

TECHNICAL MANUAL

AVIATION UNIT AND
AVIATION INTERMEDIATE
MAINTENANCE MANUAL

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

HEADQUARTERS, DEPARTMENT OF THE ARMY

26 APRIL 1983

CHANGE
NO. 7

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

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

OZONE DEPLETING CHEMICAL INFORMATION

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

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

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

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

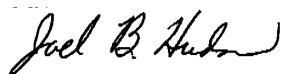
Remove pages	Insert pages
--	A and B
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i and ii	i and ii
7-85 and 7-86	7-85 and 7-86
9-7 and 9-8	9-7 and 9-8
9-9/(9-10 blank)	9-9/(9-10 blank)
9-13 and 9-14	9-13 and 9-14
9-31 and 9-32	9-31 and 9-32
9-37 and 9-38	9-37 and 9-38
A-1/(A-2 blank)	A-1/(A-2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

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

TM 55-2840-254-23-4
C7

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NO. 6

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WASHINGTON, D.C., 30 September 1996Aviation Unit and Aviation Intermediate
Maintenance Manual**ENGINE, GAS TURBINE
MODEL T55-L-712
NSN 2840-01-030-4890**

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

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TM 55-2840-254-23-4
C5

CHANGE

No. 5

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

Aviation Unit and Aviation Intermediate Maintenance Manual

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

DISTRIBUTION STATEMENT A: Approved for public released distribution is unlimited

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

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

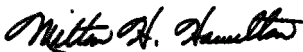
Remove pages
C-7/(C-8 blank)

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

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Aviation Unit and Aviation Intermediate
Maintenance Manual

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

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

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

Remove pages

6-213 and 6-214
7-69 and 7-70
8-255 and 8-256
8-297 and 8-298
9-7 and 9-8
9-13 and 9-14
9-45 through 9-48

B-19 and B-20
C-1 through C-6
E-35/(E-36 blank)
F-1/(F-2 blank)
Index-1 through Index-36

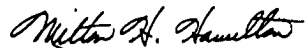
Insert pages

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

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CHANGE }
NO. 3 }

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WASHINGTON, D.C., 13 June 1990

Aviation Unit and Aviation Intermediate
Maintenance Manual

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

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

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

Remove pages

Insert pages

C-5 and C-6

C-5 and C-6

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CHANGE }
NO. 2 }

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

AVIATION UNIT AND
AVIATION INTERMEDIATE
MAINTENANCE MANUAL

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

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

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

Remove pages

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

Insert pages

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

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CHANGE }
NO. 1 }

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

Aviation Unit and Aviation Intermediate
Maintenance Manual

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

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

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

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

Remove pages

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

Insert pages

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

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DISTRIBUTION:

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

WARNING AND FIRST AID DATA

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

WARNING

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

CAUTION

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

NOTE

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

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

WARNING

Fuels

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

WARNING

Lubricating Oils

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

WARNING

Dangerous Voltages

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

WARNING

Discharging Ignition Exciter

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

WARNING**Compressed Air**

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

WARNING**Corrosion Preventive Compounds**

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

WARNING**Cleaning Solvents**

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

WARNING

Handling of Heated Parts

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

WARNING

Handling of Parts Treated with Dry Ice

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

WARNING

Handling of Spring Loaded Parts

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

WARNING

Nitric Acid

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

WARNING

Handling Engine Shipping Container

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

WARNING

Handling of Skimming Maintenance Kit

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

WARNING

Sodium Dichromate

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

WARNING

Welding Operations

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

WARNING

Use of Engine Maintenance Sling

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

WARNING

Power Grinding

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

WARNING**HANDLING TORQUE MULTIPLIER**

- Make sure handle is fully seated and ratchet selector on torque pack is properly set before applying torque. Rotating ratchet selector with load on torque pack may damage unit and injure personnel.
- Do not change ratchet selector when torque load is on torque pack.
- In injury occurs, get medical attention.

WARNING**FLIGHT SAFETY CRITICAL AIRCRAFT PARTS (FSCAP)**

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

- Do not change ratchet selector when torque load is on torque pack.
- In injury occurs, get medical attention.

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

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

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

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

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

LIST OF EFFECTIVE PAGES

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

NOTE: On a changed page, the portion of the text affected by the latest change is indicated by a vertical line, or other change symbol, in the outer margin of the page. Changes to illustrations are indicated by miniature pointing hands. Changes to wiring diagrams are indicated by shaded areas.

Dates of issue for original and changed pages are:

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

Page	*Change	Page	*Change
No.	No.	No.	No.
Cover	0	6-170 blank	1
A and B	7	6-171 through 6-213	0
a through f	0	6-214	4
g	7	6-215 through 6-272	0
h blank	7	7-1 and 7-2	1
i	7	7-3 through 7-31	0
ii and iv	6	7-32	2
v through xiii	0	7-33 through 7-36	0
xiv	2	7-37	2
6-1	2	7-38 through 7-68	0
6-2	1	7-69	4
6-3 through 6-16	0	7-70 through 7-84	0
6-17 through 6-18.1	2	7-85	7
6-18.2 and 6-18.3	6	7-86 through 7-97	0
6-18.4 blank	6	7-98 blank	0
6-19 through 6-120	0	7-99 through 7-149	1
6-121 through 6-124.1 ...	1	7-150 blank	1
6-124.2 blank	1	8-1	2
6-125	0	8-2 through 8-14	0
6-126	1	8-15	2
6-127 and 6-128	0	8-16 and 8-17	0
6-129 through 6-130.1 ..	1	8-18	2
6-130.2 blank	1	8-19 and 8-20	0
6-131	0	8-20.1 through 8-20.4 ...	6
6-132 and 6-132.1	1	8-21 through 8-137	0
6-132.2 blank	1	8-138	6
6-133	0	8-139 through 8-149	0
6-134 through 6-136.1/ ..	1	8-150	6
6-136.2 blank	1	8-151	0
6-137	0	8-152 and 8-153	6
6-138 and 6-138.1	1	8-154 through 8-204	0
6-138.2 blank	1	8-205 through 8-208	6
6-139 through 6-147	0	8-209 through 8-254	0
6-148 and 6-149	1	8-255	4
6-150 through 6-168	0	8-256 through 8-292	0
6-169	1	8-293	6

*Zero in this column indicates an original page.

TM 55–2840-254-23

Page No.	*Change No.
8–294 through 8–297	0
8–298	6
8–299 through 8–351	0
8–352 blank	0
9–1	6
9–2 blank	6
9–3 through 9–7	6
9–8 and 9–9	7
9–10 blank	7
9–11 through 9–13	6
9–14	7
9–15 through 9–30	6
9–31	7
9–32 through 9–37	6
9–38	7
9–39 through 9–62	6
A–1	7
A–2 blank	7
B–1 through B–6	0
B–7 through B–9	6
B–10	0
B–11 through B–13	6
B–14	0
B–15 through B–17	6
B–18	0
B–19	4
B–20 and B–21	6
B–22 blank	6
C–1 and C–2	0
C–3	7
C–4 and C–5	6

Page No.	*Change No.
C–6	4
C–7	7
C–8 blank	6
D–1	0
D–2 blank	0
E–i and E–ii	0
E–1 through E–7	0
E–8 through E–14	1
E–15 through E–18	0
E–18.1 and E–18.2	6
E–19 and E–20	0
E–20.1	6
E–20.2 blank	6
E–21	1
E–22 through E–29	0
E–30 and E–31	1
E–32	0
E–33 and E–34	1
E–35	0
E–36	6
E–37	0
E–38 blank	0
F–1	4
F–2 blank	4
Glossary–1 through Glossary–5	0
Glossary 6 blank	0
Index–1 through Index–3	6
Index–4	7
Index–5 through Index–32	6

*Zero in this column indicates an original page.

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Technical Manual
 NO. 55-2840-254-23

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

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

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

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

OZONE DEPLETING CHEMICAL INFORMATION

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

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

TABLE OF CONTENTS

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

NOTE

This manual is printed in four volumes as follows:

TM 55-2840-254-23-1, consisting of Warning Pages, Table of Contents, Chapter 1, and alphabetical index.

TM 55-2840-254-23-2, consisting of Warning Pages, Table of Contents, Chapter 2, and alphabetical index.

TM 55-2840-254-23-3, consisting of Warning Pages, Table of Contents, Chapter 3 through 5 and Alphabetical Index.

TM 55-2840-254-23-4, consisting of Warning Pages, Table of Contents, Chapter 6 through 9, Appendixes A through F, Glossary, and Alphabetical Index.

TABLE OF CONTENTS (Continued)

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

TABLE OF CONTENTS (Continued)

CHAPTER 6 (Continued)

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

TABLE OF CONTENTS (Continued)

APPENDIX A	REFERENCES	A-1
APPENDIX B	MAINTENANCE ALLOCATION CHART	B-1
APPENDIX C	EXPENDABLE SUPPLIES AND MATERIALS LIST	C-1
APPENDIX D	WIRING DIAGRAMS	D-1
APPENDIX E	ILLUSTRATED LIST OF MANUFACTURED ITEMS	E-1
APPENDIX F	ABBREVIATIONS	F-1
GLOSSARY	Glossary-1
SUBJECT INDEX	Index-1

HOW TO USE THIS MANUAL

OVERVIEW

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

1. DESCRIPTION OF MANUAL

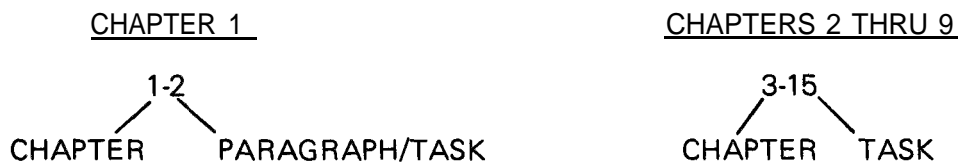
This manual has nine chapters and six appendixes. Each chapter is divided into sections. Each section in Chapter 1 is divided into paragraphs or tasks. Each section in Chapters 2 thru 9 is divided into tasks. The tasks tell you what you need and how to do any job. The paragraphs have specific information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

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

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

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

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

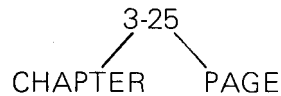


(2) The first number is the number of the chapter. The second number is the paragraph or task in that chapter. The two elements are separated by a dash.

HOW TO USE THIS MANUAL (Continued)

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

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



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

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

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

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

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

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

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

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

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

HOW TO USE THIS MANUAL (Continued)

NOTE

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

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

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

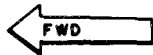
G. Illustration Arrows. You will find five types of arrows used. They areas shown below:



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



Index arrow used to identify parts on artwork.



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



Movement arrow used to indicate direction of movement.



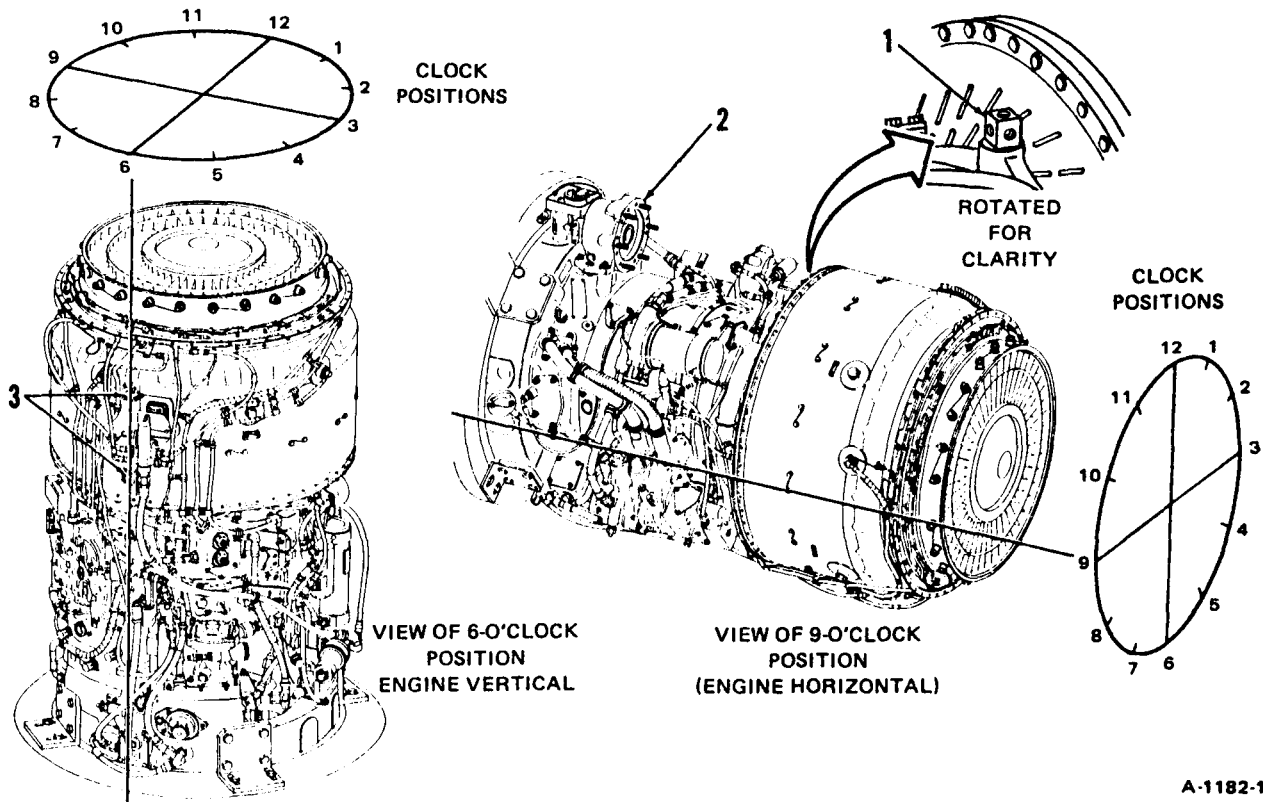
Movement arrow used to indicate direction of rotation.

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

HOW TO USE THIS MANUAL (Continued)

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

- (1) Clock position is always determined from rear of engine.
- (2) Once a clock position is determined from rear of engine, visualize that clock position along entire length of engine.
- (3) Hoist adapter (1) and starter drive assembly (2) are mounted at the 12-o'clock position.
- (4) Two fuel drain valves (3) are mounted at the 6-o'clock position.
- (5) Some procedures show engine mounted vertical in maintenance stand. This does not change the method for finding clock positions on the engine.



A-1182-1

HOW TO USE THIS MANUAL (Continued)

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

HOW TO USE THIS MANUAL (Continued)

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

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

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

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

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

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

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

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

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

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

Example:

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

HOW TO USE THIS MANUAL (Continued)

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

Example:

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

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

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

2. HOW TO FIND WHAT YOU NEED

A. General Information (Troubleshooting).

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

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

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

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

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

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

HOW TO USE THIS MANUAL (Continued)

3. HOW TO PREPARE FOR A TASK

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

You know what is needed
You have the things you need

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

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

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

D. Check for personnel required.

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

4. HOW TO DO THE JOB

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

A. PAY ATTENTION TO WARNINGS, CAUTIONS AND NOTES.

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

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

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

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

CHAPTER 6

FUEL SYSTEM - MAINTENANCE INSTRUCTIONS

CHAPTER OVERVIEW

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

<u>SECTION</u>	<u>TASK</u> <u>N.o.</u>	<u>TITLE</u>	<u>PAGE</u>
I		FUEL CONTROL - MAINTENANCE PROCEDURES	
	6-1	Remove Fuel Control	6-5
	6-2	Disassemble Fuel Control	6-12
	6-3	Clean Fuel Control	6-14
	6-4	Inspect Fuel Control	6-16
	6-4.1	Repair Fuel Control	6-18.1
	6-5	Assemble Fuel Control	6-19
	6-6	Install Fuel Control	6-22
II		FUEL CONTROL - PREPARATION FOR STORAGE OR SHIPMENT	
	6-7	Preserve Fuel Control	6-31
	6-8	Package Fuel Control	6-36
III		FUEL BOOST PUMP ASSEMBLY - MAINTENANCE PROCEDURES	
	6-9	Remove Fuel Boost Pump Assembly	6-39
	6-10	Clean Fuel Boost Pump Assembly	6-42
	6-11	Inspect Fuel Boost Pump Assembly	6-43
	6-12	Repair Fuel Boost Pump Assembly	6-44
	6-13	Install Fuel Boost Pump Assembly	6-48
IV		FUEL BOOST PUMP ASSEMBLY - PREPARATION FOR STORAGE OR SHIPMENT	
	6-14	Preserve Fuel Boost Pump Assembly	6-55
	6-15	Package Fuel Boost Pump Assembly	6-56
V		LEFT-AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES - MAINTENANCE PROCEDURES	
	6-16	Remove Left- and Right-Hand Fuel Manifold Assemblies	6-57
	6-17	Clean Left- and Right-Hand Fuel Manifold Assemblies	6-68
	6-18	Inspect Left- and Right-Hand Fuel Manifold Assemblies	6-70
	6-19	Repair Left- and Right-Hand Fuel Manifold Assemblies	6-72
	6-20	Install Left- and Right-Hand Fuel Manifold Assemblies	6-78

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

<u>SECTION</u>	<u>TASK N o .</u>	<u>TITLE</u>	<u>PAGE</u>
XII		STARTING FUEL SOLENOID VALVE – MAINTENANCE PROCEDURES	
	6-49	Remove Starting Fuel Solenoid Valve	6-177
	6-50	Clean Starting Fuel Solenoid Valve	6-181
	6-51	Inspect Starting Fuel Solenoid Valve	6-182
	6-52	Repair Starting Fuel Solenoid Valve	6-183
	6-53	Install Starting Fuel Solenoid Valve	6-184
XIII		FUEL LINES – MAINTENANCE PROCEDURES	
	6-54	Remove Hose Assembly (Oil Cooler to In-Line Fuel Filter)	6-189
	6-55	Install Hose Assembly (Oil Cooler to In-Line Fuel Filter)	6-191
	6-66	Remove Hose Assembly (Fuel Control to Oil Cooler)	6-193
	6-57	Install Hose Assembly (Fuel Control to Oil Cooler)	6-196
	6-58	Remove Hose Assembly (in-Line Fuel Filter to Flow Divider)	6-199
	6-59	Install Hose Assembly (in-Line Fuel Filter to Flow Divider)	6-203
	6-60	Remove Hose Assembly (Fuel Boost Pump to Main Fuel Filter)	6-206
	6-61	Install Hose Assembly (Fuel Boost Pump to Main Fuel Filter)	6-210
	6-62	Remove Hose Assembly (Fuel Check Valve to Fuel Boost Pump)	6-214
	6-63	Install Hose Assembly (Fuel Check Valve to Fuel Boost Pump)	6-218
	6-64	Remove Hose Assembly (Flow Divider Left Side Primary to Manifold Assembly)	6-223
	6-65	Install Hose Assembly (Flow Divider Left Side Primary to Manifold Assembly)	6-225
	6-66	Remove Hose Assembly (Flow Divider Right Side Primary to Manifold Assembly)	6-227
	6-67	install Hose Assembly (Flow Divider Right Side Primary to Manifold Assembly)	6-229
	6-68	Remove Hose Assembly (Flow Divider Left Side Secondary to Manifold Assembly)	6-231
	6-69	Install Hose Assembly (Flow Divider Left Side Secondary to Manifold Assembly)	6-234
	6-70	Remove Hose Assembly (Flow Divider Right Side Secondary to Manifold Assembly)	6-237
	6-71	Install Hose Assembly (Flow Divider Right Side Secondary to Manifold Assembly)	6-240
	6-72	Remove Hose Assembly (Main Fuel Filter to Fuel Control)	6-244
	6-73	Install Hose Assembly (Main Fuel Filter to Fuel Control)	6-247
	6-74	Remove Hose Assembly (Fuel Control to Starting Fuel Solenoid Valve)	6-250
	6-75	Install Hose Assembly (Fuel Control to Starting Fuel Solenoid Valve)	6-253
	6-76	Remove Hose Assembly (Starting Fuel Solenoid Valve to Tube Assembly)	6-256

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

Section I. FUEL CONTROL - MAINTENANCE PROCEDURES

6-1 REMOVE FUEL CONTROL

6-1

INITIAL SETUP

General Safety Instructions:

Applicable Configurations:
All

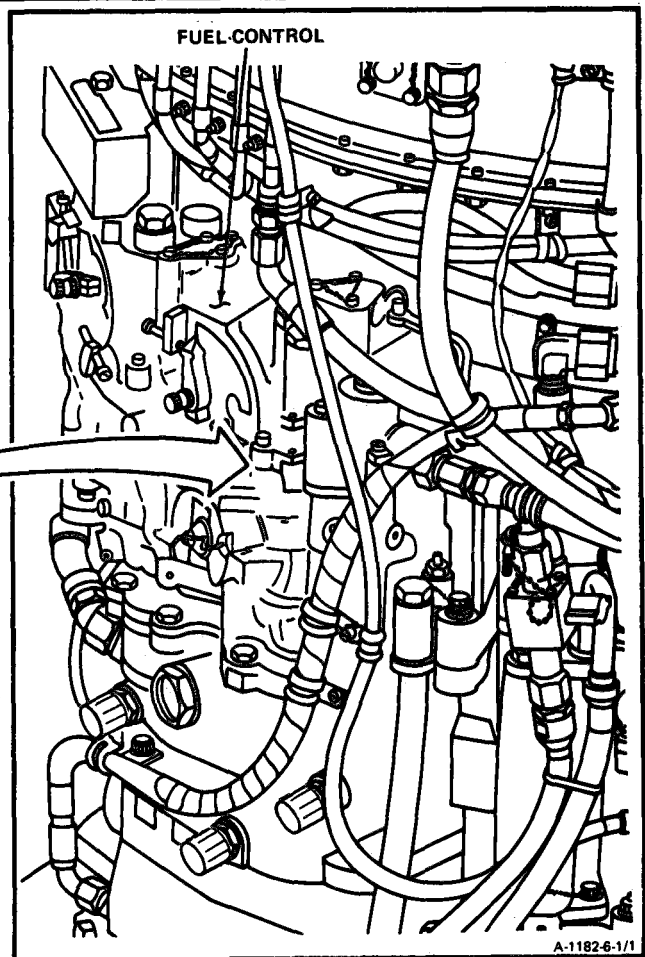
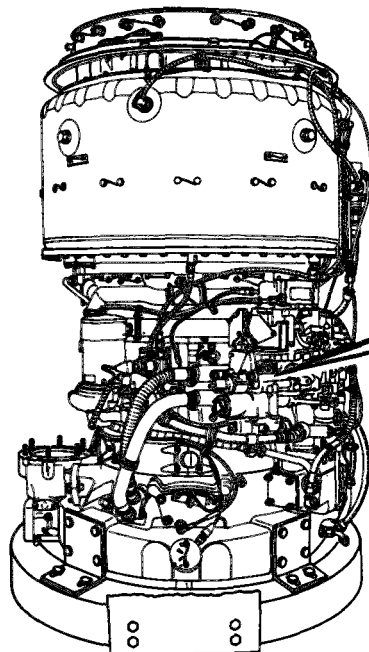
WARNING

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

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

Materials:
Wiping Rag (E58)
Caps

Personal Required:
68B10 Aircraft Powerplant Repairer



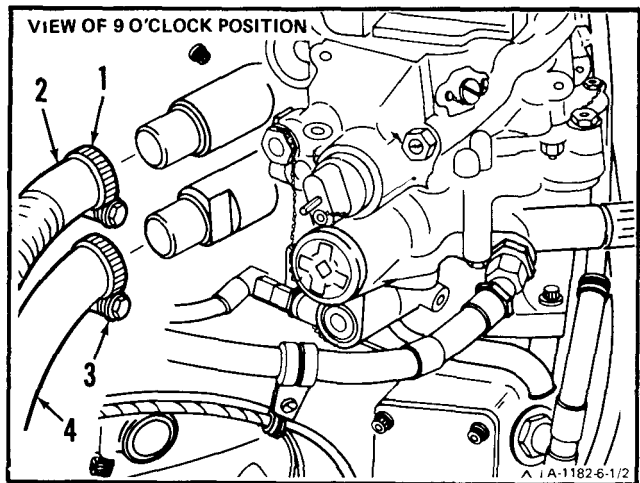
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6-1 REMOVE FUEL CONTROL (Continued)

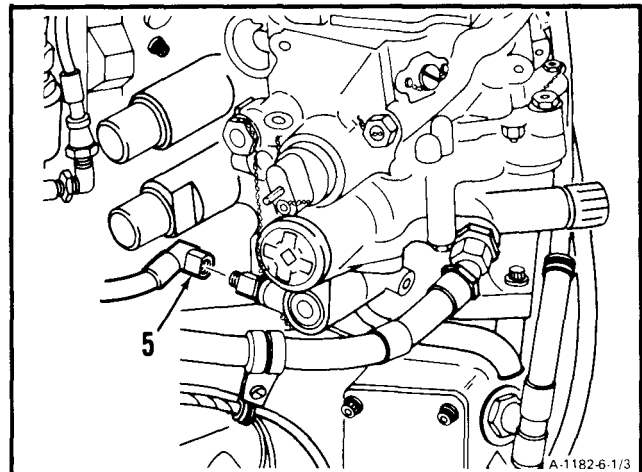
NOTE

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

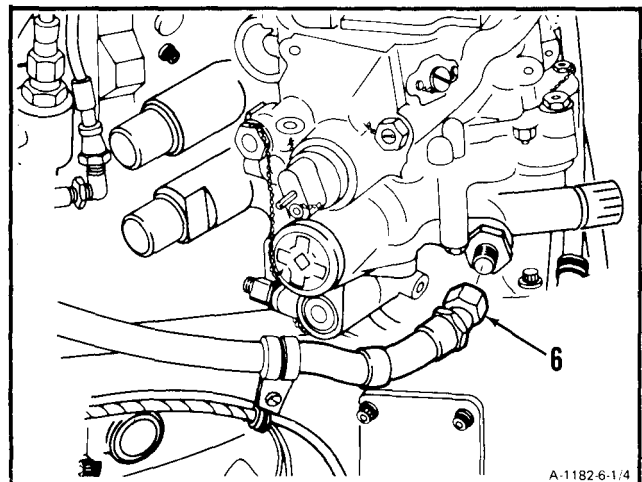
1. Loosen clamp (1) and **disconnect hose (2)**.
2. Loosen clamp (3) and **disconnect hose (4)**.



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



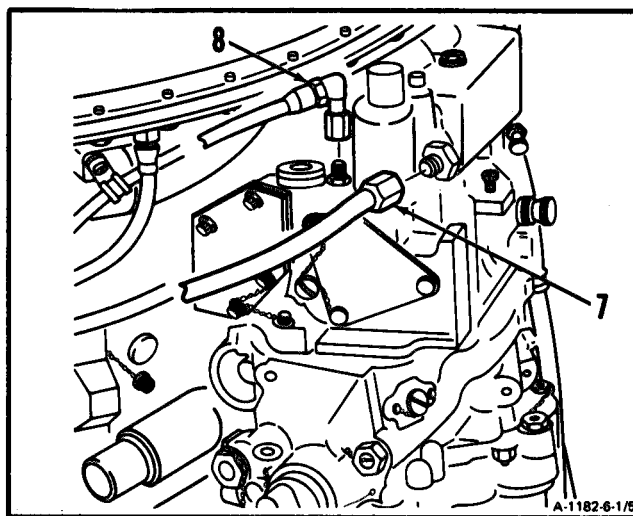
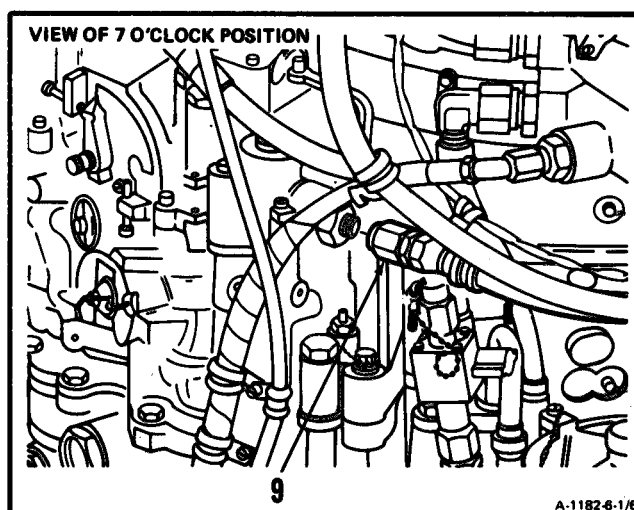
4. **Disconnect hose assembly (6)**.



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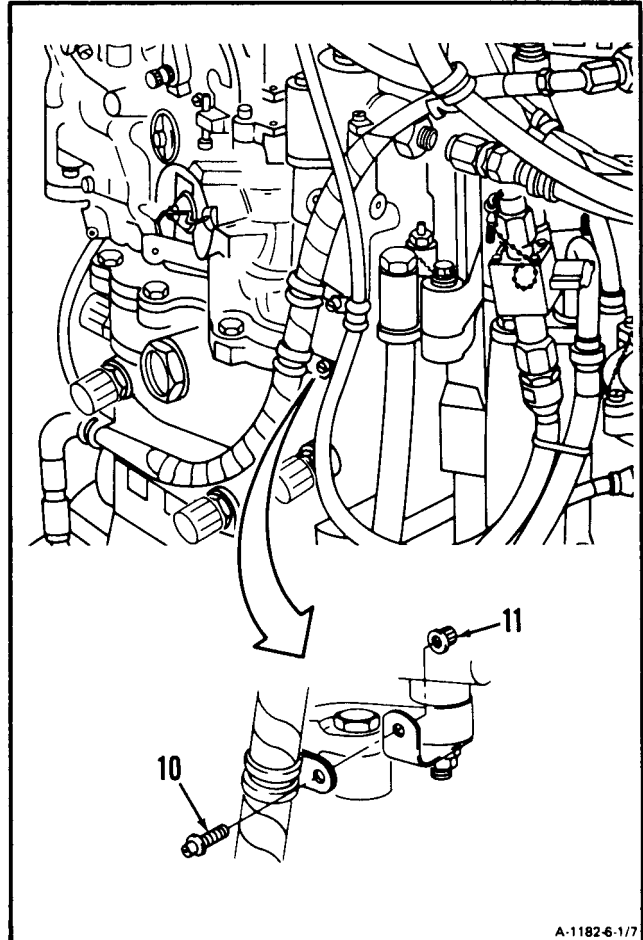
6-1 REMOVE FUEL CONTROL (Continued)

6-1

5. Disconnect hose assembly (7).**6. Disconnect hose assembly (8).****7. Disconnect hose assembly (9).****GO TO NEXT PAGE**

6-7

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



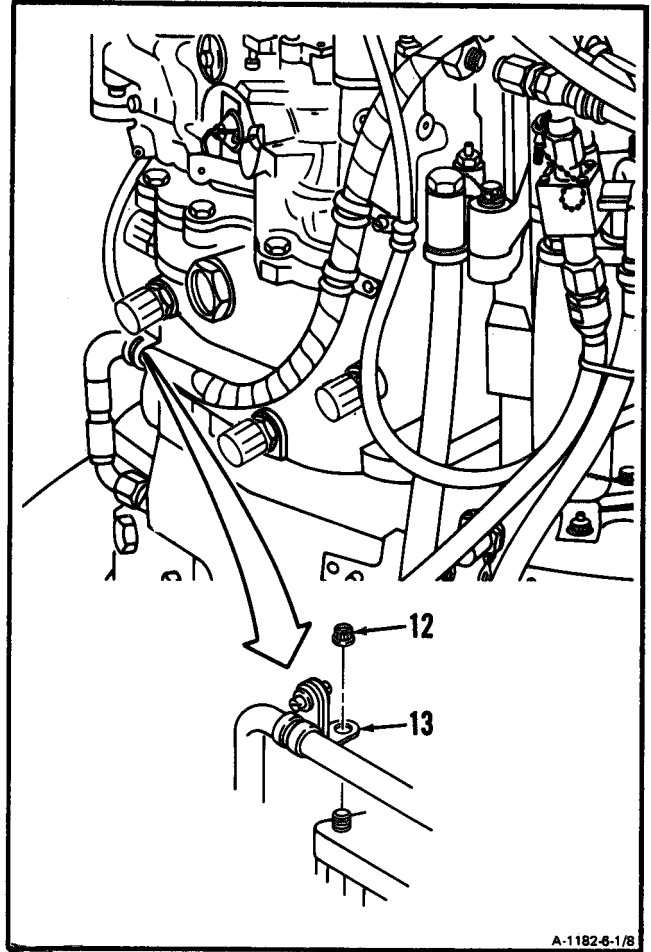
A-1182-6-1/7

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6-1 REMOVE FUEL CONTROL (Continued)

6-1

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



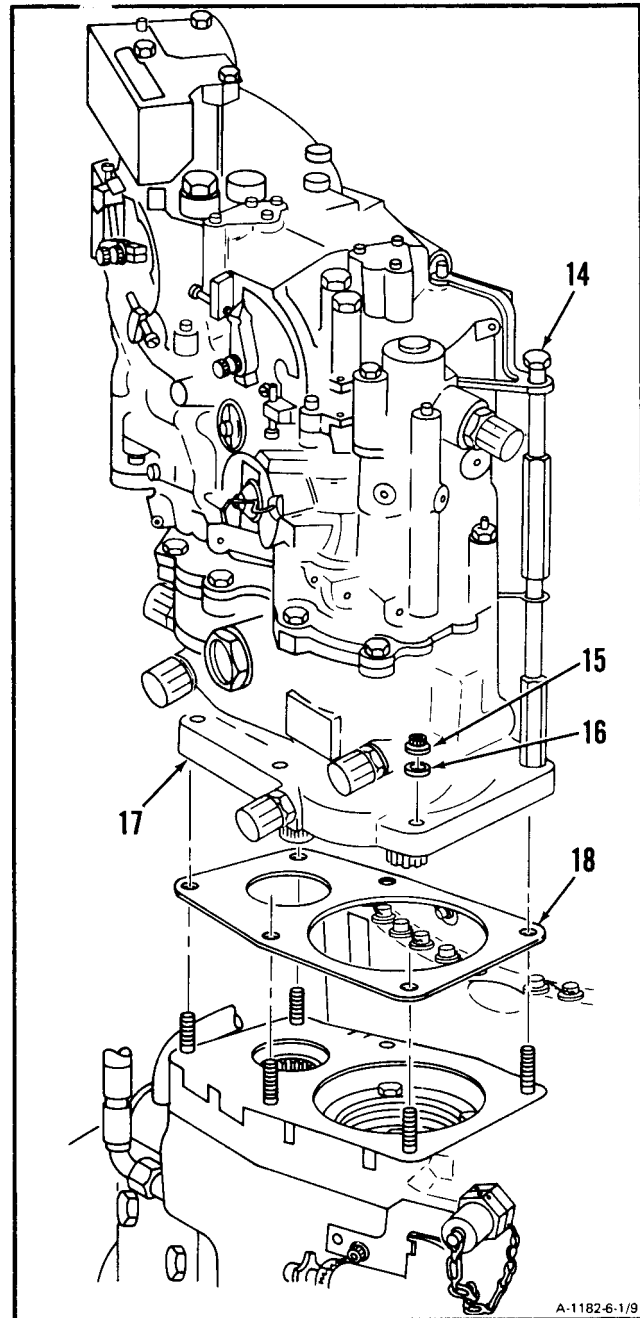
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6-9

6-1 REMOVE FUEL CONTROL (Continued)

6-1

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



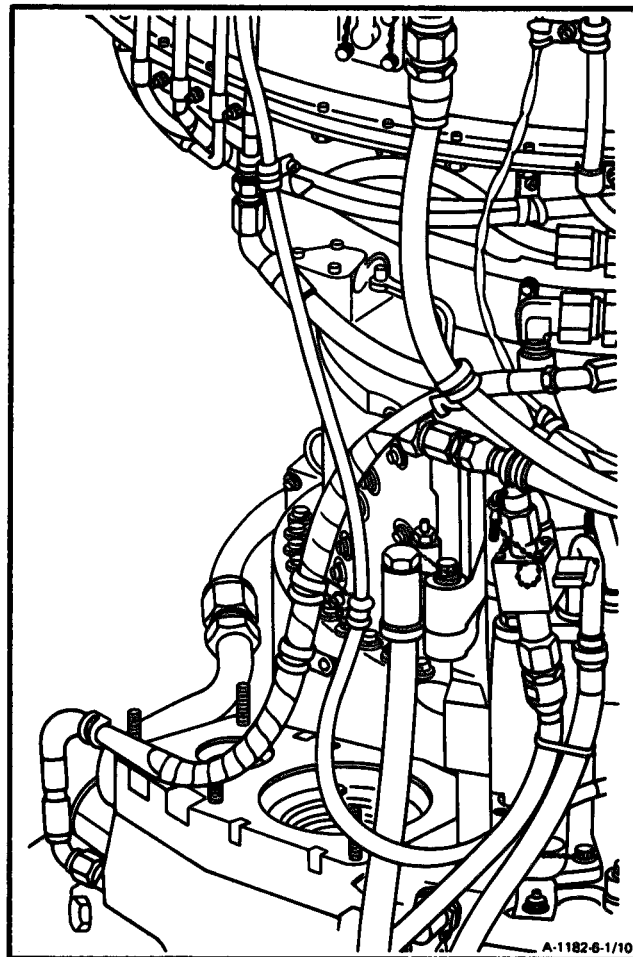
GO TO NEXT PAGE

6-1 REMOVE FUEL CONTROL (Continued)

6-1

FOLLOW-ON MAINTENANCE:

None

**END OF TASK**

6-11

6-2 DISASSEMBLE FUEL CONTROL

6-2

INITIAL SETUP**Applicable Configurations:**

All

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

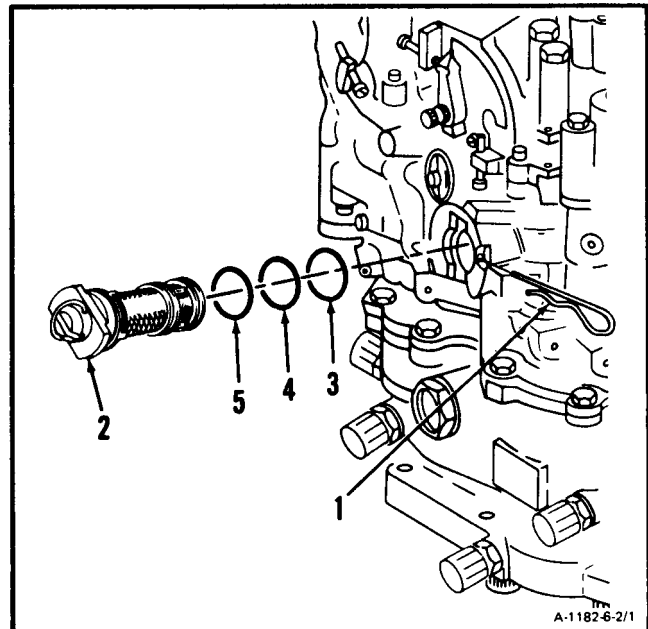
None

Personnel Required:

68B10 Aircraft Powerplant Repairer

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

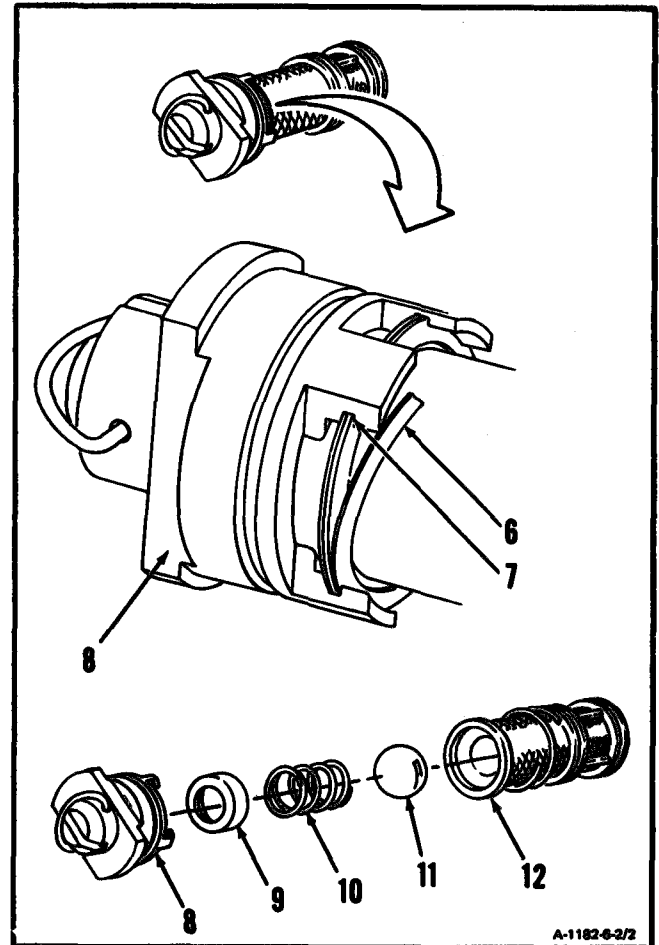
-
1. Remove lockwire and lockpin (1).
 2. Rotate filter (2) counterclockwise 90 degrees.
Remove filter (2).
 3. Remove packings (3, 4, and 5).

