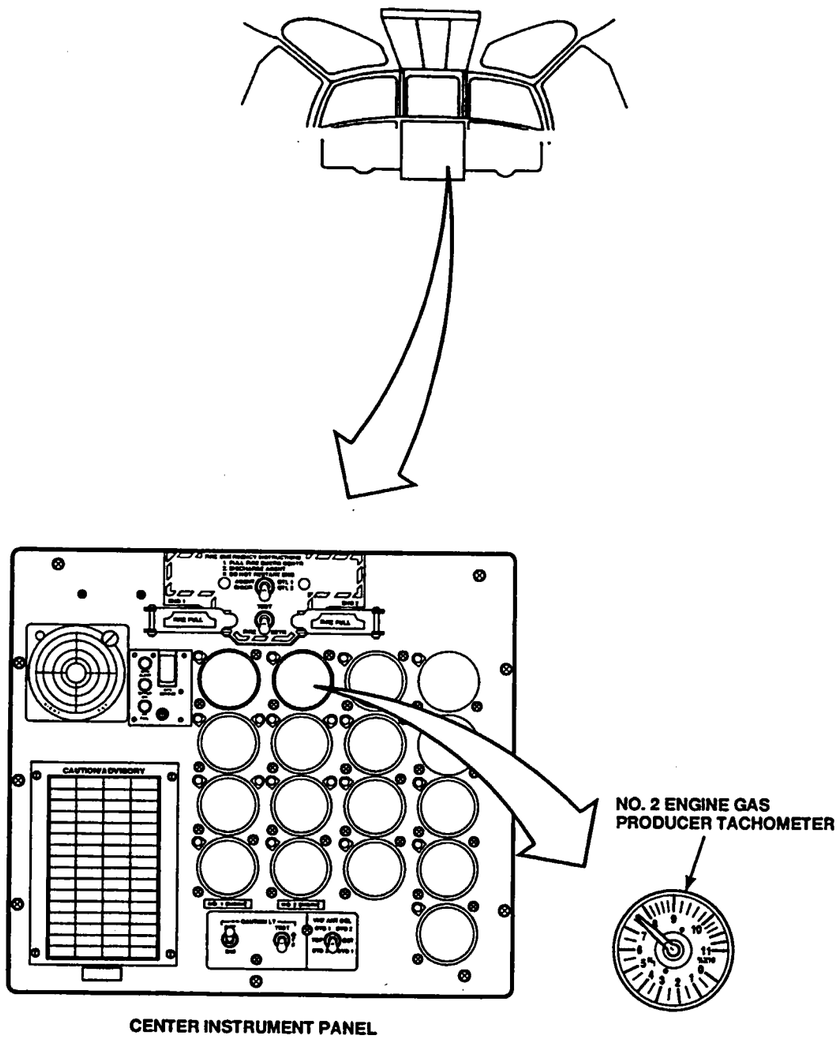
END OF TASK

FAULT ISOLATION PROCEDURE

INITIAL SETUP
Applicable Configurations:
With 74
Tools:
Electrical Repairer's Tool Kit, NSN 5180-00-323-4915
Multimeter
Materials:
None

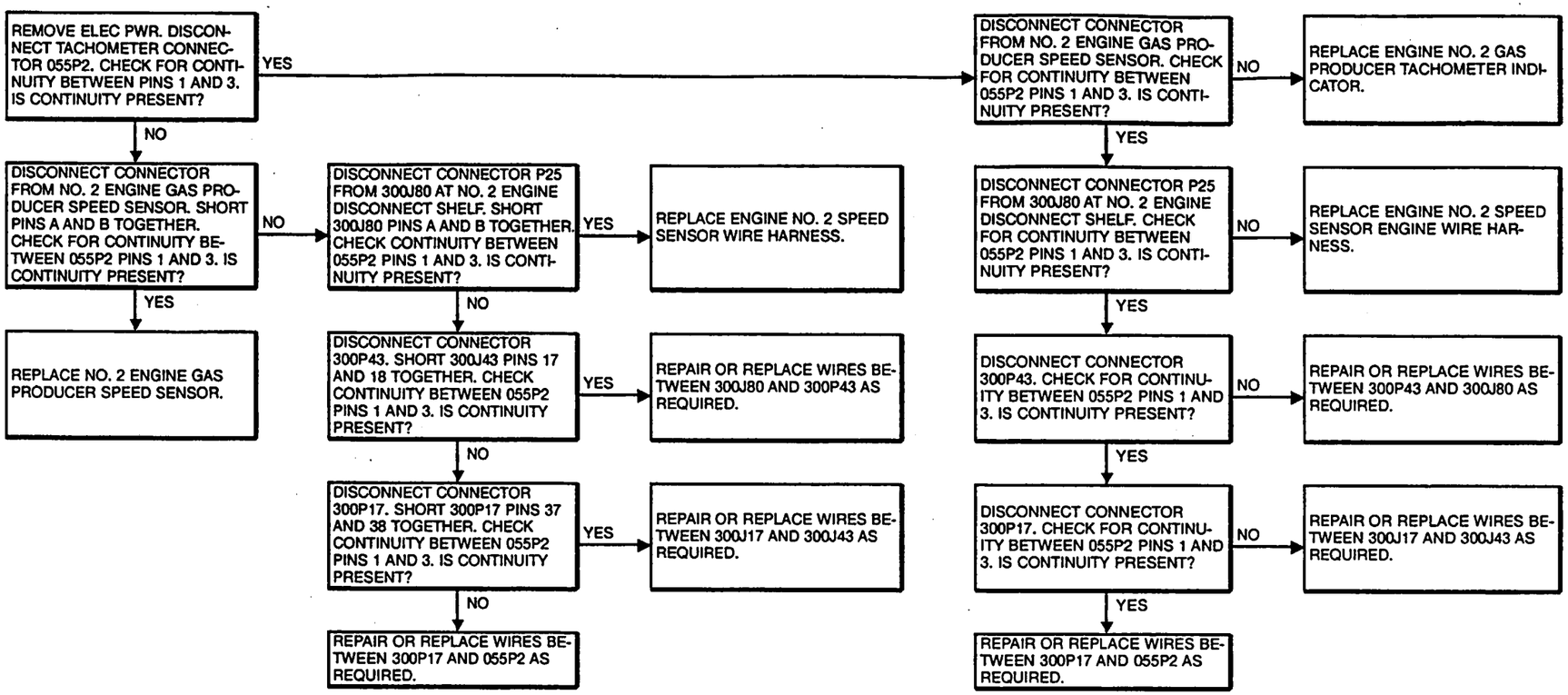
Personnel Required:
Aircraft Electrician
References:
TM 55-1520-240-23
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power Off
Hydraulic Power Off





A65274

GO TO NEXT PAGE


REMOVE ELEC PWR. DISCONNECT TACHOMETER CONNECTOR 055P2. CHECK FOR CONTINUITY BETWEEN PINS 1 AND 3. IS CONTINUITY PRESENT?
YES
NO
DISCONNECT CONNECTOR FROM NO. 2 ENGINE GAS PRODUCER SPEED SENSOR. SHORT PINS A AND B TOGETHER. CHECK FOR CONTINUITY BETWEEN 055P2 PINS 1 AND 3. IS CONTINUITY PRESENT?
NO
YES
REPLACE NO. 2 ENGINE GAS PRODUCER SPEED SENSOR.
DISCONNECT CONNECTOR P25 FROM 300J80 AT NO. 2 ENGINE DISCONNECT SHELF. SHORT 300J80 PINS A AND B TOGETHER. CHECK CONTINUITY BETWEEN 055P2 PINS 1 AND 3. IS CONTINUITY PRESENT?
YES
REPLACE ENGINE NO. 2 SPEED SENSOR WIRE HARNESS.
NO
DISCONNECT CONNECTOR 300P43. SHORT 300J43 PINS 17 AND 18 TOGETHER. CHECK CONTINUITY BETWEEN 055P2 PINS 1 AND 3. IS CONTINUITY PRESENT?
YES
REPAIR OR REPLACE WIRES BETWEEN 300J80 AND 300P43 AS REQUIRED.
NO
DISCONNECT CONNECTOR 300P17. SHORT 300P17 PINS 37 AND 38 TOGETHER. CHECK CONTINUITY BETWEEN 055P2 PINS 1 AND 3. IS CONTINUITY PRESENT?
YES
REPAIR OR REPLACE WIRES BETWEEN 300J17 AND 300J43 AS REQUIRED.
NO
REPAIR OR REPLACE WIRES BETWEEN 300P17 AND 055P2 AS REQUIRED.
DISCONNECT CONNECTOR FROM NO. 2 ENGINE GAS PRODUCER SPEED SENSOR. CHECK FOR CONTINUITY BETWEEN 055P2 PINS 1 AND 3. IS CONTINUITY PRESENT?
NO
REPLACE ENGINE NO. 2 GAS PRODUCER TACHOMETER INDICATOR.
YES
DISCONNECT CONNECTOR P25 FROM 300J80 AT NO. 2 ENGINE DISCONNECT SHELF. CHECK FOR CONTINUITY BETWEEN 055P2 PINS 1 AND 3. IS CONTINUITY PRESENT?
NO
REPLACE ENGINE NO. 2 SPEED SENSOR ENGINE WIRE HARNESS.
YES
DISCONNECT CONNECTOR 300P43. CHECK FOR CONTINUITY BETWEEN 055P2 PINS 1 AND 3. IS CONTINUITY PRESENT?
NO
REPAIR OR REPLACE WIRES BETWEEN 300P43 AND 300J80 AS REQUIRED.
YES
DISCONNECT CONNECTOR 300P17. CHECK FOR CONTINUITY BETWEEN 055P2 PINS 1 AND 3. IS CONTINUITY PRESENT?
NO
REPAIR OR REPLACE WIRES BETWEEN 300J17 AND 300J43 AS REQUIRED.
YES
REPAIR OR REPLACE WIRES BETWEEN 300P17 AND 055P2 AS REQUIRED.

END OF TASK

8-2.6 NO. 1 ENGINE GAS PRODUCER TACHOMETER READING FLUCTUATES OR IS ERRATIC 8-2.6

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
Without 74

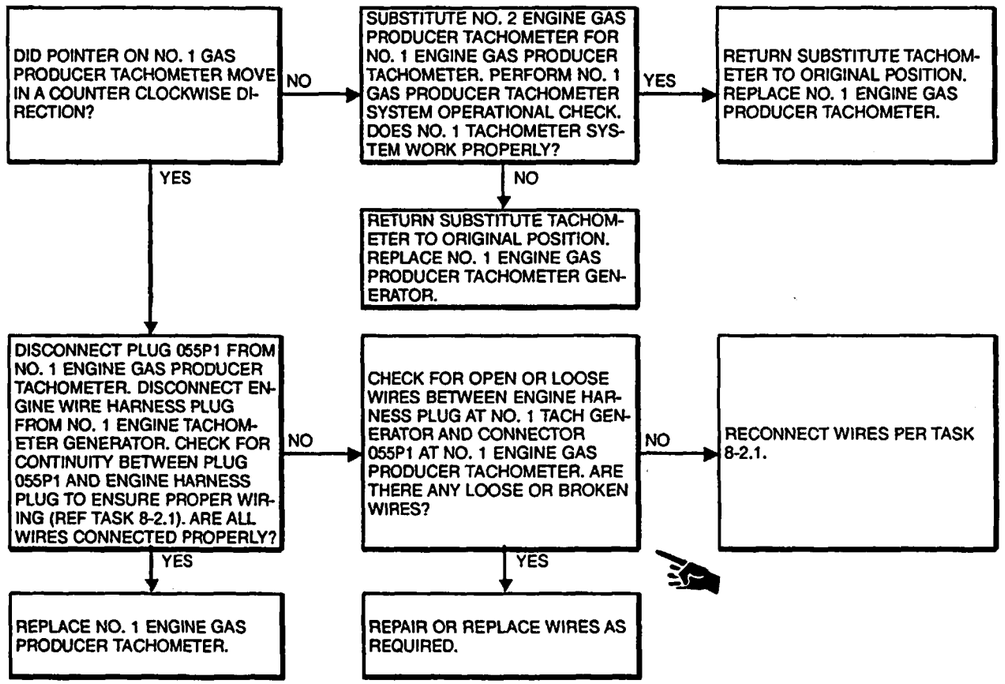
Tools:
Electrical Repairer Tool Kit, NSN 5180-00-323-4915
Multimeter

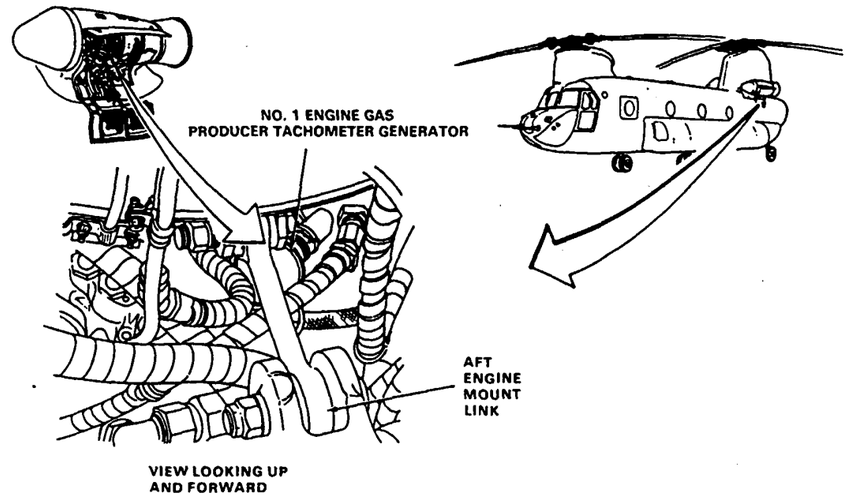
Materials:
None

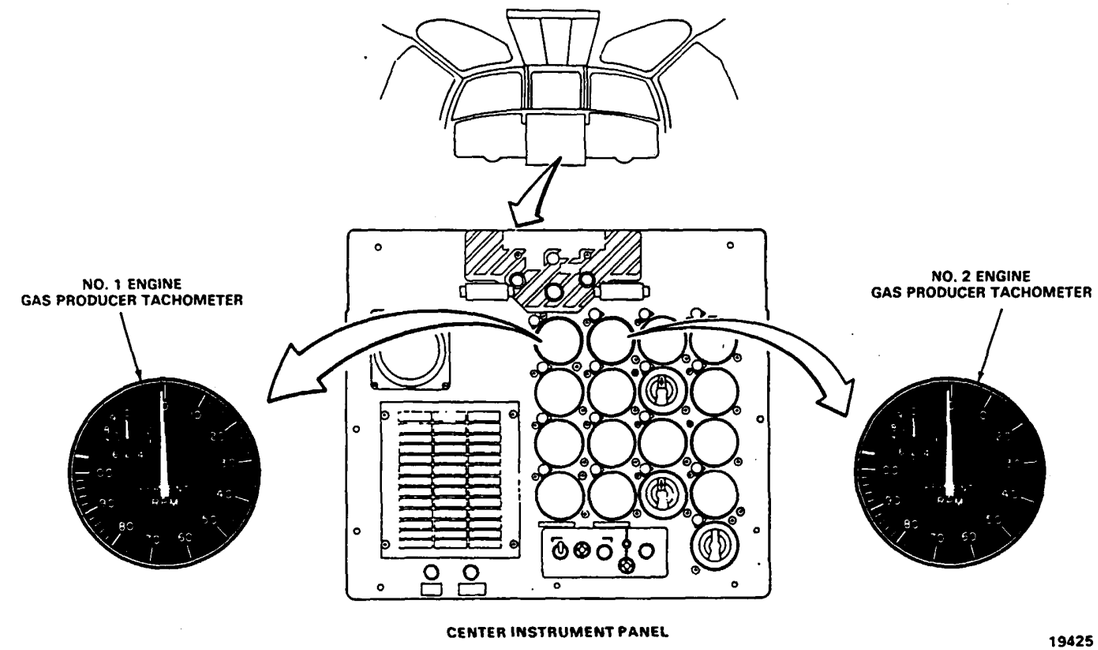
Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power Off
Hydraulic Power Off



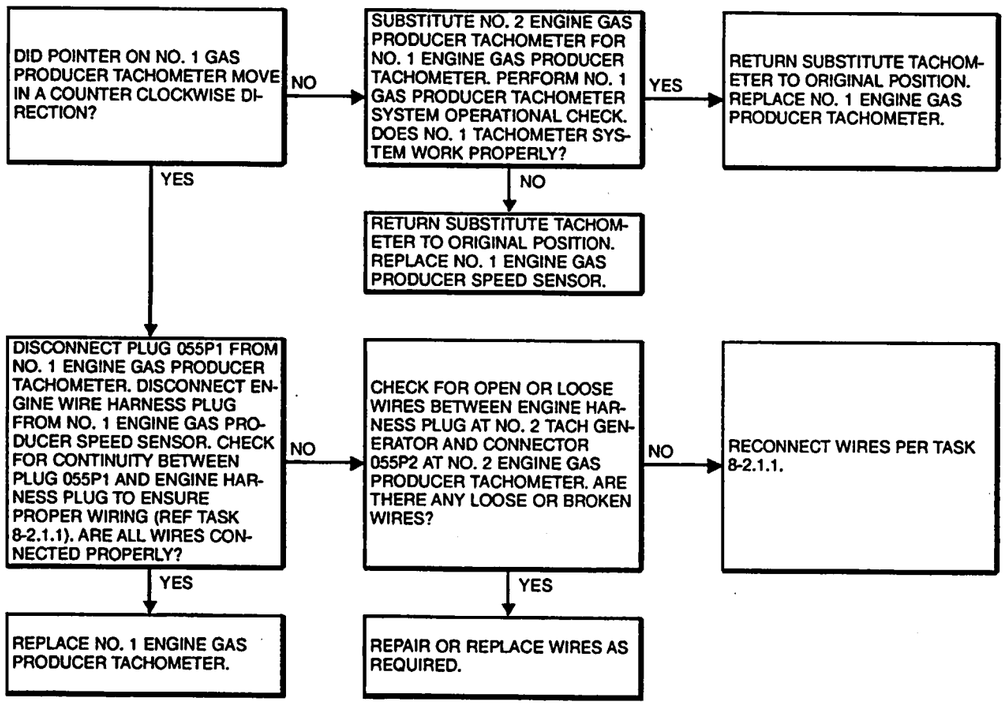


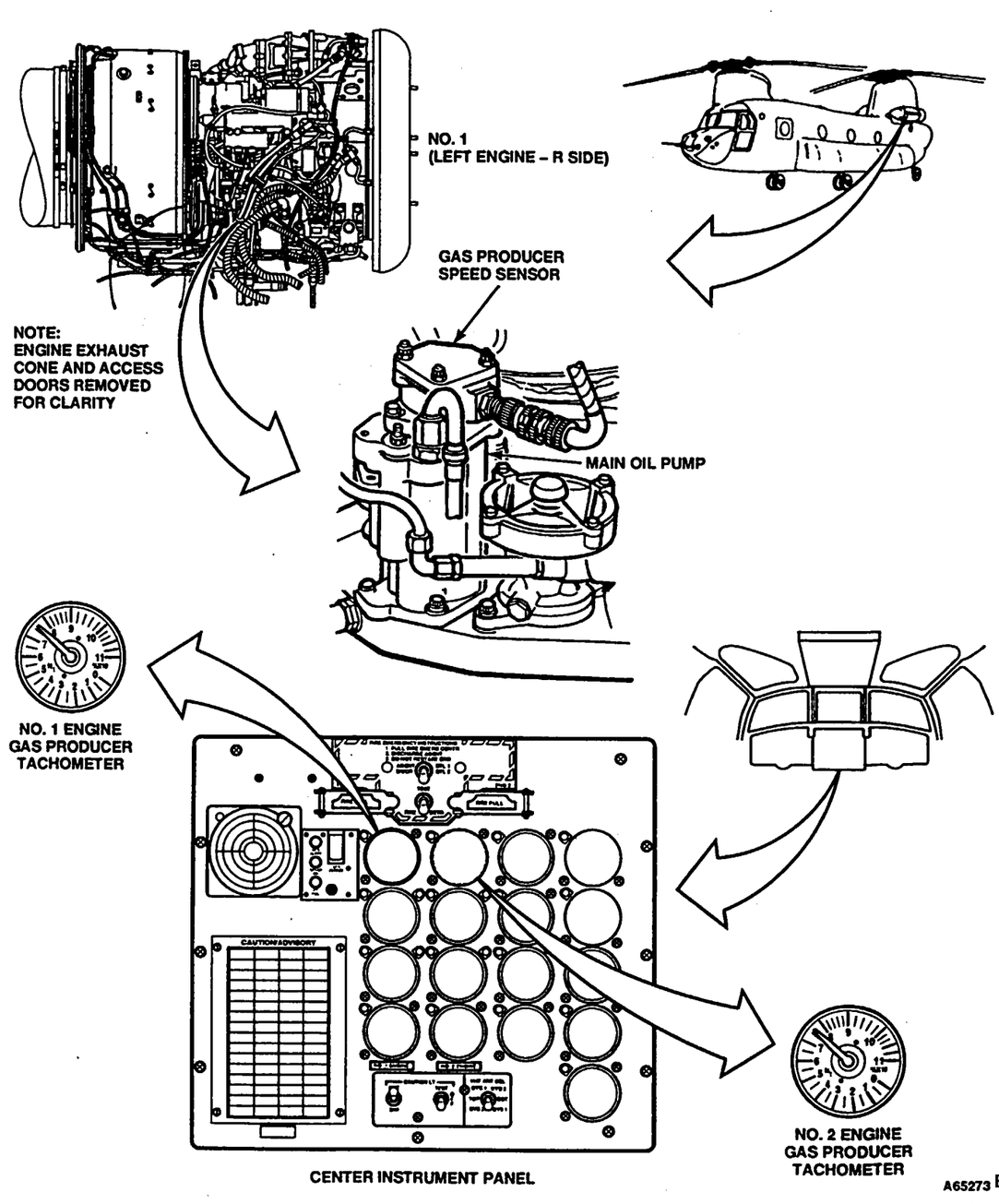


END OF TASK

FAULT ISOLATION PROCEDURE

INITIAL SETUP
Applicable Configurations:
With 74
Tools:
Electrical Repairer Tool Kit,
NSN 5180-00-323-4915
Multimeter
Materials:
None
Personnel Required:
Aircraft Electrician
References:
TM 55-1520-240-23
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power Off
Hydraulic Power Off



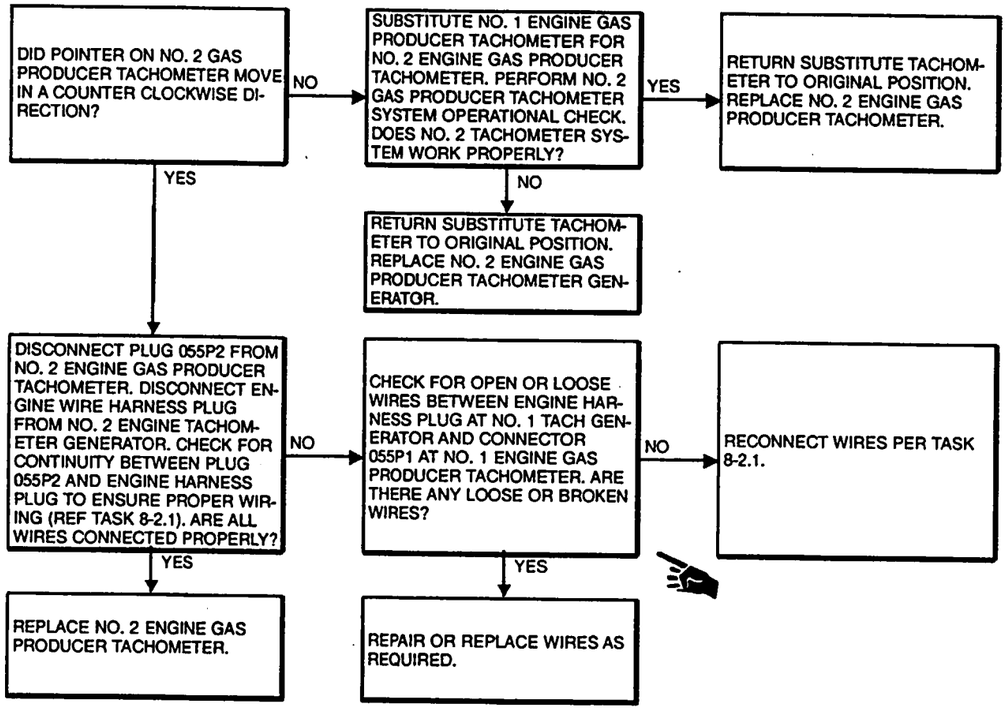


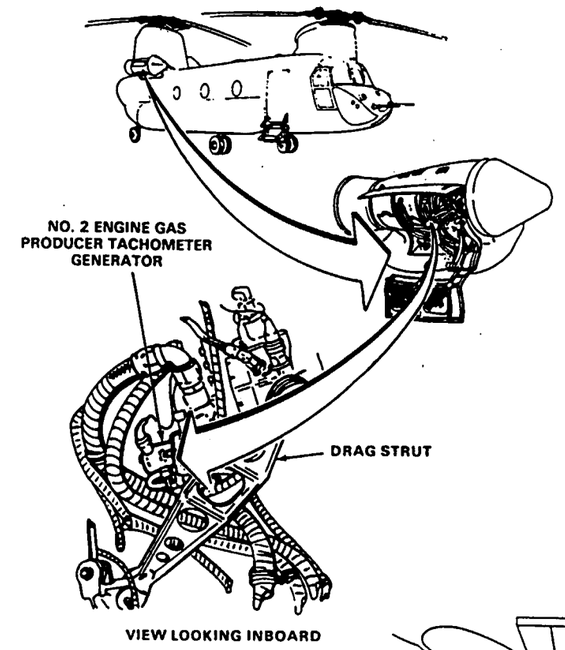
A65273 END OF TASK

8-2.7 NO. 2 ENGINE GAS PRODUCER TACHOMETER READING FLUCTUATES OR IS ERRATIC 8-2.7

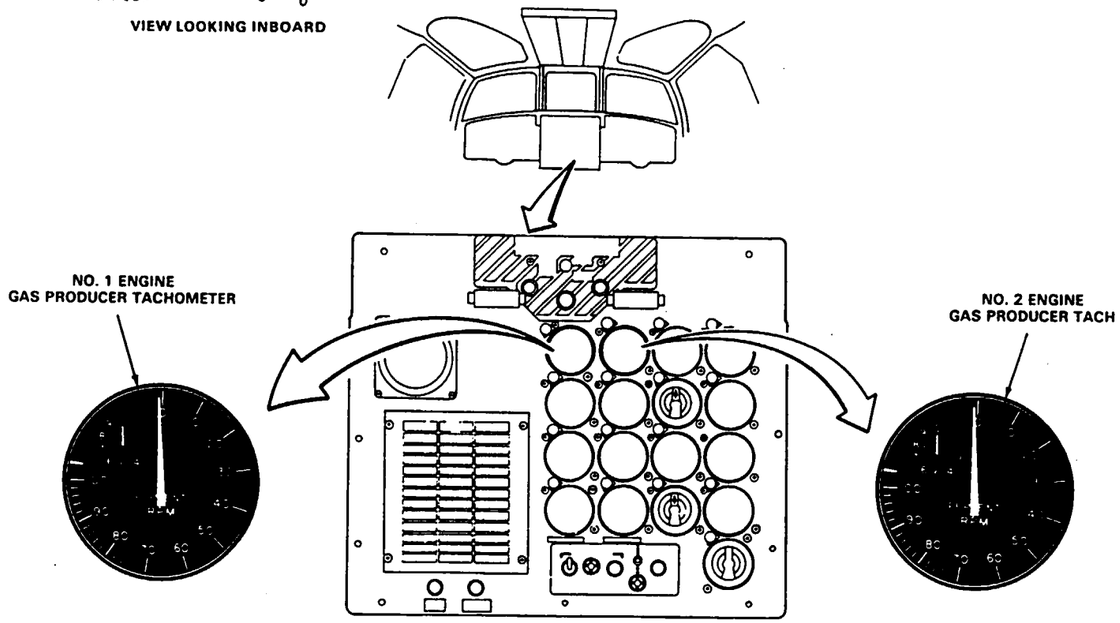
FAULT ISOLATION PROCEDURE

INITIAL SETUP
Applicable Configurations:
Without 74
Tools:
Electrical Repairer Tool Kit, NSN 5180-00-323-4915
Multimeter
Materials:
None
Personnel Required:
Aircraft Electrician
References:
TM 55-1520-240-23
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power Off
Hydraulic Power Off





VIEW LOOKING INBOARD

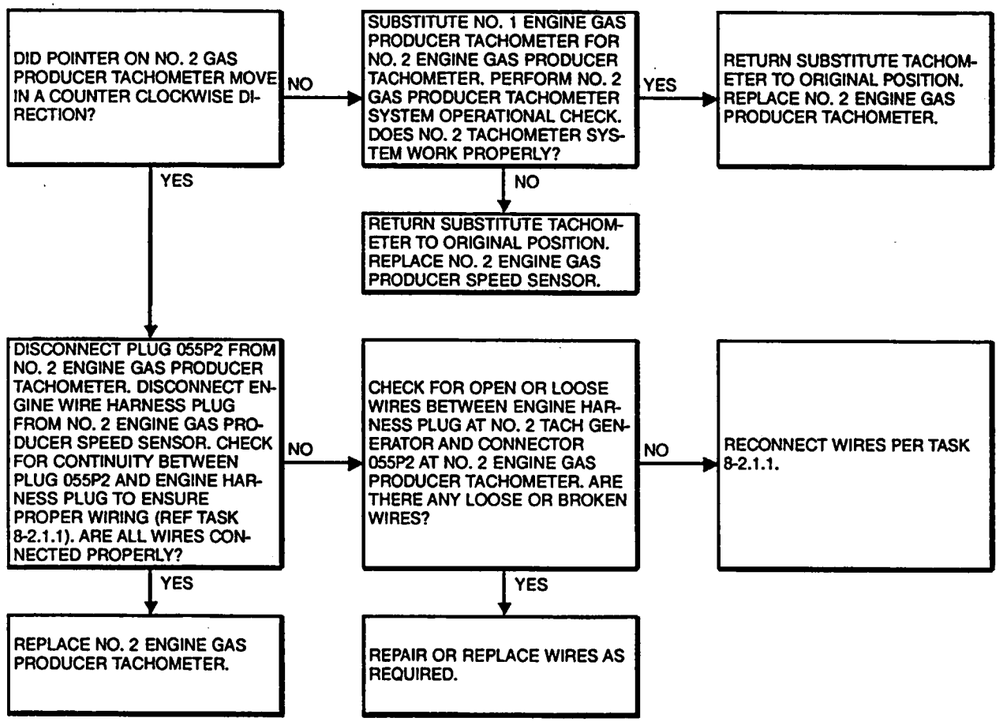


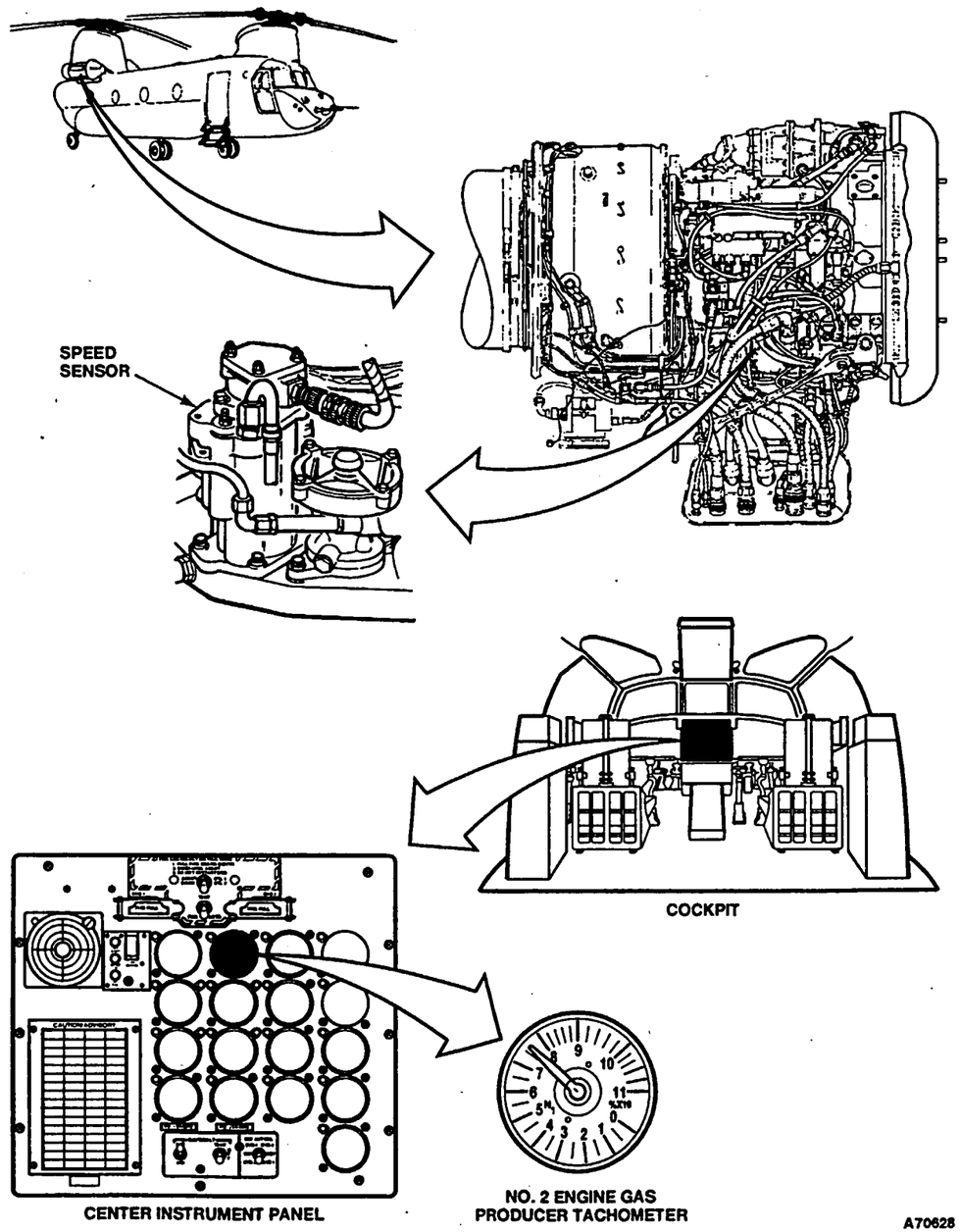
CENTER INSTRUMENT PANEL

END OF TASK
19426

FAULT ISOLATION PROCEDURE

INITIAL SETUP
Applicable Configurations:
With 74
Tools:
Electrical Repairer Tool Kit, NSN 5180-00-323-4915
Multimeter
Materials:
None
Personnel Required:
Aircraft Electrician
References:
TM 55-1520-240-23
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power Off
Hydraulic Power Off

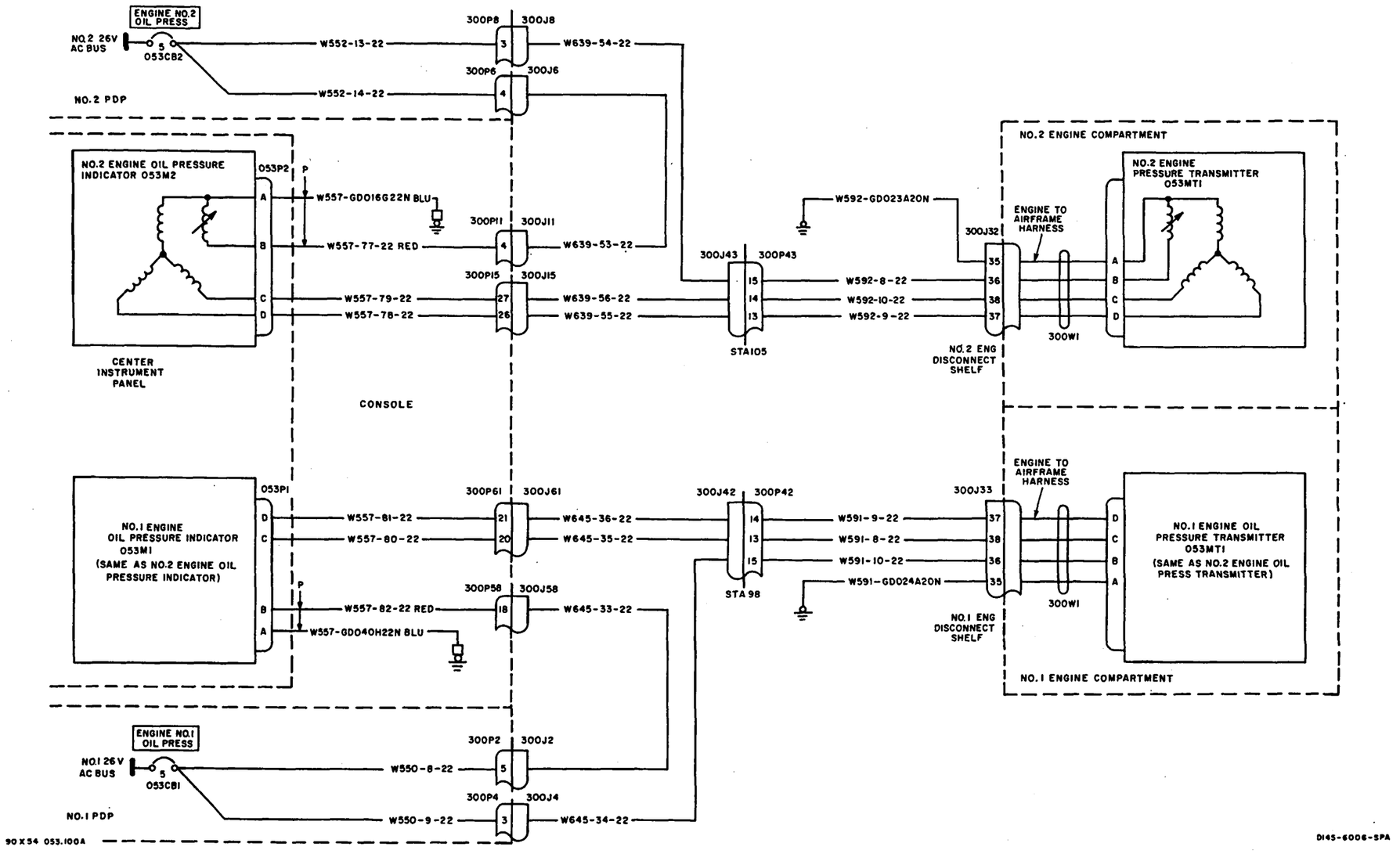




END OF TASK

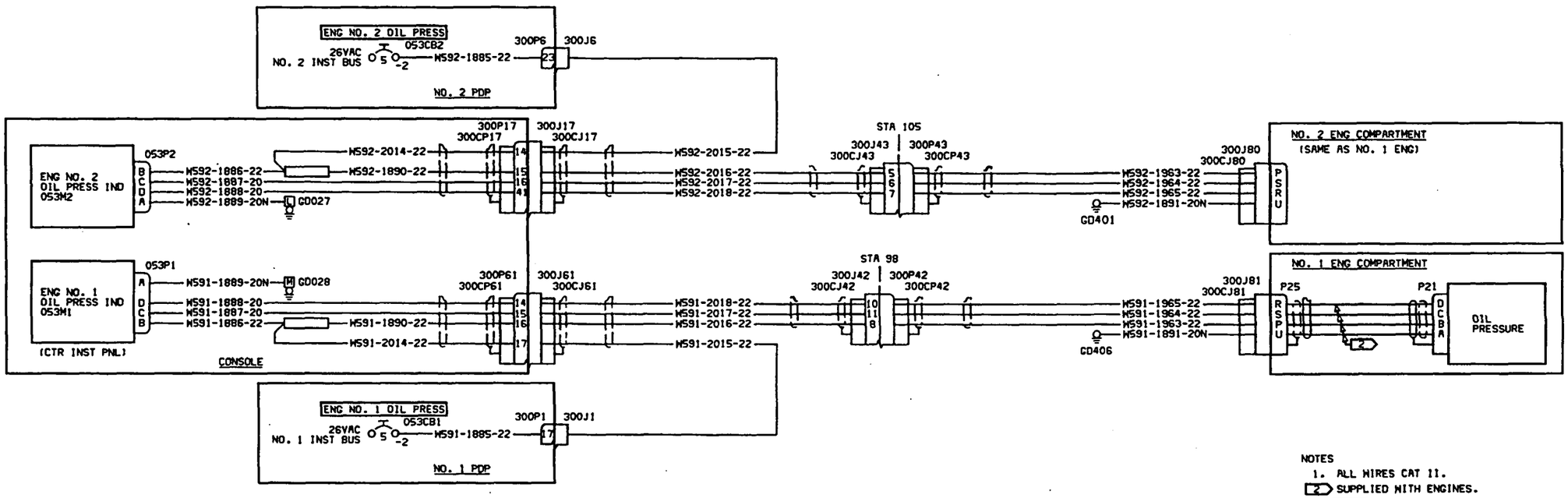
8-3 ENGINE OIL PRESSURE INDICATING SYSTEM

WITHOUT 74



END OF TASK

WITH 74



NOTES
1. ALL WIRES CAT II.
2. SUPPLIED WITH ENGINES.
3. [ ] INDICATES EQUIPMENT MARKINGS.

A72182

END OF TASK

INITIAL SETUP
Applicable Configurations:
All

Tools:
Aircraft Mechanic Tool Kit,
NSN 5180-00-323-4692
Materials:
None
Personnel Required:
Medium Helicopter Repairer

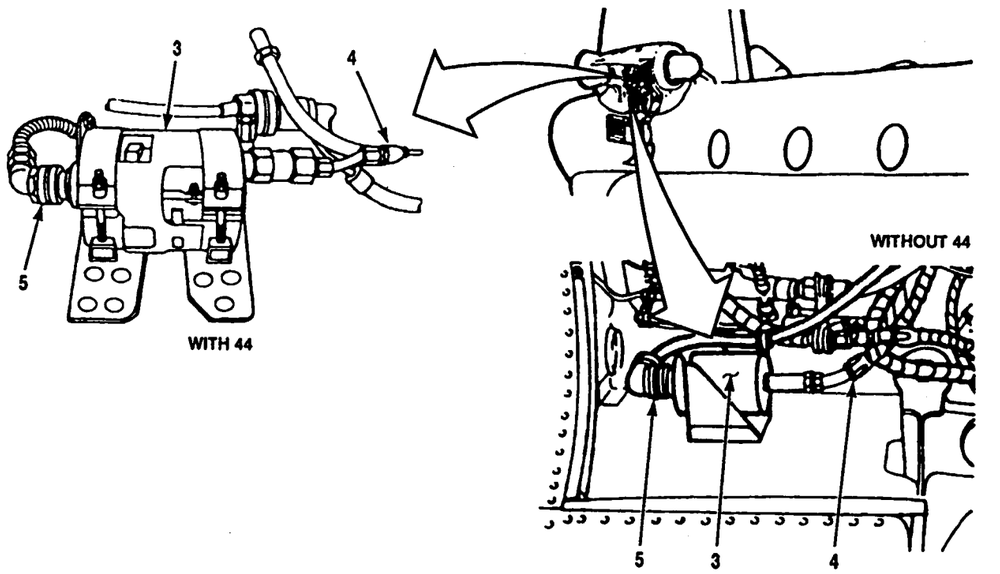
References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off
Upper and Lower Engine Access Doors Open
Engine Work Platforms Open

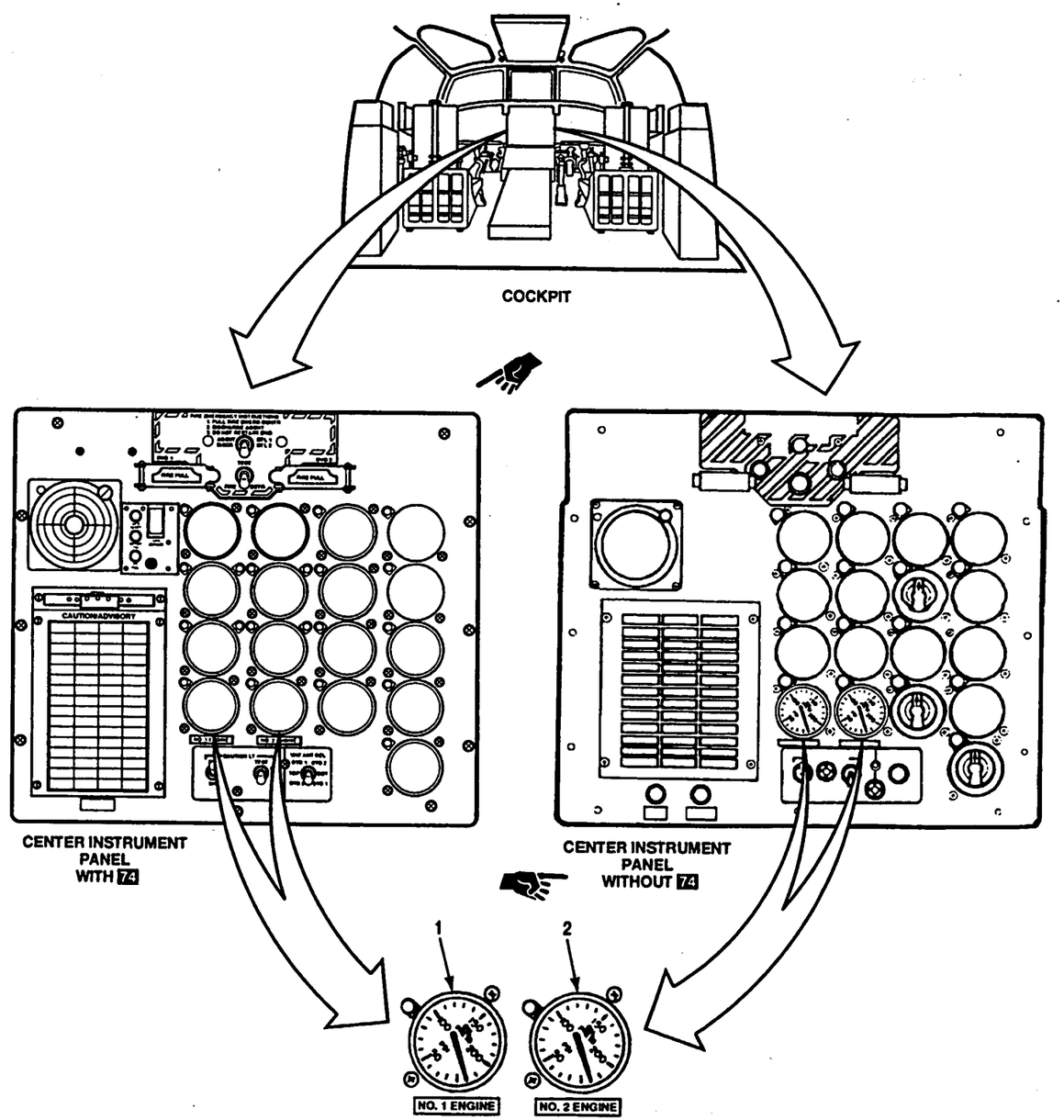
TASK	RESULT
1. **Check NO. 1 ENGINE OIL PRESS indicator (1).**	If indicator (1) is damaged, replace it.
2. **Check NO. 2 ENGINE OIL PRESS Indicator (2).**	If indicator (2) is damaged, replace it.
CHECK NO. 2 ENGINE INSTALLATION	
3. Check No. 2 engine oil pressure transmitter (3).	If transmitter (3) is loose or damaged, tighten or replace it. If oil is leaking from transmitter, tighten connection if loose or replace it as required. If oil line (4) is leaking oil or is damaged, tighten or replace it as required. If connector (5) or wiring is damaged, replace harness.
CHECK NO. 1 ENGINE INSTALLATION	
4. **Check No. 1 engine oil pressure transmitter (3).**	If transmitter (3) is loose or damaged, tighten or replace it. If oil is leaking from transmitter, tighten connection if loose or replace transmitter. If oil line (4) is leaking oil or is damaged, tighten or replace it as required. If connector (5) or wiring is damaged, replace harness.

FOLLOW-ON MAINTENANCE:
TM 55-1520-240-23:
Close upper and lower engine access doors.
Close engine work platforms.

GO TO NEXT PAGE



NO. 2 ENGINE OIL PRESSURE TRANSMITTER SHOWN.
NO. 1 ENGINE OIL PRESSURE TRANSMITTER OPPOSITE.



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END OF TASK

8-3.3 ENGINE OIL PRESSURE INDICATING SYSTEM OPERATIONAL CHECK

INITIAL SETUP

Applicable Configurations:
All

Tools:
None

Materials:
None

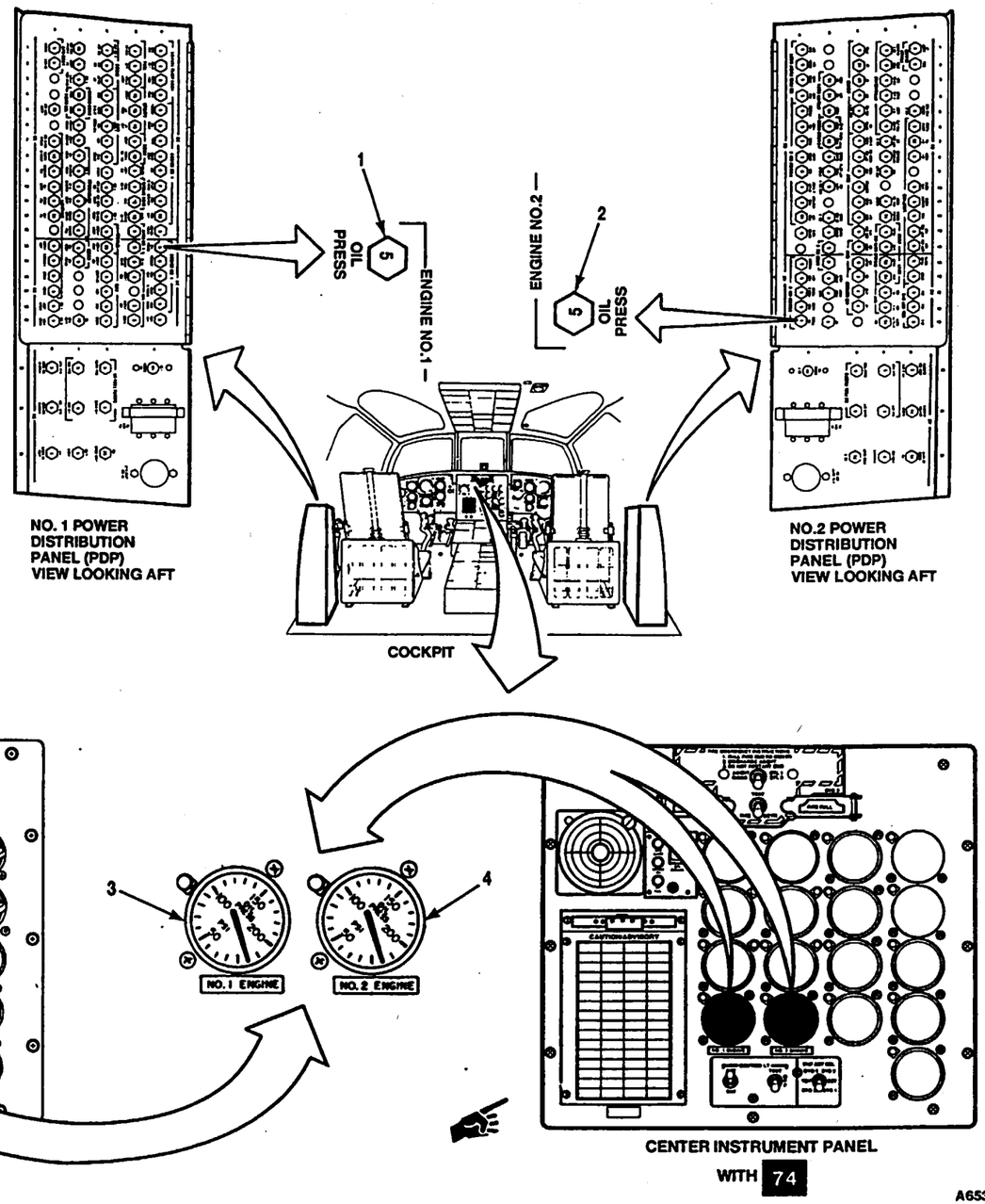
Personnel Required:
Rotary Wing Aviator (2)
Medium Helicopter Repairer

References: -
TM 55-1520-240-10
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
B-Battery Connected
Electrical Power On
Hydraulic Power On
Engine Oil Pressure Indicating System Visual Check Performed (Task 8-3.2)

TASK	RESULT
1. **Check** that **ENGINE NO. 1 OIL PRESS circuit breaker (1)** is closed**.**	If OIL PRESS circuit breaker (1) is open, close it. If it opens again, go to task 8-3.4 or 8-3.4.1.
2. **Check** that **ENGINE NO. 2 OIL PRESS circuit breaker (2)** is closed**.**	If OIL PRESS circuit breaker (2) is open, close it If it opens again, go to task 8-3.4 or 8-3.4.1.
3. **Check** that **NO. 1 ENGINE OIL PRESS AND NO. 2 ENGINE OIL PRESS Indicators (3 and 4)** indicate 0**.**	If either indicator (3 or 4) does not indicate 0, go to task 8-3.5.
CHECK NO. 1 ENGINE SYSTEM	
4. Have pilot **operate No. 1 engine to GROUND IDLE. Check NO. 1 ENGINE OIL PRESS indicator (3).**	Indicator (3) shall indicate 20 psi minimum with pointer fluctuations less than 5 psi. If indication is below 20 psi or is fluctuating more than 5 psi, go to task 8-3.6 or 8-3.6.1.
5. Have pilot stop No. 1 engine.	Indicator (3) shall indicate 0.
CHECK NO. 2 ENGINE SYSTEM	
6. Have pilot **operate No. 2 engine to GROUND IDLE. Check NO. 2 ENGINE OIL PRESS indicator (3).**	Indicator (4) shall indicate 20 psi minimum with pointer fluctuations less than 5 psi. If indication is below 20 psi or is fluctuating more than 5 psi go to task 8-3.7 or 8-3.7.1.
7. Have pilot stop No. 2 engine.	Indicator (4) shall indicate 0.

FOLLOW-ON MAINTENANCE:
TM 55-1520-240-23:
Electrical power off.
Hydraulic power off.
Battery disconnected.



END OF TASK

8-3.4 ENGINE OIL PRESS CIRCUIT BREAKER DOES NOT STAY CLOSED

INITIAL SETUP

Applicable Configurations:
Without 74

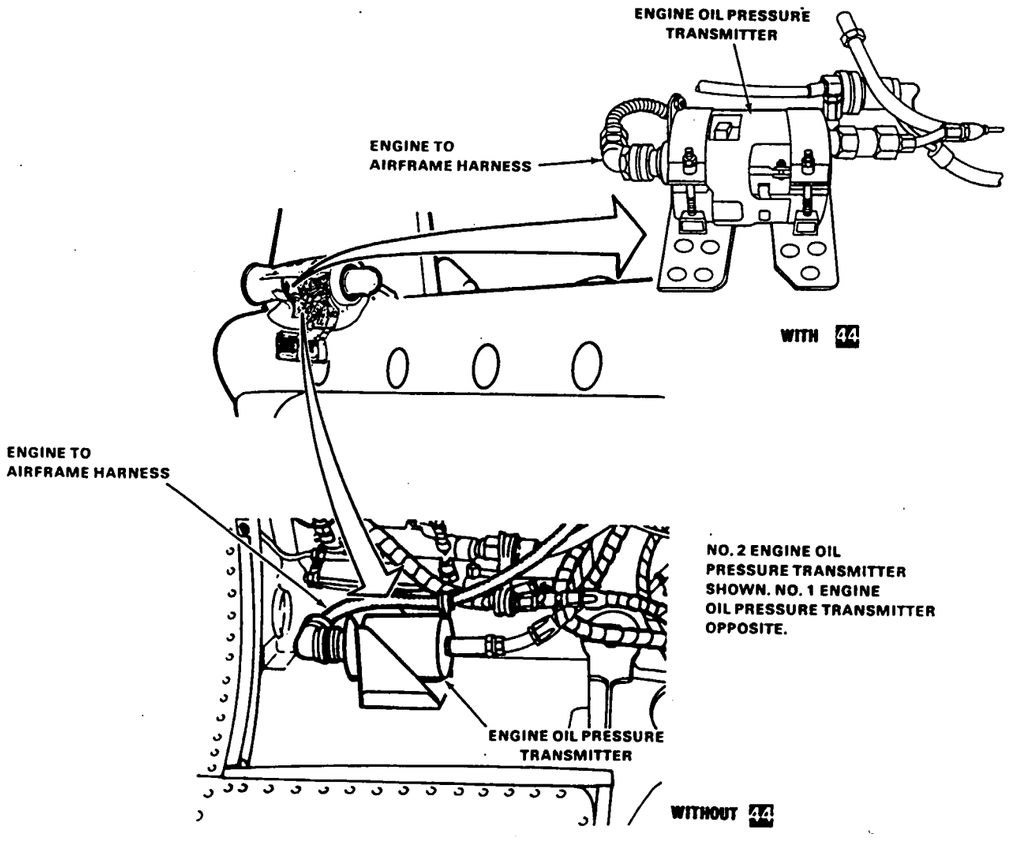
Tools:
Electrical Repairer Tool Kit, NSN 5180-00-323-4915
Multimeter

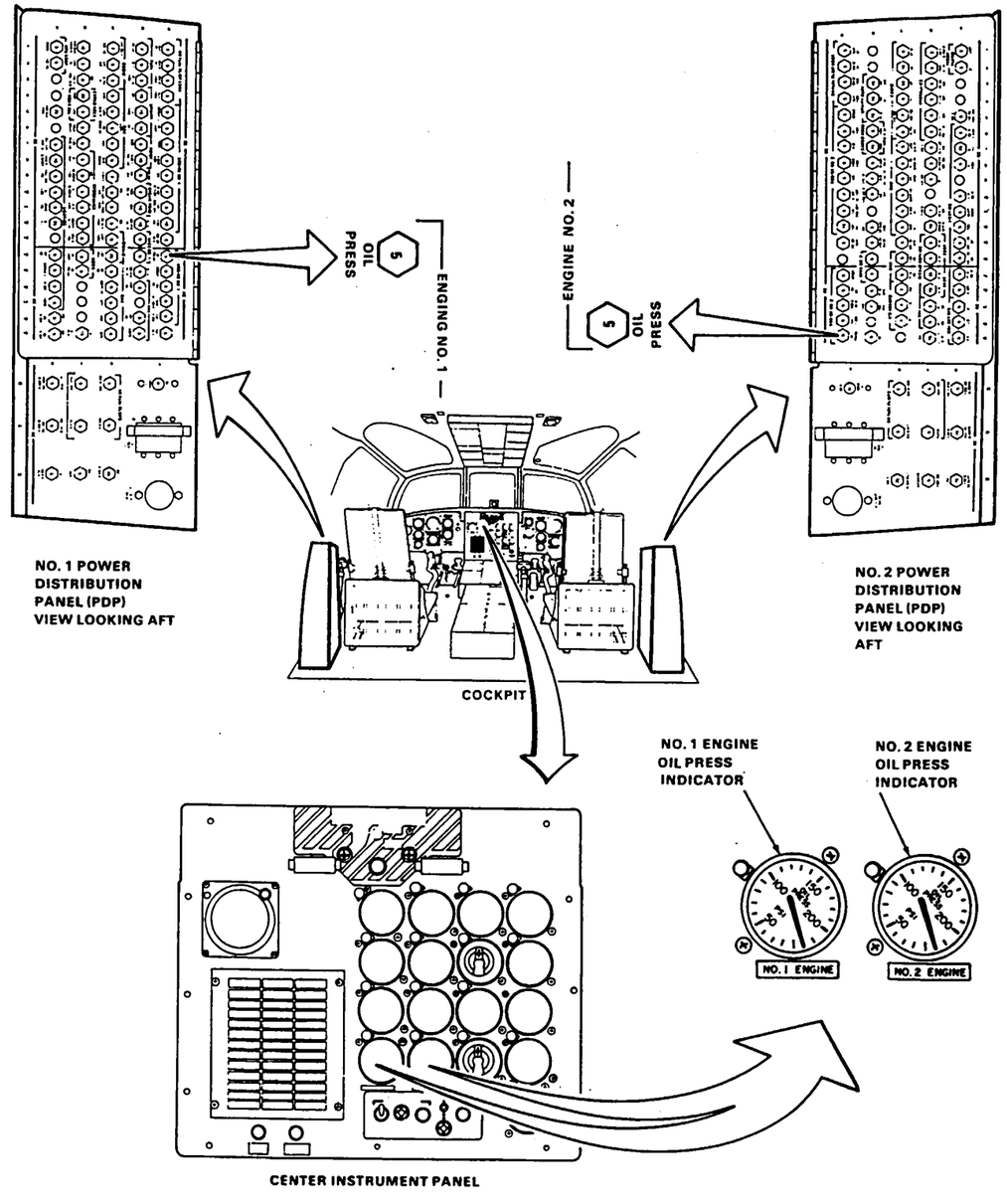
Materials:
None

Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off

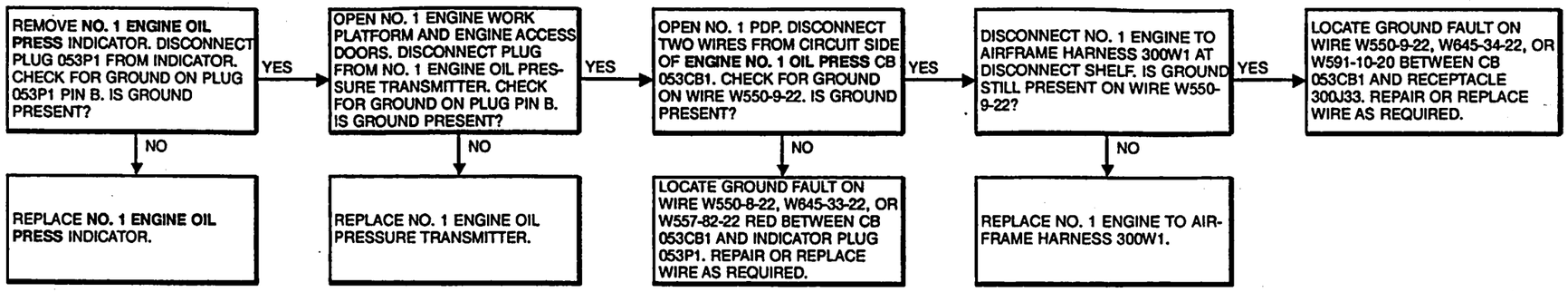




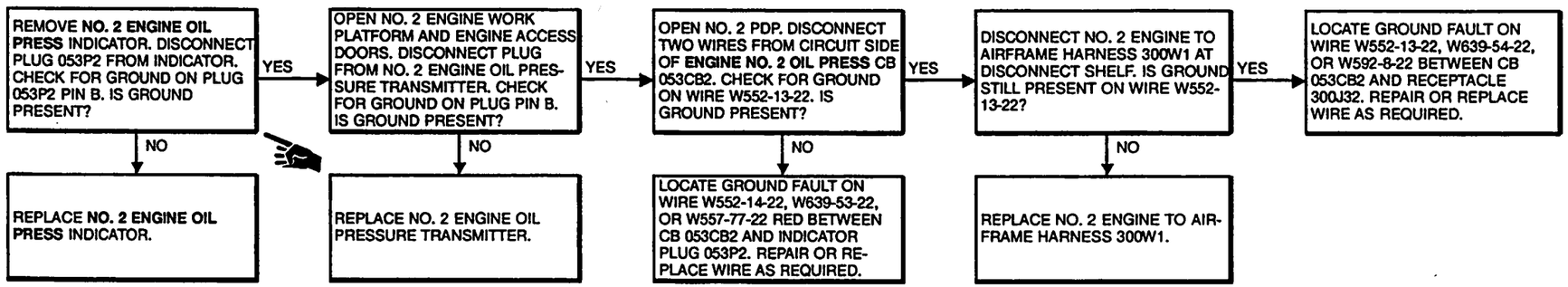
22913

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ENGINE NO. 1 OIL PRESS CIRCUIT BREAKER DOES NOT STAY CLOSED



ENGINE NO. 2 OIL PRESS CIRCUIT BREAKER DOES NOT STAY CLOSED



END OF TASK

8-3.4.1 ENGINE OIL PRESS CIRCUIT BREAKER DOES NOT STAY CLOSED

INITIAL SETUP

Applicable Configurations:
With 74

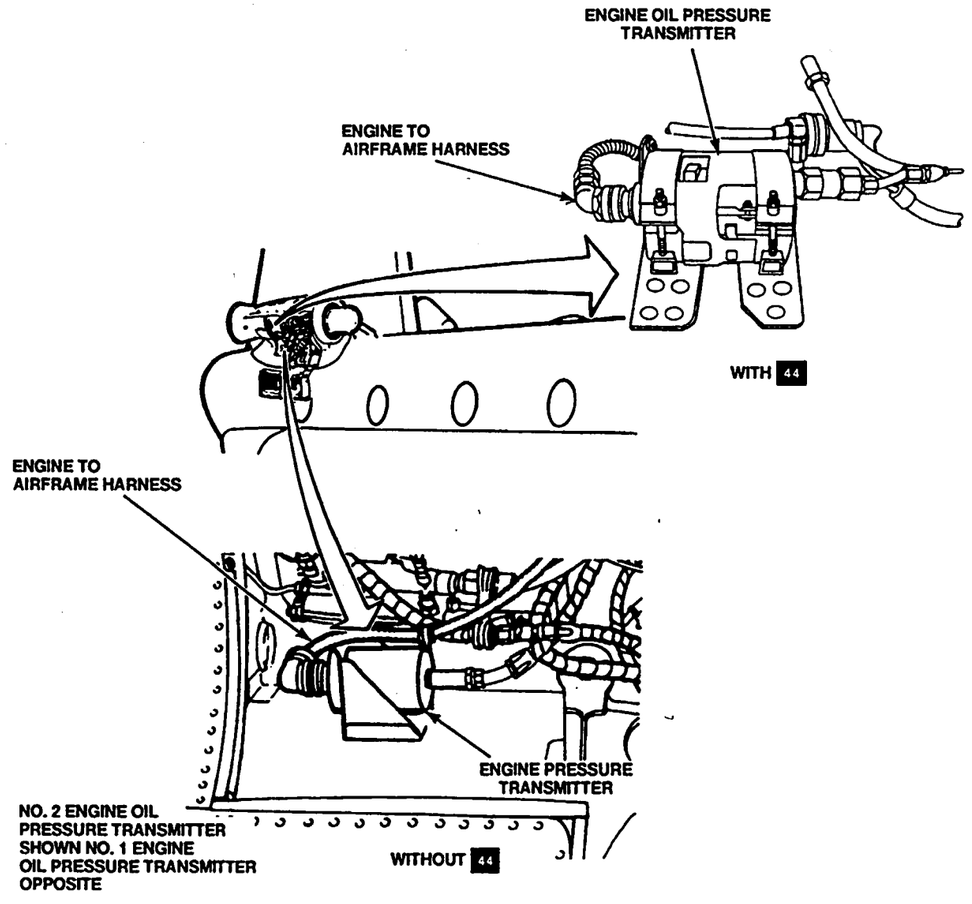
Tools:
Electrical Repairer Tool Kit,
NSN 5180-00-323-4915
Multimeter

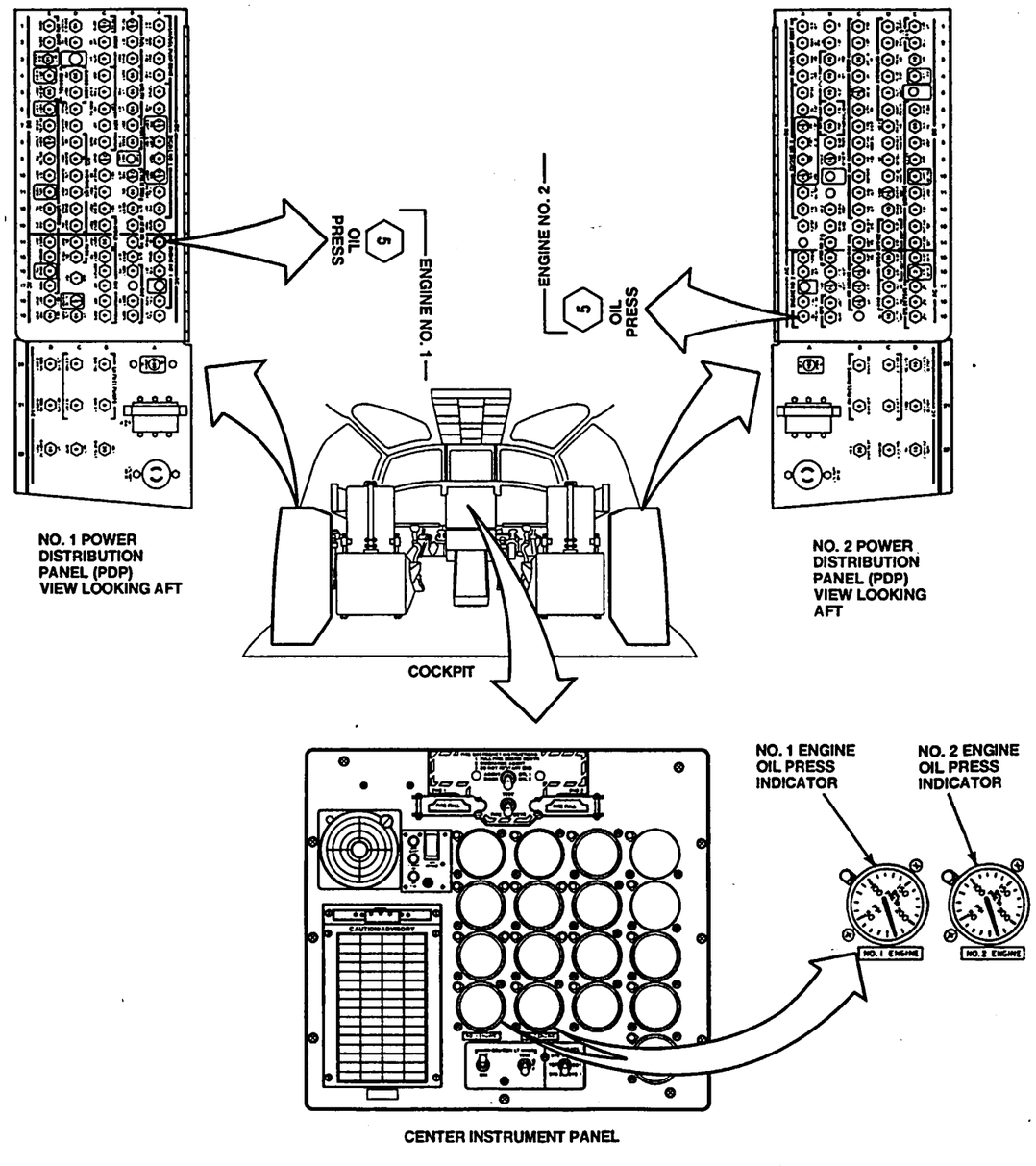
Materials:
None

Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off

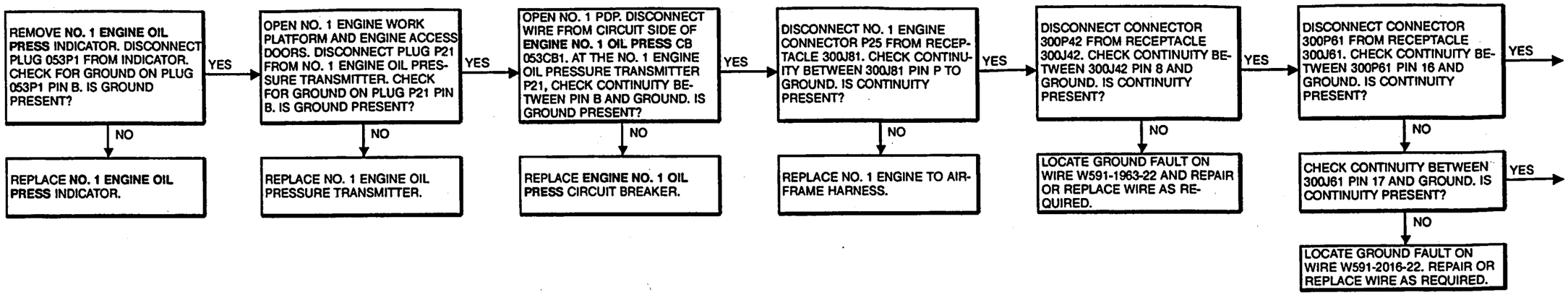




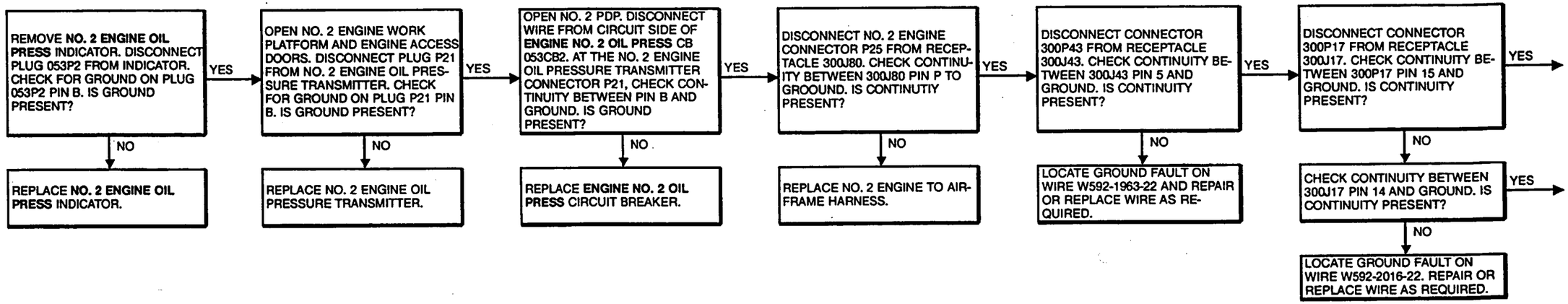
A65392

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ENGINE NO. 1 OIL PRESS CIRCUIT BREAKER DOES NOT STAY CLOSED

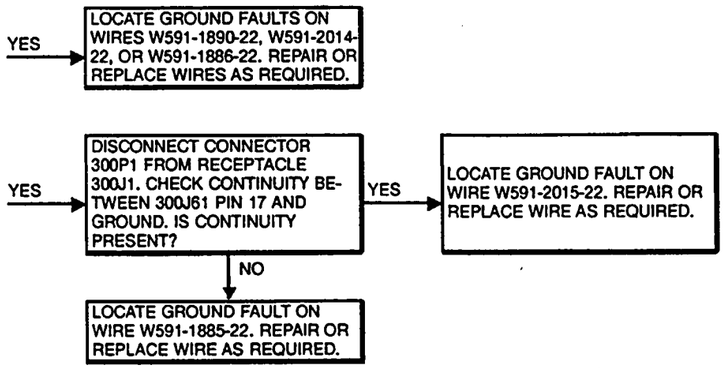


ENGINE NO. 2 OIL PRESS CIRCUIT BREAKER DOES NOT STAY CLOSED

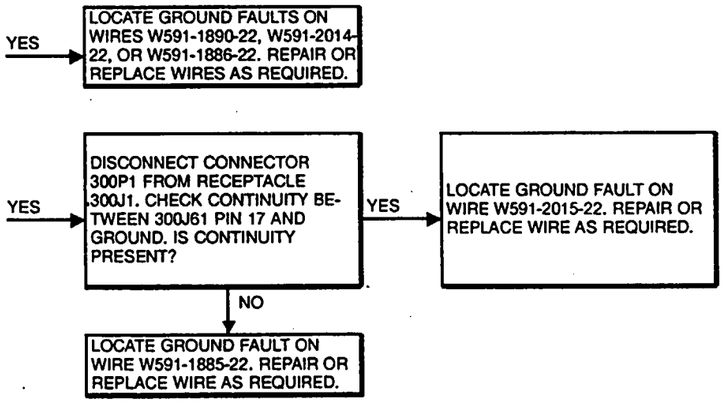


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ENGINE NO. 1 OIL PRESS CIRCUIT BREAKER DOES NOT STAY CLOSED (Cont'd)



ENGINE NO. 2 OIL PRESS CIRCUIT BREAKER DOES NOT STAY CLOSED (Cont'd)



END OF TASK

8-3.5 ENGINE OIL PRESSURE INDICATOR DOES NOT INDICATE 0

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

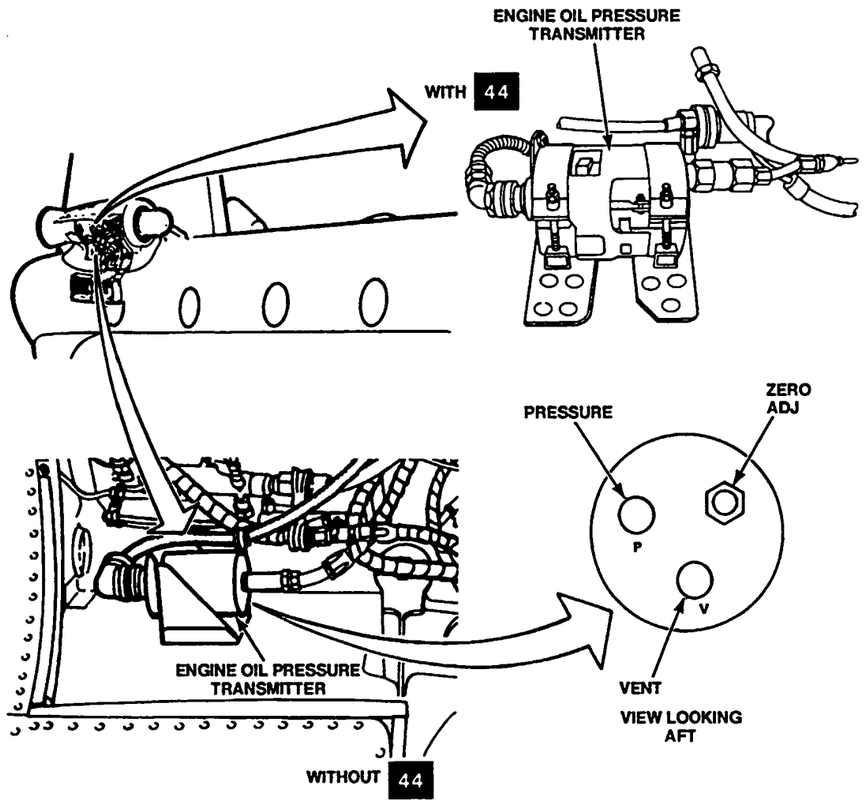
Tools:
Electrical Repairer Tool Kit,
NSN 5180-00-323-4915

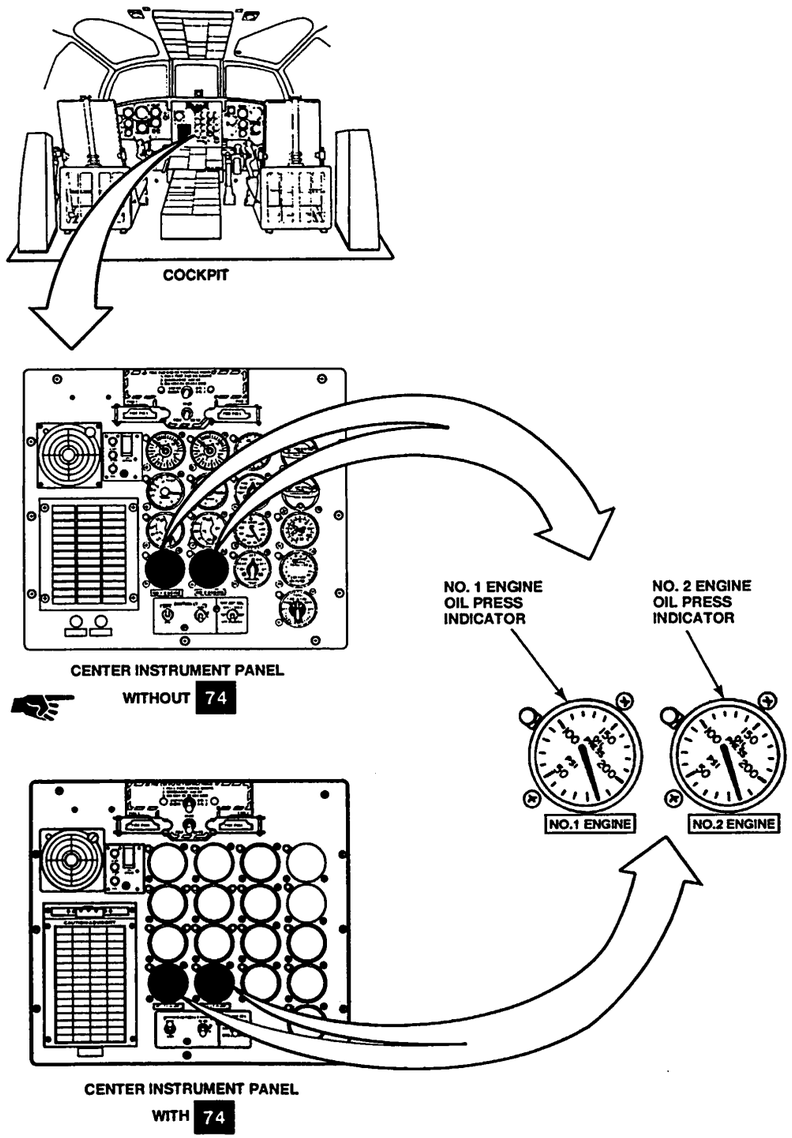
Materials:
None

Personnel Required:
Aircraft Electrician (2)

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off

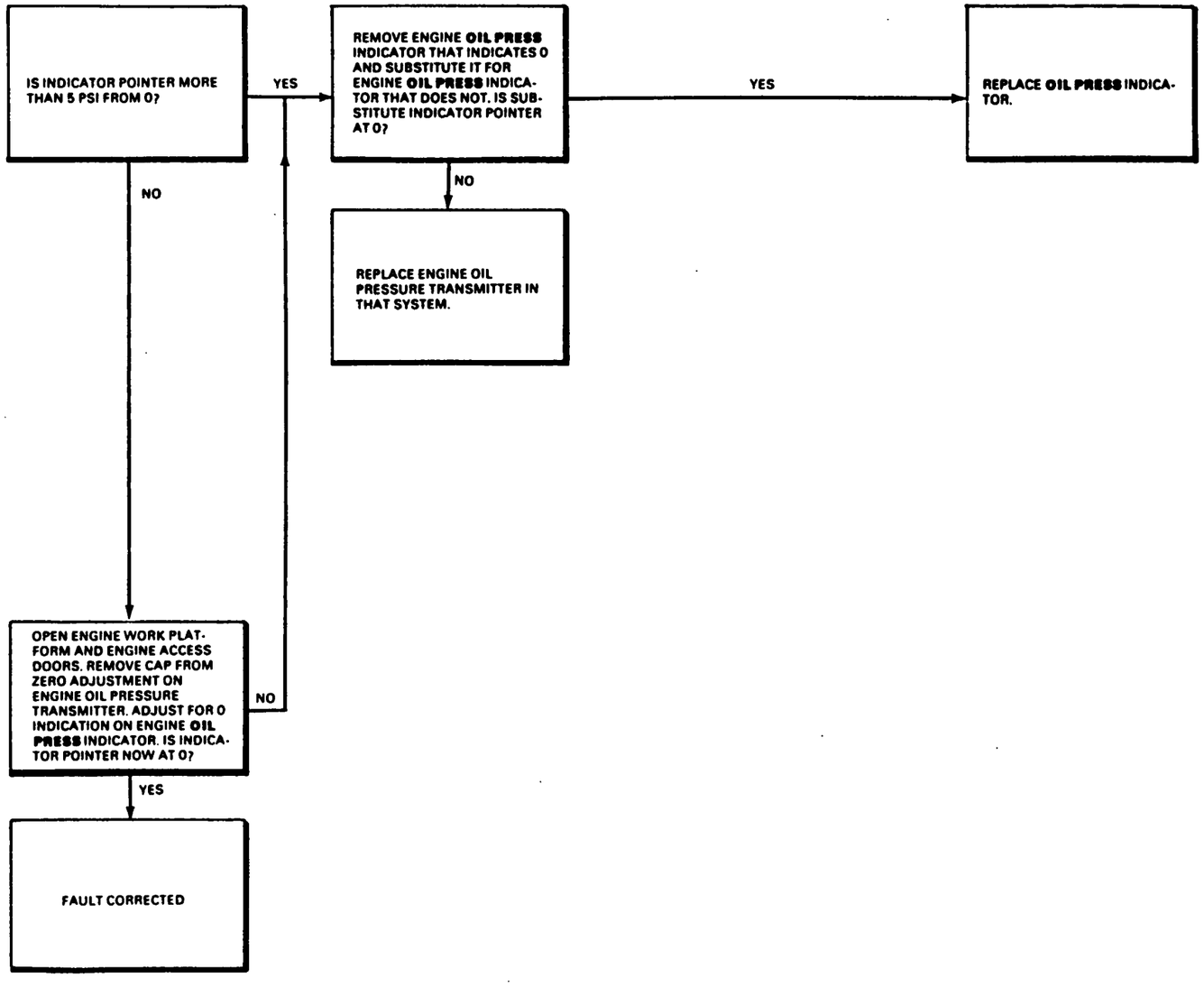




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8-3.5 ENGINE OIL PRESSURE INDICATOR DOES NOT INDICATE 0 (Continued)



END OF TASK

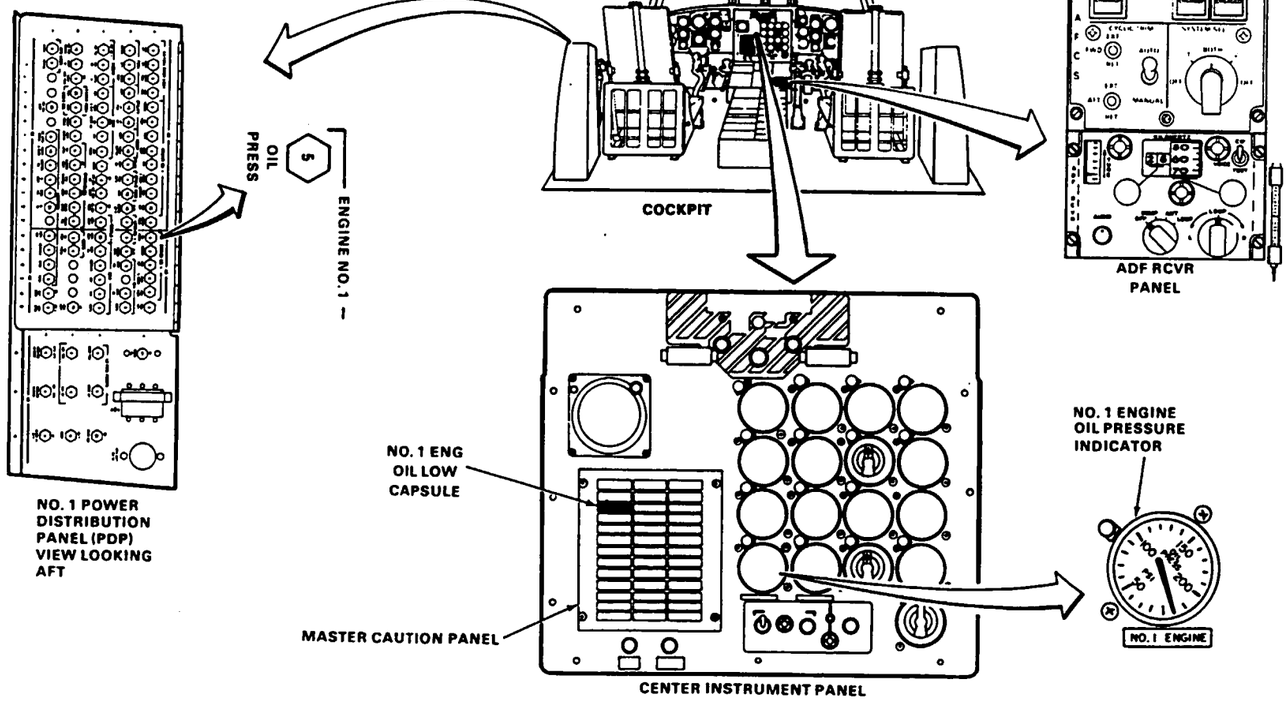
8-3.6 NO. 1 ENGINE OIL PRESS INDICATOR DOES NOT INDICATE 20 PSI MINIMUM OR POINTER FLUCTUATES MORE THAN 5 PSI 8-3.6

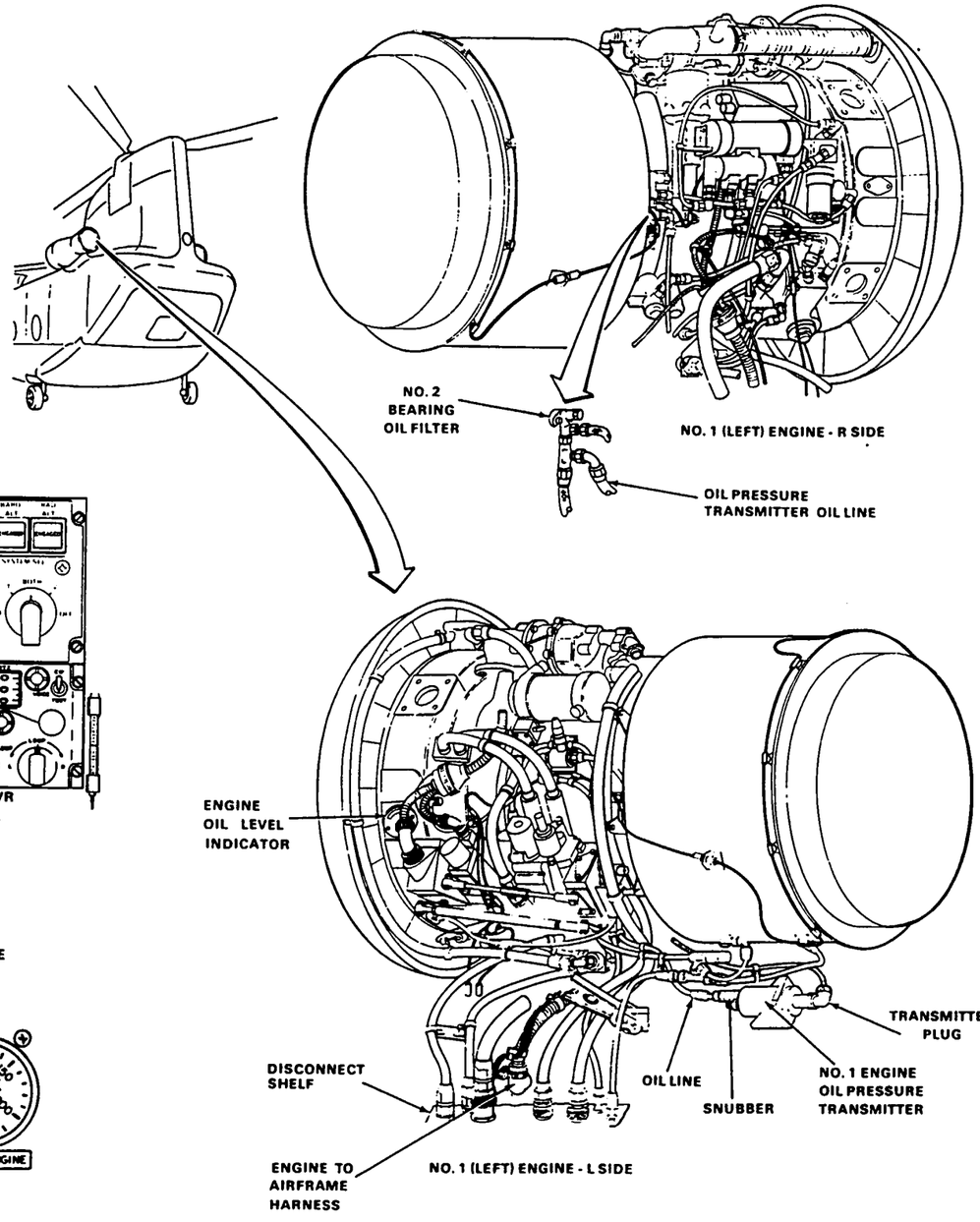
FAULT ISOLATION PROCEDURE
INITIAL SETUP
Applicable Configurations:
Without 74

Tools:
Electrical Repairer Tool Kit,
NSN 5180-00-323-4915
Multimeter
Synchro Test Set,
NSN 4920-00-556-8108
Direct Reading Pressure Gage, 0 to 200 Psi
Materials:
None

Personnel Required:
Aircraft Electrician (2)
References:
TM 55-1520-240-23
TM 55-2840-254-23-3

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off

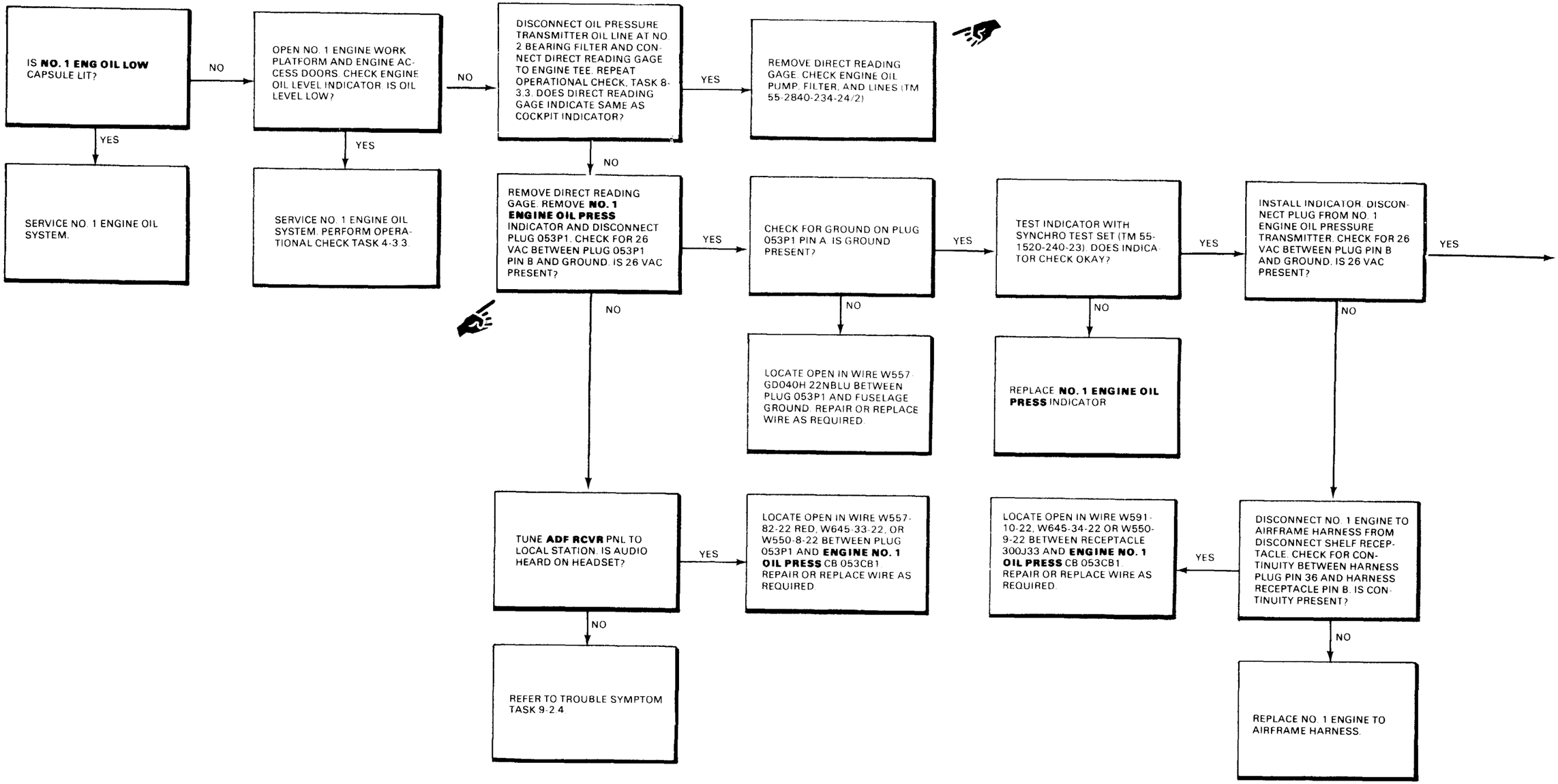




D145 – 6523 – SPA

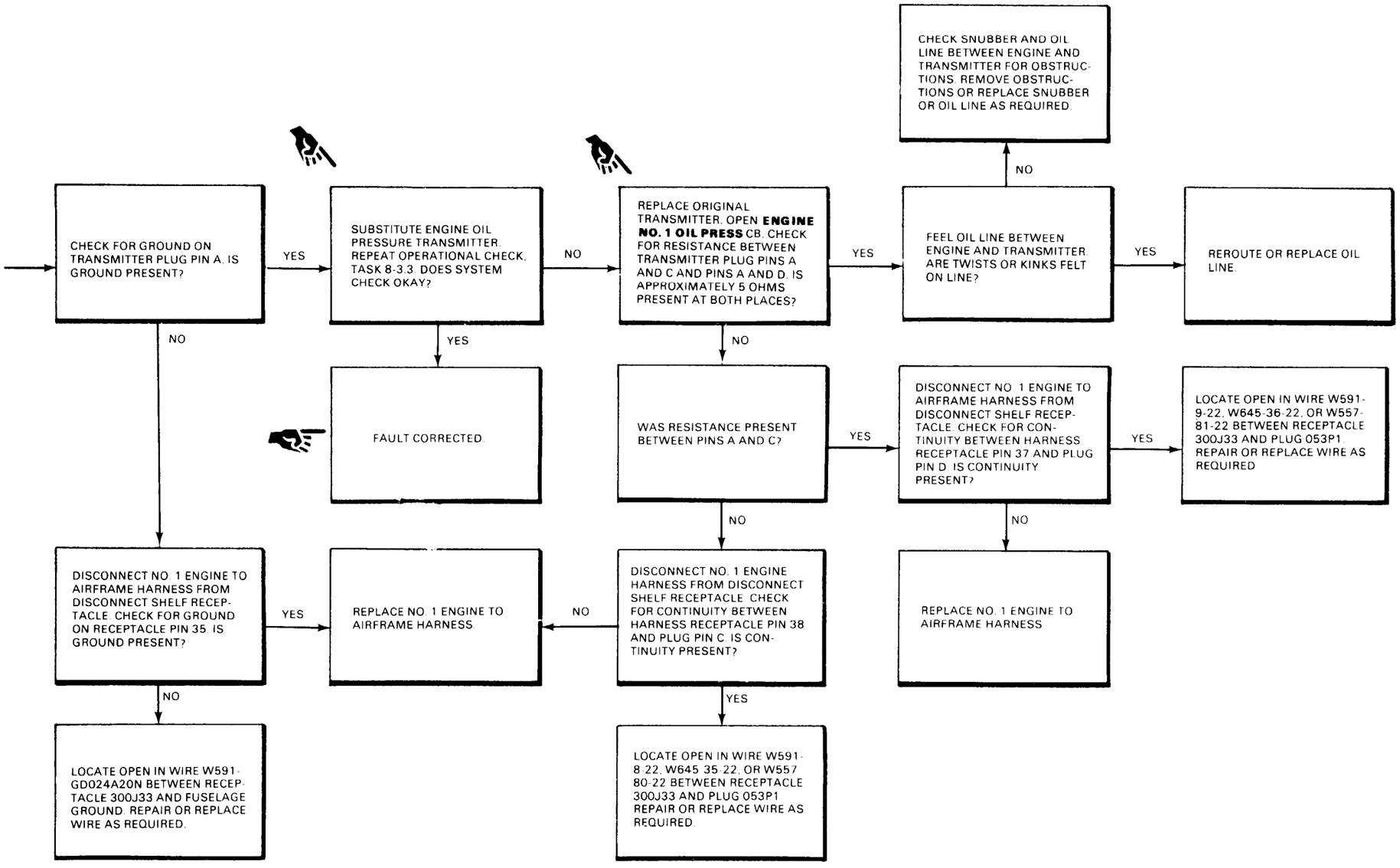
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8-3.6 NO. 1 ENGINE OIL PRESS INDICATOR DOES NOT INDICATE 20 PSI MINIMUM OR POINTER FLUCTUATES MORE THAN 5 PSI (Continued)

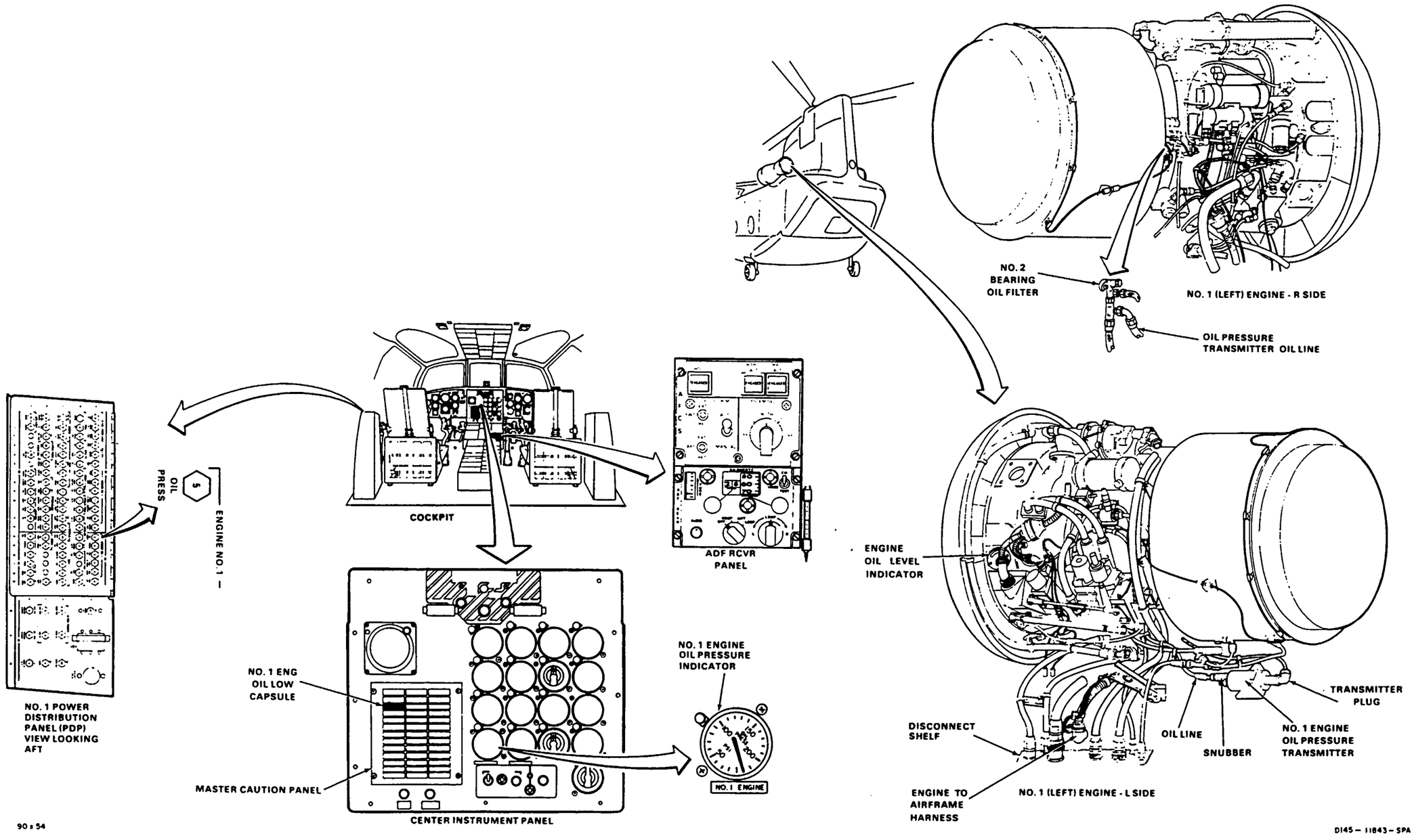


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8-3.6 NO. 1 ENGINE OIL PRESS INDICATOR DOES NOT INDICATE 20 PSI MINIMUM OR POINTER FLUCTUATES MORE THAN 5 PSI (Continued)



GO TO NEXT PAGE


NO. 2 BEARING OIL FILTER
NO. 1 (LEFT) ENGINE - R SIDE
OIL PRESSURE TRANSMITTER OIL LINE
COCKPIT
ADF RCVR PANEL
OIL PRESS
5
ENGINE NO. 1
NO. 1 POWER DISTRIBUTION PANEL (PDP) VIEW LOOKING AFT
NO. 1 ENG OIL LOW CAPSULE
MASTER CAUTION PANEL
CENTER INSTRUMENT PANEL
NO. 1 ENGINE OIL PRESSURE INDICATOR
NO. 1 ENGINE
ENGINE OIL LEVEL INDICATOR
TRANSMITTER PLUG
DISCONNECT SHELF
OIL LINE
SNUBBER
NO. 1 ENGINE OIL PRESSURE TRANSMITTER
ENGINE TO AIRFRAME HARNESS
NO. 1 (LEFT) ENGINE - L SIDE
90 x 54
D145 – 11843 – SPA

END OF TASK

FAULT ISOLATION PROCEDURE
INITIAL SETUP
Applicable Configurations:

With **74**

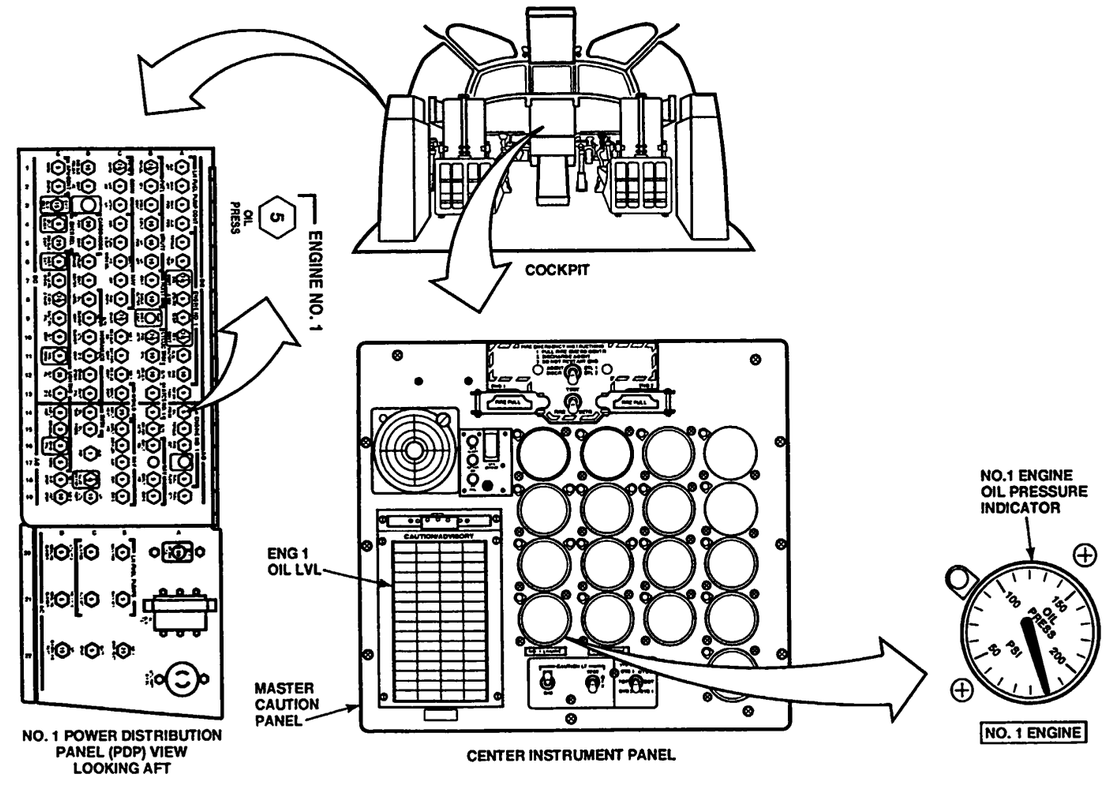
Tools:

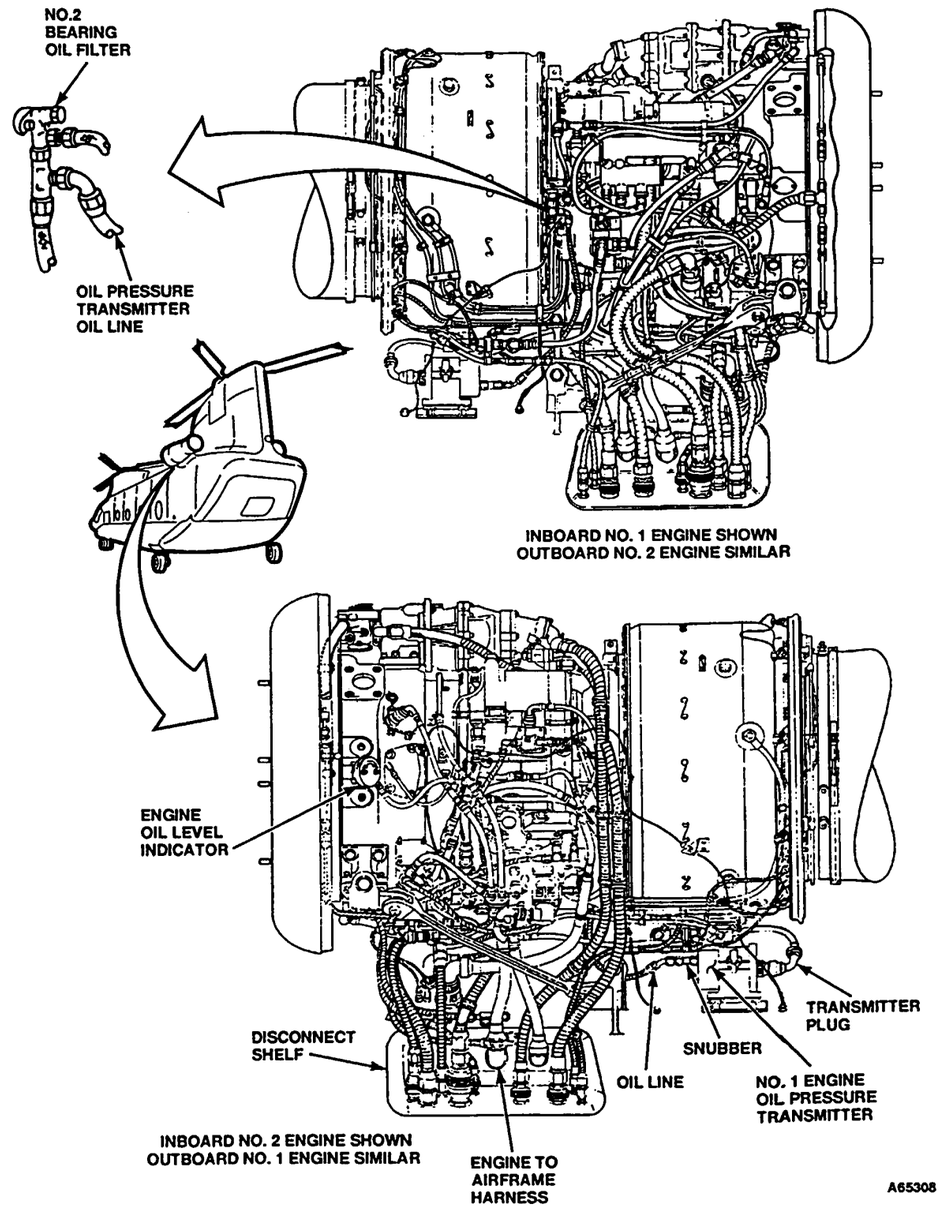
Aircraft Mechanic's Tool Kit,
NSN 5180-00-323-4692
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter
Synchro Test Set,
NSN 4920-00-556-8108
Direct Reading Pressure Gage, 0 to 200 Psi

Materials:
None
Personnel Required:
Aircraft Electrician
Medium Helicopter Repairer

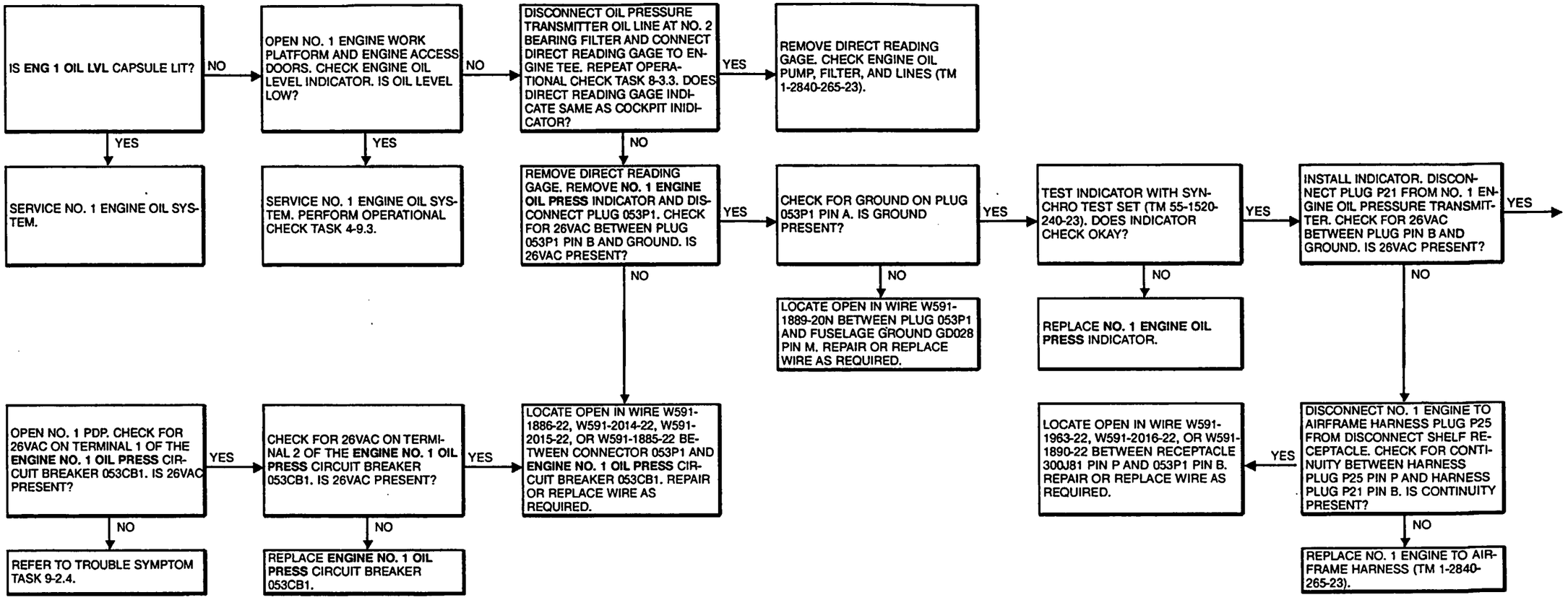
References:
TM 55-1520-240-23
TM 1-2840-265-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off

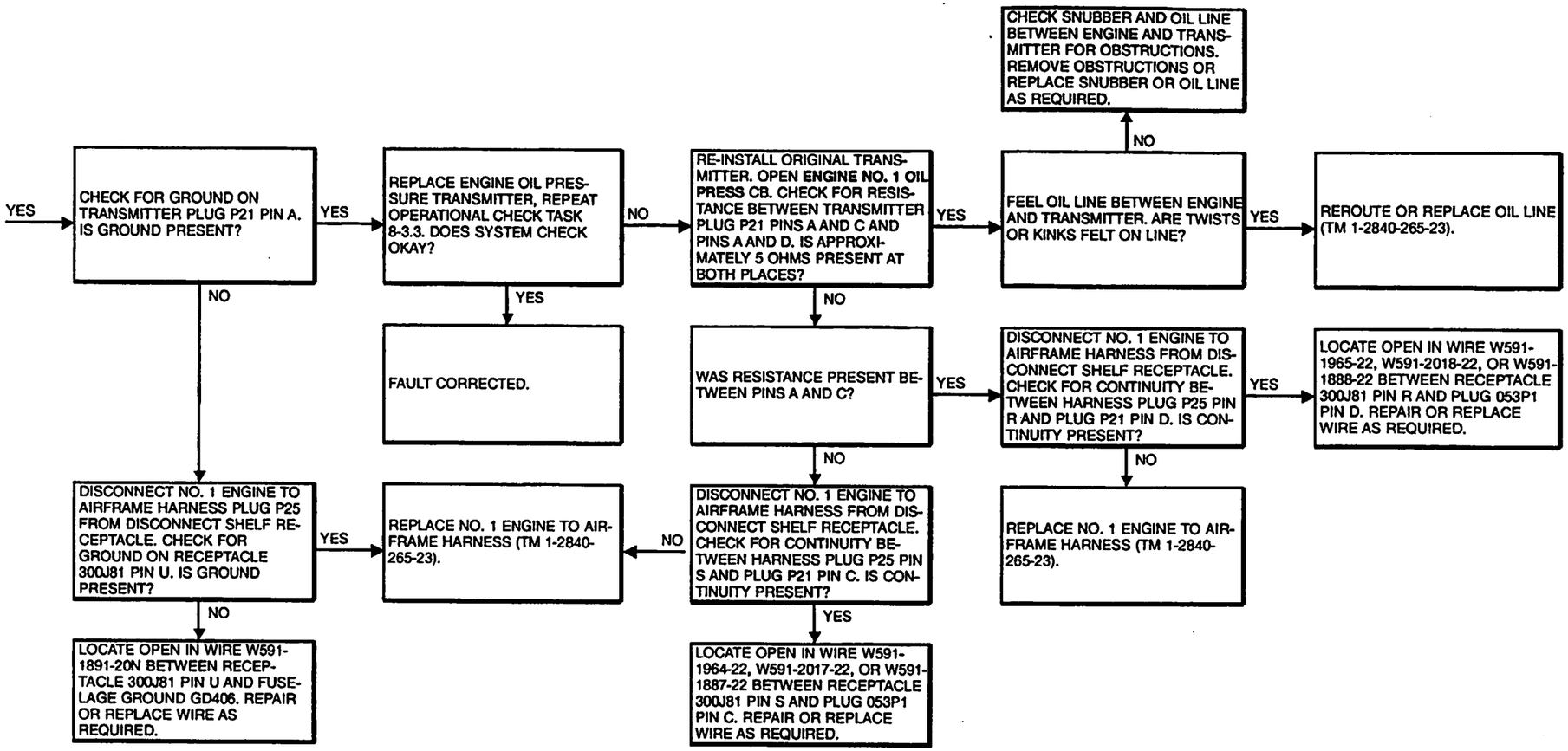




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CHECK FOR GROUND ON TRANSMITTER PLUG P21 PIN A. IS GROUND PRESENT?
YES
YES
REPLACE ENGINE OIL PRESSURE TRANSMITTER, REPEAT OPERATIONAL CHECK TASK 8-3.3. DOES SYSTEM CHECK OKAY?
NO
RE-INSTALL ORIGINAL TRANSMITTER. OPEN ENGINE NO. 1 OIL PRESS CB. CHECK FOR RESISTANCE BETWEEN TRANSMITTER PLUG P21 PINS A AND C AND PINS A AND D. IS APPROXIMATELY 5 OHMS PRESENT AT BOTH PLACES?
YES
FEEL OIL LINE BETWEEN ENGINE AND TRANSMITTER. ARE TWISTS OR KINKS FELT ON LINE?
NO
CHECK SNUBBER AND OIL LINE BETWEEN ENGINE AND TRANSMITTER FOR OBSTRUCTIONS. REMOVE OBSTRUCTIONS OR REPLACE SNUBBER OR OIL LINE AS REQUIRED.
YES
REROUTE OR REPLACE OIL LINE (TM 1-2840-265-23).
YES
FAULT CORRECTED.
NO
WAS RESISTANCE PRESENT BETWEEN PINS A AND C?
YES
DISCONNECT NO. 1 ENGINE TO AIRFRAME HARNESS FROM DISCONNECT SHELF RECEPTACLE. CHECK FOR CONTINUITY BETWEEN HARNESS PLUG P25 PIN R AND PLUG P21 PIN D. IS CONTINUITY PRESENT?
YES
LOCATE OPEN IN WIRE W591-1965-22, W591-2018-22, OR W591-1888-22 BETWEEN RECEPTACLE 300J81 PIN R AND PLUG 053P1 PIN D. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
REPLACE NO. 1 ENGINE TO AIRFRAME HARNESS (TM 1-2840-265-23).
NO
DISCONNECT NO. 1 ENGINE TO AIRFRAME HARNESS PLUG P25 FROM DISCONNECT SHELF RECEPTACLE. CHECK FOR GROUND ON RECEPTACLE 300J81 PIN U. IS GROUND PRESENT?
YES
REPLACE NO. 1 ENGINE TO AIRFRAME HARNESS (TM 1-2840-265-23).
NO
DISCONNECT NO. 1 ENGINE TO AIRFRAME HARNESS FROM DISCONNECT SHELF RECEPTACLE. CHECK FOR CONTINUITY BETWEEN HARNESS PLUG P25 PIN S AND PLUG P21 PIN C. IS CONTINUITY PRESENT?
YES
LOCATE OPEN IN WIRE W591-1964-22, W591-2017-22, OR W591-1887-22 BETWEEN RECEPTACLE 300J81 PIN S AND PLUG 053P1 PIN C. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
LOCATE OPEN IN WIRE W591-1891-20N BETWEEN RECEPTACLE 300J81 PIN U AND FUSELAGE GROUND GD406. REPAIR OR REPLACE WIRE AS REQUIRED.

END OF TASK

8-3.7 NO. 2 ENGINE OIL PRESS INDICATOR DOES NOT INDICATE 20 PSI MINIMUM OR POINTER FLUCTUATES MORE THAN 5 PSI

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:

Without 74

Tools:

Electrical Repairer Tool Kit,
NSN 5180-00-323-4915
Multimeter
Synchro Test Set,
NSN 4920-0D-556-8108
Direct Reading Pressure Gage, 0 to 200 Psi

Materials:

None

Personnel Required:

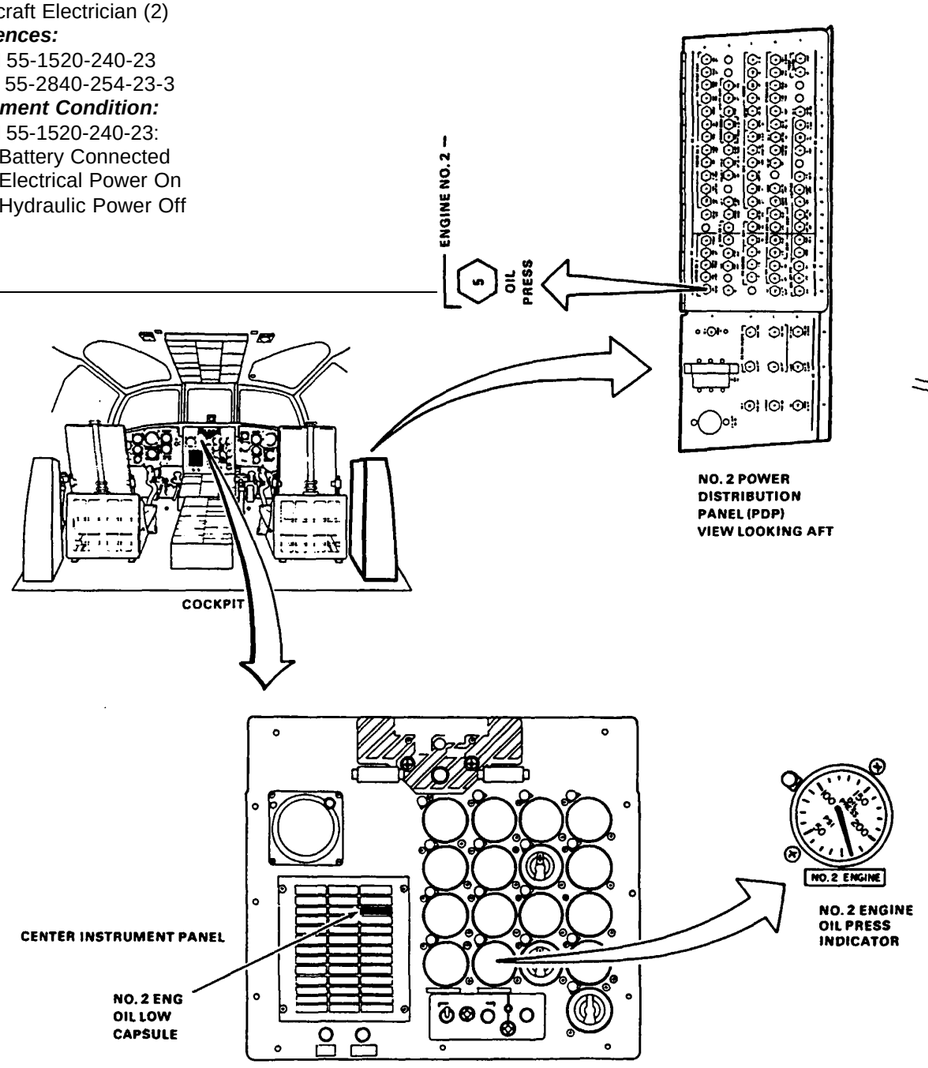
Aircraft Electrician (2)

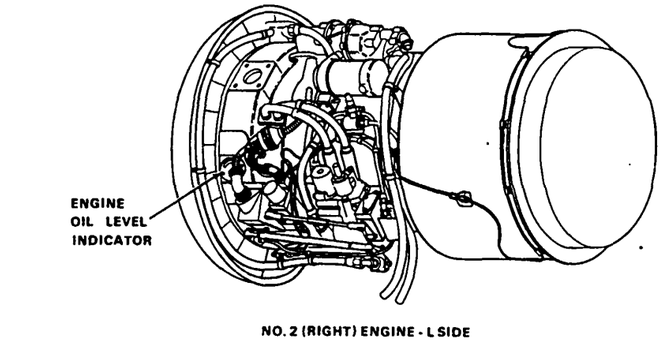
References:

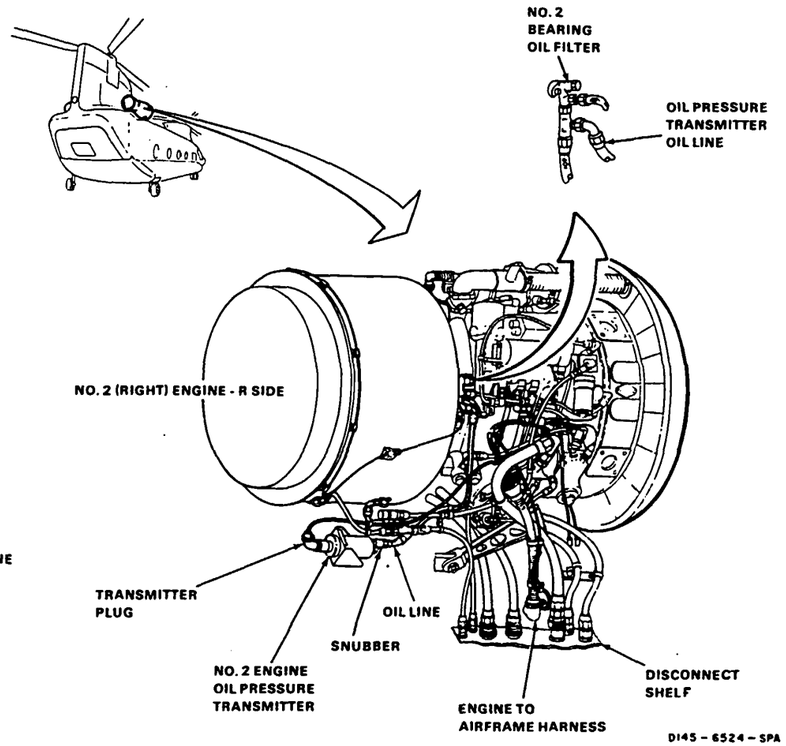
TM 55-1520-240-23
TM 55-2840-254-23-3

Equipment Condition:

TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off

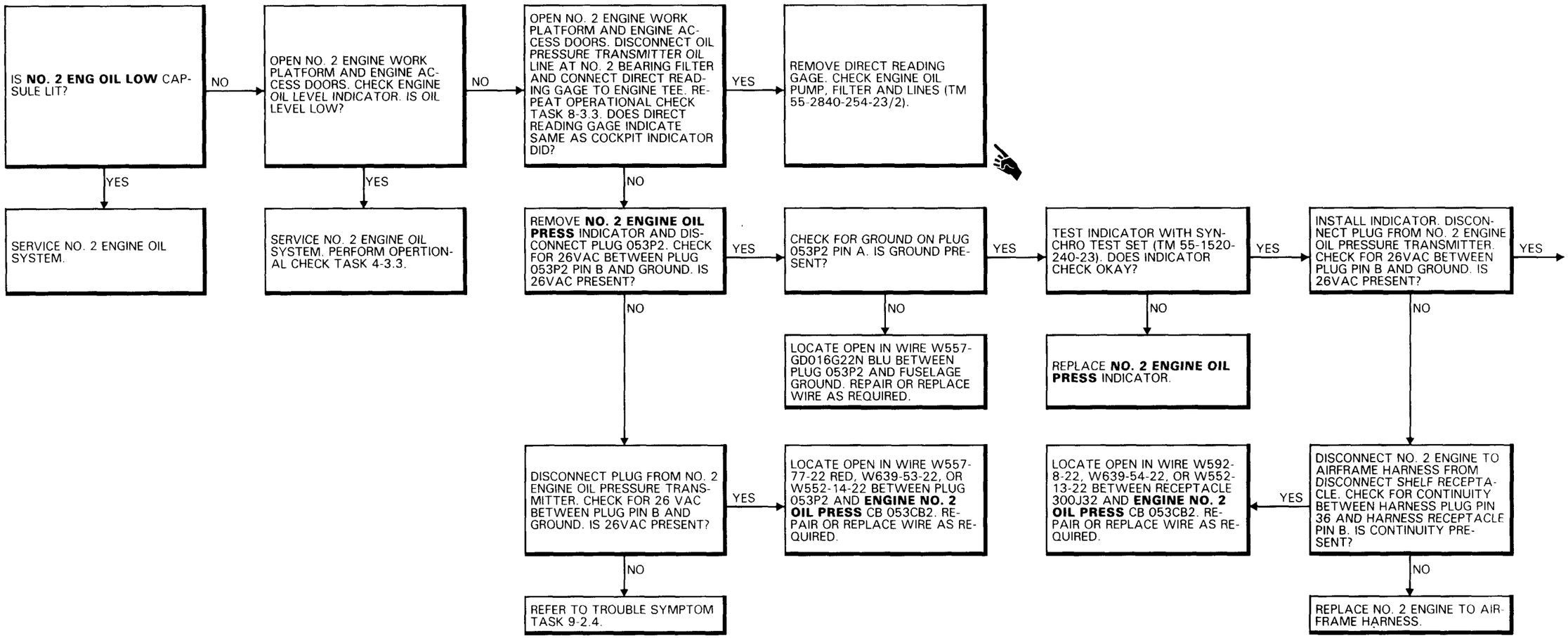




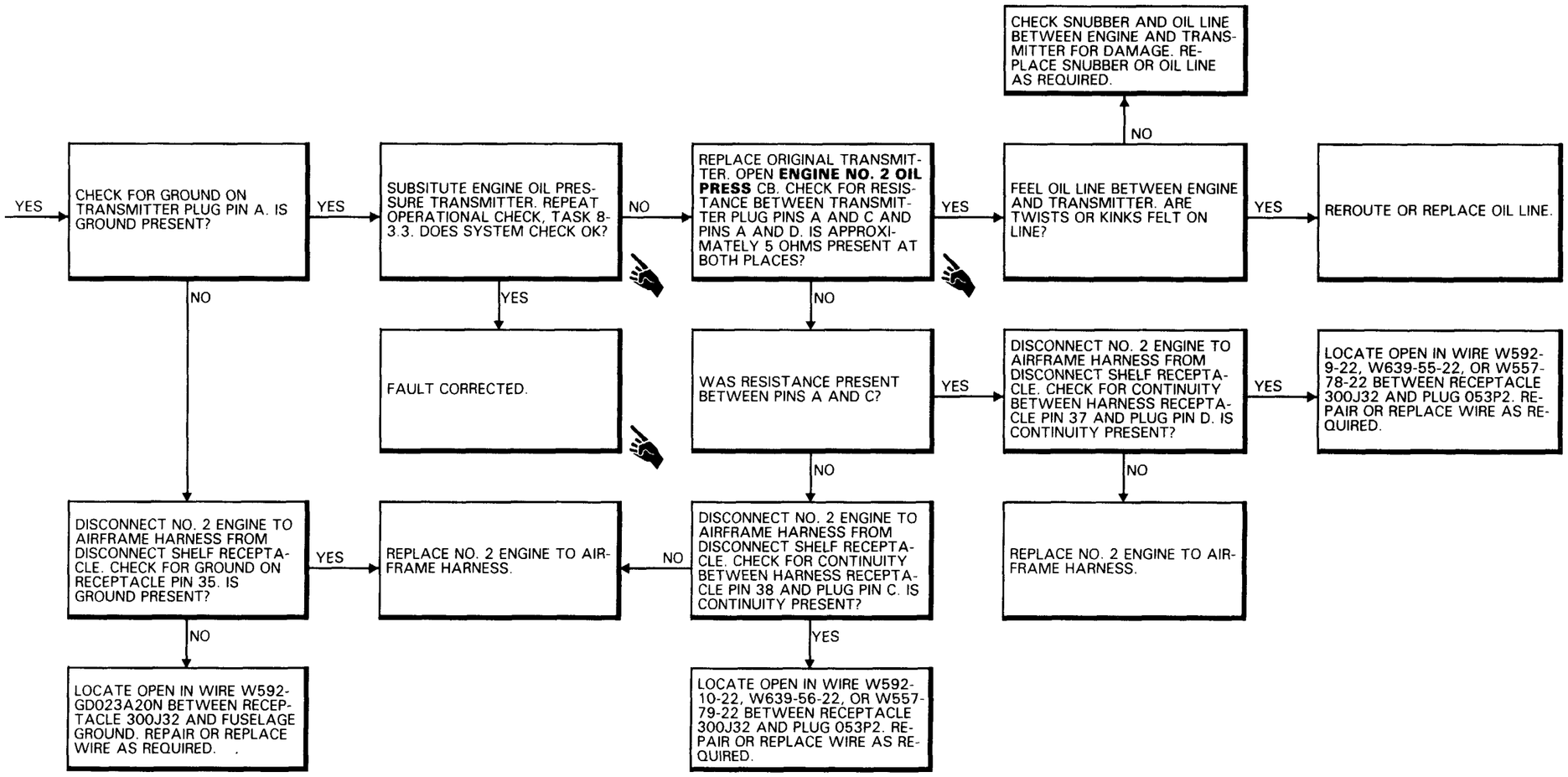


90x54

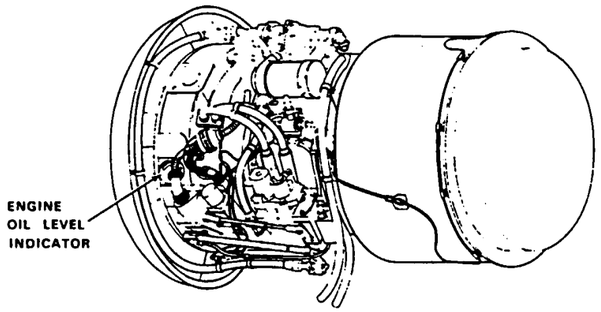
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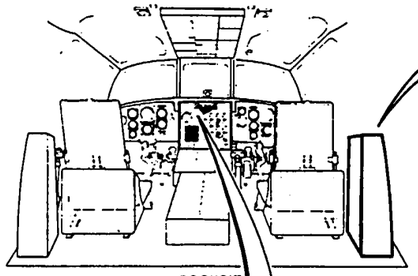
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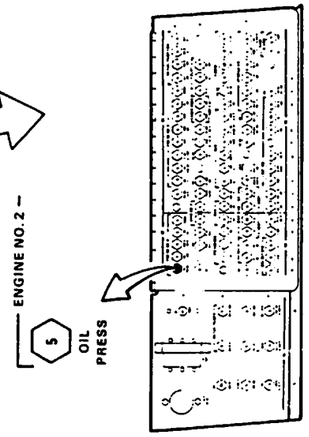
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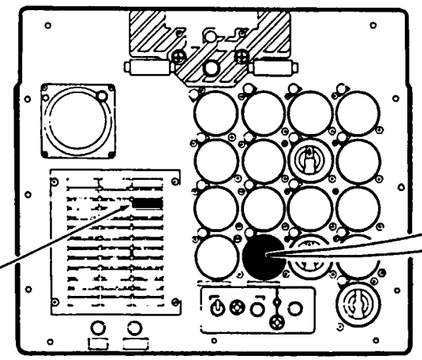
NO. 2 (RIGHT) ENGINE - L SIDE

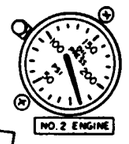


COCKPIT

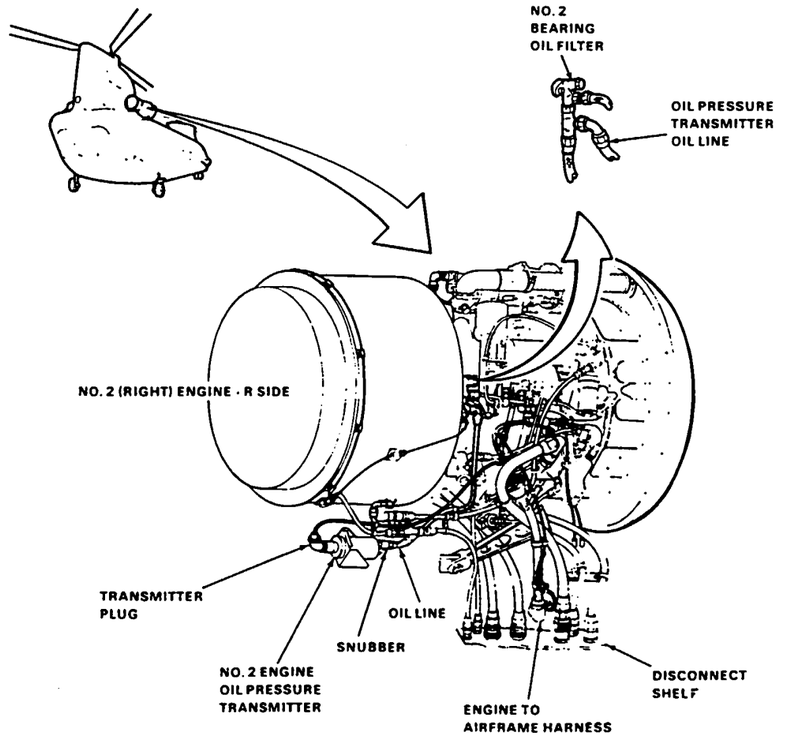


NO. 2 POWER DISTRIBUTION PANEL (PDP) VIEW LOOKING AFT





NO. 2 ENGINE OIL PRESS INDICATOR



90 x 54

D145 – 11842 – SPA

END OF TASK

8-3.7.1 NO. 2 ENGINE OIL PRESS INDICATOR DOES NOT INDICATE 20 PSI MINIMUM OR POINTER FLUCTUATES MORE THAN 5 PSI

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:

With 74

Tools:

Aircraft Mechanic's Tool Kit,
NSN 5180-00-323-4692
Powerplant Repairer's Tool Kit,
NSN 5180-00-323-4944
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter
Synchro Test Set,
NSN 4920-00-556-8108
Direct Reading Pressure Gage, 0 to 200 Psi

Materials:

None

Personnel Required:

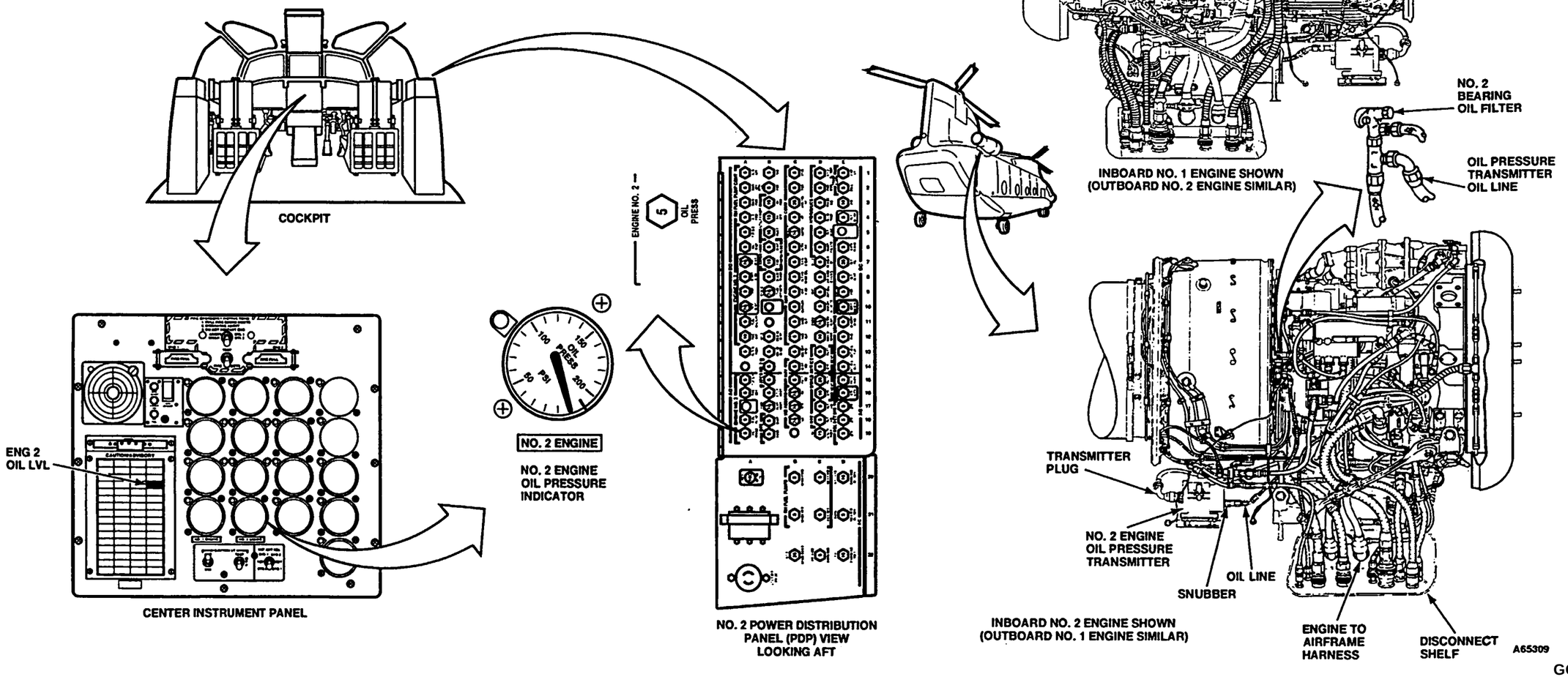
Aircraft Electrician
Medium Helicopter Repairer
Aircraft Powerplant Repairer

References:

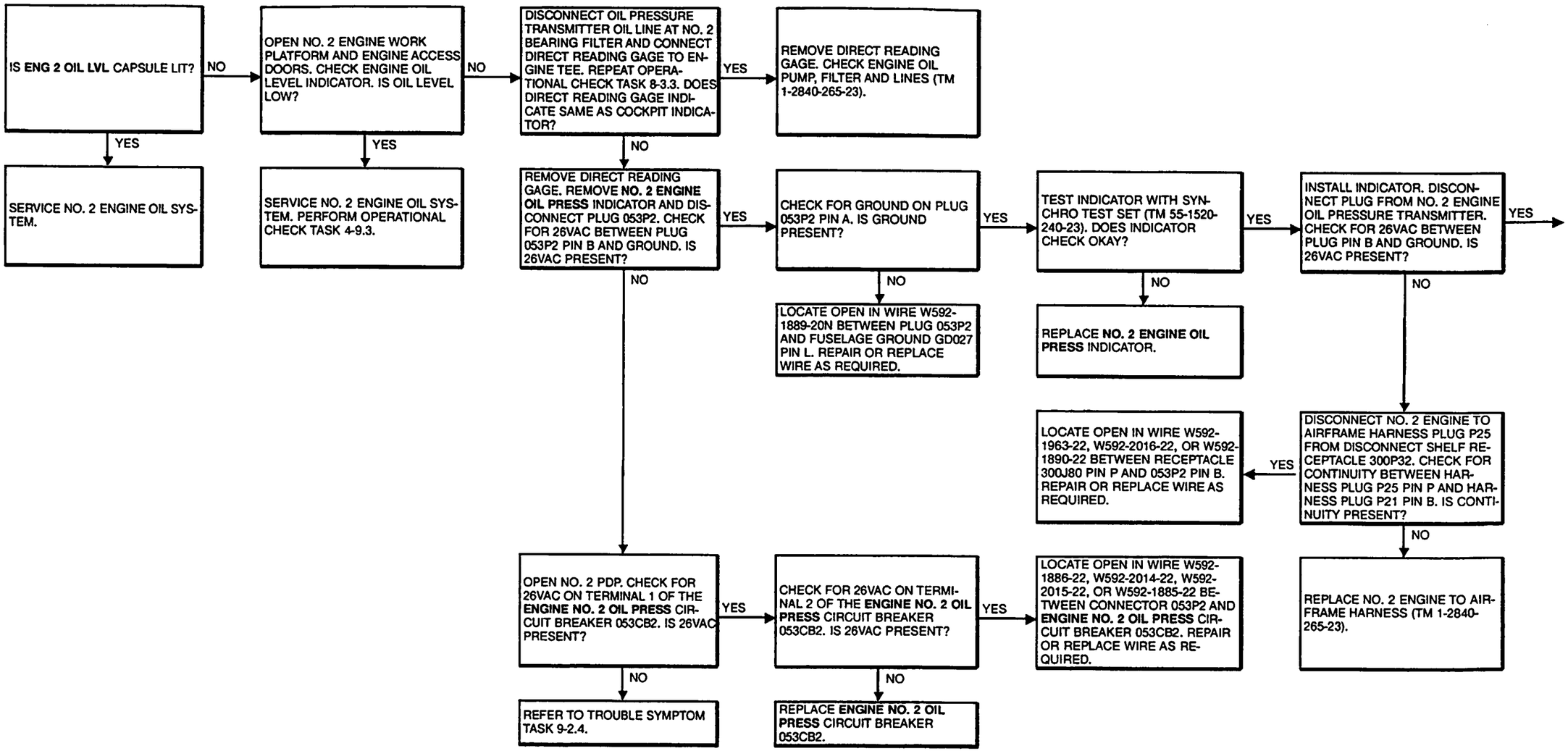
TM 1-2840-265-23
TM 55-1520-240-23

Equipment Condition:

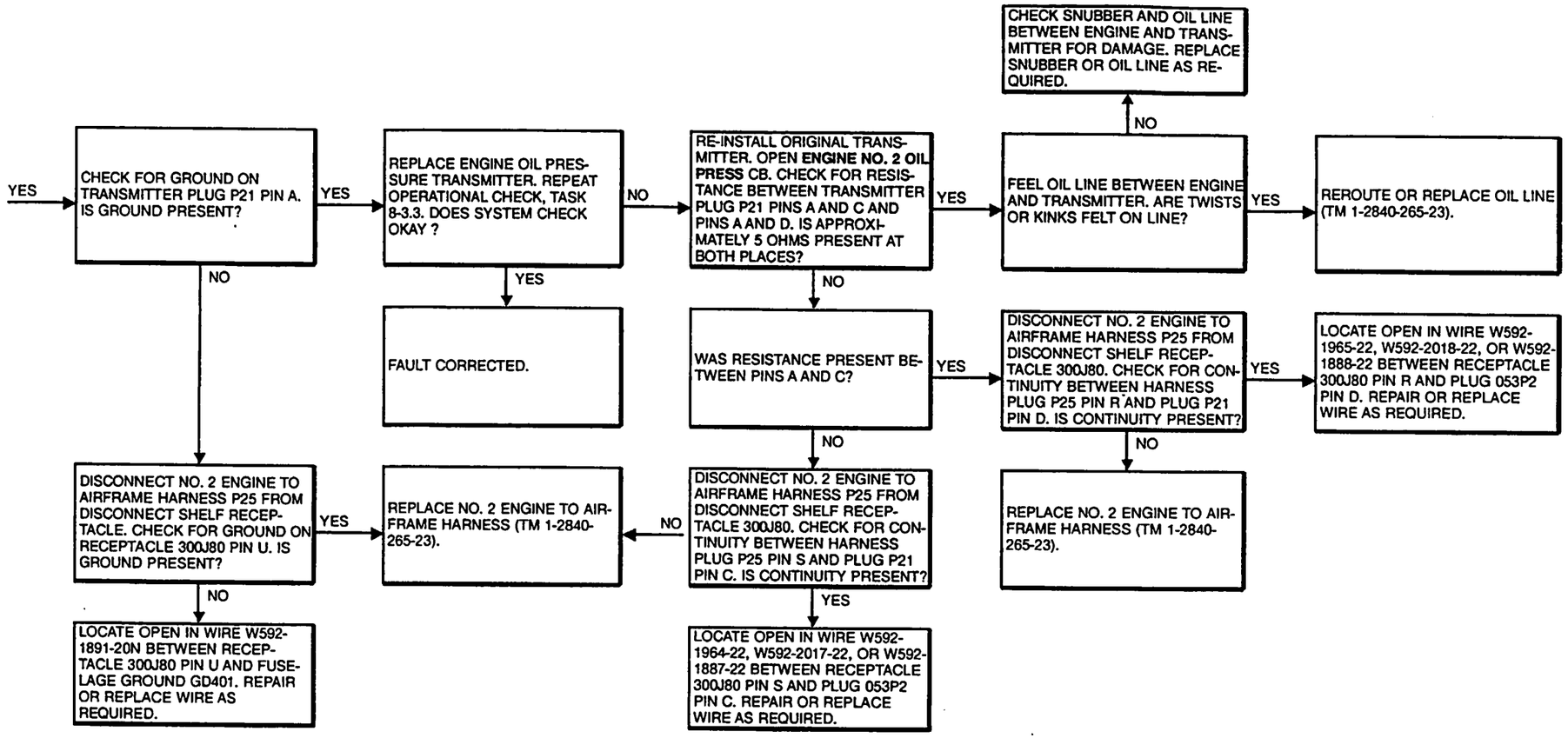
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off



GO TO NEXT PAGE

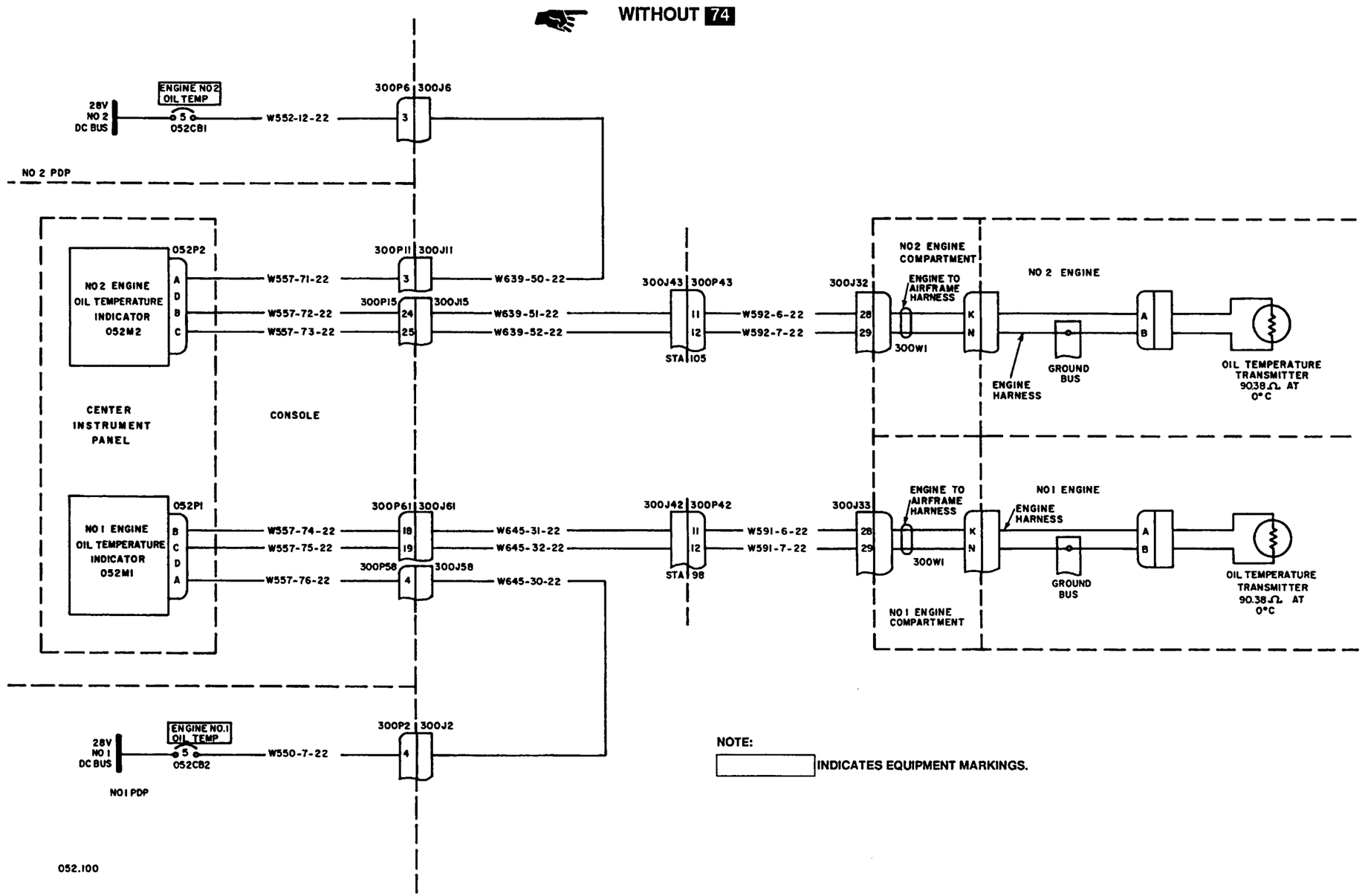


GO TO NEXT PAGE


YES
CHECK FOR GROUND ON TRANSMITTER PLUG P21 PIN A. IS GROUND PRESENT?
YES
REPLACE ENGINE OIL PRESSURE TRANSMITTER. REPEAT OPERATIONAL CHECK, TASK 8-3.3. DOES SYSTEM CHECK OKAY ?
NO
RE-INSTALL ORIGINAL TRANSMITTER. OPEN ENGINE NO. 2 OIL PRESS CB. CHECK FOR RESISTANCE BETWEEN TRANSMITTER PLUG P21 PINS A AND C AND PINS A AND D. IS APPROXIMATELY 5 OHMS PRESENT AT BOTH PLACES?
YES
FEEL OIL LINE BETWEEN ENGINE AND TRANSMITTER. ARE TWISTS OR KINKS FELT ON LINE?
YES
REROUTE OR REPLACE OIL LINE (TM 1-2840-265-23).
NO
CHECK SNUBBER AND OIL LINE BETWEEN ENGINE AND TRANSMITTER FOR DAMAGE. REPLACE SNUBBER OR OIL LINE AS REQUIRED.
YES
FAULT CORRECTED.
NO
WAS RESISTANCE PRESENT BETWEEN PINS A AND C?
YES
DISCONNECT NO. 2 ENGINE TO AIRFRAME HARNESS P25 FROM DISCONNECT SHELF RECEPTACLE 300J80. CHECK FOR CONTINUITY BETWEEN HARNESS PLUG P25 PIN R AND PLUG P21 PIN D. IS CONTINUITY PRESENT?
YES
LOCATE OPEN IN WIRE W592-1965-22, W592-2018-22, OR W592-1888-22 BETWEEN RECEPTACLE 300J80 PIN R AND PLUG 053P2 PIN D. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
REPLACE NO. 2 ENGINE TO AIRFRAME HARNESS (TM 1-2840-265-23).
NO
DISCONNECT NO. 2 ENGINE TO AIRFRAME HARNESS P25 FROM DISCONNECT SHELF RECEPTACLE 300J80. CHECK FOR CONTINUITY BETWEEN HARNESS PLUG P25 PIN S AND PLUG P21 PIN C. IS CONTINUITY PRESENT?
YES
LOCATE OPEN IN WIRE W592-1964-22, W592-2017-22, OR W592-1887-22 BETWEEN RECEPTACLE 300J80 PIN S AND PLUG 053P2 PIN C. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
DISCONNECT NO. 2 ENGINE TO AIRFRAME HARNESS P25 FROM DISCONNECT SHELF RECEPTACLE. CHECK FOR GROUND ON RECEPTACLE 300J80 PIN U. IS GROUND PRESENT?
YES
REPLACE NO. 2 ENGINE TO AIRFRAME HARNESS (TM 1-2840-265-23).
NO
LOCATE OPEN IN WIRE W592-1891-20N BETWEEN RECEPTACLE 300J80 PIN U AND FUSELAGE GROUND GD401. REPAIR OR REPLACE WIRE AS REQUIRED.

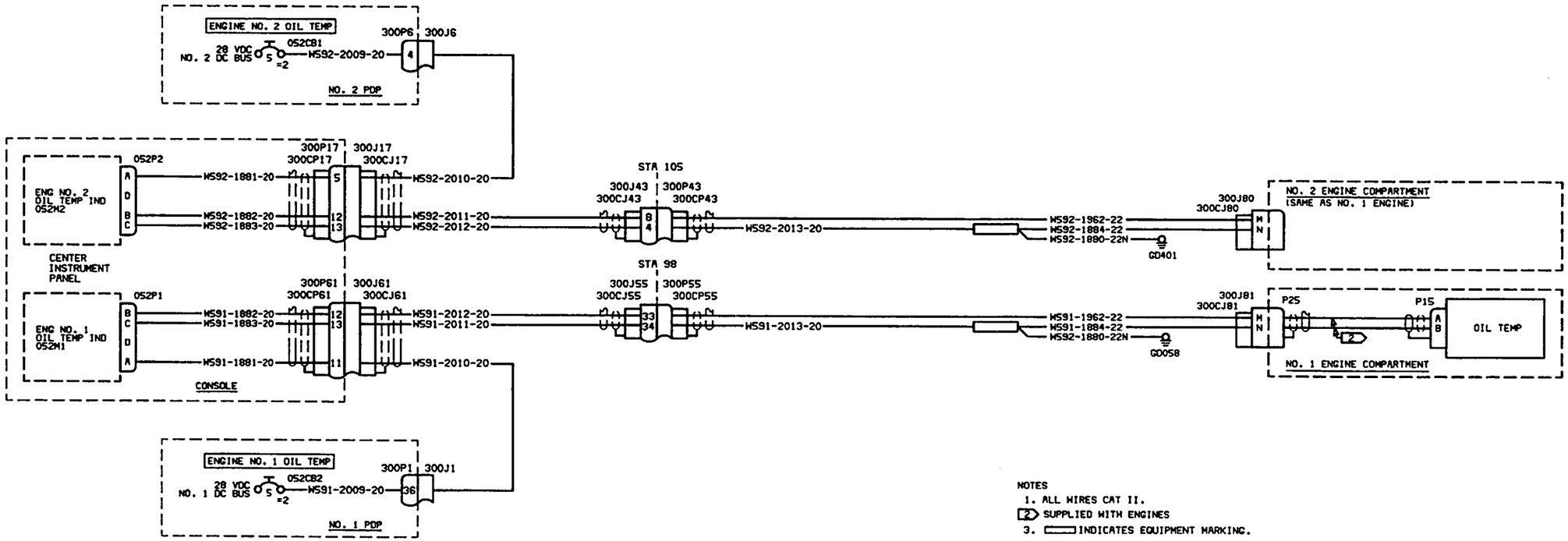
END OF TASK

8-4 ENGINE OIL TEMPERATURE INDICATING SYSTEM


WITHOUT 74
28V NO 2 DC BUS
ENGINE NO2 OIL TEMP
052CB1
W552-12-22
300P6 300J6
NO 2 PDP
052P2
NO2 ENGINE OIL TEMPERATURE INDICATOR 052M2
A
D
B
C
W557-71-22
W557-72-22
W557-73-22
300P11 300J11
300P15 300J15
W639-50-22
W639-51-22
W639-52-22
300J43 300P43
STA 105
W592-6-22
W592-7-22
300J32
NO2 ENGINE COMPARTMENT
ENGINE TO AIRFRAME HARNESS
300W1
NO 2 ENGINE
ENGINE HARNESS
GROUND BUS
OIL TEMPERATURE TRANSMITTER 90.38Ω AT 0°C
CENTER INSTRUMENT PANEL
CONSOLE
NO1 ENGINE OIL TEMPERATURE INDICATOR 052M1
052P1
B
C
D
A
W557-74-22
W557-75-22
W557-76-22
300P61 300J61
300P58 300J58
W645-31-22
W645-32-22
W645-30-22
300J42 300P42
STA 98
W591-6-22
W591-7-22
300J33
NO1 ENGINE
ENGINE TO AIRFRAME HARNESS
300W1
ENGINE HARNESS
GROUND BUS
OIL TEMPERATURE TRANSMITTER 90.38Ω AT 0°C
NO1 ENGINE COMPARTMENT
28V NO 1 DC BUS
ENGINE NO.1 OIL TEMP
052CB2
W550-7-22
300P2 300J2
NO1 PDP
052.100
NOTE:
INDICATES EQUIPMENT MARKINGS.
A78312

END OF TASK

WITH 74



A65315

END OF TASK

8-4.2 ENGINE OIL TEMPERATURE INDICATING SYSTEM VISUAL CHECK

INITIAL SETUP

Applicable Configurations:
All

Tools:
Aircraft Mechanic's Tool Kit,
NSN 5180-00-323-4692

Materials:
None

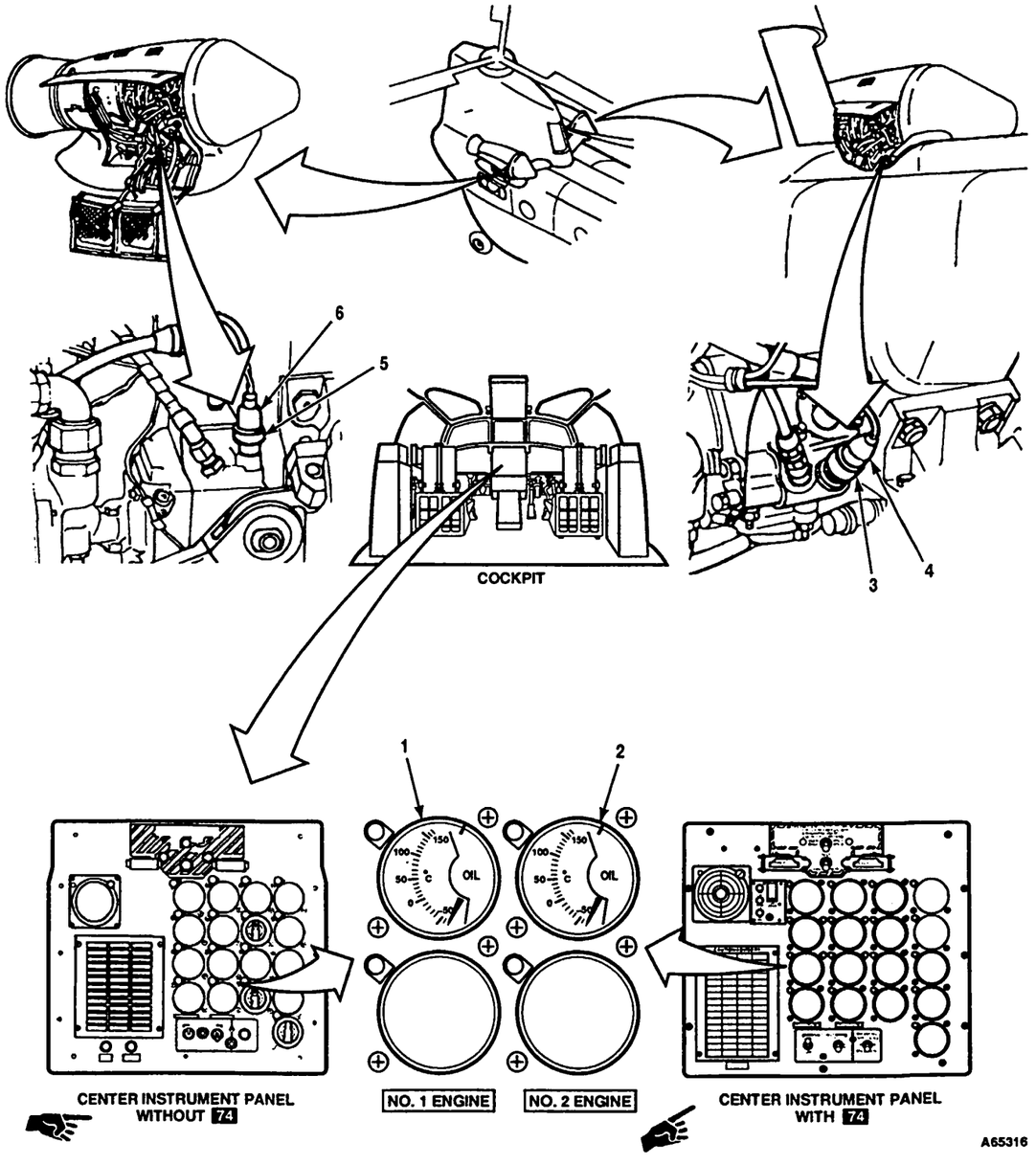
Personnel Required:
Medium Helicopter Repairer

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off
Upper and Lower Engine Access Doors Open
Engine Work Platform Open

TASK	RESULT
1. Check NO. 1 ENGINE OIL temperature indicator (1).	If indicator (1) is damaged, replace it.
2. Check NO. 2 ENGINE OIL temperature indicator (2).	If indicator (2) is damaged, replace it.
CHECK NO. I ENGINE INSTALLATION	
3. Check No. 1 engine oil temperature transmitter (3).	If transmitter (3) is loose or damaged, tighten or replace it as required. If connector (4) or wiring to connector is damaged, repair or replace it as required.
CHECK NO. 2 ENGINE INSTALLATION	
4. Check No. 2 engine oil temperature transmitter (5).	If transmitter (5) is loose or damaged, tighten or replace it as required. If connector (6) or wiring to connector is damaged, repair or replace it as required.

FOLLOW-ON MAINTENANCE:
TM 55-1520-240-23:
Close upper and lower engine access doors.
Close engine work platform.



END OF TASK

8-4.3 ENGINE OIL TEMPERATURE INDICATING SYSTEM OPERATIONAL CHECK

INITIAL SETUP

Applicable Configurations:
All

Tools:
Aircraft Mechanic's Tool Kit,
NSN 5180-00-323-4692

Materials:
None

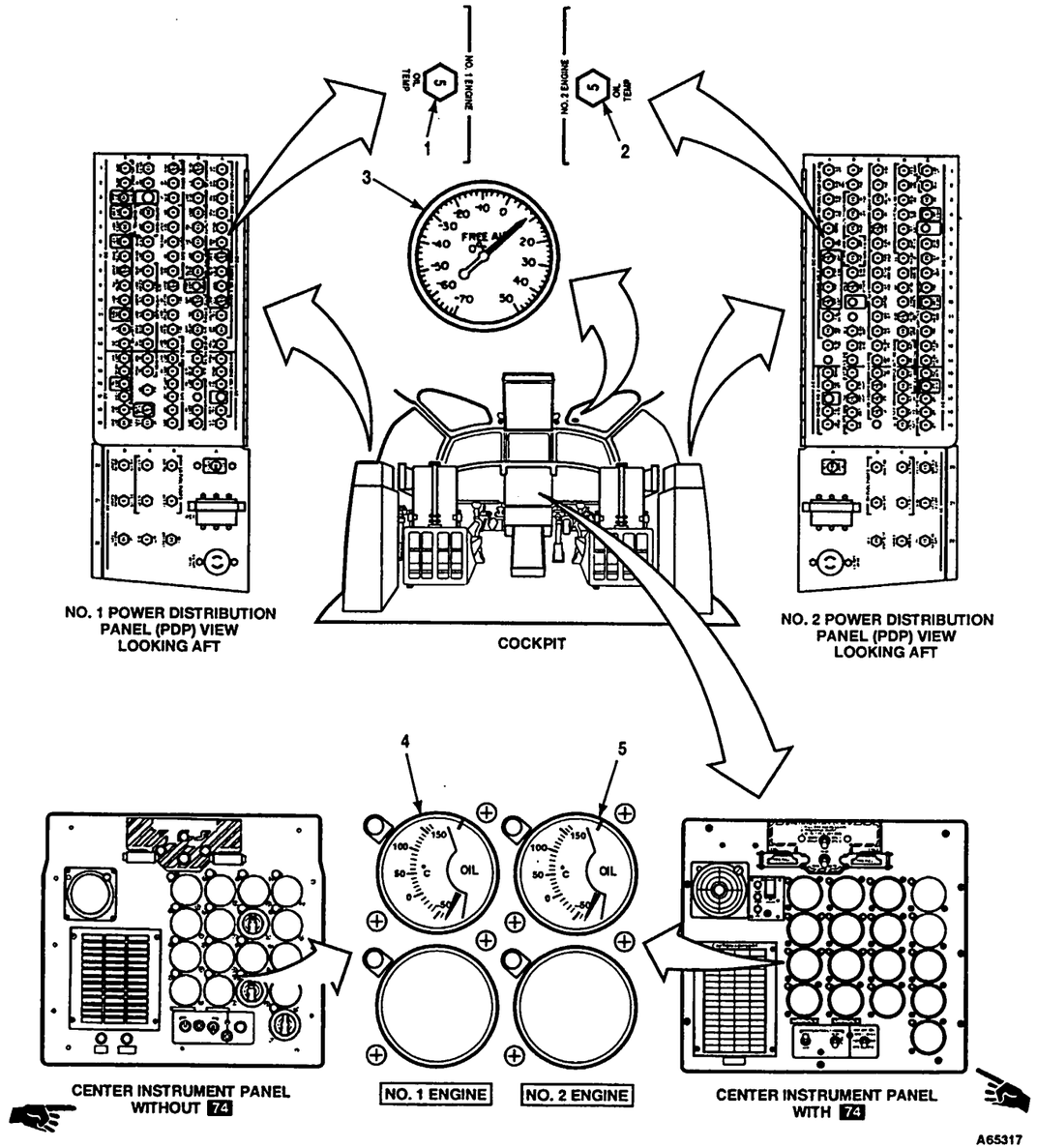
Personnel Required:
Medium Helicopter Repairer (2)

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off
Engine Oil Temperature Indicating System Visual
Check Performed (Task 8-4.2)

TASK	RESULT
NOTE **Check of engine oil temperature indicating system should be performed only on cool engines.**	
1. **Check that ENGINE NO. 1 OIL TEMP circuit breaker (1)** is closed.	If OIL TEMP circuit breaker (1) is open, close it. If it opens again, go to task 8-4.4.
2. **Check that ENGINE NO. 2 OIL TEMP circuit breaker (2)** is closed.	If OIL TEMP circuit breaker (2) is open, close it. If it opens again, go to task 8-4.4.
CHECK NO. 1 ENGINE SYSTEM	
3. **Check temperature indications on free air tempera ture indicator (3) and NO. 1 ENGINE OIL temperature indicator (4).**	Temperature indications shall be within 10°C. If not go to task 8-4.5 or 8-4.5.1. If a fluctuating pointer trouble symptom can not be verified, go to task 8-4.5 or 8-4.5.1.
CHECK NO. 2 ENGINE SYSTEM	
4. **Check temperature indications on free air tempera- ture indicator (3) and NO. 2 ENGINE OIL temperature indicator (5).**	Temperature indications shall be within 10°C. If not, go to task 8-4.6 or 8-4.6.1. If a fluctuating pointer trouble symptom can not be verified, go to task 8-4.6 or 8-4.6.1.

FOLLOW-ON MAINTENANCE:
TM 55-1520-240-23:
Battery disconnected.
Electrical power off.



END OF TASK

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

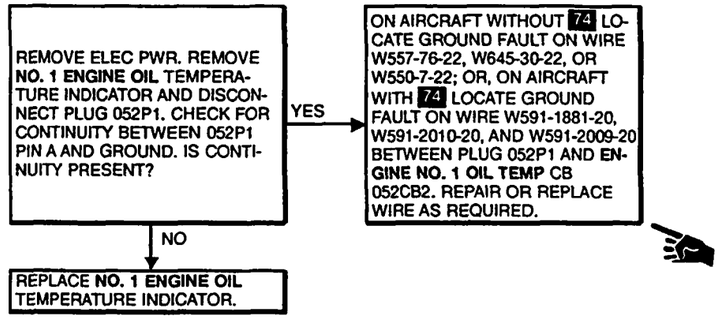
Materials:
None

Personnel Required:
Aircraft Electrician

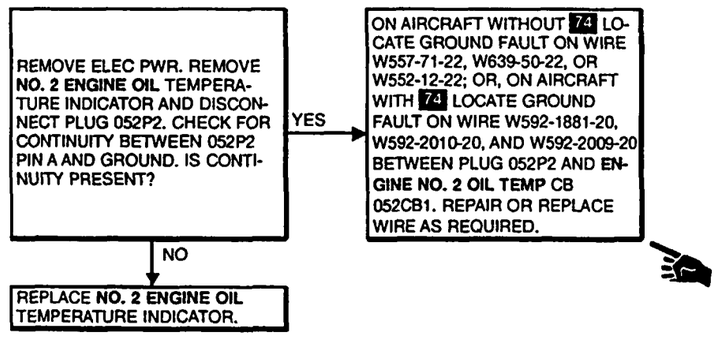
References:
TM 55-1520-240-23

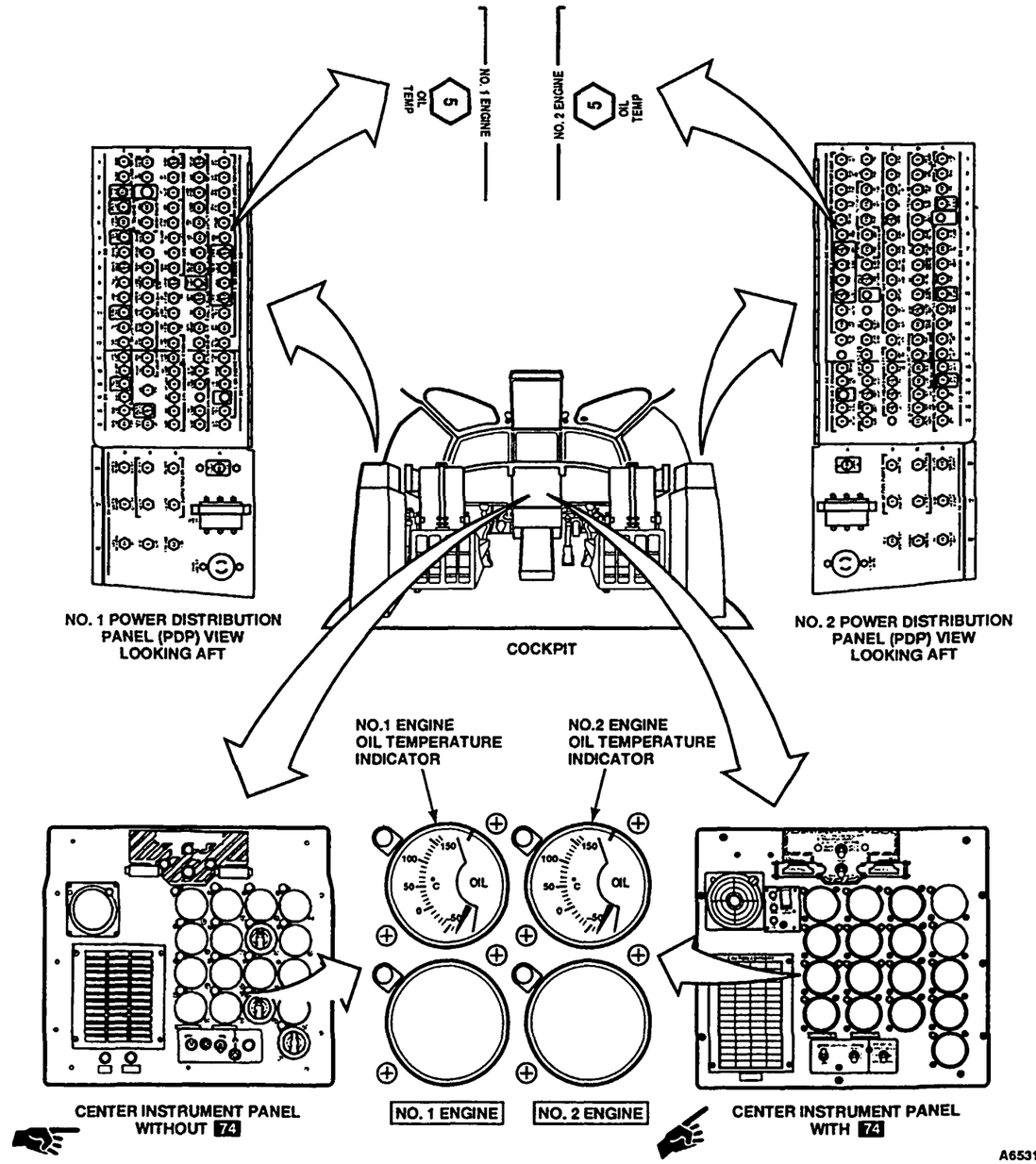
Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off

ENGINE NO. 1 OIL TEMP CIRCUIT BREAKER DOES NOT STAY CLOSED



ENGINE NO. 2 OIL TEMP CIRCUIT BREAKER DOES NOT STAY CLOSED





END OF TASK

8-4.5 NO. 1 ENGINE OIL TEMPERATURE INDICATOR INDICATION IS NOT WITHIN 10°C OF FAT INDICATOR 8-4.5

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
Without 74

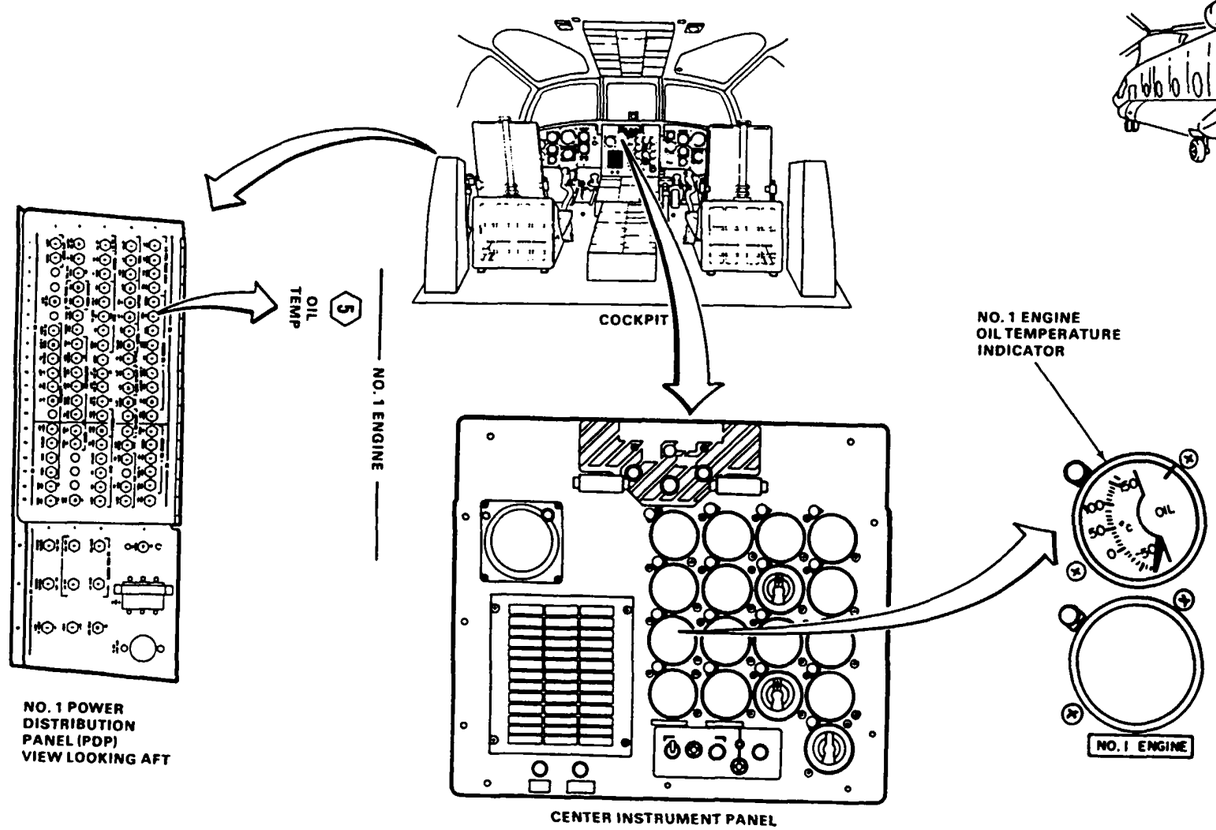
Tools:
Electrical Repairer's Tool Kit, NSN 5180-00-323-4915
Aircraft Mechanic's Tool Kit, NSN 5180-00-323-4692
Multimeter

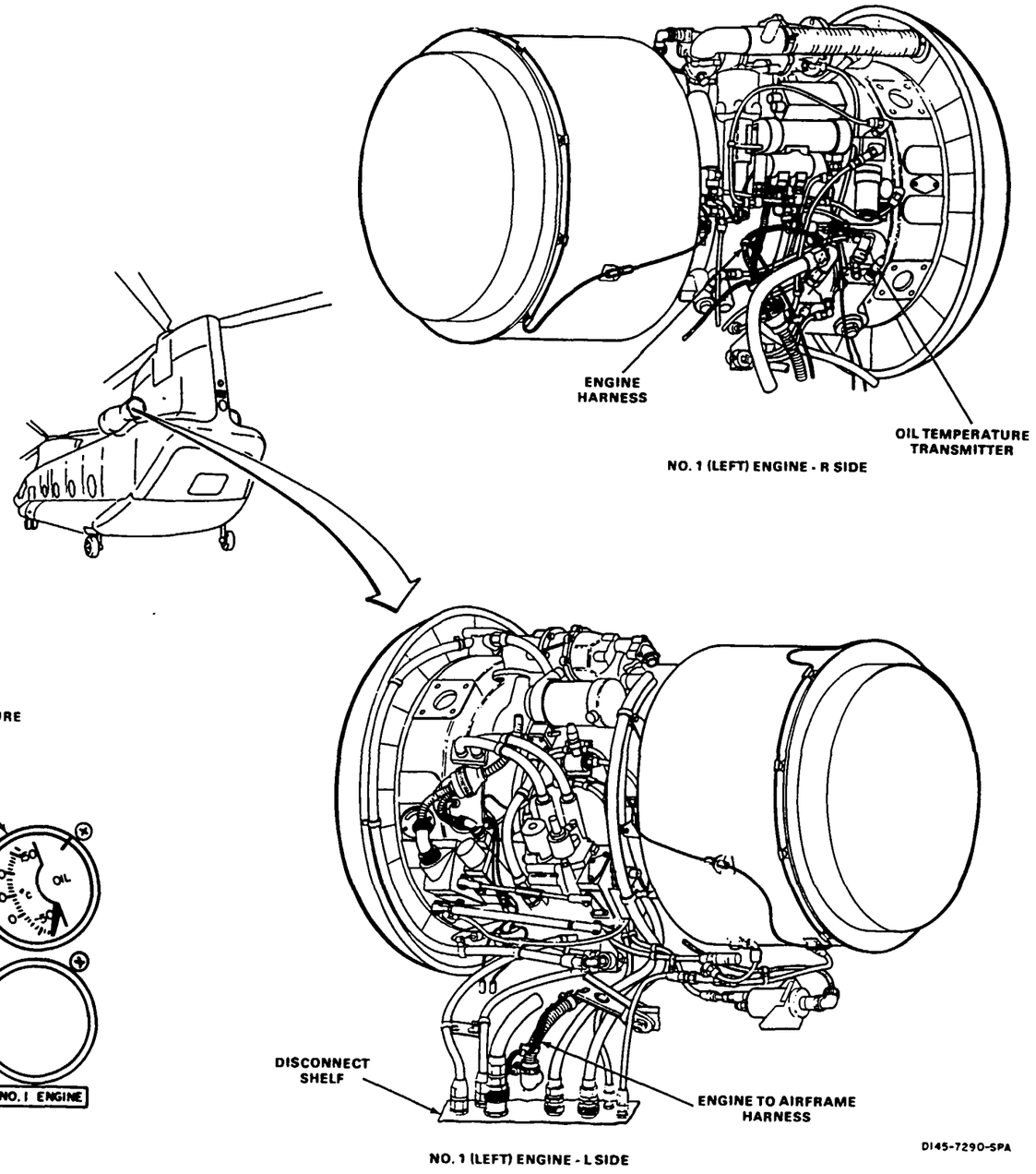
Materials:
None

Personnel Required:
Medium Helicopter Repairer
Aircraft Electrician

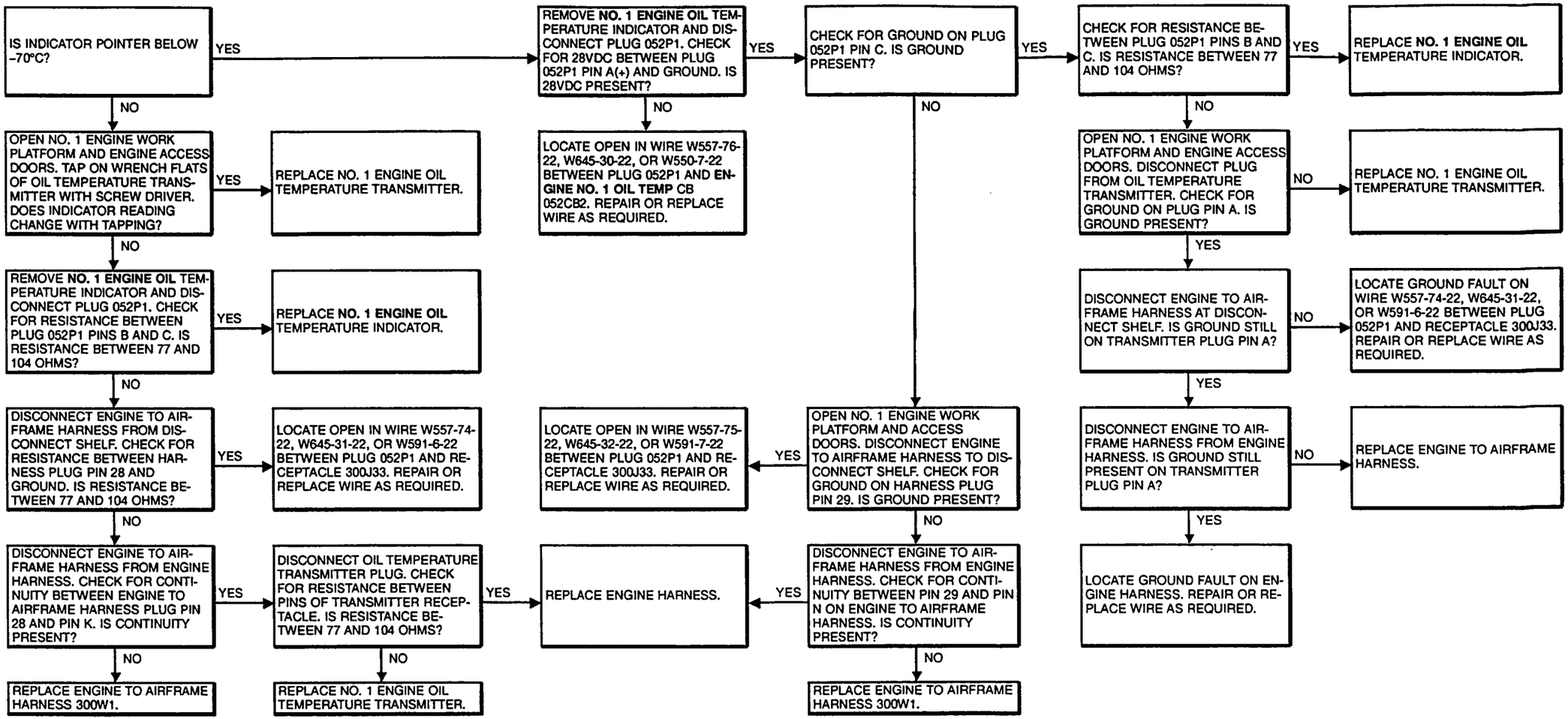
References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off





GO TO NEXT PAGE


IS INDICATOR POINTER BELOW -70°C?
YES
NO
OPEN NO. 1 ENGINE WORK PLATFORM AND ENGINE ACCESS DOORS. TAP ON WRENCH FLATS OF OIL TEMPERATURE TRANSMITTER WITH SCREW DRIVER. DOES INDICATOR READING CHANGE WITH TAPPING?
YES
REPLACE NO. 1 ENGINE OIL TEMPERATURE TRANSMITTER.
NO
REMOVE NO. 1 ENGINE OIL TEMPERATURE INDICATOR AND DISCONNECT PLUG 052P1. CHECK FOR RESISTANCE BETWEEN PLUG 052P1 PINS B AND C. IS RESISTANCE BETWEEN 77 AND 104 OHMS?
YES
REPLACE NO. 1 ENGINE OIL TEMPERATURE INDICATOR.
NO
DISCONNECT ENGINE TO AIRFRAME HARNESS FROM DISCONNECT SHELF. CHECK FOR RESISTANCE BETWEEN HARNESS PLUG PIN 28 AND GROUND. IS RESISTANCE BETWEEN 77 AND 104 OHMS?
YES
LOCATE OPEN IN WIRE W557-74-22, W645-31-22, OR W591-6-22 BETWEEN PLUG 052P1 AND RECEPTACLE 300J33. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
DISCONNECT ENGINE TO AIRFRAME HARNESS FROM ENGINE HARNESS. CHECK FOR CONTINUITY BETWEEN ENGINE TO AIRFRAME HARNESS PLUG PIN 28 AND PIN K. IS CONTINUITY PRESENT?
YES
DISCONNECT OIL TEMPERATURE TRANSMITTER PLUG. CHECK FOR RESISTANCE BETWEEN PINS OF TRANSMITTER RECEPTACLE. IS RESISTANCE BETWEEN 77 AND 104 OHMS?
YES
REPLACE ENGINE HARNESS.
NO
REPLACE NO. 1 ENGINE OIL TEMPERATURE TRANSMITTER.
NO
REPLACE ENGINE TO AIRFRAME HARNESS 300W1.
REMOVE NO. 1 ENGINE OIL TEMPERATURE INDICATOR AND DISCONNECT PLUG 052P1. CHECK FOR 28VDC BETWEEN PLUG 052P1 PIN A(+) AND GROUND. IS 28VDC PRESENT?
YES
NO
LOCATE OPEN IN WIRE W557-76-22, W645-30-22, OR W550-7-22 BETWEEN PLUG 052P1 AND ENGINE NO. 1 OIL TEMP CB 052CB2. REPAIR OR REPLACE WIRE AS REQUIRED.
CHECK FOR GROUND ON PLUG 052P1 PIN C. IS GROUND PRESENT?
YES
NO
OPEN NO. 1 ENGINE WORK PLATFORM AND ACCESS DOORS. DISCONNECT ENGINE TO AIRFRAME HARNESS TO DISCONNECT SHELF. CHECK FOR GROUND ON HARNESS PLUG PIN 29. IS GROUND PRESENT?
YES
LOCATE OPEN IN WIRE W557-75-22, W645-32-22, OR W591-7-22 BETWEEN PLUG 052P1 AND RECEPTACLE 300J33. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
DISCONNECT ENGINE TO AIRFRAME HARNESS FROM ENGINE HARNESS. CHECK FOR CONTINUITY BETWEEN PIN 29 AND PIN N ON ENGINE TO AIRFRAME HARNESS. IS CONTINUITY PRESENT?
YES
REPLACE ENGINE HARNESS.
NO
REPLACE ENGINE TO AIRFRAME HARNESS 300W1.
CHECK FOR RESISTANCE BETWEEN PLUG 052P1 PINS B AND C. IS RESISTANCE BETWEEN 77 AND 104 OHMS?
YES
REPLACE NO. 1 ENGINE OIL TEMPERATURE INDICATOR.
NO
OPEN NO. 1 ENGINE WORK PLATFORM AND ENGINE ACCESS DOORS. DISCONNECT PLUG FROM OIL TEMPERATURE TRANSMITTER. CHECK FOR GROUND ON PLUG PIN A. IS GROUND PRESENT?
NO
REPLACE NO. 1 ENGINE OIL TEMPERATURE TRANSMITTER.
YES
DISCONNECT ENGINE TO AIRFRAME HARNESS AT DISCONNECT SHELF. IS GROUND STILL ON TRANSMITTER PLUG PIN A?
NO
LOCATE GROUND FAULT ON WIRE W557-74-22, W645-31-22, OR W591-6-22 BETWEEN PLUG 052P1 AND RECEPTACLE 300J33. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
DISCONNECT ENGINE TO AIRFRAME HARNESS FROM ENGINE HARNESS. IS GROUND STILL PRESENT ON TRANSMITTER PLUG PIN A?
NO
REPLACE ENGINE TO AIRFRAME HARNESS.
YES
LOCATE GROUND FAULT ON ENGINE HARNESS. REPAIR OR REPLACE WIRE AS REQUIRED.

END-OF-TASK

8-4.5.1 NO. 1 ENGINE OIL TEMPERATURE INDICATOR INDICATION IS NOT WITHIN 10°C OF FAT INDICATOR

8-4.5.1

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
With 74

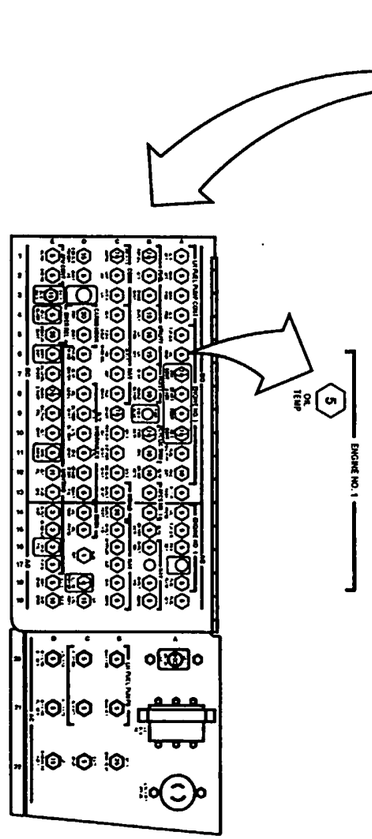
Tools.:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Aircraft Mechanic's Tool Kit,
NSN 5180-00-3234692
Aircraft Powerplant Repairer's Tool Kit,
NSN 5180-00-323-4944
Multimeter

Materials:
None

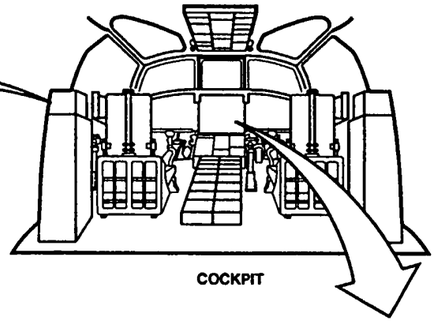
Personnel Required:
Medium Helicopter Repairer
Aircraft Electrician
Aircraft Powerplant Repairer

References:
TM 1-2840-265-23
TM 55-1520-240-23

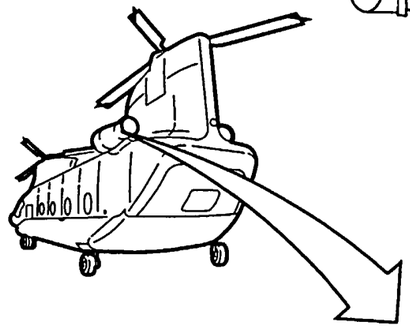
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off

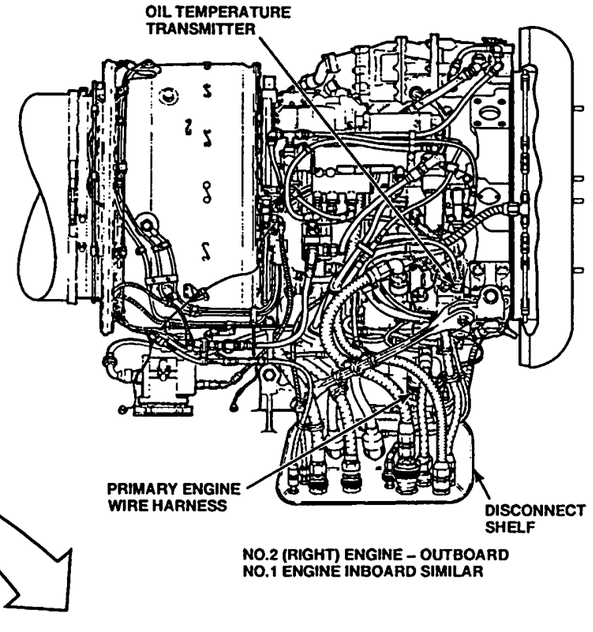


NO. 1 POWER DISTRIBUTION PANEL (PDP) VIEW LOOKING AFT

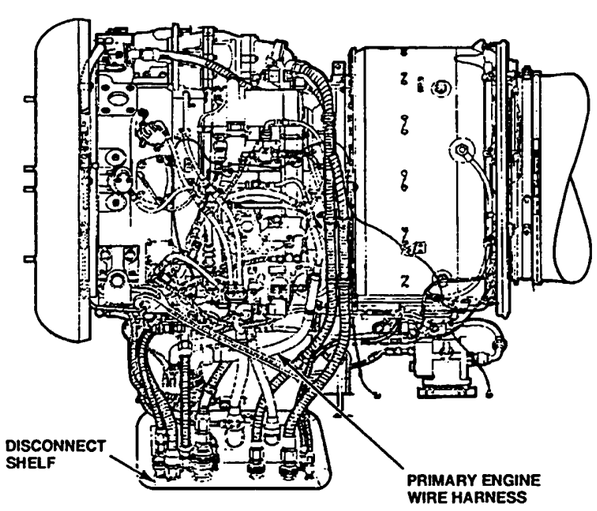


CENTER INSTRUMENT PANEL





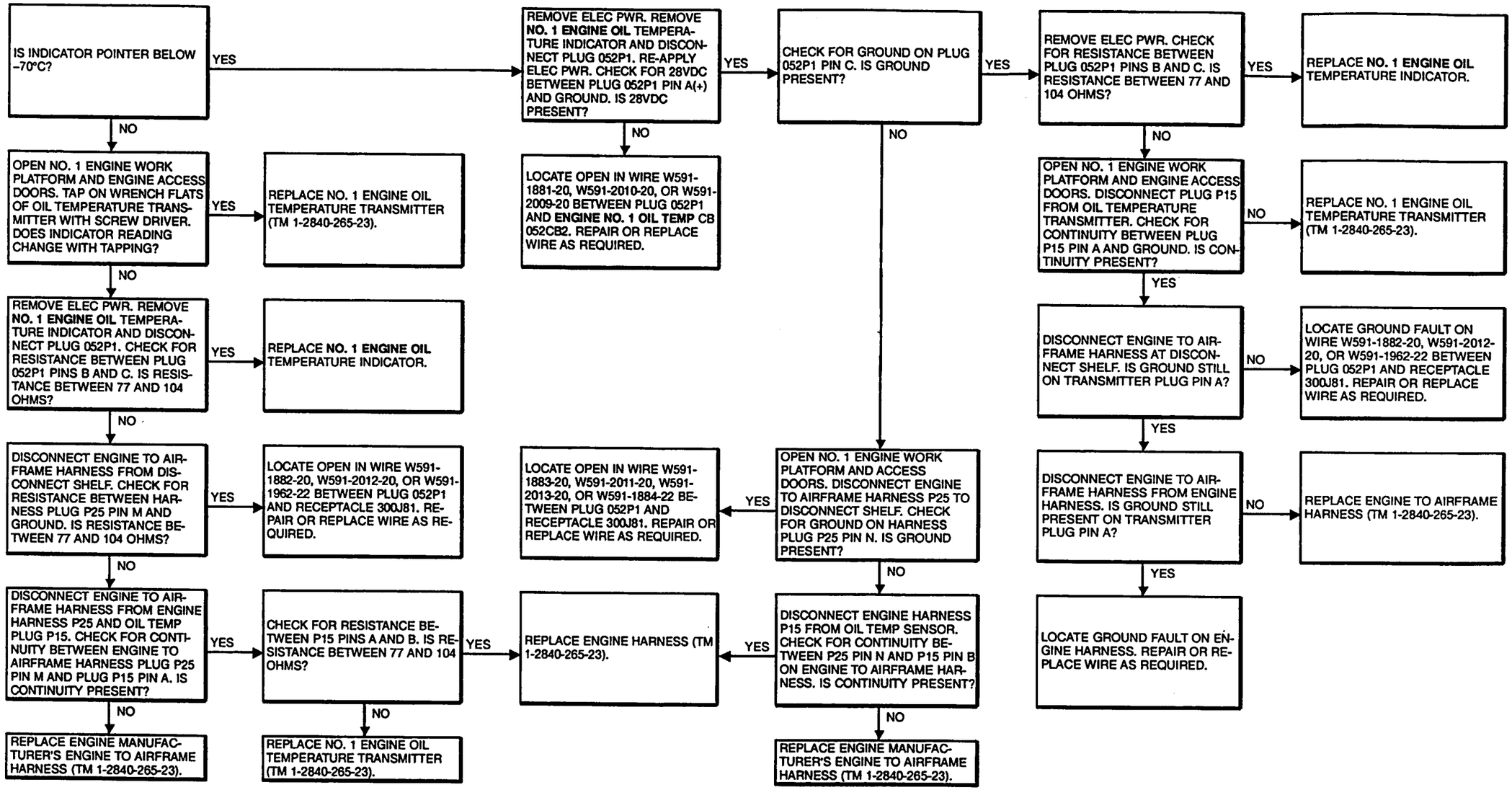
NO.2 (RIGHT) ENGINE – OUTBOARD
NO.1 ENGINE INBOARD SIMILAR



NO.1 (LEFT) ENGINE – INBOARD
NO.2 ENGINE OUTBOARD SIMILAR

A65319

GO TO NEXT PAGE


IS INDICATOR POINTER BELOW −70°C?
YES
NO
OPEN NO. 1 ENGINE WORK PLATFORM AND ENGINE ACCESS DOORS. TAP ON WRENCH FLATS OF OIL TEMPERATURE TRANSMITTER WITH SCREW DRIVER. DOES INDICATOR READING CHANGE WITH TAPPING?
YES
REPLACE NO. 1 ENGINE OIL TEMPERATURE TRANSMITTER (TM 1-2840-265-23).
NO
REMOVE ELEC PWR. REMOVE NO. 1 ENGINE OIL TEMPERATURE INDICATOR AND DISCONNECT PLUG 052P1. CHECK FOR RESISTANCE BETWEEN PLUG 052P1 PINS B AND C. IS RESISTANCE BETWEEN 77 AND 104 OHMS?
YES
REPLACE NO. 1 ENGINE OIL TEMPERATURE INDICATOR.
NO
DISCONNECT ENGINE TO AIRFRAME HARNESS FROM DISCONNECT SHELF. CHECK FOR RESISTANCE BETWEEN HARNESS PLUG P25 PIN M AND GROUND. IS RESISTANCE BETWEEN 77 AND 104 OHMS?
YES
LOCATE OPEN IN WIRE W591-1882-20, W591-2012-20, OR W591-1962-22 BETWEEN PLUG 052P1 AND RECEPTACLE 300J81. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
DISCONNECT ENGINE TO AIRFRAME HARNESS P25 AND OIL TEMP PLUG P15. CHECK FOR CONTINUITY BETWEEN ENGINE TO AIRFRAME HARNESS PLUG P25 PIN M AND PLUG P15 PIN A. IS CONTINUITY PRESENT?
YES
CHECK FOR RESISTANCE BETWEEN P15 PINS A AND B. IS RESISTANCE BETWEEN 77 AND 104 OHMS?
YES
REPLACE ENGINE HARNESS (TM 1-2840-265-23).
NO
REPLACE ENGINE MANUFACTURER'S ENGINE TO AIRFRAME HARNESS (TM 1-2840-265-23).
NO
REPLACE NO. 1 ENGINE OIL TEMPERATURE TRANSMITTER (TM 1-2840-265-23).
REMOVE ELEC PWR. REMOVE NO. 1 ENGINE OIL TEMPERATURE INDICATOR AND DISCONNECT PLUG 052P1. RE-APPLY ELEC PWR. CHECK FOR 28VDC BETWEEN PLUG 052P1 PIN A(+) AND GROUND. IS 28VDC PRESENT?
YES
NO
LOCATE OPEN IN WIRE W591-1881-20, W591-2010-20, OR W591-2009-20 BETWEEN PLUG 052P1 AND ENGINE NO. 1 OIL TEMP CB 052CB2. REPAIR OR REPLACE WIRE AS REQUIRED.
LOCATE OPEN IN WIRE W591-1883-20, W591-2011-20, W591-2013-20, OR W591-1884-22 BETWEEN PLUG 052P1 AND RECEPTACLE 300J81. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
OPEN NO. 1 ENGINE WORK PLATFORM AND ACCESS DOORS. DISCONNECT ENGINE TO AIRFRAME HARNESS P25 TO DISCONNECT SHELF. CHECK FOR GROUND ON HARNESS PLUG P25 PIN N. IS GROUND PRESENT?
NO
DISCONNECT ENGINE HARNESS P15 FROM OIL TEMP SENSOR. CHECK FOR CONTINUITY BETWEEN P25 PIN N AND P15 PIN B ON ENGINE TO AIRFRAME HARNESS. IS CONTINUITY PRESENT?
YES
NO
REPLACE ENGINE MANUFACTURER'S ENGINE TO AIRFRAME HARNESS (TM 1-2840-265-23).
CHECK FOR GROUND ON PLUG 052P1 PIN C. IS GROUND PRESENT?
YES
NO
REMOVE ELEC PWR. CHECK FOR RESISTANCE BETWEEN PLUG 052P1 PINS B AND C. IS RESISTANCE BETWEEN 77 AND 104 OHMS?
YES
REPLACE NO. 1 ENGINE OIL TEMPERATURE INDICATOR.
NO
OPEN NO. 1 ENGINE WORK PLATFORM AND ENGINE ACCESS DOORS. DISCONNECT PLUG P15 FROM OIL TEMPERATURE TRANSMITTER. CHECK FOR CONTINUITY BETWEEN PLUG P15 PIN A AND GROUND. IS CONTINUITY PRESENT?
NO
REPLACE NO. 1 ENGINE OIL TEMPERATURE TRANSMITTER (TM 1-2840-265-23).
YES
DISCONNECT ENGINE TO AIRFRAME HARNESS AT DISCONNECT SHELF. IS GROUND STILL ON TRANSMITTER PLUG PIN A?
NO
LOCATE GROUND FAULT ON WIRE W591-1882-20, W591-2012-20, OR W591-1962-22 BETWEEN PLUG 052P1 AND RECEPTACLE 300J81. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
DISCONNECT ENGINE TO AIRFRAME HARNESS FROM ENGINE HARNESS. IS GROUND STILL PRESENT ON TRANSMITTER PLUG PIN A?
NO
REPLACE ENGINE TO AIRFRAME HARNESS (TM 1-2840-265-23).
YES
LOCATE GROUND FAULT ON ENGINE HARNESS. REPAIR OR REPLACE WIRE AS REQUIRED.

END OF TASK

8-4.6 NO. 2 ENGINE OIL TEMPERATURE INDICATOR INDICATION IS NOT WITHIN 10°C OF FAT INDICATOR 8-4.6

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
Without 74

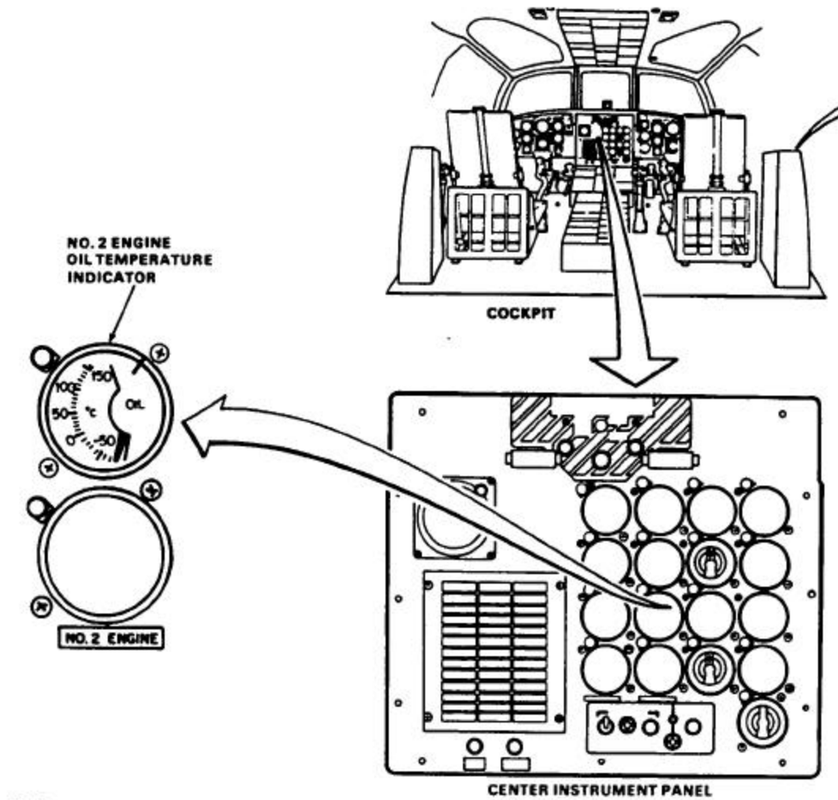
Tools:
Electrical Repairer's Tool Kit, NSN 5180-00-323-4915
Aircraft Mechanic's Tool Kit, NSN 5180-00-323-4692
Multimeter

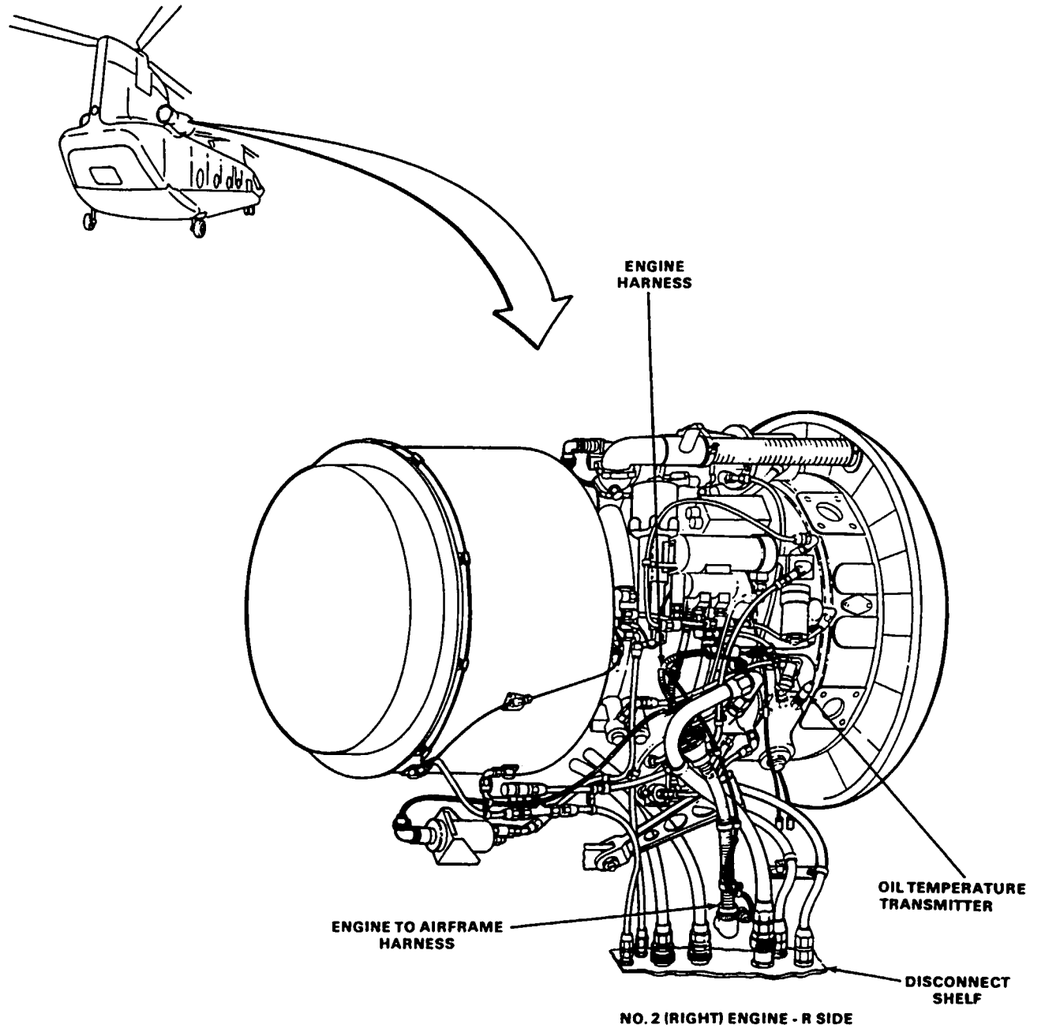
Materials:
None

Personnel Required:
Medium Helicopter Repairer
Aircraft Electrician

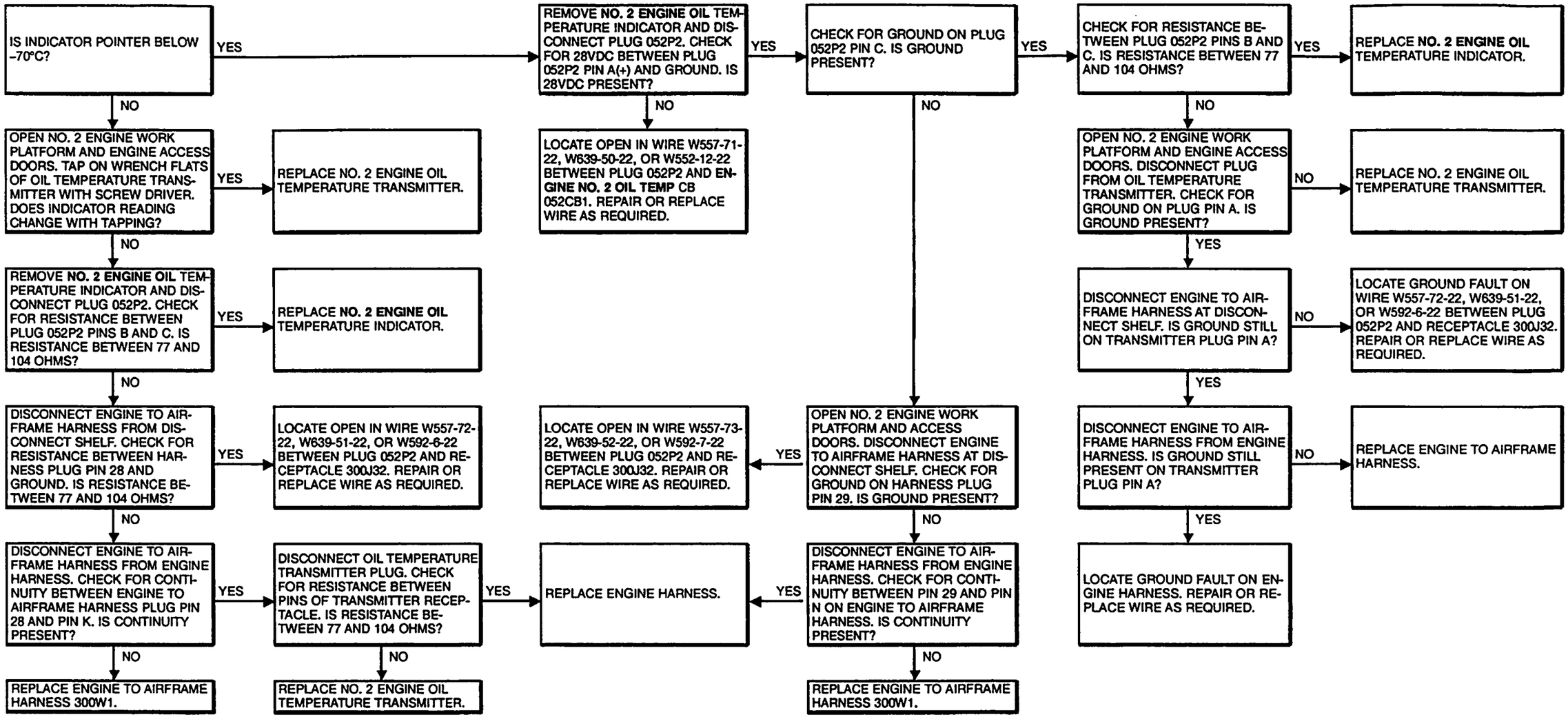
References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off





GO TO NEXT PAGE


IS INDICATOR POINTER BELOW –70°C?
YES
NO
OPEN NO. 2 ENGINE WORK PLATFORM AND ENGINE ACCESS DOORS. TAP ON WRENCH FLATS OF OIL TEMPERATURE TRANSMITTER WITH SCREW DRIVER. DOES INDICATOR READING CHANGE WITH TAPPING?
YES
REPLACE NO. 2 ENGINE OIL TEMPERATURE TRANSMITTER.
NO
REMOVE NO. 2 ENGINE OIL TEMPERATURE INDICATOR AND DISCONNECT PLUG 052P2. CHECK FOR RESISTANCE BETWEEN PLUG 052P2 PINS B AND C. IS RESISTANCE BETWEEN 77 AND 104 OHMS?
YES
REPLACE NO. 2 ENGINE OIL TEMPERATURE INDICATOR.
NO
DISCONNECT ENGINE TO AIRFRAME HARNESS FROM DISCONNECT SHELF. CHECK FOR RESISTANCE BETWEEN HARNESS PLUG PIN 28 AND GROUND. IS RESISTANCE BETWEEN 77 AND 104 OHMS?
YES
LOCATE OPEN IN WIRE W557-72-22, W639-51-22, OR W592-6-22 BETWEEN PLUG 052P2 AND RECEPTACLE 300J32. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
DISCONNECT ENGINE TO AIRFRAME HARNESS FROM ENGINE HARNESS. CHECK FOR CONTINUITY BETWEEN ENGINE TO AIRFRAME HARNESS PLUG PIN 28 AND PIN K. IS CONTINUITY PRESENT?
YES
DISCONNECT OIL TEMPERATURE TRANSMITTER PLUG. CHECK FOR RESISTANCE BETWEEN PINS OF TRANSMITTER RECEPTACLE. IS RESISTANCE BETWEEN 77 AND 104 OHMS?
YES
REPLACE ENGINE HARNESS.
NO
REPLACE ENGINE TO AIRFRAME HARNESS 300W1.
NO
REPLACE NO. 2 ENGINE OIL TEMPERATURE TRANSMITTER.
REMOVE NO. 2 ENGINE OIL TEMPERATURE INDICATOR AND DISCONNECT PLUG 052P2. CHECK FOR 28VDC BETWEEN PLUG 052P2 PIN A(+) AND GROUND. IS 28VDC PRESENT?
YES
LOCATE OPEN IN WIRE W557-73-22, W639-52-22, OR W592-7-22 BETWEEN PLUG 052P2 AND RECEPTACLE 300J32. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
LOCATE OPEN IN WIRE W557-71-22, W639-50-22, OR W552-12-22 BETWEEN PLUG 052P2 AND ENGINE NO. 2 OIL TEMP CB 052CB1. REPAIR OR REPLACE WIRE AS REQUIRED.
CHECK FOR GROUND ON PLUG 052P2 PIN C. IS GROUND PRESENT?
YES
OPEN NO. 2 ENGINE WORK PLATFORM AND ACCESS DOORS. DISCONNECT ENGINE TO AIRFRAME HARNESS AT DISCONNECT SHELF. CHECK FOR GROUND ON HARNESS PLUG PIN 29. IS GROUND PRESENT?
YES
DISCONNECT ENGINE TO AIRFRAME HARNESS FROM ENGINE HARNESS. CHECK FOR CONTINUITY BETWEEN PIN 29 AND PIN N ON ENGINE TO AIRFRAME HARNESS. IS CONTINUITY PRESENT?
YES
REPLACE ENGINE HARNESS.
NO
REPLACE ENGINE TO AIRFRAME HARNESS 300W1.
NO
CHECK FOR RESISTANCE BETWEEN PLUG 052P2 PINS B AND C. IS RESISTANCE BETWEEN 77 AND 104 OHMS?
YES
REPLACE NO. 2 ENGINE OIL TEMPERATURE INDICATOR.
NO
OPEN NO. 2 ENGINE WORK PLATFORM AND ENGINE ACCESS DOORS. DISCONNECT PLUG FROM OIL TEMPERATURE TRANSMITTER. CHECK FOR GROUND ON PLUG PIN A. IS GROUND PRESENT?
NO
REPLACE NO. 2 ENGINE OIL TEMPERATURE TRANSMITTER.
YES
DISCONNECT ENGINE TO AIRFRAME HARNESS AT DISCONNECT SHELF. IS GROUND STILL ON TRANSMITTER PLUG PIN A?
NO
LOCATE GROUND FAULT ON WIRE W557-72-22, W639-51-22, OR W592-6-22 BETWEEN PLUG 052P2 AND RECEPTACLE 300J32. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
DISCONNECT ENGINE TO AIRFRAME HARNESS FROM ENGINE HARNESS. IS GROUND STILL PRESENT ON TRANSMITTER PLUG PIN A?
NO
REPLACE ENGINE TO AIRFRAME HARNESS.
YES
LOCATE GROUND FAULT ON ENGINE HARNESS. REPAIR OR REPLACE WIRE AS REQUIRED.

END-OF-TASK

8-4.6.1 NO. 2 ENGINE OIL TEMPERATURE INDICATOR INDICATION IS NOT WITHIN 10°C OF FAT INDICATOR 8-4.6.1

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
With 74

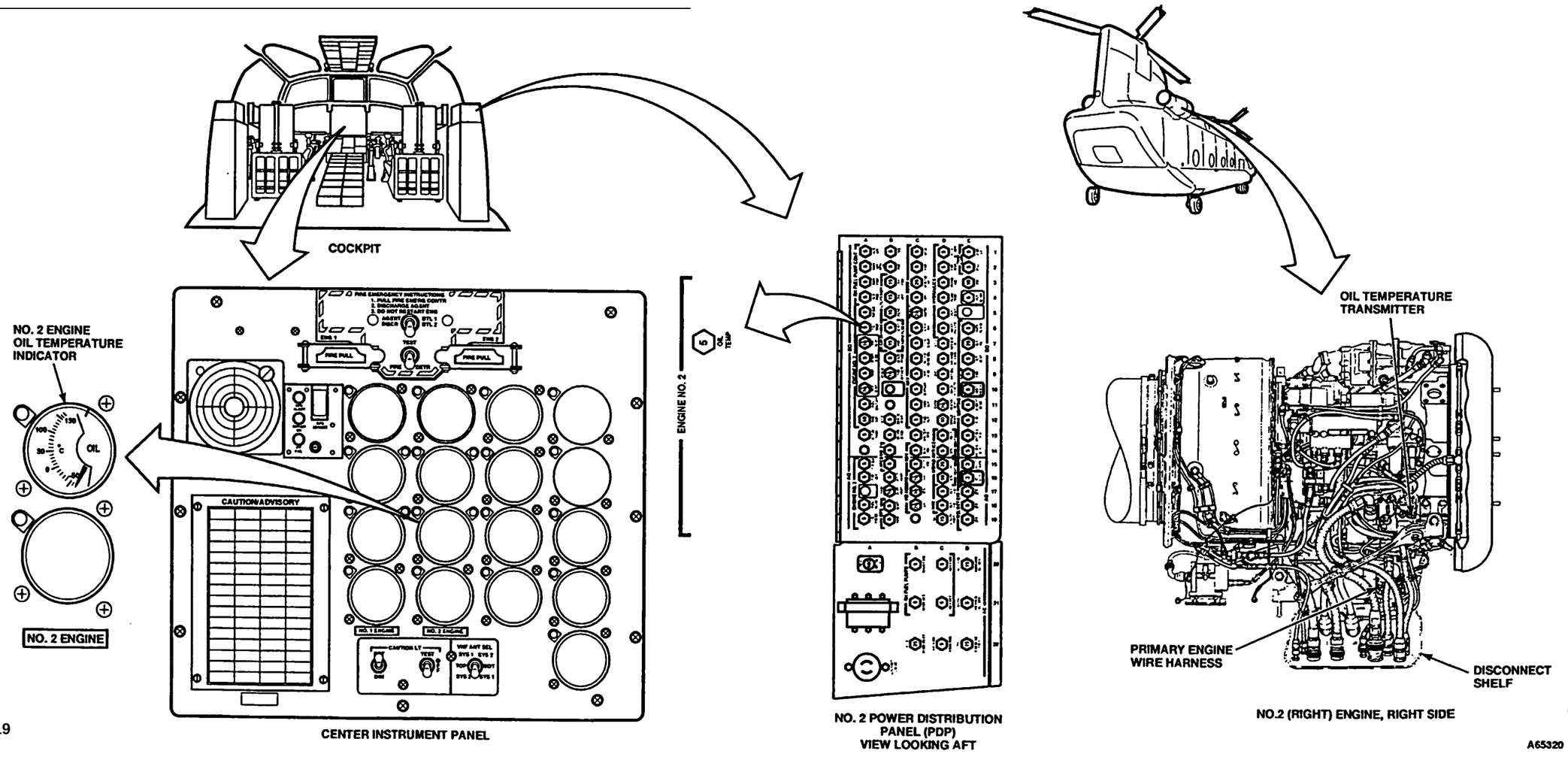
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Aircraft Mechanic's Tool Kit,
NSN 5180-00-323-4692
Aircraft Powerplant Repairer's Tool Kit,
NSN 5180-00-323-4944
Multimeter

Materials:
None

Personnel Required:
Medium Helicopter Repairer
Aircraft Electrician
Aircraft Powerplant Repairer

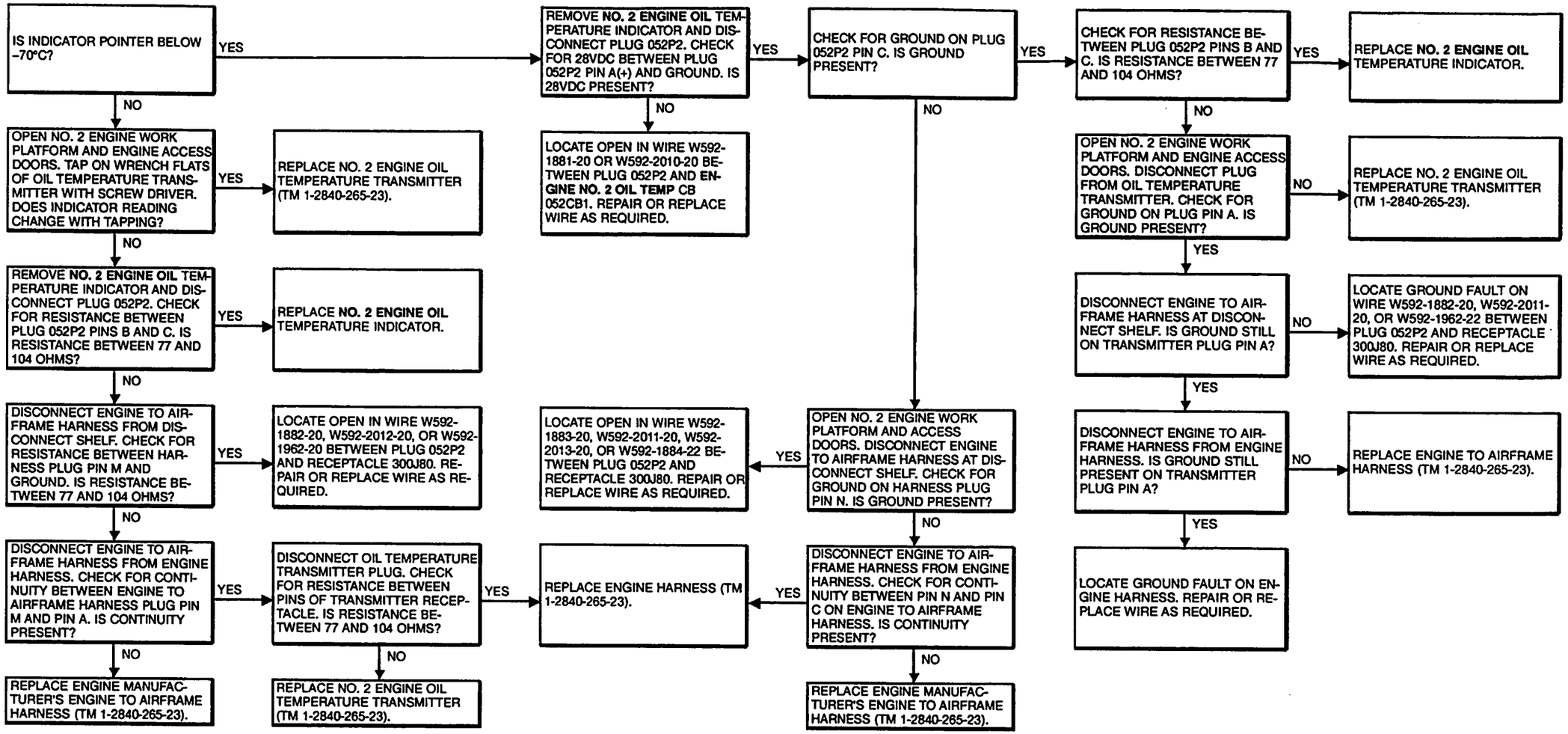
References:
TM 1-2840-265-23
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-24023:
Battery Connected
Electrical Power On
Hydraulic Power Off



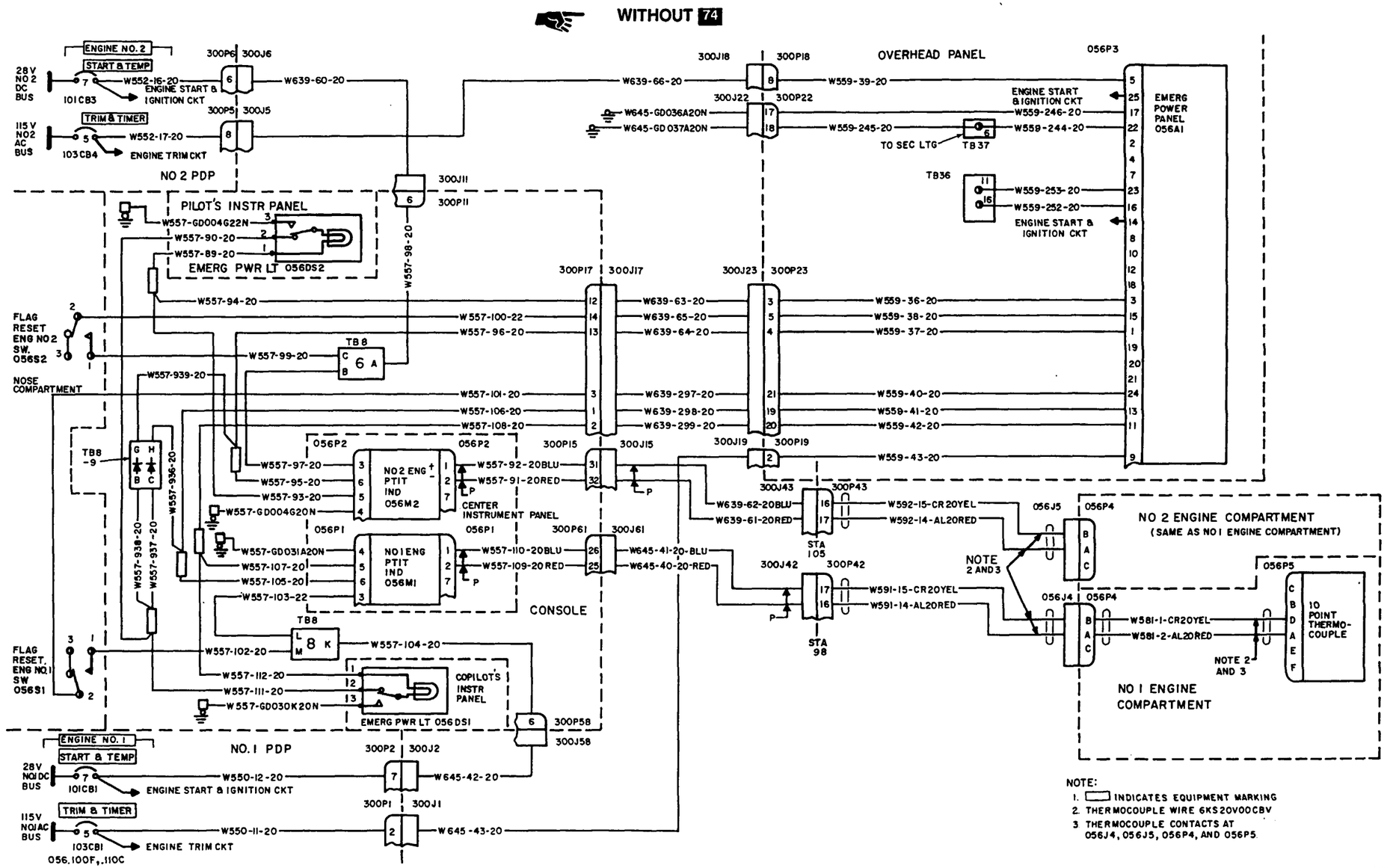
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A65320

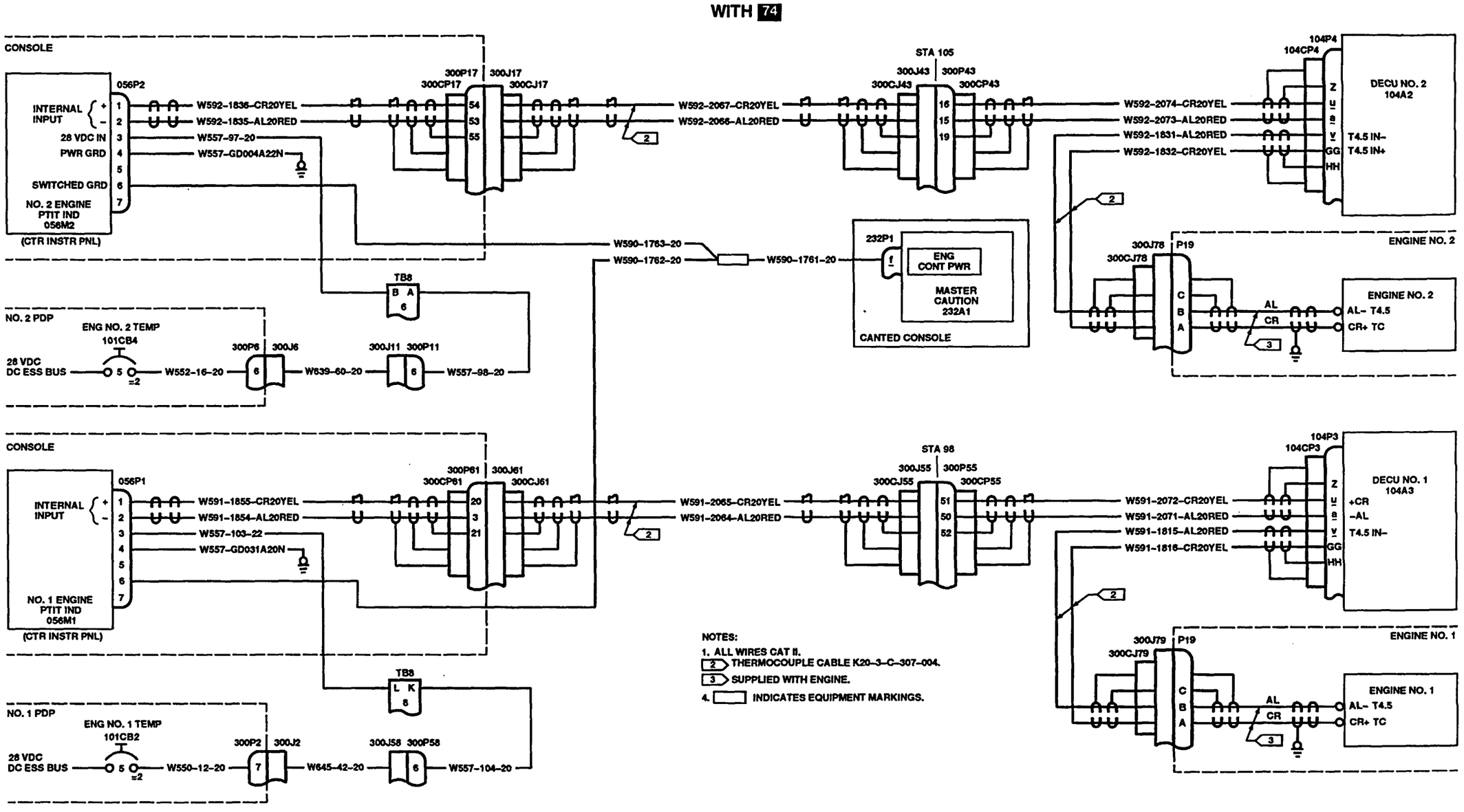

IS INDICATOR POINTER BELOW −70°C?
YES
NO
OPEN NO. 2 ENGINE WORK PLATFORM AND ENGINE ACCESS DOORS. TAP ON WRENCH FLATS OF OIL TEMPERATURE TRANSMITTER WITH SCREW DRIVER. DOES INDICATOR READING CHANGE WITH TAPPING?
YES
REPLACE NO. 2 ENGINE OIL TEMPERATURE TRANSMITTER (TM 1-2840-265-23).
NO
REMOVE NO. 2 ENGINE OIL TEMPERATURE INDICATOR AND DISCONNECT PLUG 052P2. CHECK FOR RESISTANCE BETWEEN PLUG 052P2 PINS B AND C. IS RESISTANCE BETWEEN 77 AND 104 OHMS?
YES
REPLACE NO. 2 ENGINE OIL TEMPERATURE INDICATOR.
NO
DISCONNECT ENGINE TO AIRFRAME HARNESS FROM DISCONNECT SHELF. CHECK FOR RESISTANCE BETWEEN HARNESS PLUG PIN M AND GROUND. IS RESISTANCE BETWEEN 77 AND 104 OHMS?
YES
LOCATE OPEN IN WIRE W592-1882-20, W592-2012-20, OR W592-1962-20 BETWEEN PLUG 052P2 AND RECEPTACLE 300J80. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
DISCONNECT ENGINE TO AIRFRAME HARNESS FROM ENGINE HARNESS. CHECK FOR CONTINUITY BETWEEN ENGINE TO AIRFRAME HARNESS PLUG PIN M AND PIN A. IS CONTINUITY PRESENT?
YES
DISCONNECT OIL TEMPERATURE TRANSMITTER PLUG. CHECK FOR RESISTANCE BETWEEN PINS OF TRANSMITTER RECEPTACLE. IS RESISTANCE BETWEEN 77 AND 104 OHMS?
YES
REPLACE ENGINE HARNESS (TM 1-2840-265-23).
NO
REPLACE NO. 2 ENGINE OIL TEMPERATURE TRANSMITTER (TM 1-2840-265-23).
NO
REPLACE ENGINE MANUFACTURER'S ENGINE TO AIRFRAME HARNESS (TM 1-2840-265-23).
REMOVE NO. 2 ENGINE OIL TEMPERATURE INDICATOR AND DISCONNECT PLUG 052P2. CHECK FOR 28VDC BETWEEN PLUG 052P2 PIN A(+) AND GROUND. IS 28VDC PRESENT?
YES
NO
LOCATE OPEN IN WIRE W592-1881-20 OR W592-2010-20 BETWEEN PLUG 052P2 AND ENGINE NO. 2 OIL TEMP CB 052CB1. REPAIR OR REPLACE WIRE AS REQUIRED.
LOCATE OPEN IN WIRE W592-1883-20, W592-2011-20, W592-2013-20, OR W592-1884-22 BETWEEN PLUG 052P2 AND RECEPTACLE 300J80. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
CHECK FOR GROUND ON PLUG 052P2 PIN C. IS GROUND PRESENT?
YES
NO
OPEN NO. 2 ENGINE WORK PLATFORM AND ACCESS DOORS. DISCONNECT ENGINE TO AIRFRAME HARNESS AT DISCONNECT SHELF. CHECK FOR GROUND ON HARNESS PLUG PIN N. IS GROUND PRESENT?
NO
DISCONNECT ENGINE TO AIRFRAME HARNESS FROM ENGINE HARNESS. CHECK FOR CONTINUITY BETWEEN PIN N AND PIN C ON ENGINE TO AIRFRAME HARNESS. IS CONTINUITY PRESENT?
YES
NO
REPLACE ENGINE MANUFACTURER'S ENGINE TO AIRFRAME HARNESS (TM 1-2840-265-23).
CHECK FOR RESISTANCE BETWEEN PLUG 052P2 PINS B AND C. IS RESISTANCE BETWEEN 77 AND 104 OHMS?
YES
REPLACE NO. 2 ENGINE OIL TEMPERATURE INDICATOR.
NO
OPEN NO. 2 ENGINE WORK PLATFORM AND ENGINE ACCESS DOORS. DISCONNECT PLUG FROM OIL TEMPERATURE TRANSMITTER. CHECK FOR GROUND ON PLUG PIN A. IS GROUND PRESENT?
NO
REPLACE NO. 2 ENGINE OIL TEMPERATURE TRANSMITTER (TM 1-2840-265-23).
YES
DISCONNECT ENGINE TO AIRFRAME HARNESS AT DISCONNECT SHELF. IS GROUND STILL ON TRANSMITTER PLUG PIN A?
NO
LOCATE GROUND FAULT ON WIRE W592-1882-20, W592-2011-20, OR W592-1962-22 BETWEEN PLUG 052P2 AND RECEPTACLE 300J80. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
DISCONNECT ENGINE TO AIRFRAME HARNESS FROM ENGINE HARNESS. IS GROUND STILL PRESENT ON TRANSMITTER PLUG PIN A?
NO
REPLACE ENGINE TO AIRFRAME HARNESS (TM 1-2840-265-23).
YES
LOCATE GROUND FAULT ON ENGINE HARNESS. REPAIR OR REPLACE WIRE AS REQUIRED.

END OF TASK

8-5 POWER TURBINE INLET TEMPERATURE SYSTEM

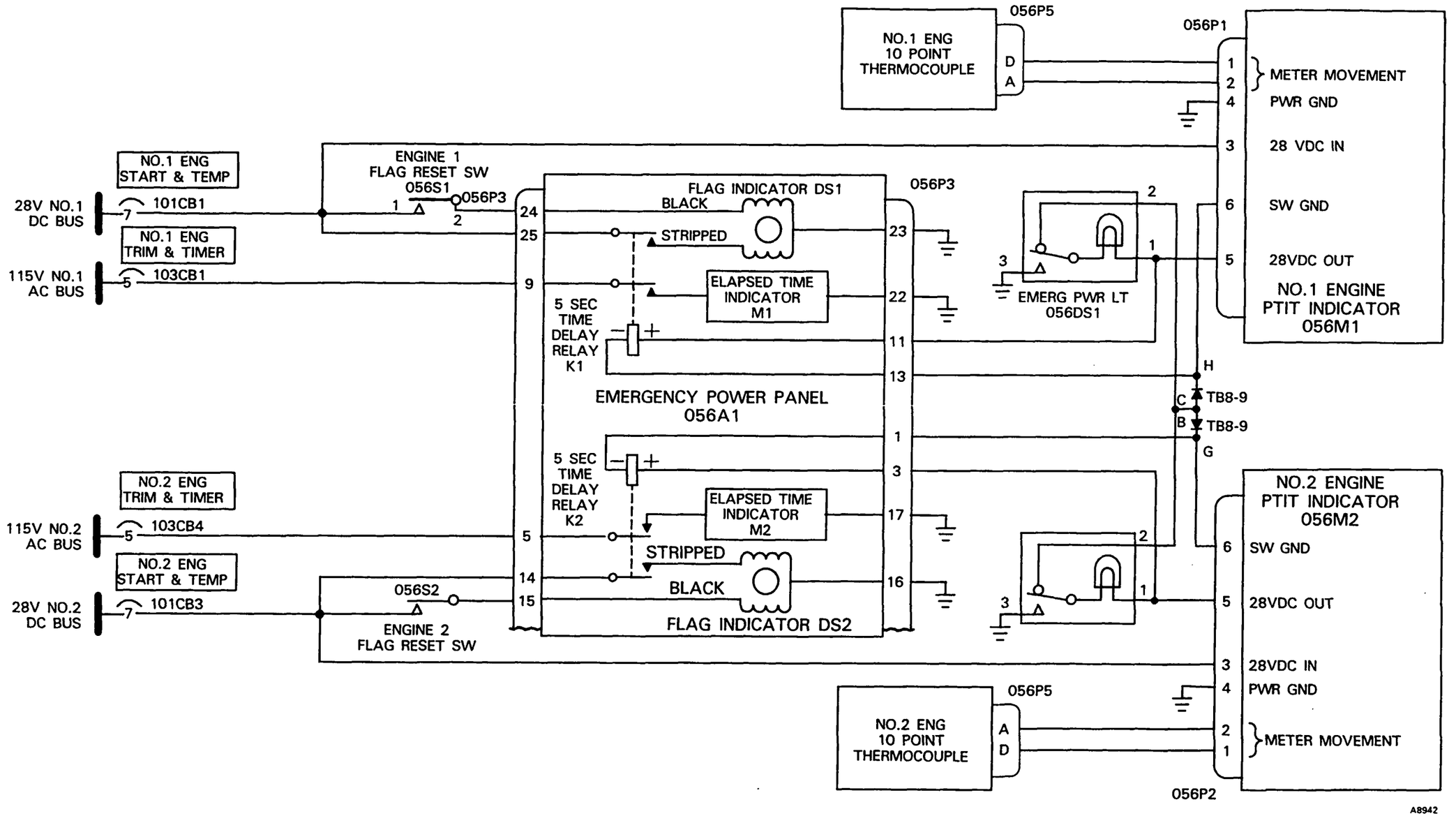


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WITH 74
CONSOLE
056P2
INTERNAL INPUT
28 VDC IN
PWR GRD
SWITCHED GRD
NO. 2 ENGINE PTIT IND 056M2
(CTR INSTR PNL)
W592-1836-CR20YEL
W592-1835-AL20RED
W557-97-20
W557-GD004A22N
300P17 300J17
300CP17 300CJ17
W592-2067-CR20YEL
W592-2066-AL20RED
STA 105
300J43 300P43
300CJ43 300CP43
W592-2074-CR20YEL
W592-2073-AL20RED
W592-1831-AL20RED
W592-1832-CR20YEL
104P4
104CP4
DECU NO. 2 104A2
T4.5 IN-
T4.5 IN+
W590-1763-20
W590-1762-20
W590-1761-20
232P1
ENG CONT PWR
MASTER CAUTION 232A1
CANTED CONSOLE
TB8
NO. 2 PDP
ENG NO. 2 TEMP
101CB4
28 VDC DC ESS BUS
W552-16-20
300P6 300J6
W639-60-20
300J11 300P11
W557-98-20
300J78 P19
300CJ78
ENGINE NO. 2
AL- T4.5
CR+ TC
CONSOLE
056P1
INTERNAL INPUT
NO. 1 ENGINE PTIT IND 056M1
(CTR INSTR PNL)
W591-1855-CR20YEL
W591-1854-AL20RED
W557-103-22
W557-GD031A20N
300P61 300J61
300CP61 300CJ61
W591-2065-CR20YEL
W591-2064-AL20RED
STA 98
300J55 300P55
300CJ55 300CP55
W591-2072-CR20YEL
W591-2071-AL20RED
W591-1815-AL20RED
W591-1816-CR20YEL
104P3
104CP3
DECU NO. 1 104A3
+CR
-AL
T4.5 IN-
TB8
NO. 1 PDP
ENG NO. 1 TEMP
101CB2
28 VDC DC ESS BUS
W550-12-20
300P2 300J2
W645-42-20
300J58 300P58
W557-104-20
300J79 P19
300CJ79
ENGINE NO. 1
AL- T4.5
CR+ TC
AL
CR
NOTES:
1. ALL WIRES CAT II.
2 THERMOCOUPLE CABLE K20-3-C-307-004.
3 SUPPLIED WITH ENGINE.
4. INDICATES EQUIPMENT MARKINGS.
A65472

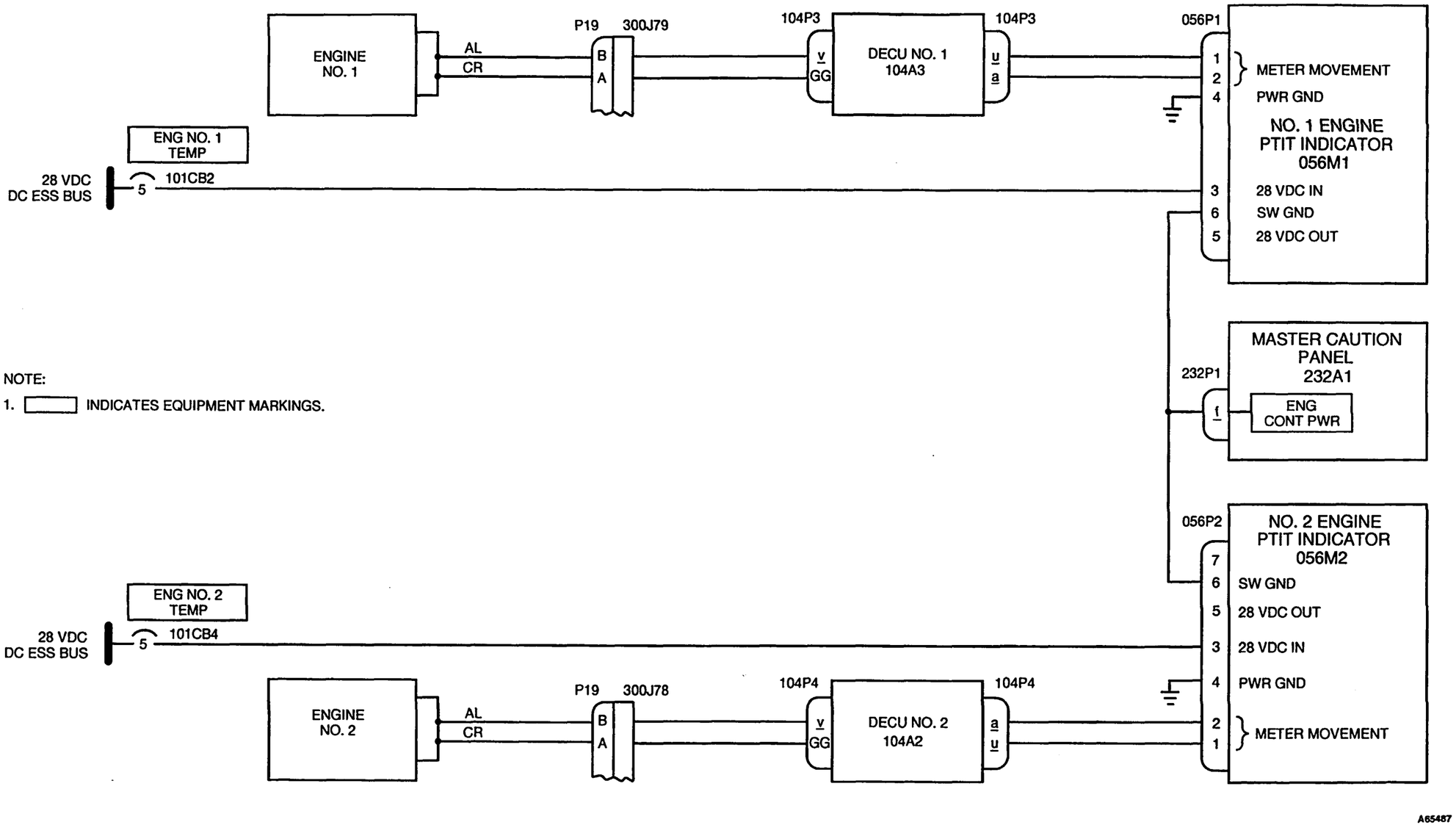
END OF TASK

WITHOUT 74



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WITH 74



NOTE:

1. ▭ INDICATES EQUIPMENT MARKINGS.

A65487

END OF TASK

8-5.2 POWER TURBINE INLET TEMPERATURE SYSTEM VISUAL CHECK

INITIAL SETUP

Applicable Configurations:

Without 74

Tools:

None

Materials:

None

Personnel Required:

Aircraft Electrician

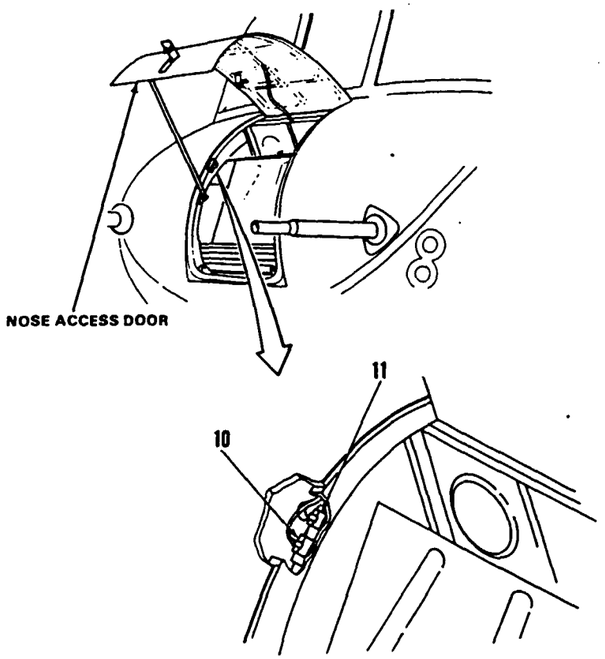
References:

TM 55-1520-240-23

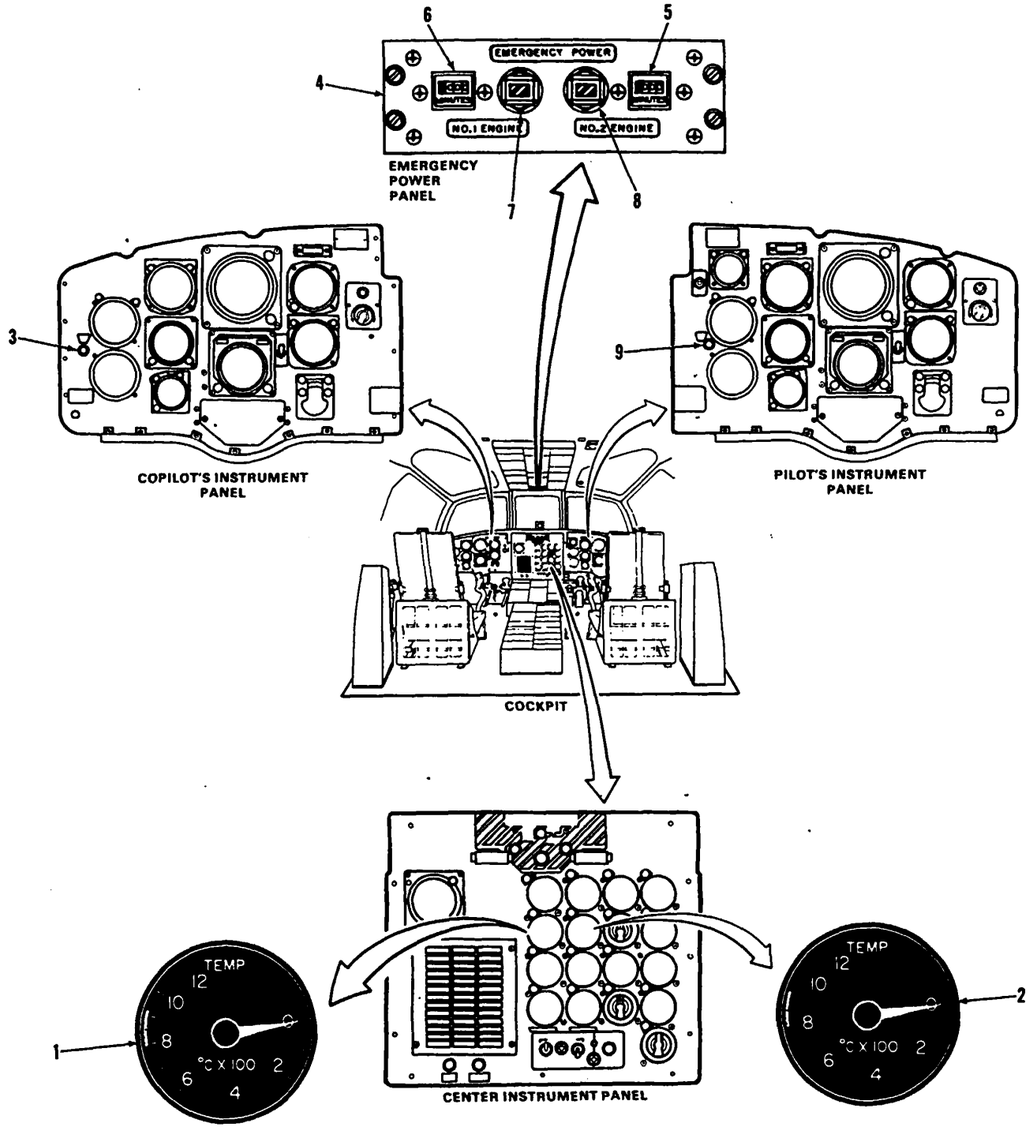
Equipment Condition:

TM 55-1520-240-23:

Battery Disconnected
Electrical Power Off
Hydraulic Power Off
Nose Access Door Open



90 X 54



DH45-11140-SPA

GO TO NEXT PAGE

TASK	RESULT
1. **Check NO. 1 PTIT indicator (1).**	If indicator (1) is loose or damaged, tighten or replace it as required.
2. **Check NO. 2 PTIT Indicator (2).**	If indicator (2) is loose or damaged, tighten or replace it as required.
3. **Check copilot EMERG PWR light (3).**	If light (3) is loose or damaged, tighten or replace it as required.
4. **Check EMERGENCY POWER panel (4).**	If timers (5 and 6) are loose or damaged, tighten or replace them as required. If latch indicators (7 and 8) are loose or damaged, tighten or replace them as required.
5. **Check pilot EMERG PWR light (9).**	If light (9) is loose or damaged, tighten or replace it as required.
6. **Check ENG NO. 1 and ENG NO. 2 FLAG RESET switches (10 and 11).**	If switches (10 and 11) are loose or damaged, tighten or replace them as required.

FOLLOW-ON MAINTENANCE:
None

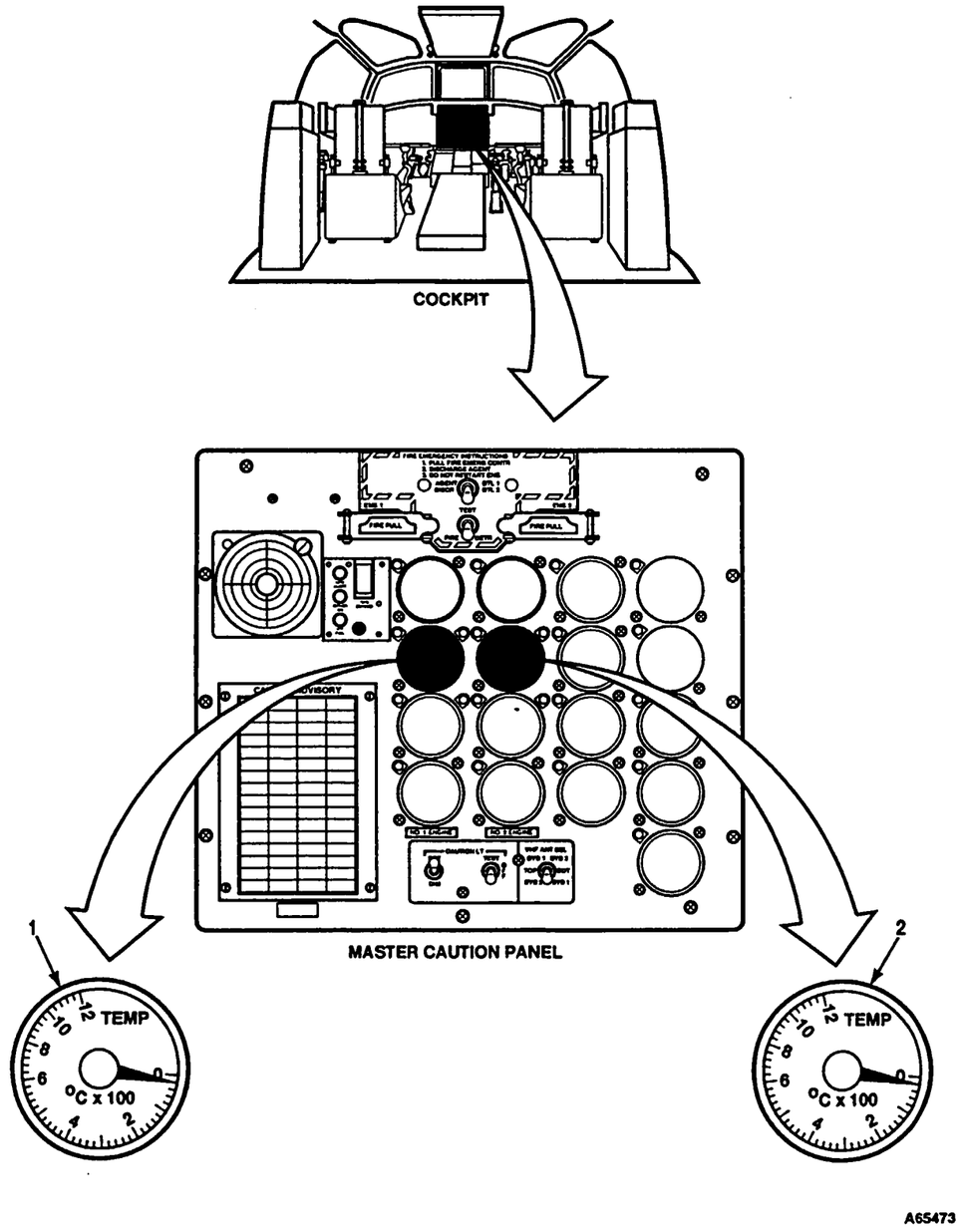
END OF TASK

INITIAL SETUP
Applicable Configurations:
With 74
Tools:
None
Materials:
None
Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23
Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off

TASK	RESULT
1. Check NO. 1 PTIT indicator (1).	If indicator (1) is loose or damaged, tighten or replace it as required.
2. Check NO. 2 PTIT Indicator (2).	If indicator (2) is loose or damaged, tighten or replace it as required.

FOLLOW-ON MAINTENANCE:
None



END OF TASK

INITIAL SETUP

Applicable Configurations:
Without 74

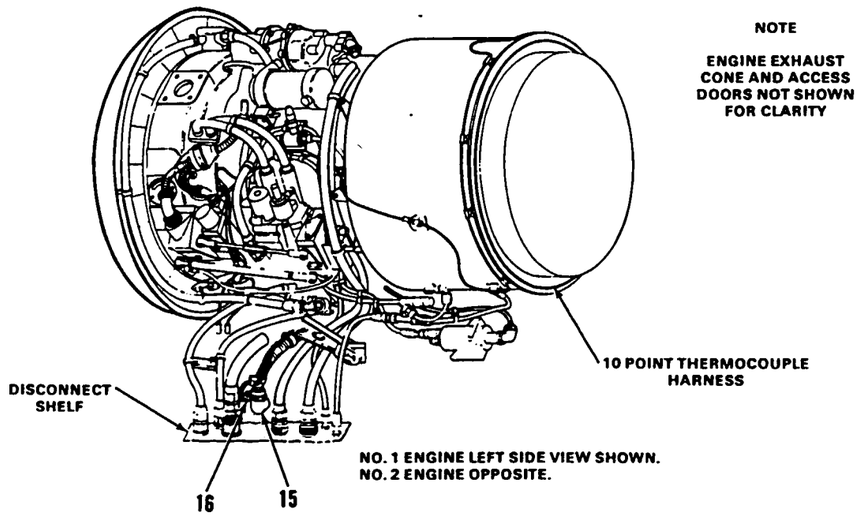
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Exhaust Gas Temperature Tester BH112HB-53,
NSN 4920-00-372-4593
T140 Test Harness

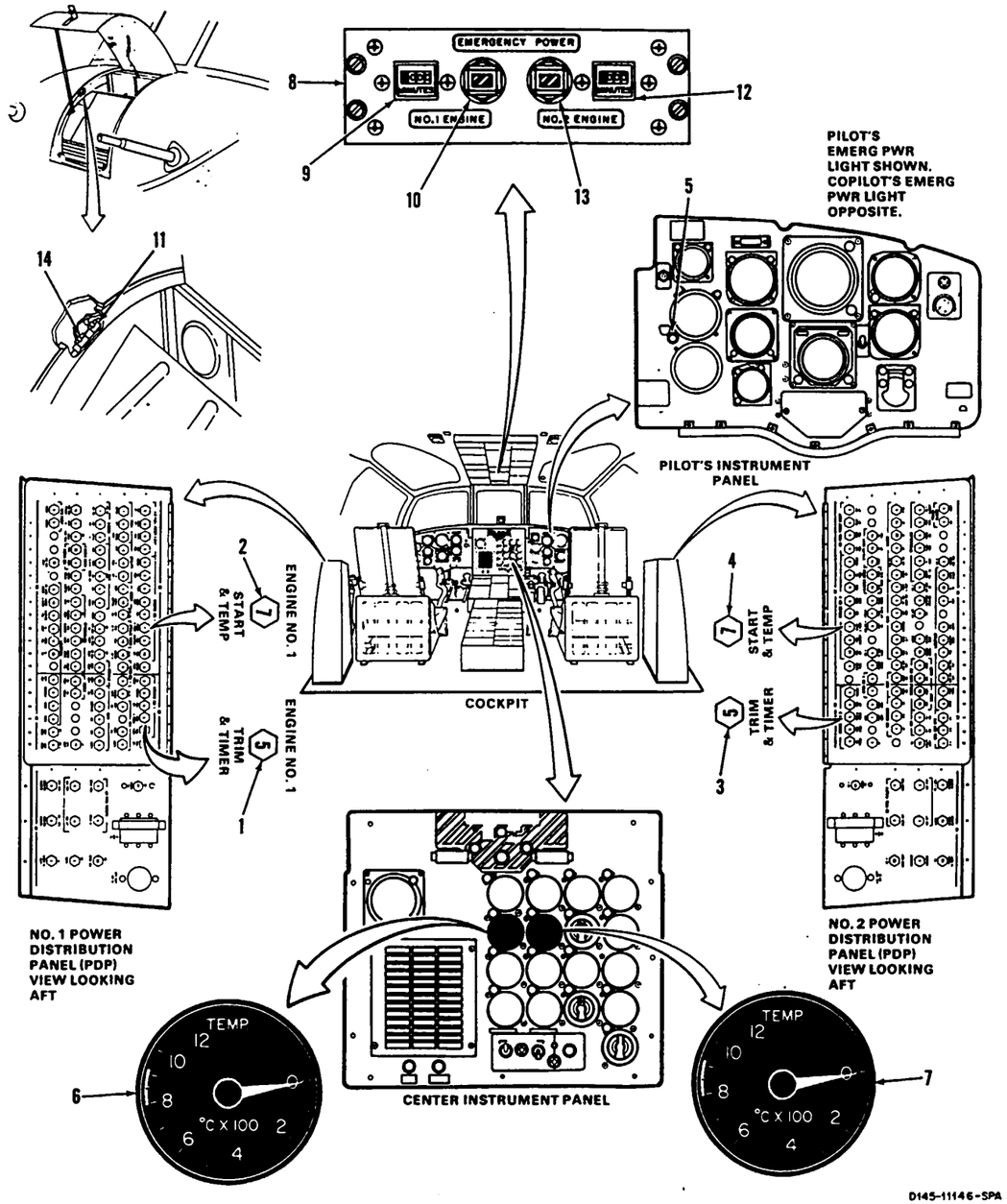
Materials:
None

Personnel Required:
Aircraft Electrician (2)
Rotary-Wing Aviator

References:
TM 55-1520-240-10
TM 55-1520-240-23
TM 55-4920-401-13

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power On
No. 1 Engine Work Platform Open
No. 1 Engine Lower Access Door Open
No. 2 Engine Work Platform Open
No. 2 Engine Lower Access Door Open
Visual Check of Power Turbine Inlet Temperature and Emergency Power Indicating System Performed (Task 8-5.2)





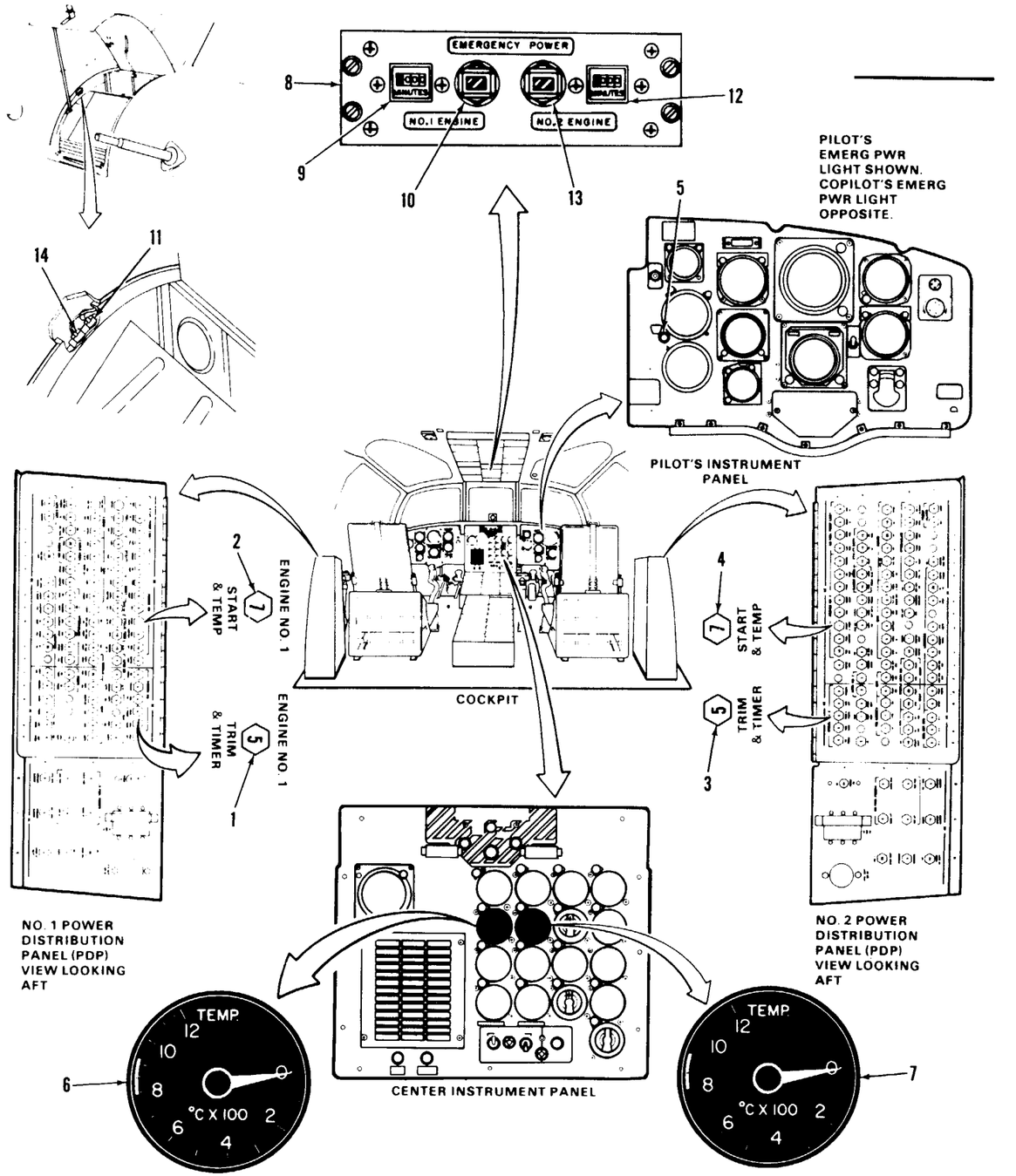
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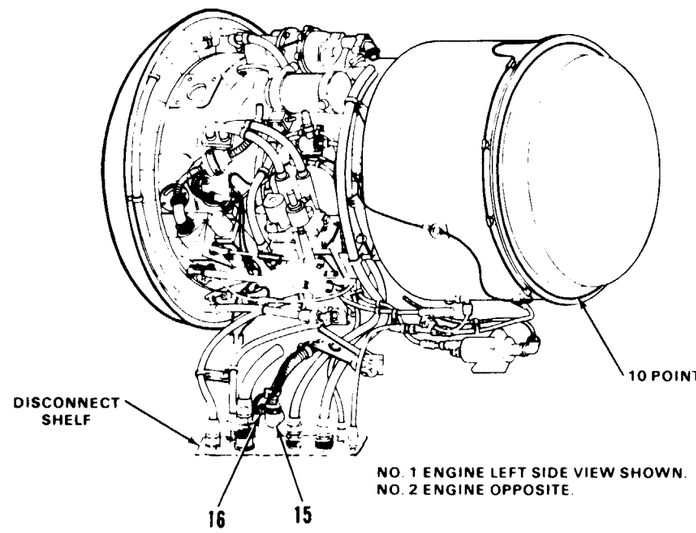
8-5.3 POWER TURBINE INLET TEMPERATURE SYSTEM OPERATIONAL CHECK AND EMERGENCY POWER INDICATING SYSTEM TEST (Continued)

TASK	RESULT
CHECK PTIT INDICATING SYSTEM	
1. **Check** that **ENGINE NO. 1 TRIM & TIMER circuit breaker (1)** is **closed.**	If circuit breaker (1) is open, close it. If it opens again, go to Task 4-6.3.
2. **Check** that **ENGINE NO. 1 START & TEMP circuit breaker (2)** is **closed.**	If circuit breaker (2) is open, close it. If it opens again, go to Task 4-4.4.
3. **Check** that **ENGINE NO. 2 TRIM & TIMER circuit breaker (3)** is **closed.**	If circuit breaker (3) is open close it. If it opens again, go to Task 4-6.3.
4. **Check** that **ENGINE NO. 2 START & TEMP circuit breaker (4)** is **closed.**	If circuit breaker (4) is open, close it. If it opens again, go to Task 4-4.4.
5. Momentarily **press copilot's EM ERG PWR light (5).**	Light (5) shall come on If not, go to Task 8-5.4.
6. Momentarily **press pilot's EM ERG PWR light (5).**	Light (5) shall come on. If not, go to Task 8-5.4.
7. Have pilot start engines and stabilize rotors at 100% rotor rpm.	
8. **Check NO. 1 ENGINE PTIT indicator (6).**	Indicator (6) shall read in green band. If not go to Task 8-5.5.
9. **Check NO. 2 ENGINE PTIT indicator (7).**	Indicator (7) shall read in green band. If not go to Task 8-5.6
TEST EMERGENCY POWER INDICATING SYSTEM	
WARNING **Do not reset striped flag unless proper log entry was made and any required engine inspection is completed. Striped flag indicates engine was operating in an overtemp condition and a log book entry must be made prior to next flight.**	
NOTE The timer records total minutes of engine overtemperature This information is used to schedule engine maintenance action.	
10. **Check pilot's and copilot's EM ERG PWR lights (5).**	Both lights (5) shall be out. If not, go to Task 8-5.7.
11. **Check EMERGENCY POWER panel (8).**	NO. 1 and NO. 2 ENGINE timers (9 and 12) shall not be operating. If either timer is operating, replace EMERGENCY POWER panel. NO. 1 and N0. 2 ENGINE flag indicators (10 and 13) shall be black. If not, reset NO. 1 or NO. 2 ENG FLAG RESET switches (11 and 14). If indicators do not reset to black, go to Task 8-5.8.
12. Have pilot shut down both engines	
CAUTION **The following procedure simulates engine overtemperature to check out indicator and timer circuits. The timer will operate, therefore, follow procedures closely to avoid excessive time being added to engine overtemperature time.**	
13. Disconnect plug (15) at NO. 1 ENGINE disconnect shelf. Connect cable from tester into receptacle (16) with test harness T140. Have helper observe NO. 1 ENGINE PTIT indicator (6). Increase millivolt output from tester until PTIT indication is 820°C. Check EMERGENCY POWER panel (9).	NO 1 ENGINE timer (9) shall not be operating. If it is, replace NO. 1 ENGINE PTIT indicator. NO 1 ENGINE flag indicator (10) shall be black. If it is striped, replace NO 1 ENGINE PTIT Indicator (6)

GO TO NEXT PAGE

8-5.3 POWER TURBINE INLET TEMPERATURE SYSTEM OPERATIONAL CHECK AND EMERGENCY POWER INDICATING SYSTEM TEST (Continued)





NOTE

ENGINE EXHAUST CONE AND ACCESS DOORS NOT SHOWN FOR CLARITY

NO. 1 ENGINE LEFT SIDE VIEW SHOWN. NO. 2 ENGINE OPPOSITE.

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TASK	RESULT
CAUTION **The following procedure simulates engine overtemperature to check out indicator and timer circuits. The timer will operate, therefore, follow procedures closely to avoid excessive time being added to engine overtemperature time.**	
14. Have helper observe NO. 1 ENGINE PTIT indicator (6). Increase millivolt output from tester until **NO. 1 ENGINE** timer (9) starts to operate.	NO. 1 ENGINE timer (9) shall operate when PTIT indication is between 890°C and 910°C. If not. go to Task 8-5.9. NO. 1 ENGINE flag indicator (10) shall be striped. If not, go to Task 8-5.10. Pilot's and copilot's EMERG PWR lights (5) shall be on. If not. go to Task 8-5.1.1.
15. Immediately reduce tester output until NO. 1 ENGINE PTIT indication is between 800°C and 820°C.	NO. 1 ENGINE timer (9) shall stop. If it does not. replace NO. 1 ENGINE PTIT indicator. NO. 1 ENGINE flag indicator (10) shall remain striped. If not, replace NO. 1 ENGINE PTIT indicator. Pilot's and copilot's EMERG PWR lights (5) shall be out. If not, replace NO. 1 ENGINE PTIT indicator.
16. Disconnect test harness from plug (15). Connect plug (15) to receptacle (16).	
17. Disconnect plug (15) at NO. 2 ENGINE disconnect shelf. Connect cable from tester into receptacle (1 6) with test harness T140. Have helper observe NO. 2 ENGINE PTIT indicator (6). Increase millivolt output from tester until PTIT indication is 8200C. Check EMERG POWER panel (9).	NO. 2 ENGINE timer (12) shall not be operating. If it is, replace NO. 2 ENGINE PTIT indicator. NO. 2 ENGINE flag indicator (13) shall be black. If it is striped, replace NO. 2 ENGINE PTIT indicator.

TASK	RESULT
	Pilot's and copilot's EMERG PWR lights (5) shall be out. If not, replace NO. 1 ENGINE PTIT indicator (6).
18. Have helper observe **NO. 2 ENGINE** PTIT indicator (6). Increase millivolt output from tester until NO. 2 ENGINE timer (12) starts to operate.	Pilot's and copilot's EMERG PWR lights (5) shall be out. If not, replace NO. 1 ENGINE PTIT indicator (6). NO. 2 ENGINE timer (12) shall operate when PTIT indication is between 890°C and 910°C. If not. go to Task 8-5.12.
19. Immediately reduce tester output until NO. 2 ENGINE PTIT indication is between 800°C and 820°C.	NO. 2 ENGINE timer (12) shall stop. If it does not, replace NO. 2 ENGINE PTIT indicator. NO. 2 ENGINE flag indicator (13) shall remain striped. If not, replace NO. 2 ENGINE PTIT indicator. Pilot's and copilot's EMERG PWR lights (5) shall be out. If not, replace NO. 2 ENGINE PTIT indicator.
20. Disconnect test harness from plug (15). Connect plug (15) to receptacle (16).	
21. **Reset NO. 1 and NO. 2 ENGINE FLAG RESET switches (11 and 14).**	

FOLLOW-ON MAINTENANCE
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off
Close No. 1 Engine Work Platform
Close No. 1 Engine Lower Access Door
Close No. 2 Engine Work Platform
Close No. 2 Engine Lower Access Panel

END OF TASK

8-5.4 NO. 1 OR NO. 2 ENGINE EMERGENCY POWER LIGHTS WILL NOT COME ON WHEN PRESSED TO TEST

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
Without 74

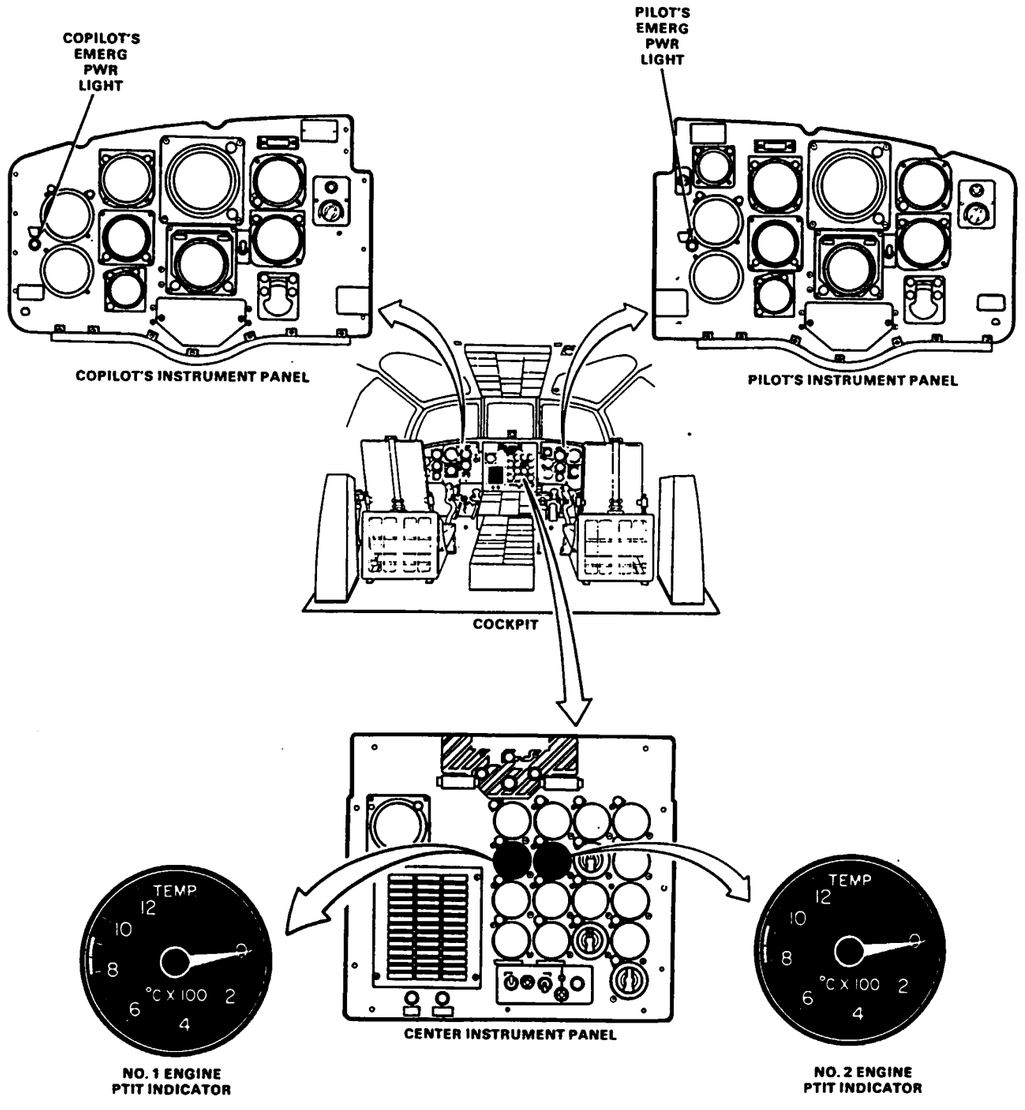
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:
None

Personnel Required:
Aircraft Electrician

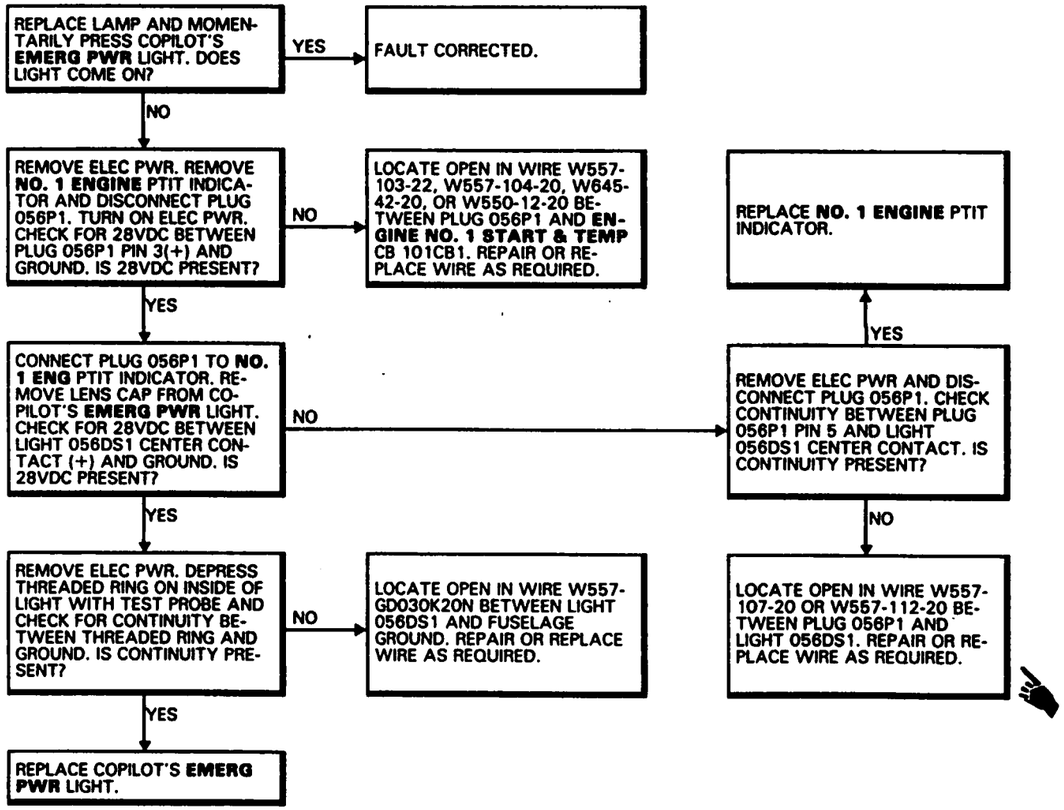
References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power On

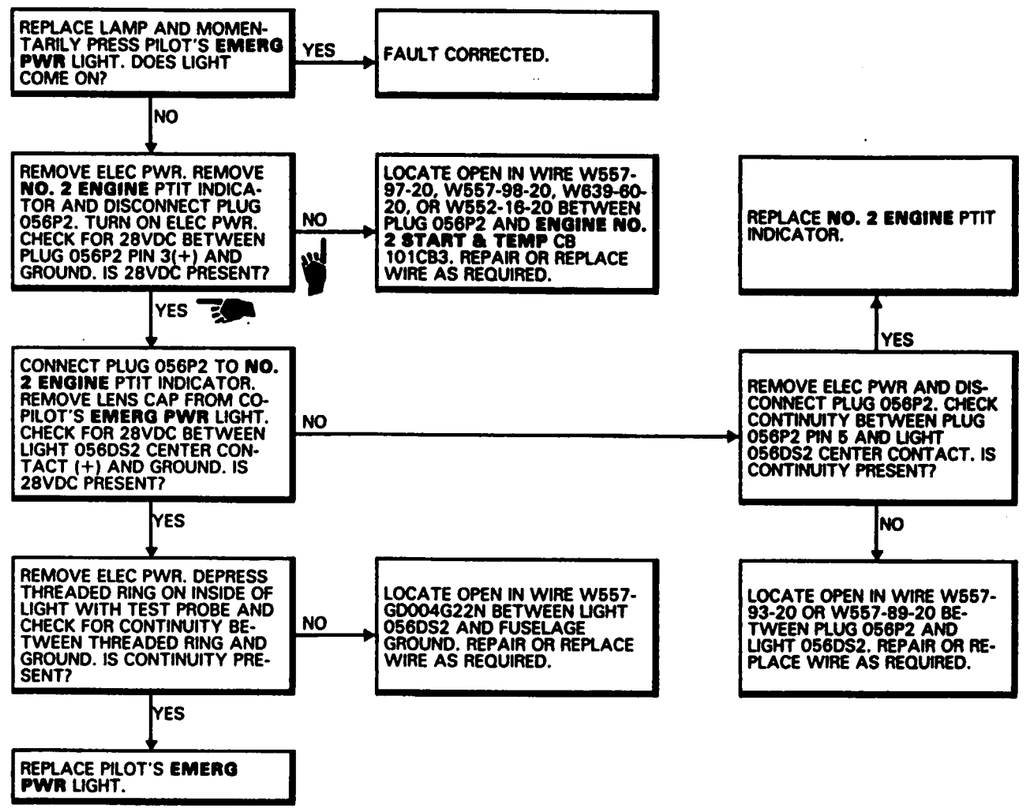


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NO. 1 ENGINE EMERGENCY POWER LIGHT WILL NOT COME ON WHEN PRESSED TO TEST



NO. 2 ENGINE EMERGENCY POWER LIGHT WILL NOT COME ON WHEN PRESSED TO TEST



END OF TASK

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:

Without 74

Tools:

Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Aircraft Powerplant Repairer's Tool Kit
NSN 5180-00-323-4944

Materials:

None

Personnel Required:

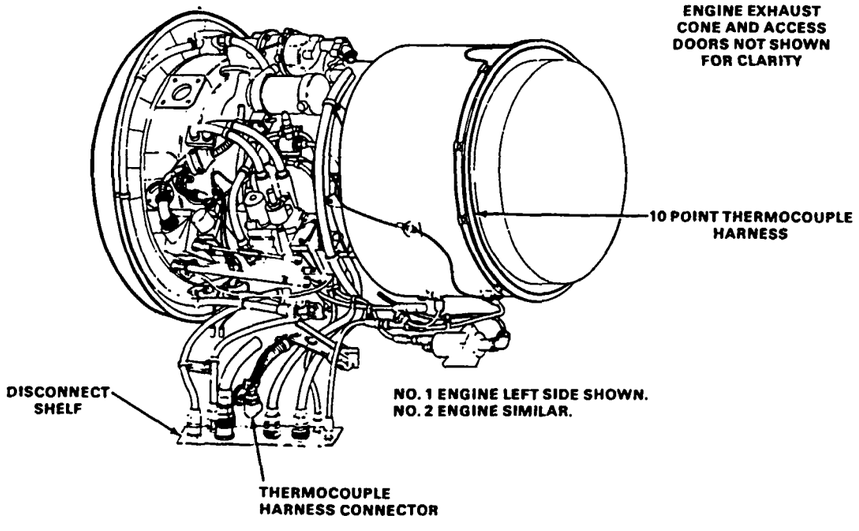
Aircraft Electrician
Aircraft Powerplant Repairer

References:

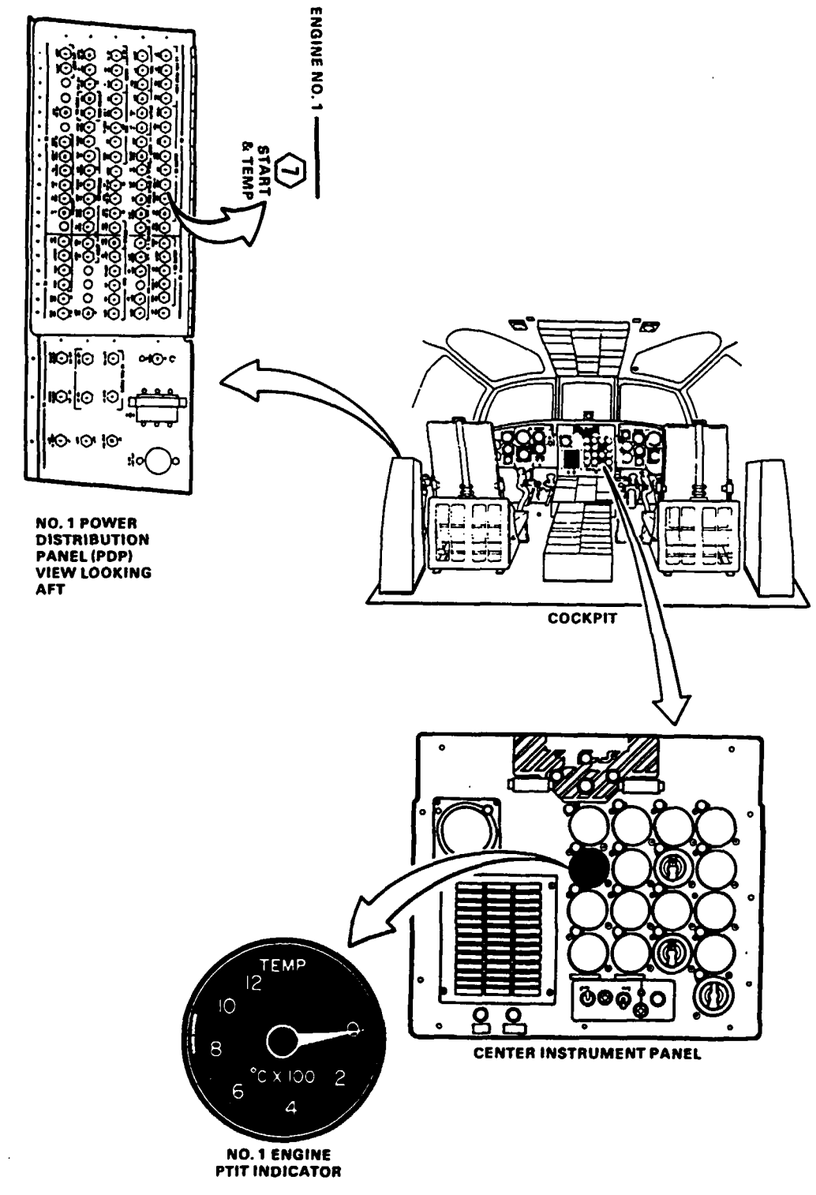
TM 55-1520-240-23
TM 55-2840-254-23

Equipment Condition:

TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power On
No. 1 Engine Work Platform Open
No. 1 Engine Upper and Lower Access Covers Open

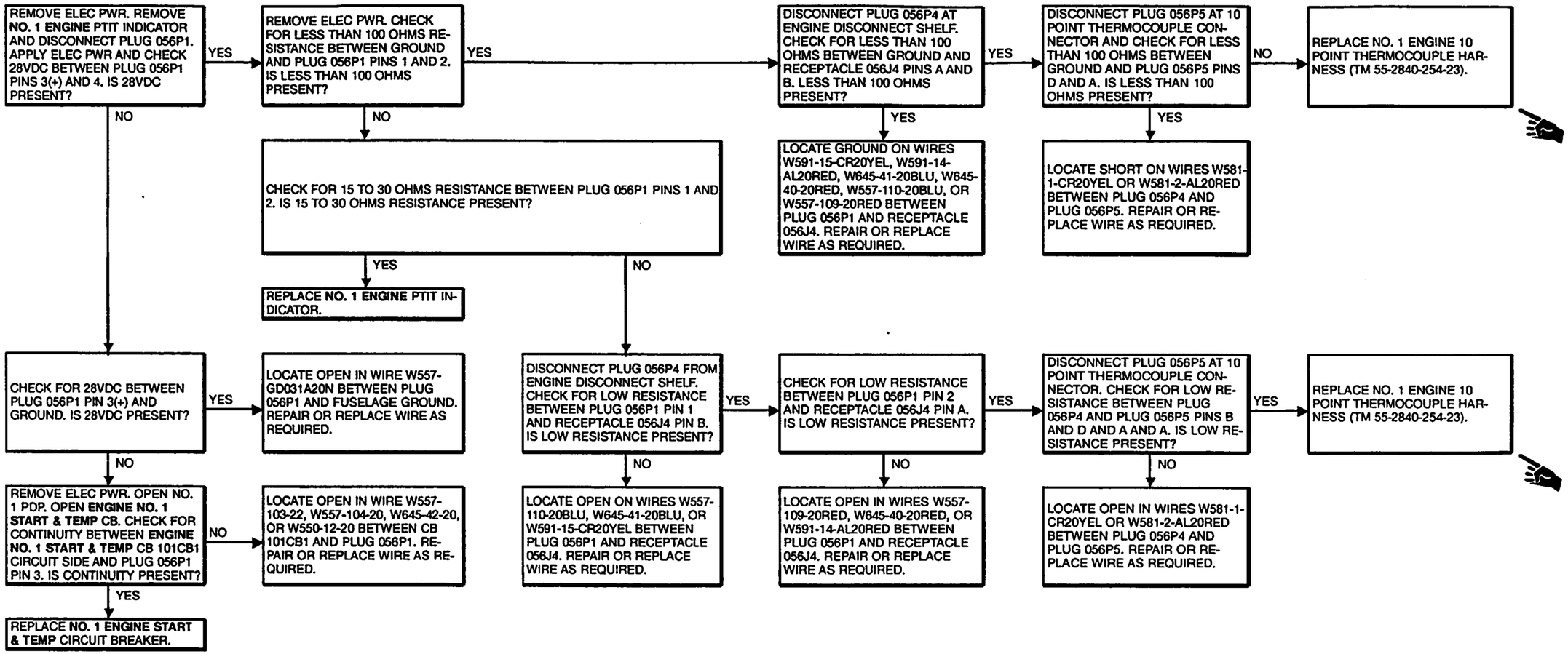


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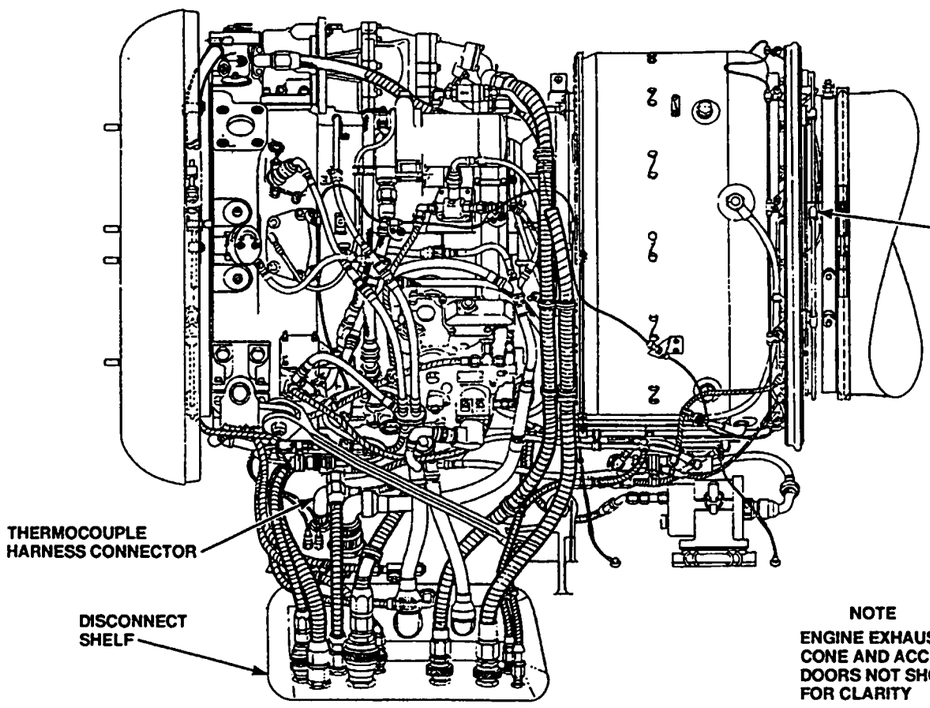
GO NEXT PAGE


REMOVE ELEC PWR. REMOVE NO. 1 ENGINE PTIT INDICATOR AND DISCONNECT PLUG 056P1. APPLY ELEC PWR AND CHECK 28VDC BETWEEN PLUG 056P1 PINS 3(+) AND 4. IS 28VDC PRESENT?
YES
REMOVE ELEC PWR. CHECK FOR LESS THAN 100 OHMS RESISTANCE BETWEEN GROUND AND PLUG 056P1 PINS 1 AND 2. IS LESS THAN 100 OHMS PRESENT?
YES
DISCONNECT PLUG 056P4 AT ENGINE DISCONNECT SHELF. CHECK FOR LESS THAN 100 OHMS BETWEEN GROUND AND RECEPTACLE 056J4 PINS A AND B. LESS THAN 100 OHMS PRESENT?
YES
DISCONNECT PLUG 056P5 AT 10 POINT THERMOCOUPLE CONNECTOR AND CHECK FOR LESS THAN 100 OHMS BETWEEN GROUND AND PLUG 056P5 PINS D AND A. IS LESS THAN 100 OHMS PRESENT?
NO
REPLACE NO. 1 ENGINE 10 POINT THERMOCOUPLE HARNESS (TM 55-2840-254-23).
NO
CHECK FOR 15 TO 30 OHMS RESISTANCE BETWEEN PLUG 056P1 PINS 1 AND 2. IS 15 TO 30 OHMS RESISTANCE PRESENT?
YES
LOCATE GROUND ON WIRES W591-15-CR20YEL, W591-14-AL20RED, W645-41-20BLU, W645-40-20RED, W557-110-20BLU, OR W557-109-20RED BETWEEN PLUG 056P1 AND RECEPTACLE 056J4. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
LOCATE SHORT ON WIRES W581-1-CR20YEL OR W581-2-AL20RED BETWEEN PLUG 056P4 AND PLUG 056P5. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
REPLACE NO. 1 ENGINE PTIT INDICATOR.
NO
CHECK FOR 28VDC BETWEEN PLUG 056P1 PIN 3(+) AND GROUND. IS 28VDC PRESENT?
YES
LOCATE OPEN IN WIRE W557-GD031A20N BETWEEN PLUG 056P1 AND FUSELAGE GROUND. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
DISCONNECT PLUG 056P4 FROM ENGINE DISCONNECT SHELF. CHECK FOR LOW RESISTANCE BETWEEN PLUG 056P1 PIN 1 AND RECEPTACLE 056J4 PIN B. IS LOW RESISTANCE PRESENT?
YES
CHECK FOR LOW RESISTANCE BETWEEN PLUG 056P1 PIN 2 AND RECEPTACLE 056J4 PIN A. IS LOW RESISTANCE PRESENT?
YES
DISCONNECT PLUG 056P5 AT 10 POINT THERMOCOUPLE CONNECTOR. CHECK FOR LOW RESISTANCE BETWEEN PLUG 056P4 AND PLUG 056P5 PINS B AND D AND A AND A. IS LOW RESISTANCE PRESENT?
YES
REPLACE NO. 1 ENGINE 10 POINT THERMOCOUPLE HARNESS (TM 55-2840-254-23).
NO
REMOVE ELEC PWR. OPEN NO. 1 PDP. OPEN ENGINE NO. 1 START & TEMP CB. CHECK FOR CONTINUITY BETWEEN ENGINE NO. 1 START & TEMP CB 101CB1 CIRCUIT SIDE AND PLUG 056P1 PIN 3. IS CONTINUITY PRESENT?
NO
LOCATE OPEN IN WIRE W557-103-22, W557-104-20, W645-42-20, OR W550-12-20 BETWEEN CB 101CB1 AND PLUG 056P1. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
REPLACE NO. 1 ENGINE START & TEMP CIRCUIT BREAKER.
NO
LOCATE OPEN ON WIRES W557-110-20BLU, W645-41-20BLU, OR W591-15-CR20YEL BETWEEN PLUG 056P1 AND RECEPTACLE 056J4. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
LOCATE OPEN IN WIRES W557-109-20RED, W645-40-20RED, OR W591-14-AL20RED BETWEEN PLUG 056P1 AND RECEPTACLE 056J4. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
LOCATE OPEN IN WIRES W581-1-CR20YEL OR W581-2-AL20RED BETWEEN PLUG 056P4 AND PLUG 056P5. REPAIR OR REPLACE WIRE AS REQUIRED.

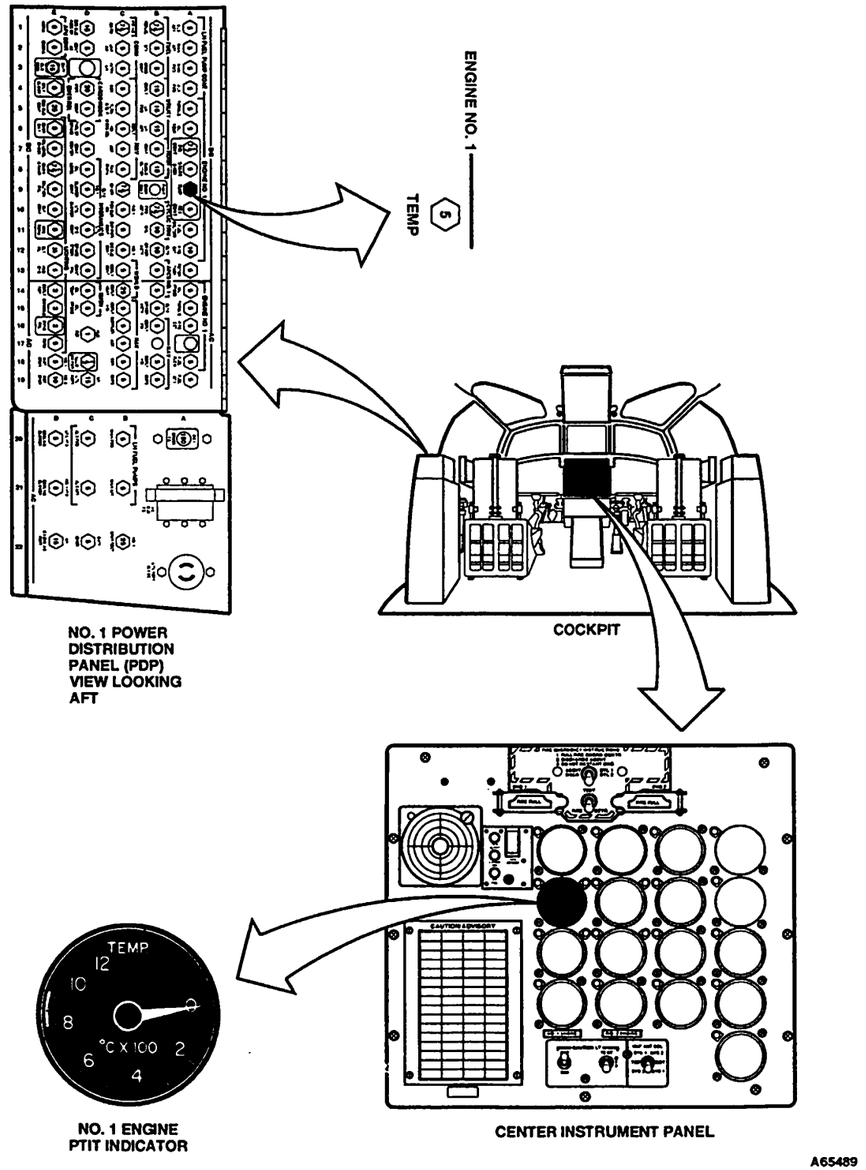
END OF TASK

FAULT ISOLATION PROCEDURE
INITIAL SETUP
Applicable Configurations:
With 74
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter
Materials:
None
Personnel Required:
Aircraft Electrician (2)

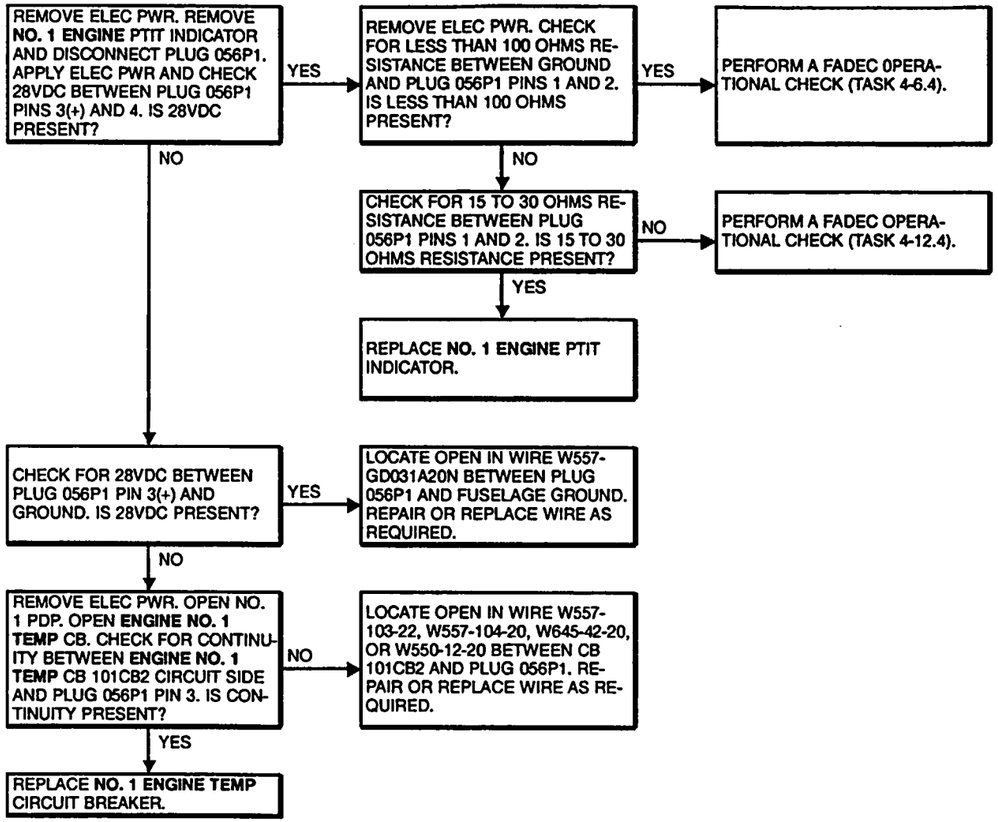
References:
TM 55-1520-240-23
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power On
No. 1 Engine Work Platform Open
No. 1 Engine Upper and Lower Access Covers Open



NOTE
ENGINE EXHAUST CONE AND ACCESS DOORS NOT SHOWN FOR CLARITY



GO TO NEXT PAGE


REMOVE ELEC PWR. REMOVE NO. 1 ENGINE PTIT INDICATOR AND DISCONNECT PLUG 056P1. APPLY ELEC PWR AND CHECK 28VDC BETWEEN PLUG 056P1 PINS 3(+) AND 4. IS 28VDC PRESENT?
YES
REMOVE ELEC PWR. CHECK FOR LESS THAN 100 OHMS RESISTANCE BETWEEN GROUND AND PLUG 056P1 PINS 1 AND 2. IS LESS THAN 100 OHMS PRESENT?
YES
PERFORM A FADEC 0PERATIONAL CHECK (TASK 4-6.4).
NO
CHECK FOR 15 TO 30 OHMS RESISTANCE BETWEEN PLUG 056P1 PINS 1 AND 2. IS 15 TO 30 OHMS RESISTANCE PRESENT?
NO
PERFORM A FADEC OPERATIONAL CHECK (TASK 4-12.4).
YES
REPLACE NO. 1 ENGINE PTIT INDICATOR.
NO
CHECK FOR 28VDC BETWEEN PLUG 056P1 PIN 3(+) AND GROUND. IS 28VDC PRESENT?
YES
LOCATE OPEN IN WIRE W557-GD031A20N BETWEEN PLUG 056P1 AND FUSELAGE GROUND. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
REMOVE ELEC PWR. OPEN NO. 1 PDP. OPEN ENGINE NO. 1 TEMP CB. CHECK FOR CONTINUITY BETWEEN ENGINE NO. 1 TEMP CB 101CB2 CIRCUIT SIDE AND PLUG 056P1 PIN 3. IS CONTINUITY PRESENT?
NO
LOCATE OPEN IN WIRE W557-103-22, W557-104-20, W645-42-20, OR W550-12-20 BETWEEN CB 101CB2 AND PLUG 056P1. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
REPLACE NO. 1 ENGINE TEMP CIRCUIT BREAKER.

END OF TASK

8-5.6 NO. 2 ENGINE PTIT INDICATOR DOES NOT INDICATE IN GREEN BAND

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
Without 74

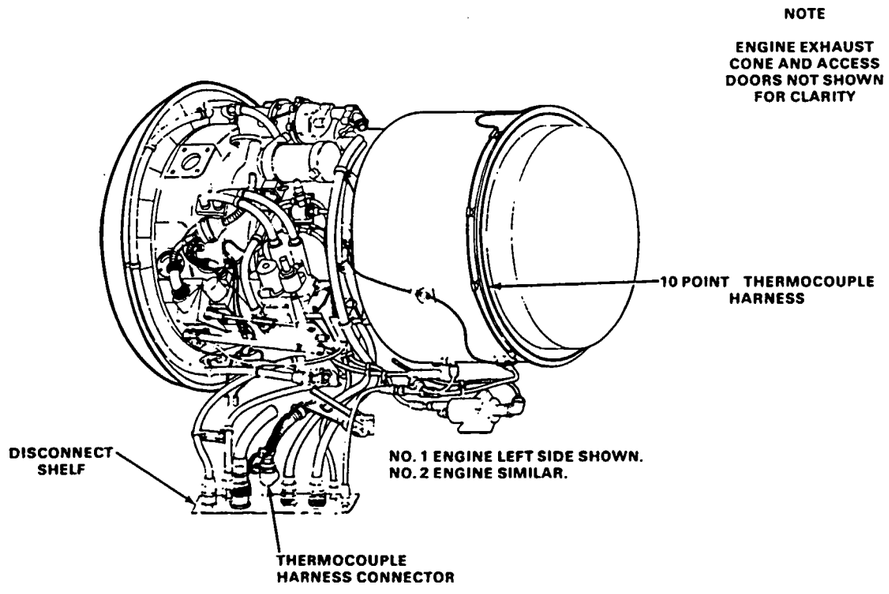
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:
None

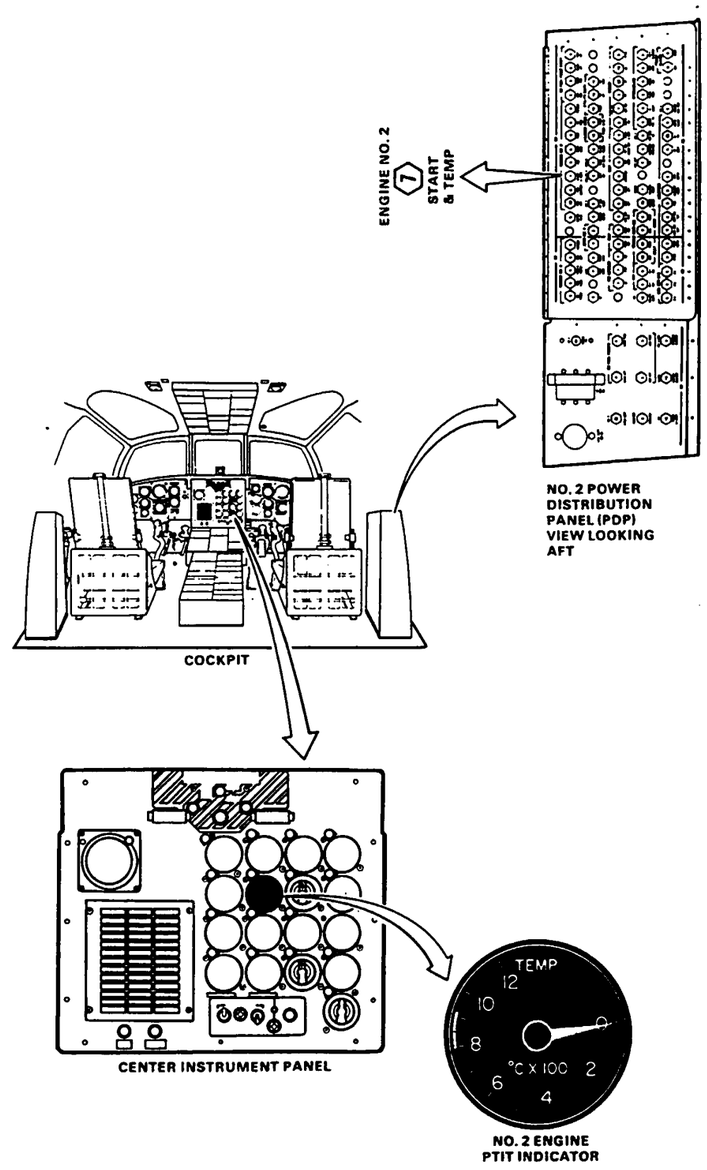
Personnel Required:
Aircraft Electrician (2)

Personnel Required:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power On
No. 2 Engine Work Platform Open
No. 2 Engine Upper and Lower Access Doors Open

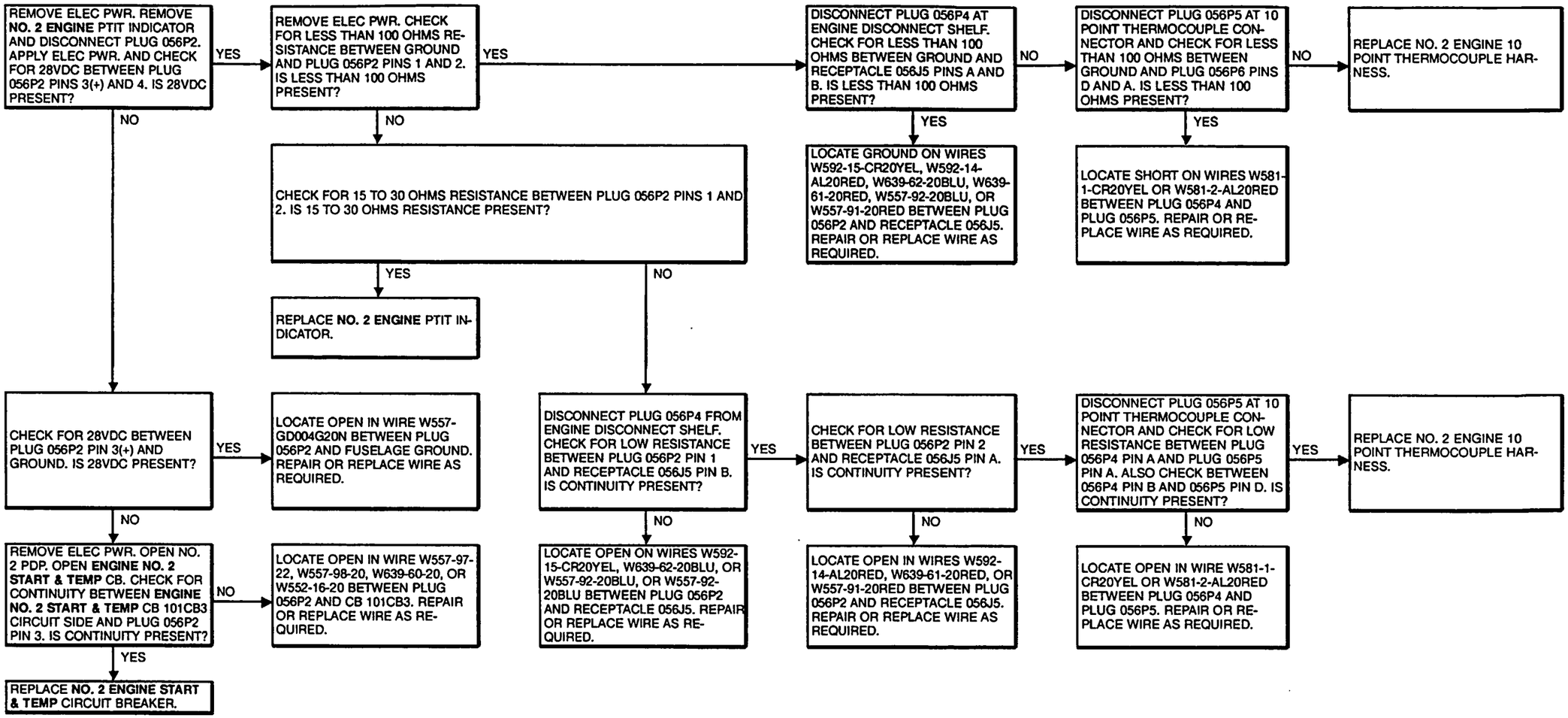


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REMOVE ELEC PWR. REMOVE NO. 2 ENGINE PTIT INDICATOR AND DISCONNECT PLUG 056P2. APPLY ELEC PWR. AND CHECK FOR 28VDC BETWEEN PLUG 056P2 PINS 3(+) AND 4. IS 28VDC PRESENT?
YES
REMOVE ELEC PWR. CHECK FOR LESS THAN 100 OHMS RESISTANCE BETWEEN GROUND AND PLUG 056P2 PINS 1 AND 2. IS LESS THAN 100 OHMS PRESENT?
YES
DISCONNECT PLUG 056P4 AT ENGINE DISCONNECT SHELF. CHECK FOR LESS THAN 100 OHMS BETWEEN GROUND AND RECEPTACLE 056J5 PINS A AND B. IS LESS THAN 100 OHMS PRESENT?
NO
DISCONNECT PLUG 056P5 AT 10 POINT THERMOCOUPLE CONNECTOR AND CHECK FOR LESS THAN 100 OHMS BETWEEN GROUND AND PLUG 056P6 PINS D AND A. IS LESS THAN 100 OHMS PRESENT?
NO
REPLACE NO. 2 ENGINE 10 POINT THERMOCOUPLE HARNESS.
NO
CHECK FOR 15 TO 30 OHMS RESISTANCE BETWEEN PLUG 056P2 PINS 1 AND 2. IS 15 TO 30 OHMS RESISTANCE PRESENT?
YES
LOCATE GROUND ON WIRES W592-15-CR20YEL, W592-14-AL20RED, W639-62-20BLU, W639-61-20RED, W557-92-20BLU, OR W557-91-20RED BETWEEN PLUG 056P2 AND RECEPTACLE 056J5. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
LOCATE SHORT ON WIRES W581-1-CR20YEL OR W581-2-AL20RED BETWEEN PLUG 056P4 AND PLUG 056P5. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
REPLACE NO. 2 ENGINE PTIT INDICATOR.
NO
CHECK FOR 28VDC BETWEEN PLUG 056P2 PIN 3(+) AND GROUND. IS 28VDC PRESENT?
YES
LOCATE OPEN IN WIRE W557-GD004G20N BETWEEN PLUG 056P2 AND FUSELAGE GROUND. REPAIR OR REPLACE WIRE AS REQUIRED.
DISCONNECT PLUG 056P4 FROM ENGINE DISCONNECT SHELF. CHECK FOR LOW RESISTANCE BETWEEN PLUG 056P2 PIN 1 AND RECEPTACLE 056J5 PIN B. IS CONTINUITY PRESENT?
YES
CHECK FOR LOW RESISTANCE BETWEEN PLUG 056P2 PIN 2 AND RECEPTACLE 056J5 PIN A. IS CONTINUITY PRESENT?
YES
DISCONNECT PLUG 056P5 AT 10 POINT THERMOCOUPLE CONNECTOR AND CHECK FOR LOW RESISTANCE BETWEEN PLUG 056P4 PIN A AND PLUG 056P5 PIN A. ALSO CHECK BETWEEN 056P4 PIN B AND 056P5 PIN D. IS CONTINUITY PRESENT?
YES
REPLACE NO. 2 ENGINE 10 POINT THERMOCOUPLE HARNESS.
NO
REMOVE ELEC PWR. OPEN NO. 2 PDP. OPEN ENGINE NO. 2 START & TEMP CB. CHECK FOR CONTINUITY BETWEEN ENGINE NO. 2 START & TEMP CB 101CB3 CIRCUIT SIDE AND PLUG 056P2 PIN 3. IS CONTINUITY PRESENT?
NO
LOCATE OPEN IN WIRE W557-97-22, W557-98-20, W639-60-20, OR W552-16-20 BETWEEN PLUG 056P2 AND CB 101CB3. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
LOCATE OPEN ON WIRES W592-15-CR20YEL, W639-62-20BLU, OR W557-92-20BLU, OR W557-92-20BLU BETWEEN PLUG 056P2 AND RECEPTACLE 056J5. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
LOCATE OPEN IN WIRES W592-14-AL20RED, W639-61-20RED, OR W557-91-20RED BETWEEN PLUG 056P2 AND RECEPTACLE 056J5. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
LOCATE OPEN IN WIRE W581-1-CR20YEL OR W581-2-AL20RED BETWEEN PLUG 056P4 AND PLUG 056P5. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
REPLACE NO. 2 ENGINE START & TEMP CIRCUIT BREAKER.

END OF TASK

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
With 74

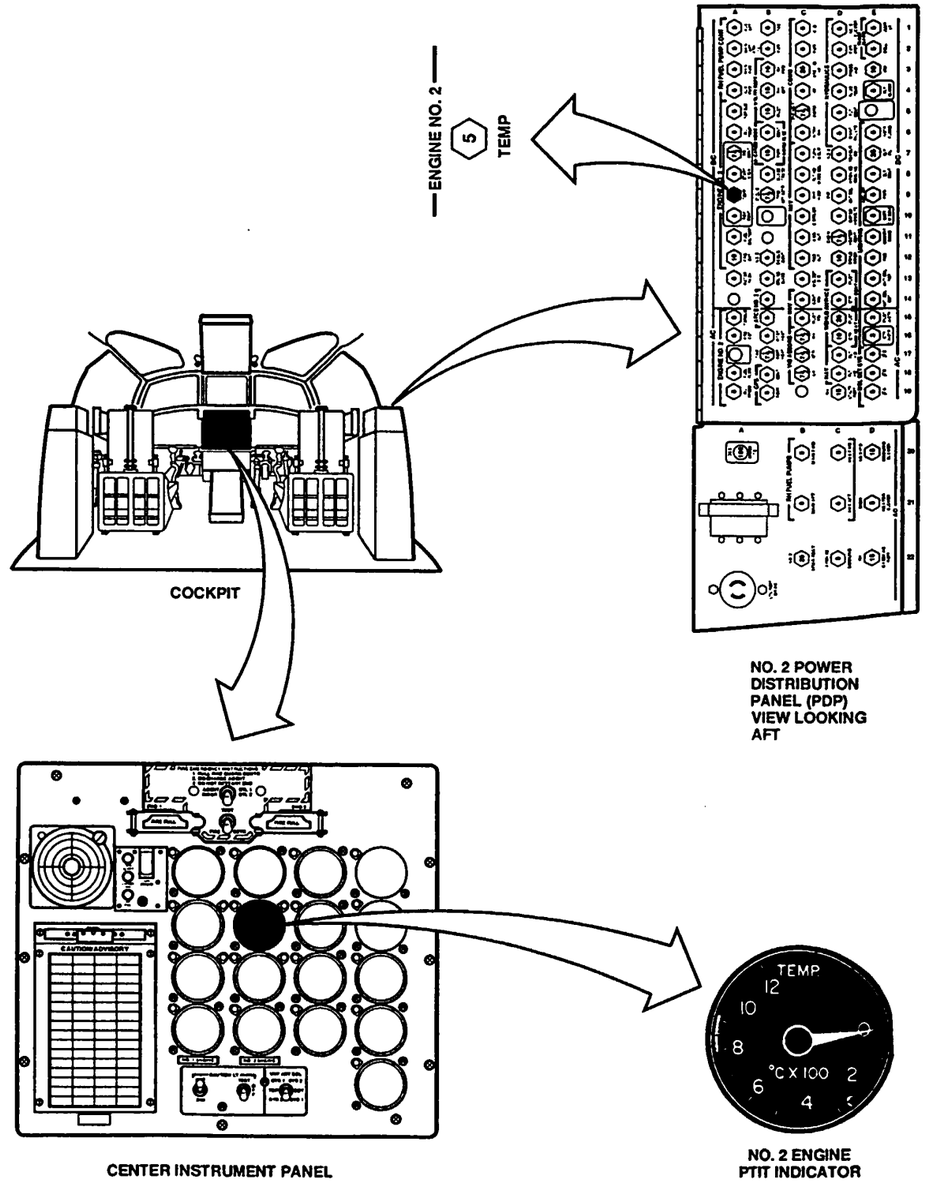
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:
None

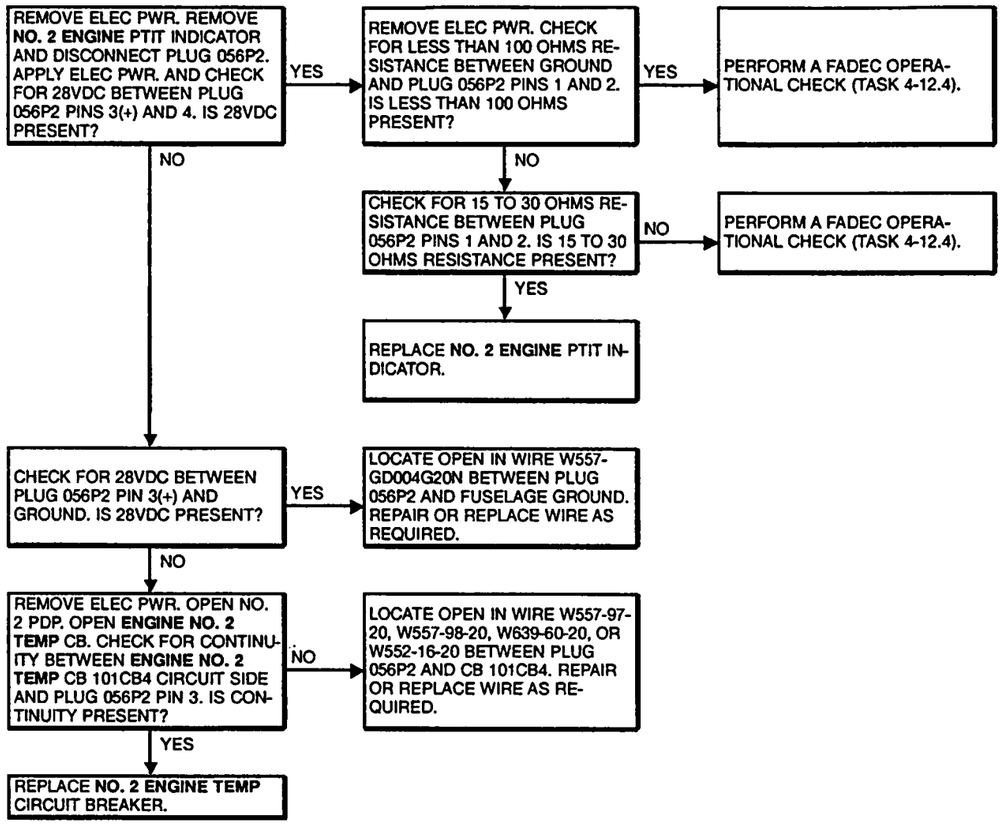
Personnel Required:
Aircraft Electrician (2)

Personnel Required:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power On
No. 2 Engine Work Platform Open
No. 2 Engine Upper and Lower Access Doors Open



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REMOVE ELEC PWR. REMOVE NO. 2 ENGINE PTIT INDICATOR AND DISCONNECT PLUG 056P2. APPLY ELEC PWR. AND CHECK FOR 28VDC BETWEEN PLUG 056P2 PINS 3(+) AND 4. IS 28VDC PRESENT?
YES
REMOVE ELEC PWR. CHECK FOR LESS THAN 100 OHMS RESISTANCE BETWEEN GROUND AND PLUG 056P2 PINS 1 AND 2. IS LESS THAN 100 OHMS PRESENT?
YES
PERFORM A FADEC OPERATIONAL CHECK (TASK 4-12.4).
NO
CHECK FOR 15 TO 30 OHMS RESISTANCE BETWEEN PLUG 056P2 PINS 1 AND 2. IS 15 TO 30 OHMS RESISTANCE PRESENT?
NO
PERFORM A FADEC OPERATIONAL CHECK (TASK 4-12.4).
YES
REPLACE NO. 2 ENGINE PTIT INDICATOR.
NO
CHECK FOR 28VDC BETWEEN PLUG 056P2 PIN 3(+) AND GROUND. IS 28VDC PRESENT?
YES
LOCATE OPEN IN WIRE W557-GD004G20N BETWEEN PLUG 056P2 AND FUSELAGE GROUND. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
REMOVE ELEC PWR. OPEN NO. 2 PDP. OPEN ENGINE NO. 2 TEMP CB. CHECK FOR CONTINUITY BETWEEN ENGINE NO. 2 TEMP CB 101CB4 CIRCUIT SIDE AND PLUG 056P2 PIN 3. IS CONTINUITY PRESENT?
NO
LOCATE OPEN IN WIRE W557-97-20, W557-98-20, W639-60-20, OR W552-16-20 BETWEEN PLUG 056P2 AND CB 101CB4. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
REPLACE NO. 2 ENGINE TEMP CIRCUIT BREAKER.

END OF TASK

8-5.7 PILOT'S AND COPILOT'S EMERGENCY POWER LIGHTS ON, ROTORS AT 100 PERCENT ROTOR RPM, BOTH ENGINES OPERATING

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
- Without 74

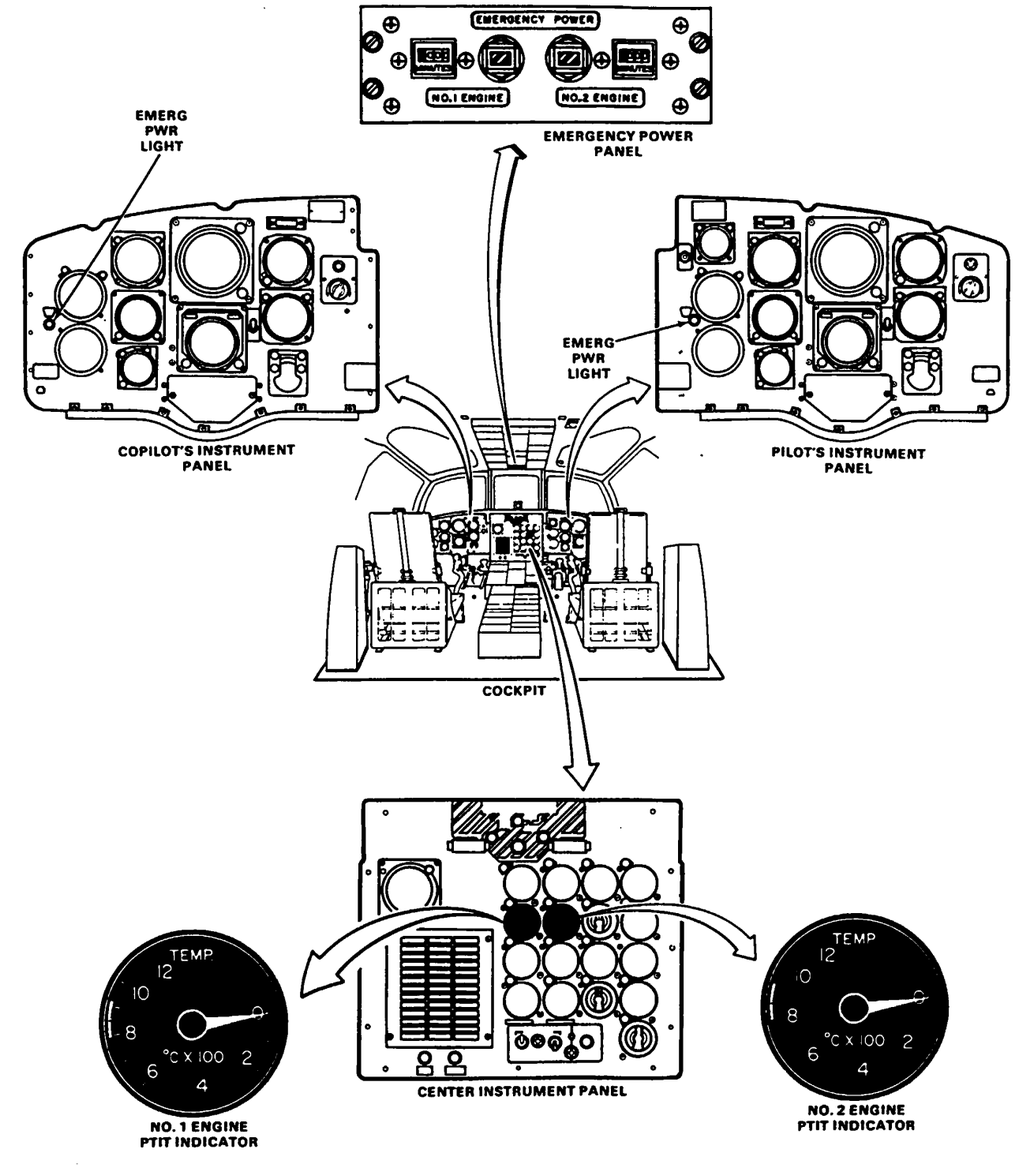
Tools:
- Electrical Repairer's Tool Kit, NSN 5180-00-323-4915
- Multimeter

Materials:
- None

Personnel Required:
- Aircraft Electrician

References:
- TM 55-1520-240-23

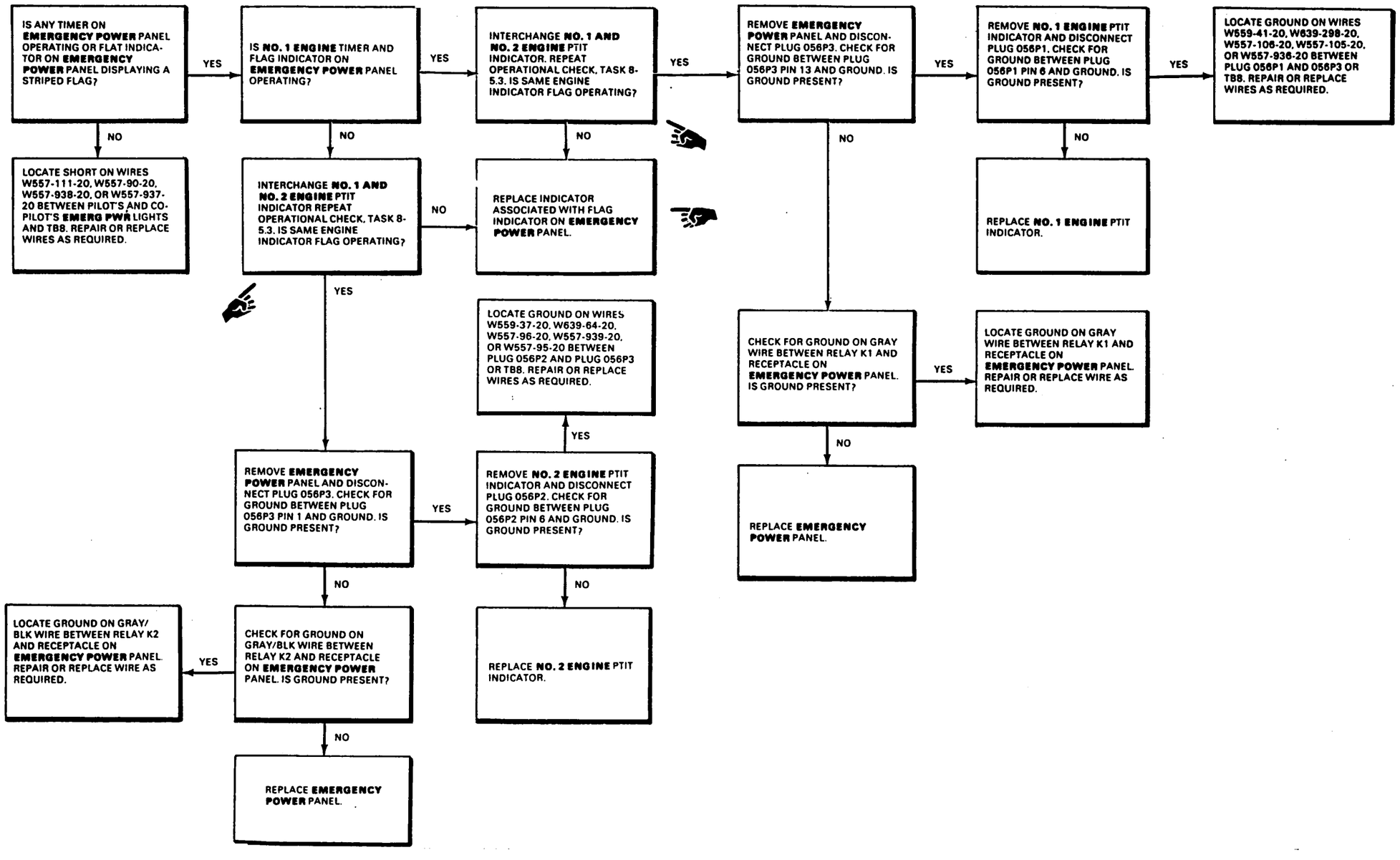
Equipment Condition:
- TM 55-1520-240-23:
  - Battery Disconnected
  - Electrical Power Off
  - Hydraulic Power Off



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IS ANY TIMER ON EMERGENCY POWER PANEL OPERATING OR FLAT INDICATOR ON EMERGENCY POWER PANEL DISPLAYING A STRIPED FLAG?
YES
NO
LOCATE SHORT ON WIRES W557-111-20, W557-90-20, W557-938-20, OR W557-937-20 BETWEEN PILOT'S AND COPILOT'S EMERG PWR LIGHTS AND TB8. REPAIR OR REPLACE WIRES AS REQUIRED.
IS NO. 1 ENGINE TIMER AND FLAG INDICATOR ON EMERGENCY POWER PANEL OPERATING?
YES
NO
INTERCHANGE NO. 1 AND NO. 2 ENGINE PTIT INDICATOR REPEAT OPERATIONAL CHECK, TASK 8-5.3. IS SAME ENGINE INDICATOR FLAG OPERATING?
NO
YES
REPLACE INDICATOR ASSOCIATED WITH FLAG INDICATOR ON EMERGENCY POWER PANEL.
INTERCHANGE NO. 1 AND NO. 2 ENGINE PTIT INDICATOR REPEAT OPERATIONAL CHECK, TASK 8-5.3. IS SAME ENGINE INDICATOR FLAG OPERATING?
YES
NO
LOCATE GROUND ON WIRES W559-37-20, W639-64-20, W557-96-20, W557-939-20, OR W557-95-20 BETWEEN PLUG 056P2 AND PLUG 056P3 OR TB8. REPAIR OR REPLACE WIRES AS REQUIRED.
YES
REMOVE EMERGENCY POWER PANEL AND DISCONNECT PLUG 056P3. CHECK FOR GROUND BETWEEN PLUG 056P3 PIN 1 AND GROUND. IS GROUND PRESENT?
YES
REMOVE NO. 2 ENGINE PTIT INDICATOR AND DISCONNECT PLUG 056P2. CHECK FOR GROUND BETWEEN PLUG 056P2 PIN 6 AND GROUND. IS GROUND PRESENT?
NO
NO
LOCATE GROUND ON GRAY/BLK WIRE BETWEEN RELAY K2 AND RECEPTACLE ON EMERGENCY POWER PANEL. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
CHECK FOR GROUND ON GRAY/BLK WIRE BETWEEN RELAY K2 AND RECEPTACLE ON EMERGENCY POWER PANEL. IS GROUND PRESENT?
NO
REPLACE EMERGENCY POWER PANEL.
REPLACE NO. 2 ENGINE PTIT INDICATOR.
REMOVE EMERGENCY POWER PANEL AND DISCONNECT PLUG 056P3. CHECK FOR GROUND BETWEEN PLUG 056P3 PIN 13 AND GROUND. IS GROUND PRESENT?
YES
NO
REMOVE NO. 1 ENGINE PTIT INDICATOR AND DISCONNECT PLUG 056P1. CHECK FOR GROUND BETWEEN PLUG 056P1 PIN 6 AND GROUND. IS GROUND PRESENT?
YES
NO
LOCATE GROUND ON WIRES W559-41-20, W639-298-20, W557-106-20, W557-105-20, OR W557-936-20 BETWEEN PLUG 056P1 AND 056P3 OR TB8. REPAIR OR REPLACE WIRES AS REQUIRED.
REPLACE NO. 1 ENGINE PTIT INDICATOR.
CHECK FOR GROUND ON GRAY WIRE BETWEEN RELAY K1 AND RECEPTACLE ON EMERGENCY POWER PANEL. IS GROUND PRESENT?
YES
NO
LOCATE GROUND ON GRAY WIRE BETWEEN RELAY K1 AND RECEPTACLE ON EMERGENCY POWER PANEL. REPAIR OR REPLACE WIRE AS REQUIRED.
REPLACE EMERGENCY POWER PANEL.

END OF TASK

8-5.8 NO. 1 OR NO. 2 ENGINE EMERGENCY POWER FLAG INDICATOR WILL NOT RESET TO BLACK, FLAG RESET SWITCH AT RESET

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
Without 74

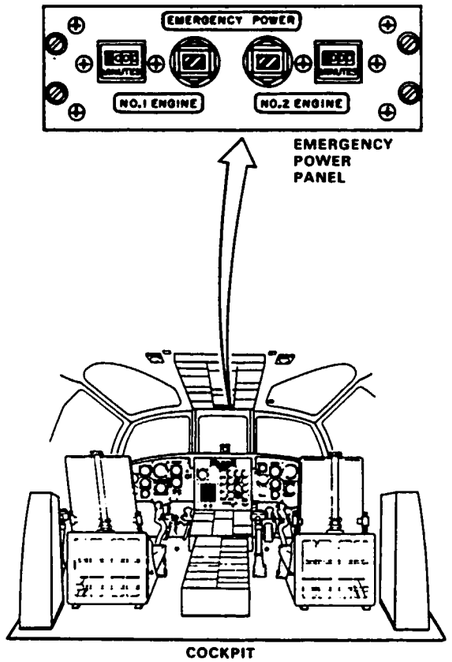
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

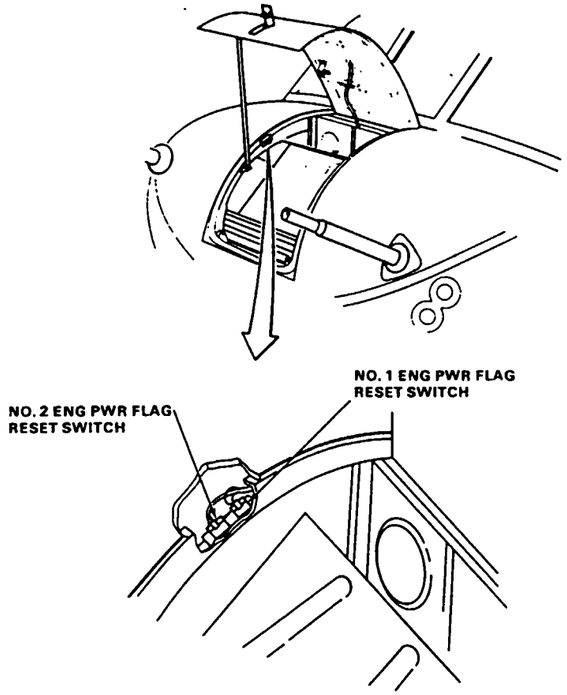
Materials:
None

Personnel Required:
Aircraft Electrician (2)

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power On
Nose Access Door Open



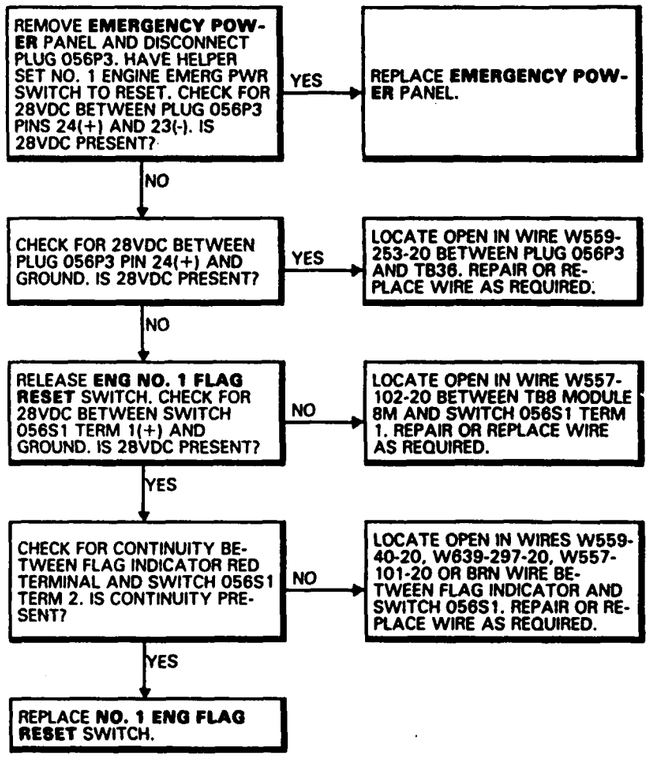


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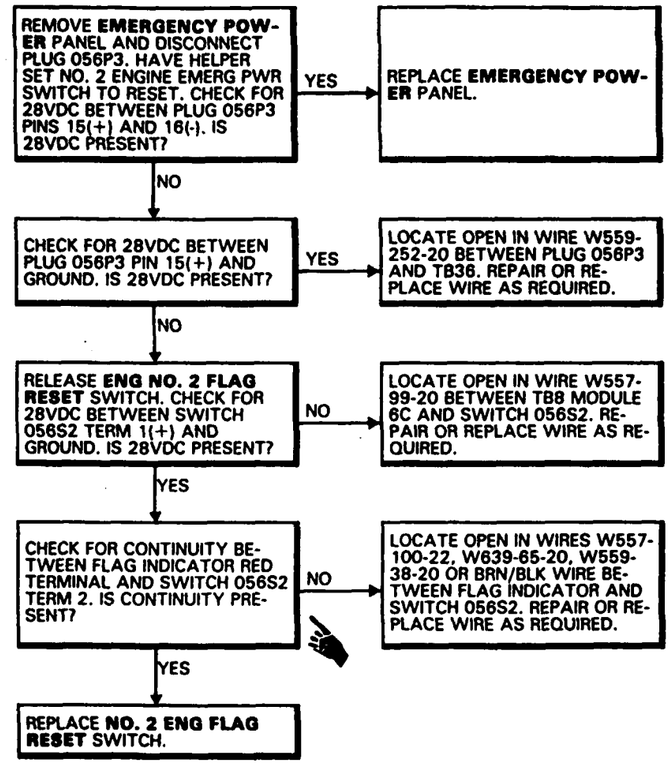
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NO. 1 ENGINE EMERGENCY POWER FLAG INDICATOR WILL NOT RESET TO BLACK, ENGINE NO. 1 FLAG RESET SWITCH AT RESET



NO. 2 ENGINE EMERGENCY POWER INDICATOR WILL NOT RESET TO BLACK, ENGINE NO. 1 FLAG RESET SWITCH AT RESET



END OF TASK

8-5.9 NO. 1 ENGINE EMERGENCY POWER TIMER DOES NOT OPERATE WHEN NO. 1 ENGINE PTIT INDICATION IS 890°C TO 910°C

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
Without 74

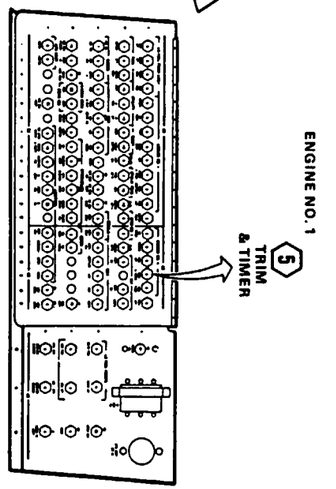
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter
Exhaust Gas Temperature Tester,
Model BH112JB-53
NSN 4920-00-372-4593

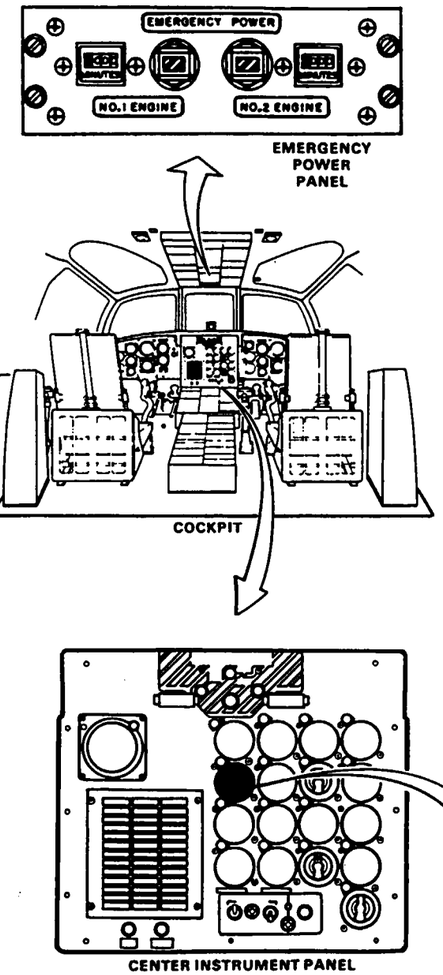
Materials:
None

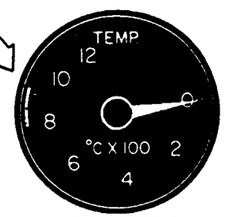
Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23
TM 55-4920-401-13&P

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
No. 1 Engine Work Platform Opened
No. 1 Engine Lower Access Panel Opened
Exhaust Temperature Tester Installed

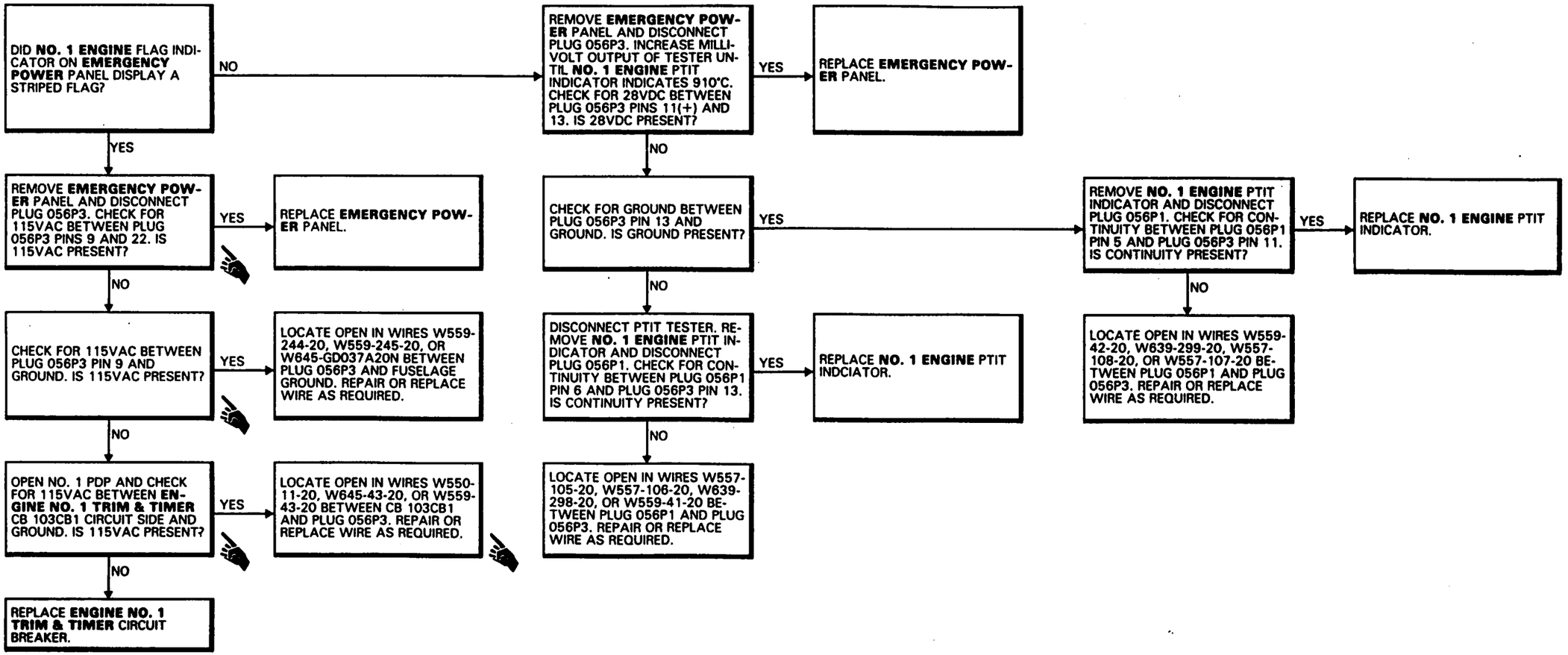






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DID NO. 1 ENGINE FLAG INDICATOR ON EMERGENCY POWER PANEL DISPLAY A STRIPED FLAG?
NO
REMOVE EMERGENCY POWER PANEL AND DISCONNECT PLUG 056P3. INCREASE MILLIVOLT OUTPUT OF TESTER UNTIL NO. 1 ENGINE PTIT INDICATOR INDICATES 910°C. CHECK FOR 28VDC BETWEEN PLUG 056P3 PINS 11(+) AND 13. IS 28VDC PRESENT?
YES
REPLACE EMERGENCY POWER PANEL.
YES
REMOVE EMERGENCY POWER PANEL AND DISCONNECT PLUG 056P3. CHECK FOR 115VAC BETWEEN PLUG 056P3 PINS 9 AND 22. IS 115VAC PRESENT?
YES
REPLACE EMERGENCY POWER PANEL.
NO
CHECK FOR GROUND BETWEEN PLUG 056P3 PIN 13 AND GROUND. IS GROUND PRESENT?
YES
REMOVE NO. 1 ENGINE PTIT INDICATOR AND DISCONNECT PLUG 056P1. CHECK FOR CONTINUITY BETWEEN PLUG 056P1 PIN 5 AND PLUG 056P3 PIN 11. IS CONTINUITY PRESENT?
YES
REPLACE NO. 1 ENGINE PTIT INDICATOR.
NO
CHECK FOR 115VAC BETWEEN PLUG 056P3 PIN 9 AND GROUND. IS 115VAC PRESENT?
YES
LOCATE OPEN IN WIRES W559-244-20, W559-245-20, OR W645-GD037A20N BETWEEN PLUG 056P3 AND FUSELAGE GROUND. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
DISCONNECT PTIT TESTER. REMOVE NO. 1 ENGINE PTIT INDICATOR AND DISCONNECT PLUG 056P1. CHECK FOR CONTINUITY BETWEEN PLUG 056P1 PIN 6 AND PLUG 056P3 PIN 13. IS CONTINUITY PRESENT?
YES
REPLACE NO. 1 ENGINE PTIT INDCIATOR.
NO
LOCATE OPEN IN WIRES W557-42-20, W639-299-20, W557-108-20, OR W557-107-20 BETWEEN PLUG 056P1 AND PLUG 056P3. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
OPEN NO. 1 PDP AND CHECK FOR 115VAC BETWEEN ENGINE NO. 1 TRIM & TIMER CB 103CB1 CIRCUIT SIDE AND GROUND. IS 115VAC PRESENT?
YES
LOCATE OPEN IN WIRES W550-11-20, W645-43-20, OR W559-43-20 BETWEEN CB 103CB1 AND PLUG 056P3. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
LOCATE OPEN IN WIRES W557-105-20, W557-106-20, W639-298-20, OR W559-41-20 BETWEEN PLUG 056P1 AND PLUG 056P3. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
REPLACE ENGINE NO. 1 TRIM & TIMER CIRCUIT BREAKER.

END OF TASK

8-5.10 NO. 1 OR NO. 2 ENGINE EMERGENCY POWER FLAG INDICATOR REMAINS BLACK WHEN NO. 1 OR NO. 2 ENGINE PTIT INDICATION IS 890°C TO 910°C

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
Without 74

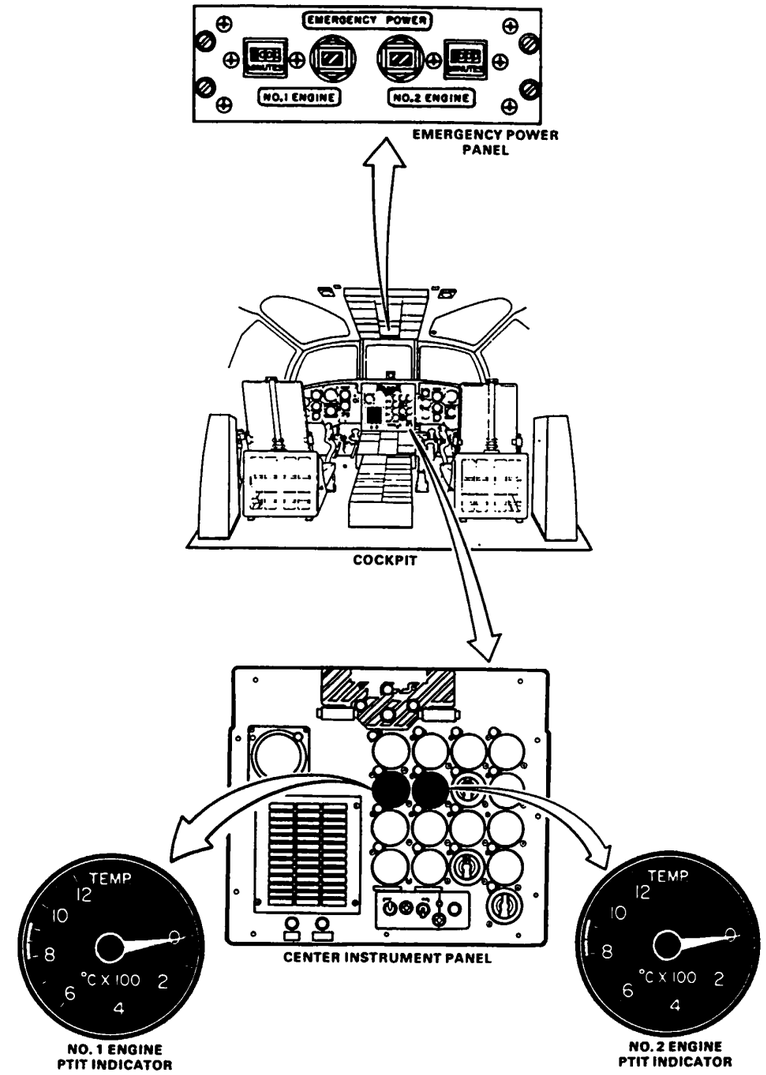
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:
None

Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

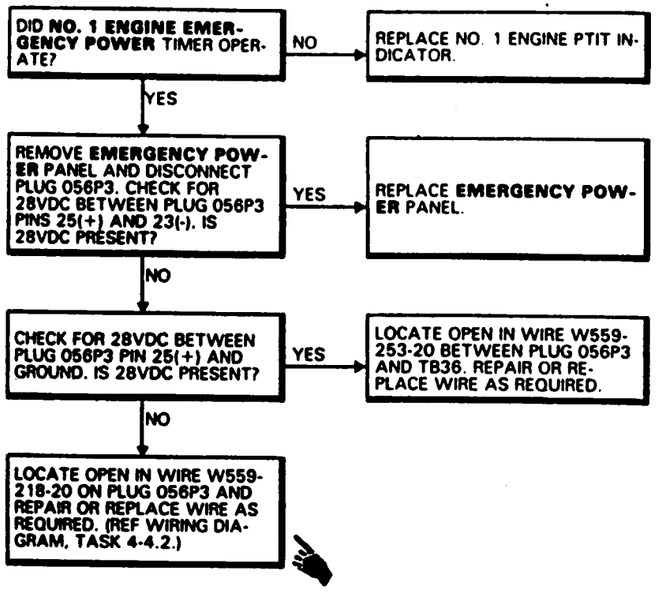
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On

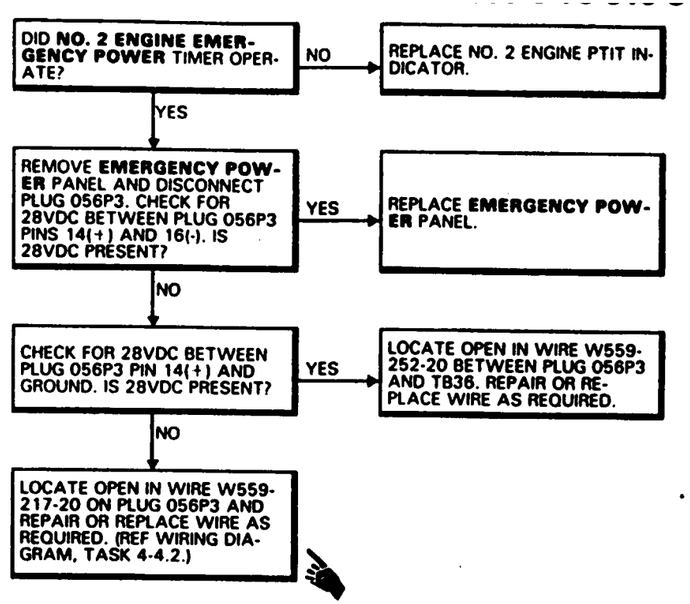


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DID NO. 1 ENGINE EMERGENCY POWER TIMER OPERATE?
NO
REPLACE NO. 1 ENGINE PTIT INDICATOR.
YES
REMOVE EMERGENCY POWER PANEL AND DISCONNECT PLUG 056P3. CHECK FOR 28VDC BETWEEN PLUG 056P3 PINS 25(+) AND 23(-). IS 28VDC PRESENT?
YES
REPLACE EMERGENCY POWER PANEL.
NO
CHECK FOR 28VDC BETWEEN PLUG 056P3 PIN 25(+) AND GROUND. IS 28VDC PRESENT?
YES
LOCATE OPEN IN WIRE W559-253-20 BETWEEN PLUG 056P3 AND TB36. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
LOCATE OPEN IN WIRE W559-218-20 ON PLUG 056P3 AND REPAIR OR REPLACE WIRE AS REQUIRED. (REF WIRING DIAGRAM, TASK 4-4.2.)


DID NO. 2 ENGINE EMERGENCY POWER TIMER OPERATE?
NO
REPLACE NO. 2 ENGINE PTIT INDICATOR.
YES
REMOVE EMERGENCY POWER PANEL AND DISCONNECT PLUG 056P3. CHECK FOR 28VDC BETWEEN PLUG 056P3 PINS 14(+) AND 16(-). IS 28VDC PRESENT?
YES
REPLACE EMERGENCY POWER PANEL.
NO
CHECK FOR 28VDC BETWEEN PLUG 056P3 PIN 14(+) AND GROUND. IS 28VDC PRESENT?
YES
LOCATE OPEN IN WIRE W559-252-20 BETWEEN PLUG 056P3 AND TB36. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
LOCATE OPEN IN WIRE W559-217-20 ON PLUG 056P3 AND REPAIR OR REPLACE WIRE AS REQUIRED. (REF WIRING DIAGRAM, TASK 4-4.2.)

END-OF-TASK

8-5.11 PILOT'S AND COPILOT'S EMERGENCY POWER LIGHTS DO NOT COME ON WHEN NO. 1 OR NO. 2 ENGINE PTIT INDICATION IS 890°C TO 910°C

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
Without 74

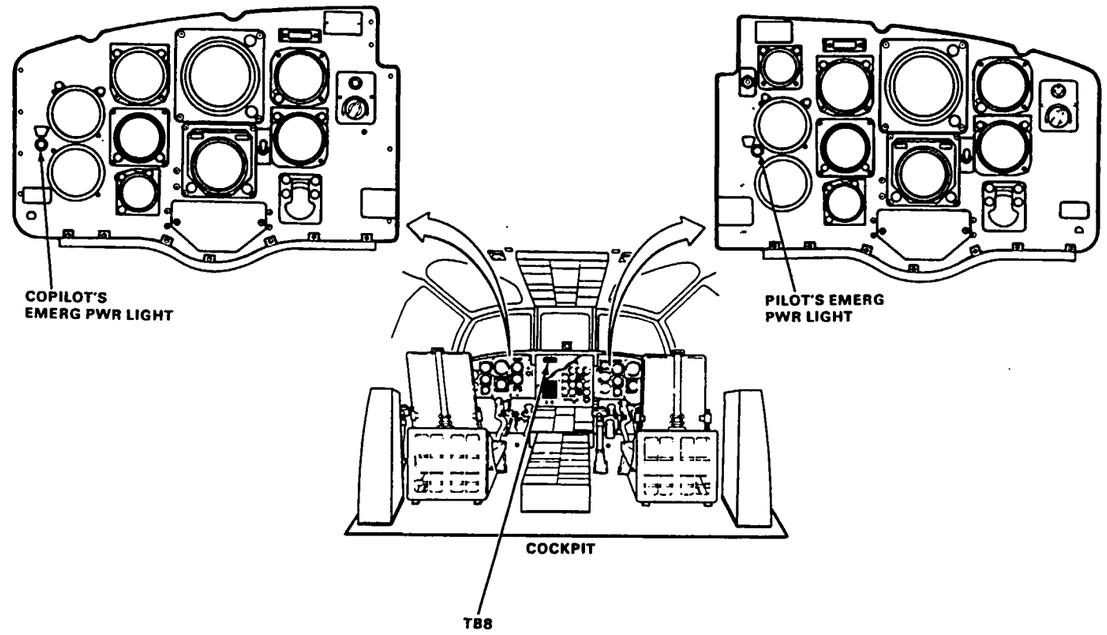
Tools:
Electrical Repairer Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:
None

Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power On

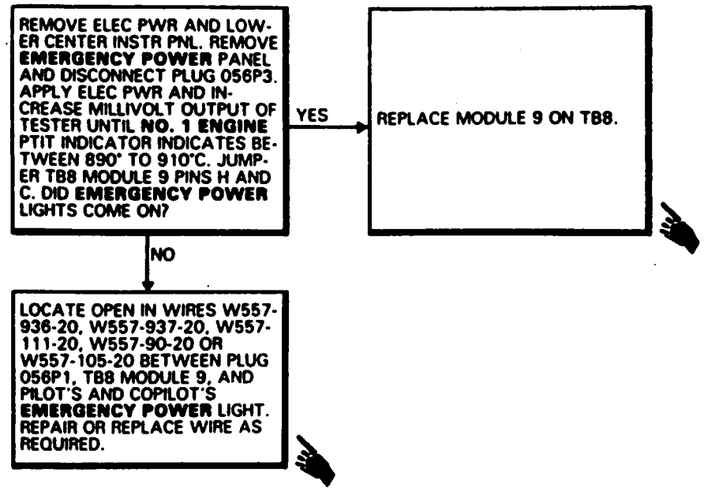


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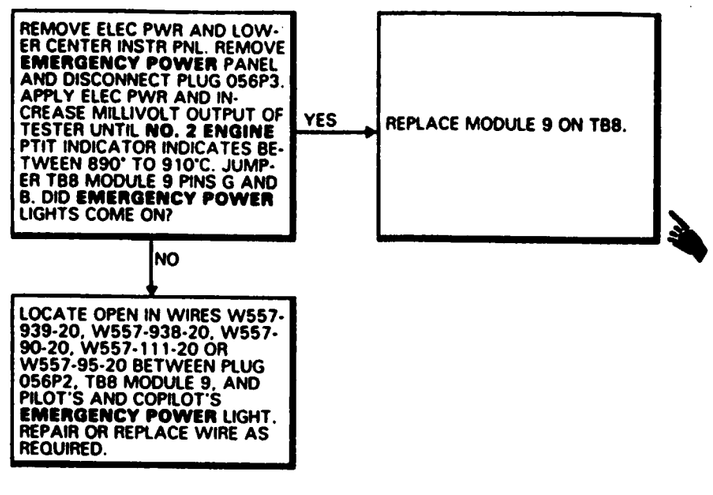
D145-11137-SPA

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PILOT'S AND COPILOT'S EMERGENCY POWER LIGHTS DO NOT COME ON WHEN NO. 1 ENGINE PTIT INDICATION IS 890°C TO 910°C



PILOTS' AND COPILOT'S EMERGENCY POWER LIGHTS DO NOT COME ON WHEN NO. 2 ENGINE PTIT INDICATION IS 890°C TO 910°C



END OF TASK

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:

Without 74

Tools:

Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter
Exhaust Gas Temperature Tester,
Model BH112JB-53,
NSN 4920-00-372-4593

Materials:

None

Personnel Required:

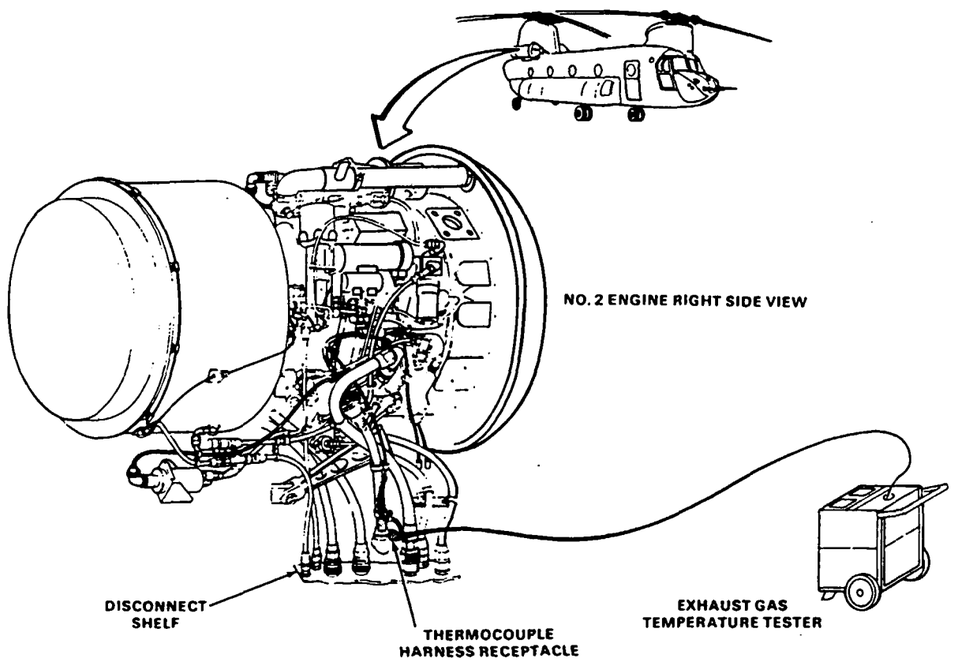
Aircraft Electrician

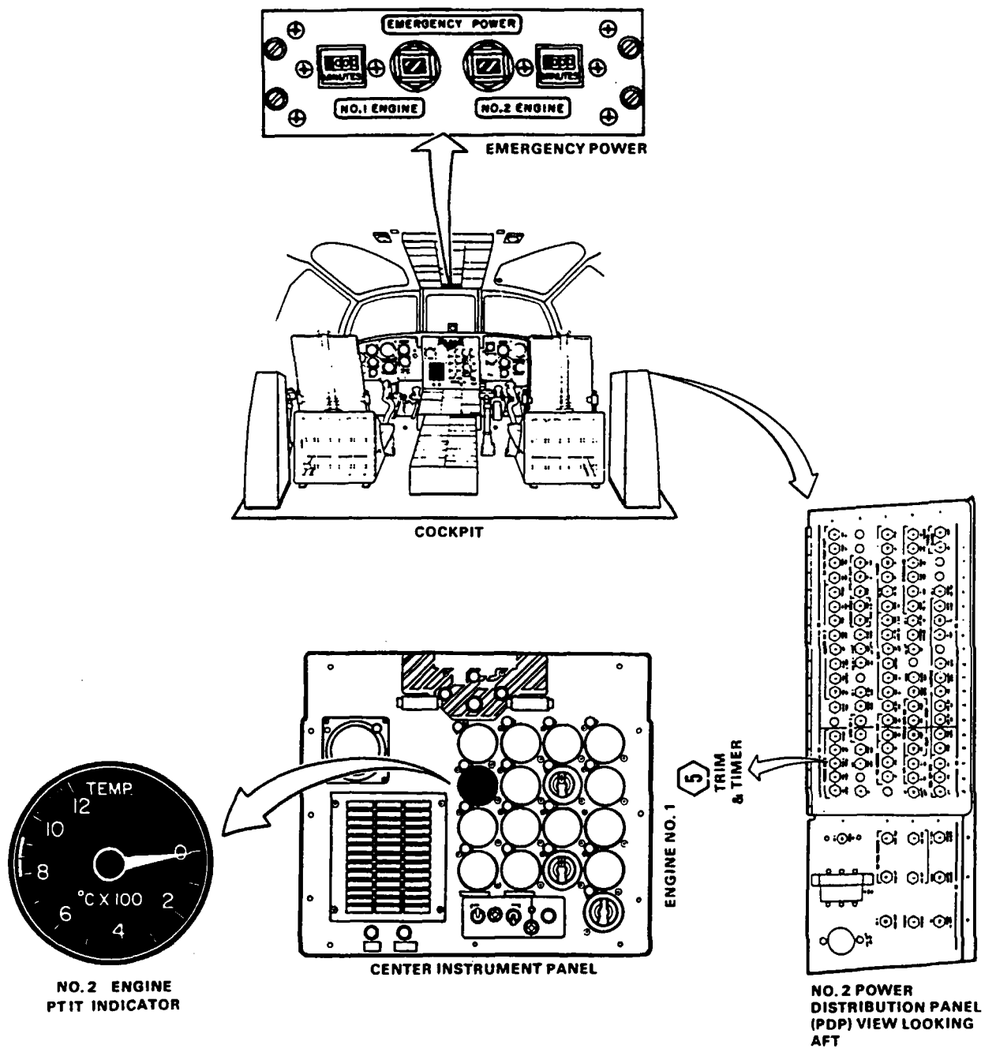
References:

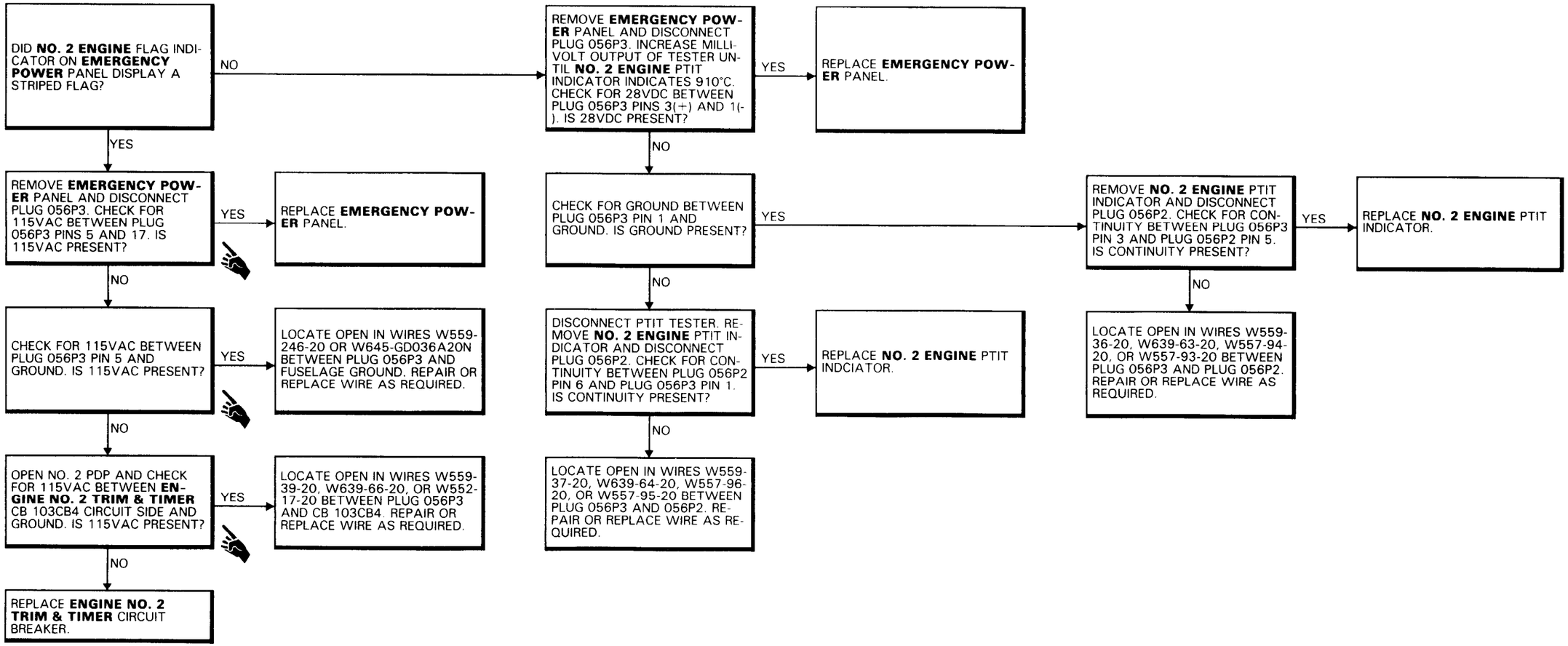
TM 55-1520-240-23
TM 55-4920-401-13&P

Equipment Condition:

TM 55-1520-240-23:
Battery Connected
Electrical Power Off
Hydraulic Power Off
No. 2 Engine Work Platform Open
No. 2 Engine Lower Access Panel Opened
Exhaust Gas Temperature Tester Installed

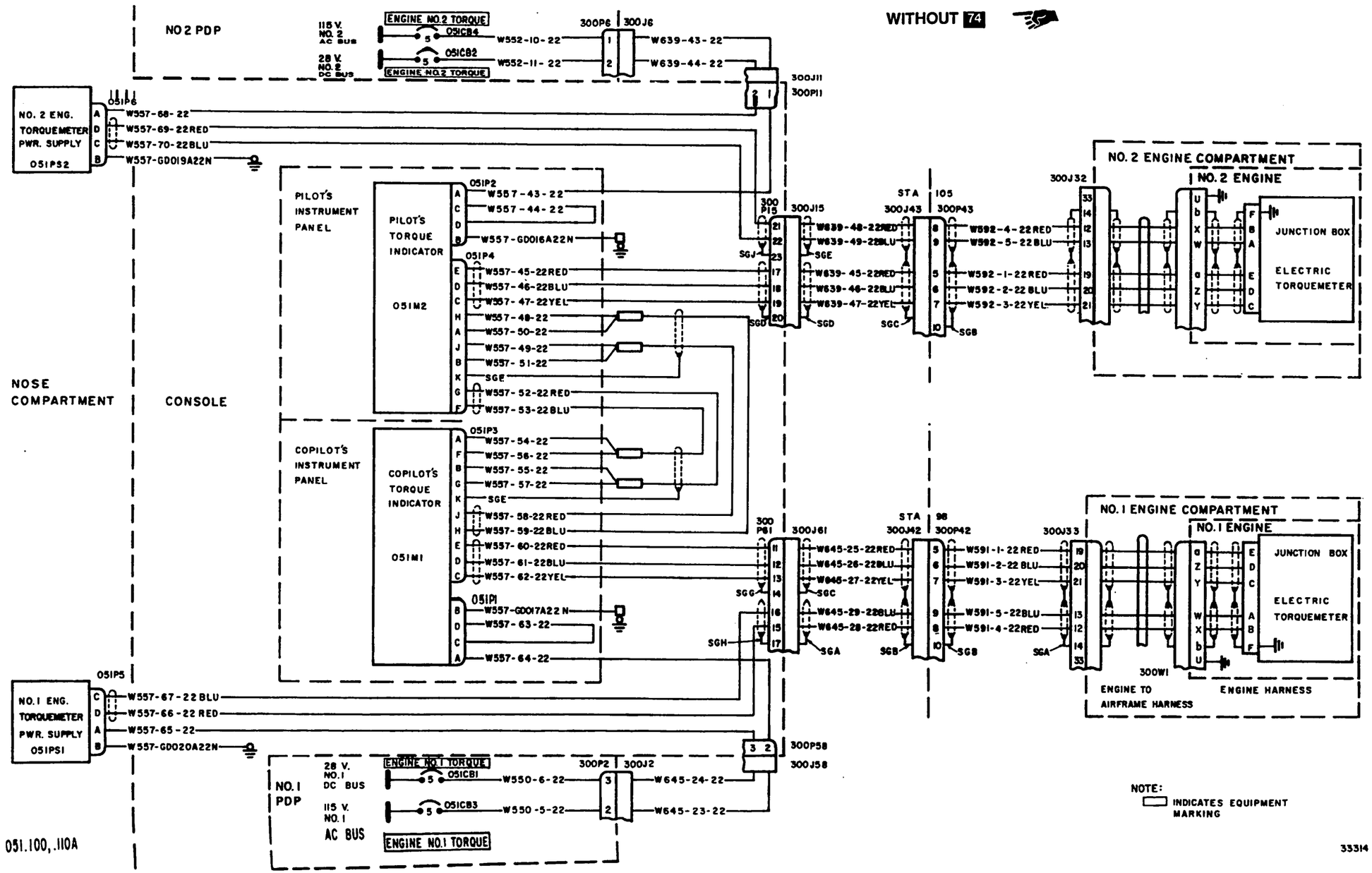





DID **NO. 2 ENGINE** FLAG INDICATOR ON **EMERGENCY POWER** PANEL DISPLAY A STRIPED FLAG?
NO
REMOVE **EMERGENCY POWER** PANEL AND DISCONNECT PLUG 056P3. INCREASE MILLIVOLT OUTPUT OF TESTER UNTIL **NO. 2 ENGINE** PTIT INDICATOR INDICATES 910°C. CHECK FOR 28VDC BETWEEN PLUG 056P3 PINS 3(+) AND 1(-). IS 28VDC PRESENT?
YES
REPLACE **EMERGENCY POWER** PANEL.
YES
REMOVE **EMERGENCY POWER** PANEL AND DISCONNECT PLUG 056P3. CHECK FOR 115VAC BETWEEN PLUG 056P3 PINS 5 AND 17. IS 115VAC PRESENT?
YES
REPLACE **EMERGENCY POWER** PANEL.
NO
CHECK FOR GROUND BETWEEN PLUG 056P3 PIN 1 AND GROUND. IS GROUND PRESENT?
YES
REMOVE **NO. 2 ENGINE** PTIT INDICATOR AND DISCONNECT PLUG 056P2. CHECK FOR CONTINUITY BETWEEN PLUG 056P3 PIN 3 AND PLUG 056P2 PIN 5. IS CONTINUITY PRESENT?
YES
REPLACE **NO. 2 ENGINE** PTIT INDICATOR.
NO
CHECK FOR 115VAC BETWEEN PLUG 056P3 PIN 5 AND GROUND. IS 115VAC PRESENT?
YES
LOCATE OPEN IN WIRES W559-246-20 OR W645-GD036A20N BETWEEN PLUG 056P3 AND FUSELAGE GROUND. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
DISCONNECT PTIT TESTER. REMOVE **NO. 2 ENGINE** PTIT INDICATOR AND DISCONNECT PLUG 056P2. CHECK FOR CONTINUITY BETWEEN PLUG 056P2 PIN 6 AND PLUG 056P3 PIN 1. IS CONTINUITY PRESENT?
YES
REPLACE **NO. 2 ENGINE** PTIT INDCIATOR.
NO
LOCATE OPEN IN WIRES W559-36-20, W639-63-20, W557-94-20, OR W557-93-20 BETWEEN PLUG 056P3 AND PLUG 056P2. REPAIR OR REPLACE WIRE AS REQUIRED.
OPEN NO. 2 PDP AND CHECK FOR 115VAC BETWEEN **ENGINE NO. 2 TRIM & TIMER** CB 103CB4 CIRCUIT SIDE AND GROUND. IS 115VAC PRESENT?
YES
LOCATE OPEN IN WIRES W559-39-20, W639-66-20, OR W552-17-20 BETWEEN PLUG 056P3 AND CB 103CB4. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
REPLACE **ENGINE NO. 2 TRIM & TIMER** CIRCUIT BREAKER.
LOCATE OPEN IN WIRES W559-37-20, W639-64-20, W557-96-20, OR W557-95-20 BETWEEN PLUG 056P3 AND 056P2. REPAIR OR REPLACE WIRE AS REQUIRED.

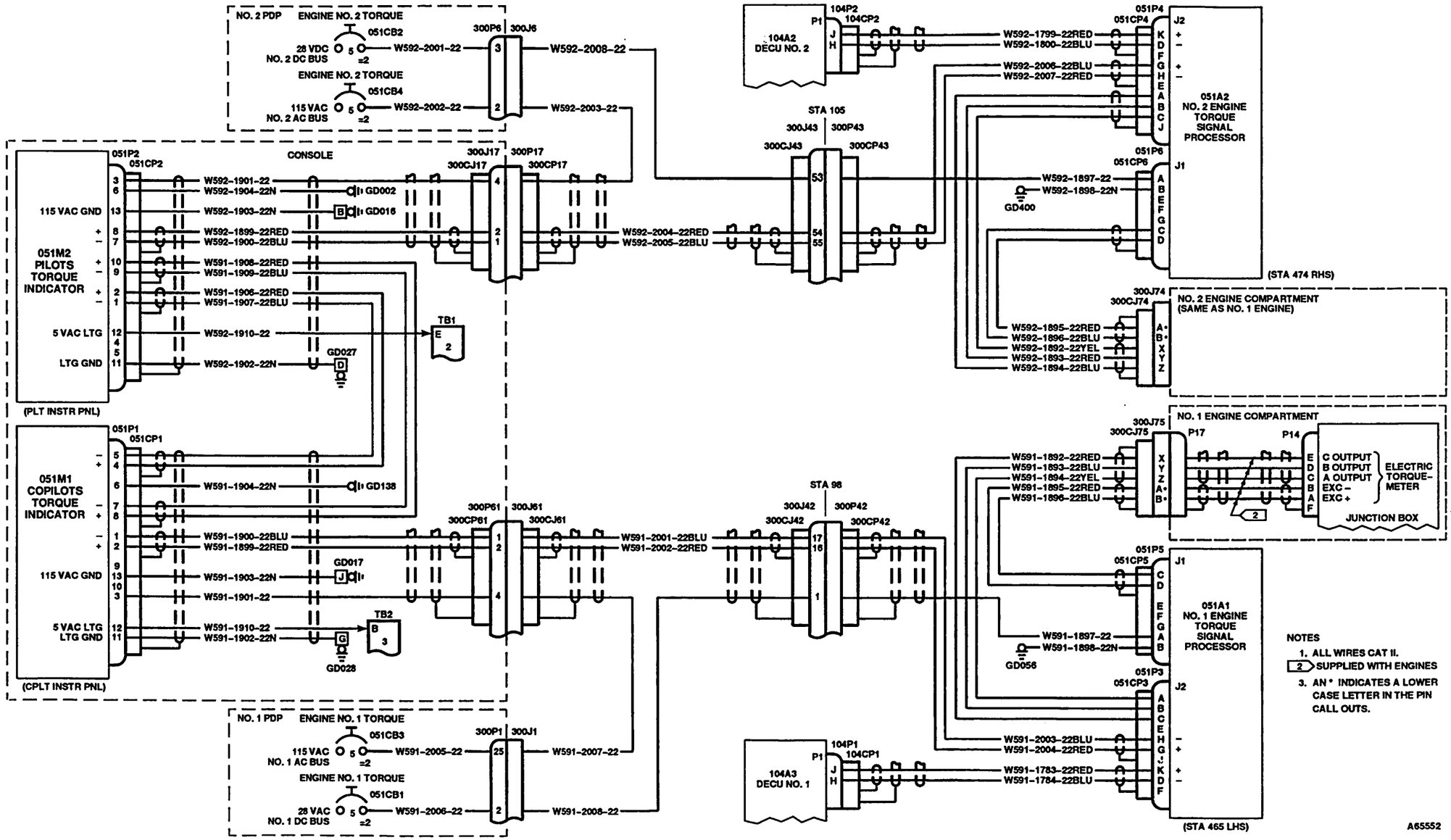
END OF TASK

8-6 TORQUE INDICATING SYSTEM


WITHOUT 74
NO 2 PDP
115 V. NO. 2 AC BUS
28 V. NO. 2 DC BUS
ENGINE NO.2 TORQUE
051CB4
051CB2
W552-10-22
W552-11-22
300P6
300J6
W639-43-22
W639-44-22
300J11
300P11
NO. 2 ENG. TORQUEMETER PWR. SUPPLY
051PS2
051P6
W557-68-22
W557-69-22RED
W557-70-22BLU
W557-GD019A22N
PILOT'S INSTRUMENT PANEL
PILOT'S TORQUE INDICATOR
051M2
051P2
W557-43-22
W557-44-22
W557-GD016A22N
051P4
W557-45-22RED
W557-46-22BLU
W557-47-22YEL
W557-48-22
W557-50-22
W557-49-22
W557-51-22
SGE
W557-52-22RED
W557-53-22BLU
COPILOT'S INSTRUMENT PANEL
COPILOT'S TORQUE INDICATOR
051M1
051P3
W557-54-22
W557-56-22
W557-55-22
W557-57-22
SGE
W557-58-22RED
W557-59-22BLU
W557-60-22RED
W557-61-22BLU
W557-62-22YEL
051P1
W557-GD017A22N
W557-63-22
W557-64-22
300P15
300J15
SGJ
SGD
SGE
SGC
W639-48-22RED
W639-49-22BLU
W639-45-22RED
W639-46-22BLU
W639-47-22YEL
STA 300J43
105 300P43
W592-4-22RED
W592-5-22BLU
W592-1-22RED
W592-2-22BLU
W592-3-22YEL
NO. 2 ENGINE COMPARTMENT
300J32
NO. 2 ENGINE
JUNCTION BOX
ELECTRIC TORQUEMETER
300P11
300J61
SGG
SGH
SGA
W645-25-22RED
W645-26-22BLU
W645-27-22YEL
W645-29-22BLU
W645-28-22RED
STA 300J42
98 300P42
W591-1-22RED
W591-2-22BLU
W591-3-22YEL
W591-5-22BLU
W591-4-22RED
300J33
NO. 1 ENGINE COMPARTMENT
NO. 1 ENGINE
300WI
ENGINE TO AIRFRAME HARNESS
ENGINE HARNESS
NO. 1 ENG. TORQUEMETER PWR. SUPPLY
051PS1
051P5
W557-67-22BLU
W557-66-22RED
W557-65-22
W557-GD020A22N
300P58
300J58
NO. 1 PDP
28 V. NO. 1 DC BUS
115 V. NO. 1 AC BUS
ENGINE NO.1 TORQUE
051CB1
051CB3
300P2
300J2
W550-6-22
W550-5-22
W645-24-22
W645-23-22
NOSE COMPARTMENT
CONSOLE
051.100,.110A
NOTE:
INDICATES EQUIPMENT MARKING
33314

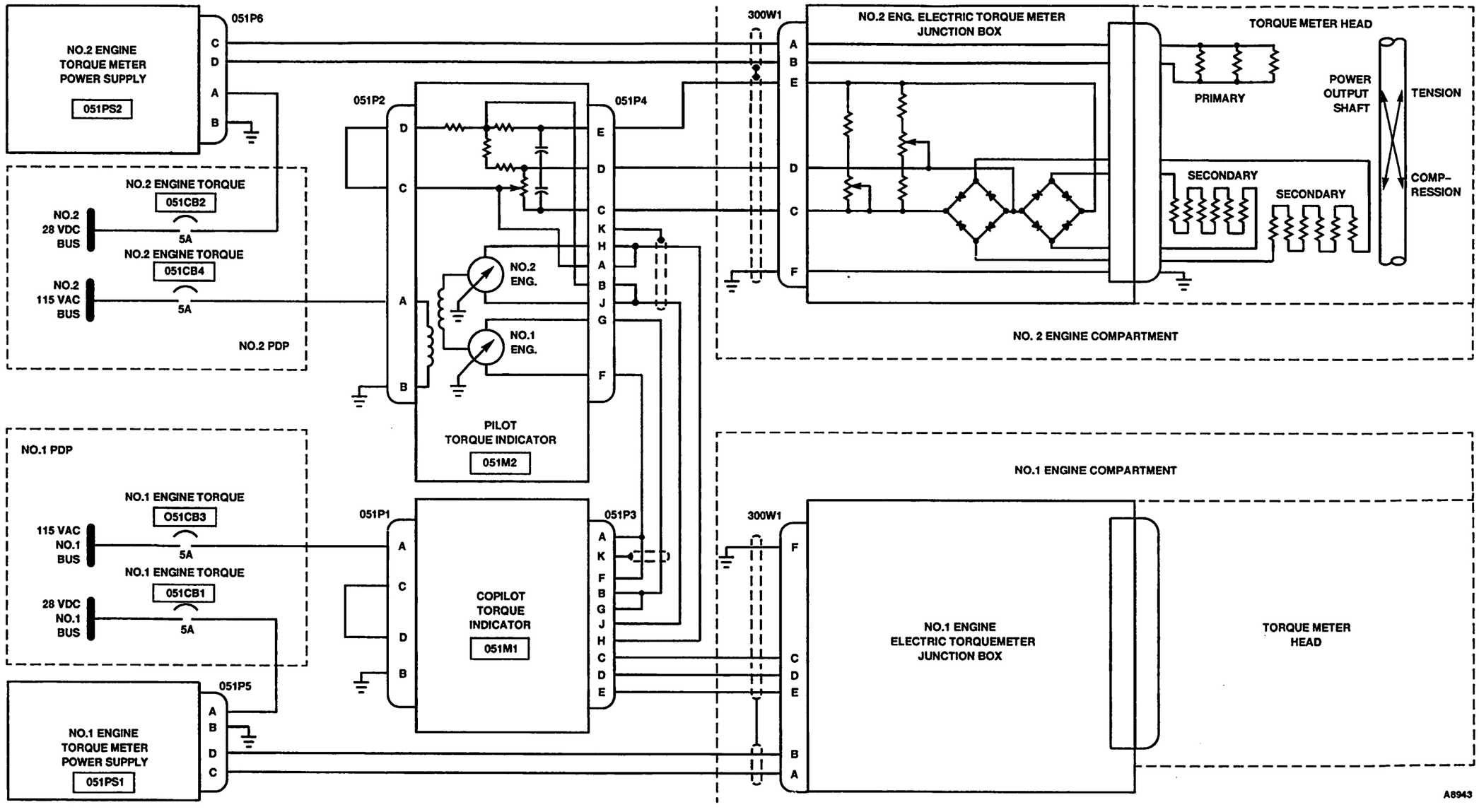
END OF-TASK

WITH 74



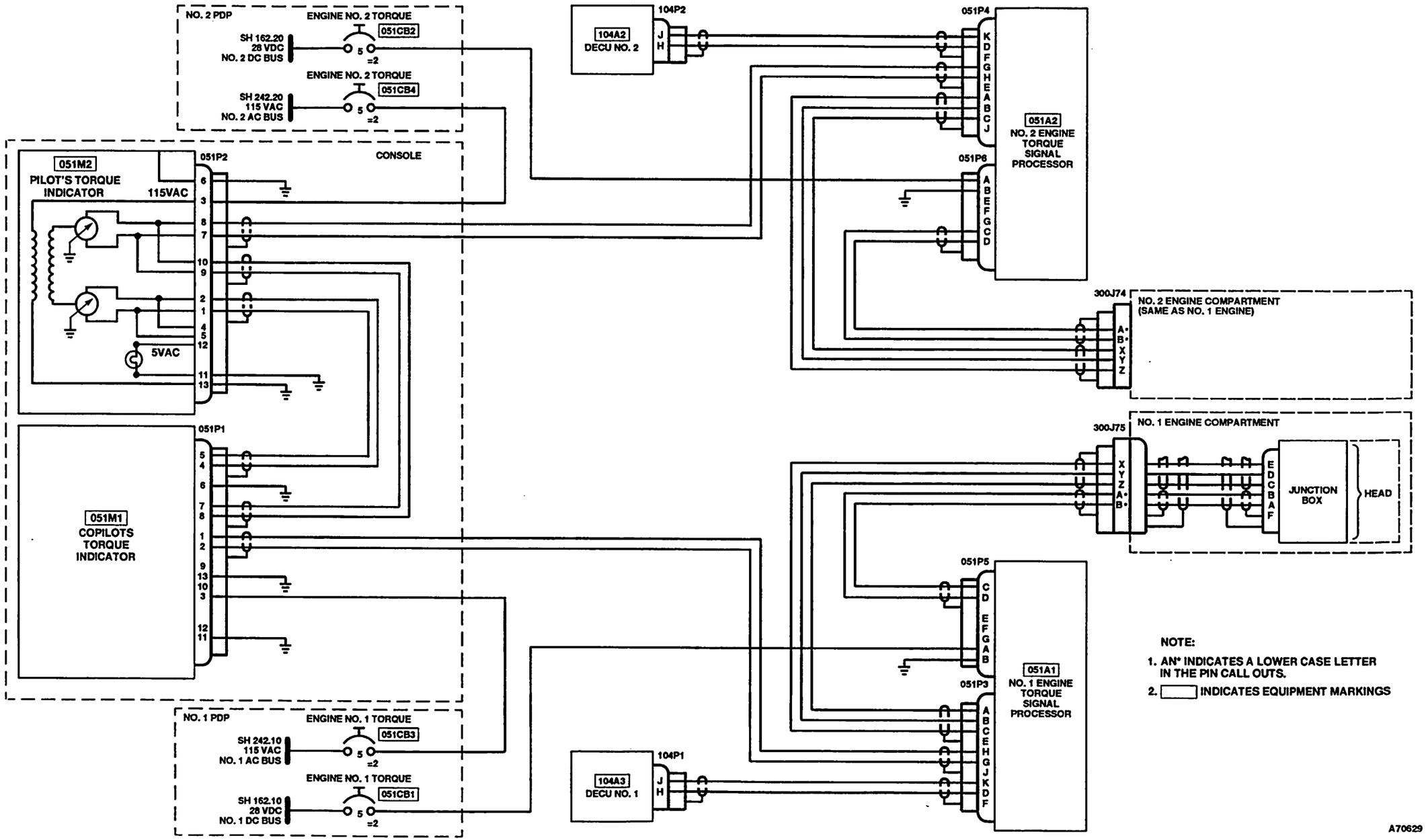
END OF TASK

WITHOUT 74



END OF TASK

WITH 74



NOTE:

1. AN• INDICATES A LOWER CASE LETTER IN THE PIN CALL OUTS.
2. [ ] INDICATES EQUIPMENT MARKINGS

A70629

END OF TASK

8-6.2 TORQUE INDICATING SYSTEM VISUAL CHECK

INITIAL SETUP

Applicable Configurations:
Without 74

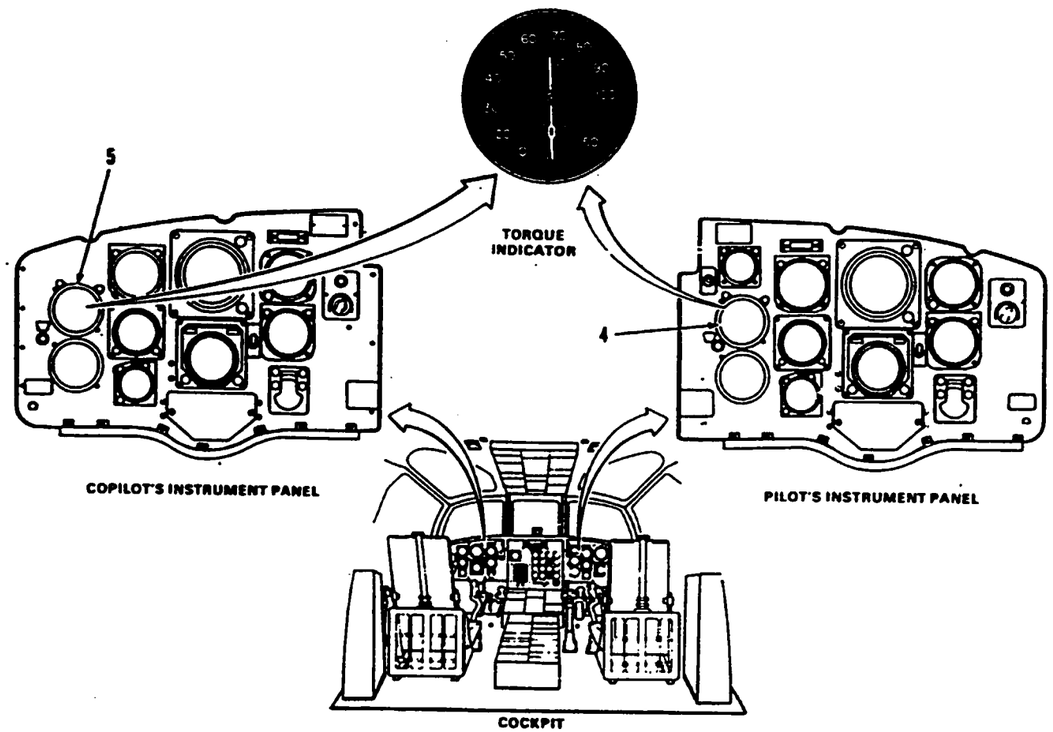
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915

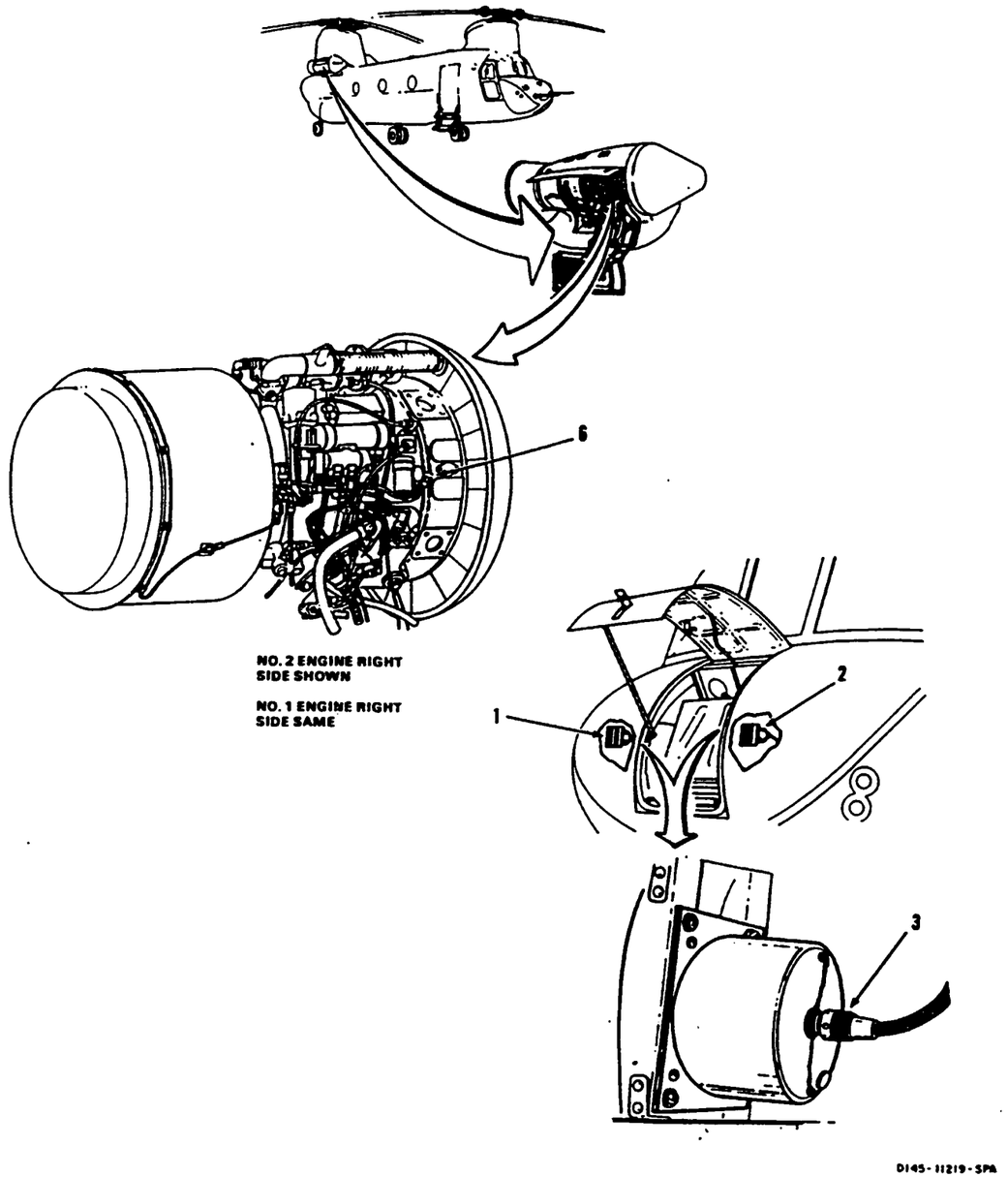
Materials:
None

Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23
TM 55-2840-254-23

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off
Nose Access Door Open
No. 1 Engine Work Platform Open
No. 1 Engine Upper and Lower Access Doors Open
No. 2 Engine Work Platform Open
No. 2 Engine Upper and Lower Access Doors Open





GO TO NEXT PAGE

TASK	RESULT
1. **Check pilot torquemeter power supply (1).**	If torquemeter power supply (1) is loose or damaged, tighten or replace it as required. If connector (3) is loose or damaged, or wiring to connector (3) is damaged, tighten or replace connector or repair or replace wire as required.
2. **Check copilot torquemeter power supply (2).**	If torquemeter power supply (2) is loose or damaged, tighten or replace it as required. If connector (3) is loose or damaged, tighten or replace it as required. If wires to connector (3) are damaged, repair or replace them as required.
3. **Check pilot torquemeter indicator (4).**	Tighten or replace torquemeter indicator (4) and/or its connector if loose or damaged.
4. **Check copilot torquemeter Indicator (5).**	Tighten or replace torquemeter indicator (5) and/or its connector if loose or damaged.
5. **Check No. 1 engine torquemeter junction box (6).**	If No. 1 engine torquemeter junction box is loose or damaged, tighten or replace it as required. If connector to junction box is loose or damaged, tighten or replace it as required. If wires to junction box (6) connector are damaged, repair or replace them as required. If oil or moisture is present, refer to TM 55-2840-254-23, task 9-2.
6. **Check No. 2 engine torquemeter junction box (6).**	If No. 2 engine torquemeter junction box is loose or damaged, tighten or replace it as required. If connector to junction box is loose or damaged, tighten or replace it as required. If wires to junction box (6) connector are damaged, repair or replace them as required. If oil or moisture is present, refer to TM 55-2840-254-23, task 9-2.

FOLLOW-ON MAINTENANCE:
TM 55-1520-240-23:
Nose access door closed.
No. 1 engine work platform closed.
No. 1 engine upper and lower access door closed.
No. 2 engine work platform closed.
No. 2 engine upper and lower access door closed.

END OF TASK

8-6.2.1 TORQUE INDICATING SYSTEM VISUAL CHECK

INITIAL SETUP

Applicable Configurations:

With 74

Tools:

Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915

Materials:

None

Personnel Required:

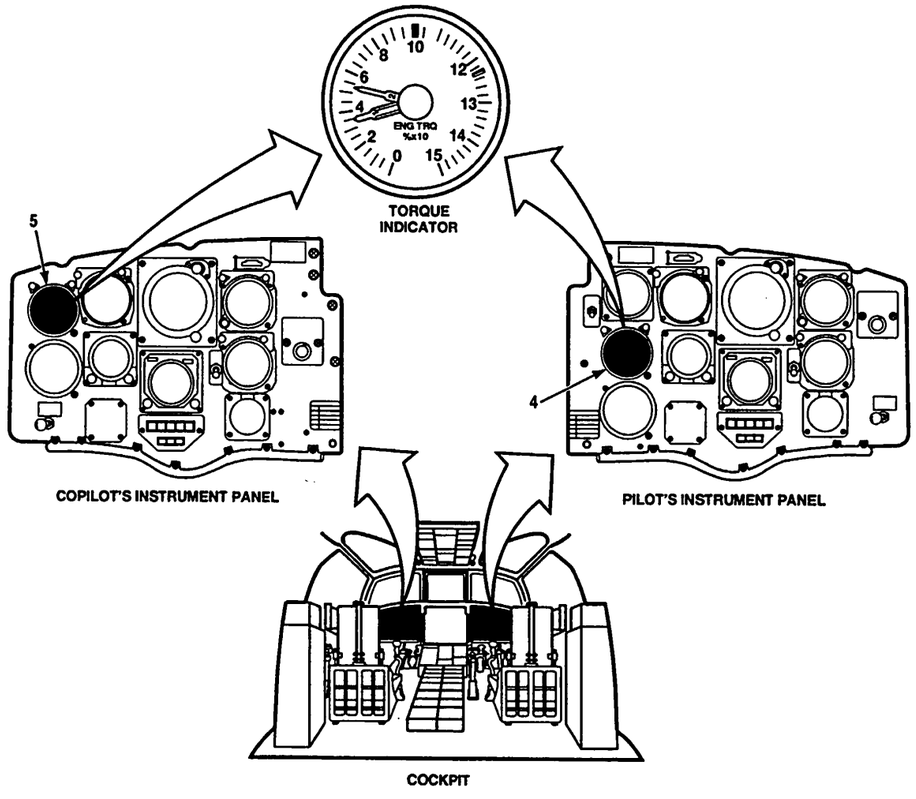
Aircraft Electrician

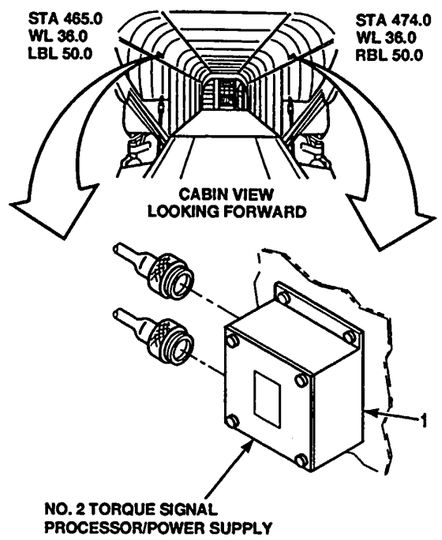
References:

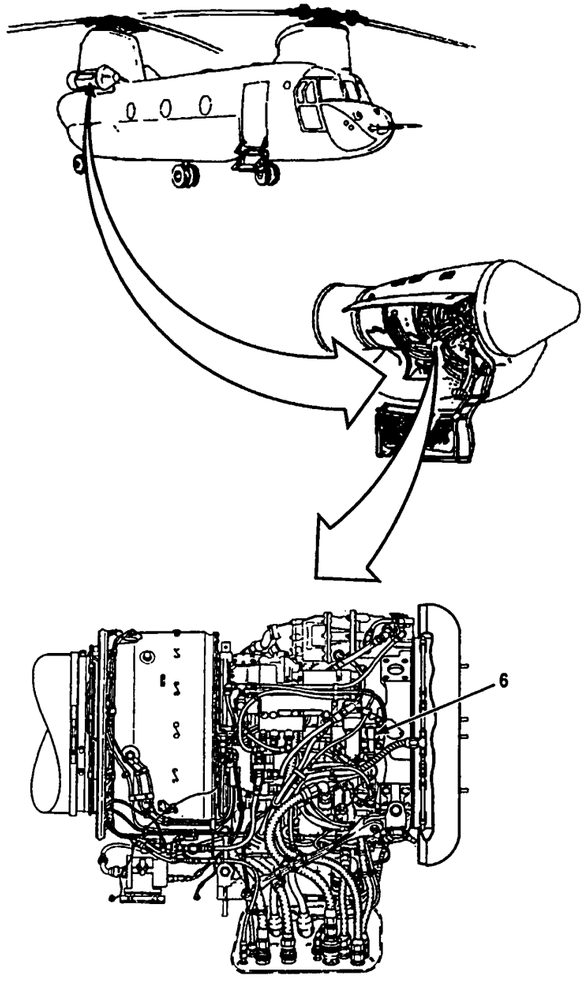
TM 1-2840-265-23
TM 55-1520-240-23

Equipment Condition:

TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off
No. 1 Engine Work Platform Open
No. 1 Engine Upper and Lower Access Doors Open
No. 2 Engine Work Platform Open
No. 2 Engine Upper and Lower Access Doors Open







NO. 2 ENGINE RIGHT SIDE SHOWN.
NO.1 ENGINE RIGHT SIDE SIMILAR.

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GO TO NEXT PAGE

TASK	RESULT
1. **Check No. 1 engine torque signal processor/power supply (1).**	If No. 1 engine torque signal processor/power supply (1) is loose or damaged, tighten or replace it as required. If connectors (3) are loose or damaged, tighten or replace as required. If wires to connectors (3) are damaged, repair or replace them as required.
2. **Check No. 2 engine torque signal processor/power supply (2).**	If No. 2 engine torque signal processor/power supply (2) is loose or damaged, tighten or replace it as required. If connectors (3) are loose or damaged, tighten or replace as required. If wires to connectors (3) are damaged, repair or replace them as required.
3. **Check pilot torquemeter indicator (4).**	Tighten or replace torquemeter indicator (4) and/or its connector if loose or damaged.
4. **Check copilot torquemeter indicator (5).**	Tighten or replace torquemeter indicator (5) and/or its connector if loose or damaged.
5. **Check No. 1 engine torquemeter junction box (6).**	If No. 1 engine torquemeter junction box (6) is loose or damaged, tighten or replace it as required. If connector to junction box is loose or damaged, tighten or replace it as required. If wires to junction box (6) connector are damaged, repair or replace them as required (TM 1-2840-26523).
6. **Check No. 2 engine torquemeter junction box (6).**	If No. 2 engine torquemeter junction box (6) is loose or damaged, tighten or replace it as required. If connector to junction box is loose or damaged, tighten or replace it as required. If wires to junction box (6) connector are damaged, repair or replace them as required (TM 1-2840-26523).

FOLLOW-ON MAINTENANCE:
TM 55-1520-240-23:
No. 1 engine work platform closed.
No. 1 engine upper and lower access door closed.
No. 2 engine work platform closed.
No. 2 engine upper and lower access door closed.

END OF TASK

8-6.3 TORQUE INDICATING SYSTEM OPERATIONAL CHECK

INITIAL SETUP

Applicable Configurations:

Without 74

Tools:

Electrical Repairer Tool Kit,
NSN 5180-00-323-4915
Engine Torque Signal Simulator Test Set,
LTCT 24137-03 (If Available)

Materials:

None

Personnel Required:

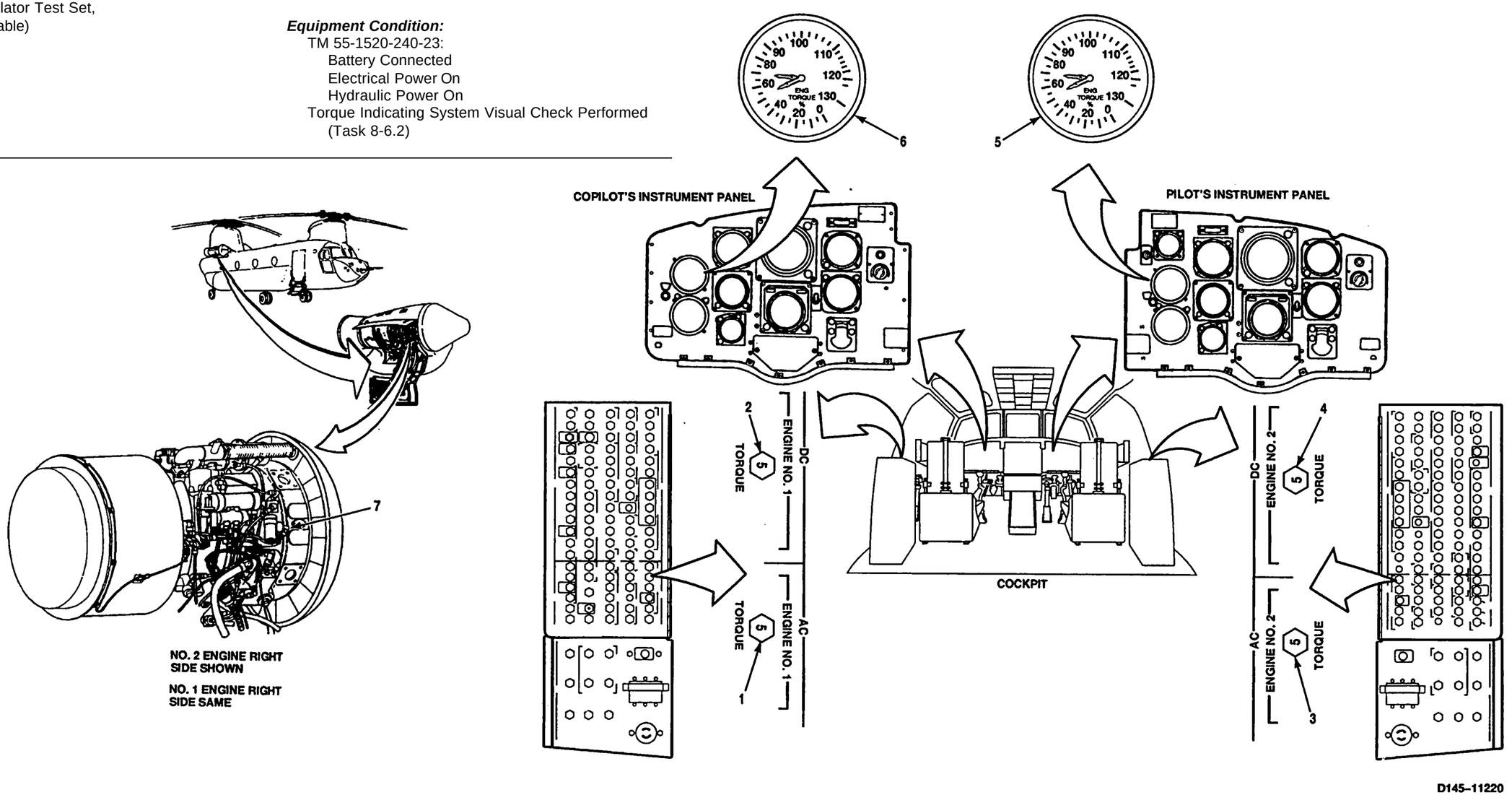
Aircraft Electrician (2)
Rotary Wing Aviator (2)

References:

TM 55-1520-240-MTF
TM 55-1520-240-10
TM 55-1520-240-23
TM 55-2840-254-23
Engine Torque Signal Simulator Test Set Operating Manual, Lycoming document 5855A

Equipment Condition:

TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power On
Torque Indicating System Visual Check Performed (Task 8-6.2)



GO TO NEXT PAGE

TASK	RESULT
1. **Check** that **ENGINE NO. 1 AC TORQUE circuit breaker (1)** is **closed.**	If **ENGINE NO. 1 AC TORQUE** circuit breaker (1) is open, close it. If it opens again, go to task 8-6.4.
2. **Check that ENGINE NO. 1 DC TORQUE circuit breaker (2)** is **closed.**	If **ENGINE NO. 1 DC TORQUE** circuit breaker (2) is open, close it. If it opens again, go to task 8-6.5.
3. **Check** that **ENGINE NO. 2 AC TORQUE circuit breaker (3)** is **closed.**	If **ENGINE NO. 2** AC TORQUE circuit breaker (3) is open, close it. If it opens again, go to task 8-6.4.
4. **Check** that **ENGINE NO. 2 DC TORQUE circuit breaker (4)** is **closed.**	If **ENGINE NO. 2** DC TORQUE circuit breaker (4) is open, close it. If it opens again, go to task 8-6.5.
5. **Check No. 2 pointer on pilot (5) and copilot (6) torque indicators.**	No. 2 pointer on both torque indicators (5 and 6) shall be below 10%. If not, adjust torque indicator to zero. (Ref TM 55-1520-240-23.)
NOTE **If pointer is spinning, have helper manually turn rotor blades until spinning stops. If spinning continues after one revolution of the blades, go to next step.**	
6. Check No. 1 pointer on pilot (5) and copilot (6) torque indicators.	No. 1 pointer on both torque indicators (5 and 6) shall be below 10%. If not, adjust torque indicator to zero. (Ref TM 55-1520-240-23.)
NOTE **If pointer is spinning, have helper manually turn rotor blades until spinning stops. If spinning continues after one revolution of blades, go to next step.**	
NOTE **If torque signal simulator LTCT 24137-03 is not available, do not perform steps 7 thru 10. Go to step 11.**	
7. **Install torque signal simulator LTCT 24137-03 on No. 1 engine.** Reference operating manual 5855A.	
8. **Check No. 1 engine torque indication using torque signal simulator LTCT 24137-03.** Reference operating manual 5855A.	No. 1 pointer on pilots and copilots torque indicators (5 and 6) shall read ± 2% of simulator selector switch value. If it does not, go to task 8-6.8.
9. **Install torque signal simulator LTCT 24137-03 on No. 2 engine.** Reference operating manual 5855A.	
10. **Check No. 2 engine torque indication using torque signal simulator LTCT 24137-03.** Reference operating manual 5855A.	No. 2 pointer on pilots and copilots torque indicators (5 and 6) shall read ± 2% of simulator selector switch value. If it does not, go to task 8-6.9.
11. Have pilot **start both engines and stabilize rotors at ground idle.**	
12. Have pilot perform **TORQUE DIFFERENTIAL CHECK. (Ref TM 55-1520-240-MTF.)**	
13. **Check No. 1 and No. 2 pointers on pilot and copilot torque indicators (5 and 6).**	No. 1 pointer on both torque indicators (5 and 6) shall indicate required torque. If not, go to task 8-6.6. If No. 1 pointer on both torque indicators (5 and 6) rotates clockwise or counterclockwise continuously, replace No. 1 engine torquemeter kit (junction box, output shaft, and head assembly). Ref TM 55-2840-254-23. If No. 1 pointer on both torque indicators (5 and 6) operates erratically, go to task 8-6.10 if Lycoming On Wing Comparator LTCT 28295-01 is available. If it is not, go to task 8-6.6. No. 2 pointer on both torque indicators (5 and 6) shall indicate required torque, if not, go to task 8-6.7. If No. 2 pointer on both torque indicators (5 and 6) rotates continuously, replace No. 2 engine torquemeter kit (junction box, output shaft and head assembly). Ref TM 55-2840-254-23. If No. 2 pointer on both torque indicators (5 and 6) operates erratically, go to task 8-6.11 if Lycoming On Wing Comparator LTCT 28295-01 is available. If it is not, go to task 8-6.7.
14. Have pilot shut down both engines.	

FOLLOW-ON MAINTENANCE:
TM 55-1520-240-23:
Battery disconnected.
Electrical power off.
Hydraulic power off.

END-OF-TASK

8-6.3.1 TORQUE INDICATING SYSTEM OPERATIONAL CHECK

INITIAL SETUP

Applicable Configurations:

With 74

Tools:

Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Electric Torquemeter Flight Line Test Set,
LTCT 29089-01/-03

Materials:

None

Personnel Required:

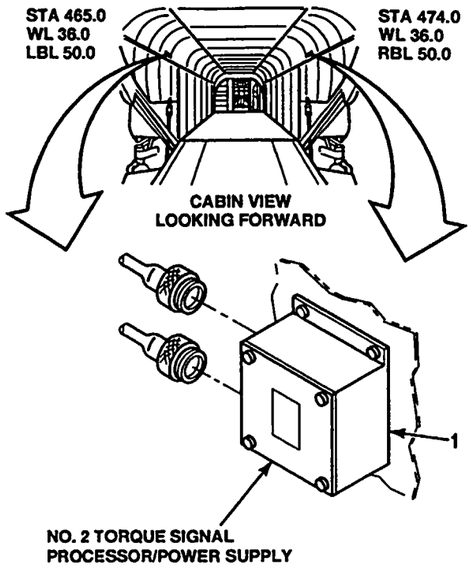
Aircraft Electrician (2)

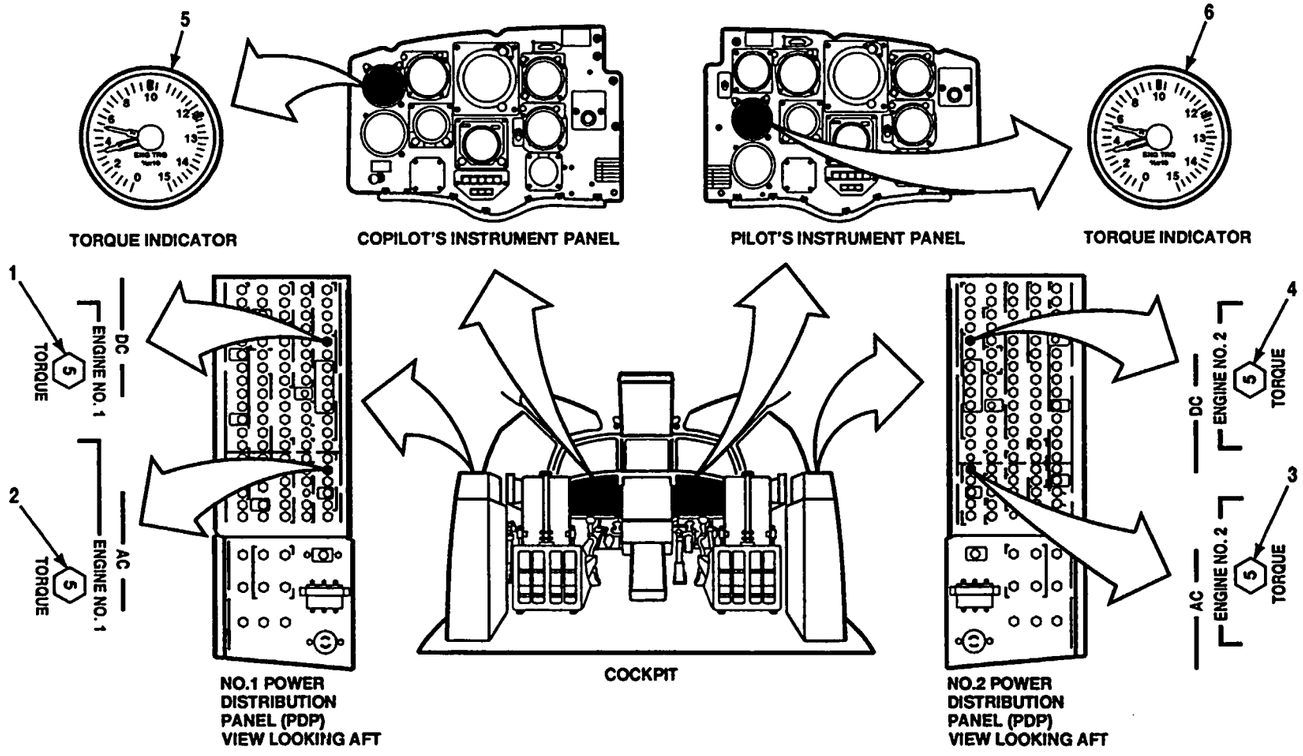
References:

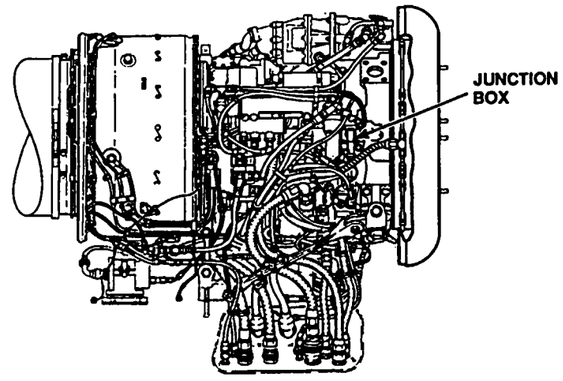
TM 1-2840-265-23
TM 55-1520-240-10
TM 55-1520-240-23
Electric Torquemeter Flight Line Test Set Operating Manual, Allied Signal SE-876-01-1006

Equipment Condition:

TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power On
Torque Indicating System Visual Check Performed (Task 8-6.2.1)







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TASK	RESULT
1. **Check** that **ENGINE NO. 1 AC TORQUE circuit breaker (2)** is **closed.**	If **ENGINE NO. 1 AC TORQUE** circuit breaker (2) is open, close it. If it opens again, go to task 8-6.4.
2. **Check** that **ENGINE NO. 1 DC TORQUE circuit breaker (1)** is **closed.**	If **ENGINE NO. 1 DC TORQUE** circuit breaker (1) is open, close it. If it opens again, go to task 8-6.5.1.
3. **Check** that **ENGINE NO. 2 AC TORQUE circuit breaker (3)** is **closed.**	If **ENGINE NO. 2 AC TORQUE** circuit breaker (3) is open, close it. If it opens again, go to task 8-6.4.
4. **Check that ENGINE NO. 2 DC TORQUE circuit breaker (4)** is **closed.**	If **ENGINE NO. 2 DC TORQUE** circuit breaker (4) is open, close it. If it opens again, go to task 8-6.5.1.
5. **Check No. 2 pointer on pilot (5) and copilot (6) torque Indicators.**	No. 2 pointer on both torque indicators (5 and 6) shall be below 10%. If not, adjust torque indicator to zero. (Ref TM 55-1520-240-23.)
NOTE **If pointer is spinning, have helper manually turn rotor blades until spinning stops. If spinning continues after one revolution of the blades, go to next step.**	
6. **Check No. 1 pointer on pilot (5) and copilot (6) torque indicators.**	No. 1 pointer on both torque indicators (5 and 6) shall be below 10%. If not, adjust torque indicator to zero. (Ref TM 55-1520-240-23.)
NOTE **If pointer is spinning, have helper manually turn rotor blades until spinning stops. If spinning continues after one revolution of blades, go to next step.**	
7. **Install electric torquemeter flight line test set on the aircraft.** Reference operating manual SE-876-01-1006.	Continue the tests or replace LRUs, depending upon the results of the AIRCRAFT SYSTEM TEST. Reference operating manual SE-876-01-1006.
8. **Perform an AIRCRAFT SYSTEM TEST.** Reference operating manual SE-876-01-1006.	
9. **After completion of test(s), remove electric flight line test set from the aircraft.** Reference operating manual SE-876-01-1006.	

FOLLOW-ON MAINTENANCE:
TM 55-1520-240-23:
Battery disconnected.
Electrical power off.
Hydraulic power off.

END OF TASK

8-6.4 NO. 1 OR NO. 2 ENGINE TORQUE AC CIRCUIT BREAKER WILL NOT STAY CLOSED 8-6.4

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

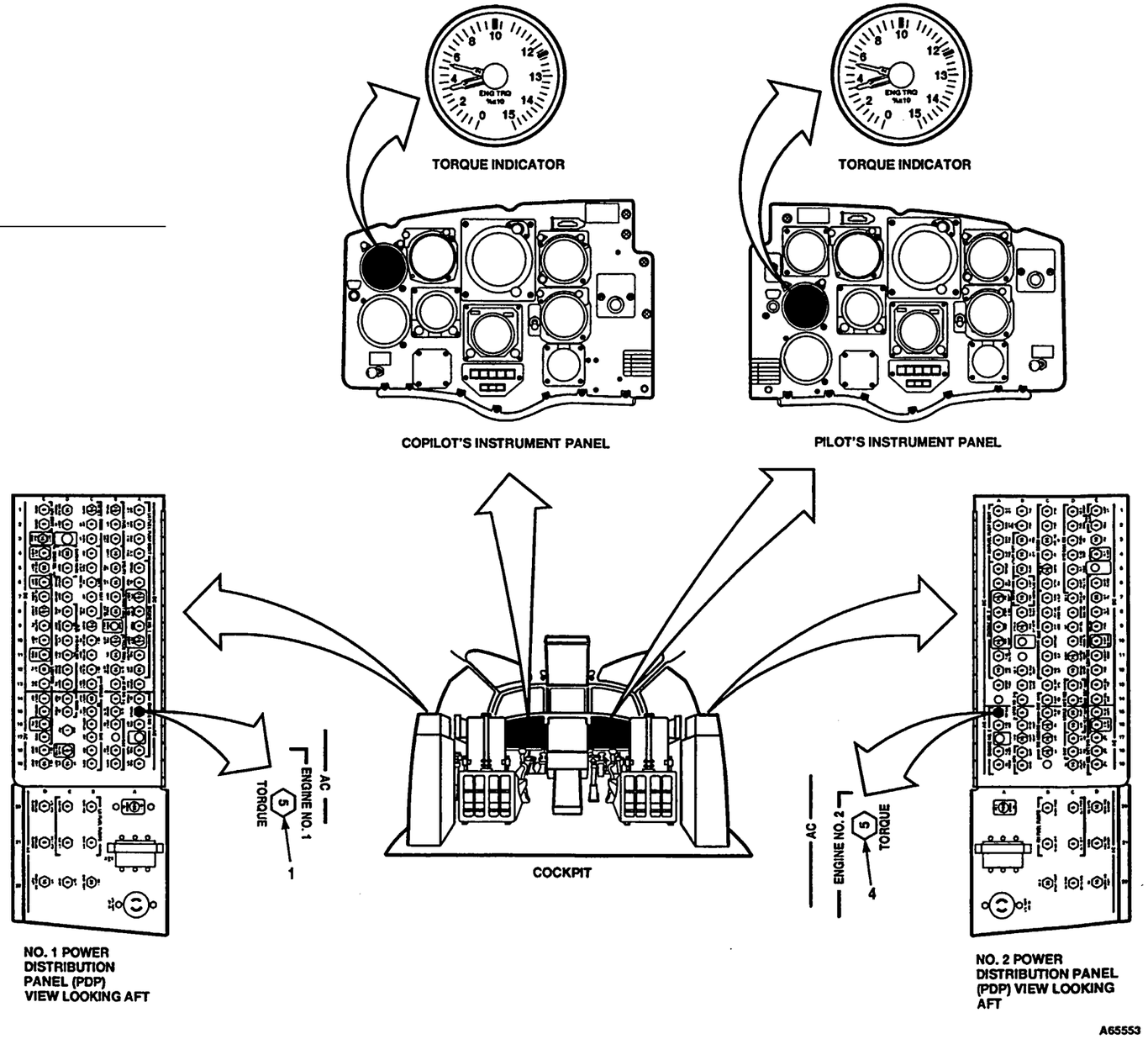
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915

Materials:
None

Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

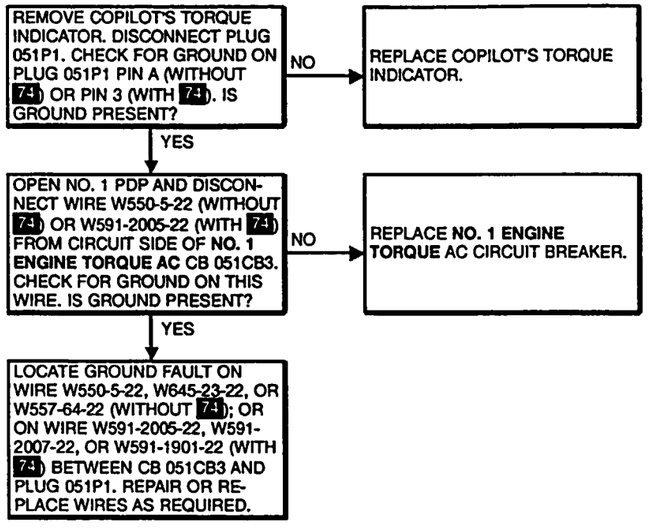
Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off



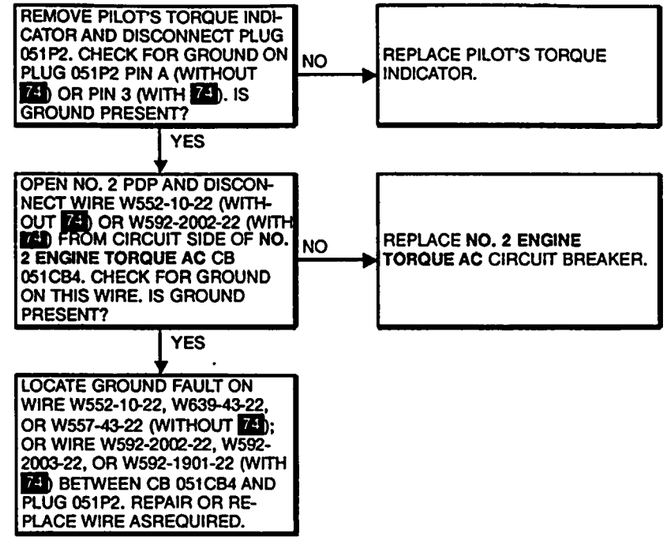
A65553

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NO. 1 ENGINE TORQUE AC CIRCUIT BREAKER WILL NOT STAY CLOSED



NO. 2 ENGINE TORQUE AC CIRCUIT BREAKER WILL NOT STAY CLOSED



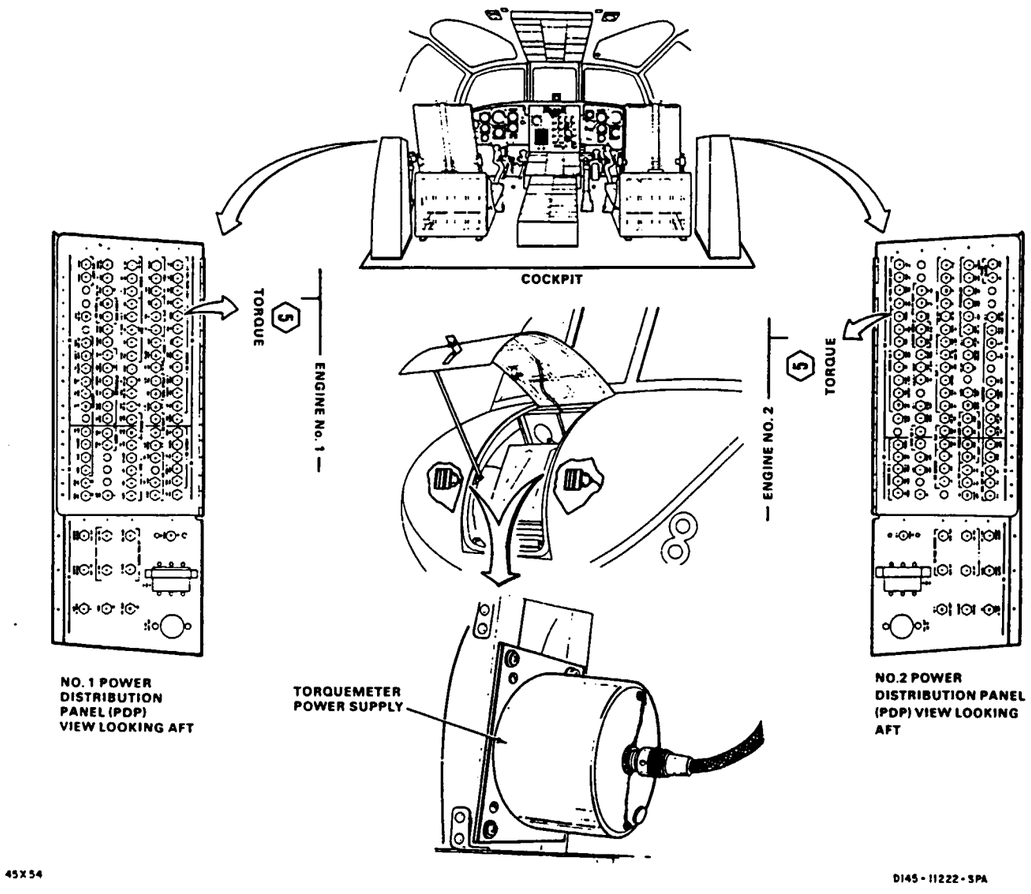
END OF TASK

8-6.5 NO. 1 OR NO. 2 ENGINE TORQUE DC CIRCUIT BREAKERS WILL NOT STAY CLOSED 8-6.5

FAULT ISOLATION PROCEDURE

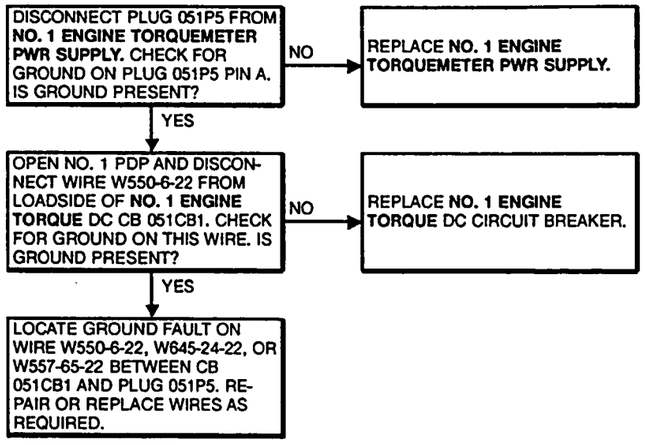
INITIAL SETUP
Applicable Configurations:
Without 74
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Workstand
Materials:
None
Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23:
Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off
Nose Access Door Open

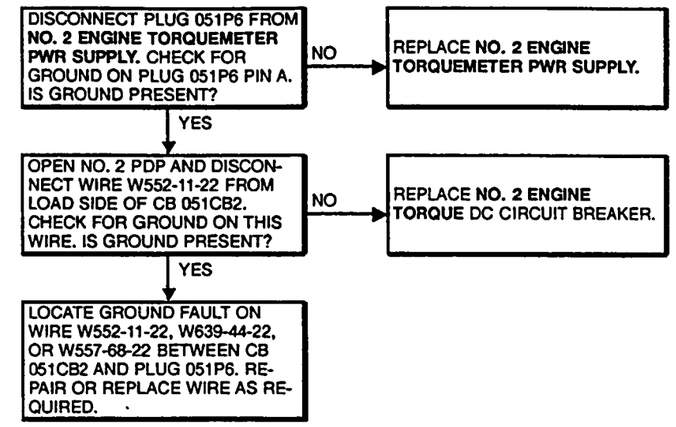


GO TO NEXT PAGE

NO. 1 ENGINE TORQUE DC CIRCUIT BREAKER WILL NOT STAY CLOSED



NO. 2 ENGINE TORQUE DC CIRCUIT BREAKER WILL NOT STAY CLOSED



END OF TASK

8-6.5.1 NO. 1 OR NO. 2 ENGINE TORQUE DC CIRCUIT BREAKERS WILL NOT STAY CLOSED 8-6.5.1

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:

With 74

Tools:

Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915

Materials:

None

Personnel Required:

Aircraft Electrician

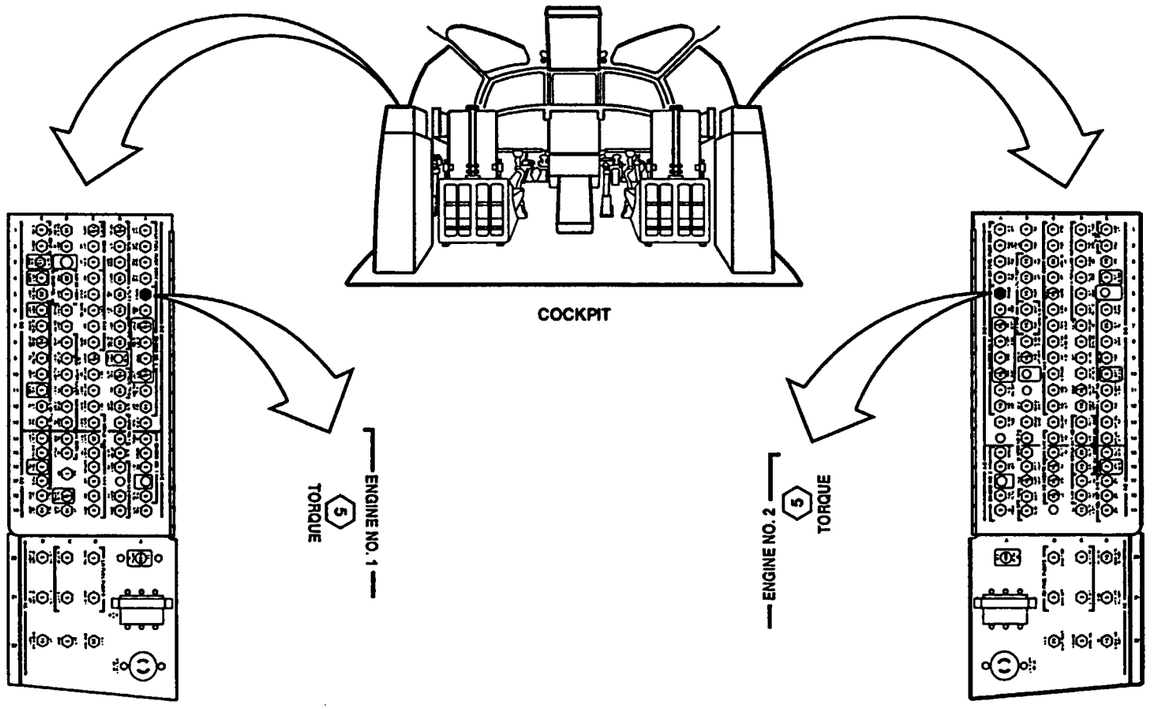
References:

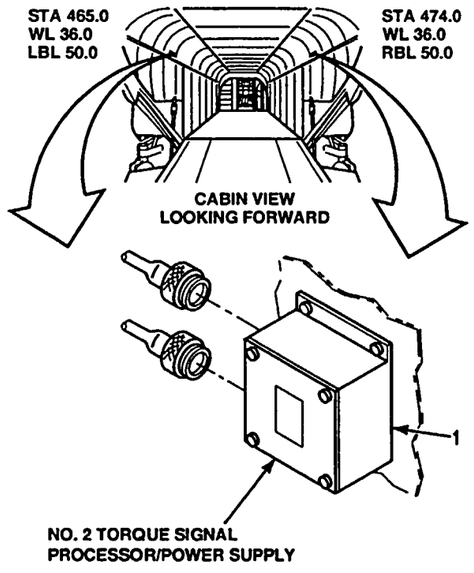
TM 55-1520-240-23:

Equipment Condition:

TM 55-1520-240-23:

Battery Disconnected
Electrical Power Off
Hydraulic Power Off

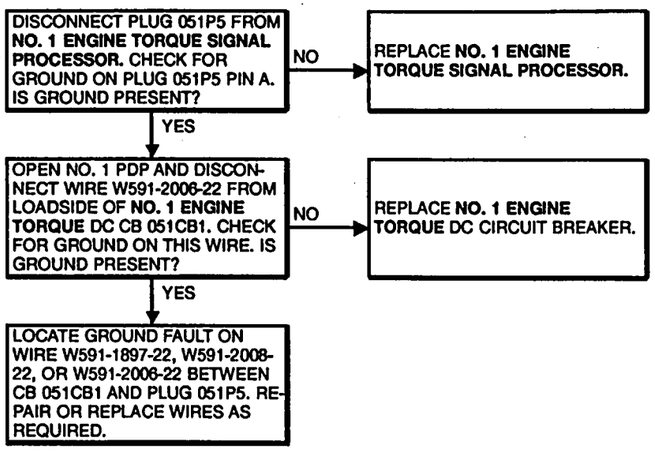




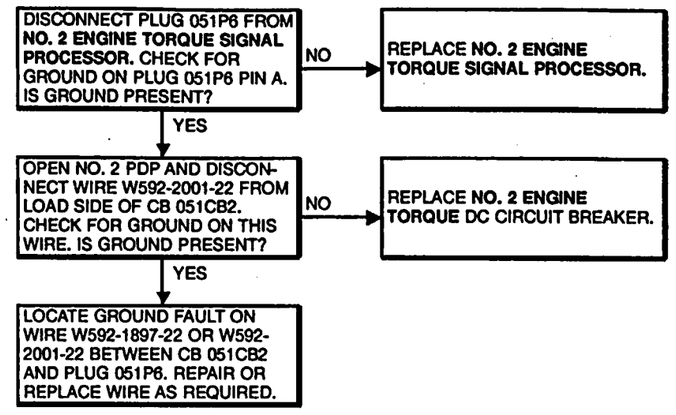
A65555

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NO. 1 ENGINE TORQUE DC CIRCUIT BREAKER WILL NOT STAY CLOSED



NO. 2 ENGINE TORQUE DC CIRCUIT BREAKER WILL NOT STAY CLOSED



END-OF TASK

8-6.6 NO. 1 POINTER ON PILOT'S OR COPILOT'S INDICATOR DOES NOT INDICATE TORQUE

8-6.6

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:

Without 74

Tools:

Electrical Repairer's Tool Kit, NSN 5180-00-323-4915

Multimeter

Materials:

None

Personnel Required:

Aircraft Electrician (2)

Rotary Wing Aviator (2)

References:

TM 55-1520-240-23

TM 55-1520-240-10

Equipment Condition:

TM 55-1520-240-23:

Battery Connected

Electrical Power On

Hydraulic Power On

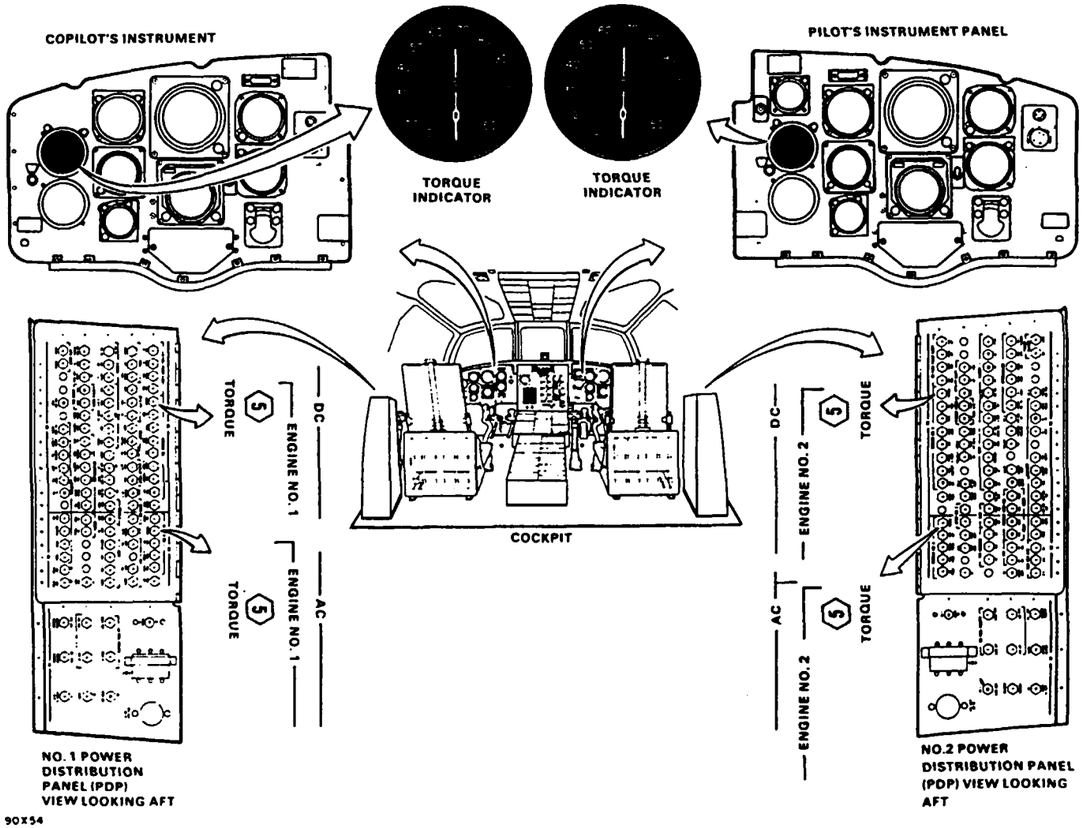
Nose Access Door Open

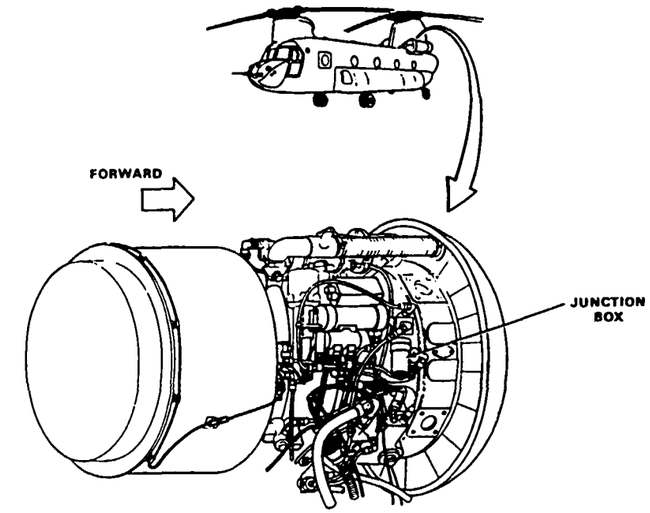
No. 1 Engine Work Platform Open

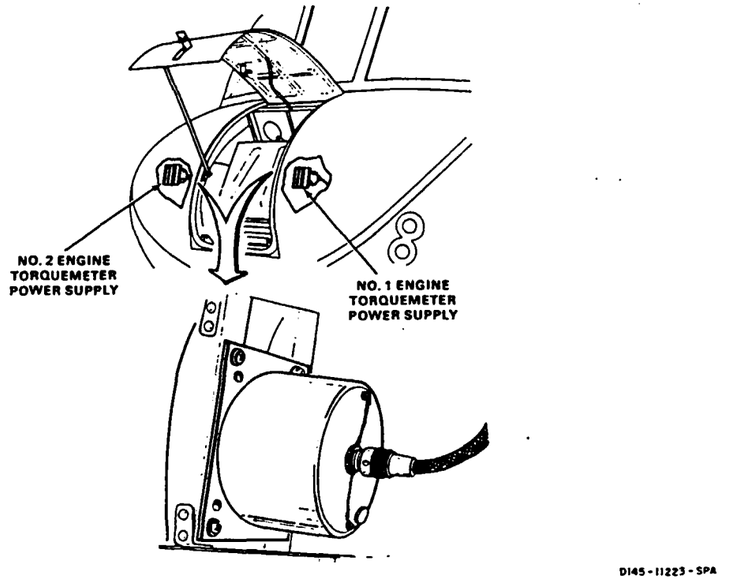
No. 1 Engine Upper and Lower Access Covers Open

No. 2 Engine Work Platform Open

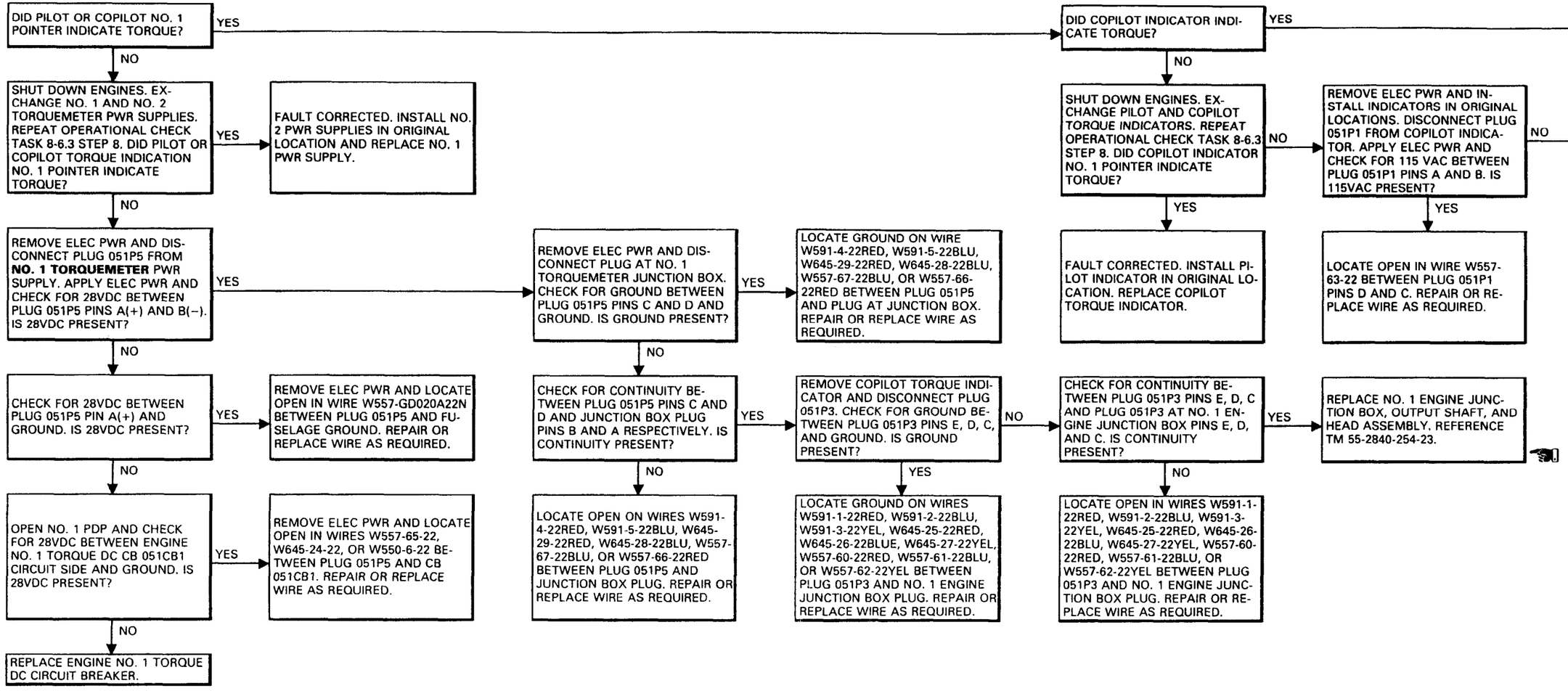
No. 2 Engine Upper and Lower Access Doors Open





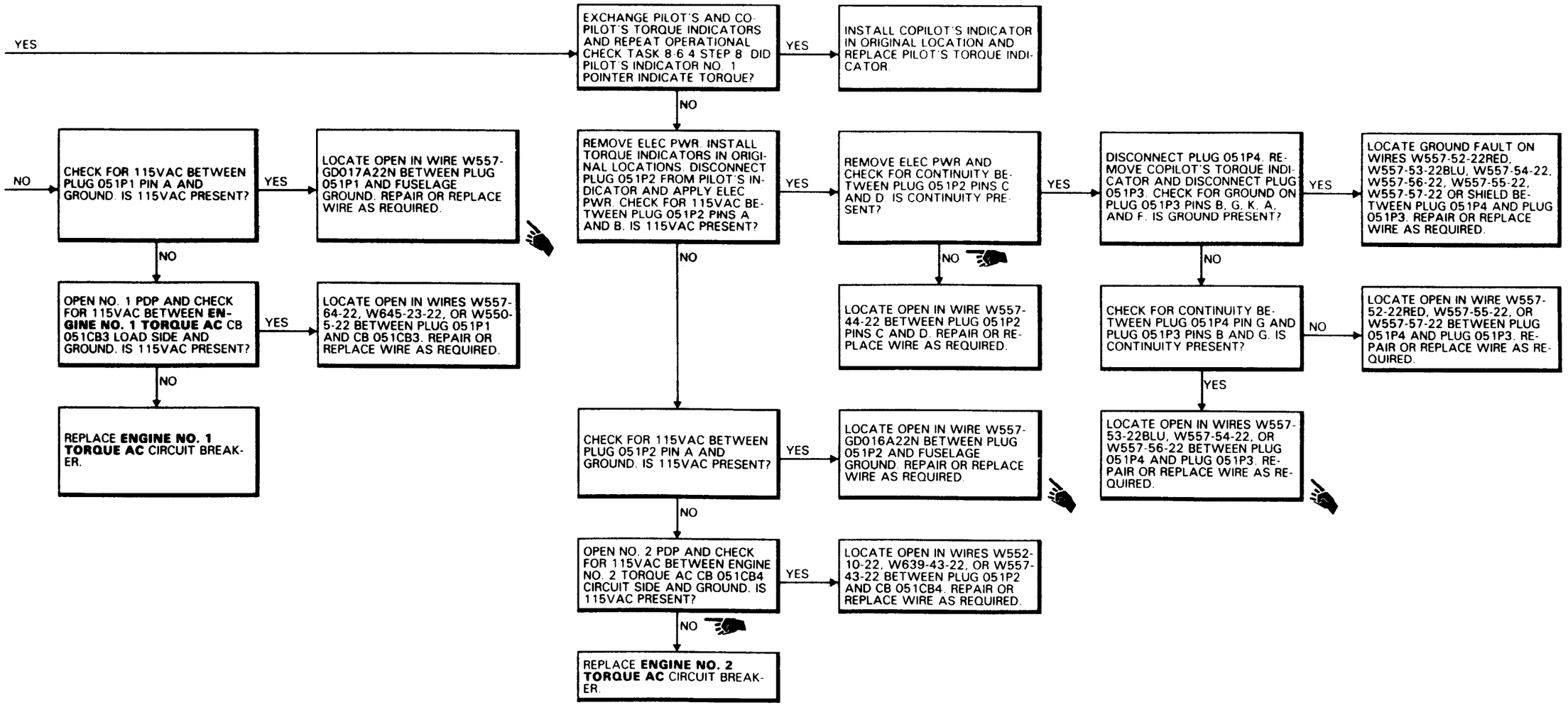


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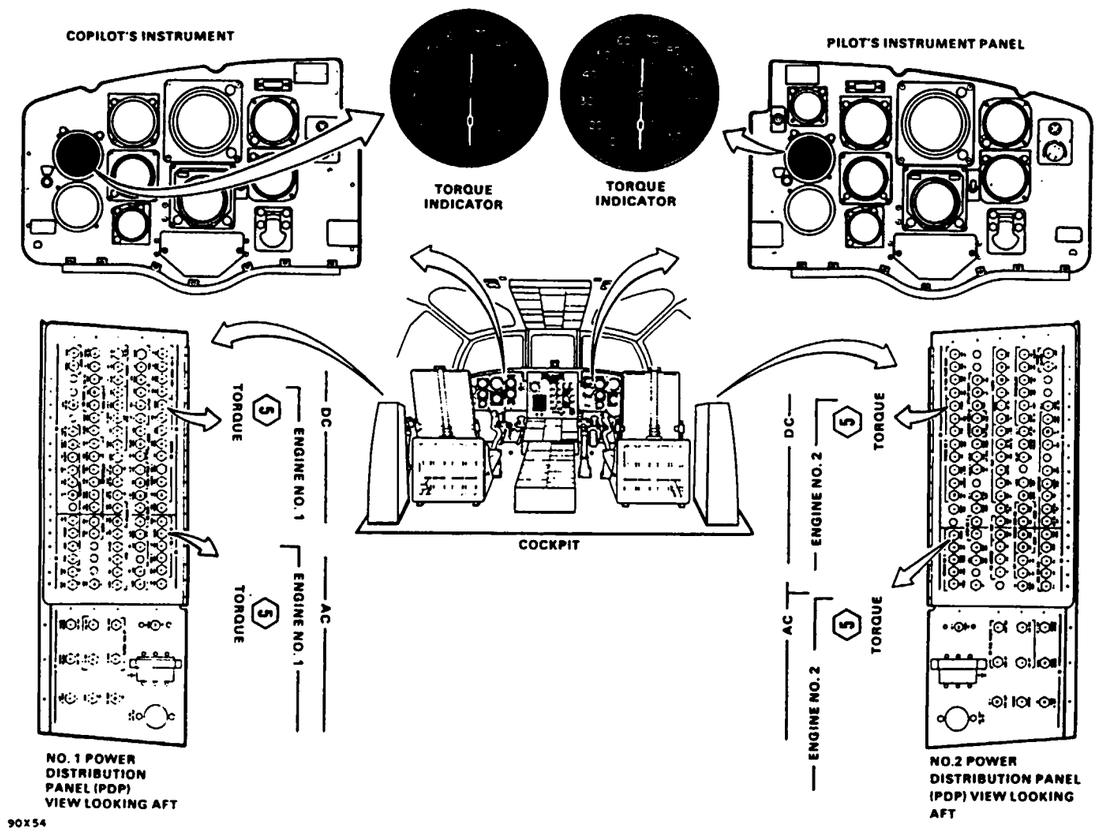


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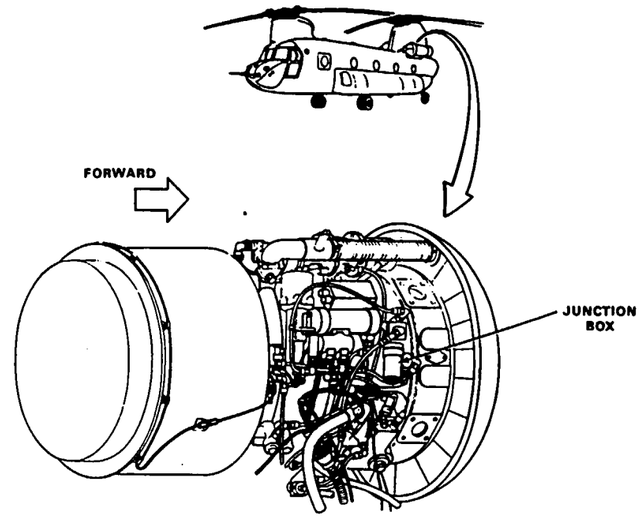
8-6.6 NO. 1 POINTER ON PILOT'S OR COPILOT'S INDICATOR DOES NOT INDICATE TORQUE (Continued)

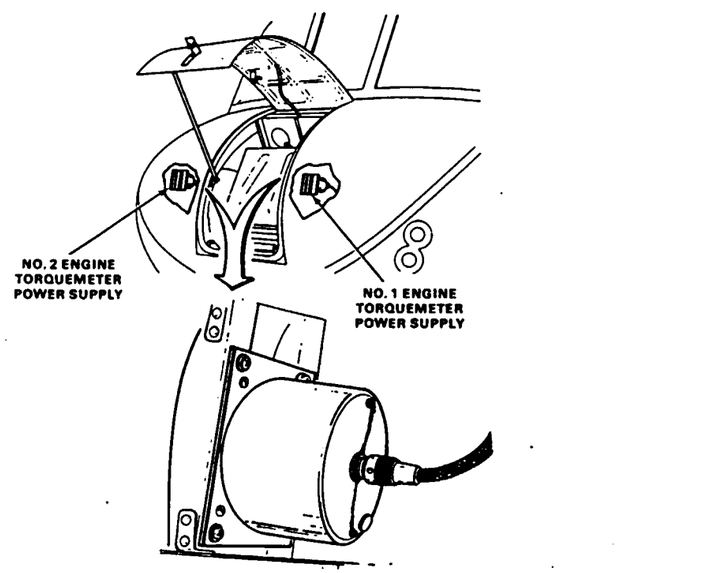


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D145-11224-SPA

END-OF-TASK

8-6.6.1 NO. 1 POINTER ON PILOT'S OR COPILOT'S INDICATOR DOES NOT INDICATE TORQUE

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:

With 74

Tools:

Electrical Repairer's Tool Kit, NSN 5180-00-323-4915

Multimeter

Materials:

None

Personnel Required:

Aircraft Electrician (2)

Rotary Wing Aviator (2)

References:

TM 1-2840-265-23

TM 55-1520-240-10

TM 55-1520-240-23

Equipment Condition:

TM 55-1520-240-23:

Battery Connected

Electrical Power On

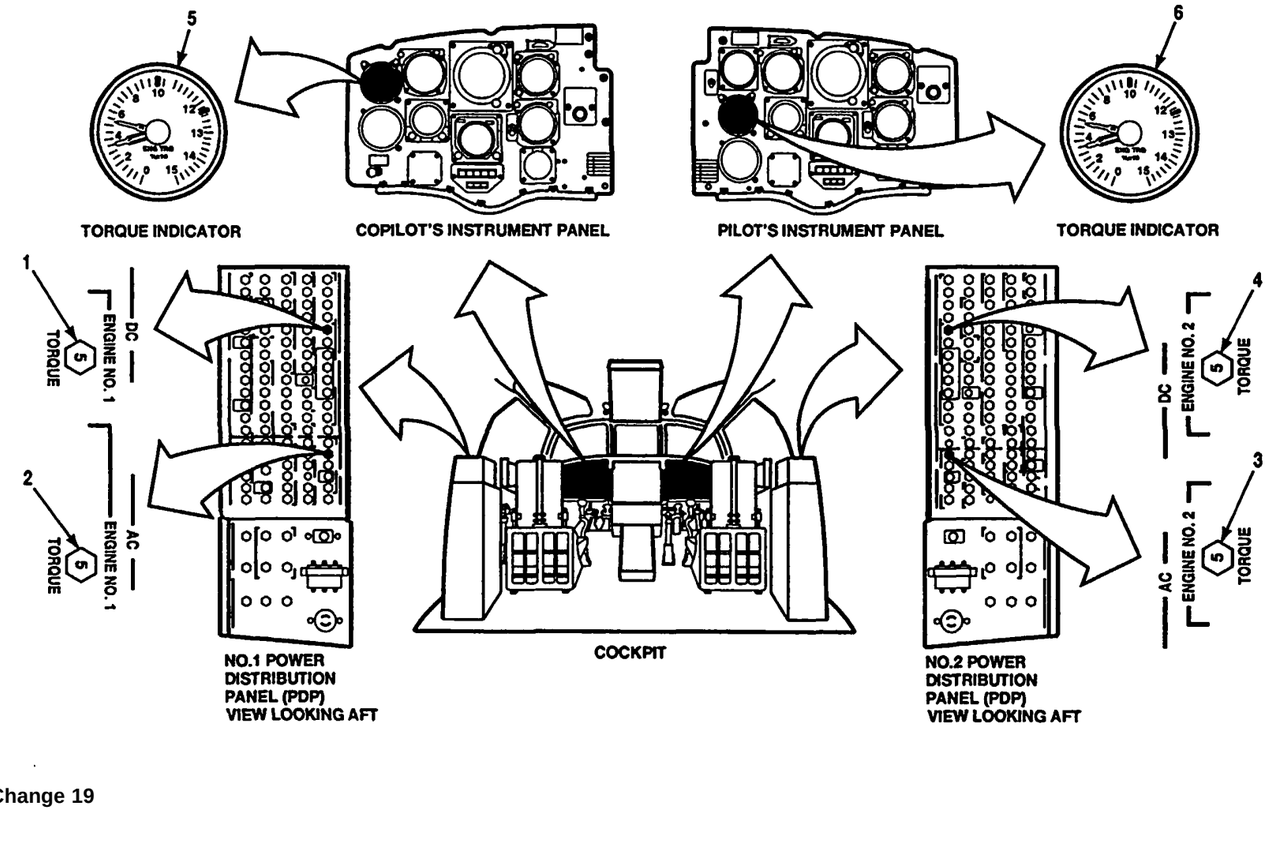
Hydraulic Power On

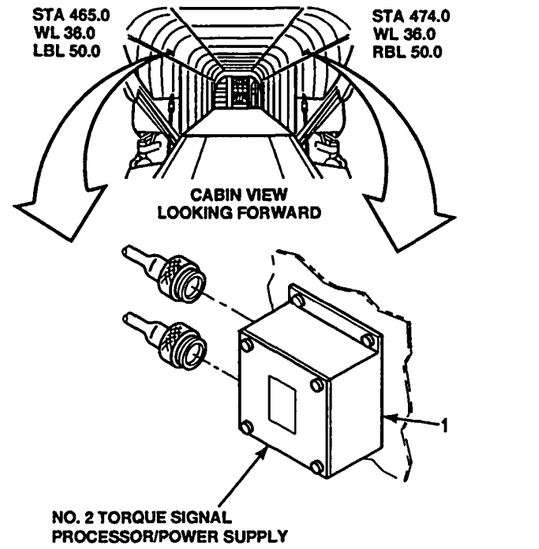
No. 1 Engine Work Platform Open

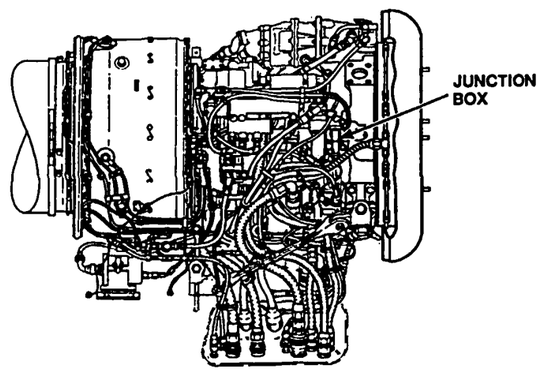
No. 1 Engine Upper and Lower Access Covers Open

No. 2 Engine Work Platform Open

No. 2 Engine Upper and Lower Access Doors Open

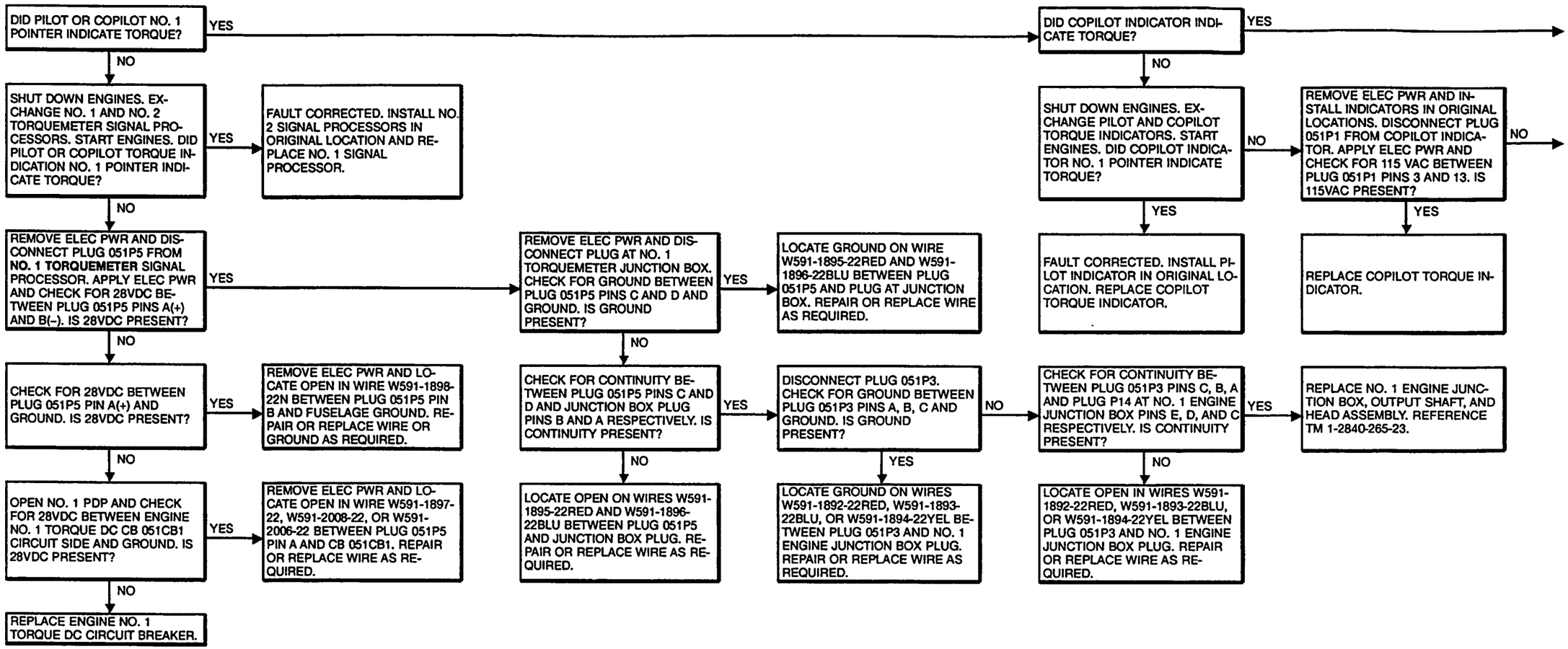




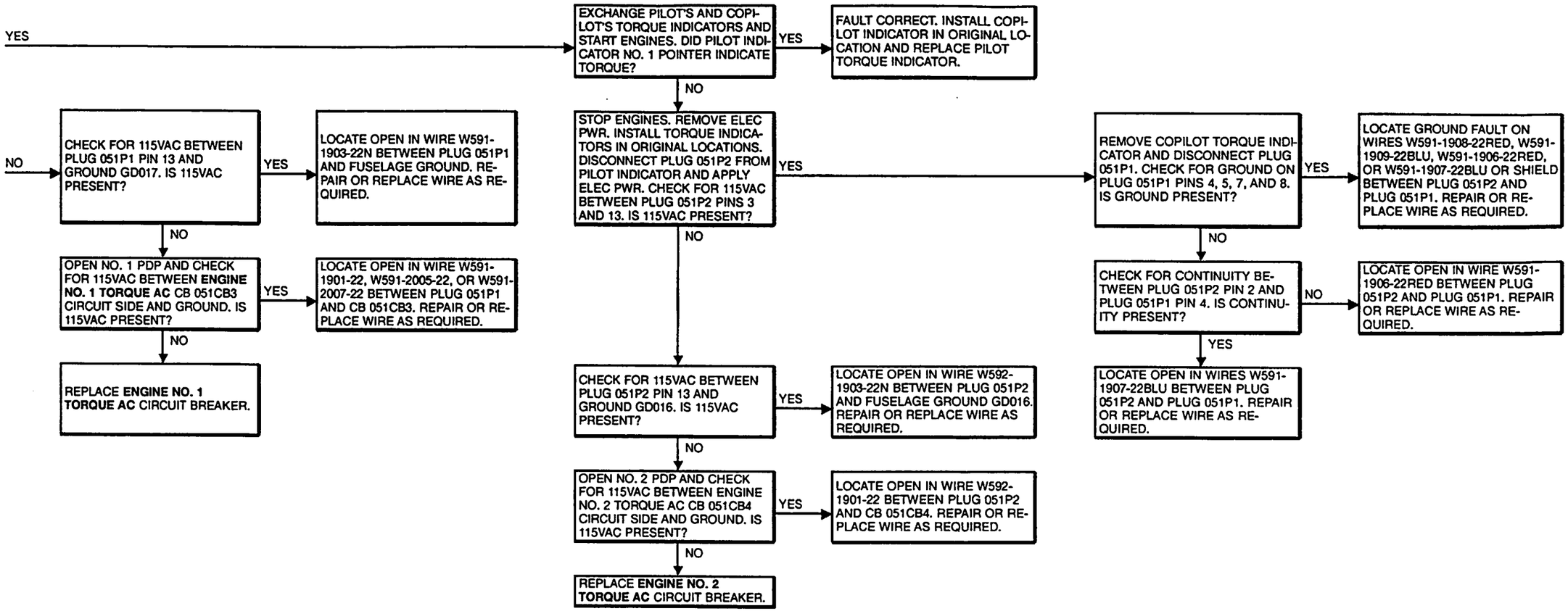


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YES
EXCHANGE PILOT'S AND COPILOT'S TORQUE INDICATORS AND START ENGINES. DID PILOT INDICATOR NO. 1 POINTER INDICATE TORQUE?
YES
FAULT CORRECT. INSTALL COPILOT INDICATOR IN ORIGINAL LOCATION AND REPLACE PILOT TORQUE INDICATOR.
NO
NO
CHECK FOR 115VAC BETWEEN PLUG 051P1 PIN 13 AND GROUND GD017. IS 115VAC PRESENT?
YES
LOCATE OPEN IN WIRE W591-1903-22N BETWEEN PLUG 051P1 AND FUSELAGE GROUND. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
OPEN NO. 1 PDP AND CHECK FOR 115VAC BETWEEN ENGINE NO. 1 TORQUE AC CB 051CB3 CIRCUIT SIDE AND GROUND. IS 115VAC PRESENT?
YES
LOCATE OPEN IN WIRE W591-1901-22, W591-2005-22, OR W591-2007-22 BETWEEN PLUG 051P1 AND CB 051CB3. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
REPLACE ENGINE NO. 1 TORQUE AC CIRCUIT BREAKER.
STOP ENGINES. REMOVE ELEC PWR. INSTALL TORQUE INDICATORS IN ORIGINAL LOCATIONS. DISCONNECT PLUG 051P2 FROM PILOT INDICATOR AND APPLY ELEC PWR. CHECK FOR 115VAC BETWEEN PLUG 051P2 PINS 3 AND 13. IS 115VAC PRESENT?
YES
REMOVE COPILOT TORQUE INDICATOR AND DISCONNECT PLUG 051P1. CHECK FOR GROUND ON PLUG 051P1 PINS 4, 5, 7, AND 8. IS GROUND PRESENT?
YES
LOCATE GROUND FAULT ON WIRES W591-1908-22RED, W591-1909-22BLU, W591-1906-22RED, OR W591-1907-22BLU OR SHIELD BETWEEN PLUG 051P2 AND PLUG 051P1. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
CHECK FOR CONTINUITY BETWEEN PLUG 051P2 PIN 2 AND PLUG 051P1 PIN 4. IS CONTINUITY PRESENT?
NO
LOCATE OPEN IN WIRE W591-1906-22RED BETWEEN PLUG 051P2 AND PLUG 051P1. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
LOCATE OPEN IN WIRES W591-1907-22BLU BETWEEN PLUG 051P2 AND PLUG 051P1. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
CHECK FOR 115VAC BETWEEN PLUG 051P2 PIN 13 AND GROUND GD016. IS 115VAC PRESENT?
YES
LOCATE OPEN IN WIRE W592-1903-22N BETWEEN PLUG 051P2 AND FUSELAGE GROUND GD016. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
OPEN NO. 2 PDP AND CHECK FOR 115VAC BETWEEN ENGINE NO. 2 TORQUE AC CB 051CB4 CIRCUIT SIDE AND GROUND. IS 115VAC PRESENT?
YES
LOCATE OPEN IN WIRE W592-1901-22 BETWEEN PLUG 051P2 AND CB 051CB4. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
REPLACE ENGINE NO. 2 TORQUE AC CIRCUIT BREAKER.

END OF TASK

8-6.7 NO. 2 POINTER ON PILOT'S OR COPILOT'S INDICATOR DOES NOT INDICATE TORQUE

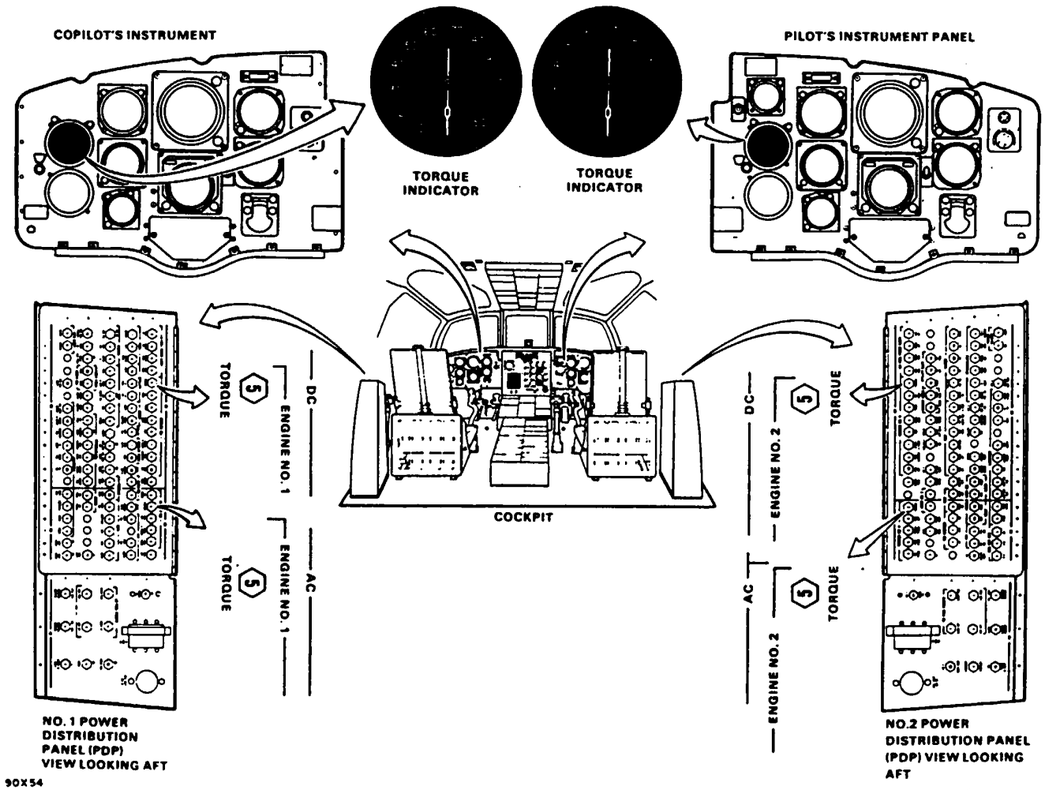
FAULT ISOLATION PROCEDURE

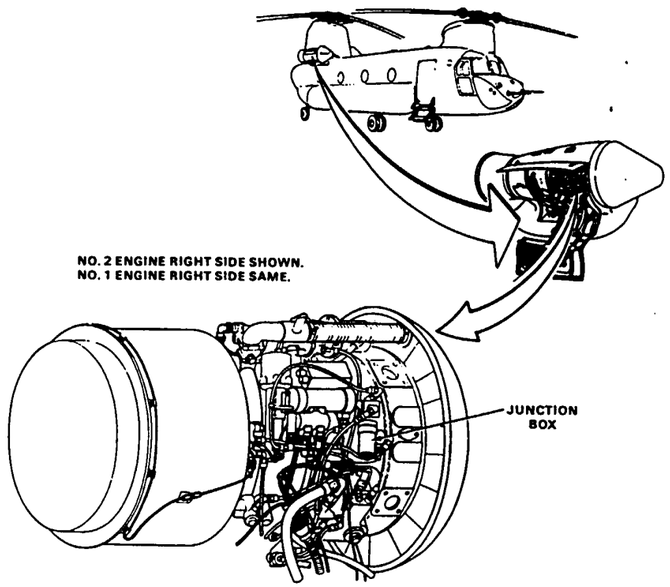
INITIAL SETUP

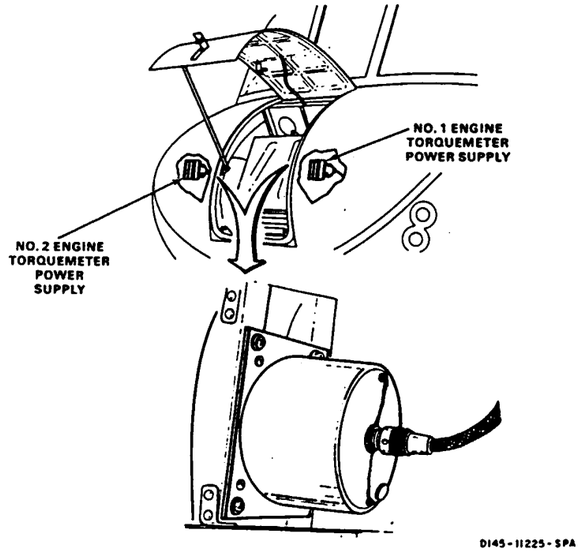
Applicable Configurations:
Without 74
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Materials:
None

Personnel Required:
Aircraft Electrician (2)
Rotary Wing Aviator (2)
Open
References:
TM 55-1520-240-10
TM 55-1520-240-23

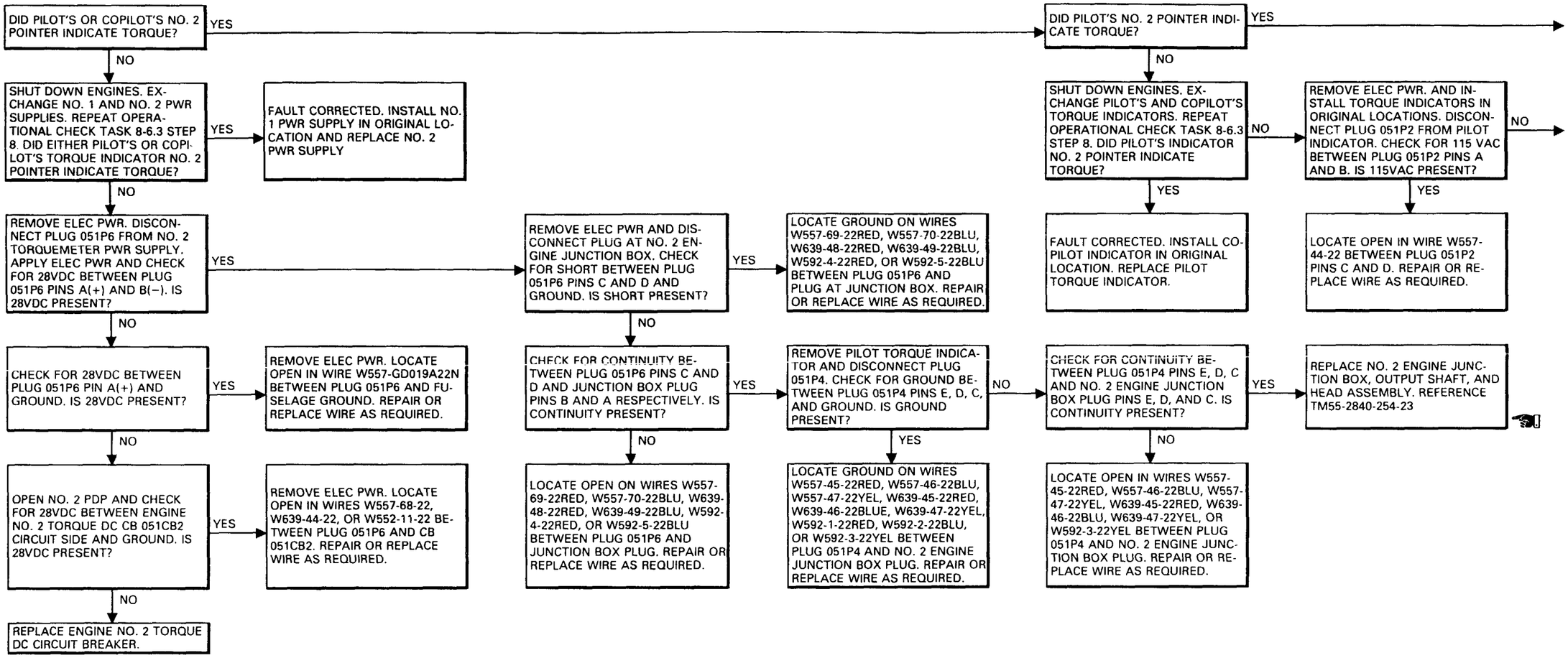
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power On
Nose Access Door Open
No. 1 Engine Work Platform Open
No. 1 Engine Upper and Lower Access Covers Open
No. 2 Engine Work Platform Open
No. 2 Engine Upper and Lower Access Doors Open





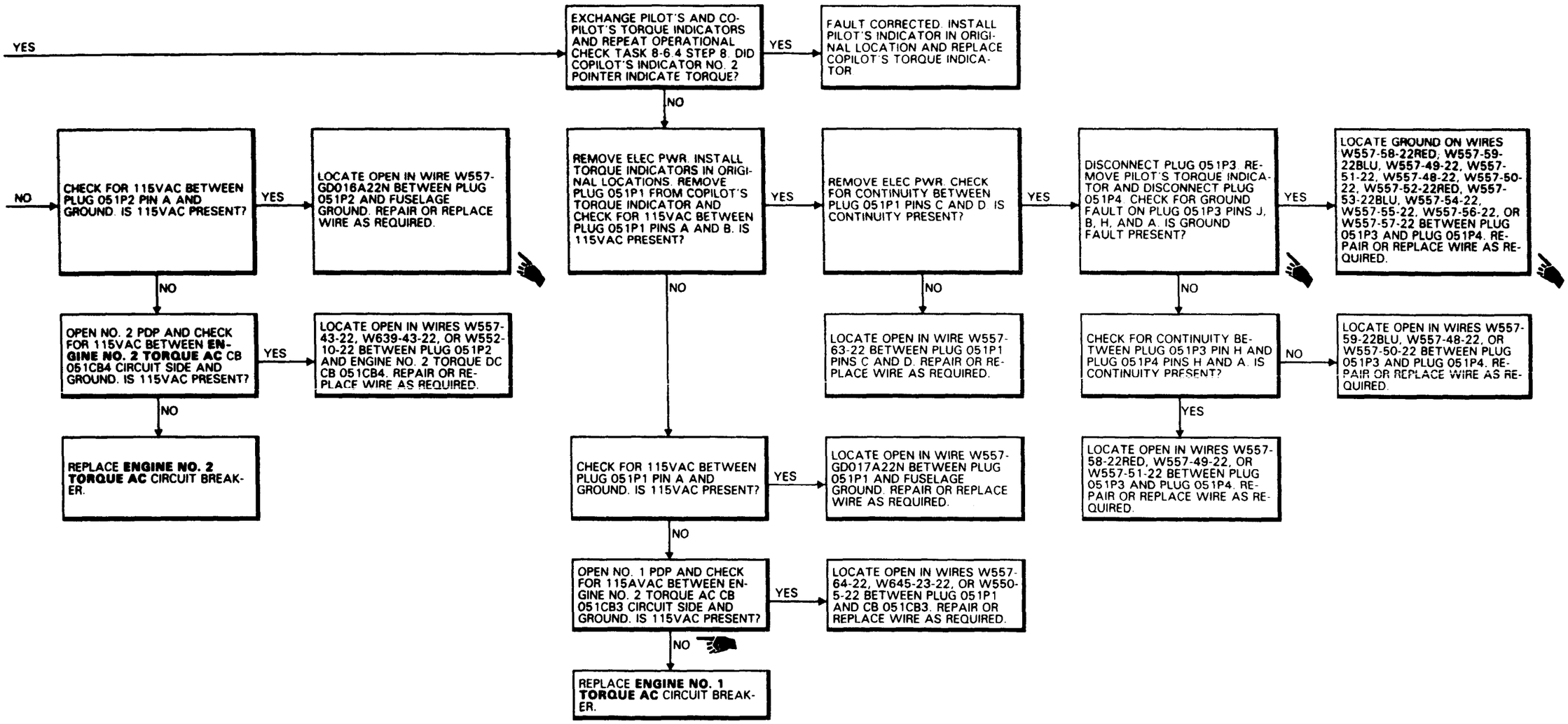


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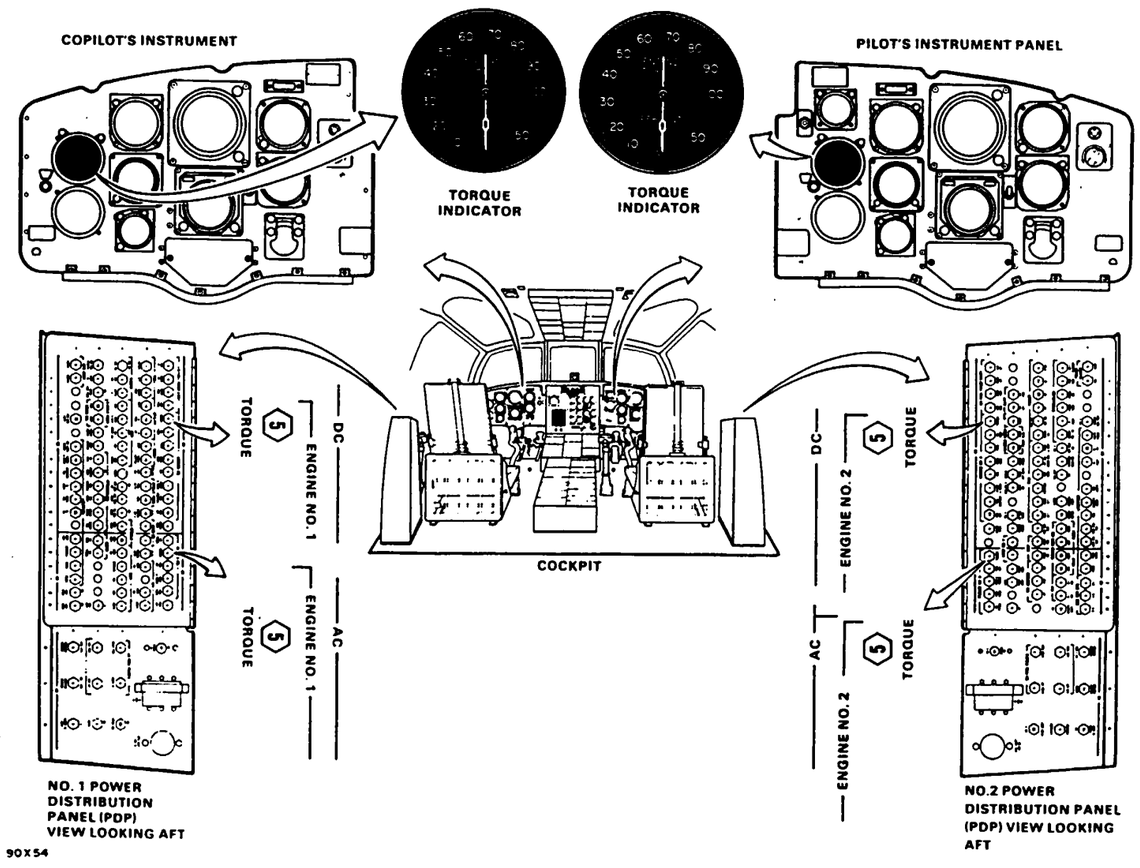


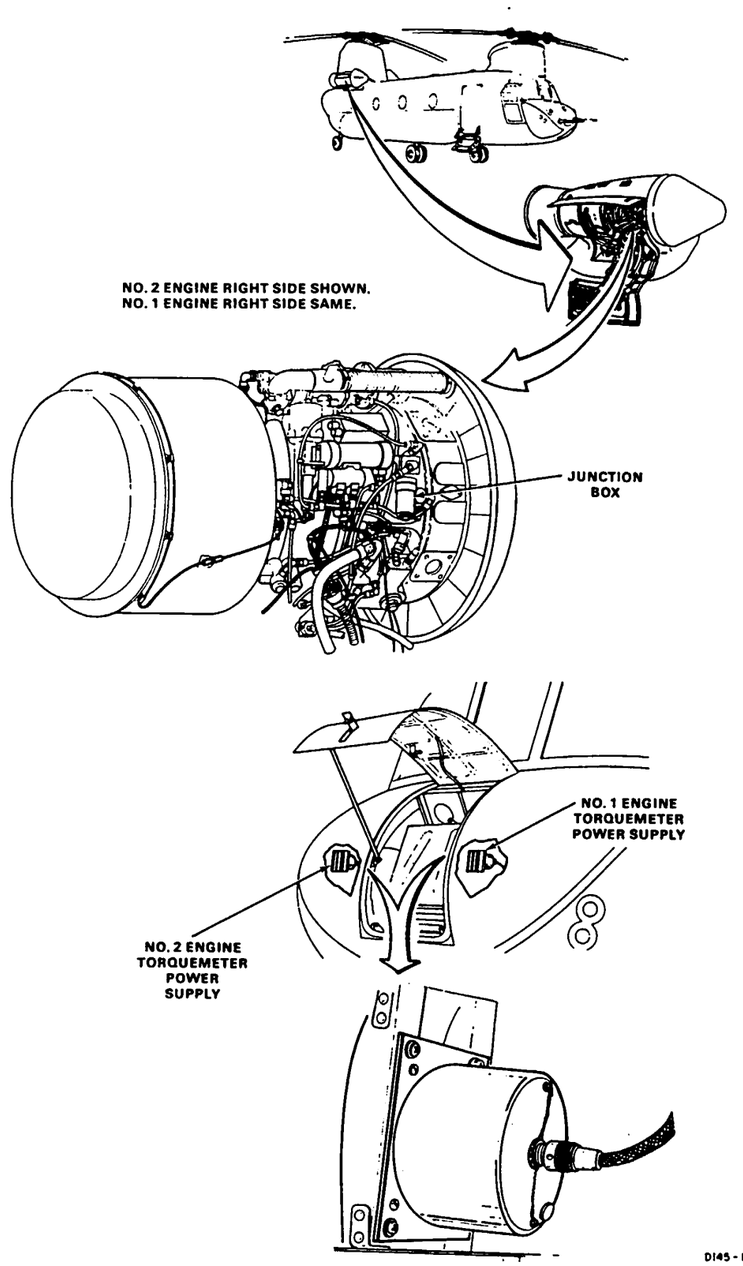
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8-6.7 NO. 2 POINTER ON PILOT'S OR COPILOT'S INDICATOR DOES NOT INDICATE TORQUE (Continued)



GO TO NEXT PAGE


COPILOT'S INSTRUMENT
TORQUE INDICATOR
TORQUE INDICATOR
PILOT'S INSTRUMENT PANEL
COCKPIT
TORQUE
5
DC
ENGINE NO. 1
AC
ENGINE NO. 1
TORQUE
5
NO. 1 POWER DISTRIBUTION PANEL (PDP) VIEW LOOKING AFT
DC
ENGINE NO. 2
TORQUE
5
AC
ENGINE NO. 2
TORQUE
5
NO.2 POWER DISTRIBUTION PANEL (PDP) VIEW LOOKING AFT
90X54


NO. 2 ENGINE RIGHT SIDE SHOWN.
NO. 1 ENGINE RIGHT SIDE SAME.
JUNCTION BOX
NO. 1 ENGINE TORQUEMETER POWER SUPPLY
NO. 2 ENGINE TORQUEMETER POWER SUPPLY
D145-11226-SPA

END OF-TASK

8-6.7.1 NO. 2 POINTER ON PILOT'S OR COPILOT'S INDICATOR DOES NOT INDICATE TORQUE 8-6.7.1

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
With 74

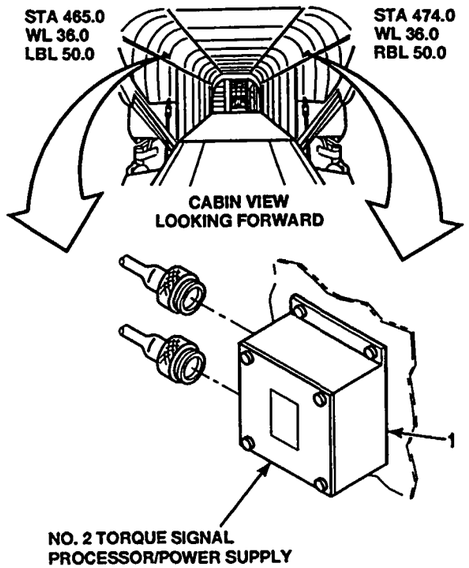
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915

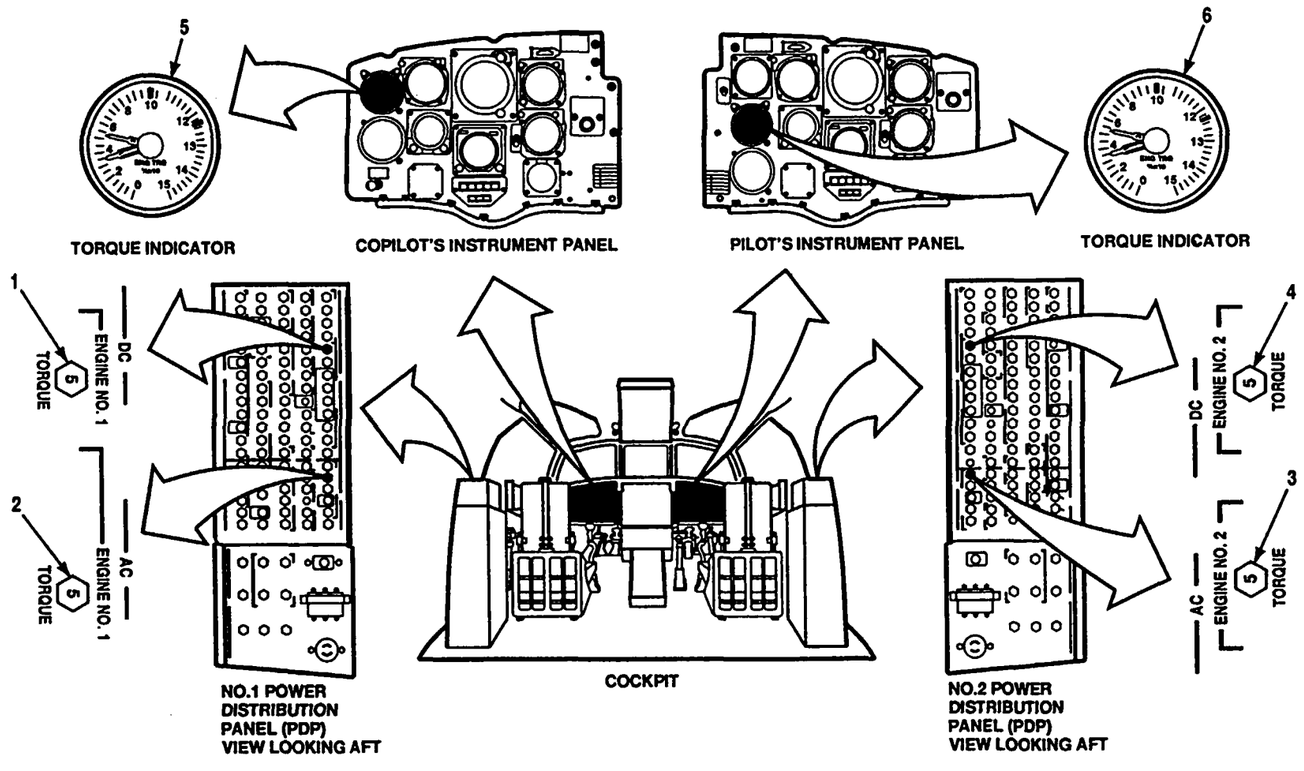
Materials,:
None

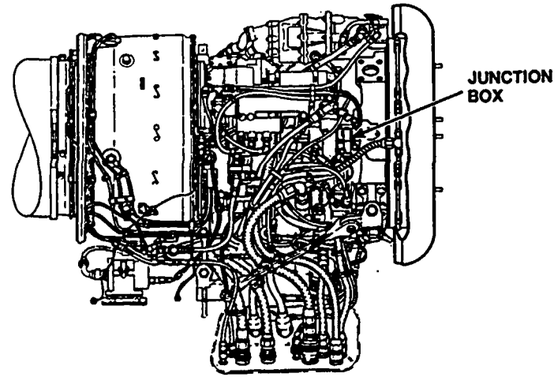
Personnel Required:
Open
Aircraft Electrician (2)
Rotary Wing Aviator (2)

References:
TM 1-2840-265-23
TM 55-1520-240-10
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power On
Hydraulic Power On
No. 1 Engine Work Platform Open
No. 1 Engine Upper and Lower Access Covers Open
No. 2 Engine Work Platform Open
No. 2 Engine Upper and Lower Access Doors

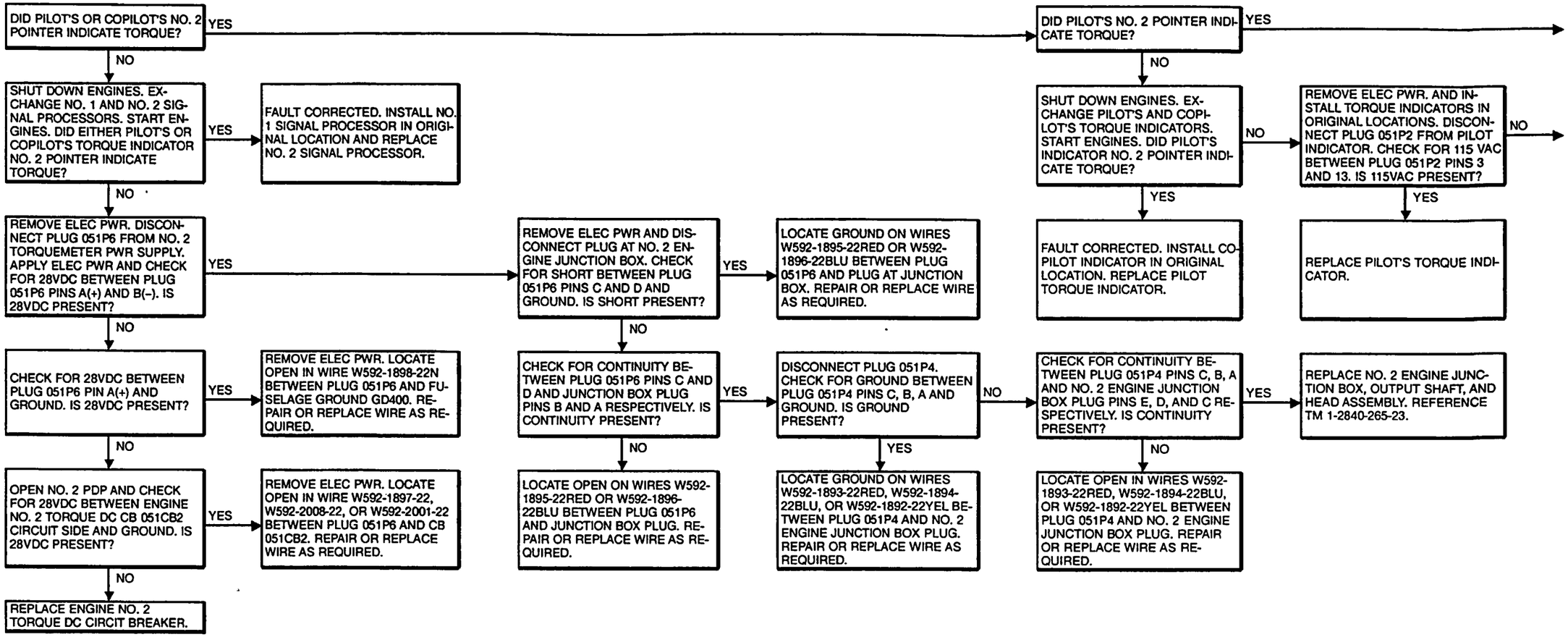




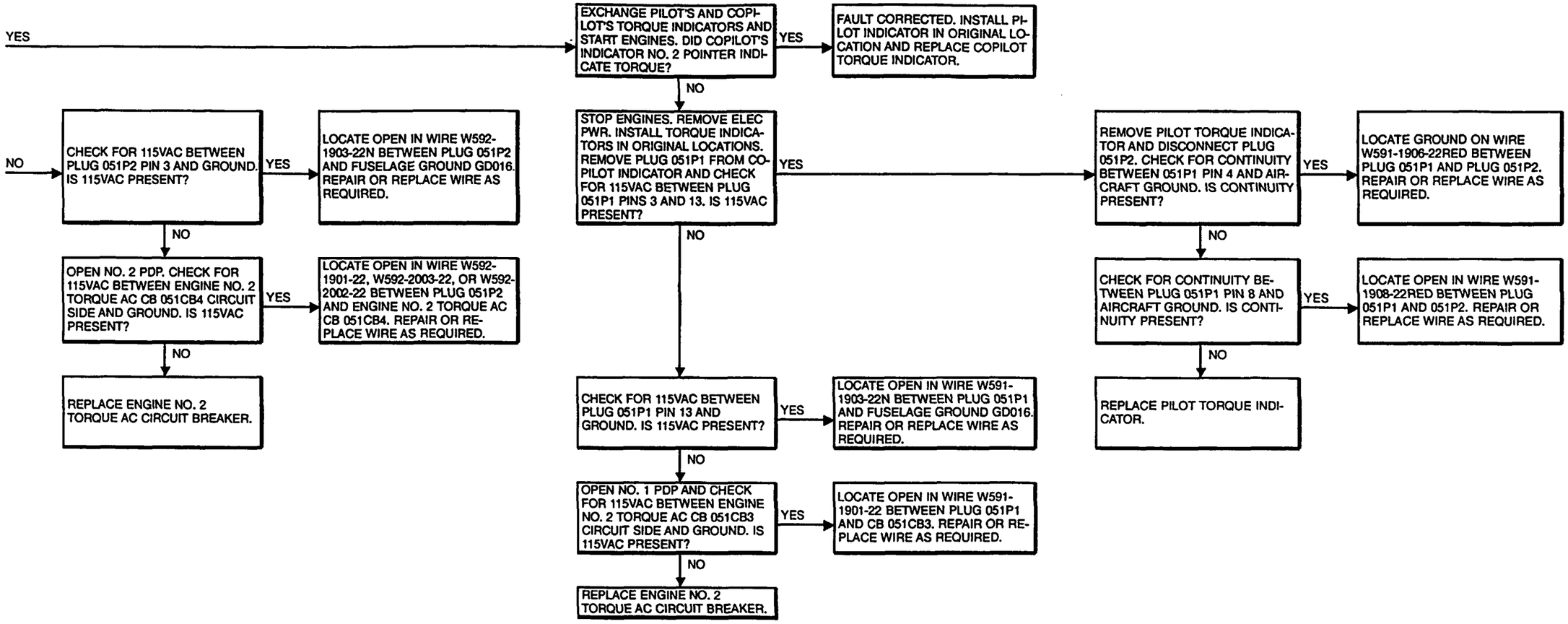


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YES
EXCHANGE PILOT'S AND COPILOT'S TORQUE INDICATORS AND START ENGINES. DID COPILOT'S INDICATOR NO. 2 POINTER INDICATE TORQUE?
YES
FAULT CORRECTED. INSTALL PILOT INDICATOR IN ORIGINAL LOCATION AND REPLACE COPILOT TORQUE INDICATOR.
NO
NO
CHECK FOR 115VAC BETWEEN PLUG 051P2 PIN 3 AND GROUND. IS 115VAC PRESENT?
YES
LOCATE OPEN IN WIRE W592-1903-22N BETWEEN PLUG 051P2 AND FUSELAGE GROUND GD016. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
OPEN NO. 2 PDP. CHECK FOR 115VAC BETWEEN ENGINE NO. 2 TORQUE AC CB 051CB4 CIRCUIT SIDE AND GROUND. IS 115VAC PRESENT?
YES
LOCATE OPEN IN WIRE W592-1901-22, W592-2003-22, OR W592-2002-22 BETWEEN PLUG 051P2 AND ENGINE NO. 2 TORQUE AC CB 051CB4. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
REPLACE ENGINE NO. 2 TORQUE AC CIRCUIT BREAKER.
STOP ENGINES. REMOVE ELEC PWR. INSTALL TORQUE INDICATORS IN ORIGINAL LOCATIONS. REMOVE PLUG 051P1 FROM COPILOT INDICATOR AND CHECK FOR 115VAC BETWEEN PLUG 051P1 PINS 3 AND 13. IS 115VAC PRESENT?
YES
REMOVE PILOT TORQUE INDICATOR AND DISCONNECT PLUG 051P2. CHECK FOR CONTINUITY BETWEEN 051P1 PIN 4 AND AIRCRAFT GROUND. IS CONTINUITY PRESENT?
YES
LOCATE GROUND ON WIRE W591-1906-22RED BETWEEN PLUG 051P1 AND PLUG 051P2. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
CHECK FOR CONTINUITY BETWEEN PLUG 051P1 PIN 8 AND AIRCRAFT GROUND. IS CONTINUITY PRESENT?
YES
LOCATE OPEN IN WIRE W591-1908-22RED BETWEEN PLUG 051P1 AND 051P2. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
REPLACE PILOT TORQUE INDICATOR.
NO
CHECK FOR 115VAC BETWEEN PLUG 051P1 PIN 13 AND GROUND. IS 115VAC PRESENT?
YES
LOCATE OPEN IN WIRE W591-1903-22N BETWEEN PLUG 051P1 AND FUSELAGE GROUND GD016. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
OPEN NO. 1 PDP AND CHECK FOR 115VAC BETWEEN ENGINE NO. 2 TORQUE AC CB 051CB3 CIRCUIT SIDE AND GROUND. IS 115VAC PRESENT?
YES
LOCATE OPEN IN WIRE W591-1901-22 BETWEEN PLUG 051P1 AND CB 051CB3. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
REPLACE ENGINE NO. 2 TORQUE AC CIRCUIT BREAKER.

END OF TASK

8-6.8 NO. 1 POINTER ON PILOTS OR COPILOTS TORQUE INDICATOR DOES NOT INDICATE PROPER TORQUE USING TORQUE SIGNAL SIMULATOR 8-6.8

FAULT ISOLATION PROCEDURE

INITIAL SETUP

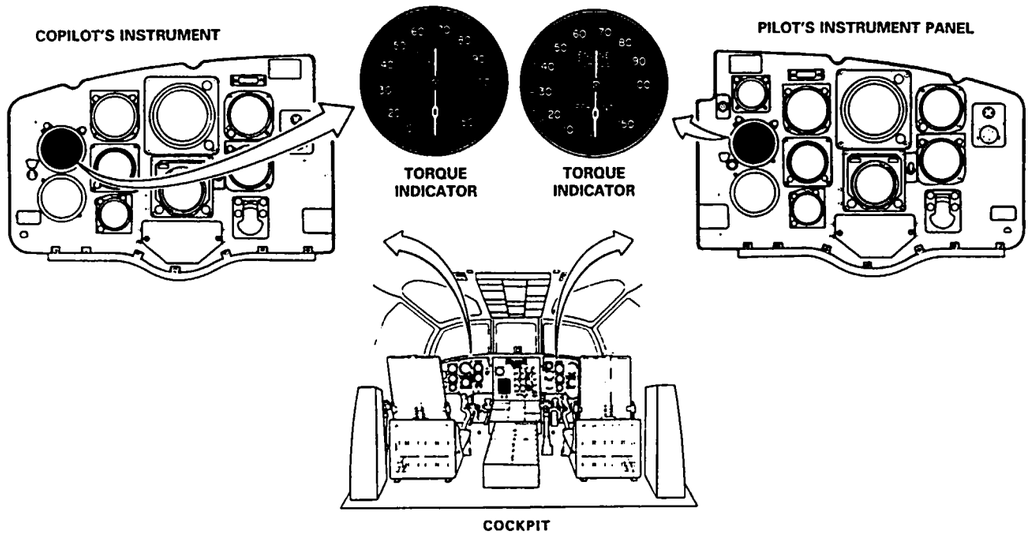
Applicable Configurations:
Without 74

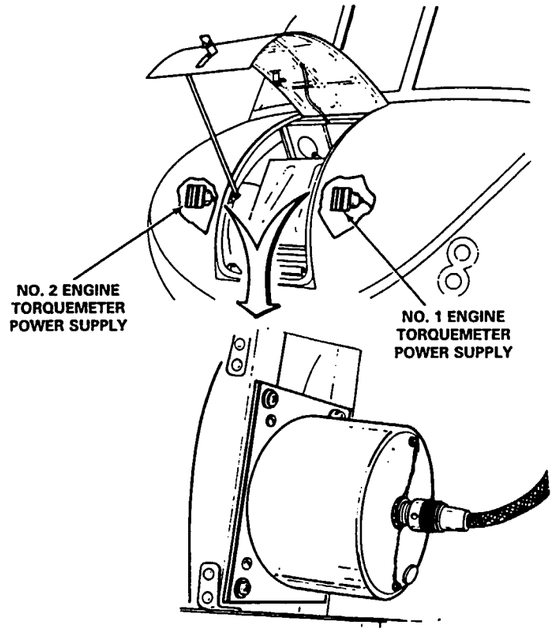
Tools:
Electrical Repairer Tool Kit,
NSN 5180-00-323-4915

Materials:
None

Personnel Required:
Aircraft Electrician (2)

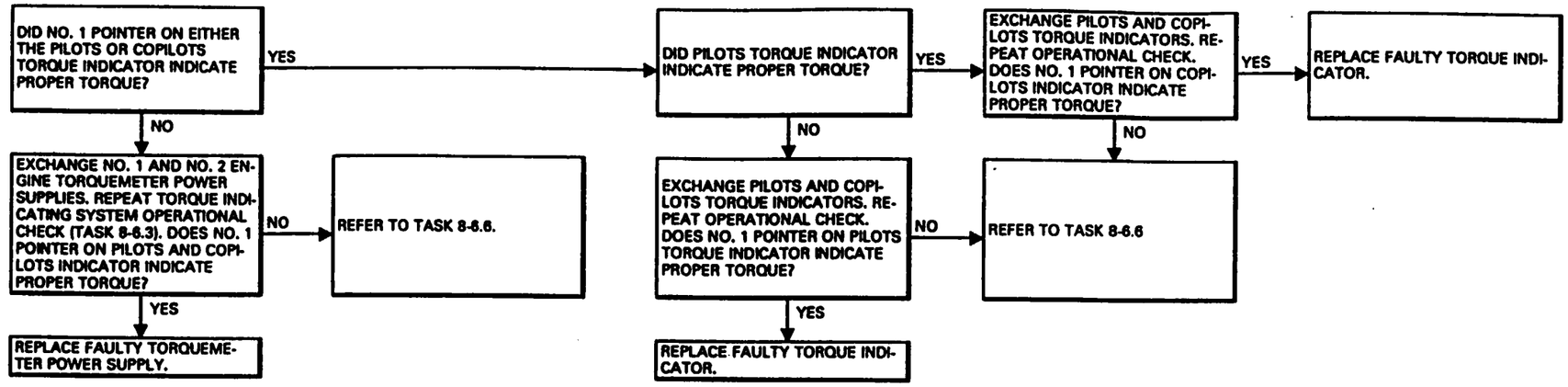
References.
TM 55-1520-240-23
Equipment Condition:
TM 55-1520-24023:
Battery Connected
Electrical Power On
Hydraulic Power On





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DID NO. 1 POINTER ON EITHER THE PILOTS OR COPILOTS TORQUE INDICATOR INDICATE PROPER TORQUE?
YES
NO
EXCHANGE NO. 1 AND NO. 2 ENGINE TORQUEMETER POWER SUPPLIES. REPEAT TORQUE INDICATING SYSTEM OPERATIONAL CHECK (TASK 8-6.3). DOES NO. 1 POINTER ON PILOTS AND COPILOTS INDICATOR INDICATE PROPER TORQUE?
NO
REFER TO TASK 8-6.6.
YES
REPLACE FAULTY TORQUEMETER POWER SUPPLY.
DID PILOTS TORQUE INDICATOR INDICATE PROPER TORQUE?
YES
EXCHANGE PILOTS AND COPILOTS TORQUE INDICATORS. REPEAT OPERATIONAL CHECK. DOES NO. 1 POINTER ON COPILOTS INDICATOR INDICATE PROPER TORQUE?
YES
REPLACE FAULTY TORQUE INDICATOR.
NO
EXCHANGE PILOTS AND COPILOTS TORQUE INDICATORS. REPEAT OPERATIONAL CHECK. DOES NO. 1 POINTER ON PILOTS TORQUE INDICATOR INDICATE PROPER TORQUE?
NO
REFER TO TASK 8-6.6
YES
REPLACE FAULTY TORQUE INDICATOR.

END OF TASK

8-6.9 NO. 2 POINTER ON PILOTS OR COPILOTS TORQUE INDICATOR DOES NOT INDICATE PROPER TORQUE USING TORQUE SIGNAL SIMULATOR 8-6.9

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
With 74

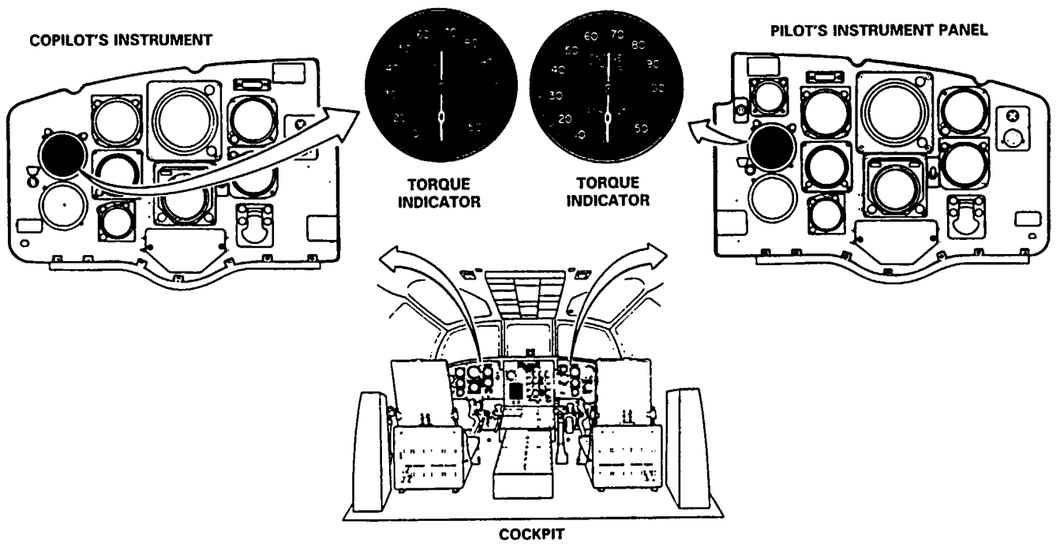
Tools:
Electrical Repairer Tool Kit,
NSN 5180-00-323-4915

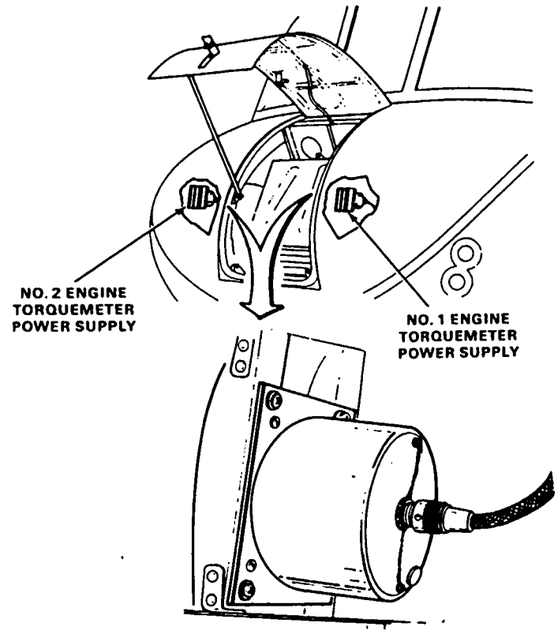
Materials:
None

Personnel Required:
Aircraft Electrician (2)

References:
TM 55-1520-240-23

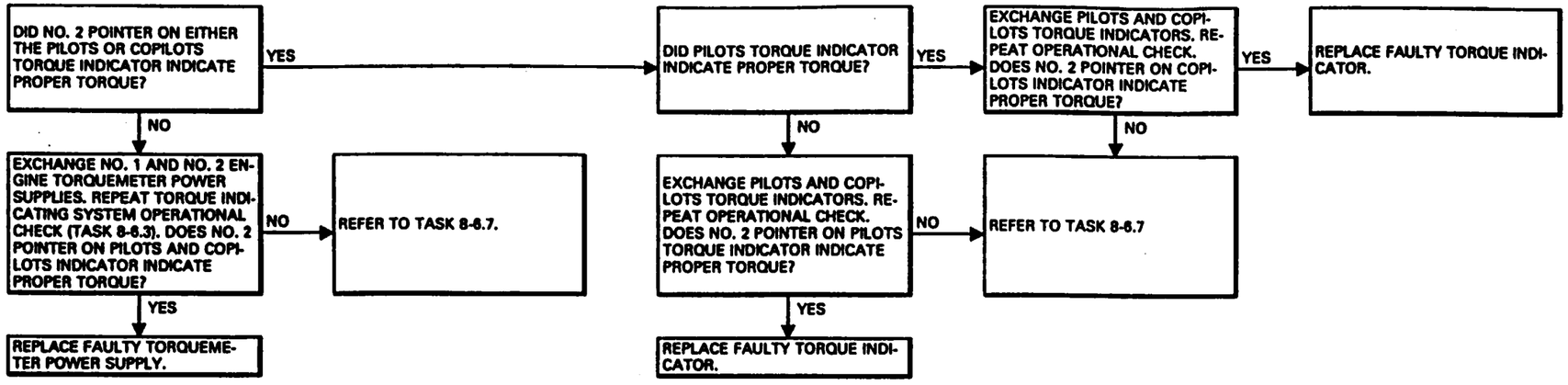
Equipment Condition:
TM 55-152024023:
Battery Connected
Electrical Power On
Hydraulic Power On





23602

GO TO NEXT PAGE


DID NO. 2 POINTER ON EITHER THE PILOTS OR COPILOTS TORQUE INDICATOR INDICATE PROPER TORQUE?
YES
NO
EXCHANGE NO. 1 AND NO. 2 ENGINE TORQUEMETER POWER SUPPLIES. REPEAT TORQUE INDICATING SYSTEM OPERATIONAL CHECK (TASK 8-6.3). DOES NO. 2 POINTER ON PILOTS AND COPILOTS INDICATOR INDICATE PROPER TORQUE?
NO
REFER TO TASK 8-6.7.
YES
REPLACE FAULTY TORQUEMETER POWER SUPPLY.
DID PILOTS TORQUE INDICATOR INDICATE PROPER TORQUE?
YES
NO
EXCHANGE PILOTS AND COPILOTS TORQUE INDICATORS. REPEAT OPERATIONAL CHECK. DOES NO. 2 POINTER ON PILOTS TORQUE INDICATOR INDICATE PROPER TORQUE?
NO
REFER TO TASK 8-6.7
YES
REPLACE FAULTY TORQUE INDICATOR.
EXCHANGE PILOTS AND COPILOTS TORQUE INDICATORS. REPEAT OPERATIONAL CHECK. DOES NO. 2 POINTER ON COPILOTS INDICATOR INDICATE PROPER TORQUE?
NO
YES
REPLACE FAULTY TORQUE INDICATOR.

END OF TASK

8-6.10 NO. 1 POINTER ON PILOTS AND COPILOTS TORQUE INDICATOR OPERATES ERRATICALLY 8-6.10

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:

All

Tools:

Aircraft Powerplant Repairer's Tool Kit, NSN 5180-00-323-4944
Electrical Repairer's Tool Kit, NSN 5180-00-3234915
On Wing Torque Comparator Test Set LTCT 28295-01 (Without 74)
Electric Torquemeter Flight Line Test Set LTCT 29089-01/-03 (With 74)

Materials:

None

Personnel Required:

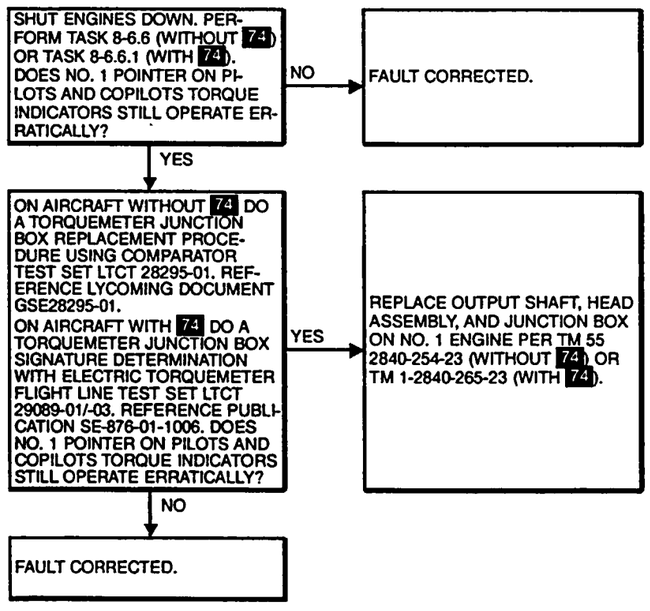
Aircraft Electrician
Aircraft Powerplant Repairer

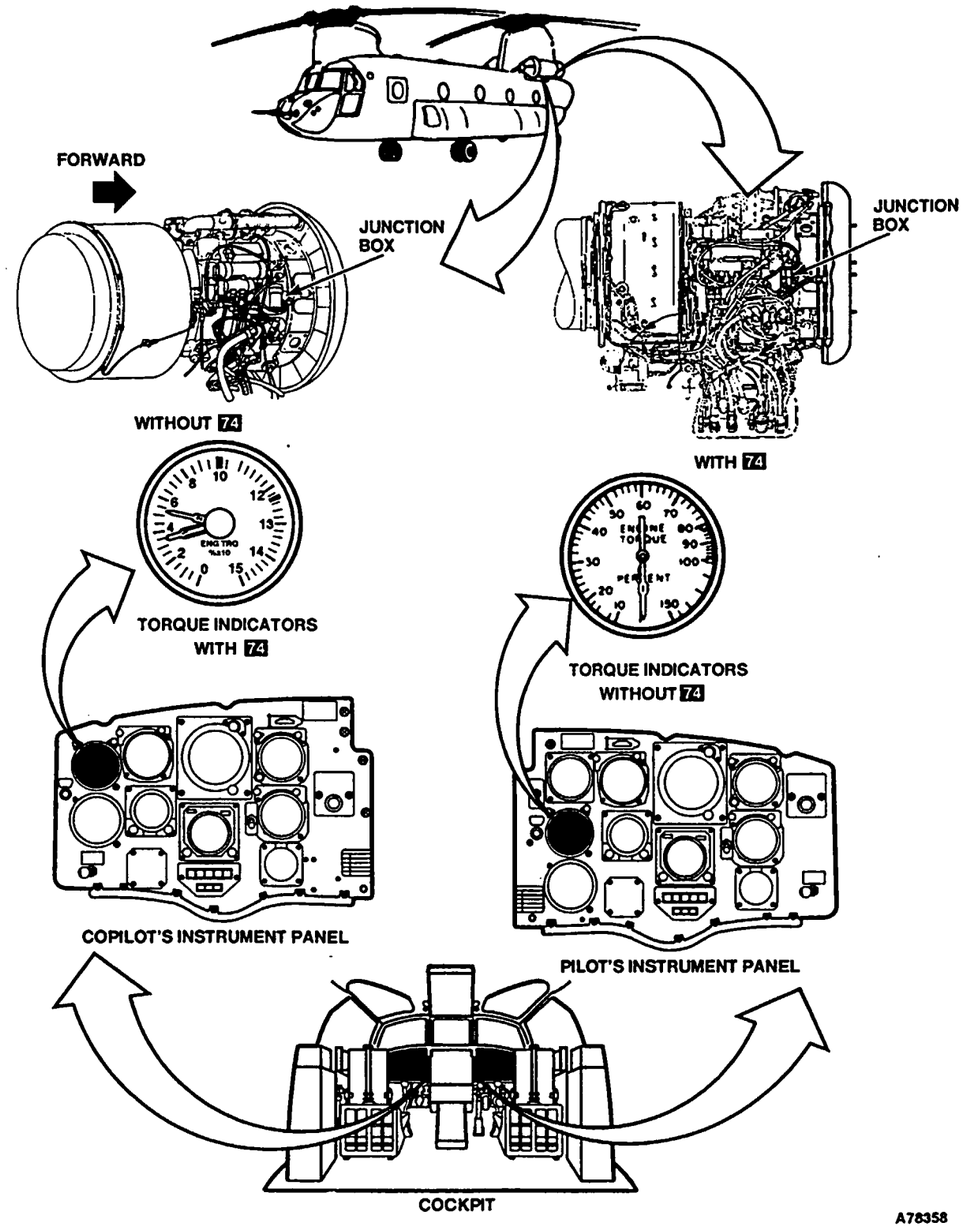
References:

TM 55-1520-240-23
TM 55-2840-254-23 (Without 74)
TM 1-2840-265-23 (With 74)
On Wing Torque Comparator Test Set Manual, Lycoming Document GSE28295-01 (Without 74)
Electric Torquemeter Flight Line Test Set Manual, SE-876-01-1006 (With 74)

Equipment Condition:

TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off
Nose Access Door Open





A78358

END OF TASK

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

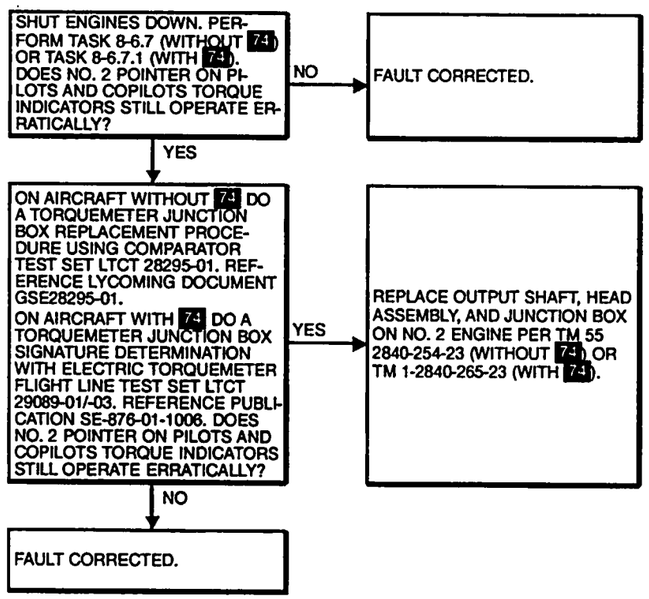
Tools:
Aircraft Powerplant Repairer's Tool Kit, NSN 5180-00-323-4944
Electrical Repairer's Tool Kit, NSN 5180-00-323-4915
On Wing Torque Comparator Test Set LTCT 28295-01 (Without 74)
Electric Torquemeter Flight Line Test Set LTCT 29089-01/-03 (With 74)

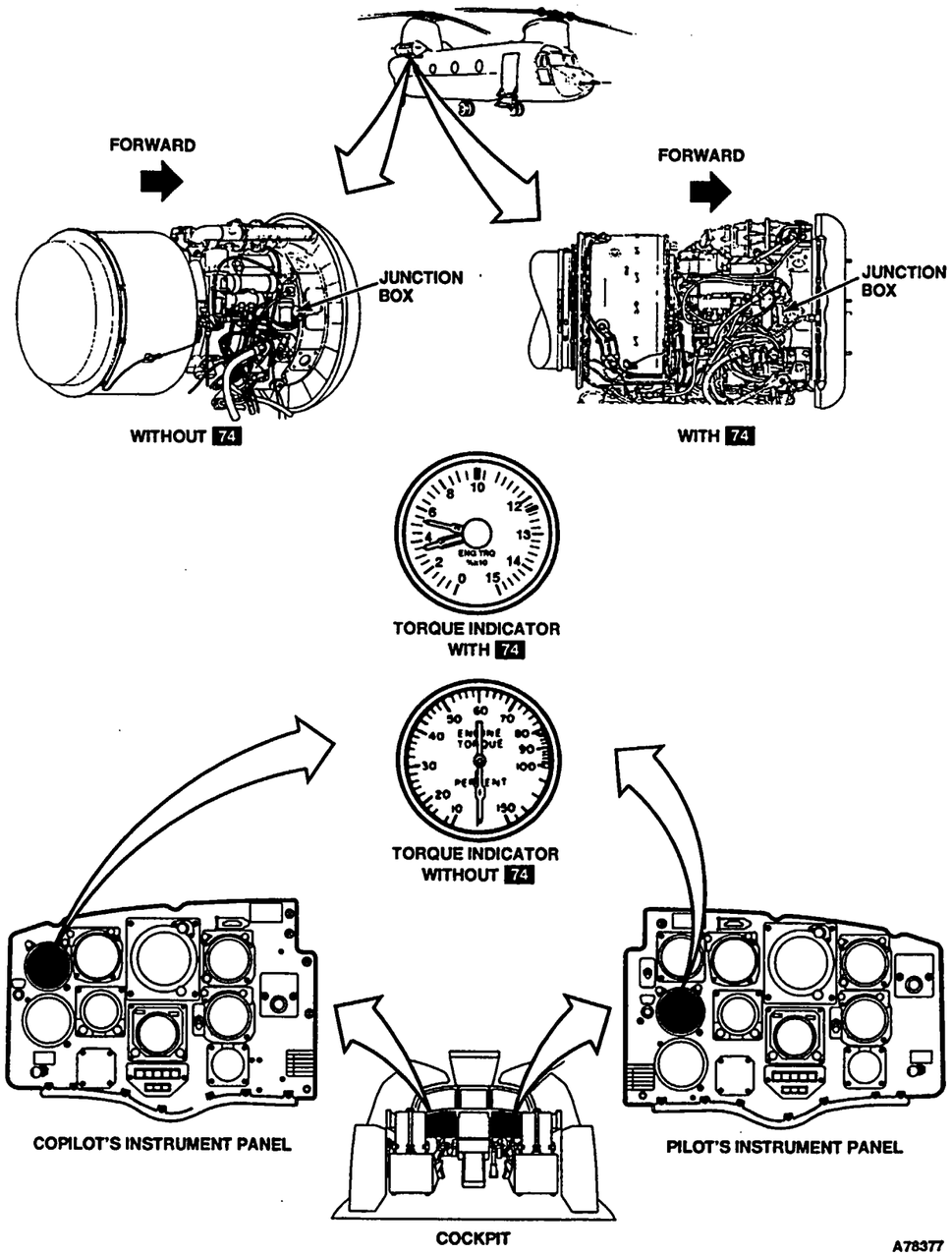
Materials:
None

Personnel Required:
Aircraft Electrician
Aircraft Powerplant Repairer

References:
TM 55-1520-240-23
TM 55-2840-254-23 (Without 74)
TM 1-2840-265-23 (With 74)
On Wing Torque Comparator Test Set Manual, Lycoming Document GSE28295-01 (Without 74)
Electric Torquemeter Flight Line Test Set Manual, SE-876-1-1006 (With 74)

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off
Nose Access Door Open



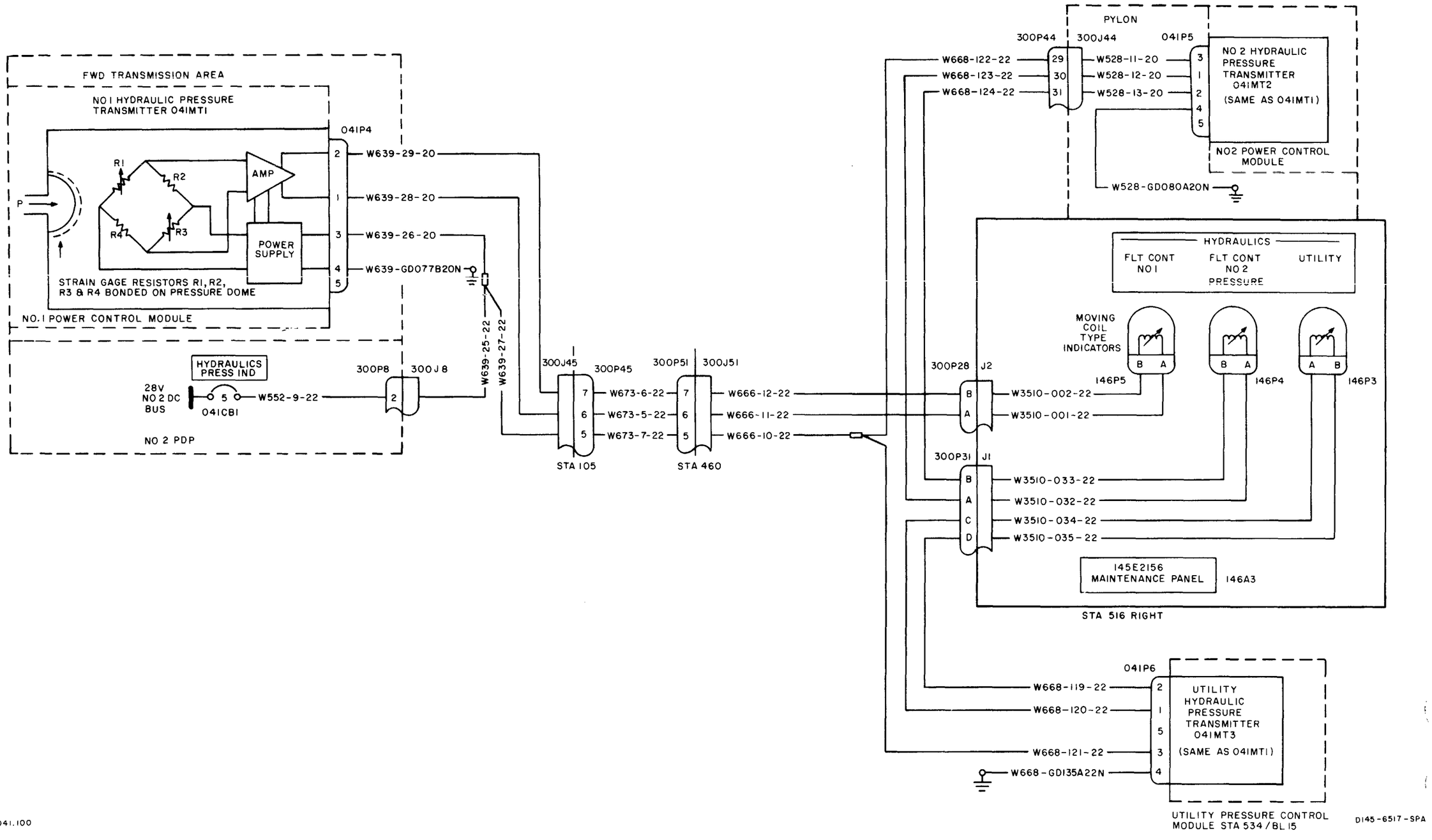


END OF TASK

8-7 HYDRAULIC PRESSURE INDICATING SYSTEM

8-7 HYDRAULIC PRESSURE INDICATING SYSTEM

8-7.1 HYDRAULIC PRESSURE INDICATING SYSTEM WIRING DIAGRAM



90 X 54 041.100

8-7.2 HYDRAULIC PRESSURE INDICATING SYSTEM VISUAL CHECK

INITIAL SETUP

Applicable Configurations:
All

Tools:
Aircraft Mechanic's Tool Kit,
NSN 5180-00-323-4692

Materials:
None

Personnel Required:
67U10 Medium Helicopter Repairer

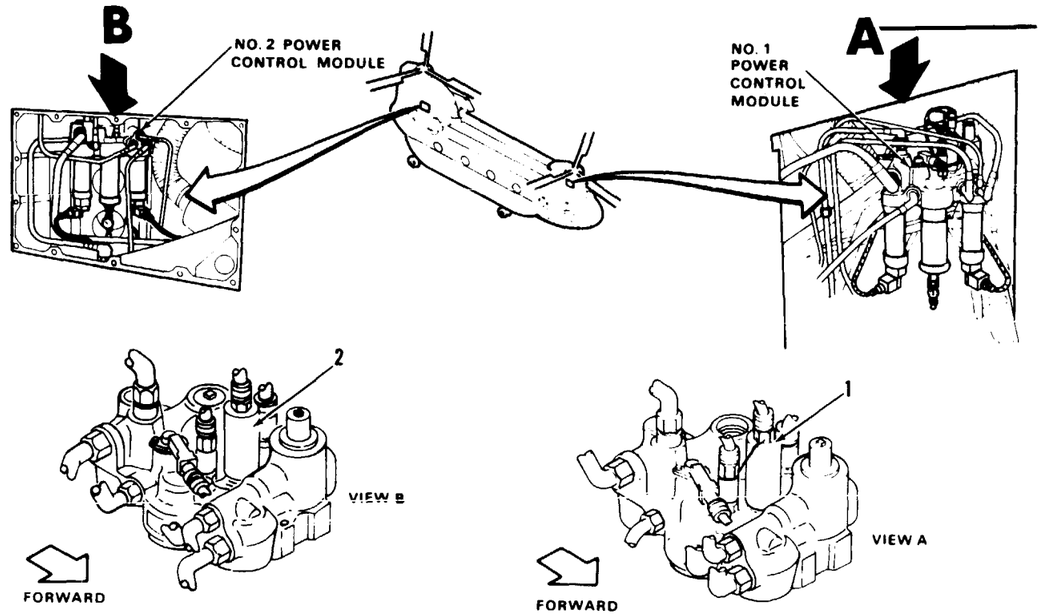
References:
TM 55-1520-240-23

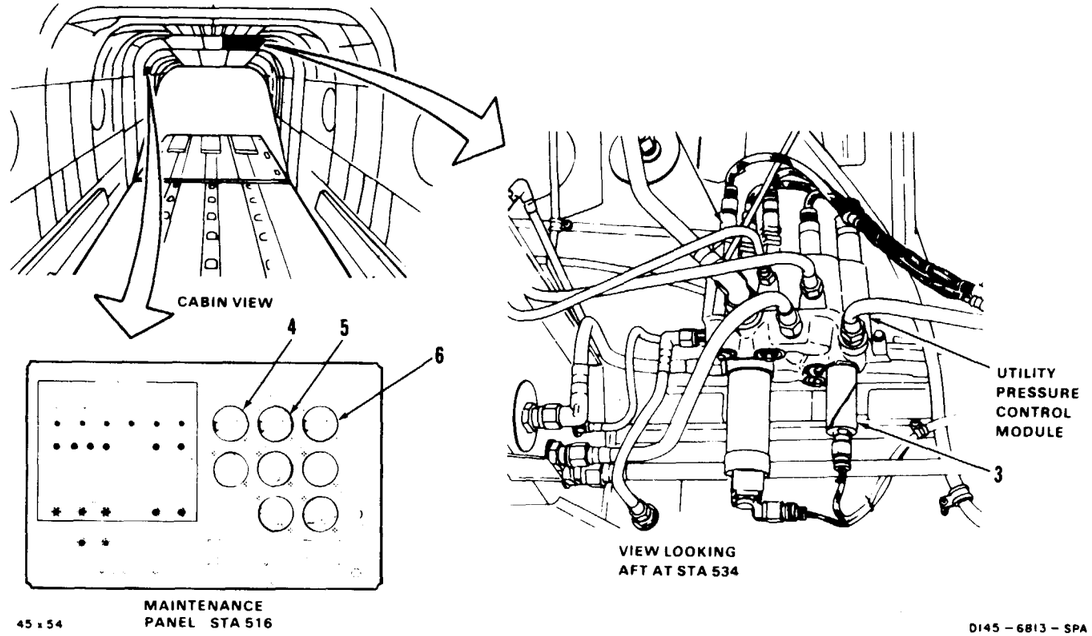
Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off
Right Forward Work Platform Open
Pylon Right Access Door Open
Cargo Ramp Open and Level (Task 7-3.4)

TASK	RESULT
1. **Check No. 1 hydraulic pressure transmitter (1).**	If transmitter (1) is loose or damaged, tighten or replace it as required. If wiring or connector to transmitter is damaged, repair or replace it as required.
2. **Check No. 2 hydraulic pressure transmitter (2).**	If transmitter (2) is loose or damaged, tighten or replace it as required. If wiring or connector to transmitter is damaged, repair or replace it as required.
3. **Check utility hydraulic pressure transmitter (3).**	If transmitter (3) is loose or damaged, tighten or replace it as required. If wiring or connector to transmitter is damaged, repair or replace it as required.
4. **Check HYDRAULICS PRESSURE indicators (4, 5, and 6).**	If any indicator (4, 5, of 6) is loose or damaged, tighten or replace it.

FOLLOW-ON MAINTENANCE:

TM 55-1520-240-23:
Right forward work platform closed.
Pylon right access door closed.





END OF TASK

INITIAL SETUP

Applicable Configurations:
All

Tools:
None

Materials:
None

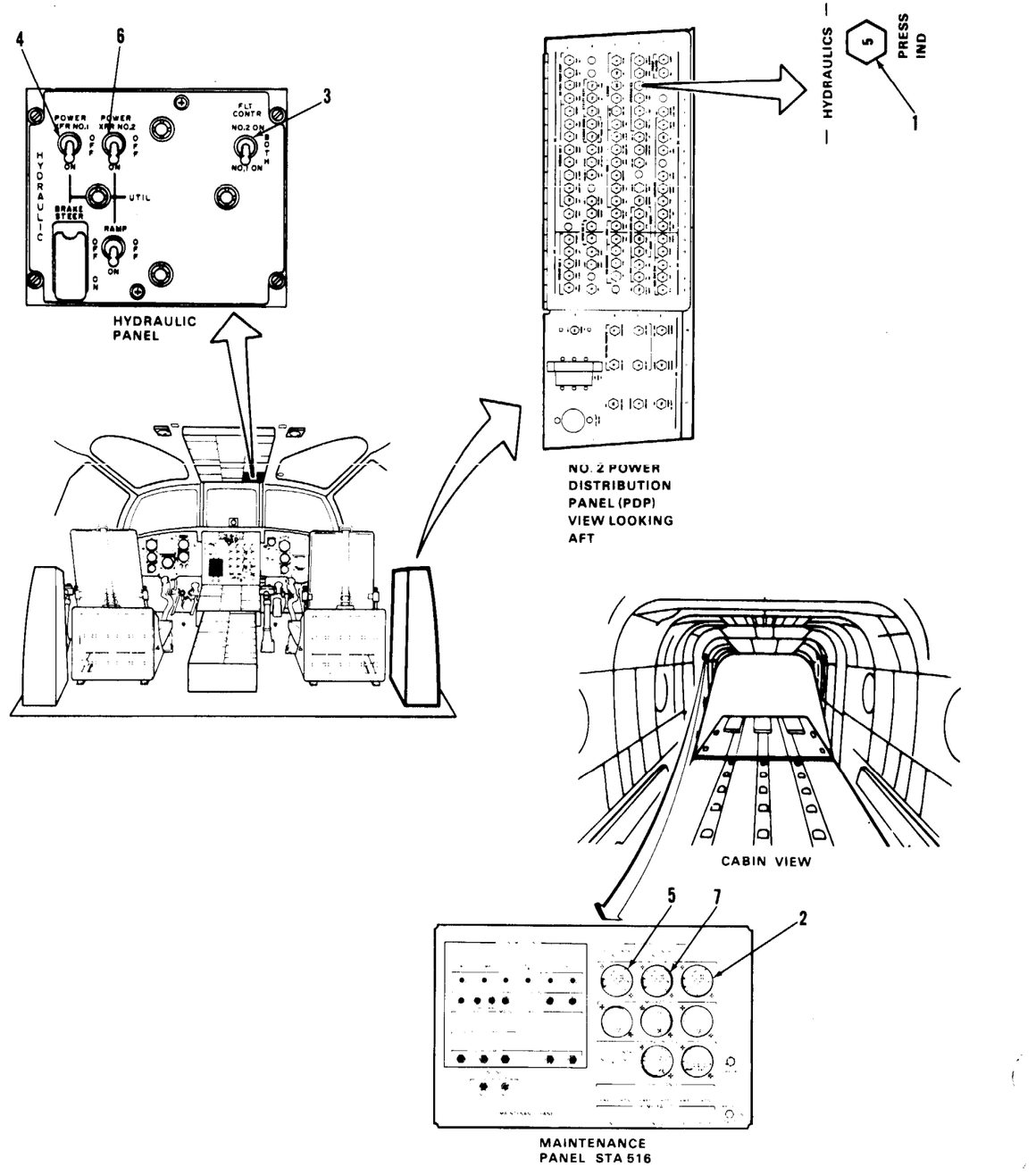
Personnel Required:
Medium Helicopter Repairer

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power On
Hydraulic Pressure Indicating System Visual Check Performed (Task 8-7.2)

	TASK	RESULT
1.	Check that HYDRAULICS PRESS IND circuit breaker (1) is **closed.**	If circuit breaker (1) is open, close it. If it opens again, go to task 8-7.4.
2.	Check UTILITY HYDRAULICS PRESSURE indicator (2).	Indicator (2) shall indicate 2500 to 3500 psi and pointer shall not fluctuate more than 100 psi. If indicator does not indicate 2500 to 3500 psi or if pointer fluctuates more than 100 psi, go to task 8-7.5.
3.	Check that FLT CONTR switch (3) is at BOTH.	If it is not, set switch (3) to BOTH.
4.	Set POWER XFR No. 1 switch (4) to ON. Check HYDRAULICS FLT CONT NO. 1 PRESSURE indicator (5).	Indicator (5) shall indicate 2500 to 3200 psi and pointer shall not fluctuate more than 100 psi. If indicator does not indicate 2500 to 3200 **psi or if** pointer fluctuates more than 100psi, go to task 8-7.6.
5.	Set POWER XFR No. 1 switch (4) to OFF.	
6.	Set POWER XFR No. 2 switch (6) to ON.	Indicator (7) shall indicate 2500 to 3200 psi and pointer shall not fluctuate more than 100psi. If indicator does not indicate 2500 to 3200 psi or if pointer fluctuates more than 100 psi, go to task 8-7.7.
7.	Set POWER XFR No. 2 switch (6) to OFF.	

FOLLOW-ON MAINTENANCE:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off



END OF TASK

• U.S. GOVERNMENT PRINTING OFFICE: 1995-655-121/20014

8-7.4 HYDRAULICS PRESS IND CIRCUIT BREAKER DOES NOT STAY CLOSED

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

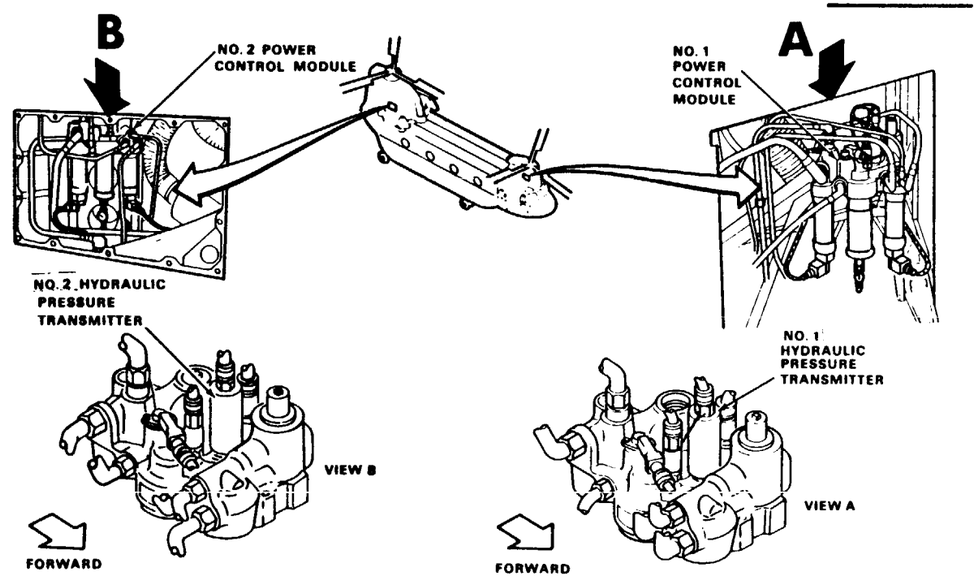
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

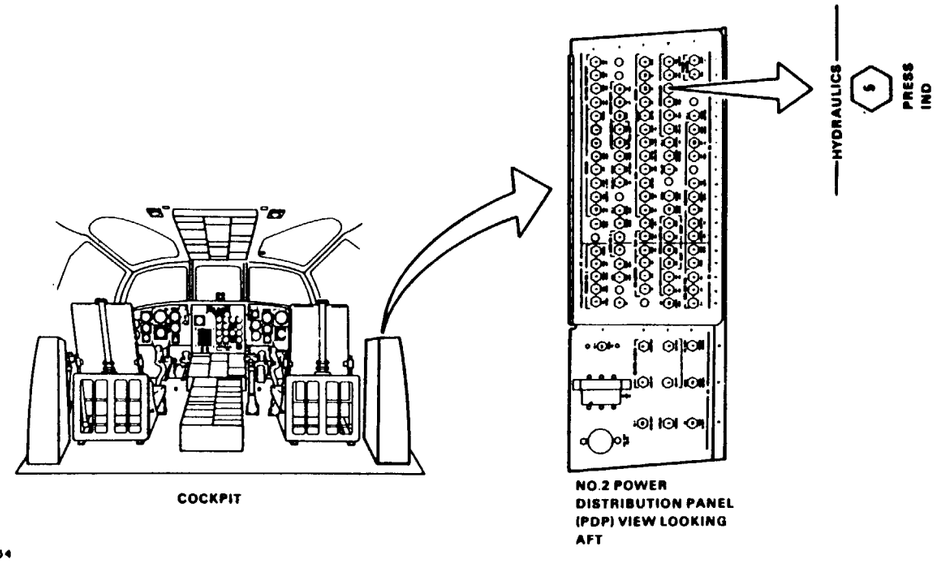
Materials:
None

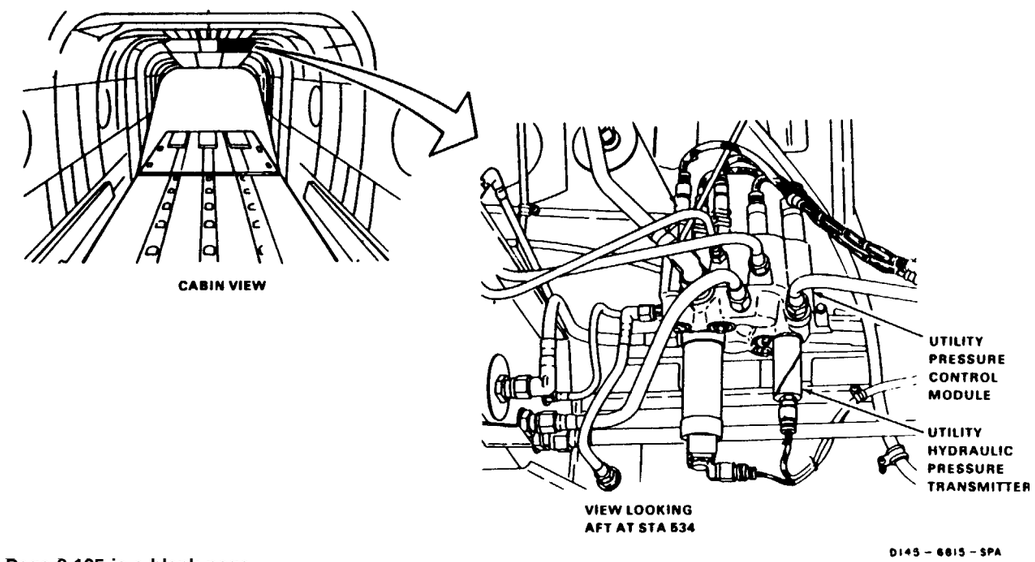
Personnel Required:
68F10 Aircraft Electrician
68F20 Aircraft Electrician

References:
TM 55-120-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off





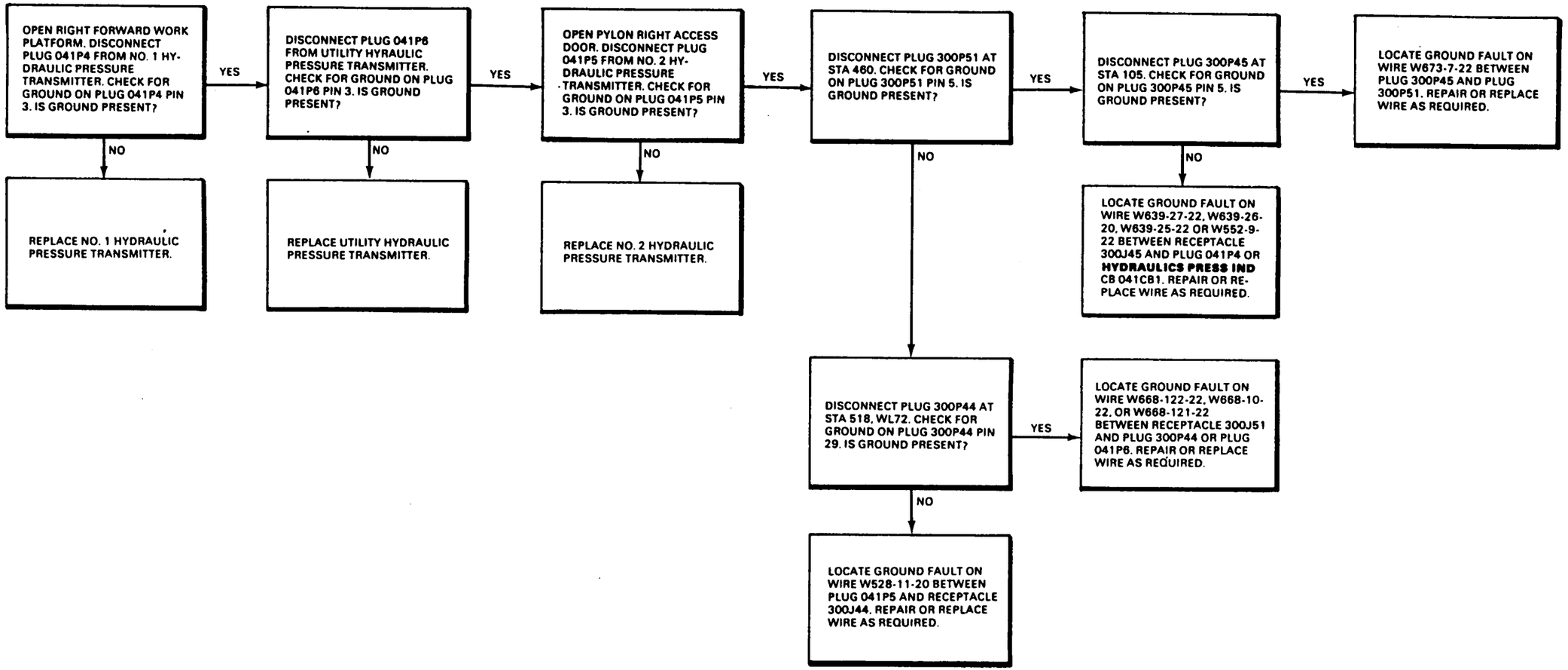


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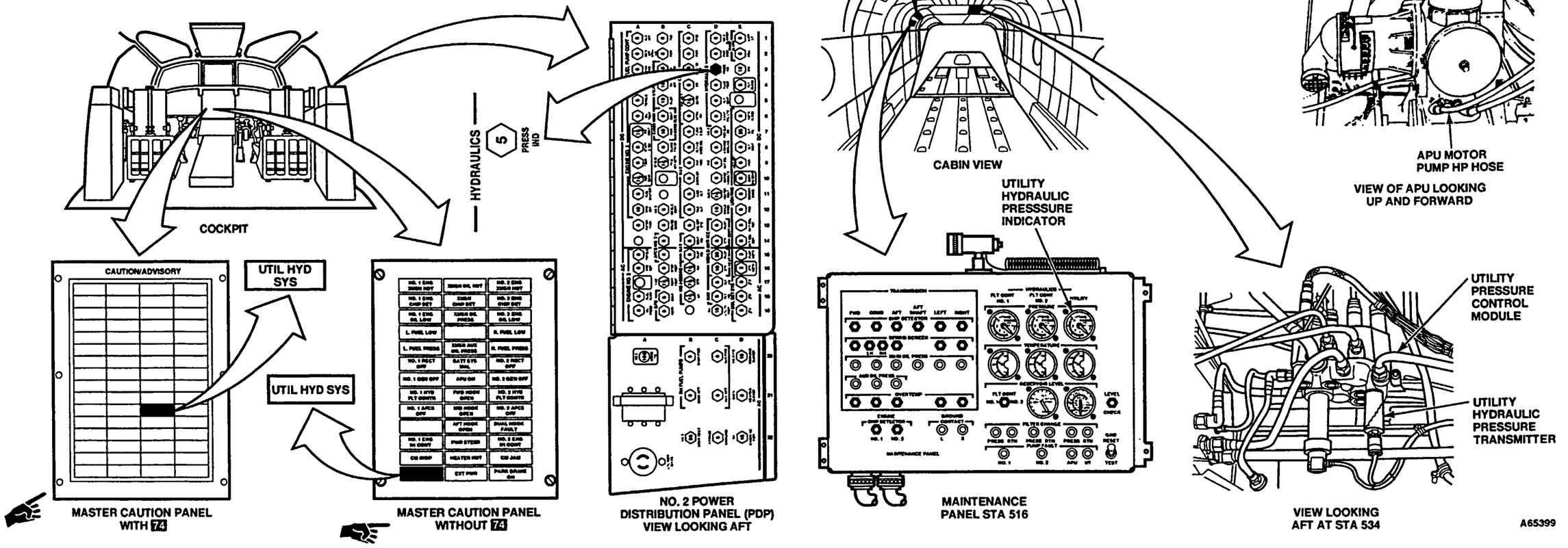
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END OF TASK
8-127

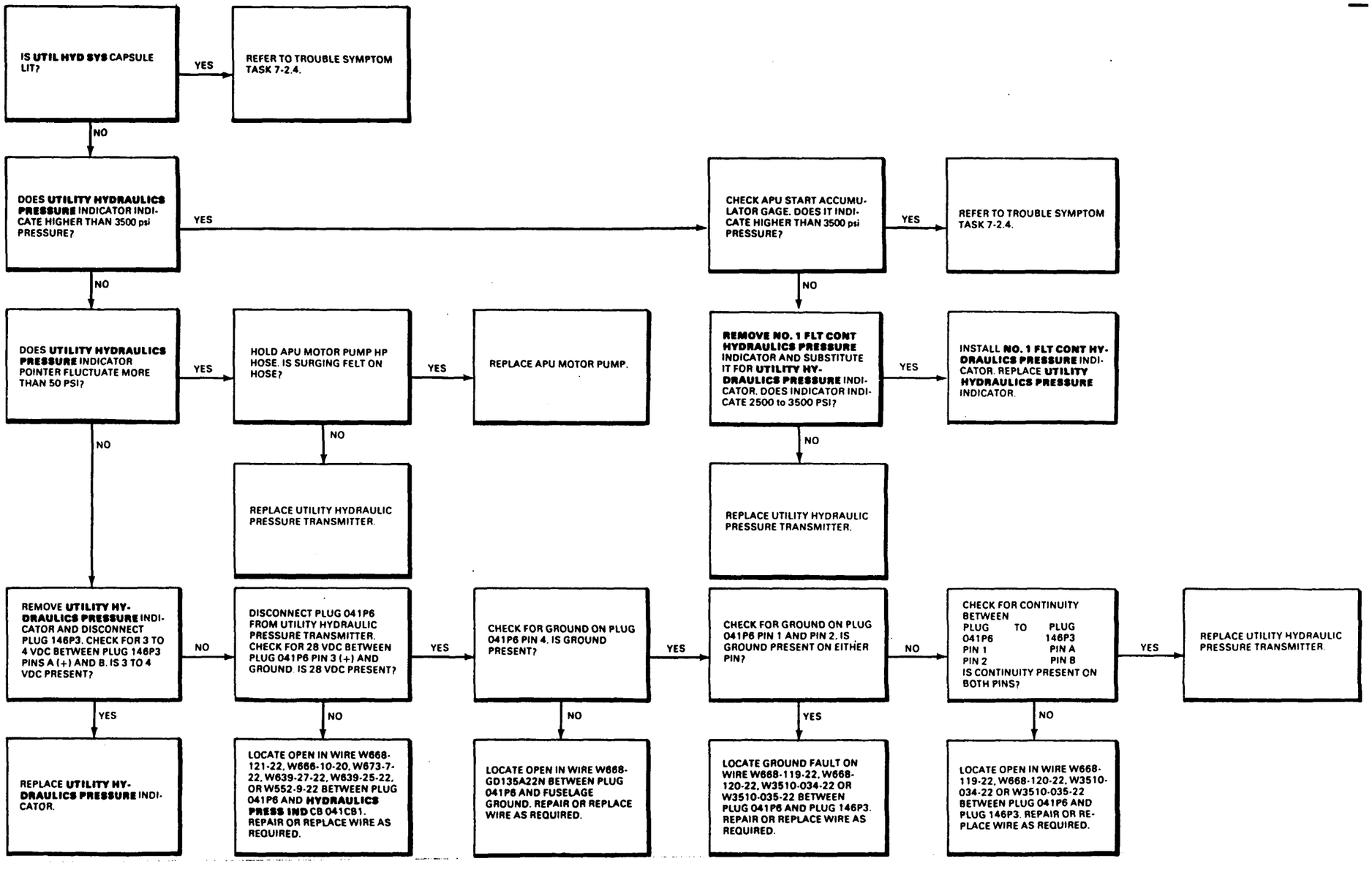
FAULT ISOLATION PROCEDURE
INITIAL SETUP
Applicable Configurations:
All
Tools:
Electrical Repairer's Tool Kit, NSN 5180-0b-323-4915
Multimeter
Materials:
None
Personnel Required:
Medium Helicopter Repairer
Aircraft Electrician

References:
TM 55-1520-240-23
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power On



END OF TASK

8-7.5 UTILITY HYDRAULIC PRESSURE INDICATOR DOES NOT INDICATE 2500 TO 3500 PSI OR POINTER FLUCTUATES MORE THAN 50 PSI (Continued)



END OF TASK

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

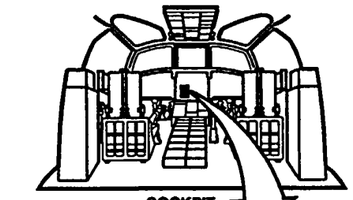
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

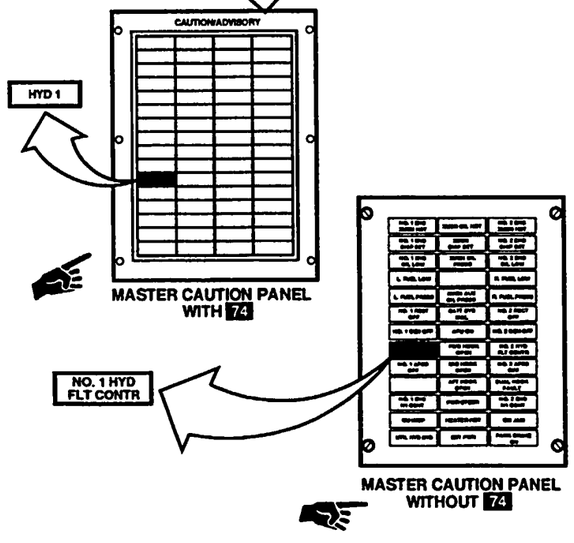
Materials:
None

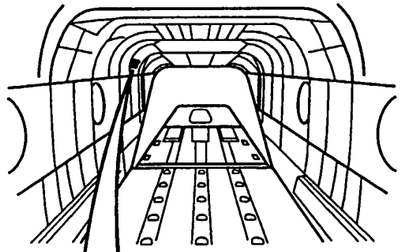
Personnel Required:
Medium Helicopter Repairer
Aircraft Electrician

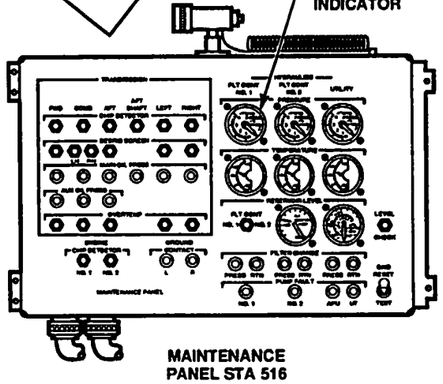
References:
TM 55-152-24023

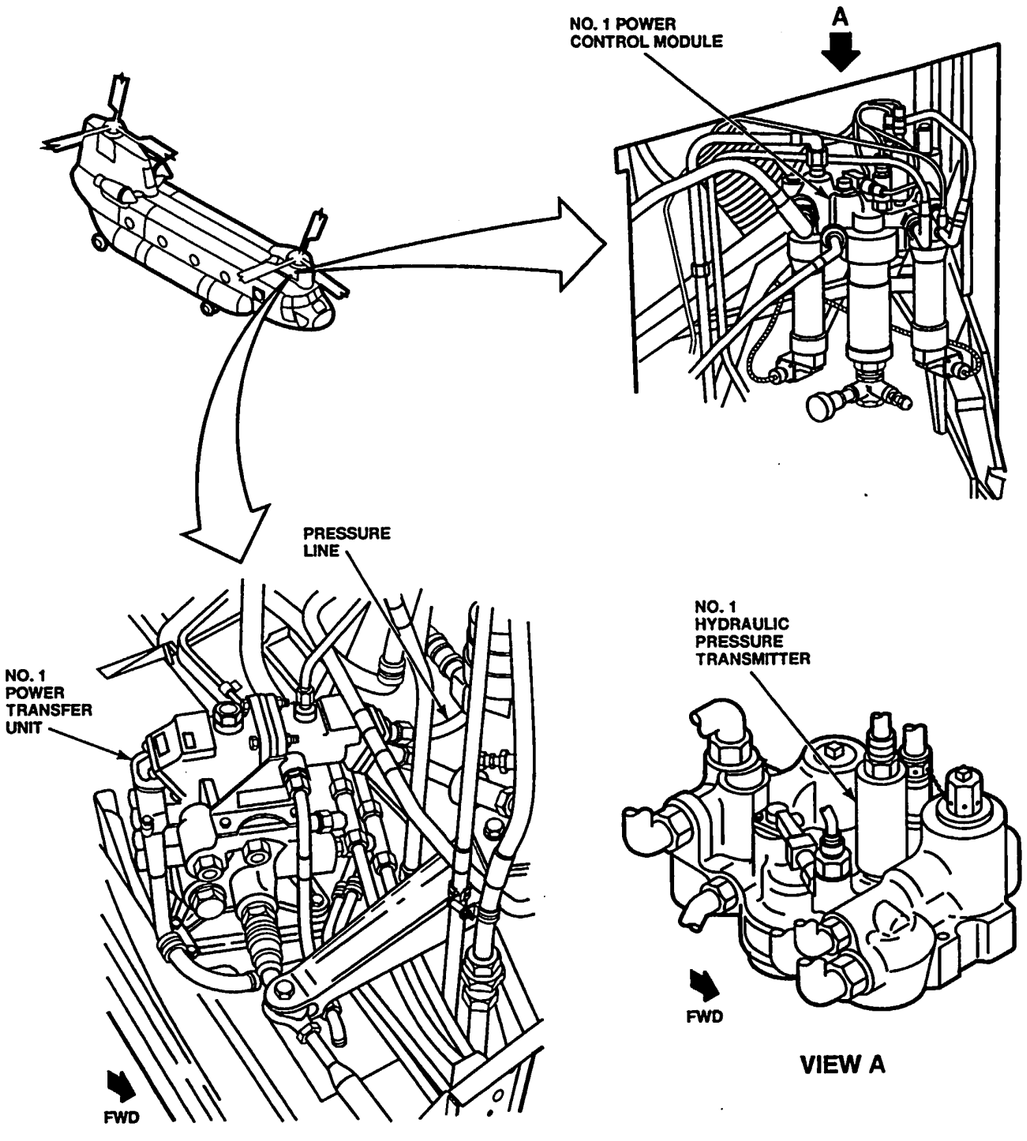
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power On



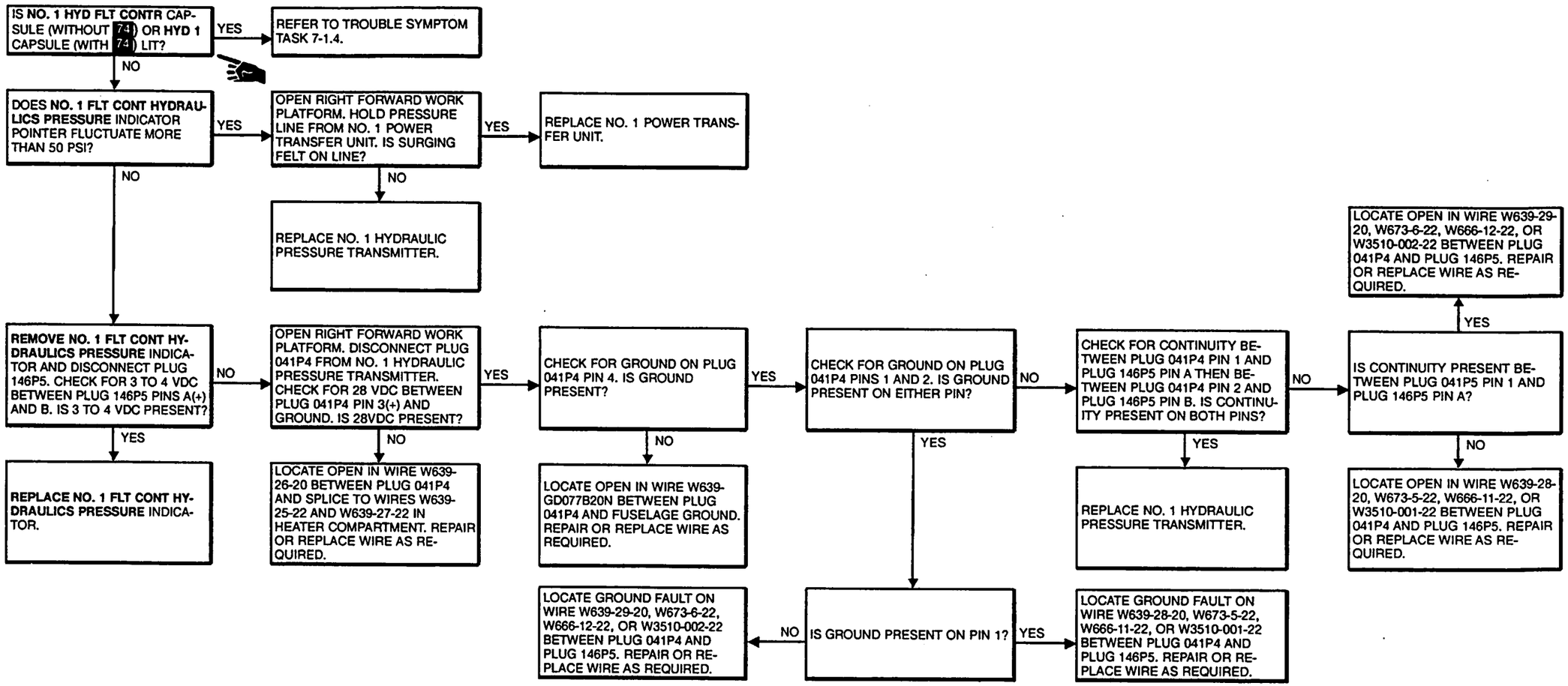








GO TO NEXT PAGE


IS NO. 1 HYD FLT CONTR CAPSULE (WITHOUT 74) OR HYD 1 CAPSULE (WITH 74) LIT?
YES
REFER TO TROUBLE SYMPTOM TASK 7-1.4.
NO
DOES NO. 1 FLT CONT HYDRAULICS PRESSURE INDICATOR POINTER FLUCTUATE MORE THAN 50 PSI?
YES
OPEN RIGHT FORWARD WORK PLATFORM. HOLD PRESSURE LINE FROM NO. 1 POWER TRANSFER UNIT. IS SURGING FELT ON LINE?
YES
REPLACE NO. 1 POWER TRANSFER UNIT.
NO
REPLACE NO. 1 HYDRAULIC PRESSURE TRANSMITTER.
NO
REMOVE NO. 1 FLT CONT HYDRAULICS PRESSURE INDICATOR AND DISCONNECT PLUG 146P5. CHECK FOR 3 TO 4 VDC BETWEEN PLUG 146P5 PINS A(+) AND B. IS 3 TO 4 VDC PRESENT?
NO
OPEN RIGHT FORWARD WORK PLATFORM. DISCONNECT PLUG 041P4 FROM NO. 1 HYDRAULIC PRESSURE TRANSMITTER. CHECK FOR 28 VDC BETWEEN PLUG 041P4 PIN 3(+) AND GROUND. IS 28VDC PRESENT?
YES
CHECK FOR GROUND ON PLUG 041P4 PIN 4. IS GROUND PRESENT?
YES
CHECK FOR GROUND ON PLUG 041P4 PINS 1 AND 2. IS GROUND PRESENT ON EITHER PIN?
NO
CHECK FOR CONTINUITY BETWEEN PLUG 041P4 PIN 1 AND PLUG 146P5 PIN A THEN BETWEEN PLUG 041P4 PIN 2 AND PLUG 146P5 PIN B. IS CONTINUITY PRESENT ON BOTH PINS?
NO
IS CONTINUITY PRESENT BETWEEN PLUG 041P5 PIN 1 AND PLUG 146P5 PIN A?
YES
LOCATE OPEN IN WIRE W639-29-20, W673-6-22, W666-12-22, OR W3510-002-22 BETWEEN PLUG 041P4 AND PLUG 146P5. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
LOCATE OPEN IN WIRE W639-28-20, W673-5-22, W666-11-22, OR W3510-001-22 BETWEEN PLUG 041P4 AND PLUG 146P5. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
REPLACE NO. 1 FLT CONT HYDRAULICS PRESSURE INDICATOR.
NO
LOCATE OPEN IN WIRE W639-26-20 BETWEEN PLUG 041P4 AND SPLICE TO WIRES W639-25-22 AND W639-27-22 IN HEATER COMPARTMENT. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
LOCATE OPEN IN WIRE W639-GD077B20N BETWEEN PLUG 041P4 AND FUSELAGE GROUND. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
IS GROUND PRESENT ON PIN 1?
NO
LOCATE GROUND FAULT ON WIRE W639-29-20, W673-6-22, W666-12-22, OR W3510-002-22 BETWEEN PLUG 041P4 AND PLUG 146P5. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
LOCATE GROUND FAULT ON WIRE W639-28-20, W673-5-22, W666-11-22, OR W3510-001-22 BETWEEN PLUG 041P4 AND PLUG 146P5. REPAIR OR REPLACE WIRE AS REQUIRED.

END OF TASK

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:

All

Tools:

Electrical Repairer's Tool Kit, NSN 5180-00-323-4915

Multimeter

Materials:

None

Personnel Required:

Medium Helicopter Repairer

Aircraft Electrician

References:

TM 55-1520-240-23

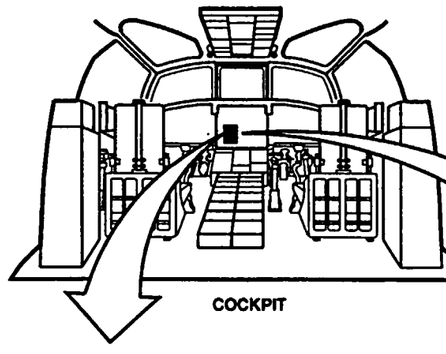
Equipment Condition:

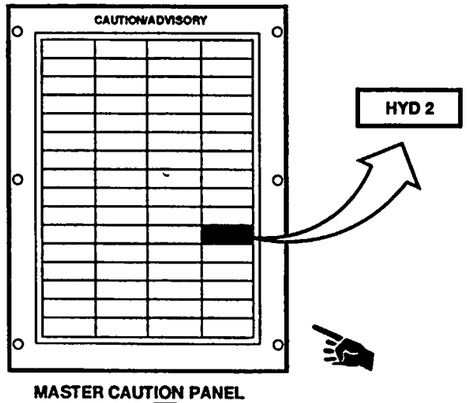
TM 55-1520-240-23:

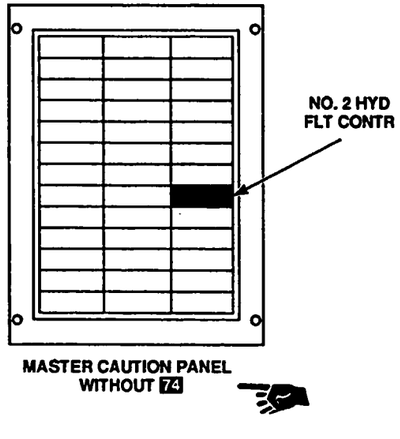
Battery Connected

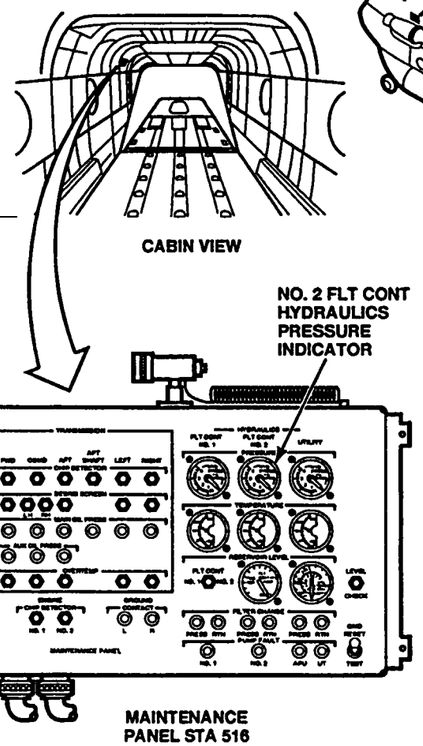
Electrical Power On

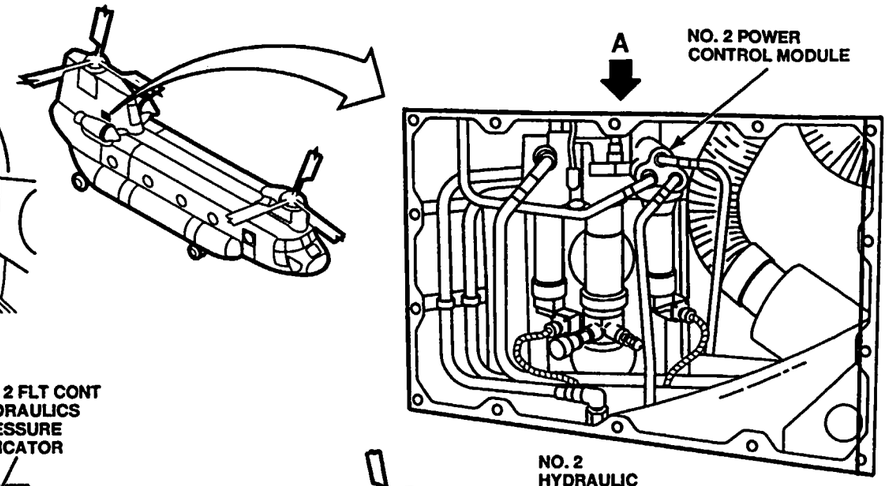
Hydraulic Power On



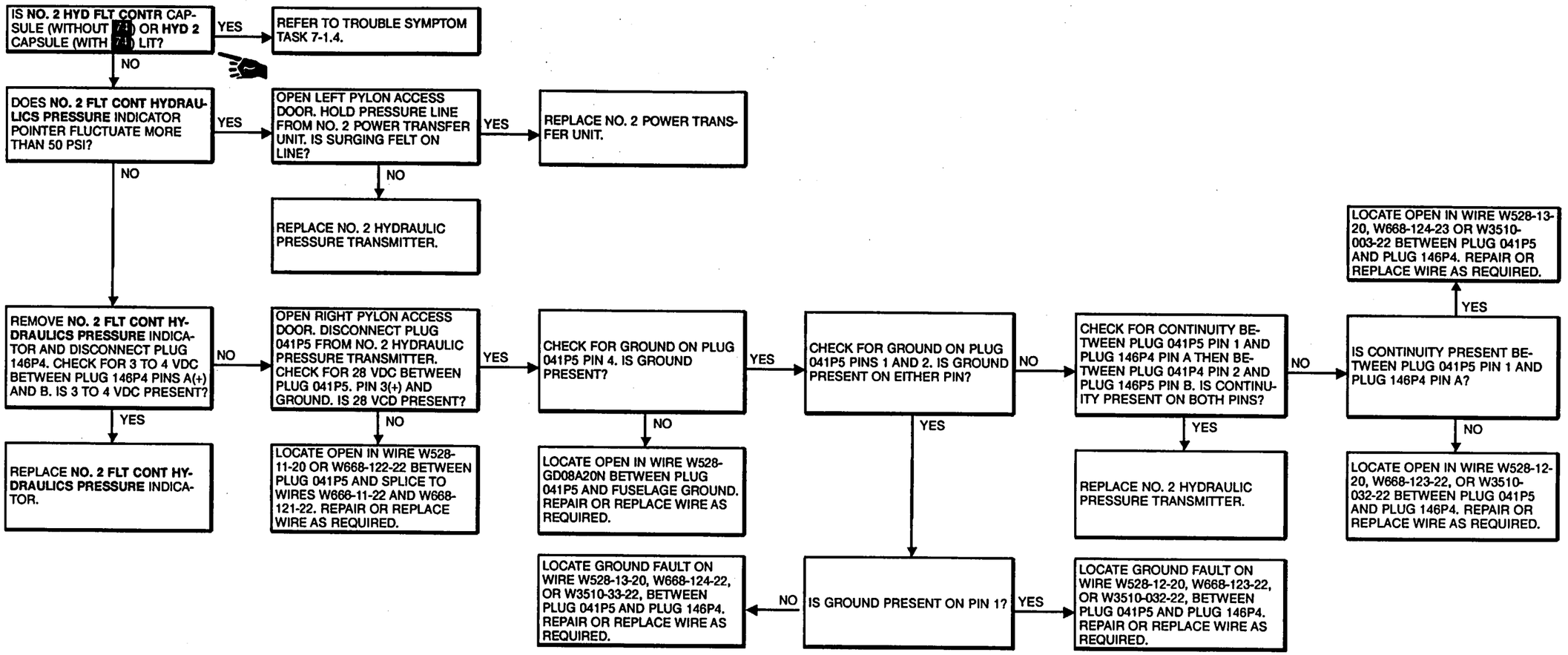






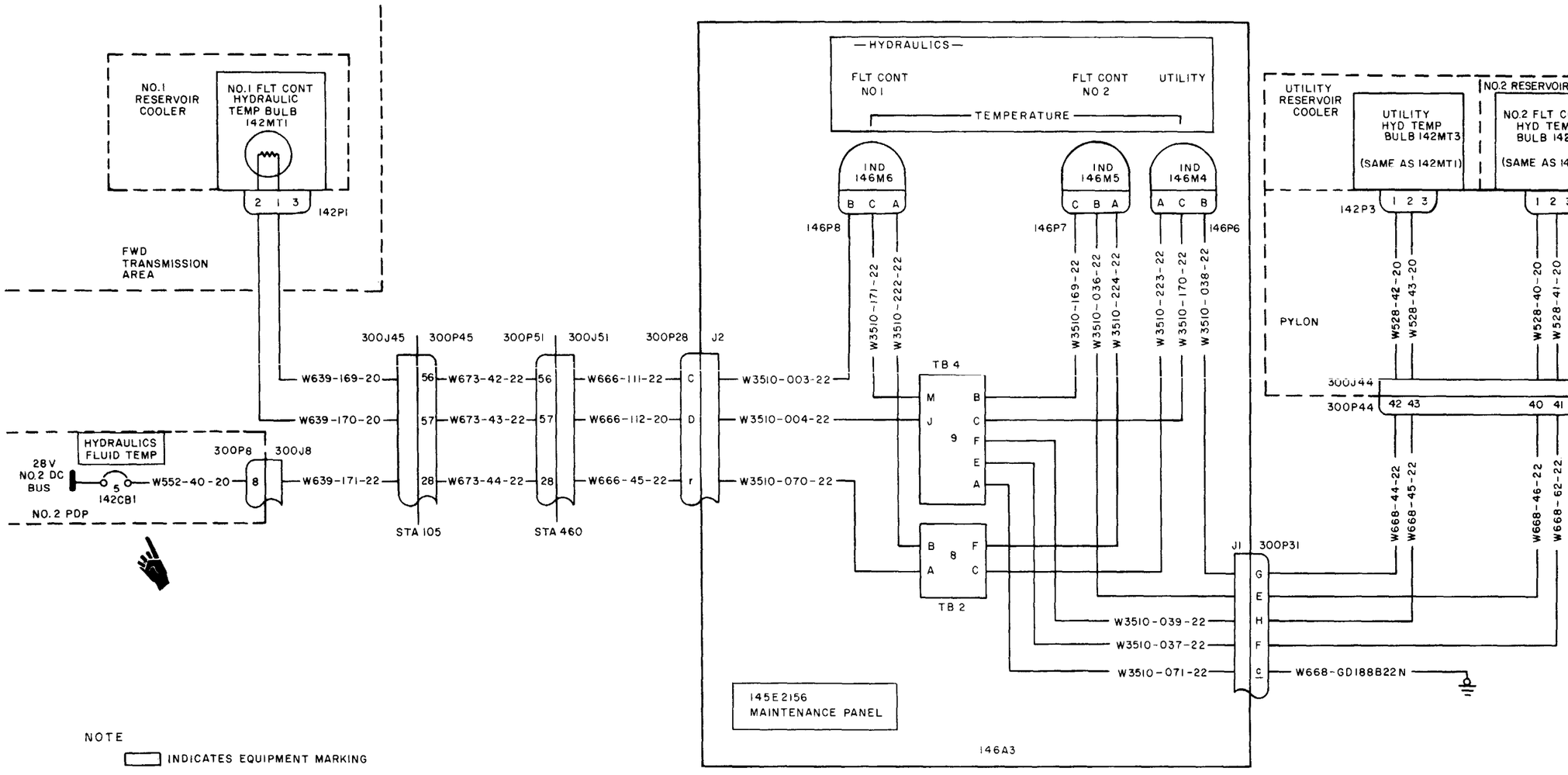


GO TO NEXT PAGE


IS NO. 2 HYD FLT CONTR CAPSULE (WITHOUT 74) OR HYD 2 CAPSULE (WITH 74) LIT?
YES
REFER TO TROUBLE SYMPTOM TASK 7-1.4.
NO
DOES NO. 2 FLT CONT HYDRAULICS PRESSURE INDICATOR POINTER FLUCTUATE MORE THAN 50 PSI?
YES
OPEN LEFT PYLON ACCESS DOOR. HOLD PRESSURE LINE FROM NO. 2 POWER TRANSFER UNIT. IS SURGING FELT ON LINE?
YES
REPLACE NO. 2 POWER TRANSFER UNIT.
NO
REPLACE NO. 2 HYDRAULIC PRESSURE TRANSMITTER.
NO
REMOVE NO. 2 FLT CONT HYDRAULICS PRESSURE INDICATOR AND DISCONNECT PLUG 146P4. CHECK FOR 3 TO 4 VDC BETWEEN PLUG 146P4 PINS A(+) AND B. IS 3 TO 4 VDC PRESENT?
NO
OPEN RIGHT PYLON ACCESS DOOR. DISCONNECT PLUG 041P5 FROM NO. 2 HYDRAULIC PRESSURE TRANSMITTER. CHECK FOR 28 VDC BETWEEN PLUG 041P5. PIN 3(+) AND GROUND. IS 28 VCD PRESENT?
YES
CHECK FOR GROUND ON PLUG 041P5 PIN 4. IS GROUND PRESENT?
YES
CHECK FOR GROUND ON PLUG 041P5 PINS 1 AND 2. IS GROUND PRESENT ON EITHER PIN?
NO
CHECK FOR CONTINUITY BETWEEN PLUG 041P5 PIN 1 AND PLUG 146P4 PIN A THEN BETWEEN PLUG 041P4 PIN 2 AND PLUG 146P5 PIN B. IS CONTINUITY PRESENT ON BOTH PINS?
NO
IS CONTINUITY PRESENT BETWEEN PLUG 041P5 PIN 1 AND PLUG 146P4 PIN A?
YES
LOCATE OPEN IN WIRE W528-13-20, W668-124-23 OR W3510-003-22 BETWEEN PLUG 041P5 AND PLUG 146P4. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
LOCATE OPEN IN WIRE W528-12-20, W668-123-22, OR W3510-032-22 BETWEEN PLUG 041P5 AND PLUG 146P4. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
REPLACE NO. 2 HYDRAULIC PRESSURE TRANSMITTER.
YES
REPLACE NO. 2 FLT CONT HYDRAULICS PRESSURE INDICATOR.
NO
LOCATE OPEN IN WIRE W528-11-20 OR W668-122-22 BETWEEN PLUG 041P5 AND SPLICE TO WIRES W666-11-22 AND W668-121-22. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
LOCATE OPEN IN WIRE W528-GD08A20N BETWEEN PLUG 041P5 AND FUSELAGE GROUND. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
IS GROUND PRESENT ON PIN 1?
NO
LOCATE GROUND FAULT ON WIRE W528-13-20, W668-124-22, OR W3510-33-22, BETWEEN PLUG 041P5 AND PLUG 146P4. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
LOCATE GROUND FAULT ON WIRE W528-12-20, W668-123-22, OR W3510-032-22, BETWEEN PLUG 041P5 AND PLUG 146P4. REPAIR OR REPLACE WIRE AS REQUIRED.

END OF TASK

8-8 HYDRAULIC OIL TEMPERATURE INDICATING SYSTEM



NOTE

▭ INDICATES EQUIPMENT MARKING

142.100F

8-8.2 HYDRAULIC OIL TEMPERATURE INDICATING SYSTEM VISUAL CHECK

INITIAL SETUP

Applicable Configurations:
All

Tools:
Aircraft Mechanic's Tool Kit,
NSN 5180-00-323-4692

Materials:
None

Personnel Required:
67U10 Medium Helicopter Repairer

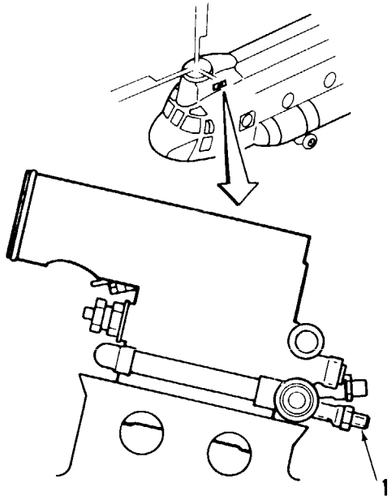
References:
TM 55-1520-240-23

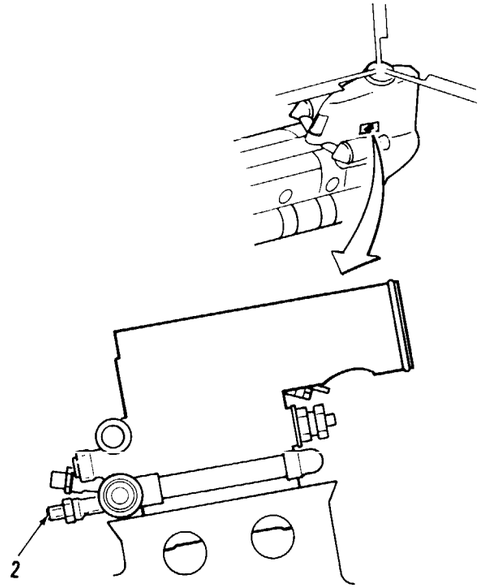
Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off
Right Forward Work Platform Open
Pylon Left and Right Access Panels Open

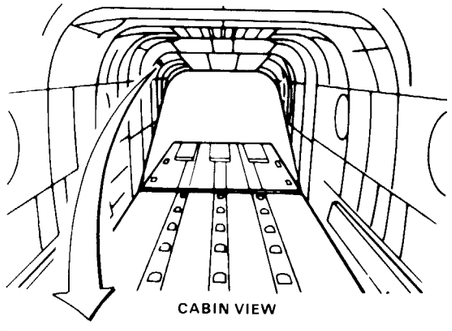
TASK	RESULT
1. **Check No. 1 hydraulic oil temperature transmitter (1).**	If transmitter (1) is loose or damaged, tighten or replace it as required. If wiring or connector to transmitter is damaged, repair or replace it as required.
2. **Check No. 2 hydraulic oil temperature transmitter (2).**	If transmitter (2) is loose or damaged, tighten or replace it as required. If wiring or connector to transmitter is damaged, repair or replace it as required.
3. **Check utility hydraulic oil temperature transimitter (3).**	If transmitter (3) is loose damaged, tighten or replace it as required. If wiring or connector to transmitter is damaged, repair or replace it as required.
4. **Check HYDRAULICS TEMPERATURE indicators (4, 5, and 6).**	If any indicator (4, 5, 6) is loose or damaged, tighten or replace it as required.

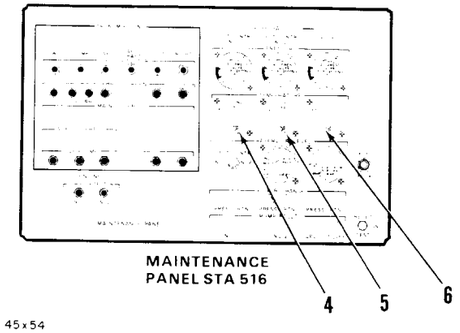
FOLLOW-ON MAINTENANCE:

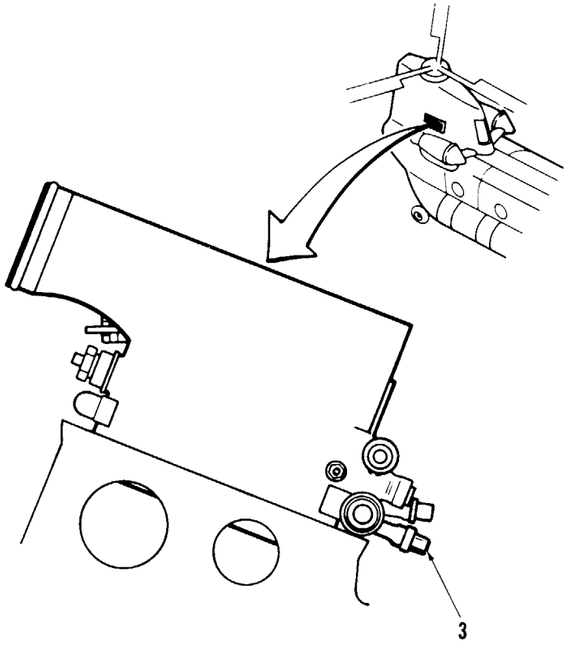
TM 55-1520-240-23:
Close Right Forward Work Platform
Close Left and Right Access Panels











45x54

D145-7292-SPA

END OF TASK

8-8.3 HYDRAULIC OIL TEMPERATURE INDICATING SYSTEM OPERATIONAL CHECK

INITIAL SETUP

Applicable Configurations:
All

Tools:
None

Materials:
None

Personnel Required:
67U10 Medium Helicopter Repairer
67U20 Medium Helicopter Repairer

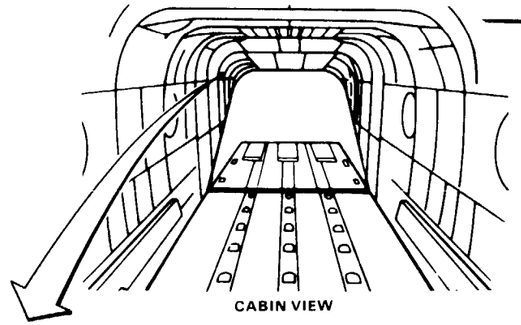
References:
TM 55-1520-240-23

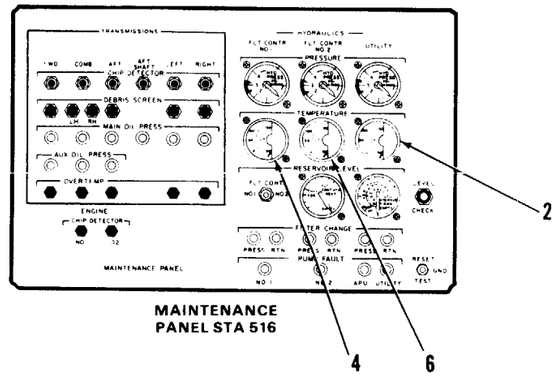
Equipment Conditions:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power On
Hydraulic Oil Temperature Indicating System Visual Check Performed (Task 8-8.2)

TASK	RESULT
1. **Check** that **HYDRAULICS FLUID TEMP circuit breaker (1)** is closed.	If circuit breaker (1) is open, close it. If it opens again, go to task 8-8.4.
2. **Check UTILITY HYDRAULICS TEMPERATURE indicator (2).**	Pointer on indicator (2) shall move upscale as fluid temperature increases. Temperature indication shall not exceed 120°C. If indicator pointer does not move upscale or pointer exceeds 120°C, go to task 8-8.5.
3. **Set POWER XFR NO. 1 switch (3) to ON. Check NO. 1 FLT CONT HYDRAULICS temperature indicator (4).**	Pointer on indicator (4) shall move upscale as fluid temperature increases. Temperature indication shall not exceed 120°C. If indicator pointer does not move upscale or pointer exceeds 120°C, go to task 8-8.6.
4. **Set POWER XFR NO. 1 switch (3) to OFF.**	
5. **Set POWER XFR NO. 2 switch (5) to ON. Check NO. 2 FLT CONT HYDRAULICS TEMPERATURE indicator (6).**	Pointer on indicator (6) shall move upscale as fluid temperature increases. Temperature indication shall not exceed 120°C. If indicator pointer does not move upscale or pointer exceeds 120°C, go to task 8-8.7.
6. Set POWER XFR NO. 2 switch (5) to OFF.	

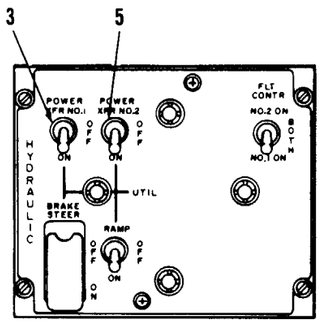
FOLLOW-ON MAINTENANCE:

TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off

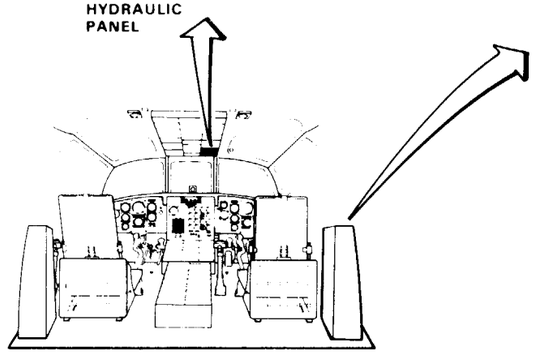




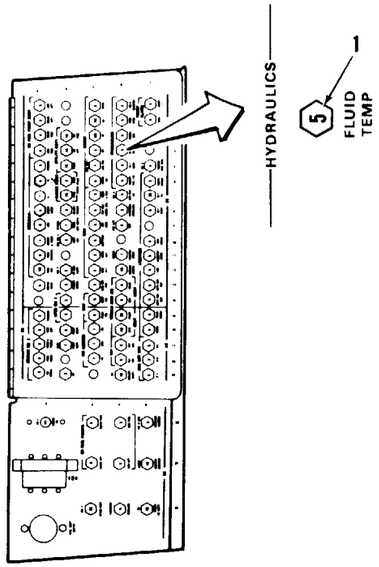
MAINTENANCE PANEL STA 516



HYDRAULIC PANEL



COCKPIT



NO.2 POWER DISTRIBUTION PANEL (PDP) VIEW LOOKING AFT

D145-7293-SPA

END OF TASK

45x54

8-8.4 HYDRAULIC FLUID TEMP CIRCUIT BREAKER DOES NOT STAY CLOSED

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

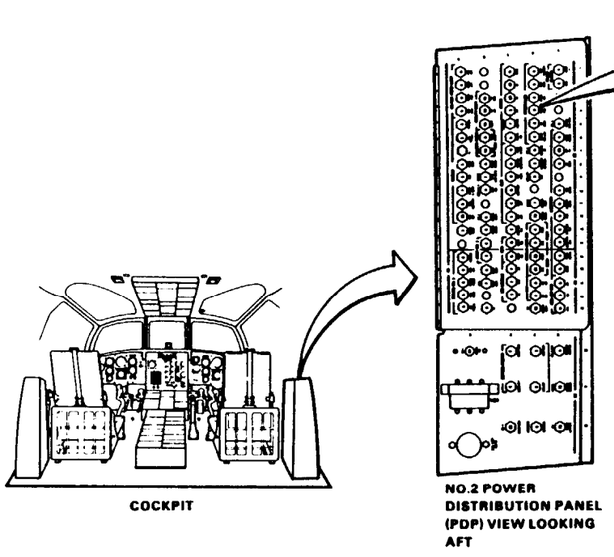
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:
None

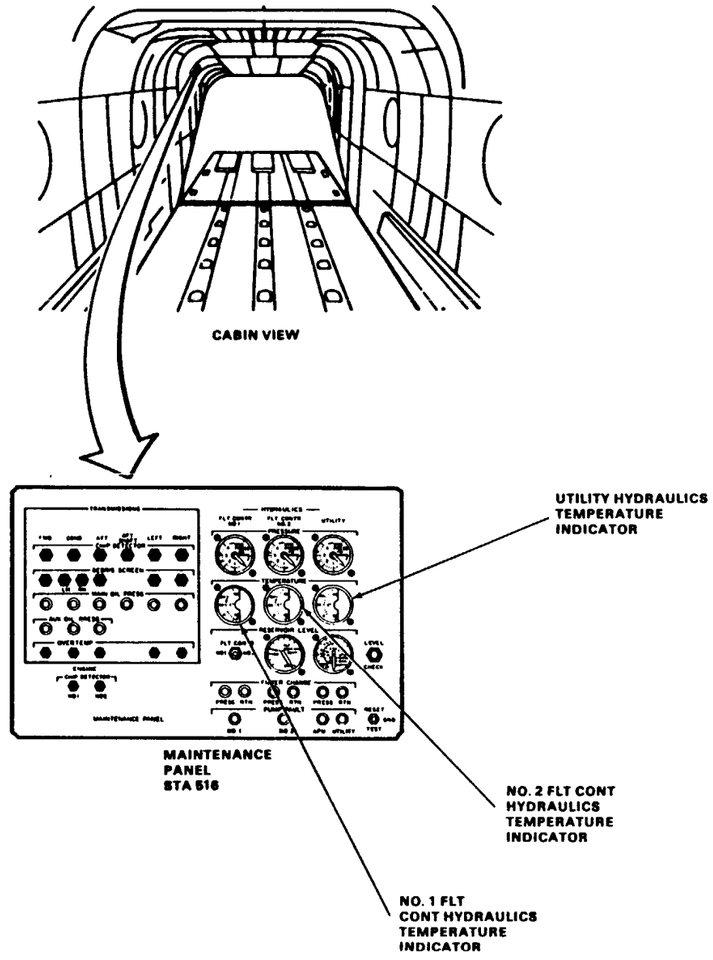
Personnel Required:
68F10 Aircraft Electrician
68F20 Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydrardlic Power Off



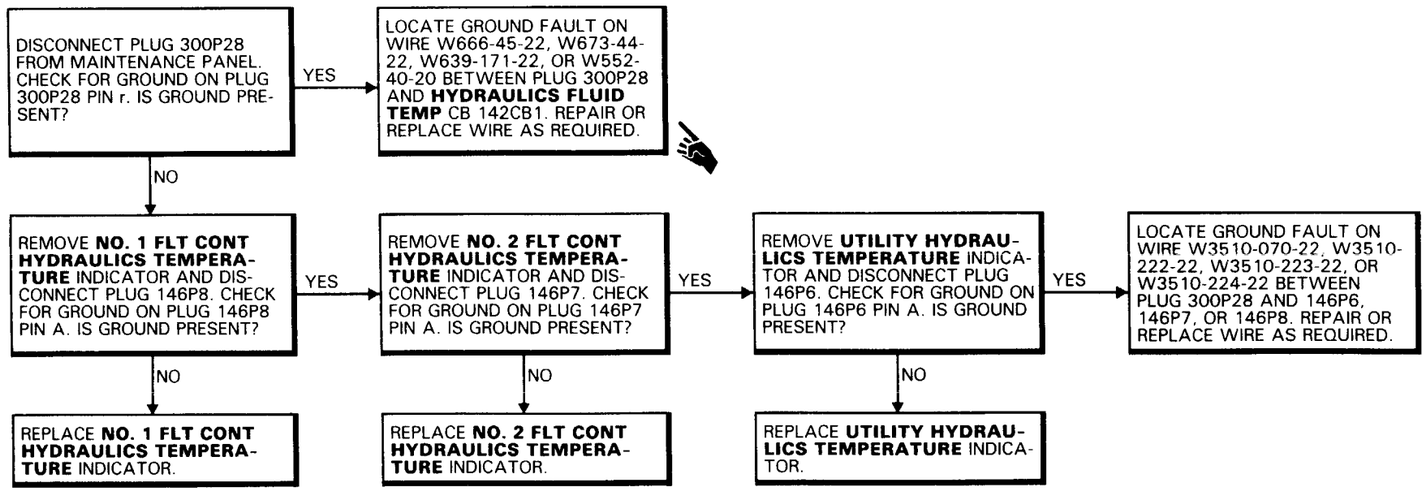
90454



D145-7294-SPA

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DISCONNECT PLUG 300P28 FROM MAINTENANCE PANEL. CHECK FOR GROUND ON PLUG 300P28 PIN r. IS GROUND PRESENT?
YES
LOCATE GROUND FAULT ON WIRE W666-45-22, W673-44-22, W639-171-22, OR W552-40-20 BETWEEN PLUG 300P28 AND **HYDRAULICS FLUID TEMP** CB 142CB1. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
REMOVE **NO. 1 FLT CONT HYDRAULICS TEMPERATURE** INDICATOR AND DISCONNECT PLUG 146P8. CHECK FOR GROUND ON PLUG 146P8 PIN A. IS GROUND PRESENT?
YES
REMOVE **NO. 2 FLT CONT HYDRAULICS TEMPERATURE** INDICATOR AND DISCONNECT PLUG 146P7. CHECK FOR GROUND ON PLUG 146P7 PIN A. IS GROUND PRESENT?
YES
REMOVE **UTILITY HYDRAULICS TEMPERATURE** INDICATOR AND DISCONNECT PLUG 146P6. CHECK FOR GROUND ON PLUG 146P6 PIN A. IS GROUND PRESENT?
YES
LOCATE GROUND FAULT ON WIRE W3510-070-22, W3510-222-22, W3510-223-22, OR W3510-224-22 BETWEEN PLUG 300P28 AND 146P6, 146P7, OR 146P8. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
REPLACE **NO. 1 FLT CONT HYDRAULICS TEMPERATURE** INDICATOR.
NO
REPLACE **NO. 2 FLT CONT HYDRAULICS TEMPERATURE** INDICATOR.
NO
REPLACE **UTILITY HYDRAULICS TEMPERATURE** INDICATOR.

END OF TASK

8-8.5 UTILITY HYDRAULICS TEMPERATURE INDICATOR POINTER DOES NOT MOVE UPSCALE OR EXCEEDS 120°C (PEGS)

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

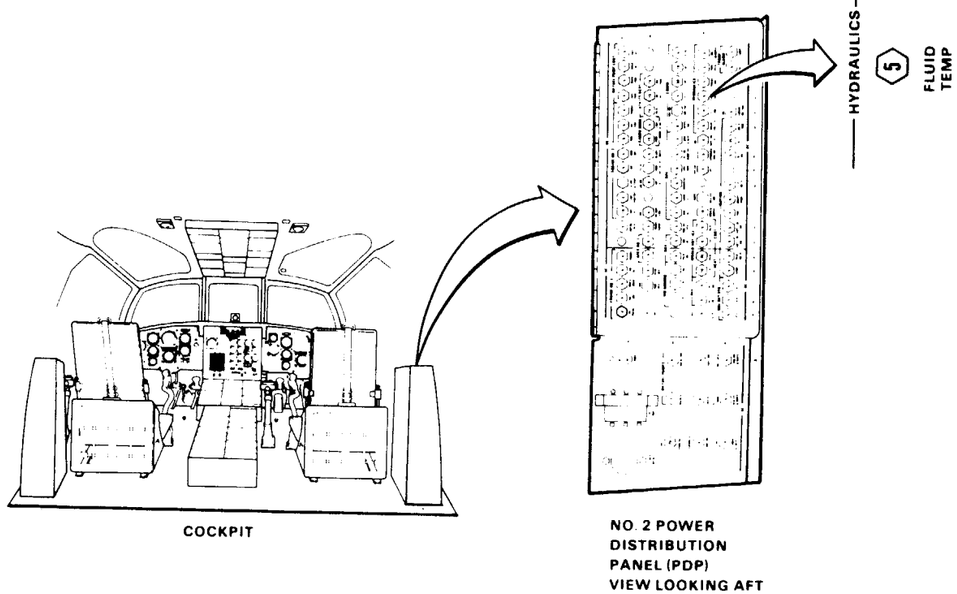
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

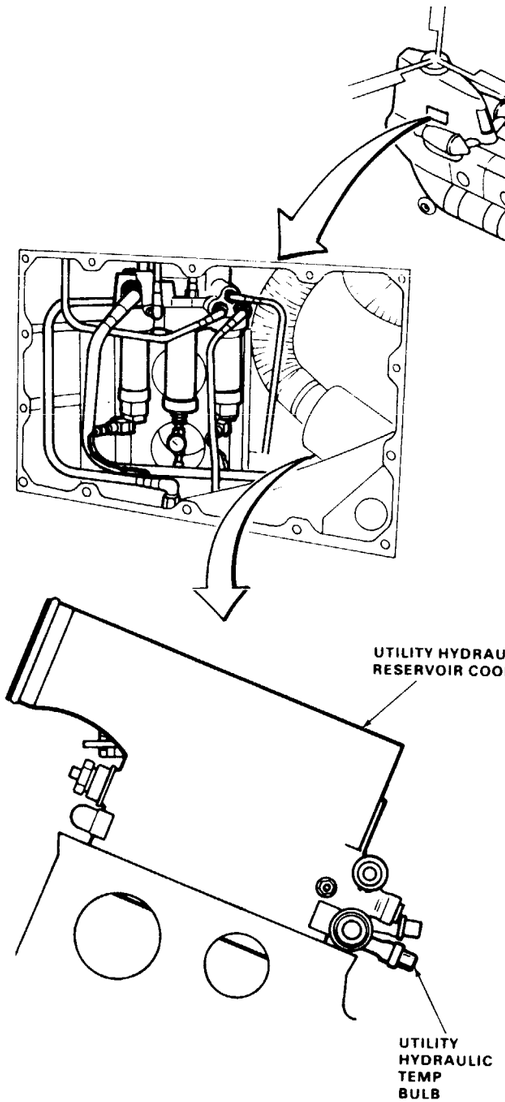
Materials:
Jumper Wire, 12 Inches

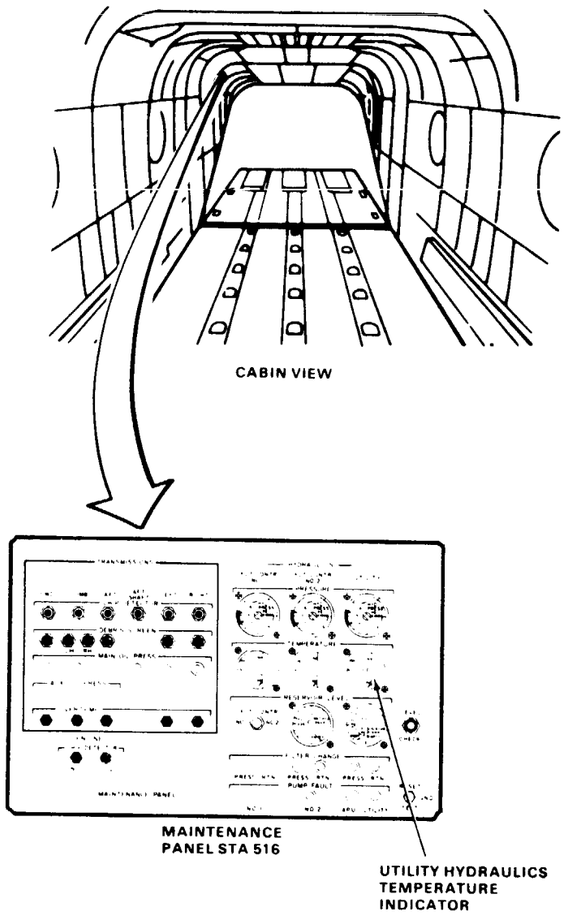
Personnel Required:
68F10 Aircraft Electrician
68F20 Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulics Power Off



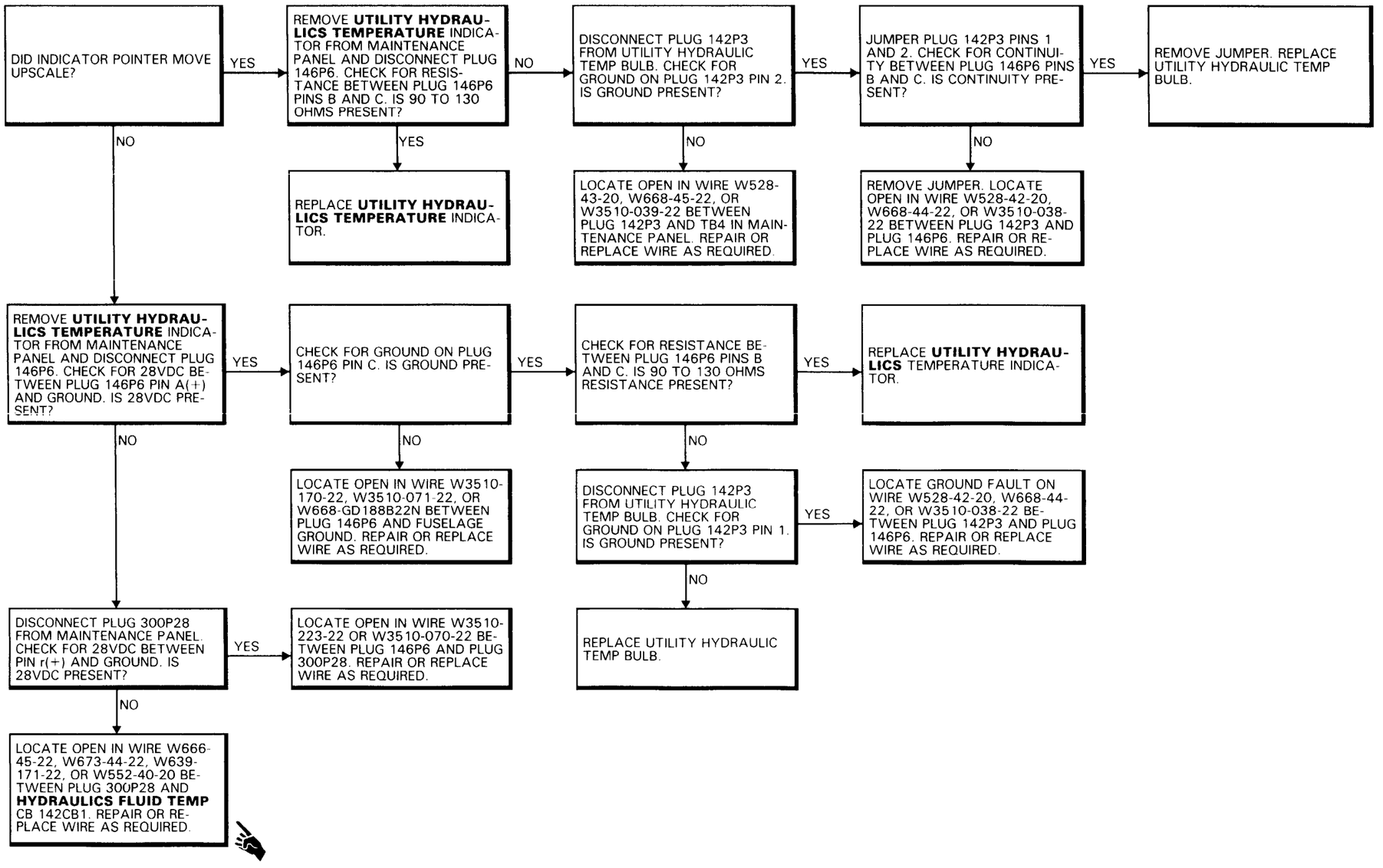




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DID INDICATOR POINTER MOVE UPSCALE?
YES
REMOVE **UTILITY HYDRAULICS TEMPERATURE** INDICATOR FROM MAINTENANCE PANEL AND DISCONNECT PLUG 146P6. CHECK FOR RESISTANCE BETWEEN PLUG 146P6 PINS B AND C. IS 90 TO 130 OHMS PRESENT?
NO
DISCONNECT PLUG 142P3 FROM UTILITY HYDRAULIC TEMP BULB. CHECK FOR GROUND ON PLUG 142P3 PIN 2. IS GROUND PRESENT?
YES
JUMPER PLUG 142P3 PINS 1 AND 2. CHECK FOR CONTINUITY BETWEEN PLUG 146P6 PINS B AND C. IS CONTINUITY PRESENT?
YES
REMOVE JUMPER. REPLACE UTILITY HYDRAULIC TEMP BULB.
NO
REMOVE JUMPER. LOCATE OPEN IN WIRE W528-42-20, W668-44-22, OR W3510-038-22 BETWEEN PLUG 142P3 AND PLUG 146P6. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
LOCATE OPEN IN WIRE W528-43-20, W668-45-22, OR W3510-039-22 BETWEEN PLUG 142P3 AND TB4 IN MAINTENANCE PANEL. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
REPLACE **UTILITY HYDRAULICS TEMPERATURE** INDICATOR.
REMOVE **UTILITY HYDRAULICS TEMPERATURE** INDICATOR FROM MAINTENANCE PANEL AND DISCONNECT PLUG 146P6. CHECK FOR 28VDC BETWEEN PLUG 146P6 PIN A(+) AND GROUND. IS 28VDC PRESENT?
YES
CHECK FOR GROUND ON PLUG 146P6 PIN C. IS GROUND PRESENT?
YES
CHECK FOR RESISTANCE BETWEEN PLUG 146P6 PINS B AND C. IS 90 TO 130 OHMS RESISTANCE PRESENT?
YES
REPLACE **UTILITY HYDRAULICS** TEMPERATURE INDICATOR.
NO
LOCATE OPEN IN WIRE W3510-170-22, W3510-071-22, OR W668-GD188B22N BETWEEN PLUG 146P6 AND FUSELAGE GROUND. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
DISCONNECT PLUG 142P3 FROM UTILITY HYDRAULIC TEMP BULB. CHECK FOR GROUND ON PLUG 142P3 PIN 1. IS GROUND PRESENT?
YES
LOCATE GROUND FAULT ON WIRE W528-42-20, W668-44-22, OR W3510-038-22 BETWEEN PLUG 142P3 AND PLUG 146P6. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
REPLACE UTILITY HYDRAULIC TEMP BULB.
NO
DISCONNECT PLUG 300P28 FROM MAINTENANCE PANEL. CHECK FOR 28VDC BETWEEN PIN r(+) AND GROUND. IS 28VDC PRESENT?
YES
LOCATE OPEN IN WIRE W3510-223-22 OR W3510-070-22 BETWEEN PLUG 146P6 AND PLUG 300P28. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
LOCATE OPEN IN WIRE W666-45-22, W673-44-22, W639-171-22, OR W552-40-20 BETWEEN PLUG 300P28 AND **HYDRAULICS FLUID TEMP** CB 142CB1. REPAIR OR REPLACE WIRE AS REQUIRED.

END OF TASK

8-8.6 NO. 1 FLT CONT HYDRAULIC TEMPERATURE INDICATOR POINTER DOES NOT MOVE UPSCALE OR EXCEEDS 120°C (PEGS)

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

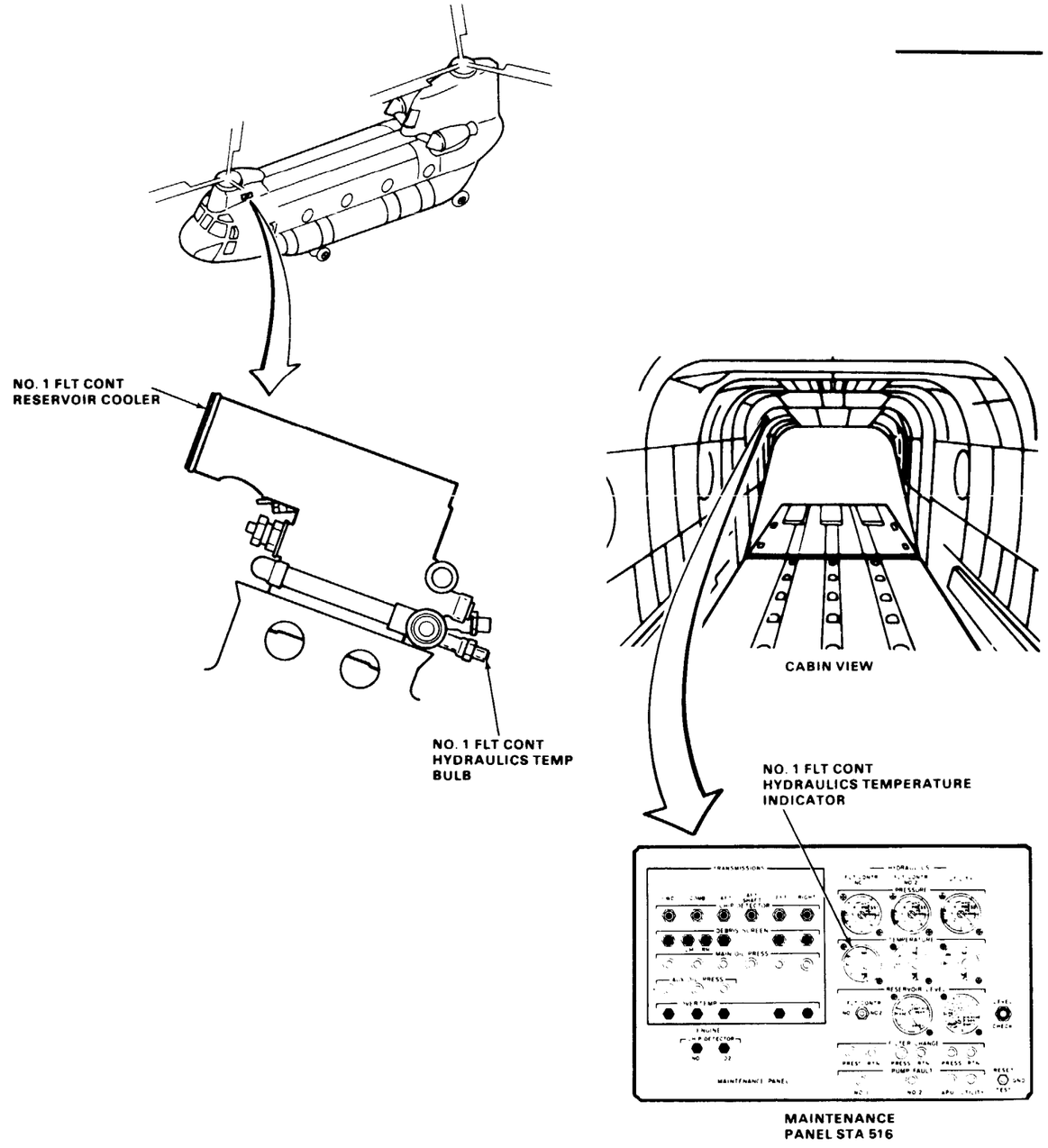
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:
Jumper Wire, 12 Inches

Personnel Required:
68F10 Aircraft Electrician
68F20 Aircraft Electrician

References:
TM 55-1520-240-23

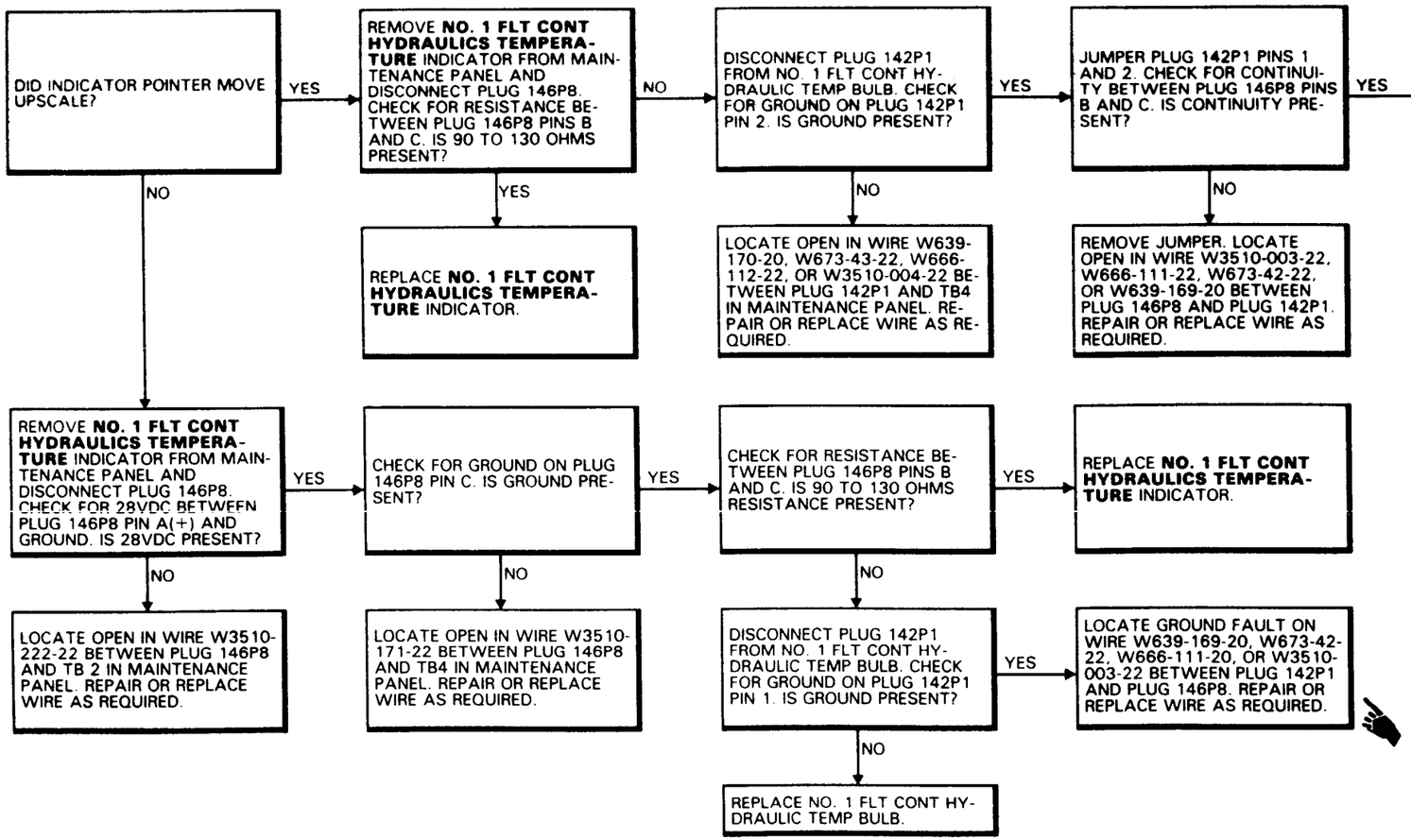
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulics Power Off



45x54

D145-7296-SPA

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DID INDICATOR POINTER MOVE UPSCALE?
YES
REMOVE NO. 1 FLT CONT HYDRAULICS TEMPERATURE INDICATOR FROM MAINTENANCE PANEL AND DISCONNECT PLUG 146P8. CHECK FOR RESISTANCE BETWEEN PLUG 146P8 PINS B AND C. IS 90 TO 130 OHMS PRESENT?
NO
DISCONNECT PLUG 142P1 FROM NO. 1 FLT CONT HYDRAULIC TEMP BULB. CHECK FOR GROUND ON PLUG 142P1 PIN 2. IS GROUND PRESENT?
YES
JUMPER PLUG 142P1 PINS 1 AND 2. CHECK FOR CONTINUITY BETWEEN PLUG 146P8 PINS B AND C. IS CONTINUITY PRESENT?
YES
REMOVE JUMPER. REPLACE NO. 1 FLT CONT HYDRAULIC TEMP BULB.
NO
REMOVE JUMPER. LOCATE OPEN IN WIRE W3510-003-22, W666-111-22, W673-42-22, OR W639-169-20 BETWEEN PLUG 146P8 AND PLUG 142P1. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
LOCATE OPEN IN WIRE W639-170-20, W673-43-22, W666-112-22, OR W3510-004-22 BETWEEN PLUG 142P1 AND TB4 IN MAINTENANCE PANEL. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
REPLACE NO. 1 FLT CONT HYDRAULICS TEMPERATURE INDICATOR.
NO
REMOVE NO. 1 FLT CONT HYDRAULICS TEMPERATURE INDICATOR FROM MAINTENANCE PANEL AND DISCONNECT PLUG 146P8. CHECK FOR 28VDC BETWEEN PLUG 146P8 PIN A(+) AND GROUND. IS 28VDC PRESENT?
YES
CHECK FOR GROUND ON PLUG 146P8 PIN C. IS GROUND PRESENT?
YES
CHECK FOR RESISTANCE BETWEEN PLUG 146P8 PINS B AND C. IS 90 TO 130 OHMS RESISTANCE PRESENT?
YES
REPLACE NO. 1 FLT CONT HYDRAULICS TEMPERATURE INDICATOR.
NO
LOCATE OPEN IN WIRE W3510-222-22 BETWEEN PLUG 146P8 AND TB 2 IN MAINTENANCE PANEL. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
LOCATE OPEN IN WIRE W3510-171-22 BETWEEN PLUG 146P8 AND TB4 IN MAINTENANCE PANEL. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
DISCONNECT PLUG 142P1 FROM NO. 1 FLT CONT HYDRAULIC TEMP BULB. CHECK FOR GROUND ON PLUG 142P1 PIN 1. IS GROUND PRESENT?
YES
LOCATE GROUND FAULT ON WIRE W639-169-20, W673-42-22, W666-111-20, OR W3510-003-22 BETWEEN PLUG 142P1 AND PLUG 146P8. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
REPLACE NO. 1 FLT CONT HYDRAULIC TEMP BULB.

END OF TASK

8-8.7 NO. 2 FLT CONT HYDRAULICS TEMPERATURE INDICATOR POINTER DOES NOT MOVE UPSCALE OR EXCEEDS 120°C (PEGS)

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

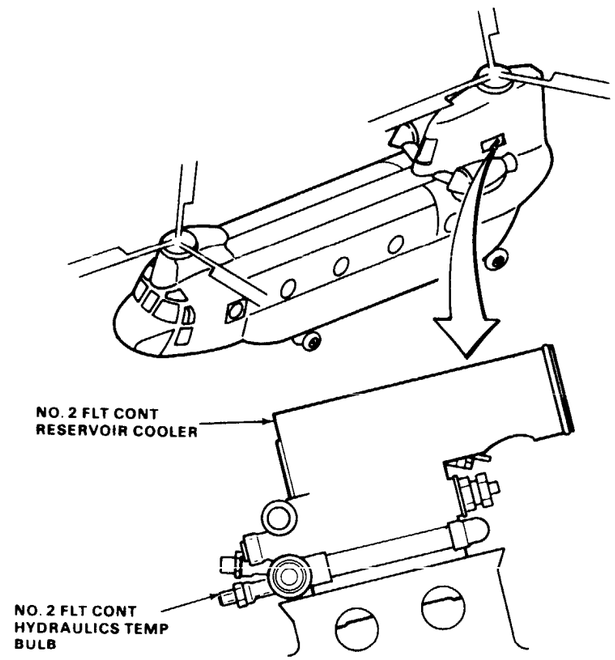
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

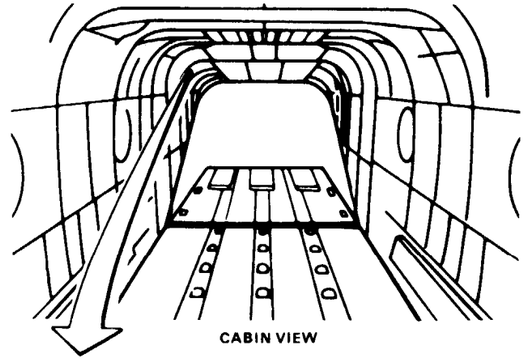
Materials:
Jumper Wire, 12 Inches

Personnel Required:
68F10 Aircraft Electrician
68F20 Aircraft Electrician

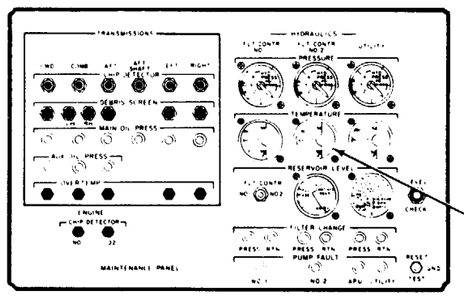
References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off





CABIN VIEW



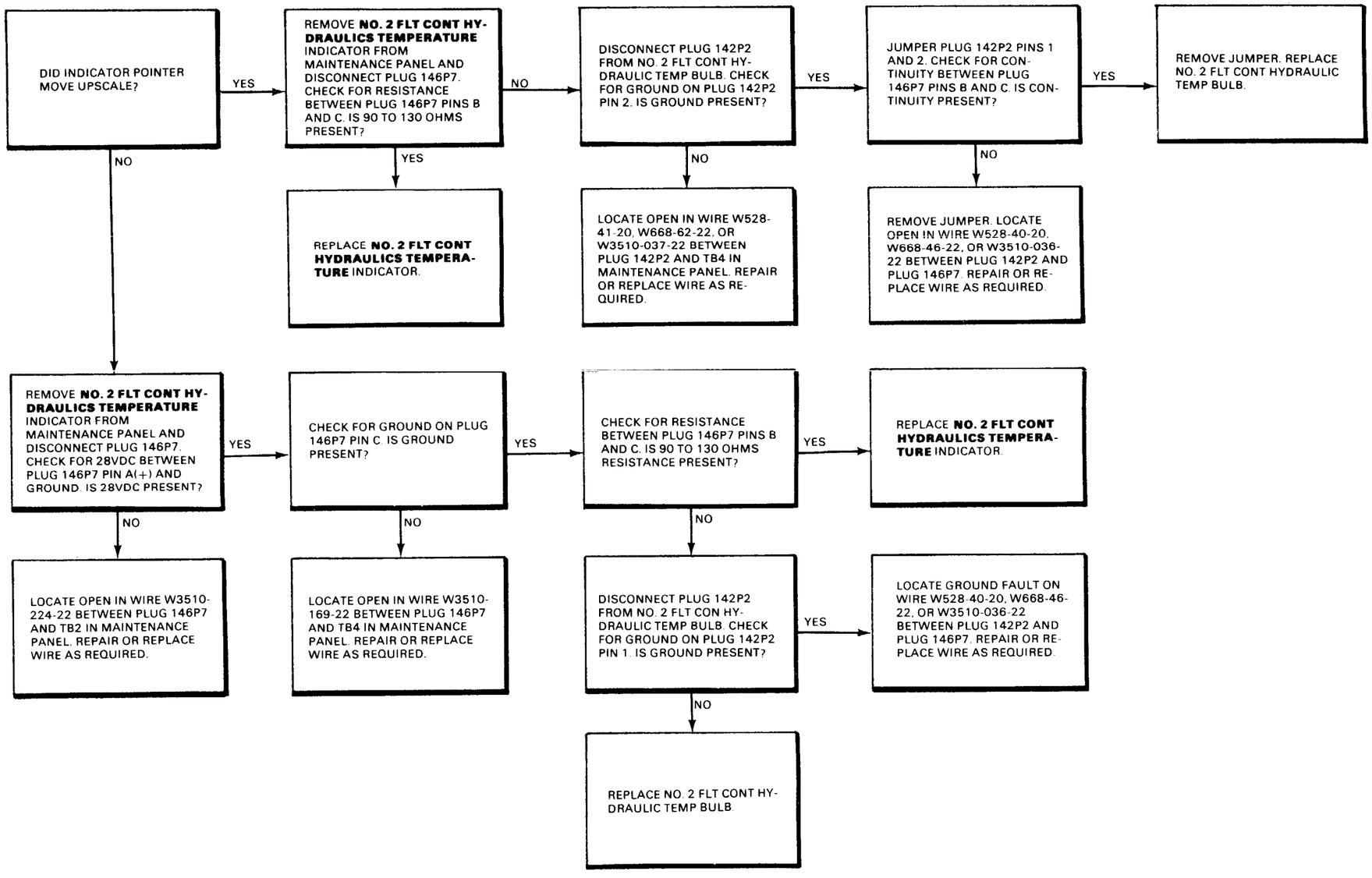
MAINTENANCE
PANEL STA 516

45x54

D145-7297-SPA

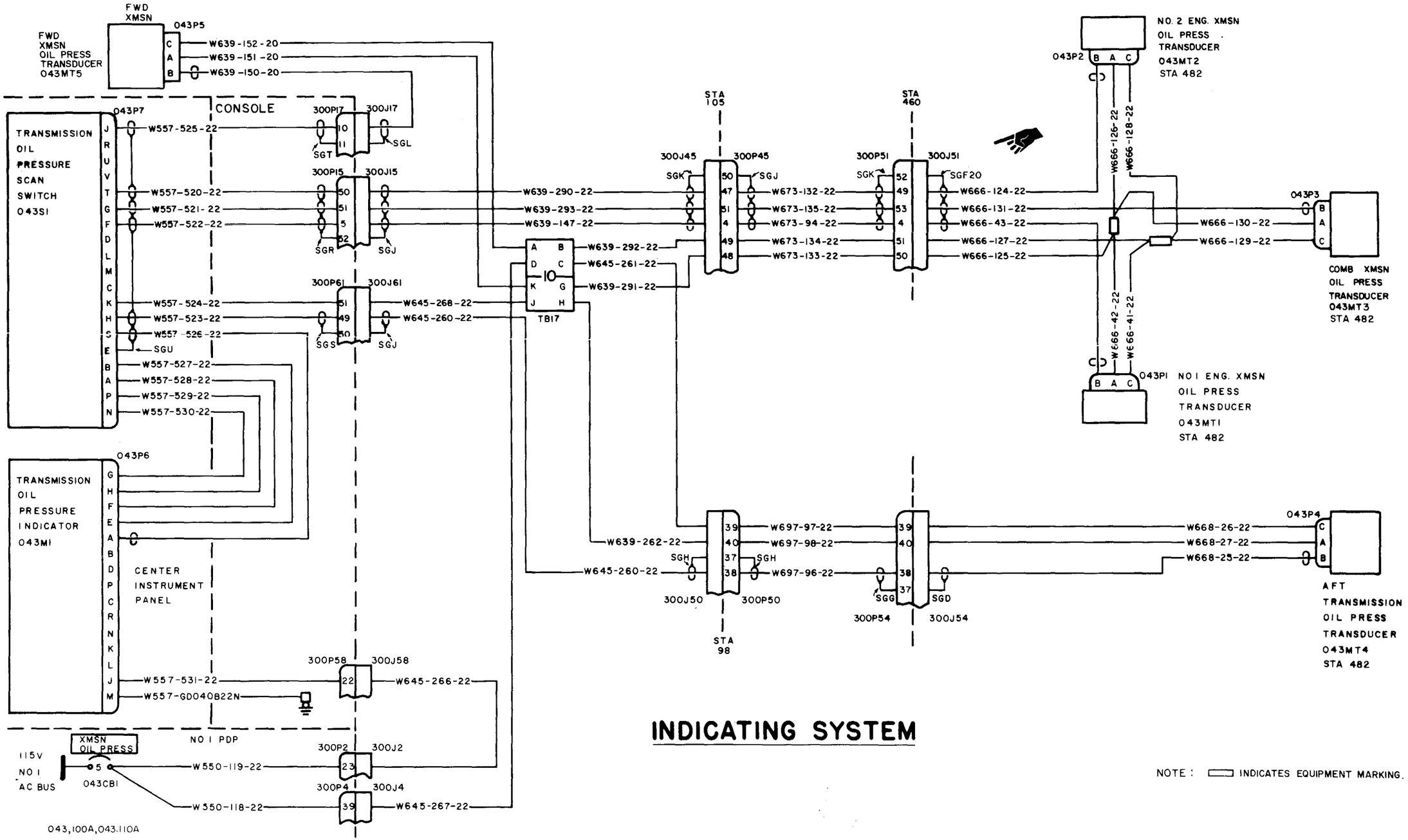
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8-8.7 NO. 2 FLT CONT HYDRAULICS TEMPERATURE INDICATOR POINTER DOES NOT MOVE UPSCALE OR EXCEEDS 120°C (PEGS) (Continued)



END OF TASK

8-9 TRANSMISSION OIL PRESSURE INDICATING AND WARNING SYSTEM

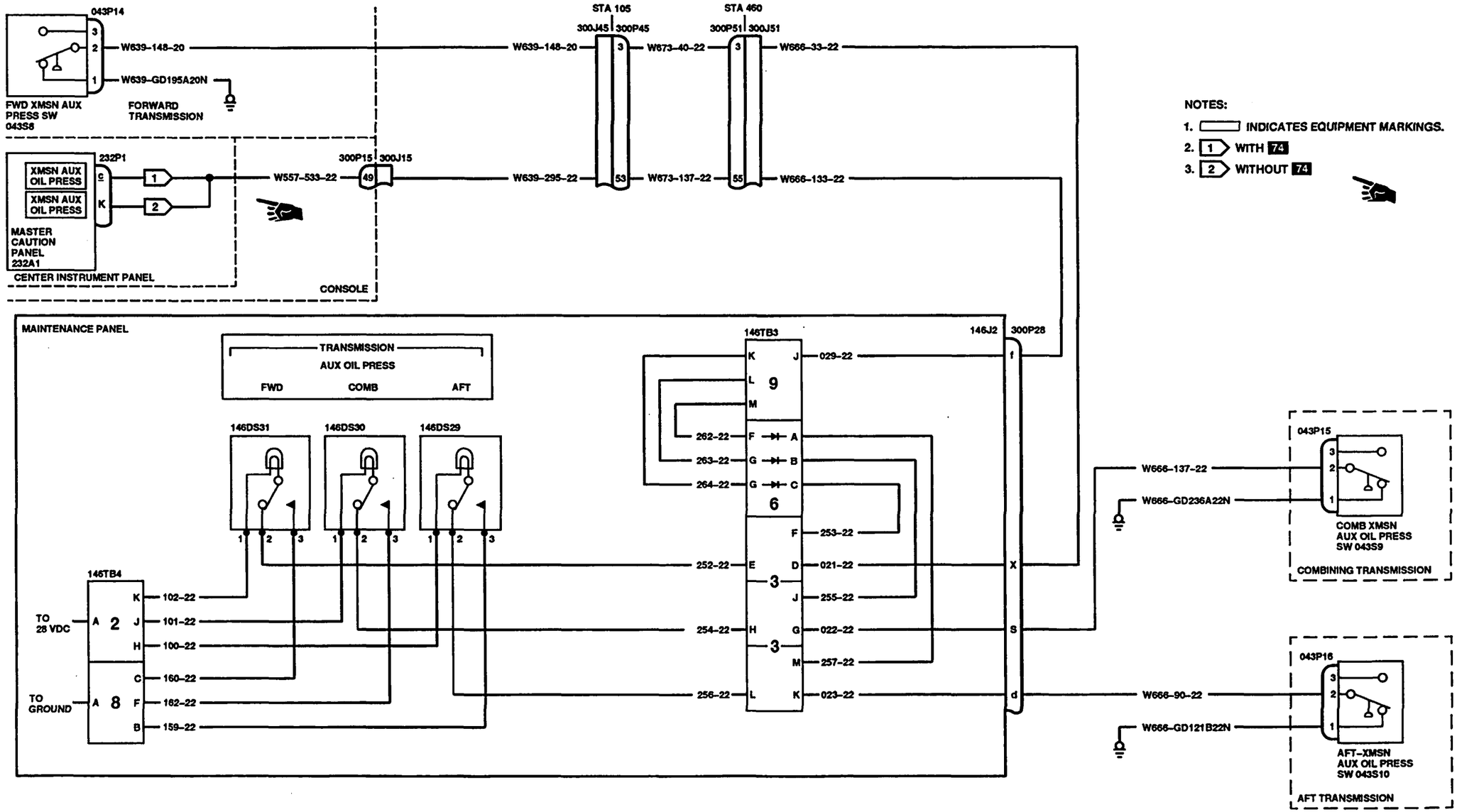


INDICATING SYSTEM

NOTE : ▭ INDICATES EQUIPMENT MARKING.

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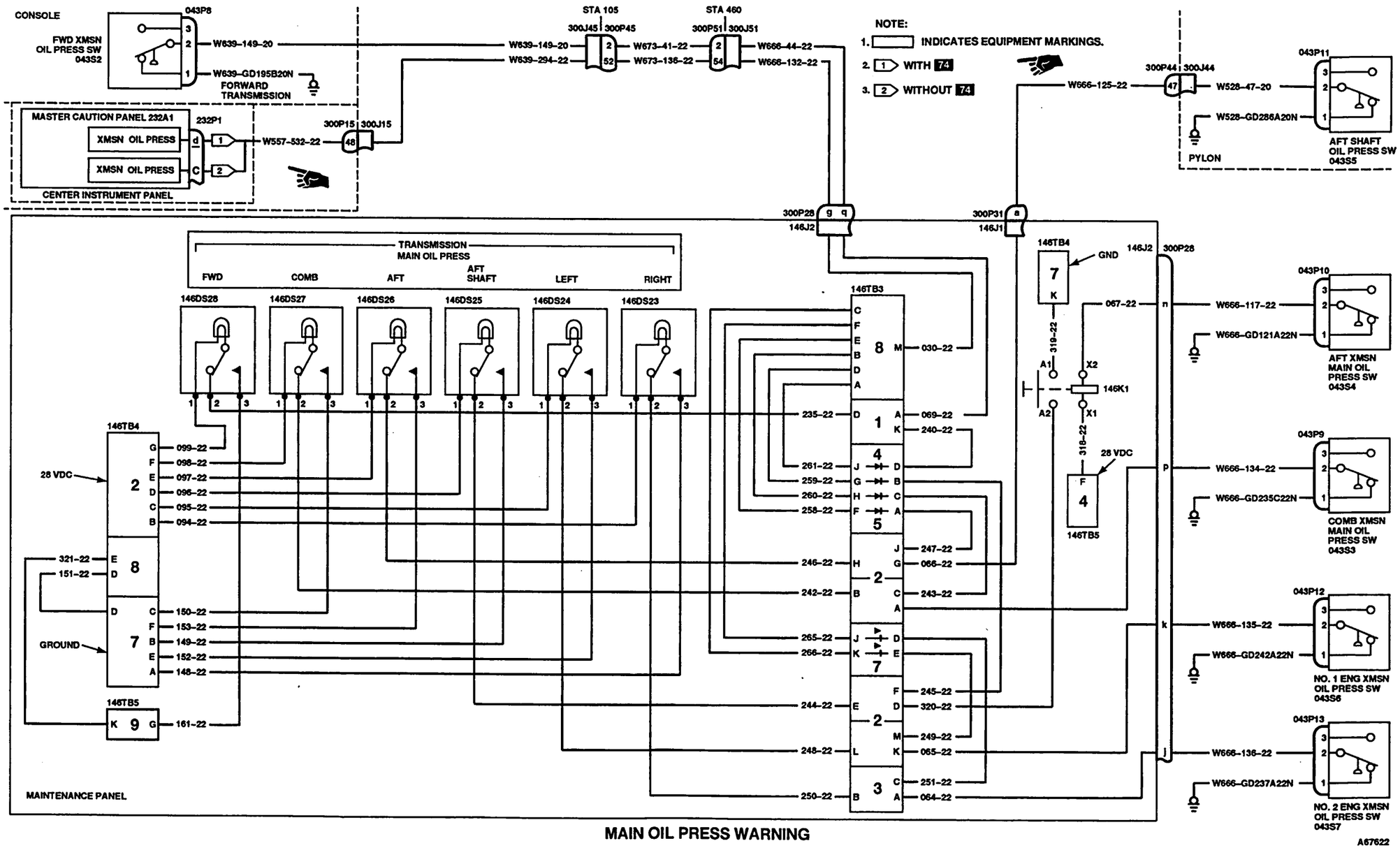
NOTES:

1. ▭ INDICATES EQUIPMENT MARKINGS.
2. 1 WITH 74
3. 2 WITHOUT 74

AUX OIL PRESS WARNING

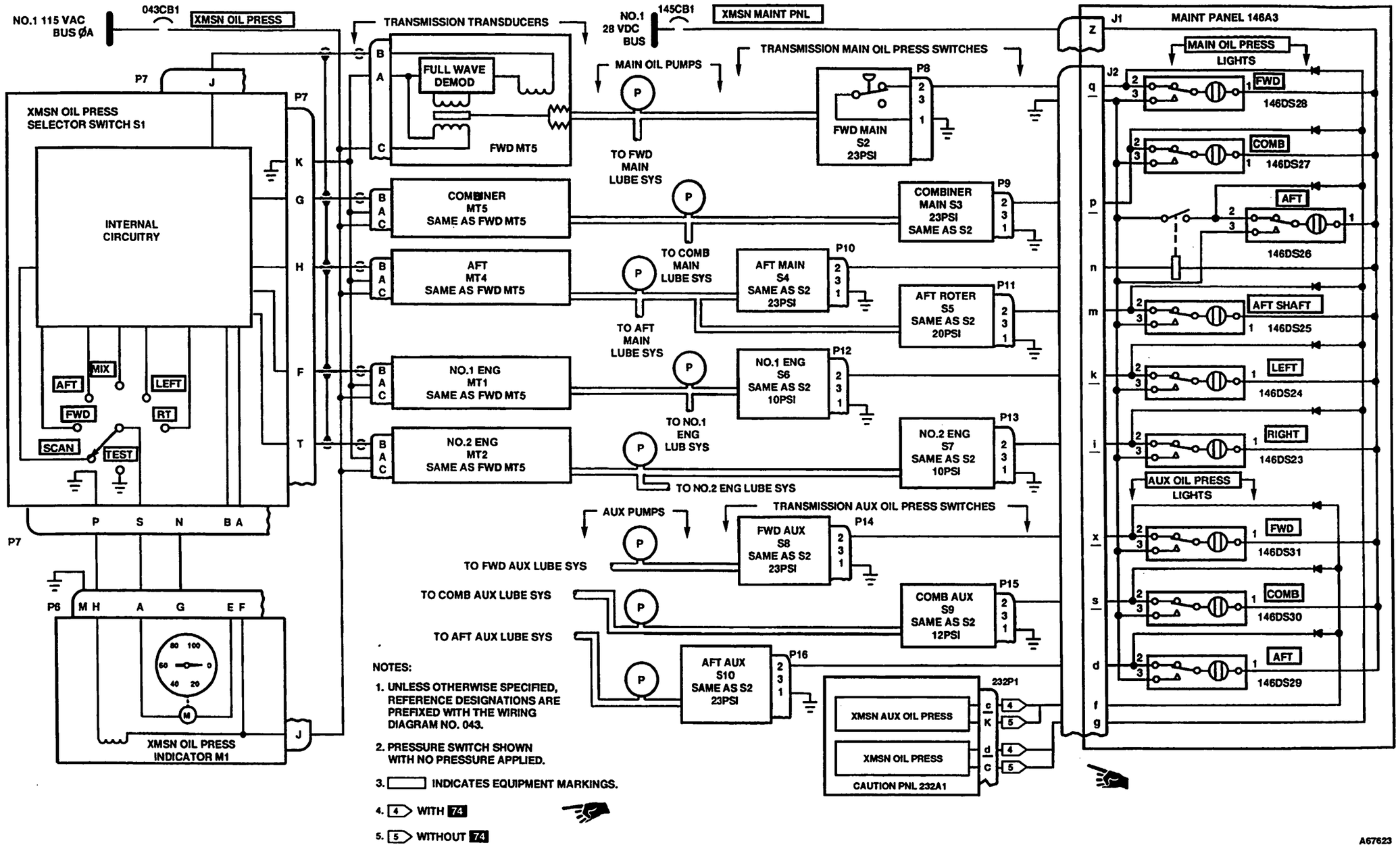
A67624

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MAIN OIL PRESS WARNING

GO TO NEXT PAGE

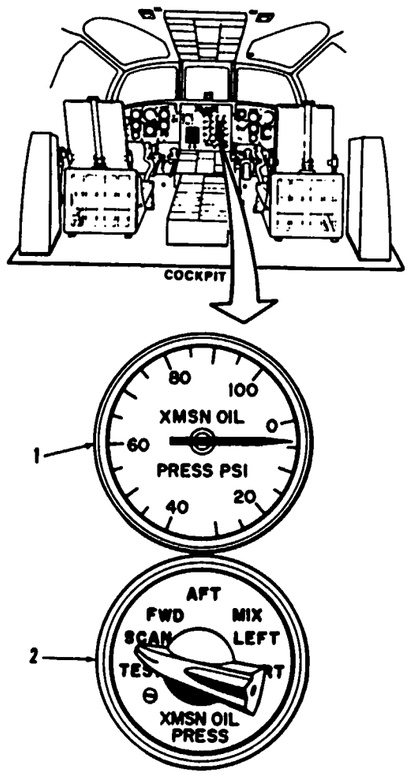

NO.1 115 VAC BUS ØA
043CB1
XMSN OIL PRESS
TRANSMISSION TRANSDUCERS
NO.1 28 VDC BUS
145CB1
XMSN MAINT PNL
MAIN OIL PUMPS
TRANSMISSION MAIN OIL PRESS SWITCHES
MAINT PANEL 146A3
MAIN OIL PRESS LIGHTS
XMSN OIL PRESS SELECTOR SWITCH S1
INTERNAL CIRCUITRY
AFT
MIX
LEFT
FWD
RT
SCAN
TEST
P S N B A
P6 M H A G E F
XMSN OIL PRESS INDICATOR M1
FULL WAVE DEMOD
FWD MT5
TO FWD MAIN LUBE SYS
FWD MAIN S2 23PSI
COMBINER MT5 SAME AS FWD MT5
TO COMB MAIN LUBE SYS
COMBINER MAIN S3 23PSI SAME AS S2
AFT MT4 SAME AS FWD MT5
TO AFT MAIN LUBE SYS
AFT MAIN S4 SAME AS S2 23PSI
AFT ROTER S5 SAME AS S2 20PSI
NO.1 ENG MT1 SAME AS FWD MT5
TO NO.1 ENG LUB SYS
NO.1 ENG S6 SAME AS S2 10PSI
NO.2 ENG MT2 SAME AS FWD MT5
TO NO.2 ENG LUBE SYS
NO.2 ENG S7 SAME AS S2 10PSI
AUX PUMPS
TRANSMISSION AUX OIL PRESS SWITCHES
TO FWD AUX LUBE SYS
FWD AUX S8 SAME AS S2 23PSI
TO COMB AUX LUBE SYS
COMB AUX S9 SAME AS S2 12PSI
TO AFT AUX LUBE SYS
AFT AUX S10 SAME AS S2 23PSI
XMSN AUX OIL PRESS
XMSN OIL PRESS
CAUTION PNL 232A1
AUX OIL PRESS LIGHTS
FWD 146DS28
COMB 146DS27
AFT 146DS26
AFT SHAFT 146DS25
LEFT 146DS24
RIGHT 146DS23
FWD 146DS31
COMB 146DS30
AFT 146DS29
NOTES:
1. UNLESS OTHERWISE SPECIFIED, REFERENCE DESIGNATIONS ARE PREFIXED WITH THE WIRING DIAGRAM NO. 043.
2. PRESSURE SWITCH SHOWN WITH NO PRESSURE APPLIED.
3. INDICATES EQUIPMENT MARKINGS.
4. WITH 74
5. WITHOUT 74
A67623

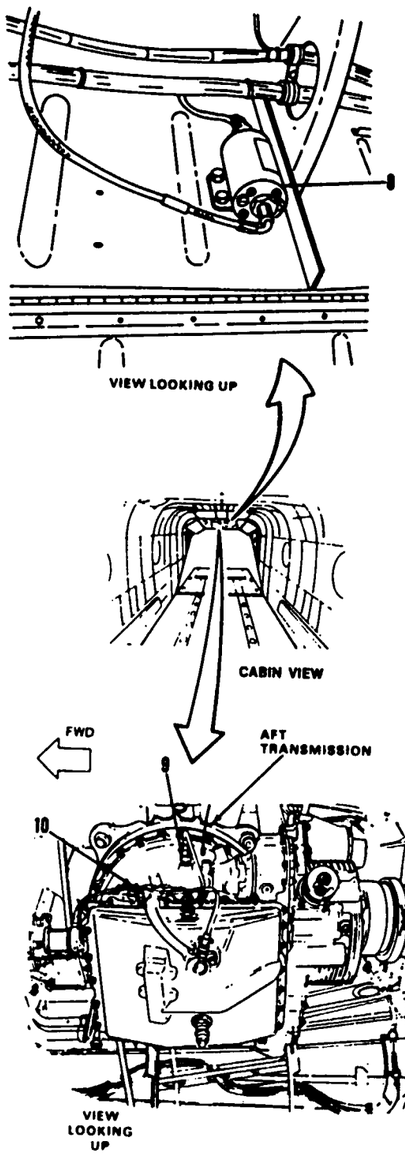
8-9.2 TRANSMISSION OIL PRESSURE INDICATING AND WARNING SYSTEM VISUAL CHECK

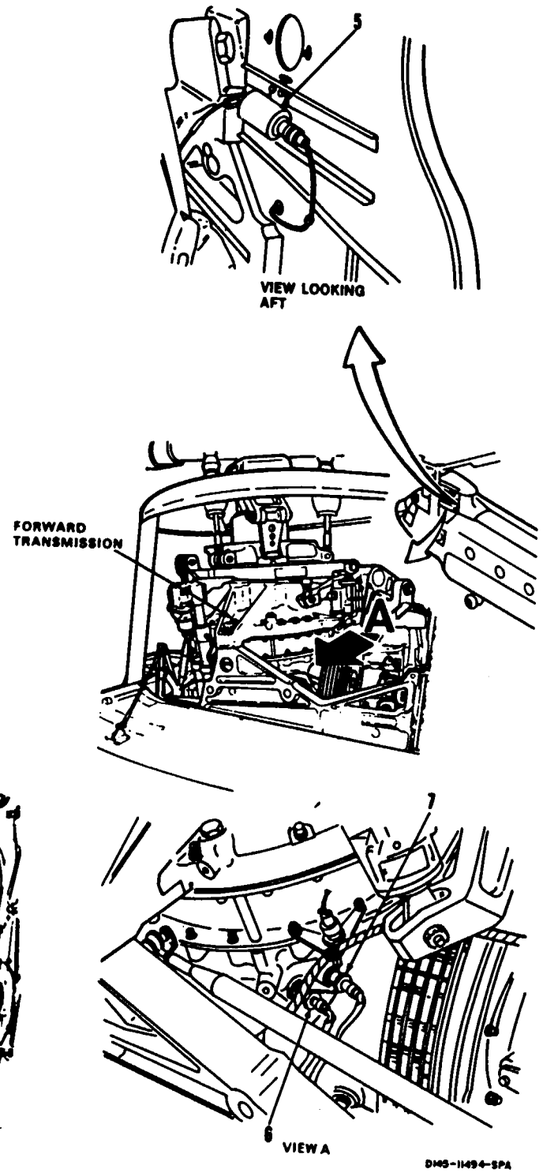
INITIAL SETUP

Applicable Configurations
All
Tools:
Aircraft Mechanic's Tool Kit.
NSN 5180-00-323-4692
Materials:
None
Personnel Required:
67U10 Medium Helicopter Repairer
References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off
Left and Right Forward Work Platforms Open
Aft Transmission Baffles Open
Pylon Hinged Fairing Open
Pylon Cover Fairing Open
Cargo Ramp Open and Level (Task 7-3.3)







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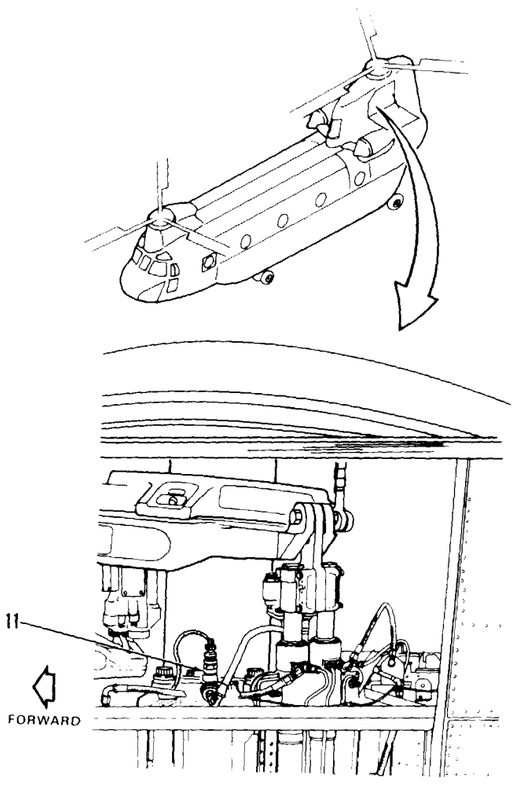
8-9.2 TRANSMISSION OIL PRESSURE INDICATING AND WARNING SYSTEM VISUAL CHECK (Continued)

TASK	RESULT
1. **Check XMSN OIL Press indicator (1).**	If indicator (1) is loose or damaged, tighten or replace it as required.
2. **Check XMSN OIL Press switch (2).**	If switch (2) is loose or damaged, tighten or replace it as required.
3. **Check six MAIN OIL PRESS Lights (3)** and **three AUX PRESS Lights (4).**	If any light (3) or (4) is damaged, replace it.
CHECK FORWARD TRANSMISSION OIL PRESSURE INDICATING AND WARNING SYSTEM INSTALLATION	
4. Check pressure transducer (5).	If transducer (5) is damaged, replace it. If wiring or electrical connector to transducer is damaged, repair or replace it as required. If hose to transducer is loose or damaged, tighten or replace it as required.
5. Check main oil pressure switch (6).	If switch (6) is damaged, replace it. If wiring or electrical connector to switch is damaged, repair or replace it as required.
6. Check auxiliary oil pressure switch (7).	If switch (7) is damaged, replace it. If wiring or electrical connector to switch is damaged, repair or replace it as required.

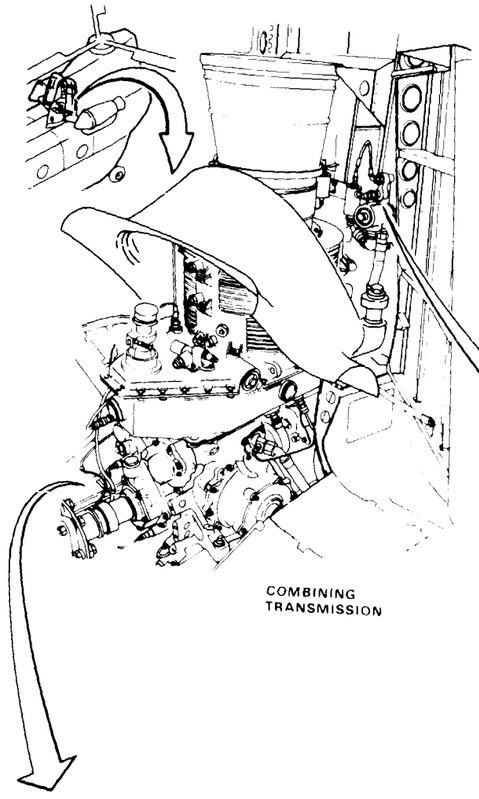
TASK	RESULT
CHECK AFT TRANSMISSION OIL PRESSURE INDICATING AND WARNING SYSTEM INSTALLATION	
7. **Check pressure transducer (8).**	If transducer (8) is damaged, replace it. If wiring or electrical connector to transducer is damaged, repair or replace it as required. If hose to transducer is loose or damaged, tighten or replace it as required.
8. **Check main oil pressure switch (9).**	If switch (9) is damaged, replace it. If wiring or electrical connector to switch is damaged, repair or replace it as required.
9. **Check auxiliary oil pressure switch (10).**	If switch (10) is damaged, replace it. If wiring or electrical connector to switch is damaged, repair or replace it as required.

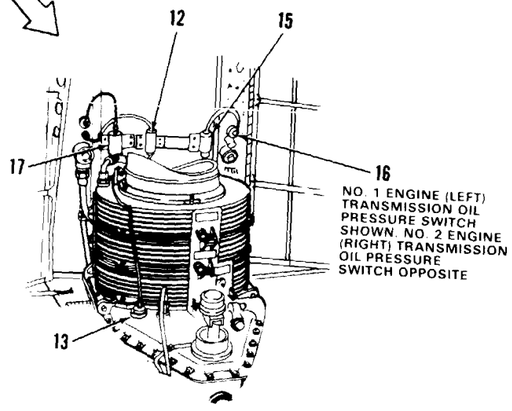
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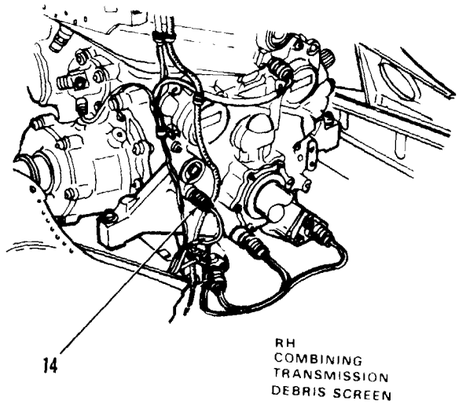
8-9.2 TRANSMISSION OIL PRESSURE INDICATING AND WARNING SYSTEM VISUAL CHECK (Continued)



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TASK	RESULT
CHECK AFT ROTOR SHAFT WARNING SYSTEM INSTALLATION	
10. **Check oil pressure switch (11).**	If switch (11) is damaged, replace it. If wiring or electrical connector to switch is damaged, repair or replace it as required.
CHECK COMBINING TRANSMISSION OIL PRESSURE indicating AND WARNING SYSTEM INSTALLATION	
11. **Check pressure transducer (12).**	If transducer (12) is damaged, replace it, if wiring or electrical connector to transducer is damaged, repair or replace it as required. If hose to transducer is loose or damaged, repair or replace it as required.
12. **Check main oil pressure switch (13)**	If switch (13) is damaged, replace it. If wiring or electrical connector to switch is damaged, repair or replace it as required.
13. **Check auxiliary oil pressure switch (14).**	If switch (14) is damaged, replace it. If wiring or electrical connector to switch is damaged, repair or replace it as required.
CHECK NO. 1 (LEFT) ENGINE TRANSMISSION OIL PRESSURE indicating AND WARNING SYSTEM INSTALLATION	
14. Check pressure transducer (15).	If transducer (15) is damaged, replace it. If wiring or electrical connector to transducer is damaged, repair or replace it as required. If hose to transducer is loose or damaged, repair or replace it as required.
15. Check oil pressure switch (16).	If switch (16) is damaged, replace it. If wiring or electrical connector to switch is damaged, repair or replace it as required.
CHECK NO. 2 (RIGHT) ENGINE TRANSMISSION OIL PRESSURE INDICATING AND WARNING SYSTEM INSTALLATION	
16. Check pressure transducer (17).	If transducer (17) is damaged, replace it. If wiring or electrical connector to transducer is damaged, repair or replace it as required. If hose to transducer is loose or damaged, repair or replace it as required.
17. Check oil pressure switch (16).	If switch (16) is damaged, replace it. If wiring or electrical connector to switch is damaged, repair or replace it as required.

FOLLOW-ON MAINTENANCE:

None

END OF TASK

INITIAL SETUP

Applicable Configurations:
All

Tools:
None

Materials:
None

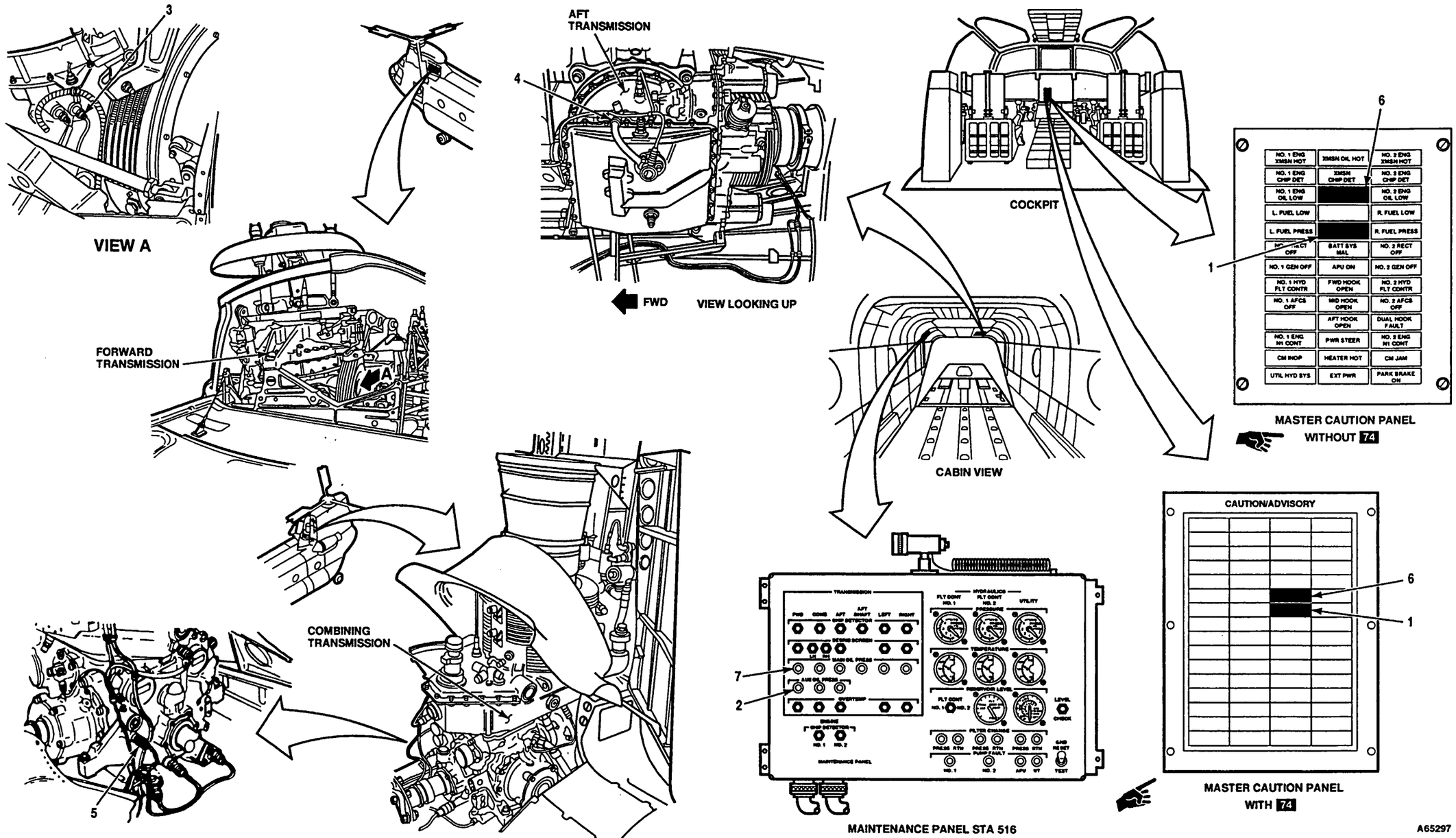
Personnel Required:
Aircraft Electrician (2)
Rotary Wing Aviator (2)

References:
TM 55-1520-240-10
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off
Visual Check of Transmission Oil Pressure Indicating and Warning System Performed

TASK	RESULT
CHECK TRANSMISSION AUXILIARY OIL PRESSURE WARNING SYSTEM	
1. Check that XMSN AUX OIL PRESS capsule (1) is lit.	If capsule (1) is not lit, go to task 8-9.4.
2. Check that three TRANSMISSION AUX OIL PRESS lights (2) are lit.	If any light (2) is not on, go to task 8-9.5.
3. Disconnect plug from forward transmission auxiliary oil pressure switch (3).	FWD TRANSMISSION AUX OIL PRESS light (2) shall go out, If it is still on, go to task 8-9.6.
4. Disconnect plug from aft transmission auxiliary oil pressure switch (4).	AFT TRANSMISSION AUX OIL light (2) shall go out. If it is still on, go to task 8-9.6.
5. Disconnect plug from combining transmission auxiliary oil pressure switch (5).	COMB TRANSMISSION AUX OIL PRESS light (2) shall go out. If it is still on, go to task 8-9.6. XMSN AUX OIL PRESS capsule (1) shall go out. If it is still on, go to task 8-9.7.
6. Short pin 2 in forward transmission auxiliary oil pressure switch (3) plug to ground with a wire.	XMSN AUX OIL PRESS capsule (1) shall come on. FWD TRANSMISSION AUX OIL PRESS light (2) shall come on. If capsule (1) does not come on, go to task 8-9.8.
7. Remove wire.	Capsule (1) and light (2) shall go out.
8. Short pin 2 in aft transmission auxiliary oil pressure switch (4) plug to ground with a wire.	XMSN AUX OIL PRESS capsule (1) shall come on. AFT TRANSMISSION AUX OIL PRESS light (2) shall come on. If capsule (1) does not come on, go to task 8-9.8.
9. Remove wire.	Capsule (1) and light (2) shall go out.
10. Short pin 2 in combining transmission auxiliary oil pressure switch (5) plug to ground with a wire.	XMSN AUX OIL PRESS capsule (1) shall come on. COMB TRANSMISSION AUX OIL PRESS light (2) shall come on. If capsule (1) does not come on, go to task 8-9.8.
11. Remove wire.	Capsule (1) and light (2) shall go out.
12. Press and release each TRANSMISSION AUX OIL PRESS light (2).	Each light (2) shall come on when pressed. If it does not, go to task 8-9.9.
13. Connect plugs to combining transmission, aft transmission, and forward transmission auxiliary oil pressure switches (5, 4, and 3).	XMSN AUX OIL PRESS capsule (1) shall come on. FWD, COMB, and AFT TRANSMISSION AUX OIL PRESS lights (2) shall come one.
CHECK TRANSMISSION MAIN OIL PRESSURE WARNING SYSTEM	
14. Check that XMSN OIL PRESS capsule (6) is lit.	If capsule (6) is not lit, go to task 8-9.10.
NOTE **AFT TRANSMISSION MAIN OIL PRESS light may take 5 to 7 seconds to come on.**	
15. Check that six TRANSMISSION MAIN OIL PRESS lights (7) are lit.	If any light is not on, go to task 8-9.11.

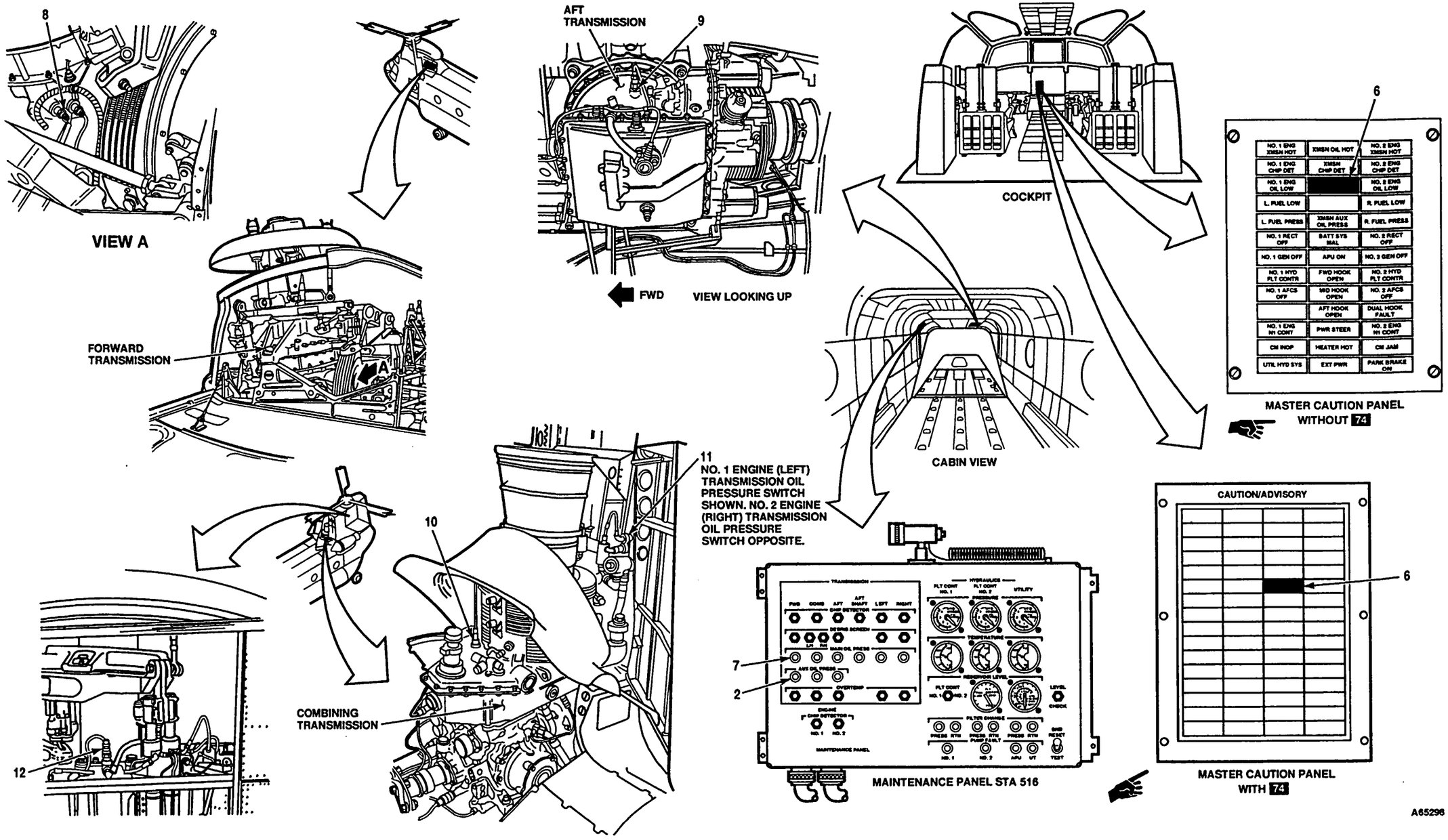
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TASK	RESULT
16. Disconnect plug from forward transmission main oil pressure switch (8).	FWD TRANSMISSION MAIN OIL PRESS light (7) shall go out. If it is still on, go to task 8-9.12.
17. Disconnect plug from aft transmission main oil pressure switch (9).	AFT TRANSMISSION MAIN OIL PRESS light (7) shall go out. If it is still on, go to task 8-9.12.
18. Disconnect plug from combining transmission main oil pressure switch (10).	COMB TRANSMISSION MAIN OIL PRESS light (7) shall go out. If it is still on, go to task 8-9.12.
19. Disconnect plug from No. 1 (left) engine transmission oil pressure switch (11).	LEFT TRANSMISSION MAIN OIL PRESS light (7) shall go out. If it is still on, go to task 8-9.12.
20. Disconnect plug from No. 2 (right) engine transmission oil pressure switch (11).	RIGHT TRANSMISSION MAIN OIL PRESS light (7) shall go out. If it is still on, go to task 8-9.12.
21. Disconnect plug from aft shaft oil pressure switch (12).	AFT SHAFT MAIN OIL PRESS light (7) shall go out. If it is still on, go to task 8-9.12. XMSN oil press capsule (6) shall go out. If it is still on, go to task 8-9.13.
22. Short pin 2 in aft shaft oil pressure switch (12) plug to ground with a wire.	XMSN OIL PRESS capsule (6) shall come on. AFT SHAFT MAIN OIL PRESS light (7) shall come on. If capsule (6) does not come on, go to task 8-9.14.
23. Remove wire.	Capsule (6) and light (7) shall go out.
24. Short pin 2 in No. 2 engine (right) transmission oil pressure switch (11) plug to ground with a wire.	XMSN OIL PRESS capsule (6) shall come on. RIGHT TRANSMISSION MAIN OIL PRESS light (7) shall come on. If capsule (6) does not come on, go to task 8-9.14.
25. Remove wire.	Capsule (6) and light (7) shall go out.
26. Short pin 2 in No. 1 engine (left) transmission oil pressure switch (11) plug to ground with a wire.	XMSN OIL PRESS capsule (6) shall come on. LEFT TRANSMISSION MAIN OIL PRESS light (7) shall come on. If capsule (6) does not come on, go to task 8-9.14.
27. Remove wire.	Capsule (6) and light (7) shall go out.
28. Short pin 2 in combining transmission main oil pressure switch (10) plug to ground with a wire.	XMSN OIL PRESS capsule (6) shall come on. COMB TRANSMISSION MAIN OIL PRESS light (7) shall come on. If capsule (6) does not come on, go to task 8-9.14.
29. Remove wire.	Capsule (6) and light (7) shall go out.
30. Short pin 2 in aft transmission main oil pressure switch (9) plug to ground with a wire.	XMSN OIL PRESS capsule (6) shall come on. AFT TRANSMISSION MAIN OIL PRESS light (7) shall come on. If capsule (6) does not come on, go to task 8-9.14.
31. Remove wire.	Capsule (6) and light (7) shall go out.
32. Short pin 2 in forward transmission main oil pressure switch (8) plug to ground with a wire.	XMSN OIL PRESS capsule (6) shall come on. FWD TRANSMISSION MAIN OIL PRESS light (7) shall come on. If capsule (6) does not come on, go to task 8-9.14.
33. Remove wire.	Capsule (6) and light (7) shall go out.
34. Press and release each TRANSMISSION MAIN OIL PRESS light (7).	Each light (7) shall come on when pressed. If it does not, go to task 8-9.15.
35. Connect plugs to forward, aft, combining, No. 1 (left) and No. 2 (right) engine transmission pressure switches (8, 9, 10, and 11) and aft shaft pressure switch (12).	XMSN OIL PRESS capsule (6) shall come on. FWD, COMB, AFT, LEFT, RIGHT, and AFT SHAFT TRANSMISSION MAIN OIL PRESS lights (7) shall come on.

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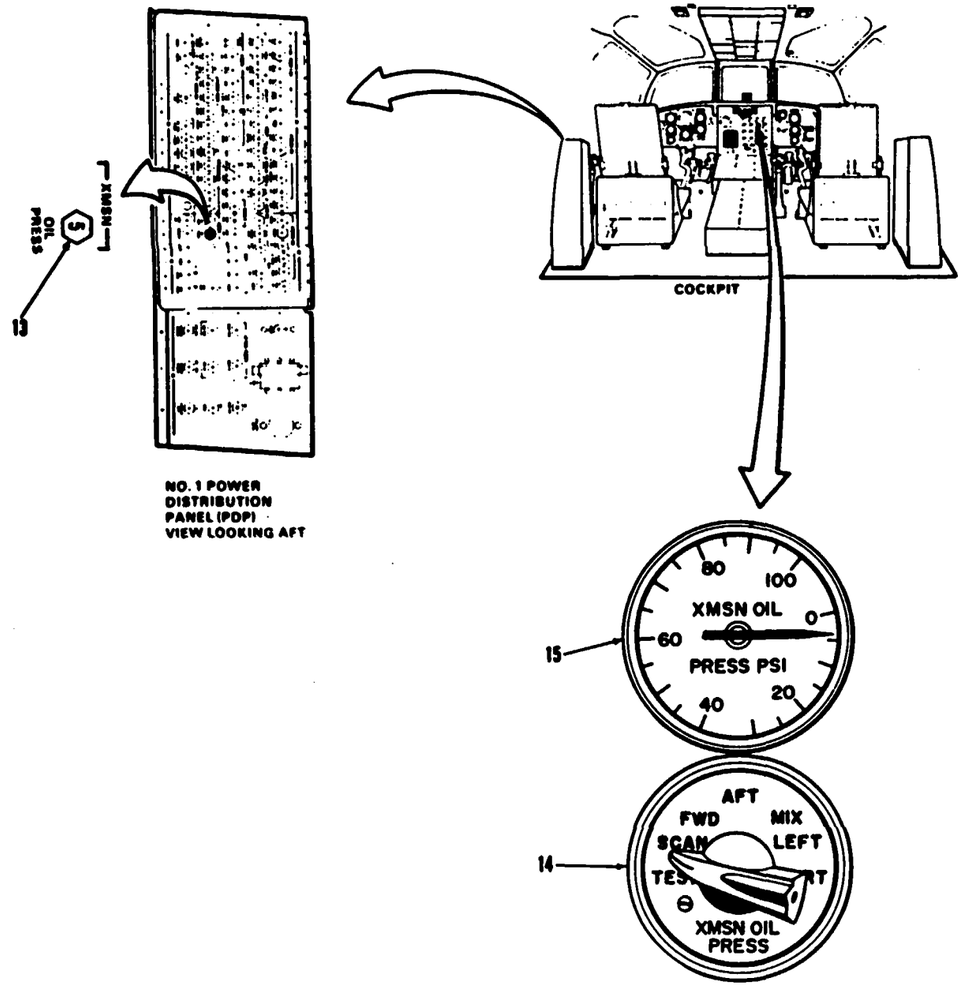


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TASK	RESULT
CHECK TRANSMISSION OIL PRESSURE INDICATING SYSTEM	
36. Close left and right forward work platforms.	
37. Close pylon lower fairing and hinted fairing.	
38. Close aft transmission baffles.	
39. **Check** that **XMSN OIL PRESS circuit breaker (13)** is **closed**.	If circuit breaker (1) is open, close it. If it opens again, go to task 8-9.16.
40. **Check** that **XMSN OIL PRESS switch (14) is set** to **SCAN**.	If switch (14) is not at SCAN, then set it to SCAN.
41. Have pilot start engines and stabilize rpm at 100 percent **Check XMSN OIL PRESS indicator (15). Record Indication.**	Indicator (15) should indicate in normal pressure range, 20 to 90 psi. If it does not, turn knob MSN OIL PRESS switch (14). To FWD, AFT, MIX, LEFT then RT positions. Note indications, and go to task 8-9.17.
42. **Set** and **hold knob** on **XMSN OIL PRESS switch (14)** to **TEST.**	Pointer on indicator(15) shall move to 0. Switch (14) TEST position shall light. If pointer does not move to 0 or TEST position does not Light, replace switch (14).
43. **Release knob** on **XMSN OIL PRESS switch (14).**	Knob on switch (14) shall return to SCAN position. SCAN position shall light. Pointer on indicator (15) shall move to operating pressure indication. If knob does not return to SCAN or SCAN position does not light, replace switch.
44. **Turn knob on XMSN OIL PRESS switch (14)** to **FWD, AFT, MIX, LEFT,** then **RT positron**. Record indication on **XMSN OIL PRESS indicator (15)** for each switch position.	Each position on switch (14) shall Light when selected. Each indicator (15) switch position indication shall be in normal pressure range, 20 to 90 psi. If any switch position does not light, replace switch. If any indicator indication is not in normal range, go to task 8-9.18.
45. Compare indications recorded in step 41 and step 44.	If Lowest indication recorded in step 44 is not within 3 percent of step 41 indication replace switch (14).
46. **Turn knob** on **XMSN OIL PRESS switch (14)** to **SCAN.**	Switch position of Lowest indication recorded in step 44 shall Light. If it does not, replace switch (14).

TASK	RESULT
FOLLOW-ON MAINTENANCE:	
Have pilot shutdown engines.	
TM 55-1520-240-23 Electrical Power Off Battery Disconnected Hydraulic Power Off	

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XMSN OIL PRESS
13
NO. 1 POWER DISTRIBUTION PANEL (PDP) VIEW LOOKING AFT
COCKPIT
15
80
100
XMSN OIL
0
60
PRESS PSI
40
20
14
AFT
FWD
MIX
SCAN
LEFT
TES
RT
XMSN OIL PRESS
45 X 54
D145-11498-SPA

END OF TASK

8-9.4 XMSN AUX OIL PRESS CAPSULE NOT LIT

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

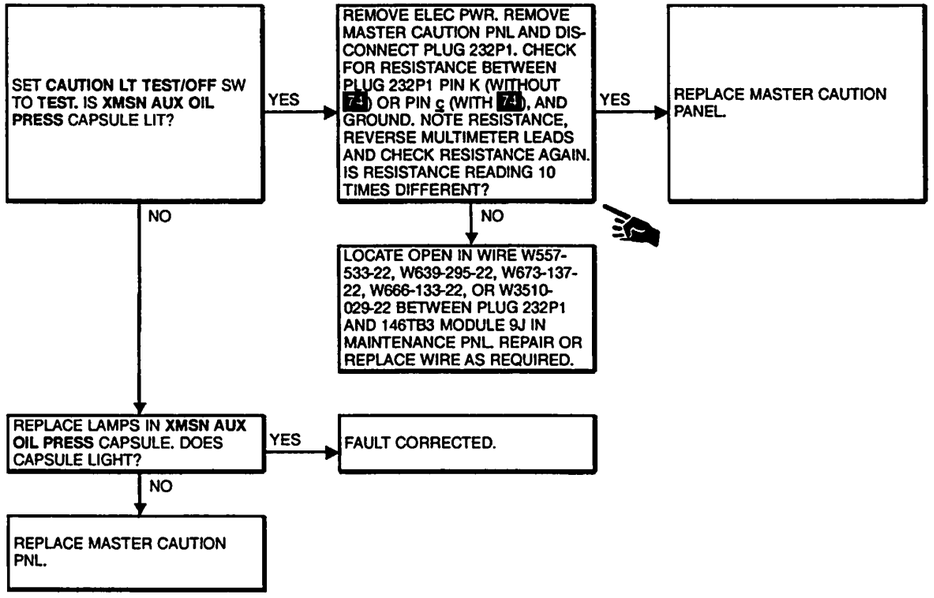
Tools:
Electrical Repairer's Tool Kit, NSN 5180-00-323-4915
Multimeter

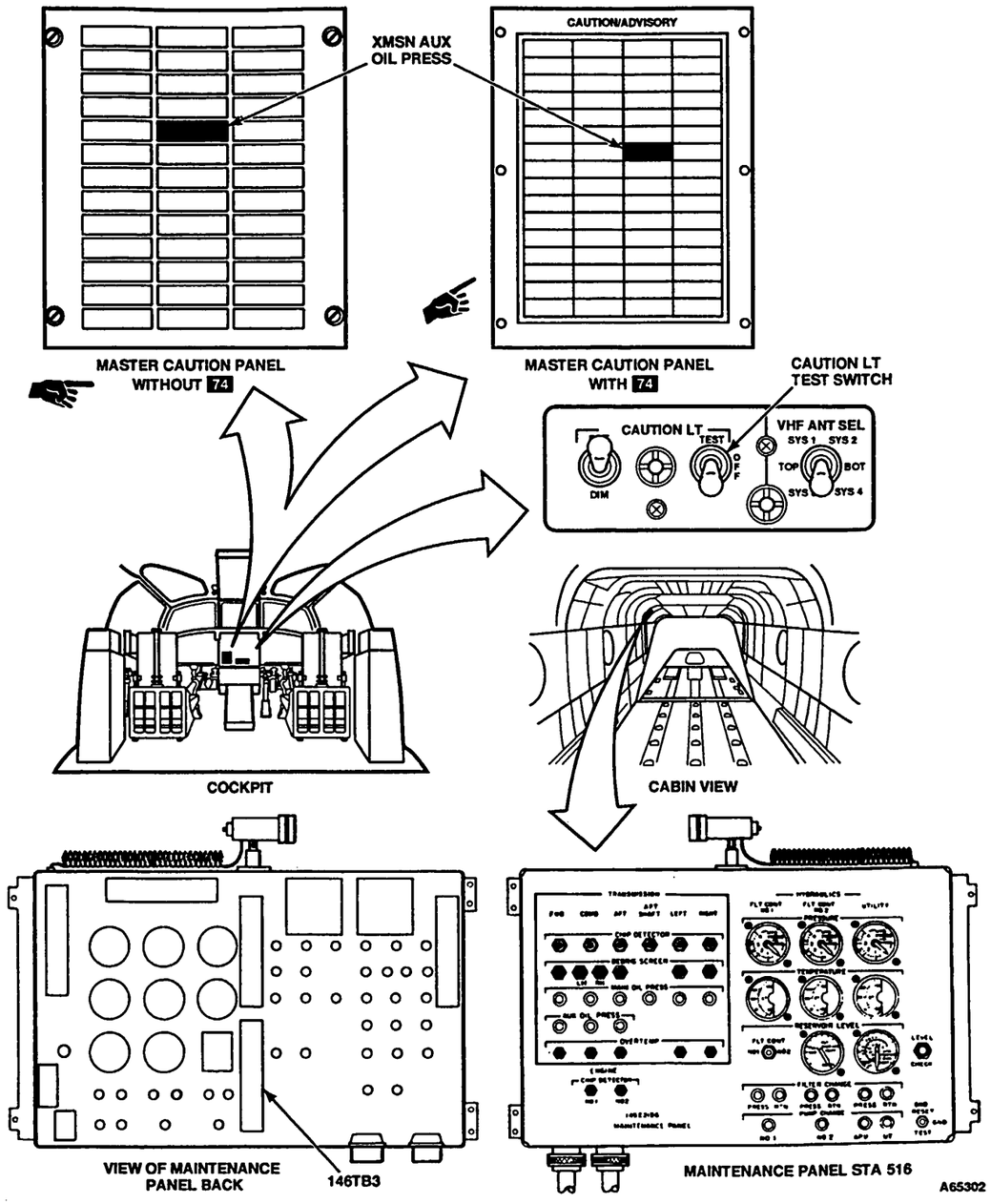
Materials:
None

Personnel Required:
Aircraft Electrician

References:
TM 55-1520240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off





END OF TASK

8-9.5 FWD, COMB, OR AFT TRANSMISSION AUX OIL PRESS LIGHT IS OUT

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configuratlons:
All

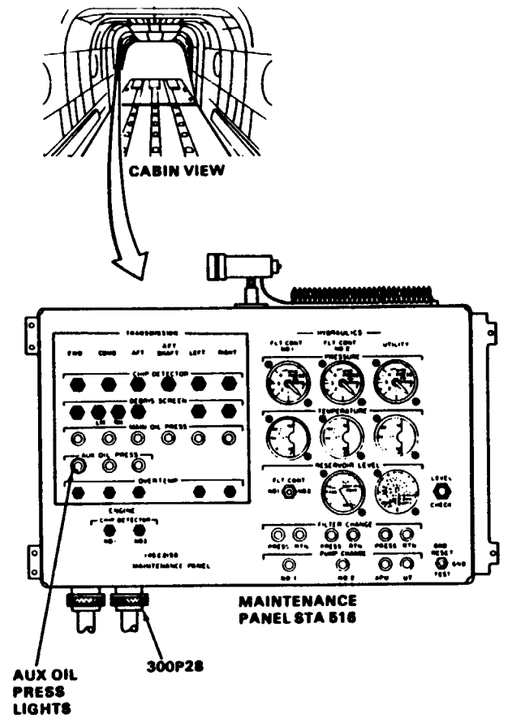
Tools:
Electrical Repairer's Tool Kit, NSN 5180-00-323-4915
Multimeter

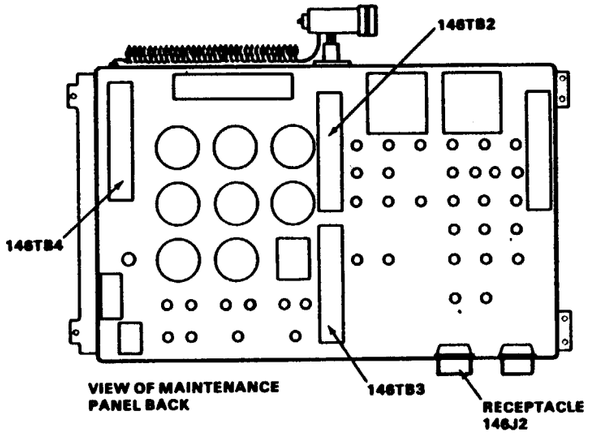
Materials:
None

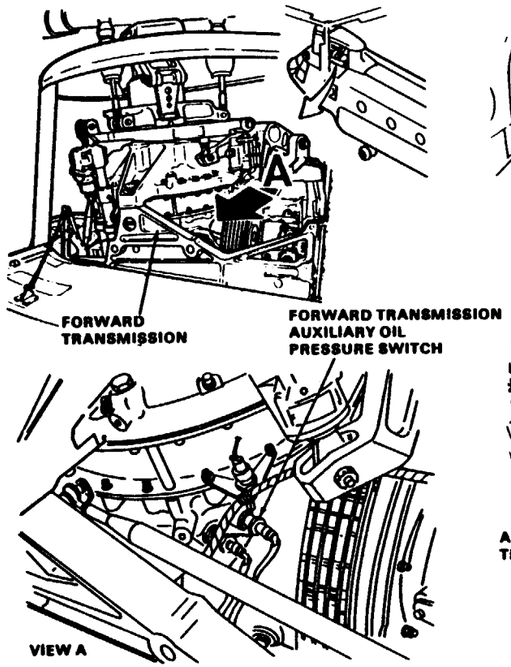
***Personnel** Required:*
66F20 Aircraft Electrician

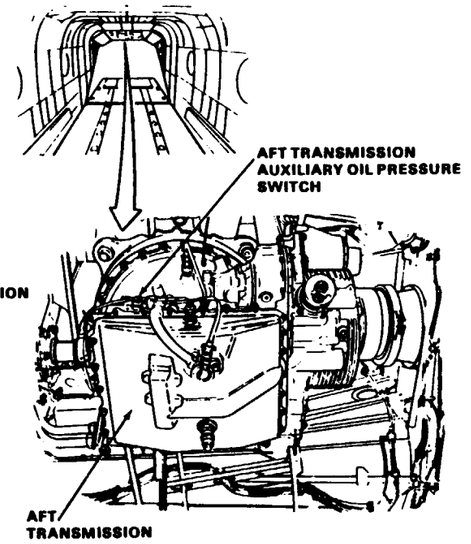
References:
TM 55-1520-240-23

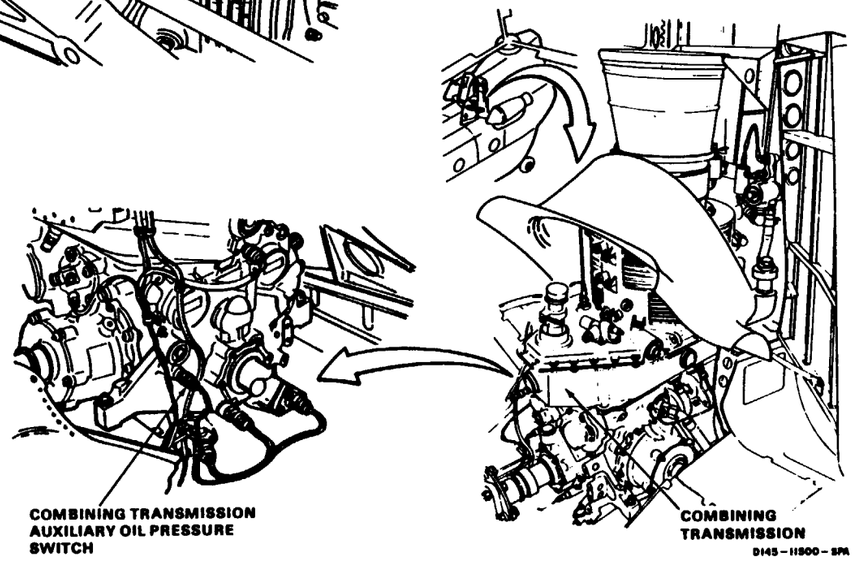
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off







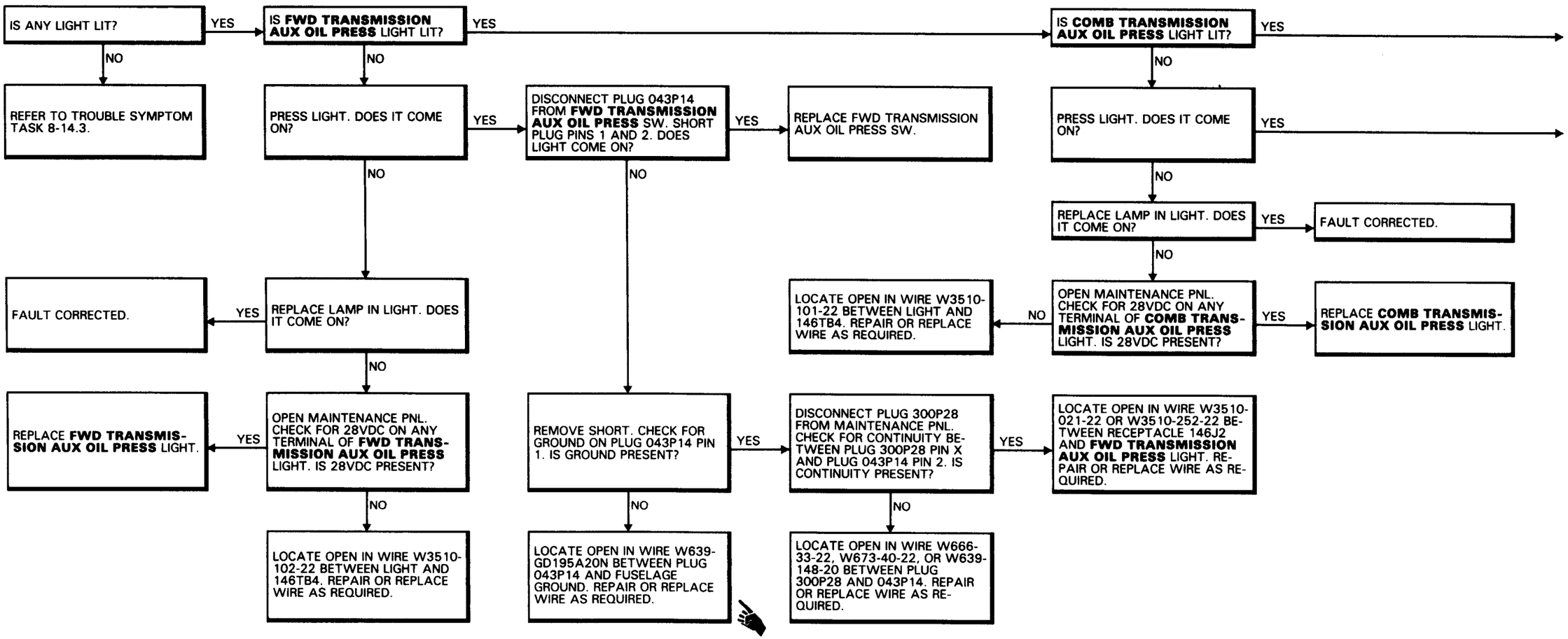




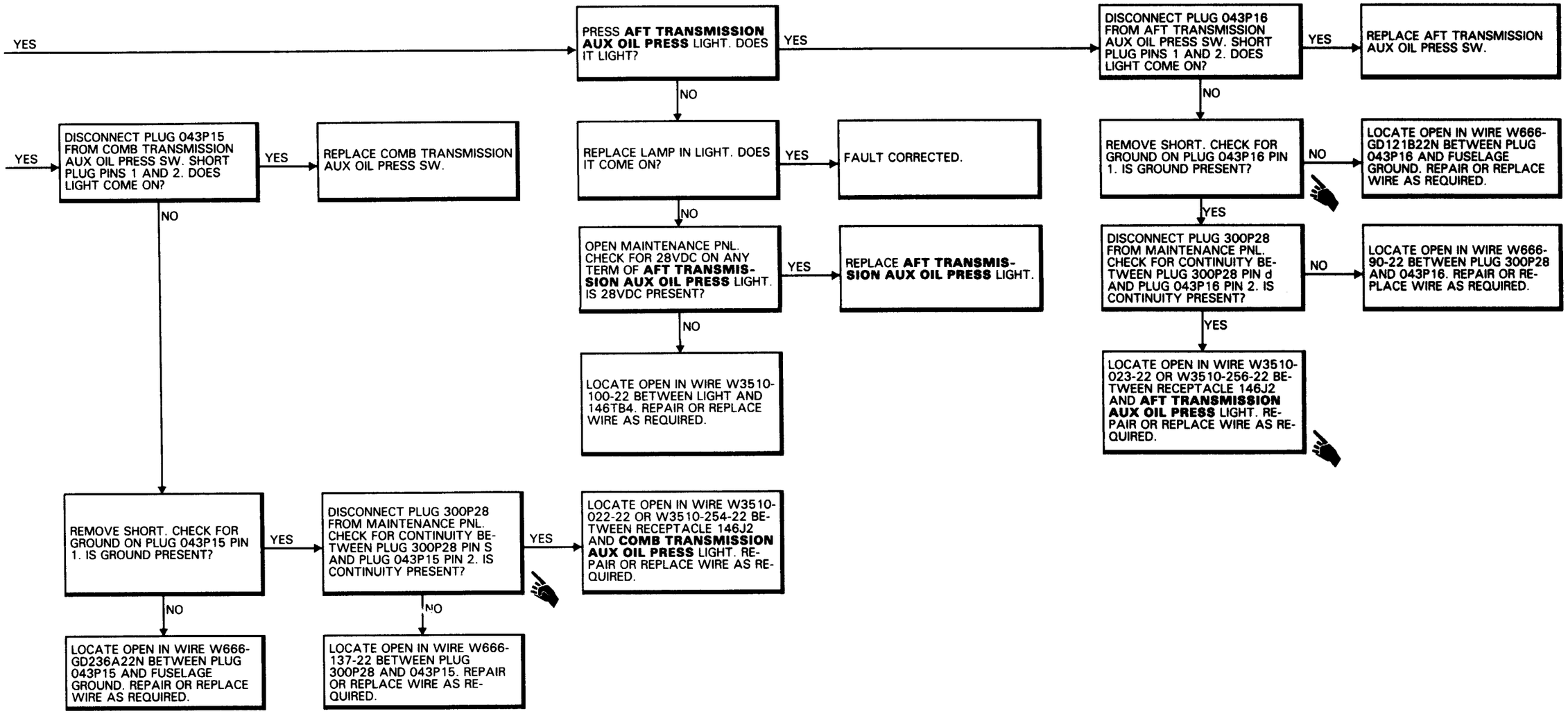
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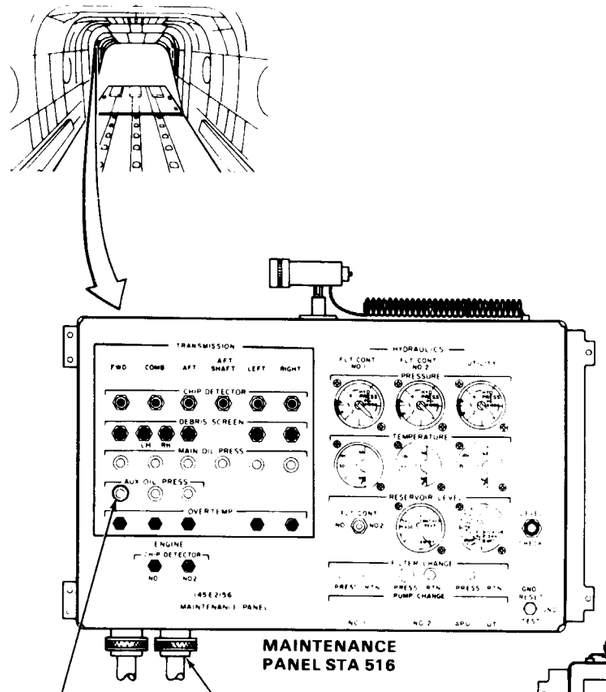


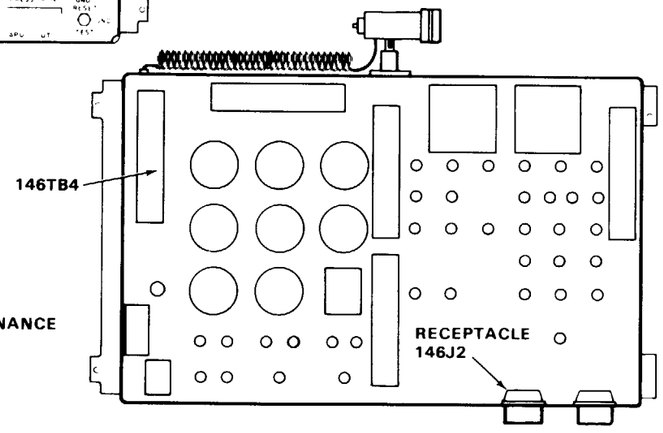
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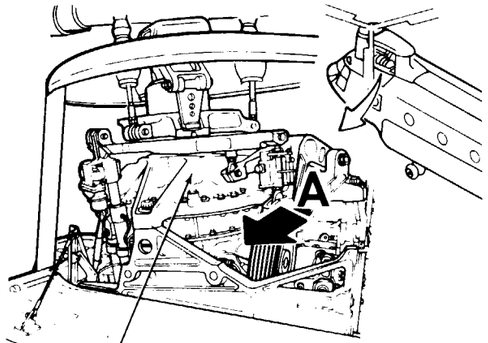


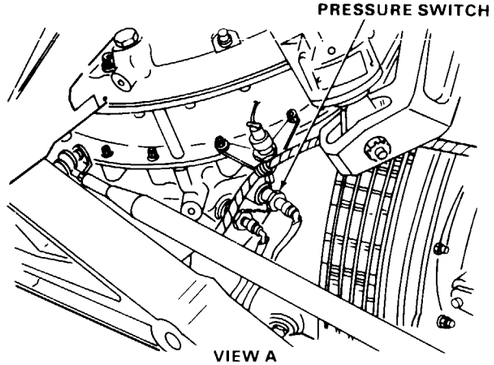
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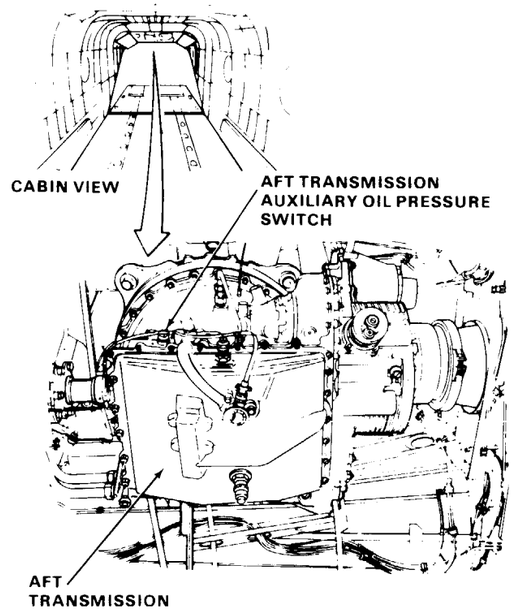
8-9.5 FWD, COMB, OR AFT TRANSMISSION AUX OIL PRESS LIGHT IS OUT (Continued)

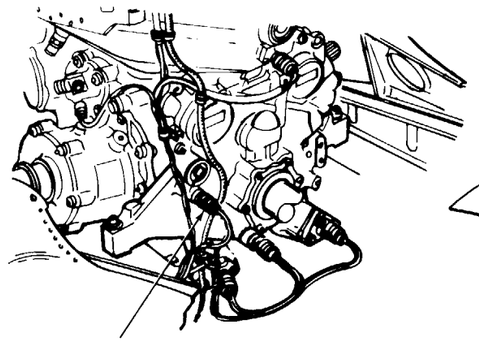


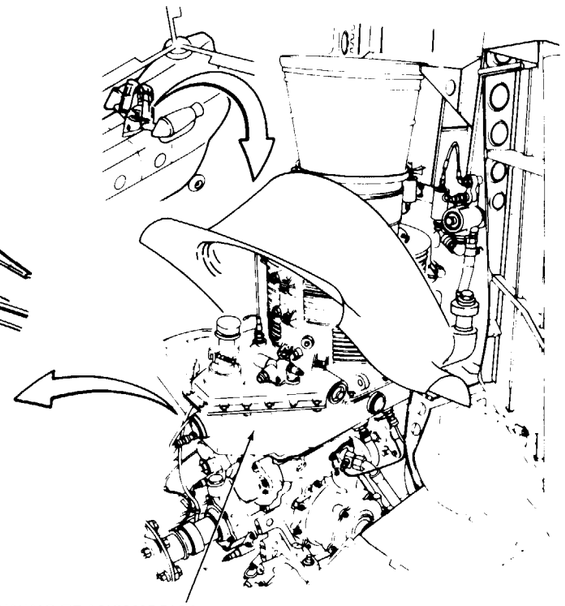












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END OF TASK

8-9.6 FWD, COMB, OR AFT TRANSMISSION AUX OIL PRESS LIGHT STILL ON WHEN ITS PRESSURE SWITCH IS DISCONNECTED

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

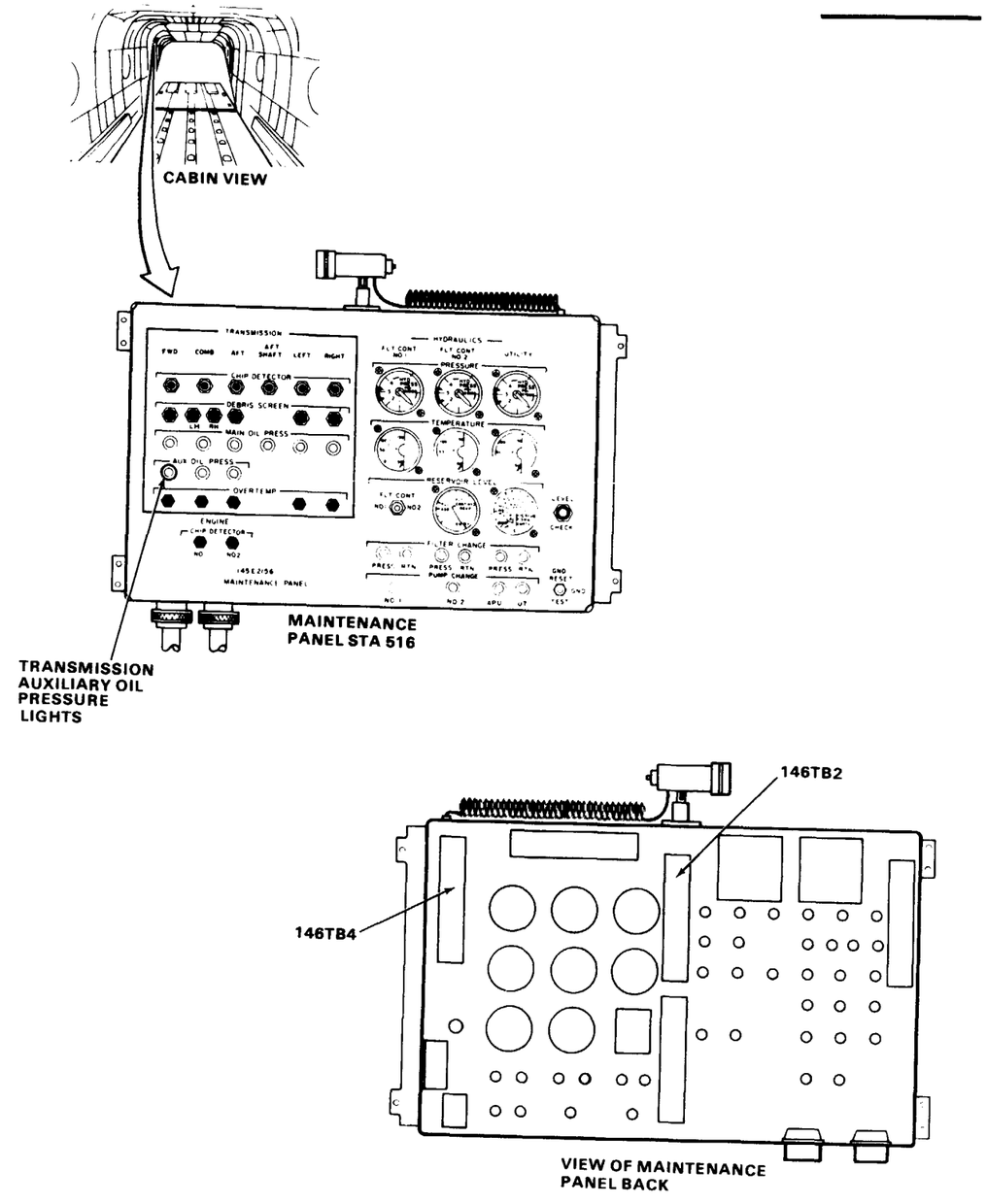
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Muitimeter

Materials:
None

Personnel Required:
68F20 Aircraft Electrician

References:
TM 55-1520-240-23

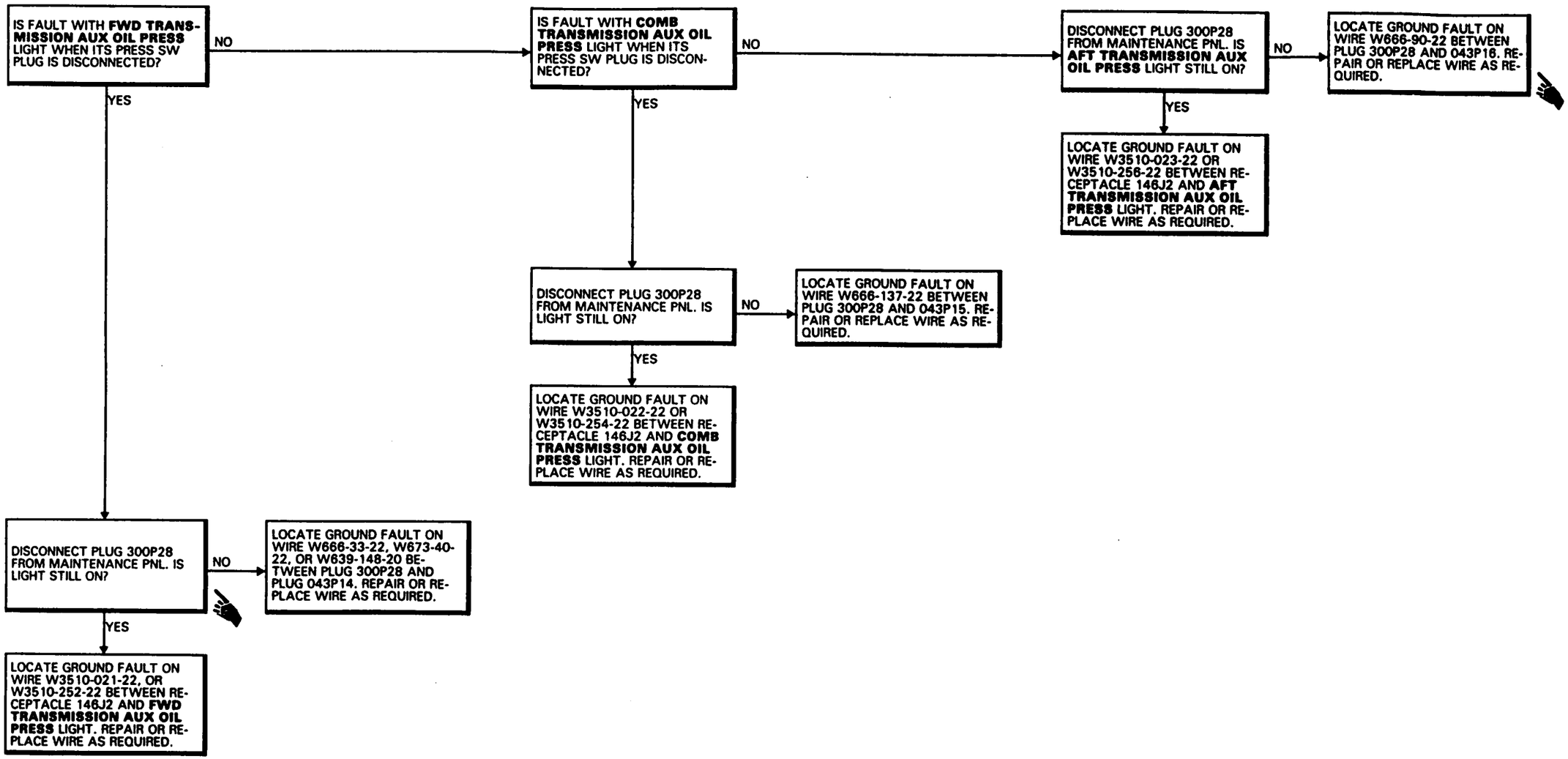
Equipment Condition:
TM 55-1520-240-23
Battery Connected
Electrical Power On
Hydraulic Power Off



45X54

D145-11502-SPA

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IS FAULT WITH **FWD TRANSMISSION AUX OIL PRESS** LIGHT WHEN ITS PRESS SW PLUG IS DISCONNECTED?
NO
YES
IS FAULT WITH **COMB TRANSMISSION AUX OIL PRESS** LIGHT WHEN ITS PRESS SW PLUG IS DISCONNECTED?
NO
YES
DISCONNECT PLUG 300P28 FROM MAINTENANCE PNL. IS **AFT TRANSMISSION AUX OIL PRESS** LIGHT STILL ON?
NO
YES
LOCATE GROUND FAULT ON WIRE W666-90-22 BETWEEN PLUG 300P28 AND 043P16. REPAIR OR REPLACE WIRE AS REQUIRED.
LOCATE GROUND FAULT ON WIRE W3510-023-22 OR W3510-256-22 BETWEEN RECEPTACLE 146J2 AND **AFT TRANSMISSION AUX OIL PRESS** LIGHT. REPAIR OR REPLACE WIRE AS REQUIRED.
DISCONNECT PLUG 300P28 FROM MAINTENANCE PNL. IS LIGHT STILL ON?
NO
YES
LOCATE GROUND FAULT ON WIRE W666-137-22 BETWEEN PLUG 300P28 AND 043P15. REPAIR OR REPLACE WIRE AS REQUIRED.
LOCATE GROUND FAULT ON WIRE W3510-022-22 OR W3510-254-22 BETWEEN RECEPTACLE 146J2 AND **COMB TRANSMISSION AUX OIL PRESS** LIGHT. REPAIR OR REPLACE WIRE AS REQUIRED.
DISCONNECT PLUG 300P28 FROM MAINTENANCE PNL. IS LIGHT STILL ON?
NO
YES
LOCATE GROUND FAULT ON WIRE W666-33-22, W673-40-22, OR W639-148-20 BETWEEN PLUG 300P28 AND PLUG 043P14. REPAIR OR REPLACE WIRE AS REQUIRED.
LOCATE GROUND FAULT ON WIRE W3510-021-22, OR W3510-252-22 BETWEEN RECEPTACLE 146J2 AND **FWD TRANSMISSION AUX OIL PRESS** LIGHT. REPAIR OR REPLACE WIRE AS REQUIRED.

END OF TASK

8-9.7 XMSN AUX OIL PRESS CAPSULE ON WHEN ALL PRESSURE SWITCHES ARE DISCONNECTED 8-9.7

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

Tools:
Electrical Repairer Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:
None

Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

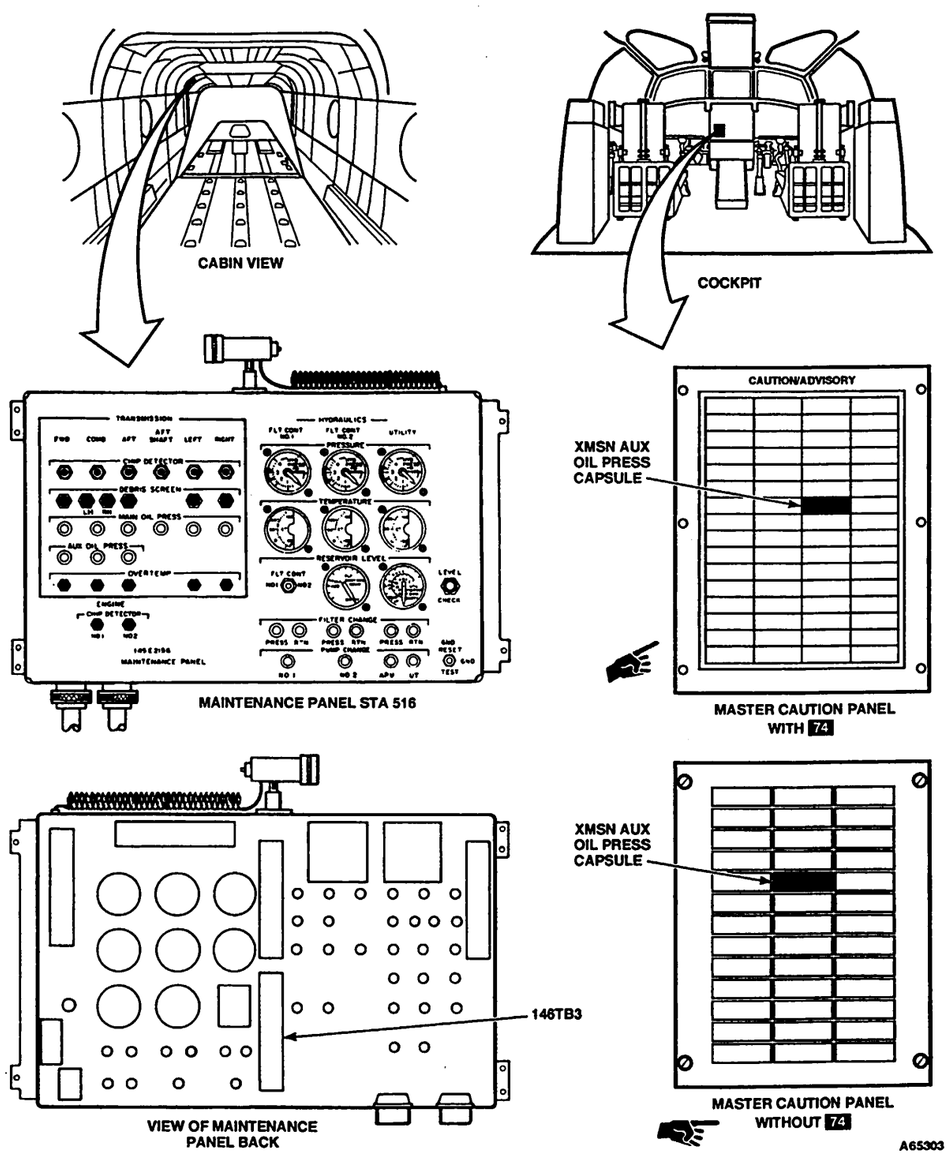
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off

DISCONNECT PLUG 300P28 FROM MAINTENANCE PNL. DOES XMSN AUX OIL PRESS CAPSULE GO OUT?

YES → LOCATE GROUND FAULT ON WIRE W3510-029-22, W3510-262-22, W3510-263-22, OR W3510-264-22 BETWEEN RECEPTACLE 146J2 AND 146TB3 IN MAINTENANCE PNL. REPAIR OR REPLACE WIRE AS REQUIRED.

NO

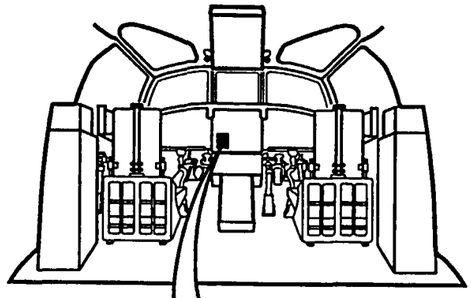
LOCATE GROUND FAULT ON WIRE W666-133-22, W673-137-22, W639-295-22, OR W557-533-22 BETWEEN PLUGS 300P28 AND 232P1. REPAIR OR REPLACE WIRE AS REQUIRED.



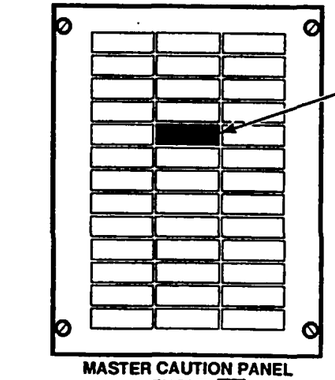
END OF TASK

FAULT ISOLATION PROCEDURE

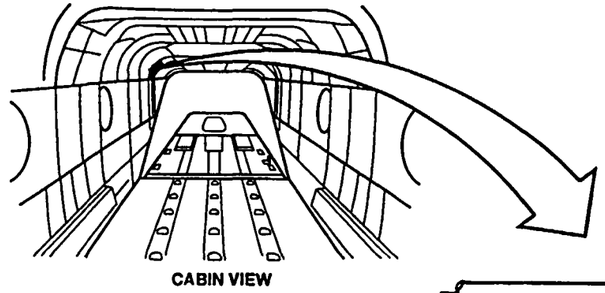
INITIAL SETUP
Applicable Configurations:
All
Tools:
Electrical Repairer's Tool Kit, NSN 5180-00-323-4915
Multimeter
Materials:
None
Personnel Required:
Aircraft Electrician
References:
TM 55-1520-240-23
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off

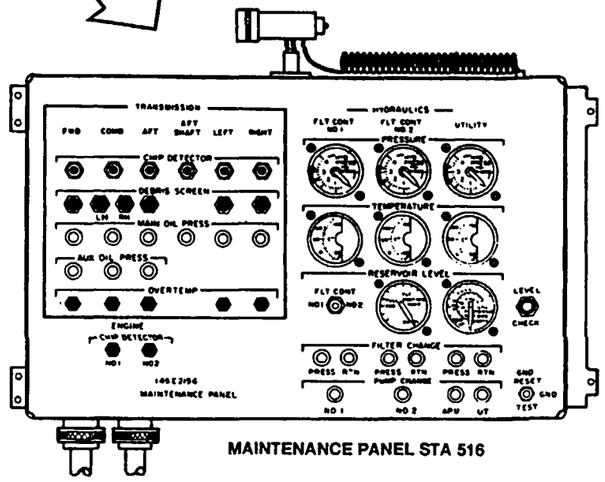


MASTER CAUTION PANEL WITH 74

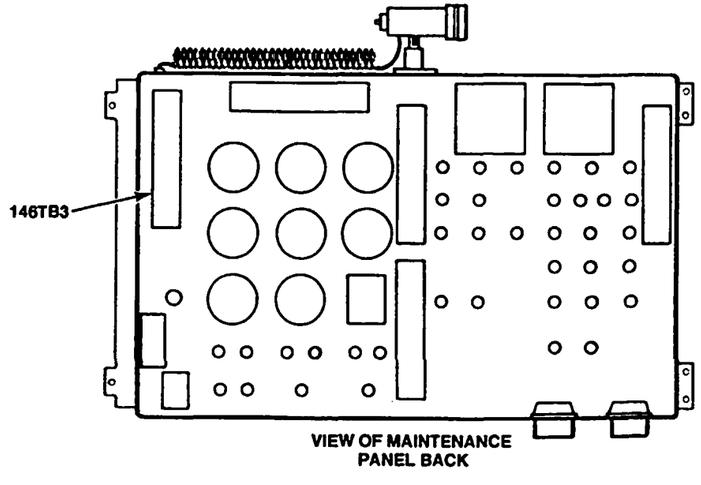


MASTER CAUTION PANEL WITHOUT 74


CABIN VIEW



MAINTENANCE PANEL STA 516

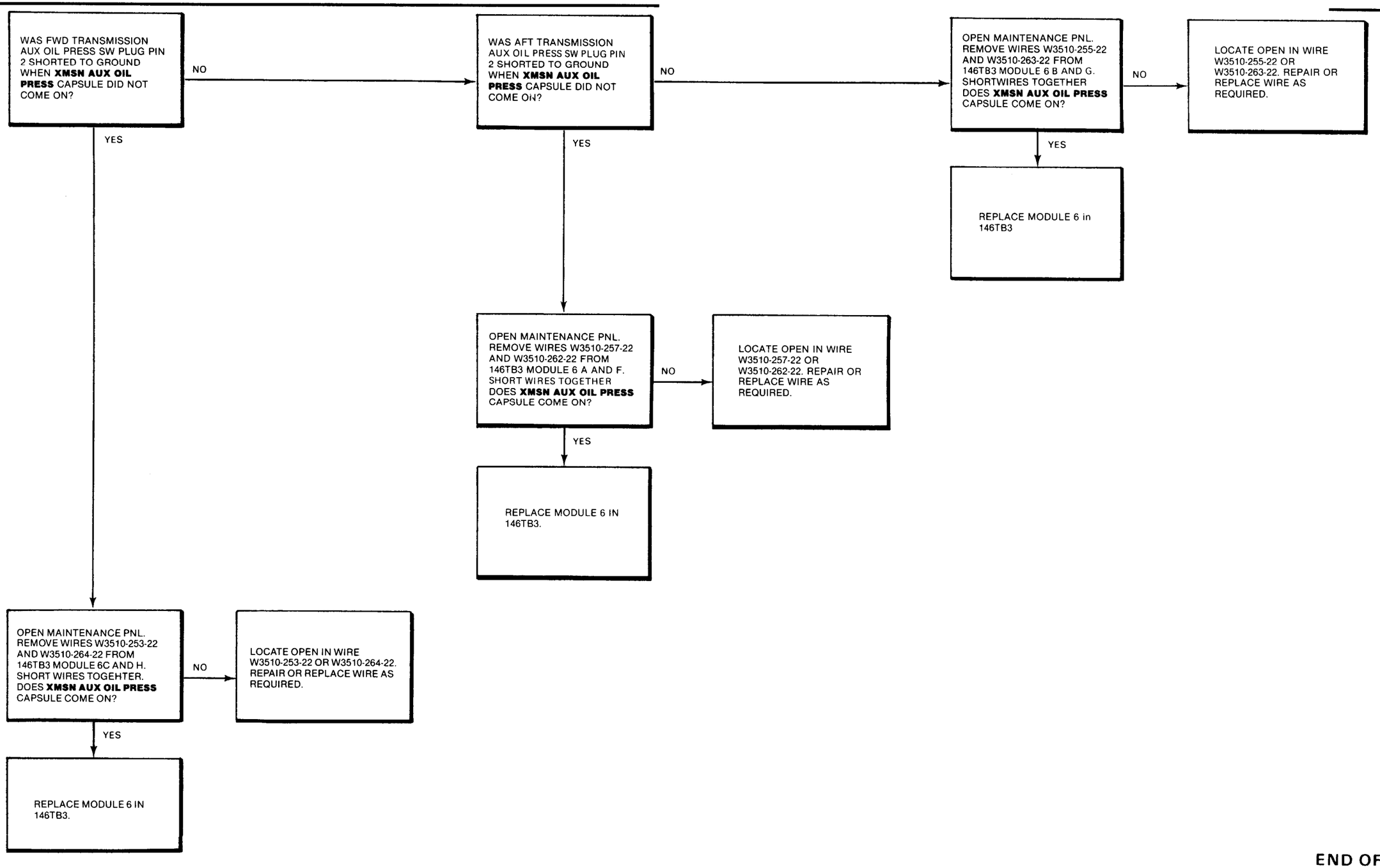


VIEW OF MAINTENANCE PANEL BACK

A65304

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8-9.8 XMSN AUX OIL PRESS CAPSULE DOES NOT COME ON DURING TEST (Continued)



END OF TASK

8-9.9 FWD, COMB, OR AFT TRANSMISSION AUX OIL PRESS LIGHT DOES NOT COME ON WHEN PRESSED

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

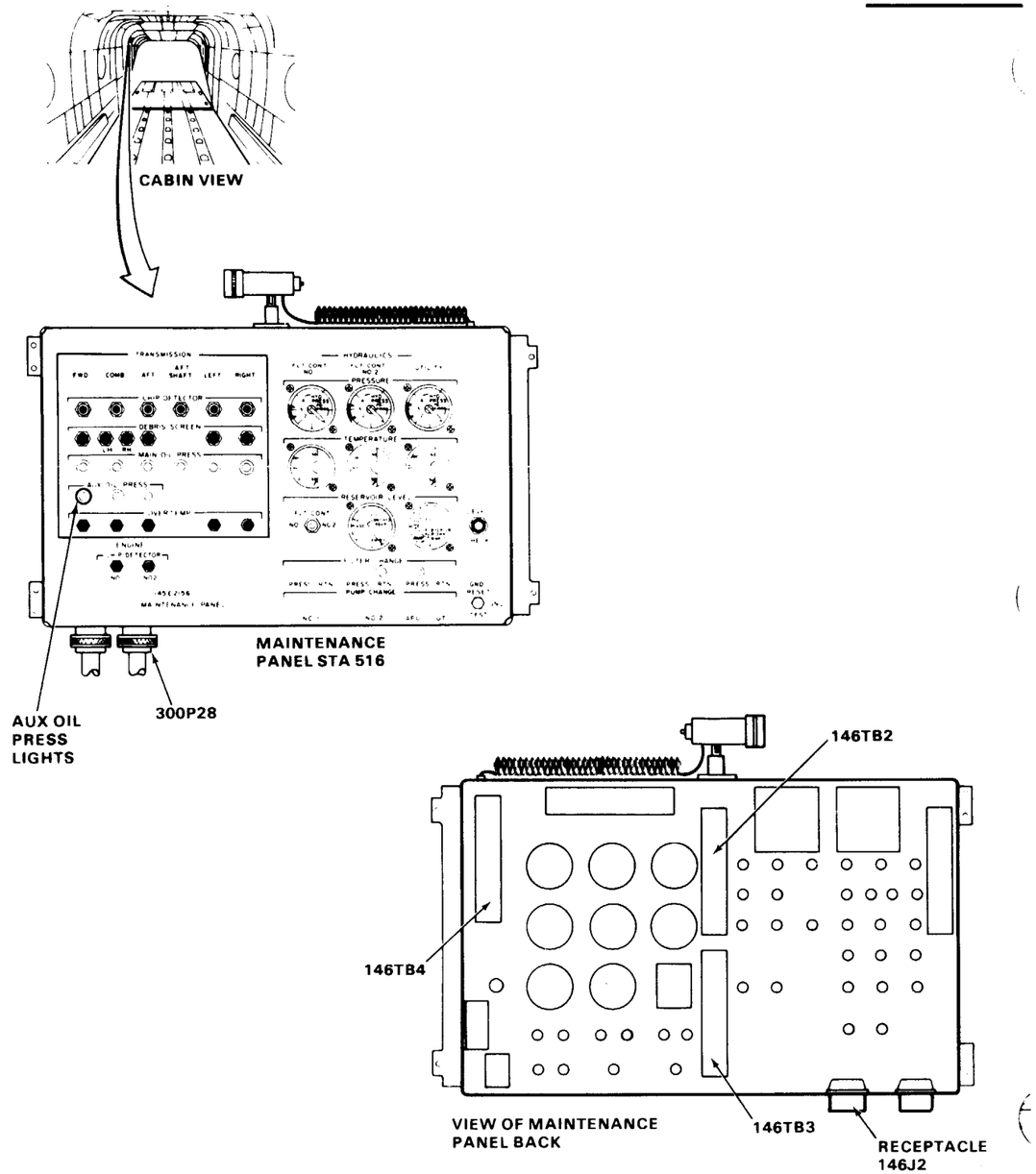
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:
None

Personnel Required
68F20 Aircraft Electrician

References:
TM 55-1520-240-23

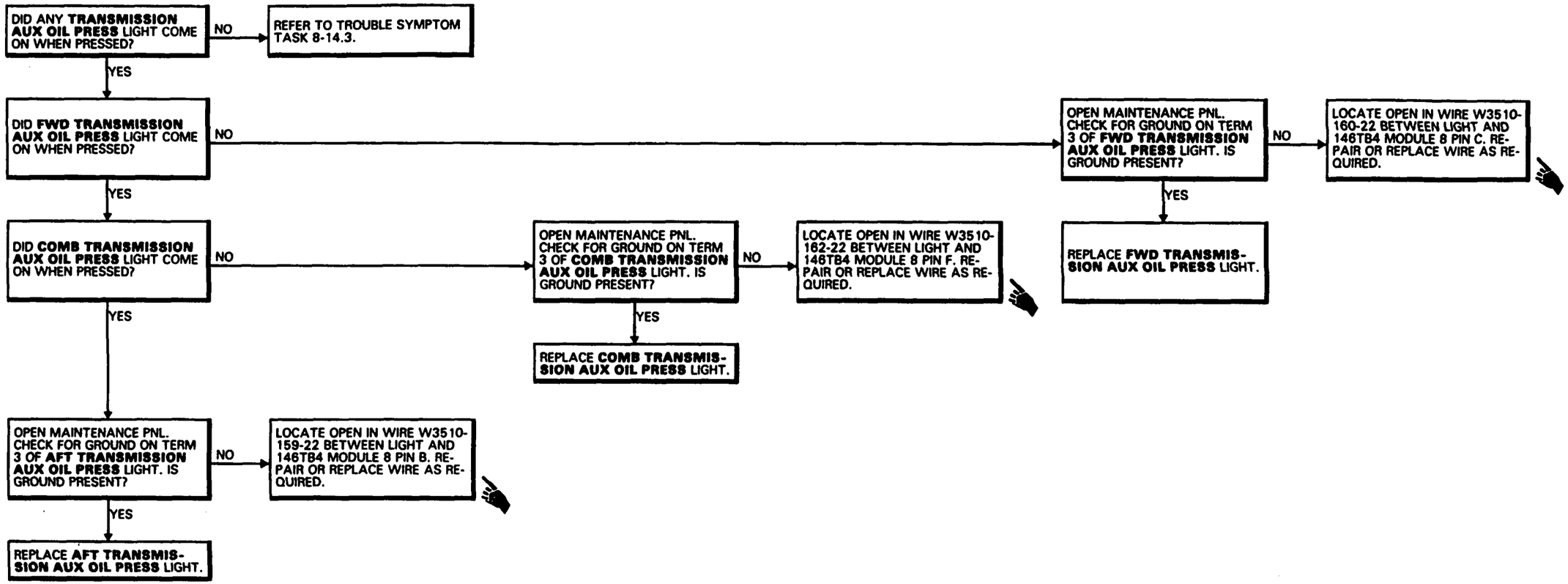
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off



42 X 54

D145-11505-SPA

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DID ANY **TRANSMISSION AUX OIL PRESS** LIGHT COME ON WHEN PRESSED?
NO
REFER TO TROUBLE SYMPTOM TASK 8-14.3.
YES
DID **FWD TRANSMISSION AUX OIL PRESS** LIGHT COME ON WHEN PRESSED?
NO
OPEN MAINTENANCE PNL. CHECK FOR GROUND ON TERM 3 OF **FWD TRANSMISSION AUX OIL PRESS** LIGHT. IS GROUND PRESENT?
NO
LOCATE OPEN IN WIRE W3510-160-22 BETWEEN LIGHT AND 146TB4 MODULE 8 PIN C. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
REPLACE **FWD TRANSMISSION AUX OIL PRESS** LIGHT.
YES
DID **COMB TRANSMISSION AUX OIL PRESS** LIGHT COME ON WHEN PRESSED?
NO
OPEN MAINTENANCE PNL. CHECK FOR GROUND ON TERM 3 OF **COMB TRANSMISSION AUX OIL PRESS** LIGHT. IS GROUND PRESENT?
NO
LOCATE OPEN IN WIRE W3510-162-22 BETWEEN LIGHT AND 146TB4 MODULE 8 PIN F. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
REPLACE **COMB TRANSMISSION AUX OIL PRESS** LIGHT.
YES
OPEN MAINTENANCE PNL. CHECK FOR GROUND ON TERM 3 OF **AFT TRANSMISSION AUX OIL PRESS** LIGHT. IS GROUND PRESENT?
NO
LOCATE OPEN IN WIRE W3510-159-22 BETWEEN LIGHT AND 146TB4 MODULE 8 PIN B. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
REPLACE **AFT TRANSMISSION AUX OIL PRESS** LIGHT.

END OF TASK

8-9.10 XMSN OIL PRESS CAPSULE NOT LIT

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

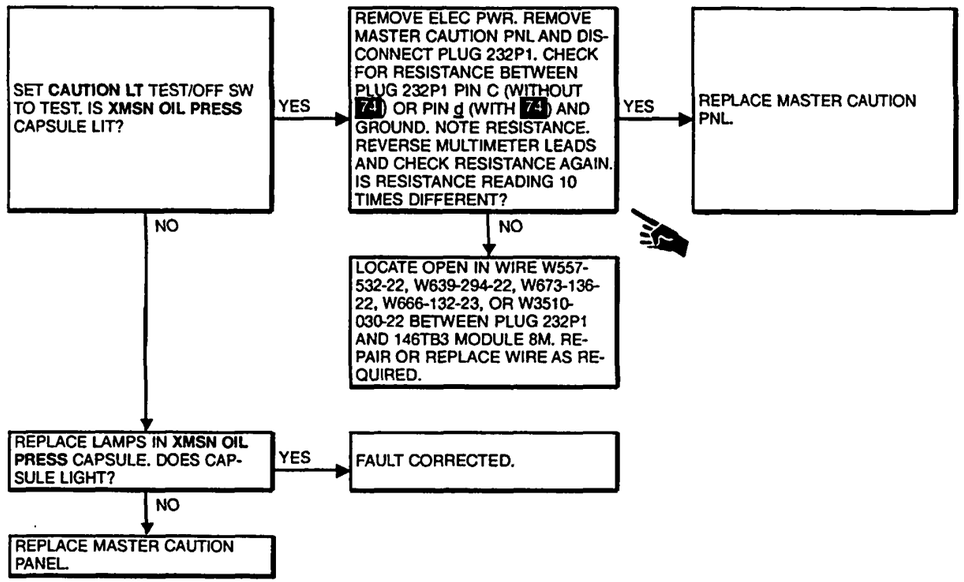
Tools:
Electrical Repairer's Tool Kit,
NSN 518000-323-4915
Multimeter

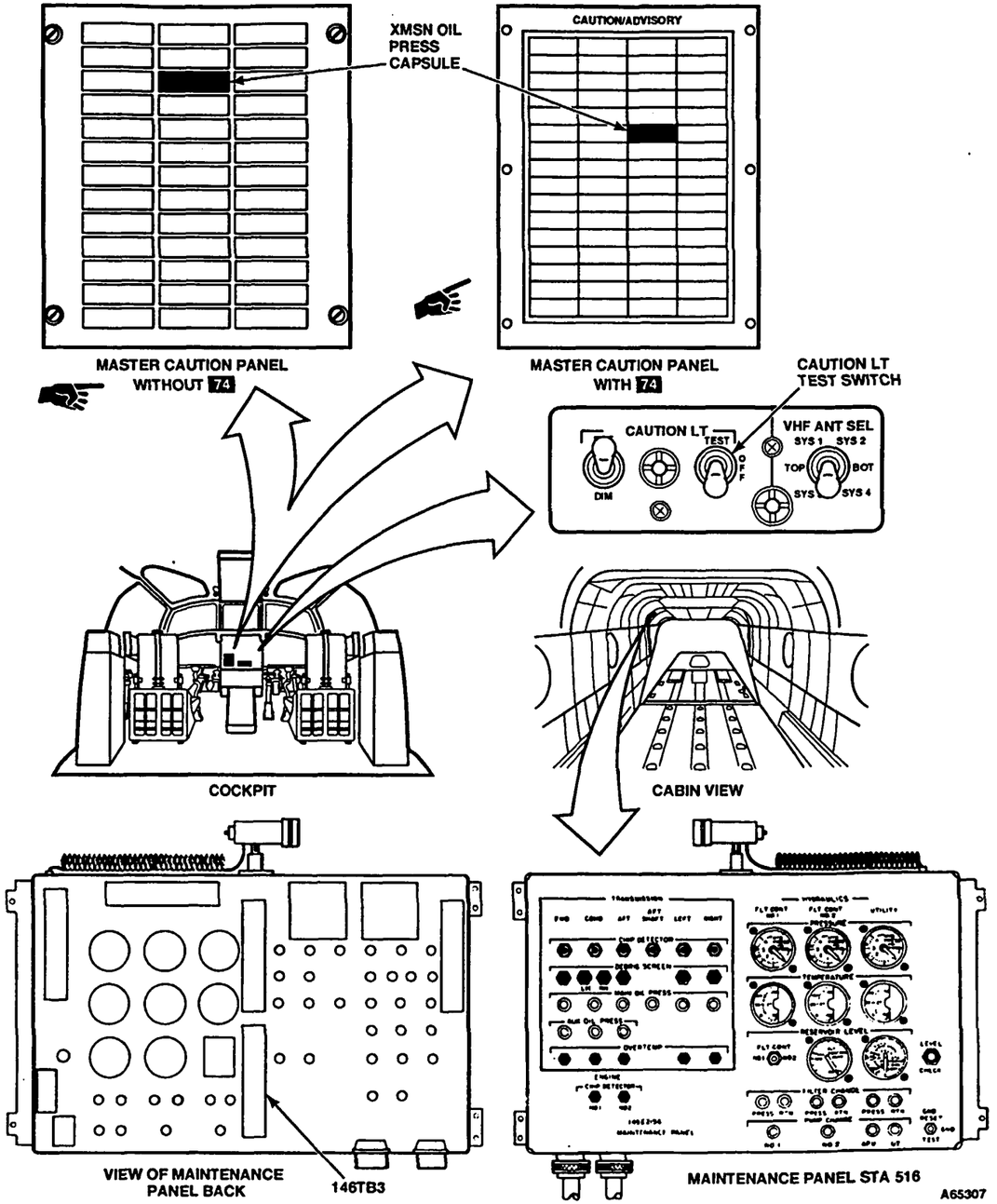
Materials:
None

Personnel Required
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off





END OF TASK

8-9.11 FWD, COMB, AFT SHAFT, LEFT, RIGHT, OR AFT TRANSMISSION MAIN OIL PRESS LIGHT IS OUT

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

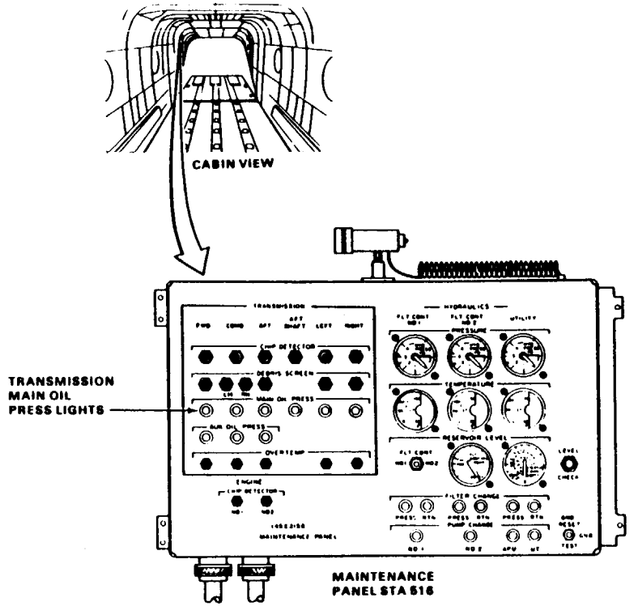
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:
None

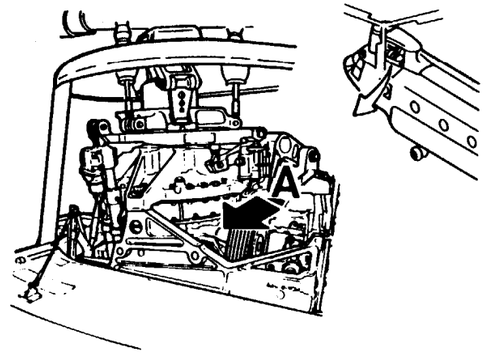
Personnel Required
68F20 Aircraft Electrician

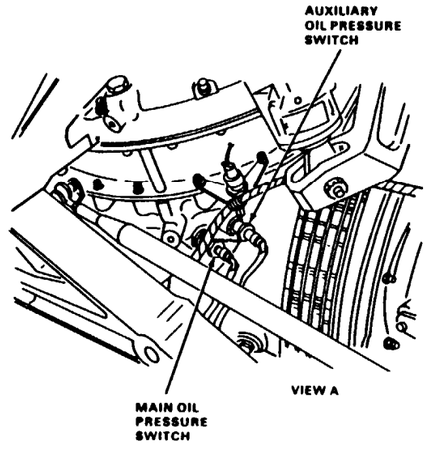
References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off



90X54

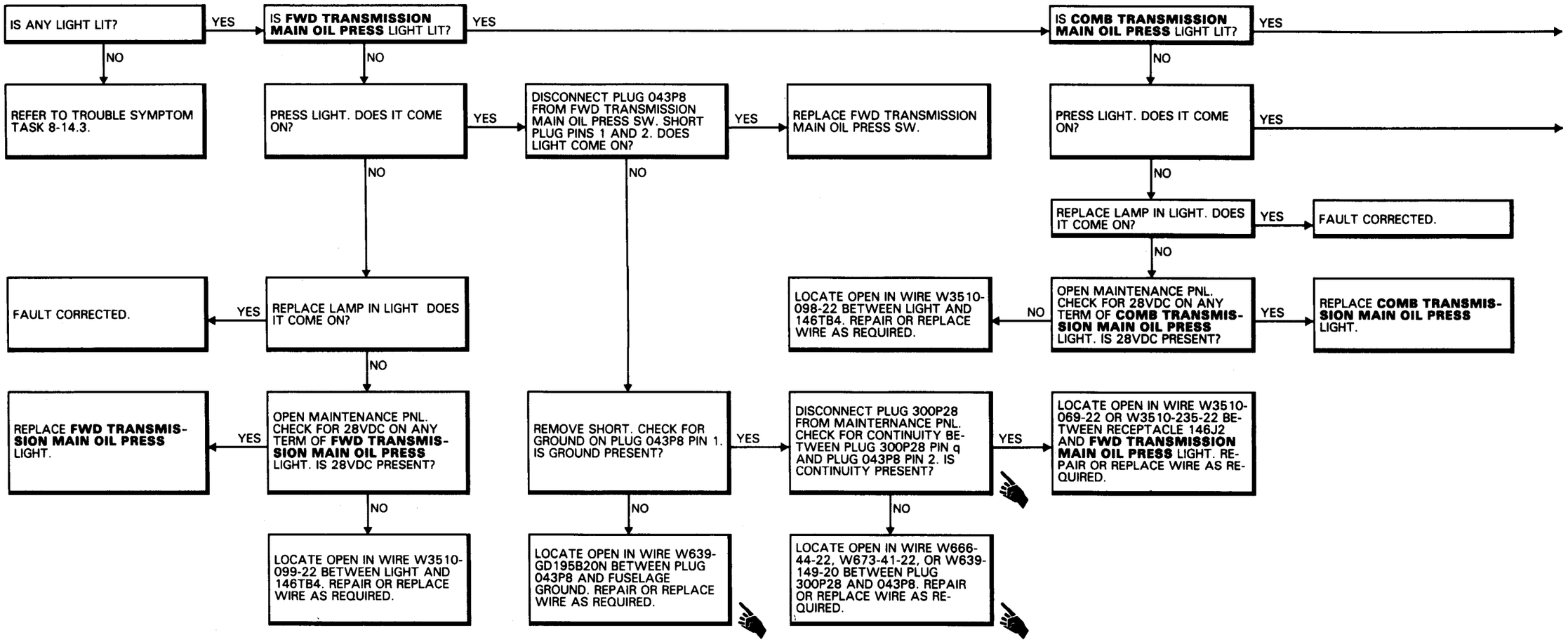




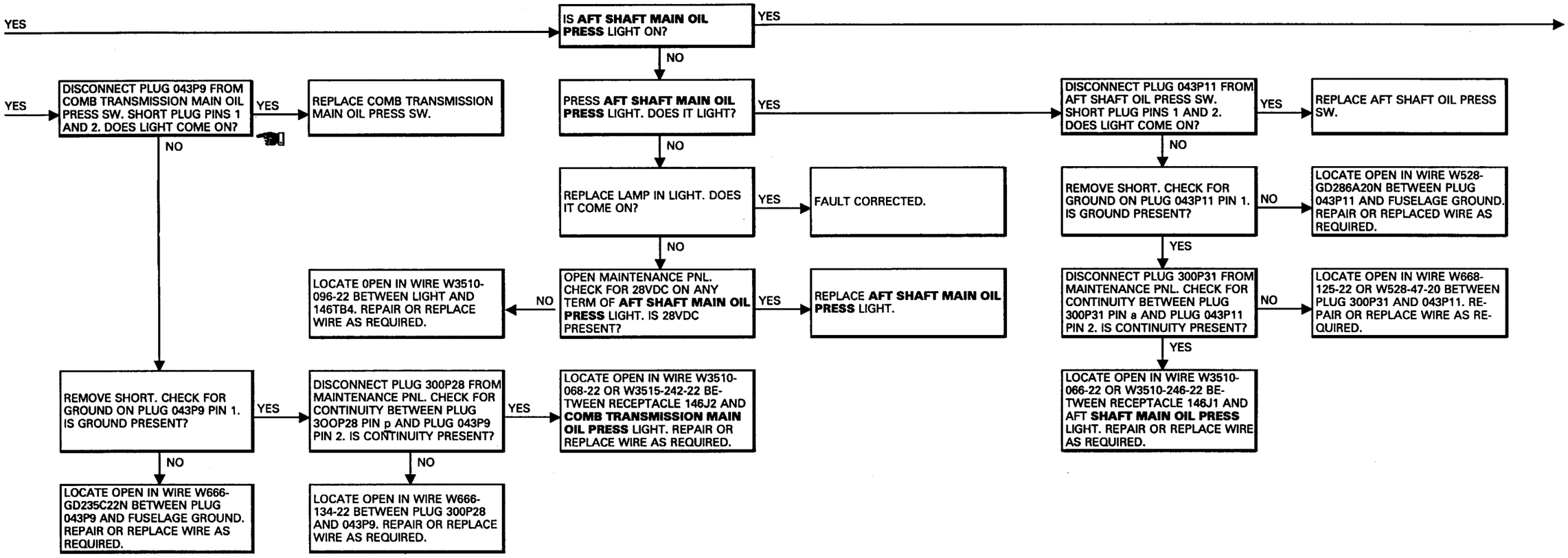
D145-11507-SPA

Page 8-179 is a blank page.

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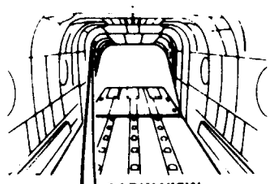


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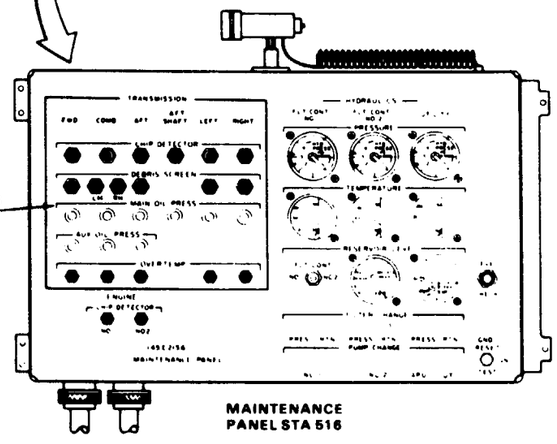


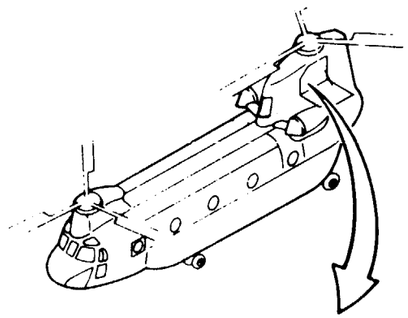
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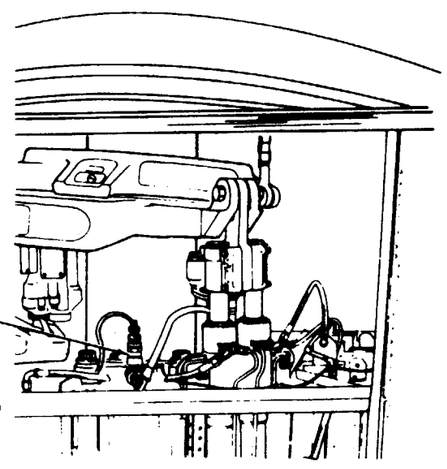
8-9.11 FWD, COMB, AFT, SHAFT, LEFT, RIGHT OR AFT TRANSMISSION MAIN OIL PRESS LIGHT IS OUT (Continued)

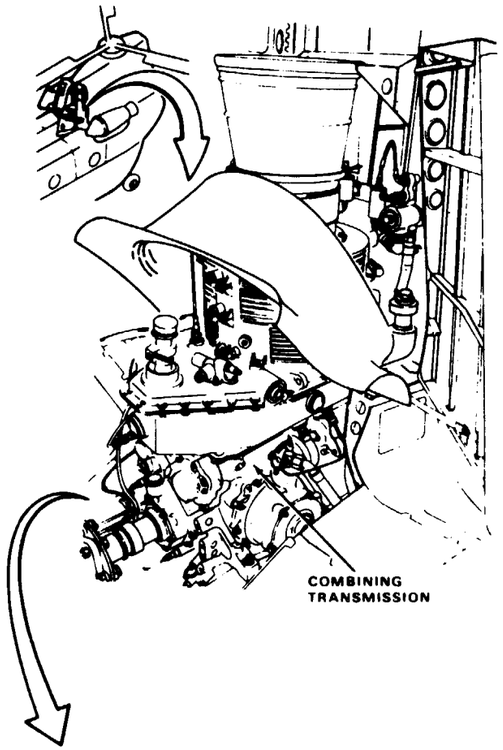


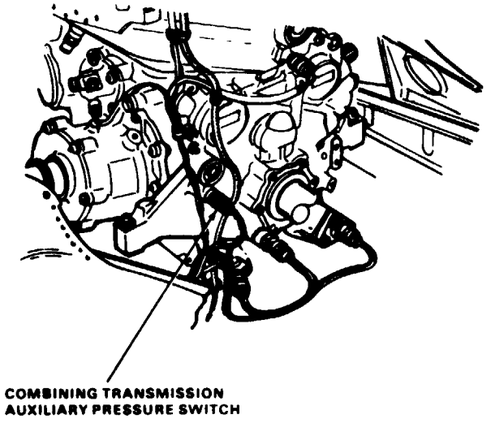
CABIN VIEW





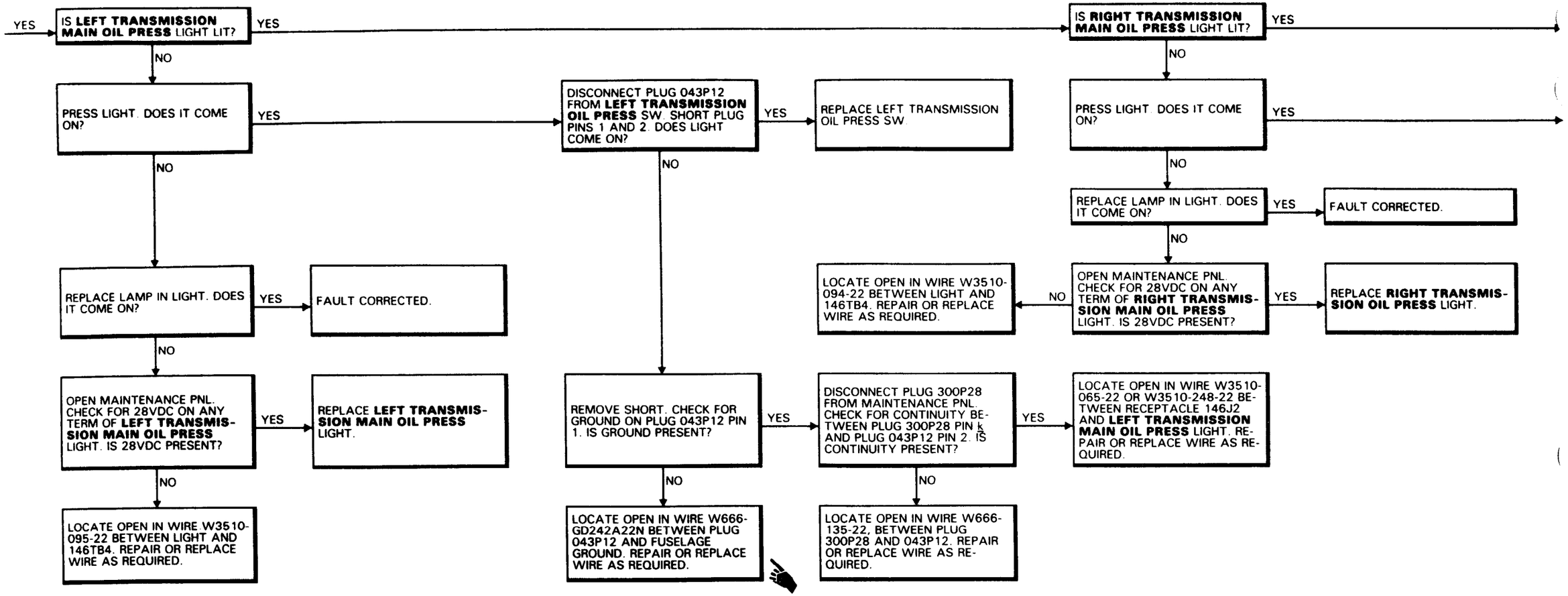






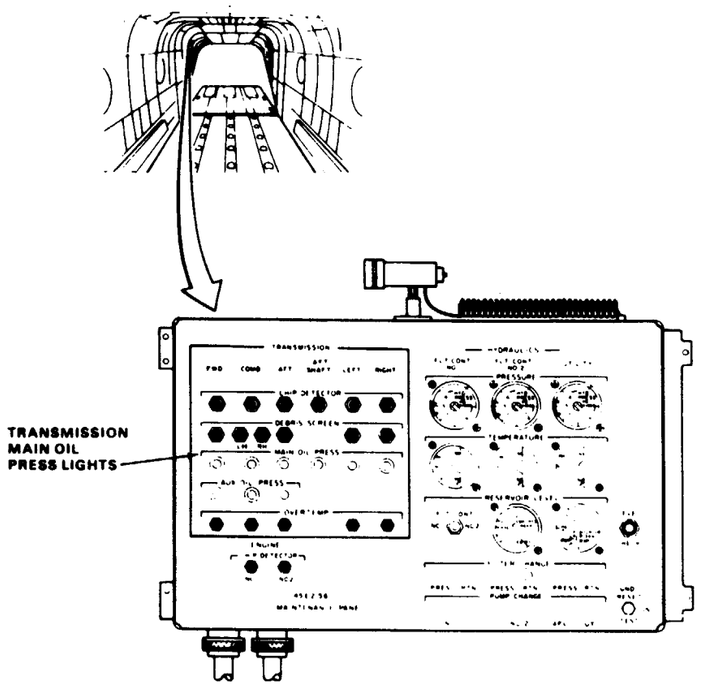
0145-11508-SPA

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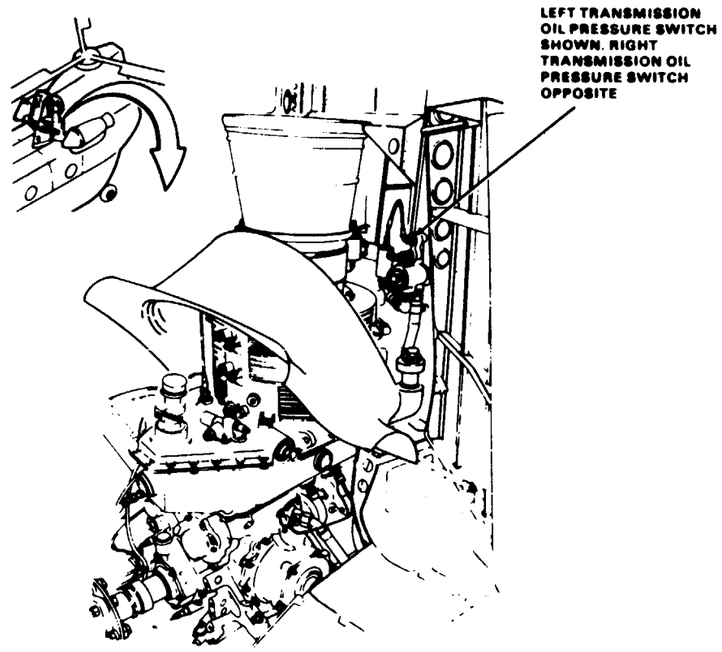


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8-9.11 FWD, COMB, AFT SHAFT, LEFT, RIGHT, OR AFT TRANSMISSION MAIN OIL PRESS LIGHT IS OUT (Continued)



90 X 54



COMBINING
TRANSMISSION

D145-11509-SPA

GO TO NEXT PAGE

YES

PRESS **AFT TRANSMISSION MAIN OIL PRESS** LIGHT. DOES IT LIGHT?

YES

DISCONNECT PLUG 043P10 FROM AFT TRANSMISSION MAIN OIL PRESS SW. SHORT PLUG PINS 1 AND 2. DOES LIGHT COME ON?

YES

REPLACE AFT TRANSMISSION MAIN OIL PRESS SW.

NO

REPLACE LAMP IN LIGHT. DOES IT COME ON?

YES

FAULT CORRECTED.

NO

REMOVE SHORT. CHECK FOR GROUND ON PLUG 043P10 PIN 1. IS GROUND PRESENT?

NO

LOCATE OPEN IN WIRE W666-GD121A22N BETWEEN PLUG 043P10 AND FUSELAGE GROUND. REPAIR OR REPLACE WIRE AS REQUIRED.

YES

DISCONNECT PLUG 043P13 FROM RIGHT TRANSMISSION OIL PRESS SW. SHORT PLUG PINS 1 AND 2. DOES LIGHT COME ON?

YES

REPLACE RIGHT TRANSMISSION OIL PRESS SW.

NO

OPEN MAINTENANCE PNL. CHECK FOR 28VDC ON ANY TERM OF **AFT TRANSMISSION MAIN OIL PRESS** LIGHT. IS 28VDC PRESENT?

YES

REPLACE **AFT TRANSMISSION MAIN OIL PRESS** LIGHT.

NO

OPEN MAINTENANCE PNL. SHORT TERMS A1 AND A2 OF RELAY 146K1 TOGETHER. DOES **AFT TRANSMISSION MAIN OIL PRESS** LIGHT COME ON?

NO

REMOVE SHORT. LOCATE OPEN IN WIRE W3510-320-22 OR W3510-319-22 BETWEEN 146TB3 AND 146TB4. REPAIR OR REPLACE WIRE AS REQUIRED.

YES

LOCATE OPEN IN WIRE W3510-097-22 BETWEEN LIGHT AND 146TB4 PIN 2. REPAIR OR REPLACE WIRE AS REQUIRED.

REMOVE SHORT. CHECK FOR 28VDC BETWEEN TERM X1(+) OF RELAY 146K1 AND GROUND. IS 28VDC PRESENT?

NO

LOCATE OPEN IN WIRE W3510-318-22 BETWEEN RELAY 146K1 AND 146TB5. REPAIR OR REPLACE WIRE AS REQUIRED.

YES

REMOVE SHORT. CHECK FOR GROUND ON PLUG 043P13 PIN 1. IS GROUND PRESENT?

YES

DISCONNECT PLUG 300P28 FROM MAINTENANCE PNL. CHECK FOR CONTINUITY BETWEEN PLUG 300P28 PIN j AND PLUG 043P13 PIN 2. IS CONTINUITY PRESENT?

YES

LOCATE OPEN IN WIRE W3510-064-22 OR W3510-250-22 BETWEEN RECEPTACLE 146J2 AND **RIGHT TRANSMISSION MAIN OIL PRESS** LIGHT. REPAIR OR REPLACE WIRE AS REQUIRED.

CHECK FOR CONTINUITY BETWEEN TERM X2 OF RELAY 146K1 AND PLUG 043P10 PIN 2. IS CONTINUITY PRESENT?

NO

LOCATE OPEN IN WIRE W3510-067-22 OR W666-117-22 BETWEEN RELAY 146K1 AND PLUG 043P10. REPAIR OR REPLACE WIRE AS REQUIRED.

NO

LOCATE OPEN IN WIRE W666-GD237A22N BETWEEN PLUG 043P13 AND FUSELAGE GROUND. REPAIR OR REPLACE WIRE AS REQUIRED.

NO

LOCATE OPEN IN WIRE W666-136-22 BETWEEN PLUG 300P28 AND 043P13. REPAIR OR REPLACE WIRE AS REQUIRED.

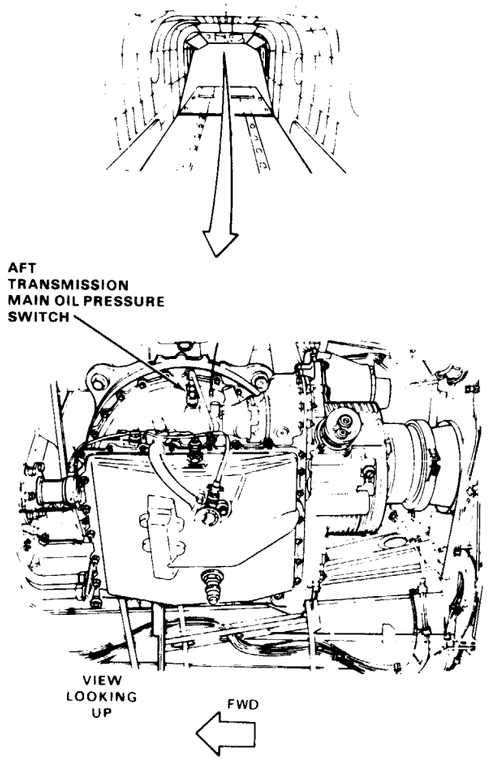
YES

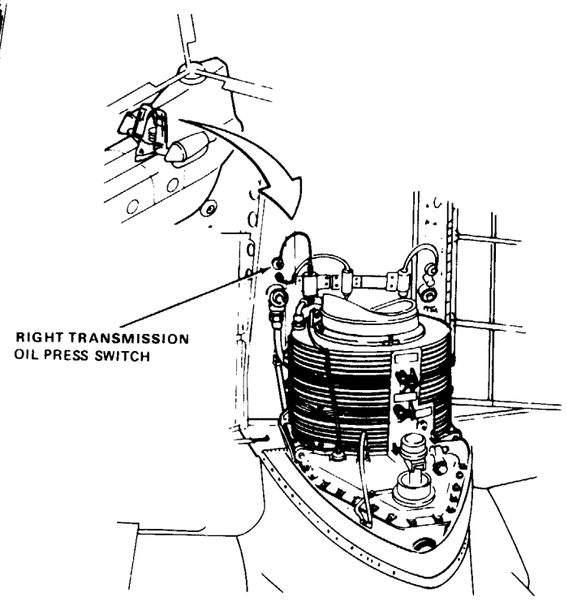
REPLACE RELAY 146K1.

GO TO NEXT PAGE

8-9.11 FWD, COMB, AFT SHAFT, LEFT, RIGHT, OR AFT TRANSMISSION MAIN OIL PRESS LIGHT IS OUT (Continued)

90X54





D145-11510-SPA

END OF TASK

8-9.12 FWD, COMB, AFT, AFT SHAFT, LEFT, OR RIGHT TRANSMISSION MAIN OIL PRESS LIGHT STILL ON WHEN ITS PRESSURE SWITCH DISCONNECTED

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

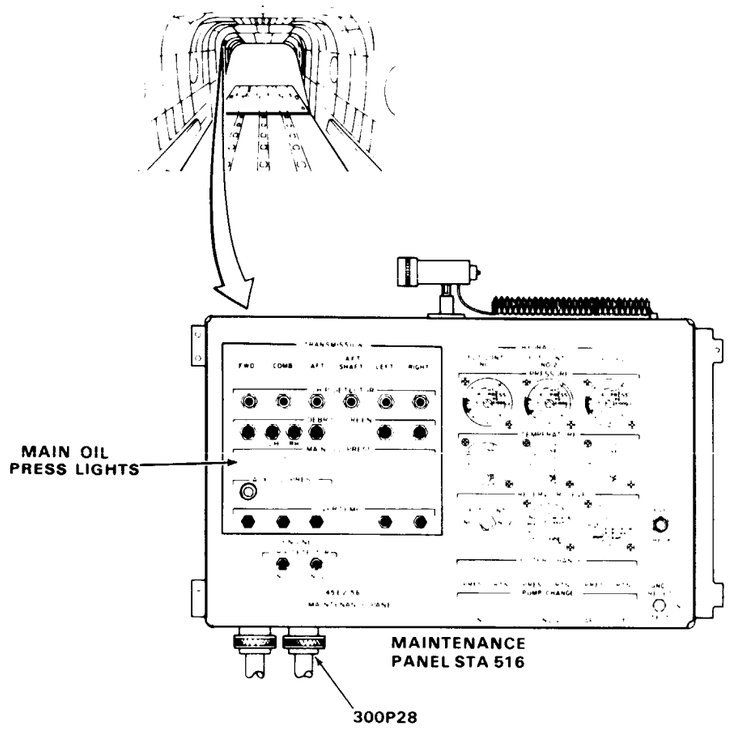
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

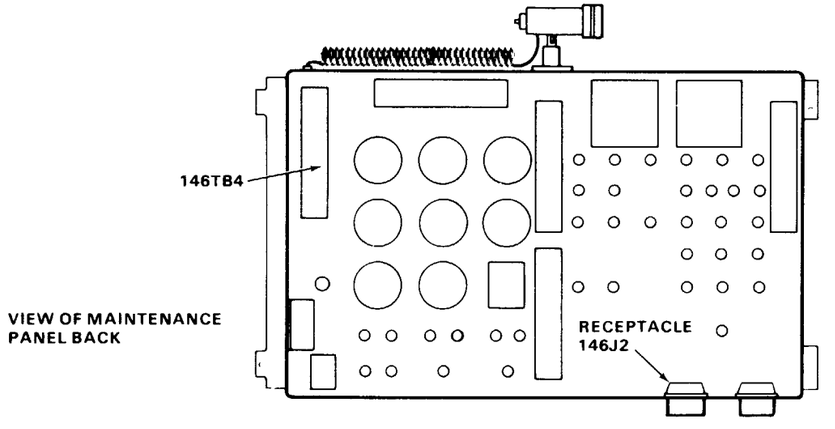
Materials:
None

Personnel Required:
68F10 Aircraft Electrician
68F20 Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off

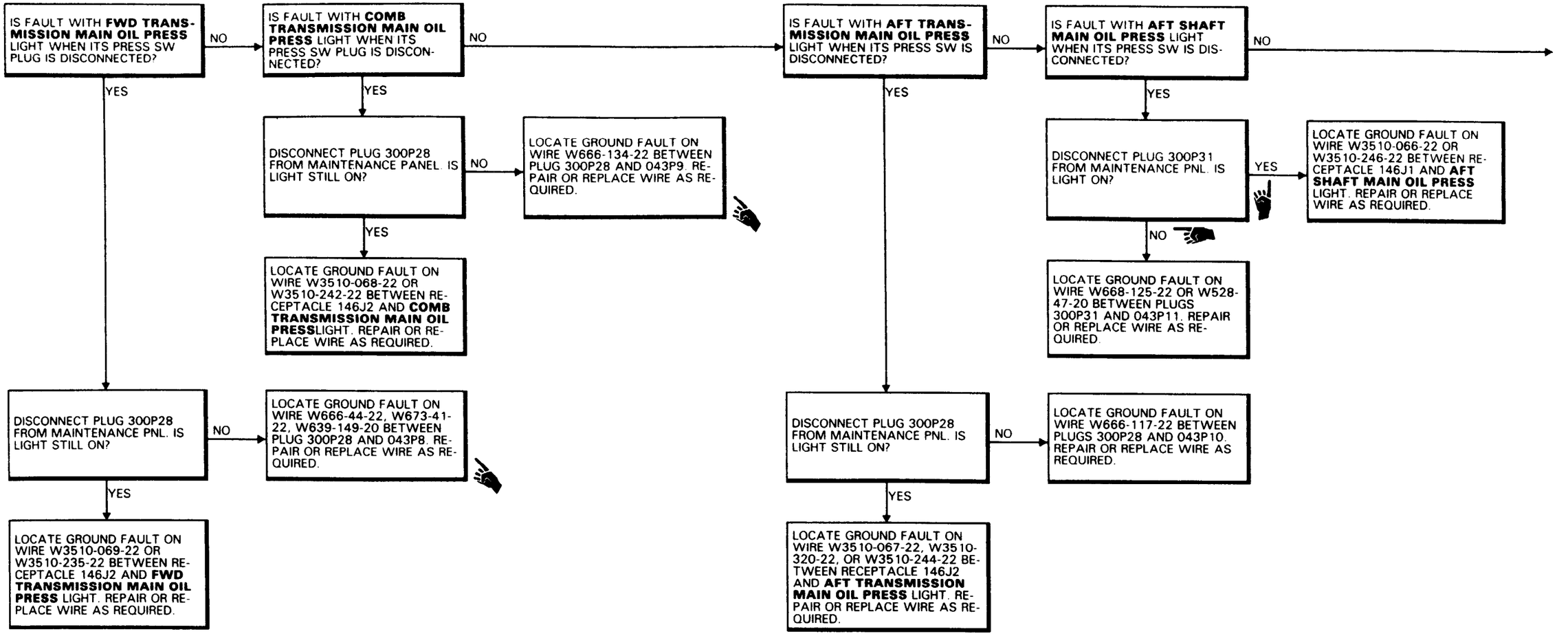




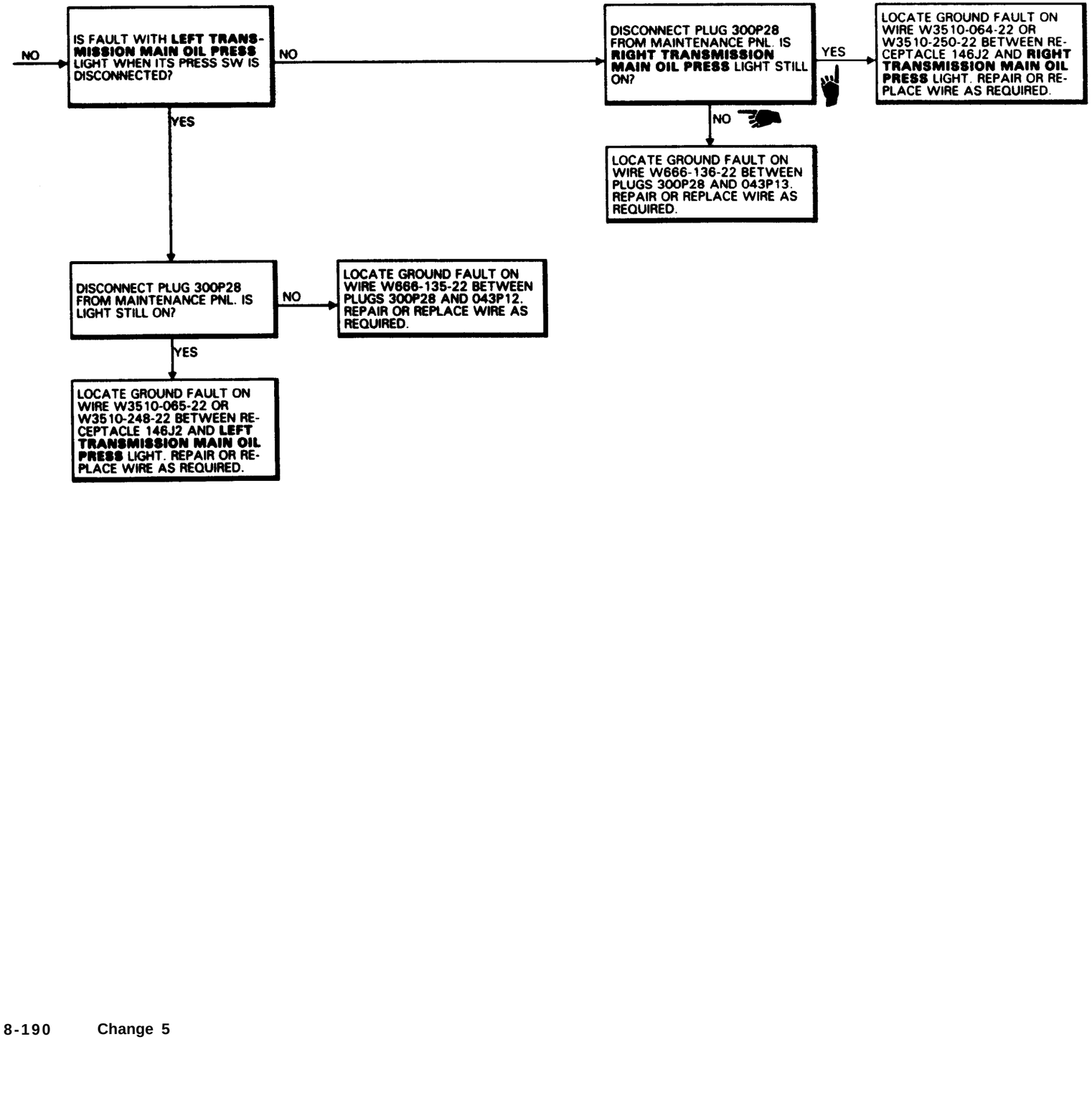
45X54

DI45-11511-SPA

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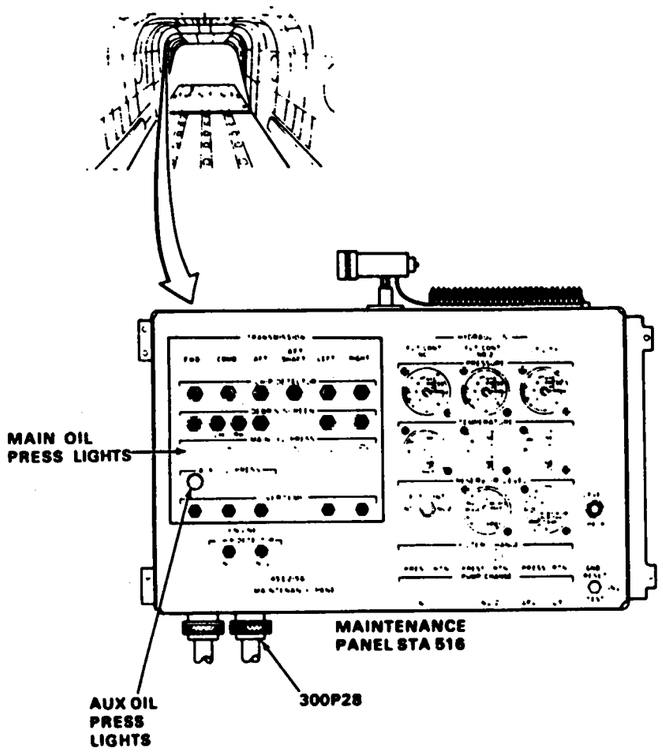


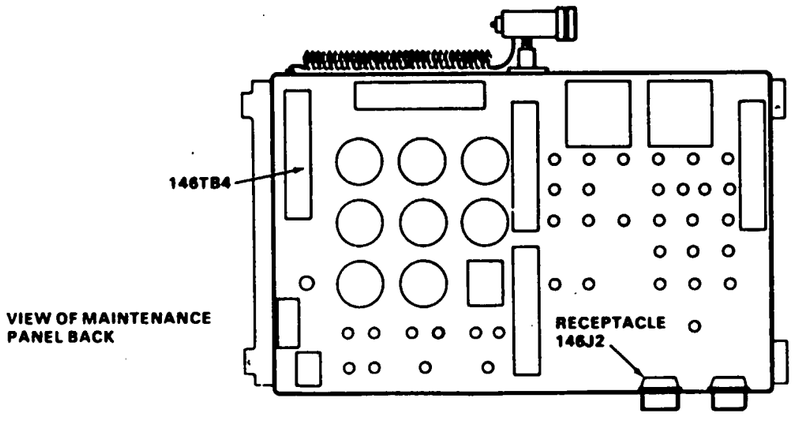
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8-9.12 FWD, COMB, AFT, AFT SHAFT, LEFT OR RIGHT TRANSMISSION MAIN OIL PRESS LIGHT STILL ON WHEN ITS PRESSURE SWITCH DISCONNECTED (Continued)



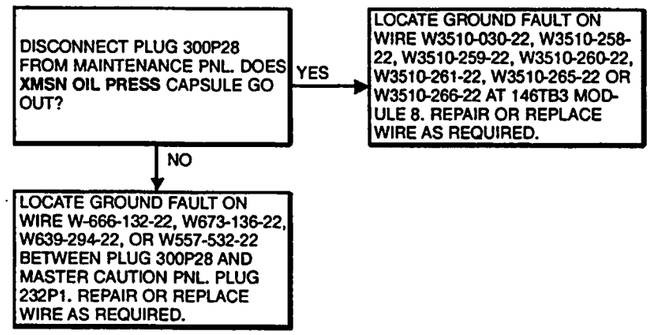


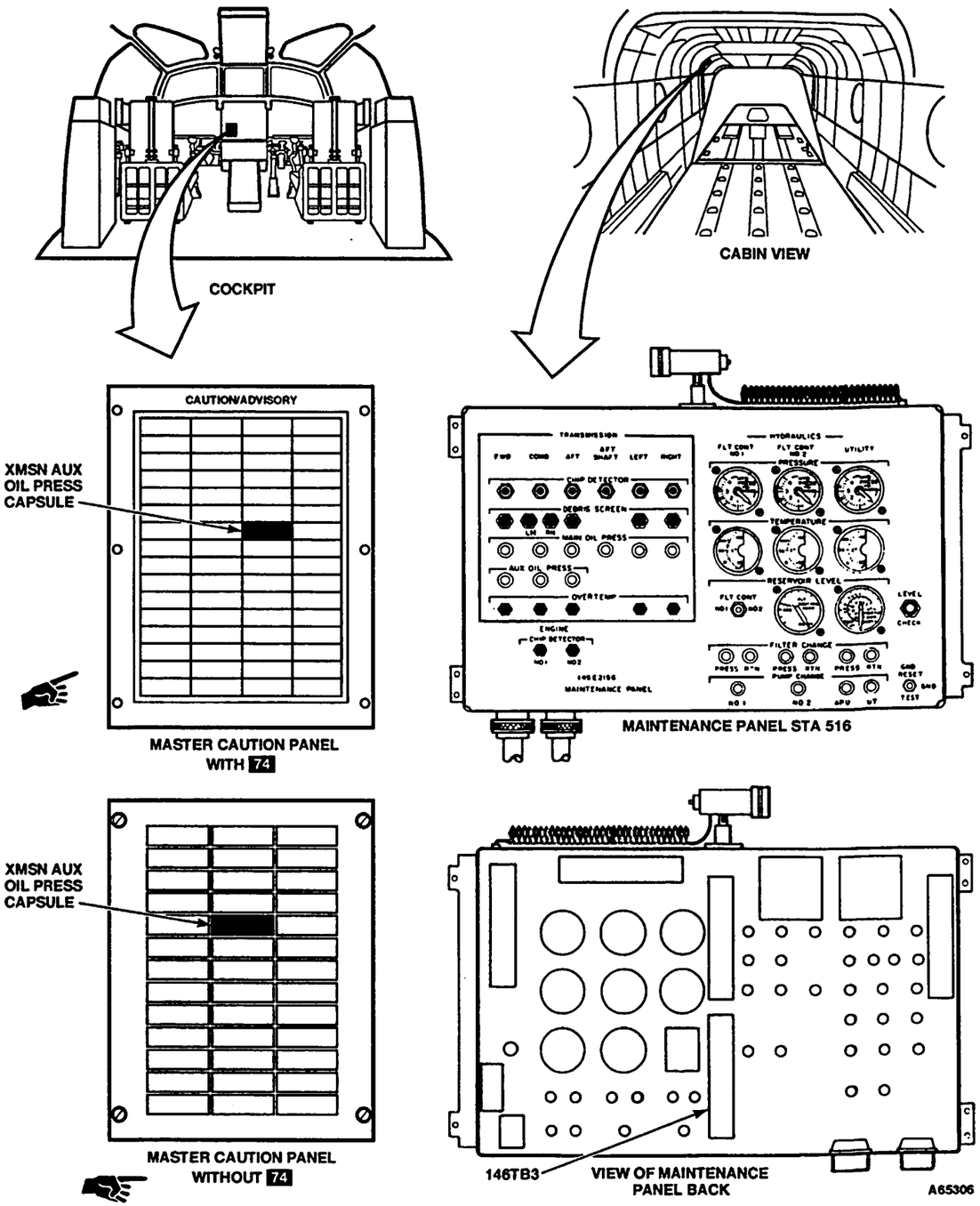
8-9.13 XMSN OIL PRESS CAPSULE STILL ON WHEN ALL MAIN OIL PRESS SWITCHES ARE DISCONNECTED 8-9.13

FAULT ISOLATION PROCEDURE

INITIAL SETUP
Applicable Configurations:
All
Tools:
Electrical Repairer's Tool Kit
NSN 5180-00-323-4915
Multimeter
Materials
None

Personnel Required:
Aircraft Electrician
References:
TM 55-1520-240-23
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off

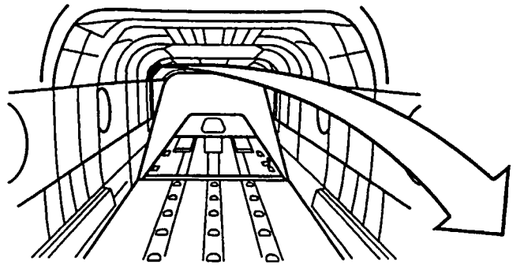




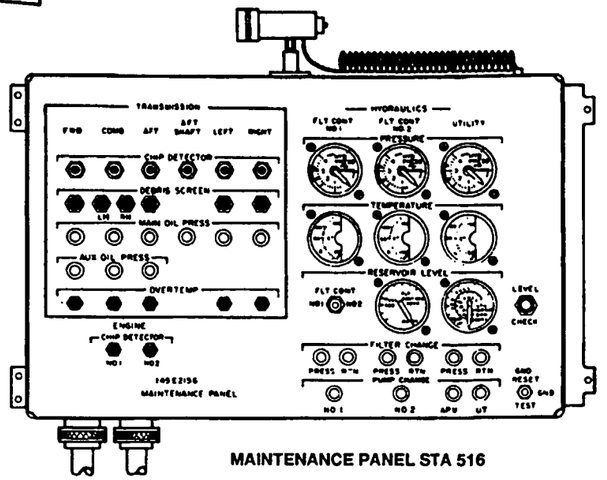
END OF TASK

FAULT ISOLATION PROCEDURE

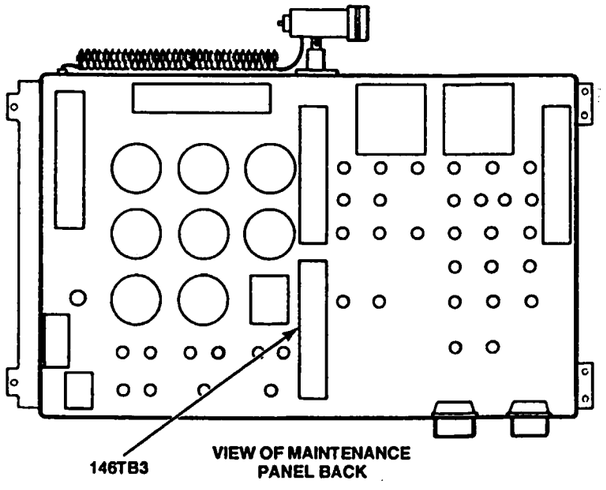
INITIAL SETUP
Applicable Configurations:
All
Tools:
Electrical Repairer's Tool Kit, NSN 5180-00-323-4915
Multimeter
Materials:
None
Personnel Required:
Aircraft Electrician
References:
TM 55-1520-240-23
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off



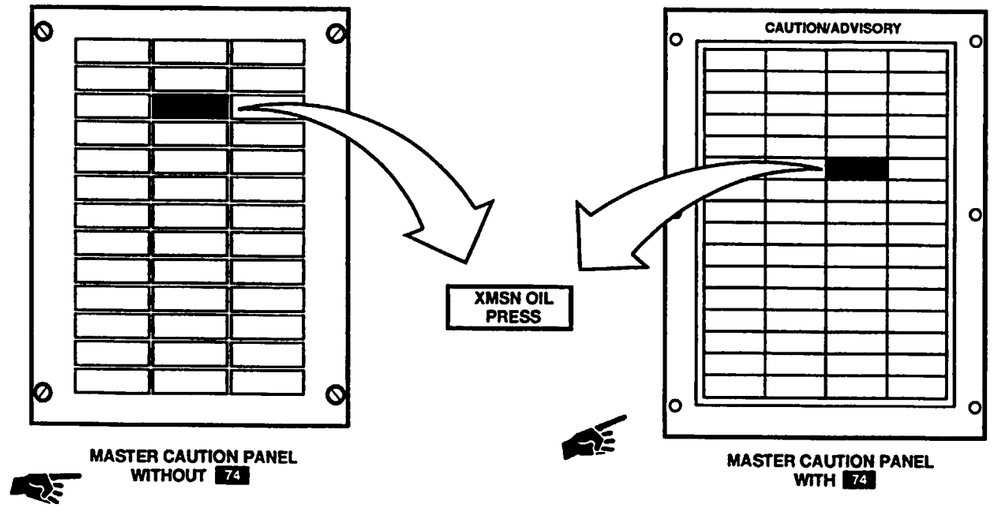
CABIN VIEW



MAINTENANCE PANEL STA 516

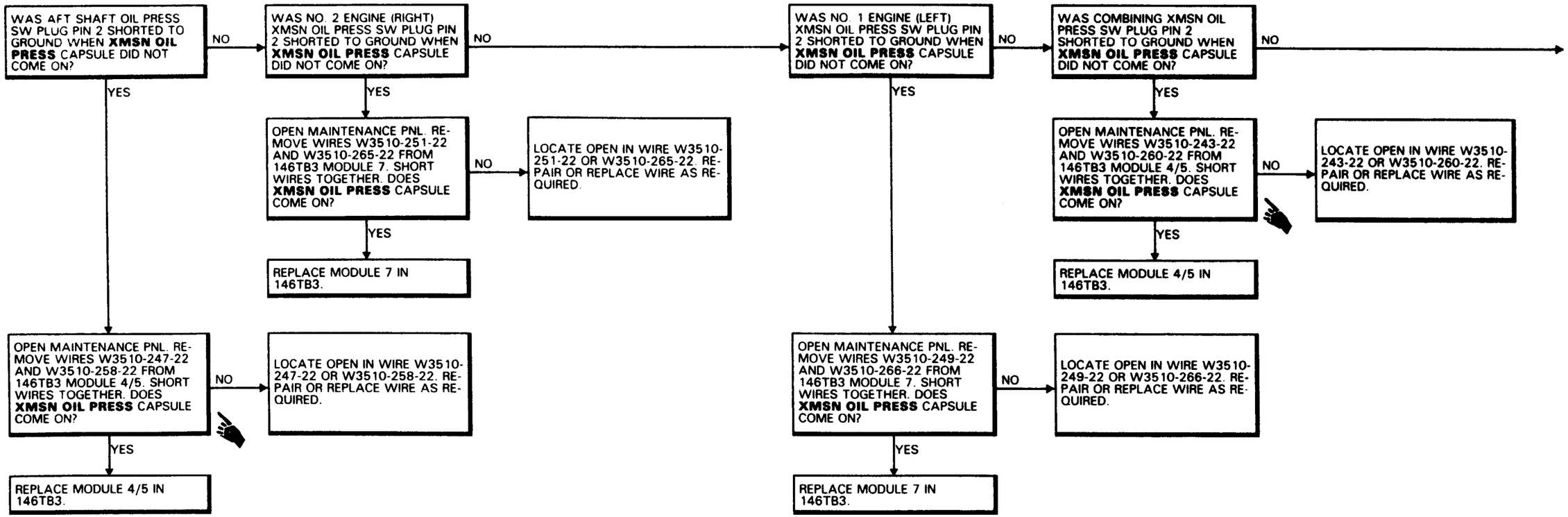


VIEW OF MAINTENANCE PANEL BACK

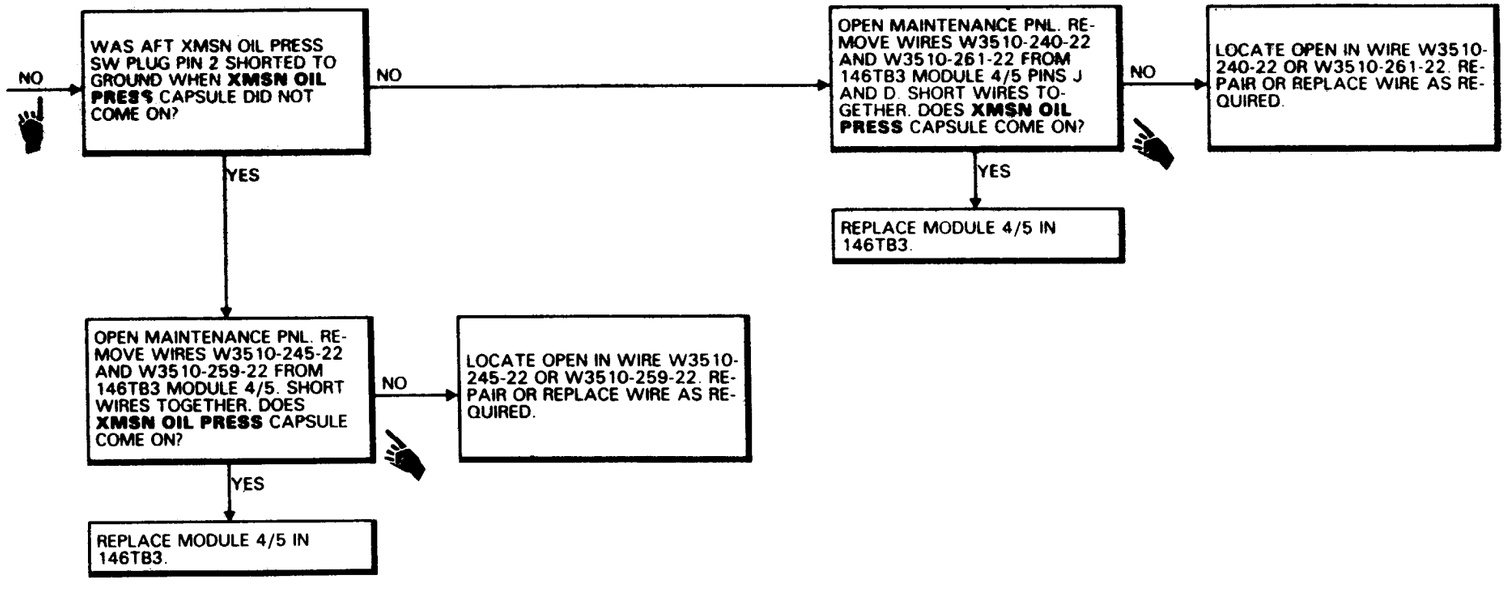


A65300

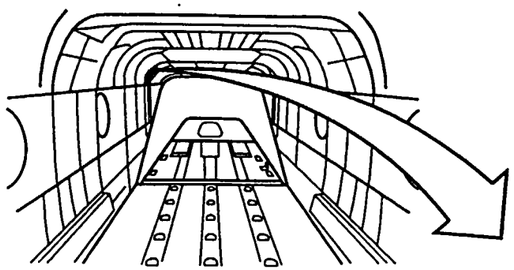
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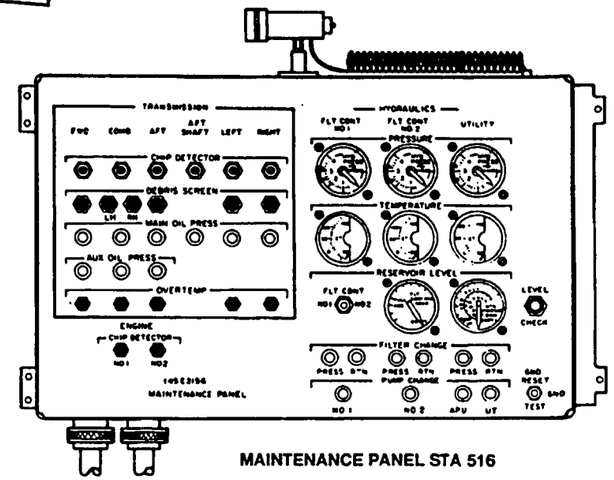
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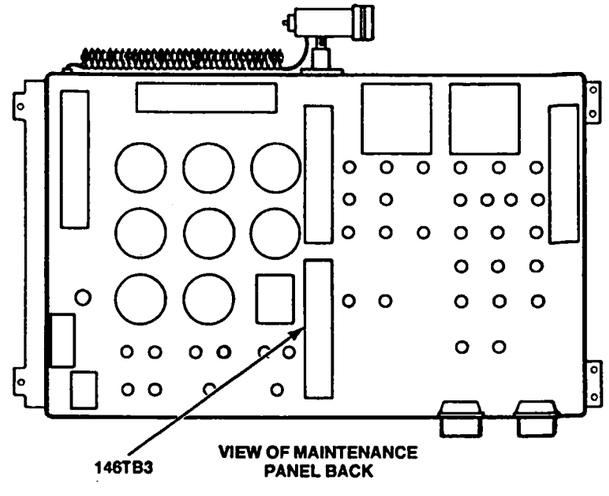
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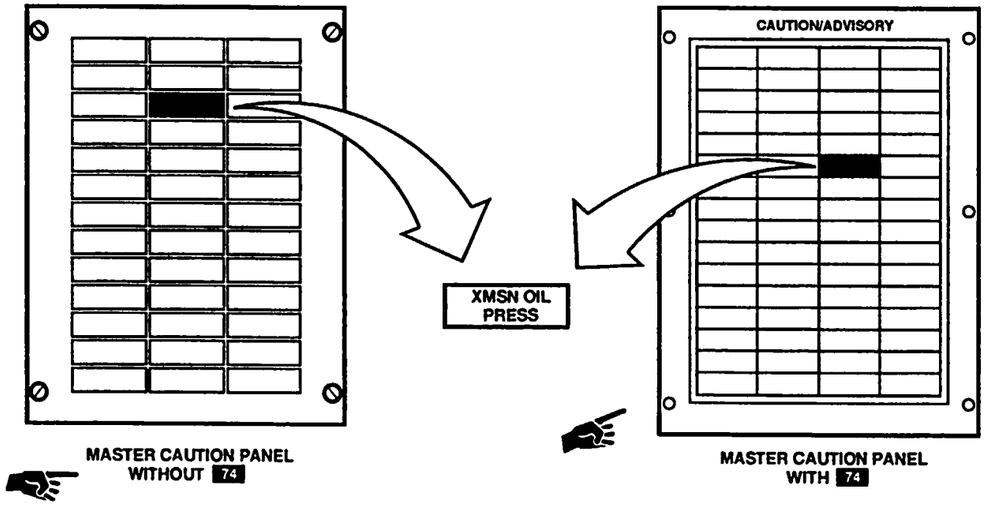
CABIN VIEW



MAINTENANCE PANEL STA 516



VIEW OF MAINTENANCE PANEL BACK



MASTER CAUTION PANEL WITHOUT 74

MASTER CAUTION PANEL WITH 74

A65300

END OF TASK

8-9.15 FWD, COMB, AFT, AFT SHAFT, LEFT, OR RIGHT TRANSMISSION MAIN OIL PRESS LIGHT DOES NOT COME ON WHEN PRESSED 8-9.15

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

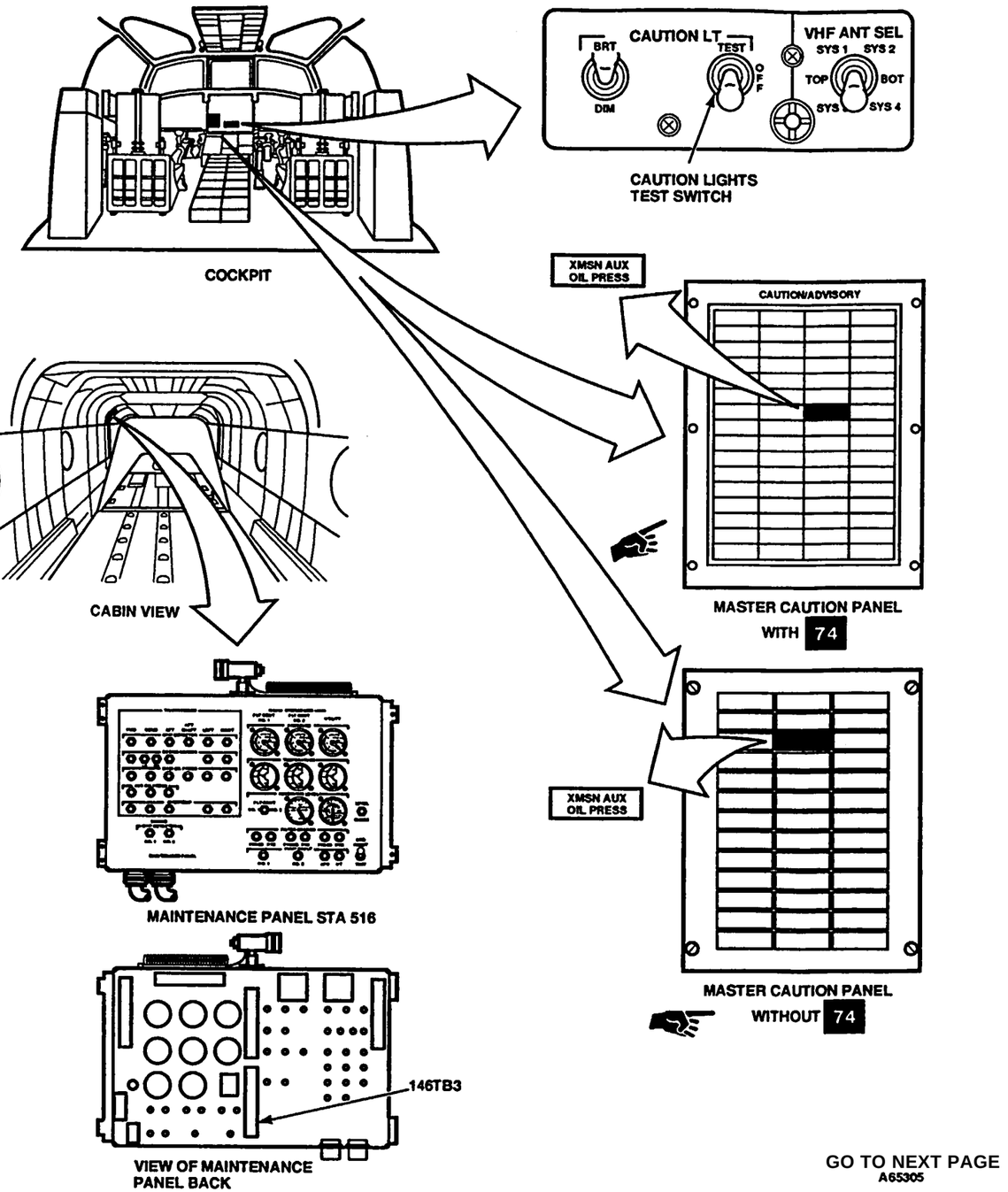
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:
None

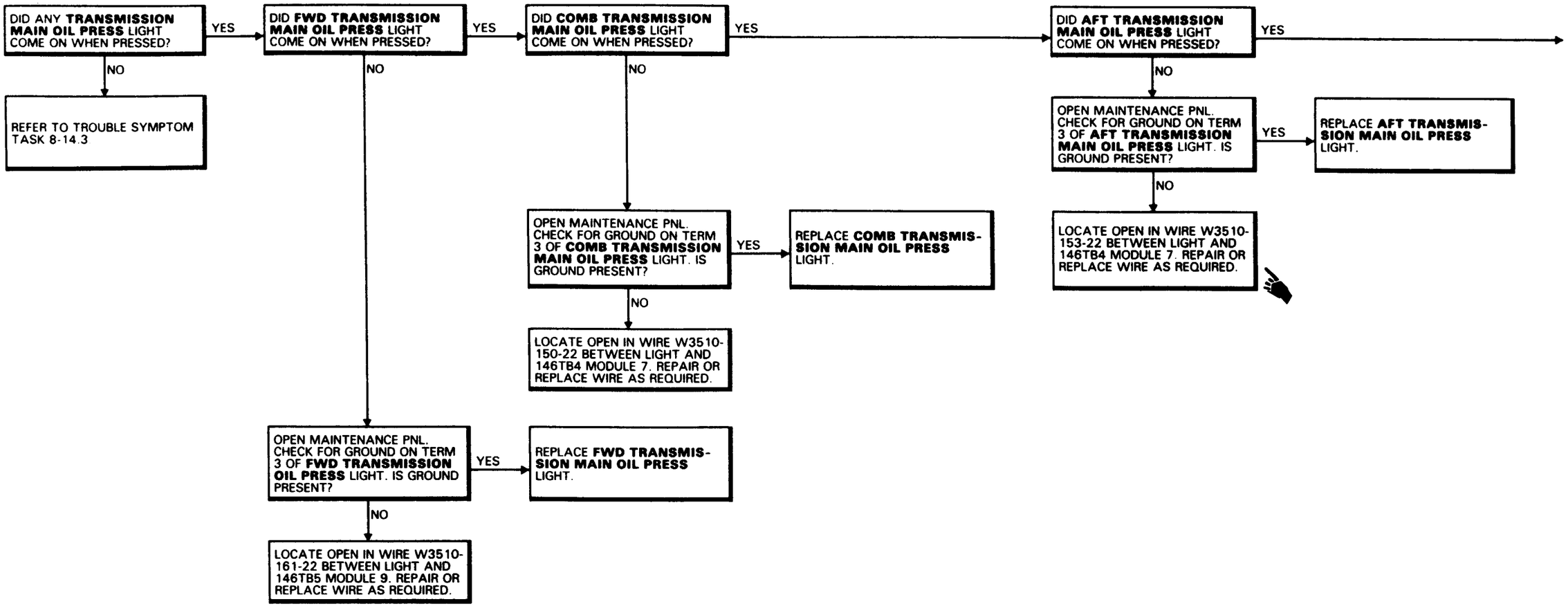
Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

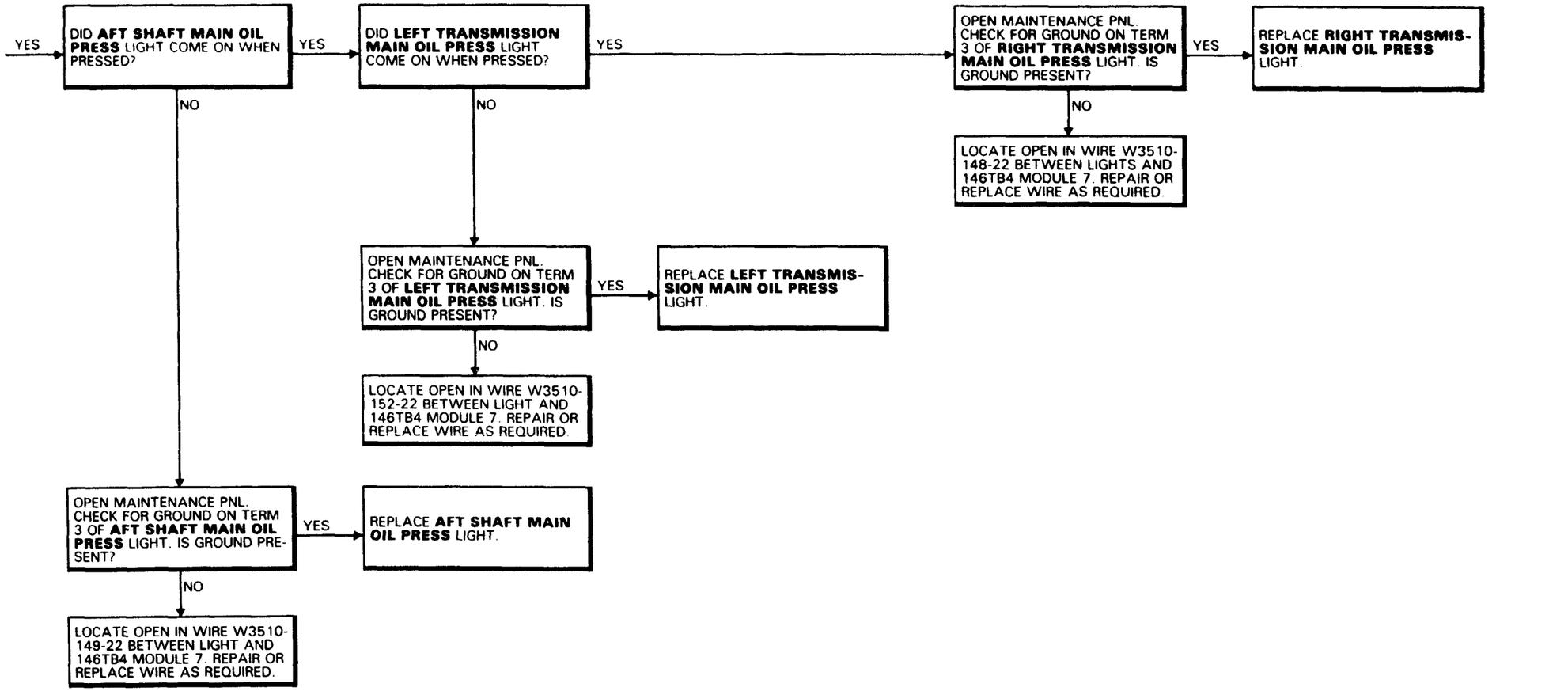
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off



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A65305

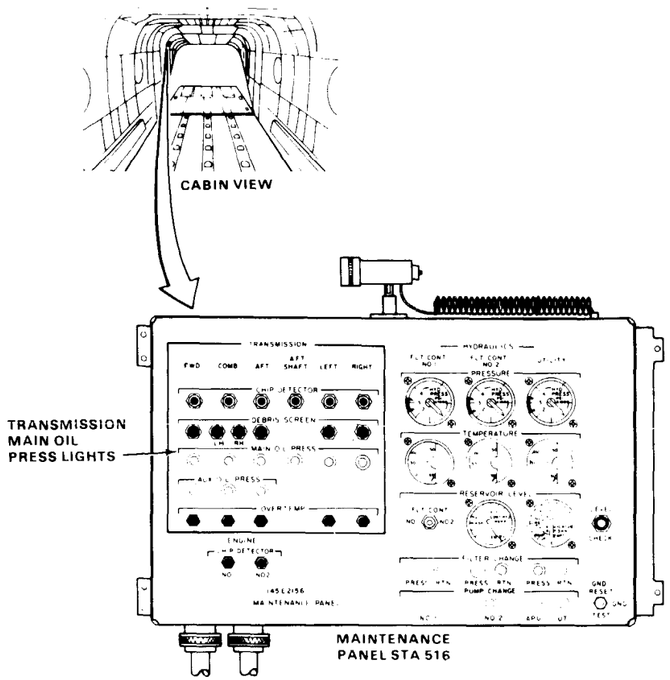


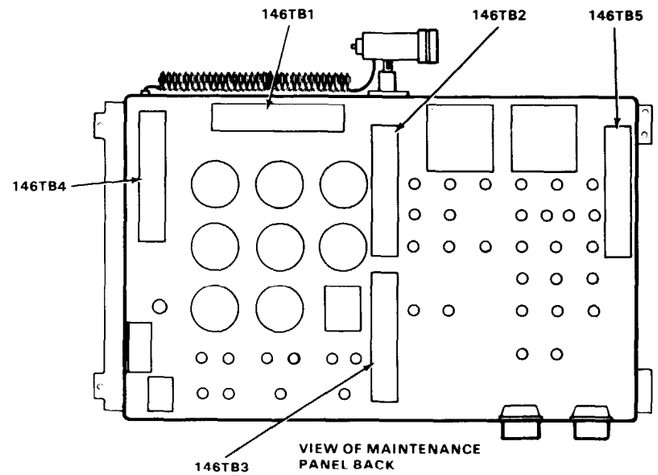
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8-9.15 FWD, COMB, AFT, AFT SHAFT, LEFT, OR RIGHT TRANSMISSION MAIN OIL PRESS LIGHT DOES NOT COME ON WHEN PRESSED (Continued)





45 X 54

D145-11517-SPA

END OF TASK

8-9.16 XMSN OIL PRESS CIRCUIT BREAKER DOES NOT STAY CLOSED

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

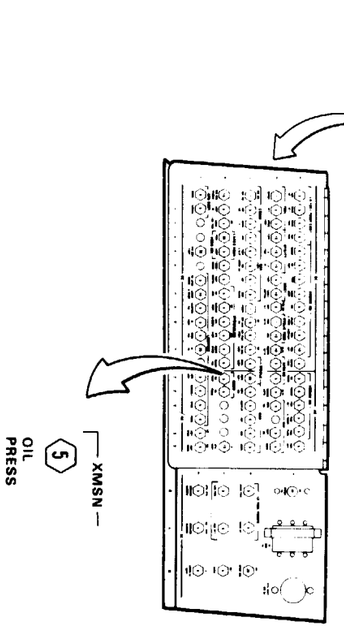
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials
None

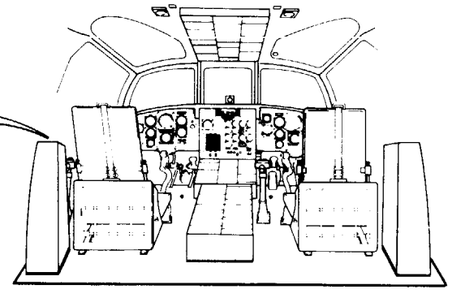
Personnel Required:
68F20 Aircraft Electrician
68F20 Aircraft Electrician

References:
TM 55-1520-240-23

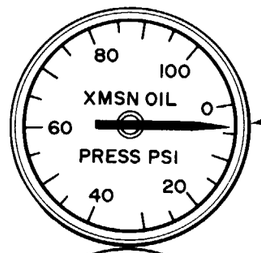
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off



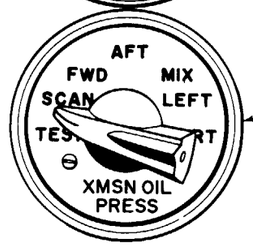
NO. 1 POWER DISTRIBUTION PANEL (PDP) VIEW LOOKING AFT



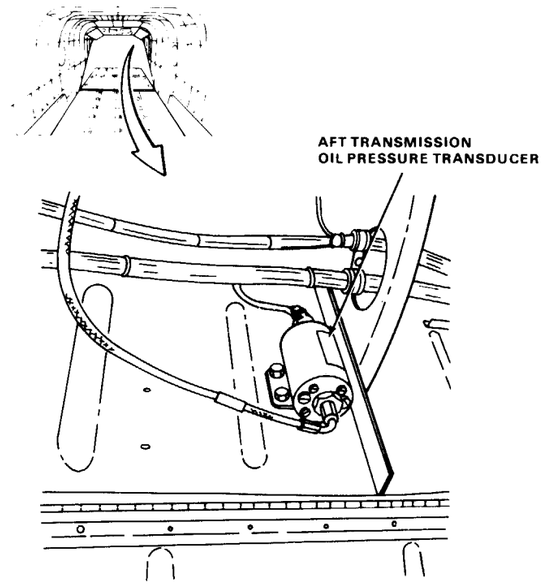
COCKPIT



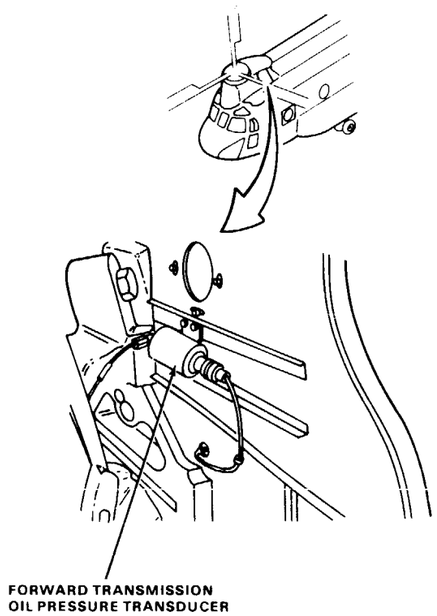
XMSN OIL PRESSURE INDICATOR

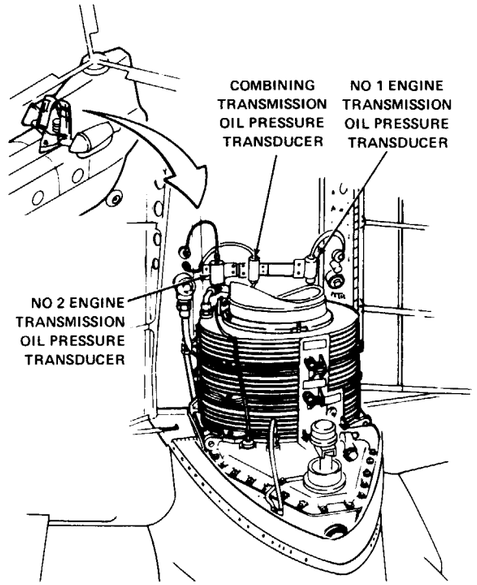


XMSN OIL PRESSURE SWITCH



VIEW LOOKING UP



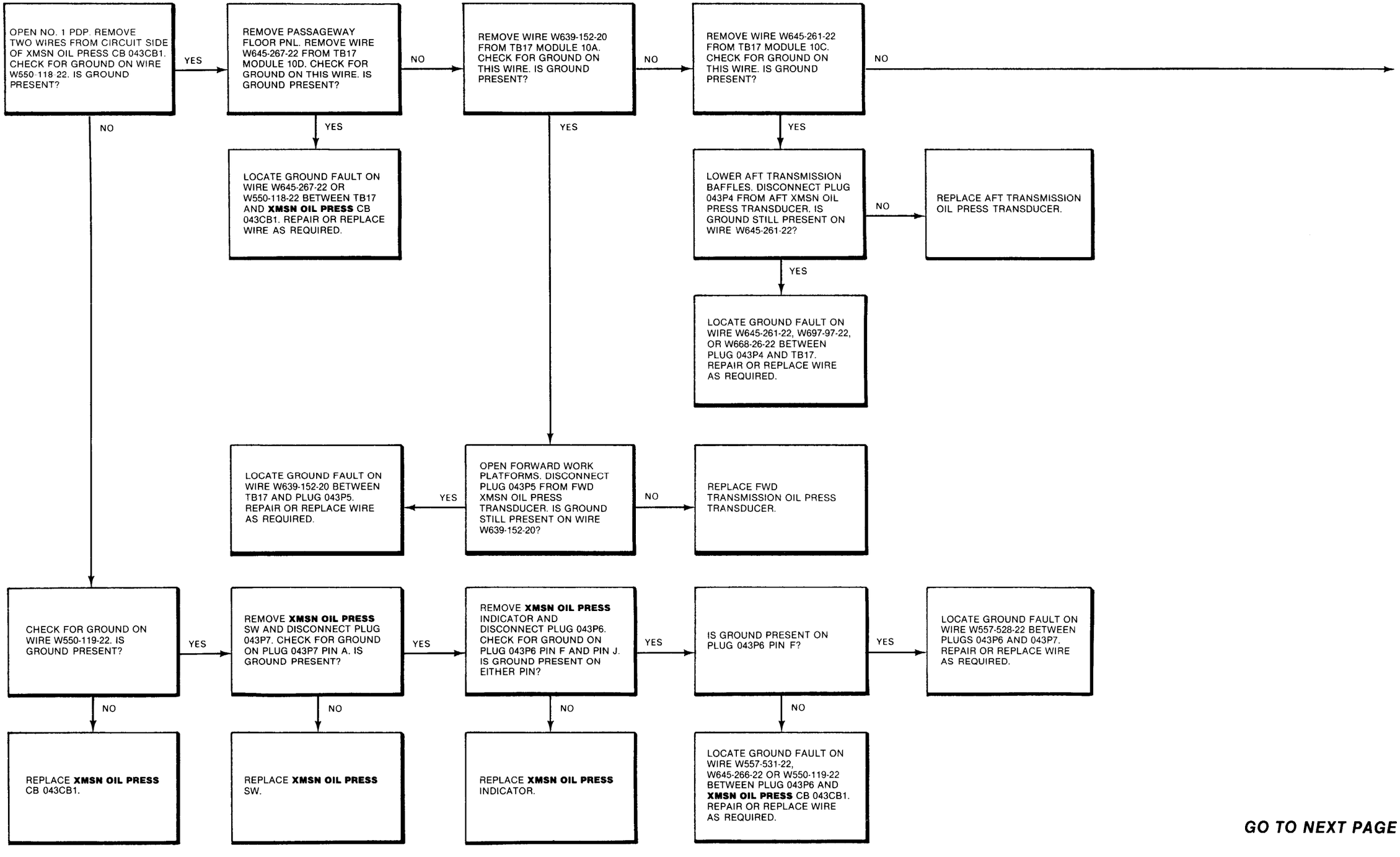


90X54

D145-11518-SPA

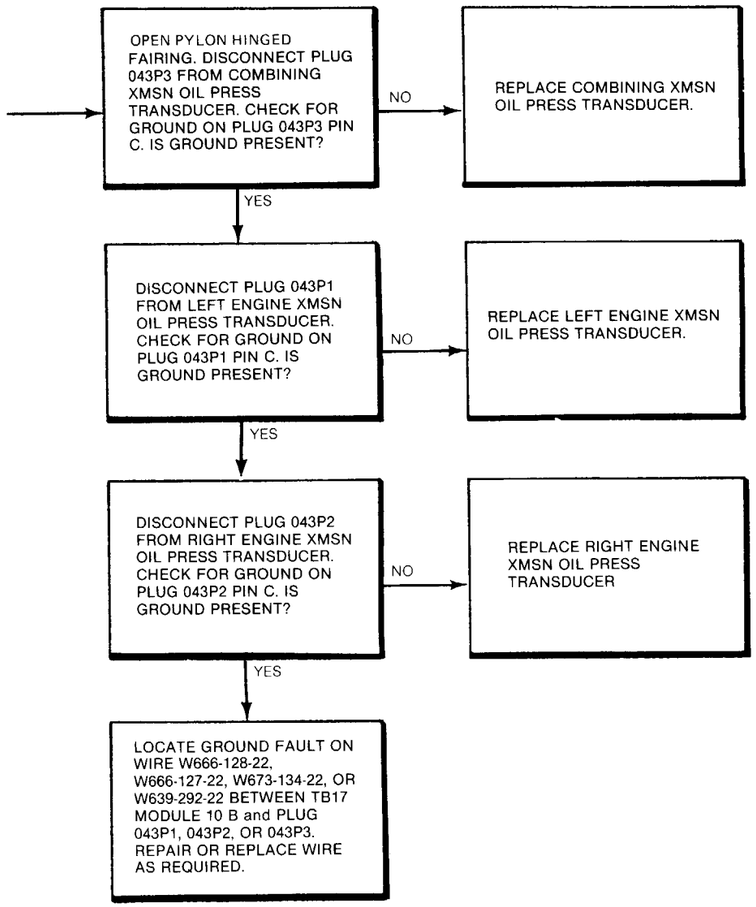
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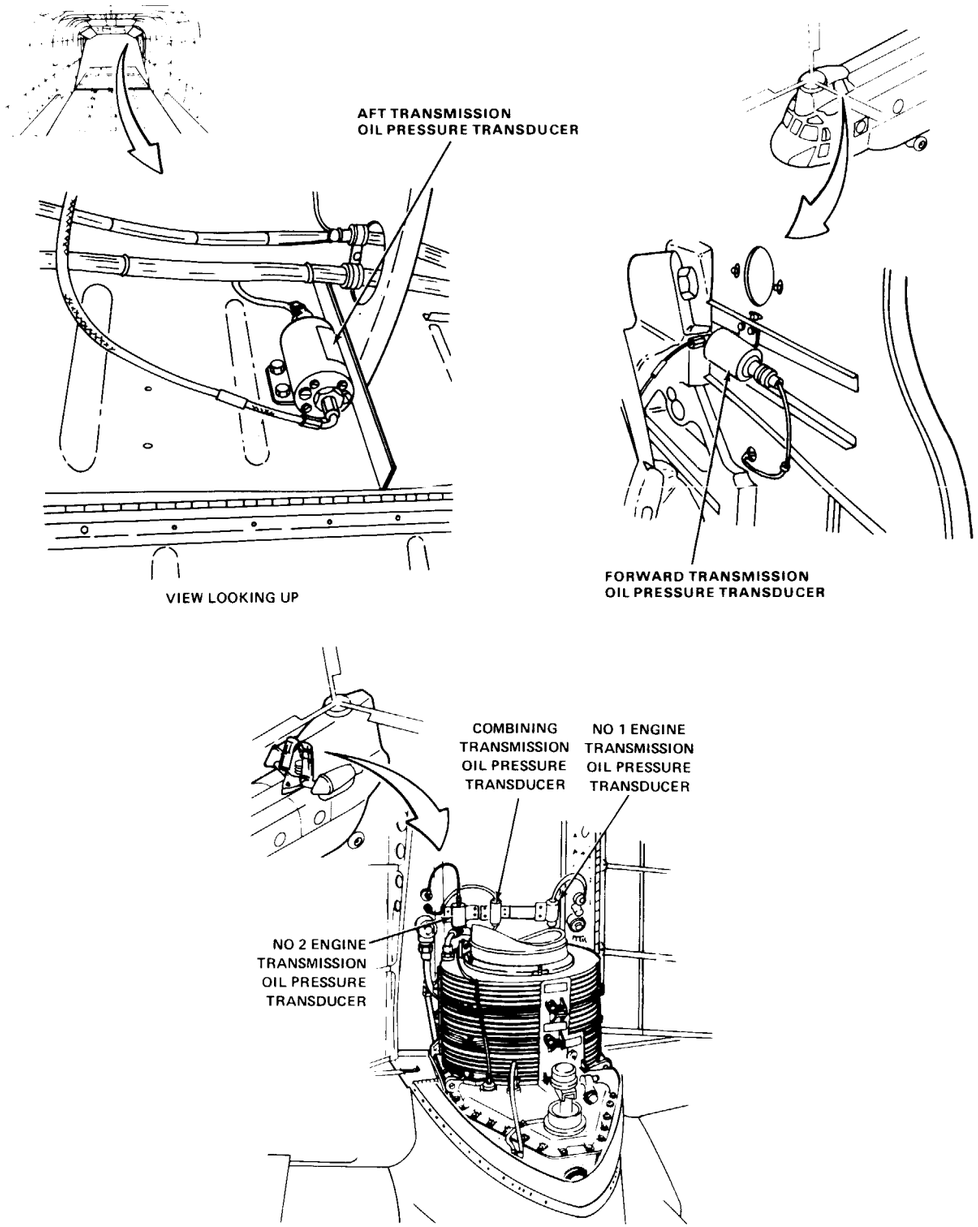
8-9.16 XMSN OIL PRESS CIRCUIT BREAKER DOES NOT STAY CLOSED (Continued)



GO TO NEXT PAGE

8-9.16 XMSN OIL PRESS CIRCUIT BREAKER DOES NOT STAY CLOSED (Continued)





D145-11519-SPA

END OF TASK

8-9.17 XMSN OIL PRESS INDICATOR DOES NOT READ IN NORMAL RANGE WHEN XMSN OIL PRESS SWITCH IS AT SCAN

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

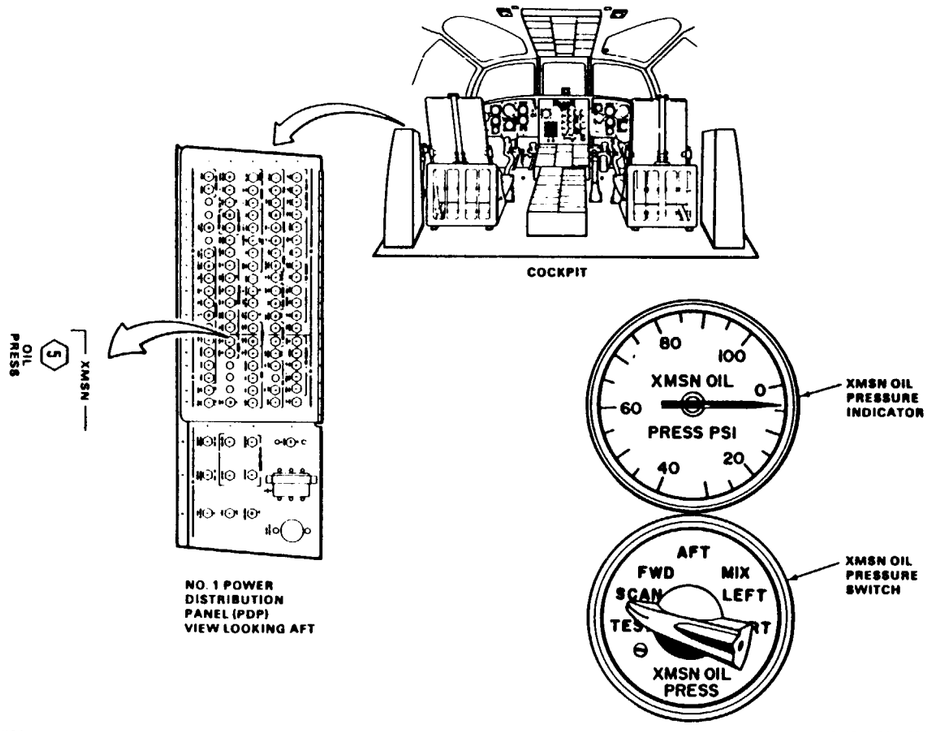
Tools:
Electrical Repairers Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials
None

Personnel Required:
68F20 Aircraft Electrician
68F20 Aircraft Electrician

References:
TM 55-1520-240-23

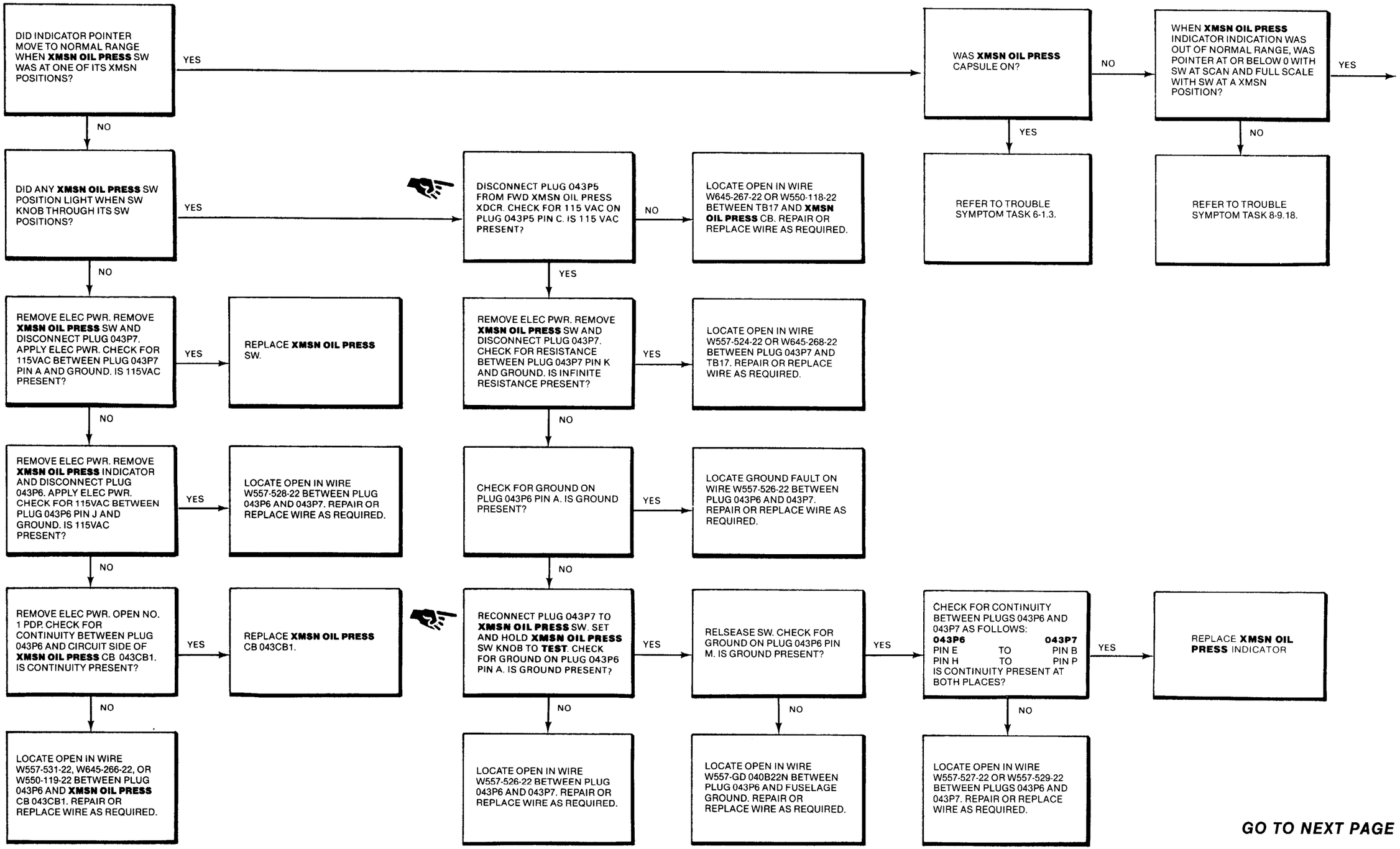
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off



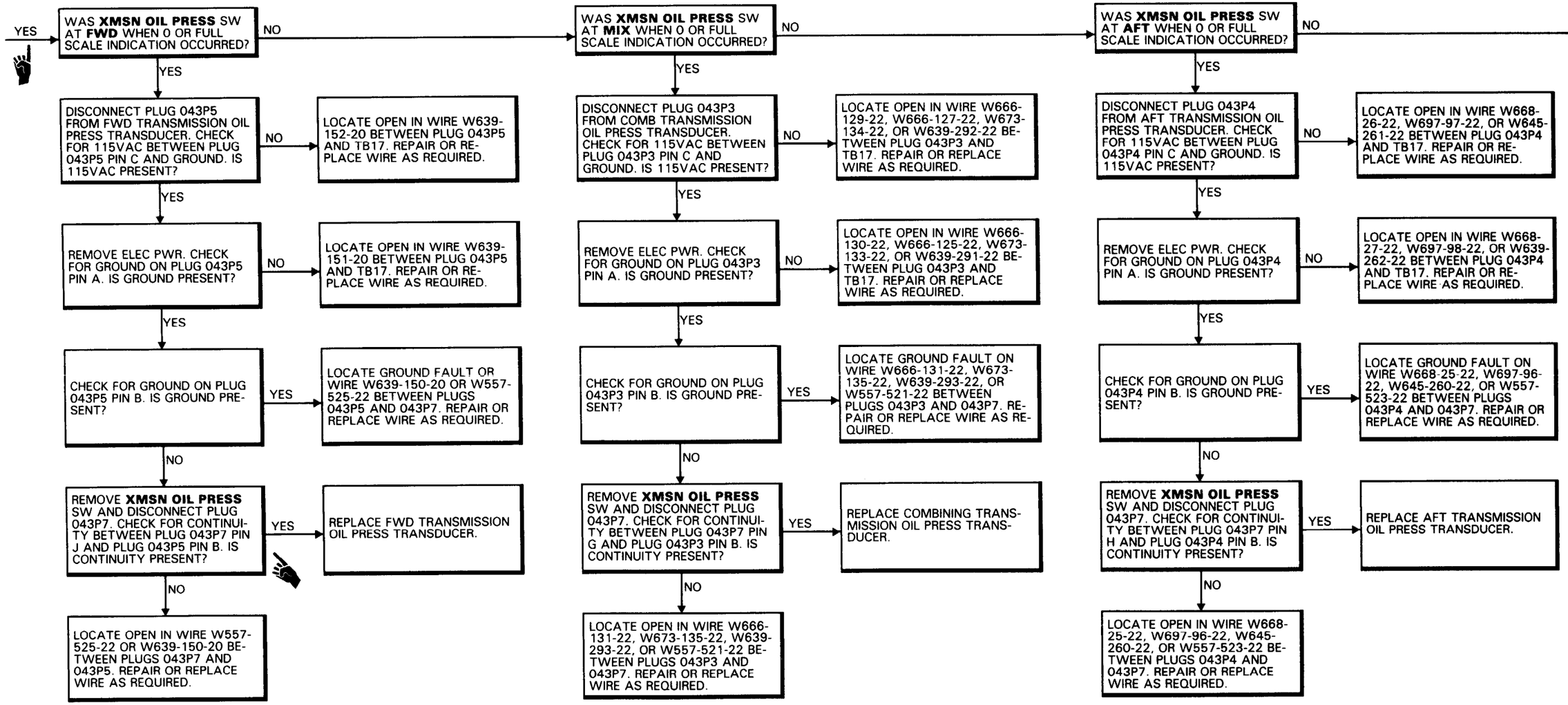
Page 8-205 is a blank page.

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8-9.17 XMSN OIL PRESS INDICATOR DOES NOT READ IN NORMAL RANGE WHEN XMSN OIL PRESS SWITCH IS AT SCAN (Continued)

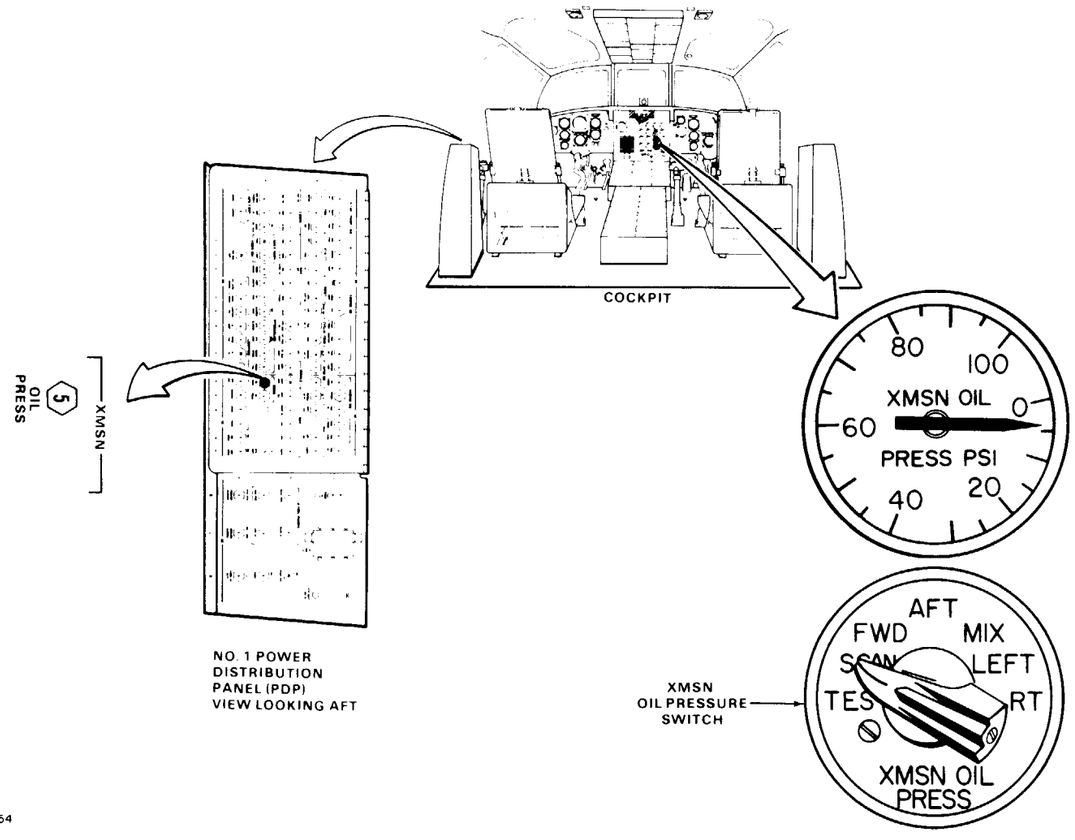


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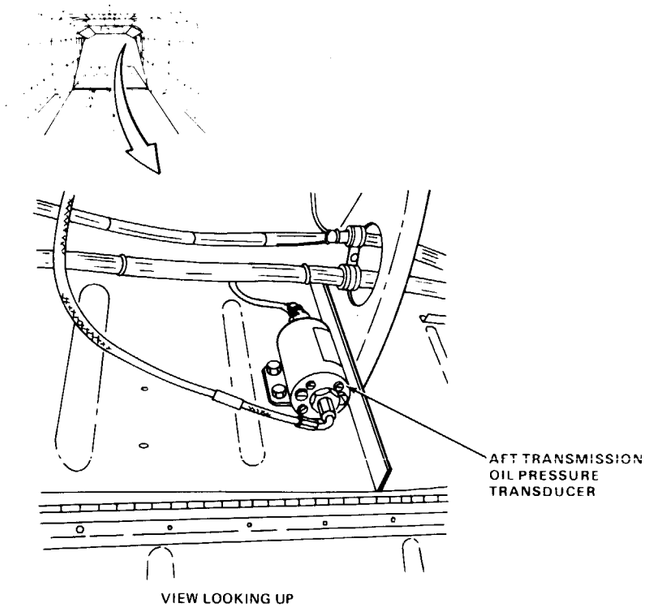


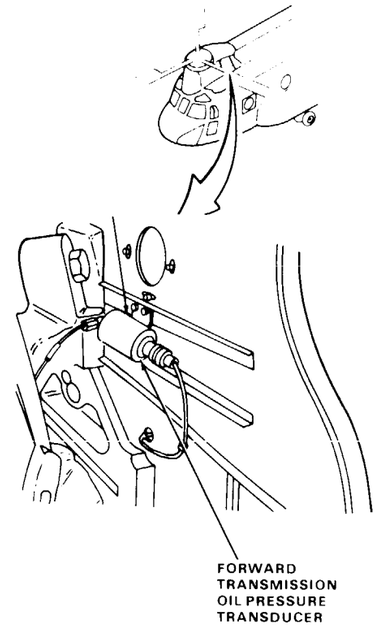
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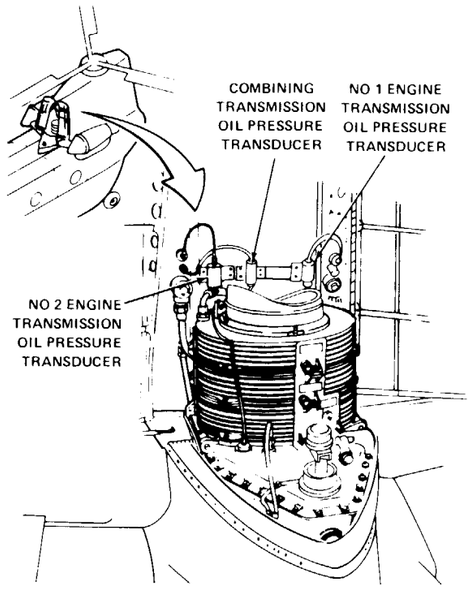
8-9.17 XMSN OIL PRESS INDICATOR DOES NOT READ IN NORMAL RANGE WHEN XMSN OIL PRESS SWITCH IS AT SCAN (Continued)



90 X 54

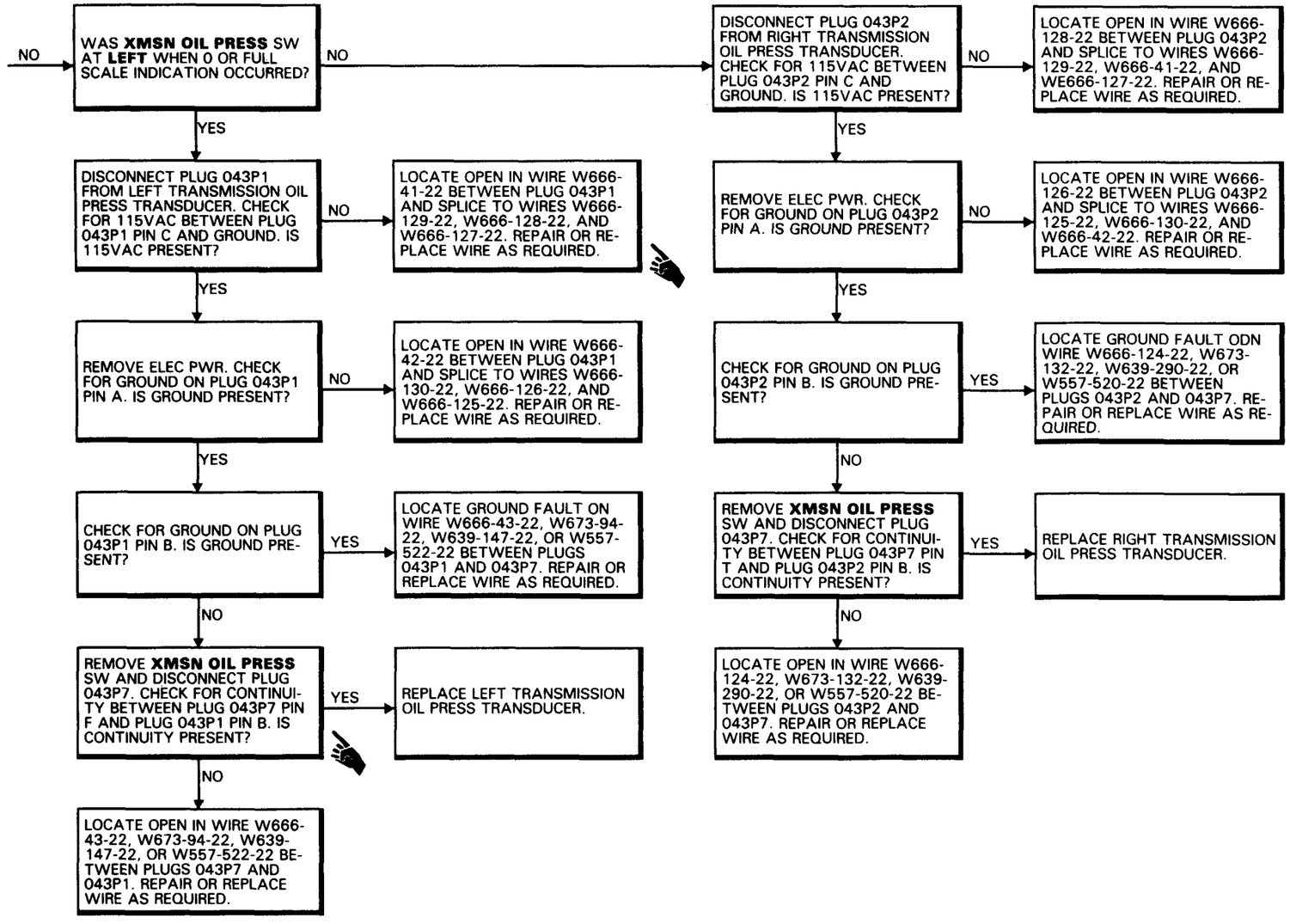






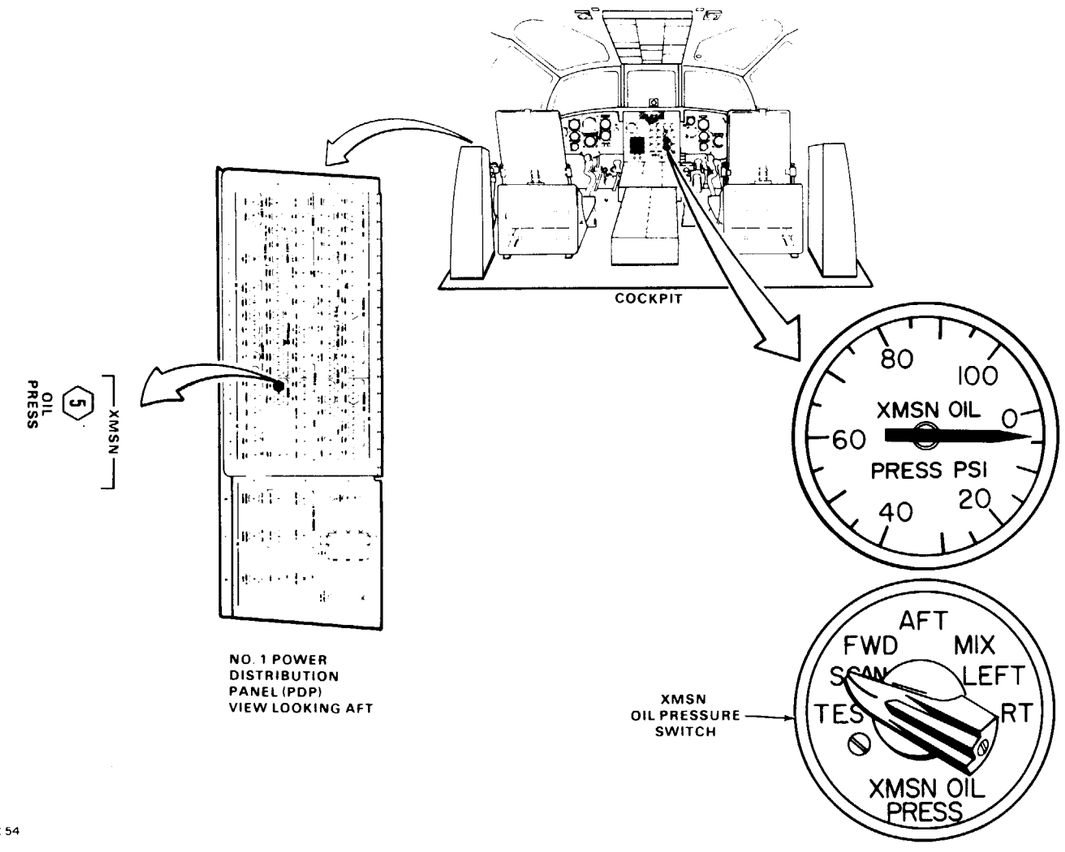
D145-11521-SPA

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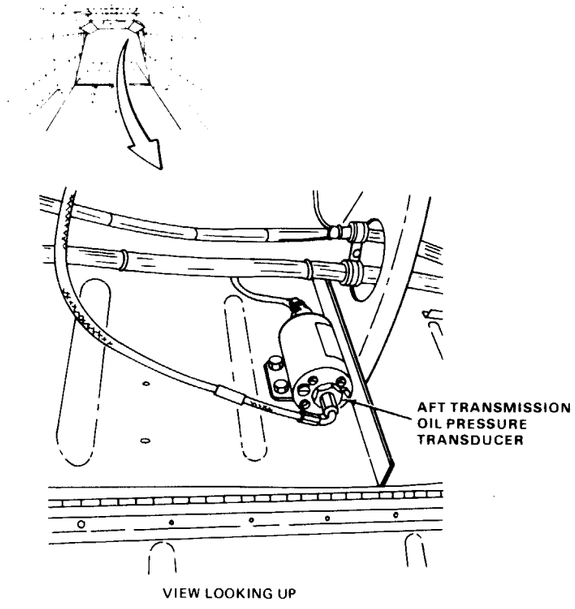


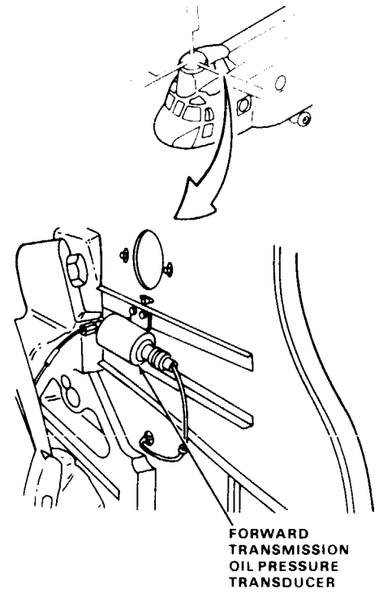
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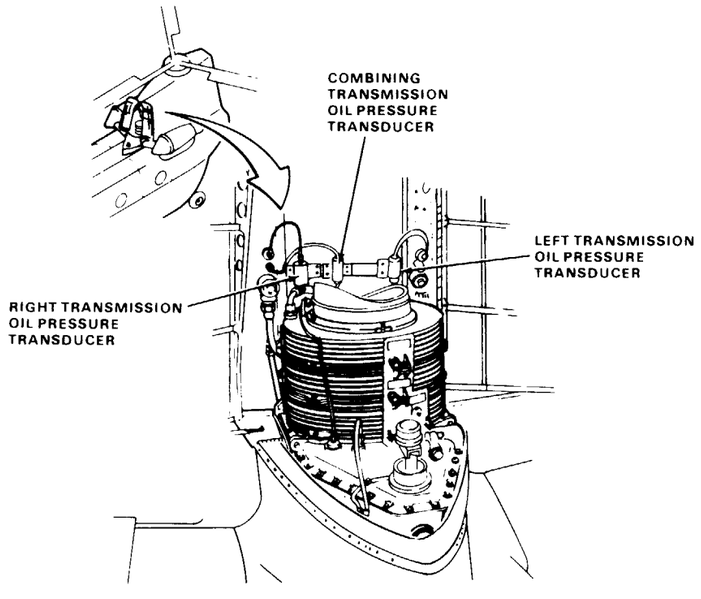
8-9.17 XMSN OIL PRESS INDICATOR DOES NOT READ IN NORMAL RANGE WHEN XMSN OIL PRESS SWITCH IS AT SCAN (Continued)



90 X 54







D145-11522-SPA

END OF TASK

8-9.18 XMSN OIL PRESS INDICATOR DOES NOT READ IN NORMAL RANGE FOR ONE XMSN OIL PRESS SWITCH POSITION

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

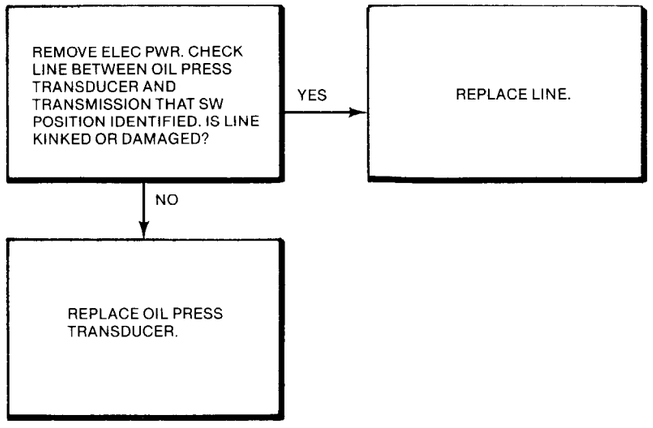
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4692
Multimeter

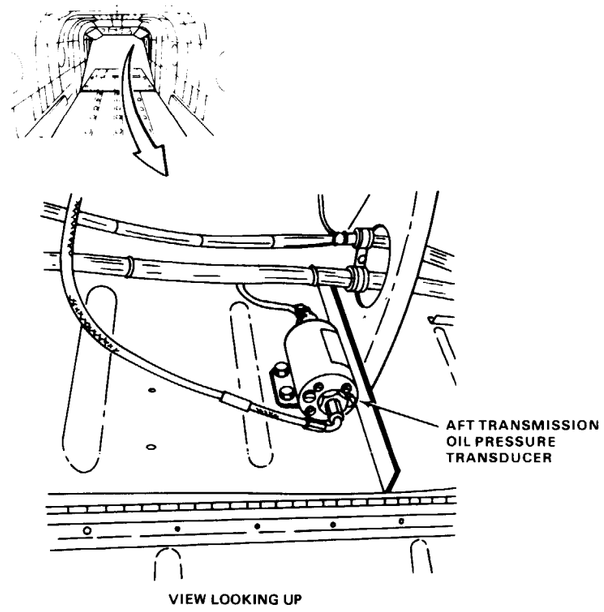
Materials
None

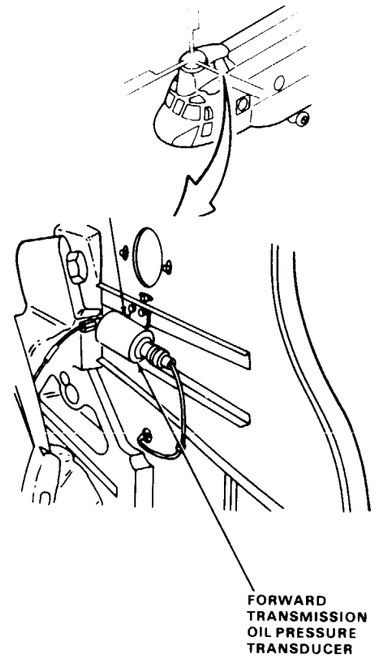
Personnel Required:
67020 Medium Helicopter Repairer

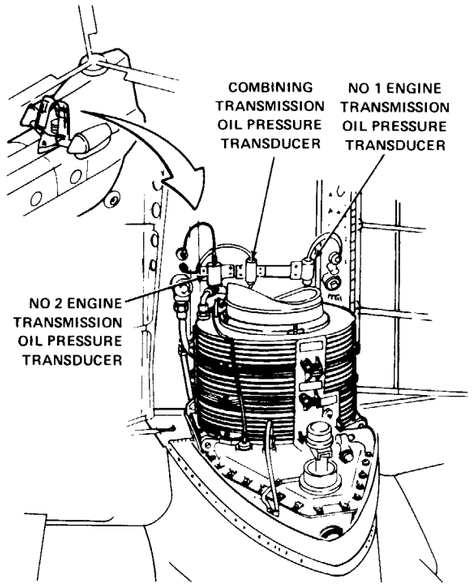
References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off









45 X 54

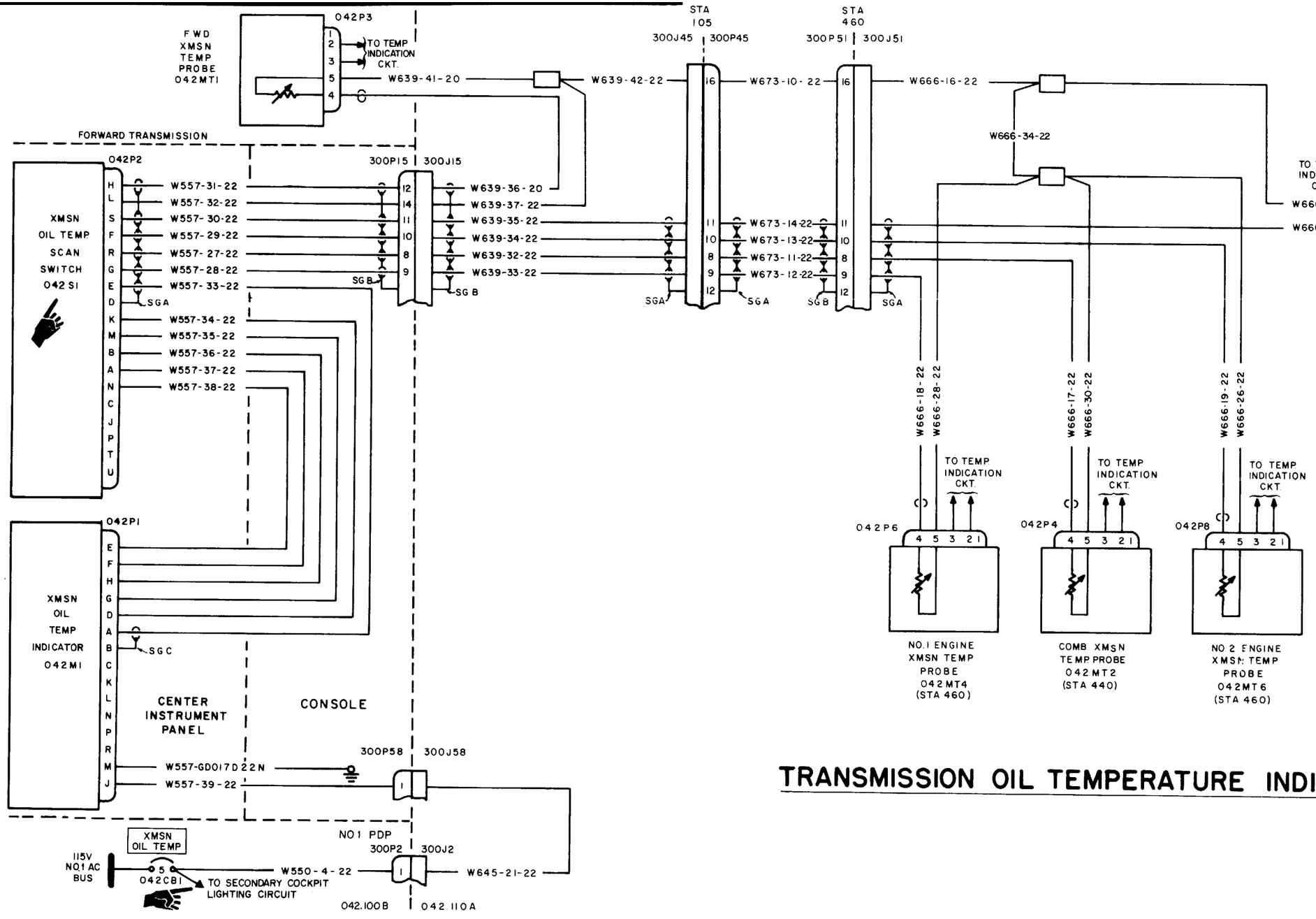
D145-11523-SPA

END OF TASK

8-10 TRANSMISSION OIL TEMPERATURE INDICATING AND WARNING SYSTEM

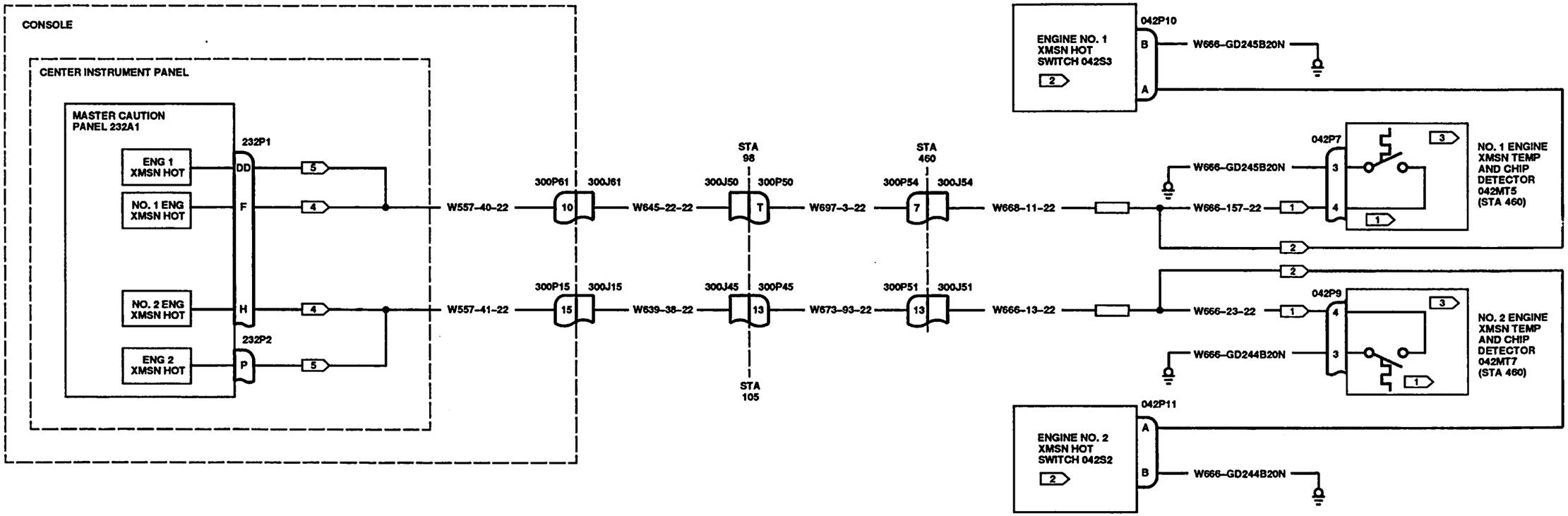
8-10 TRANSMISSION OIL TEMPERATURE INDICATING AND WARNING SYSTEM

8-10.1 TRANSMISSION OIL TEMPERATURE INDICATING AND WARNING SYSTEM WIRING DIAGRAM



TRANSMISSION OIL TEMPERATURE INDICATING

GO TO NEXT PAGE



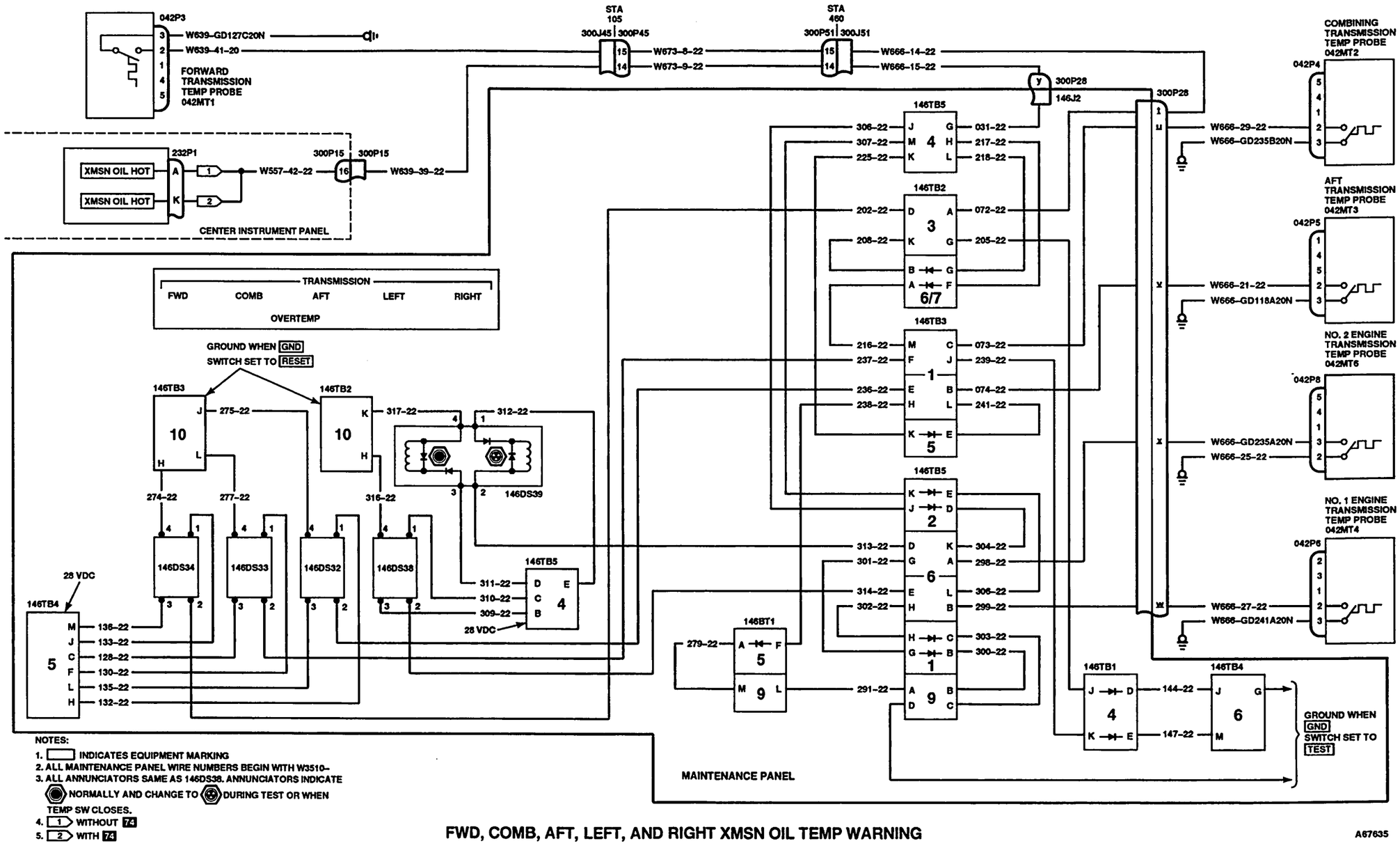
NOTES:

1. WITHOUT 37
2. WITH 37
3. FOR LOCATION OF PINS 1 AND 2 SEE TASK 6-2.1
4. WITHOUT 74
5. WITH 74
6. INDICATES EQUIPMENT MARKINGS

ENGINE TRANSMISSION OIL TEMPERATURE WARNING

A67640

GO TO NEXT PAGE

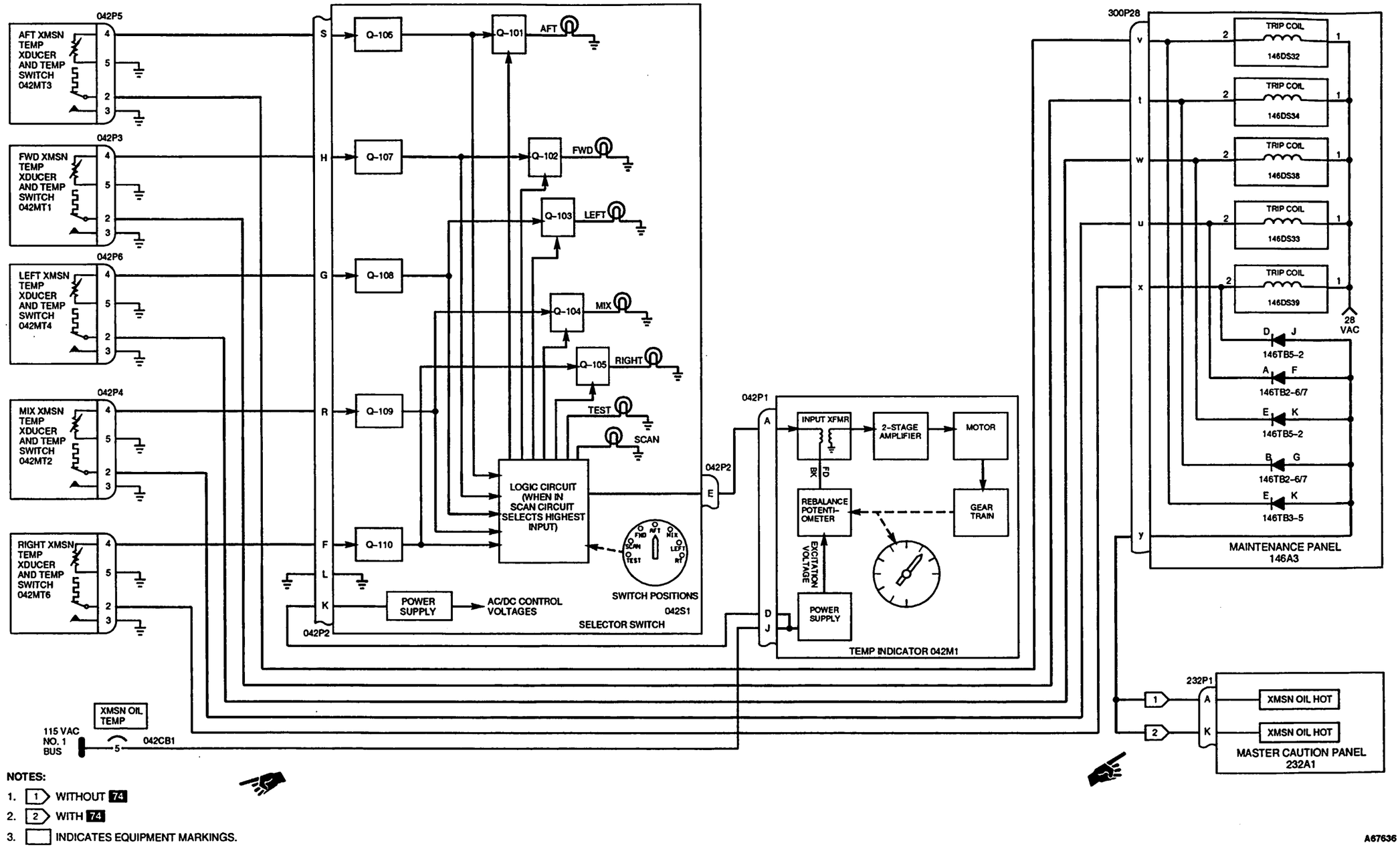


NOTES:
1. [ ] INDICATES EQUIPMENT MARKING
2. ALL MAINTENANCE PANEL WIRE NUMBERS BEGIN WITH W3510-
3. ALL ANNUNCIATORS SAME AS 146DS38. ANNUNCIATORS INDICATE NORMALLY AND CHANGE TO DURING TEST OR WHEN TEMP SW CLOSES.
4. [1] WITHOUT [74]
5. [2] WITH [74]

FWD, COMB, AFT, LEFT, AND RIGHT XMSN OIL TEMP WARNING

A67635

END OF TASK



NOTES:

1. [1] WITHOUT 74
2. [2] WITH 74
3. [ ] INDICATES EQUIPMENT MARKINGS.