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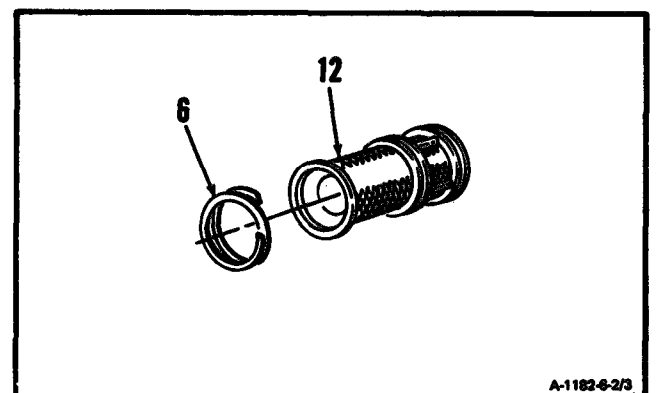
6-2 DISASSEMBLE FUEL CONTROL (Continued)

6-2

4. Push bottom end of retaining ring (6) out of cover groove (7) and separate retaining ring (6) from cover (8).
5. Remove (8), retainer (9), spring (10), and ball (11) from strainer (12).



6. Remove retaining ring (6) from strainer



FOLLOW-ON MAINTENANCE:

None

END OF TASK

6-3 CLEAN FUEL CONTROL

6-3

INITIAL SETUP

Applicable Configurations:

All

Tools:

- Goggles
- Compressed Air Source

Materials:

- Dry Cleaning Solvent (E17)
- Gloves (E20)
- Wiping Rag (E58)

Personnel Required:

68B10 Aircraft Powerplant Repairer

Equipment Condition:

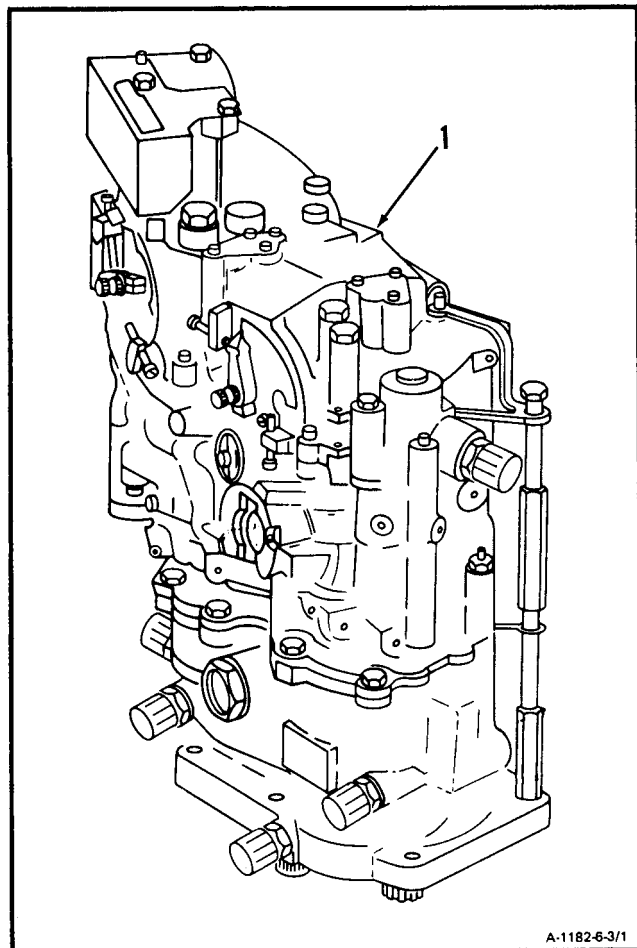
- Off Engine Task
- Fuel Control Removed (Task 6-1)
- Fuel Control Disassembled (Task 6-2)

General Safety Instructions:

WARNING

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

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



A-1182-6-3/1

GO TO NEXT PAGE

6-3 CLEAN FUEL CONTROL (Continued)

6-3

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

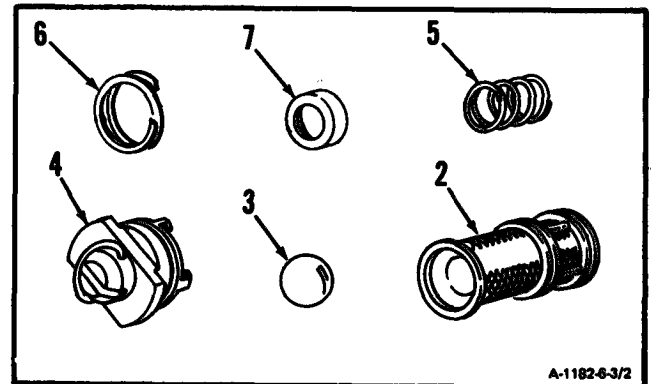
WARNING

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

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

FOLLOW-ON MAINTENANCE:

Inspect Fuel Control (Task 6-4).

**END OF TASK**

6-4 INSPECT FUEL CONTROL

6-4

INITIAL SETUP

Applicable Configurations:

All

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

None

Personnel Required:

68B30 Aircraft Powerplant Inspector

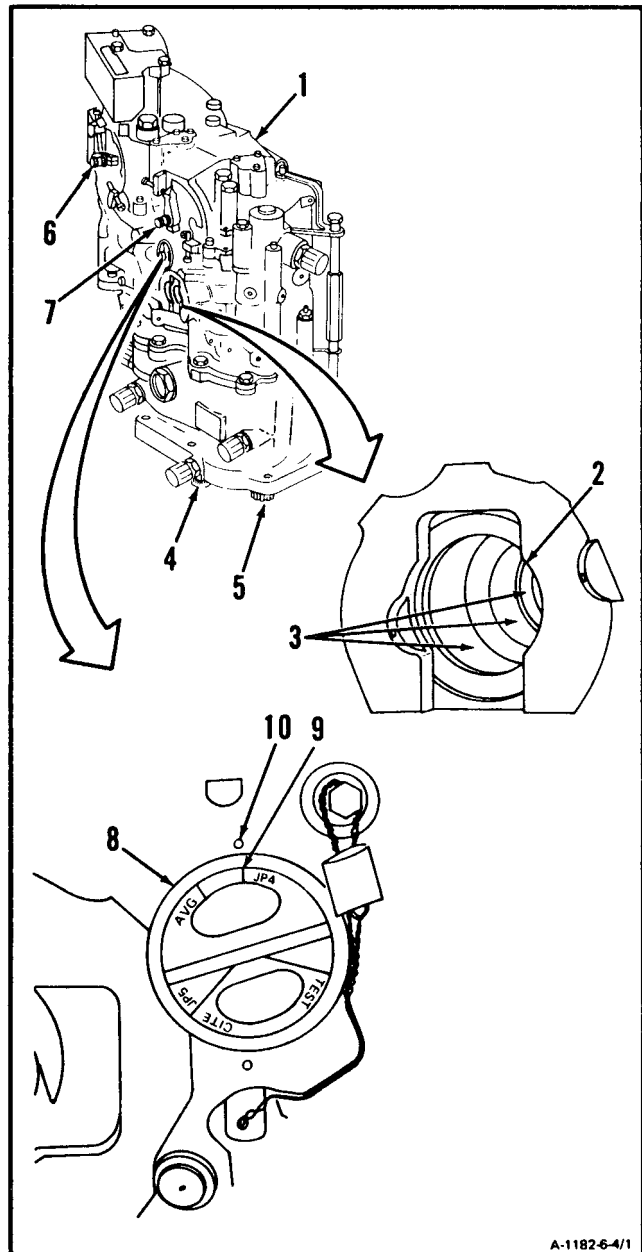
References:

Task 1-118

Equipment Condition:

Off Engine Task

1. **Inspect fuel control housing (1).** There shall be no cracks. There shall be no evidence of leakage.
 - a. Inspect filter cavity (2). There shall be no nicks, dents or scratches deeper than 0.010 inch on three packing sealing surfaces (3).
 - b. Inspect splines (4 and 5). (Ref. Task 1-118). There shall be no wear deeper than 0.007 inch on splines (4 and 5).
 - c. Inspect levers (6 and 7). They shall not be missing, broken or loose.
 - d. Inspect fuel selector (8). Make sure JP4 index line (9) is aligned with index point (10).



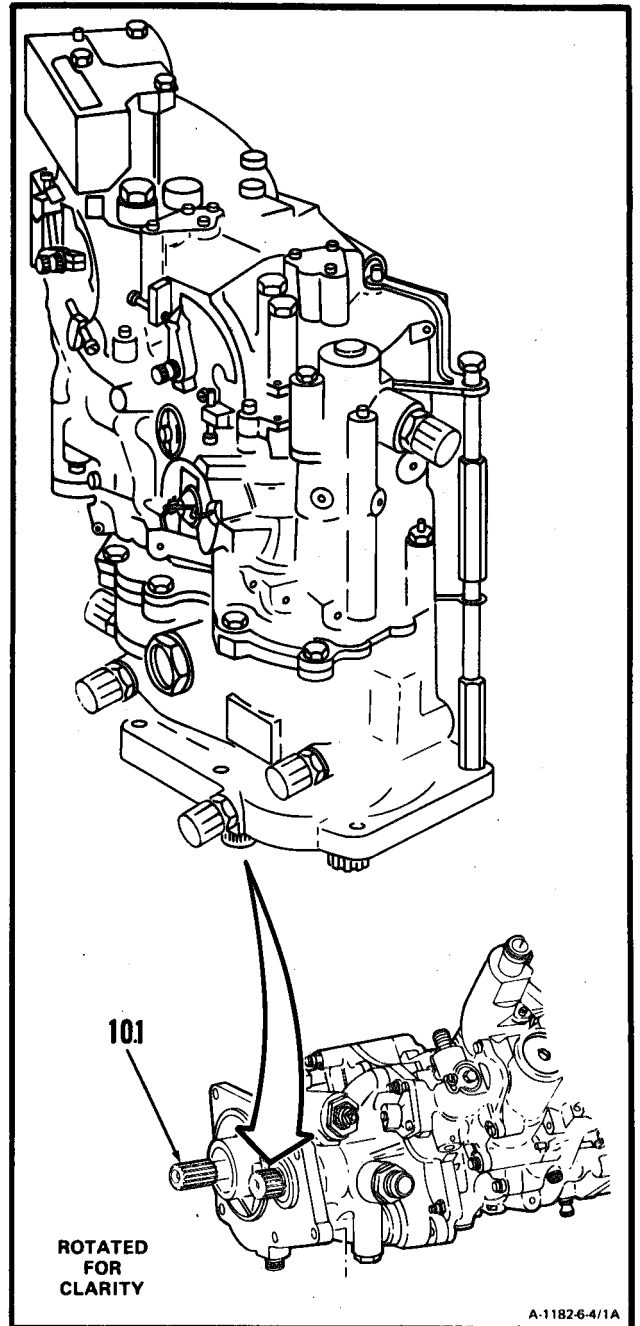
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6-4 INSPECT FUEL CONTROL (Continued)

6-4

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

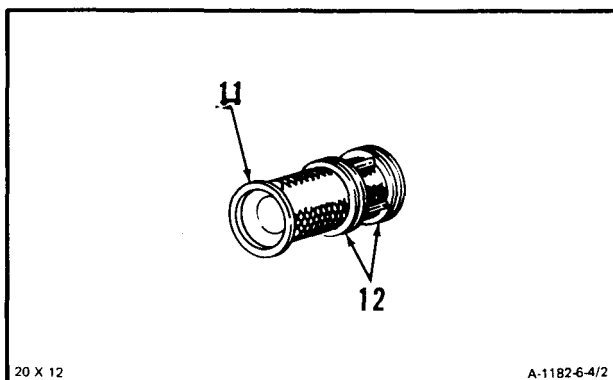


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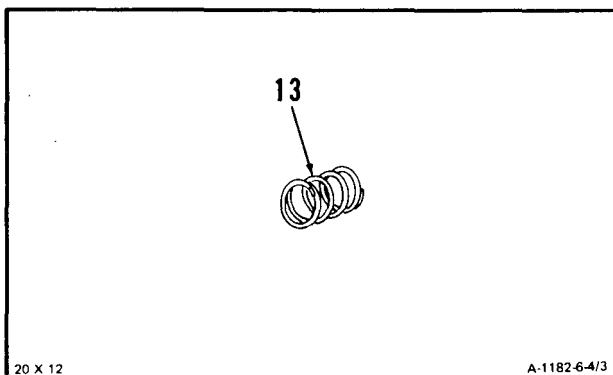
6-4 INSPECT FUEL CONTROL

6-4

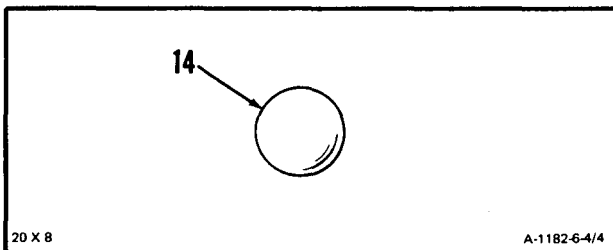
2. **Inspect strainer element (11).** There shall be no tears, punctures, or broken wires in screen. There shall be no nicks, dents or scratches deeper than 0.010 inch in two packing grooves (12).



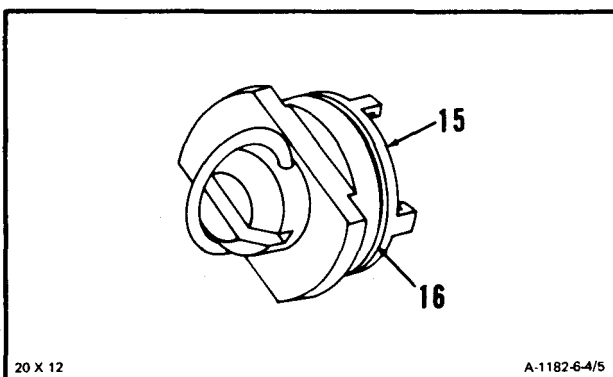
3. **Inspect spring (13).** There shall be no broken coils.



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



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



FOLLOW-ON MAINTENANCE:

None

END OF TASK

6-4.1 REPAIR FUEL CONTROL

6-4.1

INITIAL SETUP

Equipment Condition:

Off Engine Task

Applicable Configurations:

All

General Safety Instructions:**Tools:**

Powerplant Mechanic's Tool Kit

NSN 5180-00-323-4944

Technical Inspection Tool Kit,

NSN 5180-00-323-5114

Retaining Ring Pliers

WARNING**Materials:**

None

Parts:

Packing

Packing

Ring and Seal Assembly

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

Personnel Required:

68B10 Aircraft Powerplant Repairer

68B30 Aircraft Powerplant Inspector

References:

TM 55-2840-254-23P

GO TO NEXT PAGE

NOTE

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

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

WARNING

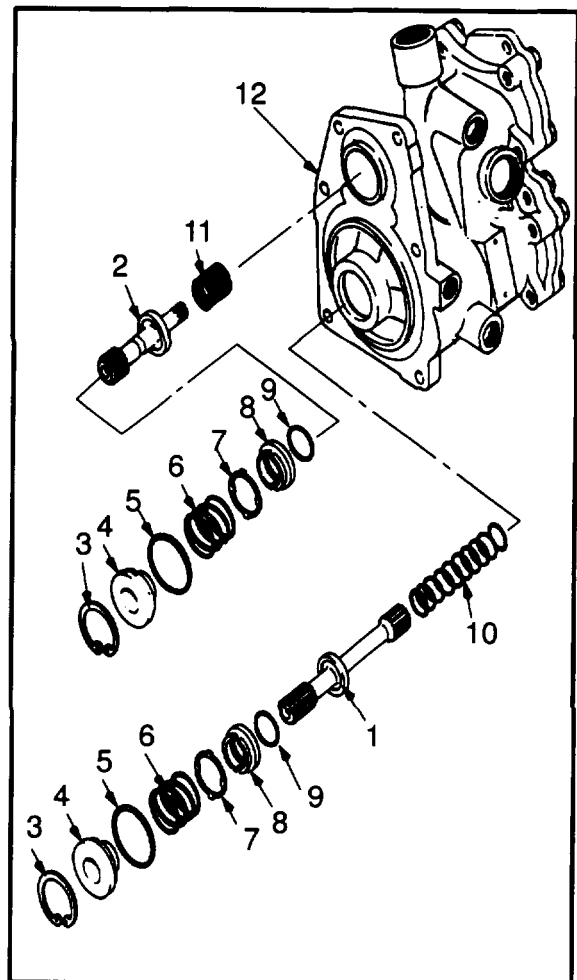
Use care when removing the retaining ring. The seal retainer is spring loaded and exerts approximately 4.5 pounds of force.

- a. Using retaining ring pliers remove retaining ring (3) from housing (12).
- b. Remove shouldered shaft (1) or (2). If spring (10) or (11) is removed with the shaft, reinstall the spring in housing (12).
- c. Remove packing retainer (4), packing (5), spring (6), key washer (7), seal ring assembly (8), and packing (9) from the shaft. Discard packings (5) and (9) and the seal ring assembly (8).

CAUTION

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

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



GO TO NEXT PAGE

6-4.1 REPAIR FUEL CONTROL

6-4.1

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

WARNING

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

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

INSPECT

FOLLOW-ON MAINTENANCE:

None

END OF TASK

Change 6 18.3/(6-18.4 blank)

6-5 ASSEMBLE FUELCONTROL

6-5

INITIAL SETUP**Applicable Configurations:**

All

Tools:

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

Materials:

Lockwire(E29)

Parts:

Packings

Personnel Required:

68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

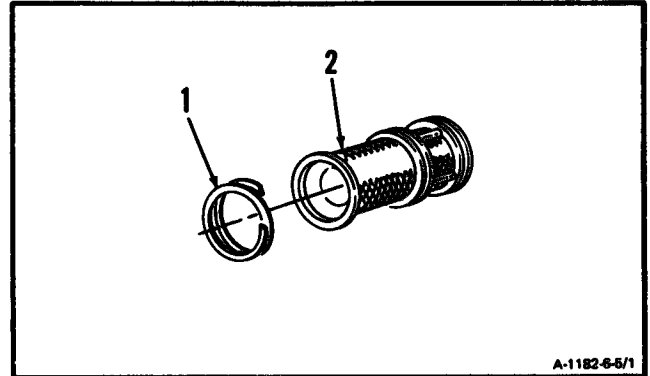
References:

TM 55-2840-254-23P

Equipment Condition:

Off Engine Task

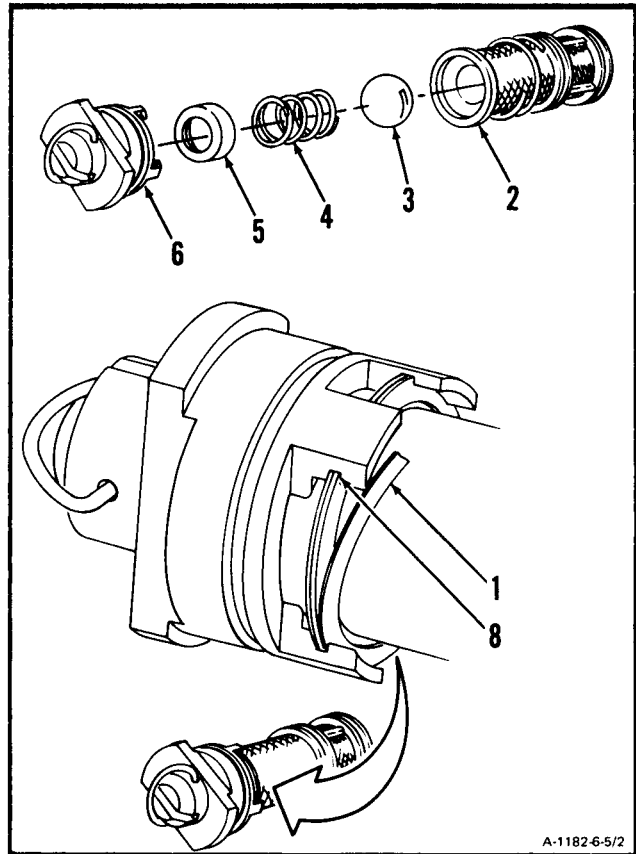
1. Slide retaining ring (1) on strainer (2).

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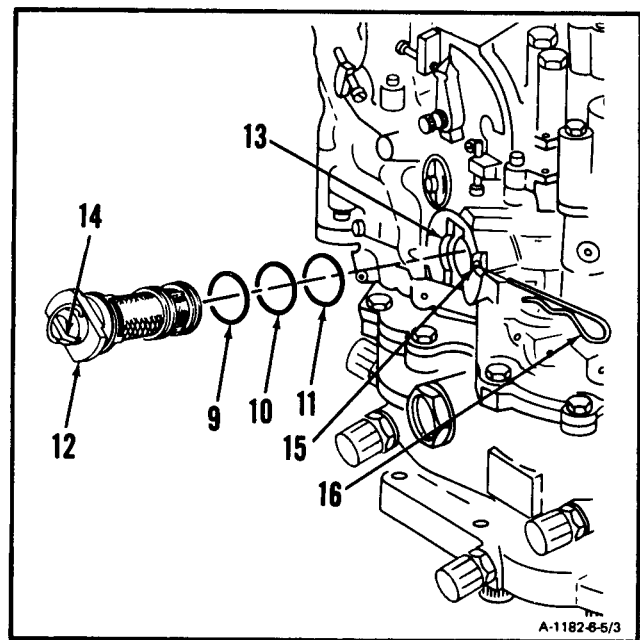
6-5 ASSEMBLE FUEL CONTROL (Continued)

6-5

2. Install ball (3), spring (4), retainer (5), and cover (6) on strainer (2).
3. Push bottom end of retaining ring (1) into cover groove (8) and install retaining ring.



4. Install packings (9, 10, and 11) on filter (12).
5. Push filter (12) into fuel control (13). Rotate filter (12) clockwise, 90 degrees, and align filter (12) and lockpin slot (14) with fuel control lockpin hole (15).
6. Install lockpin (16) and lockwire. Use lockwire (E29).



INSPECT

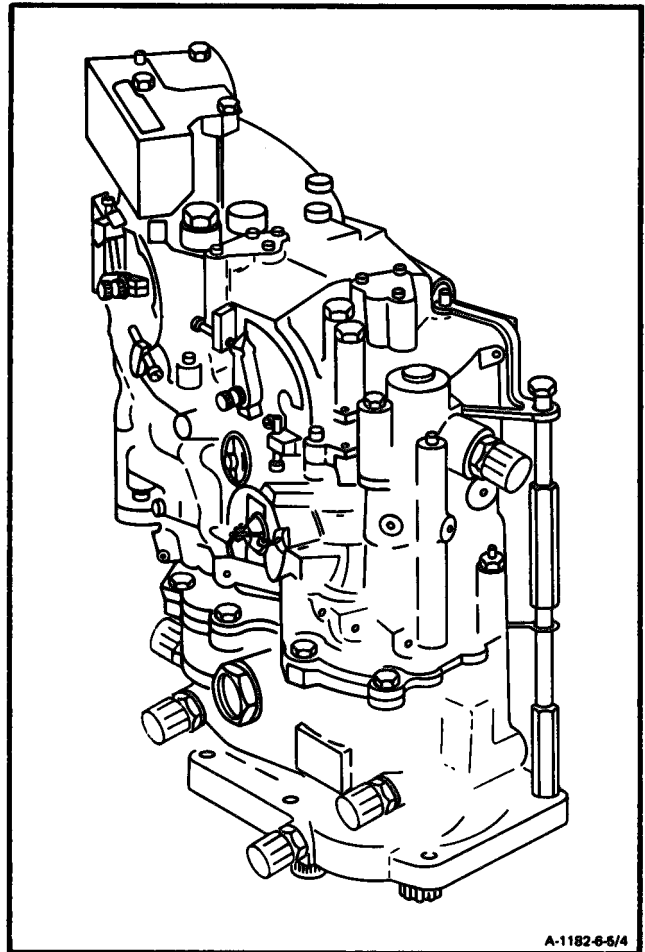
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6-5 ASSEMBLE FUEL CONTROL (Continued)

6-5

FOLLOW-ON MAINTENANCE:

None

**END OF TASK**

6-6 INSTALL FUEL CONTROL

6-6

INITIAL SETUP

Applicable Configurations:

All

Tools:

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

Materials:

Lockwire (E29)
Lubricant (E30)

Parts:

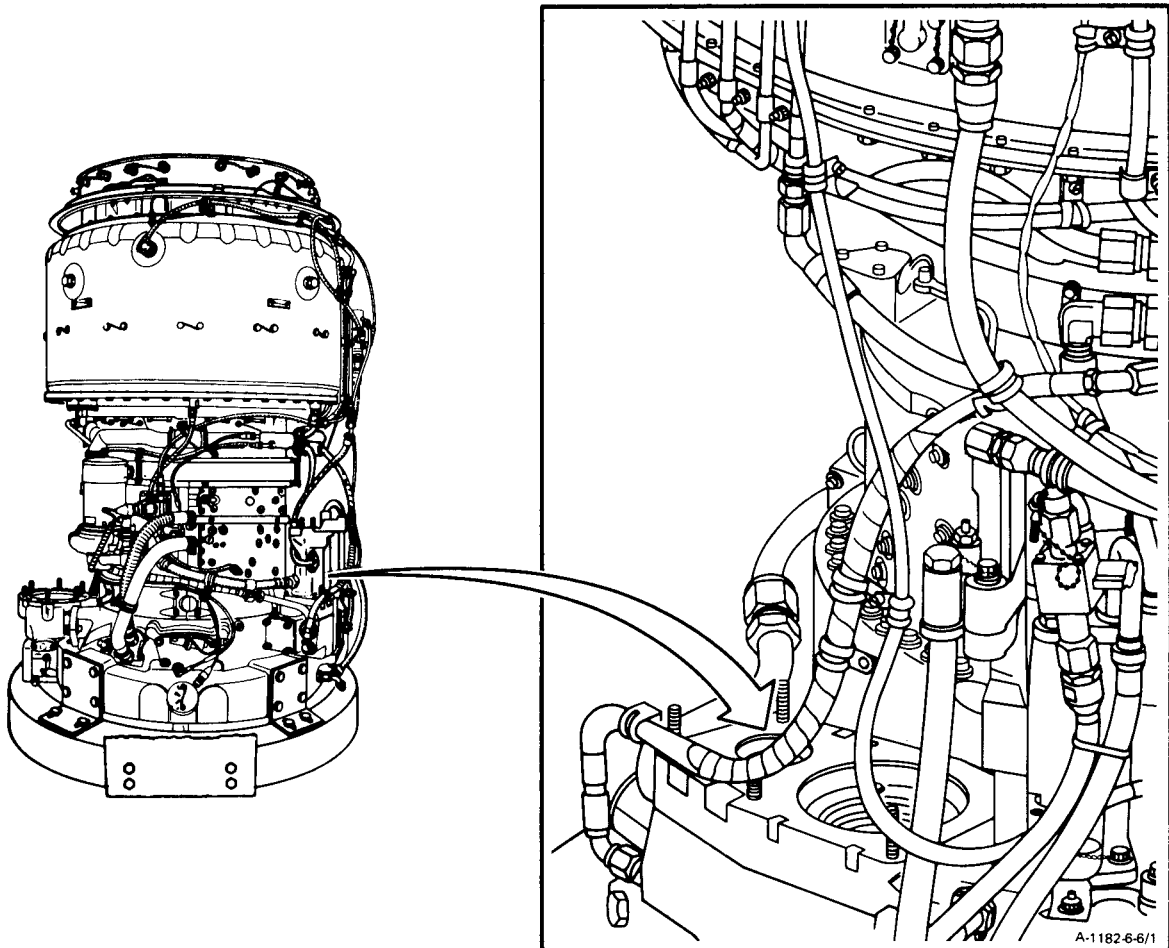
Gasket

Personnel Required:

68B10 Aircraft Powerplant Repairer (2)
68B30 Aircraft Powerplant Inspector

References:

TM 55-2840-254-23P



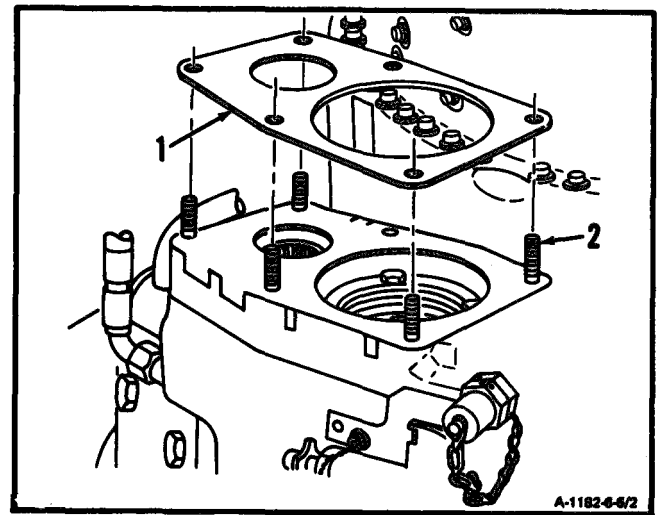
A-1182 6-6/1

GO TO NEXT PAGE

6-6 INSTALL FUEL CONTROL (Continued)

6-6

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



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6-6 INSTALL FUEL CONTROL (Continued)

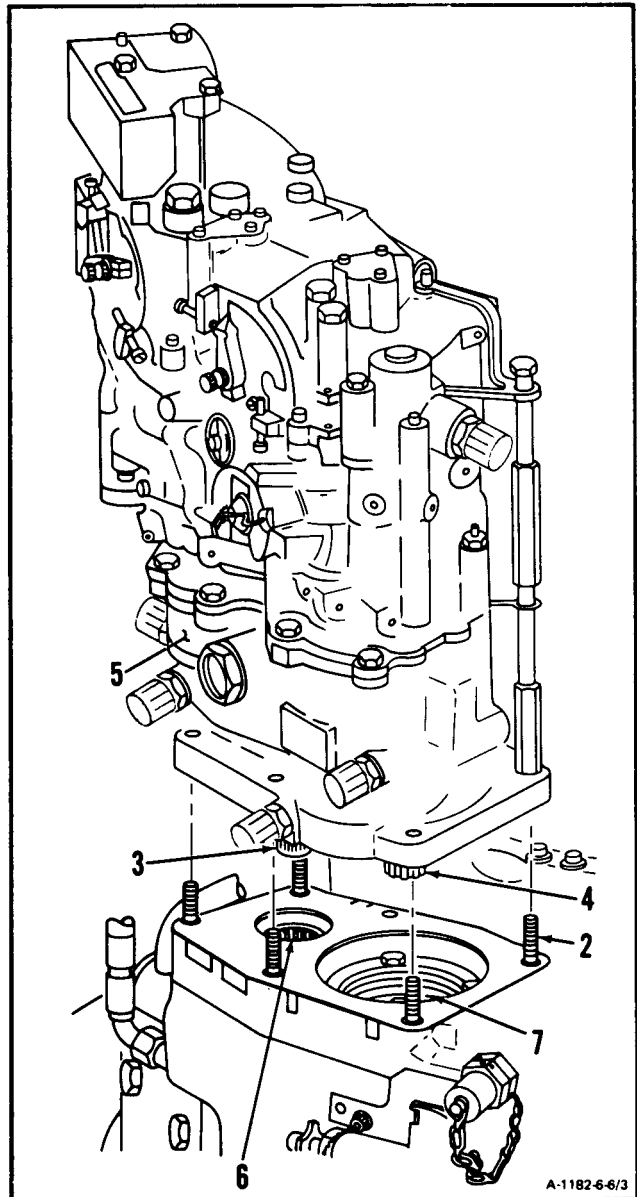
6-6

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

NOTE

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

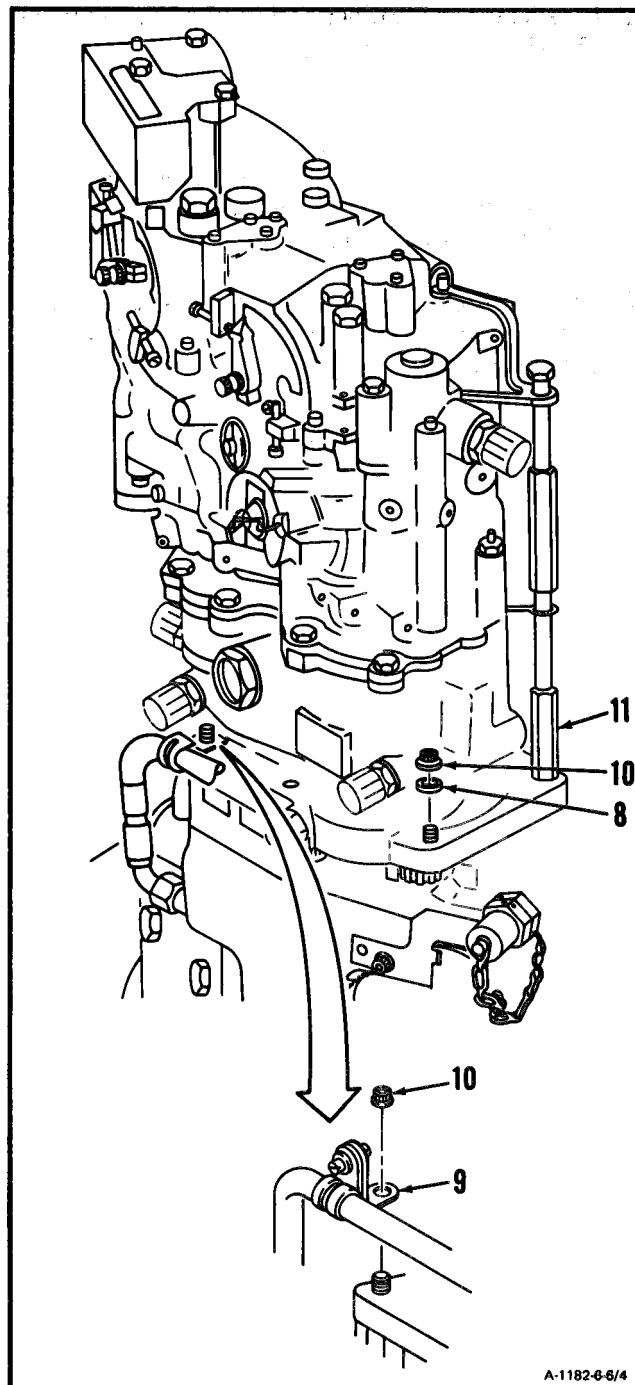
3. Position fuel control (5) onto studs (2), carefully meshing fuel control splines (3 and 4) with accessory drive gearbox splines (6 and 7).

**GO TO NEXT PAGE**

6-6 INSTALL FUEL CONTROL (Continued)

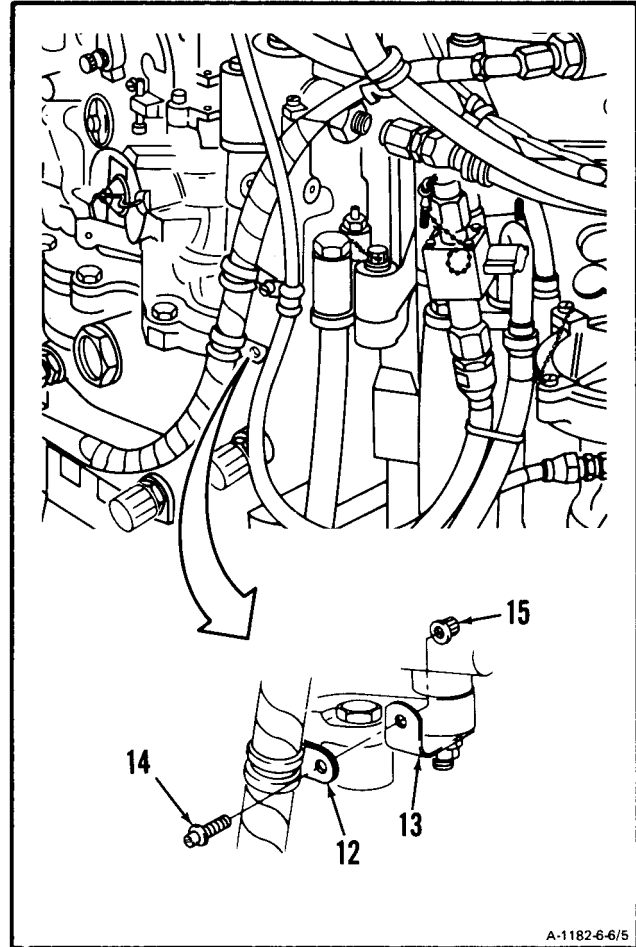
6-6

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

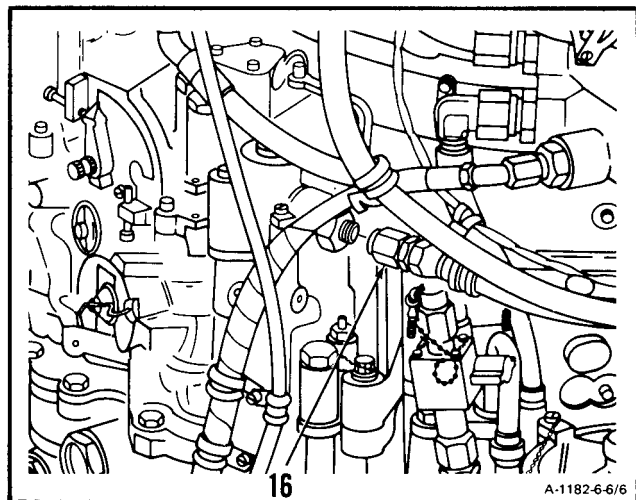


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5. Position clamp (12) on bracket (13), and install bolt (14) and nut (15).



6. Install hose assembly (16).



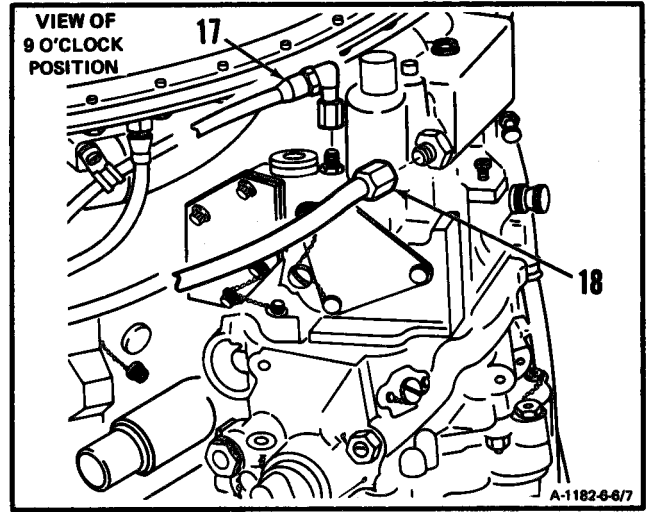
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6-6 INSTALL FUEL CONTROL (Continued)

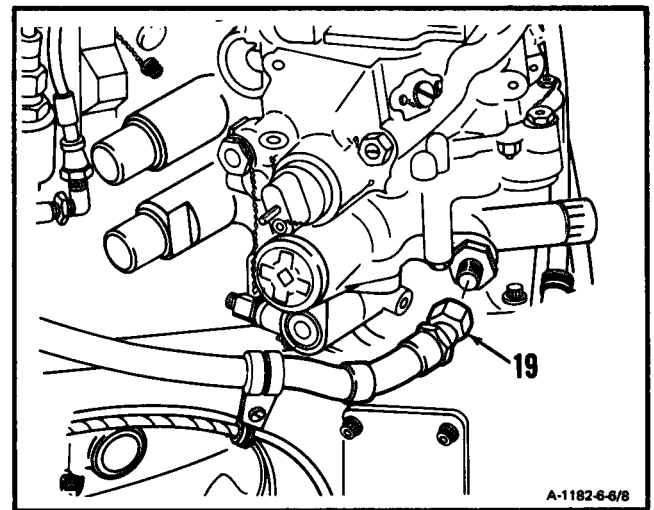
6-6

7. Install hose assembly (17).

8. Install hose assembly (18).

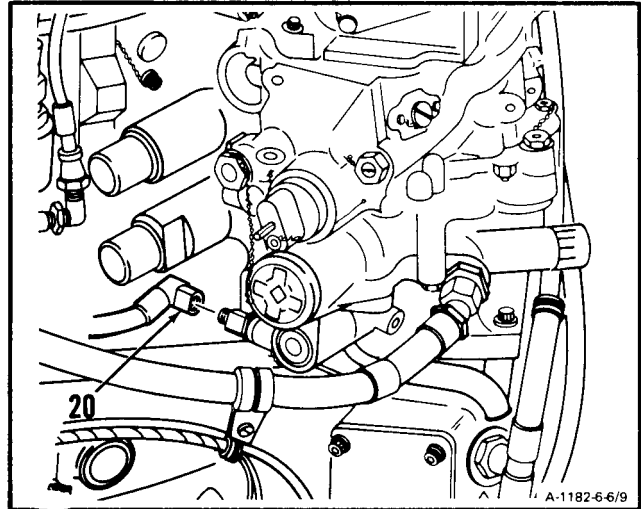


9. Install hose assembly (19).



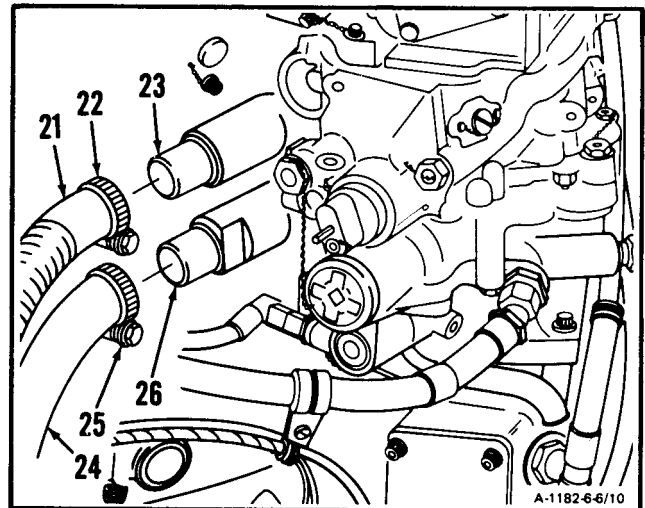
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10. Install hose assembly (20).