A67636

8-10.2 TRANSMISSION OIL TEMPERATURE INDICATING WARNING SYSTEM VISUAL CHECK

INITIAL SETUP

Applicable Configurations:
All

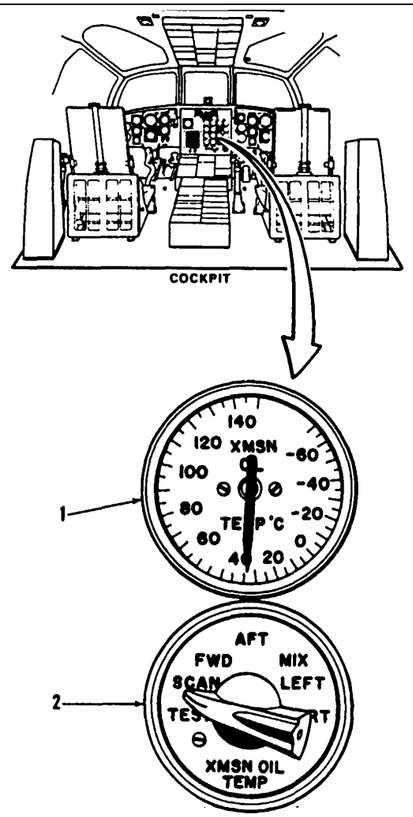
Tools:
Aircraft Mechanic's Tool Kit.
NSN 5180-00-323-4692

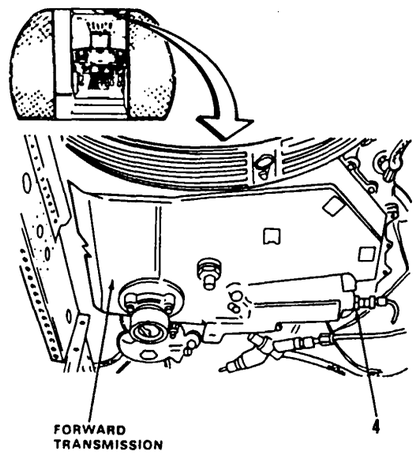
Materials:
None

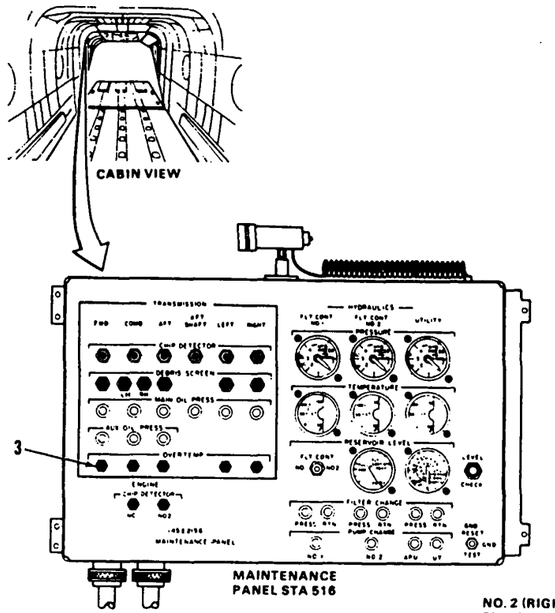
Personnel Required:
67U10 Medium Helicopter Repairer

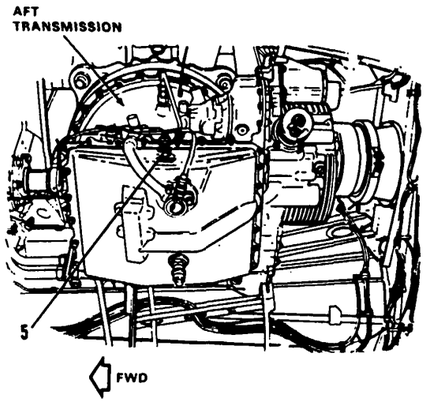
References:
TM 55-1520-240-23

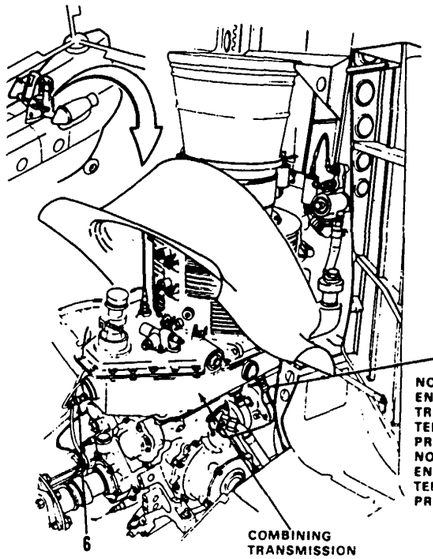
Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Left and Right Forward work Platform Open
Forward Drip Pan Removed
Aft Transmission Baffles Open
Pylon Hinged Fairing Open
Pylon Lower Fairing Open
Engine Air Inlet Screen Removed
Engine Transmission Fairing Removed
Cargo Ramp Open and Level (Task 7-3.3)

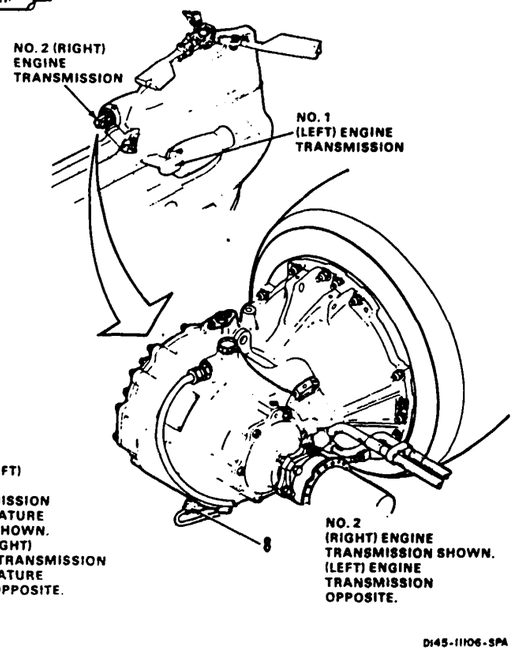












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8-10.2 TRANSMISSION OIL TEMPERATURE INDICATING AND WARNING SYSTEM VISUAL CHECK (Continued)

TASK	RESULT
1. **Check TRANSMISSION TEMP indicator (1).**	If indicator (1) is loose or damaged, tighten or replace it as required.
2. **Check TRANSMISSION TEMP** switch (2).	If switch (2) is loose or damaged, tighten or replace it as required.
3. **Check five OVERTEMP** indicators (3).	If any indicator (3) is loose or damaged, tighten or replace it as required.
CHECK FORWARD TRANSMISSION OIL TEMPERATURE INDICATING AND WARNING SYSTEM INSTALLATION	
4. Check temperature probe (4).	If probe (4) is damaged, replace it. If wiring or electrical connector to probe is damaged, repair or replace as required.
CHECK AFT TRANSMISSION OIL TEMPERATURE INDICATING AND WARNING SYSTEM INSTALLATION	
5. Check temperature probe (5).	If probe (5) is damaged, replace it. If wiring or electrical connector to probe is damaged, repair or replace it as required.
CHECK COMBINING TRANSMISSION OIL TEMPERATURE INDICATING AND WARNING SYSTEM INSTALLATION	
6. Check temperature probe (6).	If probe (6) is damaged, replace it. If wiring or electrical connector to probe is damaged, repair or replace it as required.
CHECK NO. 1 (LEFT) ENGINE TRANSMISSION OIL TEMPERATURE INDICATING AND WARNING SYSTEM INSTALLATION	
7. Check temperature probe (7).	If probe (7) is damaged, replace it. If wiring or electrical connector to probe is damaged, repair or replace it as required.
8. Check temperature and chip detector (8).	If detector (8) is damaged, replace it. If wiring or electrical connector to detector is damaged, repair or replace it as required.
CHECK NO. 2 (RIGHT) ENGINE TRANSMISSION OIL TEMPERATURE INDICATING AND WARNING SYSTEM INSTALLATION	
9. Check temperature probe (7).	If probe (7) is damaged, replace it. If wiring or electrical connector to probe is damaged, repair or replace it as required.
10. Check temperature and chip detector (8).	If detector (8) is damaged, replace it. If wiring or electrical connector to detector is damaged, repair or replace it as required.

FOLLOW-ON MAINTENANCE:

None

END OF TASK

8-10.3 TRANSMISSION OIL TEMPERATURE INDICATING AND WARNING SYSTEM OPERATIONAL CHECK

INITIAL SETUP

Applicable Configurations:
All

Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915

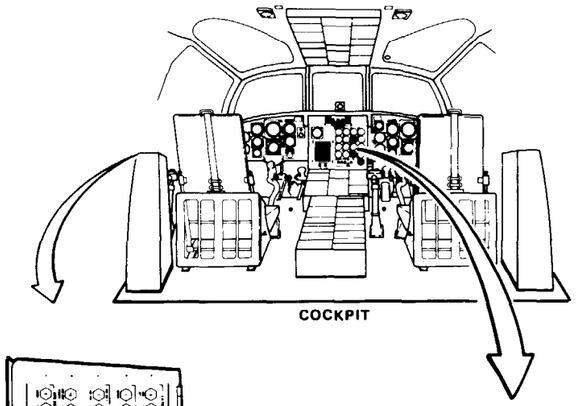
Materials:
None

Personnel Required:
68F10 Aircraft Electrician
68F20 Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off
Visual Check of Transmission Oil Temperature Indicating and Warning System Performed (Task 8-10.2)

TASK	RESULT
CHECK TRANSMISSION OIL TEMPERATURE INDICATING SYSTEM	
1. **Check** that **XMSN OIL TEMP circuit breaker (1)** is **closed.**	If circuit breaker (1) is open, close it. If it opens again, go to Task 8-10.4.
2. **Set** and **hold XMSN OIL TEMP switch (2)** to **TEST.**	Pointer on XMSN TEMP indicator (3) shall indicate below –70°C (–94°F). Switch (2) TEST position shall light. If pointer does not move below –70°C point, go to Task 8-10.5. If pointer moves below –70°C point but switch TEST position does not light, replace switch.
3. **Release XMSN OIL TEMP switch (2).**	Switch (2) shall return to SCAN position. SCAN position shall light. Indicator pointer shall move up scale and display a temperature near ambient temperature.
4. **Record indication on XMSN TEMP indicator (3).**	If switch does not return to SCAN, or SCAN position does not light, replace switch. If indicator pointer does not indicate near ambient temperature, go to Task 8-10.6.

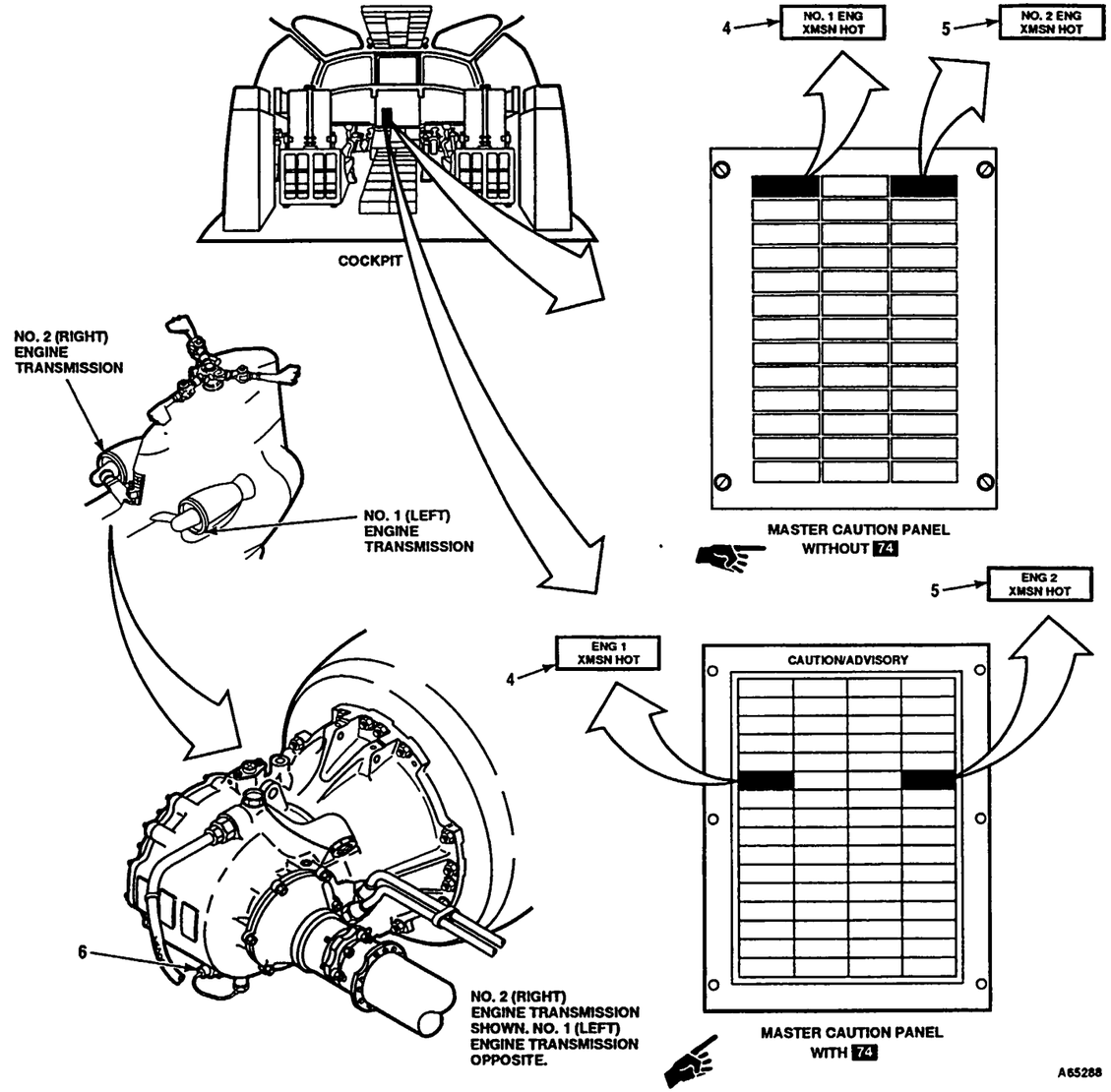


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TASK	RESULT
5. **Turn XMSN OIL TEMP switch (2)** to **FWD, AFT, MIX, LEFT, then RT position. Record indication** on **XMSN TEMP indicator (3)** for each switch position.	Each switch position shall light when selected. If not, replace XMSN OIL TEMP switch (2). Each indicator (3) indication shall be near ambient temperature. If not, go to Task 8-10.7.
6. **Compare highest indication recorded in step 5 with indication recorded in step 4.**	The difference in indications shall not exceed 5 percent. If it does, replace XMSN OIL TEMP switch (3).
7. **Turn XMSN OIL TEMP switch (2)** to **SCAN.**	Switch position that recorded highest indication in step 5 shall light. If it does not, replace switch (3).
CHECK TRANSMISSION OIL TEMPERATURE WARNING SYSTEM	
8. Without 74 **check NO. 1 ENG XMSN HOT and NO. 2 ENG XMSN HOT capsules (4 and 5).**	If capsule (4 or 5) is lit, go to Task 8-10.8.
With 74 **check ENG 1 XMSN HOT and ENG 2 XMSN HOT capsules (4 and 5).**	If capsule (4 or 5) is lit, go to Task 8-10.8.
9. **Disconnect plug from No. 1 (left) engine transmission temperature and chip detector (6). Short pins 3 and 4** with a wire.	NO. 1 ENG XMSN HOT (Without 74) ENG 1 XMSN HOT (With 74) capsule (4) shall come on. If it does not, go to Task 8-10.9.
10. **Remove wire.** Connect plug to temperature and chip detector (6).	Capsule (4) shall go out.
11. **Disconnect plug** from **No. 2 (right) engine transmission temperature and chip detector (6). Short pins 3 and 4** with a wire.	NO. 2 ENG XMSN HOT (Without 74) ENG 2 XMSN HOT (With 74) capsule (5) shall come on. If it does not, go to Task 8-10.9.
12. **Remove wire.** Connect plug to temperature and chip detector (6).	Capsule (5) shall go out.



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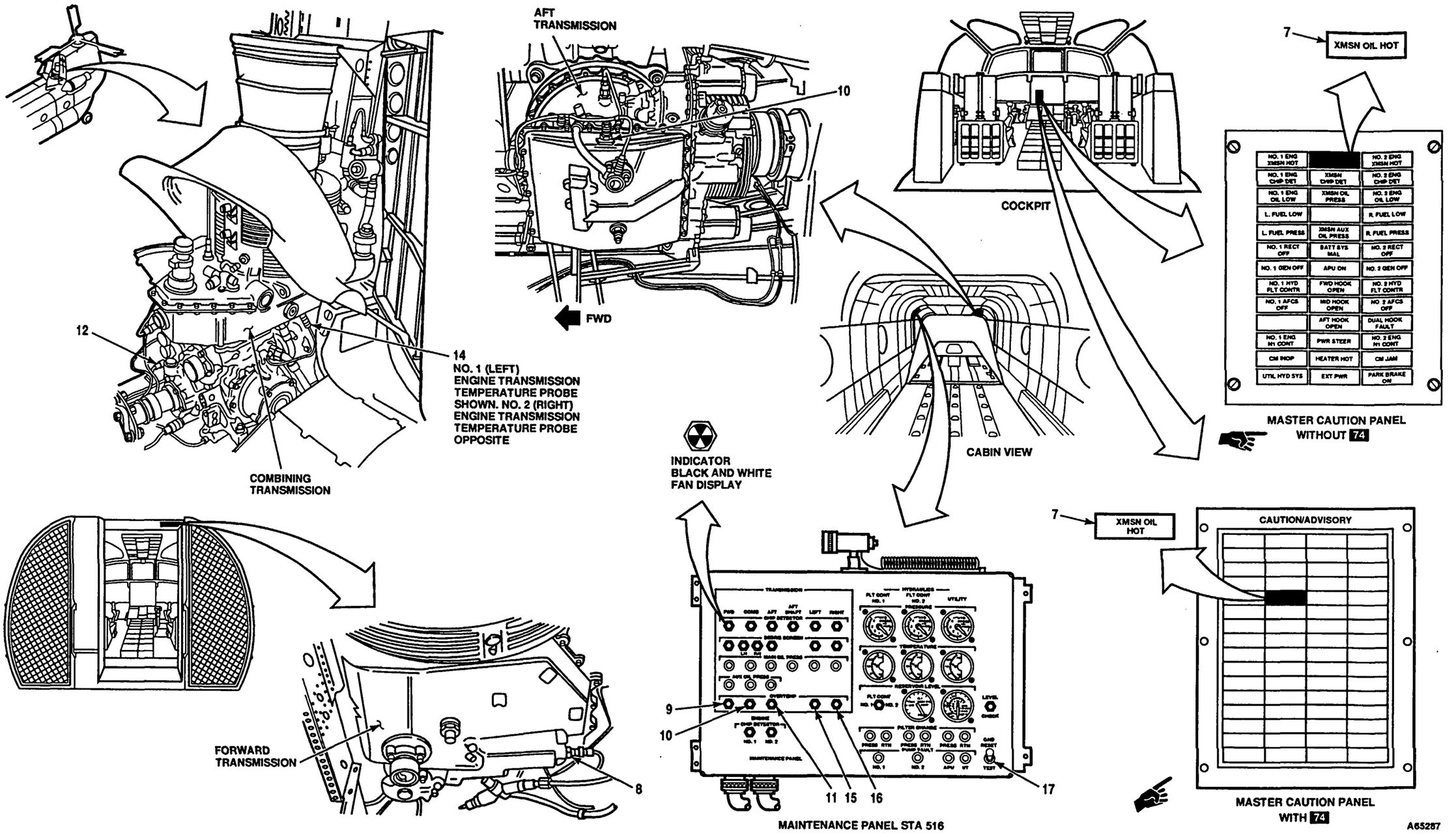
8-10.3 TRANSMISSION OIL TEMPERATURE INDICATING AND WARNING SYSTEM OPERATIONAL CHECK (Continued)

	TASK	RESULT
13.	**Check XMSN OIL HOT capsule (7).**	If capsule (7) is lit, go to Task 8-10.10.
14.	**Disconnect plug** from **forward transmission temperature probe (8). Short plug pins 2 and 3** with a wire.	XMSN OIL HOT capsule (7) shall come on. FORWARD TRANSMISSION OVERTEMP indicator (9) shall turn to a black-and-white fan display. If capsule (7) does not come on or annunciator (9) stays black, go to Task 8-10.11.
15.	**Remove wire** and connect plug to probe (8)	Capsule (7) shall go out. Indicator (9) shall stay black and white.
16.	**Disconnect plug** from **aft transmission temperature probe (10). Short plug pins 2 and 3** with a wire.	XMSN OIL HOT capsule (7) shall come on. AFT TRANSMISSION OVERTEMP indicator (11) shall turn to a black-and-white fan display. If capsule (7) does not come on or indicator (11) stays black, go to Task 8-10.12.
17.	**Remove wire** and connect plug to probe (10).	Capsule (7) shall go out. Indicator (11) shall stay black and white.
18.	**Disconnect plug** from **combining transmission temperature probe (12). Short plug pins 2 and 3** with a wire.	XMSN OIL HOT capsule (7) shall come on. COMB TRANSMISSION OVERTEMP indicator (13) shall turn to a black-and-white fan display. If capsule (7) does not come on or indicator (13) stays black, go to Task 8-10.13.
19.	**Remove wire** and connect plug to probe (12).	Capsule (7) shall go out. Indicator (13) shall stay black and white.
20.	**Disconnect plug** from **No. 1 (left) engine transmission temperature probe (14). Short plug pins 2 and 3** with a wire.	XMSN OIL HOT capsule (7) shall come on. LEFT TRANSMISSION OVERTEMP indicator (15) shall turn to a black-and-white fan display. If capsule (7) does not come on or indicator (15) stays black, go to Task 8-10.14.
21.	**Remove wire** and connect plug to probe (14).	Capsule (7) shall go out. Indicator (15) shall stay black and white.
22.	**Disconnect plug** from **No. 2 (right) engine transmission temperature probe (14). Short plug pins 2 and 3** with a wire.	XMSN OIL HOT capsule (7) shall come on. RIGHT TRANSMISSION OVERTEMP indicator (16) shall turn to a black-and-white fan display. If capsule (7) does not come on or indicator (16) stays black, go to Task 8-10.15.
23.	**Remove wire** and connect plug to probe (14).	Capsule (7) shall go out. Indicator (16) shall stay black and white.
24.	**Set GND switch (17)** to **RESET then** to **GND.**	Indicators (9, 11, 13, 15, and 16) shall turn all black. If any indicators are still black and white, go to Task 8-10.16.

FOLLOW-ON MAINTENANCE:

TM 55-1520-240-23
- Electrical Power Off
- Battery Disconnected
- Forward Drip Pan Installed
- Left and Right Forward Work Platforms Closed
- Aft Transmission Baffles Closed
- Pylon Hinged Fairing Closed
- Pylon Lower Fairing Closed
- Engine Transmission Fairing Installed
- Engine Air Inlet Screens Installed

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12
14
NO. 1 (LEFT) ENGINE TRANSMISSION TEMPERATURE PROBE SHOWN. NO. 2 (RIGHT) ENGINE TRANSMISSION TEMPERATURE PROBE OPPOSITE
COMBINING TRANSMISSION
AFT TRANSMISSION
10
FWD
INDICATOR BLACK AND WHITE FAN DISPLAY
COCKPIT
CABIN VIEW
7
XMSN OIL HOT
NO. 1 ENG XMSN HOT
NO. 2 ENG XMSN HOT
NO. 1 ENG CHIP DET
XMSN CHIP DET
NO. 2 ENG CHIP DET
NO. 1 ENG OIL LOW
XMSN OIL PRESS
NO. 2 ENG OIL LOW
L. FUEL LOW
R. FUEL LOW
L. FUEL PRESS
XMSN AUX OIL PRESS
R. FUEL PRESS
NO. 1 RECT OFF
BATT SYS MAL
NO. 2 RECT OFF
NO. 1 GEN OFF
APU ON
NO. 2 GEN OFF
NO. 1 HYD FLT CONTR
FWD HOOK OPEN
NO. 2 HYD FLT CONTR
NO. 1 AFCS OFF
MID HOOK OPEN
NO. 2 AFCS OFF
AFT HOOK OPEN
DUAL HOOK FAULT
NO. 1 ENG N1 CONT
PWR STEER
NO. 2 ENG N1 CONT
CM PROP
HEATER HOT
CM JAM
UTIL HYD SYS
EXT PWR
PARK BRAKE ON
MASTER CAUTION PANEL WITHOUT 74
FORWARD TRANSMISSION
8
9
10
11
15
16
17
MAINTENANCE PANEL STA 516
7
XMSN OIL HOT
CAUTION/ADVISORY
MASTER CAUTION PANEL WITH 74
A65287

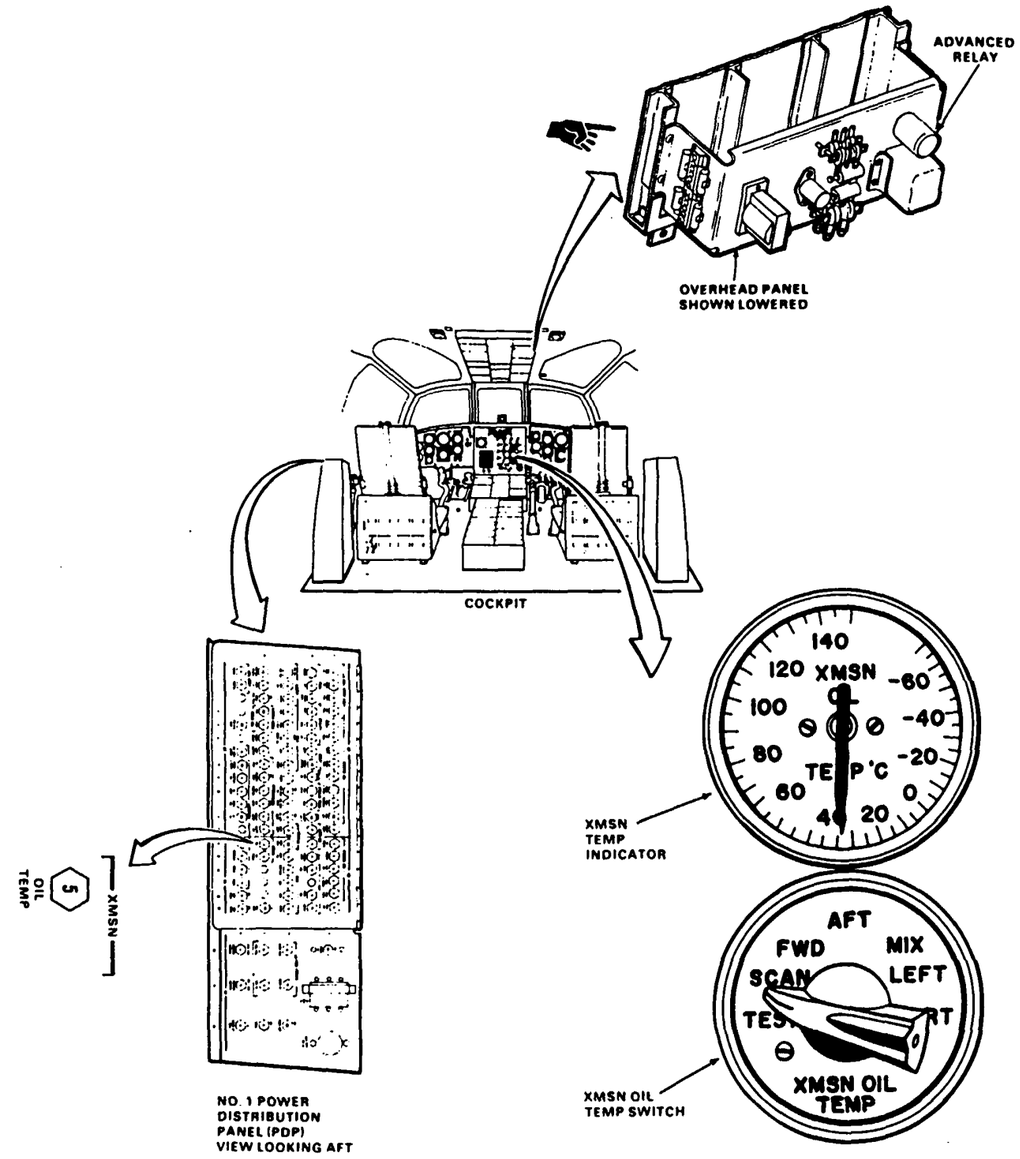
END OF TASK

8-10.4 XMSN OIL TEMP CIRCUIT BREAKER WILL NOT STAY CLOSED

FAULT ISOLATION PROCEDURE

INITIAL SETUP

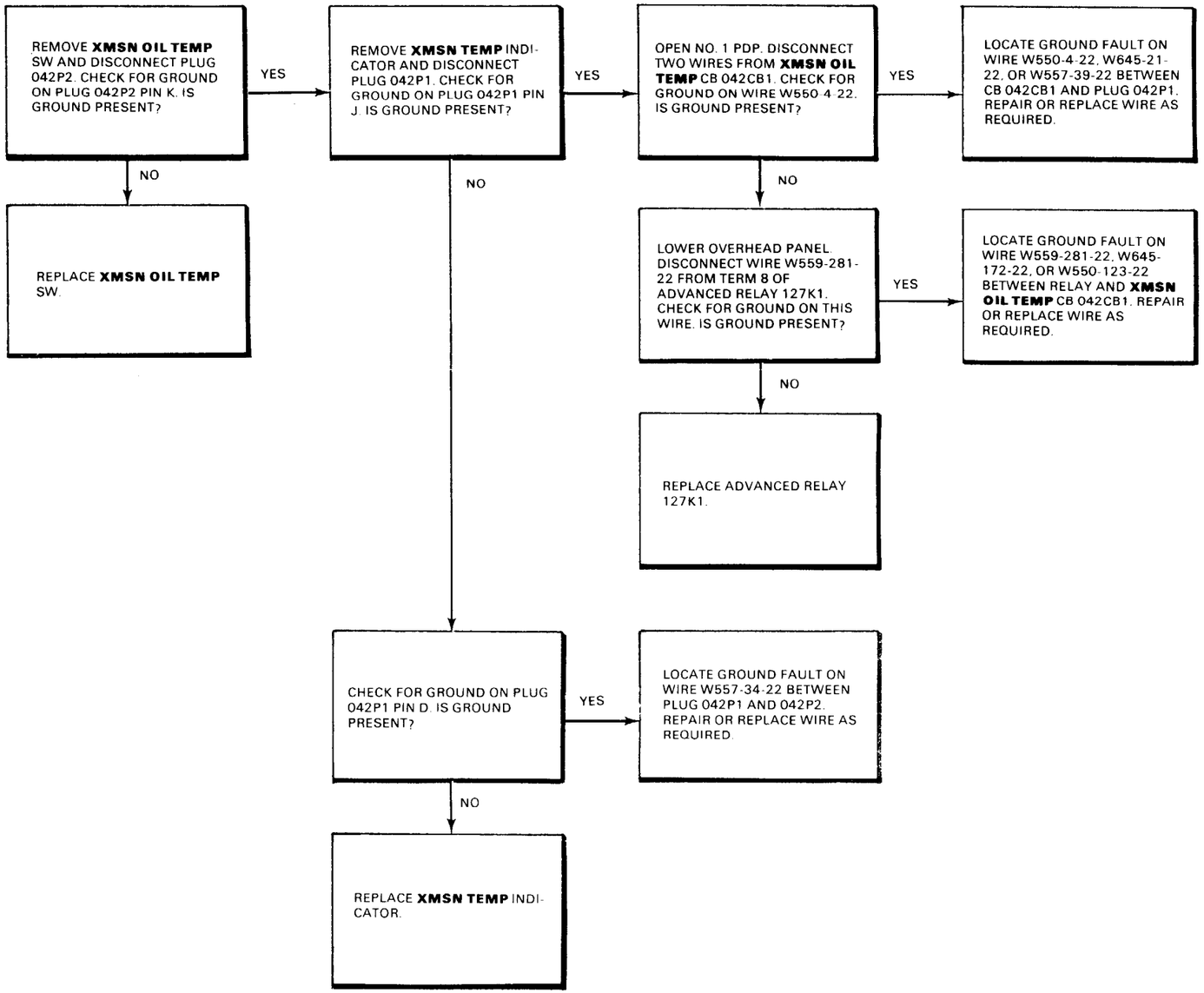
Applicable Configurations:
All
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter
Materials:
None
Personnel Required:
Aircraft Electrician
References:
TM 55-1520-240-23
Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off



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8-10.4 XMSN OIL TEMP CIRCUIT BREAKER WILL NOT STAY CLOSED (Continued)



END OF TASK

8-10.5 XMSN TEMP INDICATOR POINTER DOES NOT MOVE BELOW -70°C DURING TEST

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

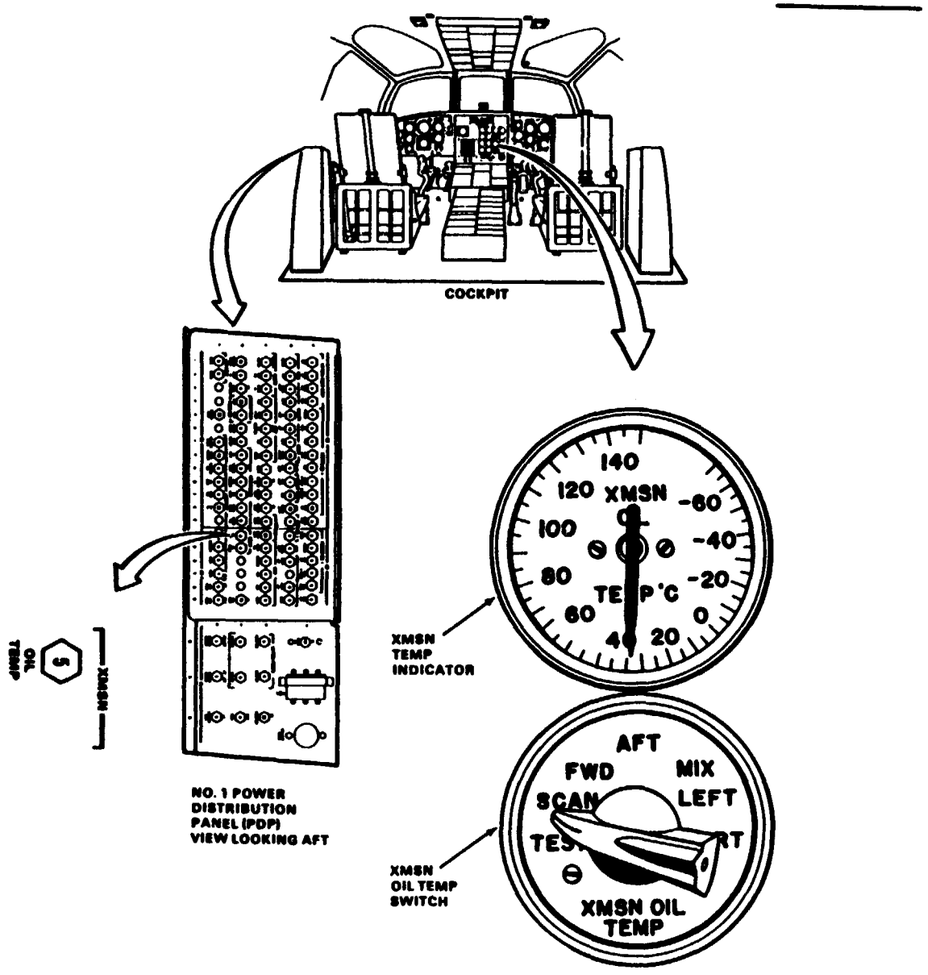
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:
None

Personnel Required:
68F10 Aircraft Electrician
68F20 Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off

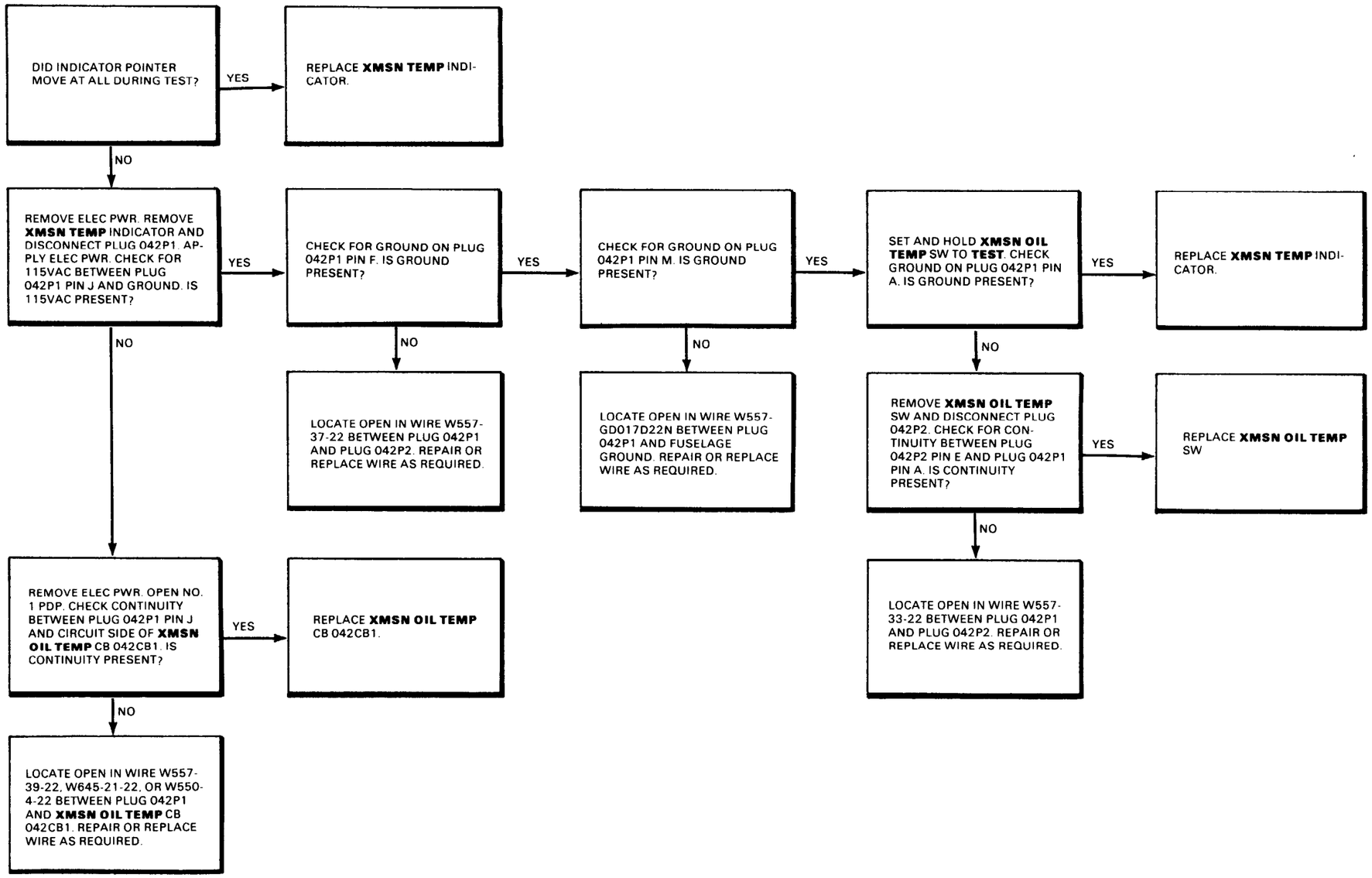


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8-10.5 XMSN TEMP INDICATOR POINTER DOES NOT MOVE BELOW -70° DURING TEST (Continued)



END OF TASK

8-10.6 XMSN TEMP INDICATOR POINTER DOES NOT INDICATE AMBIENT TEMPERATURE AT SCAN

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

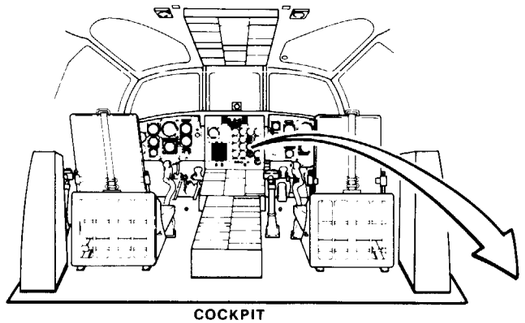
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

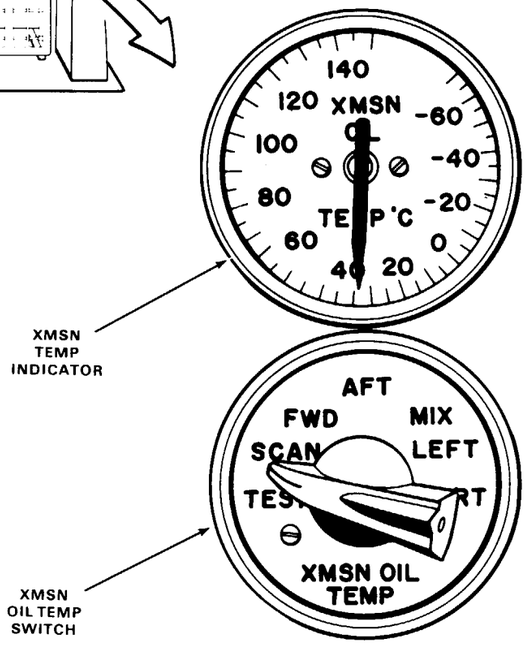
Materials:
None

Personnel Required:
68F10 Aircraft Electrician
68F20 Aircraft Electrician

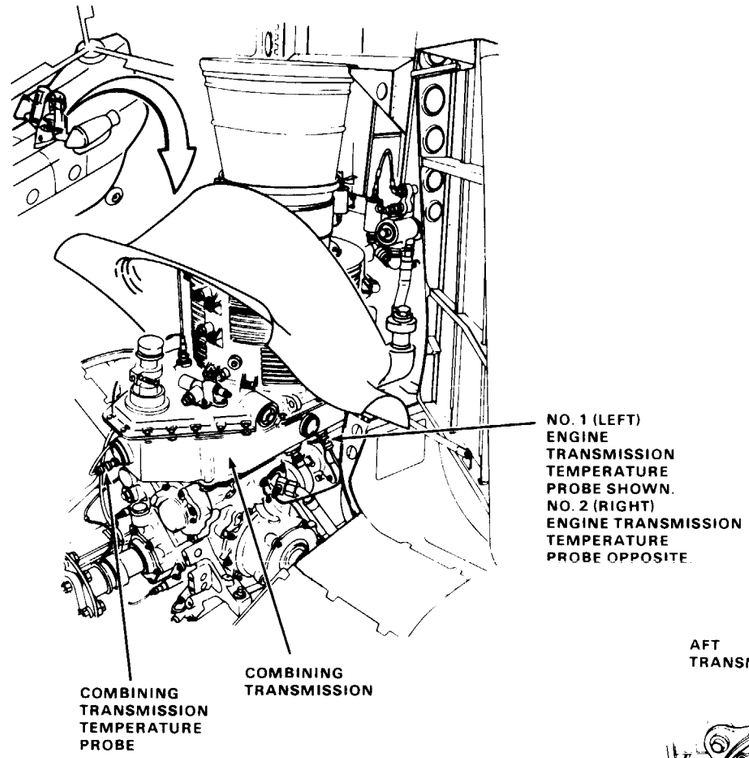
References:
TM 55-1520-240-23

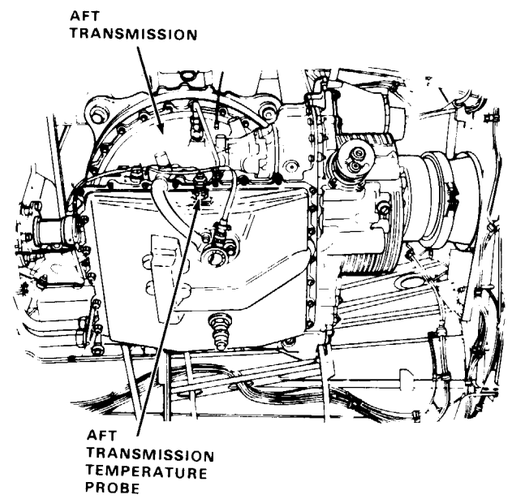
Equipment Condition:
TM 55-1520-240-23
Battery Connected
Electrical Power On
Hydraulic Power Off

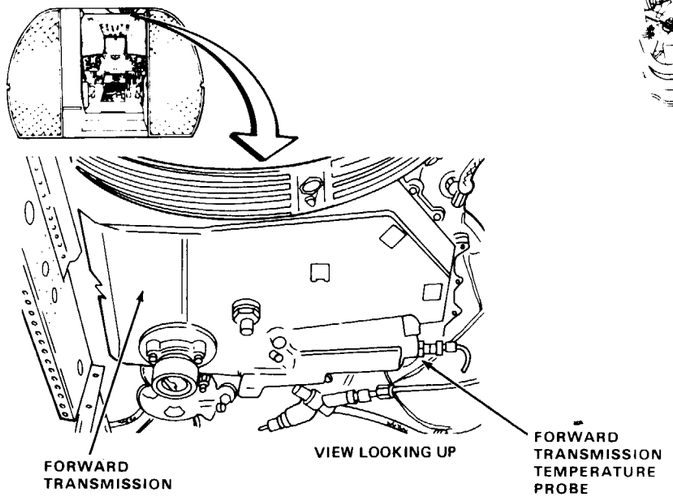




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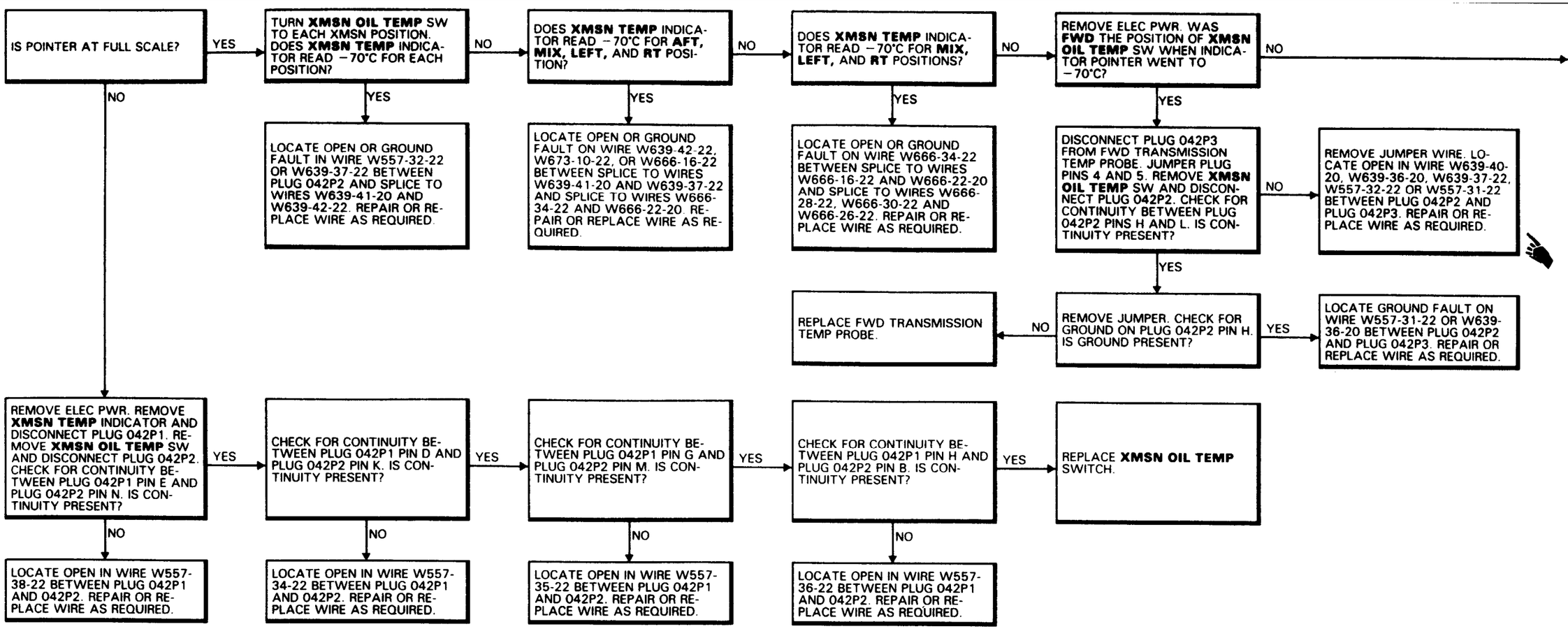




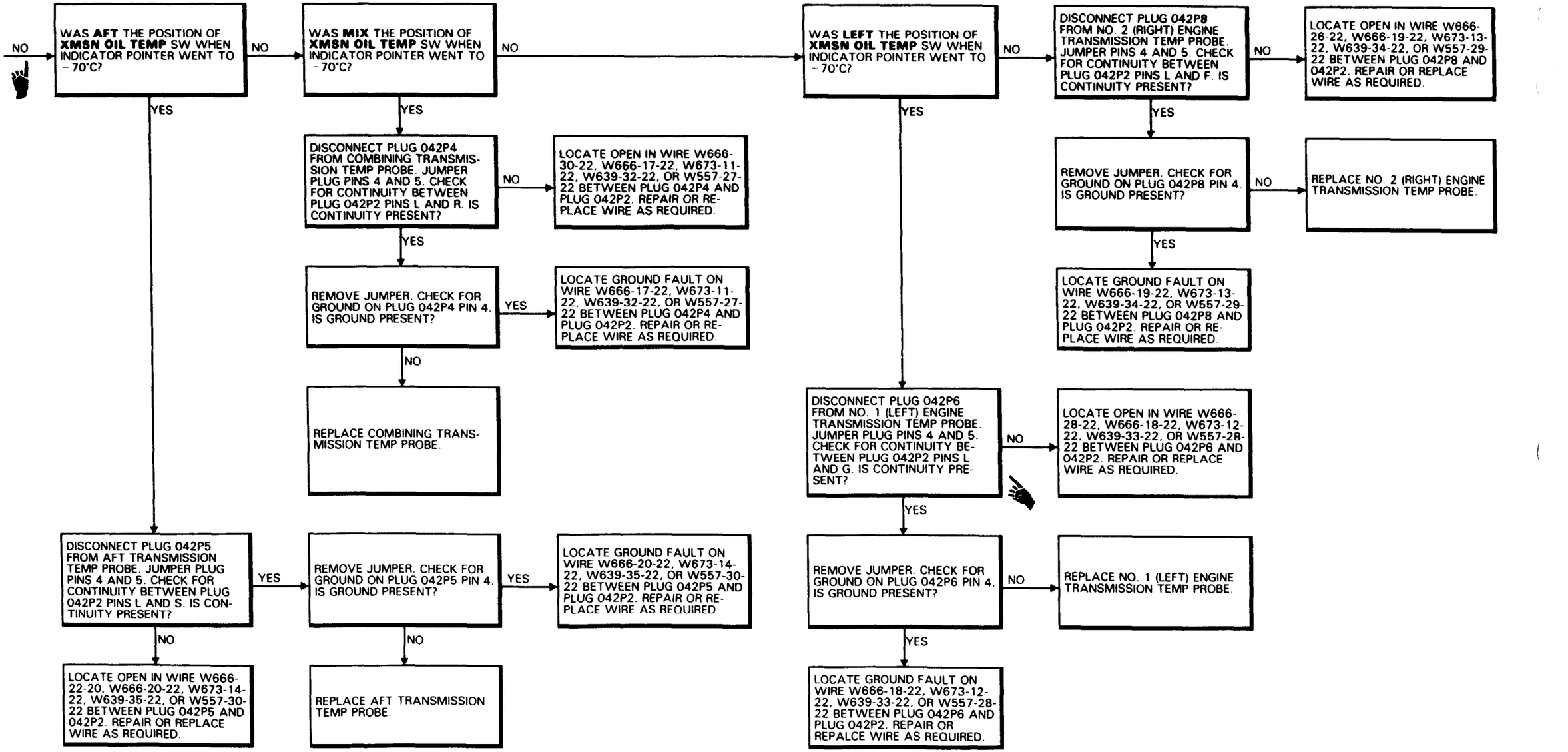


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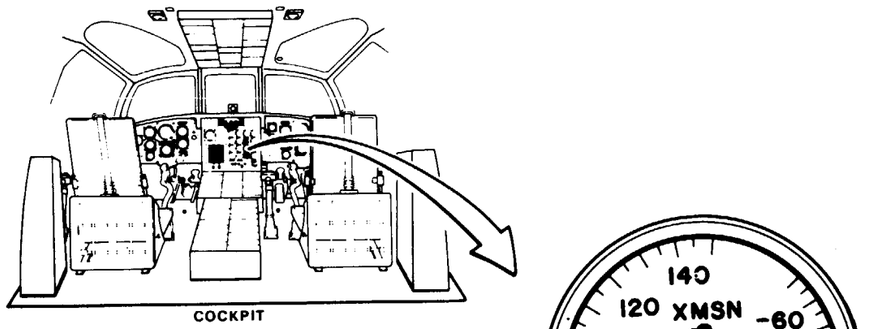


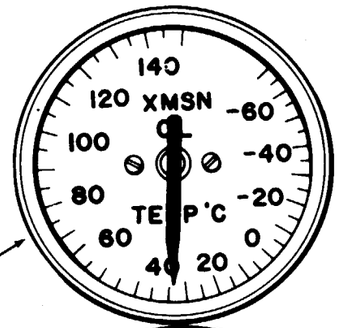
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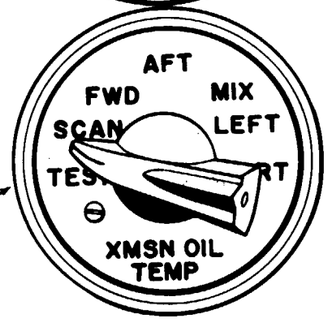
GO TO NEXT PAGE

8-10.6 XMSN TEMP INDICATOR POINTER DOES NOT INDICATE AMBIENT TEMPERATURE AT SCAN (Continued)

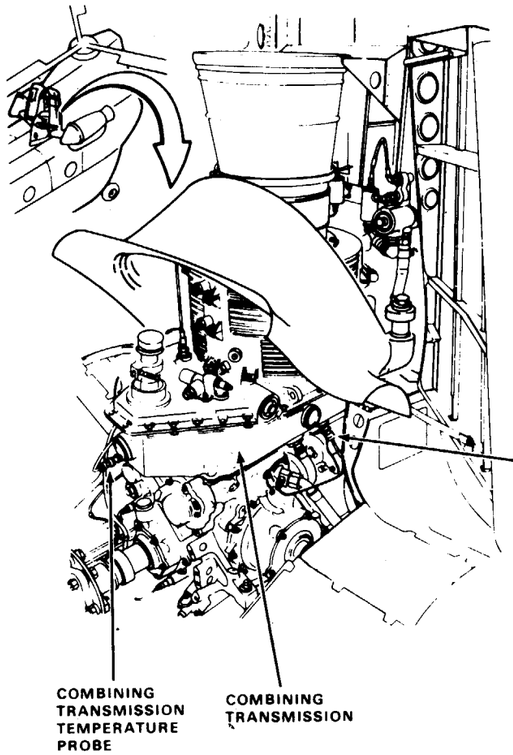


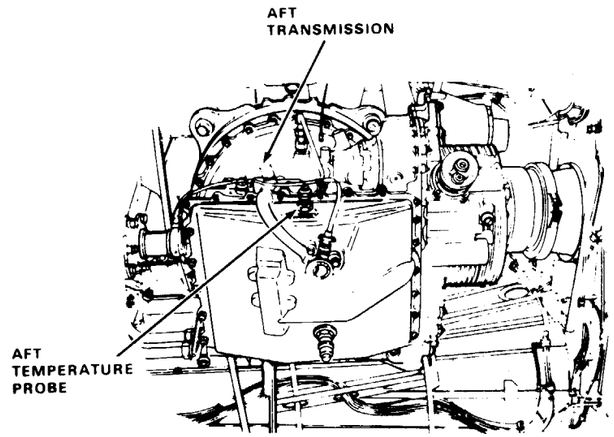


XMSN TEMP INDICATOR



XMSN OIL TEMP SWITCH





90 x 54

D145-11113-SPA

END OF TASK

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:
None

Personnel Required:
Aircraft Electrician

Referances:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off

REMOVE **XMSN OIL TEMP** IND AND DISCONNECT PLUG. DISCONNECT PLUG ON FAULTY TEMPERATURE PROBE. CHECK FOR CONTINUITY AT FAULTY SW POSITION BETWEEN PLUG 042P2 PINS:

SW POSITION	PLUG PINS
FWD–	H AND D
	L AND D
AFT–	S AND D
MIX–	R AND D
LEFT–	G AND D
RT–	F AND D
	E AND D

WAS CONTINUITY PRESENT ON ANY WIRE?

NO

REMOVE ELEC PWR. REMOVE **XMSN OIL TEMP** SW AND DISCONNECT PLUG 042P2. CHECK RESISTANCE FOR FAULTY SW POSITION BETWEEN FOLLOWING PLUG 042P2 PINS.

SW POSITION	PLUG PINS
FWD–	H AND L
AFT–	S AND L
MIX–	R AND L
LEFT–	G AND L
RT–	F AND L

IS 1100 TO 1400 OHMS PRESENT?

YES

REPLACE **XMSN OIL TEMP** SWITCH.

YES

LOCATE GROUND FAULT ON WIRE AT FAULTY SW POSITION:

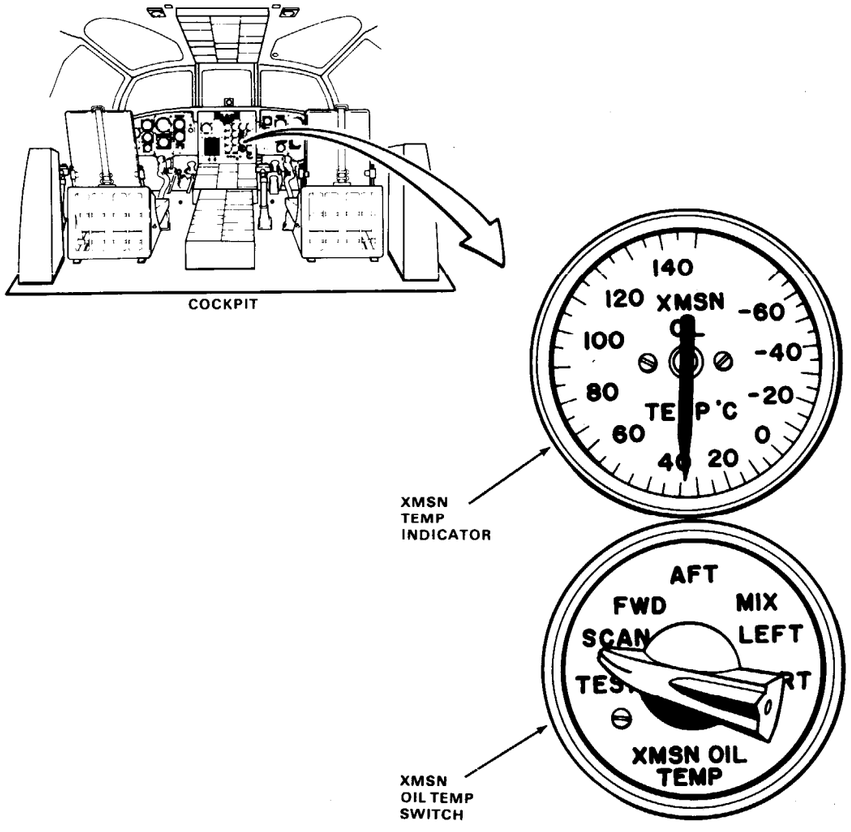
SW POSITION	WIRE NOS.
FWD–	W557-31-22, W639-36-20
AFT–	W557-30-22, W639-35-22
	W673-14-22, W666-20-22
MIX–	W557-27-22, W639-32-22
	W673-11-22, W666-17-22
LEFT–	W557-28-22, W639-33-22
	W673-12-22, W666-18-22
RT–	W557-29-22, W639-34-22
	W673-13-22, ,W666-19-22

BETWEEN PLUG 042P2 AND PLUG:

SW POSITION	
FWD-042P3–	REPAIR OR
AFT-042P5–	REPLACE
MIX-042P4–	WIRE AS
LEFT-042P6–	REQUIRED
RT-042P8–	

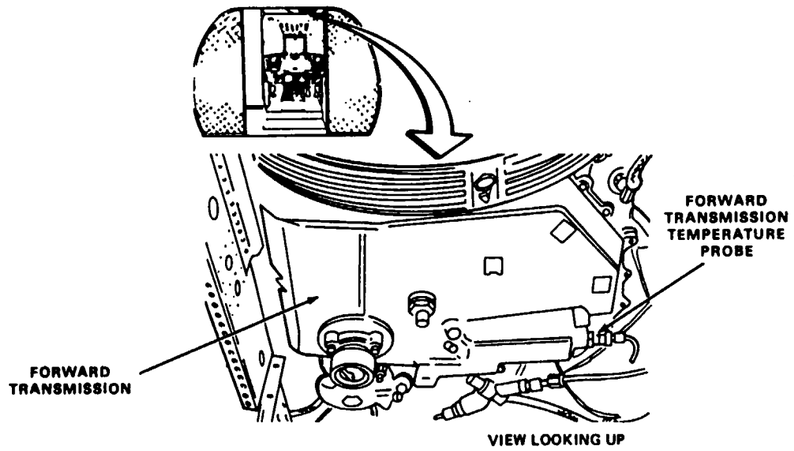
NO

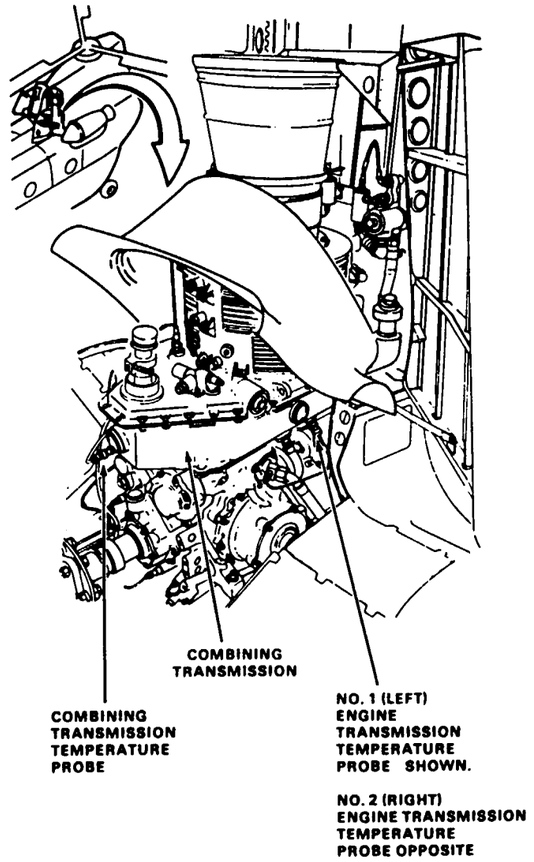
REPLACE TEMPERATURE PROBE AT FAULTY SW POSITION.

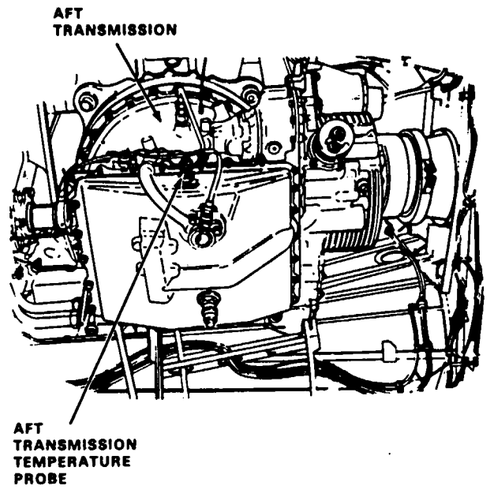


D145-11114-SPA

GO TO NEXT PAGE







30 x 54

0145-11115-SPA

END OF TASK
Change 1 8-233

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

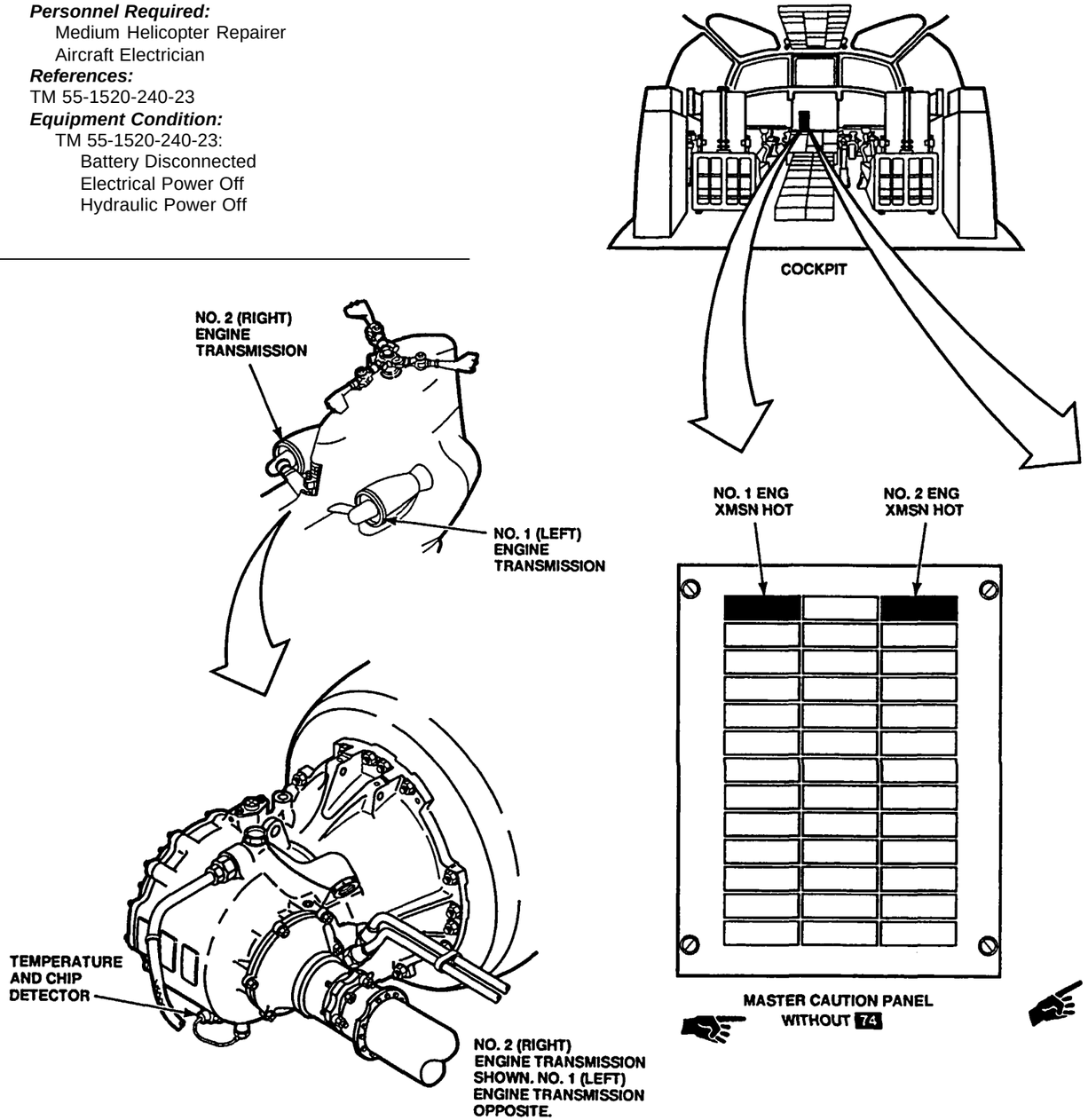
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Aircraft Mechanic's Tool Kit,
NSN 5180-00-323-4692
Multimeter

Materials:
None

Personnel Required:
Medium Helicopter Repairer
Aircraft Electrician

References:
TM 55-1520-240-23

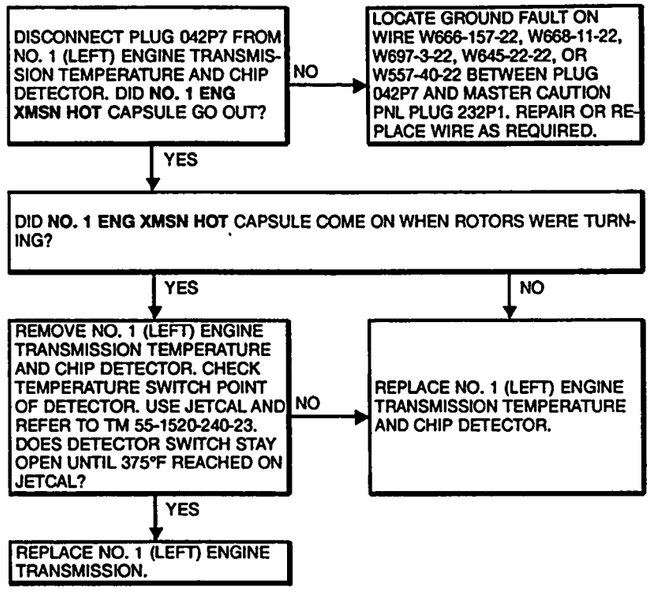
Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off



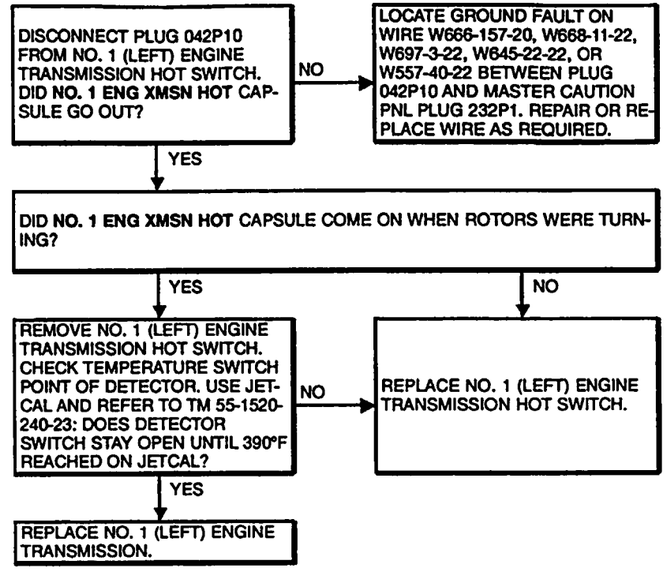
A65286

GO TO NEXT PAGE

■ NO. 1 ENG XMSN HOT CAPSULE LIT (WITHOUT 37) (WITHOUT 74)

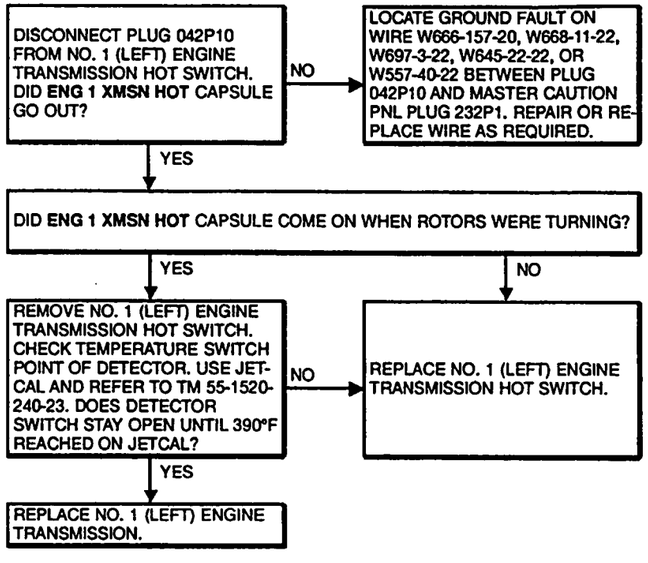


■ NO. 1 ENG XMSN HOT CAPSULE LIT (WITH 37) (WITHOUT 74)

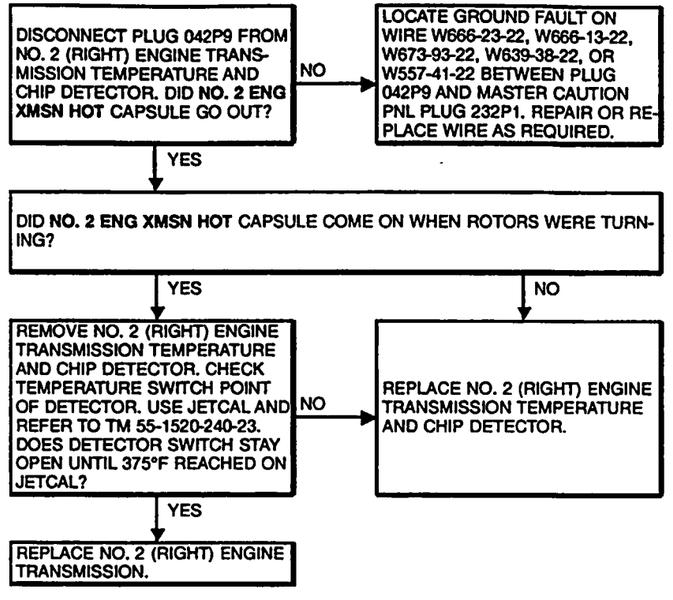


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ENG 1 XMSN HOT CAPSULE LIT (WITH 37) (WITH 74)

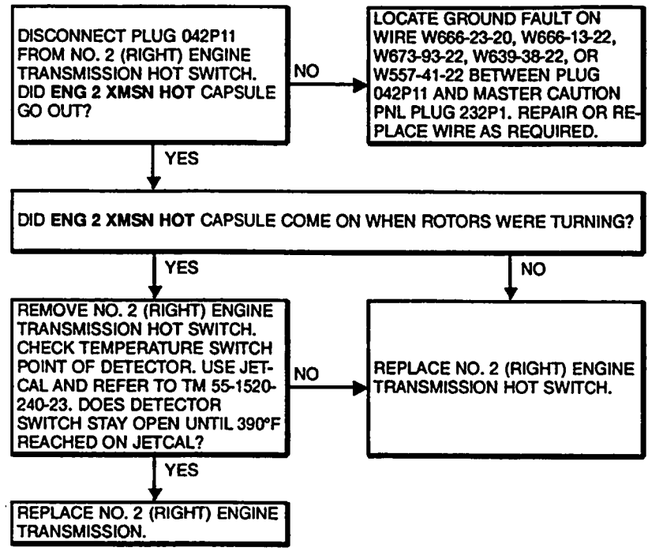


NO. 2 ENG XMSN HOT CAPSULE LIT (WITHOUT 37) (WITHOUT 74)

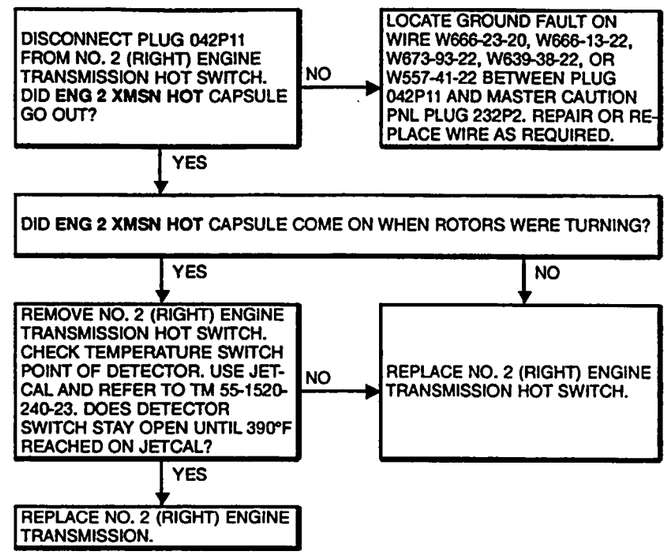


GO TO NEXT PAGE

NO. 2 ENG XMSN HOT CAPSULE LIT (WITH 37) (WITHOUT 74)



ENG 2 XMSN HOT CAPSULE LIT (WITH 37) (WITH 74)



END OF TASK

8-10.9 NO. 1 OR NO. 2 ENG XMSN HOT (WITHOUT 74), ENG 1 OR ENG 2 XMSN HOT (WITH 74) CAPSULE DOES NOT COME ON DURING TEST

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

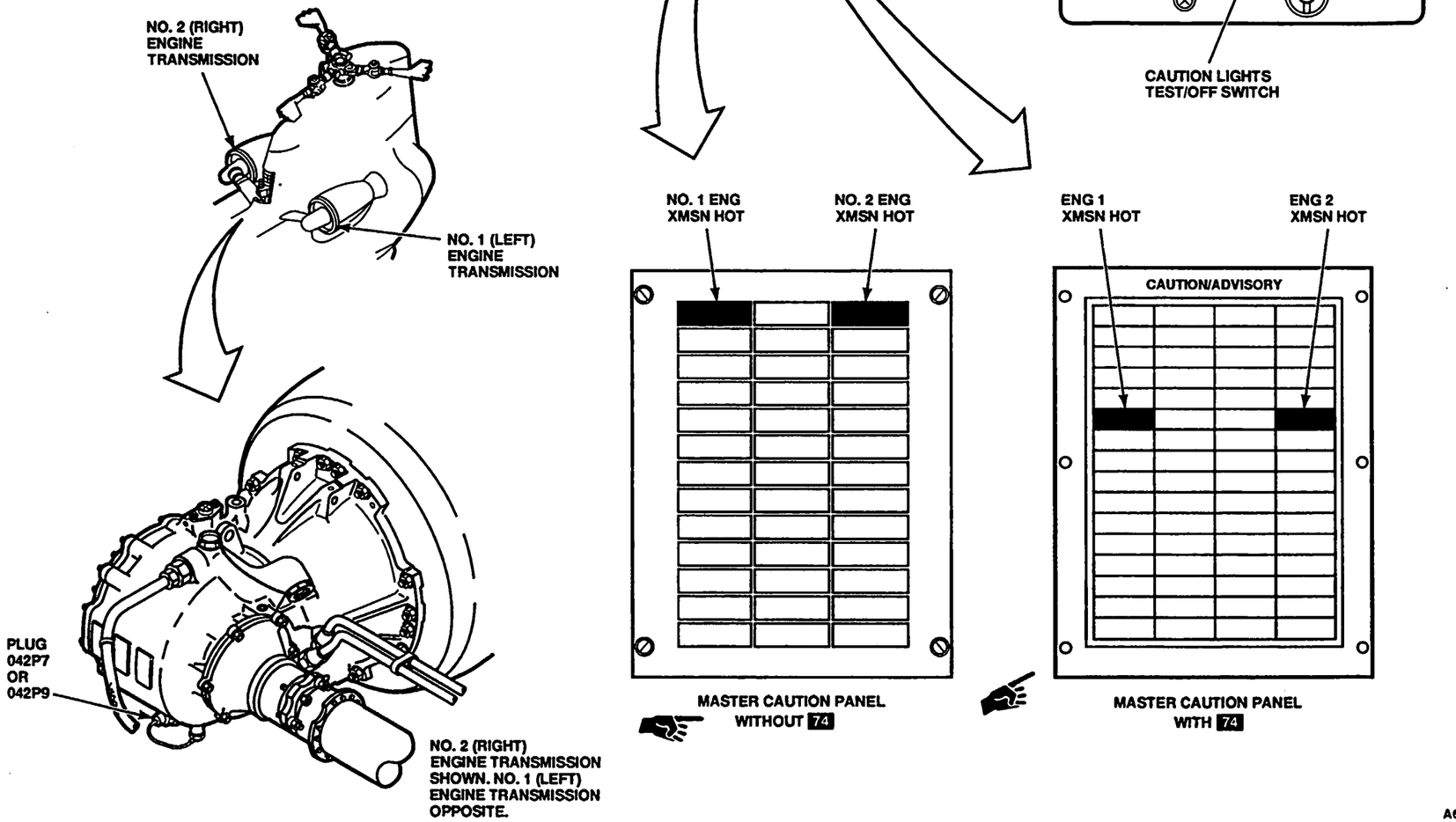
Tools:
Electrical Repairer's Tool Kit, NSN 5180-00323-4915
Multimeter

Materials:
None

Personnel Required:
Aircraft Electrician (2)

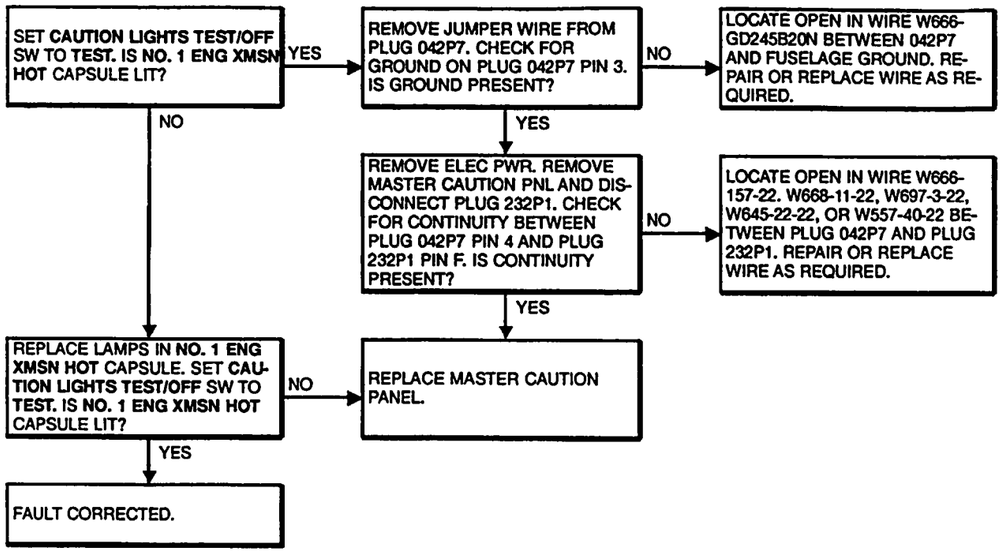
References:
TM 5-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off

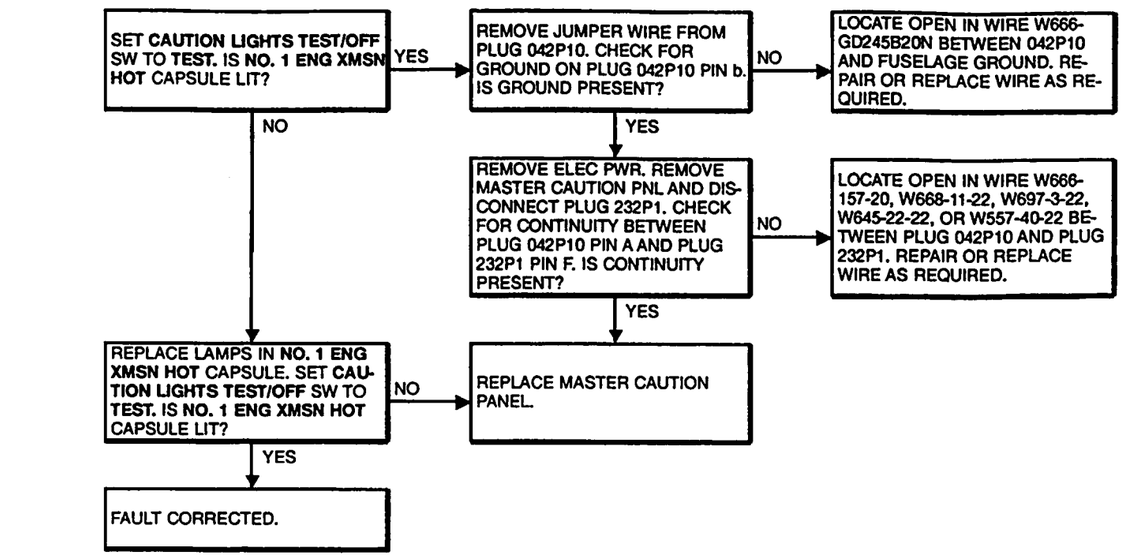


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NO. 1 ENG XMSN HOT CAPSULE DOES NOT COME ON DURING TEST (WITHOUT 37) (WITHOUT 74)

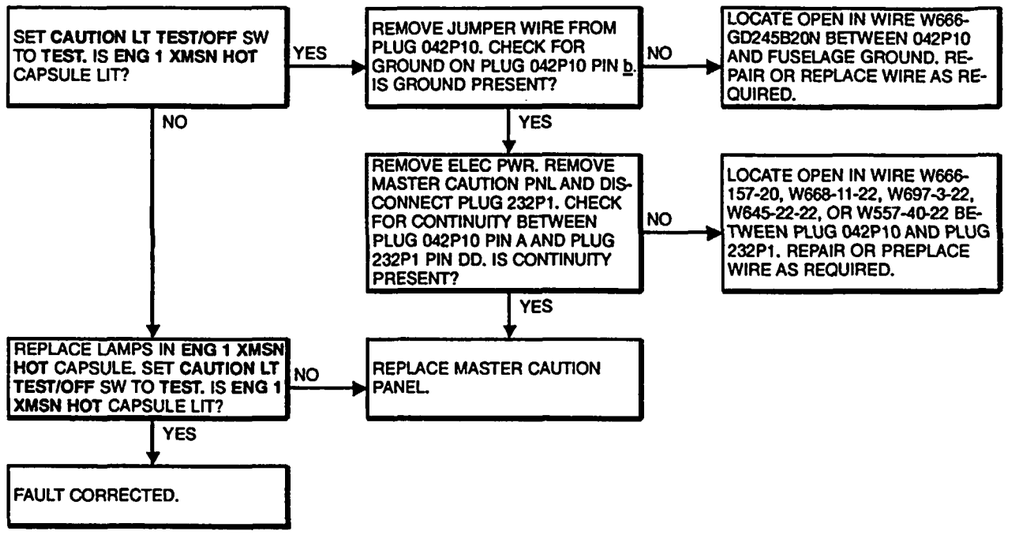


NO. 1 ENG XMSN HOT CAPSULE DOES NOT COME ON DURING TEST (WITH 37) (WITHOUT 74)

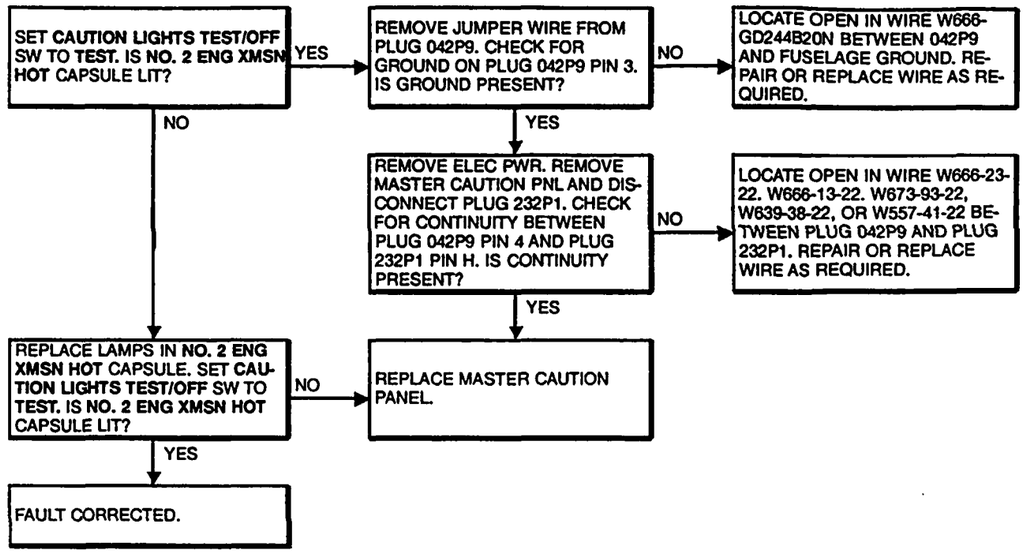


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ENG 1 XMSN HOT CAPSULE DOES NOT COME ON DURING TEST (WITH 37) (WITH 74)

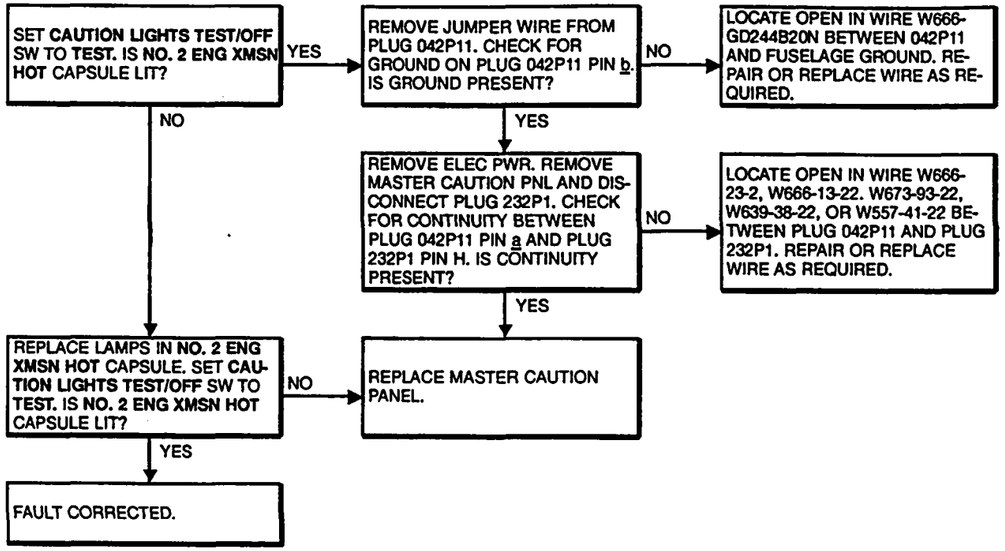


NO. 2 ENG XMSN HOT CAPSULE DOES NOT COME ON DURING TEST (WITHOUT 37) (WITHOUT 74)

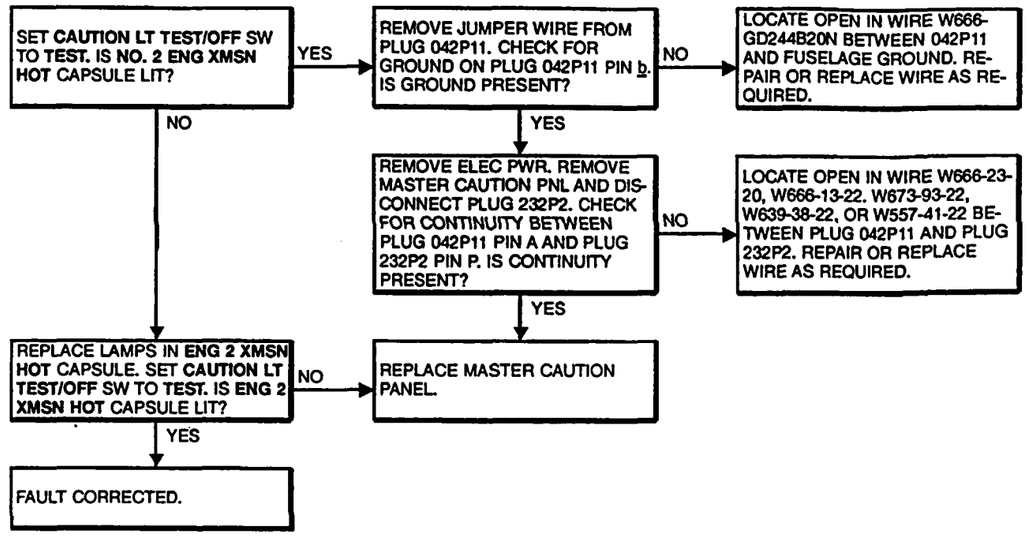


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NO. 2 ENG XMSN HOT CAPSULE DOES NOT COME ON DURING TEST (WITH 37) (WITHOUT 74)



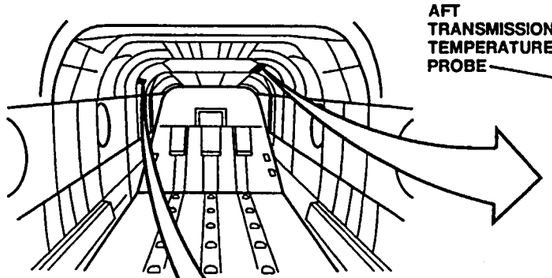
ENG 2 XMSN HOT CAPSULE DOES NOT COME ON DURING TEST (WITH 37) (WITH 74)

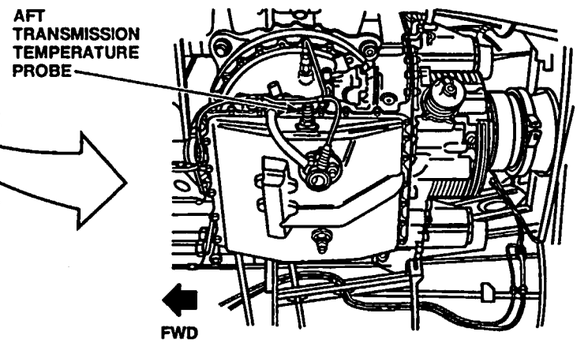


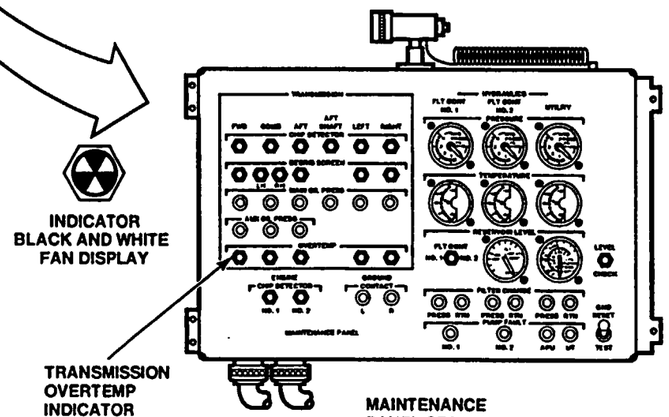
END OF TASK

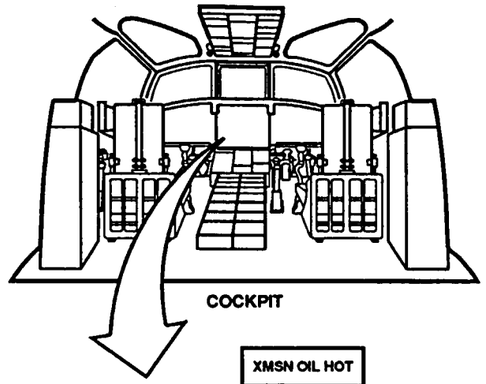
FAULT ISOLATION PROCEDURE

INITIAL SETUP
Applicable Configurations:
All
Tools:
Electrical Repairer's Tool Kit, NSN 5180-00-323-4915
Multimeter
Materials:
None
Personnel Required:
Aircraft Electrician
References:
TM 55-1520-240-23
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off

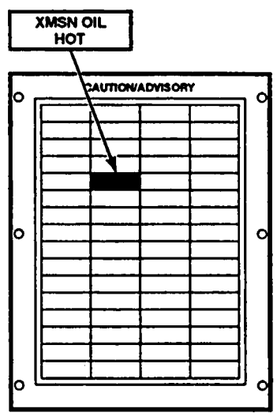




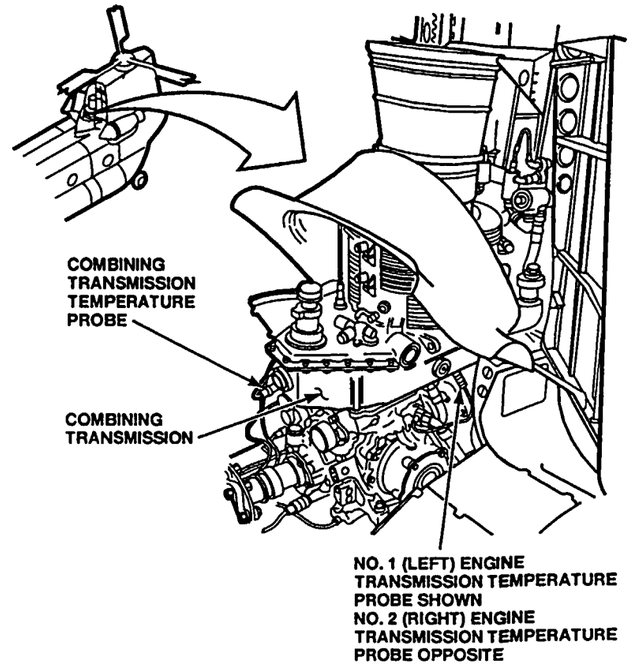


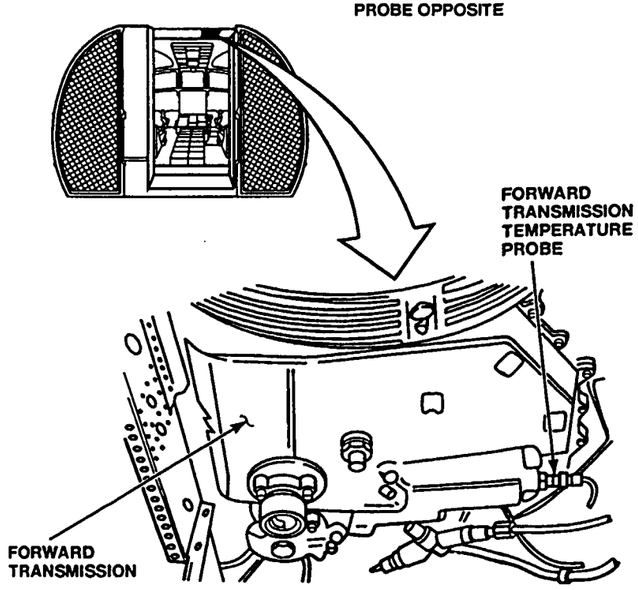


MASTER CAUTION PANEL WITHOUT 74



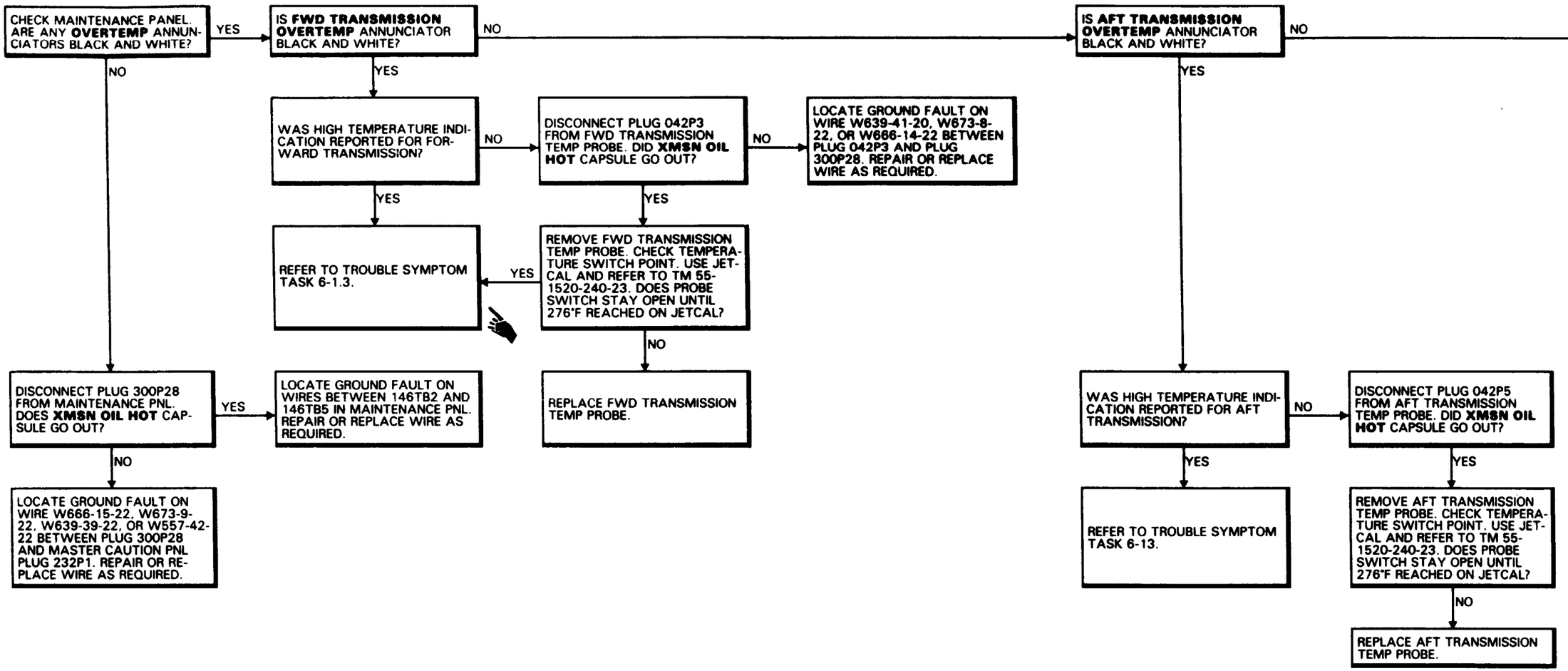
MASTER CAUTION PANEL WITH 74



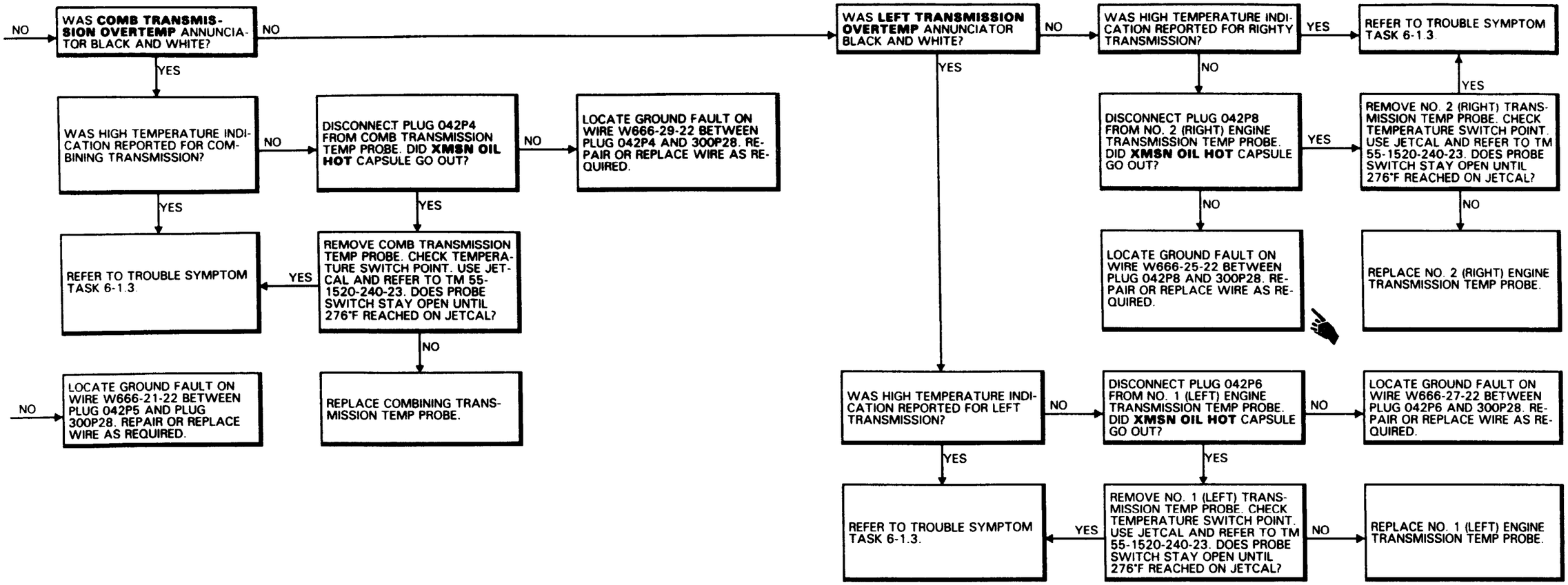


A65324

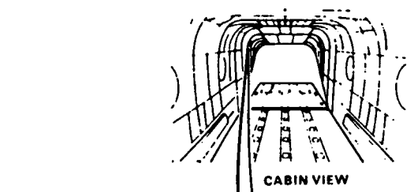
GO TO NEXT PAGE



GO TO NEXT PAGE

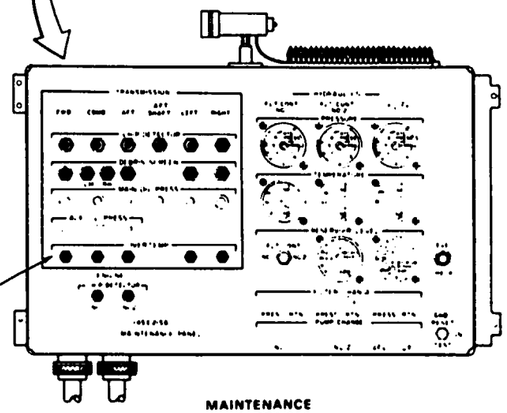


GO TO NEXT PAGE

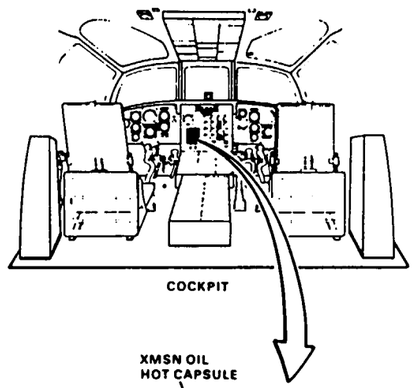




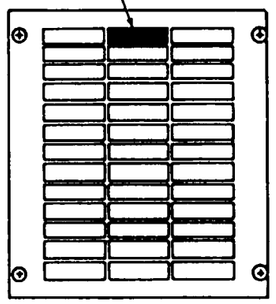
INDICATOR
BLACK-AND-WHITE
FAN DISPLAY



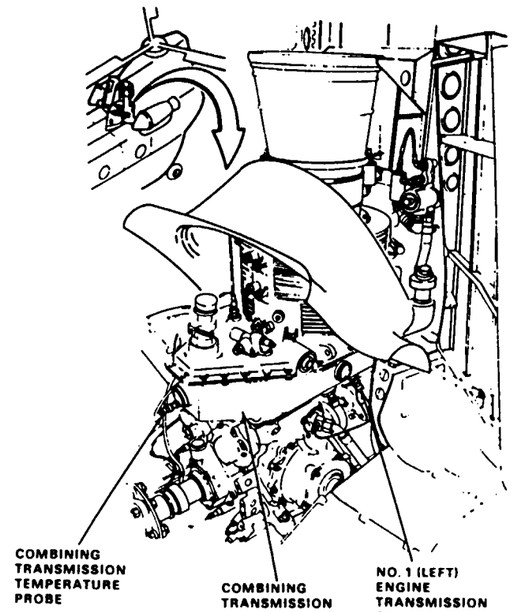
MAINTENANCE
PANEL STA 516



XMSN OIL
HOT CAPSULE



MASTER CAUTION PANEL



90X54

0145-11119-SPA

END OF TASK
8-241

8-10.11 XMSN OIL HOT CAPSULE LIT OR FWD TRANSMISSION OVERTEMP INDICATOR IS BLACK DURING TEST 8-10.11

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
Without 74

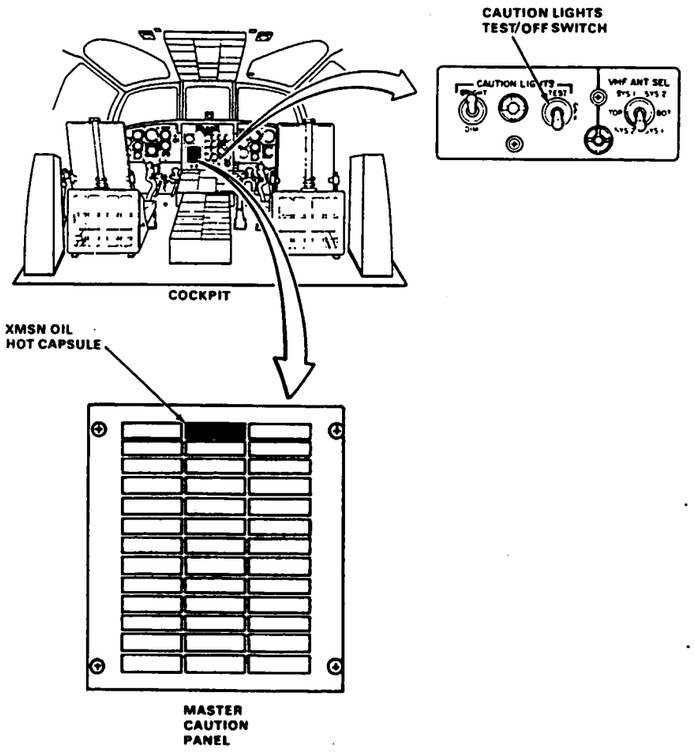
Tools:
Electrical Repairer's Tool Kit, NSN 5180-00-323-4915
Multimeter

Materials:
None

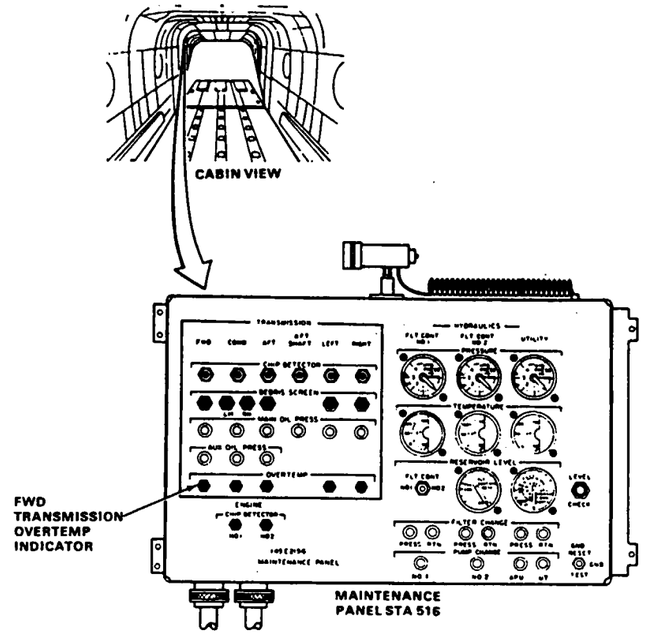
Personnel Required:
Aircraft Electrician

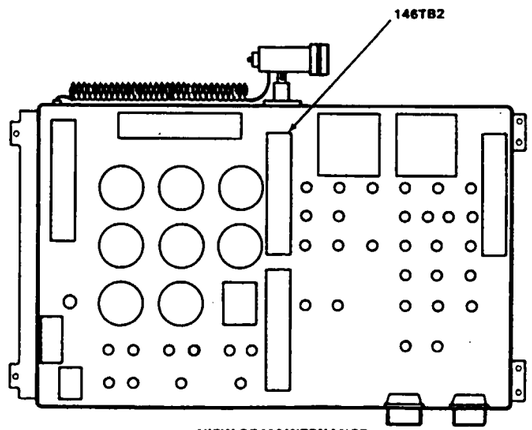
References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off



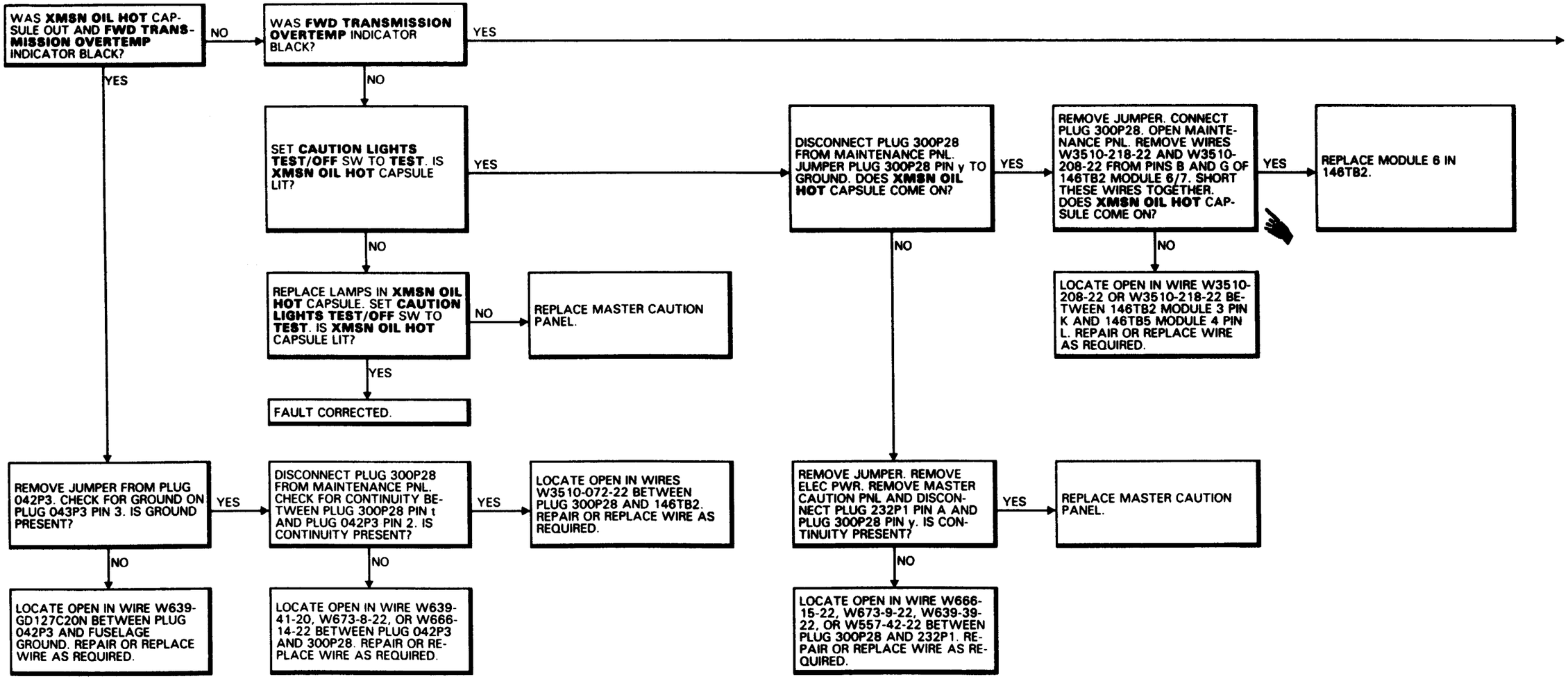
90X54





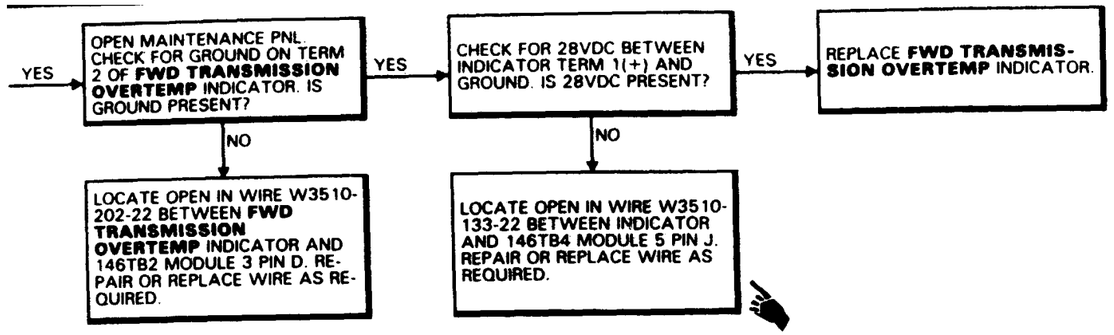
D145-11120-SPA

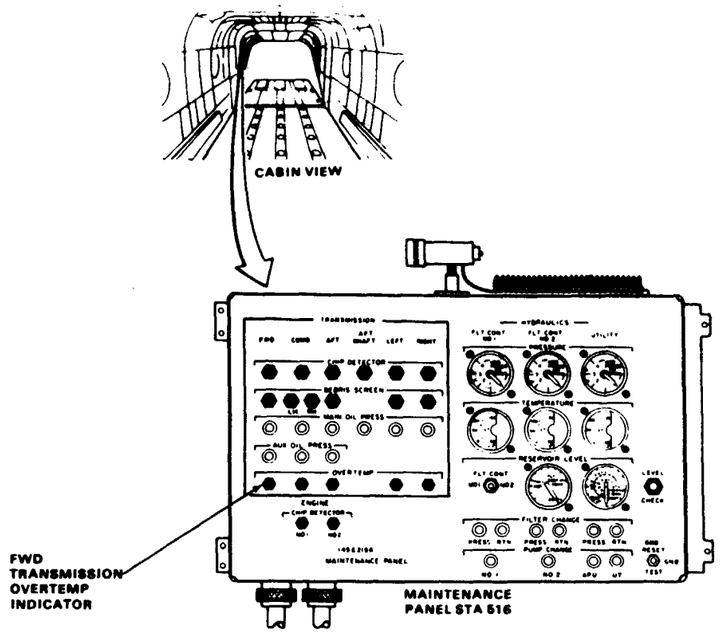
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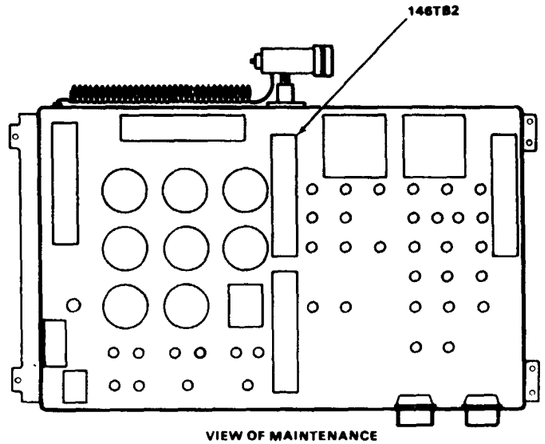


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8-10.11 XMSN OIL HOT CAPSULE LIT OR FWD TRANSMISSION OVERTEMP INDICATOR IS BLACK DURING TEST (Continued)







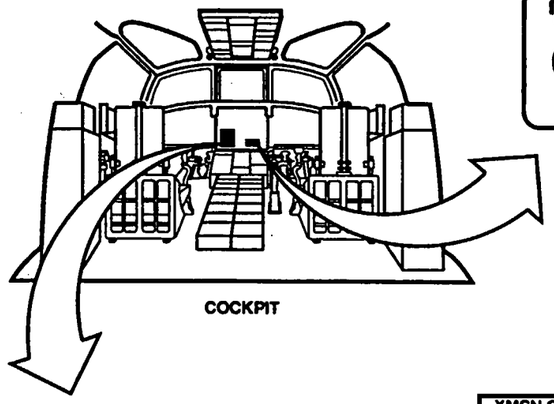
49 x 54

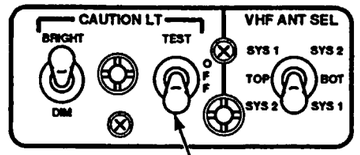
0145-11121-SPA

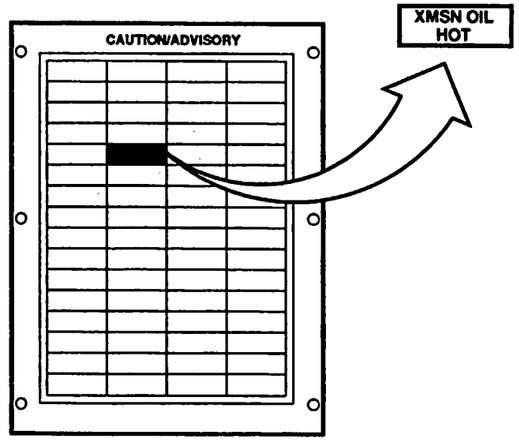
END OF TASK

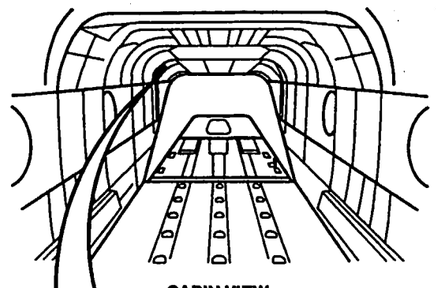
FAULT ISOLATION PROCEDURE

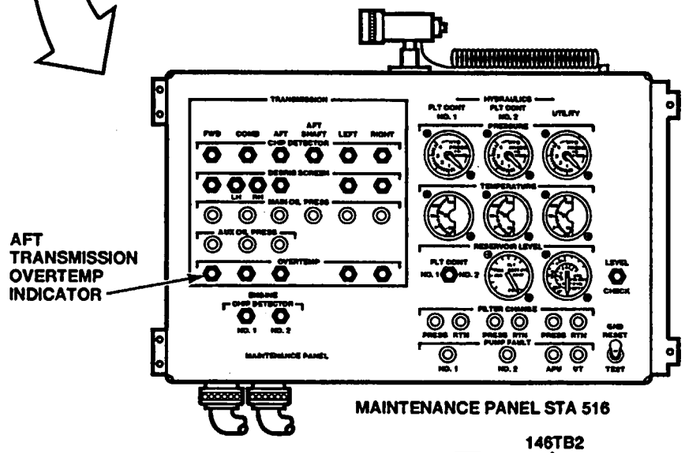
INITIAL SETUP
Applicable Configurations:
With 74
Tools:
Electrical Repairer's Tool Kit, NSN 5180-00-3234915
Multimeter
Materials:
None
Personnel Required:
Aircraft Electrician
References:
TM 55-1520-240-23
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off

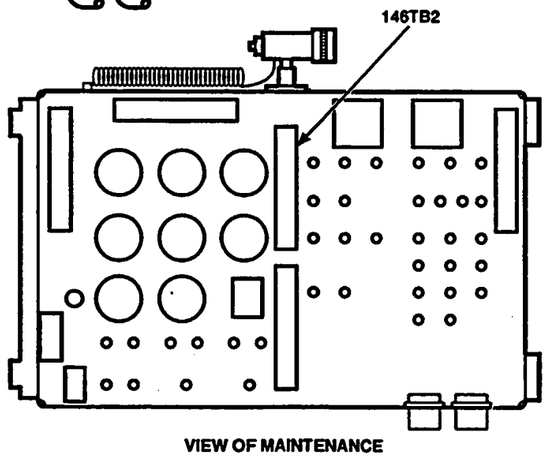






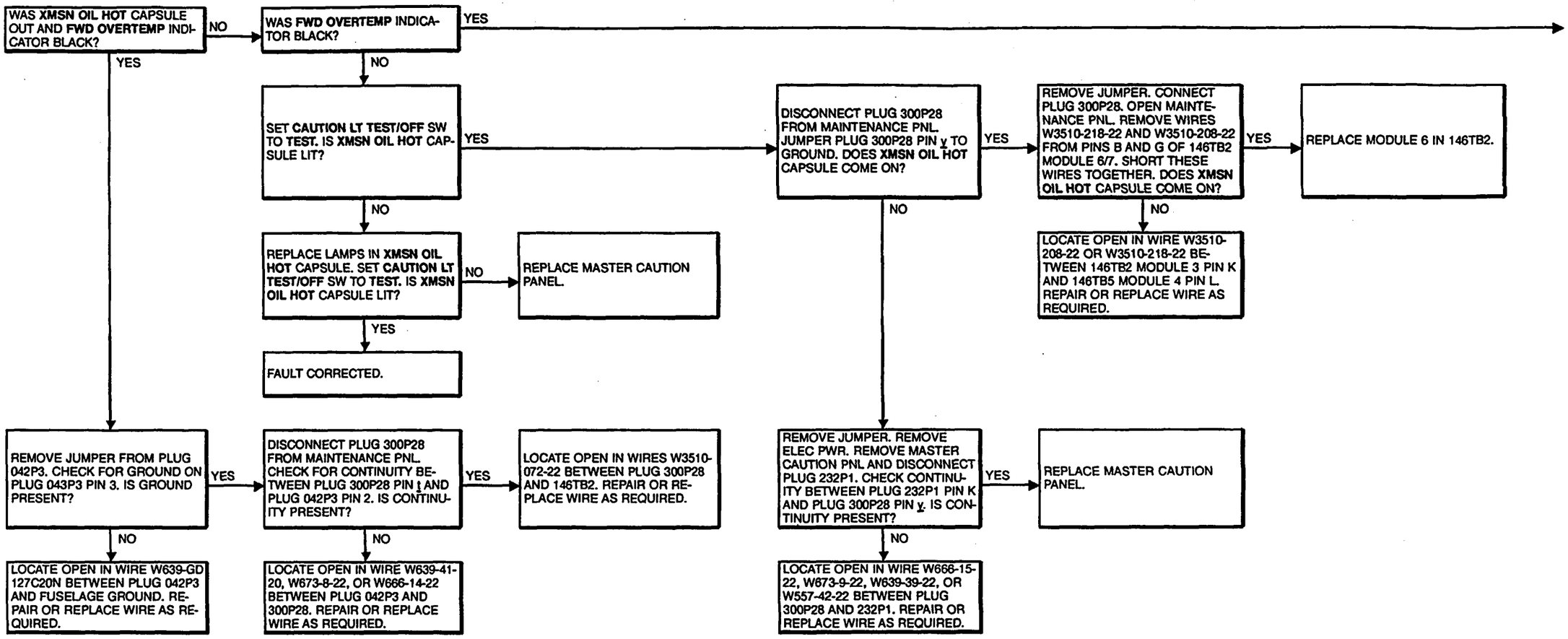




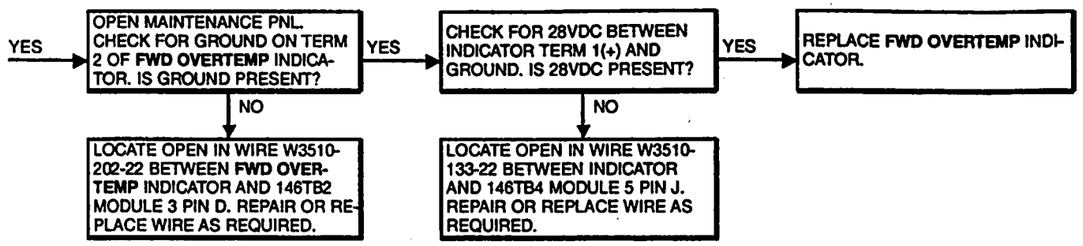


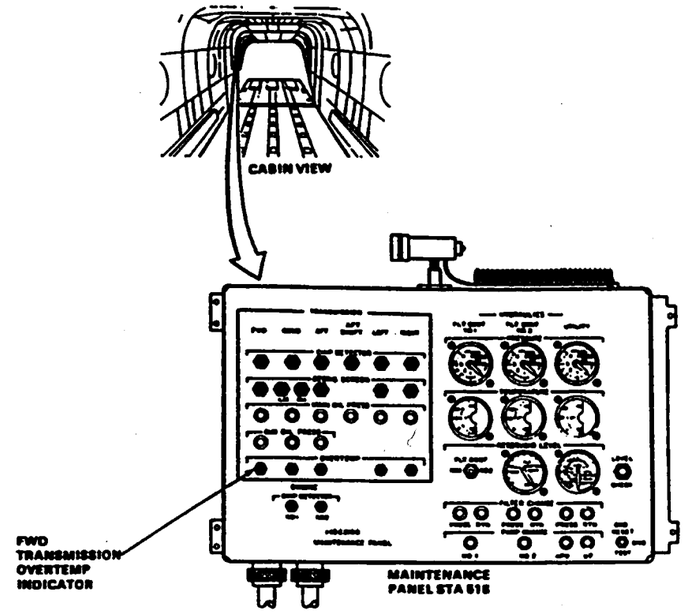
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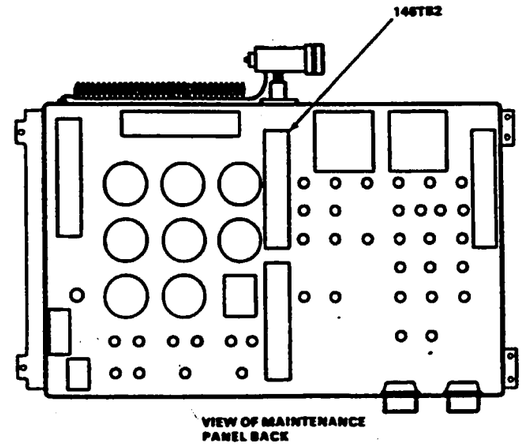
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49 36 94

0146-H121-GPA

END OF TASK
Change 19 8-245

8-10.12 XMSN OIL HOT CAPSULE LIT OR AFT TRANSMISSION OVERTEMP INDICATOR IS BLACK DURING TEST 8-10.12

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

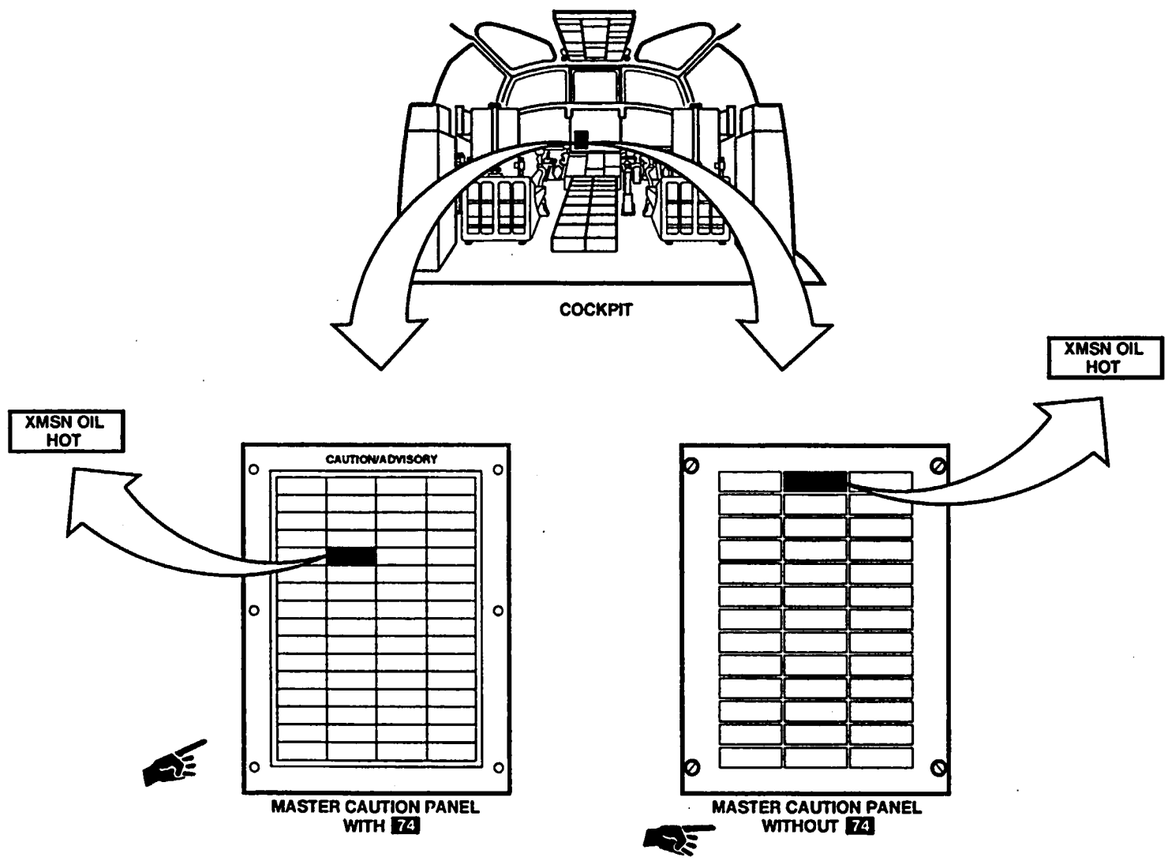
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

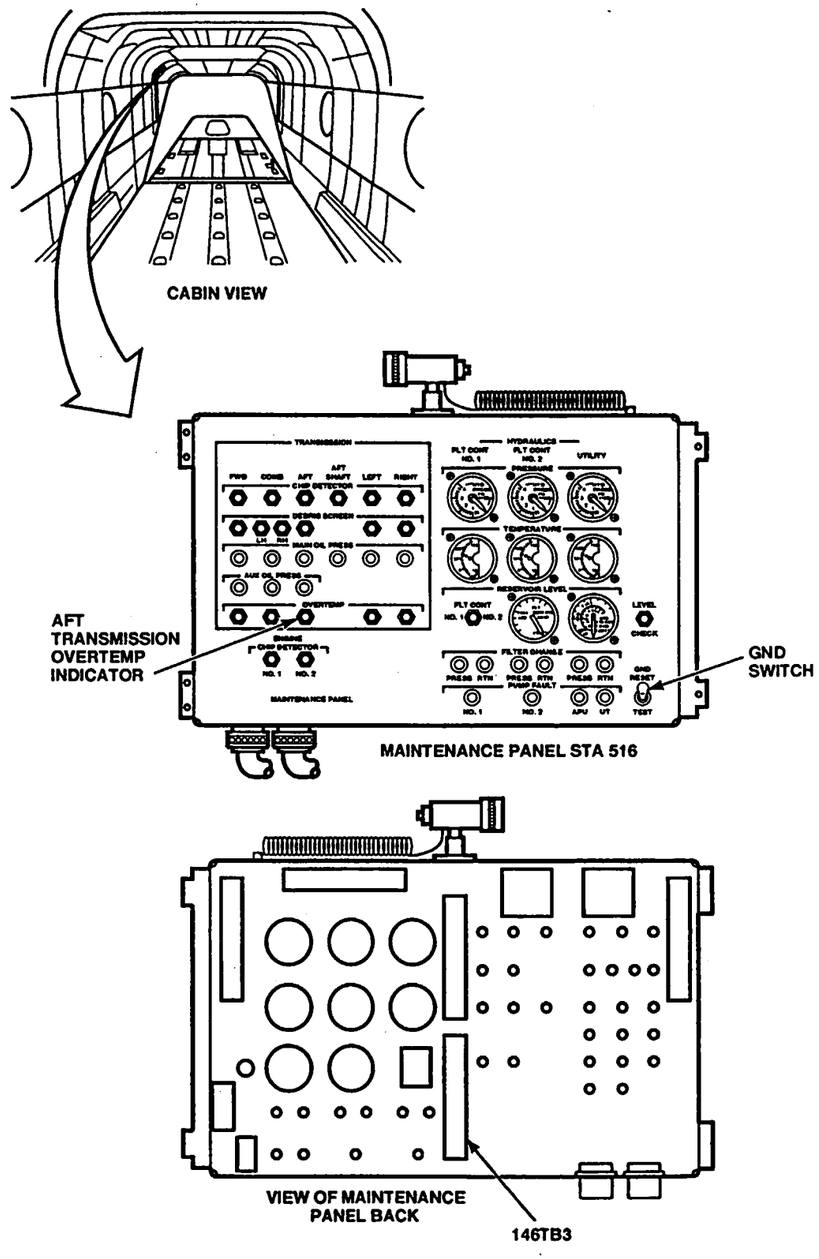
Materials:
None

Personnel Required:
Aircraft Electrician

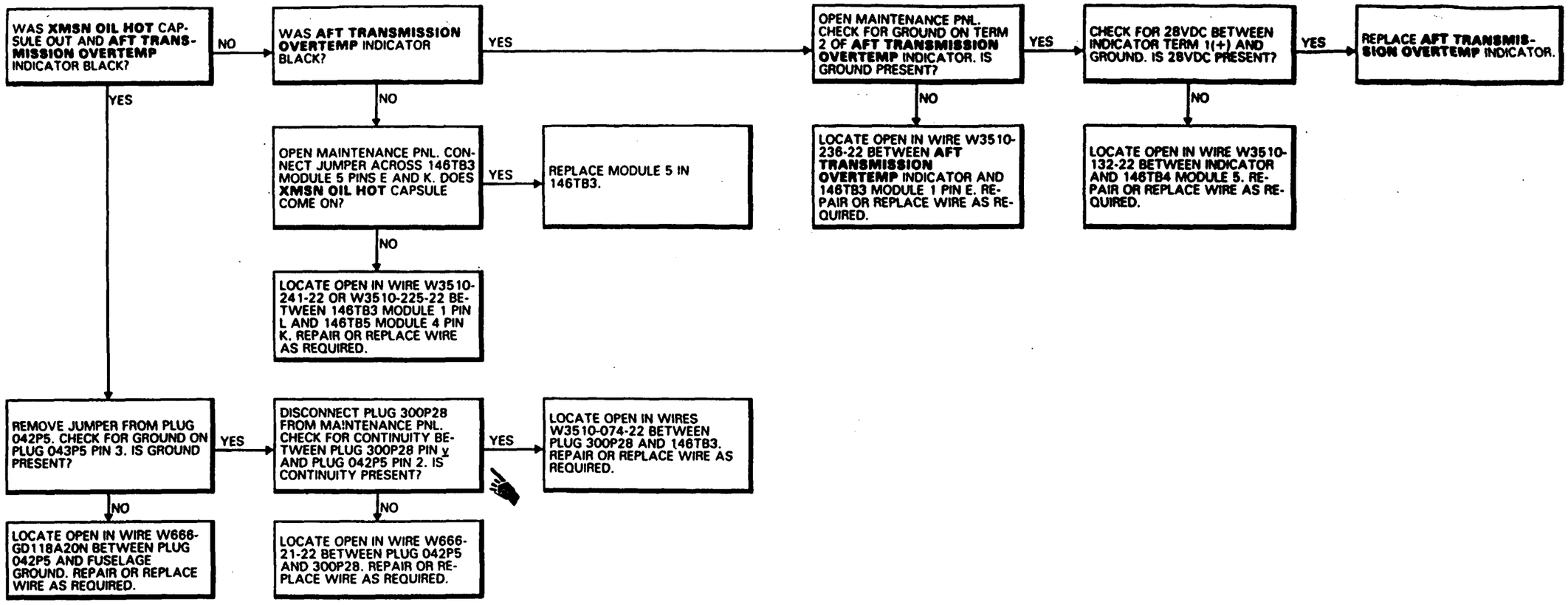
References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off





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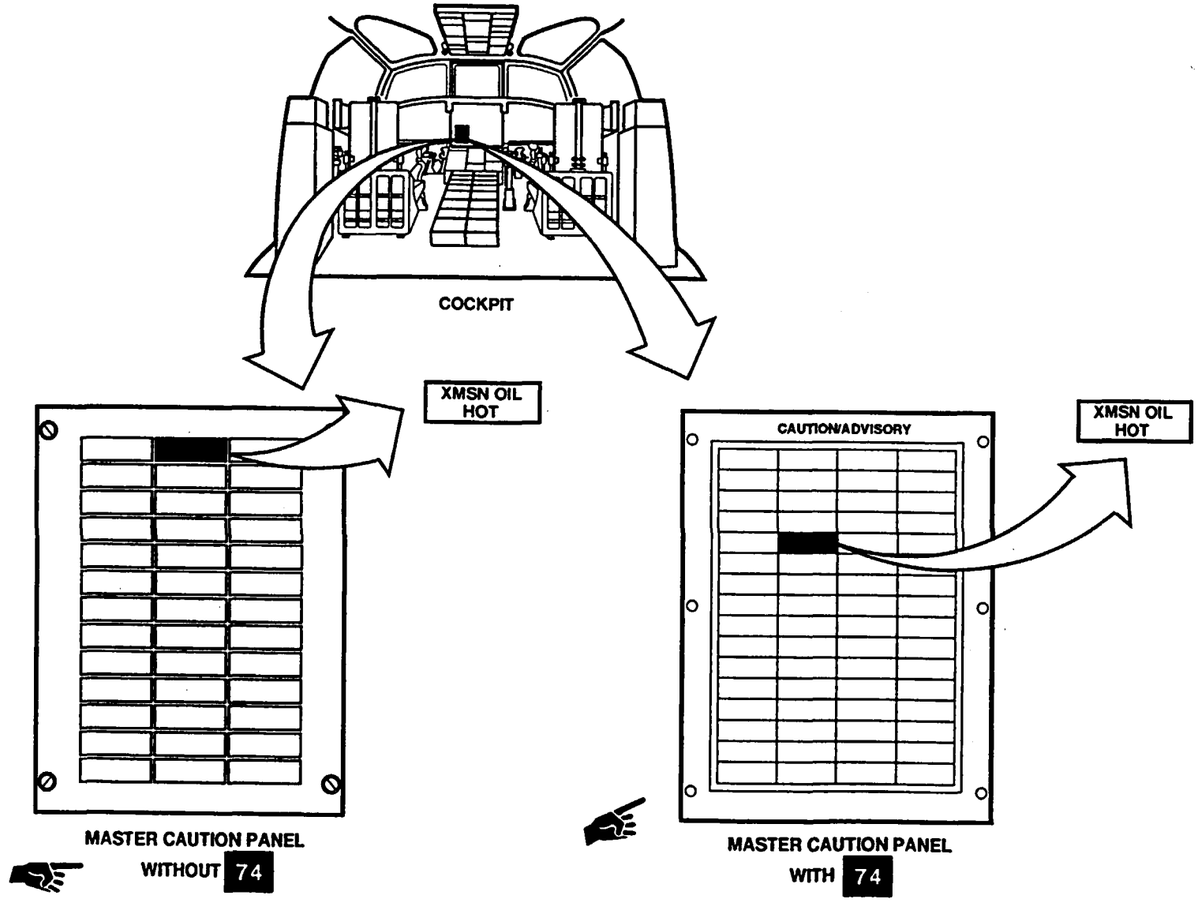

WAS XMSN OIL HOT CAPSULE OUT AND AFT TRANSMISSION OVERTEMP INDICATOR BLACK?
NO
WAS AFT TRANSMISSION OVERTEMP INDICATOR BLACK?
YES
OPEN MAINTENANCE PNL. CHECK FOR GROUND ON TERM 2 OF AFT TRANSMISSION OVERTEMP INDICATOR. IS GROUND PRESENT?
YES
CHECK FOR 28VDC BETWEEN INDICATOR TERM 1(+) AND GROUND. IS 28VDC PRESENT?
YES
REPLACE AFT TRANSMISSION OVERTEMP INDICATOR.
NO
LOCATE OPEN IN WIRE W3510-132-22 BETWEEN INDICATOR AND 146TB4 MODULE 5. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
LOCATE OPEN IN WIRE W3510-236-22 BETWEEN AFT TRANSMISSION OVERTEMP INDICATOR AND 146TB3 MODULE 1 PIN E. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
OPEN MAINTENANCE PNL. CONNECT JUMPER ACROSS 146TB3 MODULE 5 PINS E AND K. DOES XMSN OIL HOT CAPSULE COME ON?
YES
REPLACE MODULE 5 IN 146TB3.
NO
LOCATE OPEN IN WIRE W3510-241-22 OR W3510-225-22 BETWEEN 146TB3 MODULE 1 PIN L AND 146TB5 MODULE 4 PIN K. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
REMOVE JUMPER FROM PLUG 042P5. CHECK FOR GROUND ON PLUG 043P5 PIN 3. IS GROUND PRESENT?
YES
DISCONNECT PLUG 300P28 FROM MAINTENANCE PNL. CHECK FOR CONTINUITY BETWEEN PLUG 300P28 PIN v AND PLUG 042P5 PIN 2. IS CONTINUITY PRESENT?
YES
LOCATE OPEN IN WIRES W3510-074-22 BETWEEN PLUG 300P28 AND 146TB3. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
LOCATE OPEN IN WIRE W666-GD118A20N BETWEEN PLUG 042P5 AND FUSELAGE GROUND. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
LOCATE OPEN IN WIRE W666-21-22 BETWEEN PLUG 042P5 AND 300P28. REPAIR OR REPLACE WIRE AS REQUIRED.

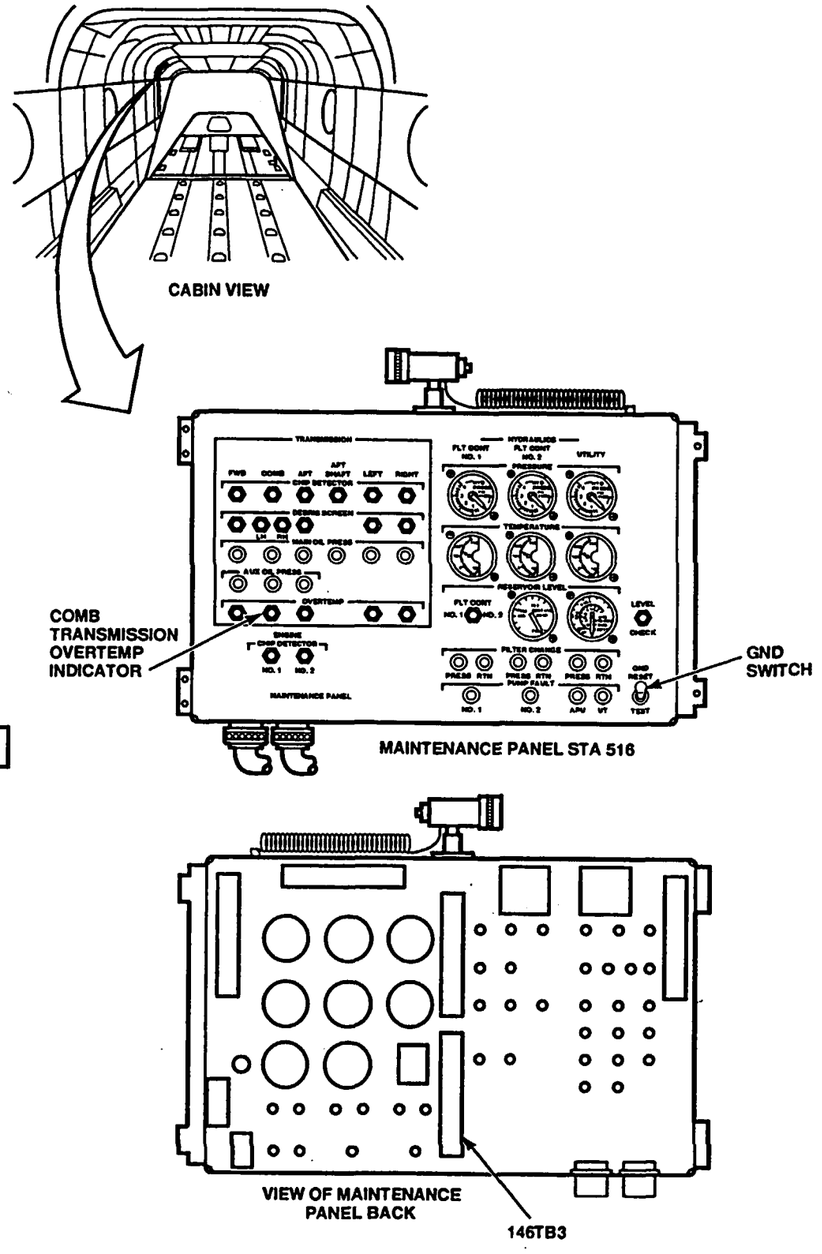
END OF TASK

8-10.13 XMSN OIL HOT CAPSULE LIT OR COMB TRANSMISSION OVERTEMP INDICATOR IS BLACK DURING TEST 8-10.13

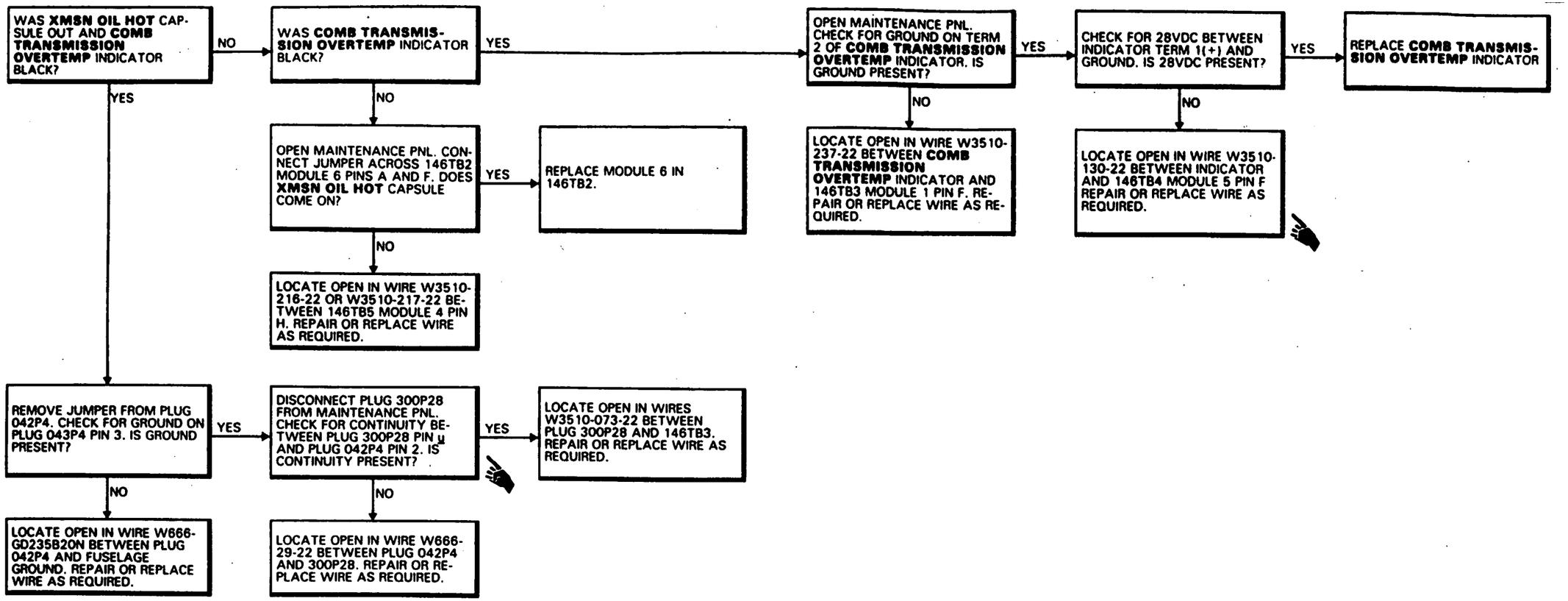
FAULT ISOLATION PROCEDURE

INITIAL SETUP
Applicable Configurations:
All
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-3234915
Multimeter
Materials:
None
Personnel Required:
Aircraft Electrician
References:
TM 55-1520-240-23
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off





GO TO NEXT PAGE


WAS XMSN OIL HOT CAPSULE OUT AND COMB TRANSMISSION OVERTEMP INDICATOR BLACK?
NO
WAS COMB TRANSMISSION OVERTEMP INDICATOR BLACK?
YES
OPEN MAINTENANCE PNL. CHECK FOR GROUND ON TERM 2 OF COMB TRANSMISSION OVERTEMP INDICATOR. IS GROUND PRESENT?
YES
CHECK FOR 28VDC BETWEEN INDICATOR TERM 1(+) AND GROUND. IS 28VDC PRESENT?
YES
REPLACE COMB TRANSMISSION OVERTEMP INDICATOR
NO
LOCATE OPEN IN WIRE W3510-130-22 BETWEEN INDICATOR AND 146TB4 MODULE 5 PIN F REPAIR OR REPLACE WIRE AS REQUIRED.
NO
LOCATE OPEN IN WIRE W3510-237-22 BETWEEN COMB TRANSMISSION OVERTEMP INDICATOR AND 146TB3 MODULE 1 PIN F. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
OPEN MAINTENANCE PNL. CONNECT JUMPER ACROSS 146TB2 MODULE 6 PINS A AND F. DOES XMSN OIL HOT CAPSULE COME ON?
YES
REPLACE MODULE 6 IN 146TB2.
NO
LOCATE OPEN IN WIRE W3510-216-22 OR W3510-217-22 BETWEEN 146TB5 MODULE 4 PIN H. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
REMOVE JUMPER FROM PLUG 042P4. CHECK FOR GROUND ON PLUG 043P4 PIN 3. IS GROUND PRESENT?
YES
DISCONNECT PLUG 300P28 FROM MAINTENANCE PNL. CHECK FOR CONTINUITY BETWEEN PLUG 300P28 PIN u AND PLUG 042P4 PIN 2. IS CONTINUITY PRESENT?
YES
LOCATE OPEN IN WIRES W3510-073-22 BETWEEN PLUG 300P28 AND 146TB3. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
LOCATE OPEN IN WIRE W666-29-22 BETWEEN PLUG 042P4 AND 300P28. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
LOCATE OPEN IN WIRE W666-GD235B20N BETWEEN PLUG 042P4 AND FUSELAGE GROUND. REPAIR OR REPLACE WIRE AS REQUIRED.

END OF TASK

8-10.14 XMSN OIL HOT CAPSULE LIT OR LEFT TRANSMISSION OVERTEMP INDICATOR IS BLACK-DURING TEST 8-10.14

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

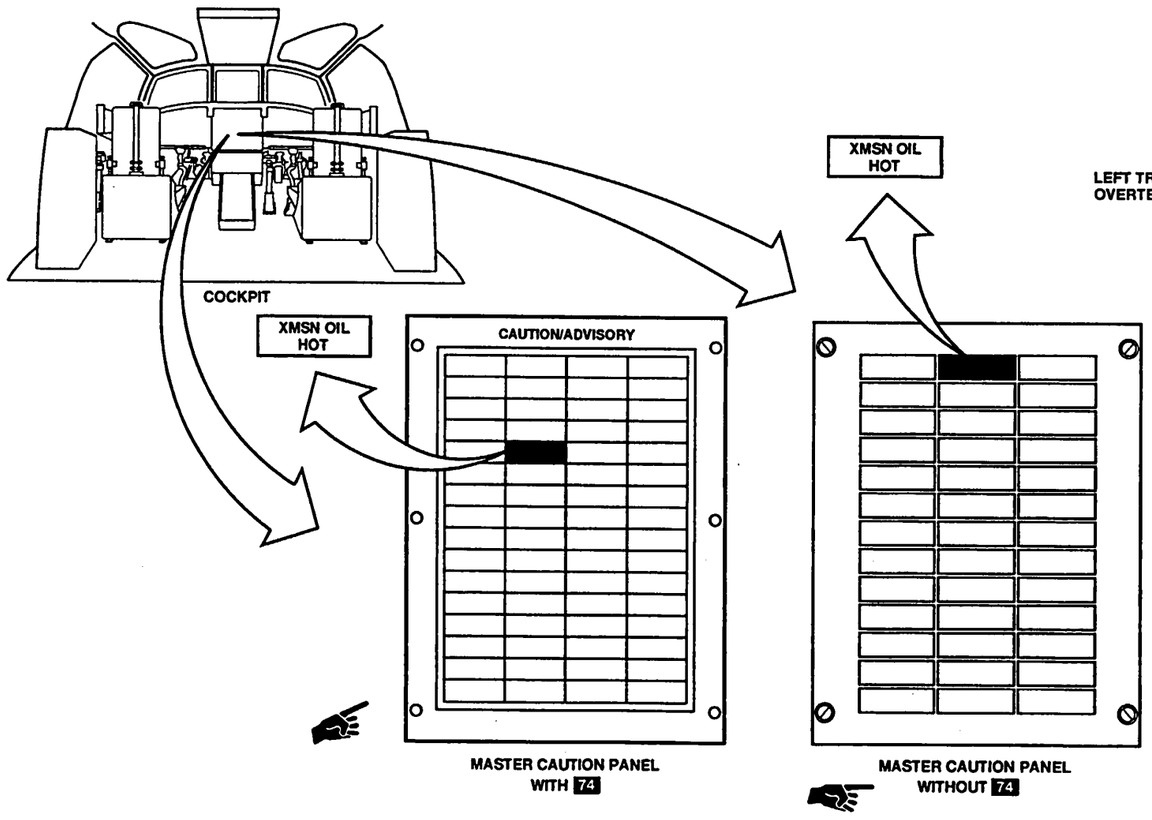
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

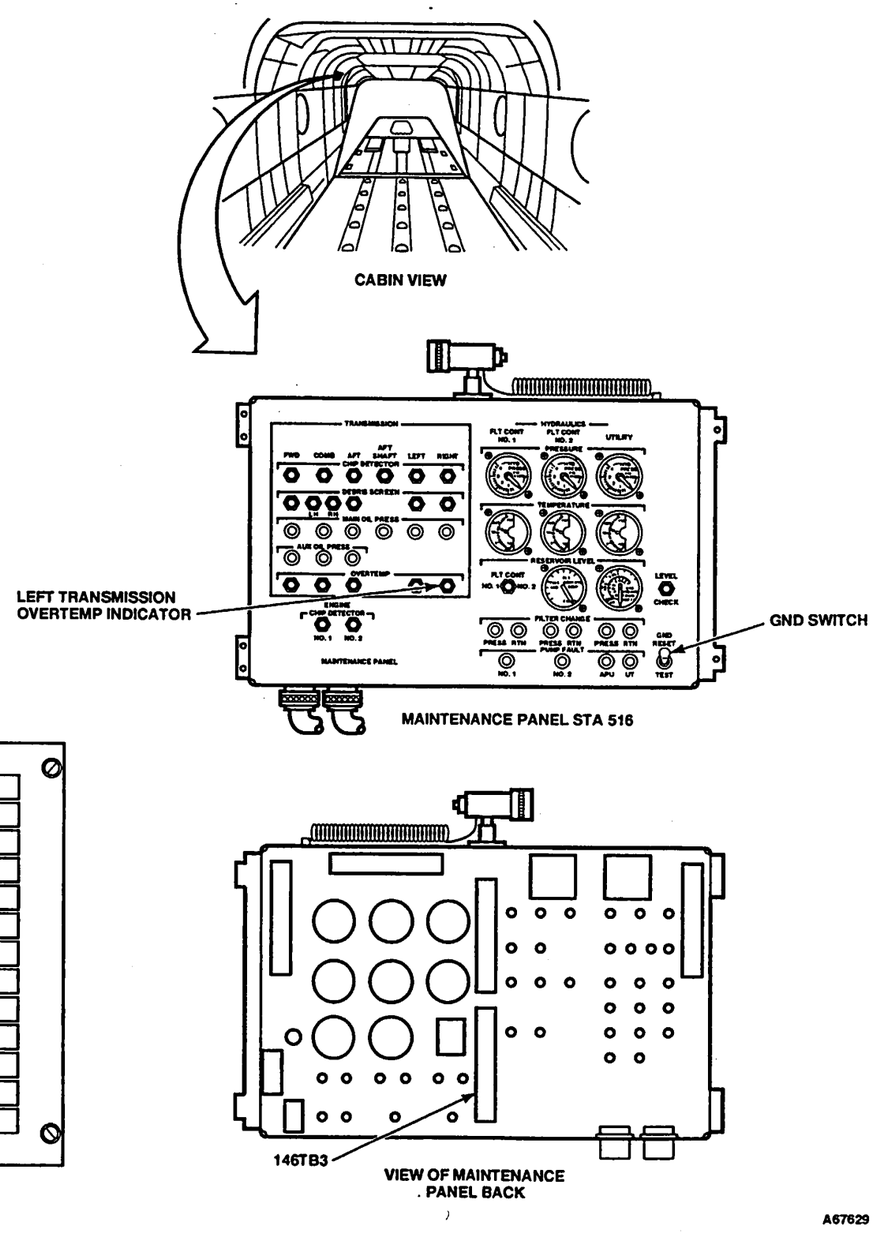
Materials:
None

Personnel Required:
Aircraft Electrician

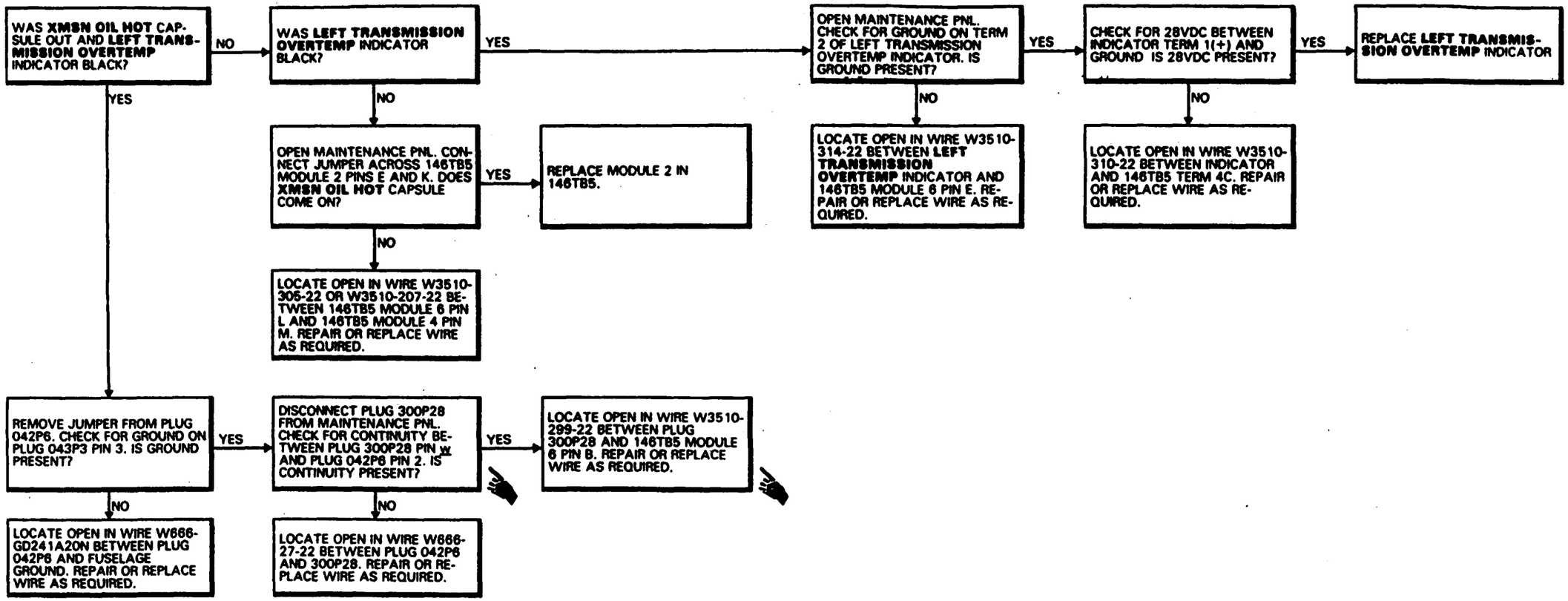
References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off





GO TO NEXT PAGE


WAS XMSN OIL HOT CAPSULE OUT AND LEFT TRANSMISSION OVERTEMP INDICATOR BLACK?
NO
WAS LEFT TRANSMISSION OVERTEMP INDICATOR BLACK?
YES
OPEN MAINTENANCE PNL. CHECK FOR GROUND ON TERM 2 OF LEFT TRANSMISSION OVERTEMP INDICATOR. IS GROUND PRESENT?
YES
CHECK FOR 28VDC BETWEEN INDICATOR TERM 1(+) AND GROUND IS 28VDC PRESENT?
YES
REPLACE LEFT TRANSMISSION OVERTEMP INDICATOR
NO
LOCATE OPEN IN WIRE W3510-314-22 BETWEEN LEFT TRANSMISSION OVERTEMP INDICATOR AND 146TB5 MODULE 6 PIN E. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
LOCATE OPEN IN WIRE W3510-310-22 BETWEEN INDICATOR AND 146TB5 TERM 4C. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
OPEN MAINTENANCE PNL. CONNECT JUMPER ACROSS 146TB5 MODULE 2 PINS E AND K. DOES XMSN OIL HOT CAPSULE COME ON?
YES
REPLACE MODULE 2 IN 146TB5.
NO
LOCATE OPEN IN WIRE W3510-305-22 OR W3510-207-22 BETWEEN 146TB5 MODULE 6 PIN L AND 146TB5 MODULE 4 PIN M. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
REMOVE JUMPER FROM PLUG 042P6. CHECK FOR GROUND ON PLUG 043P3 PIN 3. IS GROUND PRESENT?
YES
DISCONNECT PLUG 300P28 FROM MAINTENANCE PNL. CHECK FOR CONTINUITY BETWEEN PLUG 300P28 PIN W AND PLUG 042P6 PIN 2. IS CONTINUITY PRESENT?
YES
LOCATE OPEN IN WIRE W3510-299-22 BETWEEN PLUG 300P28 AND 146TB5 MODULE 6 PIN B. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
LOCATE OPEN IN WIRE W666-GD241A20N BETWEEN PLUG 042P6 AND FUSELAGE GROUND. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
LOCATE OPEN IN WIRE W666-27-22 BETWEEN PLUG 042P6 AND 300P28. REPAIR OR REPLACE WIRE AS REQUIRED.

END OF TASK

8-10.15 XMSN OIL HOT CAPSULE LIT OR RIGHT TRANSMISSION OVERTEMP INDICATOR IS BLACK DURING TEST 8-10.15

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

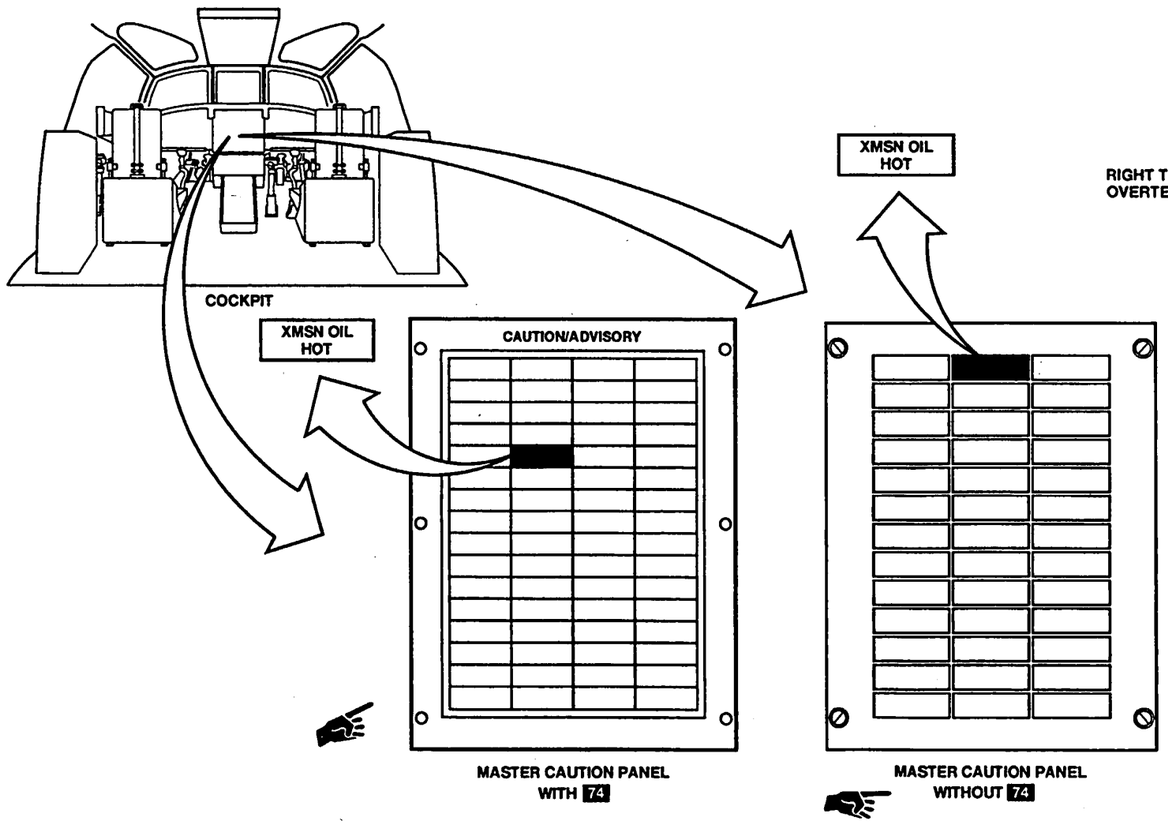
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-3234915
Multimeter

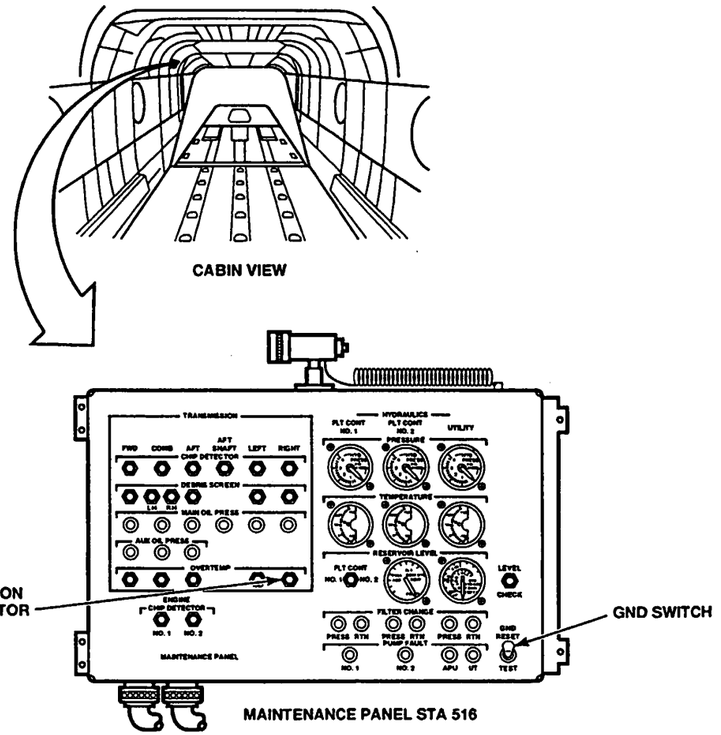
Materials:
None

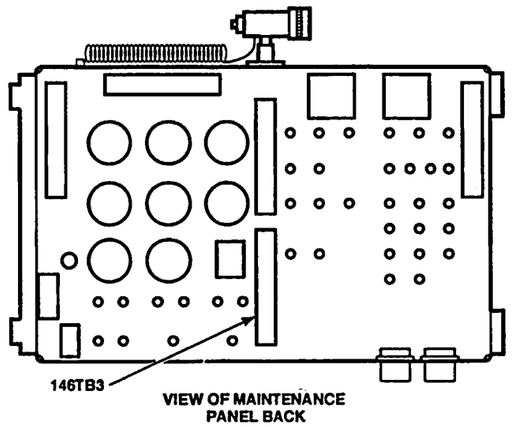
Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off

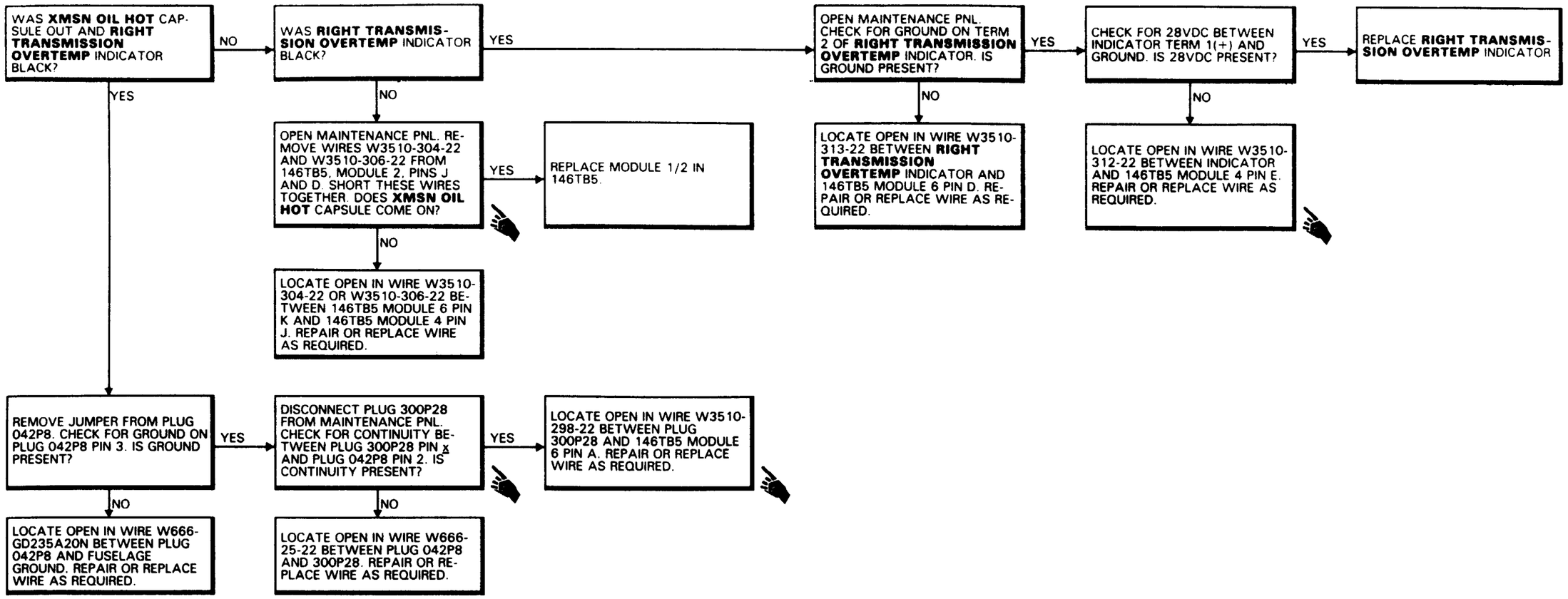






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WAS **XMSN OIL HOT** CAPSULE OUT AND **RIGHT TRANSMISSION OVERTEMP** INDICATOR BLACK?
NO
WAS **RIGHT TRANSMISSION OVERTEMP** INDICATOR BLACK?
YES
OPEN MAINTENANCE PNL. CHECK FOR GROUND ON TERM 2 OF **RIGHT TRANSMISSION OVERTEMP** INDICATOR. IS GROUND PRESENT?
YES
CHECK FOR 28VDC BETWEEN INDICATOR TERM 1(+) AND GROUND. IS 28VDC PRESENT?
YES
REPLACE **RIGHT TRANSMISSION OVERTEMP** INDICATOR
NO
LOCATE OPEN IN WIRE W3510-313-22 BETWEEN **RIGHT TRANSMISSION OVERTEMP** INDICATOR AND 146TB5 MODULE 6 PIN D. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
LOCATE OPEN IN WIRE W3510-312-22 BETWEEN INDICATOR AND 146TB5 MODULE 4 PIN E. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
OPEN MAINTENANCE PNL. REMOVE WIRES W3510-304-22 AND W3510-306-22 FROM 146TB5, MODULE 2, PINS J AND D. SHORT THESE WIRES TOGETHER. DOES **XMSN OIL HOT** CAPSULE COME ON?
YES
REPLACE MODULE 1/2 IN 146TB5.
NO
LOCATE OPEN IN WIRE W3510-304-22 OR W3510-306-22 BETWEEN 146TB5 MODULE 6 PIN K AND 146TB5 MODULE 4 PIN J. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
REMOVE JUMPER FROM PLUG 042P8. CHECK FOR GROUND ON PLUG 042P8 PIN 3. IS GROUND PRESENT?
YES
DISCONNECT PLUG 300P28 FROM MAINTENANCE PNL. CHECK FOR CONTINUITY BETWEEN PLUG 300P28 PIN X AND PLUG 042P8 PIN 2. IS CONTINUITY PRESENT?
YES
LOCATE OPEN IN WIRE W3510-298-22 BETWEEN PLUG 300P28 AND 146TB5 MODULE 6 PIN A. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
LOCATE OPEN IN WIRE W666-GD235A20N BETWEEN PLUG 042P8 AND FUSELAGE GROUND. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
LOCATE OPEN IN WIRE W666-25-22 BETWEEN PLUG 042P8 AND 300P28. REPAIR OR REPLACE WIRE AS REQUIRED.

END OF TASK

8-10.16 TRANSMISSION OVERTEMP INDICATORS DO NOT RESET

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

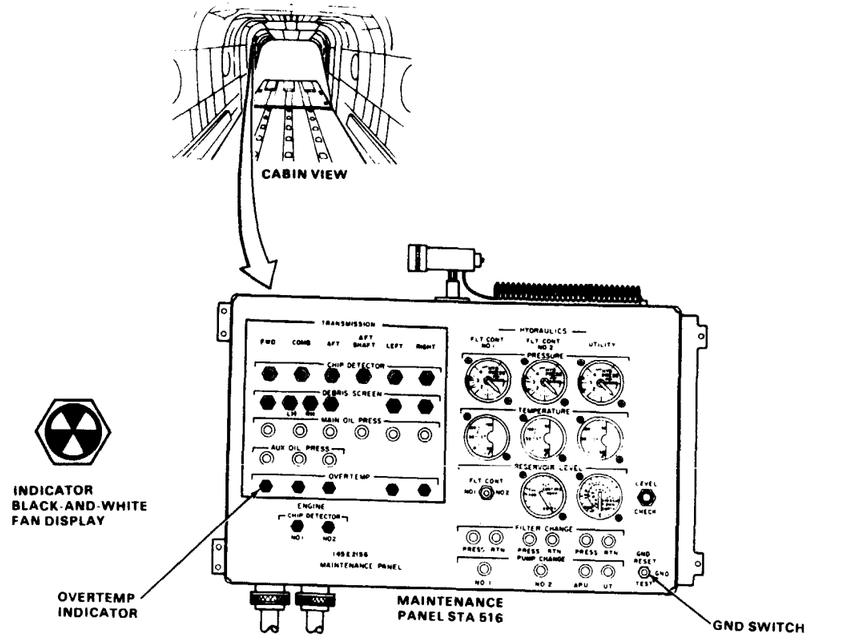
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

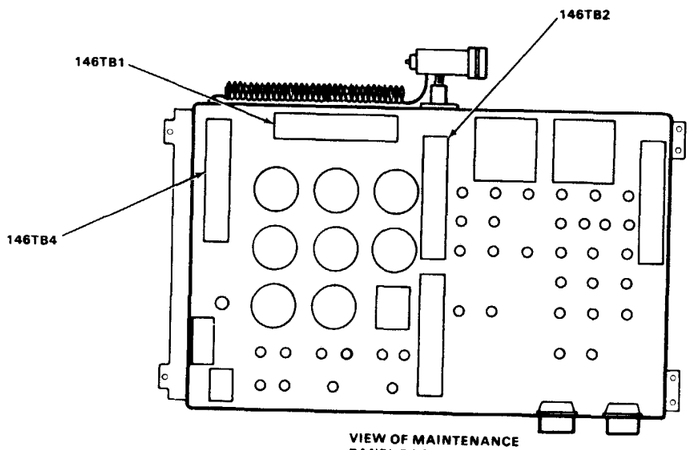
Materials:
None

Personnel Required:
68F20 Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off



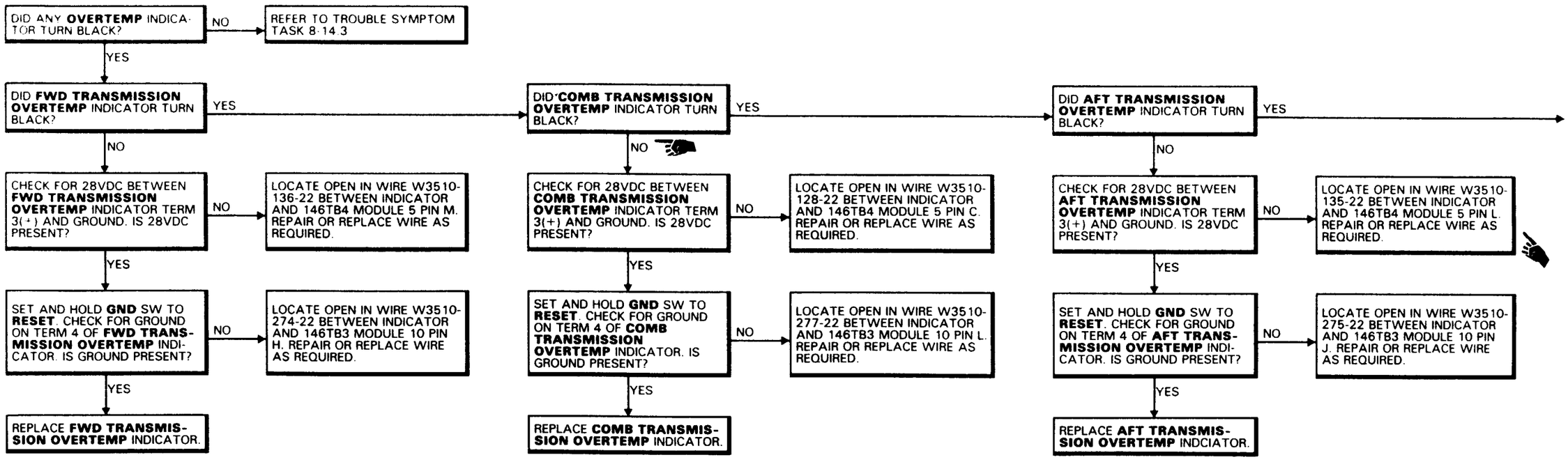


VIEW OF MAINTENANCE PANEL BACK

45x54

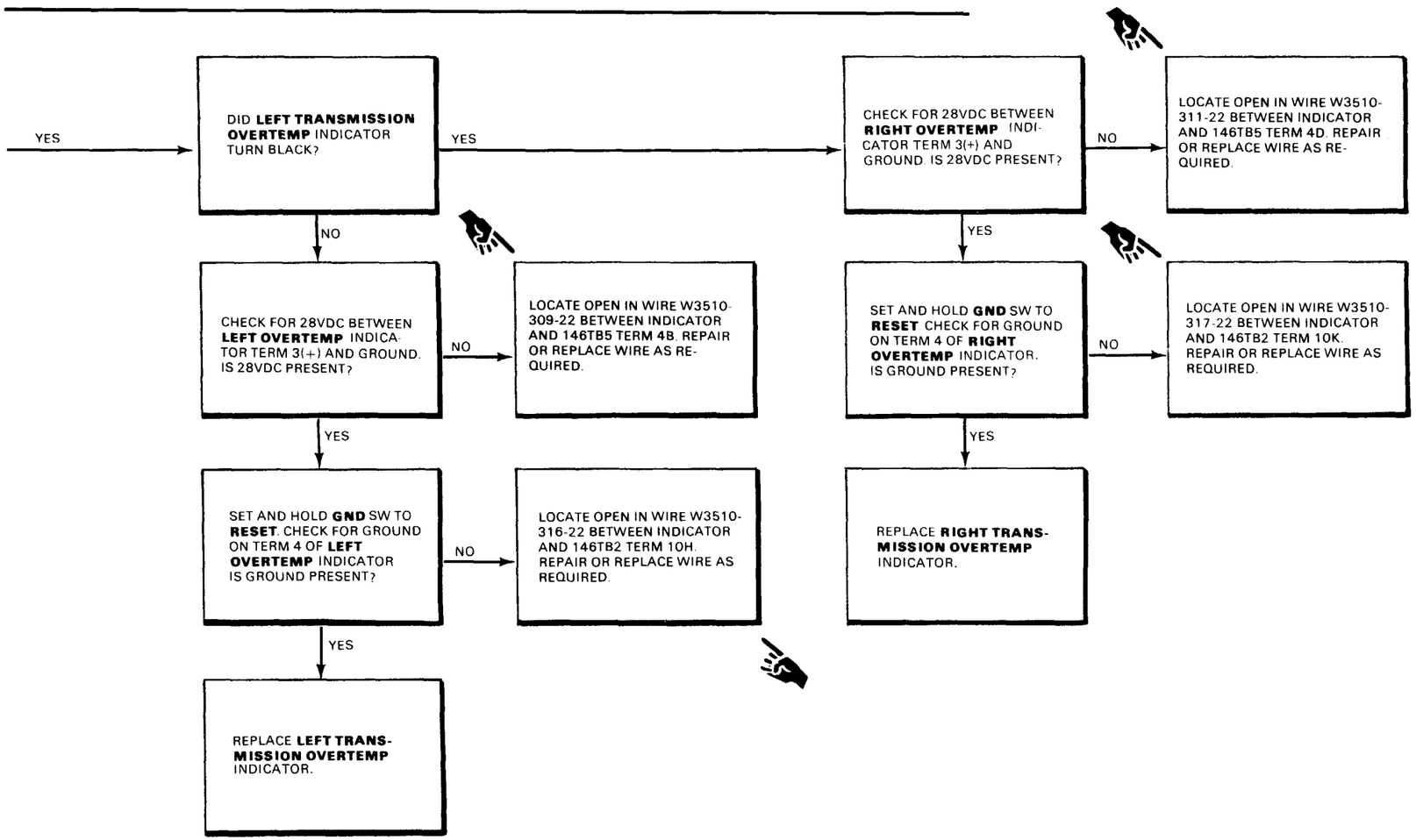
DI45-11126-SPA

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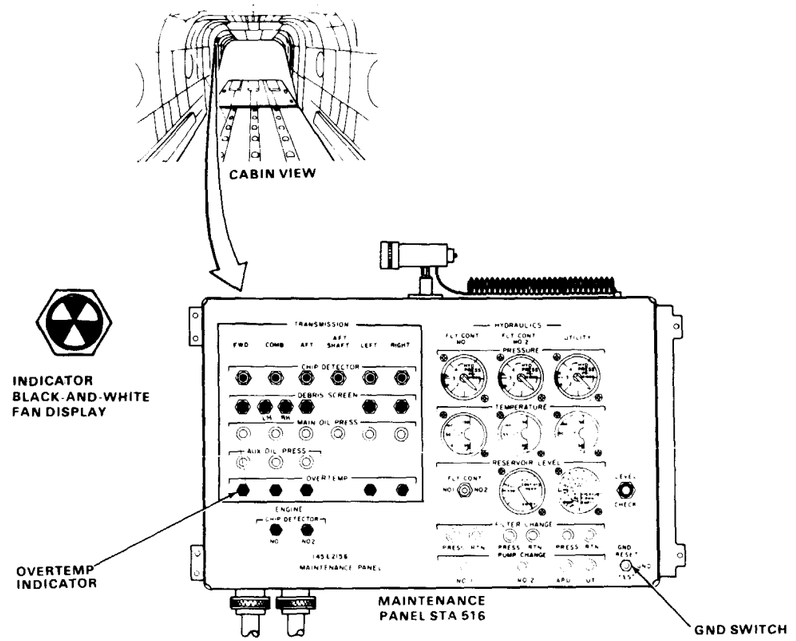
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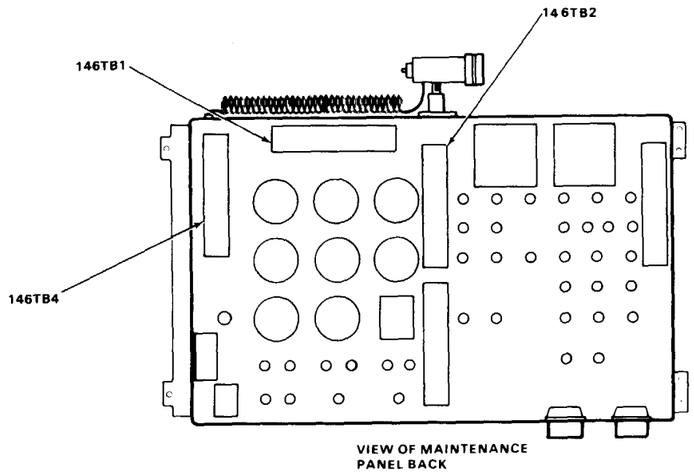
8-10.16 TRANSMISSION OVERTEMP INDICATORS DO NOT RESET (Continued)



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8-10.16 TRANSMISSION OVERTEMP INDICATORS DO NOT RESET (Continued)



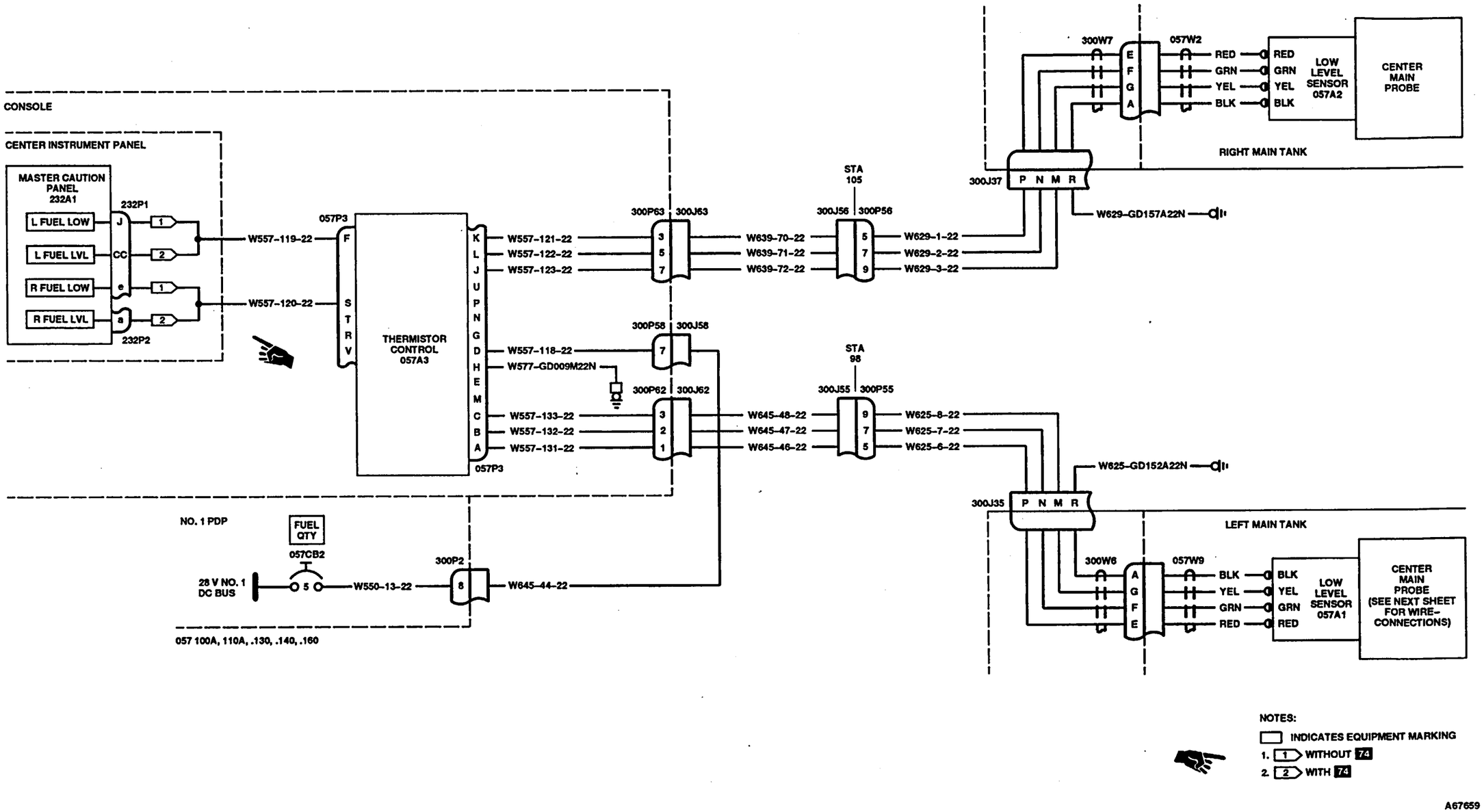


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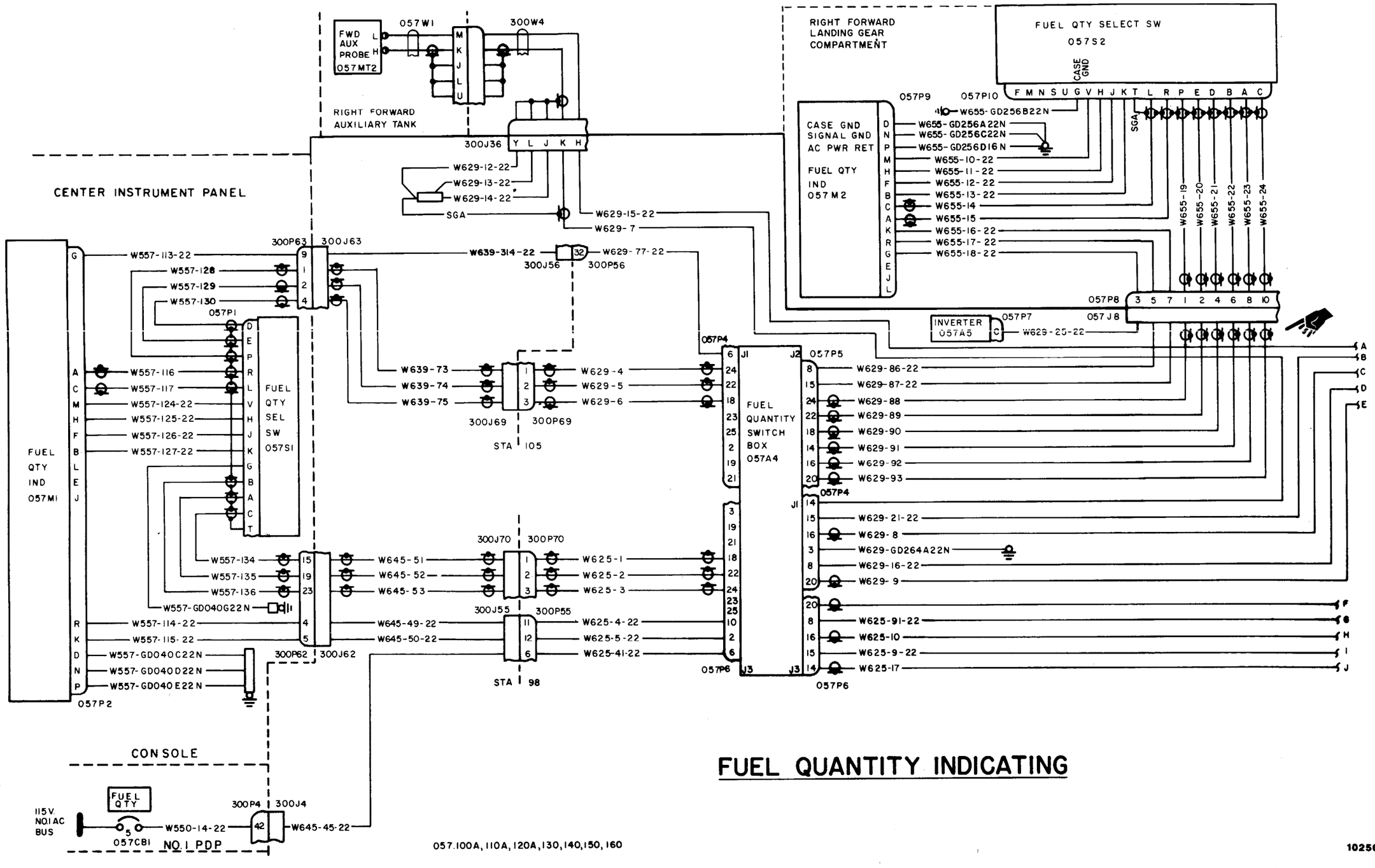
DI45-11127-SPA

END OF TASK

8-11 FUEL QUANTITY INDICATING SYSTEM



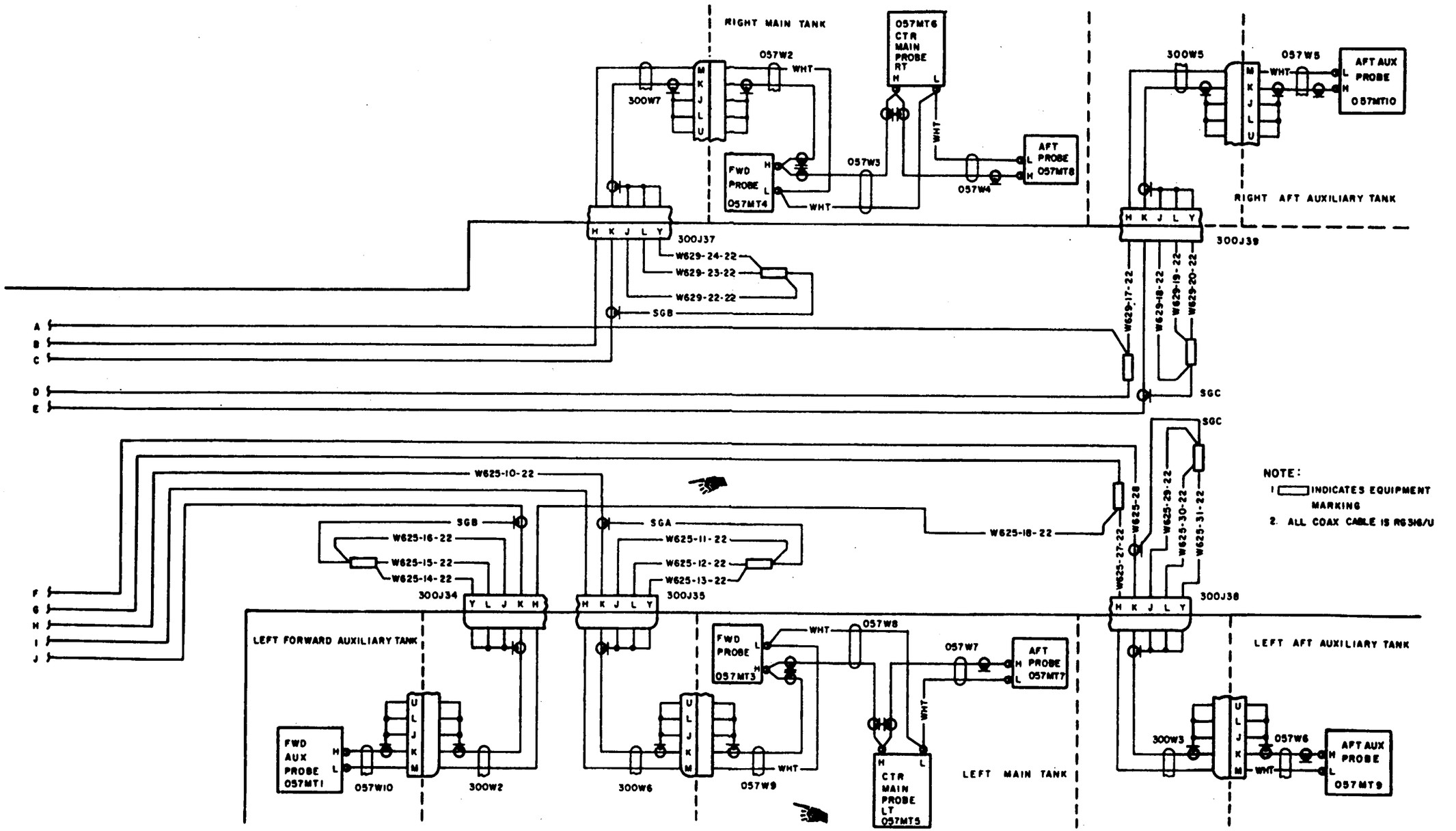
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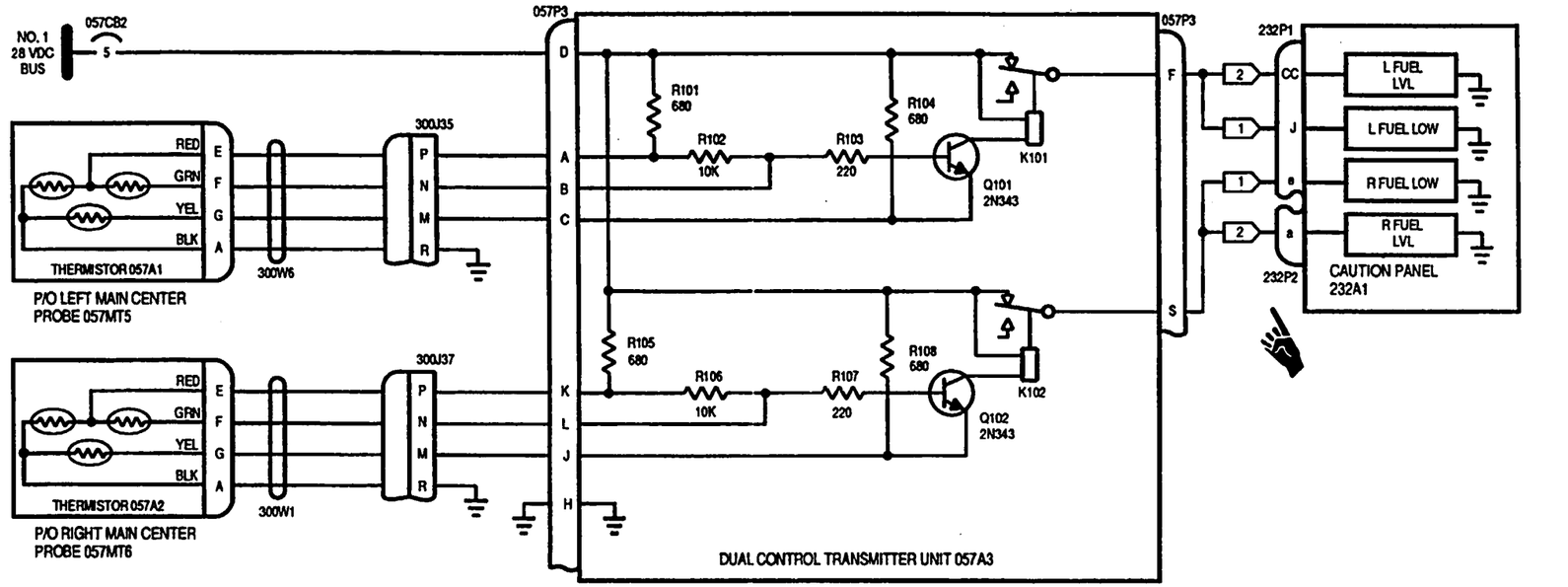
FUEL QUANTITY INDICATING

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D145-9647-SPA (2)

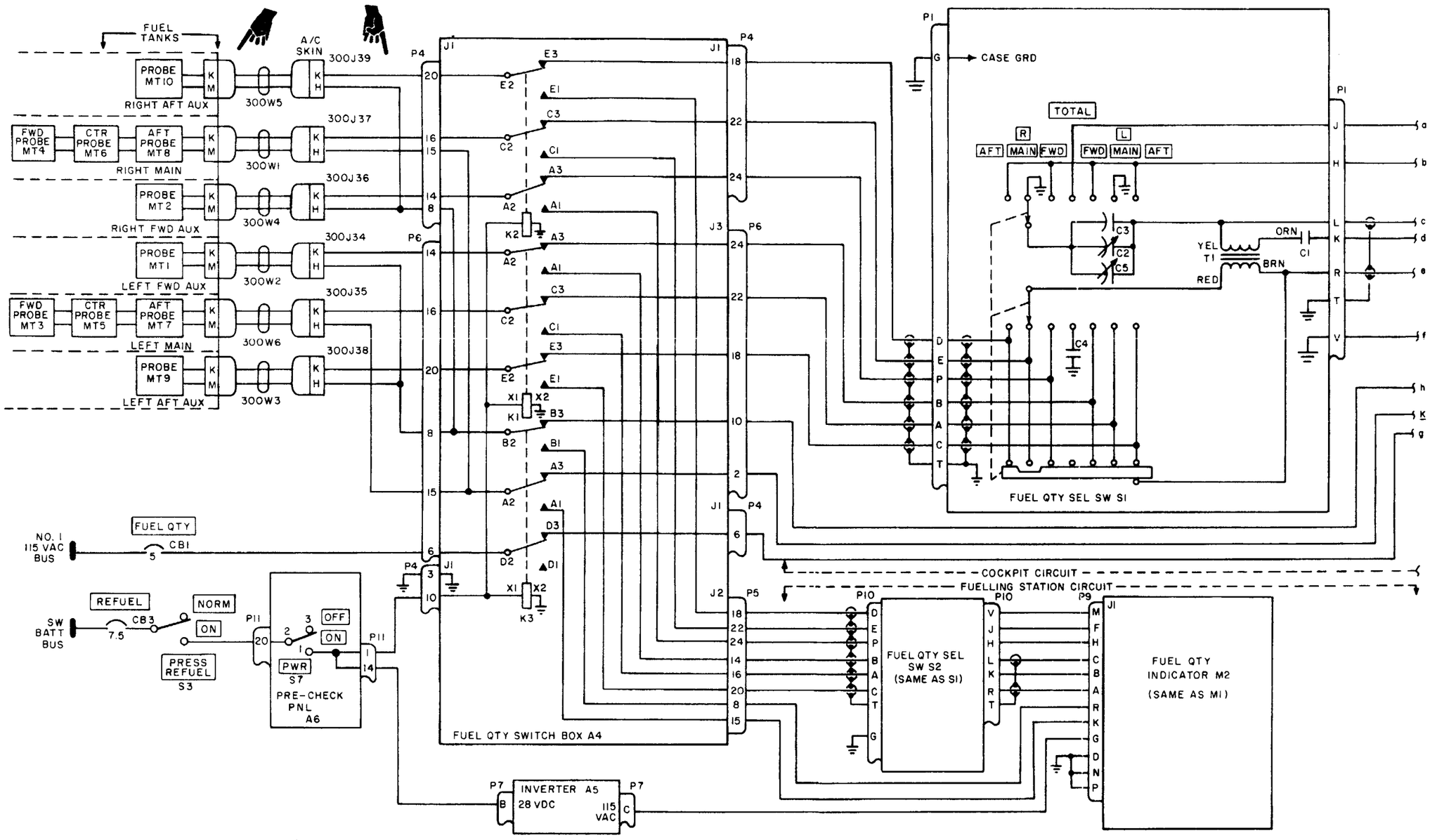


NOTES:

1. WITHOUT 74
2. WITH 74
3. INDICATES EQUIPMENT MARKINGS

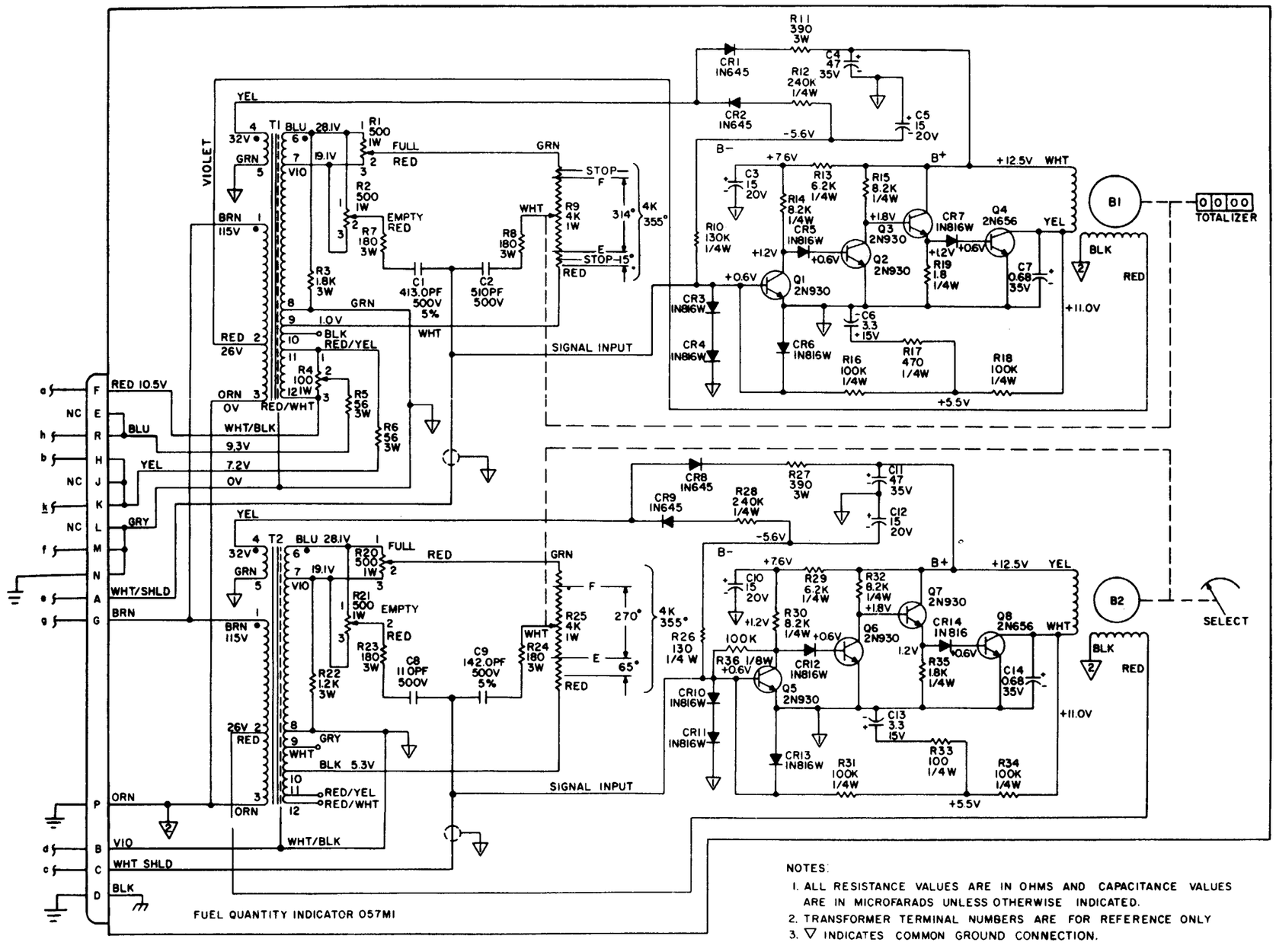
A67639

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8947

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NOTES:

1. ALL RESISTANCE VALUES ARE IN OHMS AND CAPACITANCE VALUES ARE IN MICROFARADS UNLESS OTHERWISE INDICATED.
2. TRANSFORMER TERMINAL NUMBERS ARE FOR REFERENCE ONLY
3. ▽ INDICATES COMMON GROUND CONNECTION.

9375

END OF TASK

INITIAL SETUP

Applicable Configurations:
All

Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915

Materials:
None

Personnel Required:
Aircraft Electrician

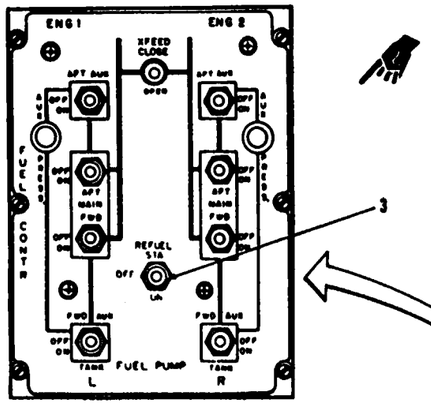
References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off
Forward Right Landing Gear Access Panel Open

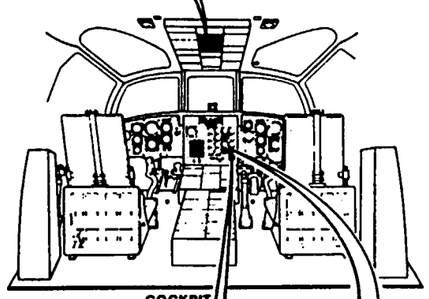
TASK	RESULT
1. Check fuel quantity indicator (1).	If indicator (1) is loose or damaged, tighten or replace it as required.
2. Check FUEL QUANTITY select switch (2).	If switch (2) is loose or damaged, tighten or replace it as required.
3. Check REFUEL STATION switch (3).	If switch (3) is loose or damaged, tighten or replace it as required.
4. Check fuel quantity switch box (4).	If switch box (4) is loose or damaged, repair or replace it as required. If plugs to switch box are loose, tighten them. If wires to plugs are frayed or cracked, repair or replace as required.
5. Check inverter (5).	If inverter (5) is loose or damaged, tighten or replace it as required.
6. Check fuel quantity indicator (6).	If indicator (6) is loose or damaged, tighten or replace it as required.
7. Check fuel quantity selector switch (7).	If switch (7) is loose or damaged, tighten or replace it as required.

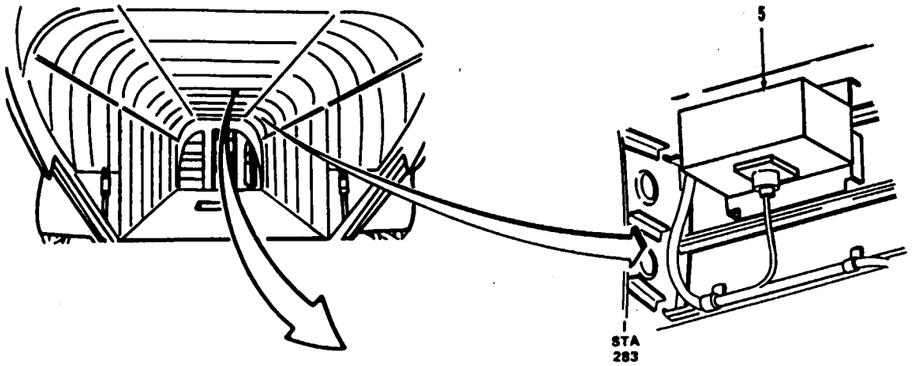
FOLLOW-ON MAINTENANCE:
None

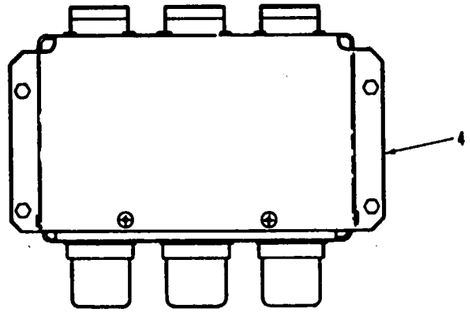
GO TO NEXT PAGE

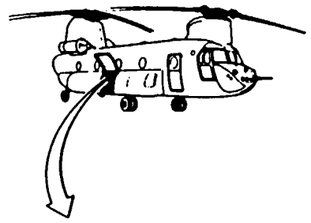


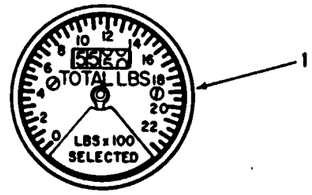
FUEL CONTROL PANEL

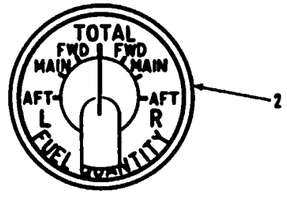

COCKPIT

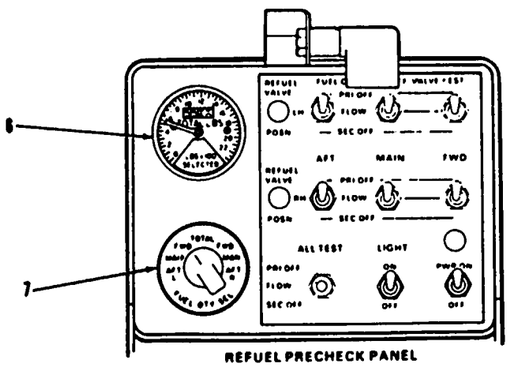



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REFUEL PRECHECK PANEL

1755

GO TO NEXT PAGE

8-11.3 FUEL QUANTITY INDICATING SYSTEM OPERATIONAL CHECK

INITIAL SETUP

Applicable Configurations:
All

Tools:
Electrical Repairer Tool Kit,
NSN 5180-00-323-4915

Materials:
None

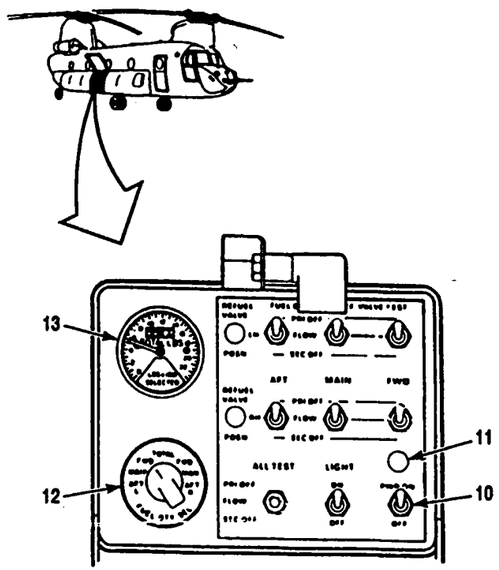
Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

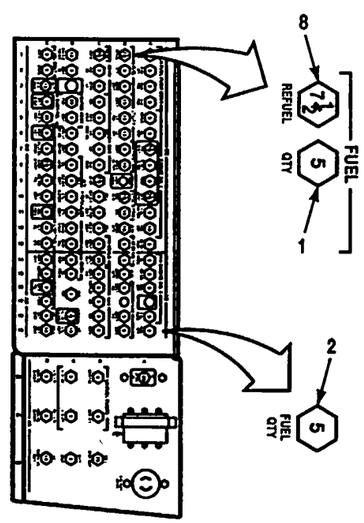
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off
Fuel Quantity Indicating System Visual Check Performed (Task 8-11.2)
All Fuel Tanks Serviced to FULL Using Gravity Refueling Method

NOTE

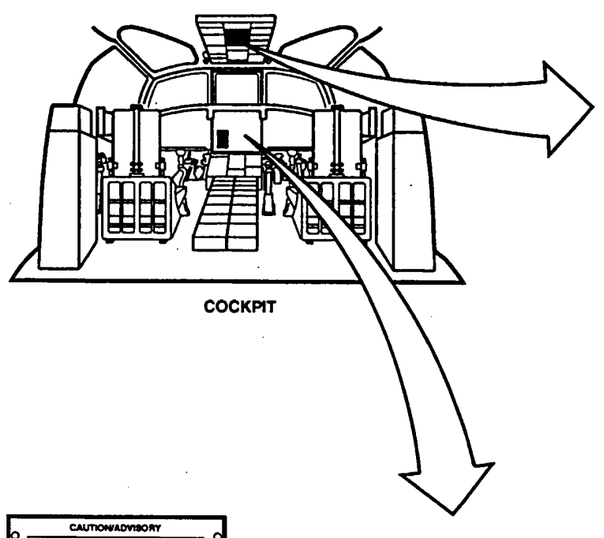
Do not use single point refueling for this check. Fuel quantity by single point refueling will vary due to different refueling pressures and rates of flow.



REFUEL PRECHECK PANEL



NO. 1 POWER DISTRIBUTION PANEL (PDP) VIEW LOOKING AFT



GO TO NEXT PAGE

TASK		RESULT
1.	Check that FUEL QTY DC circuit breaker (1) is closed.	If circuit breaker (1) is open, dose it. If it opens again, go to task 8-11.4.
2.	Check that FUEL QTY AC circuit breaker (2) is closed.	If circuit breaker (2) is open, dose it. If it opens again, go to task 8-11.5.
3.	Set fuel quantity selector switch (3) to L MAIN.	Fuel quantity indicator (4) shall read amount shown in Table 8-11.1. If indicator does not indicate amount shown in Table 8-11.1, go to task 8-11.6. If indicator pointer spins in either direction, go to task 8-11.7.
4.	Set fuel quantity selector switch (3) to L FWD.	Fuel quantity indicator (4) shall read amount shown in Table 8-11.1. If not, go to task 8-11.8.
5.	Set fuel quantity selector switch (3) to L AFT.	Fuel quantity indicator (4) shall read amount shown in Table 8-11.1. If not, go to task 8-11.9.
6.	Set main quantity selector switch (3) R MAIN.	Fuel quantity indicator (4) shall read amount shown in Table 8-11.1. If not, go to task 8-11.10.
7.	Set fuel quantity selector switch (3) to R FWD.	Fuel quantity indicator (4) shall read amount shown in Table 8-11.1. If not, go to task 8-11.11.
8.	Set fuel quantity selector switch (3) to R AFT.	Fuel quantity indicator (4) shall read amount shown in Table 8-11.1. If not, go to task 8-11.12.
9.	Set fuel quantity selector switch (3) to TOTAL.	Fuel quantity indicator (4) digital readout shall indicate amount shown in Table 8-11.1. If not, go to task 8-11.13.
10.	If **L FUEL LOW (Without** 74) L FUEL LVL (With 74) warning capsule (5) on master caution panel (6) is on, go to task 8-11.14.	
11.	If **R FUEL LOW (Without** 74) R FUEL LVL (With 74) warning capsule (7) on master caution panel (6) is on, go to task 8-11.15.	
12.	To check low fuel warning on left main fuel tank, drain tank until fuel level is below 320 to 420 pounds.	If L FUEL LOW (Without If) L FUEL LVL (With 74) warning capsule (5) on master caution panel (6) does not come on, go to task 8-11.16.
13.	To check low fuel warning on right main fuel tank, drain tank until fuel level is below 320 to 420 pounds.	If R FUEL LOW (Without 74) R FUEL LVL (With 74) warning capsule (7) on master caution panel (6) does not come on, go to task 8-11.17.

TASK		RESULT
CHECK FUEL QUANTITY AT REFUEL PRECHECK PANEL		
14.	**Check that FUEL REFUEL circuit breaker (8)** is dosed.	If circuit breaker (8) is open, dose it. If it opens again, go to task 10-3.5.
15.	**Set REFUEL STATION switch (9) to ON.**	
16.	**Set PWR switch (10) to ON.**	Light (11) shall come on. If light (11) does not come on, go to task 10-3.8.
17.	**Turn fuel quantity selector switch (12) to each position. Record fuel quantity reading** on fuel quantity indicator (13) for each switch position.	Fuel quantity indicator (13) shall read amount for each switch position shown in Table 8-11.1. If indicator does not read any amount for all switch positions, go to task 8-11.18. If indicator reads amount for all but one position, go to task 8-11.19.
18.	**Set PWR switch (10) to OFF.**	
19.	**Set REFUEL STATION switch (9) to OFF.**	

FOLLOW-ON MAINTENANCE:
TM 55-1520-240-23:
Battery disconnected.
Electrical power off.
Hydraulic power off.
Forward right landing gear access panel closed.

TABLE 8-11.1.

SWITCH POSITION	INDICATOR READING FOR FUEL TYPE		
	JP-4 SP GR 6.5 lb	JP-5 SP GR 6.8 lb	JP-8 SP GR 6.7 lb
L MAIN	1650 to 2150 lbs	1650 to 2150 lbs	1650 to 2150 lbs
L FWD	700 to 1000 lbs	700 to 1000 lbs	700 to 1000 lbs
L AFT	700 to 1000 lbs	700 to 1000 lbs	700 to 1000 lbs
R MAIN	1650 to 2150 lbs	1650 to 2150 lbs	1650 to 2150 lbs
R FWD	700 to 1000 lbs	700 to 1000 lbs	700 to 1000 lbs
R AFT	700 to 1000 lbs	700 to 1000 lbs	700 to 1000 lbs
TOTAL	6282 to 7082 lbs	6581 to 7409 lbs	6474 to 7300 lbs

END OF TASK

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

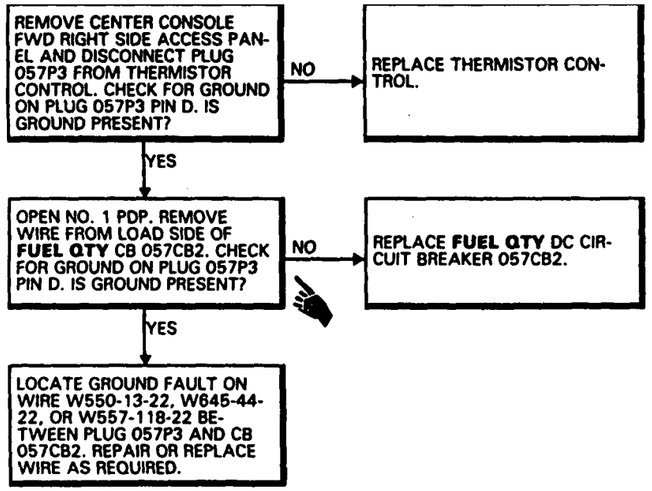
Tools:
Electrical Repairer's Tool Kit.
NSN 5180-00-323-4915
Multimeter

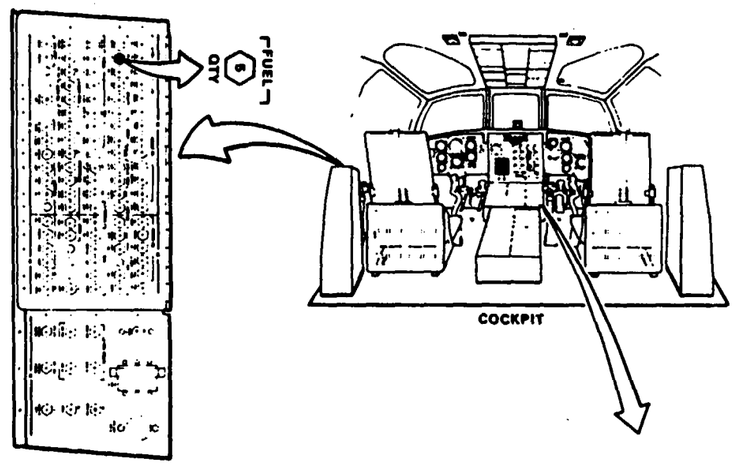
Materials:
None

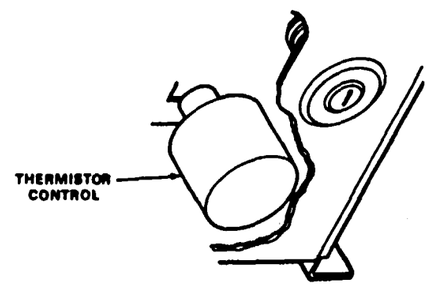
Personnel Required:
Aircraft Electrician (2)

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off







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END OF TASK

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

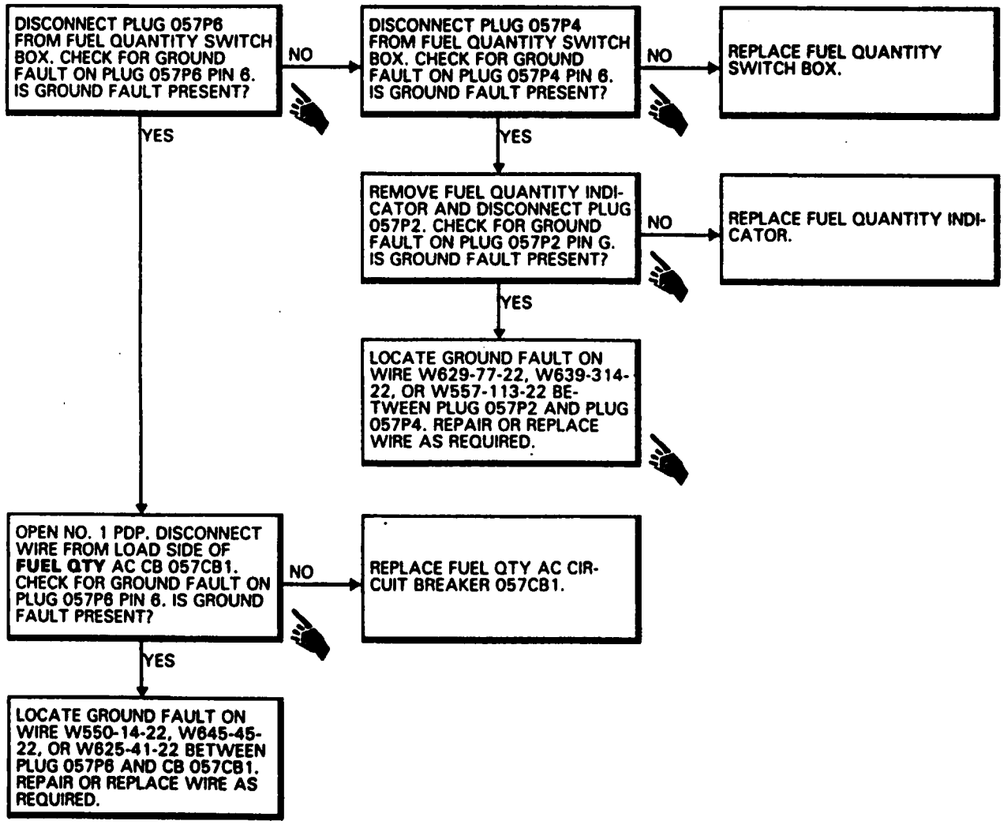
Tools:
Electrical Repairer's Tool Kit.
NSN 5180-00-323-4915
Multimeter

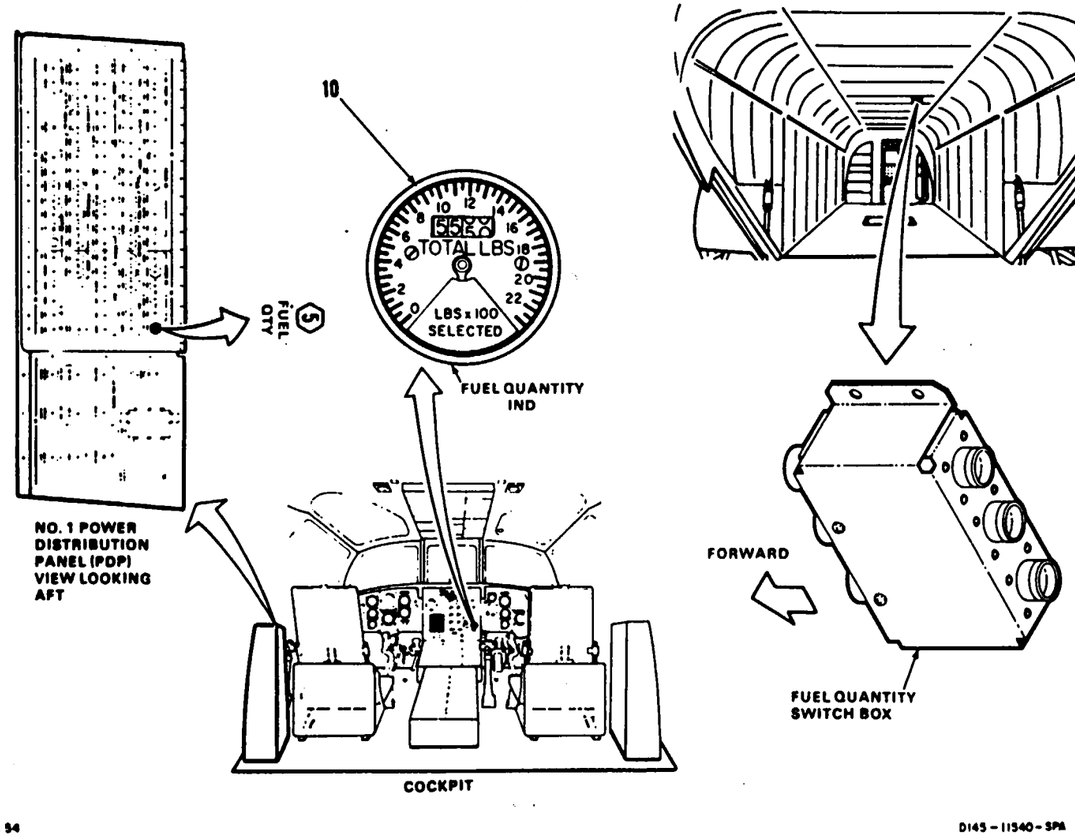
Materials:
None

Personnel Required:
Aircraft Electrician (2)

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off





END OF TASK

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:

All

Tools:

Electrical Repairer Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:

None

Personnel Required:

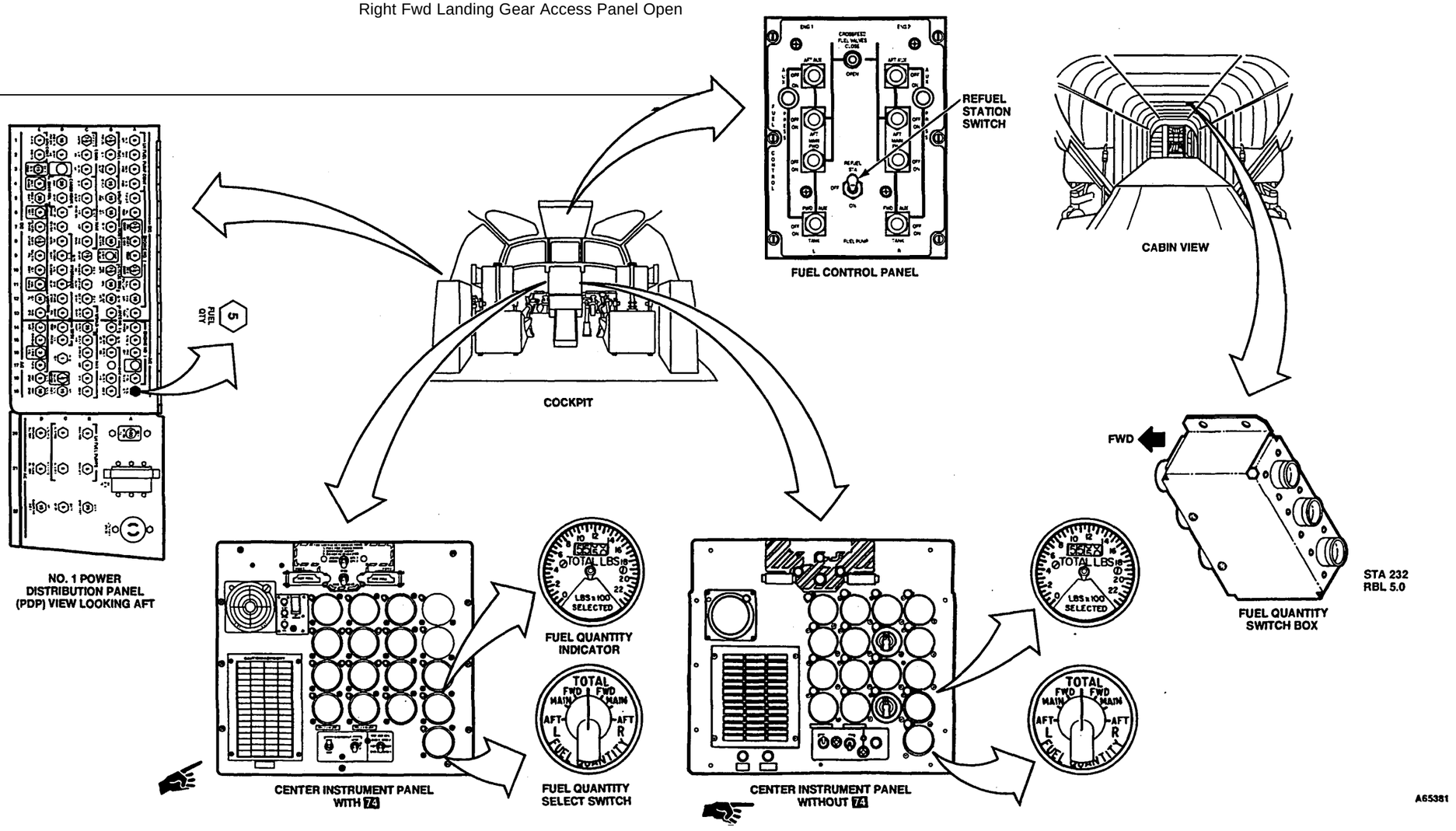
Aircraft Electrician (2)

References:

TM 55-1520-240-23

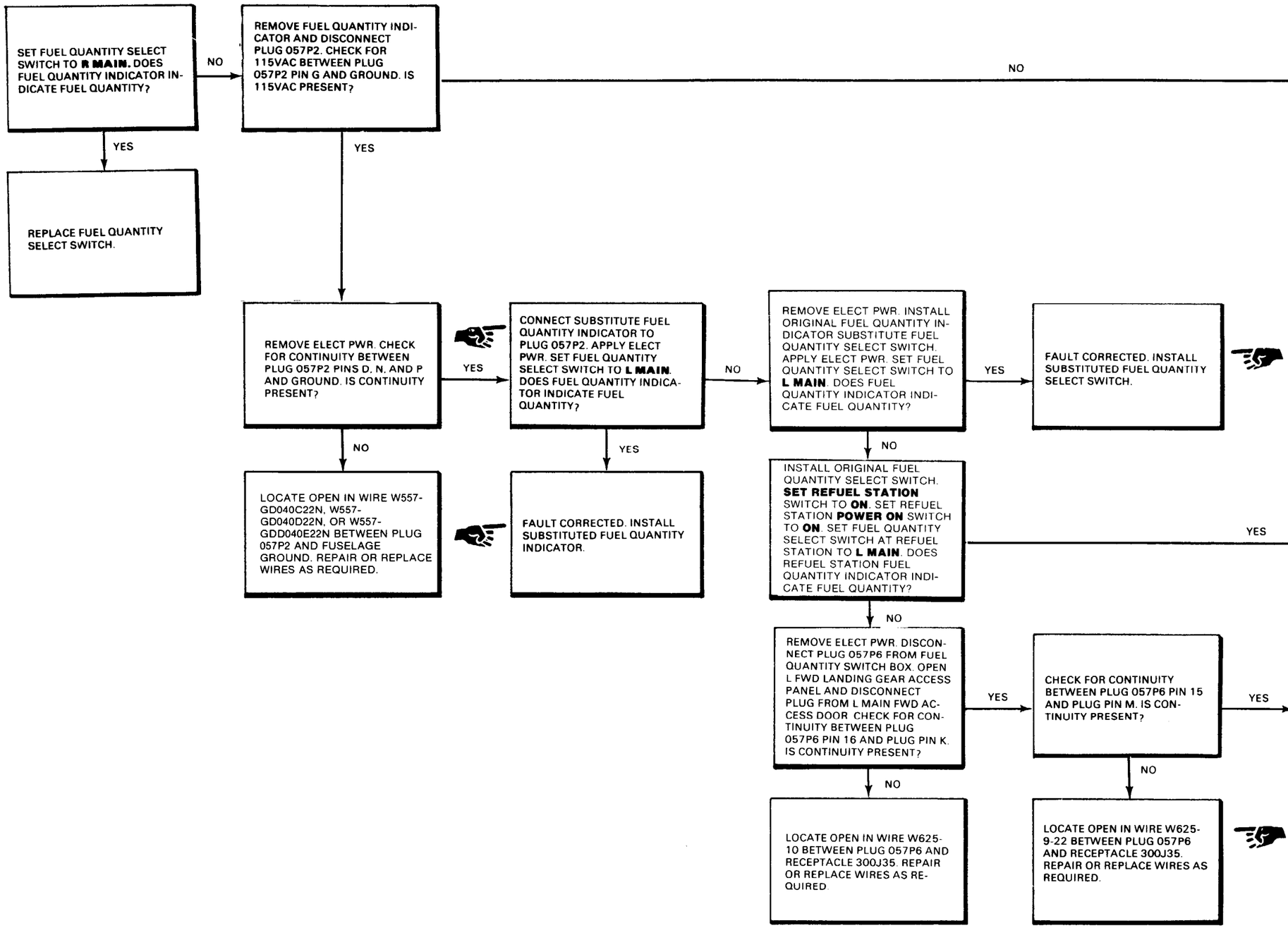
Equipment Condition:

TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off
Right Fwd Landing Gear Access Panel Open

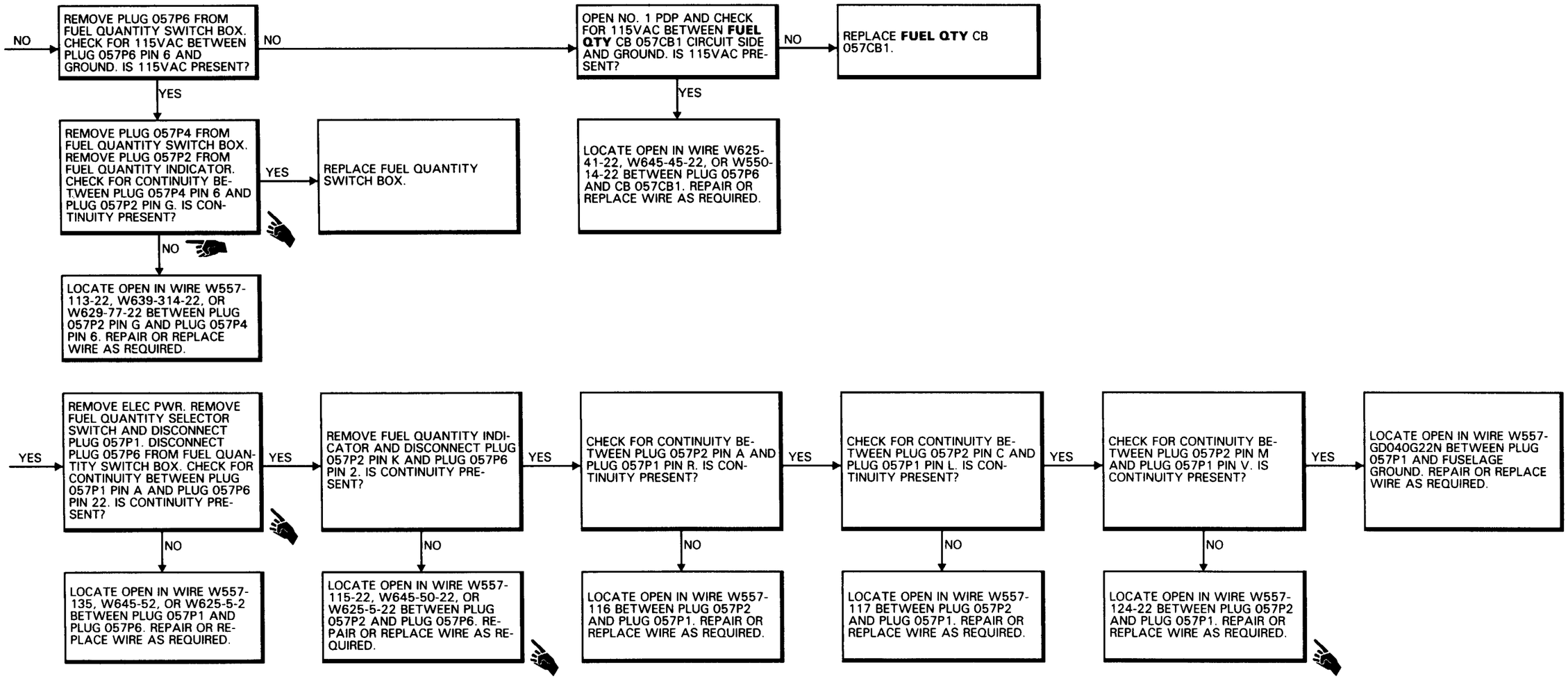


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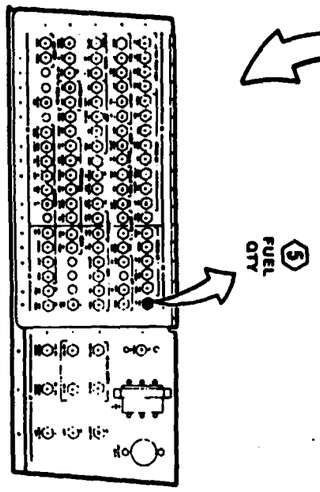
8-11.6 FUEL QUANTITY INDICATION WRONG WHEN FUEL QUANTITY SELECT SWITCH IS SET TO L MAIN (Continued)



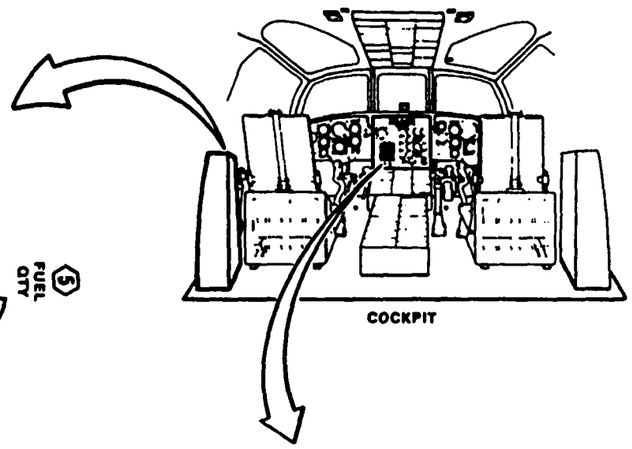
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NO. 1 POWER DISTRIBUTION PANEL (PDP) VIEW LOOKING AFT

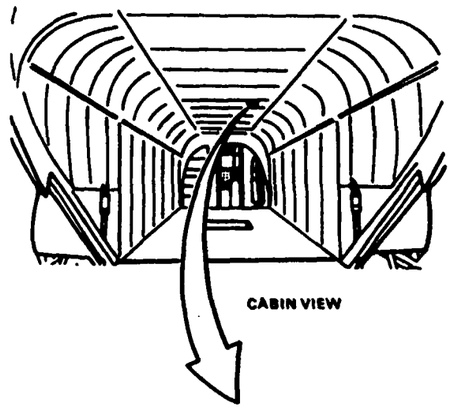


COCKPIT

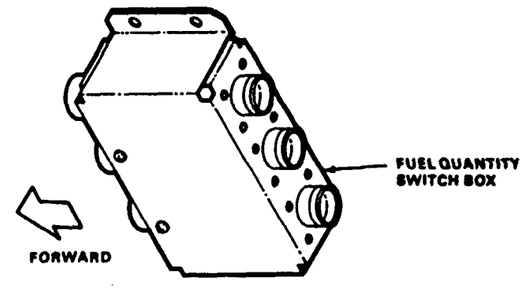
CENTER INSTRUMENT PANEL

FUEL QUANTITY INDICATOR

FUEL QUANTITY SELECT SWITCH



CABIN VIEW



STA 232
RBL 5.0

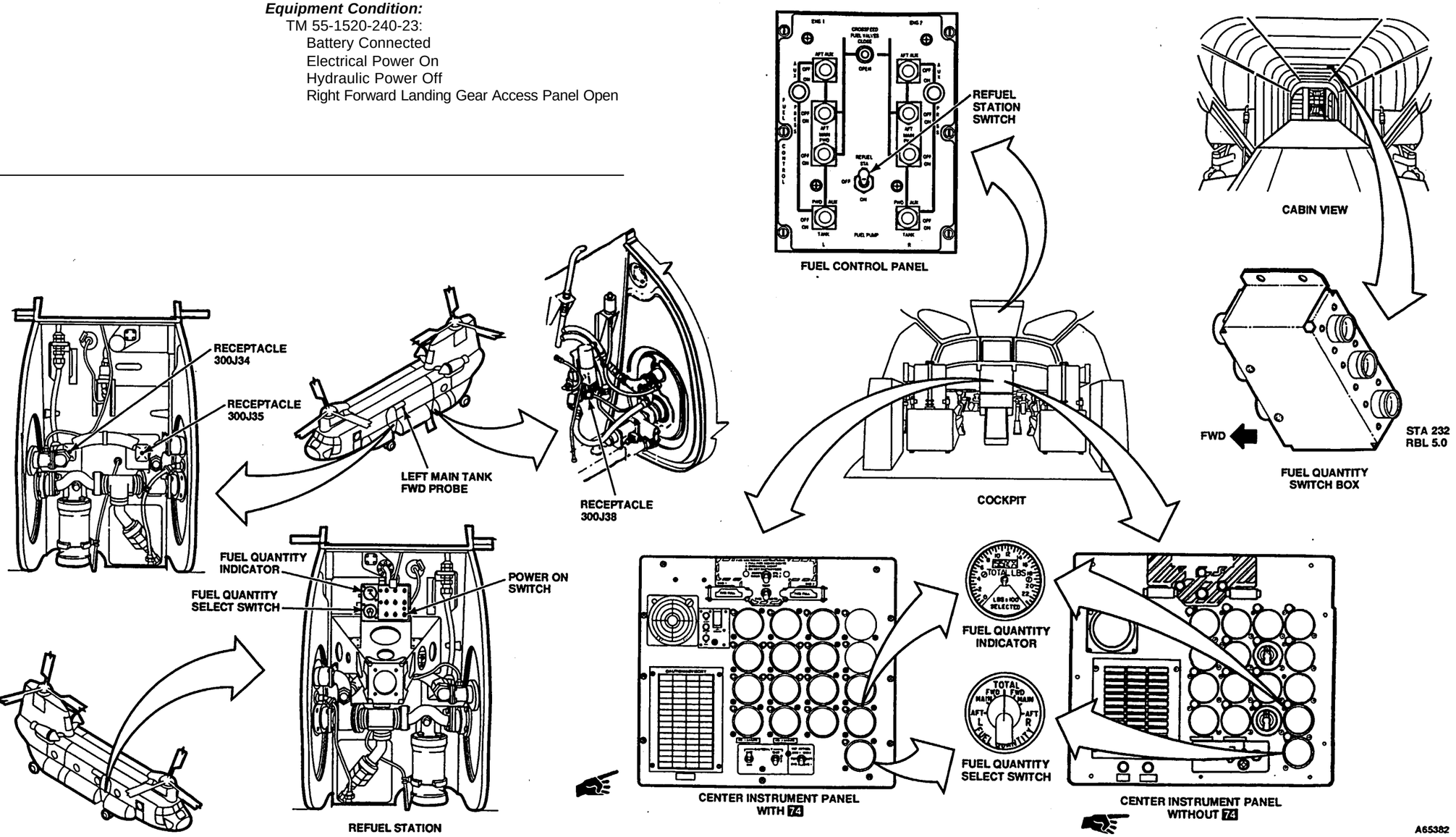
90-94

D145-11542-SPA

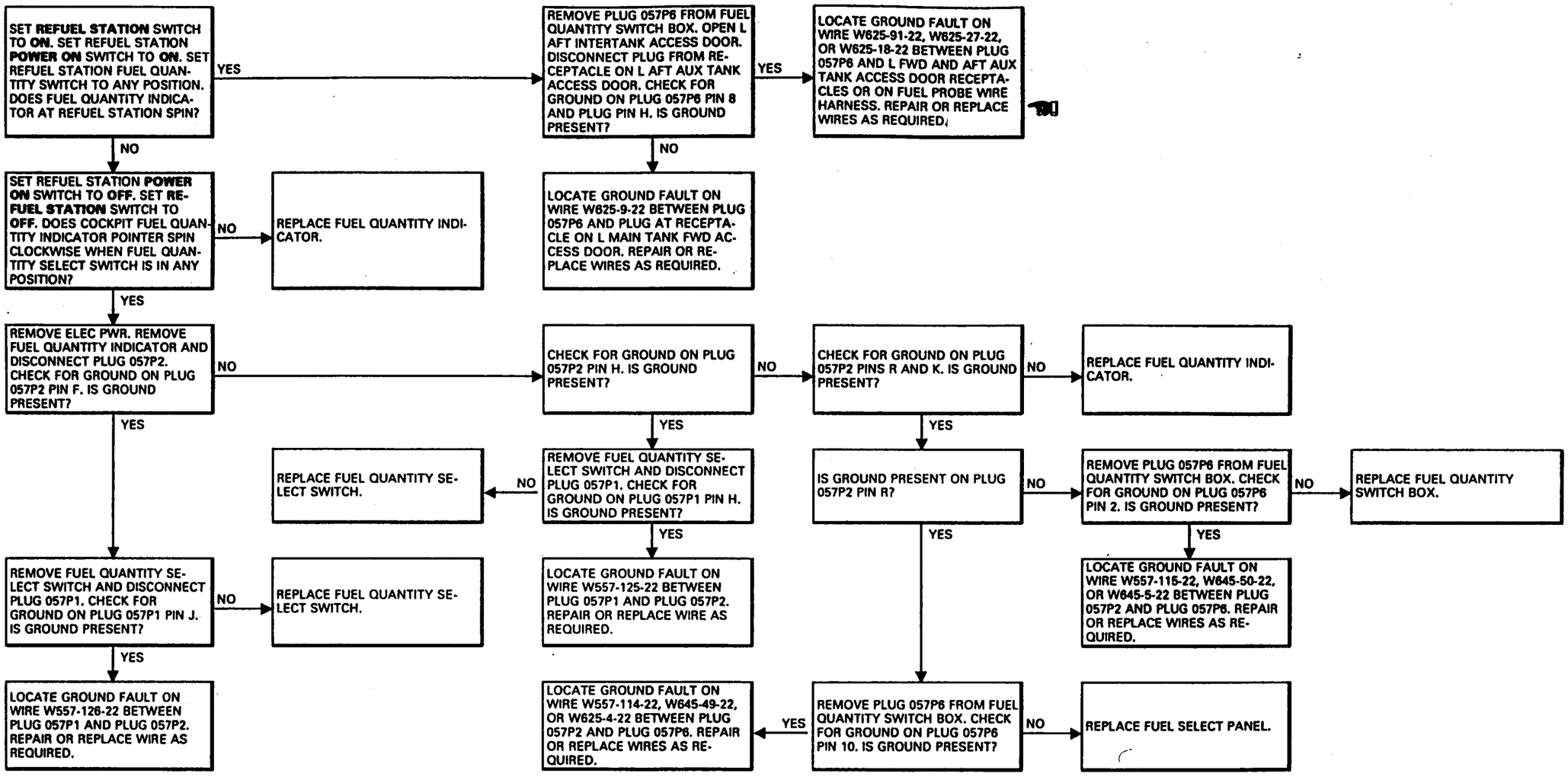
END OF TASK
Change 4 8-273

FAULT ISOLATION PROCEDURE
INITIAL SETUP
Applicable Configurations:
All
Tools:
Electrical Repairer Tool Kit,
NSN 5180-00-323-4915
Multimeter
Materials:
None
Personnel Required:
Aircraft Electrician (2)

References:
TM 55-1520-240-23
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off
Right Forward Landing Gear Access Panel Open



GO TO NEXT PAGE

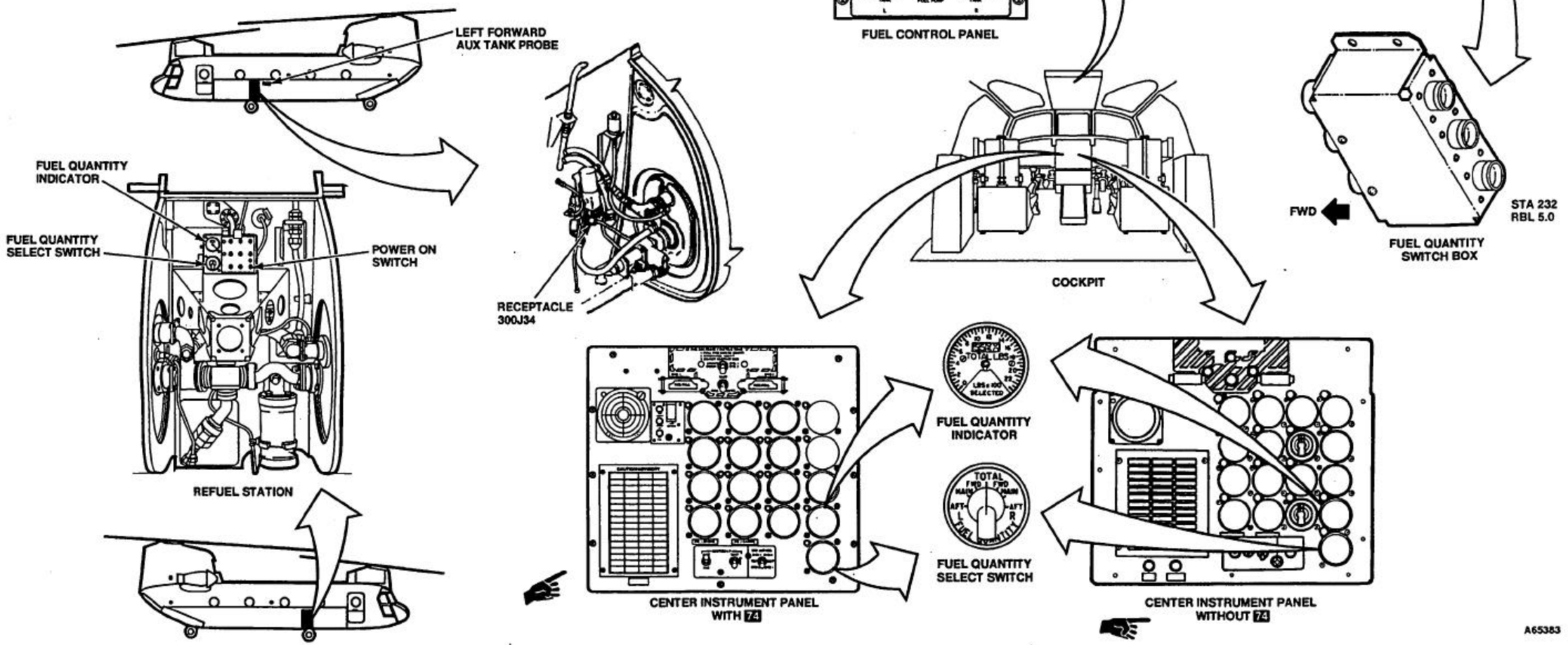

SET REFUEL STATION SWITCH TO ON. SET REFUEL STATION POWER ON SWITCH TO ON. SET REFUEL STATION FUEL QUANTITY SWITCH TO ANY POSITION. DOES FUEL QUANTITY INDICATOR AT REFUEL STATION SPIN?
YES
NO
REMOVE PLUG 057P6 FROM FUEL QUANTITY SWITCH BOX. OPEN L AFT INTERTANK ACCESS DOOR. DISCONNECT PLUG FROM RECEPTACLE ON L AFT AUX TANK ACCESS DOOR. CHECK FOR GROUND ON PLUG 057P6 PIN 8 AND PLUG PIN H. IS GROUND PRESENT?
YES
NO
LOCATE GROUND FAULT ON WIRE W625-91-22, W625-27-22, OR W625-18-22 BETWEEN PLUG 057P6 AND L FWD AND AFT AUX TANK ACCESS DOOR RECEPTACLES OR ON FUEL PROBE WIRE HARNESS. REPAIR OR REPLACE WIRES AS REQUIRED.
LOCATE GROUND FAULT ON WIRE W625-9-22 BETWEEN PLUG 057P6 AND PLUG AT RECEPTACLE ON L MAIN TANK FWD ACCESS DOOR. REPAIR OR REPLACE WIRES AS REQUIRED.
SET REFUEL STATION POWER ON SWITCH TO OFF. SET REFUEL STATION SWITCH TO OFF. DOES COCKPIT FUEL QUANTITY INDICATOR POINTER SPIN CLOCKWISE WHEN FUEL QUANTITY SELECT SWITCH IS IN ANY POSITION?
NO
REPLACE FUEL QUANTITY INDICATOR.
YES
REMOVE ELEC PWR. REMOVE FUEL QUANTITY INDICATOR AND DISCONNECT PLUG 057P2. CHECK FOR GROUND ON PLUG 057P2 PIN F. IS GROUND PRESENT?
NO
CHECK FOR GROUND ON PLUG 057P2 PIN H. IS GROUND PRESENT?
NO
CHECK FOR GROUND ON PLUG 057P2 PINS R AND K. IS GROUND PRESENT?
NO
REPLACE FUEL QUANTITY INDICATOR.
YES
YES
YES
REMOVE FUEL QUANTITY SELECT SWITCH AND DISCONNECT PLUG 057P1. CHECK FOR GROUND ON PLUG 057P1 PIN H. IS GROUND PRESENT?
NO
REPLACE FUEL QUANTITY SELECT SWITCH.
IS GROUND PRESENT ON PLUG 057P2 PIN R?
NO
REMOVE PLUG 057P6 FROM FUEL QUANTITY SWITCH BOX. CHECK FOR GROUND ON PLUG 057P6 PIN 2. IS GROUND PRESENT?
NO
REPLACE FUEL QUANTITY SWITCH BOX.
YES
YES
YES
REMOVE FUEL QUANTITY SELECT SWITCH AND DISCONNECT PLUG 057P1. CHECK FOR GROUND ON PLUG 057P1 PIN J. IS GROUND PRESENT?
NO
REPLACE FUEL QUANTITY SELECT SWITCH.
LOCATE GROUND FAULT ON WIRE W557-125-22 BETWEEN PLUG 057P1 AND PLUG 057P2. REPAIR OR REPLACE WIRE AS REQUIRED.
LOCATE GROUND FAULT ON WIRE W557-115-22, W645-50-22, OR W645-5-22 BETWEEN PLUG 057P2 AND PLUG 057P6. REPAIR OR REPLACE WIRES AS REQUIRED.
YES
LOCATE GROUND FAULT ON WIRE W557-126-22 BETWEEN PLUG 057P1 AND PLUG 057P2. REPAIR OR REPLACE WIRE AS REQUIRED.
LOCATE GROUND FAULT ON WIRE W557-114-22, W645-49-22, OR W625-4-22 BETWEEN PLUG 057P2 AND PLUG 057P6. REPAIR OR REPLACE WIRES AS REQUIRED.
YES
REMOVE PLUG 057P6 FROM FUEL QUANTITY SWITCH BOX. CHECK FOR GROUND ON PLUG 057P6 PIN 10. IS GROUND PRESENT?
NO
REPLACE FUEL SELECT PANEL.

END OF TASK

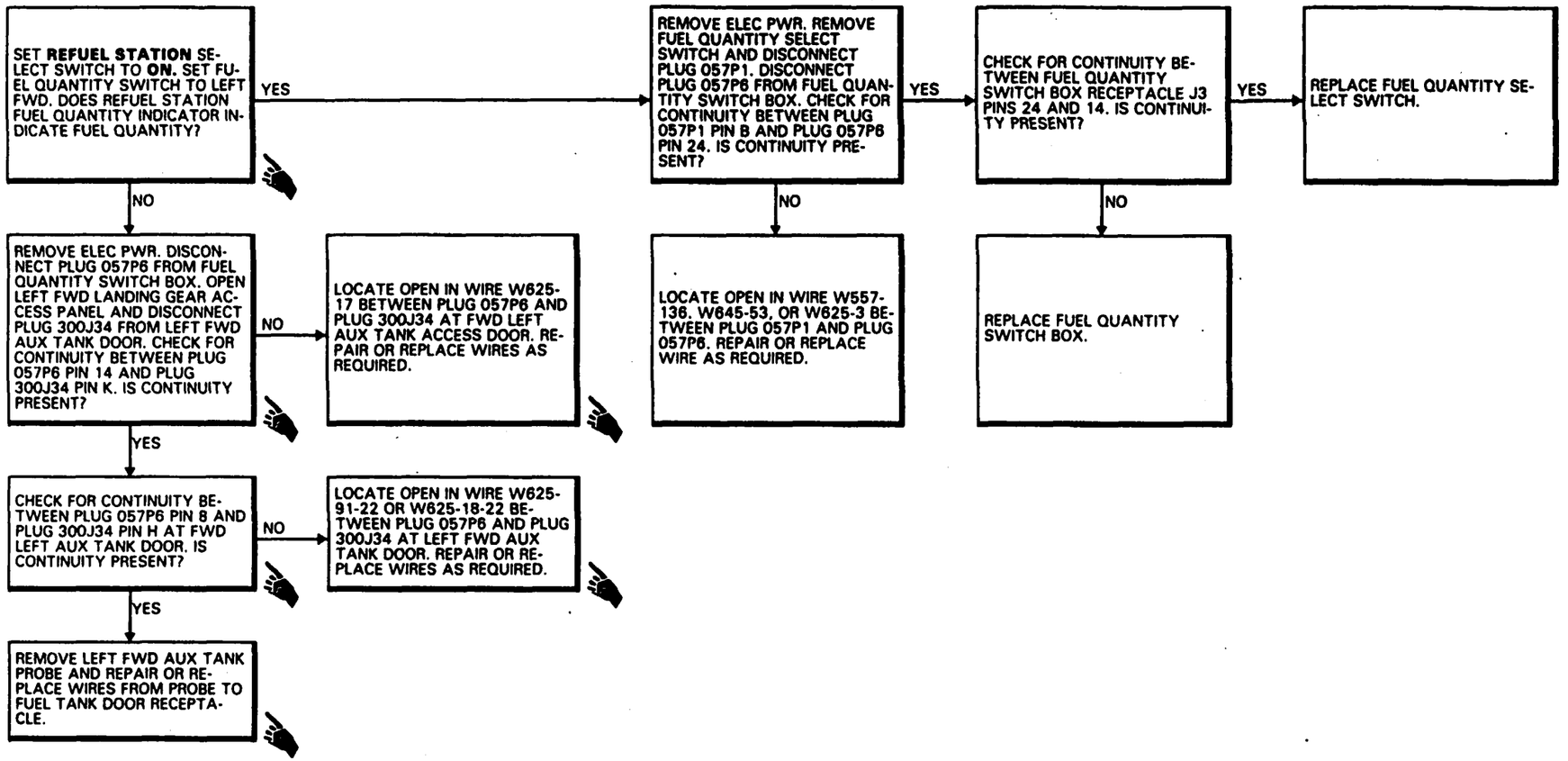
FAULT ISOLATION PROCEDURE

INITIAL SETUP
Applicable Configurations:
All
Tools:
Electrical Repairer Tool Kit,
NSN 5180-00-323-4915
Multimeter
Materials:
None
Personnel Required:
Aircraft Electrician (2)

References:
TM 55-1520-240-23
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off
Right Forward Landing Gear Access Panel Open



GO TO NEXT PAGE


SET REFUEL STATION SELECT SWITCH TO ON. SET FUEL QUANTITY SWITCH TO LEFT FWD. DOES REFUEL STATION FUEL QUANTITY INDICATOR INDICATE FUEL QUANTITY?
YES
NO
REMOVE ELEC PWR. DISCONNECT PLUG 057P6 FROM FUEL QUANTITY SWITCH BOX. OPEN LEFT FWD LANDING GEAR ACCESS PANEL AND DISCONNECT PLUG 300J34 FROM LEFT FWD AUX TANK DOOR. CHECK FOR CONTINUITY BETWEEN PLUG 057P6 PIN 14 AND PLUG 300J34 PIN K. IS CONTINUITY PRESENT?
NO
LOCATE OPEN IN WIRE W625-17 BETWEEN PLUG 057P6 AND PLUG 300J34 AT FWD LEFT AUX TANK ACCESS DOOR. REPAIR OR REPLACE WIRES AS REQUIRED.
YES
CHECK FOR CONTINUITY BETWEEN PLUG 057P6 PIN 8 AND PLUG 300J34 PIN H AT FWD LEFT AUX TANK DOOR. IS CONTINUITY PRESENT?
NO
LOCATE OPEN IN WIRE W625-91-22 OR W625-18-22 BETWEEN PLUG 057P6 AND PLUG 300J34 AT LEFT FWD AUX TANK DOOR. REPAIR OR REPLACE WIRES AS REQUIRED.
YES
REMOVE LEFT FWD AUX TANK PROBE AND REPAIR OR REPLACE WIRES FROM PROBE TO FUEL TANK DOOR RECEPTACLE.
REMOVE ELEC PWR. REMOVE FUEL QUANTITY SELECT SWITCH AND DISCONNECT PLUG 057P1. DISCONNECT PLUG 057P6 FROM FUEL QUANTITY SWITCH BOX. CHECK FOR CONTINUITY BETWEEN PLUG 057P1 PIN B AND PLUG 057P6 PIN 24. IS CONTINUITY PRESENT?
YES
NO
LOCATE OPEN IN WIRE W557-136, W645-53, OR W625-3 BETWEEN PLUG 057P1 AND PLUG 057P6. REPAIR OR REPLACE WIRE AS REQUIRED.
CHECK FOR CONTINUITY BETWEEN FUEL QUANTITY SWITCH BOX RECEPTACLE J3 PINS 24 AND 14. IS CONTINUITY PRESENT?
YES
NO
REPLACE FUEL QUANTITY SWITCH BOX.
REPLACE FUEL QUANTITY SELECT SWITCH.

END OF TASK

8-11.9 FUEL QUANTITY INDICATION WRONG WHEN FUEL QUANTITY SELECT SWITCH IS SET TO L AFT

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

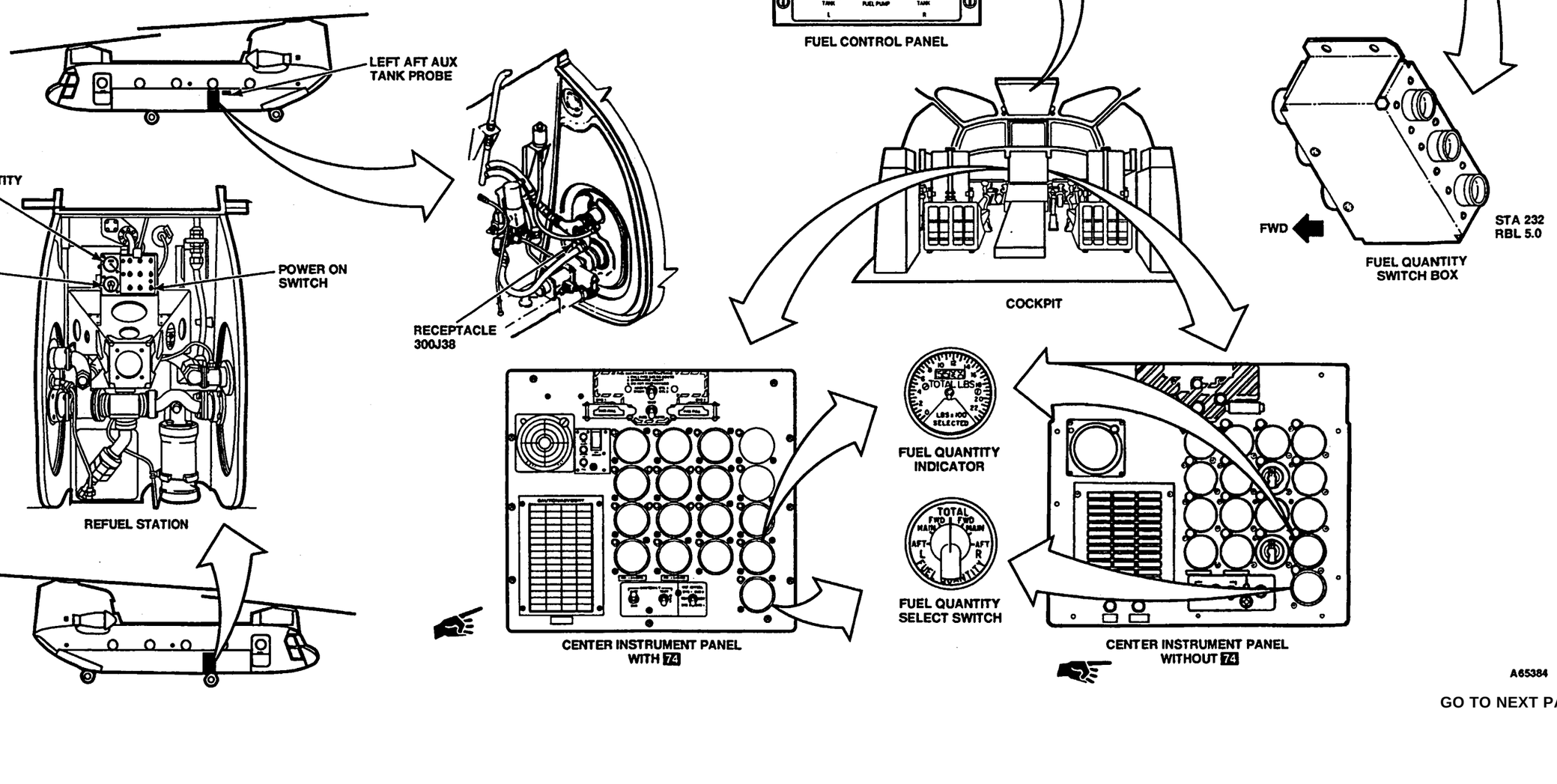
Tools:
Electrical Repairer Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:
None

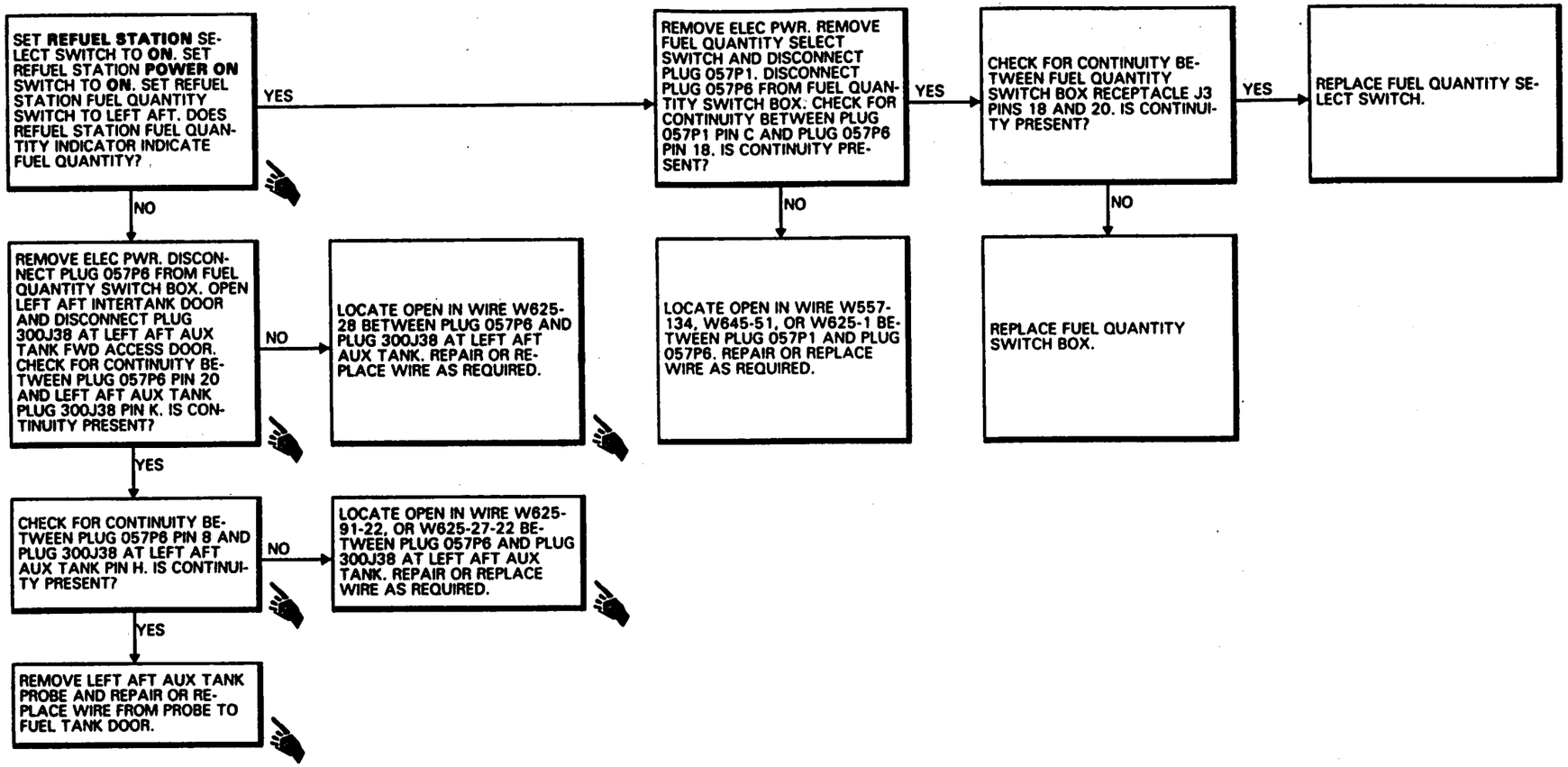
Personnel Required:
Aircraft Electrician (2)

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off
Right Forward Landing Gear Access Panel Open



GO TO NEXT PAGE


SET REFUEL STATION SELECT SWITCH TO ON. SET REFUEL STATION POWER ON SWITCH TO ON. SET REFUEL STATION FUEL QUANTITY SWITCH TO LEFT AFT. DOES REFUEL STATION FUEL QUANTITY INDICATOR INDICATE FUEL QUANTITY?
YES
NO
REMOVE ELEC PWR. DISCONNECT PLUG 057P6 FROM FUEL QUANTITY SWITCH BOX. OPEN LEFT AFT INTERTANK DOOR AND DISCONNECT PLUG 300J38 AT LEFT AFT AUX TANK FWD ACCESS DOOR. CHECK FOR CONTINUITY BETWEEN PLUG 057P6 PIN 20 AND LEFT AFT AUX TANK PLUG 300J38 PIN K. IS CONTINUITY PRESENT?
NO
LOCATE OPEN IN WIRE W625-28 BETWEEN PLUG 057P6 AND PLUG 300J38 AT LEFT AFT AUX TANK. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
CHECK FOR CONTINUITY BETWEEN PLUG 057P6 PIN 8 AND PLUG 300J38 AT LEFT AFT AUX TANK PIN H. IS CONTINUITY PRESENT?
NO
LOCATE OPEN IN WIRE W625-91-22, OR W625-27-22 BETWEEN PLUG 057P6 AND PLUG 300J38 AT LEFT AFT AUX TANK. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
REMOVE LEFT AFT AUX TANK PROBE AND REPAIR OR REPLACE WIRE FROM PROBE TO FUEL TANK DOOR.
REMOVE ELEC PWR. REMOVE FUEL QUANTITY SELECT SWITCH AND DISCONNECT PLUG 057P1. DISCONNECT PLUG 057P6 FROM FUEL QUANTITY SWITCH BOX. CHECK FOR CONTINUITY BETWEEN PLUG 057P1 PIN C AND PLUG 057P6 PIN 18. IS CONTINUITY PRESENT?
YES
NO
LOCATE OPEN IN WIRE W557-134, W645-51, OR W625-1 BETWEEN PLUG 057P1 AND PLUG 057P6. REPAIR OR REPLACE WIRE AS REQUIRED.
CHECK FOR CONTINUITY BETWEEN FUEL QUANTITY SWITCH BOX RECEPTACLE J3 PINS 18 AND 20. IS CONTINUITY PRESENT?
YES
NO
REPLACE FUEL QUANTITY SWITCH BOX.
REPLACE FUEL QUANTITY SELECT SWITCH.

END OF TASK

8-11.10 NO FUEL QUANTITY INDICATION WHEN FUEL QUANTITY SELECT SWITCH IS SET TO R MAIN

8-11.10

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

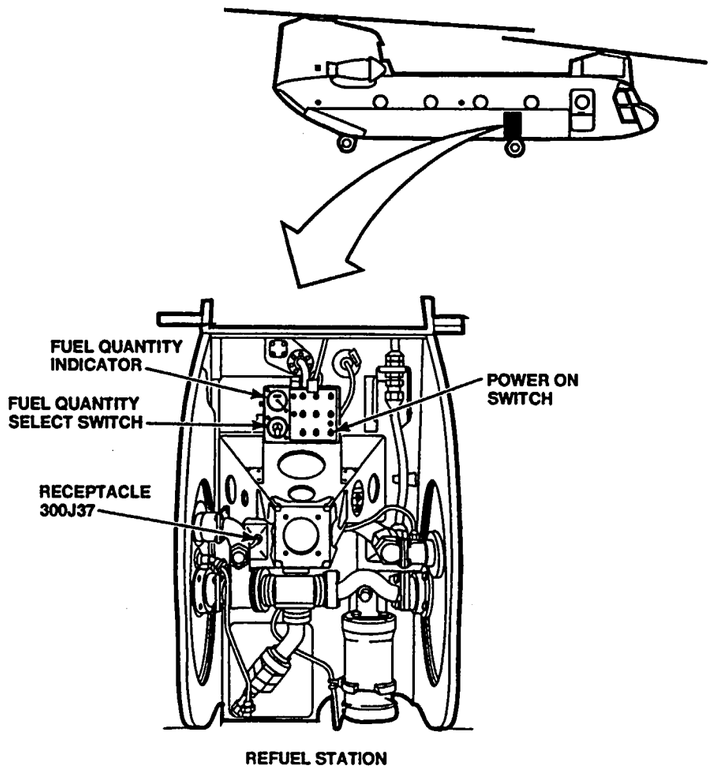
Tools:
Electrical Repairer Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:
None

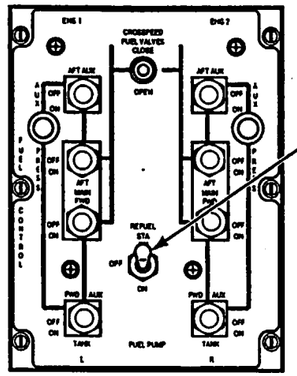
Personnel Required:
Aircraft Electrician (2)

References:
TM 55-1520-240-23

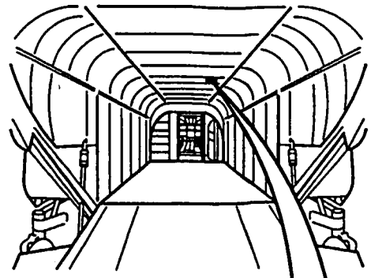
Equipment Condition:
Battery Connected
Electrical Power On
Hydraulic Power Off
Right Fwd Landing Gear Access Panel Open

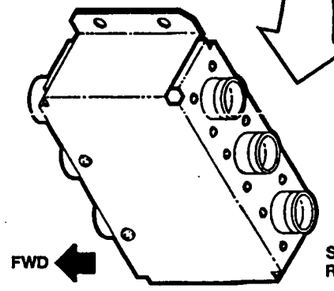


REFUEL STATION

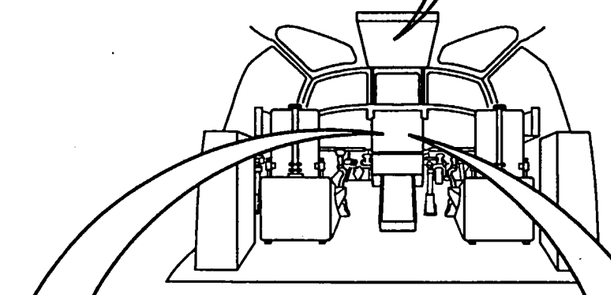


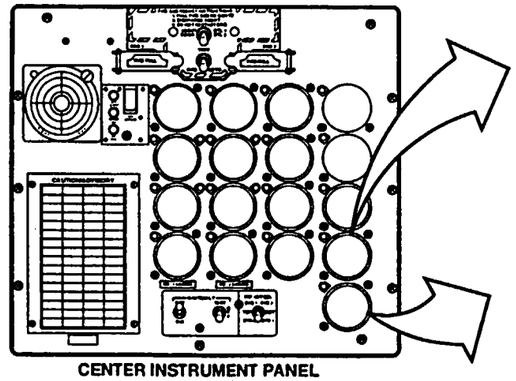
FUEL CONTROL PANEL

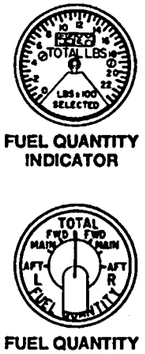

CABIN VIEW



FUEL QUANTITY SWITCH BOX

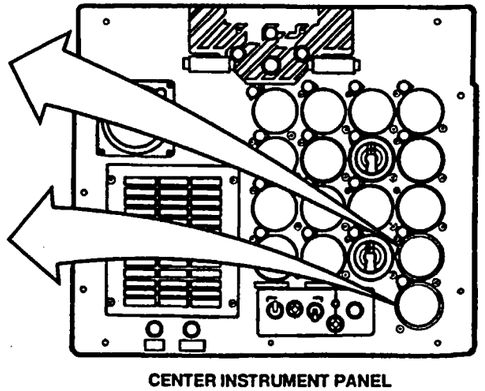

COCKPIT


CENTER INSTRUMENT PANEL WITH 74



FUEL QUANTITY INDICATOR

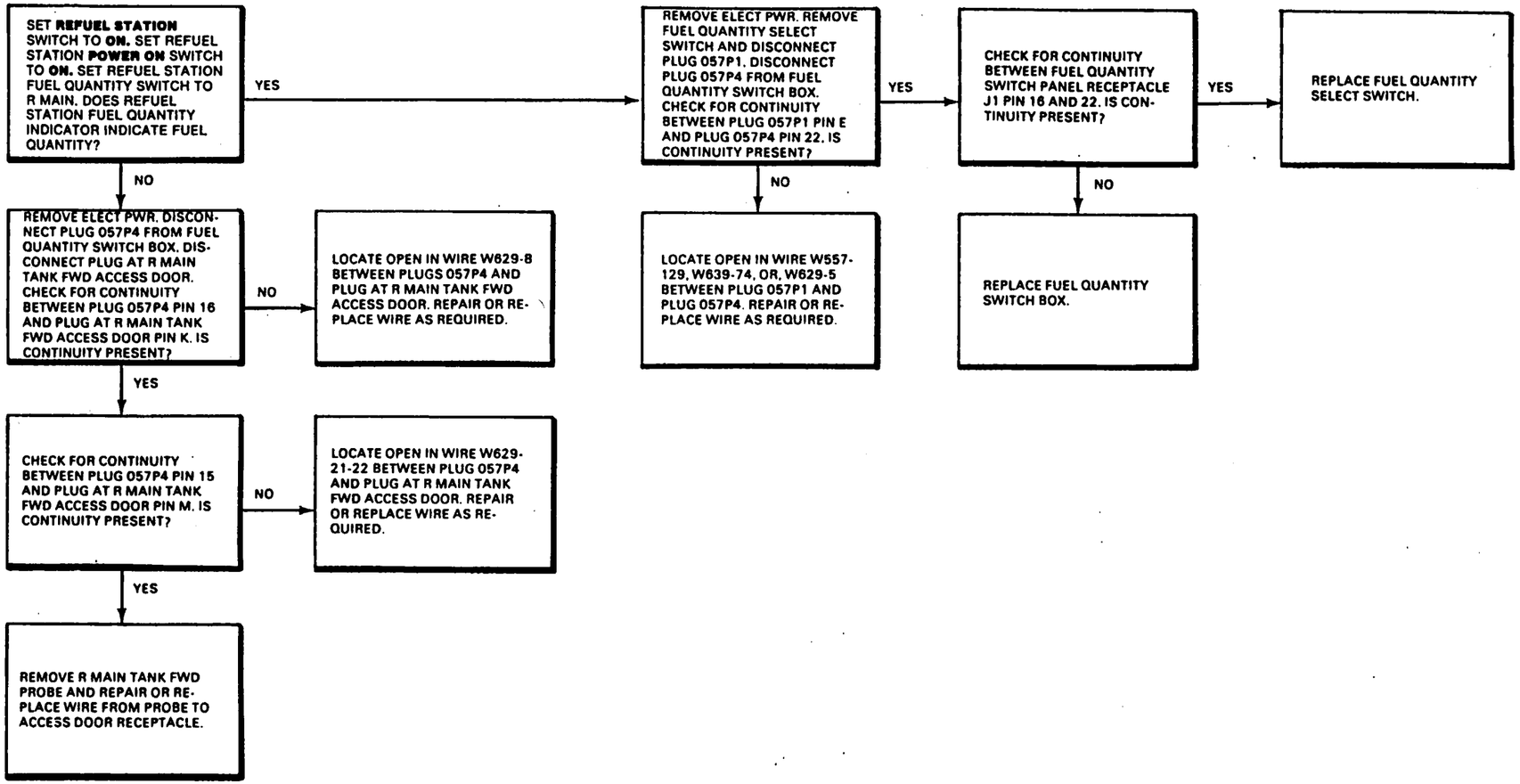
FUEL QUANTITY SELECT SWITCH


CENTER INSTRUMENT PANEL WITHOUT 74

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8-11.10 FUEL QUANTITY INDICATION WHEN FUEL QUANTITY SELECT SWITCH IS SET TO R MAIN (Continued)

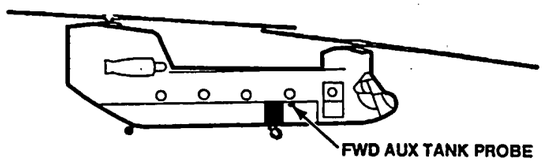


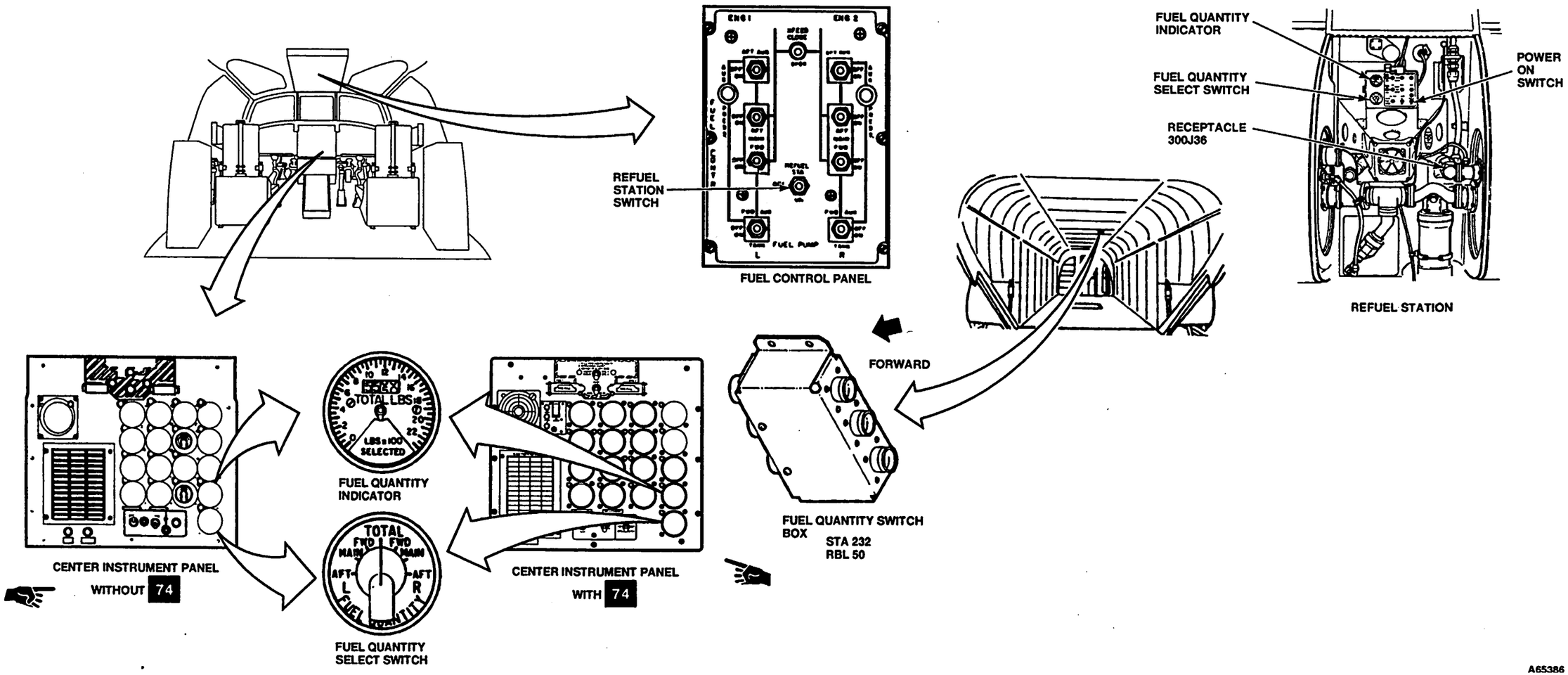
END OF TASK
8-281

8-11.11 NO FUEL QUANTITY INDICATION WHEN FUEL QUANTITY SELECT SWITCH IS SET TO R FWD

FAULT ISOLATION PROCEDURE

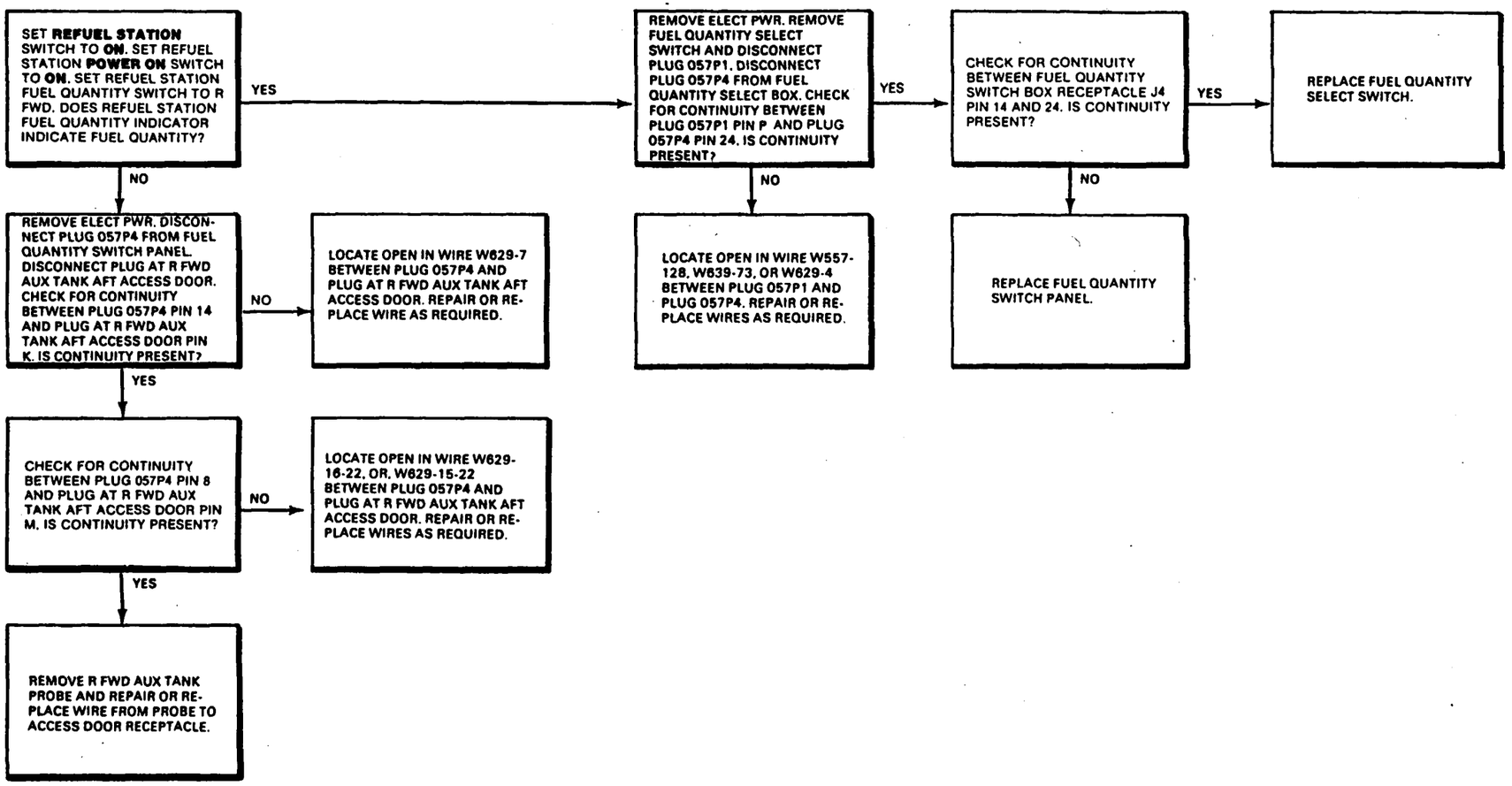
INITIAL SETUP
Applicable Configurations:
All
Tools:
Electrical Repairer Tool Kit,
NSN 5180-00-323-4915
Multimeter
Materials:
None
Personnel Required:
Aircraft Electrician (2)
References:
TM 55-1520-240-23
Equipment Condition:
Battery Connected
Electrical Power On
Hydraulic Power Off
Right Forward Landing Gear Access Panel Open





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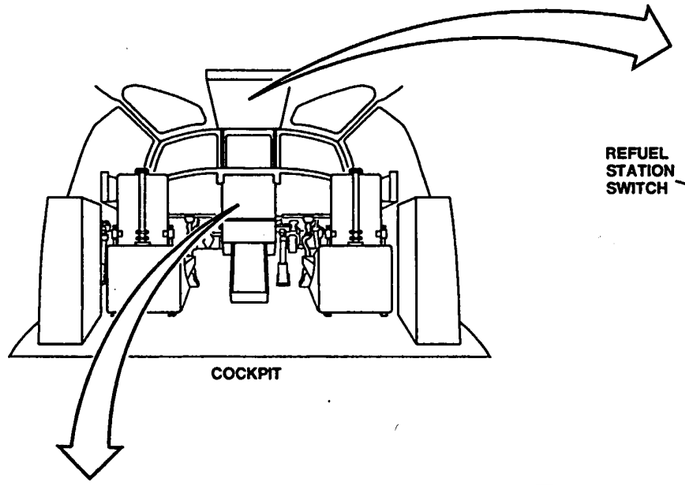
END OF TASK
8-283

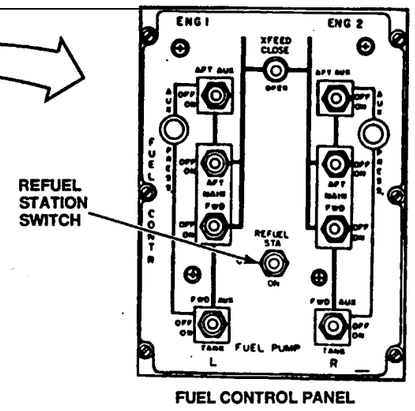
8-11.12 FUEL QUANTITY INDICATION WRONG WHEN FUEL QUANTITY SELECT SWITCH IS SET TO RIGHT AFT 8-11.12

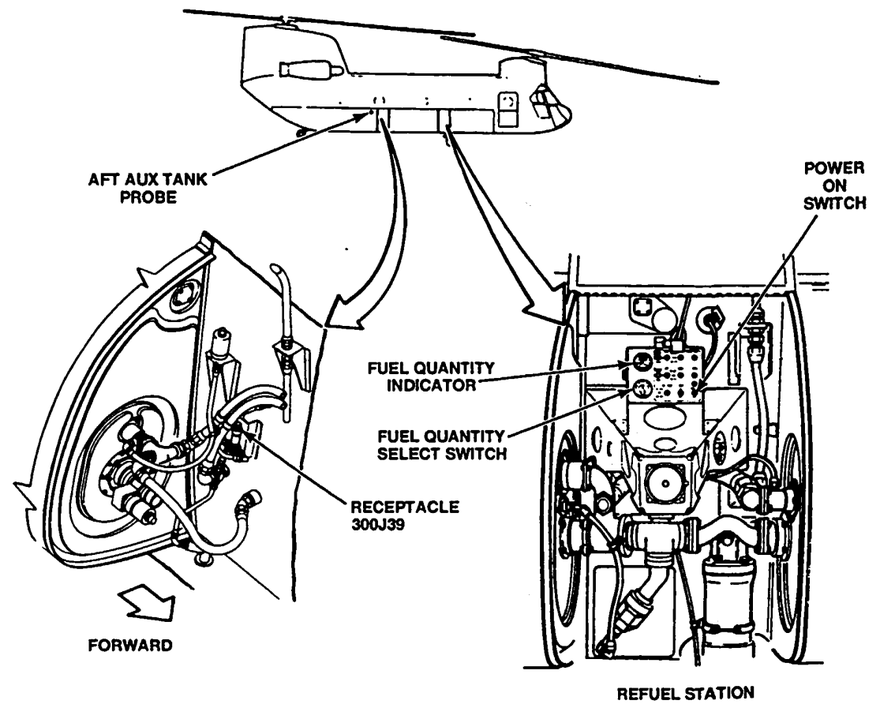
FAULT ISOLATION PROCEDURE

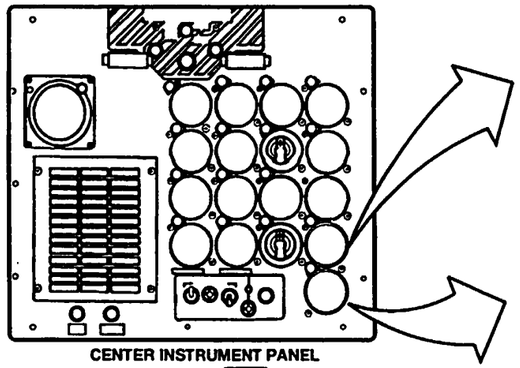
INITIAL SETUP
Applicable Configurations:
All
Tools:
Electrical Repairer Tool Kit,
NSN 5180-00-323-4915
Multimeter
Materials:
None
Personnel Required:
Aircraft Electrician (2)

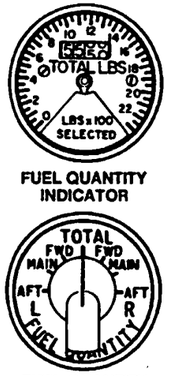
References:
TM 55-1520-240-23
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off
Right Forward Landing Gear Access Panel Open

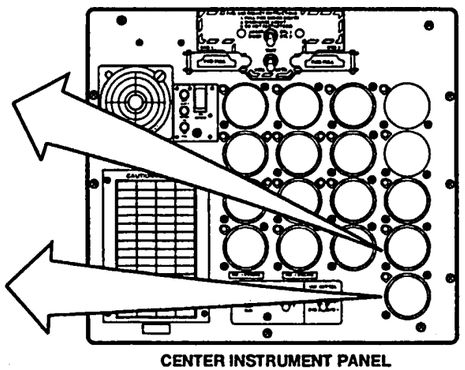


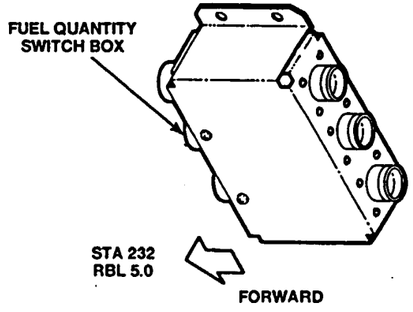


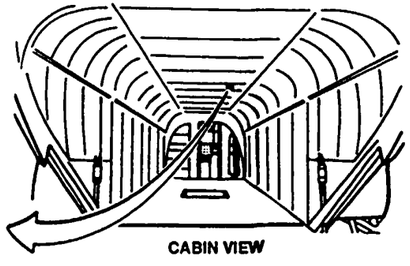










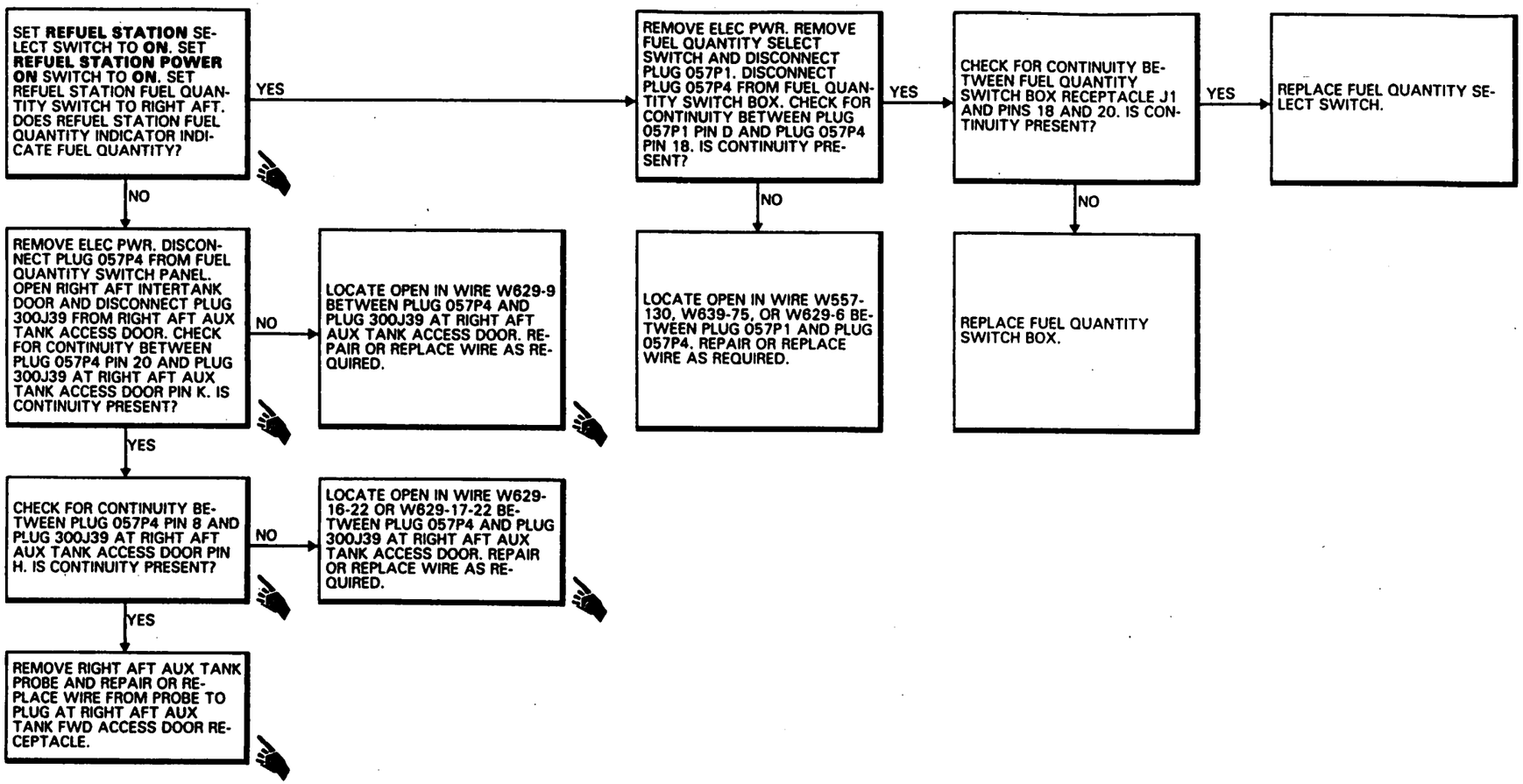


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8-11.12 FUEL QUANTITY INDICATION WRONG WHEN FUEL-QUANTITY SELECT SWITCH IS SET TO RIGHT AFT-Continued)

8-11.12



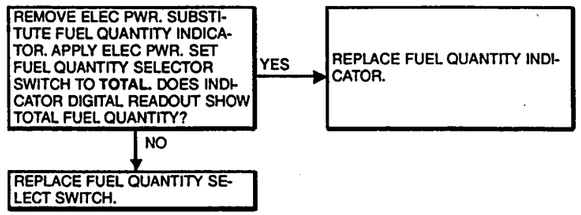
END OF TASK

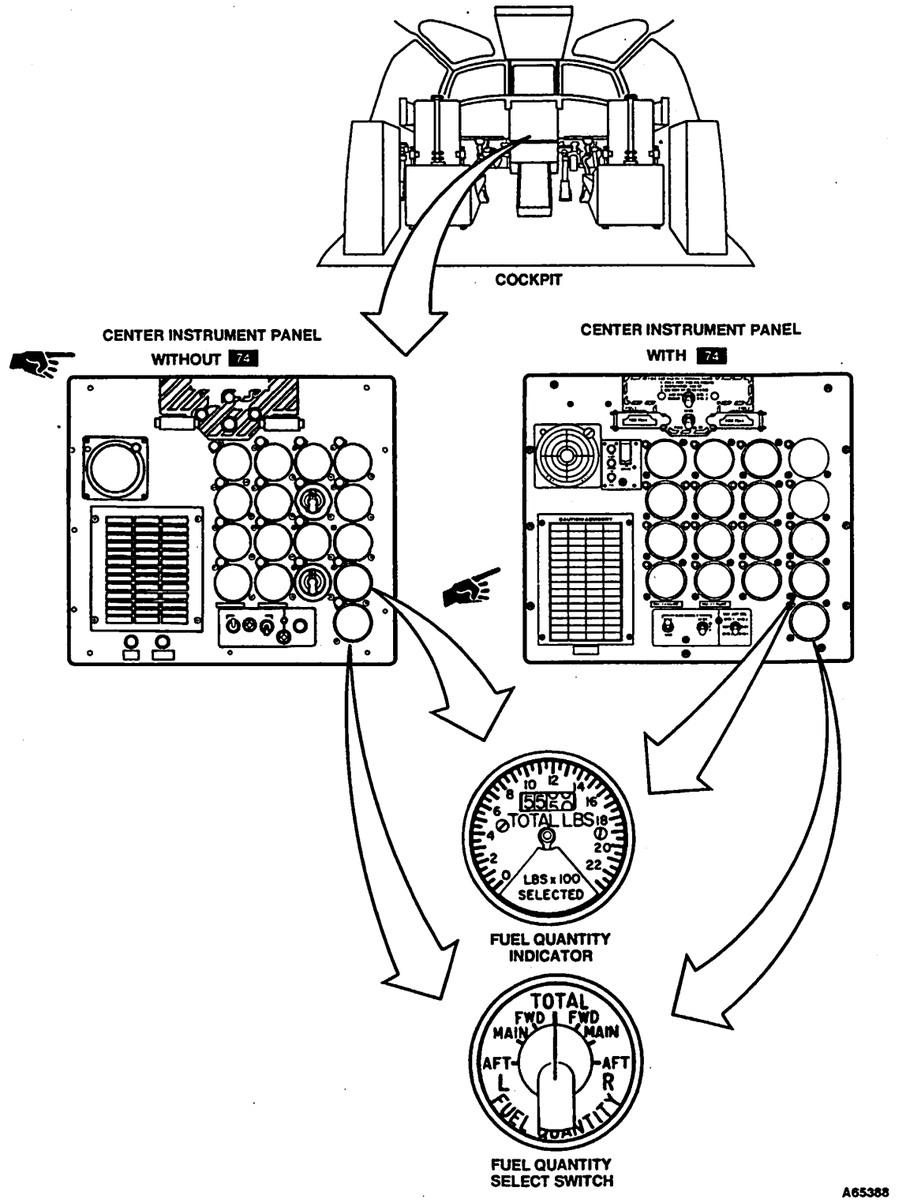
8-11.13 FUEL QUANTITY INDICATOR DIGITAL READOUT DOES NOT SHOW TOTAL FUEL QUANTITY WHEN FUEL QUANTITY SELECT SWITCH IS SET TO TOTAL 8-11.13

FAULT ISOLATION PROCEDURE

INITIAL SETUP
Applicable Configurations:
All
Tools:
Electrical Repairer Tool Kit,
NSN 5180-00-323-4915
Multimeter
Materials:
None

Personnel Required:
Aircraft Electrician (2)
References:
TM 55-1520-240-23
Equipment Condition:
Battery Connected
Electrical Power On
Hydraulic Power Off



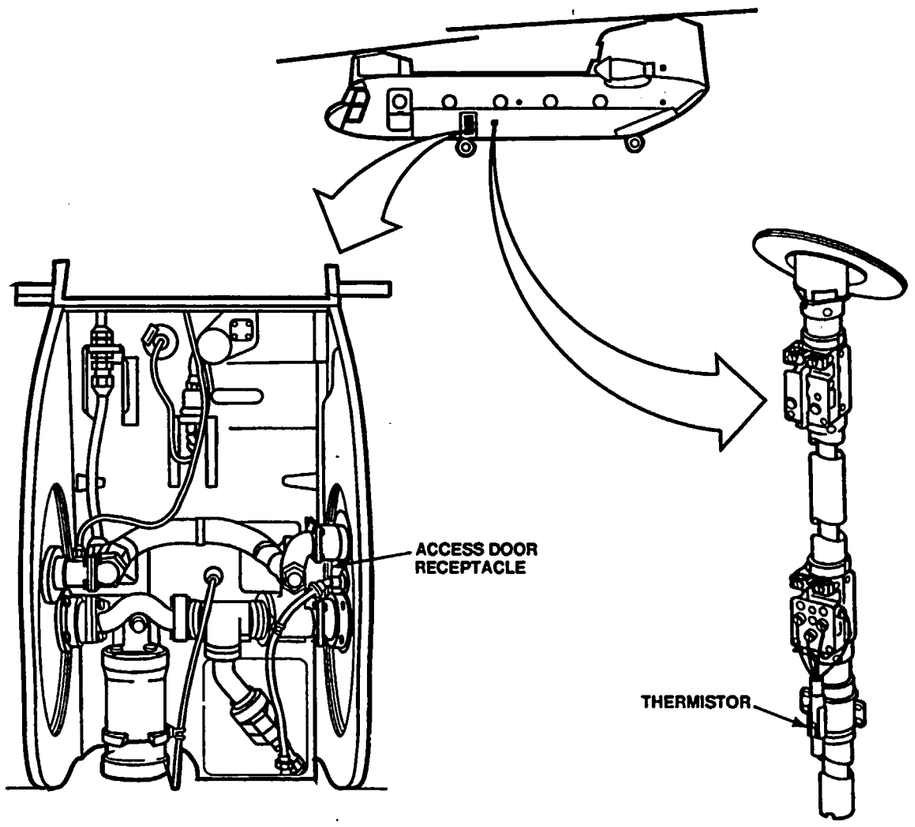


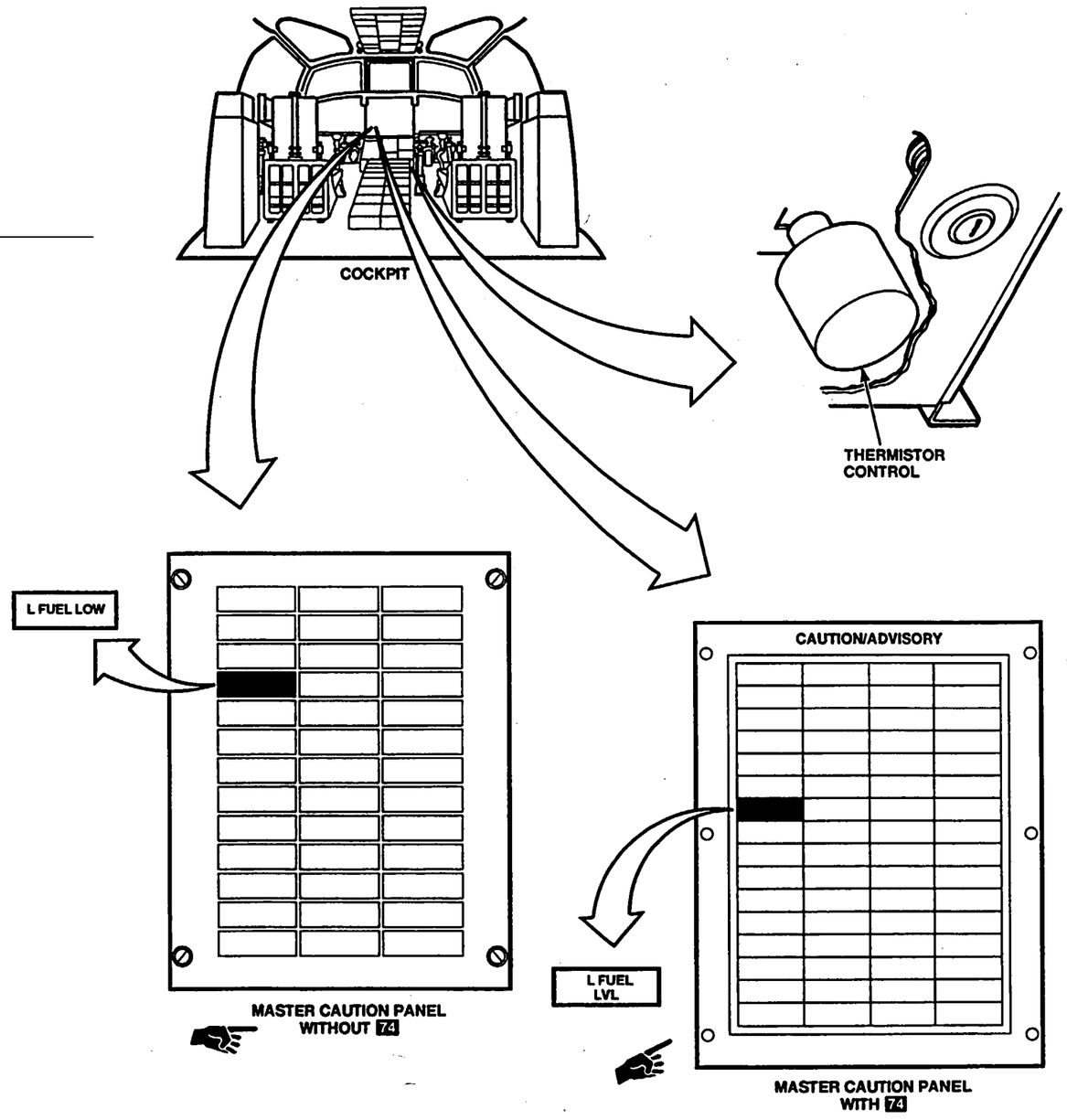
END OF TASK

8-11.14 FUEL LOW (WITHOUT 74), L FUEL LVL (WITH 74) WARNING CAPSULE ON WHEN L MAIN FUEL TANK IS FULL 8-11.14

FAULT ISOLATION PROCEDURE
INITIAL SETUP
Applicable Configurations:
All
Tools:
Electrical Repairer Tool Kit,
NSN 5180-00-323-4915
Multimeter
Materials:
None

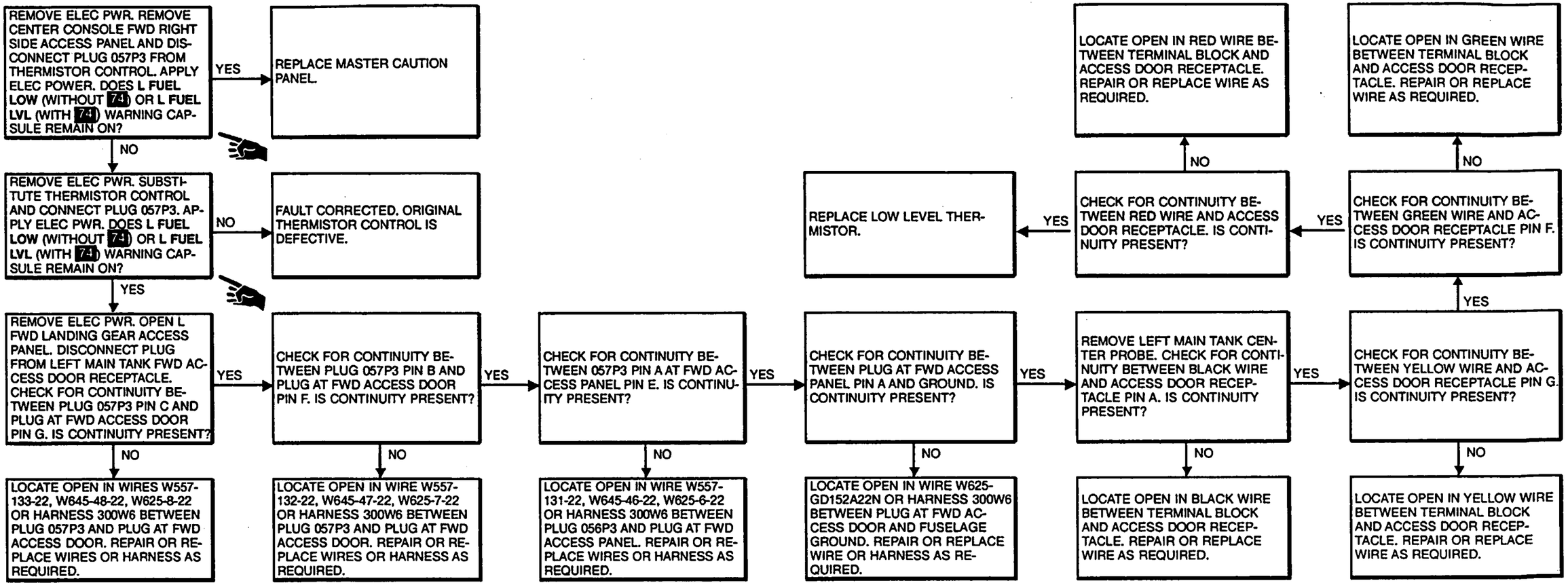
Personnel Required:
Aircraft Electrician (2)
References:
TM 55-1520-240-23
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off





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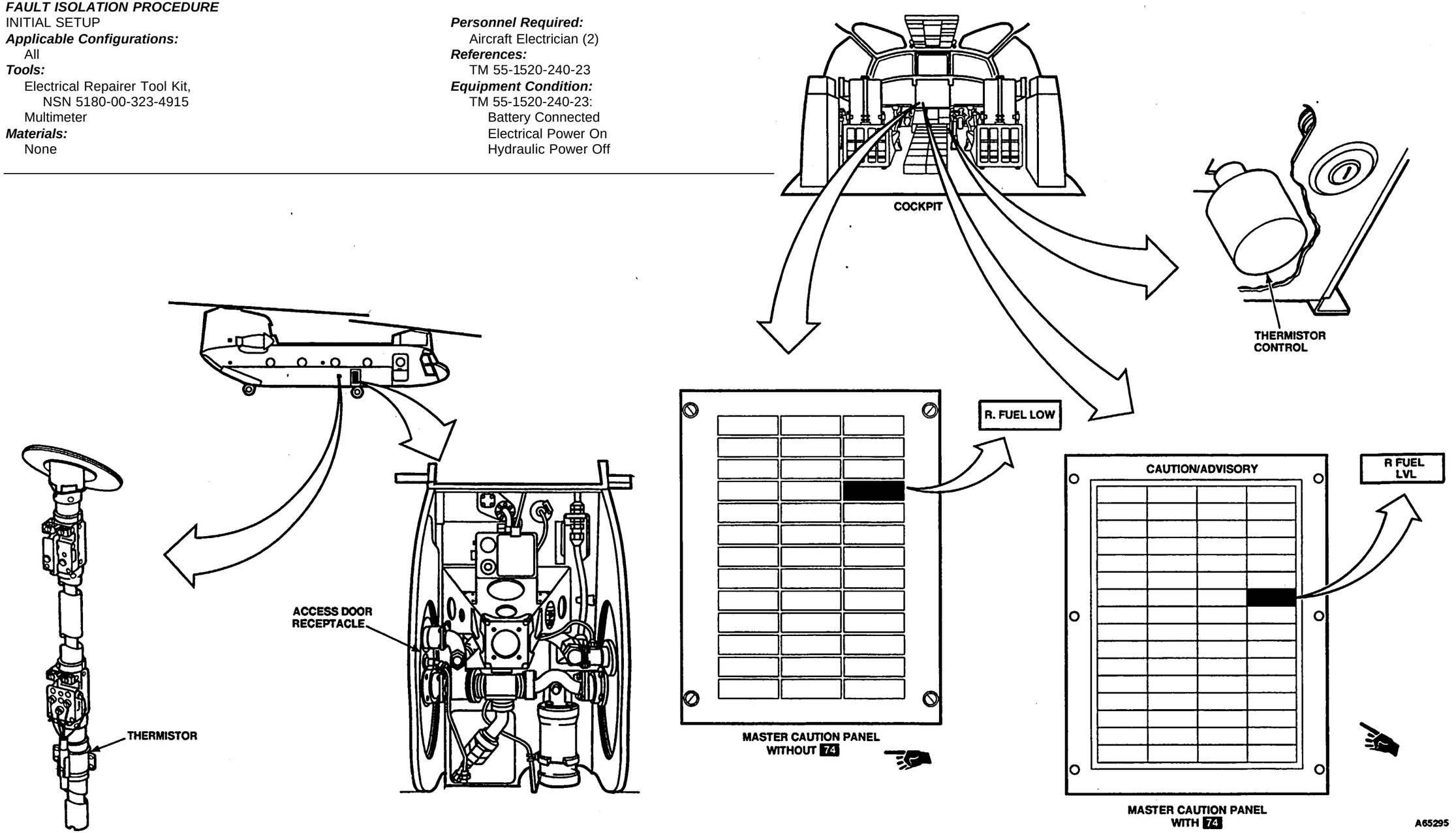
GO TO NEXT PAGE


REMOVE ELEC PWR. REMOVE CENTER CONSOLE FWD RIGHT SIDE ACCESS PANEL AND DISCONNECT PLUG 057P3 FROM THERMISTOR CONTROL. APPLY ELEC POWER. DOES L FUEL LOW (WITHOUT 74) OR L FUEL LVL (WITH 74) WARNING CAPSULE REMAIN ON?
YES
REPLACE MASTER CAUTION PANEL.
NO
REMOVE ELEC PWR. SUBSTITUTE THERMISTOR CONTROL AND CONNECT PLUG 057P3. APPLY ELEC PWR. DOES L FUEL LOW (WITHOUT 74) OR L FUEL LVL (WITH 74) WARNING CAPSULE REMAIN ON?
NO
FAULT CORRECTED. ORIGINAL THERMISTOR CONTROL IS DEFECTIVE.
YES
REMOVE ELEC PWR. OPEN L FWD LANDING GEAR ACCESS PANEL. DISCONNECT PLUG FROM LEFT MAIN TANK FWD ACCESS DOOR RECEPTACLE. CHECK FOR CONTINUITY BETWEEN PLUG 057P3 PIN C AND PLUG AT FWD ACCESS DOOR PIN G. IS CONTINUITY PRESENT?
YES
CHECK FOR CONTINUITY BETWEEN PLUG 057P3 PIN B AND PLUG AT FWD ACCESS DOOR PIN F. IS CONTINUITY PRESENT?
YES
CHECK FOR CONTINUITY BETWEEN 057P3 PIN A AT FWD ACCESS PANEL PIN E. IS CONTINUITY PRESENT?
YES
CHECK FOR CONTINUITY BETWEEN PLUG AT FWD ACCESS PANEL PIN A AND GROUND. IS CONTINUITY PRESENT?
YES
REMOVE LEFT MAIN TANK CENTER PROBE. CHECK FOR CONTINUITY BETWEEN BLACK WIRE AND ACCESS DOOR RECEPTACLE PIN A. IS CONTINUITY PRESENT?
YES
CHECK FOR CONTINUITY BETWEEN YELLOW WIRE AND ACCESS DOOR RECEPTACLE PIN G. IS CONTINUITY PRESENT?
YES
CHECK FOR CONTINUITY BETWEEN GREEN WIRE AND ACCESS DOOR RECEPTACLE PIN F. IS CONTINUITY PRESENT?
YES
CHECK FOR CONTINUITY BETWEEN RED WIRE AND ACCESS DOOR RECEPTACLE. IS CONTINUITY PRESENT?
YES
REPLACE LOW LEVEL THERMISTOR.
NO
LOCATE OPEN IN RED WIRE BETWEEN TERMINAL BLOCK AND ACCESS DOOR RECEPTACLE. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
LOCATE OPEN IN GREEN WIRE BETWEEN TERMINAL BLOCK AND ACCESS DOOR RECEPTACLE. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
LOCATE OPEN IN WIRES W557-133-22, W645-48-22, W625-8-22 OR HARNESS 300W6 BETWEEN PLUG 057P3 AND PLUG AT FWD ACCESS DOOR. REPAIR OR REPLACE WIRES OR HARNESS AS REQUIRED.
NO
LOCATE OPEN IN WIRE W557-132-22, W645-47-22, W625-7-22 OR HARNESS 300W6 BETWEEN PLUG 057P3 AND PLUG AT FWD ACCESS DOOR. REPAIR OR REPLACE WIRES OR HARNESS AS REQUIRED.
NO
LOCATE OPEN IN WIRE W557-131-22, W645-46-22, W625-6-22 OR HARNESS 300W6 BETWEEN PLUG 056P3 AND PLUG AT FWD ACCESS PANEL. REPAIR OR REPLACE WIRES OR HARNESS AS REQUIRED.
NO
LOCATE OPEN IN WIRE W625-GD152A22N OR HARNESS 300W6 BETWEEN PLUG AT FWD ACCESS DOOR AND FUSELAGE GROUND. REPAIR OR REPLACE WIRE OR HARNESS AS REQUIRED.
NO
LOCATE OPEN IN BLACK WIRE BETWEEN TERMINAL BLOCK AND ACCESS DOOR RECEPTACLE. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
LOCATE OPEN IN YELLOW WIRE BETWEEN TERMINAL BLOCK AND ACCESS DOOR RECEPTACLE. REPAIR OR REPLACE WIRE AS REQUIRED.

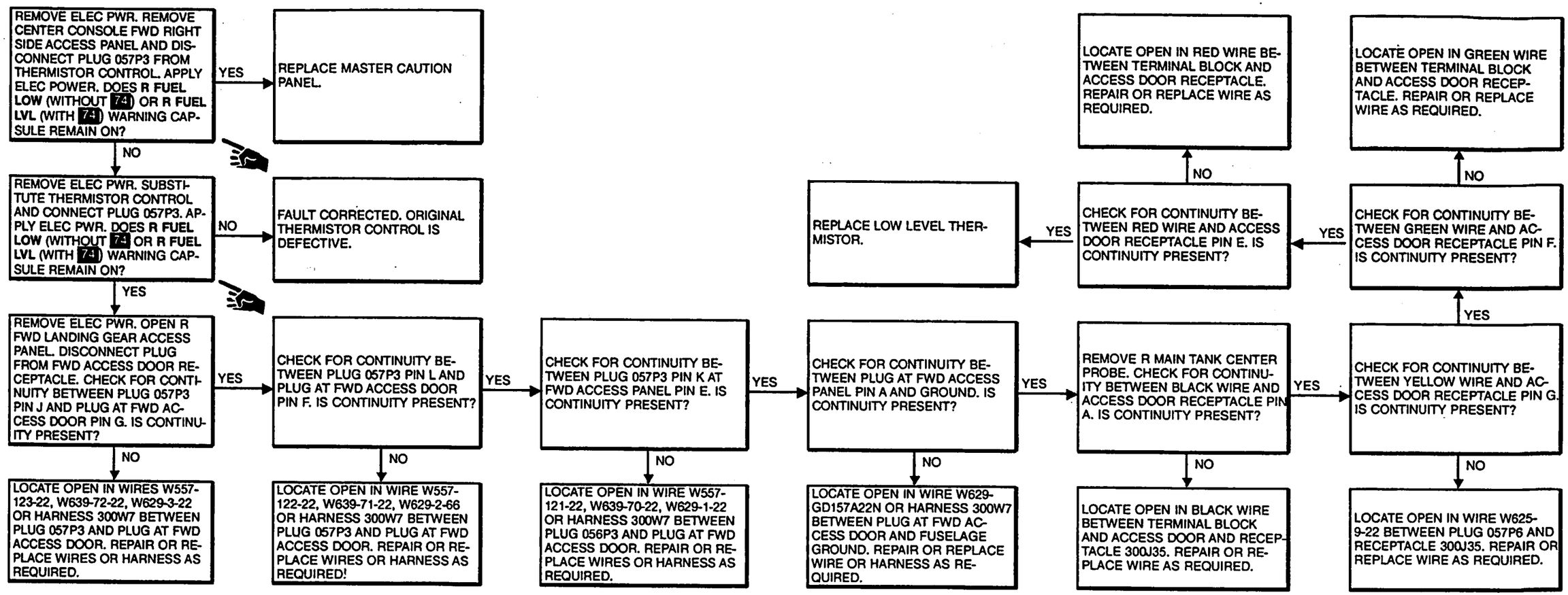
END OF TASK

8-11.15 R FUEL LOW (WITHOUT 74), R FUEL LVL (WITHOUT 74) WARNING CAPSULE ON WHEN R MAIN FUEL TANK IS FULL 8-11.15

FAULT ISOLATION PROCEDURE
INITIAL SETUP
Applicable Configurations:
All
Tools:
Electrical Repairer Tool Kit,
NSN 5180-00-323-4915
Multimeter
Materials:
None
Personnel Required:
Aircraft Electrician (2)
References:
TM 55-1520-240-23
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off



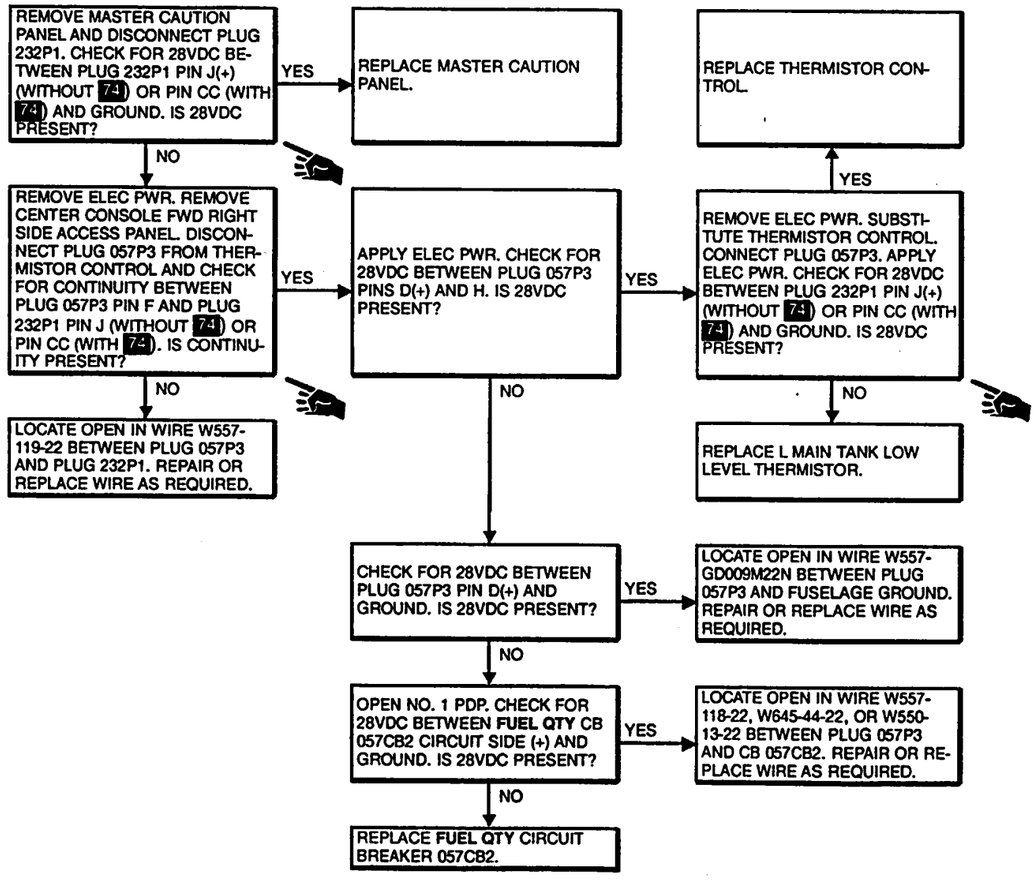
GO TO-NEXT PAGE

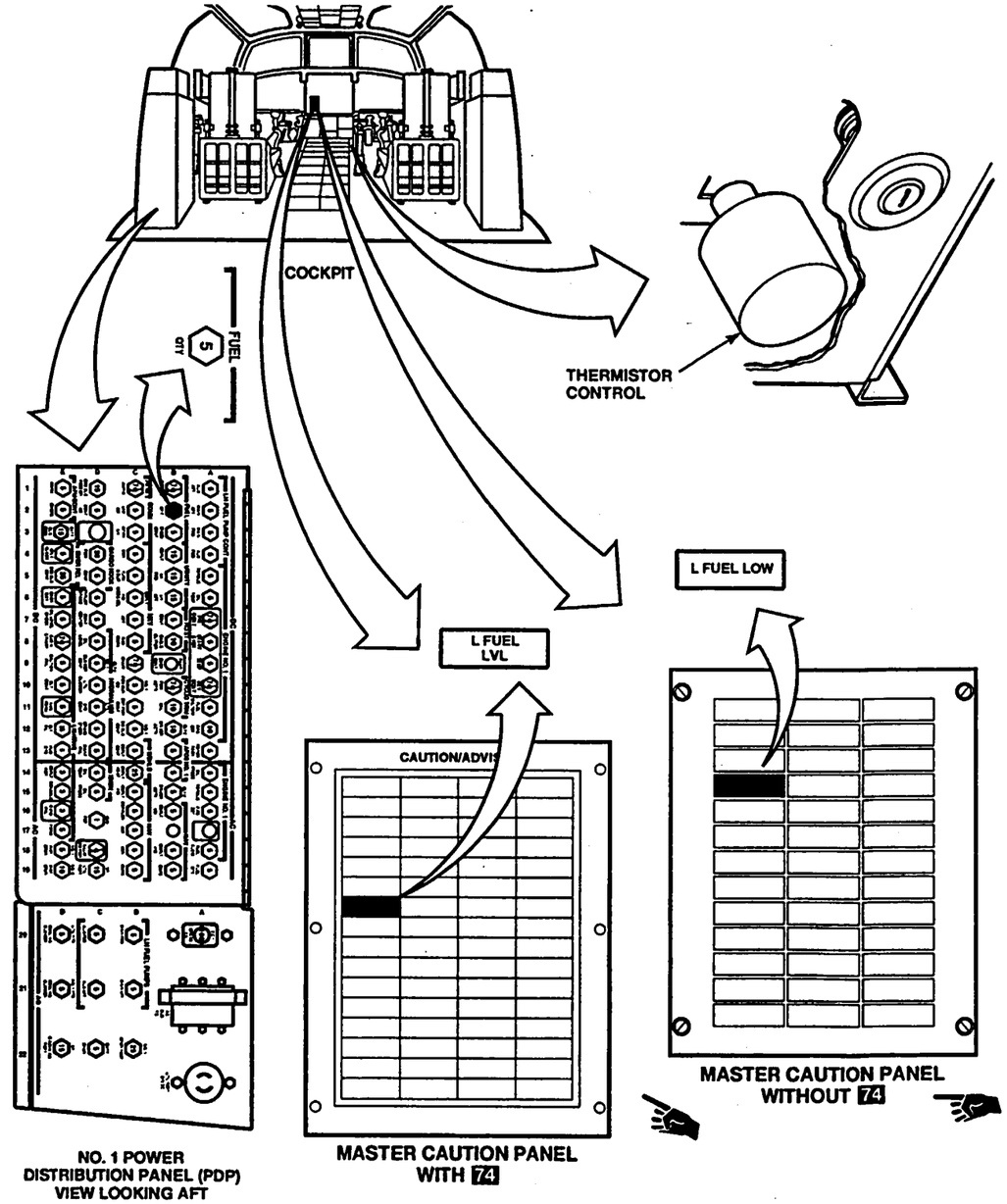

REMOVE ELEC PWR. REMOVE CENTER CONSOLE FWD RIGHT SIDE ACCESS PANEL AND DISCONNECT PLUG 057P3 FROM THERMISTOR CONTROL. APPLY ELEC POWER. DOES R FUEL LOW (WITHOUT 74) OR R FUEL LVL (WITH 74) WARNING CAPSULE REMAIN ON?
YES
REPLACE MASTER CAUTION PANEL.
NO
REMOVE ELEC PWR. SUBSTITUTE THERMISTOR CONTROL AND CONNECT PLUG 057P3. APPLY ELEC PWR. DOES R FUEL LOW (WITHOUT 74) OR R FUEL LVL (WITH 74) WARNING CAPSULE REMAIN ON?
NO
FAULT CORRECTED. ORIGINAL THERMISTOR CONTROL IS DEFECTIVE.
YES
REMOVE ELEC PWR. OPEN R FWD LANDING GEAR ACCESS PANEL. DISCONNECT PLUG FROM FWD ACCESS DOOR RECEPTACLE. CHECK FOR CONTINUITY BETWEEN PLUG 057P3 PIN J AND PLUG AT FWD ACCESS DOOR PIN G. IS CONTINUITY PRESENT?
YES
CHECK FOR CONTINUITY BETWEEN PLUG 057P3 PIN L AND PLUG AT FWD ACCESS DOOR PIN F. IS CONTINUITY PRESENT?
YES
CHECK FOR CONTINUITY BETWEEN PLUG 057P3 PIN K AT FWD ACCESS PANEL PIN E. IS CONTINUITY PRESENT?
YES
CHECK FOR CONTINUITY BETWEEN PLUG AT FWD ACCESS PANEL PIN A AND GROUND. IS CONTINUITY PRESENT?
YES
REMOVE R MAIN TANK CENTER PROBE. CHECK FOR CONTINUITY BETWEEN BLACK WIRE AND ACCESS DOOR RECEPTACLE PIN A. IS CONTINUITY PRESENT?
YES
CHECK FOR CONTINUITY BETWEEN YELLOW WIRE AND ACCESS DOOR RECEPTACLE PIN G. IS CONTINUITY PRESENT?
YES
CHECK FOR CONTINUITY BETWEEN GREEN WIRE AND ACCESS DOOR RECEPTACLE PIN F. IS CONTINUITY PRESENT?
YES
CHECK FOR CONTINUITY BETWEEN RED WIRE AND ACCESS DOOR RECEPTACLE PIN E. IS CONTINUITY PRESENT?
YES
REPLACE LOW LEVEL THERMISTOR.
NO
LOCATE OPEN IN WIRES W557-123-22, W639-72-22, W629-3-22 OR HARNESS 300W7 BETWEEN PLUG 057P3 AND PLUG AT FWD ACCESS DOOR. REPAIR OR REPLACE WIRES OR HARNESS AS REQUIRED.
NO
LOCATE OPEN IN WIRE W557-122-22, W639-71-22, W629-2-66 OR HARNESS 300W7 BETWEEN PLUG 057P3 AND PLUG AT FWD ACCESS DOOR. REPAIR OR REPLACE WIRES OR HARNESS AS REQUIRED!
NO
LOCATE OPEN IN WIRE W557-121-22, W639-70-22, W629-1-22 OR HARNESS 300W7 BETWEEN PLUG 056P3 AND PLUG AT FWD ACCESS DOOR. REPAIR OR REPLACE WIRES OR HARNESS AS REQUIRED.
NO
LOCATE OPEN IN WIRE W629-GD157A22N OR HARNESS 300W7 BETWEEN PLUG AT FWD ACCESS DOOR AND FUSELAGE GROUND. REPAIR OR REPLACE WIRE OR HARNESS AS REQUIRED.
NO
LOCATE OPEN IN BLACK WIRE BETWEEN TERMINAL BLOCK AND ACCESS DOOR AND RECEPTACLE 300J35. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
LOCATE OPEN IN WIRE W625-9-22 BETWEEN PLUG 057P6 AND RECEPTACLE 300J35. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
LOCATE OPEN IN GREEN WIRE BETWEEN TERMINAL BLOCK AND ACCESS DOOR RECEPTACLE. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
LOCATE OPEN IN RED WIRE BETWEEN TERMINAL BLOCK AND ACCESS DOOR RECEPTACLE. REPAIR OR REPLACE WIRE AS REQUIRED.

END-OF TASK

8-11.16 L FUEL LOW (WITHOUT 74), L FUEL LVL (WITH 74) WARNING CAPSULE DOES NOT COME ON WHEN L MAIN TANK FUEL LEVEL IS BELOW 320 TO 420 POUNDS 8-11.16

FAULT ISOLATION PROCEDURE
INITIAL SETUP
Applicable Configurations:
All
Tools:
Electrical Repairer Tool Kit, NSN 5180-00-323-4915
Multimeter
Materials:
None
Personnel Required:
Aircraft Electrician
References:
TM 55-1520-240-23
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off





A65294

END OF TASK

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:

All

Tools:

Electrical Repairer Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:

None

Personnel Required:

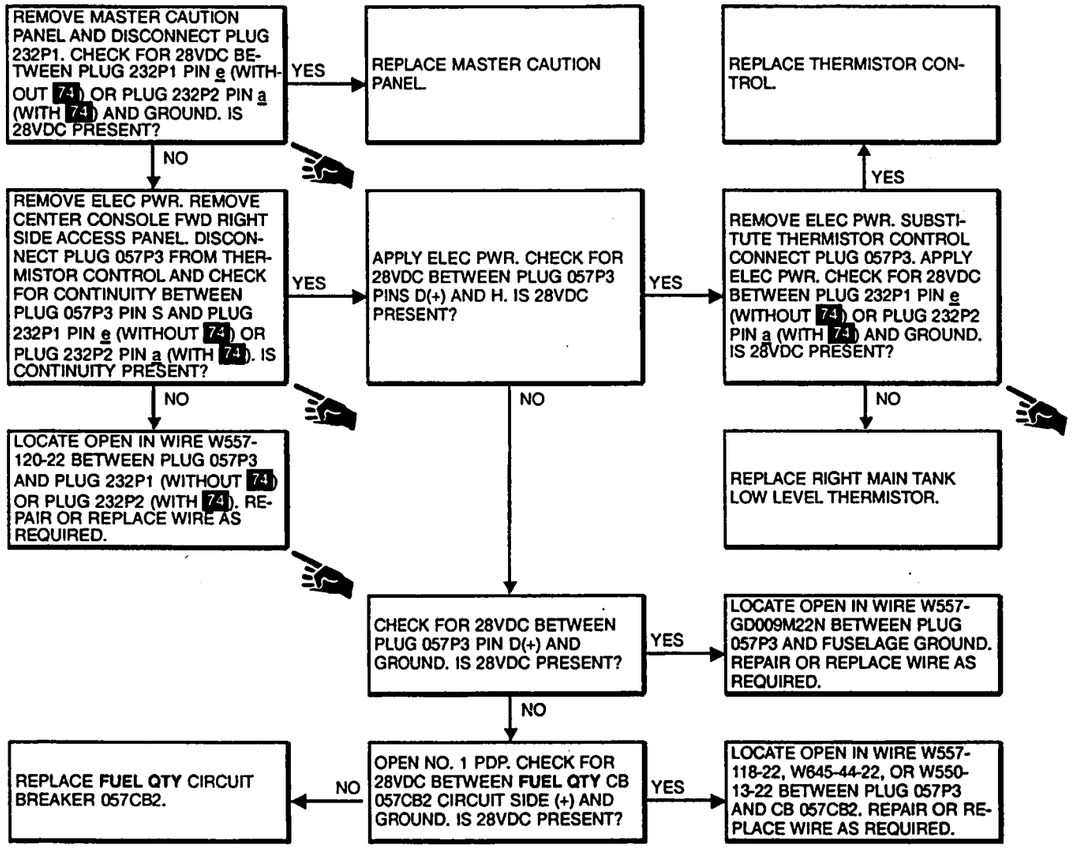
Aircraft Electrician

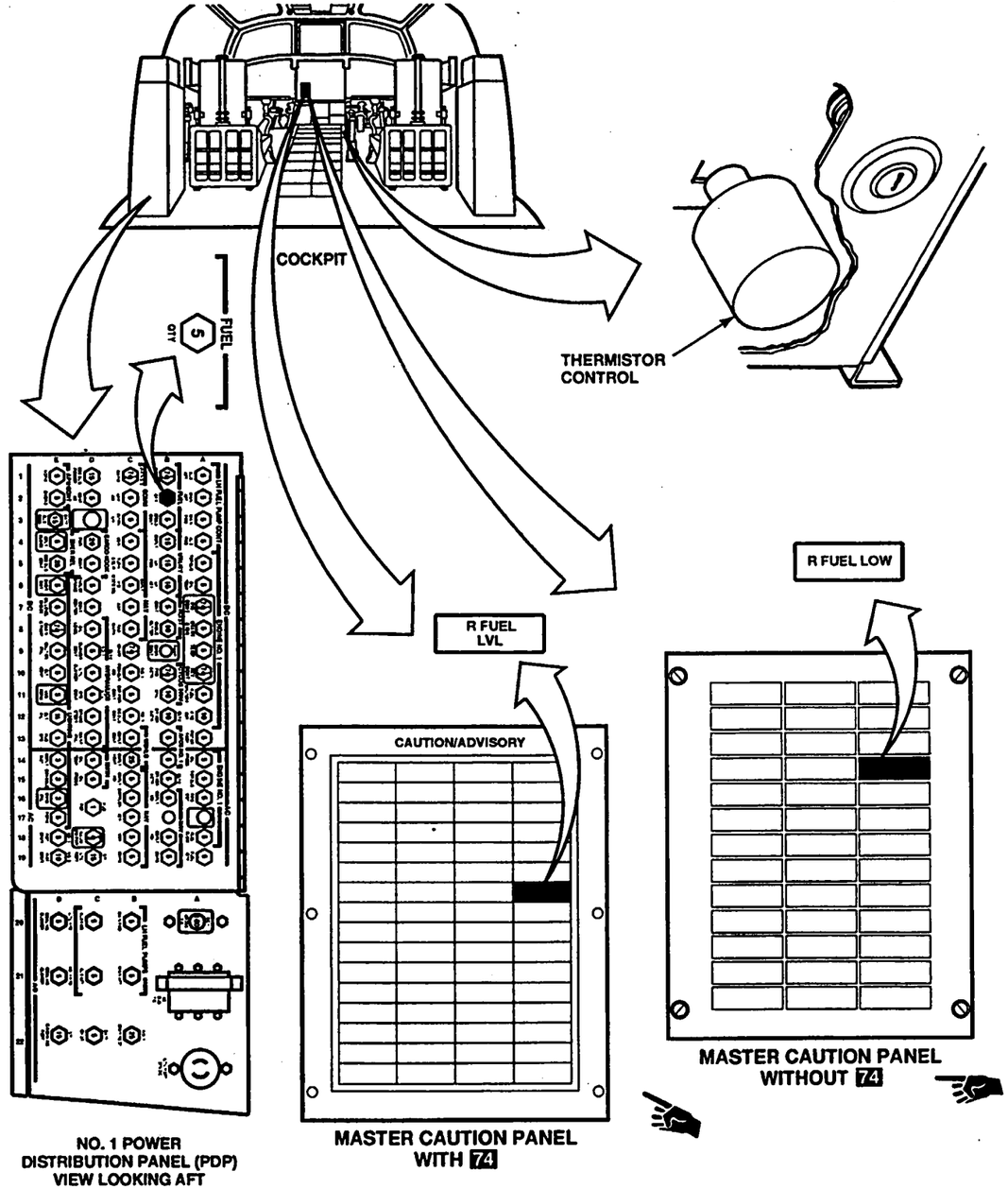
References:

TM 55-1520-240-23:

Equipment Condition:

TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off





A65296

END OF TASK

8-11.18 REFUEL PANEL FUEL QUANTITY INDICATOR DOES NOT INDICATE FUEL LEVEL AT ANY SWITCH POSITION 8-11.18

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

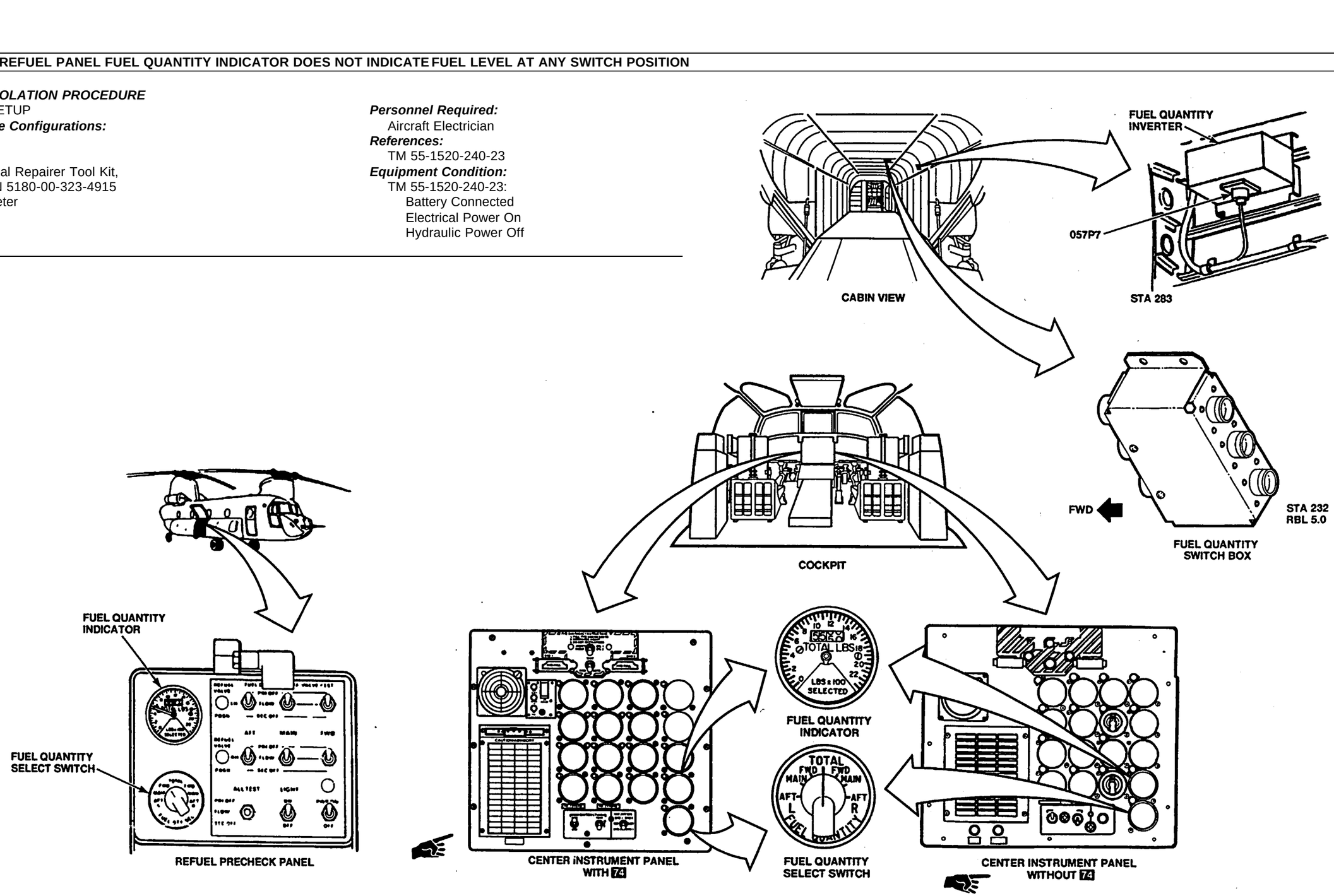
Tools:
Electrical Repairer Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:
None

Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

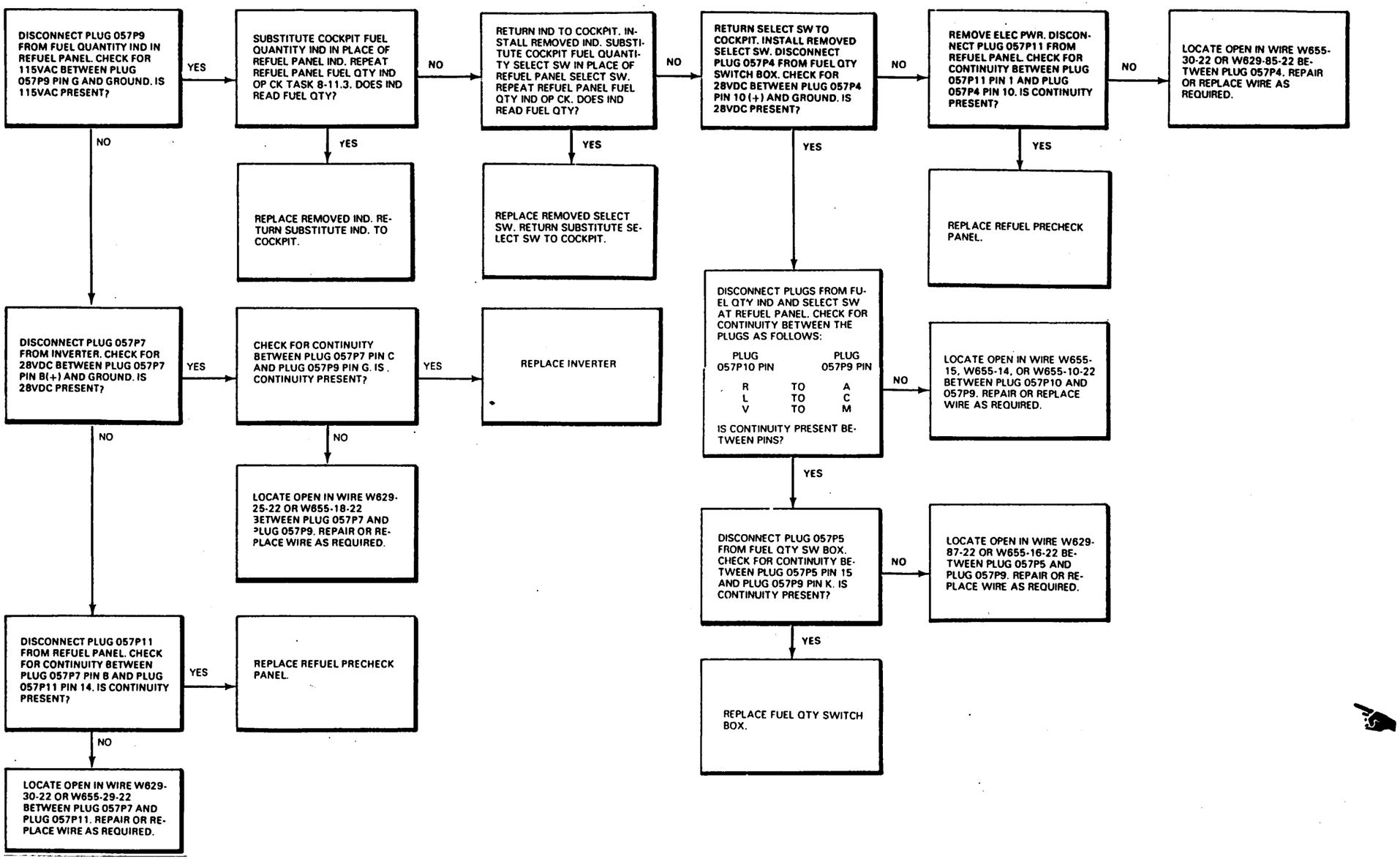
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off



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8-11.18 REFUEL PANEL FUEL QUANTITY INDICATOR DOES NOT INDICATE FUEL LEVEL AT ANY SWITCH POSITION (Continued)



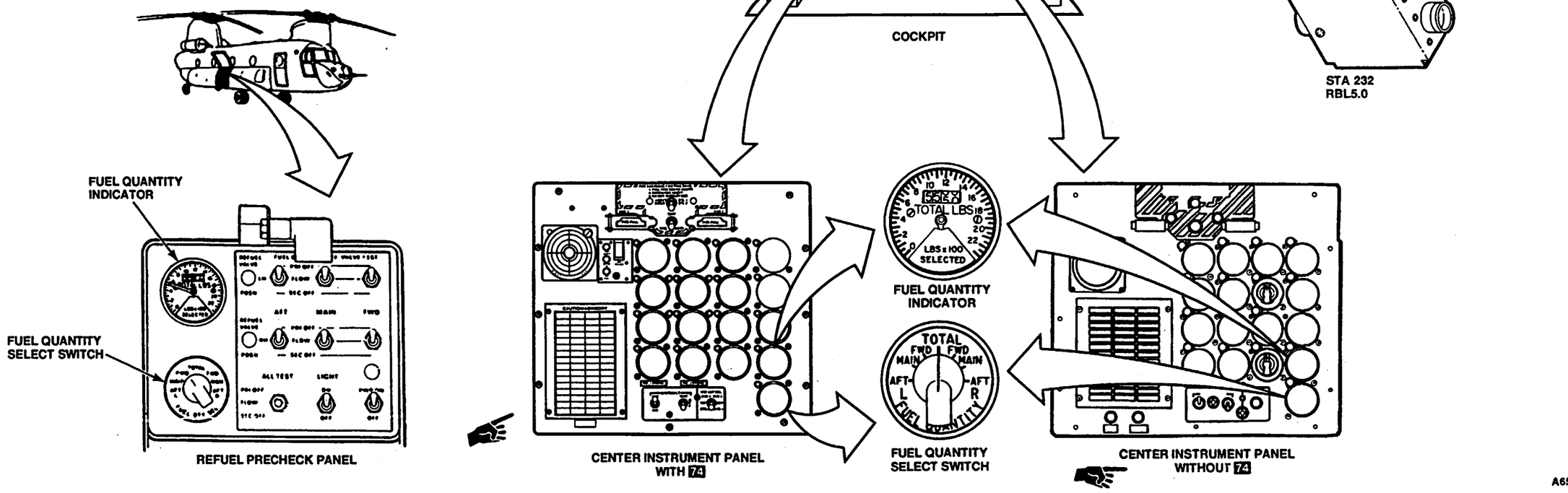
END OF TASK

8-11.19 REFUEL PANEL FUEL QUANTITY INDICATOR INDICATES FUEL LEVEL FOR ALL BUT ONE SWITCH POSITION 8-11.19

FAULT ISOLATION PROCEDURE

INITIAL SETUP
Applicable Configurations:
All
Tools:
Electrical Repairer Tool Kit,
NSN 5180-003234915
Multimeter
Materials:
None

Personnel Required:
Aircraft Electrician
References:
TM 55-1520-240-23
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off



A65379

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8-11.19 REFUEL PANEL FUEL QUANTITY INDICATOR INDICATES FUEL LEVEL FOR ALL BUT ONE SWITCH POSITION (Continued)

SUBSTITUTE COCKPIT FUEL QUANTITY IND. IN PLACE OF REFUEL IND. REPEAT REFUEL PANEL FUEL QTY IND OP CK TASK 8-11.3. DOES IND READ FUEL QTY AT ALL SWITCH POSITIONS?

YES → REPLACE REMOVED IND. RETURN SUBSTITUTE IND TO COCKPIT.

NO ↓

RETURN IND. TO COCKPIT INSTALL REMOVED IND. SUBSTITUTE COCKPIT FUEL QUANTITY SELECT SW IN PLACE OF REFUEL PANEL SELECT SW. REPEAT REFUEL PANEL FUEL QTY IND OF CK TASK 8-11.3. DOES IND READ FUEL QTY AT ALL SWITCH POSITIONS?

YES → REPLACE REMOVED SELECT SW. RETURN SUBSTITUTE SELECT SW TO COCKPIT.

NO ↓

RETURN SELECT SW TO COCKPIT. REMOVE ELEC PWR. DISCONNECT PLUG 057P5 FROM FUEL QUANTITY SWITCH BOX. CHECK FOR CONTINUITY BETWEEN PLUG 057P10 AND PLUG 057P5 AS FOLLOWS:

057P10 PIN		057P5 PIN
A	TO	16
B	TO	14
C	TO	20
D	TO	18
E	TO	22
P	TO	24

IS CONTINUITY PRESENT BETWEEN EACH SET OF PINS?

YES → **DISCONNECT PLUG 057P9 FROM REFUEL PANEL FUEL QTY IND. CHECK CONTINUITY BETWEEN PLUG 057P10 AND PLUG 057P9 AS FOLLOWS:**

057P10 PIN		057P9 PIN
H	TO	H
J	TO	F
K	TO	B

IS CONTINUITY PRESENT BETWEEN EACH SET OF PINS?

YES → **CHECK FOR CONTINUITY BETWEEN PLUG 057P9 PIN R AND PLUG 057P5 PIN 8 IS CONTINUITY PRESENT?**

YES → REPLACE FUEL QUANTITY SWITCH BOX.

NO ↓

LOCATE OPEN IN WIRE W655-17-22 OR W629-86-22 BETWEEN PLUG 057P9 AND 057P5. REPAIR OR REPLACE WIRE AS REQUIRED.

NO ↓

LOCATE OPEN IN WIRE W655-11-22, W655-12-22, OR W655-13-22 BETWEEN PLUG 057P10 AND 057P9. REPAIR OR REPLACE WIRE AS REQUIRED.

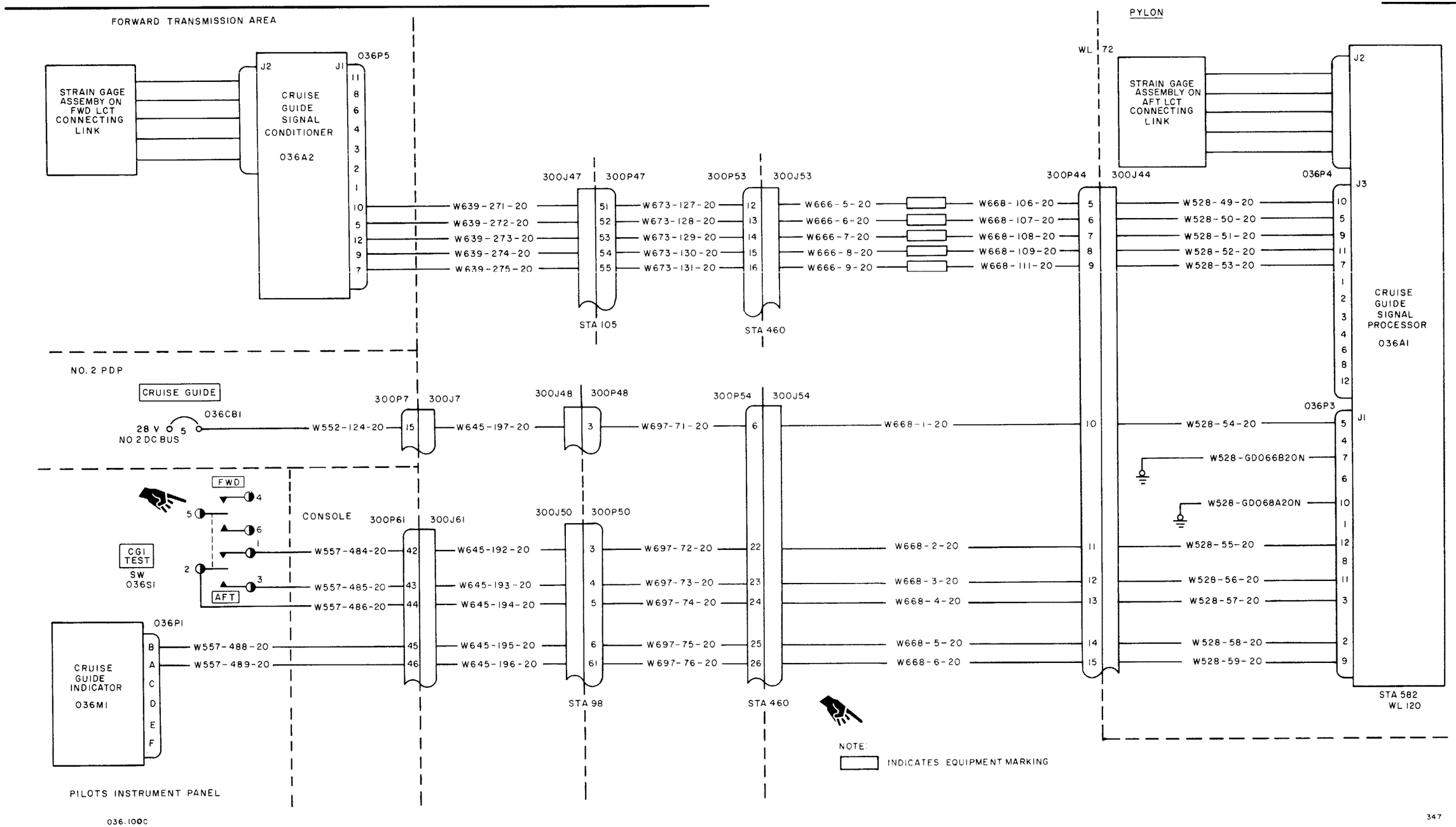
NO ↓

LOCATE OPEN IN FOLLOWING WIRES. REPAIR OR REPLACE WIRE AS REQUIRED.

PINS	WIRE NO.
A-16	W655-23, W629-92
B-14	W655-22, W629-91
C-20	W655-24, W629-93
D-18	W655-21, W629-90
E-22	W655-20, W629-89
P-24	W655-19, W629-88

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8-12 CRUISE GUIDE INDICATING SYSTEM


FORWARD TRANSMISSION AREA
PYLON
WL 72
STRAIN GAGE ASSEMBY ON FWD LCT CONNECTING LINK
CRUISE GUIDE SIGNAL CONDITIONER
036A2
J2
J1
036P5
STRAIN GAGE ASSEMBLY ON AFT LCT CONNECTING LINK
J2
036P4
J3
CRUISE GUIDE SIGNAL PROCESSOR
036AI
300J47
300P47
300P53
300J53
300P44
300J44
W639-271-20
W639-272-20
W639-273-20
W639-274-20
W639-275-20
W673-127-20
W673-128-20
W673-129-20
W673-130-20
W673-131-20
W666-5-20
W666-6-20
W666-7-20
W666-8-20
W666-9-20
W668-106-20
W668-107-20
W668-108-20
W668-109-20
W668-111-20
W528-49-20
W528-50-20
W528-51-20
W528-52-20
W528-53-20
STA 105
STA 460
NO. 2 PDP
CRUISE GUIDE
036CBI
28 V
NO 2 DC BUS
W552-124-20
300P7
300J7
300J48
300P48
300P54
300J54
W645-197-20
W697-71-20
W668-1-20
W528-54-20
036P3
J1
W528-GD066B20N
W528-GD068A20N
FWD
CONSOLE
CGI TEST SW
036SI
AFT
300P61
300J61
300J50
300P50
W557-484-20
W557-485-20
W557-486-20
W645-192-20
W645-193-20
W645-194-20
W697-72-20
W697-73-20
W697-74-20
W668-2-20
W668-3-20
W668-4-20
W528-55-20
W528-56-20
W528-57-20
036PI
CRUISE GUIDE INDICATOR
036MI
W557-488-20
W557-489-20
W645-195-20
W645-196-20
W697-75-20
W697-76-20
W668-5-20
W668-6-20
W528-58-20
W528-59-20
STA 98
STA 460
STA 582
WL 120
PILOTS INSTRUMENT PANEL
NOTE:
INDICATES EQUIPMENT MARKING
036.100C
347

8-12.2 CRUISE GUIDE INDICATING SYSTEM VISUAL CHECK

INITIAL SETUP

Applicable Configurations:
ALL

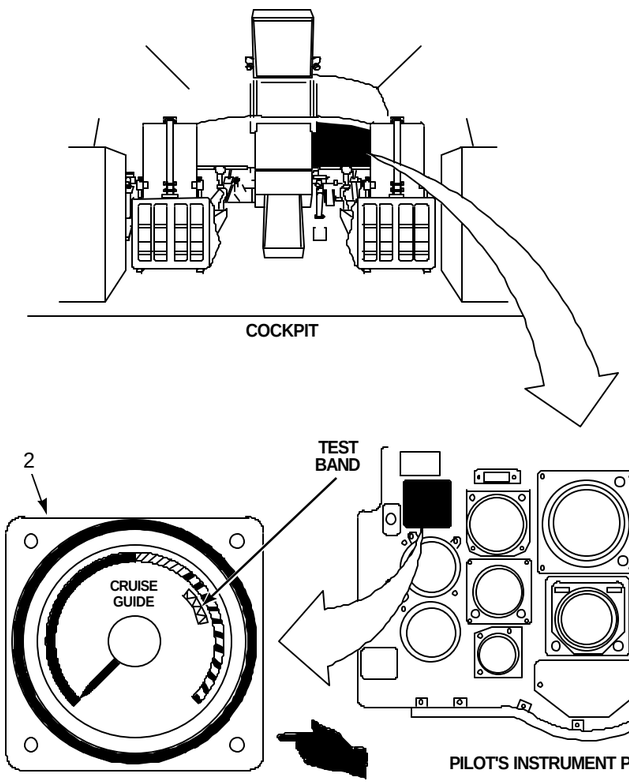
Tools:
Aircraft Mechanic's Tool Kit,
NSN 5180-00-323-4692

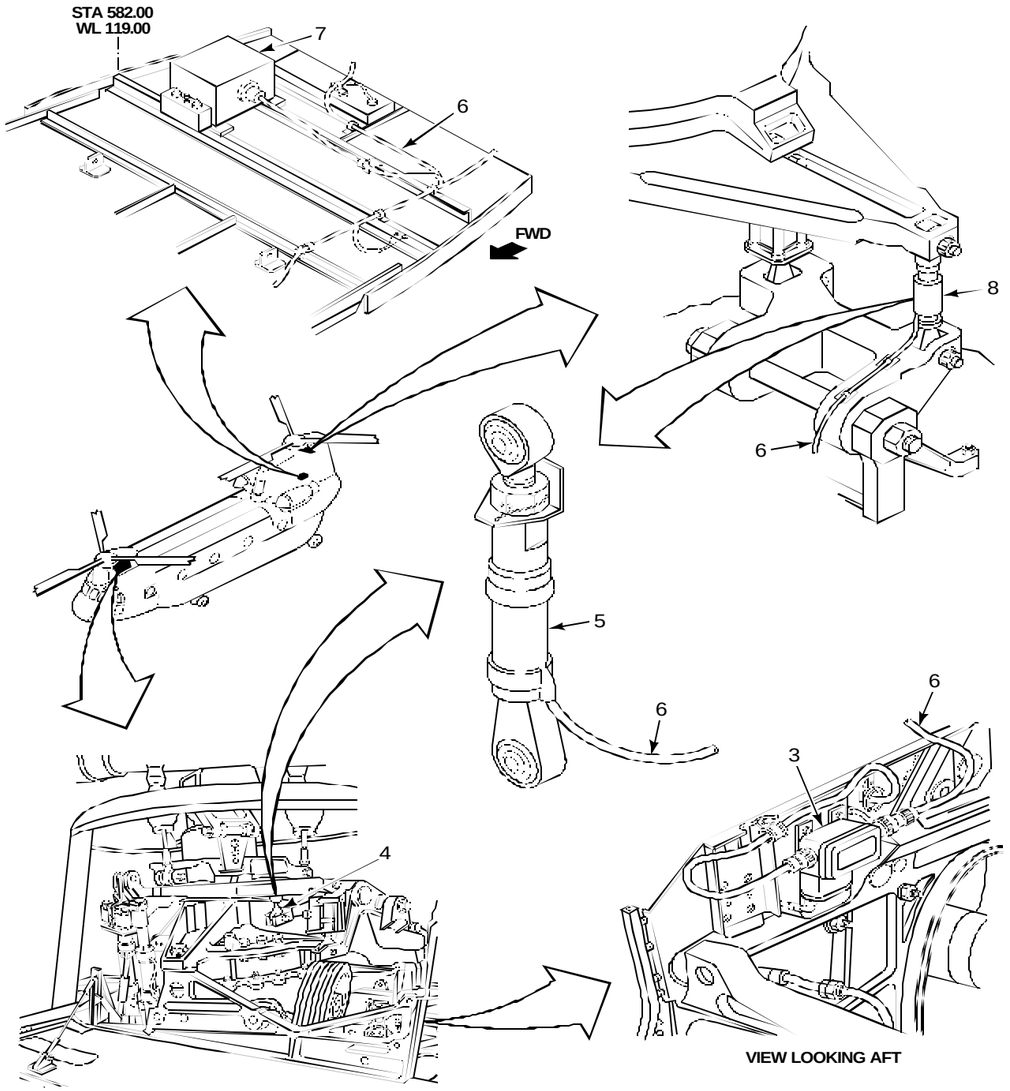
Materials:
None

Personnel Required:
67U10 Medium Helicopter Repairer

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off
Right Forward Work Platform Open
Pylon Left and Right Work Platform Open





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8-12.2 CRUISE GUIDE INDICATING SYSTEM VISUAL CHECK (Continued)

TASK	RESULT
1. **Check CGI TEST switch (1).**	If switch (1) is loose or damaged, tighten or replace it as required.
2. **Check cruise guide indicator (2).**	If indicator (2) is damaged, replace it.
3. **Check signal conditioner (3).**	If conditioner (3) is loose or damaged, tighten or replace it as required. If wiring or connector to conditioner is damaged, repair or replace as required.
4. **Check forward longitudinal cyclic trim connecting link (4).**	If boot (5) or wire harness (6) is damaged, replace link (4).
5. **Check signal processor (7).**	If processor (7) is loose or damaged, tighten or replace it as required. If wiring or connector to processor is damaged repair or replace it as required.
6. **Check aft longitudinal cyclic trim connetting link (8).**	If boot (5) or wire harness (6) is damaged, replace link (8).

FOLLOW-ON MAINTENANCE:

TM 55-1520-240-23:
Close pylon left work platform
Close left and right forward work platform

END OF TASK

8-12.3 CRUISE GUIDE INDICATING SYSTEM OPERATIONAL CHECK

INITIAL SETUP

Applicable Configurations:
ALL

Tools:
Stopwatch

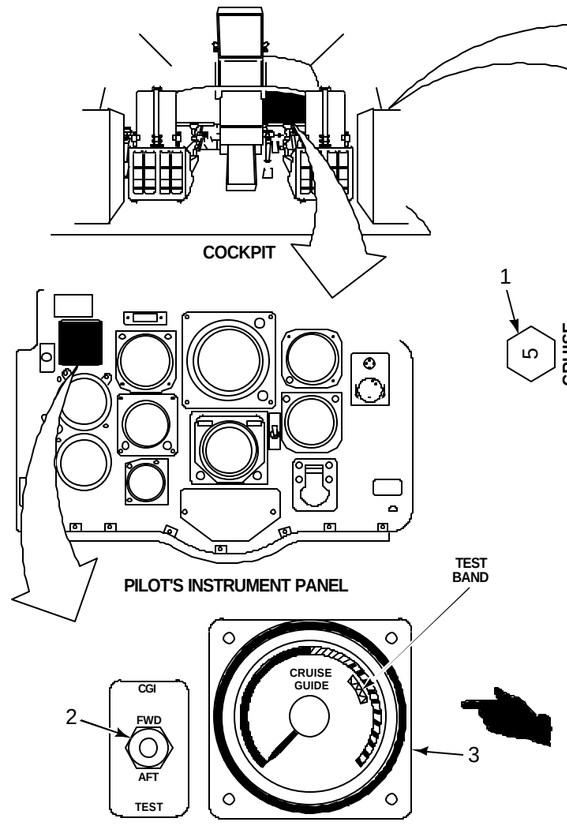
Materials:
None

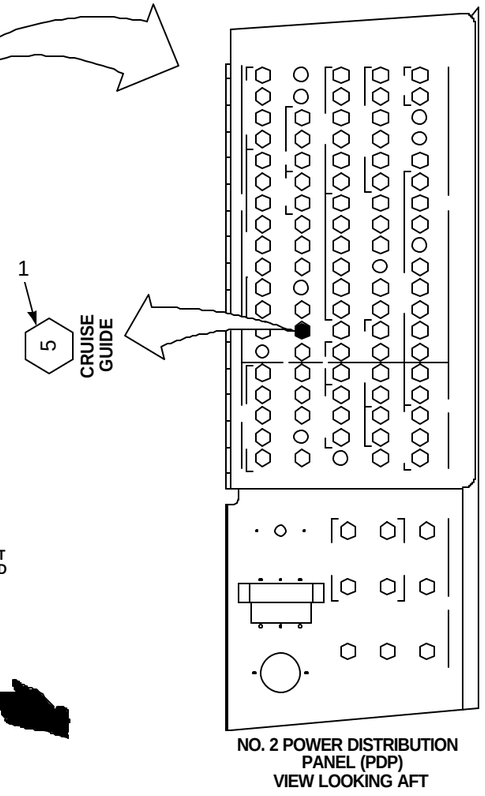
Personnel Required:
68F20 Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off
Cruise Guide Indicating System
Visual Check Performed (Task 8-12.2)

	TASK	RESULT
1.	**Check** that **CRUISE GUIDE circuit breaker (1)** is closed.	If circuit breaker (1) is open, close it. If it opens again, go to task 8-12.4
2.	**Set and hold CGI TEST switch (2) to AFT.**	Pointer on indicator (3) shall move to test band within 8 seconds. If pointer is not in test band, go to task 8-12.5
3.	**Release CGI TEST switch (2).**	Pointer on indicator (3) shall move down scale. If it does not, replace switch (2).
4.	**Set and hold CGI TEST switch (2) to FWD.**	Pointer on indicator (3) shall move to test band within 8 seconds. If pointer is not in test band, go to task 8-12.6.
5	**Release CGI TEST switch (2).**	Pointer on indicator (3) shall move down scale. If it does not, replace switch (2).





FOLLOW-ON MAINTENANCE
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off

END OF TASK

8-12.4 CRUISE GUIDE CIRCUIT BREAKER DOES NOT STAY CLOSED

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

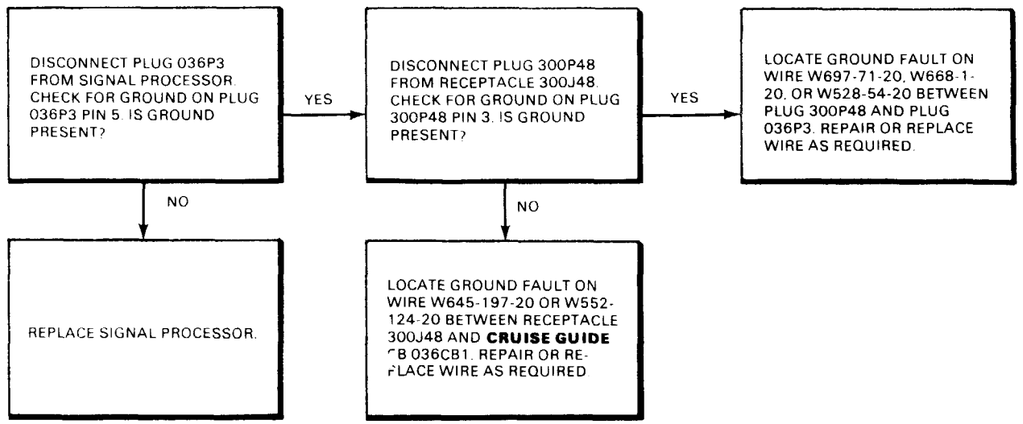
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

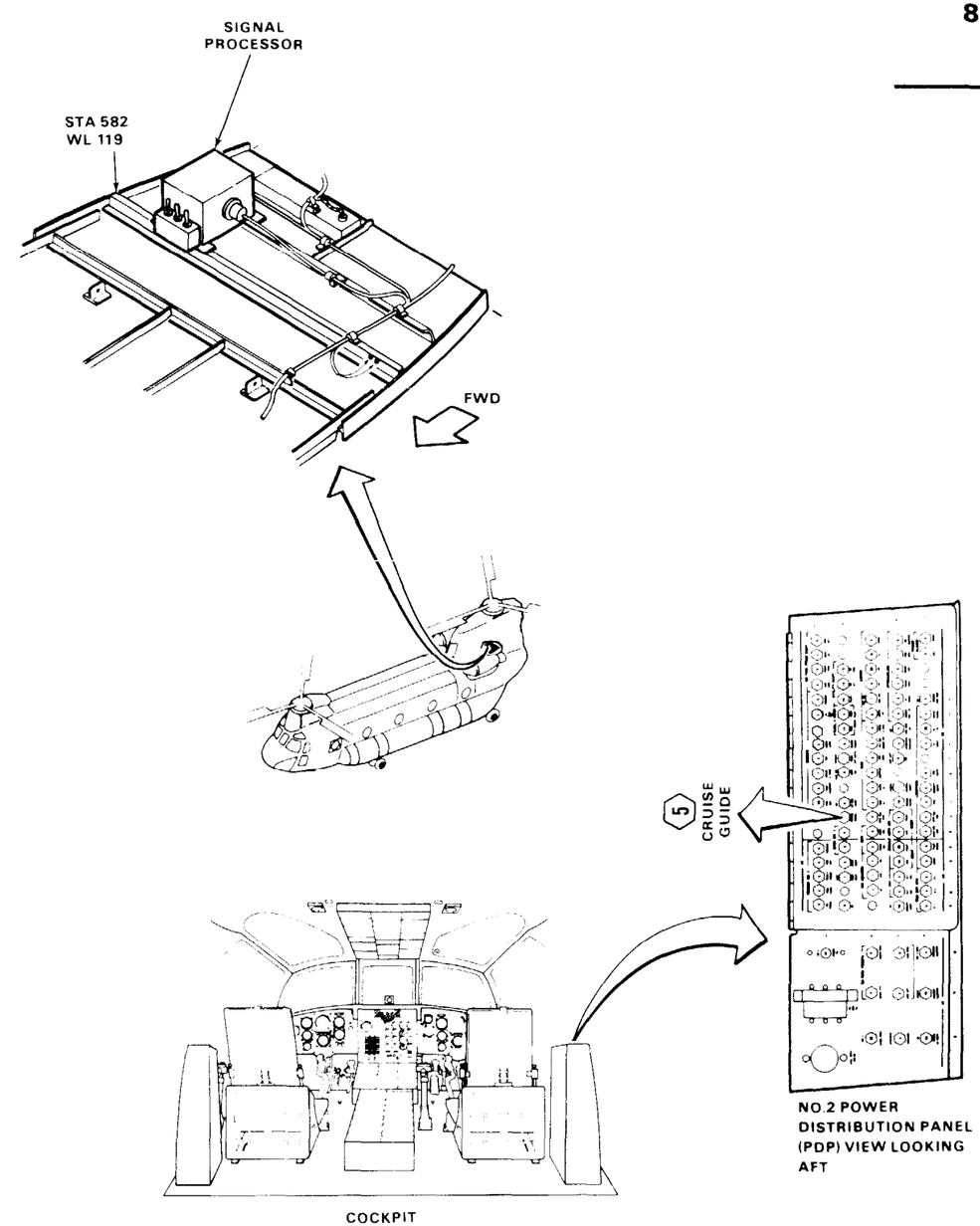
Materials:
None

Personnel Required
68F20 Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off
Pylon Left Work Platform
Open





8-12.5 CRUISE GUIDE INDICATOR POINTER NOT IN TEST BAND WITH CGI TEST SWITCH TEST AT AFT

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
ALL

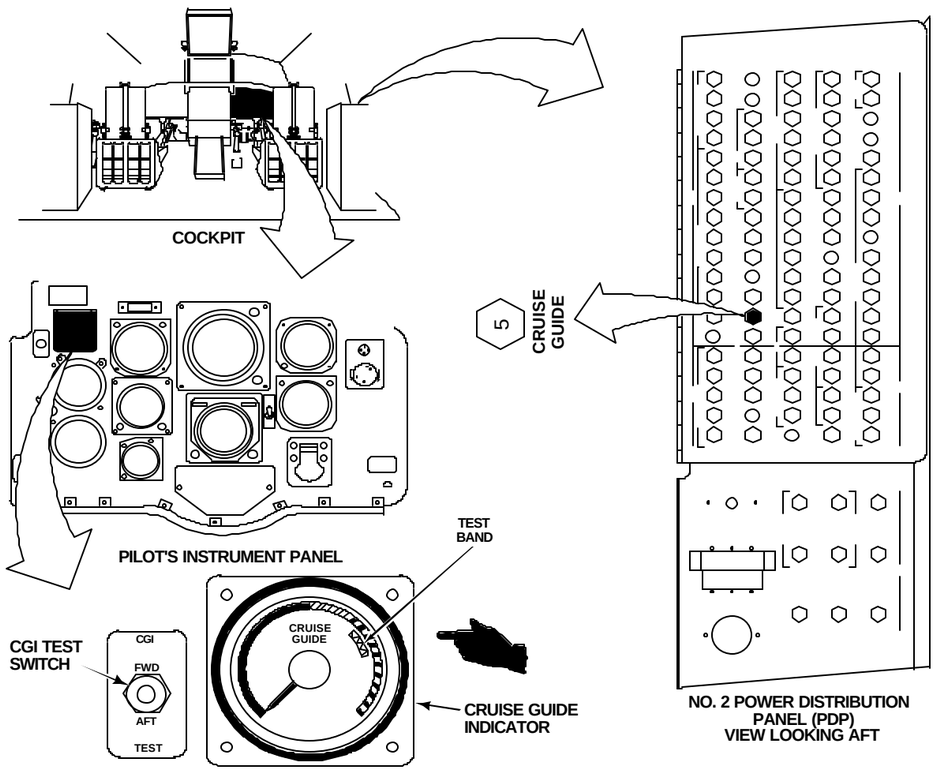
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

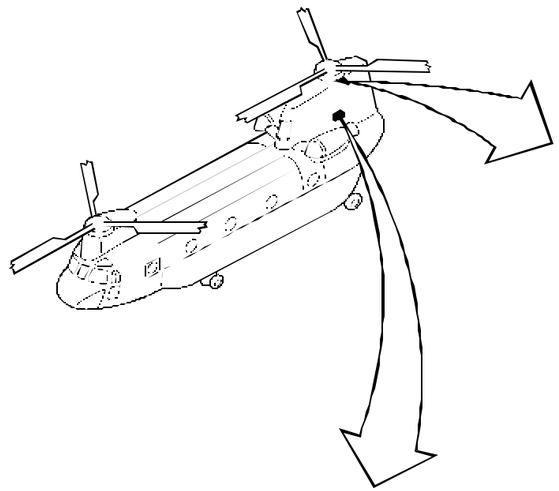
Materials:
None

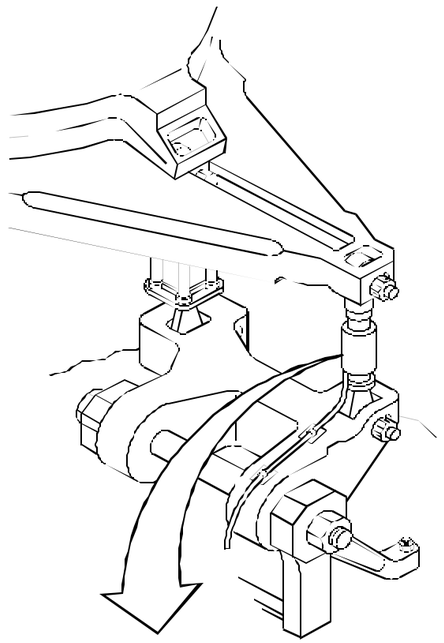
Personnel Required
68F10 Aircraft Electrician
68F20 Aircraft Electrician

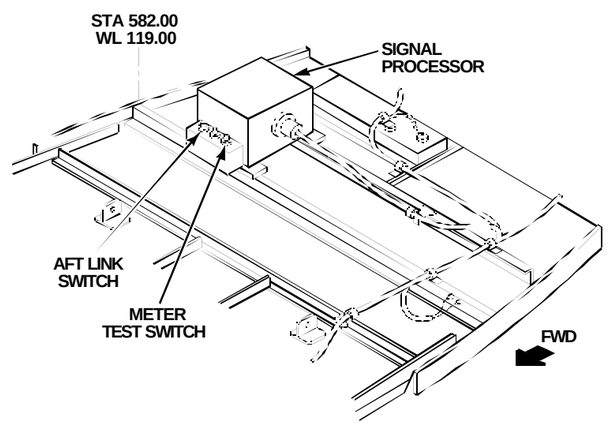
References:
TM 55-1520-240-23

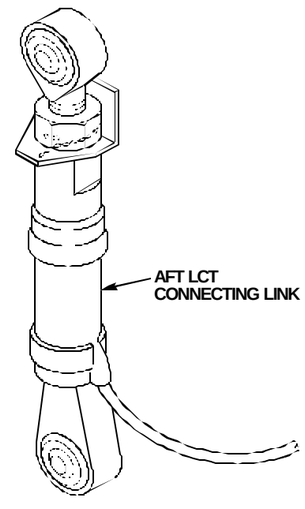
Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off



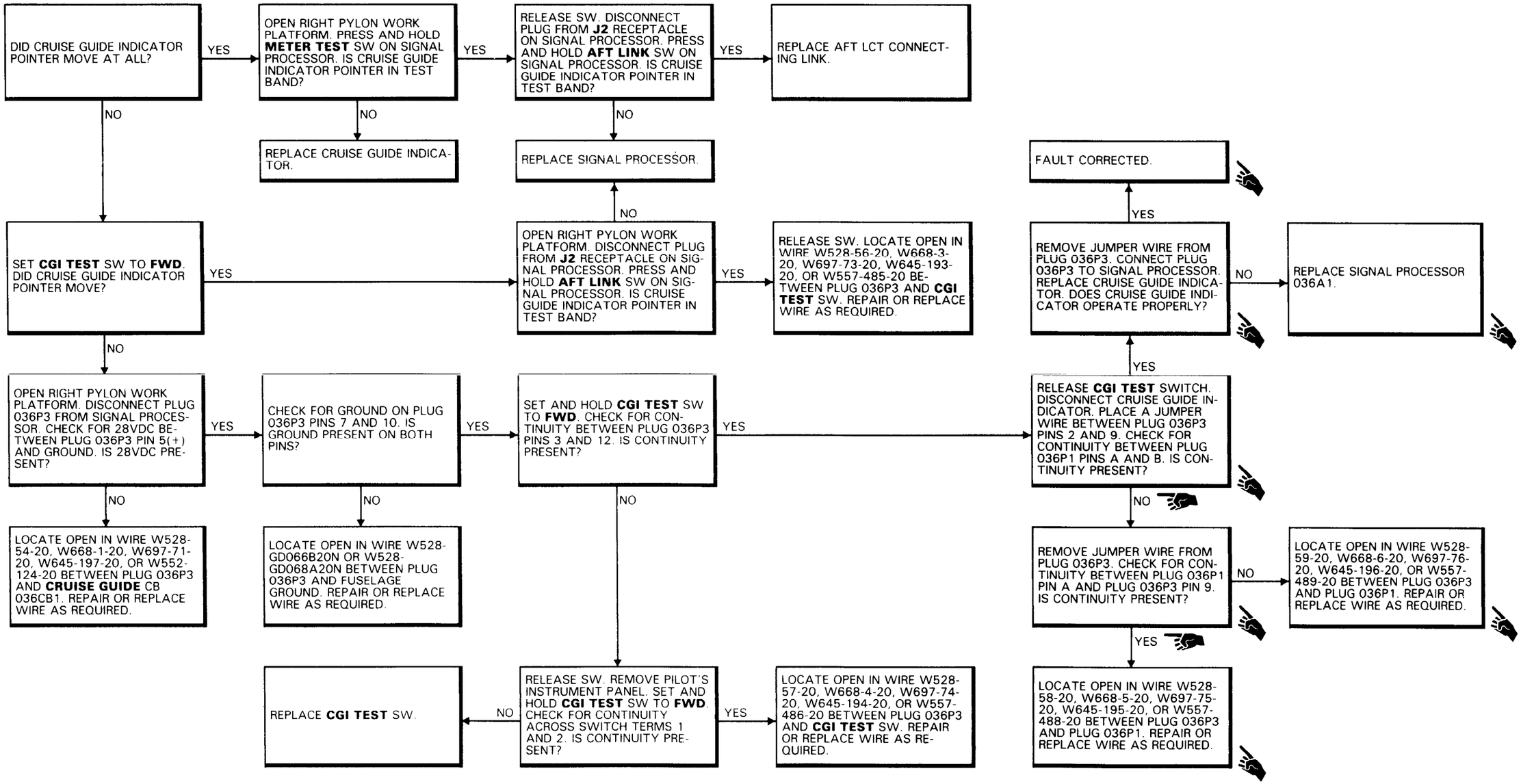








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DID CRUISE GUIDE INDICATOR POINTER MOVE AT ALL?
YES
OPEN RIGHT PYLON WORK PLATFORM. PRESS AND HOLD **METER TEST** SW ON SIGNAL PROCESSOR. IS CRUISE GUIDE INDICATOR POINTER IN TEST BAND?
YES
RELEASE SW. DISCONNECT PLUG FROM **J2** RECEPTACLE ON SIGNAL PROCESSOR. PRESS AND HOLD **AFT LINK** SW ON SIGNAL PROCESSOR. IS CRUISE GUIDE INDICATOR POINTER IN TEST BAND?
YES
REPLACE AFT LCT CONNECTING LINK.
NO
REPLACE CRUISE GUIDE INDICATOR.
NO
REPLACE SIGNAL PROCESSOR.
NO
FAULT CORRECTED.
SET **CGI TEST** SW TO **FWD**. DID CRUISE GUIDE INDICATOR POINTER MOVE?
YES
OPEN RIGHT PYLON WORK PLATFORM. DISCONNECT PLUG FROM **J2** RECEPTACLE ON SIGNAL PROCESSOR. PRESS AND HOLD **AFT LINK** SW ON SIGNAL PROCESSOR. IS CRUISE GUIDE INDICATOR POINTER IN TEST BAND?
YES
RELEASE SW. LOCATE OPEN IN WIRE W528-56-20, W668-3-20, W697-73-20, W645-193-20, OR W557-485-20 BETWEEN PLUG 036P3 AND **CGI TEST** SW. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
REMOVE JUMPER WIRE FROM PLUG 036P3. CONNECT PLUG 036P3 TO SIGNAL PROCESSOR. REPLACE CRUISE GUIDE INDICATOR. DOES CRUISE GUIDE INDICATOR OPERATE PROPERLY?
NO
REPLACE SIGNAL PROCESSOR 036A1.
NO
OPEN RIGHT PYLON WORK PLATFORM. DISCONNECT PLUG 036P3 FROM SIGNAL PROCESSOR. CHECK FOR 28VDC BETWEEN PLUG 036P3 PIN 5(+) AND GROUND. IS 28VDC PRESENT?
YES
CHECK FOR GROUND ON PLUG 036P3 PINS 7 AND 10. IS GROUND PRESENT ON BOTH PINS?
YES
SET AND HOLD **CGI TEST** SW TO **FWD**. CHECK FOR CONTINUITY BETWEEN PLUG 036P3 PINS 3 AND 12. IS CONTINUITY PRESENT?
YES
RELEASE **CGI TEST** SWITCH. DISCONNECT CRUISE GUIDE INDICATOR. PLACE A JUMPER WIRE BETWEEN PLUG 036P3 PINS 2 AND 9. CHECK FOR CONTINUITY BETWEEN PLUG 036P1 PINS A AND B. IS CONTINUITY PRESENT?
NO
LOCATE OPEN IN WIRE W528-54-20, W668-1-20, W697-71-20, W645-197-20, OR W552-124-20 BETWEEN PLUG 036P3 AND **CRUISE GUIDE** CB 036CB1. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
LOCATE OPEN IN WIRE W528-GD066B20N OR W528-GD068A20N BETWEEN PLUG 036P3 AND FUSELAGE GROUND. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
REMOVE JUMPER WIRE FROM PLUG 036P3. CHECK FOR CONTINUITY BETWEEN PLUG 036P1 PIN A AND PLUG 036P3 PIN 9. IS CONTINUITY PRESENT?
NO
LOCATE OPEN IN WIRE W528-59-20, W668-6-20, W697-76-20, W645-196-20, OR W557-489-20 BETWEEN PLUG 036P3 AND PLUG 036P1. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
REPLACE **CGI TEST** SW.
NO
RELEASE SW. REMOVE PILOT'S INSTRUMENT PANEL. SET AND HOLD **CGI TEST** SW TO **FWD**. CHECK FOR CONTINUITY ACROSS SWITCH TERMS 1 AND 2. IS CONTINUITY PRESENT?
YES
LOCATE OPEN IN WIRE W528-57-20, W668-4-20, W697-74-20, W645-194-20, OR W557-486-20 BETWEEN PLUG 036P3 AND **CGI TEST** SW. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
LOCATE OPEN IN WIRE W528-58-20, W668-5-20, W697-75-20, W645-195-20, OR W557-488-20 BETWEEN PLUG 036P3 AND PLUG 036P1. REPAIR OR REPLACE WIRE AS REQUIRED.

END OF TASK

8-12.6 CRUISE GUIDE INDICATOR POINTER NOT IN TEST BAND WITH CGI TE

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
ALL

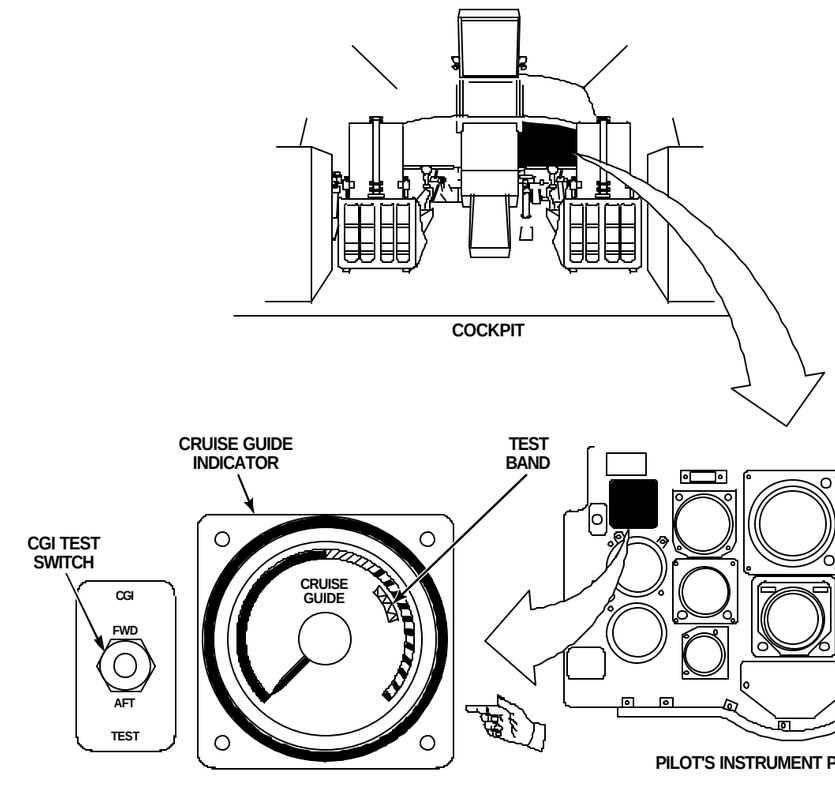
Tools:
Electrical Repairer's Tool Kit, NSN 5180-00-323-4915
Multimeter

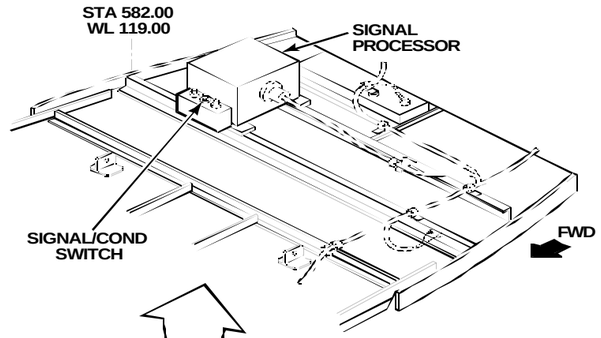
Materials:
None

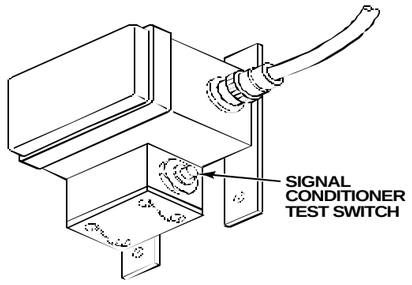
Personnel Required
68F10 Aircraft Electrician
68F20 Aircraft Electrician

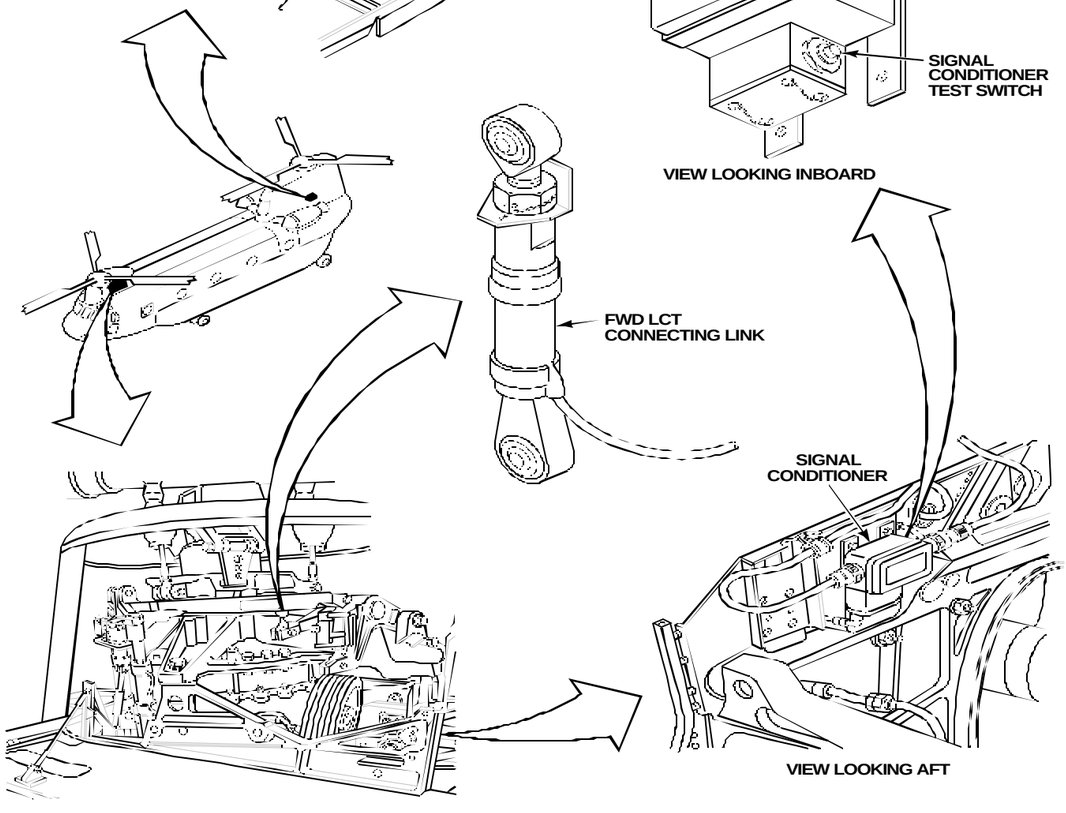
References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23
Battery Connected
Electrical Power Off
Hydraulic Power Off
Left Pylon Work Platform Opened



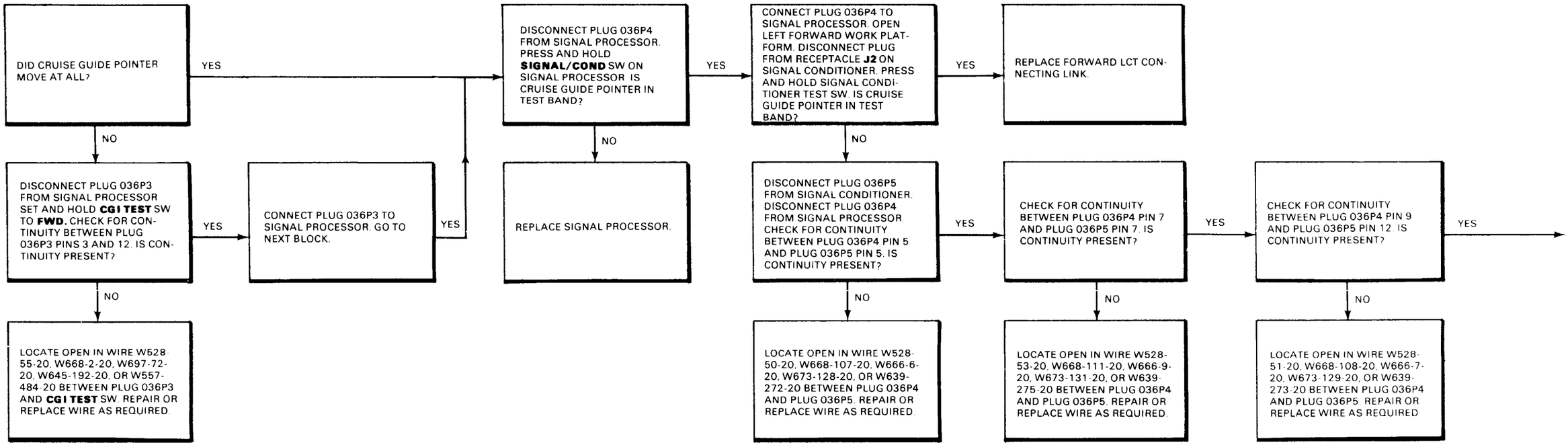






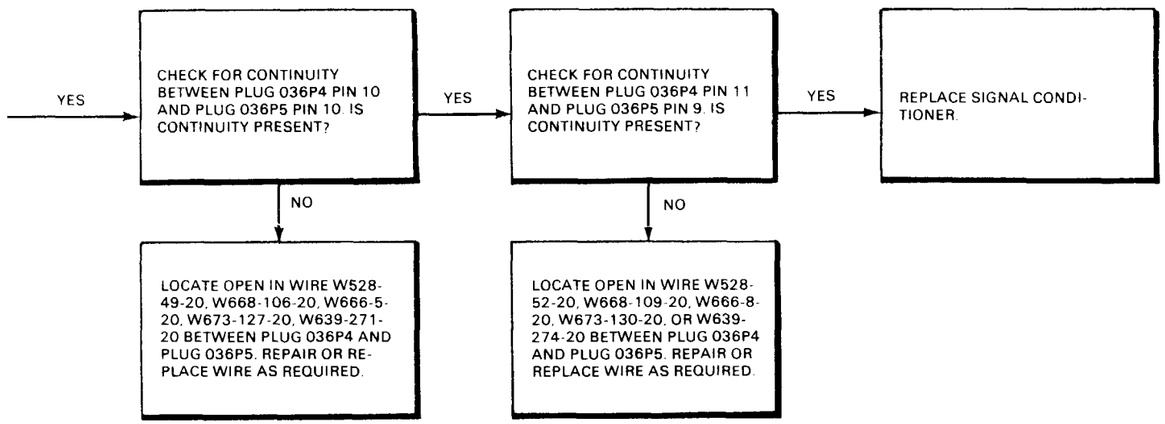
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8-12.6 CRUISE GUIDE INDICATOR POINTER NOT IN TEST BAND WITH CGI TEST SWITCH AT FWD (Continued)



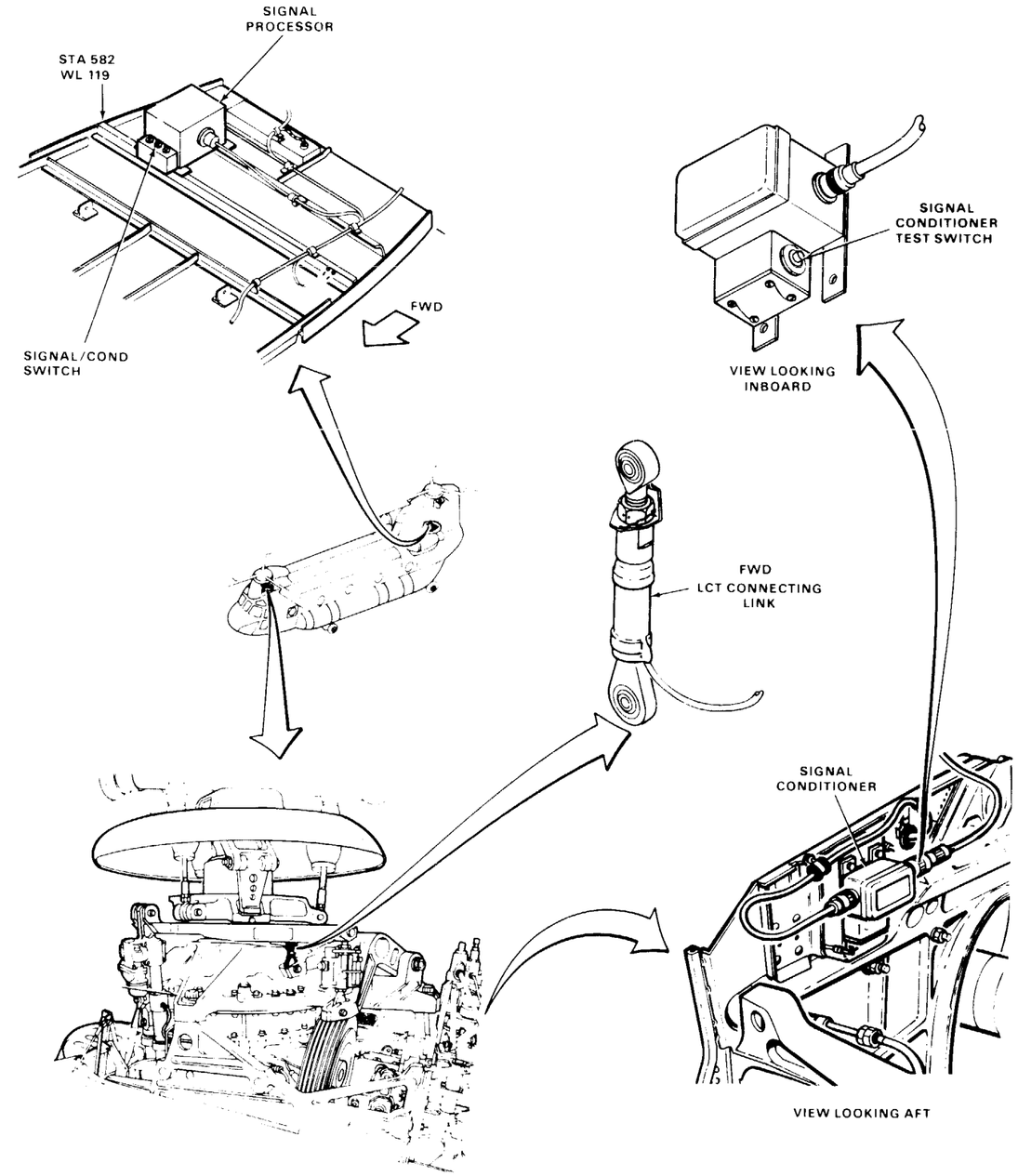
GO TO NEXT PAGE

8-12.6 CRUISE GUIDE INDICATOR POINTER NOT IN TEST BAND WITH CGI TEST SWITCH AT FWD (Continued)



GO TO NEXT PAGE

8-12.6 CRUISE GUIDE INDICATOR POINTER NOT IN TEST BAN WITH CGI TEST SWITCH AT FWD (Continued)



45 x 54

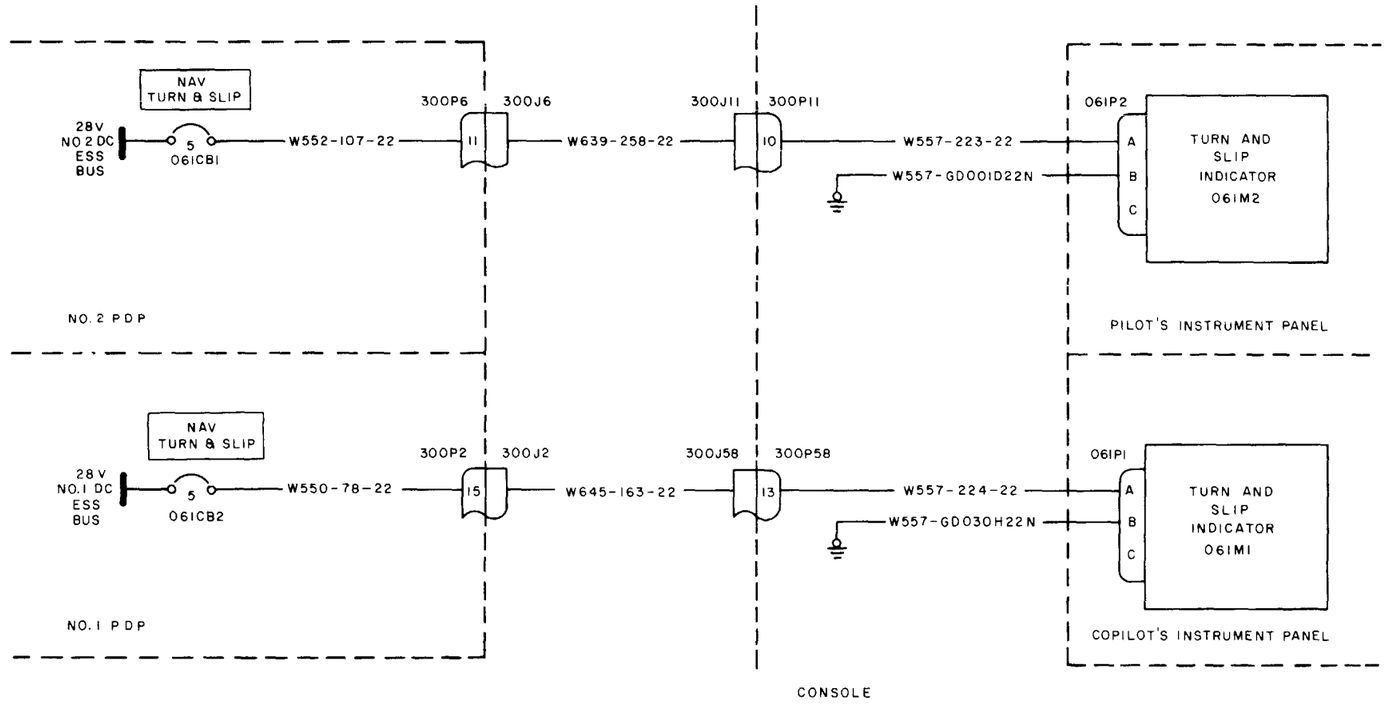
D145 – 11841 – SPA

END OF TASK

8-13 TURN AND SLIP INDICATORS

8-13 TURN AND SLIP INDICATORS

8-13.1 TURN AND SLIP INDICATORS WIRING DIAGRAM



90X54 061.100A

D145-6723-SPA

INITIAL SETUP

Applicable Configurations:
All

Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00323-4915

Materials:
None

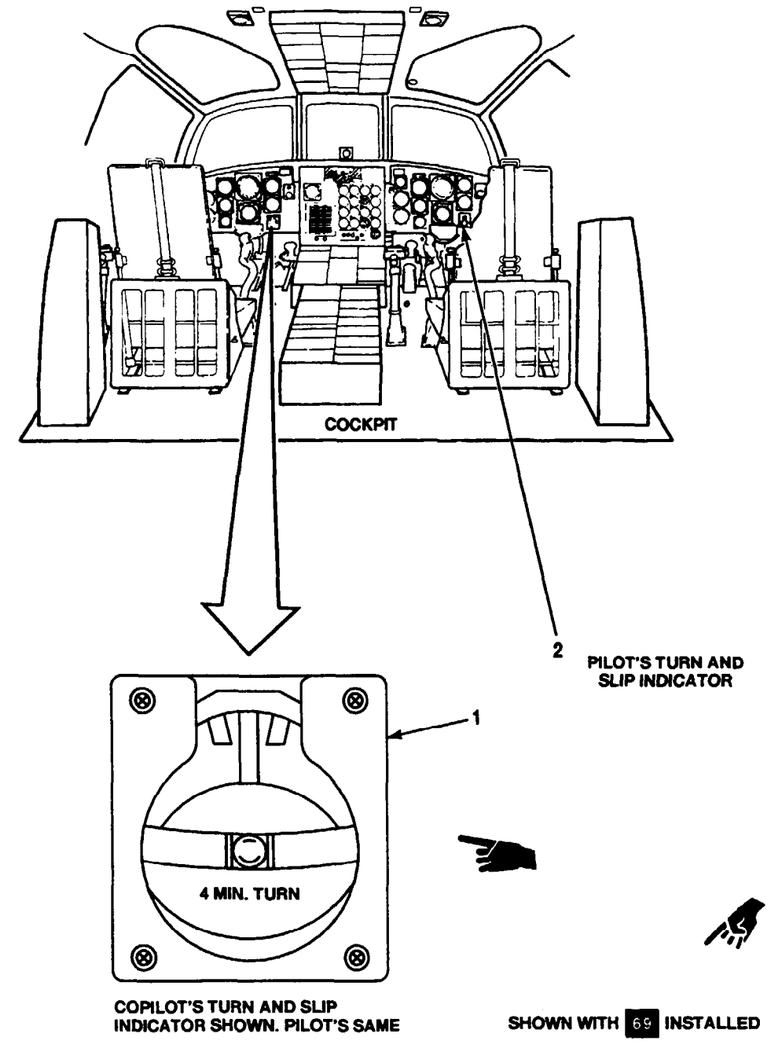
Personnel Required
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off

TASK	RESULT
1. **Check copilot's turn and slip indicator (1).**	If indicator (1) is loose or damaged, tighten or replace it as required.
2. **Check pilot's turn and slip indicator (2).**	If indicator (2) is loose or damaged, tighten or replace it as required.

FOLLOW-ON MAINTENANCE:
None



D145-7231-SPA

END OF TASK

INITIAL SETUP

Applicable Configurations:
All

Tools:
Inclinometer

Materials:
None

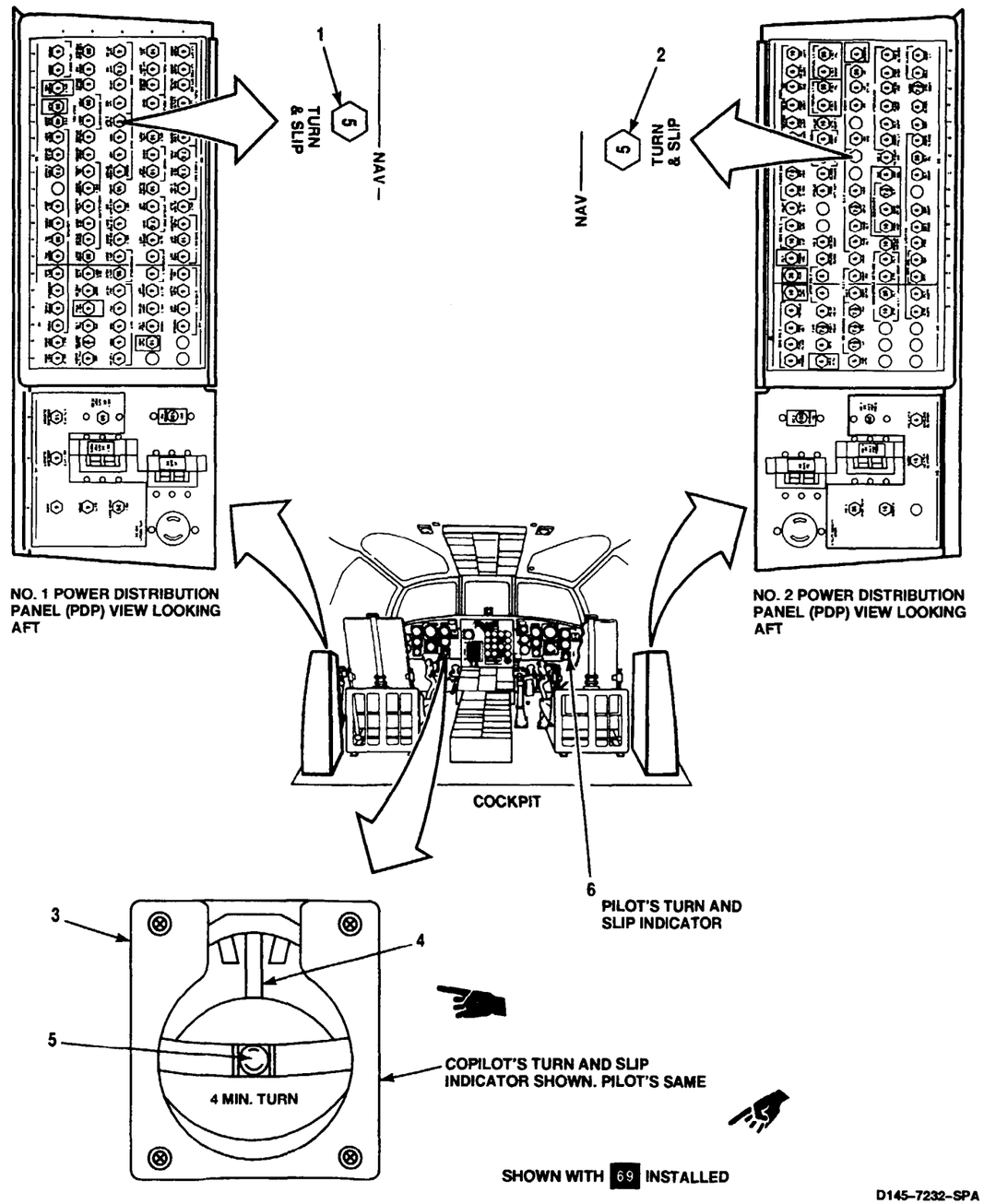
Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off
Visual Check of Turn and Slip Indicators Performed (Task 8-13.2)

	TASK	RESULT
1.	**Check** that **NAV TURN & SLIP circuit breaker (1)** is closed.	If circuit breaker (1) is open, close it. If it opens again, go to task 8-13.4.
2.	**Check** that **NAV TURN & SLIP CIRCUIT BREAKER (2)** is closed.	If circuit breaker (2) is open, close it. If it opens again, go task 8-13.4.
3.	**Check copilot's turn and slip indicator (3).**	If pointer (4) is not centered, replace indicator (3). If ball (5) is not centered, use inclinometer to verify ball position. If ball position does not agree with inclinometer, replace indicator.
4.	**Repeat step 3 for pilot's turn and slip indicator (6).** Then, go to step 5.	
5.	**On next flight, have pilots check operation of their turn and slip indicators.**	Pointer (4) on indicators (3 and 6) shall move in direction of turn, If it does not, go to task 8-13.5.

FOLLOW-ON MAINTENANCE:
TM 55-1520-240-23:
Battery disconnected.
Electrical power off.