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

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



INSPECT

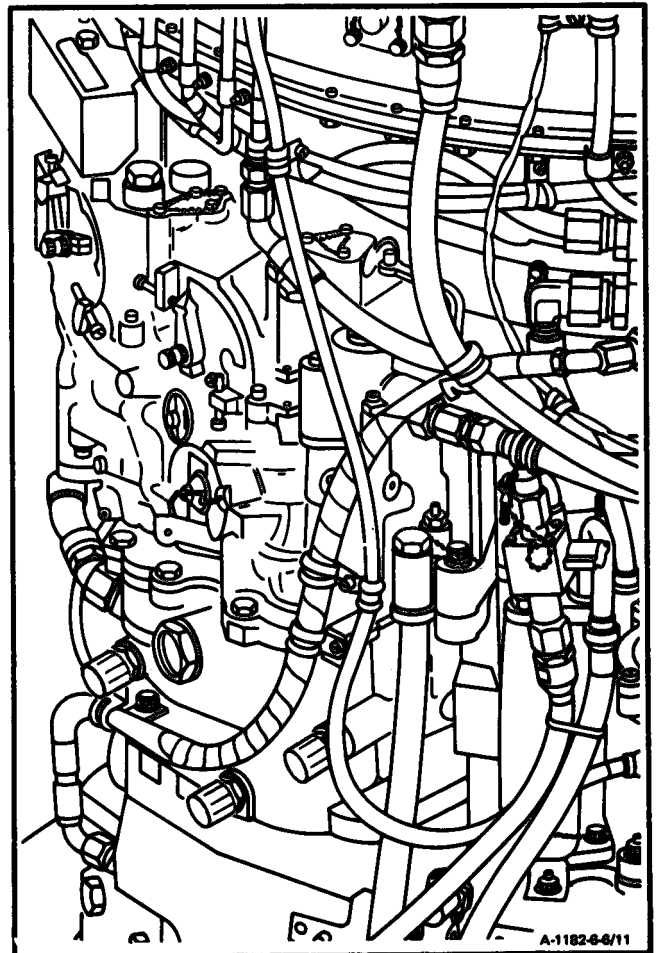
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6-6 INSTALL FUELCONTROL(Continued)

6-6

FOLLOW-ON MAINTENANCE:

Adjust Fuel Control (Task 1-108).

**END OF TASK**

Section II FUEL CONTROL - PREPARATION FOR STORAGE OR SHIPMENT

6-7 PRESERVE FUEL CONTROL

6-7

INITIAL SETUP

Applicable Configurations:

All

Tools:

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

Materials:

- High Pressure Caps
- Lubricating Oil (E31)

Personal Required:

- 681310 Aircraft Powerplant Repairer (2)

Equipment Condition:

- Off Engine Task
- Fuel Control Removal (Task 6-1)

General Safety Instructions:

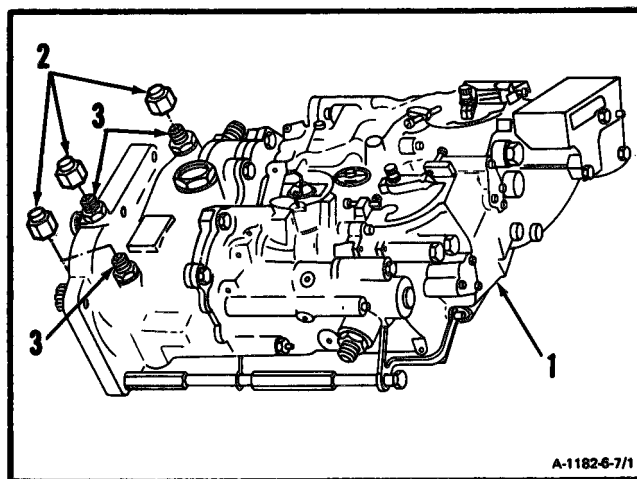
WARNING

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

NOTE

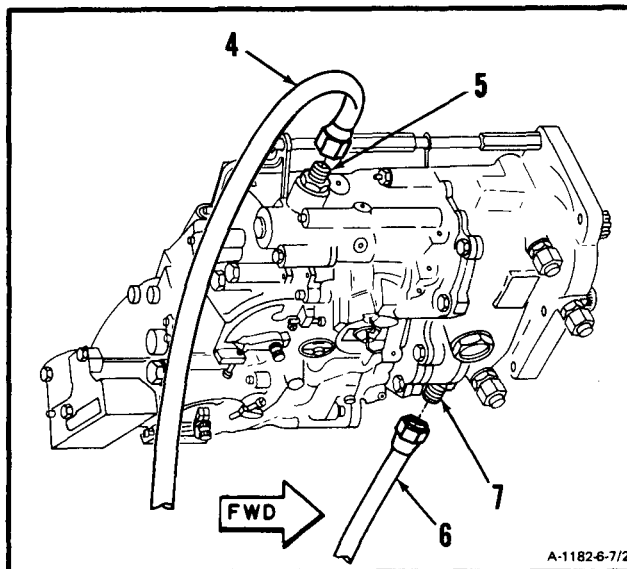
If fuel control is removed from engine and is not to be reinstalled for a period longer than 46 hours, it must be pre-Served.

1. Place fuel control (1) in horizontal position.
2. Install three high pressure caps (2) on three fittings (3).

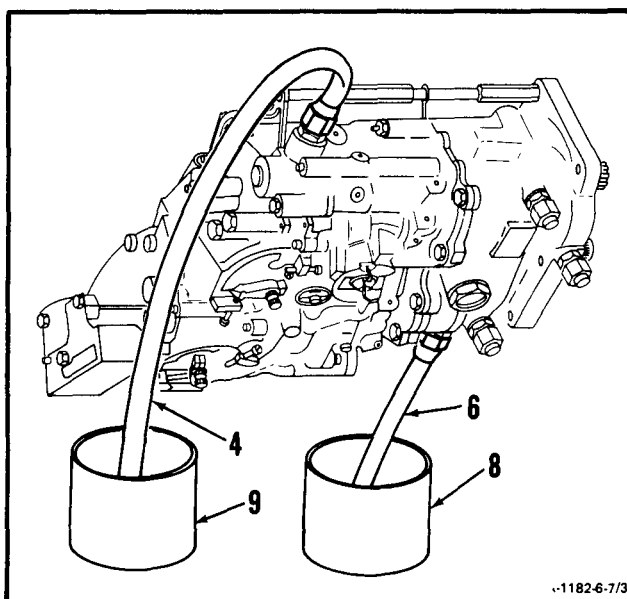


GO TO NEXT PAGE

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



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

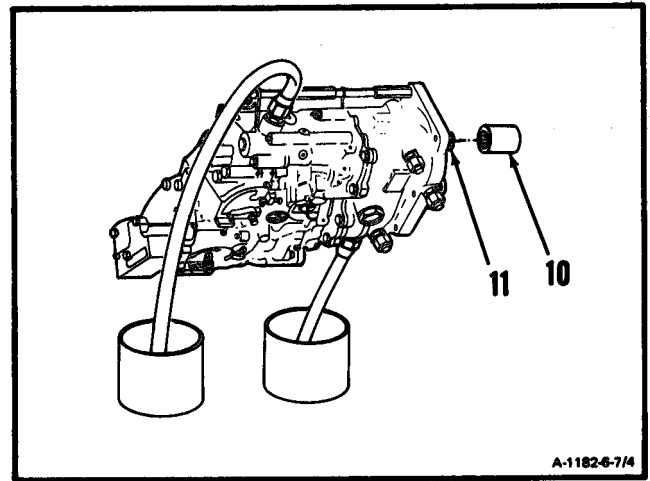


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6-7 PRESERVE FUEL CONTROL (Continued)

6-7

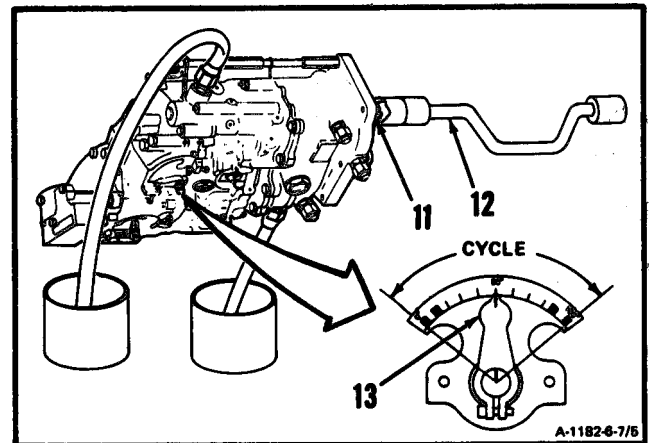
- 8.. Install 9/16 inch-12 point deep socket (10) on N1 drive spline (11).



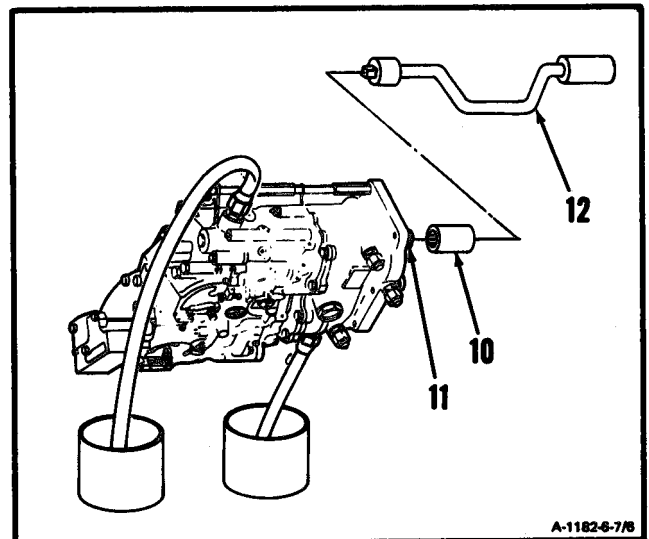
NOTE

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

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



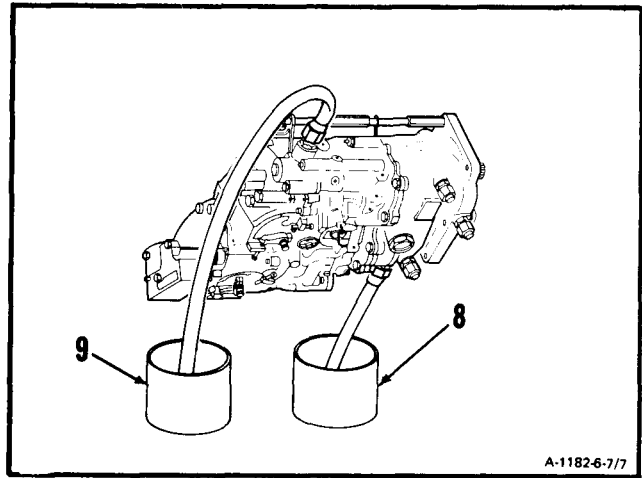
10. Remove socket wrench handle (12), and socket (10) from N1 drivespline(11).



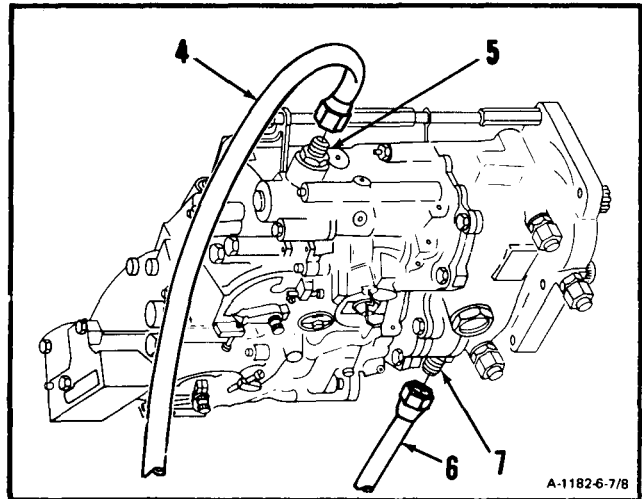
GO TO NEXT PAGE

6-7 PRESERVE FUEL CONTROL (Continued)

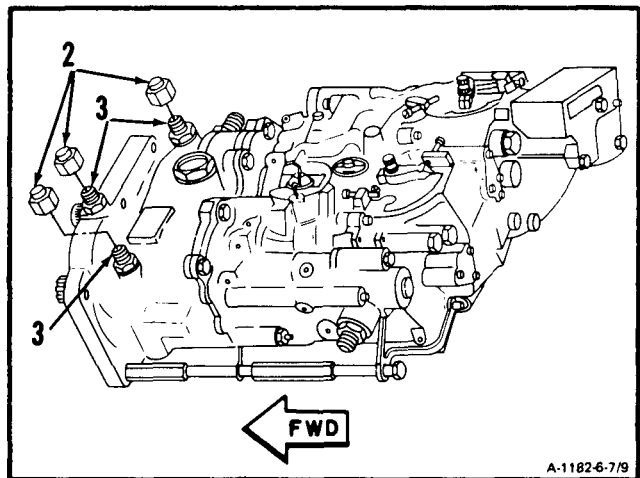
11. Remove two containers (8 and 9). Discard lubricating oil (E31) from container (9).



12. Remove hose assembly (Appendix E) (6) from fitting (7).
13. Remove hose assembly (Appendix E) (4) from fitting (5).



14. Remove three high pressure caps (2) from three fittings (3).
15. Install caps and plugs on all openings to keep contaminants out of fuel control.



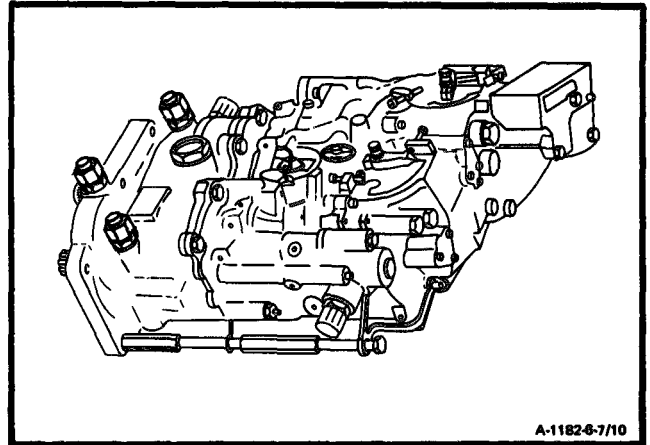
GO TO NEXT PAGE

6-7 PRESERVE FUEL CONTROL (Continued)

6-7

FOLLOW-ON MAINTENANCE:

Package Fuel Control (Task 6-8).

**END OF TASK**

6-8 PACKAGE FUEL CONTROL

6-8

INITIAL SETUP

Applicable Configurations:

All

Tools:

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

Materials:

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

Personnel Required:

68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

Equipment Condition:

Off Engine Task
Fuel Control Preserved (Task 6-7)

References:

TB 55-8100-200-25

GO TO NEXT PAGE

6-6 PACKAGE FUEL CONTROL (Continued)

6-6

1. Install molded bottom (1) in container (2).
2. Wrap fuel control (3) securely with barrier material (E6).

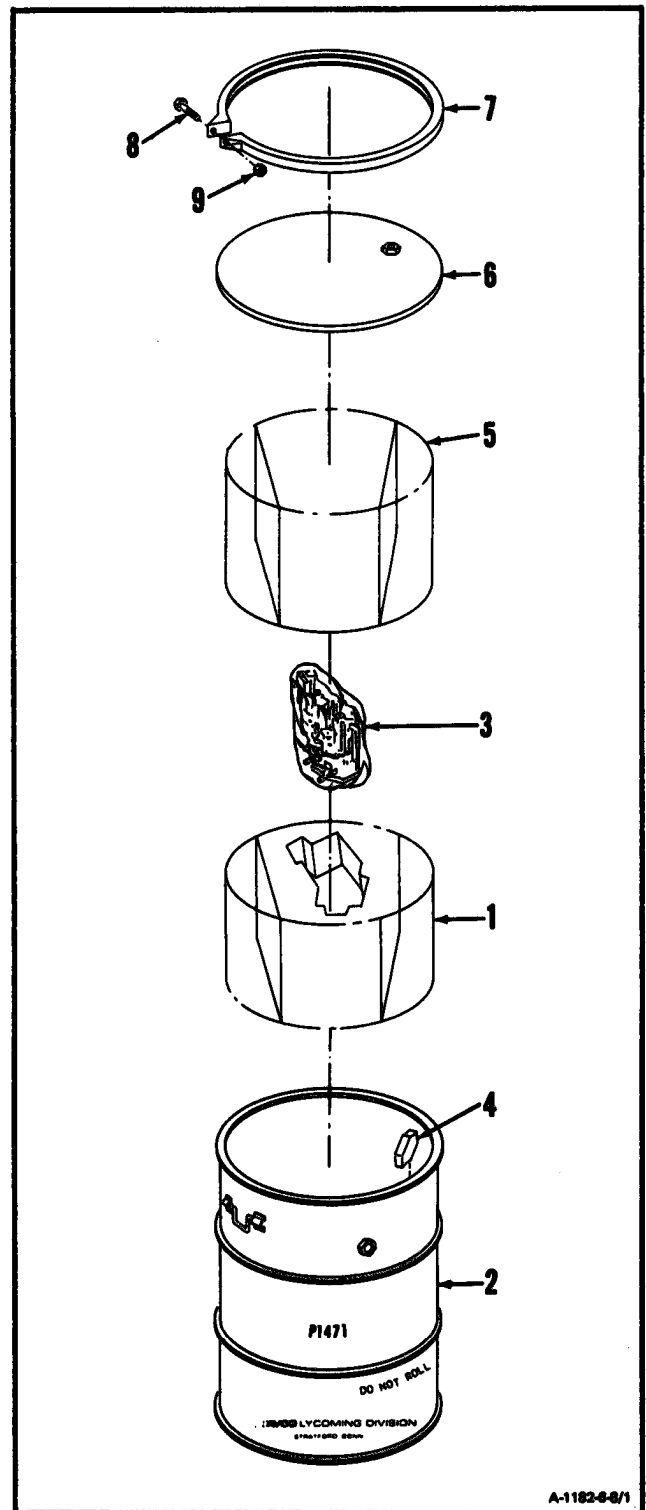
NOTE

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

3. Install fuel control (3) in molded bottom (1). install historical record.
4. Install 3 bags of desiccant (E16) (4) in container (2).
5. Install molded top support (5) on fuel control (3).

INSPECT

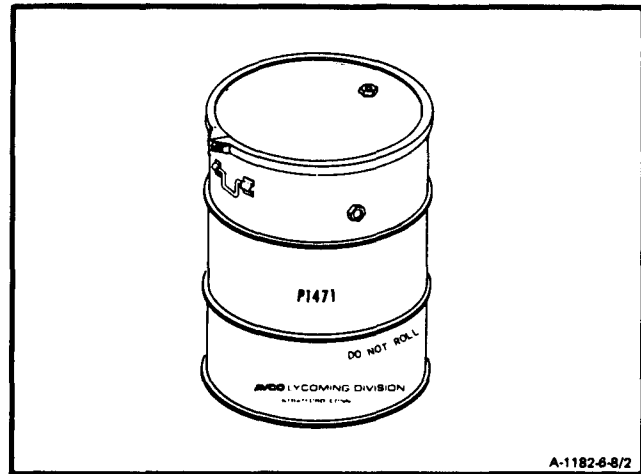
6. Install lid (6) on container (2).
7. Install closure ring (7) around lid (6) and metal shipping container (2).
8. Install bolt (8) and nut (9).

INSPECT**GO TO NEXT PAGE**

A-1182-6/1

FOLLOW-ON MAINTENANCE:

None



END OF TASK

Section III. FUEL BOOST PUMP ASSEMBLY – MAINTENANCE PROCEDURES

6-9 REMOVE FUEL BOOST PUMP ASSEMBLY

6-9

INITIAL SETUP

*General Safety Instructions:***Applicable Configurations:**

All

Tools:

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

Materials:

Wiping Rag(E58)

Personal Required:

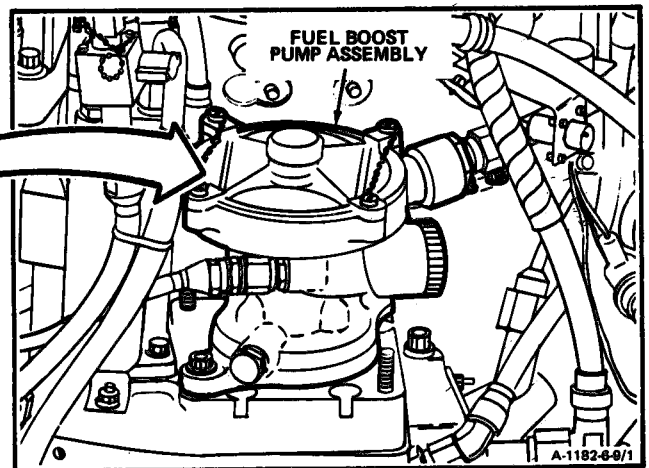
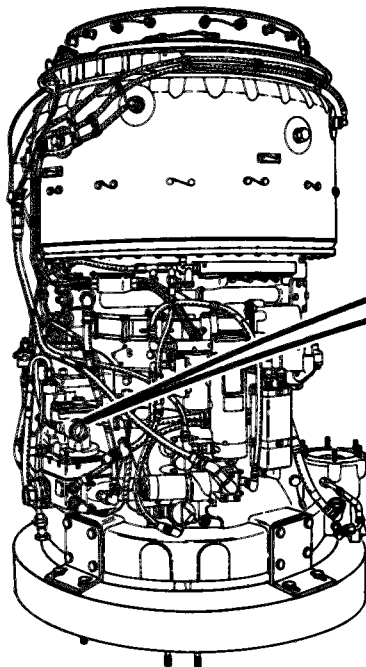
68B10 Aircraft Powerplant Repairer

References:

Task 6-11

WARNING

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



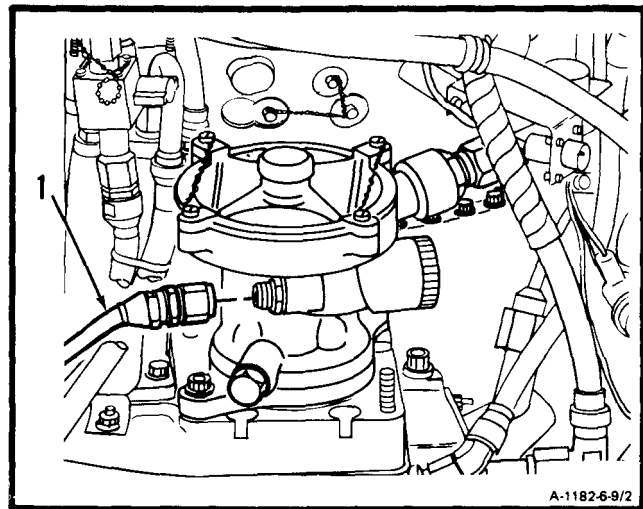
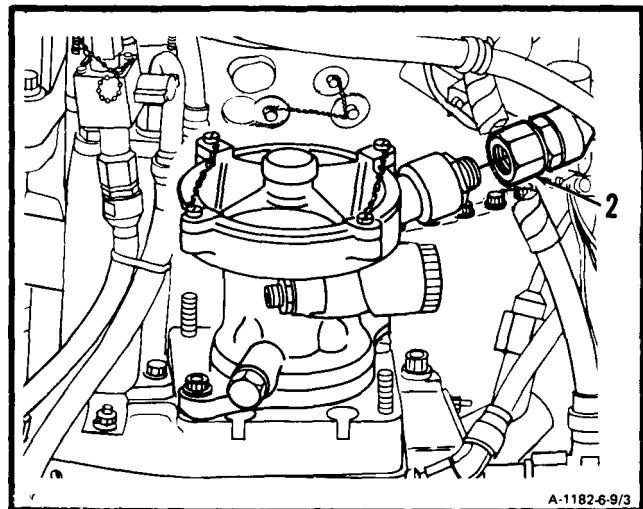
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6-9 REMOVE FUEL BOOST PUMP ASSEMBLY (Continued)

6-9

NOTE

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

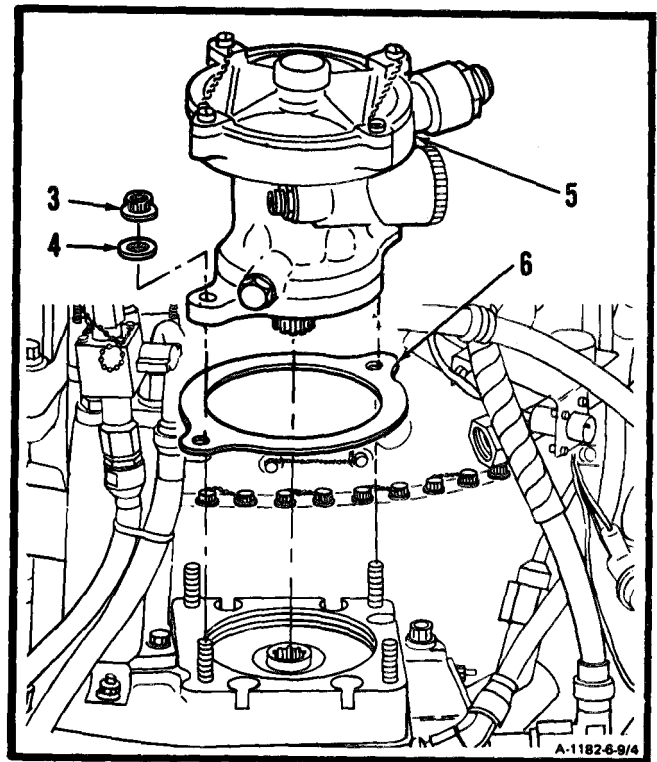
1. Disconnect hose assembly (1).**2. Disconnect hose assembly (2).**

GO TO NEXT PAGE

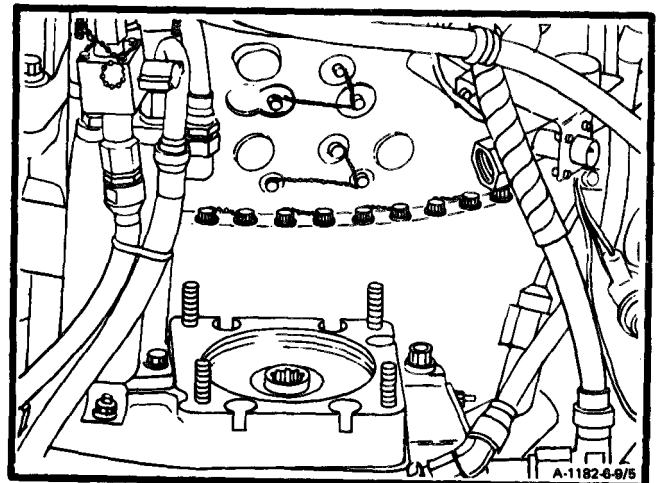
6-9 REMOVE FUEL BOOST PUMP ASSEMBLY (Continued)

6-9

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

**FOLLOW-ON MAINTENANCE:**

None

**END OF TASK**

6-41

INITIAL SETUP

*General Safety Instructions:***Applicable Configurations:**

All

Tools:

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

Materials:

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

Personnel Required:

68B10 Aircraft Powerplant Repairer

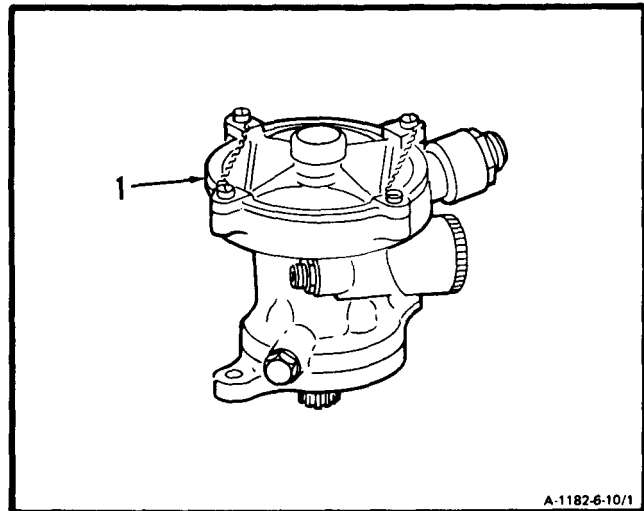
Equipment Condition:

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

WARNING

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

1. Wear gloves (E20). **Clean fuel boost pump assembly (1)**. Use dry cleaning solvent (E17) and brush.
2. **Remove any remaining solvent** with clean, lint-free cloth (E26).



FOLLOW-ON MAINTENANCE:

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

END OF TASK

6-11 INSPECT FUEL BOOST PUMP ASSEMBLY

6-11

INITIAL SETUP**Applicable Configurations:**

All

Tools:

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

Materials:

None

Personnel Required:

68B30 Aircraft Powerplant Inspector

References:

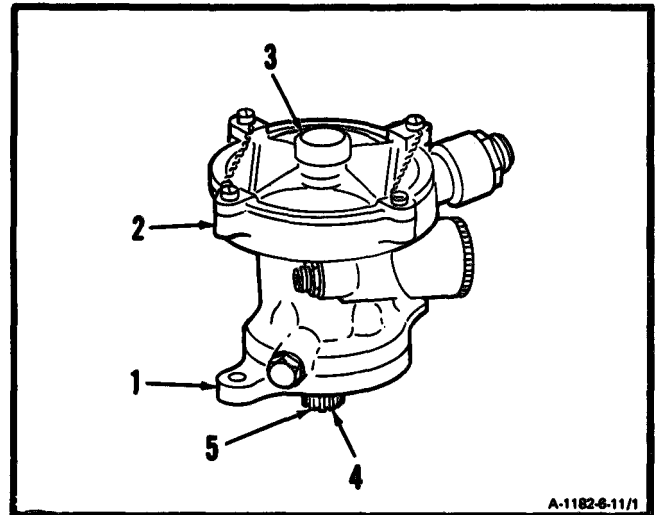
Task 1-118

Equipment Condition:

Off Engine Task

1. Inspect fuel boost pump assembly (1).

- a. There shall be no cracks.
- b. There shall be no evidence of leakage between housing (2) and cover (3).
- c. Turn shaft (4). There shall be no binding, roughness, or evidence of leakage around shaft.
- d. Inspect spline (5) (Ref. Task 1-1 18). There shall be no wear deeper than 0.007 inch on spline (5).

**FOLLOW-ON MAINTENANCE:**

None

END OF TASK

6-12 REPAIR FUEL BOOST PUMP ASSEMBLY

6-12

INITIAL SETUP

Applicable Configurations:

All

Tools:

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

Materials:

Lockwire (E29)
Wiping Rag (E58)

Parts:

Packing

Personnel Required:

68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

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

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

References:

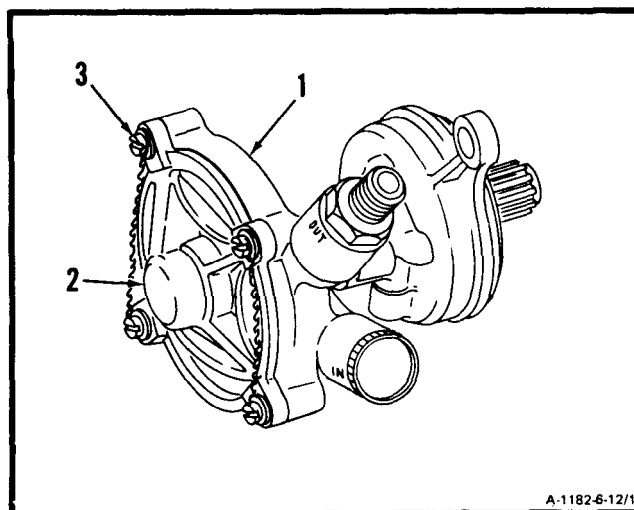
TM 55-2840-254-23P

Equipment Condition:

Off Engine Task

General Safety Instructions:**WARNING**

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

**GO TO NEXT PAGE**

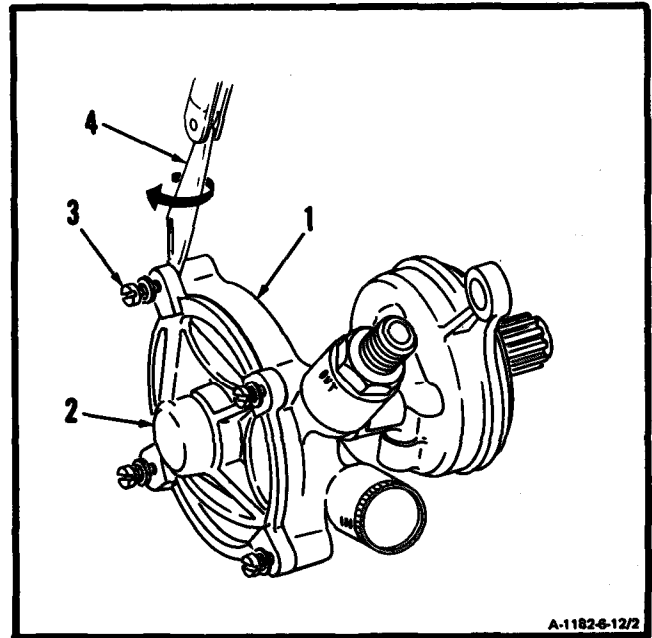
6-12 REPAIR FUEL BOOST PUMP ASSEMBLY (Continued)

6-12

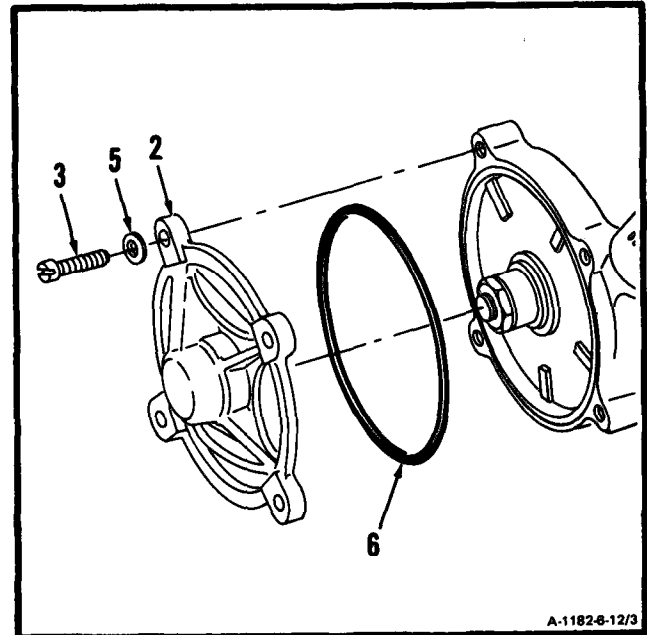
CAUTION

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

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

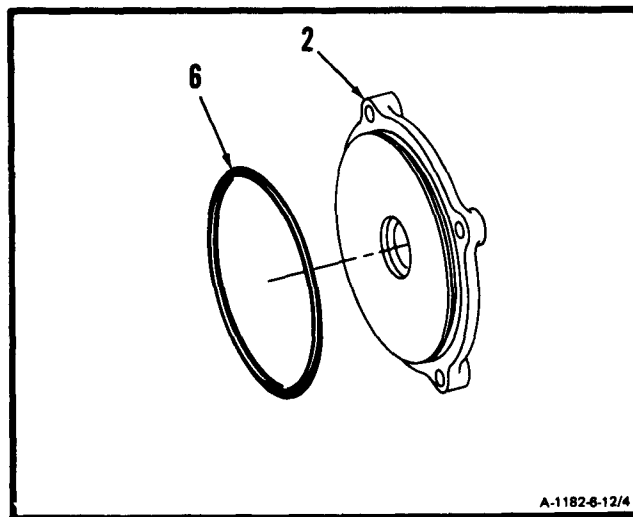


- c. Remove four screws (3), washers (5), cover (2), and packing (6).



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

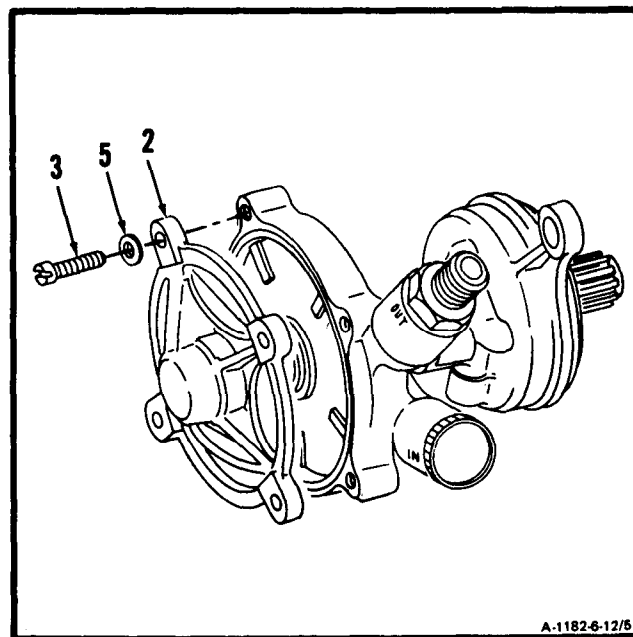


A-1182-6-12/4

CAUTION

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

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



A-1182-6-12/5

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6-12 REPAIR FUEL BOOST PUMP ASSEMBLY(Continued)

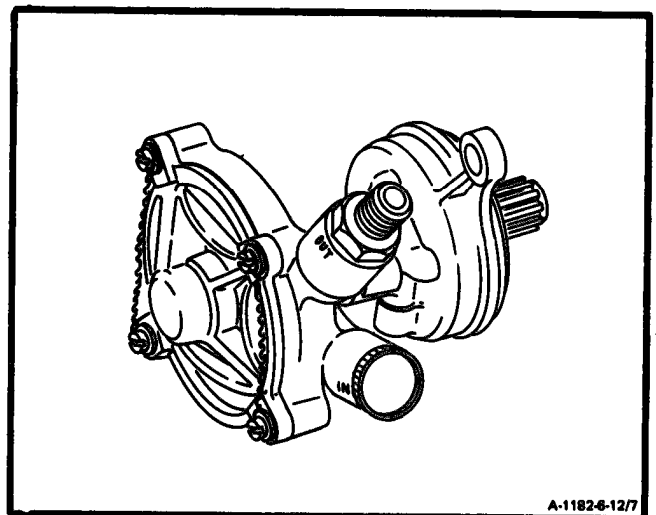
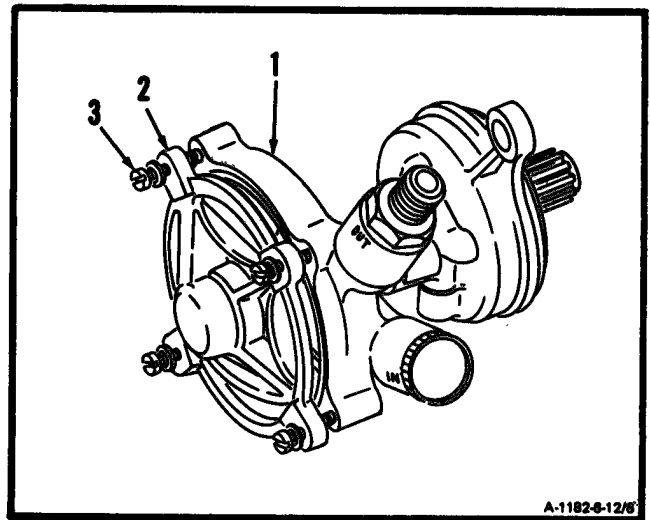
6-12

- f. Turn four screws (3) evenly until cover (2) is seated against housing (1).
- g. Torque four screws (3) to 25 inch-pounds and lockwire. Use lockwire (E29).