END OF TASK

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8-13.4 TURN AND SLIP CIRCUIT BREAKER DOES NOT STAY CLOSED

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

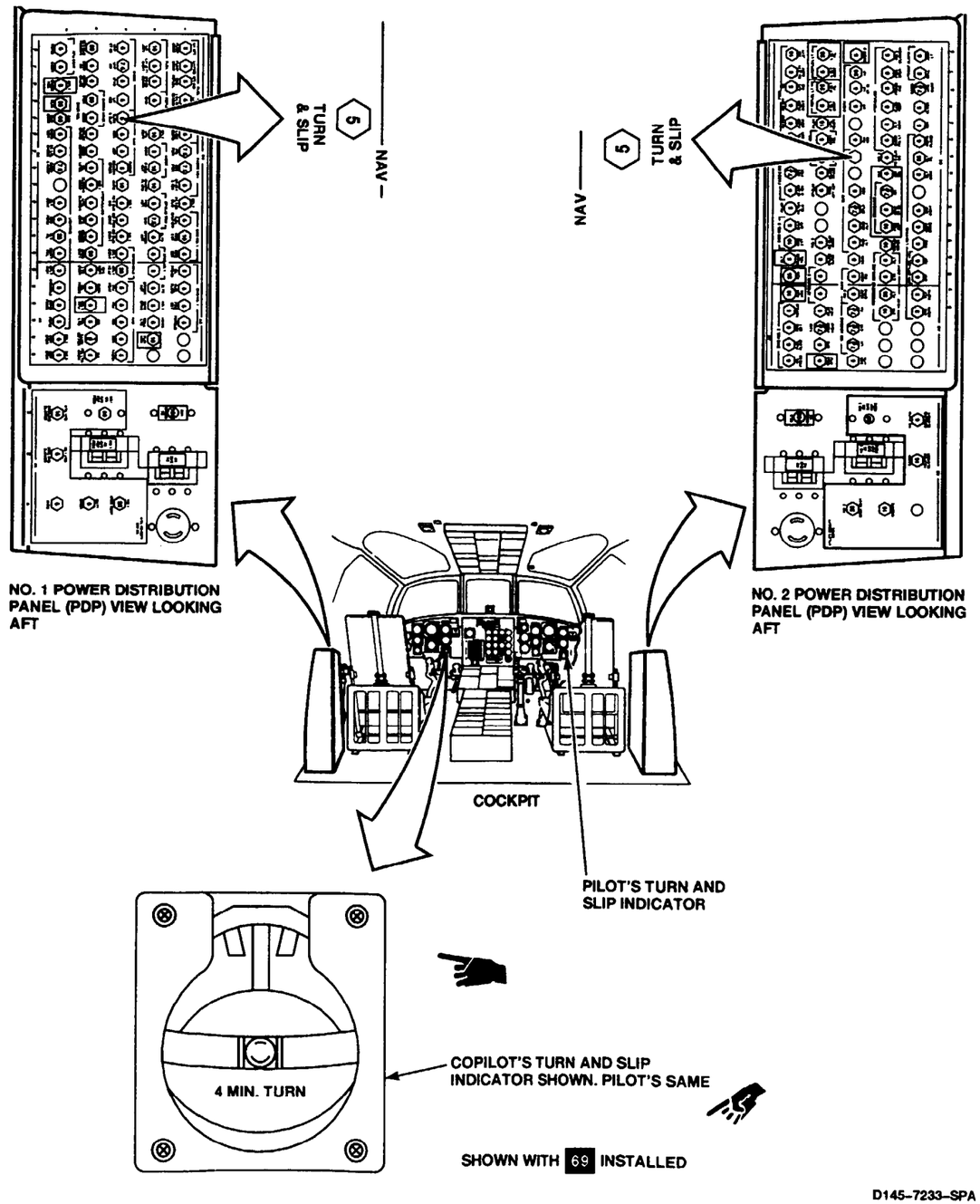
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:
None

Personnel Required:
Aircraft Electrician

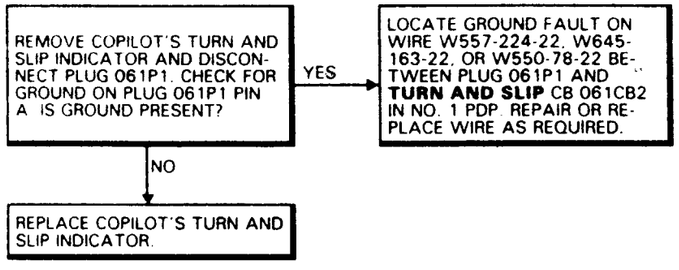
References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off

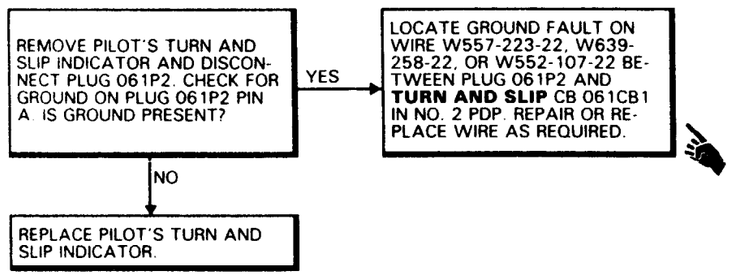


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URN AND SLIP CIRCUIT BREAKER (NO. 1 PDP) DOES NOT STAY CLOSED



TURN AND SLIP CIRCUIT BREAKER (NO. 2 PDP) DOES NOT STAY CLOSED



END OF TASK

8-13.5 TURN AND SLIP INDICATOR POINTER DOES NOT MOVE IN DIRECTION OF TURN 8-13.5

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

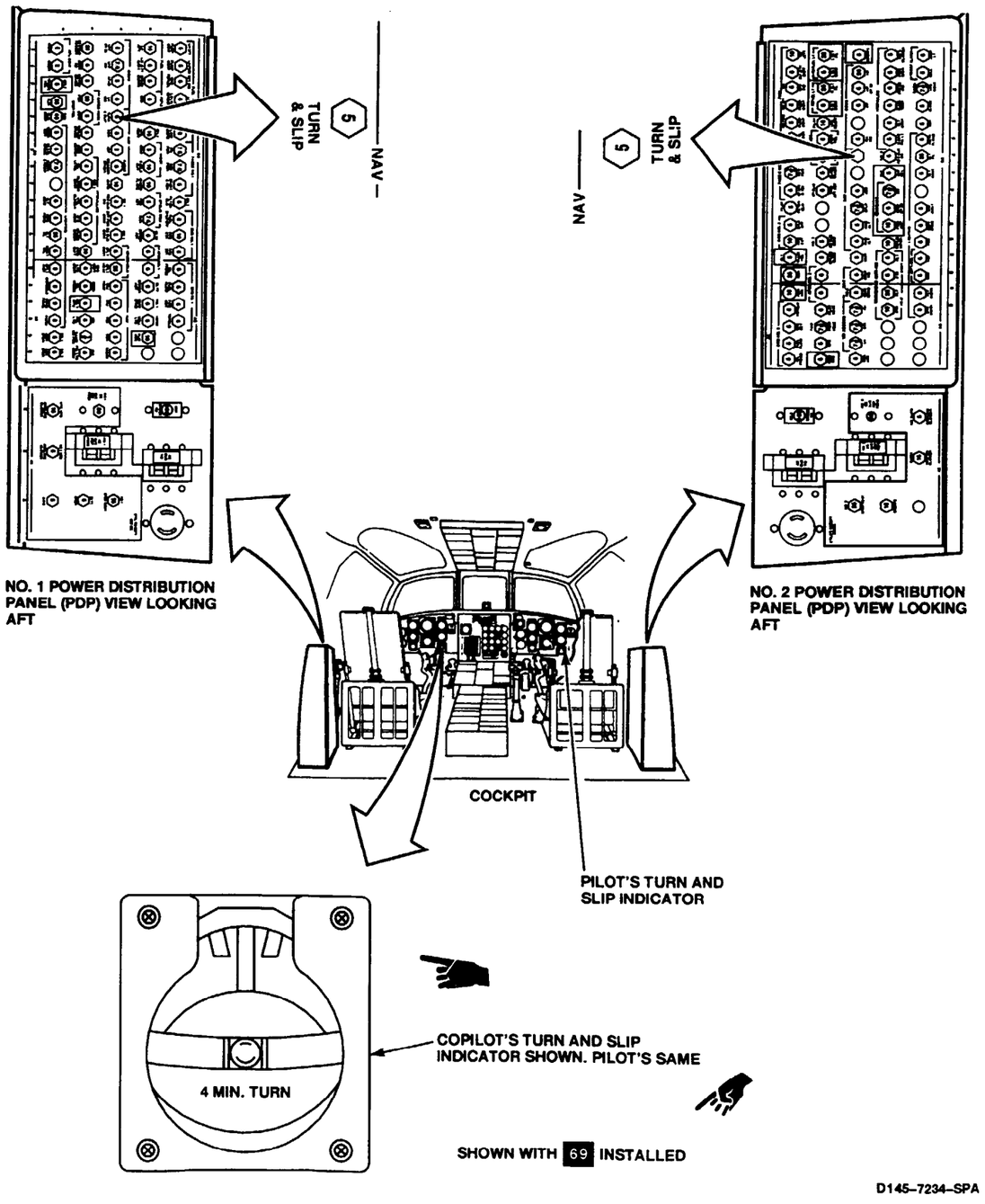
Tools:
Electrical Repairer's Tool Kit, NSN 5180-00-323-4915
Multimeter

Materials:
None

Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

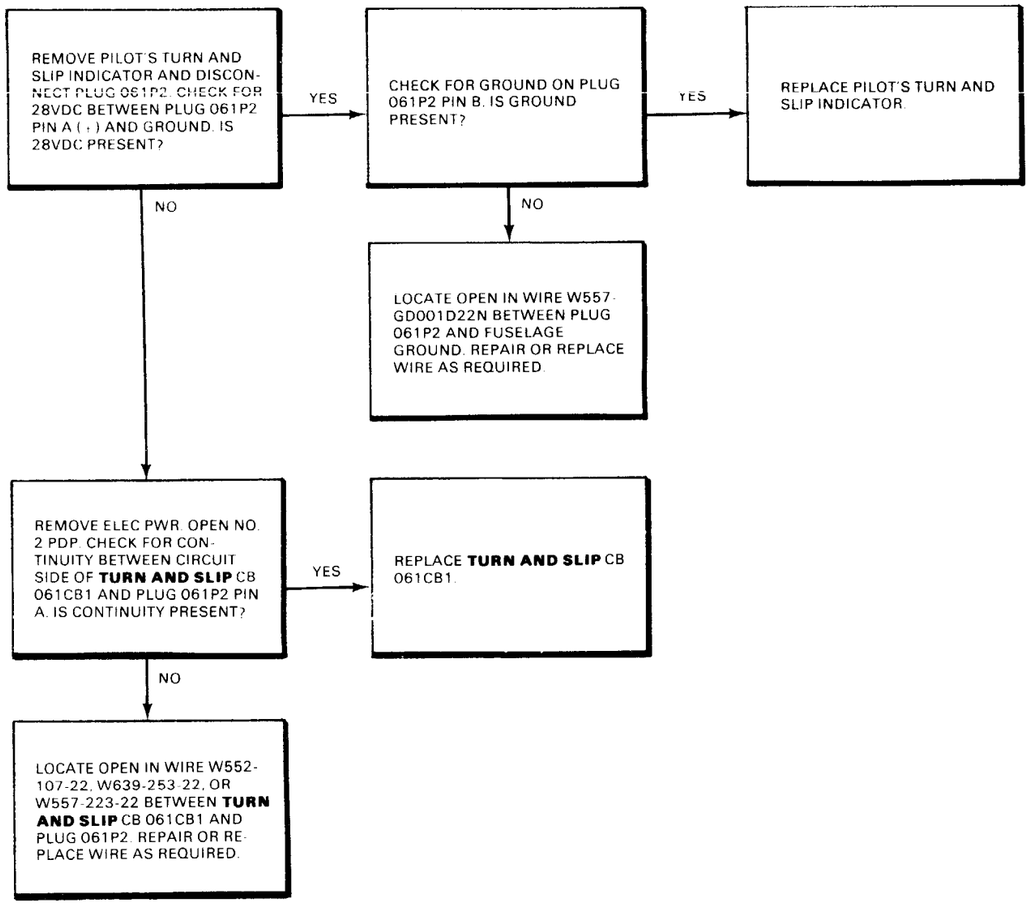
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off



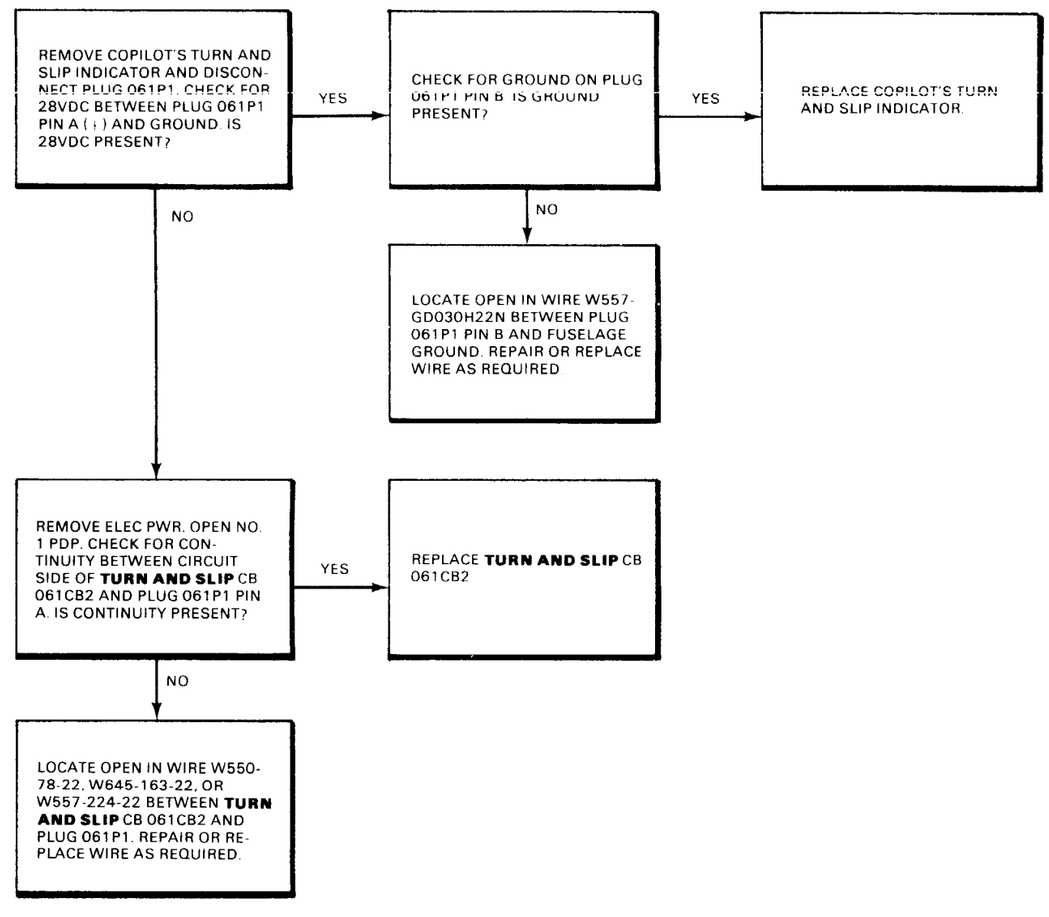
GO TO NEXT PAGE

8-13.5 TURN AND SLIP INDICATOR POINTER DOES NOT MOVE IN DIRECTION OF TURN (Continued)

PILOT'S TURN AND SLIP INDICATOR POINTER DOES NOT MOVE IN DIRECTION OF TURN

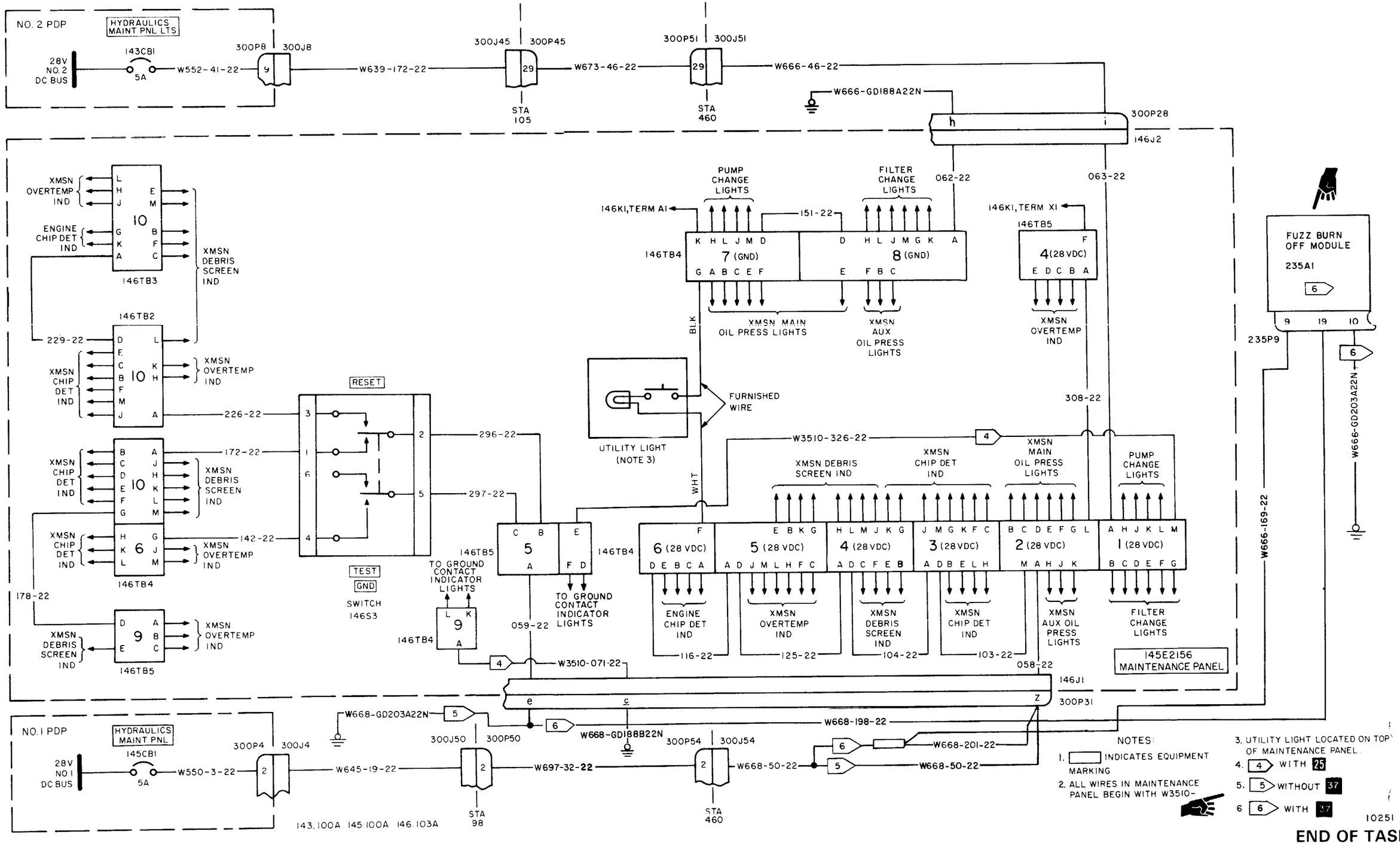


COPILOT'S TURN AND SLIP INDICATOR POINTER DOES NOT MOVE IN DIRECTION OF TURN



END OF TASK

8-14 MAINTENANCE PANEL POWER DISTRIBUTION


NO. 2 PDP
HYDRAULICS MAINT PNL LTS
143CB1
28V NO.2 DC BUS
5A
W552-41-22
300P8
300J8
W639-172-22
300J45
300P45
STA 105
W673-46-22
300P51
300J51
STA 460
W666-46-22
W666-GD188A22N
300P28
146J2
062-22
063-22
XMSN OVERTEMP IND
ENGINE CHIP DET IND
XMSN DEBRIS SCREEN IND
146TB3
146TB2
229-22
XMSN CHIP DET IND
XMSN OVERTEMP IND
226-22
172-22
142-22
178-22
146TB4
146TB5
RESET
TEST
GND
SWITCH 146S3
296-22
297-22
TO GROUND CONTACT INDICATOR LIGHTS
059-22
TO GROUND CONTACT INDICATOR LIGHTS
PUMP CHANGE LIGHTS
FILTER CHANGE LIGHTS
146K1,TERM A1
151-22
146TB4
7 (GND)
8 (GND)
XMSN MAIN OIL PRESS LIGHTS
XMSN AUX OIL PRESS LIGHTS
BLK
146K1,TERM X1
146TB5
4 (28 VDC)
XMSN OVERTEMP IND
FURNISHED WIRE
UTILITY LIGHT (NOTE 3)
WHT
W3510-326-22
308-22
XMSN DEBRIS SCREEN IND
XMSN CHIP DET IND
XMSN MAIN OIL PRESS LIGHTS
PUMP CHANGE LIGHTS
6 (28 VDC)
5 (28 VDC)
4 (28 VDC)
3 (28 VDC)
2 (28 VDC)
1 (28 VDC)
ENGINE CHIP DET IND
XMSN OVERTEMP IND
XMSN DEBRIS SCREEN IND
XMSN CHIP DET IND
XMSN AUX OIL PRESS LIGHTS
FILTER CHANGE LIGHTS
116-22
125-22
104-22
103-22
058-22
145E2156 MAINTENANCE PANEL
146J1
300P31
W666-169-22
FUZZ BURN OFF MODULE
235A1
235P9
W666-GD203A22N
W668-GD203A22N
W668-GD188B22N
W668-198-22
W668-201-22
W668-50-22
W697-32-22
W645-19-22
W550-3-22
NO.1 PDP
HYDRAULICS MAINT PNL
145CB1
28V NO.1 DC BUS
5A
300P4
300J4
300J50
300P50
300P54
300J54
STA 98
STA 460
143.100A 145.100A 146.103A
NOTES:
1. INDICATES EQUIPMENT MARKING
2. ALL WIRES IN MAINTENANCE PANEL BEGIN WITH W3510-
3. UTILITY LIGHT LOCATED ON TOP OF MAINTENANCE PANEL.
4. WITH 25
5. WITHOUT 37
6 WITH 37
10251

END OF TASK

8-14.2 MAINTENANCE PANEL POWER DISTRIBUTION VISUAL CHECK

INITIAL SETUP

Applicable Configurations:
All

Tools:
Electrical Repairer's Tool Kit, NSN 5180-00-323-4915

Materials:
None

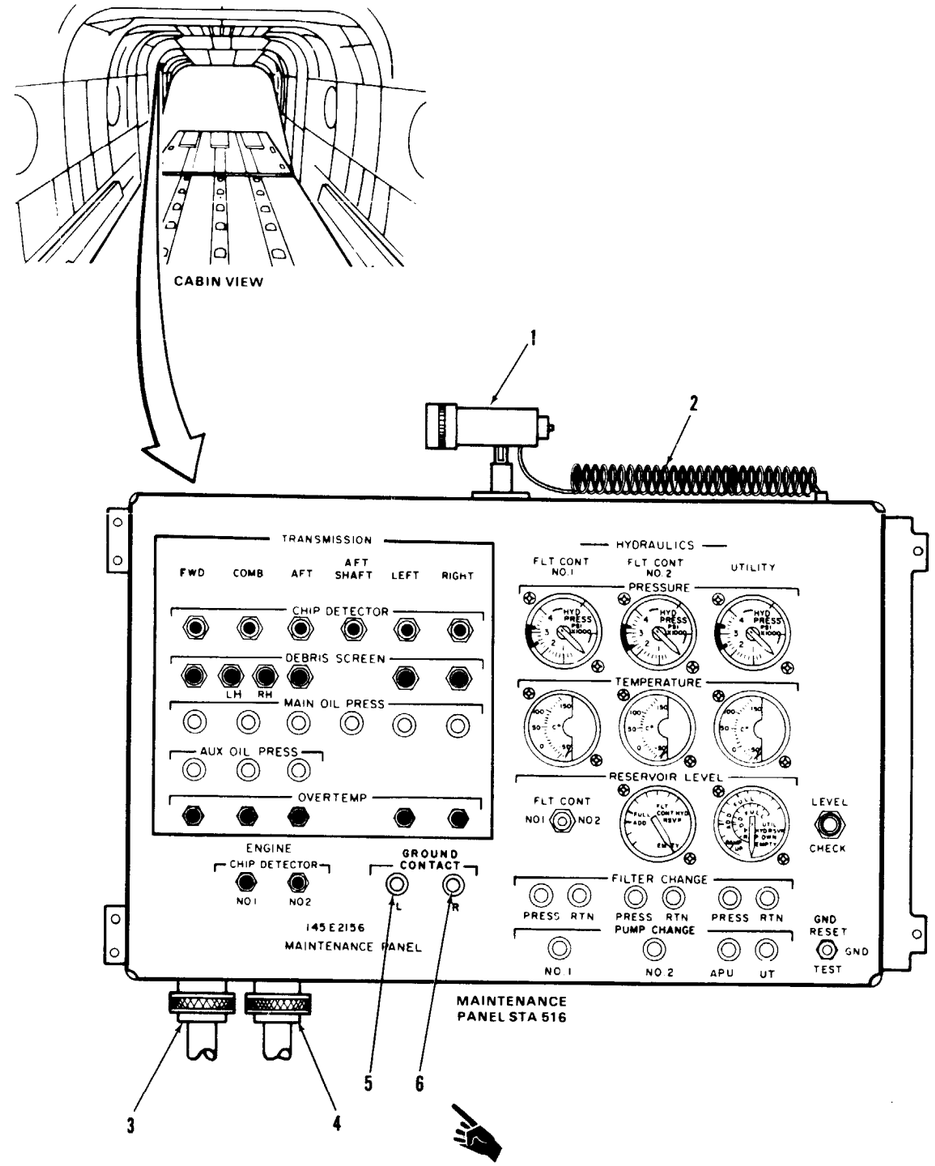
Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23
Battery Disconnected
Electrical Power Off
Hydraulic Power Off

TASK	RESULT
1 **Check maintenance panel light (1) and cord (2).**	If light (1) is damaged, replace it. If cord (2) is damaged, replace light.
2 **Check electrical connectors (3 and 4).**	If either connector (3 or 4) is loose or damaged, tighten or replace it as required. If wires to either connector are damaged, repair or replace them as required.
3 **With 25, check left and right GROUND** CONTACT lights (5 and 6).	If either light (5 or 6) is loose or damaged, tighten or replace it as required.

FOLLOW-ON MAINTENANCE:
None



12435

END OF TASK

8-14.3 MAINTENANCE PANEL POWER DISTRIBUTION OPERATIONAL CHECK

INITIAL SETUP

Applicable Configurations:
All

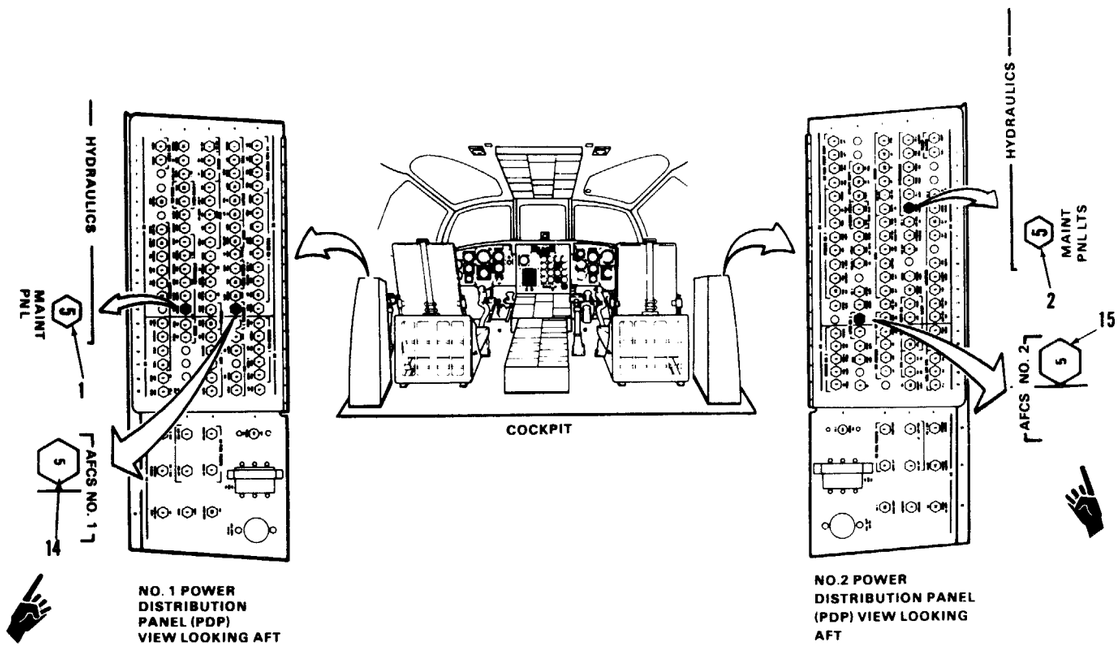
Tools:
None

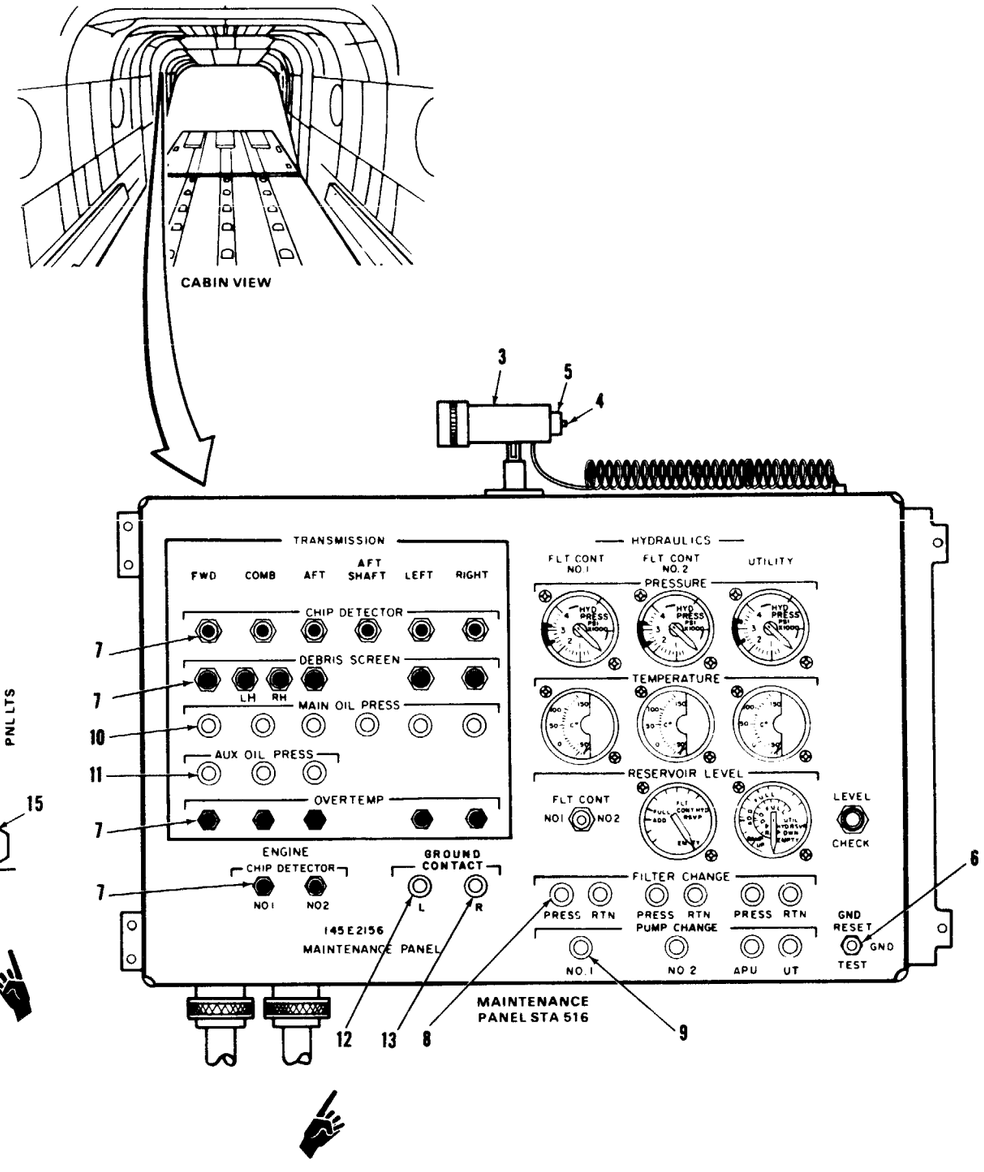
Materials:
None

Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23
Battery Connected
Electrical Power On
Hydraulic Power Off





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GO TO NEXT PAGE

TASK	RESULT
1. **Check** that **HYDRAULICS MAINT PNL circuit breaker (1)** is closed.	If MAINT PNL circuit breaker (1) is open, close it. If it opens again, go to task 8-14.4.
2. **Check** that **HYDRAULICS MAINT PNL LTS circuit breaker (2)** is closed.	if MAINT PNL LTS circuit breaker (2) is open, close it. If it opens again, go to task 8-14.5 (without 25). With 25, go to task 8-14.10.
2.1 **With 25, check** that **AFCS NO. 1 circuit breaker (14)** is closed.	If AFCS NO. 1 circuit breaker (14) is open, close it. If it opens again, go to task 11-3.6.
2.2 **With 25, check** that **AFCS NO. 2 circuit breaker (15)** is closed.	If AFCS NO. 2 circuit breaker (15) is open, close it. If it opens again, go to task 11-3.11.
3. **Remove maintenance panel light (3)** from bracket. **Press and release switch (4). Turn control (5) through its range.**	Light (3) shall blink when switch (4) pressed and released. Light shall become brighter as dimming control (5) is turned. If light does not come on, go to task 8-14.6. If light comes on but does not become brighter, replace light.
4. **Set GND switch (6) to TEST.**	All 19 indicators (7) shall change from all black to black-and-white fan displays. If one or more indicators has not changed display, go to task 8-14.7.
5. **Set GND switch (6) to RESET, then to GND.**	All 19 indicators (7) shall change from black-and-white fan displays to ail-black displays. If one or more indicators has not changed display, go to task 8-14.8.
6. **Press** and **release FILTER CHANGE PRESS light (8)** and **PUMP CHANGE NO. 1 light (9).**	All lights (8 and 9) shall momentarily come on. If all lights do not come on, go to task 8-14.9.
7. Check that all six transmission main oil PRESS lights (10) and three transmission AUX OIL PRESS lights (11) are lit.	If any light is not lit, replace lamp. If light still is not on, go to task 8-9.3.
8. **With 25, check that left and right GROUND CONTACT lights (12 and 13)** are lit.	If left GROUND CONTACT light (12) is not lit, go to task 3-1.5. If right GROUND CONTACT light (13) is not lit, go to task 3-1.7.
NOTE Remainder of operations are checked with each individual system check.	

FOLLOW-ON MAINTENANCE:
TM 55-1520-240-23
Battery disconnected.
Electrical power off.

END OF TASK

8-14.4 HYDRAULICS MAINT PNL CIRCUIT BREAKER WILL NOT STAY CLOSED

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:

All

Tools:

Electrical Repairer's Tool Kit, NSN 5180-00-323-4915

Multimeter

Materials:

None

Personnel Required:

Aircraft Electrician

References:

TM 55-1520-240-23

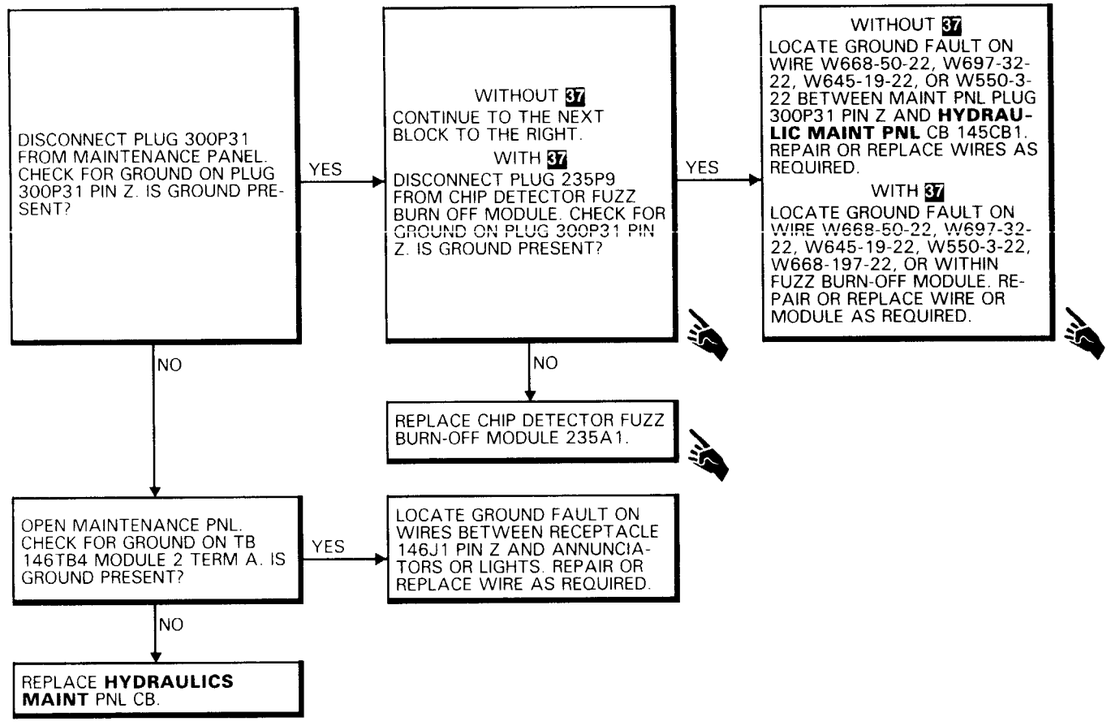
Equipment Condition:

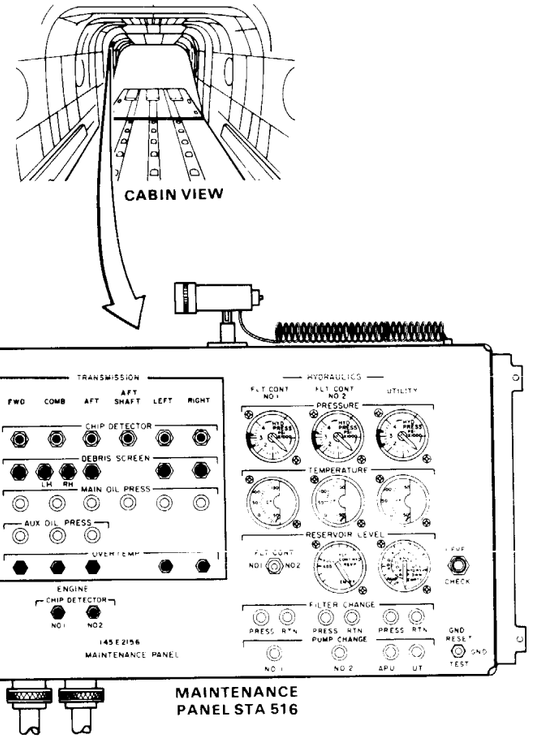
TM 55-1520-240-23:

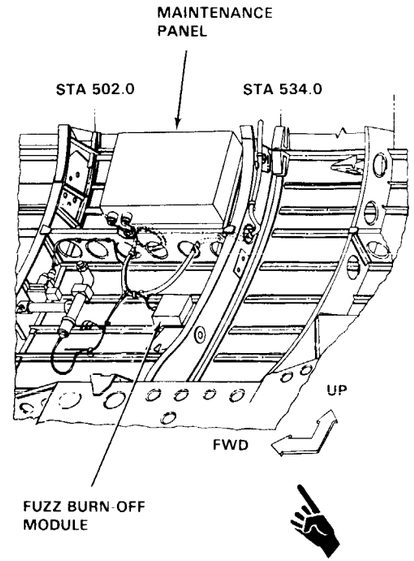
Battery Disconnected

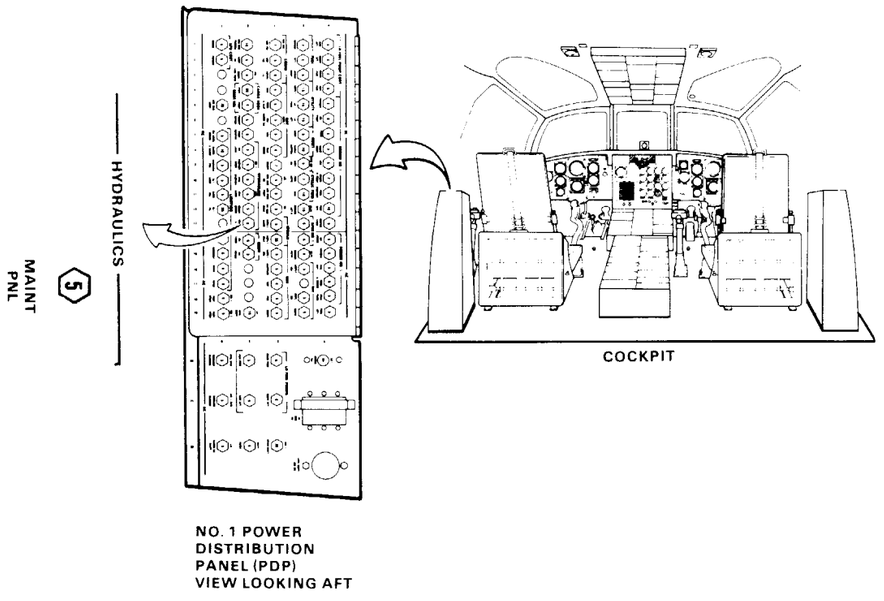
Electrical Power Off

Hydraulic Power Off









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END OF TASK

8-14.5 HYDRAULICS MAINT PNL LTS CIRCUIT BREAKER WILL NOT STAY CLOSED

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
Without 25

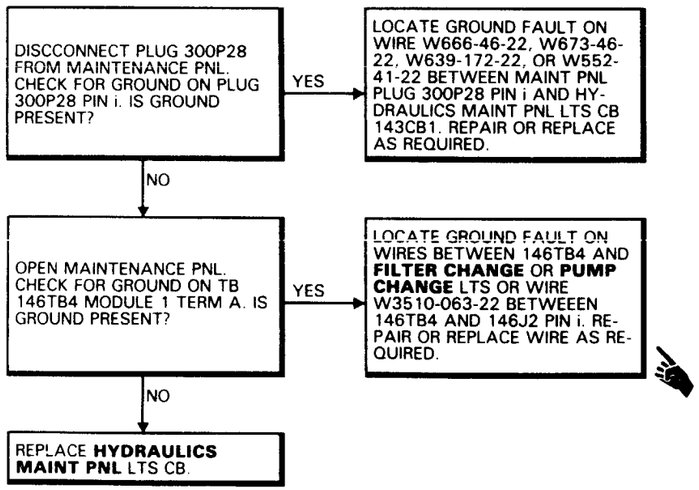
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

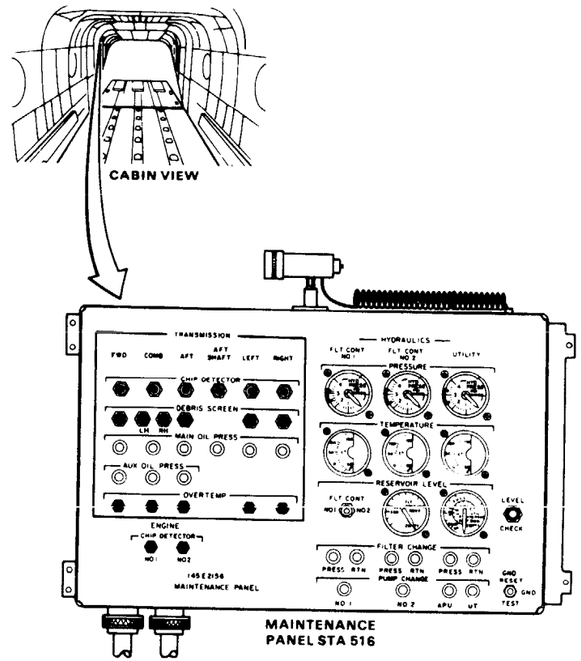
Materials:
None

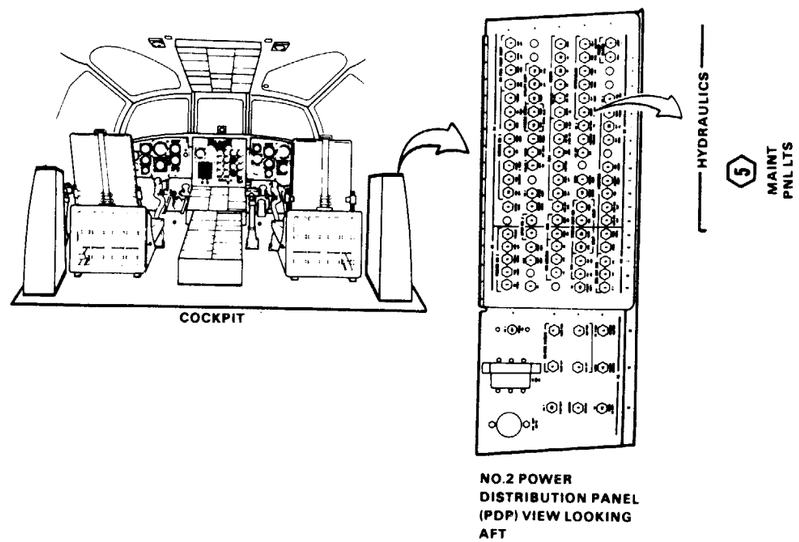
Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23
Battery Disconnected
Electrical Power Off
Hydraulic Power Off







DI45-8946-SPA

END OF TASK

8-14.6 MAINTENANCE PANEL UTILITY LIGHT WILL NOT COME ON

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

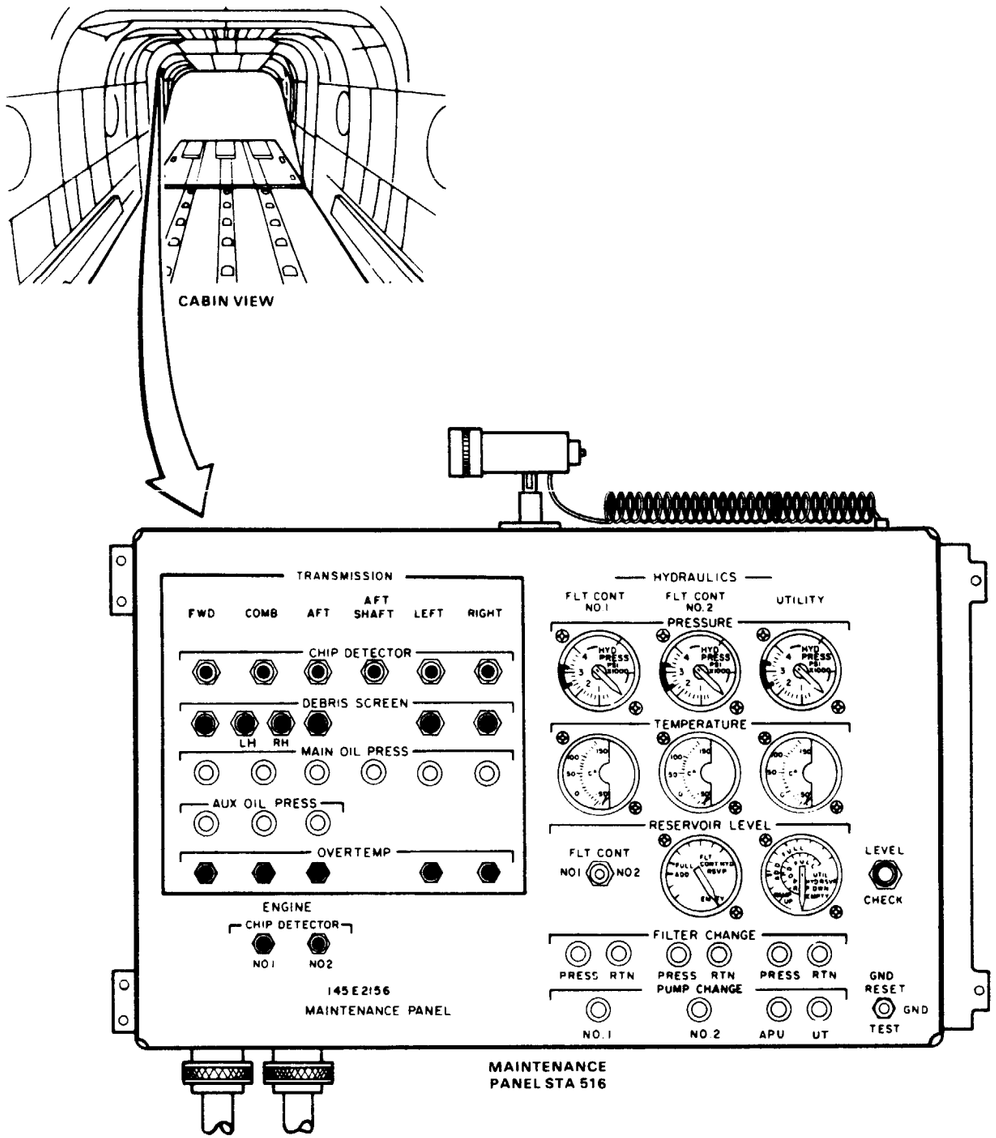
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:
None

Personnel Required:
68F20 Aircraft Electrician

References:
TM 55-1520-240-23

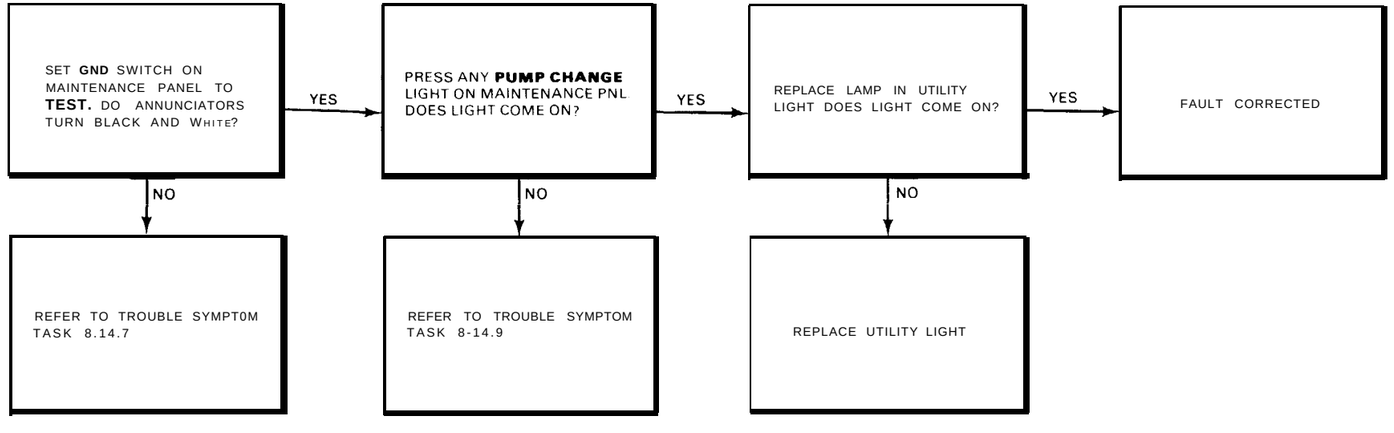
Equipment Condition:
TM 55-1520-240-23;
Battery Connected
Electrical Power On
Hydraulic Power Off



45x54

D145-8947-SPA

GO TO NEXT PAGE


SET GND SWITCH ON MAINTENANCE PANEL TO TEST. DO ANNUNCIATORS TURN BLACK AND WHITE?
YES
PRESS ANY PUMP CHANGE LIGHT ON MAINTENANCE PNL DOES LIGHT COME ON?
YES
REPLACE LAMP IN UTILITY LIGHT DOES LIGHT COME ON?
YES
FAULT CORRECTED
NO
REFER TO TROUBLE SYMPT0M TASK 8.14.7
NO
REFER TO TROUBLE SYMPTOM TASK 8-14.9
NO
REPLACE UTILITY LIGHT

END OF TASK

8-14.7 INDICATORS DO NOT TURN BLACK AND WHITE WITH GND TEST SWITCH AT TEST

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

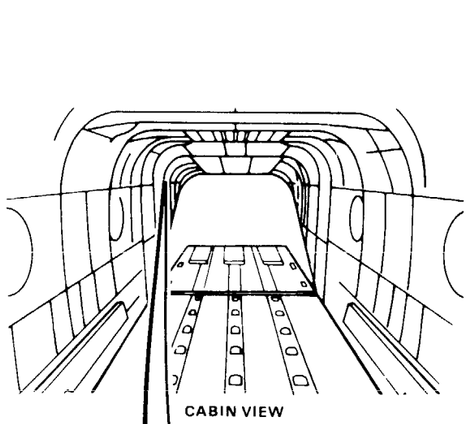
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

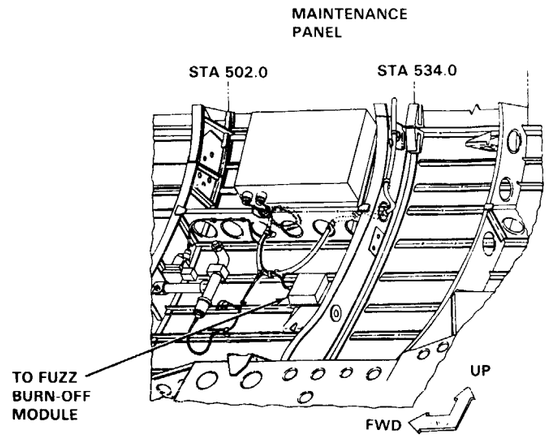
Materials:
None

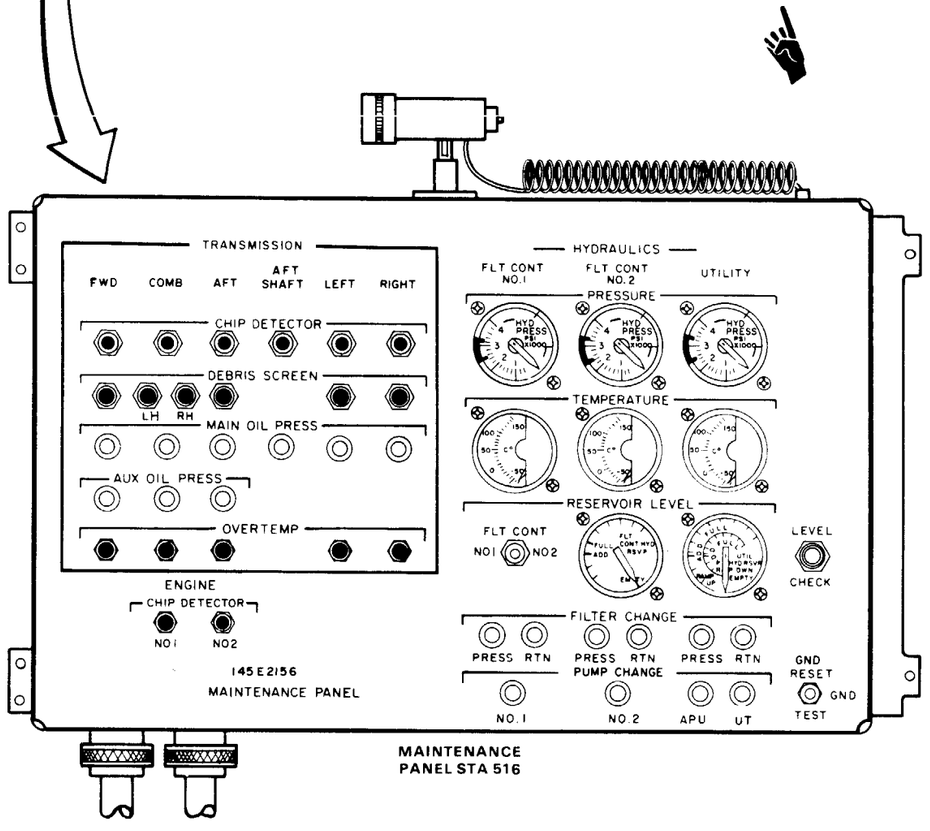
Personnel Required:
Aircraft Electrician

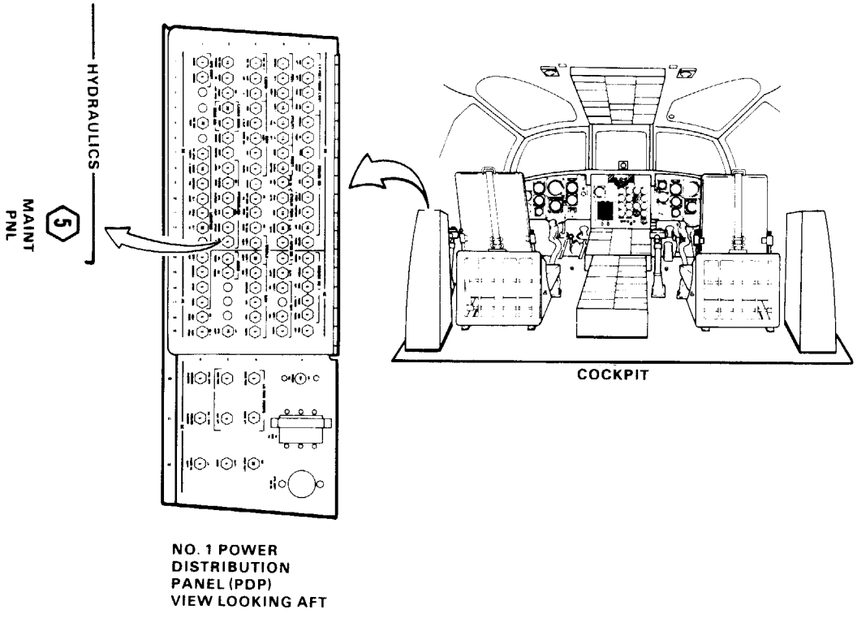
References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off





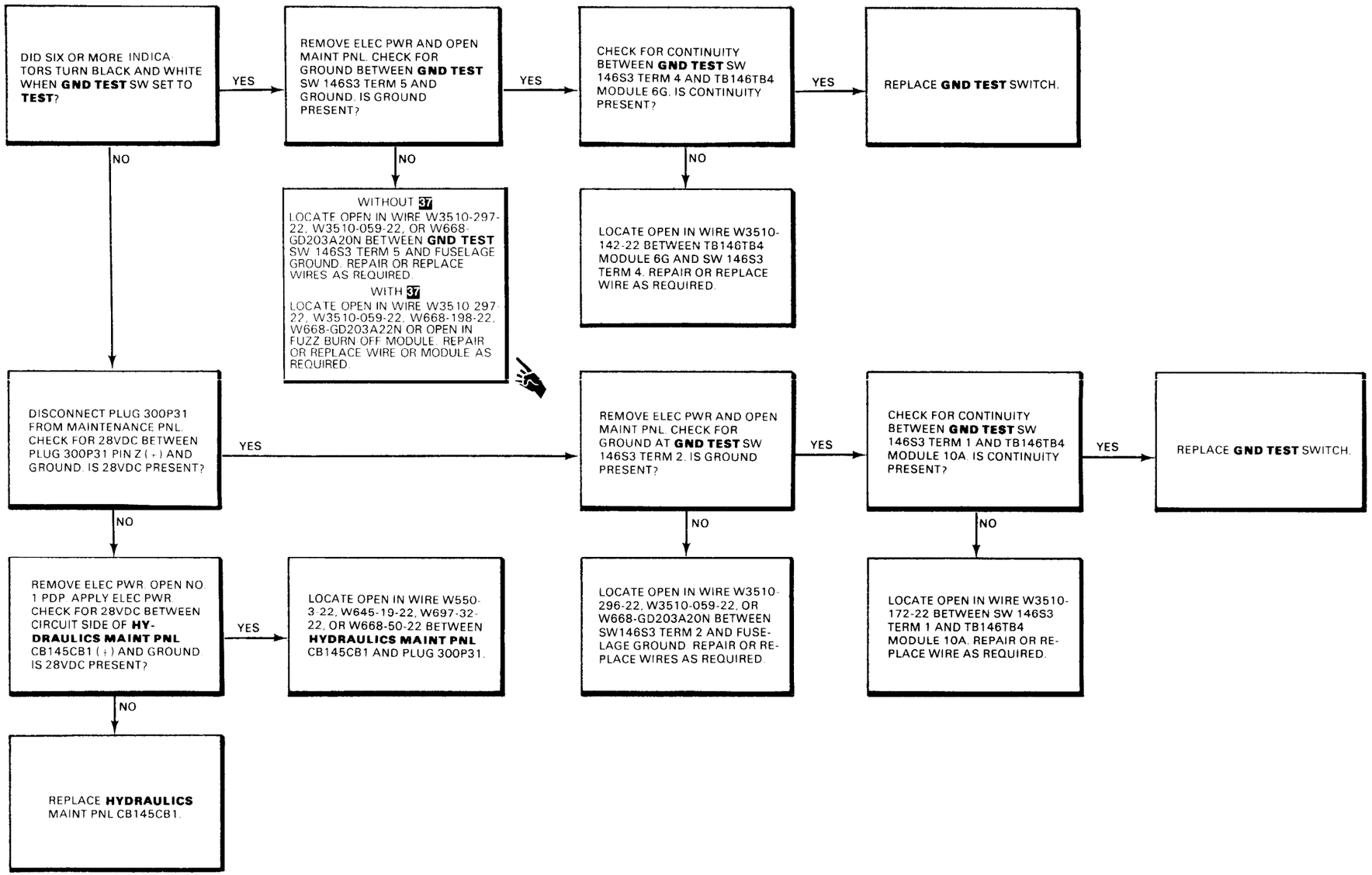




NO. 1 POWER DISTRIBUTION PANEL (PDP) VIEW LOOKING AFT

19947

GO TO NEXT PAGE


DID SIX OR MORE INDICATORS TURN BLACK AND WHITE WHEN **GND TEST** SW SET TO **TEST**?
YES
REMOVE ELEC PWR AND OPEN MAINT PNL. CHECK FOR GROUND BETWEEN **GND TEST** SW 146S3 TERM 5 AND GROUND. IS GROUND PRESENT?
YES
CHECK FOR CONTINUITY BETWEEN **GND TEST** SW 146S3 TERM 4 AND TB146TB4 MODULE 6G. IS CONTINUITY PRESENT?
YES
REPLACE **GND TEST** SWITCH.
NO
NO
NO
WITHOUT 37
LOCATE OPEN IN WIRE W3510-297-22, W3510-059-22, OR W668-GD203A20N BETWEEN **GND TEST** SW 146S3 TERM 5 AND FUSELAGE GROUND. REPAIR OR REPLACE WIRES AS REQUIRED.
WITH 37
LOCATE OPEN IN WIRE W3510 297-22, W3510-059-22, W668-198-22, W668-GD203A22N OR OPEN IN FUZZ BURN OFF MODULE. REPAIR OR REPLACE WIRE OR MODULE AS REQUIRED.
LOCATE OPEN IN WIRE W3510-142-22 BETWEEN TB146TB4 MODULE 6G AND SW 146S3 TERM 4. REPAIR OR REPLACE WIRE AS REQUIRED.
DISCONNECT PLUG 300P31 FROM MAINTENANCE PNL. CHECK FOR 28VDC BETWEEN PLUG 300P31 PIN Z (+) AND GROUND. IS 28VDC PRESENT?
YES
REMOVE ELEC PWR AND OPEN MAINT PNL. CHECK FOR GROUND AT **GND TEST** SW 146S3 TERM 2. IS GROUND PRESENT?
YES
CHECK FOR CONTINUITY BETWEEN **GND TEST** SW 146S3 TERM 1 AND TB146TB4 MODULE 10A. IS CONTINUITY PRESENT?
YES
REPLACE **GND TEST** SWITCH.
NO
NO
NO
REMOVE ELEC PWR. OPEN NO. 1 PDP. APPLY ELEC PWR. CHECK FOR 28VDC BETWEEN CIRCUIT SIDE OF **HYDRAULICS MAINT PNL** CB145CB1 (+) AND GROUND IS 28VDC PRESENT?
YES
LOCATE OPEN IN WIRE W550-3-22, W645-19-22, W697-32-22, OR W668-50-22 BETWEEN **HYDRAULICS MAINT PNL** CB145CB1 AND PLUG 300P31.
LOCATE OPEN IN WIRE W3510-296-22, W3510-059-22, OR W668-GD203A20N BETWEEN SW146S3 TERM 2 AND FUSELAGE GROUND. REPAIR OR REPLACE WIRES AS REQUIRED.
LOCATE OPEN IN WIRE W3510-172-22 BETWEEN SW 146S3 TERM 1 AND TB146TB4 MODULE 10A. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
REPLACE **HYDRAULICS** MAINT PNL CB145CB1.

END OF TASK

8-14.8 INDICATOR WILL NOT TURN ALL BLACK WITH GND TEST SWITCH AT RESET

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

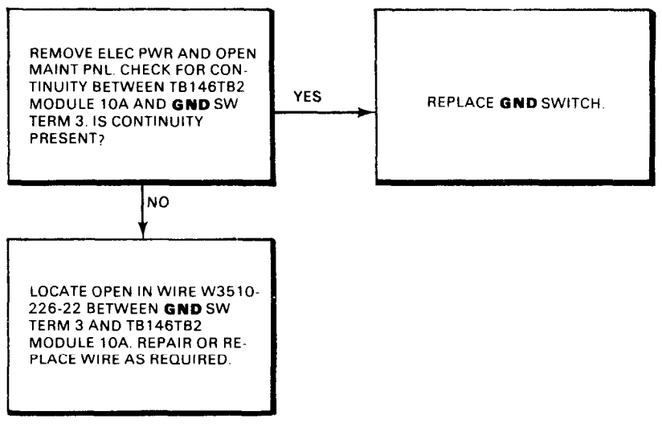
Tools:
Electrical Repairer's Tool Kit, NSN 5180-00-323-4915
Multimeter

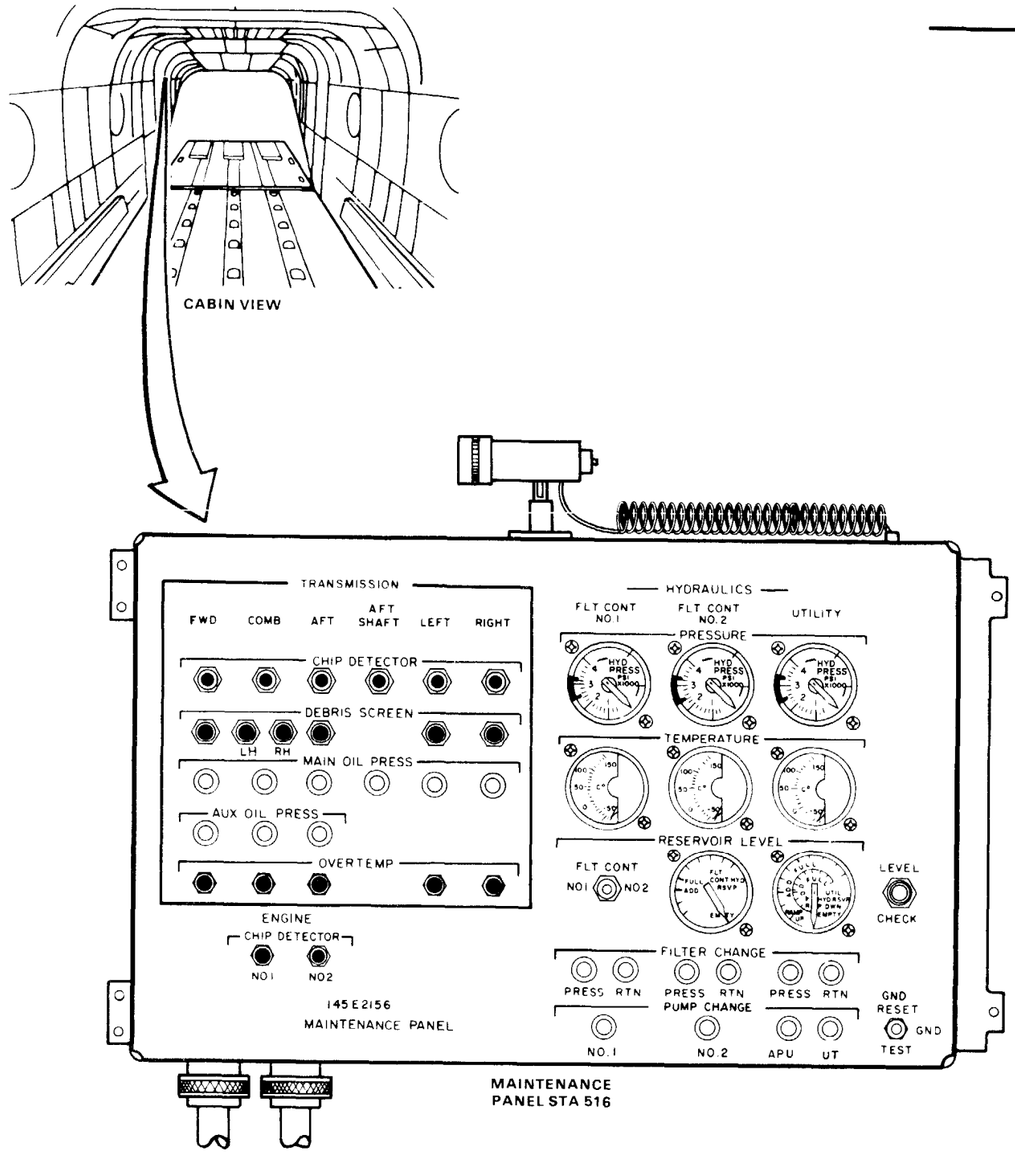
Materials:
None

Personnel Required:
68F20 Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23
Battery Connected
Electrical Power On
Hydraulic Power Off





45 x 54

D145-8949-SPA

END OF TASK

8-14.9 FILTER CHANGE AND PUMP CHANGE LIGHTS DO NOT COME ON WHEN PRESSED

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

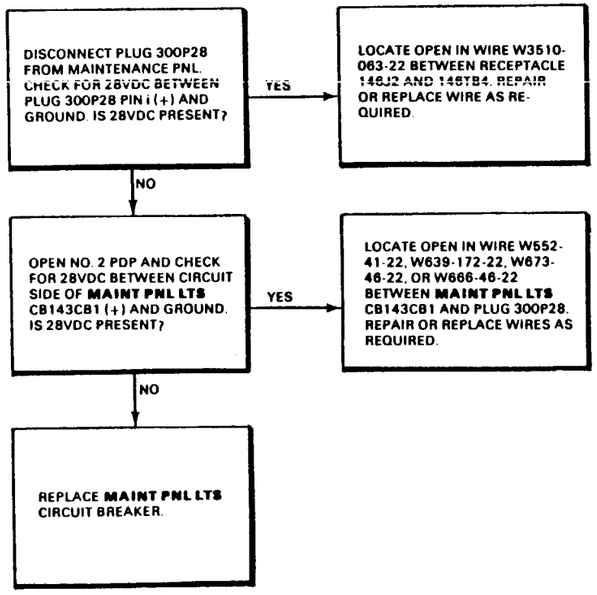
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

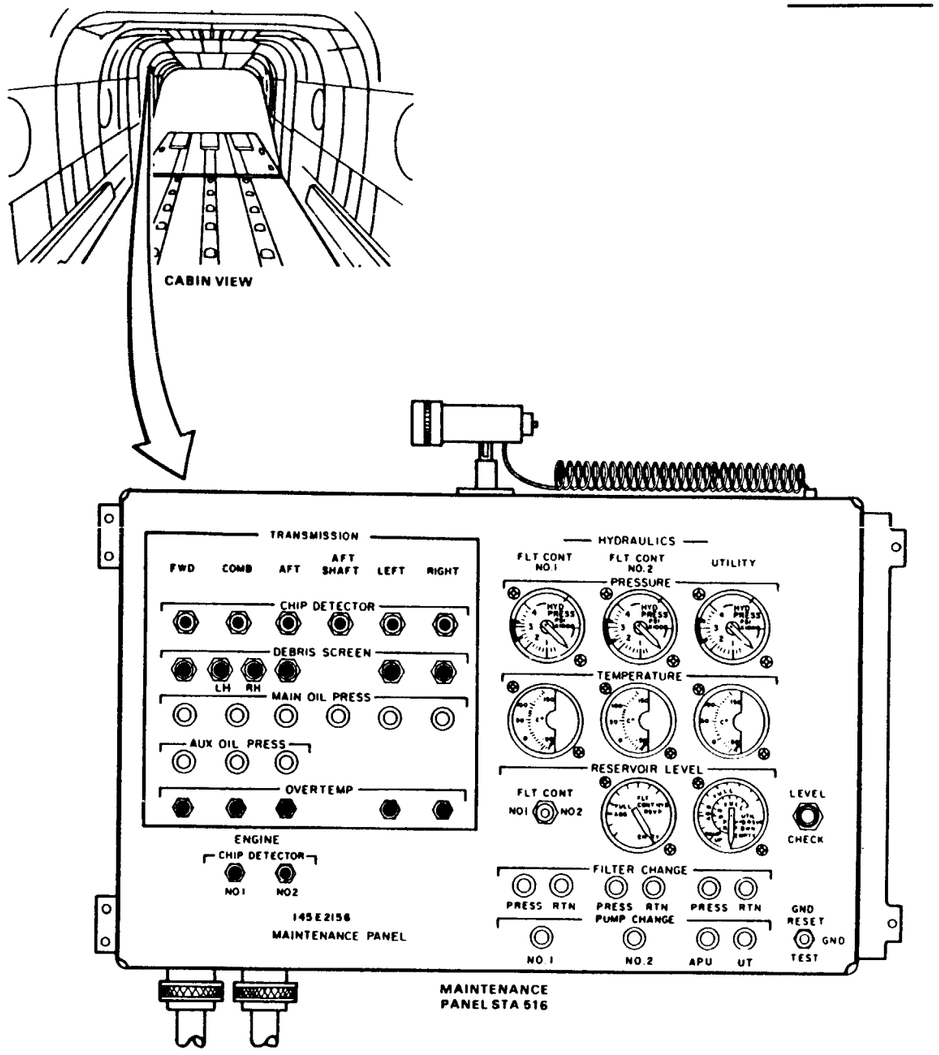
Materials:
None

Personnel Required:
68F20 Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off





45-54

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END OF TASK

Page 8-331 is a blank page.

8-14.10 HYDRAULICS MAINT PNL LTS CIRCUIT BREAKER WILL NOT STAY CLOSED

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
With 25

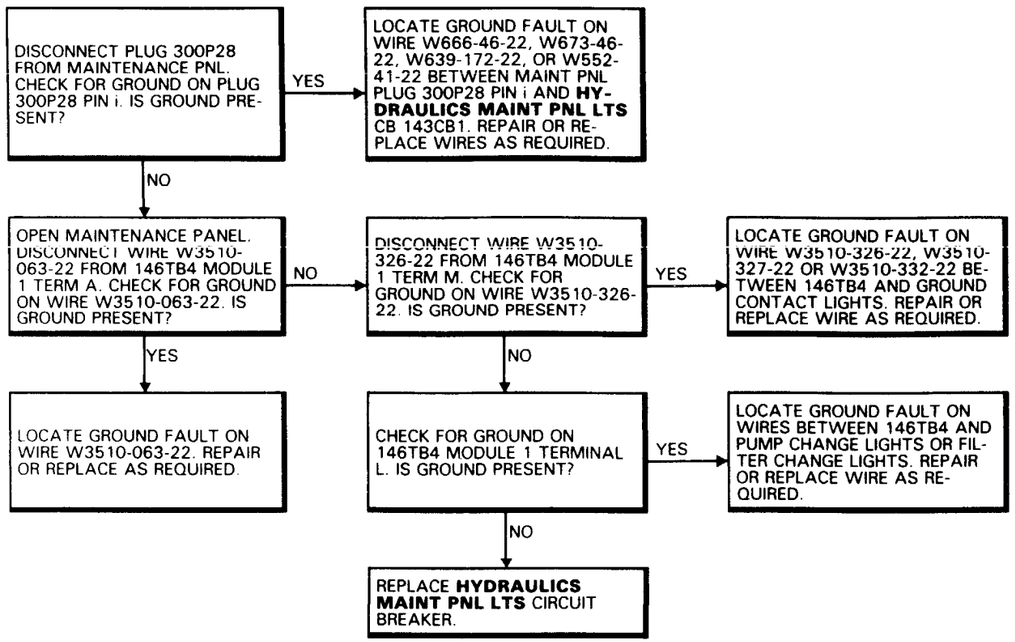
Tools:
Electrical Repairer's Tool Kit, NSN 5180-00-323-4915
Multimeter

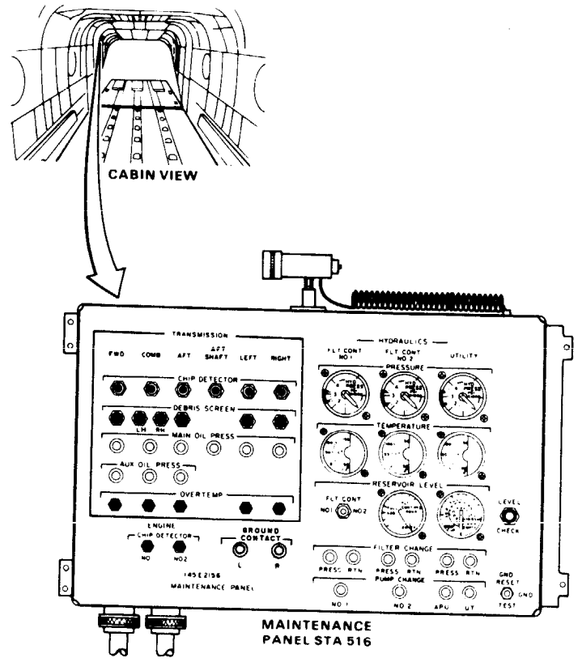
Materials:
None

Personnel Required:
Aircraft Electrician

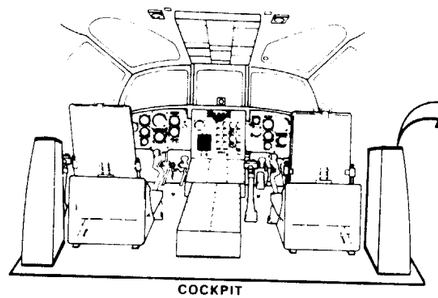
References:
TM 55-1520-240-23

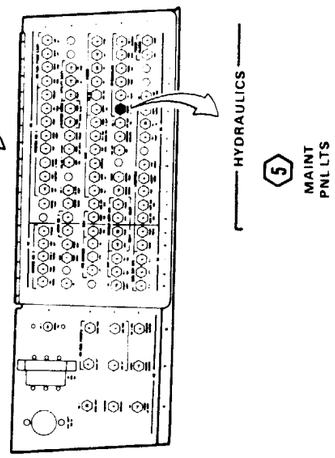
Equipment Condition:
TM 55-1520-240-23
Battery Disconnected
Electrical Power Off
Hydraulic Power Off





MAINTENANCE PANEL STA 516


COCKPIT

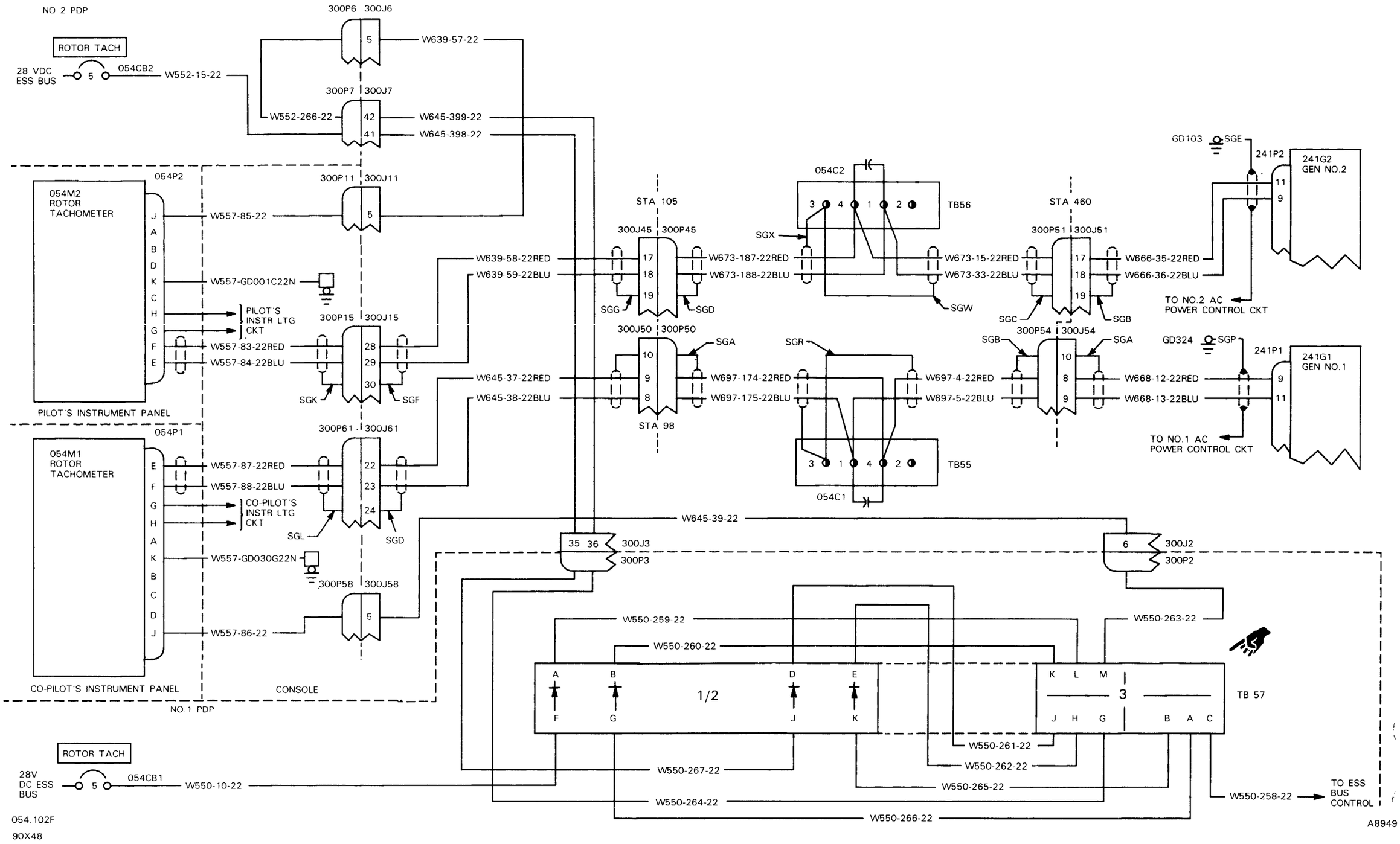


NO.2 POWER DISTRIBUTION PANEL (PDP) VIEW LOOKING AFT

12437

END OF TASK

8-15 ROTOR TACHOMETER


NO 2 PDP
ROTOR TACH
28 VDC ESS BUS
5
054CB2
W552-15-22
300P6 300J6
5
W639-57-22
300P7 300J7
W552-266-22
42
41
W645-399-22
W645-398-22
300P11 300J11
5
W557-85-22
054P2
054M2 ROTOR TACHOMETER
J
A
B
D
K
C
H
G
F
E
W557-GD001C22N
PILOT'S INSTR LTG CKT
W557-83-22RED
W557-84-22BLU
PILOT'S INSTRUMENT PANEL
300P15 300J15
28
29
30
SGK
SGF
300P61 300J61
22
23
24
SGL
SGD
054P1
054M1 ROTOR TACHOMETER
E
F
G
H
A
K
B
C
D
J
W557-87-22RED
W557-88-22BLU
CO-PILOT'S INSTR LTG CKT
W557-GD030G22N
300P58 300J58
5
W557-86-22
CO-PILOT'S INSTRUMENT PANEL
CONSOLE
NO.1 PDP
STA 105
300J45 300P45
17
18
19
SGG
SGD
W639-58-22RED
W639-59-22BLU
300J50 300P50
10
9
8
SGA
STA 98
W645-37-22RED
W645-38-22BLU
054C2
3 4 1 2
TB56
SGX
SGW
W673-187-22RED
W673-188-22BLU
W673-15-22RED
W673-33-22BLU
SGR
W697-174-22RED
W697-175-22BLU
W697-4-22RED
W697-5-22BLU
3 1 4 2
TB55
054C1
STA 460
300P51 300J51
17
18
19
SGC
SGB
300P54 300J54
10
8
9
SGB
SGA
W666-35-22RED
W666-36-22BLU
W668-12-22RED
W668-13-22BLU
GD103
SGE
241P2
241G2 GEN NO.2
11
9
TO NO.2 AC POWER CONTROL CKT
GD324
SGP
241P1
241G1 GEN NO.1
9
11
TO NO.1 AC POWER CONTROL CKT
W645-39-22
35 36
300J3
300P3
6
300J2
300P2
W550-259-22
W550-260-22
W550-263-22
A B D E
F G J K
1/2
K L M
3
J H G B A C
TB 57
W550-261-22
W550-262-22
W550-267-22
W550-265-22
W550-264-22
W550-266-22
W550-258-22
TO ESS BUS CONTROL
ROTOR TACH
28V DC ESS BUS
5
054CB1
W550-10-22
054.102F
90X48
A8949

8-15.2 ROTOR TACHOMETER VISUAL CHECK

INITIAL SETUP

Applicable Configurations:
All

Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915

Materials:
None

Personnel Required:
68F10 Aircraft Electrician

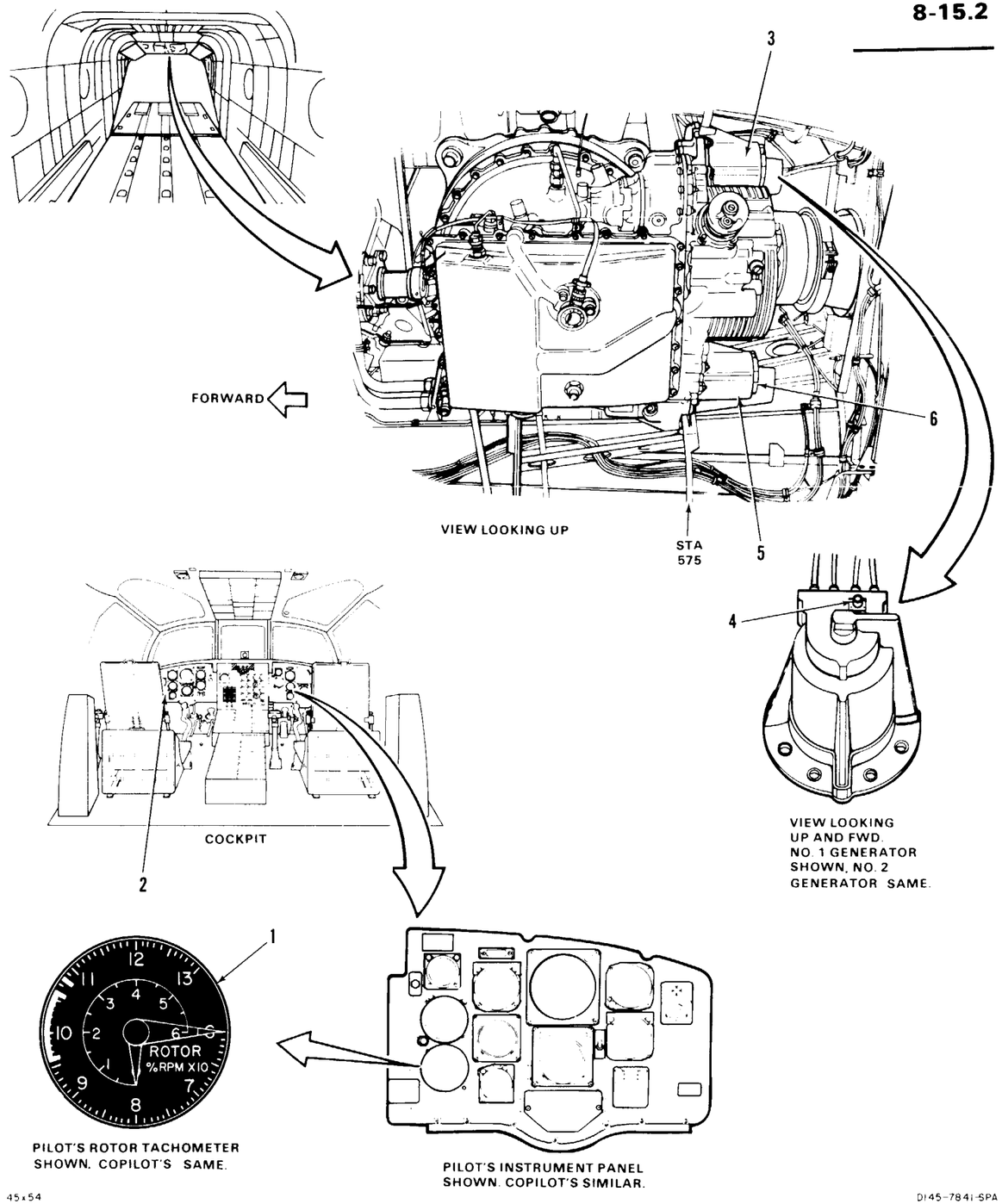
References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off
Left and Right Baffles
Open Under Aft Transmission

TASK	RESULT
1. **Check pilot's rotor tachometer indicator (1).**	If tachometer (1) is loose or damaged, tighten or replace it as required.
2. **Check copilot's rotor tachometer indicator (2).**	If tachometer (2) is loose or damaged, tighten or replace it as required.
3. **Check No. 1 generator (3).**	If plug (4) is loose or damaged or wiring to plug is damaged, tighten or repair it as required.
4. **Check No. 2 generator (5).**	If plug (6) is loose or damaged or wiring to plug is damaged, tighten or repair it as required.

FOLLOW-ON MAINTENANCE:

Left and right baffles closed under aft transmission.



45x54

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END OF TASK

8-15.3 ROTOR TACHOMETER OPERATIONAL CHECK

INITIAL SETUP

Applicable Configurations:
All

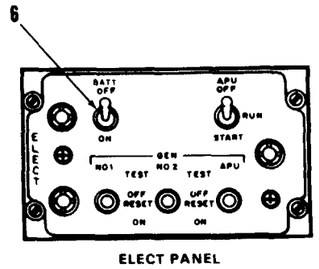
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915

Materials:
None

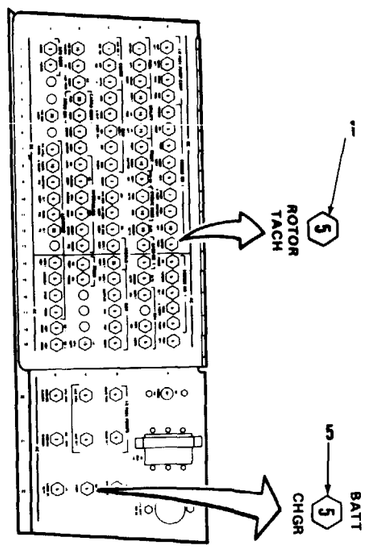
Personnel Required:
Aircraft Electrician
Army Rotor Wing Aviator (2)

References:
TM 55-1520-240-23

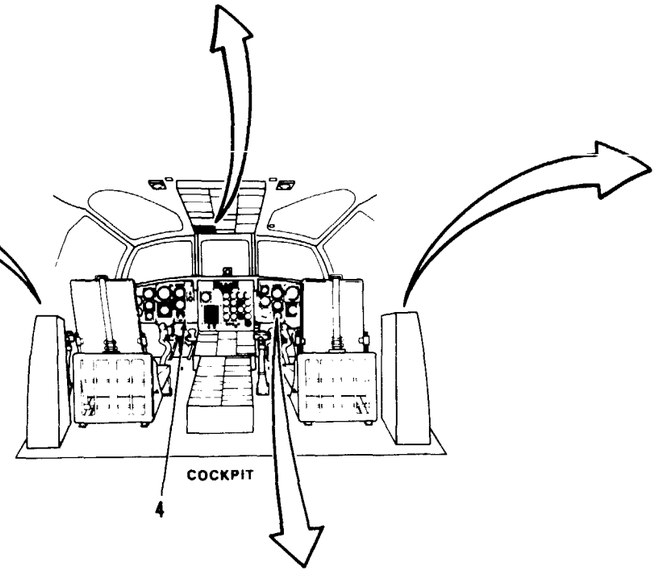
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power On
Visual Check of Rotor Tachometer Performed (Task 8-15.2)

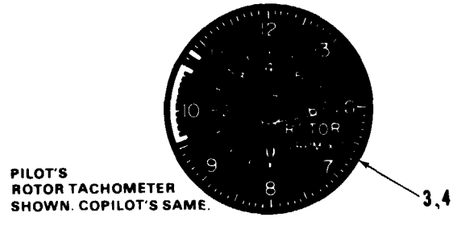


ELECT PANEL

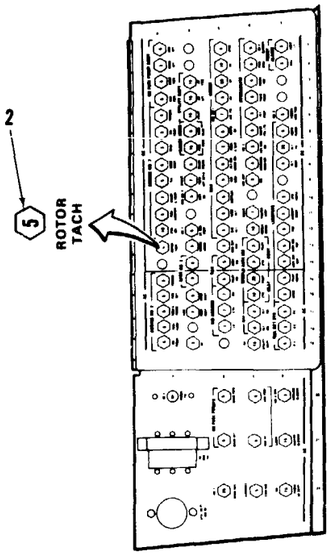


NO. 1 POWER DISTRIBUTION PANEL (PDP) VIEW LOOKING AFT





PILOT'S ROTOR TACHOMETER SHOWN. COPILOT'S SAME.



NO. 2 POWER DISTRIBUTION PANEL (PDP) VIEW LOOKING AFT

8950

GO TO NEXT PAGE

TASK	RESULT
1. **Check** that **ROTOR TACH circuit breaker (1)** is **closed.**	If circuit breaker (1) is open, close it. If it opens again, go to task 8-15.4.
2. **Check** that **ROTOR TACH circuit breaker (2)** is **closed.**	If circuit breaker (2) is open, close it. If it opens again, go to task 8-14.4.
3. Have pilot start engines and stabilize rotor rpm at 100 percent. Check pilot and copilot rotor tachometers (3 and 4).	Both tachometers shall read 98 to 101 percent. If copilot's tachometer does not read 98 percent to 101 Percent, go to task. 8-15.5 If pilot's tachometer does not read 98 to 101 percent, go to task 8-15.6. If copilot's tachometer varies or oscillates, replace capacitor 054C1. If pilot's tachometer varies or oscillates, replace capacitor 054C2.
4. **Open BATT CHGR circuit breaker (5).**	
5. Have pilot set **BATT switch (6) to OFF. Check pilot and copilot rotor tachometers (3 and 4).**	Both tachometers shall read 98 to 101 percent. If either tachometer pointer drifts downscale, go to task 8-15.7.
6. Have pilot set **BATT switch (6) to ON.**	
7. **Close BATT CHGR circuit breaker (5).**	
8. **Open ROTOR TACH circuit breaker (1). Check copilot's rotor tachometer (4).**	**Tachometer (4) shall read 98 to 101 percent.** If pointer on tachometer (4) drifts downscale, go to task 8-15.8.
9. **Close ROTOR TACH circuit breaker (1).**	
10. **Open ROTOR TACH circuit breaker (2). Check pilot's rotor tachometer (3).**	**Tachometer (3) shall read 98 to 101 percent.** If pointer on tachometer (3) drifts downscale, go to task 8-15.9.
11. **Close ROTOR TACH circuit breaker (2).**	

FOLLOW-ON MAINTENANCE:
Have Pilot Shut Down Engines
TM 55-1520-240-23:
Hydraulics Off
Electrical Power Off
Battery Disconnected

END OF TASK

8-15.4 ROTOR TACH CIRCUIT BREAKER WILL NOT STAY CLOSED

FAULT ISOUTION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

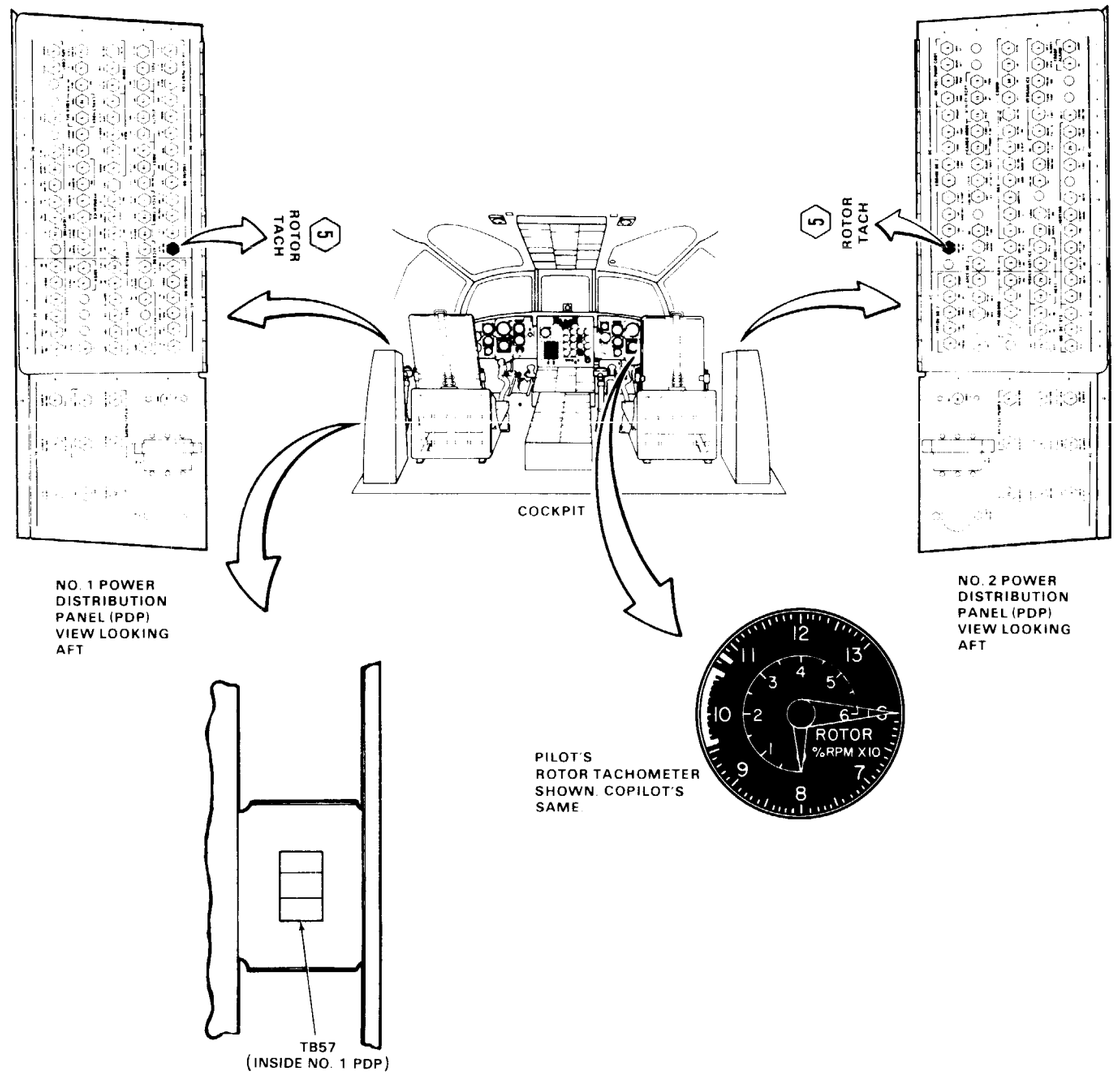
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:
None

Personnel Required:
Aircraft Electrician

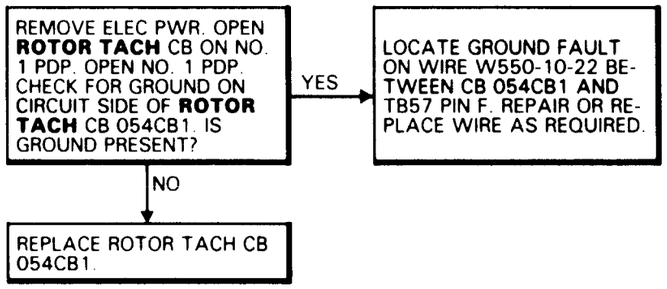
References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off

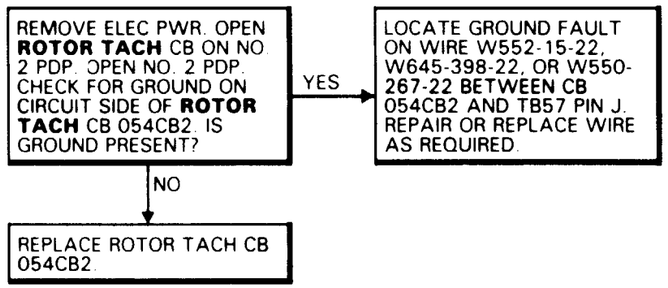


GO TO NEXT PAGE

COPILOT TACH CIRCUIT BREAKER WILL NOT STAY CLOSED



PILOT TACH CIRCUIT BREAKER WILL NOT STAY CLOSED



END OF TASK

8-15.5 COPILOT'S ROTOR TACHOMETER DOES NOT READ 98 TO 101 PERCENT

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

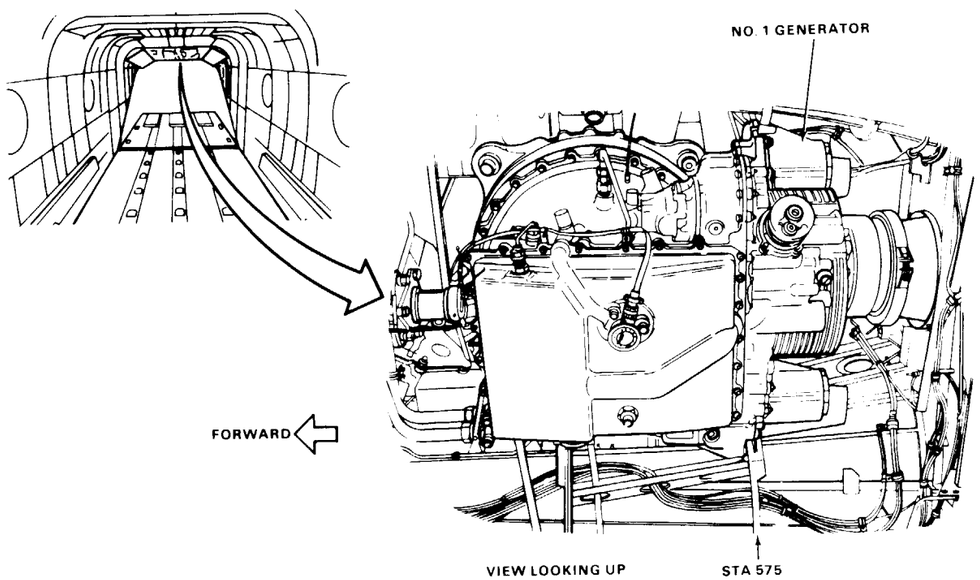
Tools:
Electrical Repairer's Tool Kit, NSN 5180-00-323-4915
Multimeter

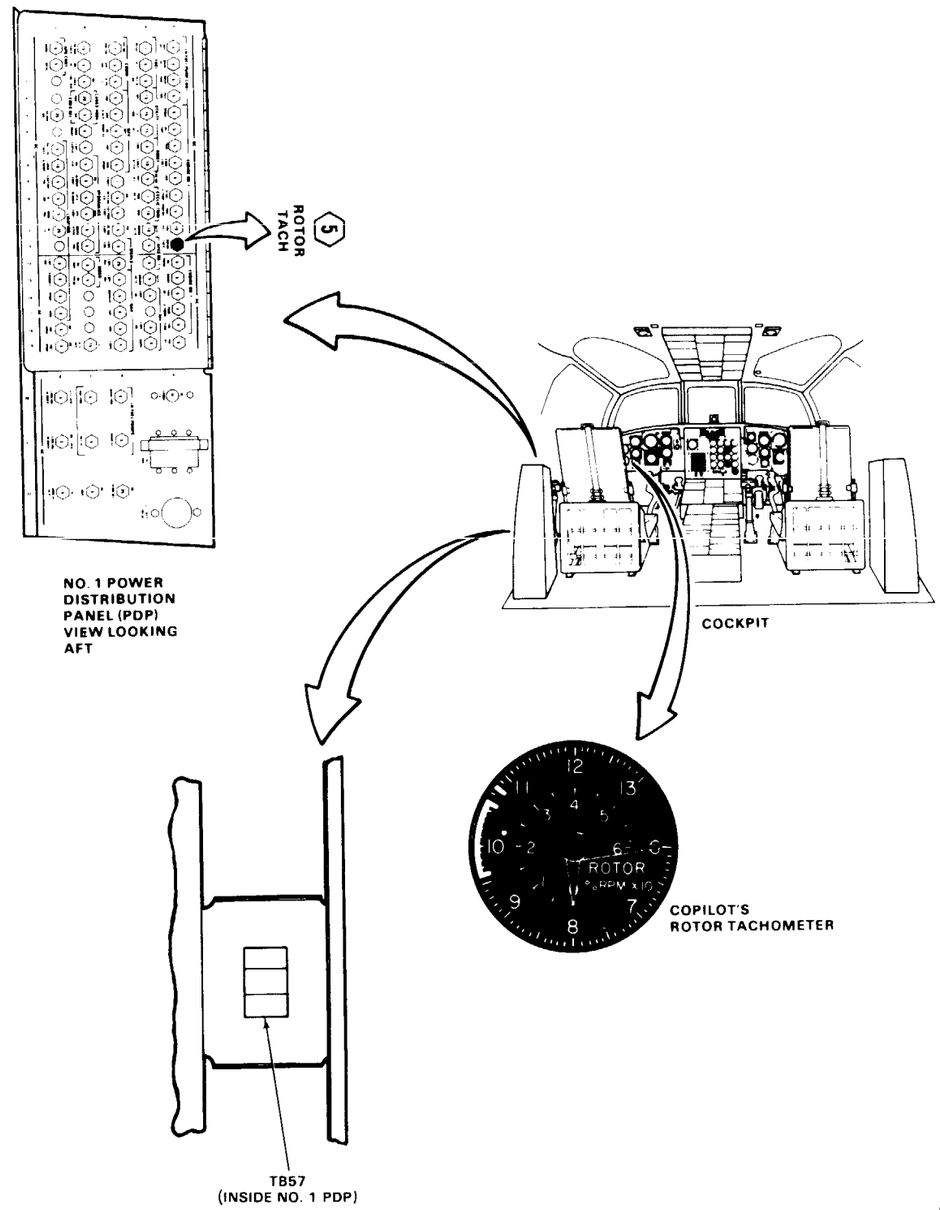
Materials:
None

Personnel Required:
Aircraft Electrician

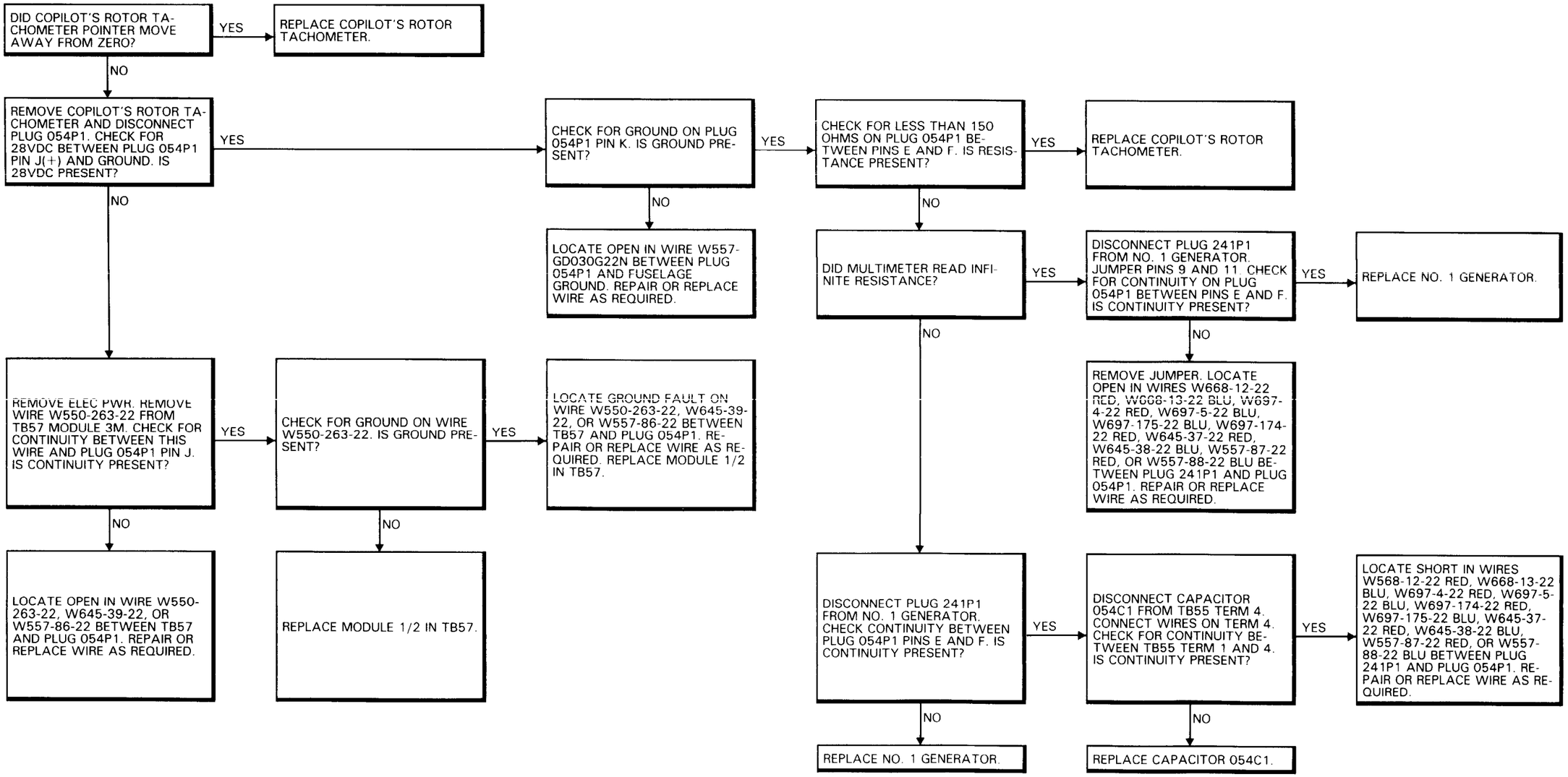
References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off





GO TO NEXT PAGE


DID COPILOT'S ROTOR TACHOMETER POINTER MOVE AWAY FROM ZERO?
YES
REPLACE COPILOT'S ROTOR TACHOMETER.
NO
REMOVE COPILOT'S ROTOR TACHOMETER AND DISCONNECT PLUG 054P1. CHECK FOR 28VDC BETWEEN PLUG 054P1 PIN J(+) AND GROUND. IS 28VDC PRESENT?
YES
CHECK FOR GROUND ON PLUG 054P1 PIN K. IS GROUND PRESENT?
YES
CHECK FOR LESS THAN 150 OHMS ON PLUG 054P1 BETWEEN PINS E AND F. IS RESISTANCE PRESENT?
YES
REPLACE COPILOT'S ROTOR TACHOMETER.
NO
LOCATE OPEN IN WIRE W557-GD030G22N BETWEEN PLUG 054P1 AND FUSELAGE GROUND. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
DID MULTIMETER READ INFINITE RESISTANCE?
YES
DISCONNECT PLUG 241P1 FROM NO. 1 GENERATOR. JUMPER PINS 9 AND 11. CHECK FOR CONTINUITY ON PLUG 054P1 BETWEEN PINS E AND F. IS CONTINUITY PRESENT?
YES
REPLACE NO. 1 GENERATOR.
NO
REMOVE JUMPER. LOCATE OPEN IN WIRES W668-12-22 RED, W668-13-22 BLU, W697-4-22 RED, W697-5-22 BLU, W697-175-22 BLU, W697-174-22 RED, W645-37-22 RED, W645-38-22 BLU, W557-87-22 RED, OR W557-88-22 BLU BETWEEN PLUG 241P1 AND PLUG 054P1. REPAIR OR REPLACE WIRE AS REQUIRED.
REMOVE ELEC PWR. REMOVE WIRE W550-263-22 FROM TB57 MODULE 3M. CHECK FOR CONTINUITY BETWEEN THIS WIRE AND PLUG 054P1 PIN J. IS CONTINUITY PRESENT?
YES
CHECK FOR GROUND ON WIRE W550-263-22. IS GROUND PRESENT?
YES
LOCATE GROUND FAULT ON WIRE W550-263-22, W645-39-22, OR W557-86-22 BETWEEN TB57 AND PLUG 054P1. REPAIR OR REPLACE WIRE AS REQUIRED. REPLACE MODULE 1/2 IN TB57.
NO
LOCATE OPEN IN WIRE W550-263-22, W645-39-22, OR W557-86-22 BETWEEN TB57 AND PLUG 054P1. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
REPLACE MODULE 1/2 IN TB57.
NO
DISCONNECT PLUG 241P1 FROM NO. 1 GENERATOR. CHECK CONTINUITY BETWEEN PLUG 054P1 PINS E AND F. IS CONTINUITY PRESENT?
YES
DISCONNECT CAPACITOR 054C1 FROM TB55 TERM 4. CONNECT WIRES ON TERM 4. CHECK FOR CONTINUITY BETWEEN TB55 TERM 1 AND 4. IS CONTINUITY PRESENT?
YES
LOCATE SHORT IN WIRES W568-12-22 RED, W668-13-22 BLU, W697-4-22 RED, W697-5-22 BLU, W697-174-22 RED, W697-175-22 BLU, W645-37-22 RED, W645-38-22 BLU, W557-87-22 RED, OR W557-88-22 BLU BETWEEN PLUG 241P1 AND PLUG 054P1. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
REPLACE NO. 1 GENERATOR.
NO
REPLACE CAPACITOR 054C1.

END OF TASK

8-15.6 PILOT'S ROTOR TACHOMETER DOES NOT READ 98 TO 101 PERCENT

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

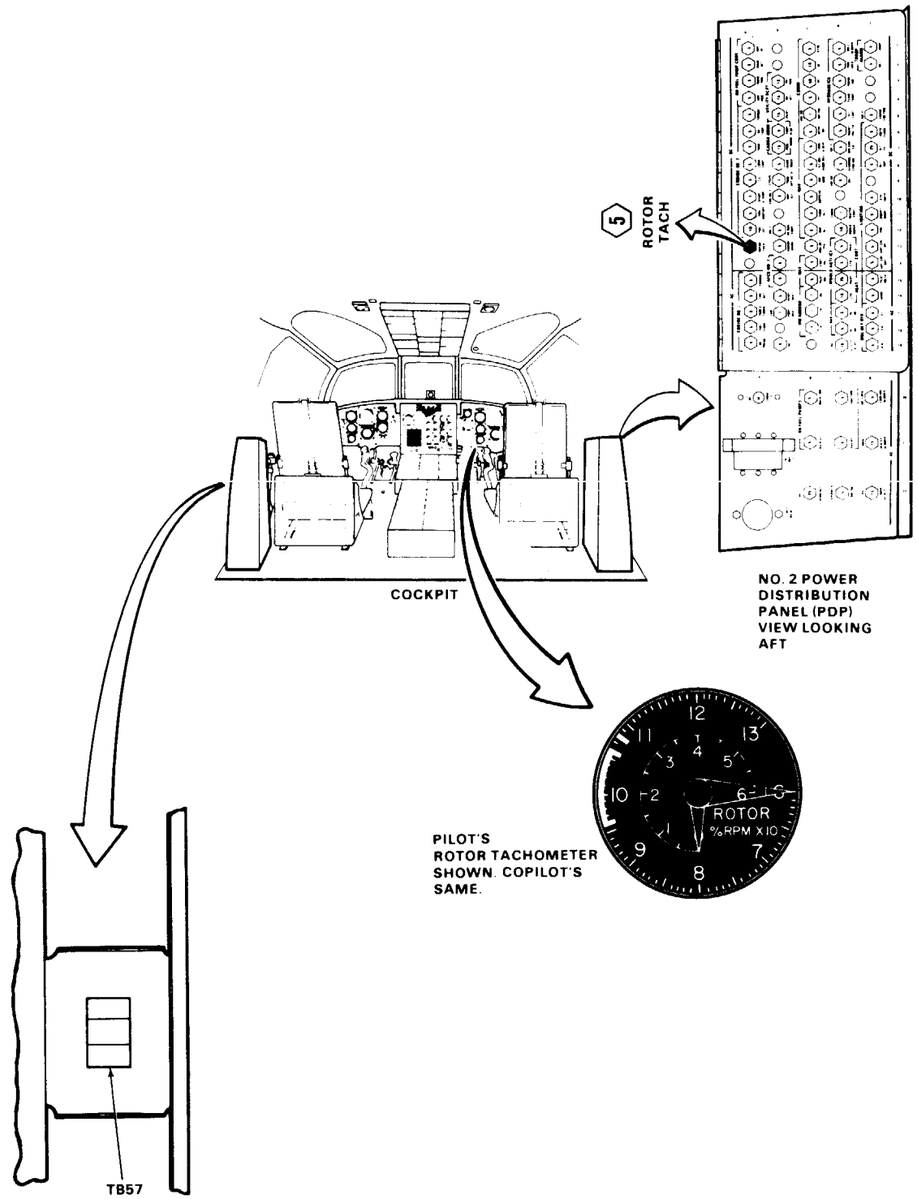
Tools:
Electrical Repairer's Tool Kit, NSN 5180-00-323-4915
Multimeter

Materials:
None

Personnel Required:
Aircraft Electrician

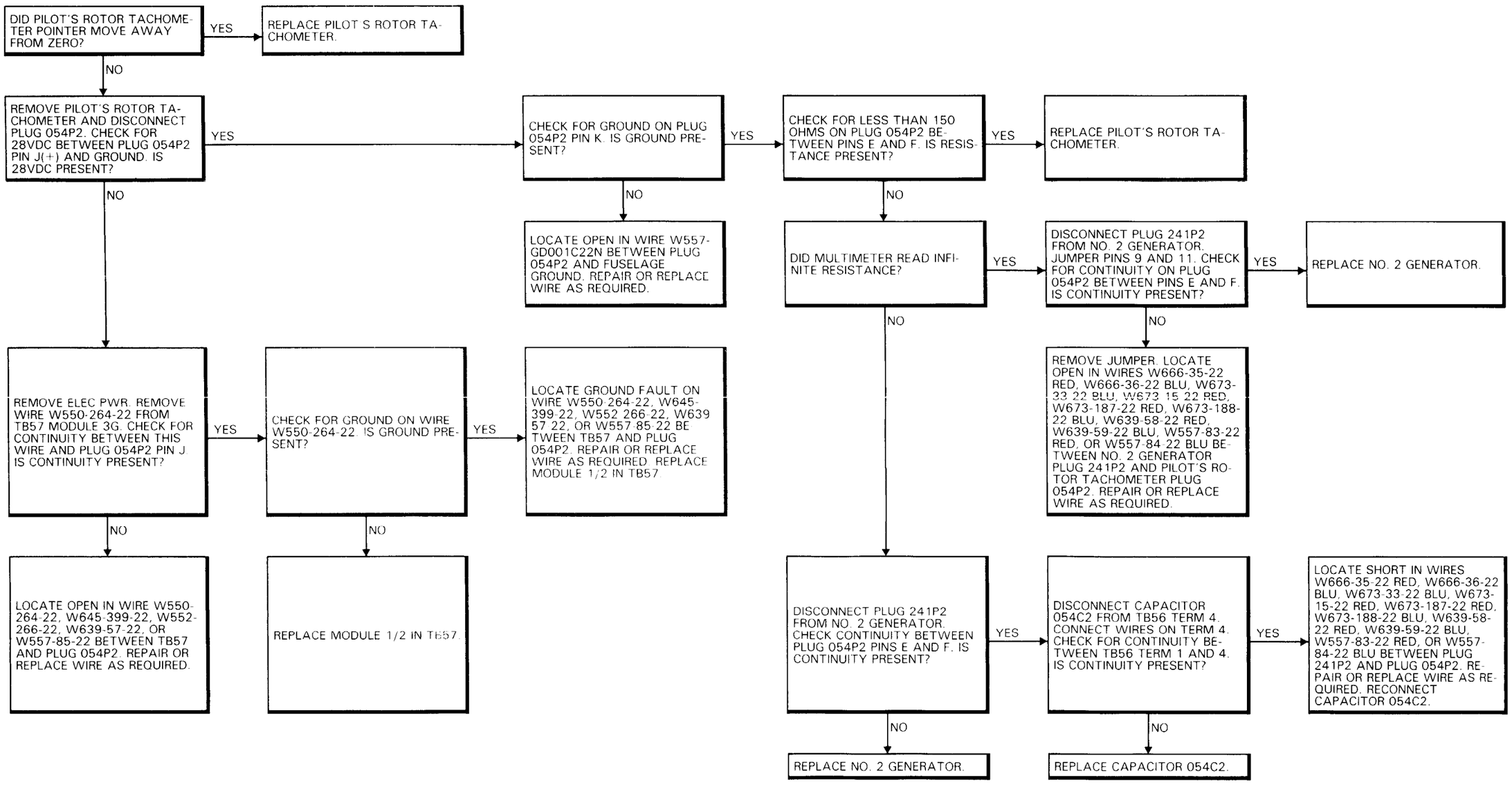
References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off



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GO TO NEXT PAGE


DID PILOT'S ROTOR TACHOMETER POINTER MOVE AWAY FROM ZERO?
YES
REPLACE PILOT'S ROTOR TACHOMETER.
NO
REMOVE PILOT'S ROTOR TACHOMETER AND DISCONNECT PLUG 054P2. CHECK FOR 28VDC BETWEEN PLUG 054P2 PIN J(+) AND GROUND. IS 28VDC PRESENT?
YES
CHECK FOR GROUND ON PLUG 054P2 PIN K. IS GROUND PRESENT?
YES
CHECK FOR LESS THAN 150 OHMS ON PLUG 054P2 BETWEEN PINS E AND F. IS RESISTANCE PRESENT?
YES
REPLACE PILOT'S ROTOR TACHOMETER.
NO
LOCATE OPEN IN WIRE W557-GD001C22N BETWEEN PLUG 054P2 AND FUSELAGE GROUND. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
DID MULTIMETER READ INFINITE RESISTANCE?
YES
DISCONNECT PLUG 241P2 FROM NO. 2 GENERATOR. JUMPER PINS 9 AND 11. CHECK FOR CONTINUITY ON PLUG 054P2 BETWEEN PINS E AND F. IS CONTINUITY PRESENT?
YES
REPLACE NO. 2 GENERATOR.
NO
REMOVE JUMPER. LOCATE OPEN IN WIRES W666-35-22 RED, W666-36-22 BLU, W673-33-22 BLU, W673-15-22 RED, W673-187-22 RED, W673-188-22 BLU, W639-58-22 RED, W639-59-22 BLU, W557-83-22 RED, OR W557-84-22 BLU BETWEEN NO. 2 GENERATOR PLUG 241P2 AND PILOT'S ROTOR TACHOMETER PLUG 054P2. REPAIR OR REPLACE WIRE AS REQUIRED.
REMOVE ELEC PWR. REMOVE WIRE W550-264-22 FROM TB57 MODULE 3G. CHECK FOR CONTINUITY BETWEEN THIS WIRE AND PLUG 054P2 PIN J. IS CONTINUITY PRESENT?
YES
CHECK FOR GROUND ON WIRE W550-264-22. IS GROUND PRESENT?
YES
LOCATE GROUND FAULT ON WIRE W550-264-22, W645-399-22, W552-266-22, W639-57-22, OR W557-85-22 BETWEEN TB57 AND PLUG 054P2. REPAIR OR REPLACE WIRE AS REQUIRED. REPLACE MODULE 1/2 IN TB57.
NO
LOCATE OPEN IN WIRE W550-264-22, W645-399-22, W552-266-22, W639-57-22, OR W557-85-22 BETWEEN TB57 AND PLUG 054P2. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
REPLACE MODULE 1/2 IN TB57.
NO
DISCONNECT PLUG 241P2 FROM NO. 2 GENERATOR. CHECK CONTINUITY BETWEEN PLUG 054P2 PINS E AND F. IS CONTINUITY PRESENT?
YES
DISCONNECT CAPACITOR 054C2 FROM TB56 TERM 4. CONNECT WIRES ON TERM 4. CHECK FOR CONTINUITY BETWEEN TB56 TERM 1 AND 4. IS CONTINUITY PRESENT?
YES
LOCATE SHORT IN WIRES W666-35-22 RED, W666-36-22 BLU, W673-33-22 BLU, W673-15-22 RED, W673-187-22 RED, W673-188-22 BLU, W639-58-22 RED, W639-59-22 BLU, W557-83-22 RED, OR W557-84-22 BLU BETWEEN PLUG 241P2 AND PLUG 054P2. REPAIR OR REPLACE WIRE AS REQUIRED. RECONNECT CAPACITOR 054C2.
NO
REPLACE NO. 2 GENERATOR.
NO
REPLACE CAPACITOR 054C2.

END OF TASK

8-15.7 PILOT'S OR COPILOT'S ROTOR TACHOMETER DOES NOT INDICATE 98 TO 101 PERCENT WHEN BATT SWITCH SET TO OFF

FAULT ISOLATION PROCEDURE

Applicable Configurations:
All

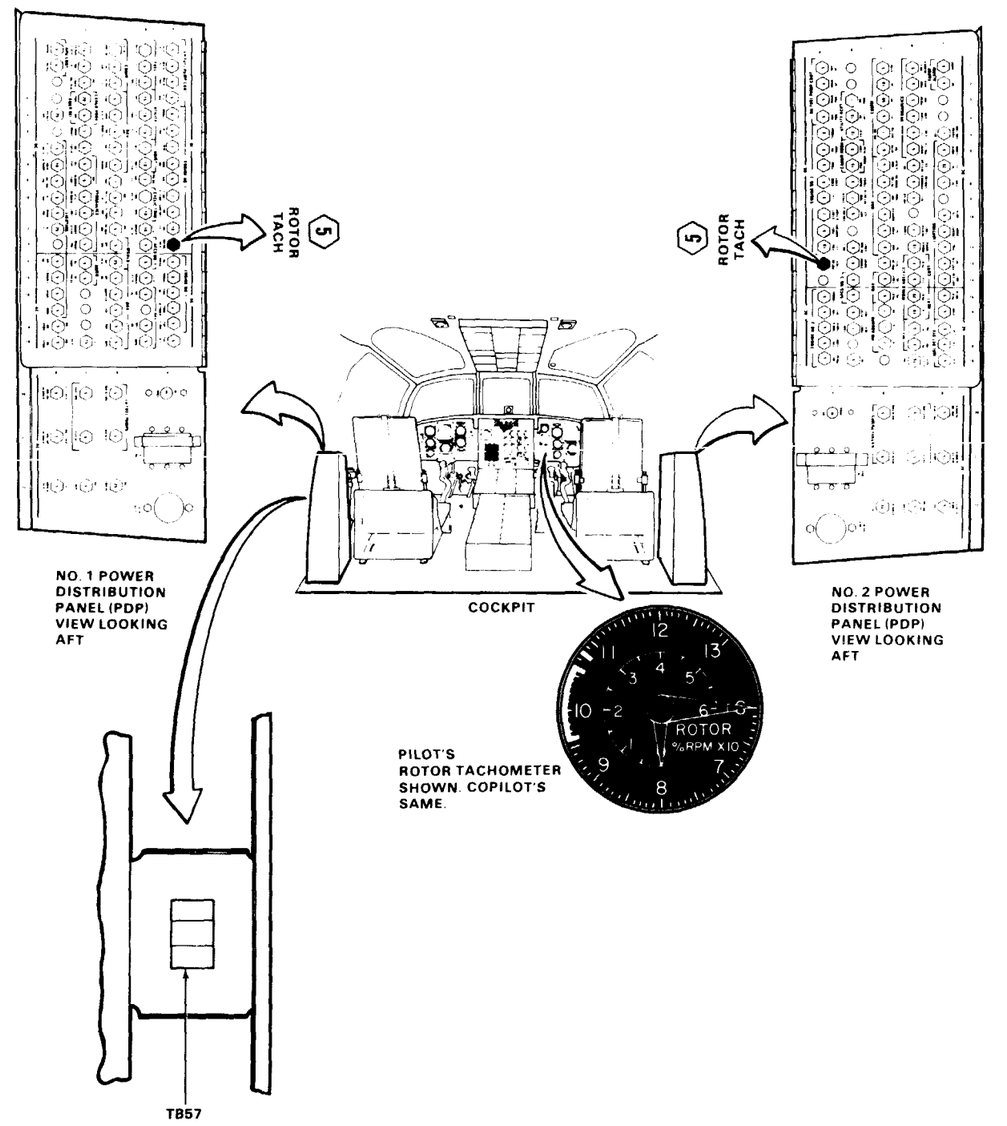
Tools:
Electrical Repairer's Tool Kit, NSN 5180-00-323-4915
Multimeter

Materials:
None

Personnel Required:
Aircraft Electrician (2)

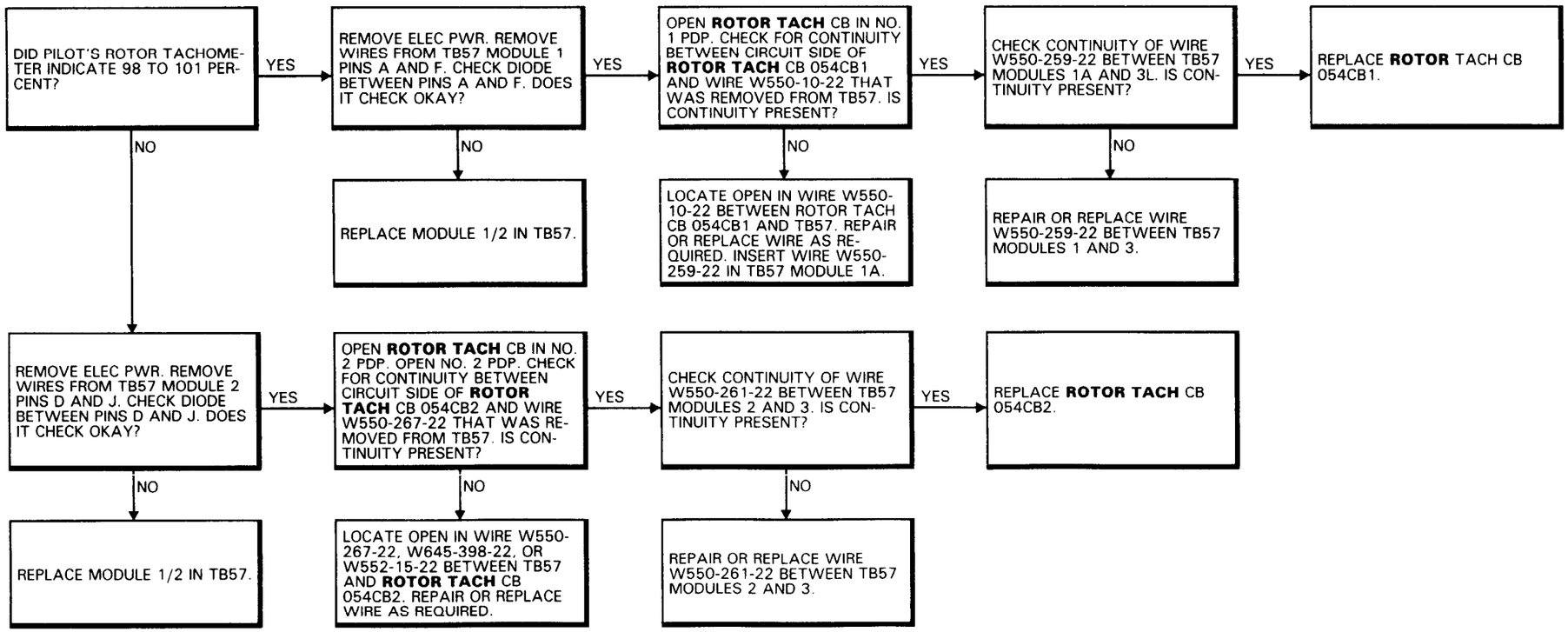
References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23
Battery Connected
Electrical Power On
Hydraulic Power On



GO TO NEXT PAGE

8-15.7 PILOT'S OR COPILOT'S ROTOR TACHOMETER DOES NOT INDICATE 98 TO 101 PERCENT WHEN BATT SWITCH SET TO OFF (Continued)



END OF TASK

8-15.8 COPILOT'S ROTOR TACHOMETER DOES NOT INDICATE 98 TO 101 PERCENT WHEN ROTOR TACH CIRCUIT BREAKER OPENED

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:

All

Tools:

Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:

None

Personnel Required:

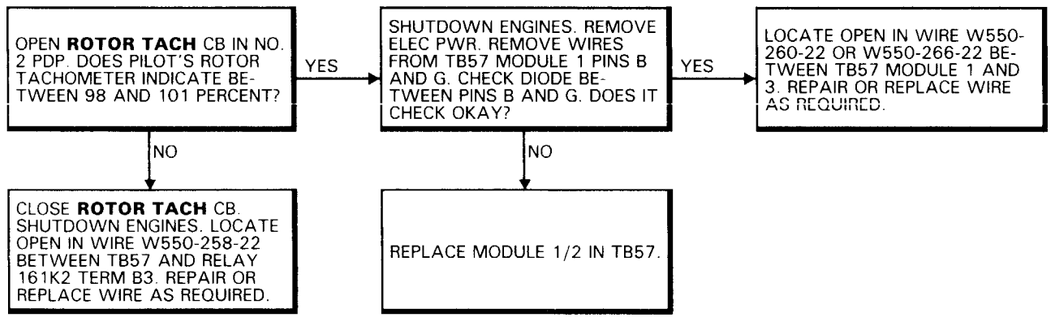
Aircraft Electrician
Rotor Wins Aviator (2)

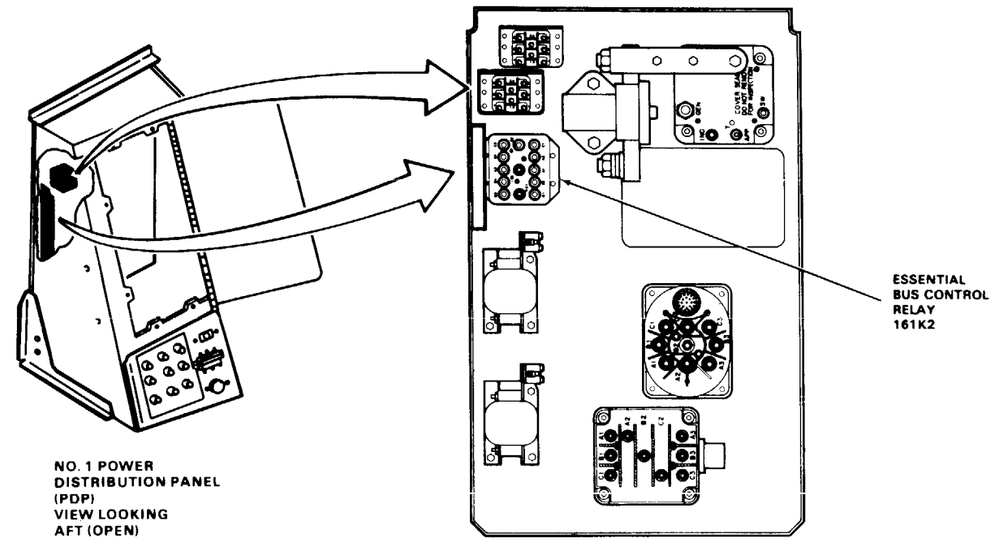
References:

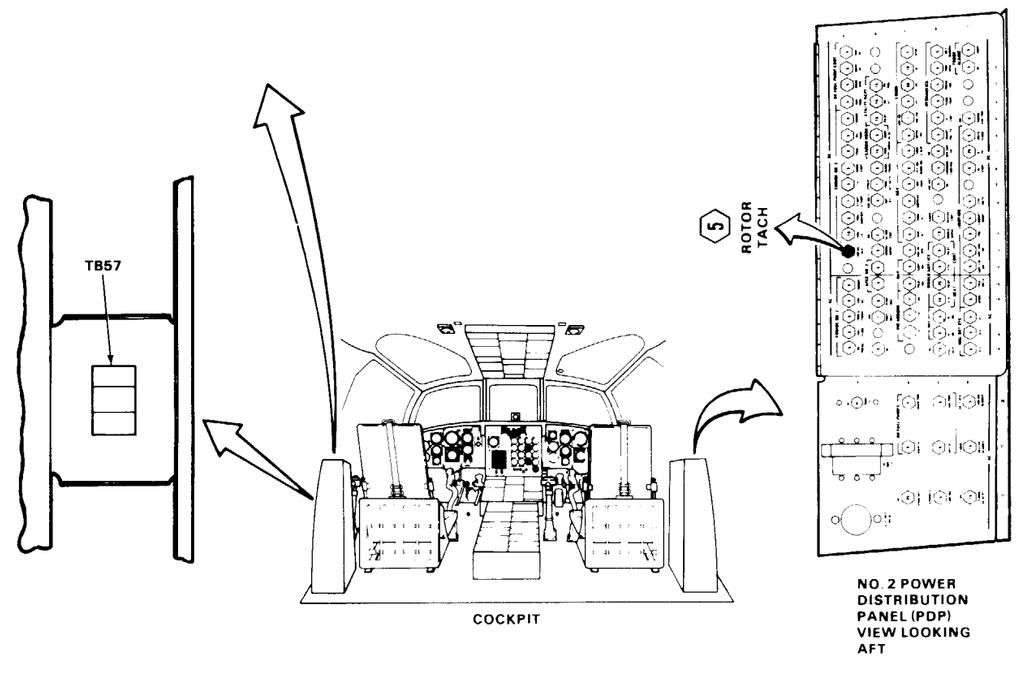
TM 55-1520-240-23

Equipment Condition:

TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power On
Rotors Turning







END OF TASK

8-15.9 PILOT'S ROTOR TACHOMETER DOES NOT INDICATE 98 TO 101 PERCENT WHEN ROTOR TACH CIRCUIT BREAKER OPENED

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

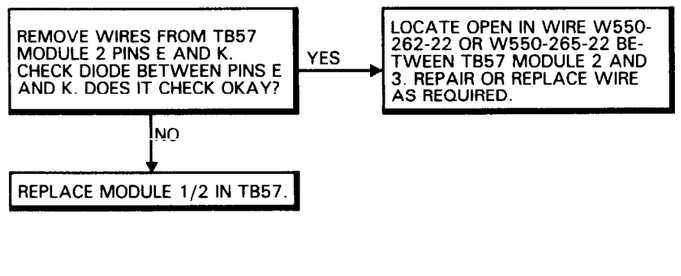
Tools:
Electrical Repairer's Tool Kit, NSN 5180-00-323-4915
Multimeter

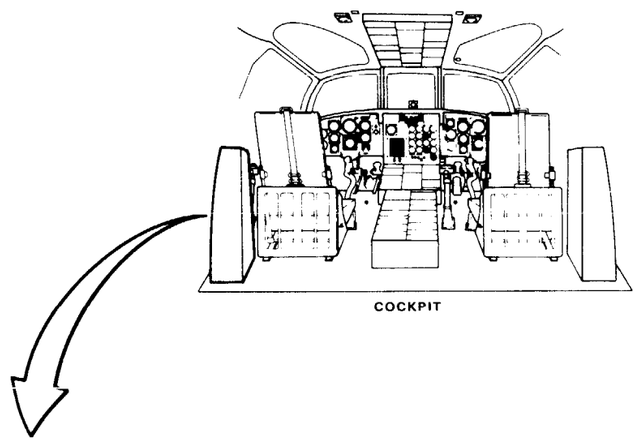
Materials:
None

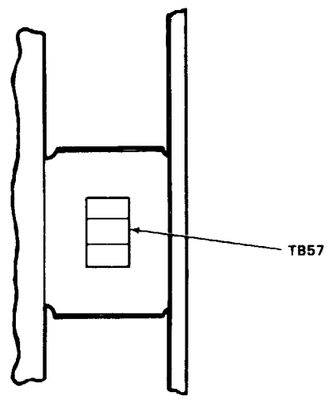
Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off



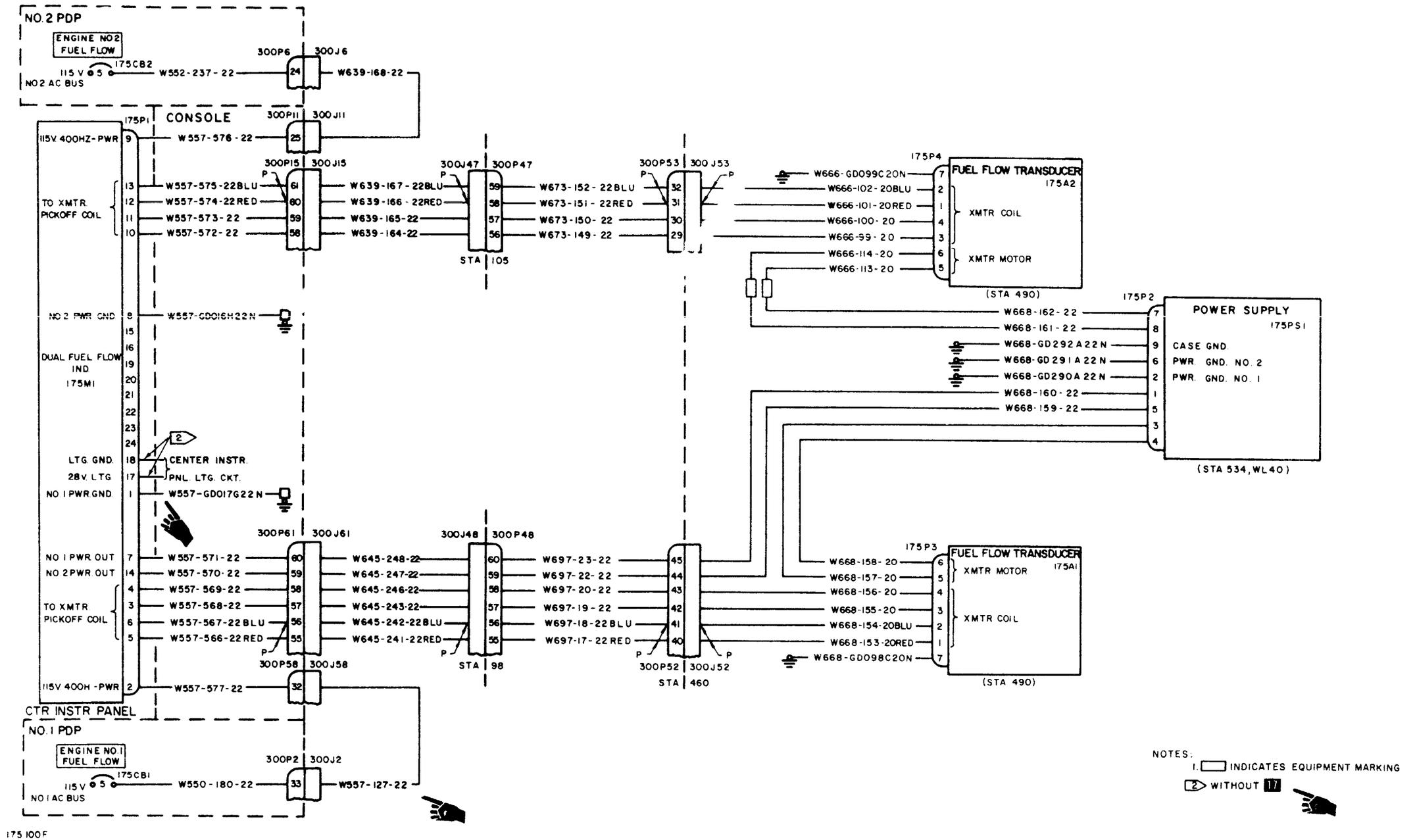




8955

END OF TASK

8-16 ENGINE FUEL FLOW INDICATING SYSTEM


NO.2 PDP
ENGINE NO2 FUEL FLOW
115 V
NO2 AC BUS
175CB2
300P6
300J6
W552-237-22
24
W639-168-22
CONSOLE
175P1
300P11
300J11
115V 400HZ-PWR
9
W557-576-22
25
300P15
300J15
300J47
300P47
300P53
300J53
TO XMTR PICKOFF COIL
13
12
11
10
W557-575-22BLU
W557-574-22RED
W557-573-22
W557-572-22
61
60
59
58
W639-167-22BLU
W639-166-22RED
W639-165-22
W639-164-22
59
58
57
56
W673-152-22BLU
W673-151-22RED
W673-150-22
W673-149-22
32
31
30
29
STA 105
W666-GD099C20N
W666-102-20BLU
W666-101-20RED
W666-100-20
W666-99-20
W666-114-20
W666-113-20
175P4
FUEL FLOW TRANSDUCER
175A2
XMTR COIL
XMTR MOTOR
(STA 490)
NO 2 PWR GND
8
W557-GD016H22N
DUAL FUEL FLOW IND
175MI
15
16
19
20
21
22
23
24
LTG GND.
18
CENTER INSTR.
28V LTG
17
PNL. LTG. CKT.
NO 1 PWR GND
1
W557-GD017G22N
2
175P2
POWER SUPPLY
175PS1
W668-162-22
W668-161-22
W668-GD292A22N
W668-GD291A22N
W668-GD290A22N
W668-160-22
W668-159-22
7
8
9
6
2
1
5
3
4
CASE GND.
PWR. GND. NO. 2
PWR. GND. NO. 1
(STA 534, WL40)
300P61
300J61
300J48
300P48
NO 1 PWR OUT
NO 2 PWR OUT
TO XMTR PICKOFF COIL
7
14
4
3
6
5
W557-571-22
W557-570-22
W557-569-22
W557-568-22
W557-567-22BLU
W557-566-22RED
60
59
58
57
56
55
W645-248-22
W645-247-22
W645-246-22
W645-243-22
W645-242-22BLU
W645-241-22RED
60
59
58
57
56
55
W697-23-22
W697-22-22
W697-20-22
W697-19-22
W697-18-22BLU
W697-17-22RED
45
44
43
42
41
40
175P3
FUEL FLOW TRANSDUCER
175A1
XMTR MOTOR
XMTR COIL
W668-158-20
W668-157-20
W668-156-20
W668-155-20
W668-154-20BLU
W668-153-20RED
W668-GD098C20N
6
5
4
3
2
1
7
300P58
300J58
115V 400H -PWR
2
W557-577-22
32
300P52
300J52
STA 460
(STA 490)
CTR INSTR PANEL
NO.1 PDP
ENGINE NO.1 FUEL FLOW
115 V
NO 1 AC BUS
175CB1
300P2
300J2
W550-180-22
33
W557-127-22
NOTES:
1. INDICATES EQUIPMENT MARKING
2 WITHOUT 17
175 100F
10252

8-16.2 ENGINE FUEL FLOW INDICATING SYSTEM VISUAL CHECK

INITIAL SETUP

Applicable Configurations:
All

Tools:
Electrical repairer's Tool Kit
NSN 5180-00-323-4915

Materials:
None

Personnel Required:
68F10 Aircraft Electrician

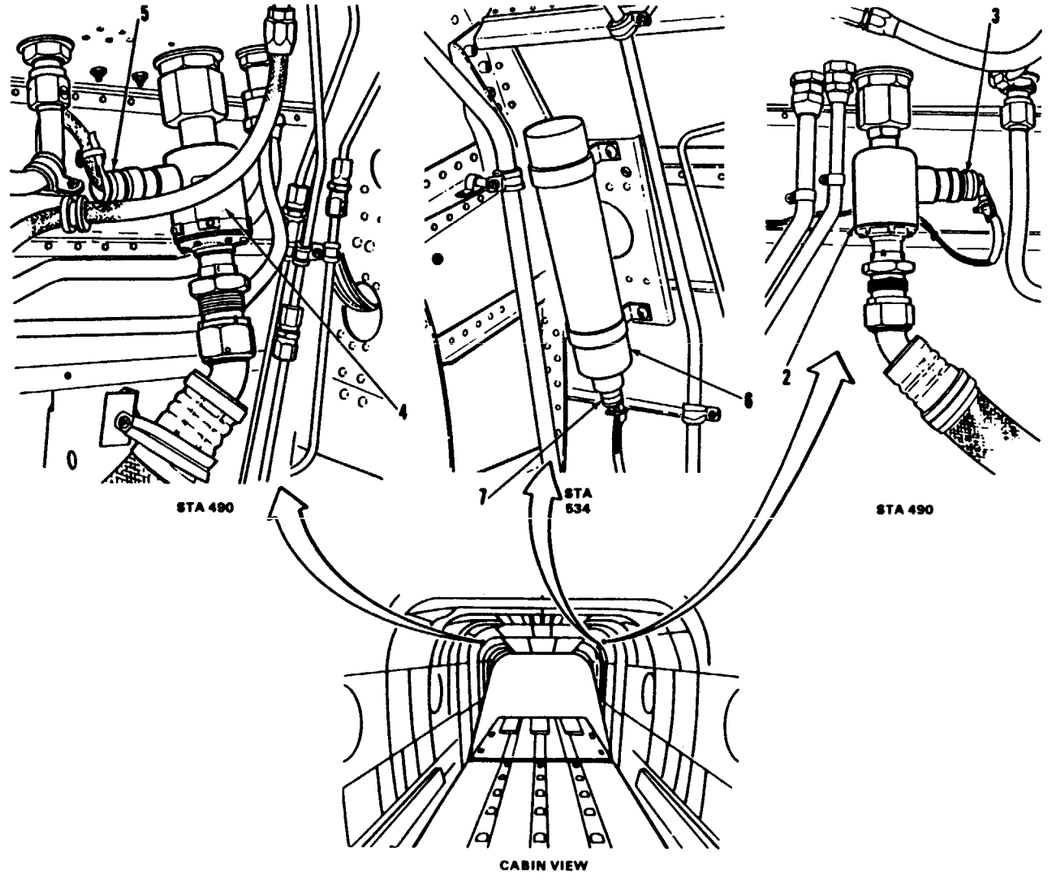
References:
TM *55-1520-240-23*

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off

TASK	RESULT
1. **Check dual fuel flow indicator (1).**	If indicator (1) is loose or damaged, tighten or replace it as required.
2. **Check No. 1 engine fuel flow transducer (2) and connector (3).**	If transducer (2) or connector (3) is loose or damaged. tighten or repair them as required.
3. **Check wires to fuel flow transducer (2) and connector (3).**	If wires are frayed or damaged, repair or replace them as required.
4. **Check No. 2 engine fuel flow transducer (4) and connector (5).**	If transducer (4) or connector (5) is loose or damaged, tighten or replace them as required.
5. **Check wires to fuel flow transducer connector (5).**	If wires are frayed or damaged. repair or replace them as required.
6. **Check fuel flow power supply (6).**	If power supply (6) is loose or damaged, tighten or replace it as required. If connector (7) is loose or damaged. tighten or replace it. If wires to connector are damaged. repair or replace them as required.

FOLLOW-ON MAINTENANCE:

None



END OF TASK

Page 8-345 is a blank page.

45x54

8-16.3 ENGINE FUEL FLOW INDICATING SYSTEM OPERATIONAL CHECK

INITIAL SETUP

Applicable Configurations:
All

Tools:
None

Materials:
None

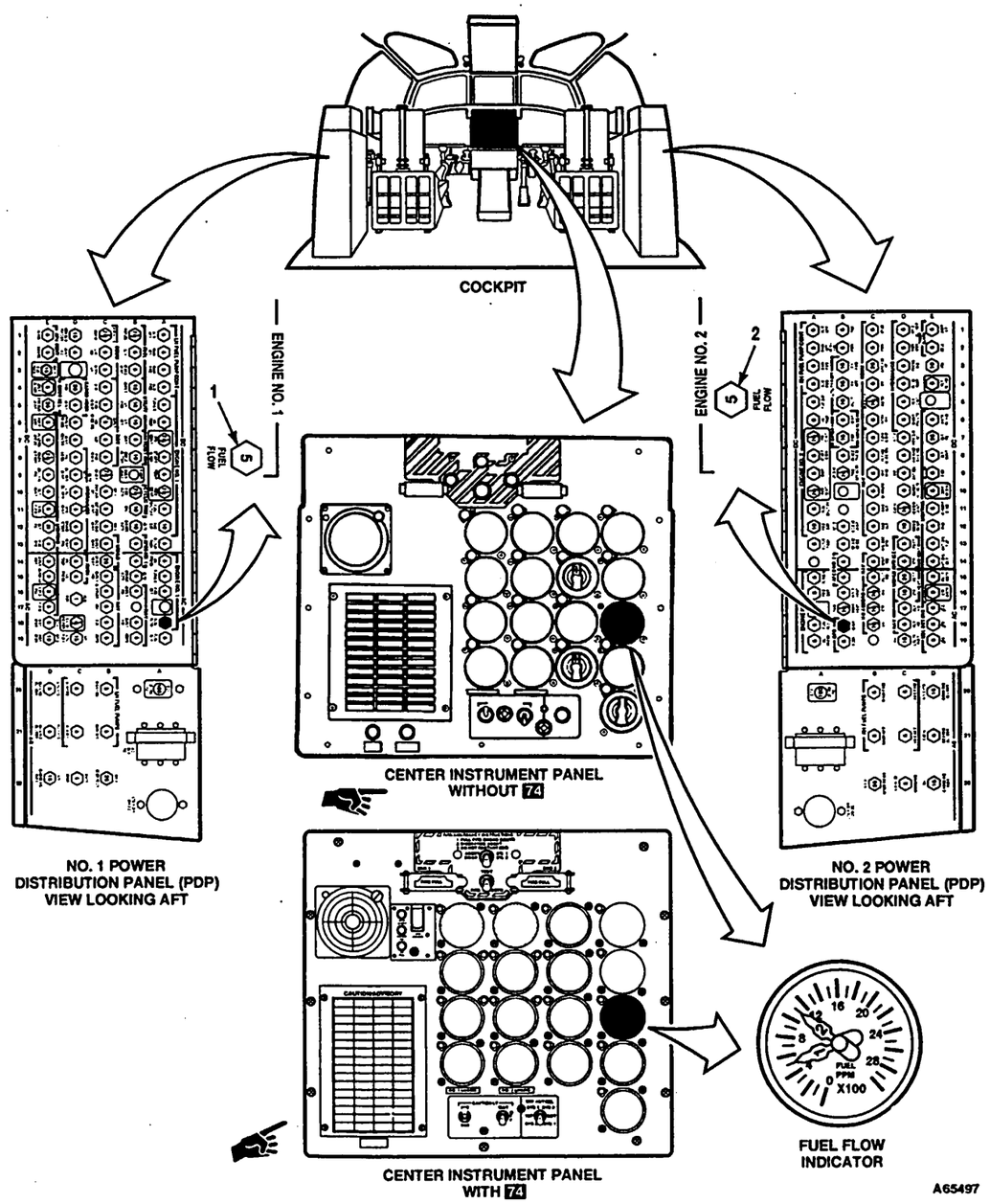
Personnel Required:
Army Rotary Wing Aviator (2)
Aircraft Electrician

References:
TM 55-1520-240-10
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off
Engine Fuel Flow Indicating System Visual Check Completed (Task 8-16.2)

TASK	RESULT
1. **Check** that **ENGINE NO. 1 FUEL FLOW circuit breaker (1)** is closed.	If circuit breaker (1) is open, close it. If it opens again, go to task 8-16.4.
2. **Check** that **ENGINE NO. 2 FUEL FLOW circuit breaker (2)** is closed.	If circuit breaker (2) is open, close it. If it opens again, go to task 8-16.5.
3. Have pilot start engines and stabilize rotors at ground idle and minimum beep. Observe fuel flow indicator (3) and compare readings with IDLE FUEL FLOW chart. (Ref TM 55-1520-240-10.)	Indicator readings shall be approximately the same as indicated by IDLE FUEL FLOW chart. If No. 1 pointer does not indicate any fuel flow, go to task 8-16.6. If No. 1 pointer does not indicate approximate fuel flow, go to task 8-16.7. If No. 2 pointer does not indicate any fuel flow, go to task 8-16.8. If No. 2 pointer does not indicate approximate fuel flow, go to task 8-16.9.

FOLLOW-ON MAINTENANCE:
TM 55-1520-240-23:
Shut down engines.
Battery disconnected.
Electrical power off.
Hydraulic power off.

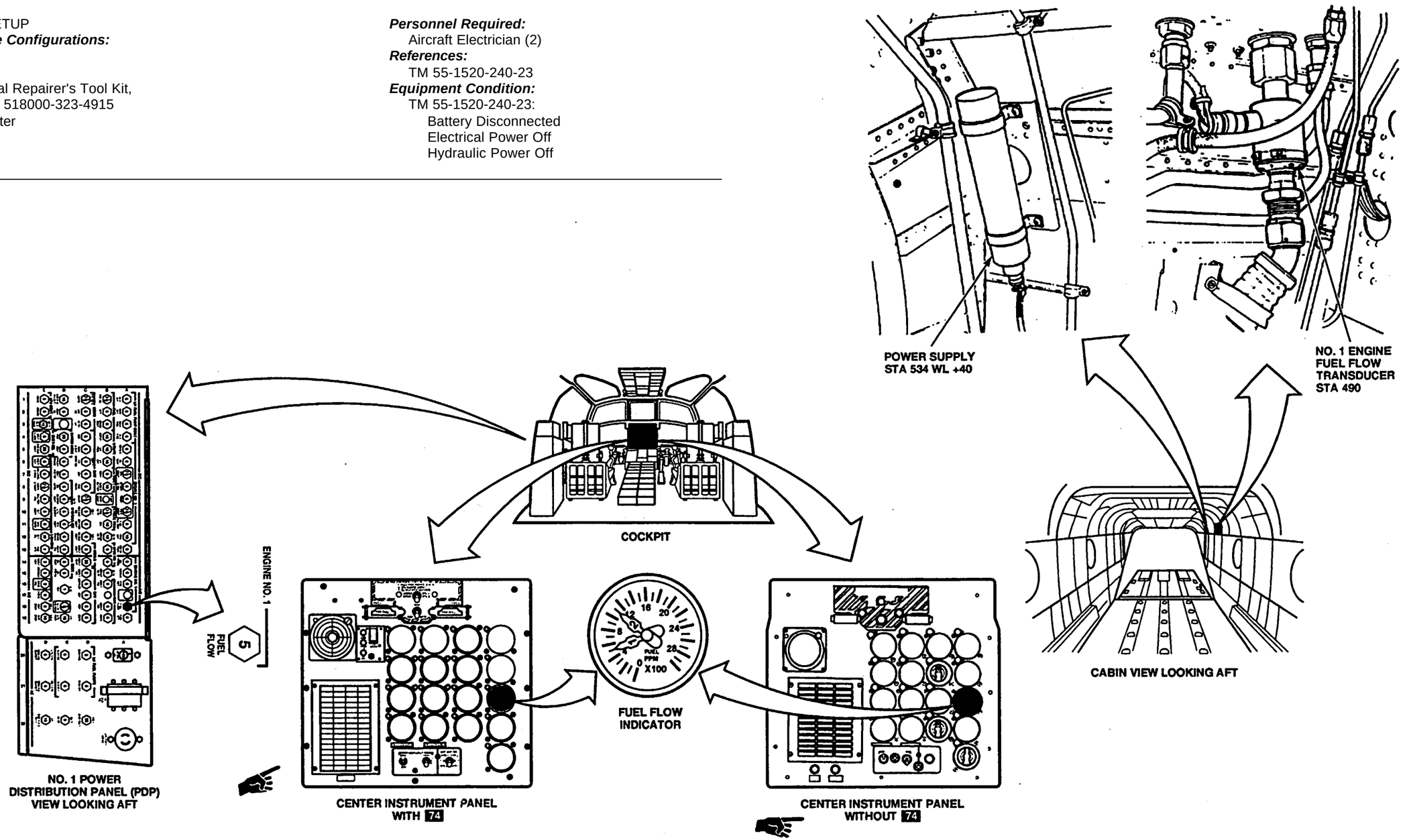


END OF TASK

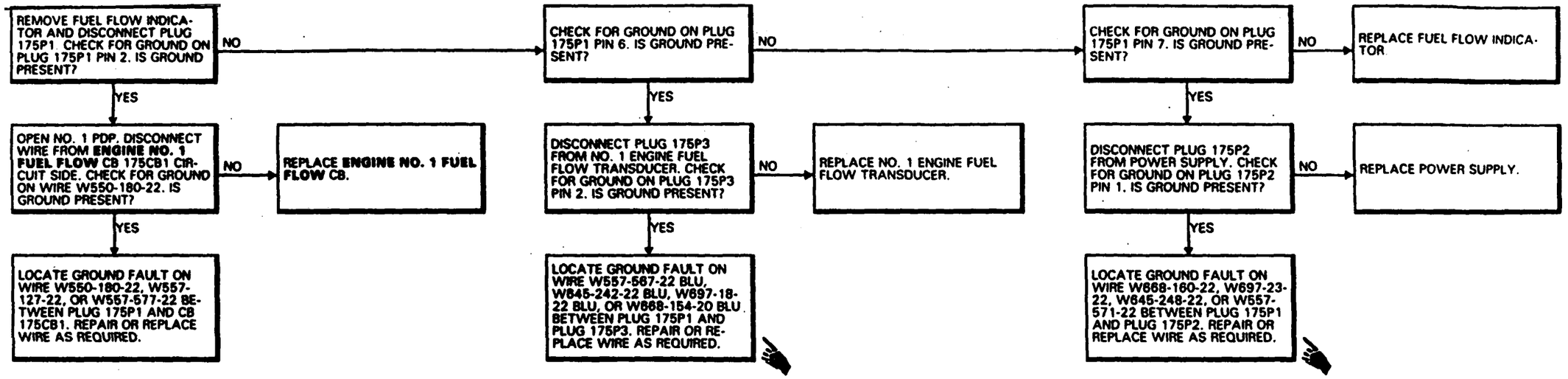
FAULT ISOLATION PROCEDURE

INITIAL SETUP
Applicable Configurations:
All
Tools:
Electrical Repairer's Tool Kit,
NSN 518000-323-4915
Multimeter
Materials:
None

Personnel Required:
Aircraft Electrician (2)
References:
TM 55-1520-240-23
Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off



GO TO NEXT PAGE


REMOVE FUEL FLOW INDICATOR AND DISCONNECT PLUG 175P1. CHECK FOR GROUND ON PLUG 175P1 PIN 2. IS GROUND PRESENT?
NO
YES
OPEN NO. 1 PDP. DISCONNECT WIRE FROM ENGINE NO. 1 FUEL FLOW CB 175CB1 CIRCUIT SIDE. CHECK FOR GROUND ON WIRE W550-180-22. IS GROUND PRESENT?
NO
REPLACE ENGINE NO. 1 FUEL FLOW CB.
YES
LOCATE GROUND FAULT ON WIRE W550-180-22, W557-127-22, OR W557-577-22 BETWEEN PLUG 175P1 AND CB 175CB1. REPAIR OR REPLACE WIRE AS REQUIRED.
CHECK FOR GROUND ON PLUG 175P1 PIN 6. IS GROUND PRESENT?
NO
YES
DISCONNECT PLUG 175P3 FROM NO. 1 ENGINE FUEL FLOW TRANSDUCER. CHECK FOR GROUND ON PLUG 175P3 PIN 2. IS GROUND PRESENT?
NO
REPLACE NO. 1 ENGINE FUEL FLOW TRANSDUCER.
YES
LOCATE GROUND FAULT ON WIRE W557-567-22 BLU, W845-242-22 BLU, W697-18-22 BLU, OR W668-154-20 BLU BETWEEN PLUG 175P1 AND PLUG 175P3. REPAIR OR REPLACE WIRE AS REQUIRED.
CHECK FOR GROUND ON PLUG 175P1 PIN 7. IS GROUND PRESENT?
NO
REPLACE FUEL FLOW INDICATOR.
YES
DISCONNECT PLUG 175P2 FROM POWER SUPPLY. CHECK FOR GROUND ON PLUG 175P2 PIN 1. IS GROUND PRESENT?
NO
REPLACE POWER SUPPLY.
YES
LOCATE GROUND FAULT ON WIRE W668-160-22, W697-23-22, W845-248-22, OR W557-571-22 BETWEEN PLUG 175P1 AND PLUG 175P2. REPAIR OR REPLACE WIRE AS REQUIRED.

END OF TASK

8-16.5 ENGINE NO. 2 FUEL FLOW CIRCUIT BREAKER WILL NOT STAY CLOSED

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

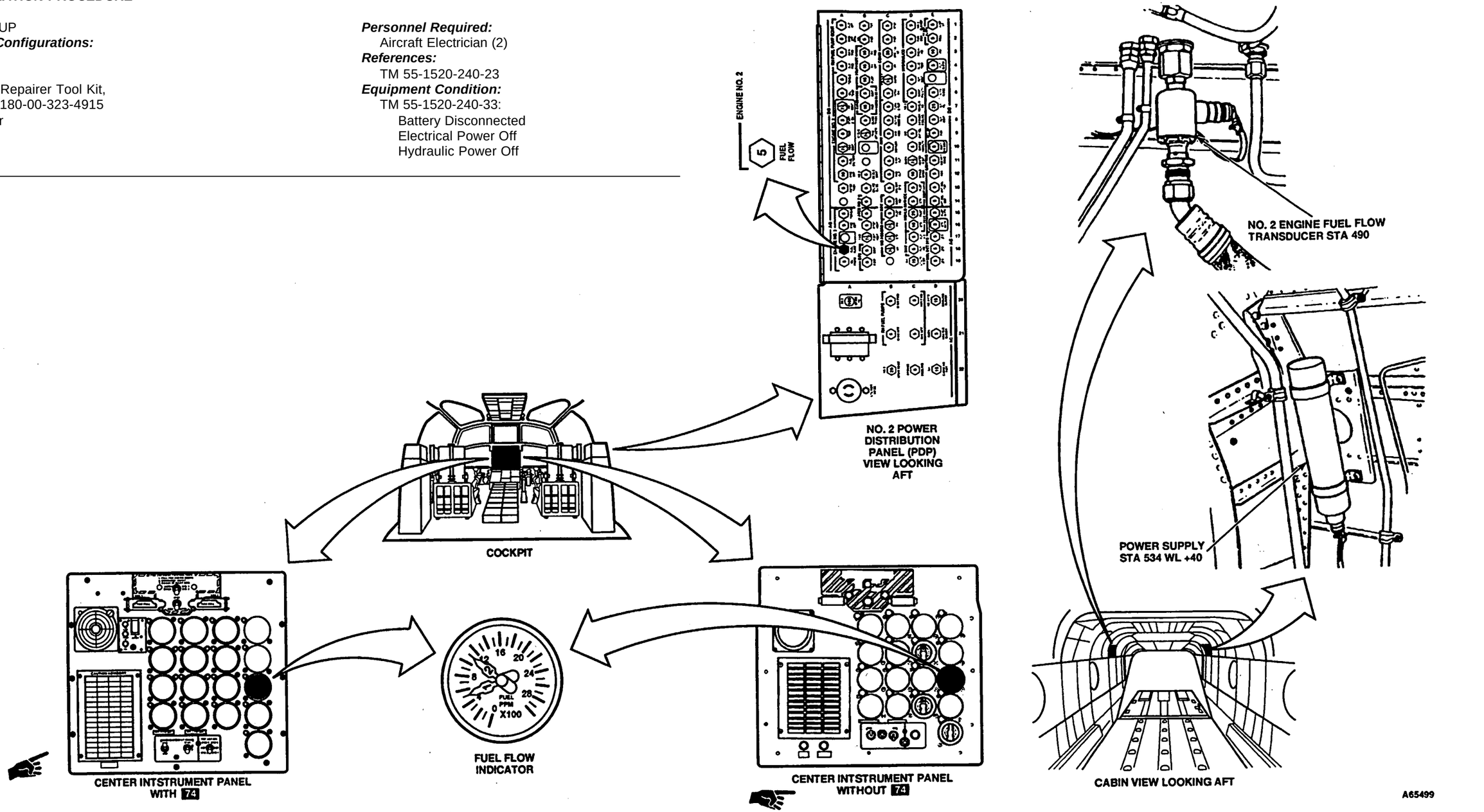
Tools:
Electrical Repairer Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:
None

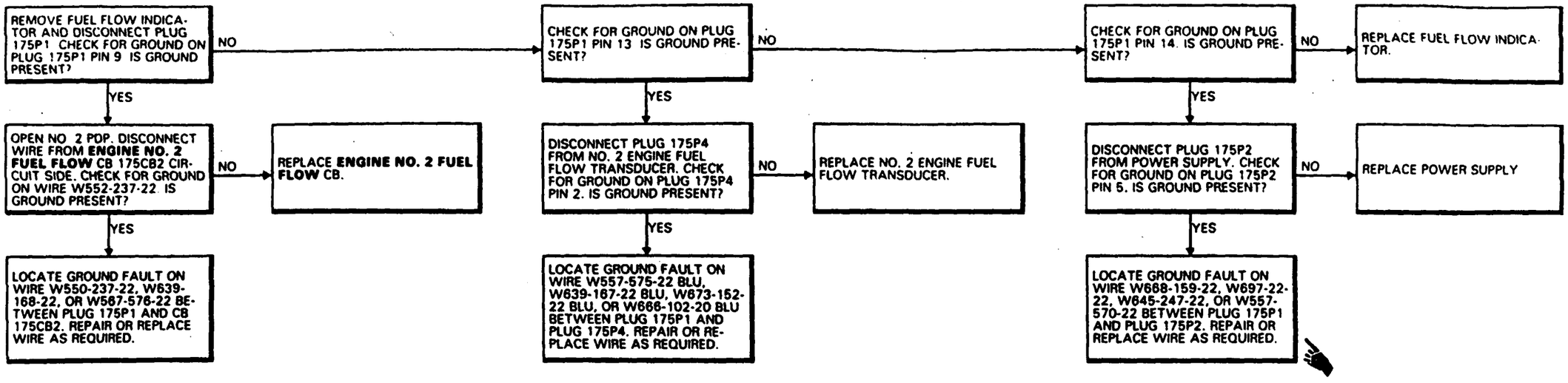
Personnel Required:
Aircraft Electrician (2)

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-33:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off



GO-TO-NEXT-PAGE


REMOVE FUEL FLOW INDICATOR AND DISCONNECT PLUG 175P1. CHECK FOR GROUND ON PLUG 175P1 PIN 9. IS GROUND PRESENT?
NO
YES
OPEN NO. 2 PDP. DISCONNECT WIRE FROM ENGINE NO. 2 FUEL FLOW CB 175CB2 CIRCUIT SIDE. CHECK FOR GROUND ON WIRE W552-237-22. IS GROUND PRESENT?
NO
REPLACE ENGINE NO. 2 FUEL FLOW CB.
YES
LOCATE GROUND FAULT ON WIRE W550-237-22, W639-168-22, OR W567-576-22 BETWEEN PLUG 175P1 AND CB 175CB2. REPAIR OR REPLACE WIRE AS REQUIRED.
CHECK FOR GROUND ON PLUG 175P1 PIN 13. IS GROUND PRESENT?
NO
YES
DISCONNECT PLUG 175P4 FROM NO. 2 ENGINE FUEL FLOW TRANSDUCER. CHECK FOR GROUND ON PLUG 175P4 PIN 2. IS GROUND PRESENT?
NO
REPLACE NO. 2 ENGINE FUEL FLOW TRANSDUCER.
YES
LOCATE GROUND FAULT ON WIRE W557-575-22 BLU, W639-167-22 BLU, W673-152-22 BLU, OR W666-102-20 BLU BETWEEN PLUG 175P1 AND PLUG 175P4. REPAIR OR REPLACE WIRE AS REQUIRED.
CHECK FOR GROUND ON PLUG 175P1 PIN 14. IS GROUND PRESENT?
NO
REPLACE FUEL FLOW INDICATOR.
YES
DISCONNECT PLUG 175P2 FROM POWER SUPPLY. CHECK FOR GROUND ON PLUG 175P2 PIN 5. IS GROUND PRESENT?
NO
REPLACE POWER SUPPLY
YES
LOCATE GROUND FAULT ON WIRE W668-159-22, W697-22-22, W645-247-22, OR W557-570-22 BETWEEN PLUG 175P1 AND PLUG 175P2. REPAIR OR REPLACE WIRE AS REQUIRED.

END OF TASK

8-16.6 FUEL FLOW INDICATOR NO. 1 POINTER DOES NOT INDICATE FUEL FLOW

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

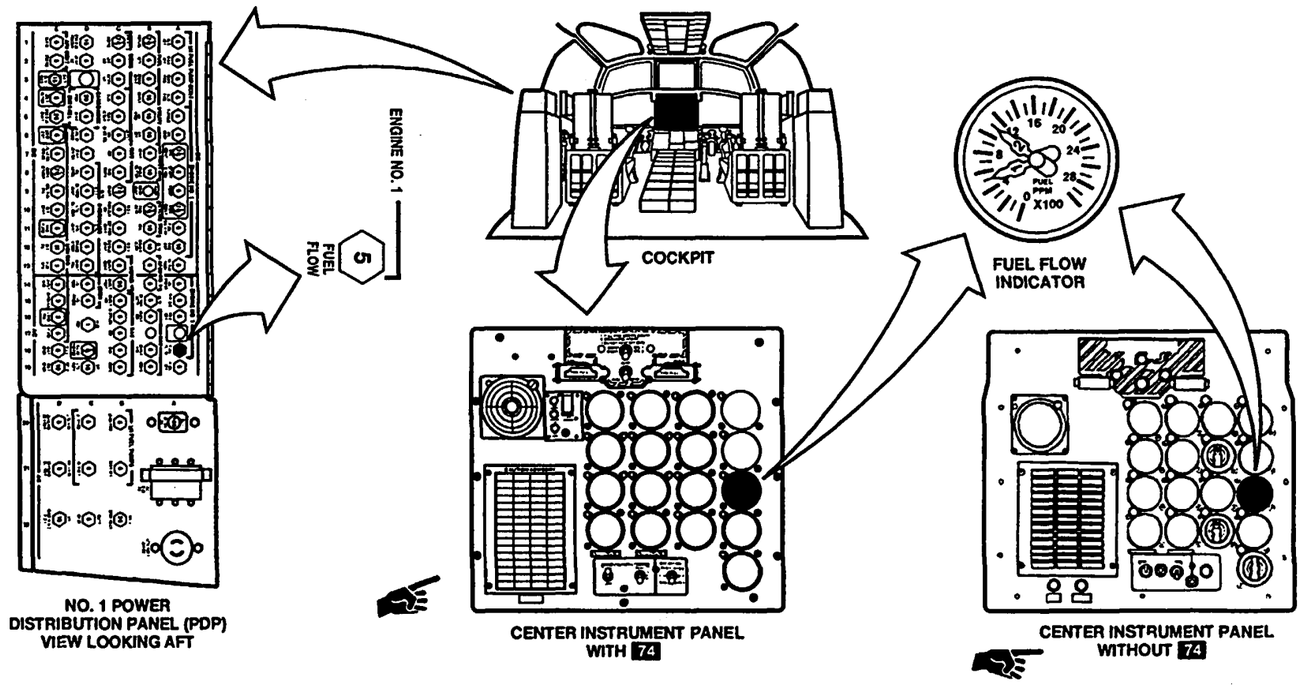
Tools:
Electrical Repairer Tool Kit, NSN 5180-00-323-4915
Multimeter

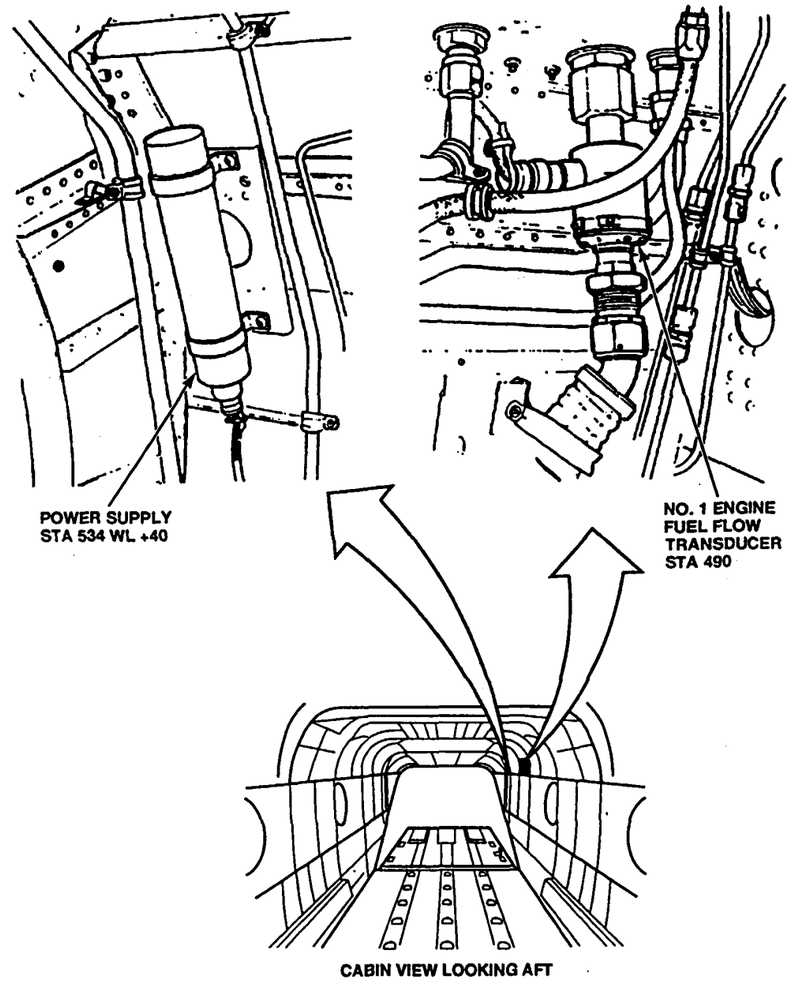
Materials:
None

Personnel Required:
Aircraft Electrician (2)

References:
TM 55-1520-240-23

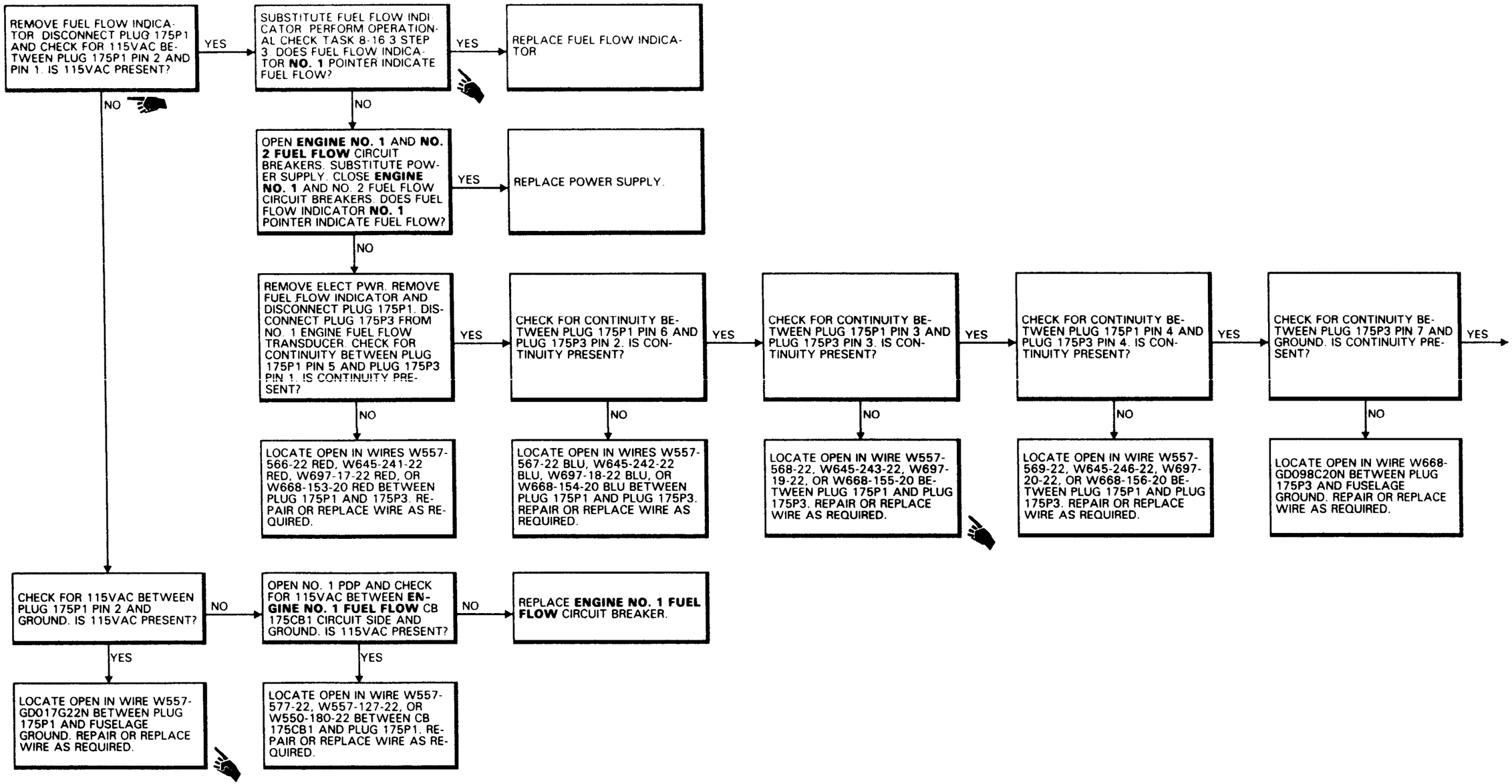
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power On





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YES

DISCONNECT PLUG 175P2 FROM POWER SUPPLY AND CHECK FOR CONTINUITY BETWEEN PLUG 175P2 PIN 3 AND PLUG 175P3 PIN 5. IS CONTINUITY PRESENT?

NO → LOCATE OPEN IN WIRE W668-157-20 BETWEEN PLUG 157P2 AND 157P3. REPAIR OR REPLACE WIRE AS REQUIRED.

YES

CHECK FOR CONTINUITY BETWEEN PLUG 175P2 PIN 4 AND PLUG 175P3 PIN 6. IS CONTINUITY PRESENT?

NO → LOCATE OPEN IN WIRE W668-158-20 BETWEEN PLUG 175P2 AND PLUG 175P3. REPAIR OR REPLACE WIRE AS REQUIRED.

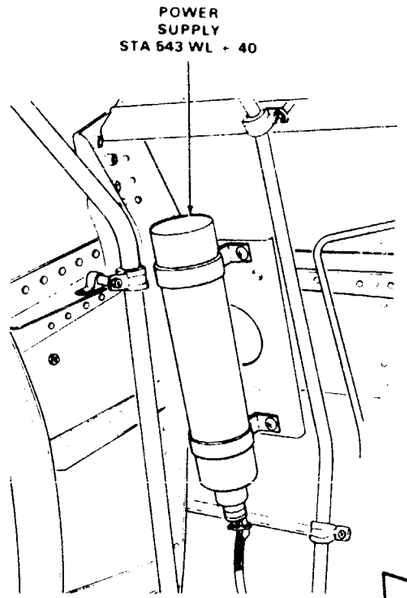
YES

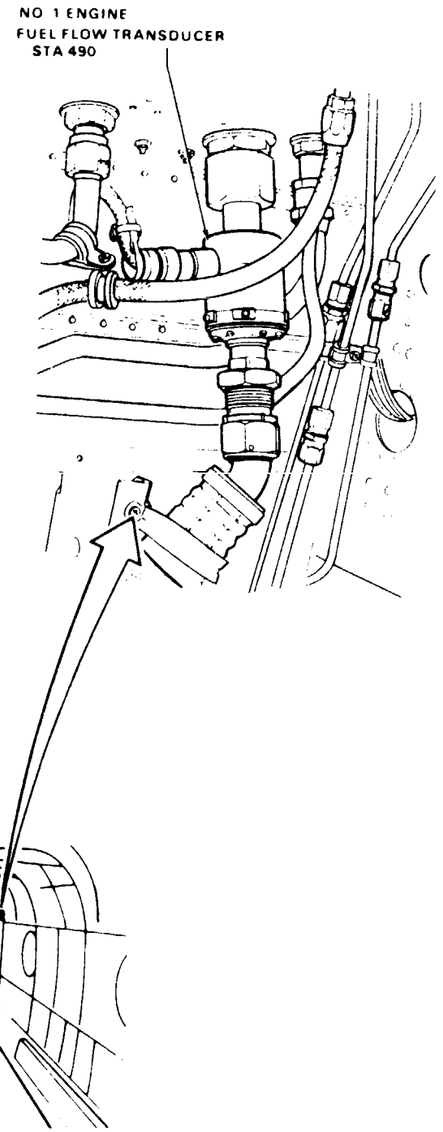
CHECK FOR CONTINUITY BETWEEN PLUG 175P2 PINS 2 AND 9 AND GROUND. IS CONTINUITY PRESENT?

NO → LOCATE OPEN IN WIRES W668-GD290A22N OR W668-GD292A22N BETWEEN PLUG 175P2 AND FUSELAGE GROUND. REPAIR OR REPLACE WIRE AS REQUIRED.

YES

REPLACE NO. 1 ENGINE FUEL FLOW TRANSDUCER





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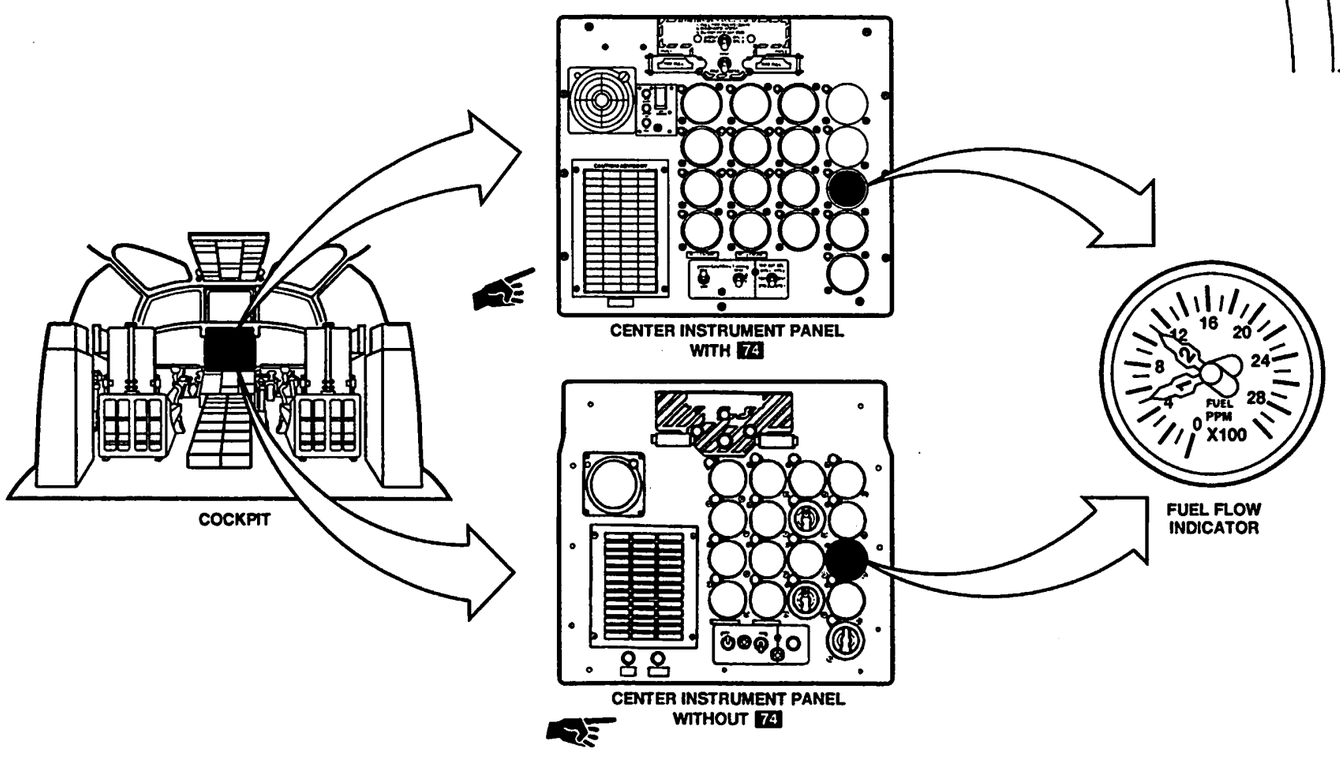
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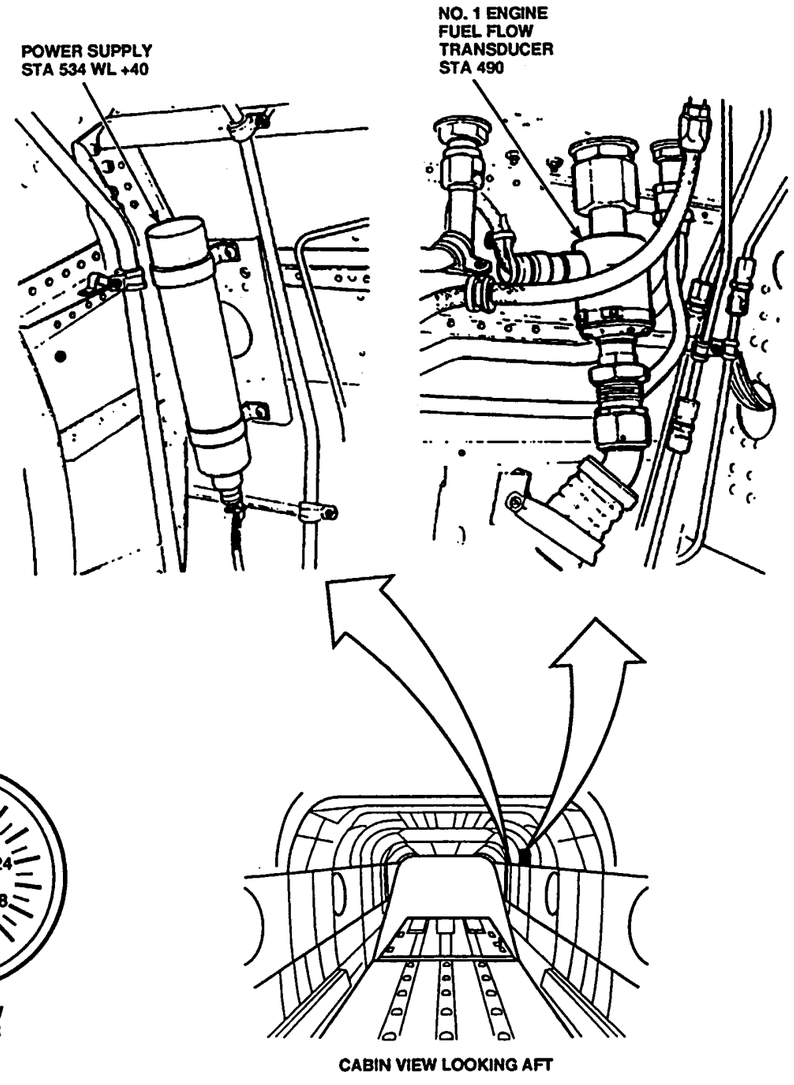
END OF TASK

8-16.7 FUEL FLOW INDICATOR NO. 1 POINTER DOES NOT INDICATE APPROXIMATE FUEL FLOW

FAULT ISOLATION PROCEDURE

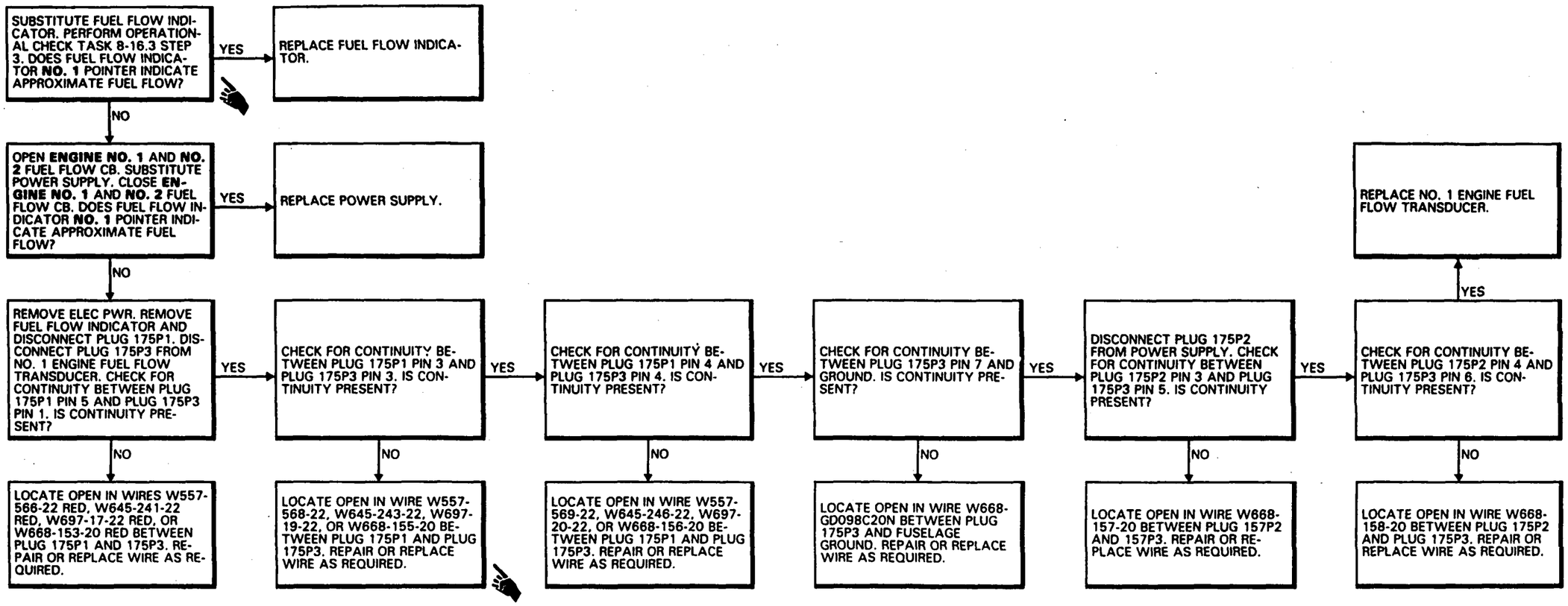
INITIAL SETUP
Applicable Configurations:
All
Tools:
Electrical Repairer Tool Kit, NSN 5180-00-323-4915
Multimeter
Materials:
None
Personnel Required:
Aircraft Electrician (2)
References:
TM 55-1520-240-23
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power On





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SUBSTITUTE FUEL FLOW INDICATOR. PERFORM OPERATIONAL CHECK TASK 8-16.3 STEP 3. DOES FUEL FLOW INDICATOR NO. 1 POINTER INDICATE APPROXIMATE FUEL FLOW?
YES
REPLACE FUEL FLOW INDICATOR.
NO
OPEN ENGINE NO. 1 AND NO. 2 FUEL FLOW CB. SUBSTITUTE POWER SUPPLY. CLOSE ENGINE NO. 1 AND NO. 2 FUEL FLOW CB. DOES FUEL FLOW INDICATOR NO. 1 POINTER INDICATE APPROXIMATE FUEL FLOW?
YES
REPLACE POWER SUPPLY.
NO
REMOVE ELEC PWR. REMOVE FUEL FLOW INDICATOR AND DISCONNECT PLUG 175P1. DISCONNECT PLUG 175P3 FROM NO. 1 ENGINE FUEL FLOW TRANSDUCER. CHECK FOR CONTINUITY BETWEEN PLUG 175P1 PIN 5 AND PLUG 175P3 PIN 1. IS CONTINUITY PRESENT?
YES
CHECK FOR CONTINUITY BETWEEN PLUG 175P1 PIN 3 AND PLUG 175P3 PIN 3. IS CONTINUITY PRESENT?
YES
CHECK FOR CONTINUITY BETWEEN PLUG 175P1 PIN 4 AND PLUG 175P3 PIN 4. IS CONTINUITY PRESENT?
YES
CHECK FOR CONTINUITY BETWEEN PLUG 175P3 PIN 7 AND GROUND. IS CONTINUITY PRESENT?
YES
DISCONNECT PLUG 175P2 FROM POWER SUPPLY. CHECK FOR CONTINUITY BETWEEN PLUG 175P2 PIN 3 AND PLUG 175P3 PIN 5. IS CONTINUITY PRESENT?
YES
CHECK FOR CONTINUITY BETWEEN PLUG 175P2 PIN 4 AND PLUG 175P3 PIN 6. IS CONTINUITY PRESENT?
YES
REPLACE NO. 1 ENGINE FUEL FLOW TRANSDUCER.
NO
LOCATE OPEN IN WIRES W557-566-22 RED, W645-241-22 RED, W697-17-22 RED, OR W668-153-20 RED BETWEEN PLUG 175P1 AND 175P3. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
LOCATE OPEN IN WIRE W557-568-22, W645-243-22, W697-19-22, OR W668-155-20 BETWEEN PLUG 175P1 AND PLUG 175P3. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
LOCATE OPEN IN WIRE W557-569-22, W645-246-22, W697-20-22, OR W668-156-20 BETWEEN PLUG 175P1 AND PLUG 175P3. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
LOCATE OPEN IN WIRE W668-GD098C20N BETWEEN PLUG 175P3 AND FUSELAGE GROUND. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
LOCATE OPEN IN WIRE W668-157-20 BETWEEN PLUG 157P2 AND 157P3. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
LOCATE OPEN IN WIRE W668-158-20 BETWEEN PLUG 175P2 AND PLUG 175P3. REPAIR OR REPLACE WIRE AS REQUIRED.

END OF TASK

8-16.8 FUEL FLOW INDICATOR NO. 2 POINTER DOES NOT INDICATE FUEL FLOW

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

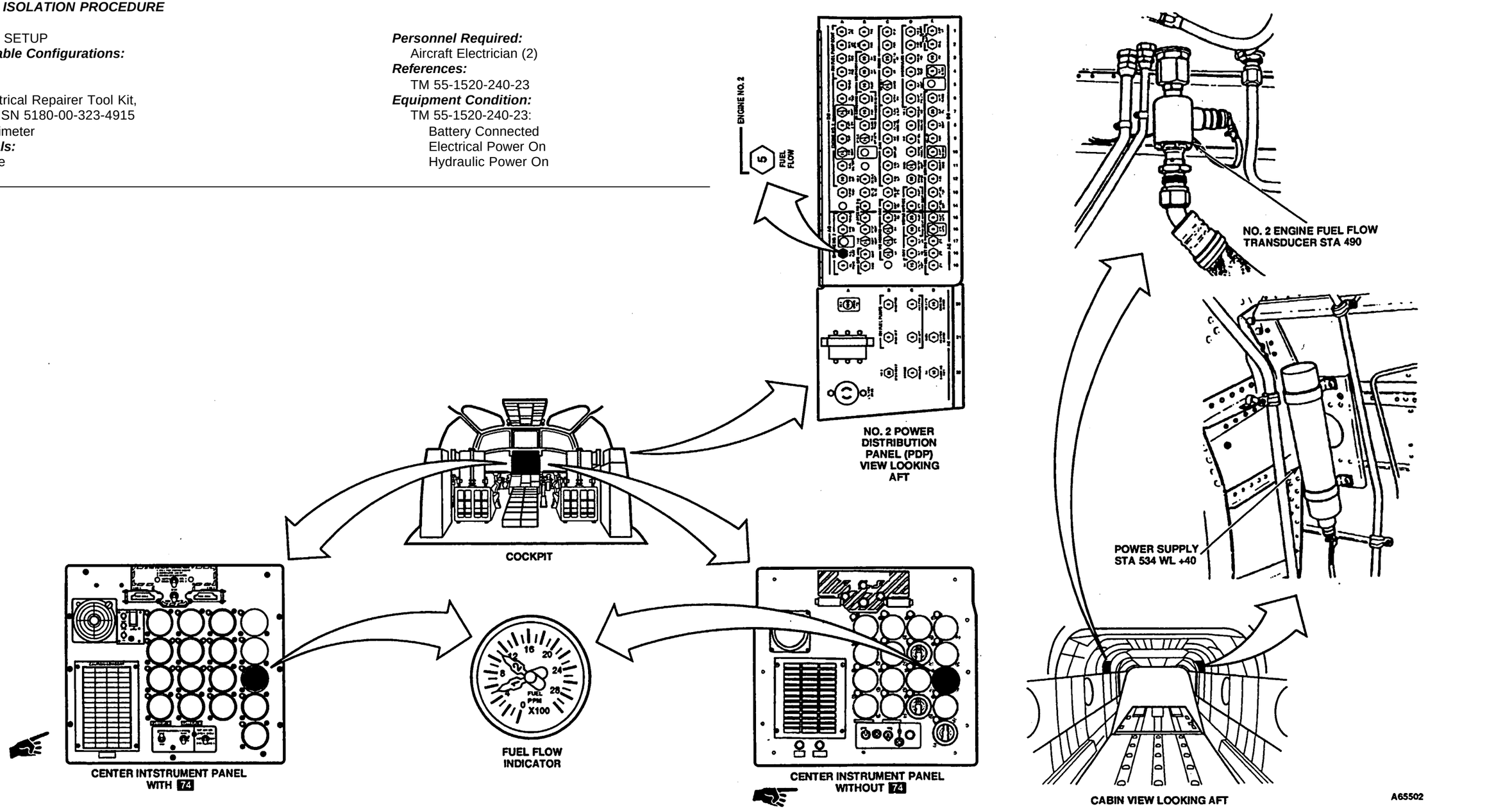
Tools:
Electrical Repairer Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:
None

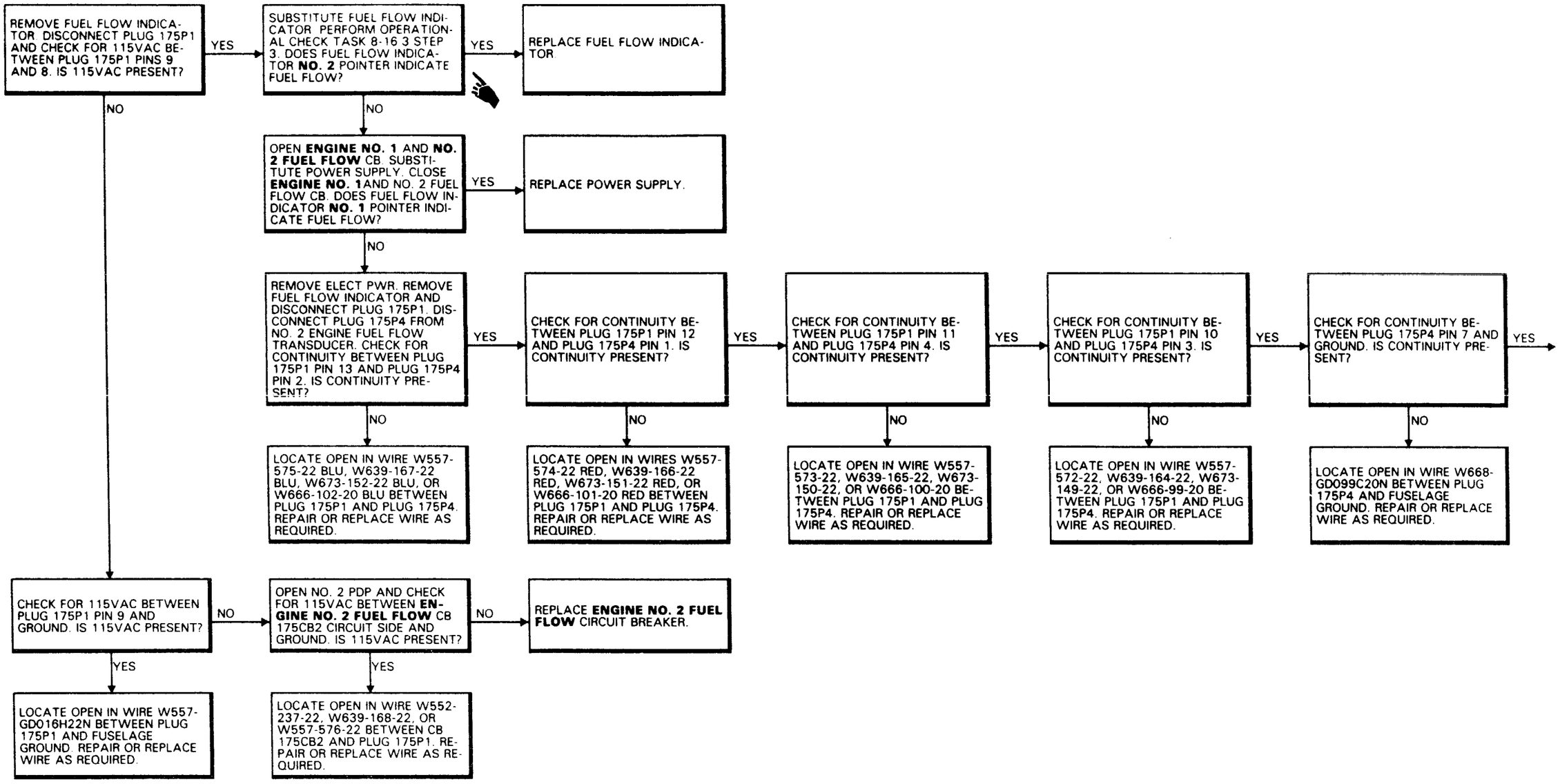
Personnel Required:
Aircraft Electrician (2)

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power On



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YES

DISCONNECT PLUG 175P2 FROM POWER SUPPLY AND CHECK FOR CONTINUITY BETWEEN PLUG 175P2 PIN 8 AND PLUG 175P4 PIN 6. IS CONTINUITY PRESENT?

NO → LOCATE OPEN IN WIRE W668-161-22 OR W666-114-20 BETWEEN PLUG 175P2 AND 175P4. REPAIR OR REPLACE WIRE AS REQUIRED.

YES

CHECK FOR CONTINUITY BETWEEN PLUG 175P2 PIN 7 AND PLUG 175P4 PIN 5. IS CONTINUITY PRESENT?

NO → LOCATE OPEN IN WIRE W668-162-22 OR W666-113-20 BETWEEN PLUG 175P2 AND PLUG 175P4. REPAIR OR REPLACE WIRE AS REQUIRED.

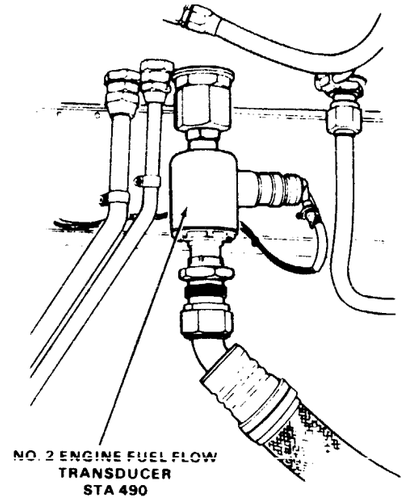
YES

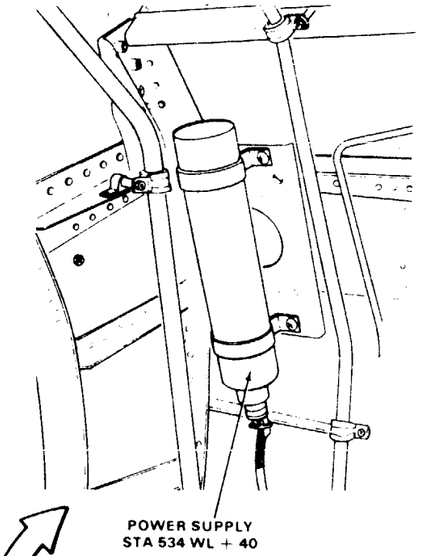
CHECK FOR CONTINUITY BETWEEN PLUG 175P2 PINS 6 AND 9 AND GROUND. IS CONTINUITY PRESENT?

NO → LOCATE OPEN IN WIRES W668-GD291A22N, OR W668-GD292A22N BETWEEN PLUG 175P2 AND FUSELAGE GROUND. REPAIR OR REPLACE WIRE AS REQUIRED.

YES

REPLACE NO. 2 ENGINE FUEL FLOW TRANSDUCER





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END OF TASK

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

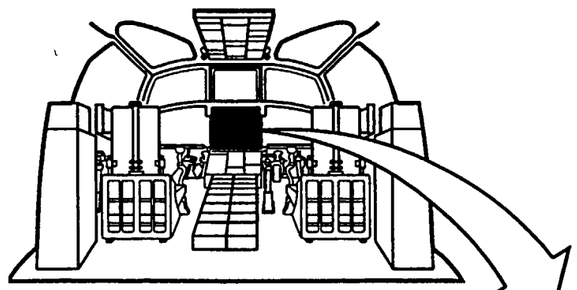
Tools:
Electrical Repairer Tool Kit,
NSN 5180-00-323-4915
Multimeter

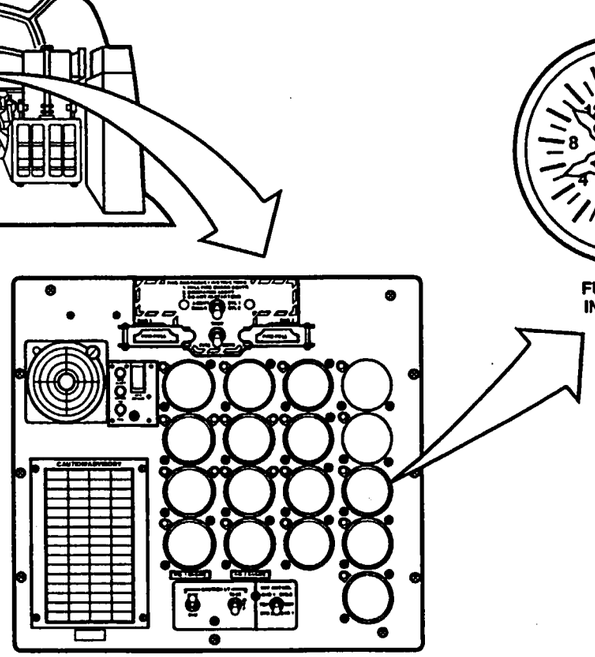
Materials:
None

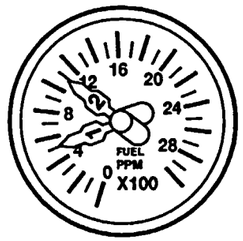
Personnel Required:
Aircraft Electrician (2)

References:
TM 55-1520-240-23

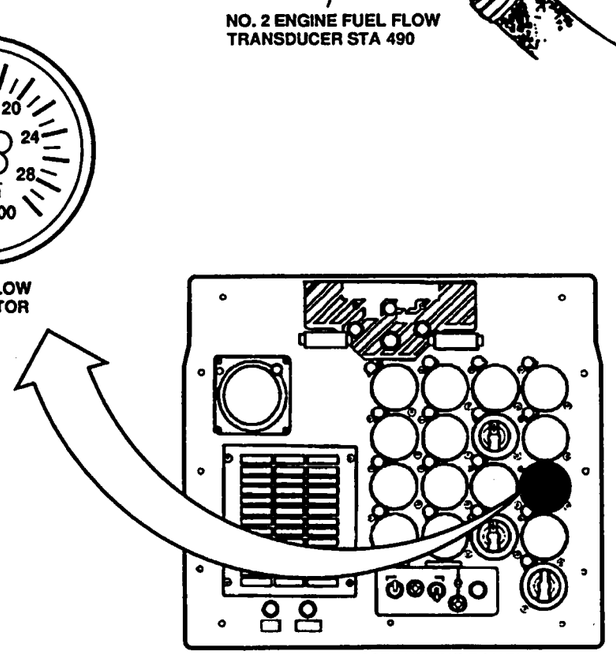
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power On

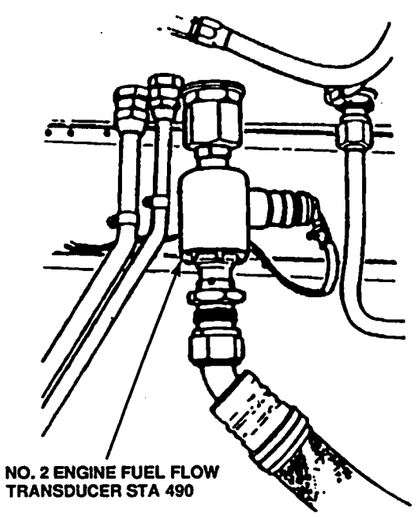


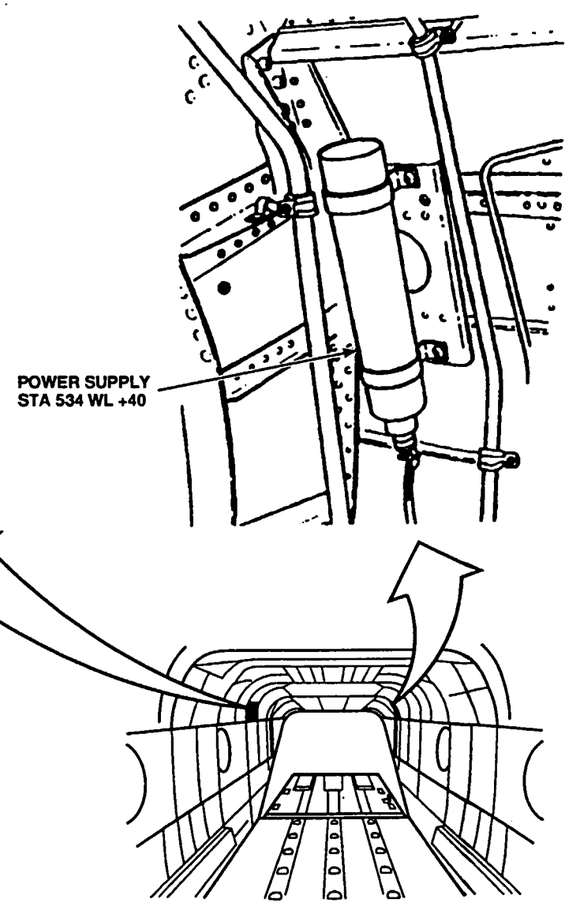




FUEL FLOW INDICATOR



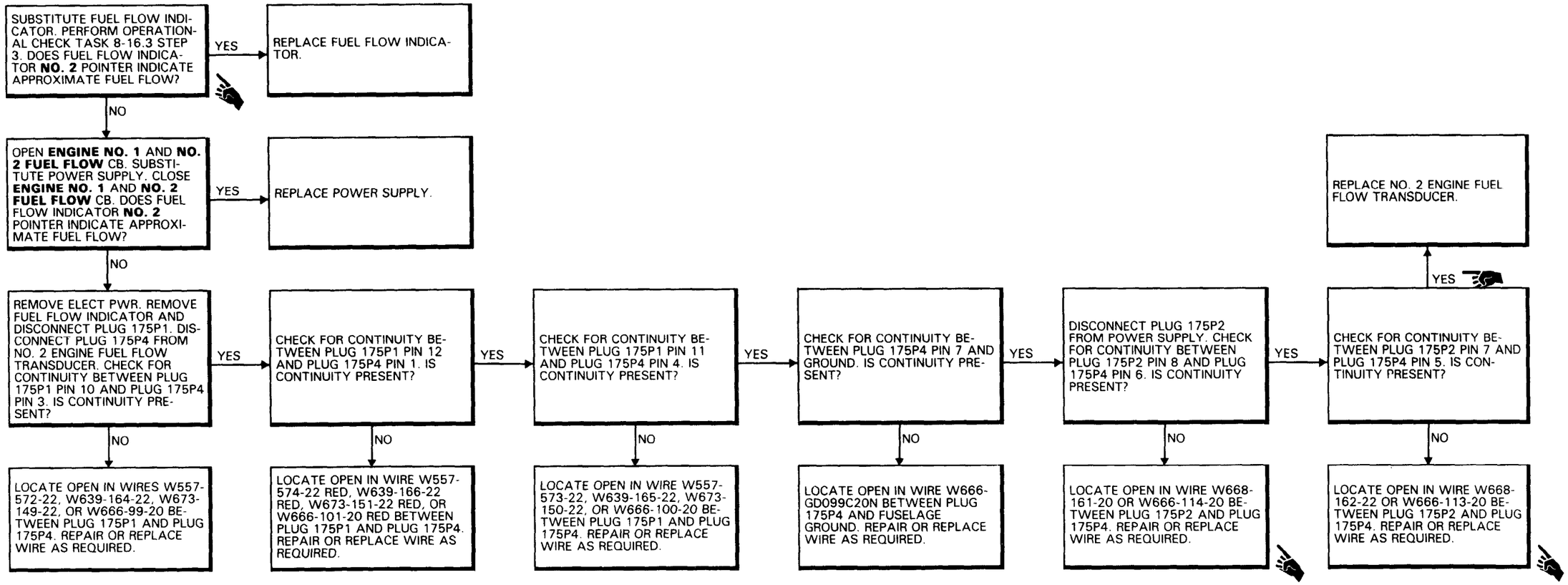




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8-16.9 FUEL FLOW INDICATOR NO. 2 POINTER DOES NOT INDICATE APPROXIMATE FUEL FLOW (Continued)



END OF TASK

CHAPTER 9

ELECTRICAL SYSTEMS TROUBLESHOOTING

CHAPTER 9
ELECTRICAL SYSTEM TROUBLESHOOTING
CHAPTER OVERVIEW

Chapter 9 contains procedures for Electrical System troubleshooting. Each system and failure symptom is listed below. Included in this chapter are locations and views of all electrical connectors, receptacles, relays, and ground connections for the Electrical System.

Refer to TM 55-1520-240-23 for required maintenance procedures.

SYSTEM	PARA
DC POWER SYSTEM	9-1
AC POWER SYSTEM	9-2
POSITION LIGHTS	9-3
LANDING (SEARCHLIGHTS)	9-4
FORMATION LIGHTS	9-5
ANTICOLLISION LIGHTS	9-6
MAINTENANCE LIGHTS	9-7
PILOT'S FLIGHT INSTRUMENT PANEL LIGHTS	9-8
CENTER FLIGHT INSTRUMENT PANEL LIGHTS	9-9
COPILOT'S FLIGHT INSTRUMENT PANEL LIGHTS	9-10
OVERHEAD PANEL LIGHTS	9-11
CONSOLE PANEL LIGHTS	9-12
SECONDARY COCKPIT LIGHTS	9-13
COCKPIT DOME AND UTILITY LIGHTS	9-14
CABIN AND RAMP LIGHTS	9-15
TROOP WARNING SYSTEM	9-16
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MASTER CAUTION SYSTEM	9-18
AVIONICS COOLING FAN	9-19
ANTICOLLISION LIGHT (AVIM)	9-20
MASTER CAUTION PANEL (AVIM)	9-21
CLOCK	9-22
CARGO HOOK LIGHTS	9-23

FAILURE SYMPTOM LIST
DC POWER SYSTEM

SYMPTOM	TASK
ANTICOLLISION LIGHTS DO NOT FLASH, NO. 1 DC SYSTEM TURNED OFF	9-1.4
ANTICOLLISION LIGHTS DO NOT FLASH, NO. 2 DC SYSTEM TURNED OFF	9-1.4
BATTERY CHARGING AND CHARGE COMPLETE LIGHTS OUT	9-1.4
BATTERY CHARGING OR CHARGE COMPLETE LIGHT DOES NOT COME ON WHEN PRESSED	9-1.4
BATTERY SYSTEM MAL CAPSULE (WITHOUT 74) OR MALF CAPSULE (WITH 74)ON.	9-1.4
CABIN AND RAMP LIGHTS NOT POWERED FROM SWITCHING BATTERY BUSS	9-1.4
EXTERNAL DC SUPPLY DOES NOT POWER DC BUSSES	9-1.4
EXTERNAL PWR CAPSULE OUT WHEN EXTERNAL DC SUPPLY CONNECTED	9-1.4
EXT PWR CONT CIRCUIT BREAKER WILL NOT STAY CLOSED WITH EXTERNAL POWER APPLIED	9-1.4
MASTER CAUTION LIGHTS DO NOT COME ON WHEN BATTERY SWITCH SET TO ON	9-1.4
RECT 1 AND RECT 2 CAPSULES OUT WHEN EXTERNAL DC SUPPLY CONNECTED	9-1.4
NO. 1 AND NO. 2 RECT OFF CAPSULE OUT WHEN EXTERNAL DC SUPPLY CONNECTED	9-1.4
RECT 1 OR RECT 2 CAPSULE NOT ON (WITH 74)	9-1.4
NO. 1 OR NO. 2 RECT OFF CAPSULE NOT ON (WITHOUT 74)	9-1.4
RECT 1 CAPSULE ON WHEN APU IS RUNNING (WITH 74)	9-1.4
NO. 1 RECT OFF CAPSULE ON WHEN APU RUNNING (WITHOUT 74)	9-1.4
RECT 2 CAPSULE ON WHEN APU IS RUNNING (WITH 74)	9-1.4
NO. 2 RECT OFF CAPSULE ON WHEN APU RUNNING (WITHOUT 74)	9-1.4
OVERHEAD PANEL LIGHTS DO NOT COME ON NO. 1 DC SYSTEM TURNED OFF	9-1.4
OVERHEAD PANEL LIGHTS DO NOT COME ON, NO. 1 DC SYSTEM TURNED ON	9-1.4
SWITCHED BATTERY BUS OR ESSENTIAL BUS NOT POWERED BY NO. 1 DC BUS	9-1.4
EXTERNAL POWER CAPSULE NOT ON (EXTERNAL POWER APPLIED)	9-2.4
NO. 1 AND NO. 2 RECT OFF CAPSULES ON (EXTERNAL POWER ON) (WITHOUT 74)	9-2.4
RECT 1 AND RECT 2 CAPSULES ON (EXTERNAL POWER ON) (WITH 74)	9-2.4
NO. 1 AND NO. 2 RECT OFF CAPSULES ON (NO. 1 GENERATOR SELECTED (WITHOUT 74)	9-2.4
NO. 1 AND NO. 2 RECT OFF CAPSULES ON (NO. 1 GENERATOR SELECTED) (WITHOUT 74)	9-2.4
RECT 1 AND RECT 2 CAPSULES ON (NO. 1 GENERATOR SELECTED) (WITH 74)	9-2.4
NO. 1 AND NO. 2 RECT OFF CAPSULES ON (NO. 2 GENERATOR SELECTED) (WITHOUT 74)	9-2.4
RECT 1 AND RECT 2 CAPSULES ON (NO. 2 GENERATOR SELECTED) (WITH 74)	9-2.4
NO. 1 AND NO. 2 RECT OFF CAUTION LIGHTS ON (WITHOUT 74)	9-2.4
GEN 1 CAPSULE IS ON (GENERATOR SWITCH ON) (WITH 74)	9-2.4
NO. 1 GENERATOR OFF CAPSULE STAYS ON (GENERATOR SWITCH IN TEST) (WITHOUT 74)	9-2.4

FAILURE SYMPTOM LIST (Continued)
AC POWER SYSTEM

SYMPTOM	TASK
GEN 1 CAPSULE STAYS ON (GENERATOR SWITCH IN TEST) (WITH 74)	9-2.4
NO. 1 OR NO. 2 GENERATOR OFF CAPSULE OUT (WITHOUT 74)	9-2.4
GEN 1 AND GEN 2 CAPSULES OUT (WITH 74)	9-2.4
NO. 1 OR NO. 2 RECT OFF CAPSULE ON WHEN GEN NO. 1 OR NO. 2 SWITCH TURNED OFF (WITHOUT 74)	9-2.4
RECT 1 OR RECT 2 CAPSULE ON WHEN GEN NO. 1 OR NO. 2 SWITCH TURNED OFF (WITH 74)	9-2.4
NO. 2 GENERATOR OFF CAPSULE IS ON (GENERATOR SWITCH ON) (WITHOUT 74)	9-2.4
GEN 2 CAPSULE IS ON (GENERATOR SWITCH ON) (WITH 74)	9-2.4
NO. 2 GENERATOR OFF CAPSULE STAYS ON (GENERATOR SWITCH IN TEST) (WITHOUT 74)	9-2.4
GEN 2 CAPSULE STAYS ON (GENERATOR SWITCH IN TEST) (WITH 74)	9-2.4

POSITION LIGHTS

SYMPTOM	TASK
POS CIRCUIT BREAKER DOES NOT STAY CLOSED	9-3.3
POSITION LIGHT OR LIGHTS NOT LIT AT BRT	9-3.3
POSITION LIGHT OR LIGHTS NOT LIT AT DIM	9-3.3

LANDING LIGHTS (SEARCHLIGHTS)

SYMPTOM	TASK
COPILOT'S LANDING LIGHT DOES NOT COME ON	9-4.4
COPILOT'S LANDING LIGHT DOES NOT EXTEND OR DOES NOT FULLY EXTEND	9-4.4
COPILOT'S LANDING LIGHT WILL NOT RETRACT WITH CO-PLT SLT CONT SWITCH	9-4.4
LANDING LIGHT DOES NOT RETRACT OR DOES NOT FULLY RETRACT INTO HOUSING	9-4.4
PILOTS LANDING LIGHT DOES NOT COME ON	9-4.4
PILOT'S LANDING LIGHT DOES NOT EXTEND OR DOES NOT FULLY EXTEND	9-4.4
PILOT'S LANDING LIGHT WILL NOT RETRACT WITH PLT SLT CONT SWITCH	9-4.4
PILOTS OR COPILOT'S LANDING LIGHT WILL NOT ROTATE CLOCKWISE OR COUNTERCLOCKWISE	9-4.4
SLT CONT CIRCUIT BREAKER (CO-PILOT'S) DOES NOT STAY CLOSED	9-4.4
SLT CONT CIRCUIT BREAKER (PILOT'S) DOES NOT STAY CLOSED	9-4.4
SLT FIL CIRCUIT BREAKER DOES NOT STAY CLOSED	9-4.4

FORMATION LIGHTS (WITHOUT 17)

SYMPTOM	TASK
FORM CIRCUIT BREAKER DOES NOT STAY CLOSED	9-5.3
FORMATION LIGHT OR LIGHTS NOT ON AT DIM	9-5.3
FORMATION LIGHTS OUT OR DO NOT GET BRIGHTER AT INTERMEDIATE OR BRT POSITIONS	9-5.3

FORMATION LIGHTS (WITH 17)

SYMPTOM	TASK
NORMAL FORM CIRCUIT BREAKER DOES NOT STAY CLOSED	9-5.9
NORMAL FORMATION LIGHT OR LIGHTS NOT ON AT DIM	9-5.9
NORMAL FORMATION LIGHTS OUT OR DO NOT GET BRIGHTER AT INTERMEDIATE OR BRT POSITIONS	9-5.9
NVG FORM CIRCUIT BREAKER DOES NOT STAY CLOSED	9-5.9
NVG FORMATION LIGHT OR LIGHTS NOT ON AT DIM	9-5.9
NVG FORMATION LIGHTS OUT OR DO NOT GET BRIGHTER AT INTERMEDIATE OR BRT POSITION	9-5.9

FAILURE SYMPTOM LIST (Continued)
ANTICOLLISION LIGHTS

SYMPTOM	TASK
ANTI-COL BOT OR TOP CIRCUIT BREAKER DOES NOT STAY CLOSED	9-6.3
ANTI COLLISION LIGHT, TOP OR BOTTOM, DOES NOT FLASH OR DOES NOT FLASH 40-60 TIMES/MINUTE	9-6.3

SYMPTOM	TASK

FAILURE SYMPTOM LIST (Continued)

SYMPTOM	TASK
FORWARD TRANSMISSION OIL LEVEL CHECK LIGHT	
FORWARD TRANSMISSION OIL LEVEL CHECK LIGHT NOT LIT	9-7.3
OIL LEVEL CHECK CIRCUIT BREAKER DOES NOT STAY CLOSED	9-7.3
PILOT'S FLIGHT INSTRUMENT PANEL LIGHTS (WITHOUT 17)	
PILOT INSTR CIRCUIT BREAKER DOES NOT STAY CLOSED	9-8.3
PILOT'S FLIGHT INSTRUMENT PANEL LIGHT OR LIGHTS NOT LIT	9-8.3
PILOT'S FLIGHT INSTRUMENT PANEL LIGHTS (WITH 17)	
PILOT INSTR CIRCUIT BREAKER DOES NOT STAY CLOSED	9-8.8
PILOT'S FLIGHT INSTRUMENT PANEL LIGHT OR LIGHTS NOT LIT	9-8.8
CENTER FLIGHT INSTRUMENT PANEL LIGHTS (WITHOUT 17)	
CENTER FLIGHT INSTRUMENT PANEL LIGHT OR LIGHTS NOT LIT	9-9.3
CTR INSTR CIRCUIT BREAKER DOES NOT STAY CLOSED	9-9.3
CENTER FLIGHT INSTRUMENT PANEL LIGHTS (WITH 17)	
CENTER FLIGHT INSTRUMENT PANEL LIGHT OR LIGHTS NOT LIT	9-9.8
CTR INSTR CIRCUIT BREAKER DOES NOT STAY CLOSED	9-9.8
COPILOT'S FLIGHT INSTRUMENT PANEL LIGHTS (WITHOUT 17)	
COPILOT'S FLIGHT INSTRUMENT PANEL LIGHT OR LIGHTS NOT LIT	9-10.3
COPLT INST CIRCUIT BREAKER DOES NOT STAY CLOSED	9-10.3
COPILOT'S FLIGHT INSTRUMENT PANEL LIGHTS (WITH 17)	
COPILOT'S FLIGHT INSTRUMENT PANEL LIGHT OR LIGHTS NOT LIT	9-10.8
COPLT INST CIRCUIT BREAKER DOES NOT STAY CLOSED	9-10.8
OVERHEAD PANEL LIGHTS (WITHOUT 17)	
OVERHEAD PANEL LIGHT OR LIGHTS NOT LIT	9-11.3
OVHD PNL CIRCUIT BREAKER DOES NOT STAY CLOSED	9-11.3
OVERHEAD PANEL LIGHTS (WITH 17)	
OVERHEAD PANEL LIGHT OR LIGHTS NOT LIT	9-11.8
OVHD PNL CIRCUIT BREAKER DOES NOT STAY CLOSED	9-11.8

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FAILURE SYMPTOM LIST (Continued)

SYMPTOM	TASK
CONSOLE CIRCUIT BREAKER DOES NOT STAY CLOSED	9-12.3
BARO ALT SWITCH CAPTION DOES NOT LIGHT BRIGHT WHEN PRESSED	9-12.8
CONSOLE CIRCUIT BREAKER WILL NOT STAY CLOSED	9-12.8
FLOOD LIGHTS ON INSTR PANEL AND OVERHEAD PANEL AND LIGHTS ON PILOT AND COPILOT'S TURN AND SLIP INDICATORS DO NOT COME ON	9-13.3
INSTR FLOOD LIGHTING CIRCUIT BREAKER WILL NOT STAY CLOSED	9-13.3
ALL FLOOD LIGHTS DO NOT COME ON WHEN PLT INST LIGHT CONTROL SET TO OFF	9-13.12
CKPT DIM CONT CIRCUIT BREAKER WILL NOT STAY CLOSED	9-13.12
COCKPIT DOME CIRCUIT BREAKER DOES NOT STAY CLOSED	9-14.3
COCKPIT DOME RED LIGHT OR LIGHTS DO NOT COME ON	9-14.3
COCKPIT DOME CIRCUIT BREAKER DOES NOT STAY CLOSED	9-14.10
COCKPIT DOME NVG LIGHT OR LIGHTS DO NOT COME ON	9-14.10

CONSOLE PANEL LIGHTS (WITHOUT 17)

SYMPTOM	TASK
CONSOLE PANEL LIGHT OR LIGHTS NOT LIT	9-12.3

CONSOLE PANEL LIGHTS (WITH 17)

SYMPTOM	TASK
CONSOLE PANEL LIGHT OR LIGHTS NOT LIT	9-12.8
ILLUM SW PWR CIRCUIT BREAKER WILL NOT STAY CLOSED	9-12.8
LONGITUDINAL STICK INDICATOR NOT LIT	9-12.8
RAD ALT SWITCH CAPTION DOES NOT LIGHT DIM WHEN PRESSED	9-12.8

SECONDARY COCKPIT LIGHTS (WITHOUT 17)

SYMPTOM	TASK
INSTR PANEL, CONSOLE, OR OVERHEAD PANEL FLOOD LIGHTS WILL NOT COME ON	9-13.3
NO. 1 DC BUS CONTROL CIRCUIT BREAKER WILL NOT STAY CLOSED	9-13.3
PILOT AND COPILOT'S TURN AND SLIP INDICATOR LIGHTS VARY IN BRIGHTNESS	9-13.3
PILOT OR COPILOT'S TURN AND SLIP INDICATOR LIGHTS OR OVERHEAD PANEL FLOOD LIGHTS DO NOT COME ON	9-13.3

SECONDARY COCKPIT LIGHTS (WITH 17)

SYMPTOM	TASK
INSTR FLOOD LIGHTING CIRCUIT BREAKER WILL NOT STAY CLOSED	9-13.12
INSTR PANEL OR OVERHEAD PANEL FLOOD LIGHTS WILL NOT COME ON	9-13.12

COCKPIT DOME AND UTILITY LIGHTS (WITHOUT 17)

SYMPTOM	TASK
COCKPIT DOME WHITE LIGHT OR LIGHTS DO NOT COME ON	9-14.3
UTILITY LIGHT OR LIGHTS DO NOT COME ON	9-14.3

COCKPIT DOME AND UTILITY LIGHTS (WITH 17)

SYMPTOM	TASK
COCKPIT DOME WHITE LIGHT OR LIGHTS DO NOT COME	9-14.10
UTILITY LIGHT OR LIGHTS DO NOT COME ON	9-14.10

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SYMPTOM	TASK
CABIN & RAMP CIRCUIT BREAKER DOES NOT STAY CLOSED	9-15.3
CABIN AND RAMP DOME RED LIGHTS DO NOT COME ON WHEN CABIN & RAMP LIGHTS SWITCH SET TO RED ON	9-15.3
CABIN AND RAMP DOME RED LIGHT OR LIGHTS NOT LIT	9-15.3
CABIN & RAMP CIRCUIT BREAKER DOES NOT STAY CLOSED	9-15.11
GREEN LIGHTS ON FWD AND AFT TROOP WARNING BOXES DO NOT GO DIM	9-16.3
GREEN LIGHT ON FWD OR AFT TROOP WARNING BOX OR GREEN TROOP JUMP LTS LIGHT DO NOT COME ON BRIGHT	9-16.3
GREEN TROOP JUMP LTS LIGHT DOES NOT GO DIM	9-16.3
LEFT TROOP JUMP LTS LIGHT DOES NOT COME ON VHEN PRESSED	9-16.3
RED LIGHTS ON FWD AND AFT TROOP WARNING BOXES DO NOT GO DIM	9-16.3
CABIN AC RECEPTACLE CIRCUIT BREAKER WILL NOT STAY CLOSED	9-17.3
NO ELECTRICAL POWER AT UTILITY AC RECEPTACLE ON LEFT SIDE OF AIRCRAFT	9-17.3
NO ELECTRICAL POWER AT UTILITY AC RECEPTACLE ON RIGHT SIDE OF AIRCRAFT	9-17.3

SYMPTOM	TASK
CABIN AND RAMP LIGHTS (WITHOUT 17)	
CABIN AND RAMP DOME WHITE LIGHTS DO NOT GO OUT WHEN CAB & RAMP LT SWITCH SET TO ALL OFF	9-15.3
CABIN AND RAMP WHITE LIGHT OR LIGHTS NOT LIT	9-15.3
CABIN AND RAMP LIGHTS (WITH 17)	
CABIN AND RAMP DOME BLUE LIGHT OR LIGHTS NOT LIT	9-15.11
TROOP WARNING SYSTEM	
RED LIGHT ON FWD OR AFT TROOP WARNING BOX OR RED TROOP JUMP LTS LIGHT DO NOT COME ON BRIGHT	9-16.3
RIGHT TROOP JUMP LTS LIGHT DOES NOT COME ON WHEN PRESSED	9-16.3
RED TROOP JUMP LT LIGHT DOES NOT GO DIM (WITH 17)	9-16.3
RED TROOP JUMP LTS LIGHT DOES NOT GO DIM (WITHOUT 17)	9-16.3
UTILITY RECEPTACLES	
NO ELECTRICAL POWER AT UTILITY DC RECEPTACLES ON LEFT SIDE OF AiRCRAFT	9-17.3
NO ELECTRICAL POWER AT UTILITY DC RECEPTACLES ON RIGHT SIDE OF AIRCRAFT	9-17.3

SYMPTOM	TASK
CABIN AND RAMP DOME WHITE LIGHTS STAY ON WHEN CABIN & RAMP LIGHTS SWITCH SET TO ALL OFF	9-15.3
CABIN AND RAMP DOME RED LIGHT OR LIGHTS NOT LIT	9-15.11
TROOP ALARM BELL ON FWD OR AFT TROOP WARNING BOX DO NOT SOUND WHEN TROOP ALARM SWITCH IS SET TO ON	9-16.3
TROOP ALARM BELL CIRCUIT BREAKER WILL NOT STAY CLOSED	9-16.3
TROOP ALARM JUMP LTS CIRCUIT BREAKER WILL NOT STAY CLOSED	9-16.3
UTILITY RECEPTACLE CIRCUIT BREAKERS WILL NOT STAY CLOSED	9-17.3

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FAILURE SYMPTOM LIST (Continued)
MASTER CAUTION SYSTEM

SYMPTOM	TASK
BOTH MASTER CAUTION LIGHTS ARE ON BUT ONE IS BRIGHT AND ONE IS DIM	9-18.3
CAUTION PNL CIRCUIT BREAKER WILL NOT STAY CLOSED	9-18.3
LIGHTS DO NOT COME ON WHEN CAUTION LIGHTS TEST SWITCH IS AT TEST	9-18.3
MASTER CAUTION PANEL CAPSULES AND MASTER CAUTION LIGHTS ARE DIM WHEN ELECTRICAL POWER APPLIED OR WHEN CAUTION LIGHT SWITCH SET TO BRIGHT	9-18.3
MASTER CAUTION PANEL LIGHTS DO NOT COME ON WHEN BATTERY SWITCH SET TO ON	9-18.3
MASTER CAUTION PANEL LIGHTS DO NOT GO BRIGHT WHEN DOME SELECT SWITCH SET TO WHITE	9-18.3
MASTER CAUTION PANEL LIGHTS OR MASTER CAUTION LIGHTS WILL NOT DIM	9-18.3
PILOT'S AND COPILOT'S MASTER CAUTION LIGHT WILL NOT GO OUT	9-18.3
PILOT'S OR COPILOT'S MASTER CAUTION LIGHTS DO NOT COME ON WHEN ELECTRICAL POWER IS APPLIED	9-18.3

AVIONICS COOLING FAN

SYMPTOM	TASK
AVIONIC COOLING FAN DC CIRCUIT BREAKER WILL NOT STAY CLOSED	9-19.3
AVIONIC COOLING AC CIRCUIT BREAKER WILL NOT STAY CLOSED	9-19.3
WEAK OR NO AIR FLOW IS FELT FROM AVIONIC COOLING FAN	9-19.3

ANTICOLLISION LIGHT (AVIM)

SYMPTOM	TASK
ANTI-COLLISION LIGHT FAILS AVIM TEST	9-20.3

MASTER CAUTION PANEL

SYMPTOM	TASK
MASTER CAUTION PANEL FAILS AVIM TEST (WITHOUT 74)	9-21.3
MASTER CAUTION PANEL FAILS AVIM TEST (WITH 74)	9-21.6

CLOCK (WITH 17)

SYMPTOM	TASK
COPILOT CLOCK CIRCUIT BREAKER DOES NOT STAY CLOSED	9-22.3
COPILOT'S CLOCK DISPLAY DOES NOT INDICATE 88:88 WHEN SELECT BUTTON PRESSED	9-22.3
PILOT CLOCK CIRCUIT BREAKER DOES NOT STAY CLOSED	9-22.3
PILOTS CLOCK DISPLAY DOES NOT INDICATE 88:88 WHEN SELECT BUTTON PRESSED	9-22.3

ELECTRICAL SYSTEM ELECTRICAL COMPONENT LOCATION AND CONFIGURATION LIST

REF DESIG	PART NUMBER	TYPE	MATE WITH/LOCATION	STATION LOCATION FS	WL	BL
GD006		150	CONSOLE-FWD FLOOR	58	-17	2L
GD014		151	AFT CABIN-ABOVE RAMP	594	50	30L
GD016		150	CONSOLE, FWD CTR INSTR PNL			
GD017		150	CONSOLE, FWD CTR INSTR PNL			
GD026		150	CONSOLE, FWD CTR INSTR PNL			
GD032		151	OVERHEAD PANEL-COCKPIT			
GD034		150	OVERHEAD PANEL-COCKPIT			
GD035		151	OVERHEAD PANEL-COCKPIT			
GD039		151	CONSOLE, FWD CTR INSTR PNL			
GD040		150	CONSOLE, FWD CTR INSTR PNL			
GD045		150	NO. 1 PDP-OTBD SIDEWALL			
GD046		151	NO. 2 PDP-OTBD SIDEWALL			
GD047		150	NO. 2 PDP-OTBD SIDEWALL			
GD048		151	NO. 1 PDP-OTBD SIDEWALL			
GD074		151	PYLON	620	72	0
GD075		151	PYLON	594	110	2L
GD076		151	PYLON	594	110	2L
GD089		151	COCKPIT BOTTOM	70.62	-35	20R
GD090		151	COCKPIT BOTTOM	70.62	-35	20L
GD100		151	AFT CABIN-ABOVE RAMP	594	55	10L
GD102		151	AFT CABIN-ABOVE RAMP	594	65	10R
GD103		151	AFT CABIN-ABOVE RAMP	594	60	20R
GD114		151	FWD TROOP WARN BOX-INSIDE	120	45	40L
GD1		151	AFT TROOP WARN BOX-INSIDE	575	30	50L
GD119		151	AFT CABIN-ABOVE RAMP	594	50	50L
GD122		151	AFT CABIN-ABOVE RAMP	594	50	24L
GD123		151	AFT RH CABIN	482	-5	50R
GD132		150	LH POD-FWD	192	-20	52L
GD146		151	LH POD-FWD	192	-20	52L
GD167		151	CABIN-UNDERFLOOR	280	-40	10L
GD170		151	CABIN OVERHEAD	200	50	0
GD171		151	CABIN OVERHEAD	255	50	20R
GD172		151	CABIN OVERHEAD	250	50	20L
GD173		150	RH POD-FWD	170	-20	52R
GD182		151	LH CABIN	340	30	50L
GD183		151	LH CABIN	260	10	50L
GD184		151	LH CABIN	360	10	50L
GD185		151	RH CABIN	325	52	40R
GD186		151	RH CABIN	260	10	50R
GD187		151	RH CABIN	355	15	50R
GD198		151	RH POD-FWD	170	-12	52R
GD204		151	LH POD-FWD	192	-25	52L
GD206		151	LH POD-FWD	192	-20	52L
GD207		151	NO. 2 PDP-OTBD SIDEWALL			
GD208		151	NO. 1 PDP-OTBD SIDEWALL			
GD209		151	LH POD-FWD	160	-20	52L
GD210		151	RH POD-FWD	170	-20	52L
GD211		151	LH POD-FWD	160	-20	52L
GD213		151	LH POD-FWD	160	-10	52L
GD225		151	FWD TROOP WARN BOX-INSIDE	120	45	40L
GD232		151	LH POD-FWD	160	-20	52L
GD257		151	ELECTRONICS COMP-OVHD	115	40	10L
GD267		151	CONSOLE-FWD FLOOR	58	-17	1L
GD268		151	ELECTRONICS COMP-OVHD	105	20	45L
TB1			PILOTS INSTR PNL			
TB2			COPILOTS INSTR PNL			
TB3			NO. 1 PDP-SIDE WALL			
TB4			CONSOLE-FWD FLOOR	50	17	0
TB7			CONSOLE-FWD CTR INSTR PNL			
TB8			CONSOLE-FWD CTR INSTR PNL			
TB9			PILOT SEARCHLIGHT HOUSING	60	-35	20R
TB10			COPILOT SEARCHLIGHT HOUSING	60	-35	20L
TB11			ELECTRONICS COMP	100	40	50L
TB17			WALKWAY-UNDERFLOOR	105	-30	18R
TB36			OVERHEAD PANEL-COCKPIT	80	40	12R
TB37			OVERHEAD PANEL-COCKPIT	80	40	12L
TB38			OVERHEAD PANEL-COCKPIT	80	45	12L
TB50			NO. 1 PDP-SIDEWALL			
TB51			NO. 2 PDP-SIDEWALL			
TB59			NO. 1 PDP			
TB62			NO. 2 PDP			
084K1		112	ELECTRONICS COMP-OVHD	100	40	50L
103K1		103	LH POD-FWD (WITH 74)	162	10	52L
128K1		106	HEATER COMPARTMENT	95	21	25R
128K2		106	HEATER COMPARTMENT	95	21	25R
161D1		380	NO. 1 PDP (WITH 74)			
161 D2		381	NO. 1 PDP (WITH 74)			
161K1		107	LH POD-FWD	162	-10	52L
161 K2		104	NO. 1 PDP			
161 K3		102	NO. 1 PDP			
161K4		102	NO. 2 PDP			
161K5		106	NO. 1 PDP			
161 K6		106	NO. 2 PDP			
161K7		116	NO. 1 PDP			
161 K8		116	NO. 2 PDP			
161K9		103	NO. 1 PDP			
161K10		106	NO. 1 PDP			
232K1						
232K12		103	CONSOLE	57	-17	12L

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ELECTRICAL SYSTEM ELECTRICAL COMPONENT LOCATION AND CONFIGURATION LIST (Continued)

REF DESIG	PART NUMBER	TYPE	MATE WITH/LOCATION	STATION LOCATION FS	WL	BL
241K1		100	NO. 1 PDP			
241K2		100	NO. 2 PDP			
241K3		101	NO. 2 PDP			
241K4		106	NO. 2 PDP			
241K5		101	NO. 1 PDP			
031P36	MS3476W14-19S	21	CONSOLE, AFCS CONT, J2			
051P1	D38999-26WB35SN	317	PLT INSTR PNL, ENGINE TORQUEMETER (WITH 74)			
051P2	D38999-26WB35SN	317	CPLT INSTR PNL, ENGINE TORQUEMETER (WITH 74)			
054P1	MS3476W14-10S	48	CPLT INSTR PNL, ROTOR TACH			
054P2	MS3476W14-10S	48	PLT INSTR PNL, ROTOR TACH			
055P1	M83723-75A1212N	31	PLT INSTR PNL, GAS PRODUCER TACHOMETER (WITH 74)			
055P2	M83723-75A1212N	31	CPLT INSTR PNL, GAS PRODUCER TACHOMETER (WITH 74)			
062P1	115785-01	61	CPLT INSTR PNL, ATTITUDE IND			
062P2	115785-01	61	PLT INSTR PNL, ATTITUDE IND			
063P2	MS3476W18-32S	25	OVHD PNL, COMPASS CONT			
066P1	MS27473T22B2S	7	PLT INSTR PNL, HSI IND			
066P2	MS27473T22B2S	7	CPLT INSTR PNL, HSI IND			
066P4	M83723-75A24616	43	PLT INSTR PNL, HSI MODE SEL			
066P7	M83723-75A24616	43	CPLT INSTR PNL, HSI MODE SEL			
084P1	MS3456W14S-5S	49	ELECTRONICS COMP, OVHD, FAN	110	40	15L
102P6	MS3476W14-19S	21	OVHD PNL, ENG COND PNL			
104P6	D38999-26WD18SA	312	J2-FADEC CONT PNL, OVHD PANEL (WITH 74			
111P1	MS3456W12S-3S	47	PYLON, TOP ANTI COL LT	590	140	0
111P2	MS3456W12S-3S	47	BOTTOM FUSELAGE, BOT ANTI COL LT	290	-40	0
121J1	MS90335-3	152	RDR ALT DIM CONT PNL			
121P1	AN3116-2	3	CTR INSTR PNL, TOP, STANDBY COMP			
122J1	MS90335-3	152	RDR ALT DIM CONT PNL			
123J1	MS90335-3	152	FIRE HANDLE WARN PNL			
123J2	MS90335-3	152	MASTER CAUTION CNTR			
125J1	MS90335-3	152	FUEL CONTROL PANEL			
125J2	MS90335-3	152	CPLT/OVHD LTG PANEL			
125J3	MS90335-3	152	PLT/CTR INSTR LTG PANEL			
125J4	MS90335-3	152	EXTERIOR LTG PANEL			
125J5	MS90335-3	152	INTERIOR LTG PANEL			
125J6	MS90335-3	152	ENGINE START PANEL			
125J7	MS90335-3	152	ANTI ICE PANEL			
125J8	MS90335-3	152	CTR CSL LGT PANEL			
125J9	MS90335-3	152	HYD POWER PANEL			
125J10	MS90335-3	152	ELEC PWR PANEL			
125J11	MS90335-3	152	TROOP WARN/HEAT PNL			
131J1	UR101F	56	LH FWD CABIN 28 VDC UTILITY RCPT	260	5	50L
131J2	UR101F	56	RH FWD CABIN 28 VDC UTILITY RCPT	260	5	50R
131J3	UR101F	56	LH FWD CABIN 28 VDC UTILITY RCPT	260	5	50L
131J4	UR101F	56	RH FWD CABIN 28 VDC UTILITY RCPT	260	5	50R
131J5	UR101F	56	LH FWD CABIN 28 VDC UTILITY RCPT	260	5	50L
131J6	UR101F	56	RH FWD CABIN 28 VDC UTILITY RCPT	260	5	50R
131J7	UR101F	56	LH AFT CABIN 28 VDC UTILITY RCPT	360	5	50L
131J8	UR101F	56	RH AFT CABIN 28 VDC UTILITY RCPT	360	5	50R
131J9	UR101F	56	LH AFT CABIN 28 VDC UTILITY RCPT	360	5	50L
131J10	UR101F	56	RH AFT CABIN 28 VDC UTILITY RCPT	360	5	50R
131J11	UR101F	56	LH AFT CABIN 28 VDC UTILITY RCPT	360	5	50L
131J12	UR101F	56	RH AFT CABIN 28 VDC UTILITY RCPT	360	5	50R
131J13	MS3454W14S-2S	48	LH CABIN, 3 PH UTILITY RCPT	320	20	50L
131J14	MS25199-1	5	LH CABIN, 1 PH UTILITY RCPT	320	20	50L
131J15	MS25199-1	5	RH CABIN, 1 PH UTILITY RCPT	320	20	50R
131J16	MS3454W14S-2S	48	RH CABIN, 3 PH UTILITY RCPT	320	20	50R
131J17	UR101F	56	NO. 1 PDP, 28 VDC UTILITY RCPT			
131J18	UR101F	56	NO. 2 PDP, 28 VDC UTILITY RCPT			
134P2	MS3476W14-19SW	21	OVHD PNL, HOIST/CARGO HOOK			
137P2	MS3476W16-23S	23	CONSOLE, POWER STEERING CONT			
140J7	MS3474W16-8S	22	LH FWD CABIN	160	30	50L
140P7	MS3476W16-8P	22	LH FWD CABIN	160	30	50L
147P1	MS3476W14-19S	21	CONSOLE, XM 130 DISP CONT			
161J1	AN2552-3A	1	LH POD, DC EXT PWR RCPT	160	-10	60L
161P2	MS3476W14-5S	18	LH POD, BATT CHARGR	184	-15	65L
161P3	MS3456W20-17S	55	LH POD, NO. 1 XFMR/RECT	175	-10	65L
161P4	MS3456W20-17S	55	RH POD, NO. 2 XFMR/RECT	175	-10	65R
161P5	MS25182-2	4	LH POD, BATT DISCONNECT	178	-25	65L
161P6	MS3476W12-10P	17	LH POD, BATT TEMP DISC	178	-27	65L
161P7	MS3476W20-16P	57	LH POD, BATT CHRGR	175	-10	65L
175P1	M83723-75A1624N	35	CTR INSTR PNL, FUEL FLOWING			
181P1	MS27473T18B32S	58	CONSOLE, RT 1167/ARC-164			
182P1	MS2748T18B32S	58	CONSOLE, RTARC-186, NO. 1 VHF			
182P4	MS2748T18B32S	58	CONSOLE, RTARC-186, NO. 2 VHF			
182P19	MS3476W12-10S	17	CONSOLE, KY28 CONT PNL			
184P5	MS3476W20-39S	59	CONSOLE, HF ARC-102 CONT			
195P1	MS27473T18B35S	60	CONSOLE, RT-2585 APX100 IFF			
187P26	M28748/6-G30L1A	62	CONSOLE, CPLT INTPH CONT PNL			
187P27	M2874816-G30L1A	62	CONSOLE, PLT INTPH CONT PNL			
187P30	M2874816-G30L1A	62	CONSOLE, TRP COMM INTPH CONT PNL			
191P7	MS3476W14-19S	21	CONSOLE, ADF CONT PNL			
192P1	M2430812-5	63	CONSOLE, VOR/LOC/GS/MKR BCN CONT PNL			

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ELECTRICAL SYSTEM ELECTRICAL COMPONENT LOCATION AND CONFIGURATION LIST (Continued)

REF DESIG	PART NUMBER	TYPE	MATE WITH/LOCATION	STATION LOCATION FS	WL	BL
195P1	MS2473T10B35S	6	PLT INSTR PNL, RAD ALT, RT-APN-209			
195P5	MS27484T12B35S	8	CPLT INSTR PNL, RAD ALT, RT-APN-209			
196P1	MS3476W16-26S	24	CPLT INSTR PNL, AIMS ALT			
196P2	MS3476W16-26S	24	PLT INSTR PNL, AIMS ALT			
197P5	MS27484T20B16S	64	CONSOLE, ASN 128, DOPPLER			
201P2	M24308/2-3	6	CONSOLE, RADAR WARNING, APR-39			
202P4	MS3476W14-19S	21	CONSOLE, MISSILE DET CONT IND			
232P1	MS3476W20-41S	26	CTR INSTR PNL, MSTR CAUT PNL (WITHOUT 74)			
232P1	MS3476W22-55S	27	CTR INSTR PNL, MSTR CAUT PNL (WITH 74)			
232P2	MS3476W16-26S	24	CTR INSTR PNL, MSTR CAUT PNL			
232P3	MS3476W14-19S	21	CTR INSTR PNL, MSTR CAUT PNL (WITH 74)			
241J1	MS90362-3	10	LH POD FWD, EXT PWR RECPT			
241P1	M83723-95A1212N	31	AFT XMSN, NO. 1 GEN5806018L			
241P2	M83723-95A1212N	31	AFT XMSN, NO. 2 GEN	580	60	18R
241P3	MS3476W16-26S	24	NO. 1 PDP, GEN NO. 1 CNTCTR			
241P4	MS3476W16-26S	24	NO. 2 PDP, GEN NO. 2 CNTCTR			
241P5	MS3476W16-23S	23	NO. 2 PDP, APU GEN CNTCTR			
241 P6	MS3476W10-06P	15	NO. 1 PDP, NO. 1 GEN CUR XFMR			
241P7	MS3476W10-06P	15	NO. 2 PDP, NO. 2 GEN CUR XFMR			
241P8	MS3476W18-32S	25	LH POD - FWD, NO. 1 GEN CONT	160	-10	60L
241P9	MS3476W18-32S	25	RH POD - FWD, NO. 2 GEN CONT	175	-10	65R
241P10	MS3476W18-32S	25	RH POD FWD, APU GEN CONT	170	-10	65R
241P11	MS3476W16-23S	23	NO. 1 PDP, EXT PWR CNTCTR			
241P12	MS3476W12-10S	17	LH POD FWD EXT PWR MON	160	-10	60L
300J1	M83723-74A2041N	40	NO. 1 PDP			
300P1	M83723-75A2041N	40	NO. 1 PDP			
300J2	M83723-74A2255N	42	NO. 1 PDP			
300P2	M83723-75A2255N	42	NO. 1 PDP			
300J3	M83723-74A22556	42	NO. 1 PDP			
300P3	M83723-75A22556	42	NO. 1 PDP			
300J4	M83723-74A2461N	43	NO. 1 PDP			
300P4	M83723-75A2461N	43	NO. 1 PDP			
300J5	M83723-74A2041N	40	NO. 2 PDP			
300P5	M83723-75A2041N	40	NO. 2 PDP			
300J6	M83723-74A24616	43	NO. 2 PDP			
300P6	M83723-75A24616	43	NO. 2 PDP			
300J7	M83723-74A2255N	42	NO. 2 PDP			
300P7	M83723-75A2255N	42	NO. 2 PDP			
300J8	M83723-74A2461N	42	NO. 2 POP			
300P8	M83723-75A2461N	42	NO. 2 PDP			
300J11	M83723-73A2255N	42	CONSOLE, UNDERFLOOR DISC			
300P11	M83723-76A2255N	42	CONSOLE, UNDERFLOOR DISC			
300J17	M83723-74A2255N	42	CONSOLE, UNDERFLOOR DISC (WITHOUT 74)			
300J17	M83723-74W2255N	27	CONSOLE, UNDERFLOOR DISC (WITH 74)			
300P17	M83723-75A2255N	42	CONSOLE, UNDERFLOOR DISC (WITHOUT 74)			
300P17	M83723-75W2255N	27	CONSOLE, UNDERFLOOR DISC (WITH 74)			
300J18	M83723-73A2041N	40	OVERHEAD PANEL - COCKPIT			
300P18	M83723-76A2041 N	40	OVERHEAD PANEL - COCKPIT			
300J19	M83723-73A2041N	40	OVERHEAD PANEL - COCKPIT			
300P19	M83723-76A2041N	40	OVERHEAD PANEL - COCKPIT			
300J20	M83723-74A2461N	43	OVERHEAD PANEL- COCKPIT			
300P20	M83723-75A2461 N	43	OVERHEAD PANEL - COCKPIT			
300J21	M83723-74A2461 N	43	OVERHEAD PANEL- COCKPIT			
300P21	M83723-75A2461N	43	OVERHEAD PANEL- COCKPIT			
300J22	M83723-73A20416	40	OVERHEAD PANEL - COCKPIT			
300P22	M83723-76A20416	40	OVERHEAD PANEL - COCKPIT			
300J23	M83723-74A2255N	42	OVERHEAD PANEL - COCKPIT			
300P23	M83723-75A2255N	42	OVERHEAD PANEL - COCKPIT			
300J25	MS3474W16-26S	24	COCKPIT UNDERFLOOR, PLT SIDE	70	-20	12R
300P25	MS3474W16-26P	24	COCKPIT UNDERFLOOR, PLT SIDE	70	-20	12R
300W26	MS3474W16-26S	24	COCKPIT UNDERFLOOR, CPLT SIDE	70	-30	40L
300J40	M83723-73A1415N	34	LH CABIN	222	-5	52L
300P40	M83723-76A1415N	34	LH CABIN	222	-5	52L
300J41	M83723-73A1415N	34	RH CABIN	245	-5	52R
300P41	M83723-76A1415N	34	RH CABIN	245	-5	52R
300J44	M83723-74A2461 N	43	PYLON	528	72	18L
300P44	M83723-75A2461 N	43	PYLON	528	72	18L
300J45	M83723-73A2461N	43	HEATER COMPARTMENT	105	40	30R
300P45	M83723-76A2461N	43	HEATER COMPARTMENT	105	40	30R
300J47	M83723-74A2461N	43	HEATER COMPARTMENT	105	40	30R
300P47	M83723-75A2461N	43	HEATER COMPARTMENT	105	40	30R
300J48	M83723-74A2461N	43	ELECTRONICS COMPARTMENT	105	40	20L
300P48	M83723-75A2461N	43	ELECTRONICS COMPARTMENT	105	40	20L
300J51	M83723-74A2461 N	43	AFT CROWN - OVHD	460	45	20R
300P51	M83723-75A2461N	43	AFT CROWN - OVHD	460	45	20R
300J52	M83723-74A2255N	42	AFT CROWN - OVHD	460	45	30L
300P52	M83723-75A2255N	42	AFT CROWN - OVHD	460	45	30L
300J53	M83723-74A2255N	42	AFT CROWN -OVHD	460	45	20R
300P53	M83723-75A2255N	42	AFT CROWN - OVHD	460	45	20R
300J55	M83723-73A2255N	42	ELECTRONICS COMPARTMENT (WITHOUT 74)	105	40	20L
300J55	M83723-73W2255N	27	ELECTRONICS COMPARTMENT (WITH 74)	105	40	20L
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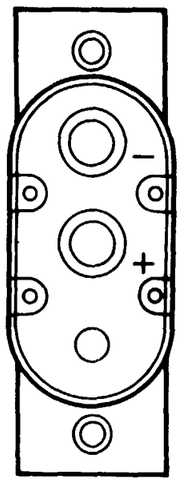
ELECTRICAL SYSTEM ELECTRICAL COMPONENT LOCATION AND CONFIGURATION LIST (Continued)

REF DESIG	PART NUMBER	TYPE	MATE WITH/LOCATION	STATION LOCATION FS	WL	BL
300P55	M83723-76W2255N	27	ELECTRONICS COMPARTMENT (WITH 74)			
300J56	M83723-73A2255N	42	HEATER COMPARTMENT	105	40	25R
300P56	M83723-76A2255N	42	HEATER COMPARTMENT	105	40	25R
300J58	M83723-73A22558	42	CONSOLE, UNDERFLOOR DISC			
300P58	M83723-76A22558	42	CONSOLE, UNDERFLOOR DISC			
300J61	M83723-73A24619	43	CONSOLE, UNDERFLOOR DISC (WITHOUT 74)			
300J61	M83723-73W24619	28	CONSOLE, UNDERFLOOR DISC (WITH 74)			
300P61	M83723-76A24619	43	CONSOLE, UNDERFLOOR DISC (WITHOUT 74)			
300P61	M83723-76W24619	28	CONSOLE, UNDERFLOOR DISC (WITH 74)			
300J68	M83723-73A22556	42	HEATER COMPARTMENT	105	40	25R
300P68	M83723-76A22556	42	HEATER COMPARTMENT	105	40	25R

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ELECTRICAL SYSTEMS ELECTRICAL COMPONENT LOCATION AND CONFIGURATION LIST (Continued)

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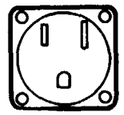
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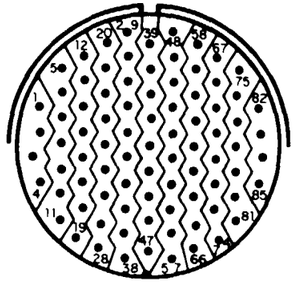
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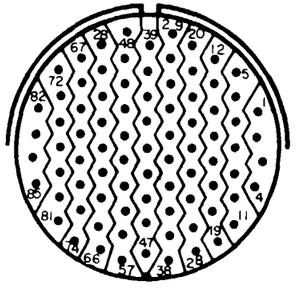


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ELECTRICAL SYSTEMS ELECTRICAL COMPONENT LOCATION AND CONFIGURATION LIST (Continued)

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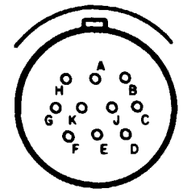
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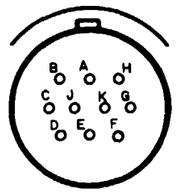
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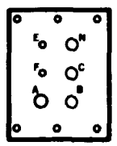


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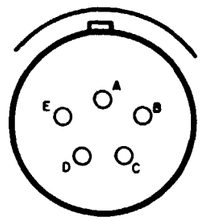
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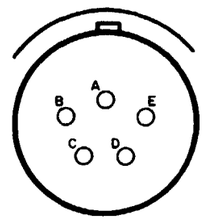
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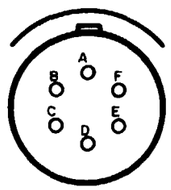
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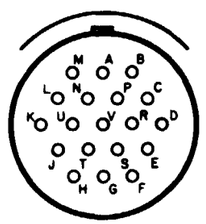
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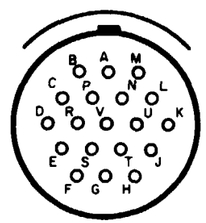
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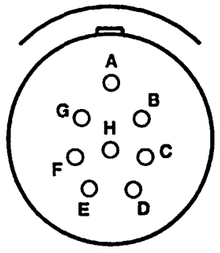
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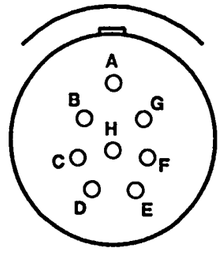
ELECTRICAL SYSTEM ELECTRICAL COMPONENT LOCATION AND CONFIGURATION LIST (Continued)

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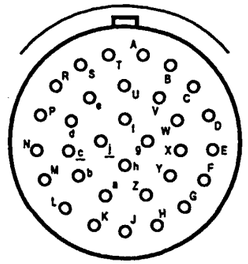
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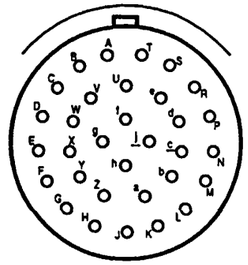
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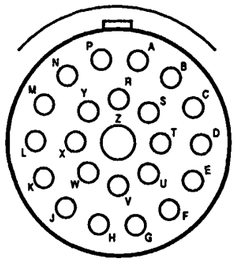


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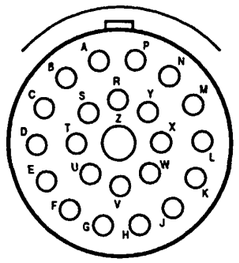
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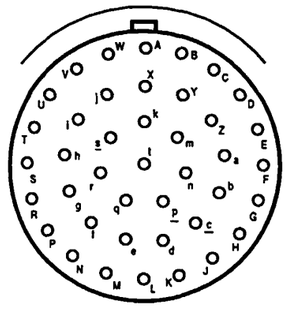
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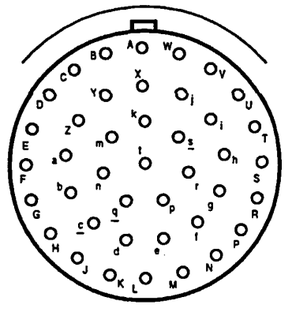
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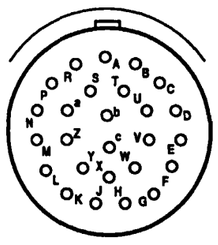
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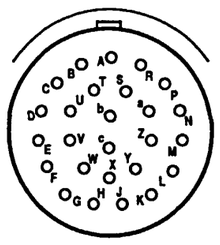
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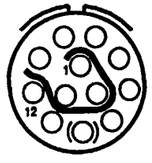
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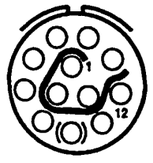
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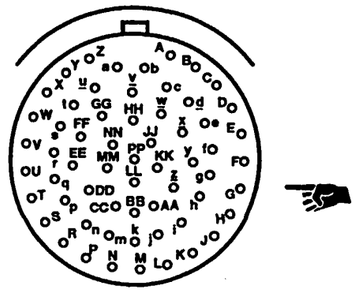
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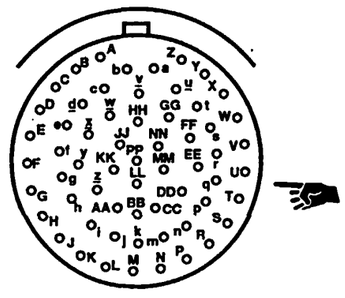
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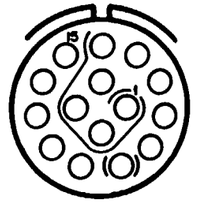
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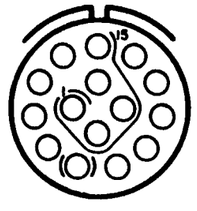
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LOCATION AND CONFIGURATION LIST (Continued)

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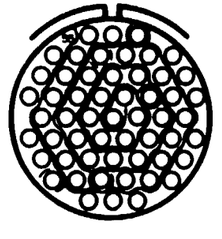
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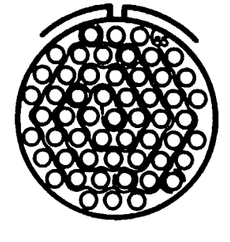
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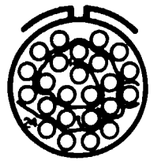


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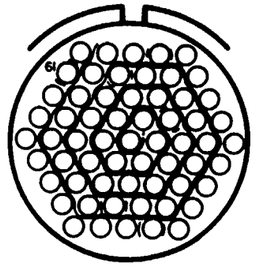
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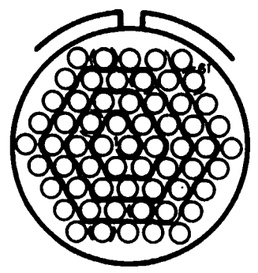
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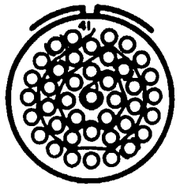
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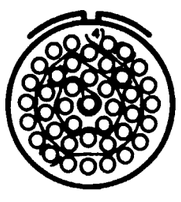
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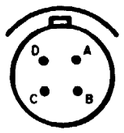
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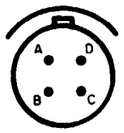
ELECTRICAL SYSTEMS ELECTRICAL COMPONENT
LOCATION AND CONFIGURATION LIST (Continued)

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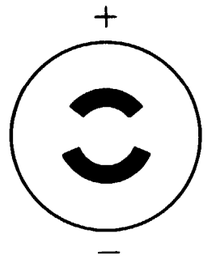
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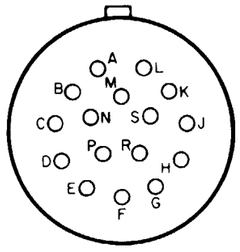
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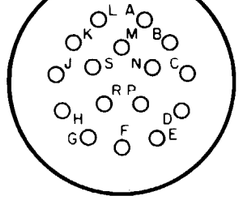
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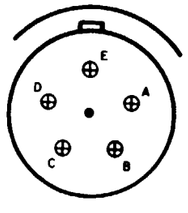
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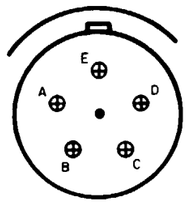
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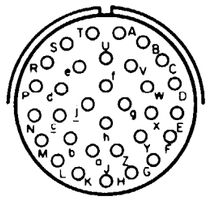
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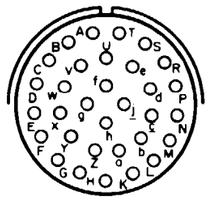
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58



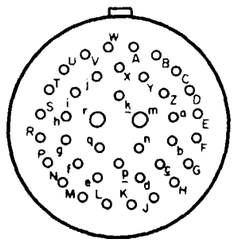
58

90 x 54

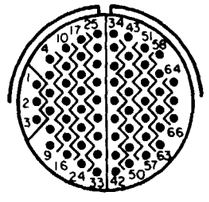
0145 - 11858 - SPA

ELECTRICAL SYSTEMS ELECTRICAL COMPONENT LOCATION AND CONFIGURATION LIST (Continued)

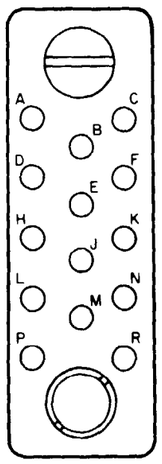
RECEPTACLE



59

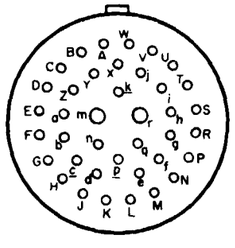


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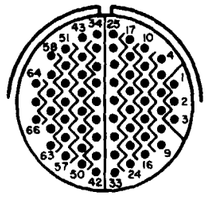


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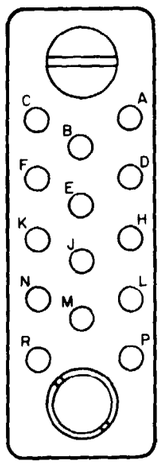
PLUG



59

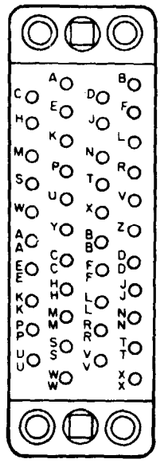


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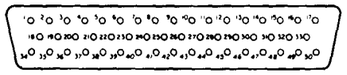


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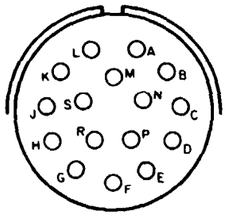
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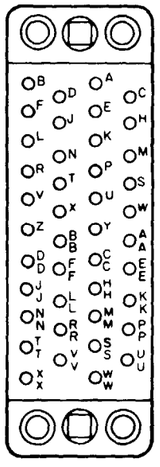


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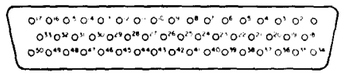


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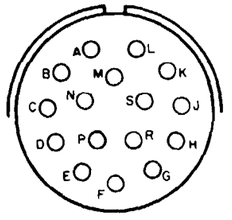
PLUG



62



63



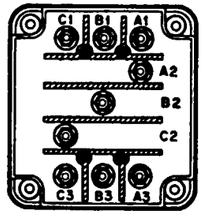
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90X54

D145-11859-SPA

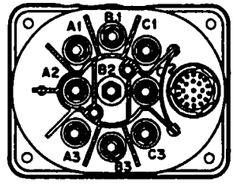
ELECTRICAL SYSTEM ELECTRICAL COMPONENT LOCATION AND CONFIGURATION LIST (Continued)

RELAY



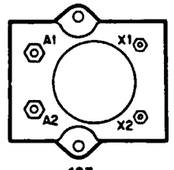
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RELAY



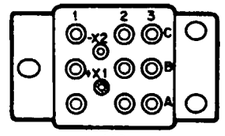
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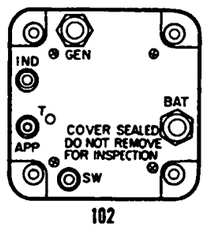


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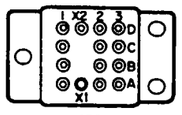
RELAY



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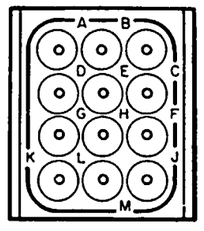


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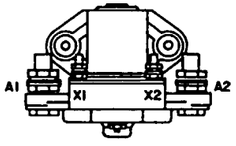


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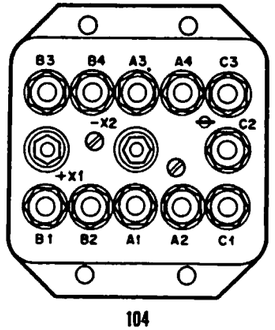
GND MODULE



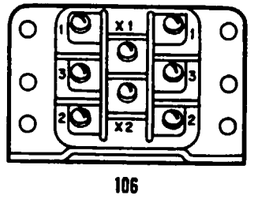
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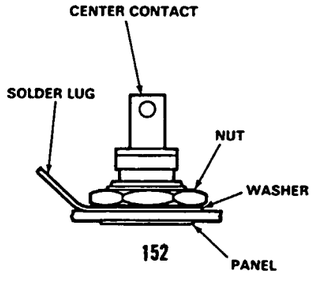
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104



106



152

GND STUD

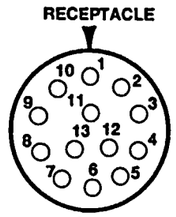


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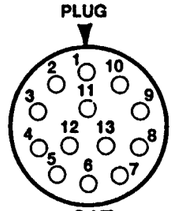
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GO TO NEXT PAGE

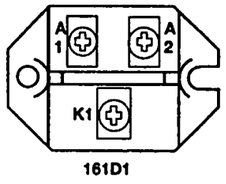
ELECTRICAL SYSTEM ELECTRICAL COMPONENT LOCATION AND CONFIGURATION LIST (Continued)



317

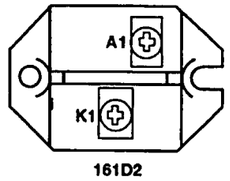


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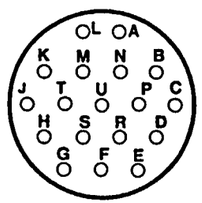
161D1

380

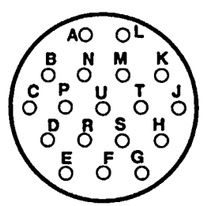


161D2

381



312

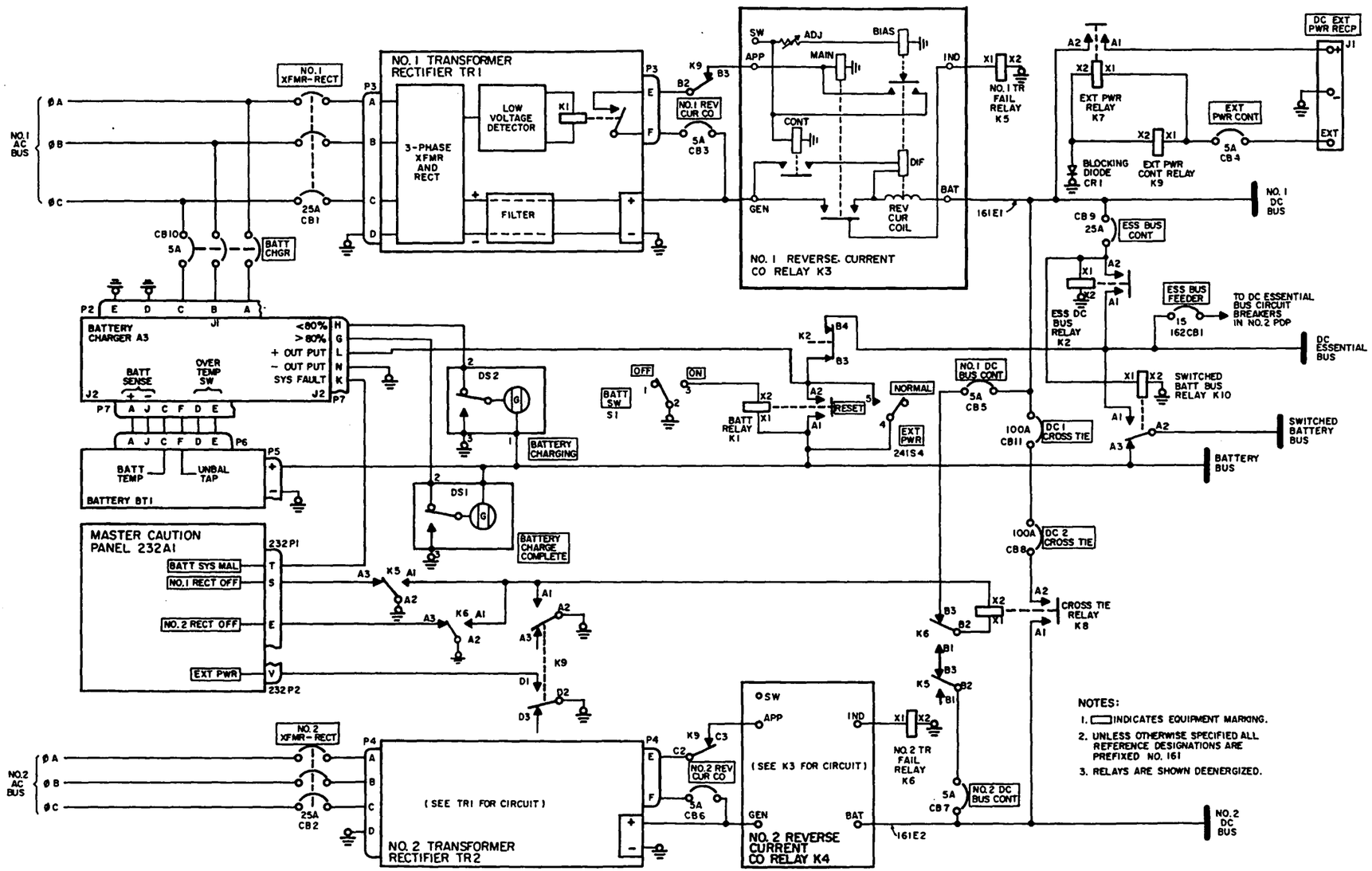


312

END OF TASK

9-1 DC POWER SYSTEM

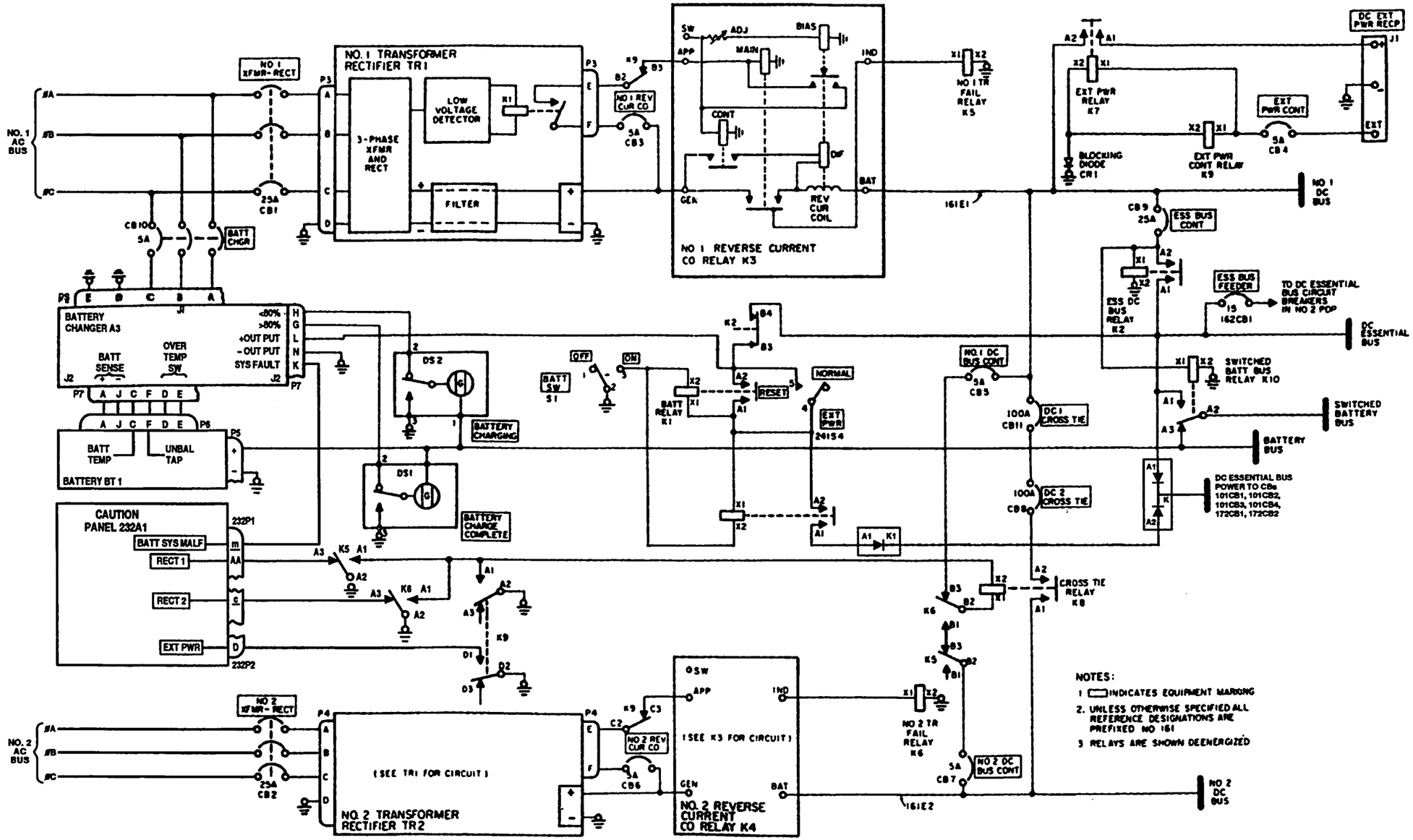
WITHOUT 74



539

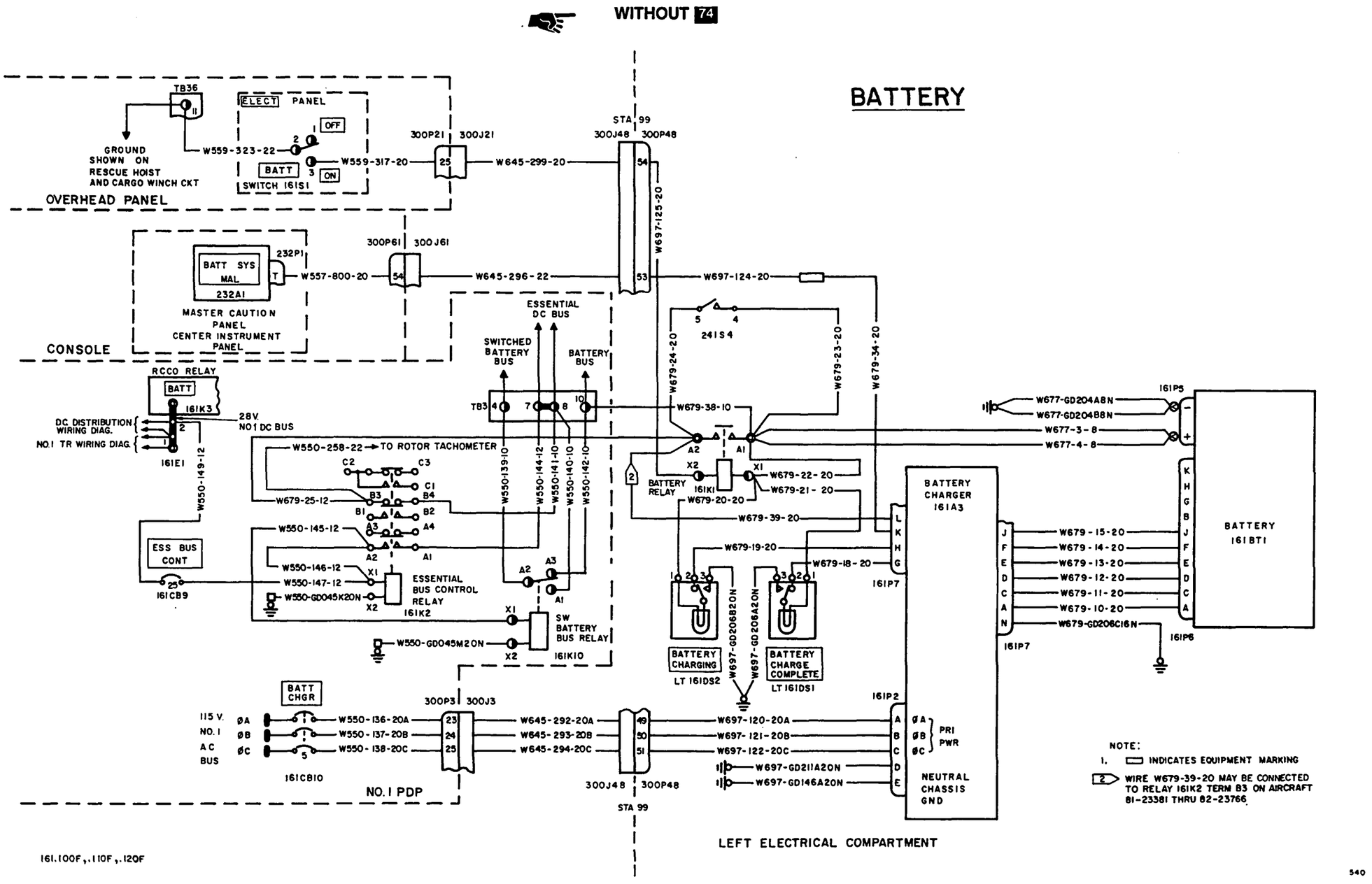
END OF TASK

WITH 74

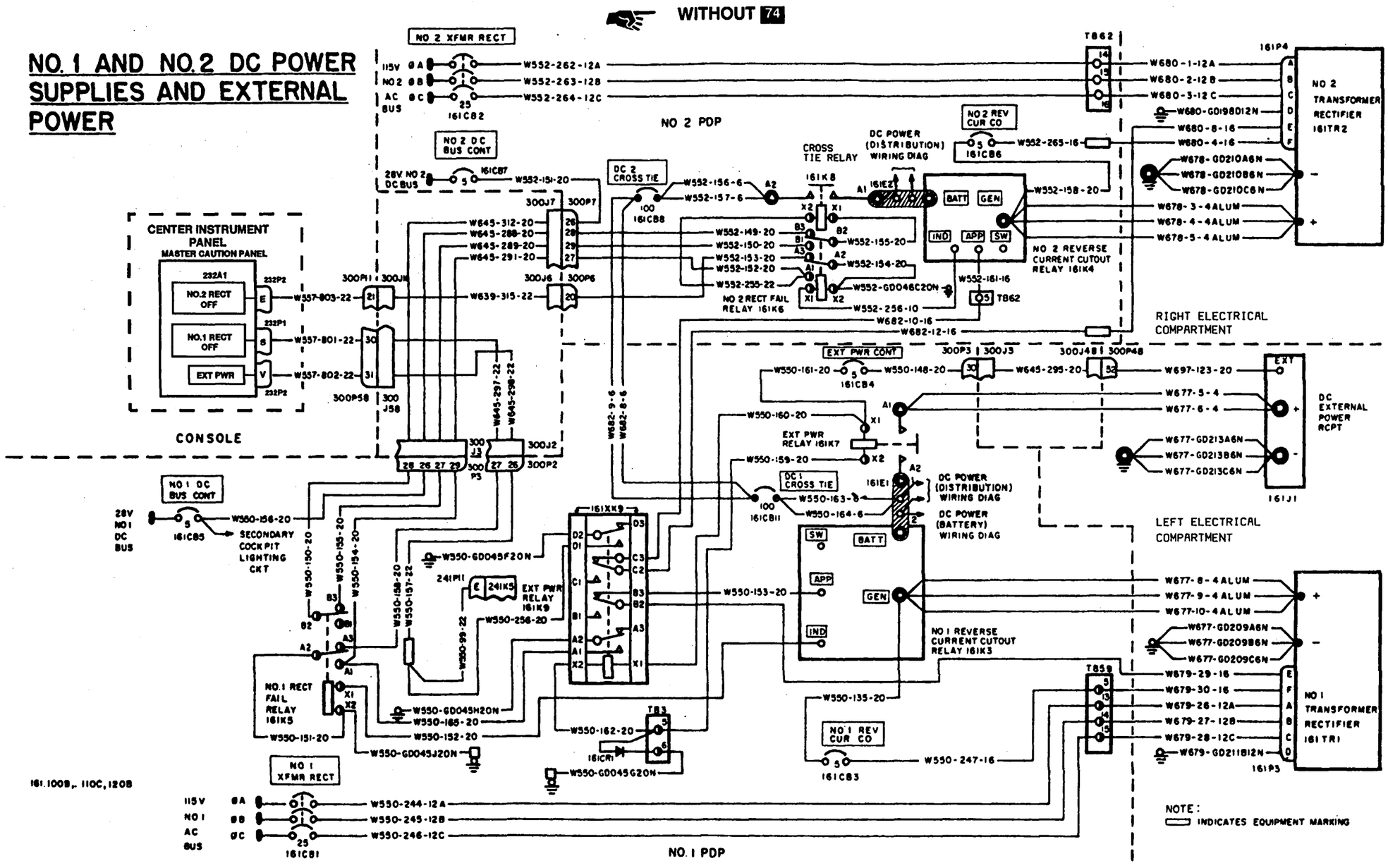


A65516

END OF TASK

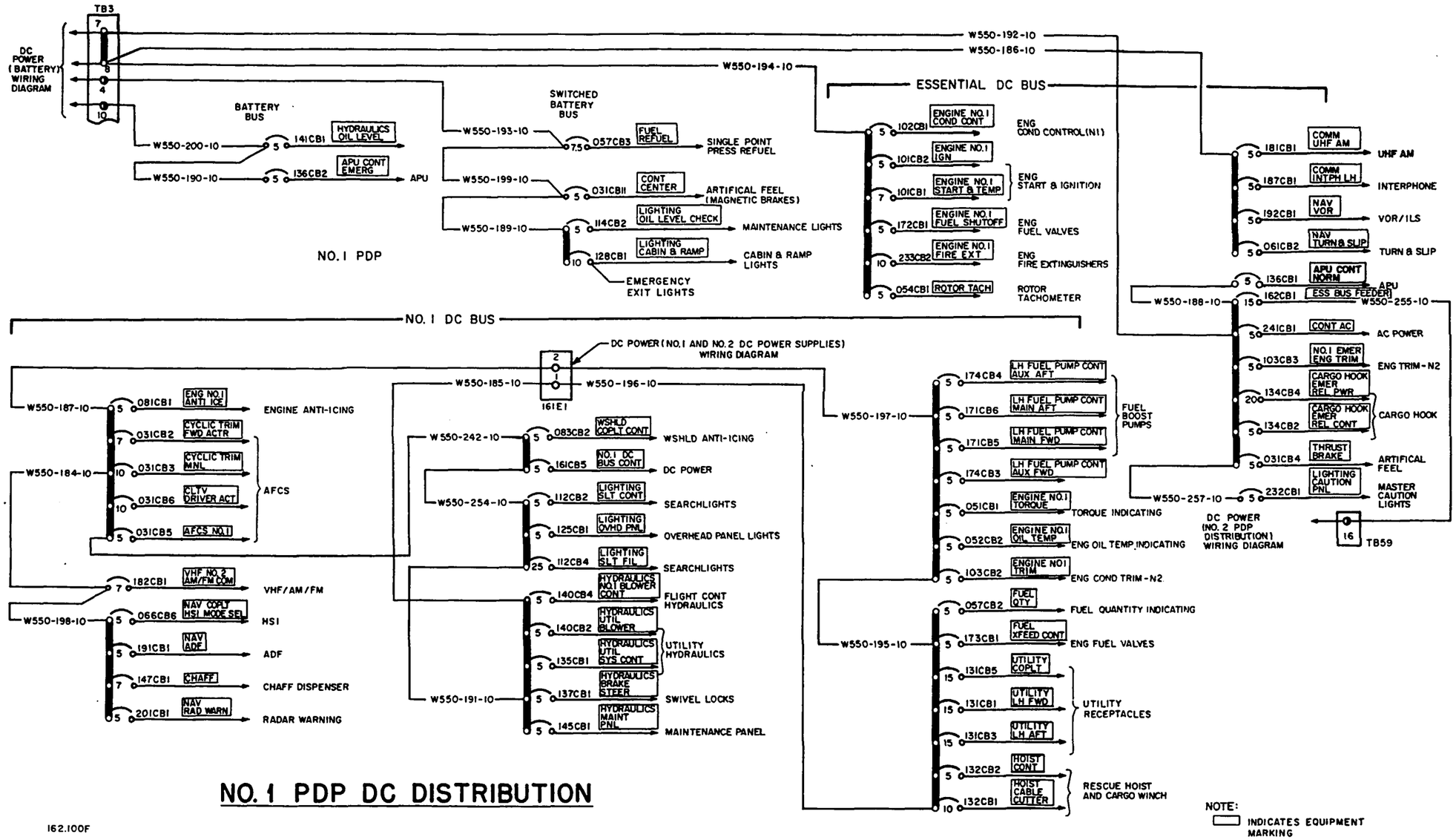

WITHOUT 74
BATTERY
TB36
ELECT PANEL
OFF
ON
BATT
SWITCH 161S1
GROUND SHOWN ON RESCUE HOIST AND CARGO WINCH CKT
W559-323-22
W559-317-20
OVERHEAD PANEL
300P21
300J21
STA 99
300J48
300P48
W645-299-20
W697-125-20
BATT SYS MAL
232A1
232P1
MASTER CAUTION PANEL CENTER INSTRUMENT PANEL
CONSOLE
300P61
300J61
W557-800-20
W645-296-22
W697-124-20
ESSENTIAL DC BUS
SWITCHED BATTERY BUS
BATTERY BUS
241S4
W679-24-20
W679-23-20
W679-34-20
RCCO RELAY
BATT
161K3
28V. NO1 DC BUS
DC DISTRIBUTION WIRING DIAG.
NO.1 TR WIRING DIAG.
161E1
W550-149-12
TB3
W679-38-10
W550-258-22 → TO ROTOR TACHOMETER
W550-139-10
W550-144-12
W550-141-10
W550-140-10
W550-142-10
W679-25-12
W550-145-12
W550-146-12
W550-147-12
W550-GD045K20N
ESS BUS CONT
161CB9
ESSENTIAL BUS CONTROL RELAY
161K2
SW BATTERY BUS RELAY
161K10
W550-GD045M20N
BATTERY RELAY
161K1
W679-22-20
W679-21-20
W679-20-20
W679-39-20
W679-19-20
W679-18-20
BATTERY CHARGING
LT 161DS2
BATTERY CHARGE COMPLETE
LT 161DS1
W697-GD206B2ON
W697-GD206A2ON
BATTERY CHARGER 161A3
161P7
161P2
W677-GD204A8N
W677-GD204B8N
W677-3-8
W677-4-8
161P5
161P6
BATTERY 161BT1
W679-15-20
W679-14-20
W679-13-20
W679-12-20
W679-11-20
W679-10-20
W679-GD206C16N
BATT CHGR
115 V. NO. 1 AC BUS
ØA
ØB
ØC
W550-136-20A
W550-137-20B
W550-138-20C
161CB10
300P3
300J3
W645-292-20A
W645-293-20B
W645-294-20C
300J48
300P48
STA 99
W697-120-20A
W697-121-20B
W697-122-20C
W697-GD211A20N
W697-GD146A20N
PRI PWR
NEUTRAL CHASSIS GND
NO. 1 PDP
LEFT ELECTRICAL COMPARTMENT
NOTE:
1. ▭ INDICATES EQUIPMENT MARKING
2 WIRE W679-39-20 MAY BE CONNECTED TO RELAY 161K2 TERM 83 ON AIRCRAFT 81-23381 THRU 82-23766
161.100F, .110F, .120F
540

NO. 1 AND NO. 2 DC POWER SUPPLIES AND EXTERNAL POWER



GO TO NEXT PAGE

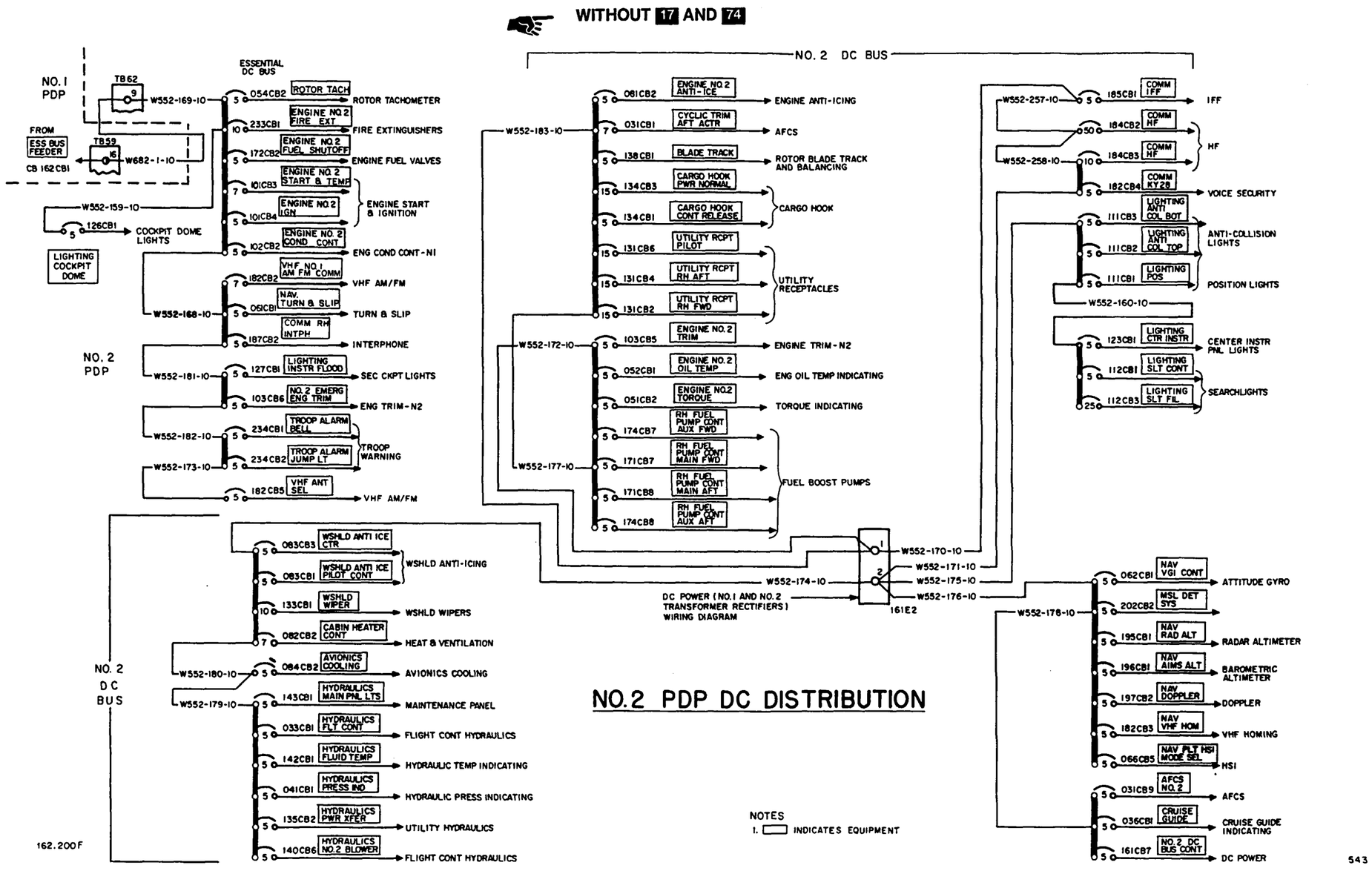
WITHOUT 17 AND 74



NO. 1 PDP DC DISTRIBUTION

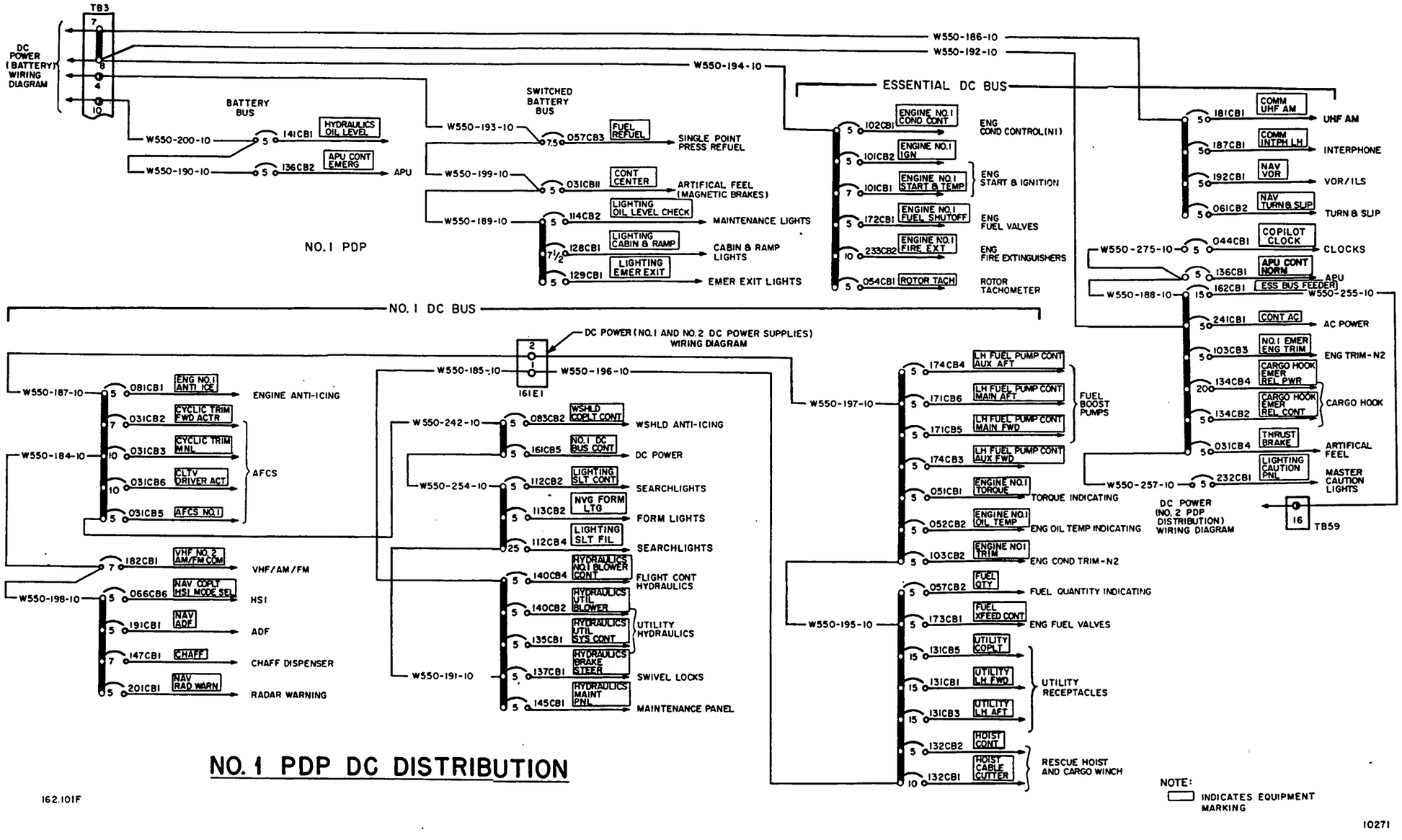
162.100F

542



GO TO NEXT PAGE

WITH 17 AND WITHOUT 74

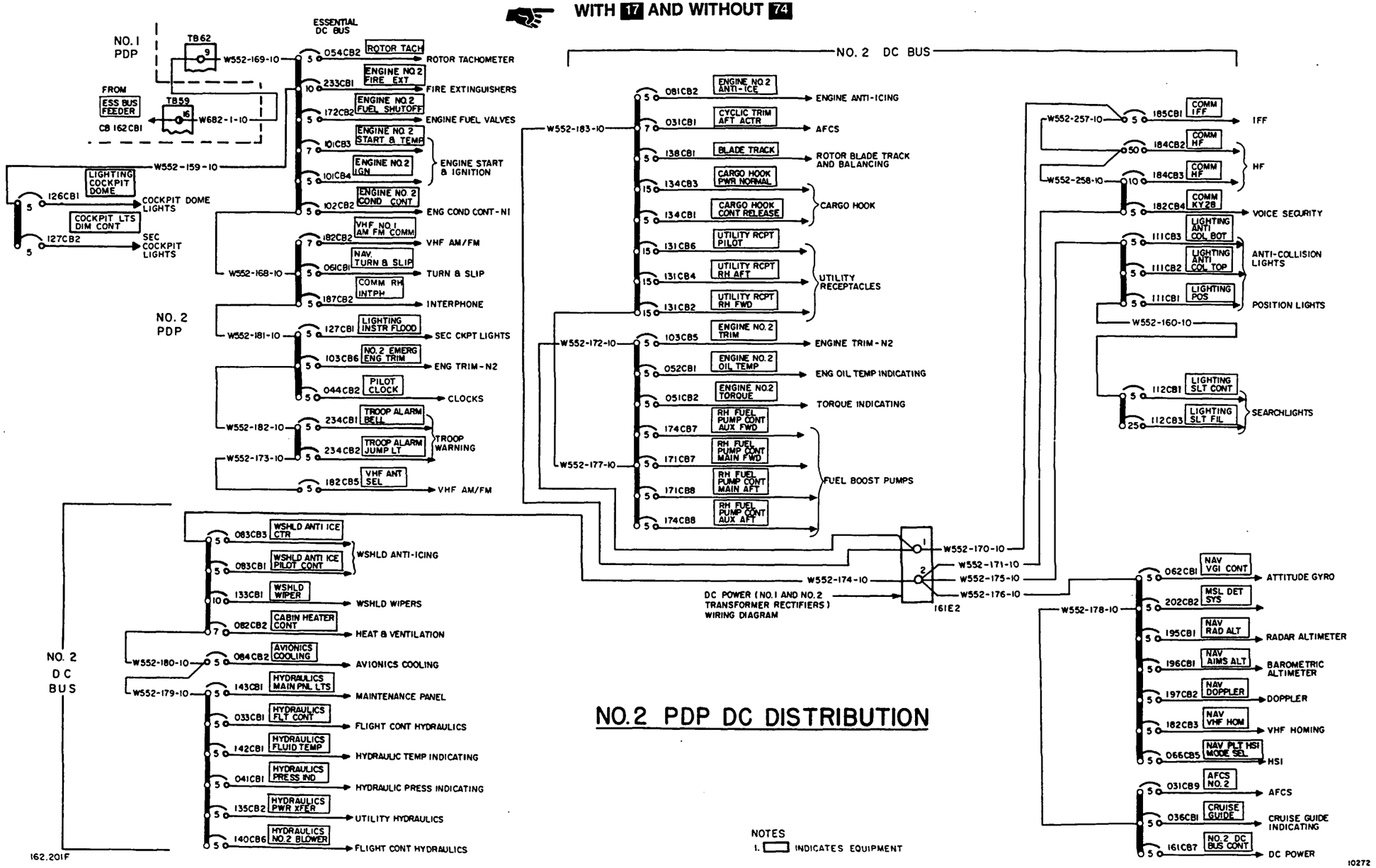


NO. 1 PDP DC DISTRIBUTION

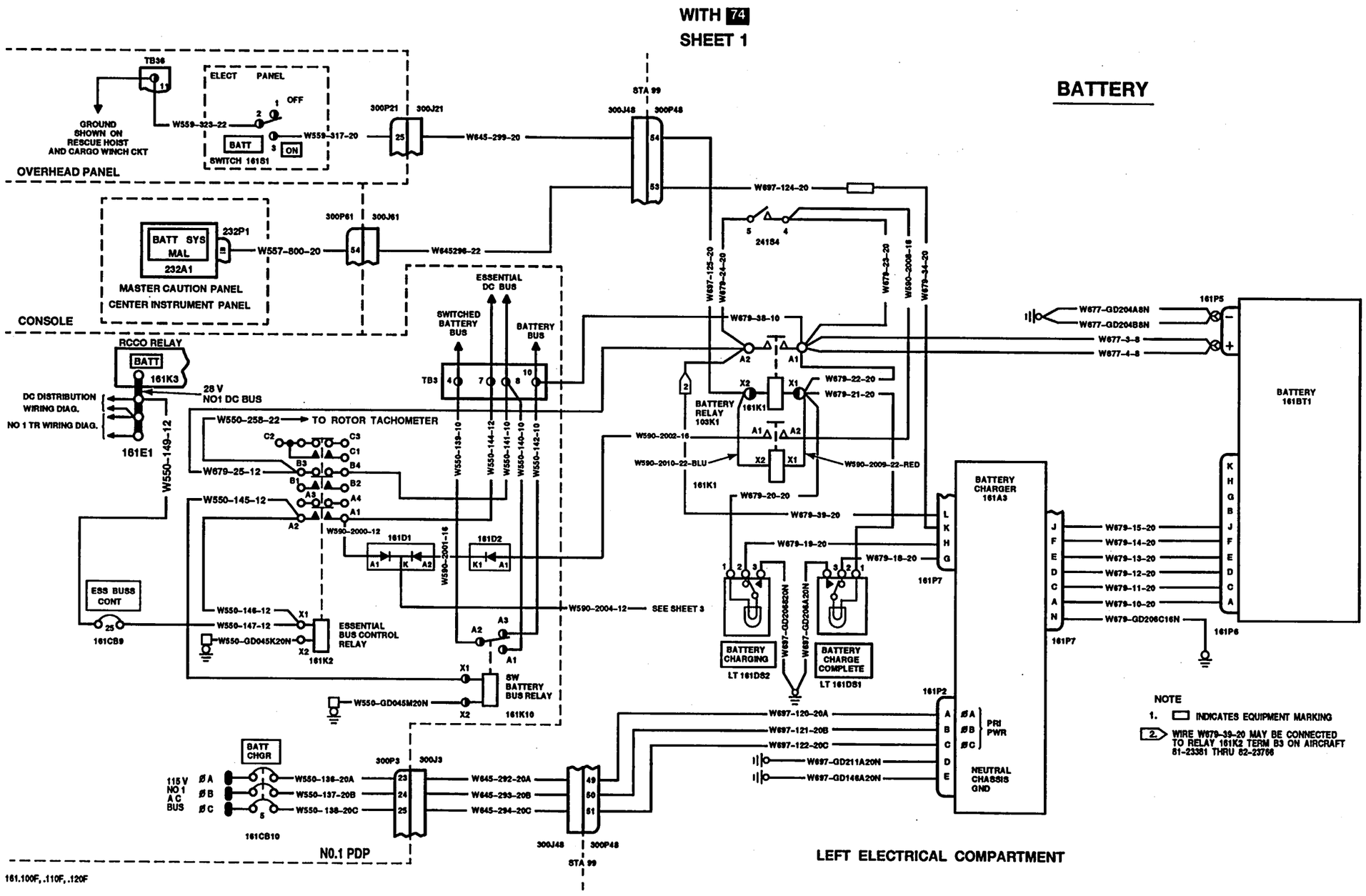
162.101F

10271

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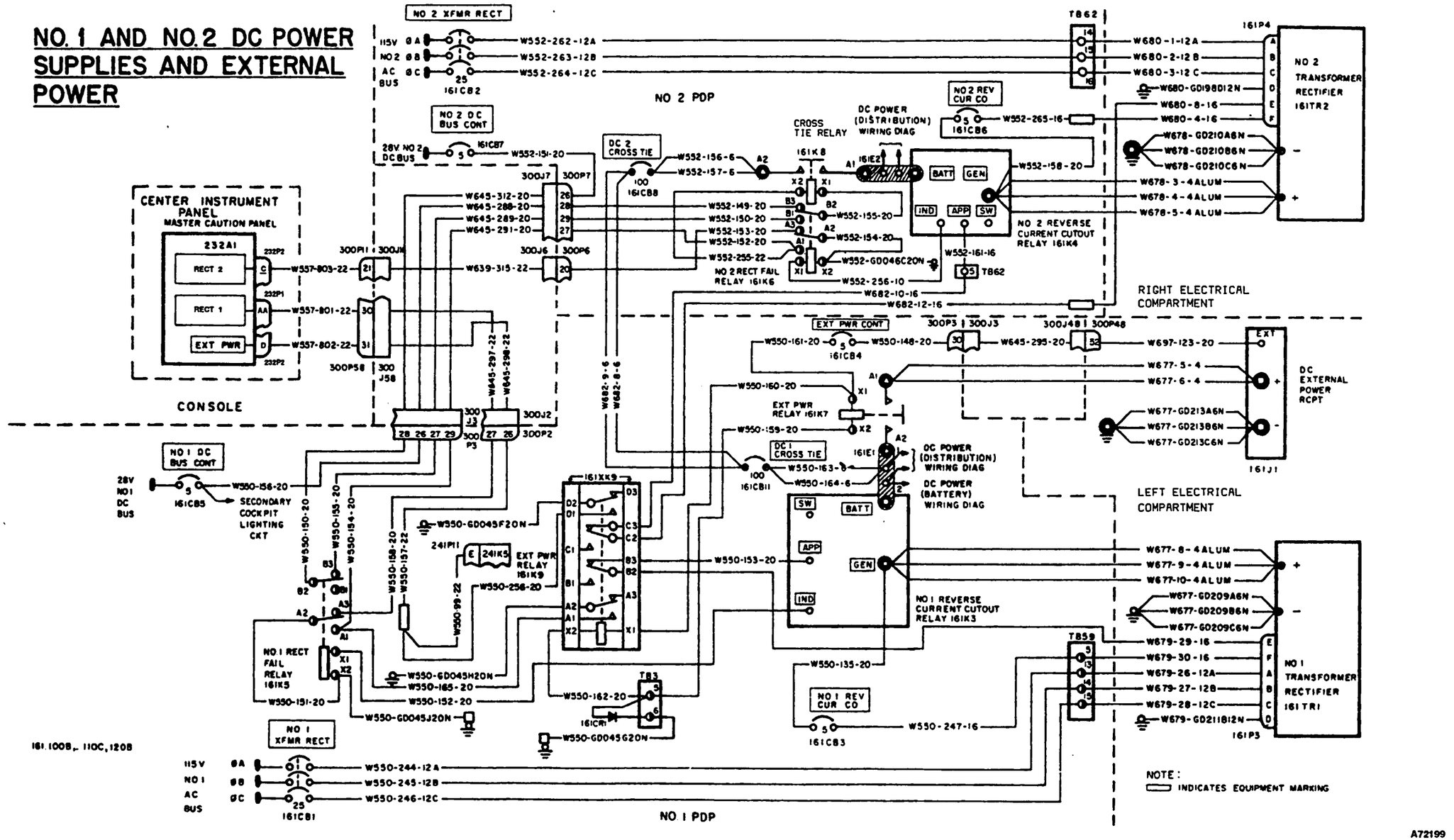

WITH 17 AND WITHOUT 74
NO. 1 PDP
TB62
9
W552-169-10
FROM ESS BUS FEEDER
TB59
16
W682-1-10
CB 162CB1
W552-159-10
ESSENTIAL DC BUS
054CB2 ROTOR TACH → ROTOR TACHOMETER
233CB1 ENGINE NO.2 FIRE EXT → FIRE EXTINGUISHERS
172CB2 ENGINE NO.2 FUEL SHUTOFF → ENGINE FUEL VALVES
101CB3 ENGINE NO.2 START & TEMP
101CB4 ENGINE NO.2 IGN
} ENGINE START & IGNITION
102CB2 ENGINE NO.2 COND CONT → ENG COND CONT-N1
LIGHTING COCKPIT DOME
126CB1 → COCKPIT DOME LIGHTS
COCKPIT LTS DIM CONT
127CB2 → SEC COCKPIT LIGHTS
182CB2 VHF NO.1 AM FM COMM → VHF AM/FM
W552-168-10
061CB1 NAV TURN & SLIP → TURN & SLIP
187CB2 COMM RH INTPH → INTERPHONE
NO. 2 PDP
W552-181-10
127CB1 LIGHTING INSTR FLOOD → SEC CKPT LIGHTS
103CB6 NO.2 EMERG ENG TRIM → ENG TRIM-N2
044CB2 PILOT CLOCK → CLOCKS
W552-182-10
234CB1 TROOP ALARM BELL
234CB2 TROOP ALARM JUMP LT
} TROOP WARNING
W552-173-10
182CB5 VHF ANT SEL → VHF AM/FM
NO. 2 DC BUS
083CB3 WSHLD ANTI ICE CTR
083CB1 WSHLD ANTI ICE PILOT CONT
} WSHLD ANTI-ICING
133CB1 WSHLD WIPER → WSHLD WIPERS
082CB2 CABIN HEATER CONT → HEAT & VENTILATION
W552-180-10
084CB2 AVIONICS COOLING → AVIONICS COOLING
W552-179-10
143CB1 HYDRAULICS MAIN PNL LTS → MAINTENANCE PANEL
033CB1 HYDRAULICS FLT CONT → FLIGHT CONT HYDRAULICS
142CB1 HYDRAULICS FLUID TEMP → HYDRAULIC TEMP INDICATING
041CB1 HYDRAULICS PRESS IND → HYDRAULIC PRESS INDICATING
135CB2 HYDRAULICS PWR XFER → UTILITY HYDRAULICS
140CB6 HYDRAULICS NO.2 BLOWER → FLIGHT CONT HYDRAULICS
162.201F
NO. 2 DC BUS
W552-183-10
081CB2 ENGINE NO.2 ANTI-ICE → ENGINE ANTI-ICING
031CB1 CYCLIC TRIM AFT ACTR → AFCS
138CB1 BLADE TRACK → ROTOR BLADE TRACK AND BALANCING
134CB3 CARGO HOOK PWR NORMAL
134CB1 CARGO HOOK CONT RELEASE
} CARGO HOOK
131CB6 UTILITY RCPT PILOT
131CB4 UTILITY RCPT RH AFT
131CB2 UTILITY RCPT RH FWD
} UTILITY RECEPTACLES
W552-172-10
103CB5 ENGINE NO.2 TRIM → ENGINE TRIM-N2
052CB1 ENGINE NO.2 OIL TEMP → ENG OIL TEMP INDICATING
051CB2 ENGINE NO.2 TORQUE → TORQUE INDICATING
174CB7 RH FUEL PUMP CONT AUX FWD
W552-177-10
171CB7 RH FUEL PUMP CONT MAIN FWD
171CB8 RH FUEL PUMP CONT MAIN AFT
174CB8 RH FUEL PUMP CONT AUX AFT
} FUEL BOOST PUMPS
W552-174-10
DC POWER (NO.1 AND NO.2 TRANSFORMER RECTIFIERS) WIRING DIAGRAM
1
2
161E2
W552-170-10
W552-171-10
W552-175-10
W552-176-10
W552-257-10
185CB1 COMM IFF → IFF
W552-258-10
184CB2 COMM HF
184CB3 COMM HF
} HF
182CB4 COMM KY28 → VOICE SECURITY
111CB3 LIGHTING ANTI COL BOT
111CB2 LIGHTING ANTI COL TOP
} ANTI-COLLISION LIGHTS
111CB1 LIGHTING POS → POSITION LIGHTS
W552-160-10
112CB1 LIGHTING SLT CONT
112CB3 LIGHTING SLT FIL
} SEARCHLIGHTS
W552-178-10
062CB1 NAV VGI CONT → ATTITUDE GYRO
202CB2 MSL DET SYS
195CB1 NAV RAD ALT → RADAR ALTIMETER
196CB1 NAV AIMS ALT → BAROMETRIC ALTIMETER
197CB2 NAV DOPPLER → DOPPLER
182CB3 NAV VHF HOM → VHF HOMING
066CB5 NAV PLT HSI MODE SEL → HSI
031CB9 AFCS NO.2 → AFCS
036CB1 CRUISE GUIDE → CRUISE GUIDE INDICATING
161CB7 NO.2 DC BUS CONT → DC POWER
10272
NO.2 PDP DC DISTRIBUTION
NOTES
1. ▭ INDICATES EQUIPMENT

END OF TASK



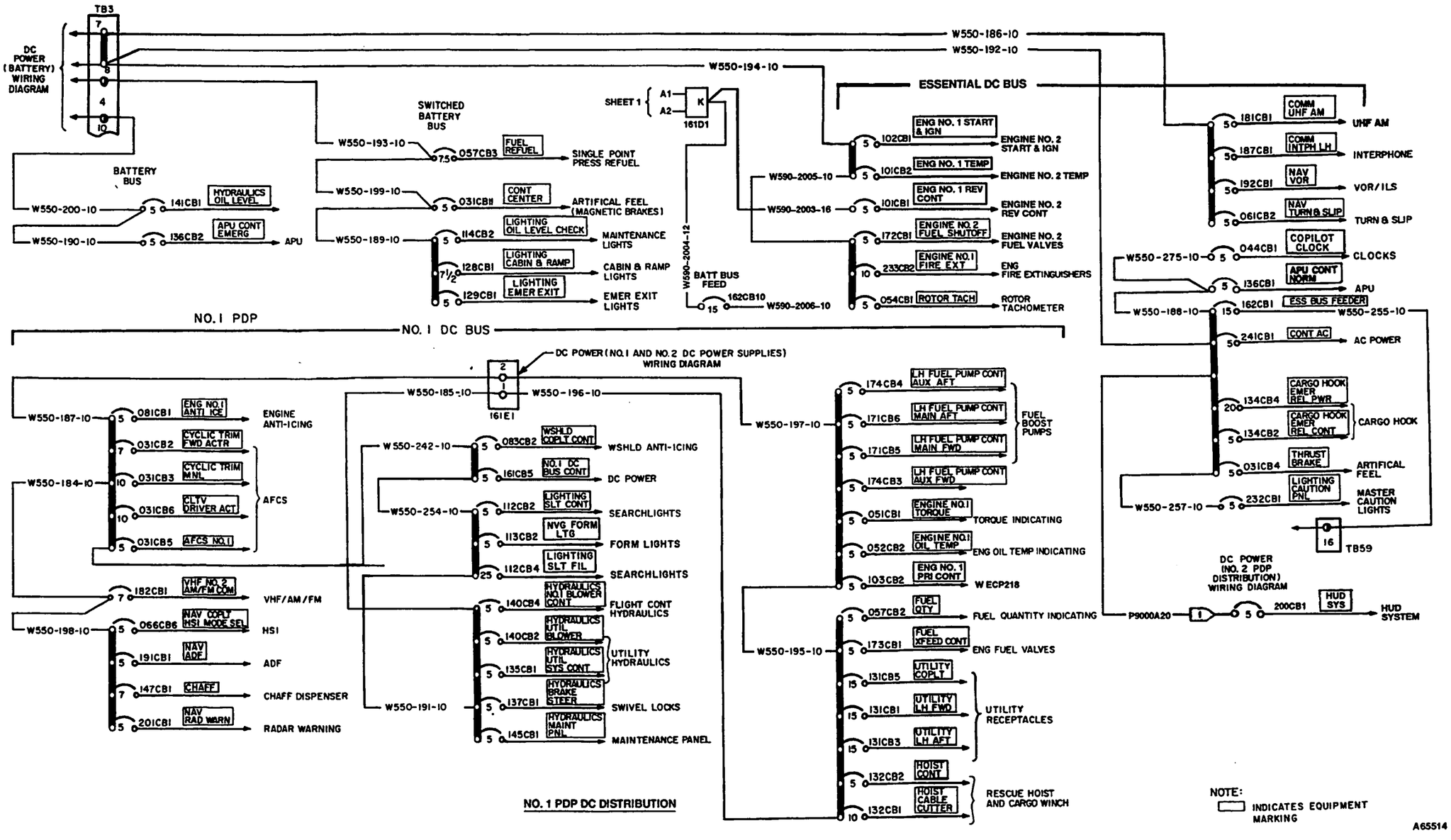
GO TO NEXT PAGE

WITH 74
SHEET 2



GO TO NEXT PAGE

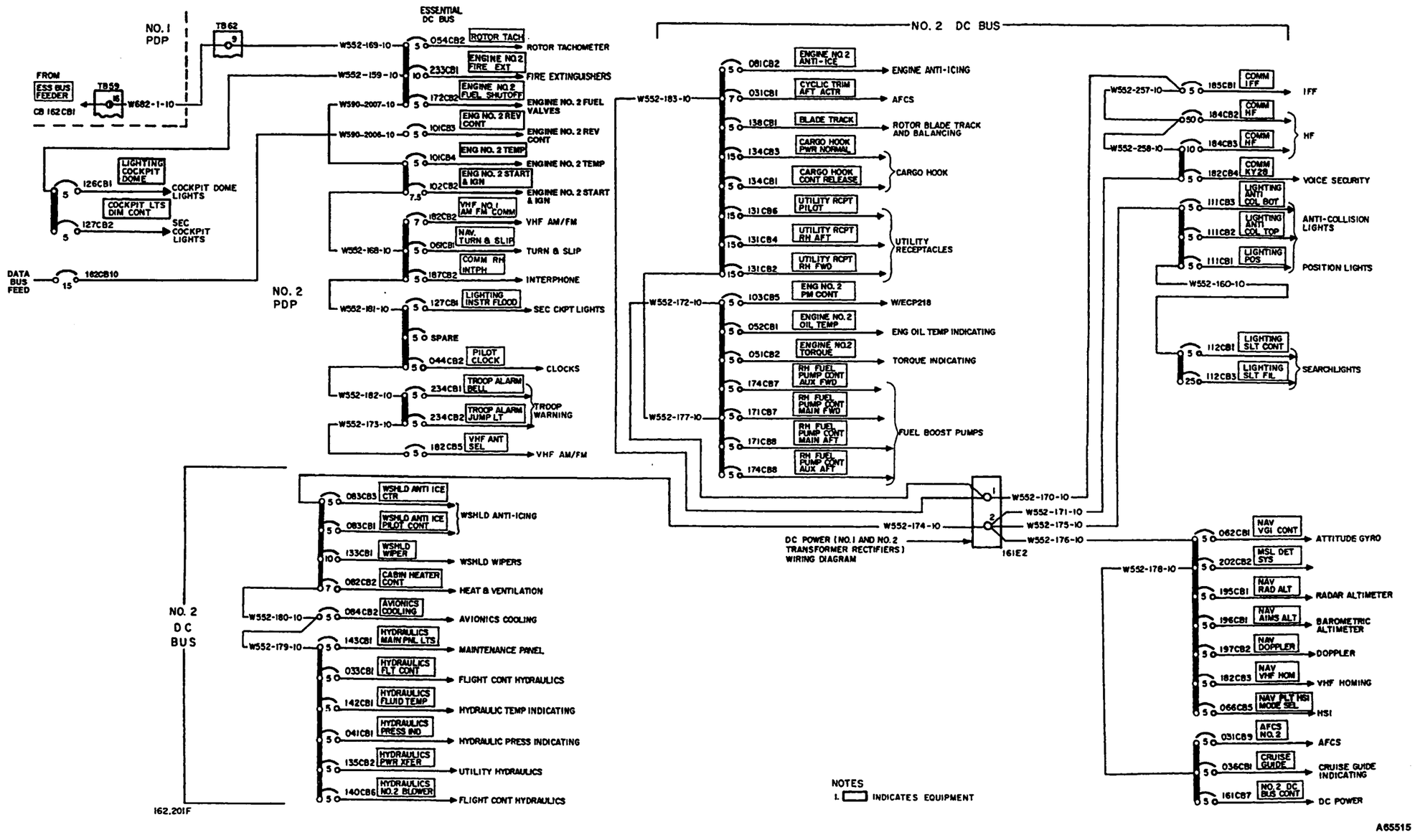
WITH 17 AND 74
SHEET 3



GO TO NEXT PAGE

WITH 17 AND 74
SHEET 4

NO. 2 PDP DISTRIBUTION



END OF TASK

9-1.3 DC POWER SYSTEM VISUAL CHECK

INITIAL SETUP

Applicable Configurations:
All

Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915

Materials:
None

Personnel Required:
68F10 Aircraft Electrician

References:
TM 55-1520-240-23

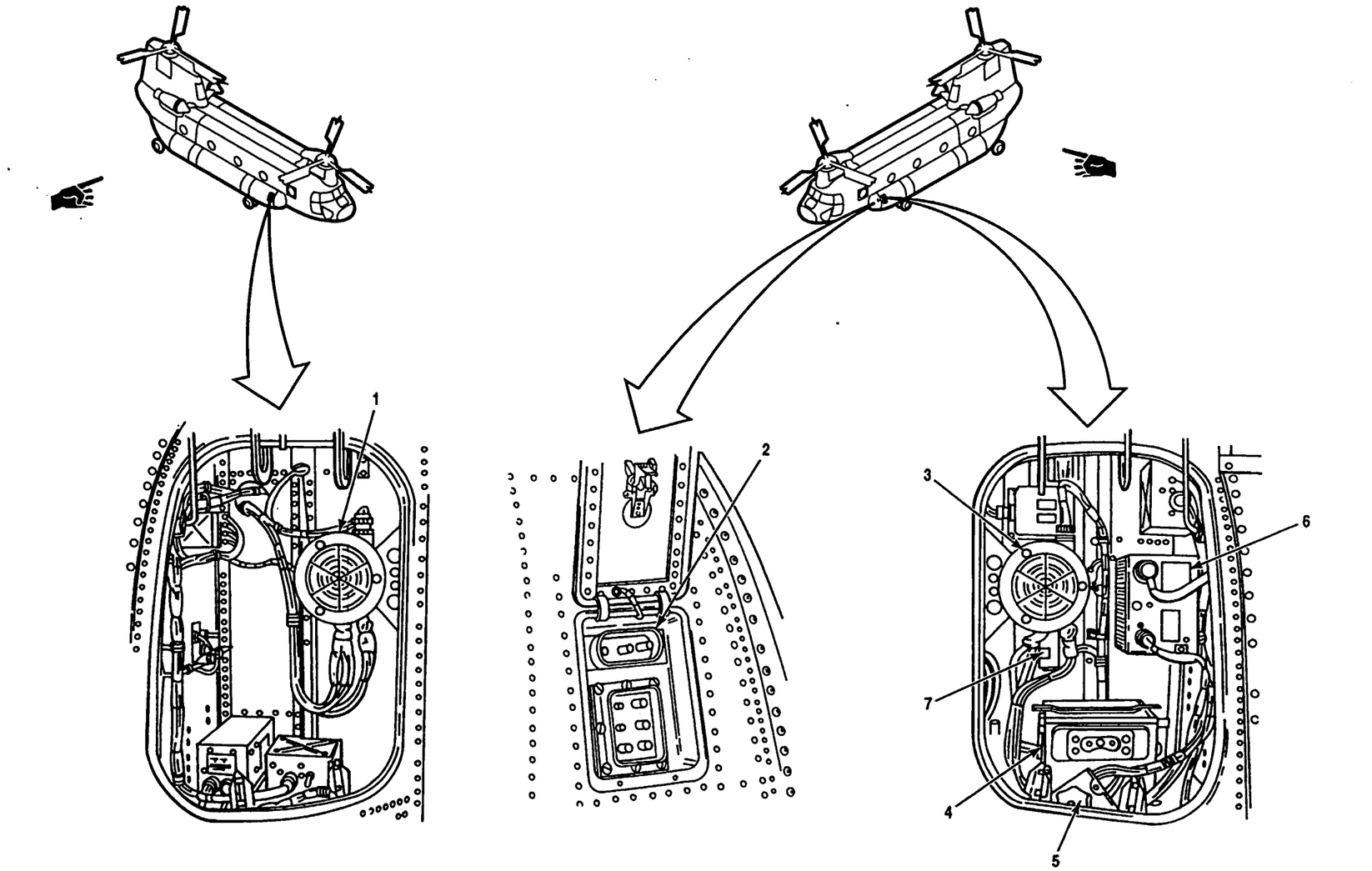
Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off
Left and Right Electrical Compartment Access Doors Open
EXT PWR DC-AC Access Cover Open

TASK	RESULT
1. **Check No. 2 dc power supply (1).**	If No. *2* de power supply is loose or damaged. tighten or replace it as required. If connector to supply is loose or damaged tighten or replace it es required. If wiring to connector or supply is loose or damaged, tighten or repair or replace it as required,
2. **Check dc external power receptacle (2).**	If receptacle (2) is lwse or damaged, tighten or replace it as required.
3. **Check No. 1 dc power supply (3).**	If No. 1 de power supply (3) is loose or damaged, tighten or replace it as required. If connector to supply is loose or damaged, tighten or repair it as required. If wiring to connector or supply is loose or damaged, tighten or repair or replace it as required.
4. **Check battery (4).**	If battery is loose or damaged, tighten or replace it as required. If connector to battery is loose or damaged tighten or replace it as required. If wiring to connector is loose or damaged. repair or replace it as required.
5. **Check battery connector (5).**	If connector is damaged, replace it. If wiring to connector is damaged, repair or replace it.
6. **Check battery charger (6).**	If charger (6) is loose or damaged, tighten or replace it as required. If connectors to charger are loose or damaged, tighten or replace them as required. If wiring to connectors is damaged. repair or replace it as required.
7. **Check battery relay (7).**	If relay (7) is loose or damaged, tighten or replace it as required. If wiring to relay is loose or damaged tighten or repair or replace it as required.

FOLLOW-ON MAINTENANCE:
None

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GO TO NEXTPAGE



A65608

END OF TASK

9-1.4 DC POWER SYSTEM OPERATIONAL CHECK

INITIAL SETUP

Applicable Configurations:
All

Tools:
28 VDC External Power Source

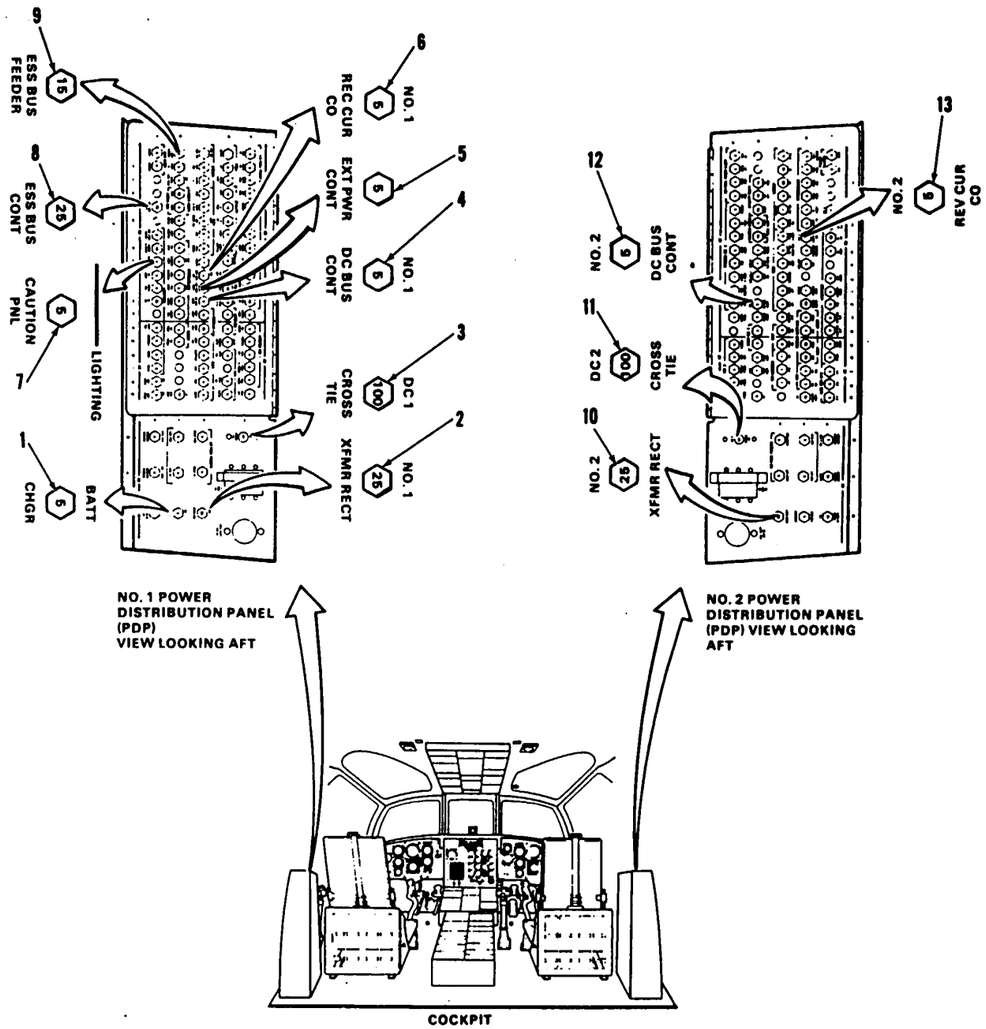
Materials:
None

Personnel Required:
Aircraft Electrician (2)

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power Off
Hydraulic Power Off
Visual Check of Dc Power System Performed (Task 9-1.3)

TASK	RESULT
CHECK CIRCUIT BREAKERS	
1. **Check** that **following circuit breakers on No. 1 pdp** are closed: BATT CHGR (1) NO. 1 XFMR RECT (2) DC 1 CROSSTIE (3) NO. 1 DC BUS CONT (4) EXT PWR CONT (5) NO. 1 REV CUR CO (6) CAUTION PNL (7) ESS BUS CONT (8) ESS BUS FEEDER (9)	If any circuit breaker (1 through 9) is open, close it.
2. **Check** that **following circuit breakers on No. 2 pdp** are closed: NO. 2 XFMR RECT (10) DC2 CROSSTIE (11) NO. 2 DC BUS CONT(12) NO. 2 REV CUR CO (13)	If any circuit breaker (10, 11, 12, or 13) is open. closed it.

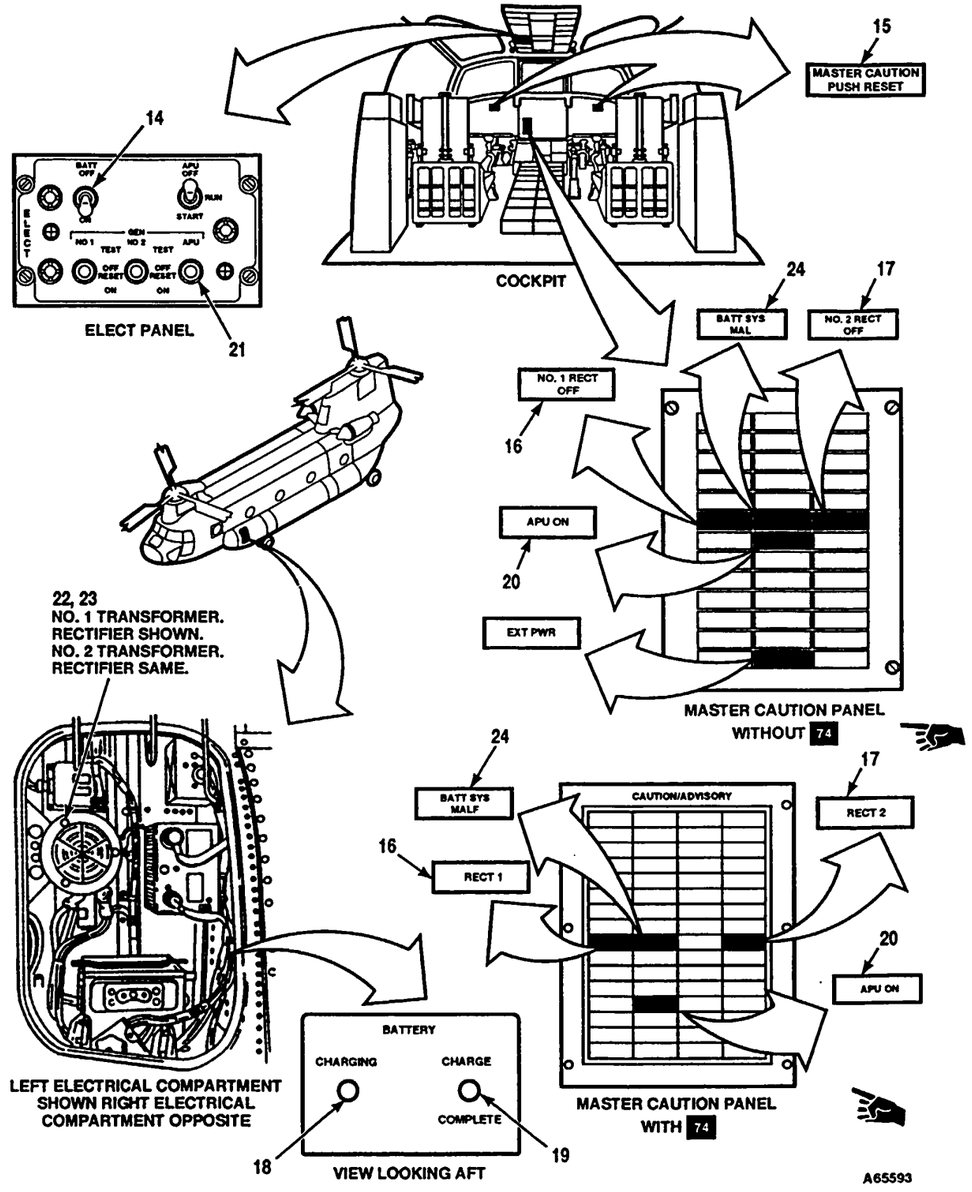


45-54

D145-11215-SPP

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TASK	RESULT
3. **Set BATT switch (14) to ON.**	MASTER CAUTION lights (15) shall come on. NO. 1 RECT OFF and NO. 2 RECT OFF (Without 74) RECT 1 and RECT 2 (With 74) capsules (16 and 17) shall be on. If lights do not come on, replace battery. Refer to TM 55-1520-240-23. If lights still do not come on, go to task 9-1.5. If either capsule (16 or 17) is not on, go to task 9-1.6.
4. **Press and release BATTERY CHARGING and CHARGE COMPLETE lights (18 and 19).**	Lights (18 and 19) shall momentarily come on. If either light does not come on, go to task 9-1.7.
5. **Start apu.** Refer to task 15-1.5.	APU ON capsule (20) shall come on.
6. **Set APU GEN switch (21) to ON.**	NO. 1 RECT OFF and NO. 2 RECT OFF (Without 74) RECT 1 and RECT 2 (With 74) capsules (16 and 17) shall go out. APU ON capsule (20) shall stay on. If capsules (16 and 17) are still on, go to task 9-2.5. If only NO. 1 RECT OFF (Without 74) RECT 1 (With 74) capsule is still on, go to task 9-1.8. If only NO. 2 RECT 1 OFF (Without 74) RECT 2 (With 74) capsule is still on, go to task 9-1.9.
7. **Check BATT SYS MAL capsule (24).**	BATT SYS MAL capsule (24) shall be out. If it is on, open and then dose BATT CHGR circuit breaker (1). If capsule (24) is still on, go to task 9-1.11.
8. **Check air flow from No. 1 transformer-rectifier (22).**	Air shall flow from rectifier (22). If not, replace rectifier.
9. **Check air flow from No. 2 transformer-rectifier (23).**	Air shall flow from rectifier (23). If not, replace rectifier.
10. **Check BATTERY CHARGING and CHARGE COMPLETE lights (18 and 19).**	Light (18 or 19) shall be on. If either light is not on, go to task 9-1.10.



TASK	RESULT
11. **Open NO. 1 REV CUR CO circuit breaker (6).**	NO. 1 RECT OFF (Without 74) RECT 1 (With 74) capsule (16) shall come on. If it does not, replace NO. 1 reverse current cutout relay.
12. Turn top and bottom **anti collision lights ON.** Refer to task 9-6.3.	Both top and bottom anti collision lights shall flash. If they do not, go to task 9-1.12.
13. **Turn overhead panel lights ON.**	Overhead panel lights shall come on. If they do not, go to task 9-1.13.
14. **Close NO. 1 REV CUR CO circuit breaker (6). Open**	NO. 1 RECT OFF (Without 74) RECT 1 (With 74) capsule (16) shall go out. NO. 2 RECT OFF (Without 74) RECT 2 (With 74) capsule (17) shall come on. If it does not, replace NO. 2 reverse current cutout relay.
15. **Check overhead panel lights.**	Overhead panel lights shall still be on. If they are out, go to task 9-1.14.
16. **Check anti collision lights.**	Anti collision lights shall still be on. If they are not, go to task 9-1.15.
17. **Turn off overhead panel lights**.	
18. **Close NO. 2 REV CUR CO circuit breaker (13).**	NO. 2 RECT OFF (Without 74) RECT 2 (With 74) capsule (17) shall go out.
19. **Open NO. 1 REV CUR CO and NO. 2 REV CUR CO circuit breakers (6 and 13).**	NO. 1 and NO. 2 RECT OFF (Without 74) RECT 1 and RECT 2 (With 74) capsules (16 and 17) shall come on.
20. **Turn cabin and ramp white lights ON.**	Cabin and ramp white lights shall come on. If they do not, go to task 9-1.16.
21. **Close NO. 1 REV CUR CO and NO. 2 REV CUR CO circuit breakers (6 and 13).**	NO. 1 and NO. 2 RECT OFF (Without 74) RECT 1 and RECT 2 (With 74) capsule (16 and 17) shall go out.
22. **Disconnect electrical connector (27) from battery (28).**	
23. **Check cabin and ramp white lights**.	Cabin and ramp white lights shall stay on. If they are not on, go to task 9-1.20.
23.1 **Connect electrical connector (27) to battery (28).**	
24. **Turn off cabin and ramp white lights.** Use CAB & RAMP LT switch. Refer to task 9-15.3.	

NOTE

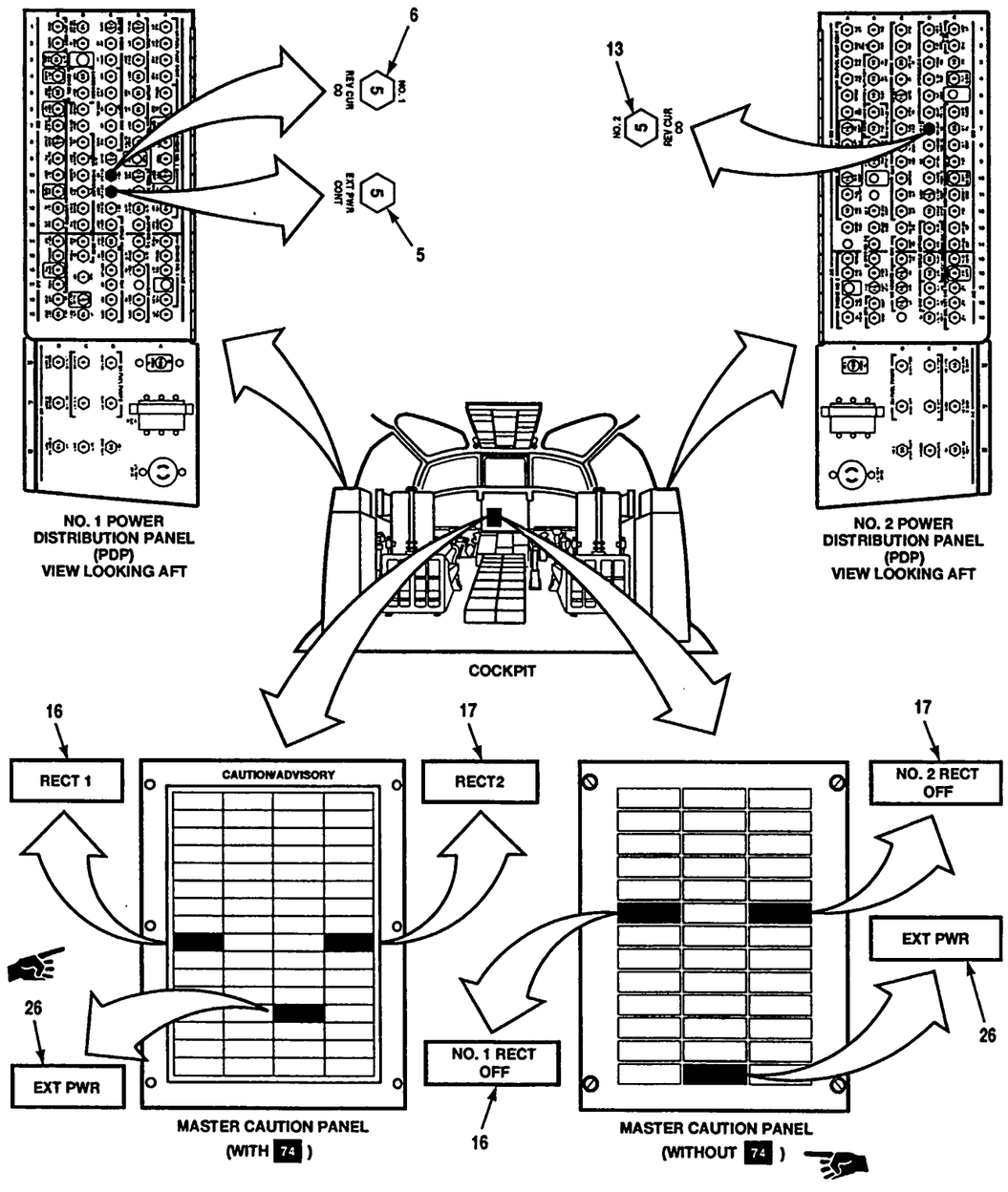
Steps 25 through 27 can only be performed with an external 28VDC power source.

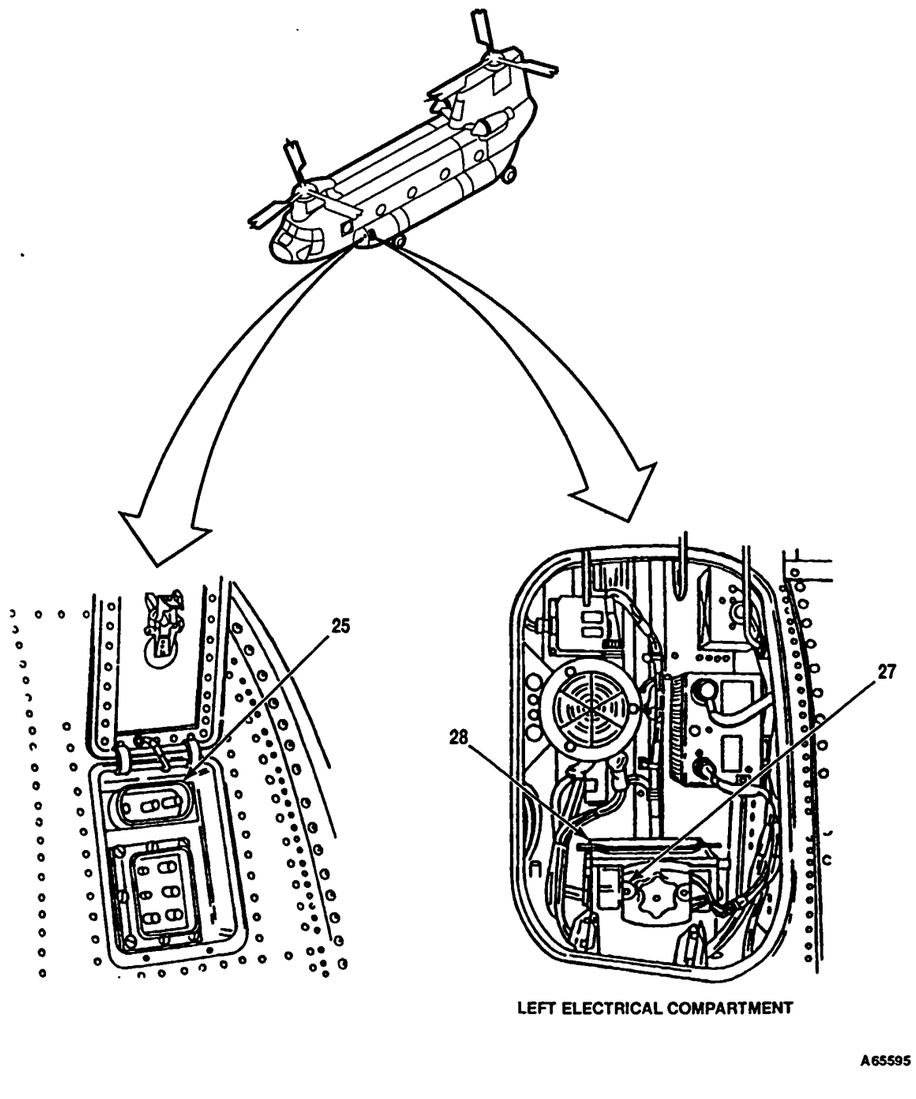
TASK	RESULT
25. **Connect external 28VDC power source to receptacle (25).** Turn on power supply.	NO. 1 and NO. 2 RECT OFF (Without 74) RECT 1 and RECT 2 (With 74) capsules (16 and 17) shall come on. EXT PWR capsule (26) shall come on. If capsule (16 or 17) is out, go to task 9-1.17. If capsule (26) does not come on, go to task 9-1.18. EXT PWR CONT circuit breaker (5) shall stay closed. If it does not, go to task 9-1.21.
26. **Check anti collision lights.**	Anticollision lights shall still be on. If they are not, go to task 9-1.19.
27. **Turn off and disconnect external 28VDC power.**	NO. 1 and NO. 2 RECT OFF (Without 74) RECT 1 and RECT 2 (With 74) capsules (16 and 17) shall go out. EXT PWR capsule (26) shall go out. If any capsule (16, 17, or 26) is still on, replace external power control relay.
28. **Turn off anti collision lights.**	
29. **Shutdown apu.** Refer to task 15-1.4.	

FOLLOW-ON MAINTENANCE:

None

GO TO NEXT PAGE


6
NO. 1 RECT CUR
5
8
EXT PWR CONT
5
5
13
NO. 2 RECT CUR
5
8
NO. 1 POWER DISTRIBUTION PANEL (PDP) VIEW LOOKING AFT
NO. 2 POWER DISTRIBUTION PANEL (PDP) VIEW LOOKING AFT
COCKPIT
16
RECT 1
CAUTION/ADVISORY
17
RECT2
17
NO. 2 RECT OFF
EXT PWR
26
EXT PWR
NO. 1 RECT OFF
16
26
MASTER CAUTION PANEL (WITH 74)
MASTER CAUTION PANEL (WITHOUT 74)

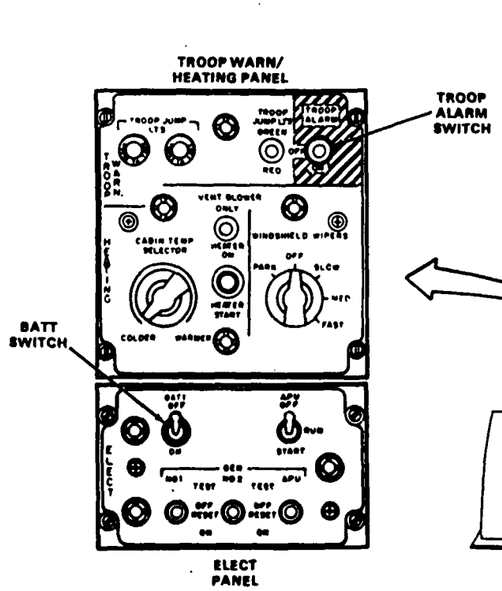

25
28
27
LEFT ELECTRICAL COMPARTMENT
A65595

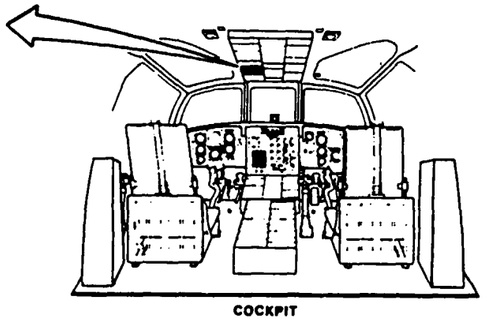
END OF TASK

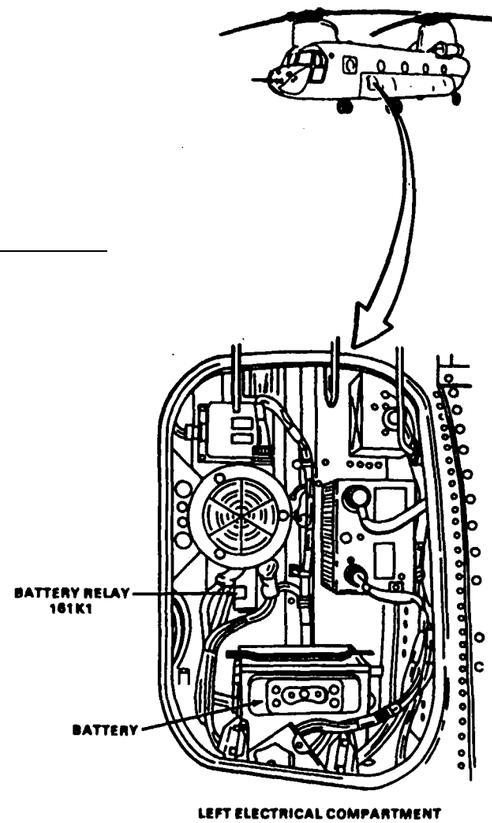
9-1.5 MASTER CAUTION LIGHT DO NOT COME ON WHEN BATTERY SWITCH SET ON 9-1.5

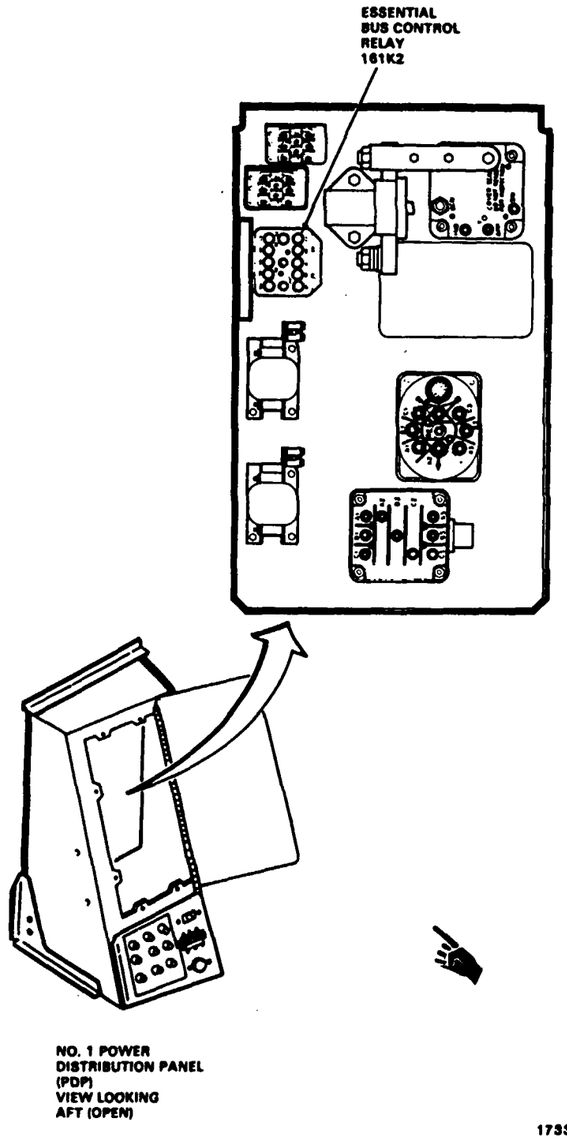
FAULT ISOLATION PROCEDURE

INITIAL SETUP
Applicable Configurations:
All
Tools:
Electrical Repairer Tool Kit, NSN 5180-00-323-4915
Multimeter
Materials:
None
Personnel Required:
Medium Helicopter Repairer
Aircraft Electrician
Reference:
TM 55-1520-240-23
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off



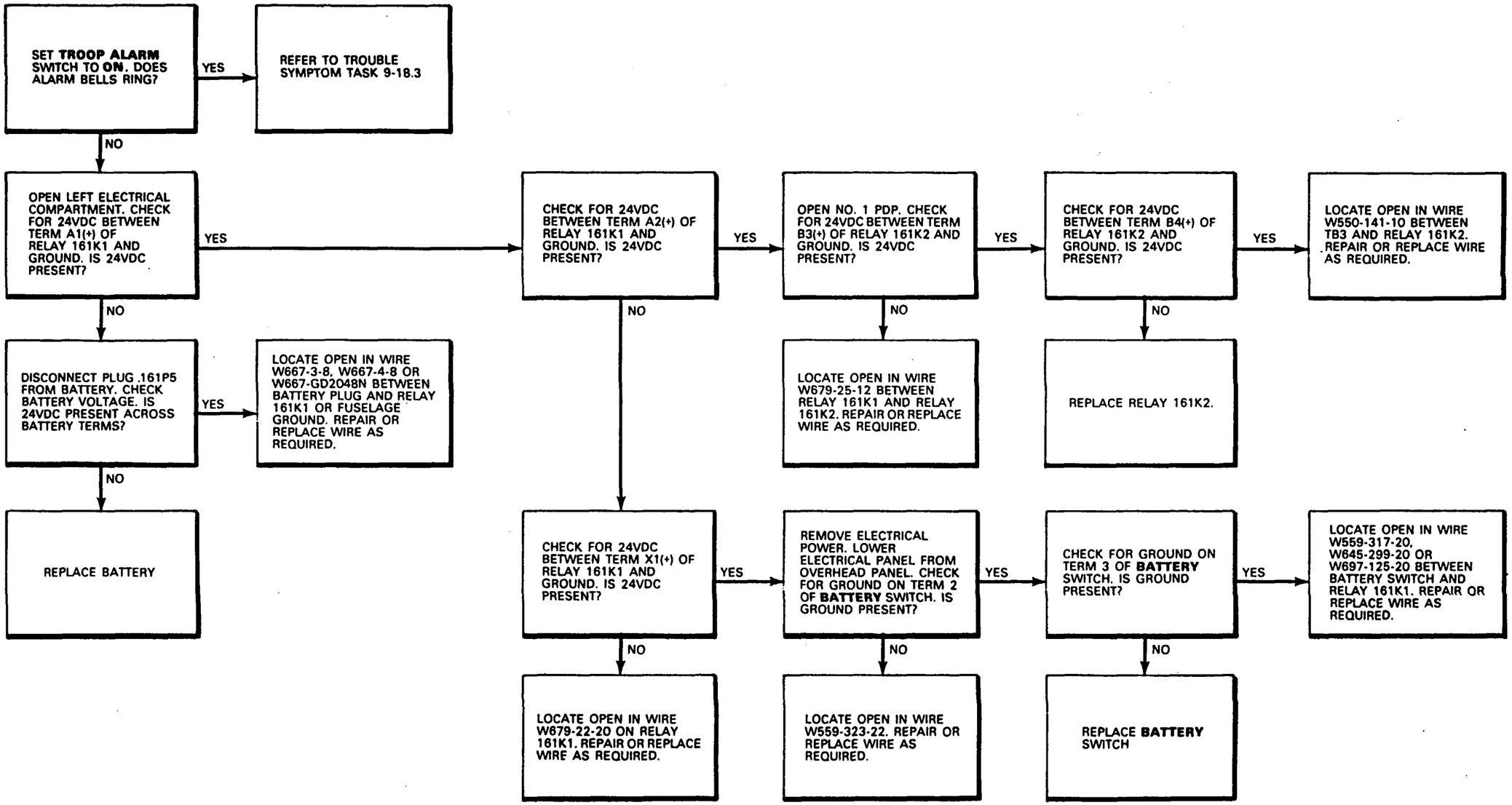






17331

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SET TROOP ALARM SWITCH TO ON. DOES ALARM BELLS RING?
YES
REFER TO TROUBLE SYMPTOM TASK 9-18.3
NO
OPEN LEFT ELECTRICAL COMPARTMENT. CHECK FOR 24VDC BETWEEN TERM A1(+) OF RELAY 161K1 AND GROUND. IS 24VDC PRESENT?
YES
NO
DISCONNECT PLUG 161P5 FROM BATTERY. CHECK BATTERY VOLTAGE. IS 24VDC PRESENT ACROSS BATTERY TERMS?
YES
LOCATE OPEN IN WIRE W667-3-8, W667-4-8 OR W667-GD2048N BETWEEN BATTERY PLUG AND RELAY 161K1 OR FUSELAGE GROUND. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
REPLACE BATTERY
CHECK FOR 24VDC BETWEEN TERM A2(+) OF RELAY 161K1 AND GROUND. IS 24VDC PRESENT?
YES
NO
CHECK FOR 24VDC BETWEEN TERM X1(+) OF RELAY 161K1 AND GROUND. IS 24VDC PRESENT?
YES
NO
LOCATE OPEN IN WIRE W679-22-20 ON RELAY 161K1. REPAIR OR REPLACE WIRE AS REQUIRED.
OPEN NO. 1 PDP. CHECK FOR 24VDC BETWEEN TERM B3(+) OF RELAY 161K2 AND GROUND. IS 24VDC PRESENT?
YES
NO
LOCATE OPEN IN WIRE W679-25-12 BETWEEN RELAY 161K1 AND RELAY 161K2. REPAIR OR REPLACE WIRE AS REQUIRED.
REMOVE ELECTRICAL POWER. LOWER ELECTRICAL PANEL FROM OVERHEAD PANEL. CHECK FOR GROUND ON TERM 2 OF BATTERY SWITCH. IS GROUND PRESENT?
YES
NO
LOCATE OPEN IN WIRE W559-323-22. REPAIR OR REPLACE WIRE AS REQUIRED.
CHECK FOR 24VDC BETWEEN TERM B4(+) OF RELAY 161K2 AND GROUND. IS 24VDC PRESENT?
YES
NO
REPLACE RELAY 161K2.
CHECK FOR GROUND ON TERM 3 OF BATTERY SWITCH. IS GROUND PRESENT?
YES
NO
REPLACE BATTERY SWITCH
LOCATE OPEN IN WIRE W550-141-10 BETWEEN TB3 AND RELAY 161K2. REPAIR OR REPLACE WIRE AS REQUIRED.
LOCATE OPEN IN WIRE W559-317-20, W645-299-20 OR W697-125-20 BETWEEN BATTERY SWITCH AND RELAY 161K1. REPAIR OR REPLACE WIRE AS REQUIRED.

END OF TASK

9-1.6 NO. 1 OR NO. 2 RECT OFF CAPSULE NOT ON

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
Without 74

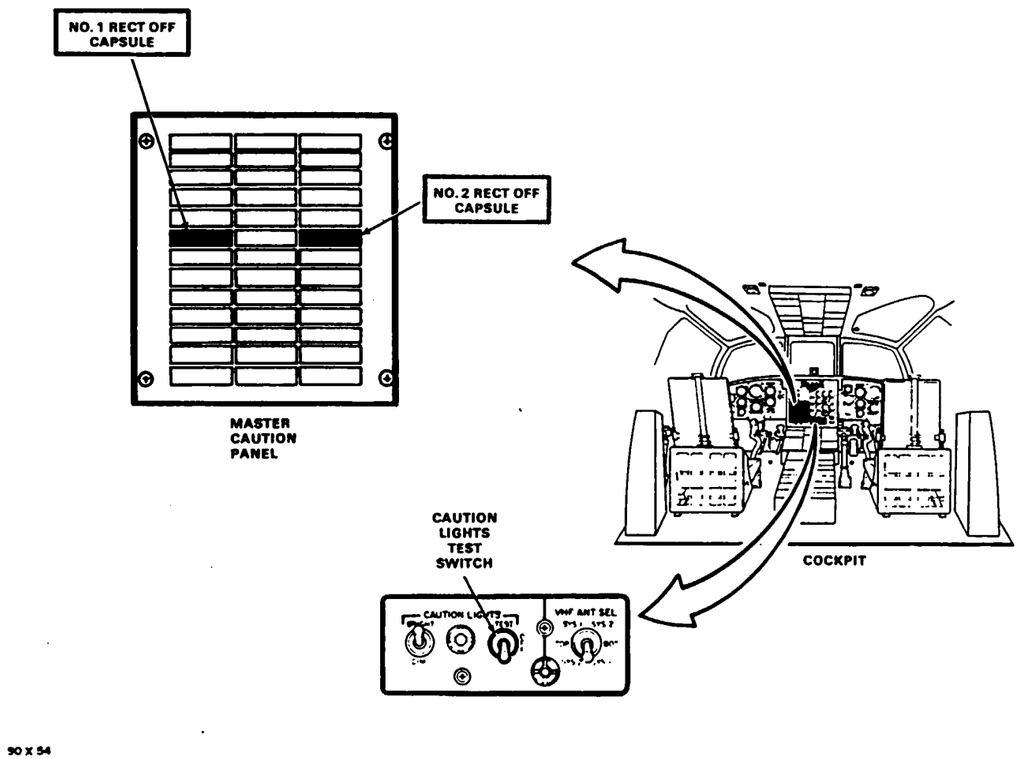
Tools:
Aircraft Mechanic's Tool Kit,
NSN 5180-00323-4692
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

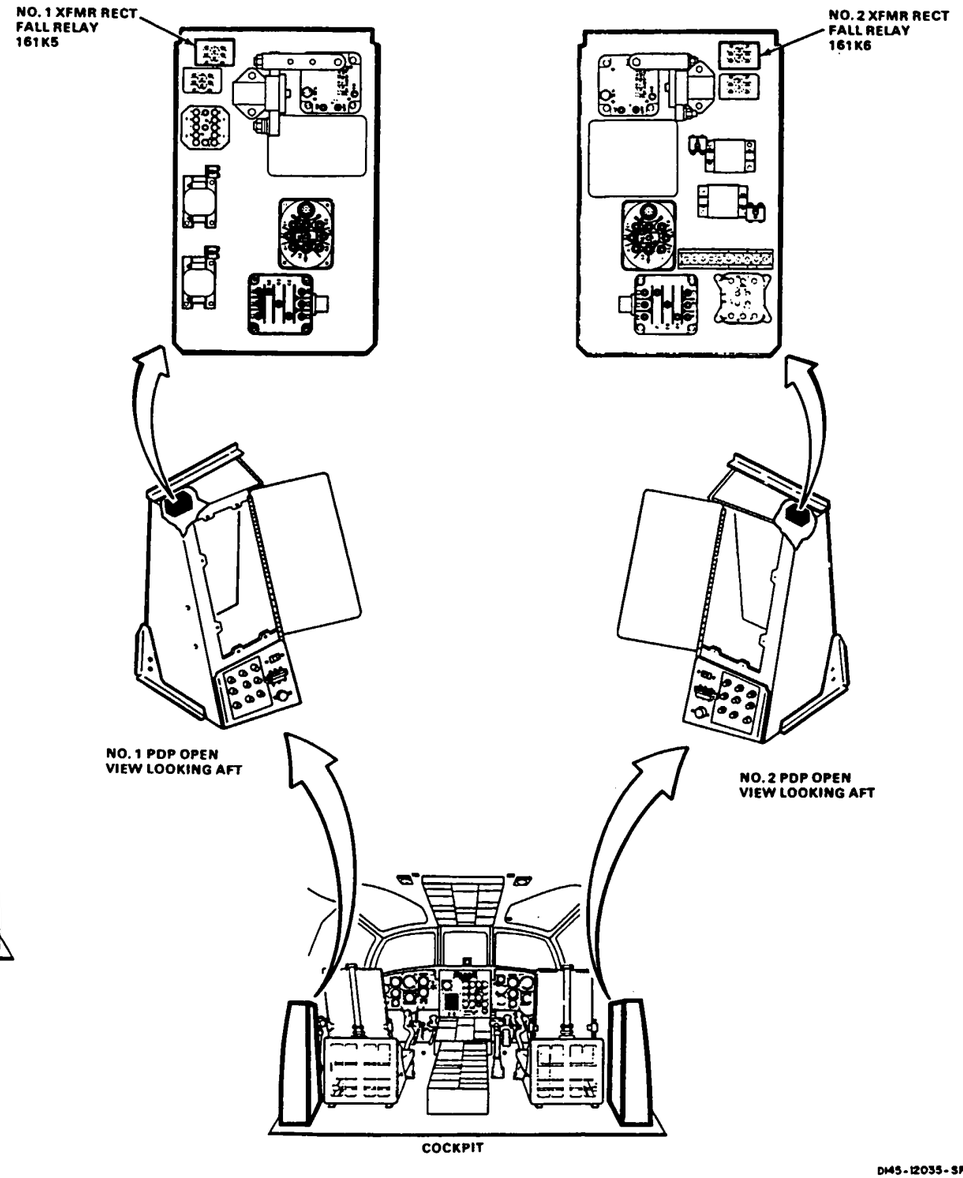
Materials:
None

Personnel Required:
Medium Helicopter Repairer
Aircraft Electrician

References:
TM 55-1520-240-23

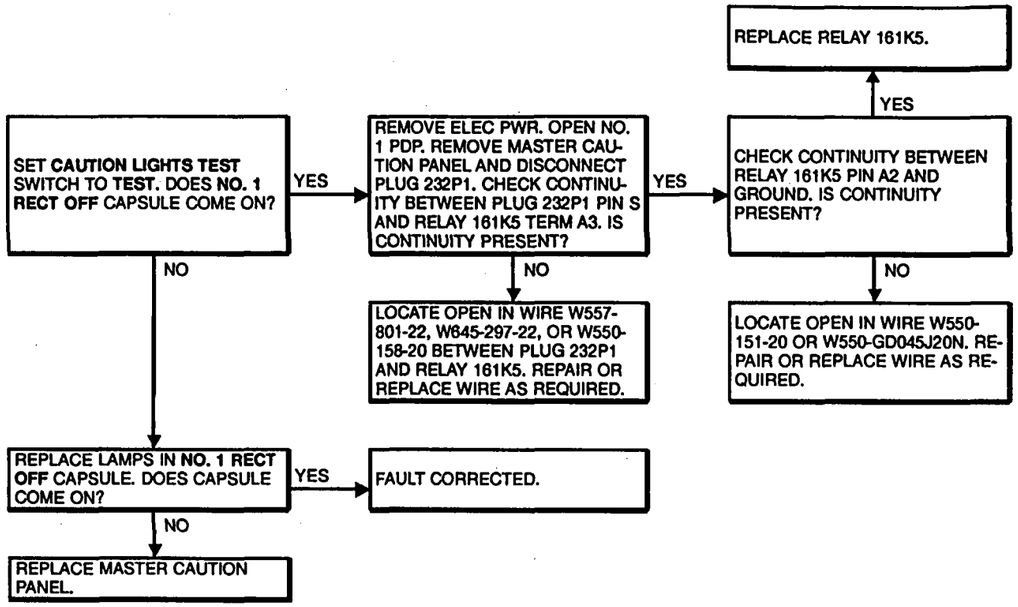
Equipment Condition:
TM 55-152-2423:
Battery Connected
Electrical Power On
Hydraulic Power Off



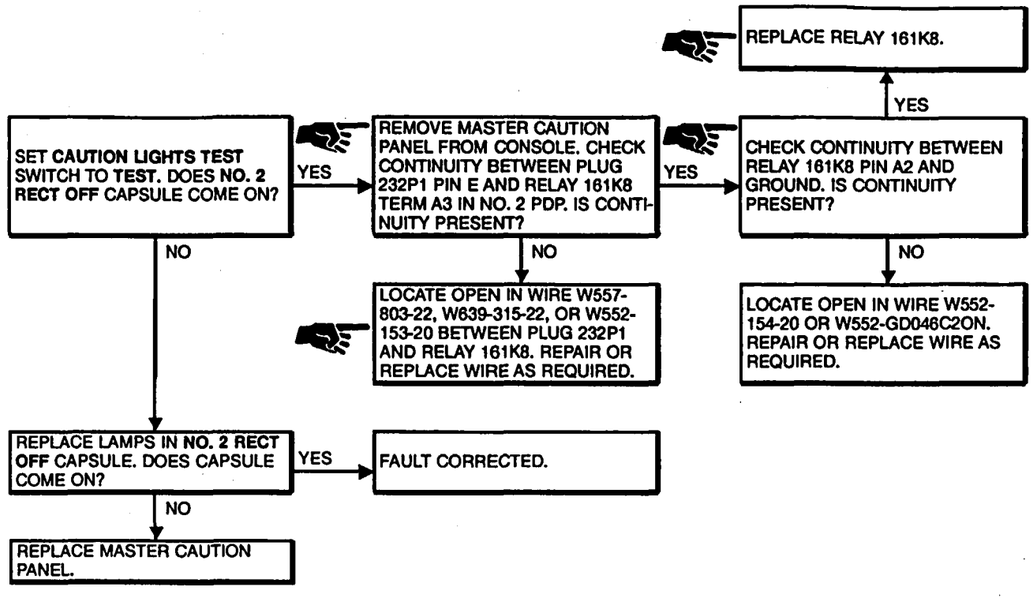


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NO. 1 RECT OFF CAPSULE NOT ON



NO. 2 RECT OFF CAPSULE NOT ON



END OF TASK

9-1.6.1 RECT 1 OR RECT 2 CAPSULE NOT ON

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
With 74

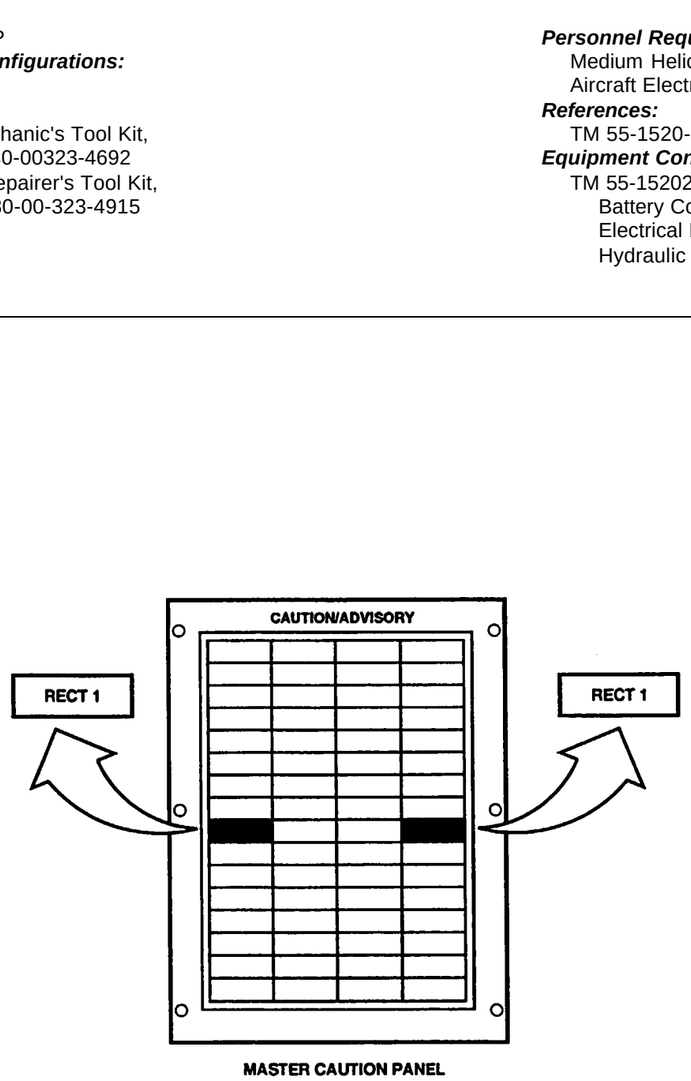
Tools:
Aircraft Mechanic's Tool Kit,
NSN 5180-00323-4692
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

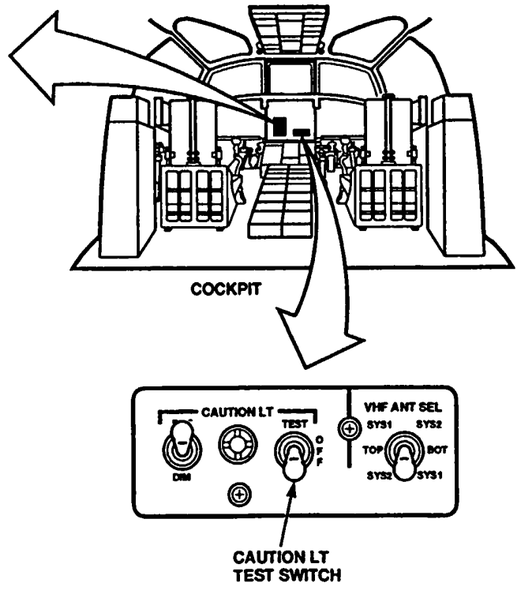
Materials:
None

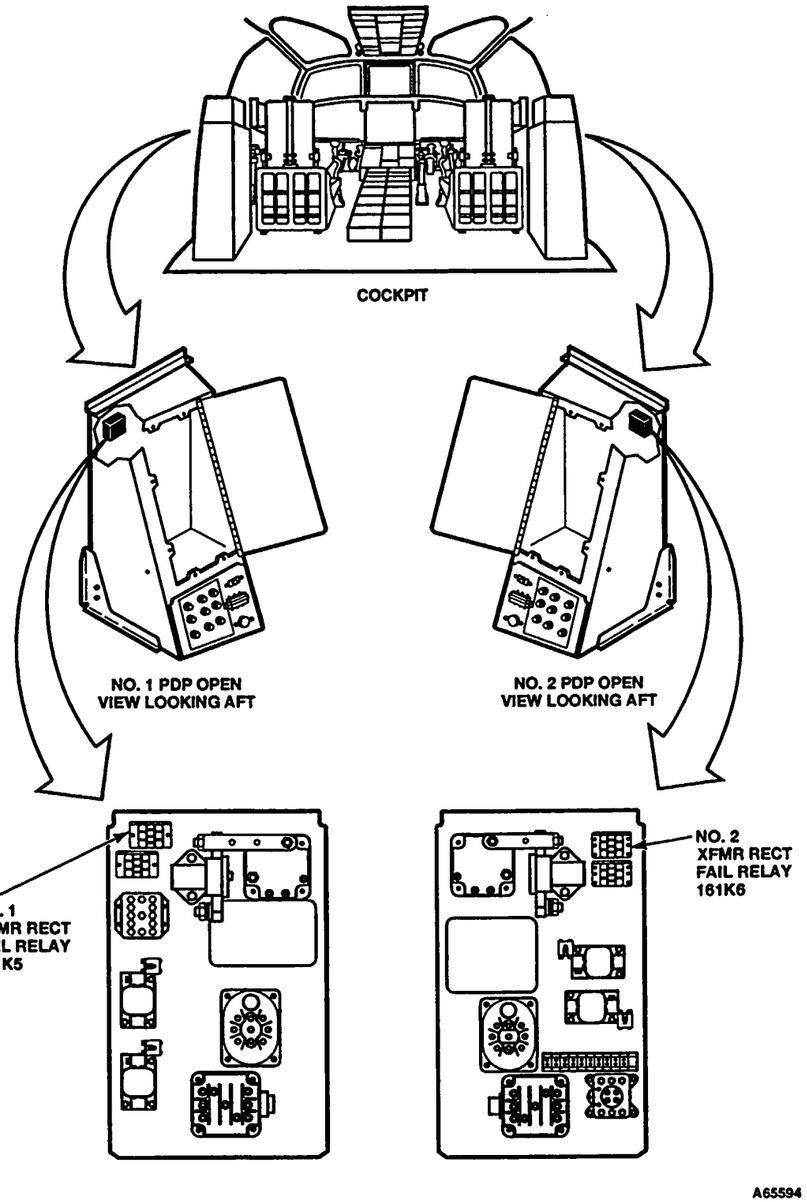
Personnel Required:
Medium Helicopter Repairer
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-152024023:
Battery Connected
Electrical Power On
Hydraulic Power Off



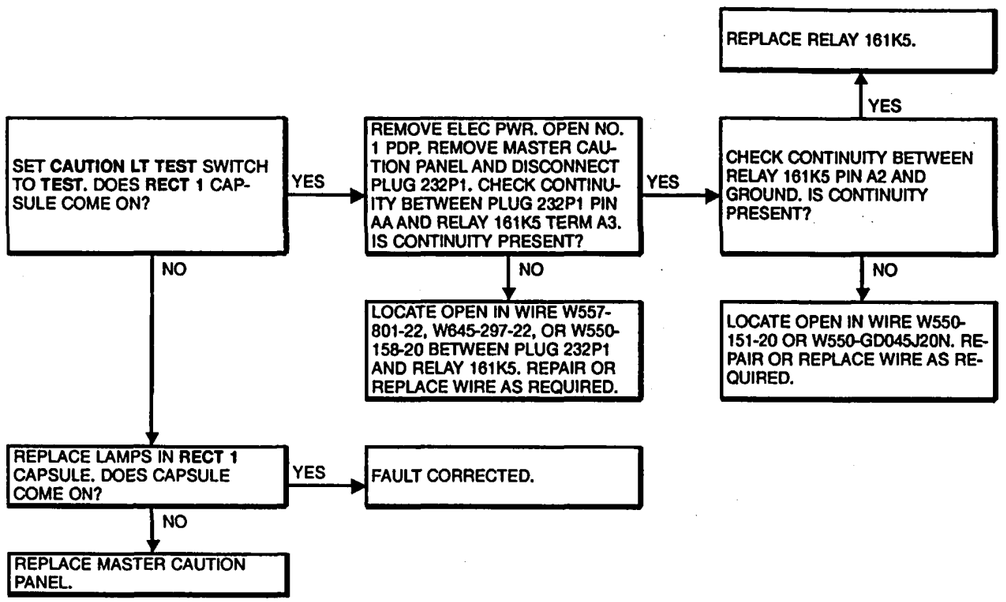




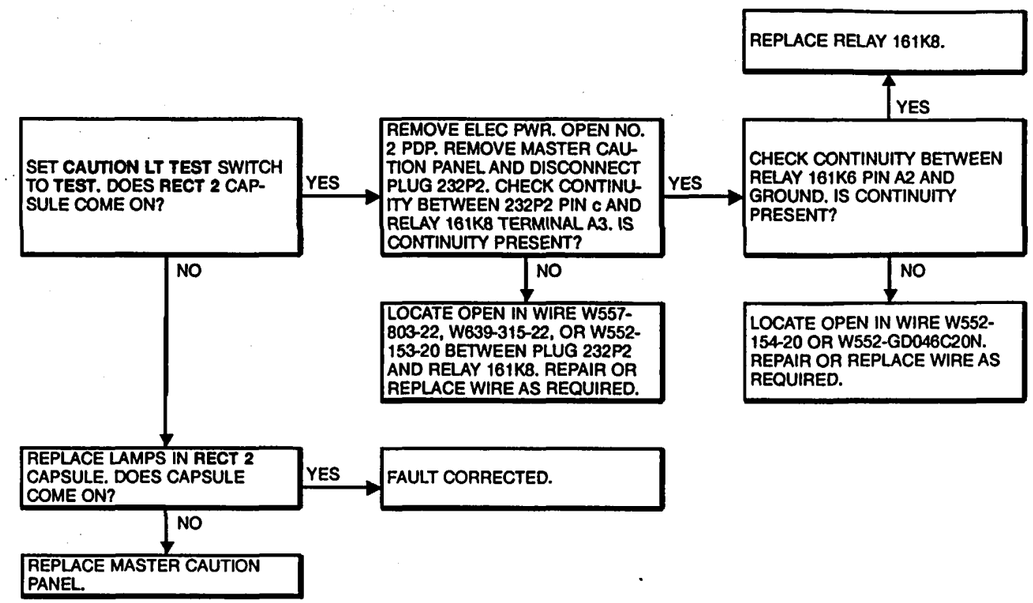
A65594

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RECT 1 CAPSULE NOT ON



RECT 2 CAPSULE NOT ON



END OF TASK

9-1.7 BATTERY CHARGING OR CHARGE COMPLETE LIGHT DOES NOT COME ON WHEN PRESSED 9-1.7

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

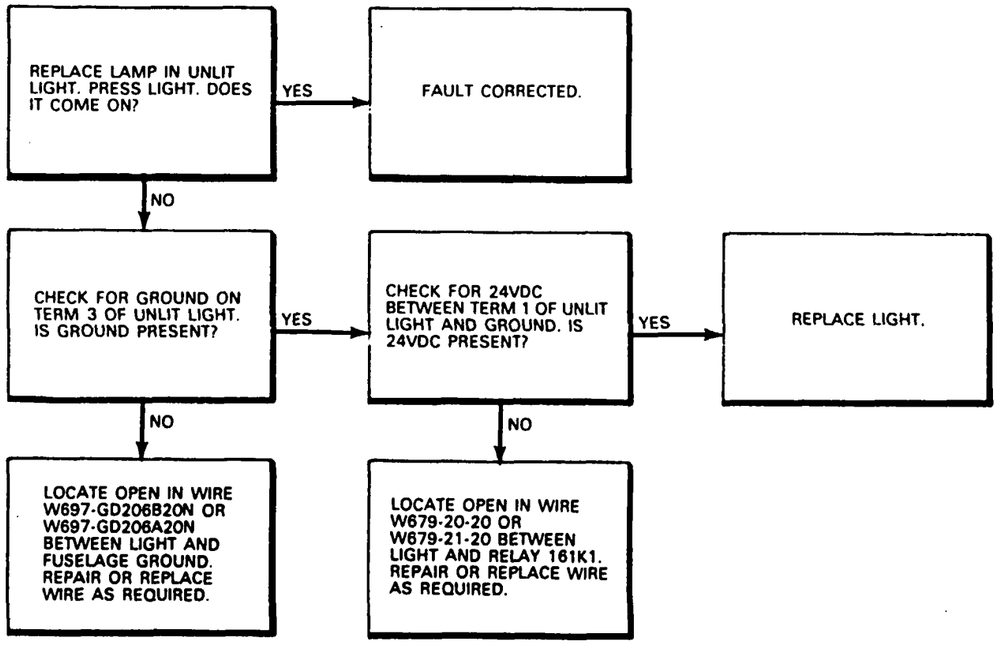
Tools:
Electrical Repairer's Tool Kit
NSN 5180-00-323-4915
Multimeter

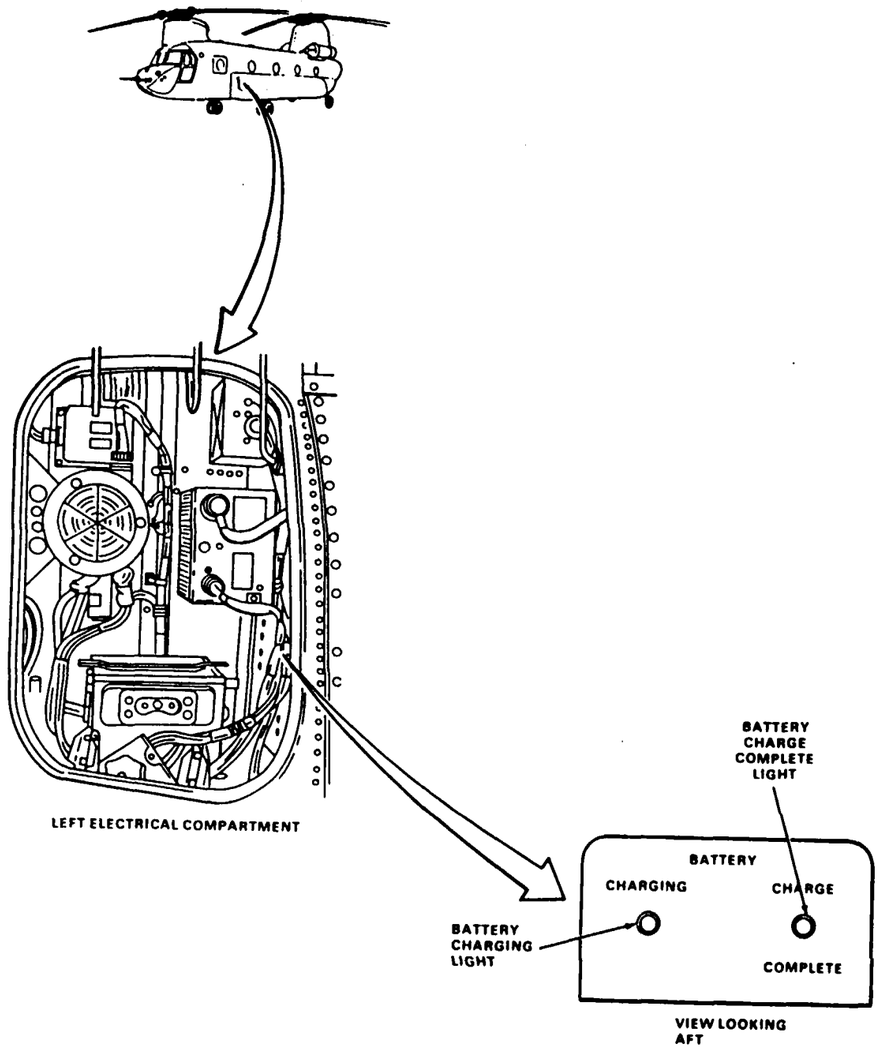
Materials:
None

Personnel Required:
67U10 Medium Helicopter Repairer
68F20 Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23
Battery Connected
Electrical Power On
Hydraulic Power Off
Left Electrical Compartment Open





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0148-12036-SPA

END-OF-TASK

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

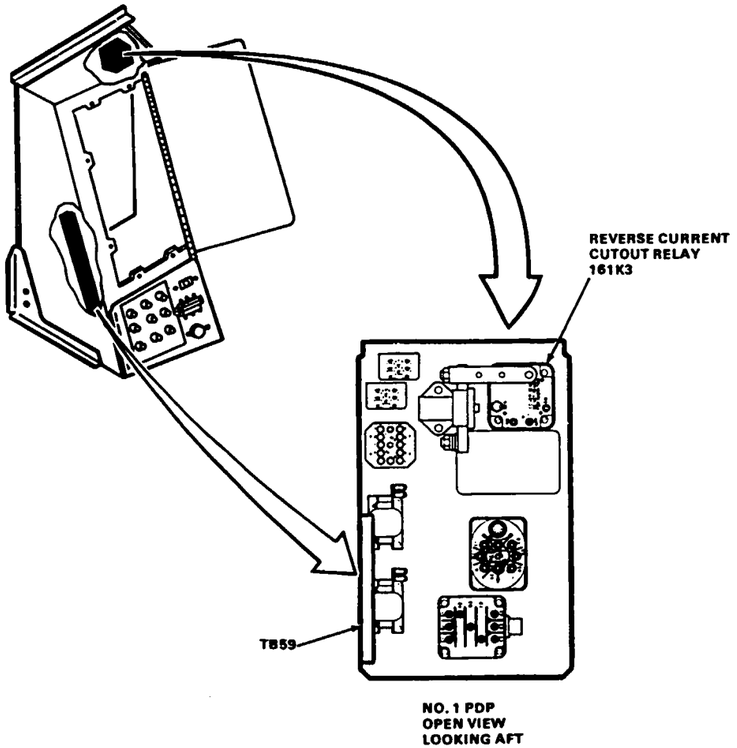
Tools:
Aircraft Mechanic's Tool Kit,
NSN 5180-00-323-4692
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

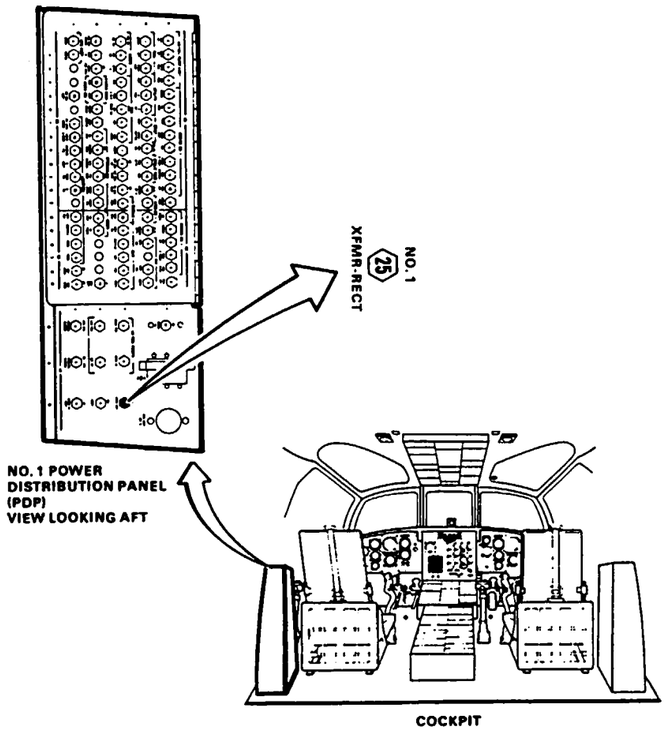
Materials:
None

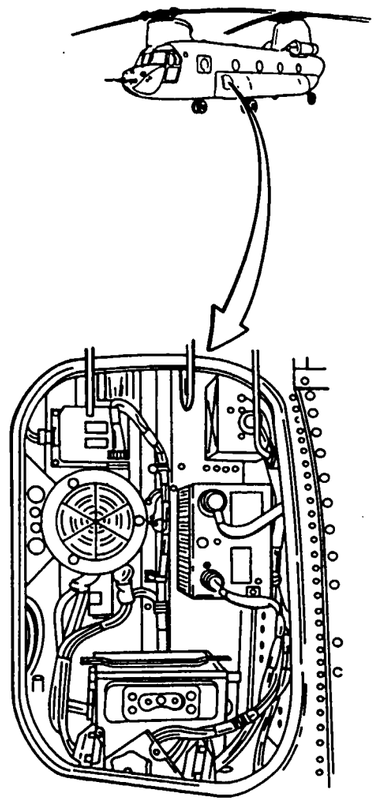
Personnel Required:
Medium Helicopter Repairer
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off



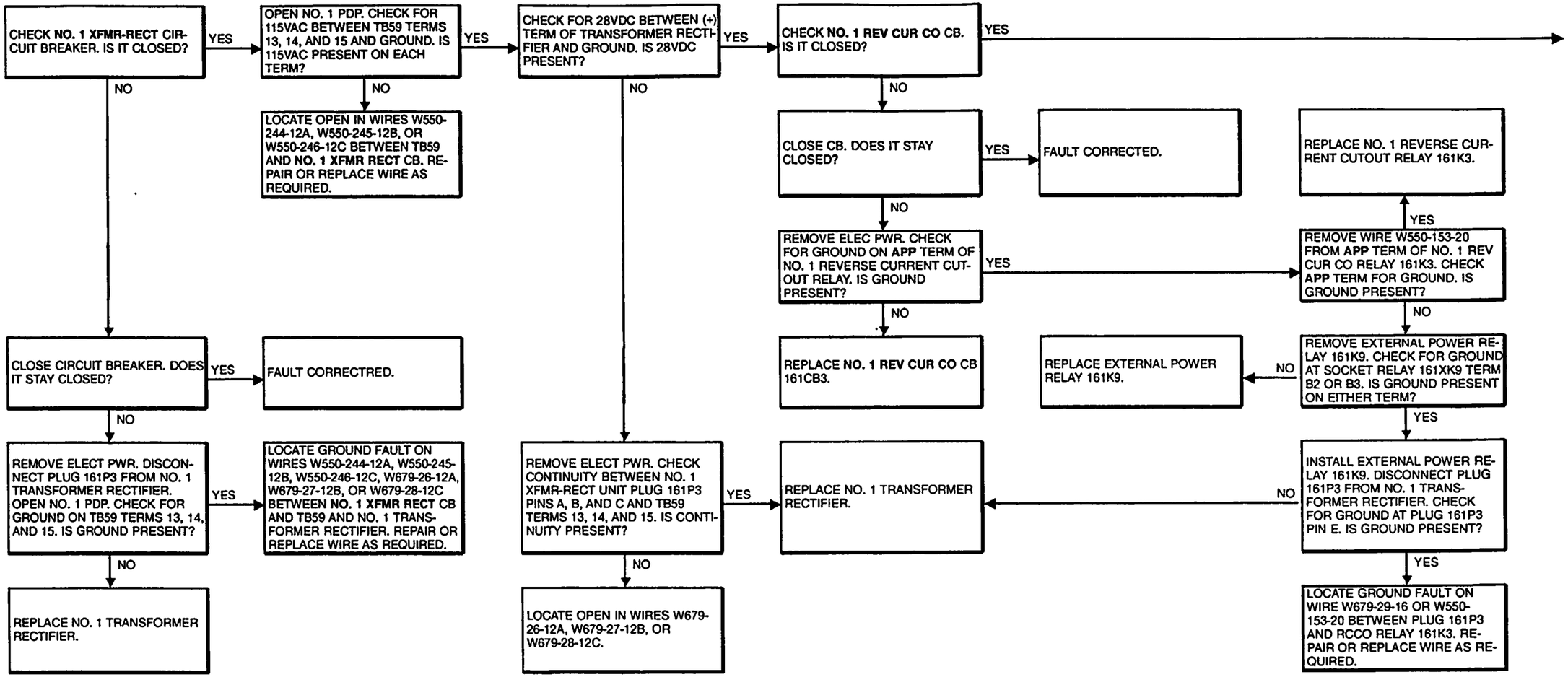




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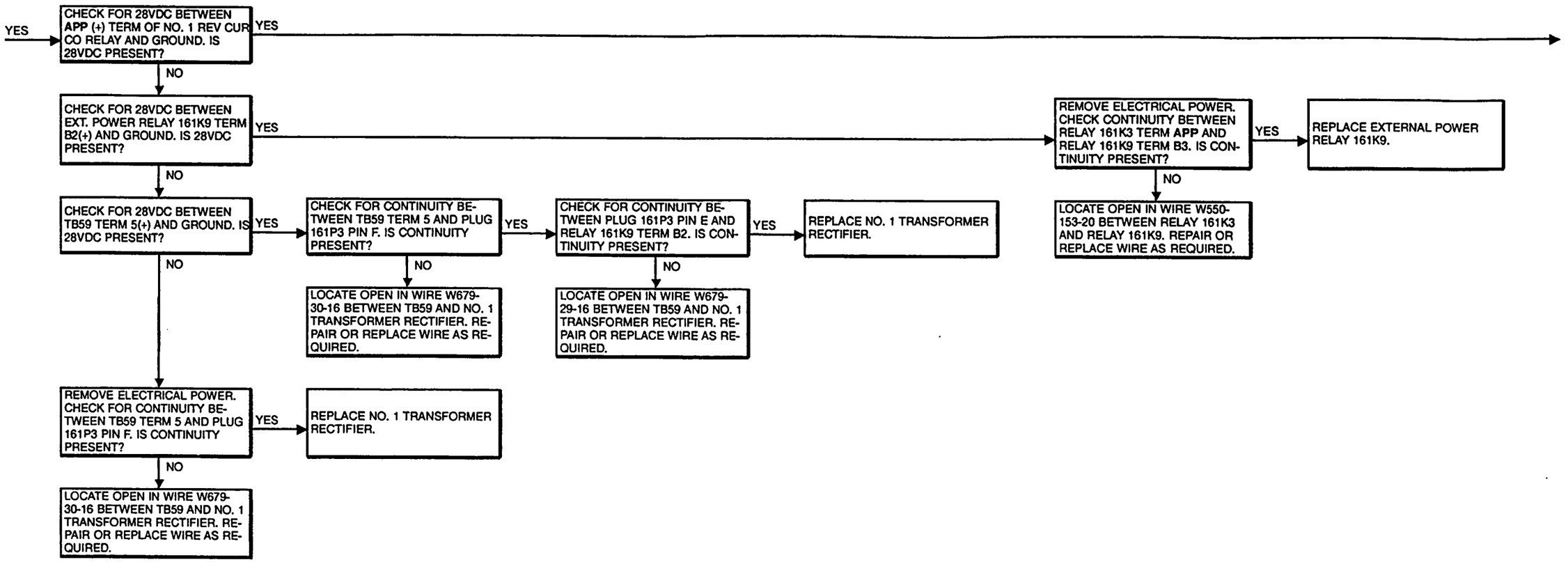
D145-12037-SPA

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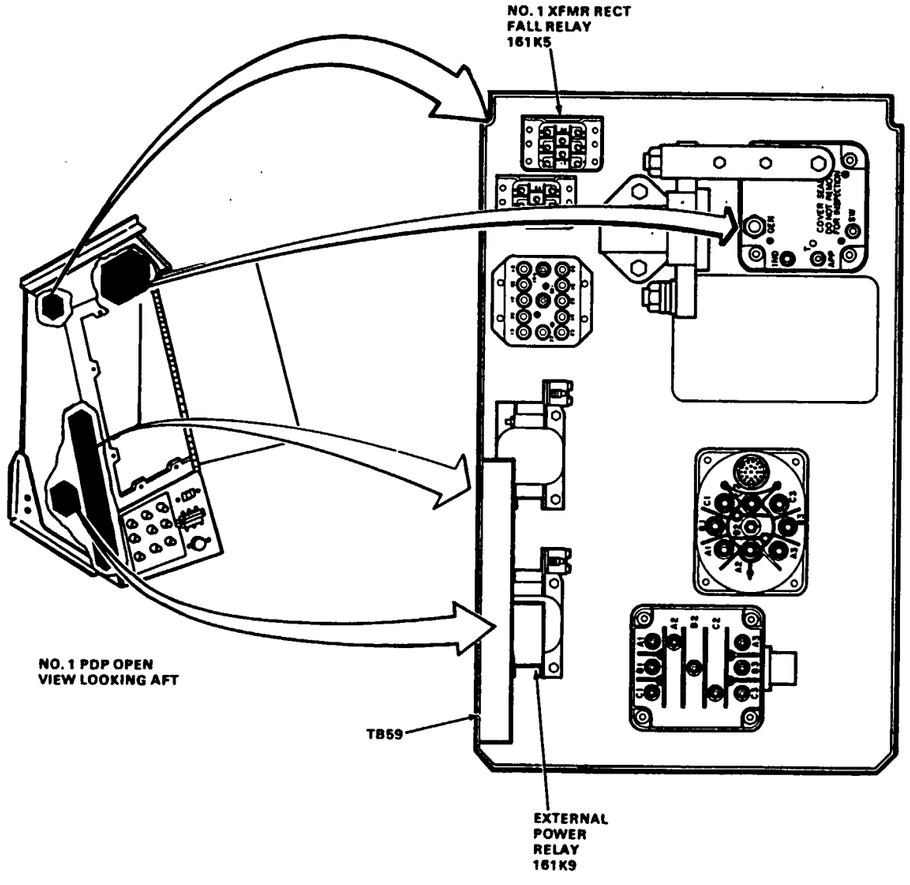


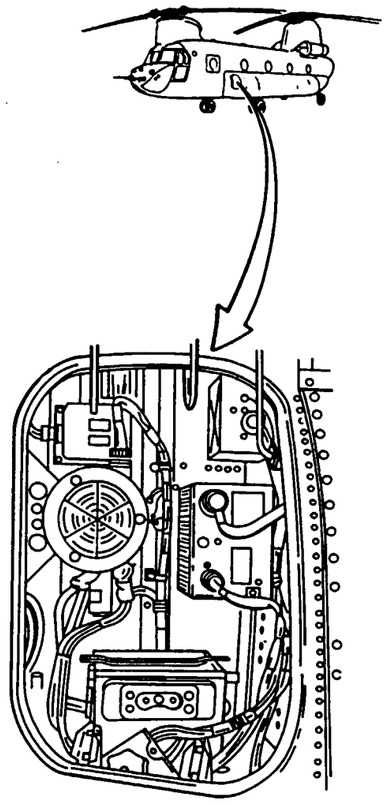
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9-1.8 NO. 1 RECT OFF (WITHOUT 74) RECT 1 (WITH 74) CAPSULE ON WHEN APU RUNNING (Continued) 9-1.8



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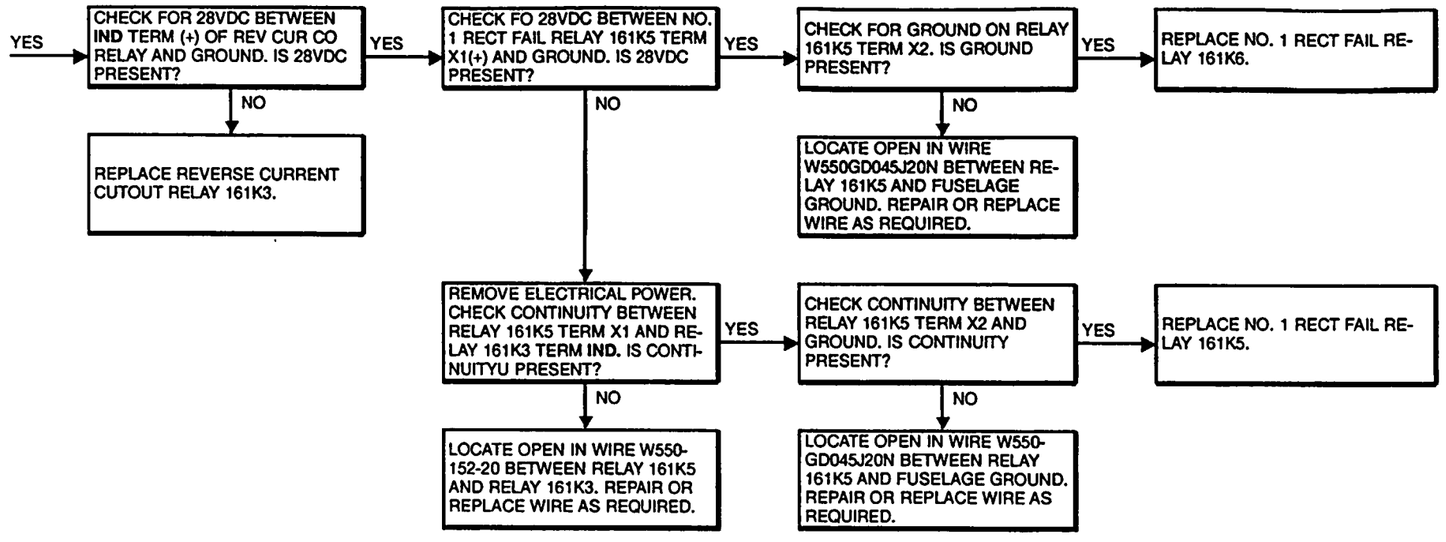




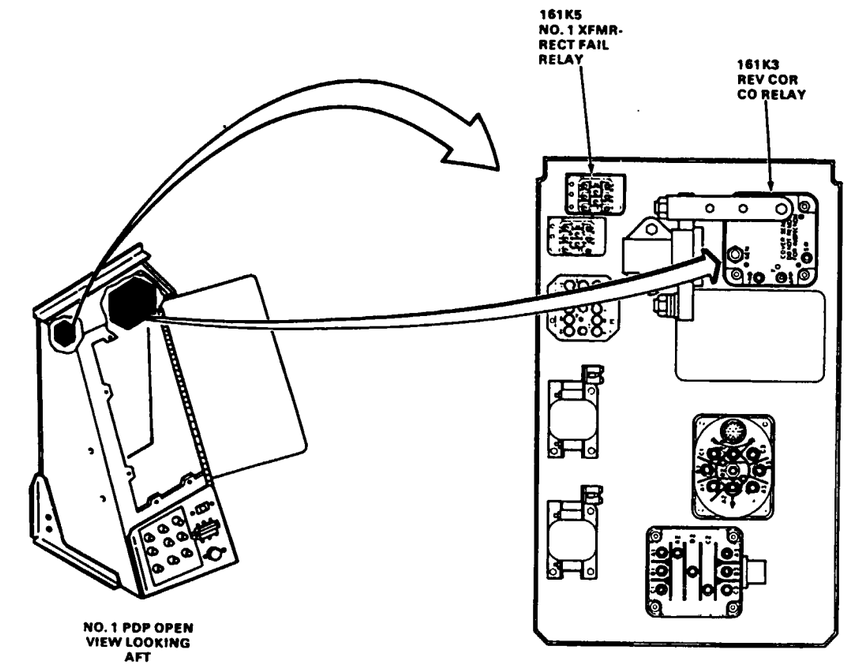
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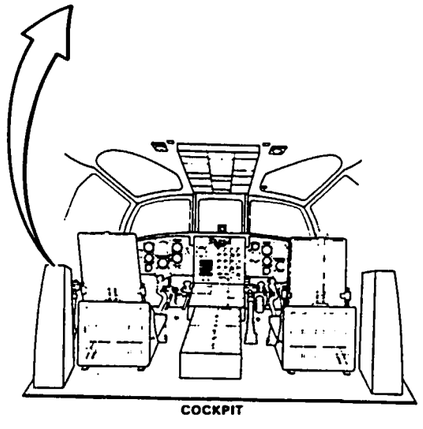
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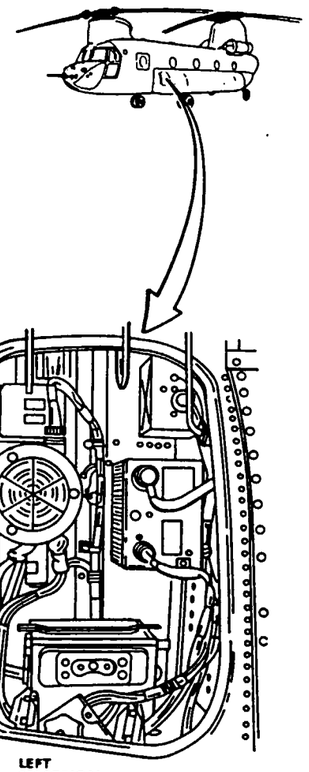
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NO. 1 PDP OPEN
VIEW LOOKING
AFT



COCKPIT



LEFT
ELECTRICAL
COMPARTMENT

90 X 54

D145-12039-3PA

END OF TASK
Change 19 9-25

9-1.9 NO. 2 RECT OFF (WITHOUT 74 RECT 2 (WITH 74) CAPSULE ON WHEN APU RUNNING

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

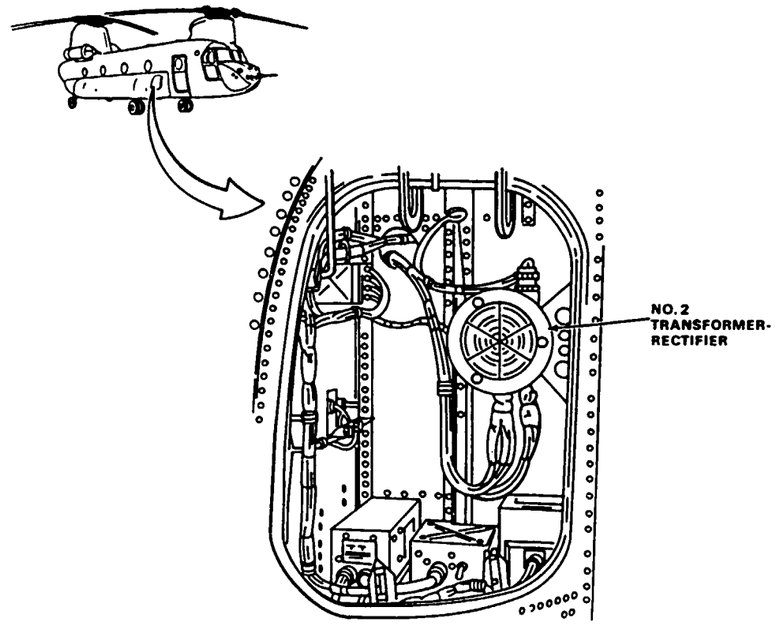
Tools:
Aircraft Mechanic's Tool Kit,
NSN 5180-00-323-4692
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

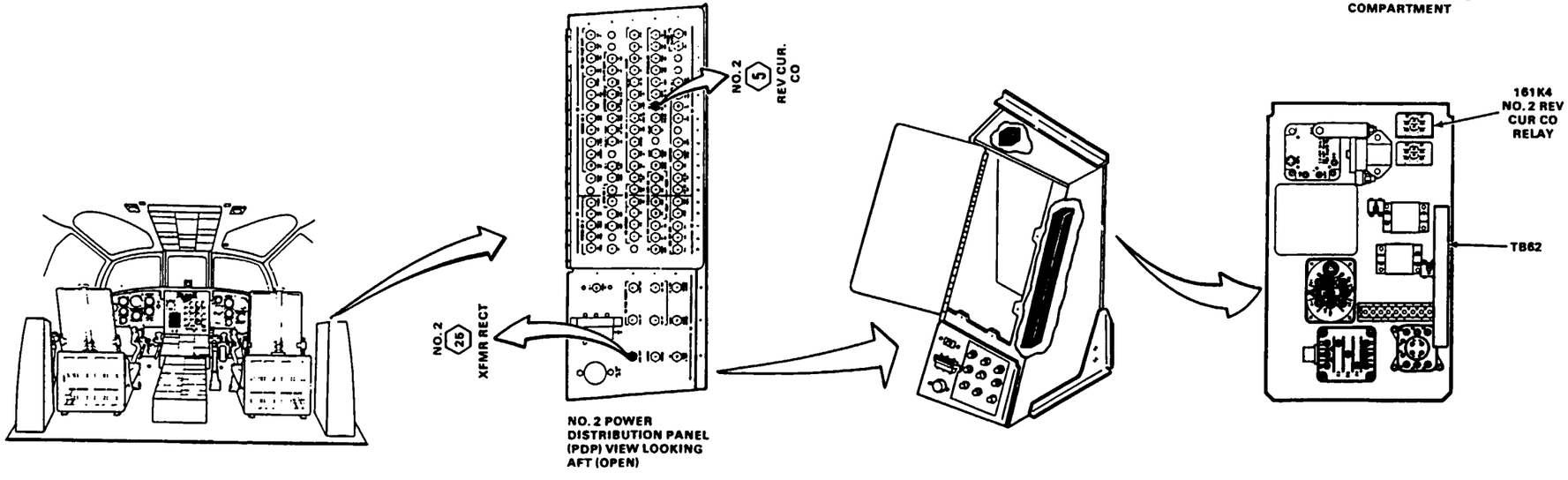
Materials:
None

Personnel Required:
Medium Helicopter Repairer
Aircraft Electrician

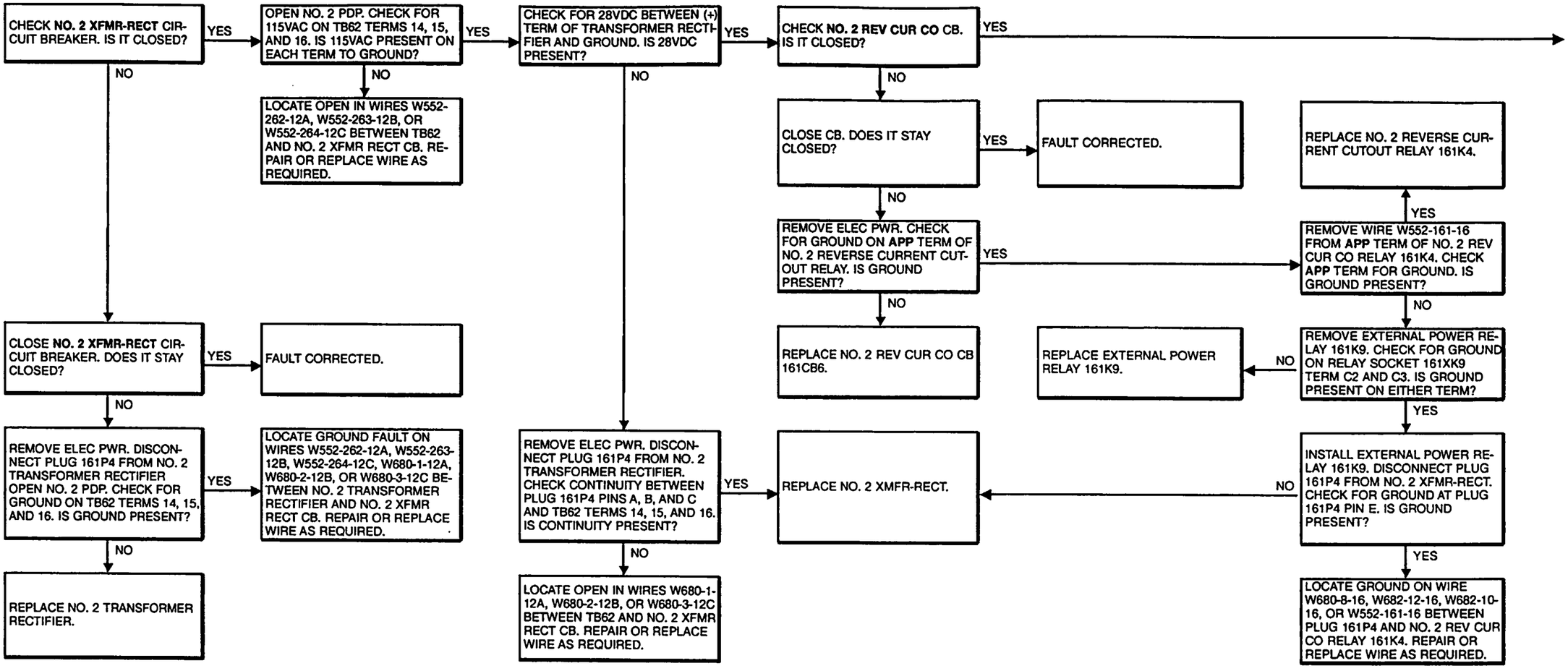
References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off

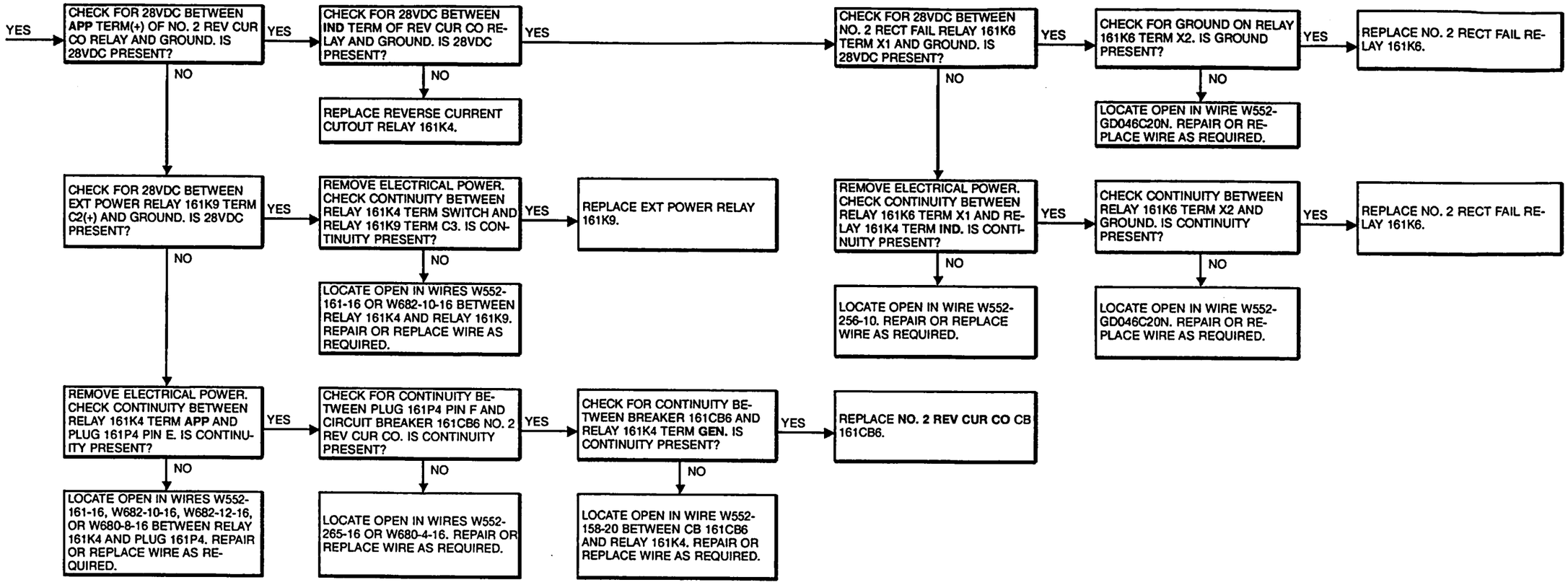




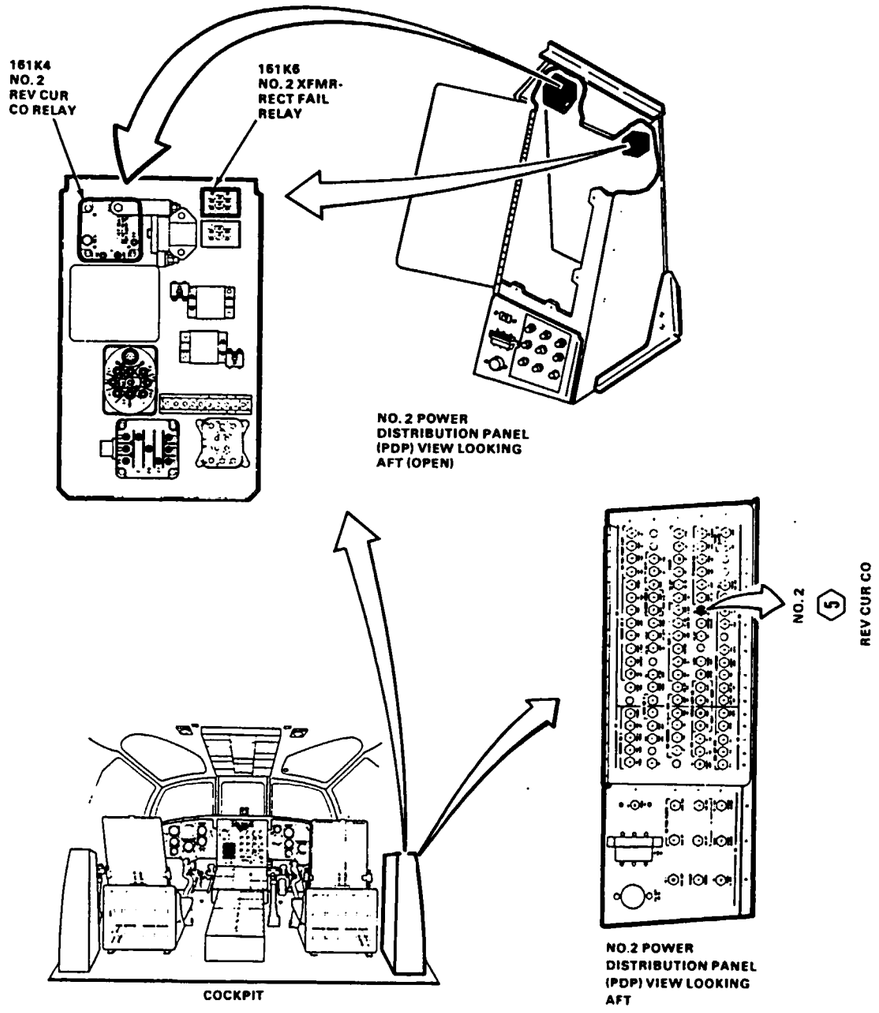
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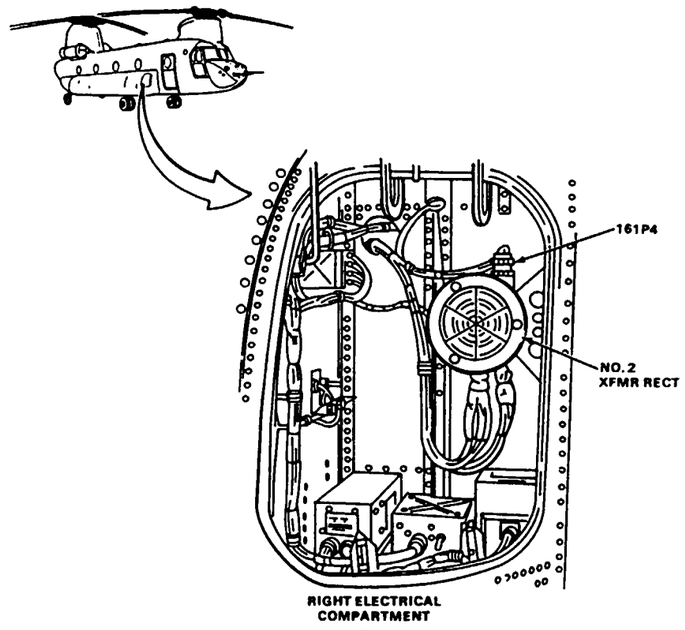
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END OF TASK

9-1.10 BATTERY CHARGING AND CHARGE COMPLETE LIGHTS OUT

FAULT ISOLATION PROCEDURE
INITIAL SETUP

Applicable Configurations:
All

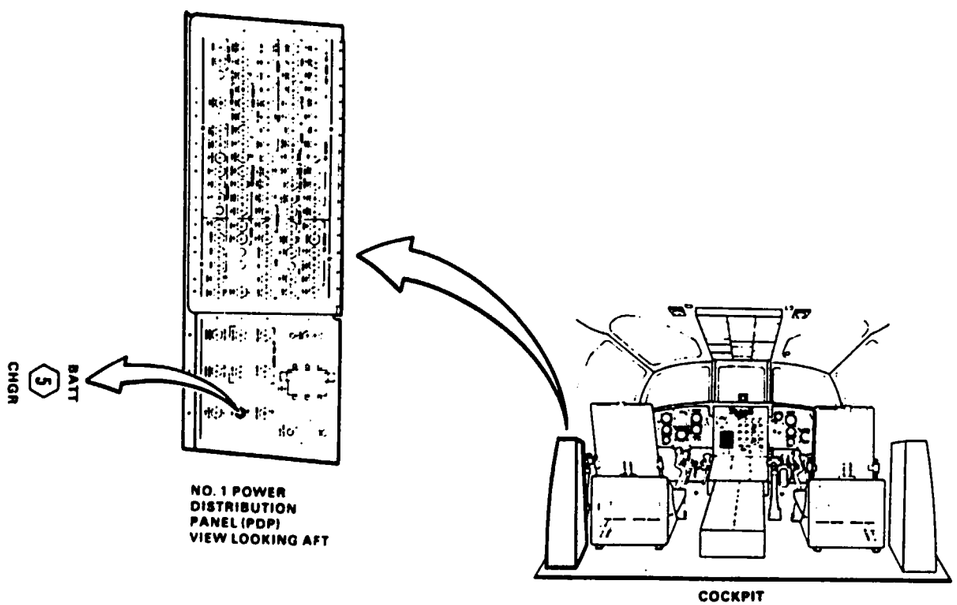
Tools:
Electrical Repairer's Tool Kit
NSN 5180-00-323-4915
Multimeter

Materials:
None

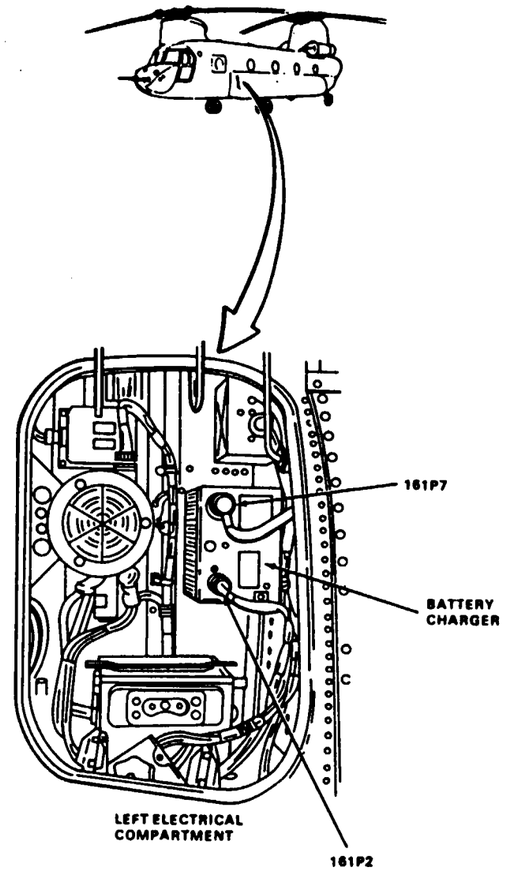
Personnel Required:
67U10 Medium Helicopter Repairer
68F20 Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23
Battery Connected
Electrical Power On
Hydraulic Power Off

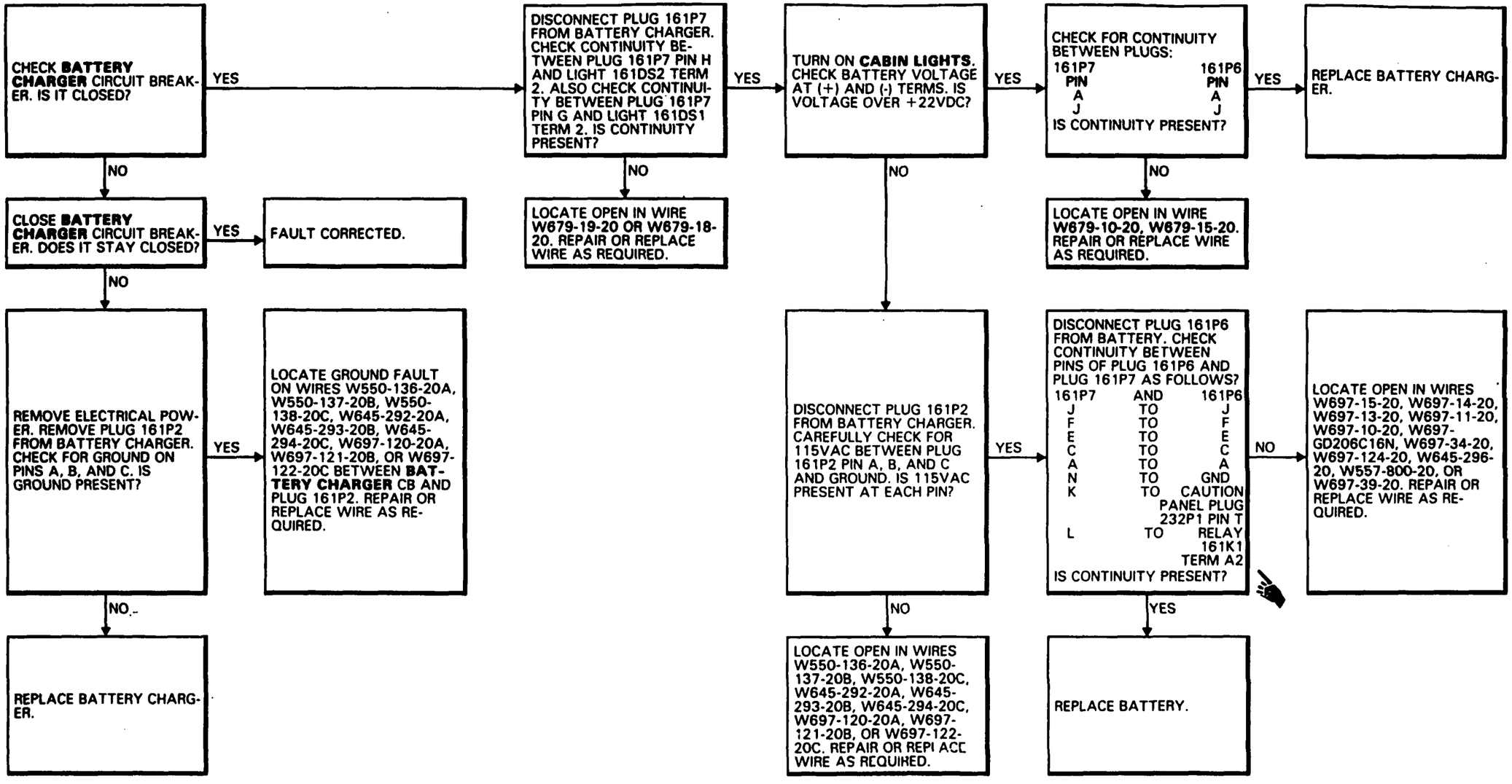


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CHECK BATTERY CHARGER CIRCUIT BREAKER. IS IT CLOSED?
YES
NO
CLOSE BATTERY CHARGER CIRCUIT BREAKER. DOES IT STAY CLOSED?
YES
FAULT CORRECTED.
NO
REMOVE ELECTRICAL POWER. REMOVE PLUG 161P2 FROM BATTERY CHARGER. CHECK FOR GROUND ON PINS A, B, AND C. IS GROUND PRESENT?
YES
LOCATE GROUND FAULT ON WIRES W550-136-20A, W550-137-20B, W550-138-20C, W645-292-20A, W645-293-20B, W645-294-20C, W697-120-20A, W697-121-20B, OR W697-122-20C BETWEEN BATTERY CHARGER CB AND PLUG 161P2. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
REPLACE BATTERY CHARGER.
DISCONNECT PLUG 161P7 FROM BATTERY CHARGER. CHECK CONTINUITY BETWEEN PLUG 161P7 PIN H AND LIGHT 161DS2 TERM 2. ALSO CHECK CONTINUITY BETWEEN PLUG 161P7 PIN G AND LIGHT 161DS1 TERM 2. IS CONTINUITY PRESENT?
YES
NO
LOCATE OPEN IN WIRE W679-19-20 OR W679-18-20. REPAIR OR REPLACE WIRE AS REQUIRED.
TURN ON CABIN LIGHTS. CHECK BATTERY VOLTAGE AT (+) AND (-) TERMS. IS VOLTAGE OVER +22VDC?
YES
NO
DISCONNECT PLUG 161P2 FROM BATTERY CHARGER. CAREFULLY CHECK FOR 115VAC BETWEEN PLUG 161P2 PIN A, B, AND C AND GROUND. IS 115VAC PRESENT AT EACH PIN?
YES
NO
LOCATE OPEN IN WIRES W550-136-20A, W550-137-20B, W550-138-20C, W645-292-20A, W645-293-20B, W645-294-20C, W697-120-20A, W697-121-20B, OR W697-122-20C. REPAIR OR REPLACE WIRE AS REQUIRED.
CHECK FOR CONTINUITY BETWEEN PLUGS:
161P7 PIN A J
161P6 PIN A J
IS CONTINUITY PRESENT?
YES
NO
LOCATE OPEN IN WIRE W679-10-20, W679-15-20. REPAIR OR REPLACE WIRE AS REQUIRED.
DISCONNECT PLUG 161P6 FROM BATTERY. CHECK CONTINUITY BETWEEN PINS OF PLUG 161P6 AND PLUG 161P7 AS FOLLOWS?
161P7 AND 161P6
J TO J
F TO F
E TO E
C TO C
A TO A
N TO GND
K TO CAUTION PANEL PLUG 232P1 PIN T
L TO RELAY 161K1 TERM A2
IS CONTINUITY PRESENT?
YES
REPLACE BATTERY.
NO
LOCATE OPEN IN WIRES W697-15-20, W697-14-20, W697-13-20, W697-11-20, W697-10-20, W697-GD206C16N, W697-34-20, W697-124-20, W645-296-20, W557-800-20, OR W697-39-20. REPAIR OR REPLACE WIRE AS REQUIRED.
REPLACE BATTERY CHARGER.

END OF TASK

9-1.11 BATTERY SYSTEM MAL CAPSULE ON (WITHOUT 74) OR MALF CAPSULE (WITH 74)

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

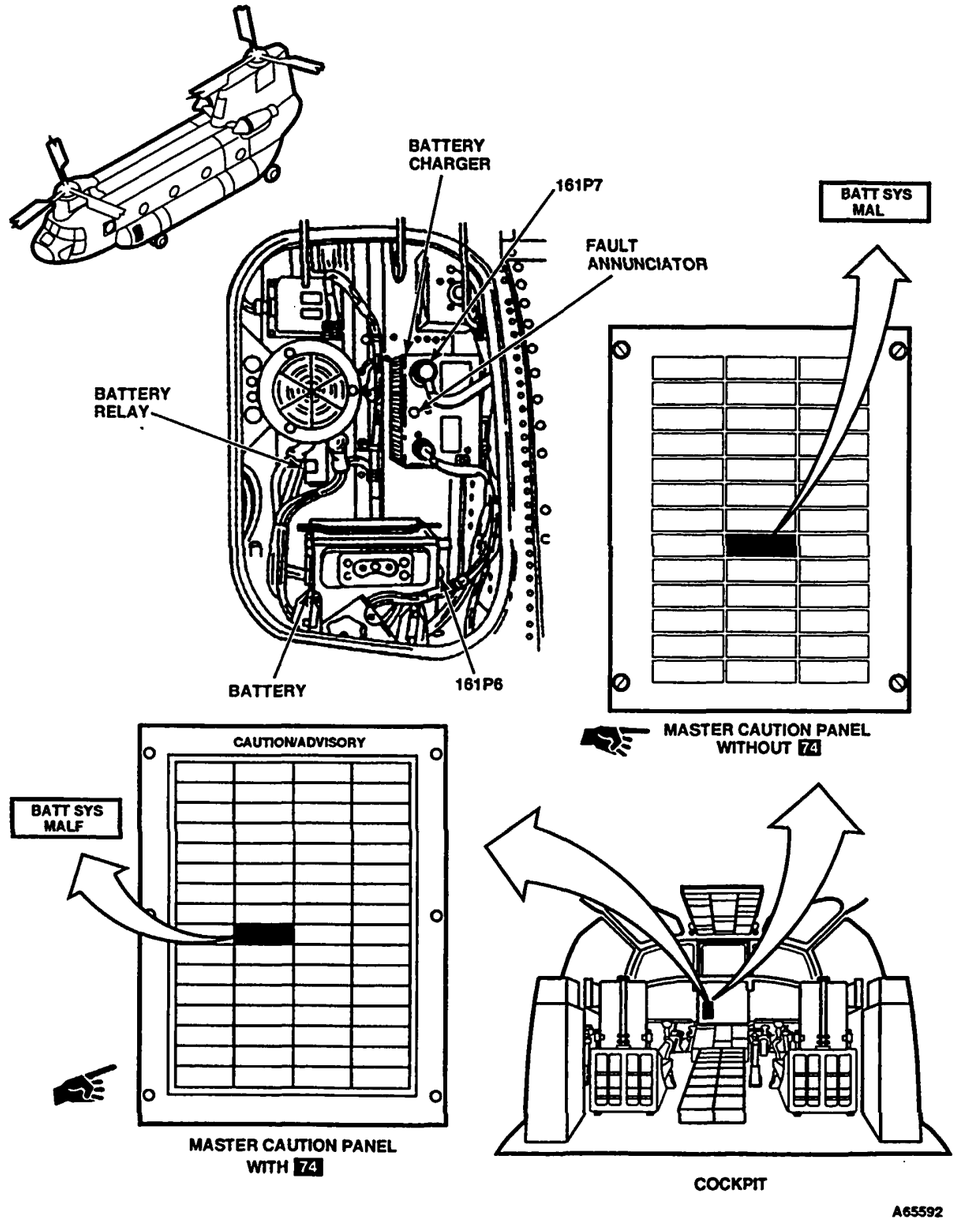
Tools:
Aircraft Mechanic's Tool Kit,
NSN 5180-00-323-4692
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:
None

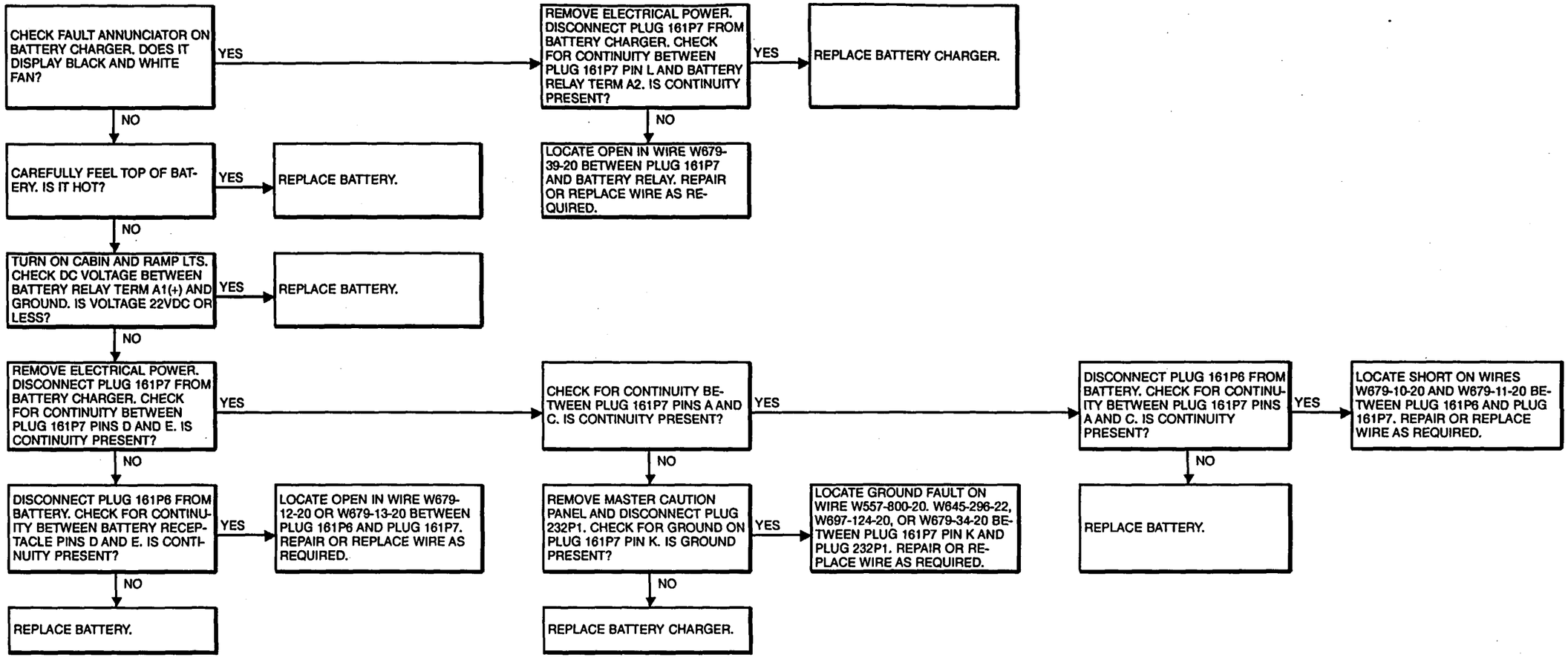
Personnel Required:
Medium Helicopter Repairer
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-152024023:
Battery Connected
Electrical Power On
Hydraulic Power Off



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CHECK FAULT ANNUNCIATOR ON BATTERY CHARGER. DOES IT DISPLAY BLACK AND WHITE FAN?
YES
NO
REMOVE ELECTRICAL POWER. DISCONNECT PLUG 161P7 FROM BATTERY CHARGER. CHECK FOR CONTINUITY BETWEEN PLUG 161P7 PIN L AND BATTERY RELAY TERM A2. IS CONTINUITY PRESENT?
YES
REPLACE BATTERY CHARGER.
NO
LOCATE OPEN IN WIRE W679-39-20 BETWEEN PLUG 161P7 AND BATTERY RELAY. REPAIR OR REPLACE WIRE AS REQUIRED.
CAREFULLY FEEL TOP OF BATTERY. IS IT HOT?
YES
REPLACE BATTERY.
NO
TURN ON CABIN AND RAMP LTS. CHECK DC VOLTAGE BETWEEN BATTERY RELAY TERM A1(+) AND GROUND. IS VOLTAGE 22VDC OR LESS?
YES
REPLACE BATTERY.
NO
REMOVE ELECTRICAL POWER. DISCONNECT PLUG 161P7 FROM BATTERY CHARGER. CHECK FOR CONTINUITY BETWEEN PLUG 161P7 PINS D AND E. IS CONTINUITY PRESENT?
YES
CHECK FOR CONTINUITY BETWEEN PLUG 161P7 PINS A AND C. IS CONTINUITY PRESENT?
YES
DISCONNECT PLUG 161P6 FROM BATTERY. CHECK FOR CONTINUITY BETWEEN PLUG 161P7 PINS A AND C. IS CONTINUITY PRESENT?
YES
LOCATE SHORT ON WIRES W679-10-20 AND W679-11-20 BETWEEN PLUG 161P6 AND PLUG 161P7. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
REPLACE BATTERY.
NO
DISCONNECT PLUG 161P6 FROM BATTERY. CHECK FOR CONTINUITY BETWEEN BATTERY RECEPTACLE PINS D AND E. IS CONTINUITY PRESENT?
YES
LOCATE OPEN IN WIRE W679-12-20 OR W679-13-20 BETWEEN PLUG 161P6 AND PLUG 161P7. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
REPLACE BATTERY.
NO
REMOVE MASTER CAUTION PANEL AND DISCONNECT PLUG 232P1. CHECK FOR GROUND ON PLUG 161P7 PIN K. IS GROUND PRESENT?
YES
LOCATE GROUND FAULT ON WIRE W557-800-20. W645-296-22, W697-124-20, OR W679-34-20 BETWEEN PLUG 161P7 PIN K AND PLUG 232P1. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
REPLACE BATTERY CHARGER.

END OF TASK

9-1.12 ANTICOLLISION LIGHTS DO NOT FLASH, NO. 1 DC SYSTEM TURNED OFF

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configuration:
All

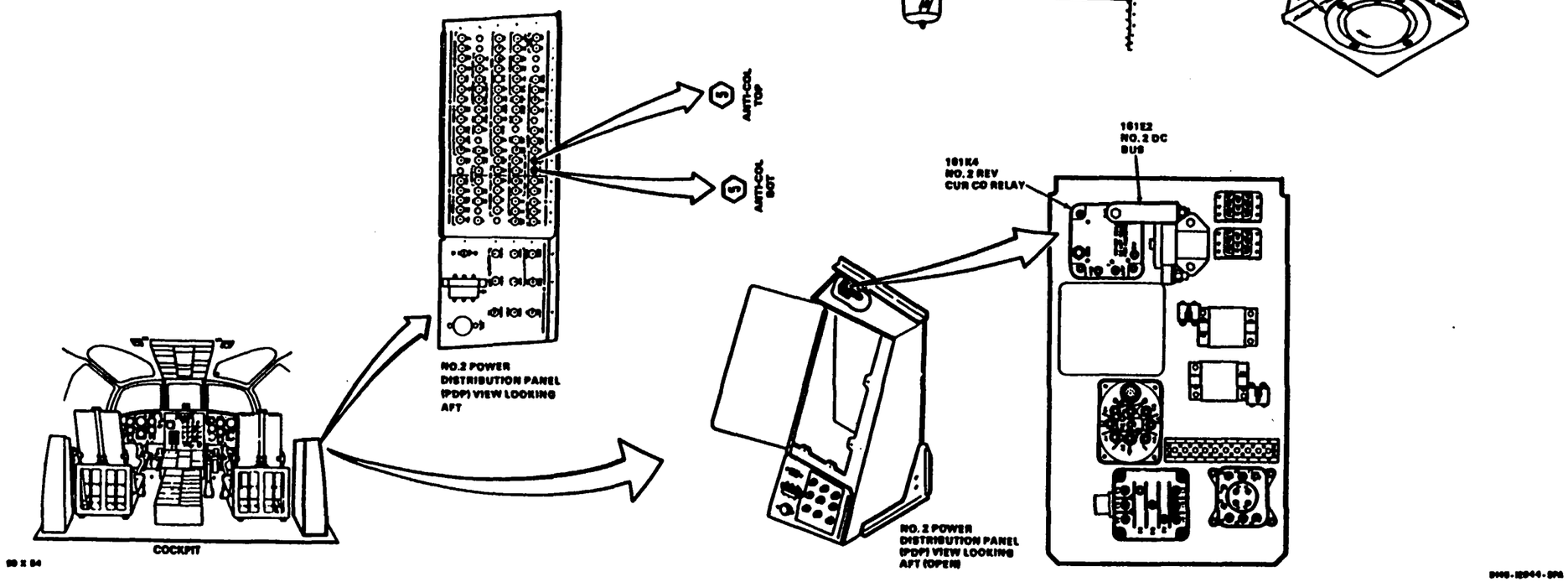
Tools:
Electrical Repairer's Tool Kit
NSN 5180-00-323-4916
Aircraft Mechanic's Tool Kit
NSN 5180-00-323-4692
Multimeter

Materials:
None

Personnel Required:
67U20 Medium Helicopter Repairer
68F20 Aircraft Electrician

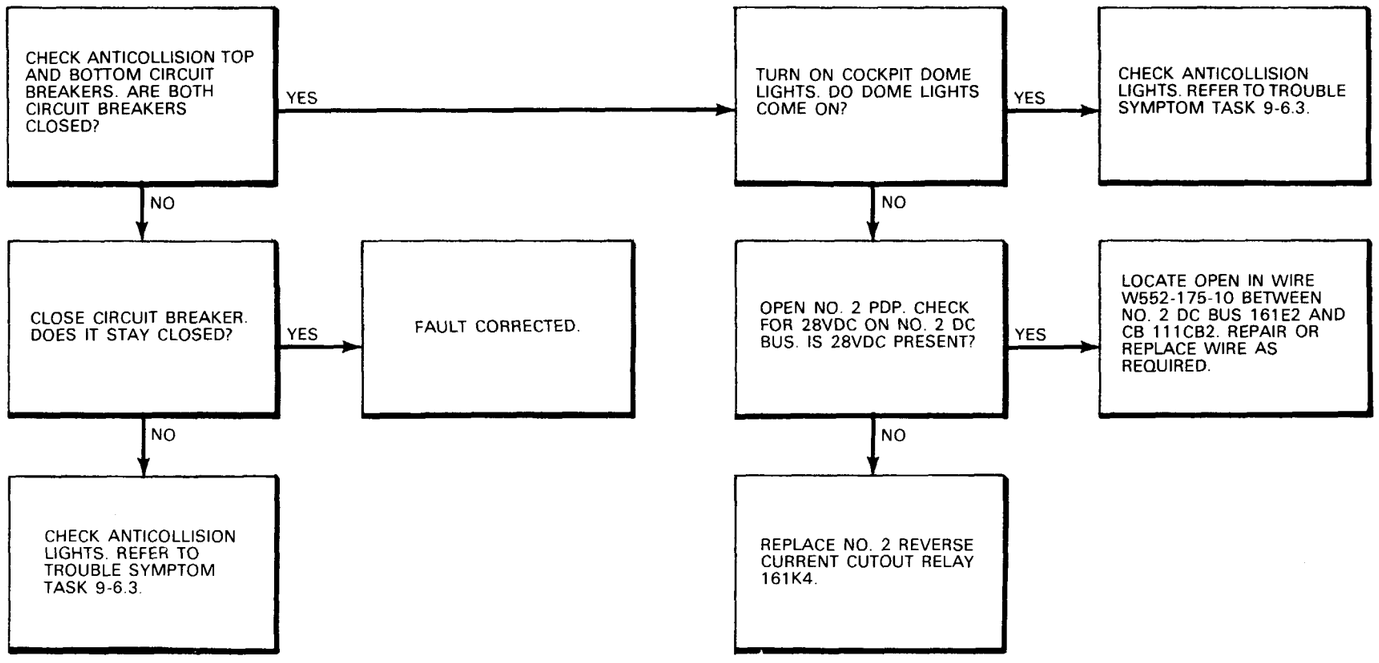
Reference:
TM 55-1620-240-23

Equipment Condition:
TM 65-1520-240-23
Battery Connected
Electrical Power On
Hydraulic Power Off



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9-1.12 ANTICOLLISION LIGHTS DO NOT FLASH, NO. 1 DC SYSTEM TURNED OFF (Continued)



END OF TASK

9-1.13 OVERHEAD PANEL LIGHTS DO NOT COME ON, NO. 1 DC SYSTEM TURNED OFF

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
Without 17

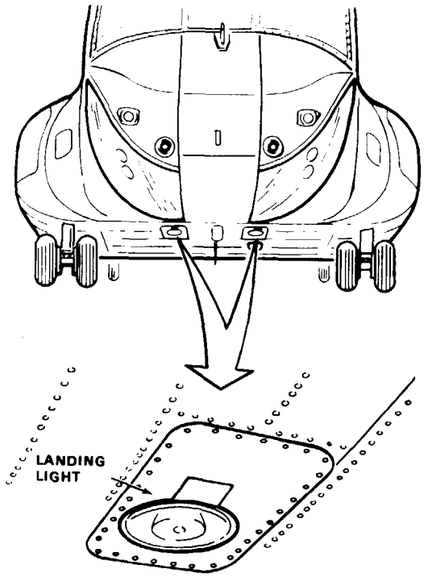
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

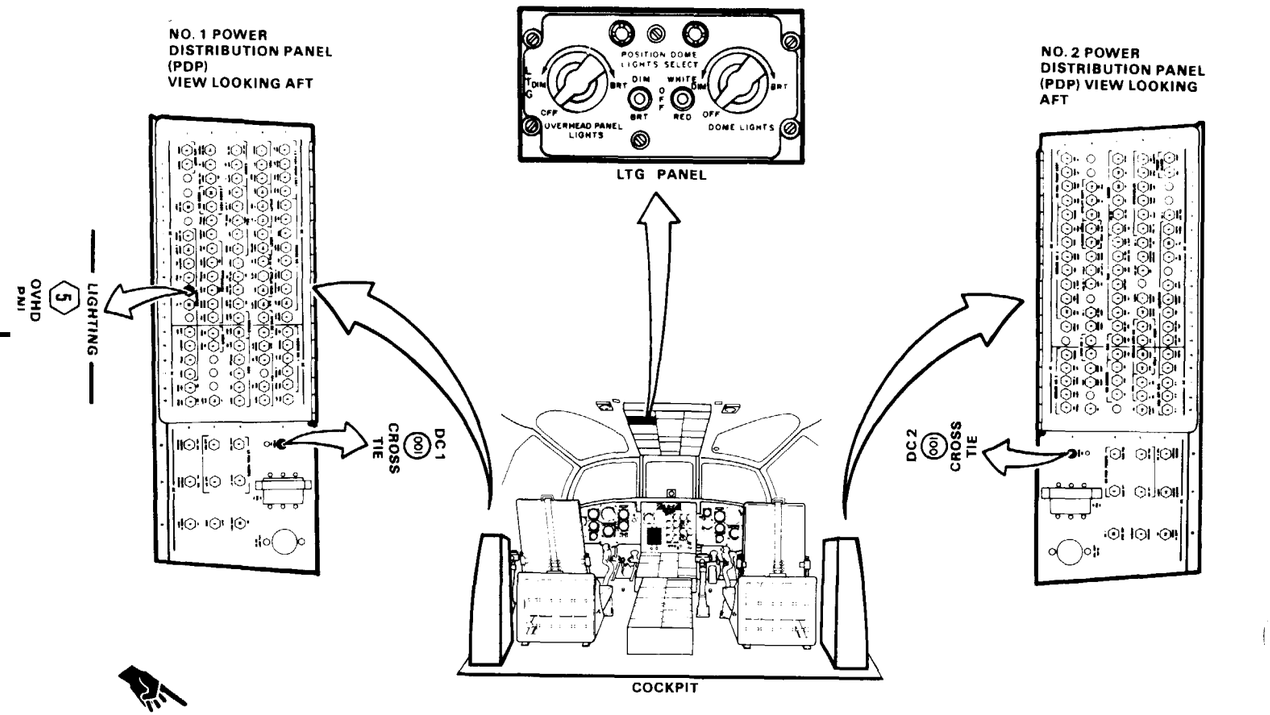
Materials:
None

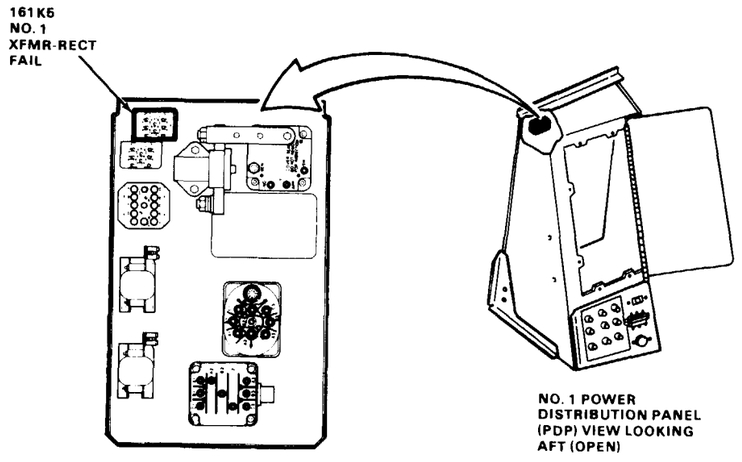
Personnel Required:
Medium Helicopter Repairer
Aircraft Electrician

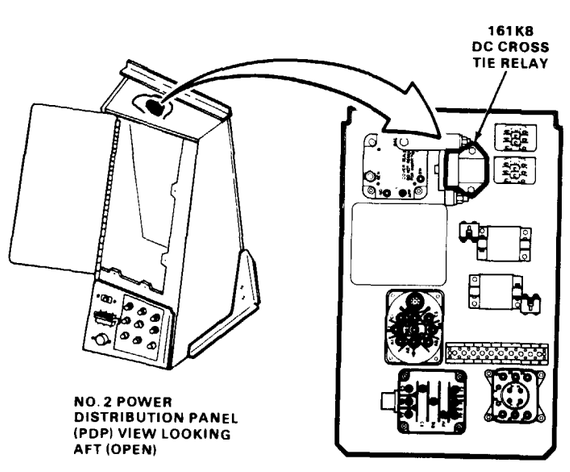
References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power Disconnected
Hydraulic Power Off



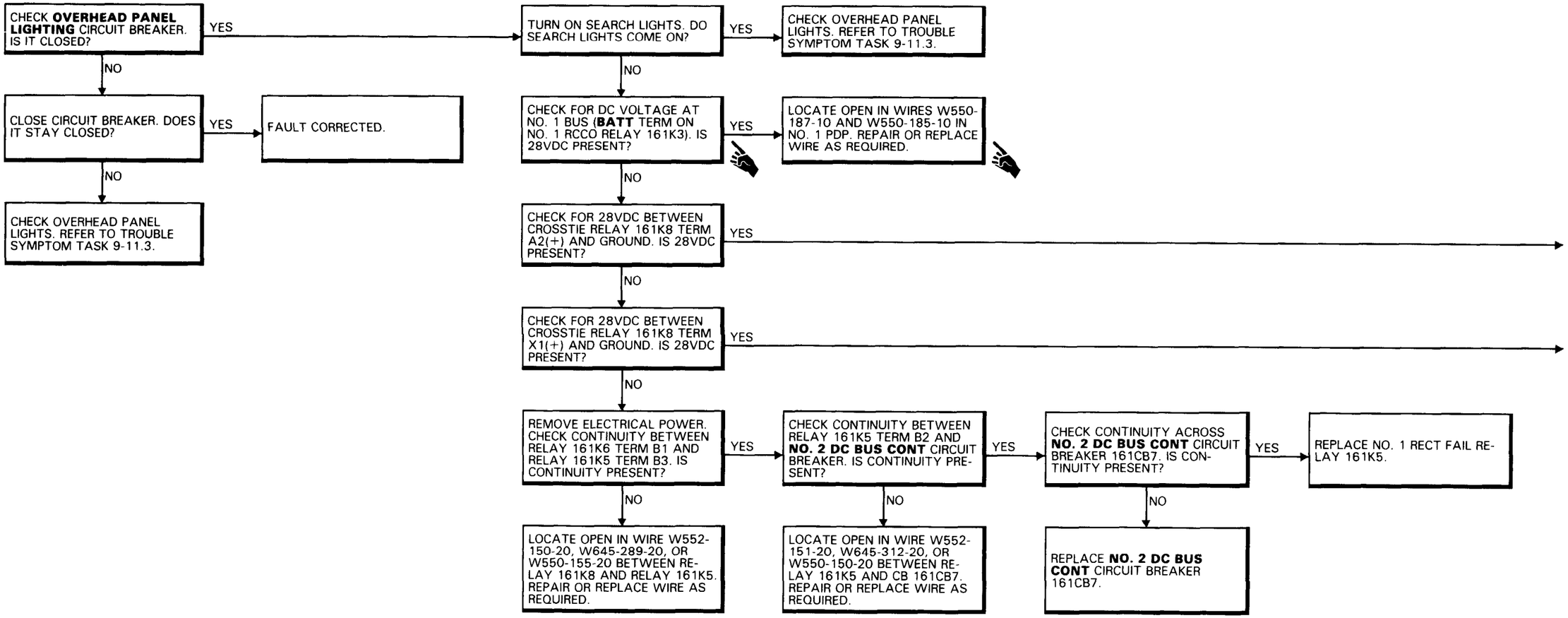




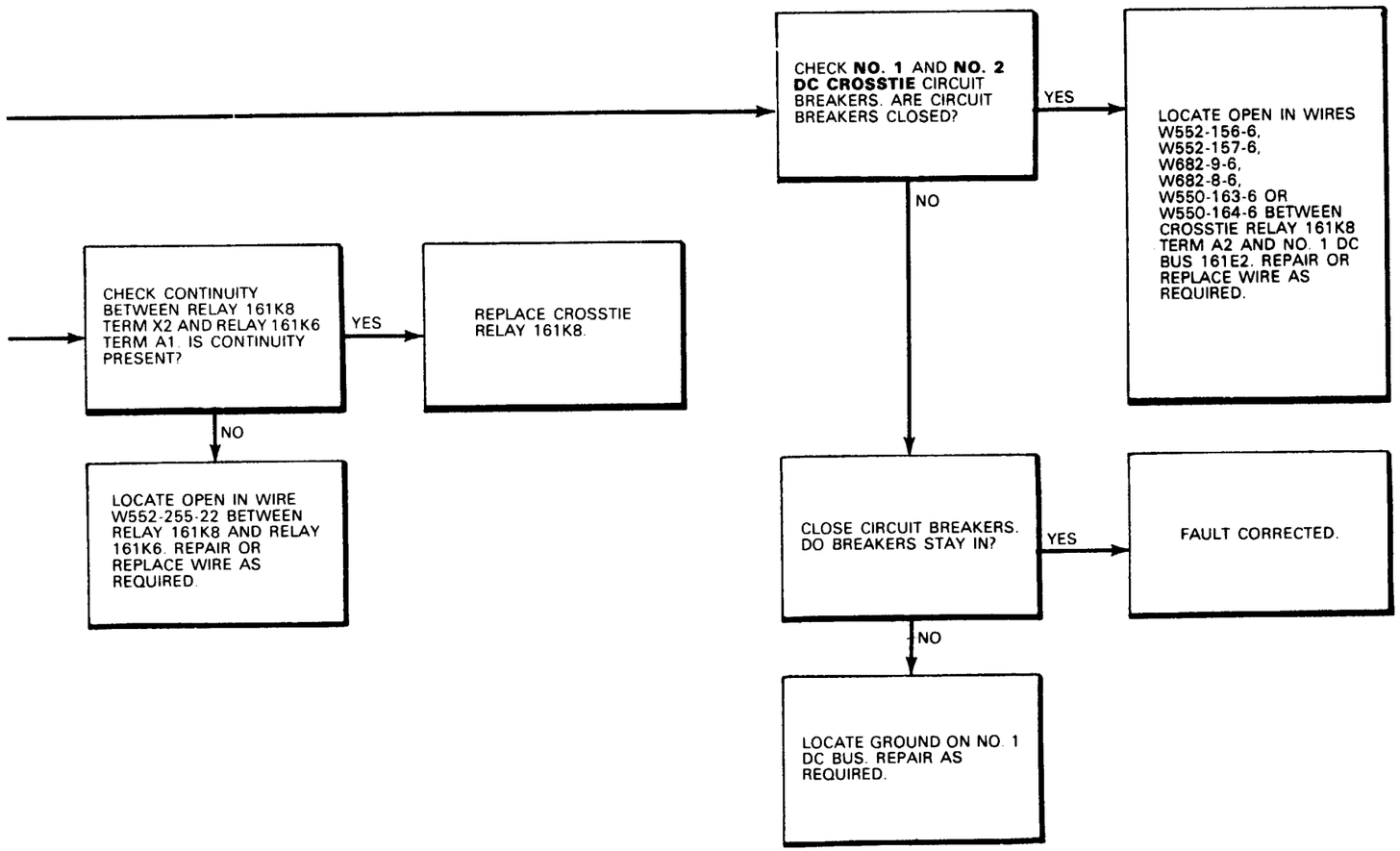


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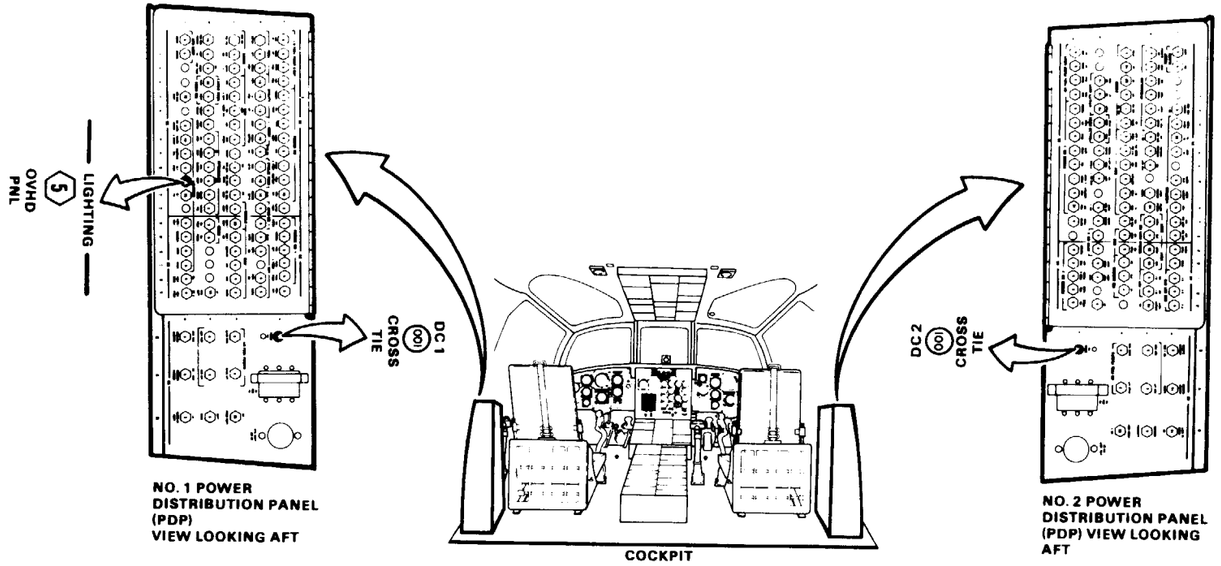


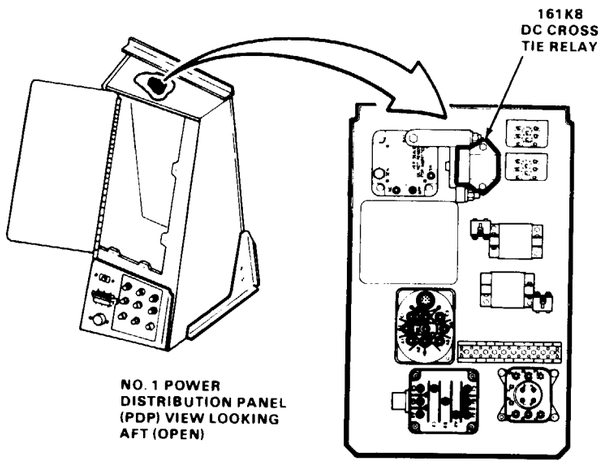
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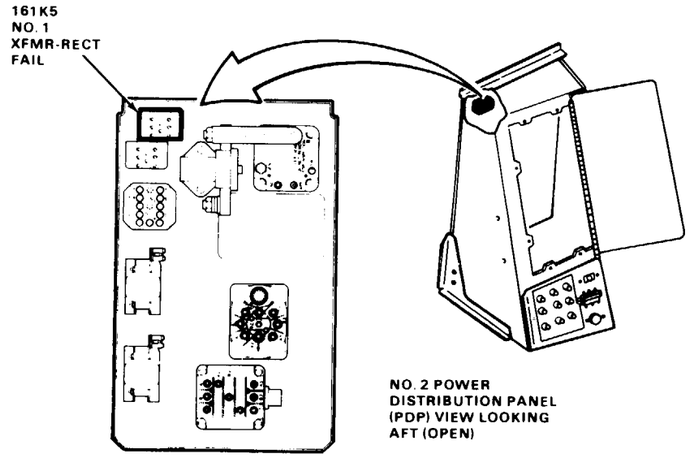


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9-1.13 OVERHEAD PANEL LIGHTS DO NOT COME ON, NO. 1 DC SYSTEM TURNED OFF (Continued)







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END OF TASK

9-1.14 OVERHEAD PANEL LIGHTS DO NOT COME ON, NO. 1 DC SYSTEM TURNED ON

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

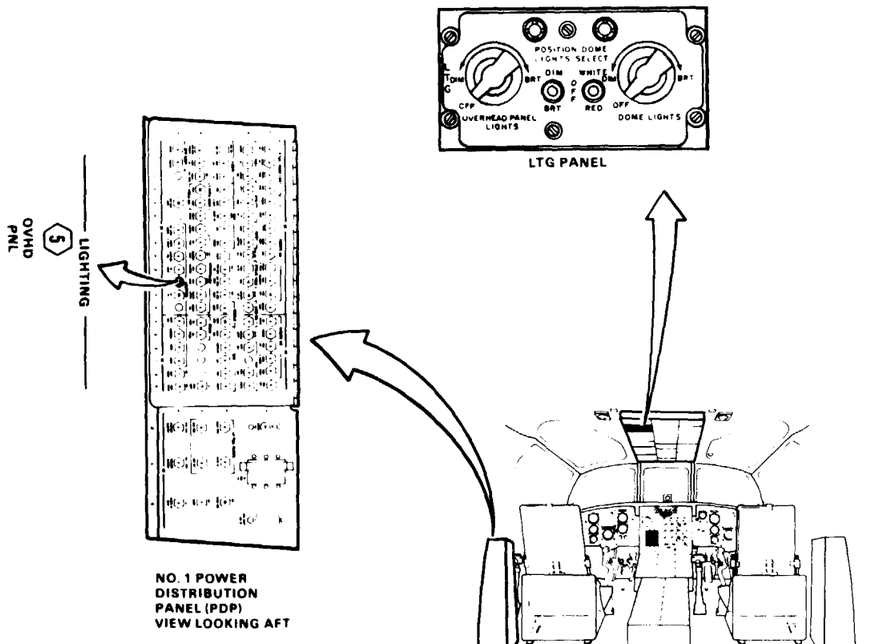
Tools:
Electrical Repairer's Kit
NSN 5180-00-323-4915
Multimeter

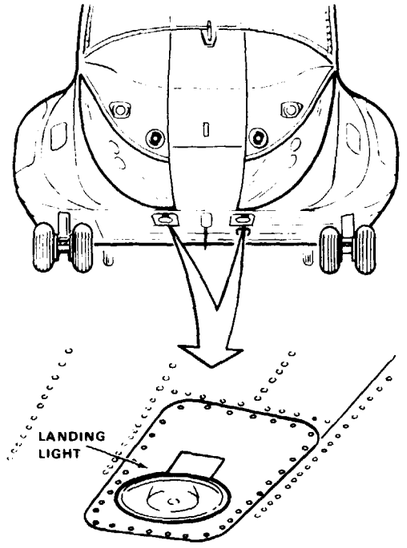
Materials:
None

Personnel Required:
67U10 Medium Helicopter Repairer
68F20 Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23
Battery Connected
Electrical Power On
Hydraulic Power Off

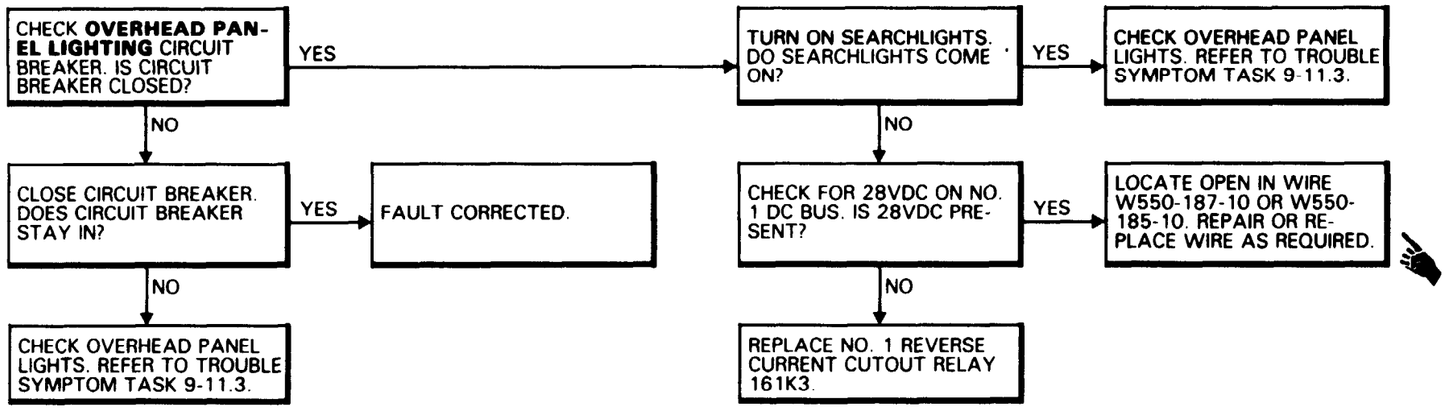




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CHECK **OVERHEAD PANEL LIGHTING** CIRCUIT BREAKER. IS CIRCUIT BREAKER CLOSED?
YES
NO
CLOSE CIRCUIT BREAKER. DOES CIRCUIT BREAKER STAY IN?
YES
FAULT CORRECTED.
NO
CHECK OVERHEAD PANEL LIGHTS. REFER TO TROUBLE SYMPTOM TASK 9-11.3.
TURN ON SEARCHLIGHTS. DO SEARCHLIGHTS COME ON?
YES
CHECK OVERHEAD PANEL LIGHTS. REFER TO TROUBLE SYMPTOM TASK 9-11.3.
NO
CHECK FOR 28VDC ON NO. 1 DC BUS. IS 28VDC PRESENT?
YES
LOCATE OPEN IN WIRE W550-187-10 OR W550-185-10. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
REPLACE NO. 1 REVERSE CURRENT CUTOUT RELAY 161K3.

END OF TASK

9-1.15 ANTICOLLISION LIGHTS DO NOT FLASH, NO. 2 DC SYSTEM TURNED OFF 9-1.15

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

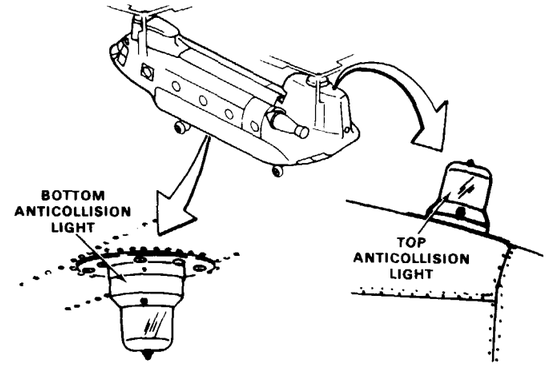
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

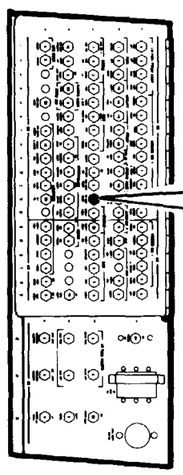
Materials:
None

Personnel Required:
Medium Helicopter Repairer
Aircraft Electrician

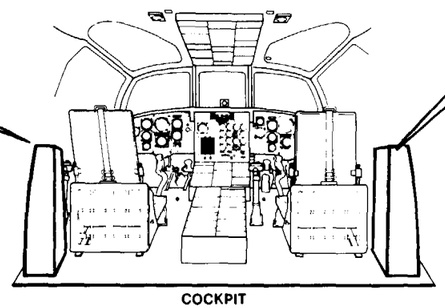
References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off

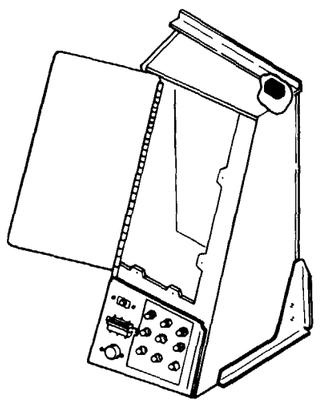




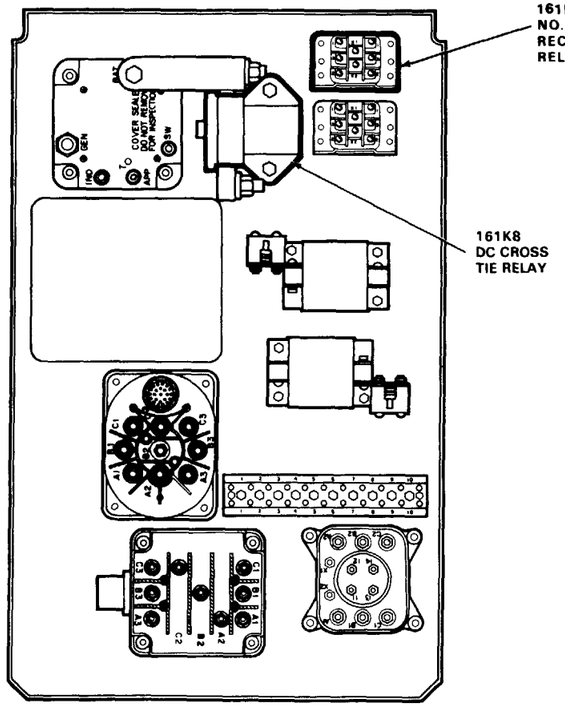
NO. 1 POWER DISTRIBUTION PANEL (PDP) VIEW LOOKING AFT



COCKPIT

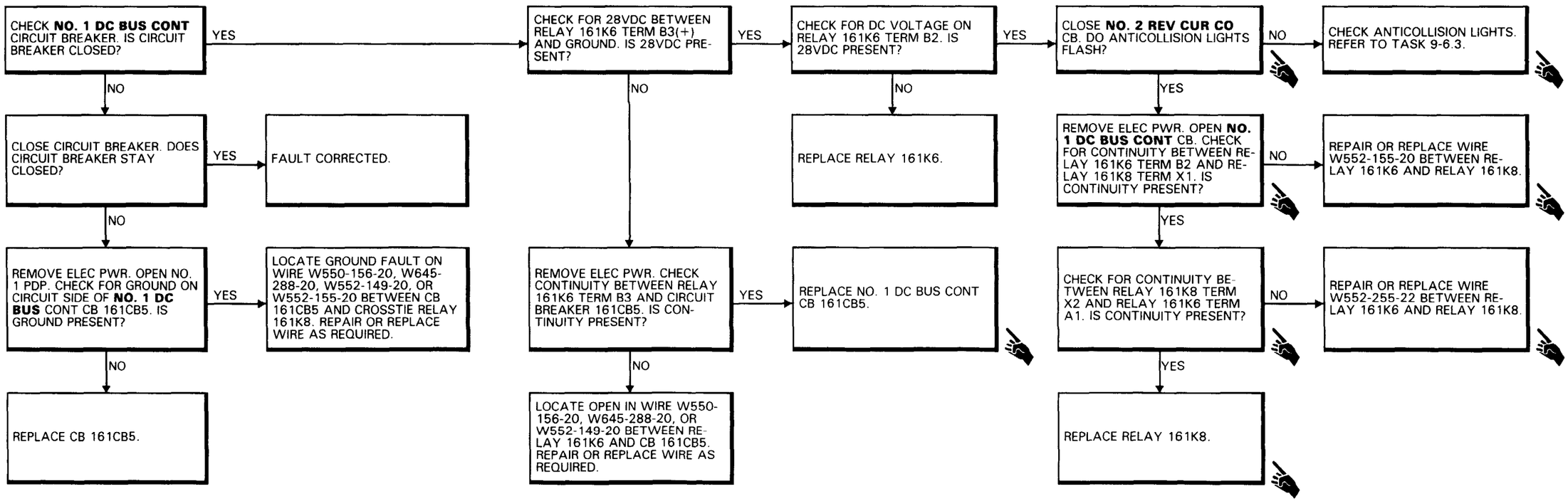


NO. 2 POWER DISTRIBUTION PANEL (PDP) VIEW LOOKING AFT (OPEN)



10269

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CHECK **NO. 1 DC BUS CONT** CIRCUIT BREAKER. IS CIRCUIT BREAKER CLOSED?
YES
NO
CLOSE CIRCUIT BREAKER. DOES CIRCUIT BREAKER STAY CLOSED?
YES
FAULT CORRECTED.
NO
REMOVE ELEC PWR. OPEN NO. 1 PDP. CHECK FOR GROUND ON CIRCUIT SIDE OF **NO. 1 DC BUS** CONT CB 161CB5. IS GROUND PRESENT?
YES
LOCATE GROUND FAULT ON WIRE W550-156-20, W645-288-20, W552-149-20, OR W552-155-20 BETWEEN CB 161CB5 AND CROSSTIE RELAY 161K8. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
REPLACE CB 161CB5.
CHECK FOR 28VDC BETWEEN RELAY 161K6 TERM B3(+) AND GROUND. IS 28VDC PRESENT?
YES
NO
REMOVE ELEC PWR. CHECK CONTINUITY BETWEEN RELAY 161K6 TERM B3 AND CIRCUIT BREAKER 161CB5. IS CONTINUITY PRESENT?
YES
REPLACE NO. 1 DC BUS CONT CB 161CB5.
NO
LOCATE OPEN IN WIRE W550-156-20, W645-288-20, OR W552-149-20 BETWEEN RELAY 161K6 AND CB 161CB5. REPAIR OR REPLACE WIRE AS REQUIRED.
CHECK FOR DC VOLTAGE ON RELAY 161K6 TERM B2. IS 28VDC PRESENT?
YES
NO
REPLACE RELAY 161K6.
CLOSE **NO. 2 REV CUR CO** CB. DO ANTICOLLISION LIGHTS FLASH?
NO
CHECK ANTICOLLISION LIGHTS. REFER TO TASK 9-6.3.
YES
REMOVE ELEC PWR. OPEN **NO. 1 DC BUS CONT** CB. CHECK FOR CONTINUITY BETWEEN RELAY 161K6 TERM B2 AND RELAY 161K8 TERM X1. IS CONTINUITY PRESENT?
NO
REPAIR OR REPLACE WIRE W552-155-20 BETWEEN RELAY 161K6 AND RELAY 161K8.
YES
CHECK FOR CONTINUITY BETWEEN RELAY 161K8 TERM X2 AND RELAY 161K6 TERM A1. IS CONTINUITY PRESENT?
NO
REPAIR OR REPLACE WIRE W552-255-22 BETWEEN RELAY 161K6 AND RELAY 161K8.
YES
REPLACE RELAY 161K8.

END OF TASK

9-1.16 CABIN AND RAMP LIGHTS NOT POWERED FROM SWITCHED BATTERY BUS

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

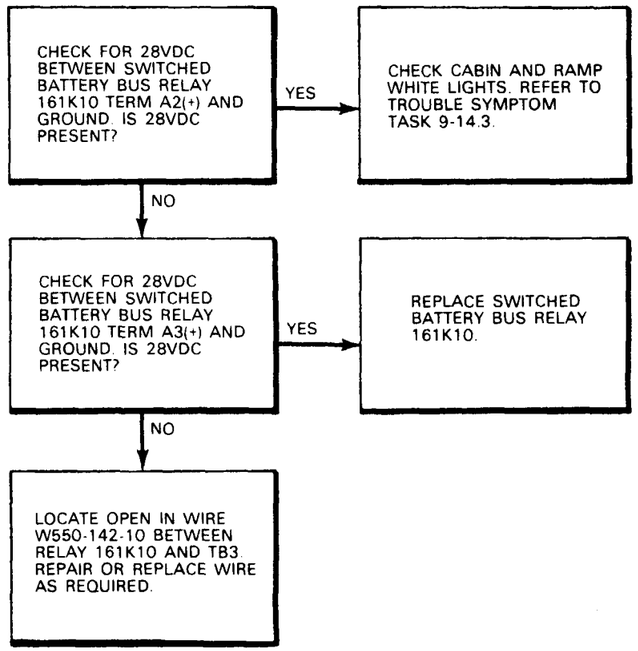
Tools:
Electrical Repairer's Tool Kit
NSN 5180-00-323-4915
Multimeter

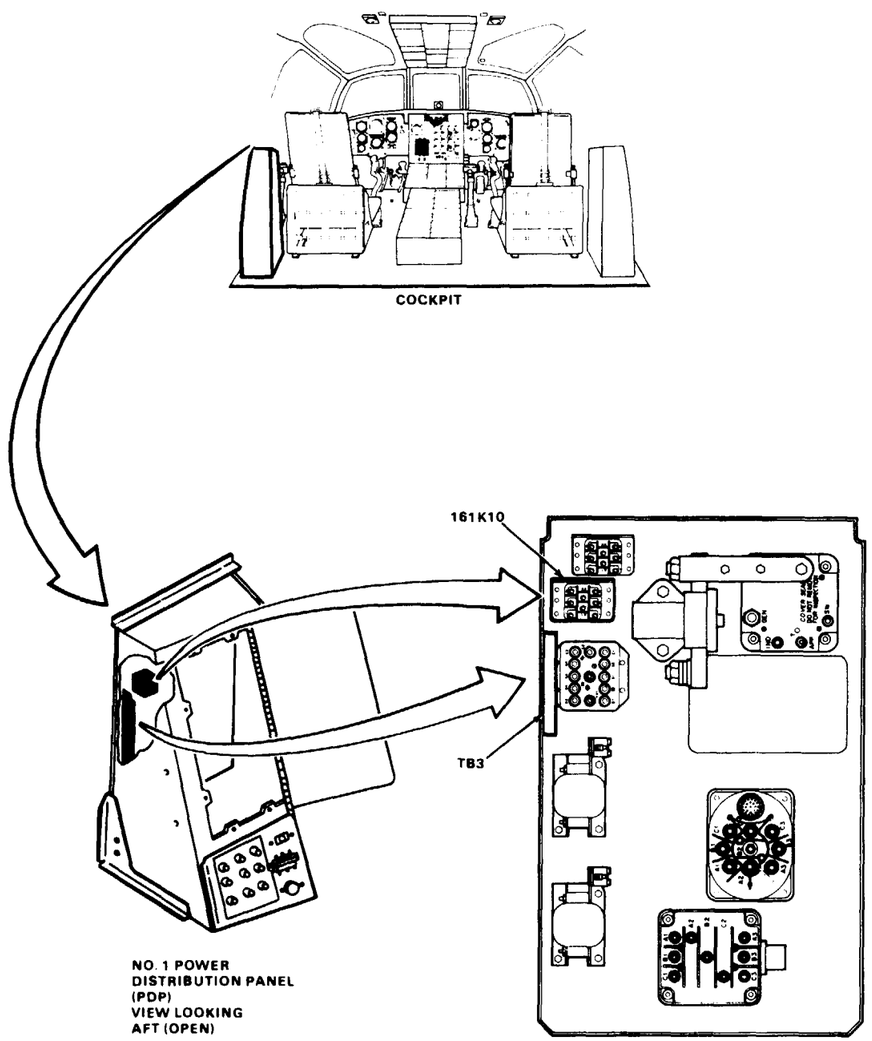
Materials:
None

Personnel Required:
67U1O Medium Helicopter Repairer
68F20 Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Conditlon:
TM 55-1520-240-23
Battery Connected
Electrical Power On
Hydraulic Power Off





45 x 54

DI45-12049-3PA

END OF TASK

9-1.17 NO. 1 AND NO. 2 RECT OFF (WITHOUT 74) RECT 1 AND RECT 2 (WITH 74) CAPSULE OUT WHEN EXTERNAL DC SUPPLY CONNECTED 9-1.17

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

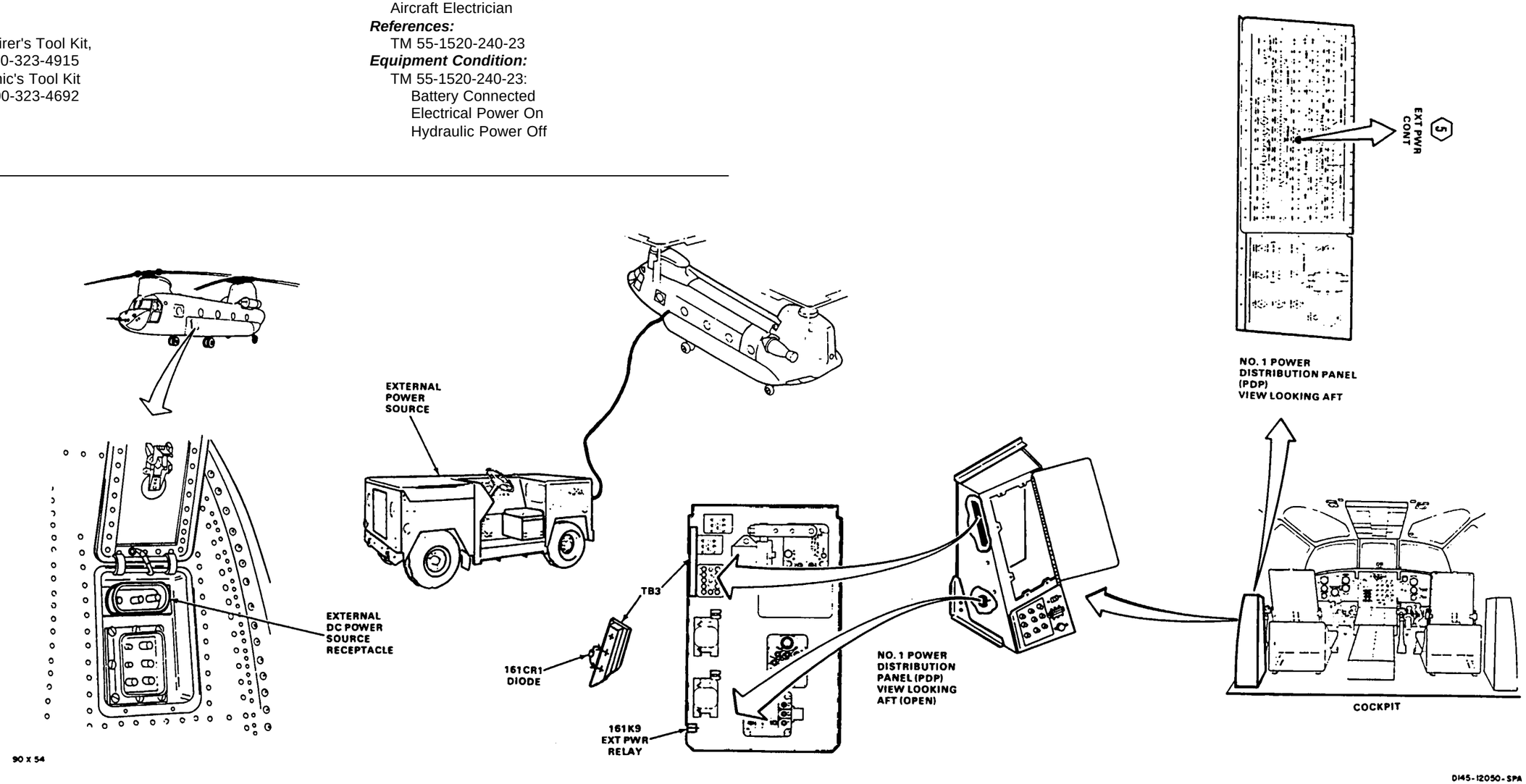
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Aircraft Mechanic's Tool Kit
NSN 5180-00-323-4692
Multimeter

Materials:
None

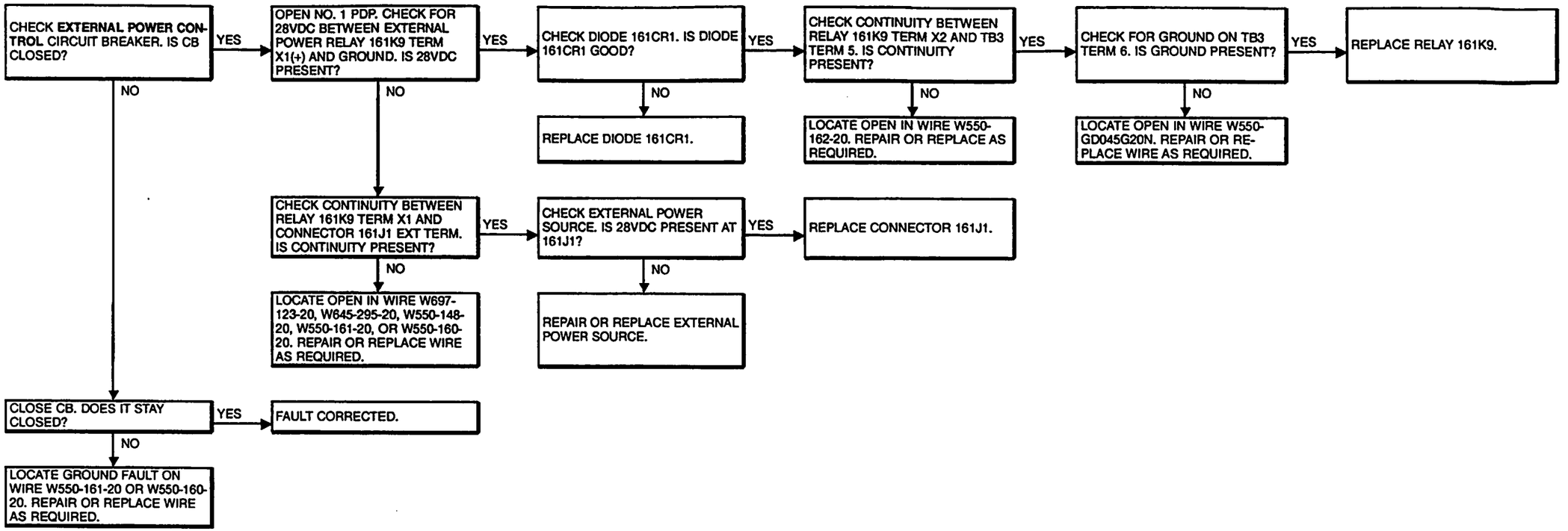
Personnel Required:
Medium Helicopter Repairer
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off



GO-TO NEXT PAGE


CHECK EXTERNAL POWER CONTROL CIRCUIT BREAKER. IS CB CLOSED?
YES
NO
OPEN NO. 1 PDP. CHECK FOR 28VDC BETWEEN EXTERNAL POWER RELAY 161K9 TERM X1(+) AND GROUND. IS 28VDC PRESENT?
YES
NO
CHECK DIODE 161CR1. IS DIODE 161CR1 GOOD?
YES
NO
REPLACE DIODE 161CR1.
CHECK CONTINUITY BETWEEN RELAY 161K9 TERM X2 AND TB3 TERM 5. IS CONTINUITY PRESENT?
YES
NO
LOCATE OPEN IN WIRE W550-162-20. REPAIR OR REPLACE AS REQUIRED.
CHECK FOR GROUND ON TB3 TERM 6. IS GROUND PRESENT?
YES
NO
LOCATE OPEN IN WIRE W550-GD045G20N. REPAIR OR REPLACE WIRE AS REQUIRED.
REPLACE RELAY 161K9.
CHECK CONTINUITY BETWEEN RELAY 161K9 TERM X1 AND CONNECTOR 161J1 EXT TERM. IS CONTINUITY PRESENT?
YES
NO
LOCATE OPEN IN WIRE W697-123-20, W645-295-20, W550-148-20, W550-161-20, OR W550-160-20. REPAIR OR REPLACE WIRE AS REQUIRED.
CHECK EXTERNAL POWER SOURCE. IS 28VDC PRESENT AT 161J1?
YES
NO
REPAIR OR REPLACE EXTERNAL POWER SOURCE.
REPLACE CONNECTOR 161J1.
CLOSE CB. DOES IT STAY CLOSED?
YES
NO
FAULT CORRECTED.
LOCATE GROUND FAULT ON WIRE W550-161-20 OR W550-160-20. REPAIR OR REPLACE WIRE AS REQUIRED.

END OF TASK

9-1.18 EXT PWR CAPSULE OUT WHEN EXTERNAL DC SUPPLY CONNECTED

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

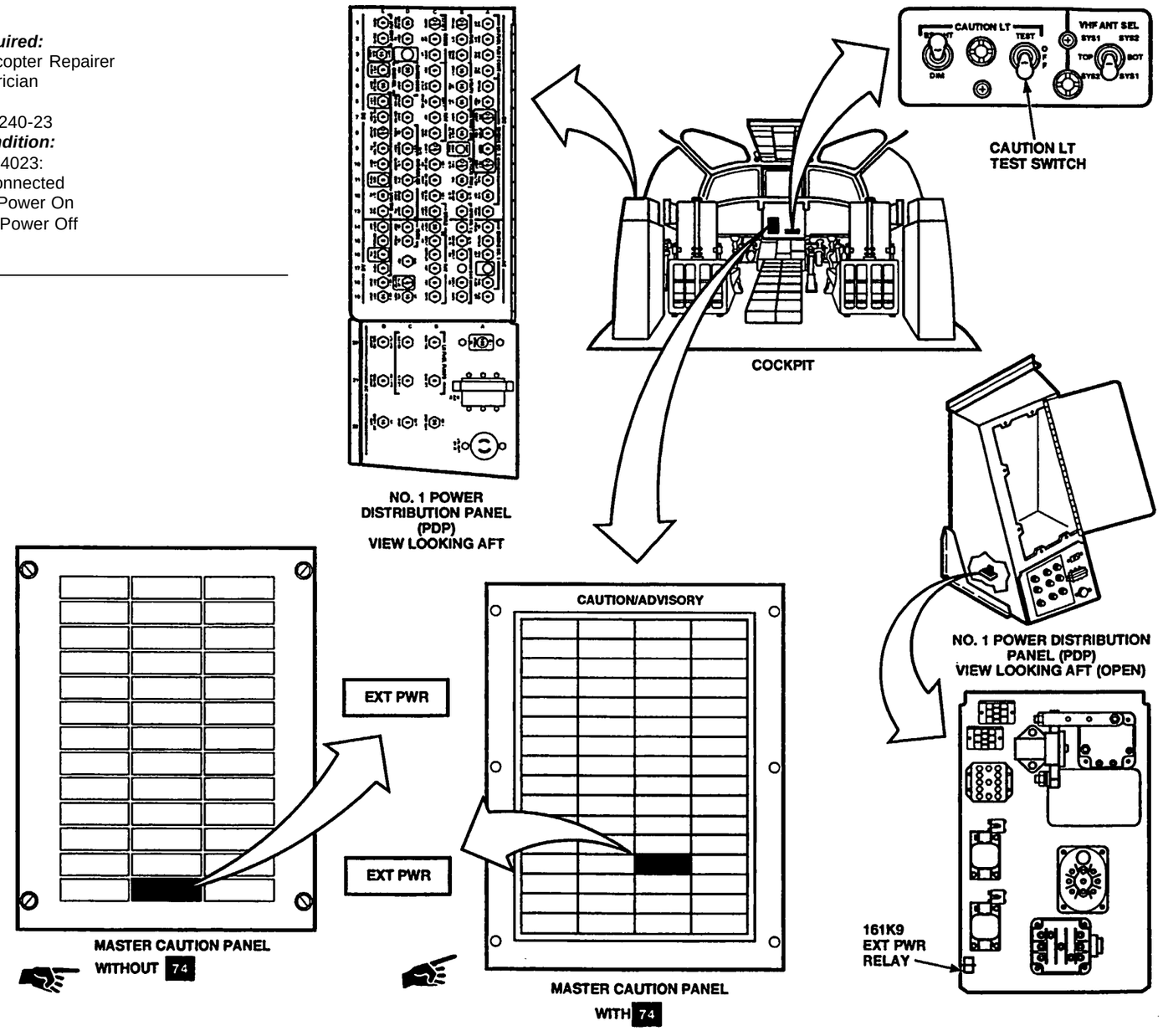
Tools:
Aircraft Mechanic's Tool Kit,
NSN 5180-00-323-4692
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:
None

Personnel Required:
Medium Helicopter Repairer
Aircraft Electrician

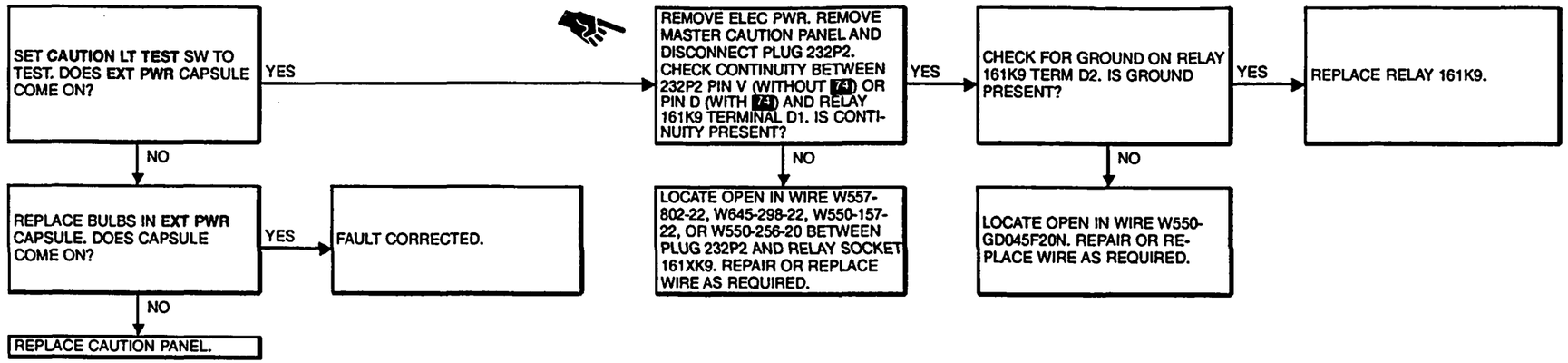
References:
TM 55-1520-240-23

Equipment Condition:
TM 55-152024023:
Battery Connected
Electrical Power On
Hydraulic Power Off



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GO TO NEXT PAGE


SET CAUTION LT TEST SW TO TEST. DOES EXT PWR CAPSULE COME ON?
YES
NO
REPLACE BULBS IN EXT PWR CAPSULE. DOES CAPSULE COME ON?
YES
FAULT CORRECTED.
NO
REPLACE CAUTION PANEL.
REMOVE ELEC PWR. REMOVE MASTER CAUTION PANEL AND DISCONNECT PLUG 232P2. CHECK CONTINUITY BETWEEN 232P2 PIN V (WITHOUT 741) OR PIN D (WITH 741) AND RELAY 161K9 TERMINAL D1. IS CONTINUITY PRESENT?
YES
NO
LOCATE OPEN IN WIRE W557-802-22, W645-298-22, W550-157-22, OR W550-256-20 BETWEEN PLUG 232P2 AND RELAY SOCKET 161XK9. REPAIR OR REPLACE WIRE AS REQUIRED.
CHECK FOR GROUND ON RELAY 161K9 TERM D2. IS GROUND PRESENT?
YES
NO
LOCATE OPEN IN WIRE W550-GD045F20N. REPAIR OR REPLACE WIRE AS REQUIRED.
REPLACE RELAY 161K9.

END OF TASK

9-1.19 EXTERNAL DC SUPPLY DOES NOT POWER DC BUSES

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

Tools:
Electrical Repairer's Tool Kit
NSN 5180-00-323-4915
Multimeter

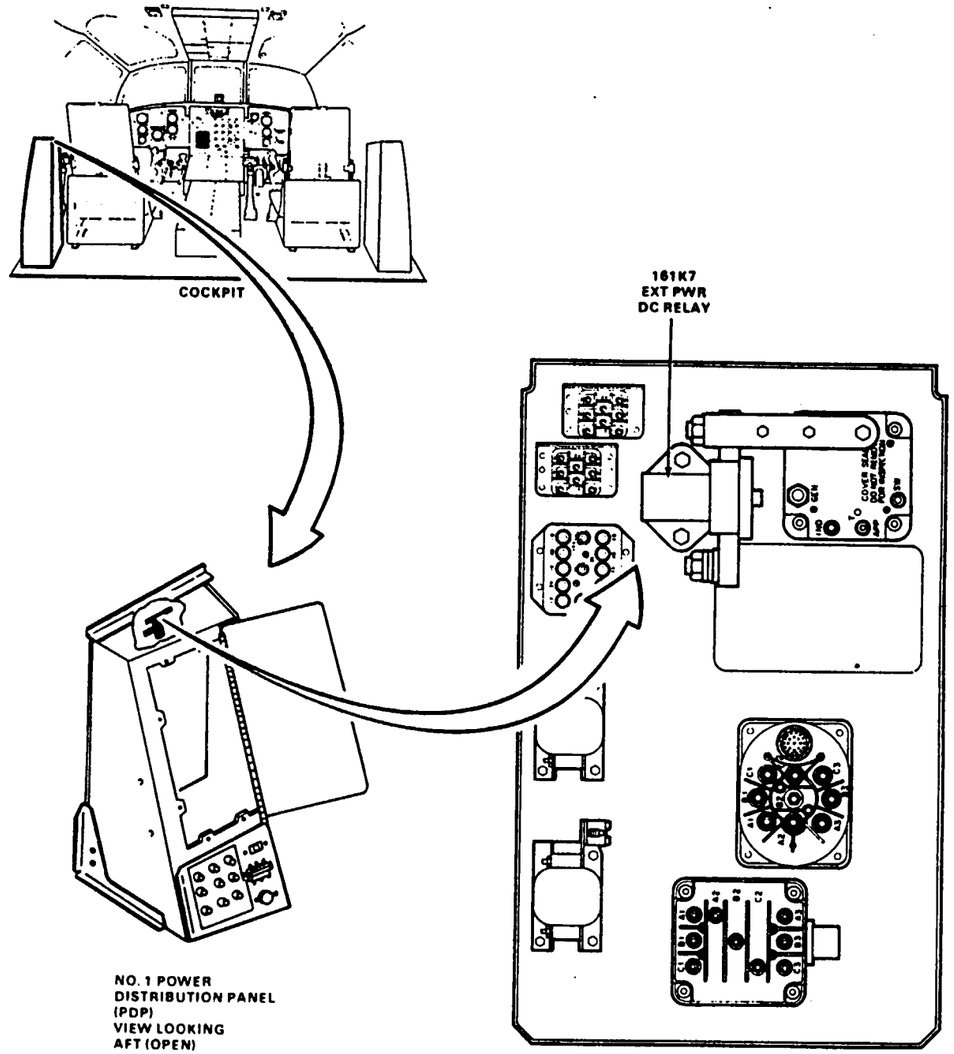
Materials:
None

Personnel Required:
67U10 Medium Helicopter Repairer
68F20 Aircraft Electrician

References:
TM 55-1520-240-23

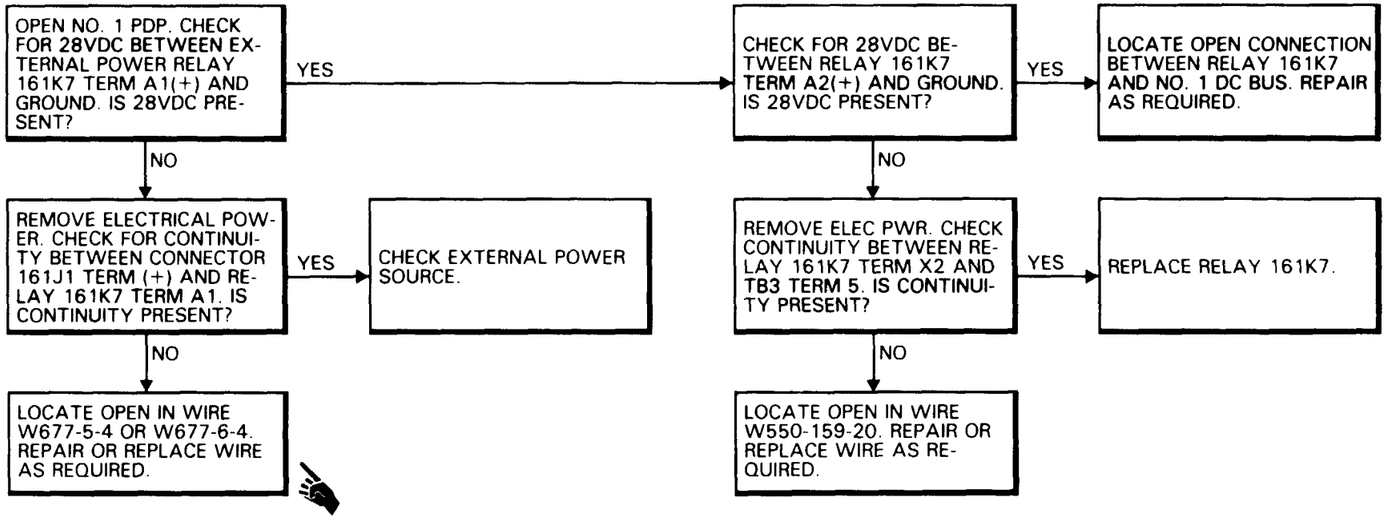
Equipment Condition:
TM 55-1520-240-23
Battery Connected
Electrical Power On
Hydraulic Power Off

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OPEN NO. 1 PDP. CHECK FOR 28VDC BETWEEN EXTERNAL POWER RELAY 161K7 TERM A1(+) AND GROUND. IS 28VDC PRESENT?
YES
NO
REMOVE ELECTRICAL POWER. CHECK FOR CONTINUITY BETWEEN CONNECTOR 161J1 TERM (+) AND RELAY 161K7 TERM A1. IS CONTINUITY PRESENT?
YES
CHECK EXTERNAL POWER SOURCE.
NO
LOCATE OPEN IN WIRE W677-5-4 OR W677-6-4. REPAIR OR REPLACE WIRE AS REQUIRED.
CHECK FOR 28VDC BETWEEN RELAY 161K7 TERM A2(+) AND GROUND. IS 28VDC PRESENT?
YES
LOCATE OPEN CONNECTION BETWEEN RELAY 161K7 AND NO. 1 DC BUS. REPAIR AS REQUIRED.
NO
REMOVE ELEC PWR. CHECK CONTINUITY BETWEEN RELAY 161K7 TERM X2 AND TB3 TERM 5. IS CONTINUITY PRESENT?
YES
REPLACE RELAY 161K7.
NO
LOCATE OPEN IN WIRE W550-159-20. REPAIR OR REPLACE WIRE AS REQUIRED.

END OF TASK

9-1.20 SWITCHED BATTERY BUS OR ESSENTIAL DC BUS NOT POWERED BY NO. 1 DC BUS

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

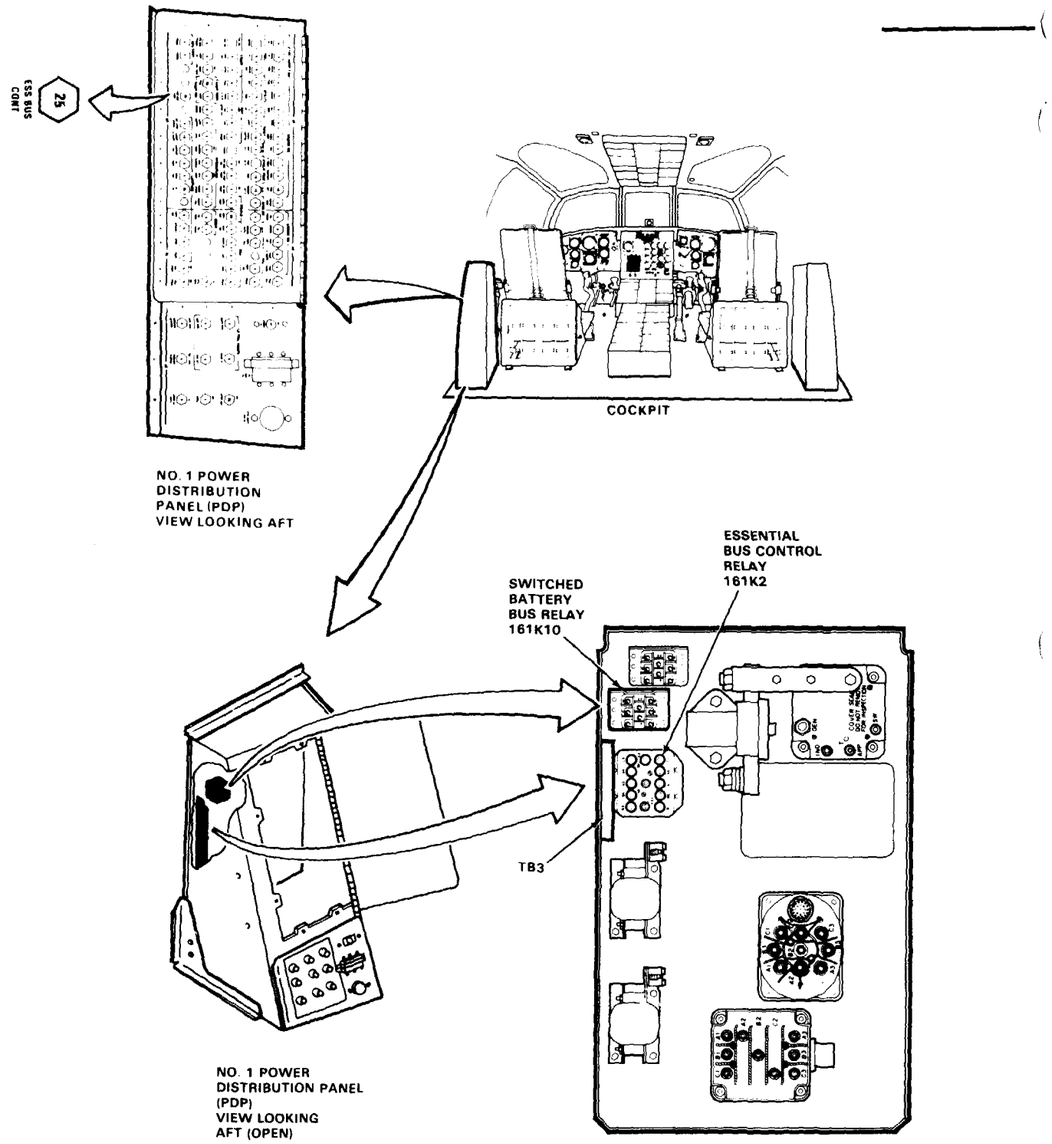
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:
None

Personnel Required:
Aircraft Electrician

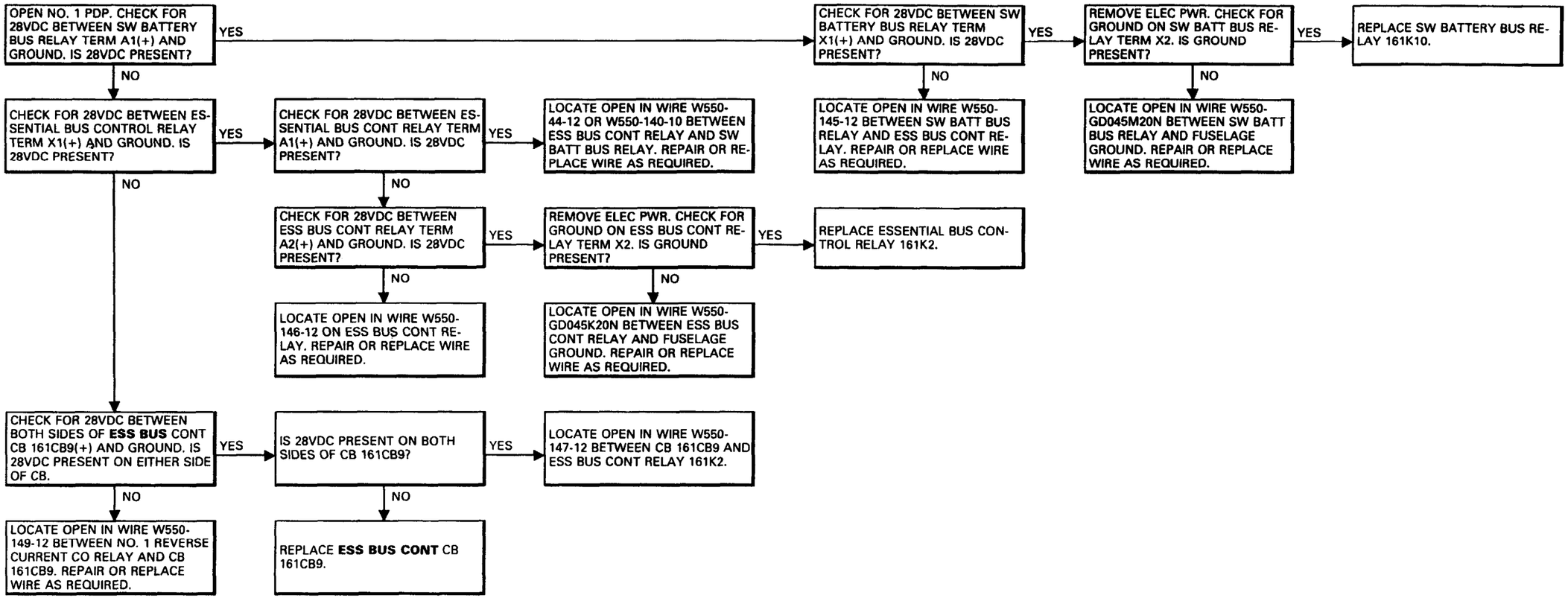
References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23
Battery Connected
Electrical Power On
Hydraulic Power On



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OPEN NO. 1 PDP. CHECK FOR 28VDC BETWEEN SW BATTERY BUS RELAY TERM A1(+) AND GROUND. IS 28VDC PRESENT?
YES
NO
CHECK FOR 28VDC BETWEEN SW BATTERY BUS RELAY TERM X1(+) AND GROUND. IS 28VDC PRESENT?
YES
NO
LOCATE OPEN IN WIRE W550-145-12 BETWEEN SW BATT BUS RELAY AND ESS BUS CONT RELAY. REPAIR OR REPLACE WIRE AS REQUIRED.
REMOVE ELEC PWR. CHECK FOR GROUND ON SW BATT BUS RELAY TERM X2. IS GROUND PRESENT?
YES
NO
LOCATE OPEN IN WIRE W550-GD045M20N BETWEEN SW BATT BUS RELAY AND FUSELAGE GROUND. REPAIR OR REPLACE WIRE AS REQUIRED.
REPLACE SW BATTERY BUS RELAY 161K10.
CHECK FOR 28VDC BETWEEN ESSENTIAL BUS CONTROL RELAY TERM X1(+) AND GROUND. IS 28VDC PRESENT?
YES
NO
CHECK FOR 28VDC BETWEEN ESSENTIAL BUS CONT RELAY TERM A1(+) AND GROUND. IS 28VDC PRESENT?
YES
NO
LOCATE OPEN IN WIRE W550-44-12 OR W550-140-10 BETWEEN ESS BUS CONT RELAY AND SW BATT BUS RELAY. REPAIR OR REPLACE WIRE AS REQUIRED.
CHECK FOR 28VDC BETWEEN ESS BUS CONT RELAY TERM A2(+) AND GROUND. IS 28VDC PRESENT?
YES
NO
LOCATE OPEN IN WIRE W550-146-12 ON ESS BUS CONT RELAY. REPAIR OR REPLACE WIRE AS REQUIRED.
REMOVE ELEC PWR. CHECK FOR GROUND ON ESS BUS CONT RELAY TERM X2. IS GROUND PRESENT?
YES
NO
LOCATE OPEN IN WIRE W550-GD045K20N BETWEEN ESS BUS CONT RELAY AND FUSELAGE GROUND. REPAIR OR REPLACE WIRE AS REQUIRED.
REPLACE ESSENTIAL BUS CONTROL RELAY 161K2.
CHECK FOR 28VDC BETWEEN BOTH SIDES OF ESS BUS CONT CB 161CB9(+) AND GROUND. IS 28VDC PRESENT ON EITHER SIDE OF CB.
YES
NO
LOCATE OPEN IN WIRE W550-149-12 BETWEEN NO. 1 REVERSE CURRENT CO RELAY AND CB 161CB9. REPAIR OR REPLACE WIRE AS REQUIRED.
IS 28VDC PRESENT ON BOTH SIDES OF CB 161CB9?
YES
NO
REPLACE ESS BUS CONT CB 161CB9.
LOCATE OPEN IN WIRE W550-147-12 BETWEEN CB 161CB9 AND ESS BUS CONT RELAY 161K2.

END OF TASK

9-1.21 EXT PWR CONT CIRCUIT BREAKER WILL NOT STAY CLOSED WITH EXTERNAL DC POWER APPLIED

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

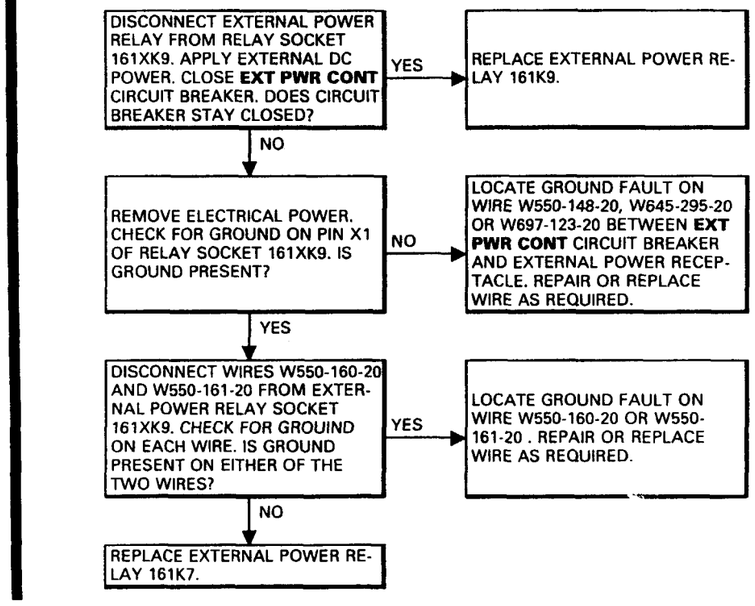
Tools:
Electrical Repairer's Tool Kit, NSN 5180-00-323-4915
Multimeter

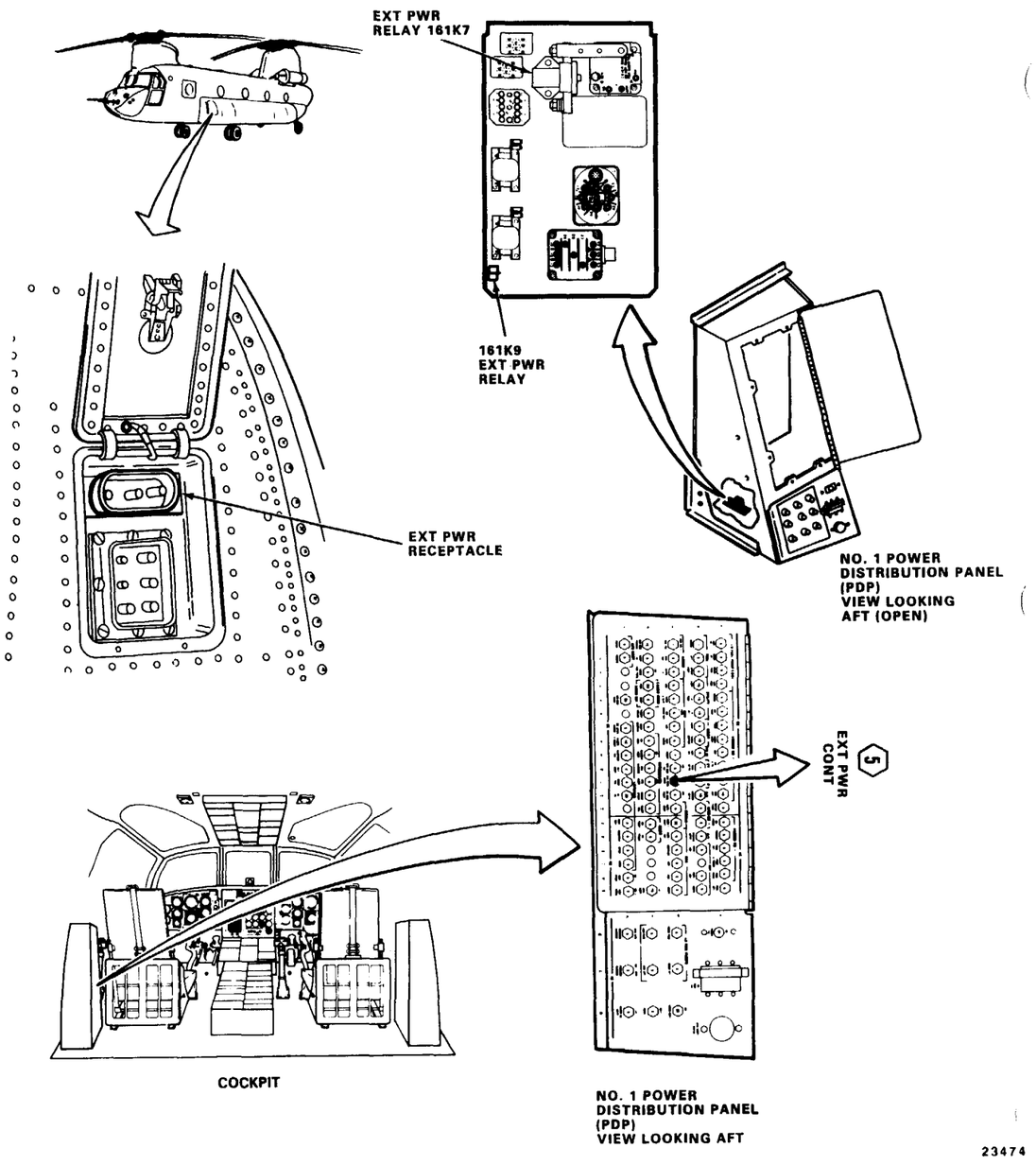
Materials:
None

Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

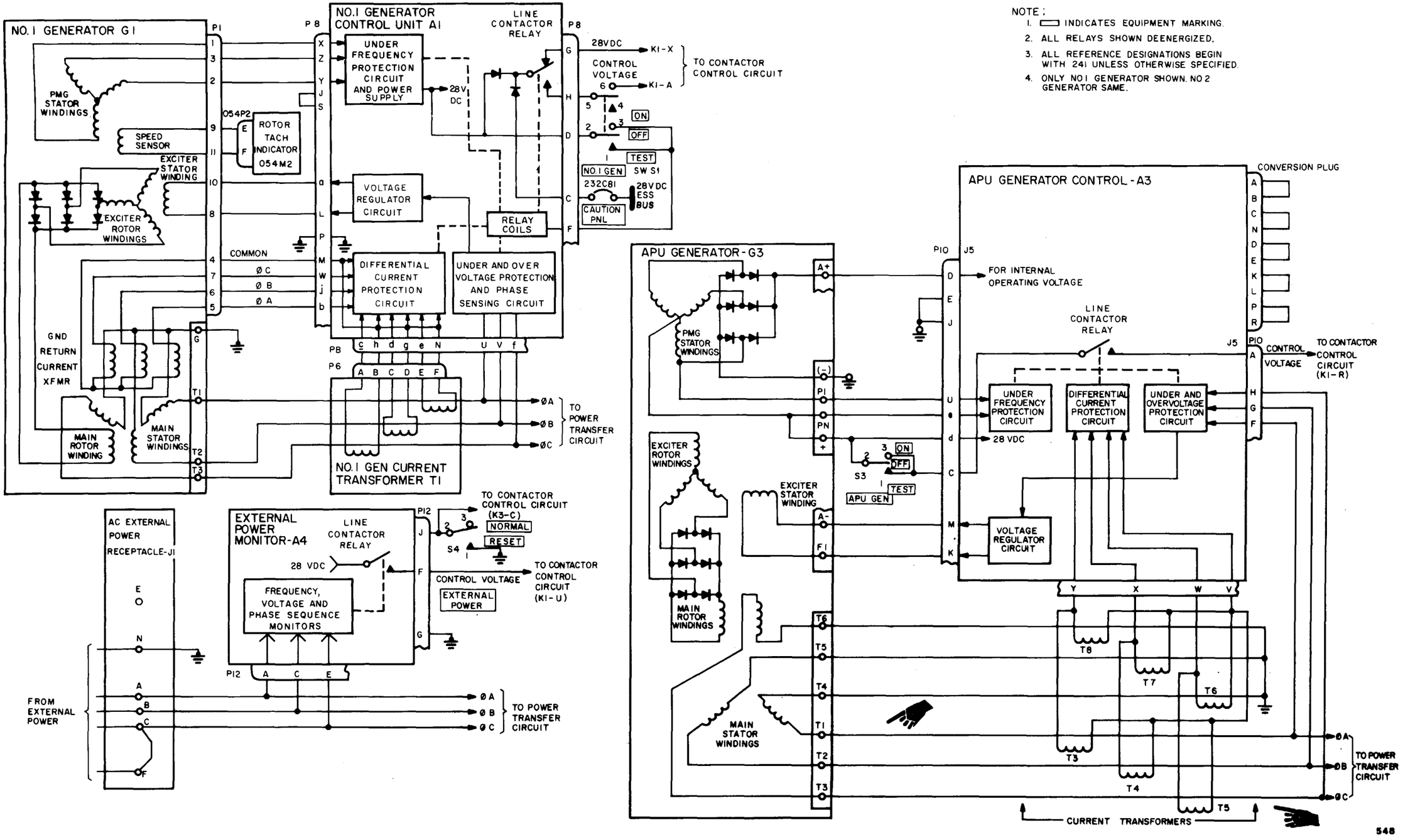
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power On



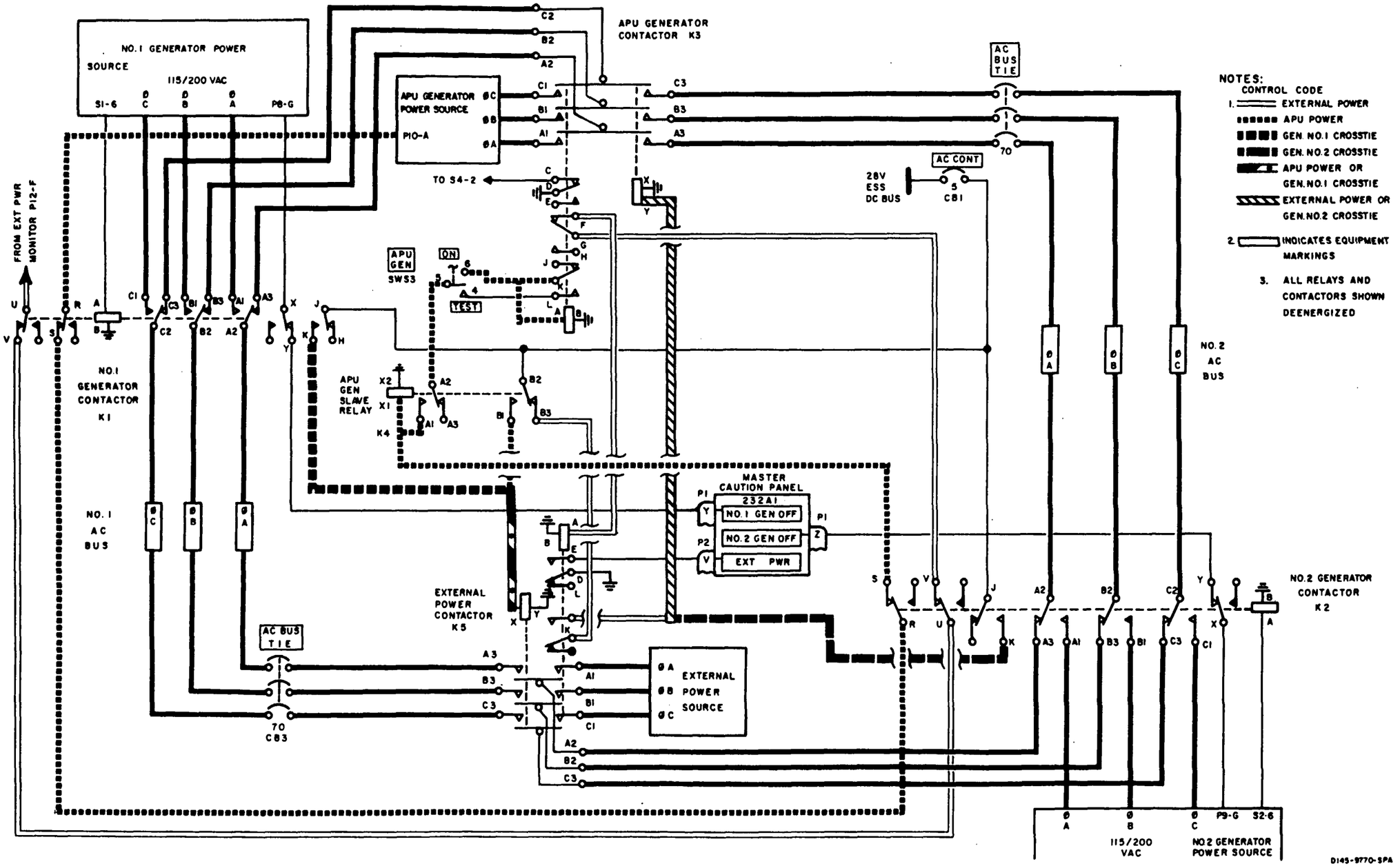


END OF TASK

9-2 AC POWER SYSTEM



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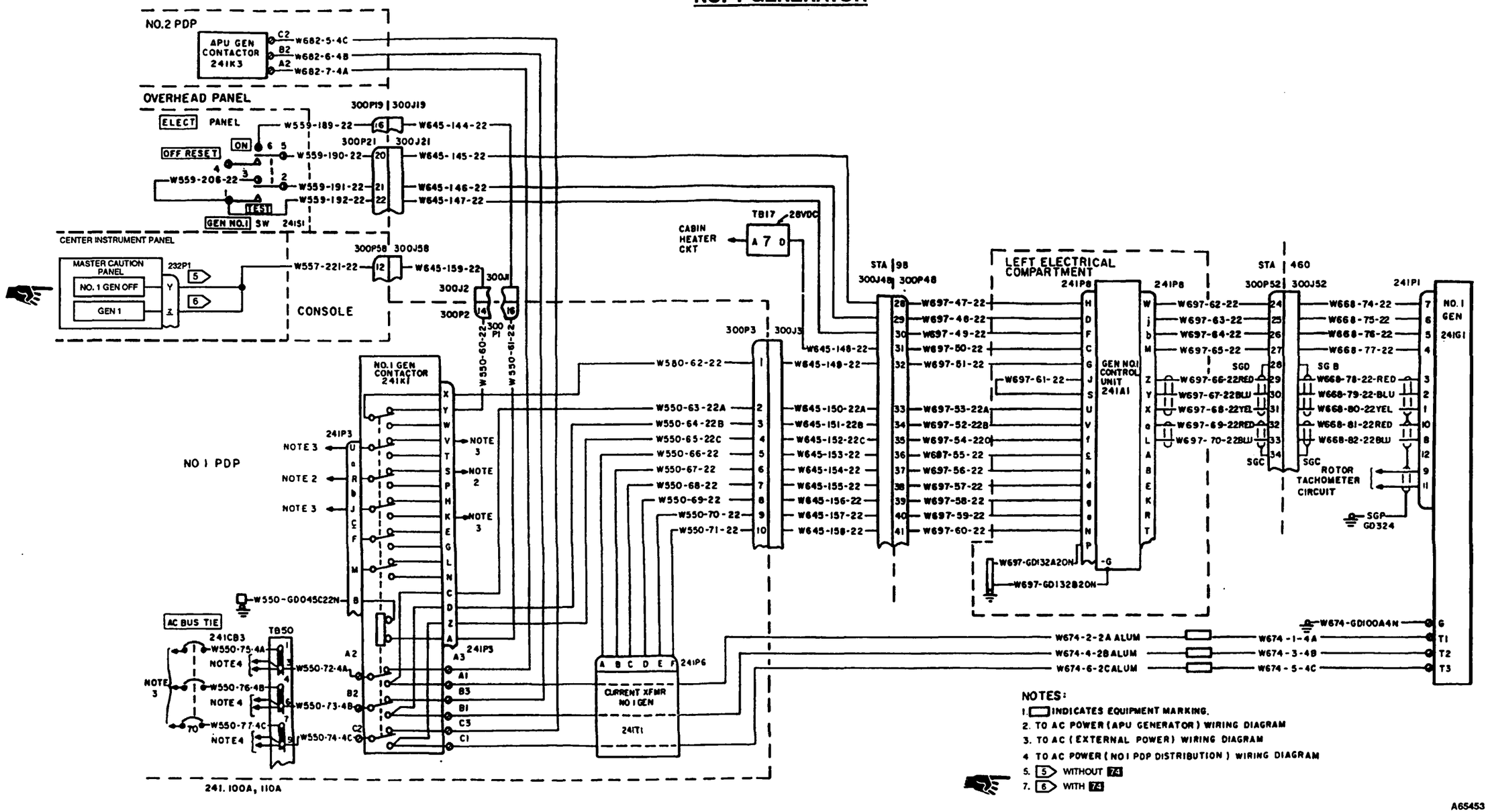


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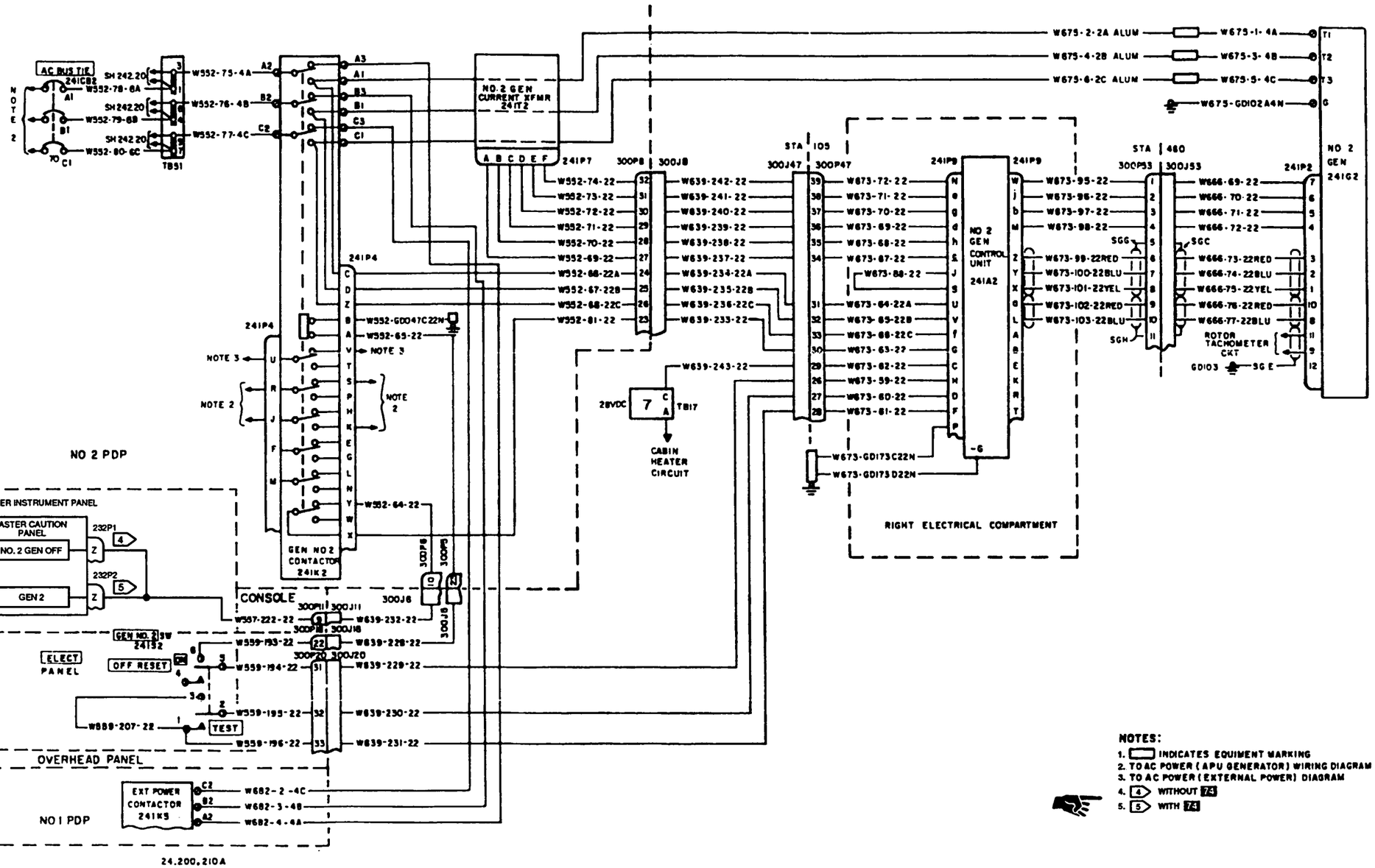
END OF TASK

NO. 1 GENERATOR



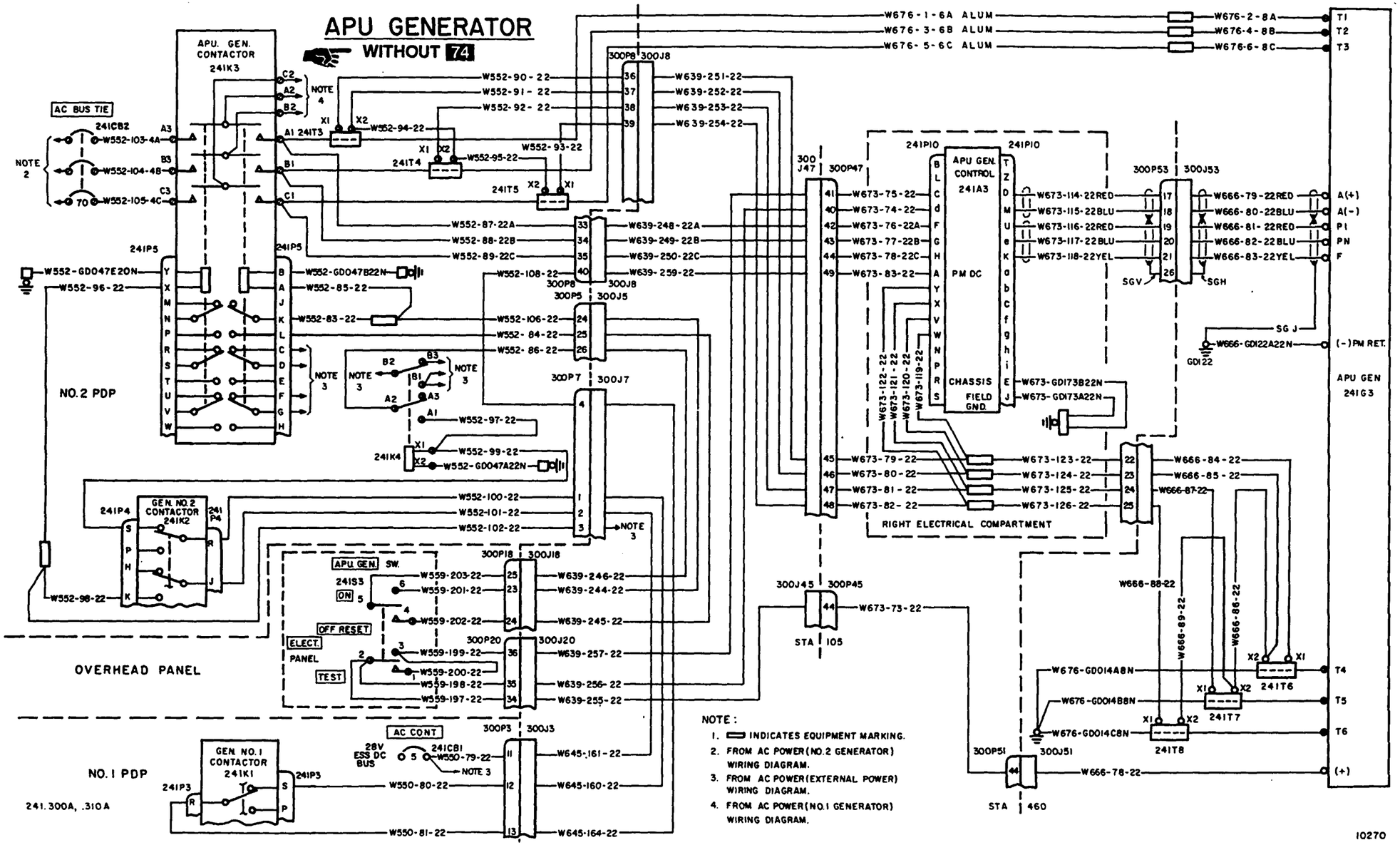
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NO. 2 GENERATOR

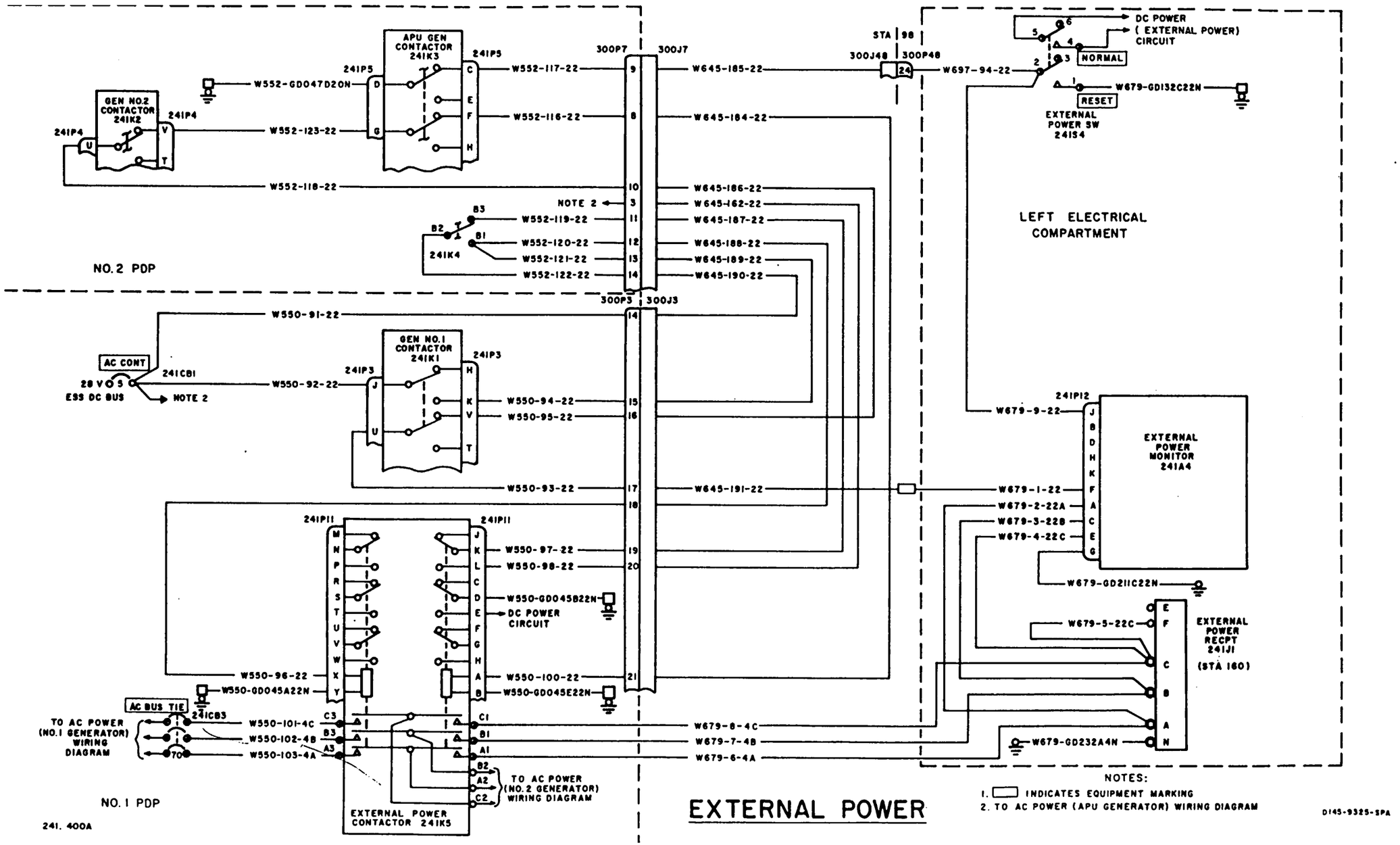


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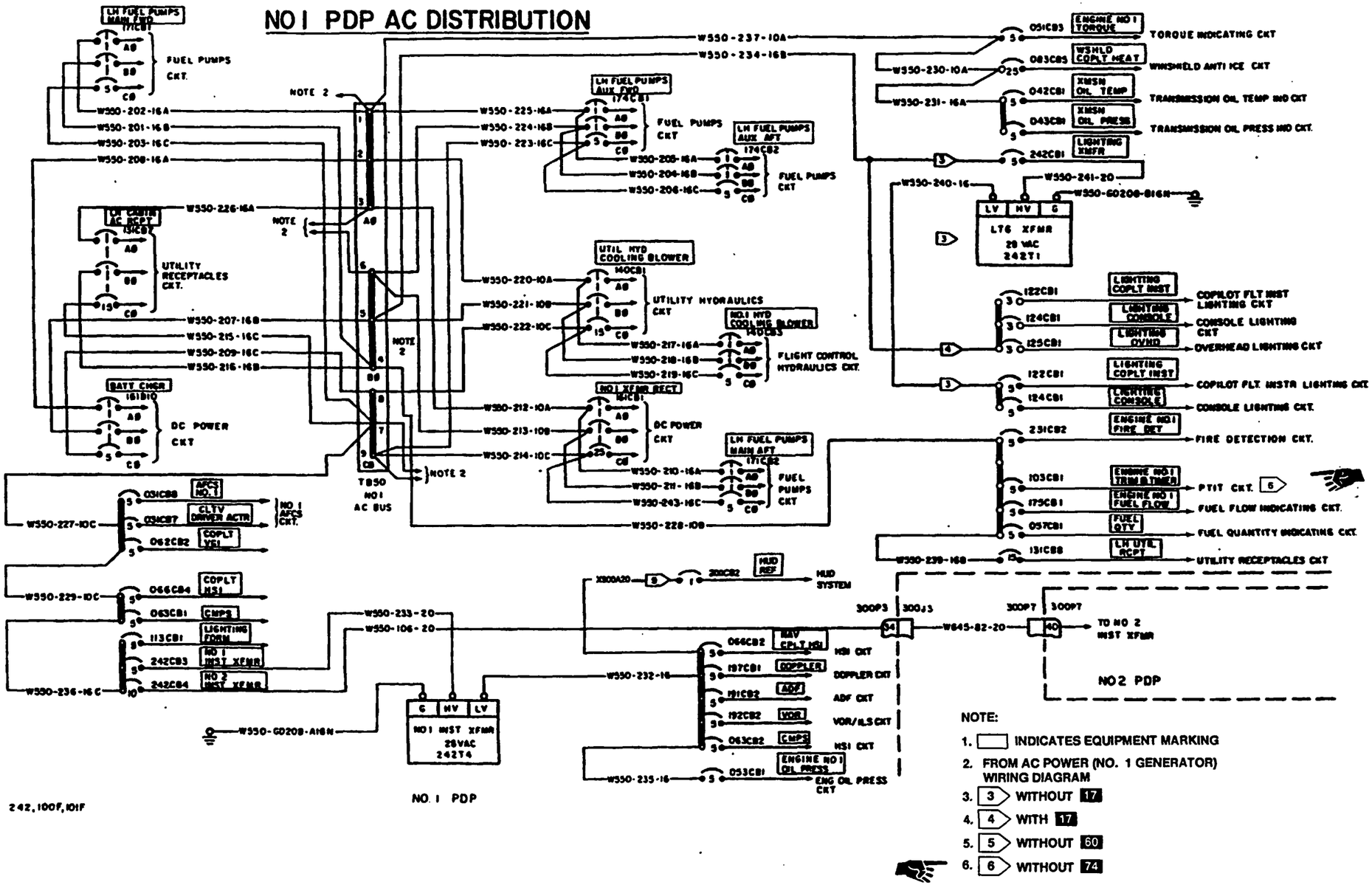
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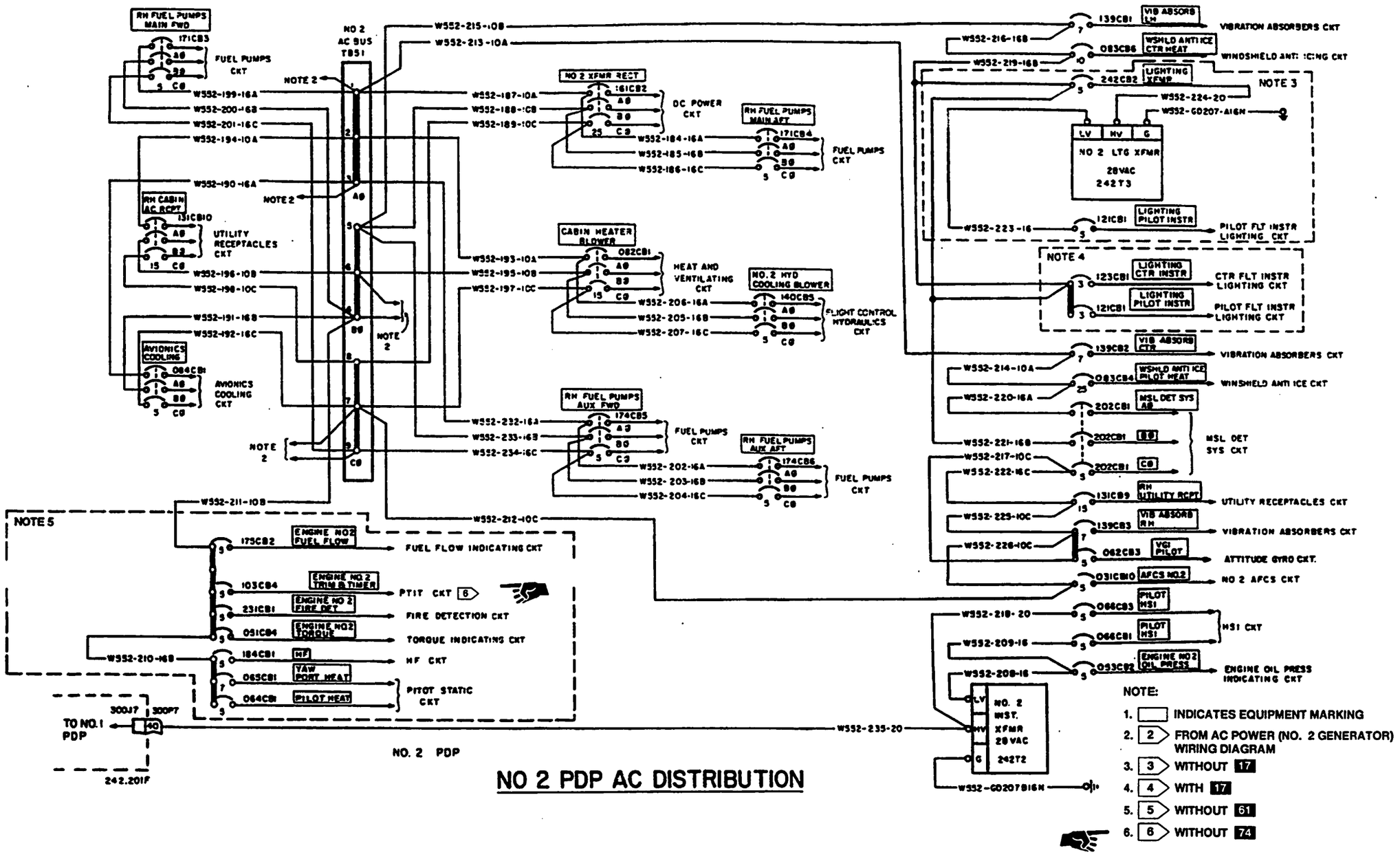
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9-59

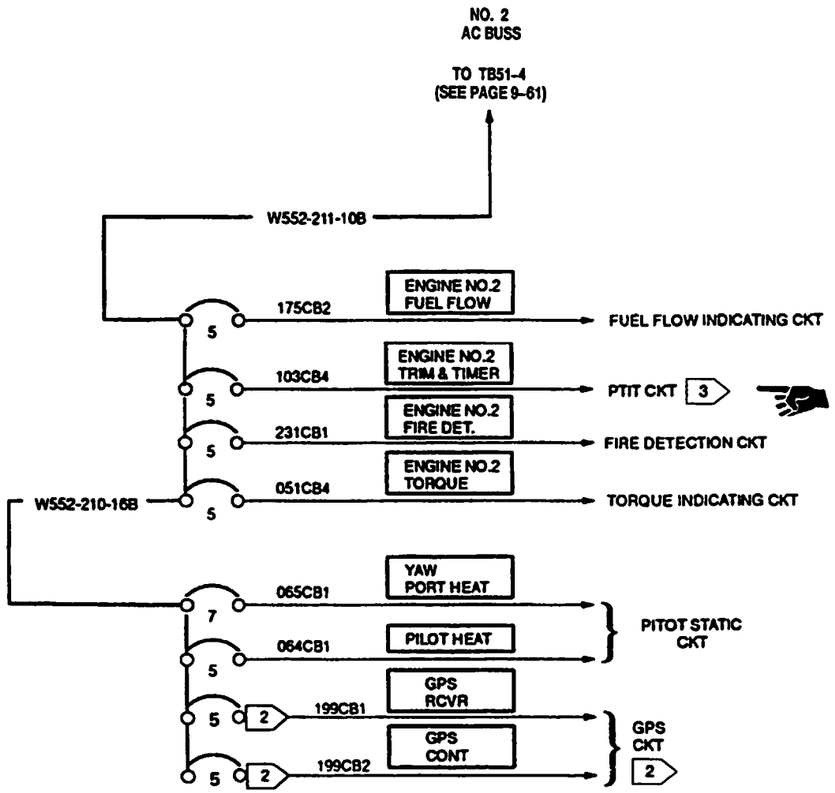


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NO 2 PDP AC DISTRIBUTION

A72197



NOTE:

1. ▭ INDICATES EQUIPMENT MARKING
2. 2 WITH 61
3. 3 WITHOUT 74

A72196

END OF TASK

9-2.3 AC POWER SYSTEM VISUAL CHECK

INITIAL SETUP

Applicable Configurations:
All
TM 55-1520-240-23:
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Left and Right Transmission
Materials:
None

Personnel Required:
68F10 Aircraft Electrician

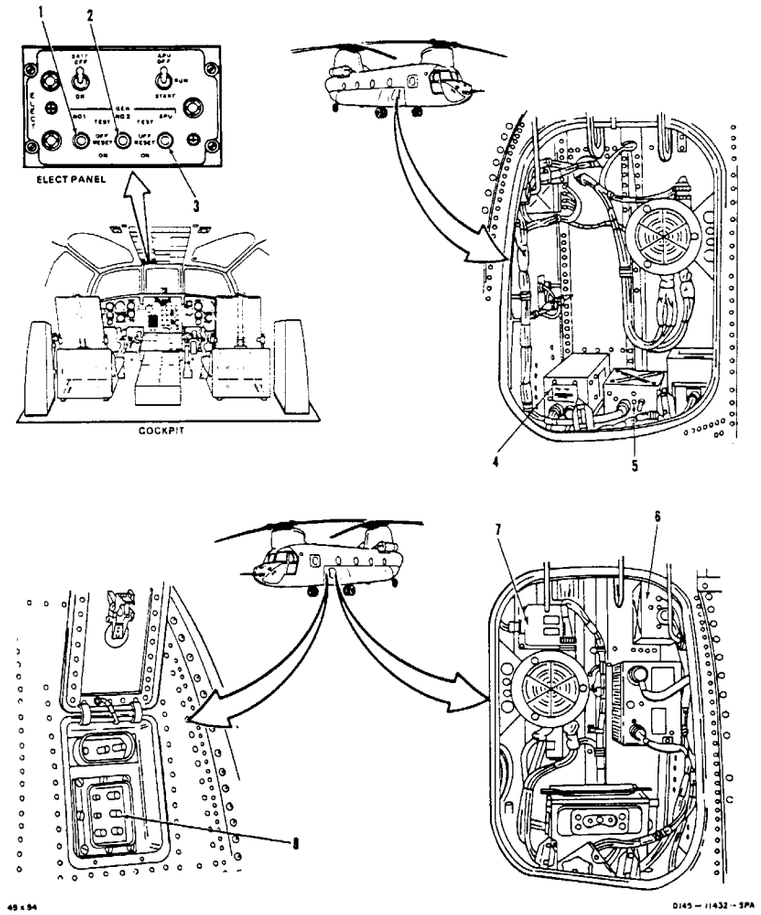
References:

Equipment Condition:

Battery Disconnected
Electrical Power Off
Hydraulic Power Off

Baffles Open
Left and Right Electrical
Compartment Access Doors Open
Cargo Ramp Open and Level
(Task 7-3 4)

TASK	RESULT
1. Check GEN NO. 1, NO. 2, and APU switches (1, 2, and 3).	If any switch (1,2. or 3) is loose or damaged, tighten or replace it as required.
2. Check apu generator control panel (4).	If panel (4) is loose or damaged, tighten or replace it as required. If electrical connectors to panel are loose or damaged. tighten or replace them as required. If wiring to either connector is damaged, repair or replace it as required.
3. Check No. 2 generator control panel (5).	If panel (5) is loose or damaged. tighten or replace it as required. If electrical connector to panel is loose or damaged, tighten or replace it as required. If wiring to connector is damaged, repair or replace it as required.
4. Check No. 1 generator control panel (6).	If panel (6) is loose or damaged, tighten or replace it is required. If electrical connector to panel is loose or damaged, tighten or replace it as required. If wiring to connector is damaged. repair or replace it as required.
5. Check power monitor (7).	If monitor (7) is loose or damaged. tighten or replace it as required. If electrical connector to monitor is loose or damaged, tighten or replace it as required. If wiring to connector is damaged, repair or replace it as required.
6. Check AC power receptacle (8).	If receptacle (8) is loose or damaged, tighten or replace it as required.



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9-2.3 AC POWER SYSTEM VISUAL CHECK (Continued)

TASK	RESULT
7. Check three apu current transformers (9).	If any transformer (9) is loose or damaged, tighten or replace it as required. If wiring to or through transformers is loose or damaged, tighten or replace it as required.
8. Check apu generator (10).	If generator (10) is loose or damaged, tighten or replace it as required. If wiring to generator is loose or damaged, tighten or replace it as required. If inlet screen (11) or exhaust screen (12) are clogged, clean screen or replace generator.
9. Check No. 1 generator (13).	If generator (13) is loose or damaged, or leaking oil, tighten or replace it as required. If electrical connector (14) is loose or damaged, tighten or replace it as required. If wiring to generator or connector is damaged, repair or replace it as required.
10. Check No. 2 generator (15).	If generator (15) is loose or damaged, or leaking oil, tighten or replace it as required. If electrical connector (14) is loose or damaged, tighten or replace it as required. If wiring to generator or connector is damaged, repair or replace it as required.

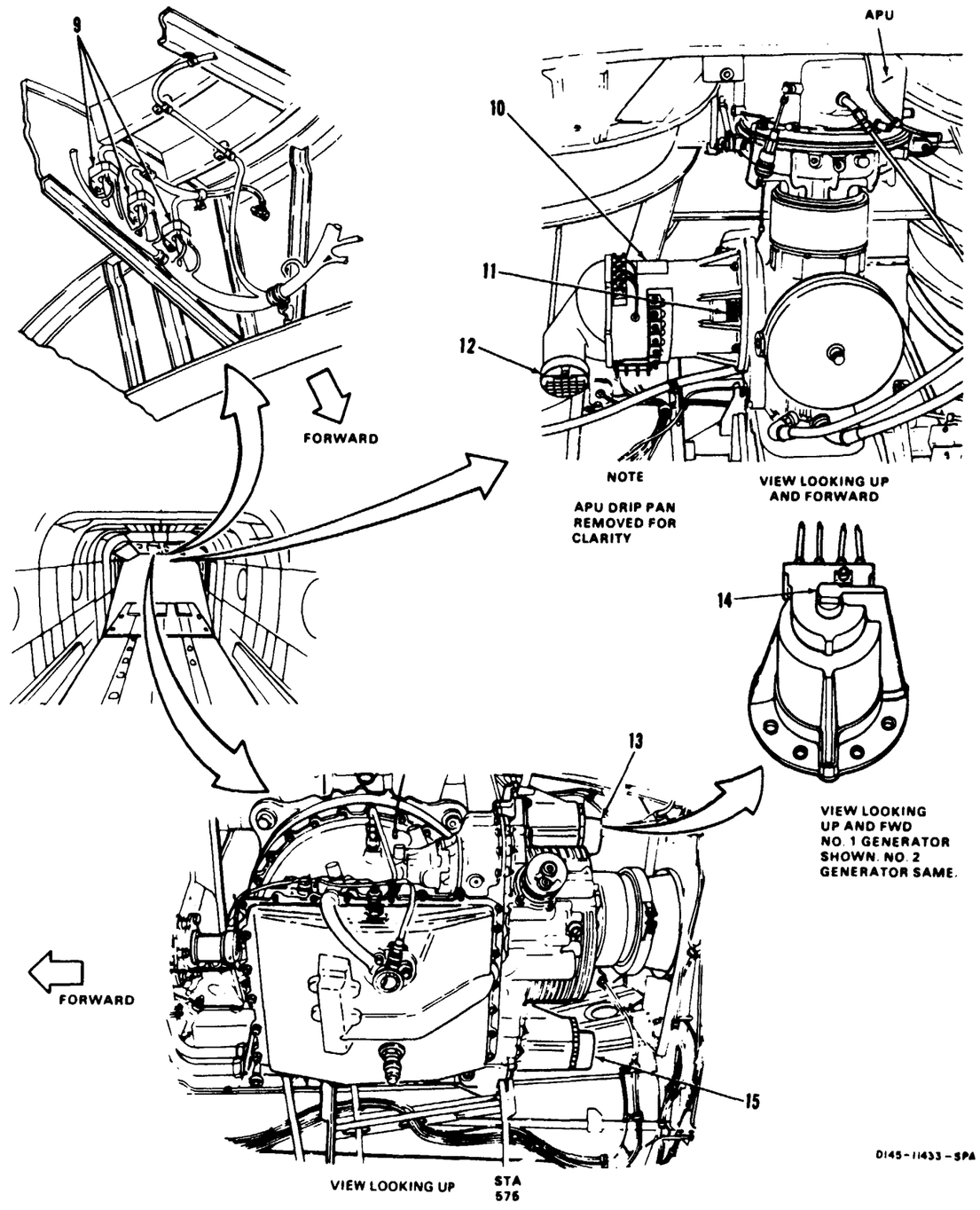
FOLLOW-ON MAINTENANCE:

TM 55-1520-240-23:

Left and right transmission baffles closed.

Left and right electrical compartment access doors closed.

Cargo ramp closed.



9-2.4 AC POWER SYSTEM OPERATIONAL CHECK

INITIAL SETUP

Applicable Configurations:
All

Tools:
None

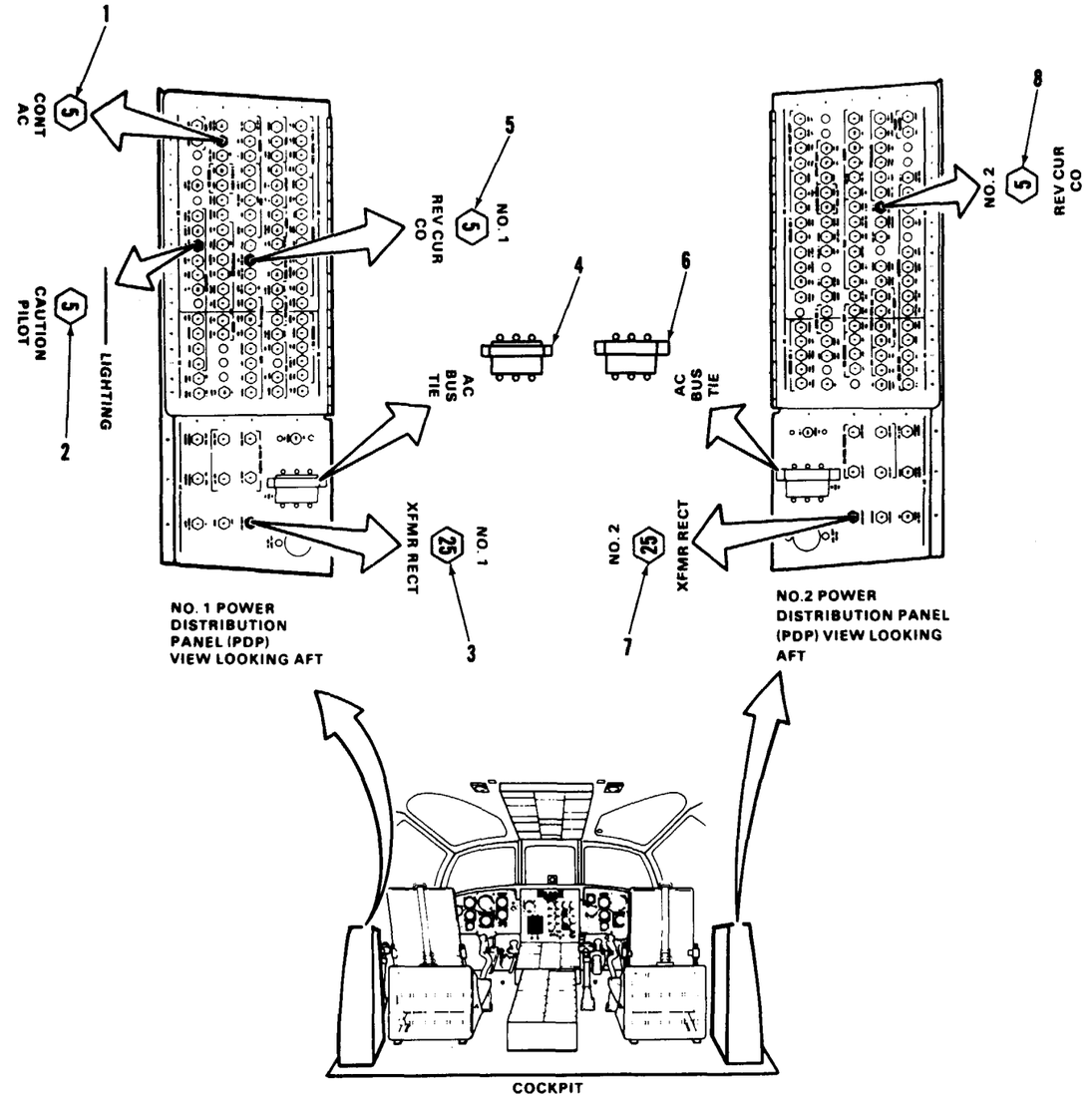
Materials:
None

Personnel Required:
Aircraft Electrician
Armv Rotary Wing Aviator (2)

References:
TM 55-1520-240-23
TM 55-1520-240-10

Equipment Condition:
TM 55-1520-240-23:
Battery Connected

TASK	RESULT
CHECK CIRCUIT BREAKERS	
1. **Check** that **following circuit breakers on NO. 1 PDP** are closed. CONT AC (1) CAUTION PNL (2) NO. 1 XFMR RECT (3) AC BUS TIE (4) NO. 1 REV CUR CO (5)	If any circuit breaker (1 through 5) is open, close it.
2. **Check** that **following circuit breakers on NO. 2 PDP** are closed. AC BUS TIE (6) NO. 2 XFMR RECT (7) NO, 2 REV CUR CO (8)	If any circuit breaker (6, 7, or 8) is open, close it.

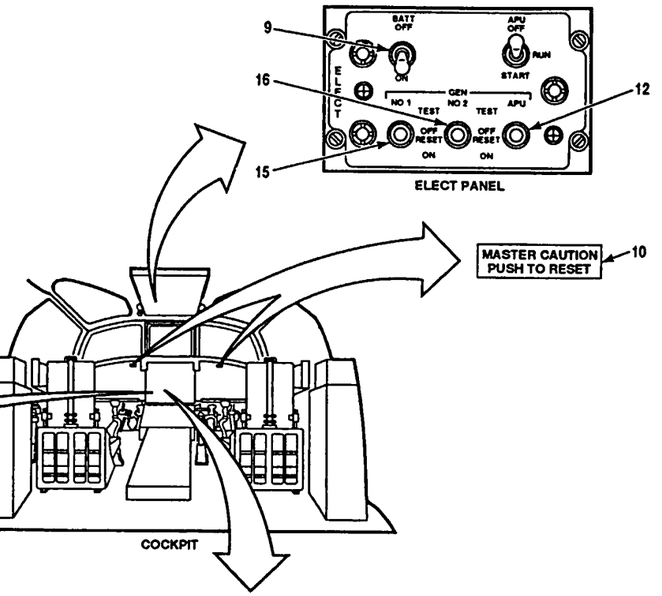


45x54

D145-11434-SP

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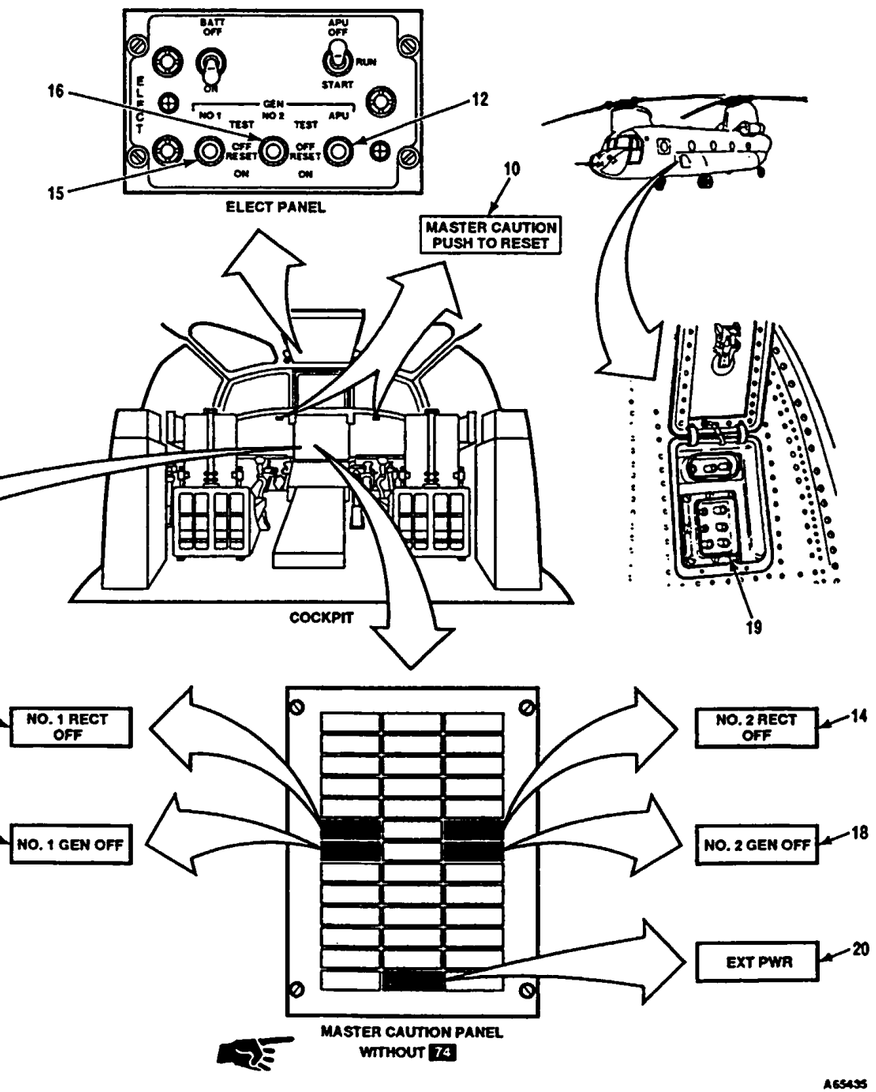
	TASK	RESULT
3.	**Set BATT switch (9) to ON.**	MASTER CAUTION lights (10) shall come on. If lights do not come on, go to task 9-1.4.
4.	Have pilot **start apu.**	APU ON capsule (11) shall come on.
5.	**Set APU GEN switch (12) to ON.**	NO. 1 RECT OFF and NO. 2 RECT OFF (Without 74) RECT 1 and RECT 2 (With 74) capsules (13 and 14) shall go out. If both capsules are on, go to task 9-2.5. If either capsule is on, go to task 9-1.8 or 9-1.9.
6.	**Check** that **GEN NO. 1 and NO. 2 switches (15 and 16)** are **OFF.**	If either switch (15 or 16) is not at OFF, then set it to OFF.
7.	**Check that NO. 1 GEN OFF and NO. 2 GEN OFF (Without 74) GEN 1 and GEN 2 (With 74) capsules (17 and 18)** are **ON.**	If either capsule (17 or 18) is out, go to task 9-2.6.
8.	Have pilot start engines and establish 100% rotor rpm.	
9.	**Set GEN NO. 1 switch (15) to TEST.**	NO. 1 GEN OFF (Without 74) GEN 1 (With 74) capsule (17) shall go out. If it does not, check ground stud GD100 (STA 594, WL 76, LBL 10), for security and good bond to structure. If capsule (17) still does not go out, go task 9-2.7.
10.	**Set GEN NO. 1 switch (15) to ON.**	NO. 1 GEN OFF (Without 74) GEN 1 (With 74)capsule (17) shall stay out. NO. 1 RECT OFF NO. 2 RECT OFF (Without 74) RECT 1 and RECT 2 (With 74) capsules (13 and 14) shall stay out. If capsule (17) comes on and stays on, go to task 9-2.8.
11.	Have pilot shutdown apu.	APU ON capsule (11) shall go out. NO. 1 RECT OFF and NO. 2 RECT OFF (Without 74) RECT 1 and RECT 2 (With 74) capsules (13 and 14) shall stay out. If they come on, go to task 9-2.9.



GO TO NEXT PAGE

TASK	RESULT
12. **Set GEN NO. 2 switch (16) to TEST.**	NO. 2 GEN OFF (Without 74) GEN 2 (With 74) capsule (18) shall go out. If it does not, check ground stud GD102 (STA 594, WL 58, RBL 8), for security and good bond to structure. If capsule (18) still does not go out, go to task 9-2.10.
13. **Set GEN NO. 2 switch (16) to ON.**	NO. 2 GEN OFF (Without 74) GEN 2 (With 74) capsule (18) shall stay out. If capsule comes on, go to task 9-2.11.
14. **Set GEN NO. 1 switch (15) to OFF.**	NO. 1 GEN OFF (Without 74) GEN 1 (With 74) capsule (17) shall come on. NO. 1 RECT OFF and NO. 2 RECT OFF (Without 74) RECT 1 and RECT 2 (With 74) capsules (13 and 14) shall stay out. If they come on, go to task 9-2.12.
15. **Set GEN NO. 1 SWITCH (15) to ON.**	
16. **Have pilot start apu and switch on apu generator.**	
17. **Set GEN NO. 1 switch (15) to OFF.**	NO. 1 GEN (Without I) GEN 1 (With 74) b capsule shall come on. NO. 1 RECT OFF (Without 74) RECT 1 (With 74) capsule shall stay out. If it comes on, go to task 9-2.15.
18. **Set GEN NO. 1 switch (15) to ON.**	
19. **Set GEN NO. 2 switch (16) to OFF.**	NO. 2 GEN OFF (Without 74) GEN 2 (With 74) capsule shall come on. NO. 2 RECT OFF (Without 74) RECT 2 (With 74) capsule shall stay out. If it comes on, go to task 9-2.15.
20. **Have pilot shutdown engines.**	
NOTE **The following steps can only be performed with an external ac power source.**	
21. **Connect a 115/200VAC Hz AC external power source to receptacle (19). Turn on power source.**	EXT PWR capsule (20) shall come on. If it does not, go to task 9-2.13. NO. 1 RECT OFF and NO. 2 RECT OFF (Without 74) RECT 1 and RECT 2 (With 74) capsules (13 and 14) shall go out. If they do not, go to task 9-2.14.
22. **Turn off and disconnect power source.**	

FOLLOW-ON MAINTENANCE:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off



END OF TASK

9-2.5 NO. 1 AND NO. 2 RECT OFF (WITHOUT 74) OR RECT 1 AND RECT 2 (WITH 74) CAUTION LIGHTS ON 9-2.5

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

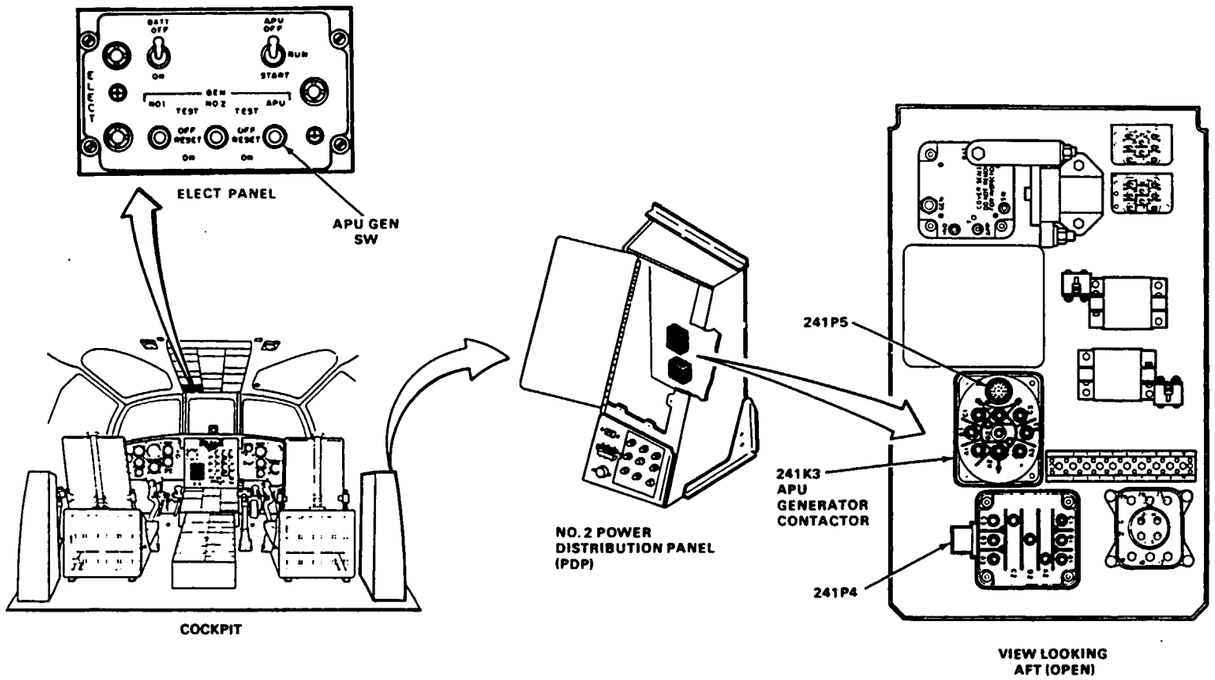
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

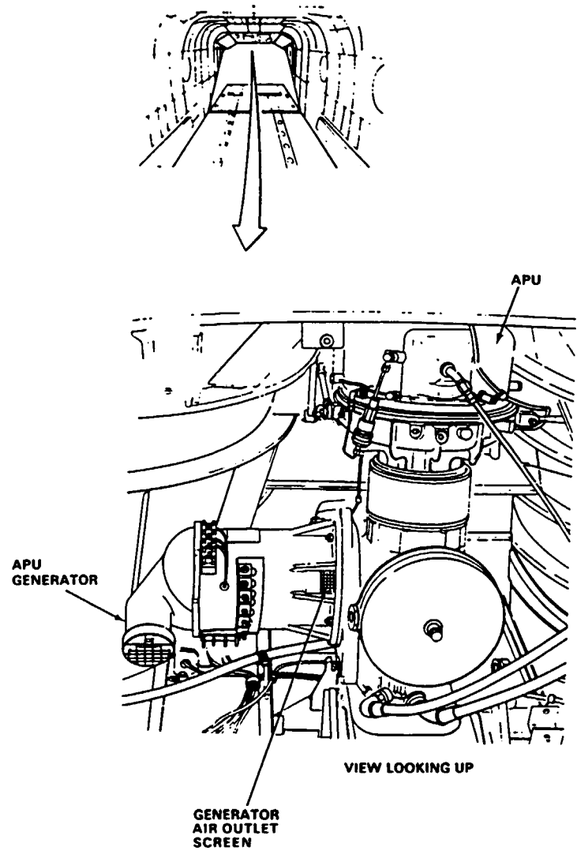
Materials:
None

Personnel Required:
Aircraft Electrician (2)

References:
TM 55-1520-240-23

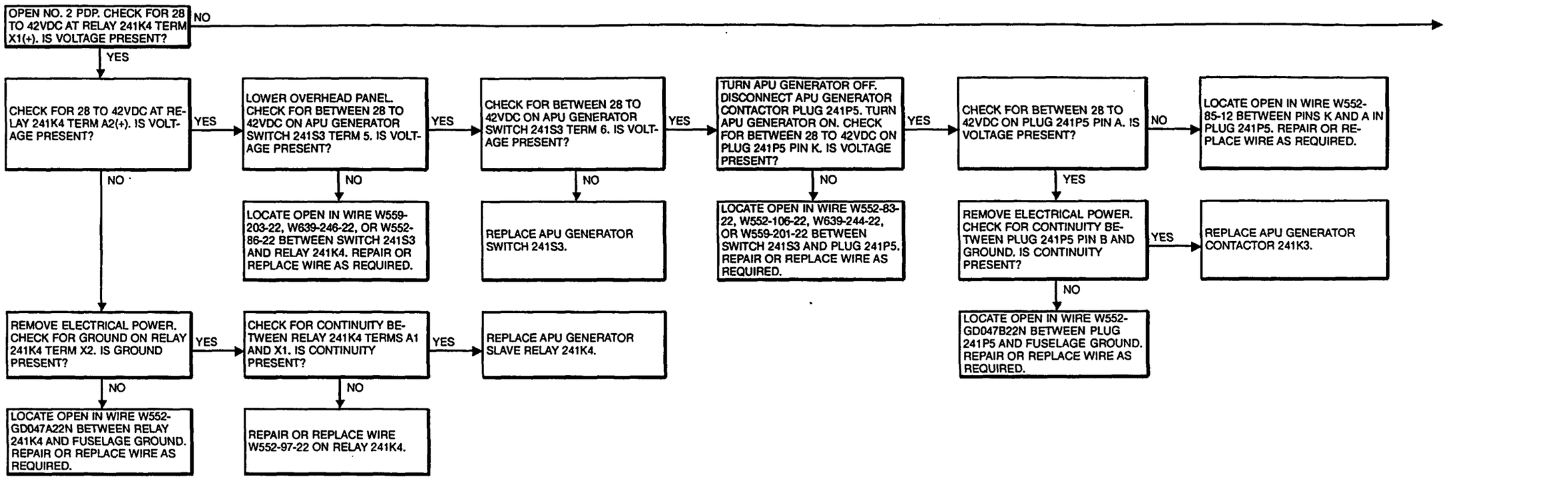
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off



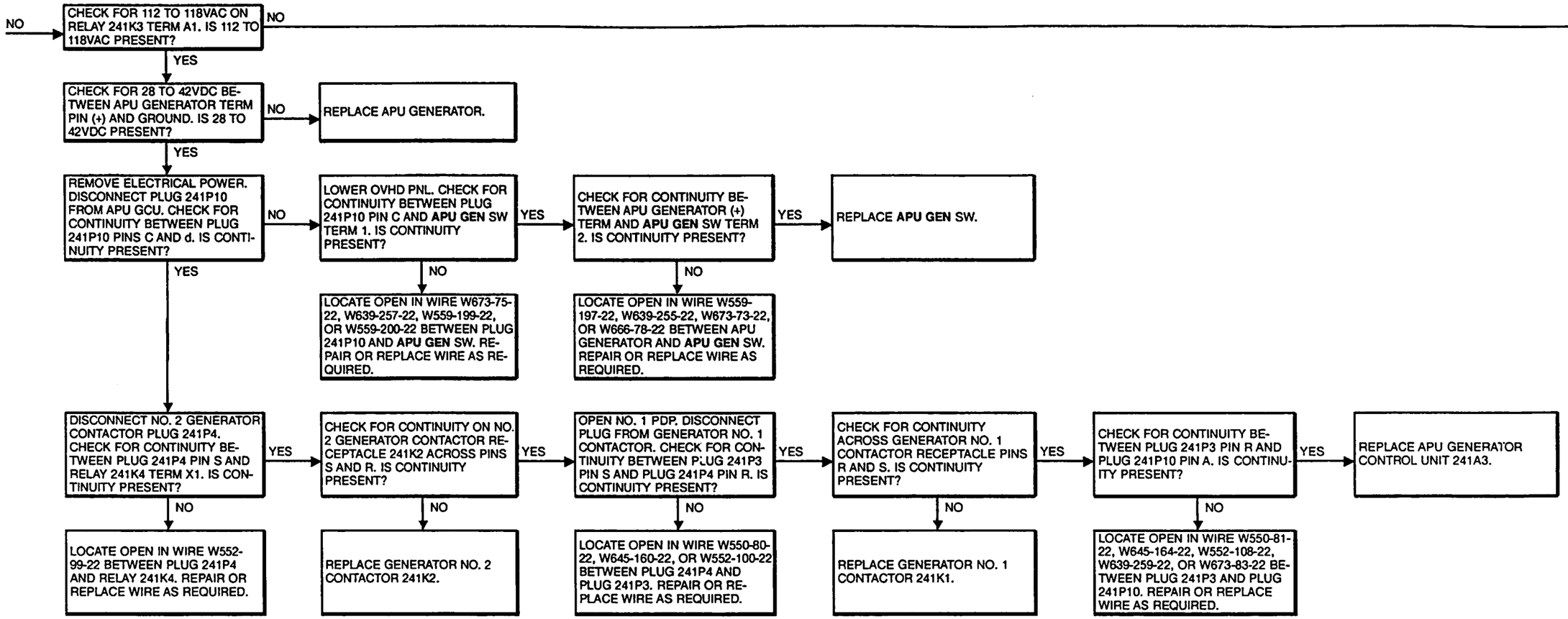


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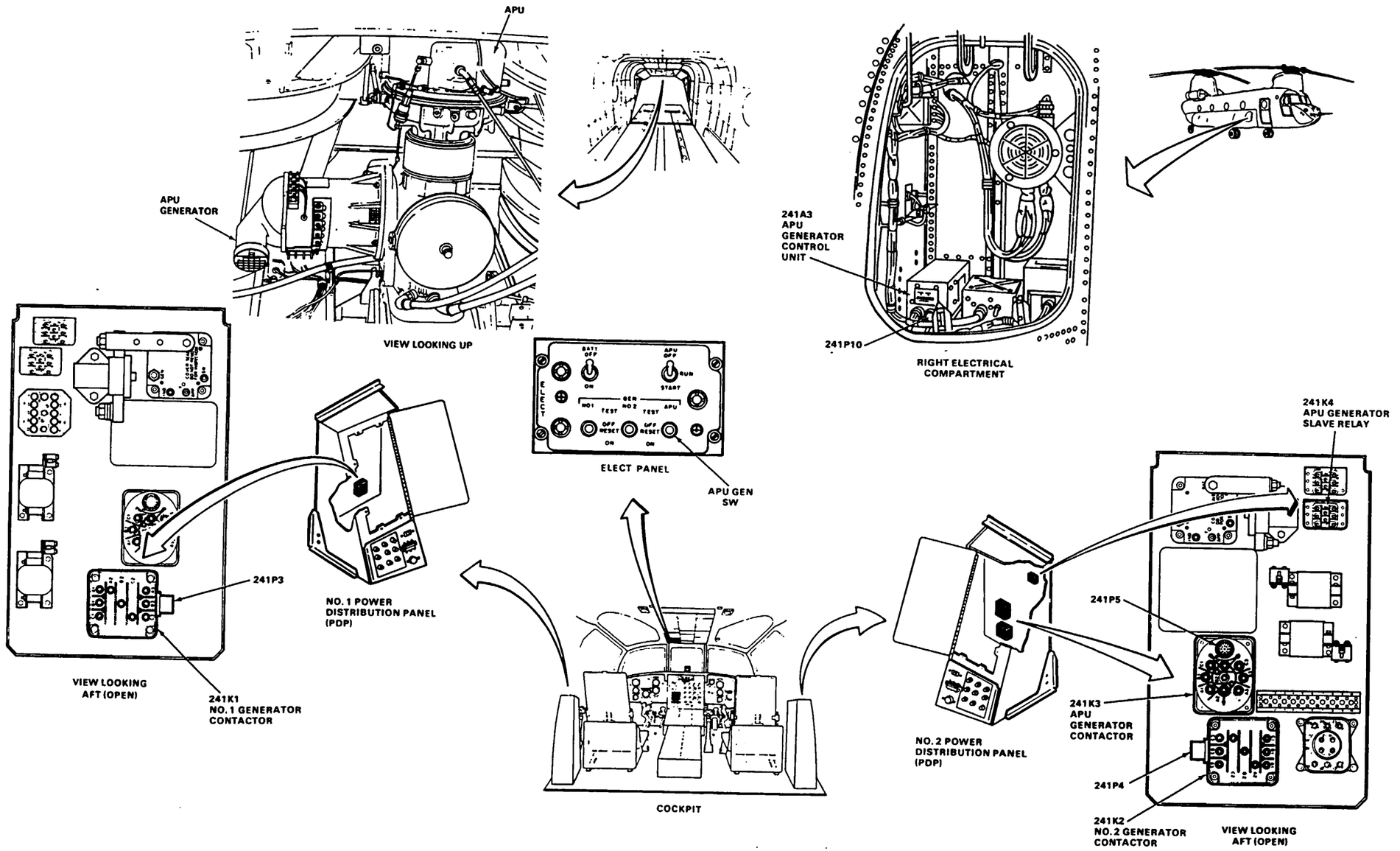
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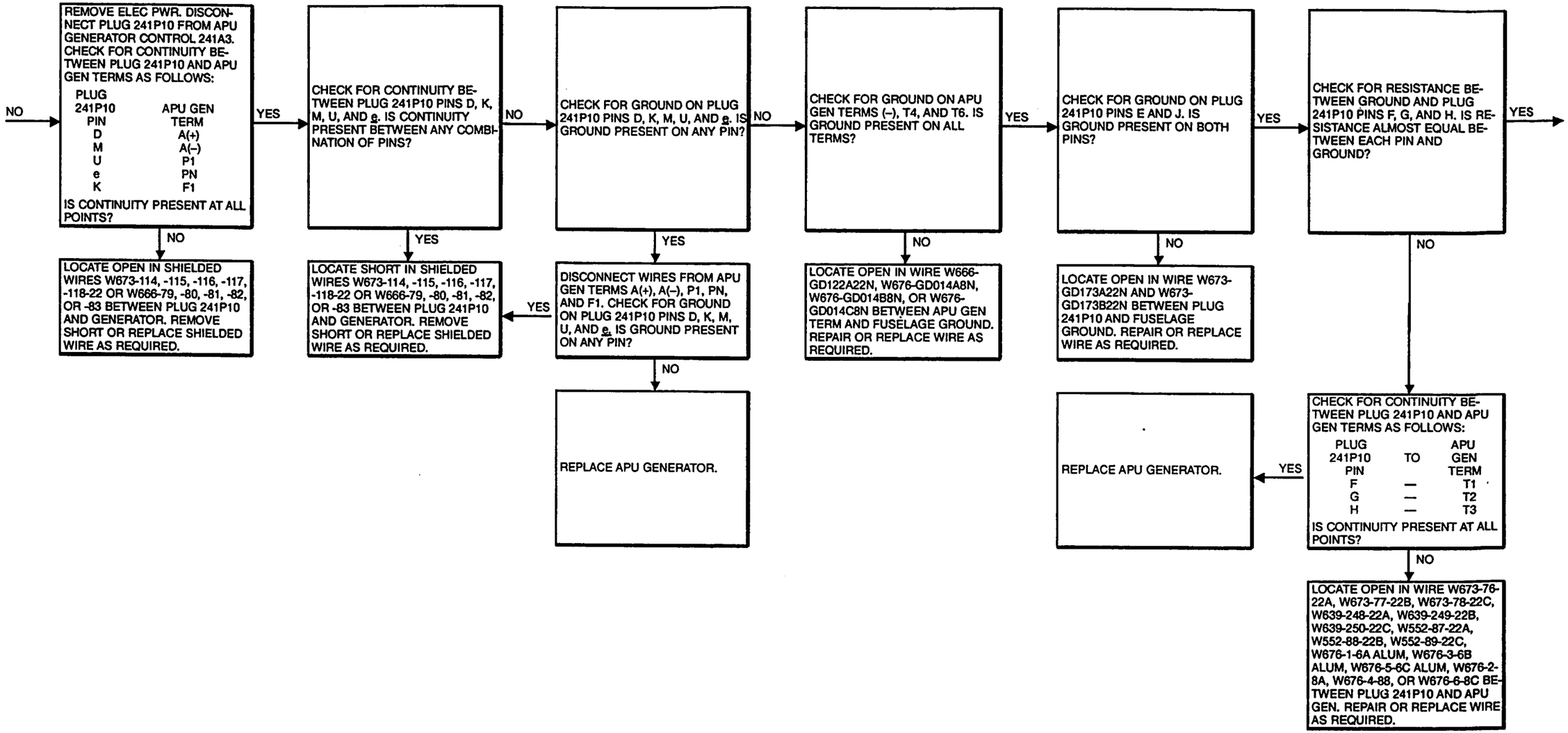


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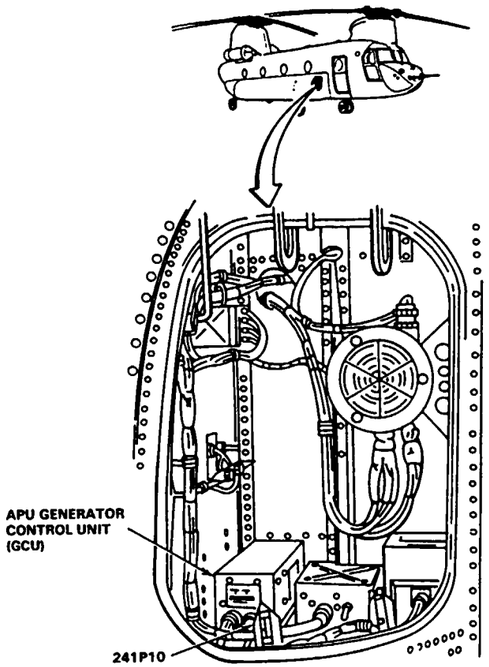


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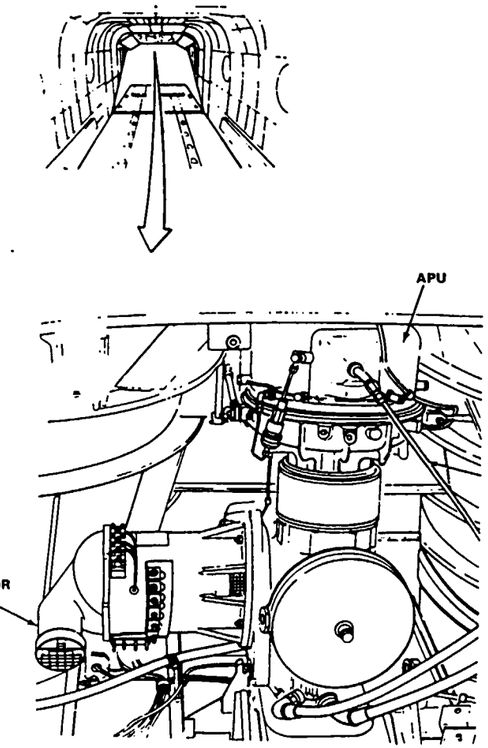
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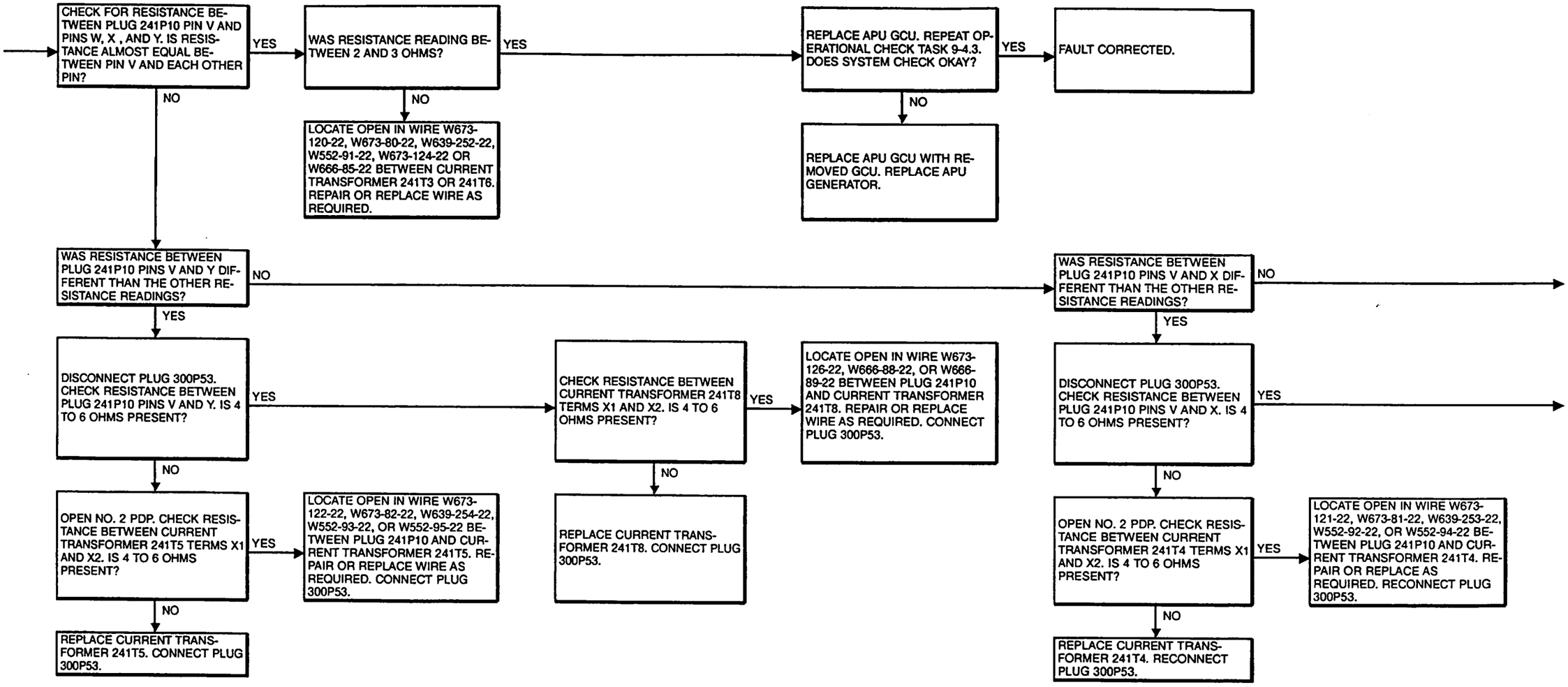


RIGHT ELECTRICAL COMPARTMENT

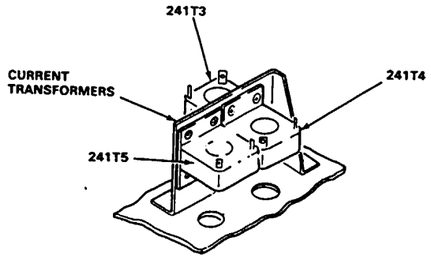


VIEW LOOKING UP

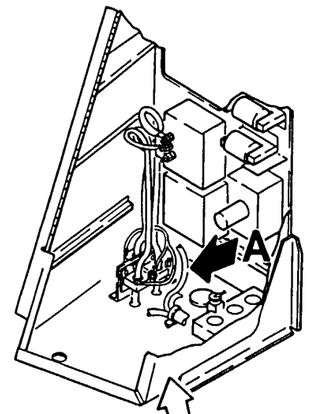
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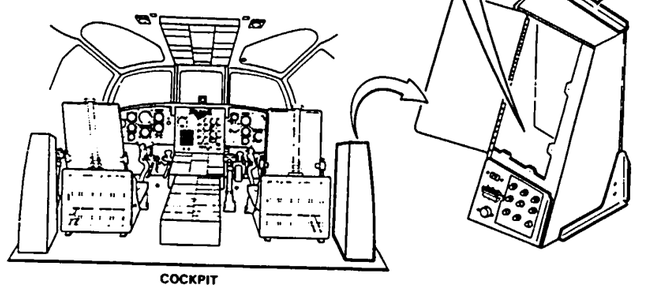


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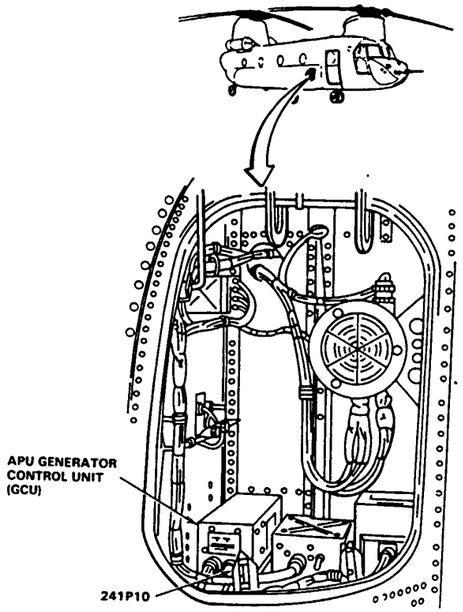


VIEW A

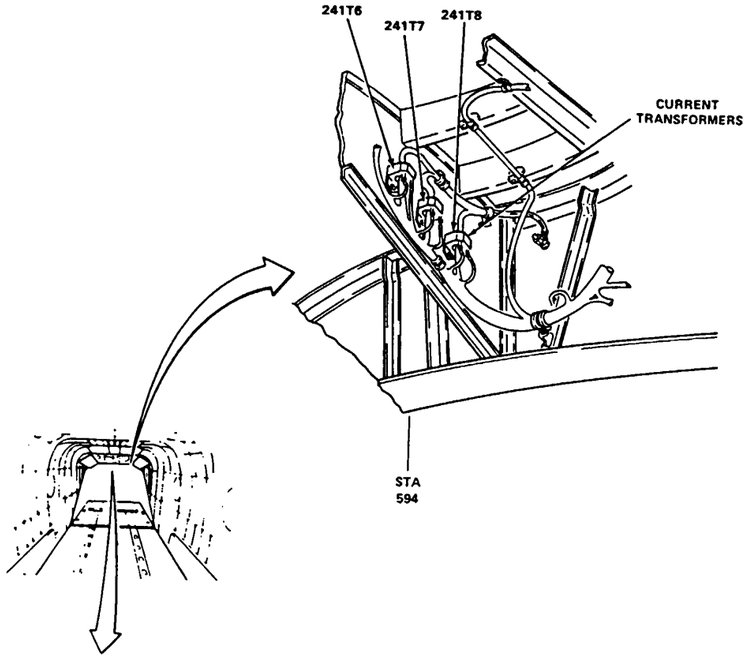


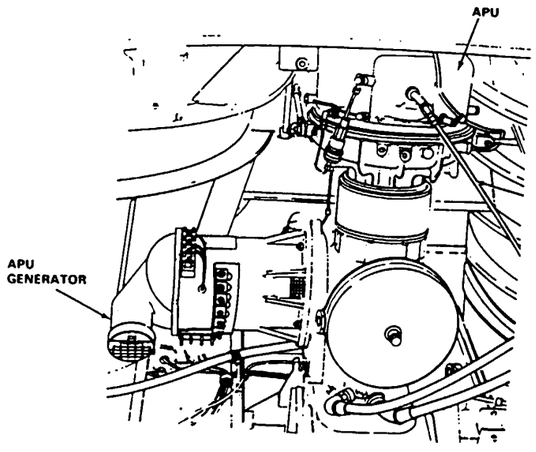


COCKPIT



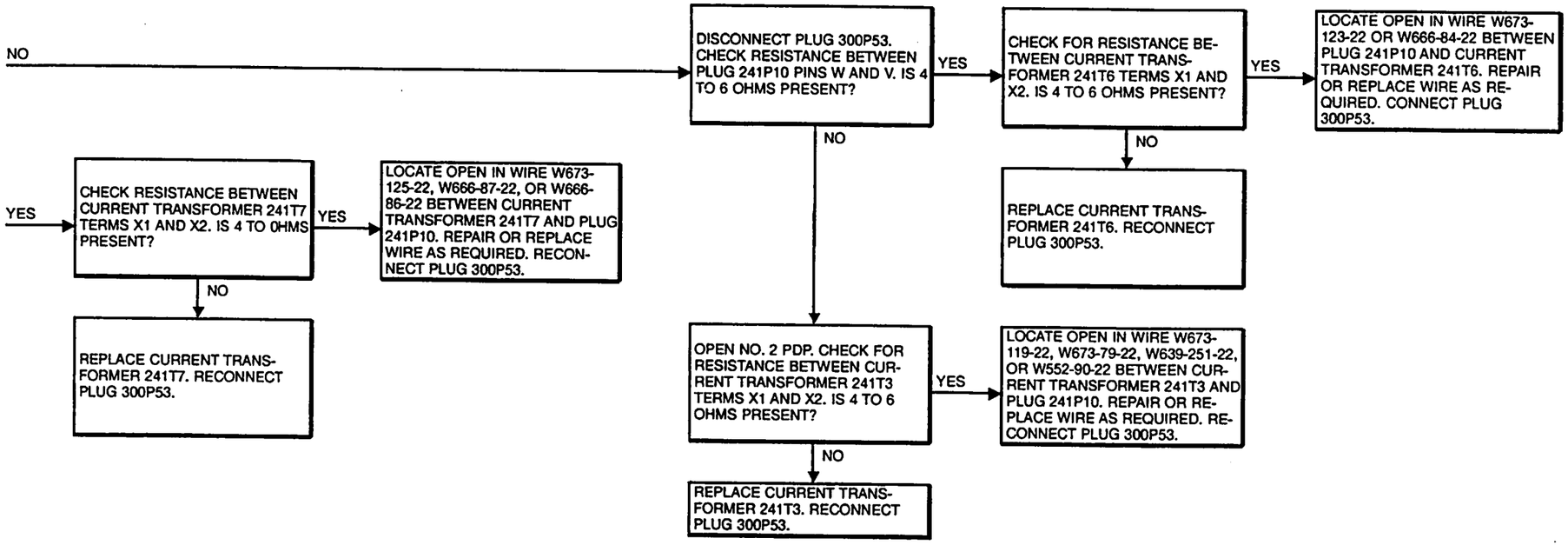
RIGHT ELECTRICAL COMPARTMENT



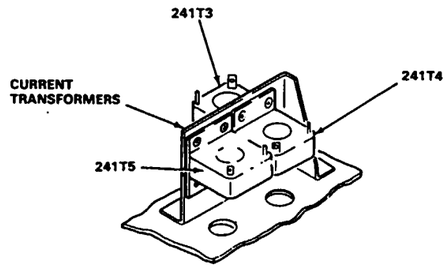


VIEW LOOKING UP

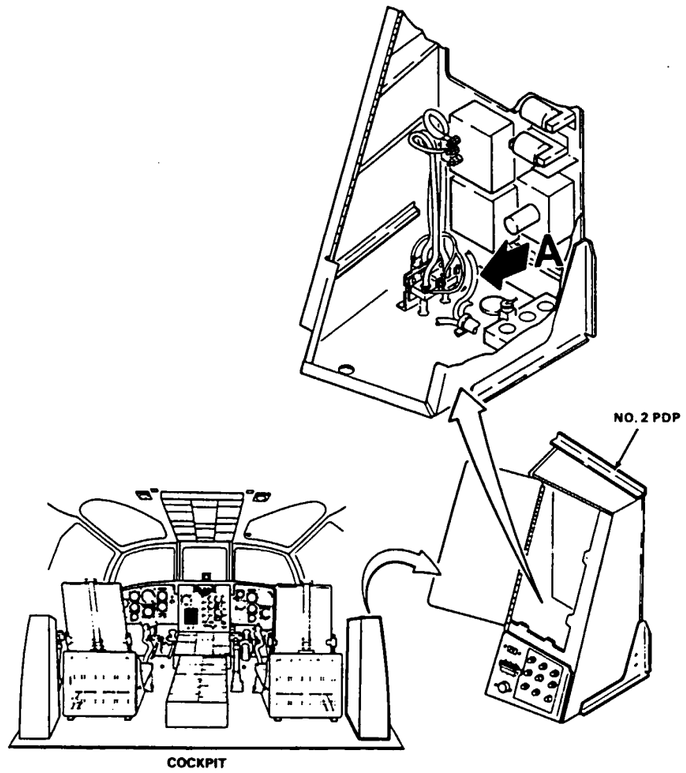
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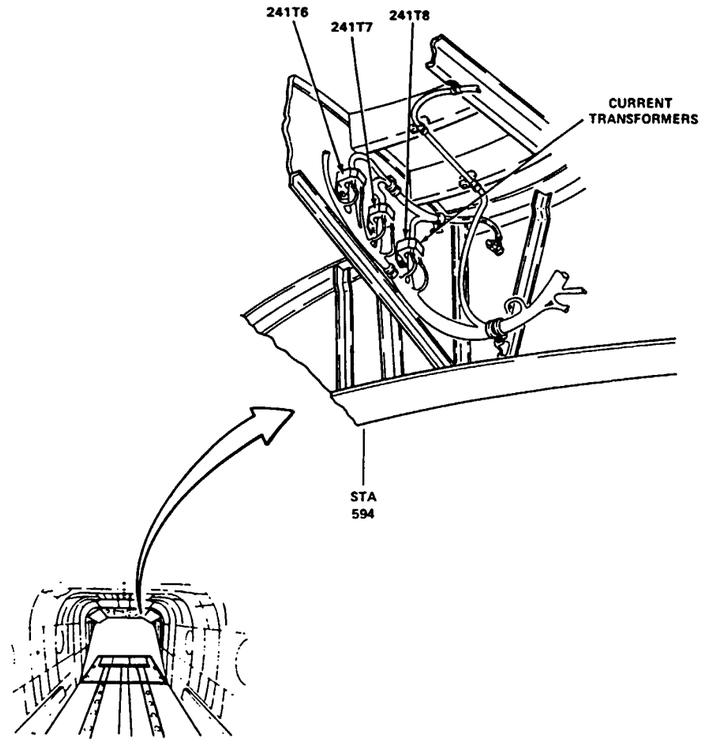


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VIEW A





555

END OF TASK

9-2.6 NO. 1 OR NO. 2 GEN OFF (WITHOUT 74) OR GEN 1 OR GEN 2 (WITH 74) CAPSULE OUT

FAULT ISOLATION PROCEDURE

INITIAL SETUP

***Applicable* Configurations:**
All

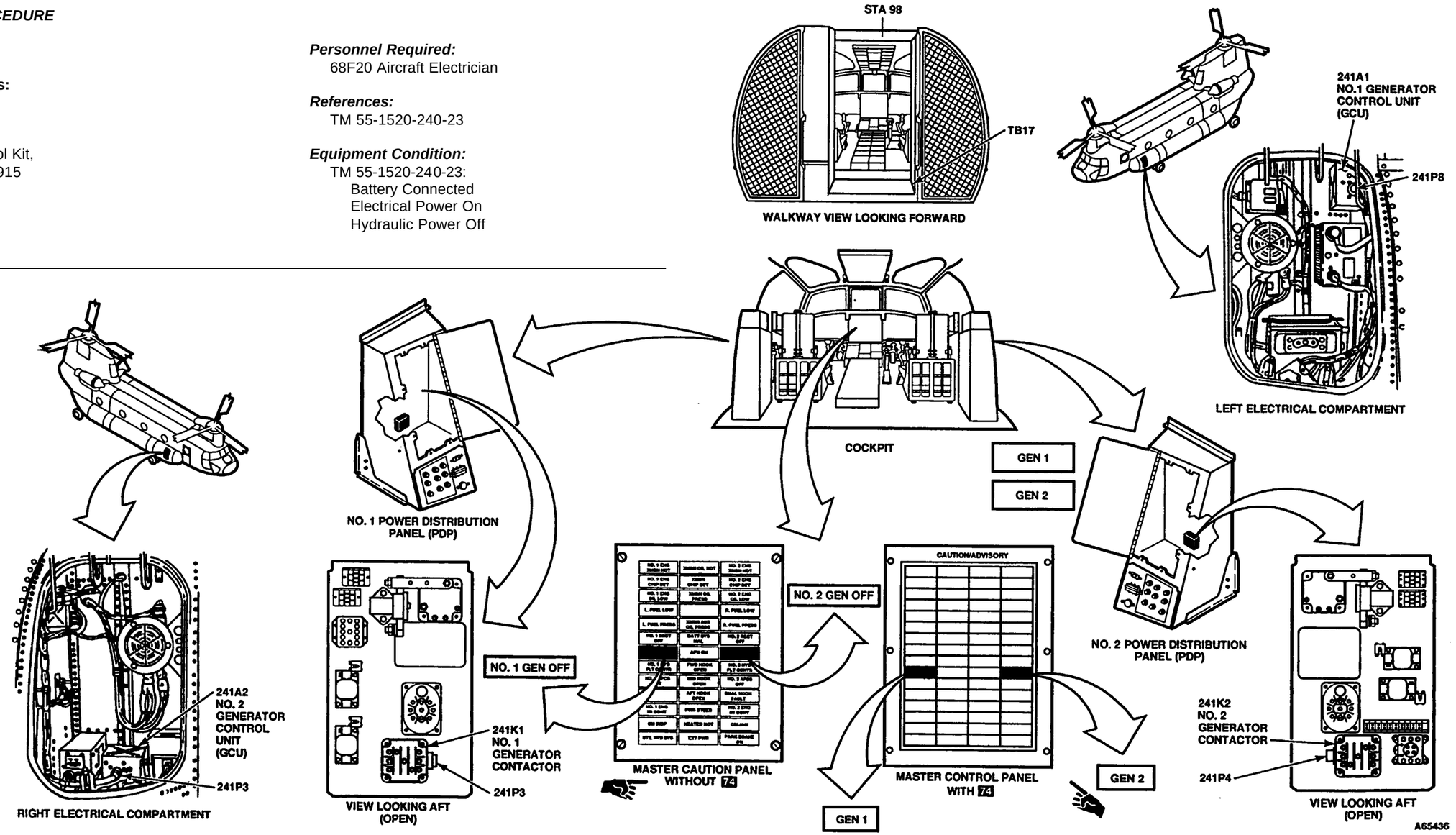
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:
None

Personnel Required:
68F20 Aircraft Electrician

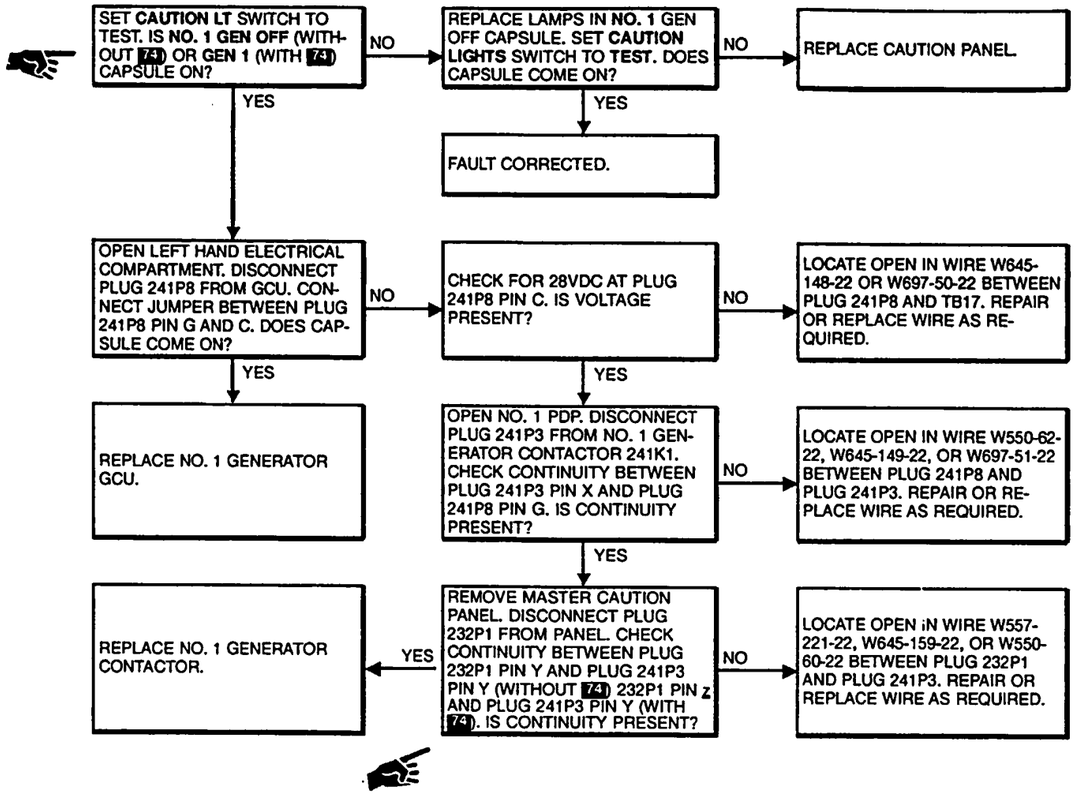
References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off

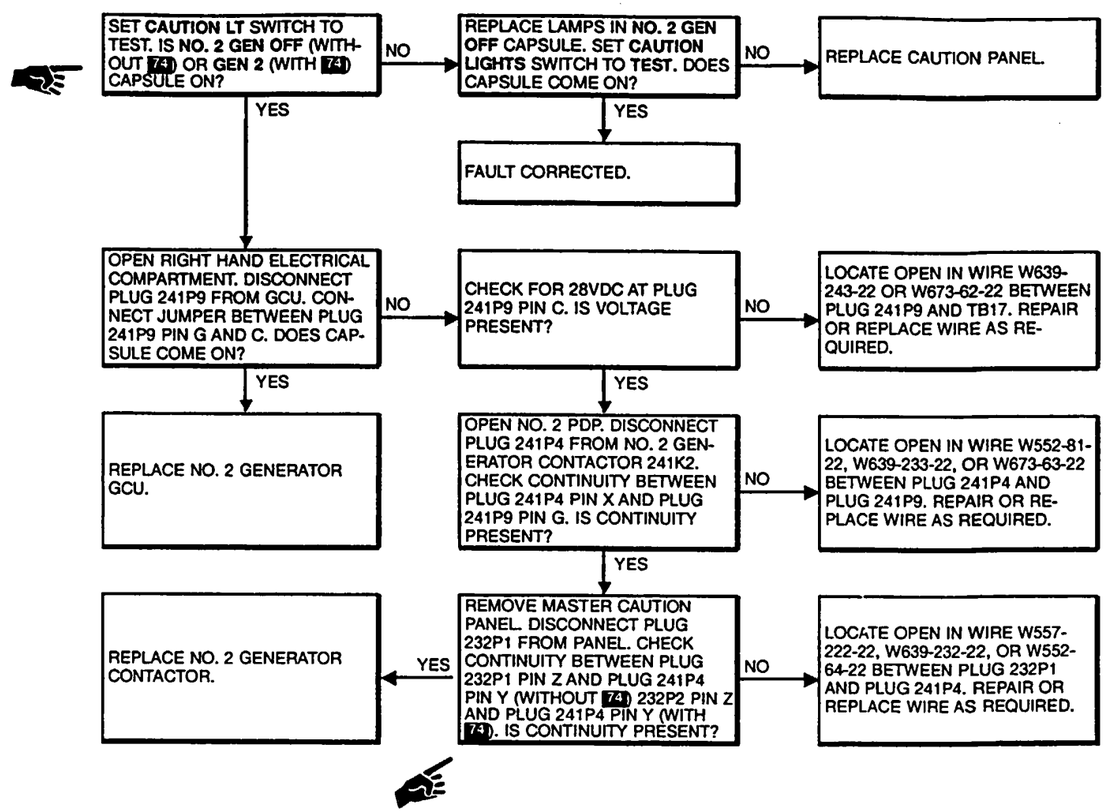


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NO. 1 GEN OFF CAPSULE OUT



NO. 2 GEN OFF CAPSULE OUT

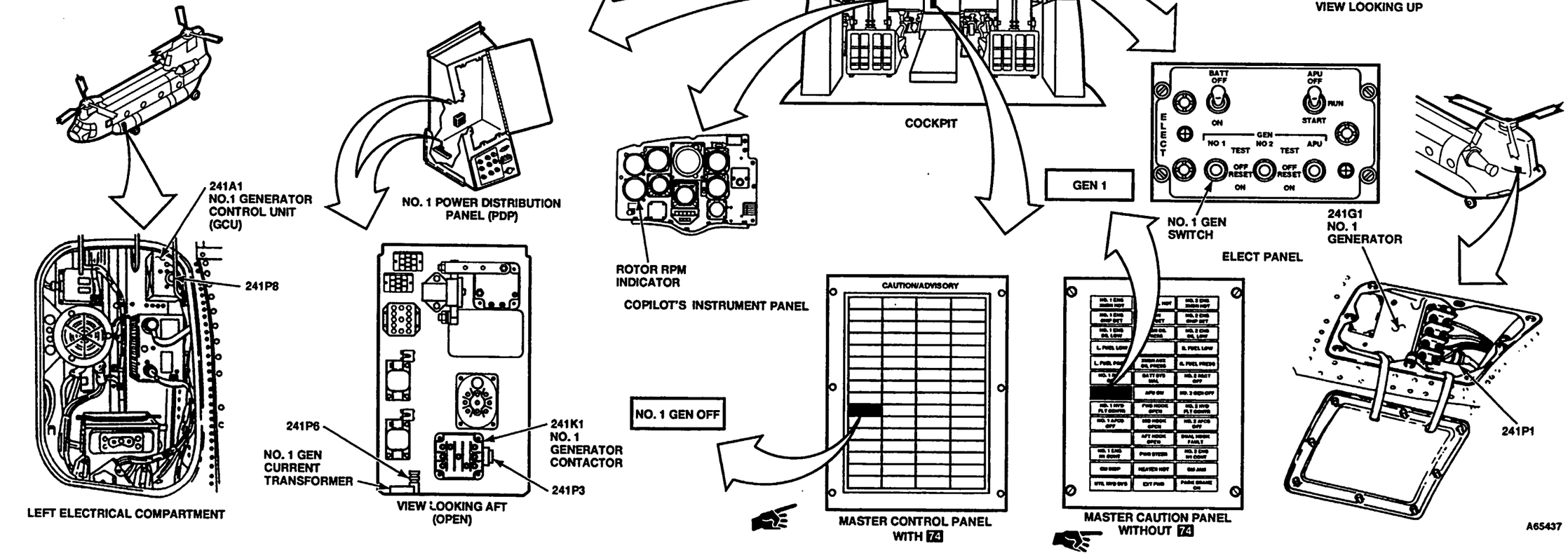


END-OF-TASK

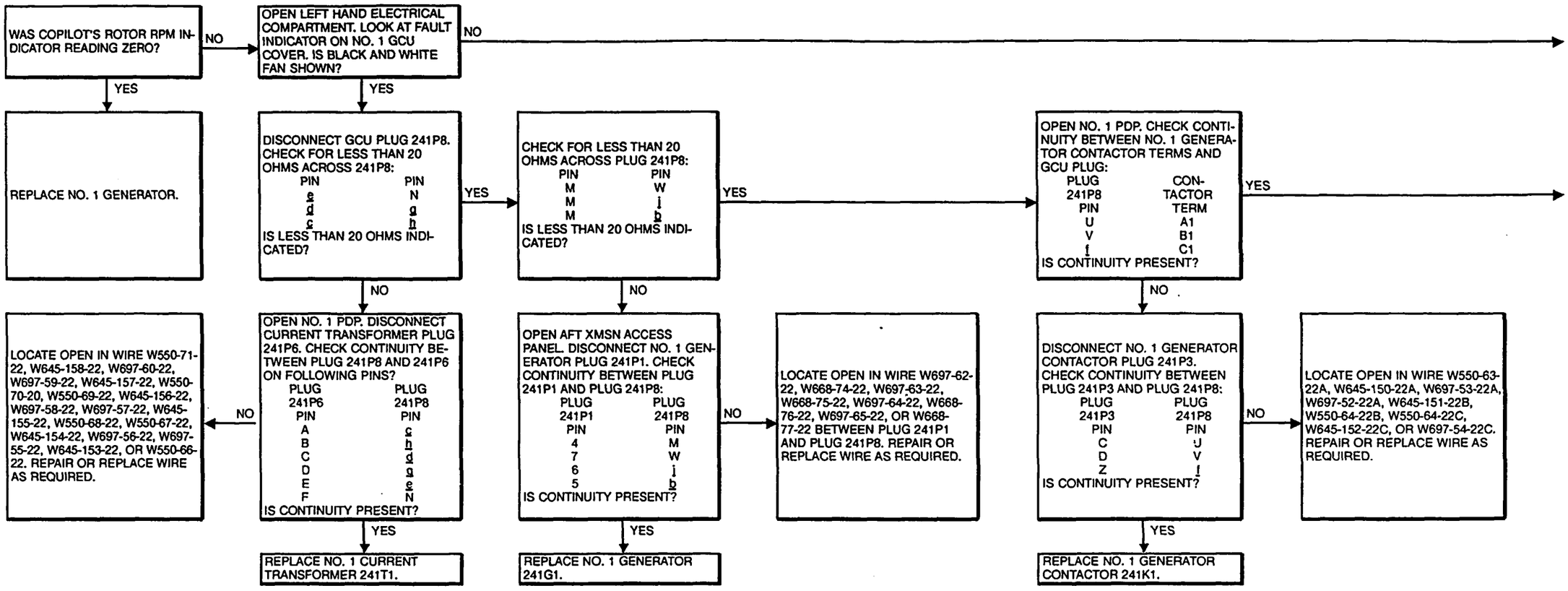
9-2.7 NO. 1 GEN OFF CAPSULE (WITHOUT 74)OR GEN 74 CAPSULE (WITH 74) STAYS ON (GENERATOR SWITCH IN TEST) 9-2.7

FAULT ISOLATION PROCEDURE
INITIAL SETUP
Applicable Configurations:
All
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter
Materials:
None

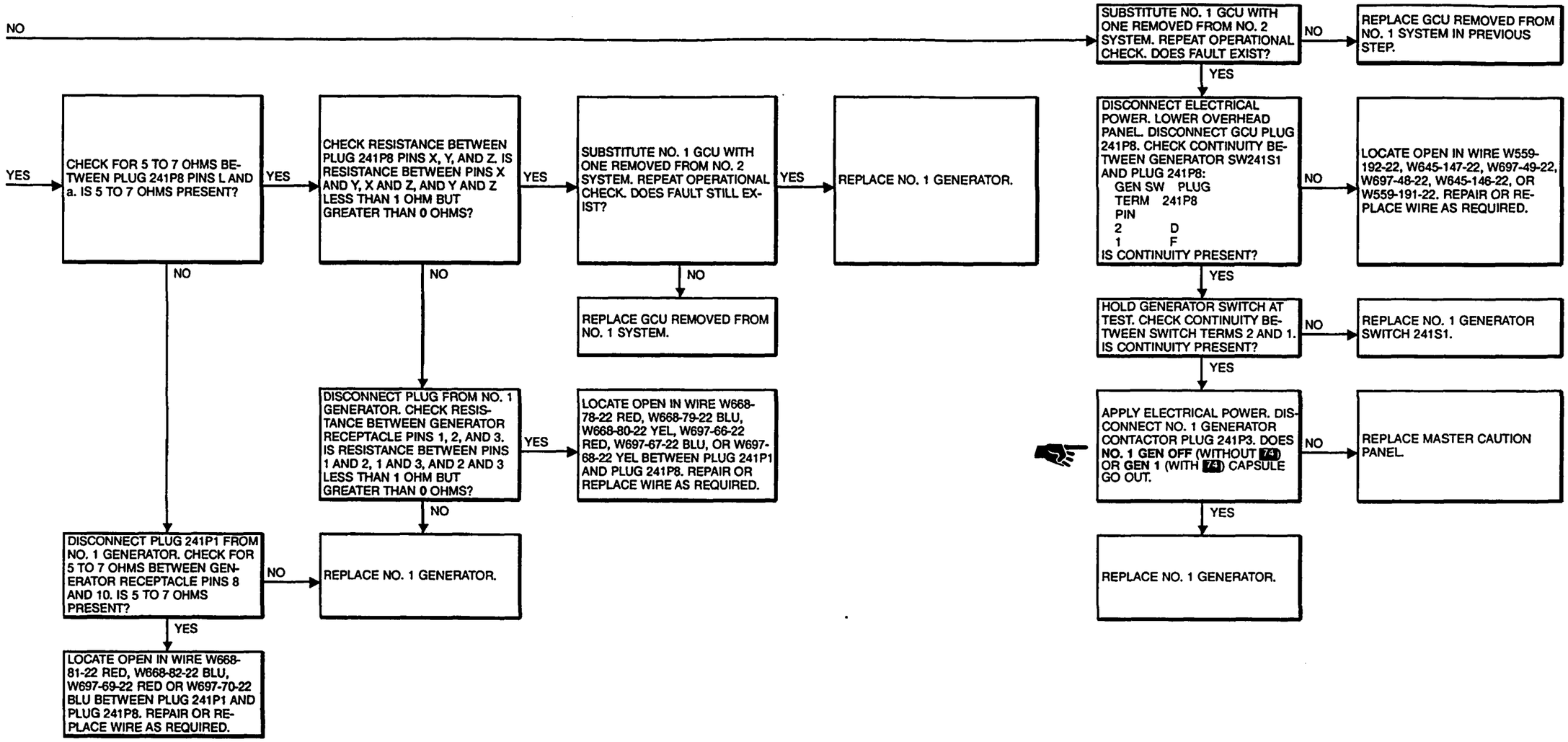
Personnel Required:
Aircraft Electrician
References:
TM 55-1520-240-23
Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off



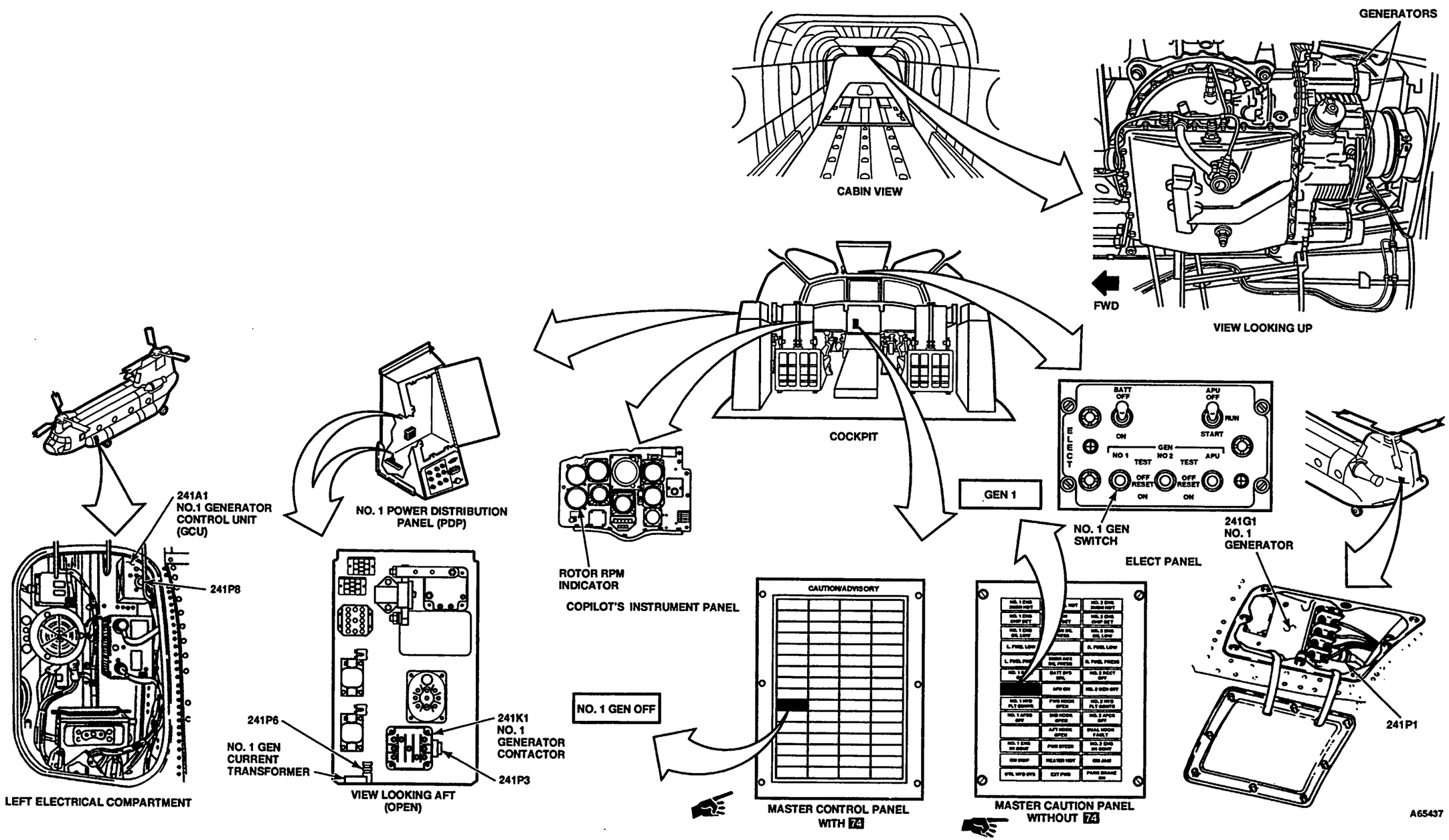
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END OF TASK
Change 19 9-79

9-2.8 NO. 1 GEN OFF CAPSULE (WITHOUT 74) OR GEN 1 CAPSULE (WITH 74) IS ON (GENERATOR SWITCH ON) 9-2.8

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

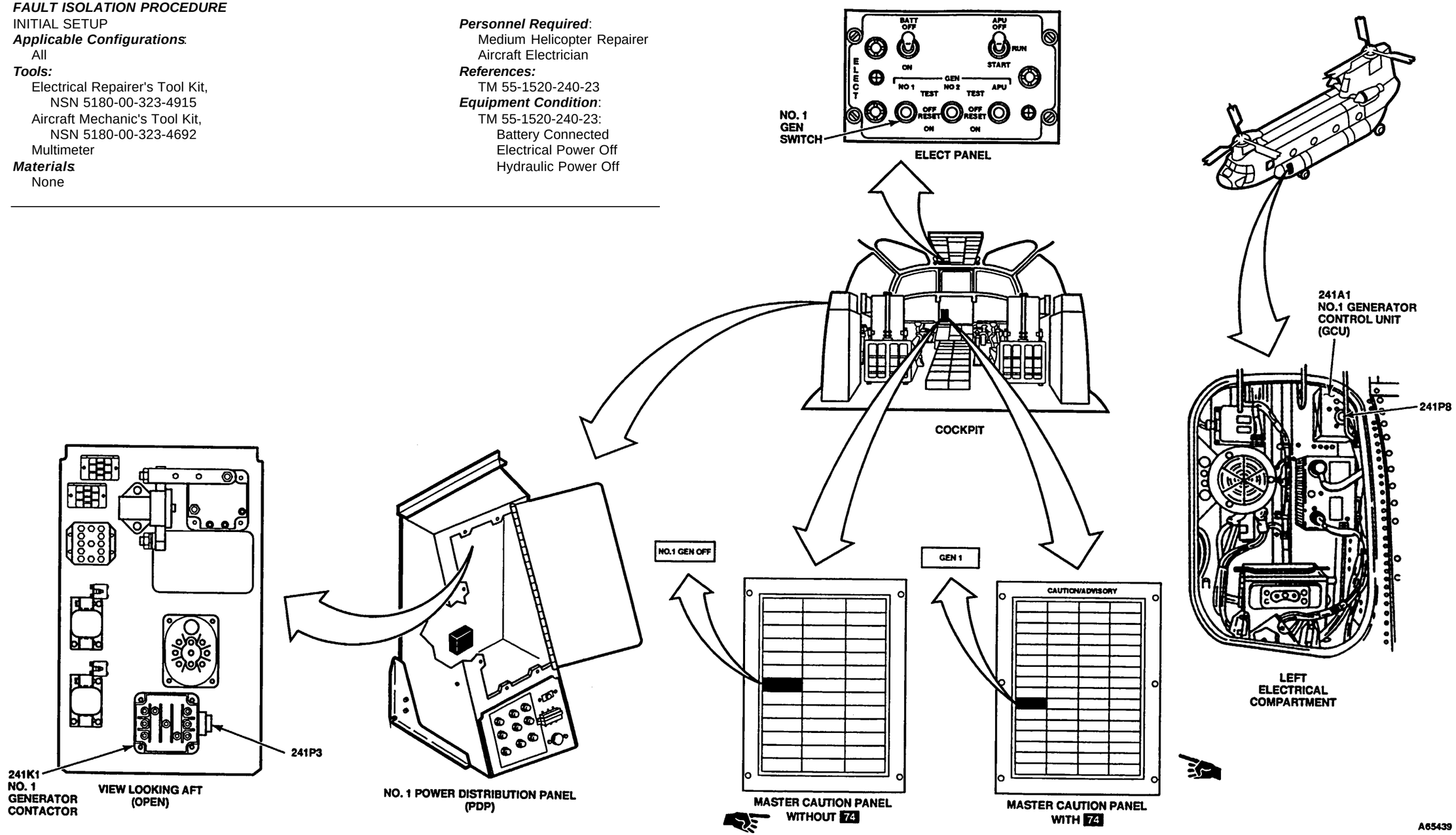
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Aircraft Mechanic's Tool Kit,
NSN 5180-00-323-4692
Multimeter

Materials:
None

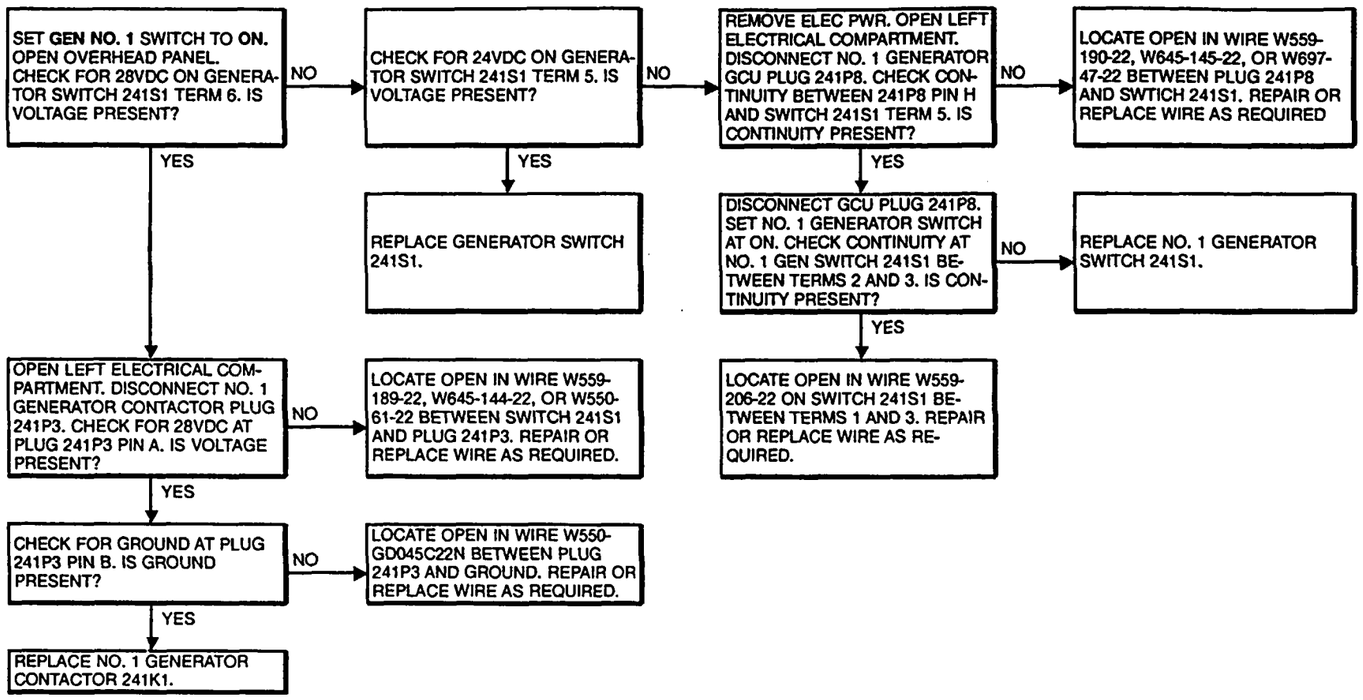
Personnel Required:
Medium Helicopter Repairer
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power Off
Hydraulic Power Off



GO TO NEXT PAGE


SET GEN NO. 1 SWITCH TO ON. OPEN OVERHEAD PANEL. CHECK FOR 28VDC ON GENERATOR SWITCH 241S1 TERM 6. IS VOLTAGE PRESENT?
NO
CHECK FOR 24VDC ON GENERATOR SWITCH 241S1 TERM 5. IS VOLTAGE PRESENT?
NO
REMOVE ELEC PWR. OPEN LEFT ELECTRICAL COMPARTMENT. DISCONNECT NO. 1 GENERATOR GCU PLUG 241P8. CHECK CONTINUITY BETWEEN 241P8 PIN H AND SWITCH 241S1 TERM 5. IS CONTINUITY PRESENT?
NO
LOCATE OPEN IN WIRE W559-190-22, W645-145-22, OR W697-47-22 BETWEEN PLUG 241P8 AND SWTICH 241S1. REPAIR OR REPLACE WIRE AS REQUIRED
YES
REPLACE GENERATOR SWITCH 241S1.
YES
DISCONNECT GCU PLUG 241P8. SET NO. 1 GENERATOR SWITCH AT ON. CHECK CONTINUITY AT NO. 1 GEN SWITCH 241S1 BETWEEN TERMS 2 AND 3. IS CONTINUITY PRESENT?
NO
REPLACE NO. 1 GENERATOR SWITCH 241S1.
YES
LOCATE OPEN IN WIRE W559-206-22 ON SWITCH 241S1 BETWEEN TERMS 1 AND 3. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
OPEN LEFT ELECTRICAL COMPARTMENT. DISCONNECT NO. 1 GENERATOR CONTACTOR PLUG 241P3. CHECK FOR 28VDC AT PLUG 241P3 PIN A. IS VOLTAGE PRESENT?
NO
LOCATE OPEN IN WIRE W559-189-22, W645-144-22, OR W550-61-22 BETWEEN SWITCH 241S1 AND PLUG 241P3. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
CHECK FOR GROUND AT PLUG 241P3 PIN B. IS GROUND PRESENT?
NO
LOCATE OPEN IN WIRE W550-GD045C22N BETWEEN PLUG 241P3 AND GROUND. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
REPLACE NO. 1 GENERATOR CONTACTOR 241K1.

END OF TASK

9-2.9 NO. 1 AND NO. 2 RECT OFF (WITHOUT 74) RECT 1 AND RECT 2 (WITH 74) CAPSULES ON (NO. 1 GENERATOR SELECTED) 9-2.9

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

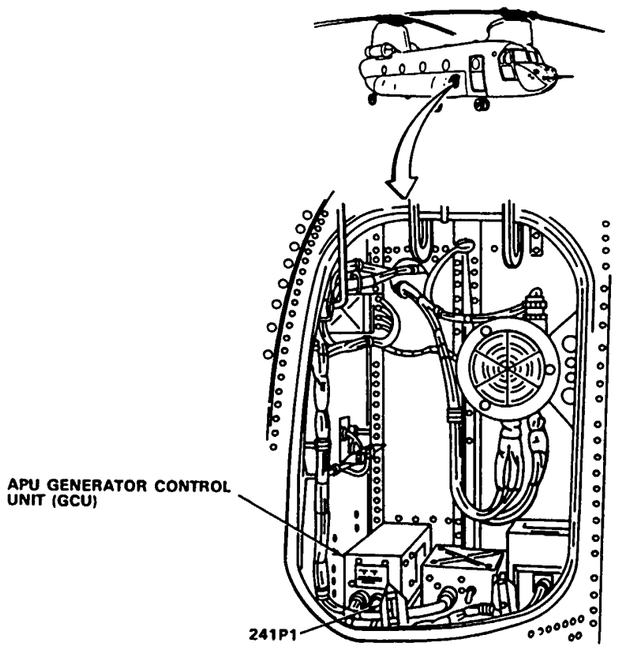
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:
None

Personnel Required:
Aircraft Electrician

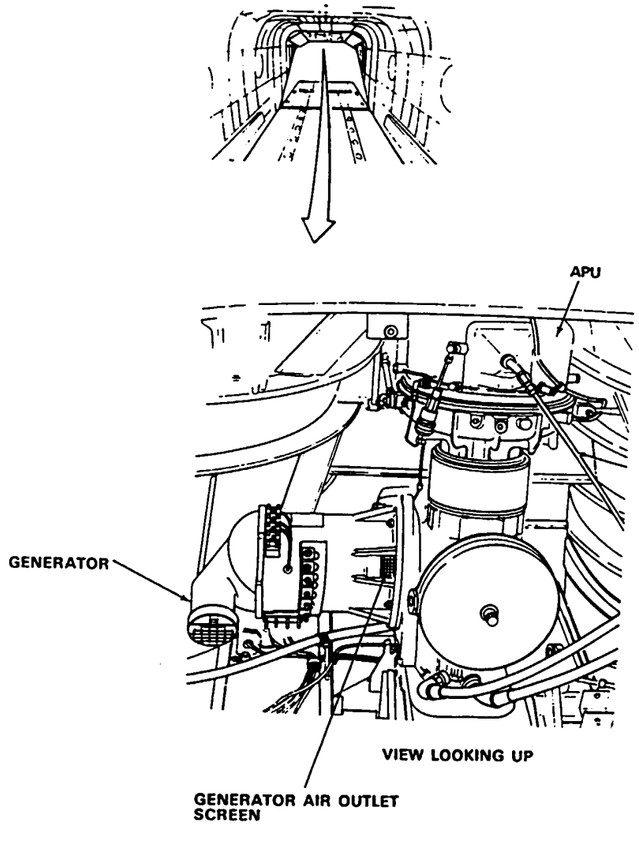
References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off



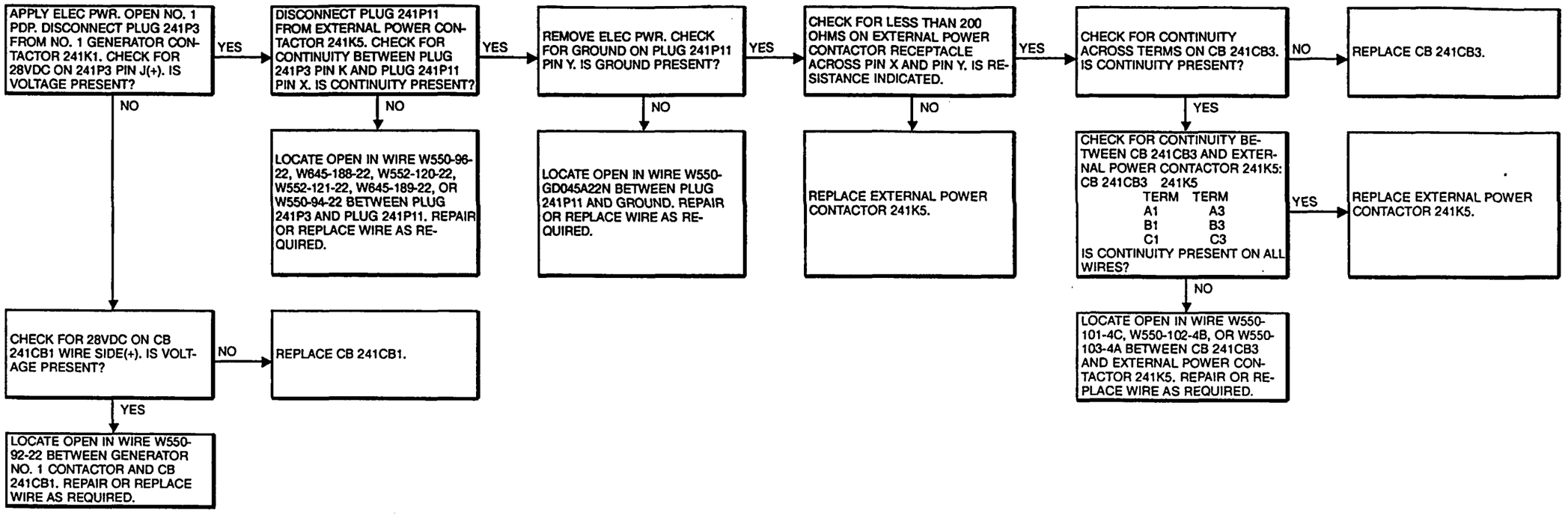
RIGHT ELECTRICAL COMPARTMENT

90:54



D145-12067-SPA

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APPLY ELEC PWR. OPEN NO. 1 PDP. DISCONNECT PLUG 241P3 FROM NO. 1 GENERATOR CONTACTOR 241K1. CHECK FOR 28VDC ON 241P3 PIN J(+). IS VOLTAGE PRESENT?
YES
NO
DISCONNECT PLUG 241P11 FROM EXTERNAL POWER CONTACTOR 241K5. CHECK FOR CONTINUITY BETWEEN PLUG 241P3 PIN K AND PLUG 241P11 PIN X. IS CONTINUITY PRESENT?
YES
NO
LOCATE OPEN IN WIRE W550-96-22, W645-188-22, W552-120-22, W552-121-22, W645-189-22, OR W550-94-22 BETWEEN PLUG 241P3 AND PLUG 241P11. REPAIR OR REPLACE WIRE AS REQUIRED.
REMOVE ELEC PWR. CHECK FOR GROUND ON PLUG 241P11 PIN Y. IS GROUND PRESENT?
YES
NO
LOCATE OPEN IN WIRE W550-GD045A22N BETWEEN PLUG 241P11 AND GROUND. REPAIR OR REPLACE WIRE AS REQUIRED.
CHECK FOR LESS THAN 200 OHMS ON EXTERNAL POWER CONTACTOR RECEPTACLE ACROSS PIN X AND PIN Y. IS RESISTANCE INDICATED.
YES
NO
REPLACE EXTERNAL POWER CONTACTOR 241K5.
CHECK FOR CONTINUITY ACROSS TERMS ON CB 241CB3. IS CONTINUITY PRESENT?
YES
NO
REPLACE CB 241CB3.
CHECK FOR CONTINUITY BETWEEN CB 241CB3 AND EXTERNAL POWER CONTACTOR 241K5:
CB 241CB3 241K5
TERM TERM
A1 A3
B1 B3
C1 C3
IS CONTINUITY PRESENT ON ALL WIRES?
YES
NO
REPLACE EXTERNAL POWER CONTACTOR 241K5.
LOCATE OPEN IN WIRE W550-101-4C, W550-102-4B, OR W550-103-4A BETWEEN CB 241CB3 AND EXTERNAL POWER CONTACTOR 241K5. REPAIR OR REPLACE WIRE AS REQUIRED.
CHECK FOR 28VDC ON CB 241CB1 WIRE SIDE(+). IS VOLTAGE PRESENT?
NO
REPLACE CB 241CB1.
YES
LOCATE OPEN IN WIRE W550-92-22 BETWEEN GENERATOR NO. 1 CONTACTOR AND CB 241CB1. REPAIR OR REPLACE WIRE AS REQUIRED.

END OF TASK

9-2.10 NO. 2 GEN OFF CAPSULE (WITHOUT 74) OR GEN 2 CAPSULE (WITH 74)STAYS ON (GENERATOR SWITCH IN TEST) 9-2.10

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

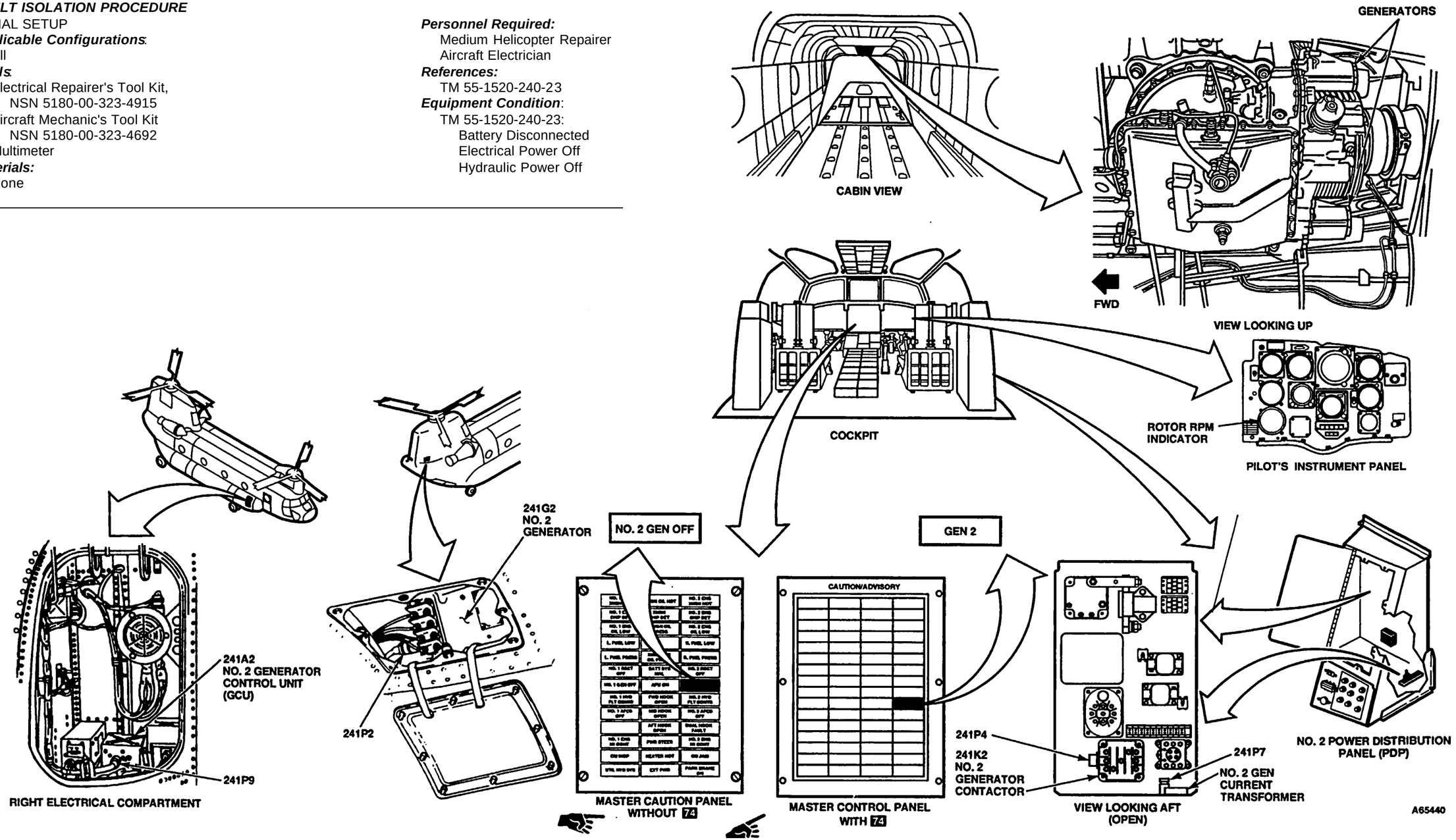
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Aircraft Mechanic's Tool Kit
NSN 5180-00-323-4692
Multimeter

Materials:
None

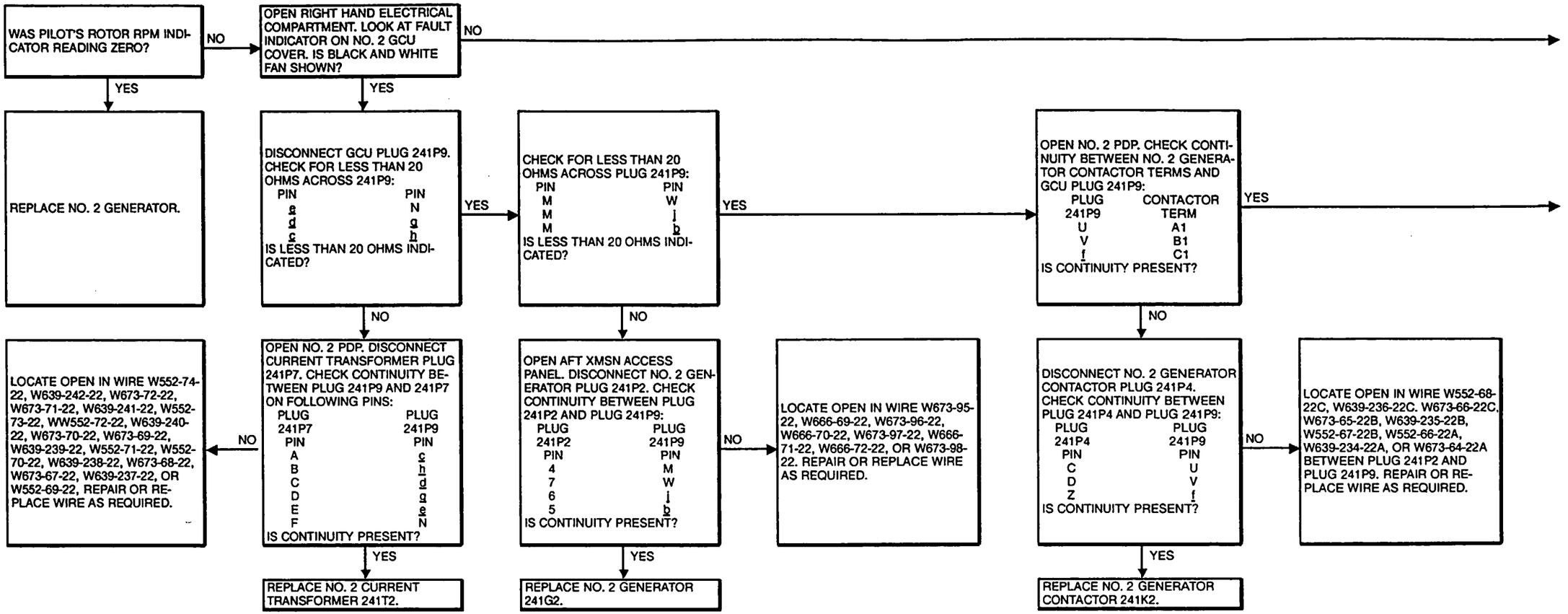
Personnel Required:
Medium Helicopter Repairer
Aircraft Electrician

References:
TM 55-1520-240-23

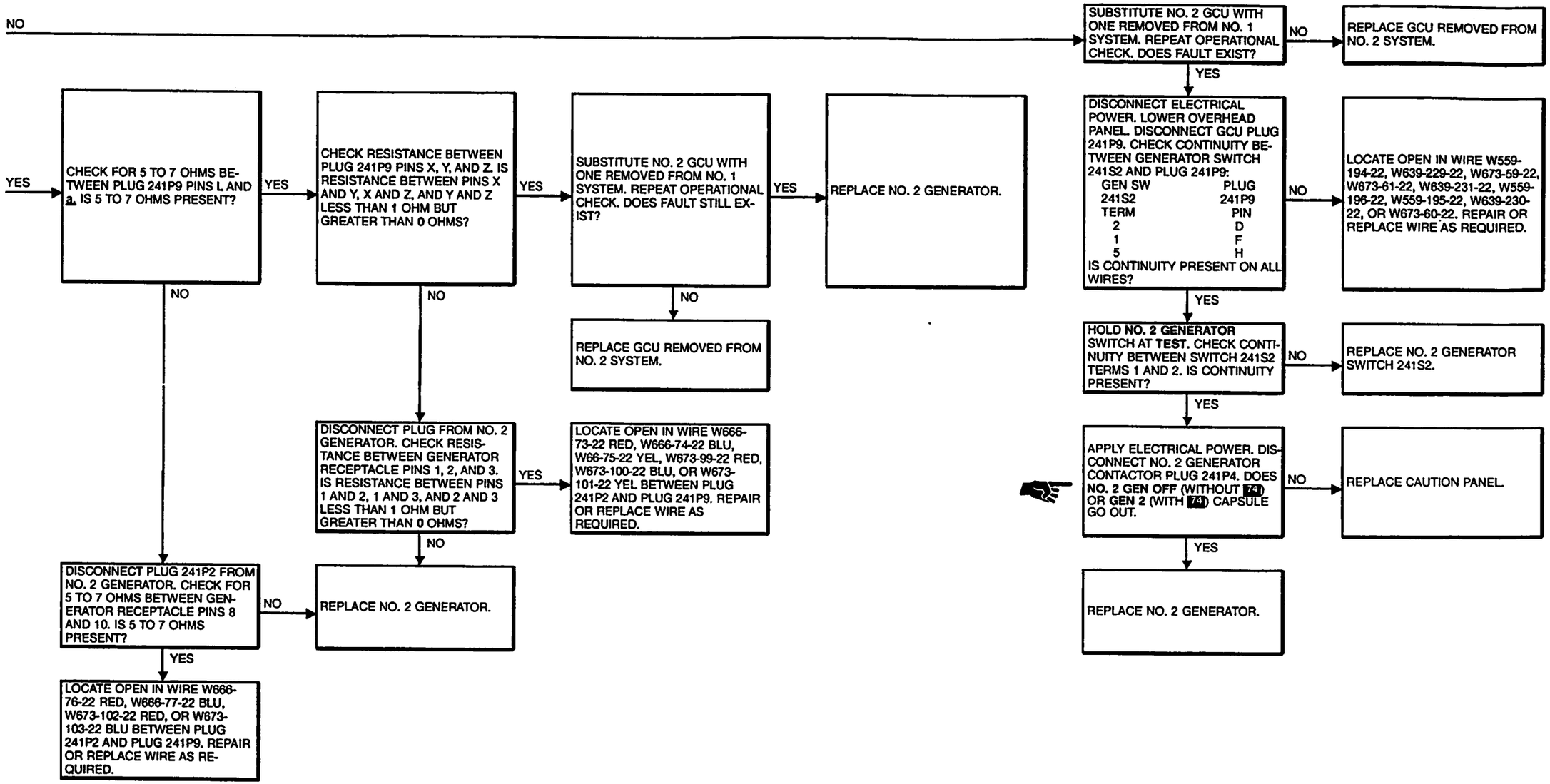
Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off



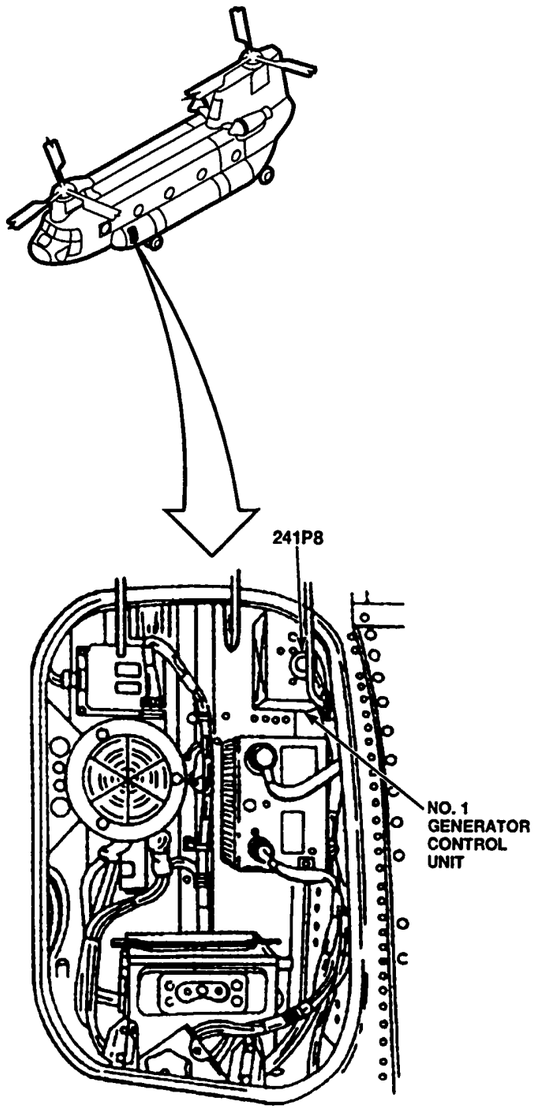
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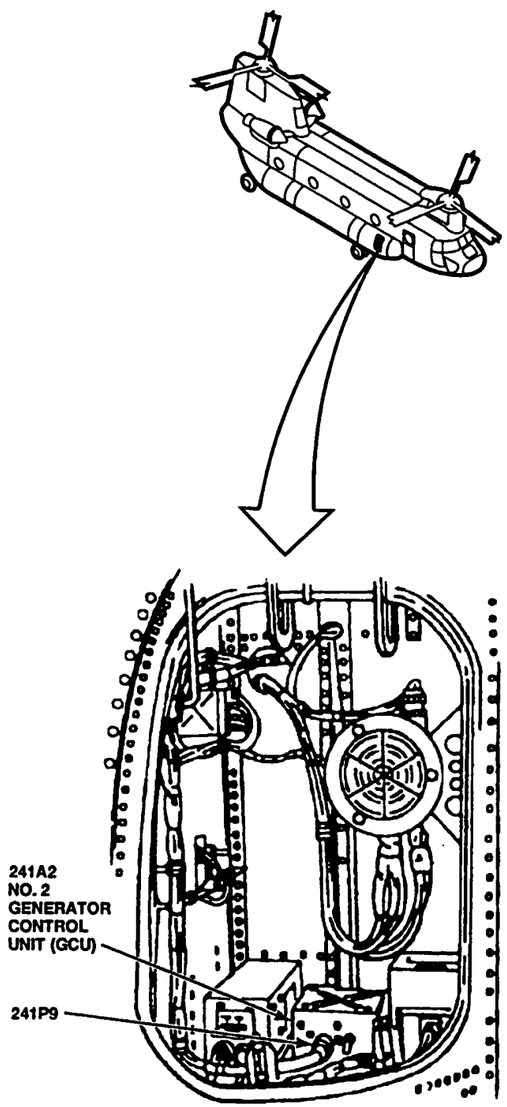
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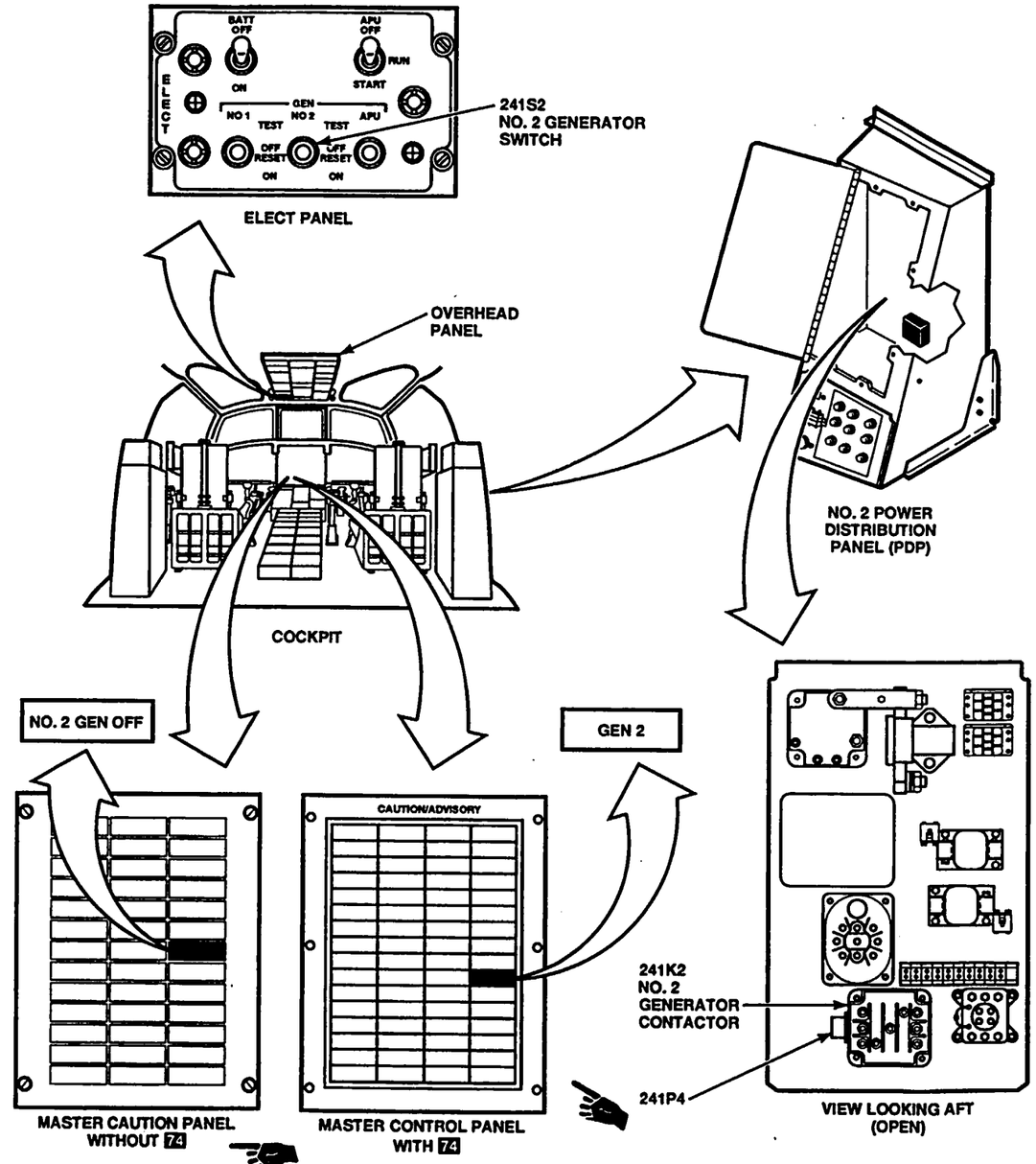
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LEFT ELECTRICAL COMPARTMENT



RIGHT ELECTRICAL COMPARTMENT

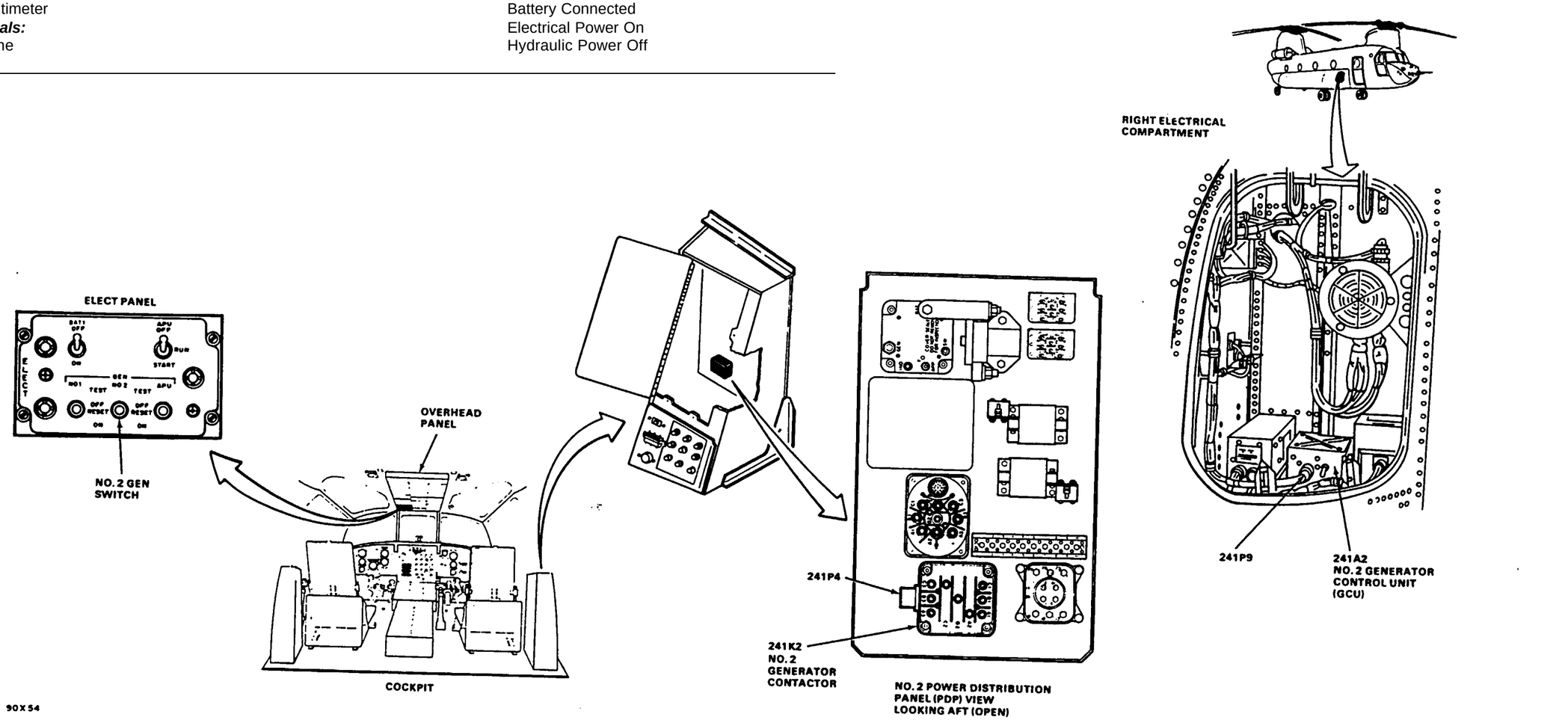


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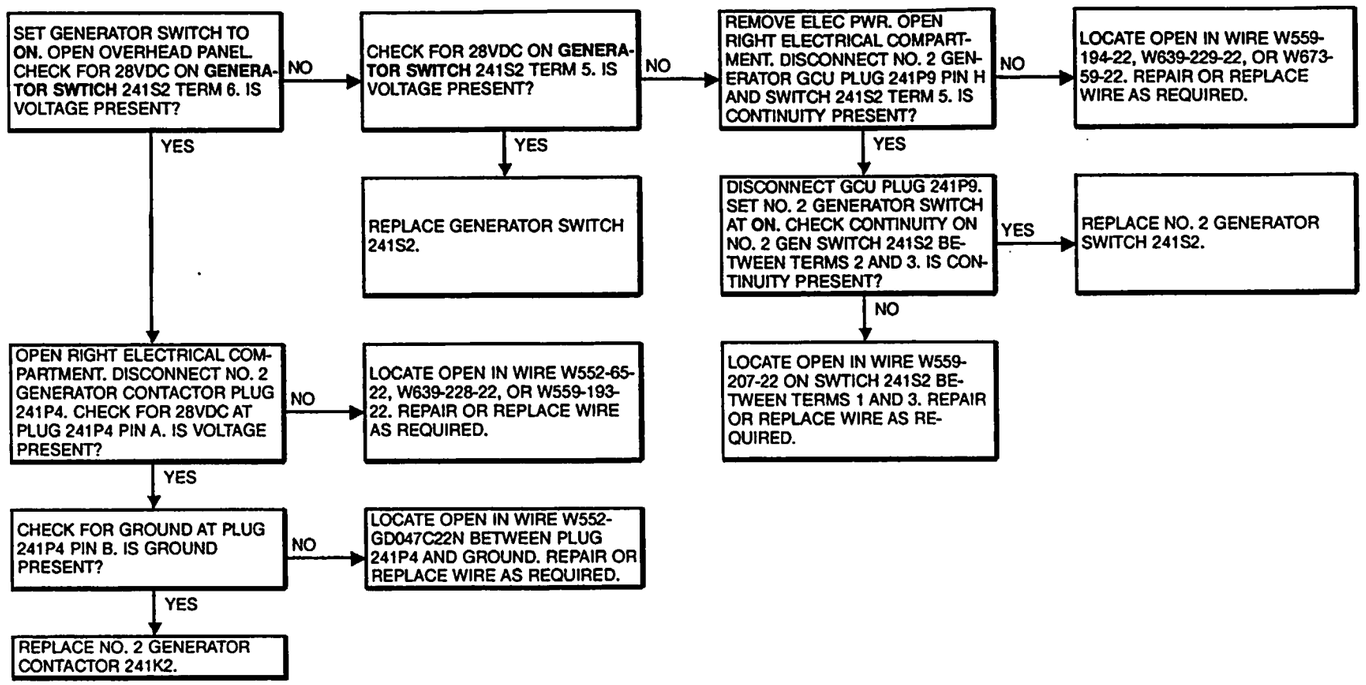
END OF TASK

9-2.11 NO. 2 GENERATOR OFF (WITHOUT 74) GEN 2 (WITH 74) CAPSULE IS ON (GENERATOR SWITCH ON) 9-2.11

FAULT ISOLATION PROCEDURE
INITIAL SETUP
Applicable Configurations:
All
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter
Materials:
None
Personnel Required:
Aircraft Electrician
References:
TM 55-1520-240-23
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off



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SET GENERATOR SWITCH TO ON. OPEN OVERHEAD PANEL. CHECK FOR 28VDC ON GENERATOR SWTICH 241S2 TERM 6. IS VOLTAGE PRESENT?
NO
CHECK FOR 28VDC ON GENERATOR SWITCH 241S2 TERM 5. IS VOLTAGE PRESENT?
NO
REMOVE ELEC PWR. OPEN RIGHT ELECTRICAL COMPARTMENT. DISCONNECT NO. 2 GENERATOR GCU PLUG 241P9 PIN H AND SWITCH 241S2 TERM 5. IS CONTINUITY PRESENT?
NO
LOCATE OPEN IN WIRE W559-194-22, W639-229-22, OR W673-59-22. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
REPLACE GENERATOR SWITCH 241S2.
YES
DISCONNECT GCU PLUG 241P9. SET NO. 2 GENERATOR SWITCH AT ON. CHECK CONTINUITY ON NO. 2 GEN SWITCH 241S2 BETWEEN TERMS 2 AND 3. IS CONTINUITY PRESENT?
YES
REPLACE NO. 2 GENERATOR SWITCH 241S2.
NO
LOCATE OPEN IN WIRE W559-207-22 ON SWTICH 241S2 BETWEEN TERMS 1 AND 3. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
OPEN RIGHT ELECTRICAL COMPARTMENT. DISCONNECT NO. 2 GENERATOR CONTACTOR PLUG 241P4. CHECK FOR 28VDC AT PLUG 241P4 PIN A. IS VOLTAGE PRESENT?
NO
LOCATE OPEN IN WIRE W552-65-22, W639-228-22, OR W559-193-22. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
CHECK FOR GROUND AT PLUG 241P4 PIN B. IS GROUND PRESENT?
NO
LOCATE OPEN IN WIRE W552-GD047C22N BETWEEN PLUG 241P4 AND GROUND. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
REPLACE NO. 2 GENERATOR CONTACTOR 241K2.

END OF TASK

9-2.12 NO. 1 AND NO. 2 RECT OFF CAPSULES (WITHOUT 74) OR RECT 1 AND RECT 2 CAPSULES (WITH 74) ON (NO. 2 GENERATOR SELECTED) 9-2.12

FAULT ISOLATION PROCEDURE

INITIAL SETUP

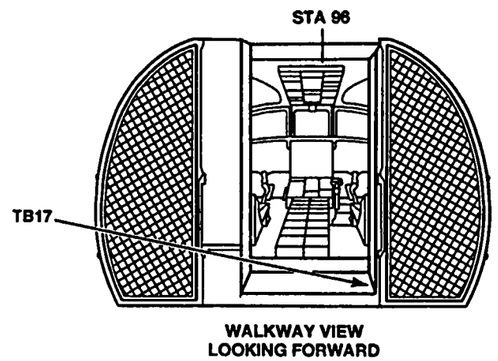
Applicable Configurations:
All References:

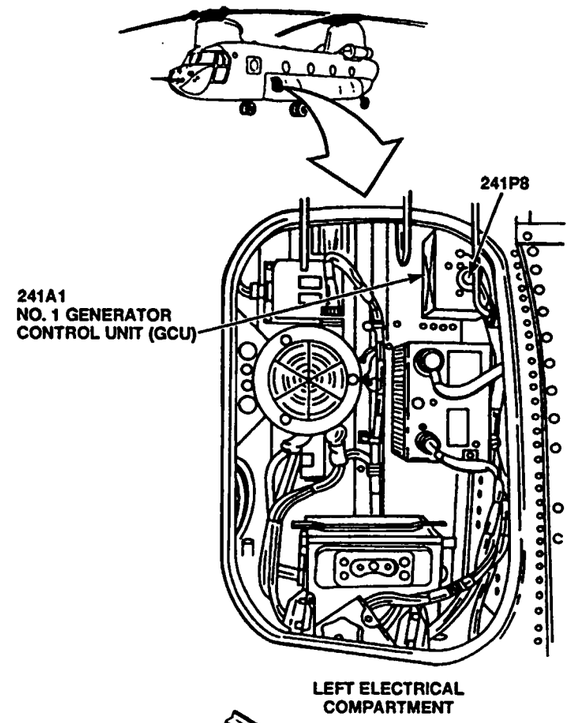
Tools: TM 55-1520-240-23
Electrical Repairer's Tool Kit, NSN 5180-00-323-4915
Multimeter

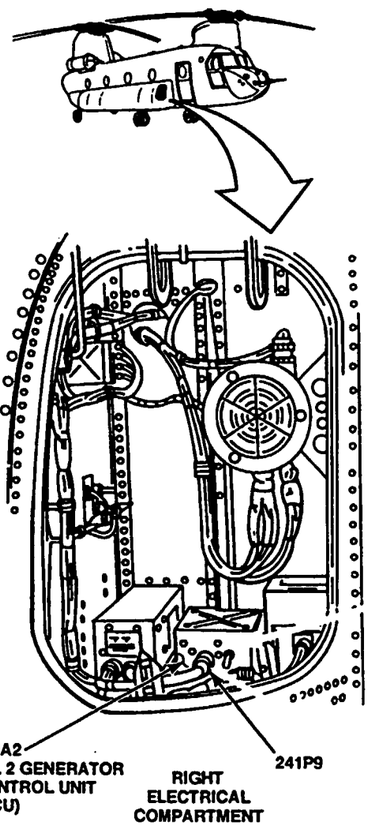
Materials:
None

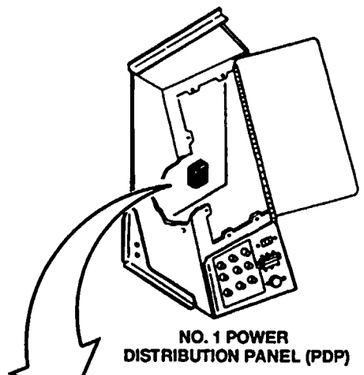
Personnel Required:
Aircraft Electrician

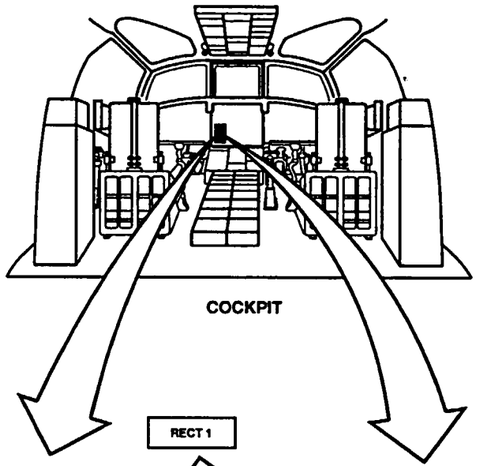
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off

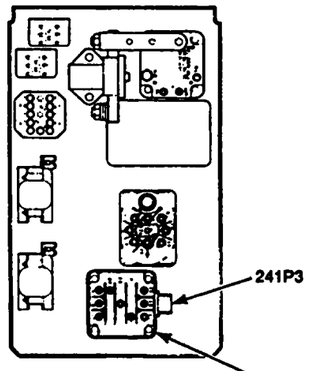


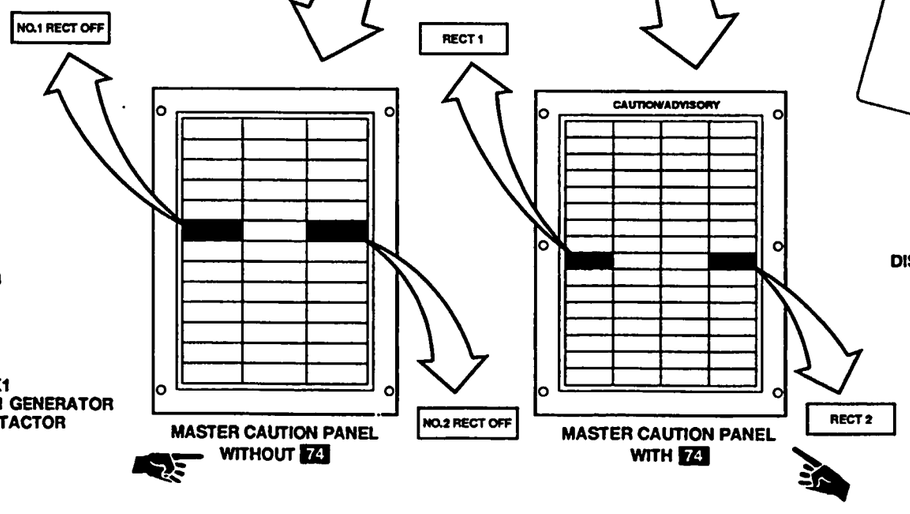


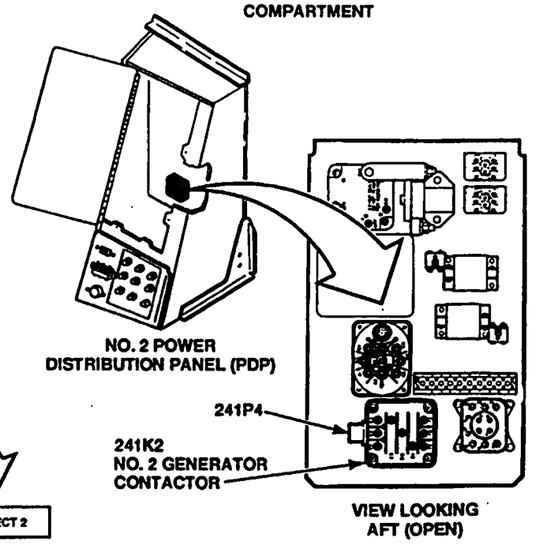






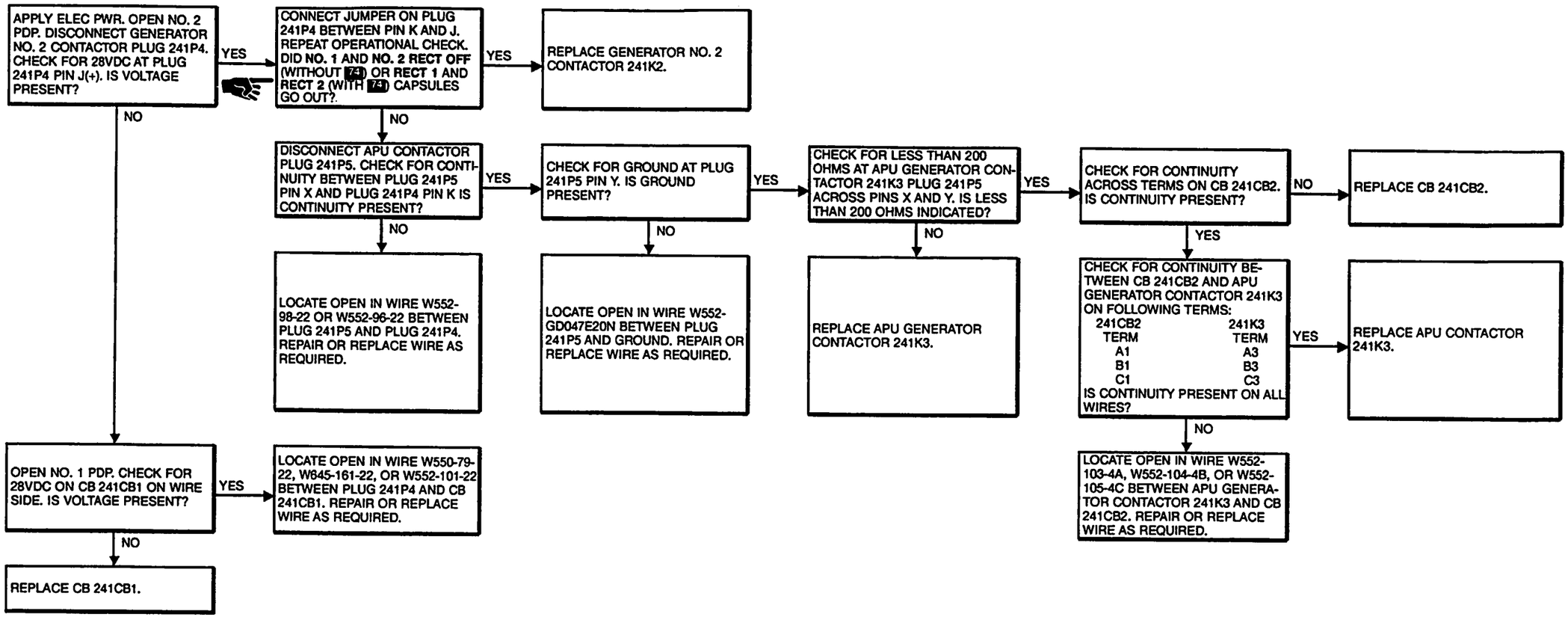






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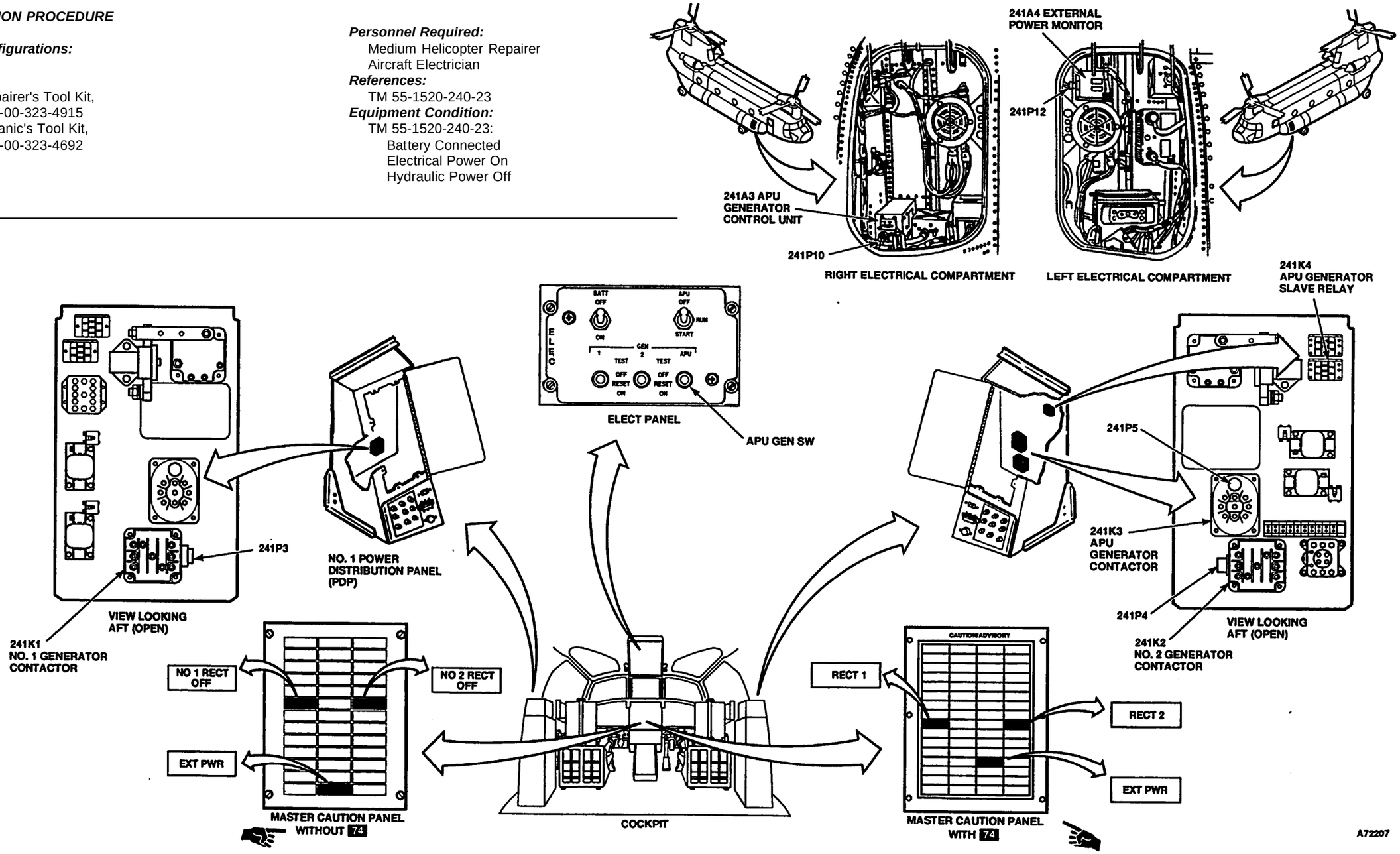

APPLY ELEC PWR. OPEN NO. 2 PDP. DISCONNECT GENERATOR NO. 2 CONTACTOR PLUG 241P4. CHECK FOR 28VDC AT PLUG 241P4 PIN J(+). IS VOLTAGE PRESENT?
YES
NO
CONNECT JUMPER ON PLUG 241P4 BETWEEN PIN K AND J. REPEAT OPERATIONAL CHECK. DID NO. 1 AND NO. 2 RECT OFF (WITHOUT 74) OR RECT 1 AND RECT 2 (WITH 74) CAPSULES GO OUT?
YES
REPLACE GENERATOR NO. 2 CONTACTOR 241K2.
NO
DISCONNECT APU CONTACTOR PLUG 241P5. CHECK FOR CONTINUITY BETWEEN PLUG 241P5 PIN X AND PLUG 241P4 PIN K IS CONTINUITY PRESENT?
YES
NO
LOCATE OPEN IN WIRE W552-98-22 OR W552-96-22 BETWEEN PLUG 241P5 AND PLUG 241P4. REPAIR OR REPLACE WIRE AS REQUIRED.
CHECK FOR GROUND AT PLUG 241P5 PIN Y. IS GROUND PRESENT?
YES
NO
LOCATE OPEN IN WIRE W552-GD047E20N BETWEEN PLUG 241P5 AND GROUND. REPAIR OR REPLACE WIRE AS REQUIRED.
CHECK FOR LESS THAN 200 OHMS AT APU GENERATOR CONTACTOR 241K3 PLUG 241P5 ACROSS PINS X AND Y. IS LESS THAN 200 OHMS INDICATED?
YES
NO
REPLACE APU GENERATOR CONTACTOR 241K3.
CHECK FOR CONTINUITY ACROSS TERMS ON CB 241CB2. IS CONTINUITY PRESENT?
NO
REPLACE CB 241CB2.
YES
CHECK FOR CONTINUITY BETWEEN CB 241CB2 AND APU GENERATOR CONTACTOR 241K3 ON FOLLOWING TERMS:
241CB2 TERM: A1, B1, C1
241K3 TERM: A3, B3, C3
IS CONTINUITY PRESENT ON ALL WIRES?
YES
REPLACE APU CONTACTOR 241K3.
NO
LOCATE OPEN IN WIRE W552-103-4A, W552-104-4B, OR W552-105-4C BETWEEN APU GENERATOR CONTACTOR 241K3 AND CB 241CB2. REPAIR OR REPLACE WIRE AS REQUIRED.
OPEN NO. 1 PDP. CHECK FOR 28VDC ON CB 241CB1 ON WIRE SIDE. IS VOLTAGE PRESENT?
YES
LOCATE OPEN IN WIRE W550-79-22, W645-161-22, OR W552-101-22 BETWEEN PLUG 241P4 AND CB 241CB1. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
REPLACE CB 241CB1.

END OF TASK

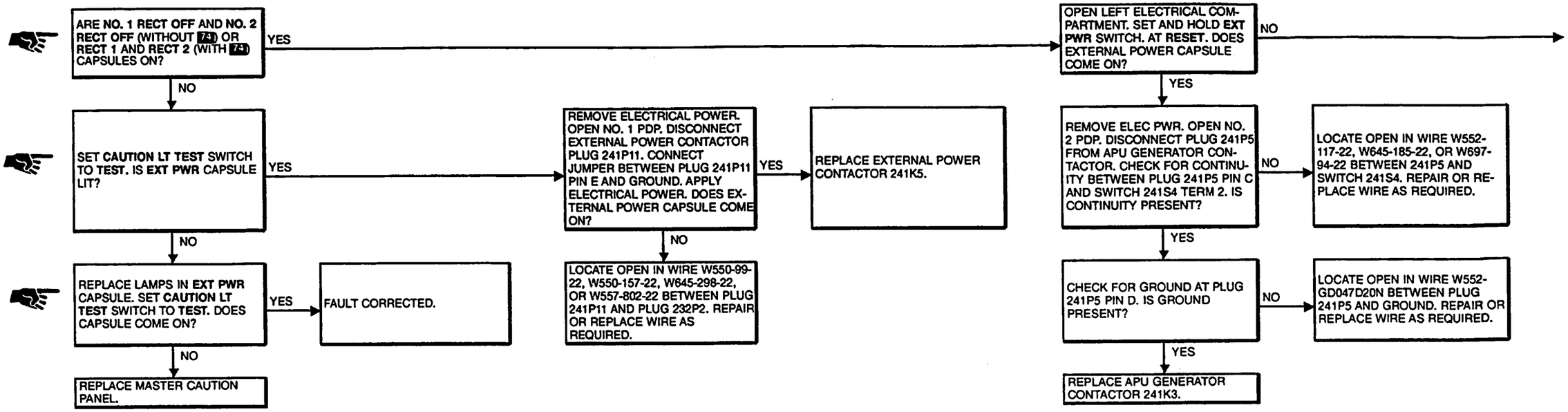
9-2.13 EXT PWR CAPSULE NOT ON (EXTERNAL POWER APPLIED) 9-2.13

FAULT ISOLATION PROCEDURE
INITIAL SETUP
Applicable Configurations:
All
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Aircraft Mechanic's Tool Kit,
NSN 5180-00-323-4692
Multimeter
Materials:
None

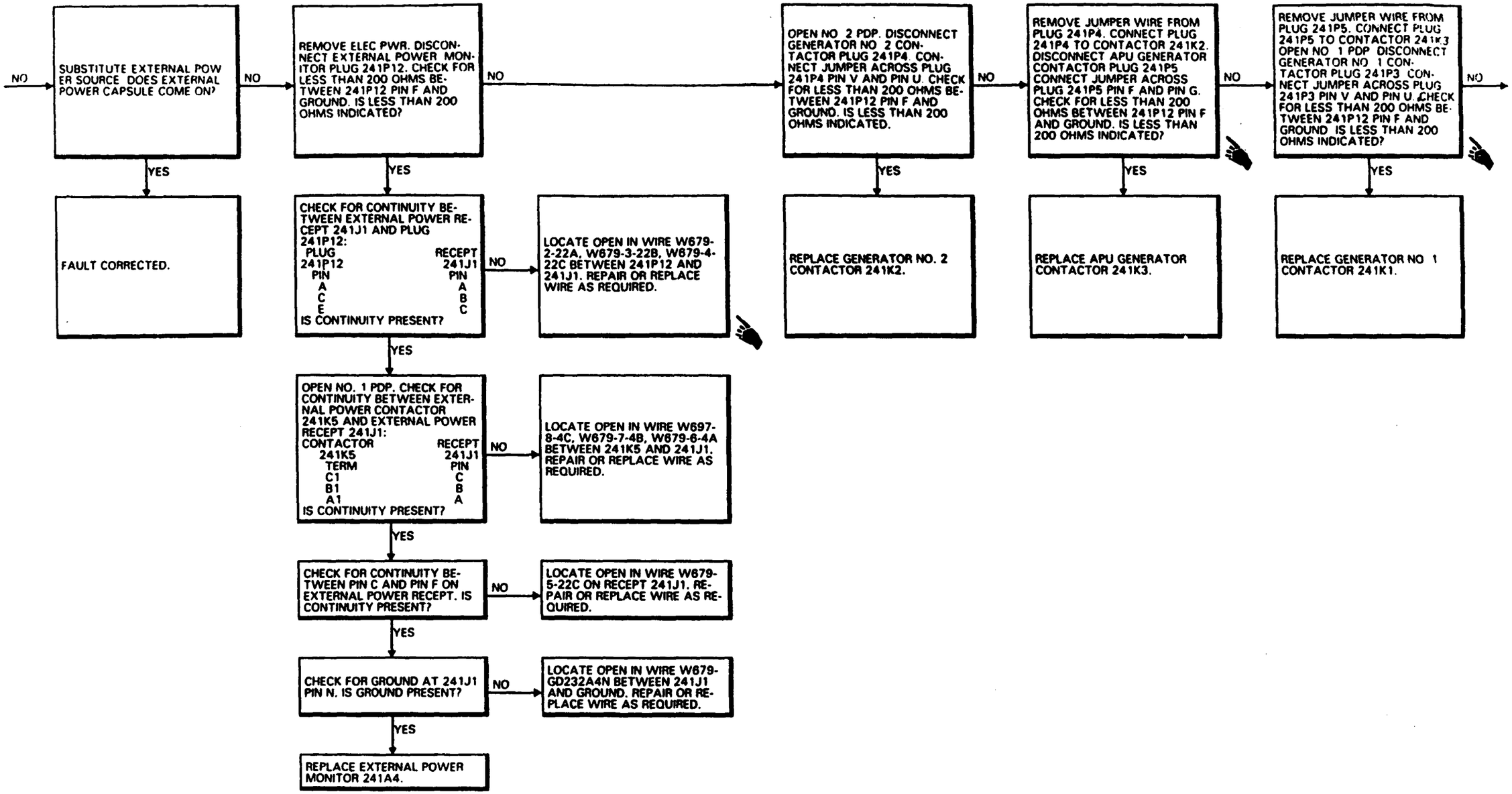
Personnel Required:
Medium Helicopter Repairer
Aircraft Electrician
References:
TM 55-1520-240-23
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off



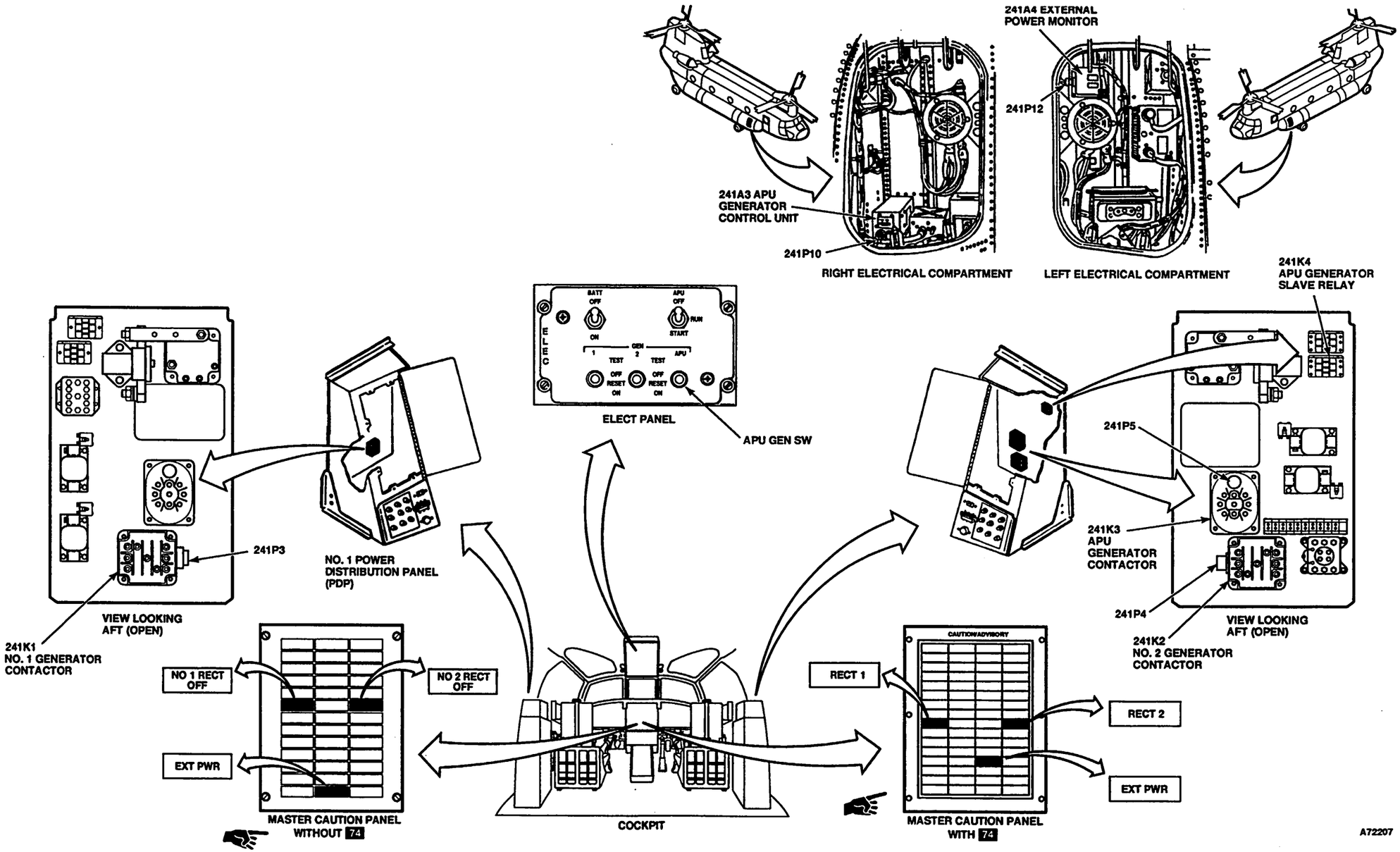
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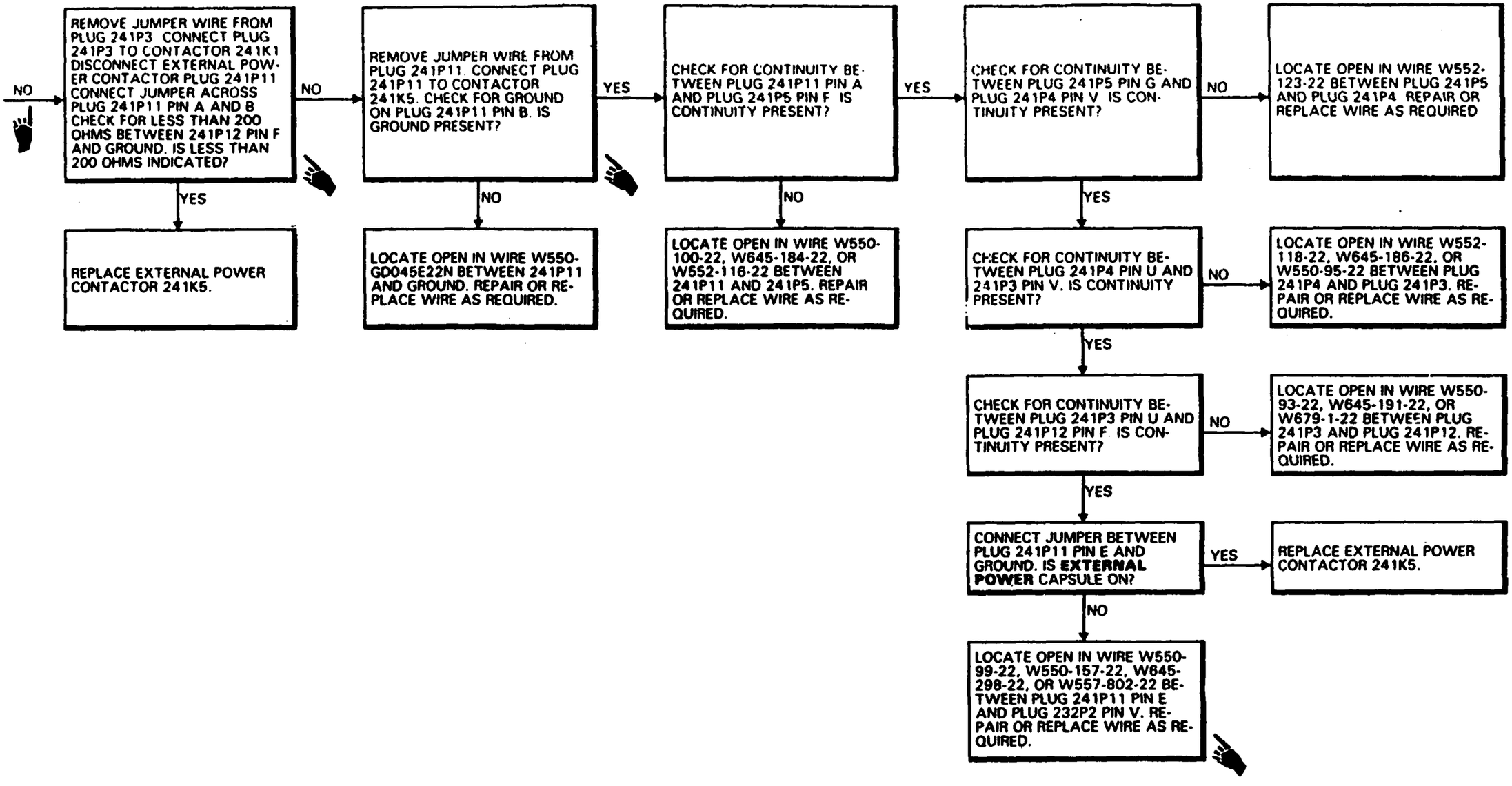
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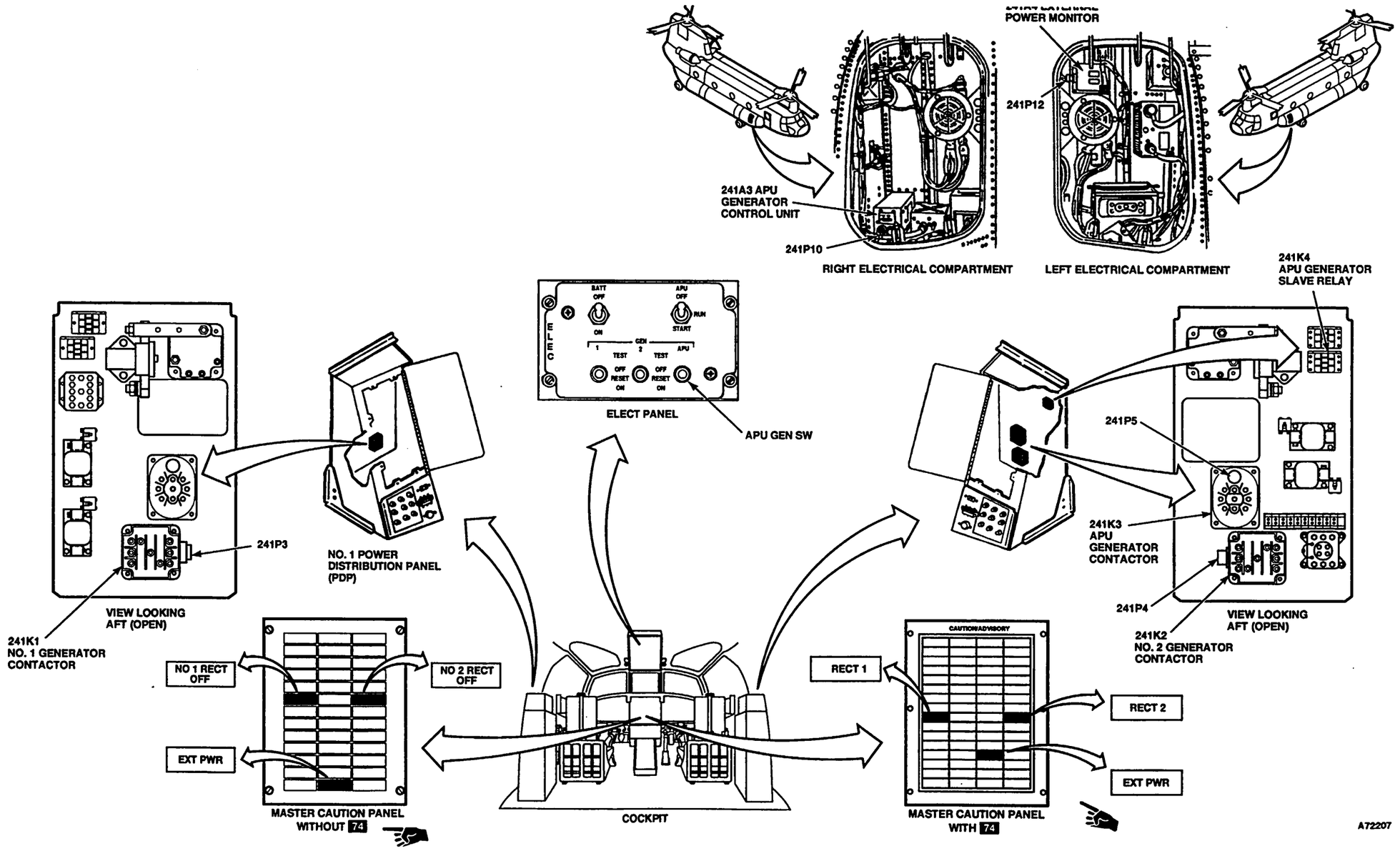
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POWER MONITOR
241P12
241A3 APU GENERATOR CONTROL UNIT
241P10
RIGHT ELECTRICAL COMPARTMENT
LEFT ELECTRICAL COMPARTMENT
241K4 APU GENERATOR SLAVE RELAY
BATT OFF ON
APU OFF RUN START
GEN 1 2 APU
TEST
OFF RESET ON
ELECT PANEL
APU GEN SW
241P5
241K3 APU GENERATOR CONTACTOR
241P4
241K2 NO. 2 GENERATOR CONTACTOR
VIEW LOOKING AFT (OPEN)
241P3
NO. 1 POWER DISTRIBUTION PANEL (PDP)
241K1 NO. 1 GENERATOR CONTACTOR
NO 1 RECT OFF
NO 2 RECT OFF
EXT PWR
MASTER CAUTION PANEL WITHOUT 74
COCKPIT
RECT 1
RECT 2
EXT PWR
CAUTION/ADVISORY
MASTER CAUTION PANEL WITH 74
A72207

END OF TASK

9-2.14 NO. 1 AND NO. 2 RECT OFF (WITHOUT 74 RECT 1 AND RECT 2 (WITH 74) CAPSULES ON (EXTERNAL POWER ON) 9-2.14

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

Tools:
Electrical Repairer Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:
None

Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off

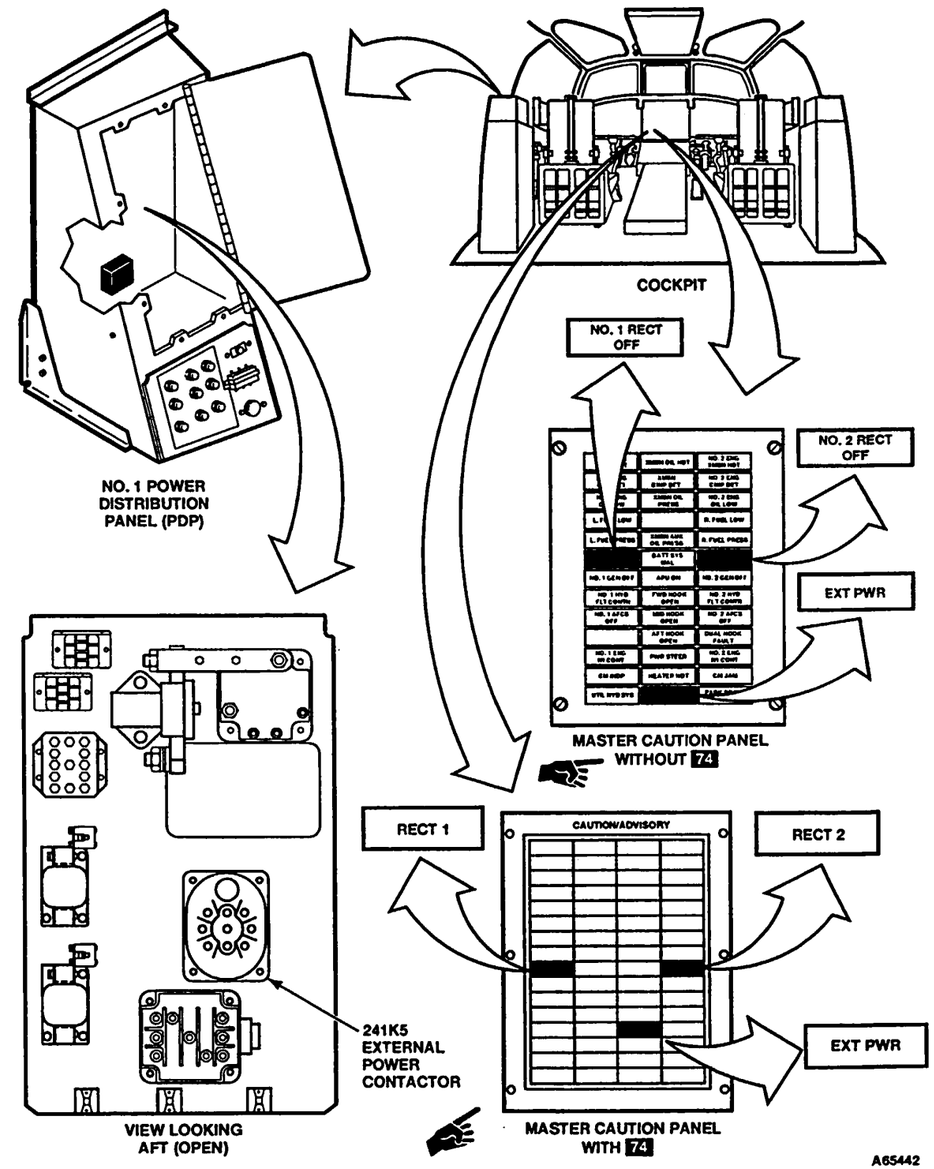
OPEN NO. 1 PDP. CHECK CONTINUITY BETWEEN EXTERNAL POWER RECEPT 241J1 AND EXTERNAL POWER CONTACTOR 241K5:

241J1 PIN	241K5 TERM
A	A1
B	B1
C	C1

IS CONTINUITY PRESENT?

NO → LOCATE OPEN IN WIRE W679-8-4C, W679-7-4B, OR W679-6-4A BETWEEN 241J1 AND 241K5 TERMS. REPAIR OR REPLACE WIRE AS REQUIRED.

YES → REPLACE EXTERNAL POWER CONTACTOR 241K5.



END OF TASK

9-2.15 NO. 1 OR NO. 2 RECT OFF (WITHOUT 74 RECT 1 OR RECT 2 (WITH 74 CAPSULE ON WHEN GEN NO. 1 OR NO. 2 SWITCH TURNED OFF 9-2.15

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

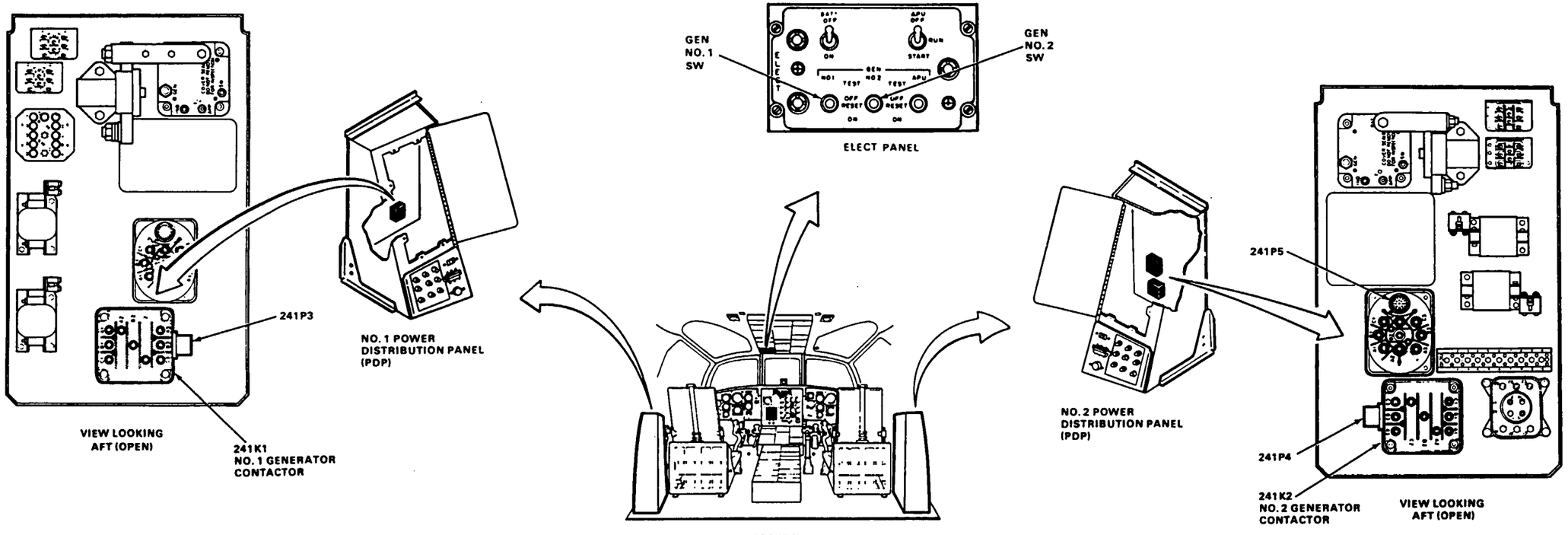
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:
None

Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

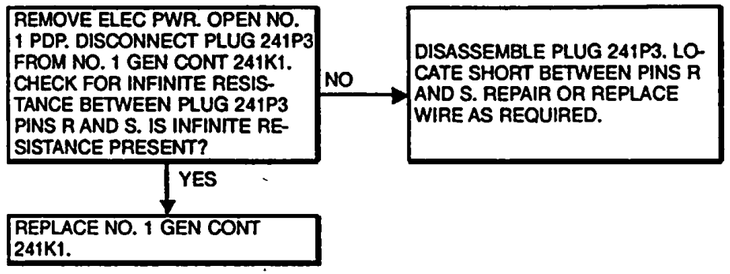
Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power On
Hydraulic Power Off



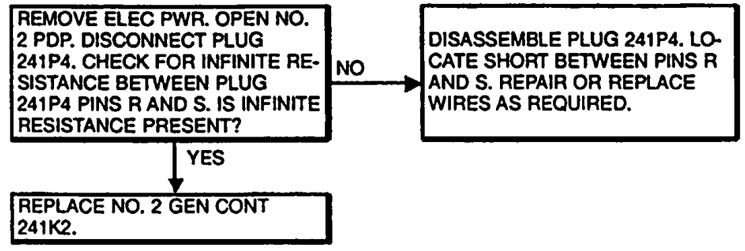
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NO. 1 RECT OFF (WITHOUT 74) RECT 1 (WITH 74) CAPSULE ON

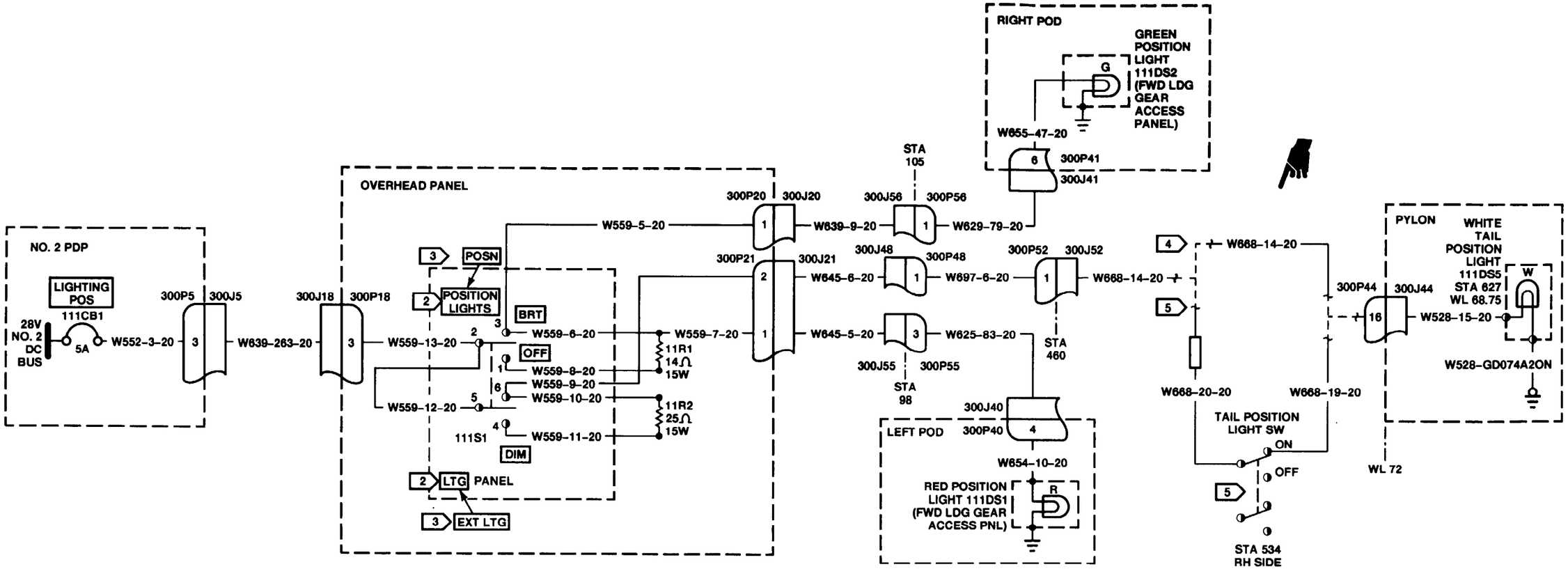


NO. 2 RECT OFF (WITHOUT 74) RECT 2 (WITH 74) CAPSULE ON



END OF TASK

9-3 POSITION LIGHTS



NOTES

1. ▭ INDICATES EQUIPMENT MARKING
2. ▷ WITHOUT 17
3. ▷ WITH 17
4. ▷ WITHOUT 67
5. ▷ WITH 67

A51201

END OF TASK

INITIAL SETUP

Applicable Configurations:
All

Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:
None

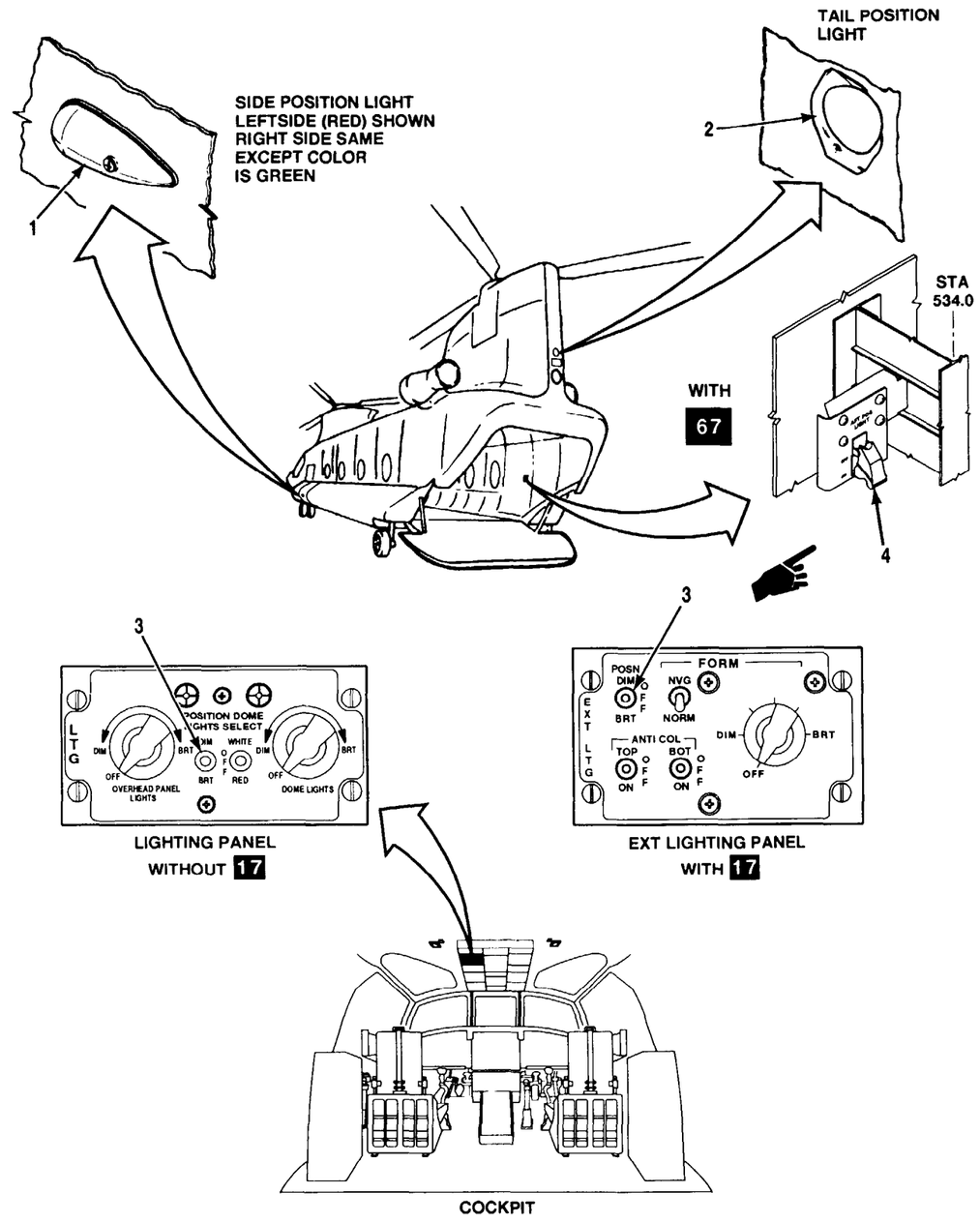
Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off

	TASK	RESULT
1.	Check left side position light (1).	If light (1) is loose or damaged, tighten or replace it as required.
2.	Repeat step 1 for right side position light.	
3.	Check tail position light (2).	If light (2) is loose or damaged, tighten or replace it as required.
4.	Check POSITION LIGHTS or POSN switch (3) on LTG panel.	If switch (3) is loose or damaged, tighten or replace it as required.
5.	On aircraft with 67 check AFT POS LIGHT switch (4) on bracket at STA 534.	If switch (4) or mounting bracket are loose or damaged, tighten or replace as required.

FOLLOW-ON MAINTENANCE:
None



END OF TASK

INITIAL SETUP

Applicable Configurations:
All

Tools:
None

Materials:
None

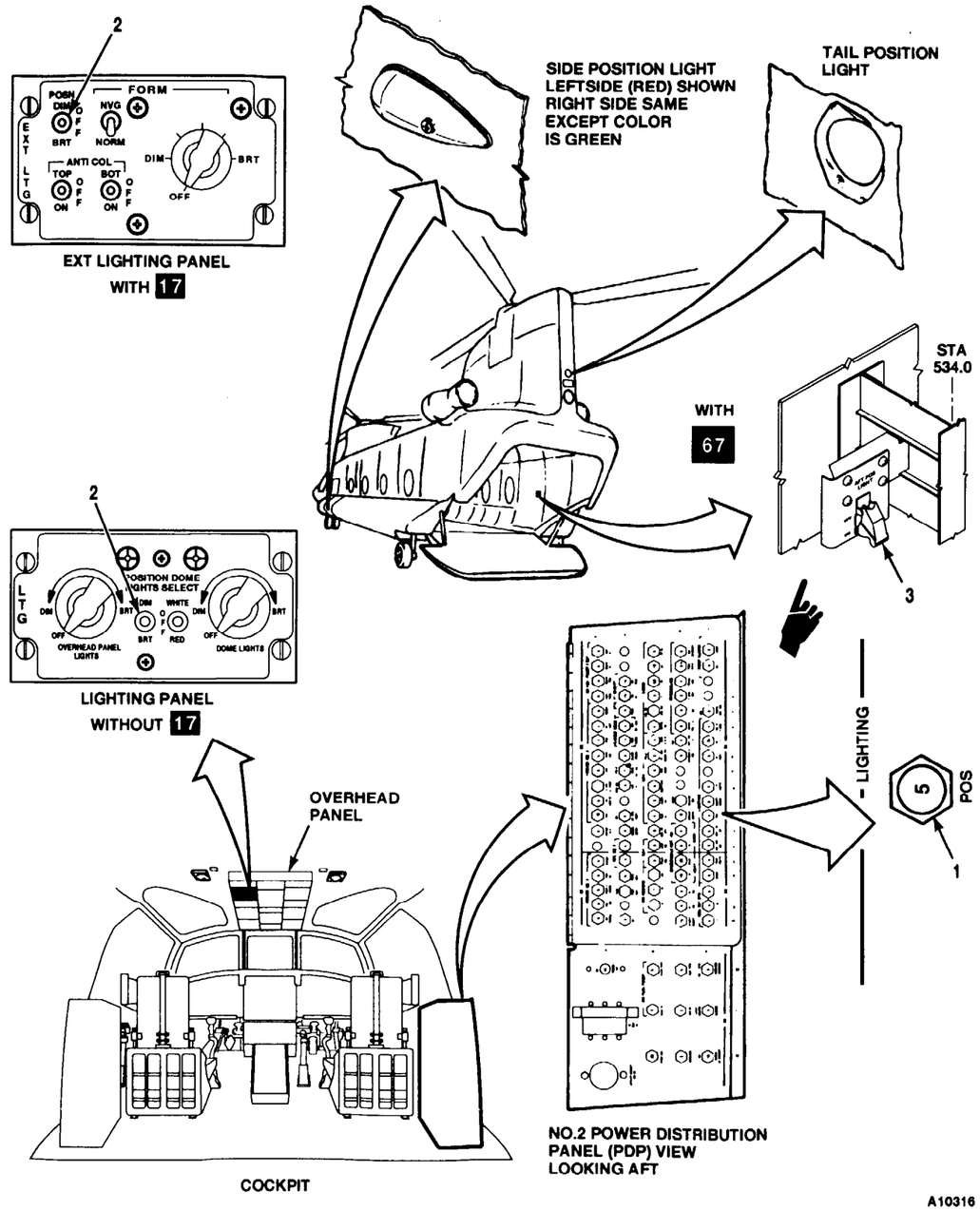
Personnel Required:
Aircraft Electrician (2)

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off
Visual Check of Position Lights Performed (Task 9-3.2)

	TASK	RESULT
1.	**Check** that **LIGHTING POS circuit breaker (1)** is closed.	If **POS** circuit breaker (1) is opened, close it. If it opens again, go to task 9-3.4 on aircraft without 67 or task 9-3.4.1 on aircraft with 67.
2.	**Set POSITIONS LIGHTS switch or POSN switch (2) to BRT.**	Left, right, and tail position lights come on at full intensity. If any light is not lit, go to task 9-3.5.
3.	**On aircraft with 67 , set AFT POS LIGHT switch (3) to OFF and back to ON.**	Tail postition light shall go out and come on. If tail position light fails to operate properly, go to task 9-3.5.
4.	**Set POSITION LIGHTS switch or POSN switch (2) to DIM.**	Left, right, and tail position lights shall be at low intensity. If any light is not lit, go to task 9-3.6.
5.	**Set POSITION LIGHTS switch or POSN switch (2) to OFF.**	All position lights shall go out.

FOLLOW-ON MAINTENANCE:
BH 55-1520-240-23:
Battery disconnected.
Electrical power off.



END OF TASK

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
Without 67

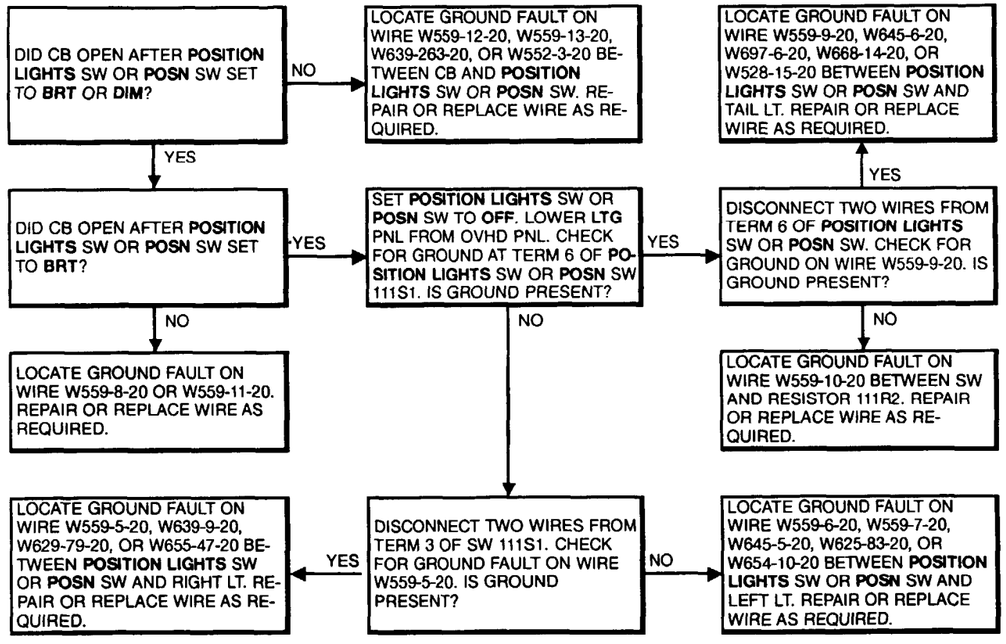
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

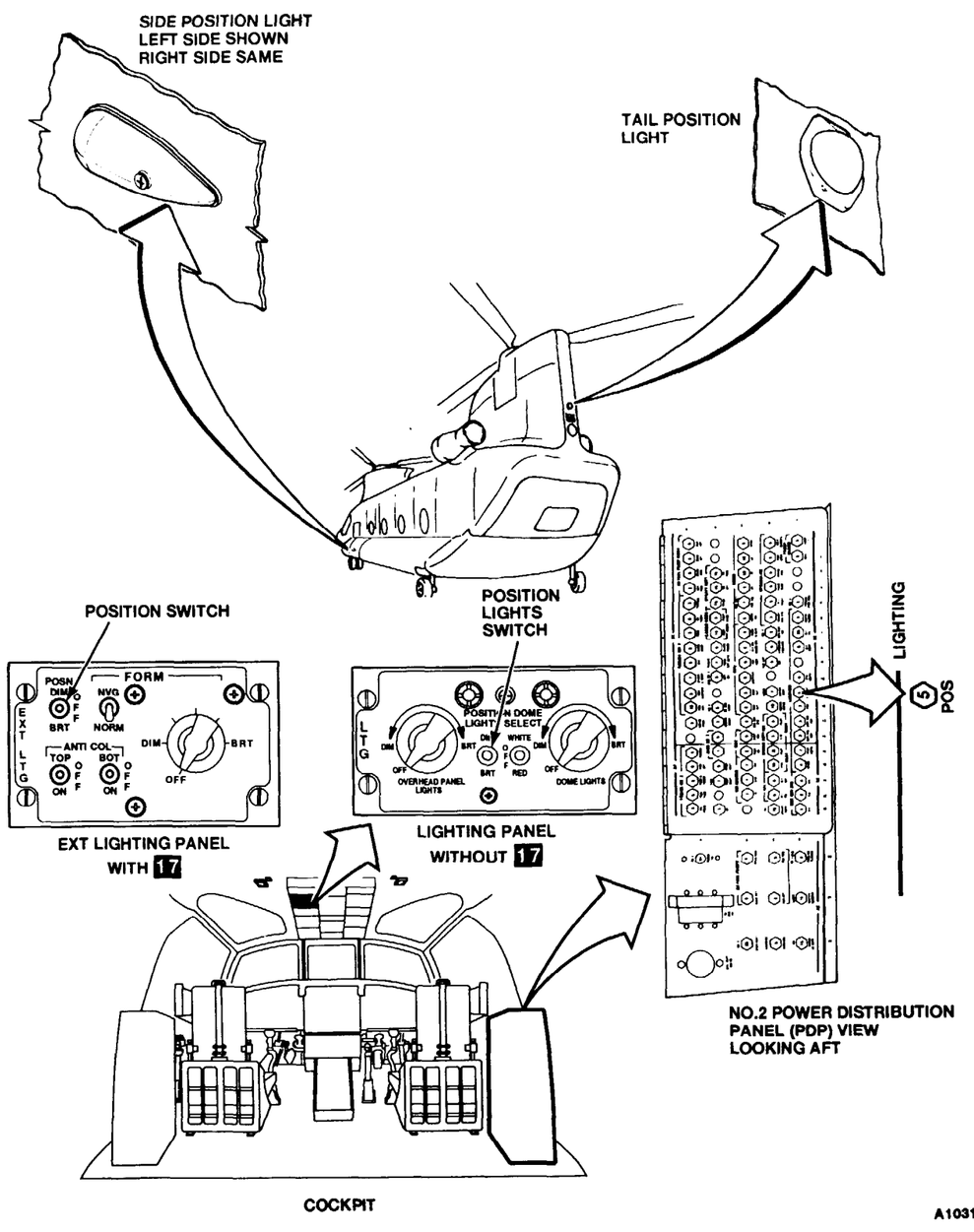
Materials:
None

Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off





END OF TASK

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
With 67

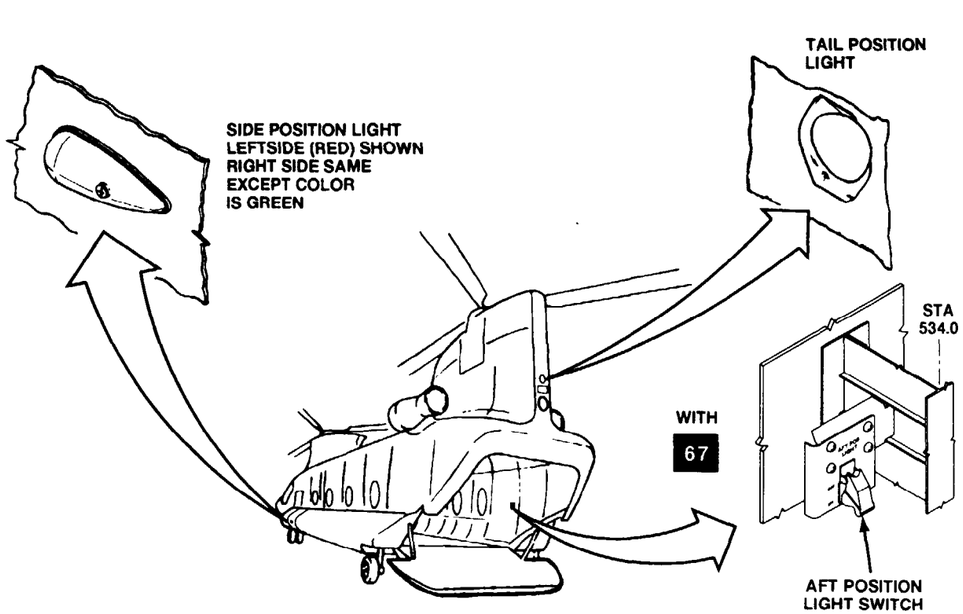
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

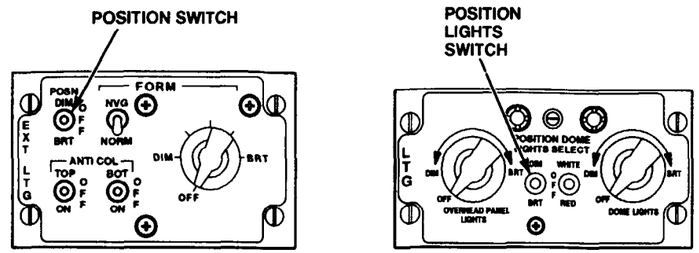
Materials:
None

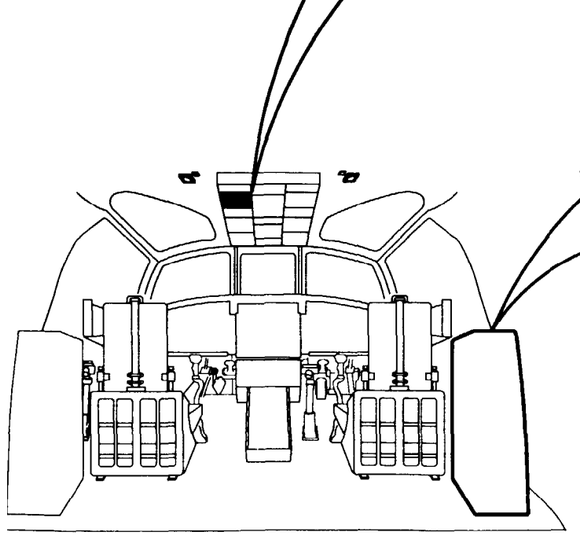
Personnel Required:
Aircraft Electrician

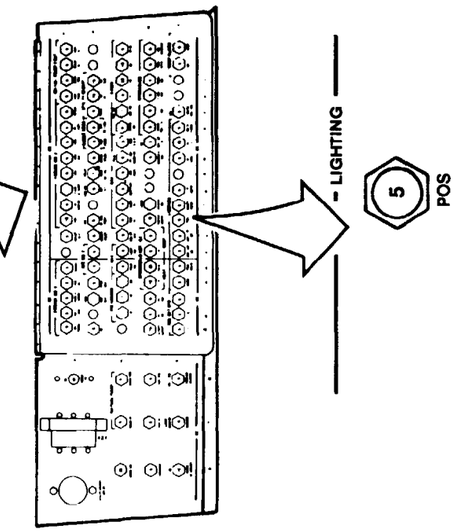
References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off



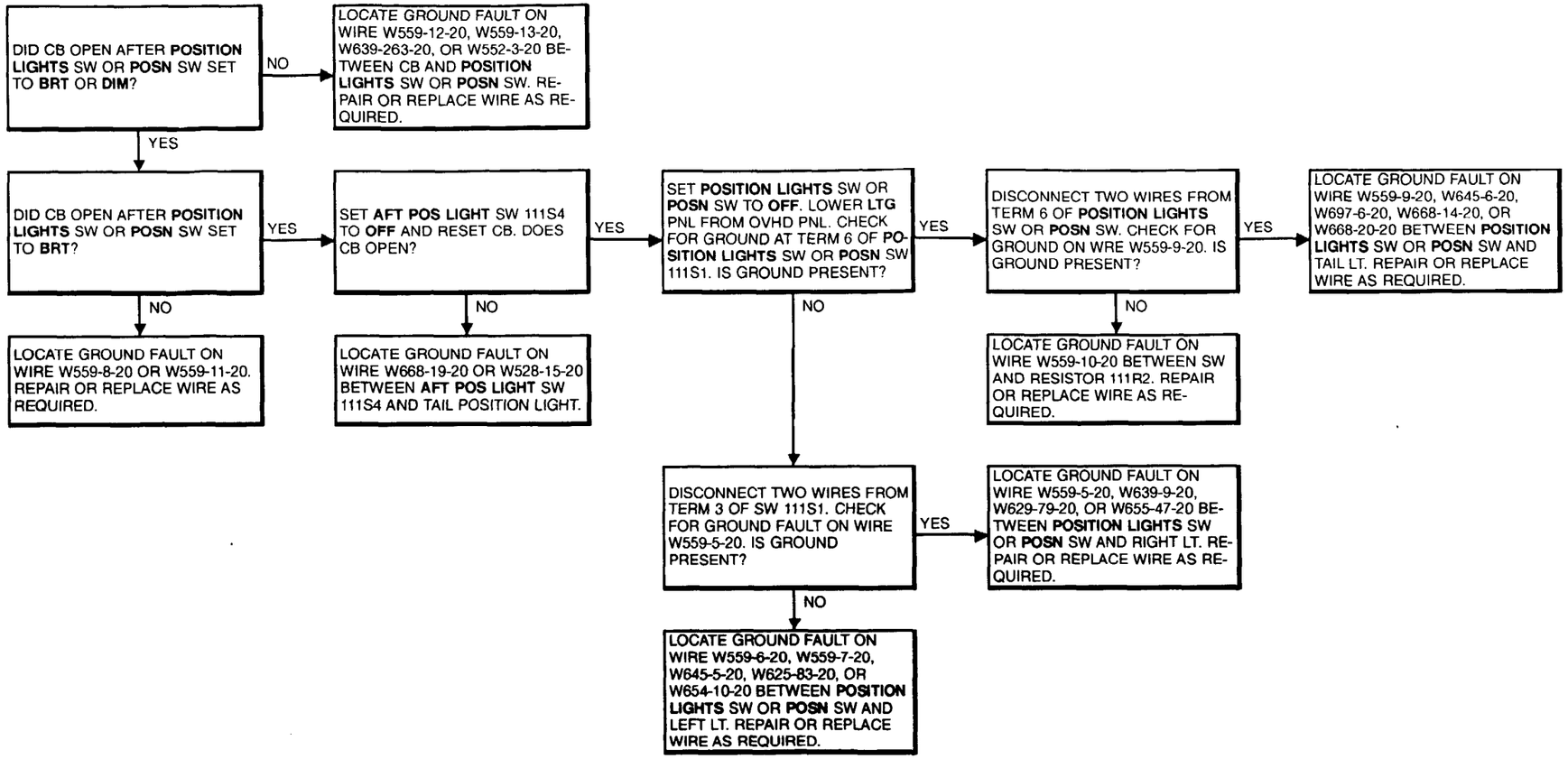






A51211

GO TO NEXT PAGE


DID CB OPEN AFTER POSITION LIGHTS SW OR POSN SW SET TO BRT OR DIM?
NO
LOCATE GROUND FAULT ON WIRE W559-12-20, W559-13-20, W639-263-20, OR W552-3-20 BETWEEN CB AND POSITION LIGHTS SW OR POSN SW. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
DID CB OPEN AFTER POSITION LIGHTS SW OR POSN SW SET TO BRT?
YES
SET AFT POS LIGHT SW 111S4 TO OFF AND RESET CB. DOES CB OPEN?
YES
SET POSITION LIGHTS SW OR POSN SW TO OFF. LOWER LTG PNL FROM OVHD PNL. CHECK FOR GROUND AT TERM 6 OF POSITION LIGHTS SW OR POSN SW 111S1. IS GROUND PRESENT?
YES
DISCONNECT TWO WIRES FROM TERM 6 OF POSITION LIGHTS SW OR POSN SW. CHECK FOR GROUND ON WRE W559-9-20. IS GROUND PRESENT?
YES
LOCATE GROUND FAULT ON WIRE W559-9-20, W645-6-20, W697-6-20, W668-14-20, OR W668-20-20 BETWEEN POSITION LIGHTS SW OR POSN SW AND TAIL LT. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
LOCATE GROUND FAULT ON WIRE W559-10-20 BETWEEN SW AND RESISTOR 111R2. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
LOCATE GROUND FAULT ON WIRE W668-19-20 OR W528-15-20 BETWEEN AFT POS LIGHT SW 111S4 AND TAIL POSITION LIGHT.
NO
LOCATE GROUND FAULT ON WIRE W559-8-20 OR W559-11-20. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
DISCONNECT TWO WIRES FROM TERM 3 OF SW 111S1. CHECK FOR GROUND FAULT ON WIRE W559-5-20. IS GROUND PRESENT?
YES
LOCATE GROUND FAULT ON WIRE W559-5-20, W639-9-20, W629-79-20, OR W655-47-20 BETWEEN POSITION LIGHTS SW OR POSN SW AND RIGHT LT. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
LOCATE GROUND FAULT ON WIRE W559-6-20, W559-7-20, W645-5-20, W625-83-20, OR W654-10-20 BETWEEN POSITION LIGHTS SW OR POSN SW AND LEFT LT. REPAIR OR REPLACE WIRE AS REQUIRED.

END OF TASK

9-3.5 POSITION LIGHT OR LIGHTS NOT LIT AT BRT

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

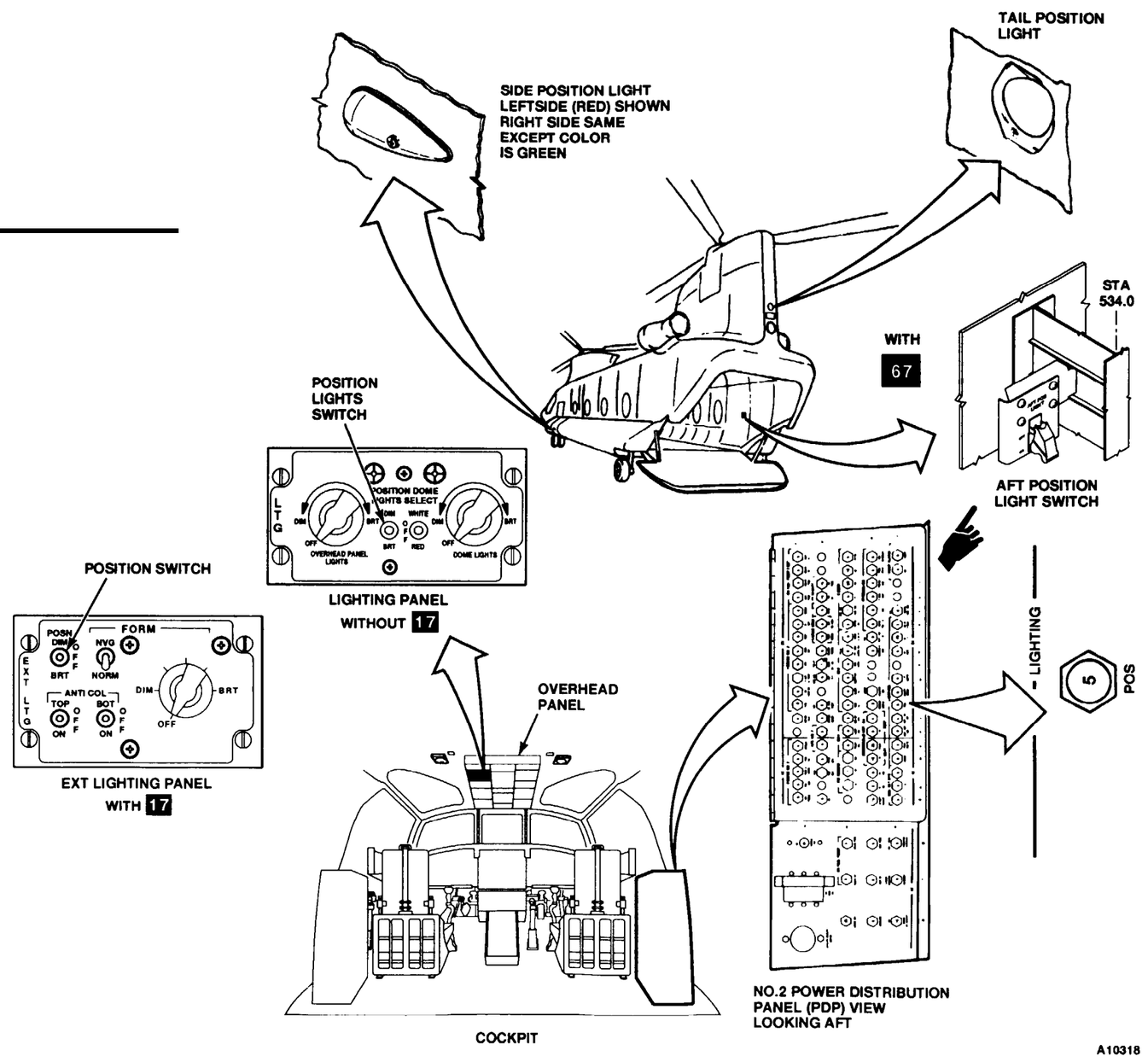
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:
None

Personnel Required:
Aircraft Electrician

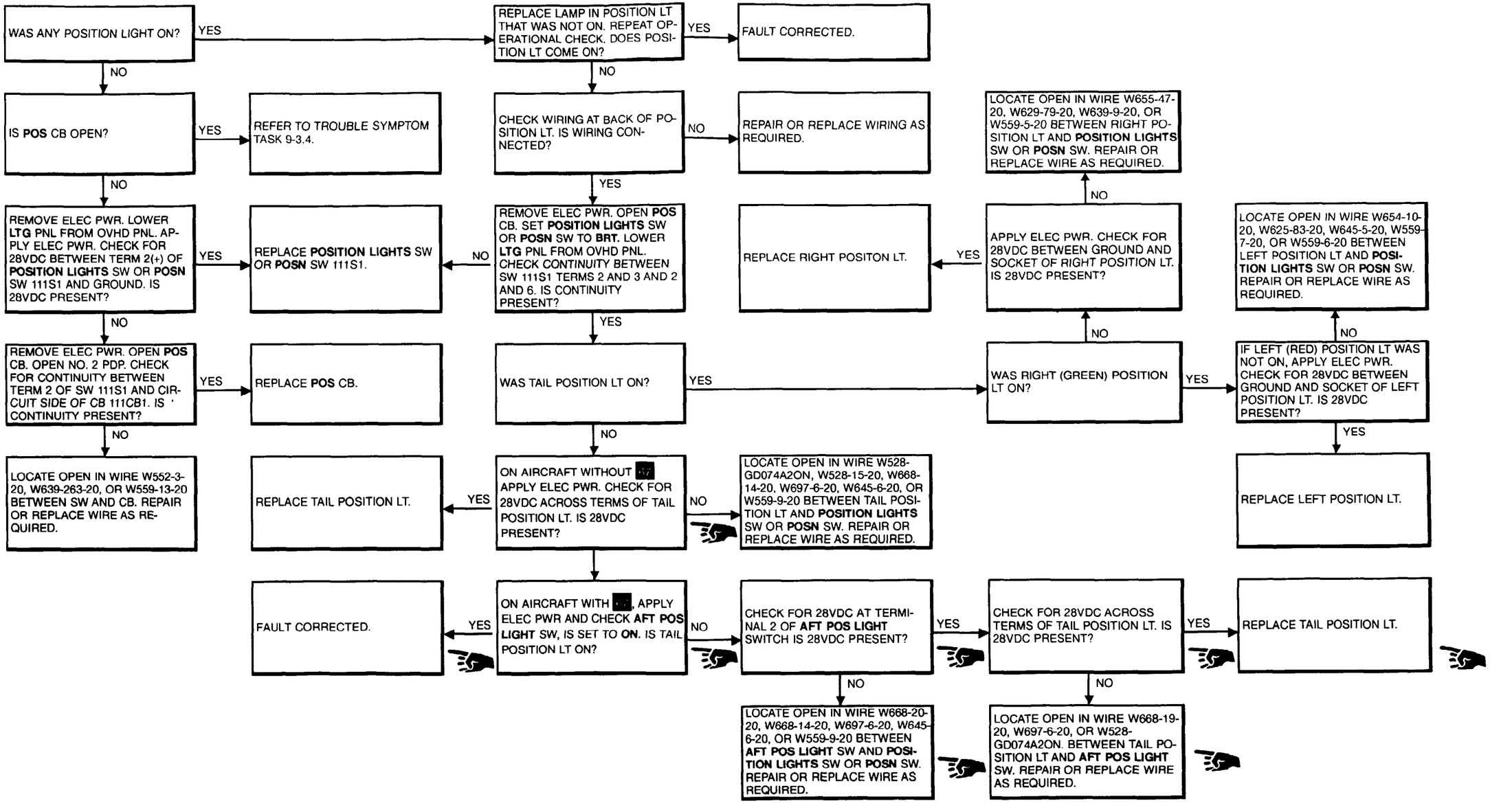
References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off



GO TO NEXT PAGE

9-3.5 POSITION LIGHT OR LIGHTS NOT LIT AT BRT (Continued)



END OF TASK

9-3.6 POSITION LIGHT OR LIGHTS NOT LIT AT DIM

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

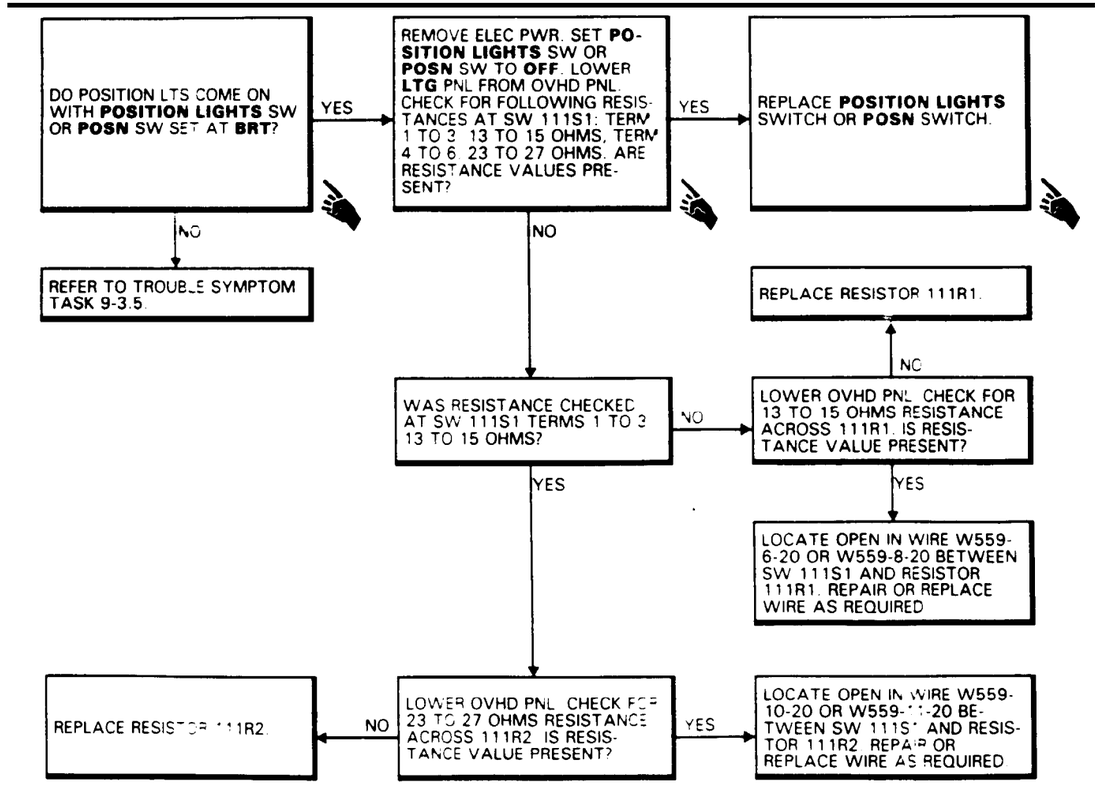
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

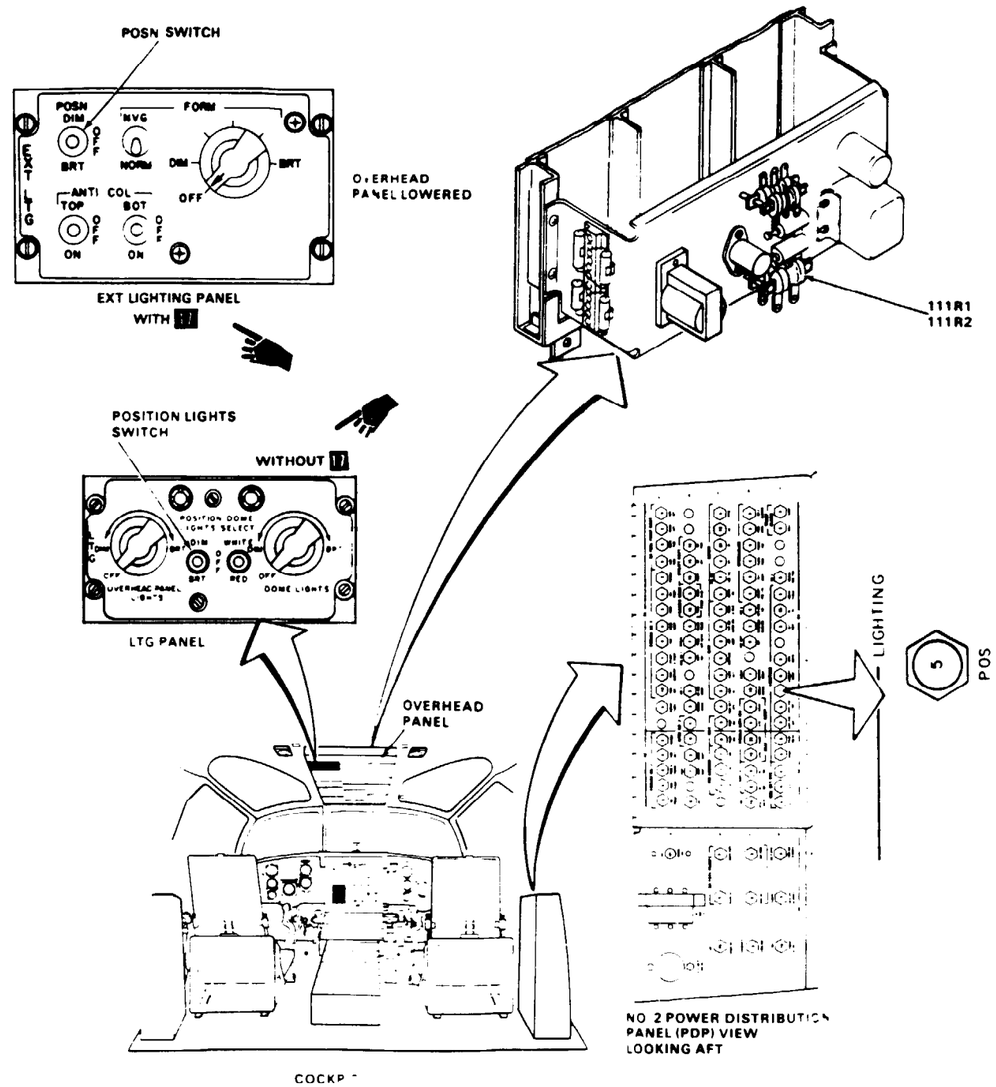
Materials:
None

Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off
Visual Check of Position Lights Pet-formed (Task 9-3.2)

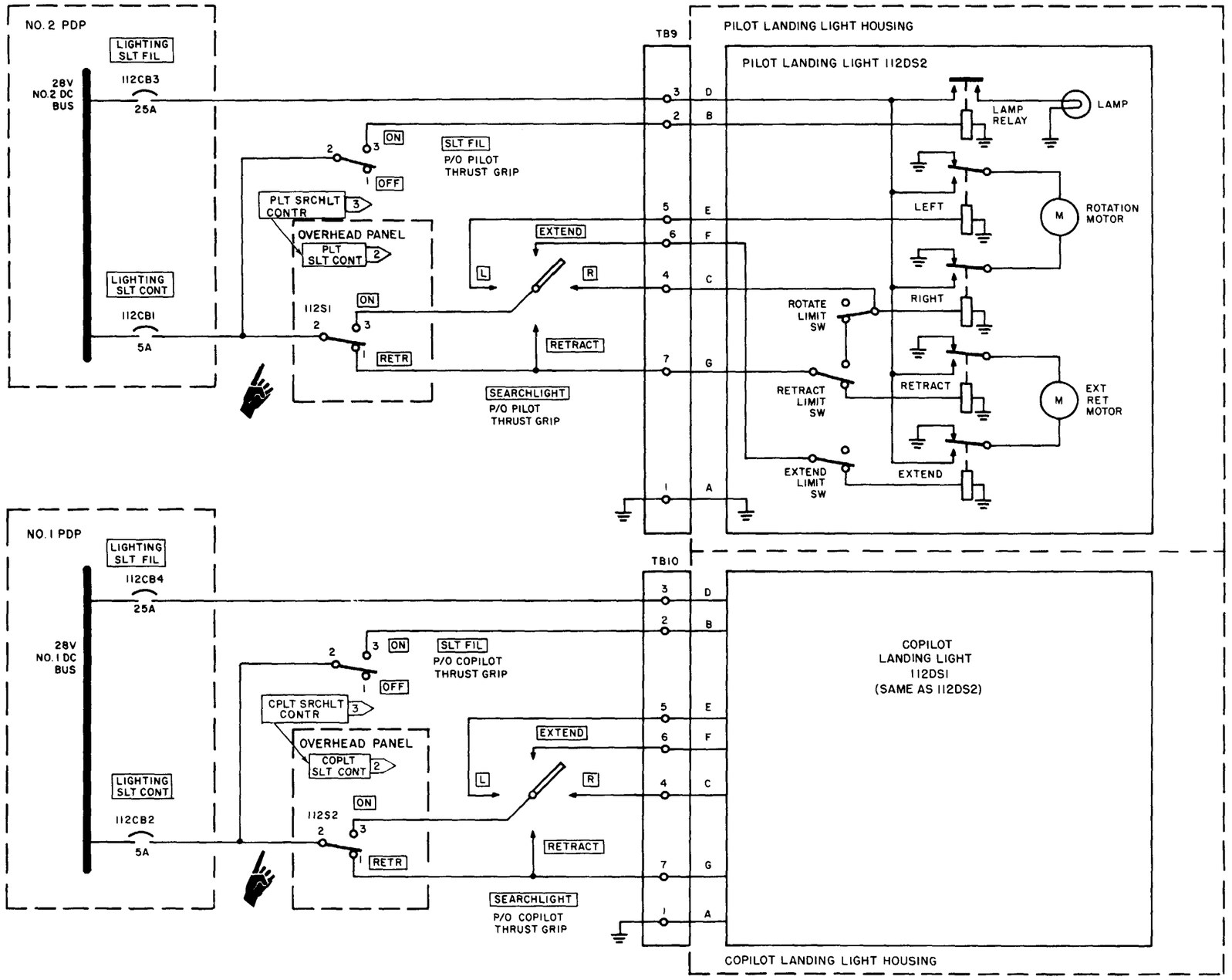


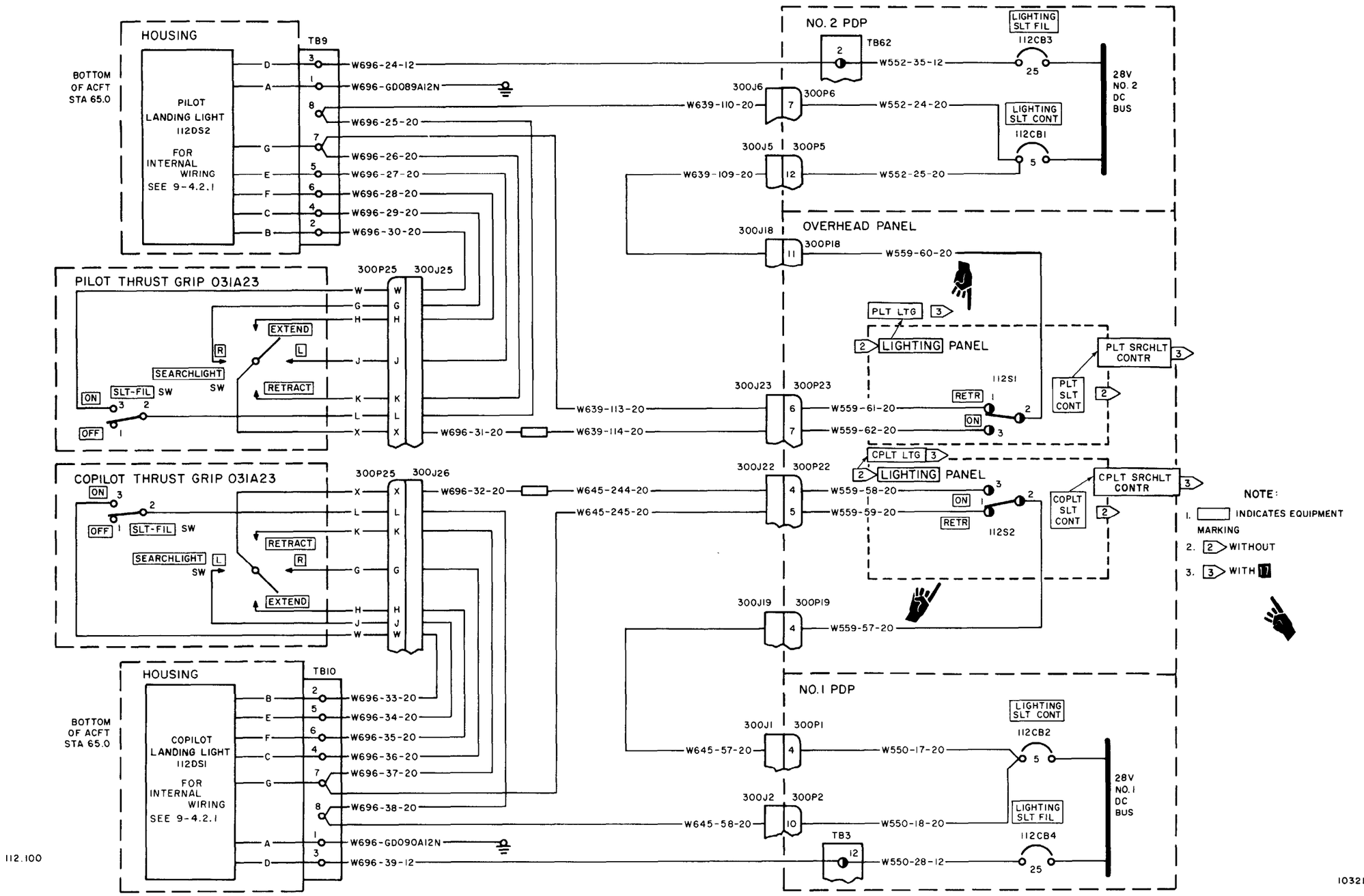


10319

END OF TASK

9-4 LANDING LIGHTS (SEARCHLIGHTS)

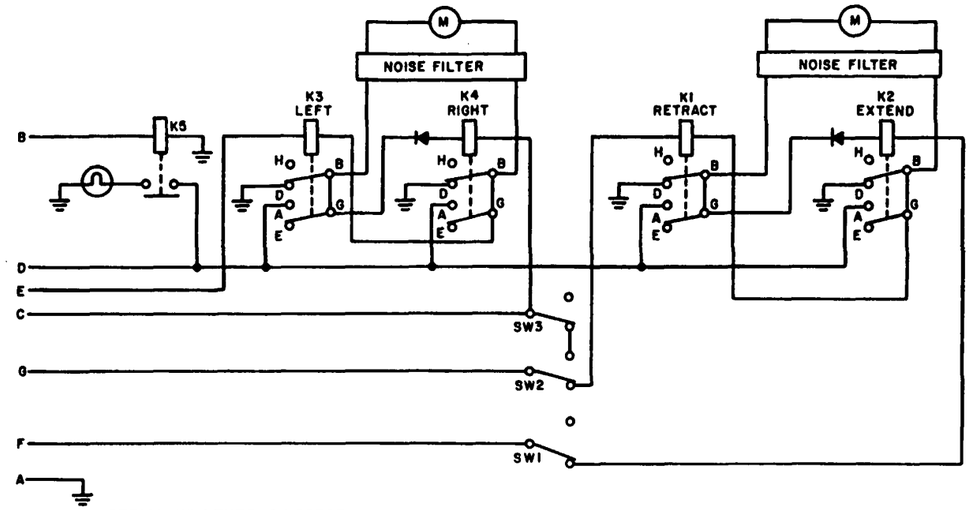

NO. 2 PDP
LIGHTING SLT FIL
28V NO.2 DC BUS
112CB3
25A
LIGHTING SLT CONT
112CB1
5A
ON
OFF
SLT FIL
P/O PILOT THRUST GRIP
PLT SRCHLT CONTR
OVERHEAD PANEL
PLT SLT CONT
112S1
RETR
EXTEND
RETRACT
L
R
SEARCHLIGHT
P/O PILOT THRUST GRIP
TB9
PILOT LANDING LIGHT HOUSING
PILOT LANDING LIGHT 112DS2
LAMP RELAY
LAMP
LEFT
ROTATION MOTOR
RIGHT
ROTATE LIMIT SW
RETRACT
RETRACT LIMIT SW
EXT RET MOTOR
EXTEND
EXTEND LIMIT SW
NO. 1 PDP
LIGHTING SLT FIL
28V NO.1 DC BUS
112CB4
25A
LIGHTING SLT CONT
112CB2
5A
CPLT SRCHLT CONTR
OVERHEAD PANEL
COPLT SLT CONT
112S2
SEARCHLIGHT
P/O COPILOT THRUST GRIP
TB10
COPILOT LANDING LIGHT 112DS1 (SAME AS 112DS2)
COPILOT LANDING LIGHT HOUSING
NOTE:
1. INDICATES EQUIPMENT MARKING.
2. 2 WITHOUT 17
3. 3 WITH 17
10320



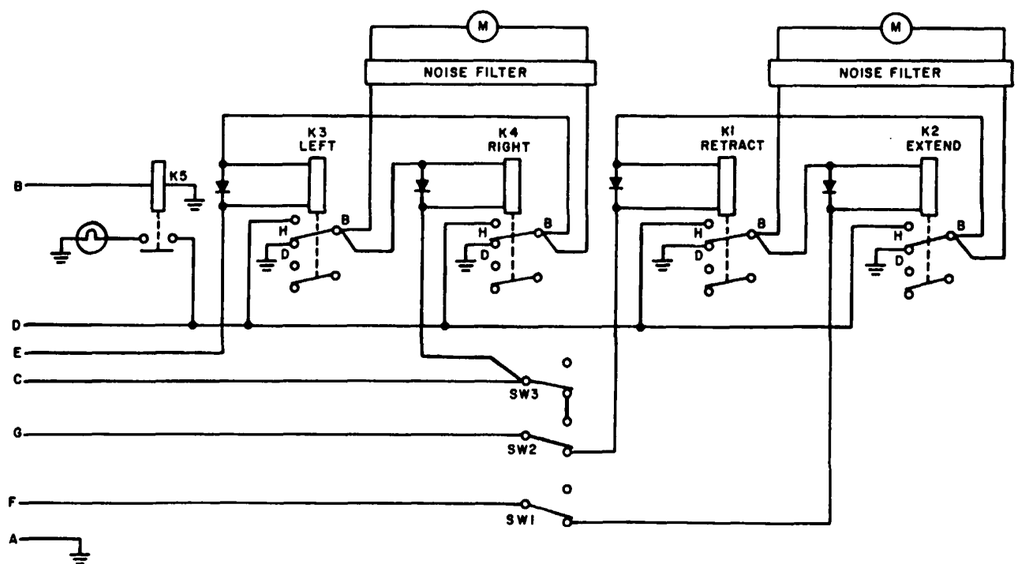
112.100

10321

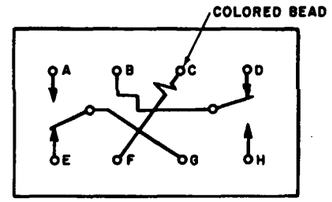
END OF TASK



SERIAL NO.1 THROUGH 68595



SERIAL NO.68596 AND SUBEQUENT



PIN VIEW OF RELAYS K1 THROUGH K4

END OF TASK

9-4.3 LANDING LIGHTS (SEARCHLIGHTS) VISUAL CHECK

INITIAL SETUP

Applicable Configurations:
All

Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915

Materials:
None

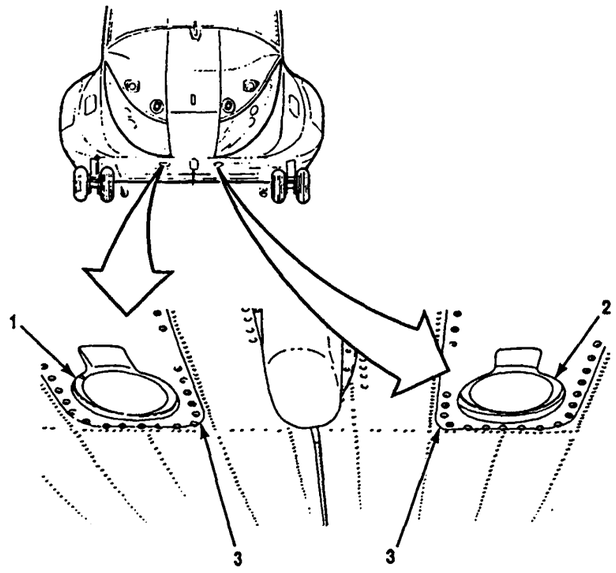
Personnel Required:
Aircraft Electrician

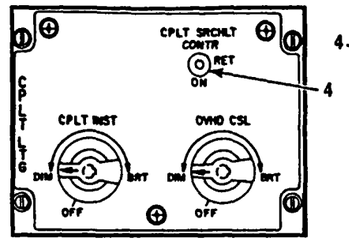
References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off

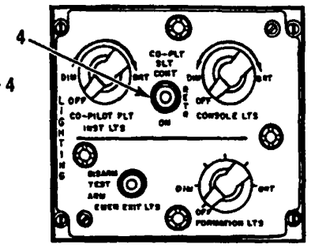
TASK	RESULT
1. **Check pilot's and copilot's landing lights (searchlights) (1 and 2).**	If landing light (1 or 2) is bent, broken or has damaged parts, replace landing light. If landing light housing screws (3) are loose, tighten them.
2. **Check CO-PLT SLT CONT switch (4)** on left LIGHTING panel or **CPLT SRCHLT CONTR switch**.	If switch (4) is loose or damaged, tighten or replace it as required.
3. **Check PLT SLT CONT switch (5)** on right lighting panel or **PLT SRCHLT CONTR switch**.	If switch (5) is loose or damaged, tighten or replace it as required.
4. **Check SEARCH LIGHT switch (6) and SLT-FIL switch (7)** on pilot's and copilot's thrust grips (8 and 9).	If either switch (6 or 7) is loose or damaged, tighten or replace it as required.

FOLLOW-ON MAINTENANCE:
None

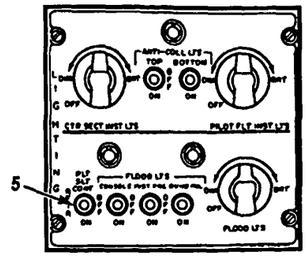




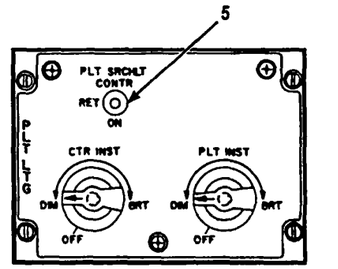
CPLT LTG PANEL WITH 17



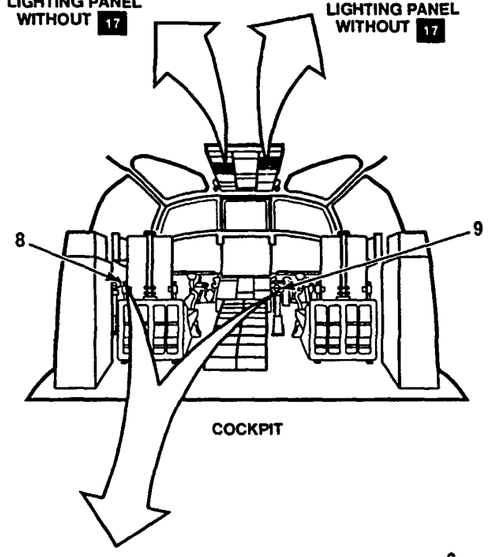
LIGHTING PANEL WITHOUT 17

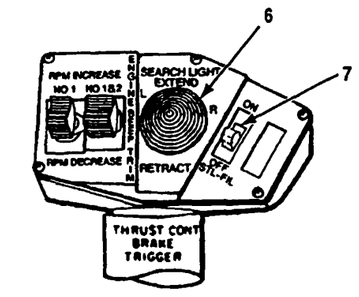


LIGHTING PANEL WITHOUT 17

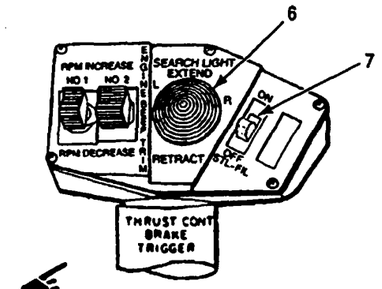


PLT LTG PANEL WITH 17





THRUST GRIP WITHOUT 74



THRUST GRIP WITH 74

A65559

END OF TASK

9-4.4 LANDING LIGHTS (SEARCHLIGHTS) OPERATIONAL CHECK

INITIAL SETUP

Applicable Configurations:
All

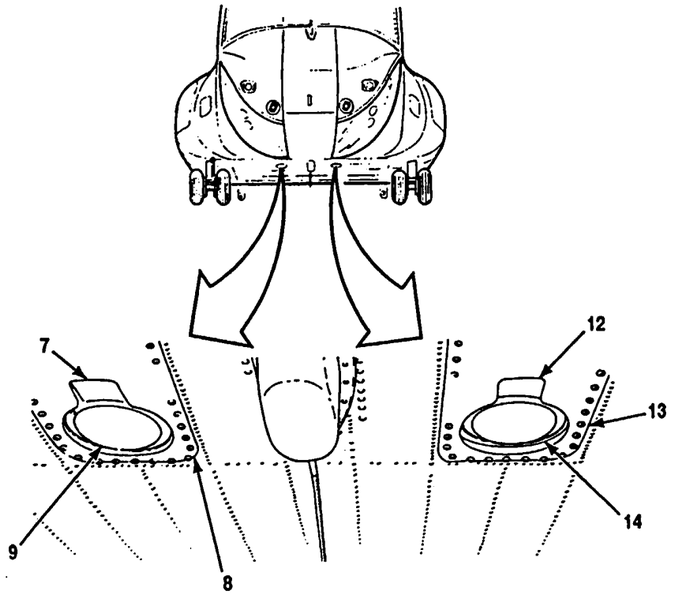
Tools:
None

Materials:
None

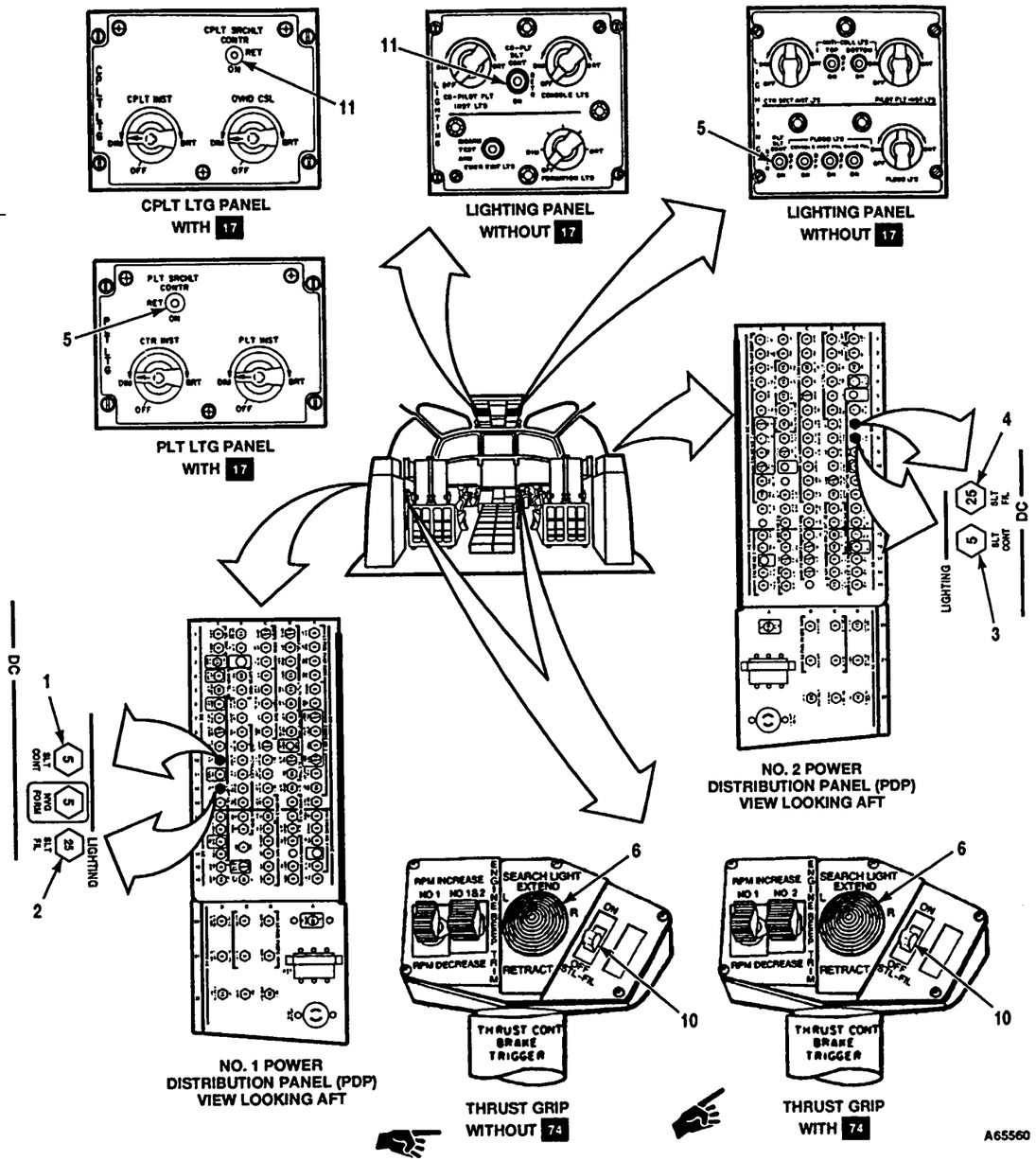
Personnel Required:
Aircraft Electrician (2)

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off
Visual Check Performed (Task 9-4.3)



PILOT'S LANDING LIGHT COPILOT'S LANDING LIGHT



GO TO NEXT PAGE

TASK	RESULT
CAUTION **Do not move SEARCHLIGHT switch directly from one direction to opposite direction. Release switch to center position before moving it to a new direction. Abnormally rapid switching can damage relay contacts.**	
CHECK CIRCUIT BREAKER	
1. **Check that LIGHTING SLT CONT circuit breaker (1) and SLT FIL circuit breaker (2) are closed.**	If SLT CONT circuit breaker (1) is open, close it. If it opens again, go to task 9-4.5. If SLT FIL circuit breaker (2) is open, close it. If it opens again, go to task 9-4.6.
2. **Check that LIGHTING SLT CONT circuit breaker (3) and SLT FIL circuit breaker (4) are closed.** **opens again, go to task 9-4.6.**	If SLT CONT circuit breaker (3) is open, close it. If it opens again, go to task 9-4.7. If SLT FIL circuit breaker (4) is open, close it. If it
CHECK PILOT'S LANDING LIGHT	
3. **Set PLT SLT CONT switch** or **PLT SRCHLT CONTR switch (5) to ON.**	
4. **Set and hold pilot's SEARCH LIGHT switch (6) to EXTEND.**	Pilot's landing light (7) shall fully extend from housing (8). If landing light (7) does not fully extend, go to task 9-4.8.
5. **Set and hold pilot's SEARCH LIGHT switch (6) to L and then to R.**	Pilot's landing light (7) shall rotate counterclockwise and then clockwise. If light does not rotate in both directions, go to task 9-4.9.
6. **Set and hold pilot's SEARCH LIGHT switch (6) to RETRACT.**	Pilot's landing light (7) shall fully retract into housing (8) with lamp (9) facing down. If light does not fully retract, or lamp is not facing down, go to task 9-4.10.
7. **Set and hold pilot's SEARCH LIGHT switch (6) to EXTEND.**	Pilot's landing light (7) shall fully extend from housing (8).
CAUTION **Prolonged lighting of landing light on ground will reduce its useful life.**	
8. **Set pilot's SLT-FIL switch (10) to ON.**	Pilot's landing light (7) shall come on. If it does not, go to task 9-4.11.
9. **Set pilot's SLT-FIL switch (10) to OFF.**	Pilot's landing light (7) shall go out. If not, replace landing light.
10. **Set PLT SLT CONT switch** or **PLT SRCHLT CONTR switch (5) to RETR.**	Pilot's landing light (7) shall fully retract into housing (8). If light does not fully retract, go to task 9-4.12.
CHECK COPILOT'S LANDING LIGHT	
11. **Set CO-PLT SLT CONT switch** or **CPLT SRCHLT CONTR switch (11) to ON.**	
12. **Set and hold copilot's SEARCH LIGHT switch (6) to EXTEND.**	Copilot's landing light (12) shall fully extend from housing (13). If light does not fully extend, go to task 9-4.13.
13. **Set and hold copilot's SEARCH LIGHT switch (6) to L and then to R.**	Copilot's landing light (12) shall rotate counterclockwise and then clockwise. If light does not rotate in both directions, go to task 9-4.9.
14. **Set and hold copilot's SEARCH LIGHT switch (6) to RETRACT.**	Copilot's landing light (12) shall fully retract in housing (13) with lamp (14) facing down. If light does not fully retract, or lamp is not facing down, go to task 9-4.10.
15. **Set and hold copilot's SEARCH LIGHT switch (6) to EXTEND.**	Copilot's landing light (12) shall fully extend from housing (13).
CAUTION **Prolonged lighting of landing light on ground will reduce its useful life.**	
WARNING **With 17, do not look into lighted NVG landing light. Infra-red light output can seriously injure eyes. Use night vision goggles or feel for heat from copilot's landing light to check its operation.**	
16. **Set copilot's SLT-FIL switch (10) to ON.**	Copilot's landing light (12) shall come on. If it does not, go to task 9-4.14.
17. **Set copilot's SLT-FIL switch (10) to OFF.**	Copilot's landing light (12) shall go out. If not, replace landing light.
18. **Set CO-PLT SLT CONT switch or CPLT SRCHLT CONTR switch (11) to RETR.**	Copilot's landing light (12) shall fully retract into housing (13). If light does not fully retract, go to task 9-4.15.

FOLLOW-ON MAINTENANCE:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off

END OF TASK

9-4.5 SLT CONT CIRCUIT BREAKER (COPILOT'S) DOES NOT STAY CLOSED

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

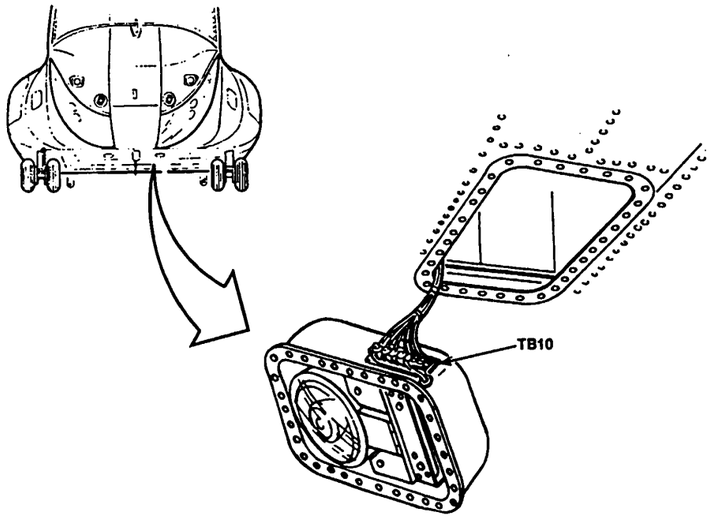
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:
None

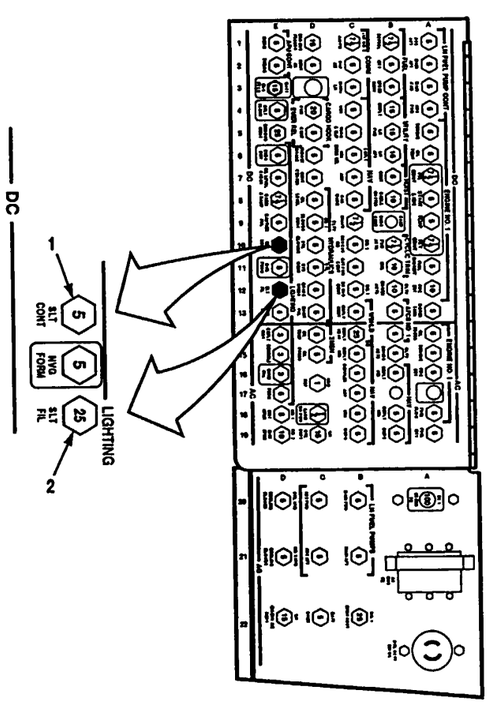
Personnel Required:
Aircraft Electrician (2)

References:
TM 55-1520-240-23

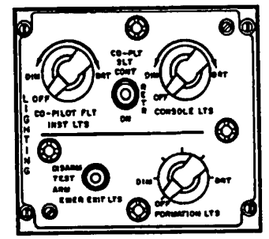
Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off



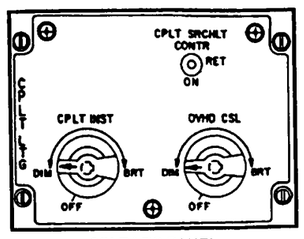
COPILOT'S LANDING LIGHT



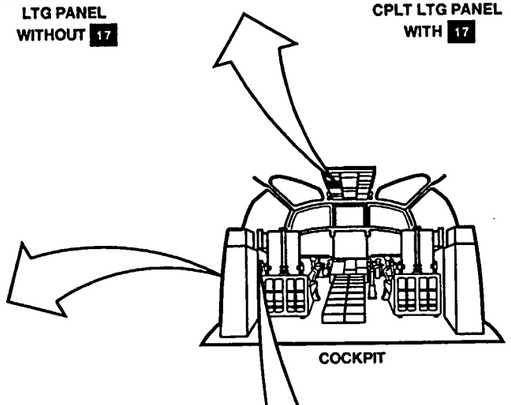
NO. 1 POWER DISTRIBUTION PANEL (PDP) VIEW LOOKING AFT

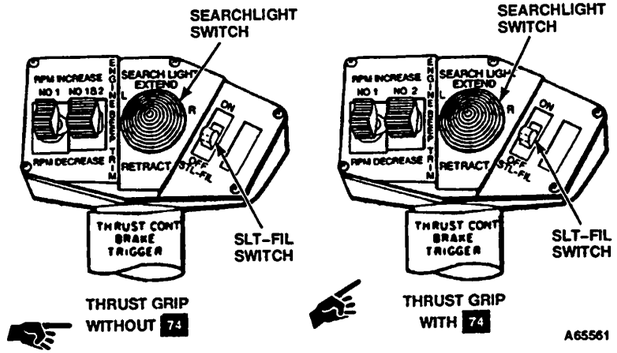


LTG PANEL WITHOUT 17



CPLT LTG PANEL WITH 17



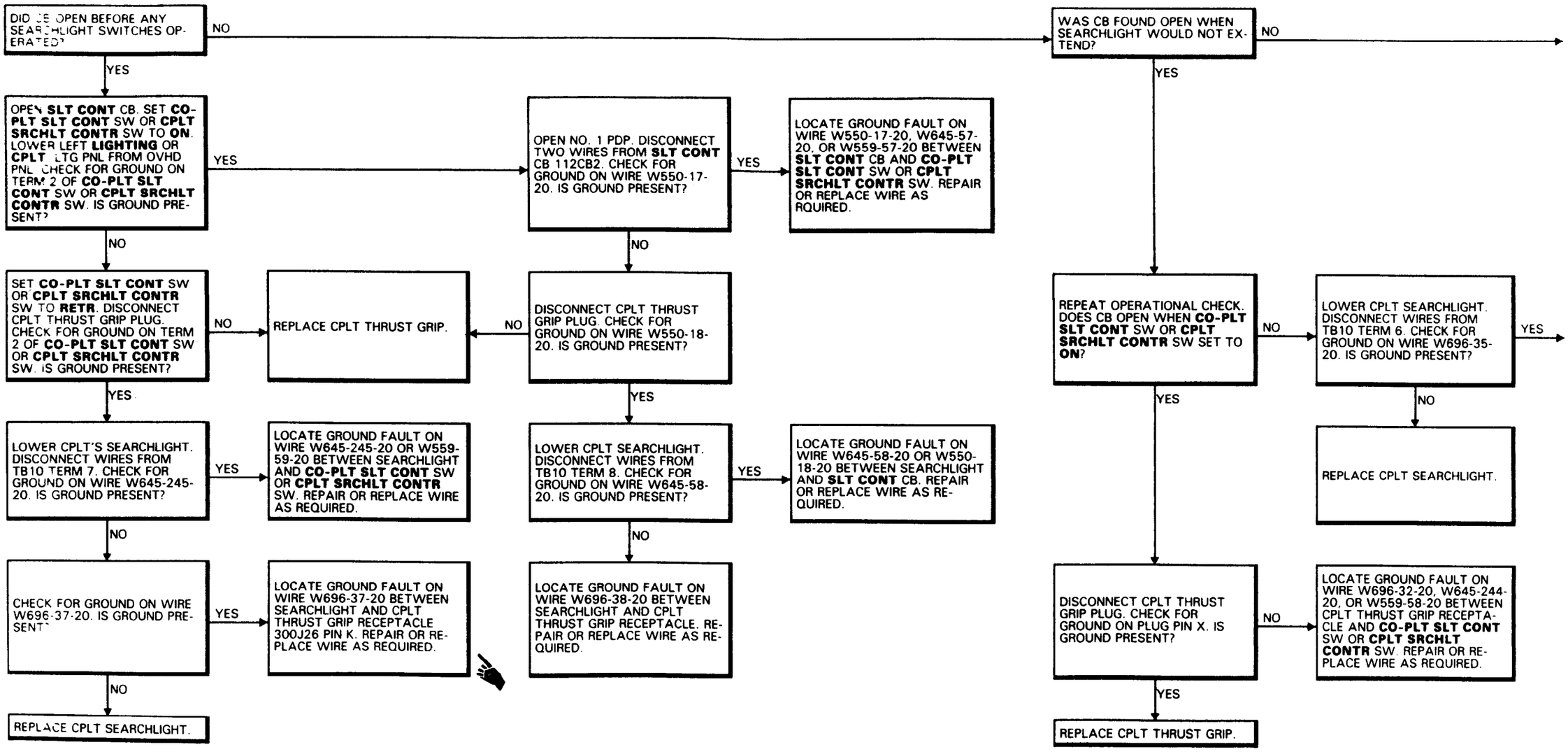


THRUST GRIP WITHOUT 74

THRUST GRIP WITH 74

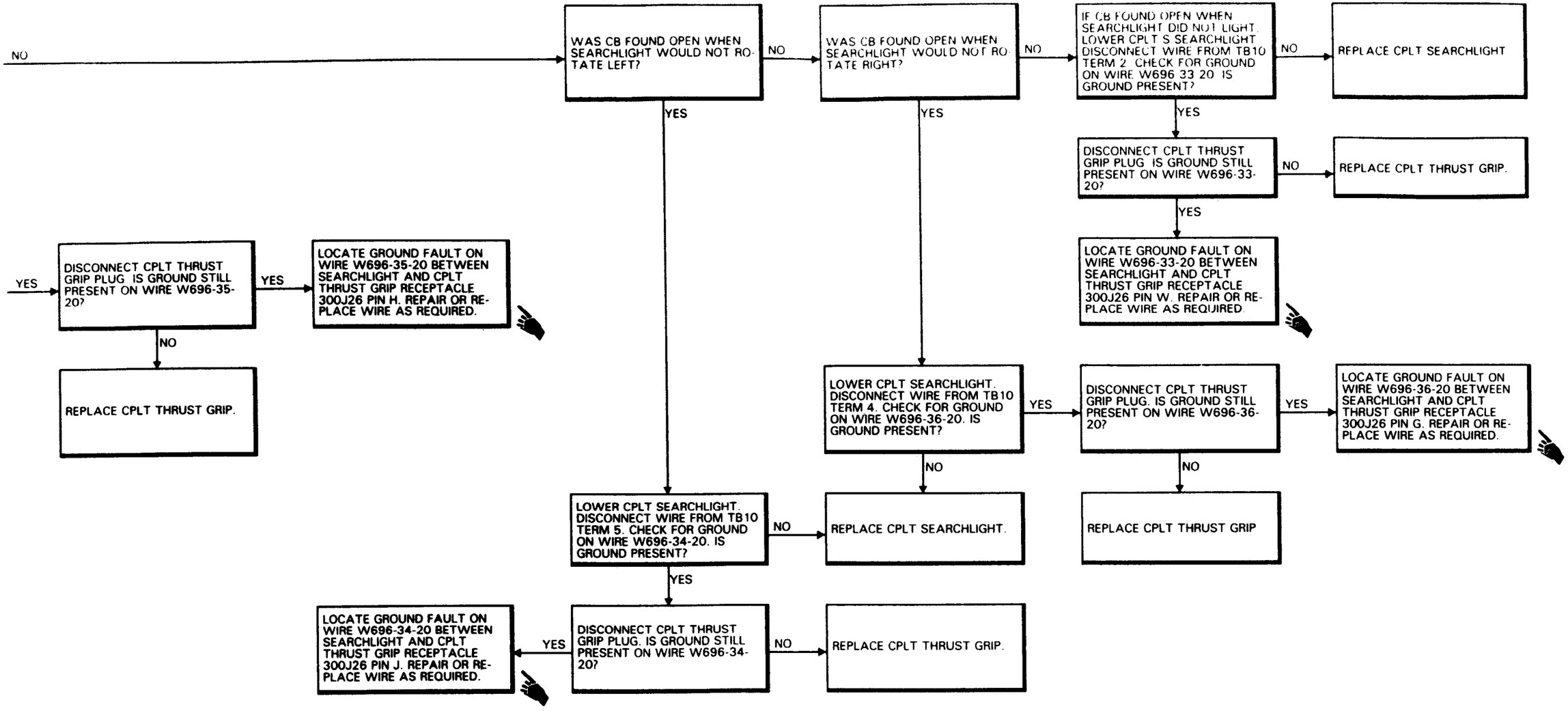
A65561

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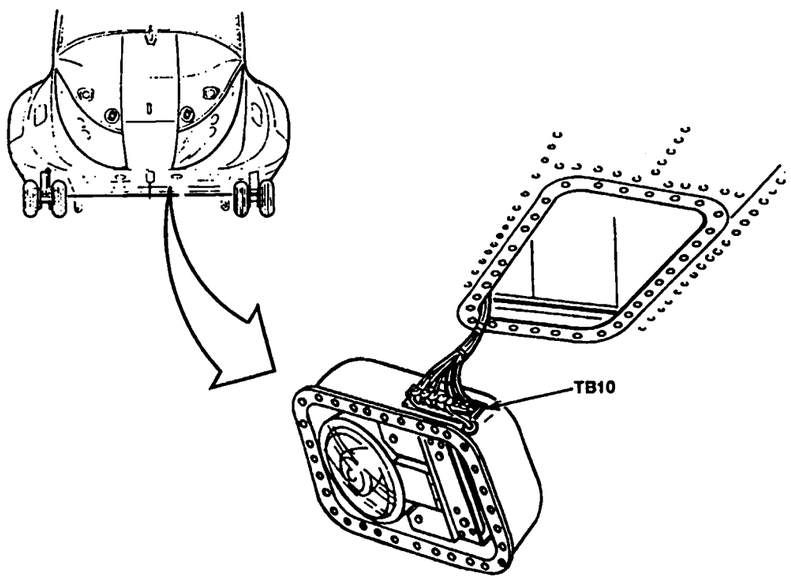


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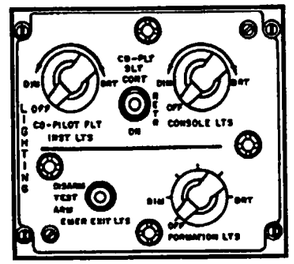
9-4.5 SLT CONT CIRCUIT BREAKER (COPILOT'S) DOES NOT STAY CLOSED (Continued) 9-4.5



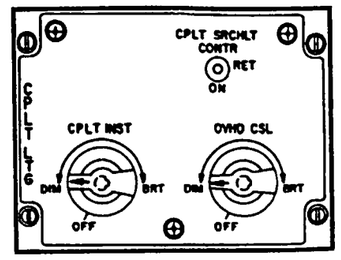
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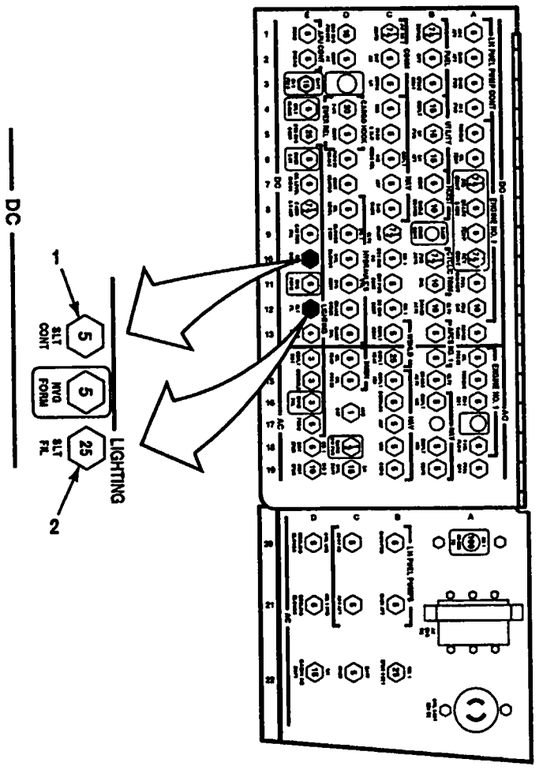
COPILOT'S LANDING LIGHT



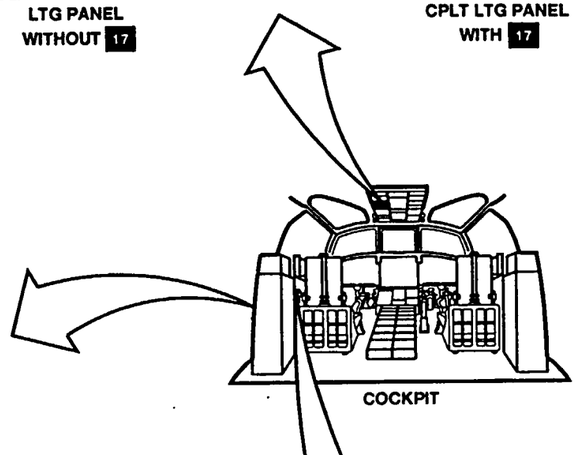
LTG PANEL WITHOUT 17



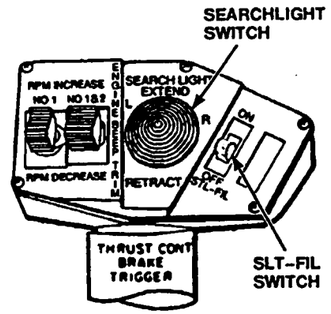
CPLT LTG PANEL WITH 17



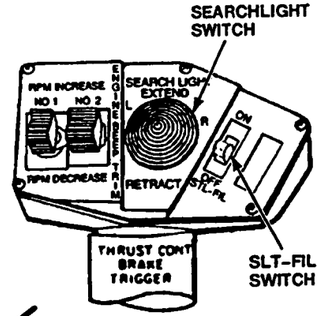
NO. 1 POWER DISTRIBUTION PANEL (PDP) VIEW LOOKING AFT



COCKPIT



THRUST GRIP WITHOUT 74



THRUST GRIP WITH 74

A65561

END OF TASK

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

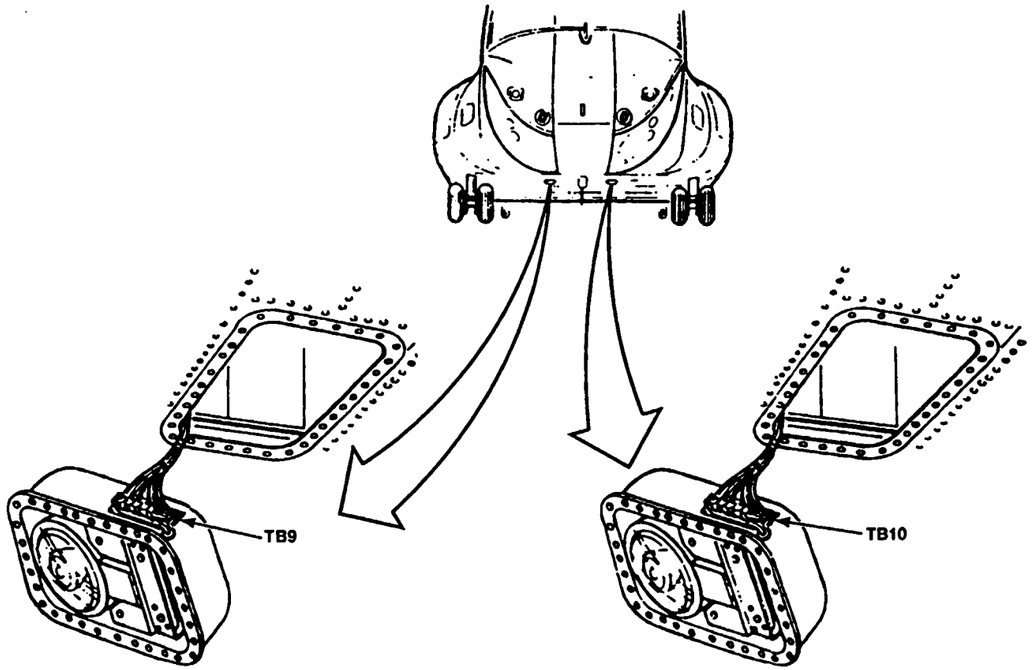
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

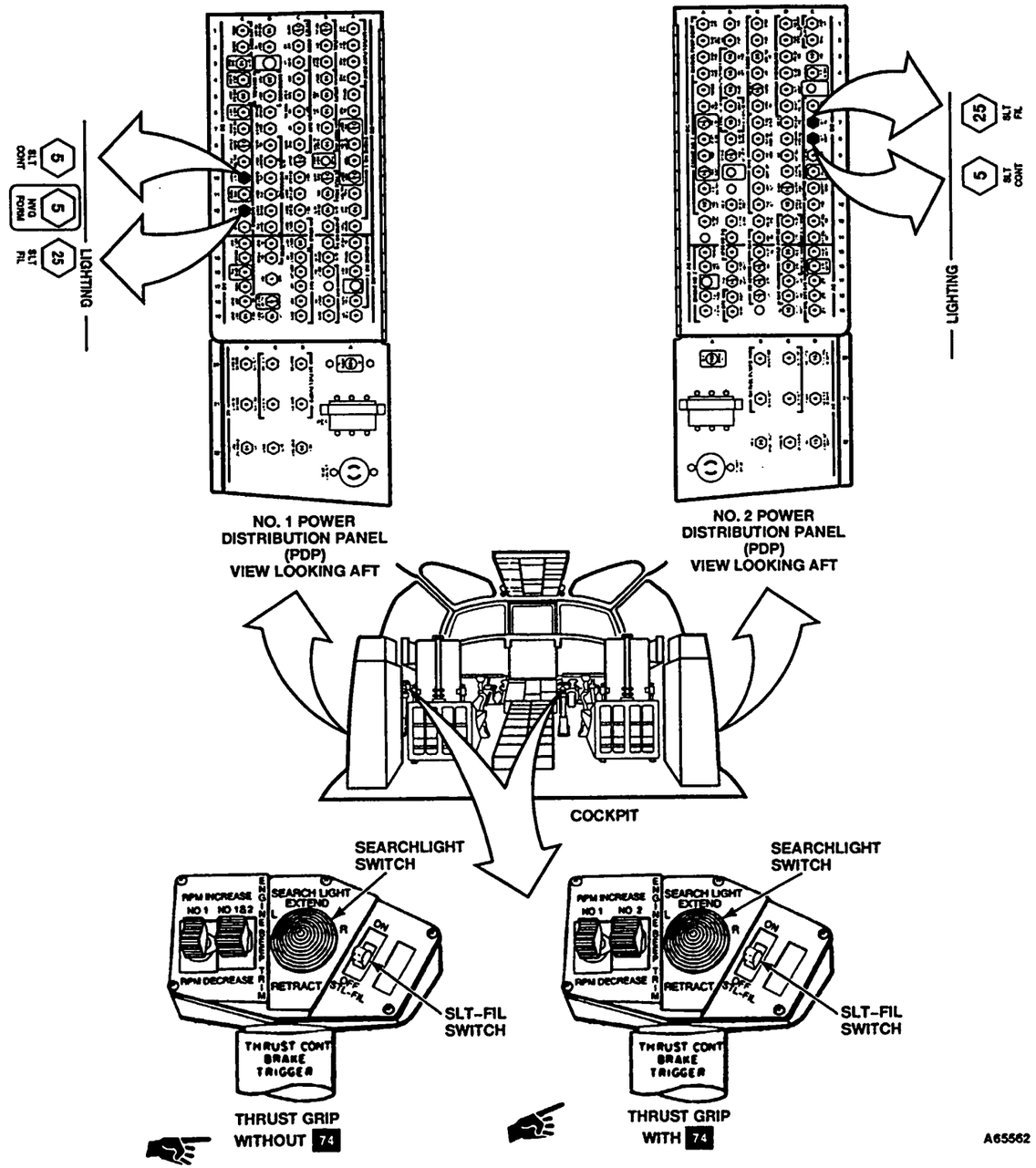
Materials:
None

Personnel Required:
Aircraft Electrician (2)

References:
TM 55-1520-240-23

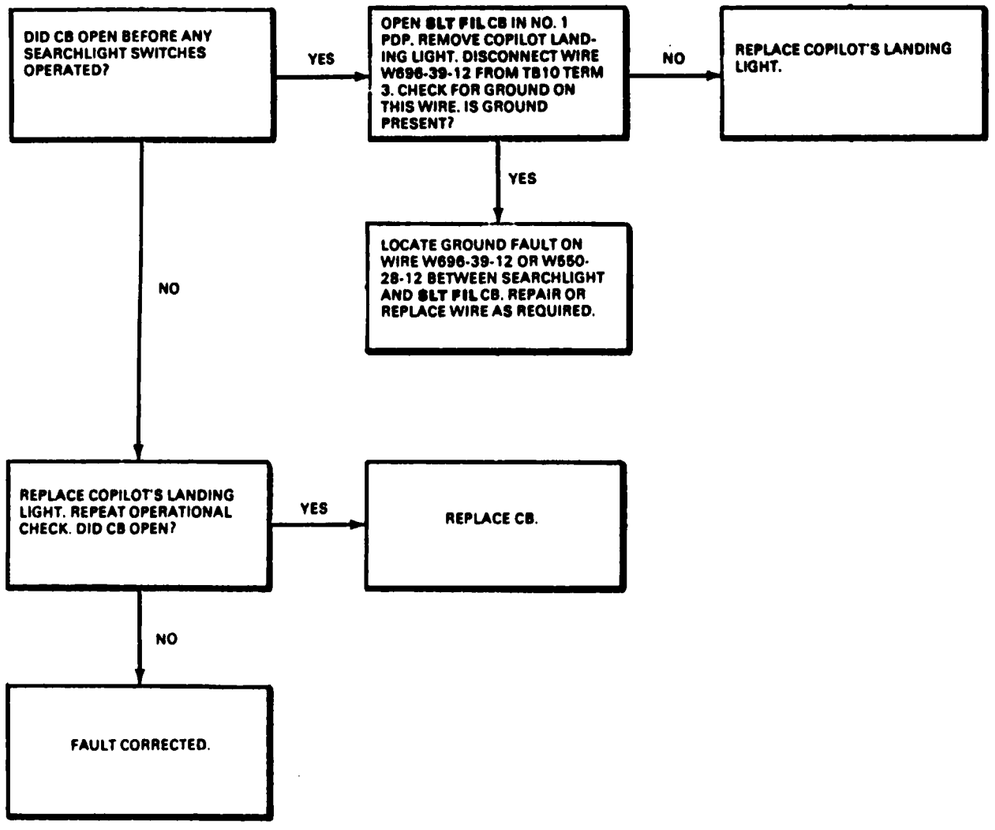
Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off



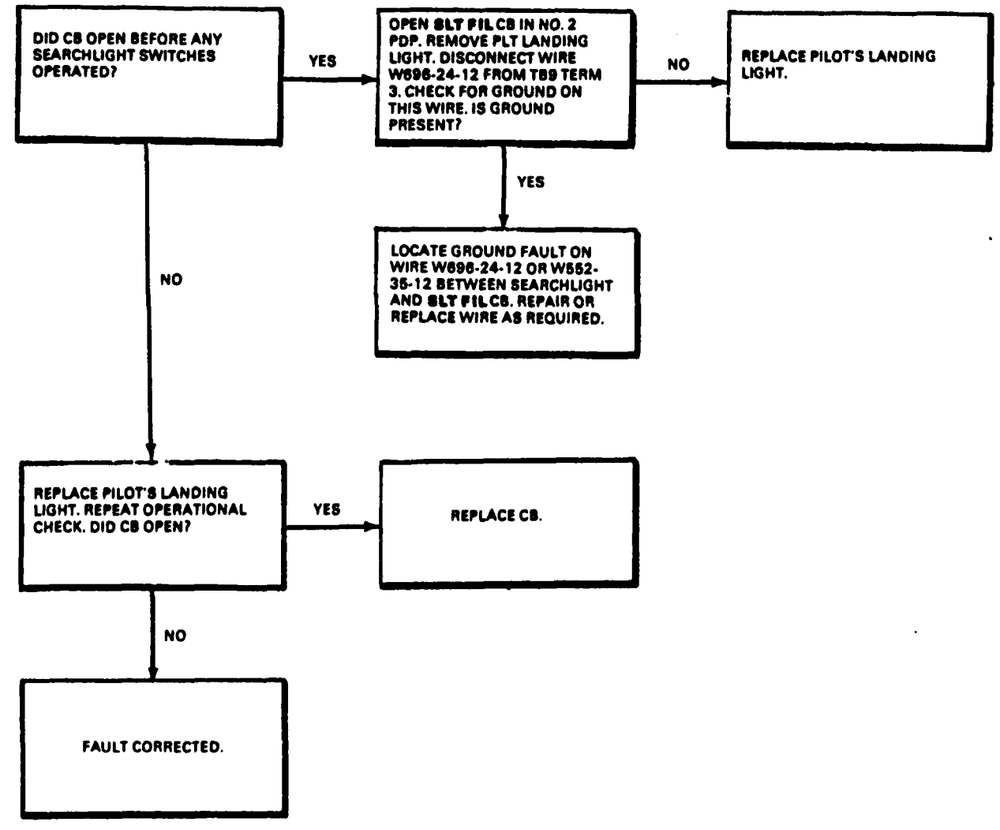


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NO. 1 PDP SLT FIL CIRCUIT BREAKER DOES NOT STAY CLOSED



NO. 2 PDP SLT FIL CIRCUIT BREAKER DOES NOT STAY CLOSED

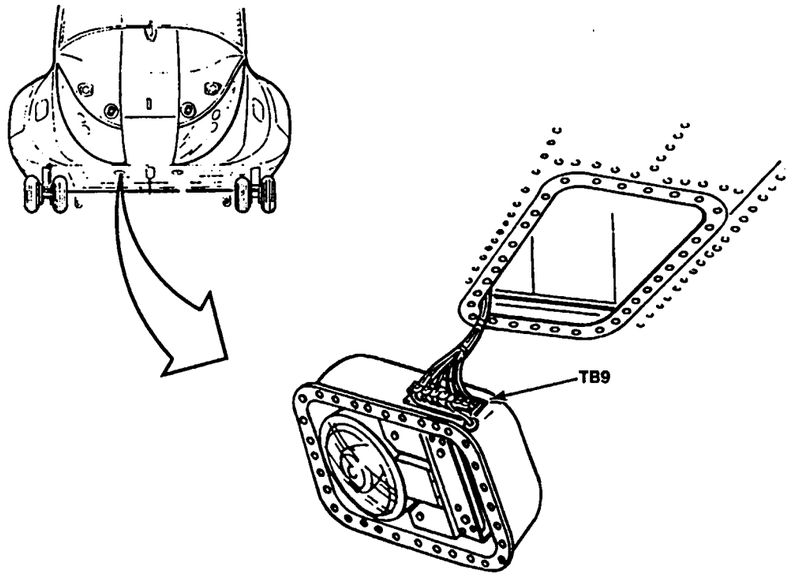


END OF TASK
9-119

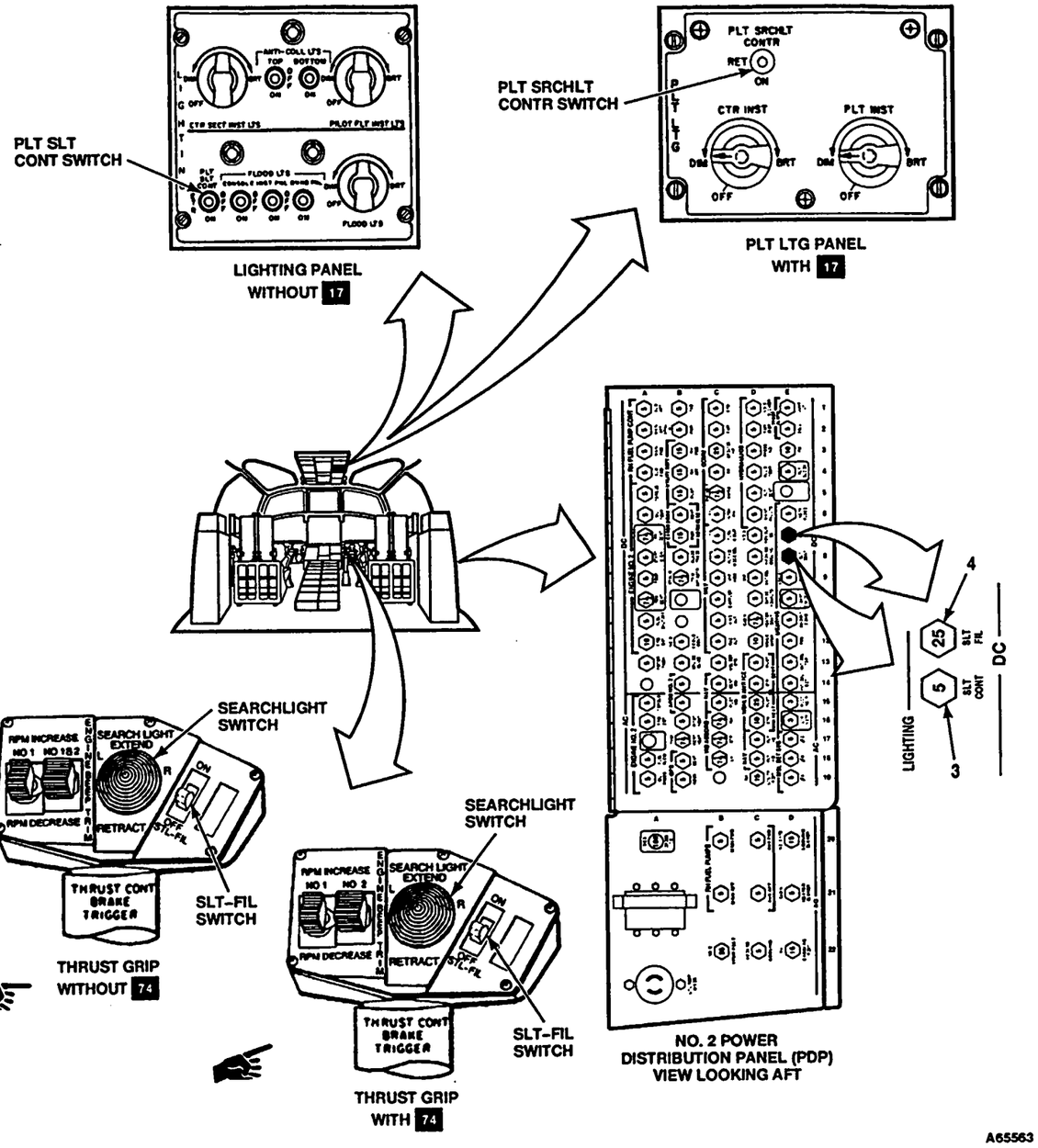
9-4.7 SLT CONT CIRCUIT BREAKER (PILOT'S) DOES NOT STAY CLOSED 9-4.7

FAULT ISOLATION PROCEDURE

INITIAL SETUP
Applicable Configurations:
All
Tools:
Electrical Repairer's Tool Kit, NSN 5180-00-323-4915
Multimeter
Materials:
None
Personnel Required:
Aircraft Electrician (2)
References:
TM 55-1520-240-23
Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off

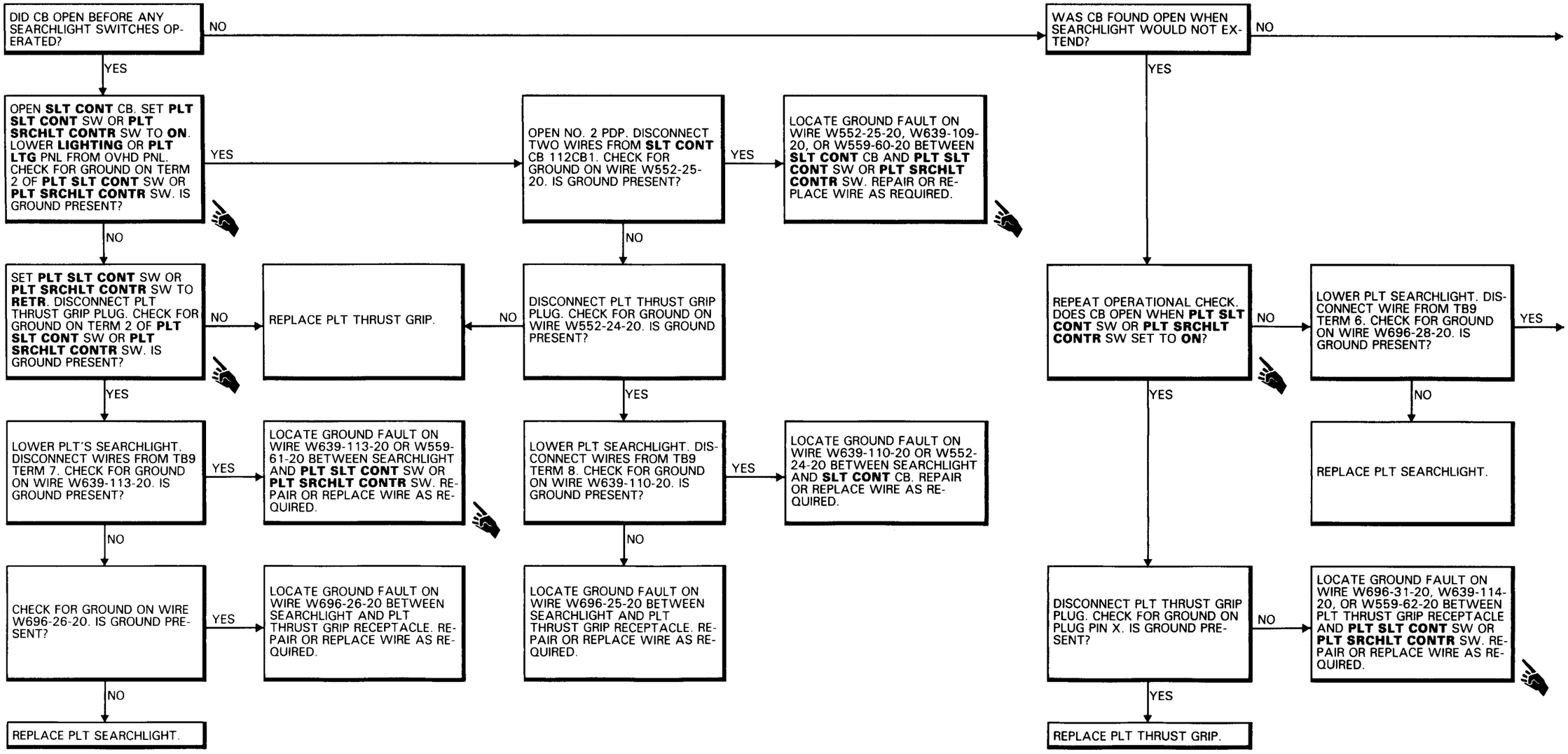


PILOT'S LANDING LIGHT



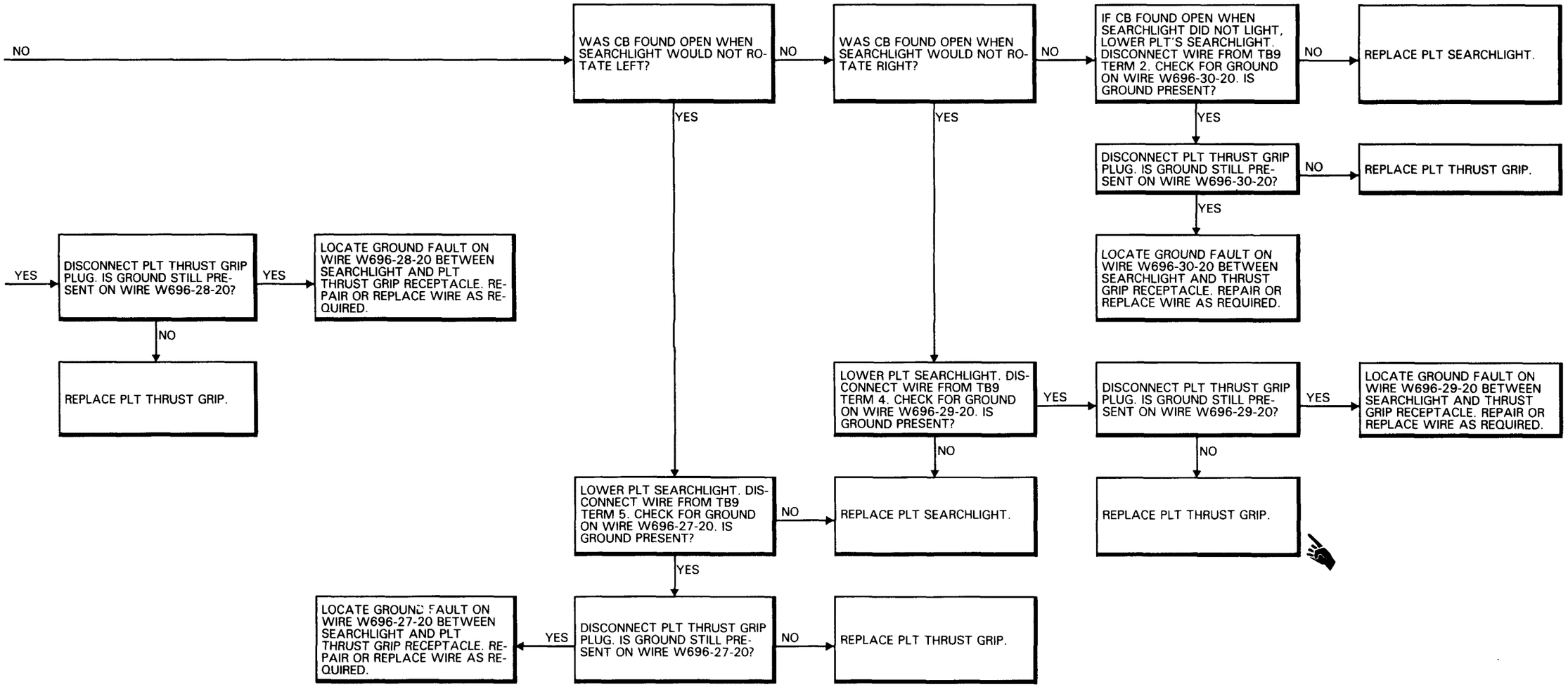
A65563

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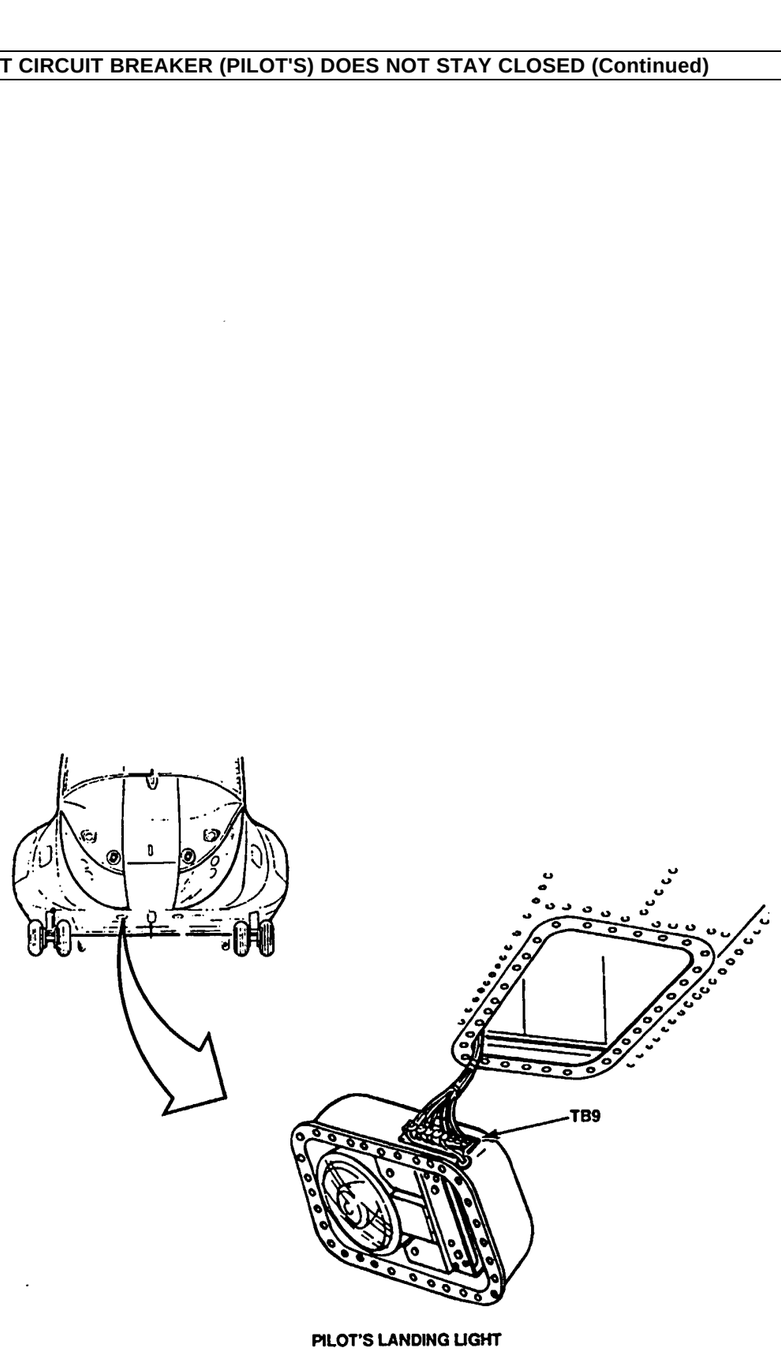


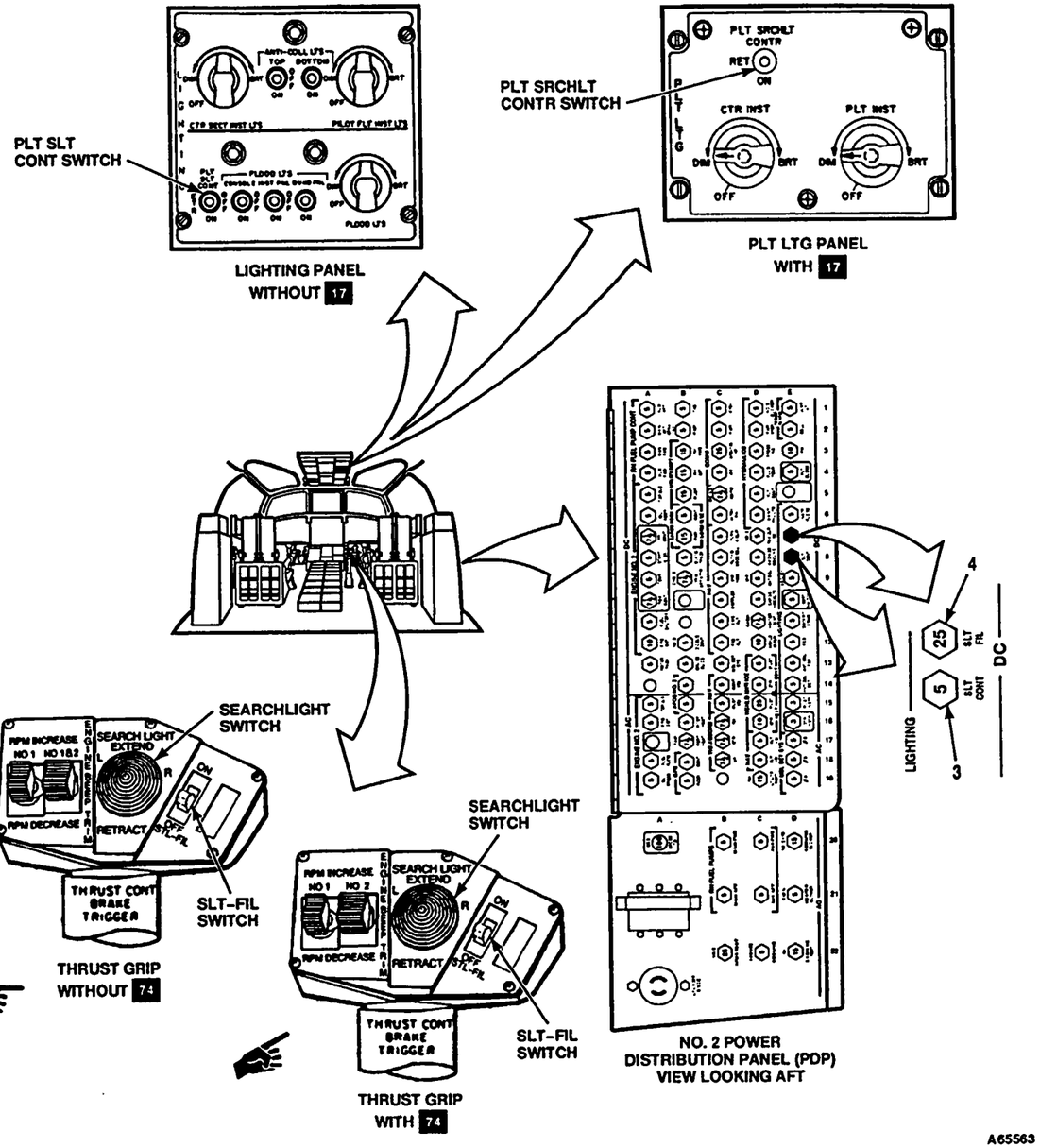
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9-4.7 SLT CONT CIRCUIT BREAKER (PILOT'S) DOES NOT STAY CLOSED (Continued) 9-4.7



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A65563

END OF TASK
Change-19 9-123

9-4.8 PILOT'S LANDING LIGHT DOES NOT EXTEND OR DOES NOT FULLY EXTEND

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

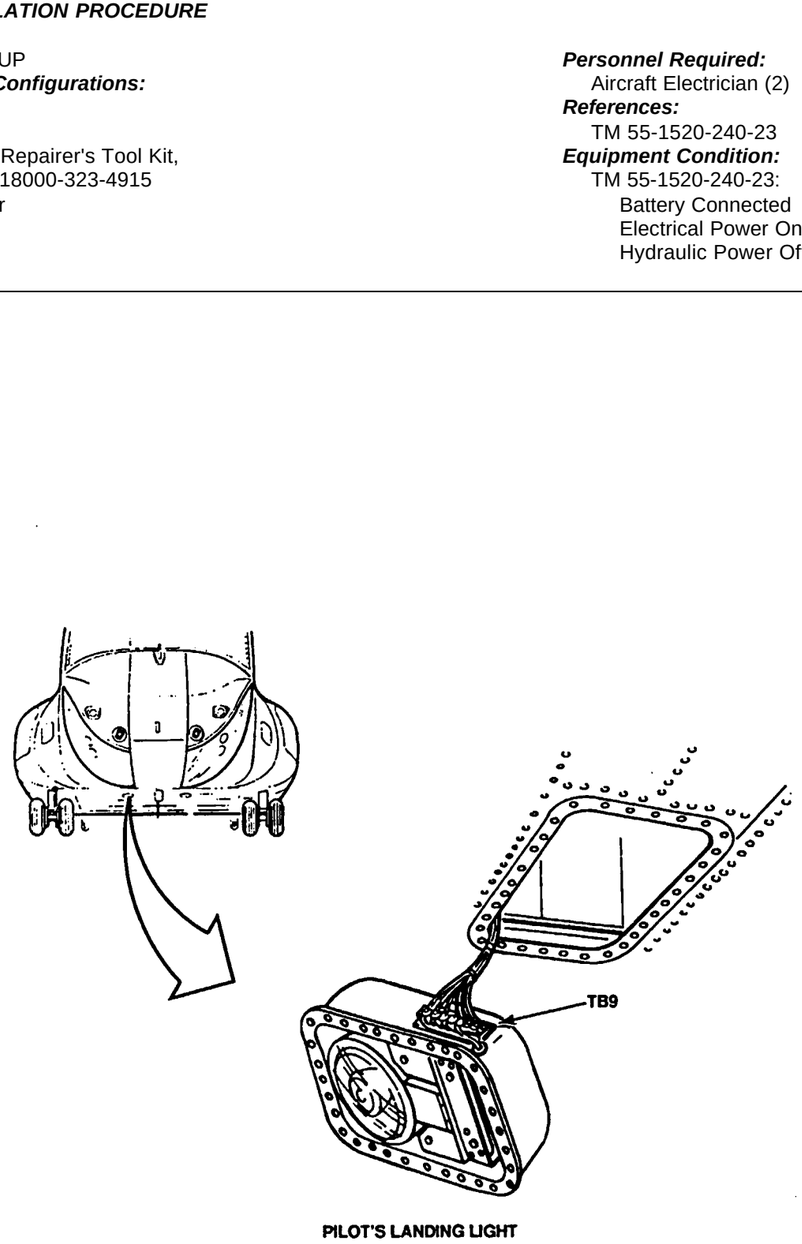
Tools:
Electrical Repairer's Tool Kit,
NSN 518000-323-4915
Multimeter

Materials:
None

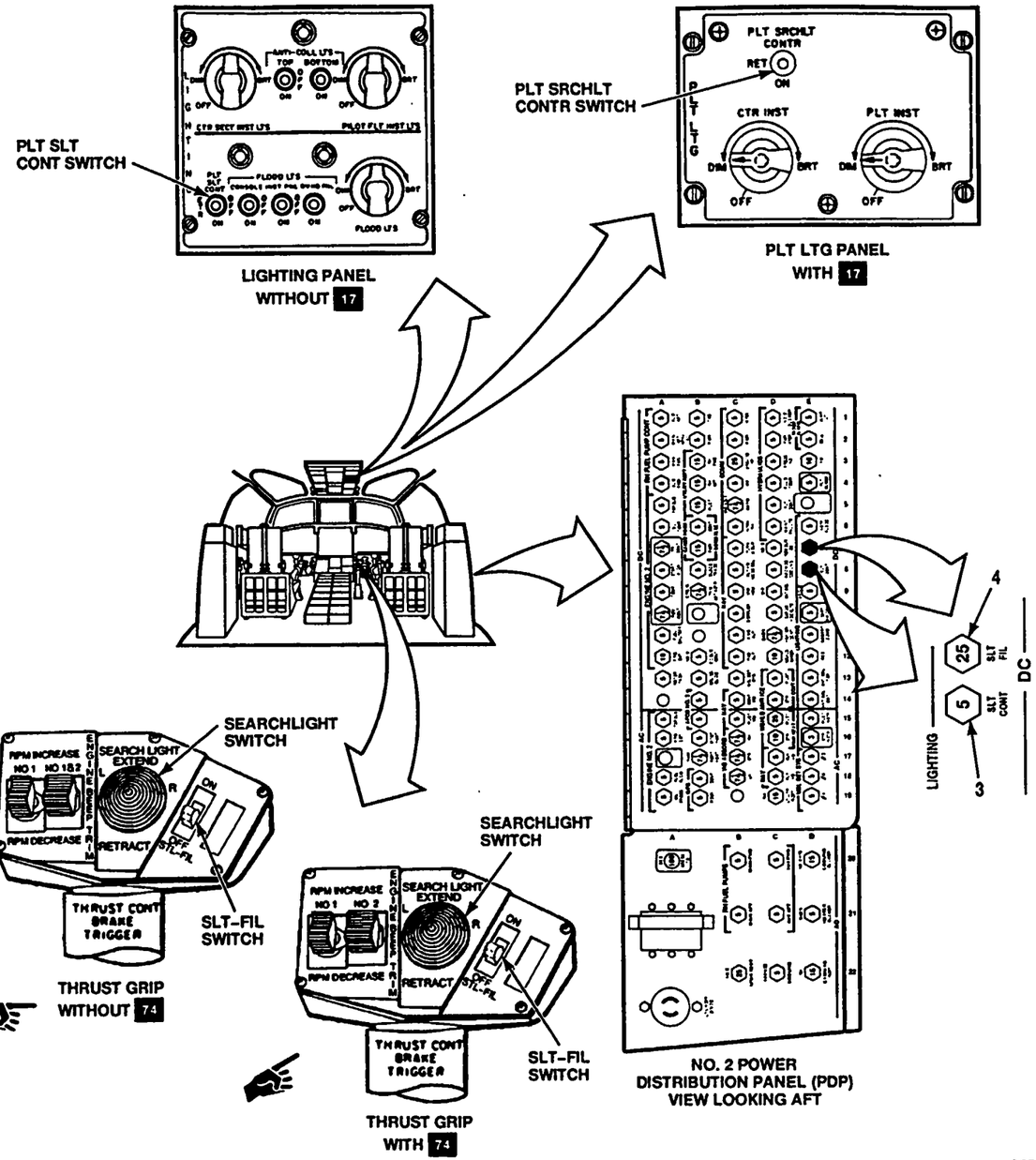
Personnel Required:
Aircraft Electrician (2)

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off

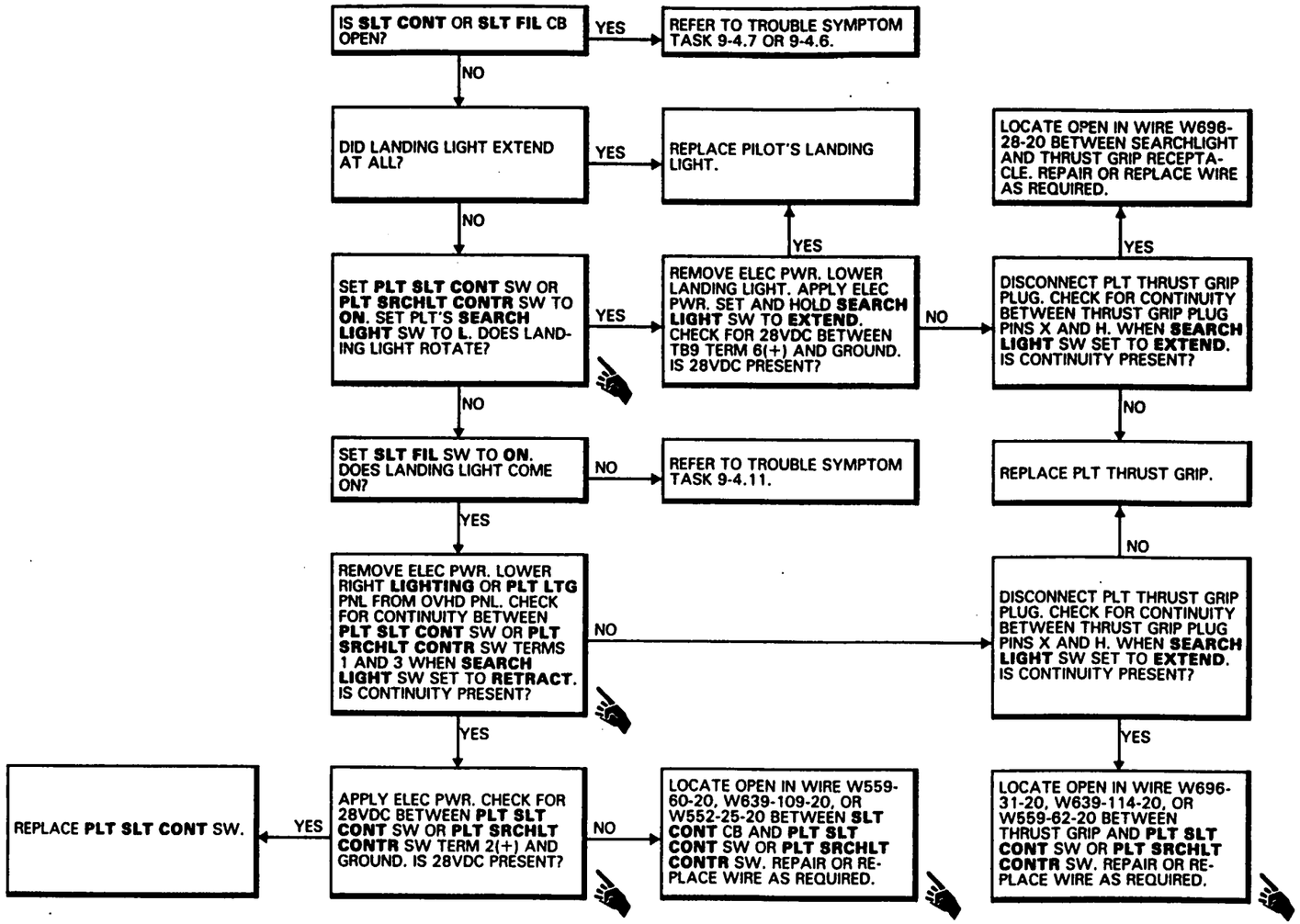


PILOT'S LANDING LIGHT



A65563

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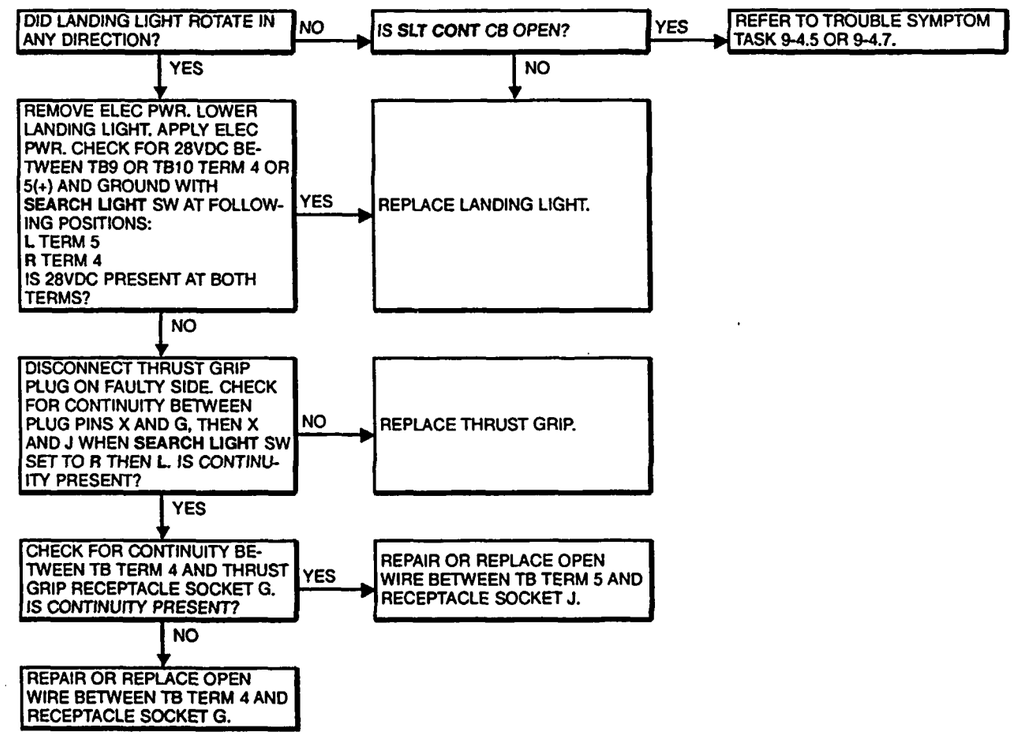

IS SLT CONT OR SLT FIL CB OPEN?
YES
REFER TO TROUBLE SYMPTOM TASK 9-4.7 OR 9-4.6.
NO
DID LANDING LIGHT EXTEND AT ALL?
YES
REPLACE PILOT'S LANDING LIGHT.
NO
SET PLT SLT CONT SW OR PLT SRCHLT CONTR SW TO ON. SET PLT'S SEARCH LIGHT SW TO L. DOES LANDING LIGHT ROTATE?
YES
REMOVE ELEC PWR. LOWER LANDING LIGHT. APPLY ELEC PWR. SET AND HOLD SEARCH LIGHT SW TO EXTEND. CHECK FOR 28VDC BETWEEN TB9 TERM 6(+) AND GROUND. IS 28VDC PRESENT?
NO
DISCONNECT PLT THRUST GRIP PLUG. CHECK FOR CONTINUITY BETWEEN THRUST GRIP PLUG PINS X AND H. WHEN SEARCH LIGHT SW SET TO EXTEND. IS CONTINUITY PRESENT?
YES
LOCATE OPEN IN WIRE W696-28-20 BETWEEN SEARCHLIGHT AND THRUST GRIP RECEPTACLE. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
SET SLT FIL SW TO ON. DOES LANDING LIGHT COME ON?
NO
REFER TO TROUBLE SYMPTOM TASK 9-4.11.
YES
REMOVE ELEC PWR. LOWER RIGHT LIGHTING OR PLT LTG PNL FROM OVHD PNL. CHECK FOR CONTINUITY BETWEEN PLT SLT CONT SW OR PLT SRCHLT CONTR SW TERMS 1 AND 3 WHEN SEARCH LIGHT SW SET TO RETRACT. IS CONTINUITY PRESENT?
NO
REPLACE PLT THRUST GRIP.
NO
DISCONNECT PLT THRUST GRIP PLUG. CHECK FOR CONTINUITY BETWEEN THRUST GRIP PLUG PINS X AND H. WHEN SEARCH LIGHT SW SET TO EXTEND. IS CONTINUITY PRESENT?
YES
LOCATE OPEN IN WIRE W696-31-20, W639-114-20, OR W559-62-20 BETWEEN THRUST GRIP AND PLT SLT CONT SW OR PLT SRCHLT CONTR SW. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
APPLY ELEC PWR. CHECK FOR 28VDC BETWEEN PLT SLT CONT SW OR PLT SRCHLT CONTR SW TERM 2(+) AND GROUND. IS 28VDC PRESENT?
NO
LOCATE OPEN IN WIRE W559-60-20, W639-109-20, OR W552-25-20 BETWEEN SLT CONT CB AND PLT SLT CONT SW OR PLT SRCHLT CONTR SW. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
REPLACE PLT SLT CONT SW.

END OF TASK

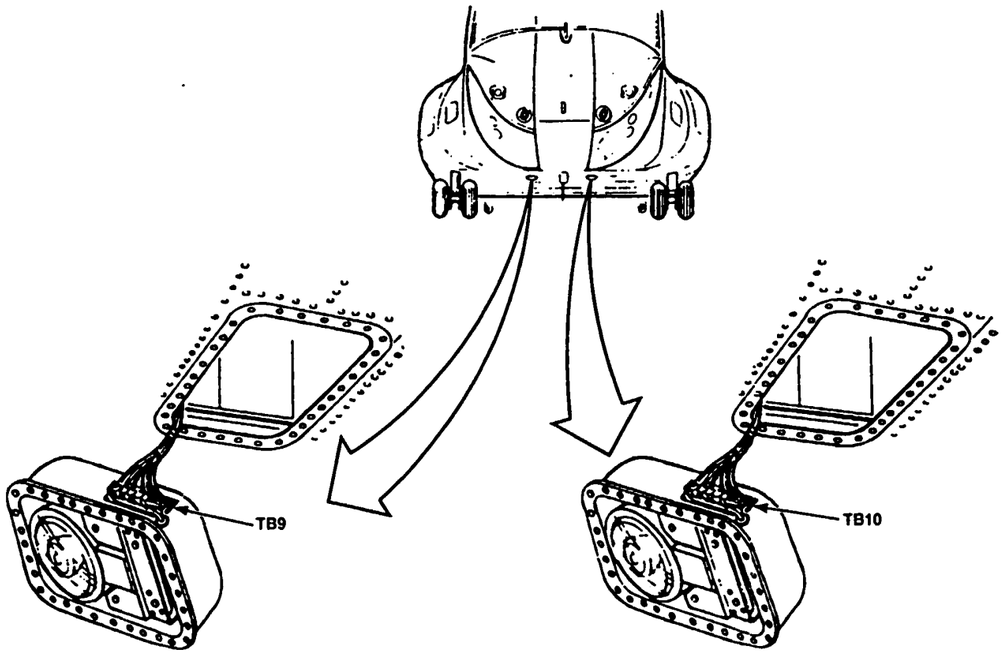
9-4.9 PILOT'S OR COPILOT'S LANDING LIGHT WILL NOT ROTATE CLOCKWISE OR COUNTERCLOCKWISE 9-4.9

FAULT ISOLATION PROCEDURE

INITIAL SETUP
Applicable Configurations:
All
Tools:
Electrical Repairer's Tool Kit, NSN 5180-00-323-4915
Multimeter
Materials:
None
Personnel Required:
Aircraft Electrician (2)
References:
TM 55-1520-240-23
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power On

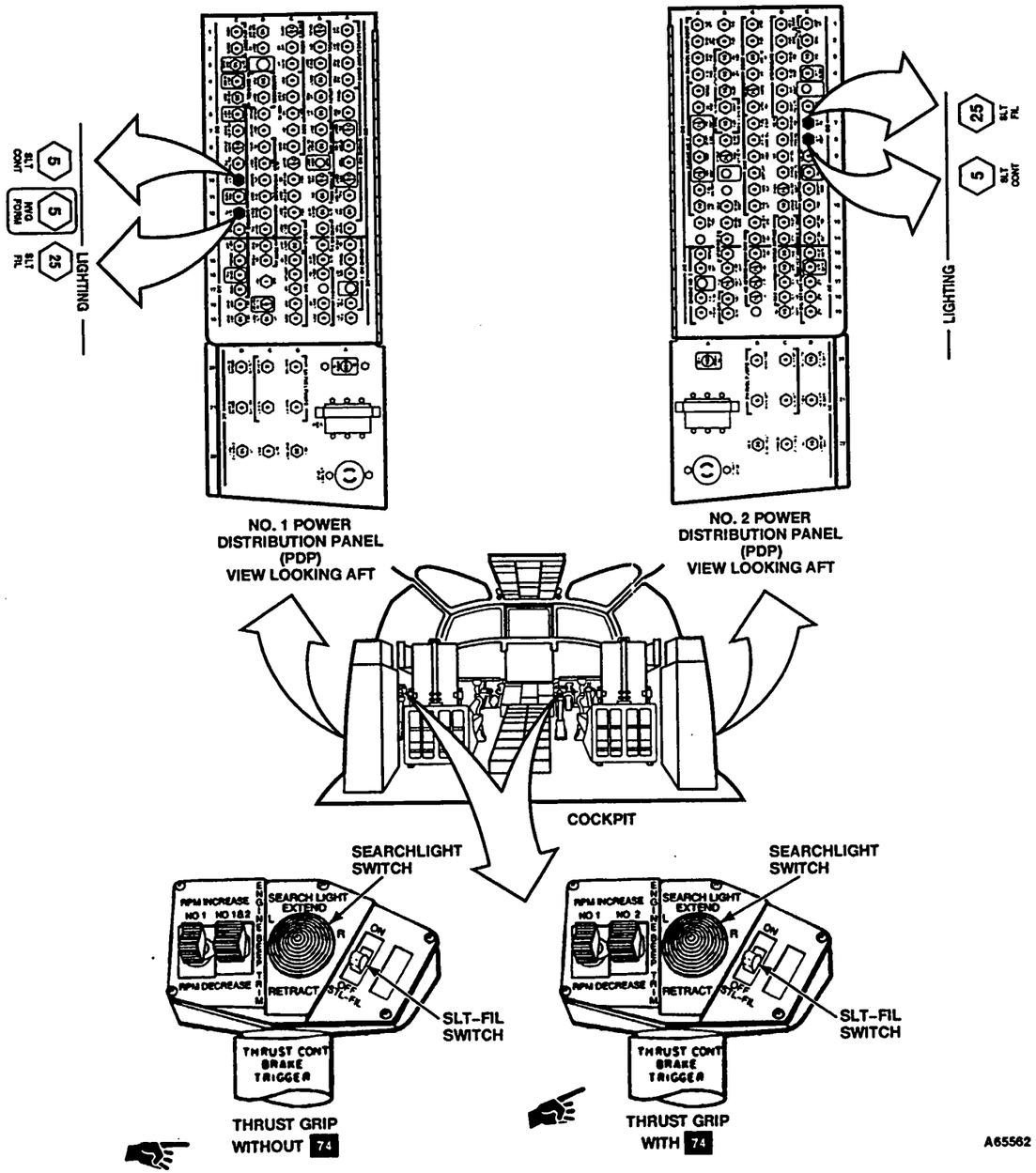


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PILOT'S LANDING LIGHT

COPILOT'S LANDING LIGHT



END OF TASK

9-4.10 LANDING LIGHT DOES NOT RETRACT OR DOES NOT FULLY RETRACT INTO HOUSING

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

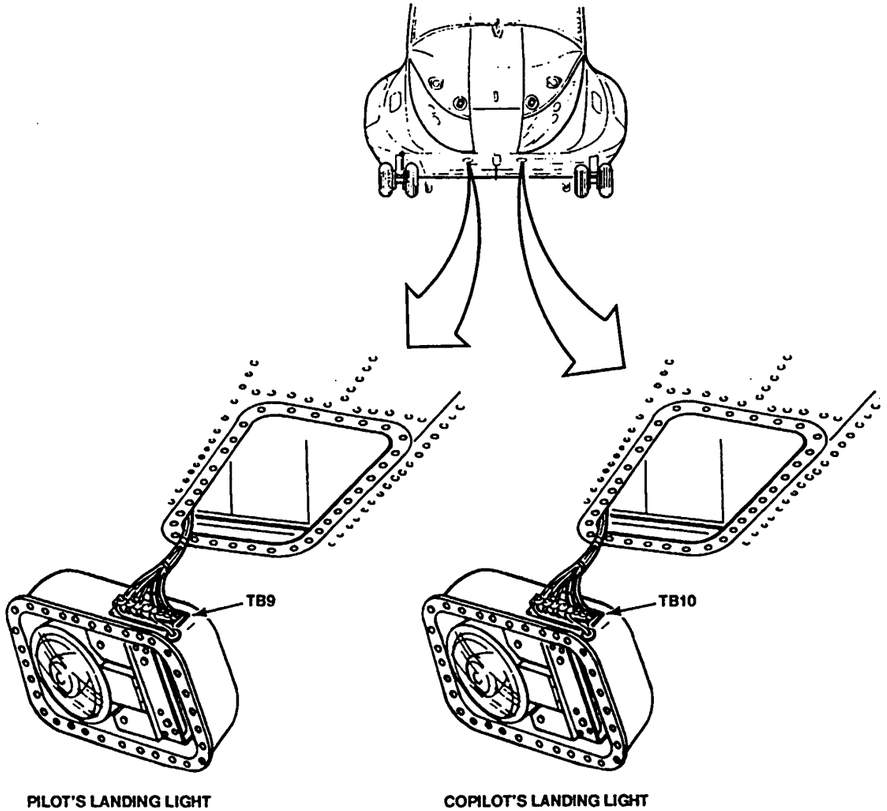
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

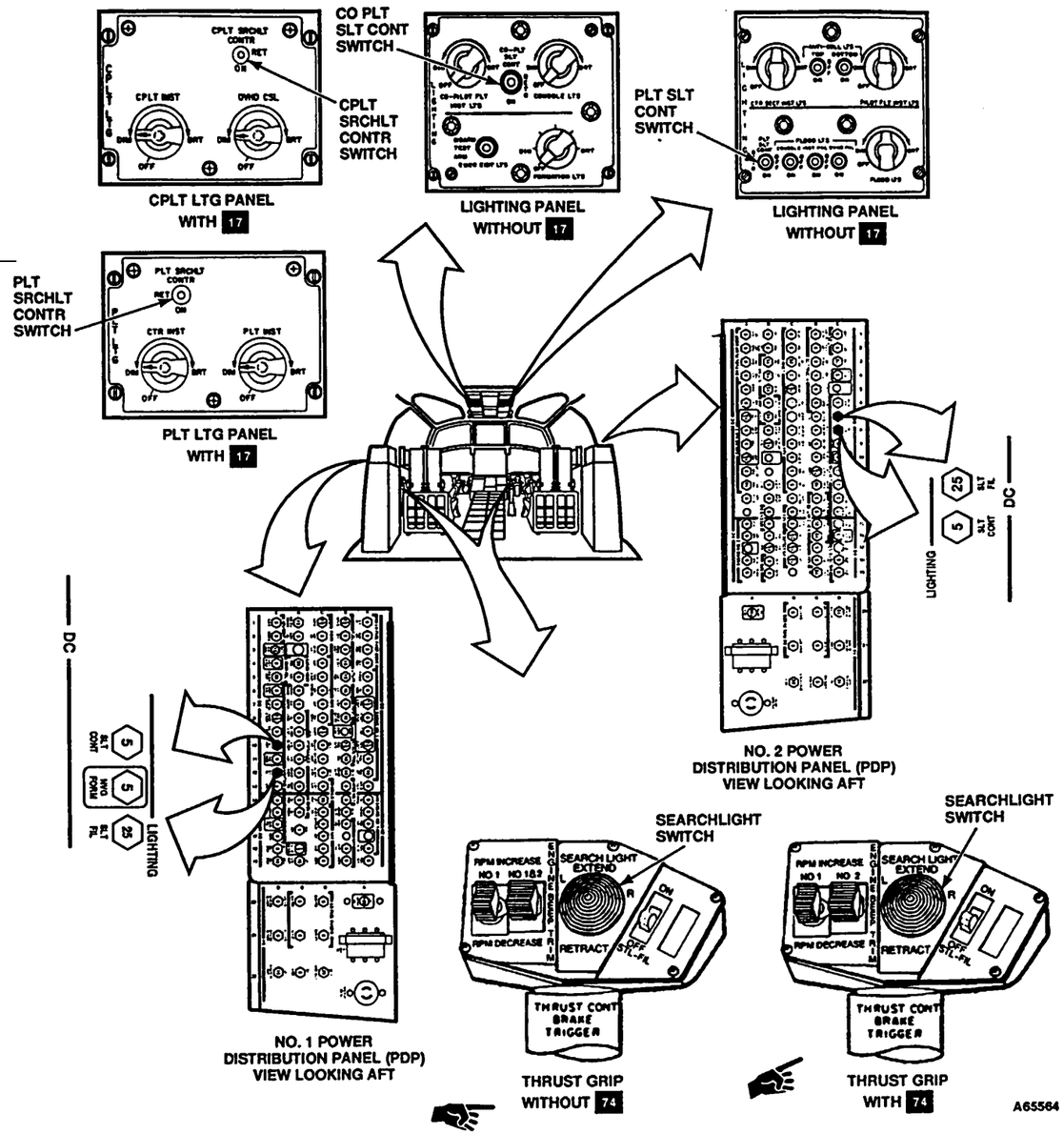
Materials:
None

Personnel Required:
Aircraft Electrician (2)

References
TM 55-1520-240-23

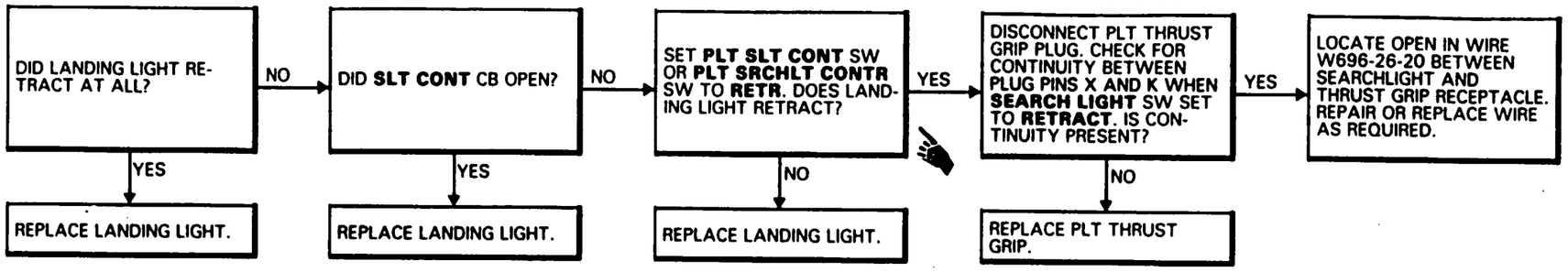
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off



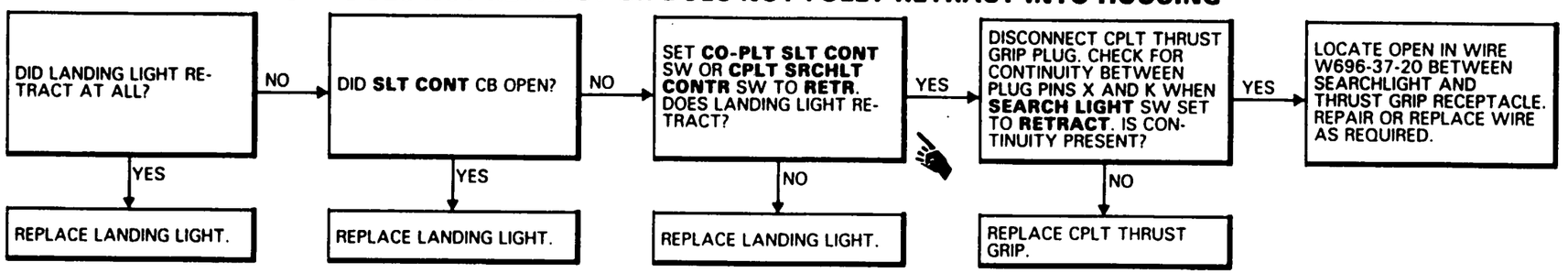


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PILOT'S LANDING LIGHT DOES NOT RETRACT OR DOES NOT FULLY RETRACT INTO HOUSING



COPILOT'S LANDING LIGHT DOES NOT RETRACT OR DOES NOT FULLY RETRACT INTO HOUSING



END OF TASK

9-4.11 PILOT'S LANDING LIGHT DOES NOT COME ON

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

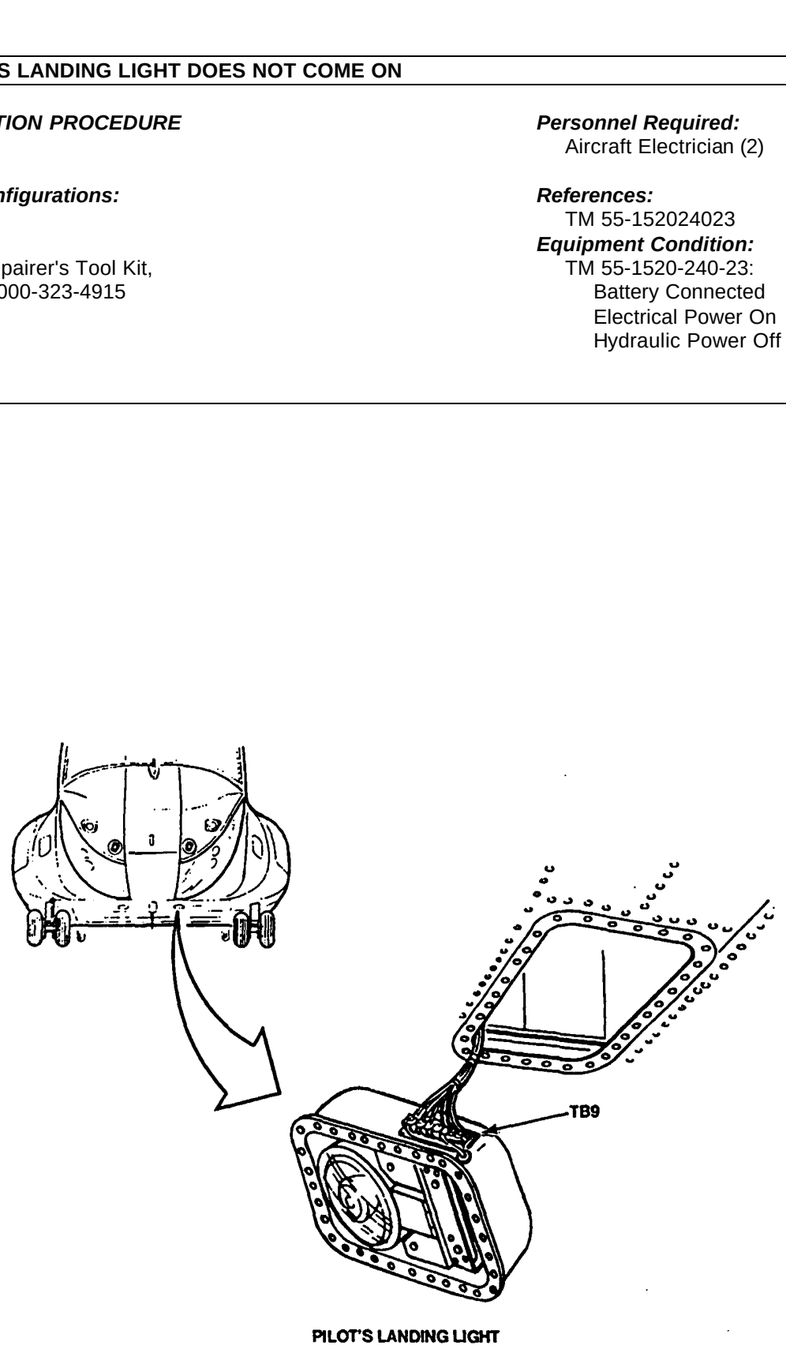
Tools:
Electrical Repairer's Tool Kit,
NSN 518000-323-4915
Multimeter

Materials:
None

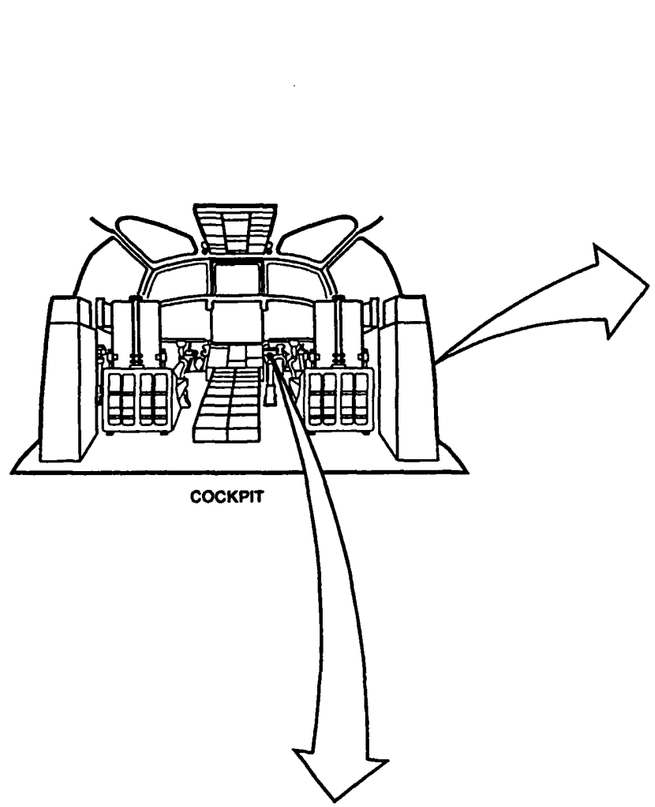
Personnel Required:
Aircraft Electrician (2)

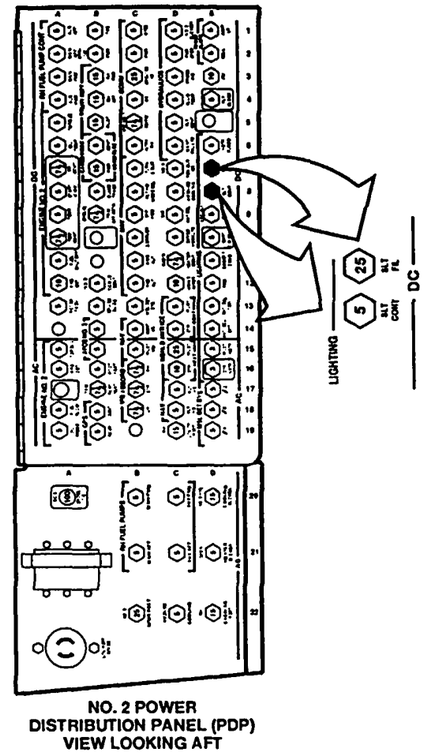
References:
TM 55-152024023

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off

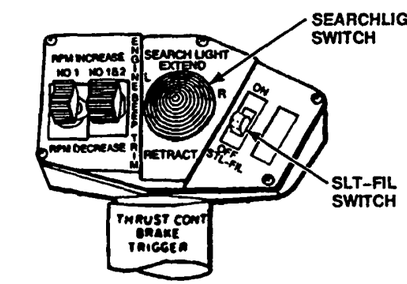


PILOT'S LANDING LIGHT

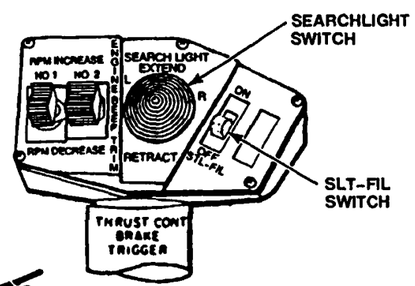




NO. 2 POWER
DISTRIBUTION PANEL (PDP)
VIEW LOOKING AFT



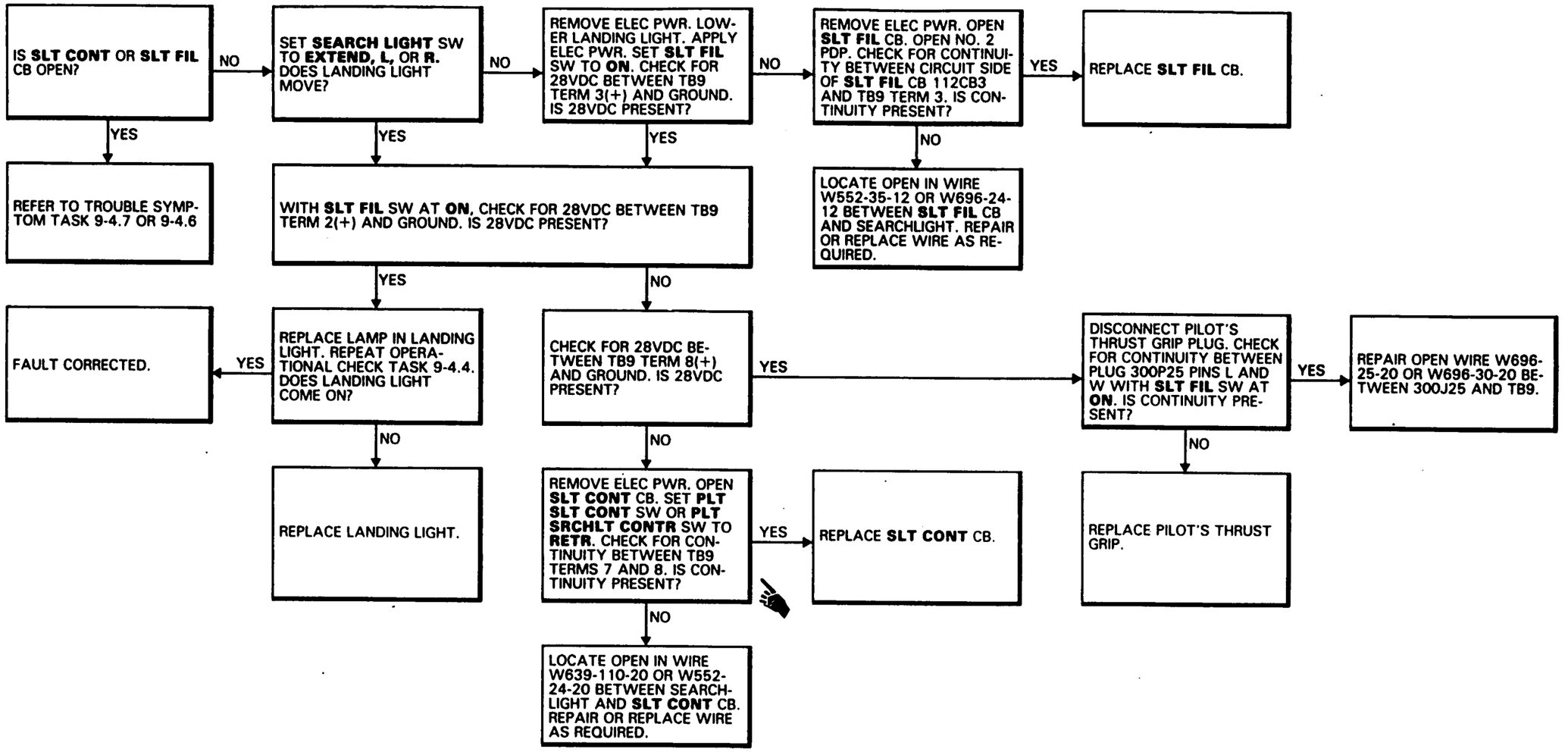
THRUST GRIP
WITHOUT 74



THRUST GRIP
WITH 74

A65565

GO TO NEXT PAGE


IS SLT CONT OR SLT FIL CB OPEN?
NO
SET SEARCH LIGHT SW TO EXTEND, L, OR R. DOES LANDING LIGHT MOVE?
NO
REMOVE ELEC PWR. LOWER LANDING LIGHT. APPLY ELEC PWR. SET SLT FIL SW TO ON. CHECK FOR 28VDC BETWEEN TB9 TERM 3(+) AND GROUND. IS 28VDC PRESENT?
NO
REMOVE ELEC PWR. OPEN SLT FIL CB. OPEN NO. 2 PDP. CHECK FOR CONTINUITY BETWEEN CIRCUIT SIDE OF SLT FIL CB 112CB3 AND TB9 TERM 3. IS CONTINUITY PRESENT?
YES
REPLACE SLT FIL CB.
YES
REFER TO TROUBLE SYMPTOM TASK 9-4.7 OR 9-4.6
YES
YES
NO
LOCATE OPEN IN WIRE W552-35-12 OR W696-24-12 BETWEEN SLT FIL CB AND SEARCHLIGHT. REPAIR OR REPLACE WIRE AS REQUIRED.
WITH SLT FIL SW AT ON, CHECK FOR 28VDC BETWEEN TB9 TERM 2(+) AND GROUND. IS 28VDC PRESENT?
YES
NO
FAULT CORRECTED.
YES
REPLACE LAMP IN LANDING LIGHT. REPEAT OPERATIONAL CHECK TASK 9-4.4. DOES LANDING LIGHT COME ON?
CHECK FOR 28VDC BETWEEN TB9 TERM 8(+) AND GROUND. IS 28VDC PRESENT?
YES
DISCONNECT PILOT'S THRUST GRIP PLUG. CHECK FOR CONTINUITY BETWEEN PLUG 300P25 PINS L AND W WITH SLT FIL SW AT ON. IS CONTINUITY PRESENT?
YES
REPAIR OPEN WIRE W696-25-20 OR W696-30-20 BETWEEN 300J25 AND TB9.
NO
NO
NO
REPLACE LANDING LIGHT.
REMOVE ELEC PWR. OPEN SLT CONT CB. SET PLT SLT CONT SW OR PLT SRCHLT CONTR SW TO RETR. CHECK FOR CONTINUITY BETWEEN TB9 TERMS 7 AND 8. IS CONTINUITY PRESENT?
YES
REPLACE SLT CONT CB.
REPLACE PILOT'S THRUST GRIP.
NO
LOCATE OPEN IN WIRE W639-110-20 OR W552-24-20 BETWEEN SEARCHLIGHT AND SLT CONT CB. REPAIR OR REPLACE WIRE AS REQUIRED.