INSPECT

FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-13 INSTALL FUEL BOOST PUMP ASSEMBLY

INITIAL SETUP

Applicable Configurations:

All

Tools:

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

Materials:

Lubricant (E30)

Parts:

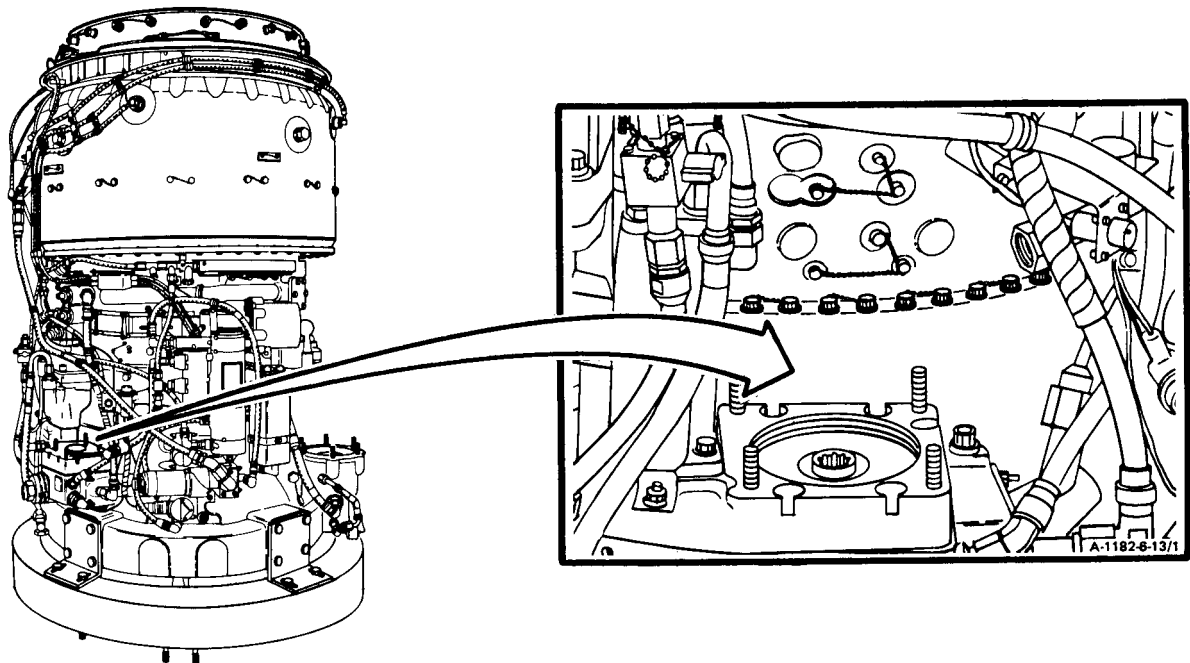
Gasket
Packings

Personnel Required:

68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

References:

TM 55-2840-254-23P



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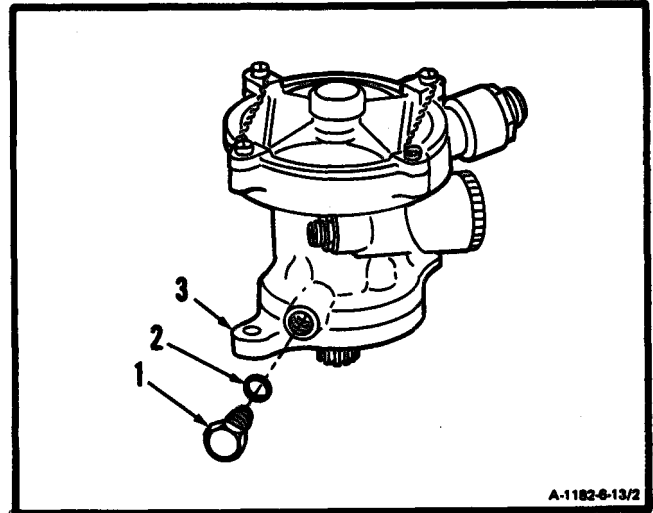
6-13 INSTALL FUEL BOOST PUMP ASSEMBLY (Continued)

6-13

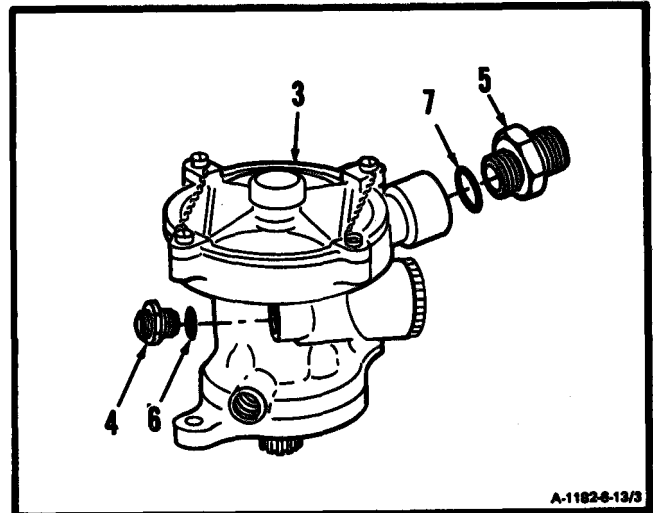
NOTE

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

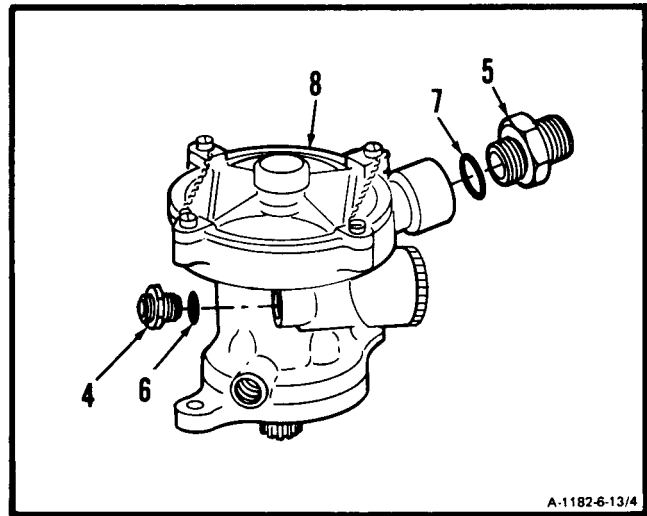
1. Remove plug (1) and packing (2) from removed fuel boost pump (3).



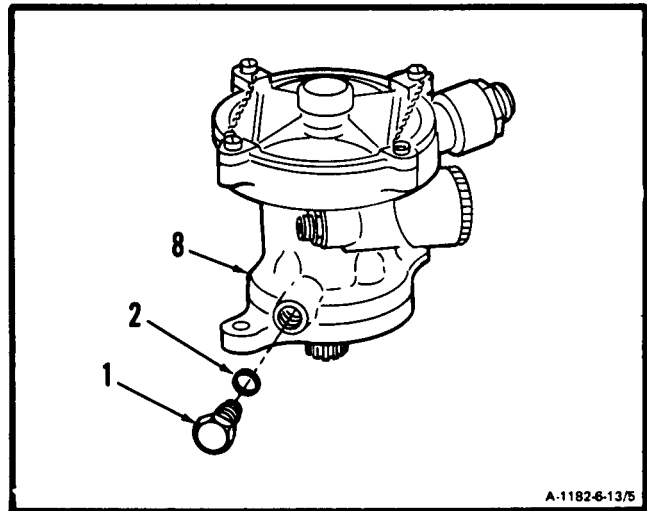
2. Remove nipples (4 and 5) and packings (6 and 7) from removed fuel boost pump (3).

**GO TO NEXT PAGE**

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



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



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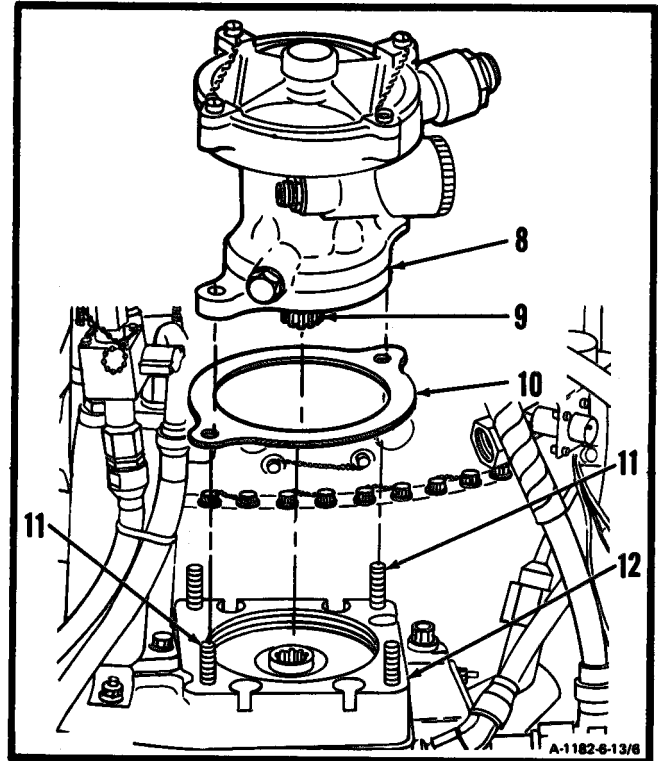
6-13 INSTALL FUEL BOOST PUMP ASSEMBLY (Continued)

6-13

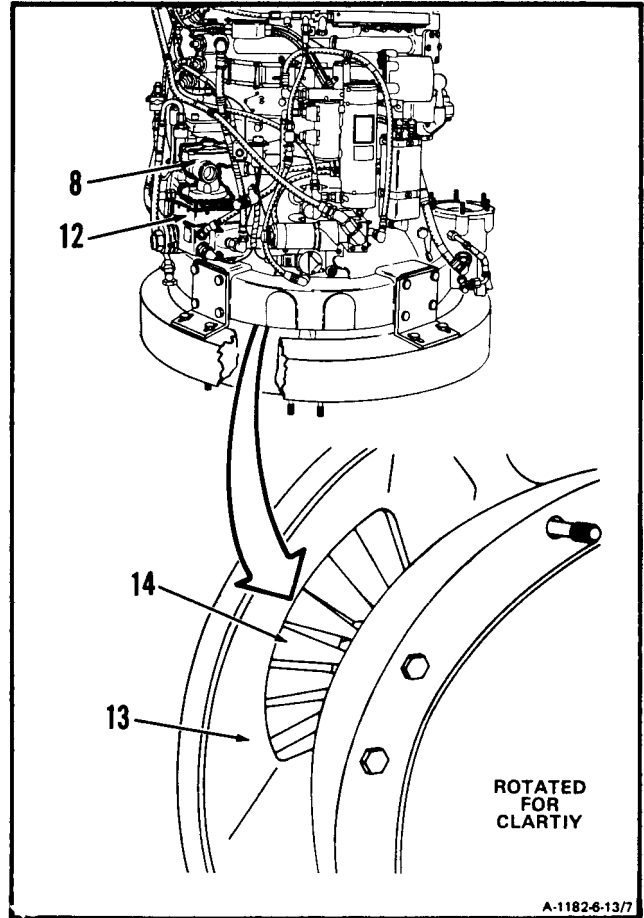
5. Apply lubricant (E30) to splines (9).
6. Install gasket (10) and fuel boost pump assembly (8) on studs (11) of accessory gearbox assembly (12).

NOTE

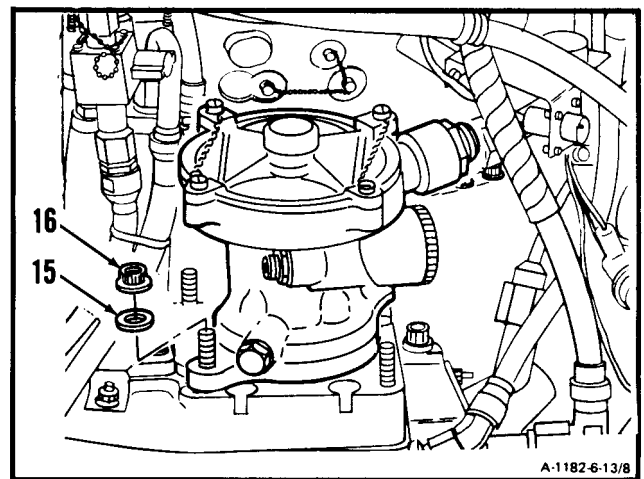
If splines of fuel boost pump shaft and accessory gearbox do not engage, do step 7. If splines do engage and pump assembly seats against gearbox assembly, skip step 7.

**GO TO NEXT PAGE**

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



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

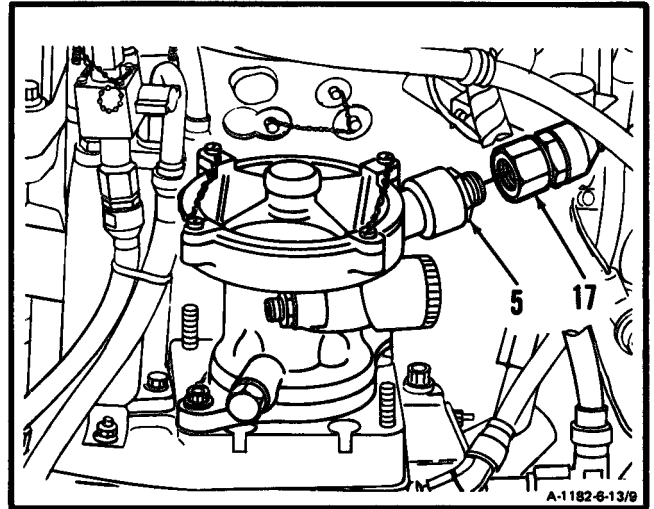


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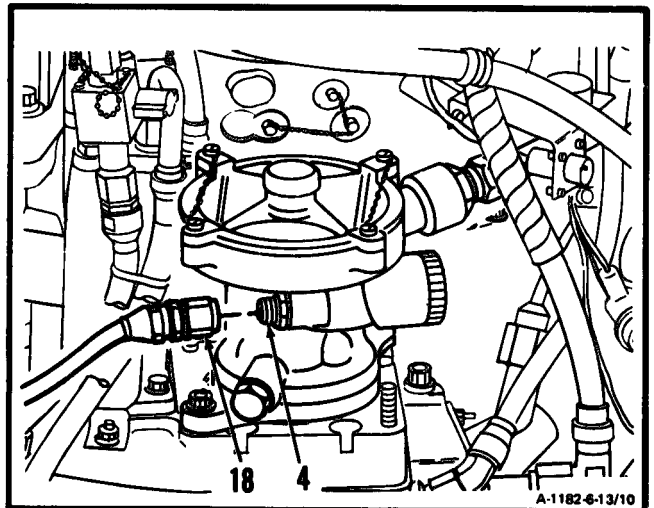
6-13 INSTALL FUEL BOOST PUMP ASSEMBLY (Continued)

6-13

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



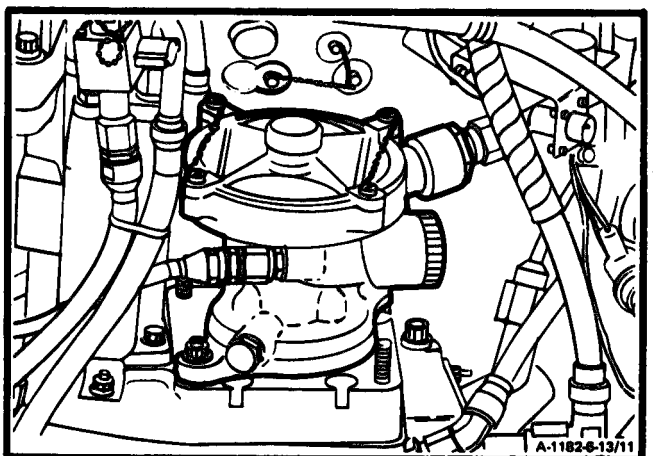
10. Connect hose assembly (18) to nipple (4).



INSPECT

FOLLOW-ON MAINTENANCE :

None



END OF TASK

Section IV. FUEL BOOST PUMP ASSEMBLY - PREPARATION FOR STORAGE OR SHIPMENT

6-14 PRESERVE FUEL BOOST PUMP ASSEMBLY

6-14

INITIAL SETUP**Applicable Configurations:**

All

Tools:

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

Materials:

Lubricating Oil (E31)
High Pressure Plugs

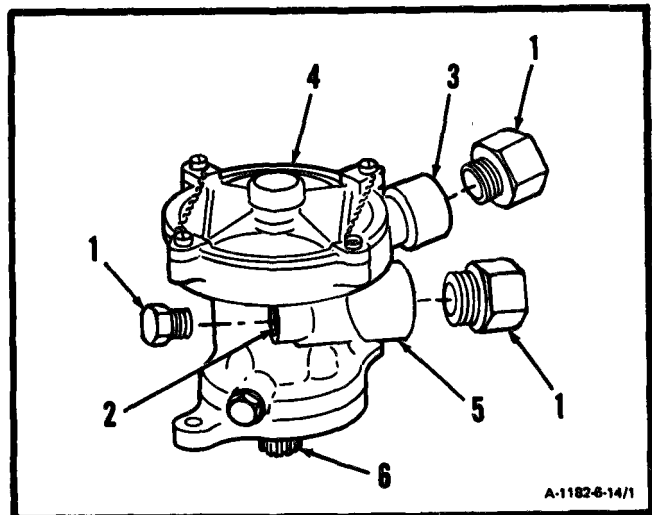
Personnel Required:

68B10 Aircraft Powerplant Repairer

Equipment Condition:

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

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

**FOLLOW-ON MAINTENANCE:**

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

END OF TASK

6-15 PACKAGE FUEL BOOST PUMP ASSEMBLY

6-15

INITIAL SETUP**Applicable Configurations:**

All

Tools:

None

Materials:

Barrier Material (E6)

Tape (E35)

Personnel Required:

68B10 Aircraft Powerplant Repairer

Equipment Condition:

Fuel Boost Pump Assembly Removed

(Task 6-9)

Fuel Boost Pump Assembly Preserved

(Task 6-14)

-
- 1. Wrap fuel boost pump** securely with barrier material (E6).
 - 2. Install fuel boost pump** in suitable fiberboard box.
 - 3. Package fiberboard box** securely to allow no movement of fuel boost pump.
 - 4. Seal box** with tape (E35).

FOLLOW-ON MAINTENANCE:

None

END OF TASK

Section V. LEFT-AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES -
 MAINTENANCE PROCEDURES

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

6-16

INITIAL SETUP

Applicable Configurations:

All

Tools:

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

Materials:

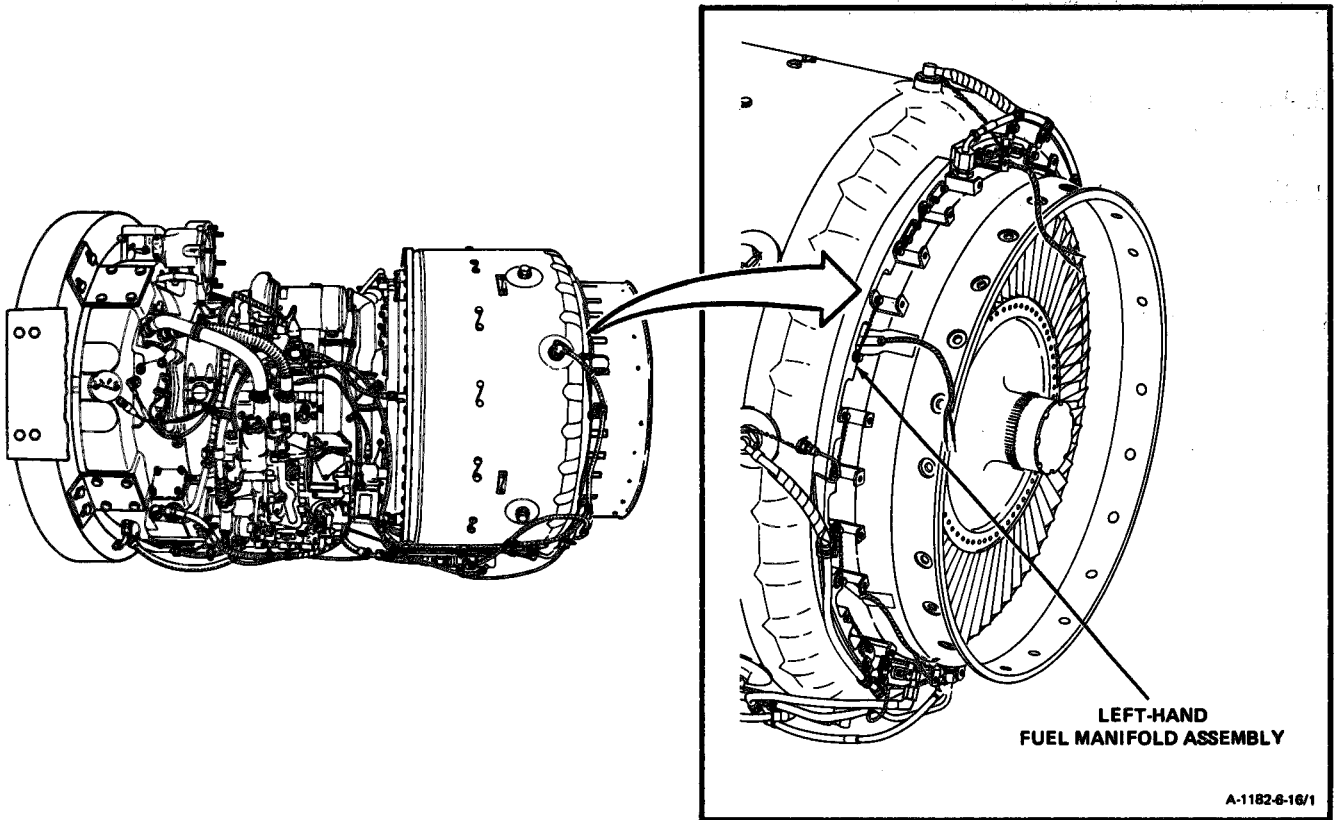
None

Personnel Required:

68B10 Aircraft Powerplant Repairer

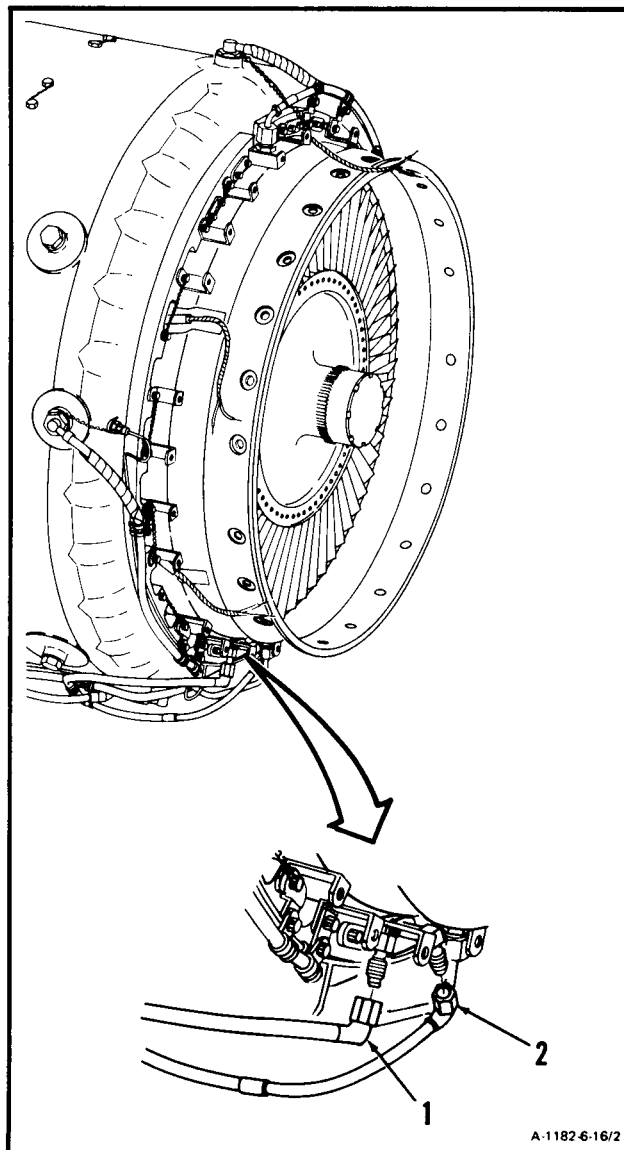
Equipment Condition:

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



GO TO NEXT PAGE

1. Disconnect hose assemblies (1 and 2).



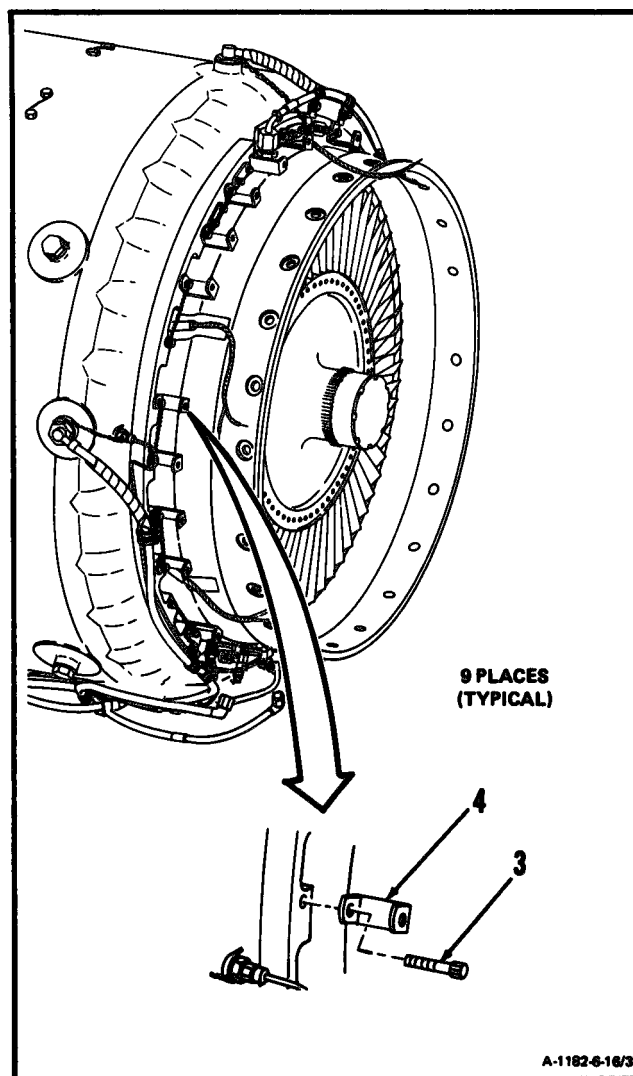
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6-16 REMOVE LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued)

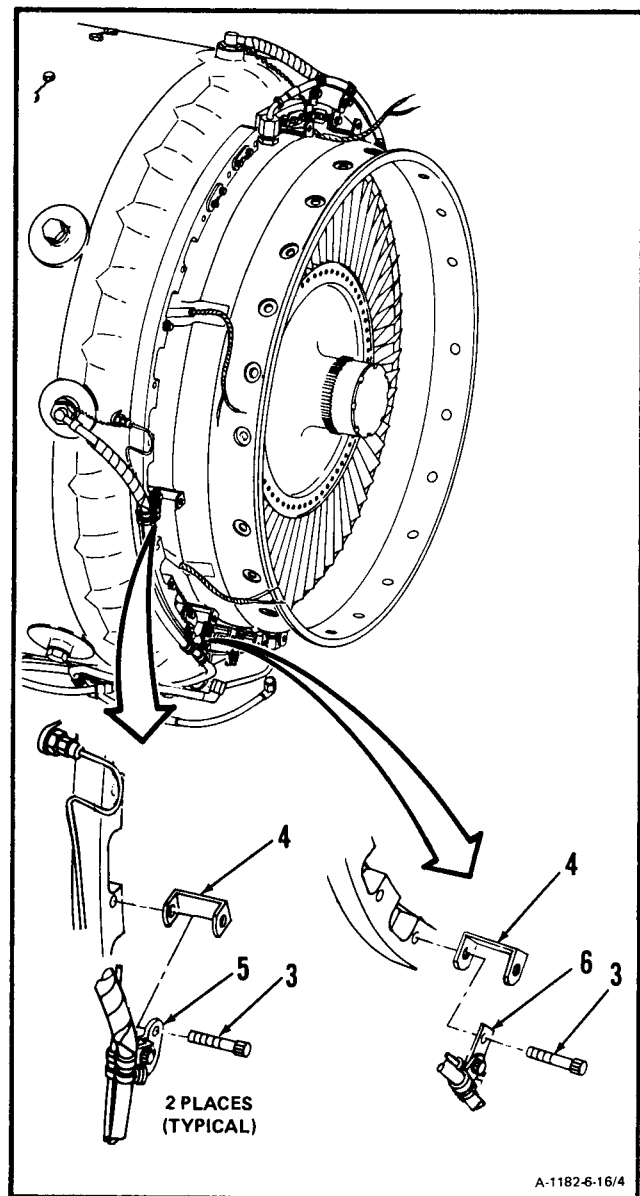
6-16

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



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

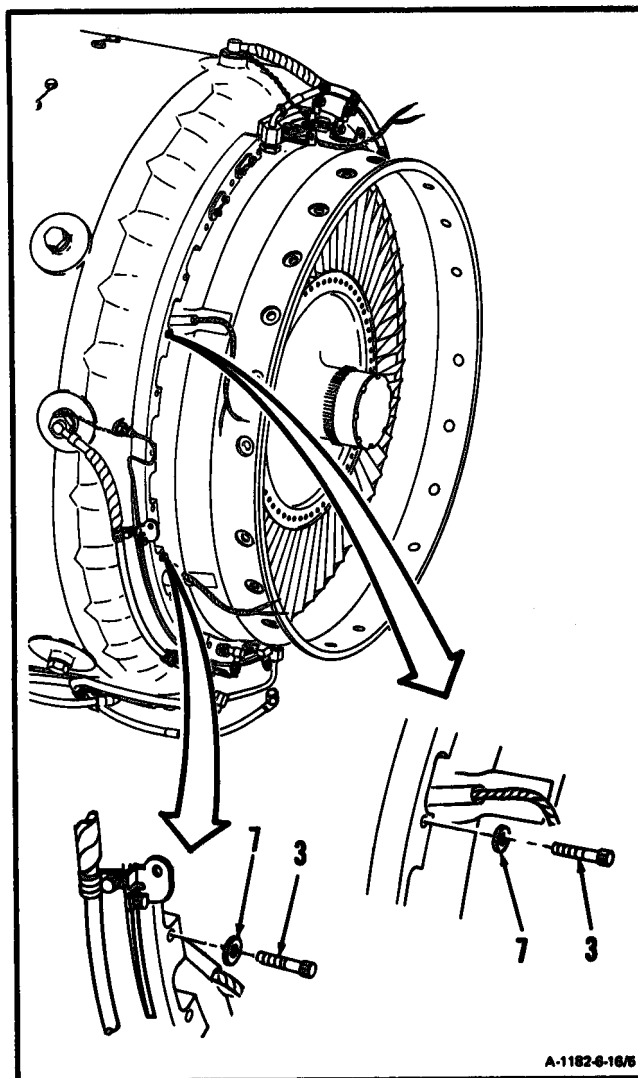


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6-16 REMOVE LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continual)

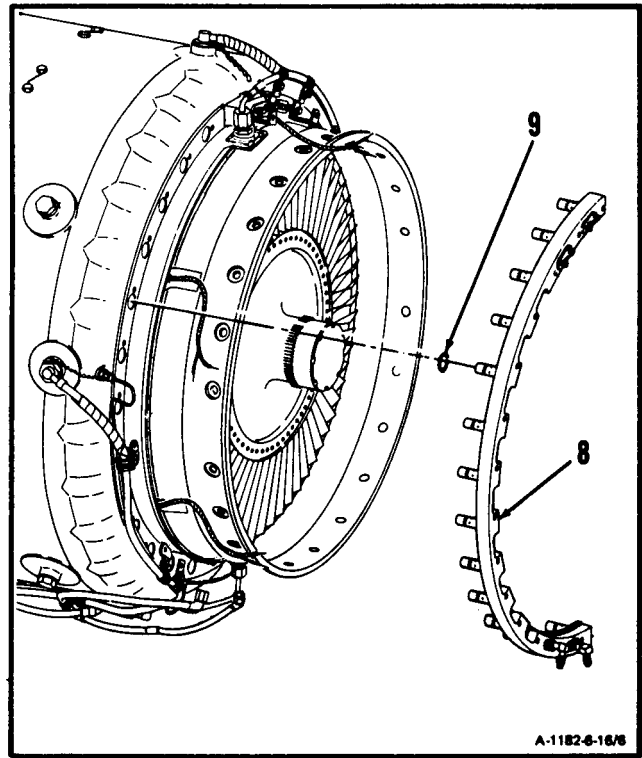
6-16

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



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

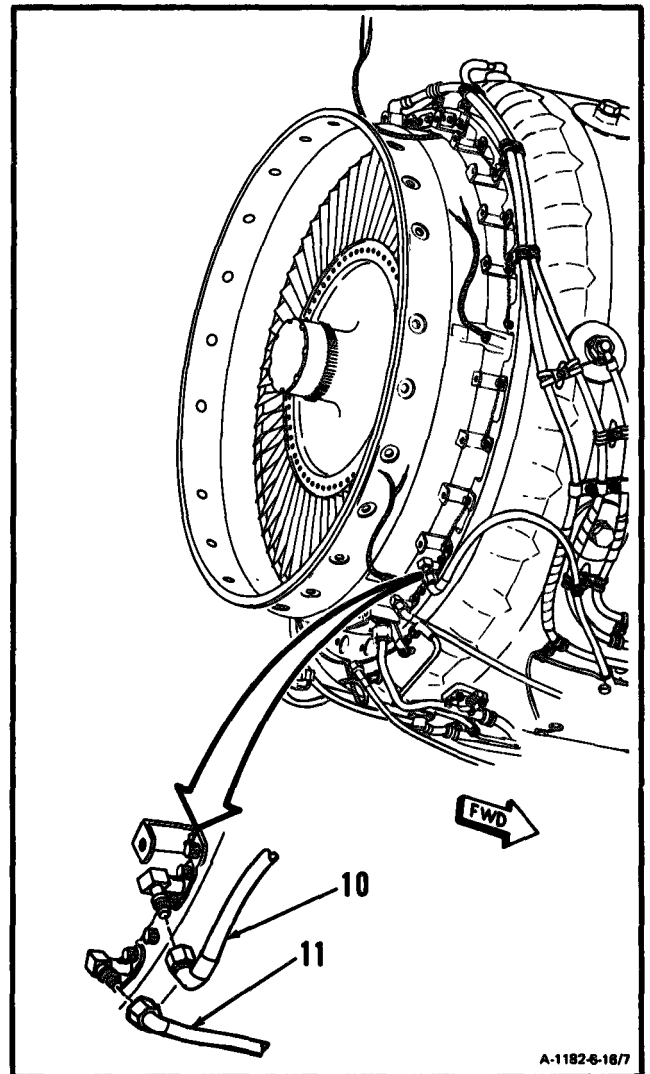


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6-16 REMOVE LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued)

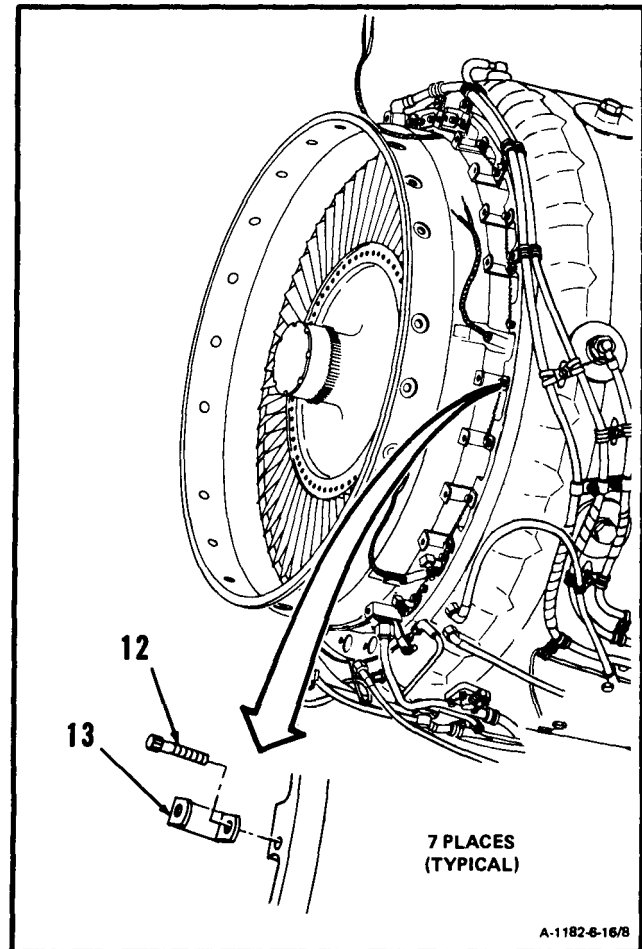
6-16

6. Disconnect hose assemblies (10 and 11).



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

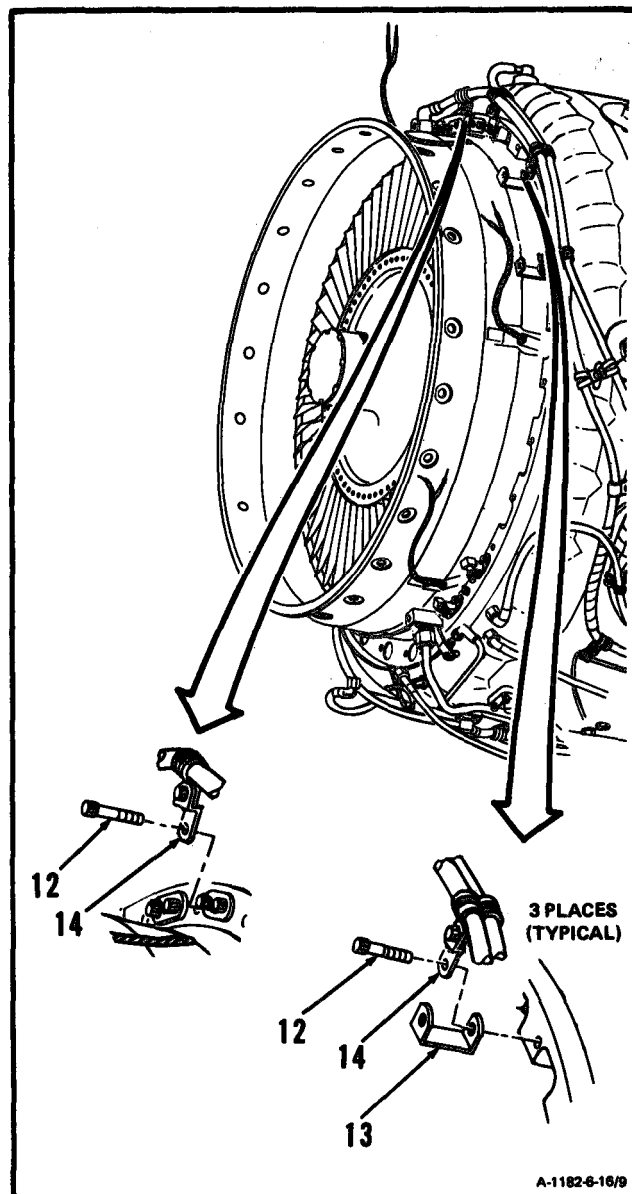


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6-16 REMOVE LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued)

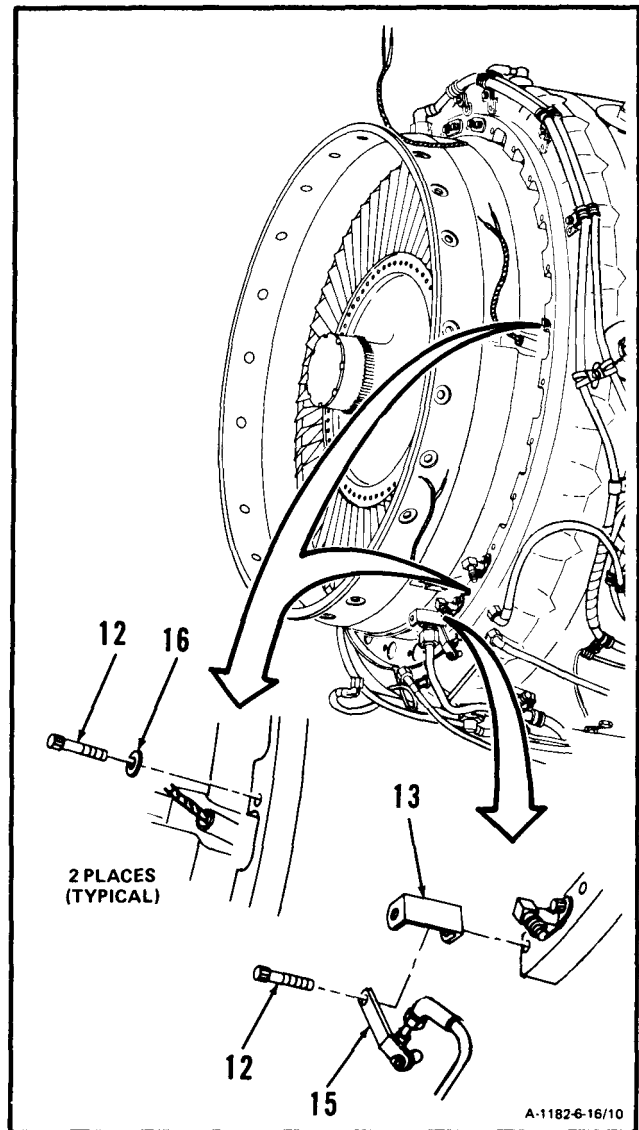
6-16

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



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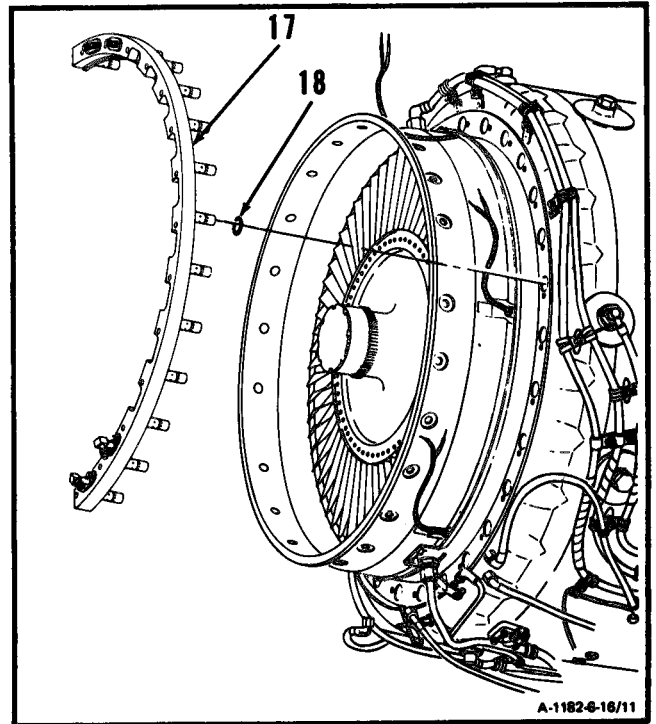
9. Remove lockwire, three bolts (12), bracket (15), support (13), and two washers (16).