END OF TASK

9-4.12 PILOT'S LANDING LIGHT WILL NOT RETRACT WITH PLT SLT CONT SWITCH

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

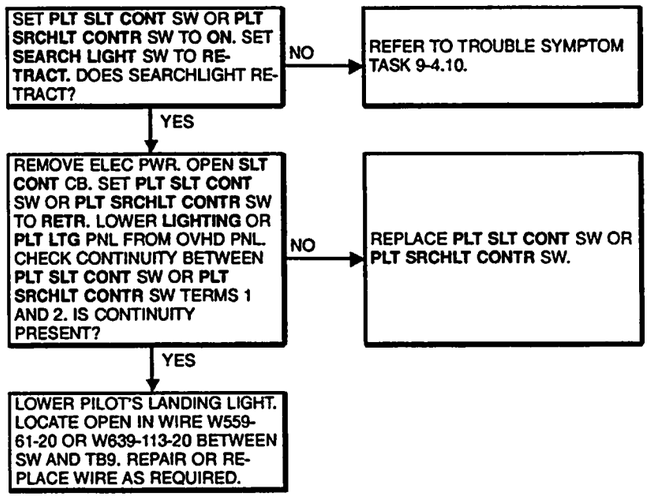
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:
None

Personnel Required:
Aircraft Electrician (2)

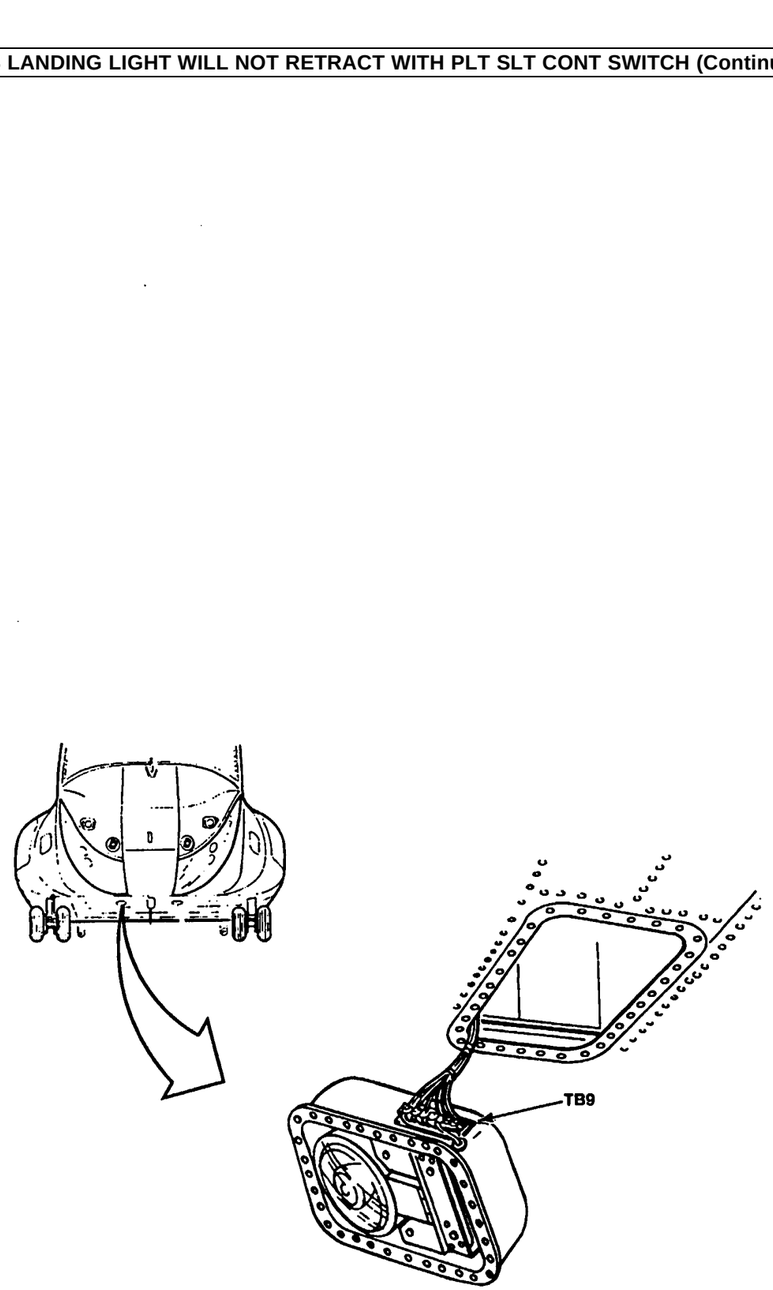
References:
TM 55-1520-240-23

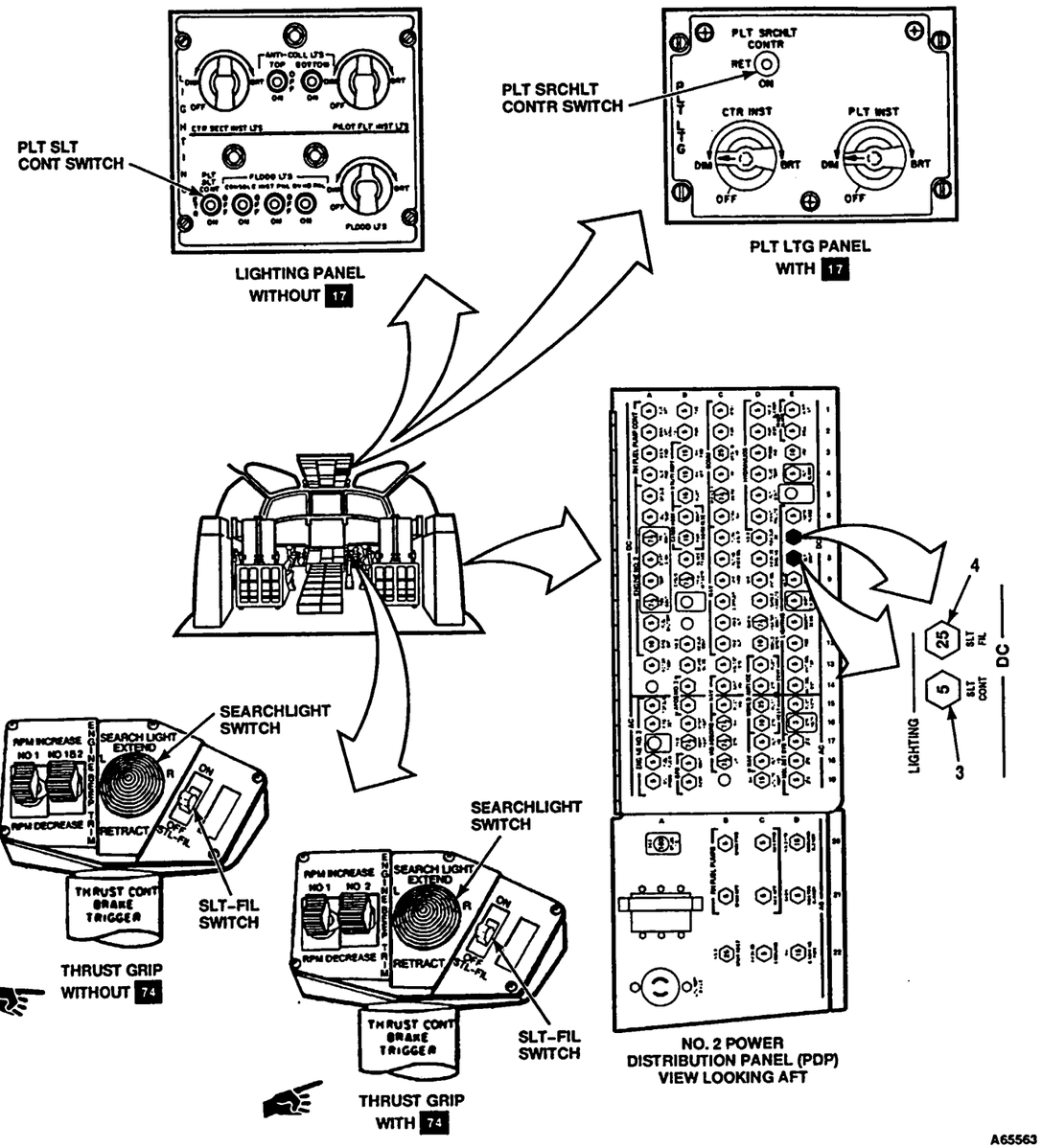
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off



GO TO NEXT PAGE

9-4.12 PILOT'S LANDING LIGHT WILL NOT RETRACT WITH PLT SLT CONT SWITCH (Continued)





END OF TASK

9-4.13 COPILOT'S LANDING LIGHT DOES NOT EXTEND OR DOES NOT FULLY EXTEND

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

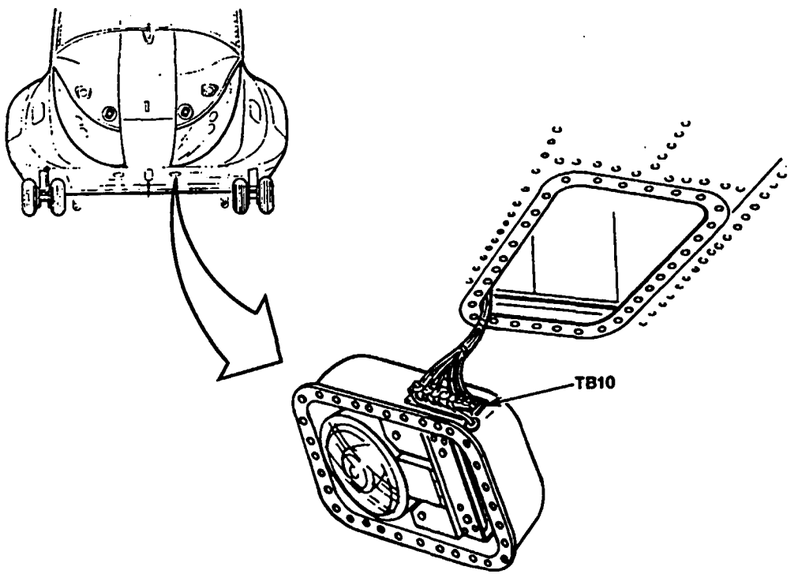
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:
None

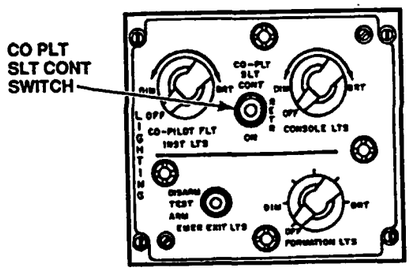
Personnel Required:
Aircraft Electrician (2)

References:
TM 55-1520-240-23

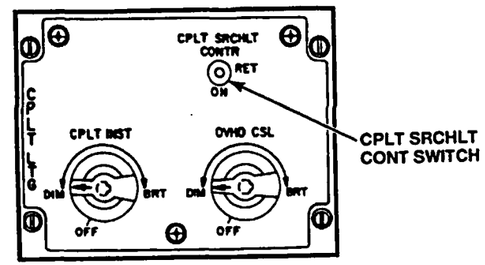
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off



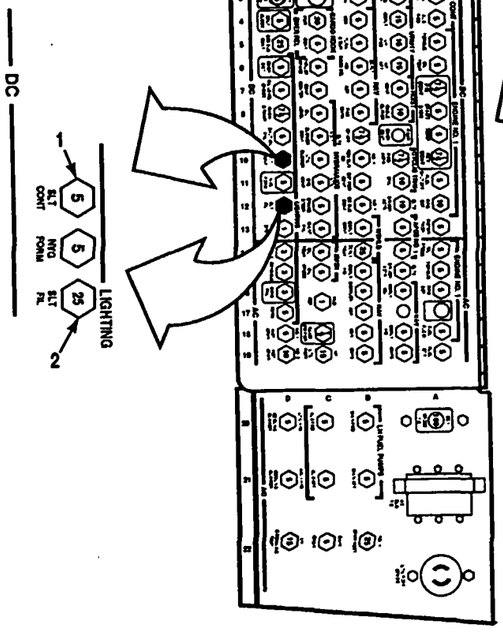
COPILOT'S LANDING LIGHT



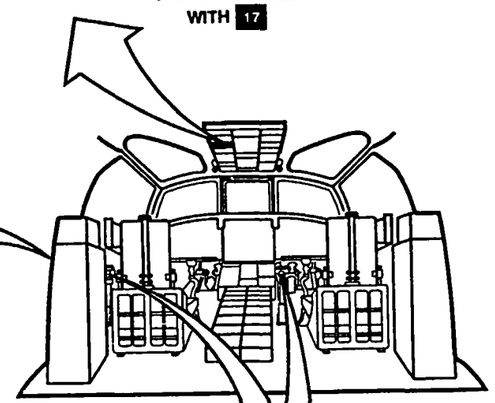
LIGHTING PANEL WITHOUT 17



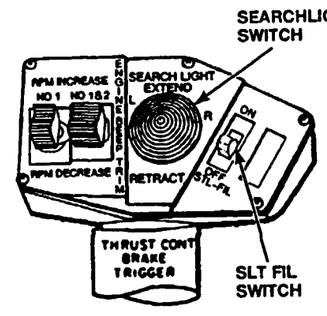
CPLT LTG PANEL WITH 17



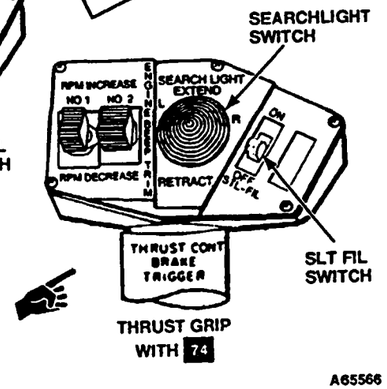
NO. 1 POWER DISTRIBUTION PANEL (PDP) VIEW LOOKING AFT



COCKPIT



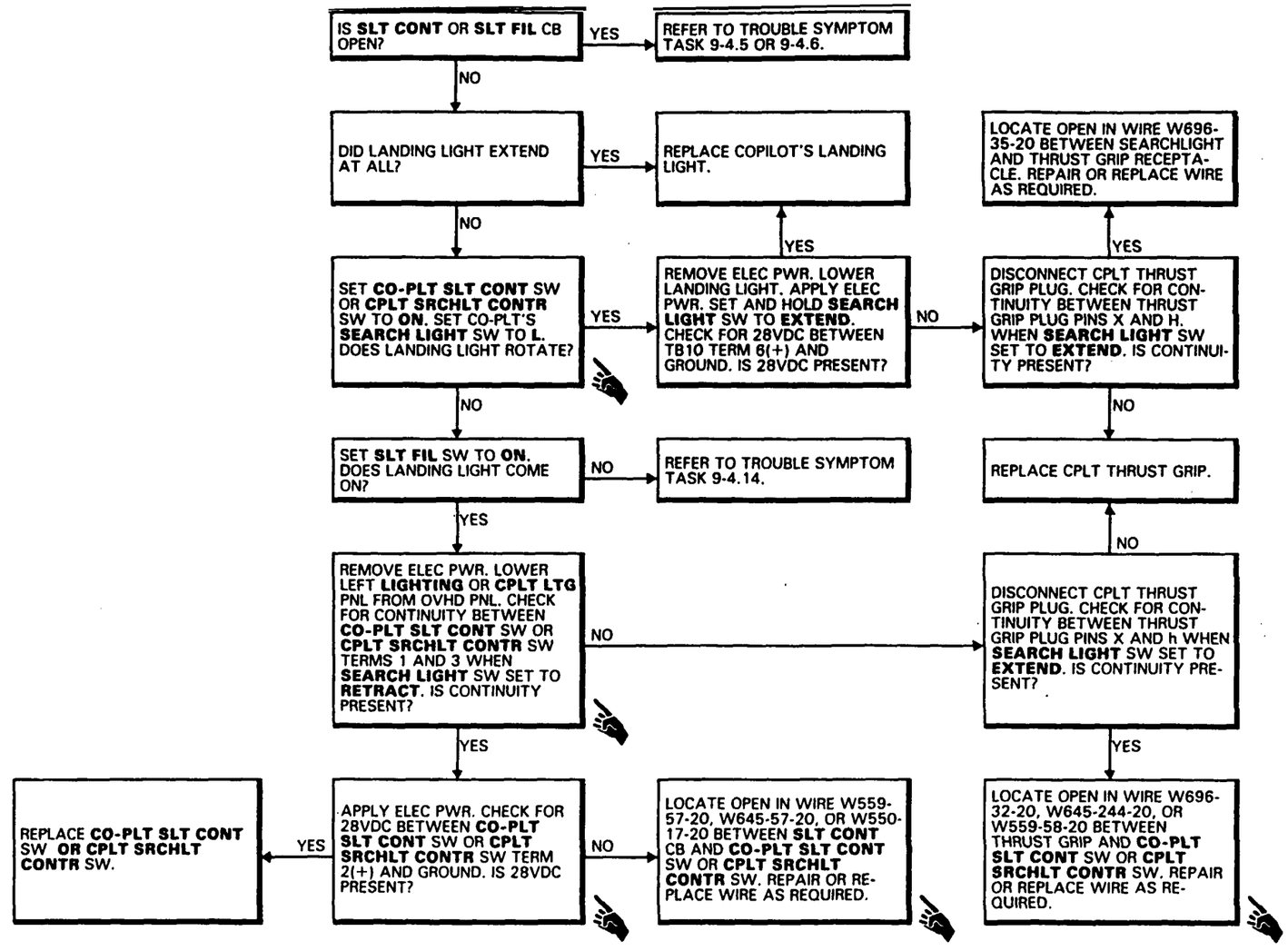
THRUST GRIP WITHOUT 74



THRUST GRIP WITH 74

A65566

GO TO NEXT PAGE


IS SLT CONT OR SLT FIL CB OPEN?
YES
REFER TO TROUBLE SYMPTOM TASK 9-4.5 OR 9-4.6.
NO
DID LANDING LIGHT EXTEND AT ALL?
YES
REPLACE COPILOT'S LANDING LIGHT.
LOCATE OPEN IN WIRE W696-35-20 BETWEEN SEARCHLIGHT AND THRUST GRIP RECEPTACLE. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
YES
YES
SET CO-PLT SLT CONT SW OR CPLT SRCHLT CONTR SW TO ON. SET CO-PLT'S SEARCH LIGHT SW TO L. DOES LANDING LIGHT ROTATE?
YES
REMOVE ELEC PWR. LOWER LANDING LIGHT. APPLY ELEC PWR. SET AND HOLD SEARCH LIGHT SW TO EXTEND. CHECK FOR 28VDC BETWEEN TB10 TERM 6(+) AND GROUND. IS 28VDC PRESENT?
NO
DISCONNECT CPLT THRUST GRIP PLUG. CHECK FOR CONTINUITY BETWEEN THRUST GRIP PLUG PINS X AND H. WHEN SEARCH LIGHT SW SET TO EXTEND. IS CONTINUITY PRESENT?
NO
SET SLT FIL SW TO ON. DOES LANDING LIGHT COME ON?
NO
REFER TO TROUBLE SYMPTOM TASK 9-4.14.
REPLACE CPLT THRUST GRIP.
YES
NO
REMOVE ELEC PWR. LOWER LEFT LIGHTING OR CPLT LTG PNL FROM OVHD PNL. CHECK FOR CONTINUITY BETWEEN CO-PLT SLT CONT SW OR CPLT SRCHLT CONTR SW TERMS 1 AND 3 WHEN SEARCH LIGHT SW SET TO RETRACT. IS CONTINUITY PRESENT?
NO
DISCONNECT CPLT THRUST GRIP PLUG. CHECK FOR CONTINUITY BETWEEN THRUST GRIP PLUG PINS X AND h WHEN SEARCH LIGHT SW SET TO EXTEND. IS CONTINUITY PRESENT?
YES
YES
REPLACE CO-PLT SLT CONT SW OR CPLT SRCHLT CONTR SW.
YES
APPLY ELEC PWR. CHECK FOR 28VDC BETWEEN CO-PLT SLT CONT SW OR CPLT SRCHLT CONTR SW TERM 2(+) AND GROUND. IS 28VDC PRESENT?
NO
LOCATE OPEN IN WIRE W559-57-20, W645-57-20, OR W550-17-20 BETWEEN SLT CONT CB AND CO-PLT SLT CONT SW OR CPLT SRCHLT CONTR SW. REPAIR OR REPLACE WIRE AS REQUIRED.
LOCATE OPEN IN WIRE W696-32-20, W645-244-20, OR W559-58-20 BETWEEN THRUST GRIP AND CO-PLT SLT CONT SW OR CPLT SRCHLT CONTR SW. REPAIR OR REPLACE WIRE AS REQUIRED.

END OF TASK

9-4.14 COPILOT'S LANDING LIGHT DOES NOT COME ON

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

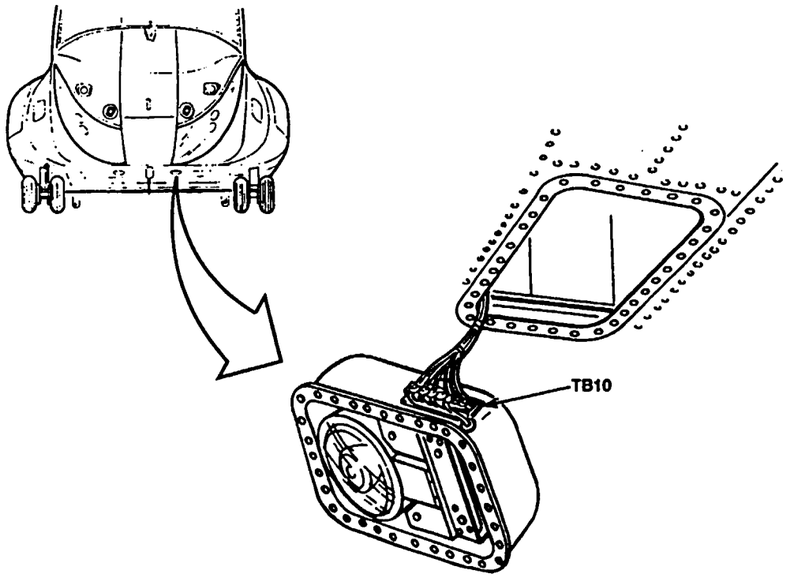
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-3234915
Multimeter

Materials:
None

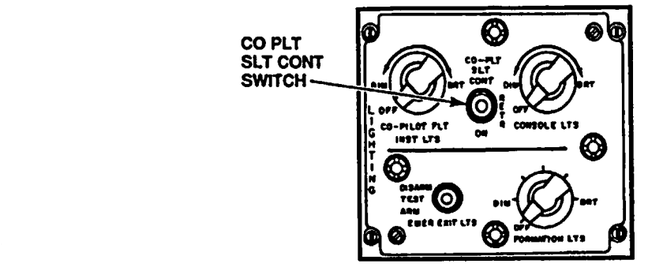
Personnel Required:
Aircraft Electrician (2)

References:
TM 55-1520-240-23

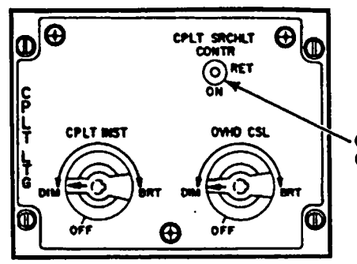
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off



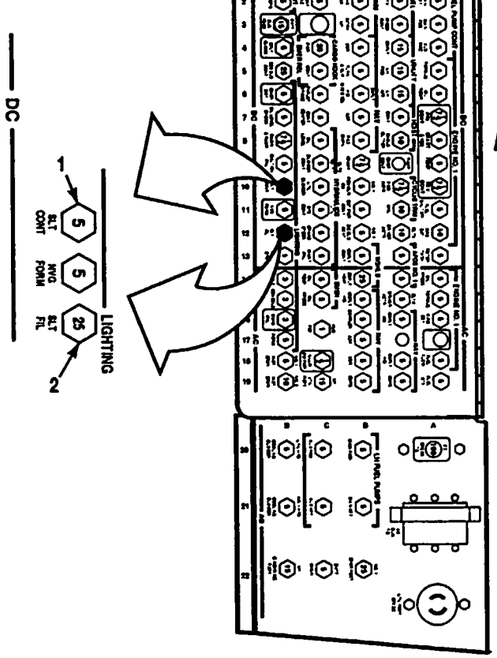
COPILOT'S LANDING LIGHT



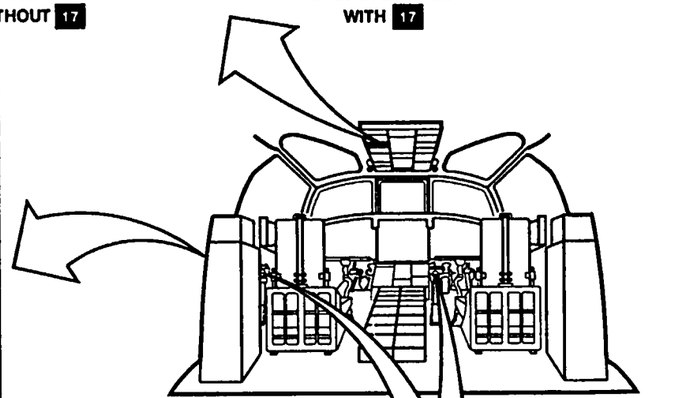
LIGHTING PANEL WITHOUT 17

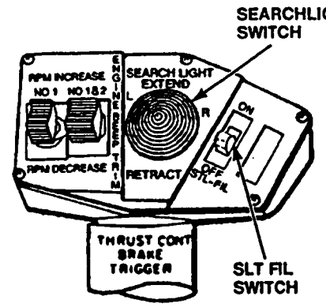


CPLT LTG PANEL WITH 17

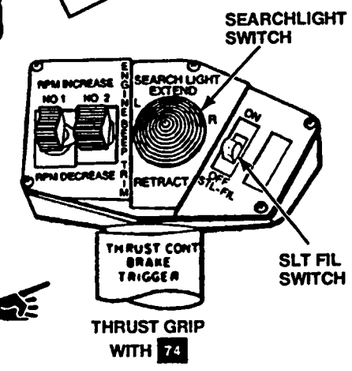


NO. 1 POWER DISTRIBUTION PANEL (PDP) VIEW LOOKING AFT





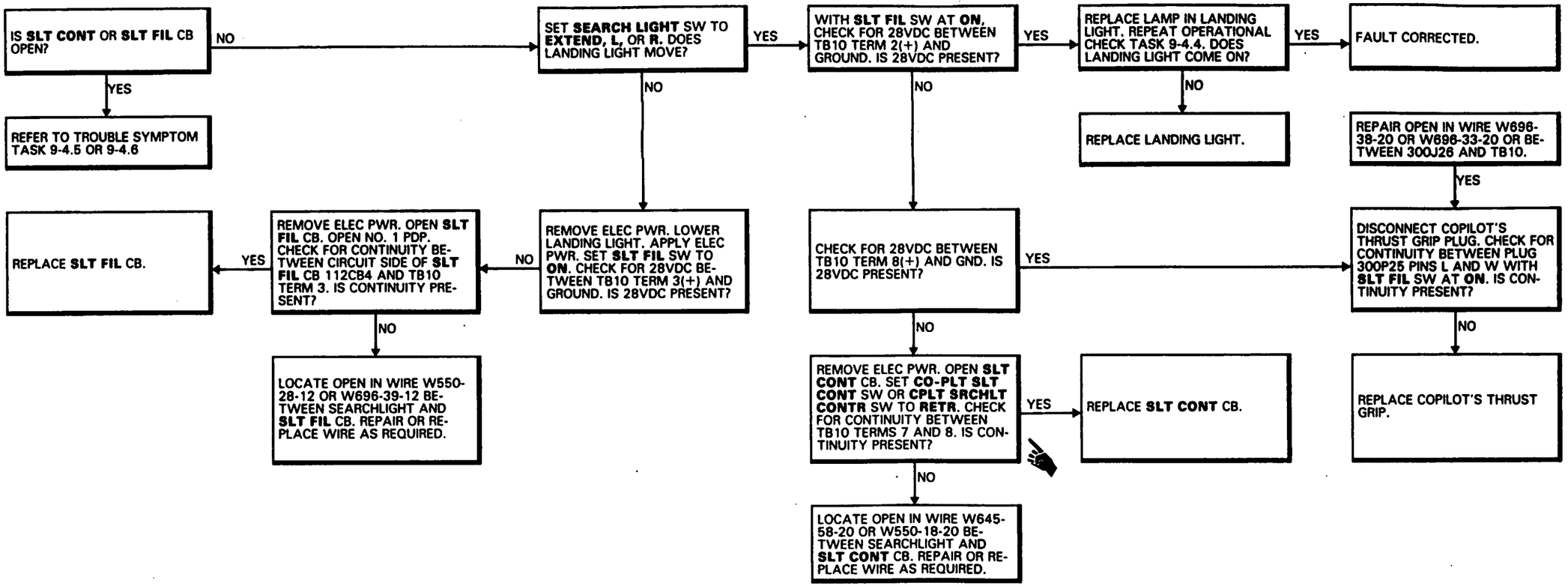
THRUST GRIP WITHOUT 74



THRUST GRIP WITH 74

A65566

GO TO NEXT PAGE


IS SLT CONT OR SLT FIL CB OPEN?
NO
YES
REFER TO TROUBLE SYMPTOM TASK 9-4.5 OR 9-4.6
SET SEARCH LIGHT SW TO EXTEND, L, OR R. DOES LANDING LIGHT MOVE?
YES
NO
WITH SLT FIL SW AT ON, CHECK FOR 28VDC BETWEEN TB10 TERM 2(+) AND GROUND. IS 28VDC PRESENT?
YES
NO
REPLACE LAMP IN LANDING LIGHT. REPEAT OPERATIONAL CHECK TASK 9-4.4. DOES LANDING LIGHT COME ON?
YES
NO
FAULT CORRECTED.
REPLACE LANDING LIGHT.
REPAIR OPEN IN WIRE W696-38-20 OR W696-33-20 OR BETWEEN 300J26 AND TB10.
YES
REMOVE ELEC PWR. LOWER LANDING LIGHT. APPLY ELEC PWR. SET SLT FIL SW TO ON. CHECK FOR 28VDC BETWEEN TB10 TERM 3(+) AND GROUND. IS 28VDC PRESENT?
NO
REMOVE ELEC PWR. OPEN SLT FIL CB. OPEN NO. 1 PDP. CHECK FOR CONTINUITY BETWEEN CIRCUIT SIDE OF SLT FIL CB 112CB4 AND TB10 TERM 3. IS CONTINUITY PRESENT?
YES
NO
REPLACE SLT FIL CB.
LOCATE OPEN IN WIRE W550-28-12 OR W696-39-12 BETWEEN SEARCHLIGHT AND SLT FIL CB. REPAIR OR REPLACE WIRE AS REQUIRED.
CHECK FOR 28VDC BETWEEN TB10 TERM 8(+) AND GND. IS 28VDC PRESENT?
YES
NO
DISCONNECT COPILOT'S THRUST GRIP PLUG. CHECK FOR CONTINUITY BETWEEN PLUG 300P25 PINS L AND W WITH SLT FIL SW AT ON. IS CONTINUITY PRESENT?
NO
REPLACE COPILOT'S THRUST GRIP.
REMOVE ELEC PWR. OPEN SLT CONT CB. SET CO-PLT SLT CONT SW OR CPLT SRCHLT CONTR SW TO RETR. CHECK FOR CONTINUITY BETWEEN TB10 TERMS 7 AND 8. IS CONTINUITY PRESENT?
YES
NO
REPLACE SLT CONT CB.
LOCATE OPEN IN WIRE W645-58-20 OR W550-18-20 BETWEEN SEARCHLIGHT AND SLT CONT CB. REPAIR OR REPLACE WIRE AS REQUIRED.

END OF TASK

9-4.15 COPILOT'S LANDING LIGHT WILL NOT RETRACT WITH CO-PLT SLT CONT SWITCH

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

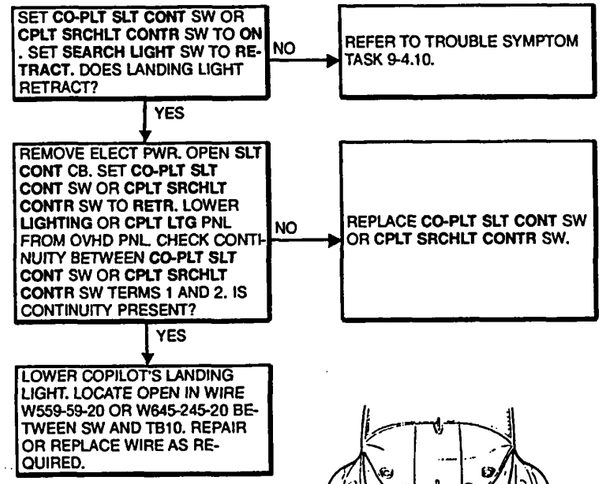
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

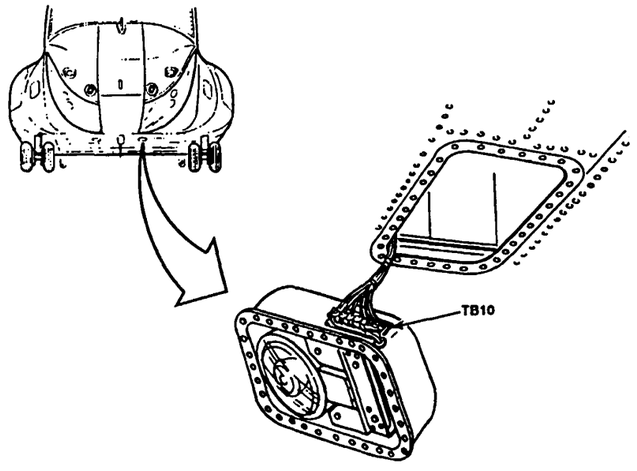
Materials:
None

Personnel Required:
Aircraft Electrician (2)

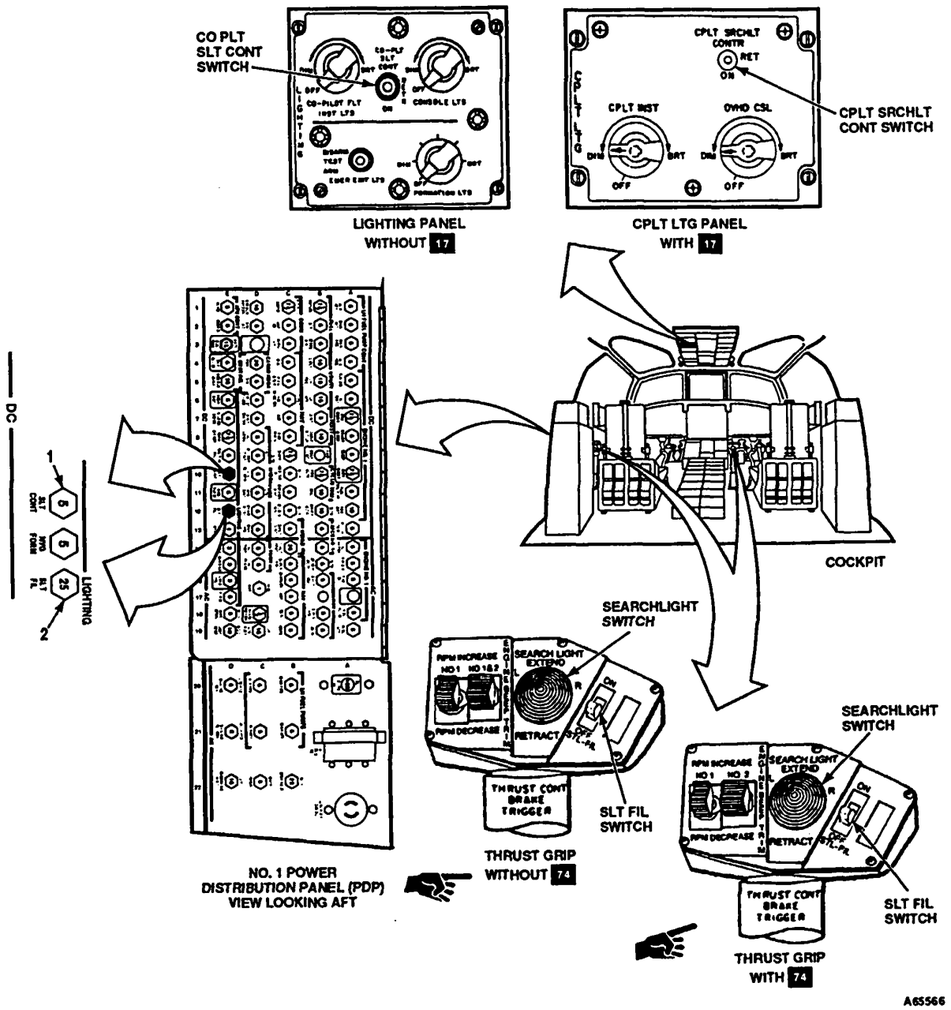
References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off



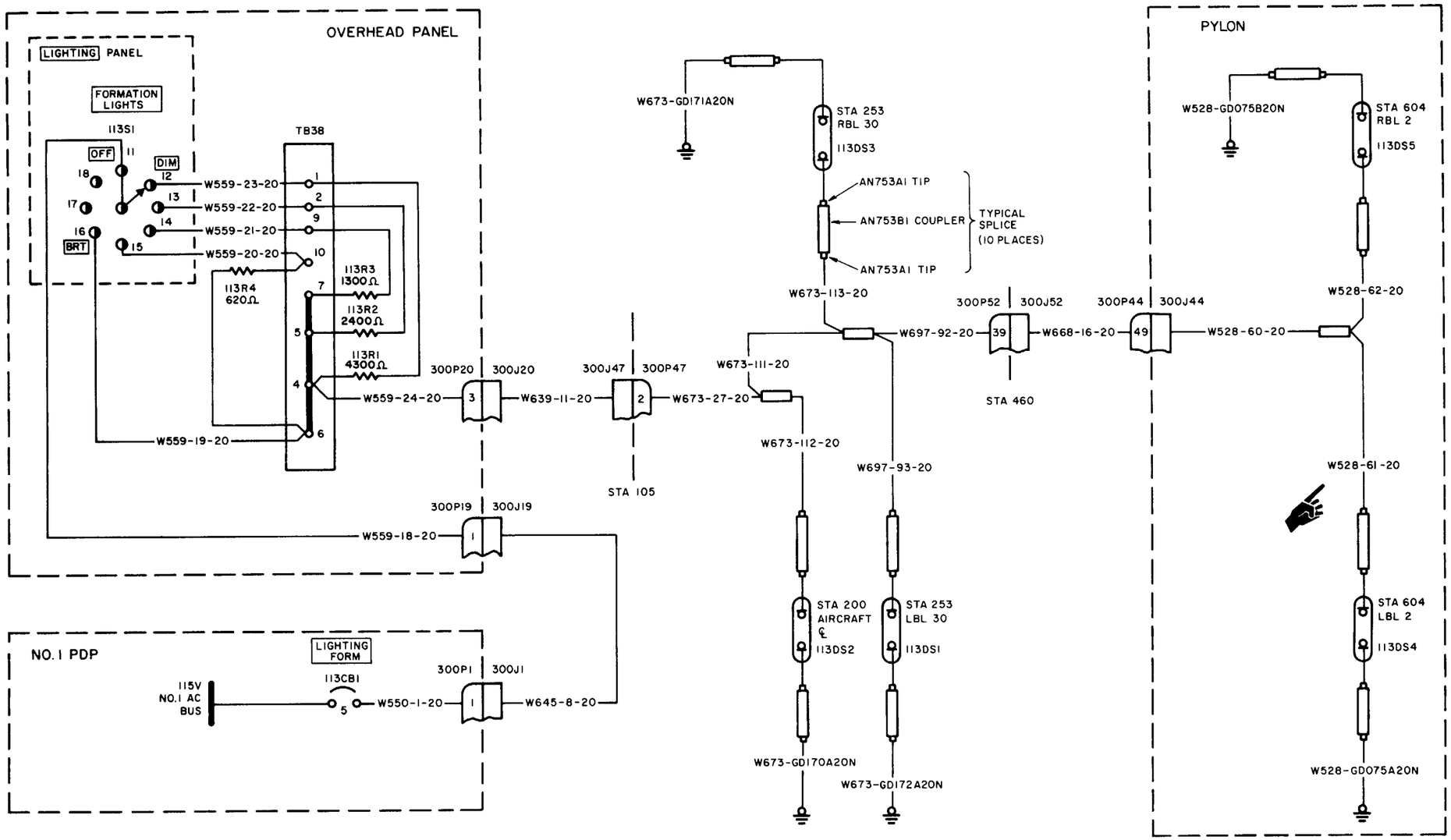


COPILOT'S LANDING LIGHT



END OF TASK

9-5 FORMATION LIGHTS


OVERHEAD PANEL
LIGHTING PANEL
FORMATION LIGHTS
113S1
OFF
DIM
BRT
TB38
W559-23-20
W559-22-20
W559-21-20
W559-20-20
113R4 620Ω
113R3 1300Ω
113R2 2400Ω
113R1 4300Ω
W559-19-20
W559-24-20
300P20
300J20
W639-11-20
300J47
300P47
W673-27-20
W673-111-20
W673-112-20
STA 105
300P19
300J19
W559-18-20
NO. 1 PDP
LIGHTING FORM
113CB1
115V NO. 1 AC BUS
300P1
300J1
W550-1-20
W645-8-20
W673-GD171A20N
STA 253 RBL 30
113DS3
AN753A1 TIP
AN753B1 COUPLER
TYPICAL SPLICE (10 PLACES)
AN753A1 TIP
W673-113-20
W697-92-20
300P52
300J52
STA 460
W697-93-20
STA 200 AIRCRAFT
113DS2
STA 253 LBL 30
113DS1
W673-GD170A20N
W673-GD172A20N
PYLON
W528-GD075B20N
STA 604 RBL 2
113DS5
W528-62-20
300P44
300J44
W668-16-20
W528-60-20
W528-61-20
STA 604 LBL 2
113DS4
W528-GD075A20N
113.100
11982

9-5.2 FORMATION LIGHTS VISUAL CHECK

INITIAL SETUP

Applicable Configurations:
Without 17

Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915

Materials:
None

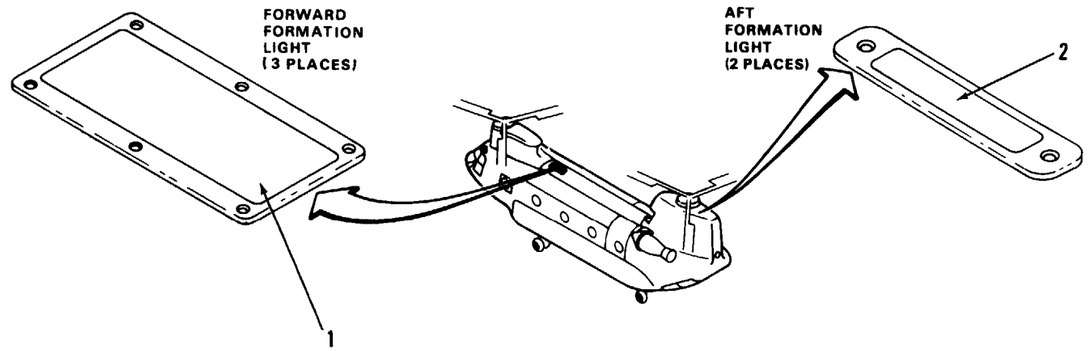
Personnel Required:
Aircraft Electrician

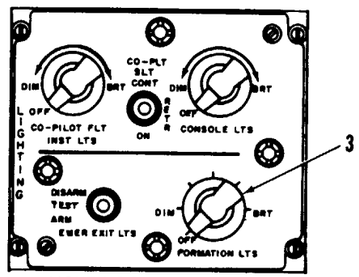
References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off

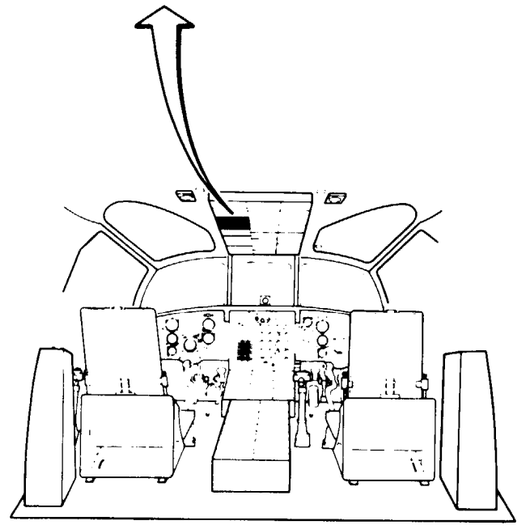
TASK	RESULT
1. Check three forward formation lights (1).	If any light (1) is loose, cracked, or burnt, tighten or replace it as required. **NOTE** Slight discoloration of light face is normal.
2. Check two aft formation lights (2).	If any light (2) is loose, cracked, or burnt, tighten or replace it as required.
3. Check FORMATION LTS control (3).	If control (3) is loose or damaged, tighten or replace it as required.

FOLLOW-ON MAINTENANCE:
None





LIGHTING PANEL



COCKPIT

D145-3140-SPA

END OF TASK

9-5.3 FORMATION LIGHTS OPERATIONAL CHECK

INITIAL SETUP

Applicable Configurations:
Without 17

Tools:
None

Materials:
None

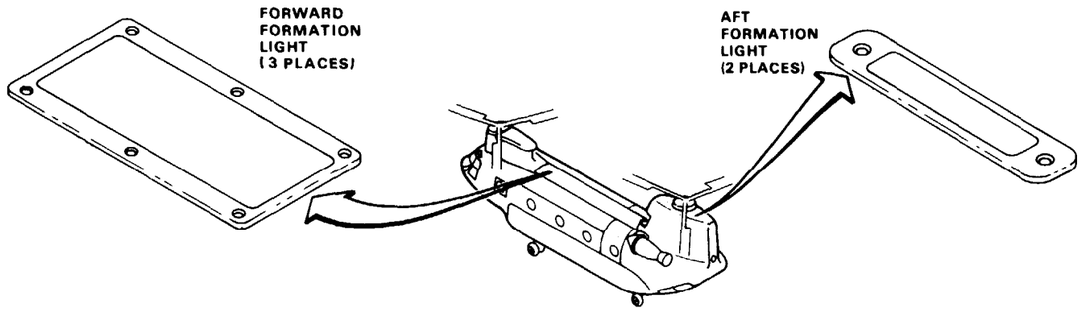
Personnel Required:
Aircraft Electrician (2)

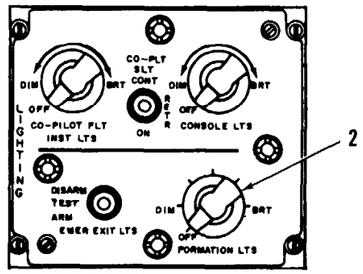
References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off
Visual Check of Formation Lights Performed (Task 9-5.2)

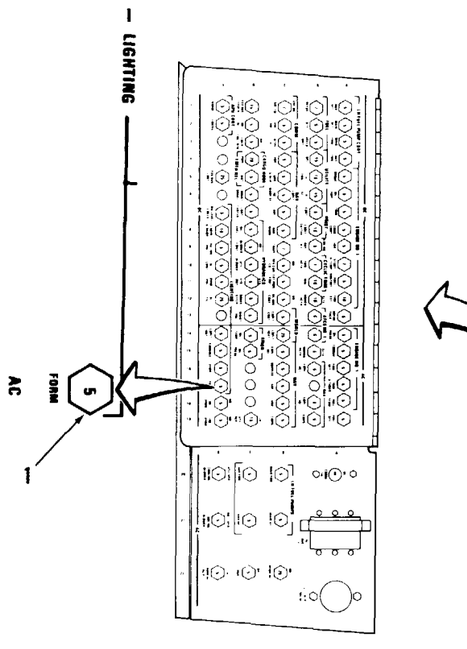
TASK	RESULT
1. **Check** that **LIGHTING FORM circuit breaker (1)** is closed.	If FORM circuit breaker (1) is open, close it. If it opens again, go to task 9-5.4.
2. **Set FORMATION LTS switch (2) to DIM.**	Five formation lights shall come on dim. If any light is not on, go to task 9-5.5.
3. **Rotate FORMATION LTS switch (2) through intermediate positions to BRT.**	Five formation lights shall get brighter as switch is turned to right. If lights go out or brightness does not increase, go to task 9-5.6.
4. Set FORMATION LTS switch (2) to OFF.	Five formation lights shall go out.

FOLLOW-ON MAINTENANCE:
TM 55-1520-240-23:
Electrical Power Off
Battery Disconnected

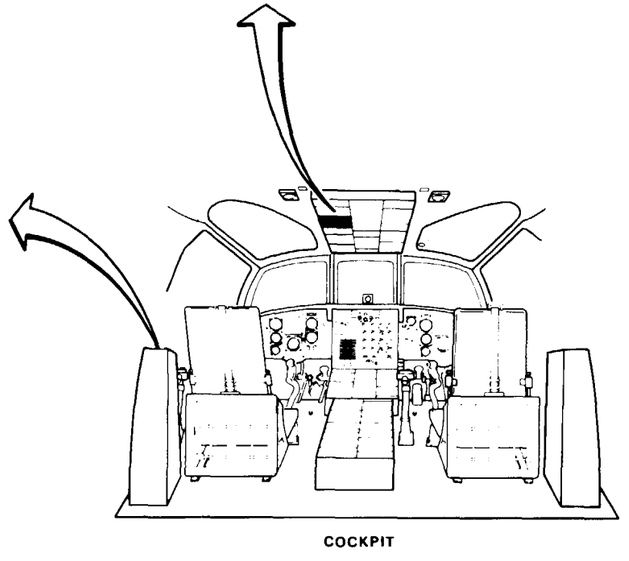




LIGHTING PANEL



NO. 1 POWER DISTRIBUTION PANEL (PDP)
VIEW LOOKING
AFT


COCKPIT

0145 3141-SPA

END OF TASK

9-5.4 FORM CIRCUIT BREAKER DOES NOT STAY CLOSED 9-5.4

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
Without 17

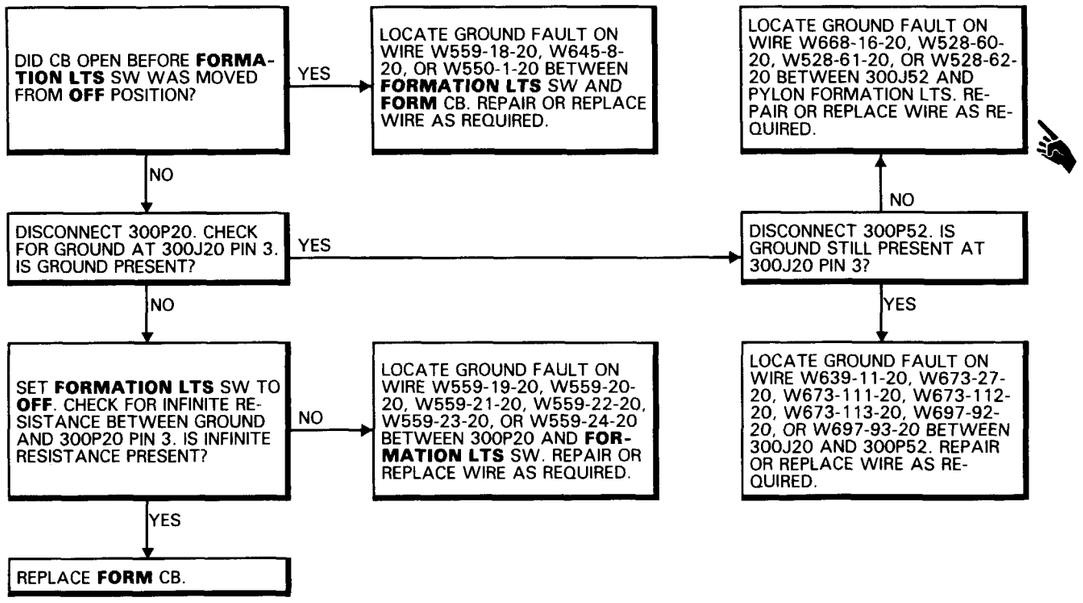
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

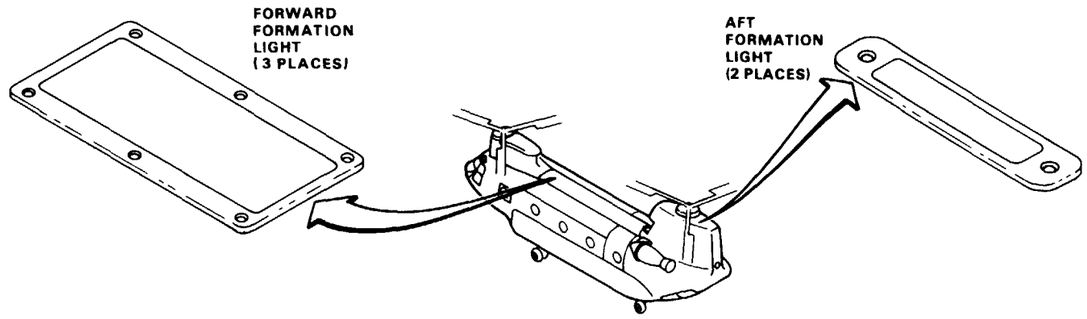
Materials:
None

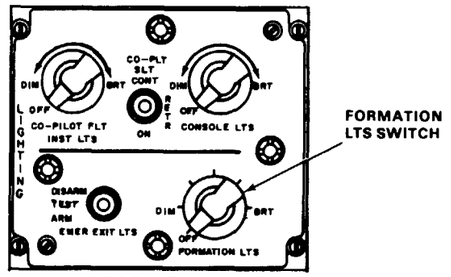
Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off

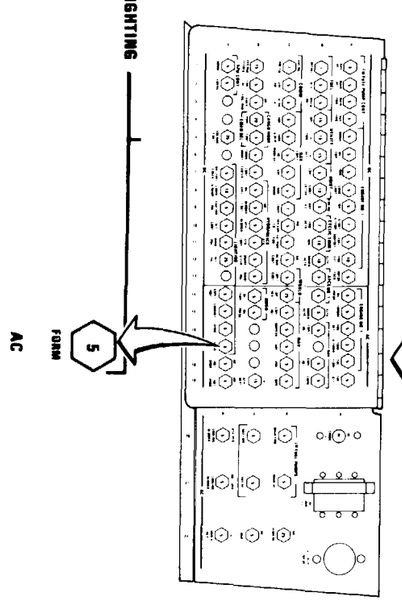




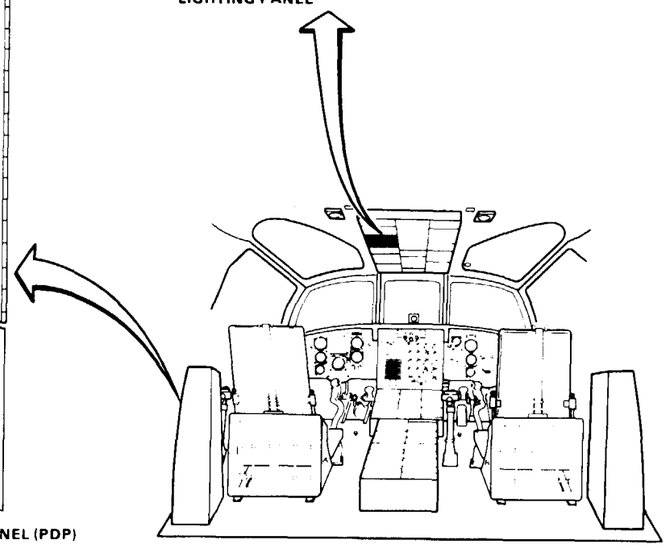


FORMATION LTS SWITCH

LIGHTING PANEL



NO. 1 POWER DISTRIBUTION PANEL (PDP) VIEW LOOKING AFT



COCKPIT

D145-3142-SPA

END OF TASK

9-5.5 FORMATION LIGHT OR LIGHTS NOT ON AT DIM

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
Withou 17

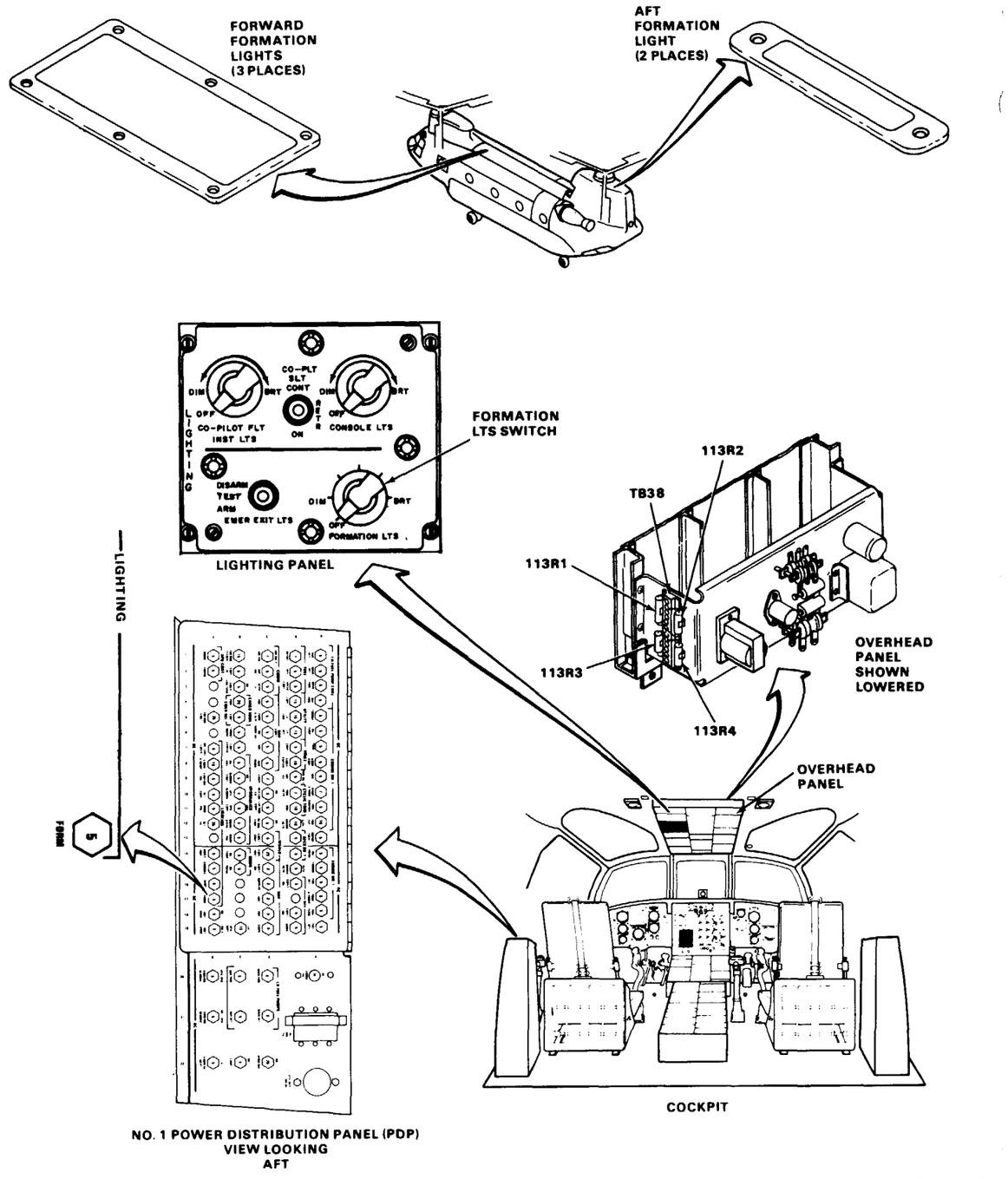
Tools:
Electrical Repairer's Tool Kit, NSN 5180-00-323-4915
Multimeter

Materials:
None

Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

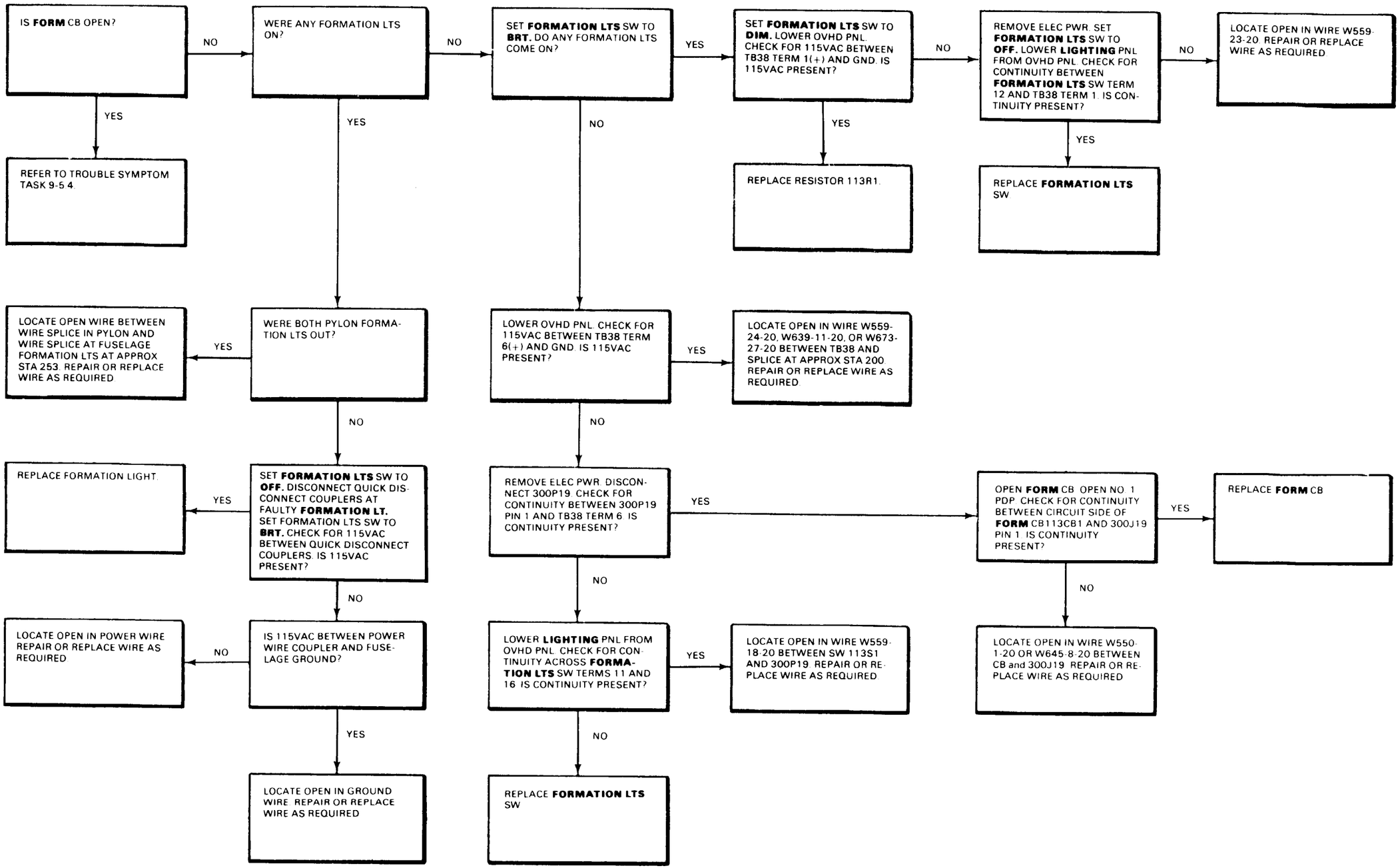
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off



DI45-3143-SPA

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9-5.5 FORMATION LIGHT OR LIGHTS NOT ON AT DIM (Continued)



END OF TASK

9-5.6 FORMATION LIGHTS OUT OR DO NOT GET BRIGHTER AT INTERMEDIATE OR BRT POSITIONS

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:

Without 17

Tools:

Electrical Repairer's Tool Kit, NSN 5180-00-323-4915

Multimeter

Materials:

None

Personnel Required:

Aircraft Electrician (2)

References:

TM 55-1520-240-23

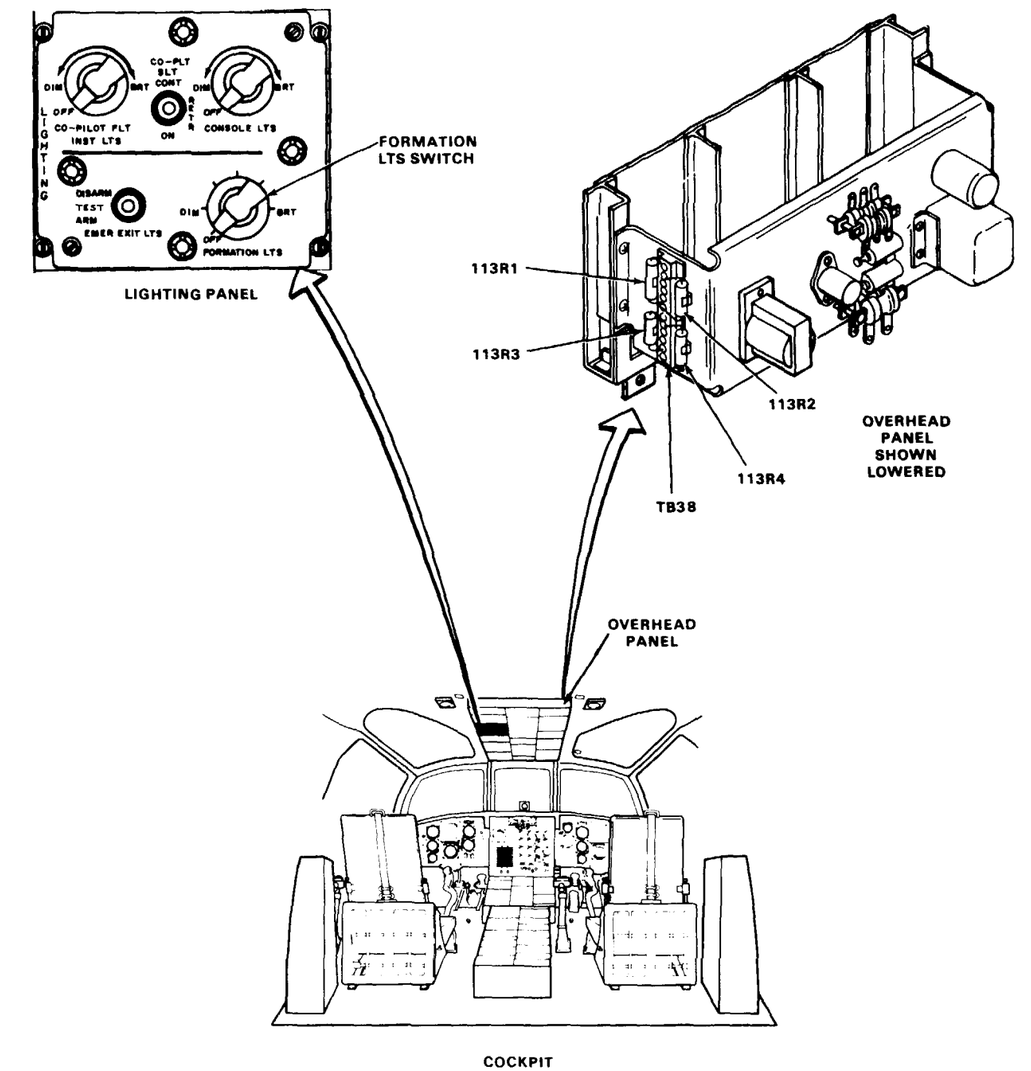
Equipment Condition:

TM 55-1520-240-23:

Battery Connected

Electrical Power On

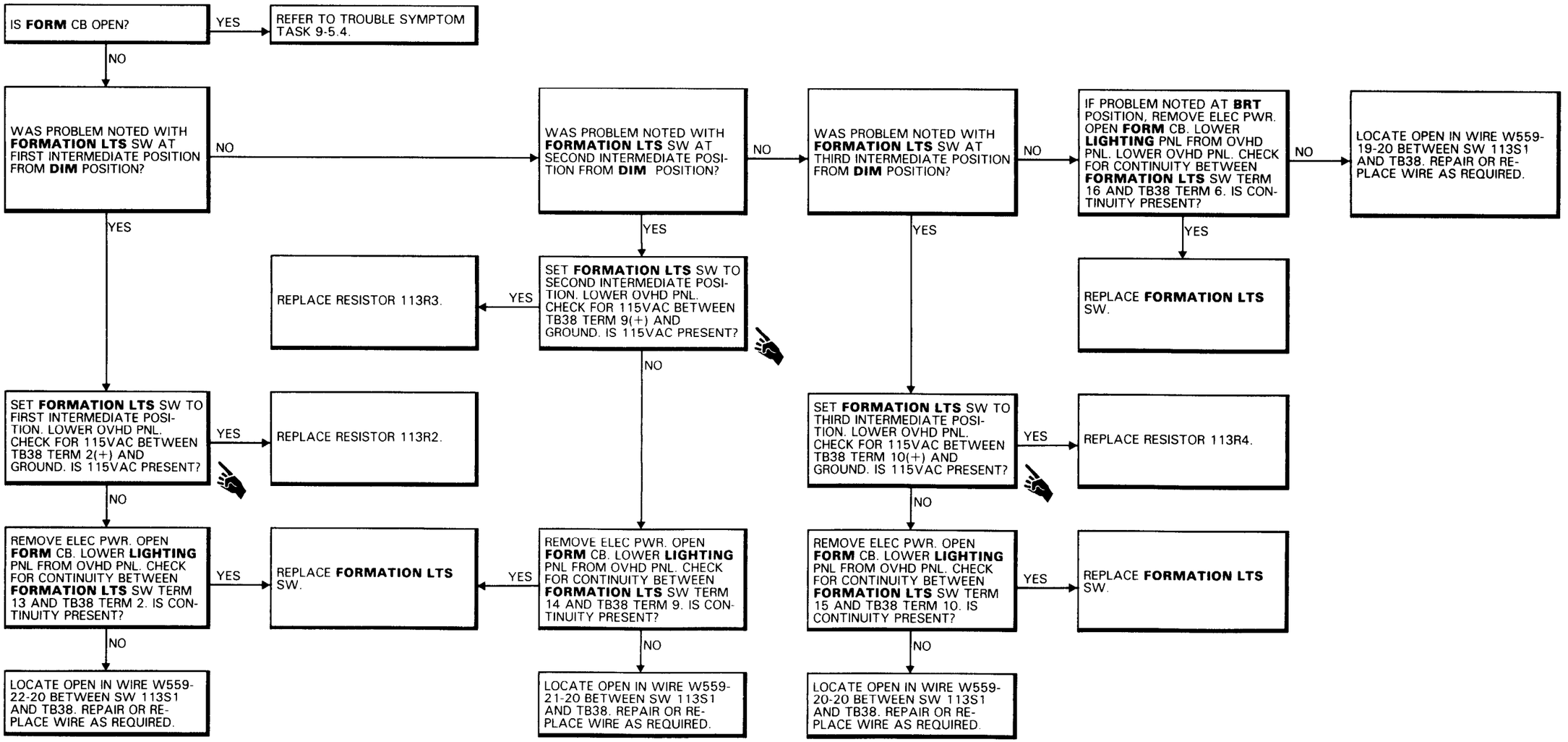
Hydraulic Power Off



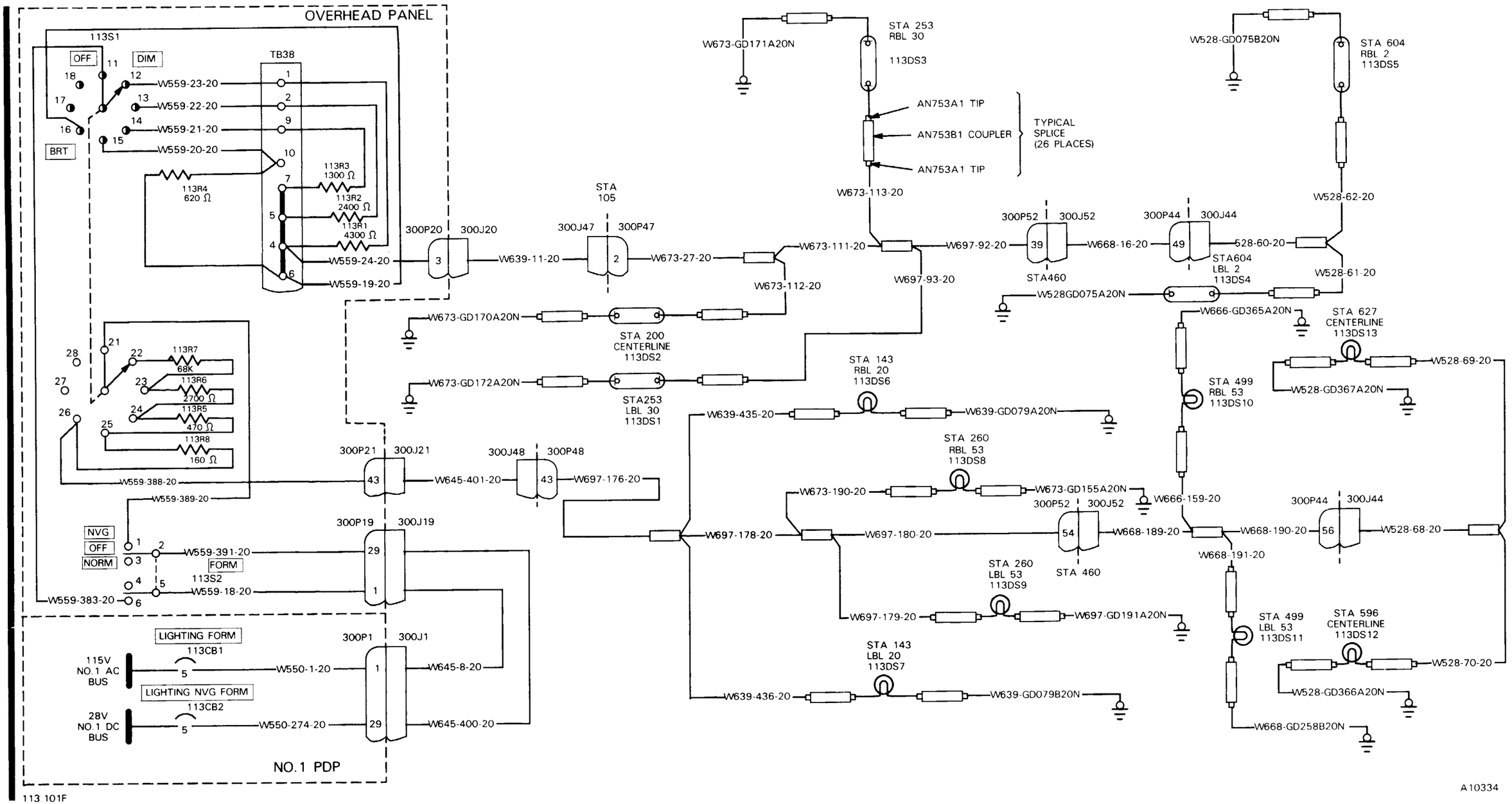
D145-3144-SPA

GO TO NEXT PAGE

9-5.6 FORMATION LIGHTS OUT OR DO NOT GET BRIGHTER AT INTERMEDIATE OR BRT POSITIONS (Continued)



END OF TASK


OVERHEAD PANEL
113S1
OFF
DIM
BRT
TB38
W559-23-20
W559-22-20
W559-21-20
W559-20-20
113R4 620 Ω
113R3 1300 Ω
113R2 2400 Ω
113R1 4300 Ω
W559-24-20
W559-19-20
300P20
300J20
W639-11-20
STA 105
300J47
300P47
W673-27-20
W673-111-20
W673-112-20
W673-GD171A20N
STA 253 RBL 30 113DS3
AN753A1 TIP
AN753B1 COUPLER
AN753A1 TIP
TYPICAL SPLICE (26 PLACES)
W673-113-20
W697-92-20
300P52
300J52
39
W668-16-20
STA460
W697-93-20
W673-GD170A20N
STA 200 CENTERLINE 113DS2
W673-GD172A20N
STA253 LBL 30 113DS1
STA 143 RBL 20 113DS6
W639-435-20
W639-GD079A20N
W528-GD075B20N
STA 604 RBL 2 113DS5
W528-62-20
300P44
300J44
49
528-60-20
STA604 LBL 2 113DS4
W528-61-20
W528GD075A20N
W666-GD365A20N
STA 627 CENTERLINE 113DS13
W528-69-20
W528-GD367A20N
STA 499 RBL 53 113DS10
113R7 68K
113R6 2700 Ω
113R5 470 Ω
113R8 160 Ω
W559-388-20
W559-389-20
300P21
300J21
43
W645-401-20
300J48
300P48
43
W697-176-20
STA 260 RBL 53 113DS8
W673-190-20
W673-GD155A20N
W666-159-20
300P52
300J52
54
STA 460
W668-189-20
W668-190-20
300P44
300J44
56
W528-68-20
W668-191-20
W697-178-20
W697-180-20
STA 260 LBL 53 113DS9
W697-179-20
W697-GD191A20N
STA 499 LBL 53 113DS11
STA 596 CENTERLINE 113DS12
W528-70-20
W528-GD366A20N
W668-GD258B20N
STA 143 LBL 20 113DS7
W639-436-20
W639-GD079B20N
NVG
OFF
NORM
W559-391-20
FORM
113S2
W559-18-20
W559-383-20
300P19
300J19
29
1
LIGHTING FORM
113CB1
115V NO.1 AC BUS
W550-1-20
300P1
300J1
W645-8-20
LIGHTING NVG FORM
113CB2
28V NO.1 DC BUS
W550-274-20
W645-400-20
NO.1 PDP
113 101F
A10334

END OF TASK

9-5.8 FORMATION LIGHTS VISUAL CHECK (WITH 17)

INITIAL SETUP

Applicable Configurations:
With 17

Tools:
Electrical Repairer's Tool Kit, NSN 5180-00-323-4915

Materials:
None

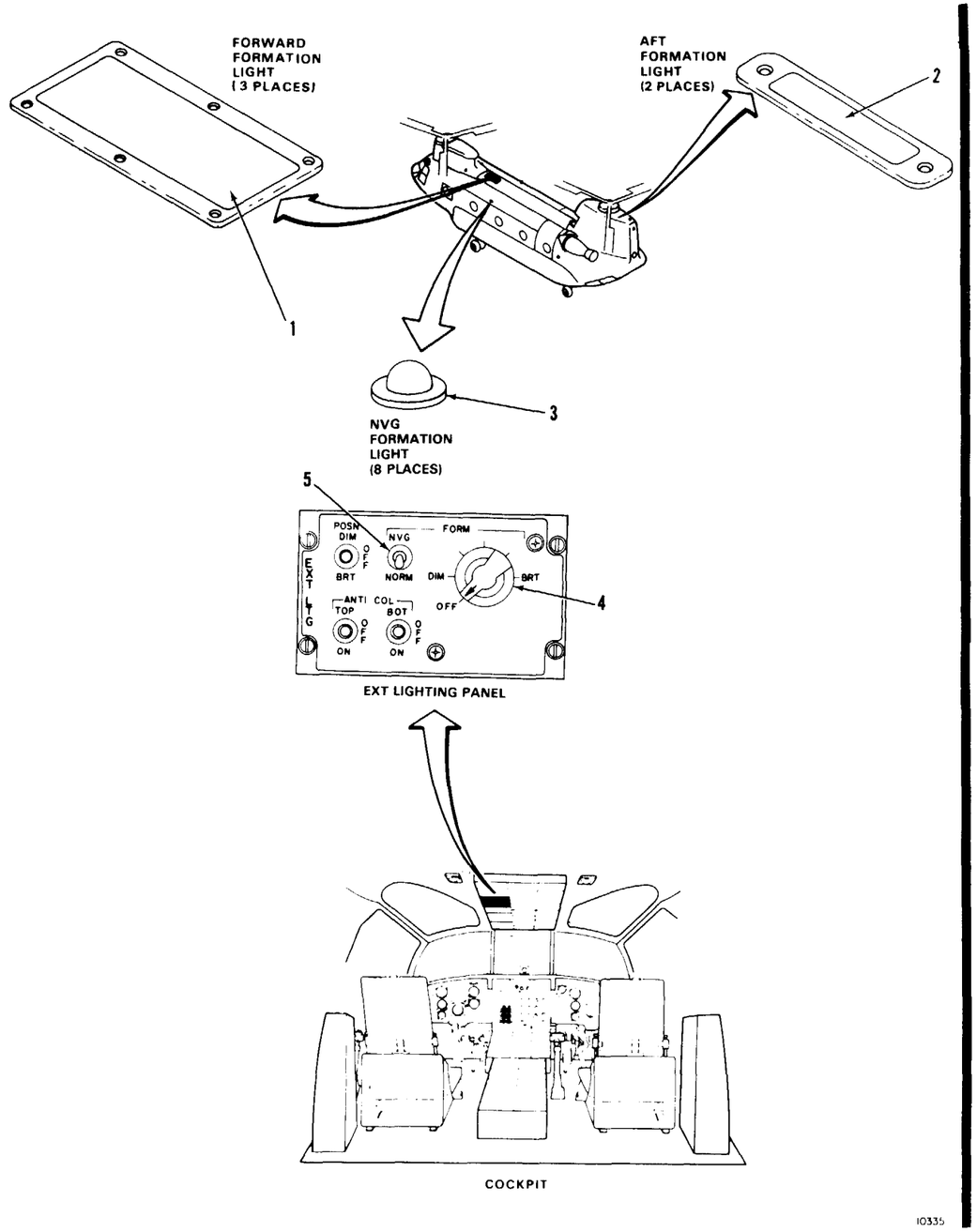
Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off

TASK	RESULT
1. Check three forward normal formation lights (1).	If any light (1) is loose, cracked, or burnt, tighten or replace it as required. **NOTE** **Slight discoloration of light face is normal.**
2. Check two aft normal formation lights (2).	If any light (2) is loose, cracked, or burnt, tighten or replace it as required.
3. Check eight NVG formation lights (3).	If any light (3) is loose, cracked, or burnt, tighten or replace it as required.
4. Check FORM LTS control (4).	If control (4) is loose or damaged, tighten or replace it as required.
5. Check FORM NVG-NORM switch (5).	If switch (5) is loose or damaged, tighten or replace it as required.

FOLLOW-ON MAINTENANCE:
None



END OF TASK

9-5.9 FORMATION LIGHTS OPERATIONAL CHECK (WITH 17)

INITIAL SETUP

Applicable Configurations:
With 17

Tools:
Night Vision Goggles AN/AVS-6 or AN/PVS-5A with Daylight Filter Installed

Materials:
None

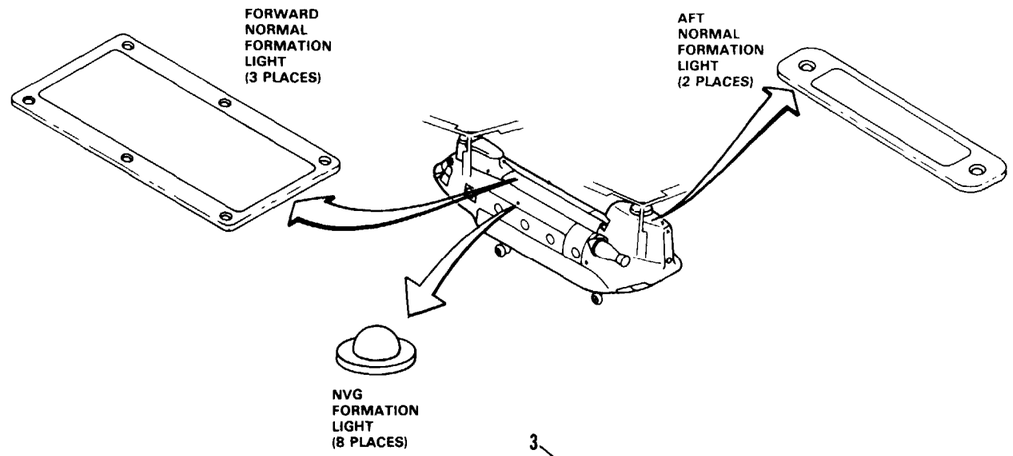
Personnel Required:
Aircraft Electrician (2)

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off
VisualCheck of Formation Lights With 17 Performed (Task 9-5.8)

TASK	RESULT
1. **Check** that **LIGHTING FORM circuit breaker (1)** is closed.	If FORM circuit breaker (1) is open, close it. If it opens again, go to task 9-5,10.
2. **Check that LIGHTING NVG FORM circuit breaker (2)** is closed.	If LIGHTING NVG FORM circuit breaker (2) is open, close it. If it opens again, go to task 9-5.11.
3. **Set FORM NVG-NORM switch (3) to NORM.**	
4. **Set FORM BRT-DIM switch (4) to DIM.**	Five normal formation lights shall come on dim. If any light is not on, go to task 9-5.12.
5. **Rotate FORM BRT-DIM switch (4) through intermediate positions to BRT.**	Five normal formation lights shall get brighter as switch is turned clockwise. If lights go out or brightness does not increase; go to task 9-5.13.
6. **Set FORM BRT-DIM switch (4) to DIM. Set FORM NVG-NORM switch (3) to NVG.** Use night vision goggles to view NVG formation lights. During daylight hours shield ambient light.	Eight NVG formation lights shall come on dim. If any light is not on, go to task 9-5.14.
7. **Rotate FORM BRT-DIM switch (4) through intermediate positions to BRT.**	Eight NVG formation lights shall get brighter as switch is turned clockwise. If lights go out or brightness does not increase, go to task 9-5.15.
8. **Rotate FORM BRT-DIM switch (4) to OFF.**	

FOLLOW-ON MAINTENANCE:
TM 55-1520-240-23:
Electrical Power Off
Battery Disconnected



10336

END OF TASK

9-5.10 FORM CIRCUIT BREAKER DOES NOT STAY CLOSED (WITH 17) 9-5.10

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
With 17

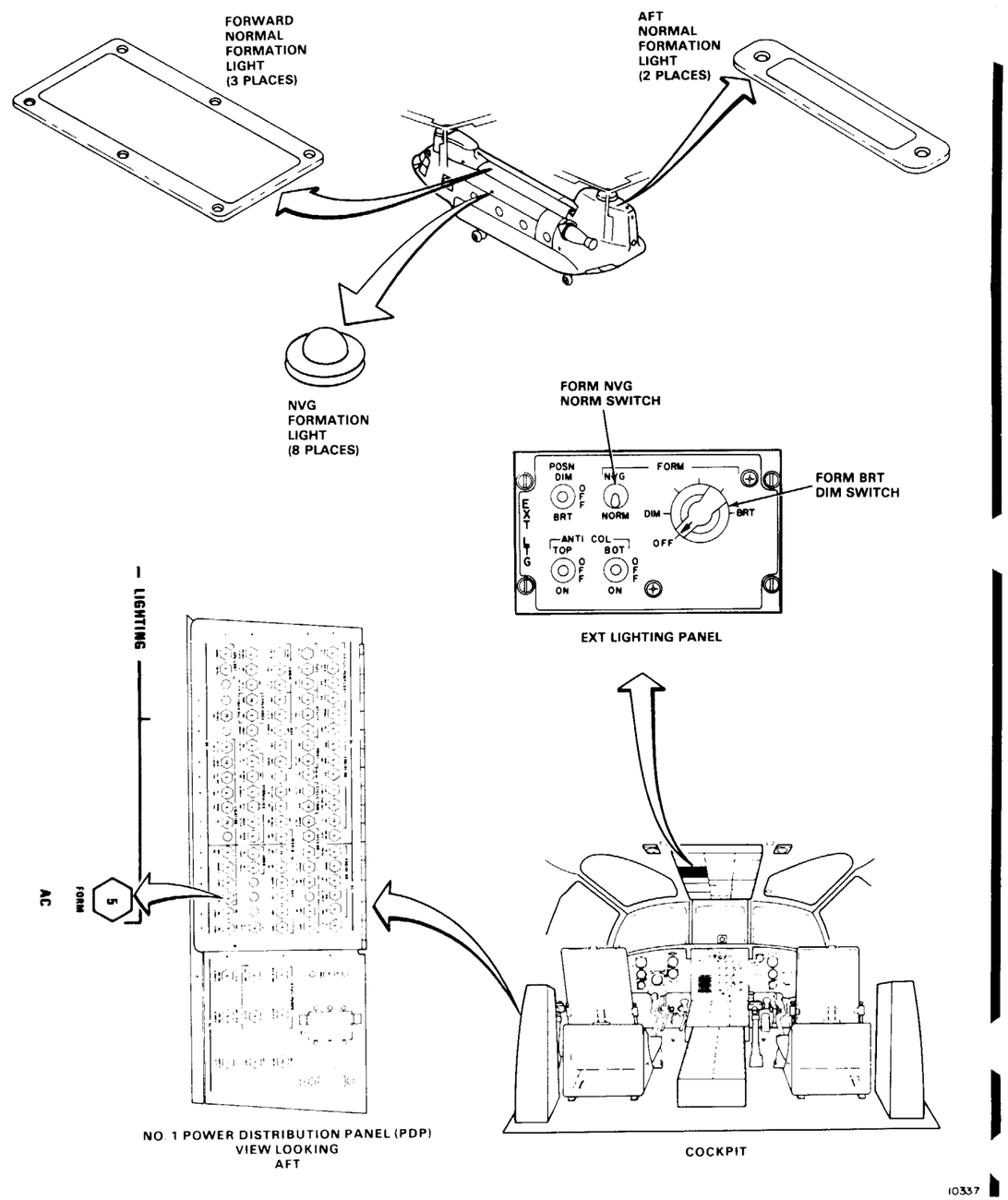
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:
None

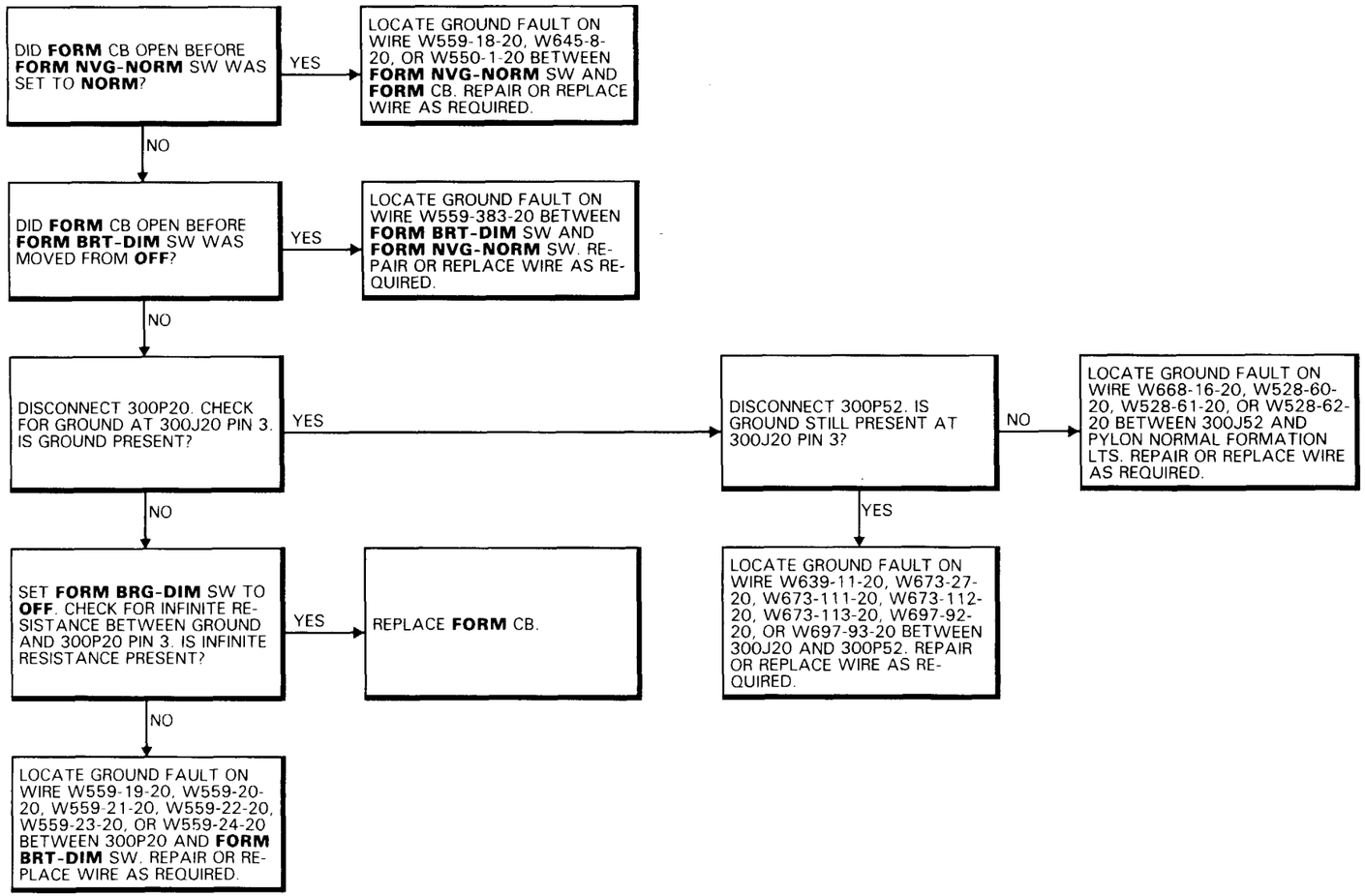
Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off



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DID **FORM** CB OPEN BEFORE **FORM NVG-NORM** SW WAS SET TO **NORM**?
YES
LOCATE GROUND FAULT ON WIRE W559-18-20, W645-8-20, OR W550-1-20 BETWEEN **FORM NVG-NORM** SW AND **FORM** CB. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
DID **FORM** CB OPEN BEFORE **FORM BRT-DIM** SW WAS MOVED FROM **OFF**?
YES
LOCATE GROUND FAULT ON WIRE W559-383-20 BETWEEN **FORM BRT-DIM** SW AND **FORM NVG-NORM** SW. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
DISCONNECT 300P20. CHECK FOR GROUND AT 300J20 PIN 3. IS GROUND PRESENT?
YES
DISCONNECT 300P52. IS GROUND STILL PRESENT AT 300J20 PIN 3?
NO
LOCATE GROUND FAULT ON WIRE W668-16-20, W528-60-20, W528-61-20, OR W528-62-20 BETWEEN 300J52 AND PYLON NORMAL FORMATION LTS. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
LOCATE GROUND FAULT ON WIRE W639-11-20, W673-27-20, W673-111-20, W673-112-20, W673-113-20, W697-92-20, OR W697-93-20 BETWEEN 300J20 AND 300P52. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
SET **FORM BRG-DIM** SW TO **OFF**. CHECK FOR INFINITE RESISTANCE BETWEEN GROUND AND 300P20 PIN 3. IS INFINITE RESISTANCE PRESENT?
YES
REPLACE **FORM** CB.
NO
LOCATE GROUND FAULT ON WIRE W559-19-20, W559-20-20, W559-21-20, W559-22-20, W559-23-20, OR W559-24-20 BETWEEN 300P20 AND **FORM BRT-DIM** SW. REPAIR OR REPLACE WIRE AS REQUIRED.

END OF TASK

9-5.11 NVG FORM CIRCUIT BREAKER DOES NOT STAY CLOSED (WITH 17)

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
with 17

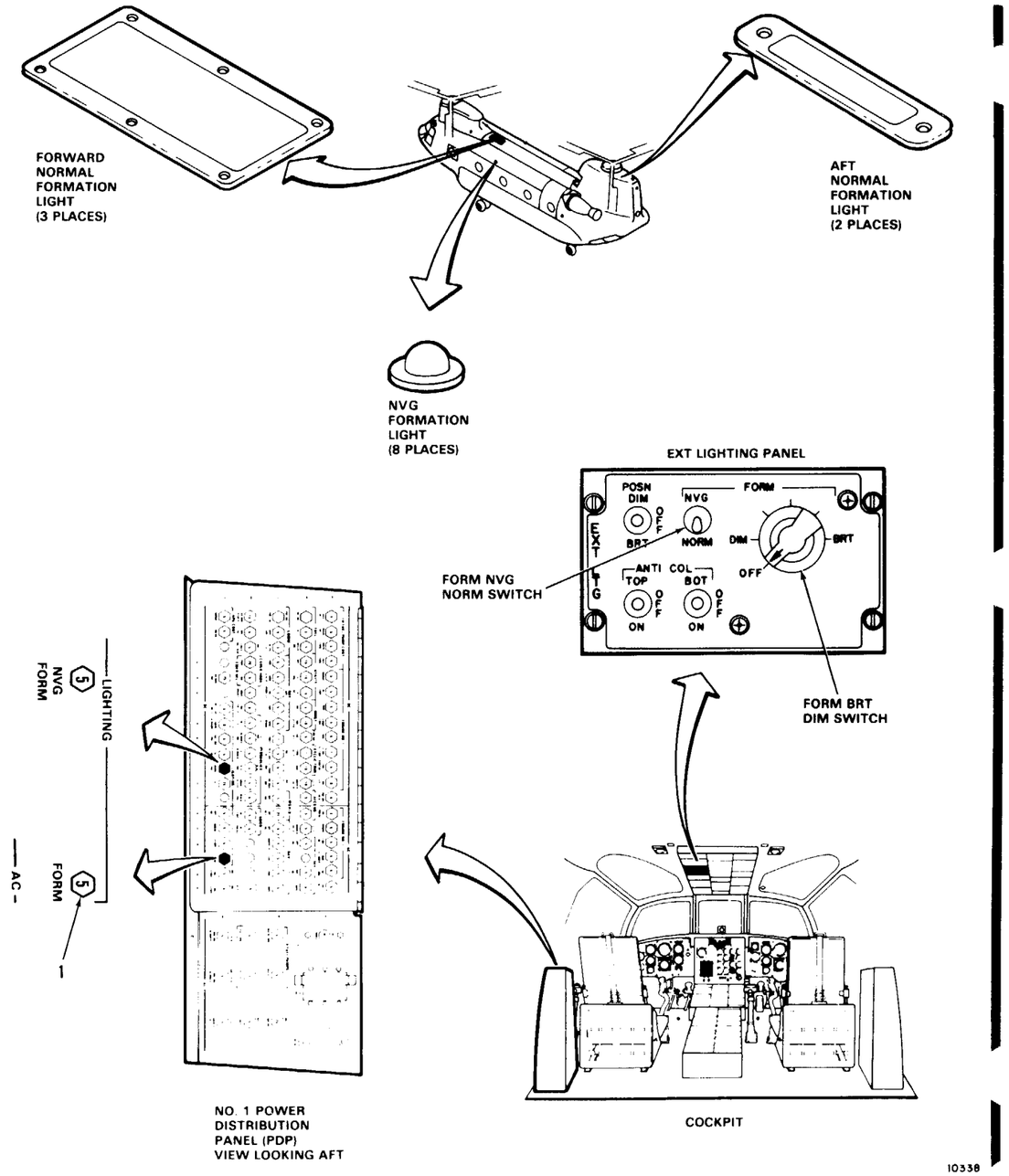
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:
None

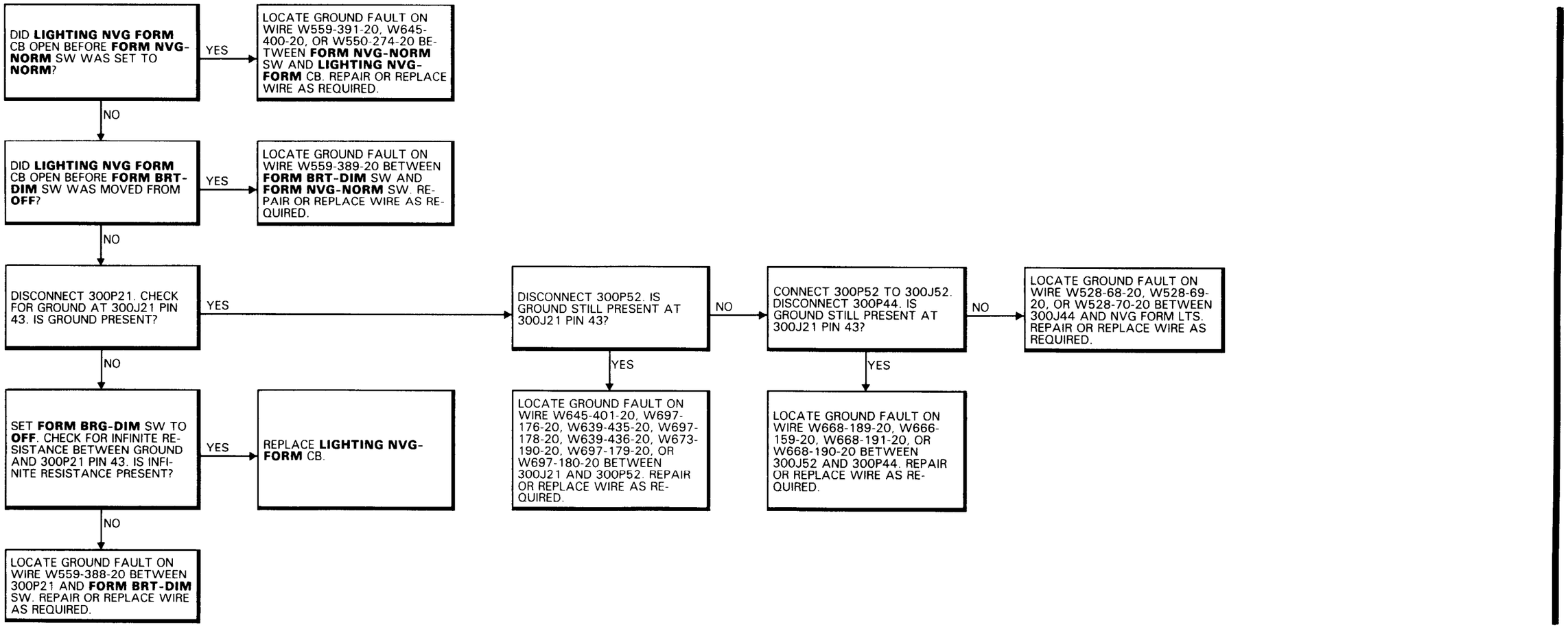
Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off



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DID **LIGHTING NVG FORM** CB OPEN BEFORE **FORM NVG-NORM** SW WAS SET TO **NORM**?
YES
LOCATE GROUND FAULT ON WIRE W559-391-20, W645-400-20, OR W550-274-20 BETWEEN **FORM NVG-NORM** SW AND **LIGHTING NVG-FORM** CB. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
DID **LIGHTING NVG FORM** CB OPEN BEFORE **FORM BRT-DIM** SW WAS MOVED FROM **OFF**?
YES
LOCATE GROUND FAULT ON WIRE W559-389-20 BETWEEN **FORM BRT-DIM** SW AND **FORM NVG-NORM** SW. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
DISCONNECT 300P21. CHECK FOR GROUND AT 300J21 PIN 43. IS GROUND PRESENT?
YES
DISCONNECT 300P52. IS GROUND STILL PRESENT AT 300J21 PIN 43?
NO
CONNECT 300P52 TO 300J52. DISCONNECT 300P44. IS GROUND STILL PRESENT AT 300J21 PIN 43?
NO
LOCATE GROUND FAULT ON WIRE W528-68-20, W528-69-20, OR W528-70-20 BETWEEN 300J44 AND NVG FORM LTS. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
LOCATE GROUND FAULT ON WIRE W668-189-20, W666-159-20, W668-191-20, OR W668-190-20 BETWEEN 300J52 AND 300P44. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
LOCATE GROUND FAULT ON WIRE W645-401-20, W697-176-20, W639-435-20, W697-178-20, W639-436-20, W673-190-20, W697-179-20, OR W697-180-20 BETWEEN 300J21 AND 300P52. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
SET **FORM BRG-DIM** SW TO **OFF**. CHECK FOR INFINITE RESISTANCE BETWEEN GROUND AND 300P21 PIN 43. IS INFINITE RESISTANCE PRESENT?
YES
REPLACE **LIGHTING NVG-FORM** CB.
NO
LOCATE GROUND FAULT ON WIRE W559-388-20 BETWEEN 300P21 AND **FORM BRT-DIM** SW. REPAIR OR REPLACE WIRE AS REQUIRED.

END OF TASK

9-5.12 NORMAL FORMATION LIGHT OR LIGHTS NOT ON AT DIM (WITH 17)

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
with 17

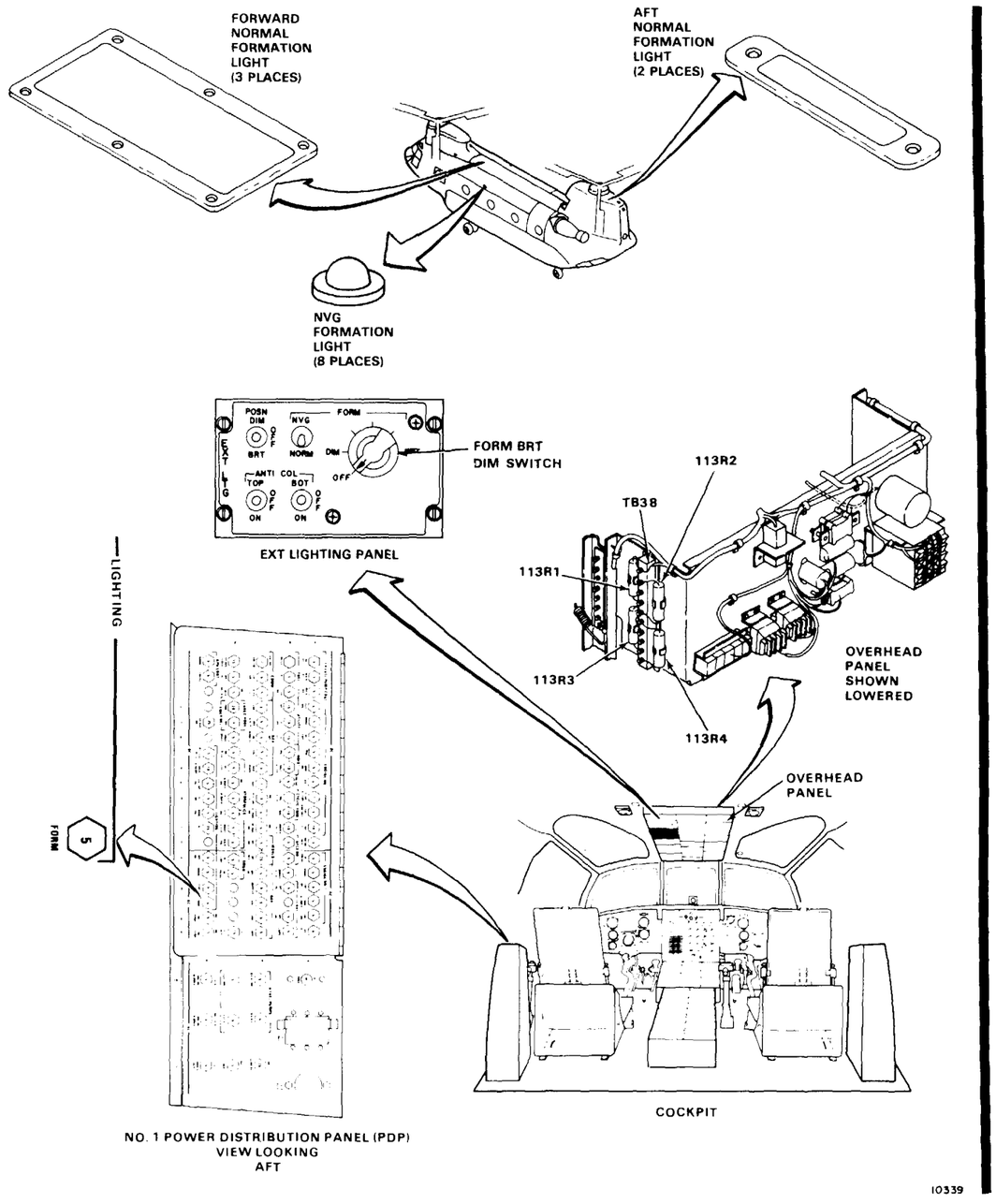
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:
None

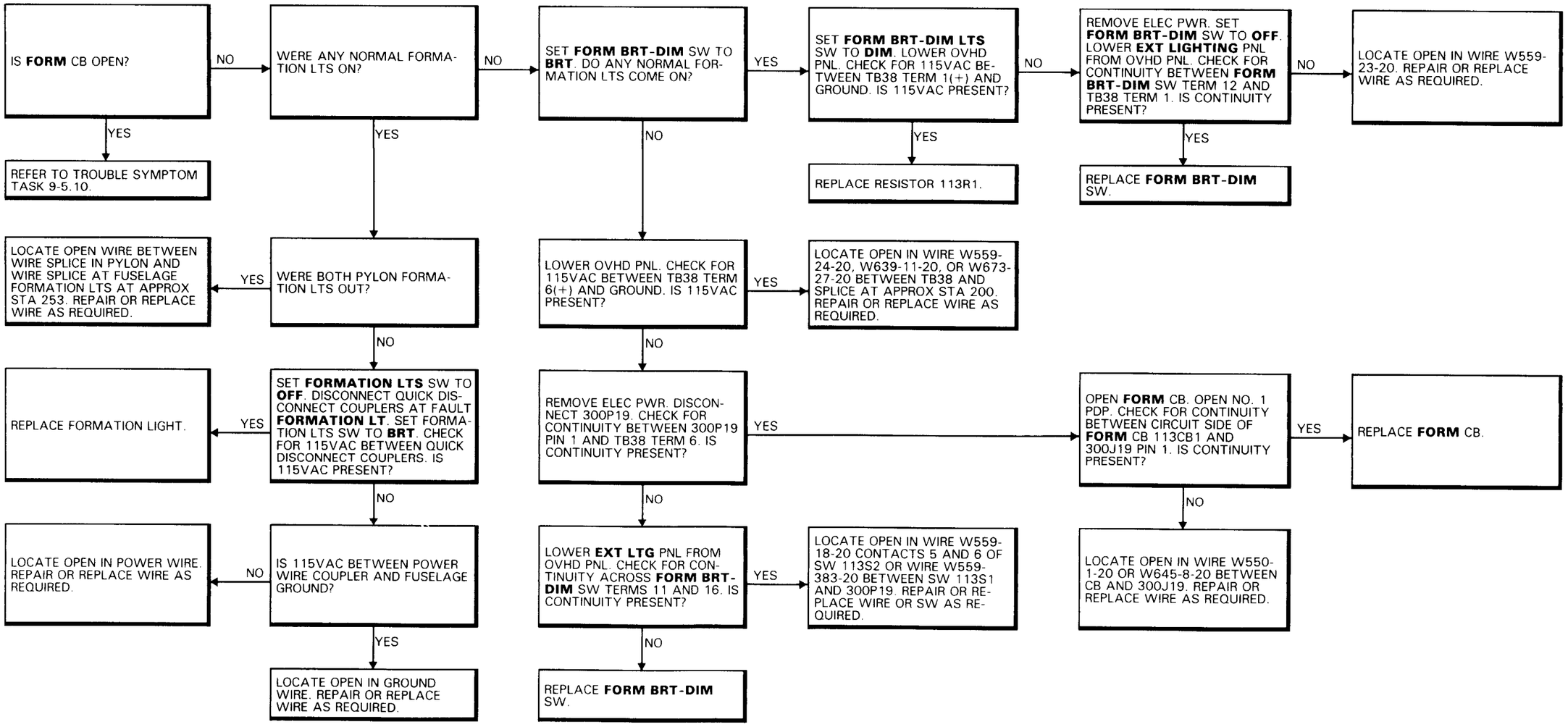
Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off



GO TO NEXT PAGE


IS **FORM** CB OPEN?
NO
WERE ANY NORMAL FORMATION LTS ON?
NO
SET **FORM BRT-DIM** SW TO **BRT**. DO ANY NORMAL FORMATION LTS COME ON?
YES
SET **FORM BRT-DIM LTS** SW TO **DIM**. LOWER OVHD PNL. CHECK FOR 115VAC BETWEEN TB38 TERM 1(+) AND GROUND. IS 115VAC PRESENT?
NO
REMOVE ELEC PWR. SET **FORM BRT-DIM** SW TO **OFF**. LOWER **EXT LIGHTING** PNL FROM OVHD PNL. CHECK FOR CONTINUITY BETWEEN **FORM BRT-DIM** SW TERM 12 AND TB38 TERM 1. IS CONTINUITY PRESENT?
NO
LOCATE OPEN IN WIRE W559-23-20. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
REFER TO TROUBLE SYMPTOM TASK 9-5.10.
YES
REPLACE RESISTOR 113R1.
YES
REPLACE **FORM BRT-DIM** SW.
YES
WERE BOTH PYLON FORMATION LTS OUT?
NO
LOWER OVHD PNL. CHECK FOR 115VAC BETWEEN TB38 TERM 6(+) AND GROUND. IS 115VAC PRESENT?
YES
LOCATE OPEN IN WIRE W559-24-20, W639-11-20, OR W673-27-20 BETWEEN TB38 AND SPLICE AT APPROX STA 200. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
LOCATE OPEN WIRE BETWEEN WIRE SPLICE IN PYLON AND WIRE SPLICE AT FUSELAGE FORMATION LTS AT APPROX STA 253. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
SET **FORMATION LTS** SW TO **OFF**. DISCONNECT QUICK DISCONNECT COUPLERS AT FAULT **FORMATION LT**. SET FORMATION LTS SW TO **BRT**. CHECK FOR 115VAC BETWEEN QUICK DISCONNECT COUPLERS. IS 115VAC PRESENT?
YES
REPLACE FORMATION LIGHT.
NO
REMOVE ELEC PWR. DISCONNECT 300P19. CHECK FOR CONTINUITY BETWEEN 300P19 PIN 1 AND TB38 TERM 6. IS CONTINUITY PRESENT?
YES
OPEN **FORM** CB. OPEN NO. 1 PDP. CHECK FOR CONTINUITY BETWEEN CIRCUIT SIDE OF **FORM** CB 113CB1 AND 300J19 PIN 1. IS CONTINUITY PRESENT?
YES
REPLACE **FORM** CB.
NO
LOCATE OPEN IN WIRE W550-1-20 OR W645-8-20 BETWEEN CB AND 300J19. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
IS 115VAC BETWEEN POWER WIRE COUPLER AND FUSELAGE GROUND?
NO
LOCATE OPEN IN POWER WIRE. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
LOCATE OPEN IN GROUND WIRE. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
LOWER **EXT LTG** PNL FROM OVHD PNL. CHECK FOR CONTINUITY ACROSS **FORM BRT-DIM** SW TERMS 11 AND 16. IS CONTINUITY PRESENT?
YES
LOCATE OPEN IN WIRE W559-18-20 CONTACTS 5 AND 6 OF SW 113S2 OR WIRE W559-383-20 BETWEEN SW 113S1 AND 300P19. REPAIR OR REPLACE WIRE OR SW AS REQUIRED.
NO
REPLACE **FORM BRT-DIM** SW.

END OF TASK

9-5.13 NORMAL FORMATION LIGHTS OUT OR DO NOT GET BRIGHTER AT INTERMEDIATE OR BRT POSITIONS (WITH 17)

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
With 17

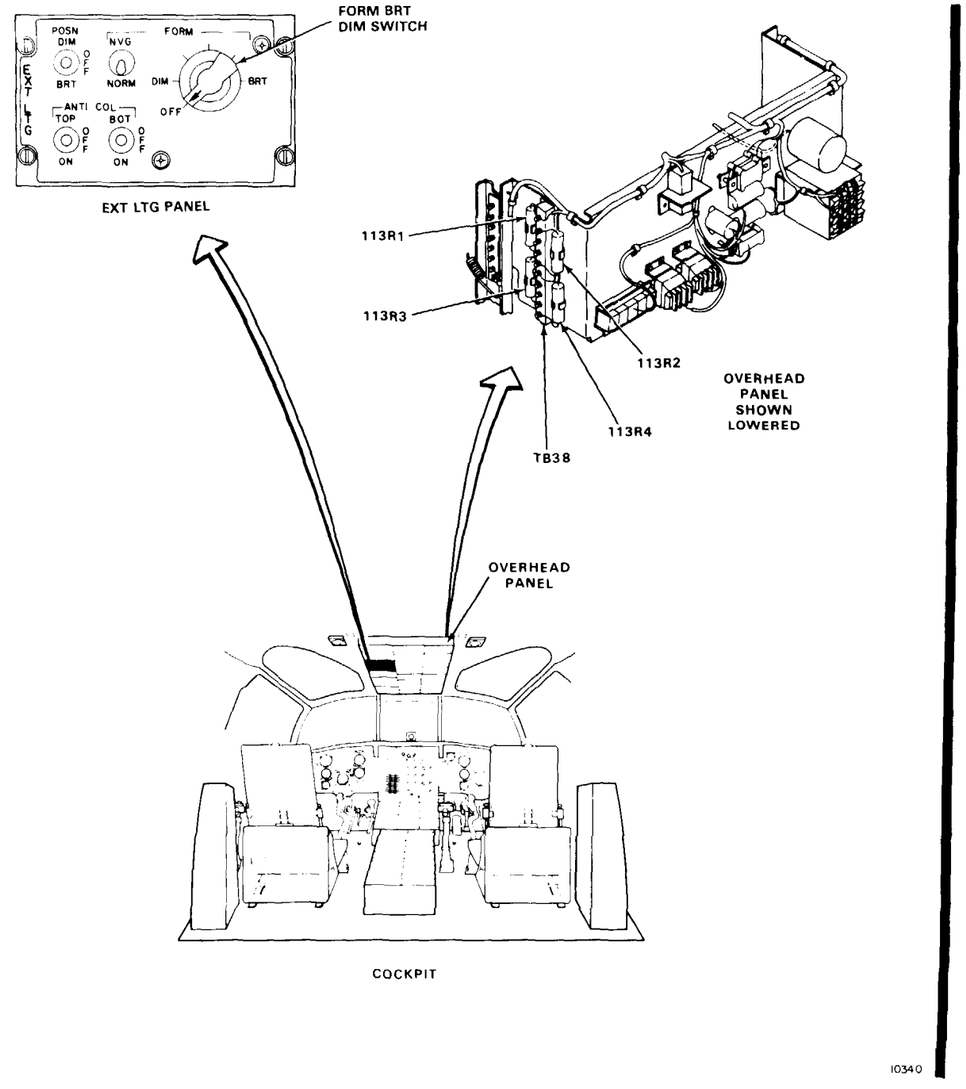
Tools:
Electrical Repairer's Tool Kit, NSN 5180-00-323-4915
Multimeter

Materials:
None

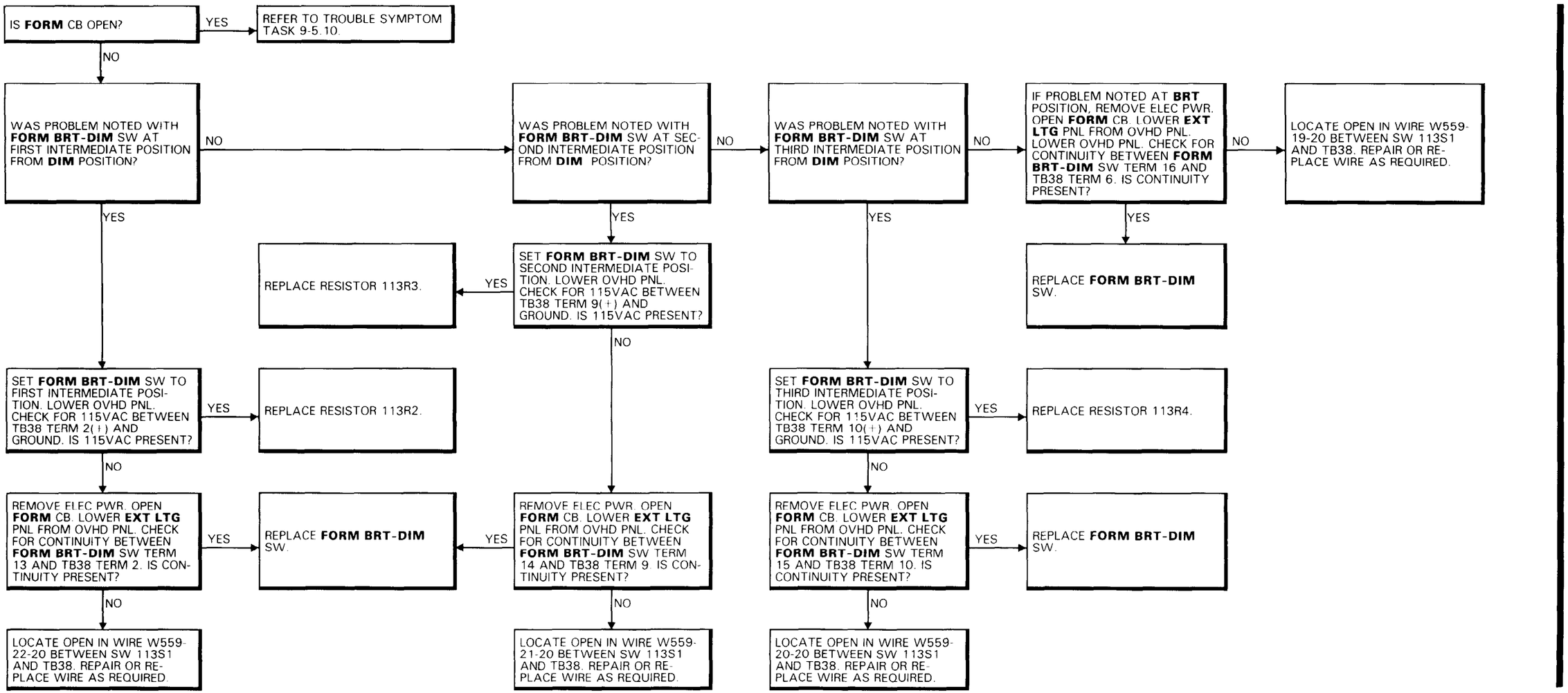
Personnel Required:
Aircraft Electriclan (2)

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off



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IS **FORM** CB OPEN?
YES
REFER TO TROUBLE SYMPTOM TASK 9-5.10.
NO
WAS PROBLEM NOTED WITH **FORM BRT-DIM** SW AT FIRST INTERMEDIATE POSITION FROM **DIM** POSITION?
NO
WAS PROBLEM NOTED WITH **FORM BRT-DIM** SW AT SECOND INTERMEDIATE POSITION FROM **DIM** POSITION?
NO
WAS PROBLEM NOTED WITH **FORM BRT-DIM** SW AT THIRD INTERMEDIATE POSITION FROM **DIM** POSITION?
NO
IF PROBLEM NOTED AT **BRT** POSITION, REMOVE ELEC PWR. OPEN **FORM** CB. LOWER **EXT LTG** PNL FROM OVHD PNL. LOWER OVHD PNL. CHECK FOR CONTINUITY BETWEEN **FORM BRT-DIM** SW TERM 16 AND TB38 TERM 6. IS CONTINUITY PRESENT?
NO
LOCATE OPEN IN WIRE W559-19-20 BETWEEN SW 113S1 AND TB38. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
REPLACE **FORM BRT-DIM** SW.
YES
SET **FORM BRT-DIM** SW TO SECOND INTERMEDIATE POSITION. LOWER OVHD PNL. CHECK FOR 115VAC BETWEEN TB38 TERM 9(+) AND GROUND. IS 115VAC PRESENT?
YES
REPLACE RESISTOR 113R3.
NO
SET **FORM BRT-DIM** SW TO FIRST INTERMEDIATE POSITION. LOWER OVHD PNL. CHECK FOR 115VAC BETWEEN TB38 TERM 2(+) AND GROUND. IS 115VAC PRESENT?
YES
REPLACE RESISTOR 113R2.
NO
REMOVE ELEC PWR. OPEN **FORM** CB. LOWER **EXT LTG** PNL FROM OVHD PNL. CHECK FOR CONTINUITY BETWEEN **FORM BRT-DIM** SW TERM 13 AND TB38 TERM 2. IS CONTINUITY PRESENT?
YES
REPLACE **FORM BRT-DIM** SW.
NO
LOCATE OPEN IN WIRE W559-22-20 BETWEEN SW 113S1 AND TB38. REPAIR OR REPLACE WIRE AS REQUIRED.
REMOVE ELEC PWR. OPEN **FORM** CB. LOWER **EXT LTG** PNL FROM OVHD PNL. CHECK FOR CONTINUITY BETWEEN **FORM BRT-DIM** SW TERM 14 AND TB38 TERM 9. IS CONTINUITY PRESENT?
YES
REPLACE **FORM BRT-DIM** SW.
NO
LOCATE OPEN IN WIRE W559-21-20 BETWEEN SW 113S1 AND TB38. REPAIR OR REPLACE WIRE AS REQUIRED.
SET **FORM BRT-DIM** SW TO THIRD INTERMEDIATE POSITION. LOWER OVHD PNL. CHECK FOR 115VAC BETWEEN TB38 TERM 10(+) AND GROUND. IS 115VAC PRESENT?
YES
REPLACE RESISTOR 113R4.
NO
REMOVE ELEC PWR. OPEN **FORM** CB. LOWER **EXT LTG** PNL FROM OVHD PNL. CHECK FOR CONTINUITY BETWEEN **FORM BRT-DIM** SW TERM 15 AND TB38 TERM 10. IS CONTINUITY PRESENT?
YES
REPLACE **FORM BRT-DIM** SW.
NO
LOCATE OPEN IN WIRE W559-20-20 BETWEEN SW 113S1 AND TB38. REPAIR OR REPLACE WIRE AS REQUIRED.

END OF TASK

9-5.14 NVG FORMATION LIGHT OR LIGHTS NOT ON AT DIM (WITH [redacted])

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
With [redacted]

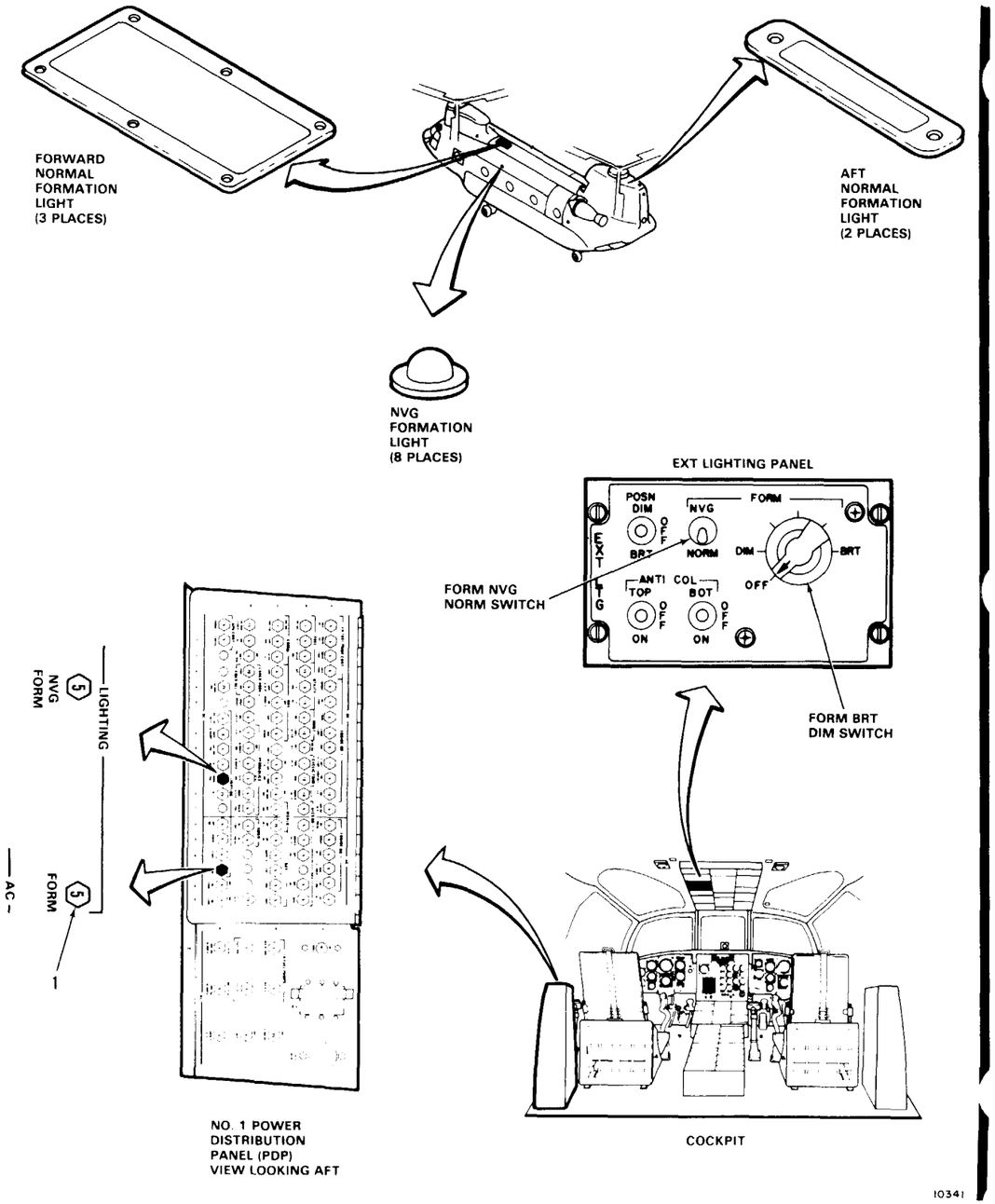
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter
Night Vision Goggles AN/AVS-6 or AN-PVS-5A
with Daylight Filter Installed

Materials:
None

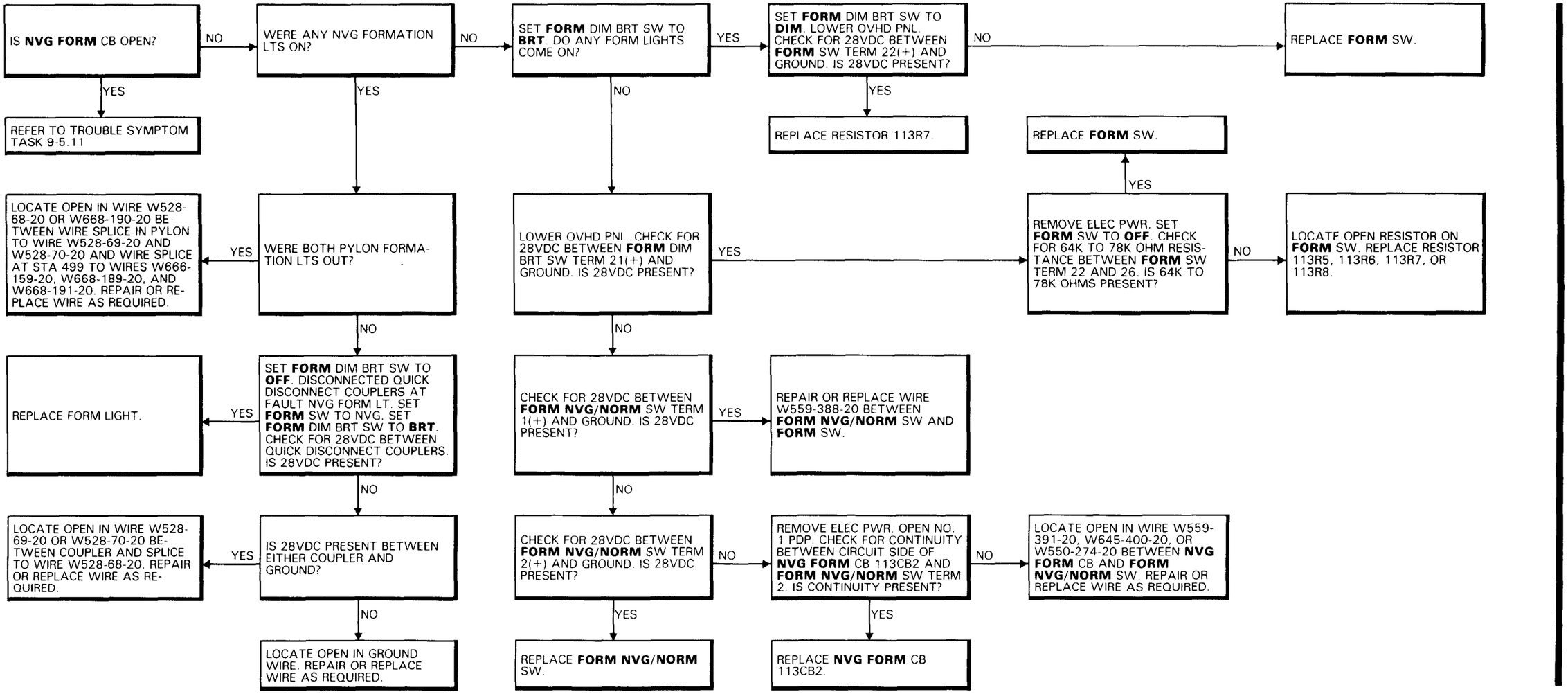
Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off



GO TO NEXT PAGE


IS NVG FORM CB OPEN?
NO
WERE ANY NVG FORMATION LTS ON?
NO
SET FORM DIM BRT SW TO BRT. DO ANY FORM LIGHTS COME ON?
YES
SET FORM DIM BRT SW TO DIM. LOWER OVHD PNL. CHECK FOR 28VDC BETWEEN FORM SW TERM 22(+) AND GROUND. IS 28VDC PRESENT?
NO
REPLACE FORM SW.
YES
REFER TO TROUBLE SYMPTOM TASK 9-5.11
YES
NO
YES
REPLACE RESISTOR 113R7.
REPLACE FORM SW.
YES
LOCATE OPEN IN WIRE W528-68-20 OR W668-190-20 BETWEEN WIRE SPLICE IN PYLON TO WIRE W528-69-20 AND W528-70-20 AND WIRE SPLICE AT STA 499 TO WIRES W666-159-20, W668-189-20, AND W668-191-20. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
WERE BOTH PYLON FORMATION LTS OUT?
LOWER OVHD PNL. CHECK FOR 28VDC BETWEEN FORM DIM BRT SW TERM 21(+) AND GROUND. IS 28VDC PRESENT?
YES
REMOVE ELEC PWR. SET FORM SW TO OFF. CHECK FOR 64K TO 78K OHM RESISTANCE BETWEEN FORM SW TERM 22 AND 26. IS 64K TO 78K OHMS PRESENT?
NO
LOCATE OPEN RESISTOR ON FORM SW. REPLACE RESISTOR 113R5, 113R6, 113R7, OR 113R8.
NO
NO
NO
REPLACE FORM LIGHT.
YES
SET FORM DIM BRT SW TO OFF. DISCONNECTED QUICK DISCONNECT COUPLERS AT FAULT NVG FORM LT. SET FORM SW TO NVG. SET FORM DIM BRT SW TO BRT. CHECK FOR 28VDC BETWEEN QUICK DISCONNECT COUPLERS. IS 28VDC PRESENT?
CHECK FOR 28VDC BETWEEN FORM NVG/NORM SW TERM 1(+) AND GROUND. IS 28VDC PRESENT?
YES
REPAIR OR REPLACE WIRE W559-388-20 BETWEEN FORM NVG/NORM SW AND FORM SW.
NO
NO
LOCATE OPEN IN WIRE W528-69-20 OR W528-70-20 BETWEEN COUPLER AND SPLICE TO WIRE W528-68-20. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
IS 28VDC PRESENT BETWEEN EITHER COUPLER AND GROUND?
CHECK FOR 28VDC BETWEEN FORM NVG/NORM SW TERM 2(+) AND GROUND. IS 28VDC PRESENT?
NO
REMOVE ELEC PWR. OPEN NO. 1 PDP. CHECK FOR CONTINUITY BETWEEN CIRCUIT SIDE OF NVG FORM CB 113CB2 AND FORM NVG/NORM SW TERM 2. IS CONTINUITY PRESENT?
NO
LOCATE OPEN IN WIRE W559-391-20, W645-400-20, OR W550-274-20 BETWEEN NVG FORM CB AND FORM NVG/NORM SW. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
YES
YES
LOCATE OPEN IN GROUND WIRE. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
REPLACE FORM NVG/NORM SW.
YES
REPLACE NVG FORM CB 113CB2.

END OF TASK

9-5.15 NVG FORMATION LIGHTS OUT OR DO NOT GET BRIGHTER AT INTERMEDIATE OR BRT POSITIONS 9-5.15

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
with 17

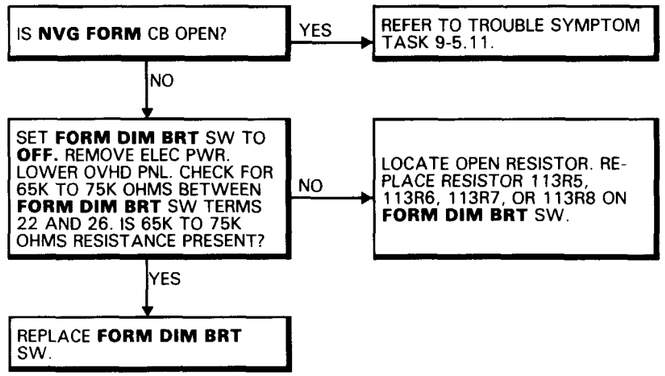
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter
Night Vision Goggles AN/AVS-6 or AN/PVS-5A
with Daylight Filter Installed

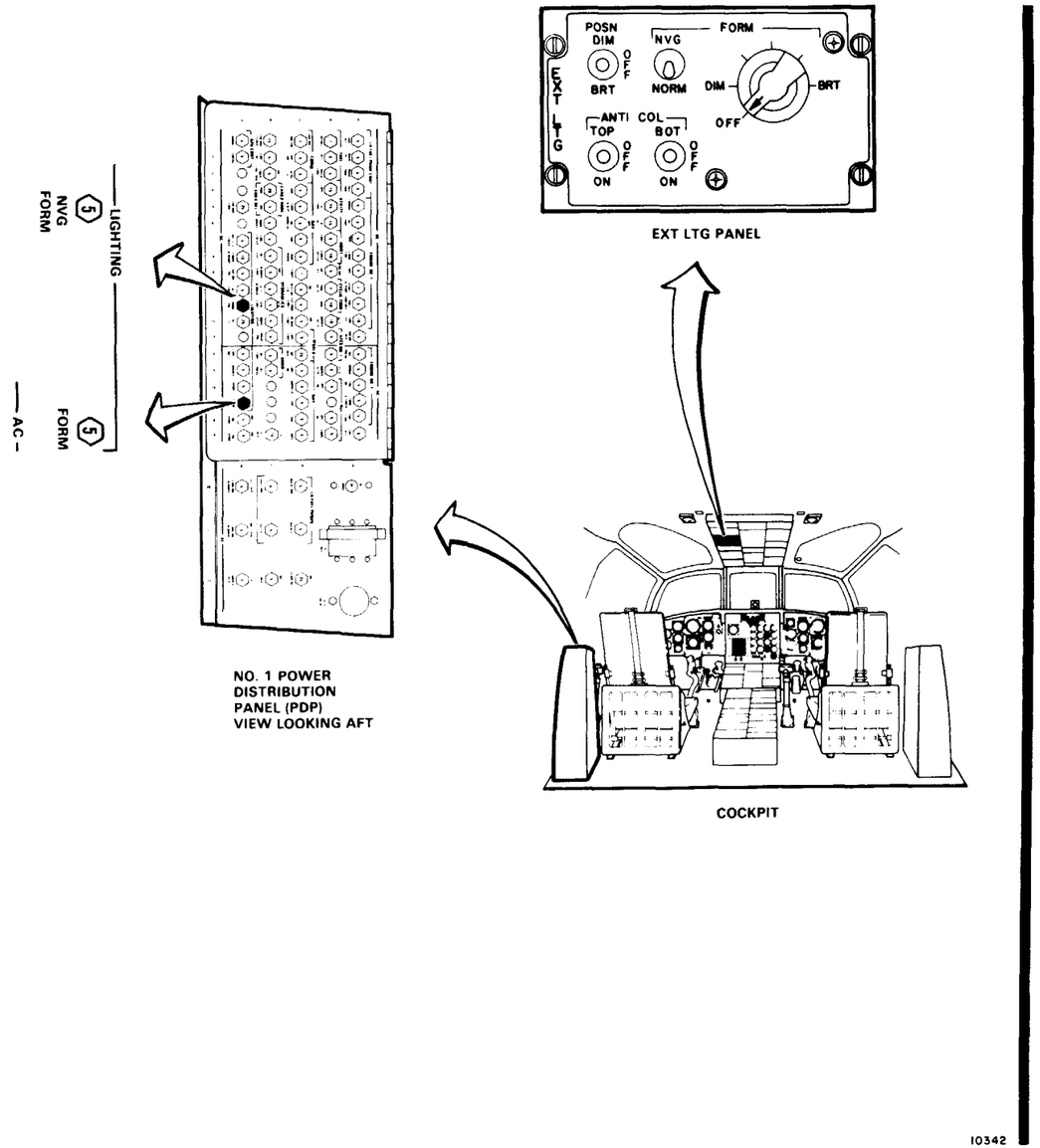
Materials:
None

Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

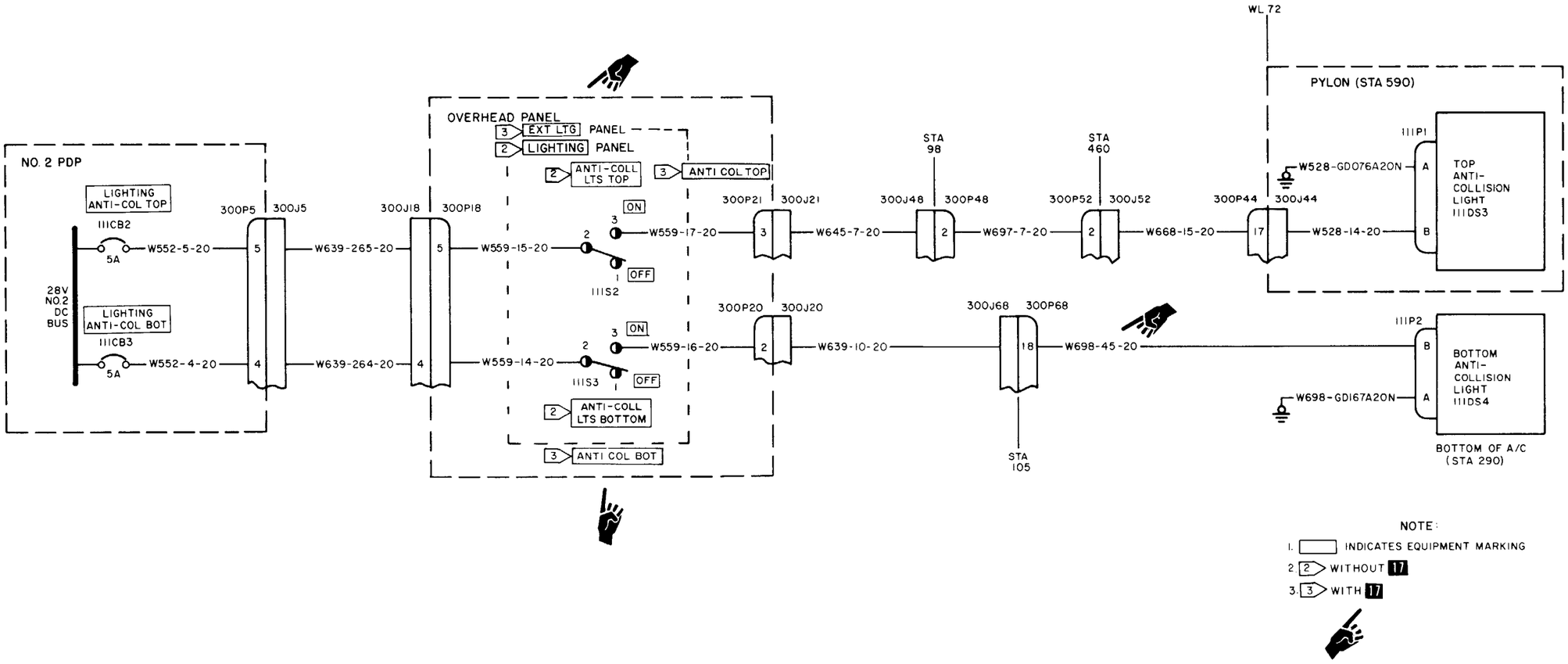
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off





END OF TASK

9-6 ANTICOLLISION LIGHTS


NO. 2 PDP
LIGHTING ANTI-COL TOP
111CB2
5A
W552-5-20
28V NO.2 DC BUS
LIGHTING ANTI-COL BOT
111CB3
5A
W552-4-20
300P5
300J5
300J18
300P18
W639-265-20
W639-264-20
W559-15-20
W559-14-20
OVERHEAD PANEL
3 EXT LTG PANEL
2 LIGHTING PANEL
2 ANTI-COLL LTS TOP
3 ANTI COL TOP
ON
OFF
111S2
111S3
2 ANTI-COLL LTS BOTTOM
3 ANTI COL BOT
W559-17-20
W559-16-20
300P21
300J21
300P20
300J20
W645-7-20
W639-10-20
STA 98
300J48
300P48
W697-7-20
STA 460
300P52
300J52
W668-15-20
300J68
300P68
W698-45-20
STA 105
WL 72
PYLON (STA 590)
300P44
300J44
W528-14-20
W528-GD076A20N
111P1
TOP ANTI-COLLISION LIGHT
111DS3
111P2
W698-GD167A20N
BOTTOM ANTI-COLLISION LIGHT
111DS4
BOTTOM OF A/C (STA 290)
NOTE:
1. INDICATES EQUIPMENT MARKING
2. 2 WITHOUT 17
3. 3 WITH 17
111.100A
556

9-6.2 ANTICOLLISION LIGHTS VISUAL CHECK

INITIAL SETUP

Applicable Configurations:
All

Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915

Materials:
None

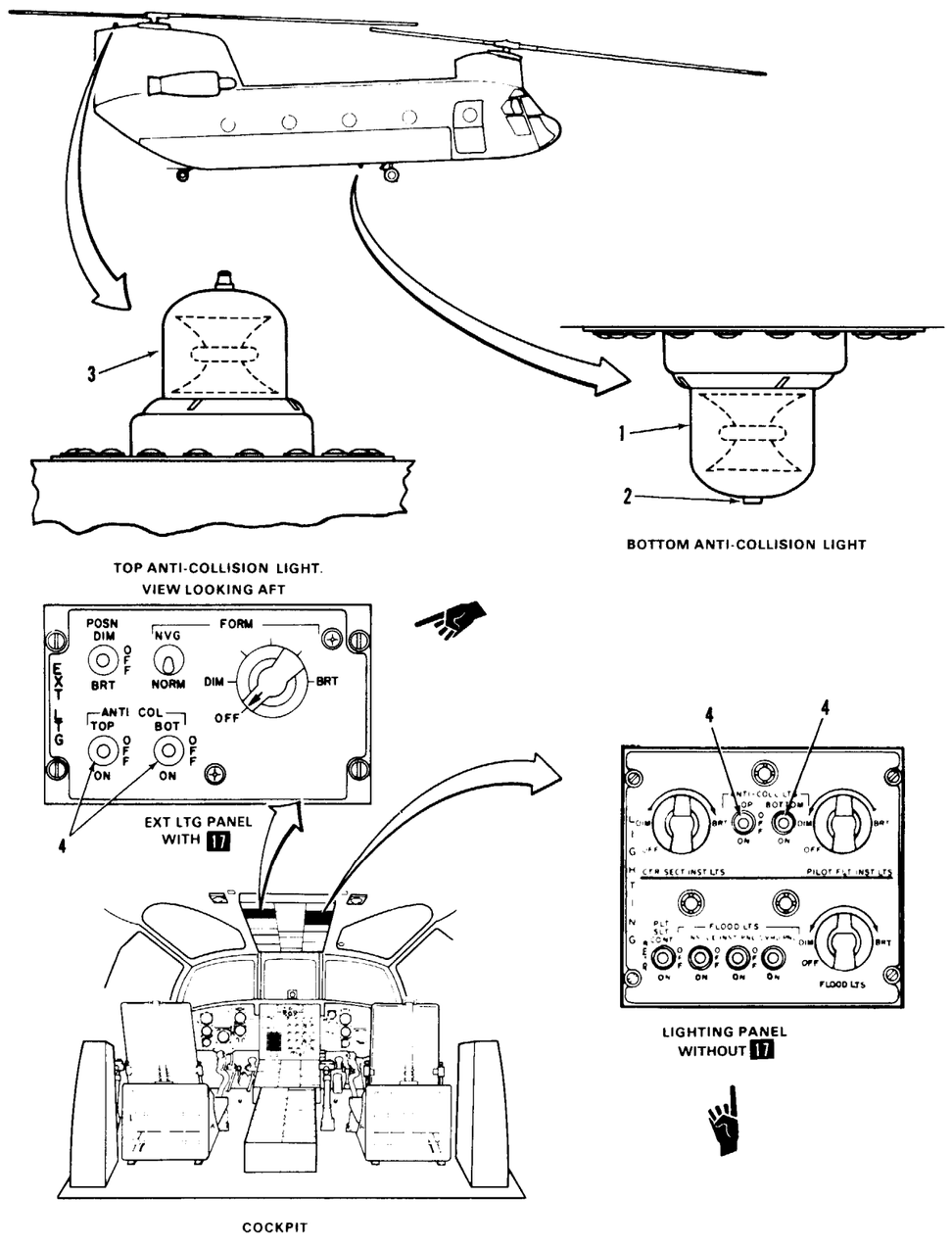
Personnel Required:
Aircraft Electrician (2)

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off
Left or Right Pylon Work Platform Open

TASK	RESULT
1. Check bottom anticollision light (1).	If light is loose or damaged, tighten or replace it as required. Open drain (2) if there is water in light.
2. Check top anticollision light (3).	If light is loose or damaged, tighten or replace it as required.
3. Check ANTI-COLL LTS switches (4) on LIGHTING panel or **ANTI COL** switches (4) on EXT LTG panel as applicable.	If switches are loose or damaged, tighten or replace them as required.

FOLLOW-ON MAINTENANCE:
TM 55-1520-240-23:
Left or Right Pylon Work Platform Closed



10343

END OF TASK

9-6.3 ANTICOLLISION LIGHT OPERATIONAL CHECK

INITIAL SETUP

Applicable Configurations:
All

Tools:
None

Materials:
None

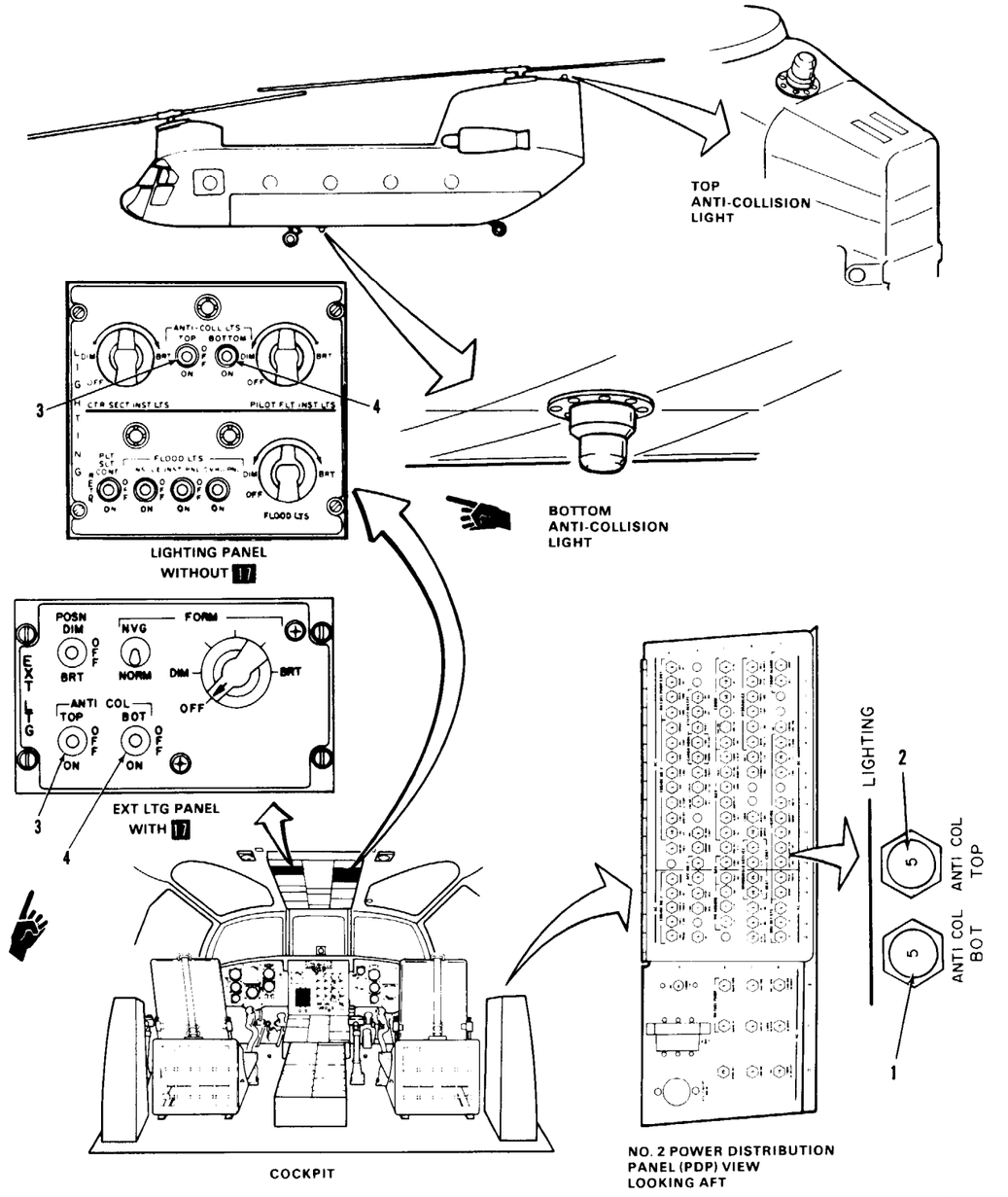
Personnel Required:
Aircraft Electrician (2)

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off
Anticollision Lights Visual Check Performed (Task 9-6.2)

TASK	RESULT
1. **Check** that **LIGHTING ANTI-COL BOT circuit breaker (1) and ANTI-COL TOP circuit breaker (2)** are closed.	If LIGHTING ANTI-COL BOT circuit breaker (1) is open, close it. If it opens again, go to task 9-6.4. If LIGHTING ANTI-COL TOP circuit breaker (2) is open, close it. If it opens again, go to task 9-6.4.
2. **Set ANTI-COLL LTS TOP or ANTI-COL TOP switch (3) to ON.**	The top anticollision light shall flash 40 to 60 times per minute. If it does not, go to task 9-6.5.
3. **Set ANTI-COLL LTS BOTTOM or ANTI-COL BOT switch (4) to ON.**	The bottom anticollision light shall flash 40 to 60 times per minute. If it does not, go to task 9-6.5.
4. **Set switches (3) and (4) to OFF.**	Both anticollision lights shall stop flashing.

FOLLOW-ON MAINTENANCE:
TM 55-1520-240-23:
Electrical Power Off
Battery Disconnected



END OF TASK

9-6.4 ANTI-COL BOT OR TOP CIRCUIT BREAKER DOES NOT STAY CLOSED

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:

All

Tools:

Electrical Repairer's Tool Kit, NSN 5180-00-323-4915

Multimeter

Materials:

None

Personnel Required:

Aircraft Electrician

References:

TM 55-1520-240-23

Equipment Condition:

TM 55-1520-240-23:

Battery Disconnected

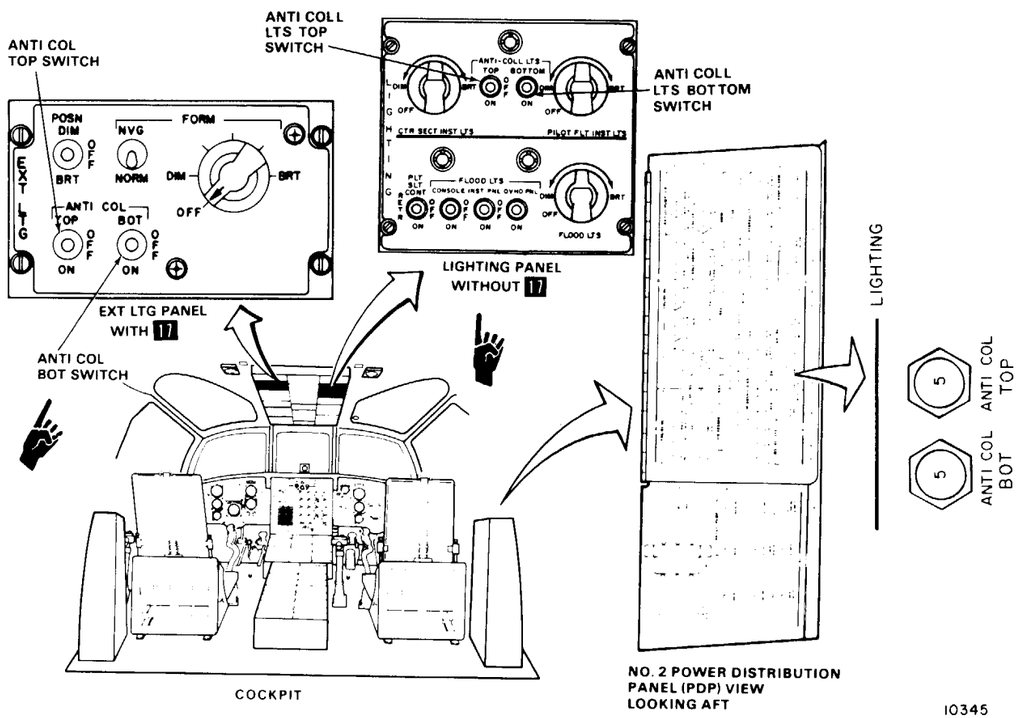
Electrical Power Off

Hydraulic Power Off

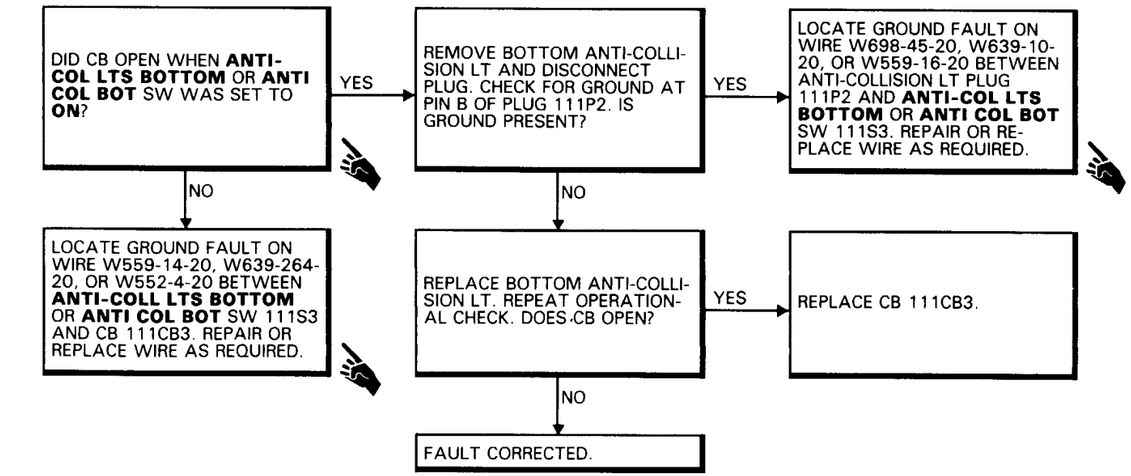
General Safety Instructions:

WARNING

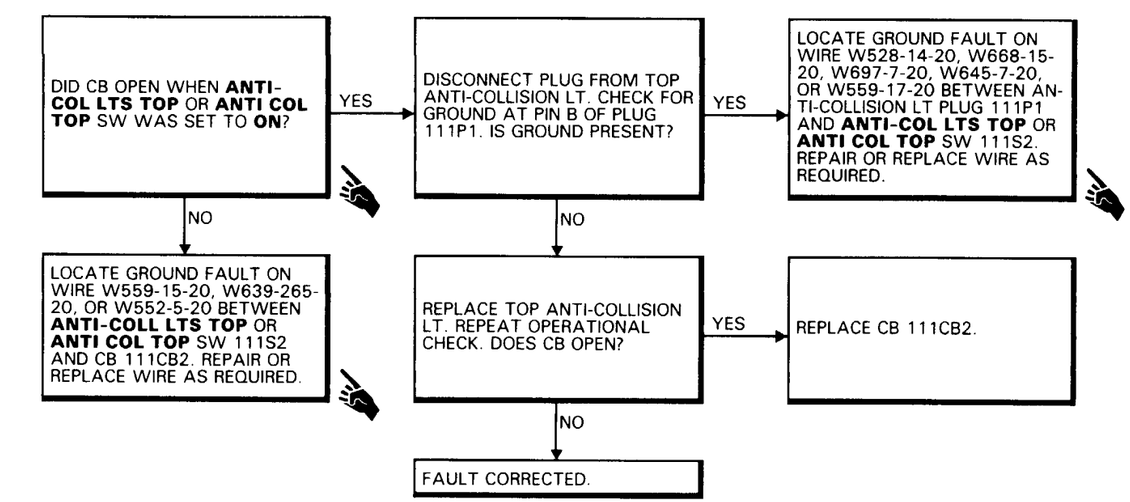
Wait 10 minutes after power has been disconnected before disconnecting anticollision light. High voltage discharge can occur, causing personnel injury.



ANTI-COL BOT CIRCUIT BREAKER DOES NOT STAY CLOSED



ANTI-COL TOP CIRCUIT BREAKER DOES NOT STAY CLOSED



END OF TASK

9-6.5 ANTICOLLISION LIGHT, TOP OR BOTTOM, DOES NOT FLASH OR DOES NOT FLASH 40-60 TIMES/MINUTE

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

Tools:
Electrical Repairer's Tool Kit, *NSN 5180-00-323-4915*
Multimeter

Materials:
None

Personnel Required:
Aircraft Electrician (2)

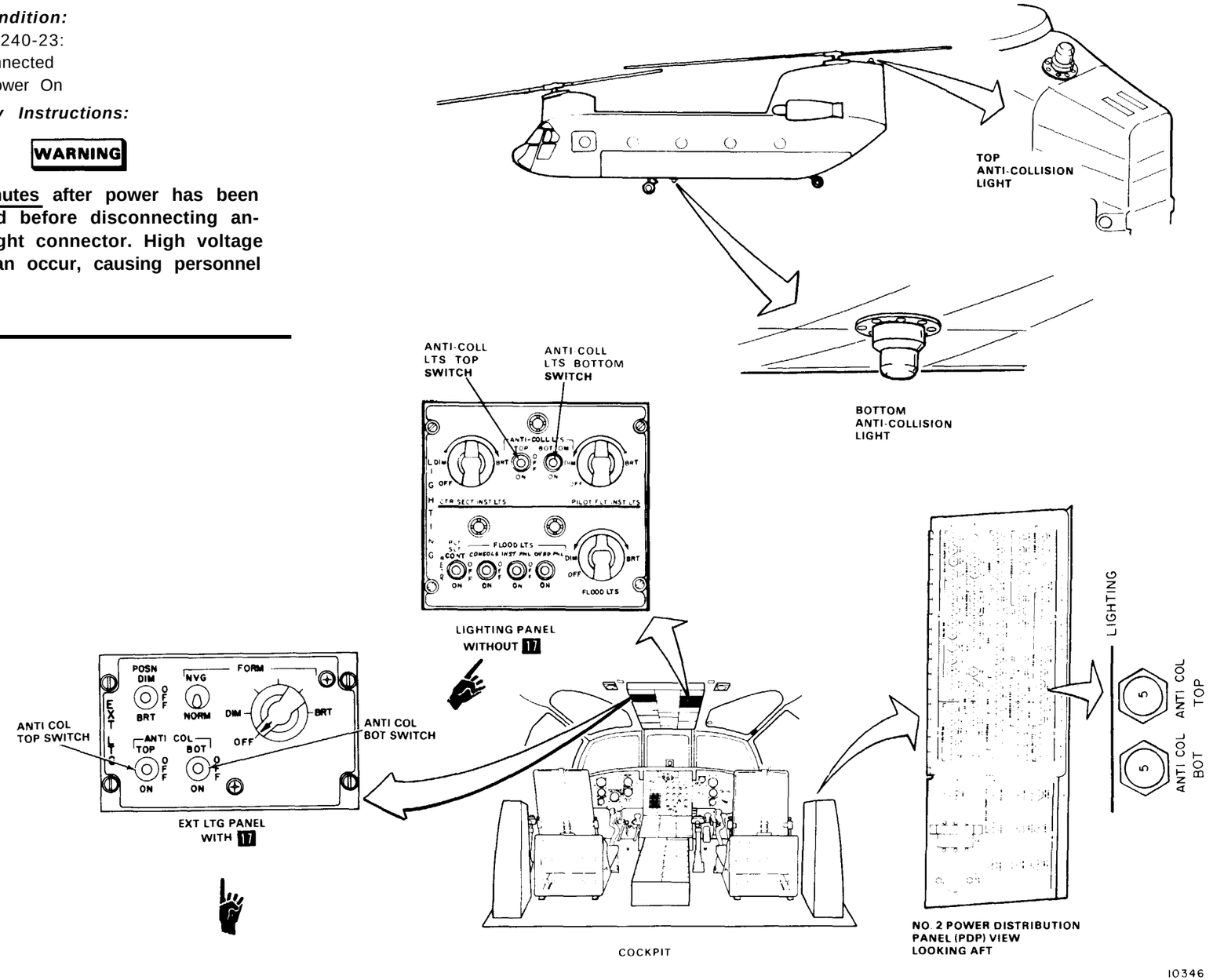
References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On

General Safety Instructions:

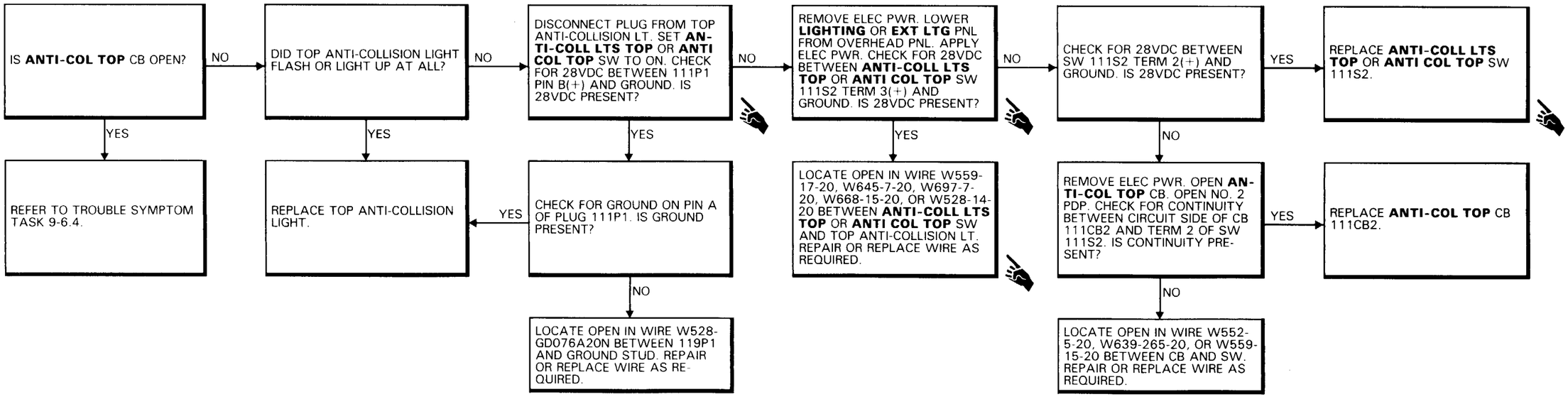
WARNING

Wait 10 minutes after power has been disconnected before disconnecting anticollision light connector. High voltage discharge can occur, causing personnel injury.



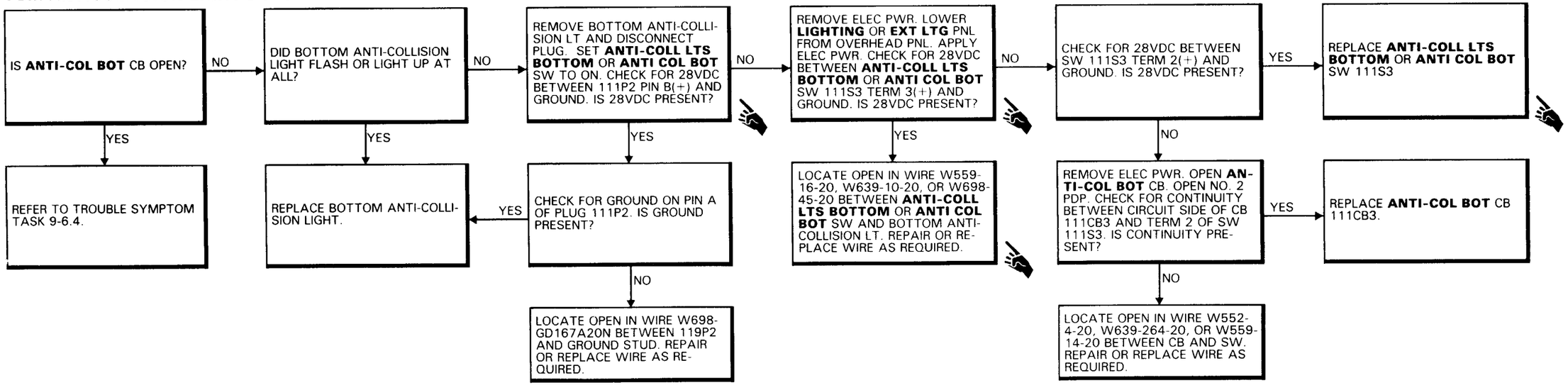
GO TO NEXT PAGE

TOP ANTICOLLISION LIGHT DOES NOT FLASH OR DOES NOT FLASH 40-60 TIMES/MINUTE



GO TO NEXT PAGE

BOTTOM ANTICOLLISION LIGHT DOES NOT FLASH OR DOES NOT FLASH 40-60 TIMES/MINUTE

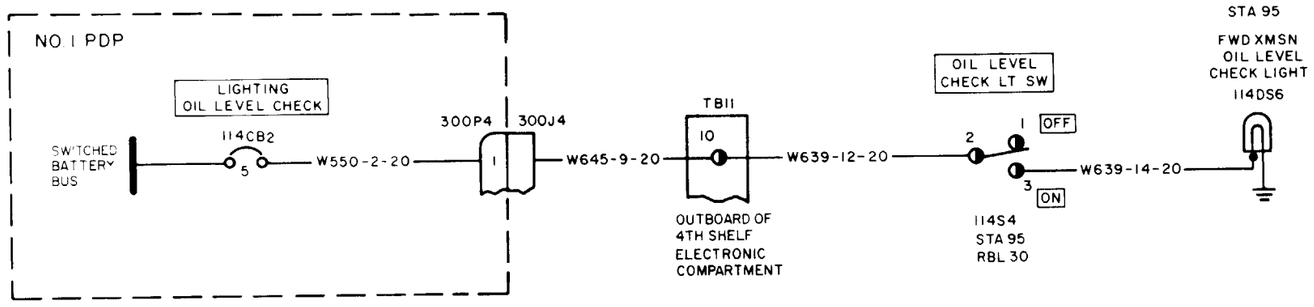


END OF TASK

9-7 FORWARD TRANSMISSION OIL LEVEL CHECK LIGHT

9-7 FORWARD TRANSMISSION OIL LEVEL CHECK LIGHT

9-7.1 FORWARD TRANSMISSION OIL LEVEL CHECK LIGHT WIRING DIAGRAM



114 100

84 x 54

D145-59-SPA

9-7.2 FORWARD TRANSMISSION OIL LEVEL CHECK LIGHT VISUAL CHECK

INITIAL SETUP

Applicable Configurations:
All

Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915

Materials:
None

Personnel Required:
68F10 Aircraft Electrician

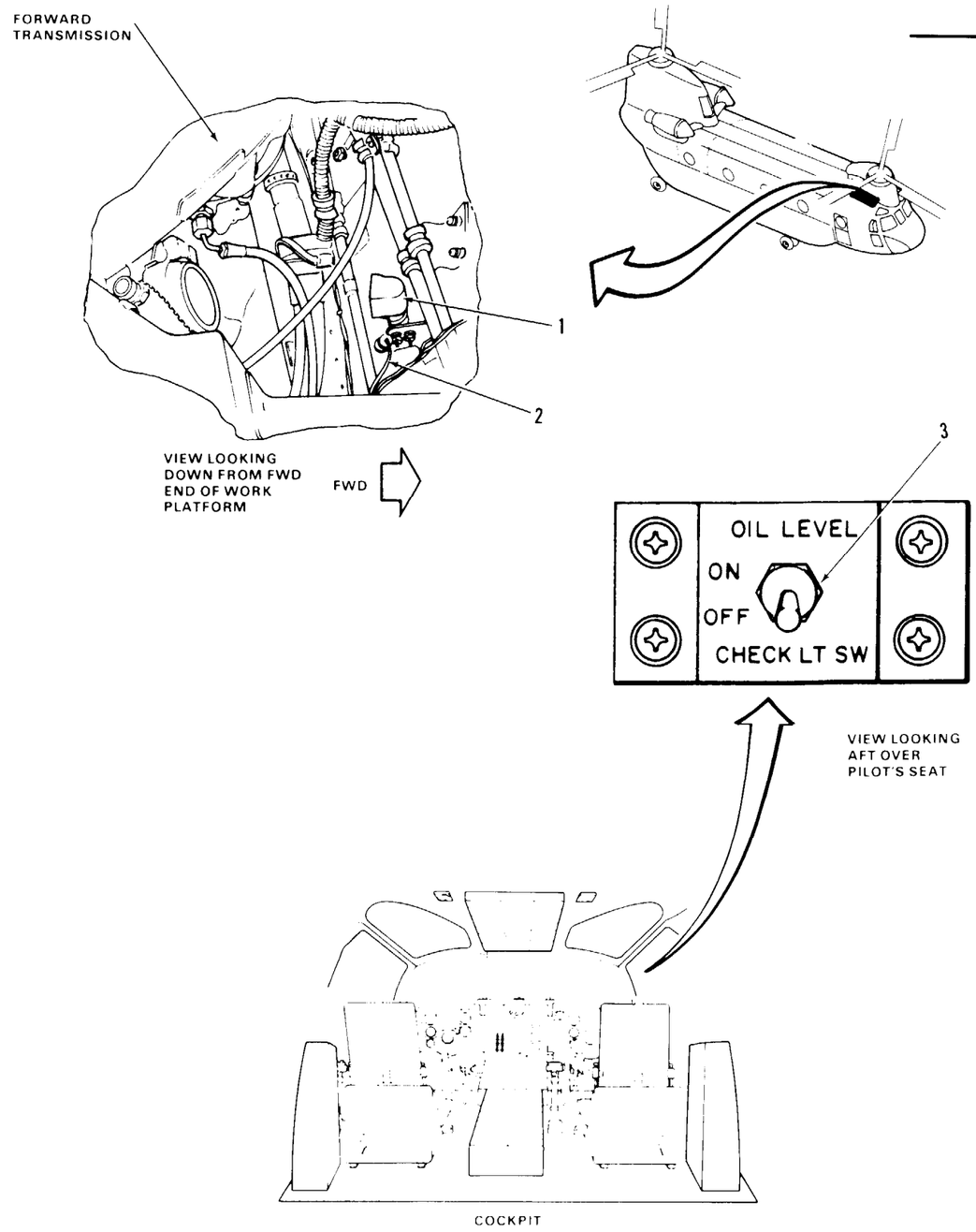
References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23
Battery Disconnected
Electrical Power Off
Hydraulic Power Off
Right Forward Transmission Work Platform Open

TASK	RESULT
1. Check light (1).	If light (1) is loose or damaged, tighten or replace it as required. If wire (2) is damaged, repair or replace it as required.
2. Check OIL LEVEL CHECK LT SW (3).	If switch (3) is loose or damaged, tighten or replace it as required.

FOLLOW-ON MAINTENANCE

None



0145 31.36 SPA

END OF TASK

9-7.3 FORWARD TRANSMISSION OIL LEVEL CHECK LIGHT OPERATIONAL CHECK

INITIAL SETUP

Applicable Configurations:
All

Tools:
None

Materials:
None

Personnel Required:
68F10 Aircraft Electrician
68F20 Aircraft Electrician

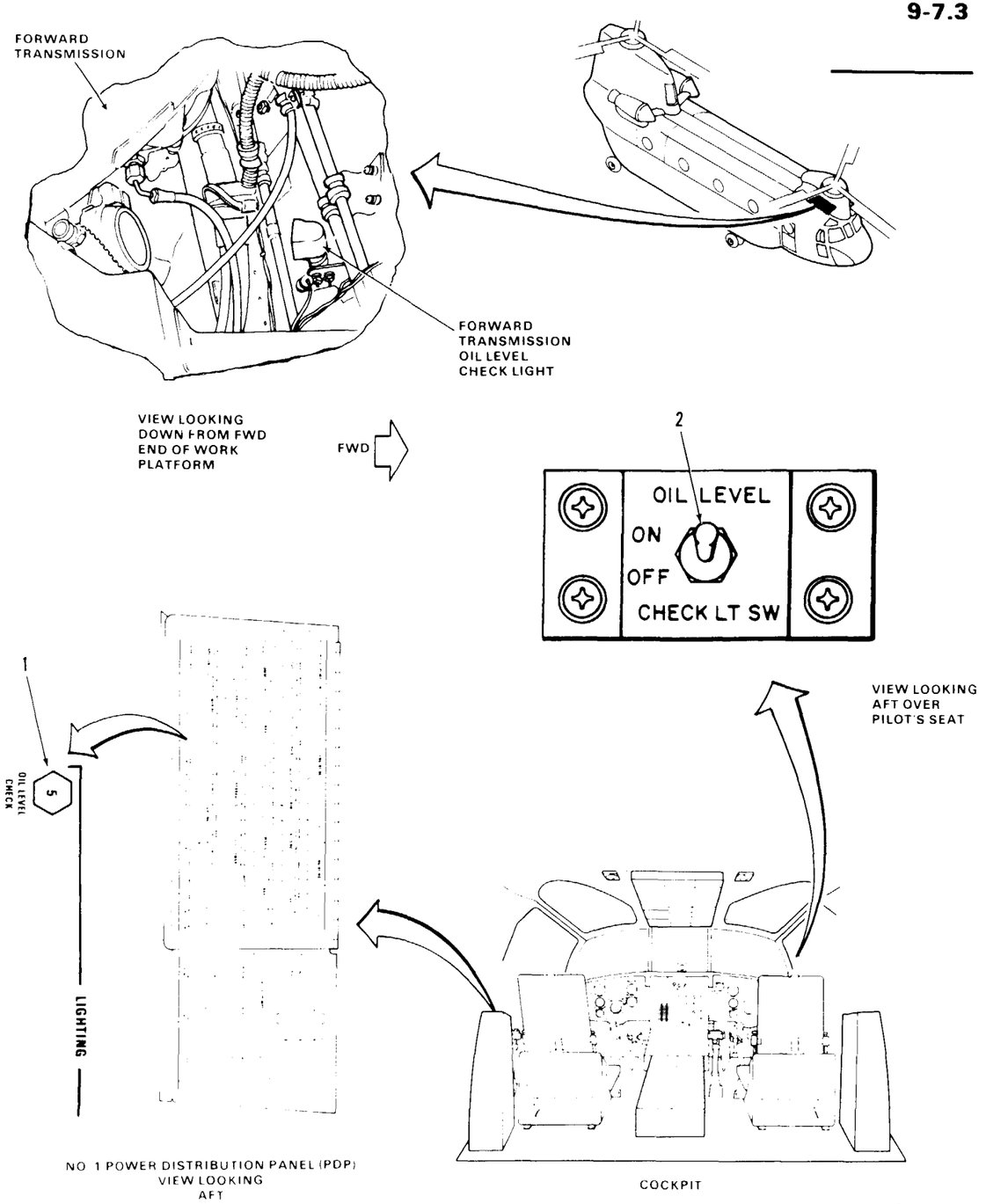
References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off
Visual Check of Forward Transmission Oil Level Check Light Performed (Task 9-7.2)

TASK	RESULTS
1. **Check** that **LIGHTING OIL LEVEL CHECK circuit breaker (A)** is closed.	If OIL LEVEL CHECK circuit breaker (1) is open, close it, If it opens again, go to task 9-7.4
2. **Set OIL LEVEL CHECK LTSW (2) to ON.**	011 level check light shall come on. If it is not on, go to task 9-7.5.
3 Set OIL LEVEL CHECK LTSW to OFF.	Forward transmission 011 level check light shall go out.

FOLLOW-ON MAINTENANCE

TM 55-1520-240-23:
Battery disconnected
Electrical power off
Close right forward transmlsslon work platform



END OF TASK

9-7.4 OIL LEVEL CHECK CIRCUIT BREAKER DOES NOT STAY CLOSED

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

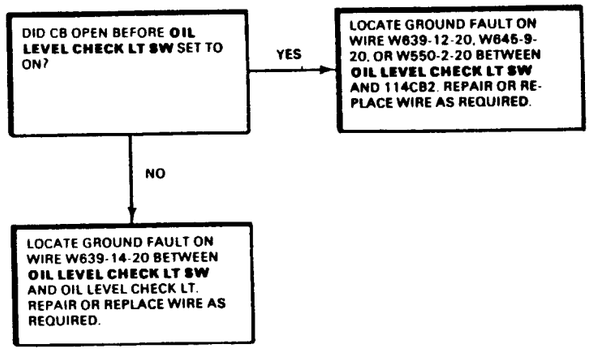
Tools:
Electrical Repairer's Tool Kit.
NSN 5180-00-323-4915
Multimeter

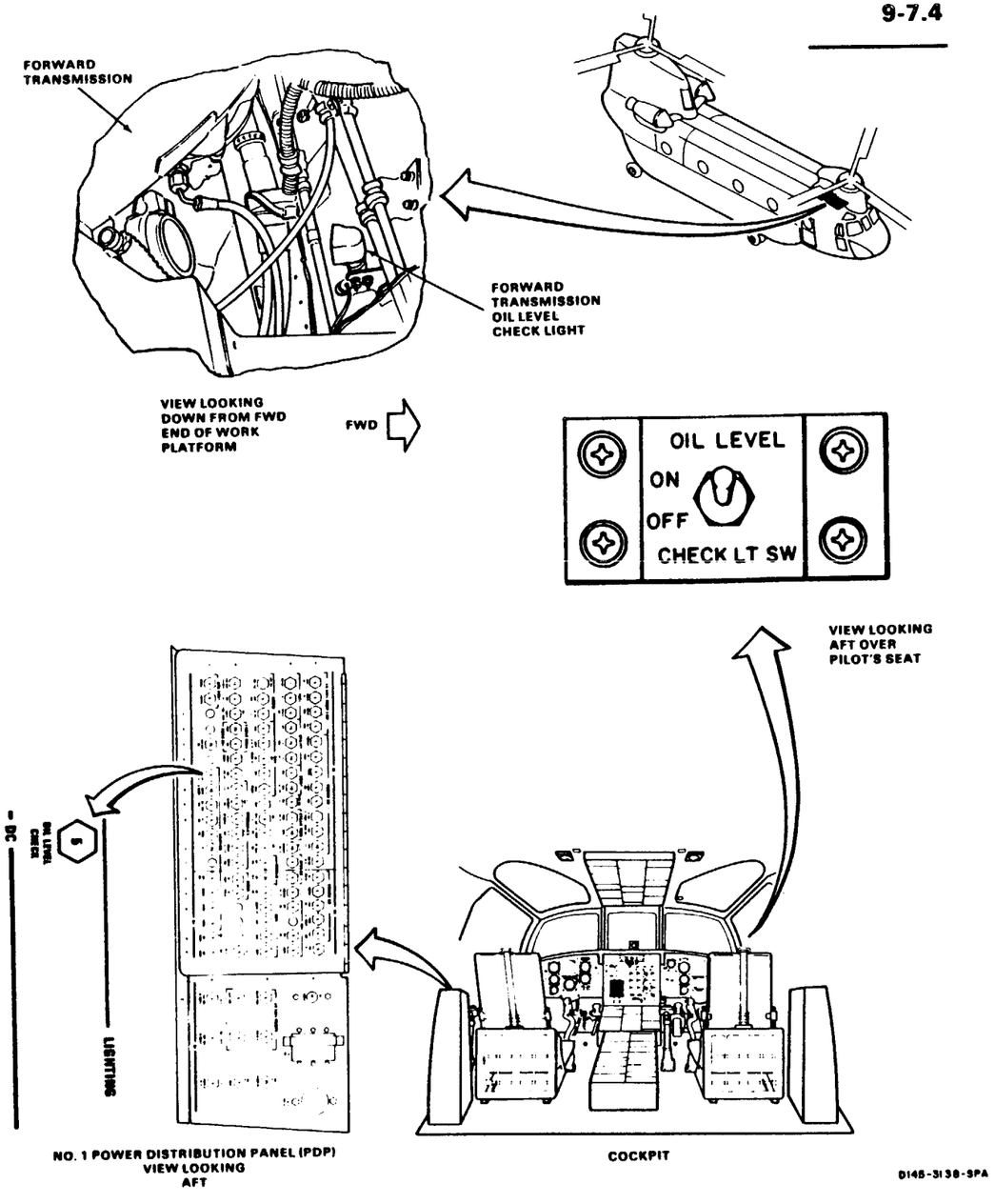
Materials:
None

Personnel Required:
68F20 Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off





END OF TASK

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9-7.5 FORWARD TRANSMISSION OIL LEVEL CHECK LIGHT NOT LIT

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

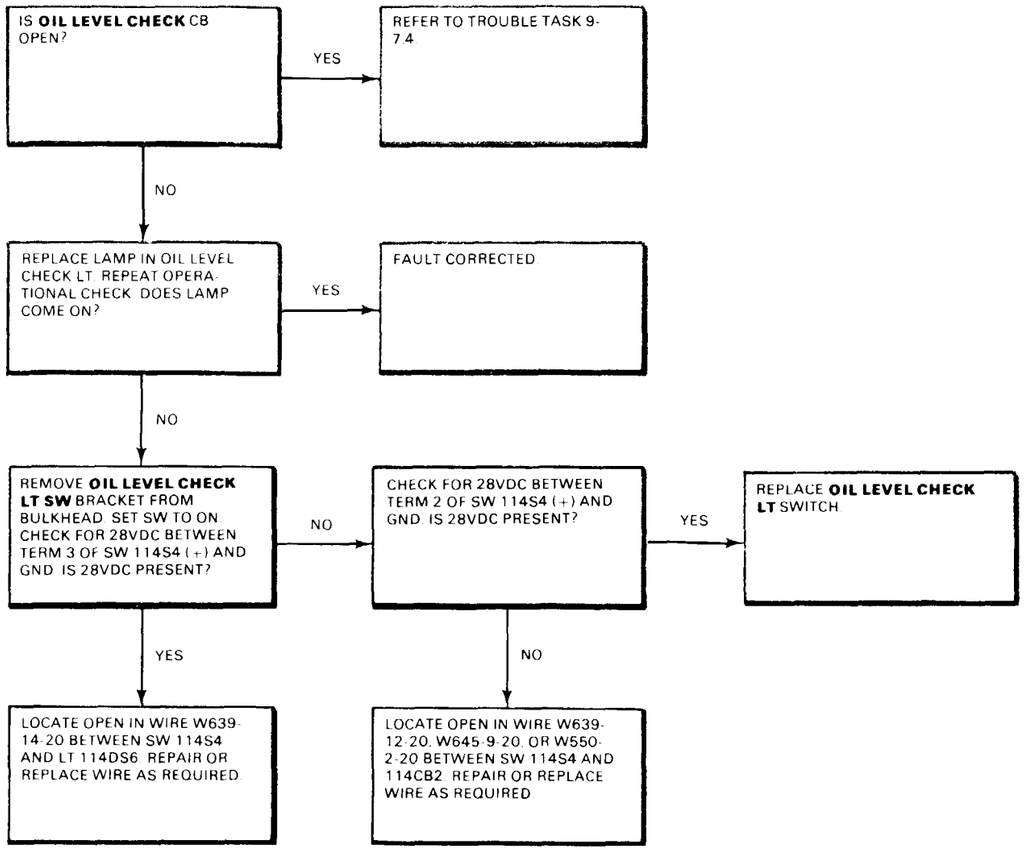
Tools:
Electrical Repairer's Tool Kit, NSN 5180-00-323-4915
Multimeter

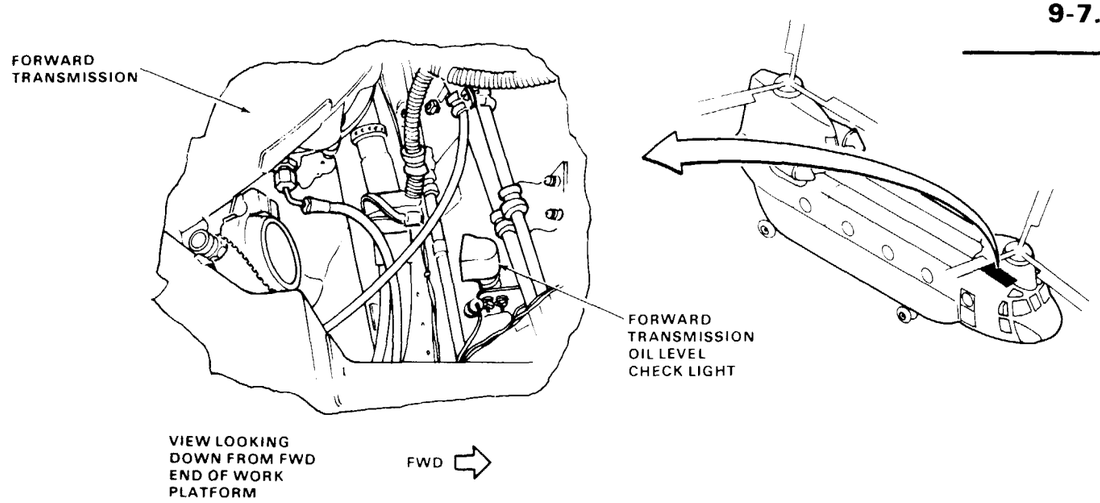
Materials:
None

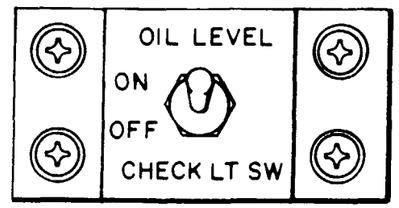
Personnel Required:
68F20 Aircraft Electrician

References:
TM 55-1520-240-23

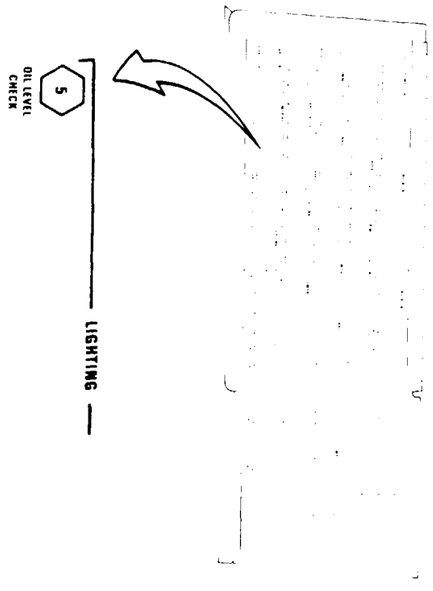
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off



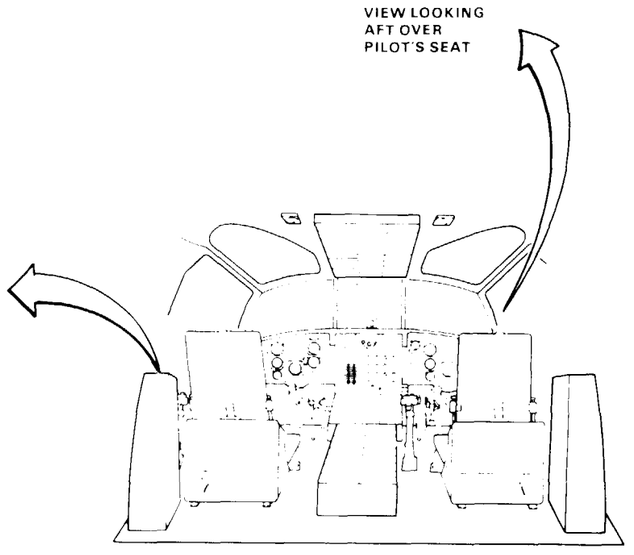




VIEW LOOKING AFT OVER PILOT'S SEAT



NO. 1 POWER DISTRIBUTION PANEL (PDP) VIEW LOOKING AFT



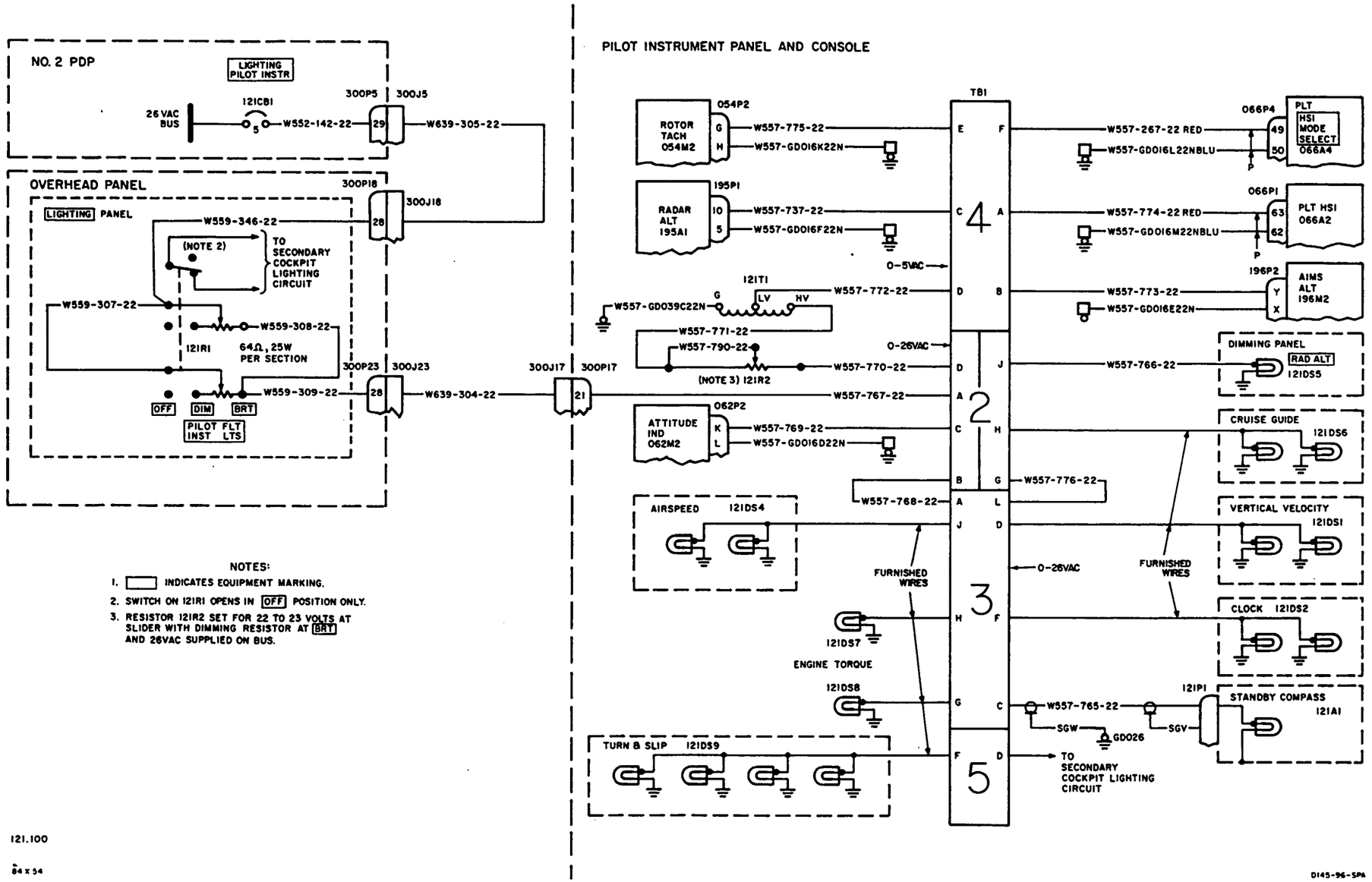
COCKPIT

0145-3139-SPA

END OF TASK

9-8 PILOTS FLIGHT INSTRUMENT PANEL LIGHTS

WITHOUT 17 AND WITH 74



END OF TASK

9-8.2 PILOT'S FLIGHT INSTRUMENT PANEL LIGHTS VISUAL CHECK

INITIAL SETUP

Applicable Configurations:
Without 17
Without 74

Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915

Materials:
None

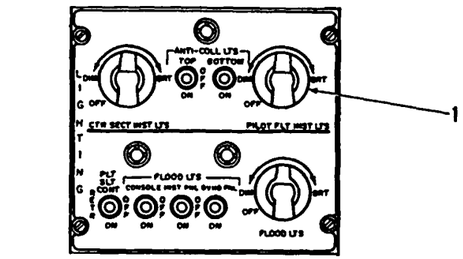
Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

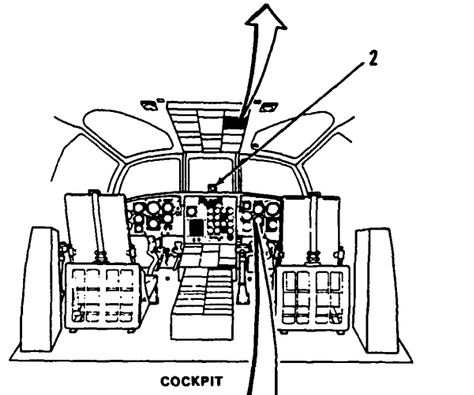
Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off

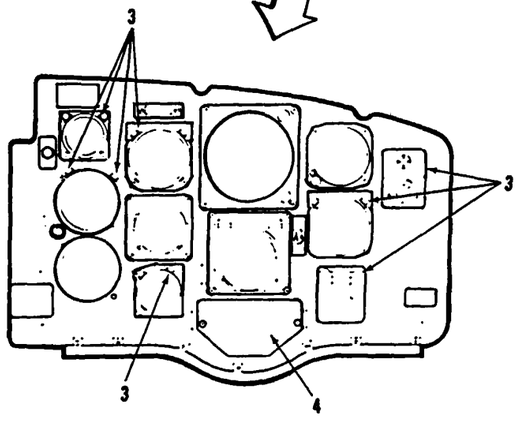
TASK	RESULT
1. **Check PILOT FLT INST LTS control (1).**	If control (1) is loose or damaged, tighten or replace it as required.
2. **Check back of standby compass (2).**	If wiring is damaged, repair or replace it as required.
3. **Check panel lights (2).**	If any panel light (3) is damaged, replace it.
4. **Check HSI MODE SELECT panel (4).**	If panel (4) is damaged, replace it.

FOLLOW-ON MAINTENANCE:
None



LIGHTING PANEL





PILOT'S INSTRUMENT PANEL

D145-4161-SPA

END OF TASK

9-8.3 PILOT'S FLIGHT INSTRUMENT PANEL LIGHTS OPERATIONAL CHECK

INITIAL SETUP

Applicable Configurations:
Without 17
Without 74

Tools:
None

Materials:
None

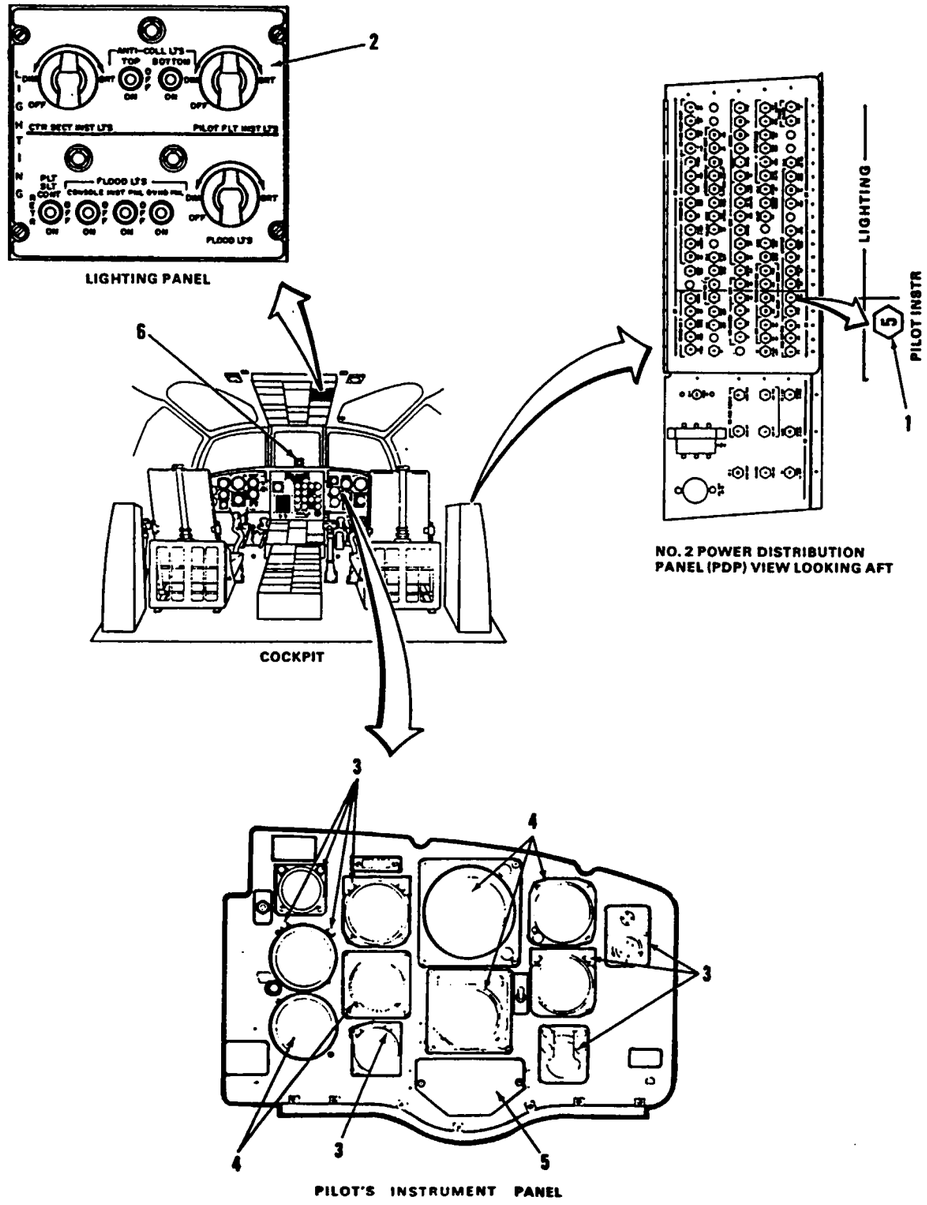
Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off
Pilot's Flight Instrument Panel Lights, Visual Check
Performed (Task 9-8.2)

TASK	RESULT
1. **Check** that **LIGHTING PILOT INSTR circuit breaker (1)** is closed.	If PILOT INSTR circuit breaker (1) is open, close it. If it opens again, go to task 9-8.4.
2. **Turn PILOT FLT INST LTS control (2) from OFF through DIM to BRT.**	Following lights shall come on and increase in brightness as control (2) is rotated to BRT: a. Panel lights (3) b. Internal lights in indicators (4). c. Panel lights and switch captions VOR, DOP, FM, and CMD on HSI MODE SELECT panel (5). d. Light in standby compass (6). If any light is not lit, go to task 9-8.5. If lights do not increase in brightness, replace PILOT FLT INST LTS control (2).
3. **Turn PILOT FLT INST LTS control (2) to OFF.**	All pilot's instrument panel lights shall go out. If they do not, replace PILOT FLT INST LTS control (2).

FOLLOW-ON MAINTENANCE:
TM 55-1520-240-23:
Electrical power off.
Battery disconnected.



END OF TASK

9-8.4 PILOT'S INSTR CIRCUIT BREAKER DOES NOT STAY CLOSED

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:

Without 17

Without 74

Tools:

Electrical Repairer's Tool Kit, NSN 5180-00-323-4915

Multimeter

Materials:

None

Personnel Required:

Aircraft Electrician

References:

TM 55-1520-240-23

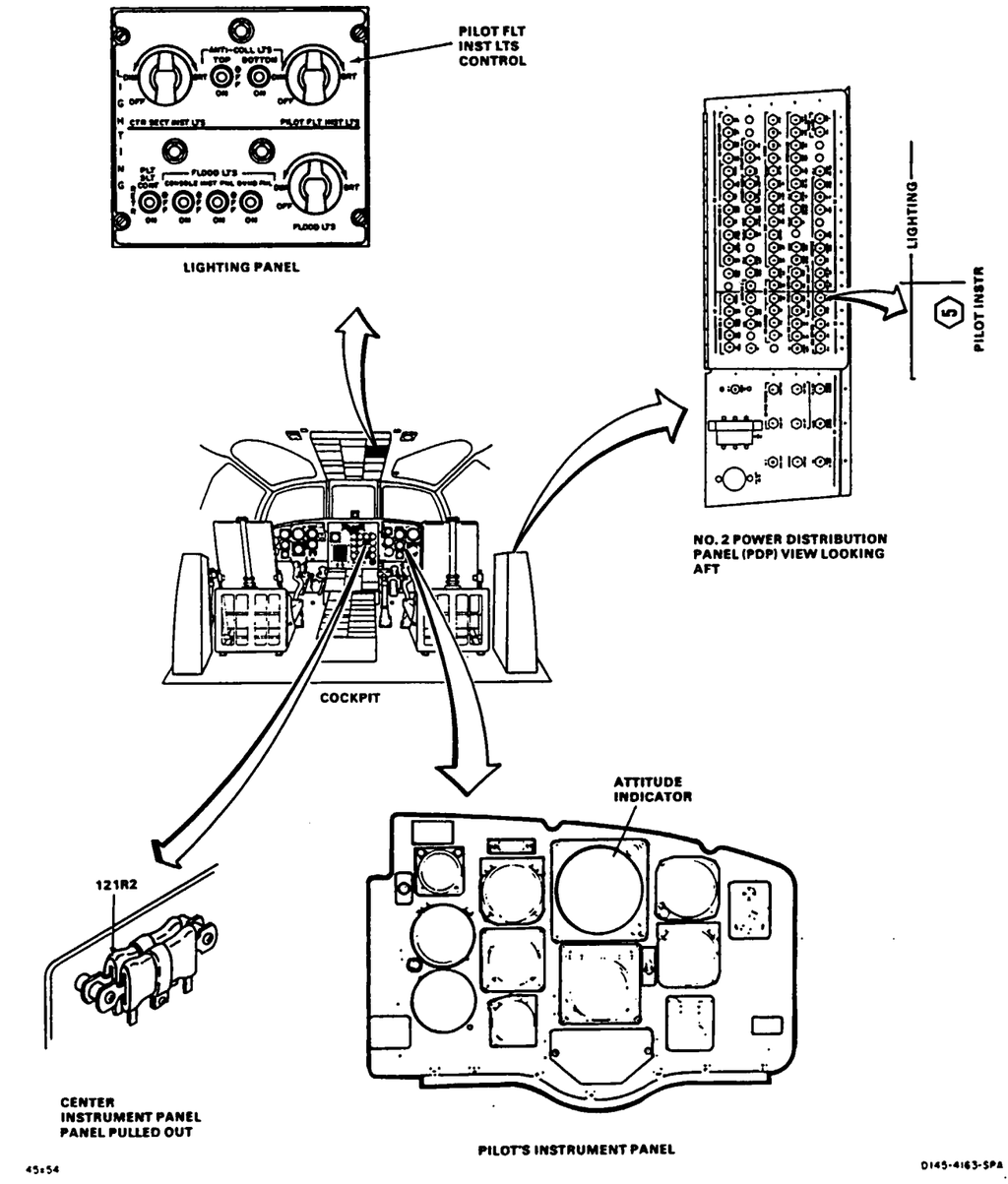
Equipment Condition:

TM 55-1520-240-23:

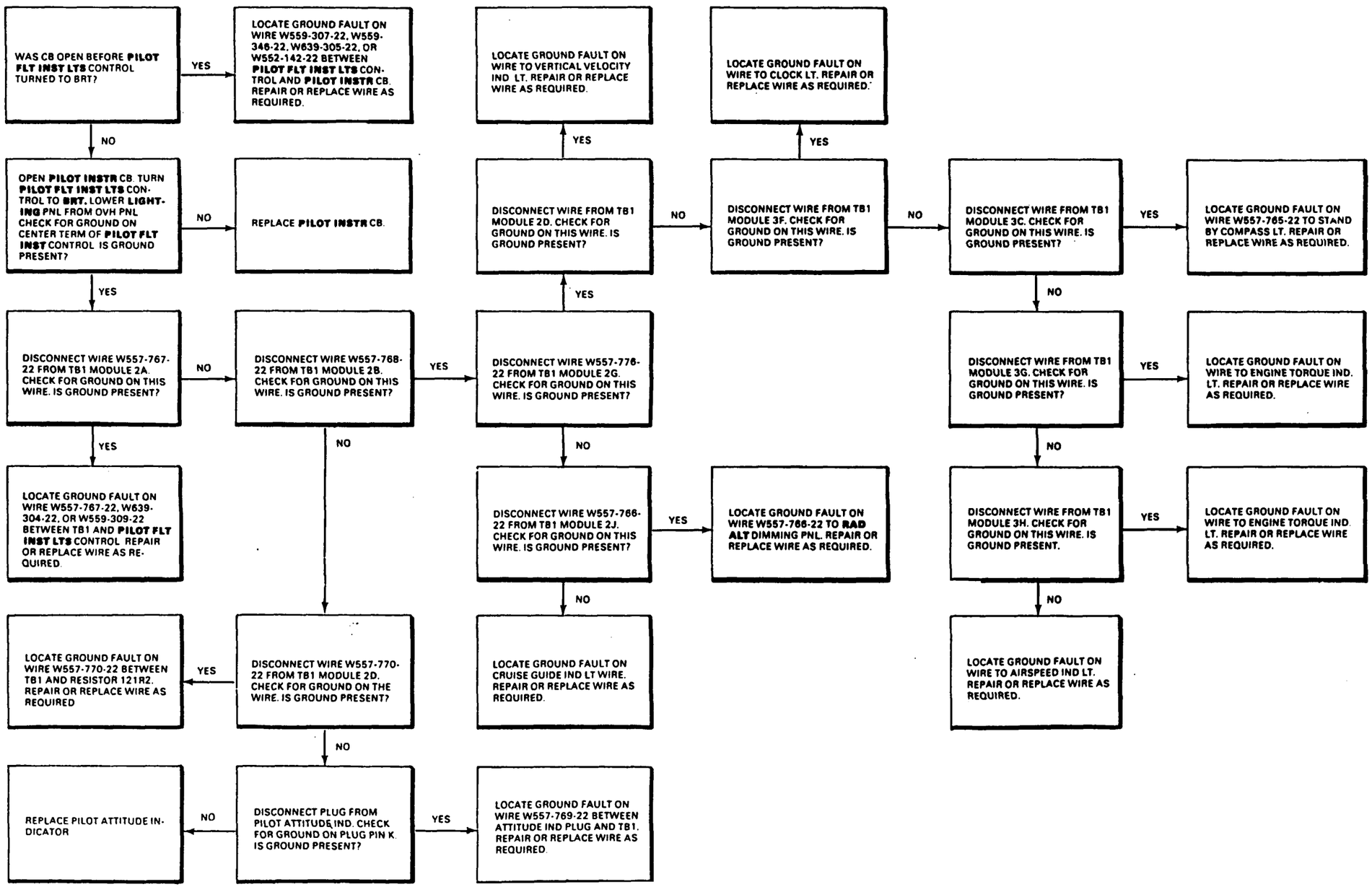
Battery Disconnected

Electrical Power Off

Hydraulic Power Off



GO TO NEXT PAGE



END OF TASK
9-173

9-8.5 PILOT'S FLIGHT INSTRUMENT PANEL LIGHT OR LIGHTS NOT LIT

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:

Without 17
Without 74

Tools:

Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:

None

Personnel Required:

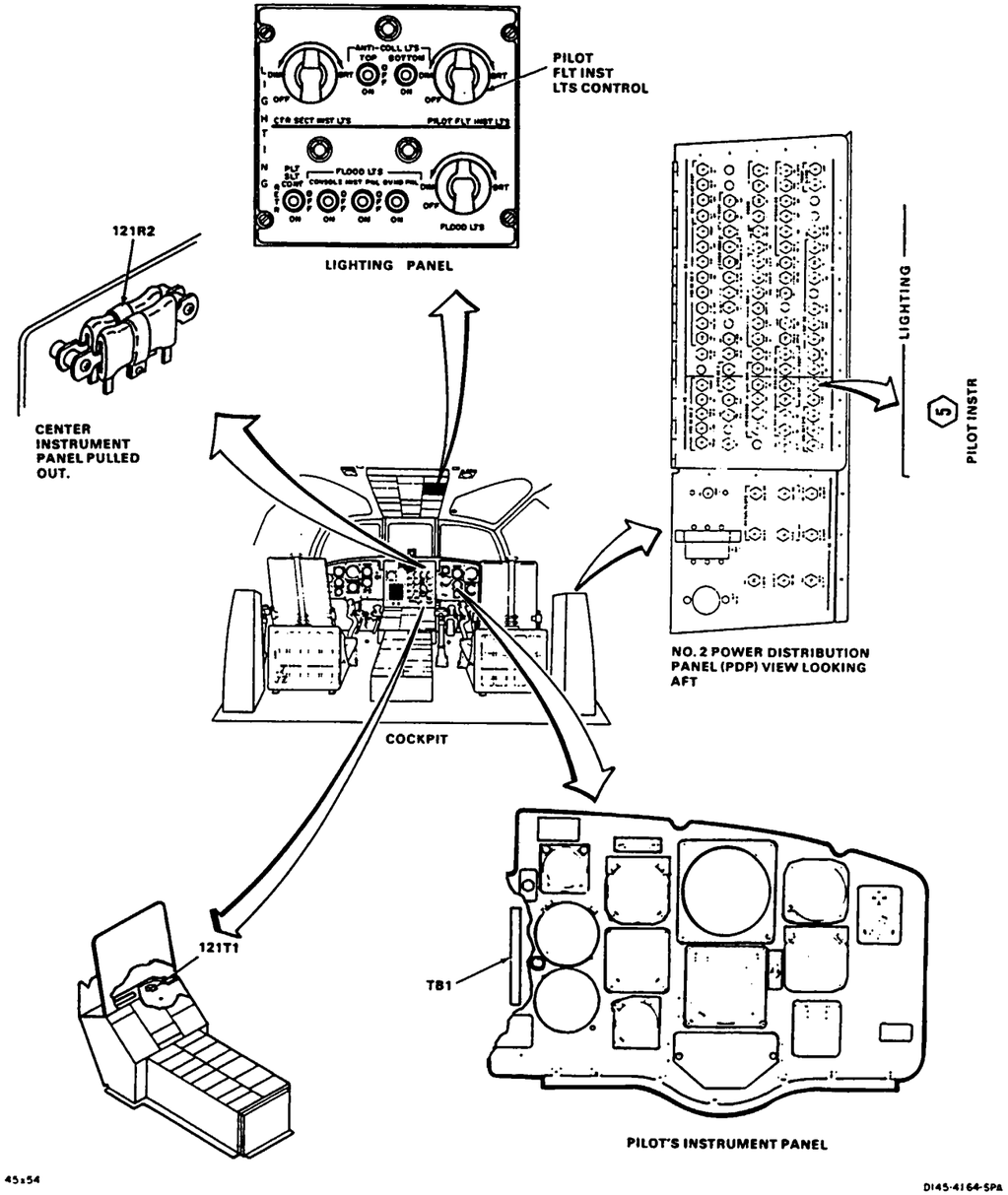
Aircraft Electrician

References:

TM 55-1520-240-23

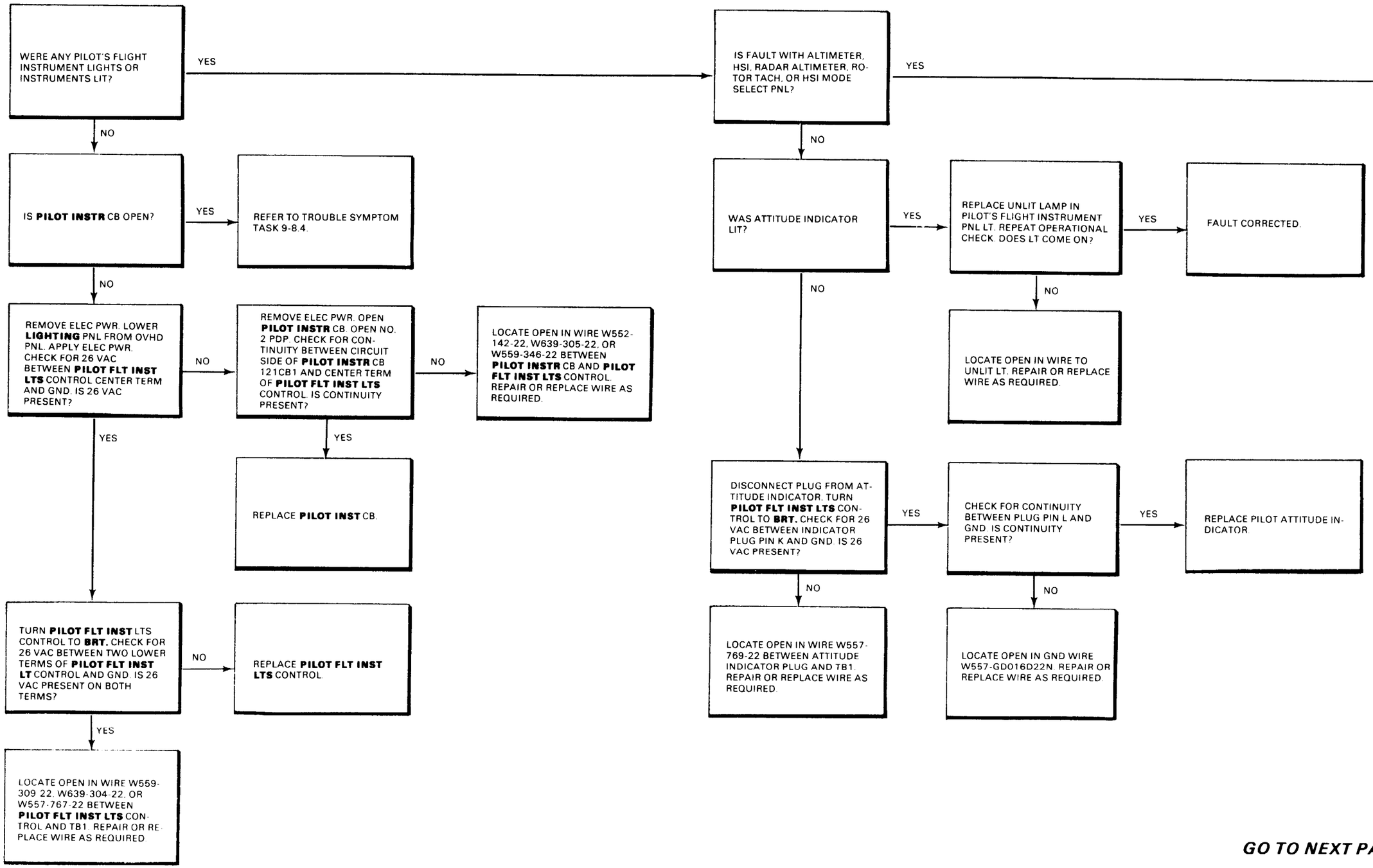
Equipment Condition:

TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off



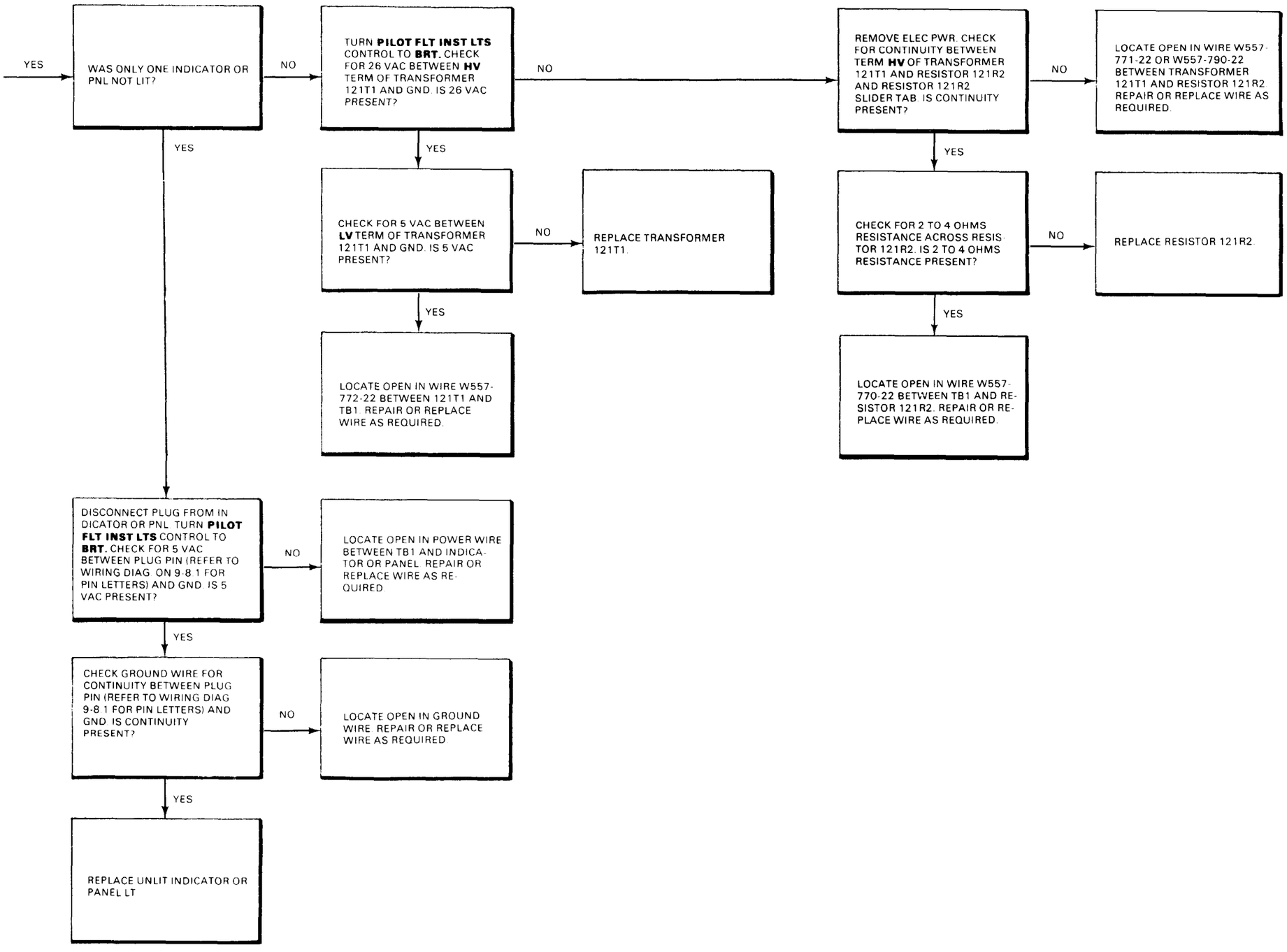
GO TO NEXT PAGE

9-8.5 PILOT'S FLIGHT INSTRUMENT PANEL LIGHT OR LIGHTS NOT LIT (Continued)

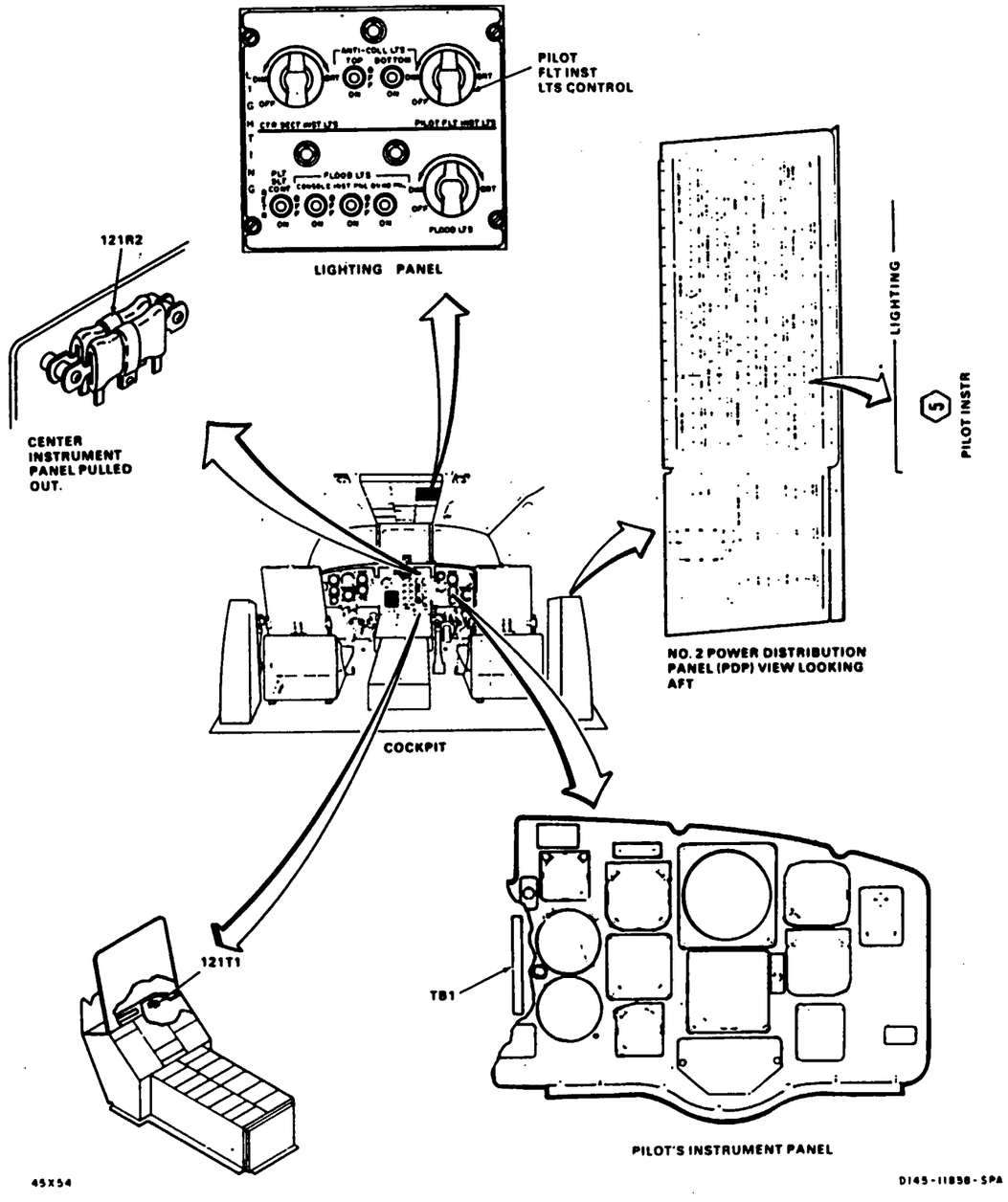


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9-8.5 PILOT'S FLIGHT INSTRUMENT PANEL LIGHT OR LIGHTS NOT LIT (Continued)

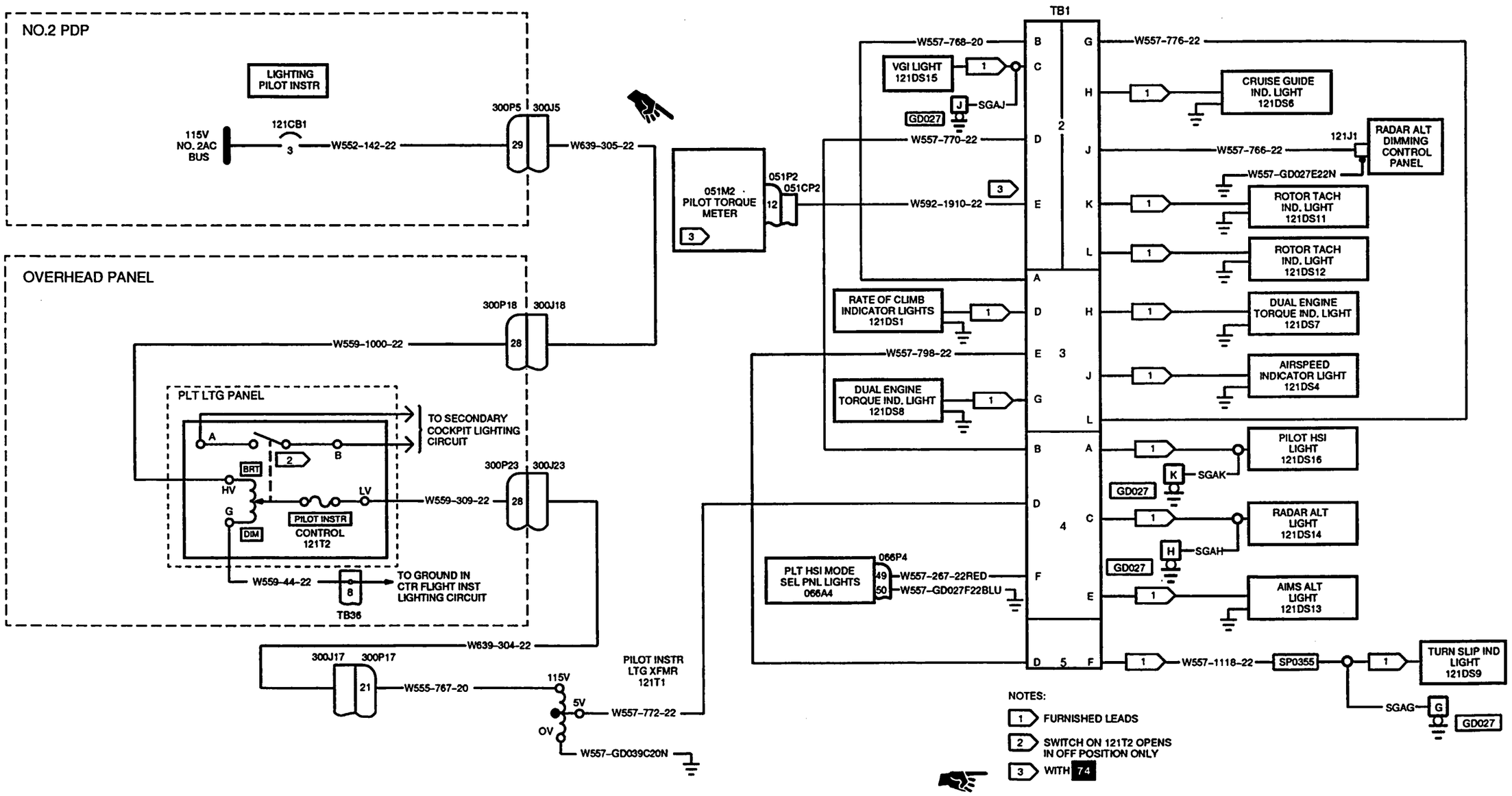


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END OF TASK
Change 2 9-177

WITH 17 AND 74



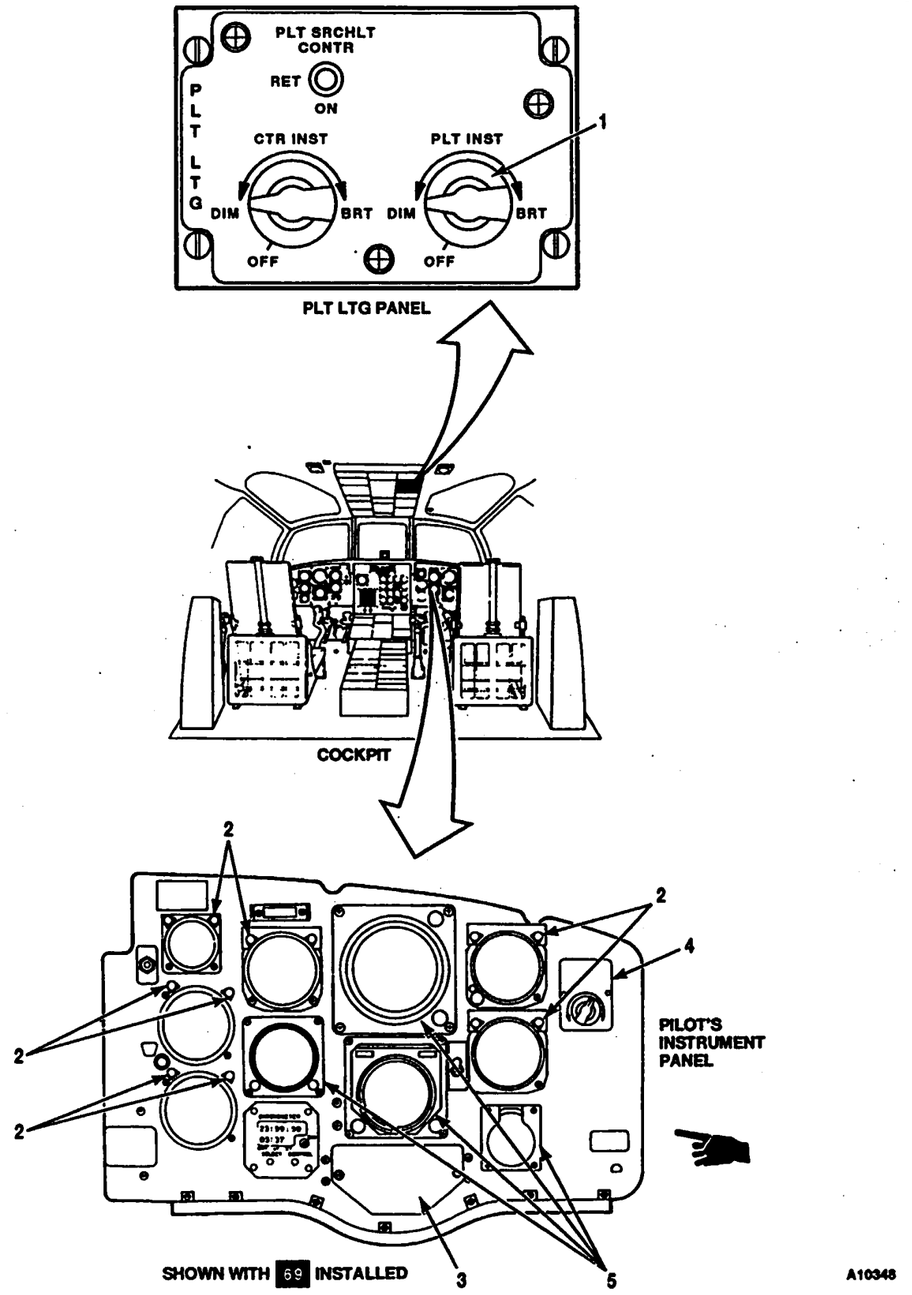
END OF TASK

9-8.7 PILOT'S FLIGHT INSTRUMENT PANEL LIGHTS VISUAL CHECK

INITIAL SETUP
Applicable Configurations:
With 17 or 69
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Materials:
None
Personnel Required:
Aircraft Electrician
References:
TM 55-1520-240-23
Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off

TASK	RESULT
1. **Check PILOT INST lights control (1).**	If control (1) is loose or damaged, tighten or replace it as required.
2. **Check panel lights (2).**	If any panel light (2) is damaged, replace it.
3. **Check HSI MODE SELECT panel (3).**	If panel (3) is damaged, replace it.
4. Check **RAD ALT DIM** panel (4).	If panel (4) is damaged, replace it.
5. Check lighting bezels (5).	If any bezel (5) is damaged, replace it.

FOLLOW-ON MAINTENANCE:
None



END TASK

9-8.7 PILOT'S FLIGHT INSTRUMENT PANEL LIGHTS VISUAL CHECK 9-8.7

INITIAL SETUP

Applicable Configurations:
With 17 and 69

Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915

Materials:
None

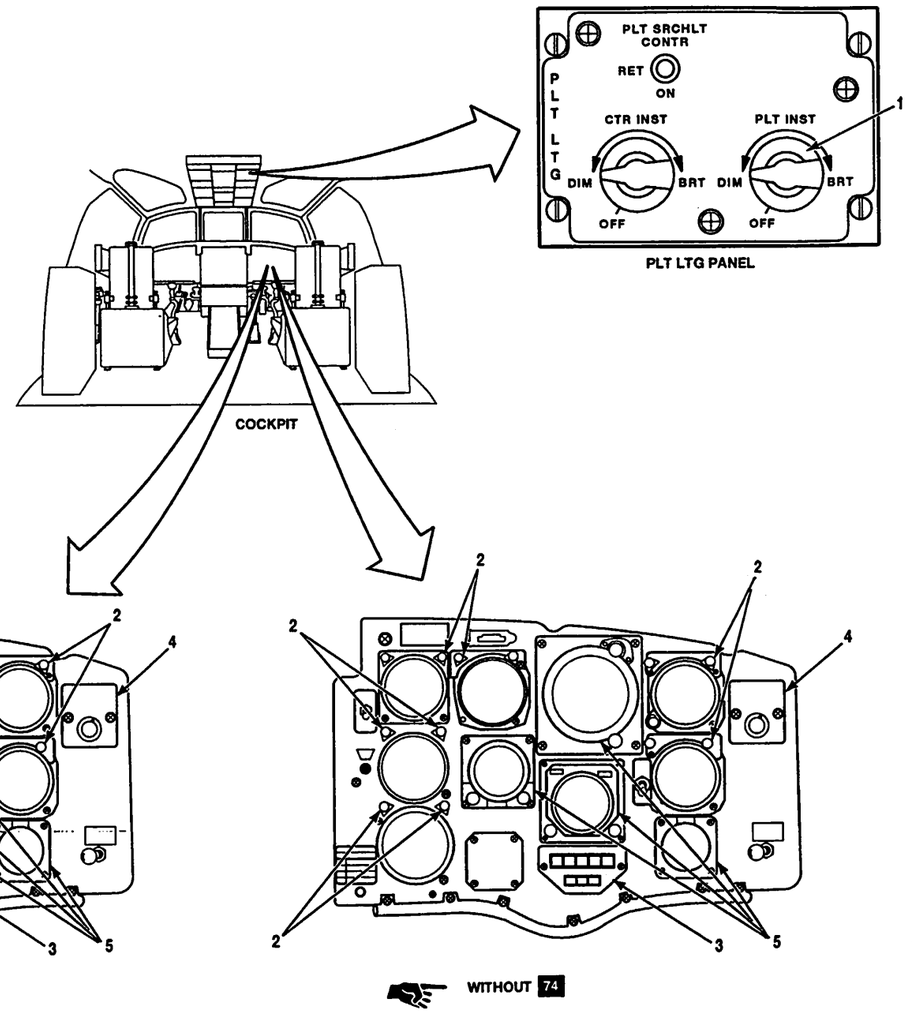
Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off

TASK	RESULT
1. **Check PILOT INST lights control (1).**	If control (1) is loose or damaged, tighten or replace it as required.
2. **Check panel lights (2).**	If any panel light (2) is damaged, replace it.
3. **Check HSI MODE SELECT panel (3).**	If panel (3) is damaged, replace it.
4. Check **RAD ALT DIM** panel (4).	If panel (4) is damaged, replace it.
5. Check lighting bezels (5).	If any bezel (5) is damaged, replace it.

FOLLOW-ON MAINTENANCE:
None



END OF TASK

9-8.9 PILOT INSTR CIRCUIT BREAKER DOES NOT STAY CLOSED

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
With 17 and 69

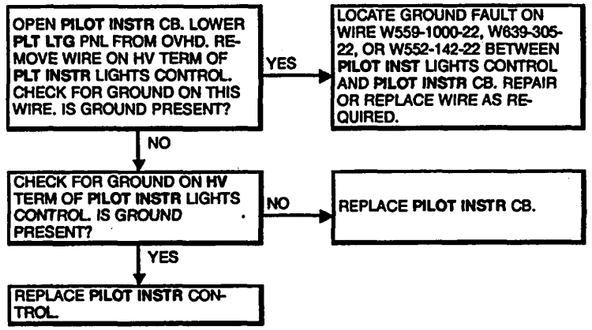
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00323-4915
Multimeter

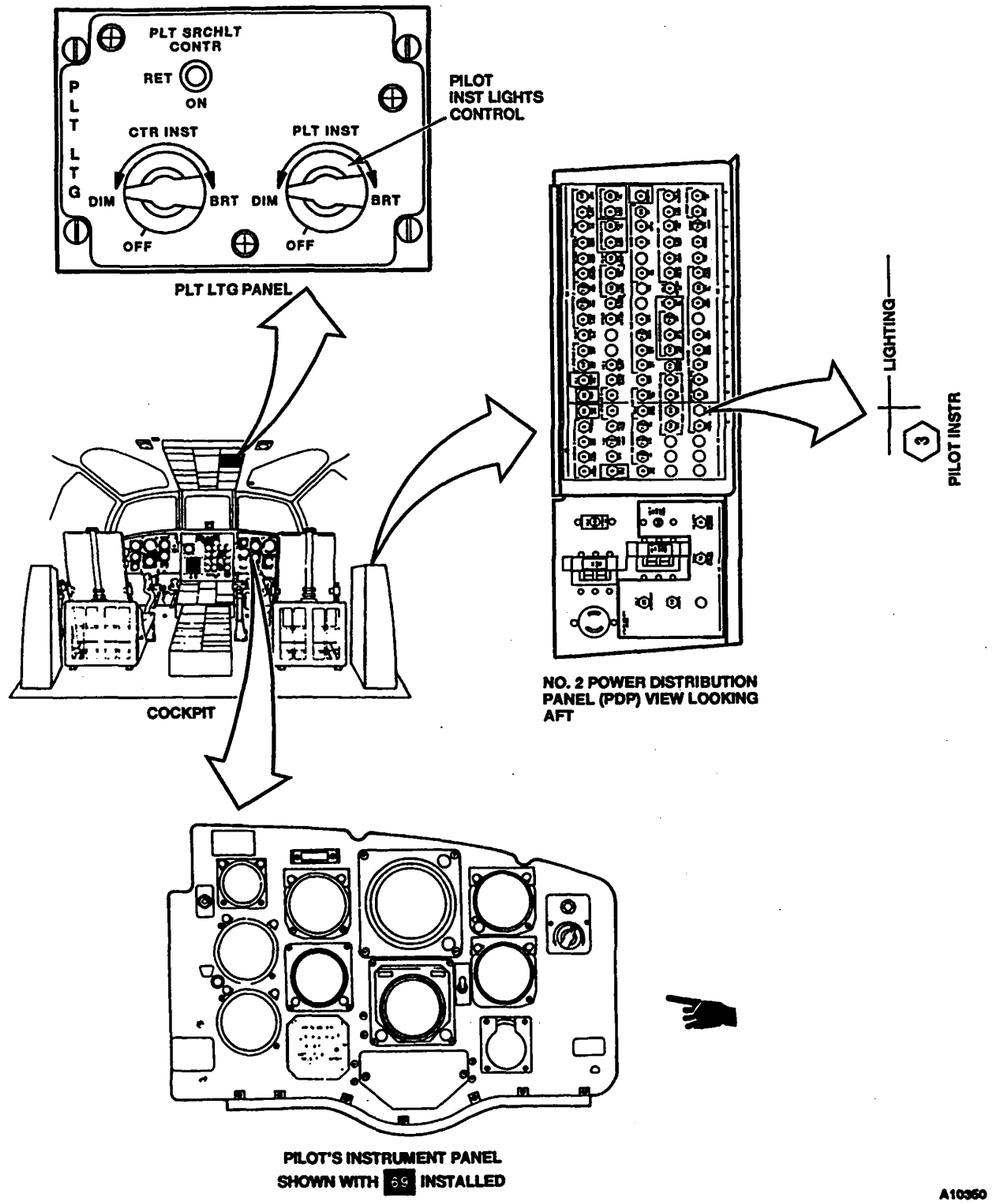
Materials:
None

Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off





A10360

END OF TASK

9-8.9 PILOT INSTR CIRCUIT BREAKER DOES NOT STAY CLOSED 9-8.9

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
With 17 and 69

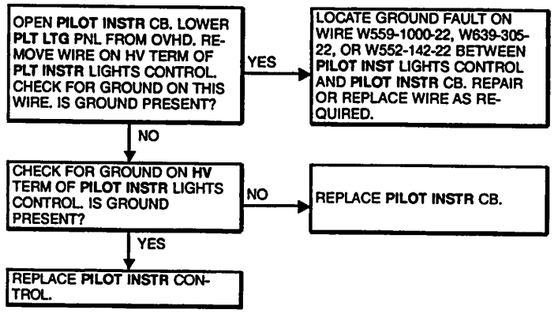
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

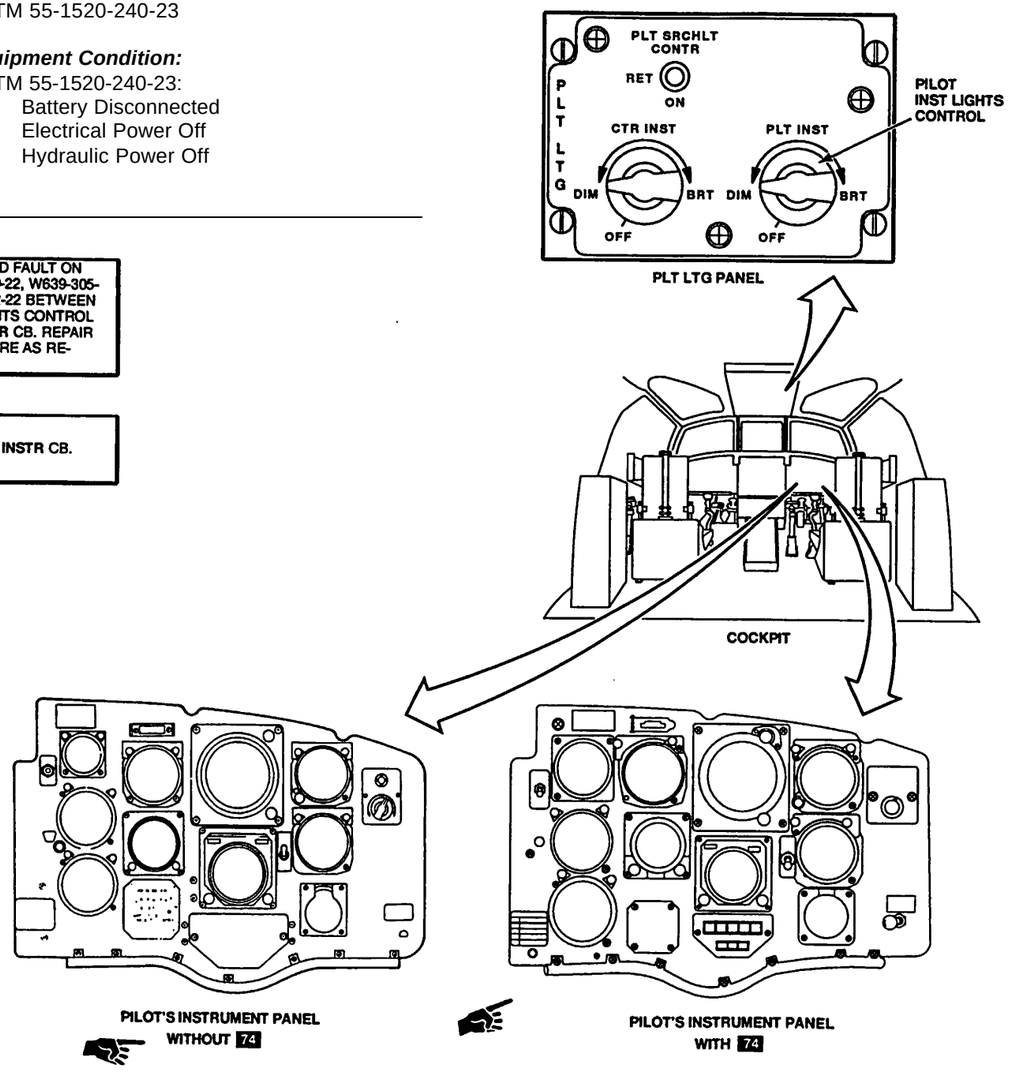
Materials:
None

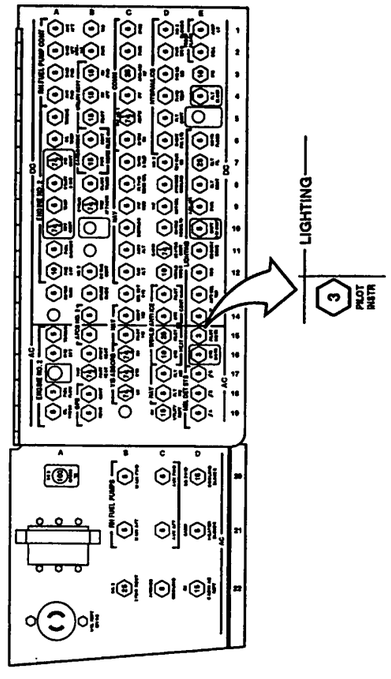
Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off







A67642

END OF TASK

9-8.10 PILOT'S FLIGHT INSTRUMENT PANEL LIGHT OR LIGHTS NOT LIT

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
With 17 and 69

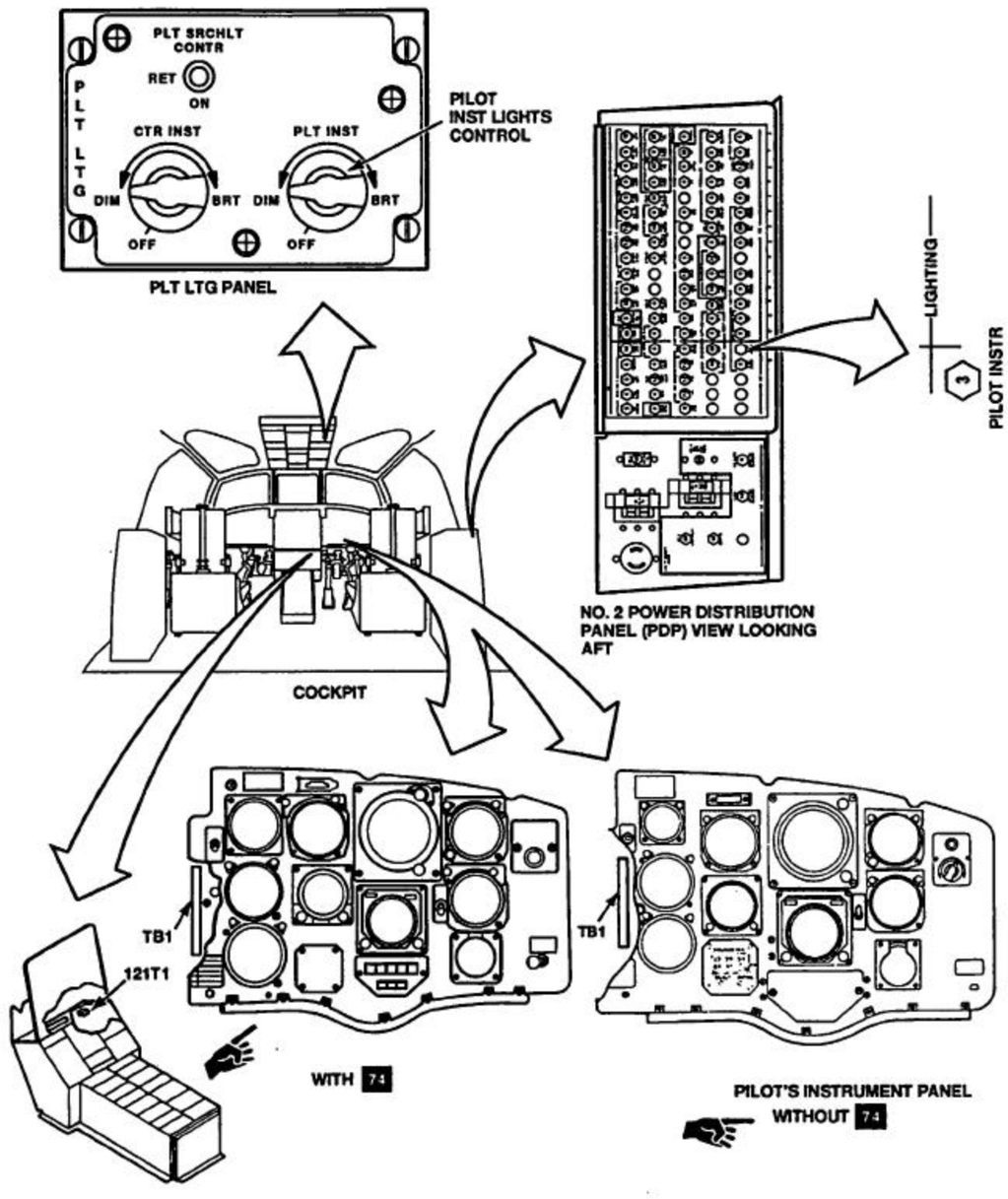
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:
None

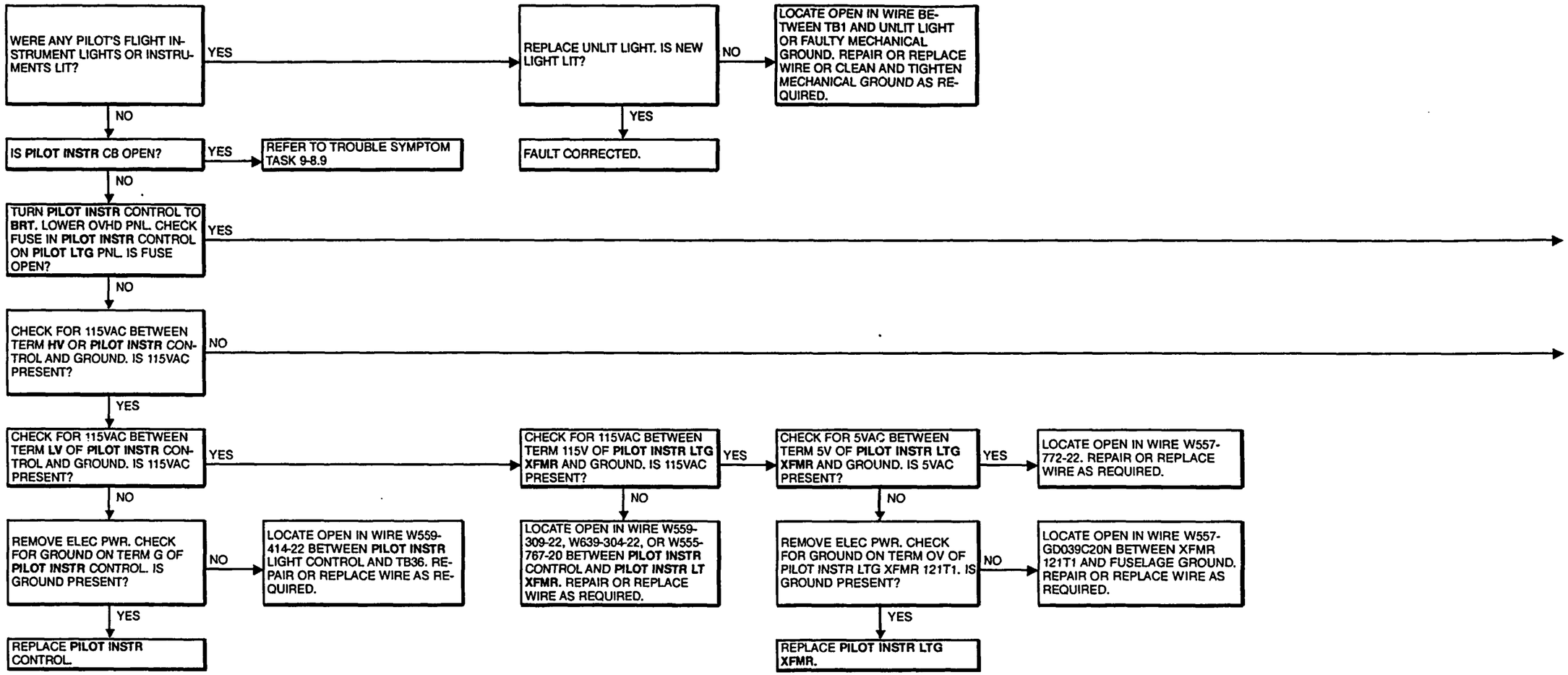
Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

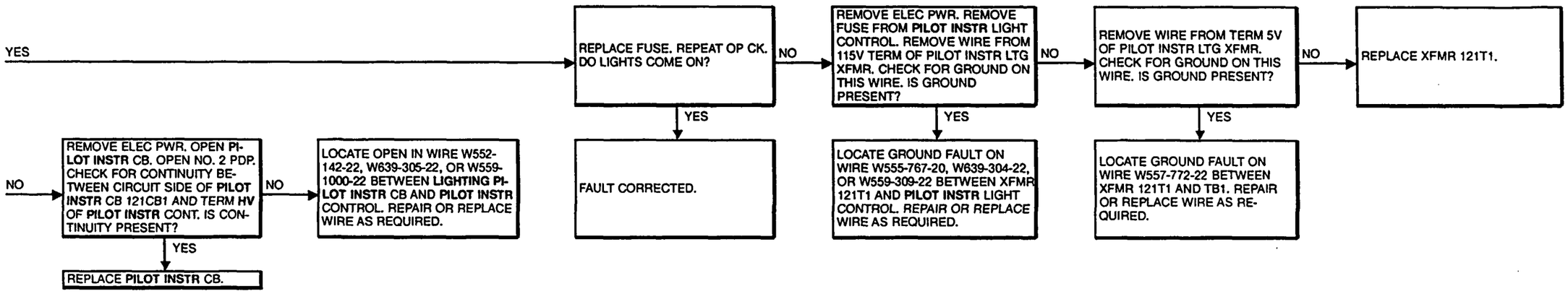
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off



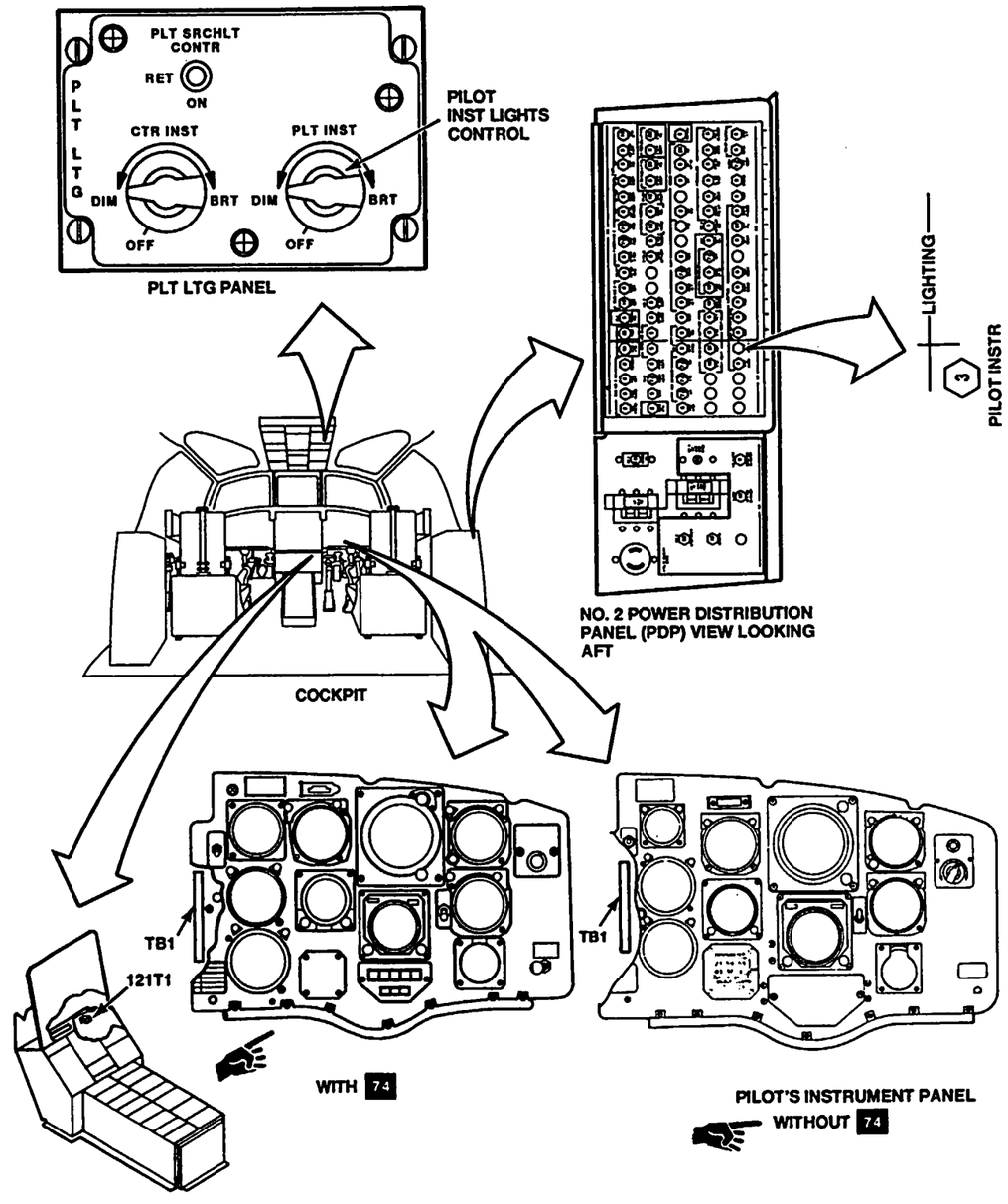
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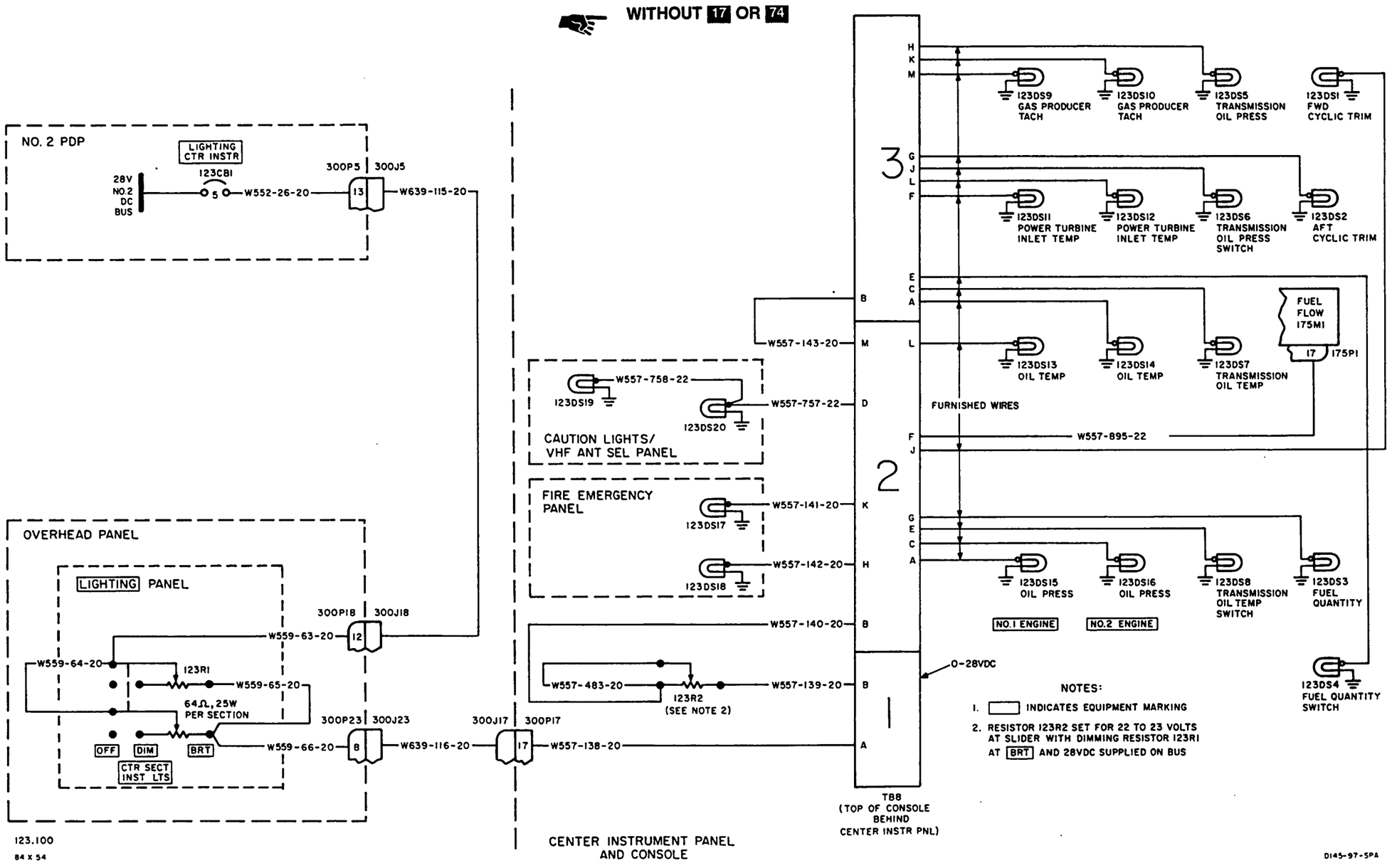


GO TO NEXT PAGE


PLT SRCHLT CONTR
RET
ON
PLT LTG
CTR INST
PLT INST
DIM
BRT
OFF
PLT LTG PANEL
PILOT INST LIGHTS CONTROL
LIGHTING
3
PILOT INSTR
NO. 2 POWER DISTRIBUTION PANEL (PDP) VIEW LOOKING AFT
COCKPIT
TB1
121T1
WITH 74
PILOT'S INSTRUMENT PANEL WITHOUT 74
A67641

END OF TASK

9-9 CENTER FLIGHT INSTRUMENT PANEL LIGHTS


WITHOUT 17 OR 74
NO. 2 PDP
LIGHTING CTR INSTR
123CBI
28V NO.2 DC BUS
5
W552-26-20
300P5
300J5
13
W639-115-20
OVERHEAD PANEL
LIGHTING PANEL
300P18
300J18
12
W559-63-20
W559-64-20
123RI
W559-65-20
64Ω, 25W PER SECTION
OFF
DIM
BRT
CTR SECT INST LTS
300P23
300J23
8
W559-66-20
W639-116-20
300J17
300P17
17
W557-138-20
123.100
84 X 54
CAUTION LIGHTS/ VHF ANT SEL PANEL
123DS19
W557-758-22
123DS20
W557-757-22
FIRE EMERGENCY PANEL
123DS17
W557-141-20
123DS18
W557-142-20
W557-140-20
W557-483-20
123R2
(SEE NOTE 2)
W557-139-20
CENTER INSTRUMENT PANEL AND CONSOLE
H
K
M
3
G
J
L
F
E
C
A
B
M
L
D
F
J
2
G
E
C
A
K
H
B
B
A
1
W557-143-20
123DS9 GAS PRODUCER TACH
123DS10 GAS PRODUCER TACH
123DS5 TRANSMISSION OIL PRESS
123DS1 FWD CYCLIC TRIM
123DS11 POWER TURBINE INLET TEMP
123DS12 POWER TURBINE INLET TEMP
123DS6 TRANSMISSION OIL PRESS SWITCH
123DS2 AFT CYCLIC TRIM
FUEL FLOW 175MI
17
175PI
123DS13 OIL TEMP
123DS14 OIL TEMP
123DS7 TRANSMISSION OIL TEMP
FURNISHED WIRES
W557-895-22
123DS15 OIL PRESS
123DS16 OIL PRESS
123DS8 TRANSMISSION OIL TEMP SWITCH
123DS3 FUEL QUANTITY
NO.1 ENGINE
NO.2 ENGINE
0-28VDC
123DS4 FUEL QUANTITY SWITCH
NOTES:
1. INDICATES EQUIPMENT MARKING
2. RESISTOR 123R2 SET FOR 22 TO 23 VOLTS AT SLIDER WITH DIMMING RESISTOR 123RI AT BRT AND 28VDC SUPPLIED ON BUS
TB8
(TOP OF CONSOLE BEHIND CENTER INSTR PNL)
D145-97-SPA

END OF TASK

9-9.2 CENTER FLIGHT INSTRUMENT PANEL LIGHTS VISUAL CHECK

INITIAL SETUP

Applicable Configurations:
Without 17 or 74

Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:
None

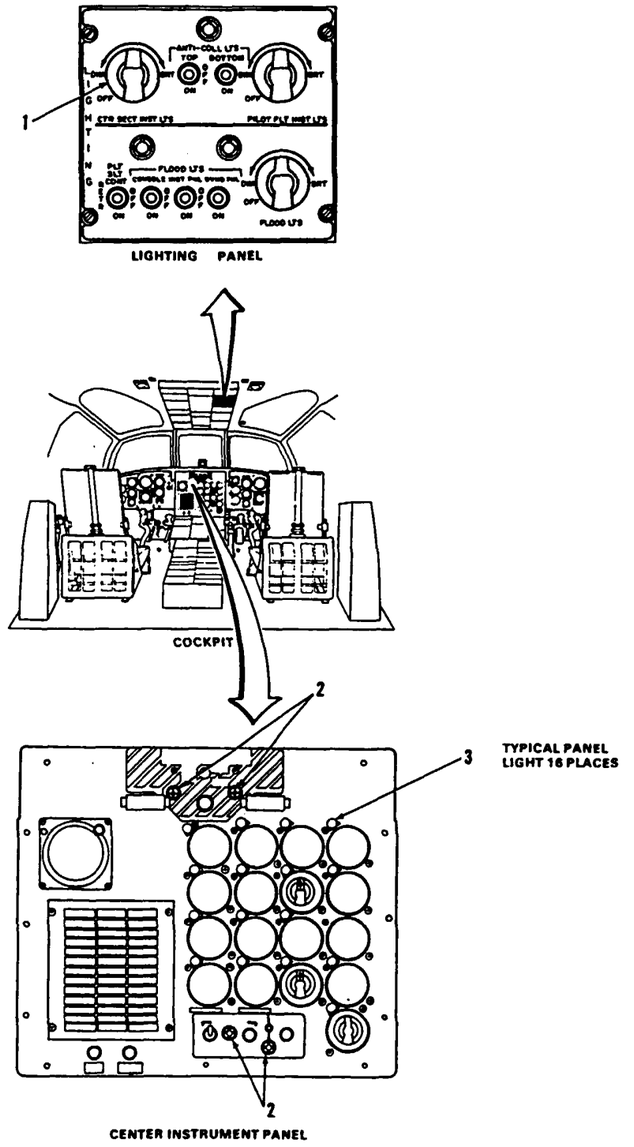
Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off

TASK	RESULT
1. **Check CTR SECT INST LTS control (1).**	If control (1) is loose or damaged, tighten or replace it as required.
2. **Check four panel lights (2).**	If any panel light (2) is damaged, replace it.
3. **Check 16 panel lights (3).**	If any panel light (3) is damaged, replace it.

FOLLOW-ON MAINTENANCE:
None



45x54

D145-4165-SPA

END OF TASK

9-9.3 CENTER FLIGHT INSTRUMENT PANEL LIGHTS OPERATIONAL CHECK

INITIAL SETUP

Applicable Configurations:
Without 17 or 74

Tools:
None

Materials:
None

Personnel Required:

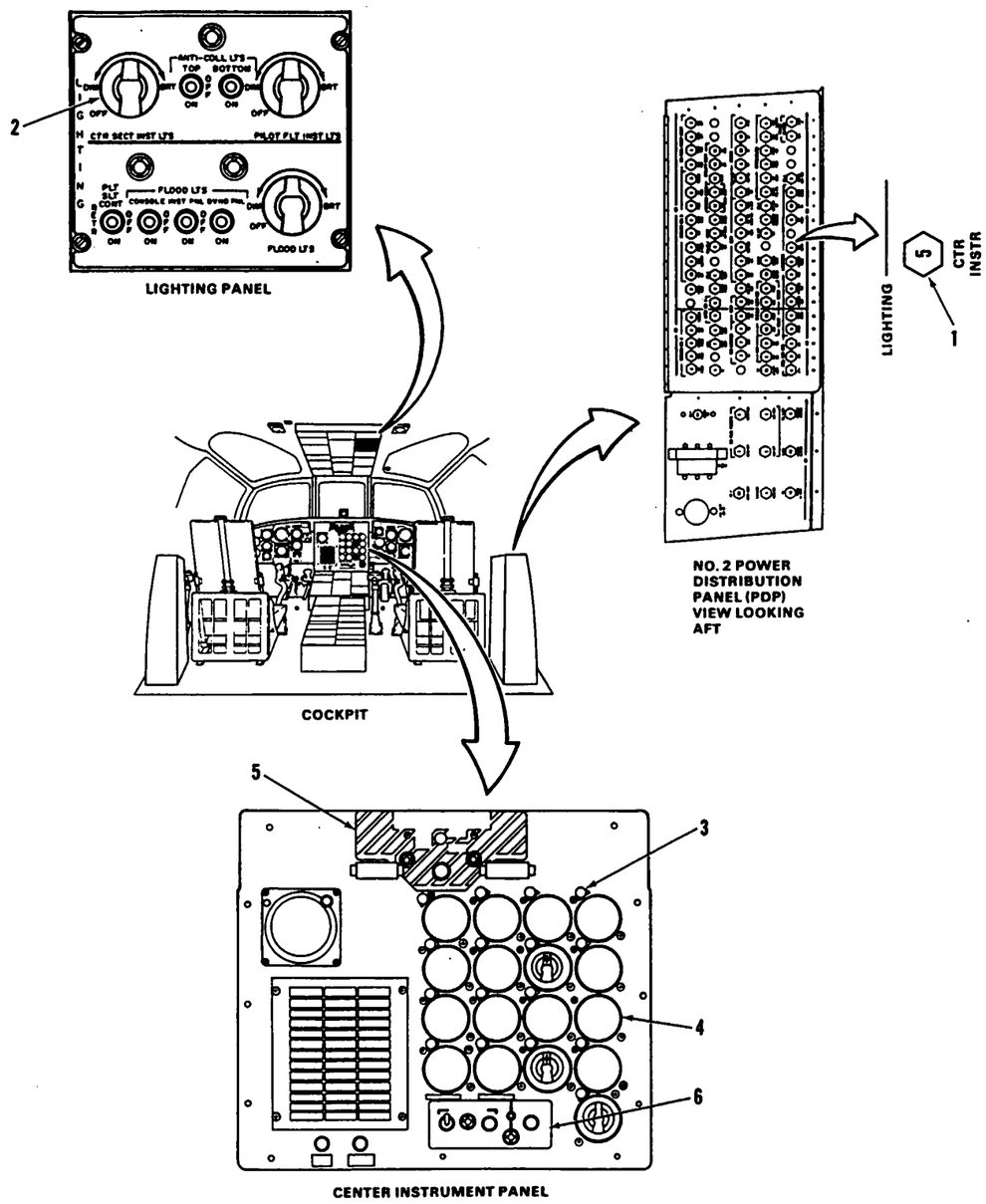
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off
Center Flight Instrument Panel Lights Visual Check
Performed (Task 9-9.2)

TASK	RESULT
1. **Check** that **LIGHTING CTR INSTR circuit breaker (1)** is closed.	If CTR INSTR circuit breaker (1) is open, close it. If it opens again, go to task 9-9.4.
2. **Turn CTR INST lights control (2) from OFF through DIM to BRT**.	All 16 instrument panel lights (3), fuel flow indicator (4) internal lights, fire emergency panel (5) lights, and caution lights/vhf antenna select panel (6) lights shall come on dim and increase in brightness as control (2) is turned to BRT. If any light is not lit, go to task 9-9.5. If brightness does not increase, replace CTR SECT INST LTS control.
3. **Turn CTR SECT INST LTS control (2) to OFF**.	All center flight instrument panel lights shall go out. If not, replace CTR SECT INST LTS control.

FOLLOW-ON MAINTENANCE:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off



45X54

D145-4166-SPA

END OF TASK

9-9.4 CTR INSTR CIRCUIT BREAKER DOES NOT STAY CLOSED

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
Without 17

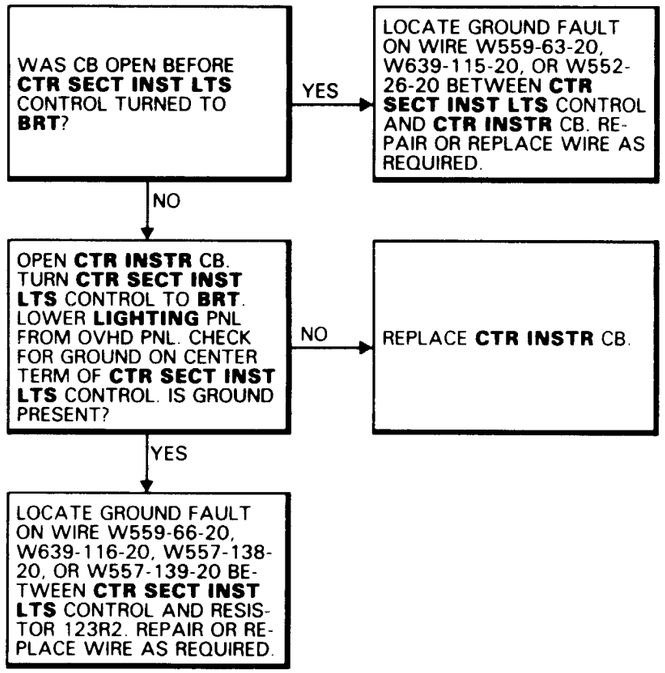
Tools:
Electrical Repairer's Tool Kit, *NSN 5180-00-323-4915*
Multimeter

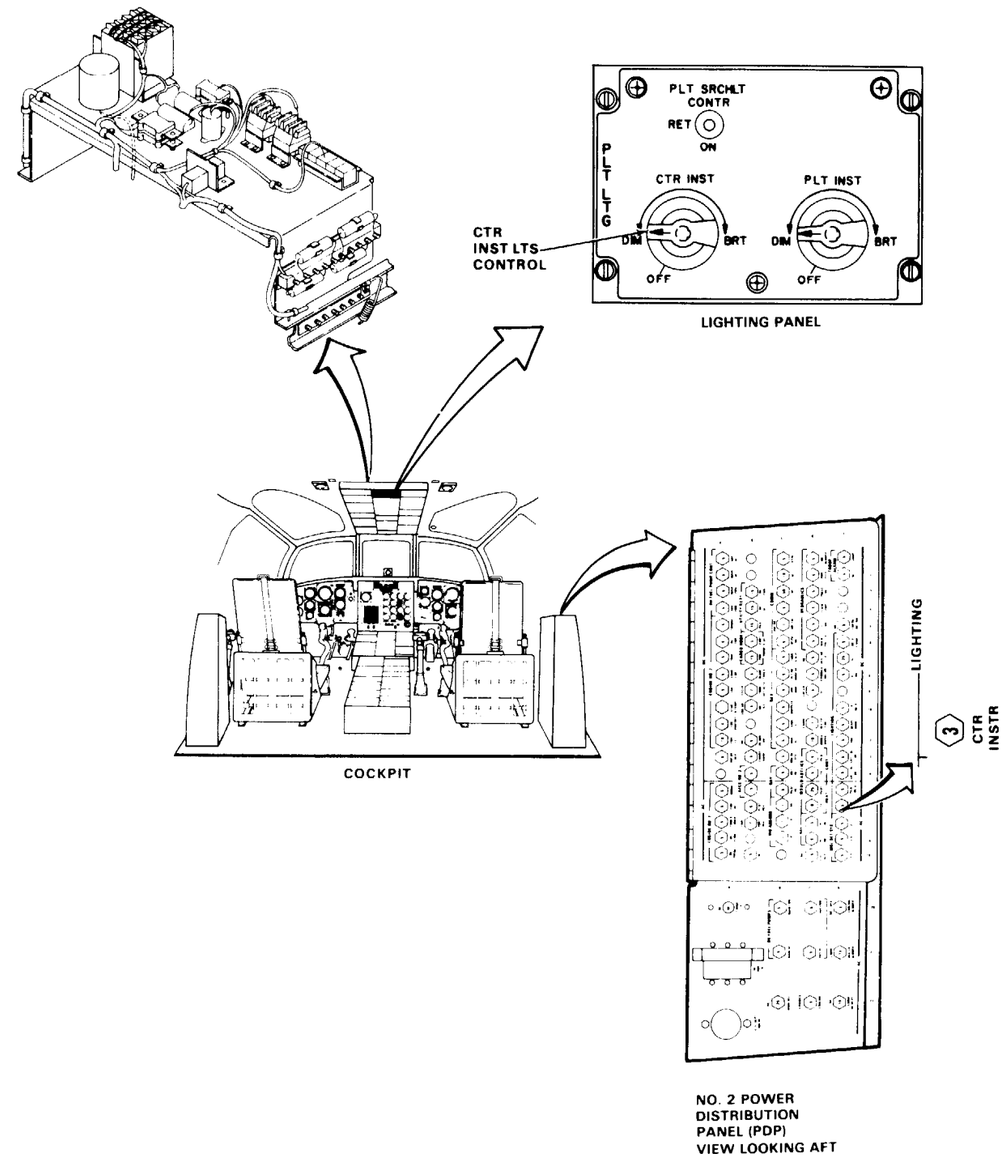
Materials:
None

Personnel Required:
Aircraft Electncian

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off





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END OF TASK

9-9.5 CENTER FLIGHT INSTRUMENT PANEL LIGHT OR LIGHTS NOT LIT

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:

Without 17

Tools:

Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:

None

Personnel Required:

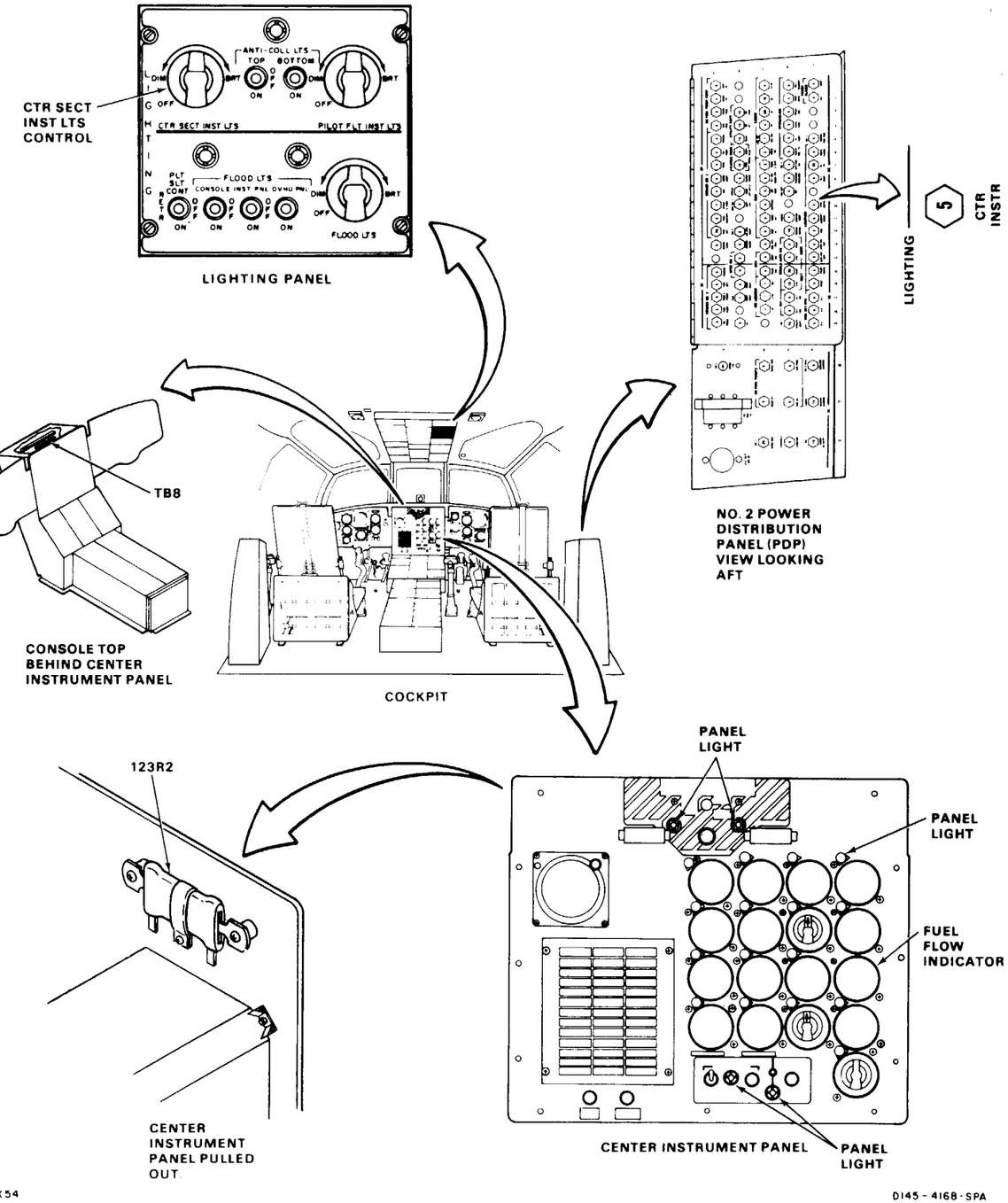
Aircraft Electrician

References:

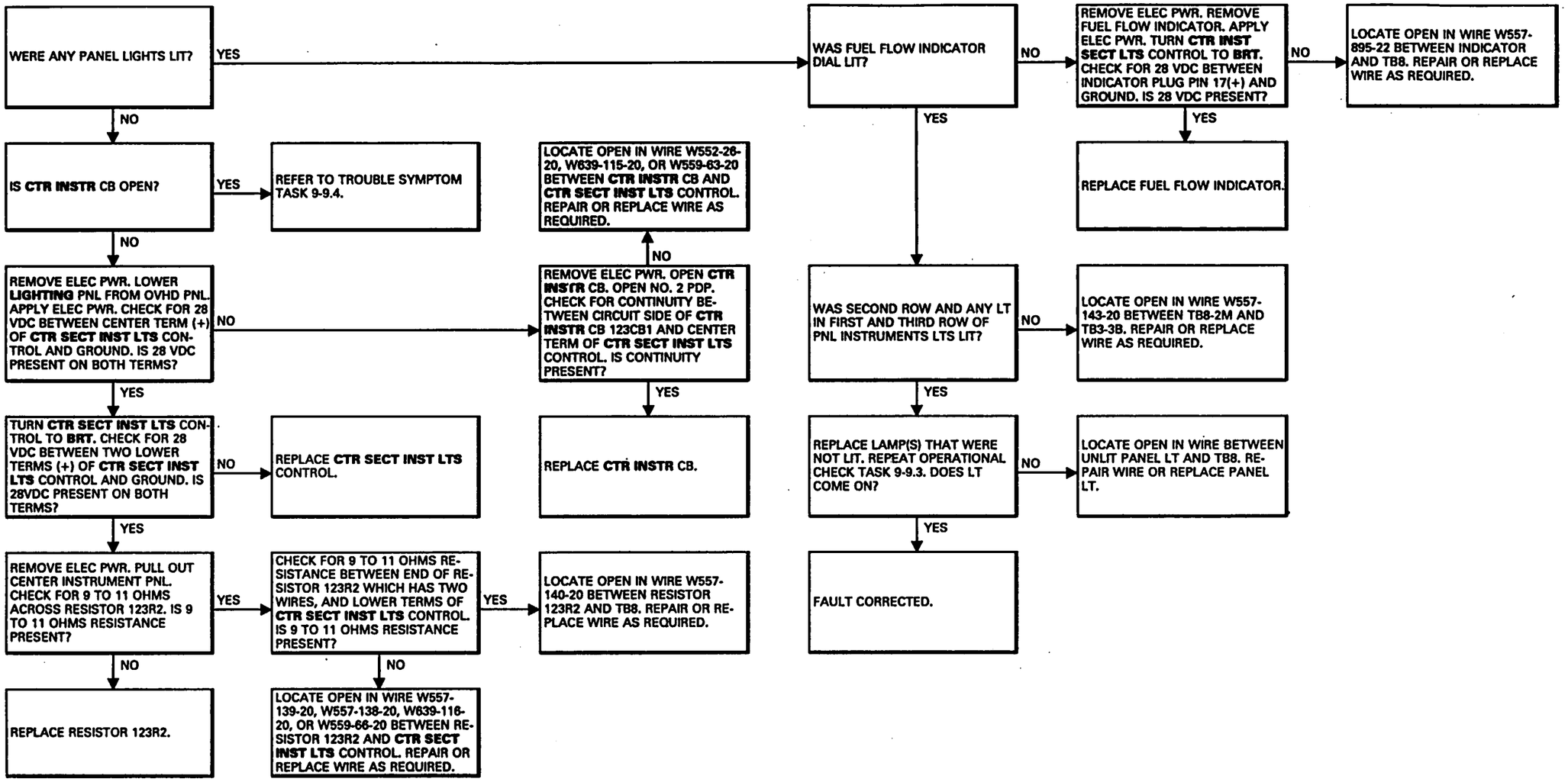
TM 55-1520-240-23

Equipment Condition:

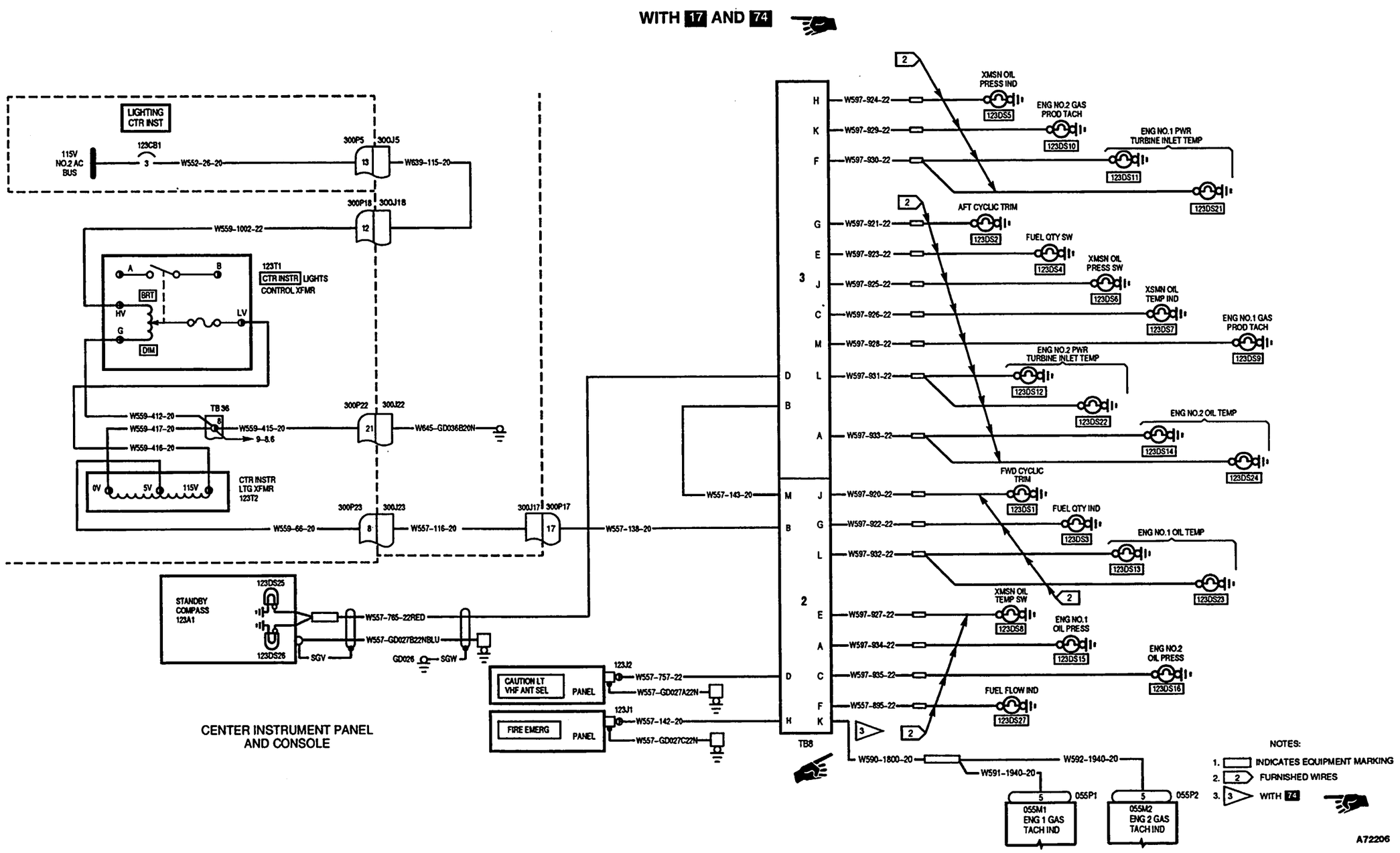
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off



GO TO NEXT PAGE

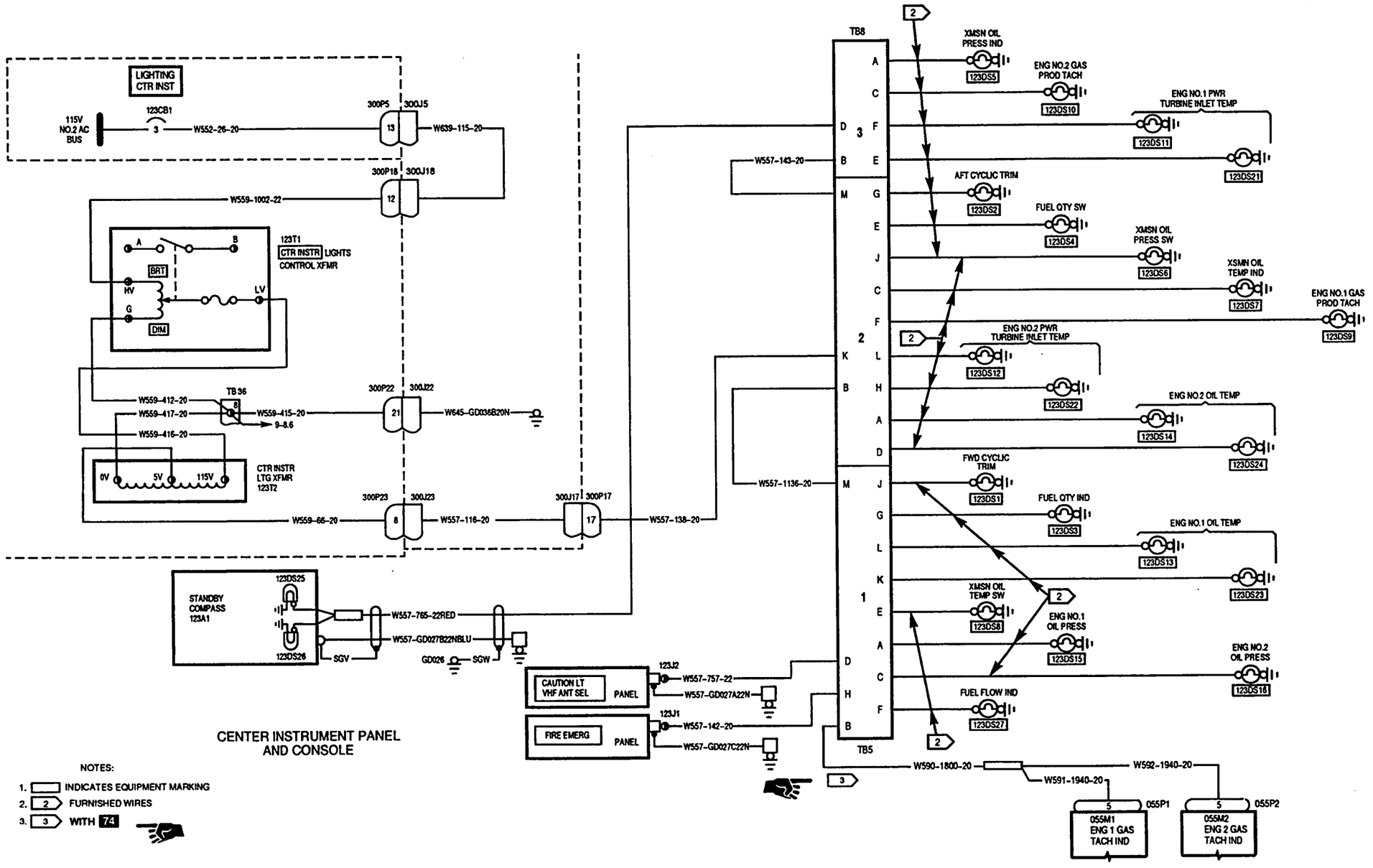

WERE ANY PANEL LIGHTS LIT?
YES
NO
IS CTR INSTR CB OPEN?
YES
REFER TO TROUBLE SYMPTOM TASK 9-9.4.
NO
REMOVE ELEC PWR. LOWER LIGHTING PNL FROM OVHD PNL. APPLY ELEC PWR. CHECK FOR 28 VDC BETWEEN CENTER TERM (+) OF CTR SECT INST LTS CONTROL AND GROUND. IS 28 VDC PRESENT ON BOTH TERMS?
NO
YES
TURN CTR SECT INST LTS CONTROL TO BRT. CHECK FOR 28 VDC BETWEEN TWO LOWER TERMS (+) OF CTR SECT INST LTS CONTROL AND GROUND. IS 28VDC PRESENT ON BOTH TERMS?
NO
REPLACE CTR SECT INST LTS CONTROL.
YES
REMOVE ELEC PWR. PULL OUT CENTER INSTRUMENT PNL. CHECK FOR 9 TO 11 OHMS ACROSS RESISTOR 123R2. IS 9 TO 11 OHMS RESISTANCE PRESENT?
YES
CHECK FOR 9 TO 11 OHMS RESISTANCE BETWEEN END OF RESISTOR 123R2 WHICH HAS TWO WIRES, AND LOWER TERMS OF CTR SECT INST LTS CONTROL. IS 9 TO 11 OHMS RESISTANCE PRESENT?
YES
LOCATE OPEN IN WIRE W557-140-20 BETWEEN RESISTOR 123R2 AND TB8. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
REPLACE RESISTOR 123R2.
NO
LOCATE OPEN IN WIRE W557-139-20, W557-138-20, W639-116-20, OR W559-66-20 BETWEEN RESISTOR 123R2 AND CTR SECT INST LTS CONTROL. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
LOCATE OPEN IN WIRE W552-26-20, W639-115-20, OR W559-63-20 BETWEEN CTR INSTR CB AND CTR SECT INST LTS CONTROL. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
REMOVE ELEC PWR. OPEN CTR INSTR CB. OPEN NO. 2 PDP. CHECK FOR CONTINUITY BETWEEN CIRCUIT SIDE OF CTR INSTR CB 123CB1 AND CENTER TERM OF CTR SECT INST LTS CONTROL. IS CONTINUITY PRESENT?
YES
REPLACE CTR INSTR CB.
WAS FUEL FLOW INDICATOR DIAL LIT?
NO
REMOVE ELEC PWR. REMOVE FUEL FLOW INDICATOR. APPLY ELEC PWR. TURN CTR INST SECT LTS CONTROL TO BRT. CHECK FOR 28 VDC BETWEEN INDICATOR PLUG PIN 17(+) AND GROUND. IS 28 VDC PRESENT?
NO
LOCATE OPEN IN WIRE W557-895-22 BETWEEN INDICATOR AND TB8. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
REPLACE FUEL FLOW INDICATOR.
YES
WAS SECOND ROW AND ANY LT IN FIRST AND THIRD ROW OF PNL INSTRUMENTS LTS LIT?
NO
LOCATE OPEN IN WIRE W557-143-20 BETWEEN TB8-2M AND TB3-3B. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
REPLACE LAMP(S) THAT WERE NOT LIT. REPEAT OPERATIONAL CHECK TASK 9-9.3. DOES LT COME ON?
NO
LOCATE OPEN IN WIRE BETWEEN UNLIT PANEL LT AND TB8. REPAIR WIRE OR REPLACE PANEL LT.
YES
FAULT CORRECTED.

END OF TASK


WITH 17 AND 74
LIGHTING CTR INST
115V NO.2 AC BUS
123CB1
3
W552-26-20
300P5
300J5
13
W639-115-20
300P18
300J18
12
W559-1002-22
123T1
CTR INSTR LIGHTS CONTROL XFMR
A
B
BRT
HV
LV
G
DIM
TB36
W559-412-20
W559-417-20
W559-415-20
9-8.6
W559-416-20
300P22
300J22
21
W645-GD036B20N
CTR INSTR LTG XFMR 123T2
0V
5V
115V
300P23
300J23
8
W559-66-20
W557-116-20
300J17
300P17
17
W557-138-20
W557-143-20
STANDBY COMPASS 123A1
123DS25
123DS26
W557-765-22RED
W557-GD027B22NBLU
SGV
GD026
SGW
CAUTION LT VHF ANT SEL PANEL
FIRE EMERG PANEL
123J2
123J1
W557-757-22
W557-GD027A22N
W557-142-20
W557-GD027C22N
CENTER INSTRUMENT PANEL AND CONSOLE
TB8
H
K
F
G
E
J
3
C
M
L
D
B
A
2
W597-924-22
W597-929-22
W597-930-22
W597-921-22
W597-923-22
W597-925-22
W597-926-22
W597-928-22
W597-931-22
W597-933-22
W597-920-22
W597-922-22
W597-932-22
W597-927-22
W597-934-22
W597-935-22
W597-895-22
XMSN OIL PRESS IND
123DS5
ENG NO.2 GAS PROD TACH
123DS10
ENG NO.1 PWR TURBINE INLET TEMP
123DS11
123DS21
AFT CYCLIC TRIM
123DS2
FUEL QTY SW
123DS4
XMSN OIL PRESS SW
123DS6
XSMN OIL TEMP IND
123DS7
ENG NO.1 GAS PROD TACH
123DS9
ENG NO.2 PWR TURBINE INLET TEMP
123DS12
123DS22
ENG NO.2 OIL TEMP
123DS14
123DS24
FWD CYCLIC TRIM
123DS1
FUEL QTY IND
123DS3
ENG NO.1 OIL TEMP
123DS13
123DS23
XMSN OIL TEMP SW
123DS8
ENG NO.1 OIL PRESS
123DS15
ENG NO.2 OIL PRESS
123DS16
FUEL FLOW IND
123DS27
W590-1800-20
W591-1940-20
W592-1940-20
055P1
055P2
055M1
ENG 1 GAS TACH IND
055M2
ENG 2 GAS TACH IND
NOTES:
1. INDICATES EQUIPMENT MARKING
2. 2 FURNISHED WIRES
3. 3 WITH 74
A72206

END OF TASK

WITH 17 AND 74



A72205

END OF TASK

9-9.7 CENTER FLIGHT INSTRUMENT PANEL LIGHTS VISUAL CHECK

INITIAL SETUP

Applicable Configurations:
With 17

Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915

Materials:
None

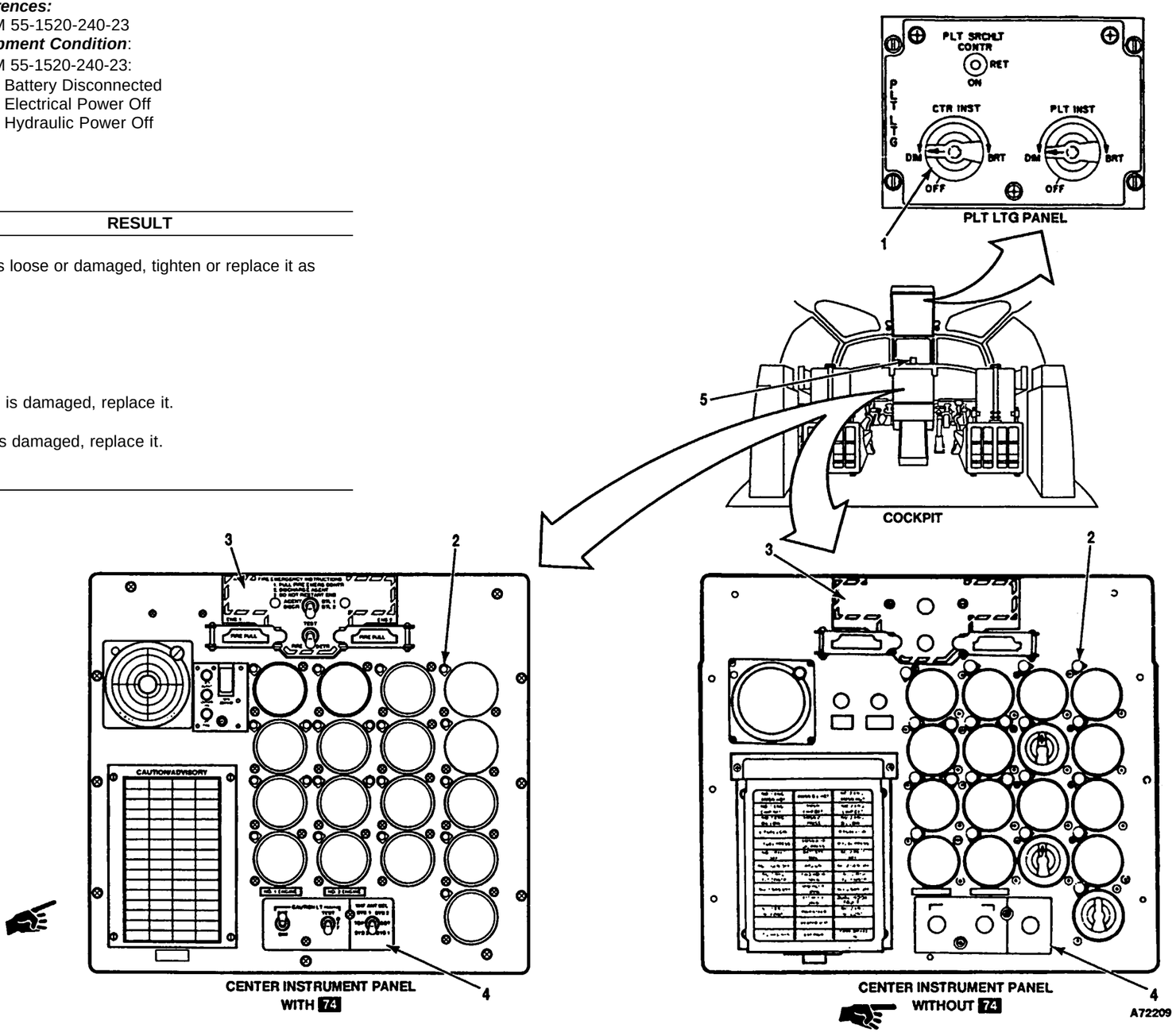
Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off

TASK	RESULT
1. **Check CRT INST lights control (1).**	If control (1) is loose or damaged, tighten or replace it as required.
2. **Check panel lights (2).**	
NOTE **There are 17 panel lights on helicopters up to 85-24330. Beginning with 85-24331, there are 21 panel lights (Without 74). There are 20 panel lights (With 74).**	
3. **Check FIRE EMERG panel (3) and CAUTION LT VHF ANT SEL** panel (4).	If either panel is damaged, replace it.
4. **Check lights on standby compass (5).**	If either light is damaged, replace it.

FOLLOW-ON MAINTENANCE:
None



END OF TASK

9-9.8 CENTER FLIGHT INSTRUMENT PANEL LIGHTS OPERATIONAL CHECK

INITIAL SETUP

Applicable Configurations:
With 17

Tools:
None

Materials:
None

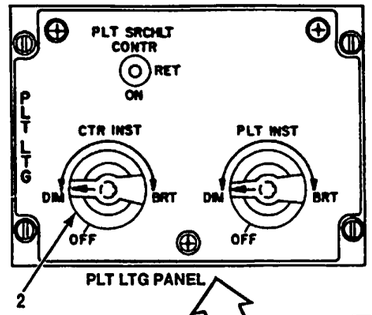
Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off
Center Flight Instrument Panel Lights Visual Check
Performed (Task 9-9.7)

TASK	RESULT
1. **Check that LIGHTING CTR INSTR circuit breaker (1)** is closed.	If CTR INSTR circuit breaker (1) is open, close it. If it opens again, go to task 9-9.9.
2. **Turn CTR INST lights control (2) from OFF through DIM to BRT**.	All instrument panel lights (3), FIRE EMERG panel (4) lights, CAUTION LTS/VHF ANT SEL panel (5) lights, and standby compass (6) lights, shall come on dim and increase in brightness as control (2) is turned to BRT. If any light is not lit, go to task 9-9.10. If brightness does not increase, replace CTR INST lights control.
3. **Turn CTR INST lights control (2) to OFF**.	All center flight instrument panel lights shall go out. If not, replace CTR INST lights control.

FOLLOW-ON MAINTENANCE:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off



END OF TASK

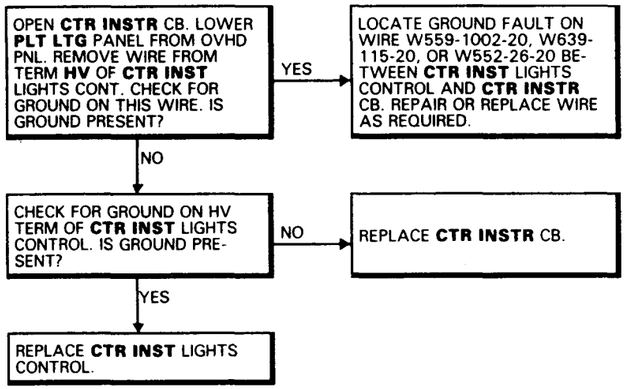
FAULT ISOLATION PROCEDURE
INITIAL SETUP

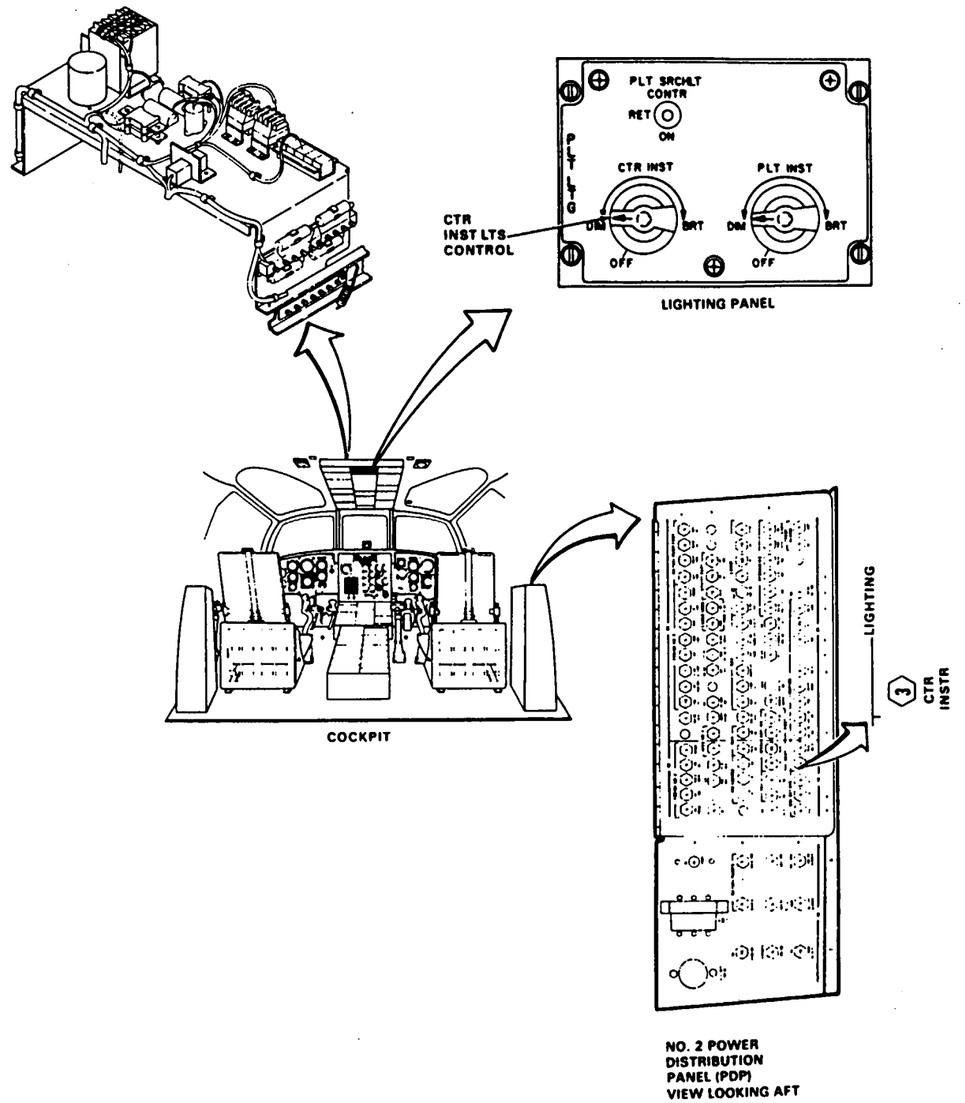
Applicable Configurations:
With 17
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:
None

Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23
Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off





10355

END OF TASK
Change 2 9-186.3

9-9.10 CENTER FLIGHT INSTRUMENT PANEL LIGHT OR LIGHTS NOT LIT

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
With 17

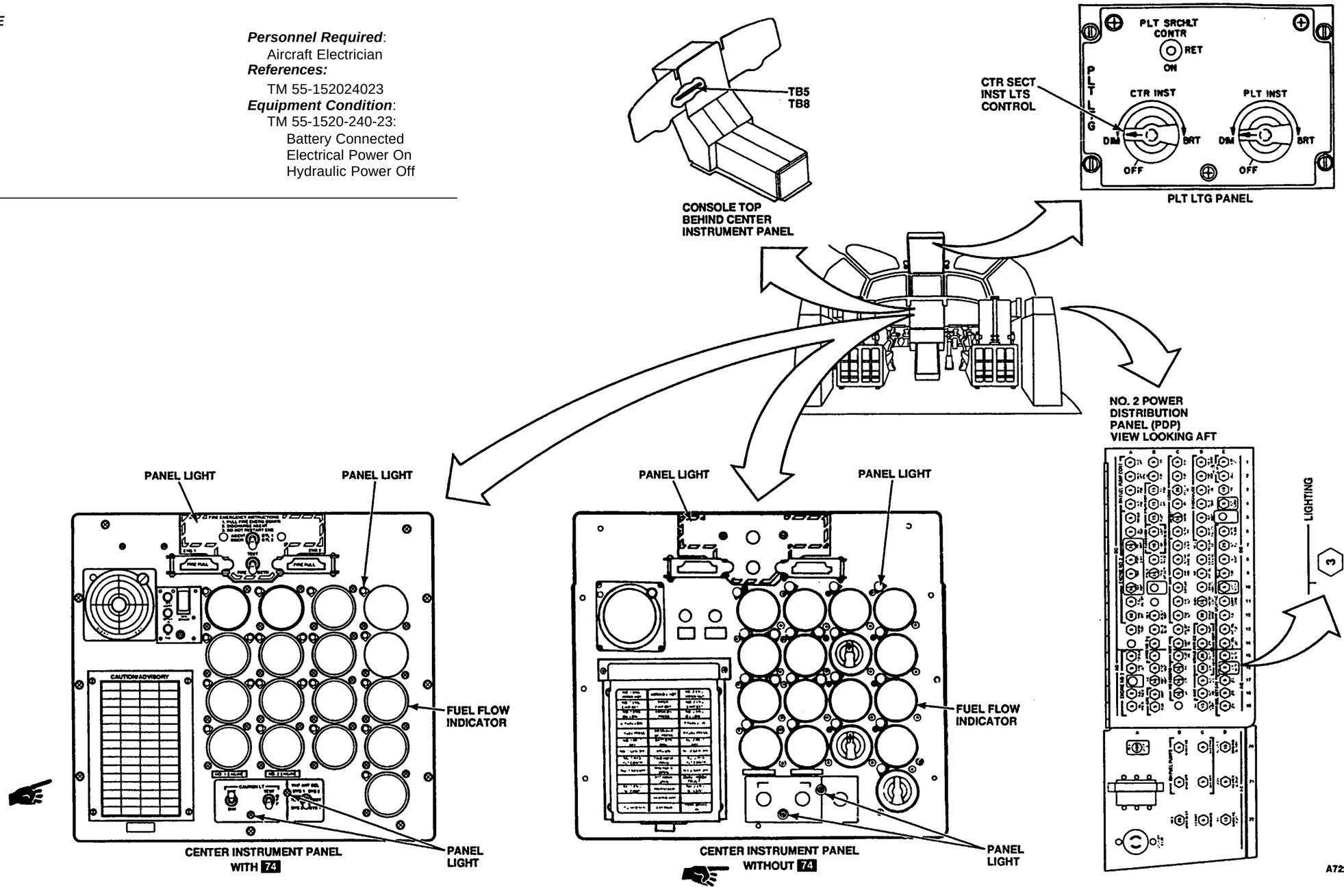
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:
None

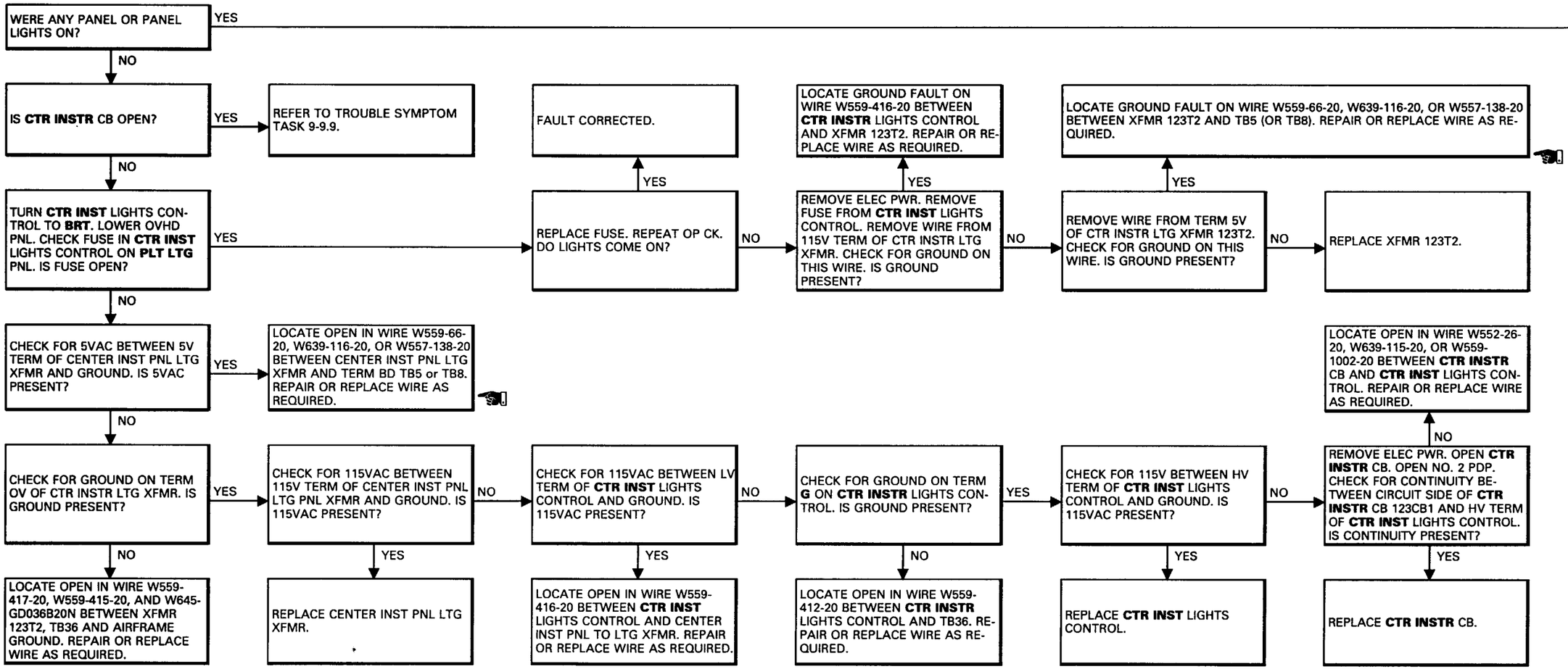
Personnel Required:
Aircraft Electrician

References:
TM 55-152024023

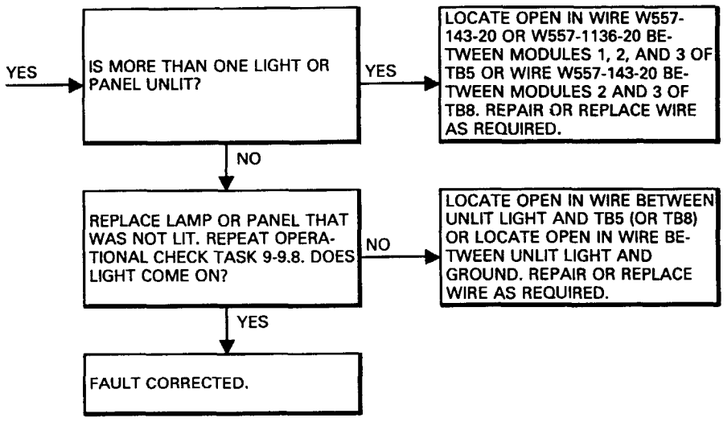
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off



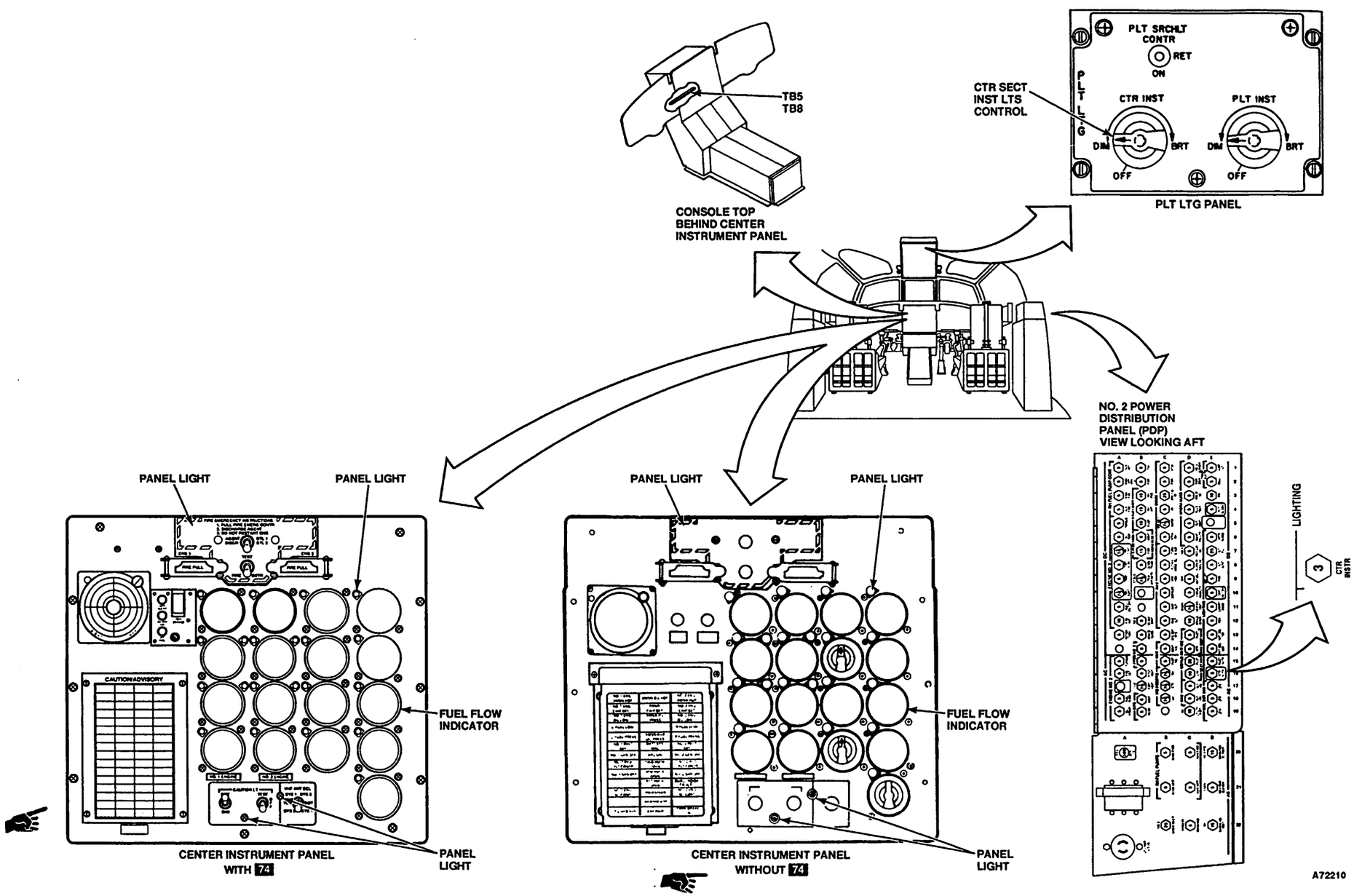
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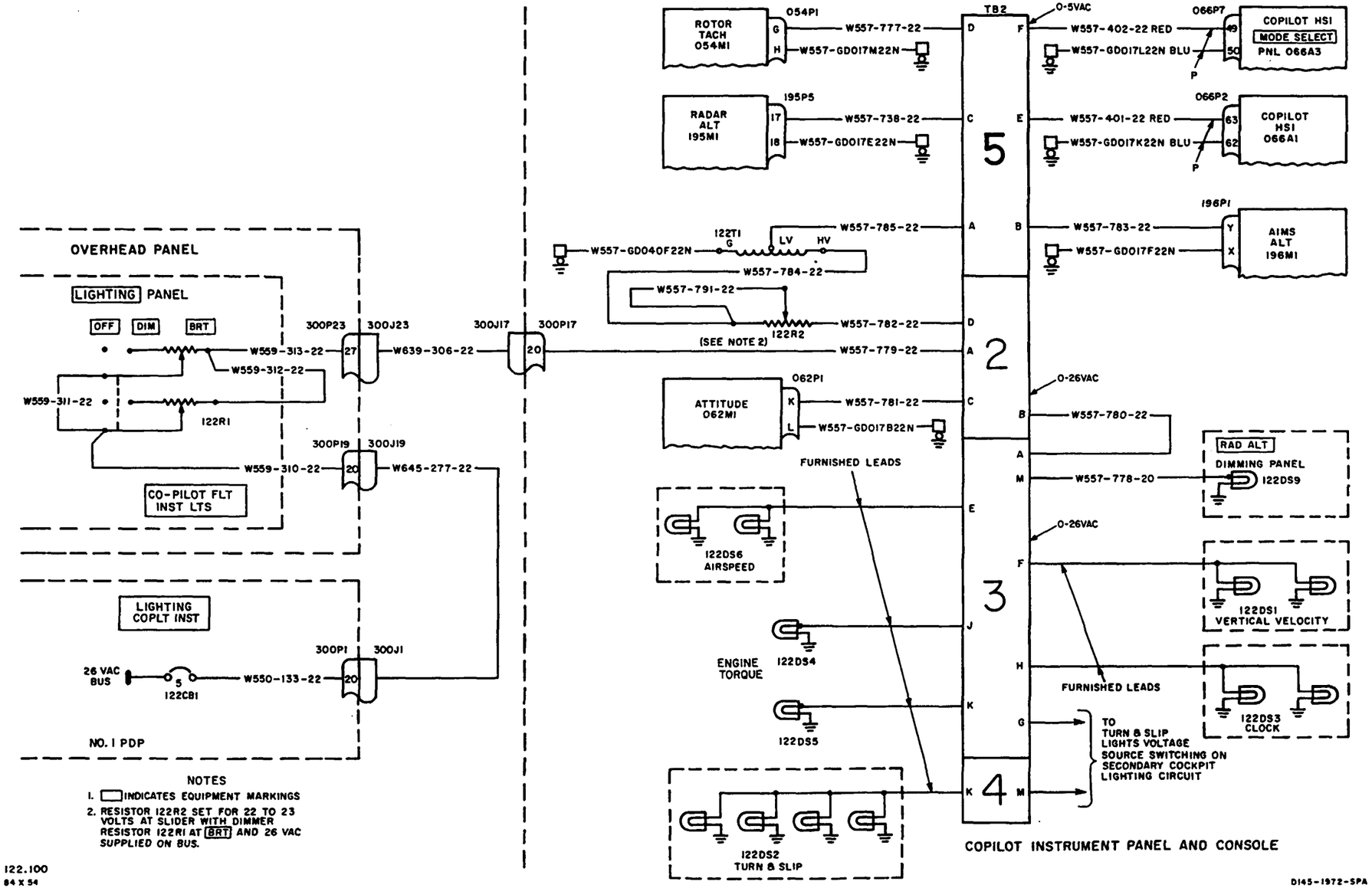
GO TO NEXT PAGE


TB5
TB8
CONSOLE TOP
BEHIND CENTER
INSTRUMENT PANEL
PLT SRCHLT
CONTR
RET
ON
PLT LTG
CTR SECT
INST LTS
CONTROL
CTR INST
PLT INST
DIM
BRT
OFF
PLT LTG PANEL
NO. 2 POWER
DISTRIBUTION
PANEL (PDP)
VIEW LOOKING AFT
LIGHTING
3
CTR
INSTR
PANEL LIGHT
PANEL LIGHT
FUEL FLOW
INDICATOR
CAUTION/ADVISORY
CENTER INSTRUMENT PANEL
WITH 74
PANEL
LIGHT
PANEL LIGHT
PANEL LIGHT
FUEL FLOW
INDICATOR
CENTER INSTRUMENT PANEL
WITHOUT 74
PANEL
LIGHT
A72210

END OF TASK

9-10 COPILOT FLIGHT INSTRUMENT PANEL LIGHTS

WITHOUT 17 AND 74



COPILOT INSTRUMENT PANEL AND CONSOLE

END OF TASK

9-10.2 COPILOT'S FLIGHT INSTRUMENT PANEL LIGHTS VISUAL CHECK

INITIAL SETUP

Applicable Configurations:
Without 17 or 74

Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-3234915

Materials:
None

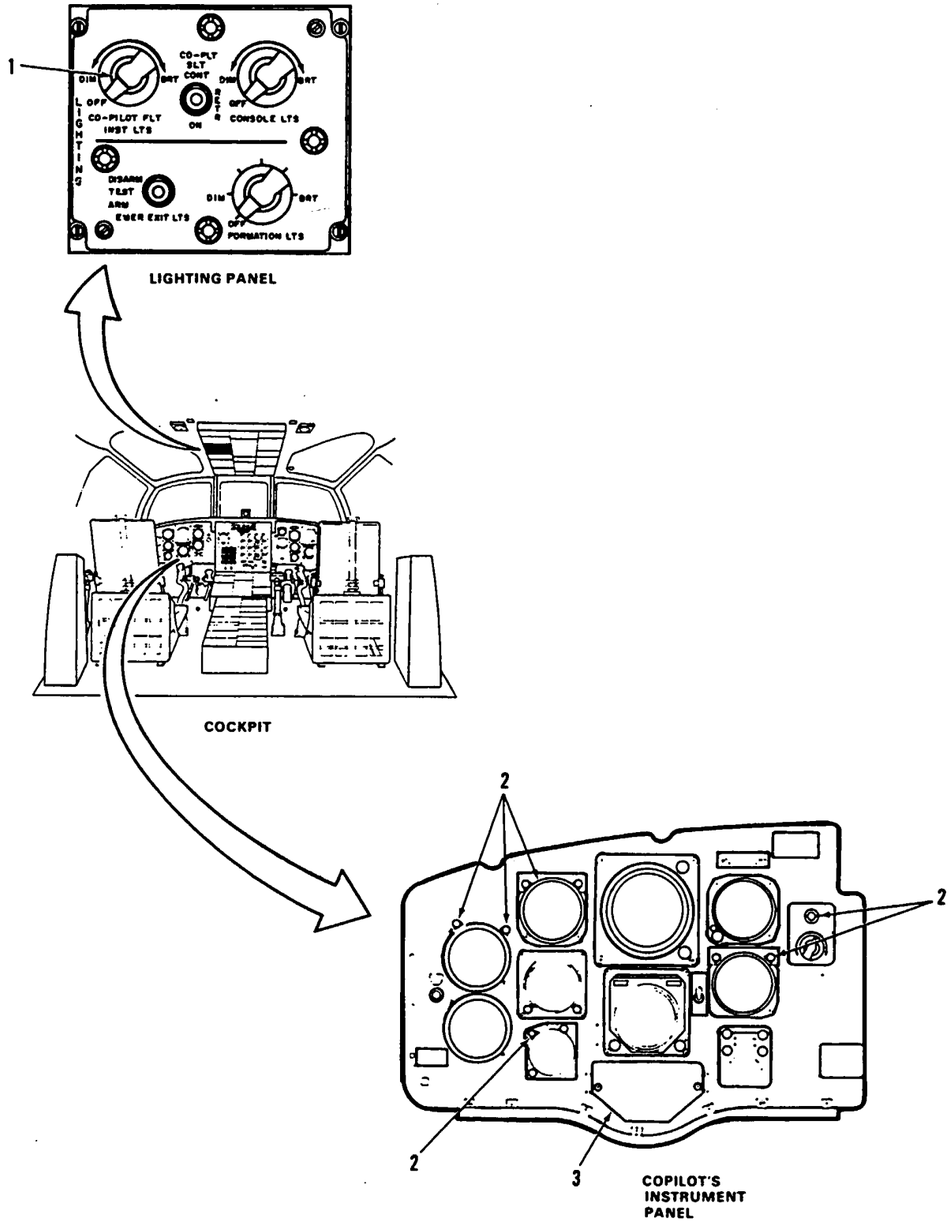
Personnel Required:
Aircraft Electrician

References:
TM 55-1520-24023

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off

TASK	RESULT
1. **Check CO-PILOT FLT INST LTS control (1).**	If control (1) is loose or damaged, tighten or replace it as required.
2. **Check six panel lights (2).**	If any panel light (2) is damaged, replace it.
3. **Check HSI MODE SELECT panel (3).**	If panel (3) is damaged, replace it.

FOLLOW-ON MAINTENANCE:
None



45X54

D145-4223-SPA

9-10.3 COPILOT'S FLIGHT INSTRUMENT PANEL LIGHTS OPERATIONAL CHECK

INITIAL SETUP

Applicable Configurations:
Without 17 or 74

Tools:
None

Materials:
None

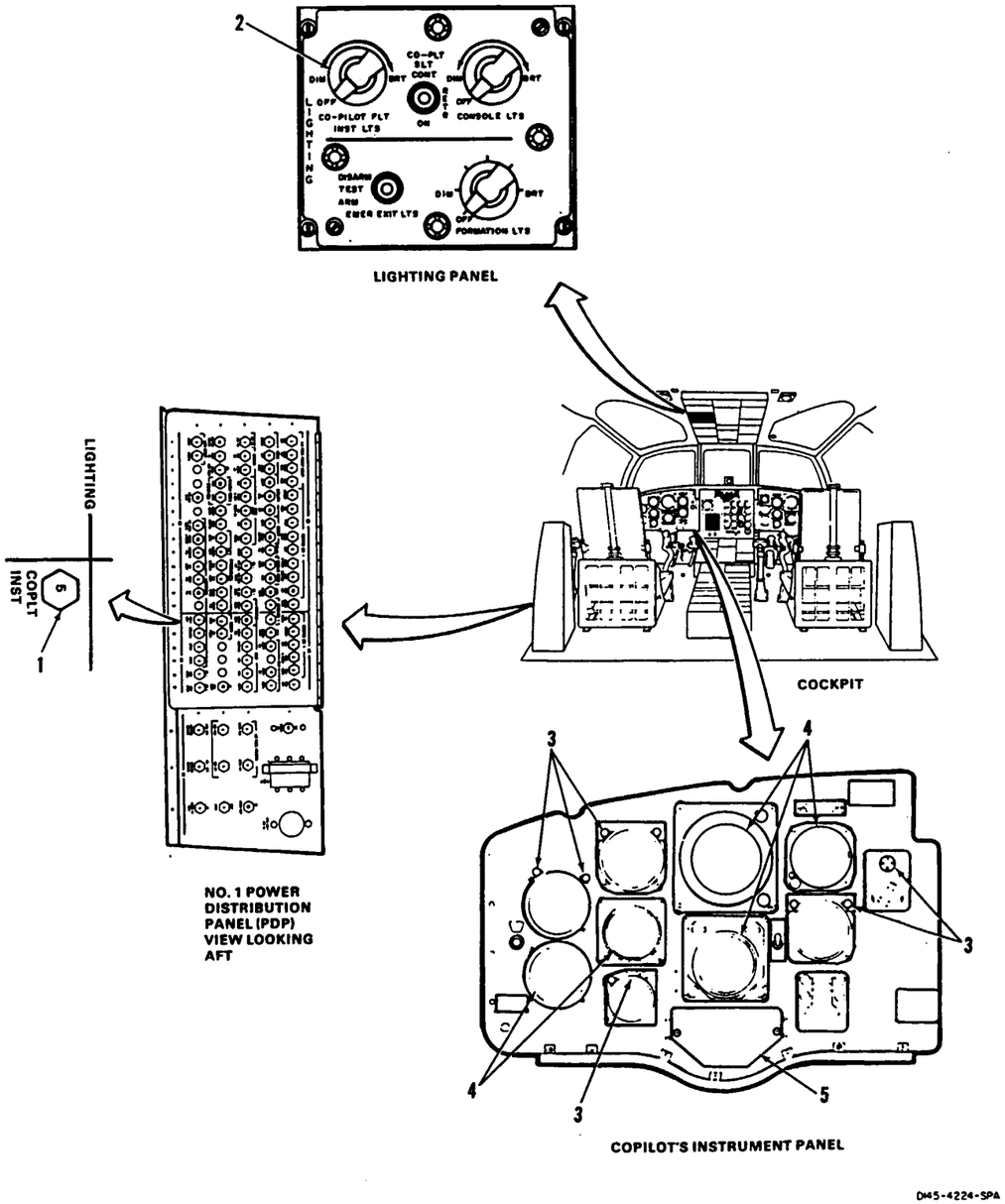
Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off
Copilots Flight Instrument Panel Lights, Visual Check Performed (Task 9-10.2)

TASK	RESULT
1. **Check that LIGHTING COPLT INSTR circuit breaker (1)** is closed.	If COPLT INSTR circuit breaker (1) is open, close it. If it opens again, go to task 9-10.4.
2. **Turn CO-PILOT FLT INST LTS control (2) from OFF through DIM to BRT.**	Following lights shall come on and increase in brightness as control (2) is rotated to BRT: a. Panel lights (3) b. Internal lights in five indicators (4). c. Panel lights and switch captions VOR, DOP, FM, and CMD on HSI MODE SELECT panel (5). If any light is not lit, go to task 9-10.5. If lights do not increase in brightness, replace CO-PILOT FLT INST LTS control.
3. **Turn CO-PILOT FLT INST LTS control (2) to OFF.**	All copilot's instrument panel lights shall go out If not, replace CO-PILOT FLT INST LTS control (2).

FOLLOW-ON MAINTENANCE:
TM 55-1520-240-23:
Electrical power off.
Battery disconnected.



END OF TASK

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
Without 17 or 74

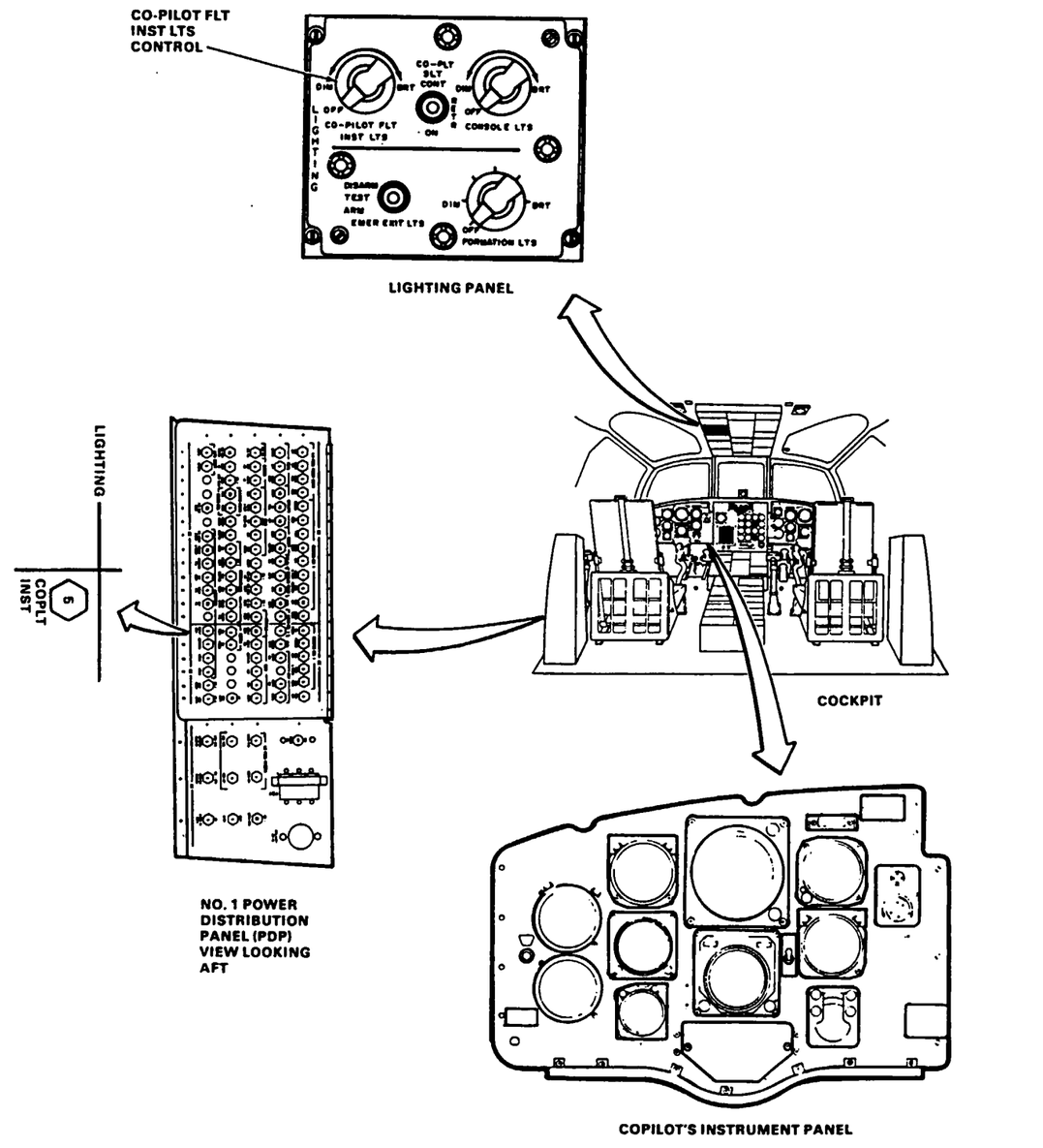
Tools:
Electrical Repairer's Tool Kit, NSN 5180-00-323-4915
Multimeter

Materials:
None

Personnel Required:
Aircraft Electrician

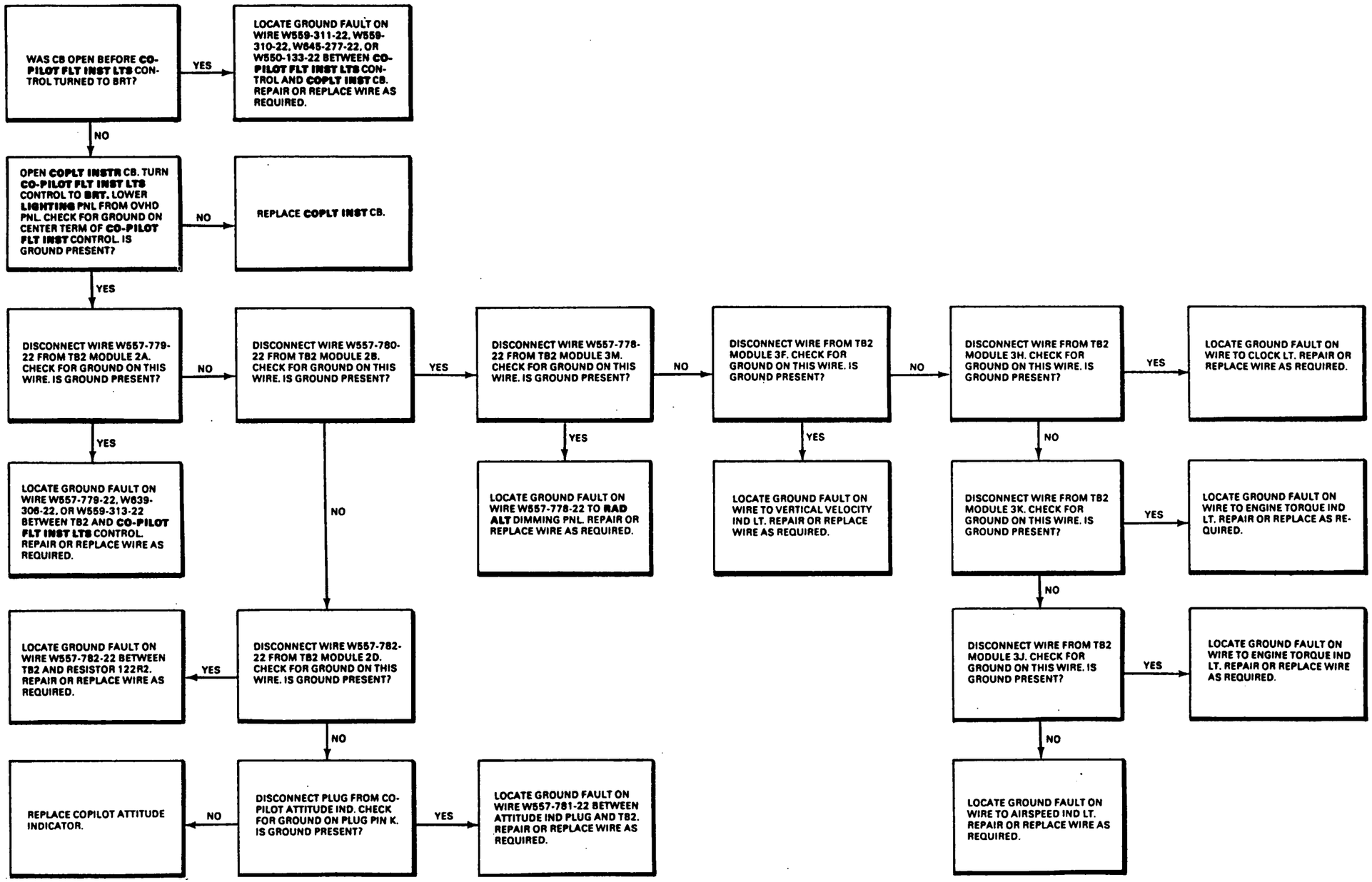
References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off



GO TO NEXT PAGE

9-10.4 COPLT INST CIRCUIT BREAKER DOES NOT STAY CLOSED (Continued)



END OF TASK
9-193

9-10.5 COPILOT'S FLIGHT INSTRUMENT PANEL LIGHTS OR LIGHTS NOT LIT

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
Without 17 or 74

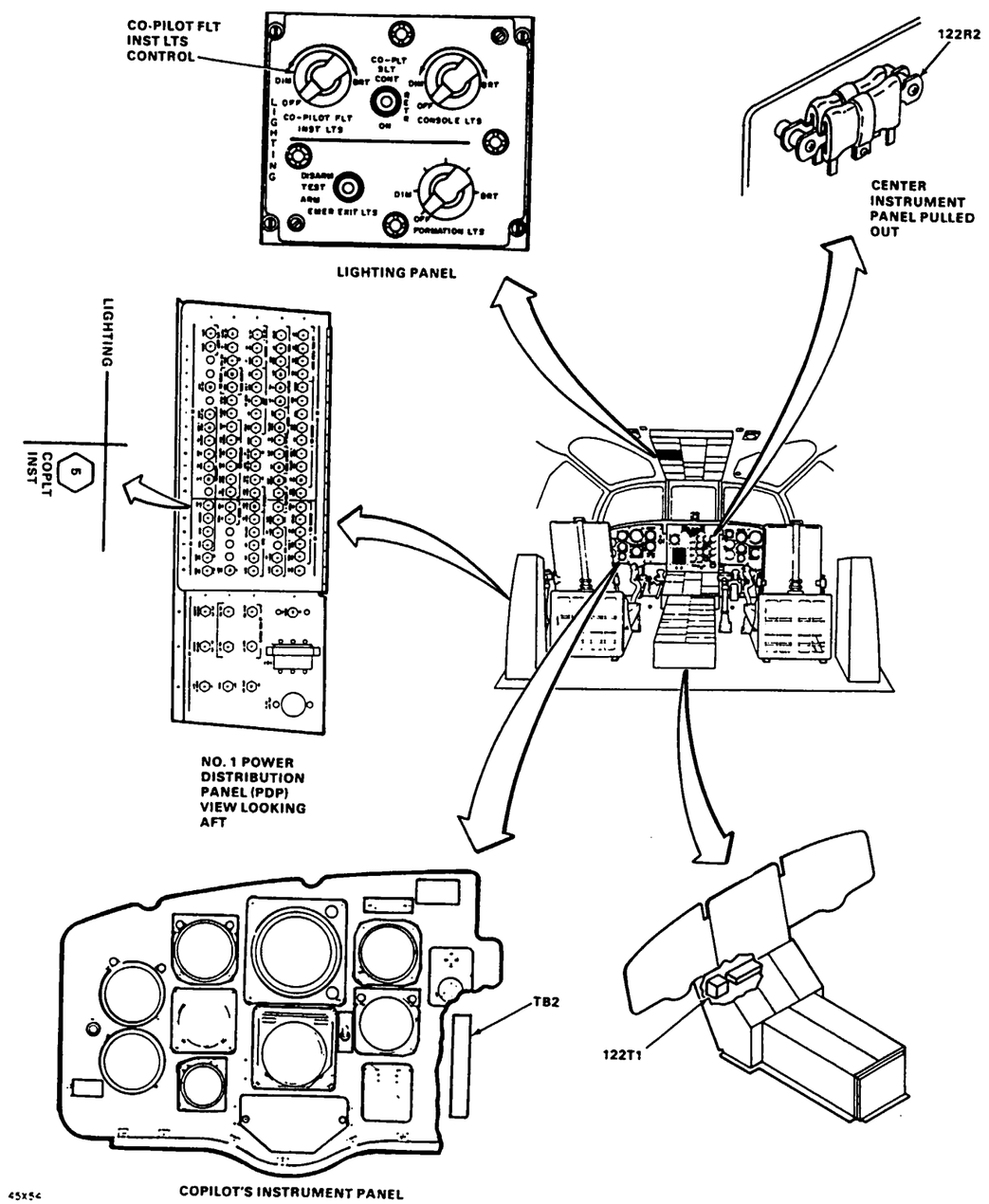
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:
None

Personnel Required:
Aircraft Electrician

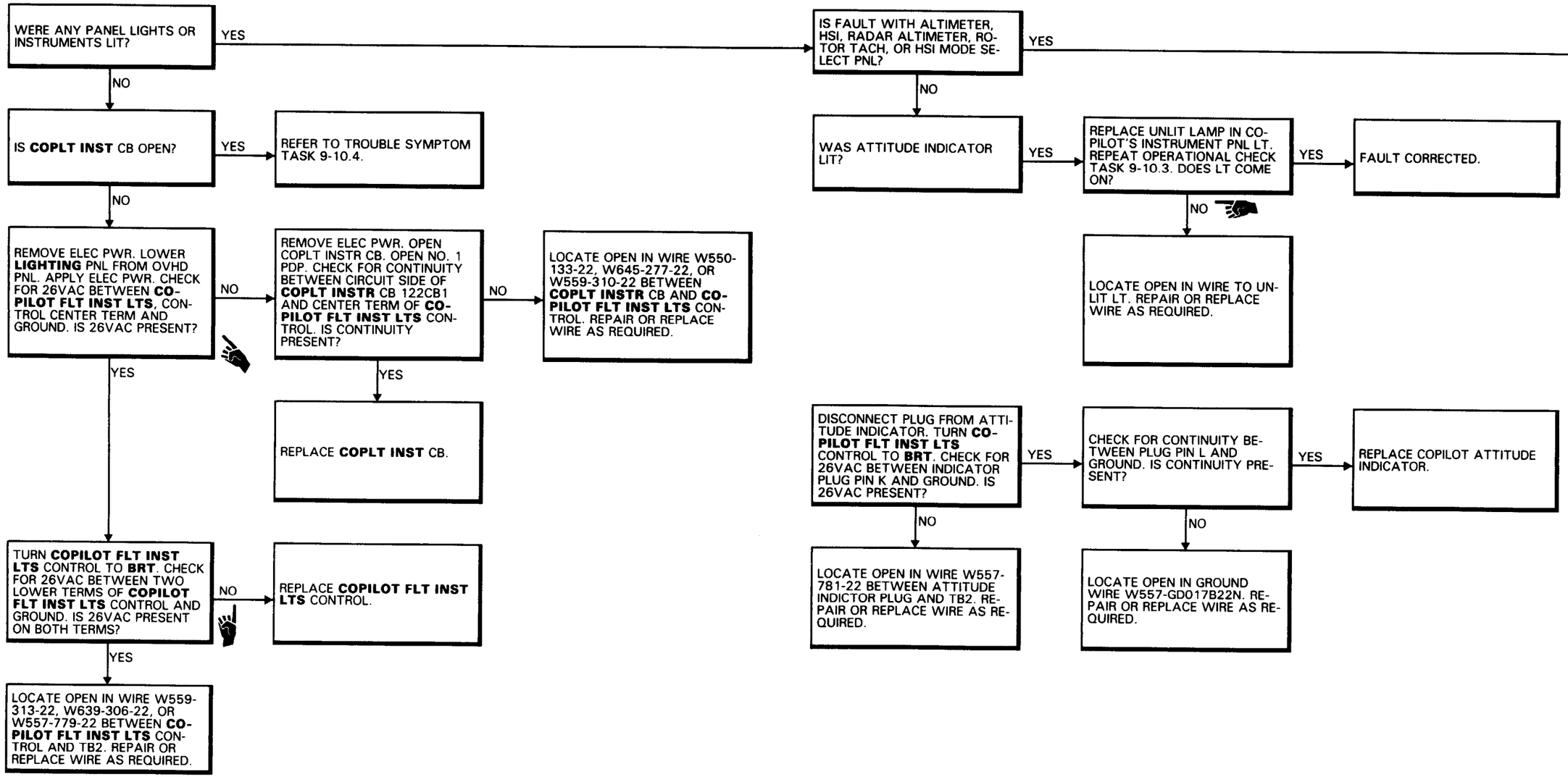
References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off



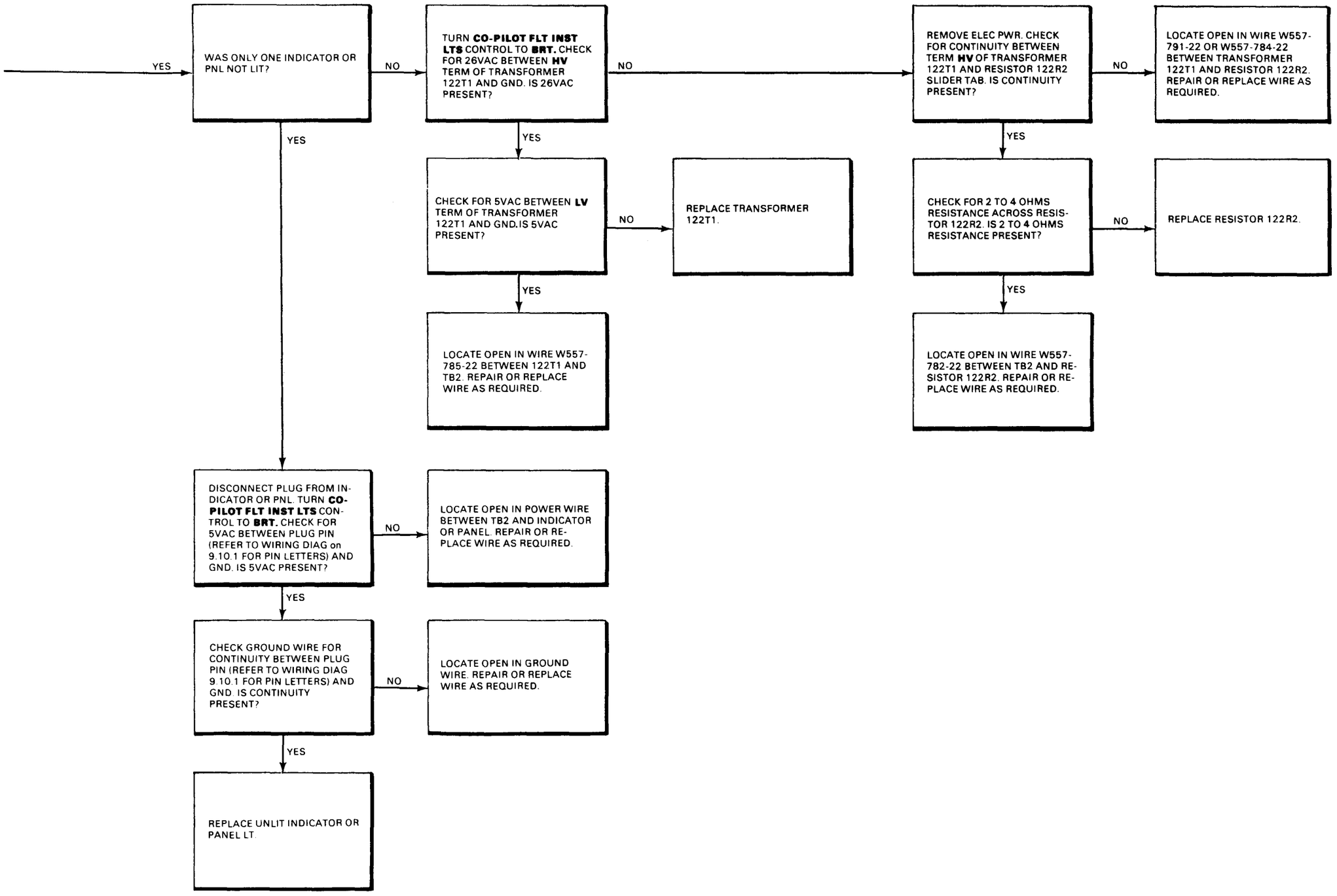
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9-10.5 COPILOT'S FLIGHT INSTRUMENT PANEL LIGHT OR LIGHTS NOT LIT (Continued)

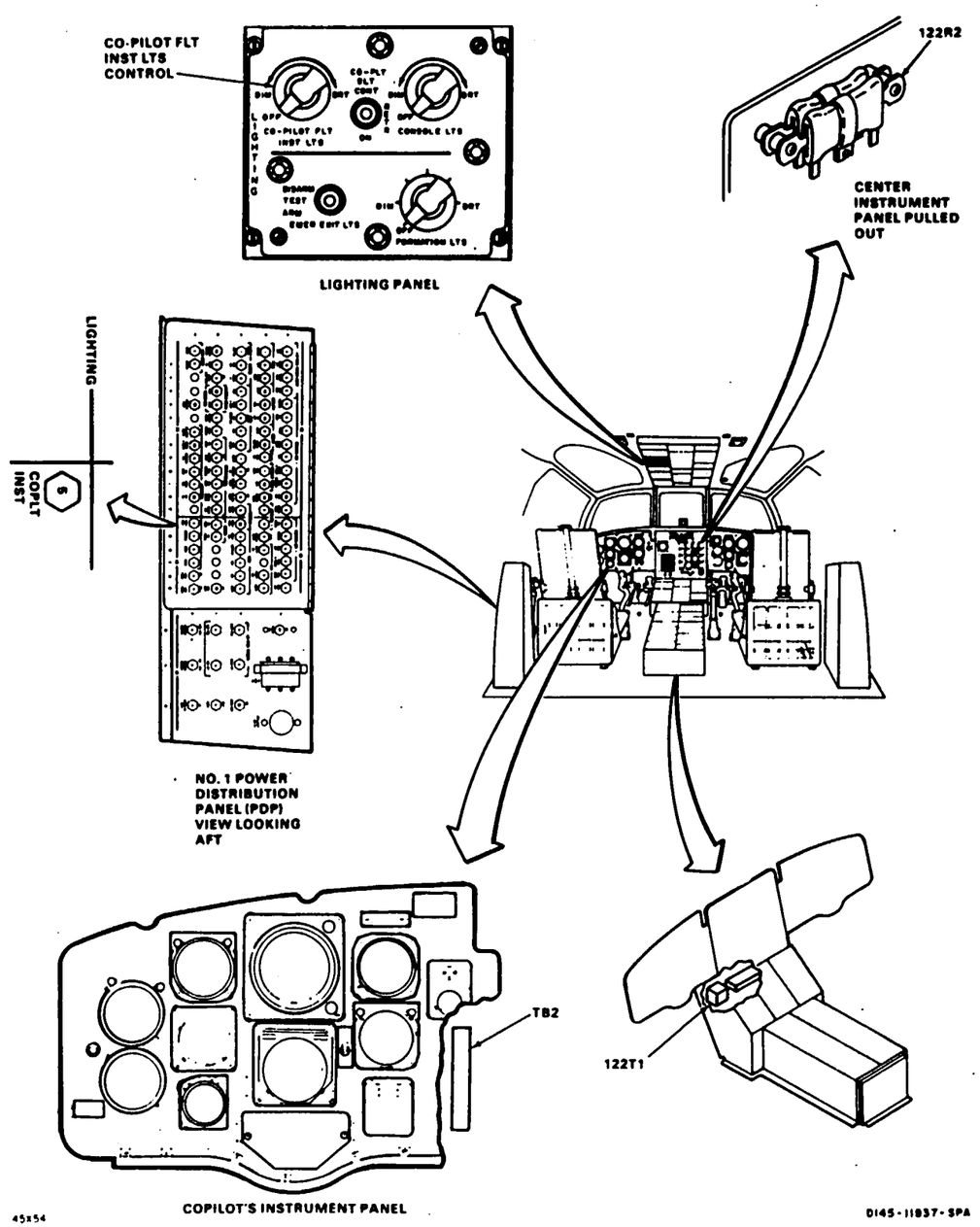


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9-10.5 COPILOT'S FLIGHT INSTRUMENT PANEL LIGHT OR LIGHTS NOT LIT (Continued)

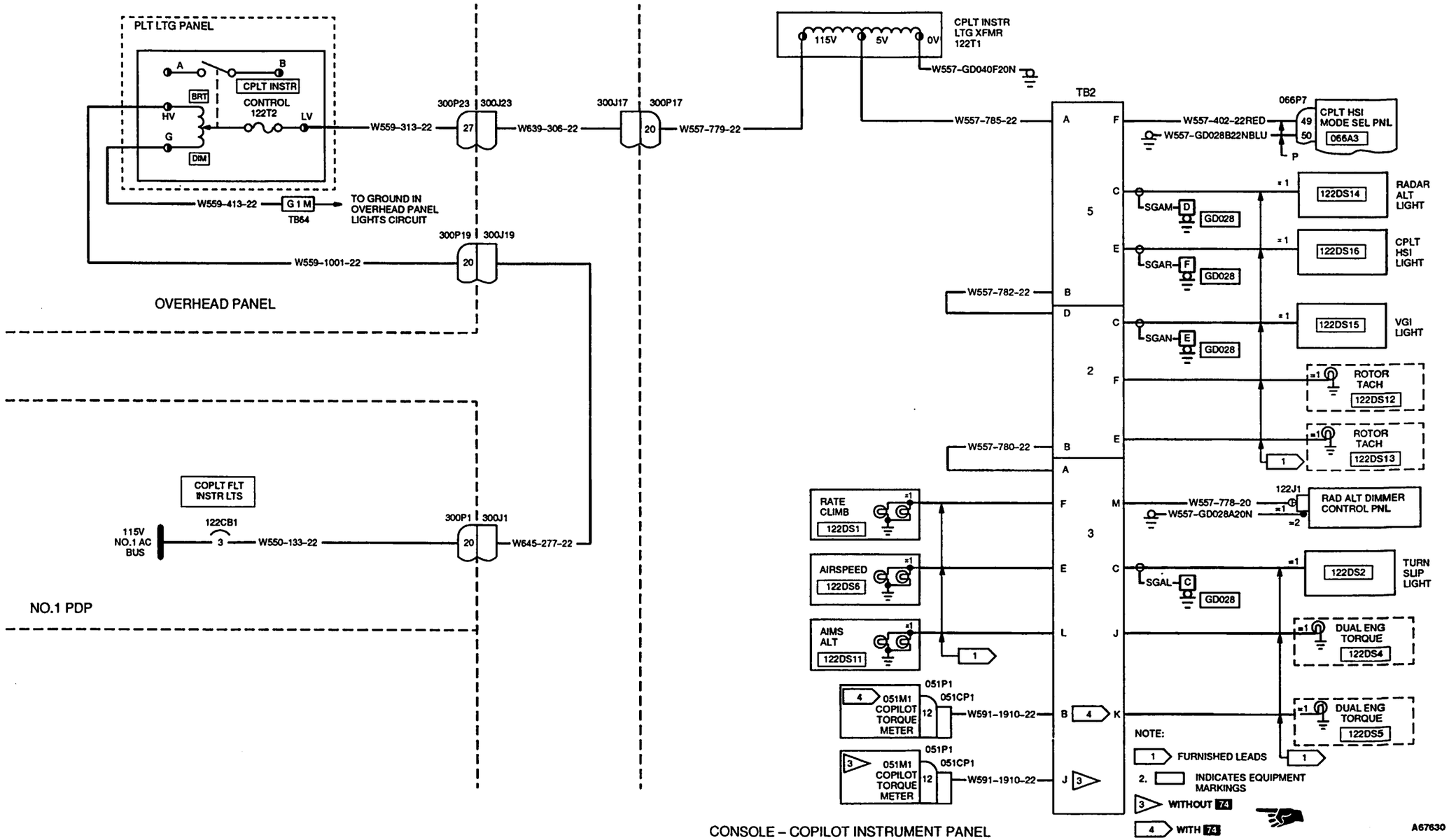


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END OF TASK
Change 2 9-197

WITH 17 AND 74



CONSOLE – COPILOT INSTRUMENT PANEL

A67630

END OF TASK

9-10.7 COPILOT'S FLIGHT INSTRUMENT PANEL LIGHTS VISUAL CHECK

INITIAL SETUP

Applicable Configurations:
With 17 and 69

Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915

Materials:
None

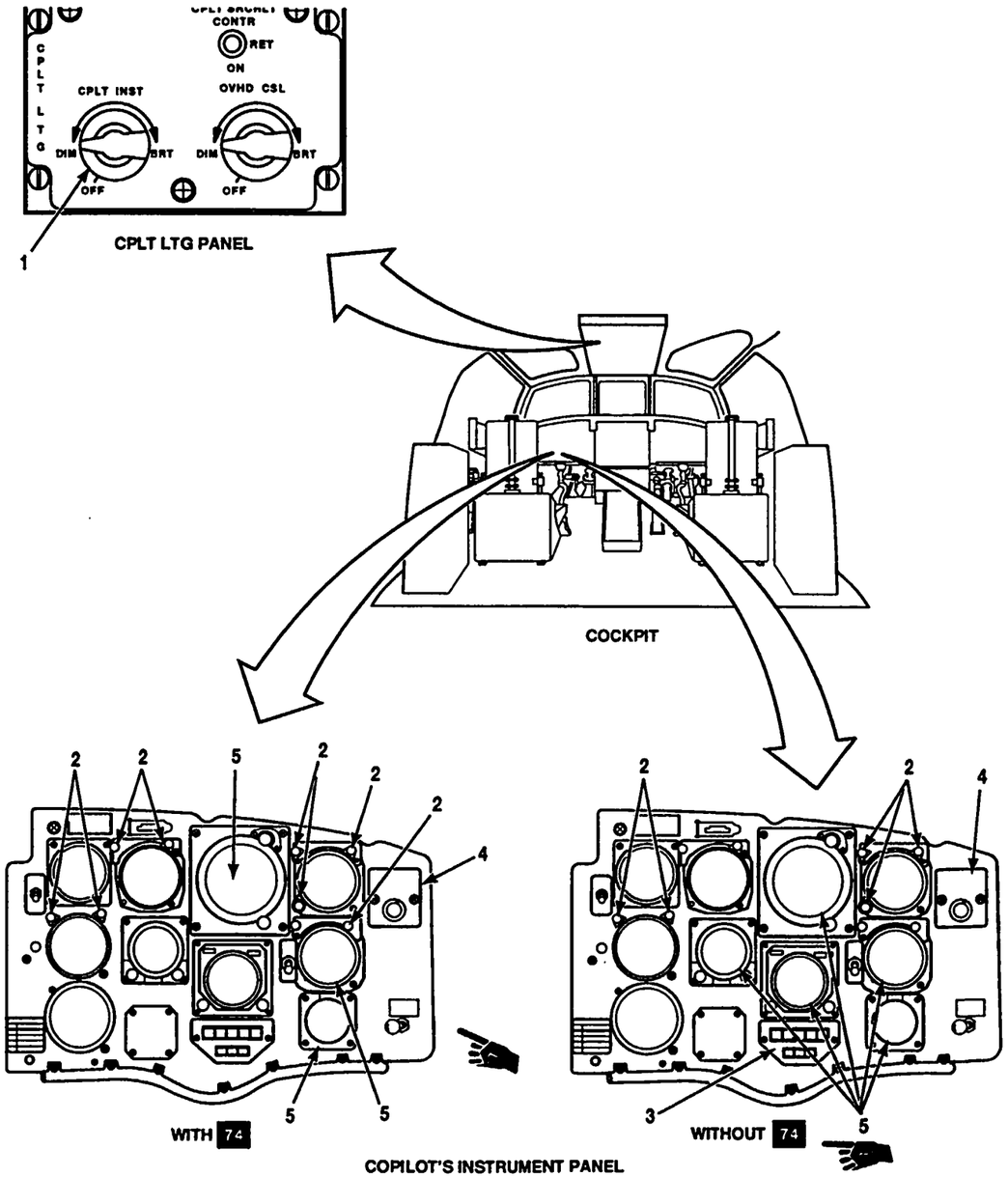
Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off

TASK	RESULT
1. **Check CO-PILOT FLT INST LTS control (1).**	If control (1) is loose or damaged, tighten or replace it as required.
2. **Check panel lights (2).**	If any panel (2) light is damaged, replace it.
3. **Check HSI MODE SELECT panel (3).**	If panel (3) is damaged, replace it
4. Check RAD ALT DIM panel (4).	If panel (4) is damaged, replace it.
5. Check lighting bezels (5).	If any bezel (5) is damaged, replace it.

FOLLOW-ON MAINTENANCE:
None



END OF TASK

9-10.8 COPILOT'S FLIGHT INSTRUMENT PANEL LIGHTS OPERATIONAL CHECK

INITIAL SETUP

Applicable Configurations:
With 17 and 69

Tools:
None

Materials:
None

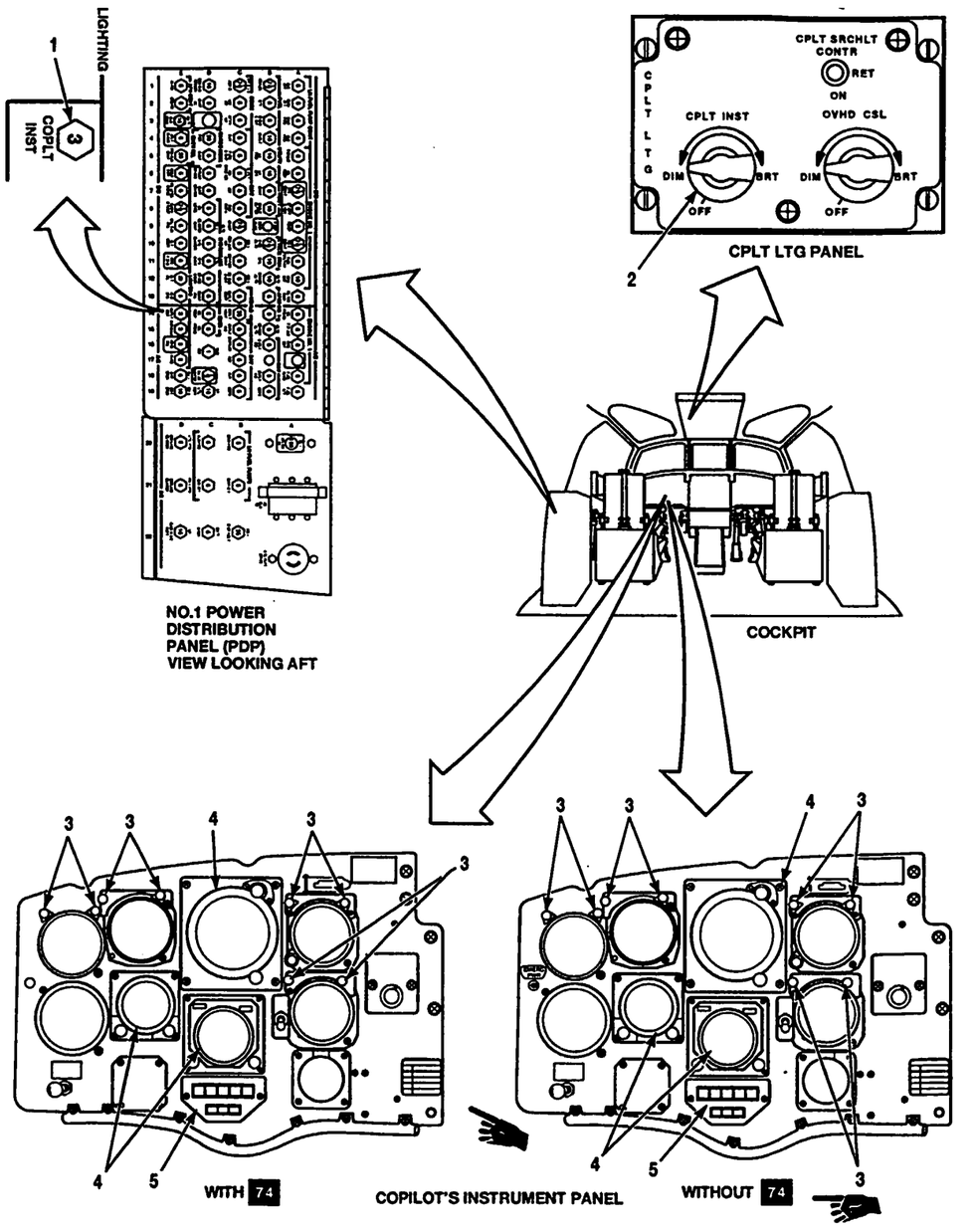
Personnel Required:
Check
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off
Copilot Flight Instrument Panel Lights Visual Check Performed (Task 9-10.2)

TASK	RESULT
1. **Check** that **LIGHTING COPLT INST circuit breaker (1)** is closed.	If COPLT INST circuit breaker (1) is open, close it. If it opens again, go to task 9-10.9.
2. **Turn CPLT INST light control (2) from OFF through DIM to BRT.**	Following lights shall come on and increase in brightness as control (2) is rotated to BRT: a. Panel lights (3). b. Internal lights in indicators (4). c. Panel lights and switch captions VOR, DOP, FM, and CMD on HSI MODE SELECT panel (5). If any light is not lit, go to task 9-10.10. If light brightness does not increase, replace CPLT INST lights control.
3. **Turn CPLT INST lights control (2) to OFF.**	All copilot's flight instrument panel lights shall go out. If not, replace **CPLT INST** light control (2).

FOLLOW-ON MAINTENANCE:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off



END OF TASK

9-10.9 COPLT INST CIRCUIT BREAKER DOES NOT STAY CLOSED

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
With 17 and 69

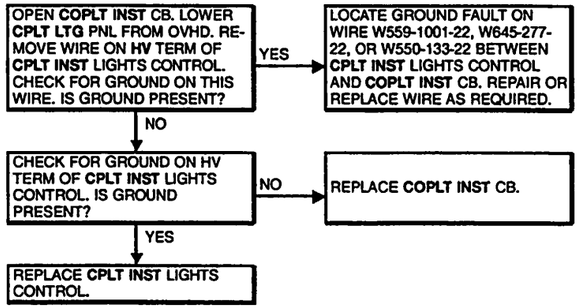
Tools:
Electrical Repairer's Tool Kit, NSN 5180-00-323-4915
Multimeter

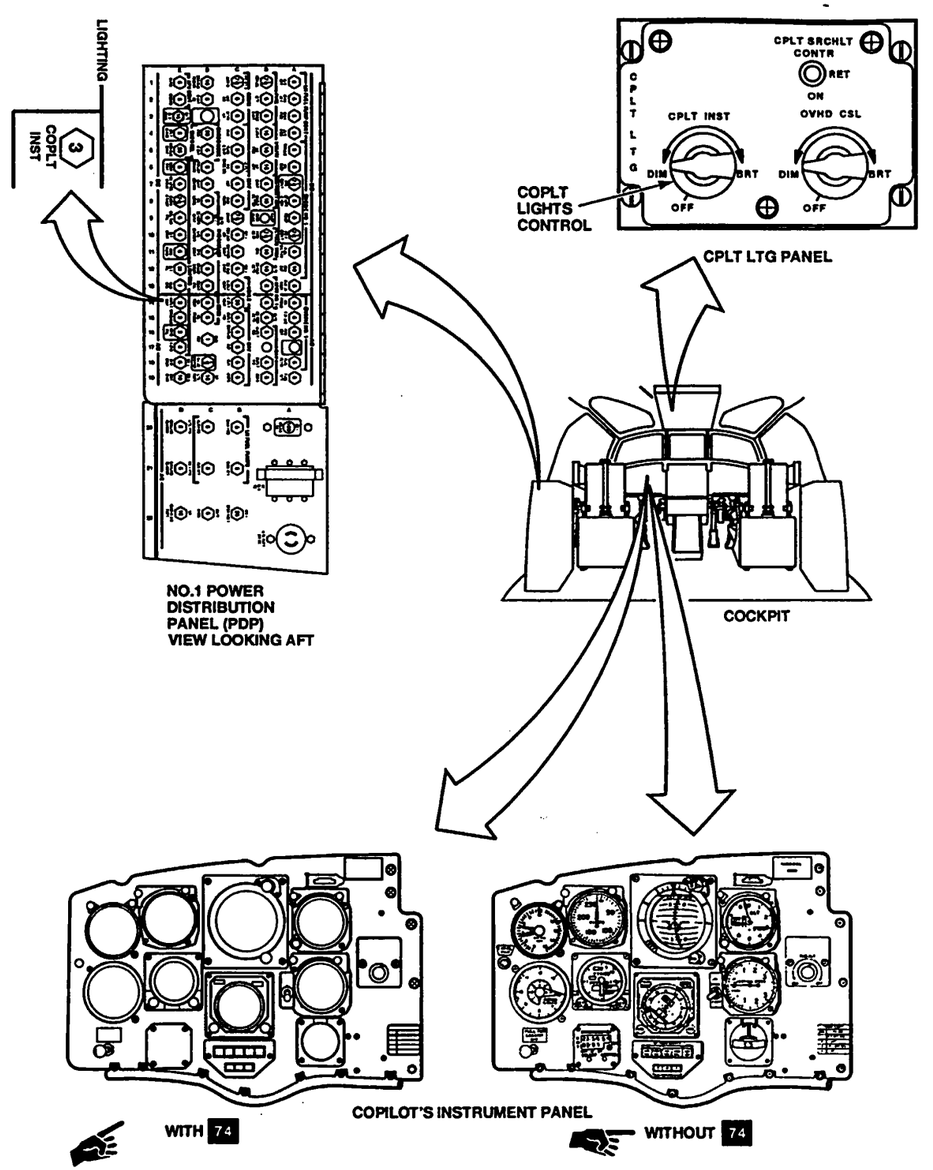
Materials:
None

Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off



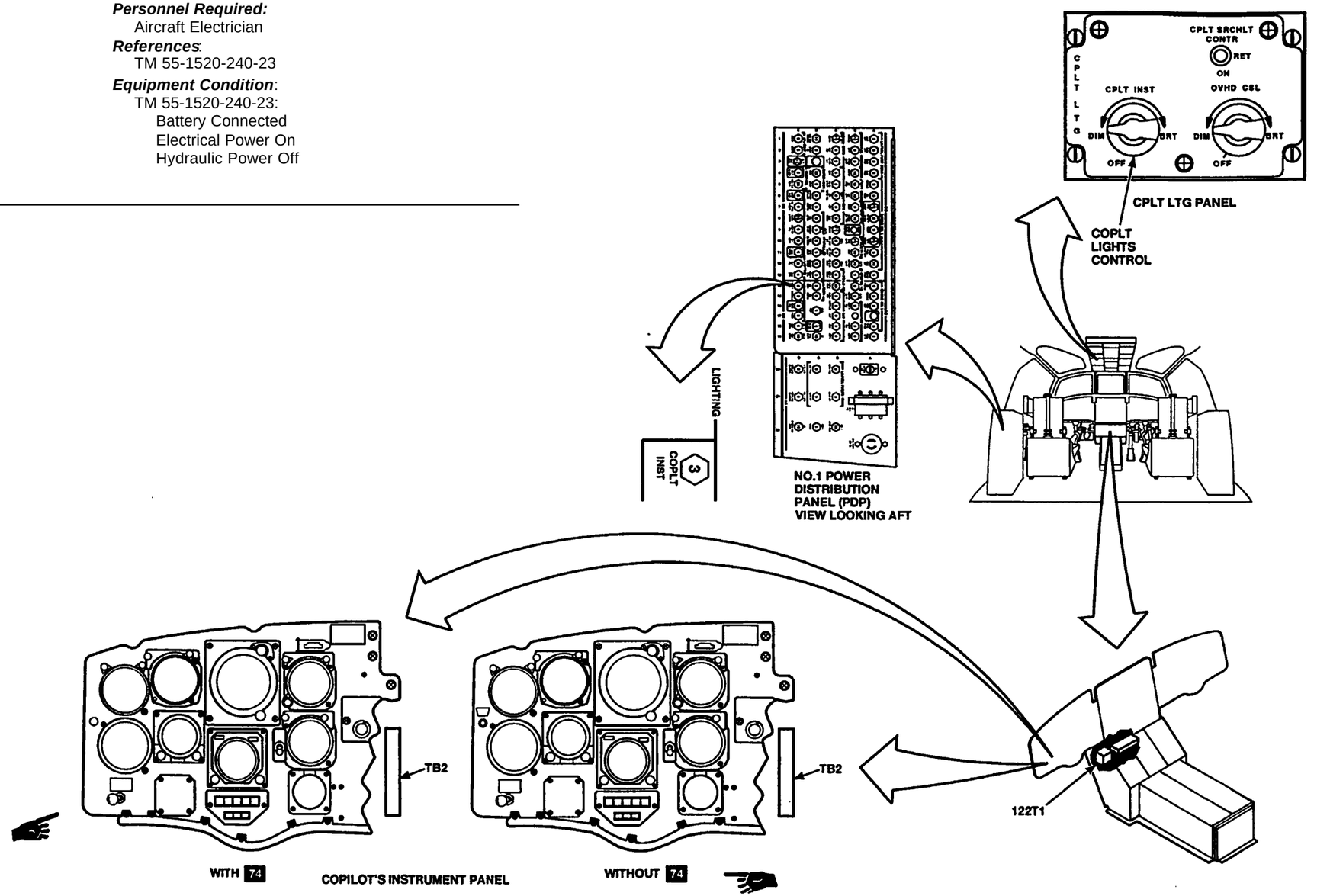


END OF TASK

9-10.10 COPILOT'S FLIGHT INSTRUMENT PANEL LIGHT OR LIGHTS NOT LIT

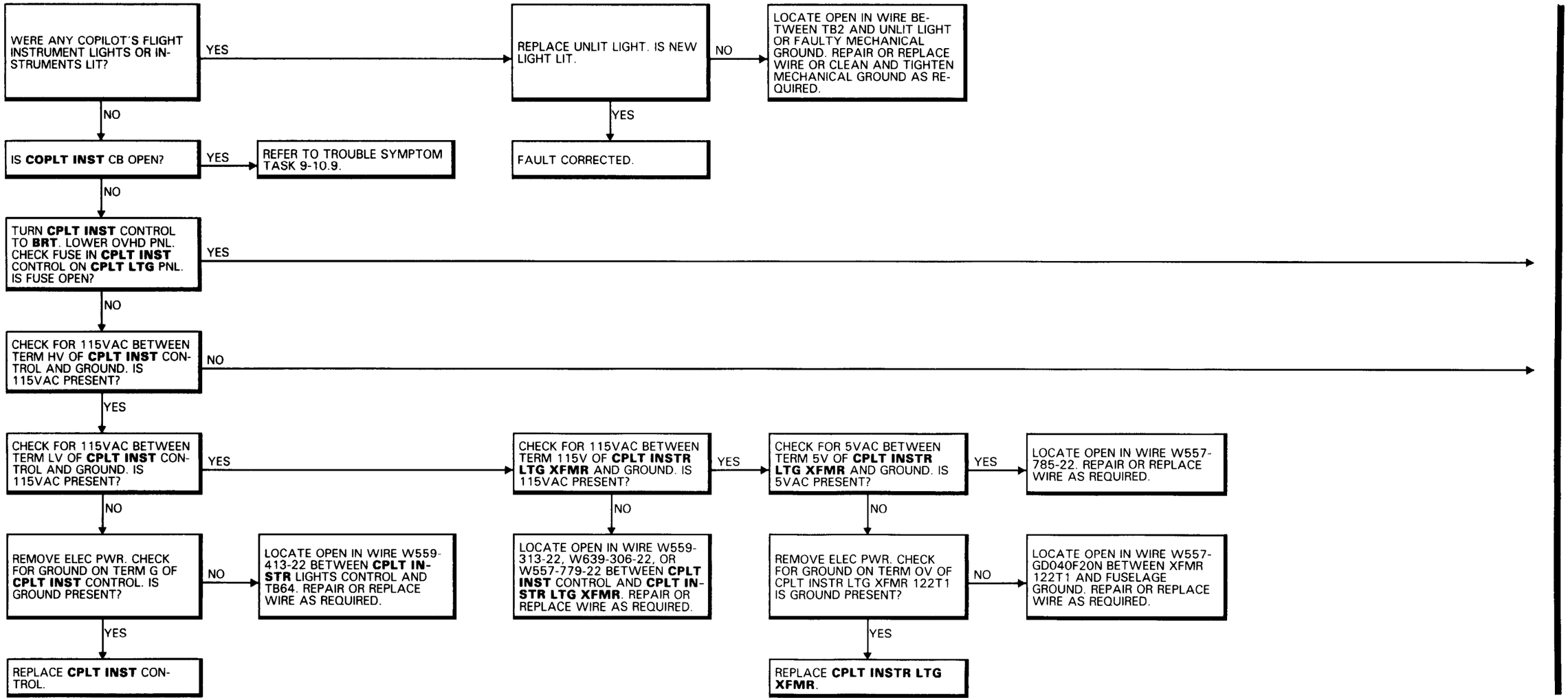
FAULT ISOLATION PROCEDURE
INITIAL SETUP
Applicable Configurations:
With 17 and 69
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter
Materials:
None

Personnel Required:
Aircraft Electrician
References:
TM 55-1520-240-23
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off

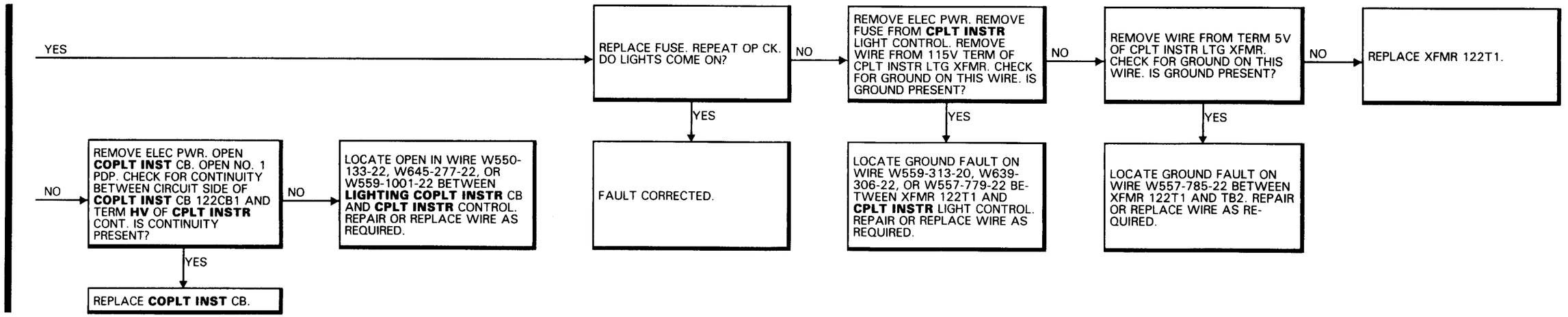


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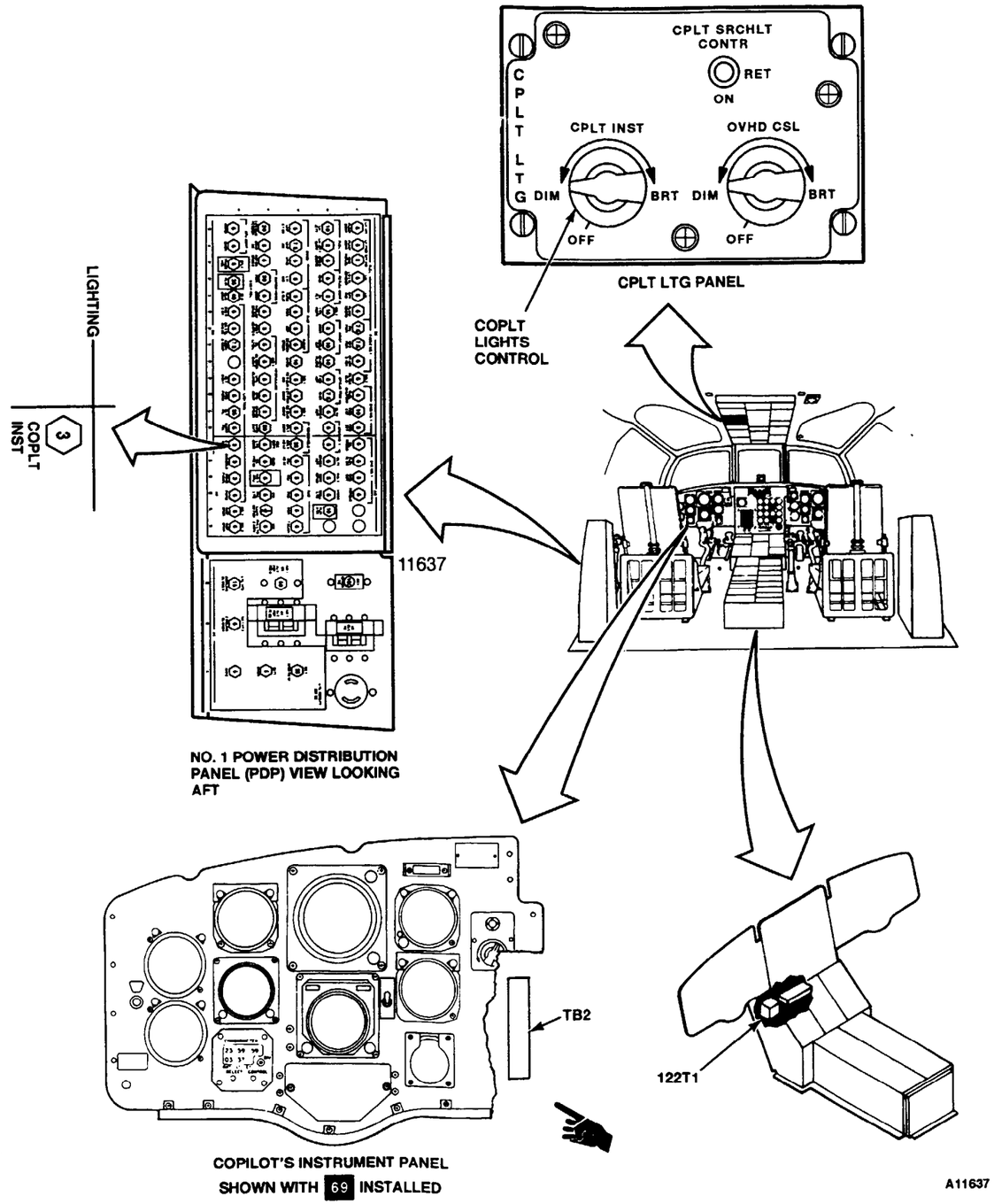


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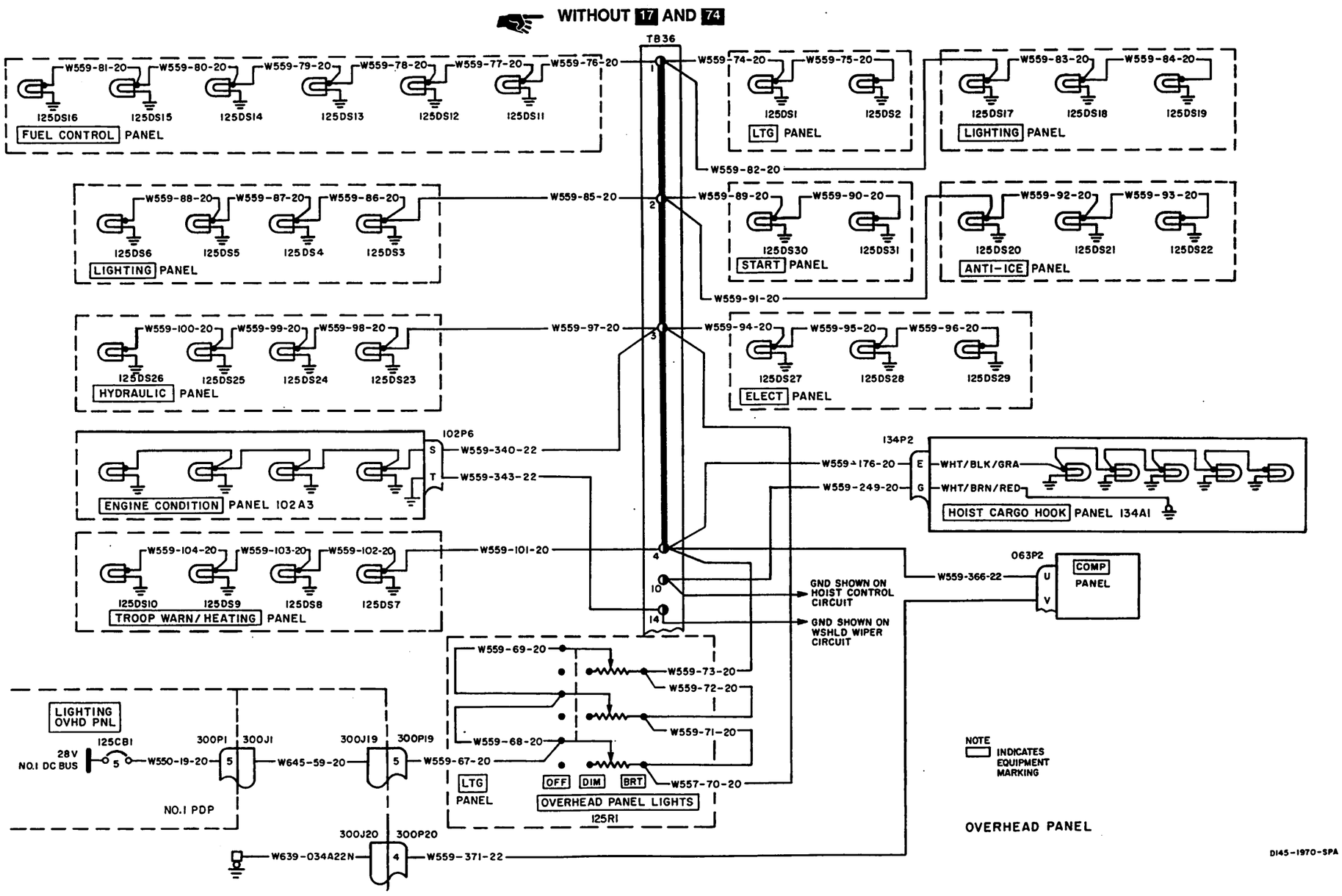
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9-10.10 COPILOT'S FLIGHT INSTRUMENT PANEL LIGHT OR LIGHTS NOT LIT (Continued)



END OF TASK

9-11 OVERHEAD PANEL LIGHTS


WITHOUT 17 AND 74
T836
W559-81-20
W559-80-20
W559-79-20
W559-78-20
W559-77-20
W559-76-20
125DS16
125DS15
125DS14
125DS13
125DS12
125DS11
FUEL CONTROL PANEL
W559-74-20
W559-75-20
125DS1
125DS2
LTG PANEL
W559-83-20
W559-84-20
125DS17
125DS18
125DS19
LIGHTING PANEL
W559-82-20
W559-85-20
W559-88-20
W559-87-20
W559-86-20
125DS6
125DS5
125DS4
125DS3
LIGHTING PANEL
W559-89-20
W559-90-20
125DS30
125DS31
START PANEL
W559-92-20
W559-93-20
125DS20
125DS21
125DS22
ANTI-ICE PANEL
W559-91-20
W559-97-20
W559-100-20
W559-99-20
W559-98-20
125DS26
125DS25
125DS24
125DS23
HYDRAULIC PANEL
W559-94-20
W559-95-20
W559-96-20
125DS27
125DS28
125DS29
ELECT PANEL
102P6
S
T
W559-340-22
W559-343-22
ENGINE CONDITION PANEL 102A3
134P2
E
G
W559-176-20
W559-249-20
WHT/BLK/GRA
WHT/BRN/RED
HOIST CARGO HOOK PANEL 134A1
W559-104-20
W559-103-20
W559-102-20
W559-101-20
125DS10
125DS9
125DS8
125DS7
TROOP WARN/HEATING PANEL
063P2
U
V
COMP
PANEL
W559-366-22
GND SHOWN ON HOIST CONTROL CIRCUIT
GND SHOWN ON WSHLD WIPER CIRCUIT
W559-69-20
W559-73-20
W559-72-20
W559-71-20
W559-68-20
W559-67-20
W557-70-20
OFF
DIM
BRT
LTG PANEL
OVERHEAD PANEL LIGHTS
125RI
LIGHTING OVHD PNL
125CB1
28V
NO.1 DC BUS
W550-19-20
300P1
300J1
W645-59-20
300J19
300P19
NO.1 PDP
300J20
300P20
W639-034A22N
W559-371-22
NOTE
INDICATES EQUIPMENT MARKING
OVERHEAD PANEL
D145-1970-SPA

END OF TASK

9-11.2 OVERHEAD PANEL LIGHTS VISUAL CHECK

INITIAL SETUP

Applicable Configurations:
Without 17 and 74

Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915

Materials:
None

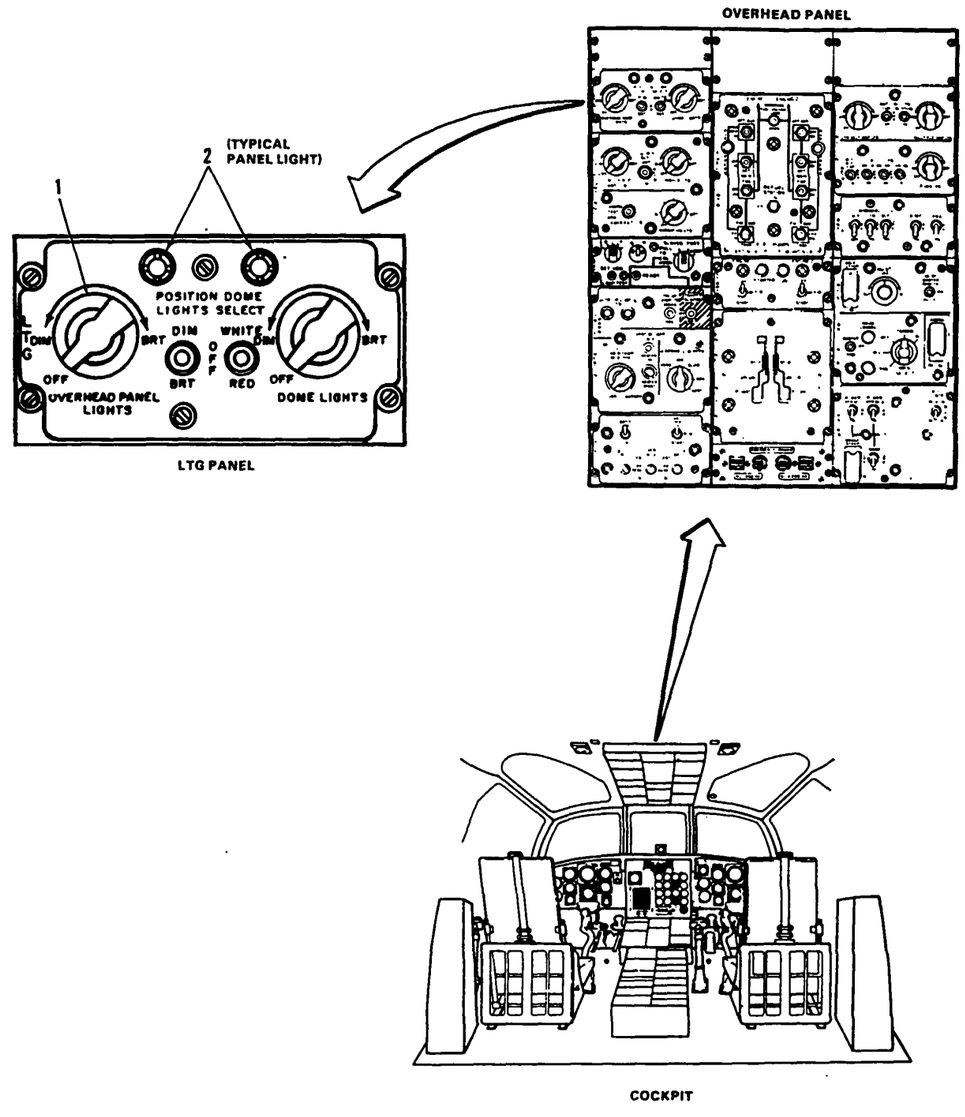
Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off '
Hydraulic Power Off

TASK	RESULT
1. **Check OVERHEAD PANEL LIGHTS control (1).**	If control (1) is loose or damaged, tighten or replace it as required.
2. **Check 42 panel lights (2).**	If any panel light (2) is loose or damaged, tighten or replace it as required.

FOLLOW-ON MAINTENANCE:
None



END OF TASK

9-11.3 OVERHEAD PANEL LIGHTS OPERATIONAL CHECK

INITIAL SETUP

Applicable Configurations:
Without 17 and 74

Tools:
None

Materials:
None

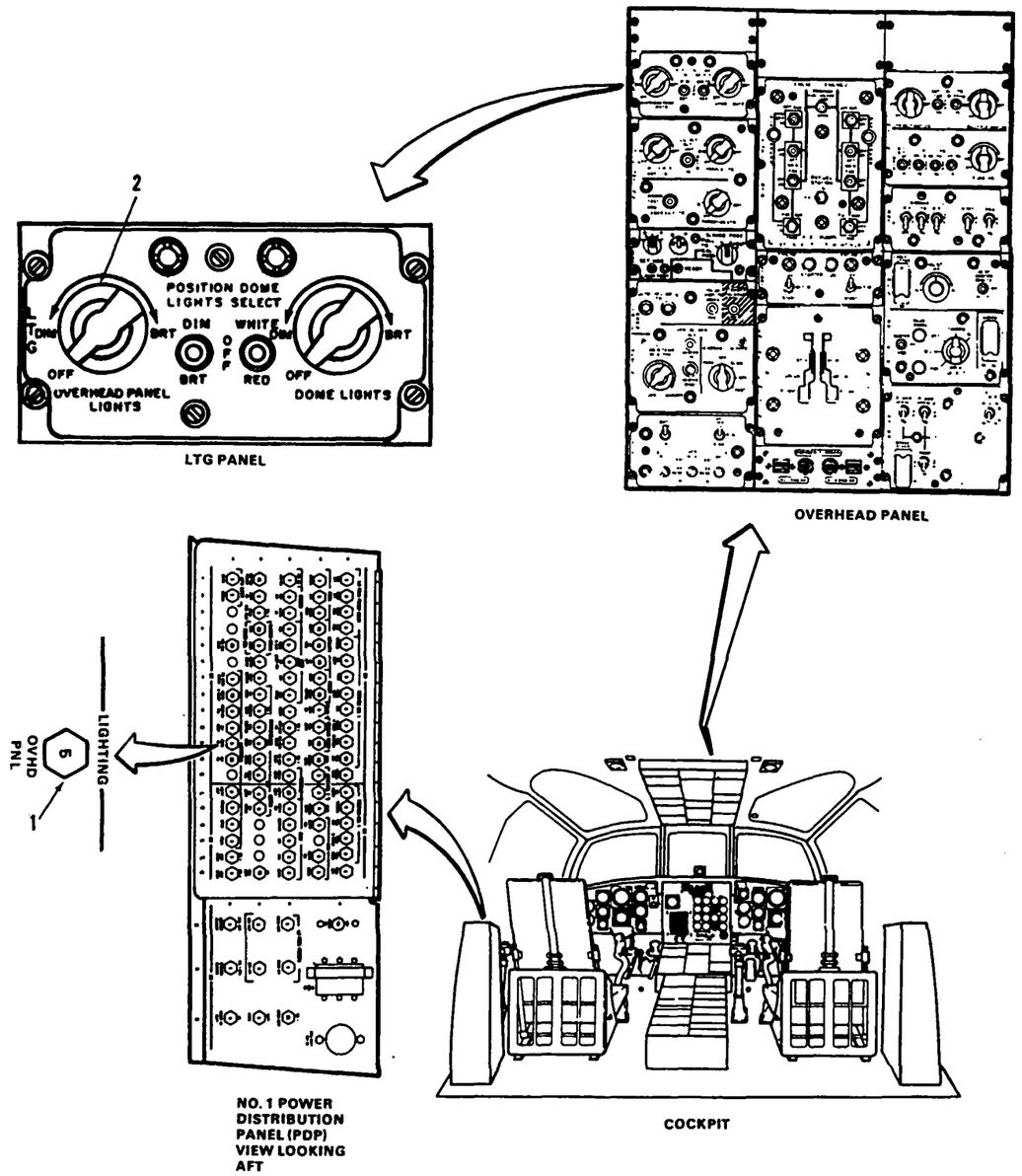
Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off
Overhead Panel Lights Visual Check Performed (Task 9-11.2)

TASK	RESULT
1. Check that LIGHTING OVHD PNL circuit breaker (1) is closed.	If OVHD PNL circuit breaker (1) is open, close it. If it opens again, go to task 9-11.4.
2. Turn OVERHEAD PANEL LIGHTS control (2) from OFF through DIM to BRT.	All control panels in overhead panel shall light dim and increase in brightness as control (2) is turned to BRT. If any panel is not lit, go to task 9-11.5. If panel brightness does not increase as control is turned, replace OVERHEAD PANEL LIGHTS control.
3. Turn OVERHEAD PANEL LIGHTS control (2) to OFF.	All control panel lights in overhead panel shall go out. If not, replace OVERHEAD PANEL LIGHTS control.

FOLLOW-ON MAINTENANCE:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off



END OF TASK

9-11.4 OVHD PNL CIRCUIT BREAKER DOES NOT STAY CLOSED

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
Without 17 and 74

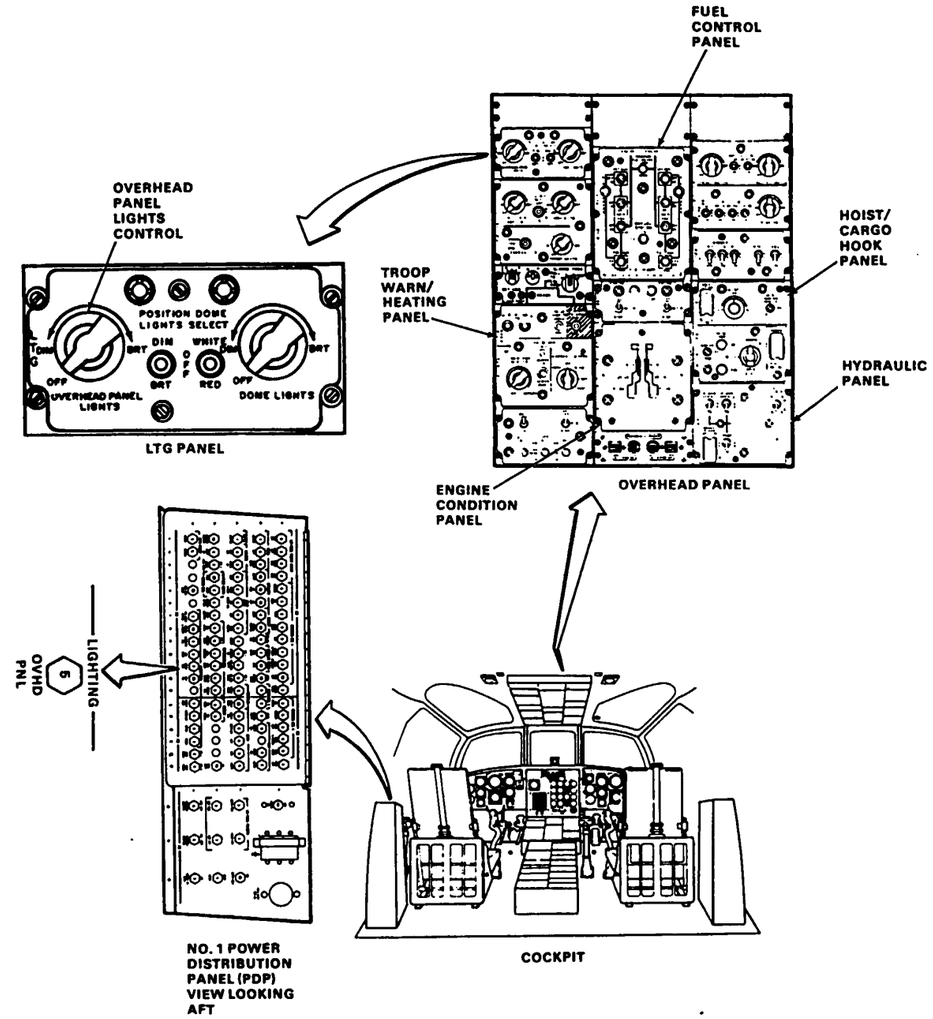
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:
None

Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

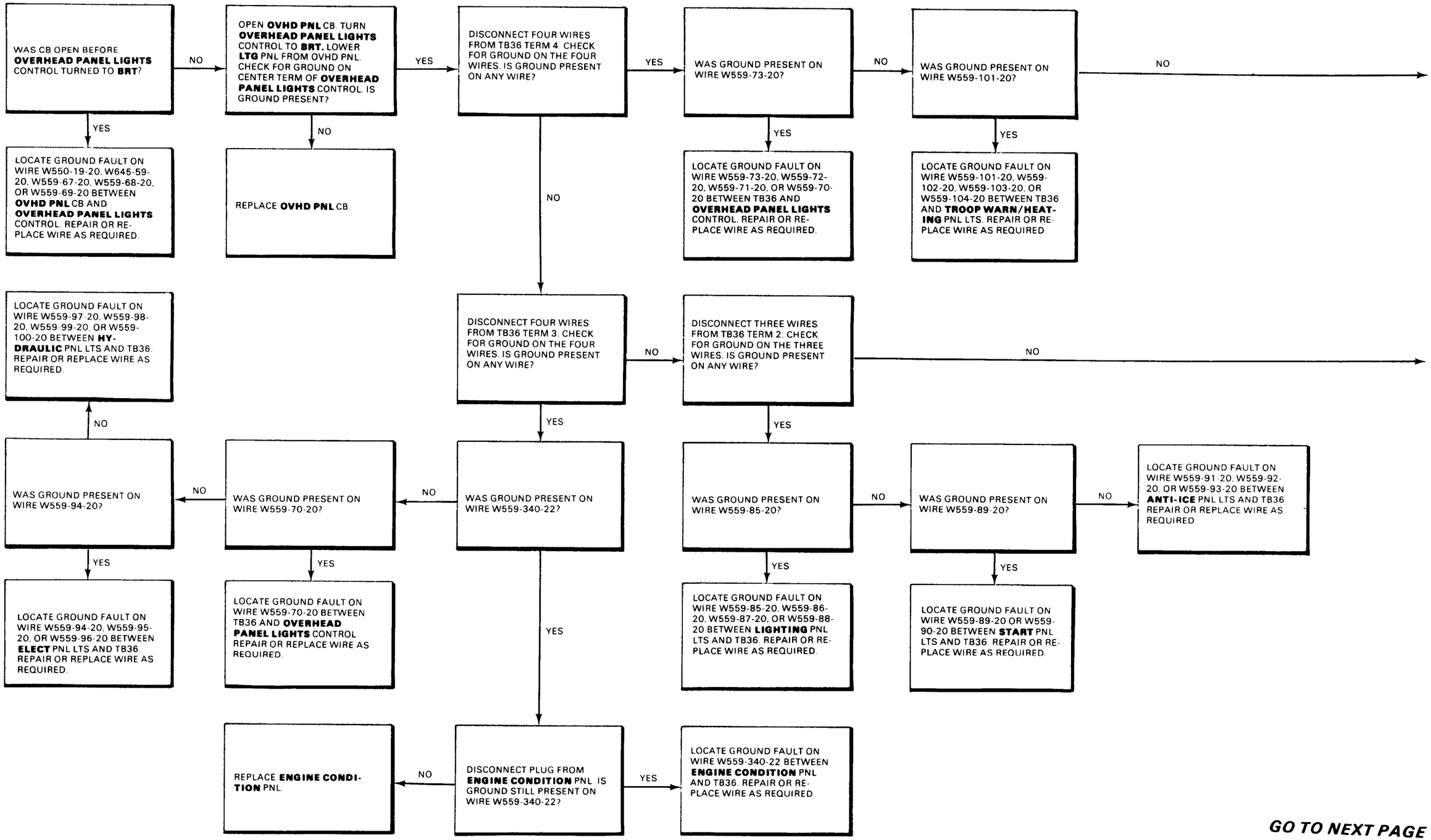
Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off



DI45-4229-SPA

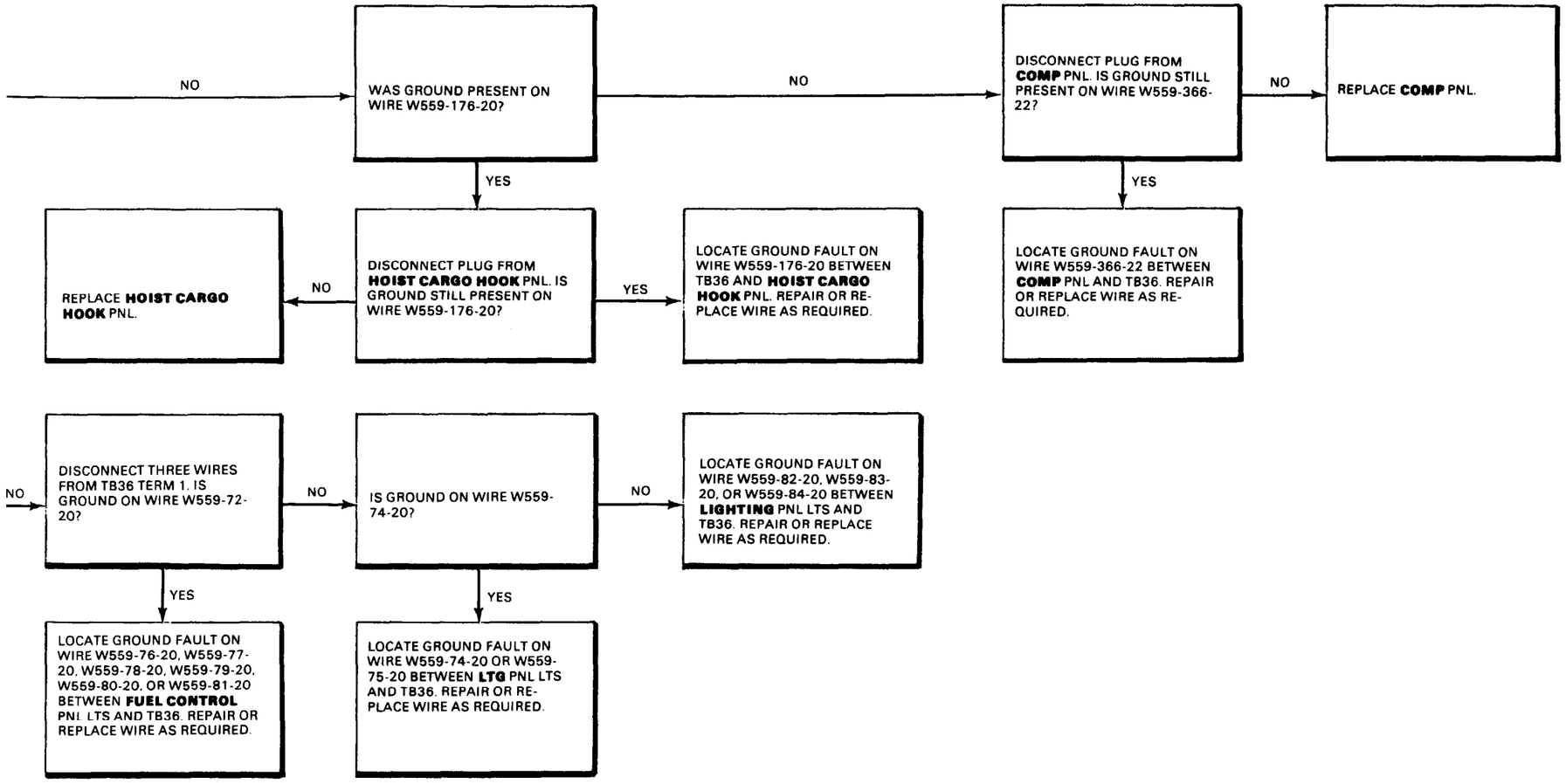
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9-11.4 OVHD PNL CIRCUIT BREAKER DOES NOT STAY CLOSED (Continued)

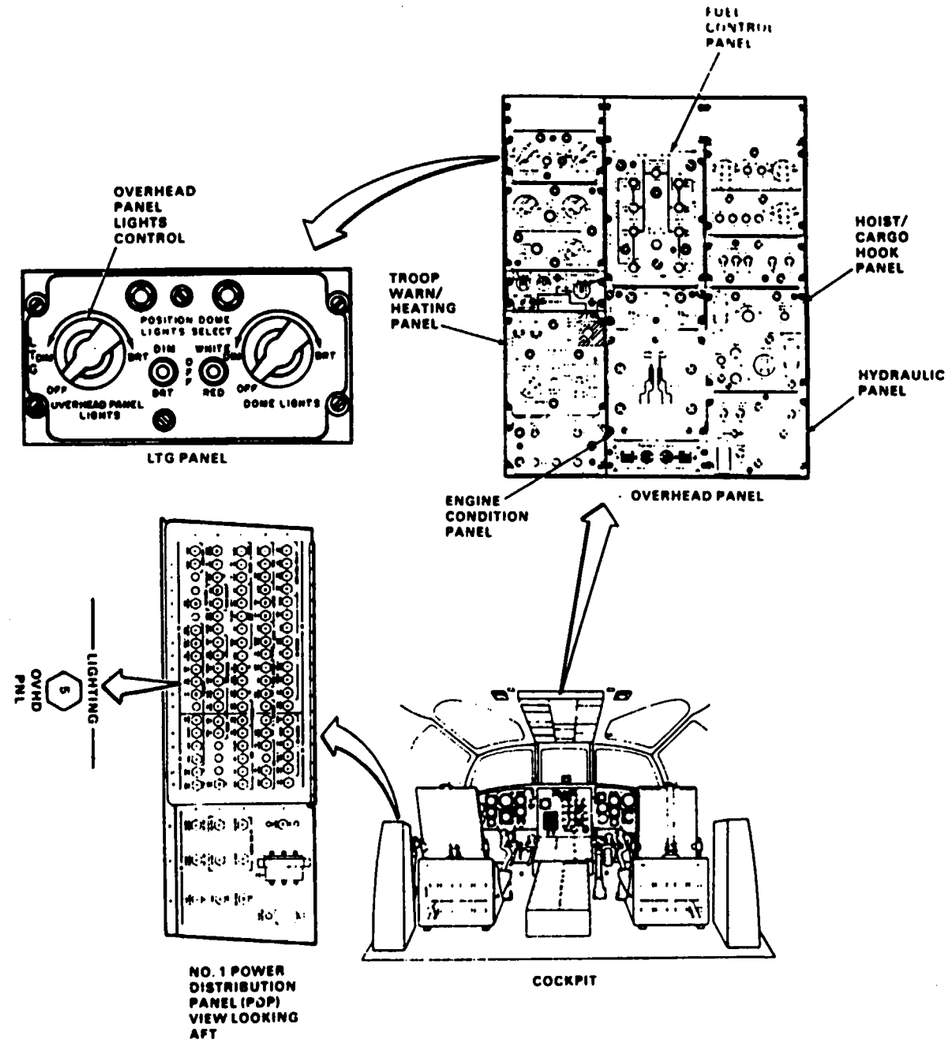


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9-11.4 OVHD PNL CIRCUIT BREAKER DOES NOT STAY CLOSED (Continued)



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45X54

D145-11836-SPA

END OF TASK

9-11.5 OVERHEAD PANEL LIGHT OR LIGHTS NOT LIT

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
Without 17 and 74

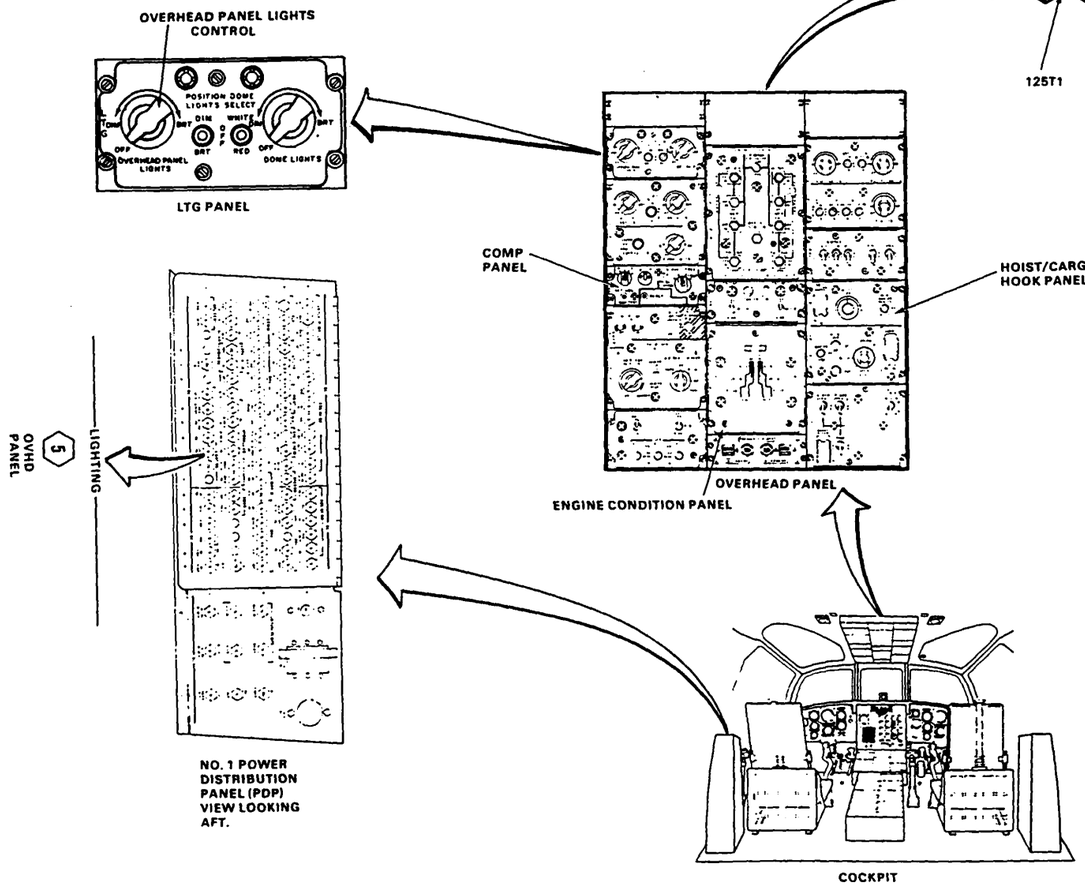
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:
None

Personnel Required:
Aircraft Electrician

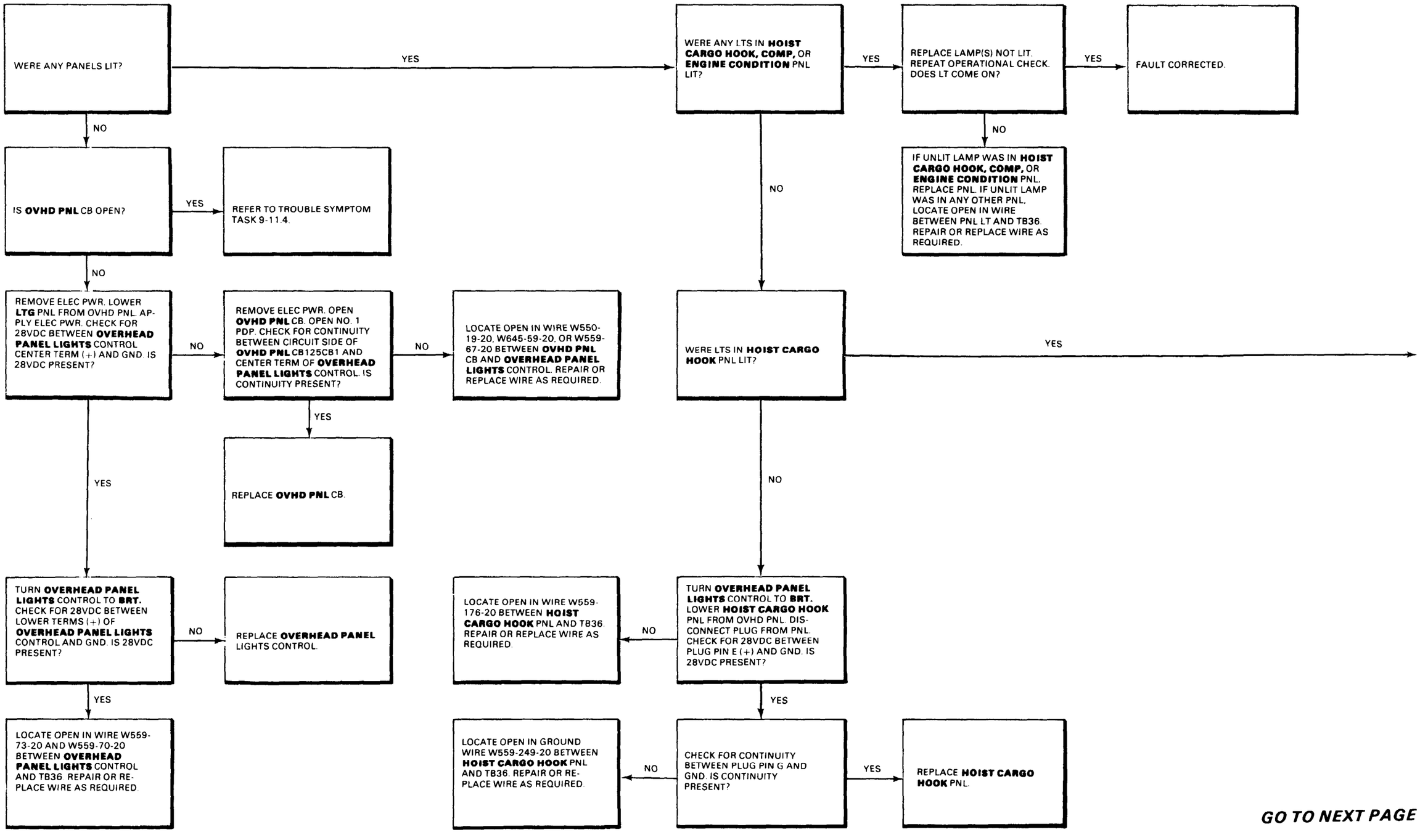
References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off

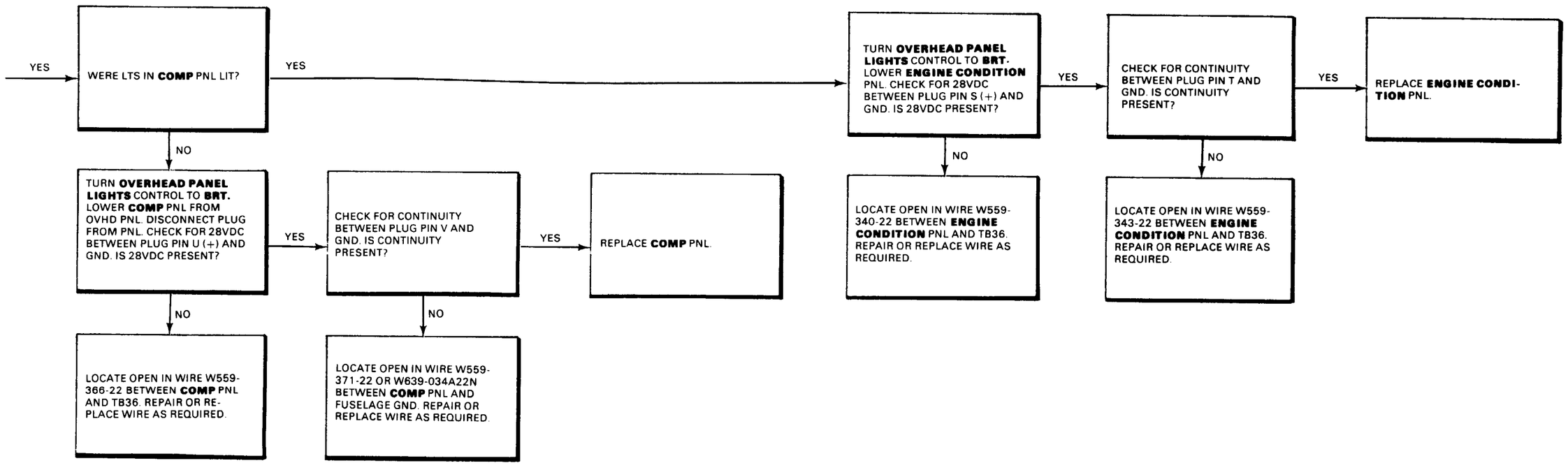


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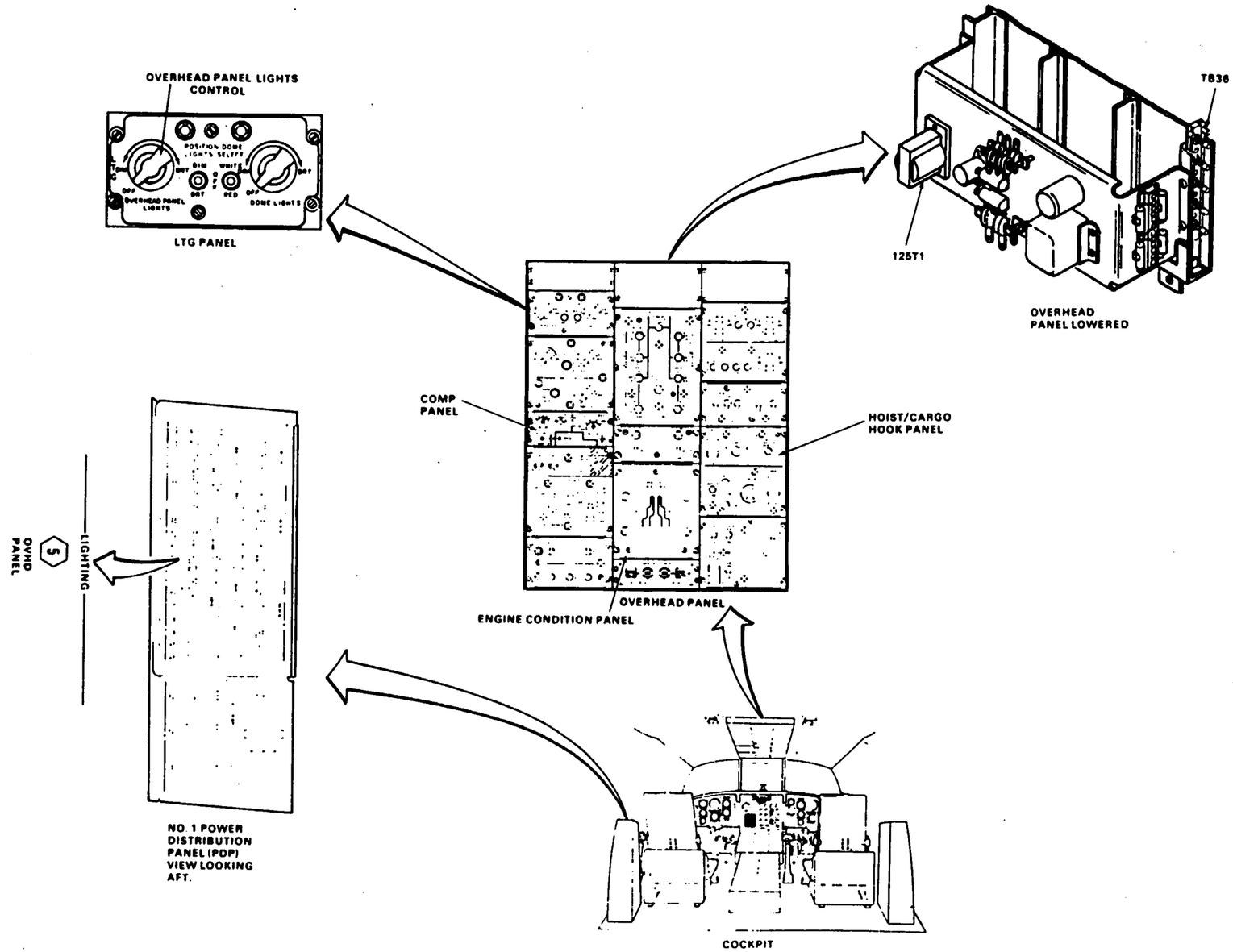
9-11-5 OVERHEAD PANEL LIGHT OR LIGHTS NOT LIT (Continued)



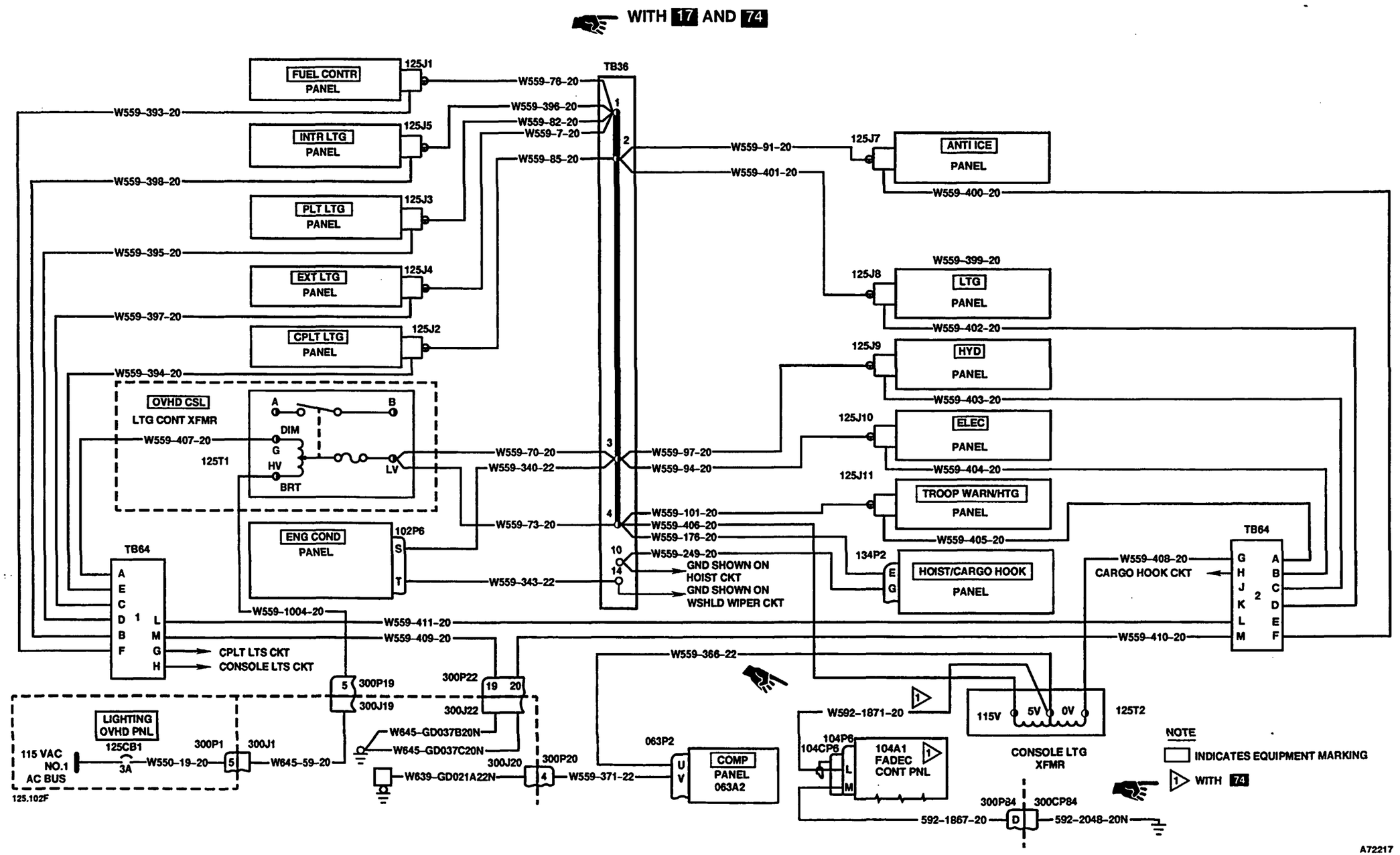
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OVERHEAD PANEL LIGHTS CONTROL
LTG PANEL
TB36
125T1
OVERHEAD PANEL LOWERED
COMP PANEL
HOIST/CARGO HOOK PANEL
OVERHEAD PANEL
ENGINE CONDITION PANEL
OVHD PANEL 5 LIGHTING
NO. 1 POWER DISTRIBUTION PANEL (PDP) VIEW LOOKING AFT.
COCKPIT
DI45-11835-SPA

END OF TASK


WITH 17 AND 74
FUEL CONTR PANEL
125J1
W559-76-20
TB36
W559-393-20
W559-396-20
W559-82-20
W559-7-20
INTR LTG PANEL
125J5
W559-85-20
W559-398-20
PLT LTG PANEL
125J3
W559-395-20
EXT LTG PANEL
125J4
W559-397-20
CPLT LTG PANEL
125J2
W559-394-20
OVHD CSL
LTG CONT XFMR
W559-407-20
125T1
A
B
DIM
G
HV
LV
BRT
W559-70-20
W559-340-22
W559-73-20
ENG COND PANEL
102P6
S
T
W559-343-22
TB64
A
E
C
D
B
F
1
L
M
G
H
CPLT LTS CKT
CONSOLE LTS CKT
W559-1004-20
W559-411-20
W559-409-20
5
300P19
300J19
300P22
19
20
300J22
W645-GD037B20N
W645-GD037C20N
LIGHTING OVHD PNL
125CB1
115 VAC NO.1 AC BUS
3A
W550-19-20
300P1
300J1
5
W645-59-20
125.102F
W639-GD021A22N
300J20
300P20
4
W559-371-22
063P2
U
V
COMP PANEL 063A2
W559-366-22
W559-91-20
W559-401-20
125J7
ANTI ICE PANEL
W559-400-20
W559-399-20
125J8
LTG PANEL
W559-402-20
125J9
HYD PANEL
W559-403-20
125J10
ELEC PANEL
W559-404-20
125J11
TROOP WARN/HTG PANEL
W559-405-20
W559-97-20
W559-94-20
W559-101-20
W559-406-20
W559-176-20
W559-249-20
GND SHOWN ON HOIST CKT
GND SHOWN ON WSHLD WIPER CKT
134P2
E
G
HOIST/CARGO HOOK PANEL
W559-408-20
CARGO HOOK CKT
TB64
G
H
J
K
L
M
A
B
C
D
E
F
2
W559-410-20
W592-1871-20
1
115V
5V
0V
125T2
CONSOLE LTG XFMR
104P6
104CP6
L
M
104A1 FADEC CONT PNL
1
300P84
300CP84
D
592-1867-20
592-2048-20N
NOTE
INDICATES EQUIPMENT MARKING
1 WITH 74
A72217

END OF TASK

9-11.7 OVERHEAD PANEL LIGHTS VISUAL CHECK

INITIAL SETUP

Applicable Configurations:
With 17

Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915

Materials:
None

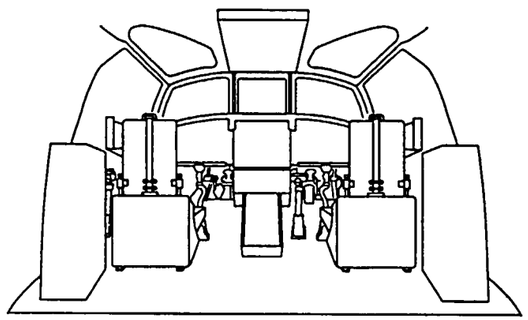
Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

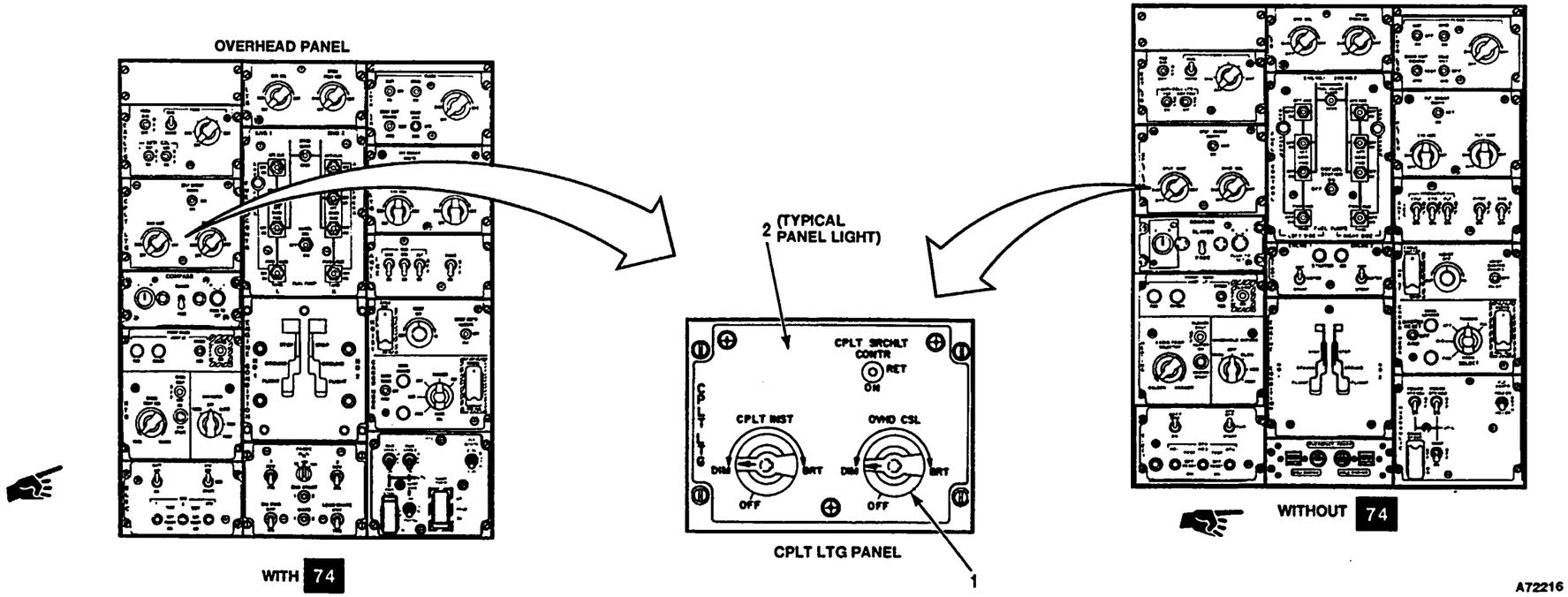
Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off

TASK	RESULT
1. **Check OVHD CSL lights control (1).**	If control (1) is loose or damaged, tighten or replace it as required.
2. **Check 15 (Without 74) or 14 (With 74) lightplate panels (2).**	If any lightplate panel (2) is loose or damaged, tighten or replace it as required.