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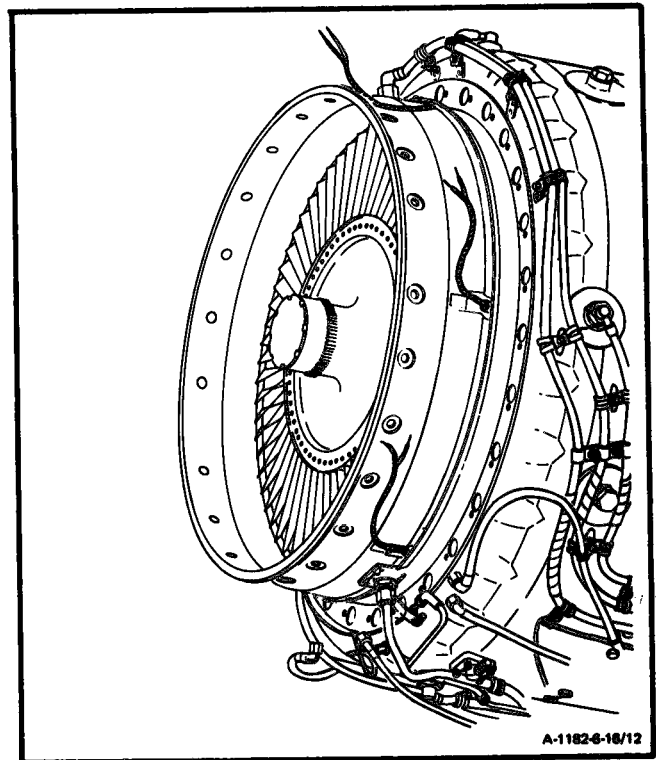
6-16 REMOVE LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued)

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



FOLLOW-ON MAINTENANCE:

None



END OF TASK

INITIAL SETUP

Applicable Configurations:

All

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

Goggles

Compressed Air Source

Materials:

Gloves (E20)

Lint-Free Cloth (E26)

Methyl Ethyl Ketone (E36)

Personnel Required:

68B10 Aircraft Powerplant Repairer

Equipment Condition:

Off Engine Task

Exit Vane Assembly Removed (Task 4-78)

Left- and Right-Hand Bus Bar Assemblies
Removed (Task 4-7)

Fireshield Assembly Removed (Task 4-12)

Left- and Right-Hand Fuel Manifold Assemblies
Removed (Task 6-16)**General Safety Requirements:**

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

GO TO NEXT PAGE

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

6-17

NOTE

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

1. Wear gloves (E20) and goggles. **Clean left- and right-hand fuel manifold assemblies (1 and 2).** Immerse in methyl ethyl ketone (E36) and agitate. Use brush to remove loose carbon.
2. Wipe dry using clean, dry lint-free cloth (E26).

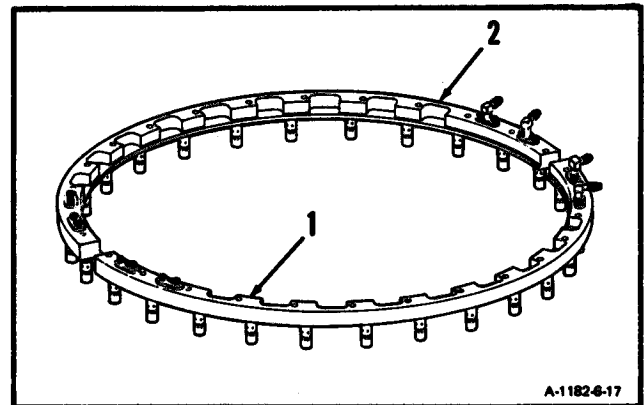
WARNING

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

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

FOLLOW-ON MAINTENANCE:

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

**END OF TASK**

INITIAL SETUP

Applicable Configurations:
All

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

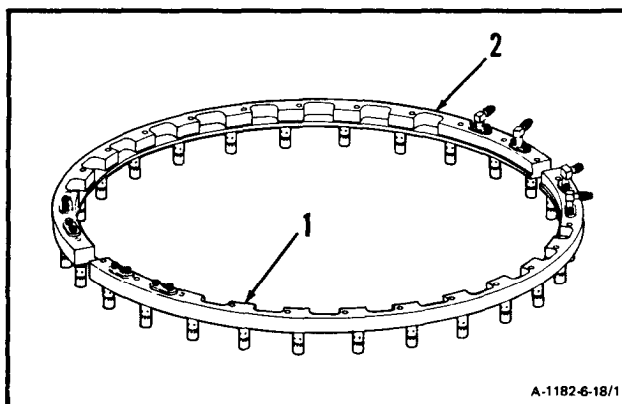
Materials:
None

Personnel Required:
68B30 Aircraft Powerplant Inspector

References:
Task 6-17

Equipment Condition:
Off Engine Task

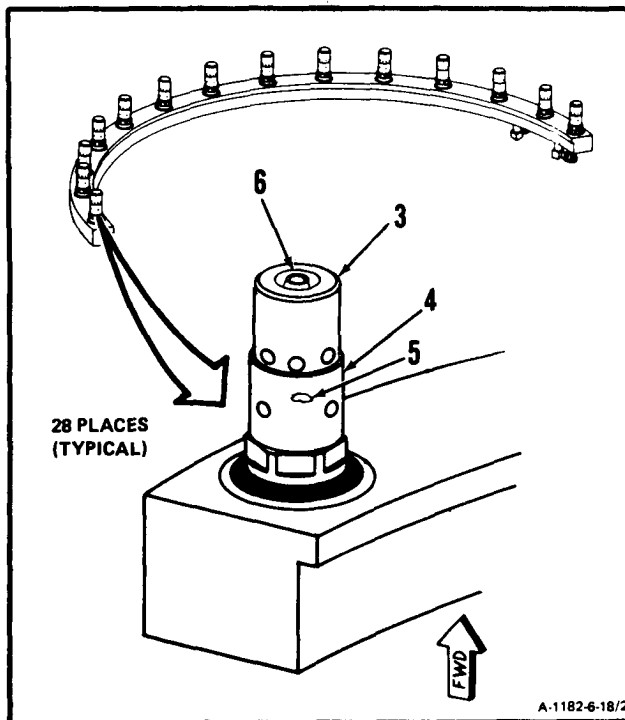
1. Inspect left- and right-hand fuel manifold assemblies (1 and 2). There shall be no cracks.



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

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

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

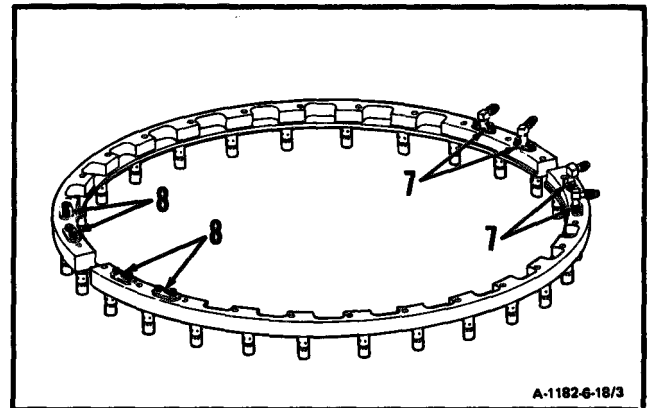


GO TO NEXT PAGE

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

6-18

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



FOLLOW-ON MAINTENANCE:

None

END OF TASK

INITIAL SETUP

Applicable Configurations:

All

Tools:

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

Materials:

Lockwire (E29)

Parts:

Packings

Personnel Required:

68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

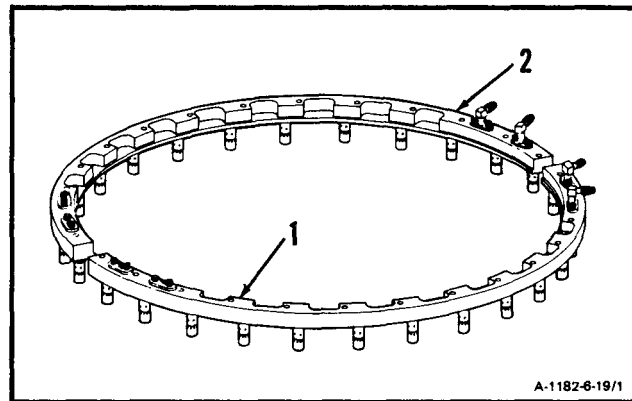
References:

TM 55-2840-254-23P

Equipment Condition:

Off Engine Task

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



A-1182-6-19/1

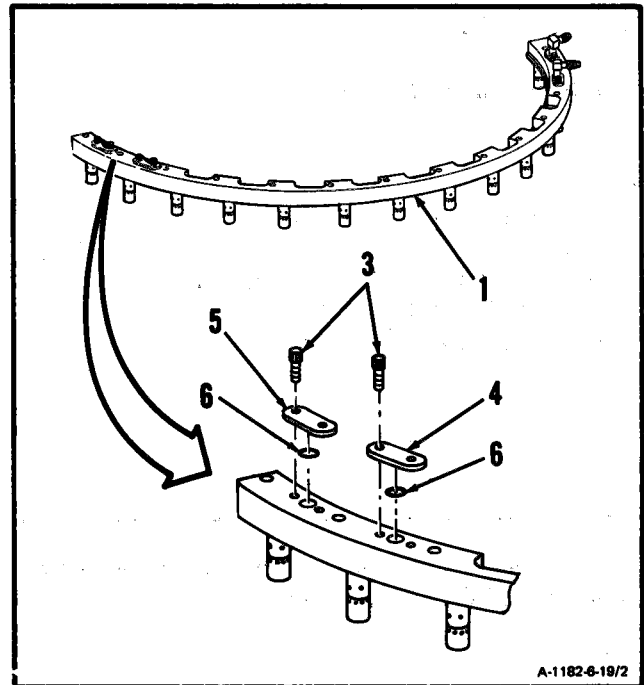
NOTE

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

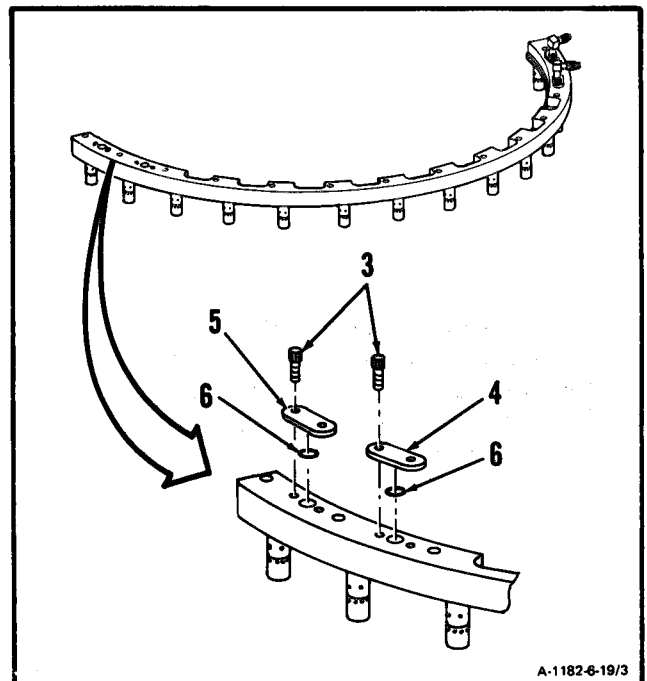
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a. Repair leaks in left-hand manifold (1).

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

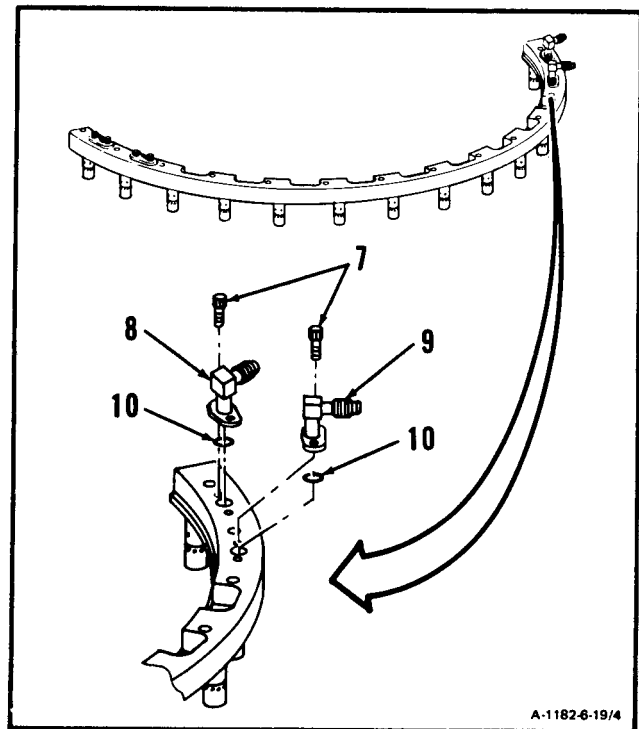


(2) Install two new packings (6), covers (4 and 5), and four bolts (3). Lockwire bolts (3). Use lockwire (E29).



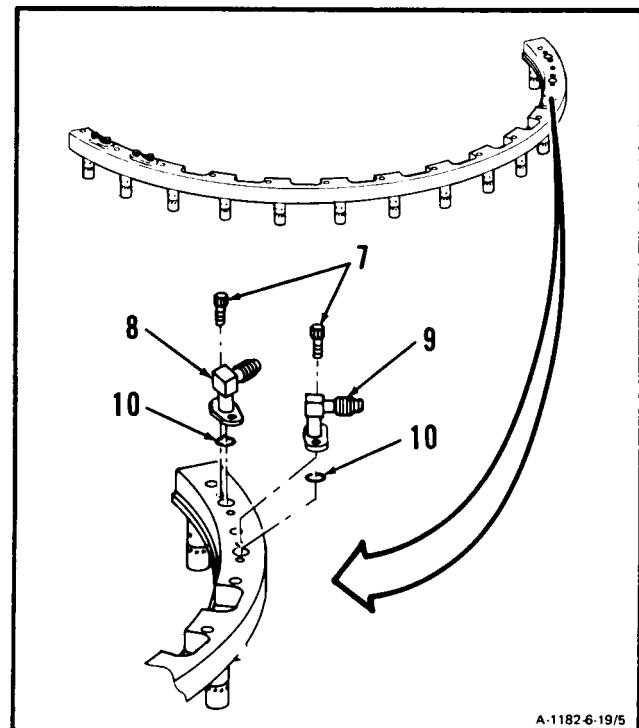
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- (3) **Remove** lockwire, four bolts (7), **elbows (8 and 9)**, and two packings (10). Use 7/32-inch torque adapter.



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

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



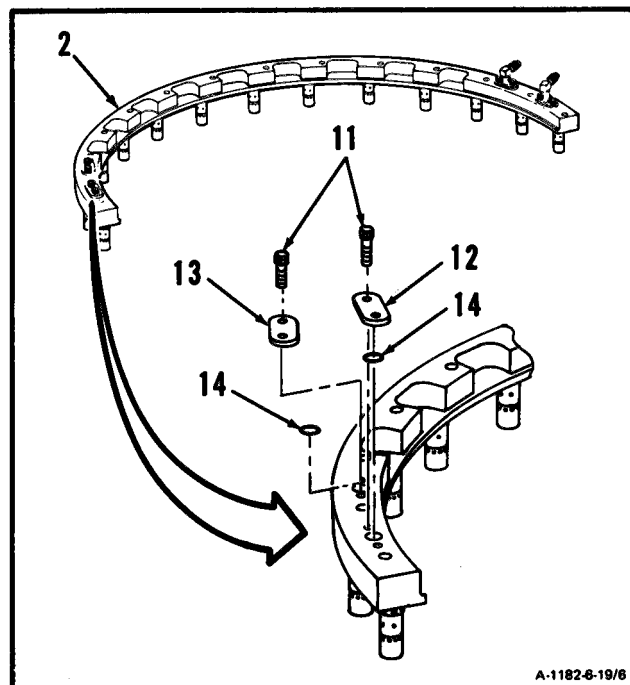
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6-19 REPAIR LEFT-AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued)

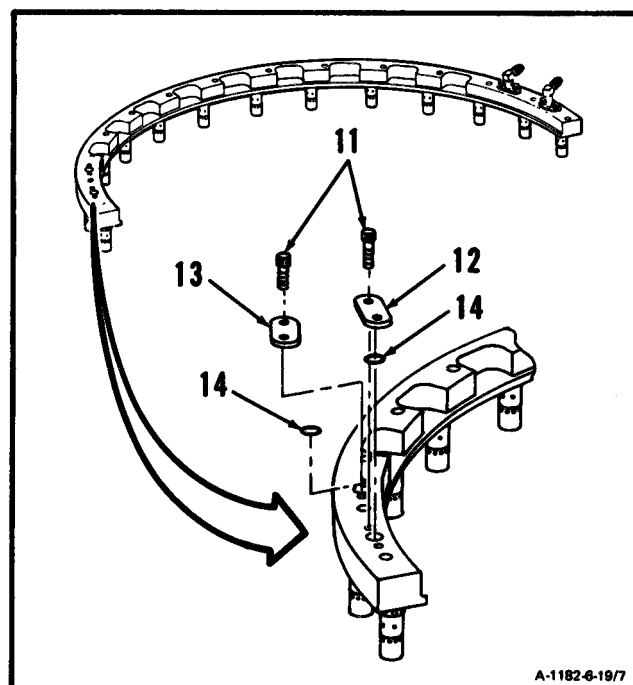
6-19

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

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

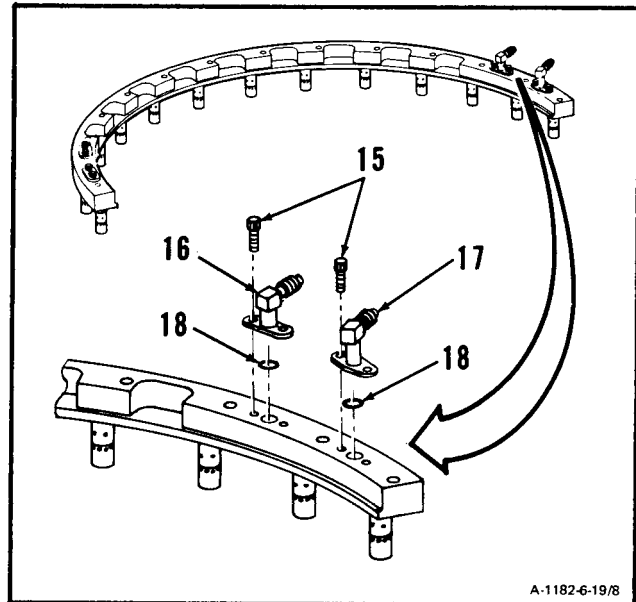


- (2) Install two new packings (14), **covers (12 and 13)**, and four bolts (11). Lockwire bolts (11). Use lockwire (E29).

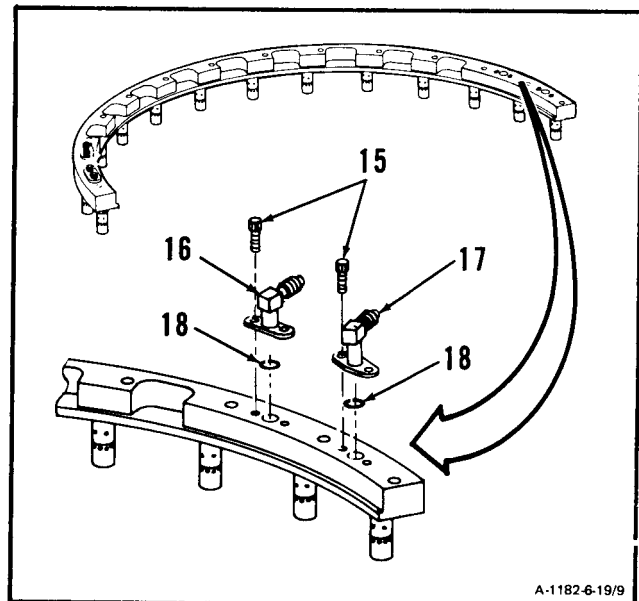


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- (3) **Remove** lockwire, four bolts (15), elbows (16 and 17), and two packings (18). Use 7/32-inch torque adapter.



- (4) **Install** two new packings (18), elbows (16 and 17), and four bolts (15). Use 7/32-inch torque adapter.
- (5) Lockwire bolts (15). Use lockwire (E29).



INSPECT

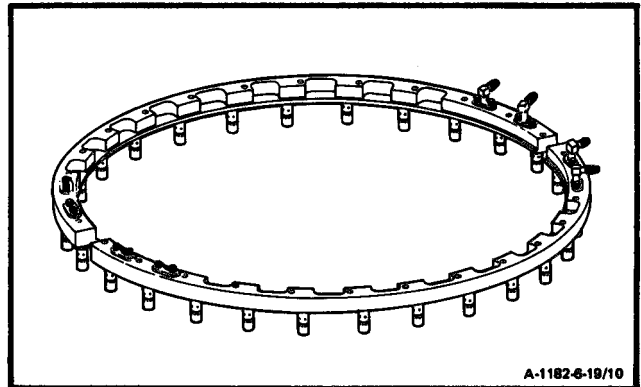
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6-19 REPAIR LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued)

6-19

FOLLOW-ON MAINTENANCE:

None

**END OF TASK**

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

6-20

INITIAL SETUP

Applicable Configurations:

All

Tools:

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

Materials:

Lockwire (E29)

Parts:

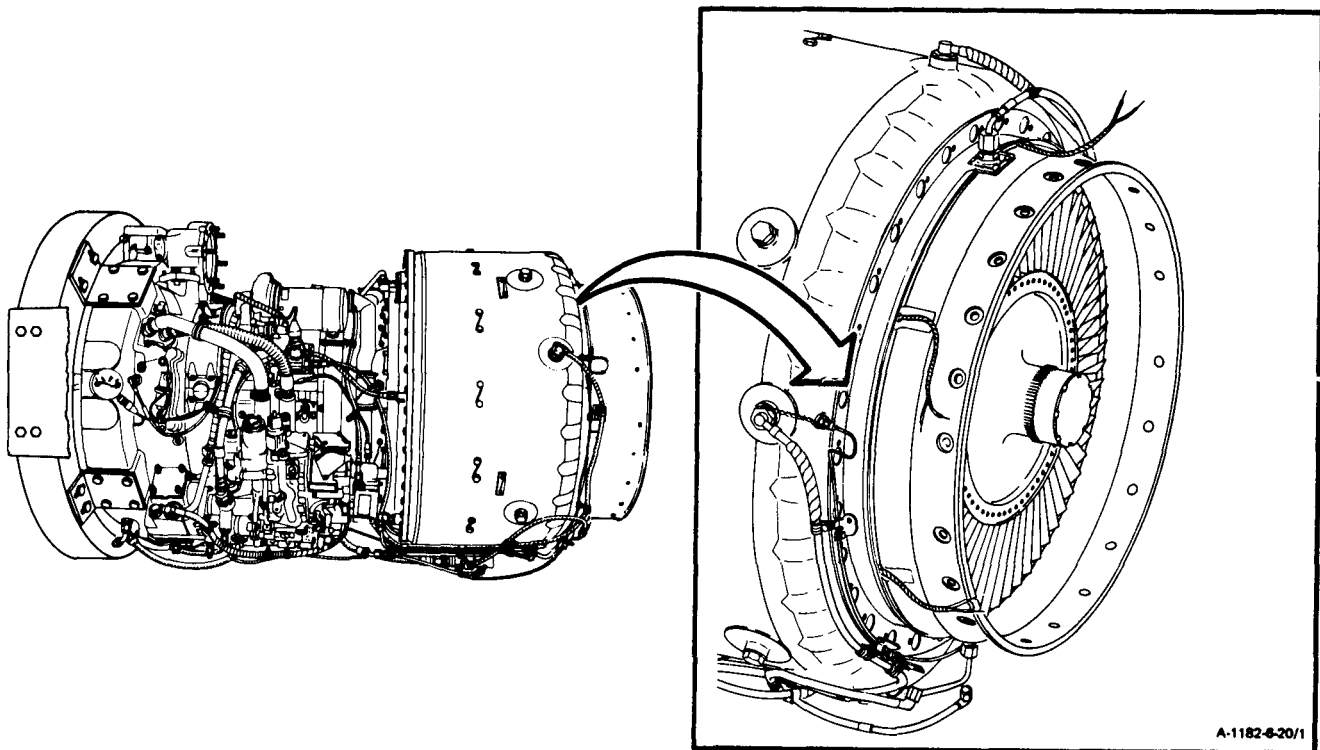
Seals

Personnel Required:

68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

References:

TM 55-2840-254-23P



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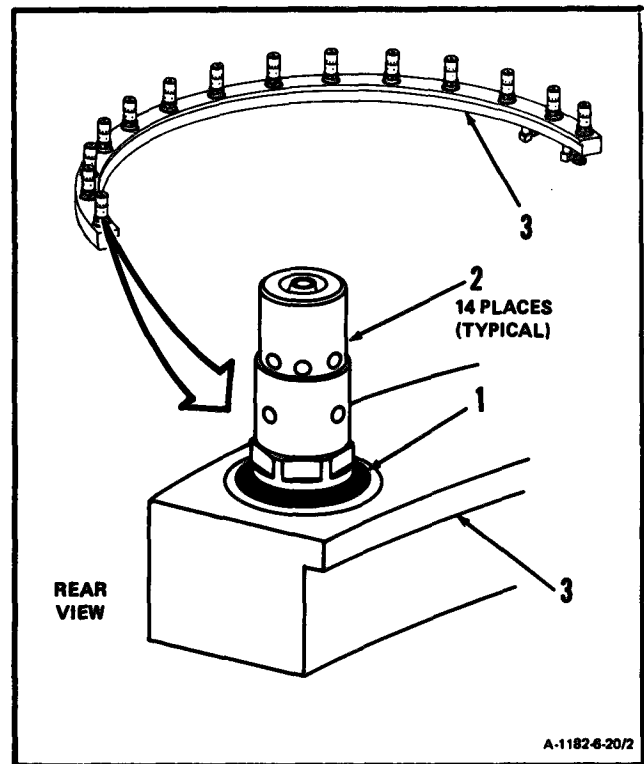
6-20 INSTALL LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued)

6-20

CAUTION

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

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



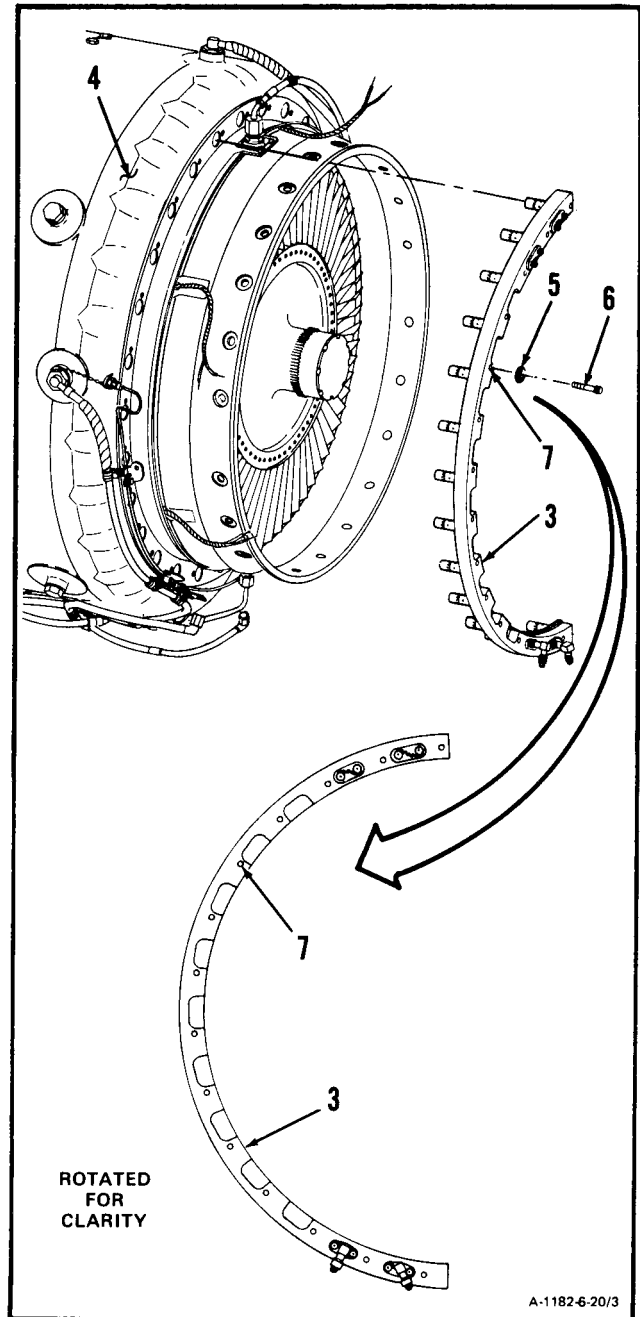
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2. Install left-hand fuel manifold assembly (3) in housing (4).

NOTE

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

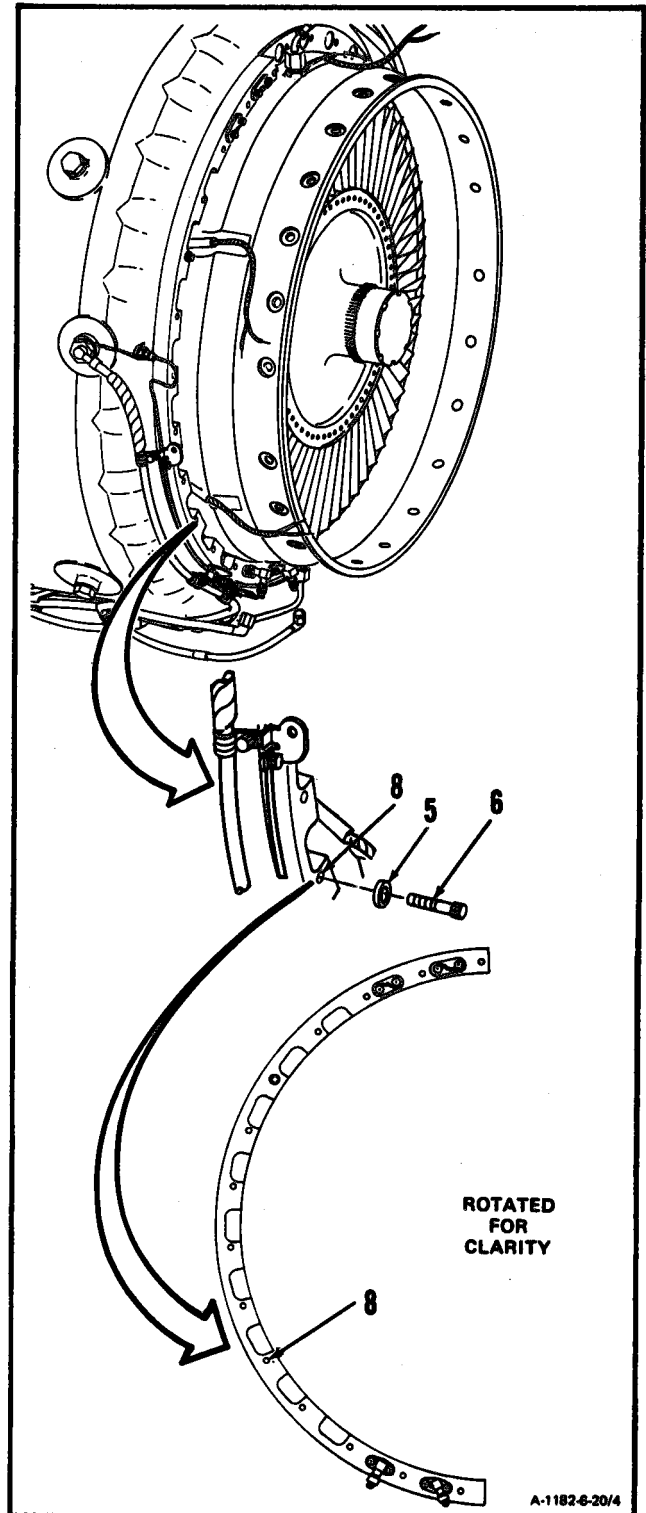
3. Install washer (5) and bolt (6) in hole (7).



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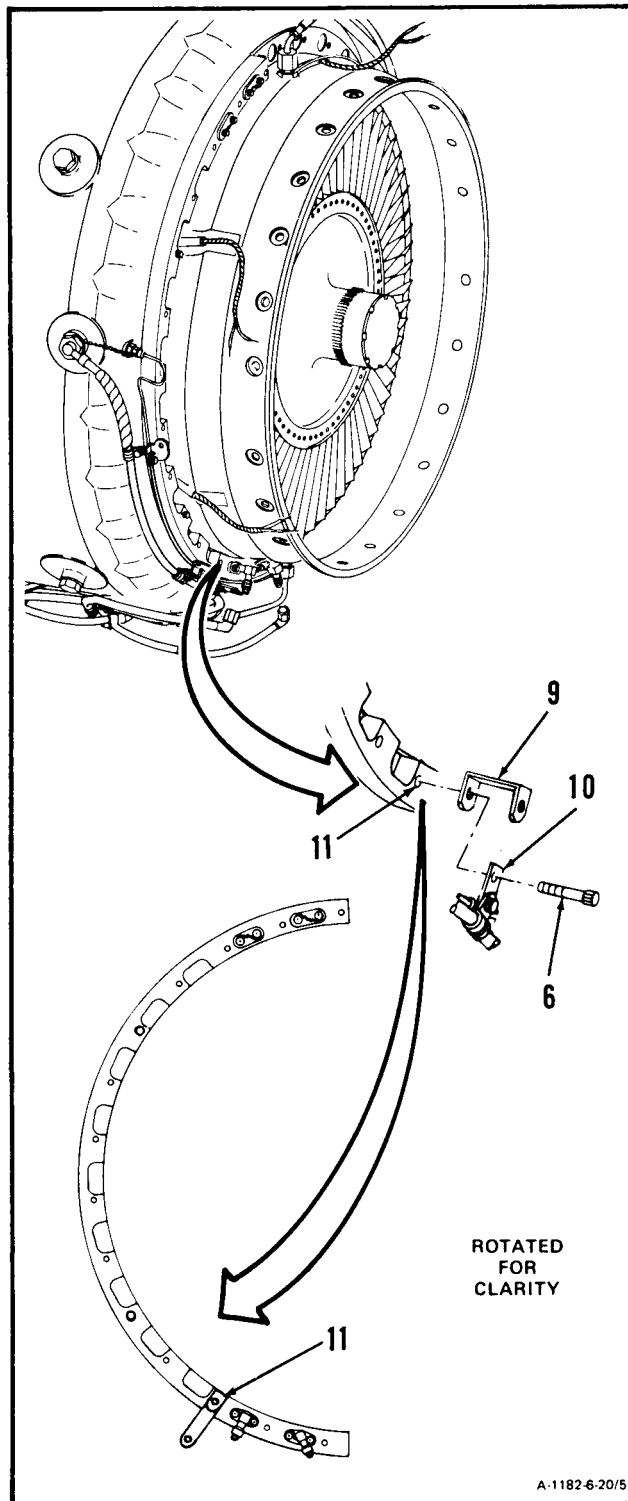
6-20 INSTALL LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued)

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



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

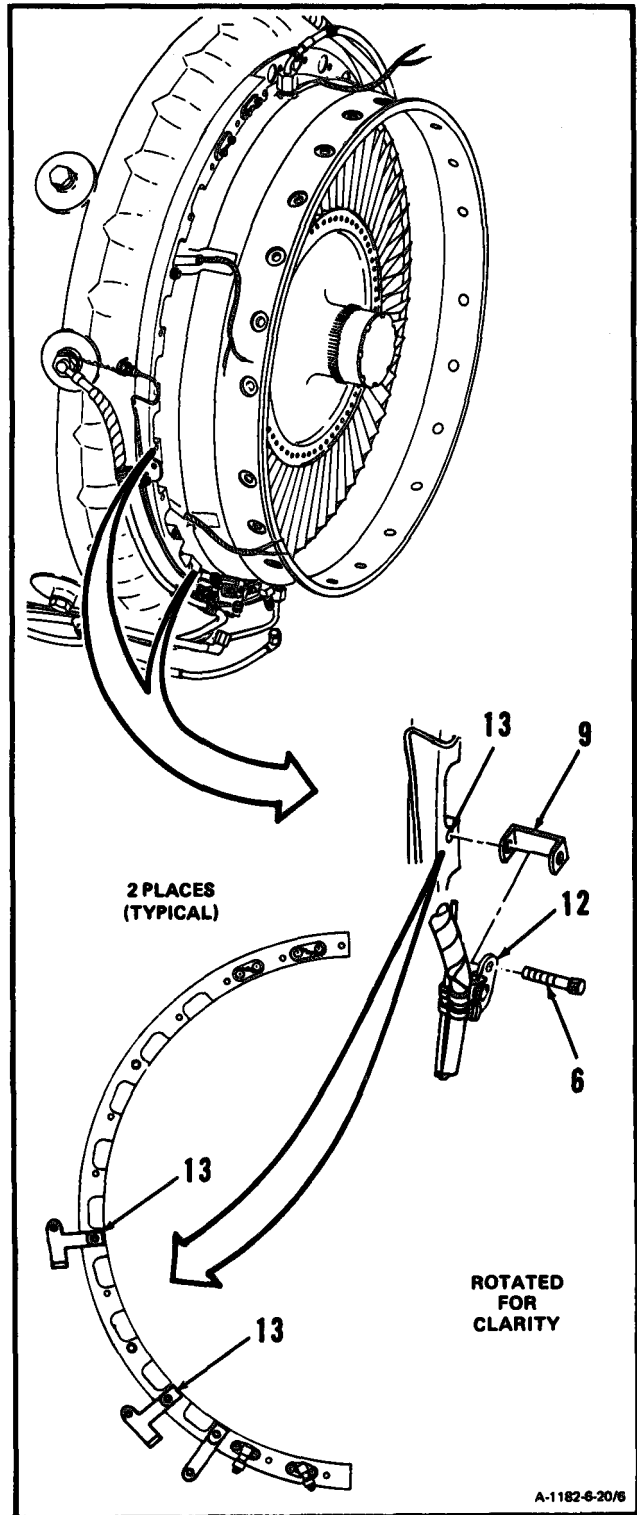


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6-20 INSTALL LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued)

6-20

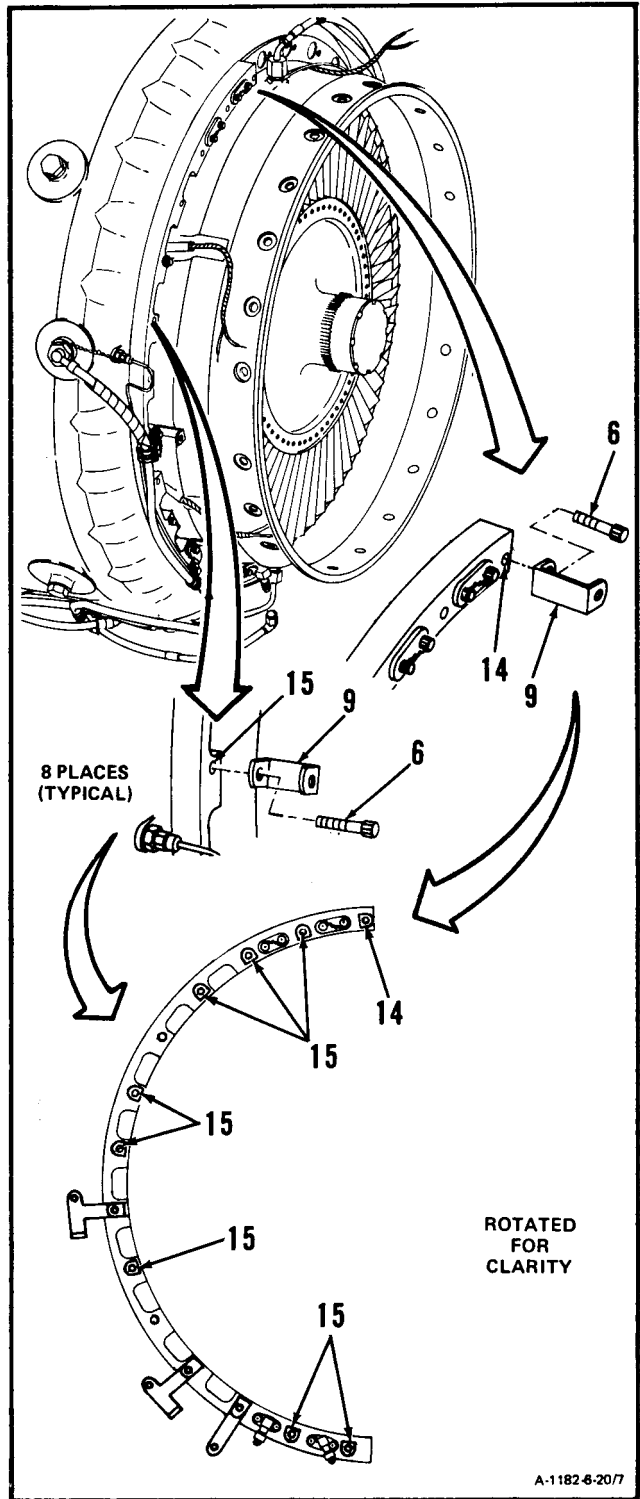
6. Install two supports (9), two brackets (12), and two bolts (6) in holes (13).



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

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



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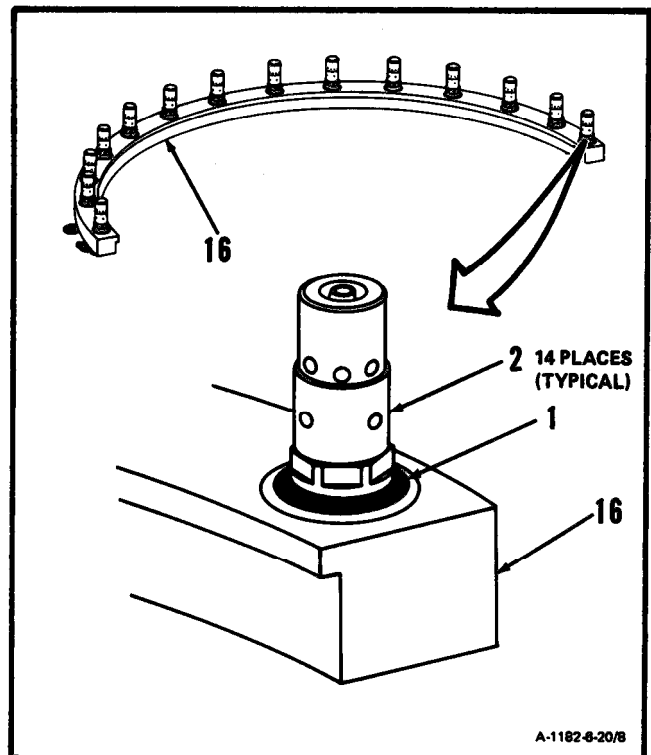
6-20 INSTALL LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued)

6-20

CAUTION

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

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



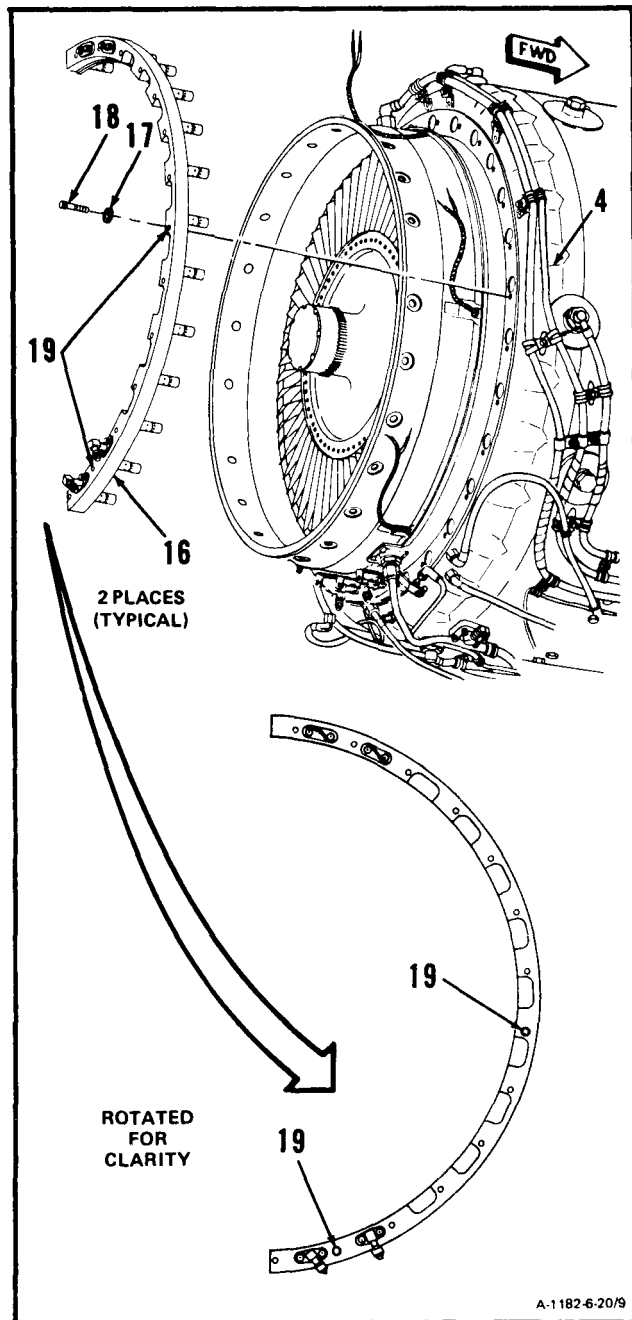
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10. Install right-hand fuel manifold assembly (16) in housing (4).

NOTE

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

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

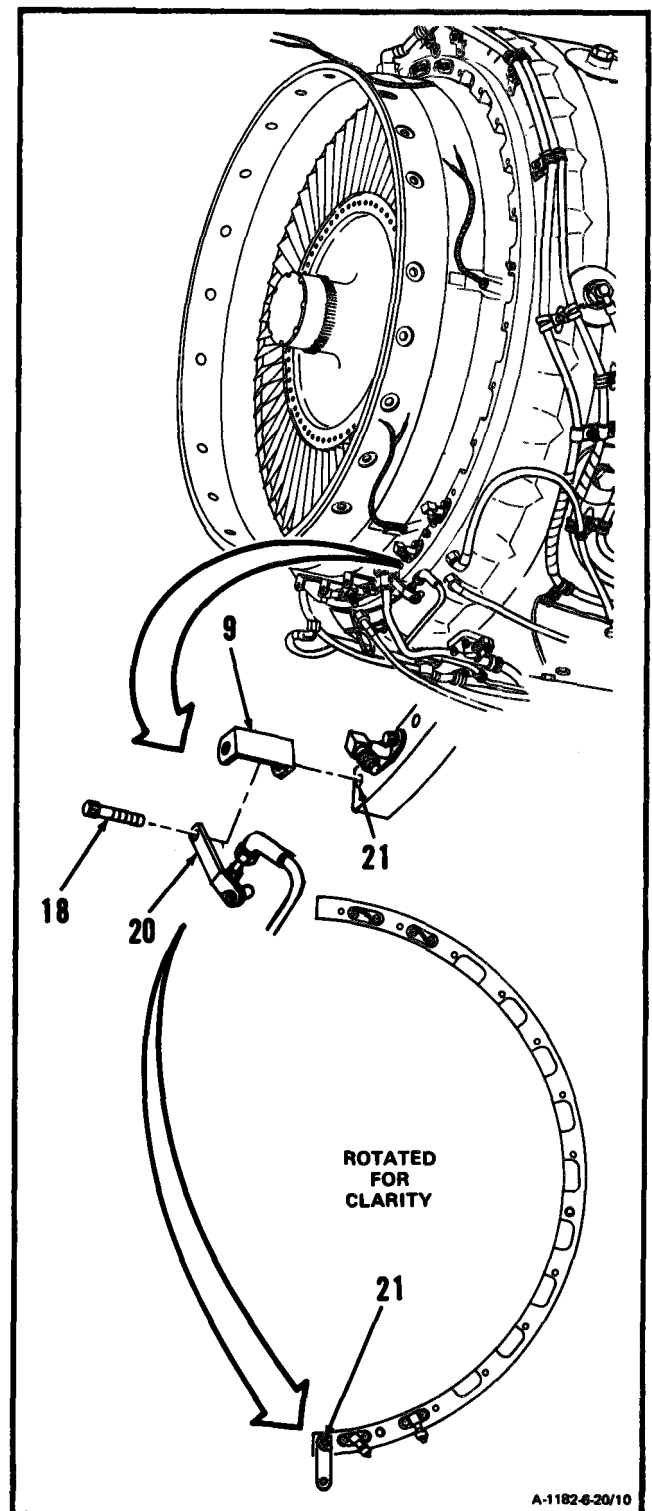


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6-20 INSTALL LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued)

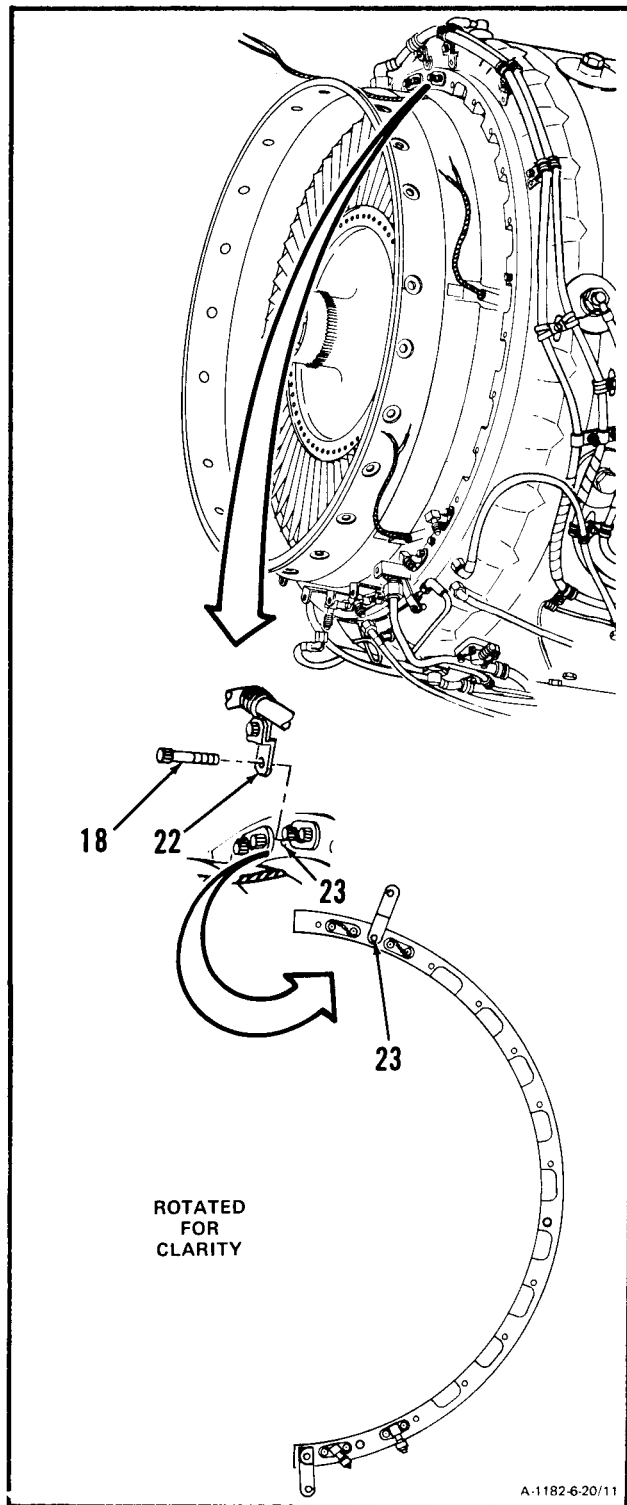
6-20

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



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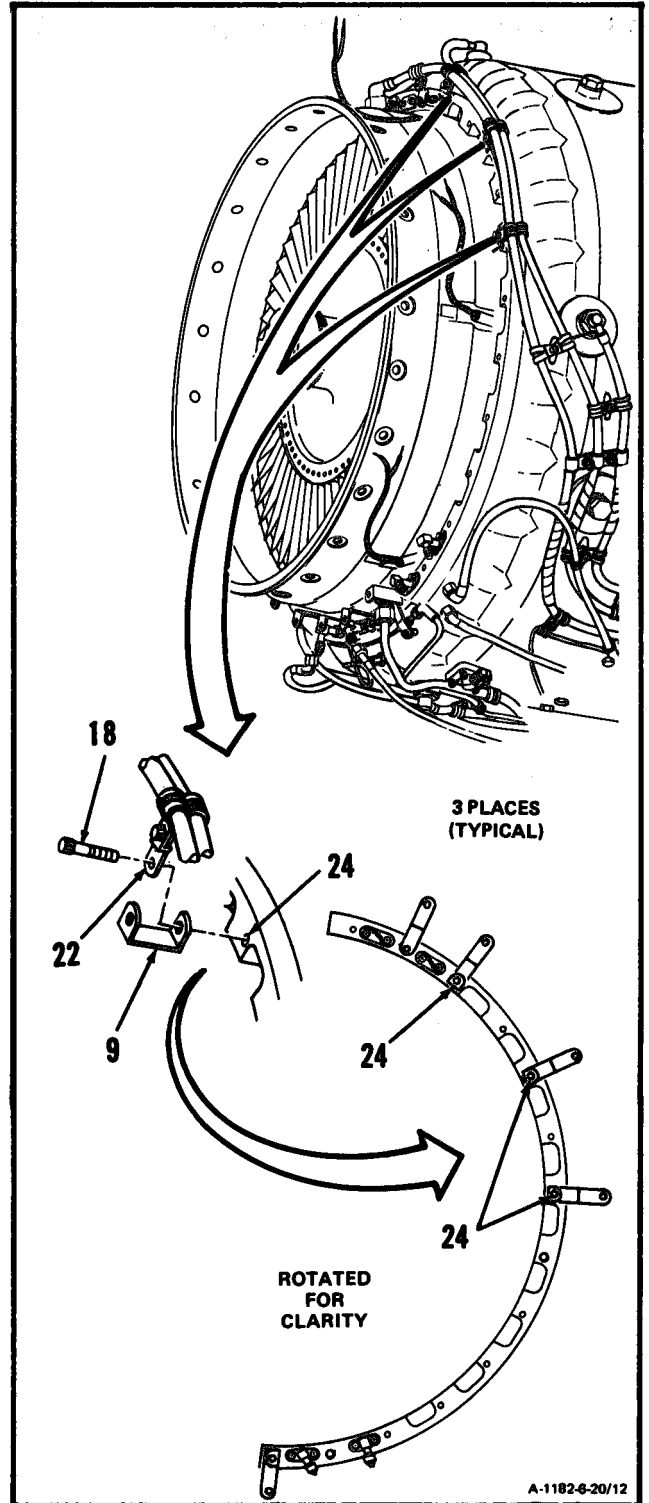
13. Install bracket (22) and bolt (18) in hole (23).



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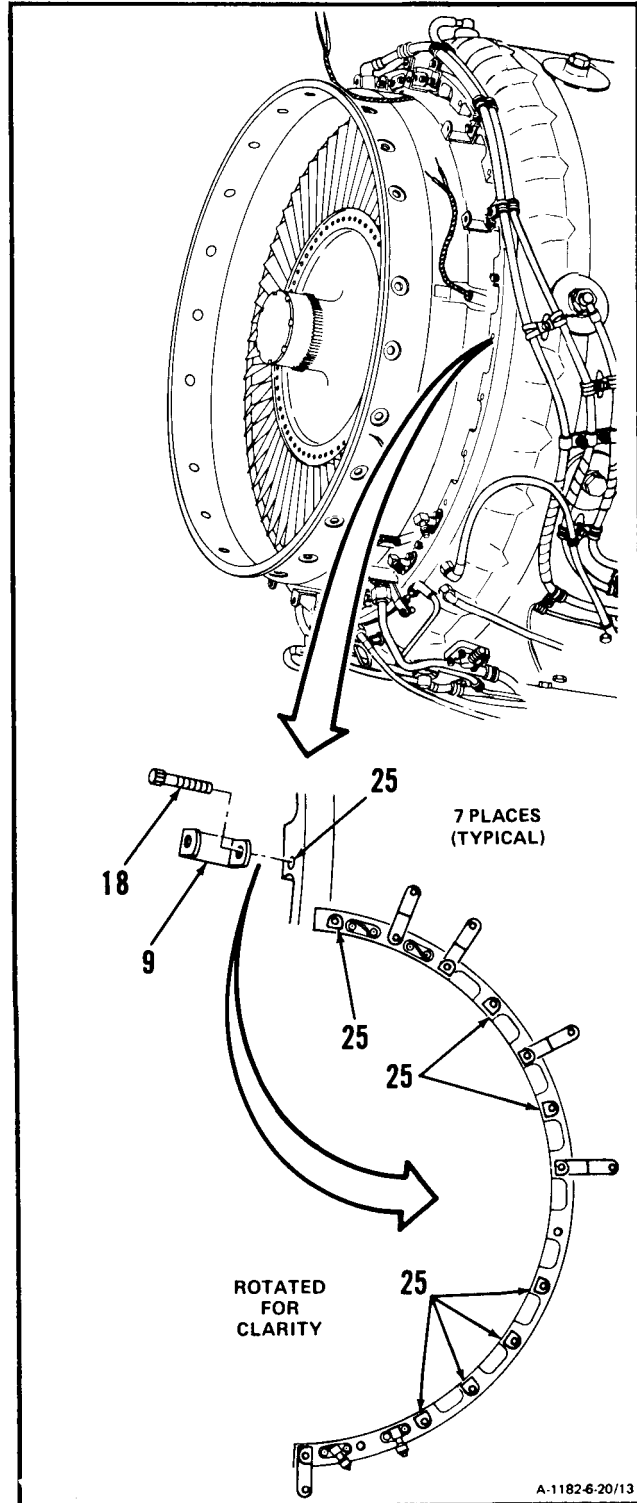
6-20 INSTALL LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued)

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



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

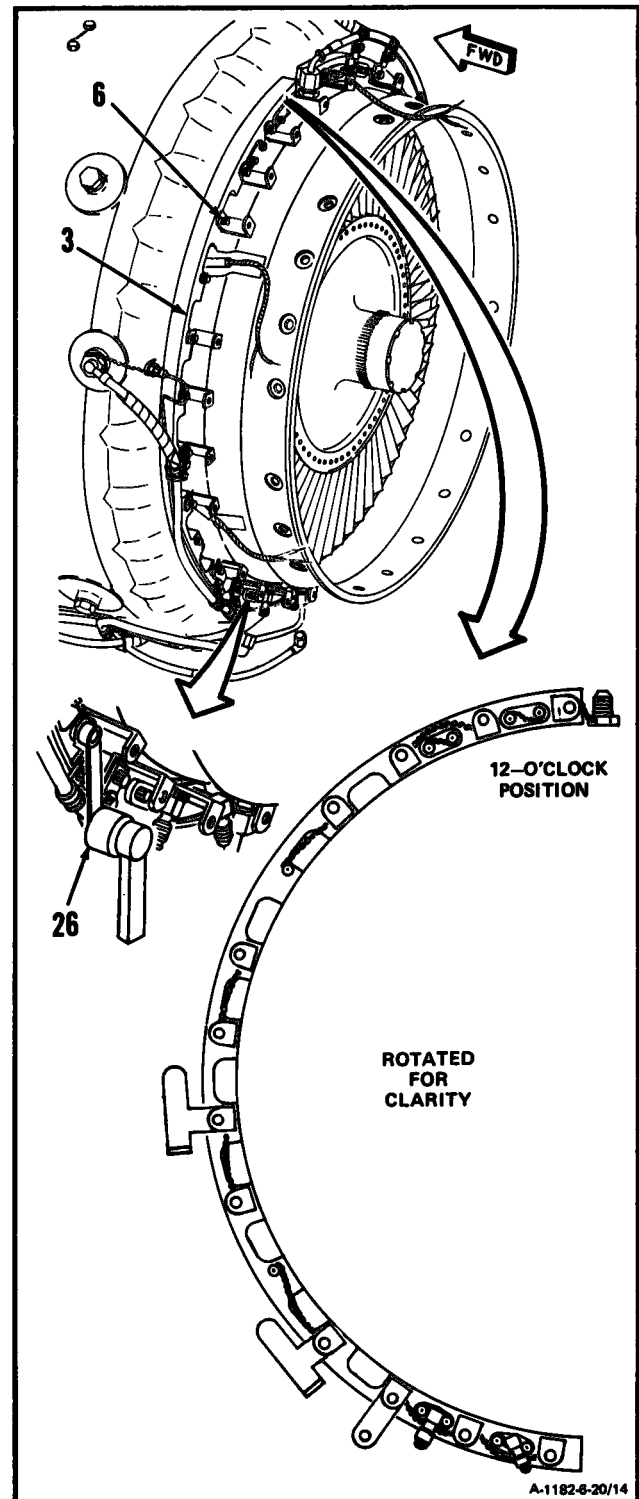


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6-20 INSTALL LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued)

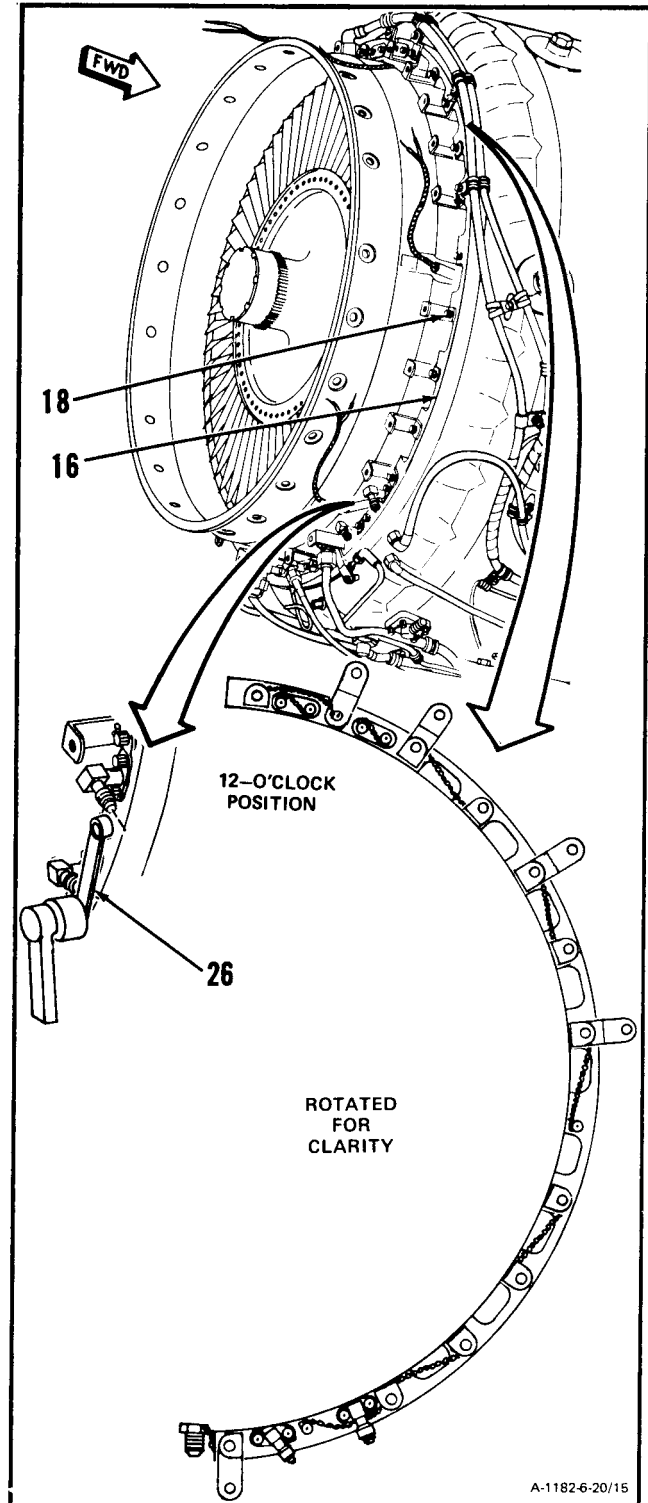
6-20

16. Using torque adapter wrench (T15) (26), **torque all bolts (6) to 40 inch-pounds** on left-hand fuel manifold (3).
17. Lockwire 14 bolts (6) on left-hand fuel manifold (3). Use lockwire (E29).



GO TO NEXT PAGE

18. Using torque adapter wrench (T15) (26), **torque all bolts (18) to 40 inch-pounds** on right-hand fuel manifold (16).
19. Lockwire 14 bolts (18) on right-hand fuel manifold (16). Use lockwire (E29).



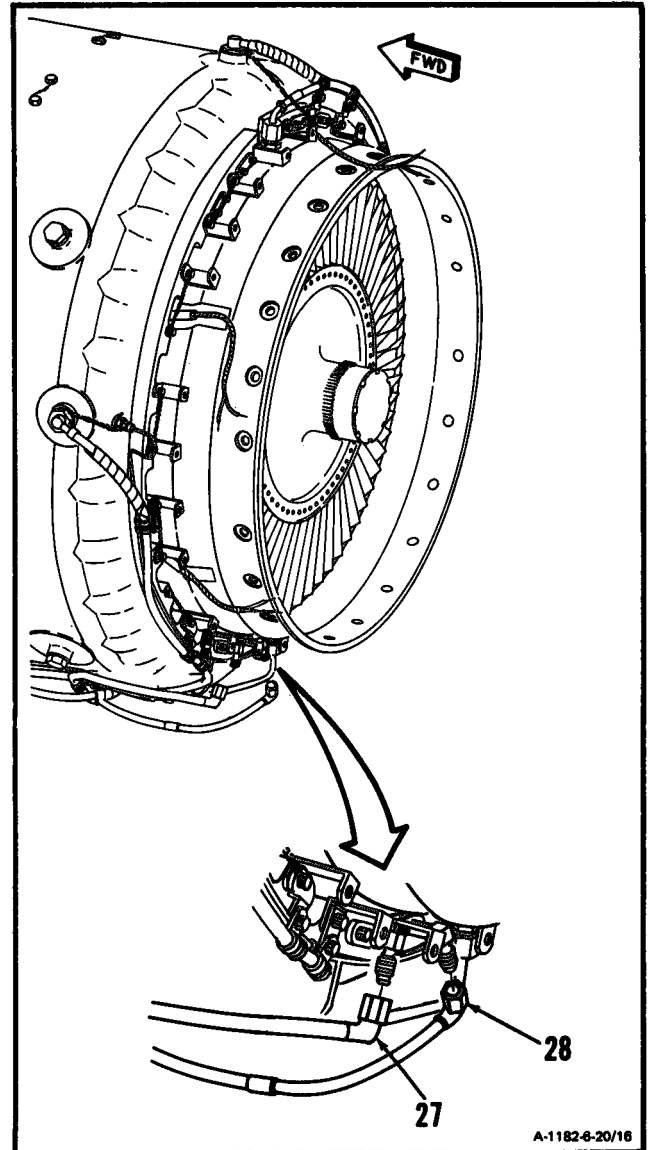
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6-20 INSTALL LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued)

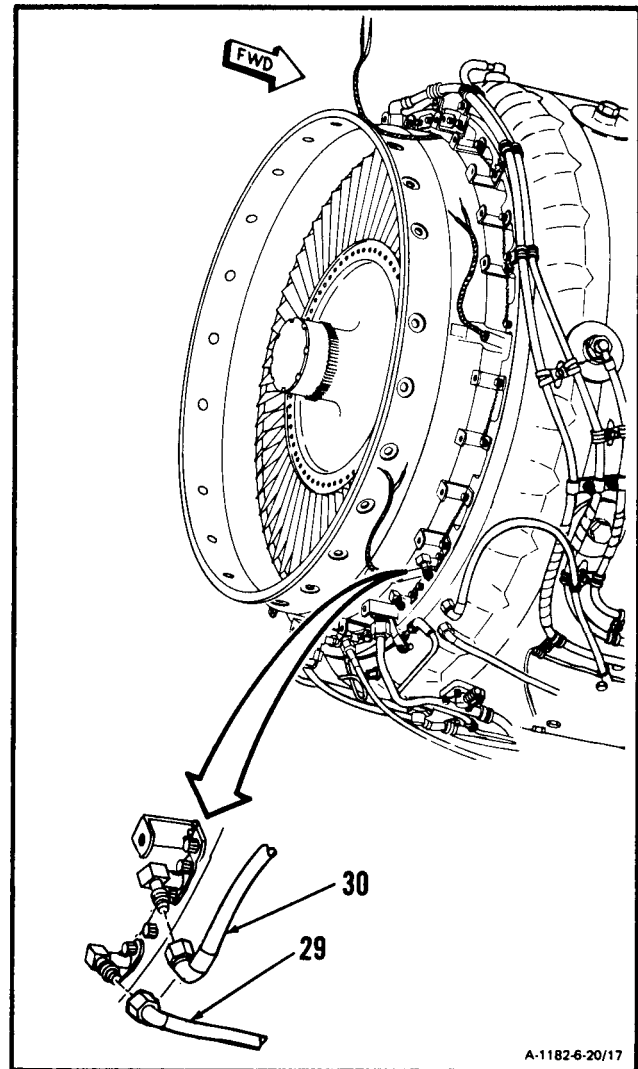
6-20

20. Connect hose assemblies (27 and 28).



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21. Connect hose assemblies (29 and 30).

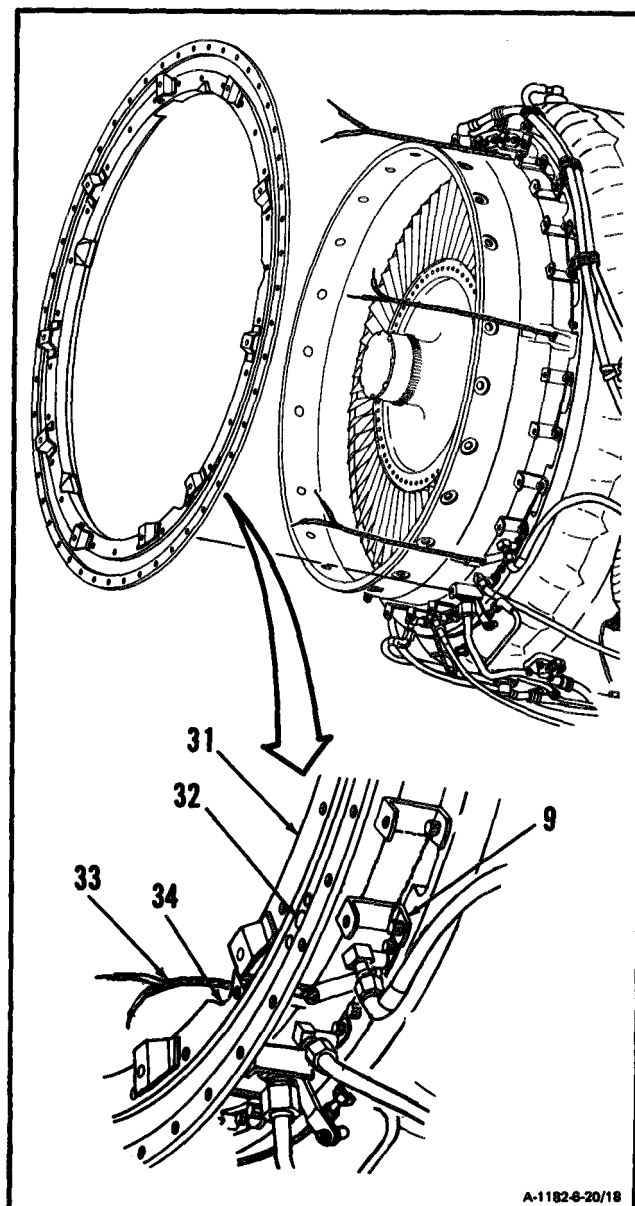


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CAUTION

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

22. Align fireshield assembly (31) near 23 supports (9) with thermocouple jumper lead mounting hole (32) at 5-o'clock position.
23. Route five thermocouple harness assembly leads (33) through five cutouts (34) in fireshield assembly (31).