FOLLOW ON MAINTENANCE:
None



COCKPIT



END OF TASK

9-11.8 OVERHEAD PANEL LIGHTS OPERATIONAL CHECK

INITIAL SETUP

Applicable Configurations:
With 17

Tools:
None

Materials:
None

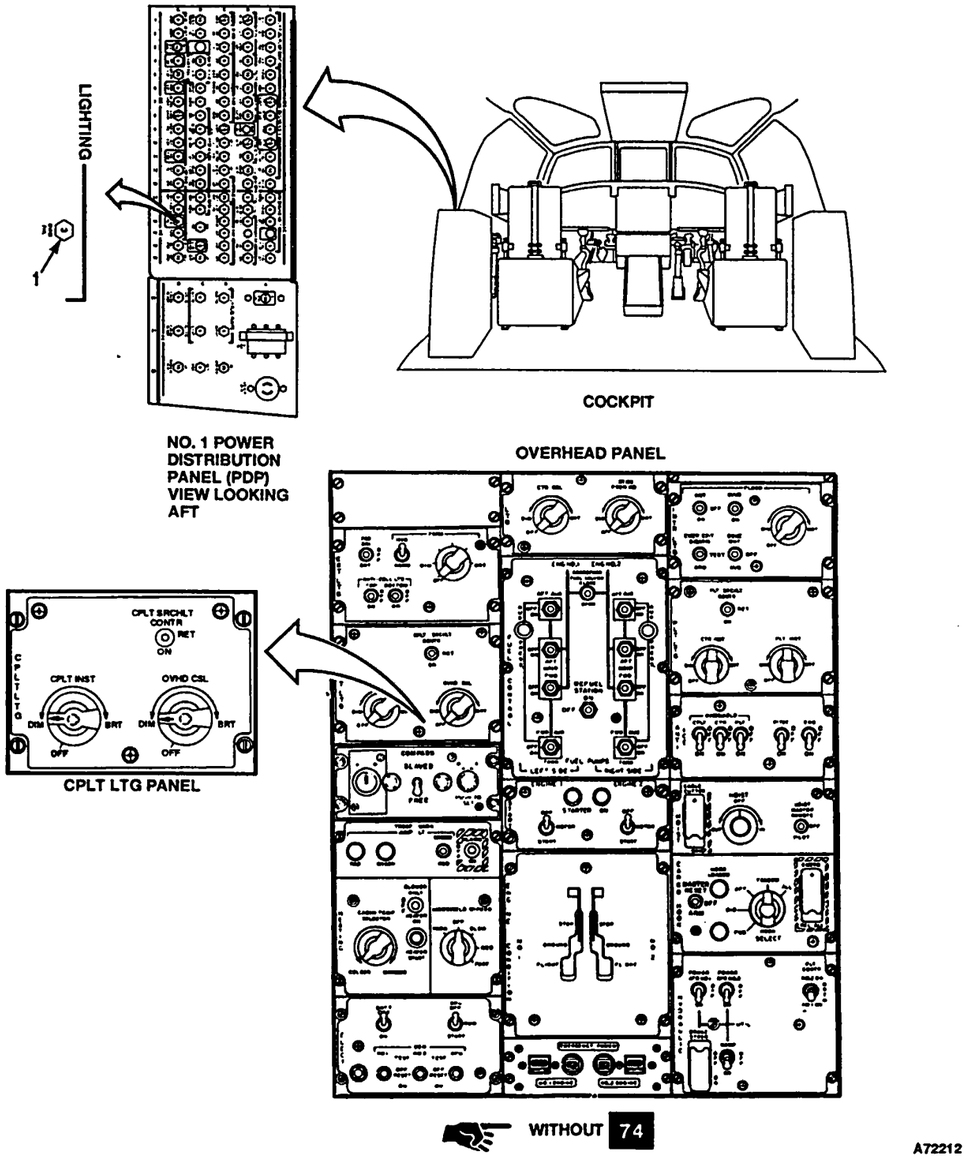
Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23.

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off
Overhead Panel Lights Visual Check Performed (Task 9-11.7)

TASK	RESULT
1. **Check** that **LIGHTING OVHD PNL circuit breaker (1)** is closed**.**	If OVHD PNL circuit breaker (1) is open, close it. If it opens again, go to task 9-11.9.
2. **Turn OVHD CSL lights control (2) from OFF through DIM to BRT.**	All control panels in overhead panel shall light dim and increase in brightness as control (2) is turned to BRT. If any panel is not lit, go to task 9-11.10. If panel brightness does not increase as control is turned, replace OVHD CSL lights control.
3. **Turn OVHD CSL lights control (2) to OFF.**	All control panel lights in overhead panel shall go out. If not, replace OVHD CSL lights control.

Follow-on Maintenance:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off

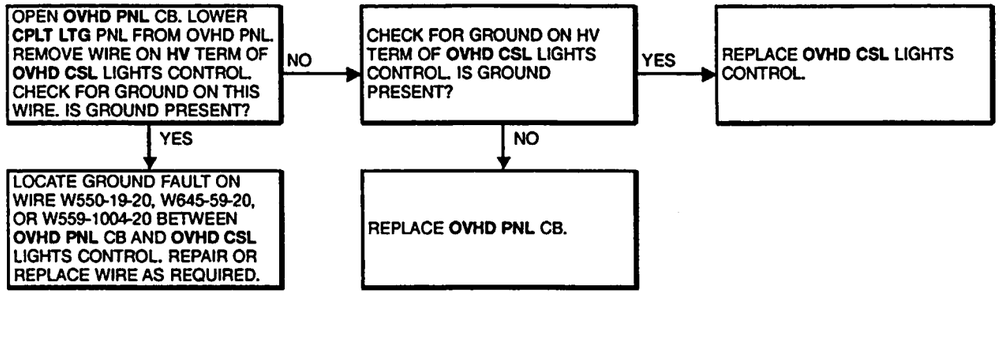


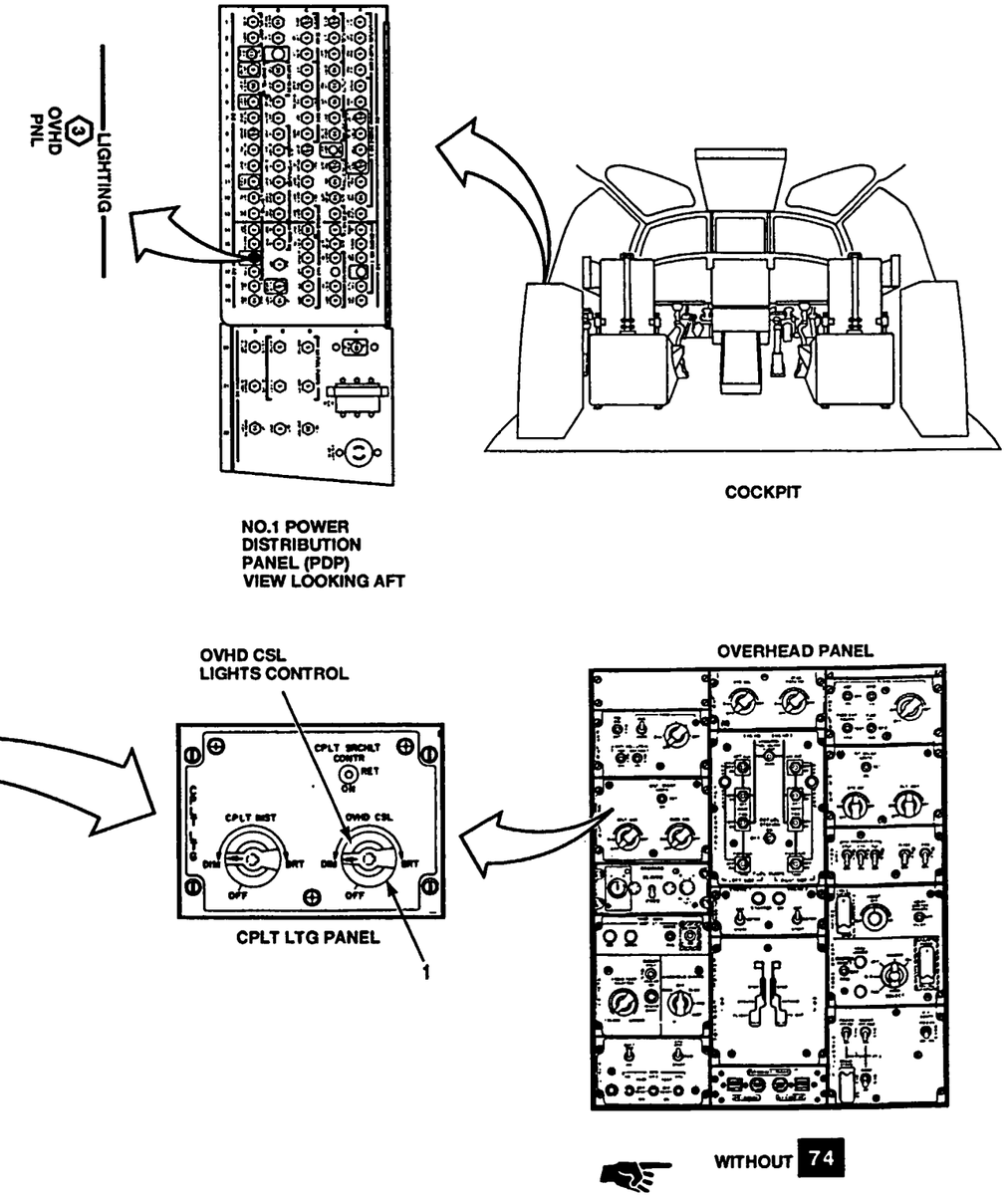
END OF TASK

FAULT ISOLATION PROCEDURE

INITIAL SETUP
Applicable Configurations:
With 17
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter
Materials:
None

Personnel Required:
Aircraft Electrician
References:
TM 55-1520-240-23
Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off





A72213

END OF TASK

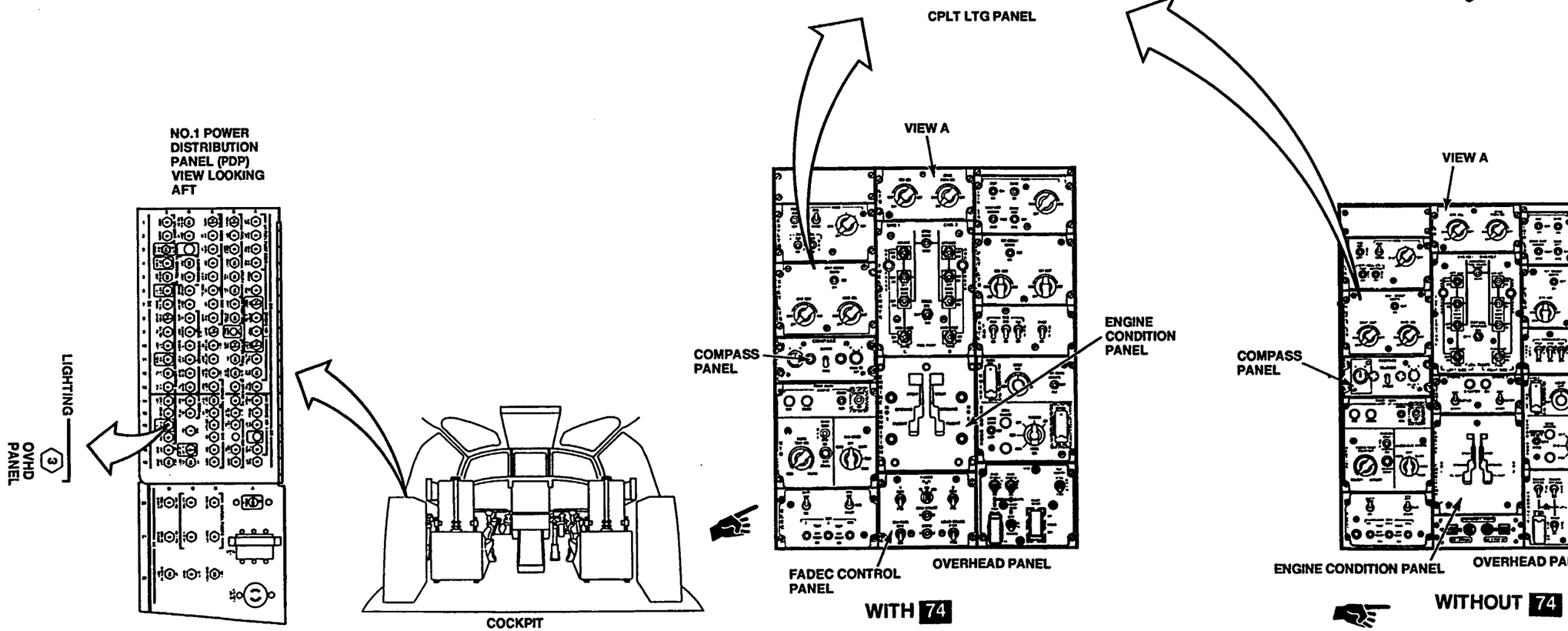
9-11.10 OVERHEAD PANEL LIGHT OR LIGHTS NOT LIT

9-11.10

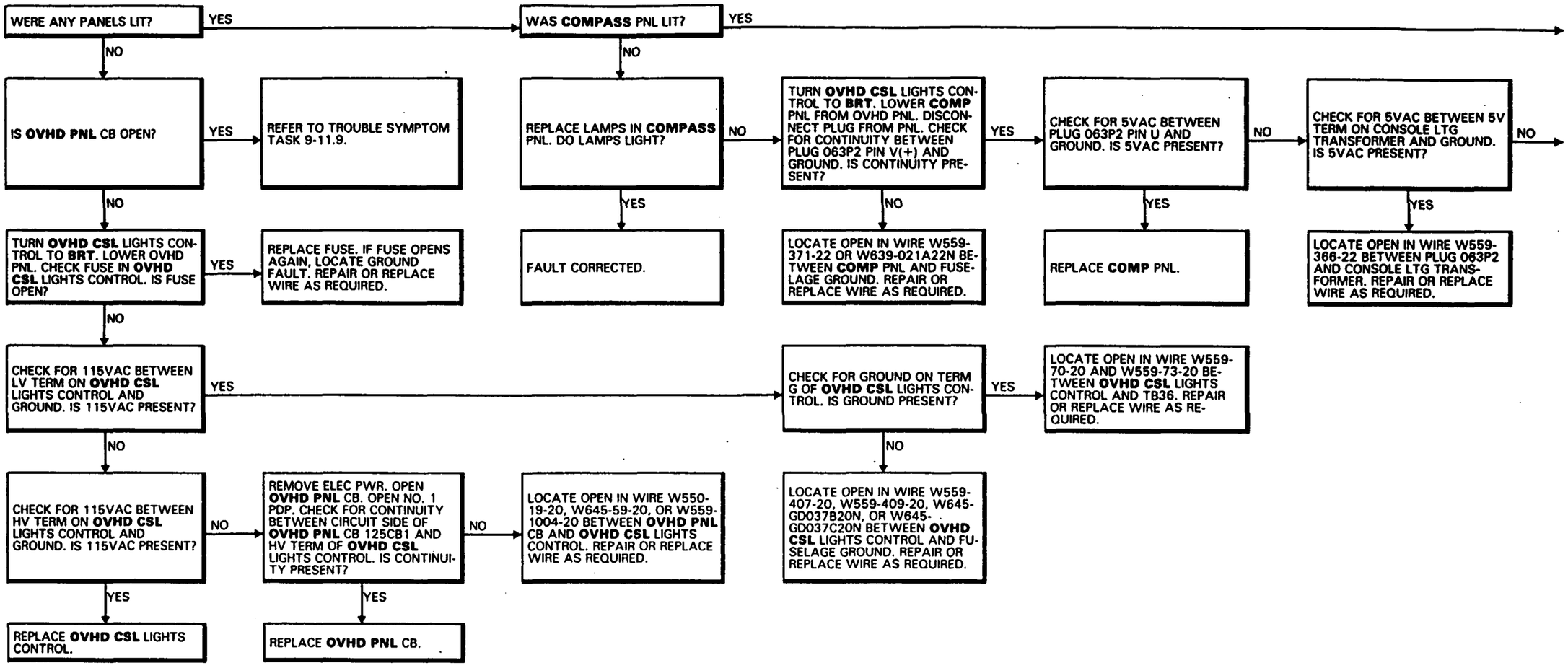
FAULT ISOLATION PROCEDURE

INITIAL SETUP
Applicable Configurations:
With 17
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter
Materials:
None

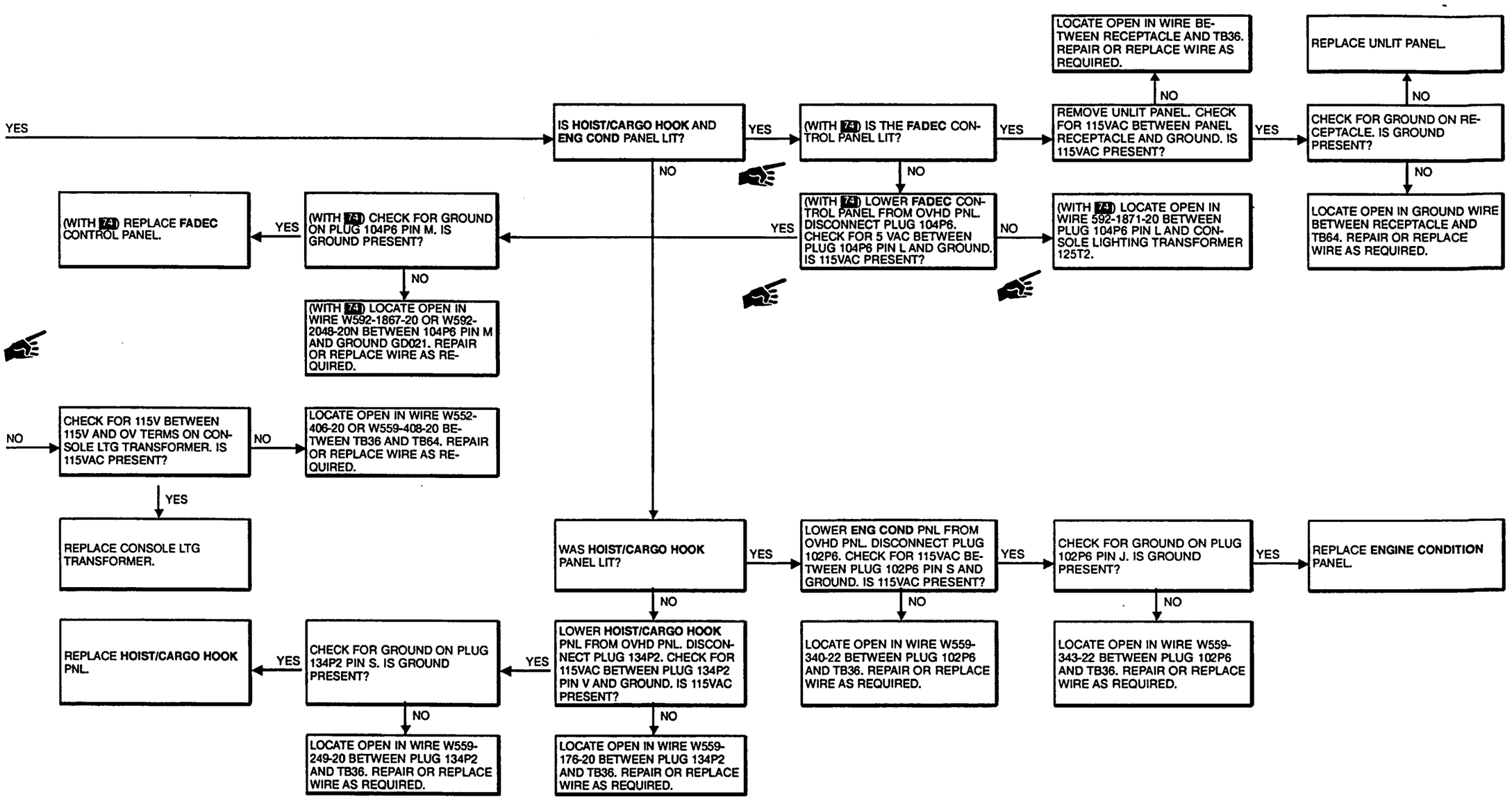
Personnel Required:
Aircraft Electrician
References:
TM 55-1520-240-23
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off



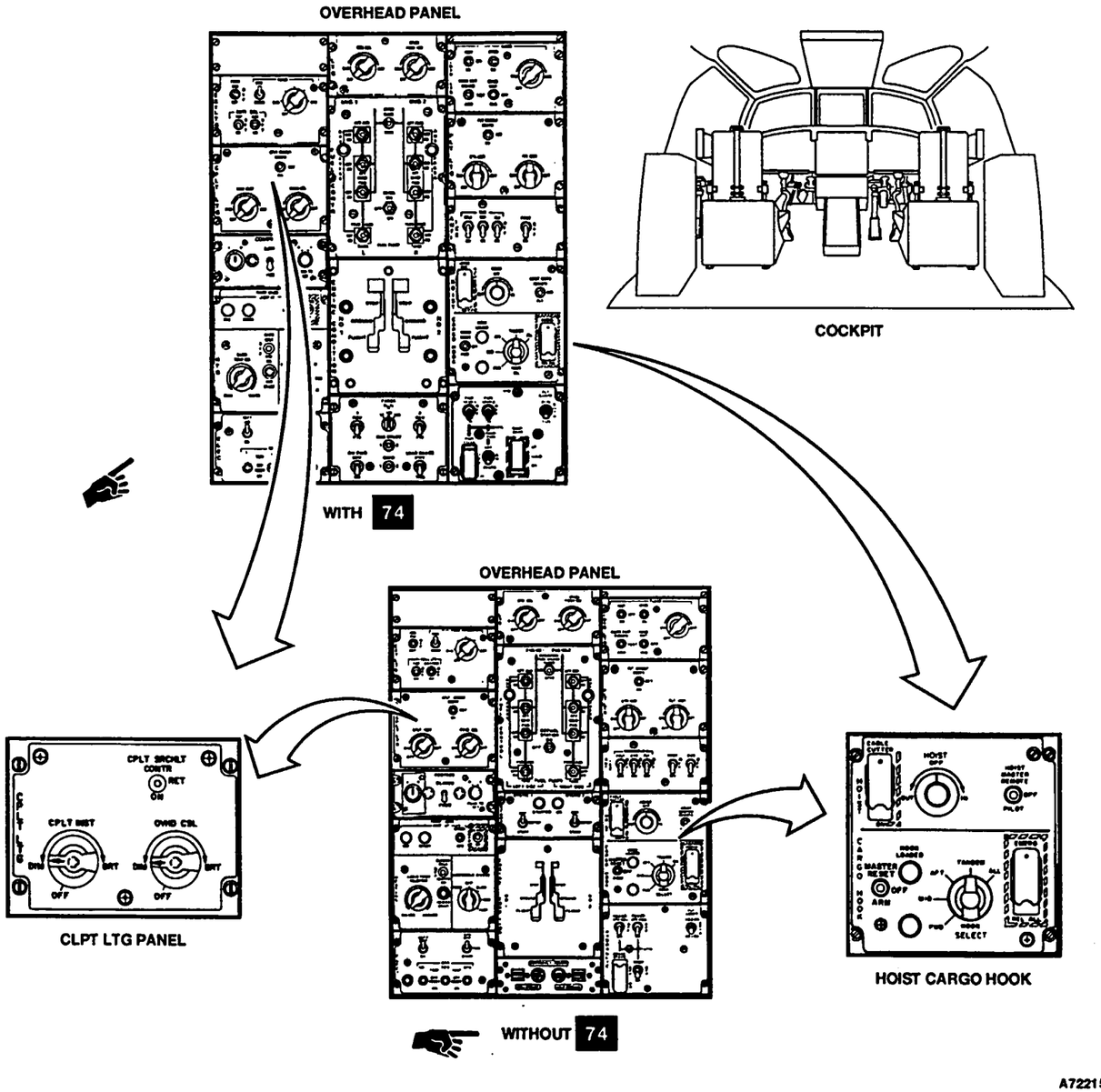
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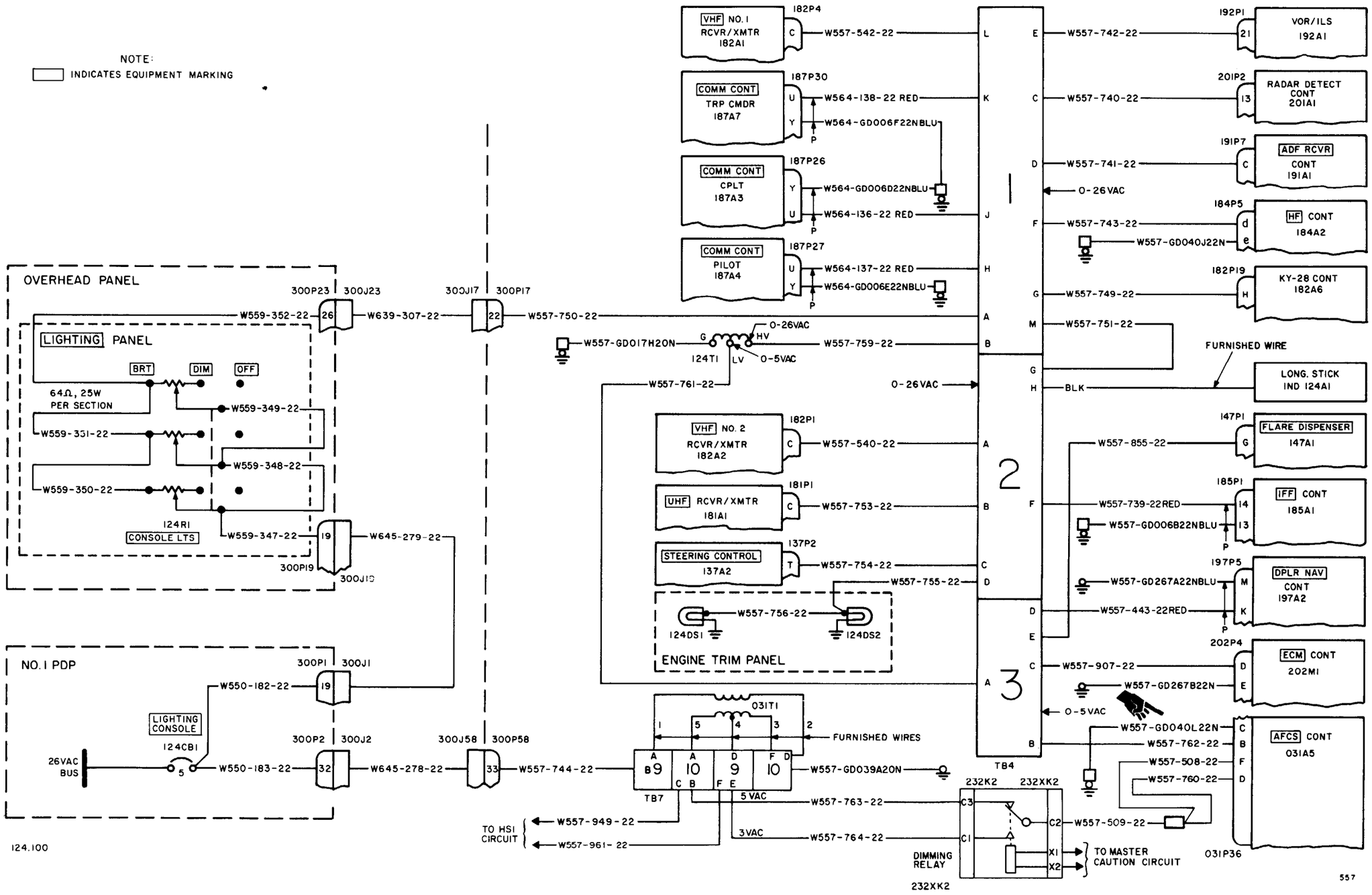


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OVERHEAD PANEL
COCKPIT
WITH 74
OVERHEAD PANEL
CPLT SRCHLT CONTR
RET
ON
CPLT INST
OVHD CBL
DIM
BRT
OFF
CLPT LTG PANEL
HOIST CARGO HOOK
WITHOUT 74
A72215

END OF TASK

9-12 CONSOLE PANEL LIGHTS


NOTE:
INDICATES EQUIPMENT MARKING
OVERHEAD PANEL
LIGHTING PANEL
BRT
DIM
OFF
64Ω, 25W PER SECTION
W559-352-22
W559-349-22
W559-351-22
W559-348-22
W559-350-22
124RI
CONSOLE LTS
W559-347-22
300P23
300J23
300J17
300P17
26
22
W639-307-22
W557-750-22
300P19
300J19
W645-279-22
NO. 1 PDP
300P1
300J1
W550-182-22
19
LIGHTING CONSOLE
124CBI
26VAC BUS
5
300P2
300J2
300J58
300P58
32
33
W550-183-22
W645-278-22
W557-744-22
W557-GD017H20N
G
0-26VAC
HV
LV
0-5VAC
124TI
W557-759-22
W557-761-22
0-26VAC
VHF NO. 1 RCVR/XMTR 182A1
182P4
C
W557-542-22
COMM CONT TRP CMDR 187A7
187P30
U
Y
P
W564-138-22 RED
W564-GD006F22NBLU
COMM CONT CPLT 187A3
187P26
W564-GD006D22NBLU
W564-136-22 RED
COMM CONT PILOT 187A4
187P27
W564-137-22 RED
W564-GD006E22NBLU
VHF NO. 2 RCVR/XMTR 182A2
182P1
W557-540-22
UHF RCVR/XMTR 181A1
181P1
W557-753-22
STEERING CONTROL 137A2
137P2
T
W557-754-22
W557-755-22
W557-756-22
124DS1
124DS2
ENGINE TRIM PANEL
031T1
1
5
4
3
2
FURNISHED WIRES
A B9
A 10
D 9
F D 10
C B
F E
TB7
W557-GD039A20N
5VAC
3VAC
W557-763-22
W557-764-22
TO HSI CIRCUIT
W557-949-22
W557-961-22
L
K
J
H
A
B
2
A
B
3
TB4
E
C
D
F
G
M
H
W557-742-22
W557-740-22
W557-741-22
0-26VAC
W557-743-22
W557-GD040J22N
W557-749-22
W557-751-22
BLK
192P1
21
VOR/ILS 192A1
201P2
13
RADAR DETECT CONT 201A1
191P7
C
ADF RCVR CONT 191A1
184P5
d
e
HF CONT 184A2
182P19
H
KY-28 CONT 182A6
FURNISHED WIRE
LONG. STICK IND 124A1
147P1
G
FLARE DISPENSER 147A1
W557-855-22
185P1
14
13
IFF CONT 185A1
W557-739-22RED
W557-GD006B22NBLU
197P5
M
K
DPLR NAV CONT 197A2
W557-GD267A22NBLU
W557-443-22RED
202P4
D
E
ECM CONT 202M1
W557-907-22
W557-GD267B22N
0-5VAC
W557-GD040L22N
W557-762-22
W557-508-22
W557-760-22
C
B
F
D
AFCS CONT 031A5
031P36
232K2
232XK2
C3
C2
C1
X1
X2
W557-509-22
DIMMING RELAY
232XK2
TO MASTER CAUTION CIRCUIT
124.100
557

9-12.2 CONSOLE PANEL LIGHTS VISUAL CHECK

INITIAL SETUP

Applicable Configurations:
Without 17

Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915

Materials:
None

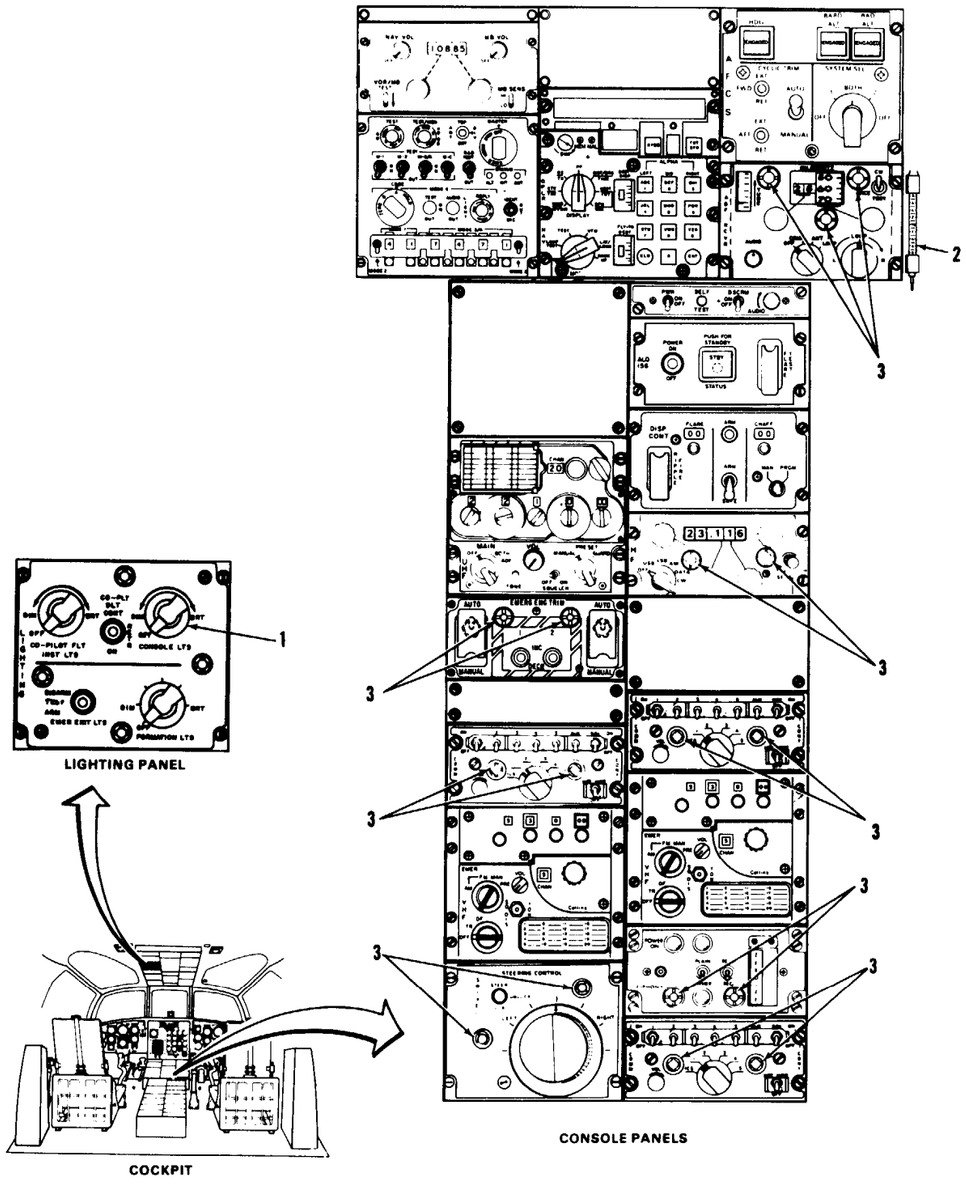
Personnel Rewired:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off

TASK	RESULT
1. Check CONSOLE LTS control (1).	If control (1) is loose or damaged, tighten or replace it as required.
2. Check longitudinal stick position indicator (2).	If wire at bottom of indicator (2) is damaged, repair wire or replace light as required.
3. Check seventeen panel lights (3).	If any panel light (3) is damaged, replace it.

FOLLOW-ON MAINTENANCE:
None



D145-4618-SPA

END OF TASK

9-12.3 CONSOLE PANEL LIGHTS OPERATIONAL CHECK

INITIAL SETUP

Applicable Configurations:
Without 17

Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915

Materials:
None

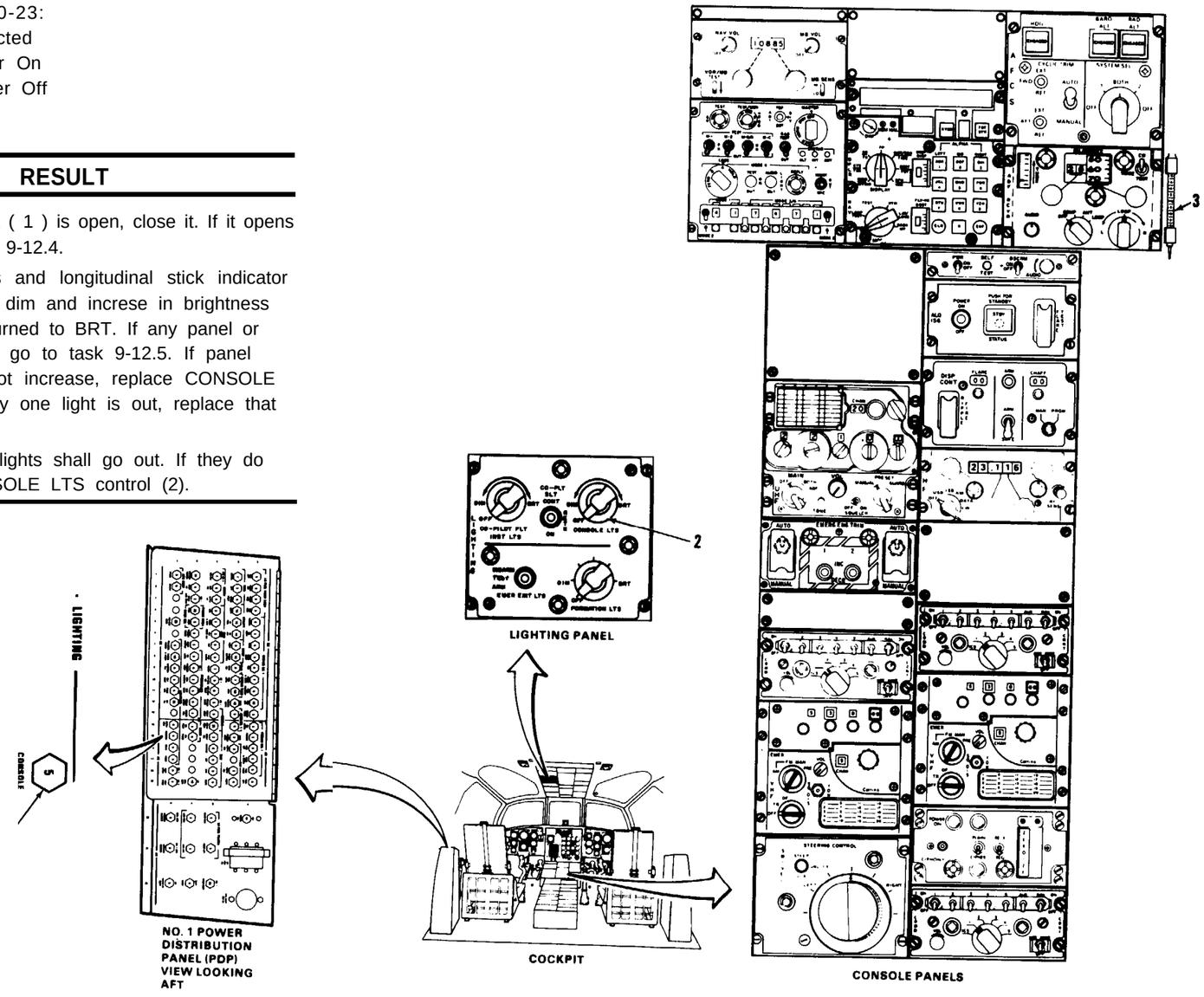
Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
Console Panel Lights Visual Check Performed (Task 9-12.2)
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off

TASK	RESULT
1. Check that **LIGHTING CONSOLE circuit breaker (1)** is closed.	If CONSOLE circuit (1) is open, close it. If it opens again, go to task 9-12.4.
2. Turn CONSOLE LTS control (2) from OFF through DIM to BRT.	All console panels and longitudinal stick indicator (3) shall come on dim and increse in brightness as control (2) is turned to BRT. If any panel or indicator is not lit, go to task 9-12.5. If panel brightness does not increase, replace CONSOLE LTS control. If only one light is out, replace that light.
3. Turn CONSOLE LTS control (2) to OFF.	All console panel lights shall go out. If they do not, replace CONSOLE LTS control (2).

FOLLOW-ON MAINTENANCE:
TM 55-1520-240-23:
Electrical Power Off
Battery Disconnected



D145-4619-SPA

END OF TASK

9-12.4 CONSOLE CIRCUIT BREAKER DOES NOT STAY CLOSED

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
Without 17

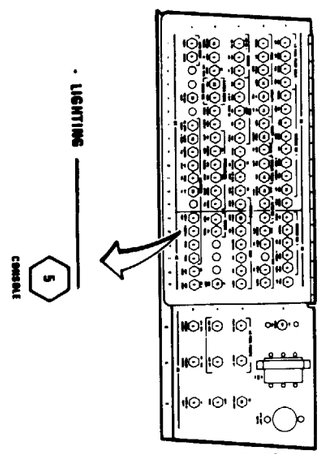
Tools:
Electrical Repairer's Tool Kit, NSN 5180-00-323-4915
Multimeter

Materials:
None

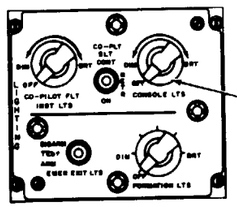
Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

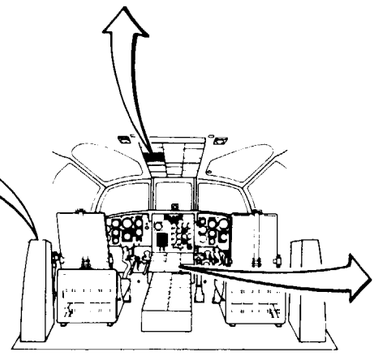
Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off



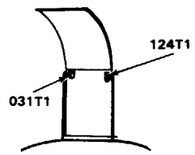
NO. 1 POWER DISTRIBUTION PANEL (PDP) VIEW LOOKING AFT



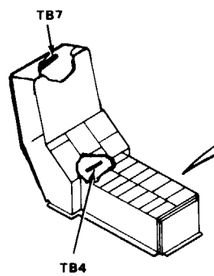
LIGHTING PANEL

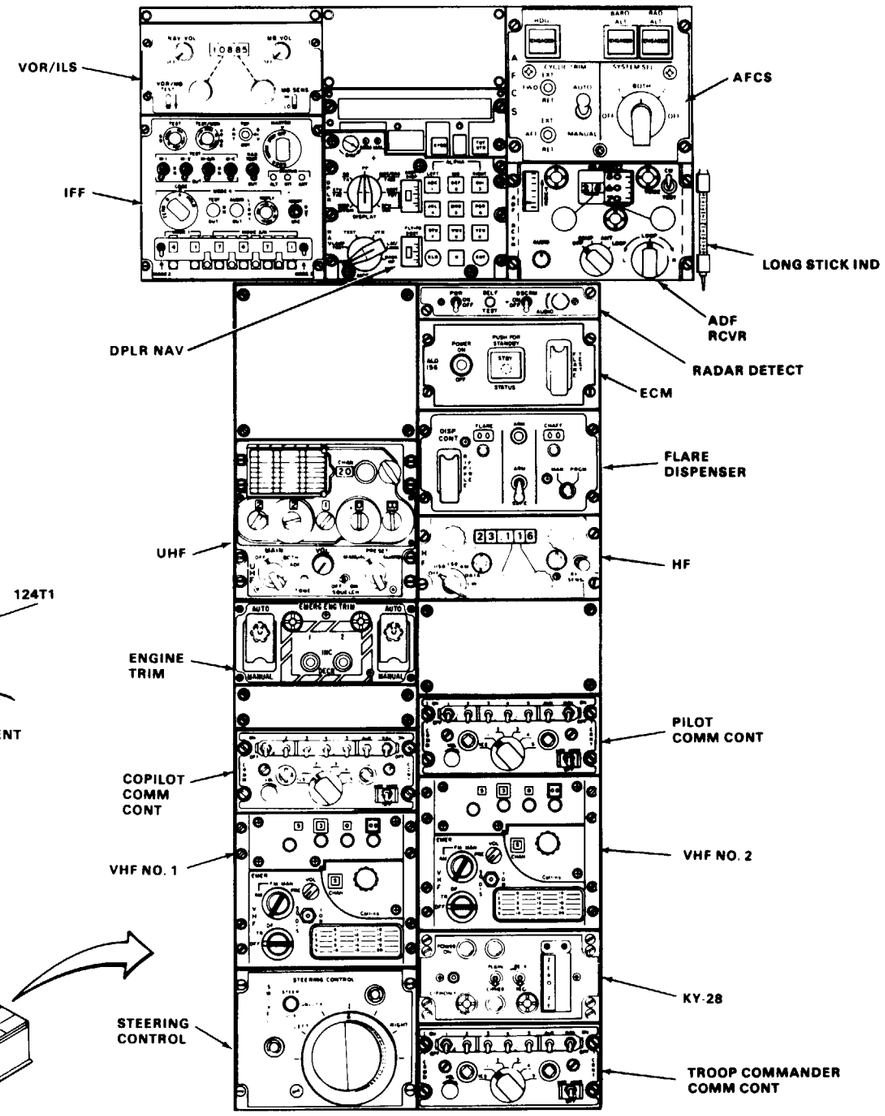


COCKPIT



NOSE COMPARTMENT



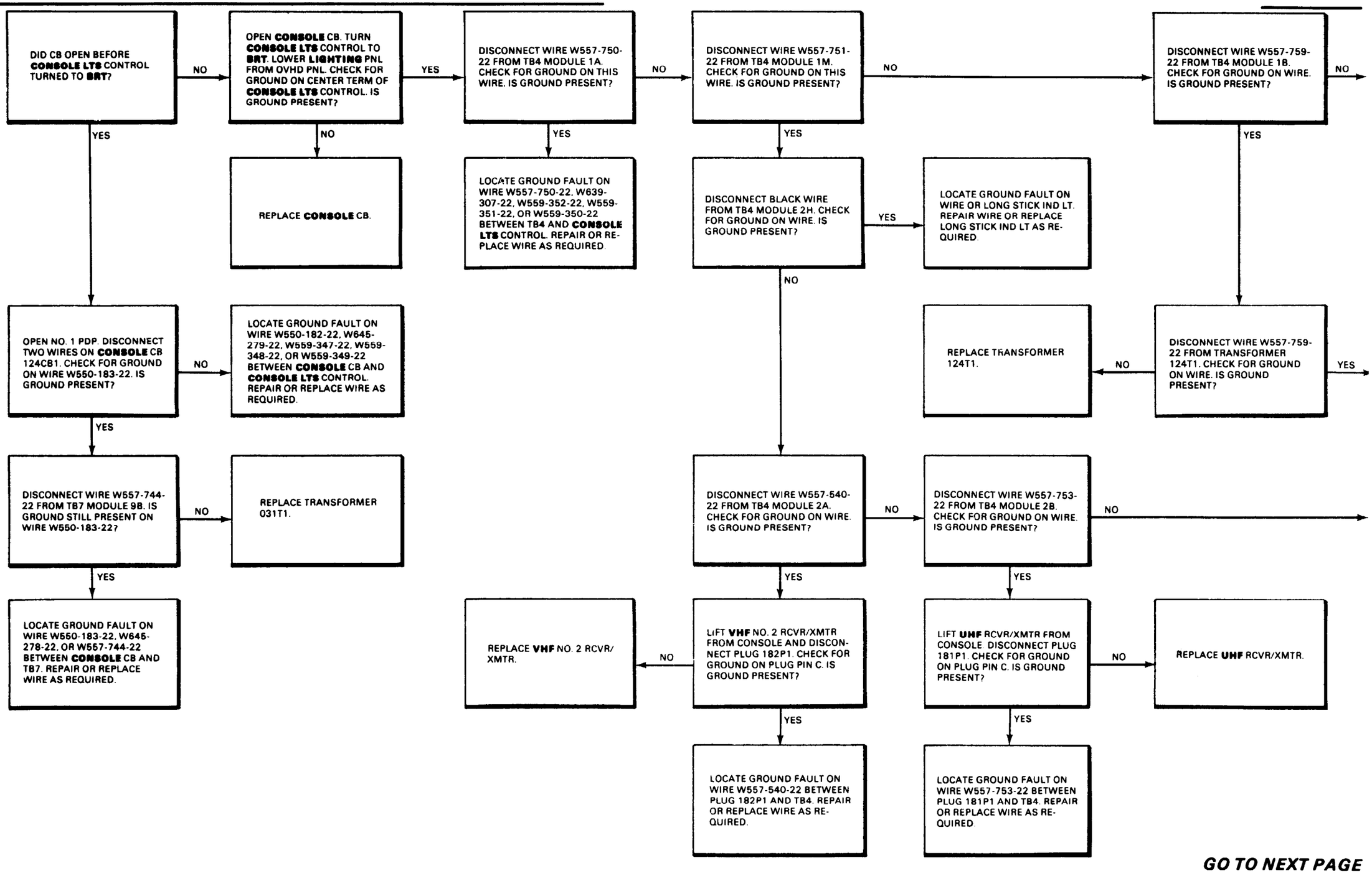


CONSOLE PANELS

D145-4620-SPA

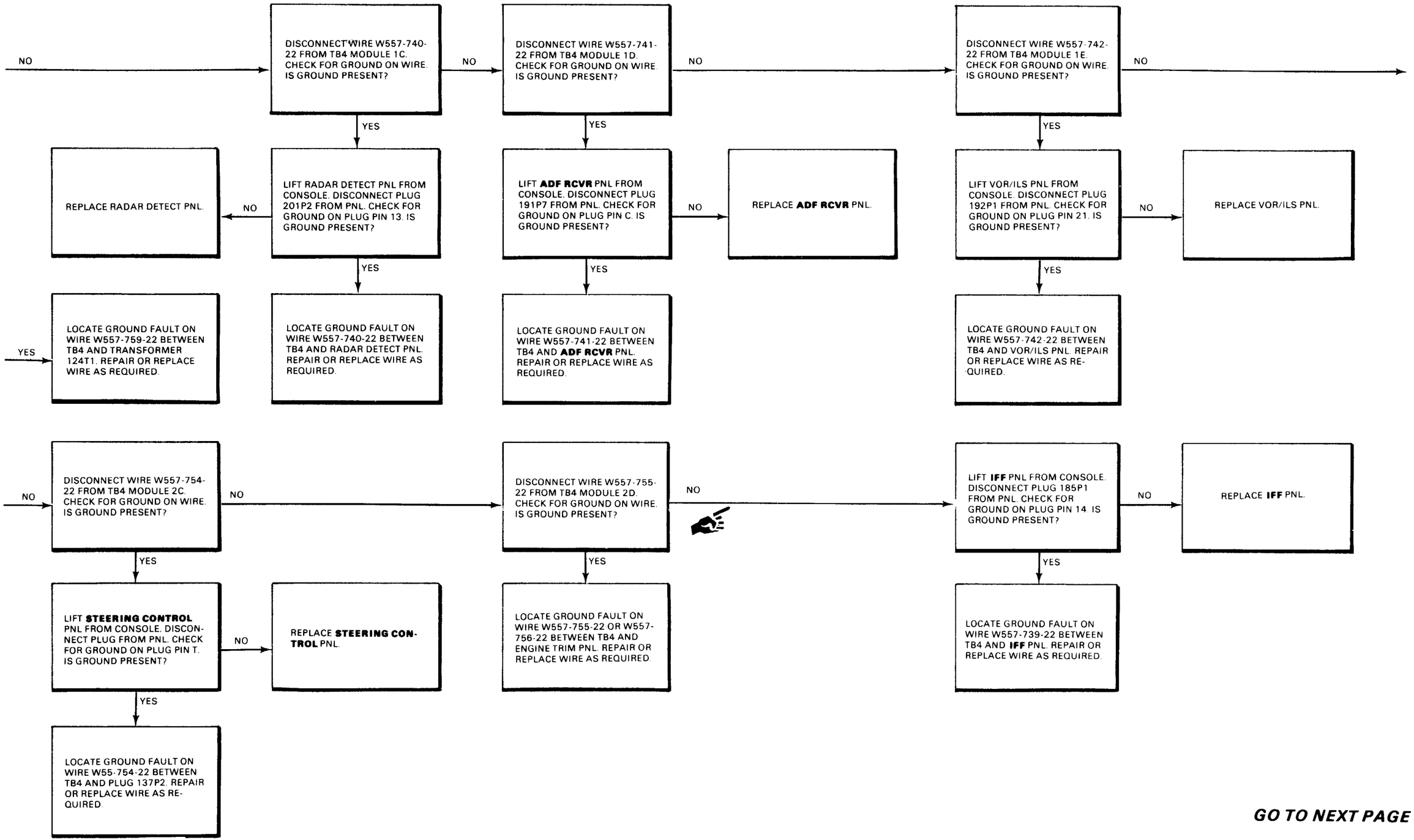
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9-12.4 CONSOLE CIRCUIT BREAKER DOES NOT STAY CLOSED (Continued)



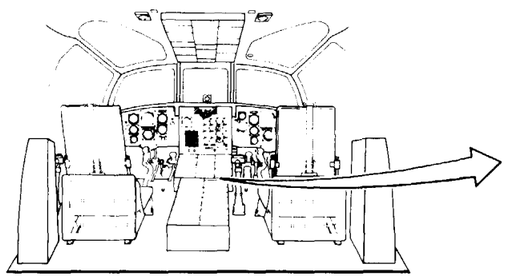
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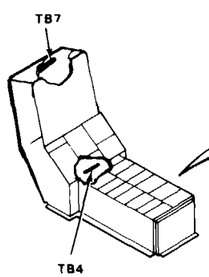
9-12.4 CONSOLE CIRCUIT BREAKER DOES NOT STAY CLOSED (Continued)

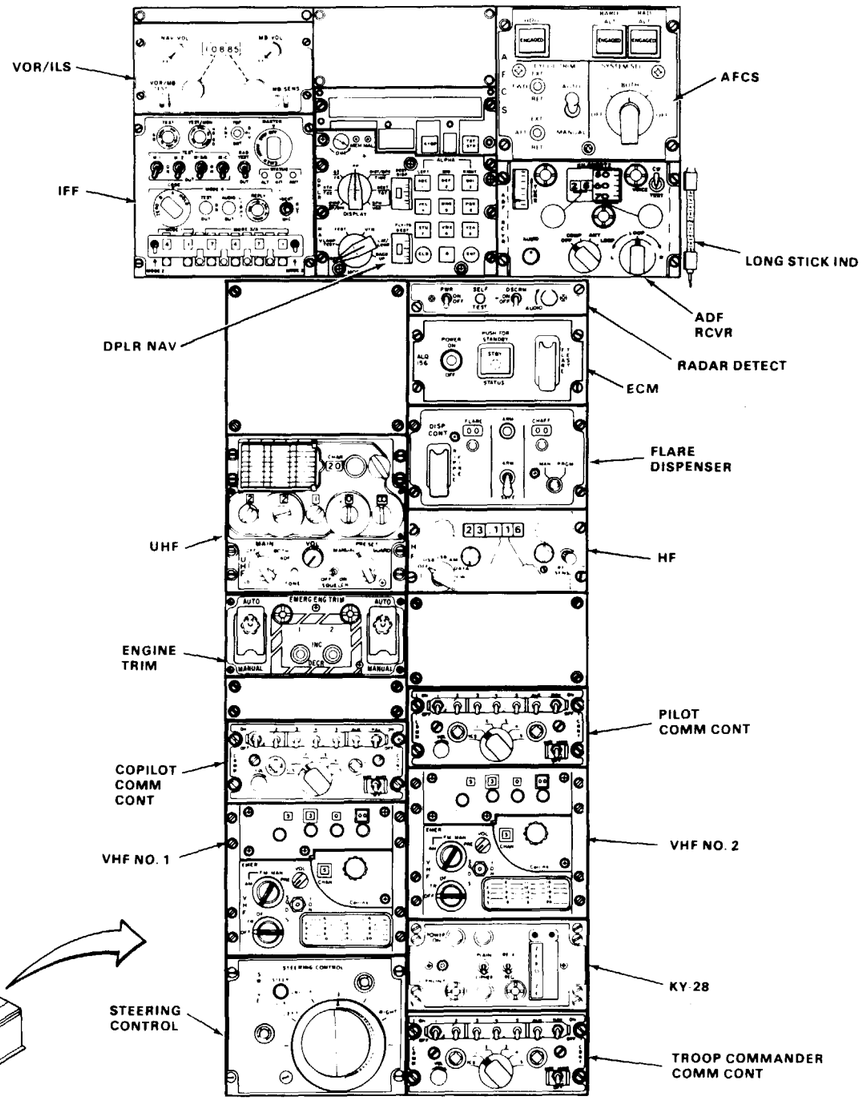


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9-12.4 CONSOLE CIRCUIT BREAKER DOES NOT STAY CLOSED (Continued)







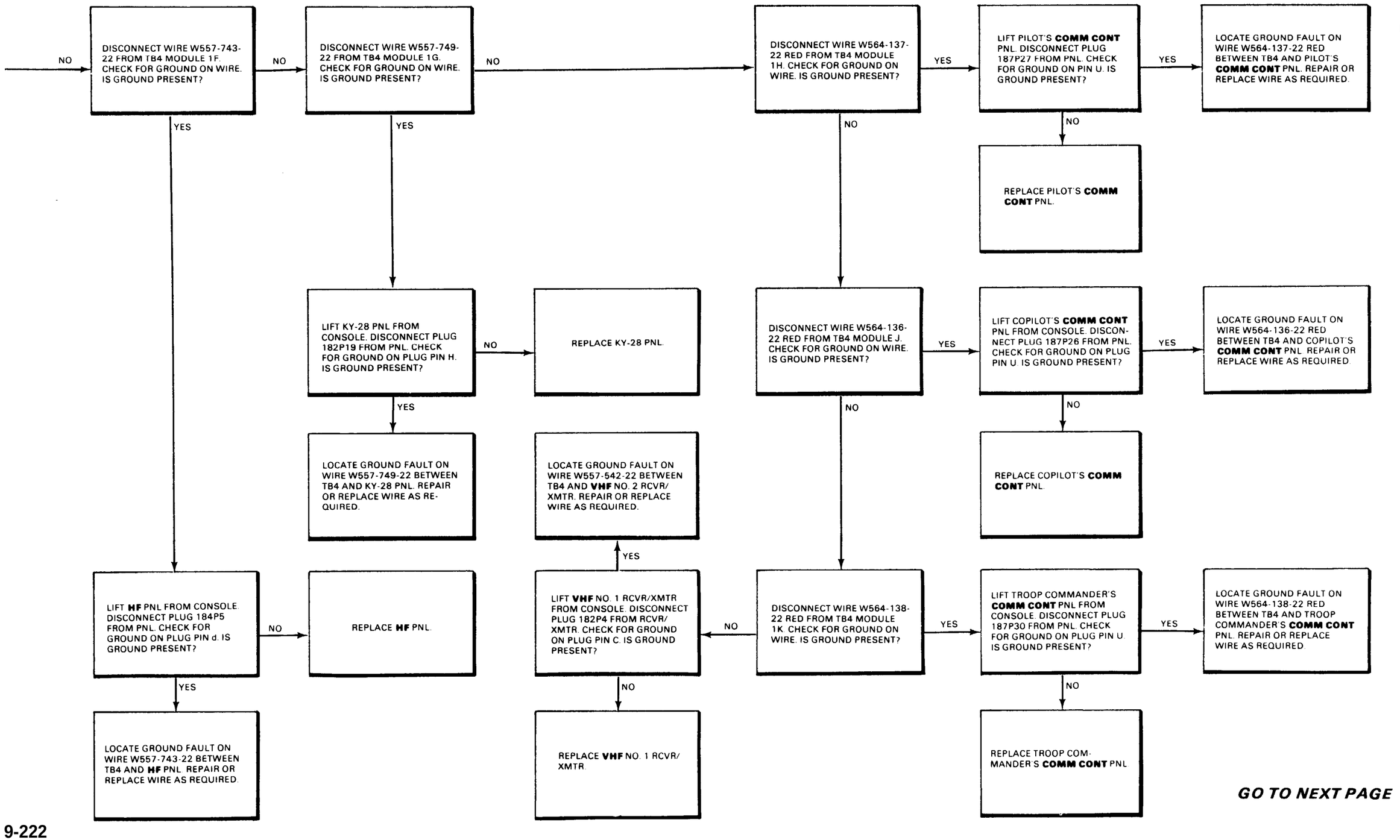
CONSOLE PANELS

90X54

D145-11834-SPA

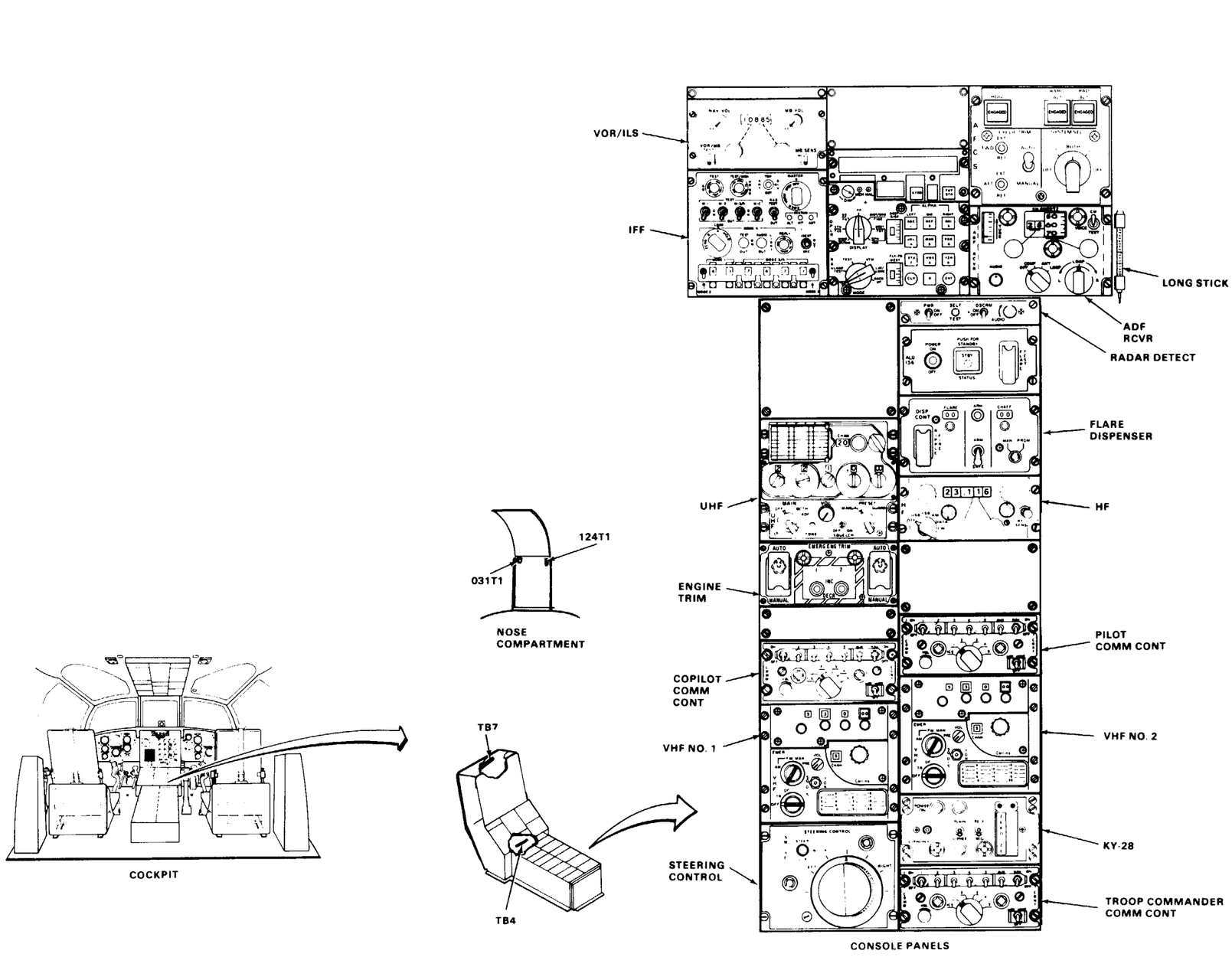
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9-12.4 CONSOLE CIRCUIT BREAKER DOES NOT STAY CLOSED (Continued)



GO TO NEXT PAGE

9-12.4 CONSOLE CIRCUIT BREAKER DOES NOT STAY CLOSED (Continued)



END OF TASK

9-12.5 CONSOLE PANEL LIGHT OR LIGHTS NOT LIT

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
Without 17

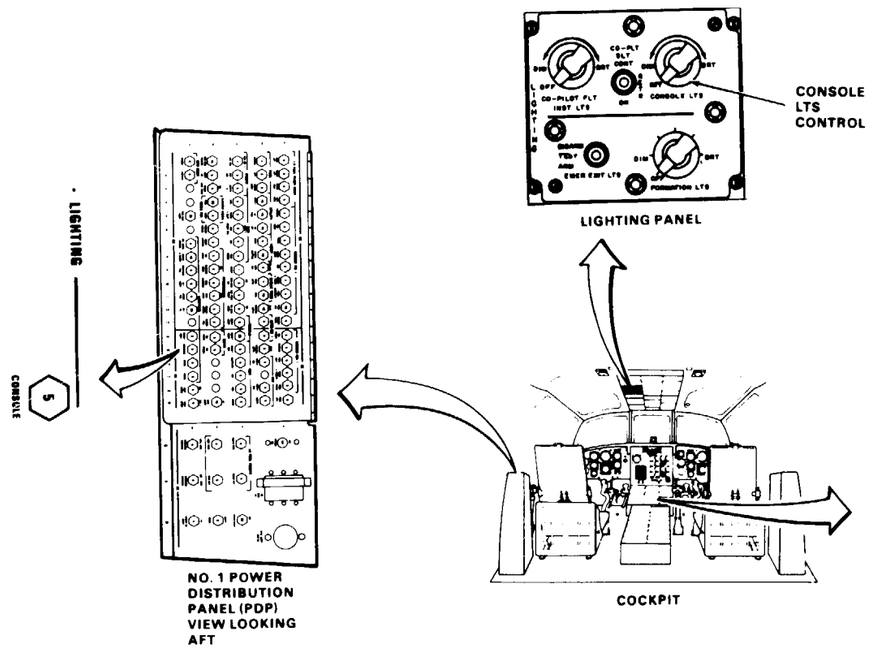
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:
None

Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

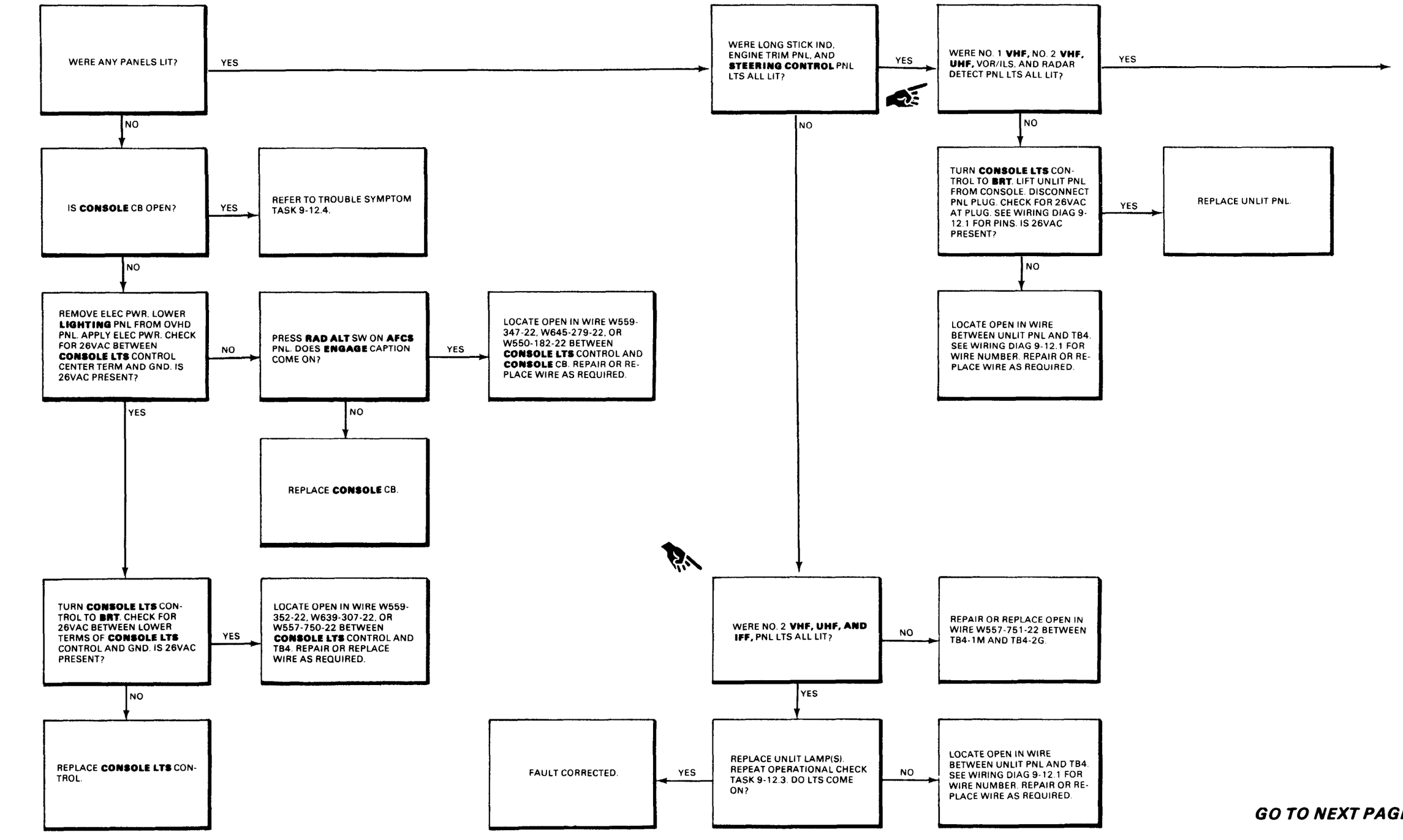
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off



D145-4621-SPA

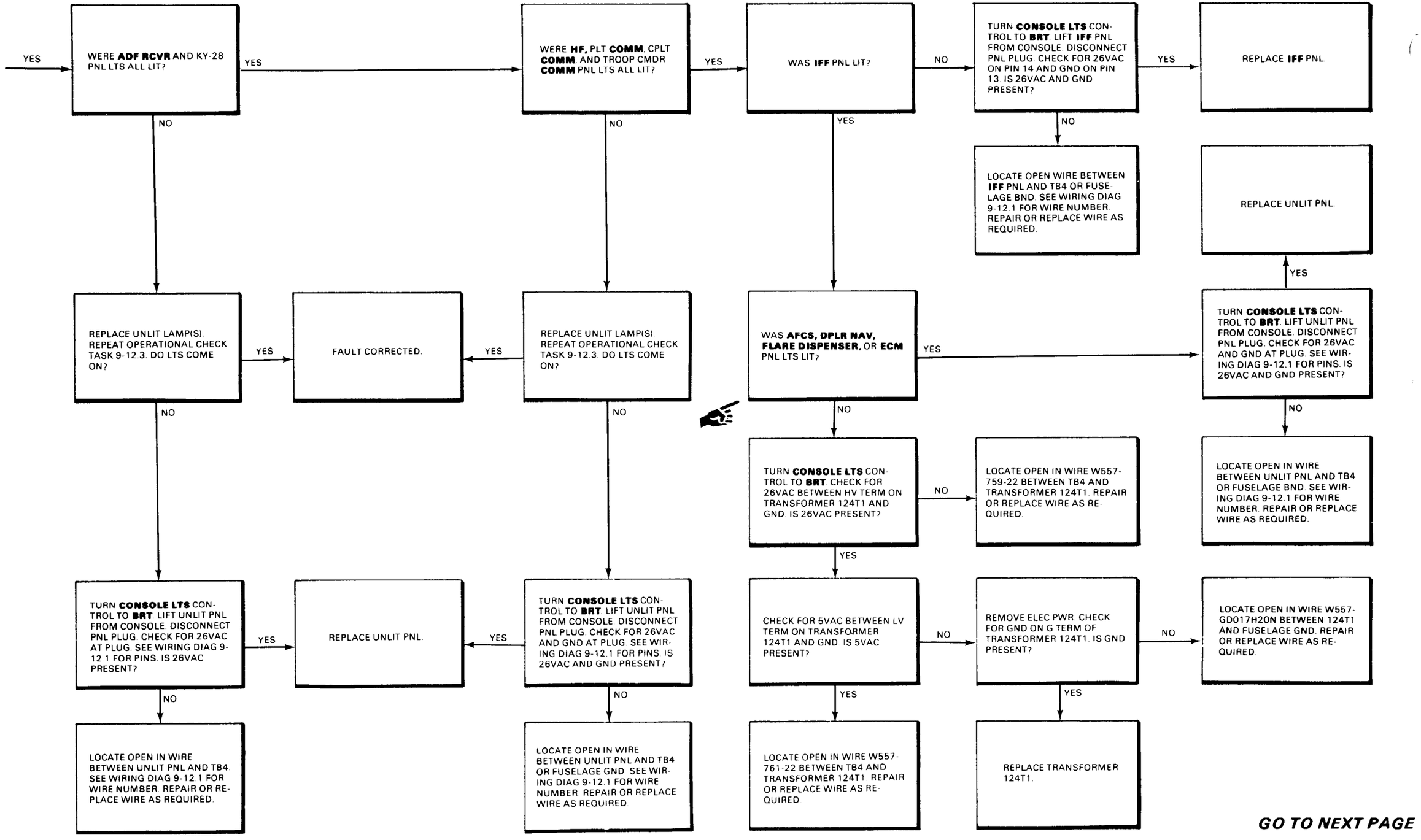
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9-12.5 CONSOLE PANEL LIGHT OR LIGHTS NOT LIT (Continued)



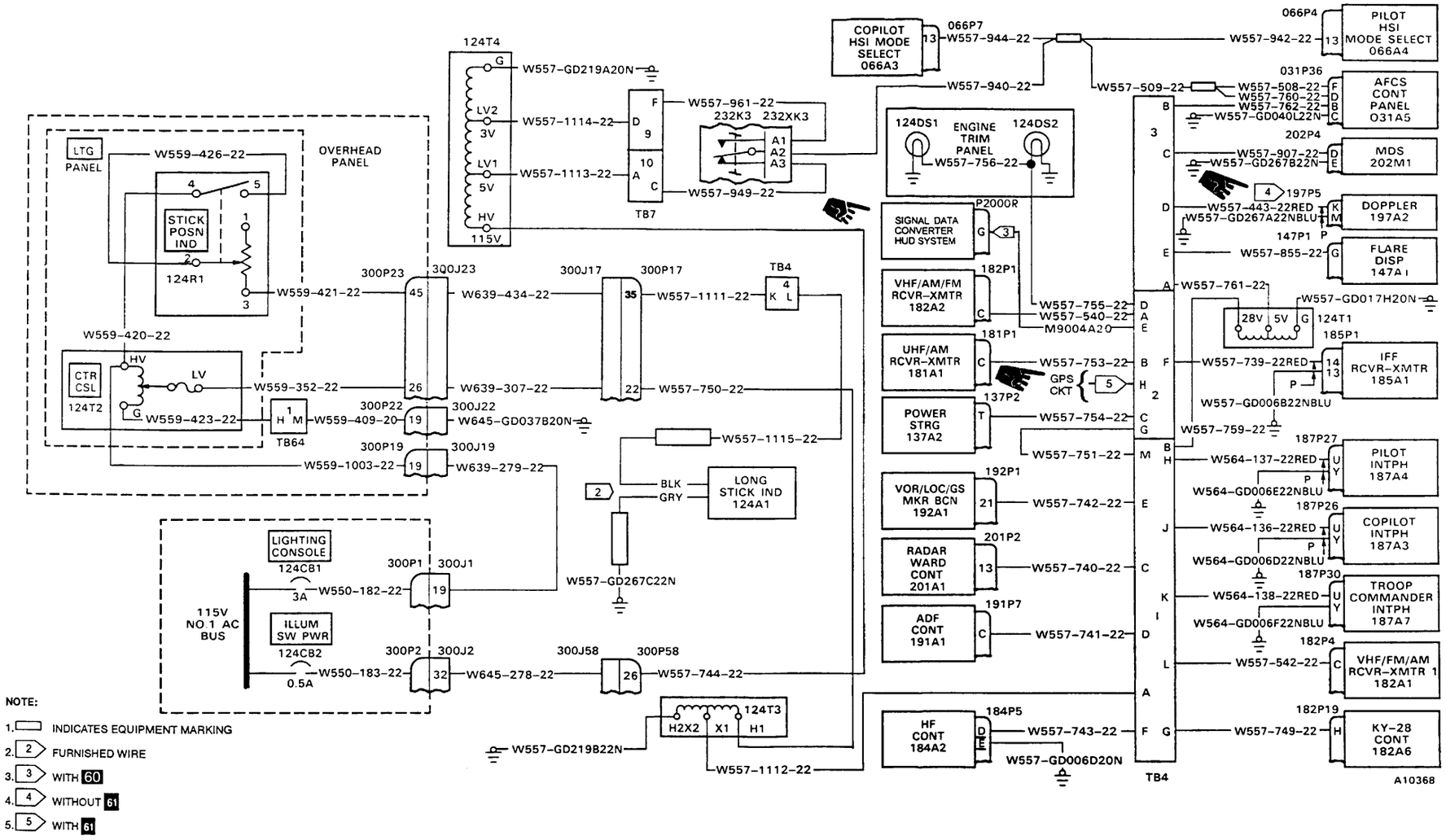
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9-12.5 CONSOLE PANEL LIGHT OR LIGHTS NOT LIT (Continued)



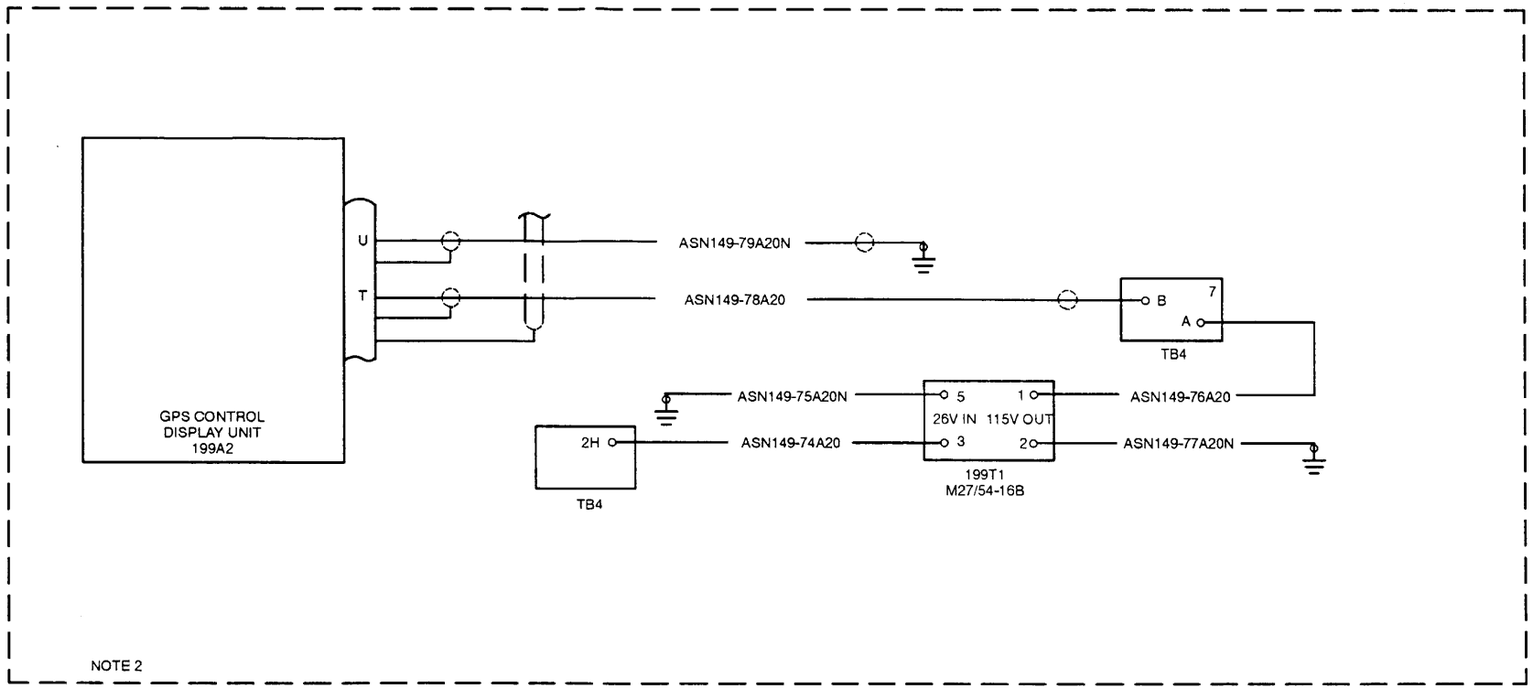
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9-12.6 CONSOLE PANEL LIGHTS WIRING DIAGRAM (WITH (17))



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9-12.6 CONSOLE PANEL LIGHTS WIRING DIAGRAM (WITH (17)) (Continued) 9-12.6

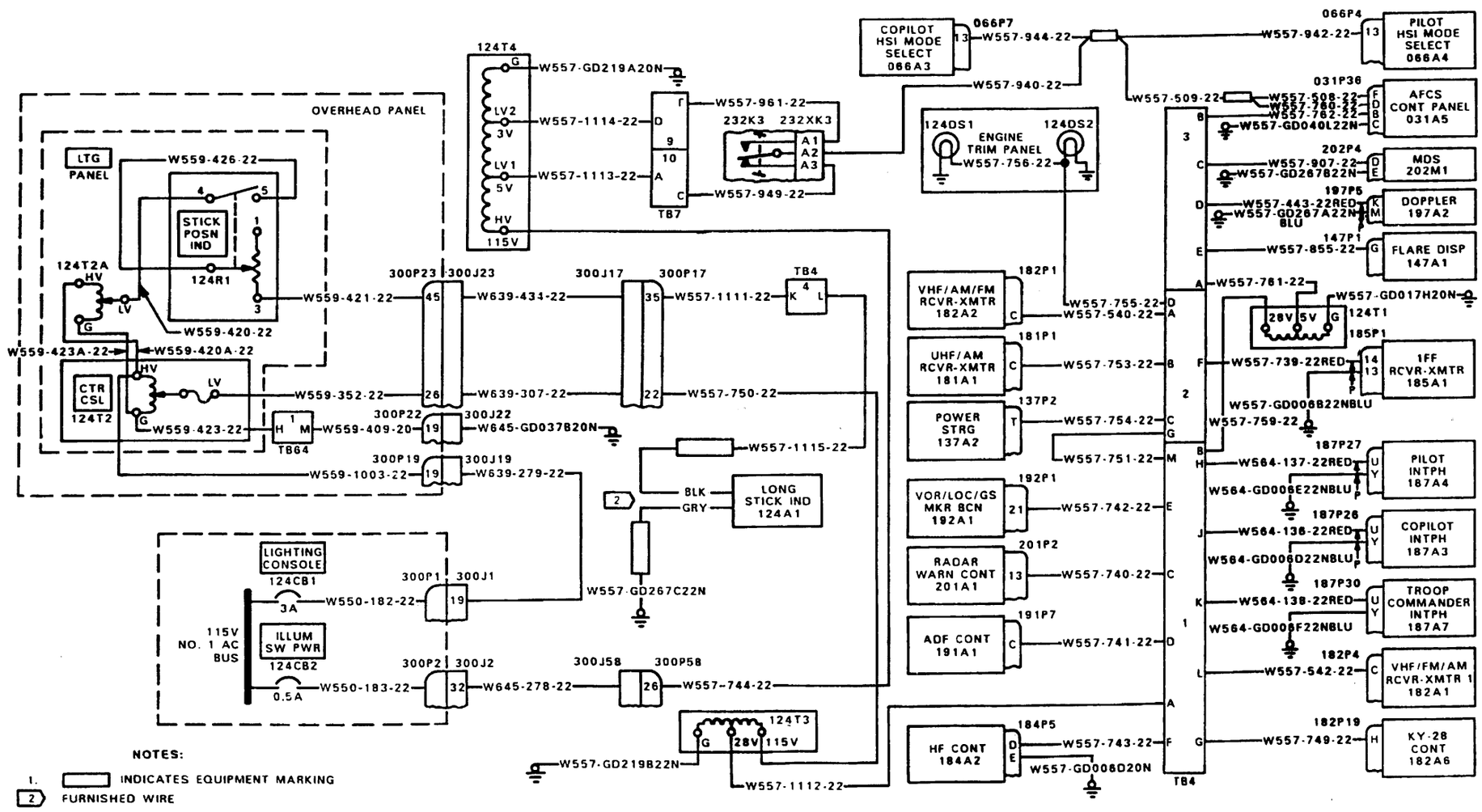


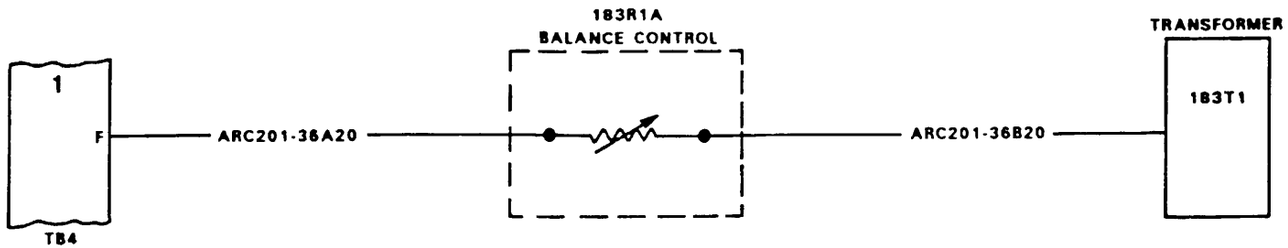
NOTE:

1. ▭ INDICATES EQUIPMENT MARKING
2. WITH 61

END OF TASK

9-12.6.1 CONSOLE PANEL LIGHTS WIRING DIAGRAM (WITH (17)) AFTER MODIFICATION BY MWO 1-1520-240-50-52





EFFECTIVITY
AFTER C/W MWO 55-1520-240-50-28

9-12.7 CONSOLE PANEL LIGHTS VISUAL CHECK

INITIAL SETUP

Applicable Configurations:
With 17

Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915

Materials:
None

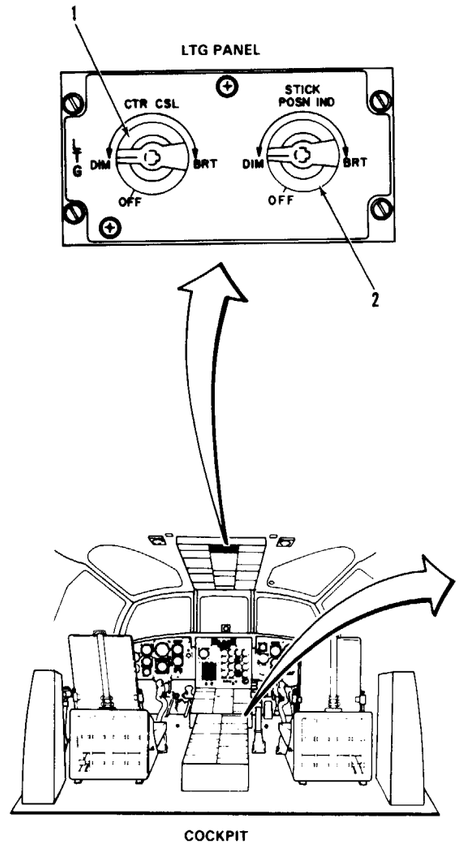
Personnel Required:
Aircraft Electrician

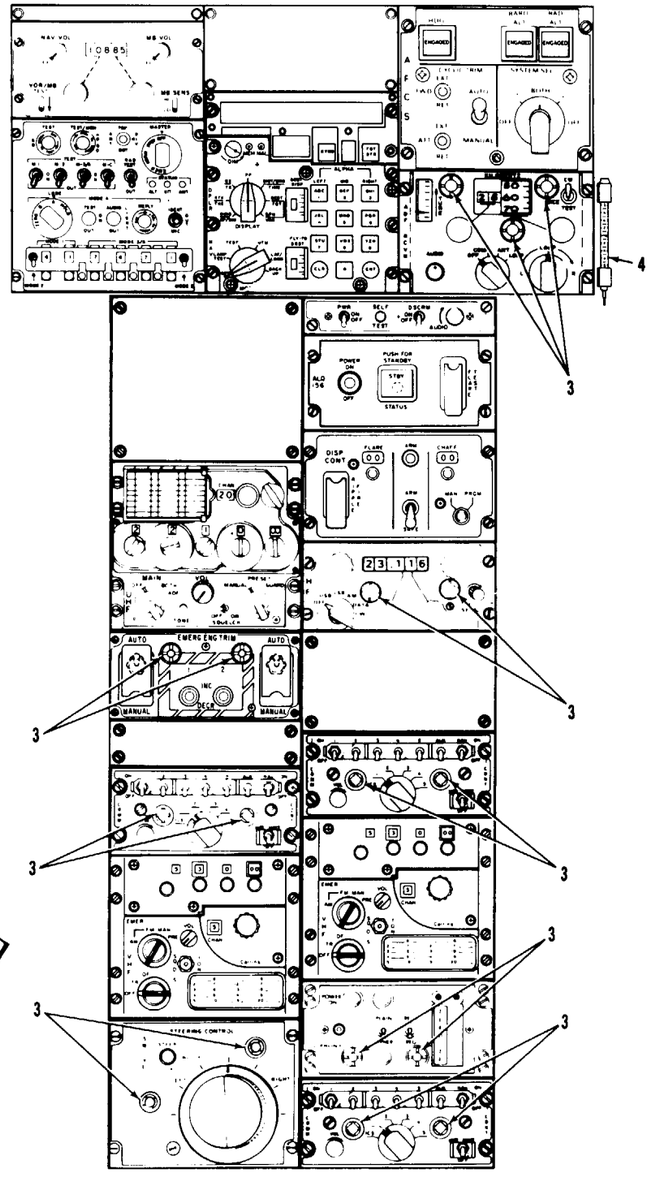
References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off

TASK	RESULT
1. Check CTR CSL control (1).	If control (1) is loose or damaged, tighten or replace it as required.
2. Check STICK POSN IND control (2).	If control (2) is loose or damaged, tighten or replace it as required.
3. Check seventeen panel lights (3).	If any panel light (3) is damaged, replace it.
4. Check light under longitudinal stick position indicator (4).	If light under indicator (4) is damaged, replace light as required.

FOLLOW-ON MAINTENANCE:
None





10369

END OF TASK

9-12.8 CONSOLE PANEL LIGHTS OPERATIONAL CHECK

INITIAL SETUP

Applicable Configurations:
With 17

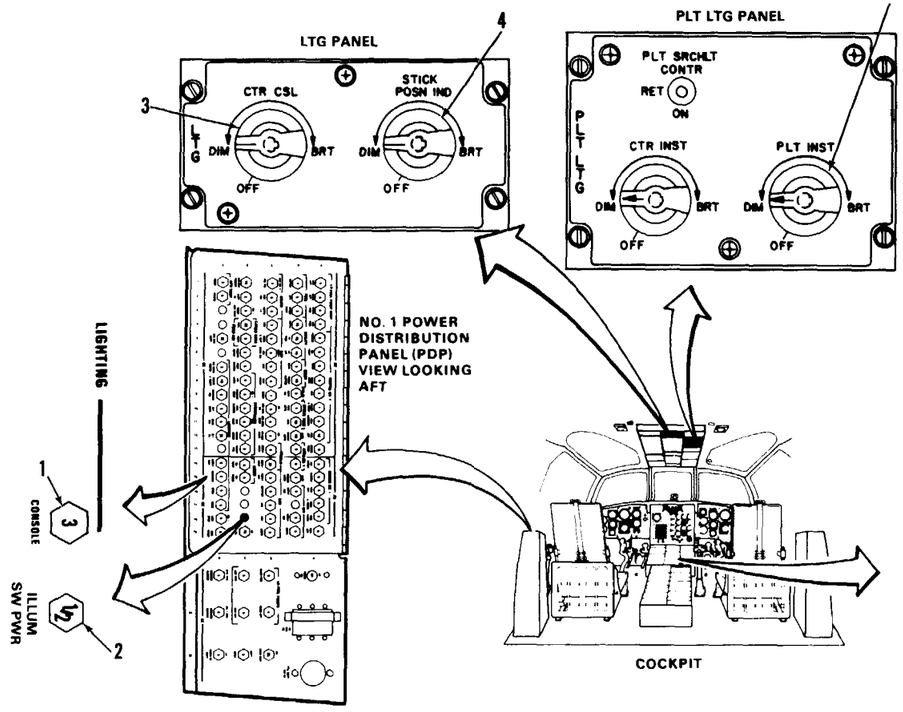
Tools:
None

Materials:
None

Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
Console Panel Lights Visual Check Performed (Task 9-12.2)
TM *55-1520-240-23:*
Battery Connected
Electrical Power On
Hydraulic Power Off



CONSOLE PANELS

10370

GO TO NEXT PAGE

TASK	RESULT
CHECK CONSOLE PANEL LIGHTS	
1. **Check** that **CONSOLE circuit breaker (1)** is closed.	If CONSOLE circuit breaker (1) is open, close it. If it opens again, go to task 9-12.9.
2. **Check** that **ILLUM SW PWR circuit breaker (2)** is closed.	If ILLUM SW PWR circuit breaker (1) is open, close it. If it opens again, go to task 9-12.10.
3. **Turn CTR CSL control (3) from OFF through DIM to BRT.**	All console panels shall come on dim and increase in brightness as control (3) is turned to BRT. If any panel is not lit, go to task 9-12.11. If panel brightness does not increase, replace CTR CSL control. If only one light is out, replace that light.
4. **Turn STICK POSN IND control (4) from OFF through DIM to BRT.**	Longitudinal stick indicator (5) shll come on dim and increase in brightness as control (4) is turned to BRT. If indicator (5) is not lit, go to task 9-12.12. If indicator brightness does not increase above dim, replace STICK POSN IND control (4).
5. **Turn CTR CSL control (3) to OFF.**	All console panel lights shall go out. If they do not, replace CTR CSL control (3).
6. **Turn STICK POSN IND control (4) to OFF.**	Longitudinal stick indicator (5) shall go out. If it does not, replace STICK POSN IND control (4).

TASK	RESULT
CHECK ILLUMINATED SWITCHES	
7. **Set SYS SEL switch (6) on AFCS panel to OFF.**	
8. **Set PLT INST lights control (7) to OFF.**	
9. Press and hold **BARO ALT switch (8).**	Caption on BARO ALT switch (8) shall light bright. If it does not come on, go to task 9-12.13.
10. **Release BARO ALT switch (8).**	Caption on BARO ALT switch (8) shall go out.
11. **Set PLT INST lights control (7) to ON.**	
12. Press and hold **RAD ALT switch (9).**	Caption on RAD ALT switch (9) shall light dim. If it does not light dim, go to task 9-12.14.
13. Set **Pilot inst** lights control (7) to OFF.	Caption on RAD ALT switch (9) shall light bright.
14. **Release RAD ALT switch (9).**	

FOLLOW-ON MAINTENANCE:
TM 55-1520-240-23:
Electrical Power Off
Battery Disconnected

END OF TASK

9-12.9 CONSOLE CIRCUIT BREAKER DOES NOT STAY CLOSED

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
With 17

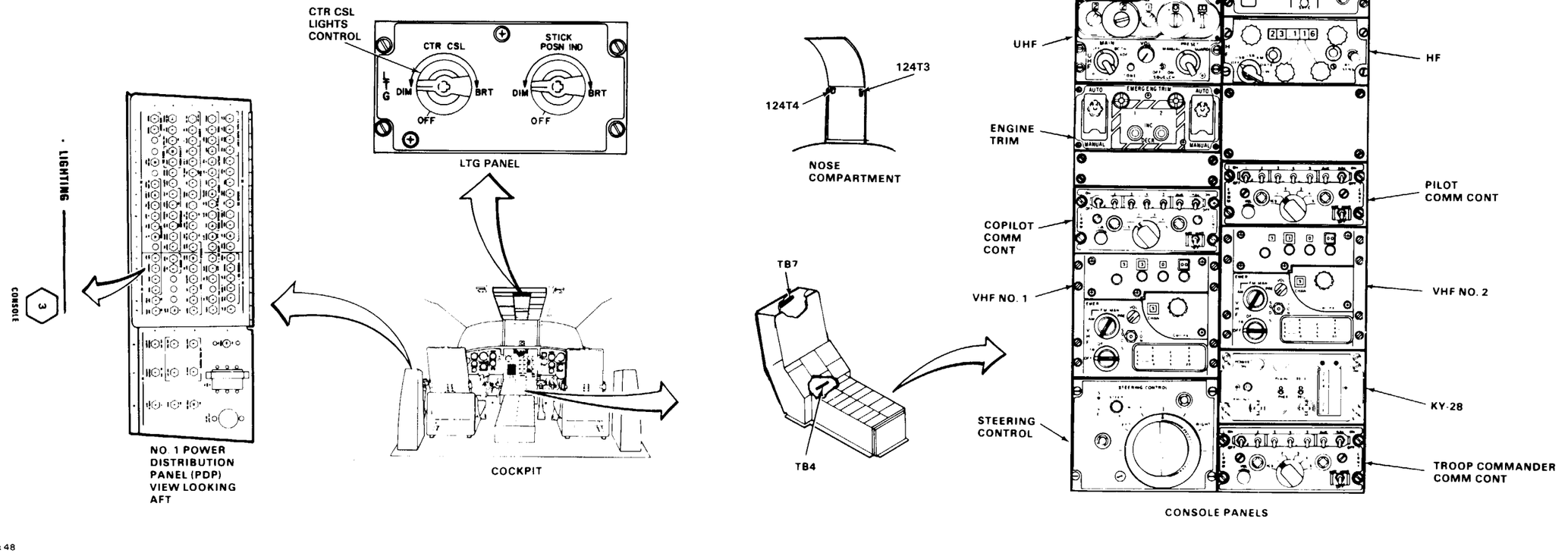
Tools:
Electrical Repairer's Tool Kit, NSN 5180-00-323-4915
Multimeter

Materials:
None

Personnel Required:
Aircraft Electrician

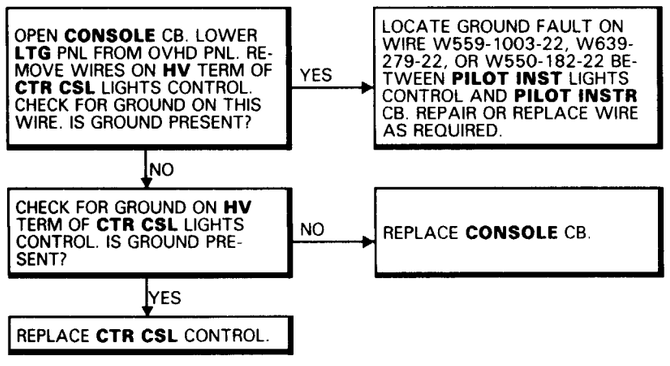
References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off



90 x 48

GO TO NEXT PAGE


OPEN **CONSOLE** CB. LOWER **LTG** PNL FROM OVHD PNL. REMOVE WIRES ON **HV** TERM OF **CTR CSL** LIGHTS CONTROL. CHECK FOR GROUND ON THIS WIRE. IS GROUND PRESENT?
YES
LOCATE GROUND FAULT ON WIRE W559-1003-22, W639-279-22, OR W550-182-22 BETWEEN **PILOT INST** LIGHTS CONTROL AND **PILOT INSTR** CB. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
CHECK FOR GROUND ON **HV** TERM OF **CTR CSL** LIGHTS CONTROL. IS GROUND PRESENT?
NO
REPLACE **CONSOLE** CB.
YES
REPLACE **CTR CSL** CONTROL.

END OF TASK

9-12.10 ILLUM SW PWR CIRCUIT BREAKER WILL NOT STAY CLOSED

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
With 17

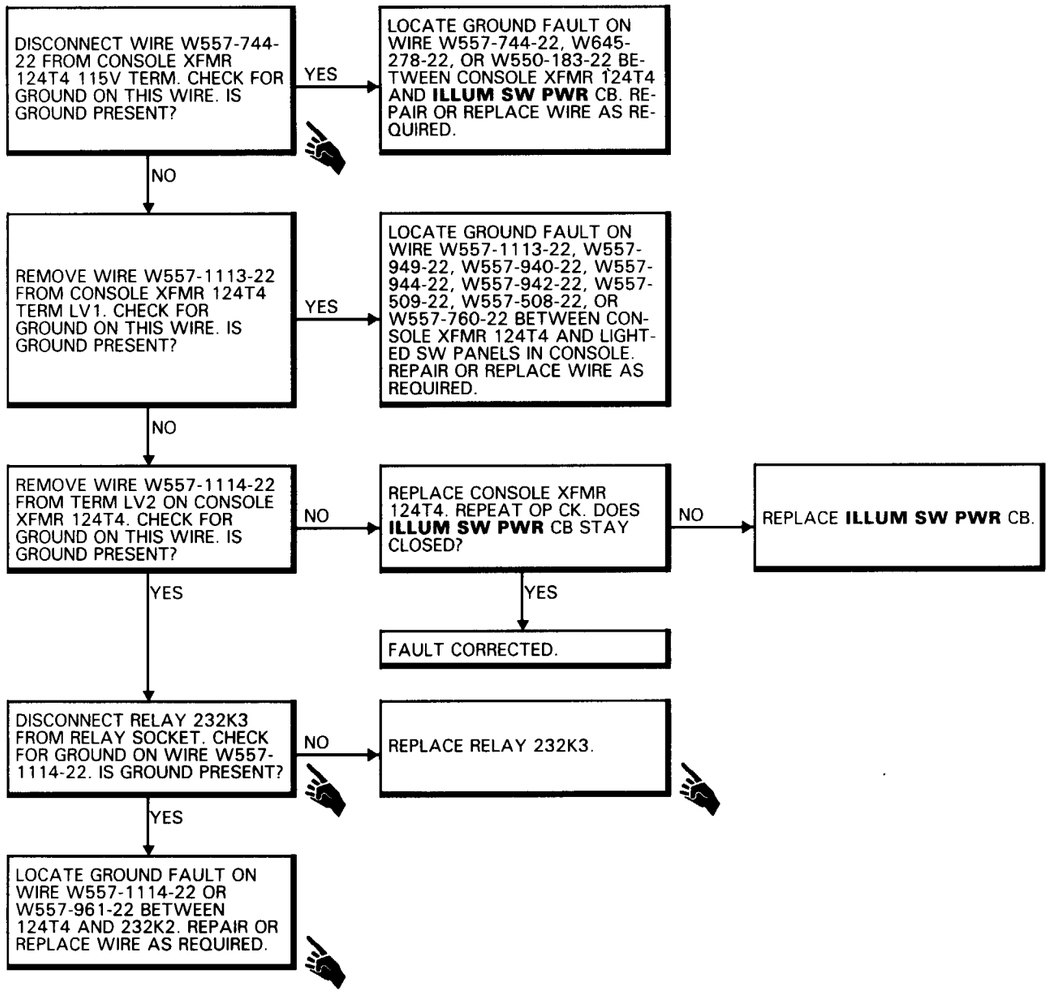
Tools:
Electrical Repairer's Tool Kit, NSN 5180-00-323-4915
Multimeter

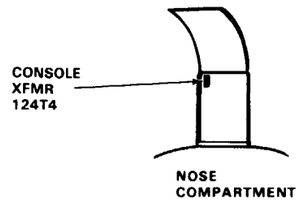
Materials:
None

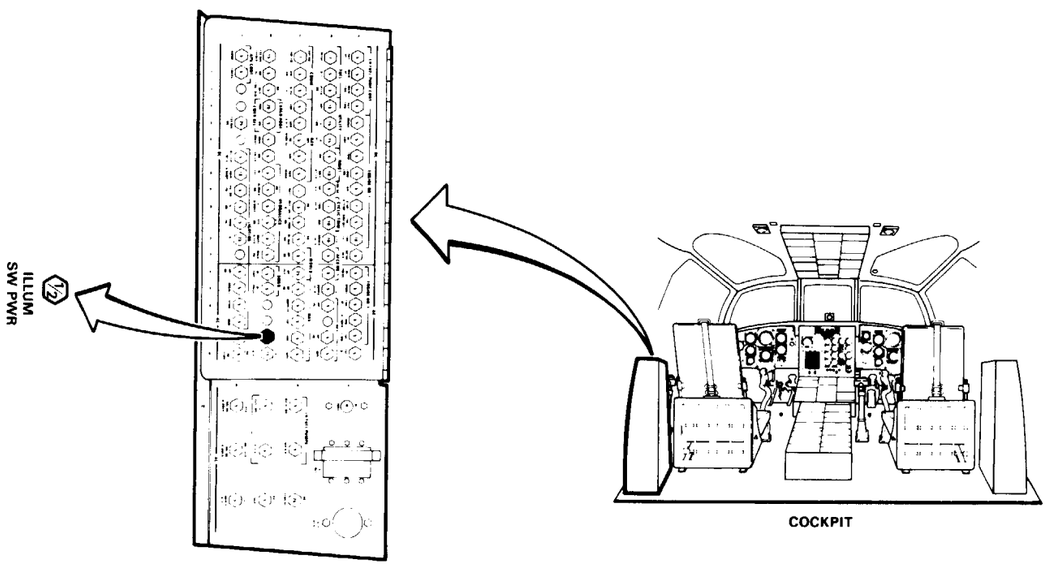
Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off







NO. 1 POWER DISTRIBUTION PANEL (PDP) VIEW LOOKING AFT

10374

END OF TASK

9-12.11 CONSOLE PANEL LIGHT OR LIGHTS NOT LIT

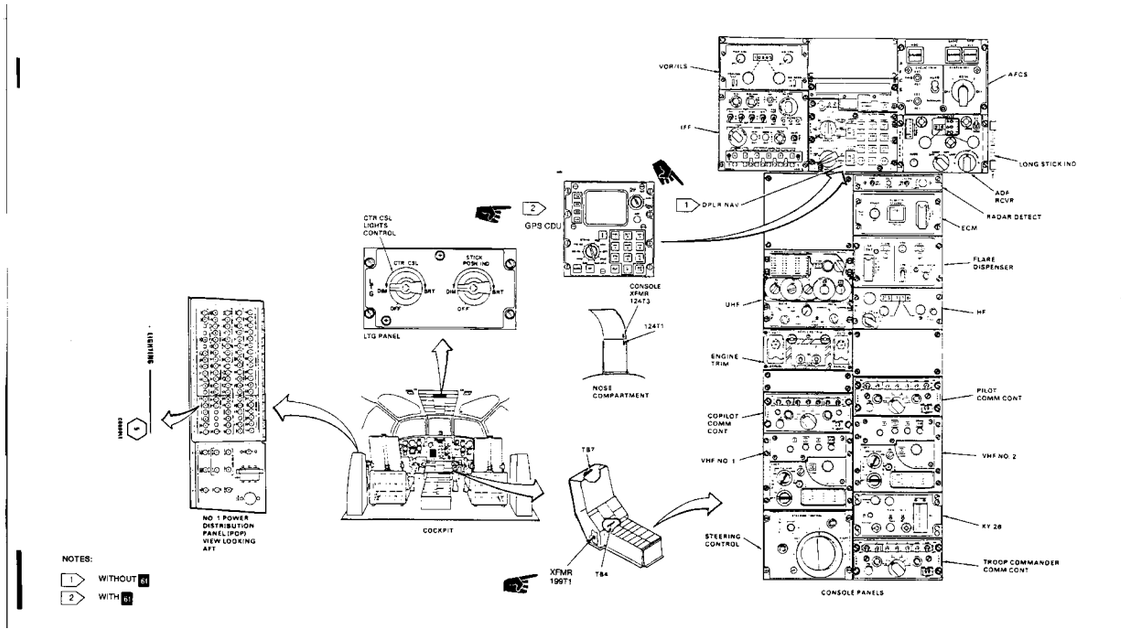
FAULT ISOLATION PROCEDURE

INITIAL SETUP
Aircraft Electrician
Applicable Configurations:
With **(17)**
Without **(61)**
Equipment Condition:
With **(61)**
Tools:
Electrical Repairer's Tool Kit, NSN 5180-00-323-4915
Multimeter
Materials:
None

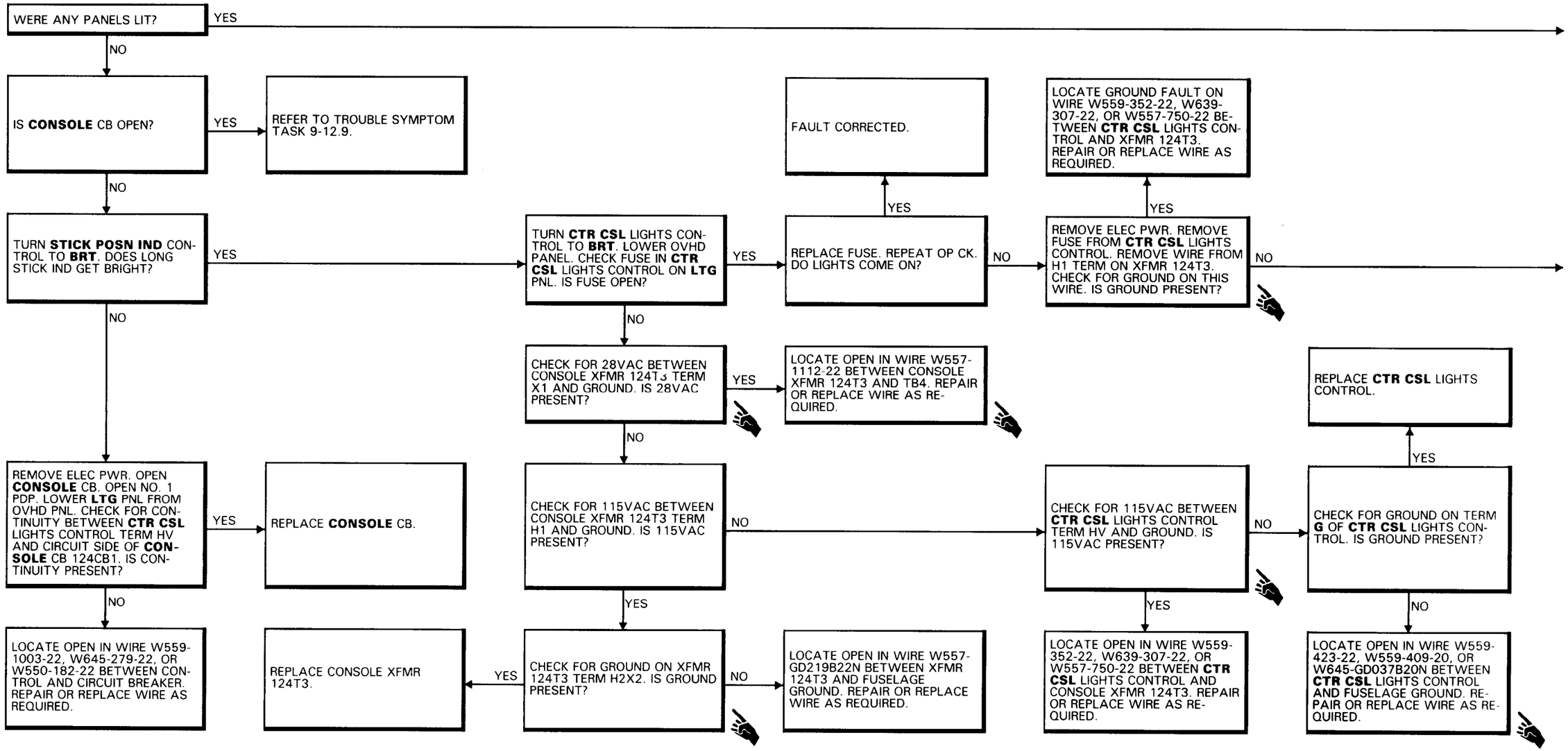
Personnel Required:

References:

TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off

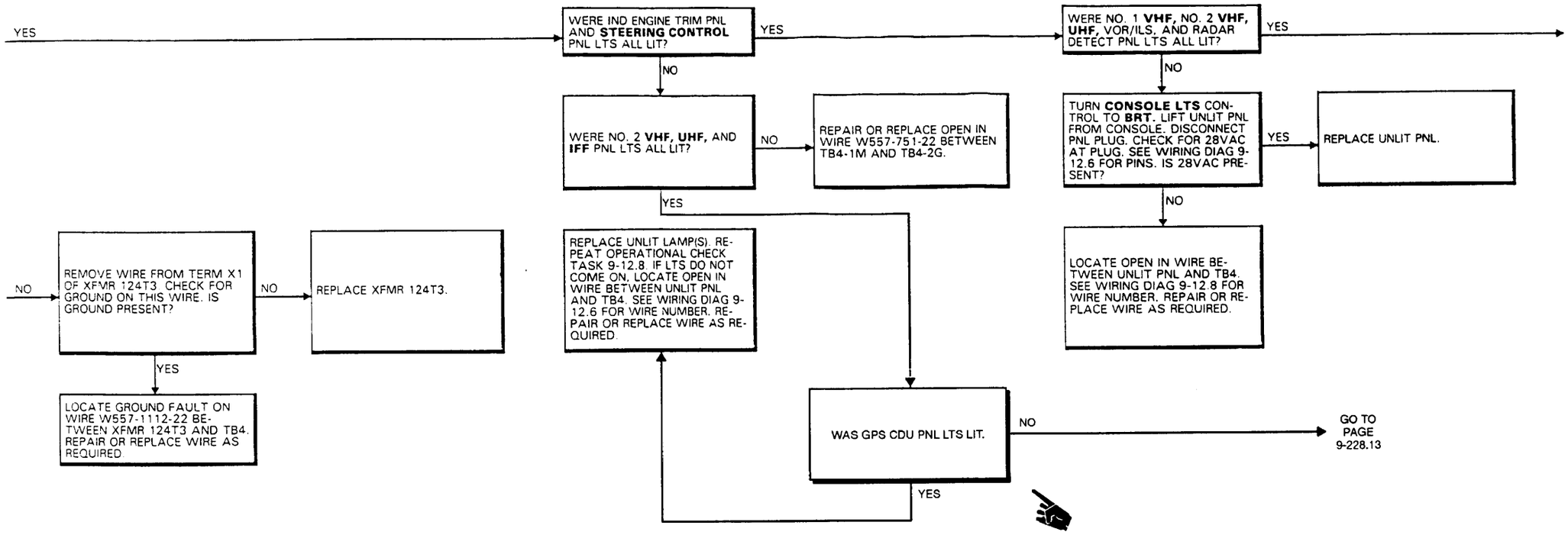


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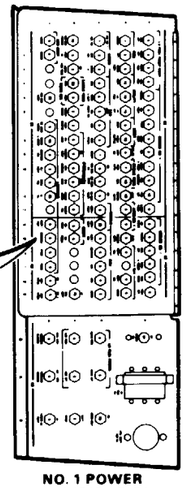


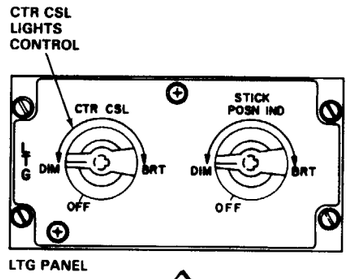
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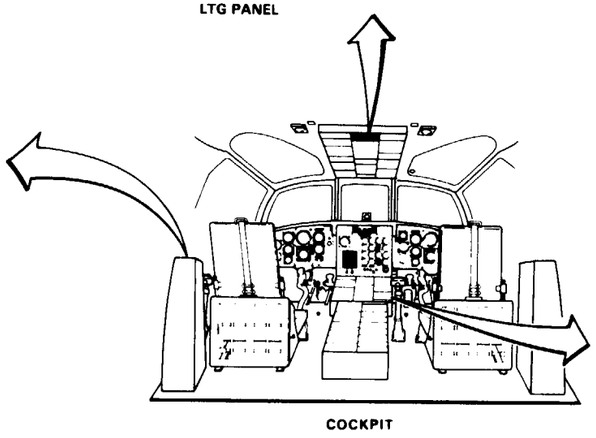
9-12.11 CONSOLE PANEL LIGHT OR LIGHTS NOT LIT (Continued)

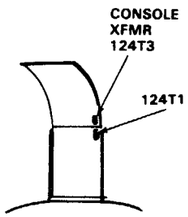


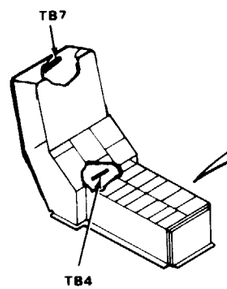
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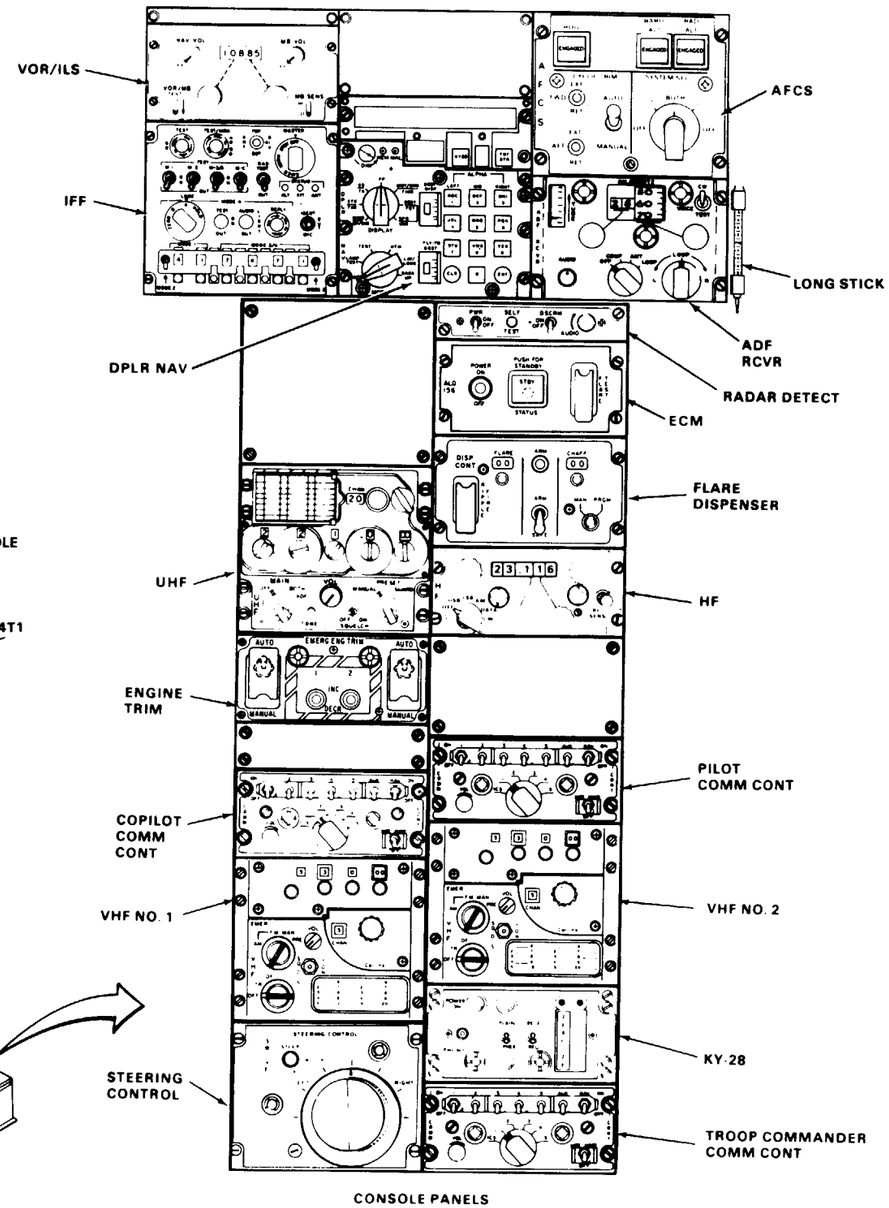

NO. 1 POWER DISTRIBUTION PANEL (PDP) VIEW LOOKING AFT


CTR CSL LIGHTS CONTROL
CTR CSL
STICK POSN IND
DIM
BRT
OFF
LTG PANEL

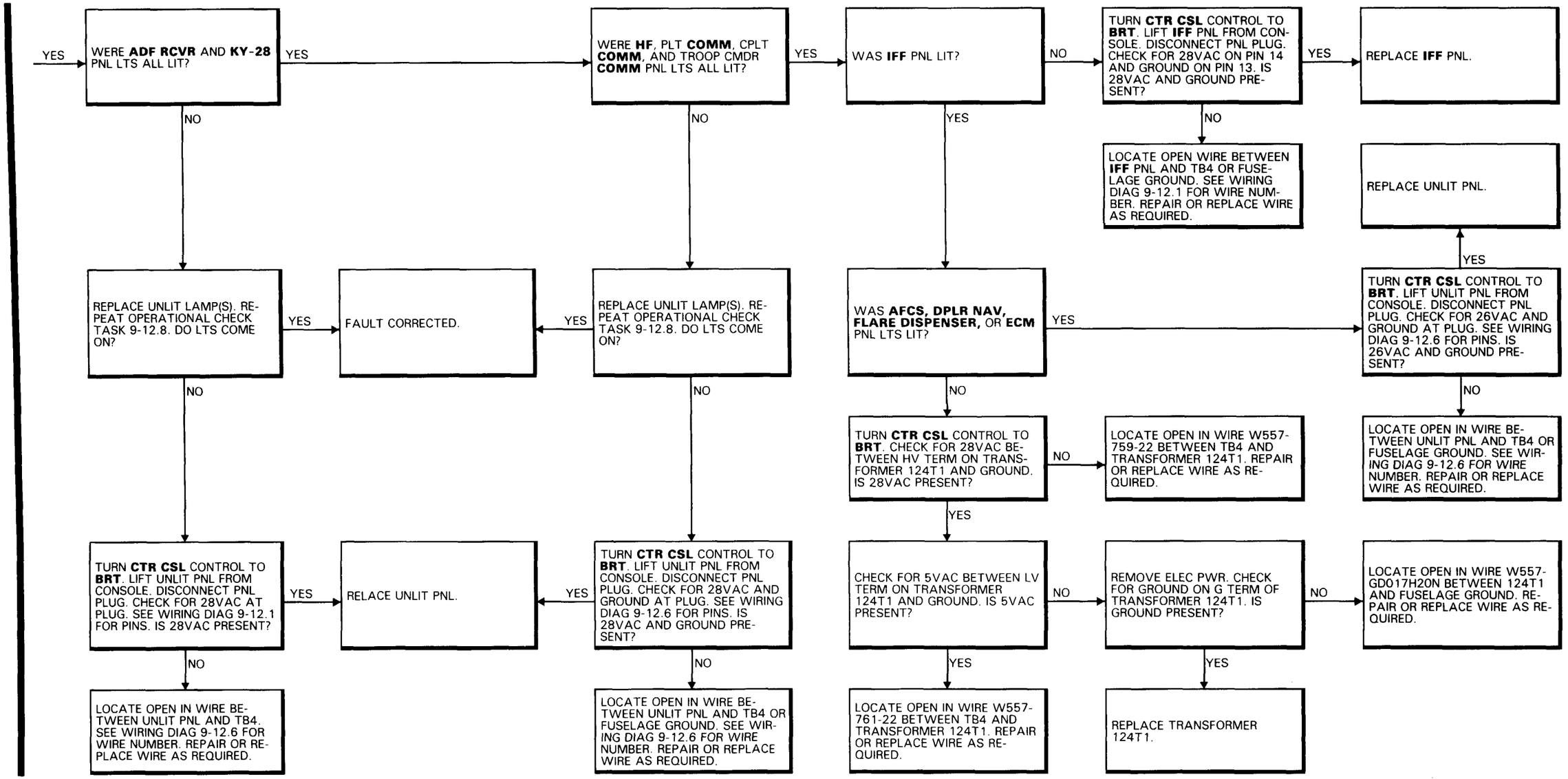

COCKPIT


CONSOLE XFMR 124T3
124T1
NOSE COMPARTMENT

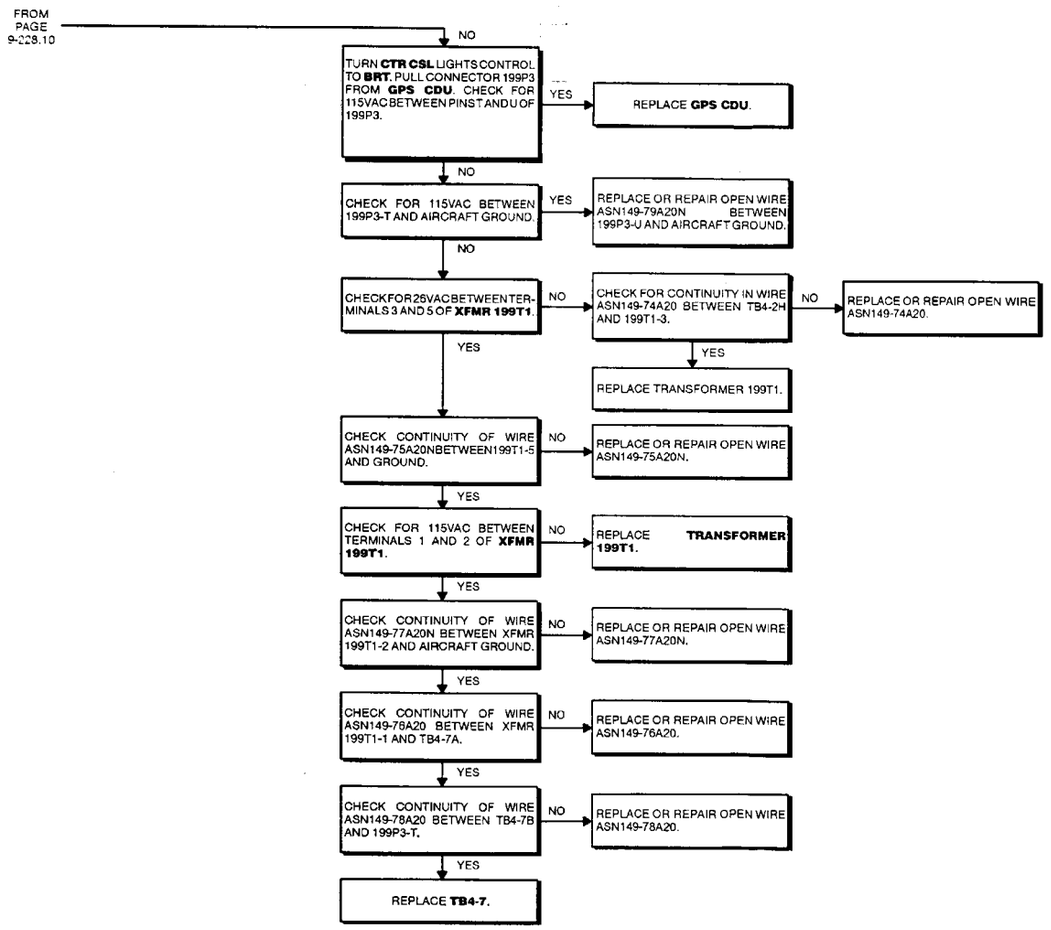

TB7
TB4


VOR/ILS
IFF
AFCS
LONG STICK IND
DPLR NAV
ADF RCVR
RADAR DETECT
ECM
FLARE DISPENSER
UHF
HF
ENGINE TRIM
PILOT COMM CONT
COPILOT COMM CONT
VHF NO. 1
VHF NO. 2
KY-28
STEERING CONTROL
TROOP COMMANDER COMM CONT
CONSOLE PANELS

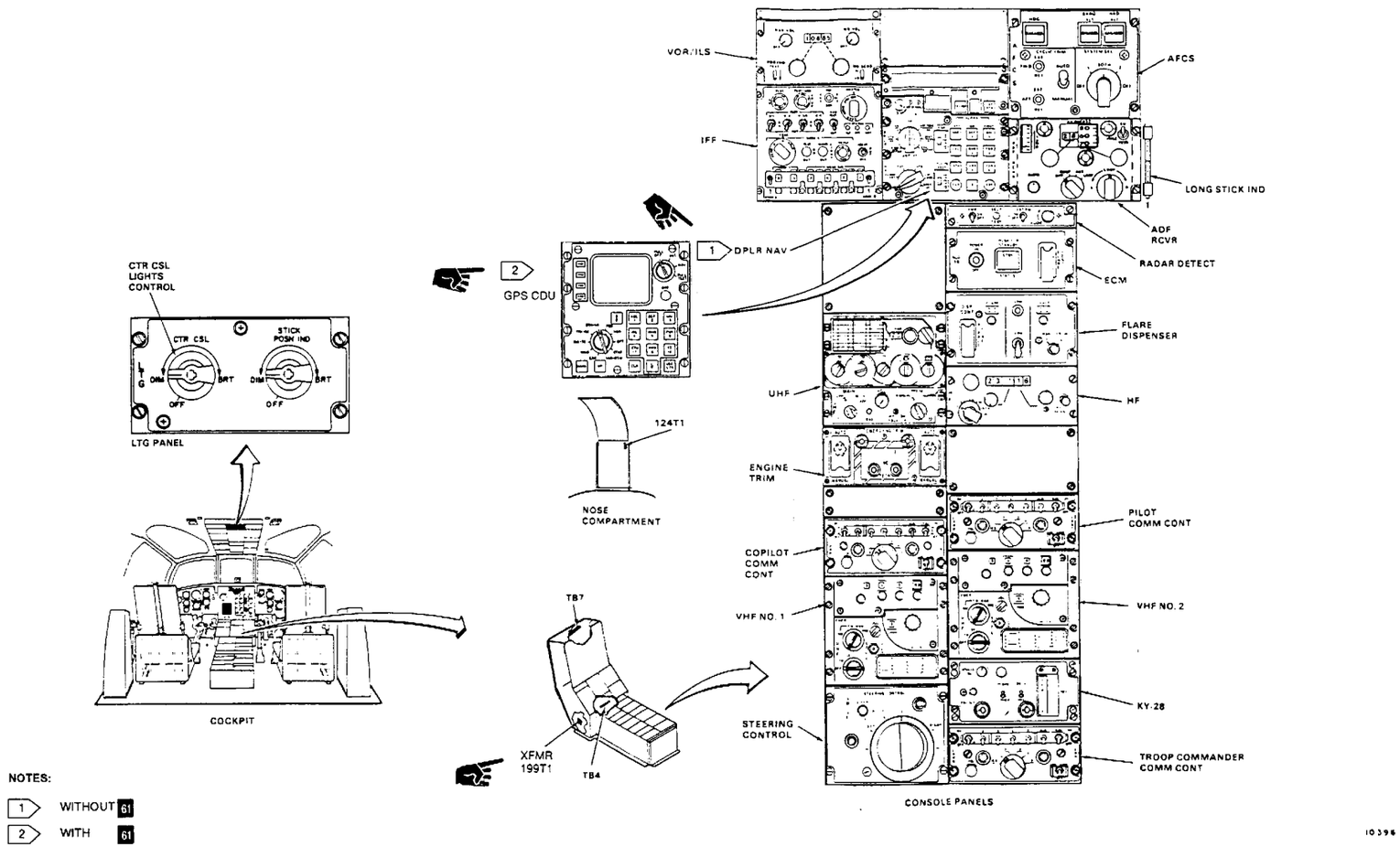
11634



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NOTES:

1 WITHOUT 61

2 WITH 61

END OF TASK

9-12.12 LONGITUDINAL STICK POSITION INDICATOR NOT LIT

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:

With 17

Tools:

Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:

None

Personnel Required

Aircraft Electrician

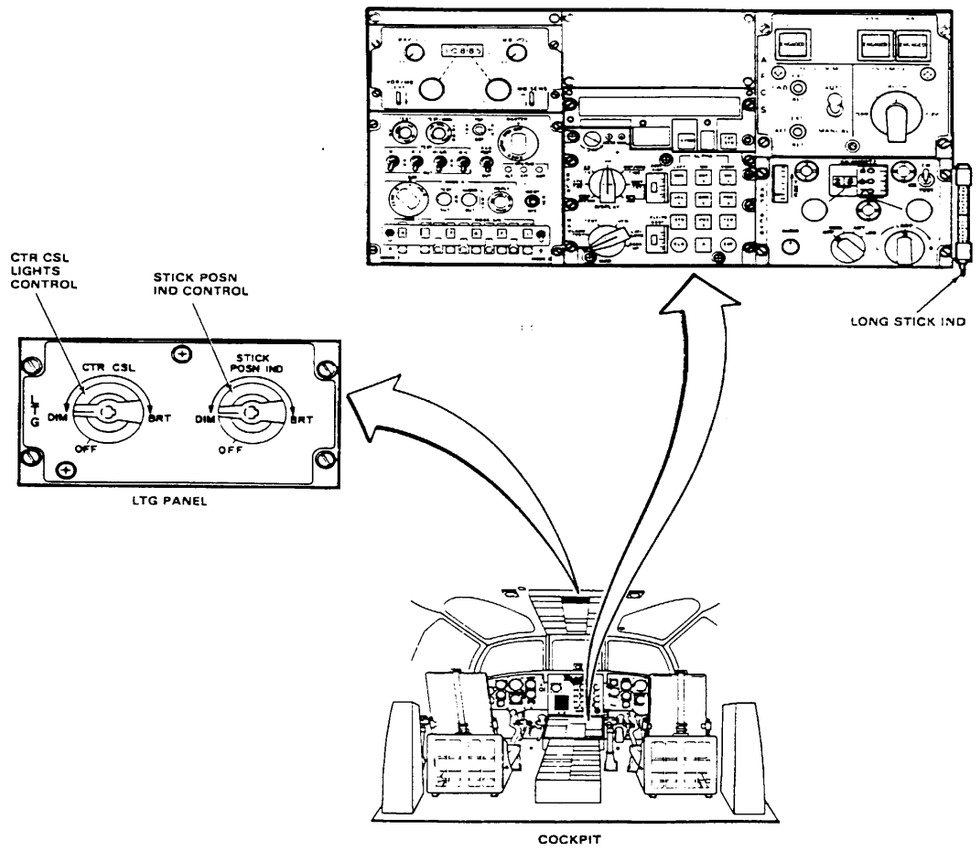
References:

TM 55-1520-240-23

Equipment Condition:

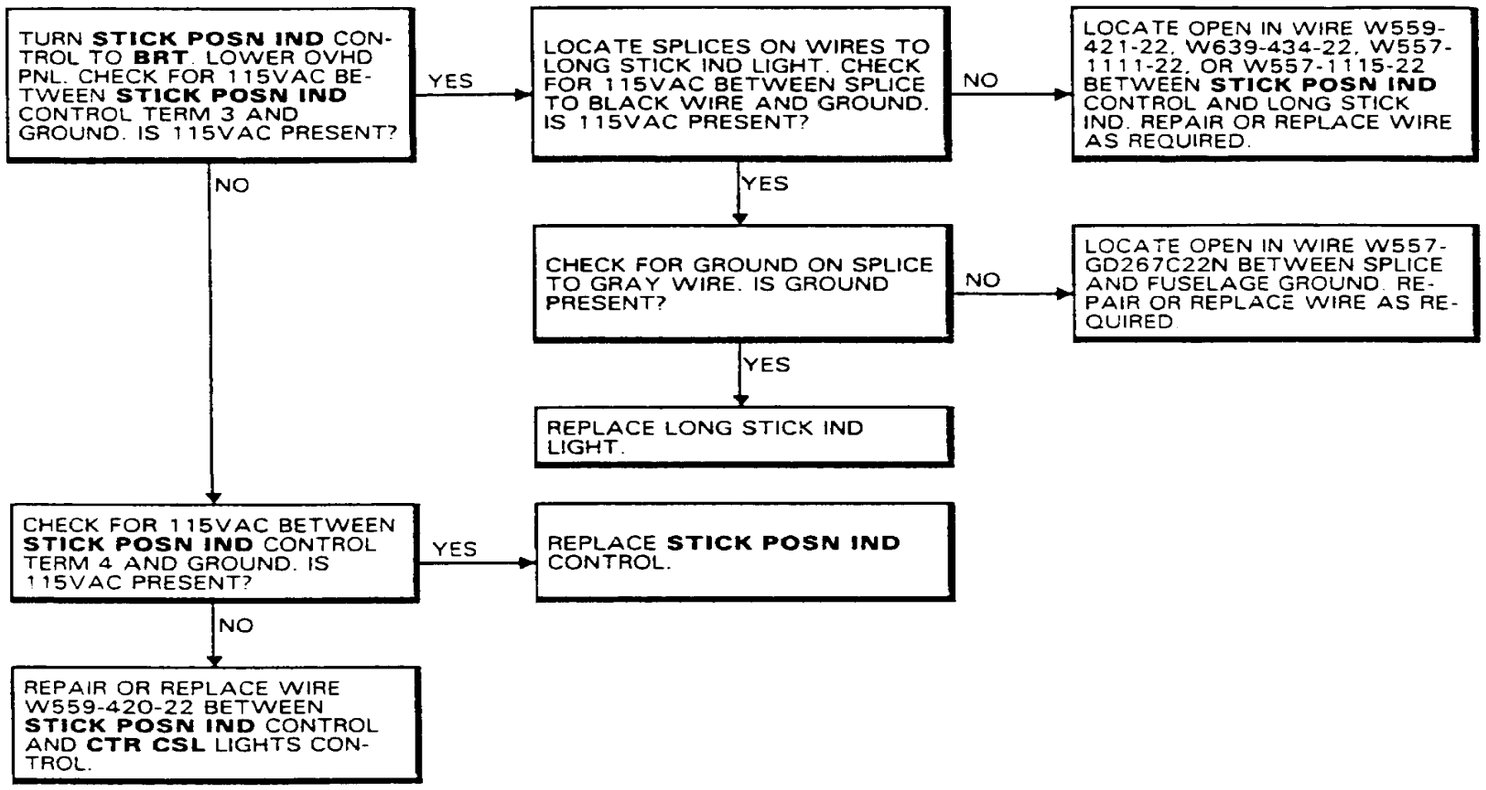
TM 55-1520-240-23:

Battery Connected
Electrical Power On
Hydraulic Power Off



10397

GO TO NEXT PAGE


TURN **STICK POSN IND** CONTROL TO **BRT**. LOWER OVHD PNL. CHECK FOR 115VAC BETWEEN **STICK POSN IND** CONTROL TERM 3 AND GROUND. IS 115VAC PRESENT?
YES
LOCATE SPLICES ON WIRES TO LONG STICK IND LIGHT. CHECK FOR 115VAC BETWEEN SPLICE TO BLACK WIRE AND GROUND. IS 115VAC PRESENT?
NO
LOCATE OPEN IN WIRE W559-421-22, W639-434-22, W557-1111-22, OR W557-1115-22 BETWEEN **STICK POSN IND** CONTROL AND LONG STICK IND. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
YES
CHECK FOR GROUND ON SPLICE TO GRAY WIRE. IS GROUND PRESENT?
NO
LOCATE OPEN IN WIRE W557-GD267C22N BETWEEN SPLICE AND FUSELAGE GROUND. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
REPLACE LONG STICK IND LIGHT.
CHECK FOR 115VAC BETWEEN **STICK POSN IND** CONTROL TERM 4 AND GROUND. IS 115VAC PRESENT?
YES
REPLACE **STICK POSN IND** CONTROL.
NO
REPAIR OR REPLACE WIRE W559-420-22 BETWEEN **STICK POSN IND** CONTROL AND **CTR CSL** LIGHTS CONTROL.

END OF TASK

9-12.13. BARO ALT SWITCH CAPTION DOES NOT LIGHT BRIGHT WHEN PRESSED

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:

With 7

Tools:

Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:

None

Personnel Required

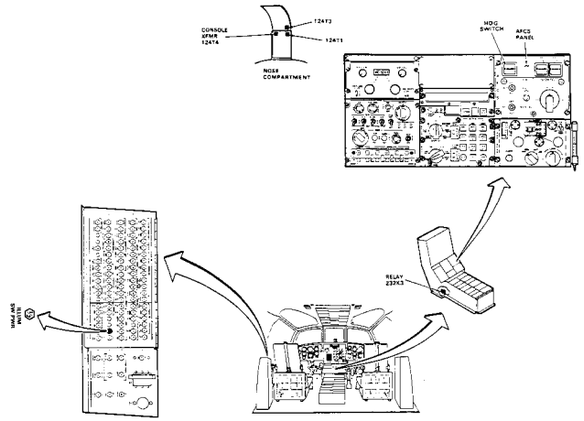
Aircraft Electrician

References:

TM 55-1520-240-23

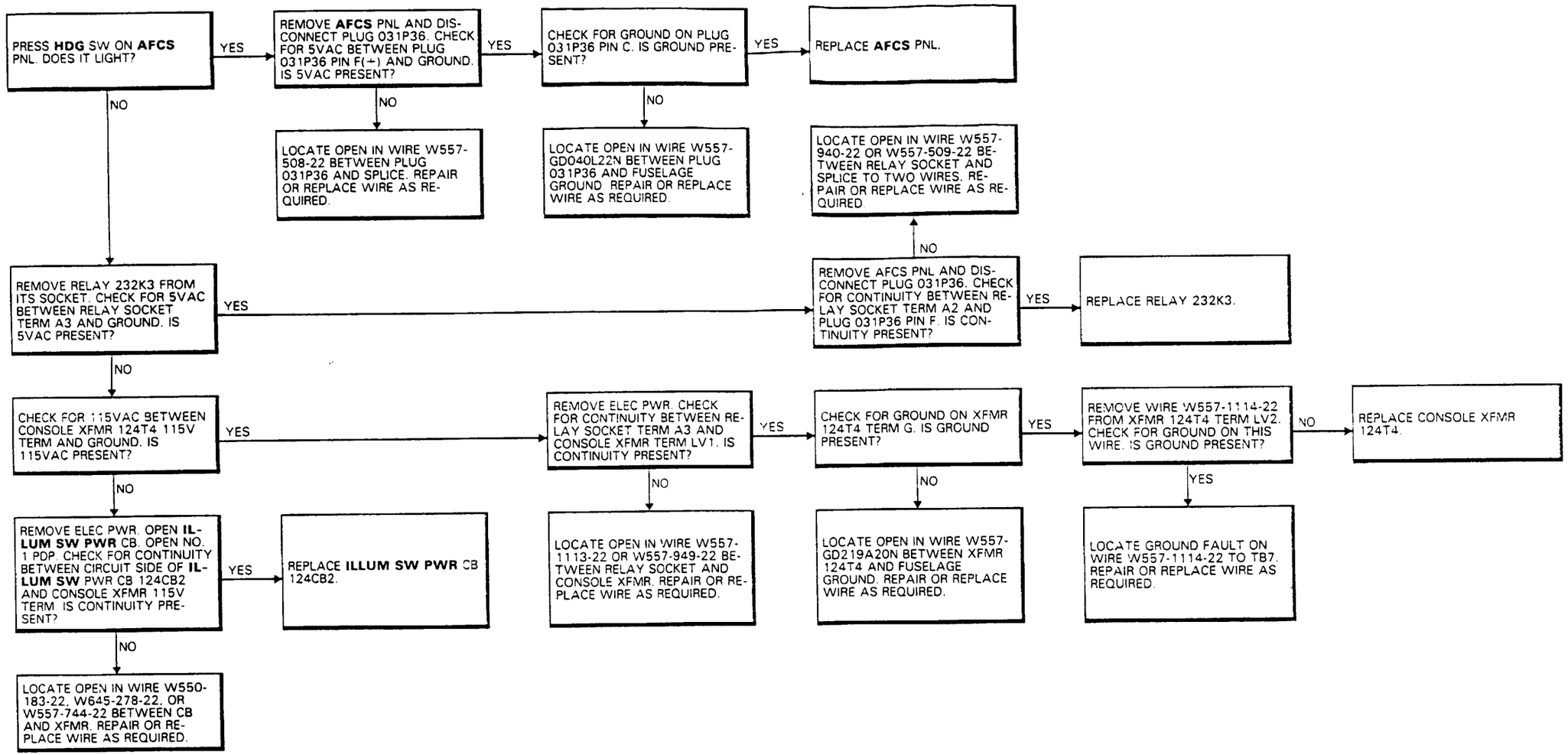
Equipment Condition:

TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off



GO TO NEXT PAGE

9-12.13. BARO ALT SWITCH CAPTION DOES NOT LIGHT BRIGHT WHEN PRESSED



END OF TASK

9-12.14. RAD ALT SWITCH CAPTION DEOS NOT LIGHT DIM WHEN PRESSED

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:

With 7

Tools:

Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:

None

Personnel Required

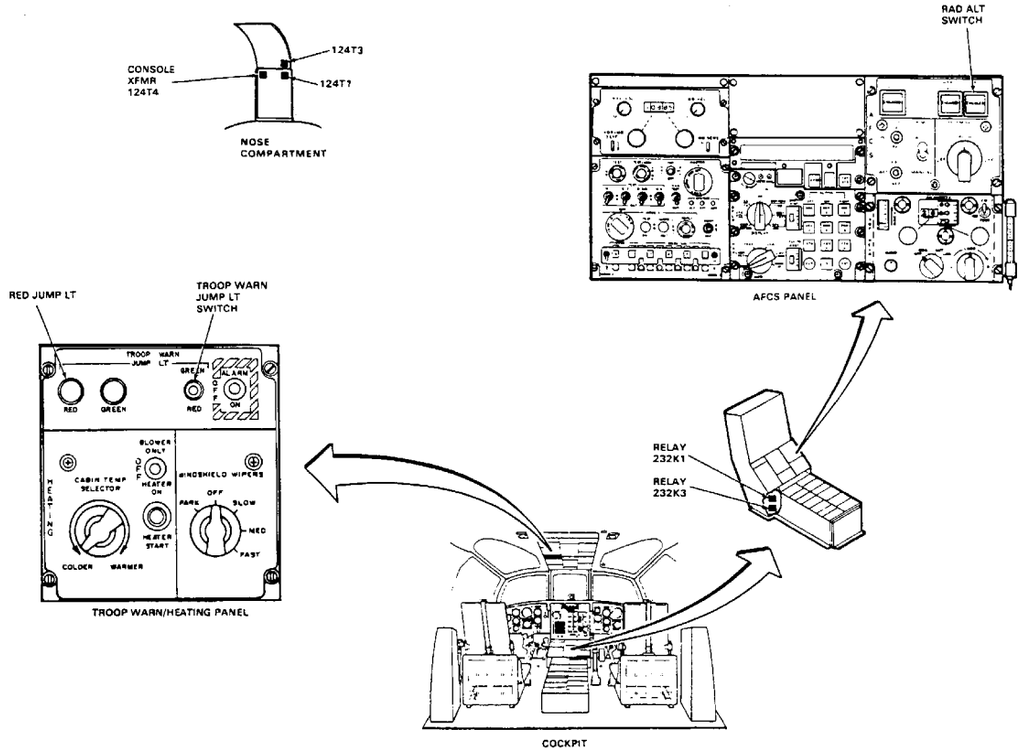
Aircraft Electrician

References:

TM 55-1520-240-23

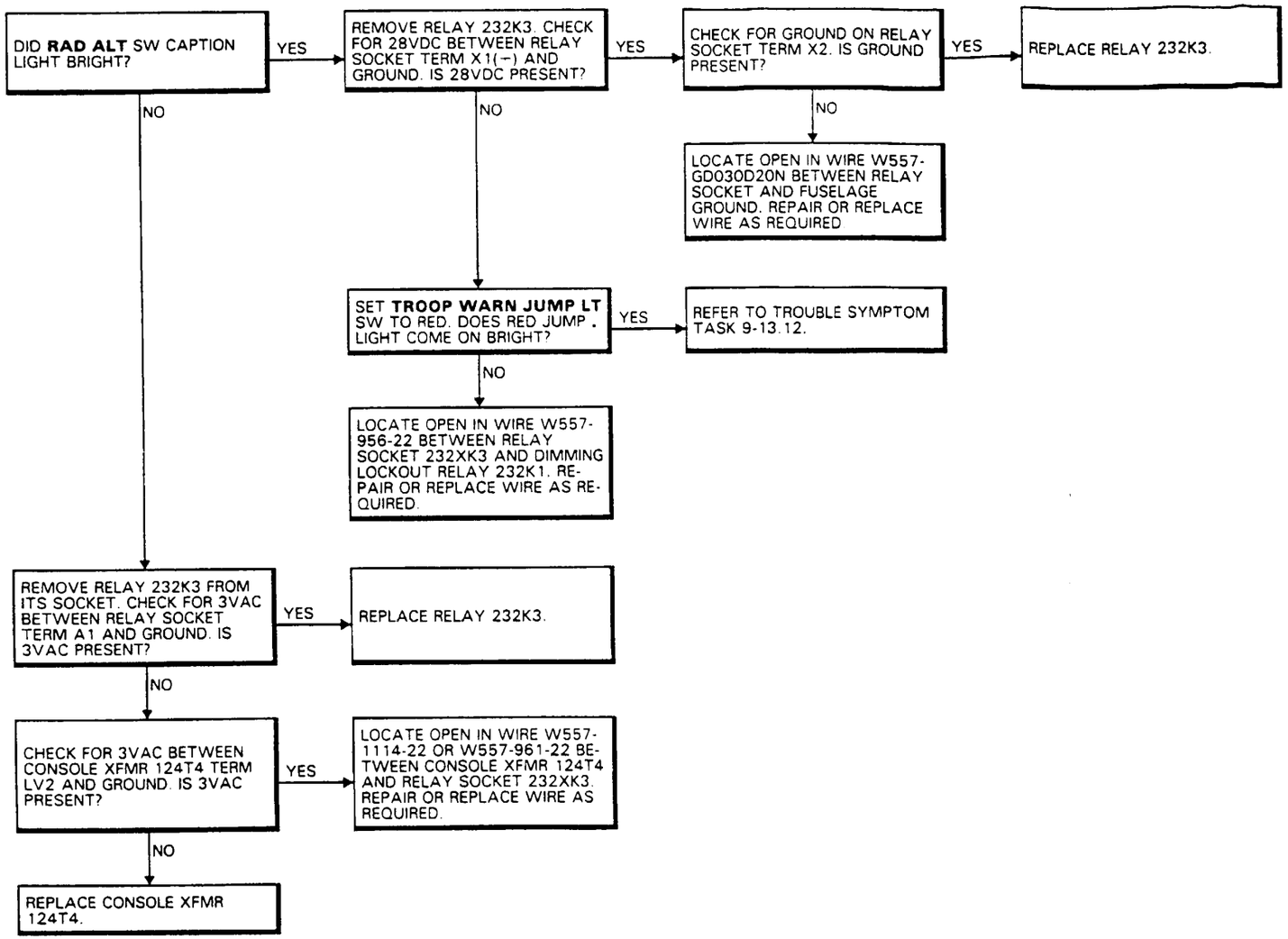
Equipment Condition

TM 55-1520-240-2
Battery Connected
Electrical Power On
Hydraulic Power Off



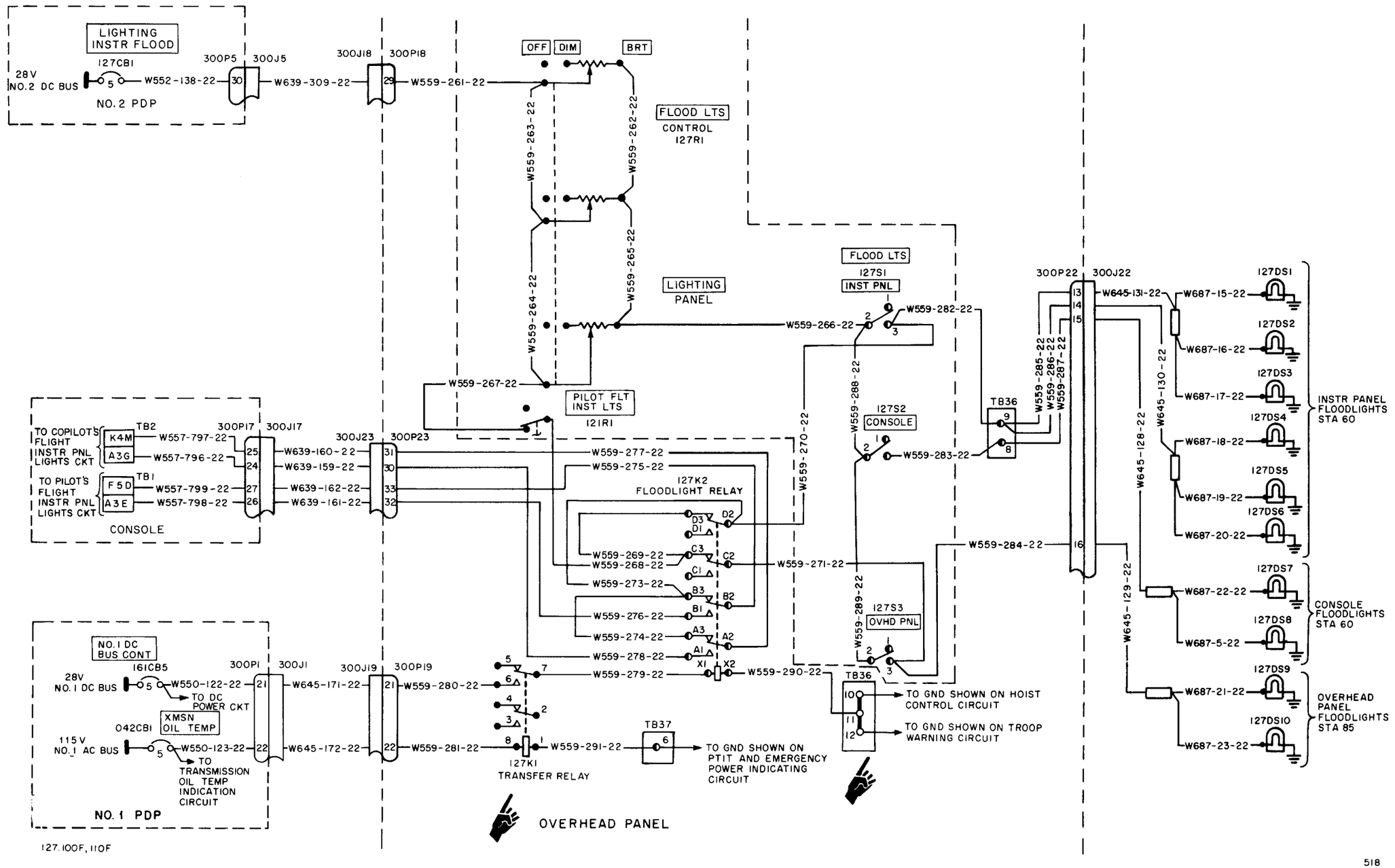
10399

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DID **RAD ALT** SW CAPTION LIGHT BRIGHT?
YES
REMOVE RELAY 232K3. CHECK FOR 28VDC BETWEEN RELAY SOCKET TERM X1(−) AND GROUND. IS 28VDC PRESENT?
YES
CHECK FOR GROUND ON RELAY SOCKET TERM X2. IS GROUND PRESENT?
YES
REPLACE RELAY 232K3.
NO
LOCATE OPEN IN WIRE W557-GD030D20N BETWEEN RELAY SOCKET AND FUSELAGE GROUND. REPAIR OR REPLACE WIRE AS REQUIRED
NO
SET **TROOP WARN JUMP LT** SW TO RED. DOES RED JUMP . LIGHT COME ON BRIGHT?
YES
REFER TO TROUBLE SYMPTOM TASK 9-13.12.
NO
LOCATE OPEN IN WIRE W557-956-22 BETWEEN RELAY SOCKET 232XK3 AND DIMMING LOCKOUT RELAY 232K1. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
REMOVE RELAY 232K3 FROM ITS SOCKET. CHECK FOR 3VAC BETWEEN RELAY SOCKET TERM A1 AND GROUND. IS 3VAC PRESENT?
YES
REPLACE RELAY 232K3.
NO
CHECK FOR 3VAC BETWEEN CONSOLE XFMR 124T4 TERM LV2 AND GROUND. IS 3VAC PRESENT?
YES
LOCATE OPEN IN WIRE W557-1114-22 OR W557-961-22 BETWEEN CONSOLE XFMR 124T4 AND RELAY SOCKET 232XK3. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
REPLACE CONSOLE XFMR 124T4.

END OF TASK

9-13 SECONDARY COCKPIT LIGHT


LIGHTING INSTR FLOOD
127CB1
28V NO.2 DC BUS
NO.2 PDP
W552-138-22
300P5
300J5
W639-309-22
300J18
300P18
W559-261-22
OFF
DIM
BRT
FLOOD LTS CONTROL 127R1
W559-263-22
W559-262-22
W559-265-22
W559-264-22
LIGHTING PANEL
W559-267-22
PILOT FLT INST LTS 121R1
FLOOD LTS 127S1 INST PNL
W559-266-22
W559-282-22
W559-288-22
127S2 CONSOLE
W559-283-22
TB36
W559-270-22
W559-284-22
W559-289-22
127S3 OVHD PNL
W559-290-22
TB36
10
11
12
TO GND SHOWN ON HOIST CONTROL CIRCUIT
TO GND SHOWN ON TROOP WARNING CIRCUIT
300P22
300J22
W645-131-22
W559-285-22
W559-286-22
W559-287-22
W645-130-22
W645-128-22
W645-129-22
W687-15-22
W687-16-22
W687-17-22
W687-18-22
W687-19-22
W687-20-22
W687-22-22
W687-5-22
W687-21-22
W687-23-22
127DS1
127DS2
127DS3
127DS4
127DS5
127DS6
127DS7
127DS8
127DS9
127DS10
INSTR PANEL FLOODLIGHTS STA 60
CONSOLE FLOODLIGHTS STA 60
OVERHEAD PANEL FLOODLIGHTS STA 85
TO COPILOT'S FLIGHT INSTR PNL LIGHTS CKT
TO PILOT'S FLIGHT INSTR PNL LIGHTS CKT
TB2
K4M
A3G
TB1
F5D
A3E
W557-797-22
W557-796-22
W557-799-22
W557-798-22
300P17
300J17
W639-160-22
W639-159-22
W639-162-22
W639-161-22
CONSOLE
300J23
300P23
W559-277-22
W559-275-22
127K2 FLOODLIGHT RELAY
W559-269-22
W559-268-22
W559-273-22
W559-276-22
W559-274-22
W559-278-22
W559-279-22
W559-271-22
NO.1 DC BUS CONT
161CB5
28V NO.1 DC BUS
W550-122-22
TO DC POWER CKT
042CB1
XMSN OIL TEMP
115V NO.1 AC BUS
W550-123-22
TO TRANSMISSION OIL TEMP INDICATION CIRCUIT
NO.1 PDP
300P1
300J1
W645-171-22
W645-172-22
300J19
300P19
W559-280-22
W559-281-22
127K1 TRANSFER RELAY
TB37
6
W559-291-22
TO GND SHOWN ON PTIT AND EMERGENCY POWER INDICATING CIRCUIT
OVERHEAD PANEL
127.100F, 110F
518

9-13.2 SECONDARY COCKPIT LIGHTS VISUAL CHECK

INITIAL SETUP

Applicable Configurations:
Without 17

Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915

Materials:
None

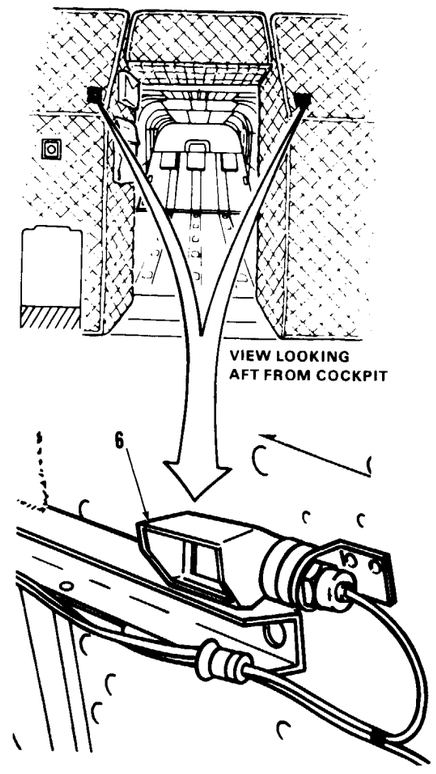
Personnel Required:
Aircraft Electrician

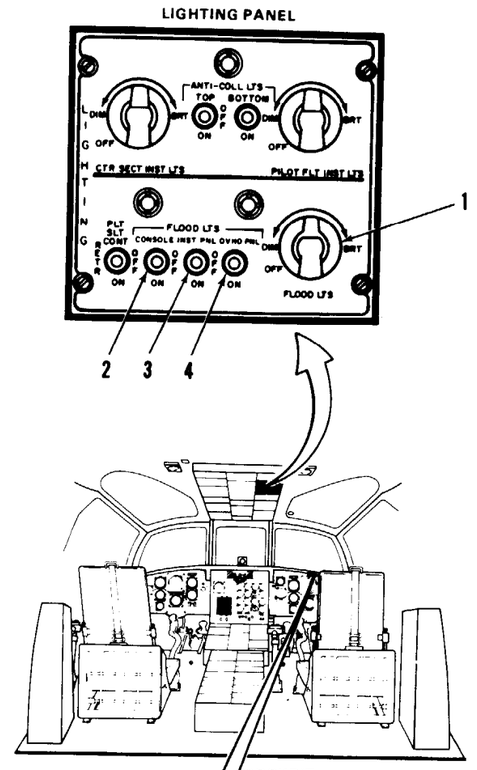
References:
TM 55-1520-240-23

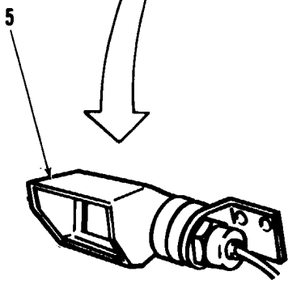
Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off

TASK	RESULT
1. **Rotate FLOOD LTS DIM BRT control (1) from OFF to BRT and back to OFF.**	FLOOD LTS DIM BRT control (1) shall rotate freely and smoothly. If control is loose or binding, replace it.
2. **Check CONSOLE FLOOD LTS switch (2).**	If switch (2) is loose or damaged, tighten or replace it as required.
3. **Check INST PNL FLOOD LTS switch (3).**	If switch (3) is loose or damaged, tighten or replace it as required.
4. **Check OVHD PNL FLOOD LTS switch (4).**	If switch (4) is loose or damaged, tighten or replace it as required.
5. **Check flood lights (5) on instrument panel and center panel.**	If any flood lights (5) is loose or damaged, tighten or replace it as required.
6. **Check flood lights (6)** behind pilot's and copilot's seat.	If either flood light (6) is loose or damaged, tighten or replace it as required.

FOLLOW-ON MAINTENANCE:
None







TYPICAL COCKPIT INSTRUMENT PANEL INSTALLATION, 8 PLACES

D145-10946-SP

END OF TASK

9-13.3 SECONDARY COCKPIT LIGHTS OPERATIONAL CHECK

INITIAL SETUP

Applicable Configurations:
Without 17

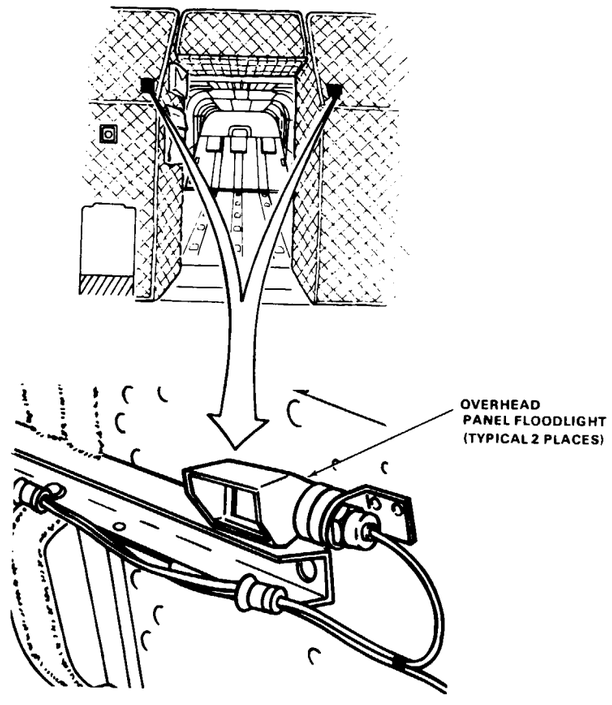
Tools:
None

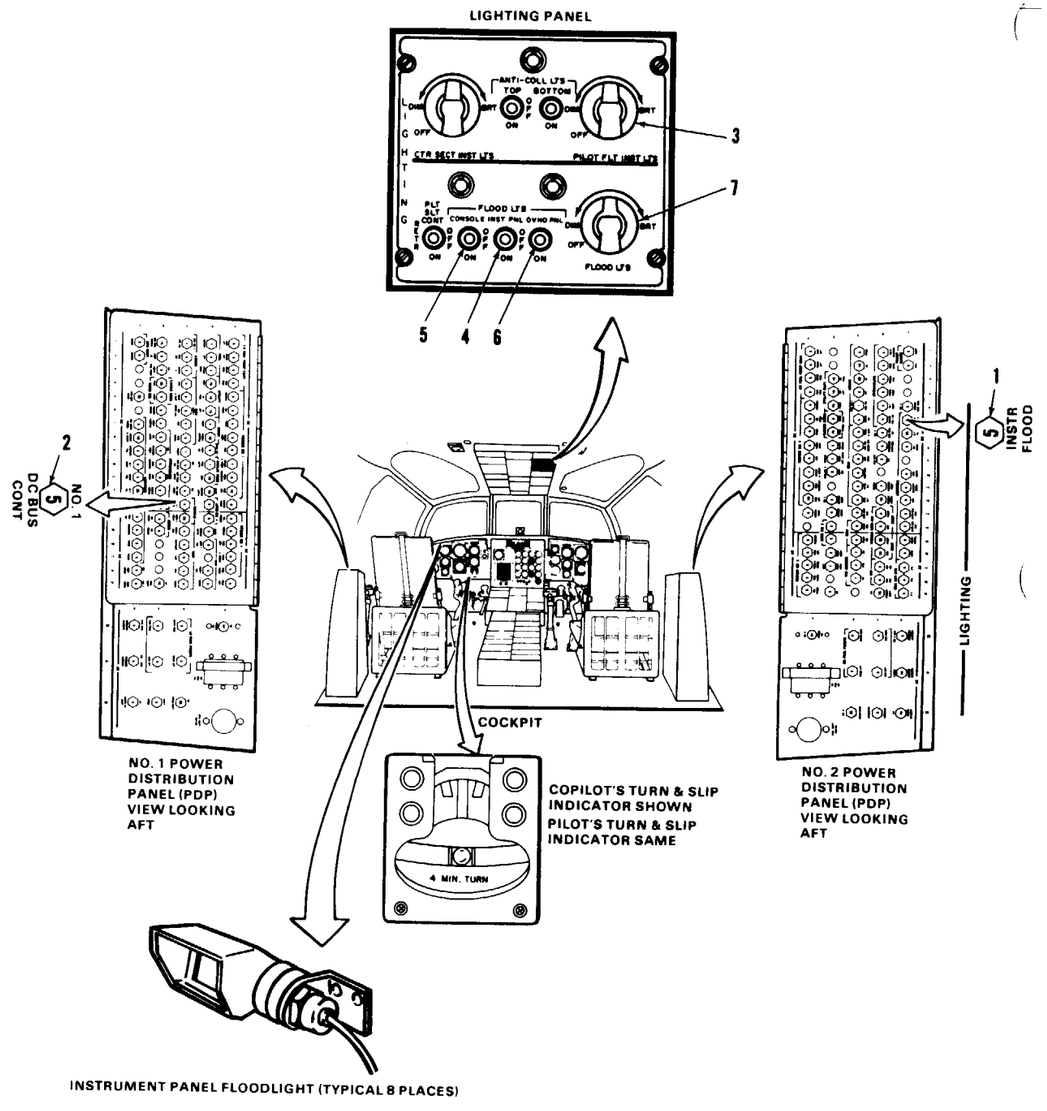
Materials:
None

Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off
Visual Check of Secondary Cockpit Lights Performed (Task 9-13.2)





D145-10947-SPA

GO TO NEXT PAGE

9-13.3 SECONDARY COCKPIT LIGHTS OPERATIONAL CHECK (Continued)

TASK	RESULT
1. **Check that INSTR FLOOD LIGHTING circuit breaker (1) is closed.**	If circuit breaker (1) is open, close it. If it opens again, go to task 9-13.4.
2. **Check that DC BUS CONT NO. 1 circuit breaker (2) is closed.**	If circuit breaker (2) is open, close it. If it opens again, go to task 9-13.5.
3. **Set PILOT FLT INST LTS control (3) to OFF.**	
4. **Set INST PNL CONSOLE, and OVHD PNL FLOOD LTS switches (4, 5, and 6) to ON.**	
5. **Turn FLOOD LTS control (7) from OFF through DIM to BRT.**	Ten flood lights, eight on instrument panel and two behind pilot's seat shall come on dim and then increase in brightness. If flood lights do not come on go to task 9-13.6. If flood lights do not increase in brightness, replace FLOOD LTS control (7).
6. **Set INST PNL FLOOD LTS switch (4) to OFF.**	Six flood lights on instrument panel shall go out. If flood lights do not go out, go to task 9-13.7.
7. **Set CONSOLE FLOOD LTS switch (5) to OFF.**	Two flood lights over center panel shall go out. If flood lights do not go out, replace switch (5).
8. **Set OVHD PNL FLOOD LTS switch (6) to OFF.**	Two flood lights behind pilot's and copilot's seat shall go out. If flood lights do not go out, replace switch (6).
9. **Open NO. 1 DC BUS CONT circuit breaker (2). Sat INST PNL switch (4) to ON.**	Six flood lights on instrument panel and pilot's and copilot's turn and slip indicators (8) lights shall come on. If flood lights and pilot's and copilot's turn and slip lights do not come on, go to task 9-13.8.
10. **Set INST PNL switch (4) to OFF.**	Flood lights and pilot's and copilot's turn and slip indicator (8) lights shall go out. If flood lights and indicator lights do not go out, replace switch (4).
11. **Turn PILOT FLT INST LTS control (3) to BRT.**	Overhead panel flood lights, instrument panel flood lights, and pilot's and copilot's turn and slip indicator lights shall come on. If not, go to task 9-13.9.
12. **Turn PILOT FLT INST LTS control (3) to OFF.**	Flood lights and indicator lights shall go out. If not replace PILOT FLT INST LTS control (3).
13. **Close NO. 1 DC BUS CONT circuit breaker (2).**	

FOLLOW-ON MAINTENANCE:

TM 55-1520-240-23:
Battery Off
Electrical Power Off
Hydraulic Power Off

END OF TASK

9-13.4 INSTR FLOOD LIGHTING CIRCUIT BREAKER WILL NOT STAY CLOSED

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
Without 17

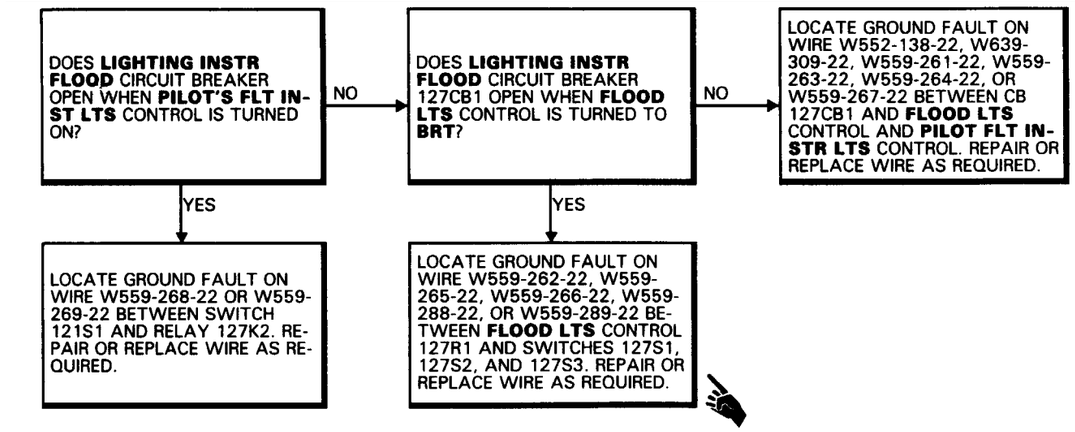
Tools:
Electrical Repairer's Tool Kit, NSN 5180-00-323-4915
Multimeter

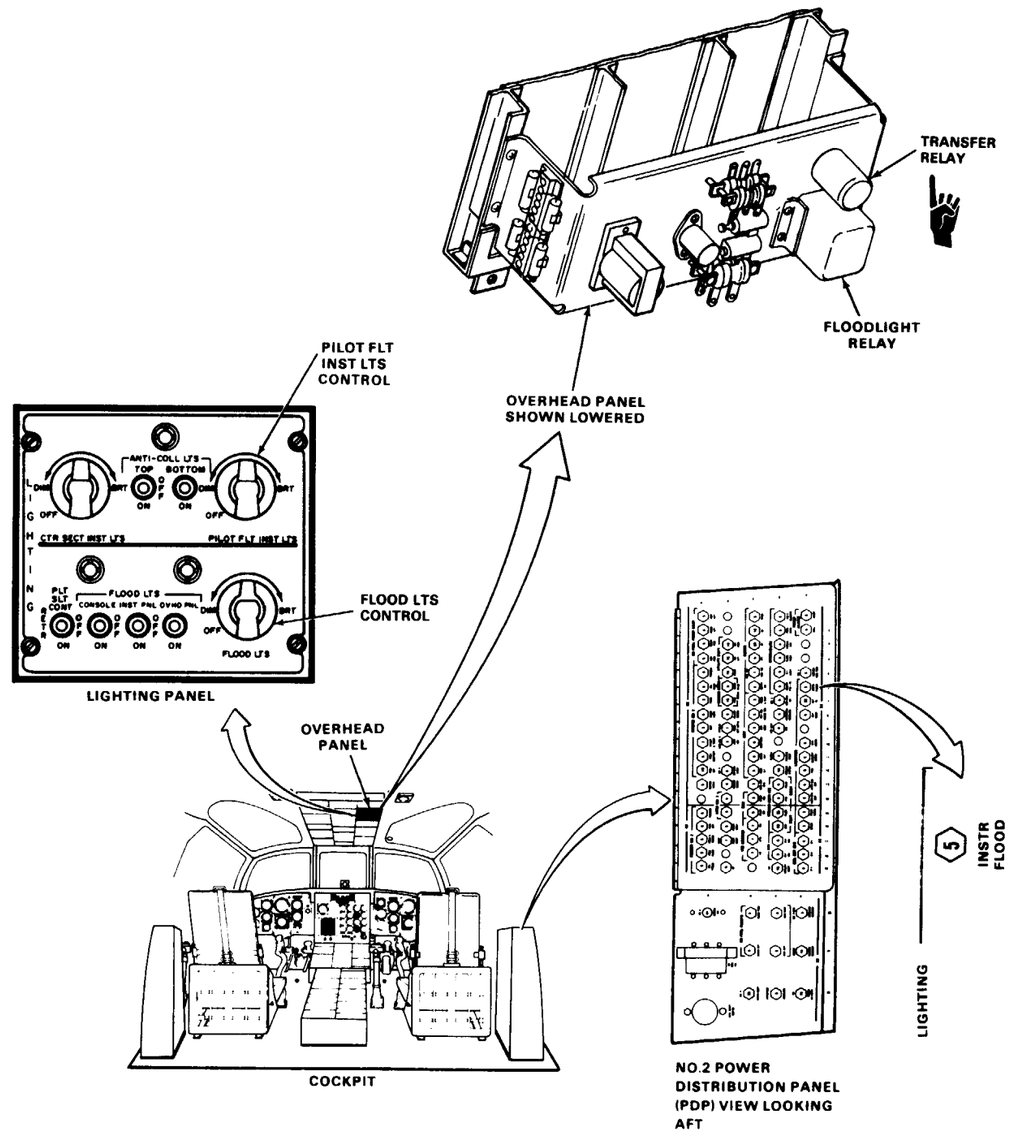
Materials:
None

Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off





END OF TASK

9-13.5 NO. 1 DC BUS CONTROL CIRCUIT BREAKER WILL NOT STAY CLOSED

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
Without 17

Tools:
Electrical Repairer's Tool Kit, NSN 5180-00-323-4915
Multimeter

Materials:
None

Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off

OPEN **XMSN OIL TEMP** CB. CLOSE **NO. 1 DC BUS CONT** CB. DOES **NO. 1 DC BUS CONT** CB STAY CLOSED?

YES → CLOSE **XMSN OIL TEMP** CB. LOCATE GROUND FAULT ON WIRE W559-279-22 BETWEEN TRANSFER RELAY AND FLOODLIGHT RELAY. REPAIR OR REPLACE WIRE AS REQUIRED.

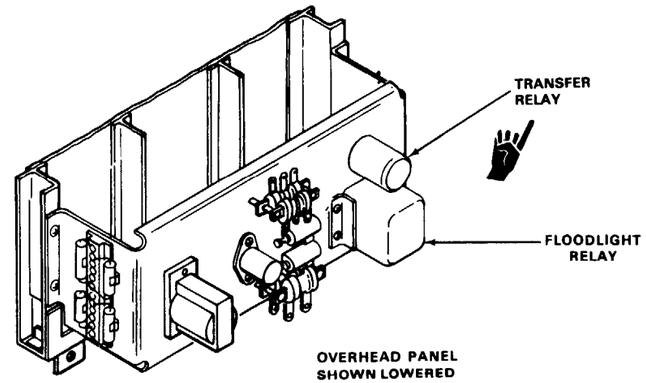
NO ↓

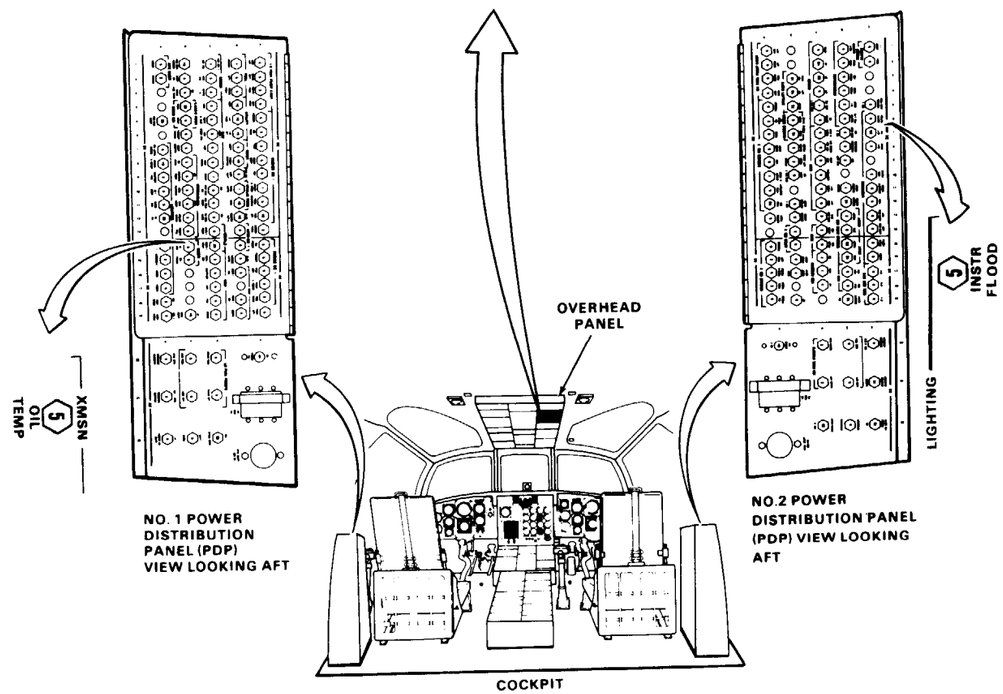
CLOSE **XMSN OIL TEMP** CB 042CB1. REMOVE ELEC PWR. OPEN NO. 1 PDP. REMOVE WIRES FROM CIRCUIT SIDE OF **NO. 1 DC BUS CONT** CB 161CB5. CHECK FOR GROUND ON WIRE W550-122-22. IS GROUND PRESENT?

YES → LOCATE GROUND FAULT ON WIRE W550-122-22, W645-171-22, OR W559-280-22 BETWEEN CB 161CB5 AND TRANSFER RELAY. REPAIR OR REPLACE WIRE AS REQUIRED.

NO ↓

REFER TO TROUBLE SYMPTOM TASK 9-1.4.





10400

END OF TASK

9-13.6 INSTR PANEL, CONSOLE, OR OVERHEAD PANEL FLOOD LIGHTS WILL NOT COME ON

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
Without 17

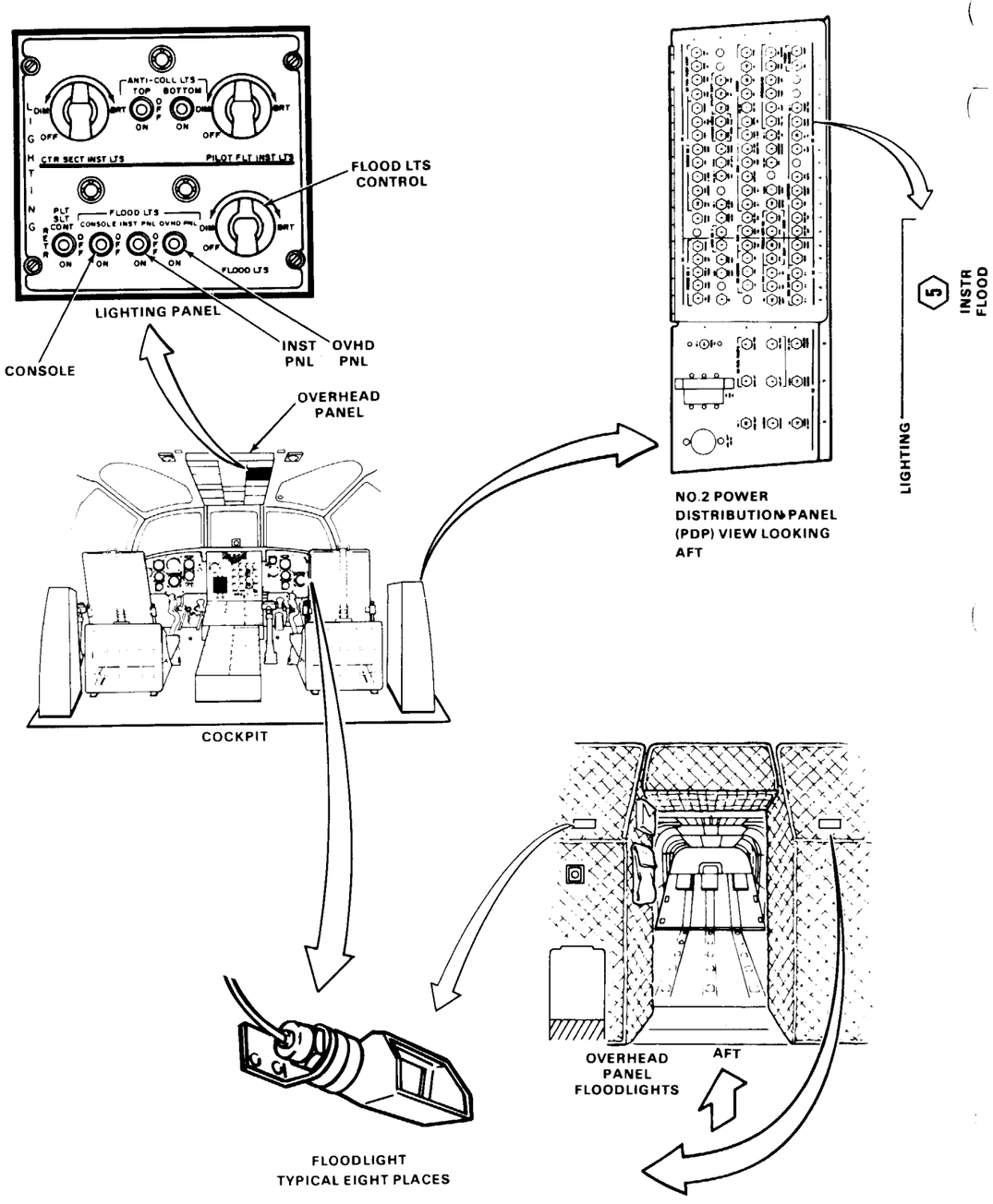
Tools:
Electrical Repairer's Tool Kit, NSN 5180-00-323-4915
Multimeter

Materials:
None

Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

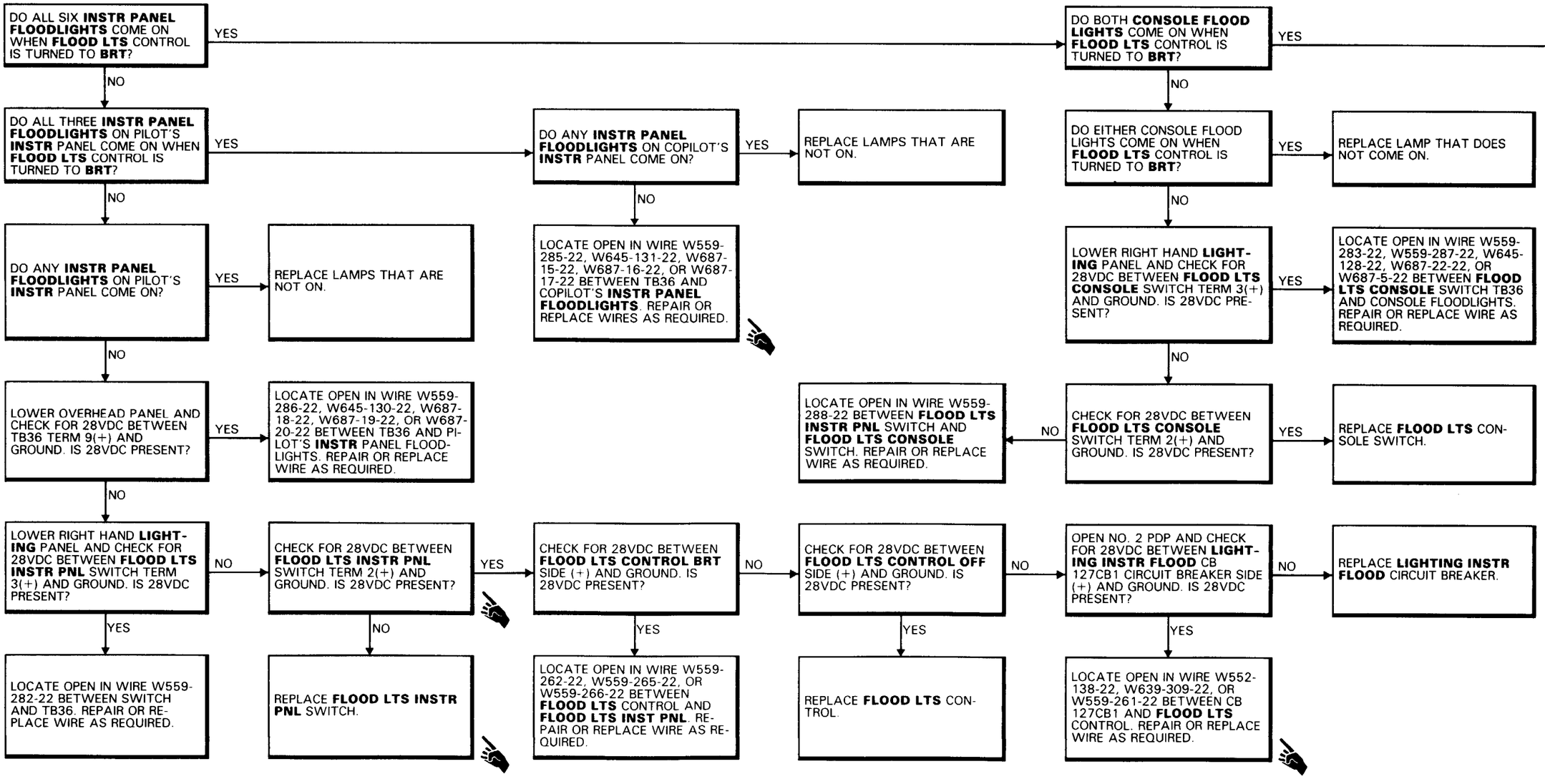
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off



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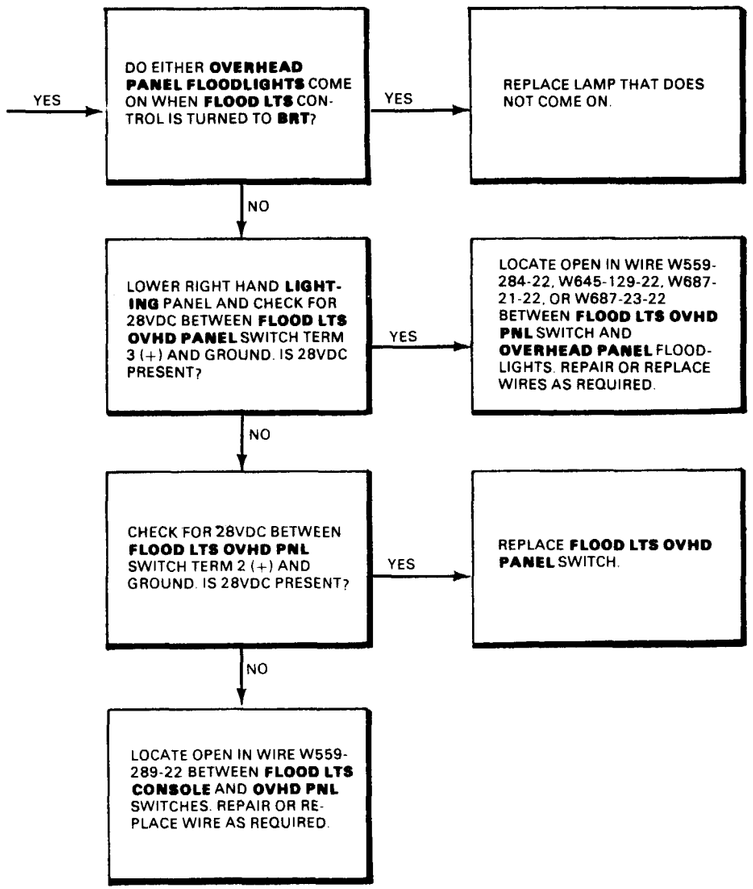
GO TO NEXT PAGE

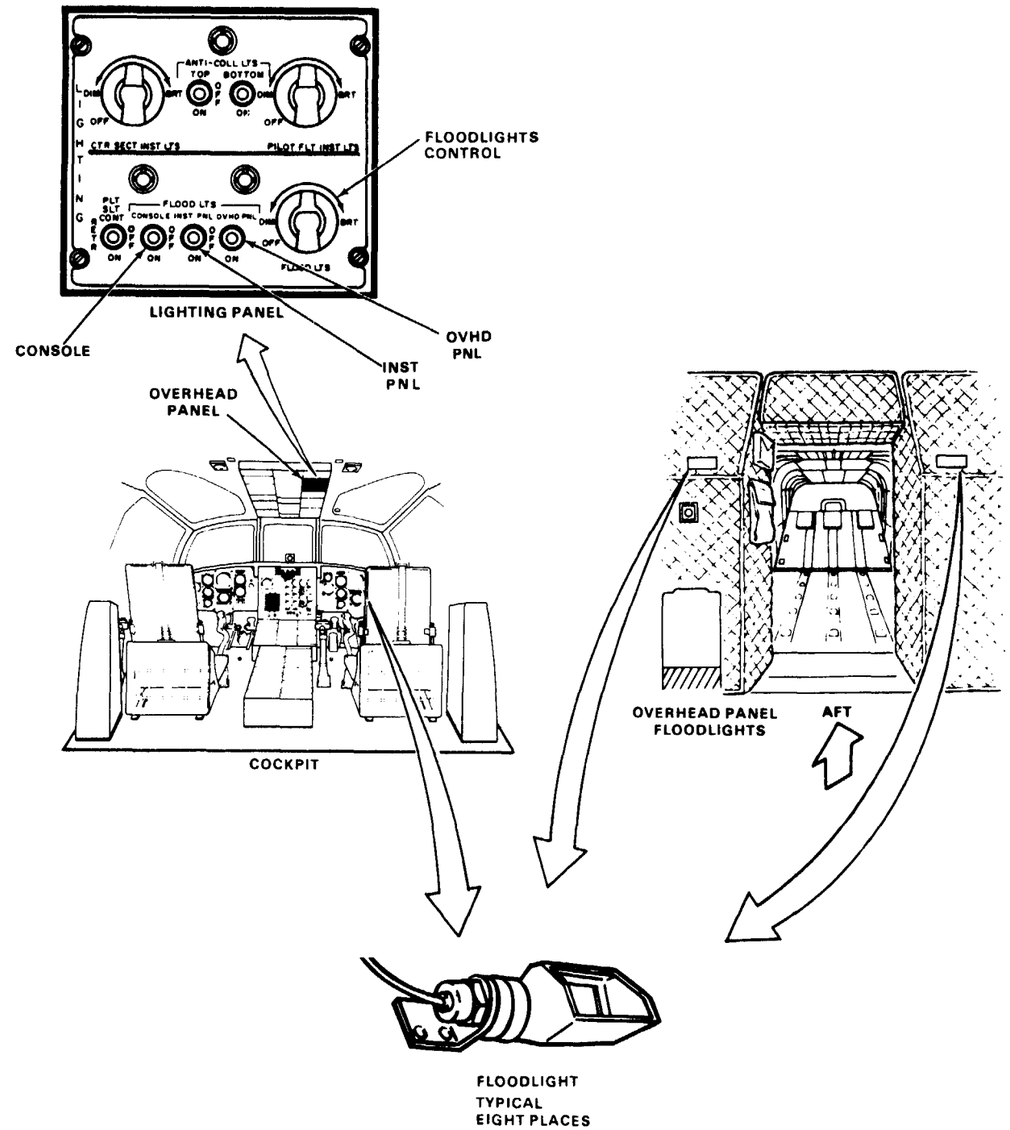
9-13.6 INSTR PANEL, CONSOLE, OR OVERHEAD PANEL FLOOD LIGHTS WILL NOT COME ON (Continued)



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9-13.6 INSTR PANEL, CONSOLE, OR OVERHEAD PANEL FLOODLIGHTS WILL NOT COME ON (Continued)





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END OF TASK

9-13.7 PILOT'S AND COPILOT'S TURN AND SLIP INDICATOR LIGHTS VARY IN BRIGHTNESS 9-13.7

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
Without 17

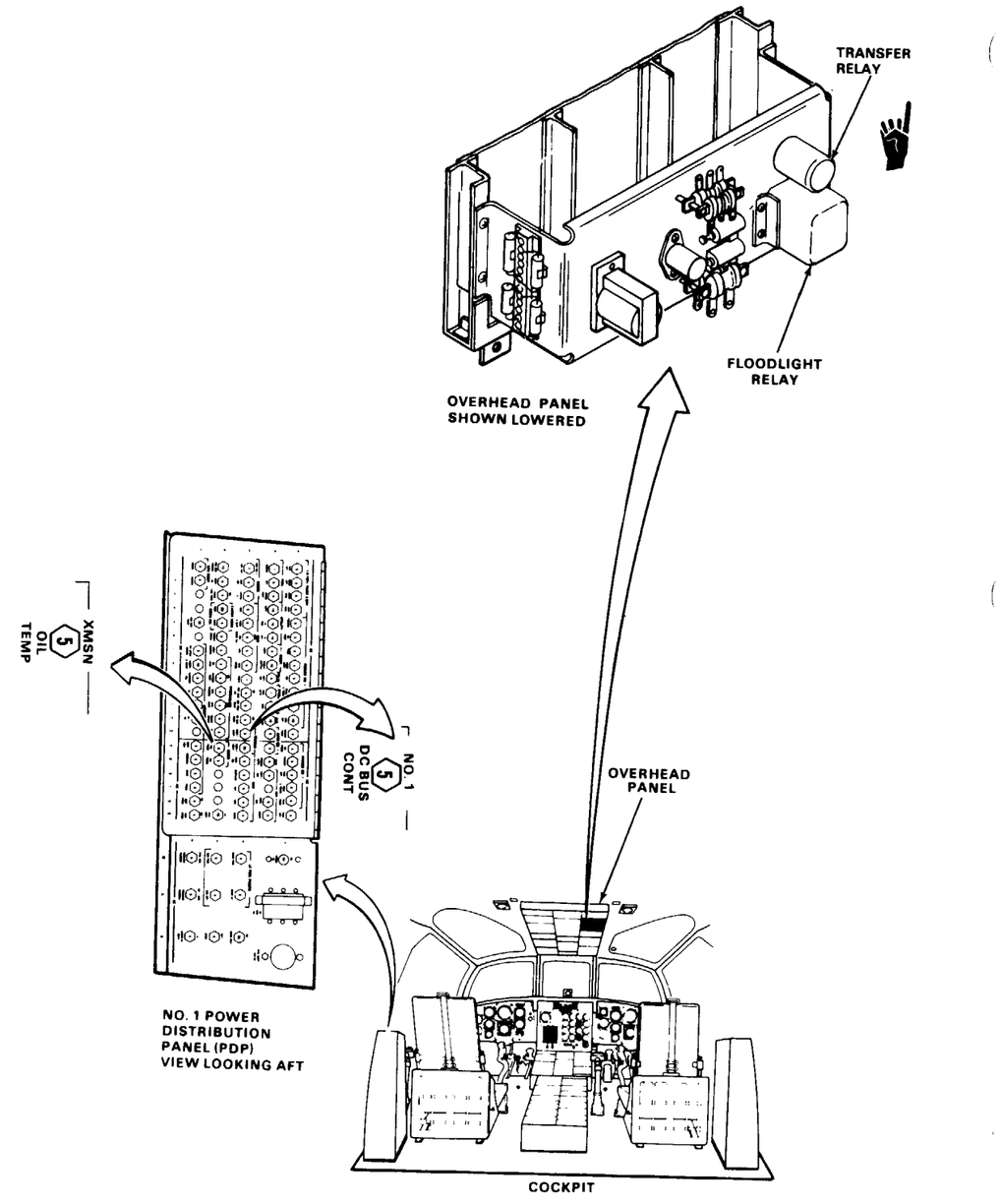
Tools:
Electrical Repairer's Tool Kit, NSN 5180-00-323-4915
Multimeter

Materials:
None

Personnel Required:

References:
TM 55-1520-240-23

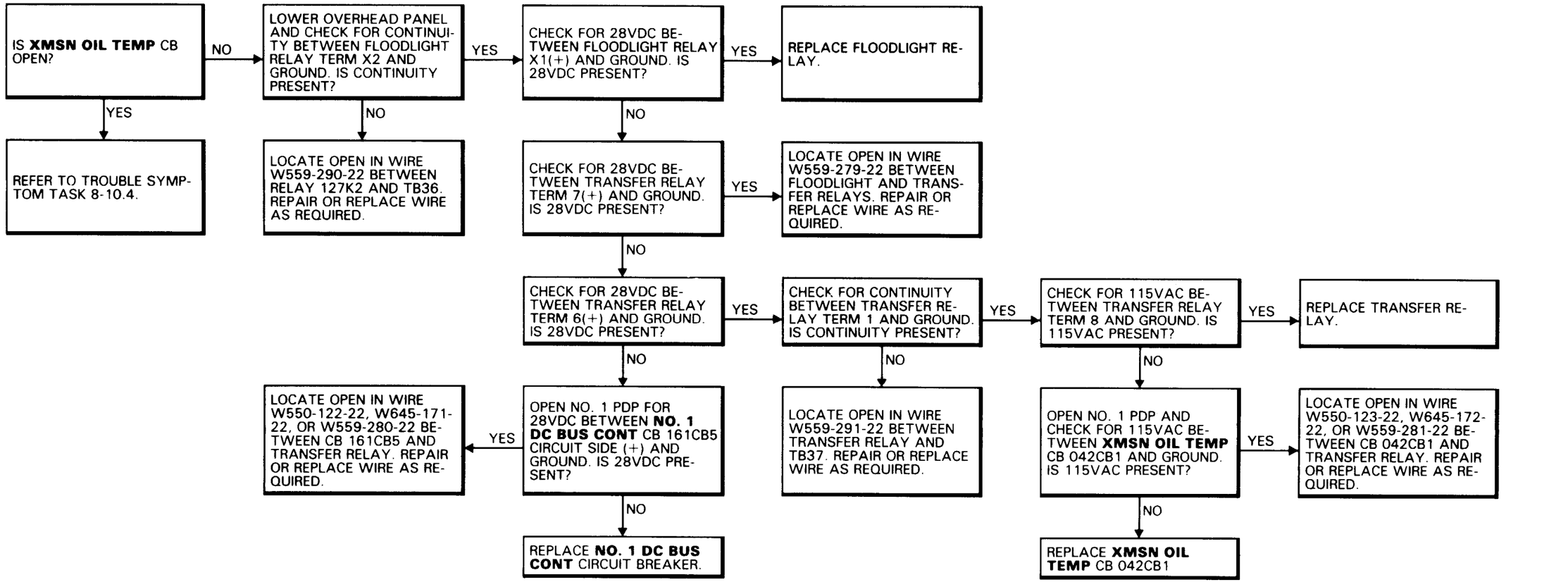
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off



10401

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IS **XMSN OIL TEMP** CB OPEN?
NO
YES
REFER TO TROUBLE SYMPTOM TASK 8-10.4.
LOWER OVERHEAD PANEL AND CHECK FOR CONTINUITY BETWEEN FLOODLIGHT RELAY TERM X2 AND GROUND. IS CONTINUITY PRESENT?
YES
NO
LOCATE OPEN IN WIRE W559-290-22 BETWEEN RELAY 127K2 AND TB36. REPAIR OR REPLACE WIRE AS REQUIRED.
CHECK FOR 28VDC BETWEEN FLOODLIGHT RELAY X1(+) AND GROUND. IS 28VDC PRESENT?
YES
NO
REPLACE FLOODLIGHT RELAY.
CHECK FOR 28VDC BETWEEN TRANSFER RELAY TERM 7(+) AND GROUND. IS 28VDC PRESENT?
YES
NO
LOCATE OPEN IN WIRE W559-279-22 BETWEEN FLOODLIGHT AND TRANSFER RELAYS. REPAIR OR REPLACE WIRE AS REQUIRED.
CHECK FOR 28VDC BETWEEN TRANSFER RELAY TERM 6(+) AND GROUND. IS 28VDC PRESENT?
YES
NO
CHECK FOR CONTINUITY BETWEEN TRANSFER RELAY TERM 1 AND GROUND. IS CONTINUITY PRESENT?
YES
NO
LOCATE OPEN IN WIRE W559-291-22 BETWEEN TRANSFER RELAY AND TB37. REPAIR OR REPLACE WIRE AS REQUIRED.
CHECK FOR 115VAC BETWEEN TRANSFER RELAY TERM 8 AND GROUND. IS 115VAC PRESENT?
YES
NO
REPLACE TRANSFER RELAY.
OPEN NO. 1 PDP AND CHECK FOR 115VAC BETWEEN **XMSN OIL TEMP** CB 042CB1 AND GROUND. IS 115VAC PRESENT?
YES
NO
LOCATE OPEN IN WIRE W550-123-22, W645-172-22, OR W559-281-22 BETWEEN CB 042CB1 AND TRANSFER RELAY. REPAIR OR REPLACE WIRE AS REQUIRED.
REPLACE **XMSN OIL TEMP** CB 042CB1
OPEN NO. 1 PDP FOR 28VDC BETWEEN **NO. 1 DC BUS CONT** CB 161CB5 CIRCUIT SIDE (+) AND GROUND. IS 28VDC PRESENT?
YES
NO
LOCATE OPEN IN WIRE W550-122-22, W645-171-22, OR W559-280-22 BETWEEN CB 161CB5 AND TRANSFER RELAY. REPAIR OR REPLACE WIRE AS REQUIRED.
REPLACE **NO. 1 DC BUS CONT** CIRCUIT BREAKER.

END OF TASK

9-13.8 PILOT'S OR COPILOT'S TURN AND SLIP INDICATOR LIGHTS OR OVERHEAD PANEL FLOODLIGHTS DO NOT COME ON

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
Without 17

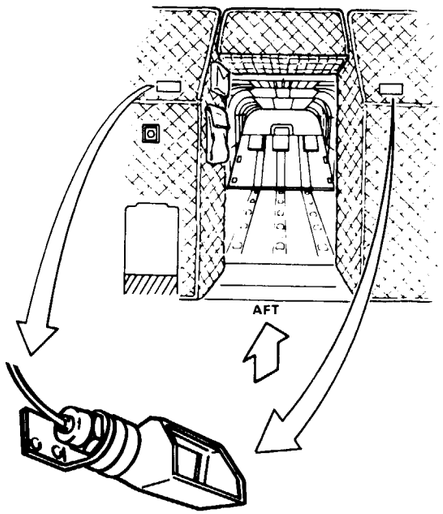
Tools:
Electrical Repairer's Tool Kit, NSN 5180-00-323-4915
Multimeter

Materials:
None

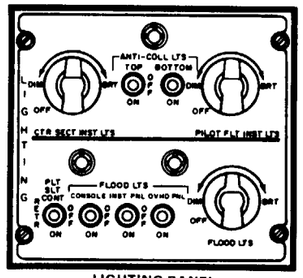
Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

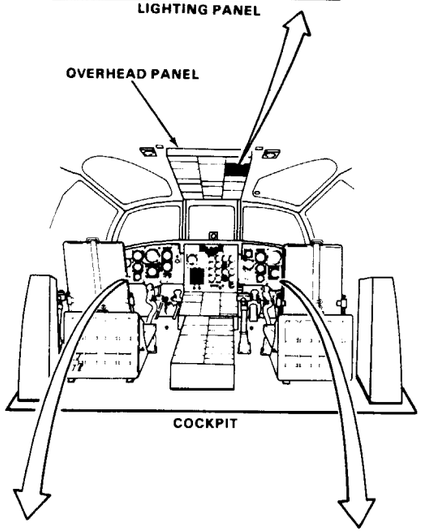
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off

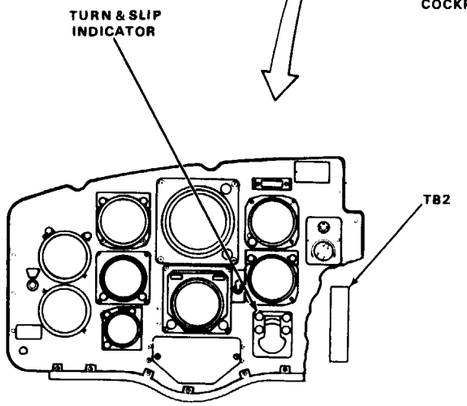


OVERHEAD PANEL FLOODLIGHT

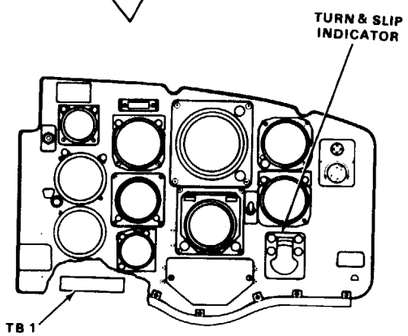


LIGHTING PANEL





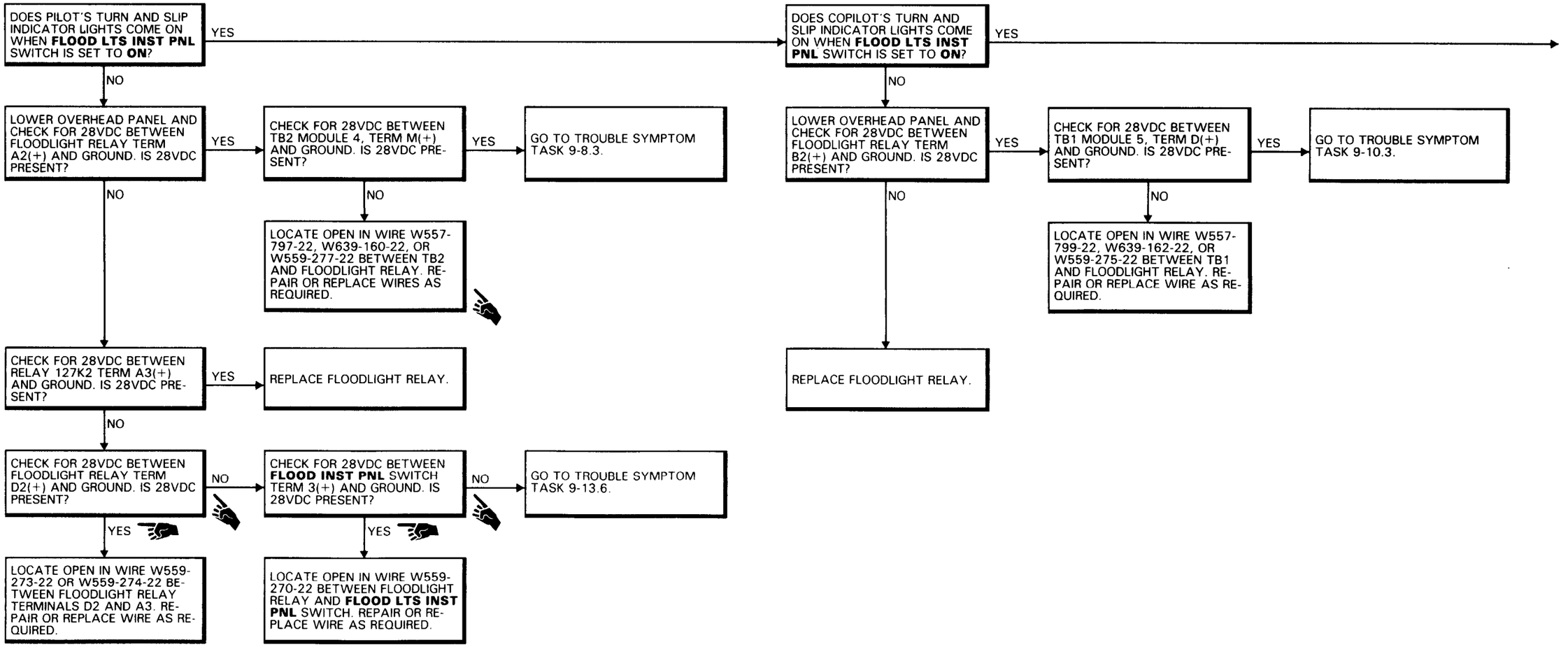
COPILOT'S INSTRUMENT PANEL



PILOT'S INSTRUMENT PANEL

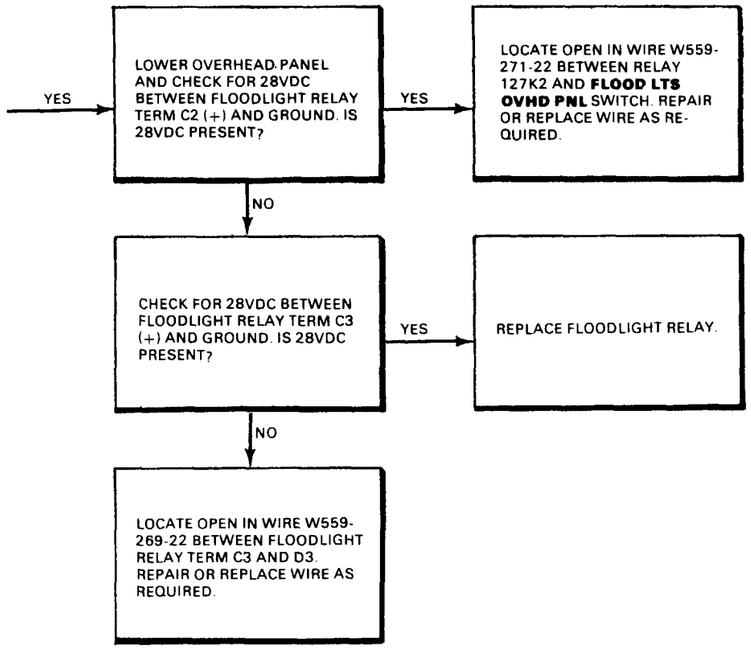
DI45-11470-SPA

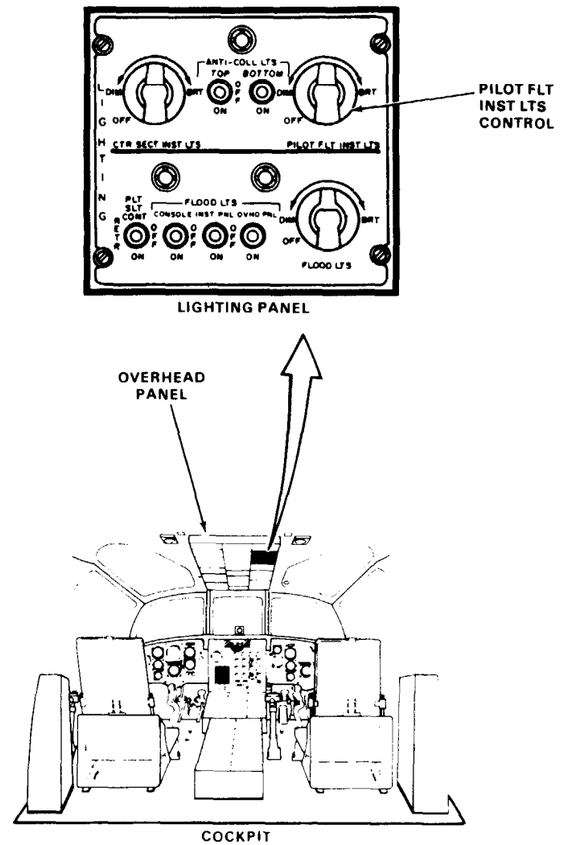
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9-13.8 PILOT OR COPILOT'S TURN AND SLIP INDICATOR LIGHTS OR OVERHEAD PANEL FLOODLIGHTS DO NOT COME ON (Continued)





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END OF TASK

9-13.9 FLOODLIGHTS ON INST PANEL AND OVERHEAD PANEL AND LIGHTS ON PILOT AND COPILOT'S TURN AND SLIP INDICATORS DO NOT COME ON

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
Without 17

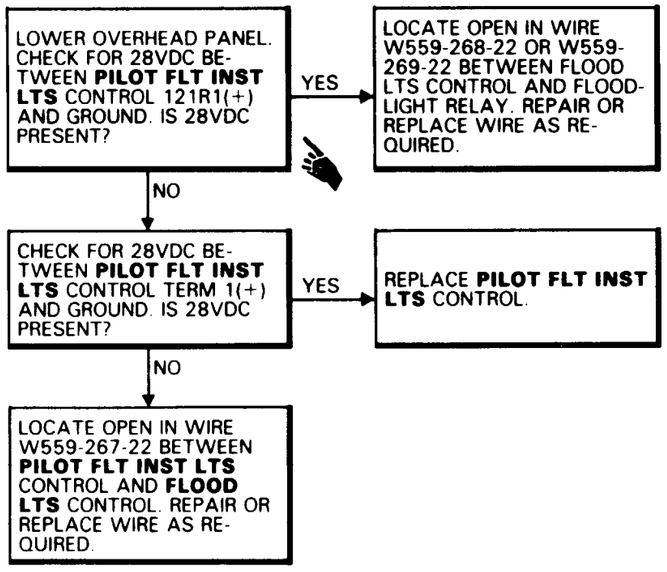
Tools:
Electrical Repairer's Tool Kit, NSN 5180-00-323-4915
Multimeter

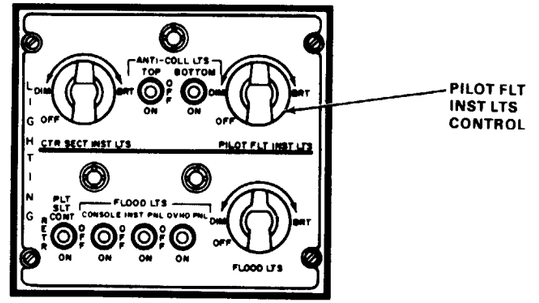
Materials:
None

Personnel Required:
Aircraft Electrician

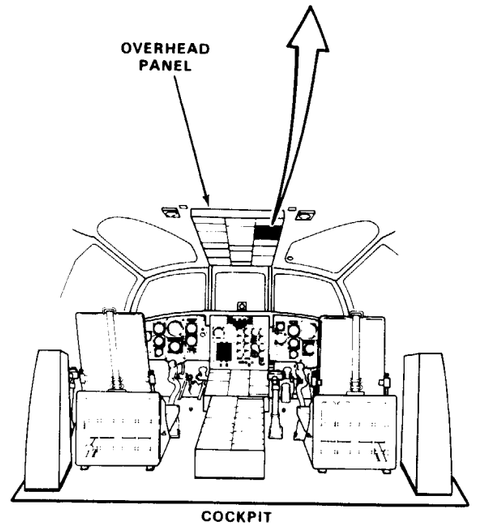
References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23
Battery Connected
Electrical Power On
Hydraulic Power Off



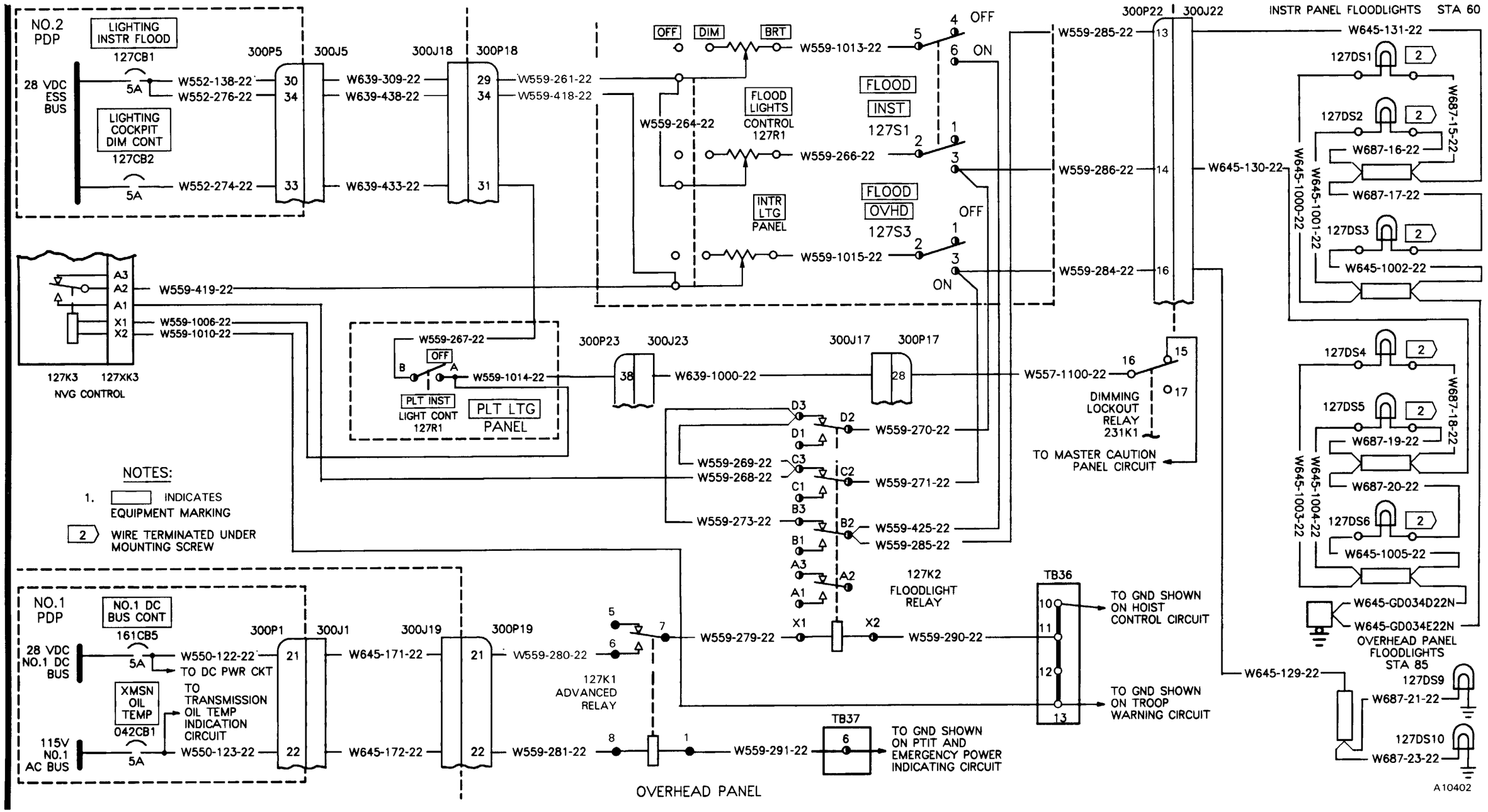


LIGHTING PANEL



COCKPIT

END OF TASK


NO.2 PDP
LIGHTING INSTR FLOOD
127CB1
28 VDC ESS BUS
5A
W552-138-22
W552-276-22
LIGHTING COCKPIT DIM CONT
127CB2
5A
W552-274-22
300P5
300J5
300J18
300P18
30
34
33
29
34
31
W639-309-22
W639-438-22
W639-433-22
W559-261-22
W559-418-22
OFF
DIM
BRT
W559-1013-22
FLOOD LIGHTS CONTROL 127R1
W559-264-22
W559-266-22
INTR LTG PANEL
W559-1015-22
FLOOD INST 127S1
FLOOD OVHD 127S3
4 OFF
6 ON
1
2
3
OFF
ON
300P22
300J22
W559-285-22
W559-286-22
W559-284-22
13
14
16
INSTR PANEL FLOODLIGHTS STA 60
W645-131-22
127DS1
127DS2
W687-16-22
W687-17-22
127DS3
W645-1002-22
W645-130-22
W645-1000-22
W645-1001-22
W687-15-22
127DS4
W687-18-22
127DS5
W687-19-22
W687-20-22
127DS6
W645-1005-22
W645-1004-22
W645-1003-22
W645-GD034D22N
W645-GD034E22N
OVERHEAD PANEL FLOODLIGHTS STA 85
W645-129-22
127DS9
W687-21-22
127DS10
W687-23-22
A3
A2
A1
X1
X2
W559-419-22
W559-1006-22
W559-1010-22
127K3
127XK3
NVG CONTROL
W559-267-22
OFF
B
A
W559-1014-22
PLT INST LIGHT CONT 127R1
PLT LTG PANEL
300P23
300J23
300J17
300P17
38
28
W639-1000-22
W557-1100-22
16
15
17
DIMMING LOCKOUT RELAY 231K1
TO MASTER CAUTION PANEL CIRCUIT
D3
D2
D1
W559-270-22
W559-269-22
C3
C2
W559-268-22
C1
W559-271-22
B3
B2
W559-273-22
B1
W559-425-22
W559-285-22
A3
A2
A1
127K2
FLOODLIGHT RELAY
X1
X2
W559-279-22
W559-290-22
TB36
10
11
12
13
TO GND SHOWN ON HOIST CONTROL CIRCUIT
TO GND SHOWN ON TROOP WARNING CIRCUIT
NO.1 PDP
NO.1 DC BUS CONT
161CB5
28 VDC NO.1 DC BUS
5A
W550-122-22
TO DC PWR CKT
300P1
300J1
300J19
300P19
21
21
W645-171-22
W559-280-22
XMSN OIL TEMP
042CB1
TO TRANSMISSION OIL TEMP INDICATION CIRCUIT
115V NO.1 AC BUS
5A
W550-123-22
22
22
W645-172-22
W559-281-22
5
6
7
127K1 ADVANCED RELAY
8
1
W559-291-22
TB37
6
TO GND SHOWN ON PTIT AND EMERGENCY POWER INDICATING CIRCUIT
OVERHEAD PANEL
NOTES:
1. INDICATES EQUIPMENT MARKING
2 WIRE TERMINATED UNDER MOUNTING SCREW
A10402

9-13.11 SECONDARY COCKPIT LIGHTS VISUAL CHECK

INITIAL SETUP

Applicable Configurations:
With 17

Tools:
Electrical Repairer's Tool Kit, NSN 5180-00-323-4915

Materials:
None

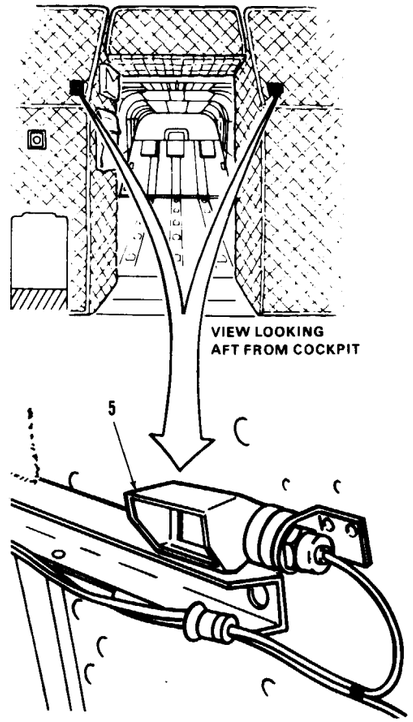
Personnel Required:
Aircraft Electrician

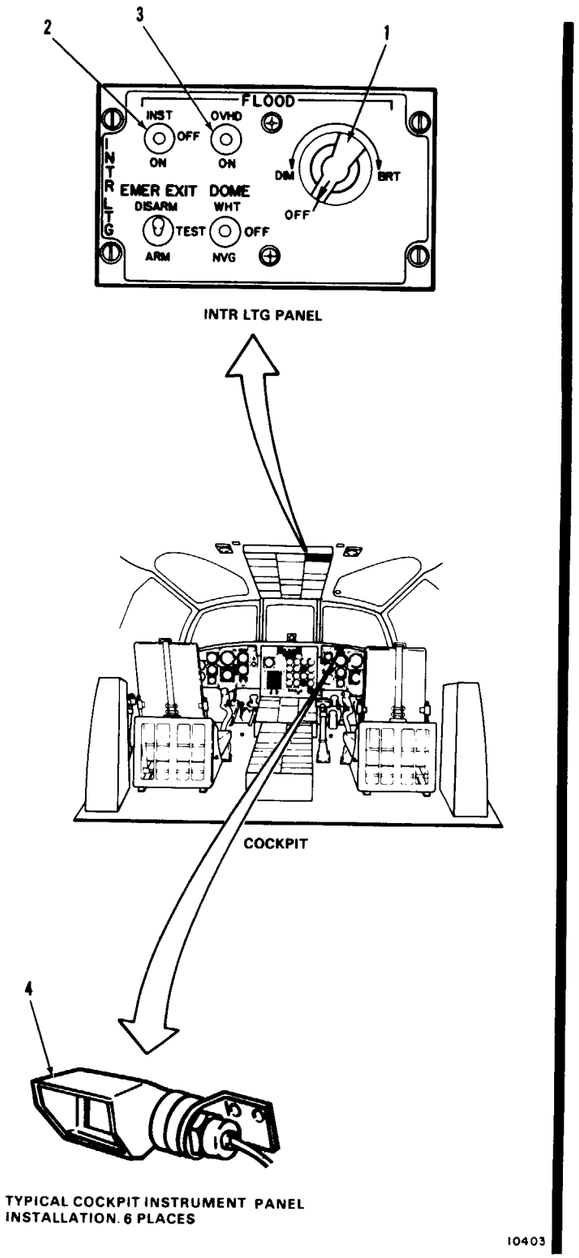
References
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off

TASK	RESULT
1. **Rotate FLOOD lights DIM BRT control (1) from OFF to BRT and back to OFF.**	FLOOD lights DIM BRT control (1) shall rotate freely and smoothly. If control is loose or binding, replace it.
2. **Check INST FLOOD lights switch (2).**	If switch (2) is loose or damaged, tighten or replace it as required.
3. **Check OVHD FLOOD lights switch (3).**	If switch (3) is loose or damaged, tighten or replace it as required.
4. **Check flood lights (4) on instrument panel and center panel.**	If any flood light (4) is loose or damaged, tighten or replace it as required.
5. **Check flood lights (5)** behind pilot's and copilot's seat.	If either flood light (5) is loose or damaged, tighten or replace it as required.

FOLLOW-ON MAINTENANCE:
None





END OF TASK

9-13.12 SECONDARY COCKPIT LIGHTS OPERATIONAL CHECK

INITIAL SETUP

Applicable Configurations:
With 17

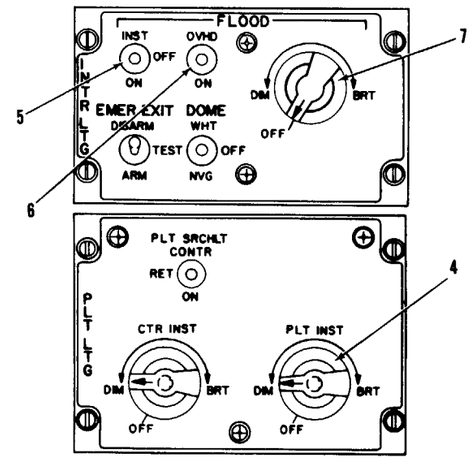
Tools:
None

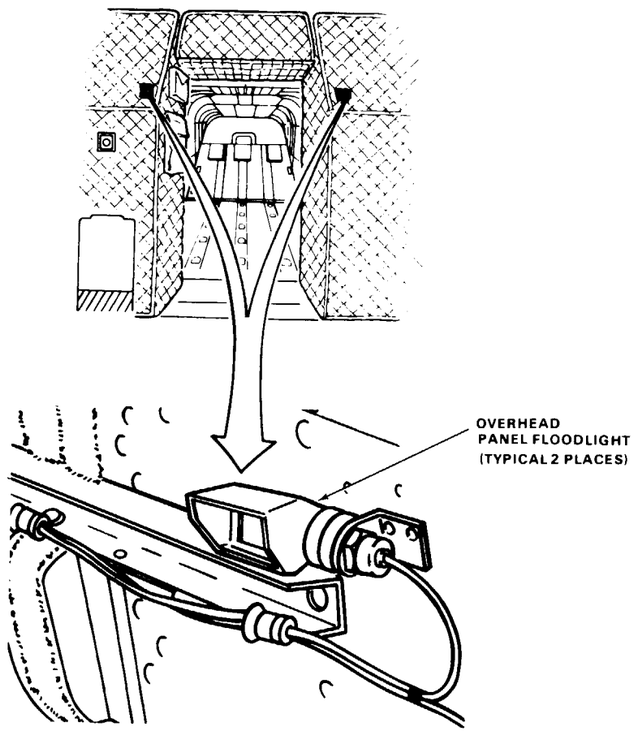
Materials:
None

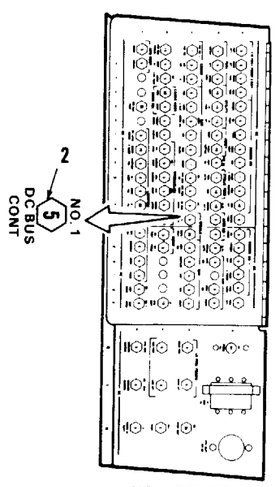
Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

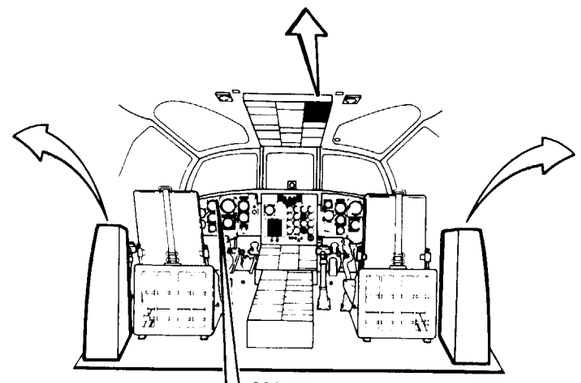
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off
Visual Check of Secondary Cockpit Lights Performed (Task 9-13.11)

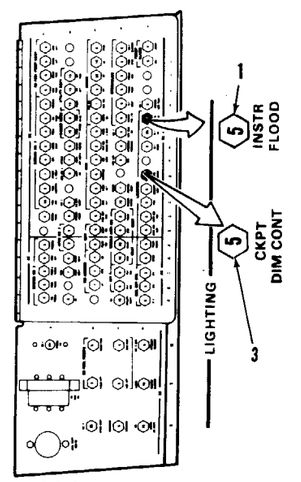




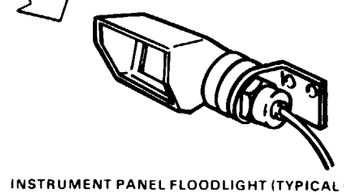


NO. 1 POWER DISTRIBUTION PANEL (PDP) VIEW LOOKING AFT





NO. 2 POWER DISTRIBUTION PANEL (PDP) VIEW LOOKING AFT



INSTRUMENT PANEL FLOODLIGHT (TYPICAL 6 PLACES)

10404

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TASK	RESULT
1. **Check** that **INSTR FLOOD LIGHTING circuit breaker (1)** is **closed.**	If circuit breaker (1) is open, close it. If it opens again, go to task 9-13.13.
2. **Check** that **DC BUS CONT NO. 1 circuit breaker (2)** is **closed.**	If circuit breaker (2) is open, close it. If it opens again, go to task 9-13.5.
3. **Check** that **CKPT DIM CONT LIGHTING circuit breaker (3)** is **closed.**	If circuit breaker (3) is open, close it. If it opens again, go to task 9-13.14.
4. **Set PLT INST lights control (4) to DIM.**	
5. **Set INST and OVHD FLOOD lights switches (5 and 6)** to **ON.**	
6. **Turn FLOOD lights control (7) from OFF through DIM to BRT.**	Eight flood lights, six on instrument panel and two behind pilot's seat shall come on dim and then increase in brightness. If flood lights do not come on, go to task 9-13.15. If flood lights do not increase in brightness, replace FLOOD lights control (7).
7. **Set INST FLOOD lights switch (5) to OFF.**	Six flood lights on instrument panel shall go out. If flood lights do not go out, replace switch (5).
8. **Set OVHD FLOOD lights switch (6) to OFF.**	Two flood lights behind pilot's and copilot's seat shall go out. If flood lights do not go out, replace switch (6).
9. **Open NO. 1 DC BUS CONT circuit breaker (2).**	All eight flood lights shall come on. If not, go to task 9-13.16.
10. **Turn PLT INST lights control (4) to OFF.**	Flood lights and indicator lights shall go out. If not, replace PLT INST lights control (4).
11. **Close NO. 1 DC BUS CONT circuit breaker (2).**	

FOLLOW-ON MAINTENANCE:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off

END OF TASK

9-13.13 INSTR FLOOD LIGHTING CIRCUIT BREAKER WILL NOT STAY CLOSED

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
With 17

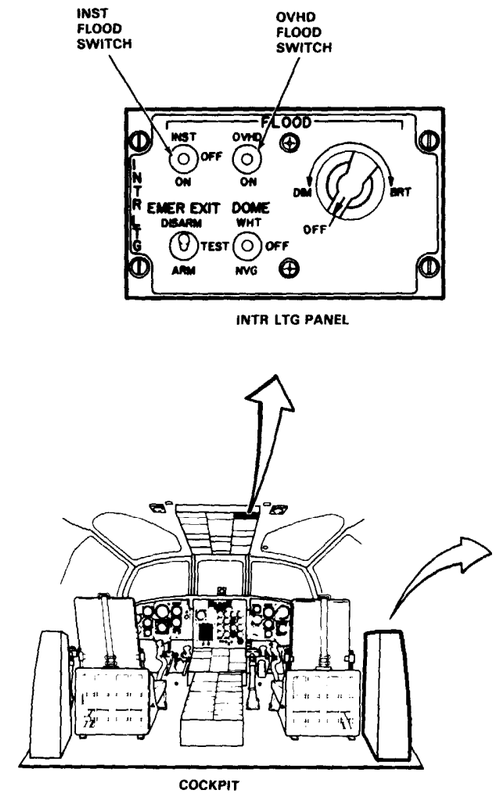
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:
None

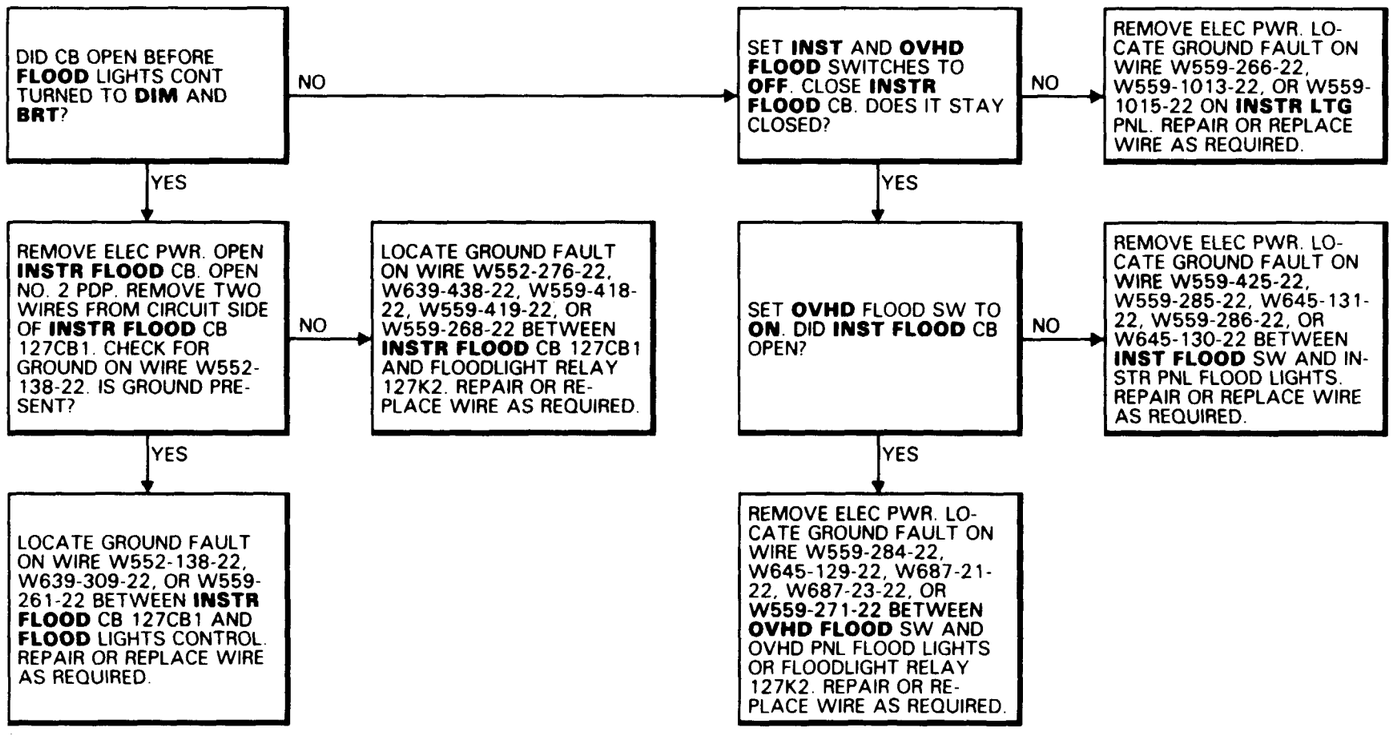
Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off



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DID CB OPEN BEFORE **FLOOD** LIGHTS CONT TURNED TO **DIM** AND **BRT**?
NO
YES
REMOVE ELEC PWR. OPEN **INSTR FLOOD** CB. OPEN NO. 2 PDP. REMOVE TWO WIRES FROM CIRCUIT SIDE OF **INSTR FLOOD** CB 127CB1. CHECK FOR GROUND ON WIRE W552-138-22. IS GROUND PRESENT?
NO
LOCATE GROUND FAULT ON WIRE W552-276-22, W639-438-22, W559-418-22, W559-419-22, OR W559-268-22 BETWEEN **INSTR FLOOD** CB 127CB1 AND FLOODLIGHT RELAY 127K2. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
LOCATE GROUND FAULT ON WIRE W552-138-22, W639-309-22, OR W559-261-22 BETWEEN **INSTR FLOOD** CB 127CB1 AND **FLOOD** LIGHTS CONTROL. REPAIR OR REPLACE WIRE AS REQUIRED.
SET **INST** AND **OVHD FLOOD** SWITCHES TO **OFF**. CLOSE **INSTR FLOOD** CB. DOES IT STAY CLOSED?
NO
REMOVE ELEC PWR. LOCATE GROUND FAULT ON WIRE W559-266-22, W559-1013-22, OR W559-1015-22 ON **INSTR LTG** PNL. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
SET **OVHD** FLOOD SW TO **ON**. DID **INST FLOOD** CB OPEN?
NO
REMOVE ELEC PWR. LOCATE GROUND FAULT ON WIRE W559-425-22, W559-285-22, W645-131-22, W559-286-22, OR W645-130-22 BETWEEN **INST FLOOD** SW AND INSTR PNL FLOOD LIGHTS. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
REMOVE ELEC PWR. LOCATE GROUND FAULT ON WIRE W559-284-22, W645-129-22, W687-21-22, W687-23-22, OR **W559-271-22 BETWEEN OVHD FLOOD** SW AND OVHD PNL FLOOD LIGHTS OR FLOODLIGHT RELAY 127K2. REPAIR OR REPLACE WIRE AS REQUIRED.

END OF TASK

9-13.14 CKPT DIM CONT CIRCUIT BREAKER WILL NOT STAY CLOSED

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
With 17

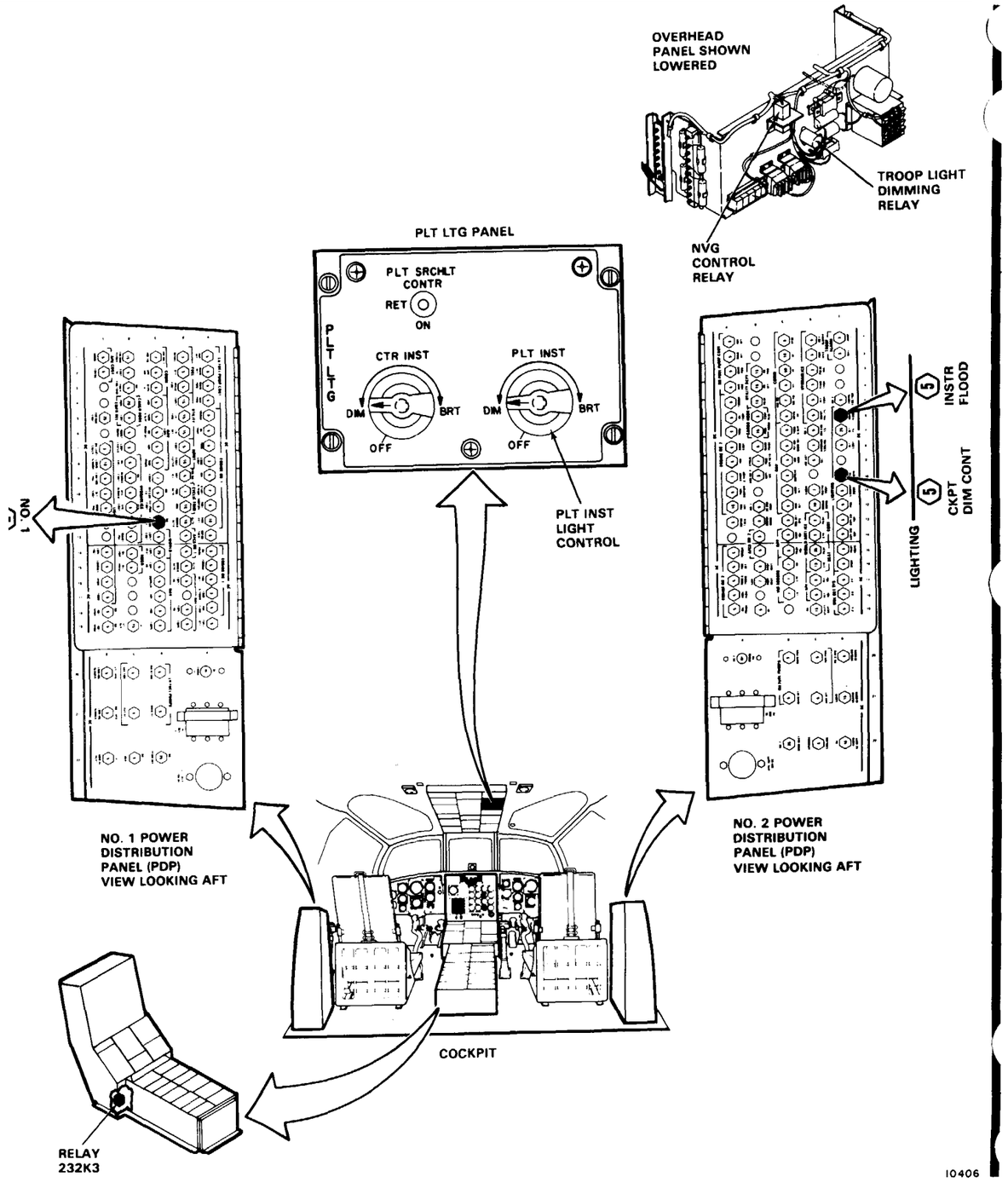
Tools:
Electrical Repairer's Tool Kit, NSN 5180-00-323-4915
Multimeter

Materials:
None

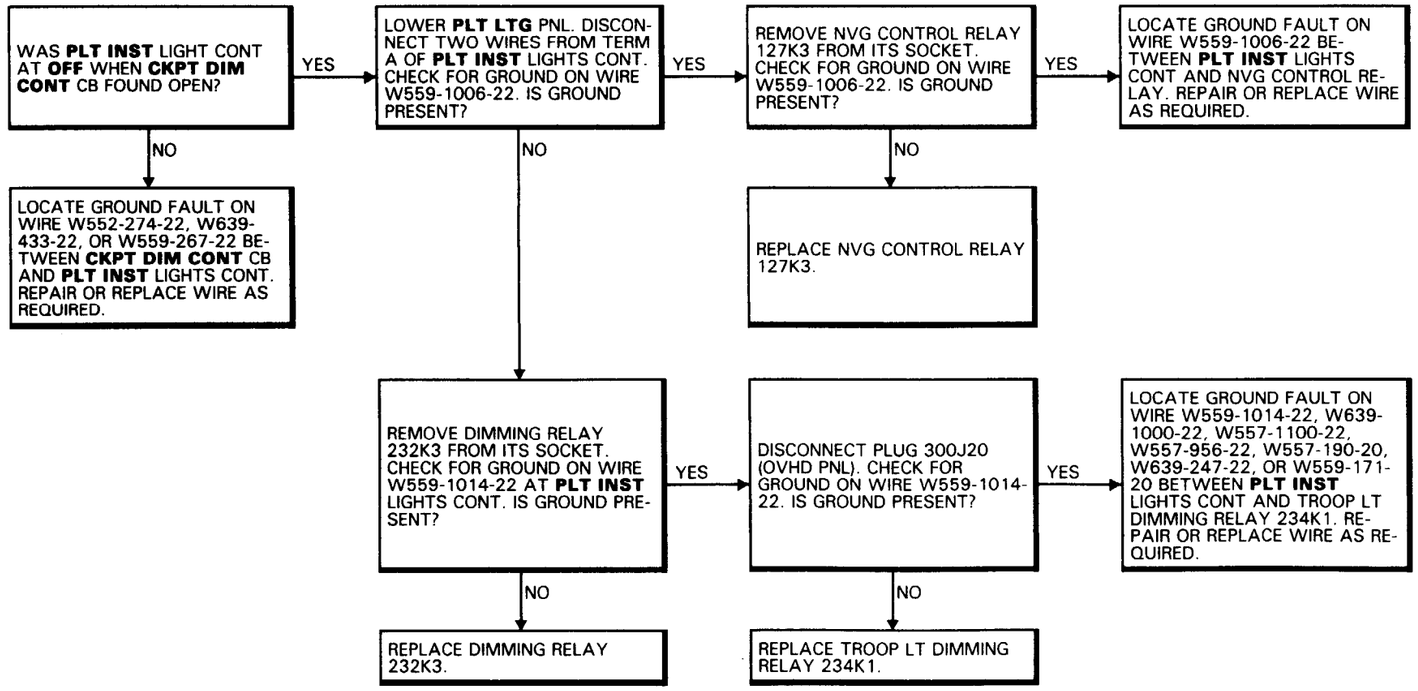
Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off



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WAS **PLT INST** LIGHT CONT AT **OFF** WHEN **CKPT DIM CONT** CB FOUND OPEN?
YES
NO
LOWER **PLT LTG** PNL. DISCONNECT TWO WIRES FROM TERM A OF **PLT INST** LIGHTS CONT. CHECK FOR GROUND ON WIRE W559-1006-22. IS GROUND PRESENT?
YES
NO
REMOVE NVG CONTROL RELAY 127K3 FROM ITS SOCKET. CHECK FOR GROUND ON WIRE W559-1006-22. IS GROUND PRESENT?
YES
NO
LOCATE GROUND FAULT ON WIRE W559-1006-22 BETWEEN **PLT INST** LIGHTS CONT AND NVG CONTROL RELAY. REPAIR OR REPLACE WIRE AS REQUIRED.
LOCATE GROUND FAULT ON WIRE W552-274-22, W639-433-22, OR W559-267-22 BETWEEN **CKPT DIM CONT** CB AND **PLT INST** LIGHTS CONT. REPAIR OR REPLACE WIRE AS REQUIRED.
REPLACE NVG CONTROL RELAY 127K3.
REMOVE DIMMING RELAY 232K3 FROM ITS SOCKET. CHECK FOR GROUND ON WIRE W559-1014-22 AT **PLT INST** LIGHTS CONT. IS GROUND PRESENT?
YES
NO
DISCONNECT PLUG 300J20 (OVHD PNL). CHECK FOR GROUND ON WIRE W559-1014-22. IS GROUND PRESENT?
YES
NO
LOCATE GROUND FAULT ON WIRE W559-1014-22, W639-1000-22, W557-1100-22, W557-956-22, W557-190-20, W639-247-22, OR W559-171-20 BETWEEN **PLT INST** LIGHTS CONT AND TROOP LT DIMMING RELAY 234K1. REPAIR OR REPLACE WIRE AS REQUIRED.
REPLACE DIMMING RELAY 232K3.
REPLACE TROOP LT DIMMING RELAY 234K1.

END OF TASK

9-13.15 INSTR PANEL OR OVERHEAD PANEL FLOOD LIGHTS WILL NOT COME ON 9-13.15

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
With 17

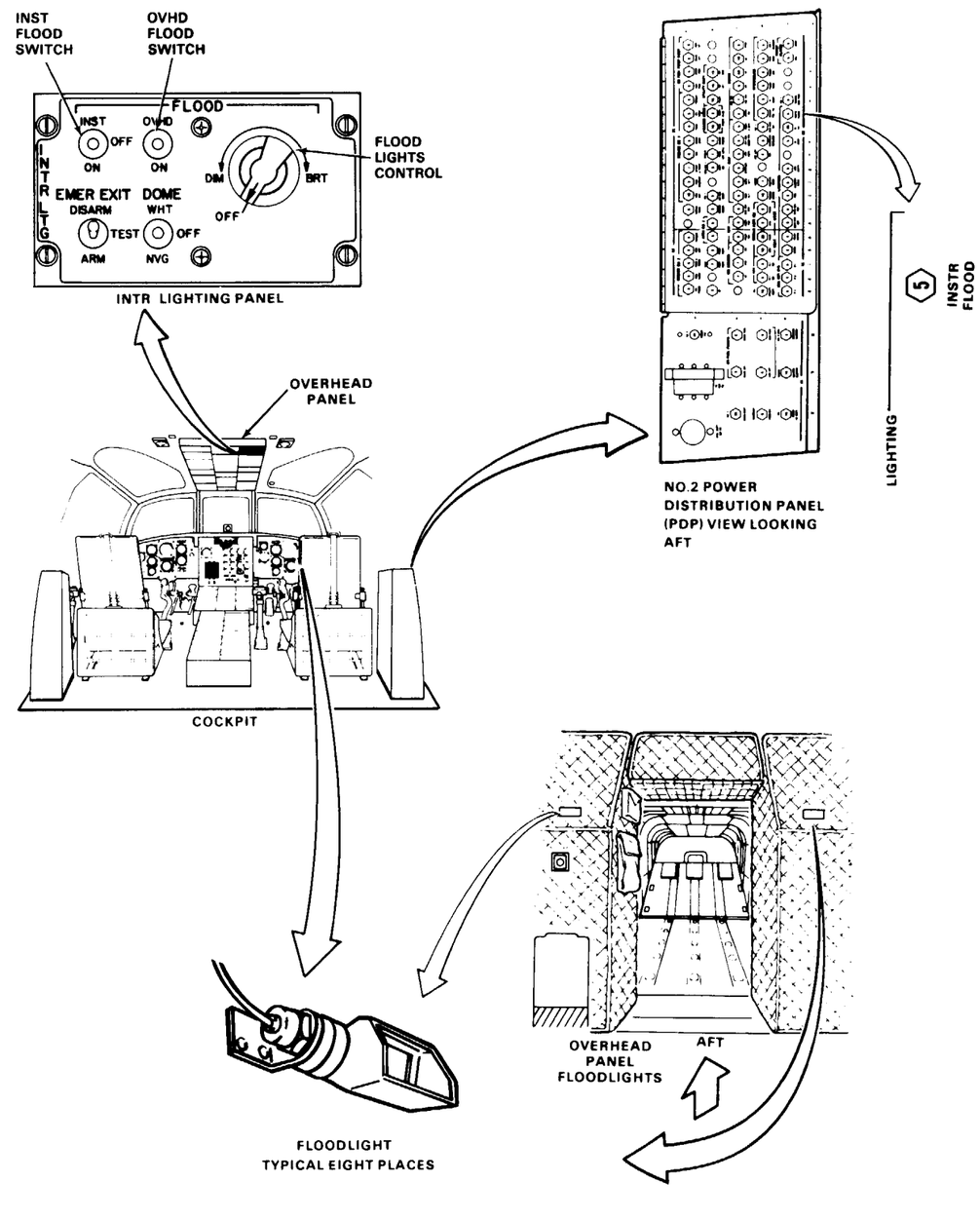
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:
None

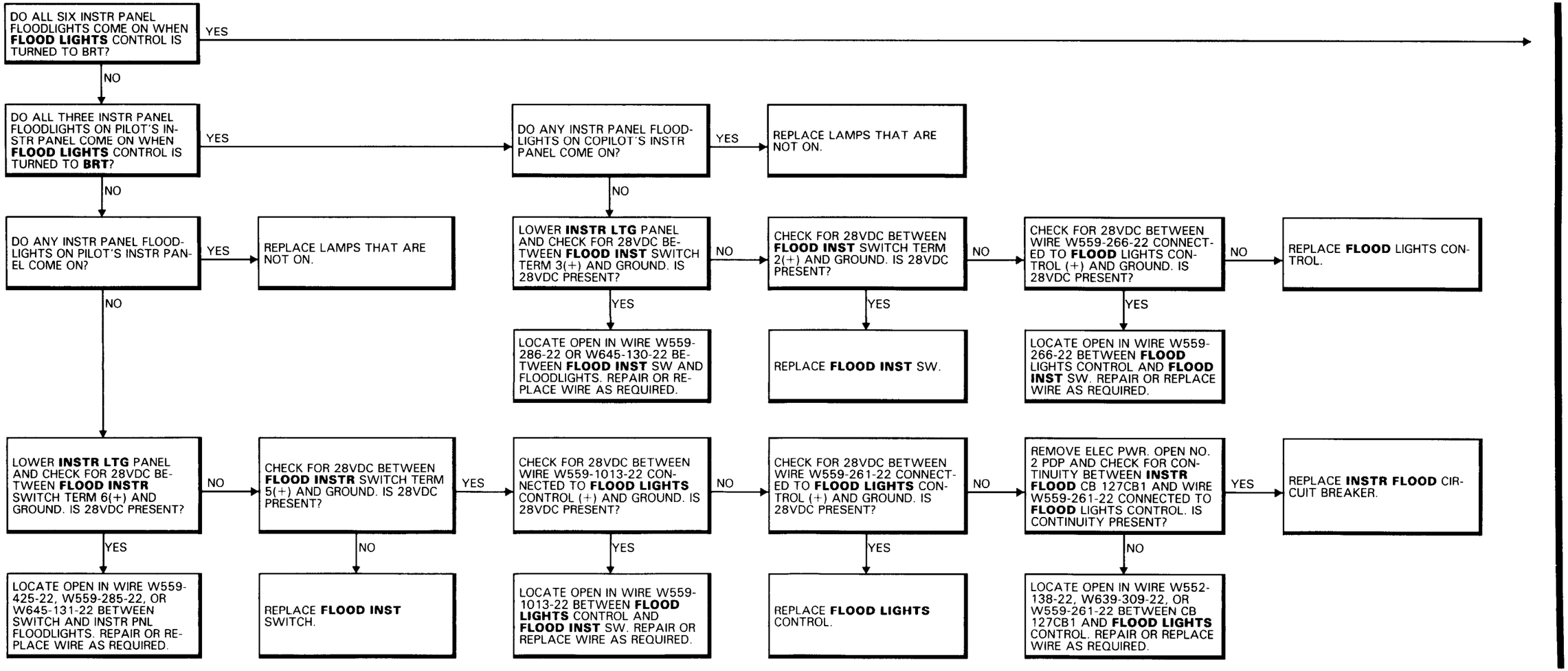
Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off



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GO TO NEXT PAGE

YES

DO EITHER OVERHEAD PANEL FLOODLIGHTS COME ON WHEN **FLOOD LIGHTS** CONTROL IS TURNED TO **BRT**?

YES → REPLACE LAMP THAT DOES NOT COME ON.

NO

LOWER **INTR LTG** PANEL AND CHECK FOR 28VDC BETWEEN **FLOOD OVHD** SWITCH TERM 3(+) AND GROUND. IS 28VDC PRESENT?

YES → LOCATE OPEN IN WIRE W559-284-22, W645-129-22, W687-21-22, OR W687-23-22 BETWEEN **FLOOD OVHD** SWITCH AND OVERHEAD PANEL FLOODLIGHTS. REPAIR OR REPLACE WIRE AS REQUIRED.

NO

CHECK FOR 28VDC BETWEEN WIRE **FLOOD OVHD** SWITCH TERM 2(+) AND GROUND. IS 28VDC PRESENT?

YES → REPLACE **FLOOD OVHD** SWITCH.

NO

CHECK FOR 28VDC BETWEEN WIRE W559-1015-22 CONNECTED TO **FLOOD LIGHTS** CONTROL (+) AND GROUND. IS 28VDC PRESENT?

YES → LOCATE OPEN IN WIRE W559-1015-22 BETWEEN **FLOOD LIGHTS** CONTROL AND **FLOOD OVHD** SW. REPAIR OR REPLACE WIRE AS REQUIRED.

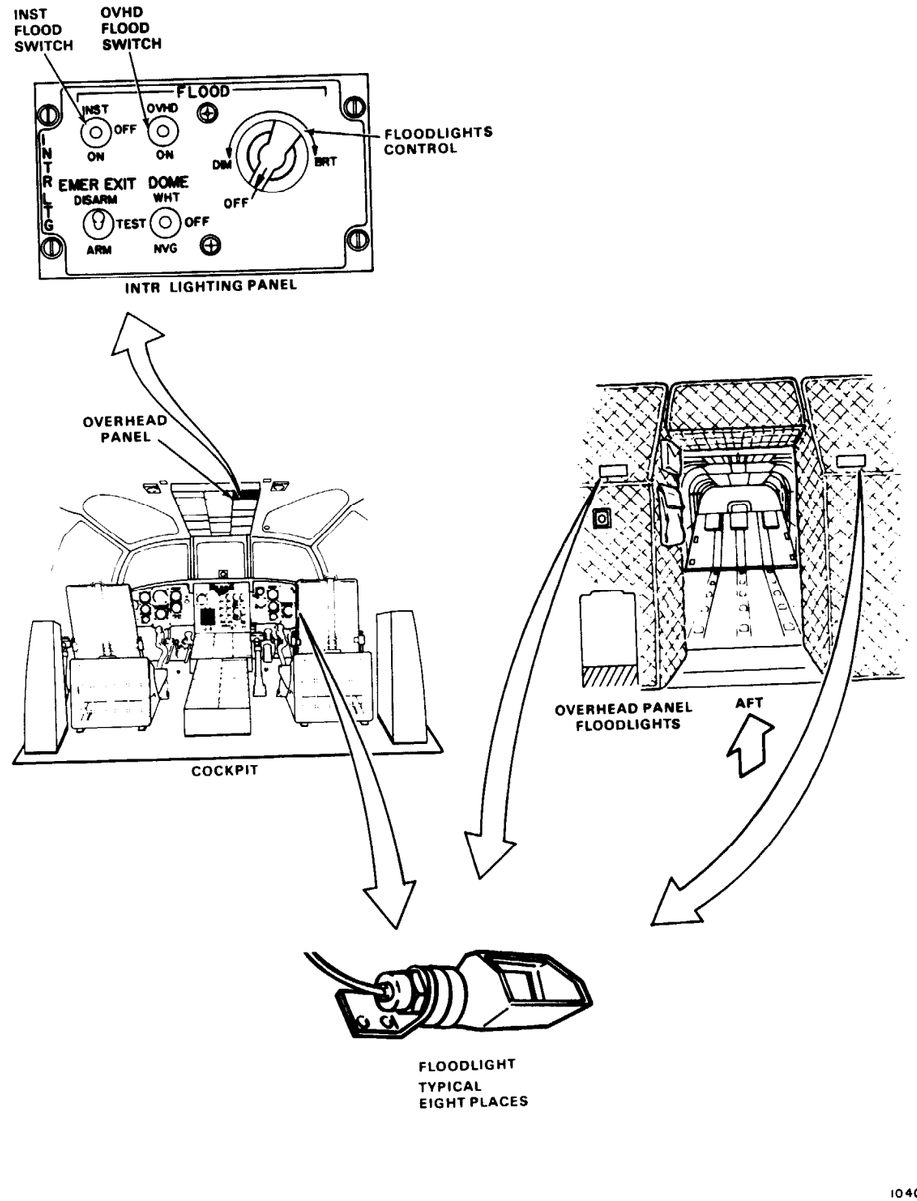
NO

CHECK FOR 28VDC BETWEEN WIRE W559-418-22 CONNECTED TO **FLOOD LIGHTS** CONTROL (+) AND GROUND. IS 28VDC PRESENT?

YES → REPLACE **FLOOD LIGHTS** CONTROL.

NO

LOCATE OPEN IN WIRE W559-418-22, W639-438-22, OR W552-276-22 BETWEEN **FLOOD LIGHTS** CONTROL AND **INSTR** FLOOD CB. REPAIR OR REPLACE WIRE AS REQUIRED.



END OF TASK

9-13.16 ALL FLOODLIGHTS DO NOT COME ON WHEN PLT INST LIGHT CONTROL SET TO OFF 9-13.16

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
With 17

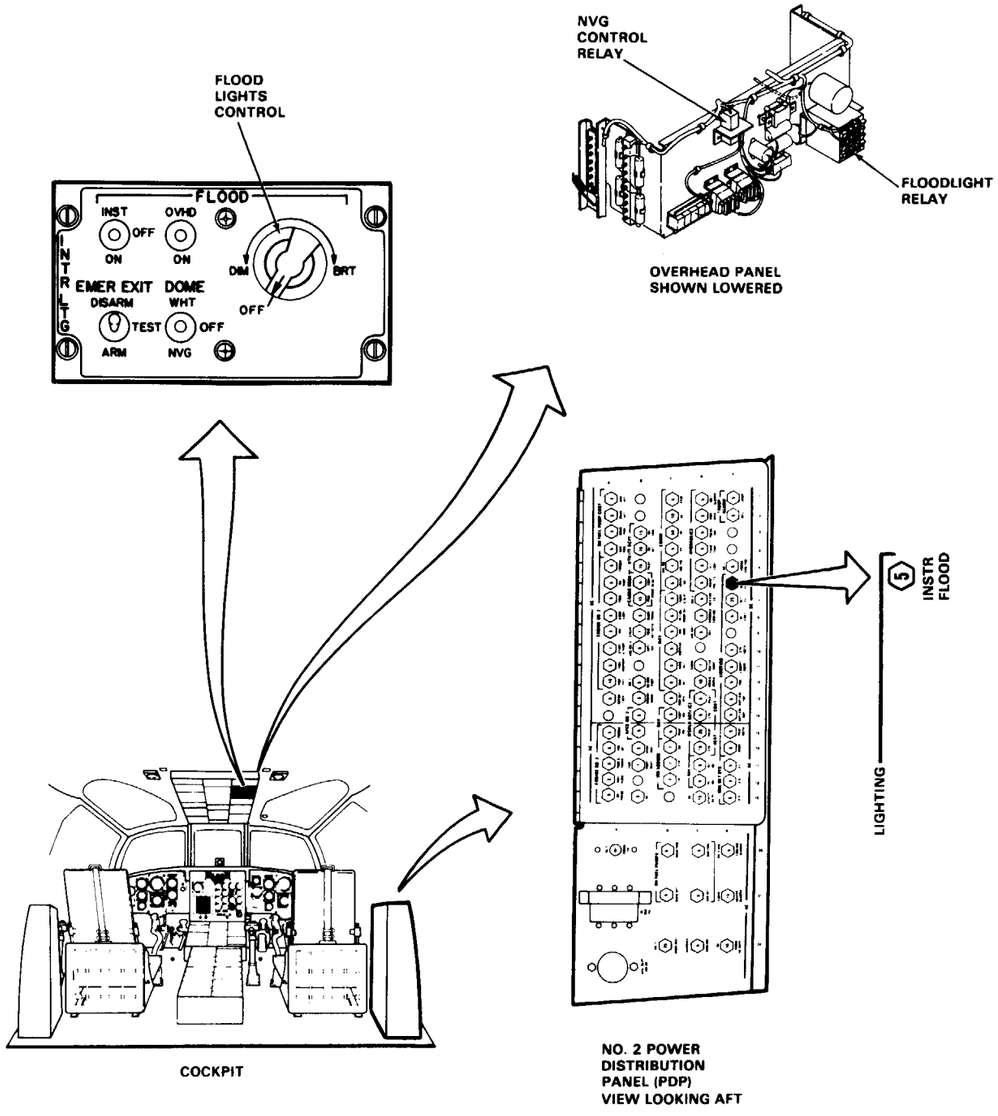
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:
None

Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

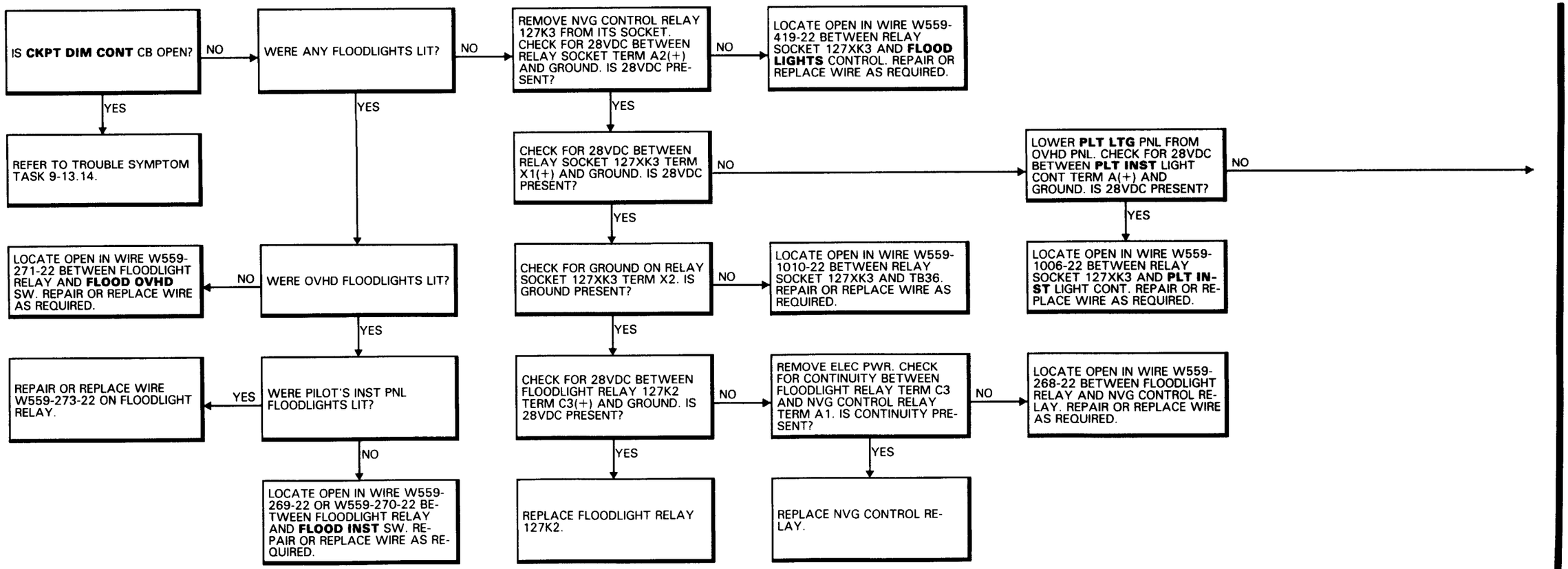
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off



10409

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9-13.16 ALL FLOODLIGHTS DO NOT COME ON WHEN PLT INST LIGHT CONTROL SET TO OFF (Continued)



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NO

CHECK FOR 28VDC BETWEEN **PLT INST** LIGHT CONT TERM B(+) AND GROUND. IS 28VDC PRESENT?

YES → REPLACE **PLT INST** LIGHT CONT.

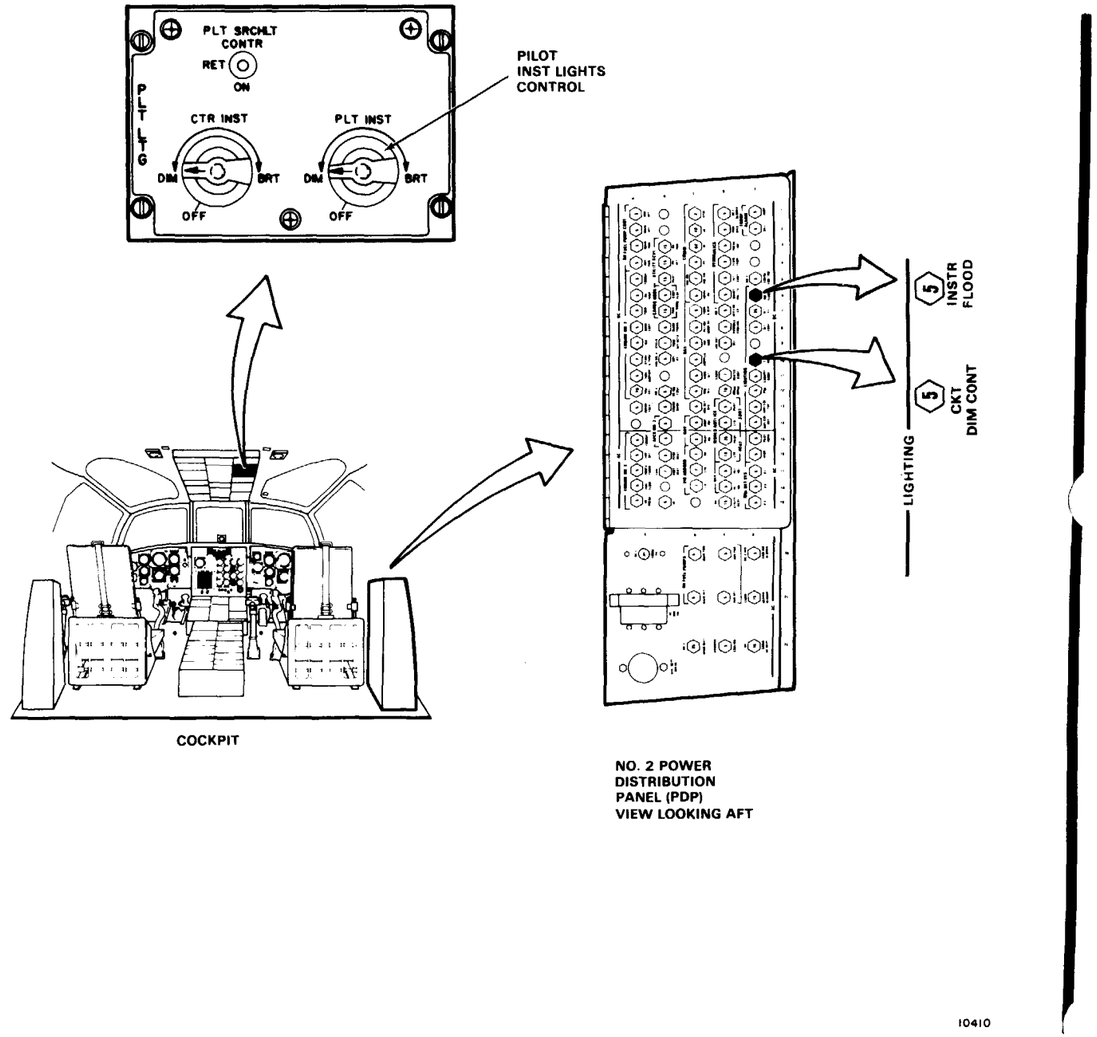
NO

REMOVE ELEC PWR. OPEN NO. 2 PDP. CHECK FOR CONTINUITY BETWEEN CIRCUIT SIDE OF **CKPT DIM CONT** CB 127CB2 AND TERM B OF **PLT INST** LIGHT CONT. IS CONTINUITY PRESENT?

YES → REPLACE **CKPT DIM CONT** CB 127CB2.

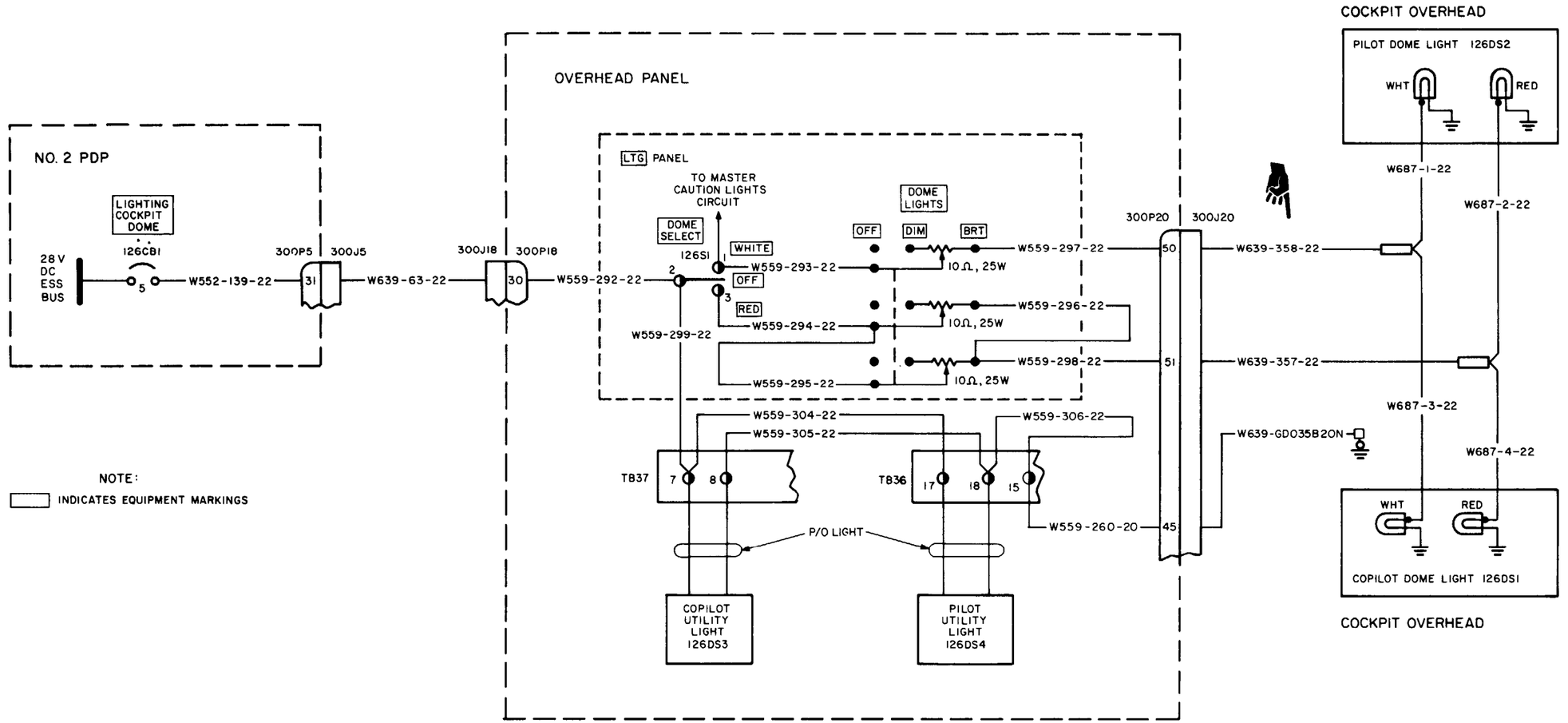
NO

LOCATE OPEN IN WIRE W559-267-22, W639-433-22, OR W552-274-22 BETWEEN **PLT INST** LIGHT CONT AND **CKPT DIM CONT** CB. REPAIR OR REPLACE WIRE AS REQUIRED.



END OF TASK

9-14 COCKPIT DOME AND UTILITY LIGHTS



NOTE:
INDICATES EQUIPMENT MARKINGS

126.100C 234.100A

519

9-14.12 COCKPIT DOME WHITE LIGHT OR LIGHTS DO NOT COME ON

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
With 17

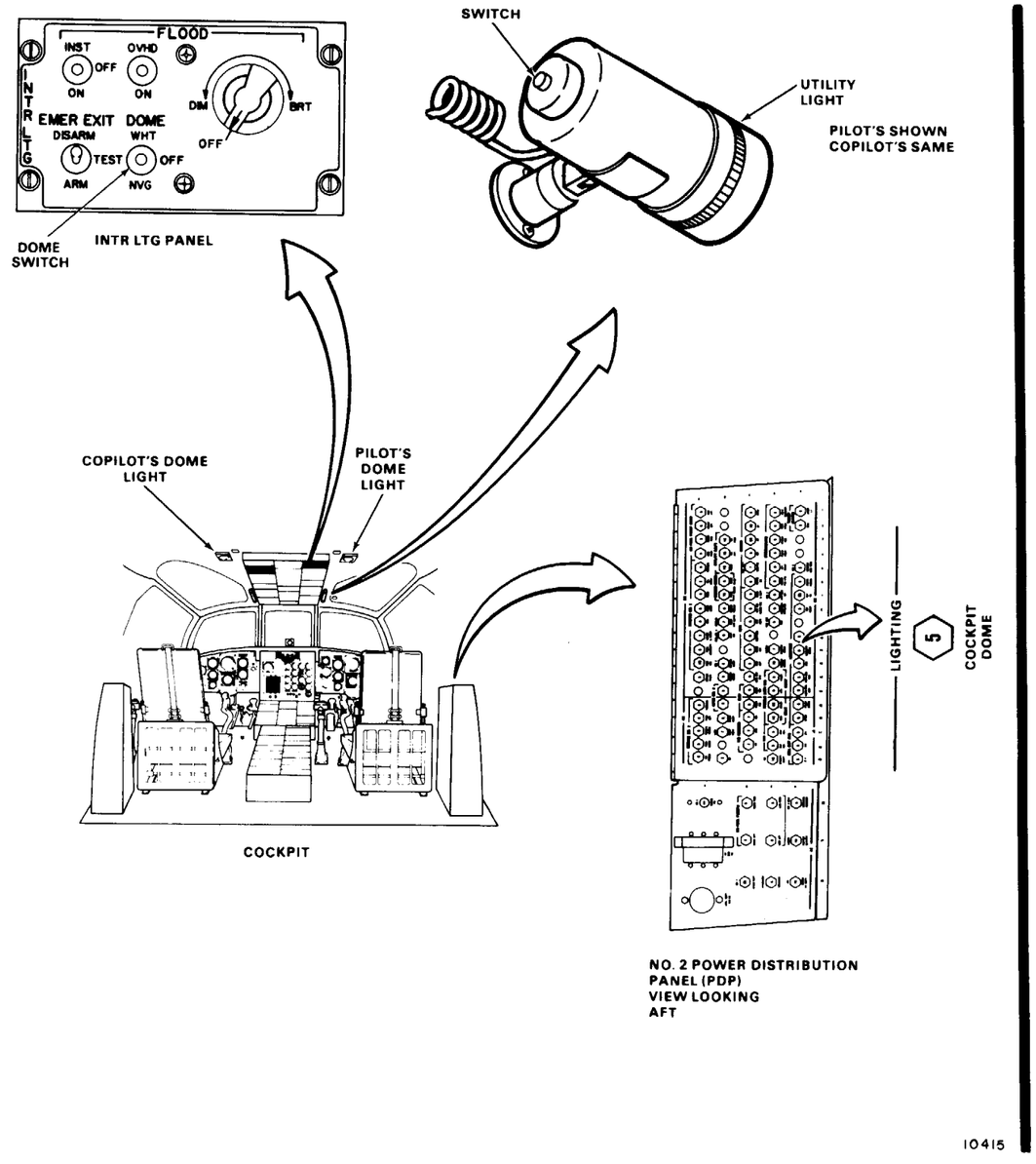
Tools:
Electrical Repairer's Tool Kit, NSN 5180-00-323-4915
Multimeter

Materials:
None

Personnel Required:
Aircraft Electrician

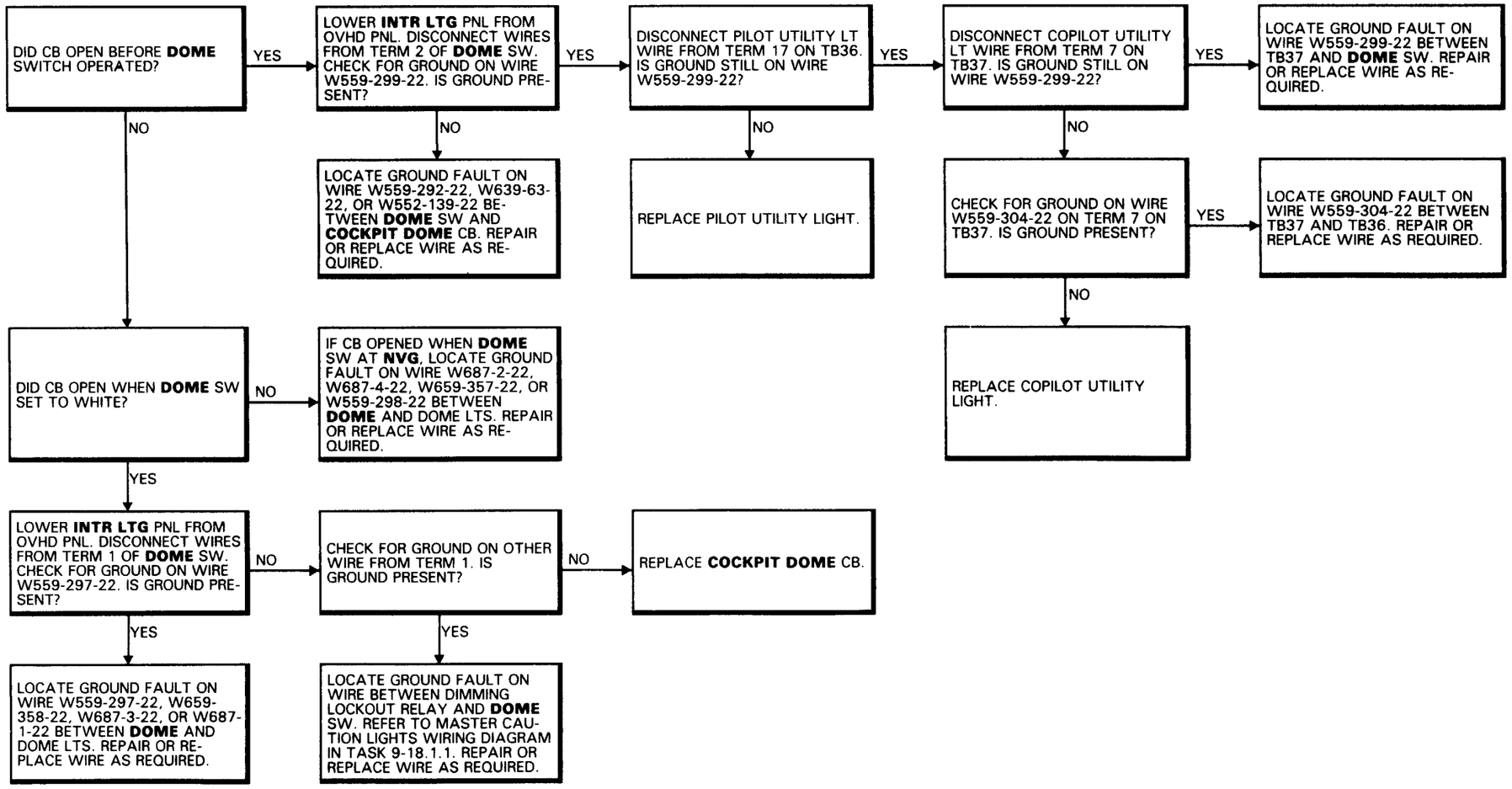
References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off



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9-14.11 COCKPIT DOME CIRCUIT BREAKER DOES NOT STAY CLOSED (Continued)



END OF TASK

9-14.11 COCKPIT DOME CIRCUIT BREAKER DOES NOT STAY CLOSED

FAULT ISOLATION PROCEDURE

INITIALSETUP

Applicable Configurations:
With 17

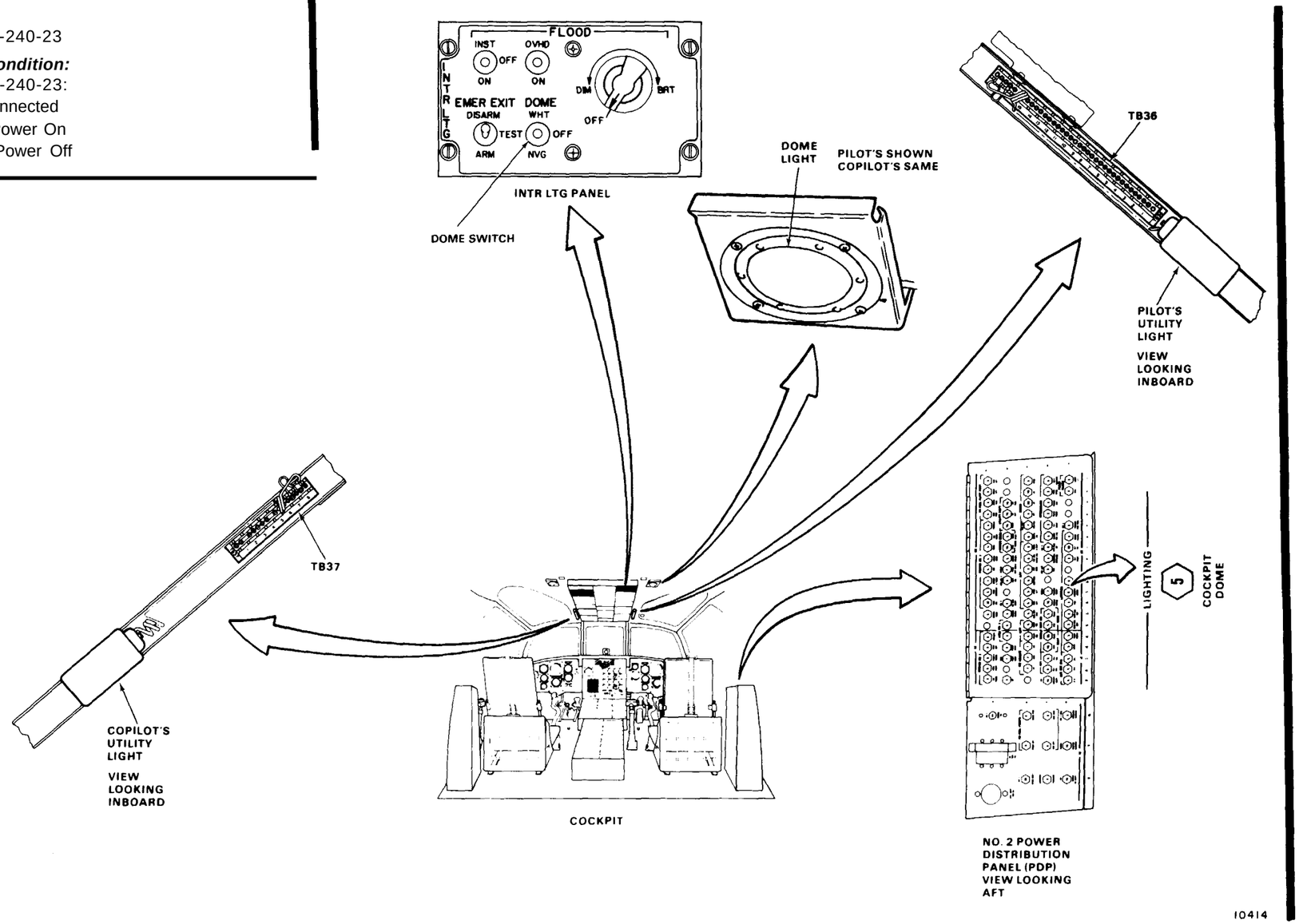
Tools:
Electrical Repairer's Tool Kit, NSN 5180-00-323-4915
Multimeter

Materials:
None

Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off



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9-14.10 COCKPIT DOME AND UTILITY LIGHTS OPERATIONAL CHECK

INITIAL SETUP

Applicable Configurations:
With 17

Tools:
None

Materials:
None

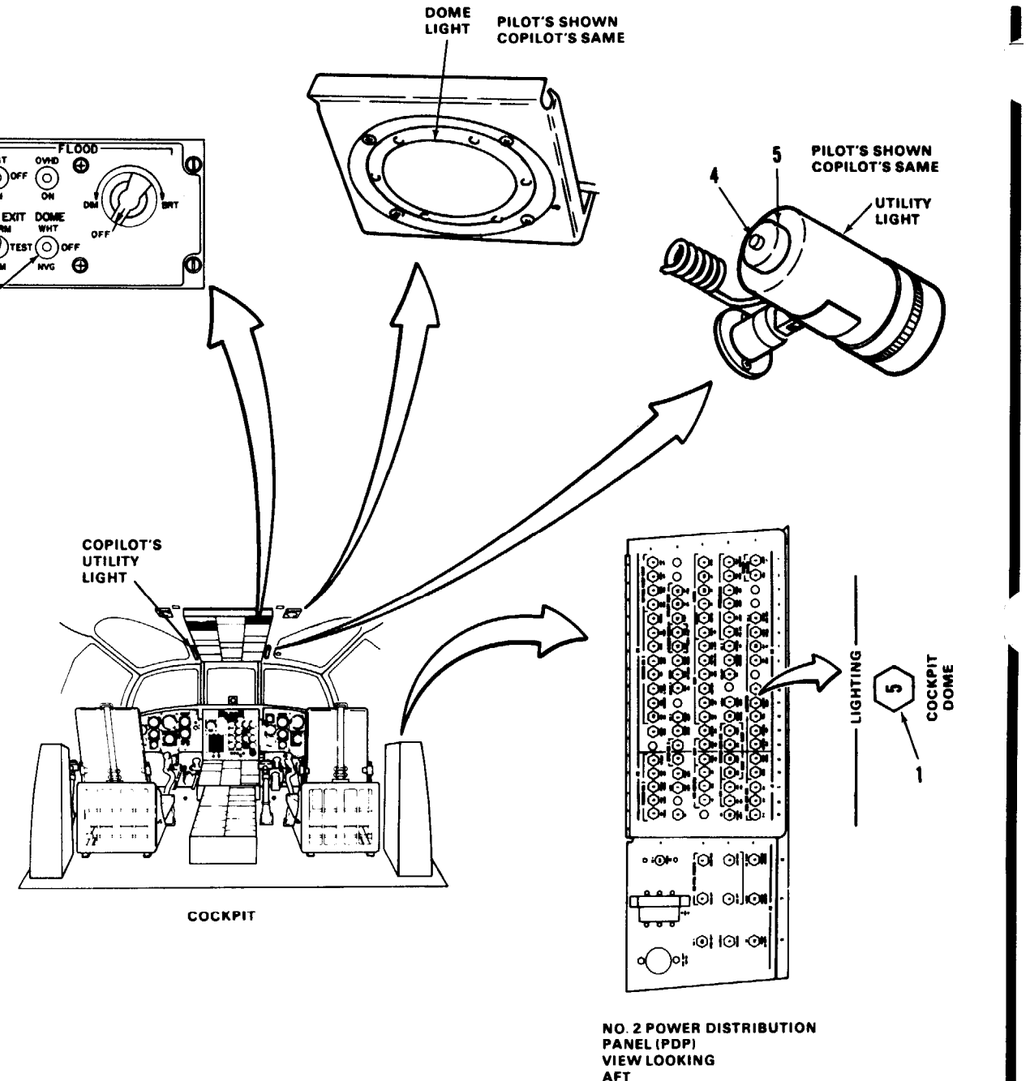
Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off
Cockpit Dome Utility Lights Visual Check Performed (Task 9-14.9)

TASK	RESULT
1. **Check that LIGHTING COCKPIT DOME circuit breaker (1)** is closed.	If COCKPIT DOME circuit breaker (1) is open, close it. If it opens again, go to task 9-14.11.
2. **Set DOME switch (2) to WHT.**	White light in both dome lights shall come on. If any dome light is not lit, go to task 9-14.12.
3. **Turn DOME switch (2) to OFF.**	Dome lights shall go out.
4. **Set DOME switch (2) to NVG.**	Blue light in both dome lights shall come on. If any dome light is not lit, go to task 9-14.13.
5. **Set DOME switch (2) to OFF.**	Dome lights shall go out.
6. **Remove pilot's utility light** from overhead panel bracket. **Press and release switch (4). Turn dimming control (5) through its range.**	Utility light shall blink when switch (4) is pressed and released. Utility light shall increase in brightness as dimming control (5) is turned. If utility light does not come on, go to task 9-14.14. If light comes on but does not increase in brightness, replace utility light.
7. Stow pilot's utility light.	
8. Perform steps 6 and 7 with copilot's utility light.	

FOLLOW-ON MAINTENANCE:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off



END OF TASK

9-14.9 COCKPIT DOME AND UTILITY LIGHTS VISUAL CHECK

INITIAL SETUP

Applicable Configurations:
With 17

Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915

Materials:
None

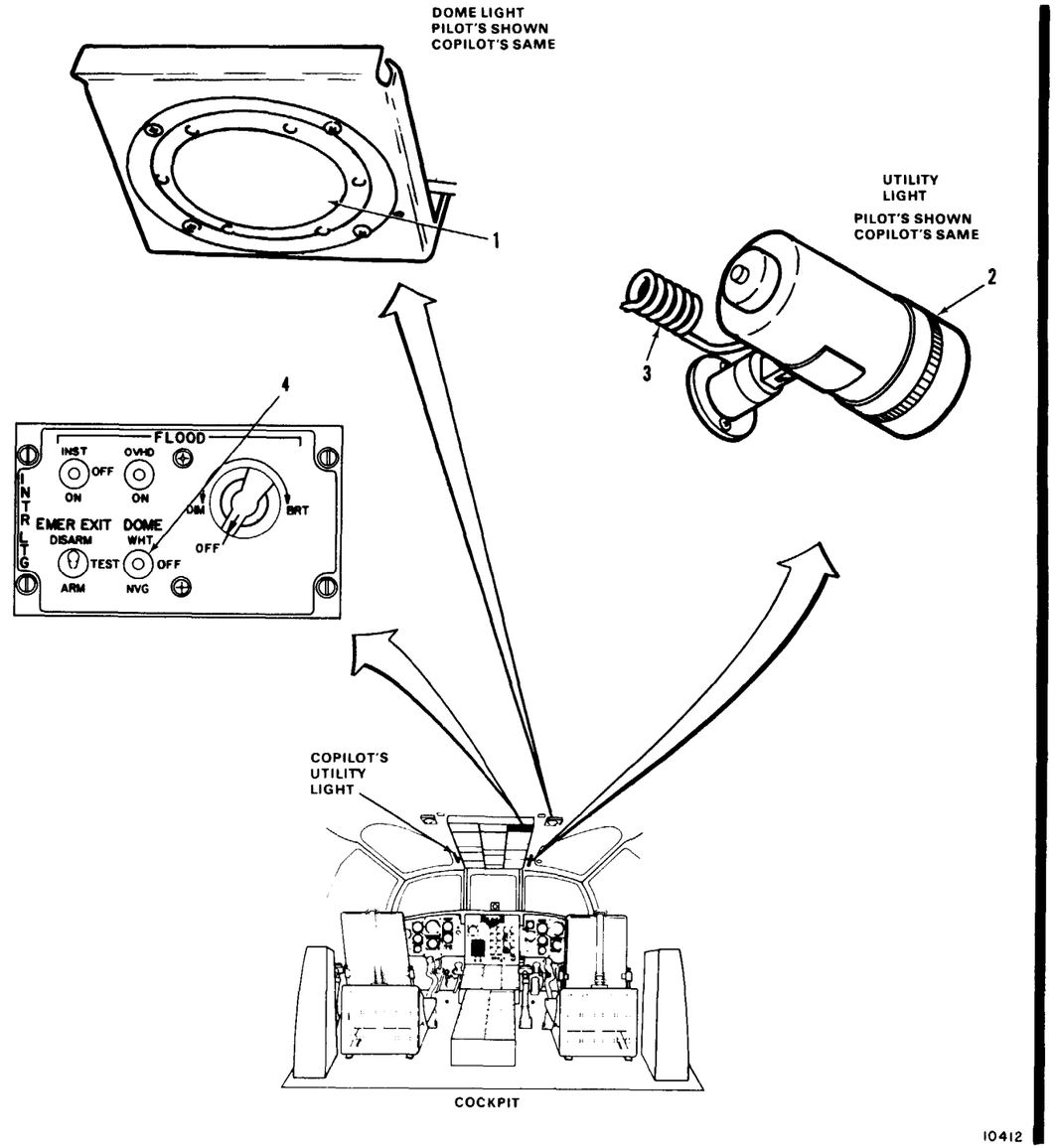
Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off

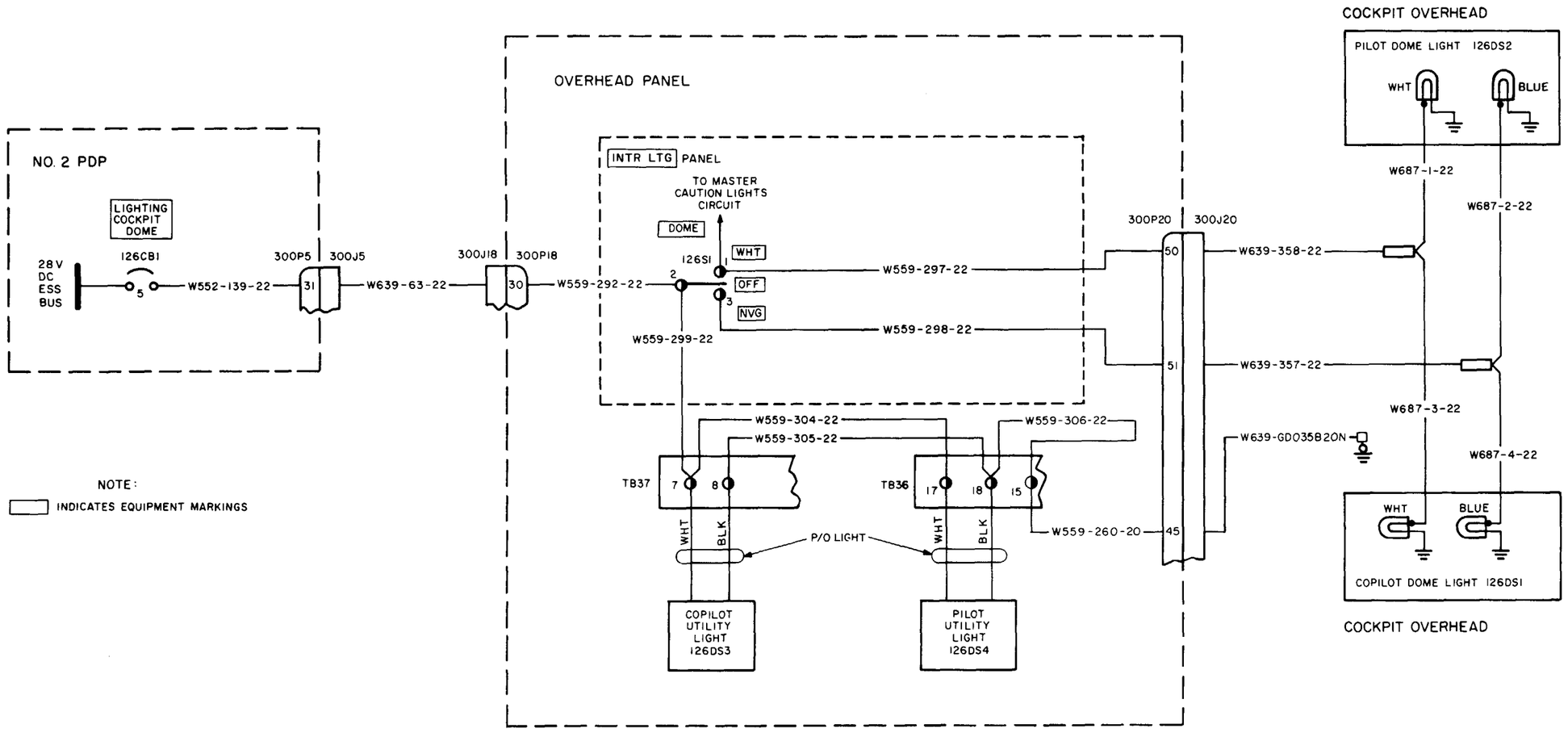
TASK	RESULT
1. Check pilot's dome light (1).	If light (1) is loose or damaged, tighten or replace it as required.
2. Repeat step 1 for copilot's dome light.	
3. Check pilot's utility light (2) and cord (3).	If light (2) is damaged, replace it. If light cord (3) is damaged, replace light.
4. Repeat step 3 for copilot's utility light and cord.	
5. Check DOME switch (4) on INTR LTG panel.	If switch (4) is loose or damaged, tighten or replace it as required.

FOLLOW-ON MAINTENANCE:
None



END OF TASK

9-14.8 COCKPIT DOME AND UTILITY LIGHTS WIRING DIAGRAM (WITH 17)



NOTE:

▭ INDICATES EQUIPMENT MARKINGS

126.100F 234.100A

10411

9-14.7 UTILITY LIGHT OR LIGHTS DO NOT COME ON 9-14.7

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
√Without 17

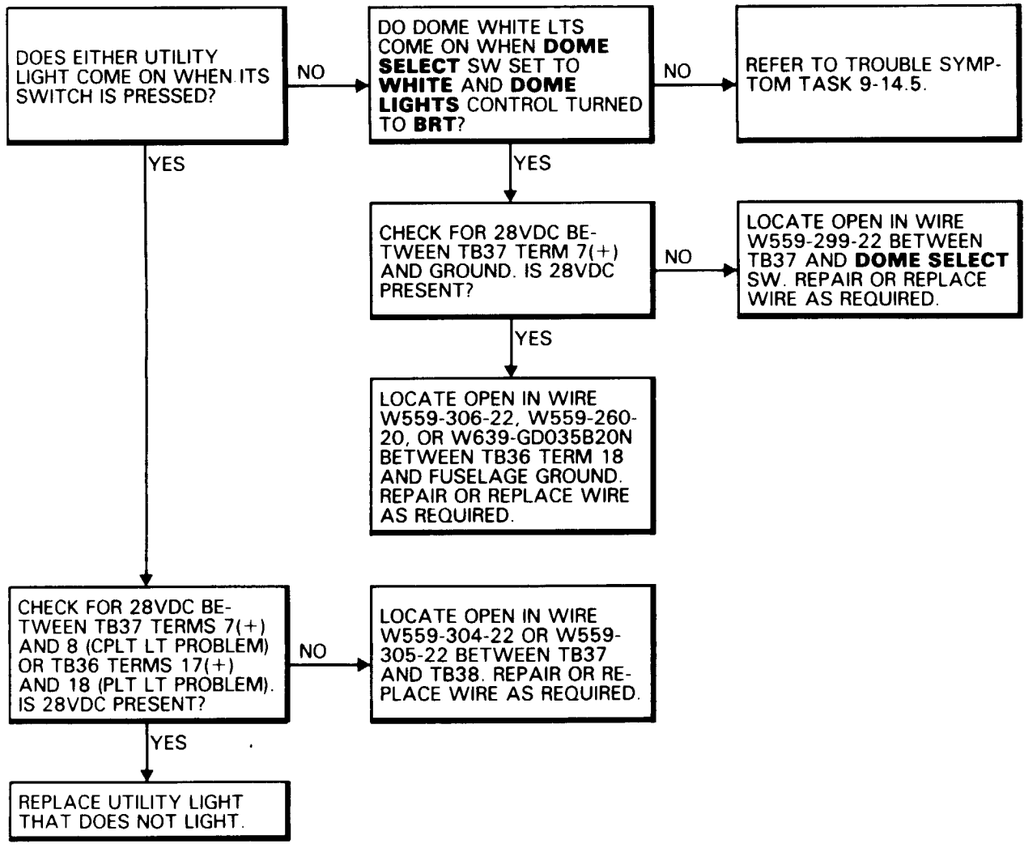
Tools:
Electrical Repairer's Tool Kit, NSN 5180-00-323-4915
Multimeter

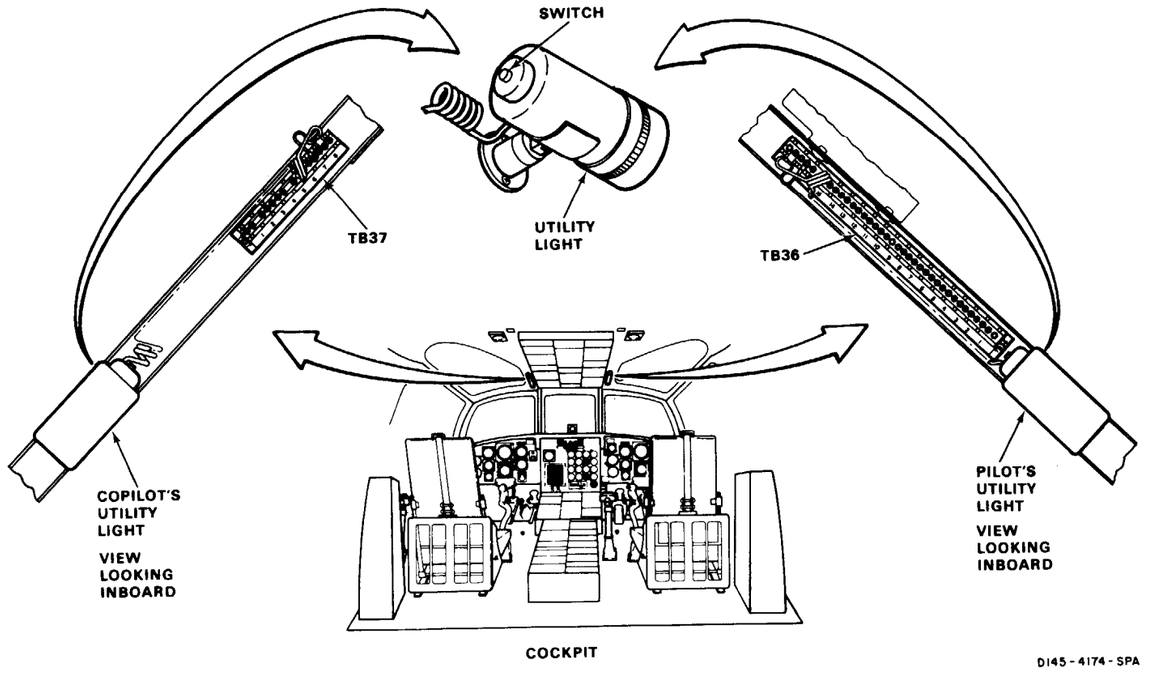
Materials:
None

Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

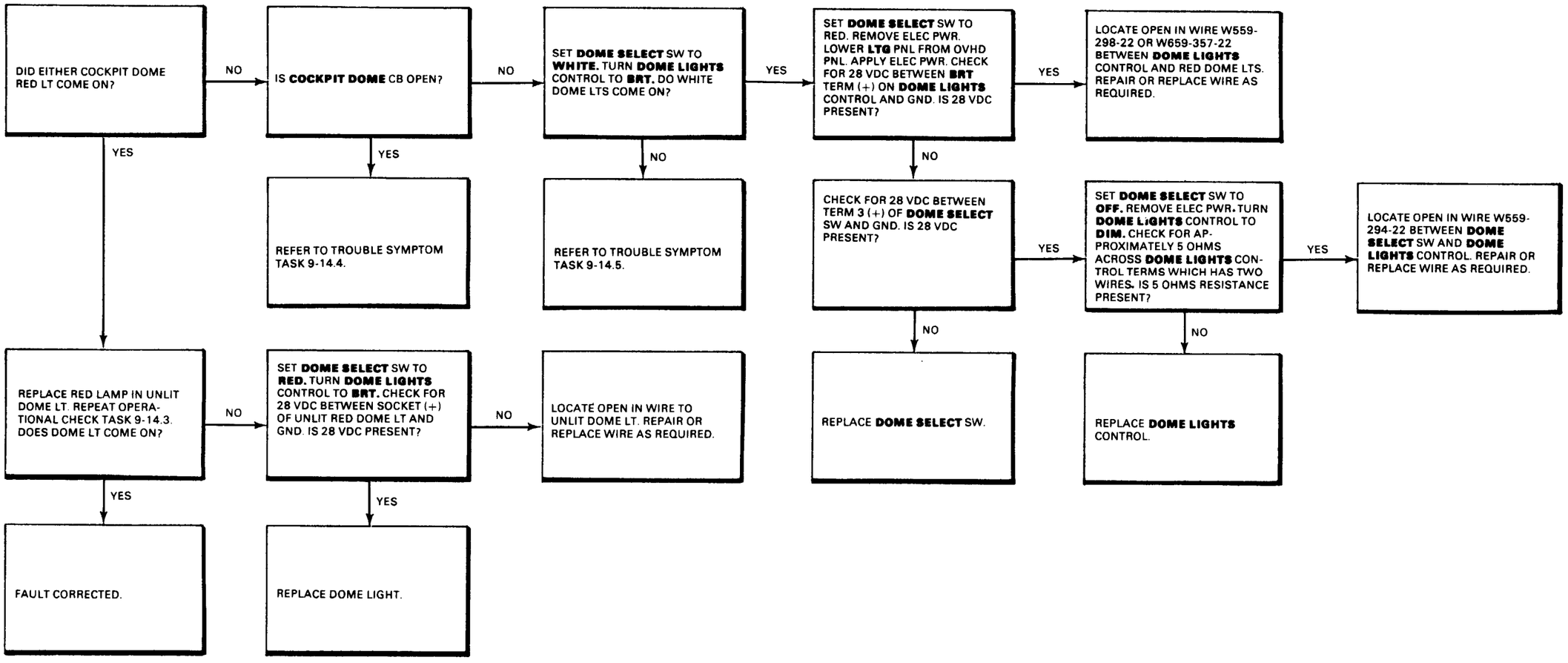
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off





END OF TASK

9-14.6 COCKPIT DOME RED LIGHT OR LIGHTS DO NOT COME ON (Continued)



END OF TASK

9-14.6 COCKPIT DOME RED LIGHT OR LIGHTS DO NOT COME ON

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
Without 17

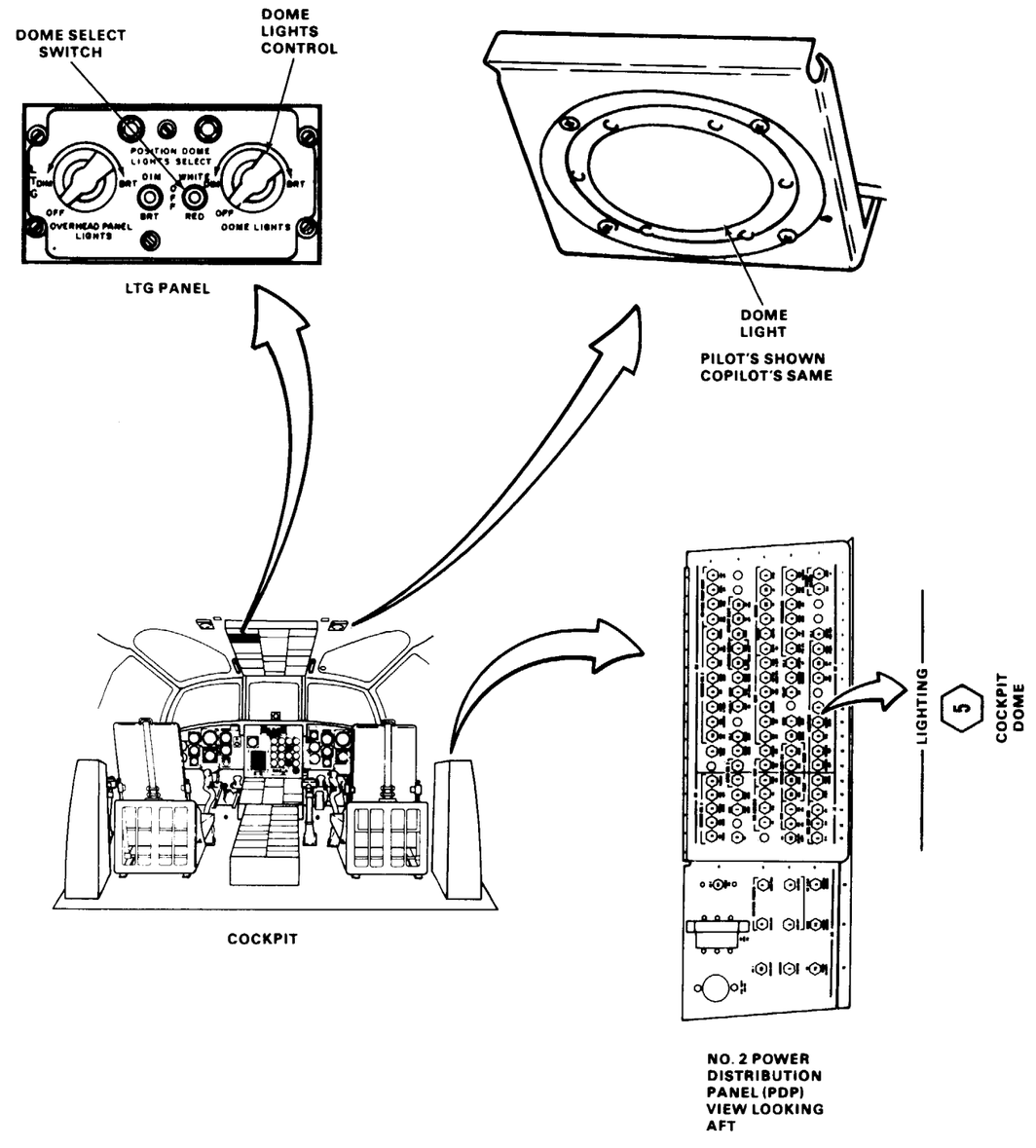
Tools:
Electrical Repairer's Tool Kit, NSN 5180-00-323-4915
Multimeter

Materials:
None

Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

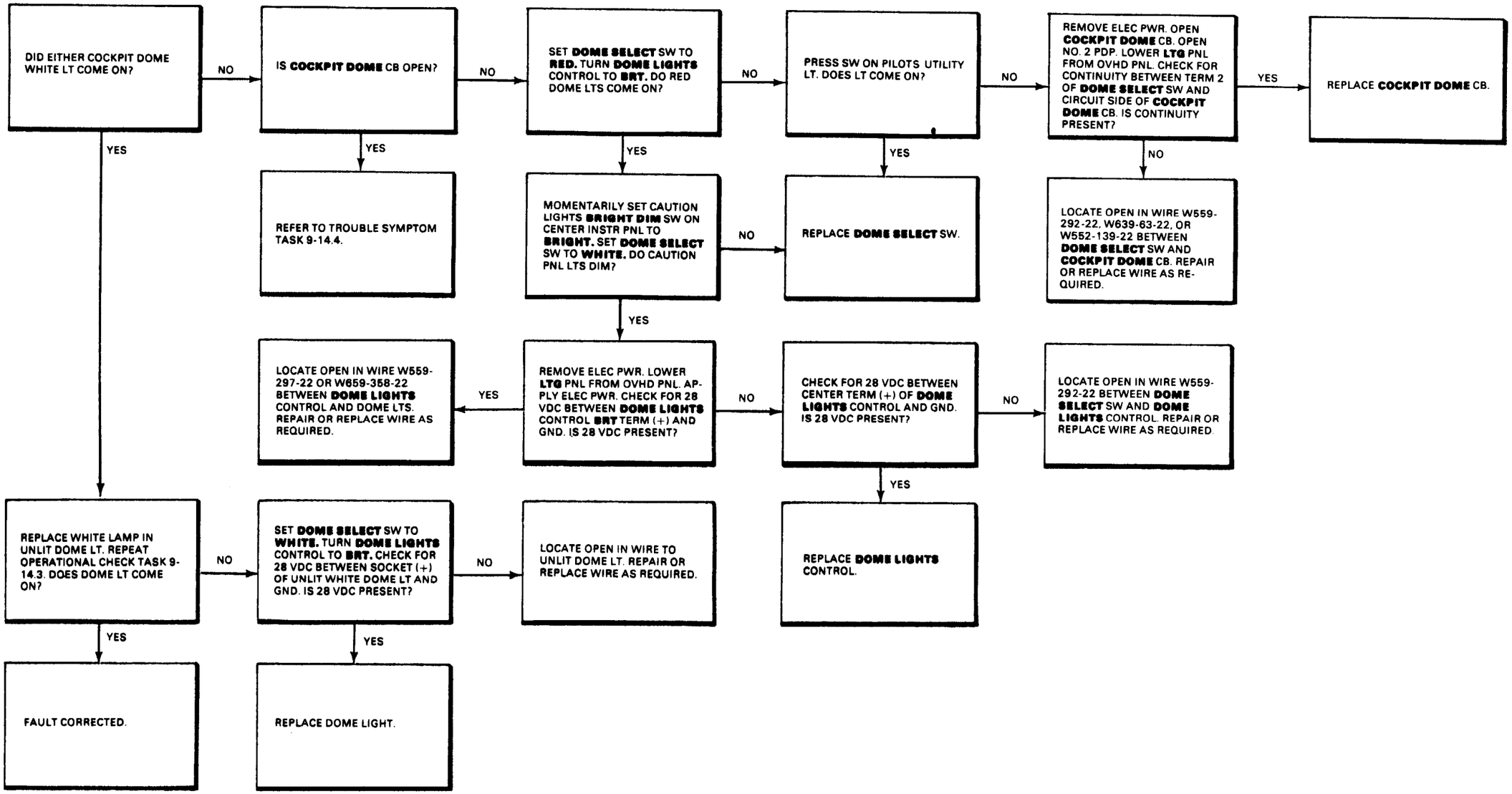
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off



D145-4173-SPA

GO TO NEXT PAGE

9-14.5 COCKPIT DOME WHITE LIGHT OR LIGHTS DO NOT COME ON (Continued)



END OF TASK

9-14.5 COCKPIT DOME WHITE LIGHT OR LIGHTS DO NOT COME ON

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
Without 17

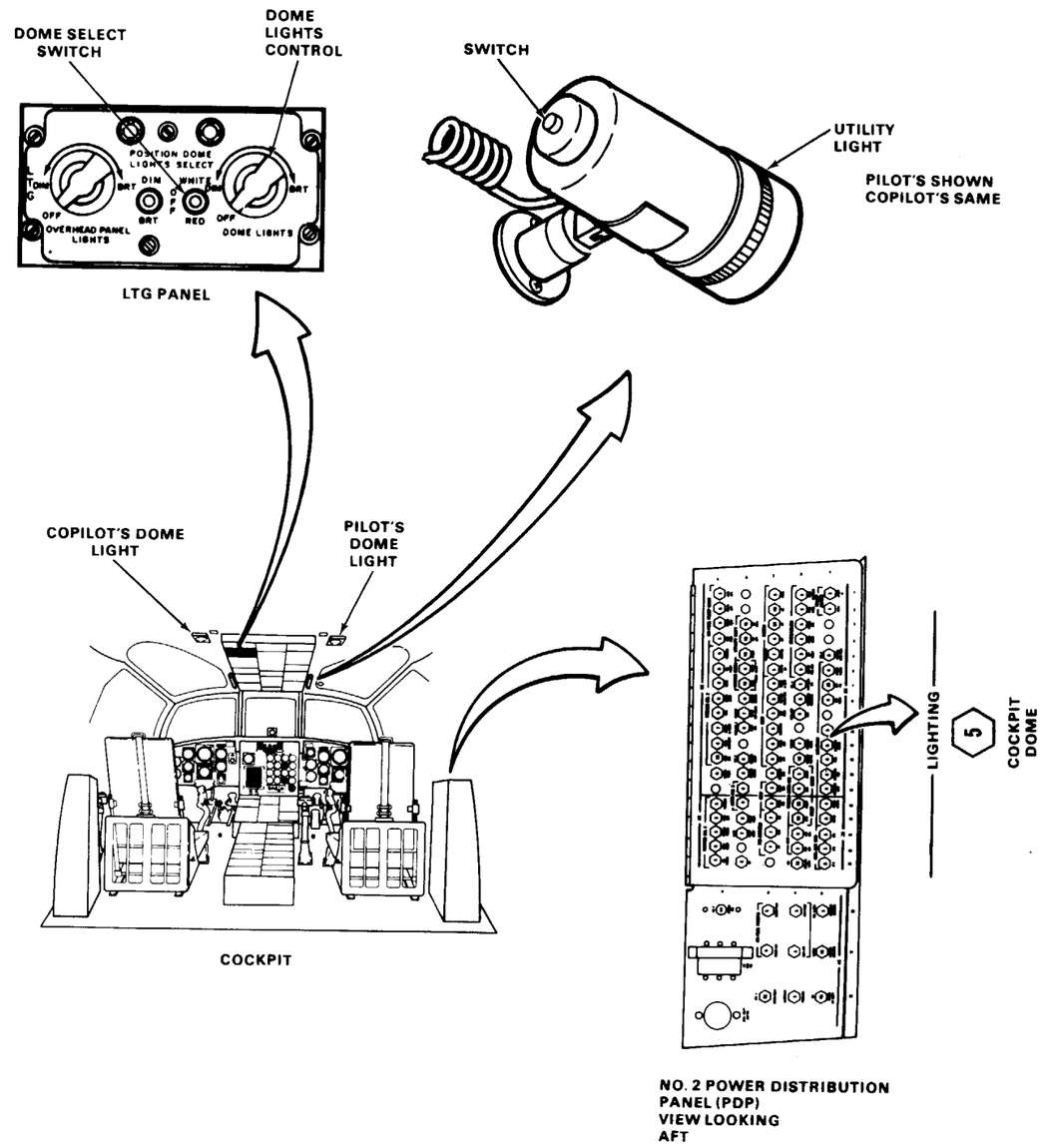
Tools:
Electrical Repairer's Tool Kit, NSN 5180-00-323-4915
Multimeter

Materials:
None

Personnel Required:
Aircraft Electrician

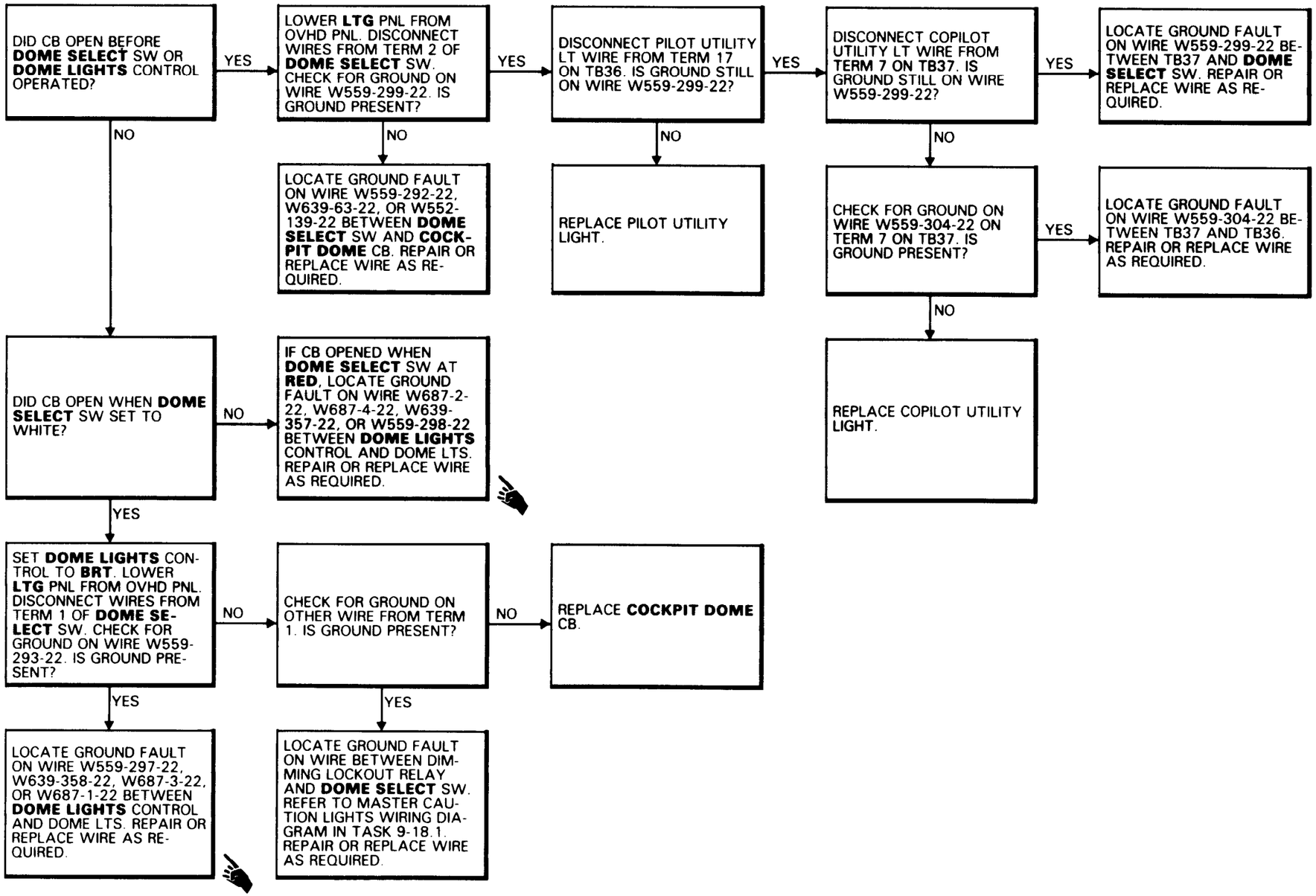
References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off



D145-4172-SPA

GO TO NEXT PAGE


DID CB OPEN BEFORE **DOME SELECT** SW OR **DOME LIGHTS** CONTROL OPERATED?
YES
LOWER **LTG** PNL FROM OVHD PNL. DISCONNECT WIRES FROM TERM 2 OF **DOME SELECT** SW. CHECK FOR GROUND ON WIRE W559-299-22. IS GROUND PRESENT?
YES
DISCONNECT PILOT UTILITY LT WIRE FROM TERM 17 ON TB36. IS GROUND STILL ON WIRE W559-299-22?
YES
DISCONNECT COPILOT UTILITY LT WIRE FROM TERM 7 ON TB37. IS GROUND STILL ON WIRE W559-299-22?
YES
LOCATE GROUND FAULT ON WIRE W559-299-22 BETWEEN TB37 AND **DOME SELECT** SW. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
LOCATE GROUND FAULT ON WIRE W559-292-22, W639-63-22, OR W552-139-22 BETWEEN **DOME SELECT** SW AND **COCKPIT DOME** CB. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
REPLACE PILOT UTILITY LIGHT.
NO
CHECK FOR GROUND ON WIRE W559-304-22 ON TERM 7 ON TB37. IS GROUND PRESENT?
YES
LOCATE GROUND FAULT ON WIRE W559-304-22 BETWEEN TB37 AND TB36. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
REPLACE COPILOT UTILITY LIGHT.
NO
DID CB OPEN WHEN **DOME SELECT** SW SET TO WHITE?
NO
IF CB OPENED WHEN **DOME SELECT** SW AT **RED**, LOCATE GROUND FAULT ON WIRE W687-2-22, W687-4-22, W639-357-22, OR W559-298-22 BETWEEN **DOME LIGHTS** CONTROL AND DOME LTS. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
SET **DOME LIGHTS** CONTROL TO **BRT**. LOWER **LTG** PNL FROM OVHD PNL. DISCONNECT WIRES FROM TERM 1 OF **DOME SELECT** SW. CHECK FOR GROUND ON WIRE W559-293-22. IS GROUND PRESENT?
NO
CHECK FOR GROUND ON OTHER WIRE FROM TERM 1. IS GROUND PRESENT?
NO
REPLACE **COCKPIT DOME** CB.
YES
LOCATE GROUND FAULT ON WIRE W559-297-22, W639-358-22, W687-3-22, OR W687-1-22 BETWEEN **DOME LIGHTS** CONTROL AND DOME LTS. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
LOCATE GROUND FAULT ON WIRE BETWEEN DIMMING LOCKOUT RELAY AND **DOME SELECT** SW. REFER TO MASTER CAUTION LIGHTS WIRING DIAGRAM IN TASK 9-18.1. REPAIR OR REPLACE WIRE AS REQUIRED.

END OF TASK

9-14.4 COCKPIT DOME CIRCUIT BREAKER DOES NOT STAY CLOSED

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
Vithout 17

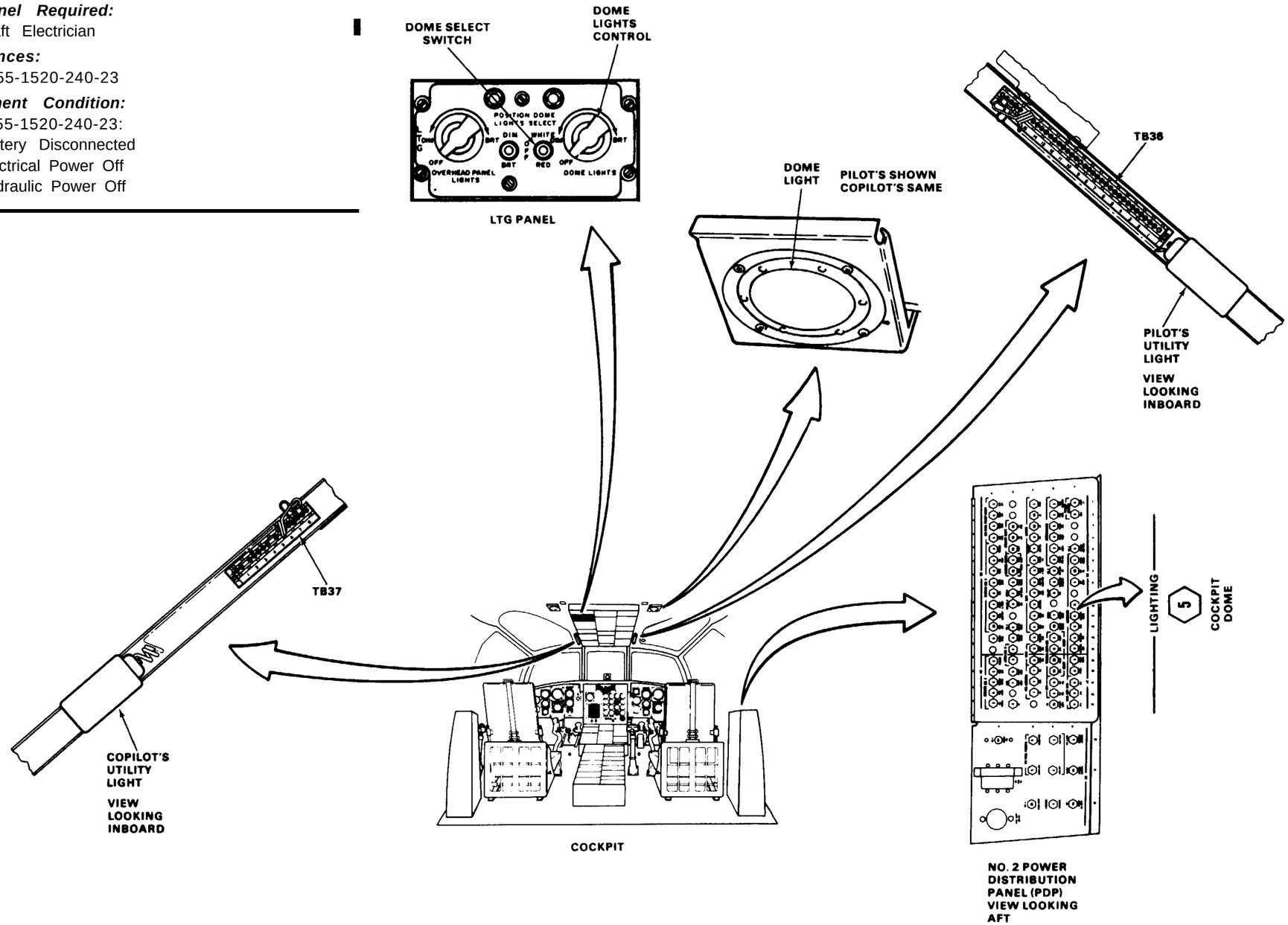
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:
None

Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off



D145-4171-SPA

GO TO NEXT PAGE

9-14.3 COCKPIT DOME AND UTILITY LIGHTS OPERATIONAL CHECK

INITIAL SETUP

Applicable Configurations:
Without 17

Tools:
None

Materials:
None

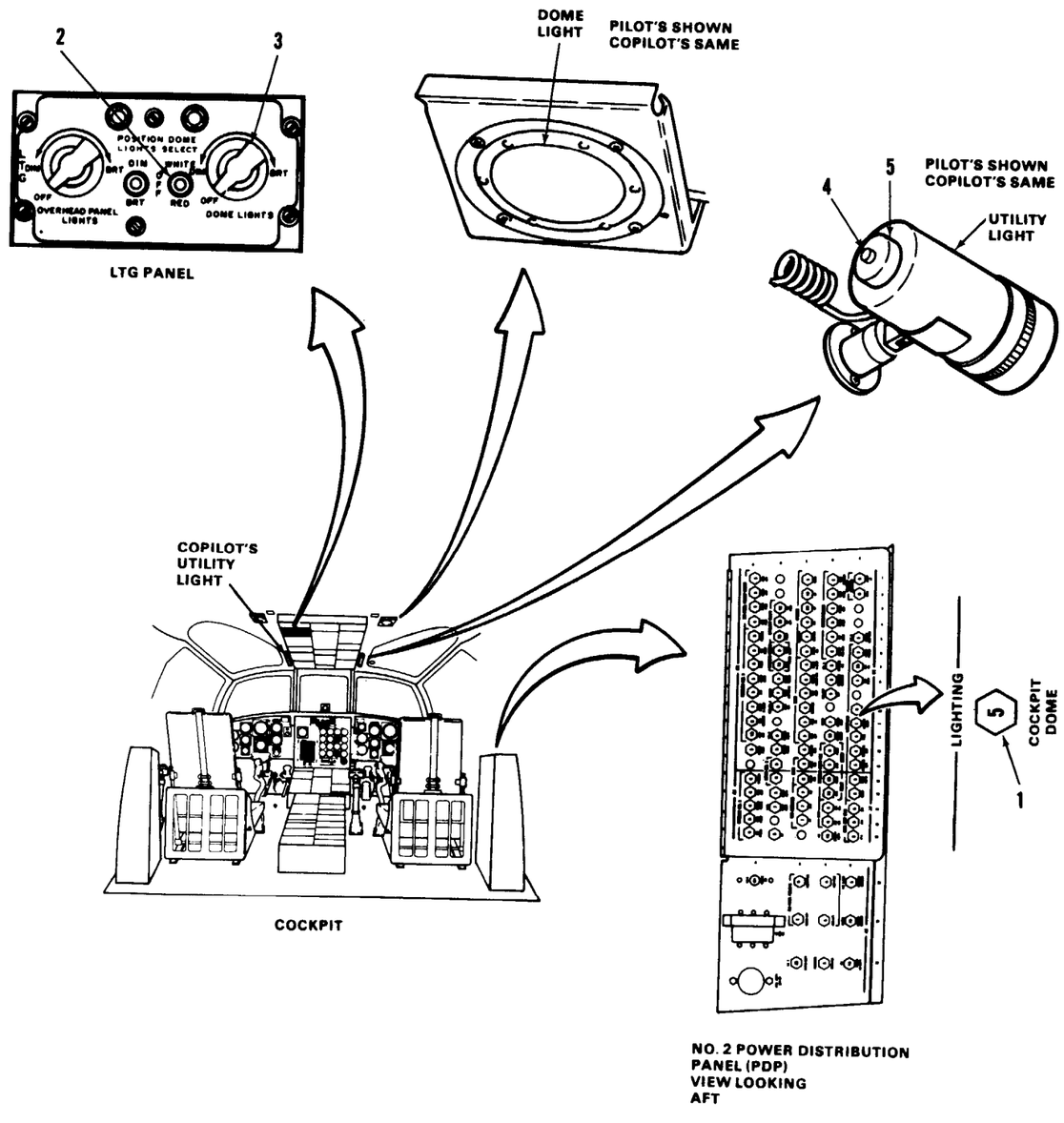
Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off
Cockpit Dome and Utility Lights Visual Check Performed (Task 9-14.2)

TASK	RESULT
1. **Check** that **LIGHTING COCKPIT DOME circuit breaker (1)** is closed.	If COCKPIT DOME circuit breaker (1) is open, close it. If it opens again, go to task 9-14.4.
2. **Set DOME SELECT switch (2) to WHITE. Turn DOME LIGHTS control (3) from OFF through DIM to BRT.**	White light in both dome lights shall come on and increase in brightness as control (3) is turned to BRT. If any dome light is not lit, go to task 9-14.5. If brightness does not increase, replace DOME LIGHTS control (3).
3. **Turn DOME LIGHTS control (3) to OFF.**	Dome lights shall go out. If lights are still on, replace DOME LIGHTS control (3).
4. **Set DOME SELECT switch (2) to RED. Turn DOME LIGHTS control (3) from OFF through DIM to BRT.**	Red light in both dome lights shall come on and increase in brightness as control (3) is turned to BRT. If any dome light is not lit, go to task 9-14.6. If brightness does not increase, replace DOME LIGHTS control (3).
5. **Turn DOME LIGHTS control (3) to OFF.**	Dome lights shall go out. If lights are still on, replace DOME LIGHTS control (3).
6. **Set DOME SELECT switch (2) to OFF.**	
7. **Remove pilot's utility light** from overhead panel bracket. **Press and release switch (4). Turn dimming control (5) through its range.**	Utility light shall blink when switch (4) is pressed and released. Utility light shall increase in brightness as dimming control (5) is turned. If utility light does not come on, go to task 9-14.7. If light comes on but does not increase in brightness, replace utility light.
8. Stow pilot's utility light.	
9. Perform steps 7 and 8 with copilot's utility light.	

FOLLOW-ON MAINTENANCE:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off



D145-4170-SPA

END OF TASK

9-14.2 COCKPIT DOME AND UTILITY LIGHTS VISUAL CHECK

INITIAL SETUP

Applicable Configurations:
Without 17

Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915

Materials:
None

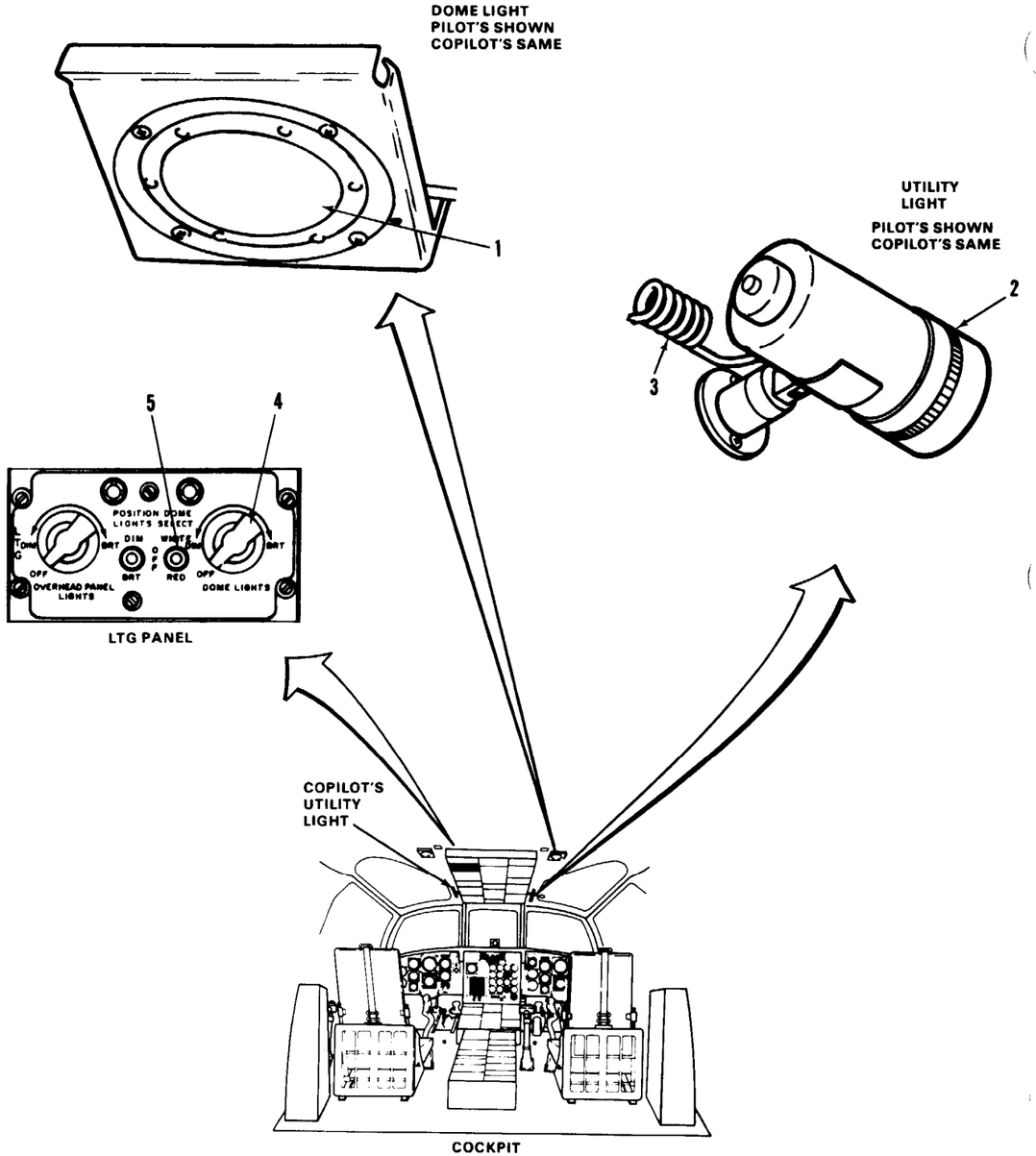
Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off

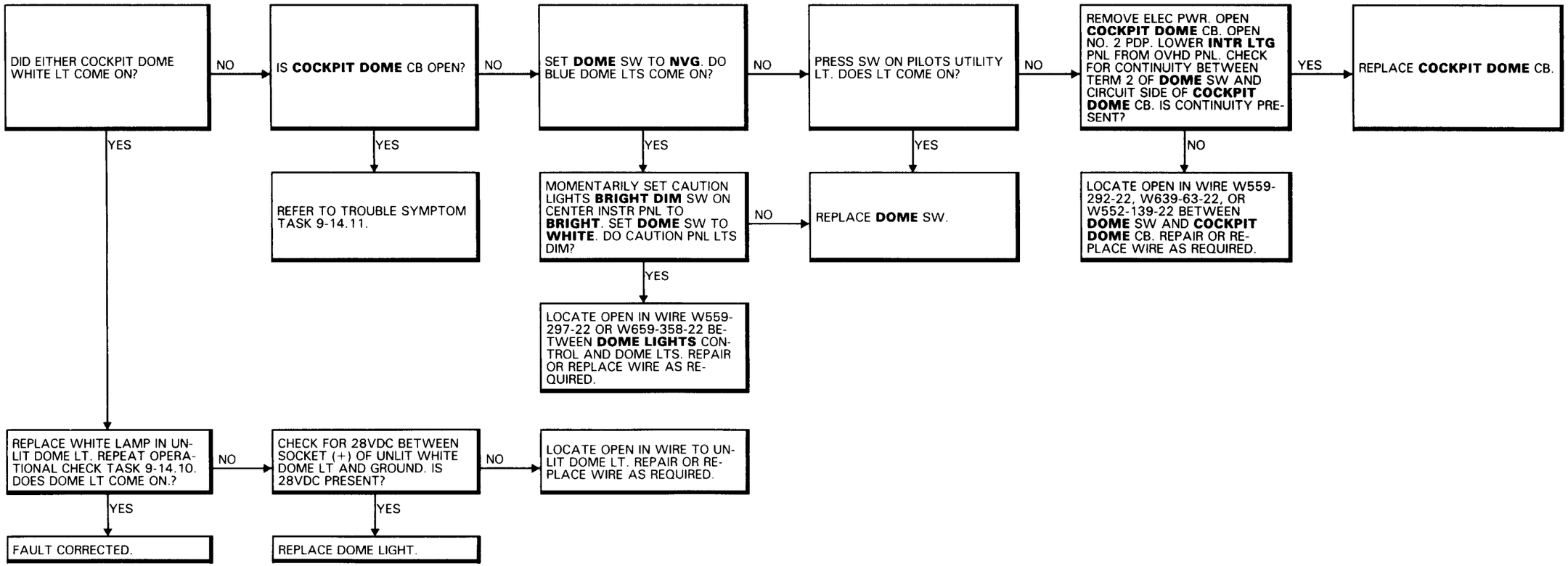
TASK	RESULT
1. **Check pilot's dome light (1).**	If light (1) is loose or damaged, tighten or replace it as required.
2. **Repeat step 1 for copilot's dome light.**	
3. **Check pilot's utility light (2) and cord (3).**	If light (2) is damaged, replace it. If light cord (3) is damaged, replace light.
4. **Repeat step 3 for copilot's utility light and cord.**	
5. **Check DOME LIGHTS control (4) and DOME SELECT switch (5) on LTG panel.**	If control (4) or switch (5) is loose or damaged, tighten or replace it as required.

FOLLOW-ON MAINTENANCE:
None



D145-4169-

END OF TASK


DID EITHER COCKPIT DOME WHITE LT COME ON?
NO
IS COCKPIT DOME CB OPEN?
NO
SET DOME SW TO NVG. DO BLUE DOME LTS COME ON?
NO
PRESS SW ON PILOTS UTILITY LT. DOES LT COME ON?
NO
REMOVE ELEC PWR. OPEN COCKPIT DOME CB. OPEN NO. 2 PDP. LOWER INTR LTG PNL FROM OVHD PNL. CHECK FOR CONTINUITY BETWEEN TERM 2 OF DOME SW AND CIRCUIT SIDE OF COCKPIT DOME CB. IS CONTINUITY PRESENT?
YES
REPLACE COCKPIT DOME CB.
YES
REFER TO TROUBLE SYMPTOM TASK 9-14.11.
YES
MOMENTARILY SET CAUTION LIGHTS BRIGHT DIM SW ON CENTER INSTR PNL TO BRIGHT. SET DOME SW TO WHITE. DO CAUTION PNL LTS DIM?
NO
REPLACE DOME SW.
YES
LOCATE OPEN IN WIRE W559-297-22 OR W659-358-22 BETWEEN DOME LIGHTS CONTROL AND DOME LTS. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
LOCATE OPEN IN WIRE W559-292-22, W639-63-22, OR W552-139-22 BETWEEN DOME SW AND COCKPIT DOME CB. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
REPLACE WHITE LAMP IN UNLIT DOME LT. REPEAT OPERATIONAL CHECK TASK 9-14.10. DOES DOME LT COME ON.?
NO
CHECK FOR 28VDC BETWEEN SOCKET (+) OF UNLIT WHITE DOME LT AND GROUND. IS 28VDC PRESENT?
NO
LOCATE OPEN IN WIRE TO UNLIT DOME LT. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
FAULT CORRECTED.
YES
REPLACE DOME LIGHT.

END OF TASK

9-14.13 COCKPIT DOME NVG LIGHT OR LIGHTS DO NOT COME ON 9-14.13

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
With 17

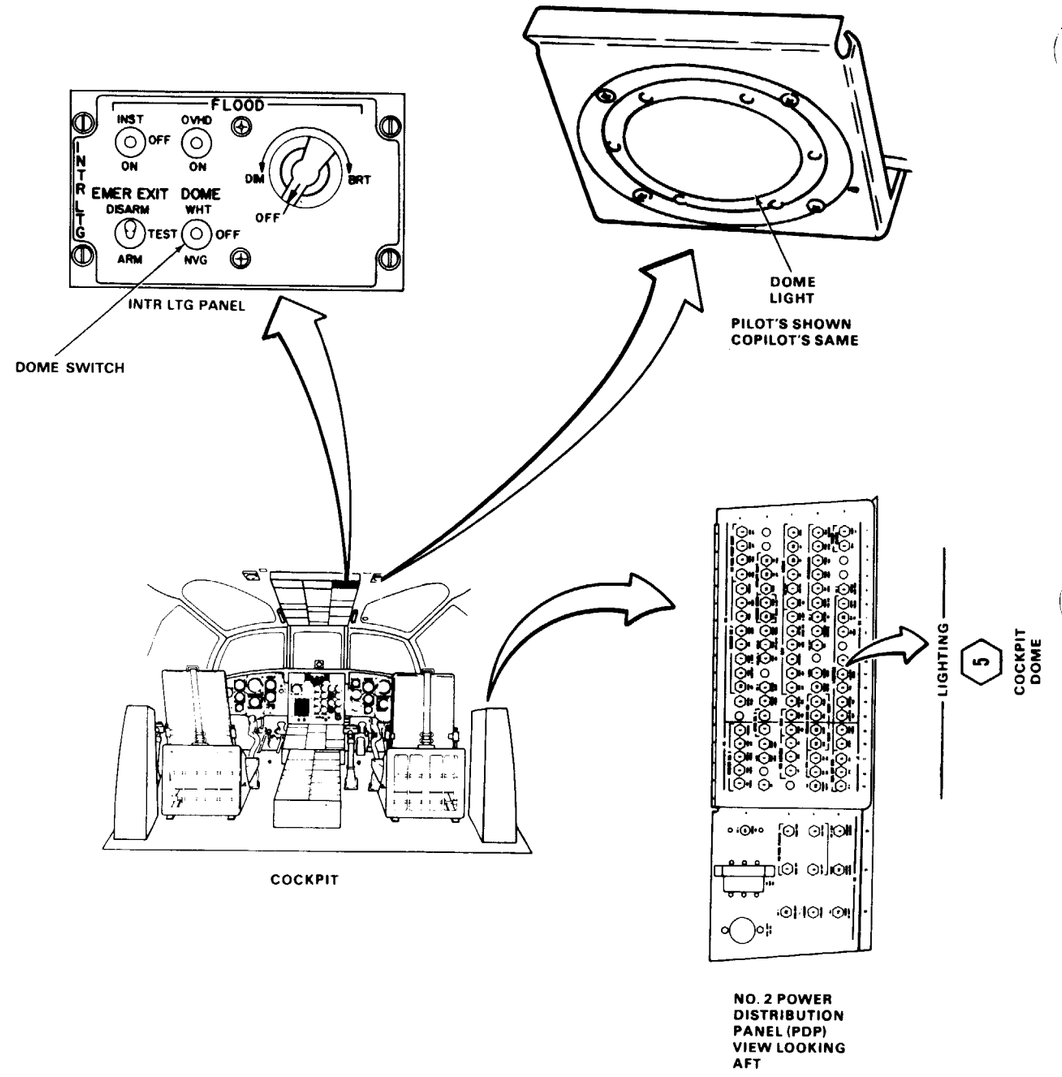
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:
None

Personnel Required:
Aircraft Electrician

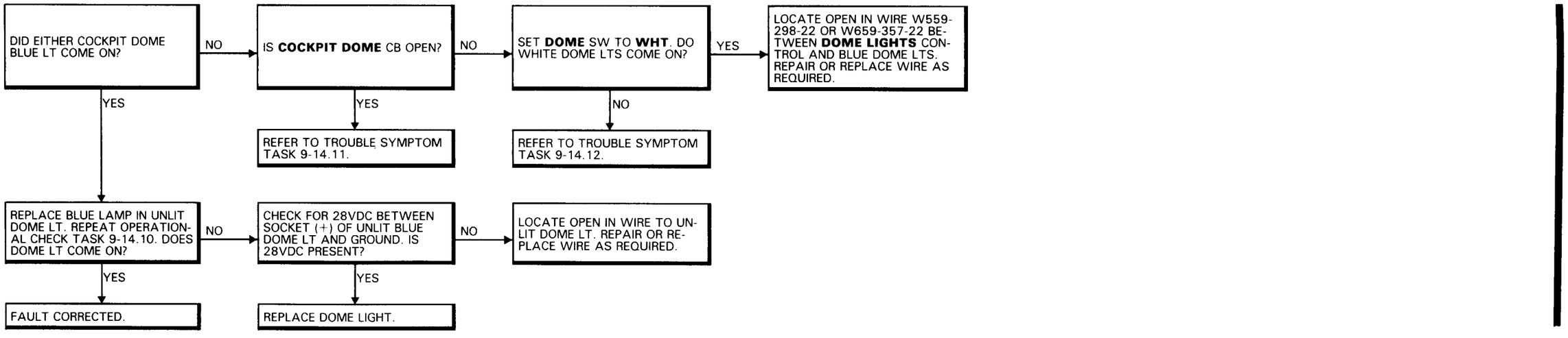
References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off



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GO TO NEXT PAGE


DID EITHER COCKPIT DOME BLUE LT COME ON?
NO
IS **COCKPIT DOME** CB OPEN?
NO
SET **DOME** SW TO **WHT**. DO WHITE DOME LTS COME ON?
YES
LOCATE OPEN IN WIRE W559-298-22 OR W659-357-22 BETWEEN **DOME LIGHTS** CONTROL AND BLUE DOME LTS. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
YES
NO
REFER TO TROUBLE SYMPTOM TASK 9-14.11.
REFER TO TROUBLE SYMPTOM TASK 9-14.12.
REPLACE BLUE LAMP IN UNLIT DOME LT. REPEAT OPERATIONAL CHECK TASK 9-14.10. DOES DOME LT COME ON?
NO
CHECK FOR 28VDC BETWEEN SOCKET (+) OF UNLIT BLUE DOME LT AND GROUND. IS 28VDC PRESENT?
NO
LOCATE OPEN IN WIRE TO UNLIT DOME LT. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
YES
FAULT CORRECTED.
REPLACE DOME LIGHT.

END OF TASK

9-14.14 UTILITY LIGHT OR LIGHTS DO NOT COME ON

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
With 17

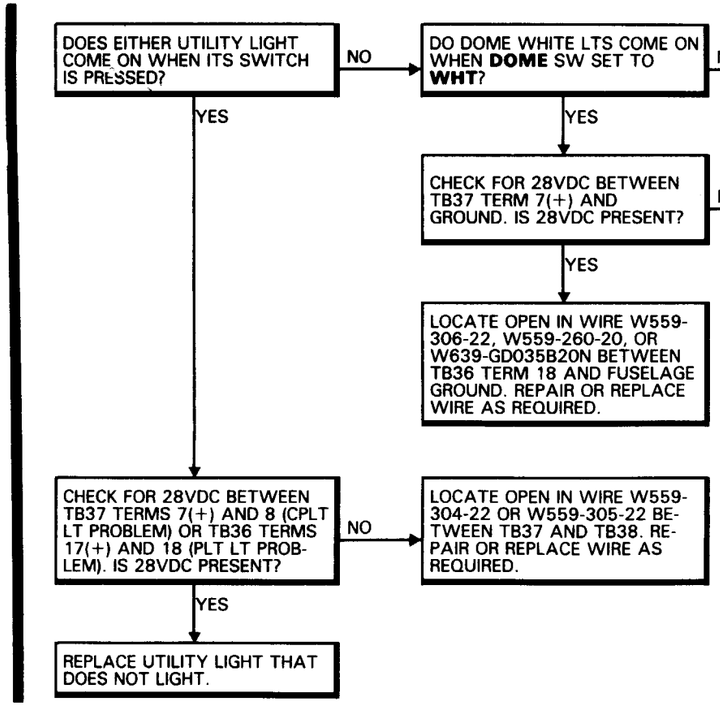
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

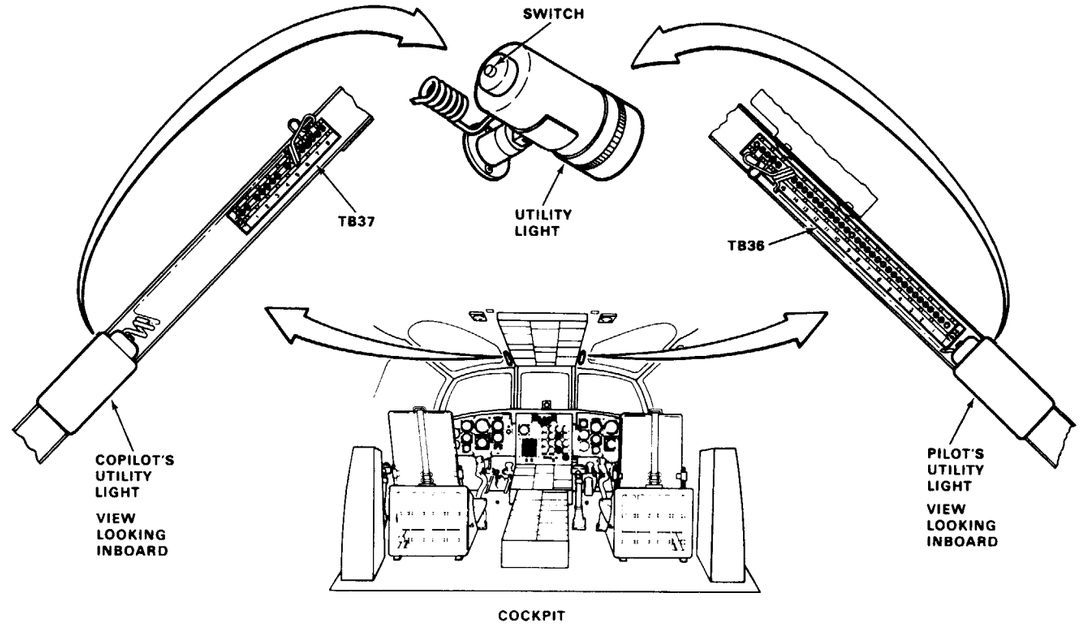
Materials:
None

Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off

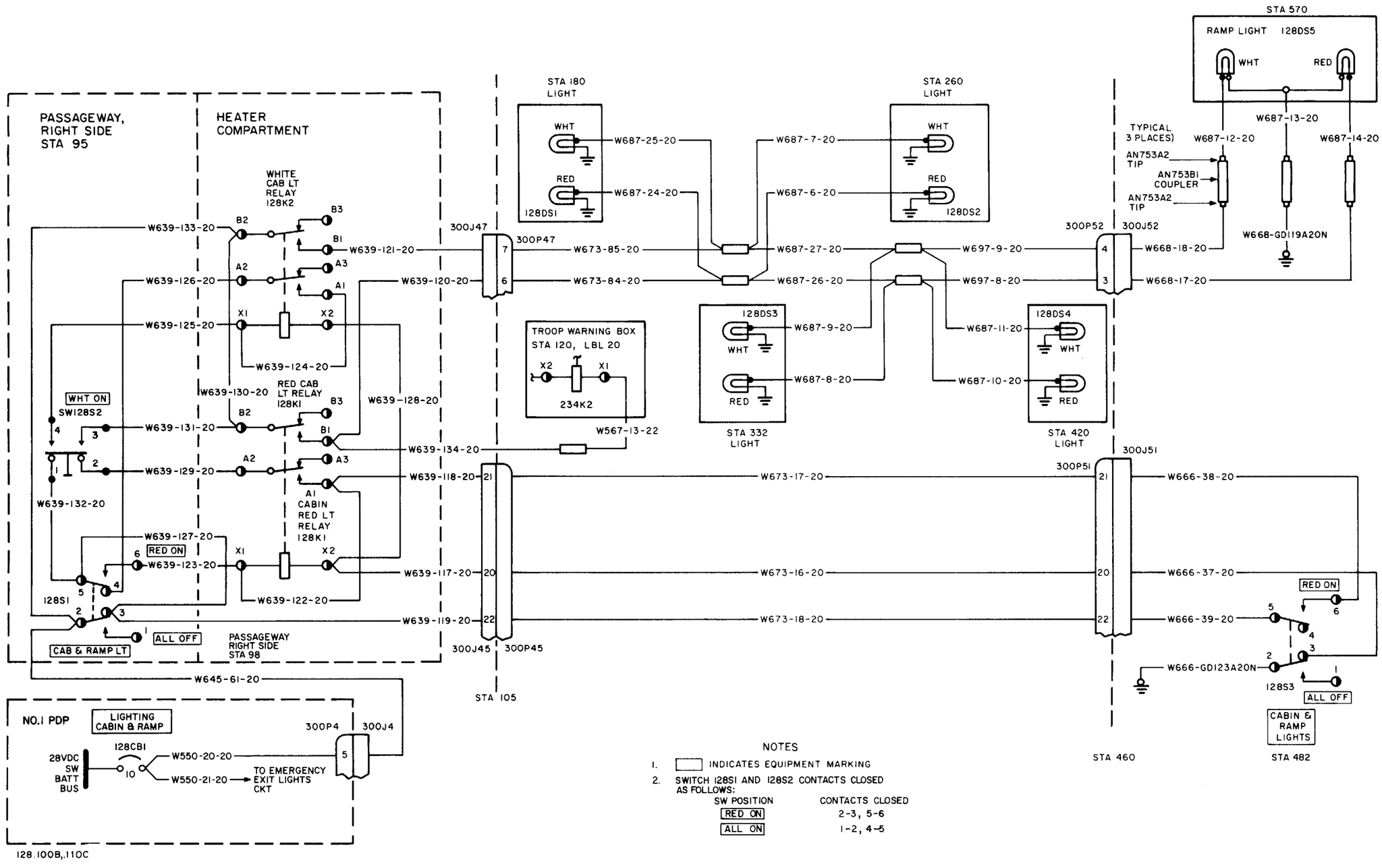




10417

END OF TASK

9-15 CABIN AND RAMP LIGHTS



NOTES

1. [ ] INDICATES EQUIPMENT MARKING
2. SWITCH 128S1 AND 128S2 CONTACTS CLOSED AS FOLLOWS:

SW POSITION	CONTACTS CLOSED
[RED ON]	2-3, 5-6
[ALL ON]	1-2, 4-5

9-15.2 CABIN AND RAMP LIGHTS VISUAL CHECK

INITIAL SETUP

Applicable Configurations:
Without 17

Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915

Materials:
None

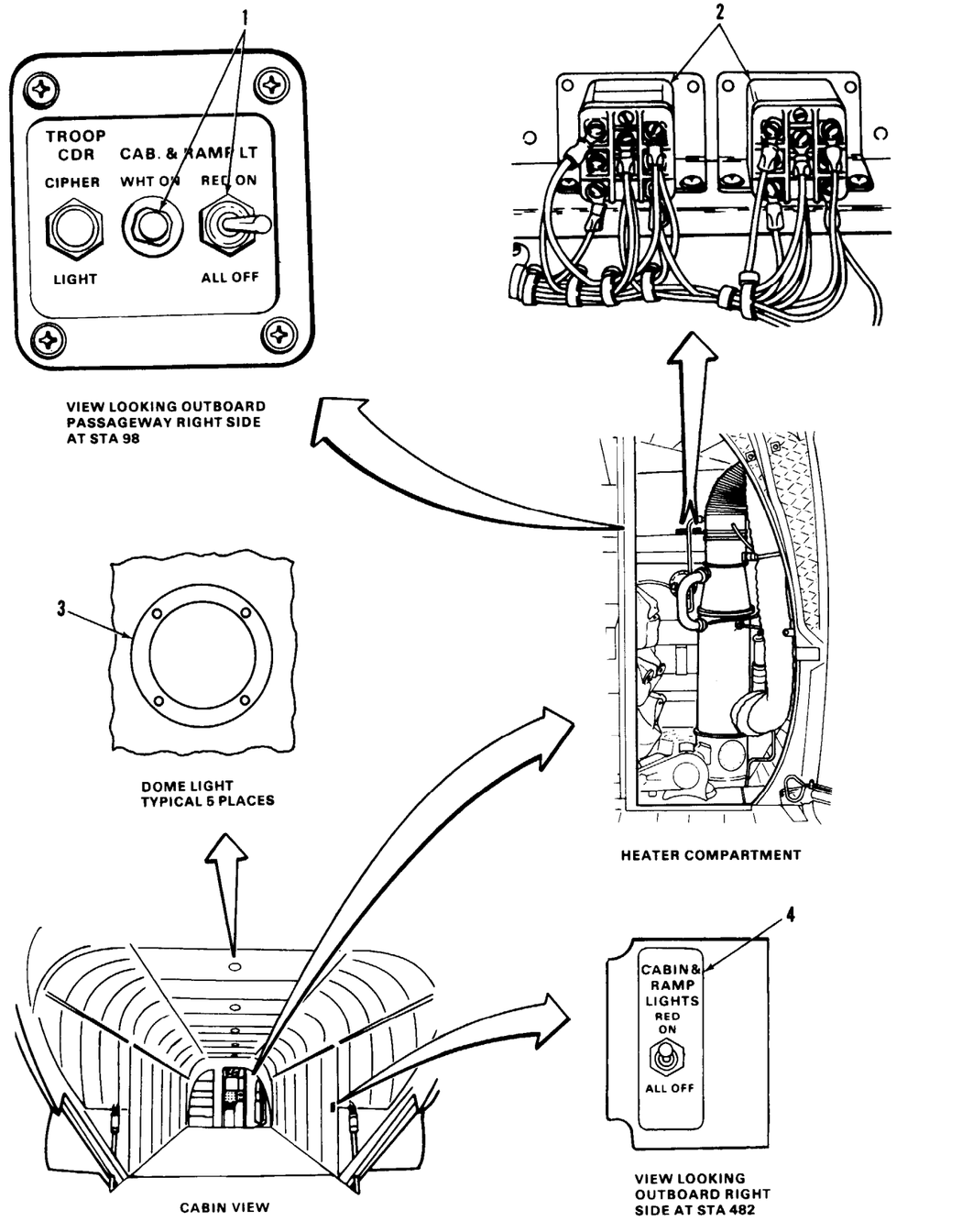
Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off
Heater Compartment Acoustic Blanket Removed

TASK	RESULT
1. **Check two CAB & RAMP LT switches (1).**	If either switch (1) is loose or damaged, tighten or replace it as required.
2. **Check two relays (2) and back of switches (1).**	If either relay (2) or switch (1) is loose or damaged, tighten or replace it as required. If wiring is loose or damaged, tighten, repair, or replace it as required.
3. **Check ramp dome and four cabin dome lights (3).**	If any dome light (3) is loose or damaged, tighten or replace it as required.
4. **Check CABIN & RAMP LIGHTS switch (4).**	If switch (4) is loose or damaged, tighten or replace it as required. If wiring is loose or damaged, tighten, repair, or replace it as required.

FOLLOW-ON MAINTENANCE:
TM 55-1520-240-23:
Install Heater Compartment Acoustic Blanket



D145-4237-SPA

END OF TASK

9-15.3 CABIN AND RAMP LIGHTS OPERATIONAL CHECK 9-15.3

INITIAL SETUP

Applicable Configurations:
Without 17

Tools:
None

Materials:
None

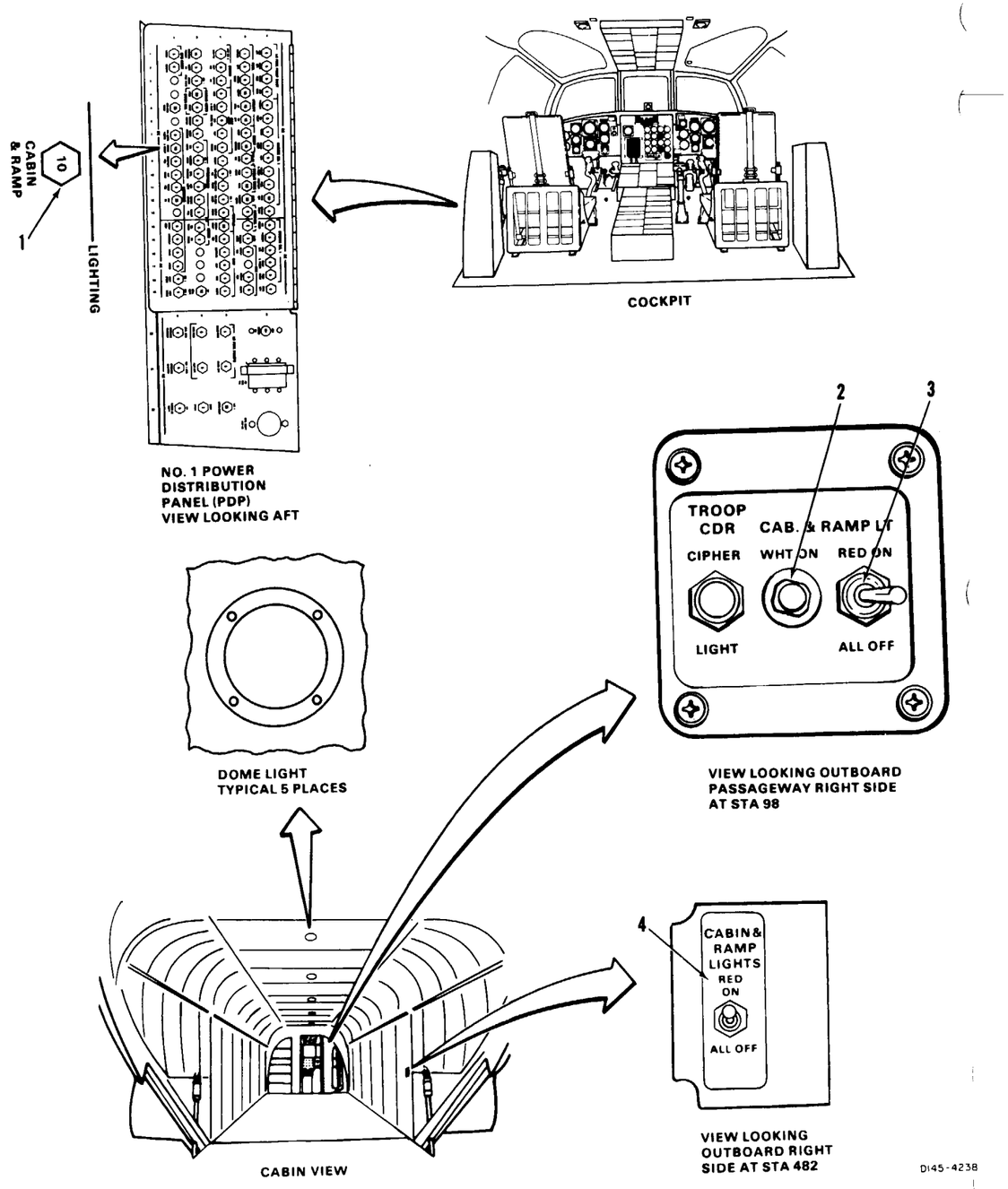
Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off
Visual Check of Cabin and Ramp Lights Performed (Task 9-15.2)

TASK	RESULT
1. **Check that LIGHTING CABIN & RAMP circuit breaker (1) is closed.**	If CABIN & RAMP circuit breaker (1) is open, close it. If it opens again, go to task 9-15.4.
2. **Press and release CAB & RAMP LT WHT ON pushbutton (2).**	All five dome white lights shall come on. If any light is not lit, go to task 9-15.5.
3. **Momentarily set CAB & RAMP LT switch (3) to ALL OFF.**	All dome white lights shall go out. If lights do not go out, go to task 9-15.6.
4. **Momentarily set CAB & RAMP LT switch (3) to RED ON.**	All five dome red lights shall come on. If any light is not lit, go to task 9-15.7.
5. **Press and release CAB & RAMP LT WHT ON pushbutton (2).**	All dome red lights shall go out and all dome white lights shall come on. If both red and white dome lights are lit, locate and repair shorted wiring between WHT ON switch (2) and cabin red light relay.
6. **Momentarily set CABIN & RAMP LIGHTS switch (4) to ALL OFF.**	All dome white lights shall go out. If lights do not go out, go to task 9-15.8.
7. **Momentarily set CABIN & RAMP LIGHTS switch (4) to RED ON.**	All dome red lights shall come on. If lights are not lit, go to task 9-15.9.
8. **Momentarily set CABIN & RAMP LIGHTS switch (4) to ALL OFF.**	All dome red lights shall go out. If lights do not go out, go to task 9-15.8.

FOLLOW-ON MAINTENANCE:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off



END OF TASK

9-15.4 CABIN & RAMP CIRCUIT BREAKER DOES NOT STAY CLOSED

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
Without 17

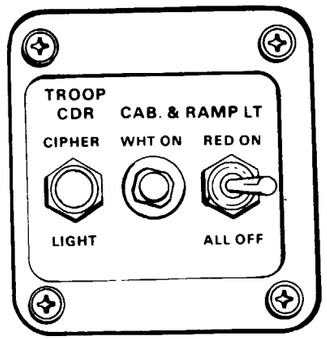
Tools:
Electrical Repairer's Tool Kit, NSN 5180-00-323-4915
Multimeter

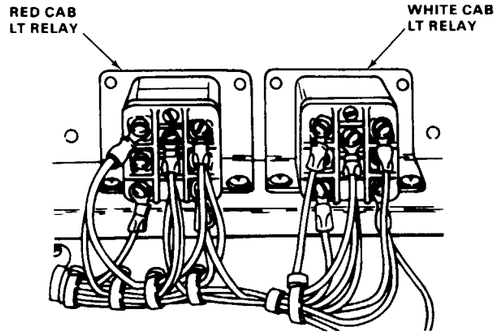
Materials:
None

Personnel Required:
Aircraft Electrician

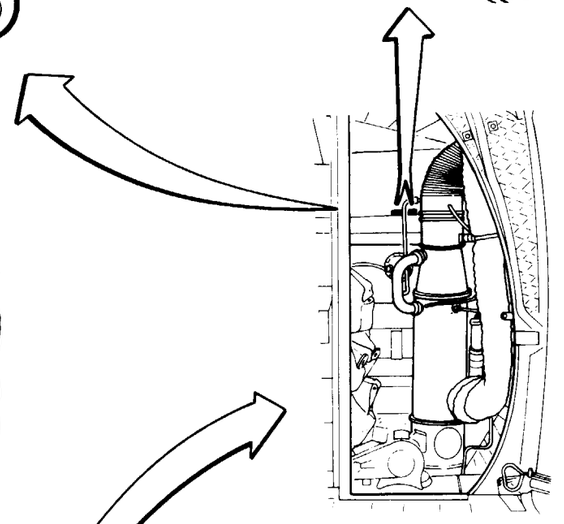
References:
TM 55-1520-240-23

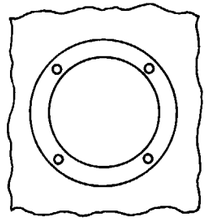
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off
Heater Compartment Acoustic Blanket Removed





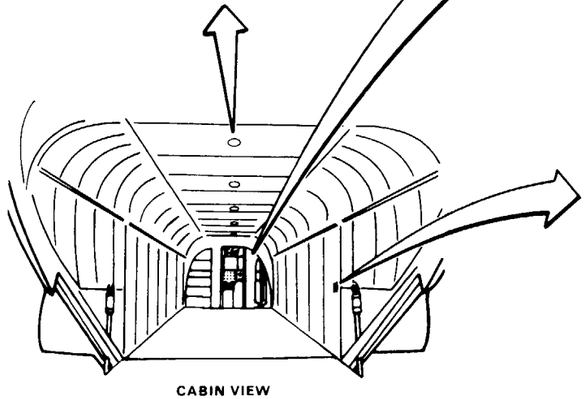
VIEW LOOKING OUTBOARD
PASSAGEWAY RIGHT SIDE
AT STA 98



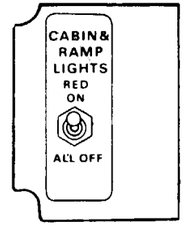


DOME LIGHT
TYPICAL 5 PLACES

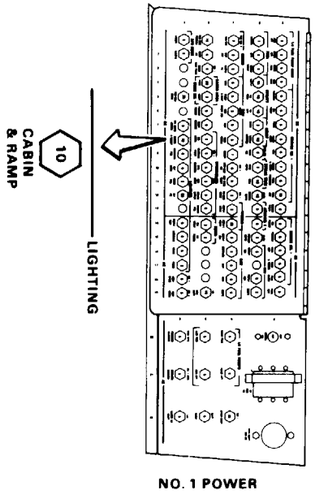
HEATER COMPARTMENT



CABIN VIEW

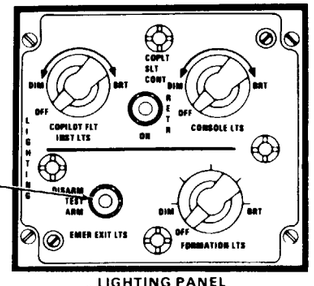


VIEW LOOKING
OUTBOARD RIGHT
SIDE AT STA 482

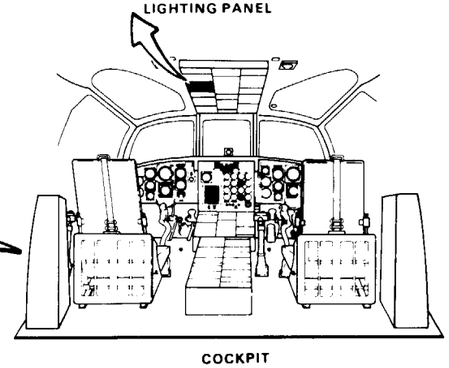


NO. 1 POWER
DISTRIBUTION
PANEL (PDP)
VIEW LOOKING AFT

EMER
EXIT
LTS
SWITCH



LIGHTING PANEL

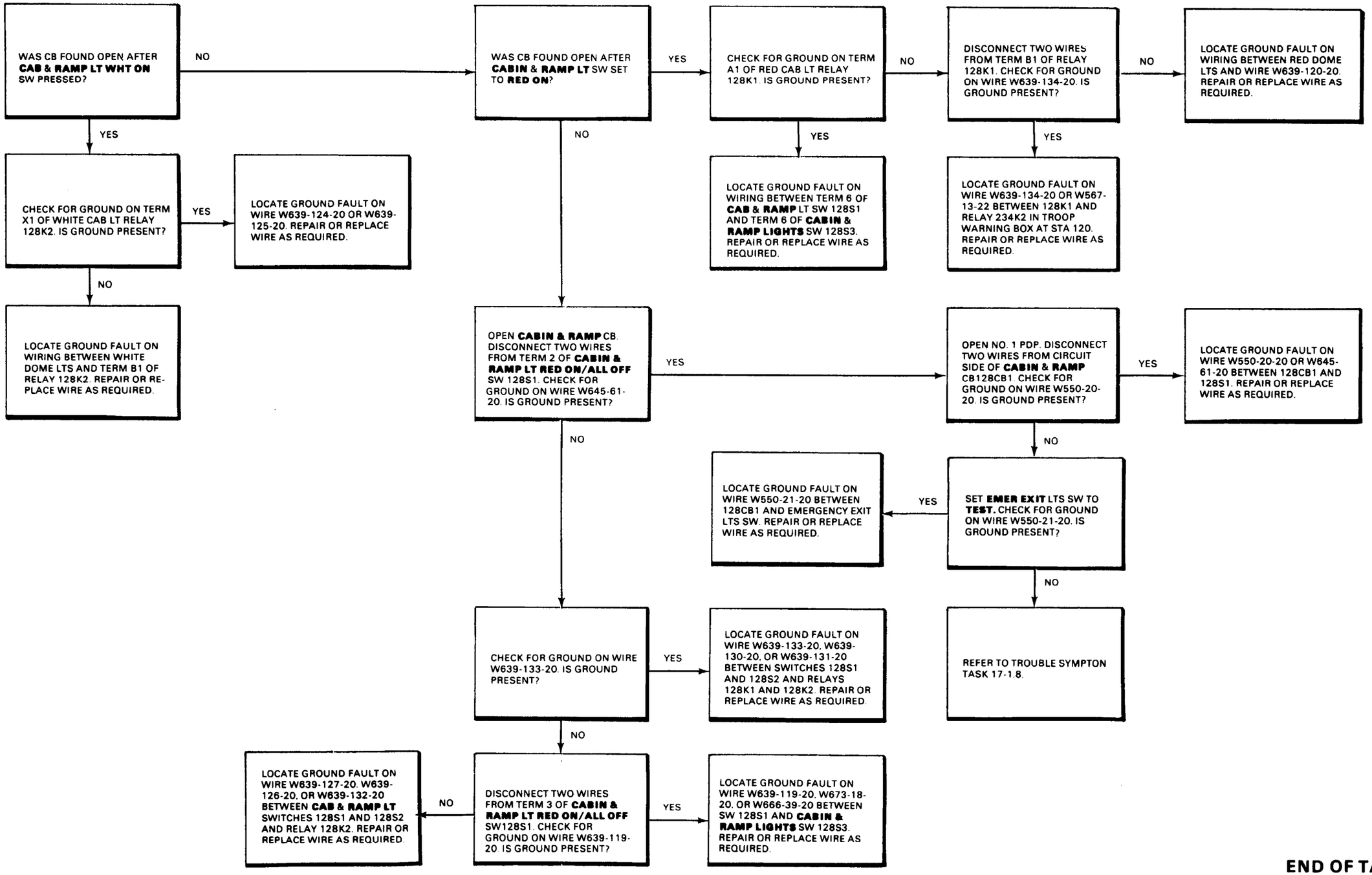


COCKPIT

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GO TO NEXT PAGE

9-15.4 CABIN & RAMP CIRCUIT BREAKER DOES NOT STAY CLOSED (Continued)



END OF TASK

9-15.5 CABIN AND RAMP DOME WHITE LIGHT OR LIGHTS NOT LIT

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:

Without 17

Tools:

Electrical Repairer's Tool Kit, NSN 5180-00-323-4915
Multimeter

Materials:

None

Personnel Required:

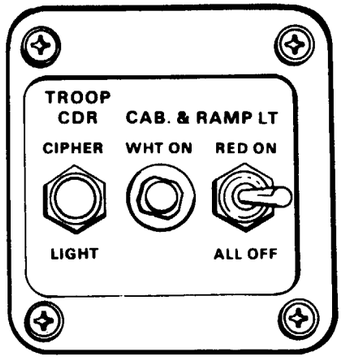
Aircraft Electrician (2)

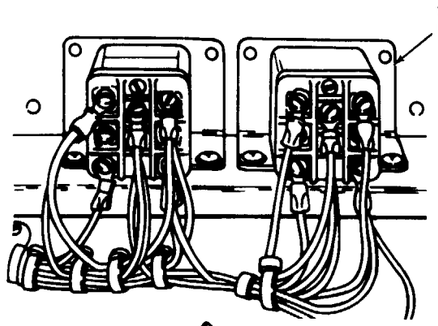
References:

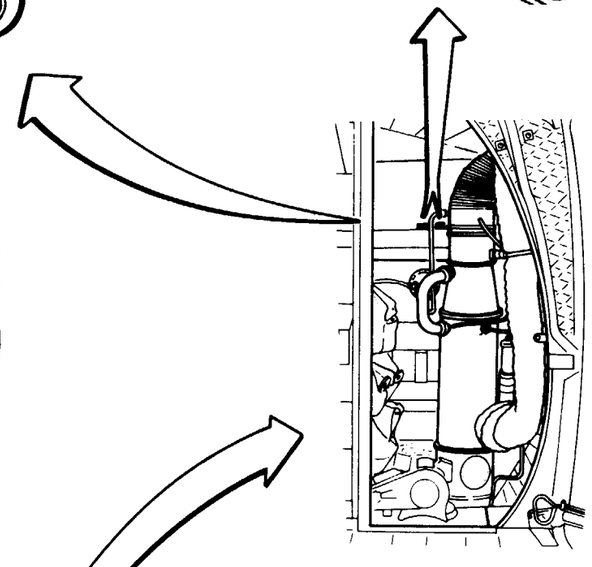
TM 55-1520-240-23

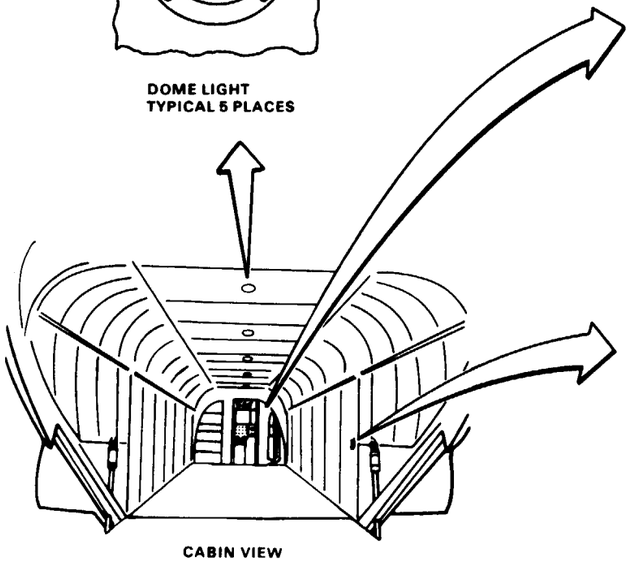
Equipment Condition:

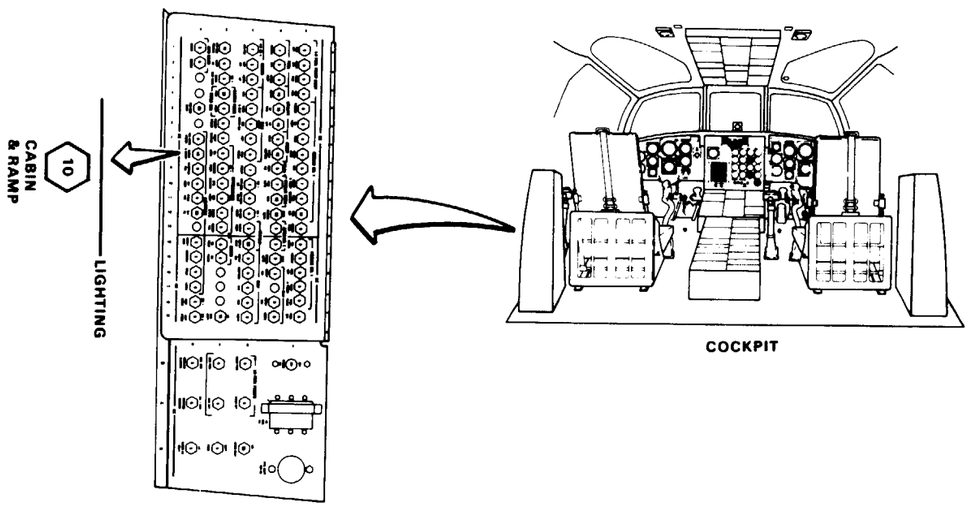
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off
Heater Compartment Acoustic Blanket Removed







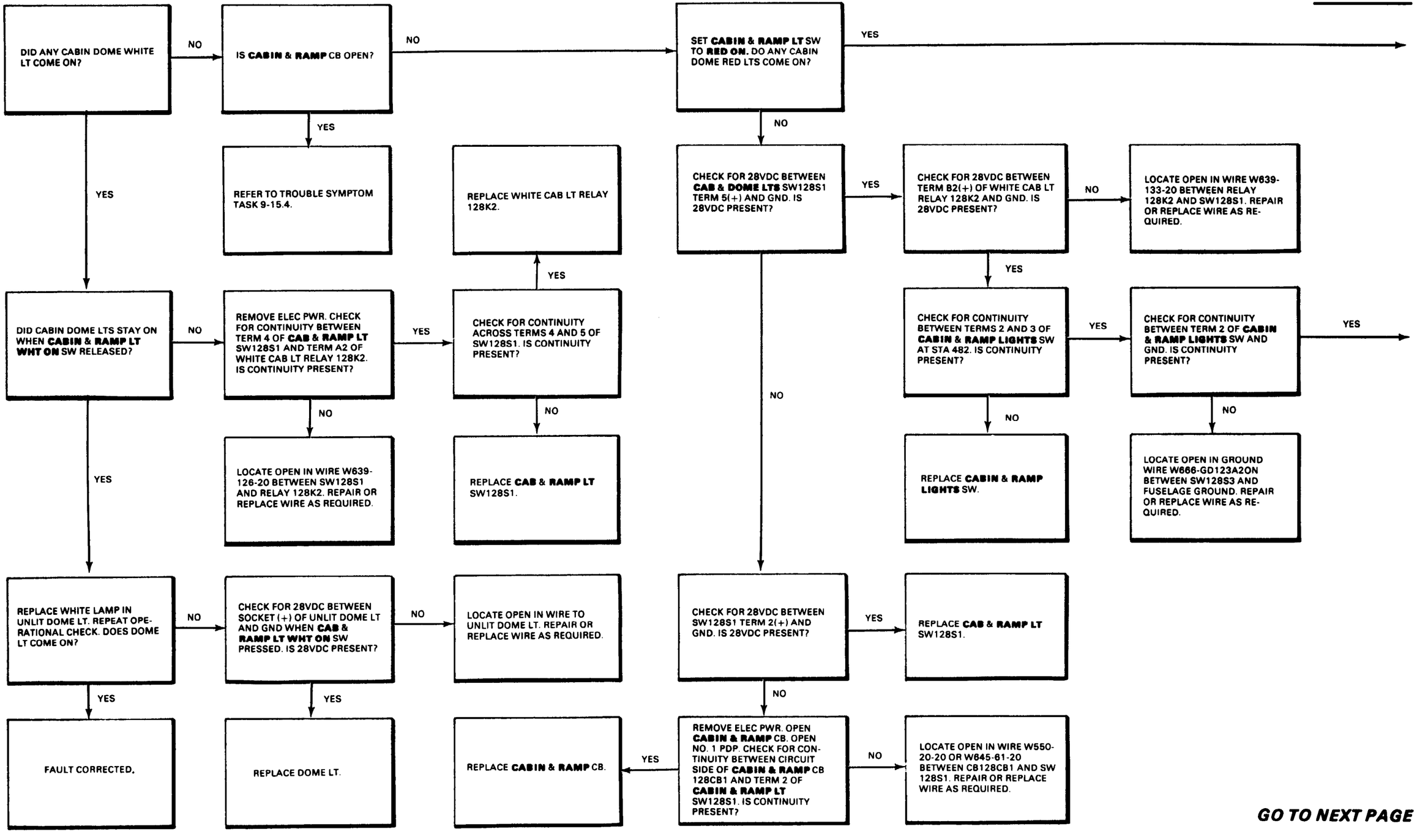




DI45-4240-SPA

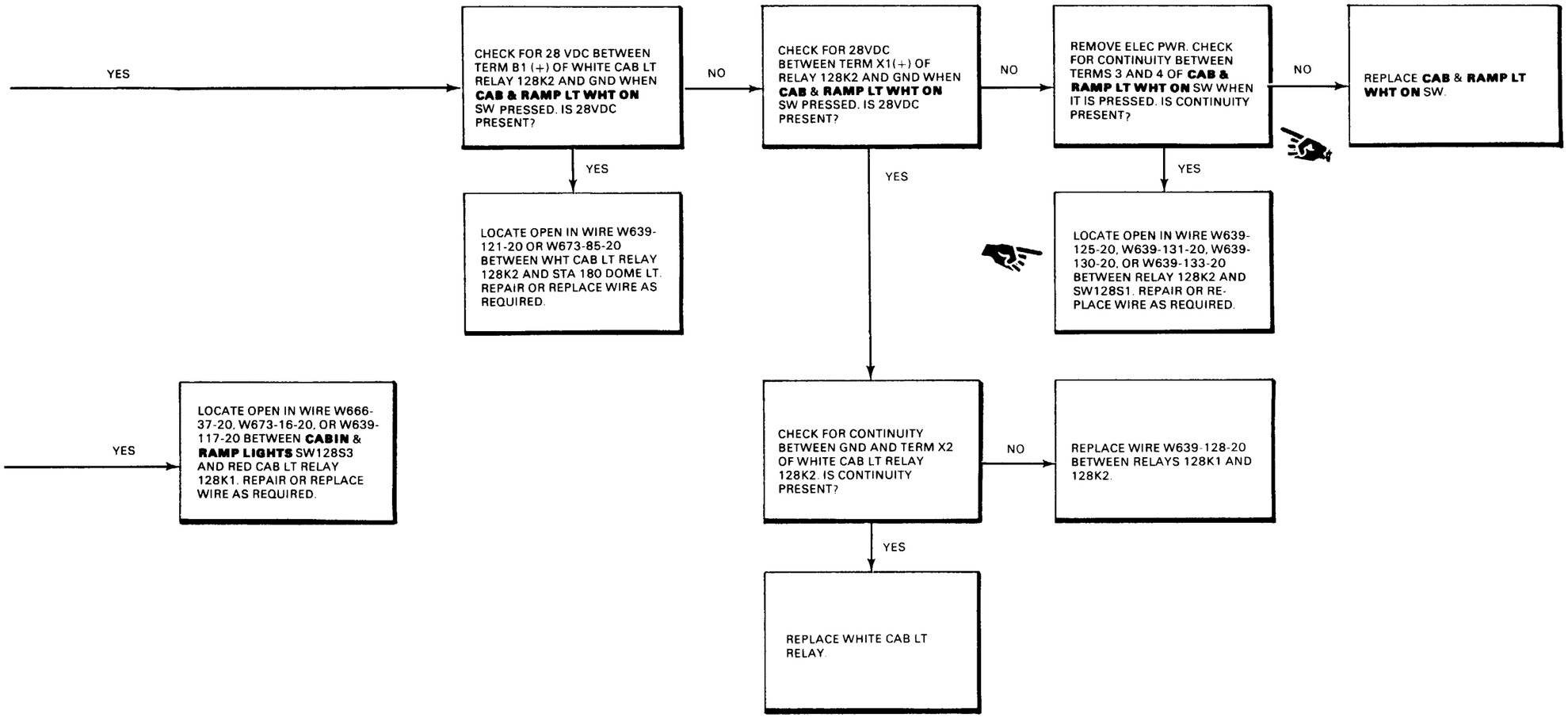
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9-15.5 CABIN AND RAMP DOME WHITE LIGHT OR LIGHTS NOT LIT (Continued)



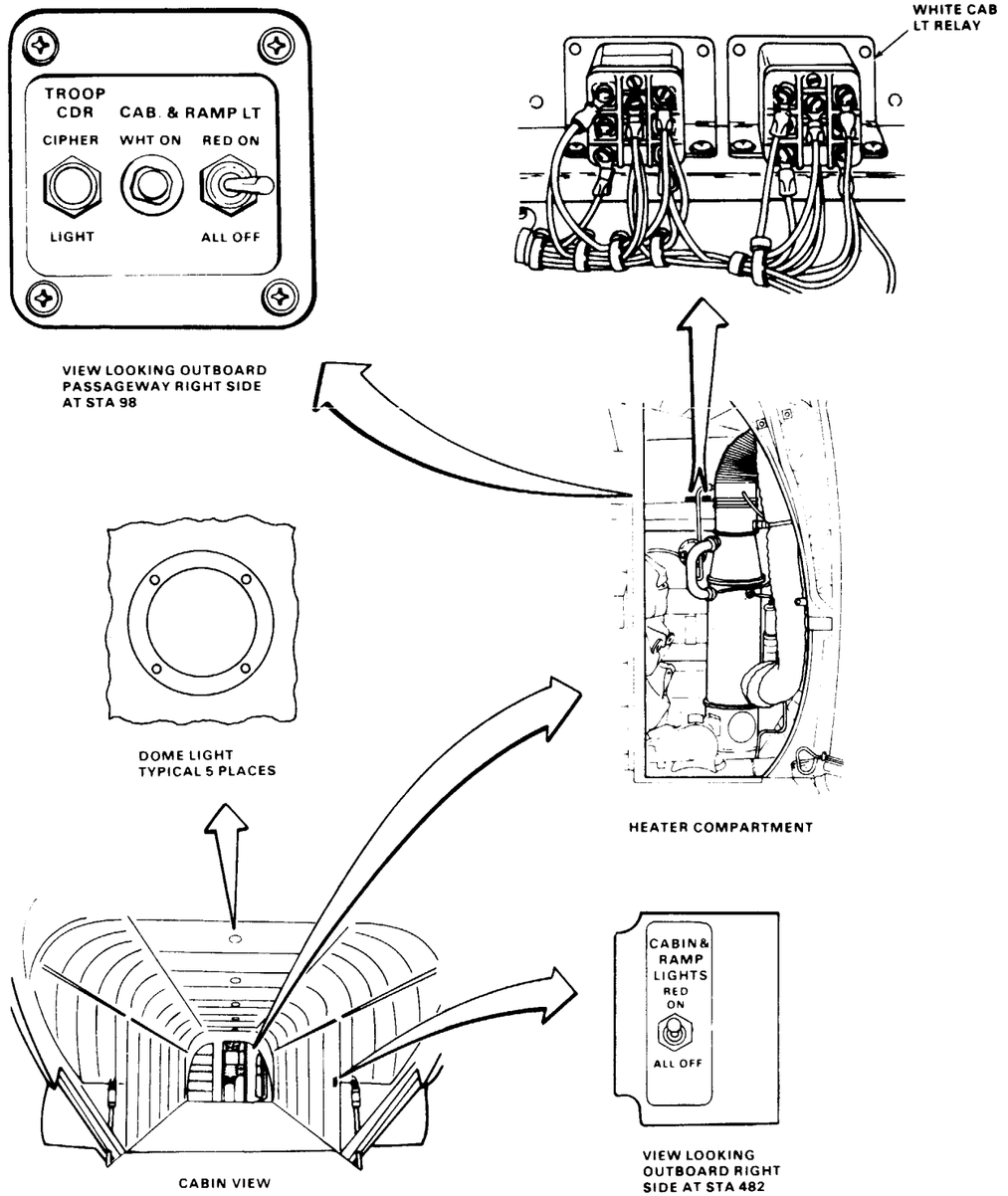
GO TO NEXT PAGE

9-15.5 CABIN AND RAMP DOME WHITE LIGHT OR LIGHTS NOT LIT (Continued)



GO TO NEXT PAGE

9-15.5 CABIN AND RAMP DOME WHITE LIGHT OR LIGHTS NOT LIT (Continued)



90X54

D145 - 11831 - SPA

END OF TASK

9-15.6 CABIN AND RAMP DOME WHITE LIGHTS DO NOT GO OUT WHEN CAB & RAMP LT SWITCH SET TO ALL OFF

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
Without 17

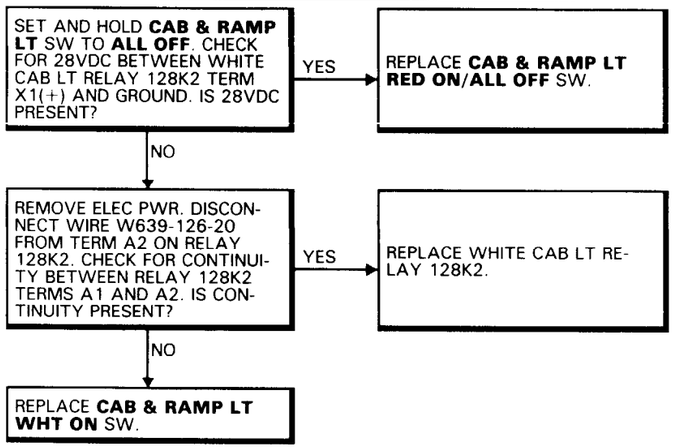
Tools:
Electrical Repairer's Tool Kit, NSN 5180-00-323-4915
Multimeter

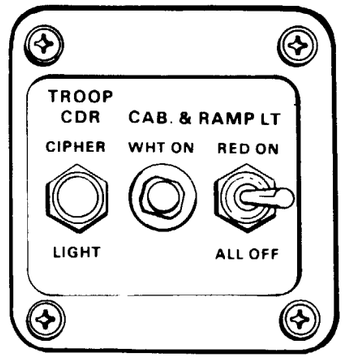
Materials:
None

Personnel Required:
Aircraft Electrician (2)

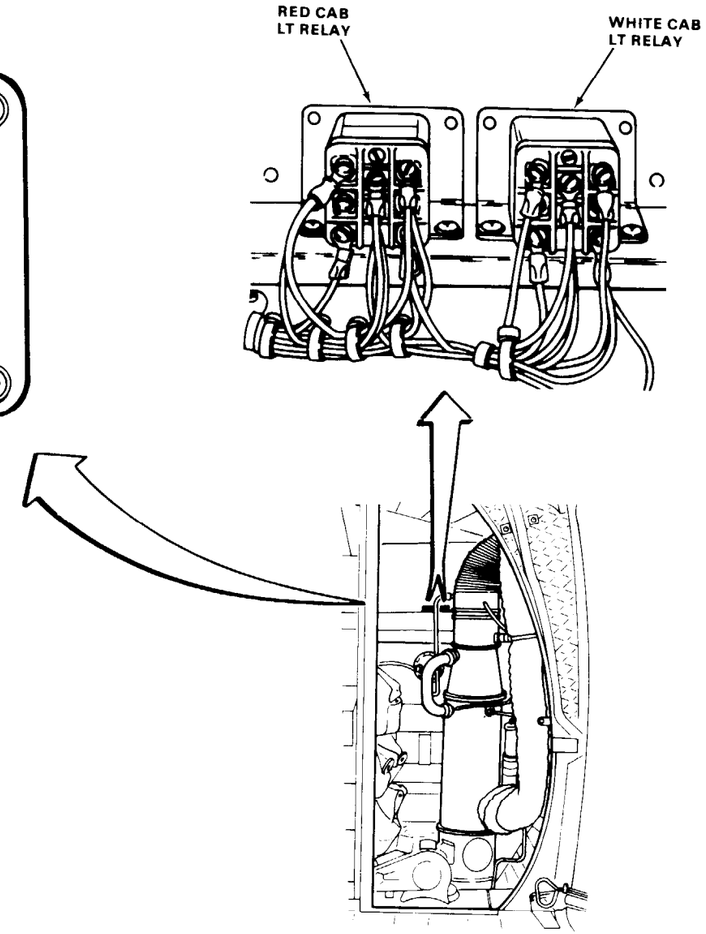
References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off
Heater Compartment Acoustic Blanket Removed





VIEW LOOKING OUTBOARD PASSAGEWAY RIGHT SIDE AT STA 98



HEATER COMPARTMENT

DI45-4241-SPA

END OF TASK

9-15.7 CABIN AND RAMP DOME RED LIGHT OR LIGHTS NOT LIT

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
Without 17

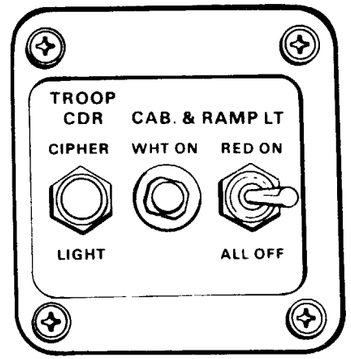
Tools:
Electrical Repairer's Tool Kit, NSN 5180-00-323-4915
Multimeter

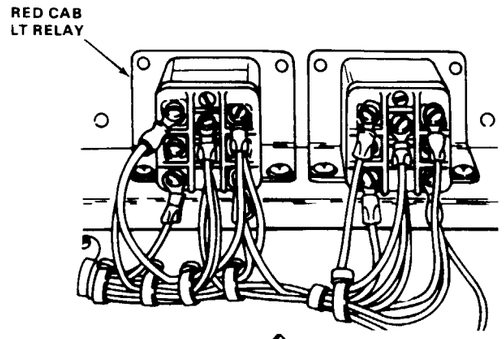
Materials:
None

Personnel Required:
Aircraft Electrician (2)

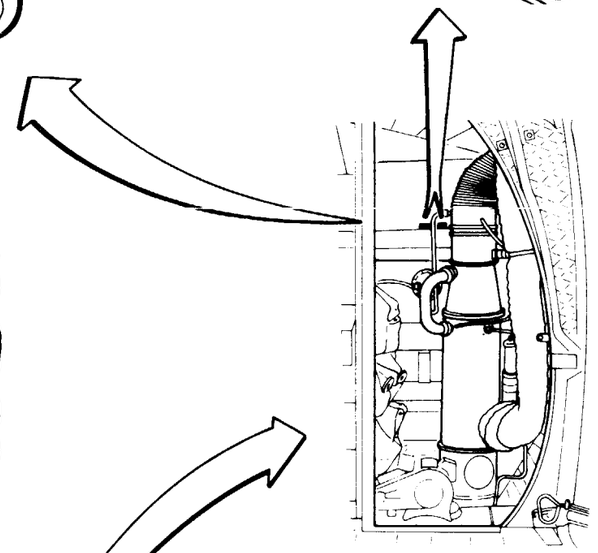
References:
TM 55-1520-240-23

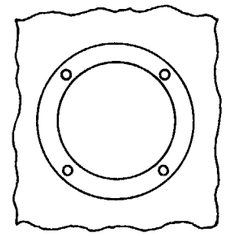
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off
Heater Compartment Acoustic Blanket Removed





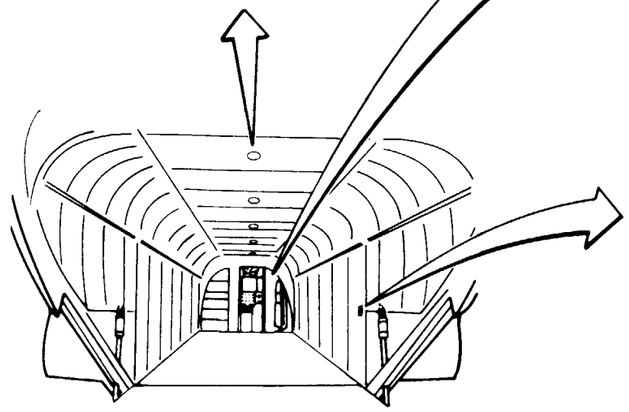
VIEW LOOKING OUTBOARD PASSAGEWAY RIGHT SIDE AT STA 98



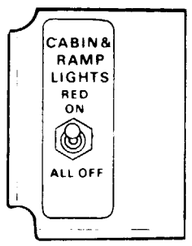


DOME LIGHT TYPICAL 5 PLACES

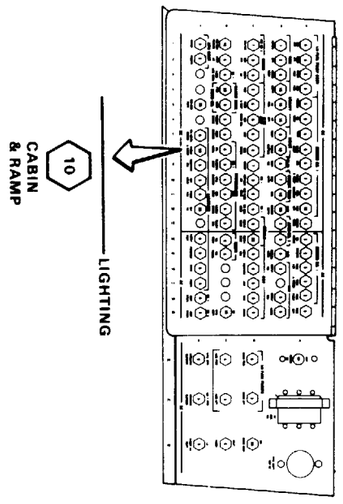
HEATER COMPARTMENT



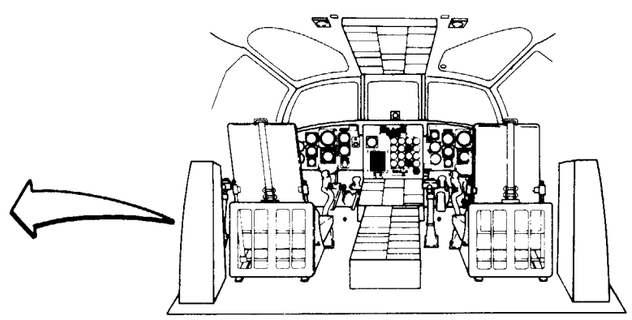
CABIN VIEW



VIEW LOOKING OUTBOARD RIGHT SIDE AT STA 482



NO. 1 POWER DISTRIBUTION PANEL (PDP) VIEW LOOKING AFT

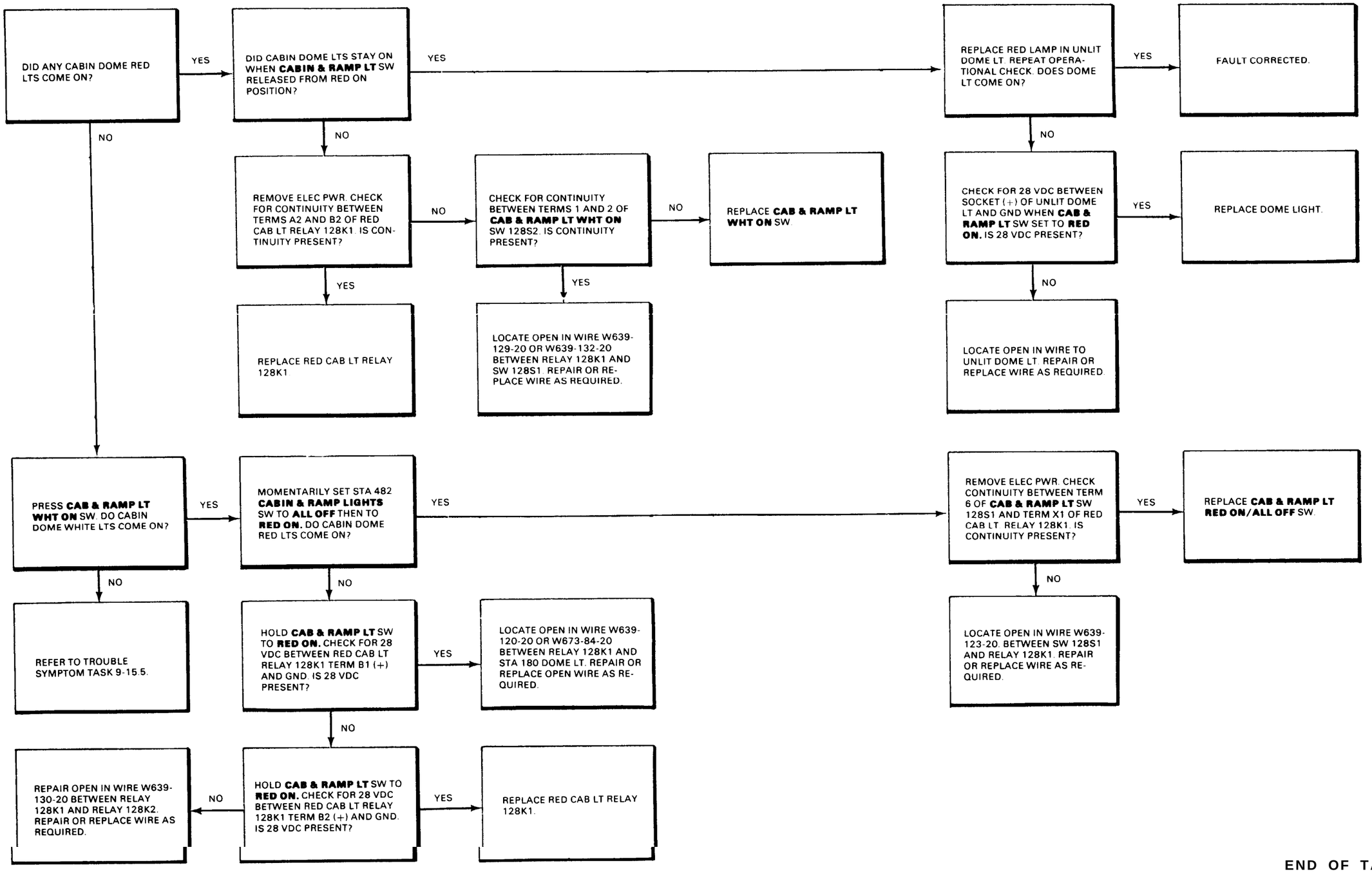


COCKPIT

D145-4242-SPA

GO TO NEXT PAGE

9-15.7 CABIN AND RAMP DOME RED LIGHT OR LIGHTS NOT LIT (Continued)



END OF TASK

9-15.8 CABIN AND RAMP DOME WHITE LIGHTS STAY ON WHEN CABIN & RAMP LIGHTS SWITCH SET TO ALL OFF

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
without 17

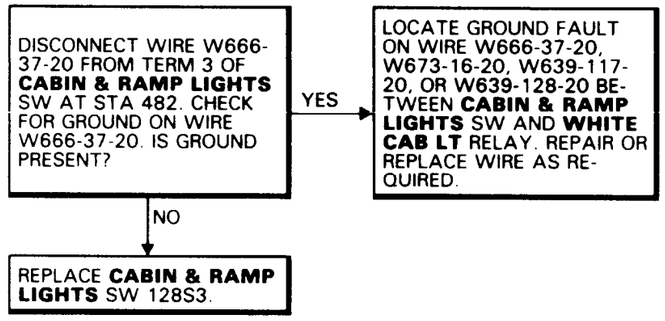
Tools:
Electrical Repairer's Tool Kit, NSN 5180-00-323-4915
Multimeter

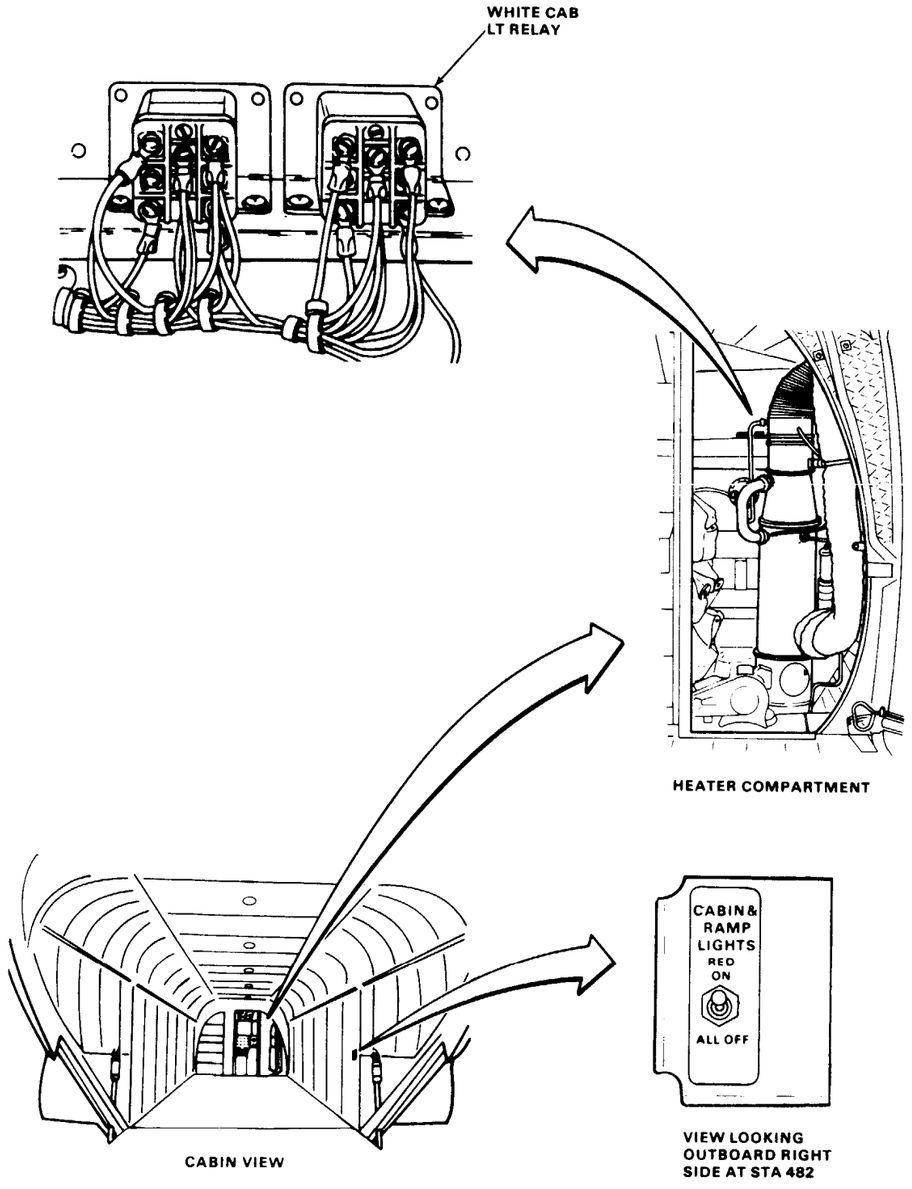
Materials:
None

Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off
Heater Compartment Acoustic Blanket Removed





END OF TASK

9-15.9 CABIN AND RAMP DOME RED LIGHTS DO NOT COME ON WHEN CABIN & RAMP LIGHTS SWITCH SET TO RED ON

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
Without 17

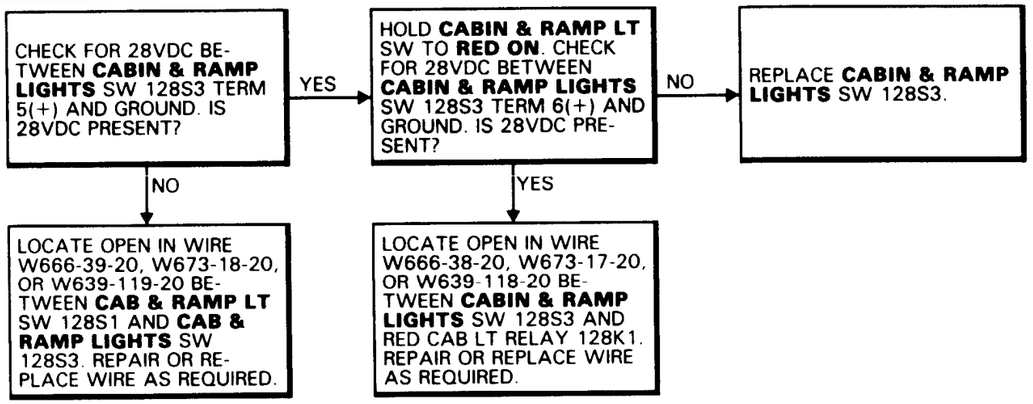
Tools:
Electrical Repairer's Tool Kit, NSN 5180-00-323-4915
Multimeter

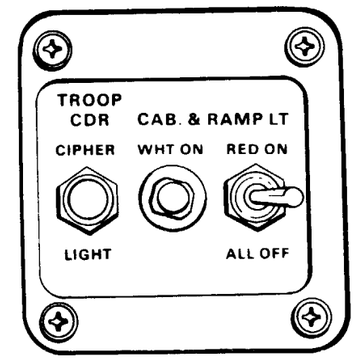
Materials:
None

Personnel Required:
Aircraft Electrician (2)

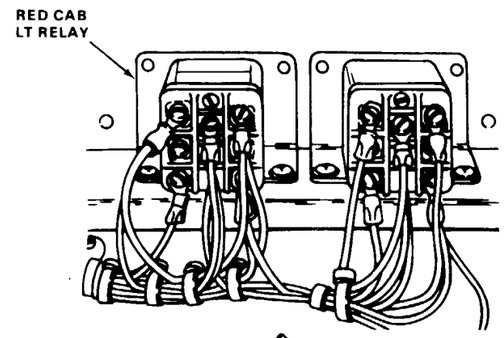
References:
TM 55-1520-240-23

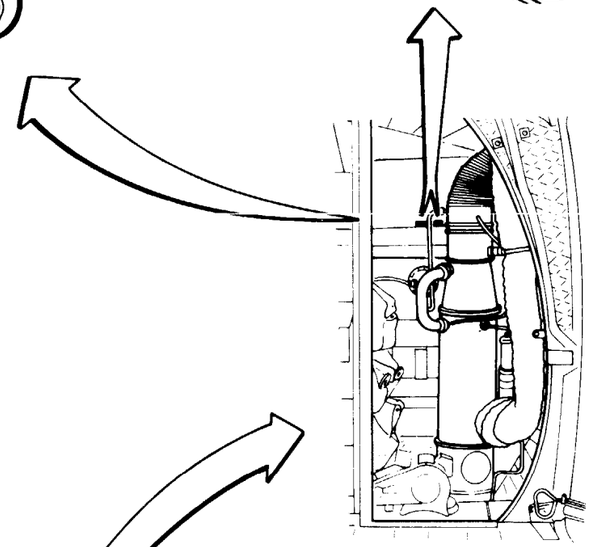
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power Off
Hydraulic Power Off



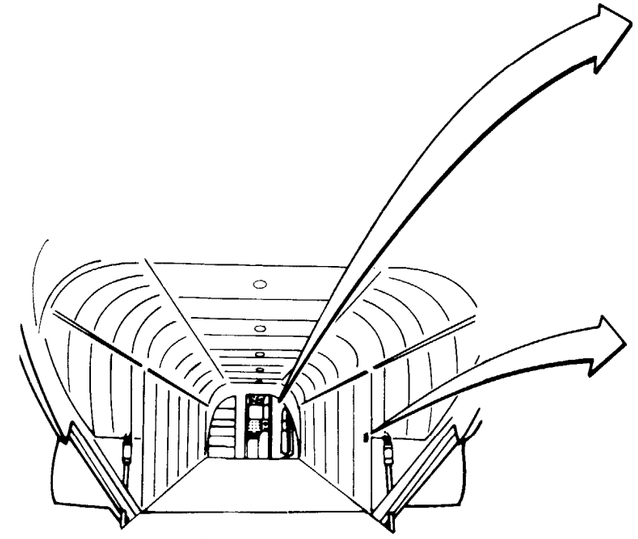


VIEW LOOKING OUTBOARD PASSAGEWAY RIGHT SIDE AT STA 98

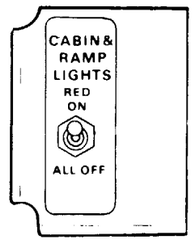




HEATER COMPARTMENT



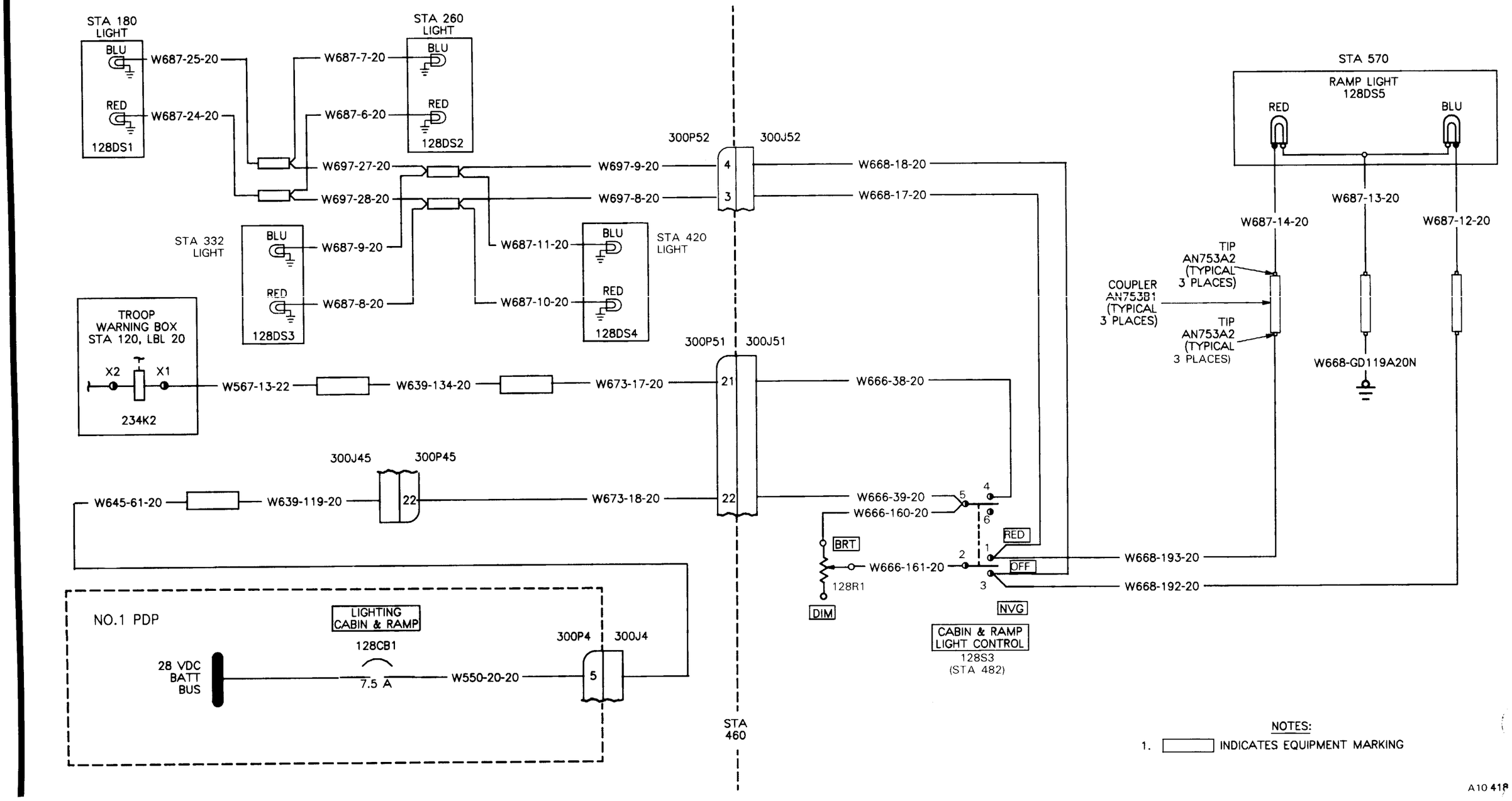
CABIN VIEW



VIEW LOOKING OUTBOARD RIGHT SIDE AT STA 482

DI45-4244-SPA

END OF TASK



NOTES:

1. ▭ INDICATES EQUIPMENT MARKING

A10 418

9-15.10 CABIN AND RAMP LIGHTS VISUAL CHECK

INITIAL SETUP

Applicable Configurations:
With 17

Tools:
Electrical Repairer's Tool Kit, NSN 5180-00-323-4915

Materials:
None

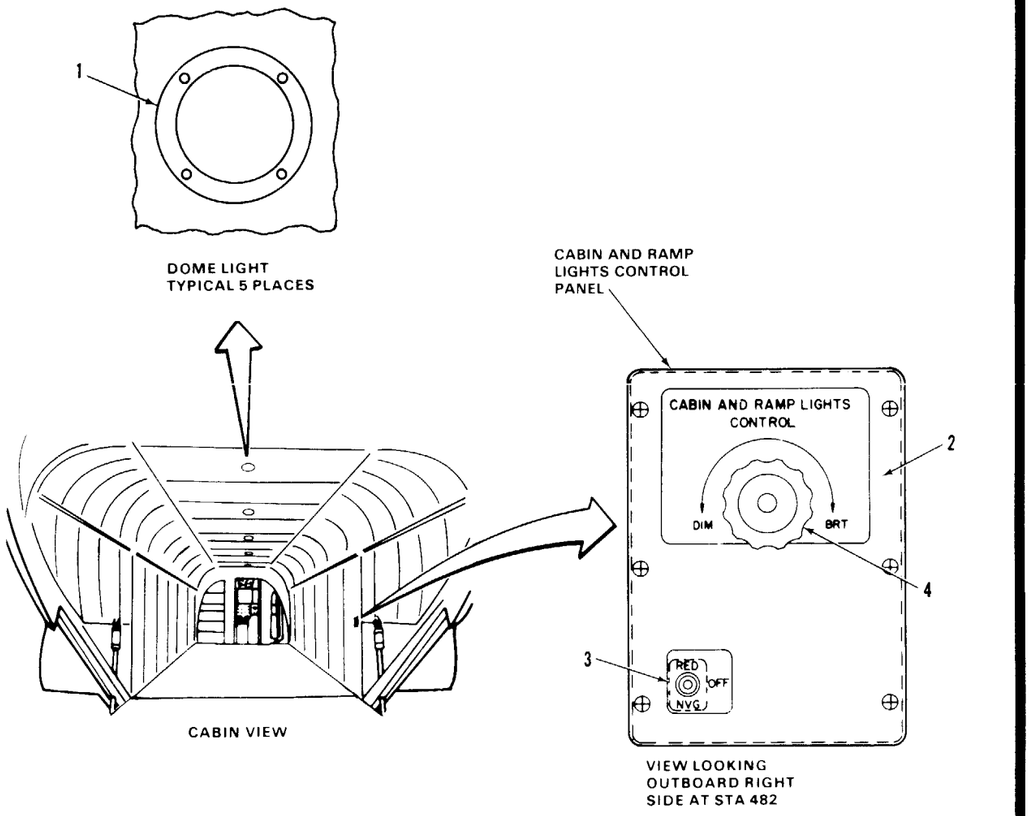
Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off

TASK	RESULT
1 **Check ramp dome and four cabin dome lights (1).**	If any dome light (1) is loose or damaged, tighten or replace it as required.
2 **Check CABIN & RAMP LIGHTS CONTROL panel (2).**	If panel (2) is loose or damaged, tighten or replace it as required. If switch (3) or knob (4) is loose or damaged, tighten or replace it as required.

FOLLOW-ON MAINTENANCE
None



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END OF TASK

9-15.11 CABIN AND RAMP LIGHTS OPERATIONAL CHECK

INITIAL SETUP

Applicable Configurations:
With 17

Tools:
None

Materials:
None

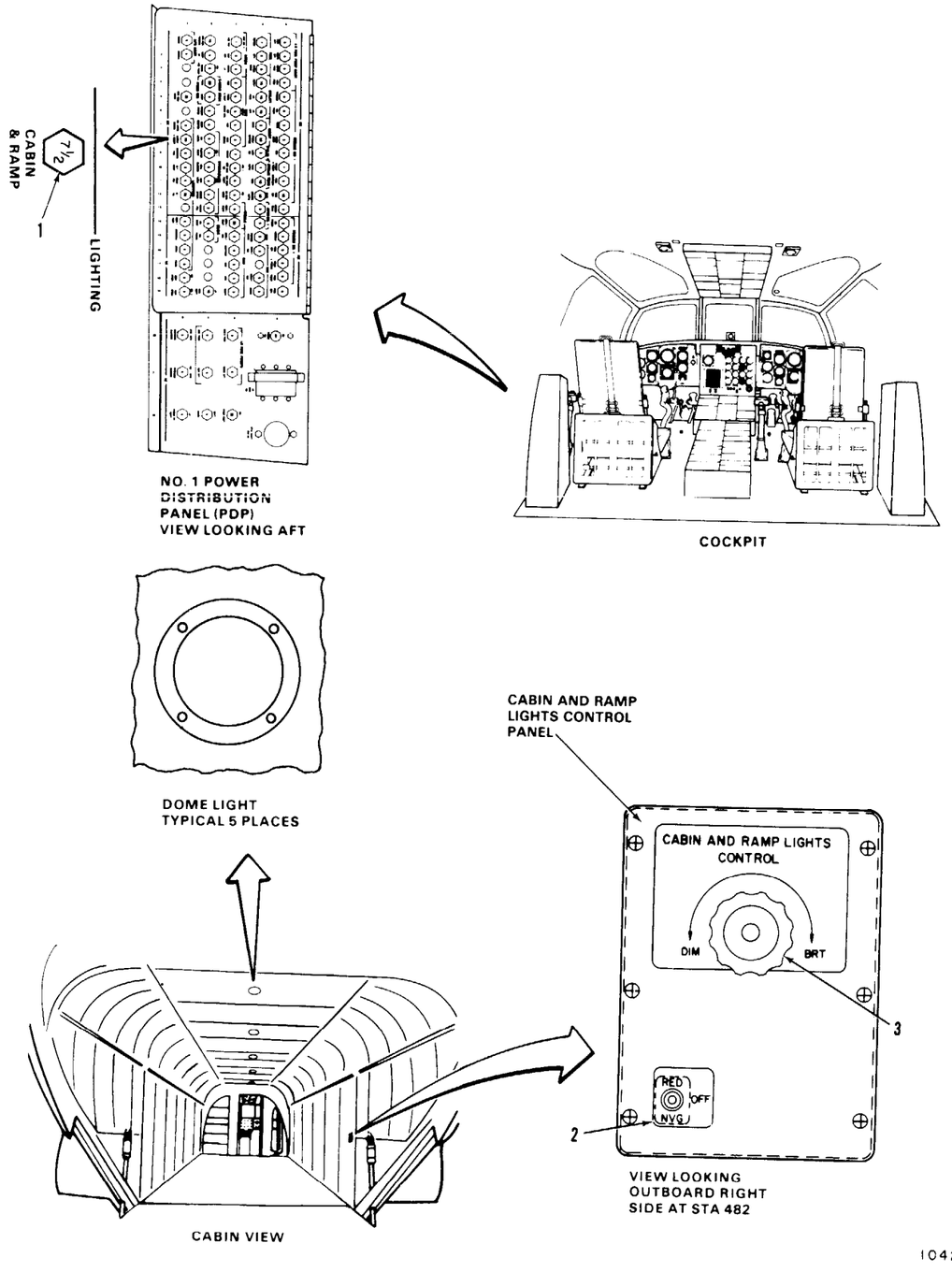
Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off
Visual Check of Cabin and Ramp Lights Performed (Task 9-15.10)

TASK	RESULT
1. Check that LIGHTING CABIN & RAMP circuit breaker (1) is closed.	If CABIN & RAMP circuit breaker (1) is open, close it. if it opens again, go to task 9-15.12.
2. Set CABIN AND RAMP LIGHTS CONTROL switch (2) to RED. Turn control (3) from DIM to BRT.	All five dome red lights shall come on and increase in brightness as control is moved. If any light is not lit, go to task 9-15.13. If lights come on but brightness does not increase, replace control (3).
3. Turn control (3) to DIM.	
4. Set CABIN AND RAMP LIGHTS CONTROL switch (2) to NVG. Turn control (3) from DIM to BRT.	All five dome blue lights shall come on and increase in brightness as control is moved. If any light is not lit, go to task 9-15.14.
5. Turn control (3) to DIM. Set switch (2) to OFF.	