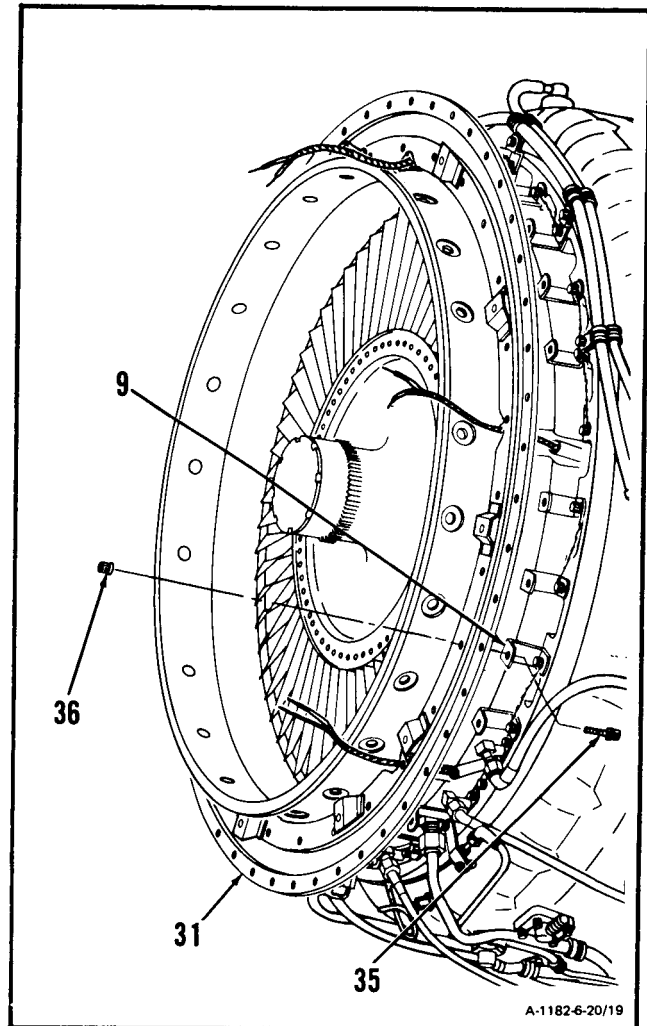


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NOTE

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

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

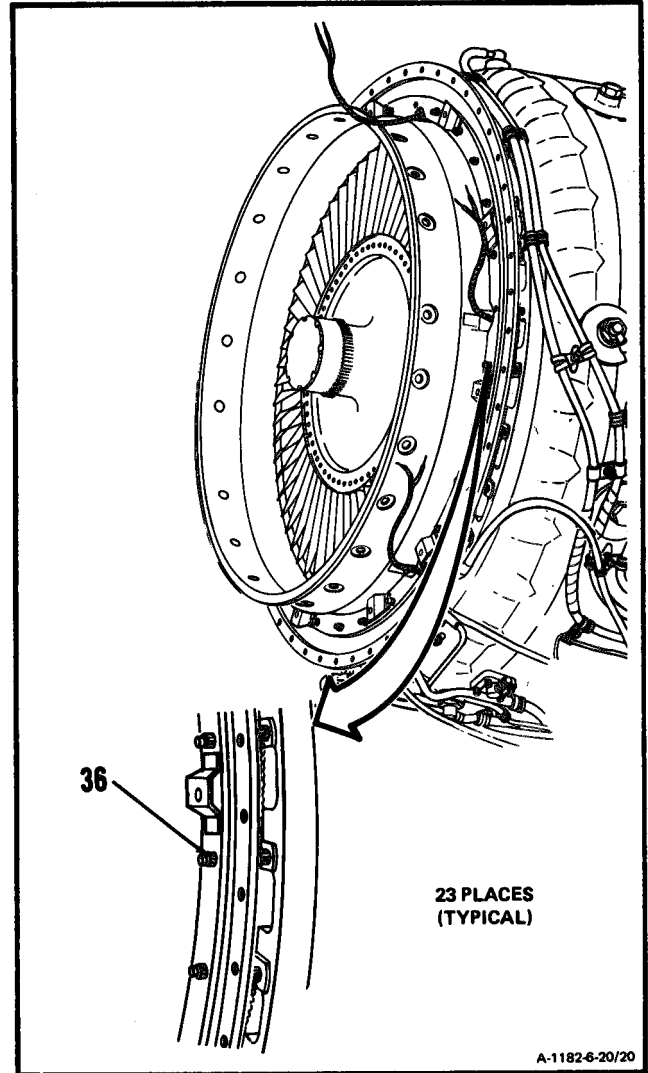


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6-20 INSTALL LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued)

6-20

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



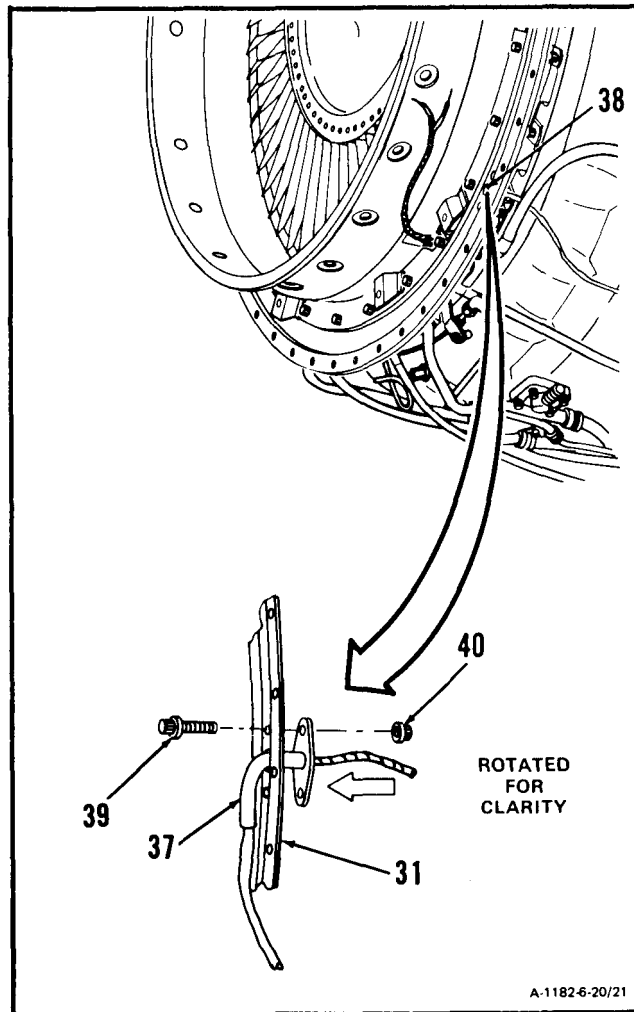
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6-20 INSTALL LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued)

6-20

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

27. Install two bolts (39 and nuts (40



INSPECT

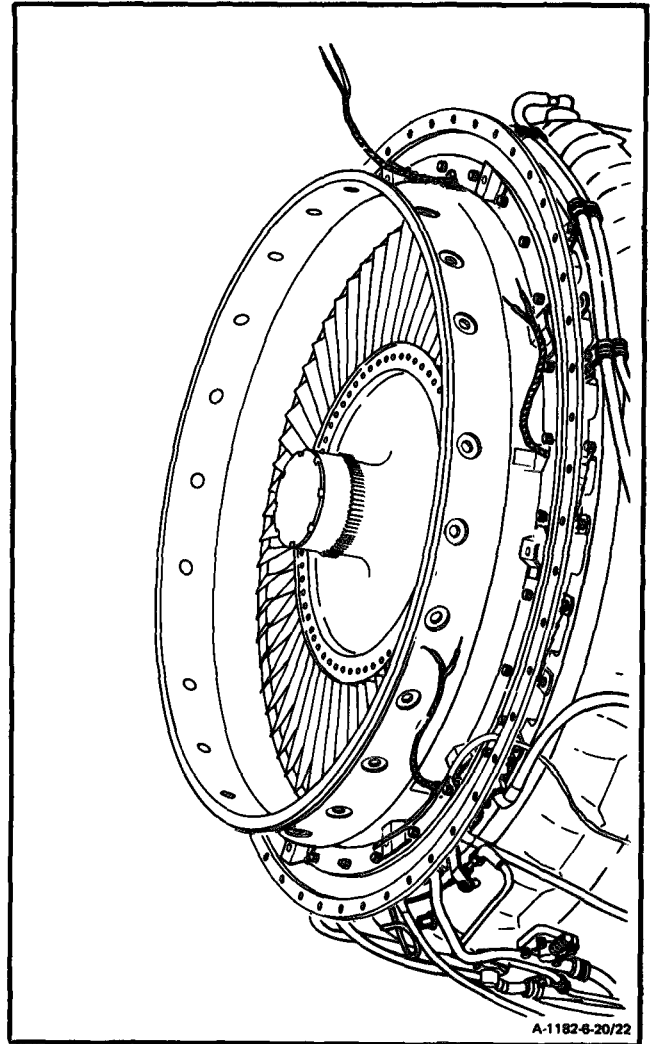
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6-20 INSTALL LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued)

6-20

FOLLOW-ON MAINTENANCE:

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

**END OF TASK**

Section VI. PRIMER TUBE ASSEMBLY - MAINTENANCE PROCEDURES

6-21 REMOVE PRIMER TUBE ASSEMBLY

6-21

INITIAL SETUP

*General Safety Instructions:***Applicable Configurations:**

All

Tools:

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

Materials:

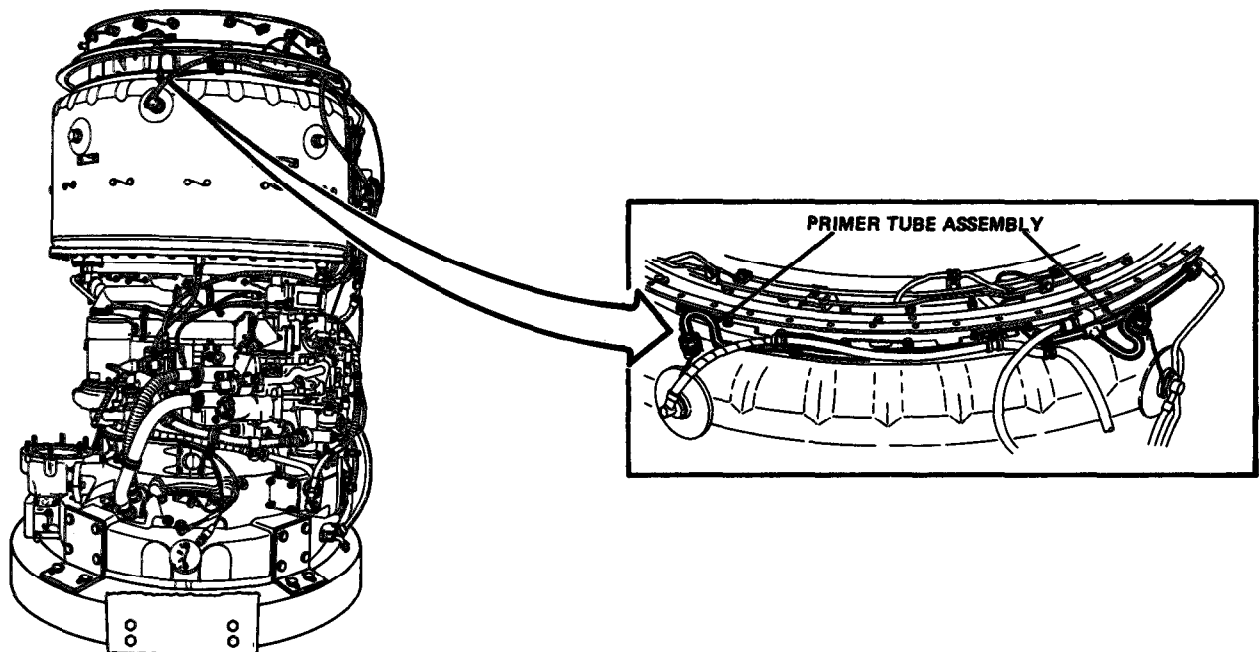
Wiping Rag (E58)

Personnel Required:

68B10 Aircraft Powerplant Repairer

WARNING

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

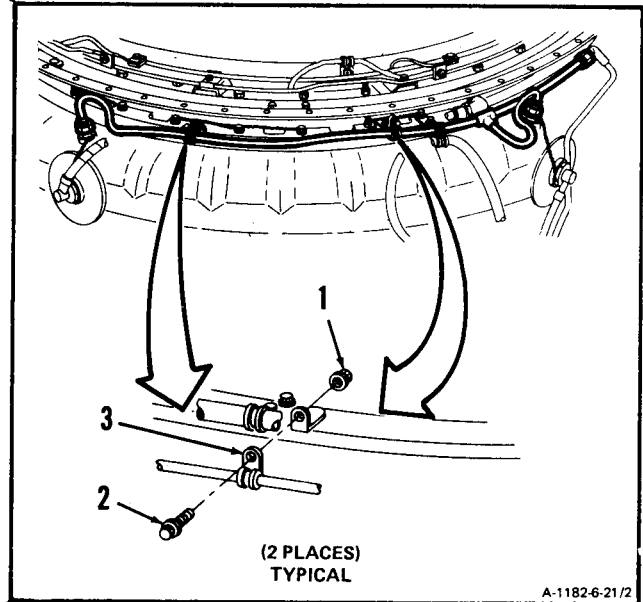


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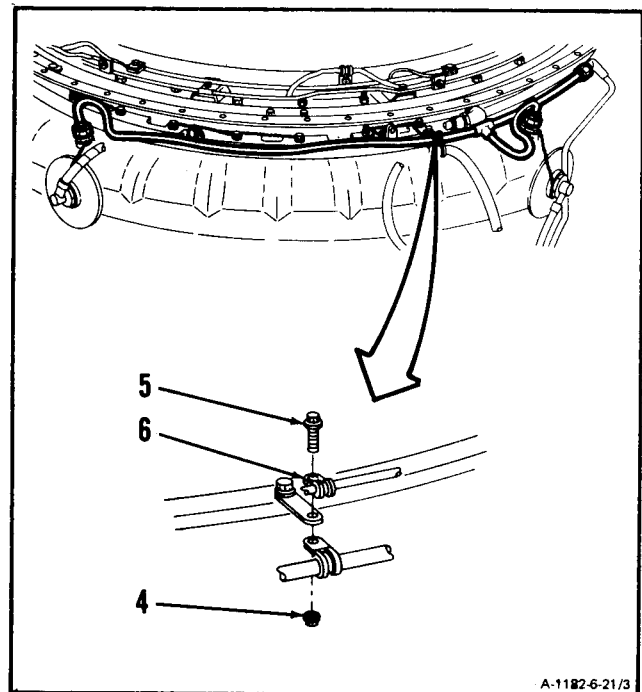
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6-21 REMOVE PRIMER TUBE ASSEMBLY (Continued)

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



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

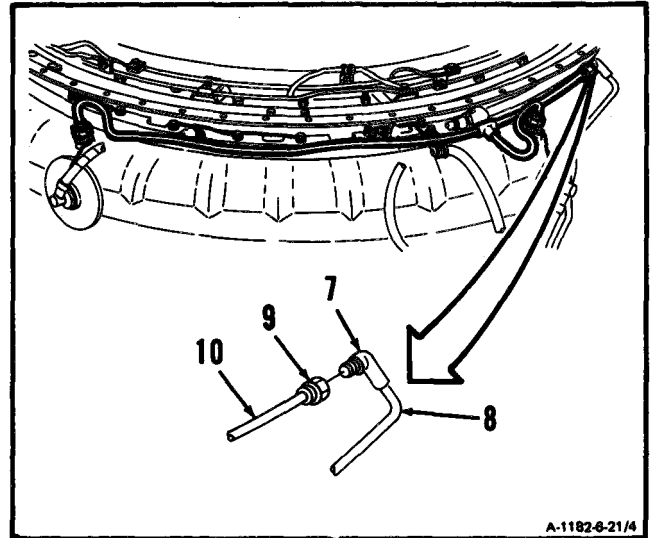


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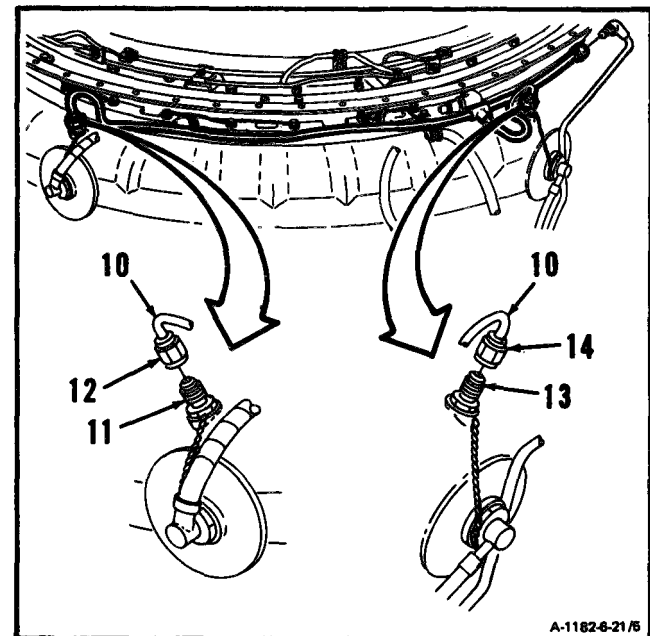
6-21 REMOVE PRIMER TUBE ASSEMBLY (Continued)

6-21

3. Using two wrenches, hold elbow (7) on tube assembly (8) and loosen swivel nut (9).
4. **Disconnect primer tube assembly (10) from tube assembly (8).**

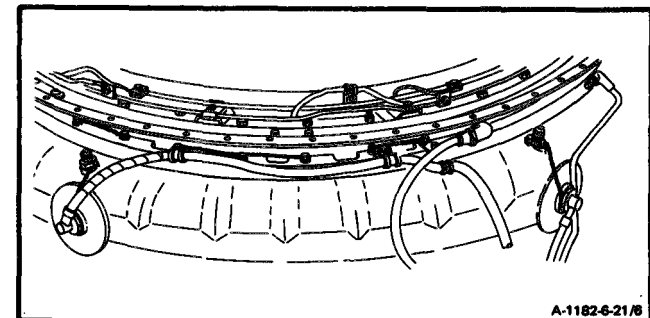


5. Using two wrenches, hold start fuel nozzle (11) and loosen swivel nut (12).
6. Using two wrenches, hold start fuel nozzle (13) and loosen swivel nut (14).
7. **Disconnect and remove primer tube assembly (10) from start fuel nozzles (11 and 13).**



FOLLOW-ON MAINTENANCE:

None



END OF TASK

INITIAL SETUP

Applicable Configurations:
All

Tools:

Goggles
Compressed Air Source

Materials:

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

Personnel Required:

68610 Aircraft Powerplant Repairer

Equipment Condition:

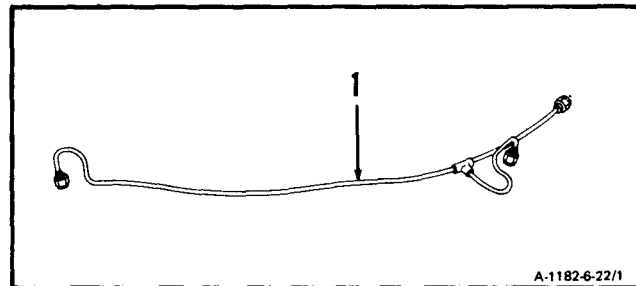
Off Engine Task
Primer Tube Assembly Removed (Task 6-21)

General Safety Instructions:**WARNING**

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

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

- a. Wear gloves (E20). Immerse primer tube assembly (1) in dry cleaning solvent (E17) and agitate.
- b. Wipe dry. Use lint-free cloth (E26).



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WARNING

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

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

FOLLOW-ON MAINTENANCE:

Inspect Primer Tube Assembly (Task 6-23).

END OF TASK

6-23 INSPECT PRIMER TUBE ASSEMBLY

6-23

INITIAL SETUP

Applicable Configurations:

All

Tools:

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

Materials:

None

Personnel Required:

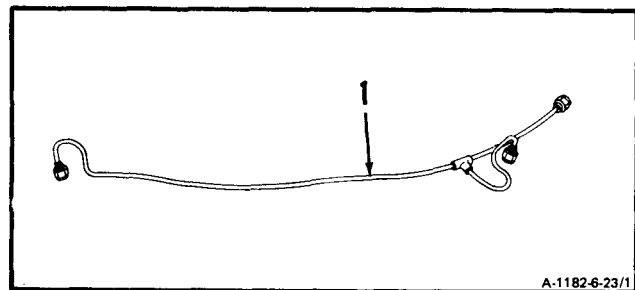
68B30 Aircraft Powerplant Inspector

Equipment Condition:

Off Engine Task

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

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



FOLLOW-ON MAINTENANCE:

None

END OF TASK

6-24 INSTALL PRIMER TUBE ASSEMBLY

6-24

INITIAL SETUP**Applicable Configurations:**

All

Tools:

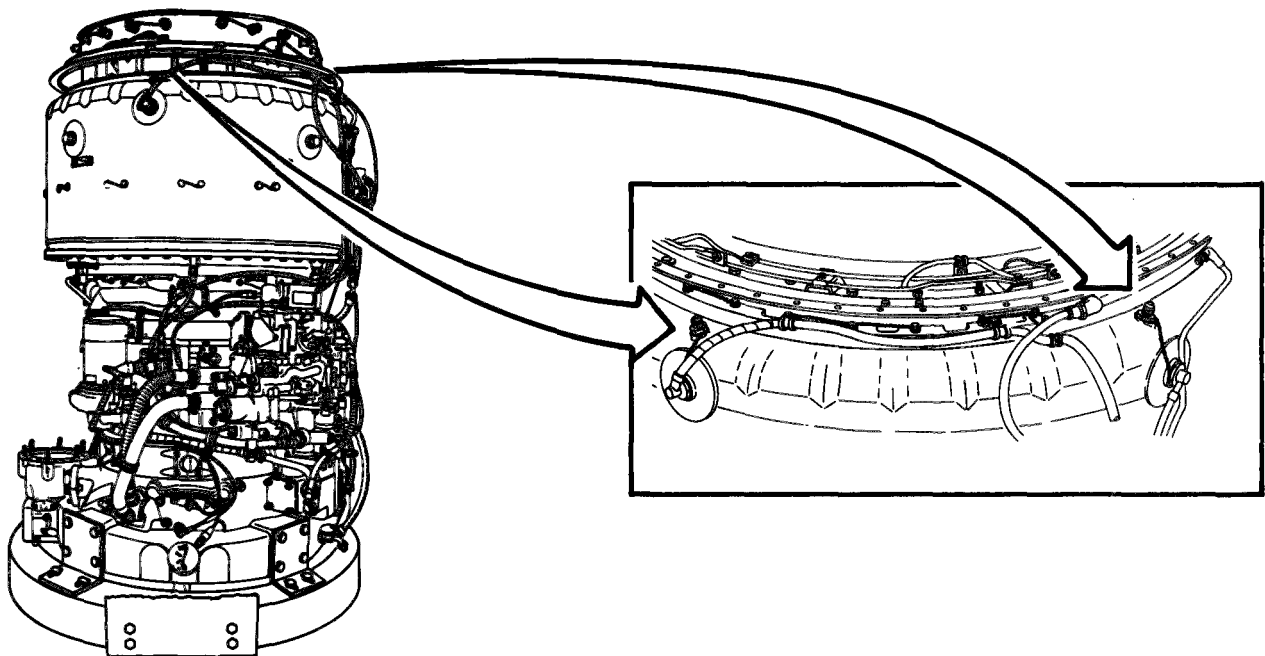
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:

None

Personnel Required:

68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

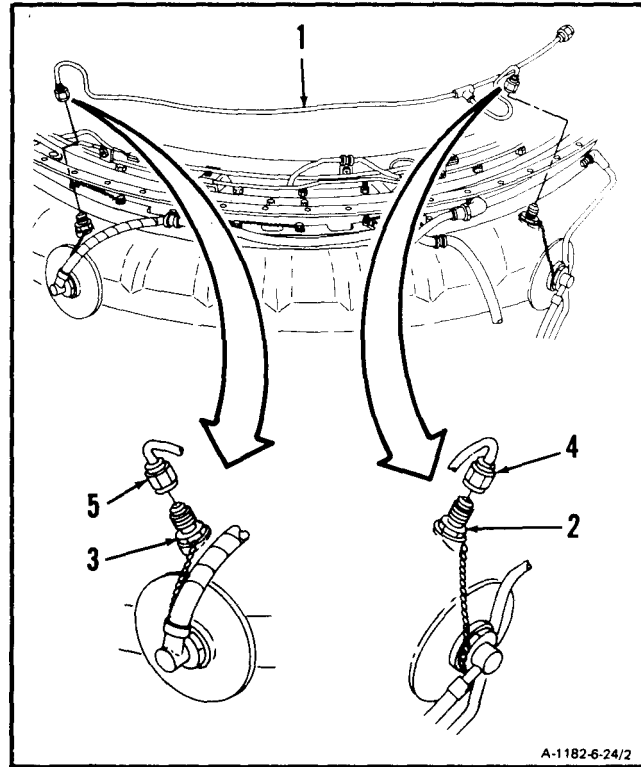


A-1182-6-24/1

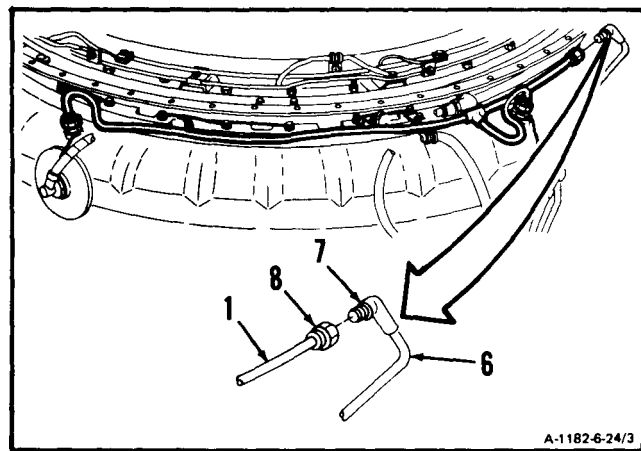
GO TO NEXT PAGE

6-24 INSTALL PRIMER TUBE ASSEMBLY (Continued)

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



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

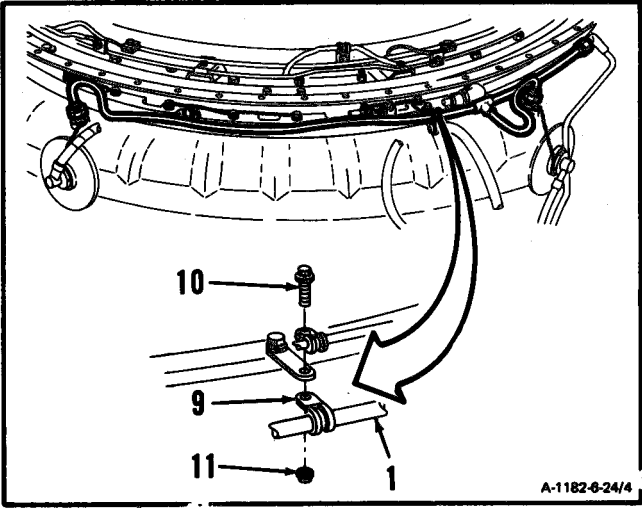


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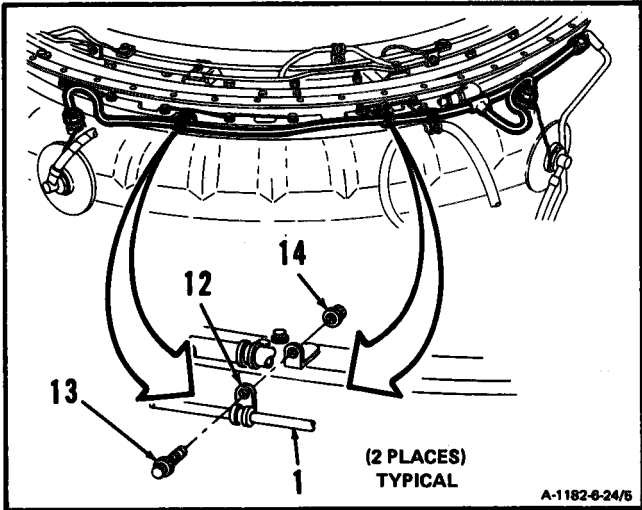
6-24 INSTALL PRIMER TUBE ASSEMBLY (Continued)

6-24

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



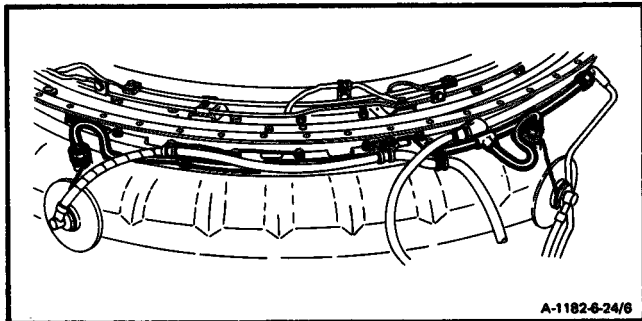
7. Install two clamps (12) on primer tube assembly (1), and install two bolts (13) and nuts (14).



INSPECT

FOLLOW-ON MAINTENANCE:

None



END OF TASK

Section VII. START FUEL NOZZLES - MAINTENANCE PROCEDURES

6-25 REMOVE START FUEL NOZZLES

6-25

INITIAL SETUP

*General Safety Instructions:**Applicable Configurations:*

All

Tools:

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

Materials:

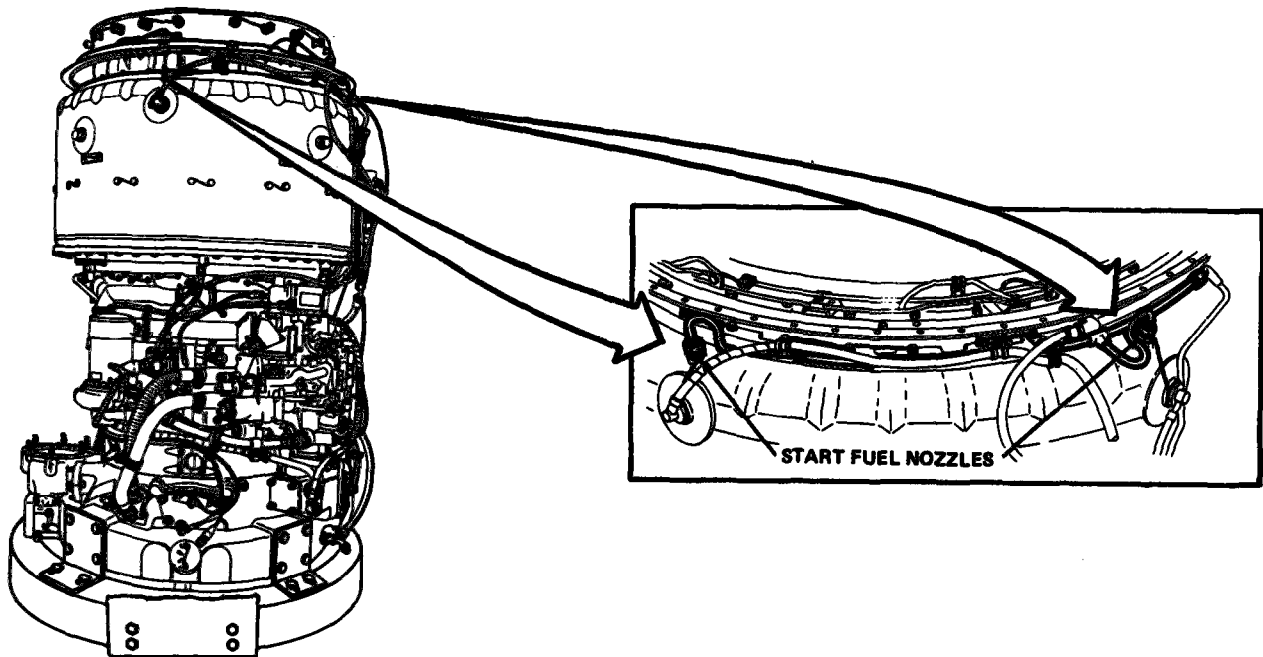
Wiping Rag (E58)

Personnel Required:

68B10 Aircraft Powerplant Repairer

WARNING

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

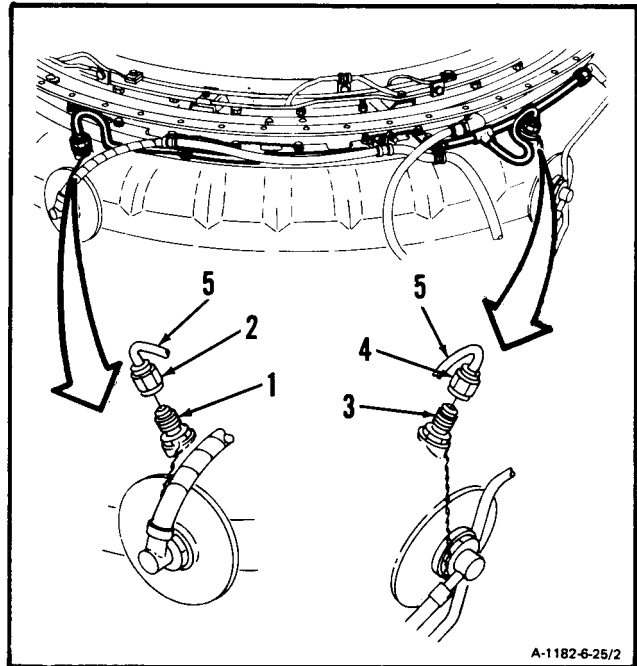


A-1182-6-25/1

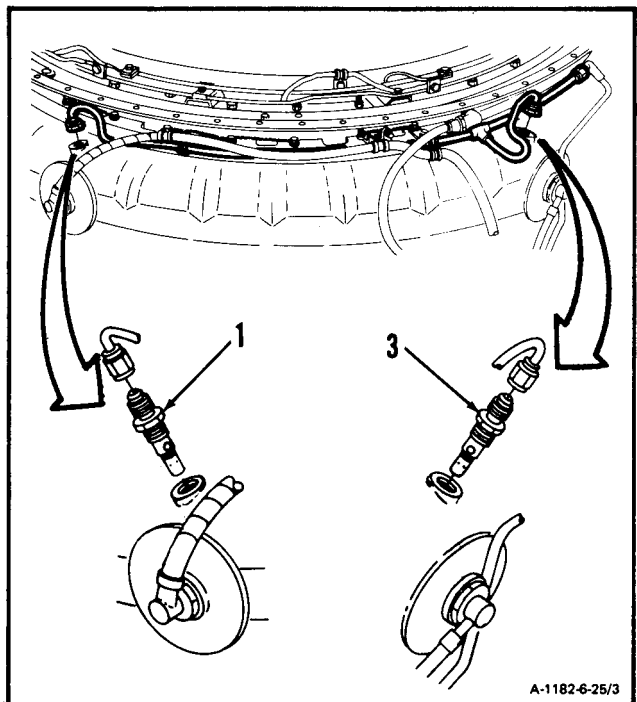
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6-25 REMOVE START FUEL NOZZLES (Continued)

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



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



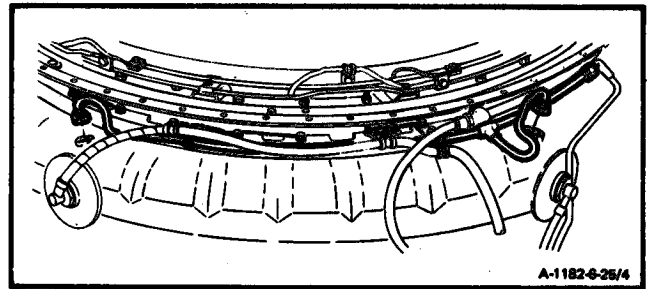
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6-25 REMOVE START FUEL NOZZLES (Continued)

6-25

FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-26 CLEAN START FUEL NOZZLES

6-26

INITIAL SETUP

Applicable Configurations:

All

Tools:

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

Materials:

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

Personnel Required:

68B10 Aircraft Powerplant Repairer

Equipment Condition:

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

General Safety Instructions:**WARNING**

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

1. Wear gloves (E20). **Clean start fuel nozzles (1).** Use dry cleaning solvent (E17) and brush.
2. After cleaning, **remove residue** with clean lint-free cloth (E26).

WARNING

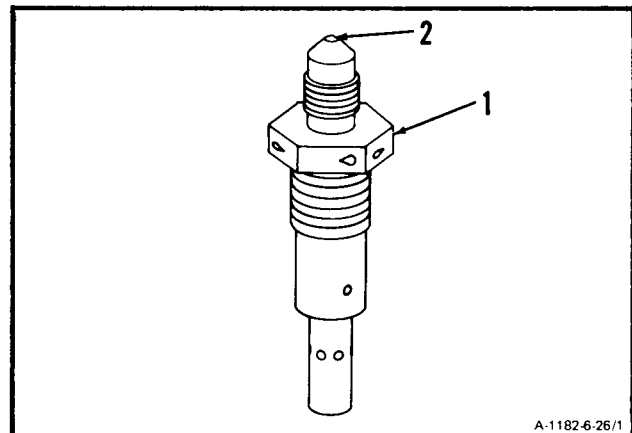
When using compressed air for cleaning, use approved protective equipment for eyes and face. Do not use more than 30 psig air pressure. Do not direct air toward yourself or another person. Failure to comply could result in injury to eyes or skin. In case of injury, get medical attention.

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

FOLLOW-ON MAINTENANCE:

Inspect Start Fuel Nozzles (Task 6-27).

END OF TASK



A-1182-6-26/1

6-27 INSPECT START FUEL NOZZLES

6-27

INITIAL SETUP**Materials:**

None

Applicable Configurations:

All

Personnel Required:

68B30 Aircraft Powerplant Inspector

Tools:

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

Equipment Condition:

Off Engine Task

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

NOTE

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

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

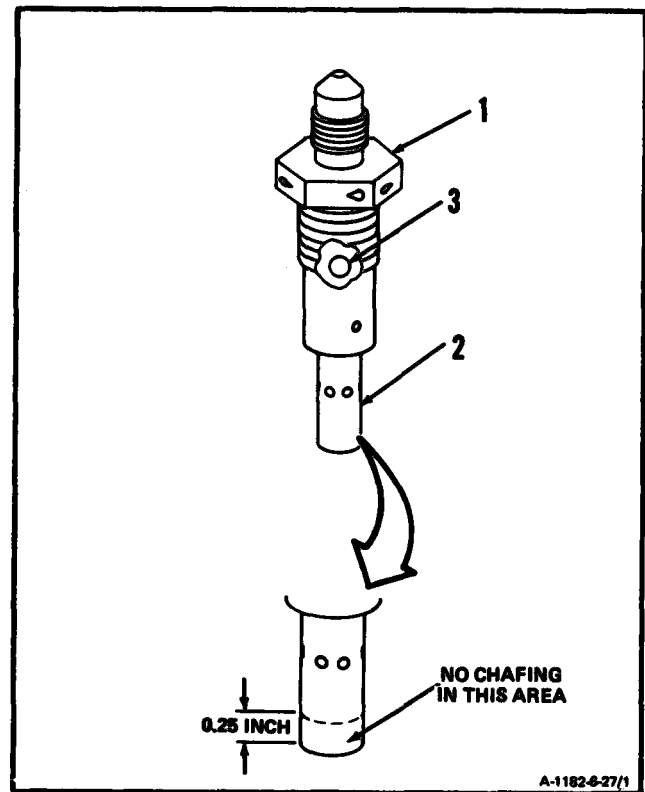
- a. There shall be no bent shroud ends.
- b. There shall be no distorted or burned out shroud ends.
- c. There shall be no chafing in area 0.25-inch from bottom of shroud ends.

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

- a. Shake start fuel nozzle (1) and listen for rattle.
- b. There shall be no stuck ball.

FOLLOW-ON MAINTENANCE:

None

END OF TASK

A-1182-6-27/1

6-28 INSTALL START FUEL NOZZLES

6-28

INITIAL SETUP

Applicable Configurations:

All

Tools:

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

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

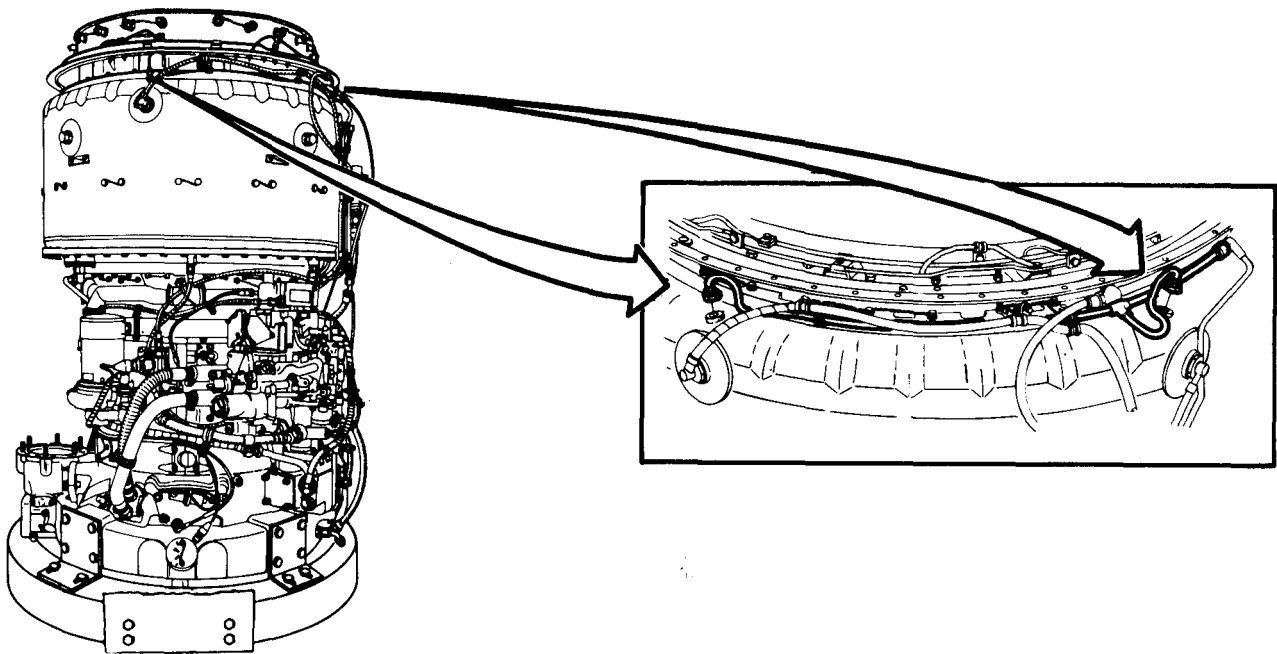
Materials:

Lockwire (E29)

Personnel Required:

68B10 Aircraft Powerplant Repairer

68B30 Aircraft Powerplant Inspector



A-1182-6-28/1

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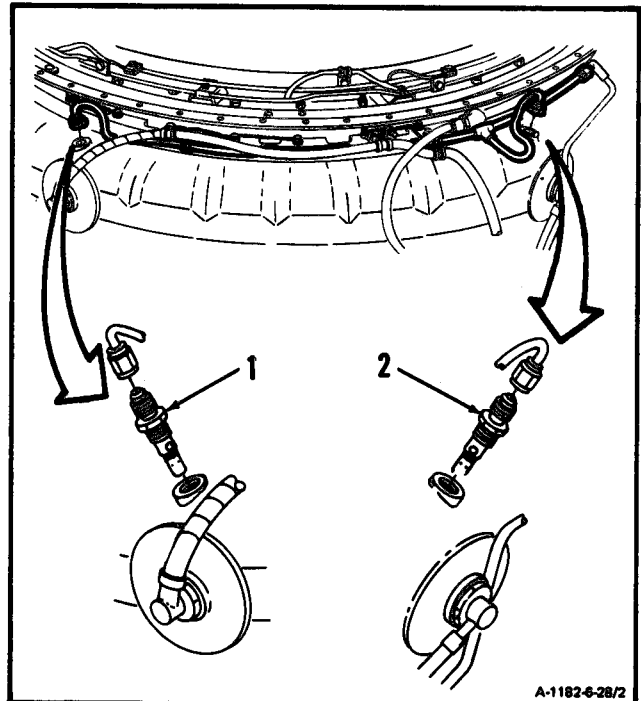
6-28 INSTALL START FUEL NOZZLES (Continued)

6-28

CAUTION

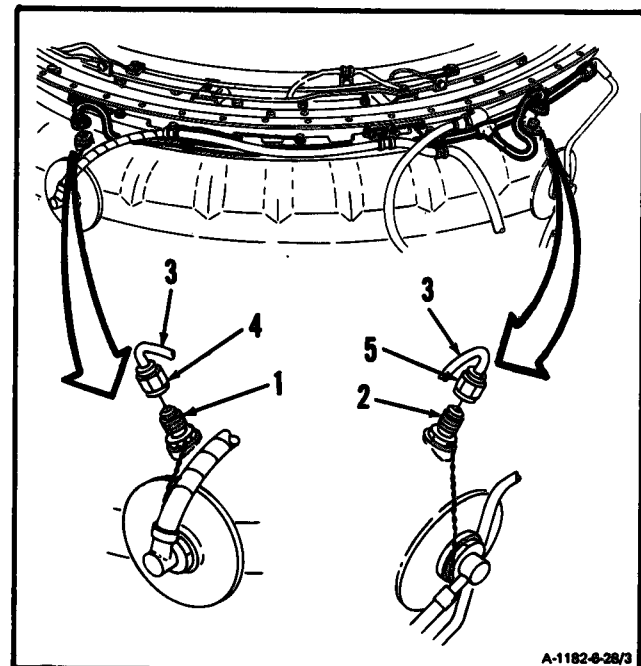
In following step, insert nozzles hand tight to insure that they do not hit combustion chamber liner. Shift liner port as needed. Failure to comply may cause and leakage.