FOLLOW-ON MAINTENANCE:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off



END OF TASK

9-15.12 CABIN & RAMP CIRCUIT BREAKER DOES NOT STAY CLOSED 9-15.12

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
With 17

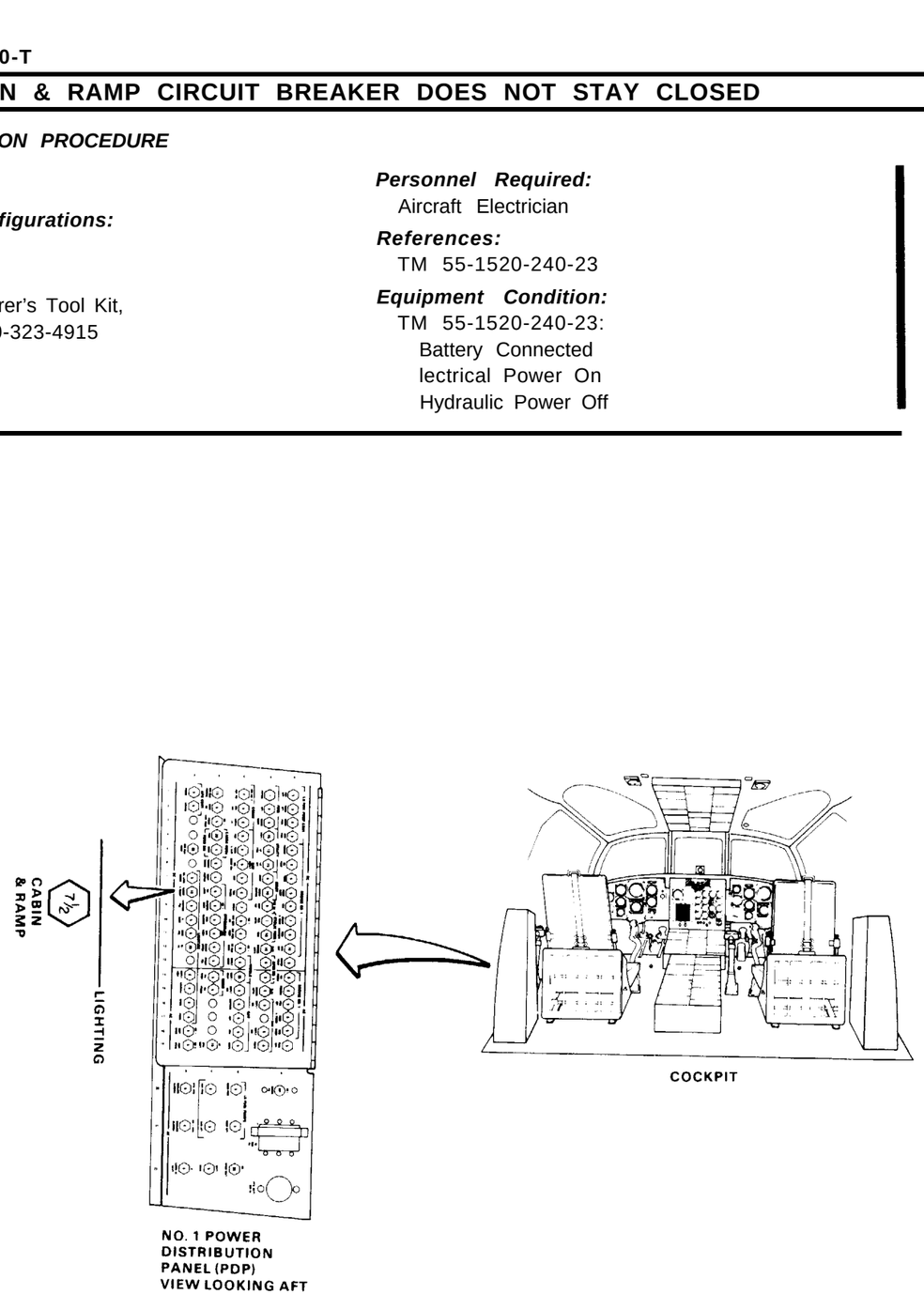
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:
None

Personnel Required:
Aircraft Electrician

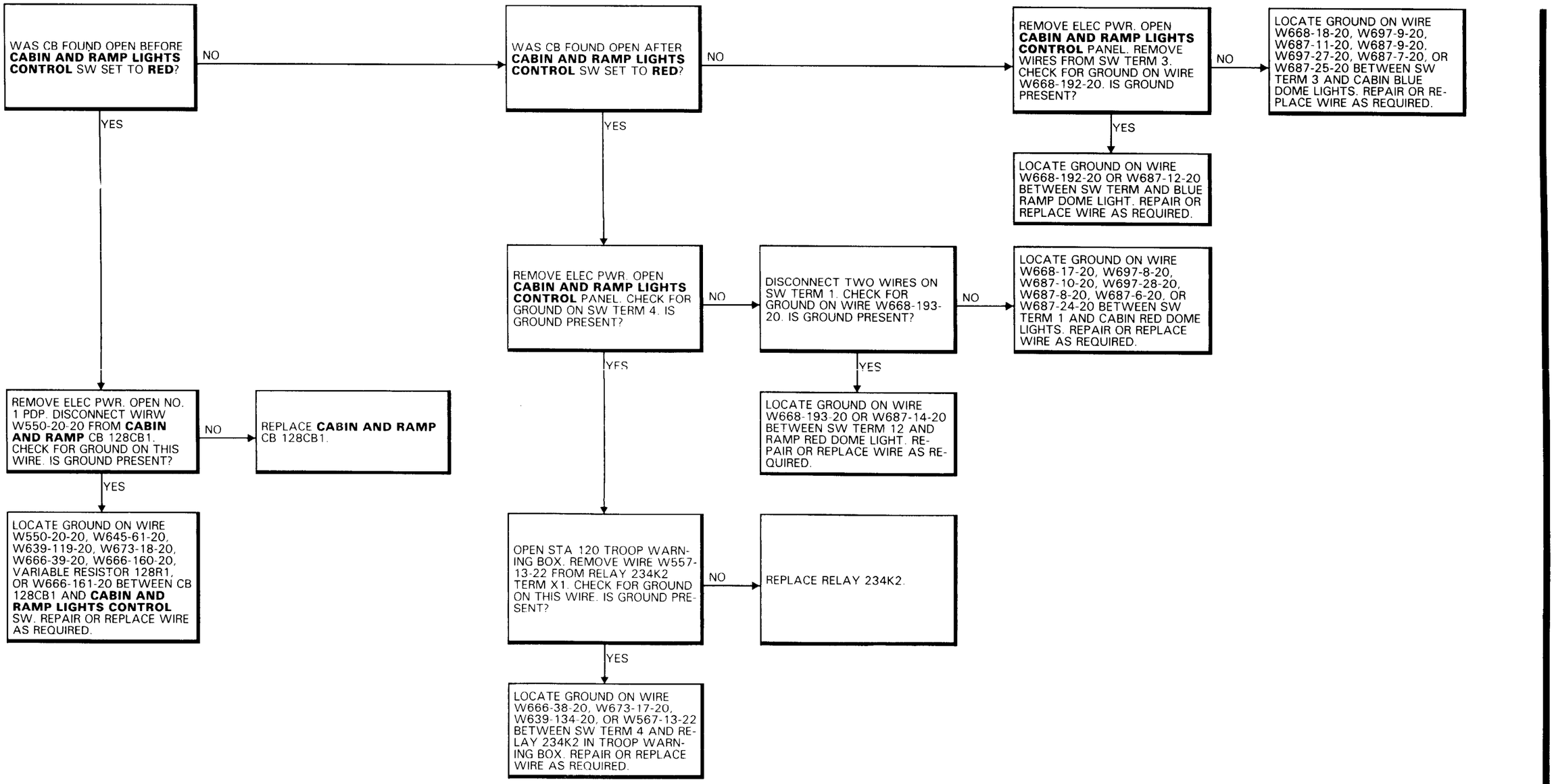
References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
lectrical Power On
Hydraulic Power Off



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GO TO NEXT PAGE


WAS CB FOUND OPEN BEFORE **CABIN AND RAMP LIGHTS CONTROL** SW SET TO **RED**?
NO
YES
WAS CB FOUND OPEN AFTER **CABIN AND RAMP LIGHTS CONTROL** SW SET TO **RED**?
NO
YES
REMOVE ELEC PWR. OPEN **CABIN AND RAMP LIGHTS CONTROL** PANEL. REMOVE WIRES FROM SW TERM 3. CHECK FOR GROUND ON WIRE W668-192-20. IS GROUND PRESENT?
NO
LOCATE GROUND ON WIRE W668-18-20, W697-9-20, W687-11-20, W687-9-20, W697-27-20, W687-7-20, OR W687-25-20 BETWEEN SW TERM 3 AND CABIN BLUE DOME LIGHTS. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
LOCATE GROUND ON WIRE W668-192-20 OR W687-12-20 BETWEEN SW TERM AND BLUE RAMP DOME LIGHT. REPAIR OR REPLACE WIRE AS REQUIRED.
REMOVE ELEC PWR. OPEN NO. 1 PDP. DISCONNECT WIRW W550-20-20 FROM **CABIN AND RAMP** CB 128CB1. CHECK FOR GROUND ON THIS WIRE. IS GROUND PRESENT?
NO
REPLACE **CABIN AND RAMP** CB 128CB1.
YES
LOCATE GROUND ON WIRE W550-20-20, W645-61-20, W639-119-20, W673-18-20, W666-39-20, W666-160-20, VARIABLE RESISTOR 128R1, OR W666-161-20 BETWEEN CB 128CB1 AND **CABIN AND RAMP LIGHTS CONTROL** SW. REPAIR OR REPLACE WIRE AS REQUIRED.
REMOVE ELEC PWR. OPEN **CABIN AND RAMP LIGHTS CONTROL** PANEL. CHECK FOR GROUND ON SW TERM 4. IS GROUND PRESENT?
NO
DISCONNECT TWO WIRES ON SW TERM 1. CHECK FOR GROUND ON WIRE W668-193-20. IS GROUND PRESENT?
NO
LOCATE GROUND ON WIRE W668-17-20, W697-8-20, W687-10-20, W697-28-20, W687-8-20, W687-6-20, OR W687-24-20 BETWEEN SW TERM 1 AND CABIN RED DOME LIGHTS. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
LOCATE GROUND ON WIRE W668-193-20 OR W687-14-20 BETWEEN SW TERM 12 AND RAMP RED DOME LIGHT. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
OPEN STA 120 TROOP WARNING BOX. REMOVE WIRE W557-13-22 FROM RELAY 234K2 TERM X1. CHECK FOR GROUND ON THIS WIRE. IS GROUND PRESENT?
NO
REPLACE RELAY 234K2.
YES
LOCATE GROUND ON WIRE W666-38-20, W673-17-20, W639-134-20, OR W567-13-22 BETWEEN SW TERM 4 AND RELAY 234K2 IN TROOP WARNING BOX. REPAIR OR REPLACE WIRE AS REQUIRED.

END OF TASK

9-15.13 CABIN AND RAMP DOME RED LIGHT OR LIGHTS NOT LIT

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
With 17

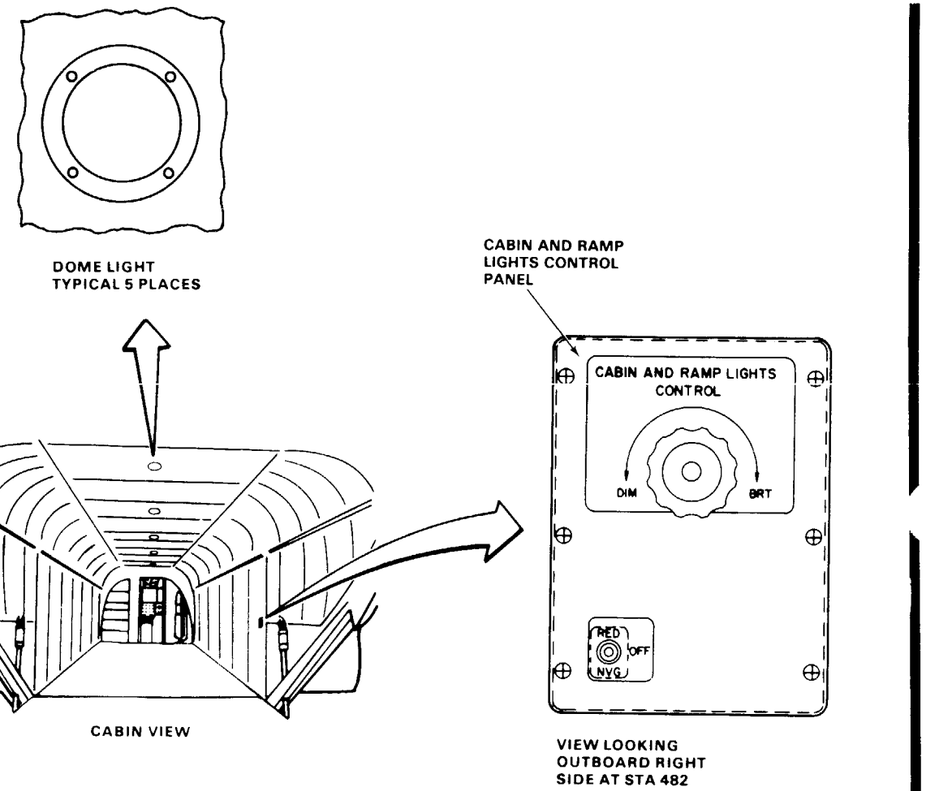
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:
None

Personnel Required:
Aircraft Electrician (2)

References:
TM 55-1520-240-23

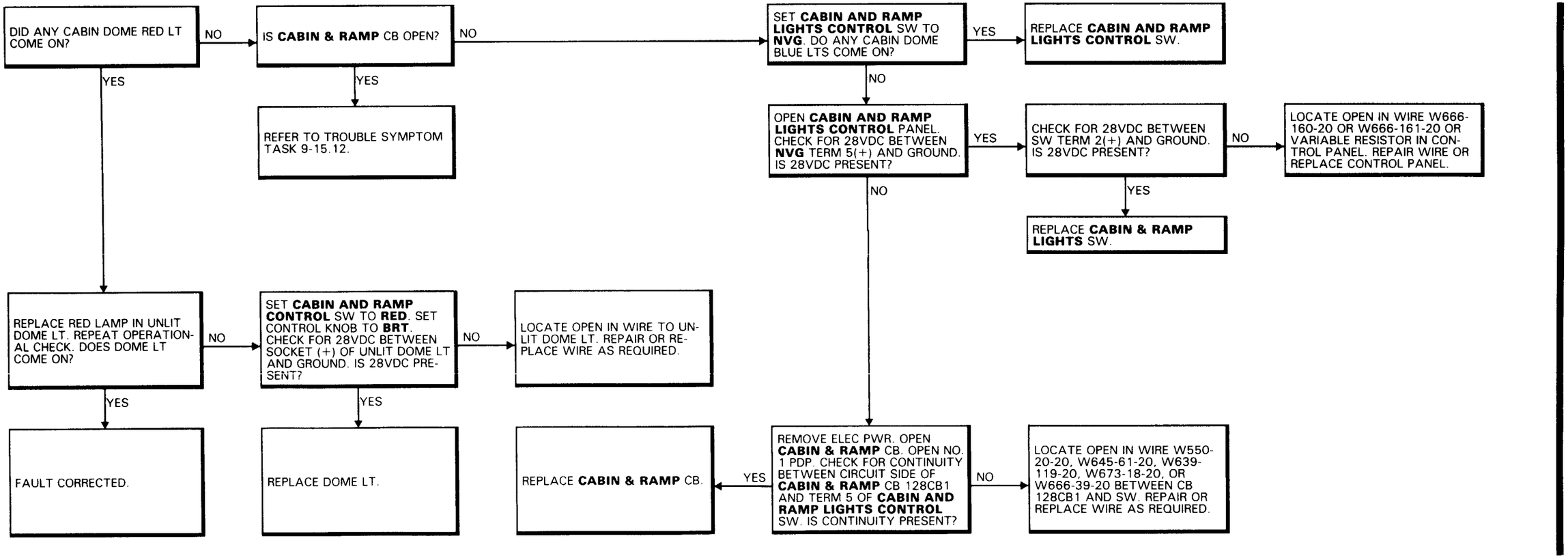
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off



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GO TO NEXT PAGE

9-15.13 CABIN AND RAMP DOME RED LIGHT OR LIGHTS NOT LIT (Continued)



END OF TASK

9-15.14 CABIN AND RAMP DOME BLUE LIGHT OR LIGHTS NOT LIT

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
With 17

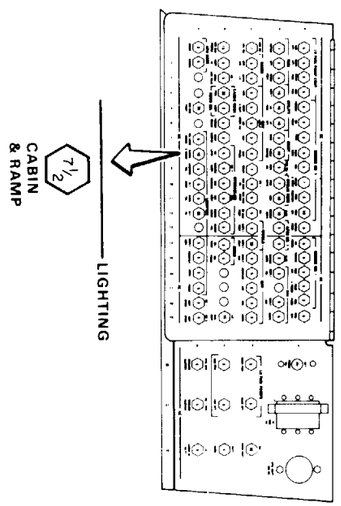
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:
None

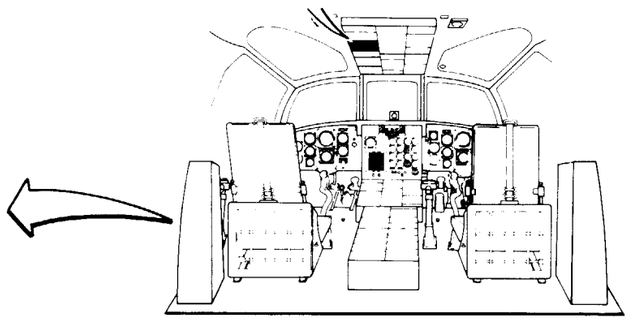
Personnel Required:
Aircraft Electrician (2)

References:
TM 55-1520-240-23

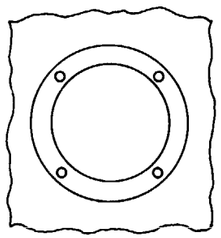
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off



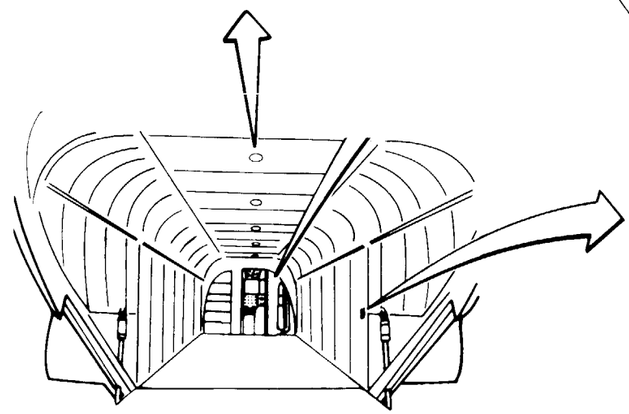
NO. 1 POWER DISTRIBUTION PANEL (PDP) VIEW LOOKING AFT



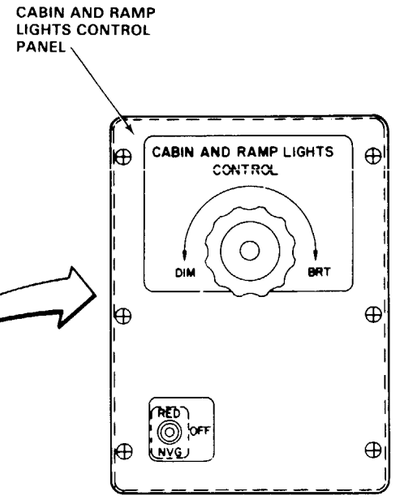
COCKPIT



DOME LIGHT TYPICAL 5 PLACES



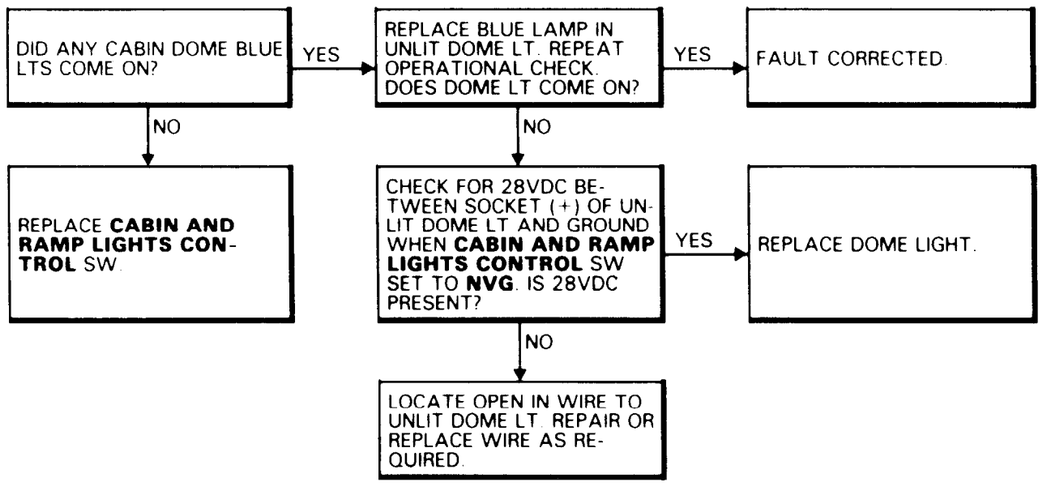
CABIN VIEW



VIEW LOOKING OUTBOARD RIGHT SIDE AT STA 482

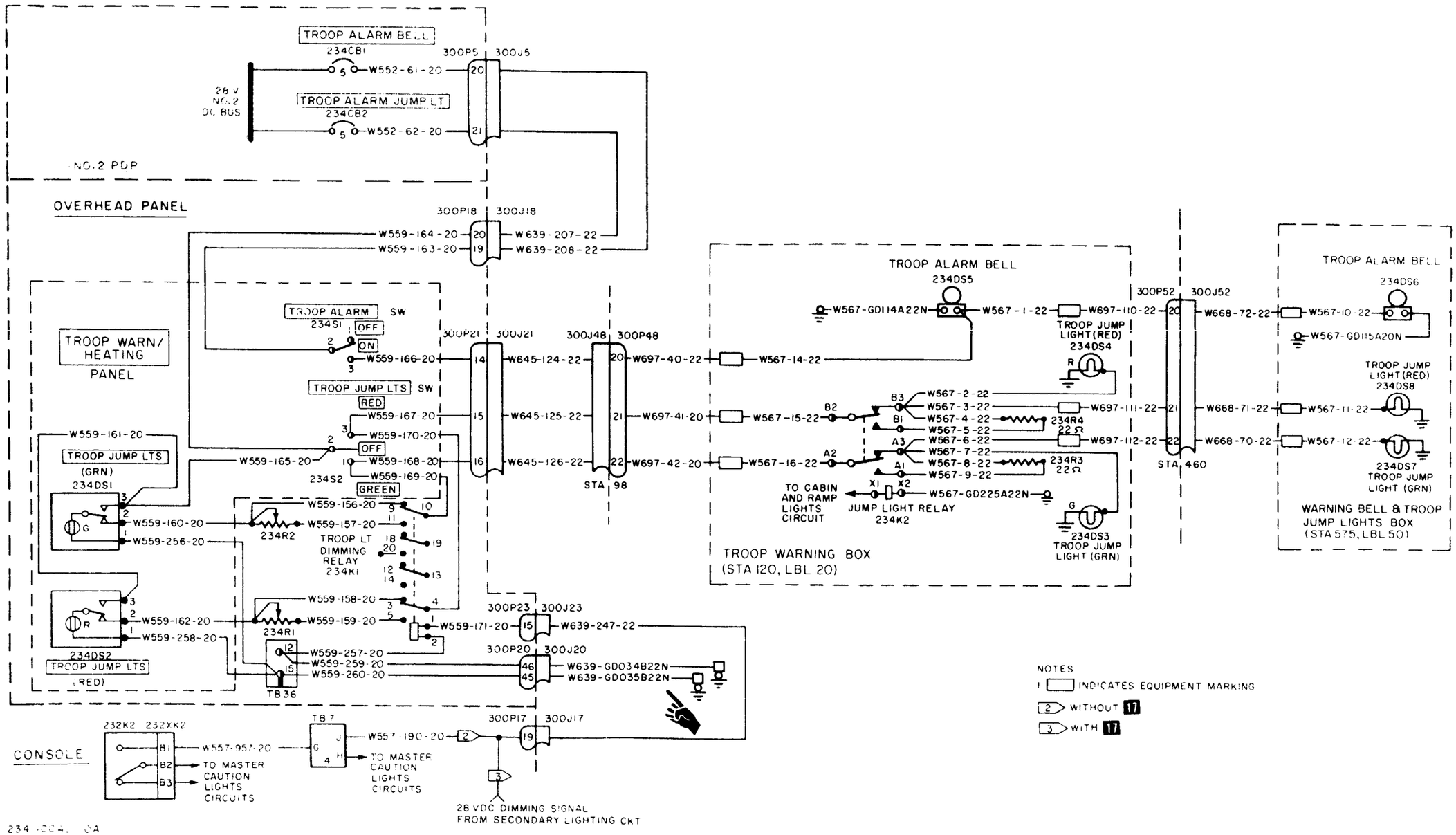
10423

GO TO NEXT PAGE


DID ANY CABIN DOME BLUE LTS COME ON?
YES
REPLACE BLUE LAMP IN UNLIT DOME LT. REPEAT OPERATIONAL CHECK. DOES DOME LT COME ON?
YES
FAULT CORRECTED.
NO
NO
REPLACE CABIN AND RAMP LIGHTS CONTROL SW.
CHECK FOR 28VDC BETWEEN SOCKET (+) OF UNLIT DOME LT AND GROUND WHEN CABIN AND RAMP LIGHTS CONTROL SW SET TO NVG. IS 28VDC PRESENT?
YES
REPLACE DOME LIGHT.
NO
LOCATE OPEN IN WIRE TO UNLIT DOME LT. REPAIR OR REPLACE WIRE AS REQUIRED.

END OF TASK

9-16 TROOP WARNING SYSTEM


TROOP ALARM BELL
234CB1
300P5
300J5
28 V NO. 2 DC BUS
W552-61-20
TROOP ALARM JUMP LT
234CB2
W552-62-20
NO. 2 PDP
OVERHEAD PANEL
300P18
300J18
W559-164-20
W559-163-20
W639-207-22
W639-208-22
TROOP WARN/ HEATING PANEL
TROOP ALARM SW 234S1
OFF
ON
W559-166-20
TROOP JUMP LTS SW
RED
W559-167-20
W559-170-20
OFF
W559-168-20
W559-169-20
GREEN
234S2
W559-165-20
W559-161-20
TROOP JUMP LTS (GRN) 234DS1
W559-160-20
W559-256-20
234R2
W559-157-20
W559-156-20
TROOP LT DIMMING RELAY 234K1
W559-158-20
234R1
W559-159-20
W559-162-20
W559-258-20
234DS2
TROOP JUMP LTS (RED)
W559-257-20
W559-259-20
W559-260-20
TB36
300P21
300J21
W645-124-22
W645-125-22
W645-126-22
300P48
300J48
W697-40-22
W697-41-20
W697-42-20
STA 98
W567-14-22
W567-15-22
W567-16-22
TROOP ALARM BELL 234DS5
W567-GD114A22N
W567-1-22
W697-110-22
TROOP JUMP LIGHT (RED) 234DS4
B3
B2
B1
A3
A2
A1
W567-2-22
W567-3-22
W567-4-22
W567-5-22
W567-6-22
W567-7-22
W567-8-22
W567-9-22
234R4 22Ω
234R3 22Ω
W697-111-22
W697-112-22
TO CABIN AND RAMP LIGHTS CIRCUIT
X1
X2
JUMP LIGHT RELAY 234K2
W567-GD225A22N
234DS3 TROOP JUMP LIGHT (GRN)
TROOP WARNING BOX (STA 120, LBL 20)
300P52
300J52
W668-72-22
W668-71-22
W668-70-22
STA 460
TROOP ALARM BELL 234DS6
W567-10-22
W567-GD115A20N
TROOP JUMP LIGHT (RED) 234DS8
W567-11-22
W567-12-22
234DS7 TROOP JUMP LIGHT (GRN)
WARNING BELL & TROOP JUMP LIGHTS BOX (STA 575, LBL 50)
300P23
300J23
W559-171-20
W639-247-22
300P20
300J20
W639-GD034B22N
W639-GD035B22N
CONSOLE
232K2
232XK2
W557-957-20
TO MASTER CAUTION LIGHTS CIRCUITS
TB7
W557-190-20
TO MASTER CAUTION LIGHTS CIRCUITS
300P17
300J17
28 VDC DIMMING SIGNAL FROM SECONDARY LIGHTING CKT
NOTES
1 INDICATES EQUIPMENT MARKING
2 WITHOUT 17
3 WITH 17

END OF TASK

9-16.2 TROOP WARNING SYSTEM VISUAL CHECK

INITIAL SETUP

Applicable Configurations:
All

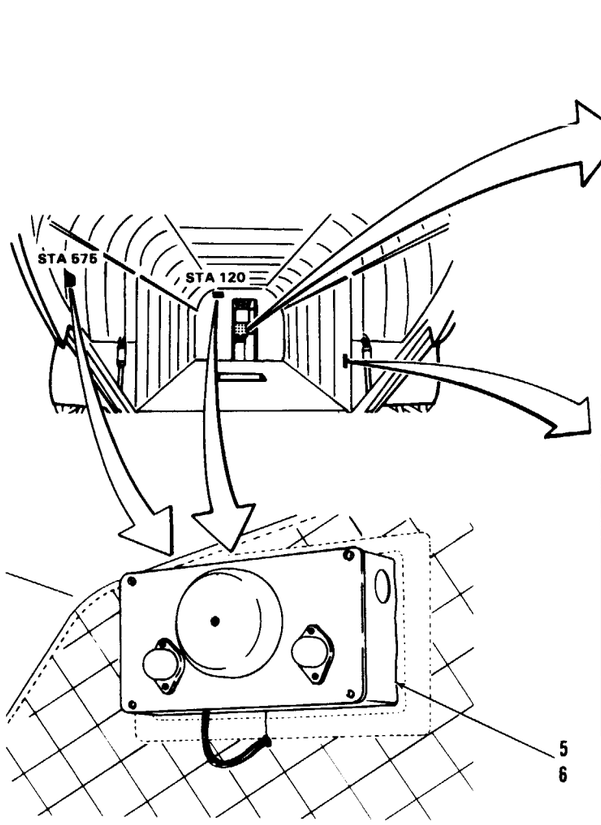
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915

Materials:
None

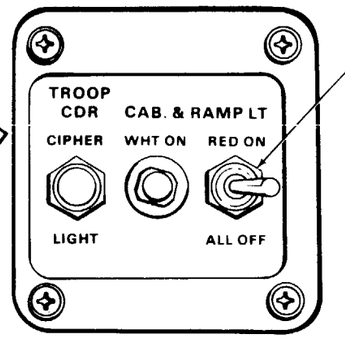
Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

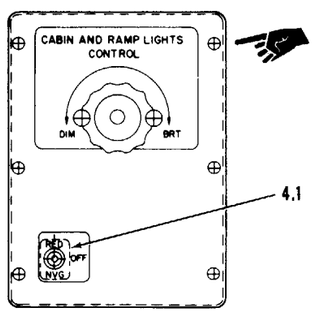
Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off



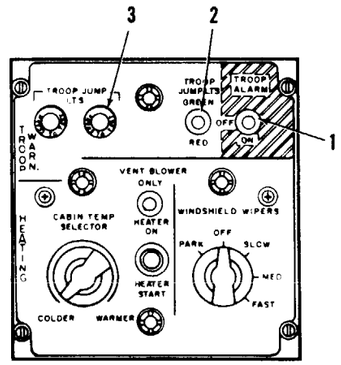
FORWARD TROOP WARNING BOX SHOWN
AFT TROOP WARNING BOX SIMILAR



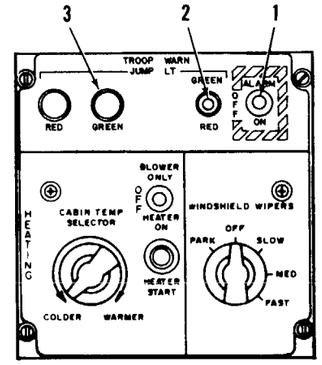
PASSAGEWAY RIGHT SIDE
AT STA 95 WITHOUT 17



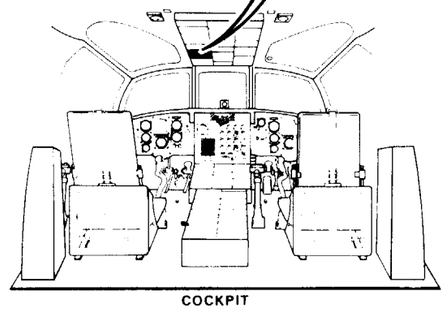
VIEW LOOKING
OUTBOARD RIGHT
SIDE AT STA 482
WITH 17



TROOP WARN/HEATING PANEL
WITHOUT 17



WITH 17



COCKPIT

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GO TO NEXT PAGE

TASK	RESULT
1. Check TROOP ALARM switch (1).	If switch (1) is loose or broken, tighten or replace it as required.
2. Check TROOP JUMP LTS switch (2).	If switch (2) is loose or broken, tighten or replace it as required.
3. Check TROOP JUMP LTS (3).	If lights (3) are loose or damaged, tighten or replace it as required.
4. Without 17, check CAB & RAMP LT RED ON/ALL OFF swtich (4).	If switch (4) is loose or broken, tighten or replace it as required.
4.1. WITH 17, check CABIN AND RAMP LIGHTS CONTROL switch (4.1).	If switch (4.1) is loose or broken, tighten or replace it as required.
5. Check forward troop warning box (5).	If lens or gong is loose or damaged, tighten or replace them as required.
6. Check aft troop warning box (6).	If lens or gong is loose or damaged, tighten or redate them as required.

FOLLOW-ON MAINTENANCE:
None

END OF TASK

9-16.3 TROOP WARNING SYSTEM OPERATIONAL CHECK

INITIAL SETUP

Applicable Configurations:
All

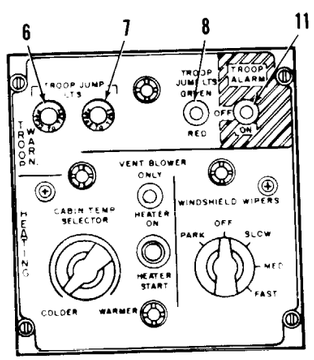
Tools:
None

Materials:
None

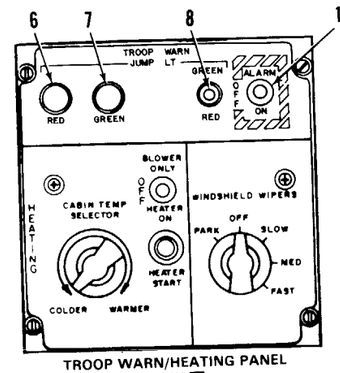
Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

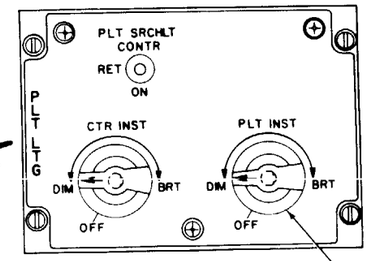
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off
Troop Warning System Visual Check Performed (Task 9-16.2)



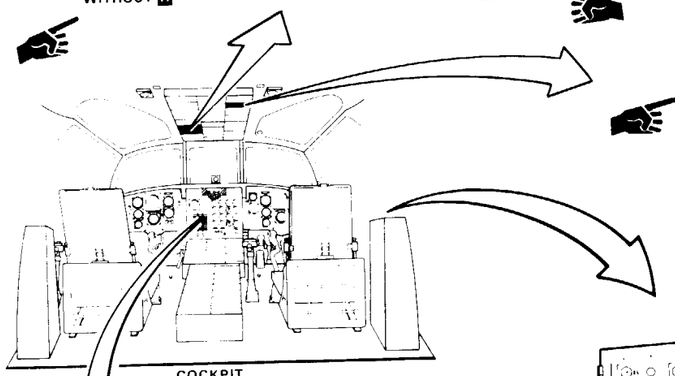
TROOP WARN/HEATING PANEL WITHOUT 17



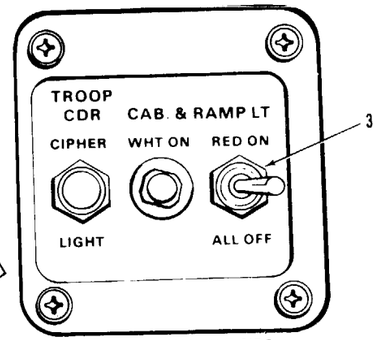
TROOP WARN/HEATING PANEL WITH 17



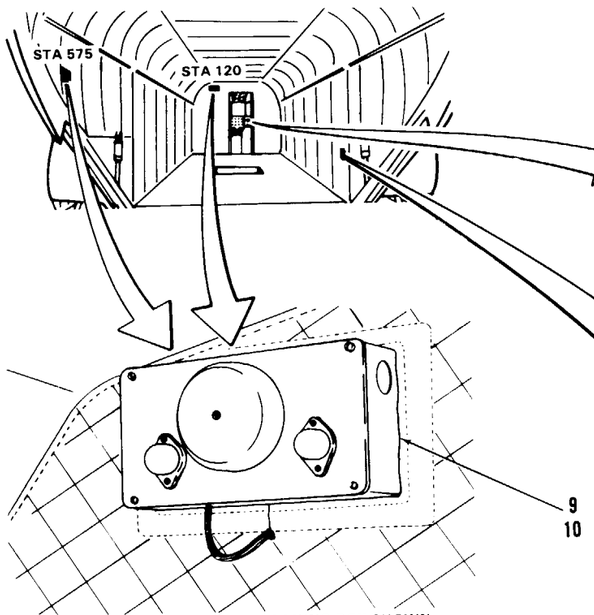
CPLT LTG PANEL WITH 17



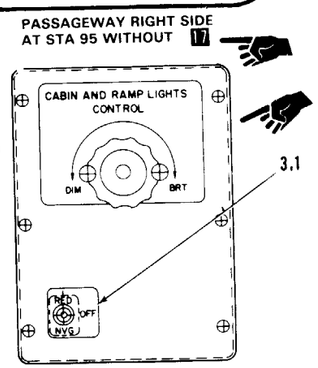
COCKPIT



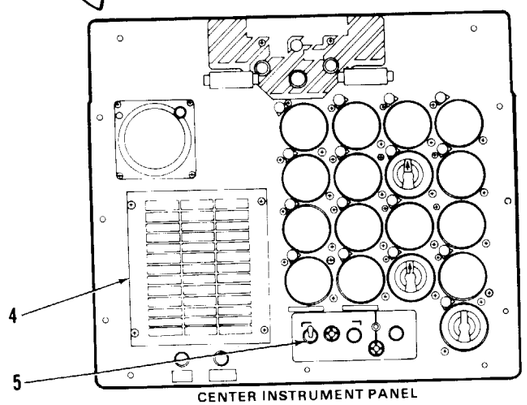
PASSAGEWAY RIGHT SIDE AT STA 95 WITHOUT 17



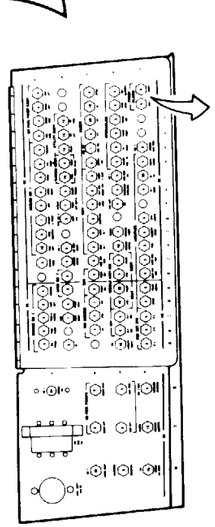
FORWARD TROOP WARNING BOX SHOWN
AFT TROOP WARNING BOX SIMILAR



VIEW LOOKING OUTBOARD RIGHT SIDE AT STA 482 WITH 17



CENTER INSTRUMENT PANEL



NO. 2 POWER DISTRIBUTION PANEL (PDP) VIEW LOOKING AFT

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GO TO NEXT PAGE

TASK	RESULT
1. **Check** that **TROOP ALARM BELL circuit breaker (1)** is closed.	If circuit breaker is open, close it. If it opens again, go to task 9-16.4.
2. **Check** that **TROOP ALARM JUMP LT circuit breaker (2)** is closed.	If circuit breaker is open, close it. If it opens again, go to task 9-16.5.
3. Without 17 check that **red dome lights in cabin and ramp area are not on.** If red dome lights are on, momentarily set the CAB & RAMP LTS switch (3) to ALL/OFF.	If red lights remain on, go to task 9-15.3.
3.1. With 17 check that **red dome lights in cabin** and **ramp area are not on.** If **red dome lights are on, set CABIN AND RAMP LIGHTS CONTROL switch (3.1)** to **OFF.**	
4. **Without 17 check** that **lights in master caution panel (4) are bright.** If not, set master caution **DIM/BRIGHT** switch to **BRIGHT.**	If lights do not come on bright, go to task 9-18.3
4.1. **With 17, set PLT INST lights control (4.1)** to **OFF.**	
5. **Press and release RED TROOP JUMP LTS** light (6),	Light (6) shall momentarily come on red. If not, go to task 9-16.6.
6. **Press and release GREEN TROOP JUMP LTS** light (7).	Light (7) shall momentarily come on green. If not, go to task 9-16.7.
7. **Set TROOP JUMP LTS switch (8)** to **RED.**	Red lights on forward and aft troop warning boxes (9 and 10) and red TROOP JUMP LTS light (6) shall come on bright. If not, go to task 9-16.8. With 17, if red lights come on dim, replace PLT INST lights control (4.1).
8. Without 17, momentarily **set CAB & RAMP LTS switch (3)** to **RED ON. With 17, set CABIN AND RAMP LIGHTS CONTROL switch (3.1)** to **RED.**	Red lights on forward and aft troop warning boxes (9 and 10) shall change from bright to dim. If not, go to task 9-16.9.
9. Without 17, momentarily **set CAB & RAMP LTS switch (3) to ALL OFF.** With 17, **set CABIN AND RAMP LIGHTS CONTROL switch (3.1)** to **OFF.**	Red lights on forward and aft troop warning boxes (9 and 10) shall change from dim to bright. If not, replace jump light relay.
10. Without 17, momentarily **set CAUTION LIGHTS BRIGHT-DIM switch (5)** to **DIM.**	Red TROOP JUMP LTS light (6) shall change from bright to dim, If not, go to task 9-16.10.
10.1. With 17 **set PLT INST lights control (4.1)** to **DIM.**	Red TROOP JUMP LTS light (6) shall change from bright to dim. If not, go to task 9-16.15.
11. Without 17 momentarily **set CAUTION LIGHTS BRIGHT-DIM switch (5)** to **BRIGHT.**	Red TROOP JUMP LTS light (6) shall change from dim to bright. If not, replace troop light dimming relay.
11.1. With 17 set **PLT INST lights control (4.1)** to **OFF.**	Red TROOP JUMP LTS light (6) shall change from dim to bright. If not, replace troop light dimming relay.
12. **Set TROOP JUMP LTS switch (8)** to **GREEN.**	Red lights on forward and aft troop warning boxes (9 and 10) shall go out and green lights shall come on bright. Green TROOP JUMP LTS light (7) shall come on bright. If red lights are still on and green lights are out, go to task 9-16.11.
13. Without 17, momentarily **set CAB & RAMP LTS switch (3) to RED ON.** With 17, **set CABIN AND RAMP LIGHTS CONTROL switch (3.1)** to **RED.**	Green lights on forward and aft troop warning boxes (9 and 10) shall change from bright to dim, If not, go to task 9-16.12.
14. Without 17, momentarily **set CAB & RAMP LTS switch (3)** to **ALL OFF.** With 17, **set CABIN AND RAMP LIGHTS CONTROL switch (3.1)** to **OFF.**	Green lights on forward and aft troop warning boxes (9 and 10) shall change from dim to bright. If not, replace jump light relay.
15. Without 17, momentarily **set CAUTION LIGHTS BRIGHT-DIM switch (4)** to **DIM.** With 17 **set PLT INST lights control (4.1)** to **DIM.**	Green TROOP JUMP LTS light (7) shall change from bright to dim. If not, go to task 9-16.13.
16. Without 17, momentarily **set CAUTION LIGHTS BRIGHT-DIM switch (4)** to **BRIGHT.** With 17 **set PLT INST lights control (4.1)** to **OFF.**	Green TROOP JUMP LTS light (7) shall change from dim to bright. If not, replace troop light dimming relay.
17. **Set TROOP JUMP LTS switch (8)** to **OFF.**	Green lights on both troop warning boxes (9 and 10) and green TROOP JUMP LTS light (7) shall go out. If not, replace TROOP JUMP LTS switch (8).
18. **Set TROOP ALARM switch (11)** to **ON.**	Alarm bells on the forward and aft troop warning boxes (9 and 10) shall sound. If not, go to task 9-16.14.
19. **Set TROOP ALARM switch (11)** to **OFF.**	Both alarm bells shall stop.

FOLLOW-ON MAINTENANCE:
TM 55-1520-240-23:
Battery disconnected.
Electrical power off.
Hydraulic power off.

END OF TASK

9-16.4 TROOP ALARM BELL CIRCUIT BREAKER WILL NOT STAY CLOSED

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

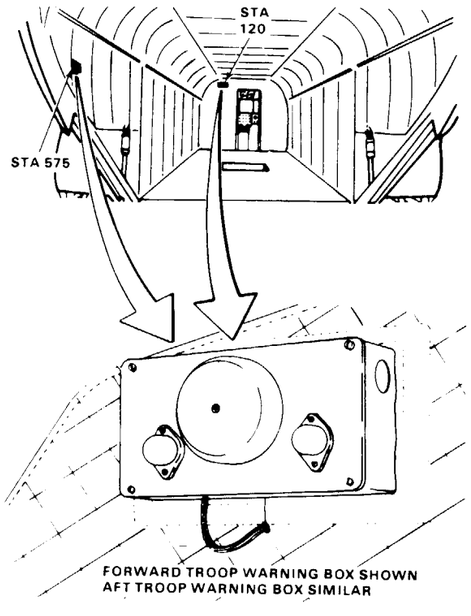
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multi meter

Materials:
None

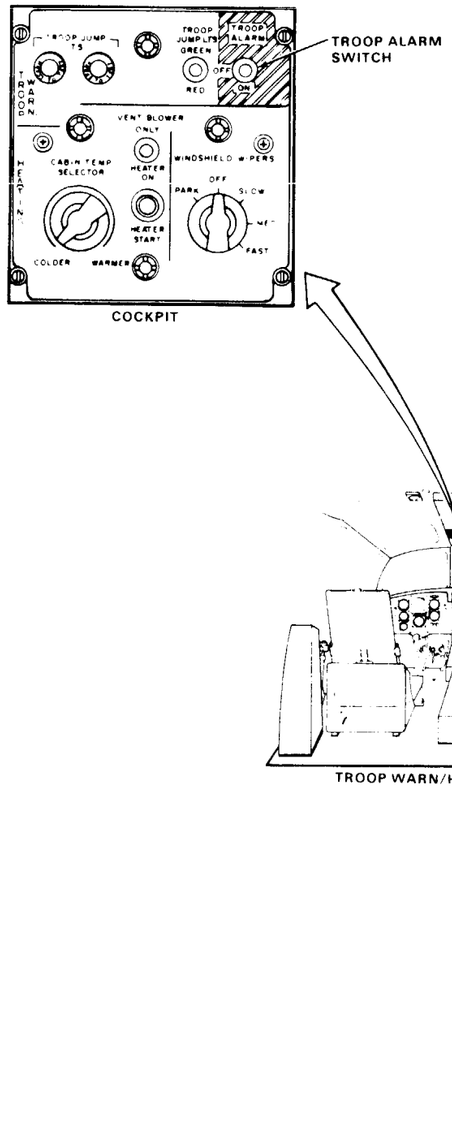
Personnel Required
68F10 Aircraft Electrician
68F20 Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
Battery Connected
Electrical Power On
Hydraulic Power Off



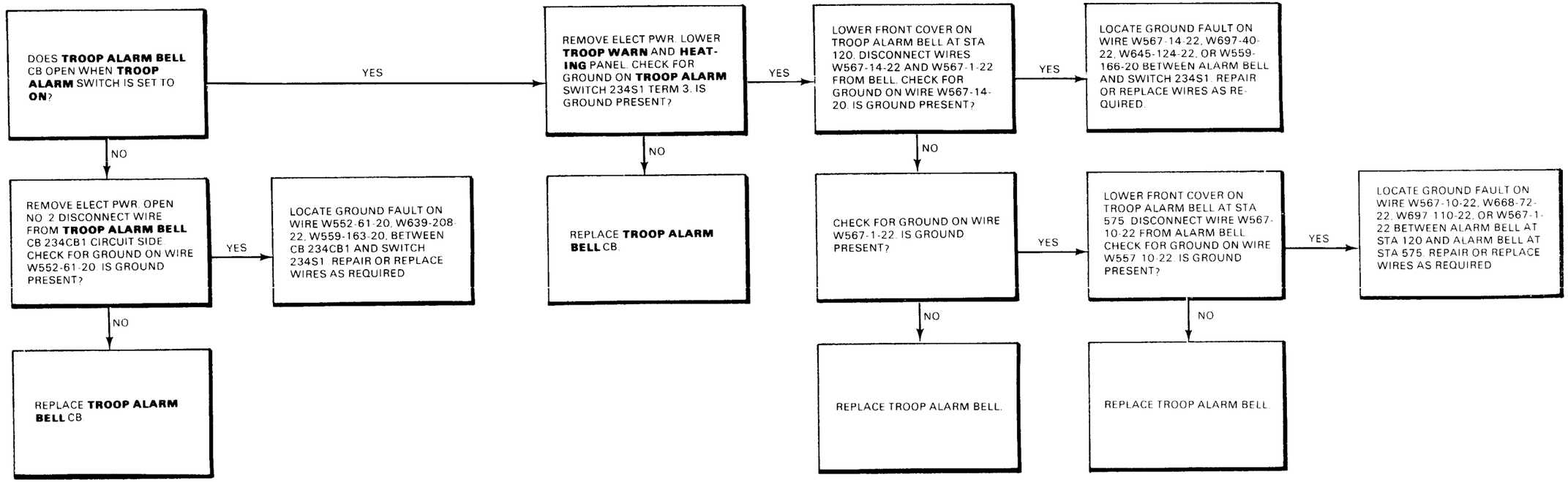
90X54



D145-11779-SPA

GO TO NEXT PAGE

9-16.4 TROOP ALARM BELL CIRCUIT BREAKER WILL NOT STAY CLOSED (Continued)



END OF TASK

9-16.5 TROOP ALARM JUMP LTS CIRCUIT BREAKER WILL NOT STAY CLOSED

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

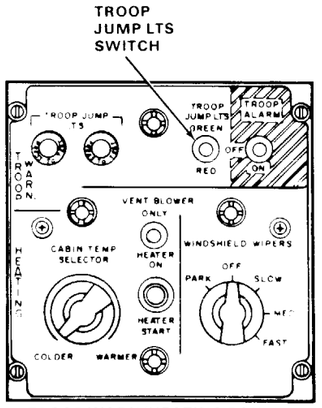
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multlmeter

Materials:
None

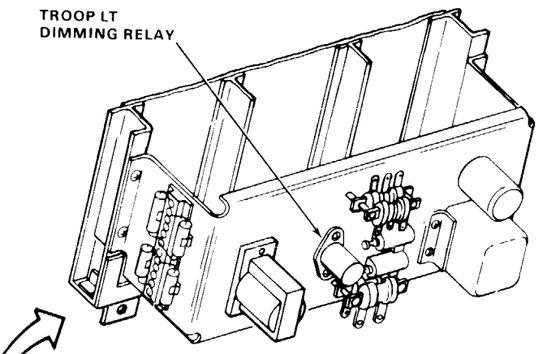
Personnel Required:
68F10 Aircraft Electrician
68F20 Aircraft Electrlclan

References:
TM 55-1520-240-23

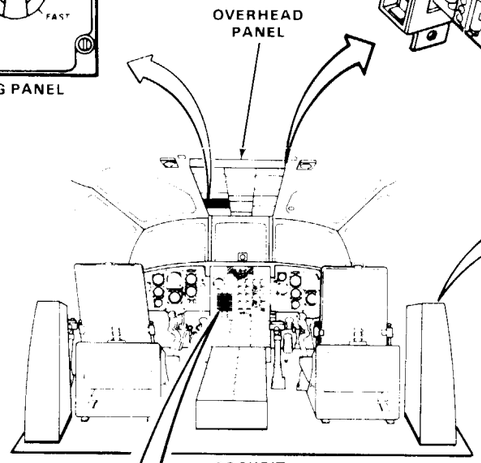
Equipment Condition:
Battery Connected
Electrical Power On
Hydraullc Power Off

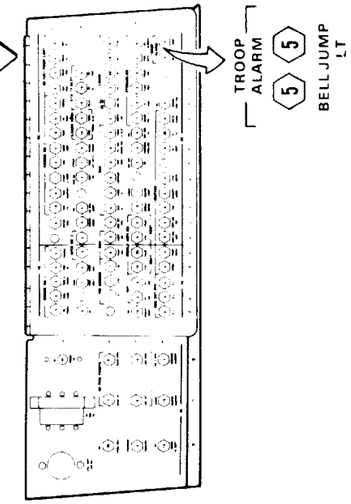


TROOP WARN/HEATING PANEL

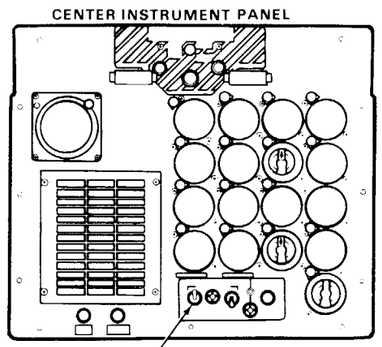


VIEW SHOWING OVERHEAD PANEL LOWERED

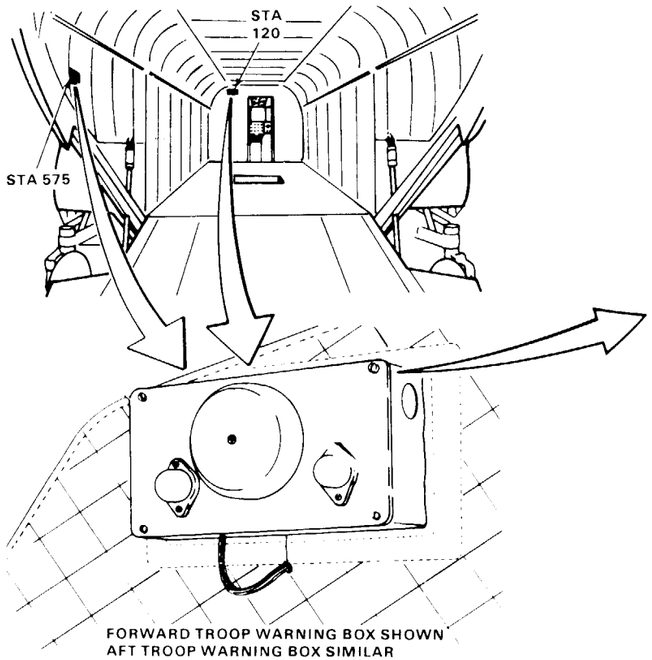




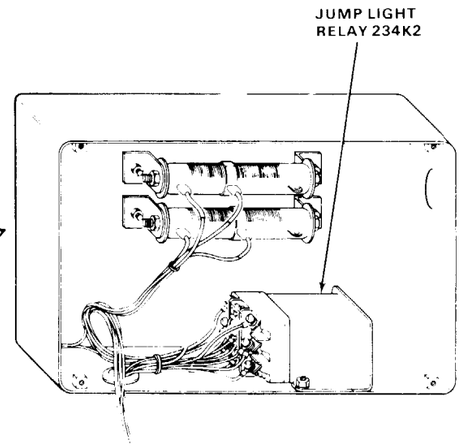
NO. 2 POWER DISTRIBUTION PANEL (PDP) VIEW LOOKING AFT



CAUTION PANEL DIM/BRIGHT SWITCH



FORWARD TROOP WARNING BOX SHOWN
AFT TROOP WARNING BOX SIMILAR

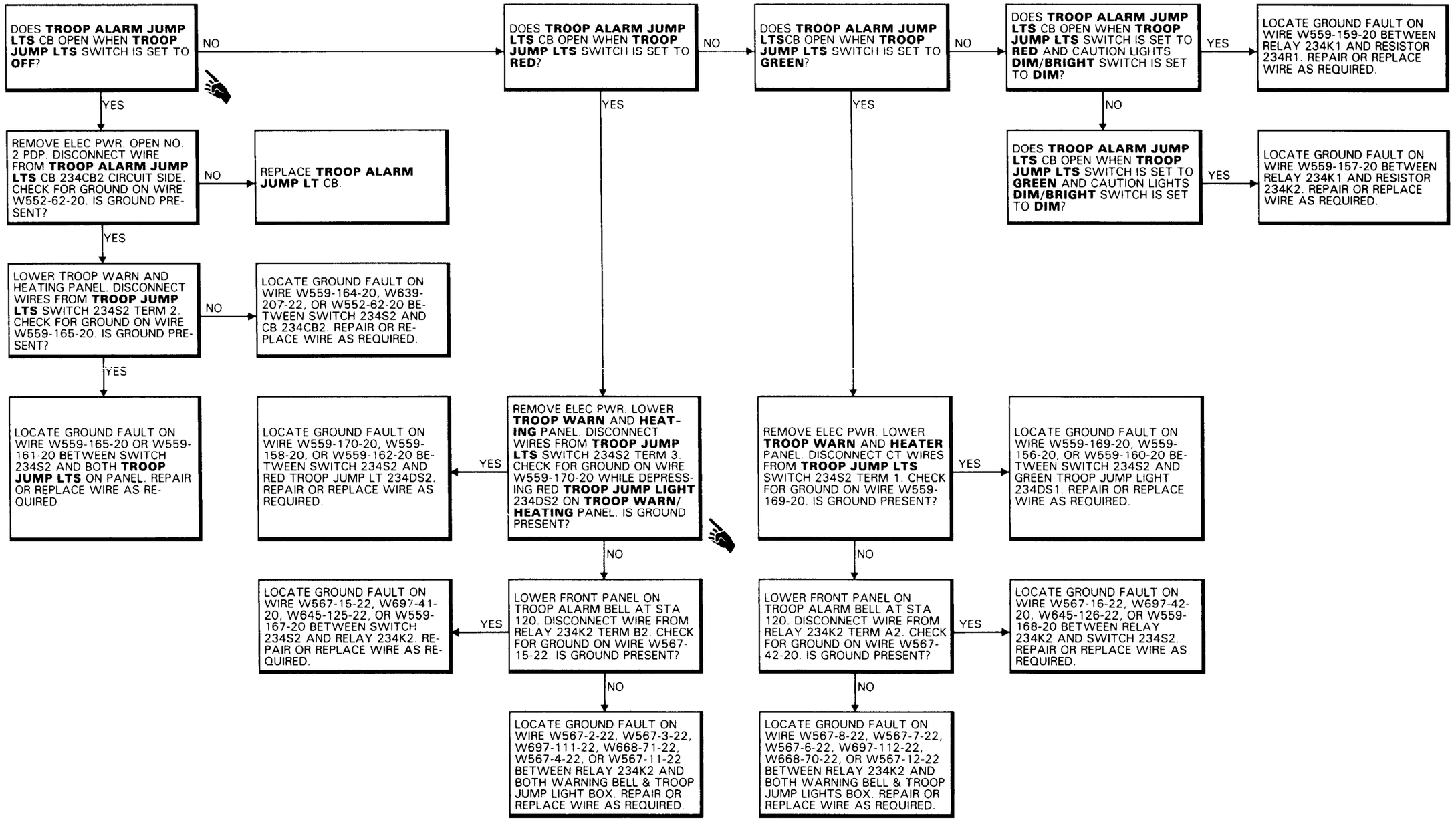


TROOP WARNING BOX AT STA 120 SHOWN WITH FRONT COVER REMOVED

0X54

GO TO NEXT PAGE

9-16.5 TROOP ALARM JUMP LTS CIRCUIT BREAKER WILL NOT STAY CLOSED (Continued)



END OF TASK

9-16.6 LEFT TROOP JUMP LTS LIGHT DOES NOT COME ON WHEN PRESSED

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

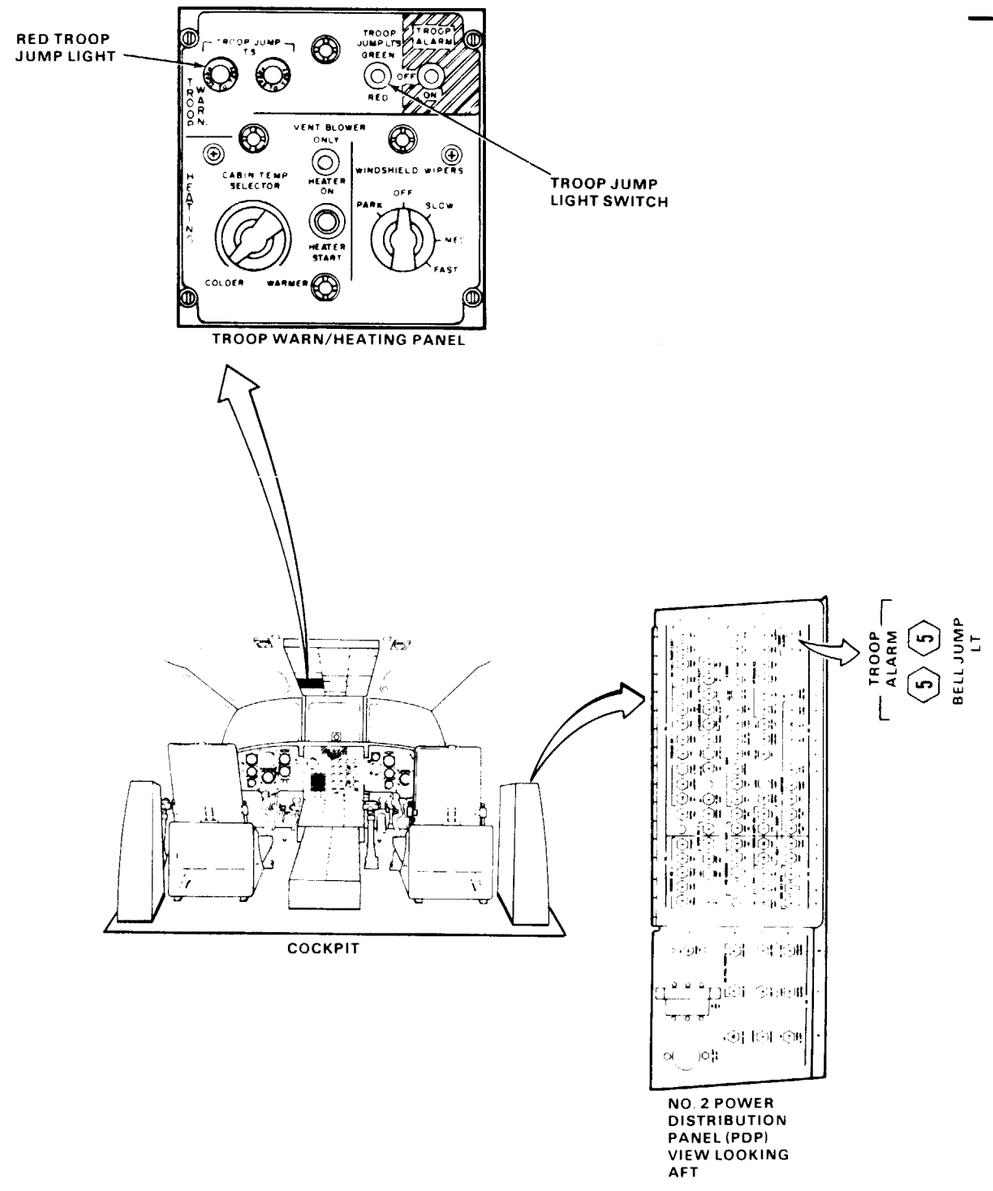
Tools:
Electrical Repairer's Tool Kit, NSN 5180-00-323-4915
Multimeter

Materials:
None

Personnel Required:
68F20 Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
Battery Connected
Electrical Power On
Hydraulic Power off

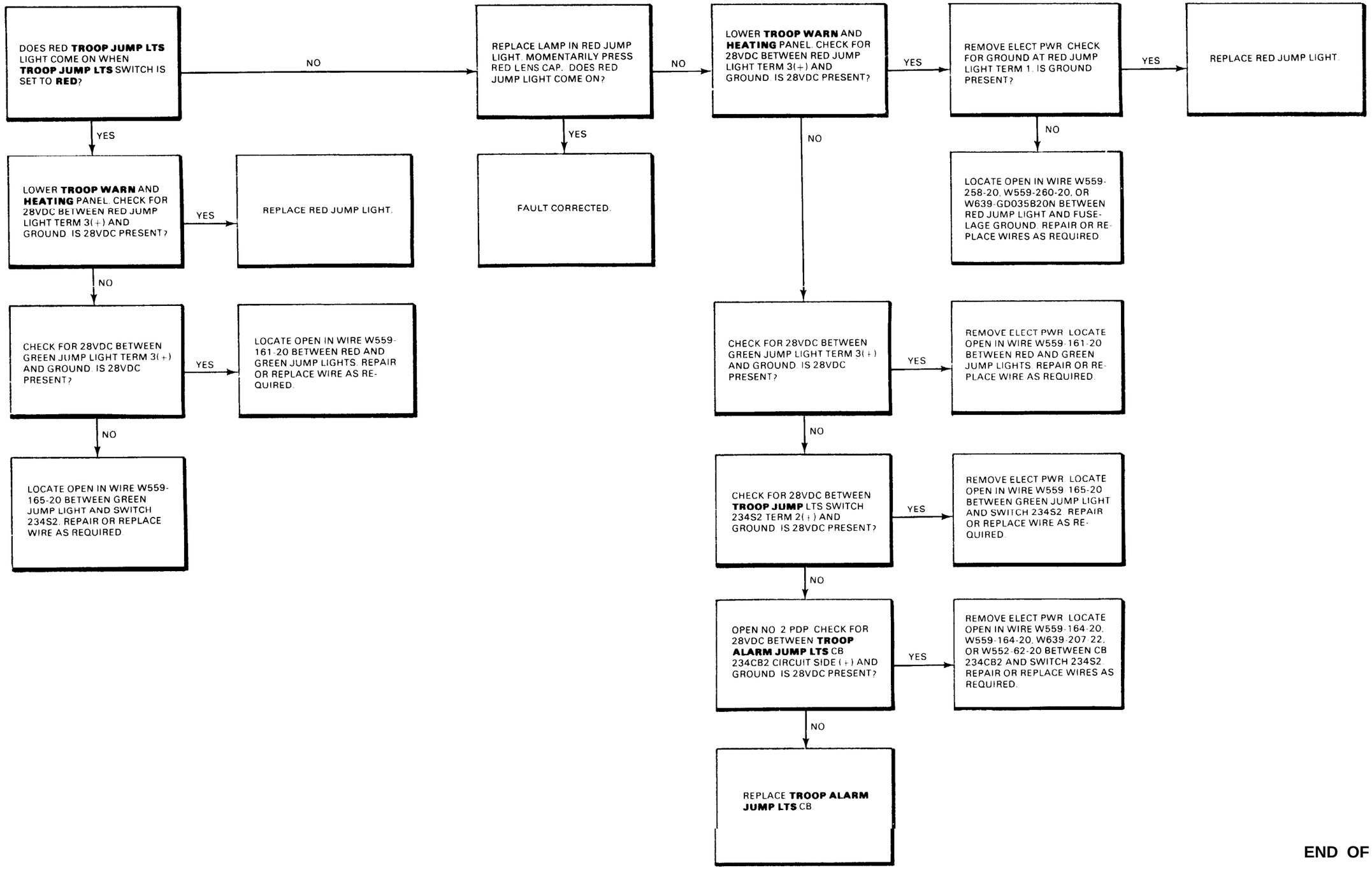


45 X 54

D145-11770-SPA

GO TO NEXT PAGE

9-16.6 LEFT TROOP JUMP LTS LIGHT DOES NOT COME ON WHEN PRESSED (Continued)



END OF TASK

9-16.7 RIGHT TROOP JUMP LTS LIGHT DOES NOT ON WHEN PRESSED

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

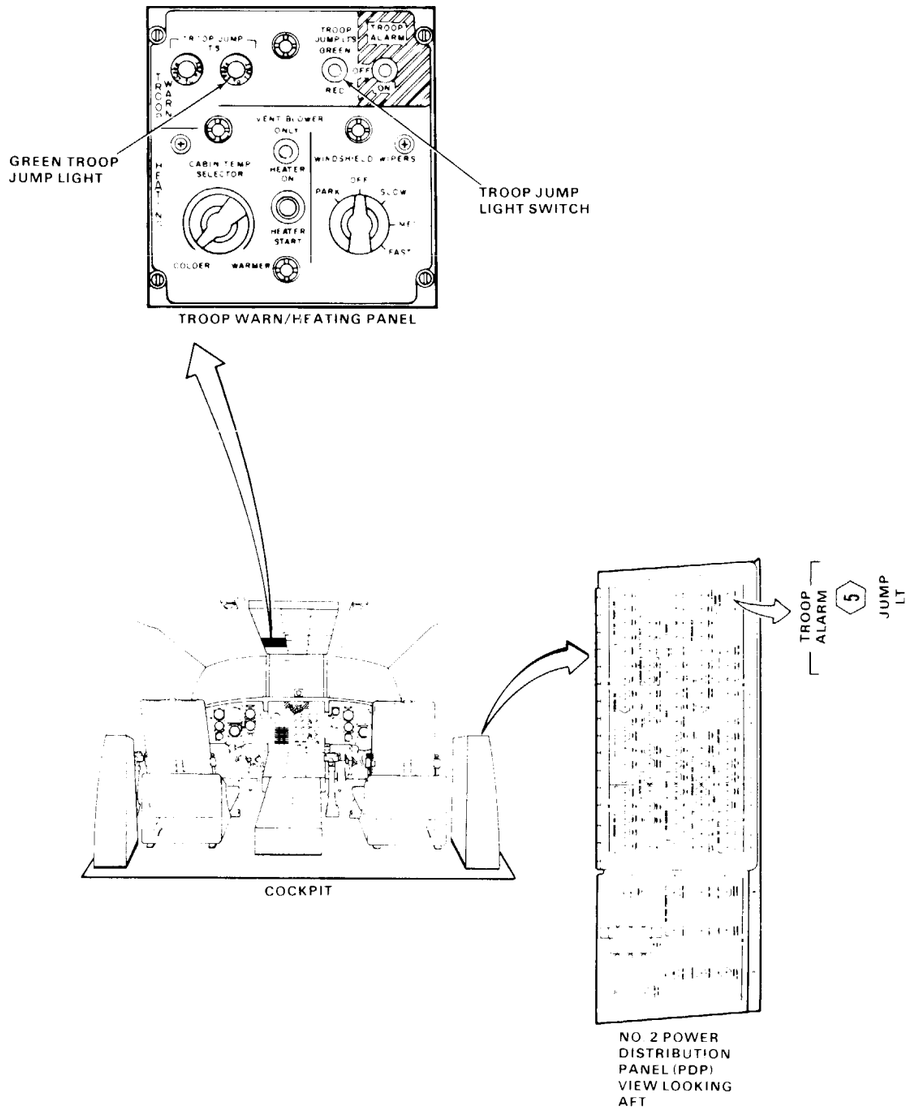
Tools:
Electrical Repairer's Tool Kit, NSN 5180-00-323-4915
Multimeter

Materials:
None

Personnel Required:
68F20 Aircraft Electrician

References:
TM 55-1520-240-23

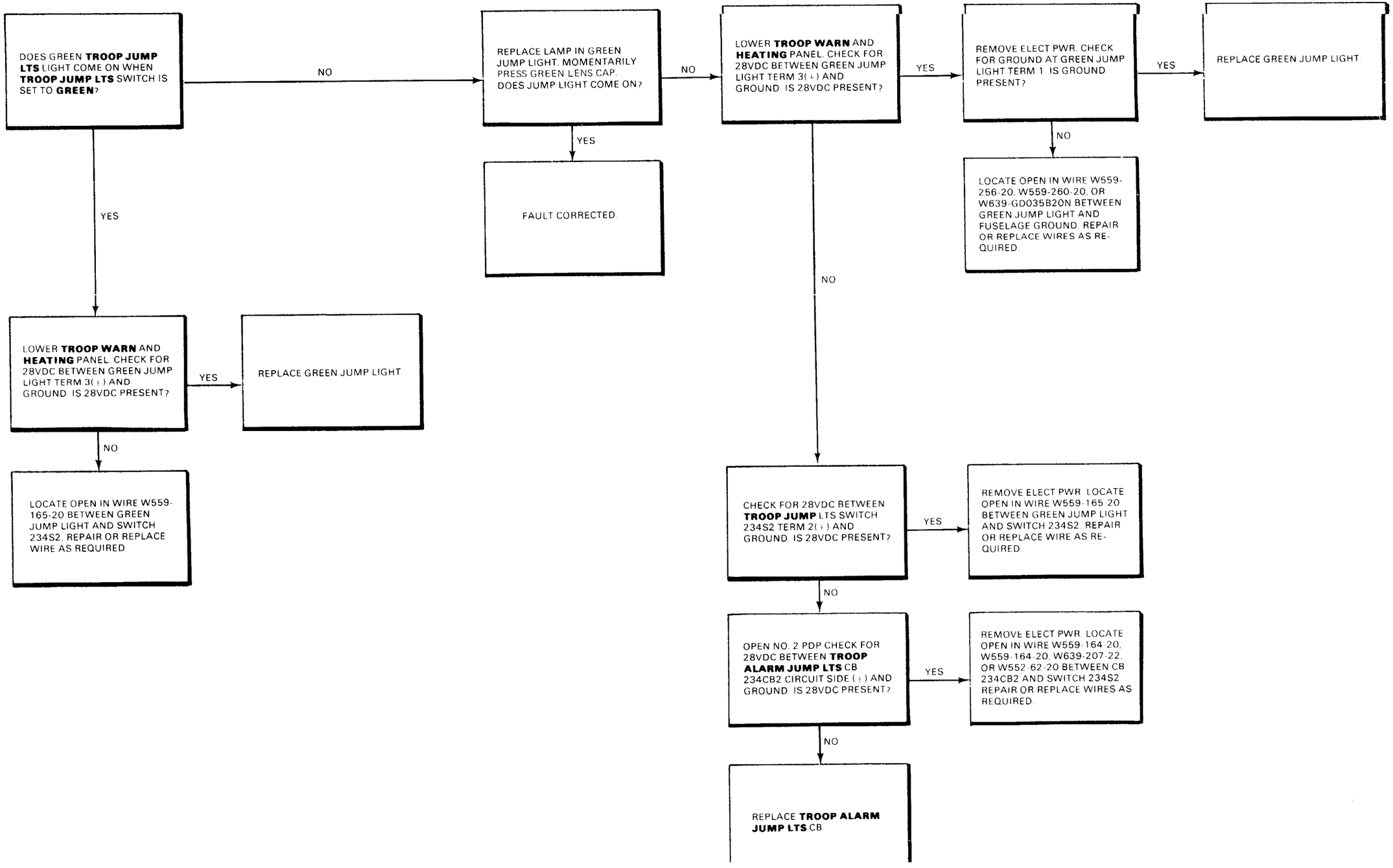
Equipment Condition:
Battery Connected
electrical Power On
Hydraulic Power Off



45X54

GO TO NEXT PA GE

9-16.7 RIGHT TROOP JUMP LTS LIGHT DOES NOT COME ON WHEN PRESSED (Continued)



END OF TASK

9-16.8 RED LIGHT ON FWD OR AFT TROOP WARNING BOX OR RED TROOP JUMP LTS LIGHT DO NOT COME ON BRIGHT

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

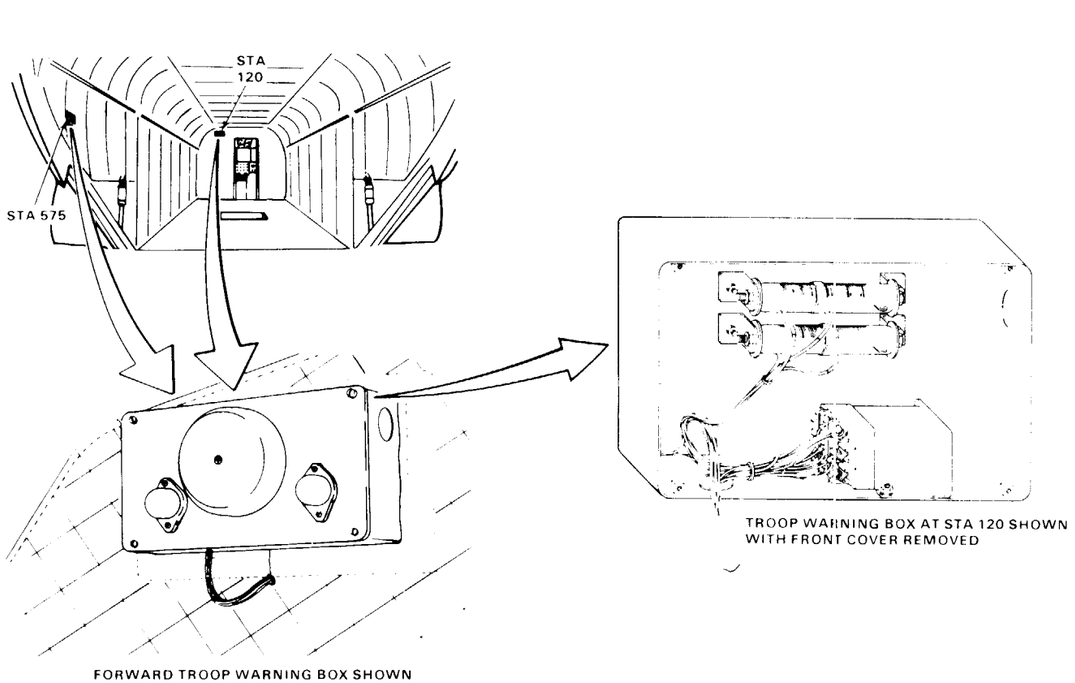
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multlmeter

Materials:
None

Personnel Required:
68F10 Aircraft Electrician
68F20 Aircraft Electrician

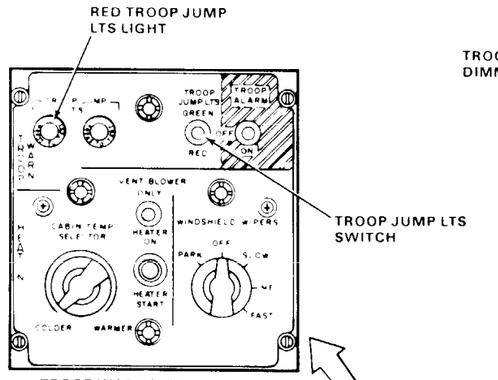
References:
TM 55-1520-240-23

Equipment Condition:
Battery Connected
Electrical Power On
Hydraulic Power Off

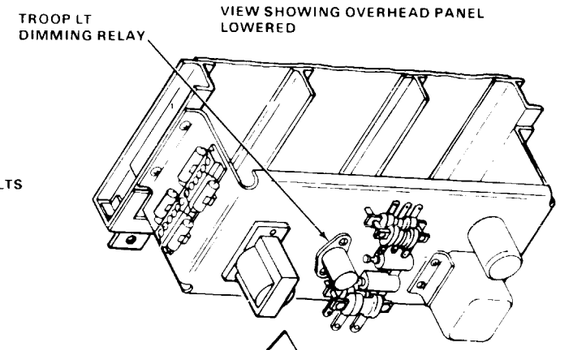


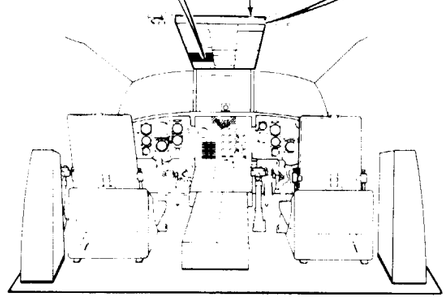
FORWARD TROOP WARNING BOX SHOWN
AFT TROOP WARNING BOX SIMILAR

TROOP WARNING BOX AT STA 120 SHOWN
WITH FRONT COVER REMOVED



TROOP WARN/HEATING PANEL





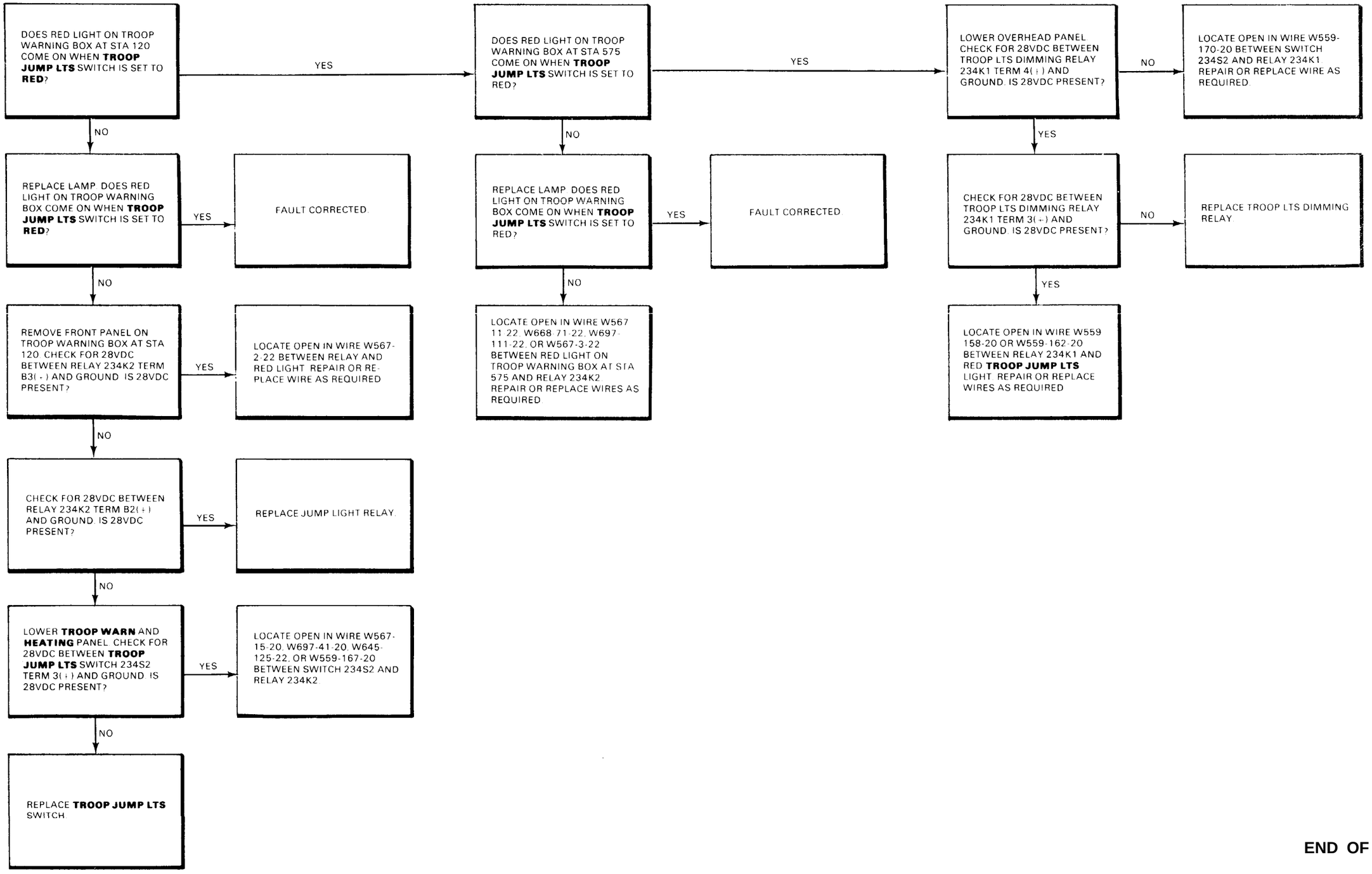
COCKPIT

90 x 54

0145 - 11772 - SPA

GO TO NEXT PAGE

9-16.8 RED LIGHT ON FWD OR AFT TROOP WARNING BOX OR RED TROOP JUMP LTS LIGHT DO NOT COME ON BRIGHT (Continued)



END OF TASK

9-16.9 RED LIGHTS ON FWDANDAFTTROOP WARNING BOXES DO NOT GO DIM

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

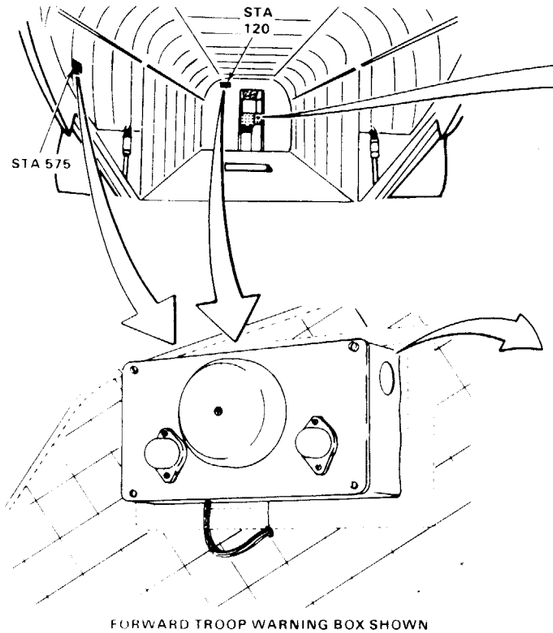
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:
None

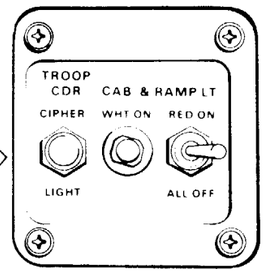
Personnel Required:
68F10 Aircraft Electrician

References:
TM 55-1520-240-23

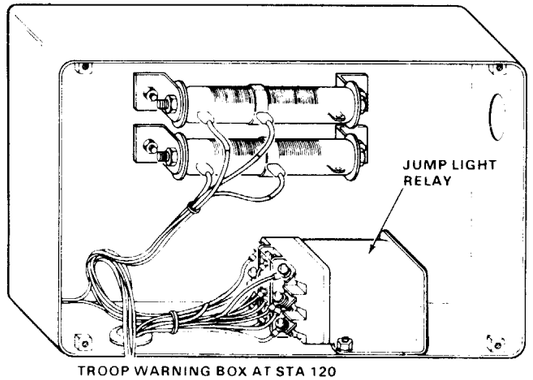
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off



FORWARD TROOP WARNING BOX SHOWN
AFT TROOP WARNING BOX SIMILAR



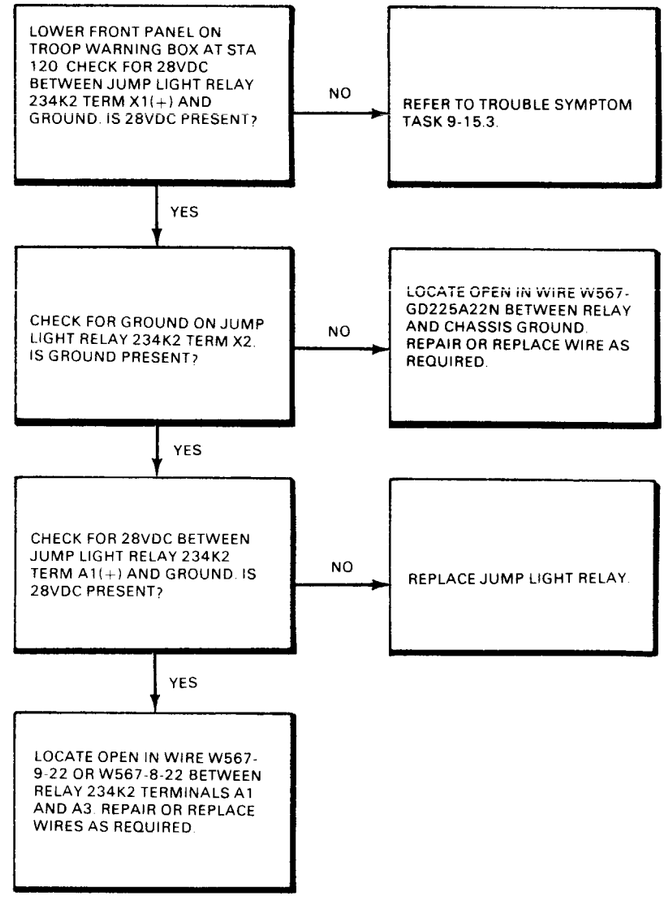
PASSAGEWAY RIGHT SIDE
AT STA 98



TROOP WARNING BOX AT STA 120
SHOWN WITH FRONT COVER REMOVED

45 x 54

D145-11773-SPA



END OF TASK

9-16.10 RED TROOP JUMP LTS LIGHT DOES NOT GO DIM

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
Without 17

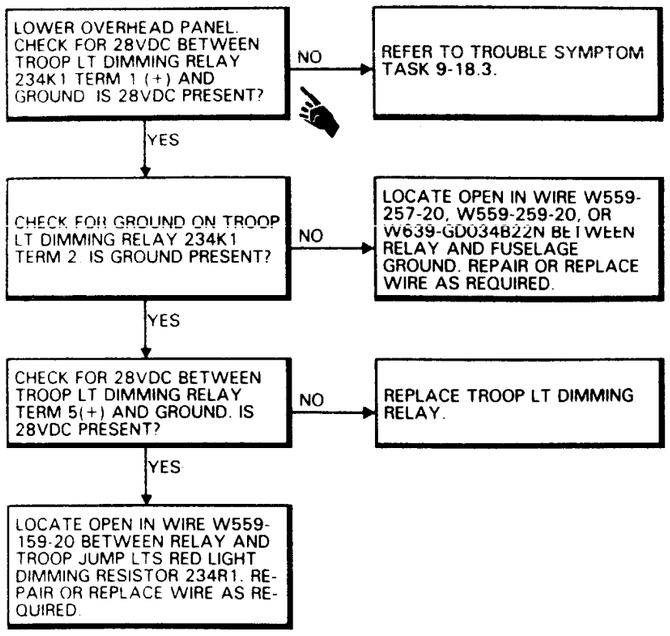
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

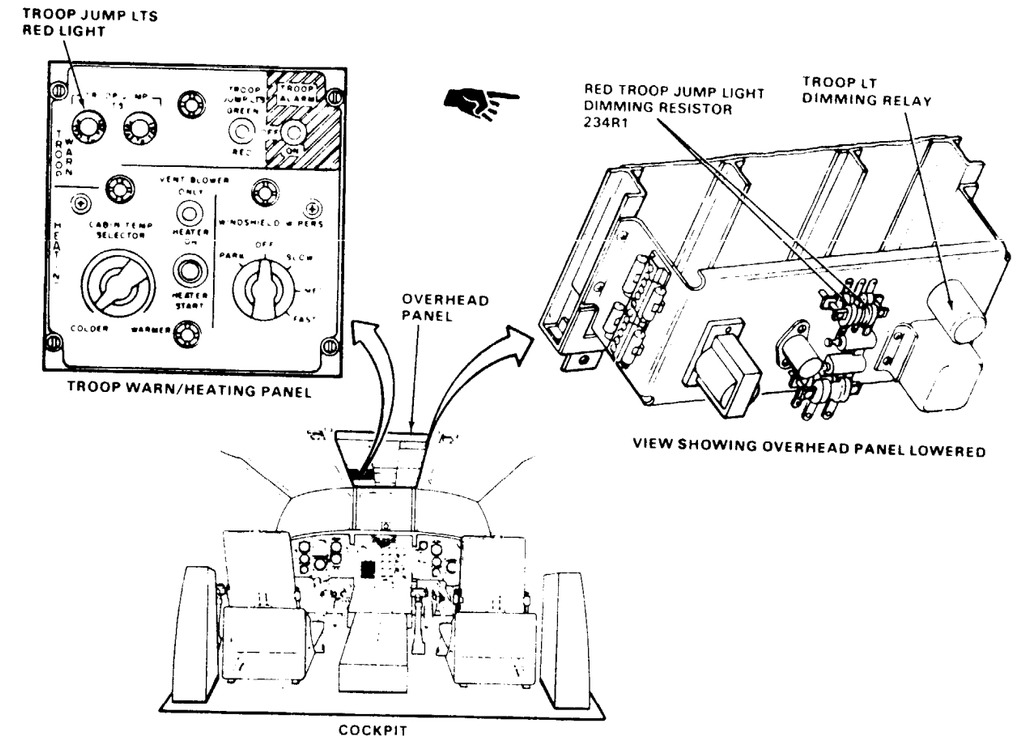
Materials:
None

Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off





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END OF TASK

9-16.11 GREEN LIGHT ON FWD OR AFT TROOP WARNING BOX OR TROOP JUMP LTS LIGHT DO NOT COME ON BRIGHT

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

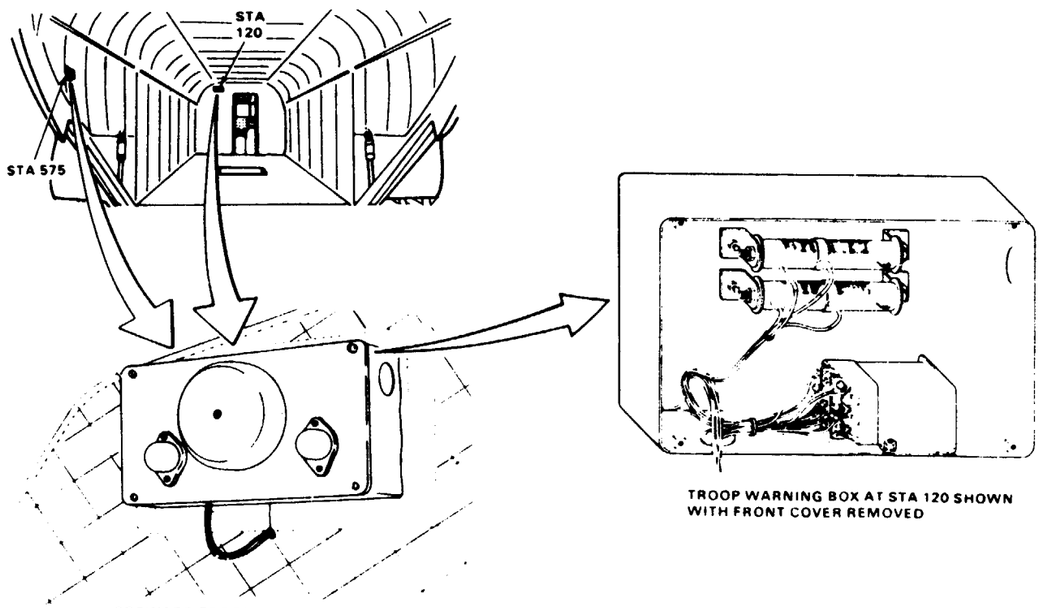
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:
None

Personnel Required:
68F10 Aircraft Electrician
68F20 Aircraft Electrician

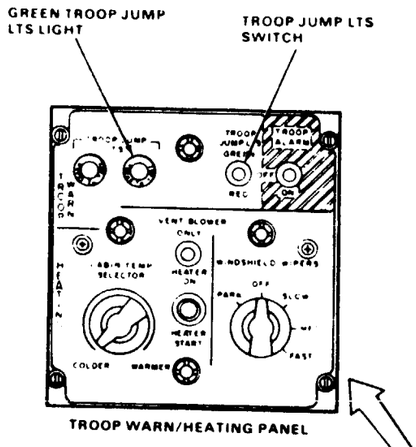
References:
TM 55-1520-240-23

Equipment Condition:
Battery Connected
Electrical Power On
Hydraulic Power Off

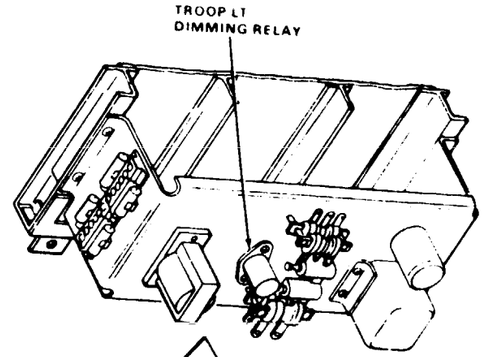


FORWARD TROOP WARNING BOX SHOWN
AFT TROOP WARNING BOX SIMILAR

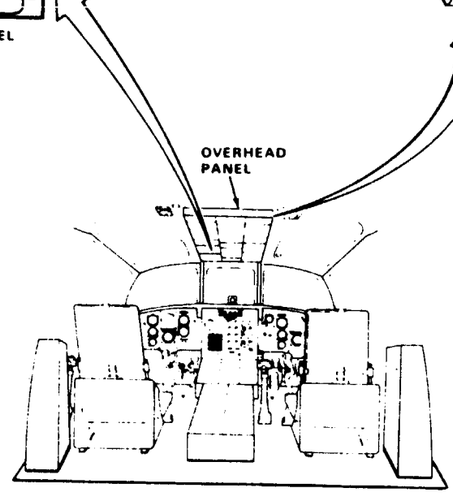
TROOP WARNING BOX AT STA 120 SHOWN WITH FRONT COVER REMOVED



TROOP WARN/HEATING PANEL

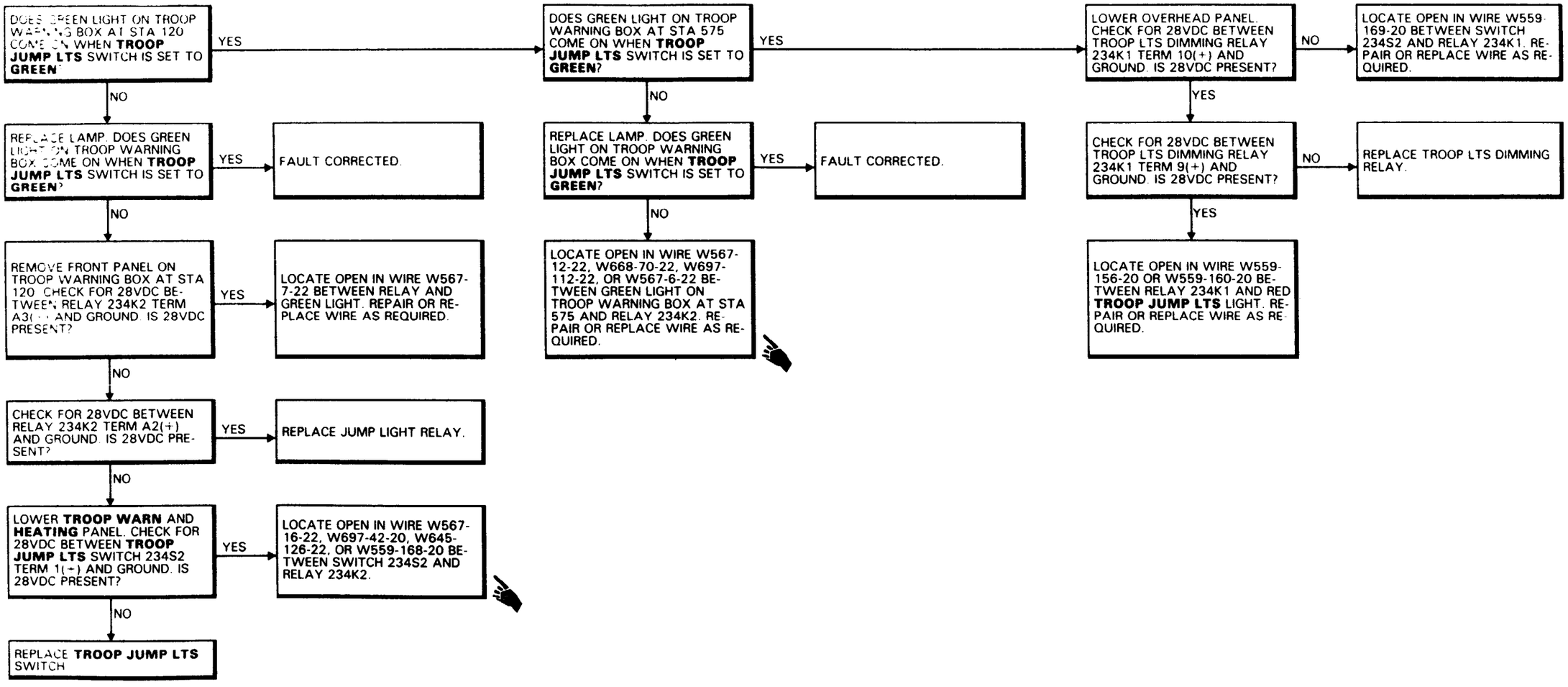


VIEW SHOWING OVERHEAD PANEL LOWERED



COCKPIT

GO TO NEXT PAGE


DOES GREEN LIGHT ON TROOP WARNING BOX AT STA 120 COME ON WHEN **TROOP JUMP LTS** SWITCH IS SET TO **GREEN**?
YES
DOES GREEN LIGHT ON TROOP WARNING BOX AT STA 575 COME ON WHEN **TROOP JUMP LTS** SWITCH IS SET TO **GREEN**?
YES
LOWER OVERHEAD PANEL. CHECK FOR 28VDC BETWEEN TROOP LTS DIMMING RELAY 234K1 TERM 10(+) AND GROUND. IS 28VDC PRESENT?
NO
LOCATE OPEN IN WIRE W559-169-20 BETWEEN SWITCH 234S2 AND RELAY 234K1. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
REPLACE LAMP. DOES GREEN LIGHT ON TROOP WARNING BOX COME ON WHEN **TROOP JUMP LTS** SWITCH IS SET TO **GREEN**?
YES
FAULT CORRECTED.
NO
REPLACE LAMP. DOES GREEN LIGHT ON TROOP WARNING BOX COME ON WHEN **TROOP JUMP LTS** SWITCH IS SET TO **GREEN**?
YES
FAULT CORRECTED.
YES
CHECK FOR 28VDC BETWEEN TROOP LTS DIMMING RELAY 234K1 TERM 9(+) AND GROUND. IS 28VDC PRESENT?
NO
REPLACE TROOP LTS DIMMING RELAY.
NO
REMOVE FRONT PANEL ON TROOP WARNING BOX AT STA 120. CHECK FOR 28VDC BETWEEN RELAY 234K2 TERM A3(+) AND GROUND. IS 28VDC PRESENT?
YES
LOCATE OPEN IN WIRE W567-7-22 BETWEEN RELAY AND GREEN LIGHT. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
LOCATE OPEN IN WIRE W567-12-22, W668-70-22, W697-112-22, OR W567-6-22 BETWEEN GREEN LIGHT ON TROOP WARNING BOX AT STA 575 AND RELAY 234K2. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
LOCATE OPEN IN WIRE W559-156-20 OR W559-160-20 BETWEEN RELAY 234K1 AND RED **TROOP JUMP LTS** LIGHT. REPAIR OR REPLACE WIRE AS REQUIRED.
NO
CHECK FOR 28VDC BETWEEN RELAY 234K2 TERM A2(+) AND GROUND. IS 28VDC PRESENT?
YES
REPLACE JUMP LIGHT RELAY.
NO
LOWER **TROOP WARN** AND **HEATING** PANEL. CHECK FOR 28VDC BETWEEN **TROOP JUMP LTS** SWITCH 234S2 TERM 1(+) AND GROUND. IS 28VDC PRESENT?
YES
LOCATE OPEN IN WIRE W567-16-22, W697-42-20, W645-126-22, OR W559-168-20 BETWEEN SWITCH 234S2 AND RELAY 234K2.
NO
REPLACE **TROOP JUMP LTS** SWITCH

END OF TASK

9-16.12 GREEN LIGHTS ON FWD AND AFT TROOP WARNING BOXES DO NOT GO DIM

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

Tools:
Electrical Repairer's Tool Kit, NSN 5180-00-323-4915
Multimeter

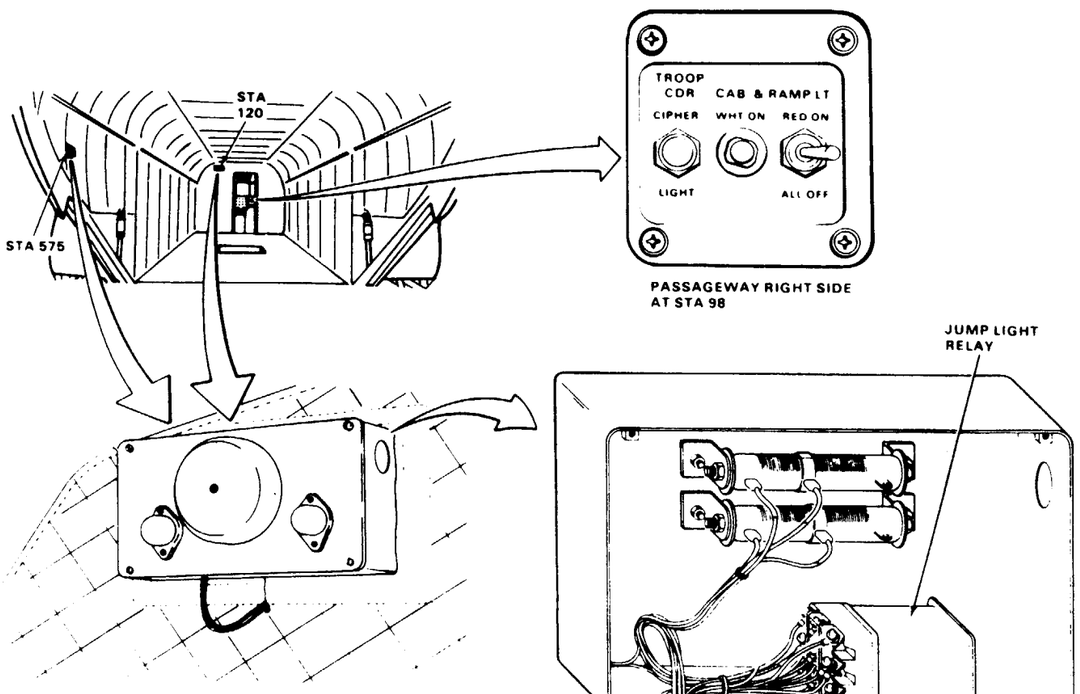
Materials:
None

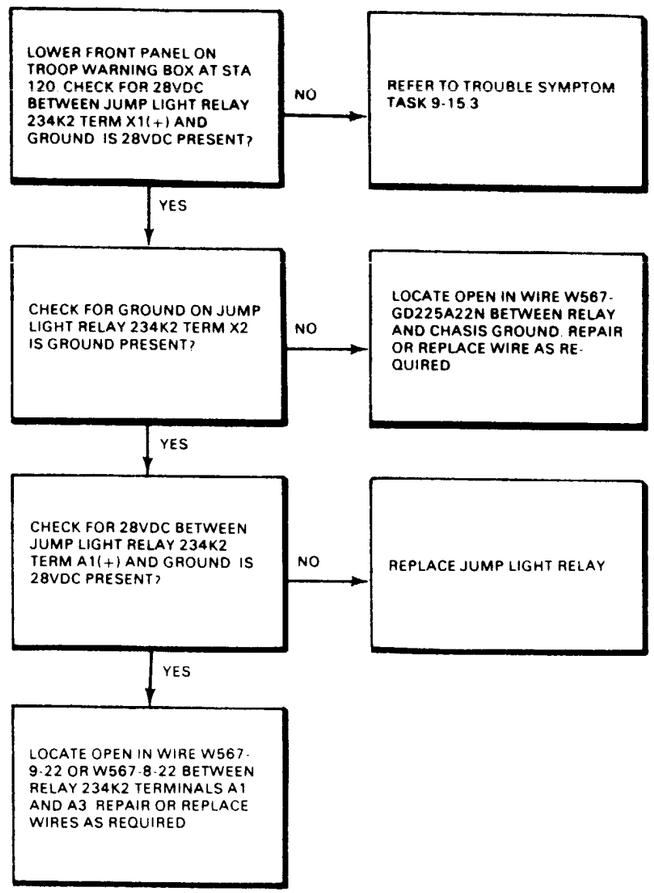
Materials:
None

Personnel Required:
68F20 Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
Battery Connected
Electrical Power On
Hydraulic Power Off





END OF TASK

9-16.13 GREEN TROOP JUMP LTS LIGHT DOES NOT GO DIM

FAULT ISOLATION PROCEDURE

INITIAL SETUP

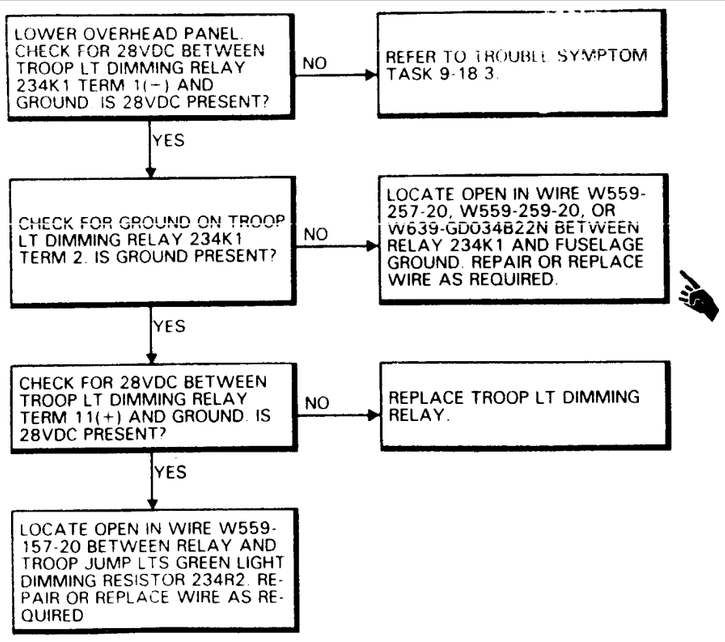
Applicable Configurations:
All

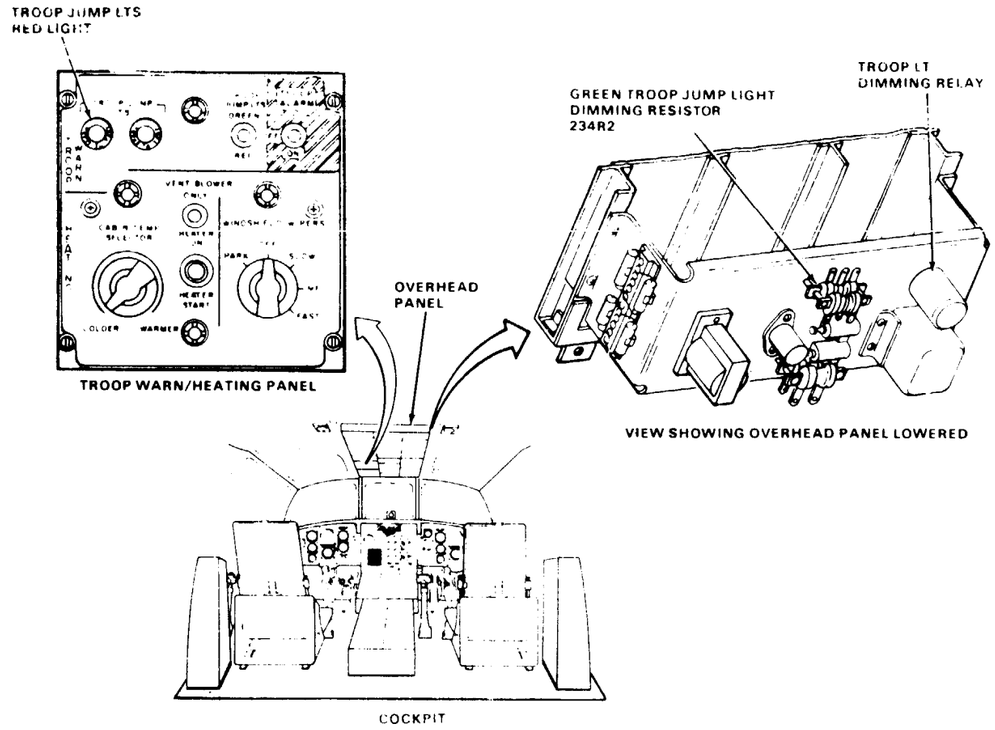
Tools:
Electrtcal Repairer's Tool Kit,
NSN 5180-00323-4915
Multlmeter

Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
Battery Connected
Electrical Power On
Hydraulic Power Off





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END OF TASK

9-16.14 TROOP ALARM BELLS ON FWD OR AFT TROOP WARNING BOX DO NOT SOUND WHEN TROOP ALARM SWITCH IS SET TO ON

ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

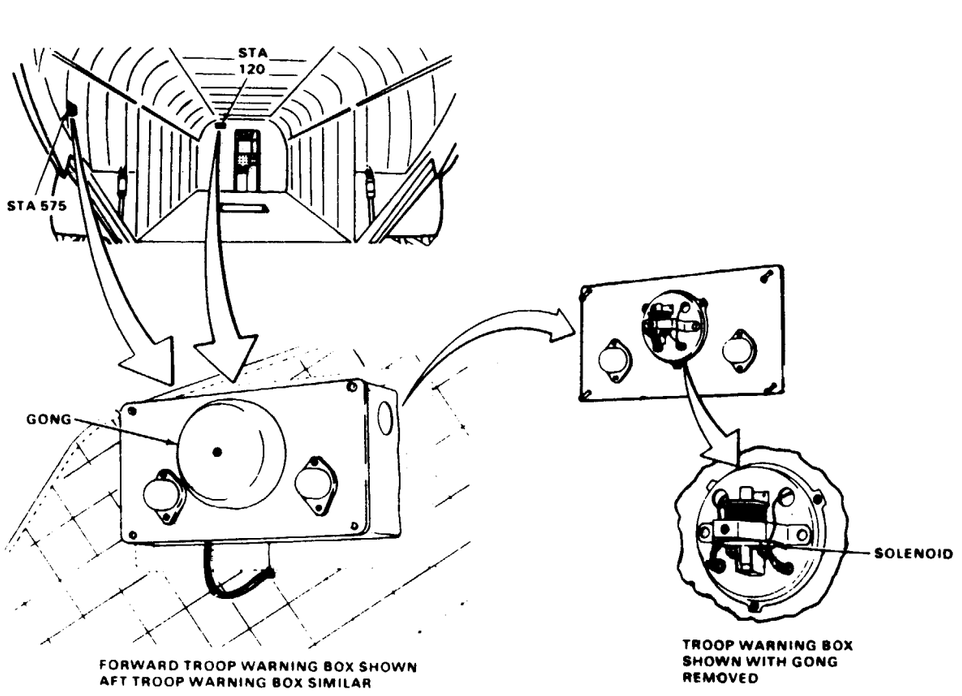
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

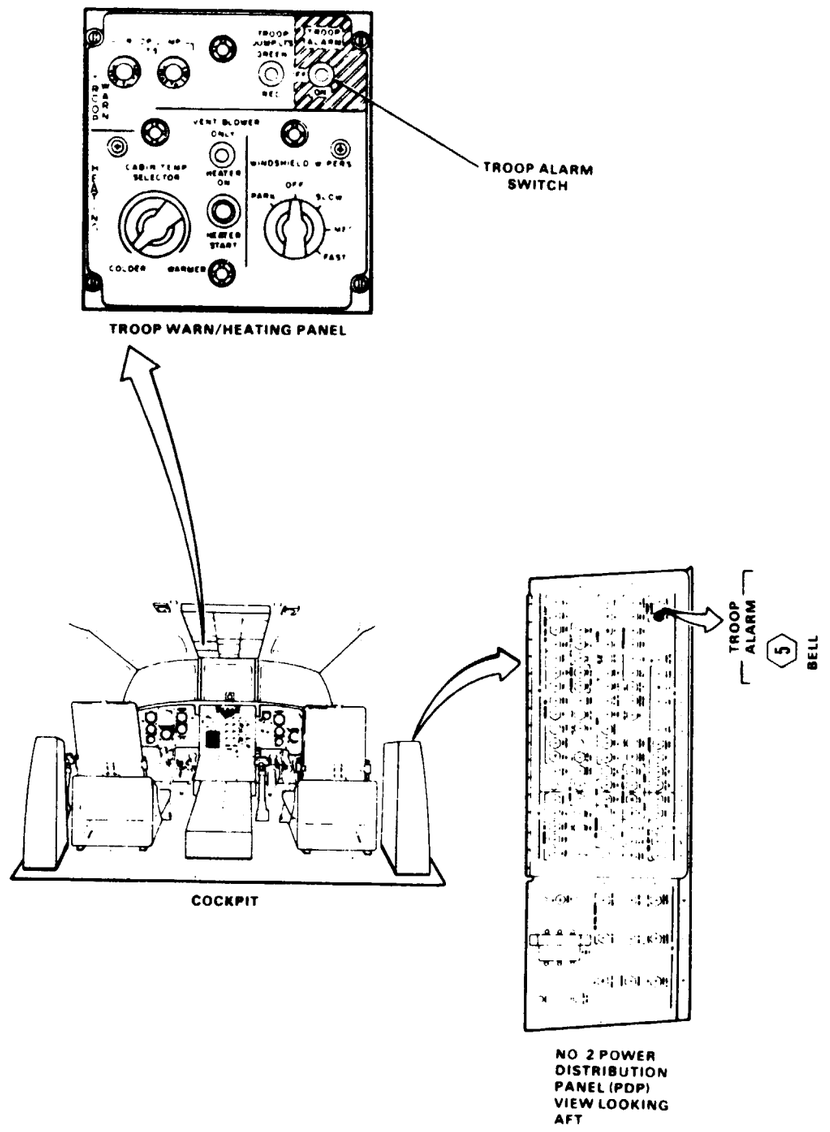
Materials:
None

Personnel Required:
68F10 Aircraft Electrician
68F20 Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
Battery Connected
Electrical Power On
Hydraulic Power Off



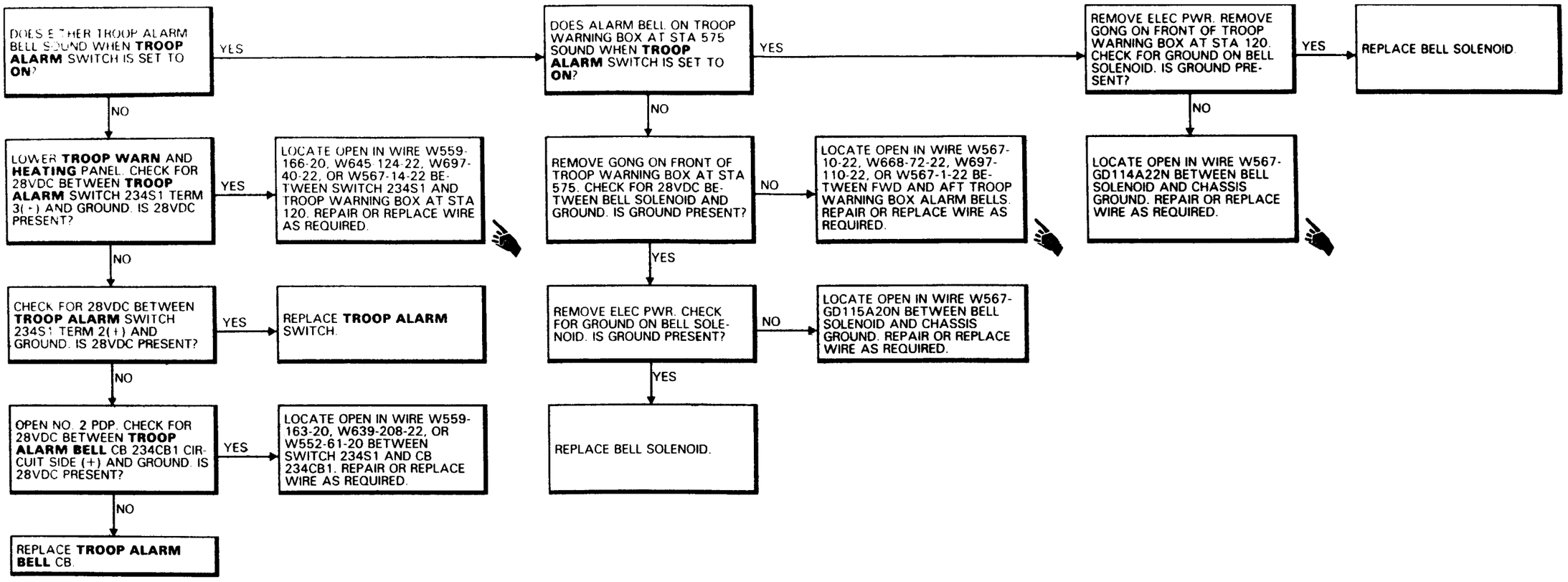


90 x 54

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GO TO NEXT PAGE

9-16.14 TROOP ALARM BELLS ON FWD OR AFT TROOP WARNING BOX DO NOT SOUND WHEN TROOP ALARM SWITCH IS SET TO ON (Continued)



END OF TASK

9-16.15 RED TROOP JUMP LT LIGHT DOES NOT GO DIM

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
With 17

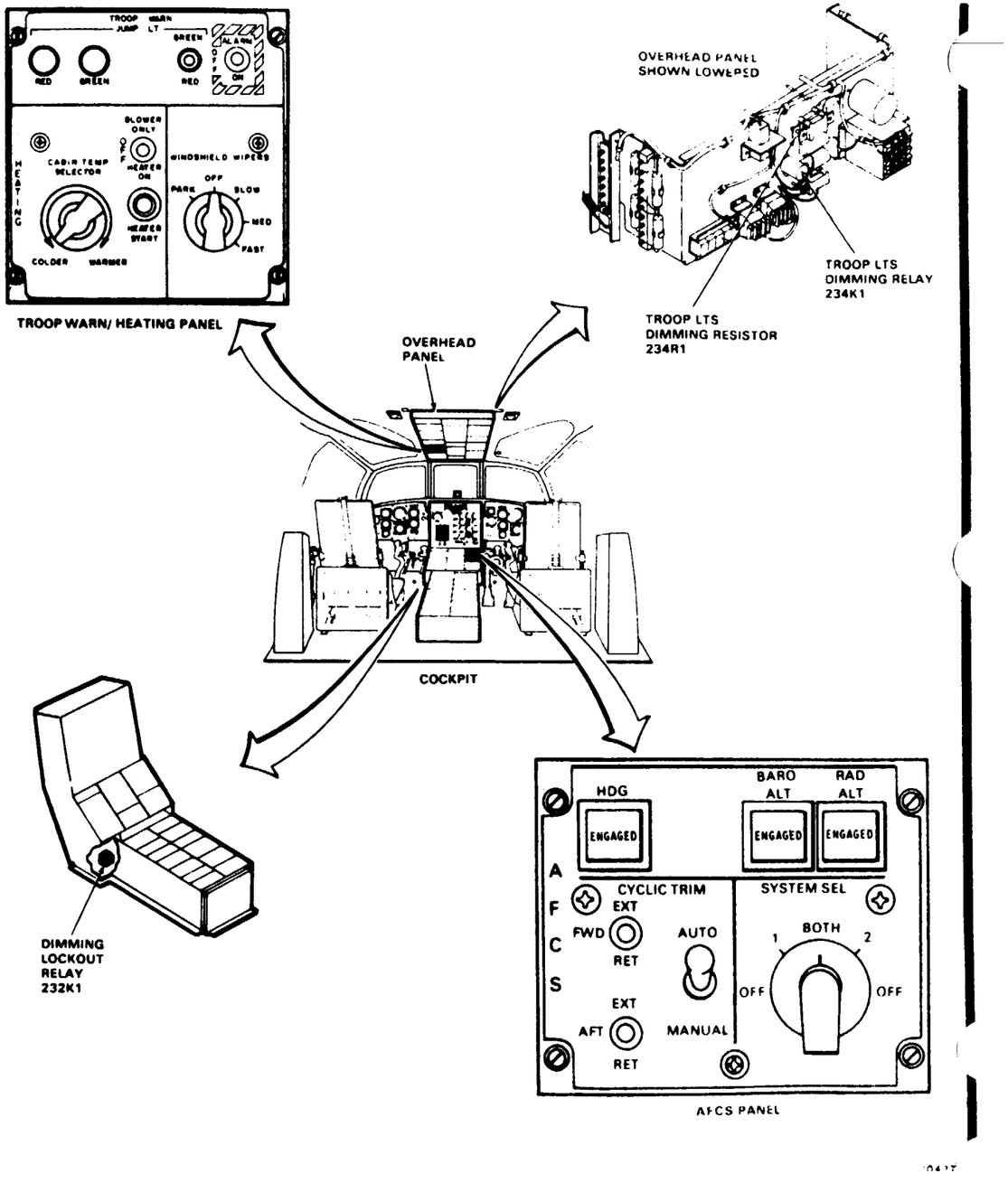
Tools:
Electrical Repairer's Tool Kit, NSN 5180-00-323-4915
Multimeter

Materials:
None

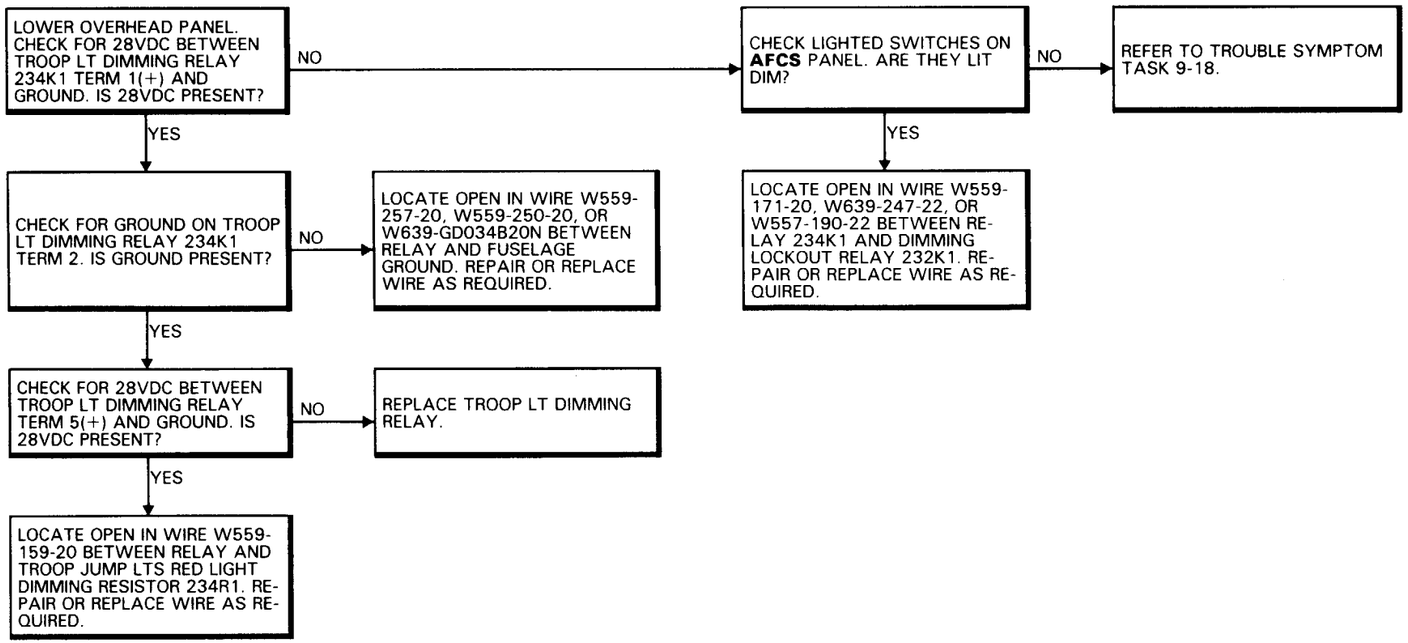
Personnal Required:
Aircraft Electriclan

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off

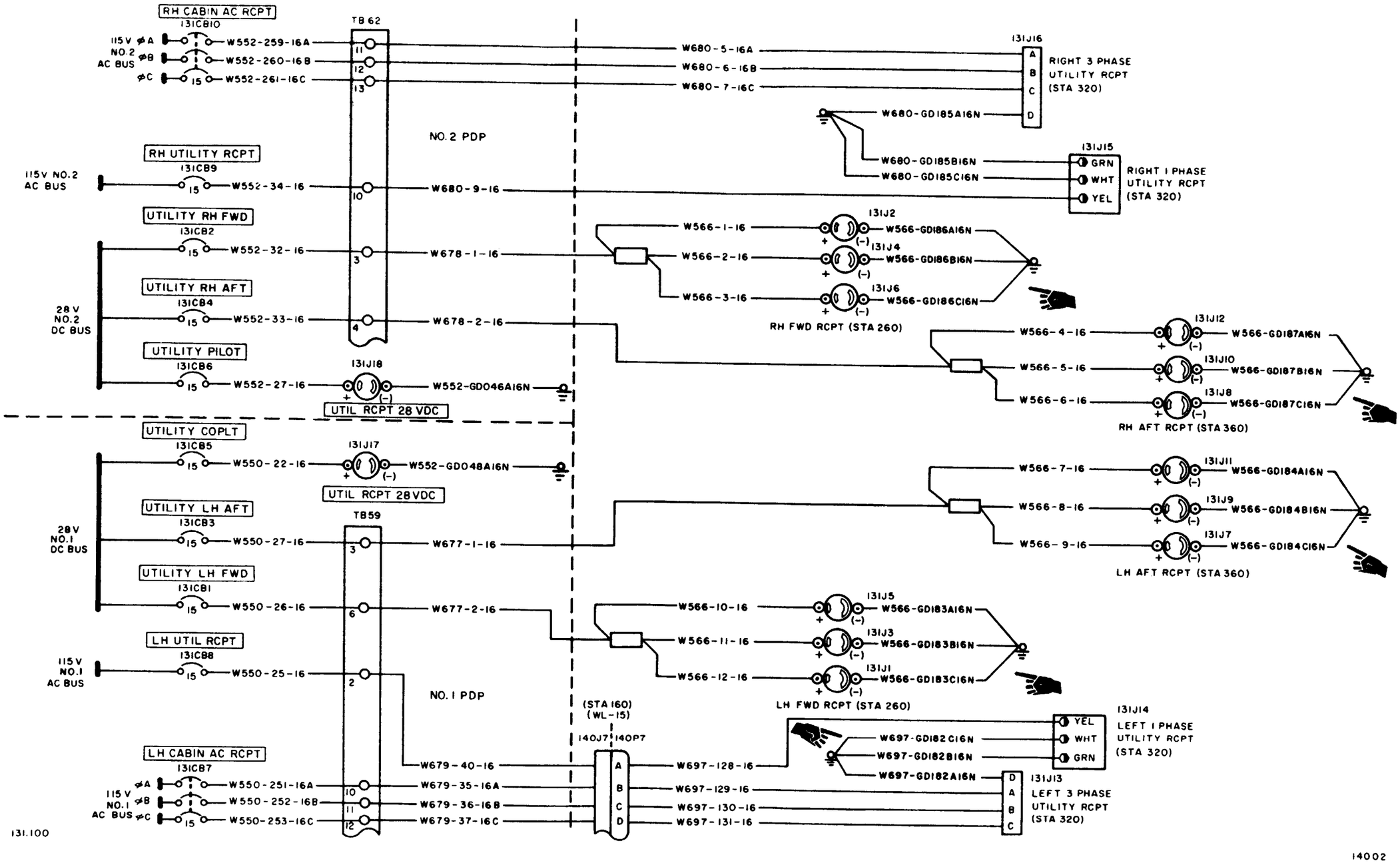


GO TO NEXT PAGE


LOWER OVERHEAD PANEL. CHECK FOR 28VDC BETWEEN TROOP LT DIMMING RELAY 234K1 TERM 1(+) AND GROUND. IS 28VDC PRESENT?
NO
CHECK LIGHTED SWITCHES ON **AFCS** PANEL. ARE THEY LIT DIM?
NO
REFER TO TROUBLE SYMPTOM TASK 9-18.
YES
YES
CHECK FOR GROUND ON TROOP LT DIMMING RELAY 234K1 TERM 2. IS GROUND PRESENT?
NO
LOCATE OPEN IN WIRE W559-257-20, W559-250-20, OR W639-GD034B20N BETWEEN RELAY AND FUSELAGE GROUND. REPAIR OR REPLACE WIRE AS REQUIRED.
LOCATE OPEN IN WIRE W559-171-20, W639-247-22, OR W557-190-22 BETWEEN RELAY 234K1 AND DIMMING LOCKOUT RELAY 232K1. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
CHECK FOR 28VDC BETWEEN TROOP LT DIMMING RELAY TERM 5(+) AND GROUND. IS 28VDC PRESENT?
NO
REPLACE TROOP LT DIMMING RELAY.
YES
LOCATE OPEN IN WIRE W559-159-20 BETWEEN RELAY AND TROOP JUMP LTS RED LIGHT DIMMING RESISTOR 234R1. REPAIR OR REPLACE WIRE AS REQUIRED.

END OF TASK

9-17 UTILITY RECEPTACLES


RH CABIN AC RCPT
131CB10
115V ΦA
NO.2 ΦB
AC BUS ΦC
W552-259-16A
W552-260-16B
W552-261-16C
15
TB 62
11
12
13
W680-5-16A
W680-6-16B
W680-7-16C
131J16
A
B
C
D
RIGHT 3 PHASE UTILITY RCPT (STA 320)
W680-GD185A16N
W680-GD185B16N
W680-GD185C16N
131J15
GRN
WHT
YEL
RIGHT 1 PHASE UTILITY RCPT (STA 320)
NO. 2 PDP
RH UTILITY RCPT
131CB9
115V NO.2 AC BUS
W552-34-16
10
W680-9-16
UTILITY RH FWD
131CB2
W552-32-16
3
W678-1-16
W566-1-16
W566-2-16
W566-3-16
131J2
131J4
131J6
W566-GD186A16N
W566-GD186B16N
W566-GD186C16N
RH FWD RCPT (STA 260)
UTILITY RH AFT
131CB4
28V NO.2 DC BUS
W552-33-16
4
W678-2-16
W566-4-16
W566-5-16
W566-6-16
131J12
131J10
131J8
W566-GD187A16N
W566-GD187B16N
W566-GD187C16N
RH AFT RCPT (STA 360)
UTILITY PILOT
131CB6
W552-27-16
131J18
W552-GD046A16N
UTIL RCPT 28 VDC
UTILITY COPLT
131CB5
W550-22-16
W552-GD048A16N
131J17
UTIL RCPT 28 VDC
TB59
UTILITY LH AFT
131CB3
28V NO.1 DC BUS
W550-27-16
3
W677-1-16
W566-7-16
W566-8-16
W566-9-16
131J11
131J9
131J7
W566-GD184A16N
W566-GD184B16N
W566-GD184C16N
LH AFT RCPT (STA 360)
UTILITY LH FWD
131CB1
W550-26-16
6
W677-2-16
W566-10-16
W566-11-16
W566-12-16
131J5
131J3
131J1
W566-GD183A16N
W566-GD183B16N
W566-GD183C16N
LH FWD RCPT (STA 260)
LH UTIL RCPT
131CB8
115V NO.1 AC BUS
W550-25-16
2
NO. 1 PDP
(STA 160)
(WL-15)
140J7
140P7
W679-40-16
W697-128-16
W697-129-16
W697-130-16
W697-131-16
A
B
C
D
131J14
YEL
WHT
GRN
LEFT 1 PHASE UTILITY RCPT (STA 320)
W697-GD182C16N
W697-GD182B16N
W697-GD182A16N
131J13
LEFT 3 PHASE UTILITY RCPT (STA 320)
LH CABIN AC RCPT
131CB7
115V NO.1 AC BUS
W550-251-16A
W550-252-16B
W550-253-16C
10
11
12
W679-35-16A
W679-36-16B
W679-37-16C
131.100
14002

END OF TASK

9-17.2 UTILITY RECEPTACLES VISUAL CHECK

INITIAL SETUP

Applicable Configurations:
All

Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915

Materials:
None

Personnel Required:
68F10 Aircraft Electrician

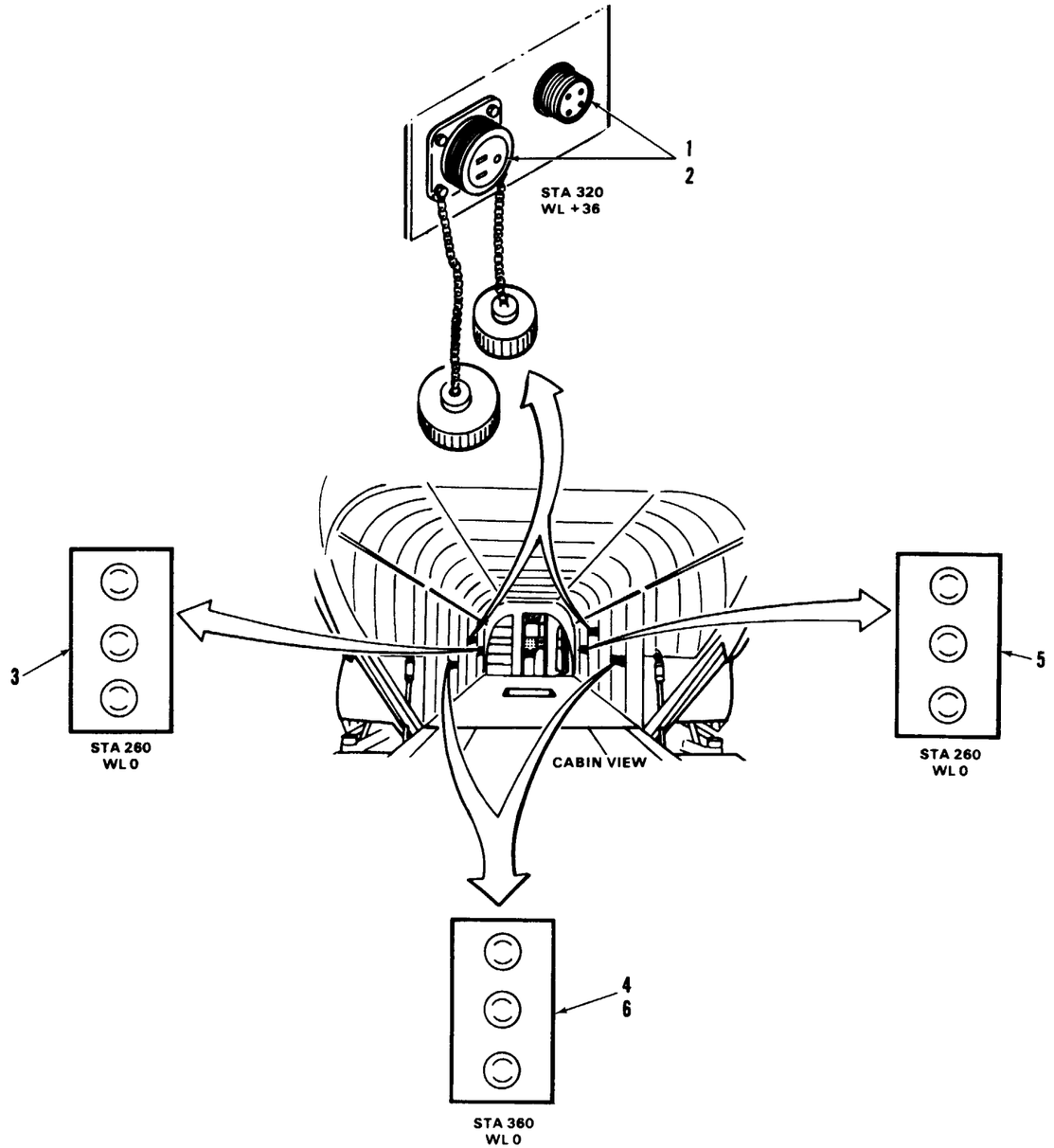
References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off
Utility AC Receptacle Dust Covers Removed

TASK	RESULT
1. Check ac utility receptacles (1 and 2).	If either receptacle (1) or (2) is loose or broken, tighten or replace as required.
2. Check dc utility receptacles (3, 4, 5 and 6).	If any receptacle (3, 4, 5, or 6) is loose or broken, tighten or replace as required.

FOLLOW-ON MAINTENANCE:

None



45x54

DI45-9664-SPA

END OF TASK

9-17.3 UTILITY RECEPTACLES OPERATIONAL CHECK

INITIAL SETUP

Applicable Configurations:
All

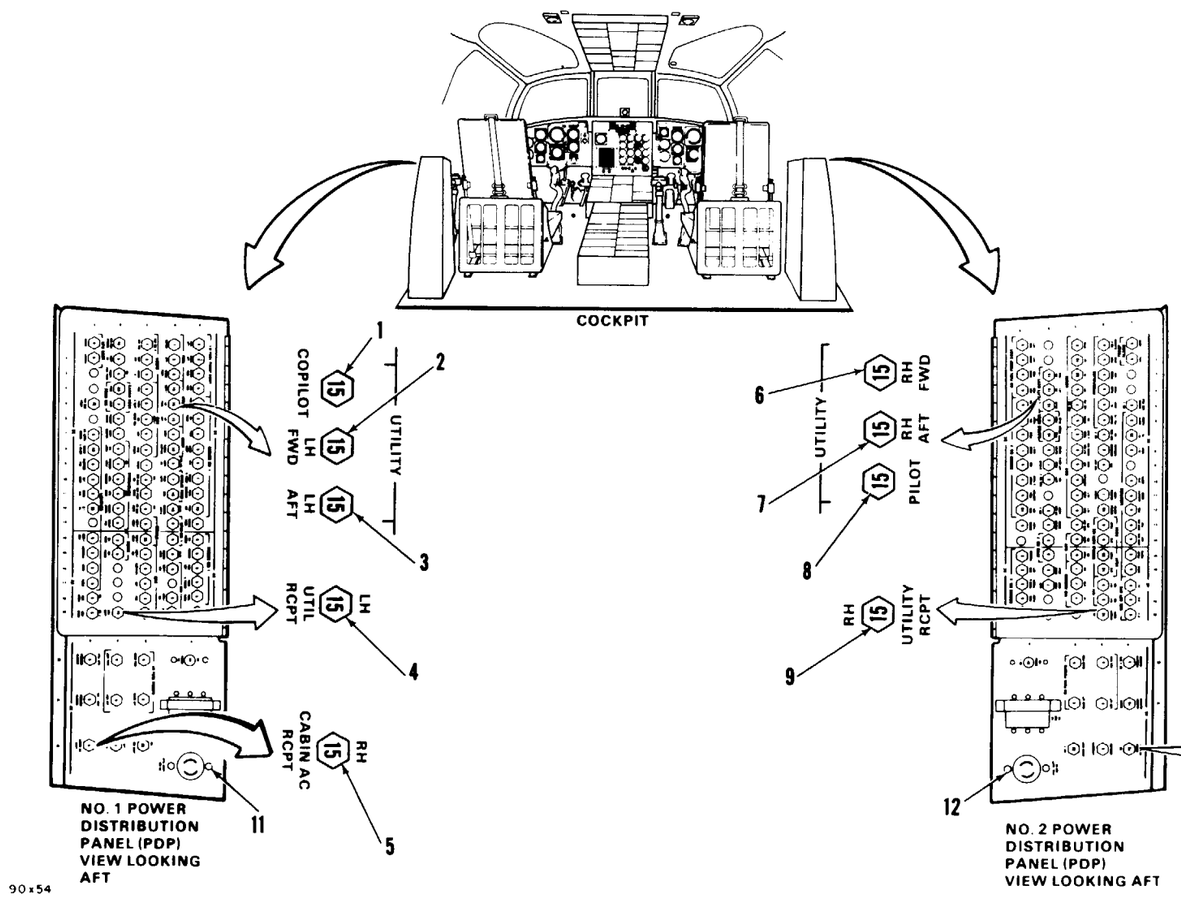
Tools:
Multimeter

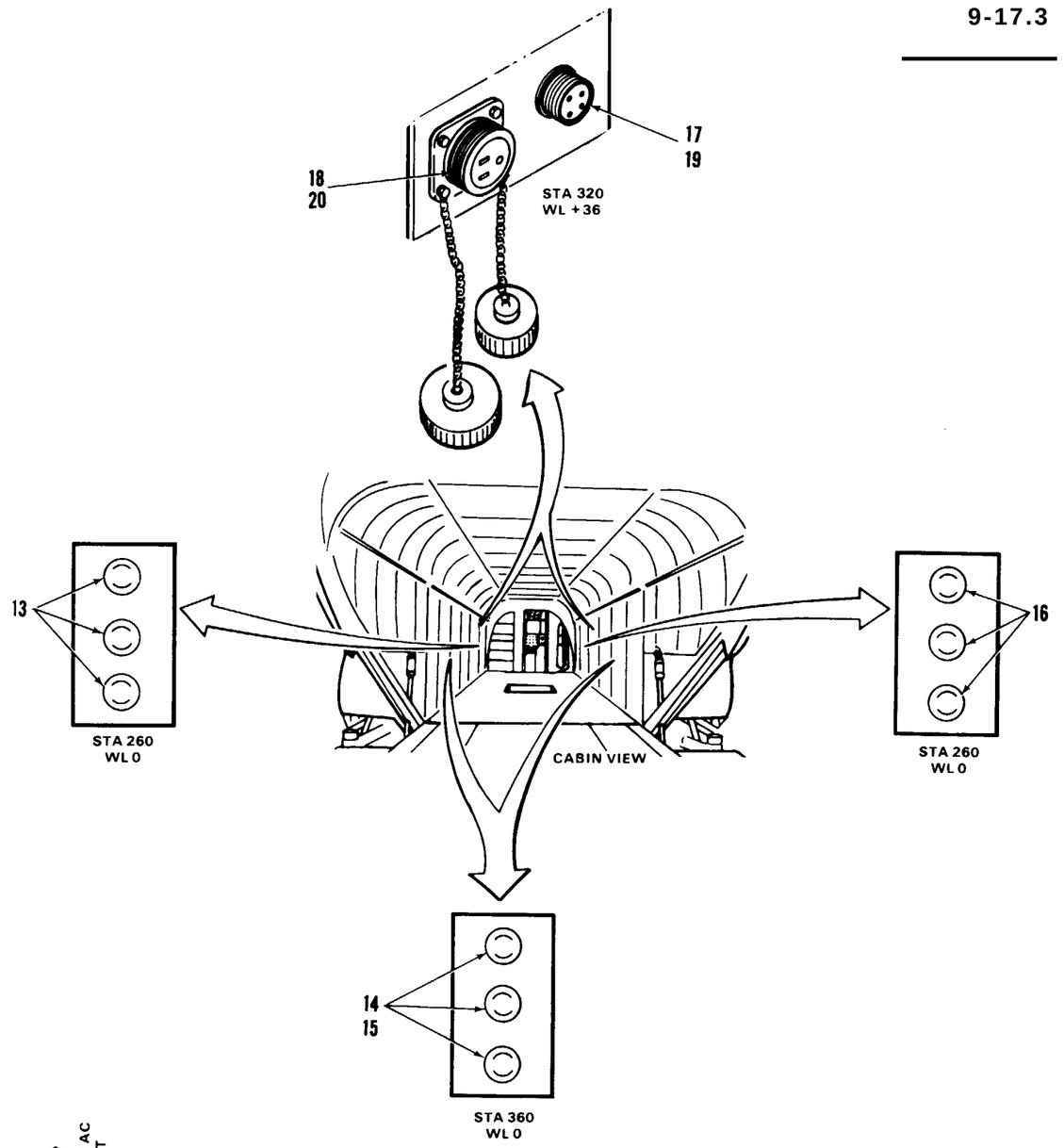
Materials:
None

Personnel Required:
68F20 Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off
Utility Receptacles Visual Check Performed (Task 9-17.2)





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9-17.3 UTILITY RECEPTACLES OPERATIONAL CHECK (Continued)

TASK	RESULT
1. Check that COPILOT LH FWD and LH AFT UTILITY circuit breakers (1, 2 and 3) are closed.	If any circuit breaker (1, 2, or 3) is open, close it, If any circuit breaker opens again, go to task 9-17.4.
2. Check that LH UTIL RCPT circuit breaker (4) is closed.	If circuit breaker (4) is open, close it, If it opens again, go to task 9-17.4.
3. Check that LH CABIN AC RCPT circuit breaker (5) is closed.	If circuit breaker (5) is open, close it. If it opens again, go to task 9-17.5.
4. Check that RH FWD, RH AFT, AND PILOT utility circuit breakers (6, 7 and 8) are closed.	If any circuit breaker (6, 7, and 8) is open, close it. If any circuit breaker opens again, go to task 9-17.4.
5. Check that RH UTIL circuit breaker (9) is closed.	If circuit breaker (9) is open, close it. if it opens again, go to task 9-17.4.
6. Check that RH CABIN AC RCPT circuit breaker (10) is closed.	If circuit breaker (10) is open, close it, If it opens again, go to task 9-17.5.
7. Connect a multi meter, set to measure 28VDC, between small socket (+) and large socket of UTIL RCPT 28VDC receptacle (11).	Multimeter shall read 28VDC. If not; go to task 9-17.6.
8. Connect a multimeter, set to read 28VDC. between small socket (+) and large socket of UTIL RCPT 28VDC receptacle (12).	Multi meter shall read 28VDC. If not, go to task 9-17.6.
9. Connect a multimeter, set to read 28VDC. between small socket (+) and large socket of six cabin left side receptacles (13 and 14).	Multi meter shall read 28VDC. If not, go to task 9-17.6.
10. Connect a multimeter, set to read 28VDC. between small socket (+) and large socket in six cabin right side receptacles (15 and 16).	Multi meter shall read 28VDC, If not, go to task 9-17.7.
11. Connect a multimeter, set to read 115VAC. between pin D and pins A, B, and C in cabin left side 3 phase receptacle (17).	Multi meter shall read 115VAC on all 3 pins. If not, go to task 9-17.8.
12. Connect a multimeter, set to read 115VAC, between narrow socket and wide socket and between narrow socket and ground socket in receptacle (18).	Multi meter shall read 115VAC on both readings. If not, go to task 9-17.8.
13. Connect a multlmeter, set to read 115VAC. between pin D and pins A, B, and C on cabin right side 3-phase receptacle (19).	Multi meter shall read 115VAC at all 3 pins. If not, go to task 9-17.9.
14, Connect a multi meter, set to read 115VAC, between narrow socket and wide socket and between narrow socket and ground socket on receptacle (20).	Multi meter shall read 115VAC on both readings. If not go to task 9-17.9.

FOLLOW-ON MAINTENANCE:

TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off
Utility Receptacles Dust Covers Installed

END OF TASK

9-17.4 UTILITY RECEPTACLE CIRCUIT BREAKERS WILL NOT STAY CLOSED

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

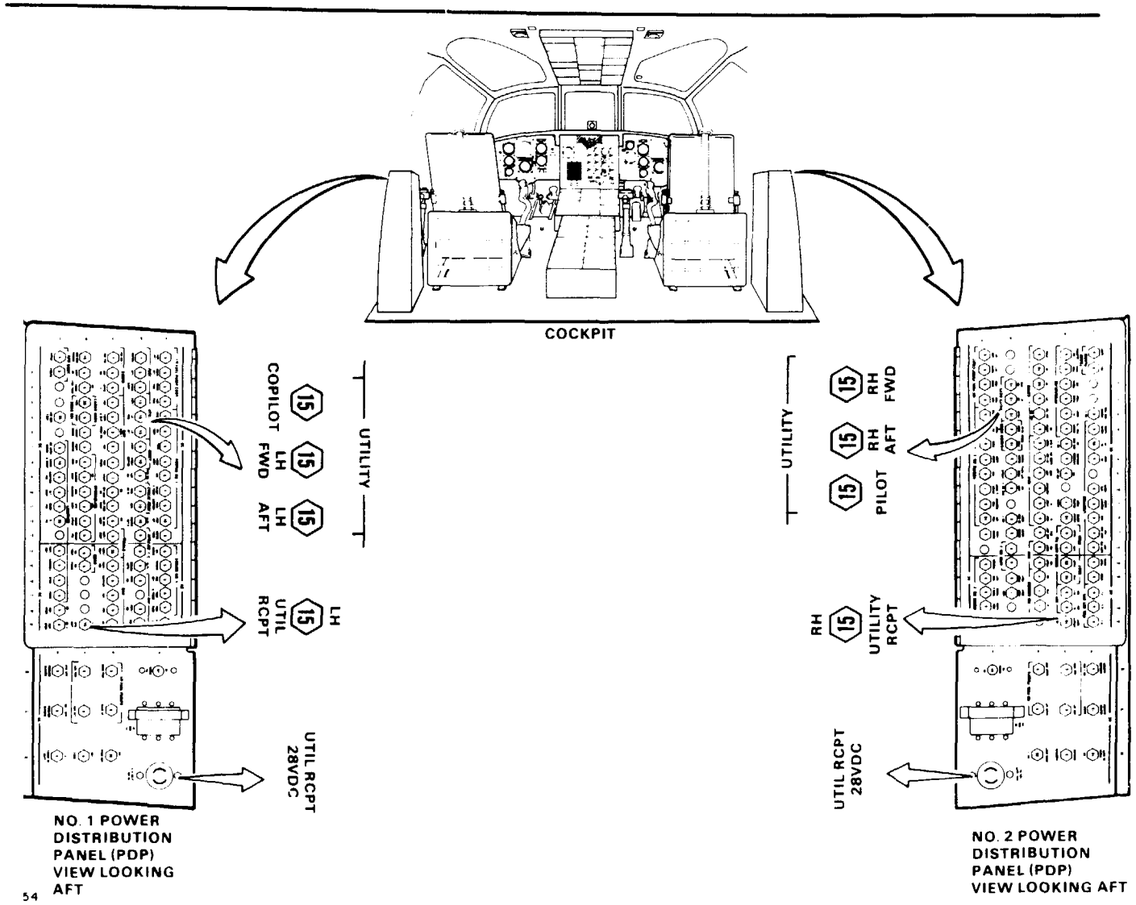
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

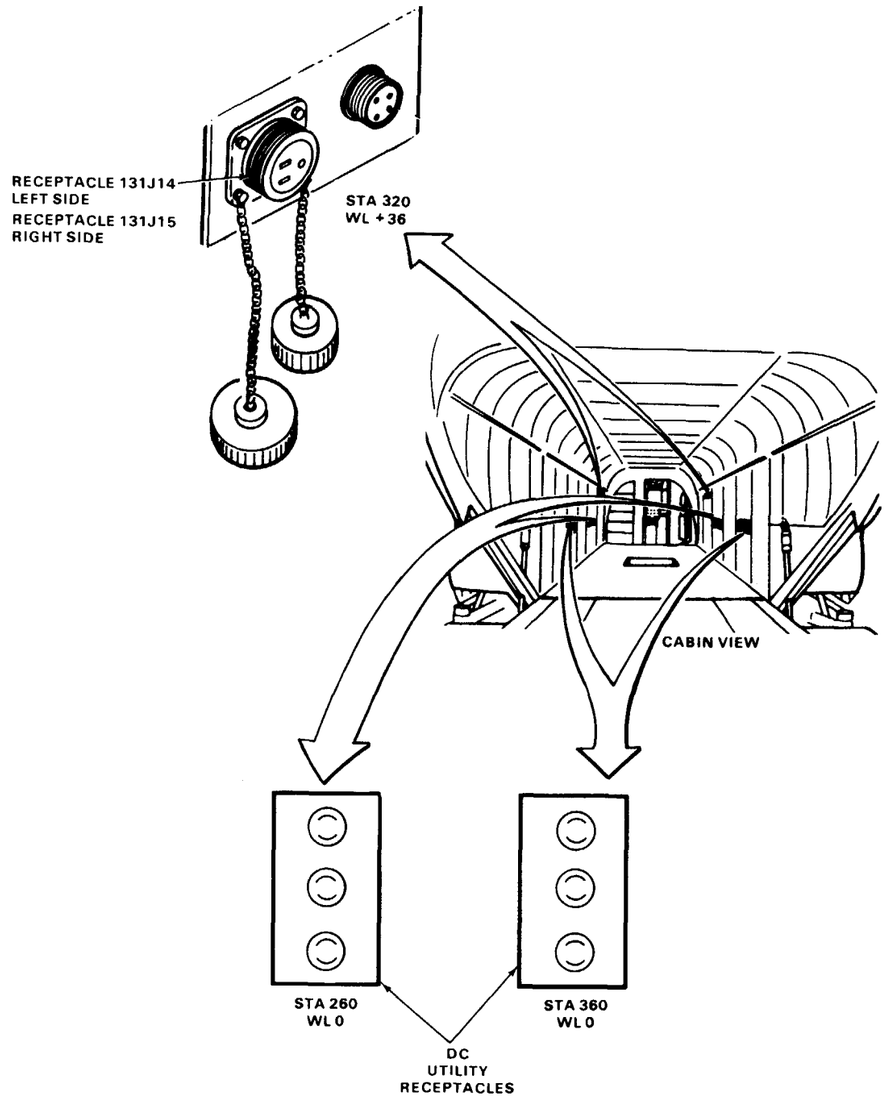
Materials:
None

Personnel Required:
68F20 Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off

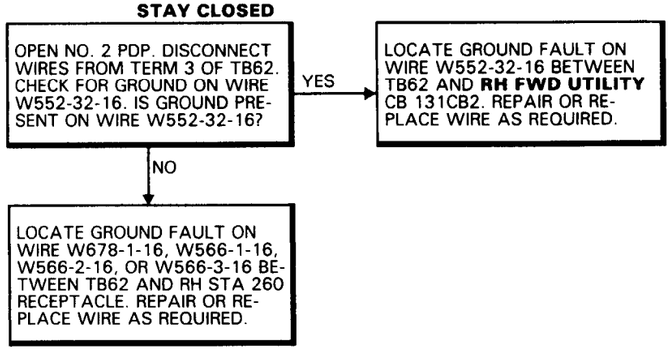




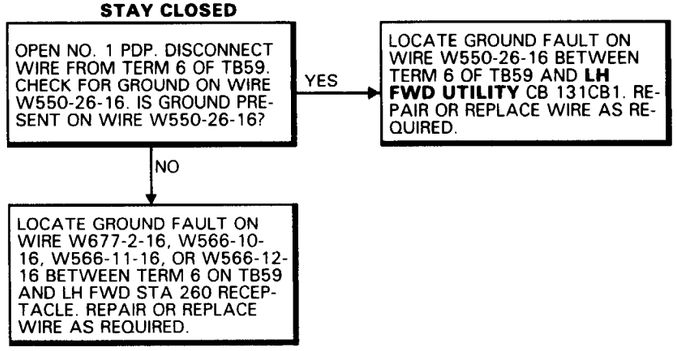
DI45-9666-SPA

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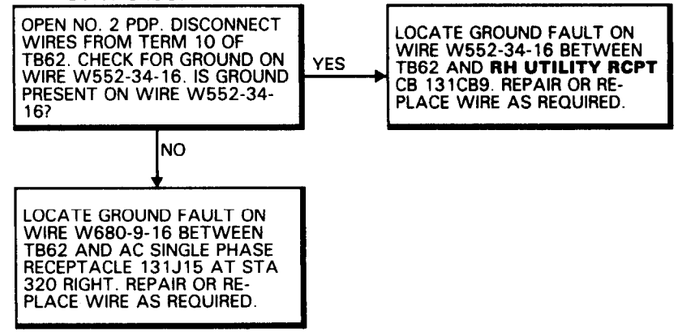
RH FWD UTILITY CIRCUIT BREAKER WILL NOT STAY CLOSED



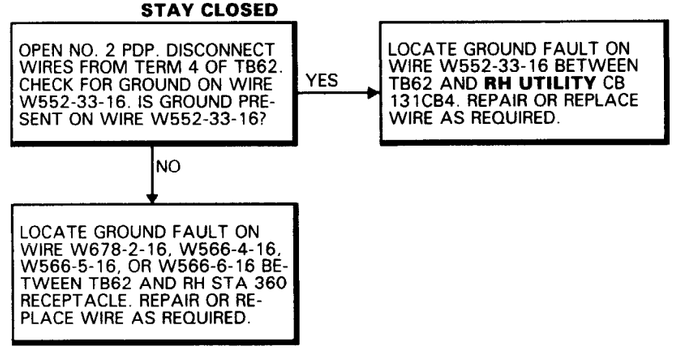
LH FWD UTILITY CIRCUIT BREAKER WILL NOT STAY CLOSED



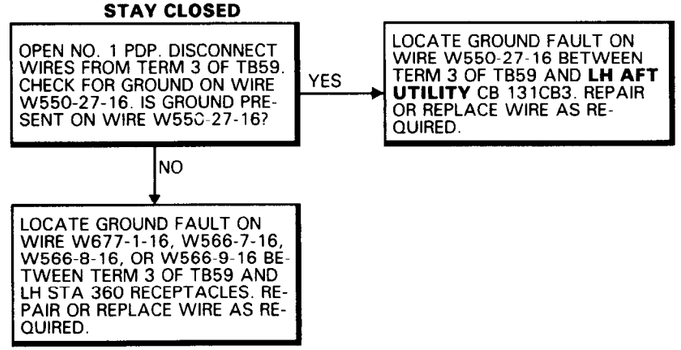
RH UTILITY RCPT CIRCUIT BREAKER WILL NOT STAY CLOSED



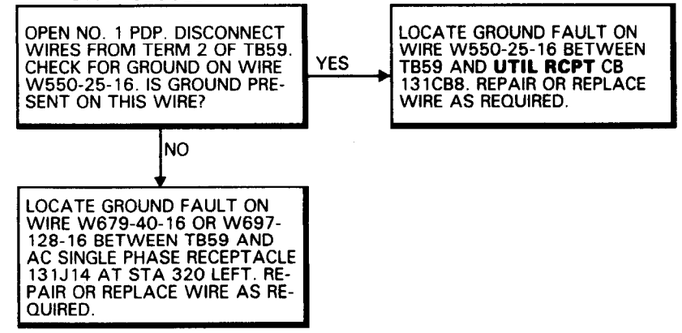
RH AFT UTILITY CIRCUIT BREAKER WILL NOT STAY CLOSED



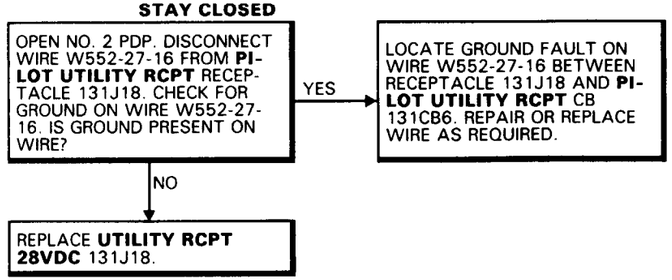
LH AFT UTILITY CIRCUIT BREAKER WILL NOT STAY CLOSED



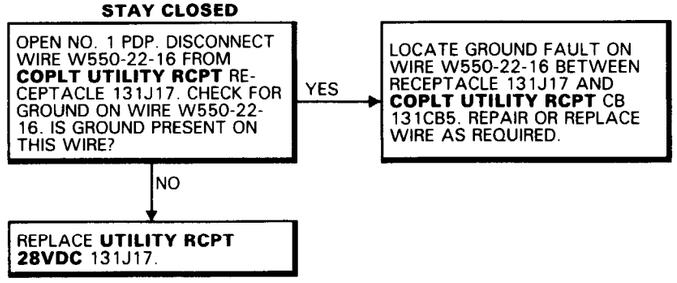
LH UTILITY RCPT CIRCUIT BREAKER WILL NOT STAY CLOSED



PILOT UTILITY CIRCUIT BREAKER WILL NOT STAY CLOSED



COPLT UTILITY CIRCUIT BREAKER WILL NOT STAY CLOSED



END OF TASK

9-17.5 CABIN AC RECEPTACLE CIRCUIT BREAKER WILL NOT STAY CLOSED

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

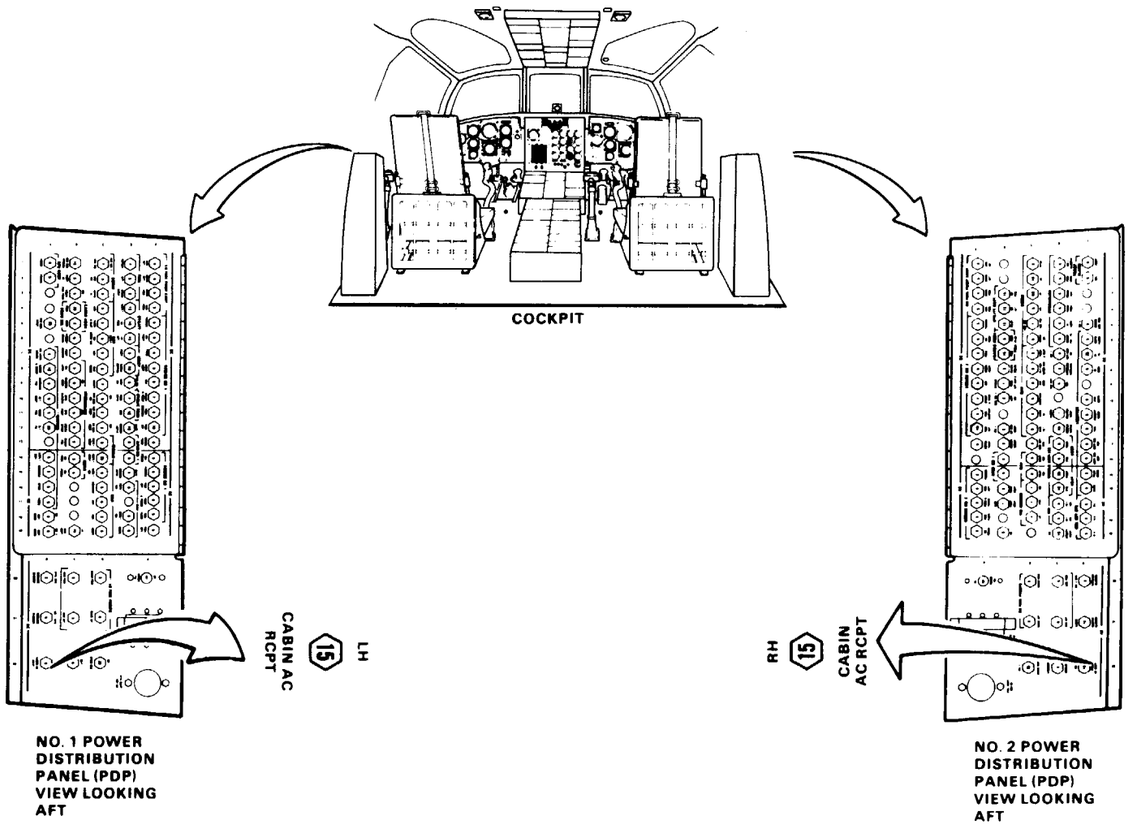
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:
None

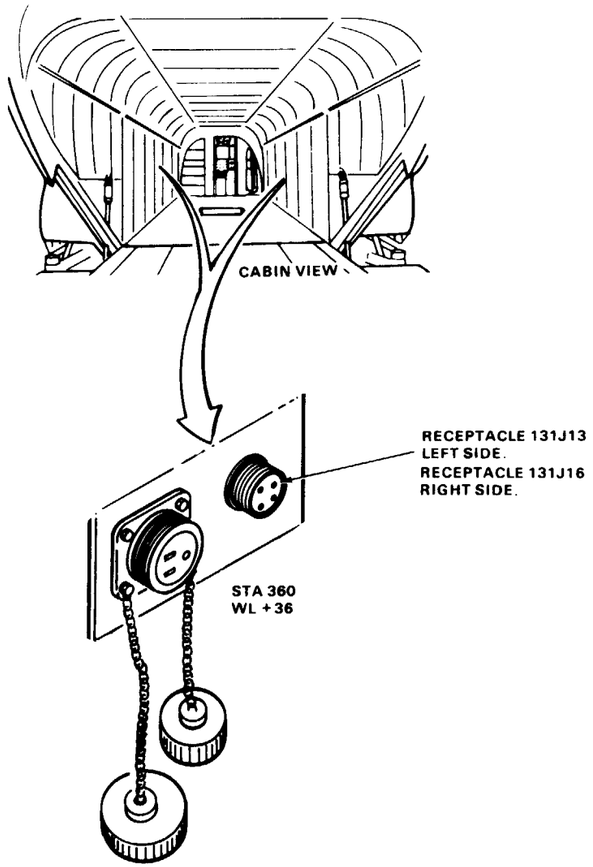
Personnel Required:
68F20 Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off



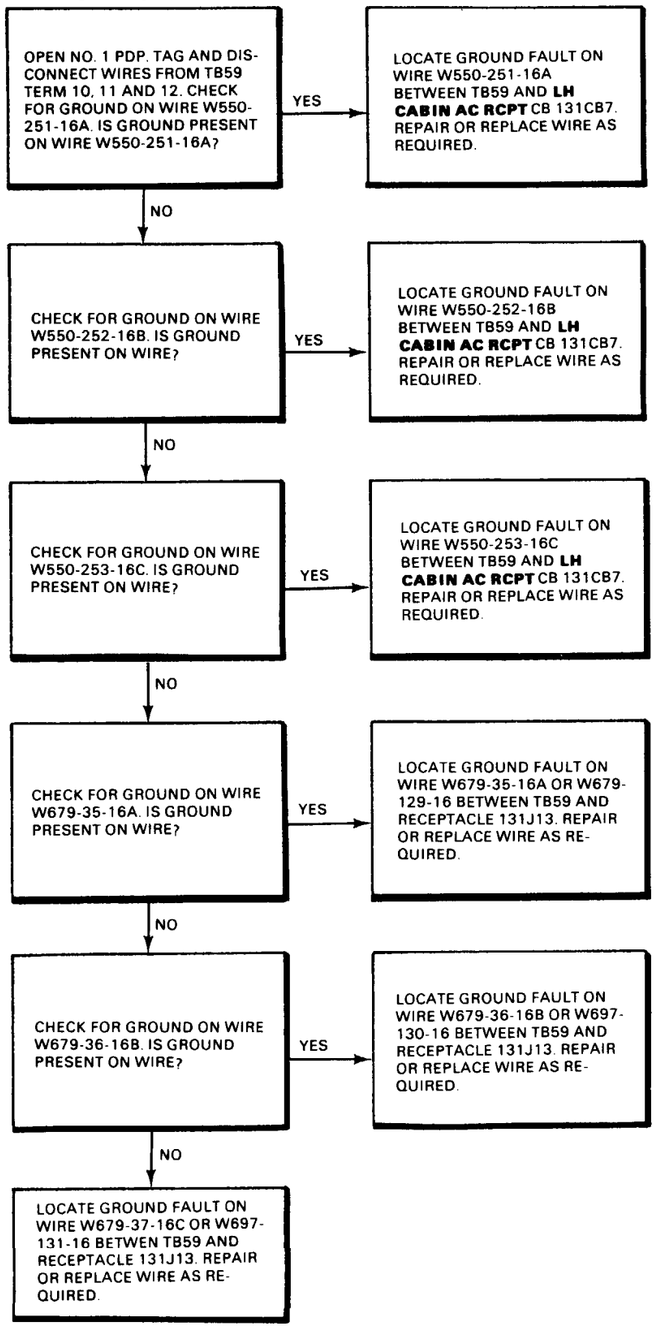
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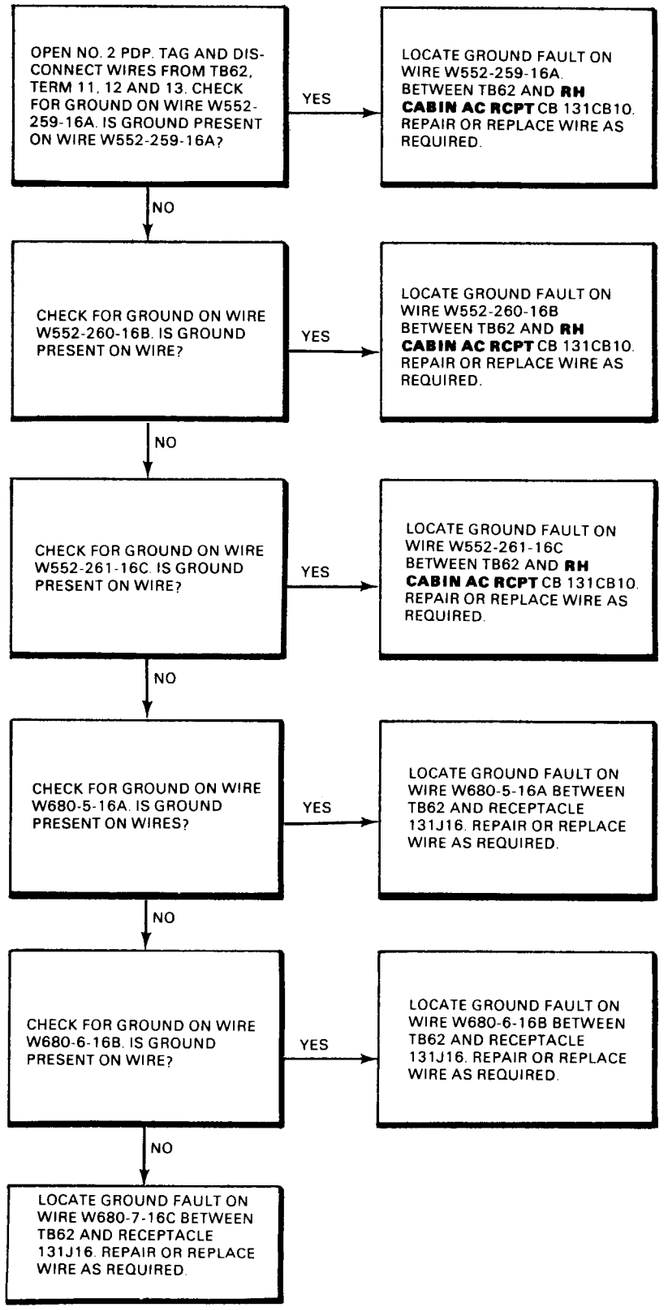
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9-17.5 CABIN AC RECEPTACLE CIRCUIT BREAKER WILL NOT STAY CLOSED (Continued)

LH CABIN AC RCPT CIRCUIT BREAKER WILL NOT STAY CLOSED



RH CABIN AC RCPT CIRCUIT BREAKER WILL NOT STAY CLOSED



END OF TASK

9-17.6 NO ELECTRICAL POWER AT UTILITY DC RECEPTACLES ON LEFT SIDE OF AIRCRAFT

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

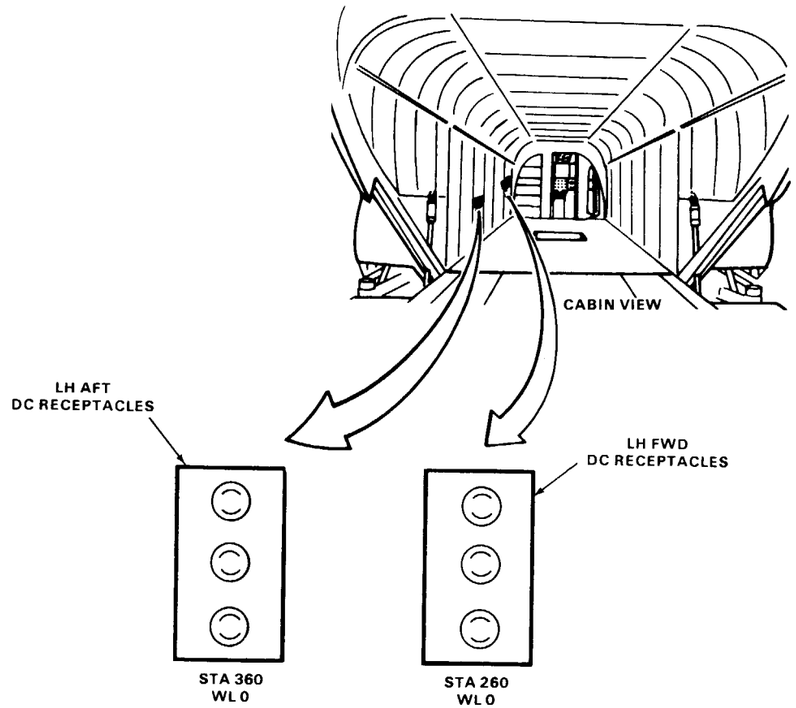
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:
None

Personnel Required:
68F20 Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off

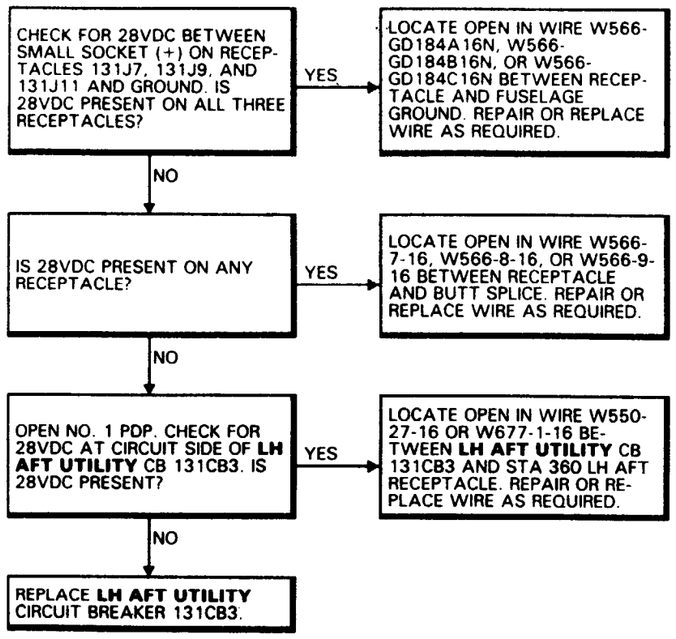


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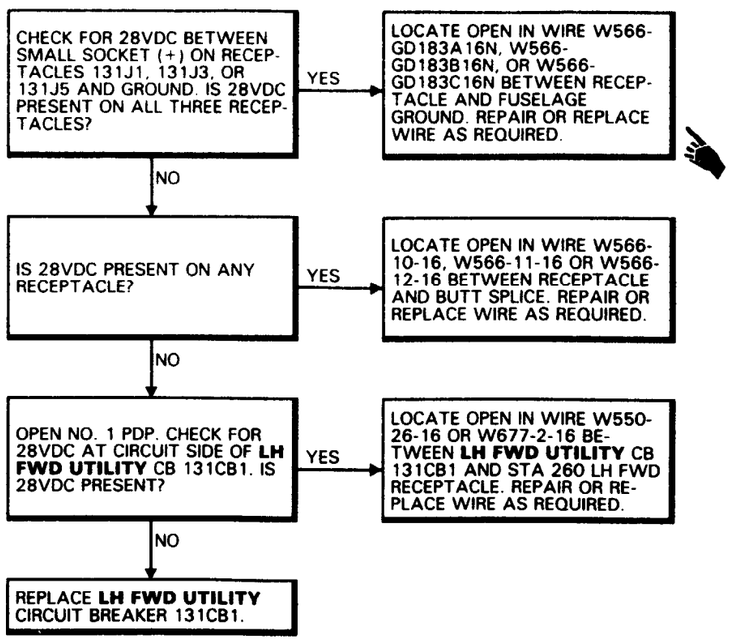
D145-9668-SPA

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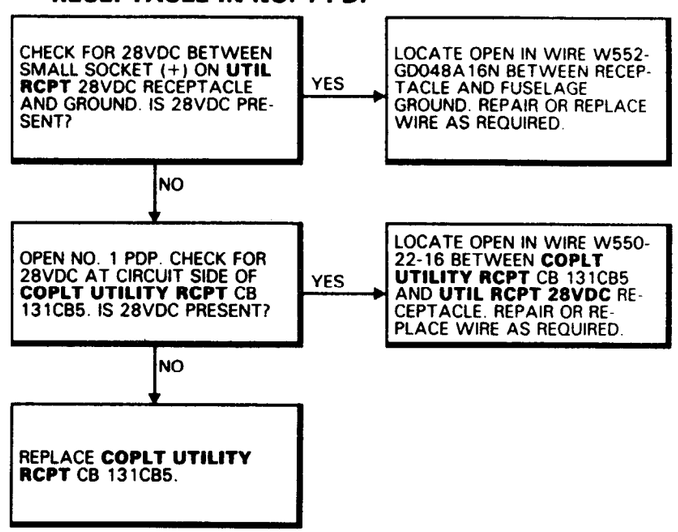
NO ELECTRICAL POWER AT LH AFT DC RECEPTACLES



NO ELECTRICAL POWER AT LH FWD DC RECEPTACLE



NO ELECTRICAL POWER AT UTIL RCPT 28VDC RECEPTACLE IN NO. 1 PDP



END OF TASK

9-17.7 NO ELECTRICAL POWER AT UTILITY DC RECEPTACLES ON RIGHT SIDE OF AIRCRAFT

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

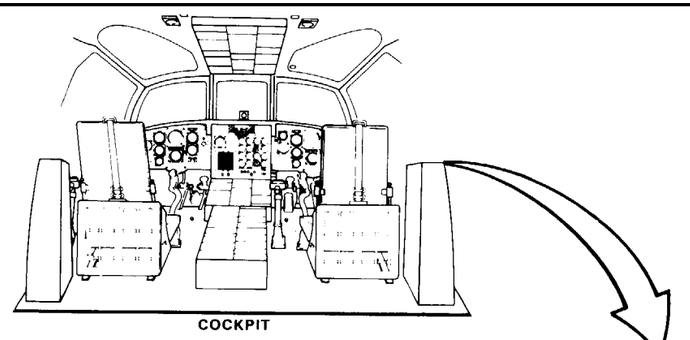
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

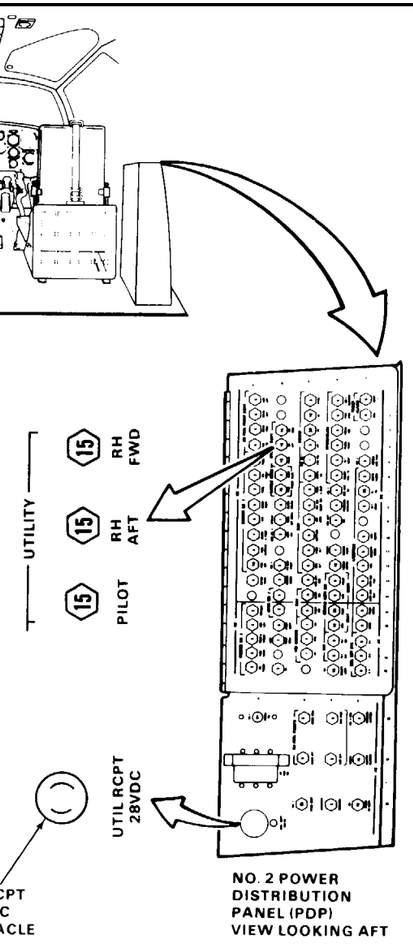
Materials:
None

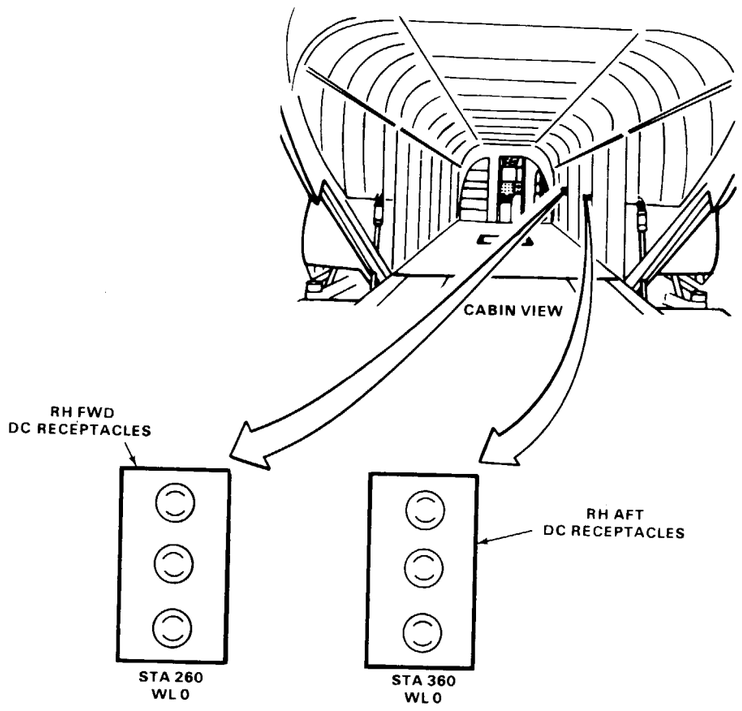
Personnel Required:
68F20 Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off



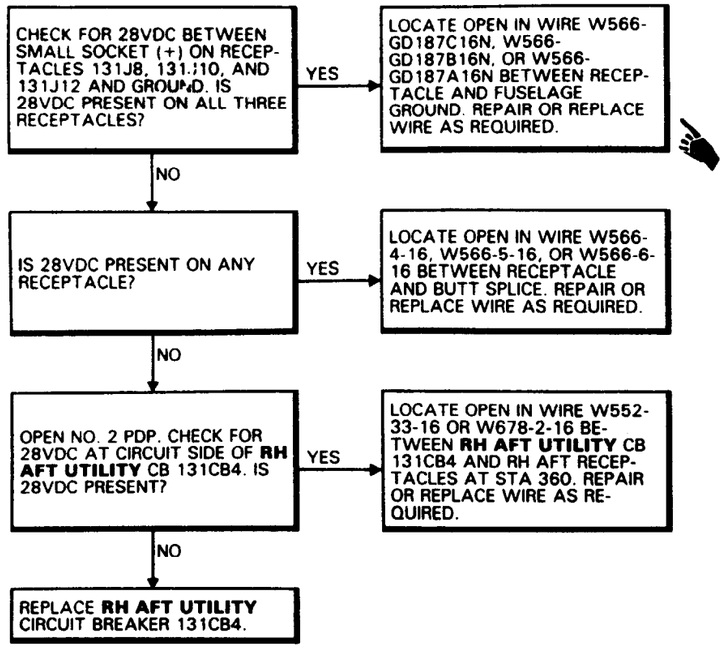




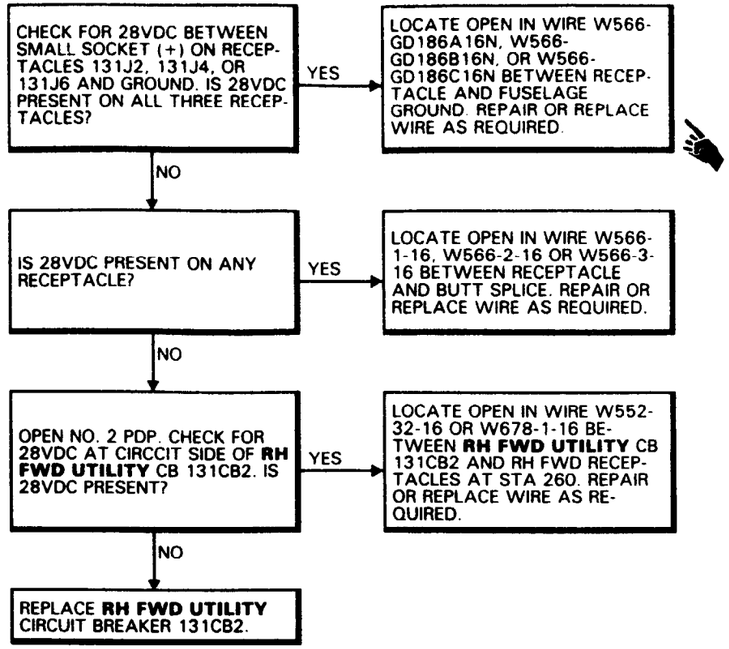
90 X 54

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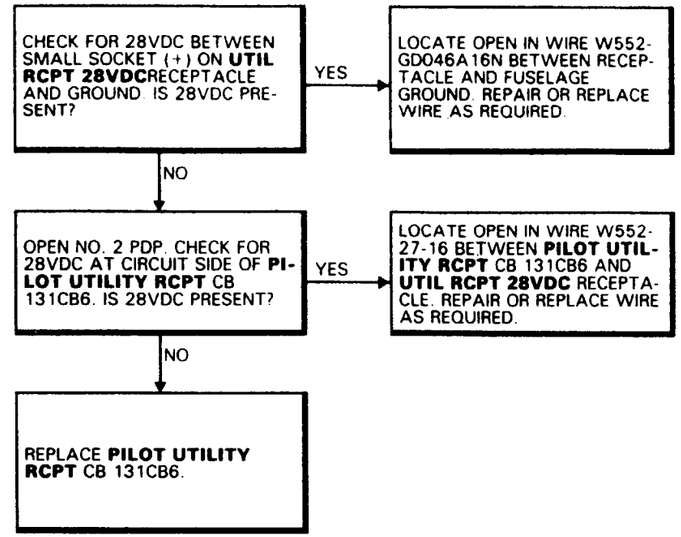
NO ELECTRICAL POWER AT RH AFT DC RECEPTACLES



NO ELECTRICAL POWER AT RH FWD DC RECEPTACLE



NO ELECTRICAL POWER AT UTIL RCPT 28VDC RECEPTACLE IN NO. 2 PDP



END OF TASK

9-17.8 NO ELECTRICAL POWER AT UTILITY AC RECEPTACLES ON LEFT SIDE OF AIRCRAFT

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

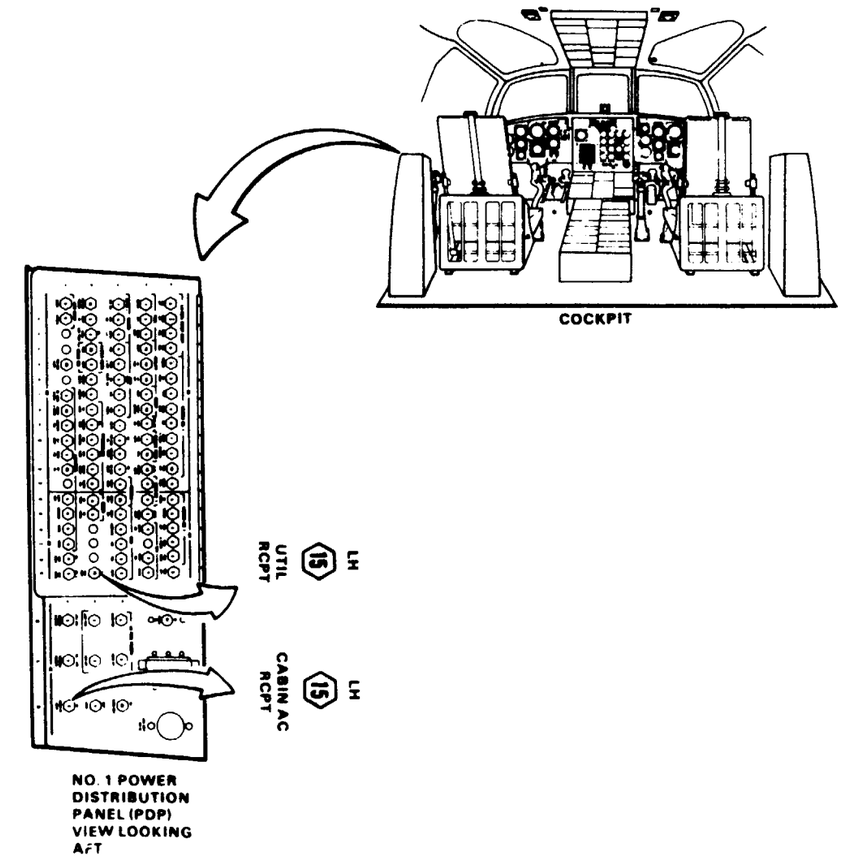
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

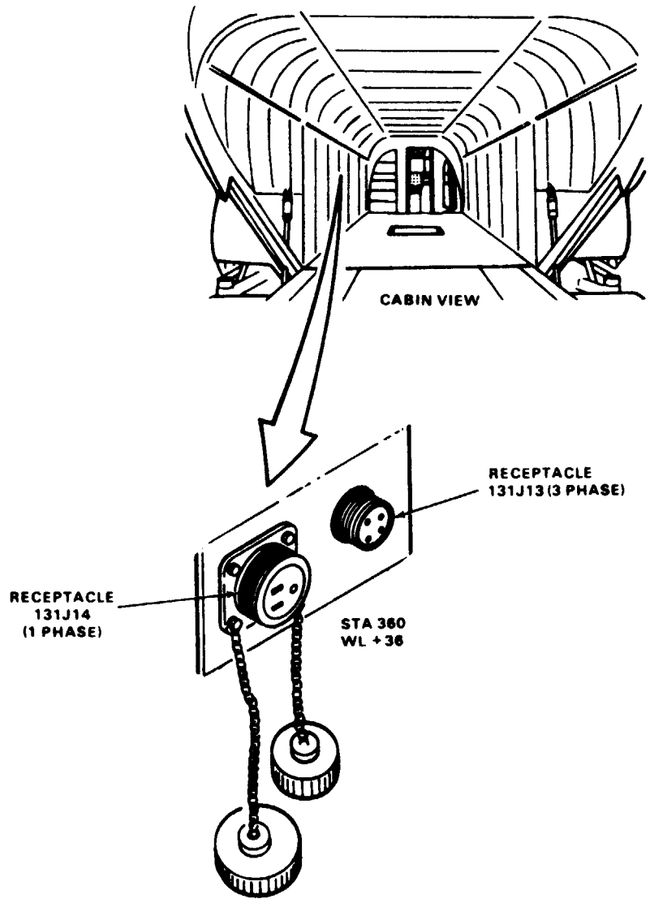
Materials:
None

Personnel Required:
68F20 Aircraft Electrician

References:
TM 65-1520-240-23

Equipment Configuration:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Powr Off
Utility Receptacles Dust Covers Removed

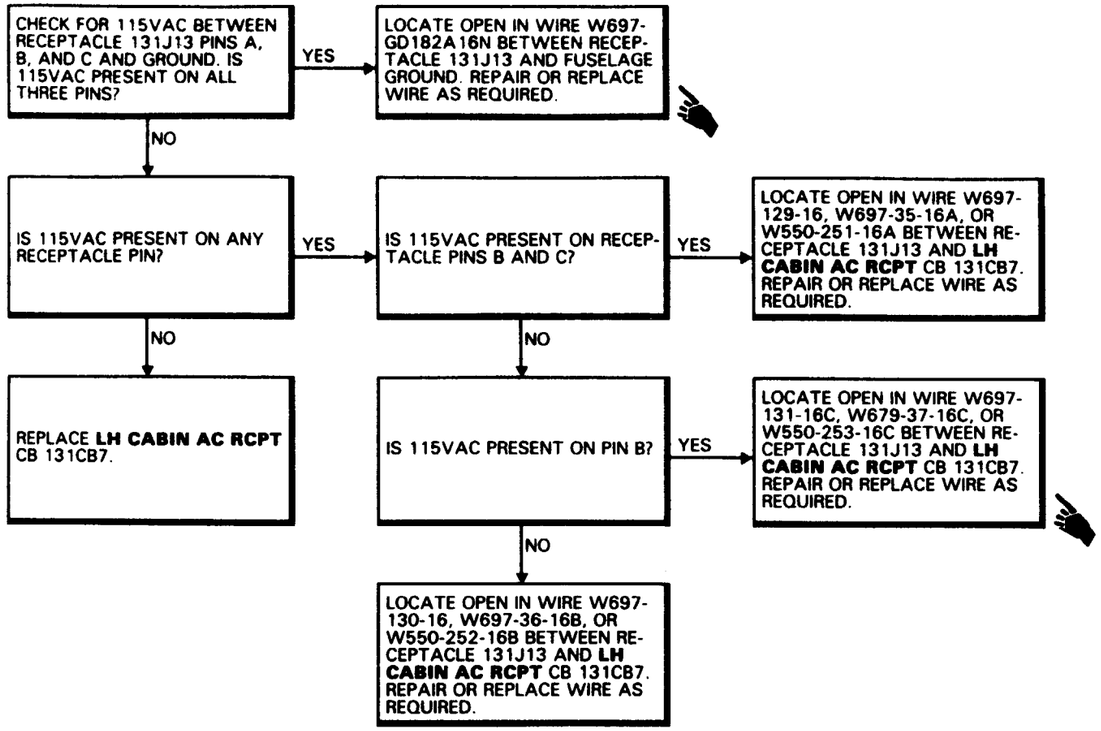




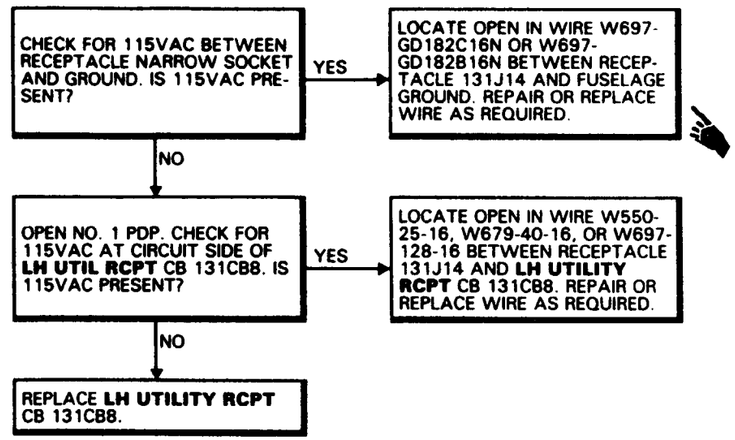
9C+54

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O ELECTRICAL POWER AT LEFT 3-PHASE UTILITY RECEPTACLE



NO ELECTRICAL POWER AT LEFT SINGLE PHASE UTILITY RECEPTACLE



END OF TASK

9-17.9 NO ELECTRICAL POWER AT UTILITY AC RECEPTACLE ON RIGHT SIDE OF AIRCRAFT

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

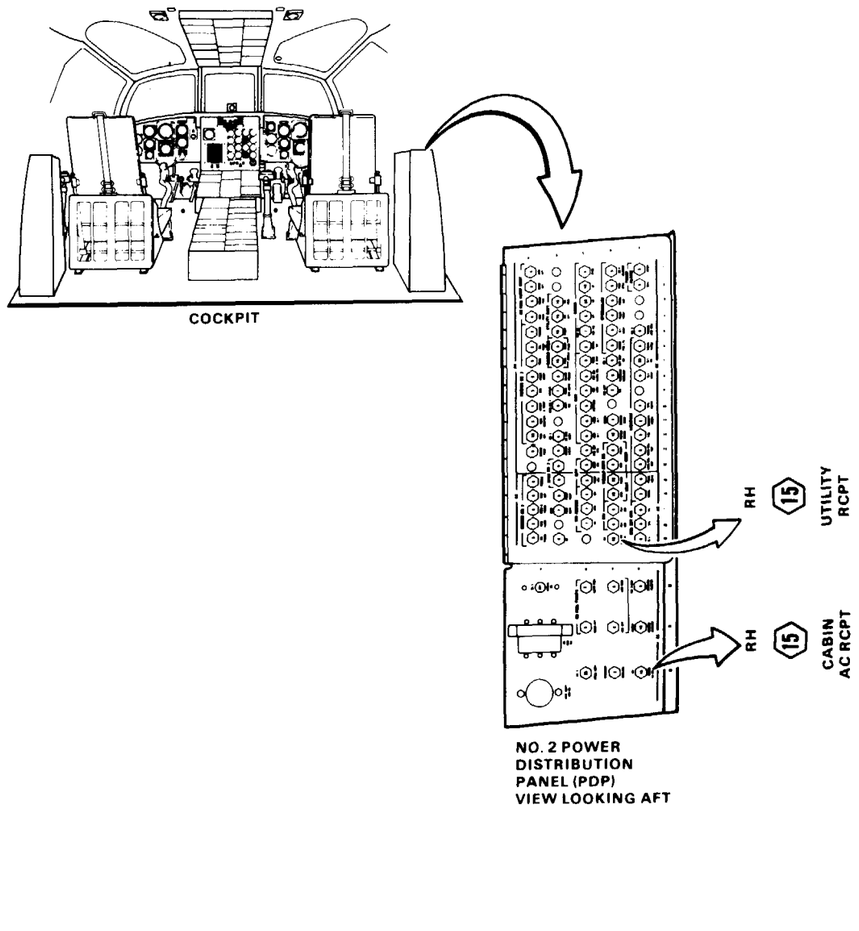
Tools:
Electrical Repairer's Tool Kit, NSN 5180-00-323-4915
Multimeter

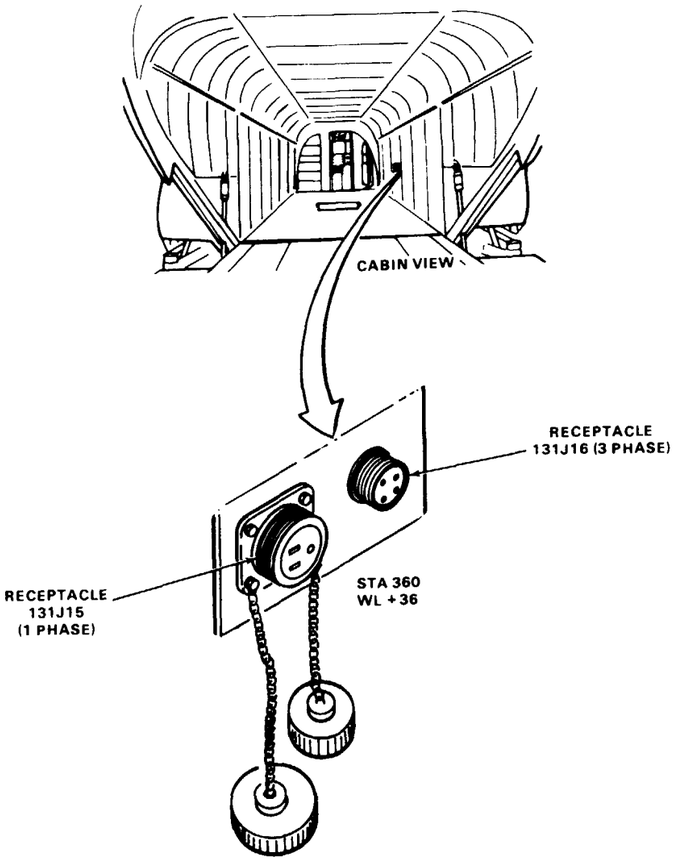
Materials:
None

Personnel Required:
68F20 Aircraft Electrician

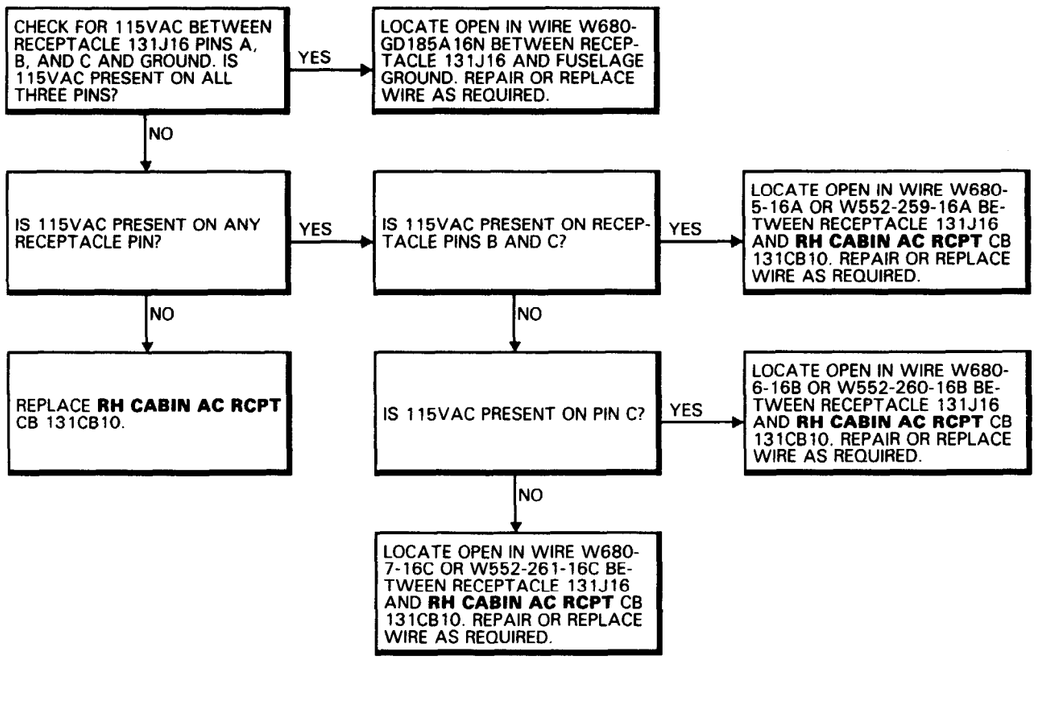
References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off
Utility Receptacle Dust Covers Removed

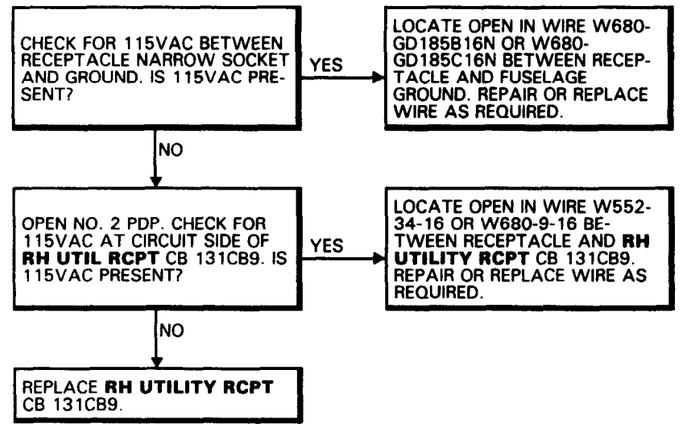




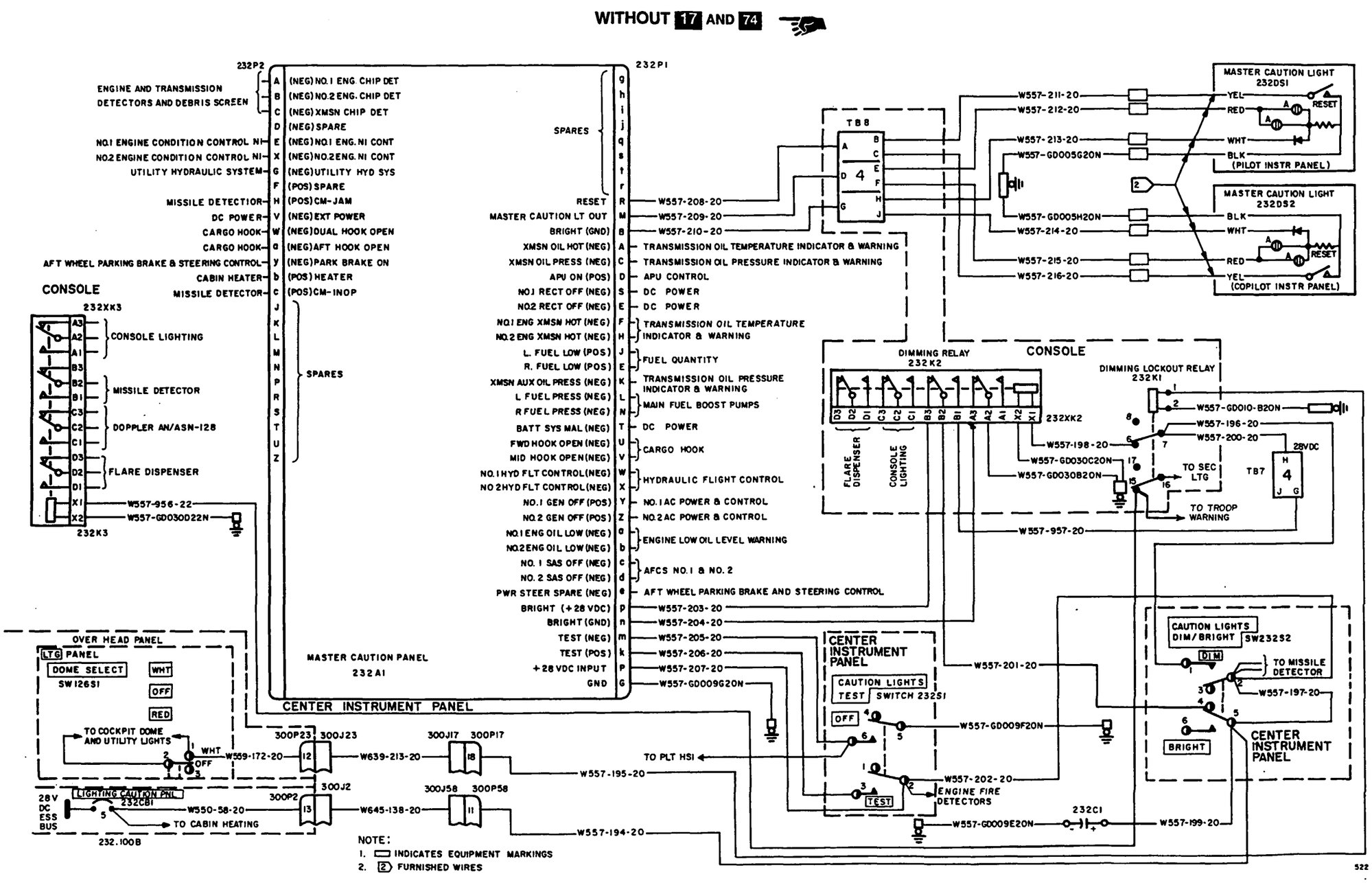
O ELECTRICAL POWER AT RIGHT 3-PHASE UTILITY RECEPTACLE



NO ELECTRICAL POWER AT RIGHT SINGLE PHASE UTILITY RECEPTACLE



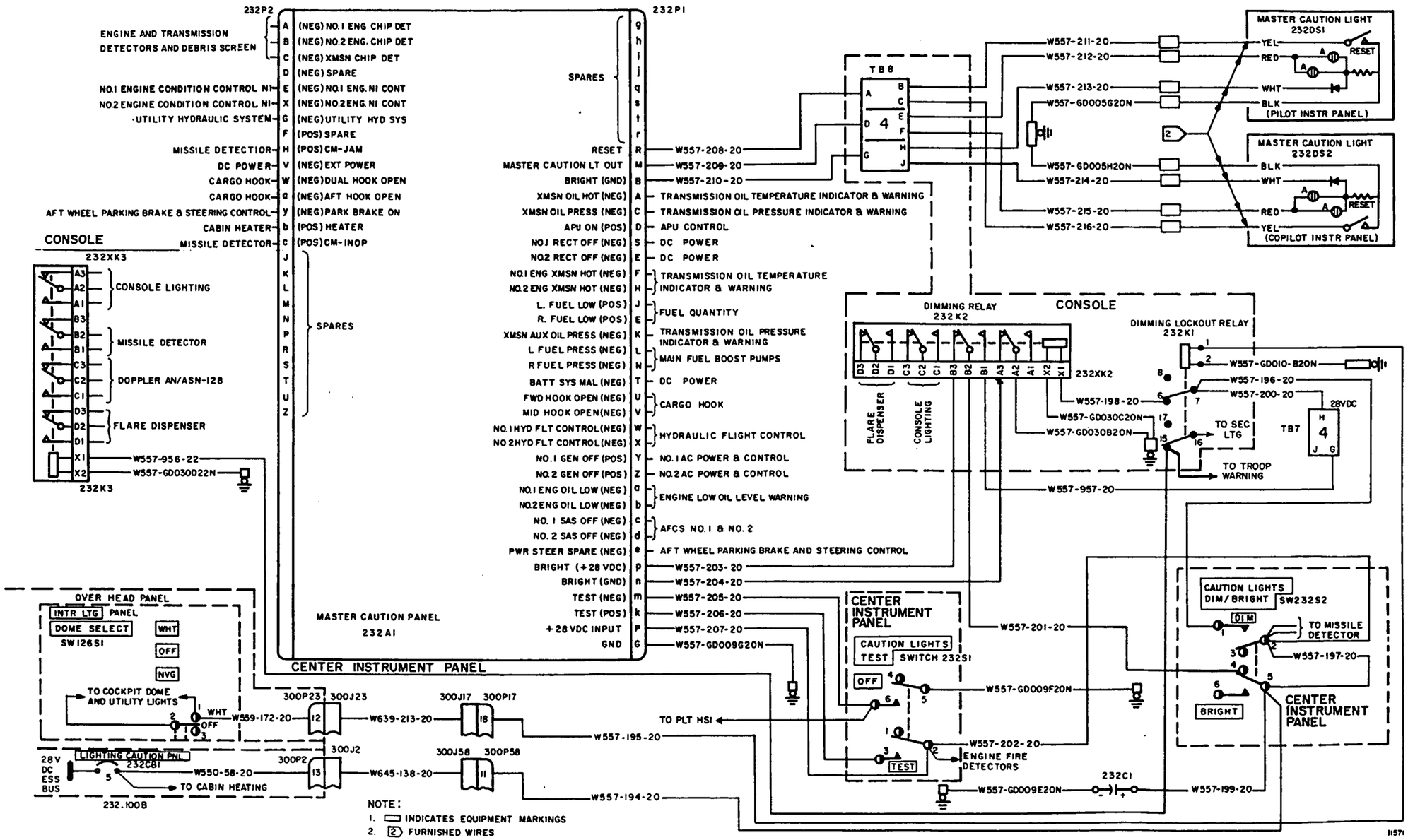
END OF TASK


WITHOUT 17 AND 74
232P2
232P1
ENGINE AND TRANSMISSION DETECTORS AND DEBRIS SCREEN
(NEG) NO.1 ENG. CHIP DET
(NEG) NO.2 ENG. CHIP DET
(NEG) XMSN CHIP DET
(NEG) SPARE
NO.1 ENGINE CONDITION CONTROL NI
(NEG) NO.1 ENG. NI CONT
NO.2 ENGINE CONDITION CONTROL NI
(NEG) NO.2 ENG. NI CONT
UTILITY HYDRAULIC SYSTEM
(NEG) UTILITY HYD SYS
(POS) SPARE
MISSILE DETECTION
(POS) CM-JAM
DC POWER
(NEG) EXT POWER
CARGO HOOK
(NEG) DUAL HOOK OPEN
CARGO HOOK
(NEG) AFT HOOK OPEN
AFT WHEEL PARKING BRAKE & STEERING CONTROL
(NEG) PARK BRAKE ON
CABIN HEATER
(POS) HEATER
MISSILE DETECTOR
(POS) CM-INOP
SPARES
RESET
MASTER CAUTION LT OUT
BRIGHT (GND)
XMSN OIL HOT (NEG)
XMSN OIL PRESS (NEG)
APU ON (POS)
NO.1 RECT OFF (NEG)
NO.2 RECT OFF (NEG)
NO.1 ENG XMSN HOT (NEG)
NO.2 ENG XMSN HOT (NEG)
L. FUEL LOW (POS)
R. FUEL LOW (POS)
XMSN AUX OIL PRESS (NEG)
L FUEL PRESS (NEG)
R FUEL PRESS (NEG)
BATT SYS MAL (NEG)
FWD HOOK OPEN (NEG)
MID HOOK OPEN (NEG)
NO.1 HYD FLT CONTROL (NEG)
NO.2 HYD FLT CONTROL (NEG)
NO.1 GEN OFF (POS)
NO.2 GEN OFF (POS)
NO.1 ENG OIL LOW (NEG)
NO.2 ENG OIL LOW (NEG)
NO. 1 SAS OFF (NEG)
NO. 2 SAS OFF (NEG)
PWR STEER SPARE (NEG)
BRIGHT (+28 VDC)
BRIGHT (GND)
TEST (NEG)
TEST (POS)
+28 VDC INPUT
GND
W557-208-20
W557-209-20
W557-210-20
TRANSMISSION OIL TEMPERATURE INDICATOR & WARNING
TRANSMISSION OIL PRESSURE INDICATOR & WARNING
APU CONTROL
DC POWER
DC POWER
TRANSMISSION OIL TEMPERATURE INDICATOR & WARNING
FUEL QUANTITY
TRANSMISSION OIL PRESSURE INDICATOR & WARNING
MAIN FUEL BOOST PUMPS
DC POWER
CARGO HOOK
HYDRAULIC FLIGHT CONTROL
NO.1 AC POWER & CONTROL
NO.2 AC POWER & CONTROL
ENGINE LOW OIL LEVEL WARNING
AFCS NO.1 & NO.2
AFT WHEEL PARKING BRAKE AND STEERING CONTROL
W557-203-20
W557-204-20
W557-205-20
W557-206-20
W557-207-20
W557-GD009G20N
MASTER CAUTION PANEL
232A1
CENTER INSTRUMENT PANEL
CONSOLE
232XK3
CONSOLE LIGHTING
MISSILE DETECTOR
DOPPLER AN/ASN-128
FLARE DISPENSER
W557-956-22
W557-GD030D22N
232K3
TB8
W557-211-20
W557-212-20
W557-213-20
W557-GD005G20N
W557-GD005H20N
W557-214-20
W557-215-20
W557-216-20
MASTER CAUTION LIGHT 232DS1
YEL
RED
WHT
BLK
RESET
(PILOT INSTR PANEL)
MASTER CAUTION LIGHT 232DS2
BLK
WHT
RED
YEL
RESET
(COPILOT INSTR PANEL)
DIMMING RELAY 232K2
CONSOLE
DIMMING LOCKOUT RELAY 232K1
232XK2
W557-198-20
W557-GD030C20N
W557-GD030B20N
W557-GD010-B20N
W557-196-20
W557-200-20
28VDC
TO SEC LTG
TB7
TO TROOP WARNING
W557-957-20
FLARE DISPENSER
CONSOLE LIGHTING
OVER HEAD PANEL
LTG PANEL
DOME SELECT
SW126S1
WHT
OFF
RED
TO COCKPIT DOME AND UTILITY LIGHTS
W559-172-20
300P23
300J23
W639-213-20
300J17
300P17
W557-195-20
TO PLT HSI
LIGHTING CAUTION PNL
232CB1
28V DC ESS BUS
W550-58-20
TO CABIN HEATING
232.1008
300P2
300J2
W645-138-20
300J58
300P58
W557-194-20
NOTE:
1. INDICATES EQUIPMENT MARKINGS
2. (2) FURNISHED WIRES
CENTER INSTRUMENT PANEL
CAUTION LIGHTS TEST SWITCH 232S1
OFF
W557-201-20
W557-GD009F20N
W557-202-20
ENGINE FIRE DETECTORS
TEST
232C1
W557-GD009E20N
W557-199-20
CAUTION LIGHTS DIM/BRIGHT SW232S2
DIM
BRIGHT
TO MISSILE DETECTOR
W557-197-20
CENTER INSTRUMENT PANEL
522

END OF TASK

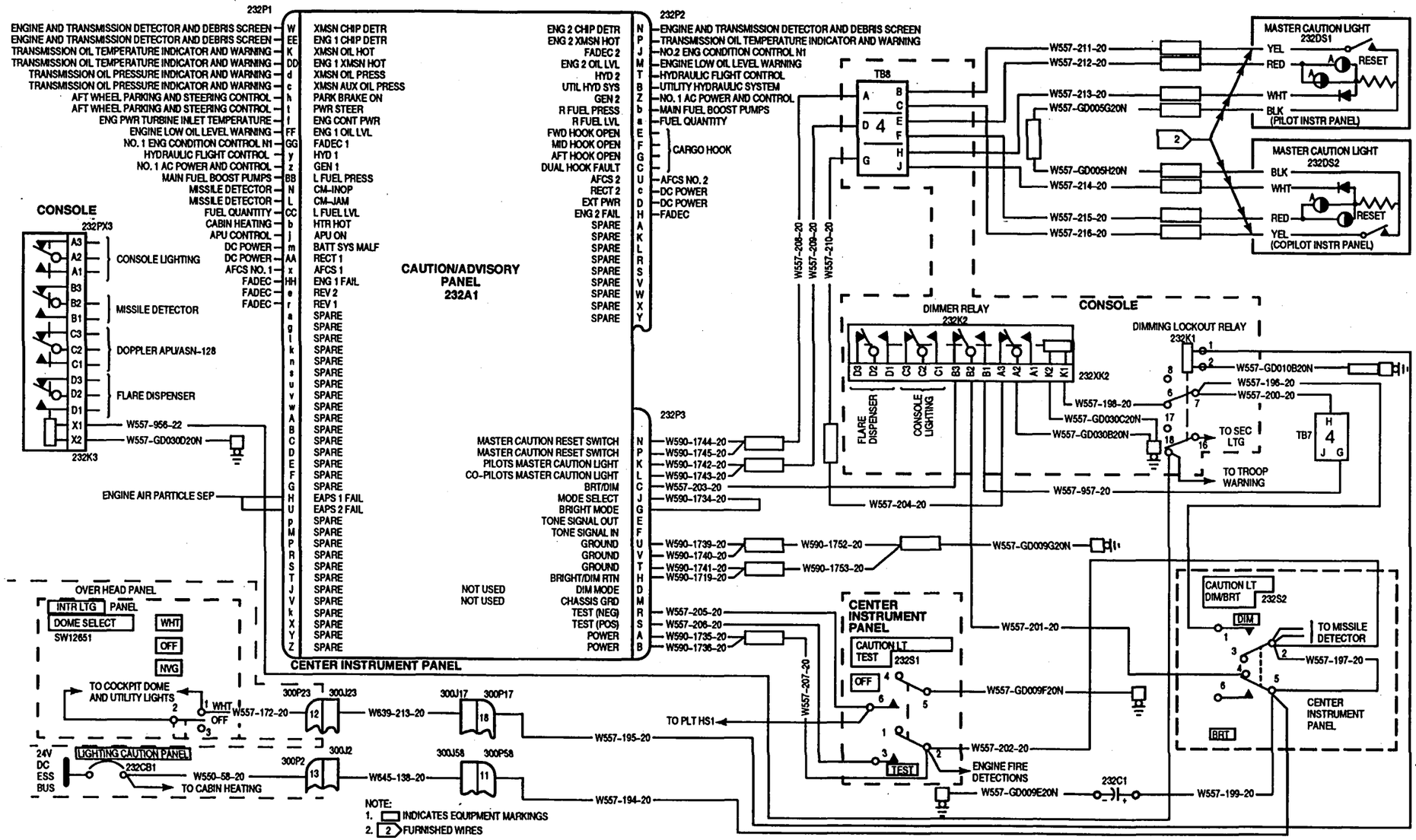
9-18.1.1. MASTER CAUTION LIGHTS WIRING DIAGRAM

WITH 17 AND WITHOUT 74



GO TO NEXT PAGE

WITH 17 AND 74



A72223

END OF TASK

9-18.2 MASTER CAUTION LIGHTS VISUAL CHECK

INITIAL SETUP

Applicable Configurations:
All

Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915

Materials:
None

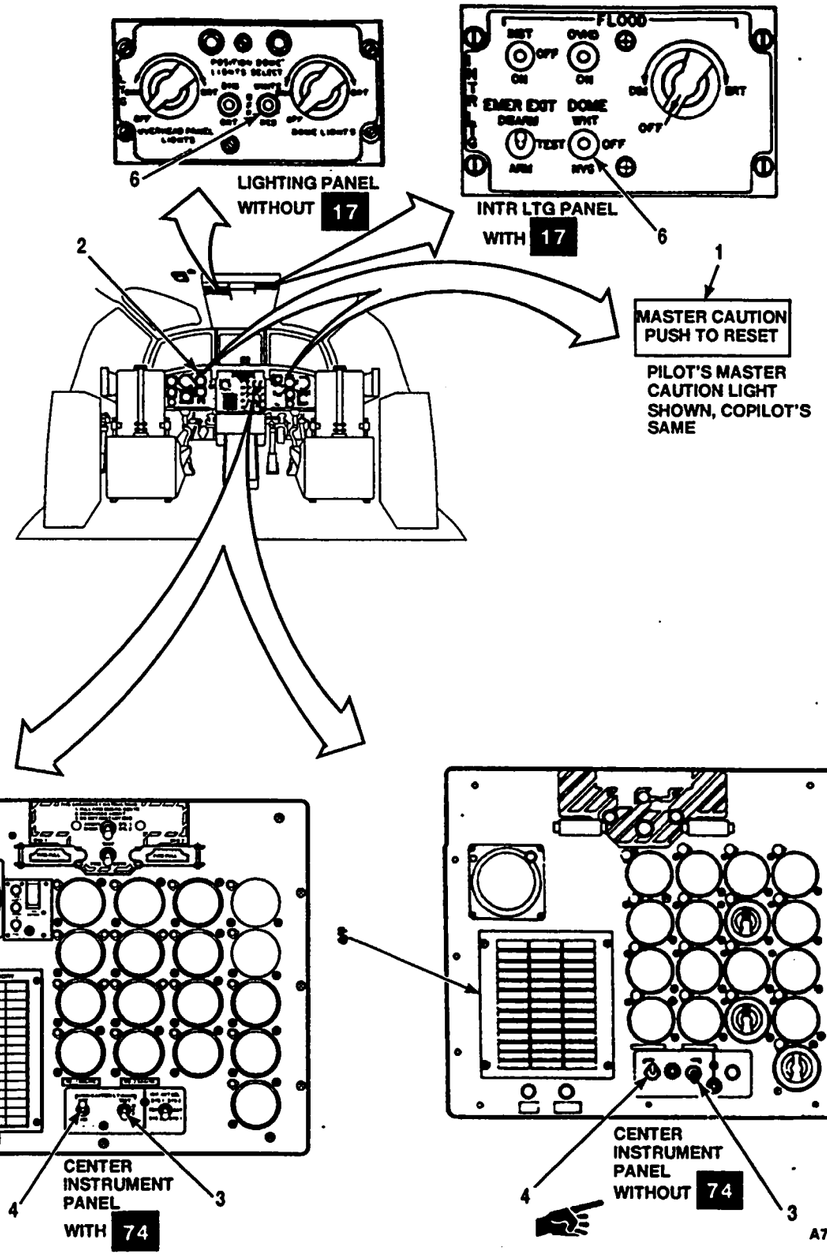
Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off

TASK	RESULT
1. **Check pilot's and copilot's MASTER CAUTION lights (1 and 2).**	If lights (1 and 2) are loose or damaged, tighten or replace them as required.
2. **Check CAUTION LIGHT (or LT) TEST switch (3).**	If switch (3) is loose or damaged, tighten or replace it as required.
3. **Check CAUTION LIGHT (or LT) DIM/BRIGHT (or DIM/BRT) switch (4).**	If switch (4) is loose or damaged, tighten or replace it as required.
4. **Check MASTER CAUTION (or CAUTION/ADVISORY) PANEL (5).**	If caution panel (5) or capsules are loose or damaged, repair or replace it as required.
5. **Check DOME SELECT or DOME switch (6).**	If switch (6) is loose or damaged, tighten or replace it as required.

FOLLOW-ON MAINTENANCE:
None



END OF TASK

9-18.3 MASTER CAUTION LIGHTS OPERATIONAL CHECK

INITIAL SETUP

Applicable Configurations:
All

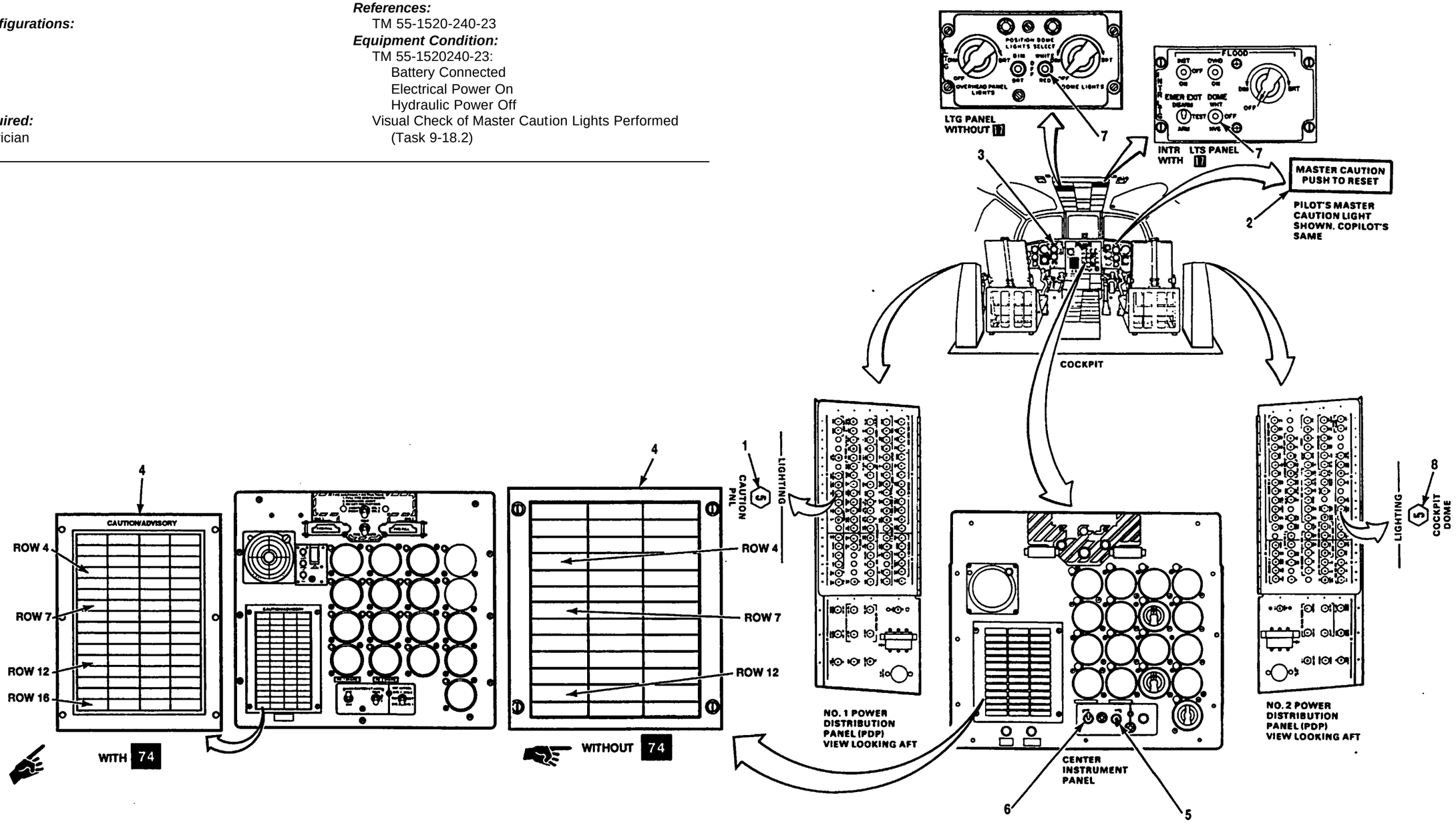
Tools:
None

Materials:
None

Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off
Visual Check of Master Caution Lights Performed (Task 9-18.2)



A72221

GO TO NEXT PAGE

	TASK	RESULT
1.	**Check that LIGHTING CAUTION PNL circuit breaker (1) is** closed.	If CAUTION PNL circuit breaker (1) is open, close it. If it opens again, go to task 9-18.4.
2.	**Check pilot's and copilot's MASTER CAUTION lights (2 and 3) and master caution panel capsules.**	Both pilot's and copilots **MASTER CAUTION** lights (2 and 3) and some capsules on master caution panel (4) shall come on bright. If caution capsules do not come on, go to task 9-18.5 or 9-18.5.1. If pilots or copilot's **MASTER CAUTION** lights do not come on, go to task 9-18.6. If master caution panel capsules and **MASTER CAUTION** lights come on dim, go to task 9-18.7. If one **MASTER CAUTION** light comes on dim and one comes on bright, go to task 9-18.12. Without 74 if all capsules in rows 4, 7, and 12 are on or if all capsules in remaining rows are on, replace master caution panel. With 74 if all capsules in rows 4, 7, 12, and 16 are on or if all capsules in remaining rows are on, replace master caution panel. Repeat task 9-13.3.
3.	**Press and release pilot's MASTER CAUTION light (2).**	Both pilot's and copilot's **MASTER CAUTION** lights (2 and 3) shall go out, lighted capsules on master caution panel (4) shall remain on. If pilot's and copilot's master caution lights remain on, go to task 9-18.8.
4.	**Set** and hold **CAUTION LIGHTS (or LT) TEST** switch(5) to **TEST.**	All capsules on master caution panel (4) and **MASTER CAUTION** lights (2 and 3) shall come on bright. If lights not come on, go to task 9-18.8.
5.	**Release CAUTION LIGHTS (or LT) TEST** switch (5) to **OFF.**	Some capsules on master caution panel (4) shall go out. If none go out, replace CAUTION LIGHTS (or LT) TEST switch.
6.	**Open, then dose LIGHTING CAUTION PNL** circuit	Both pilot and copilot **MASTER CAUTION** lights (2 and 3) and some capsules on master caution panel (4) shall come on bright. If pilot's or copilot's **MASTER CAUTION** lights do not come on, go to task 9-18.6.
7.	**Momentarily set CAUTION LIGHTS (or LT) DIM/ BRIGHT** switch (6) to **DIM.**	Lighted capsules on master caution panel (4) and both **MASTER CAUTION** lights (2 and 3) shall dim, if not, go to task 9-18.10.
8.	**Momentarily set CAUTION LIGHTS (or LT) DIM/ BRIGHT** switch (6) to **BRIGHT.**	Lighted capsules on master caution panel (4) and both MASTER CAUTION lights (2 and 3) shall get bright. If not, go to task 9-18.7.
9.	Momentarily set **CAUTION LIGHTS (or LT) DIM/BRIGHT** switch (6) to **DIM.**	
10.	**Check** that **DOME SELECT or DOME switch (7) is at OFF.**	If switch (7) is not at OFF, set it to OFF.
11.	**Check** that **LIGHTING COCKPIT DOME circuit breaker (8) is closed.**	If circuit breaker (8) is not dosed, close it. If it opens again, go to task 9-14.3.
12.	**Set DOME SELECT switch (7)** to **WHITE.**	Lighted capsules on master caution panel (4) and both **MASTER CAUTION** lights (2 and 3) shall come on bright, if not go to task 9-18.11.
13.	**Press and release copilots MASTER CAUTION light (3).**	Both pilot's and copilot's **MASTER CAUTION** lights (2 and 3) shall go out. If not, go to task 9-18.8.
14.	**Set DOME SELECT switch (7)** to **OFF.**	Lighted capsules on master caution panel (4) and both MASTER CAUTION lights (2 and 3) shall remain bright

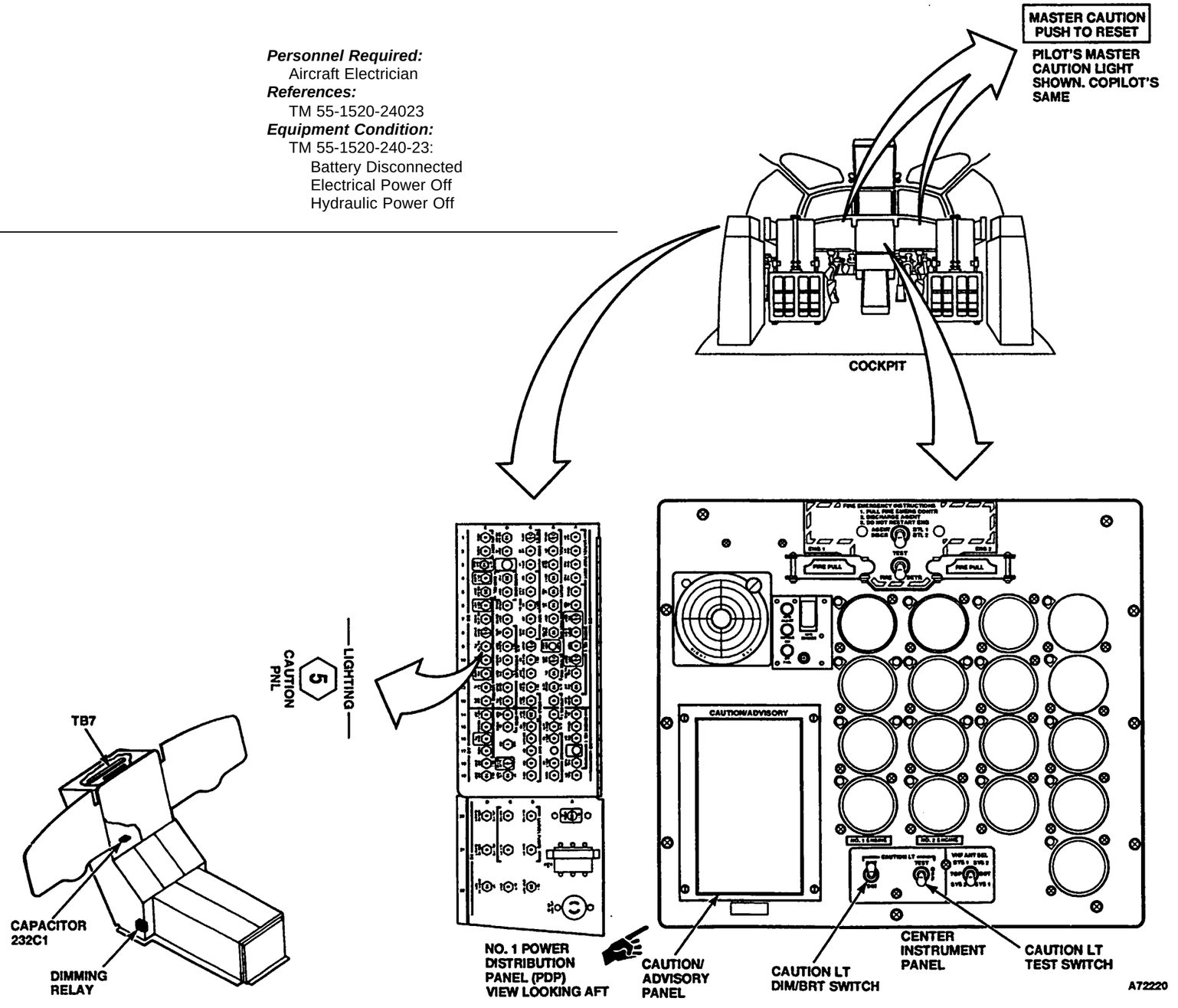
FOLLOW-ON MAINTENANCE:
TM 55-1520-240-22:
Battery disconnected.
Electrical power off.
Hydraulic power off.

END OF TASK

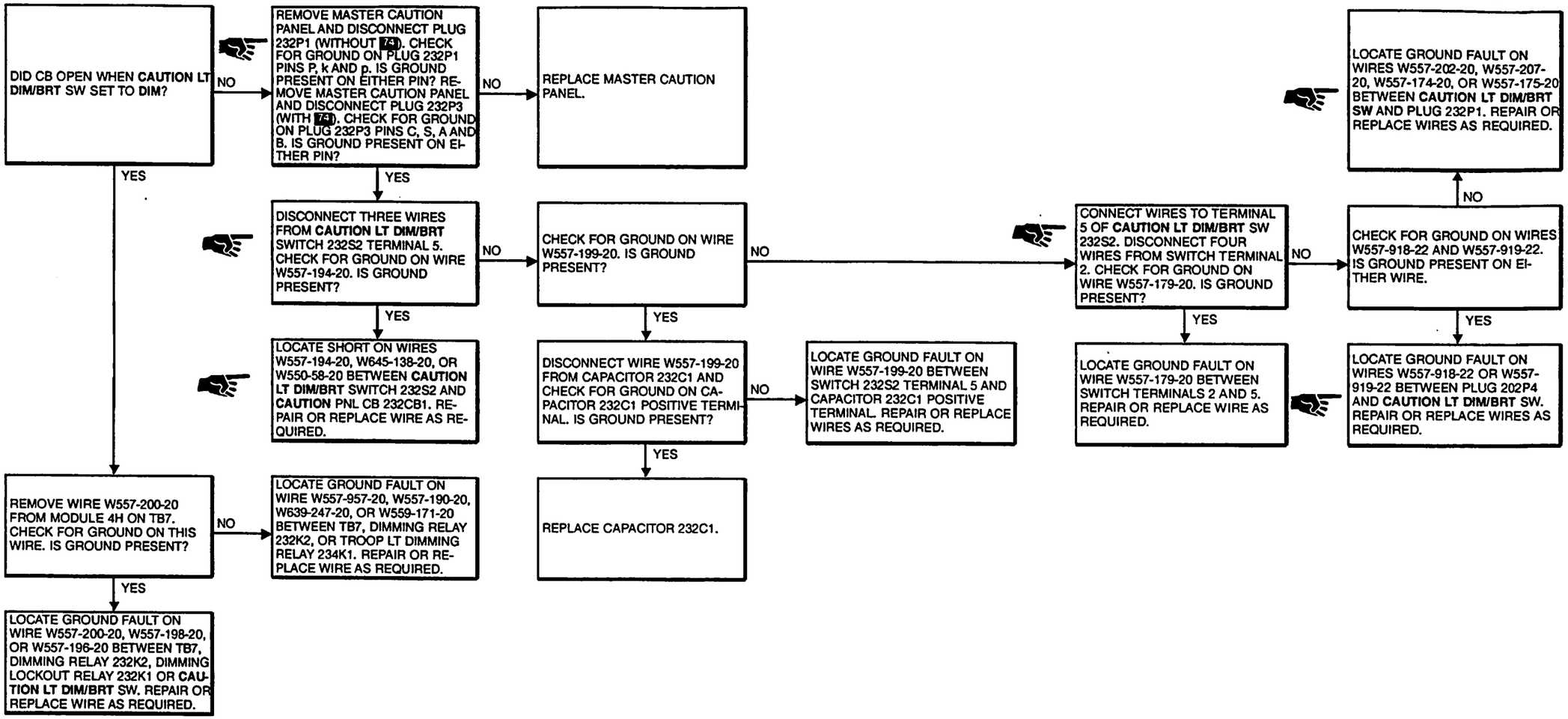
9-18.4 CAUTION PNL CIRCUIT BREAKER WILL NOT STAY CLOSED 9-18.4

FAULT ISOLATION PROCEDURE

INITIAL SETUP
Applicable Configurations:
All
Tools:
Electrical Repairer's Tool Kit, NSN 5180-00-3234915
Multimeter
Materials:
None
Personnel Required:
Aircraft Electrician
References:
TM 55-1520-24023
Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off



GO TO NEXT PAGE

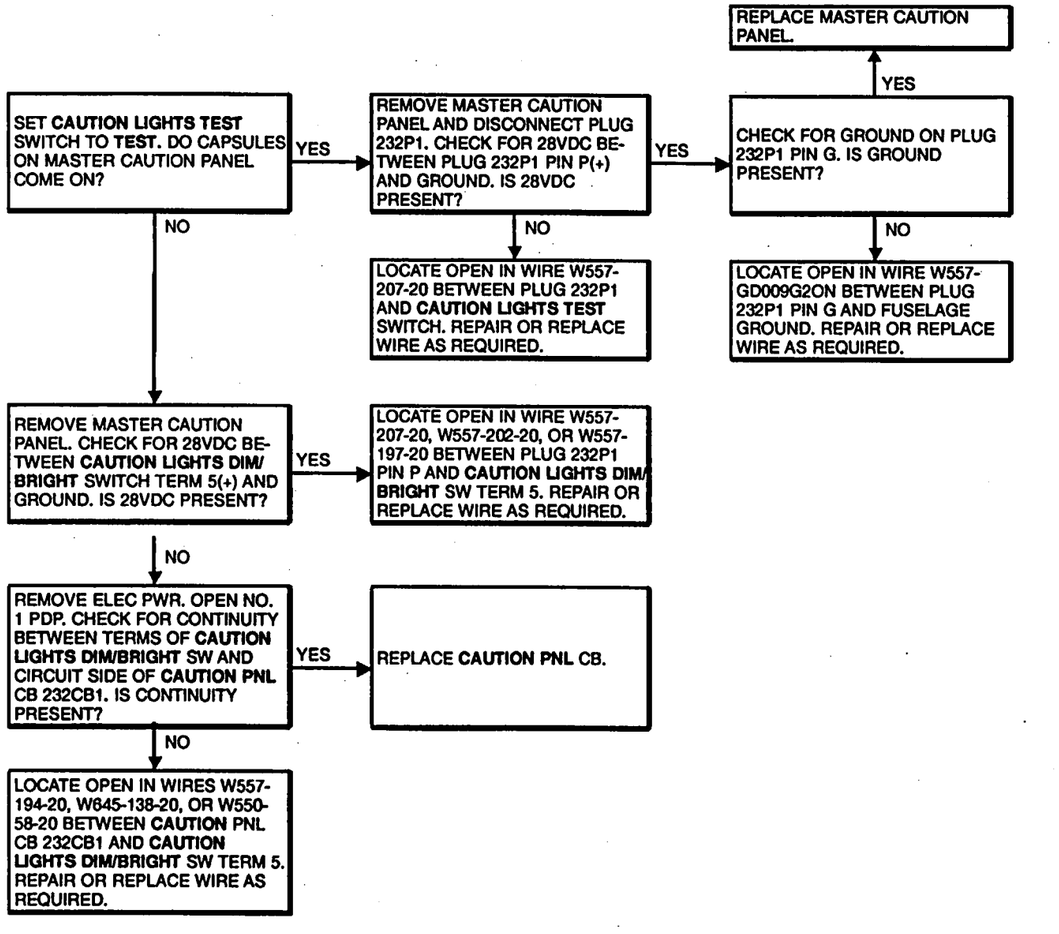

DID CB OPEN WHEN CAUTION LT DIM/BRT SW SET TO DIM?
NO
REMOVE MASTER CAUTION PANEL AND DISCONNECT PLUG 232P1 (WITHOUT 741). CHECK FOR GROUND ON PLUG 232P1 PINS P, k AND p. IS GROUND PRESENT ON EITHER PIN? REMOVE MASTER CAUTION PANEL AND DISCONNECT PLUG 232P3 (WITH 741). CHECK FOR GROUND ON PLUG 232P3 PINS C, S, A AND B. IS GROUND PRESENT ON EITHER PIN?
NO
REPLACE MASTER CAUTION PANEL.
YES
DISCONNECT THREE WIRES FROM CAUTION LT DIM/BRT SWITCH 232S2 TERMINAL 5. CHECK FOR GROUND ON WIRE W557-194-20. IS GROUND PRESENT?
NO
CHECK FOR GROUND ON WIRE W557-199-20. IS GROUND PRESENT?
NO
CONNECT WIRES TO TERMINAL 5 OF CAUTION LT DIM/BRT SW 232S2. DISCONNECT FOUR WIRES FROM SWITCH TERMINAL 2. CHECK FOR GROUND ON WIRE W557-179-20. IS GROUND PRESENT?
NO
CHECK FOR GROUND ON WIRES W557-918-22 AND W557-919-22. IS GROUND PRESENT ON EITHER WIRE.
NO
LOCATE GROUND FAULT ON WIRES W557-202-20, W557-207-20, W557-174-20, OR W557-175-20 BETWEEN CAUTION LT DIM/BRT SW AND PLUG 232P1. REPAIR OR REPLACE WIRES AS REQUIRED.
YES
LOCATE SHORT ON WIRES W557-194-20, W645-138-20, OR W550-58-20 BETWEEN CAUTION LT DIM/BRT SWITCH 232S2 AND CAUTION PNL CB 232CB1. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
DISCONNECT WIRE W557-199-20 FROM CAPACITOR 232C1 AND CHECK FOR GROUND ON CAPACITOR 232C1 POSITIVE TERMINAL. IS GROUND PRESENT?
NO
LOCATE GROUND FAULT ON WIRE W557-199-20 BETWEEN SWITCH 232S2 TERMINAL 5 AND CAPACITOR 232C1 POSITIVE TERMINAL. REPAIR OR REPLACE WIRES AS REQUIRED.
YES
LOCATE GROUND FAULT ON WIRE W557-179-20 BETWEEN SWITCH TERMINALS 2 AND 5. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
LOCATE GROUND FAULT ON WIRES W557-918-22 OR W557-919-22 BETWEEN PLUG 202P4 AND CAUTION LT DIM/BRT SW. REPAIR OR REPLACE WIRES AS REQUIRED.
YES
REMOVE WIRE W557-200-20 FROM MODULE 4H ON TB7. CHECK FOR GROUND ON THIS WIRE. IS GROUND PRESENT?
NO
LOCATE GROUND FAULT ON WIRE W557-957-20, W557-190-20, W639-247-20, OR W559-171-20 BETWEEN TB7, DIMMING RELAY 232K2, OR TROOP LT DIMMING RELAY 234K1. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
REPLACE CAPACITOR 232C1.
YES
LOCATE GROUND FAULT ON WIRE W557-200-20, W557-198-20, OR W557-196-20 BETWEEN TB7, DIMMING RELAY 232K2, DIMMING LOCKOUT RELAY 232K1 OR CAUTION LT DIM/BRT SW. REPAIR OR REPLACE WIRE AS REQUIRED.

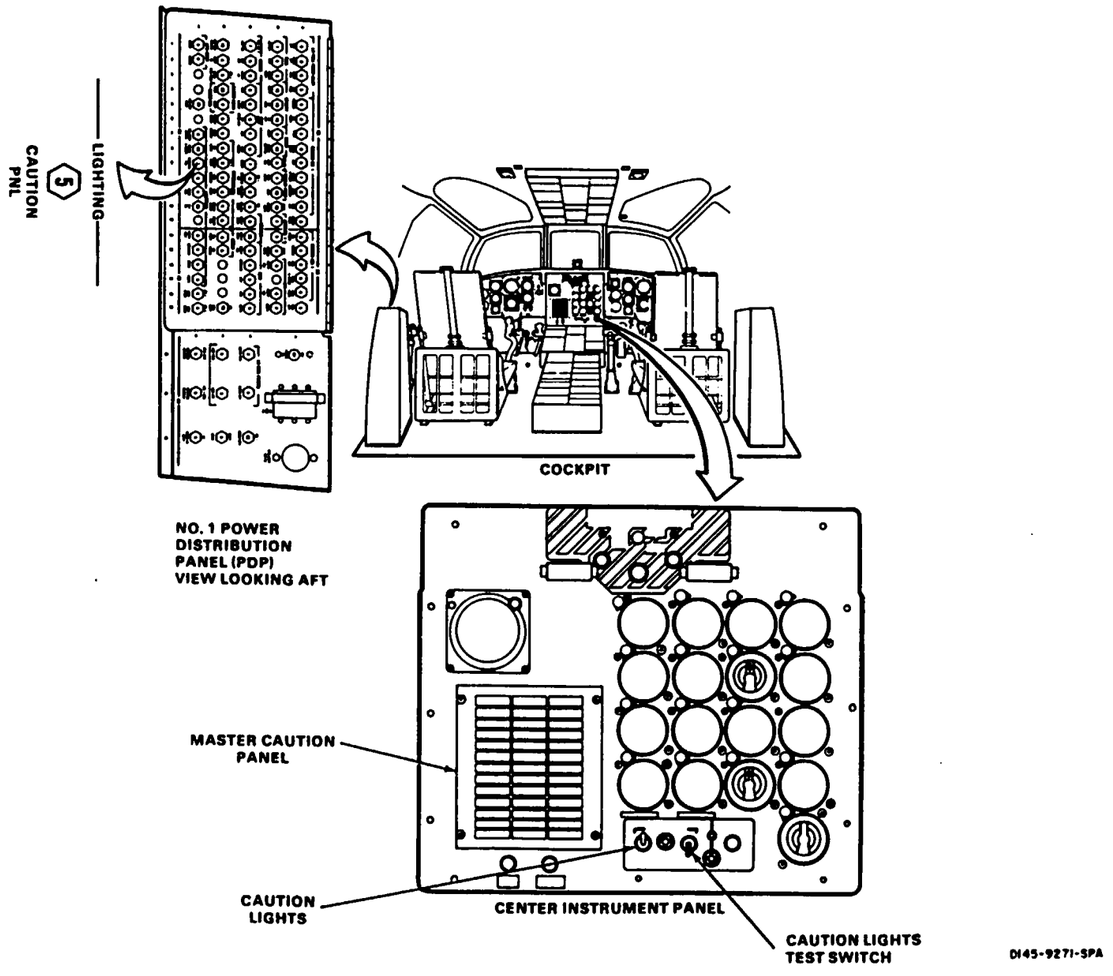
END OF TASK

9-18.5 MASTER CAUTION PANEL LIGHTS DO NOT COME ON WHEN BATTERY SWITCH SET TO ON 9-18.5

FAULT ISOLATION PROCEDURE

INITIAL SETUP
Applicable Configurations:
Without 74
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter
Materials:
None
Personnel Required:
Aircraft Electrician
References:
TM 55-1520-240-23
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off





END OF TASK

9-18.5.1 MASTER CAUTION PANEL LIGHTS DO NOT COME ON WHEN BATTERY SWITCH SET TO ON

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
With 74

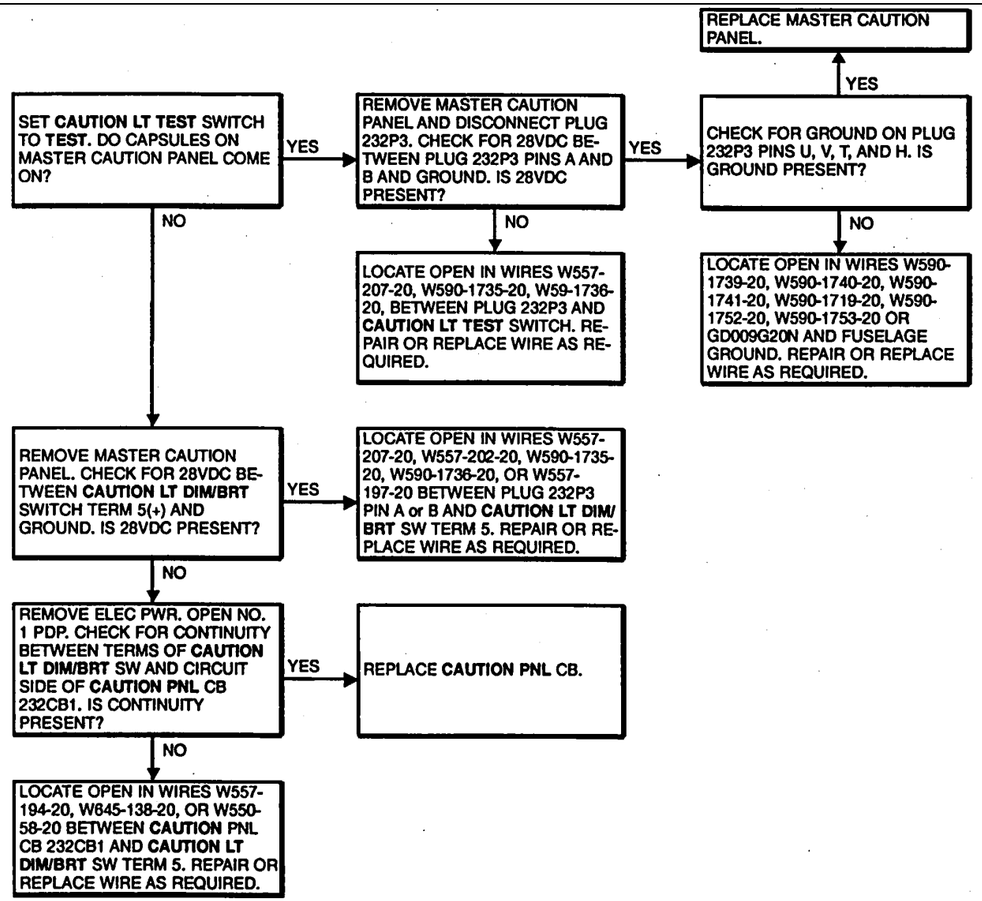
Tools:
Electrical Repairer's Tool Kit, NSN 5180-00-323-4915
Multimeter

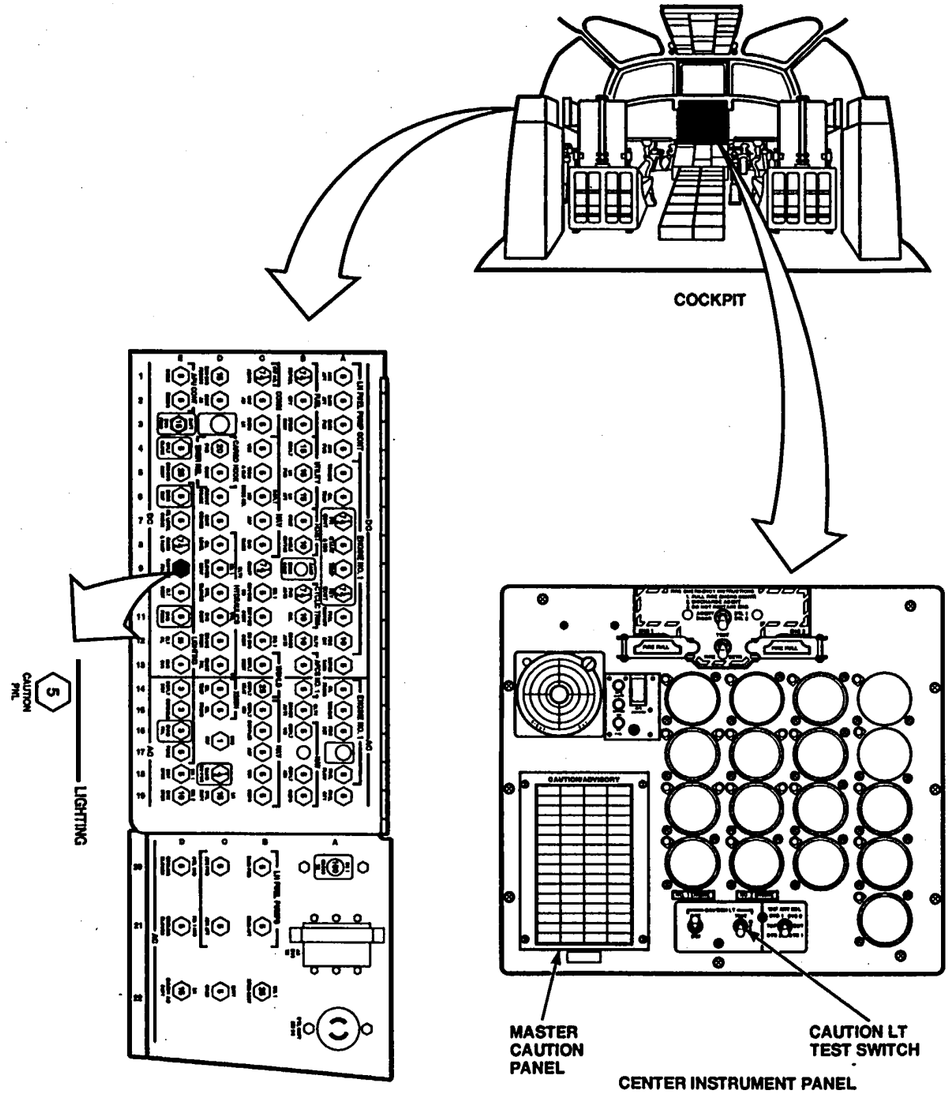
Materials:
None

Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off





NO. 1 POWER DISTRIBUTION PANEL (PDP) VIEW LOOKING AFT

A65491

END OF TASK

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

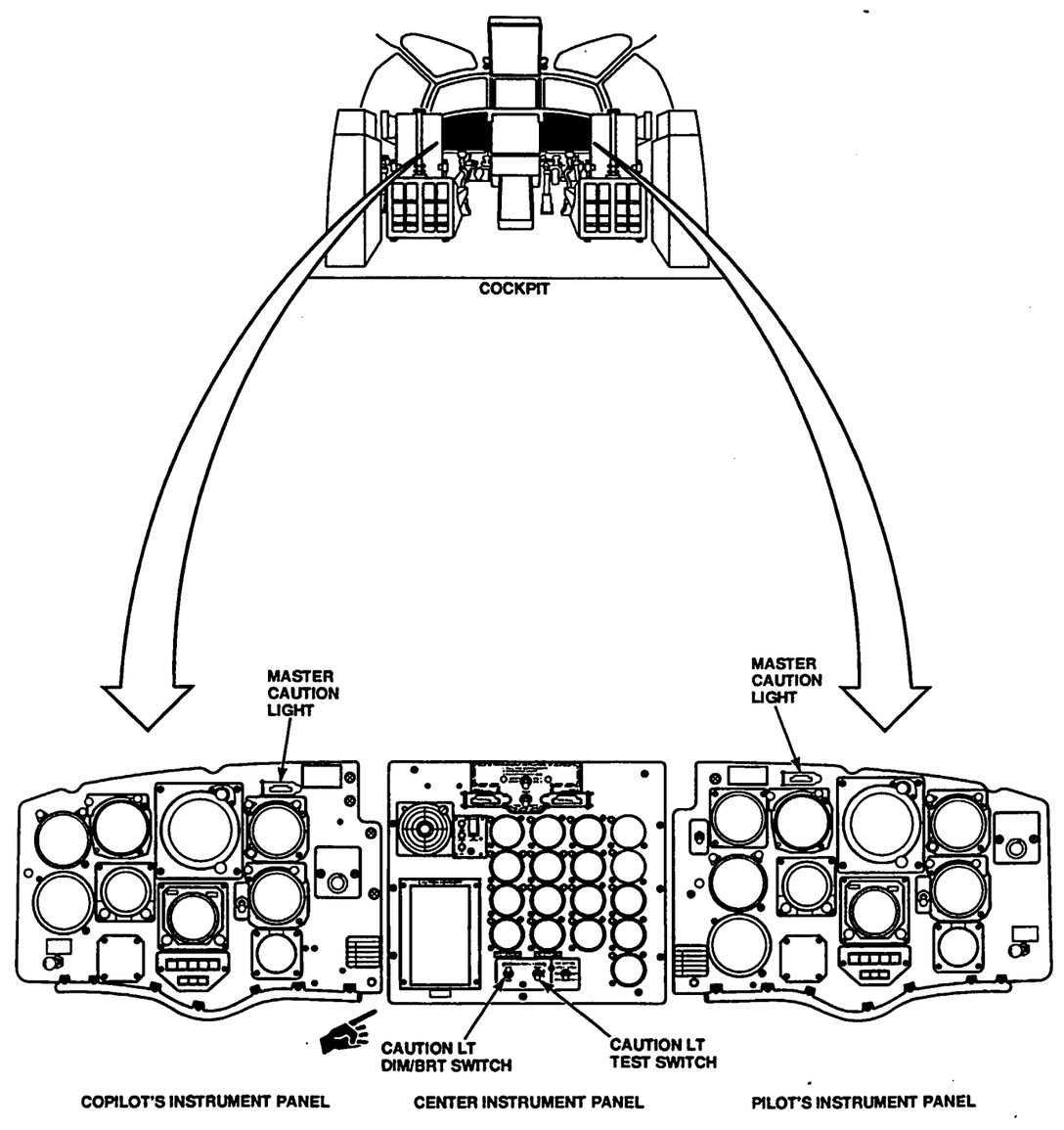
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:
None

Personnel Required:
Aircraft Electrician

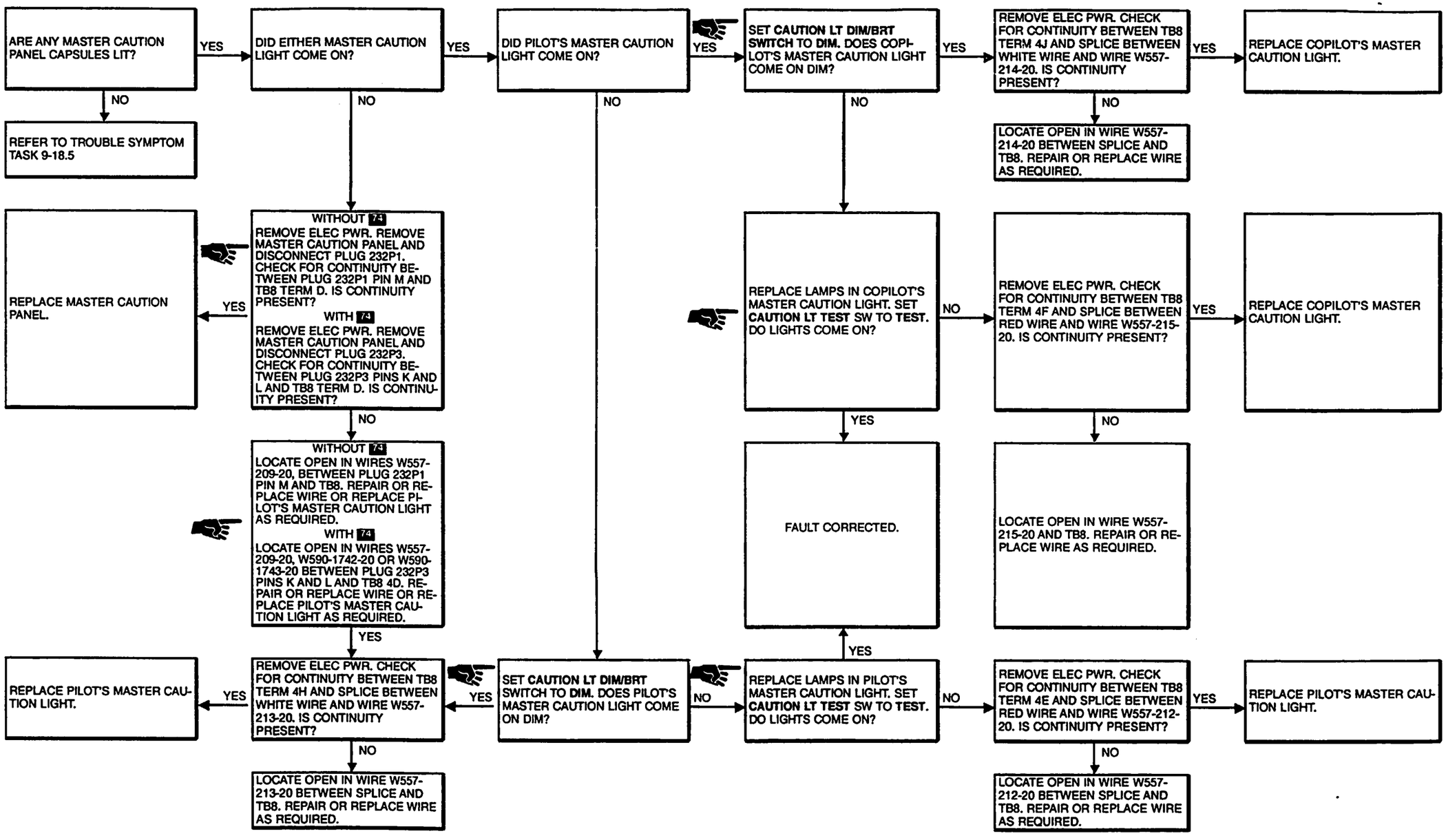
References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off



091860-A65490

GO TO NEXT PAGE


ARE ANY MASTER CAUTION PANEL CAPSULES LIT?
YES
NO
REFER TO TROUBLE SYMPTOM TASK 9-18.5
DID EITHER MASTER CAUTION LIGHT COME ON?
YES
NO
WITHOUT 74
REMOVE ELEC PWR. REMOVE MASTER CAUTION PANEL AND DISCONNECT PLUG 232P1. CHECK FOR CONTINUITY BETWEEN PLUG 232P1 PIN M AND TB8 TERM D. IS CONTINUITY PRESENT?
WITH 74
REMOVE ELEC PWR. REMOVE MASTER CAUTION PANEL AND DISCONNECT PLUG 232P3. CHECK FOR CONTINUITY BETWEEN PLUG 232P3 PINS K AND L AND TB8 TERM D. IS CONTINUITY PRESENT?
YES
REPLACE MASTER CAUTION PANEL.
NO
WITHOUT 74
LOCATE OPEN IN WIRES W557-209-20, BETWEEN PLUG 232P1 PIN M AND TB8. REPAIR OR REPLACE WIRE OR REPLACE PILOT'S MASTER CAUTION LIGHT AS REQUIRED.
WITH 74
LOCATE OPEN IN WIRES W557-209-20, W590-1742-20 OR W590-1743-20 BETWEEN PLUG 232P3 PINS K AND L AND TB8 4D. REPAIR OR REPLACE WIRE OR REPLACE PILOT'S MASTER CAUTION LIGHT AS REQUIRED.
YES
REMOVE ELEC PWR. CHECK FOR CONTINUITY BETWEEN TB8 TERM 4H AND SPLICE BETWEEN WHITE WIRE AND WIRE W557-213-20. IS CONTINUITY PRESENT?
YES
REPLACE PILOT'S MASTER CAUTION LIGHT.
NO
LOCATE OPEN IN WIRE W557-213-20 BETWEEN SPLICE AND TB8. REPAIR OR REPLACE WIRE AS REQUIRED.
DID PILOT'S MASTER CAUTION LIGHT COME ON?
YES
NO
SET CAUTION LT DIM/BRT SWITCH TO DIM. DOES PILOT'S MASTER CAUTION LIGHT COME ON DIM?
YES
NO
REPLACE LAMPS IN PILOT'S MASTER CAUTION LIGHT. SET CAUTION LT TEST SW TO TEST. DO LIGHTS COME ON?
YES
FAULT CORRECTED.
NO
REMOVE ELEC PWR. CHECK FOR CONTINUITY BETWEEN TB8 TERM 4E AND SPLICE BETWEEN RED WIRE AND WIRE W557-212-20. IS CONTINUITY PRESENT?
YES
REPLACE PILOT'S MASTER CAUTION LIGHT.
NO
LOCATE OPEN IN WIRE W557-212-20 BETWEEN SPLICE AND TB8. REPAIR OR REPLACE WIRE AS REQUIRED.
SET CAUTION LT DIM/BRT SWITCH TO DIM. DOES COPILOT'S MASTER CAUTION LIGHT COME ON DIM?
YES
NO
REPLACE LAMPS IN COPILOT'S MASTER CAUTION LIGHT. SET CAUTION LT TEST SW TO TEST. DO LIGHTS COME ON?
YES
FAULT CORRECTED.
NO
REMOVE ELEC PWR. CHECK FOR CONTINUITY BETWEEN TB8 TERM 4F AND SPLICE BETWEEN RED WIRE AND WIRE W557-215-20. IS CONTINUITY PRESENT?
YES
REPLACE COPILOT'S MASTER CAUTION LIGHT.
NO
LOCATE OPEN IN WIRE W557-215-20 AND TB8. REPAIR OR REPLACE WIRE AS REQUIRED.
REMOVE ELEC PWR. CHECK FOR CONTINUITY BETWEEN TB8 TERM 4J AND SPLICE BETWEEN WHITE WIRE AND WIRE W557-214-20. IS CONTINUITY PRESENT?
YES
REPLACE COPILOT'S MASTER CAUTION LIGHT.
NO
LOCATE OPEN IN WIRE W557-214-20 BETWEEN SPLICE AND TB8. REPAIR OR REPLACE WIRE AS REQUIRED.

END OF TASK

9-18.7 MASTER CAUTION PANEL CAPSULES AND MASTER CAUTION LIGHTS ARE DIM WHEN ELECTRICAL POWER APPLIED OR WHEN CAUTION LT SWITCH SET TO BRT

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

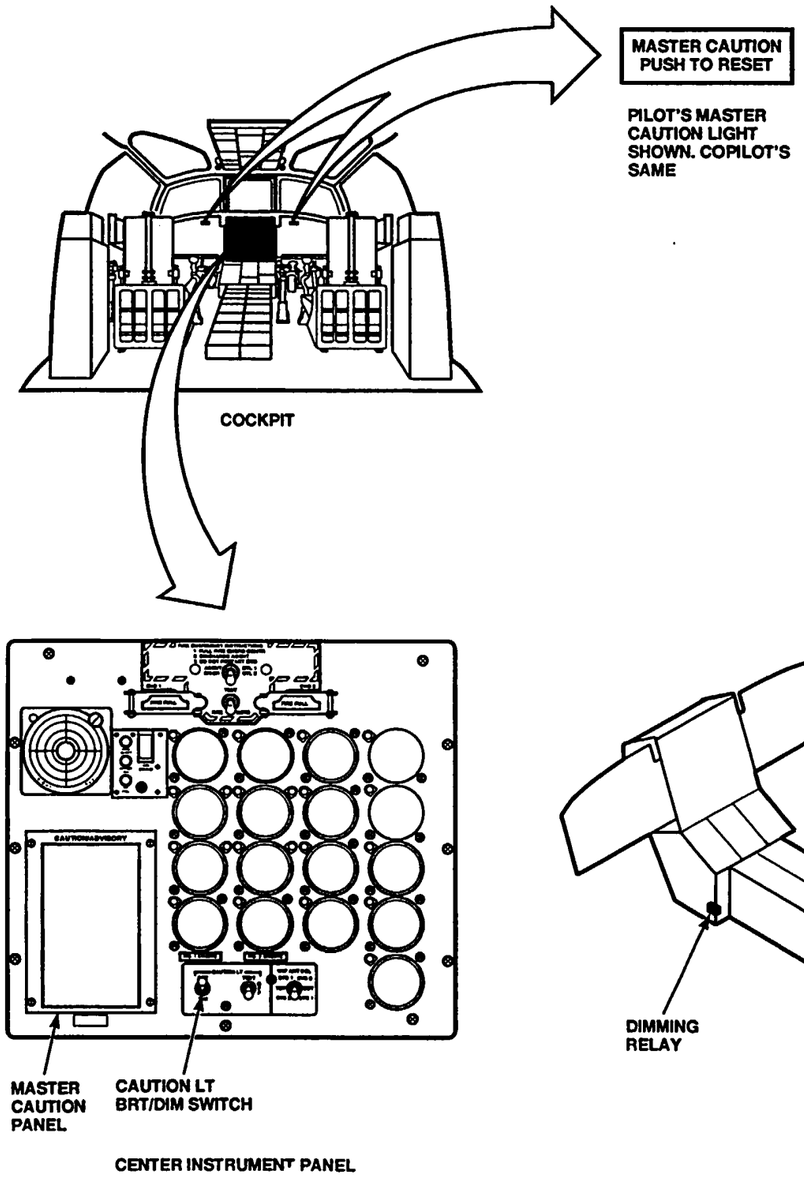
Tools:
Electrical Repairer's Tool Kit, NSN 5180-00-323-4915
Multimeter

Materials:
None

Personnel Required:
Aircraft Electrician

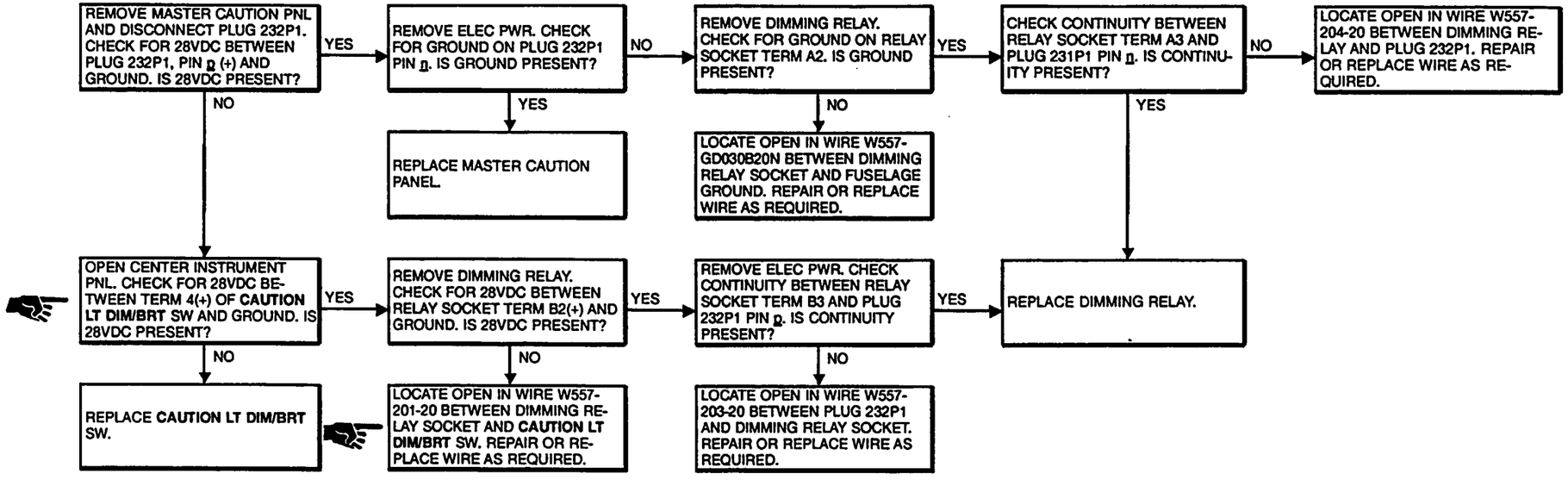
References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off

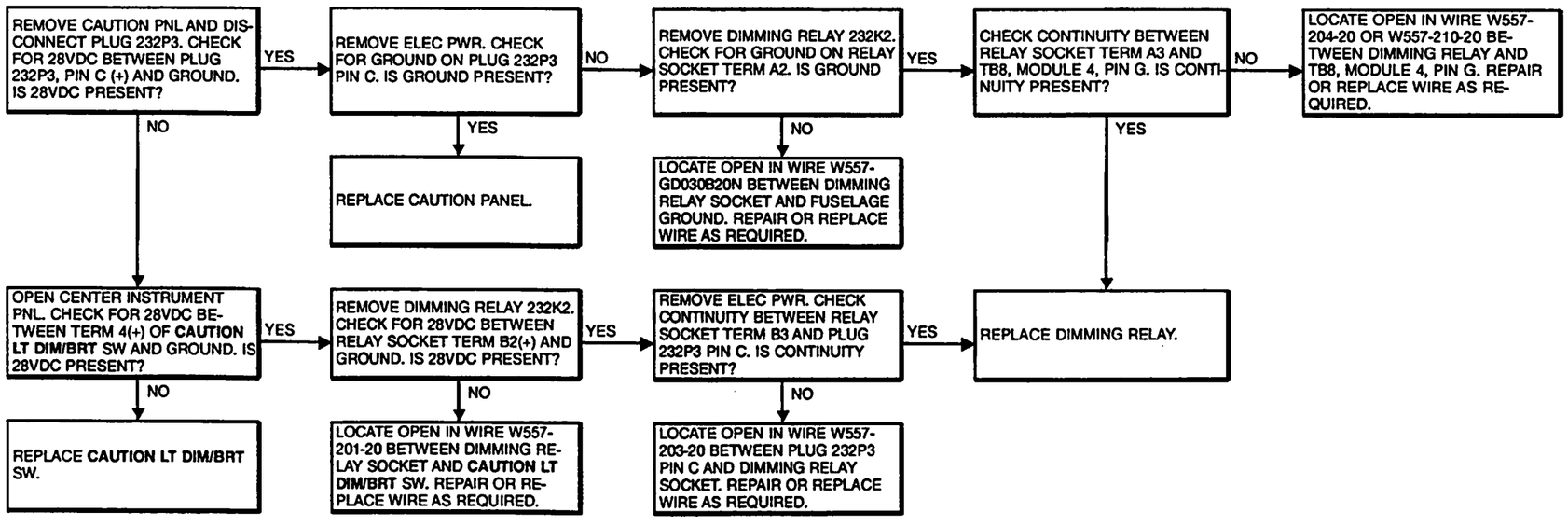


GO TO NEXT PAGE

WITHOUT 74



WITH 74



END OF TASK

9-18.8 PILOT'S AND COPILOT'S MASTER CAUTION LIGHT WILL NOT GO OUT

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

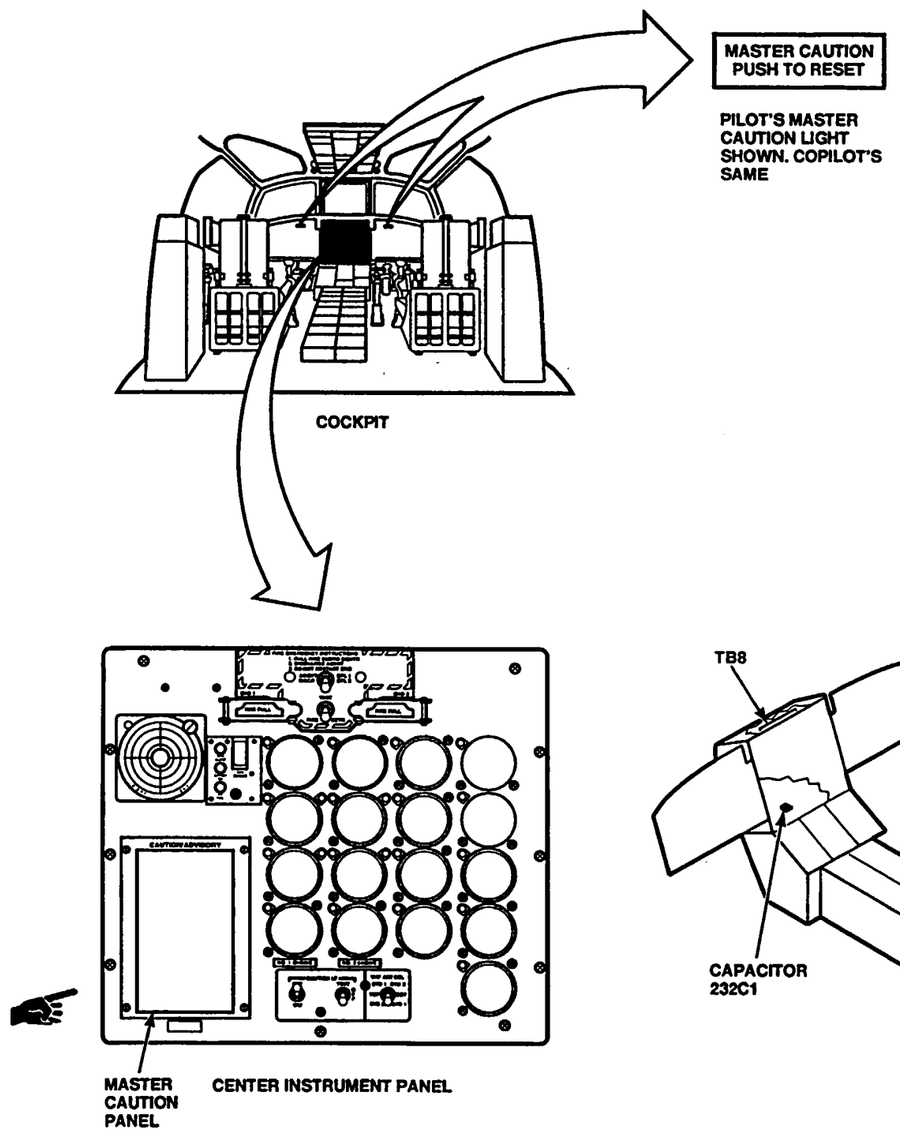
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:
None

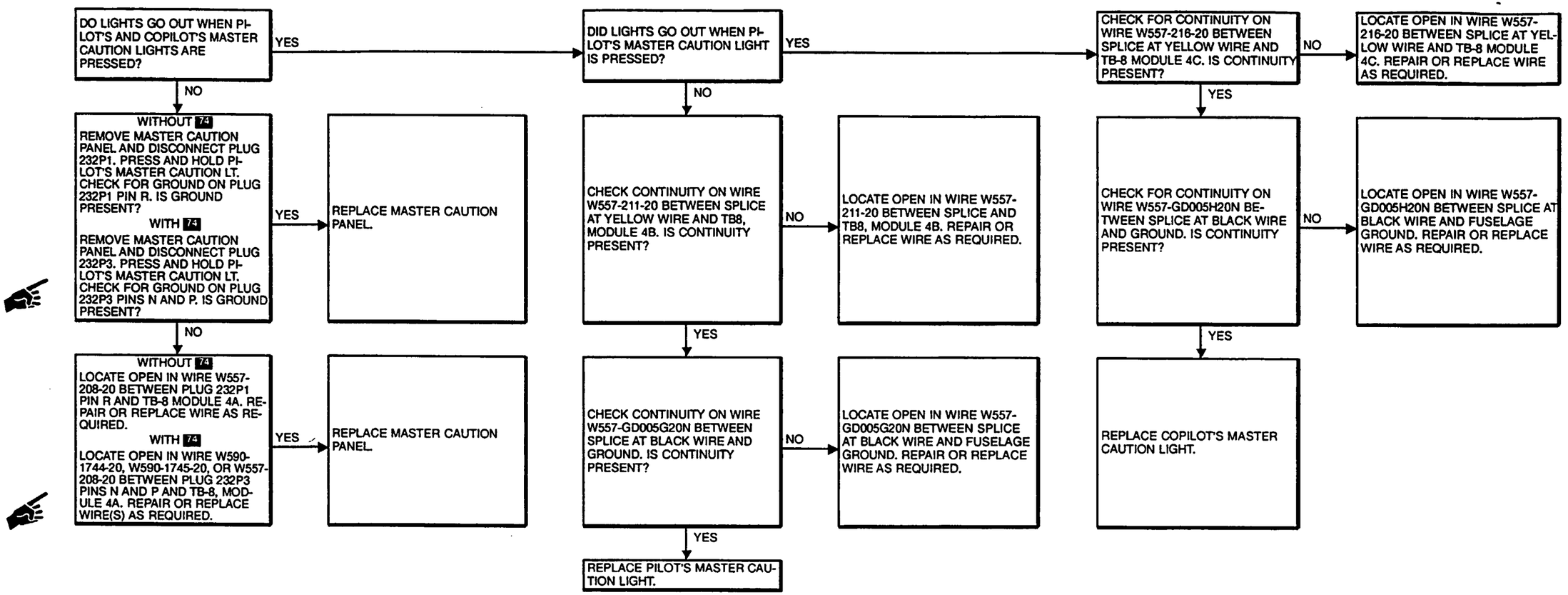
Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off



GO TO NEXT PAGE


DO LIGHTS GO OUT WHEN PILOT'S AND COPILOT'S MASTER CAUTION LIGHTS ARE PRESSED?
YES
NO
DID LIGHTS GO OUT WHEN PILOT'S MASTER CAUTION LIGHT IS PRESSED?
YES
NO
CHECK FOR CONTINUITY ON WIRE W557-216-20 BETWEEN SPLICE AT YELLOW WIRE AND TB-8 MODULE 4C. IS CONTINUITY PRESENT?
NO
YES
LOCATE OPEN IN WIRE W557-216-20 BETWEEN SPLICE AT YELLOW WIRE AND TB-8 MODULE 4C. REPAIR OR REPLACE WIRE AS REQUIRED.
WITHOUT 74
REMOVE MASTER CAUTION PANEL AND DISCONNECT PLUG 232P1. PRESS AND HOLD PILOT'S MASTER CAUTION LT. CHECK FOR GROUND ON PLUG 232P1 PIN R. IS GROUND PRESENT?
WITH 74
REMOVE MASTER CAUTION PANEL AND DISCONNECT PLUG 232P3. PRESS AND HOLD PILOT'S MASTER CAUTION LT. CHECK FOR GROUND ON PLUG 232P3 PINS N AND P. IS GROUND PRESENT?
YES
REPLACE MASTER CAUTION PANEL.
NO
CHECK CONTINUITY ON WIRE W557-211-20 BETWEEN SPLICE AT YELLOW WIRE AND TB8, MODULE 4B. IS CONTINUITY PRESENT?
NO
LOCATE OPEN IN WIRE W557-211-20 BETWEEN SPLICE AND TB8, MODULE 4B. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
CHECK FOR CONTINUITY ON WIRE W557-GD005H20N BETWEEN SPLICE AT BLACK WIRE AND GROUND. IS CONTINUITY PRESENT?
NO
LOCATE OPEN IN WIRE W557-GD005H20N BETWEEN SPLICE AT BLACK WIRE AND FUSELAGE GROUND. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
WITHOUT 74
LOCATE OPEN IN WIRE W557-208-20 BETWEEN PLUG 232P1 PIN R AND TB-8 MODULE 4A. REPAIR OR REPLACE WIRE AS REQUIRED.
WITH 74
LOCATE OPEN IN WIRE W590-1744-20, W590-1745-20, OR W557-208-20 BETWEEN PLUG 232P3 PINS N AND P AND TB-8, MODULE 4A. REPAIR OR REPLACE WIRE(S) AS REQUIRED.
YES
REPLACE MASTER CAUTION PANEL.
CHECK CONTINUITY ON WIRE W557-GD005G20N BETWEEN SPLICE AT BLACK WIRE AND GROUND. IS CONTINUITY PRESENT?
NO
LOCATE OPEN IN WIRE W557-GD005G20N BETWEEN SPLICE AT BLACK WIRE AND FUSELAGE GROUND. REPAIR OR REPLACE WIRE AS REQUIRED.
YES
REPLACE PILOT'S MASTER CAUTION LIGHT.
REPLACE COPILOT'S MASTER CAUTION LIGHT.

END OF TASK

9-18.9 LIGHTS DO NOT COME ON WHEN CAUTION LT TEST SWITCH IS AT TEST

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

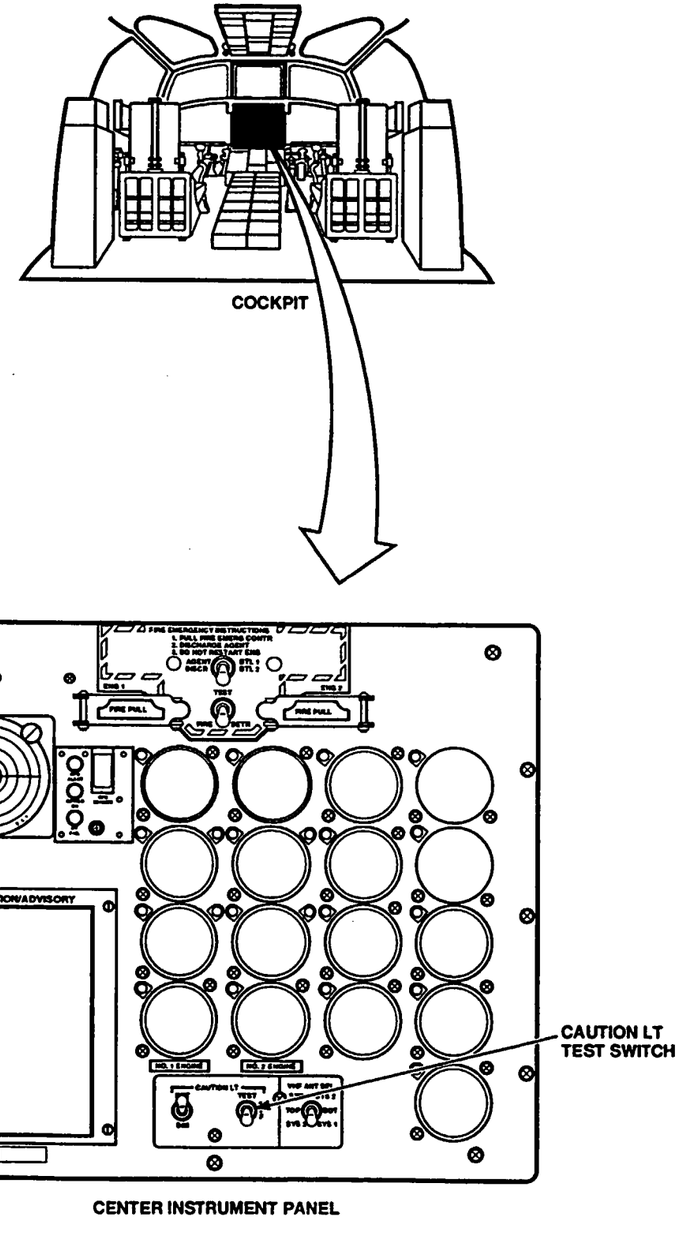
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00323-4915
Multimeter

Materials:
None

Personnel Required:
Aircraft Electrician (2)

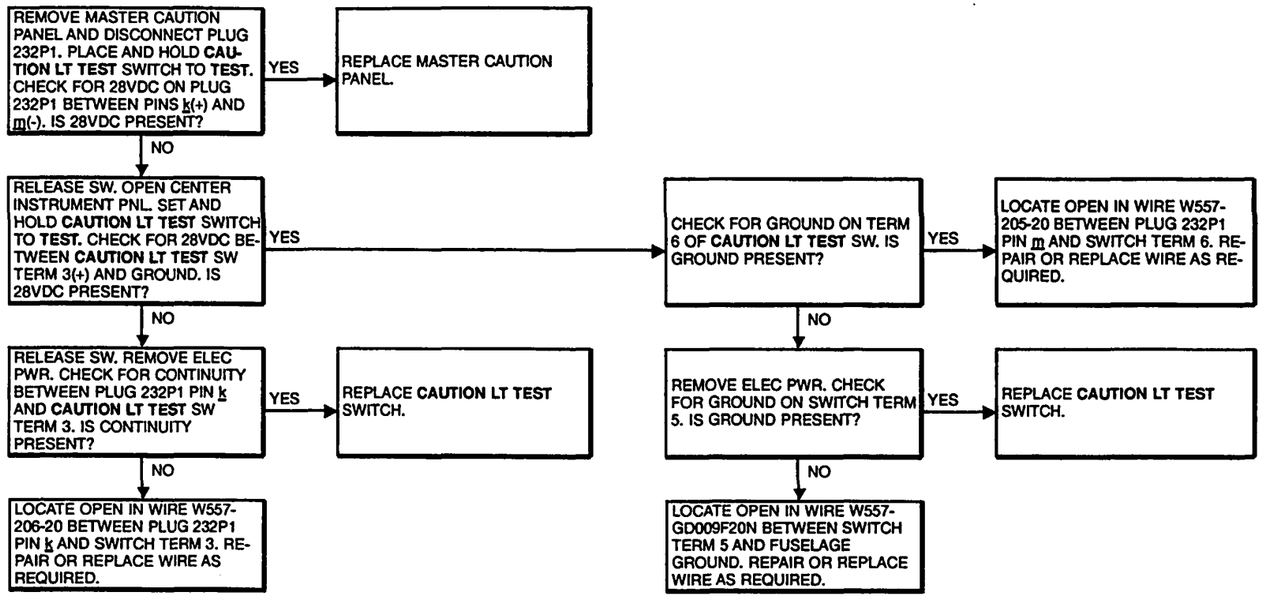
References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power Off
Hydraulic Power Off

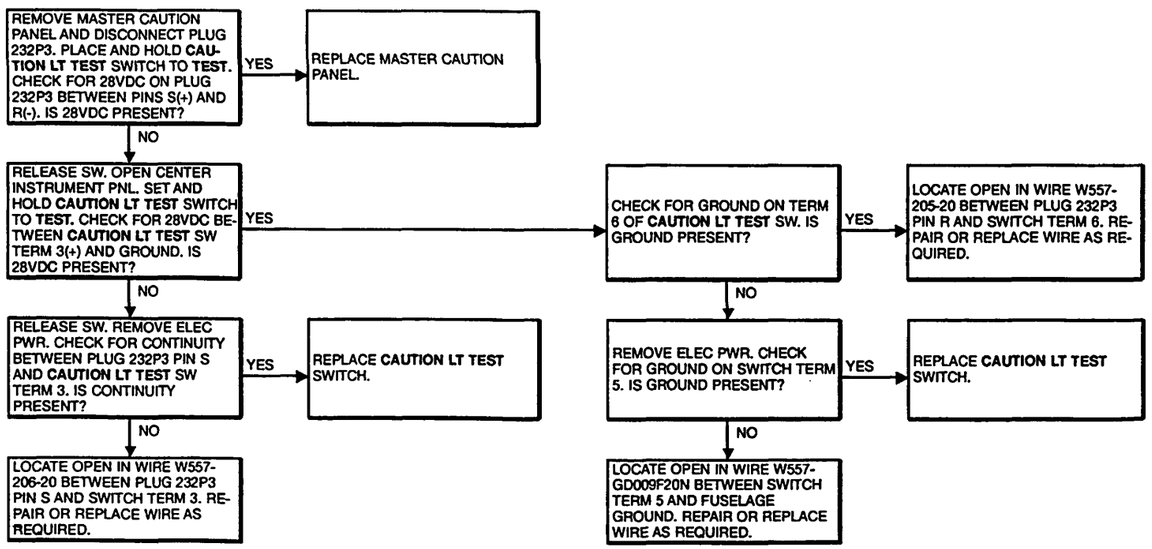


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WITHOUT 74



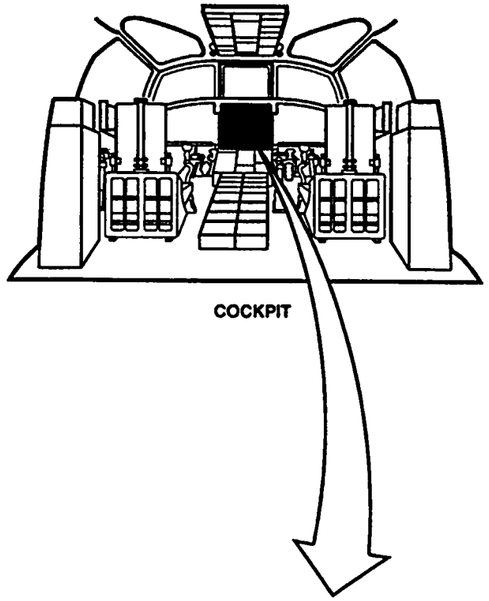
WITH 74

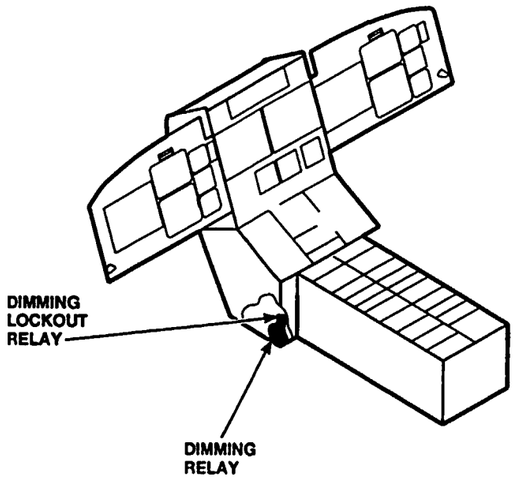


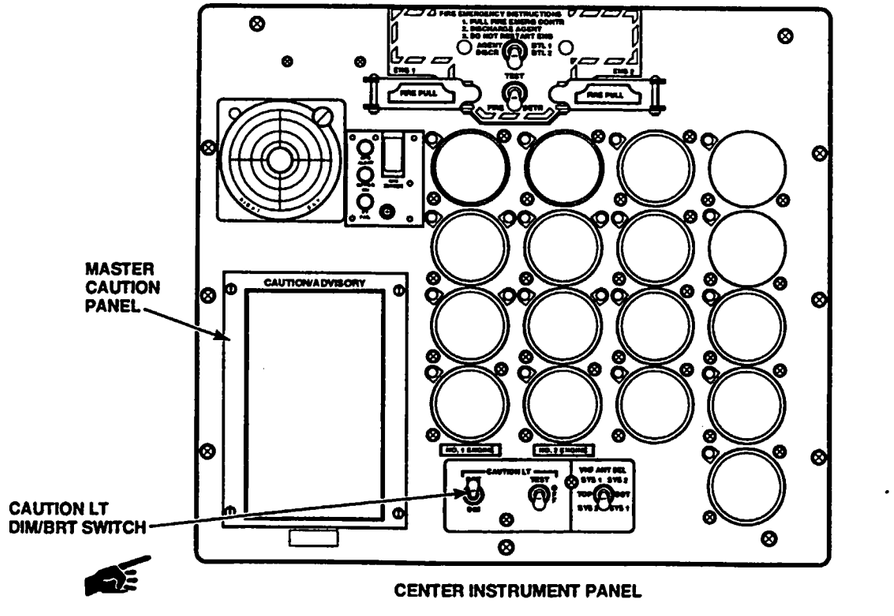
END OF TASK

FAULT ISOLATION PROCEDURE
INITIAL SETUP
Applicable Configurations:
All
Tools:
Electrical Repairer's Tool Kit,
NSN 518000-323-4915
Multimeter
Materials:
None
Personnel Required:
Aircraft Electrician (2)

References:
TM 55-1520-240-23
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power Off
Hydraulic Power Off
L.H. Forward Console Cover Removed
Console Lighting Panel Lowered



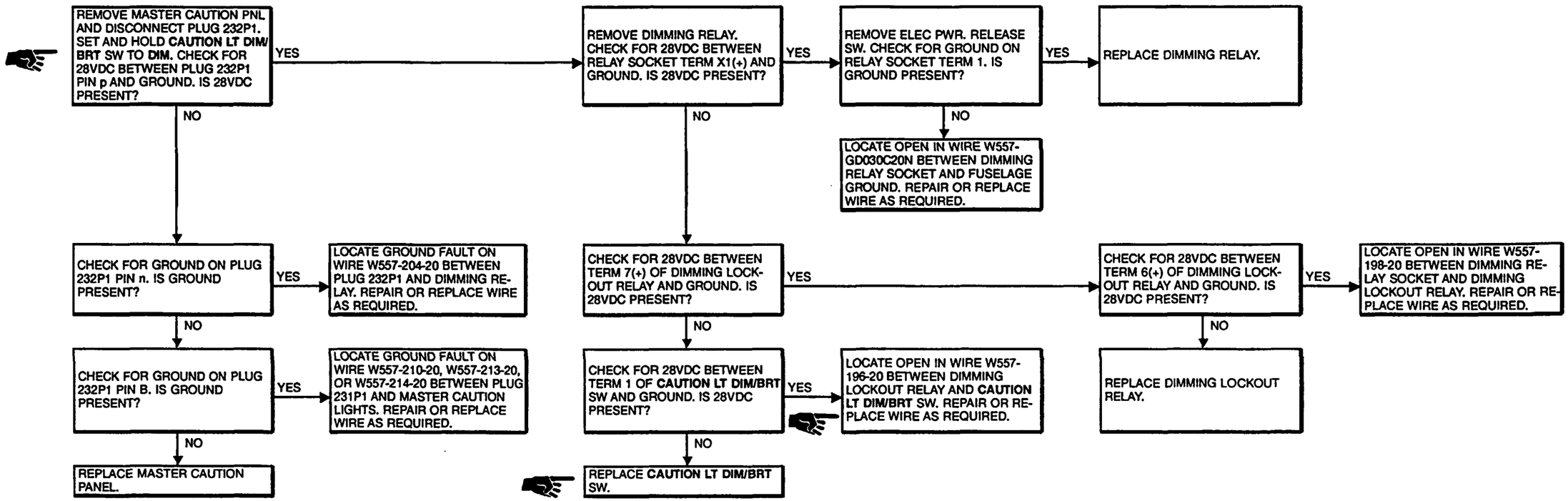




A65495

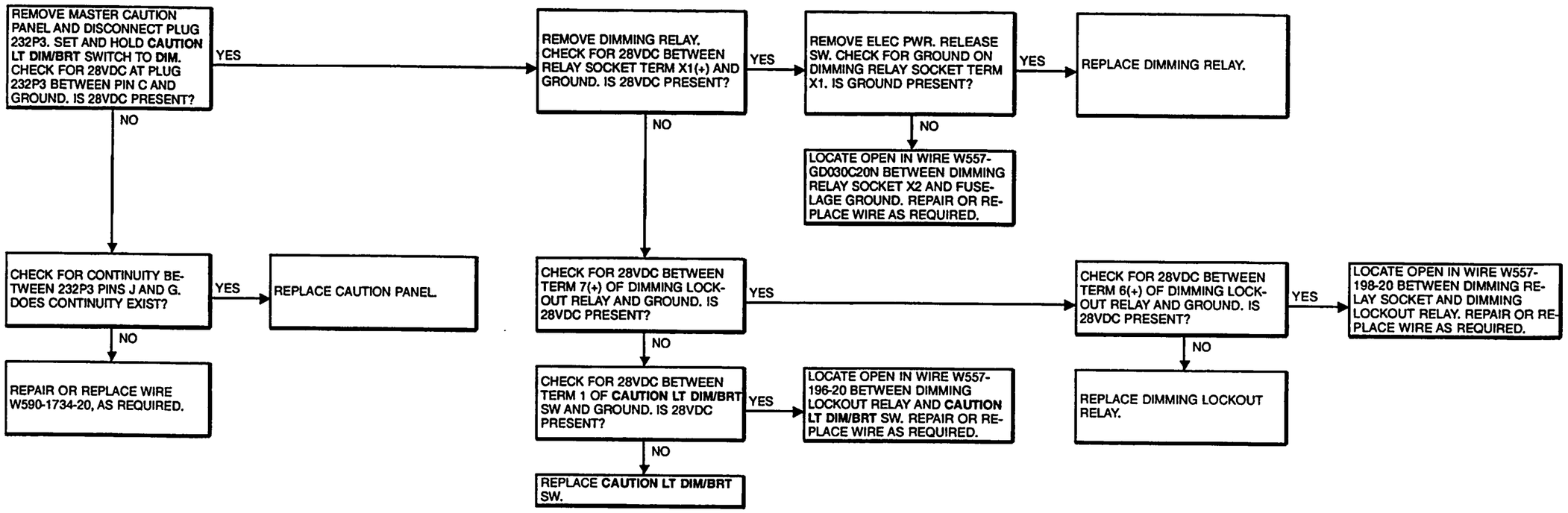
GO TO NEXT PAGE

WITHOUT 74



GO TO NEXT PAGE

WITH 74



END OF TASK

9-18.11 MASTER CAUTION PANEL LIGHTS DO NOT GO BRIGHT WHEN DOME SELECT SWITCH SET TO WHITE

FAULT ISOLATION PROCEDURE
INITIAL SETUP

Applicable Configurations:
All

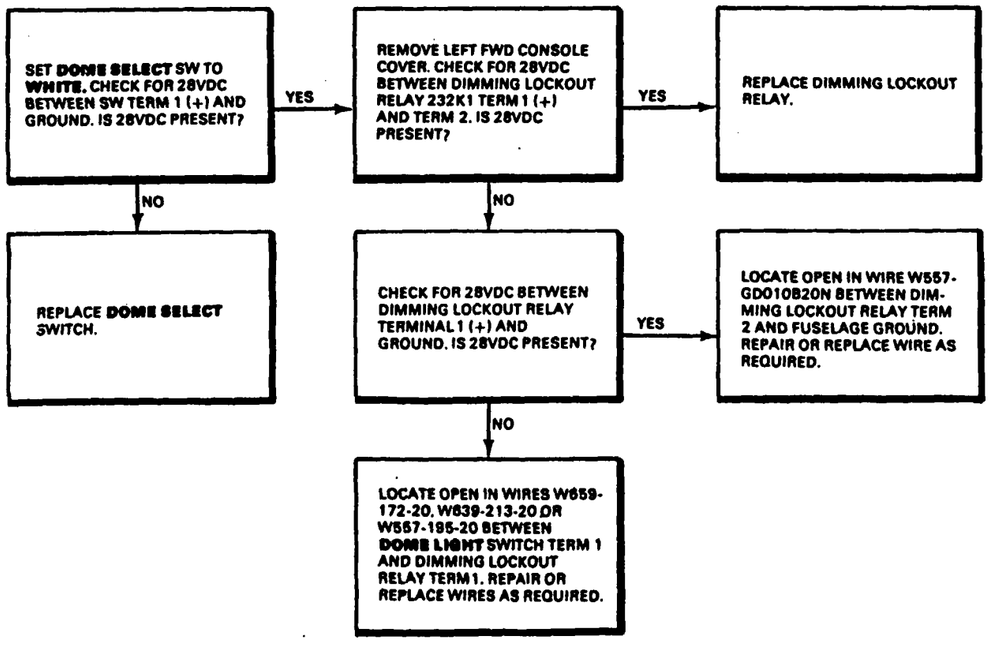
Tools:
Electrical Repairer's Tool Kit.
NSN 5180-00-323-4915
Multimeter

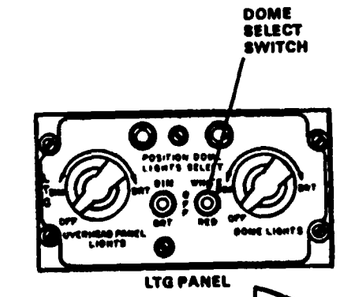
Materials:
None

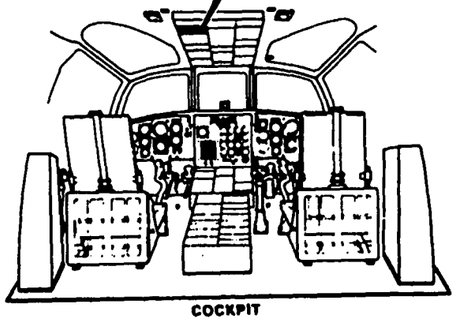
Personnel Required:
68F10 Aircraft Electrician
68F20 Aircraft Electrician

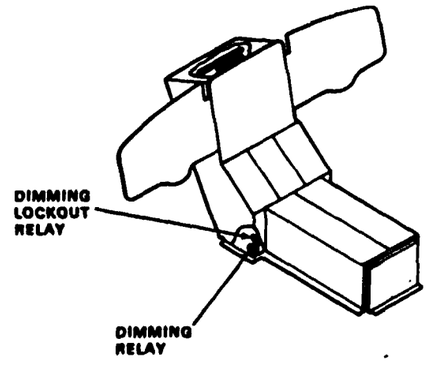
References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
LTG Panel Lowered From Overhead Panel
Battery Connected
Electrical Power On
Hydraulic Power Off









END OF TASK

9-18.12 BOOTH MASTER CAUTION LIGHTS ARE ON BUT ONE IS BRIGHT AND ONE IS DIM

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

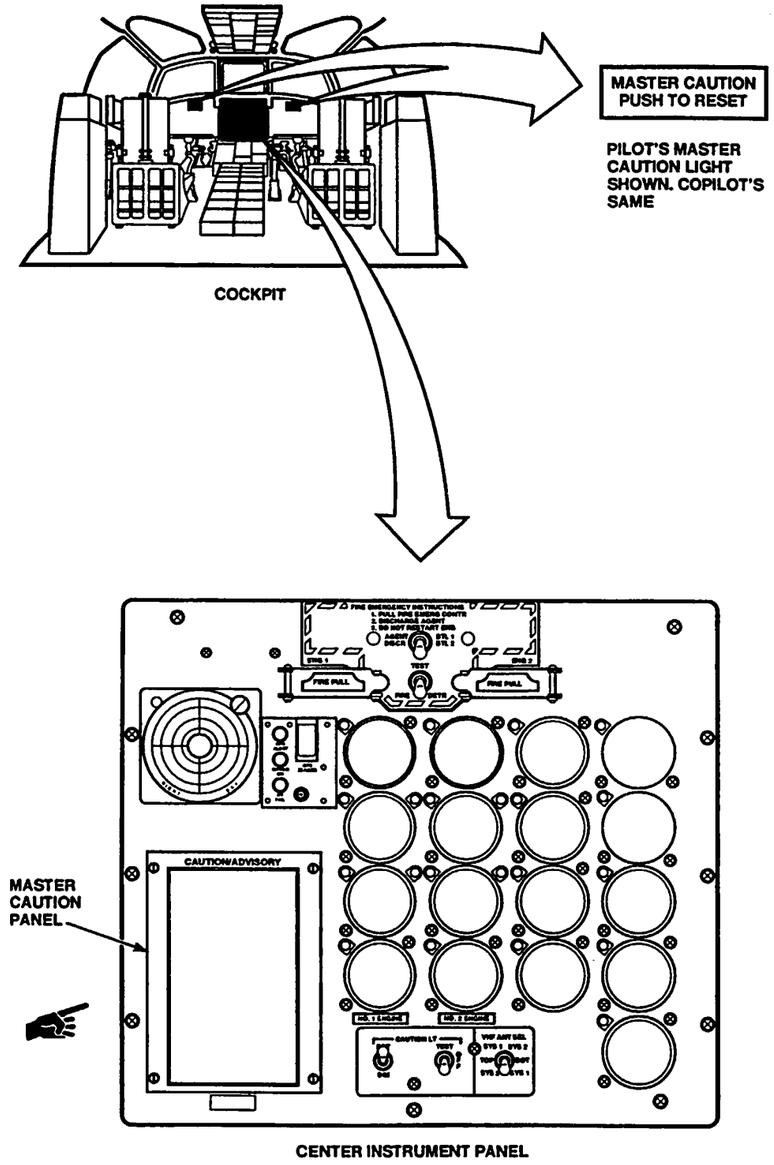
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-003234915
Multimeter

Materials:
None

Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

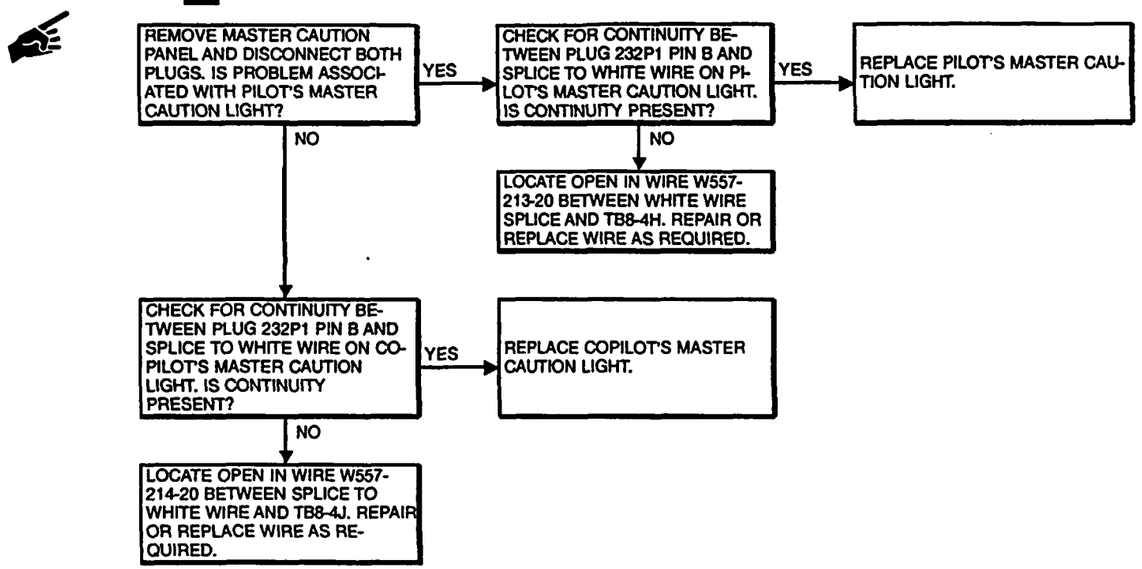
Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off



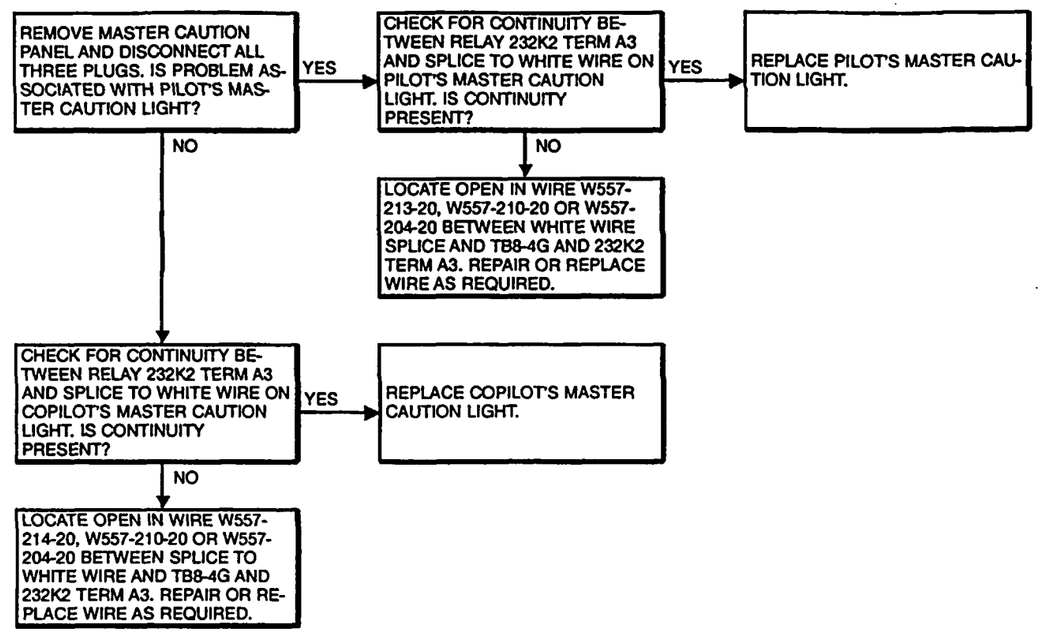
A65496

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WITHOUT 74



WITH 74

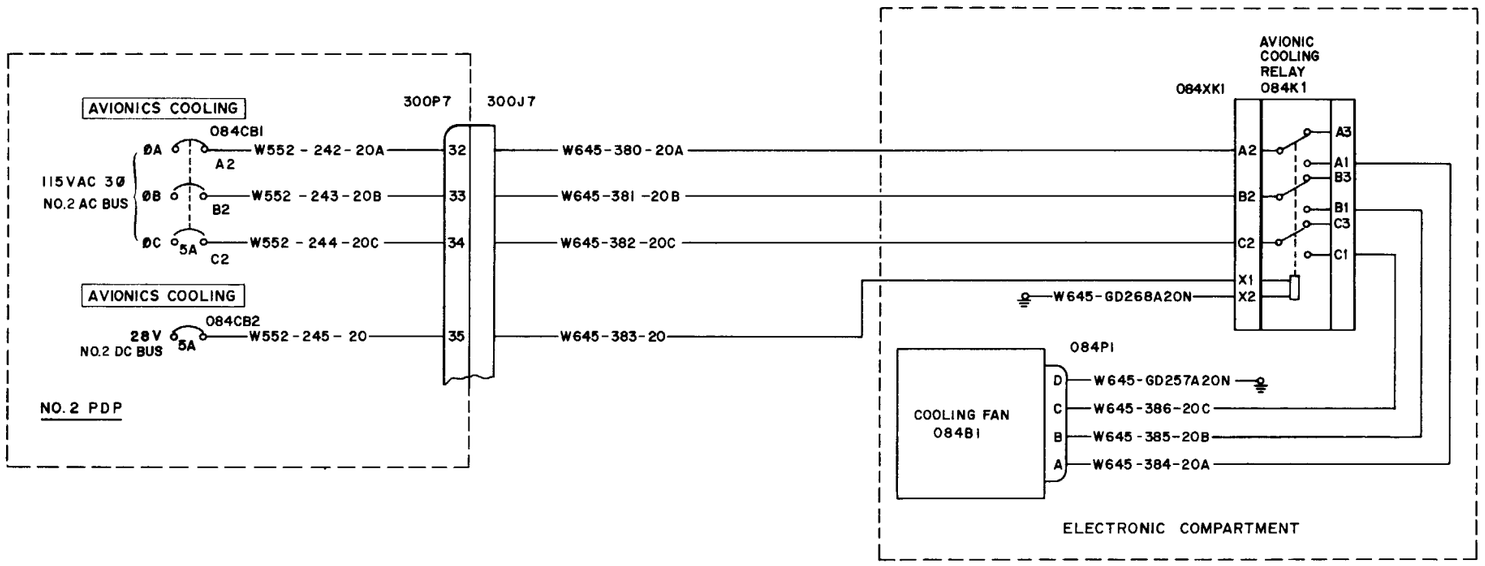


END OF TASK

9-19 AVIONICS COOLING FAN

9-19 AVIONICS COOLING FAN

9-19.1 AVIONICS COOLING FAN WIRING DIAGRAM



90x54

0145-7120-SPA

9-19.2 AVIONICS COOLING FAN VISUAL CHECK

'TIAL SETUP

Applicable Configurations:
All

ols:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915

Materials:
None

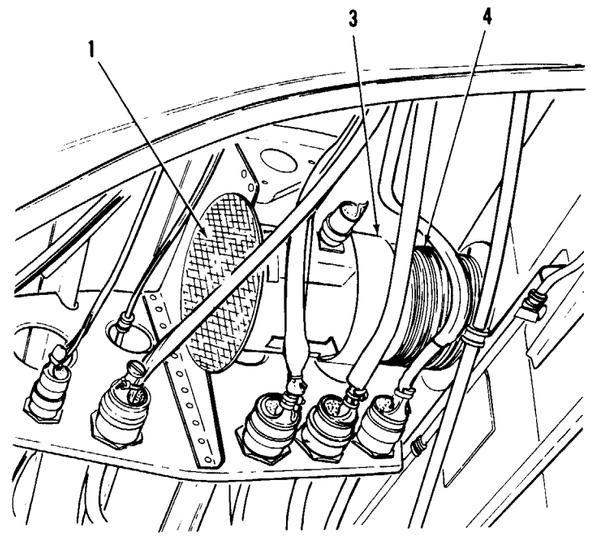
Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

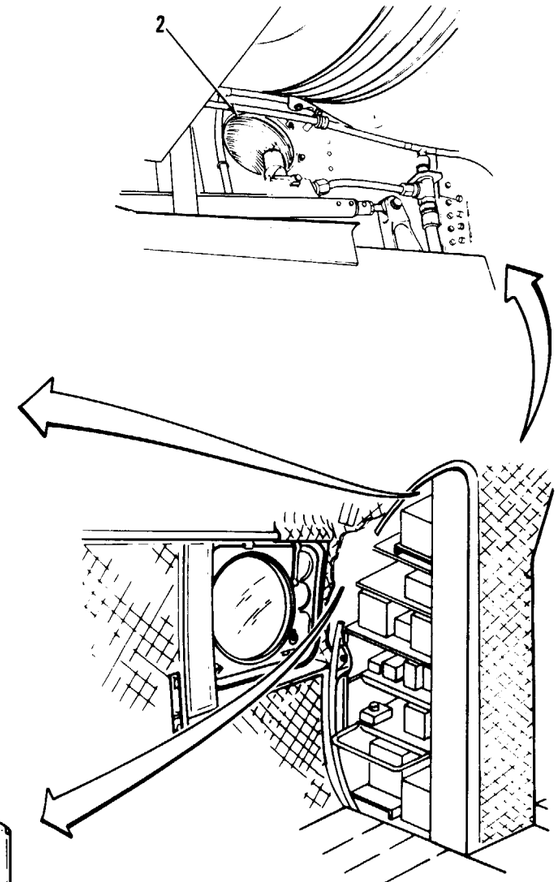
Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off
Electronic Compartment Acoustic Blanket Removed
Forward Transmission Drip Pan Removed

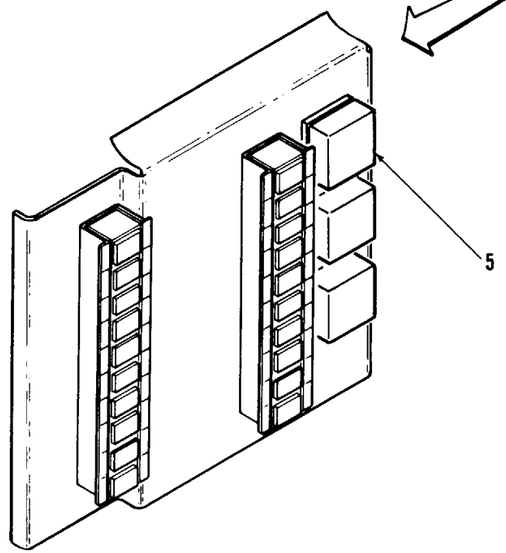
TASK	RESULT
1. **Check cooling fan inlet screen (1).**	If screen (1) is clogged, clean it.
2. **Check cooling fan outlet (2).**	Remove any debris found in cooling fan outlet (2).
3. **Check cooling fan (3).**	If cooling fan (3) is loose or damaged, tighten or replace it as required. If electrical connector or wiring to connector is damaged, replace it.
4. **Check fan duct (4).**	If fan duct (4) is torn or loose, tighten or replace it as required.
5. **Check fan relay (5).**	If fan relay (5) is loose or damaged, tighten or replace it as required.

FOLLOW-ON MAINTENANCE:
TM 55-1520-240-23:
Electronic Compartment Acoustic Blanket Installed
Fwd Transmission Drip Pan Installed



VIEW LOOKING UP AND INBOARD AT STA 107, WL 50.6





D145-7640-SPA

END OF TASK

9-19.3 AVIONIC COOLING FAN OPERATIONAL CHECK

INITIAL SETUP

Applicable Configurations:
All

Tools:
None

Materials:
None

Personnel Required:
68F20 Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off
Visual Check of Avionic Cooling Fan Performed (Task 9-19.2)

TASK	RESULT
1. **Check** that **AVIONIC COOLING DC circuit breaker (1)** is closed.	If AVIONIC COOLING circuit breaker (1) is open, close it. If it opens again, go to task 9-19.4.
2. **Check** that **AVIONIC COOLING AC circuit breaker (2)** is closed.	If AVIONIC COOLING circuit breaker (2) is open, close it. If it opens again, go to task 9-19.5.
CAUTION **Do not place hand into discharge port. Injury to hand could occur.**	
3. **Place hand near discharge port (3).**	Strong flow of air should be felt. If weak flow or no flow is felt, go to task 9-19.6.

FOLLOW-ON MAINTENANCE:

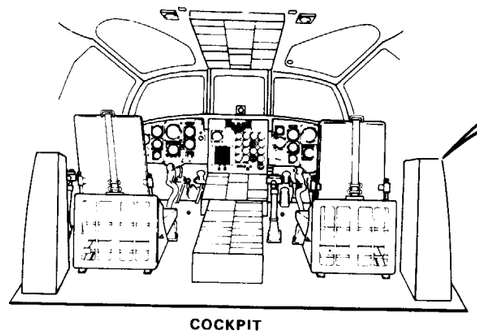
TM 55-1520-240-23:

Battery disconnected.

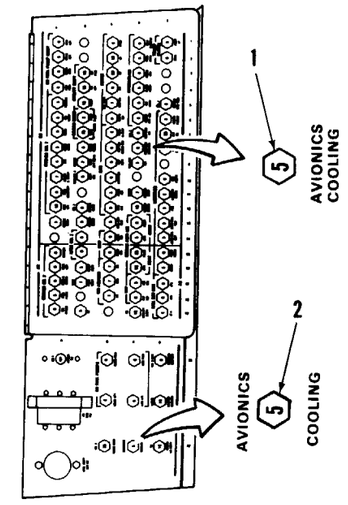
Electrical power off.

Hydraulic power off.

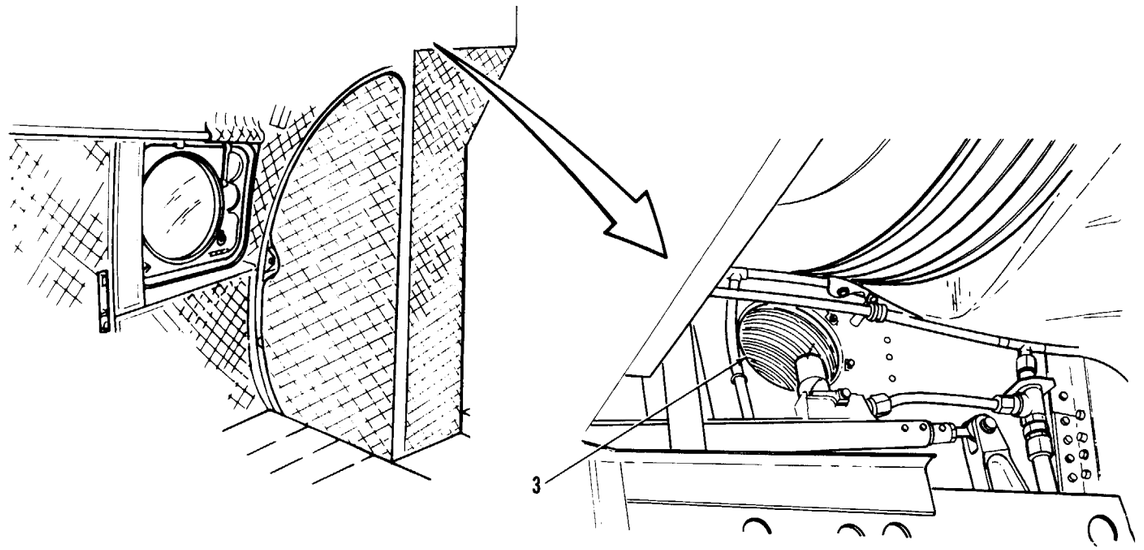
Forward Transmission Drip Pan Installed.



COCKPIT



NO. 2 POWER DISTRIBUTION PANEL (PDP) VIEW LOOKING AFT



AVIONIC COOLER DISCHARGE PORT
STA 107 WL +50.6

45x54

DI45-7641-SPA

END OF TASK

9-19.4 AVIONIC COOLING FAN DC CIRCUIT BREAKER WILL NOT STAY CLOSED

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

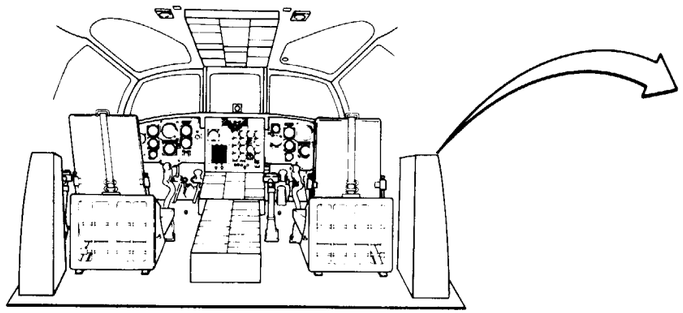
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

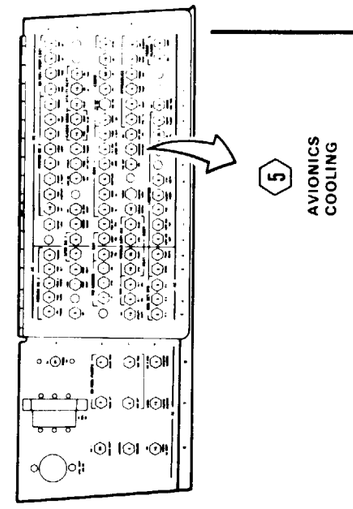
Materials:
None

Personnel Required:
68F20 Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off
Electronic Compartment Acoustic Blanket Removed





NO. 2 POWER DISTRIBUTION PANEL (PDP) VIEW LOOKING AFT

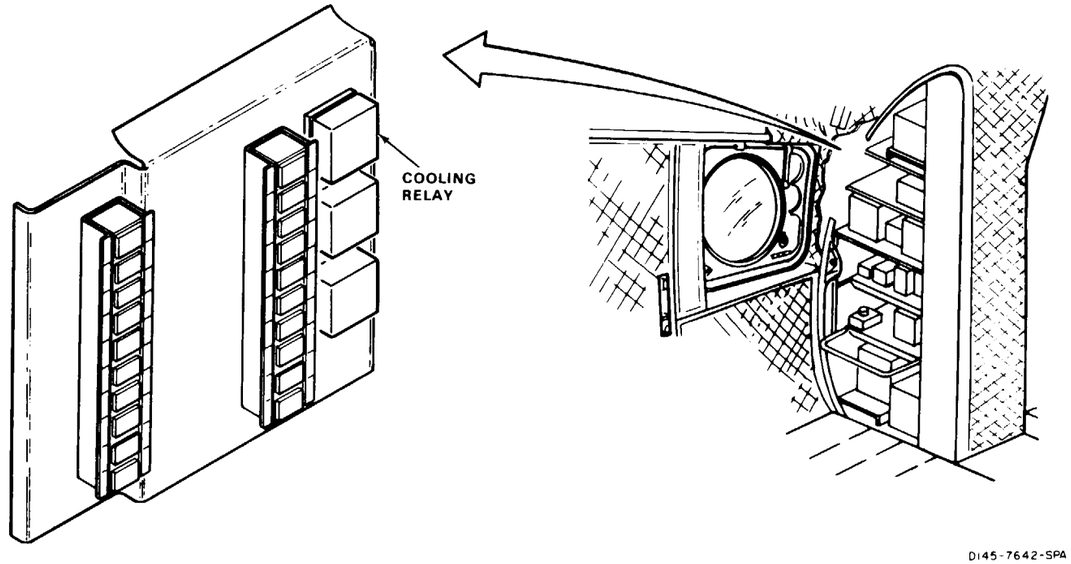
UNPLUG COOLING RELAY AND CHECK FOR GROUND AT TERMINAL X1 OF RELAY SOCKET. IS GROUND PRESENT ON TERMINAL X1?

YES

LOCATE GROUND FAULT ON WIRE W645-383-20 OR W552-245-20 BETWEEN RELAY SOCKET AND AVIONIC COOLER CB084CB2. REPAIR OR REPLACE WIRE AS REQUIRED.

NO

REPLACE COOLING RELAY



45x54

D145-7642-SPA

END OF TASK

9-19.5 AVIONIC COOLING AC CIRCUIT BREAKER WILL NOT STAY CLOSED

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

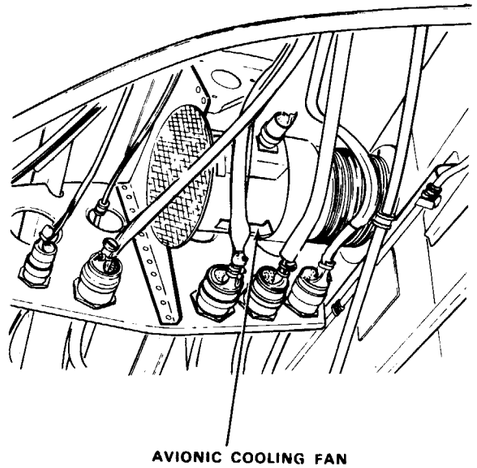
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter
Wood Dowel, 1-Inch X 16-Inches

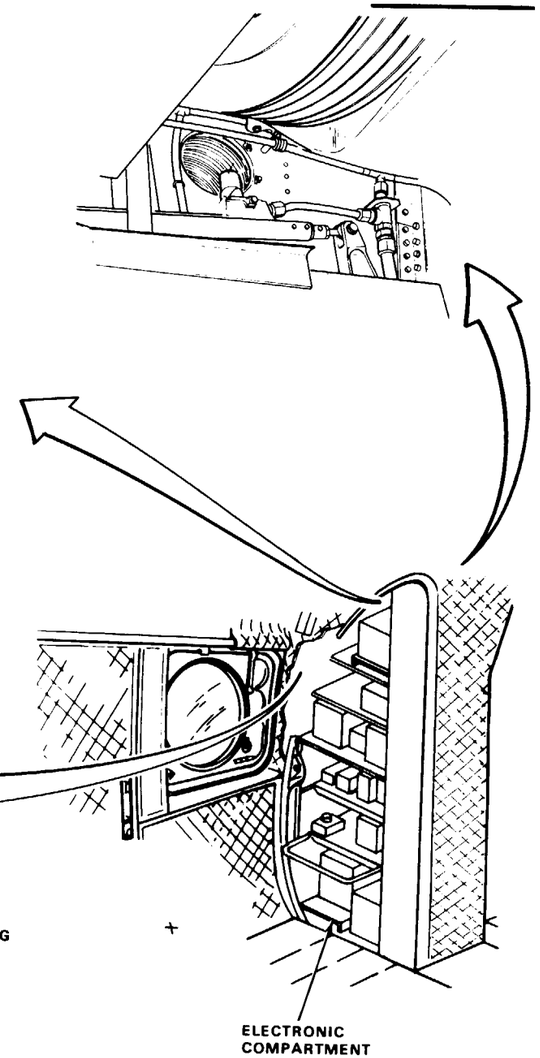
Materials:
None

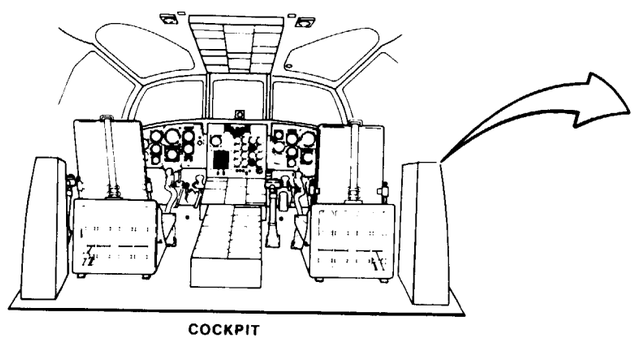
Personnel Required:
68F20 Aircraft Electrician

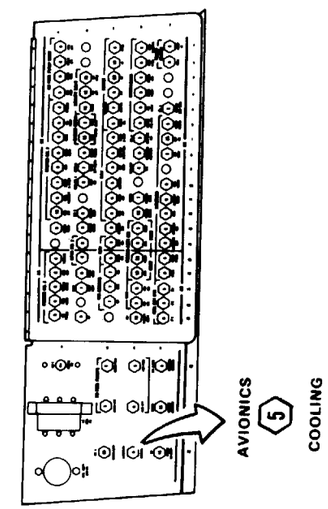
References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off









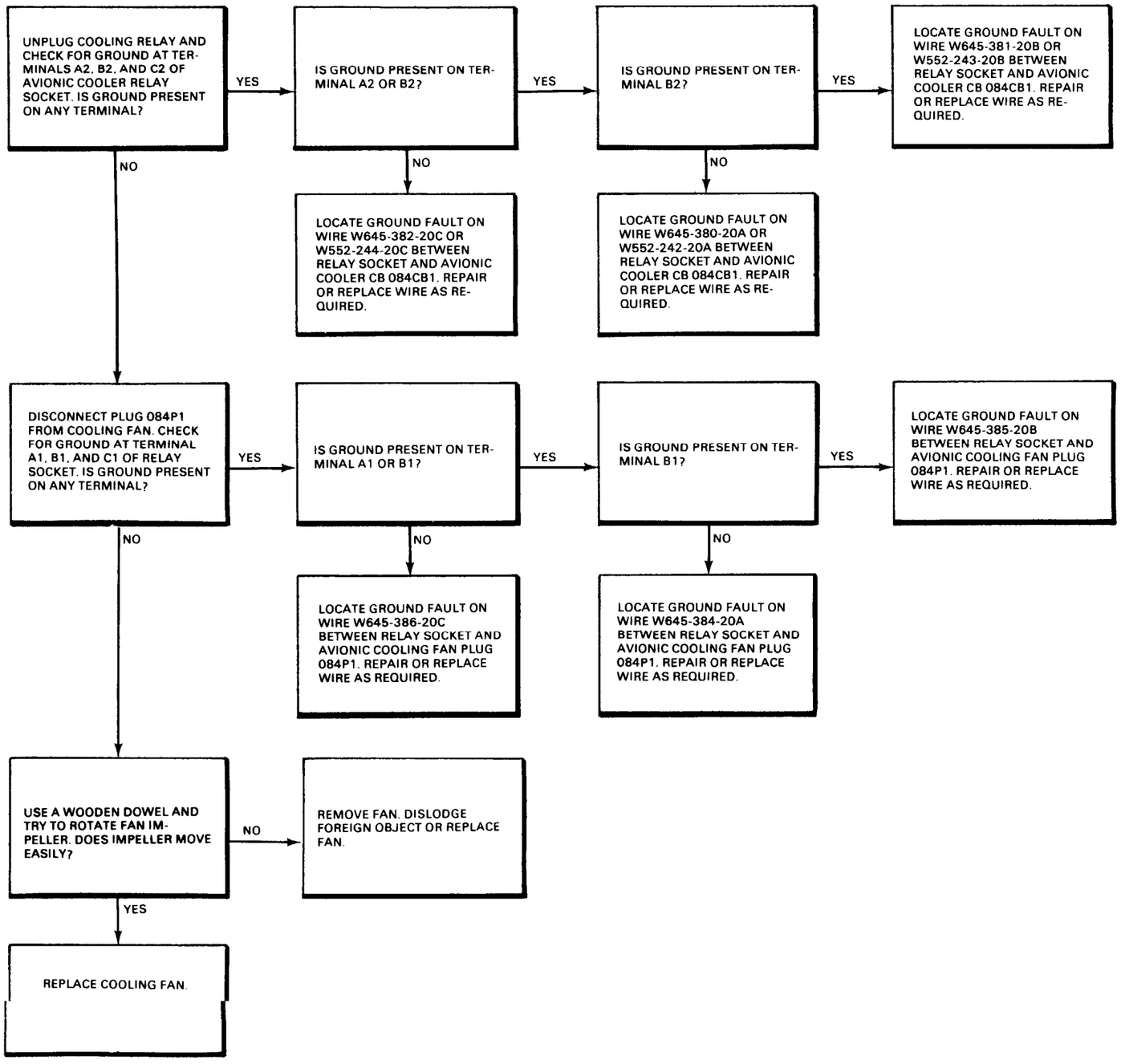
NO. 2 POWER DISTRIBUTION PANEL (PDP) VIEW LOOKING AFT

90x54

D145-7643-SPA

GO TO NEXT PAGE

9-19.5 AVIONIC COOLING FAN AC CIRCUIT BREAKER WILL NOT STAY CLOSED (Continued)



END OF TASK

9-19.6 WEAK OR NO AIR FLOW IS FELT FROM AVIONIC COOLING FAN

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

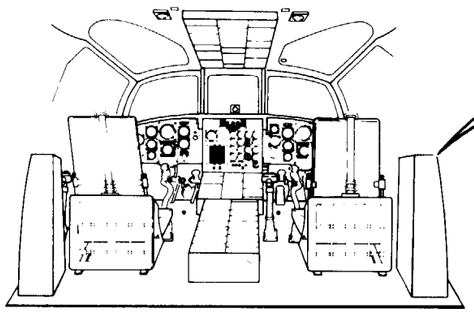
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

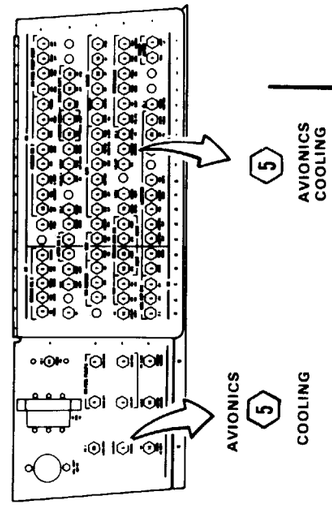
Material:
None

Personnel Required:
68F20 Aircraft Electrician

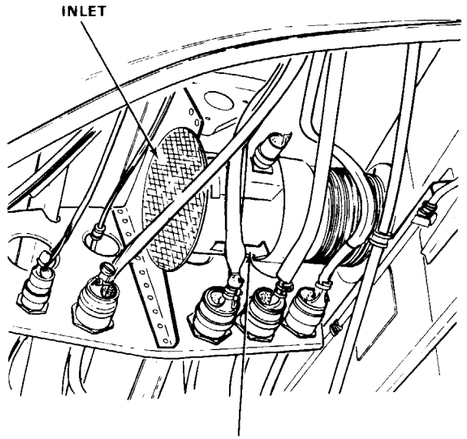
References:
TM 55-1520-240-23

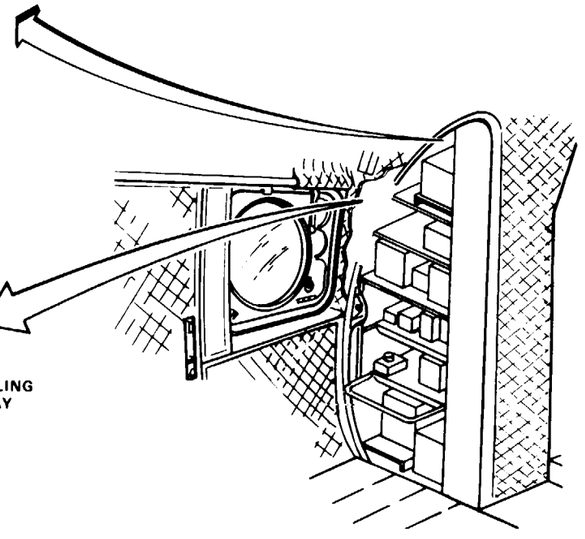
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off
Electronic Compartment Acoustic Blanket Removed

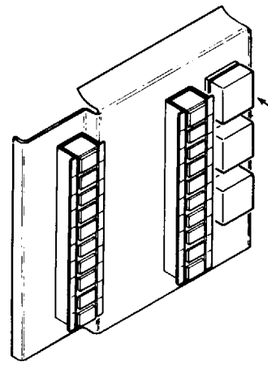




NO. 2 POWER DISTRIBUTION PANEL (PDP) VIEW LOOKING AFT



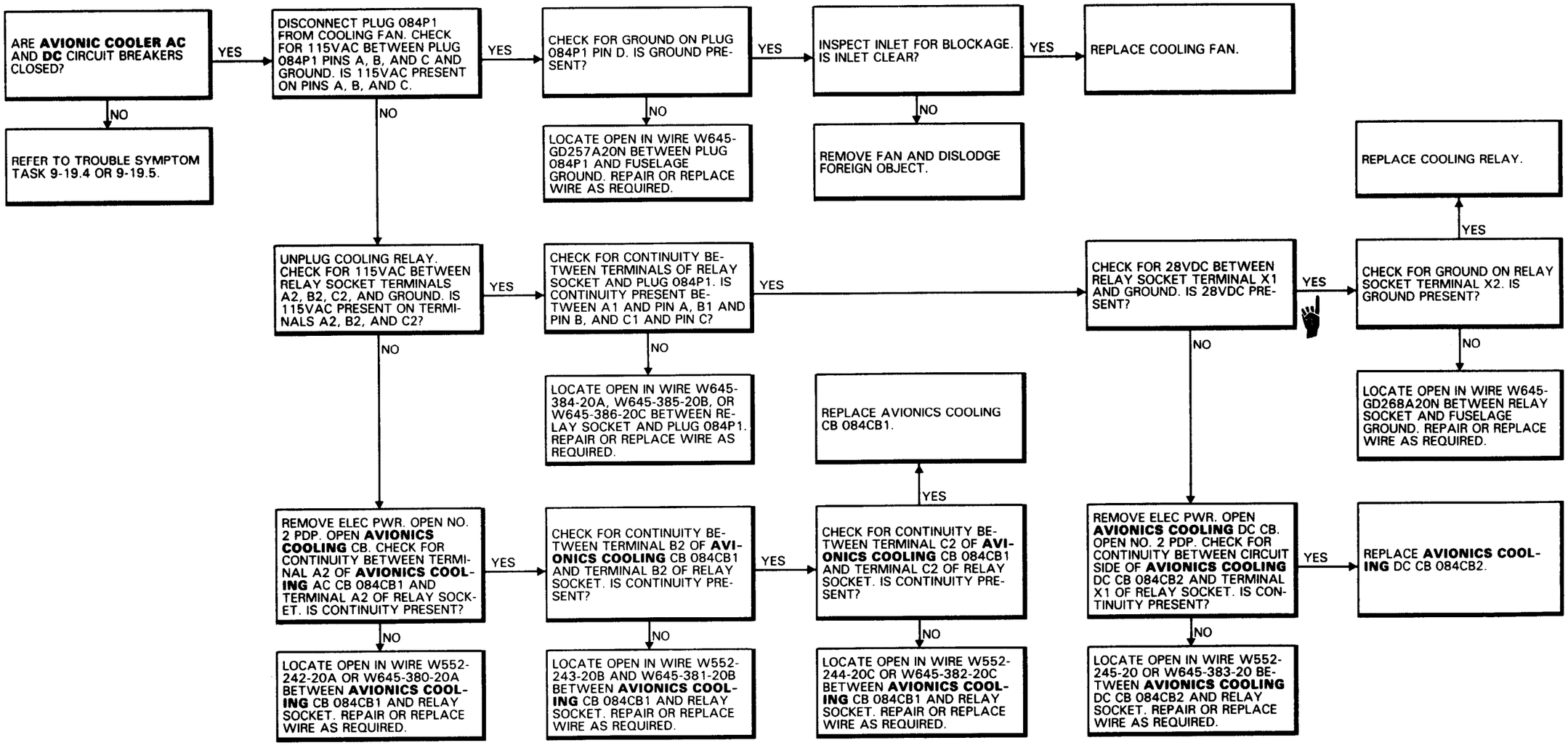




45x54

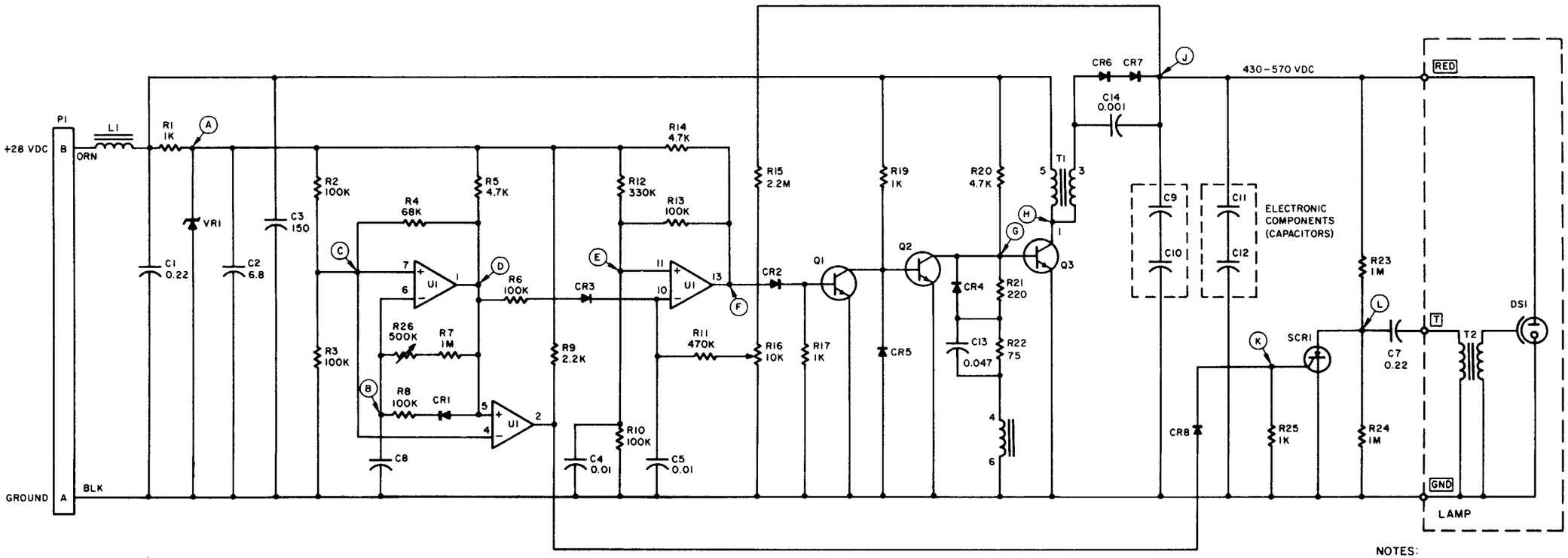
D145-7644-SPA

GO TO NEXT PAGE


ARE **AVIONIC COOLER AC** AND **DC** CIRCUIT BREAKERS CLOSED?
YES
NO
REFER TO TROUBLE SYMPTOM TASK 9-19.4 OR 9-19.5.
DISCONNECT PLUG 084P1 FROM COOLING FAN. CHECK FOR 115VAC BETWEEN PLUG 084P1 PINS A, B, AND C AND GROUND. IS 115VAC PRESENT ON PINS A, B, AND C.
YES
NO
CHECK FOR GROUND ON PLUG 084P1 PIN D. IS GROUND PRESENT?
YES
NO
LOCATE OPEN IN WIRE W645-GD257A20N BETWEEN PLUG 084P1 AND FUSELAGE GROUND. REPAIR OR REPLACE WIRE AS REQUIRED.
INSPECT INLET FOR BLOCKAGE. IS INLET CLEAR?
YES
NO
REMOVE FAN AND DISLODGE FOREIGN OBJECT.
REPLACE COOLING FAN.
UNPLUG COOLING RELAY. CHECK FOR 115VAC BETWEEN RELAY SOCKET TERMINALS A2, B2, C2, AND GROUND. IS 115VAC PRESENT ON TERMINALS A2, B2, AND C2?
YES
NO
CHECK FOR CONTINUITY BETWEEN TERMINALS OF RELAY SOCKET AND PLUG 084P1. IS CONTINUITY PRESENT BETWEEN A1 AND PIN A, B1 AND PIN B, AND C1 AND PIN C?
YES
NO
LOCATE OPEN IN WIRE W645-384-20A, W645-385-20B, OR W645-386-20C BETWEEN RELAY SOCKET AND PLUG 084P1. REPAIR OR REPLACE WIRE AS REQUIRED.
CHECK FOR 28VDC BETWEEN RELAY SOCKET TERMINAL X1 AND GROUND. IS 28VDC PRESENT?
YES
NO
CHECK FOR GROUND ON RELAY SOCKET TERMINAL X2. IS GROUND PRESENT?
YES
NO
REPLACE COOLING RELAY.
LOCATE OPEN IN WIRE W645-GD268A20N BETWEEN RELAY SOCKET AND FUSELAGE GROUND. REPAIR OR REPLACE WIRE AS REQUIRED.
REMOVE ELEC PWR. OPEN NO. 2 PDP. OPEN **AVIONICS COOLING** CB. CHECK FOR CONTINUITY BETWEEN TERMINAL A2 OF **AVIONICS COOLING** AC CB 084CB1 AND TERMINAL A2 OF RELAY SOCKET. IS CONTINUITY PRESENT?
YES
NO
LOCATE OPEN IN WIRE W552-242-20A OR W645-380-20A BETWEEN **AVIONICS COOLING** CB 084CB1 AND RELAY SOCKET. REPAIR OR REPLACE WIRE AS REQUIRED.
CHECK FOR CONTINUITY BETWEEN TERMINAL B2 OF **AVIONICS COOLING** CB 084CB1 AND TERMINAL B2 OF RELAY SOCKET. IS CONTINUITY PRESENT?
YES
NO
LOCATE OPEN IN WIRE W552-243-20B AND W645-381-20B BETWEEN **AVIONICS COOLING** CB 084CB1 AND RELAY SOCKET. REPAIR OR REPLACE WIRE AS REQUIRED.
REPLACE AVIONICS COOLING CB 084CB1.
YES
CHECK FOR CONTINUITY BETWEEN TERMINAL C2 OF **AVIONICS COOLING** CB 084CB1 AND TERMINAL C2 OF RELAY SOCKET. IS CONTINUITY PRESENT?
NO
LOCATE OPEN IN WIRE W552-244-20C OR W645-382-20C BETWEEN **AVIONICS COOLING** CB 084CB1 AND RELAY SOCKET. REPAIR OR REPLACE WIRE AS REQUIRED.
REMOVE ELEC PWR. OPEN **AVIONICS COOLING** DC CB. OPEN NO. 2 PDP. CHECK FOR CONTINUITY BETWEEN CIRCUIT SIDE OF **AVIONICS COOLING** DC CB 084CB2 AND TERMINAL X1 OF RELAY SOCKET. IS CONTINUITY PRESENT?
YES
NO
LOCATE OPEN IN WIRE W552-245-20 OR W645-383-20 BETWEEN **AVIONICS COOLING** DC CB 084CB2 AND RELAY SOCKET. REPAIR OR REPLACE WIRE AS REQUIRED.
REPLACE **AVIONICS COOLING** DC CB 084CB2.

END OF TASK

9-20 ANTICOLLISION LIGHT (AVIM)



NOTES:

1. CIRCLED LETTERS ARE TEST POINT (TP) LOCATIONS.
2. ALL RESISTOR VALUES ARE IN OHMS UNLESS OTHERWISE NOTED.
3. ALL CAPACITANCE VALUES ARE IN MICROFARADS.

90 x 54

0145-12577-SPA

9-20.2 ANTICOLLISION LIGHT (AVIM) VISUAL CHECK

INITIAL SETUP

Applicable Configurations:
All

Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915

Materials:
None

Personnel Required:
68F10 Aircraft Electrician

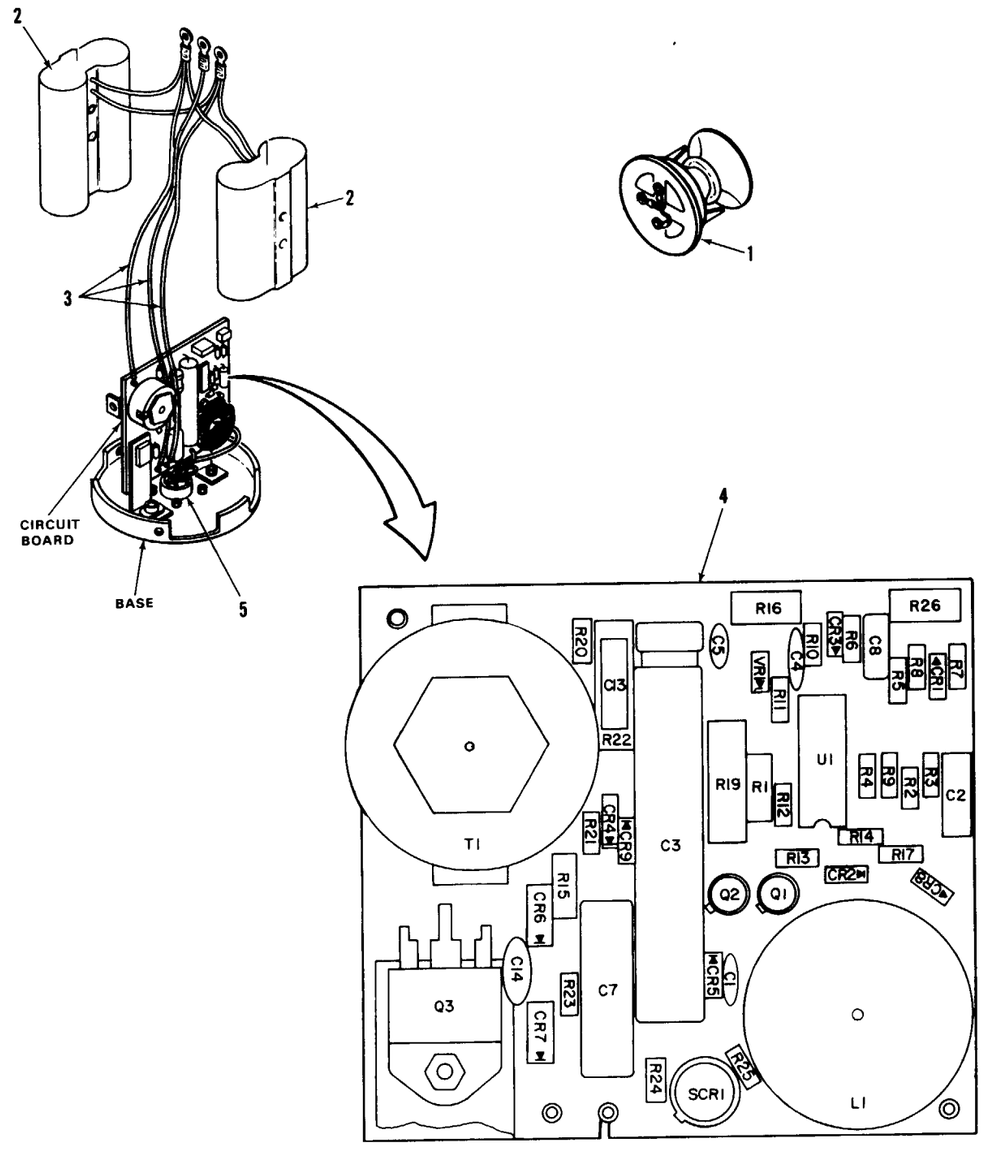
References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Anticollision Light Disassembled Down to Base with Circuit Board Attached

TASK	RESULT
1. **Check lamp (1).**	If lamp (1) is broken, discolored, or damaged, replace it.
2. **Check two electronic components (capacitors) (2).**	If a capacitor (2) is leaking or damaged, or its wiring is damaged, replace it.
3. **Check three wires (3).**	If any wire (3) is damaged, replace it.
4. **Check circuit board (4).**	If **circuit board (4)** or any component on board (4) is loose, burnt, leaking, cracked, or damaged, repair or replace it as required.
5. **Check receptacle (5).**	If receptacle (5) is damaged, replace it. If wiring to receptacle(s) is damaged, replace it.

FOLLOW-ON MAINTENANCE:

TM 55-1520-240-23:
Lamp Connected to Tagged Wires.



45 X 54

D145-12578-SPA

END OF TASK

9-20.3 ANTICOLLISION LIGHT FAILS AVIM TEST

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
All

Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter
Power Supply 0-50 VDC
Oscilloscope

Materials:
None

Personnel Required:
68F20 Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
Anticollision Light (AVIM) Visual Check Performed (Task 9-20.2)

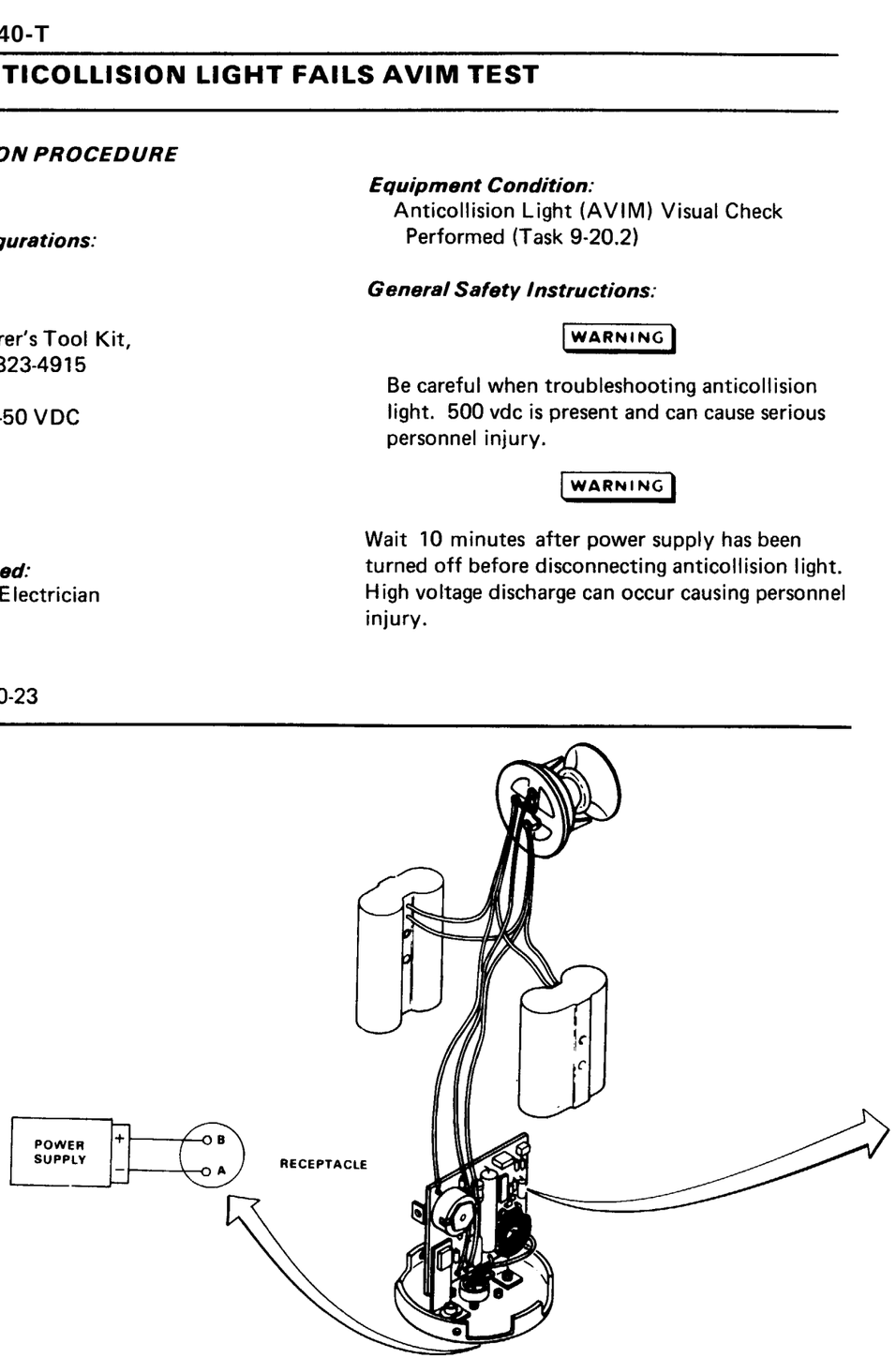
General Safety Instructions:

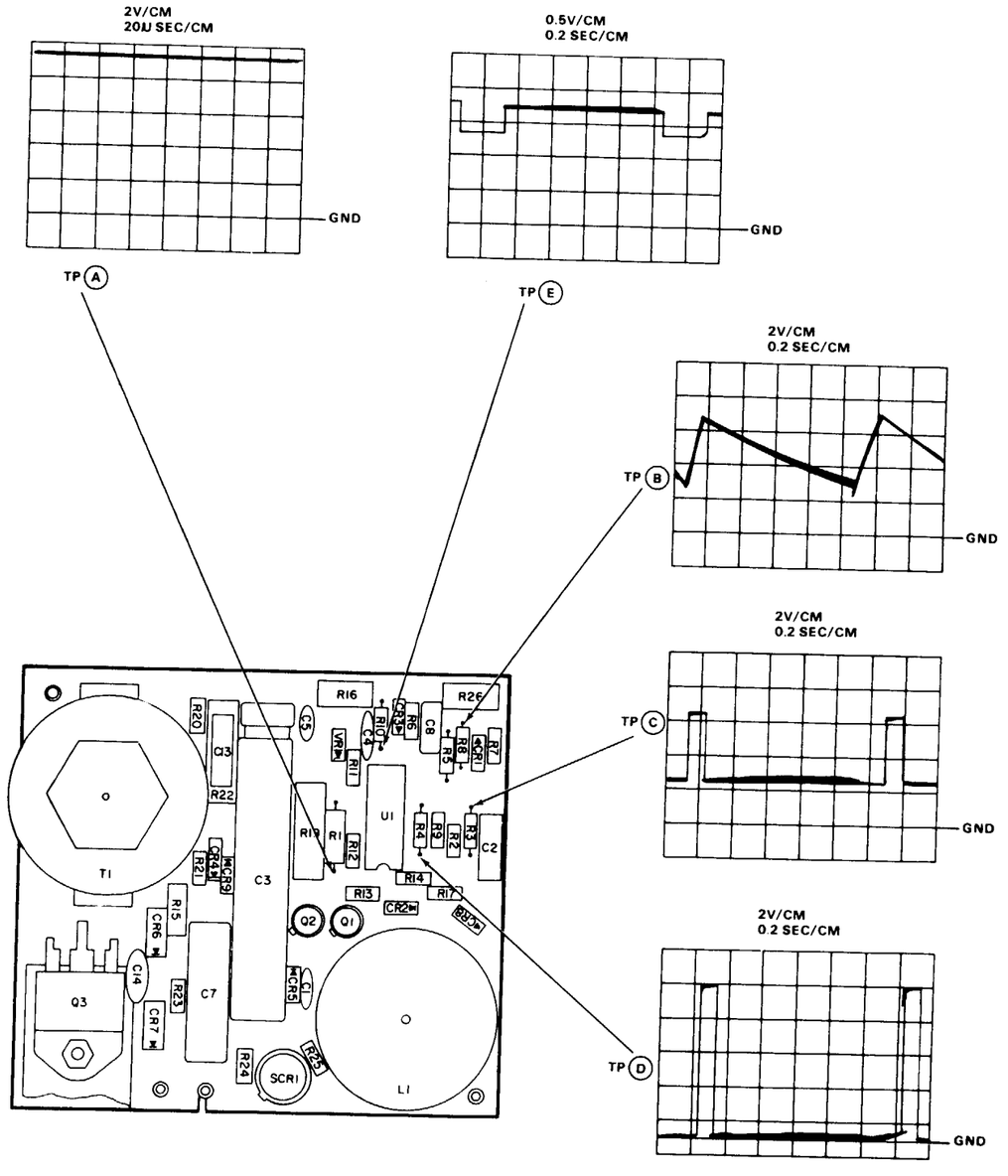
WARNING

Be careful when troubleshooting anticollision light. 500 vdc is present and can cause serious personnel injury.

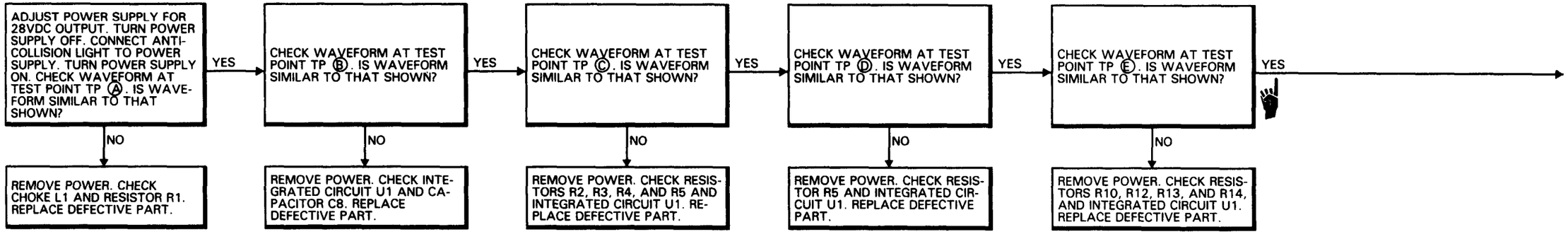
WARNING

Wait 10 minutes after power supply has been turned off before disconnecting anticollision light. High voltage discharge can occur causing personnel injury.



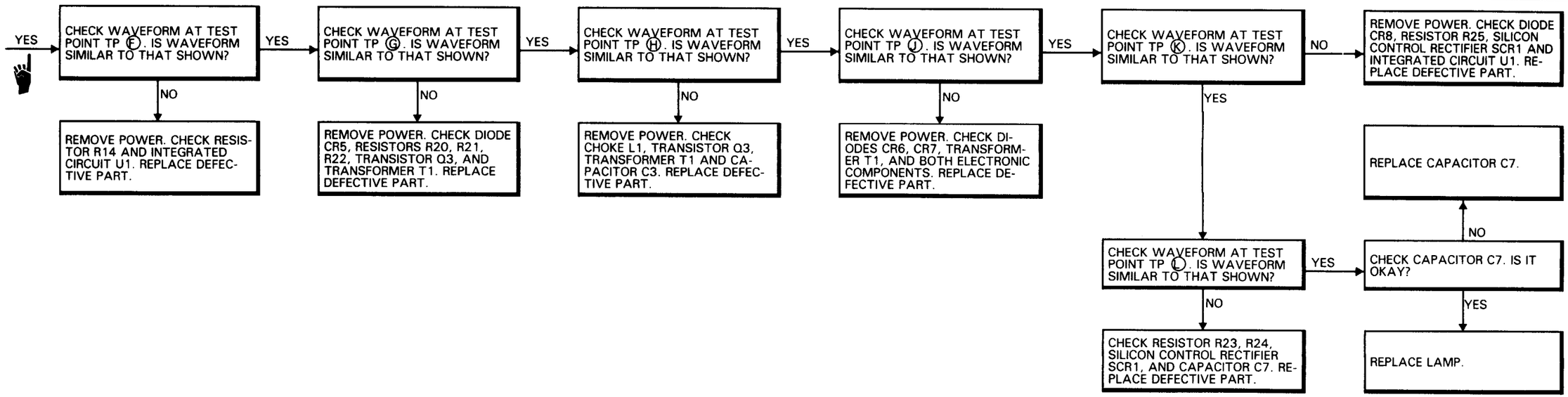


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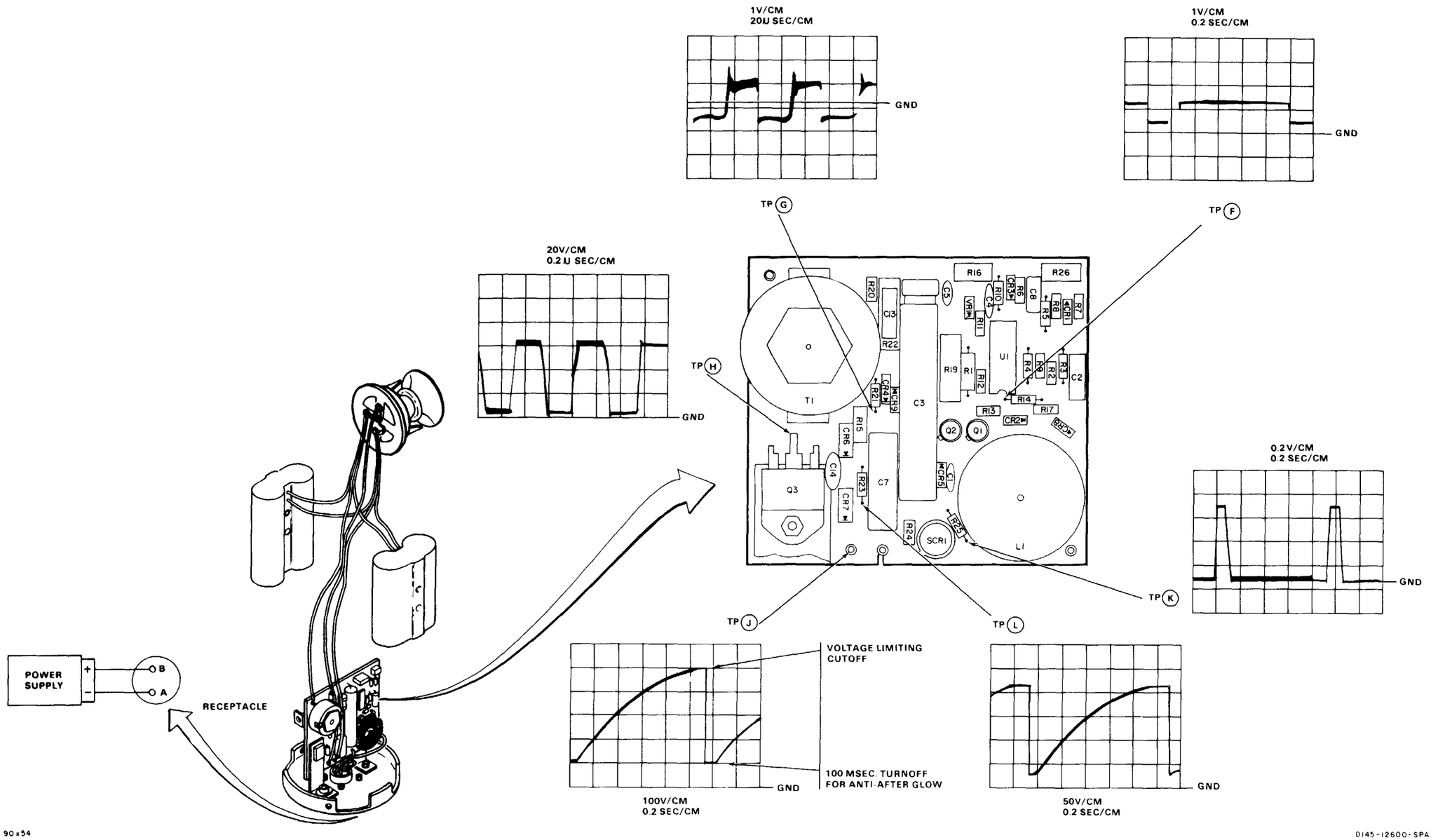
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9-20.3 ANTICOLLISION LIGHT FAILS AVIM TEST (Continued)



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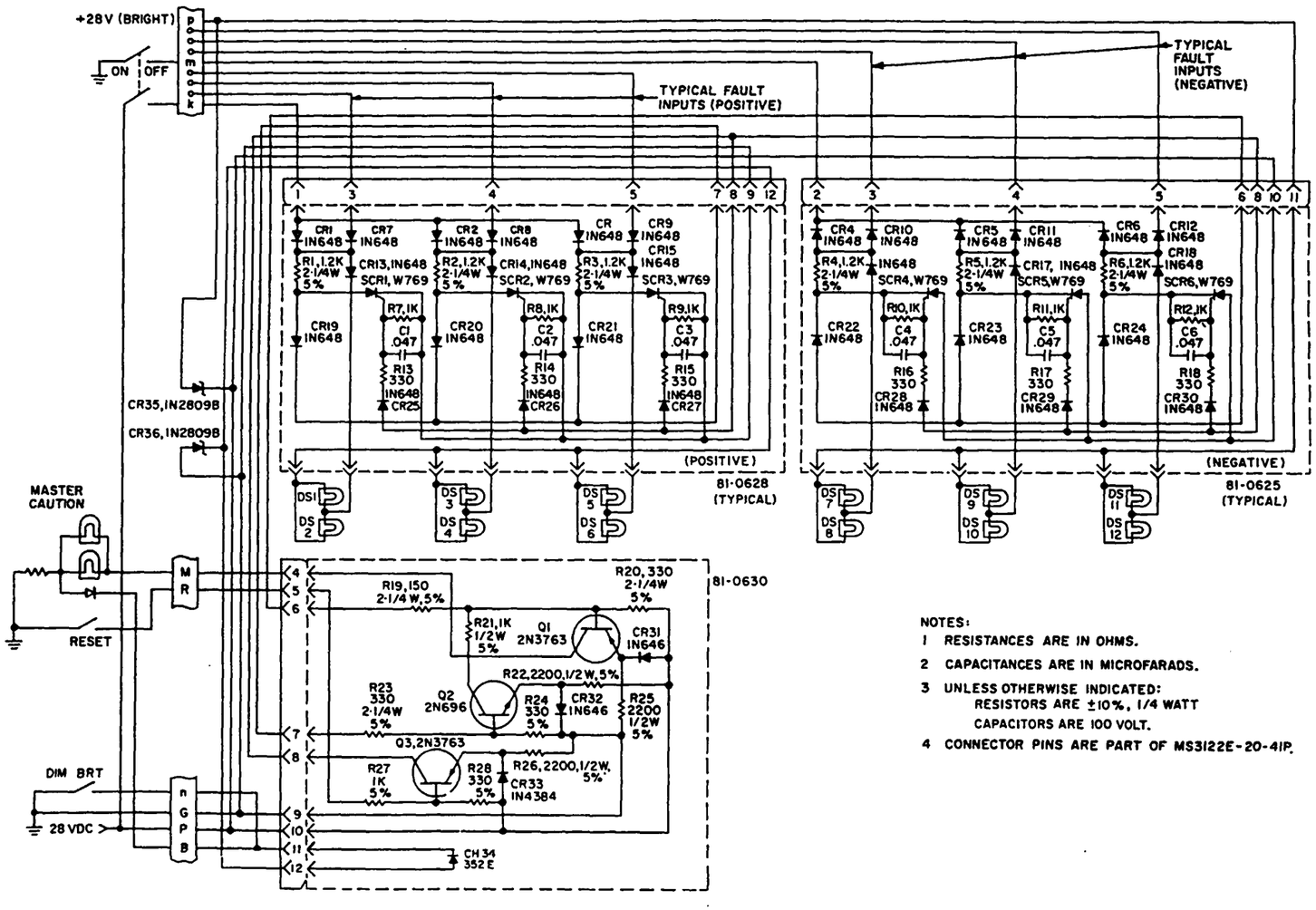
9-20.3 ANTICOLLISION LIGHT FAILS AVIM TEST (Continued)



END OF TASK

9-21 MASTER CAUTION PANEL
(AVIM)

WITHOUT 74



NOTES:

1 RESISTANCES ARE IN OHMS.

2 CAPACITANCES ARE IN MICROFARADS.

3 UNLESS OTHERWISE INDICATED:
RESISTORS ARE ±10%, 1/4 WATT
CAPACITORS ARE 100 VOLT.

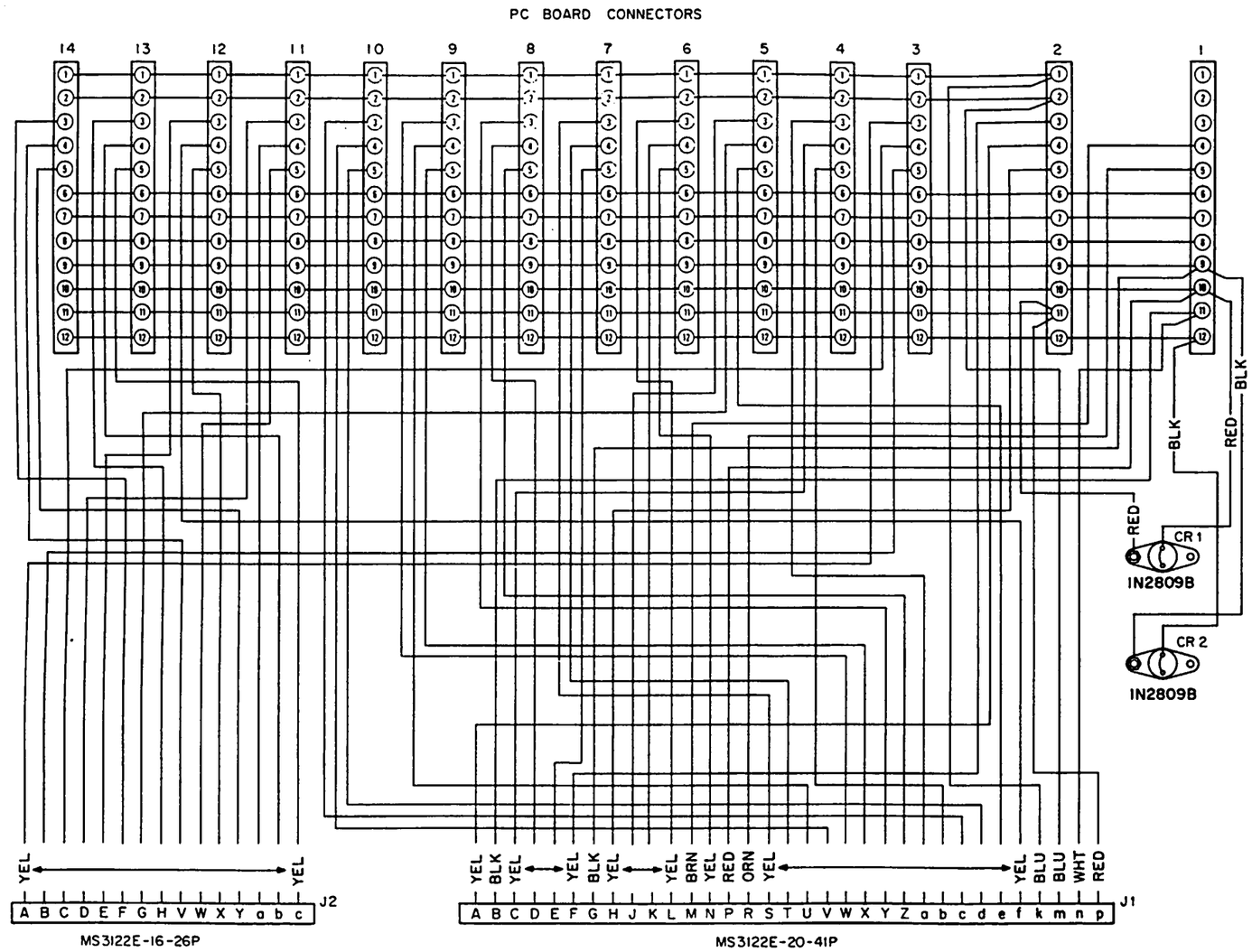
4 CONNECTOR PINS ARE PART OF MS3122E-20-41P.

90:54

D145-12650-SPA

END OF TASK

WITHOUT 74



90x54

D145-12651-SPA

END OF TASK

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
Without 74

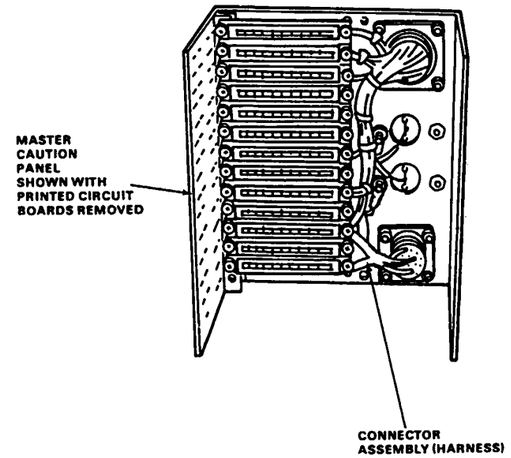
Tools:
Electrical Repairer's Tool Kit, NSN 5180-00-323-4915
Multimeter

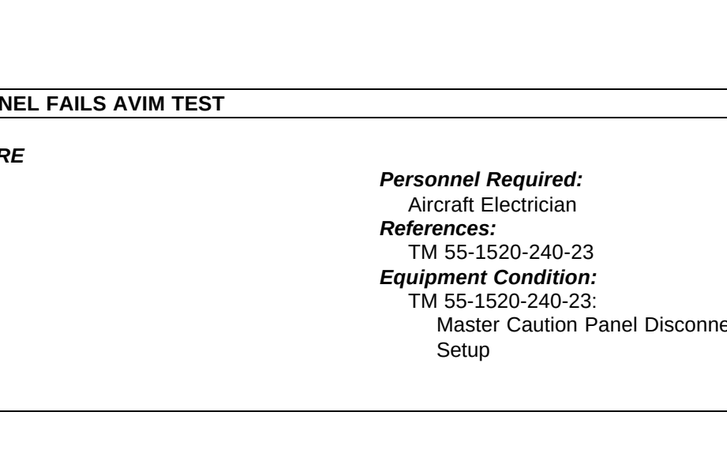
Materials:
None

Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Master Caution Panel Disconnected from Test Setup



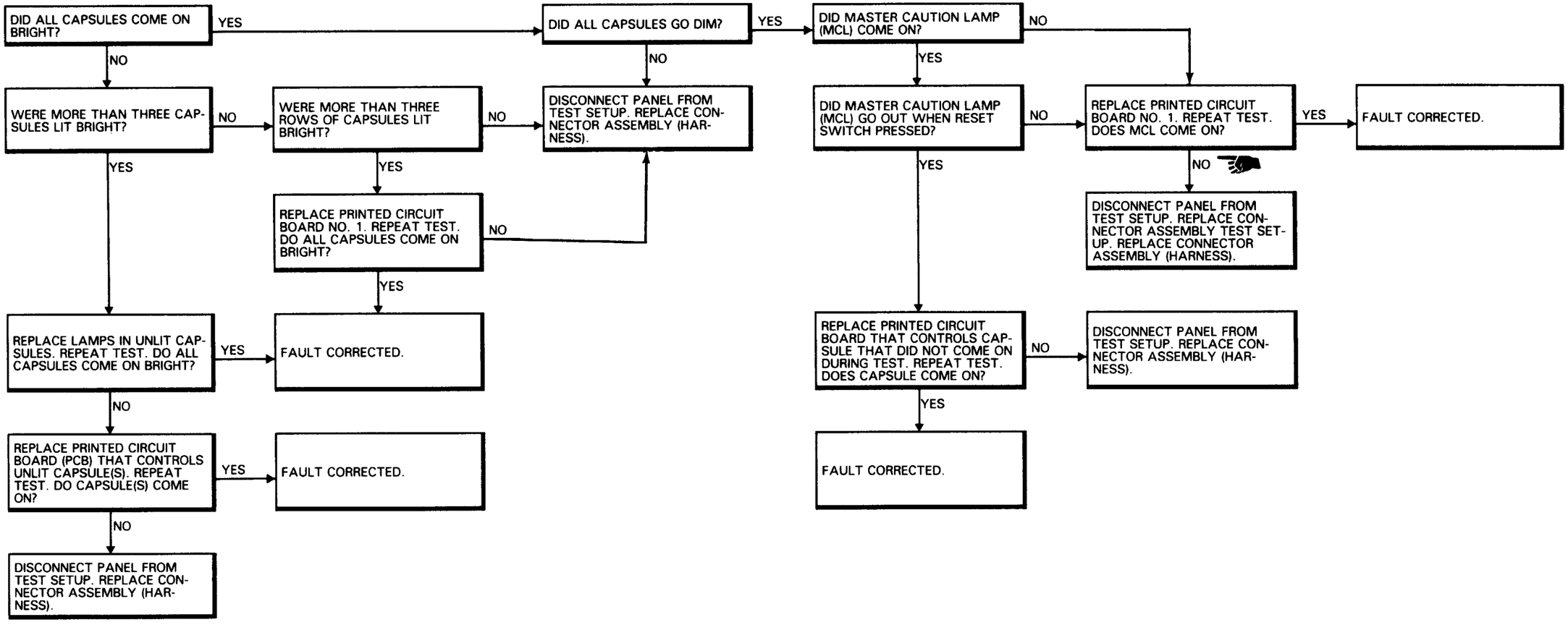


MASTER CAUTION PANEL CAPSULE LEGENDS

90454

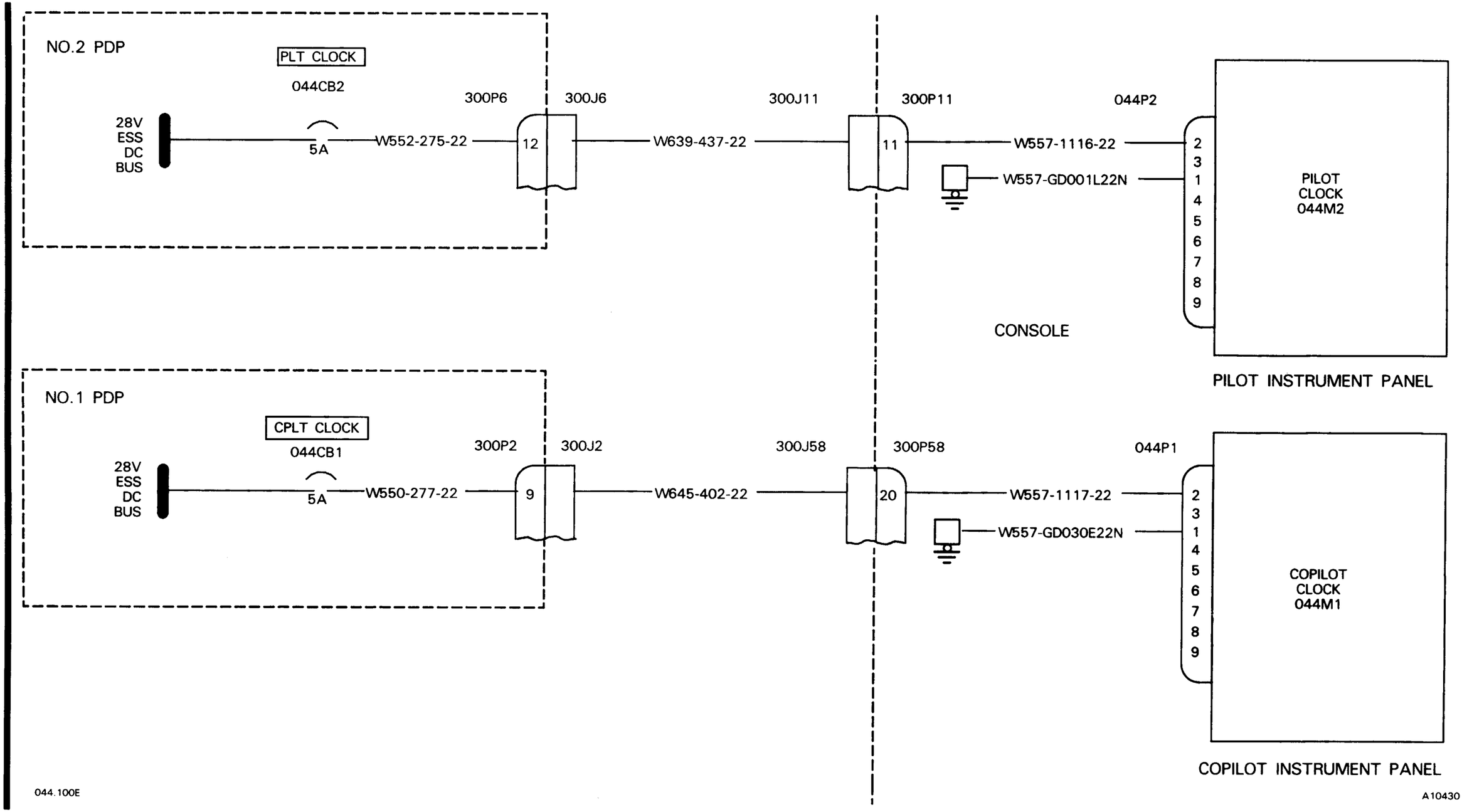
D145-12665-SP4

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DID ALL CAPSULES COME ON BRIGHT?
YES
NO
DID ALL CAPSULES GO DIM?
YES
NO
DID MASTER CAUTION LAMP (MCL) COME ON?
NO
YES
WERE MORE THAN THREE CAPSULES LIT BRIGHT?
NO
WERE MORE THAN THREE ROWS OF CAPSULES LIT BRIGHT?
NO
DISCONNECT PANEL FROM TEST SETUP. REPLACE CONNECTOR ASSEMBLY (HARNESS).
YES
REPLACE PRINTED CIRCUIT BOARD NO. 1. REPEAT TEST. DO ALL CAPSULES COME ON BRIGHT?
NO
YES
DID MASTER CAUTION LAMP (MCL) GO OUT WHEN RESET SWITCH PRESSED?
NO
REPLACE PRINTED CIRCUIT BOARD NO. 1. REPEAT TEST. DOES MCL COME ON?
YES
FAULT CORRECTED.
NO
DISCONNECT PANEL FROM TEST SETUP. REPLACE CONNECTOR ASSEMBLY TEST SETUP. REPLACE CONNECTOR ASSEMBLY (HARNESS).
YES
REPLACE LAMPS IN UNLIT CAPSULES. REPEAT TEST. DO ALL CAPSULES COME ON BRIGHT?
YES
FAULT CORRECTED.
NO
REPLACE PRINTED CIRCUIT BOARD THAT CONTROLS CAPSULE THAT DID NOT COME ON DURING TEST. REPEAT TEST. DOES CAPSULE COME ON?
NO
DISCONNECT PANEL FROM TEST SETUP. REPLACE CONNECTOR ASSEMBLY (HARNESS).
YES
REPLACE PRINTED CIRCUIT BOARD (PCB) THAT CONTROLS UNLIT CAPSULE(S). REPEAT TEST. DO CAPSULE(S) COME ON?
YES
FAULT CORRECTED.
NO
FAULT CORRECTED.
NO
DISCONNECT PANEL FROM TEST SETUP. REPLACE CONNECTOR ASSEMBLY (HARNESS).

END OF TASK

9-22 CLOCK


NO.2 PDP
PLT CLOCK
044CB2
28V ESS DC BUS
5A
W552-275-22
300P6
12
300J6
W639-437-22
300J11
11
300P11
W557-1116-22
W557-GD001L22N
044P2
2 3 1 4 5 6 7 8 9
PILOT CLOCK 044M2
CONSOLE
PILOT INSTRUMENT PANEL
NO.1 PDP
CPLT CLOCK
044CB1
28V ESS DC BUS
5A
W550-277-22
300P2
9
300J2
W645-402-22
300J58
20
300P58
W557-1117-22
W557-GD030E22N
044P1
2 3 1 4 5 6 7 8 9
COPILOT CLOCK 044M1
COPILOT INSTRUMENT PANEL
044.100E
A10430

9-22.2 CLOCK VISUAL CHECK

INITIAL SETUP

Applicable Configurations:
With 17

Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915

Materials:
None

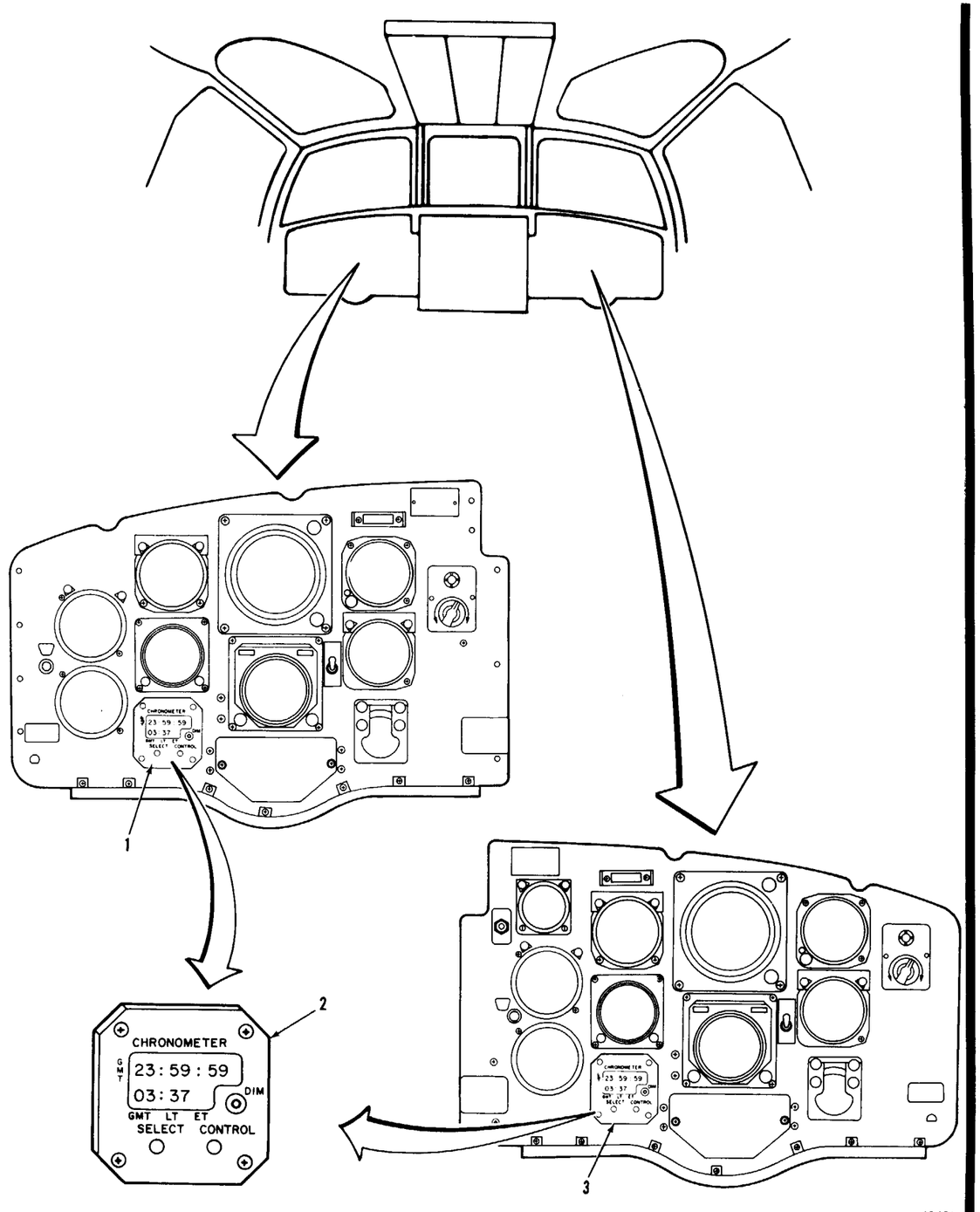
Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off

TASK	RESULT
1. **Check copilot's clock (1).**	If clock (1) is loose or panel (2) is damaged, tighten or replace clock as required.
2. **Check pilot's clock (3).**	If clock (3) is loose or panel (2) is damaged, tighten or replace clock as required.

FOLLOW-ON MAINTENANCE:
TM 55-1520-240-23:
None



10431

END OF TASK

9-22.3 CLOCK OPERATIONAL CHECK

INITIAL SETUP

Applicable Configurations:
With 17

Tools:
None

Materials:
None

Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23
TM 55-1520-240-10

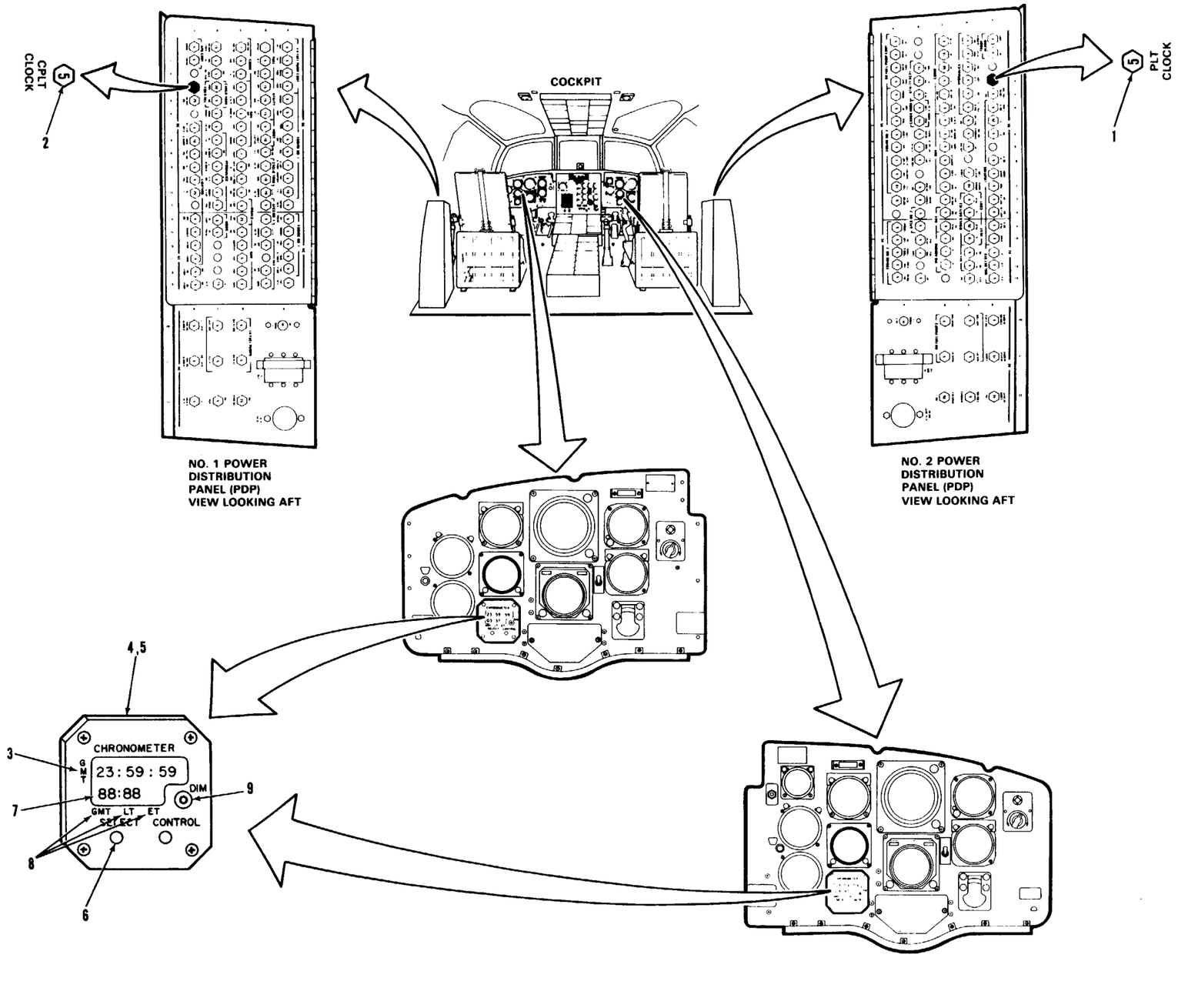
Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off
Visual Check of Clock Performed (Task 9-22.2)

TASK	RESULT
1. **Check that PLT CLOCK circuit breaker (1)** is closed.	If PLT CLOCK circuit breaker (1) is open, close it. If it opens again, go to task 9-22.4.
2. **Check that CPLT CLOCK circuit breaker (2)** is closed.	If CPLT CLOCK circuit breaker (2) is open, close it. If it opens again, go to task 9-22.5.
3. **Check GMT display (3) on pilot and co-pilot clocks (4) and (5).**	GMT display (3) shall indicate greenwich mean time. If display is blank, replace battery on back of clock and set clock. Refer to TM 55-1520-240-20 for setting instructions.
4. Press and hold SELECT button (6) on pilot's clock (4) for three seconds.	Clock display (7) shall indicate 88:88 and annunciators (8) shall light. If display does not indicate 88:88 and annunciators are not lit, go to task 9-22.6.
5. **Rotate DIM control (9) on pilot's clock (4).**	**Clock display brightness shall vary. If it does not, replace pilot's clock.**
6. Press and hold SELECT button (6) on copilot's clock (5) for three seconds.	Clock display (7) shall indicate 88:88 and annunciators (8) shall light. If display does not indicate 88:88 and annunciators are not lit, go to task 9-22.7.
7. **Rotate DIM control (9) on copilot's clock (5).**	Clock display brightness shall vary. If it does not, replace copilot's clock.

FOLLOW-ON MAINTENANCE:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off

GO TO NEXT PAGE

9-22.3 CLOCK OPERATIONAL CHECK (Continued)



10432

9-22.4 PILOT CLOCK CIRCUIT BREAKER DOES NOT STAY CLOSED

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
With 17

Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:
None

Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

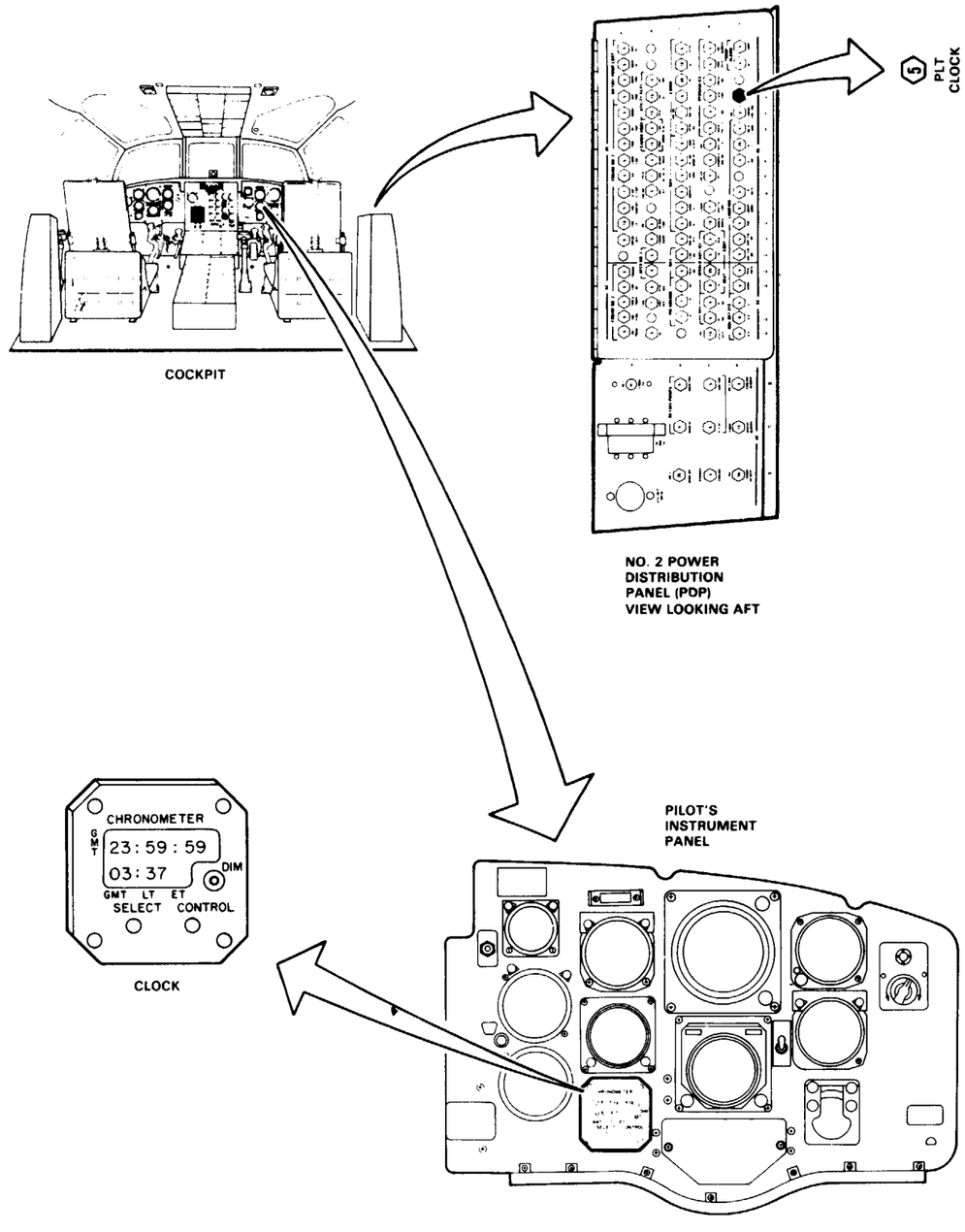
Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off

OPEN **PLT CLOCK** CB. REMOVE PILOT'S CLOCK AND DISCONNECT PLUG 044P2. CHECK FOR GROUND ON PLUG 044P2 PIN 2. IS GROUND PRESENT?

NO → REPLACE PILOT'S CLOCK.

YES ↓

LOCATE GROUND FAULT ON WIRE W557-1116-22, W639-437-22, OR W552-275-22 BETWEEN PLUG 044P2 AND **PLT CLOCK** CB 044CB2. REPAIR OR REPLACE WIRE AS REQUIRED.



END OF TASK

9-22.5 COPILOT CLOCK CIRCUIT BREAKER DOES NOT STAY CLOSED

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
With 17

Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:
None

Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

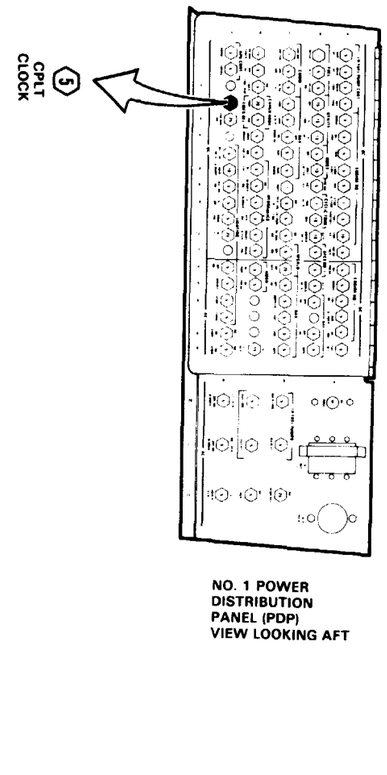
Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off

OPEN **CPLT CLOCK** CB. REMOVE COPILOT'S CLOCK AND DISCONNECT PLUG 044P1. CHECK FOR GROUND ON PLUG 044P1 PIN 2. IS GROUND PRESENT?

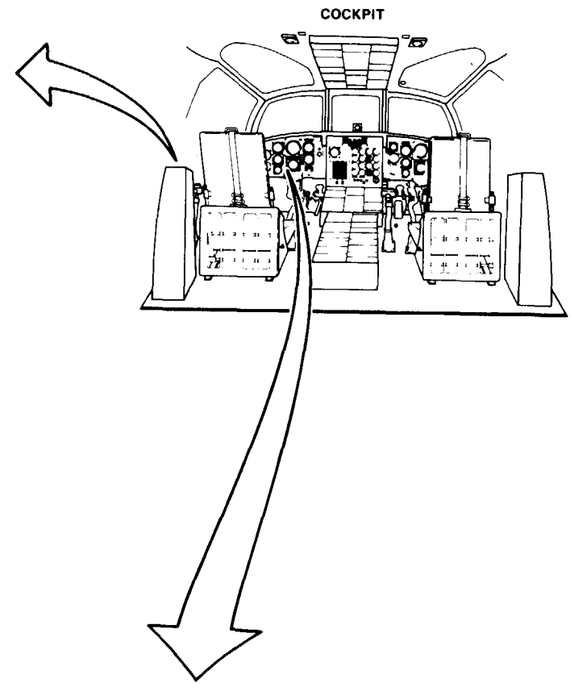
NO → REPLACE COPILOT'S CLOCK.

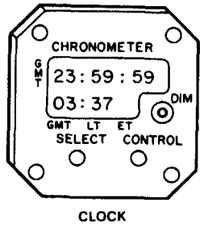
YES ↓

LOCATE GROUND FAULT ON WIRE W557-1112-22, W645-402-22, OR W550-277-22 BETWEEN PLUG 044P1 AND **CPLT CLOCK** CB 044CB2. REPAIR OR REPLACE WIRE AS REQUIRED.

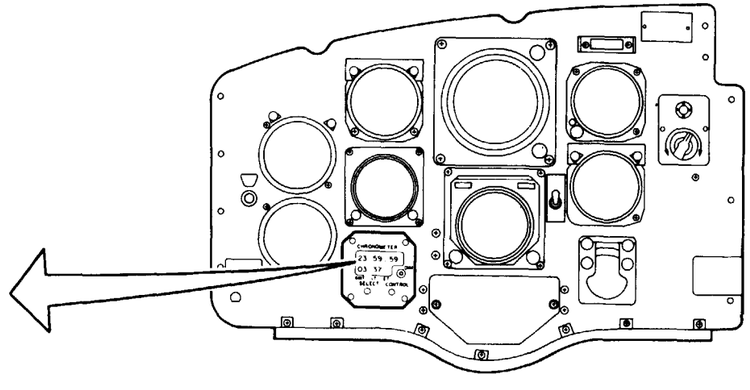


NO. 1 POWER DISTRIBUTION PANEL (PDP) VIEW LOOKING AFT





CLOCK



COPILOT'S INSTRUMENT PANEL

10434

END OF TASK

9-22.6 PILOT'S CLOCK DISPLAY DOES NOT INDICATE 88:88 WHEN SELECT BUTTON PRESSED 9-22.6

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
With 17

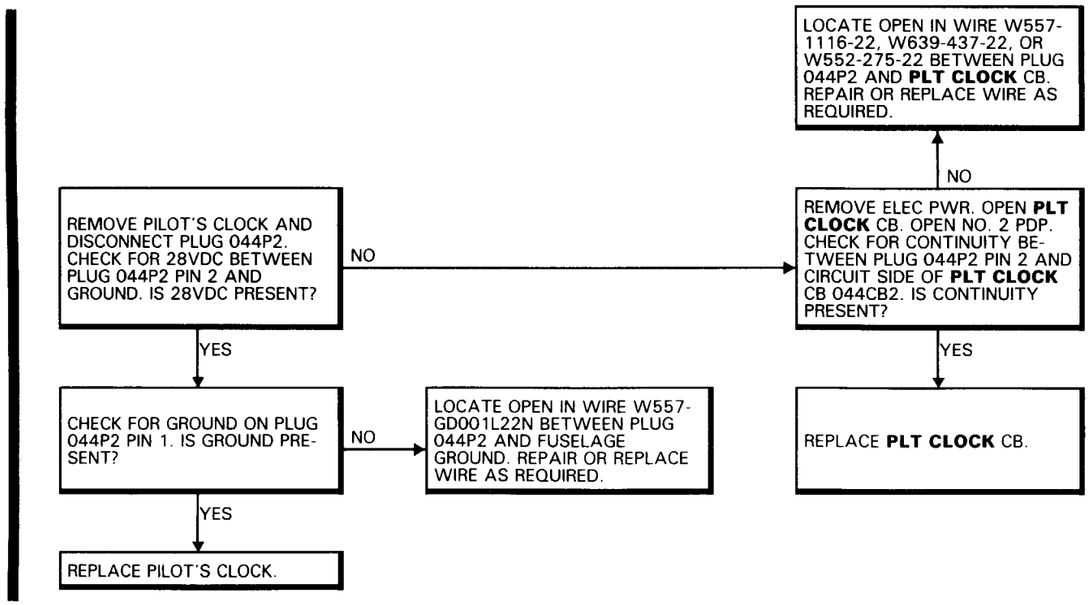
Tools:
Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

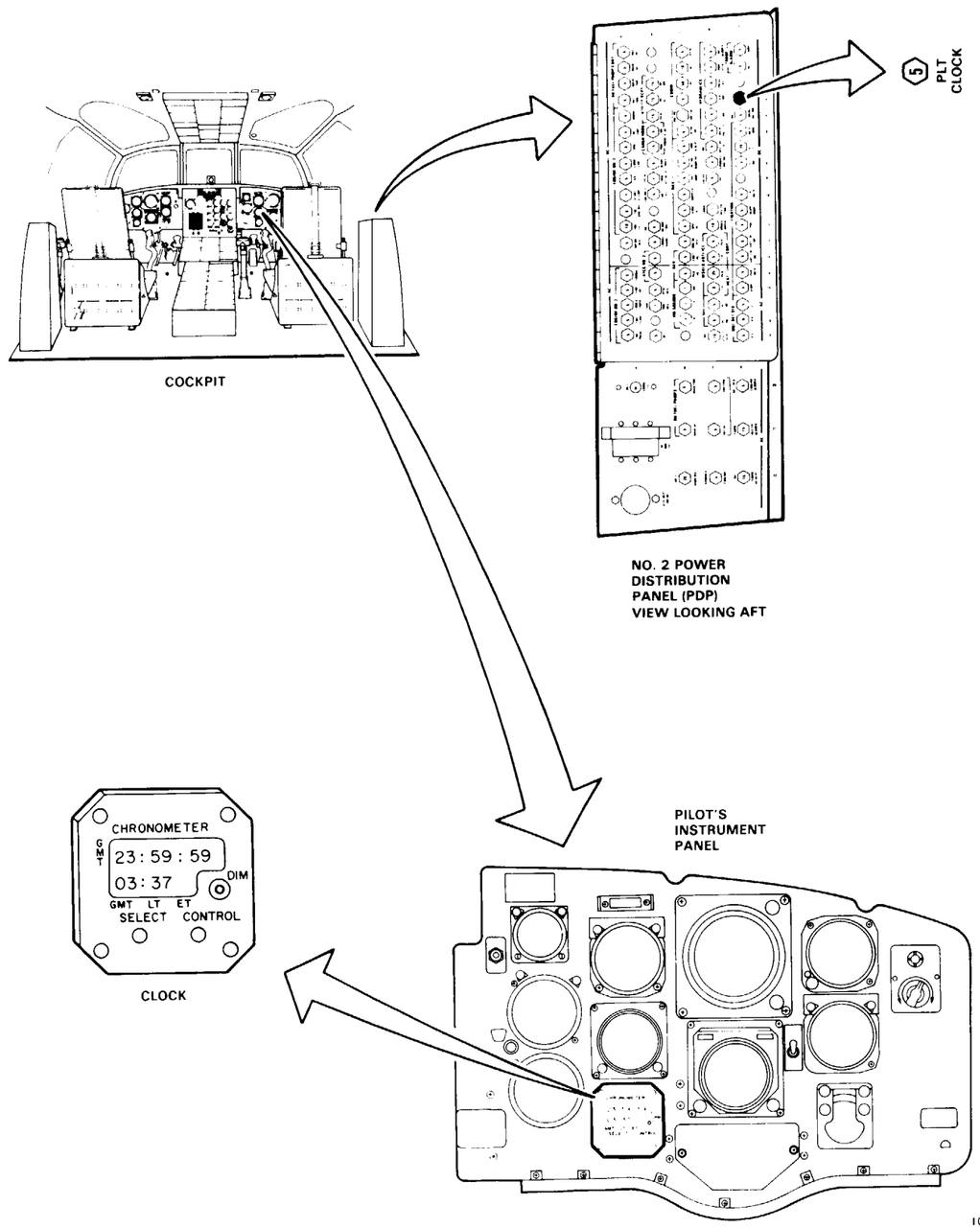
Materials:
None

Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off





END OF TASK

9-22.7 COPILOT'S CLOCK DISPLAY DOES NOT INDICATE 88:88 WHEN SELECT BUTTON PRESSED

FAULT ISOLATION PROCEDURE

INITIAL SETUP

Applicable Configurations:
With 17

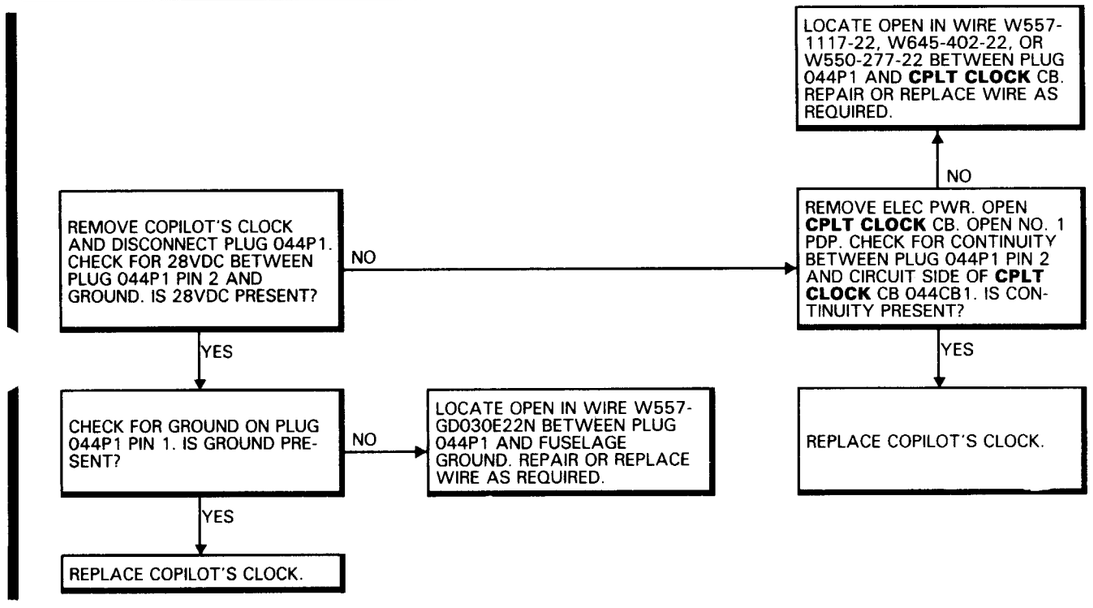
Tools:
Electrical Repairer's Tool Kit, NSN 5180-00-323-4915
Multimeter

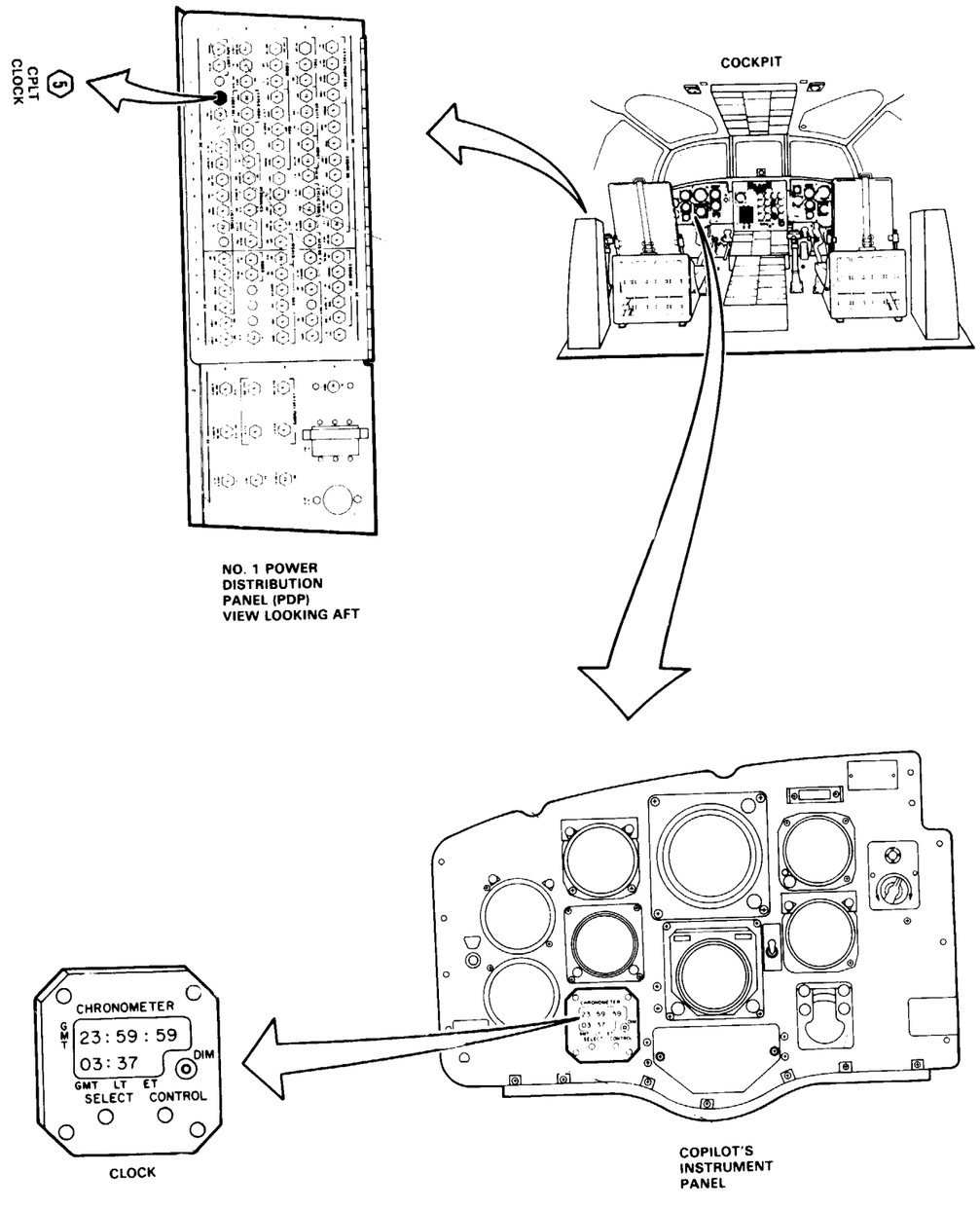
Materials:
None

Personnel Required:
Aircraft Electrician

References:
TM 55-1520-240-23

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off



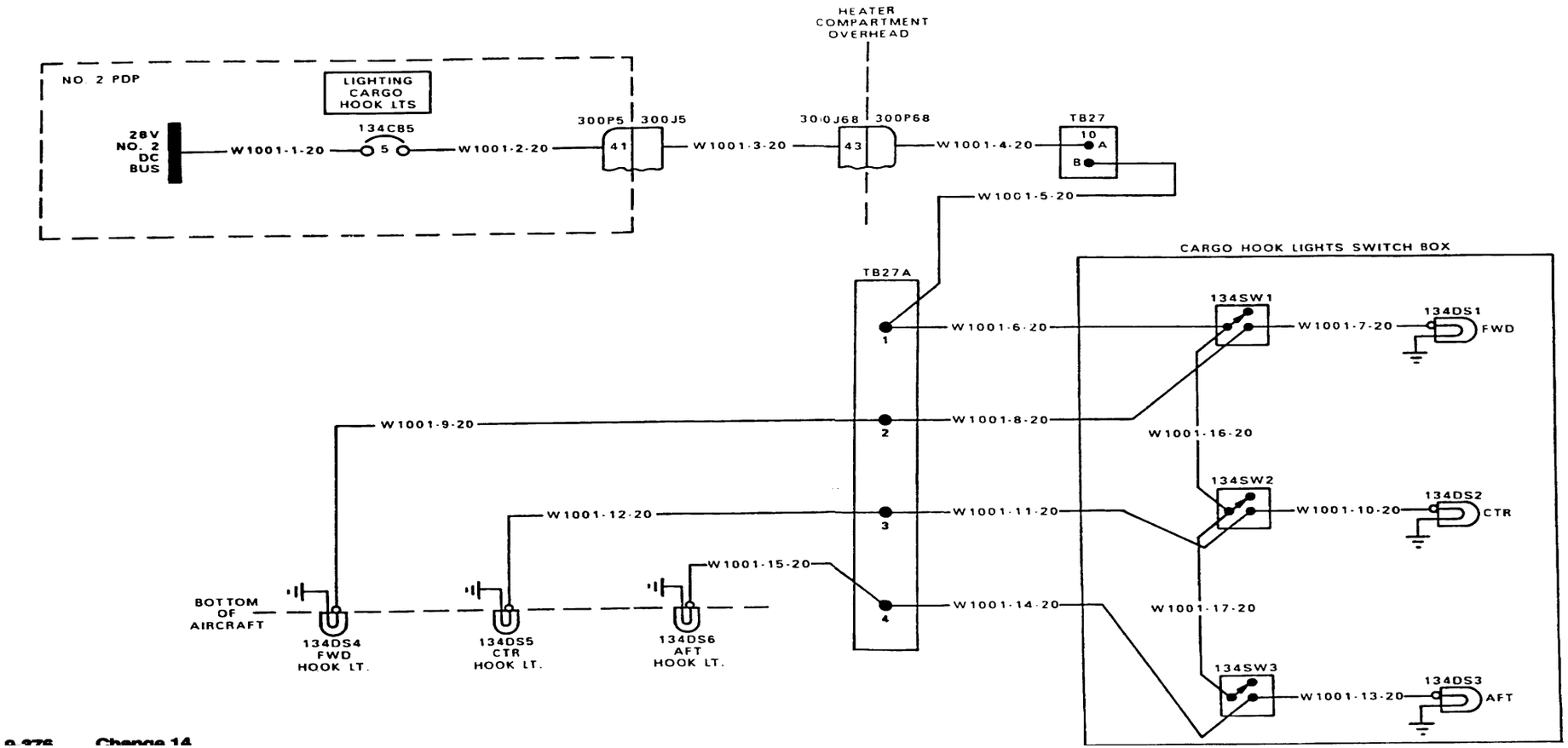


10436

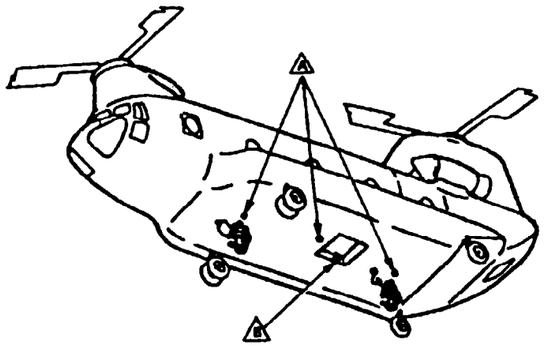
9-23 CARGO HOOK LIGHTS

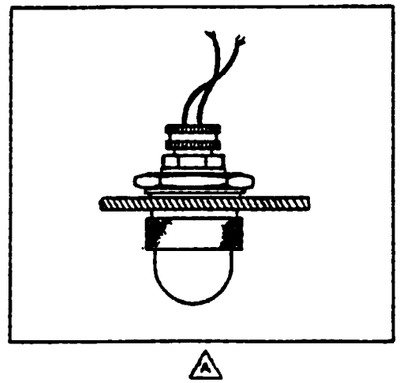
9-23. CARGO HOOK LIGHTS

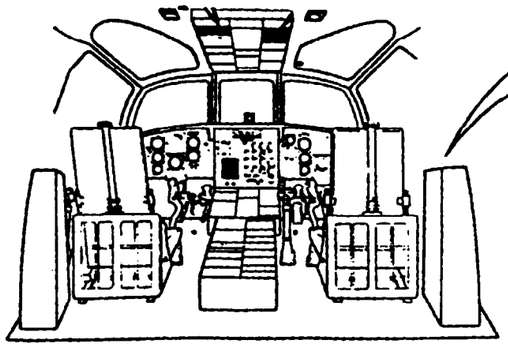
9-23.1 CARGO HOOK LIGHTS WIRING DIAGRAM (WITH [redacted]FTER C/W MWO 1-1520-240-50-52



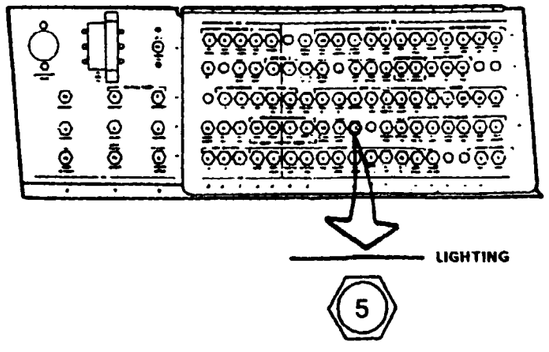
9-376 Change 14



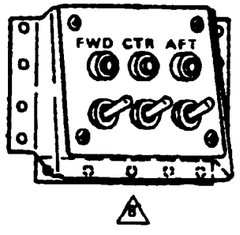




COCKPIT



NO. 2 POWER DISTRIBUTION PANEL (PDP) VIEW LOOKING AFT



INITIAL SETUP

Applicable Configurations:

With1[redacted]ft C/W MWO 1-1520-240-50-52

References:

TM 55-1520-240-23
TM 55-1520-240-23-10
TM 55-1520-240-10
TM 55-1520-240-23P-2

Tools:

Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off

Materials:

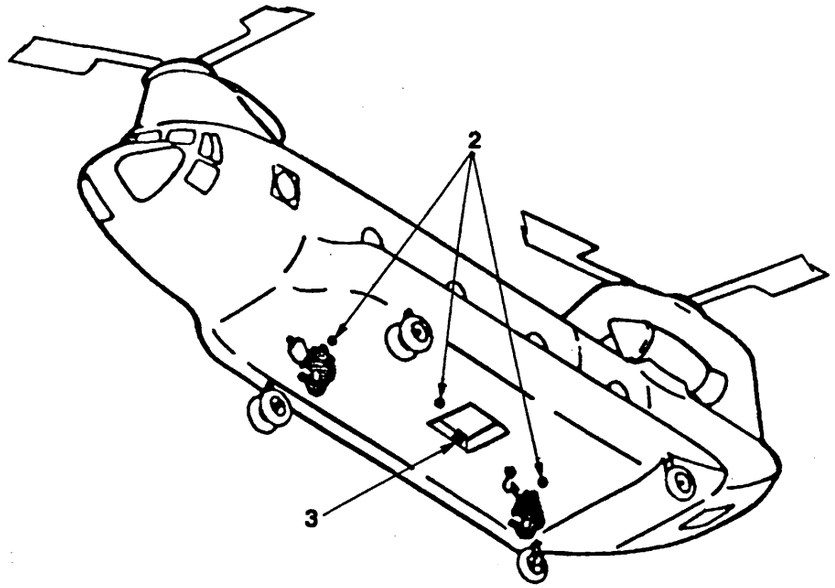
None

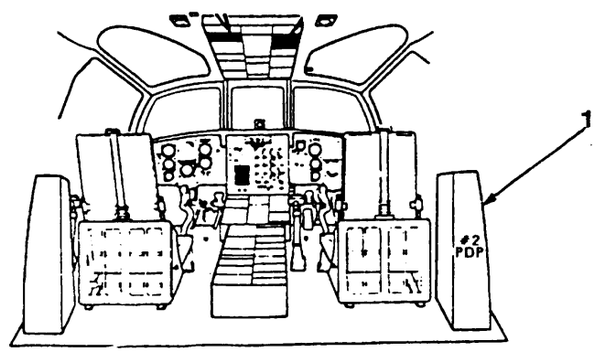
Personnel Required

Aircraft Electrician

TASK	RESULTS
1. Check cargo hook light circuit breaker	If hook light circuit breaker is loose or broken, tighten or replace as required.
2. Check cargo hook lights (2) by each cargo hook.	If cargo hook lights are damaged \or loose, tighten or Replace as required.
3. Check cargo hook lights switch box (3) and components	If any components or switch box is damaged, replace or repair as required.

FOLLOW-ON MAINTNANCE:
None





COCKPIT

f

END OF TASK

9-23.3. CARGO HOOK LIGHTS OPERATIONAL CHECK

INITIAL SETUP

Applicable Configurations:

With 7 Aft C/W MWP 1-1520-240-50-52

Tools:

Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

Materials:

None

Personnel Required

Aircraft Electrician

References:

TM 55-1520-240-23
TM 55-1520-240-10

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power Off

TASK	RESULTS
1. Check that cargo hook light circuit breaker is closed	If cargo light circuit breaker is open, close it. If it opens again, go to Task 9-23-4.
2. Check switch marked "FWD" on cargo hook light switch box is pushed up to "ON" position. Indicator lamp above switch is lit. Forward cargo hook light is lit.	If indicator lamp does light. Replace £327. If not lit after replacing lamp go to Task 9-23.6
	If indicator lamp does not light replace £327. If not lit, after replacing lamp, go to Task 9-23.5.
3. Check switch marked "CTR" on cargo hook light switch box is pushed up to "ON" position. Indicator lamp above switch is lit.	If center cargo hook light does not light, replace £327 lamp. If not lit, go to Task 9-23.6.
4. Check switch marked "AFT" on cargo hook light switch box is pushed up to "ON" position. Indicator lamp above switch is lit. Aft cargo hook light is it.	If aft cargo hook light does not light, replace £327 lamp. If not lit after replacing lamp, go to Task 9-23.5.

END OF TASK

9-23.4

INITIAL SET-UP

Applicable Configurations:

With 7 ft C/W MWO 1-1520-240-50-52

References:

TM 55-1520-240-23

Tools:

Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

Equipment Condition:
TM 55-1520-240-23:
Battery Disconnected
Electrical Power Off
Hydraulic Power Off

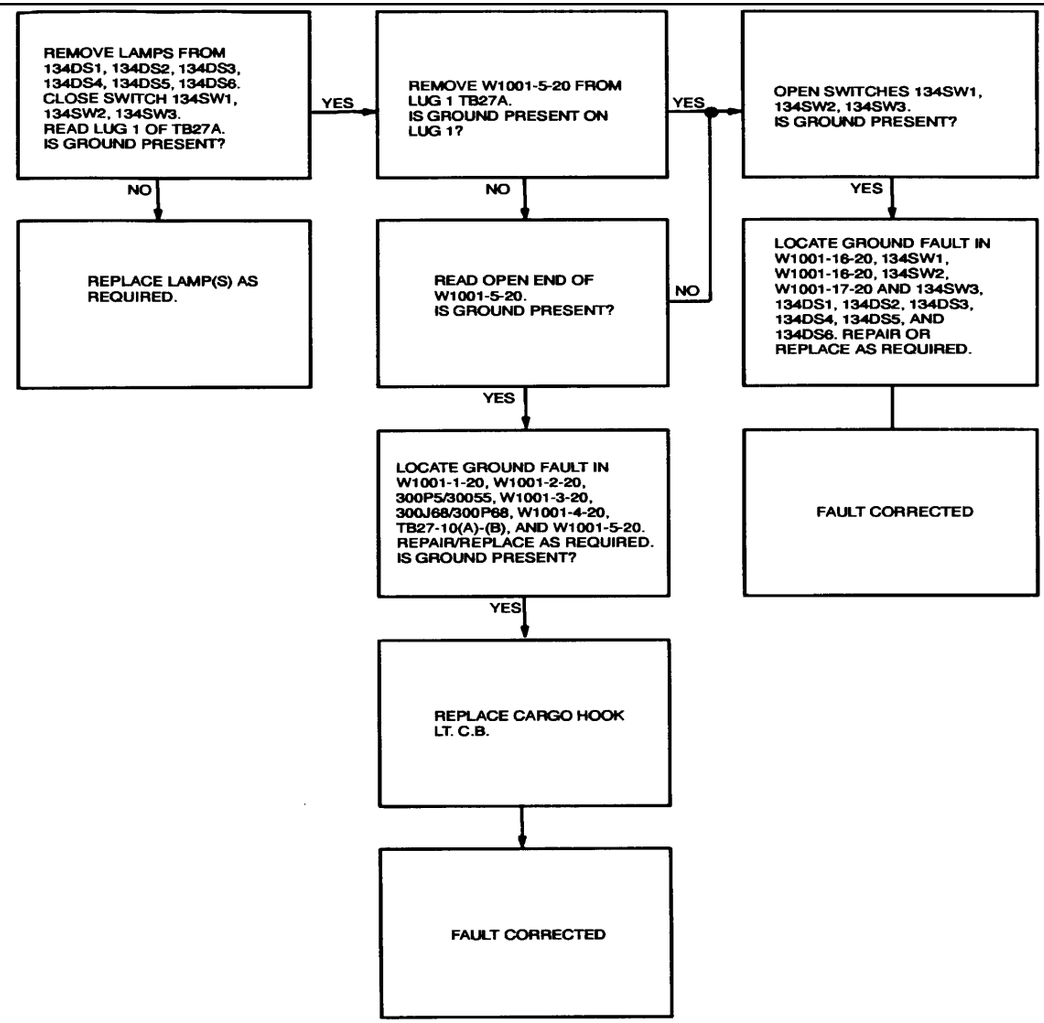
Materials:

None

Personnel Required

Aircraft Electrician

FOLLOW-ON MAINTENANCE:
None



END OF TASK

INITIAL SETUP

Applicable Configurations:

With 17 Aft CW MWO 1-1520-240-50-52

Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

References:

TM 55-1520-240-T

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power On
Operational Checks of Cargo Hook Lights performed Task 9-23.3

Materials:
None

Personnel Required
Aircraft Electrician

FOLLOW-ON MAINTENANCE:
None

END OF TASK

9-23.6 CARGO HOOK LIGHT OR LIGHTS DO NOT LIGHT 9-23.5

INITIAL SETUP

Applicable Configurations:

With 7 Aft CW MWO 1-1520-240-50-52

Electrical Repairer's Tool Kit,
NSN 5180-00-323-4915
Multimeter

References:

TM 55-1520-240-T

Equipment Condition:
TM 55-1520-240-23:
Battery Connected
Electrical Power On
Hydraulic Power On
Operational Checks of Cargo Hook Lights performed
Task 9-23.3

Materials:
None

Personnel Required
Aircraft Electrician

FOLLOW-ON MAINTENANCE
None

END OF TASK

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By Order of the Secretary of the Army:

E. C. MEYER
General, United States Army
Chief of Staff

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The Adjutant General

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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
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PART 1 – ALL PUBLICATIONS (EXCEPT RPSTL AND SC/SM) AND BLANK FORMS

PUBLICATION/FORM NUMBER	DATE	TITLE

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

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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 dekagram = 10 grams = .35 ounce
1 hectogram = 10 dekagrams = 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 milliliters = .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: 053337-000