1. Install two start fuel nozzles (1 and 2) and lock-wire. Use lockwire (E29).



A-1182-6-28/2

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



A-1182-6-28/3

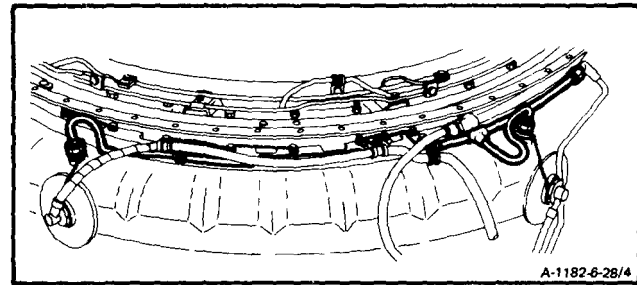
INSPECT**GO TO NEXT PAGE**

6-28 INSTALL START FUEL NOZZLES (Continued)

6-28

FOLLOW-ON MAINTENANCE:

None



END OF TASK

Section VIII. MAIN FUEL FILTER AND BRACKET – MAINTENANCE PROCEDURES

6-29 REMOVE MAIN FUEL FILTER AND BRACKET

6-29

INITIAL SETUP

*General Safety Instructions:***Applicable Configurations:**

All

Tools:

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

Materials:

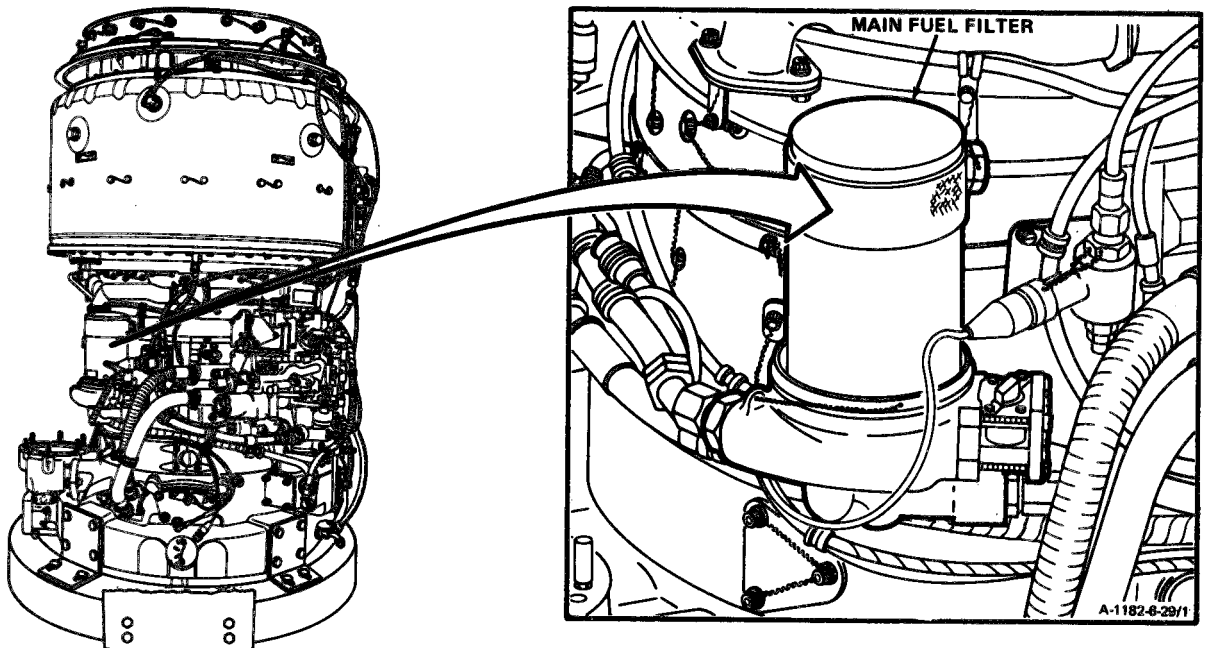
Wiping Rag (E58)

Personnel Required:

68B10 Aircraft Powerplant Repairer

WARNING

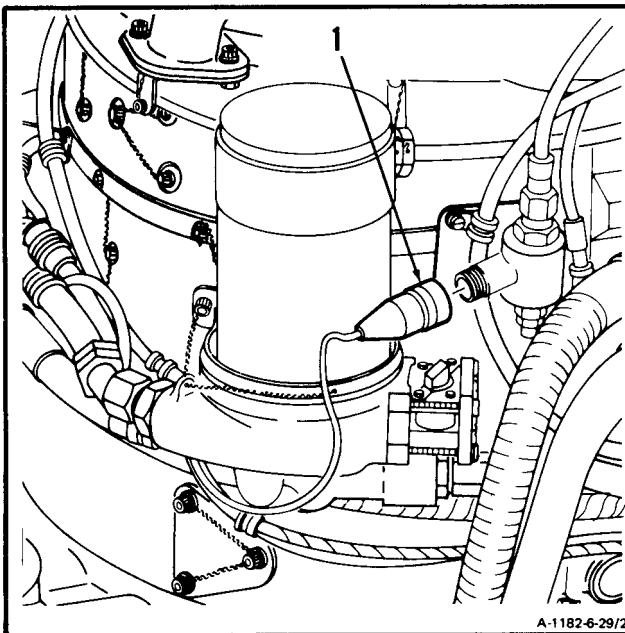
Turbine fuels are very flammable. They may cause drying and irritation of skin or eyes. Handle only in well-ventilated areas away from heat and open flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin and do not take internally. Wash contacted area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



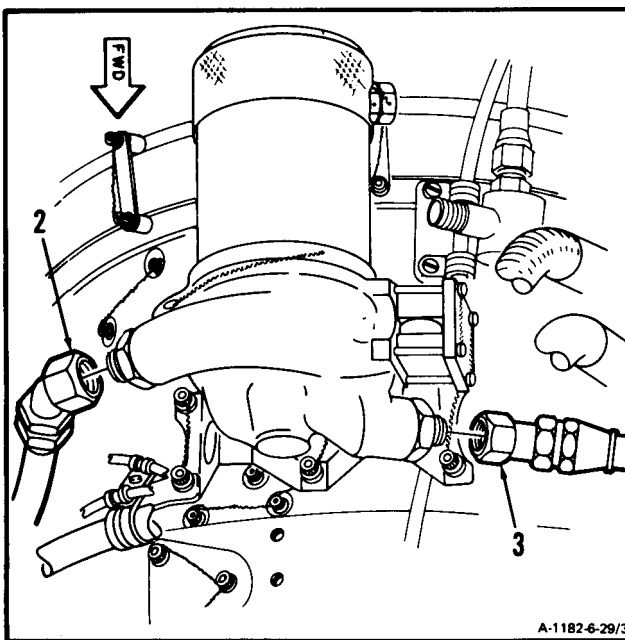
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6-29 REMOVE MAIN FUEL FILTER AND BRACKET (Continued)

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



2. Disconnect hose assembly (2).
3. Disconnect hose assembly (3).



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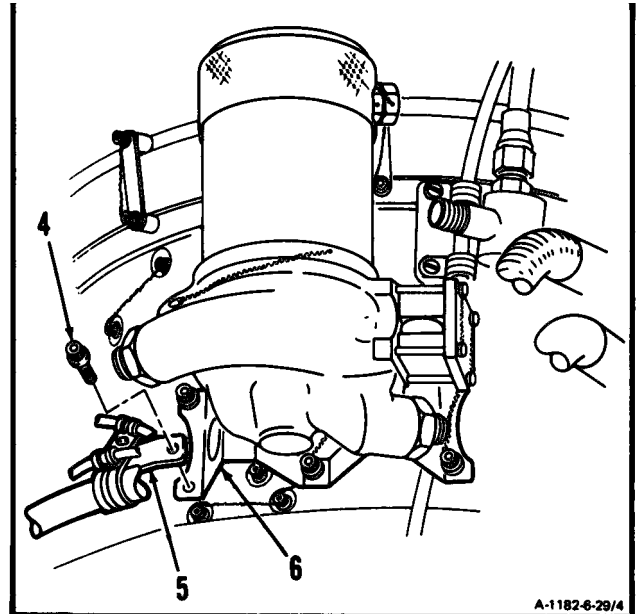
6-29 REMOVE MAIN FUEL FILTER AND BRACKET (Continued)

6-29

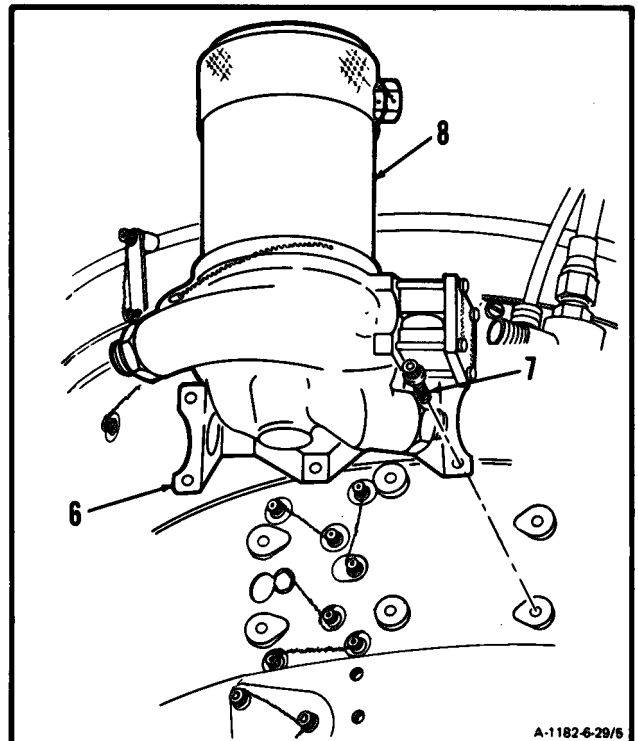
NOTE

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

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



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

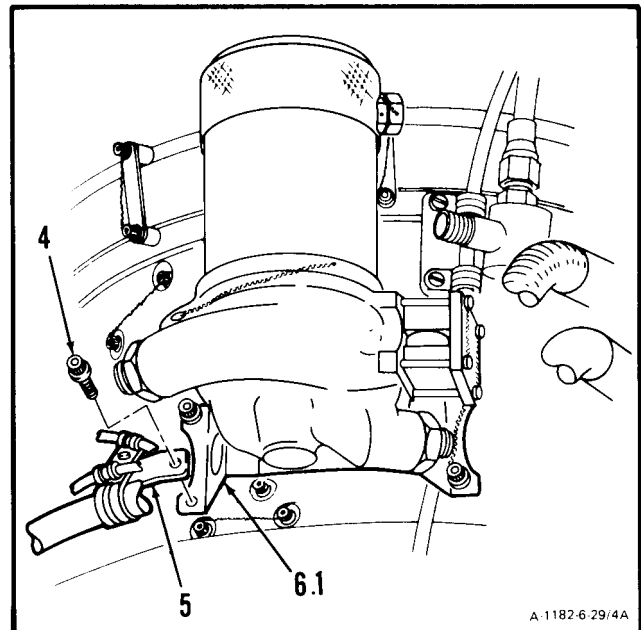


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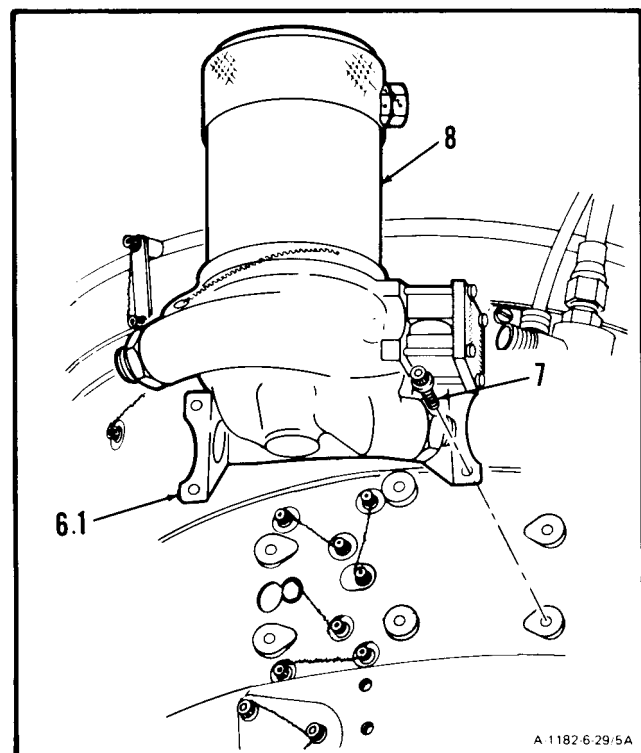
6-29 REMOVE MAIN FUEL FILTER AND BRACKET (Continued)

6-29

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



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



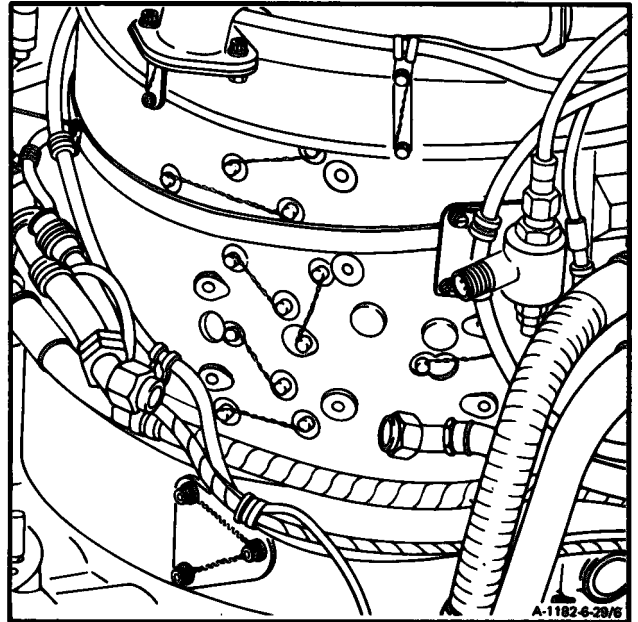
GO TO NEXT PAGE

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

6-29

FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-30 DISASSEMBLE MAIN FUEL FILTER AND BRACKET

6-30

INITIAL SETUP

Applicable Configurations:

All

Tools:

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

Materials:

Wiping Rag (E58)

Personnel Required:

6BB10 Aircraft Powerplant Repairer

Equipment Condition:

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

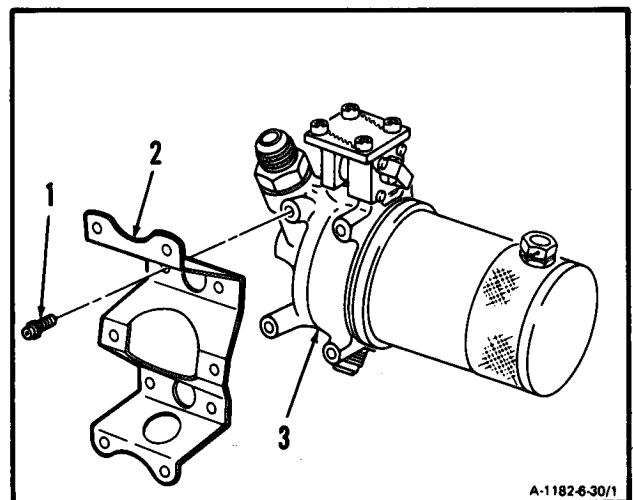
General Safety Instructions:**WARNING**

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

NOTE

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

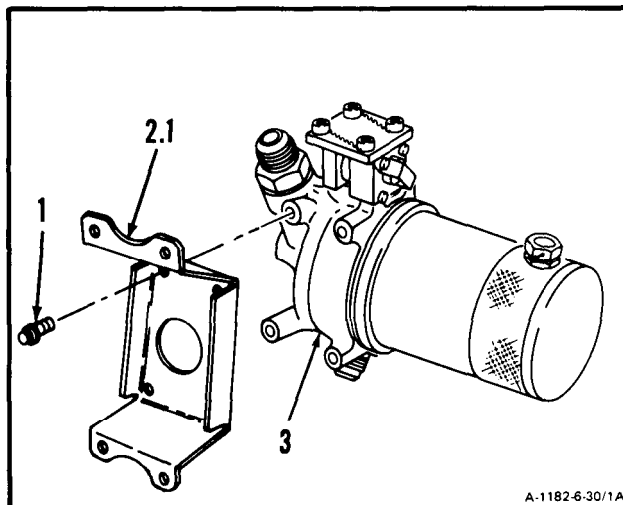
1. Remove lockwire and four bolts (1). **Remove bracket (2).**

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6-30 DISASSEMBLE MAIN FUEL FILTER AND BRACKET

6-30

1.1 Remove lockwire and four bolts (1). Remove bracket (2.1).

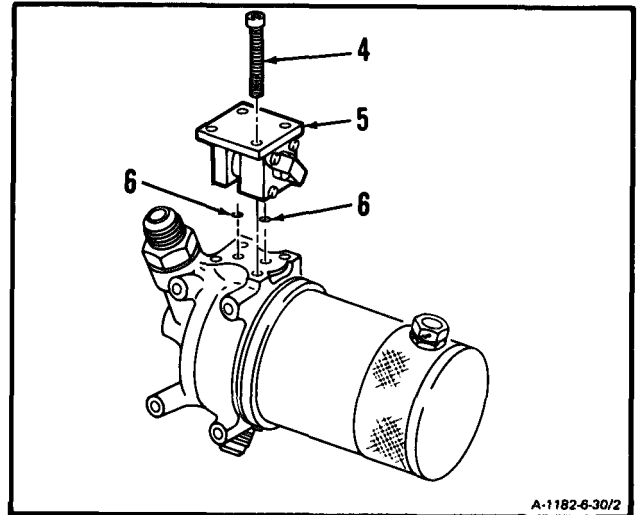


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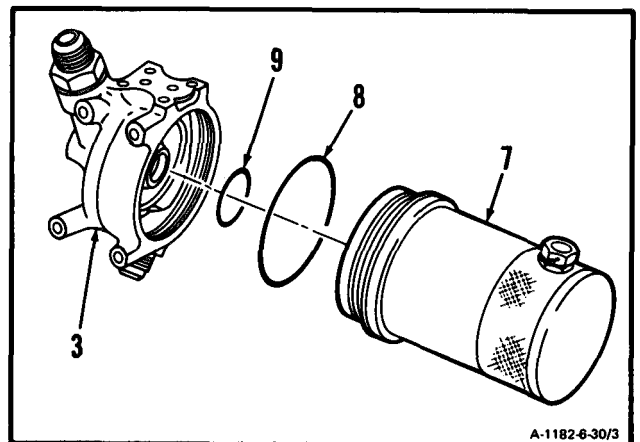
6-30 DISASSEMBLE MAIN FUEL FILTER AND BRACKET (Continued)

6-30

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



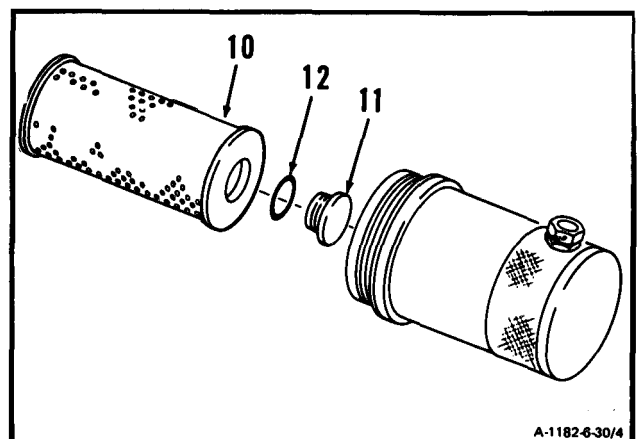
3. Remove lockwire, filter bowl (7), and packings (8 and 9) from filter head (3). Use vise with jaw caps and strap wrench.



NOTE

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

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

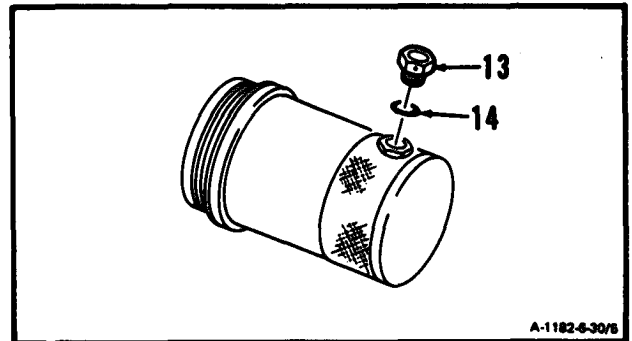


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6-30 DISASSEMBLE MAIN FUEL FILTER AND BRACKET (Continued)

6-30

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

**FOLLOW-ON MAINTENANCE:**

None

END OF TASK

6-31 CLEAN MAIN FUEL FILTER AND BRACKET

INITIAL SETUP

Applicable Configurations:

All

Tools:

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

Materials:

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

Personnel Required:

68B10 Aircraft Powerplant Repairer

Equipment Condition:

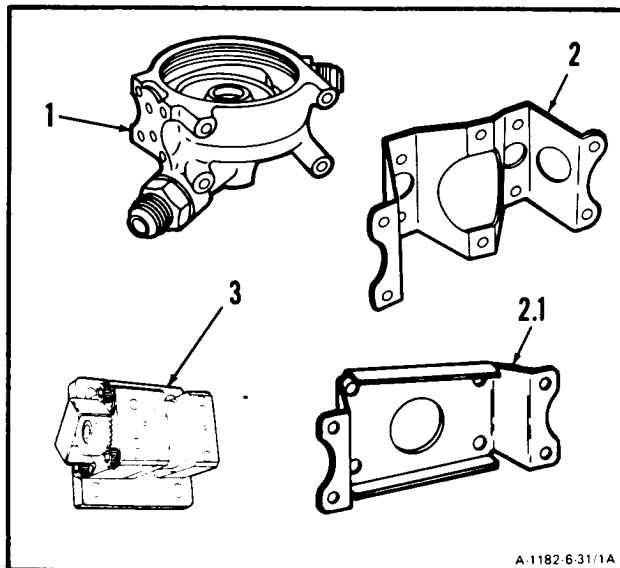
- Off Engine Task
- Main Fuel Filter and Bracket Removed
(Task 6-29)
- Main Fuel Filter and Bracket Disassembled
(Task 6-30)

General Safety Instructions:

WARNING

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

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



A-1182-6-31/1A

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

6-31

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

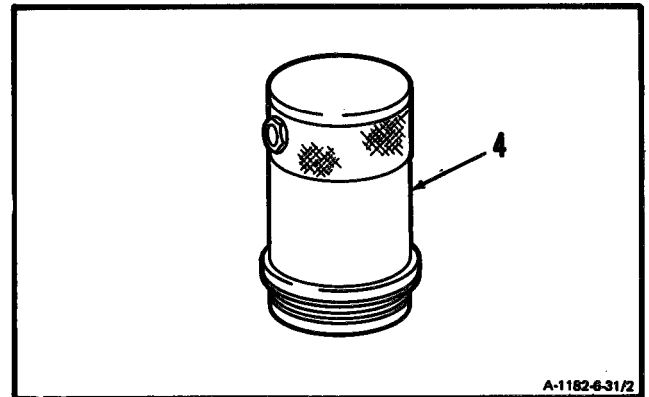
WARNING

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

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

FOLLOW-ON MAINTENANCE:

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

**END OF TASK**

6-32 INSPECT MAIN FUEL FILTER AND BRACKET

6-32

INITIAL SETUP

Applicable Configurations:

All

Tools:

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

Materials:

Lockwire (E29)

Personnel Required:

68B30 Aircraft Powerplant Inspector

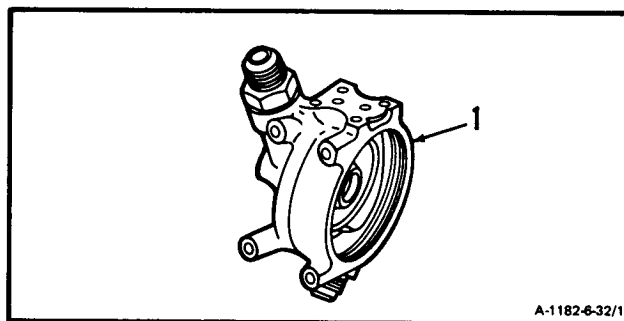
References:

Task 1-85

Equipment Condition:

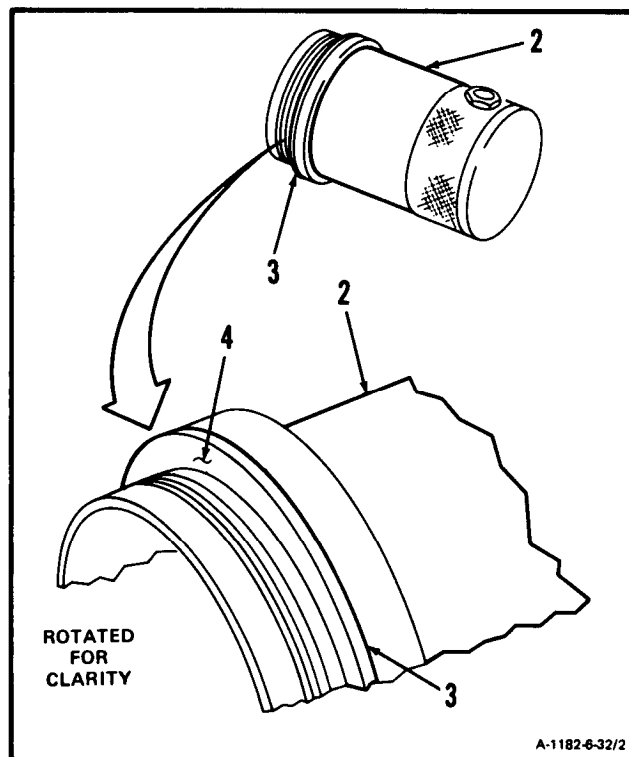
Off Engine Task

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



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

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



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NOTE

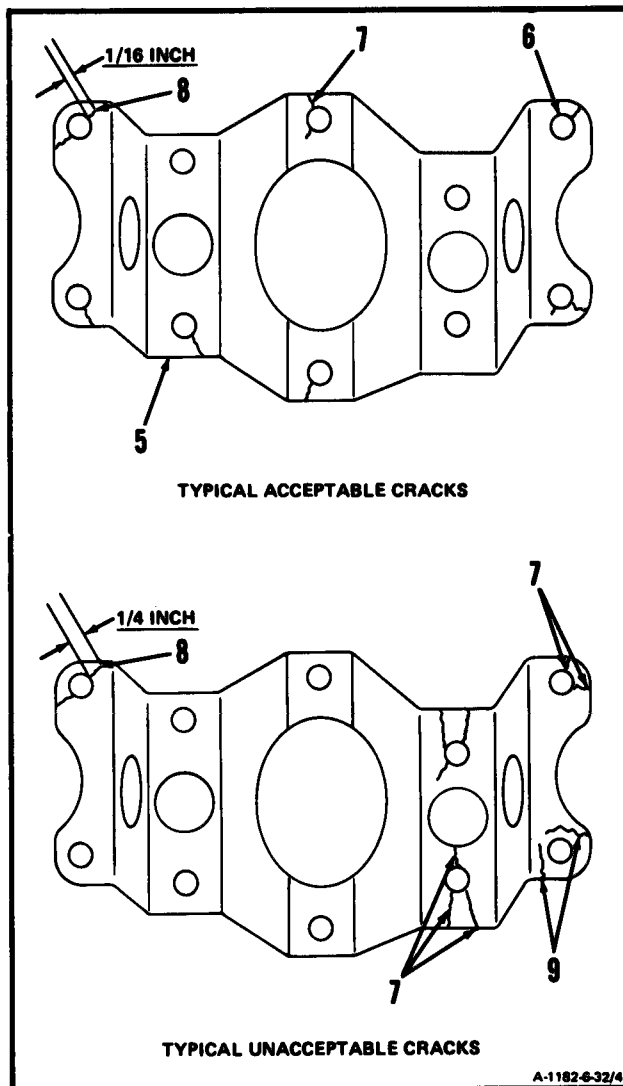
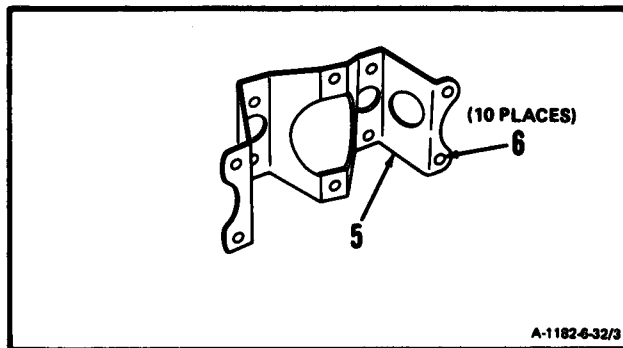
If bracket has **ten bolt holes** do steps 4. and 5. and omit step 5.1. and 5.2. If bracket has **eight bolt holes** omit steps 4. and 5. and do steps 5.1. and 5.2.

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

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

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

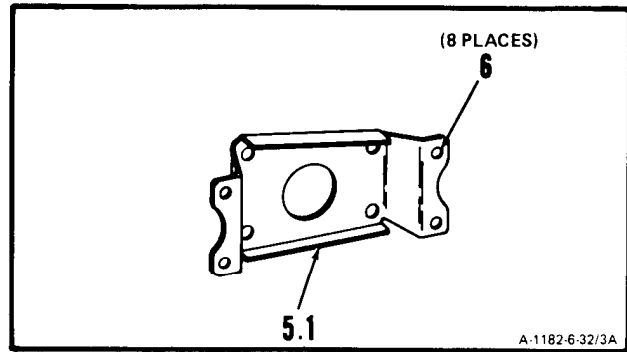
- a. **There shall be no more than one edge-to-bolt hole crack (7) per each bolt hole (6).**
- b. At bolt holes with edge-to-bolt hole crack (7), **there shall be no more than one additional crack (8).** Crack (8) shall be no more than 1/16 inch long.
- c. **There shall be no converging cracks (9)** that might cause material to fall out.



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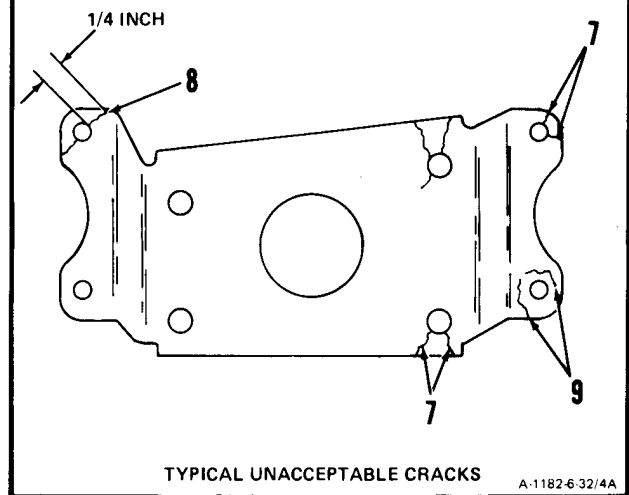
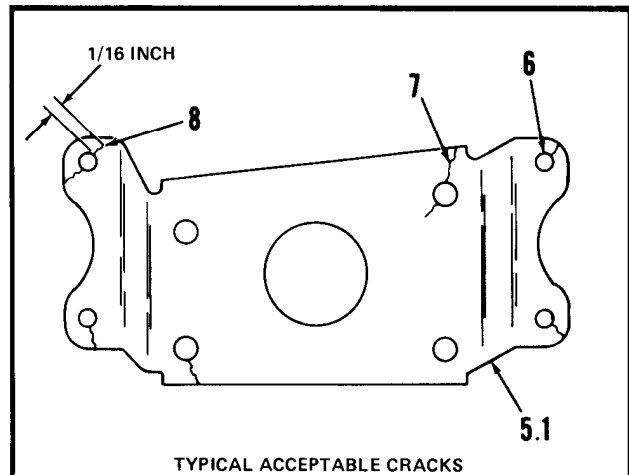
5.1 Inspect bracket (5.1).

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



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

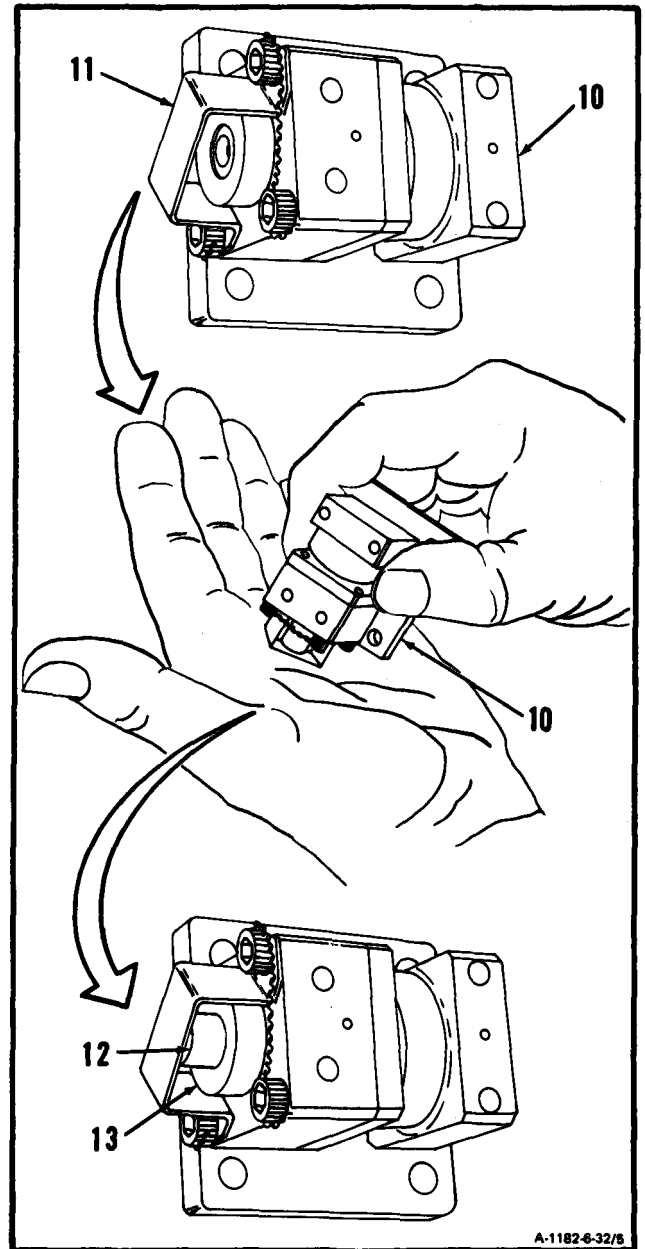
- a. **There shall be no more than one edge-to-bolt hole crack (7) per each bolt hole (6).**
- b. At bolt holes with edge-to-bolt hole crack (7), **there shall be no more than one additional crack (8),** Crack (8) shall be no more than 1/16 inch long.
- c. **There shall be no converging cracks (9)** that might cause material to fall out.



GO TO NEXT PAGE

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

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

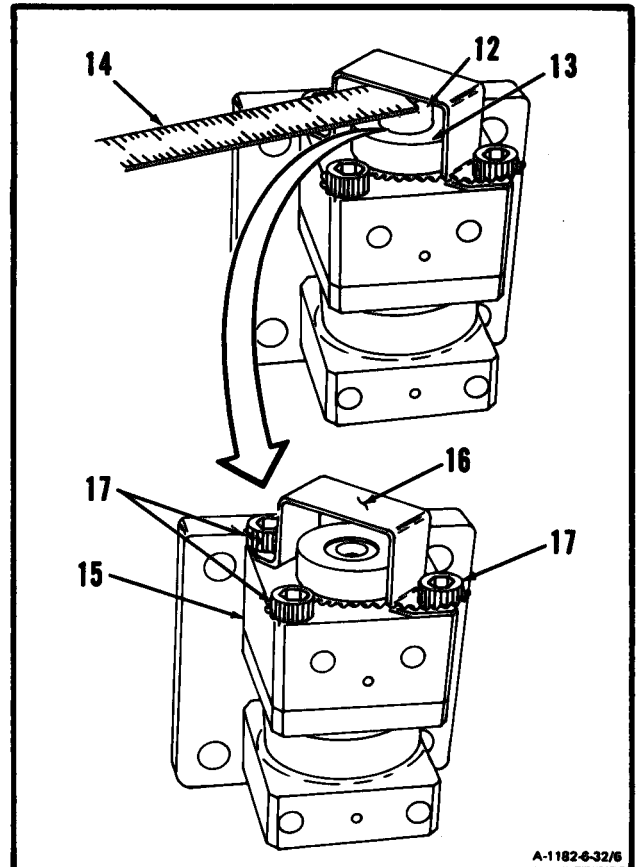


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6-32 INSPECT MAIN FUEL FILTER AND BRACKET (Continued)

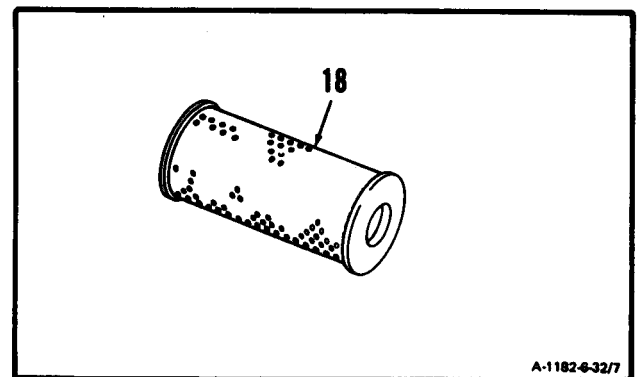
6-32

- b. Using machinist's steel rule (14), push poppet (12) into housing (13). Poppet (12) should snap back into housing (13) smoothly with light pressure applied:
- c. Inspect housing (15). There shall be no cracks.
- d. Inspect bracket (16). There shall be no looseness. If looseness exists, proceed as follows:
- (1) Remove lockwire.
 - (2) Tighten bolts (17).
 - (3) Lockwire bolts (17). use lockwire (E29).

**NOTE**

New type filter has plug installed in element.

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

**FOLLOW-ON MAINTENANCE:**

None

END OF TASK

INITIAL SETUP

Applicable Configurations:

All

Tools:

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

Materials:

None

Personnel Required:

68B10 Aircraft Powerplant Repairer
68630 Aircraft Powerplant Inspector

Equipment Condition:

Off Engine Task

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

NOTE

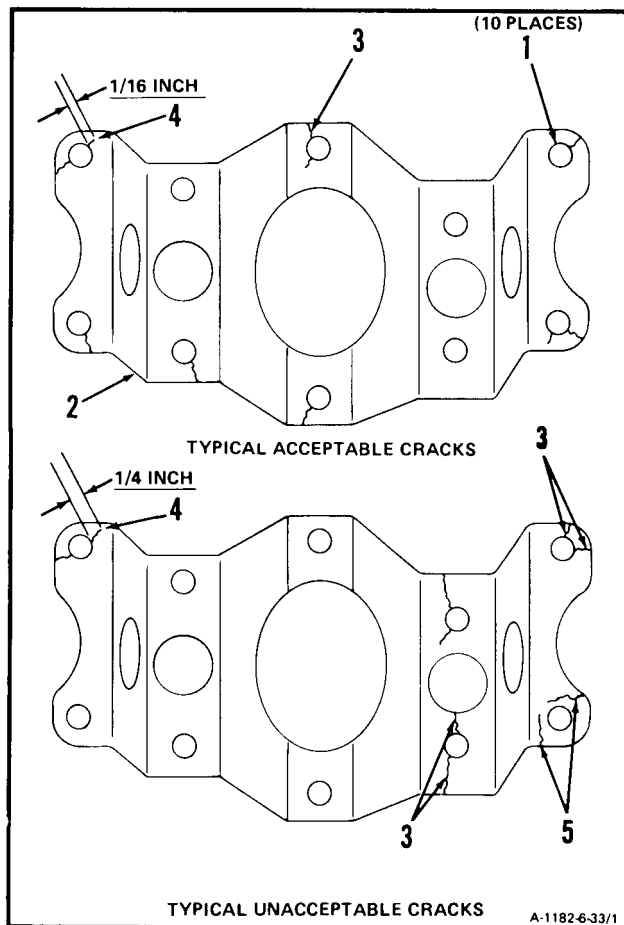
This repair is allowed as long as it does not generate cracks beyond the following limits:

- a. There shall be no more than one edge-to-bolt hole crack (3) per each bolt hole (1).
- b. At bolt holes with edge-to-bolt hole crack (3), there shall be no more than one additional crack (4). Crack (4) shall be no more than 1/16 inch long.
- c. There shall be no converging cracks (5) that might cause material to fall out.

INSPECT

FOLLOW-ON MAINTENANCE:

None



END OF TASK

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

6-33.1

INITIAL SETUP

Applicable Configurations:

All

Tools:

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

Materials:

None

Personnel Required:

68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

Equipment Condition:

Off Engine Task

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

NOTE

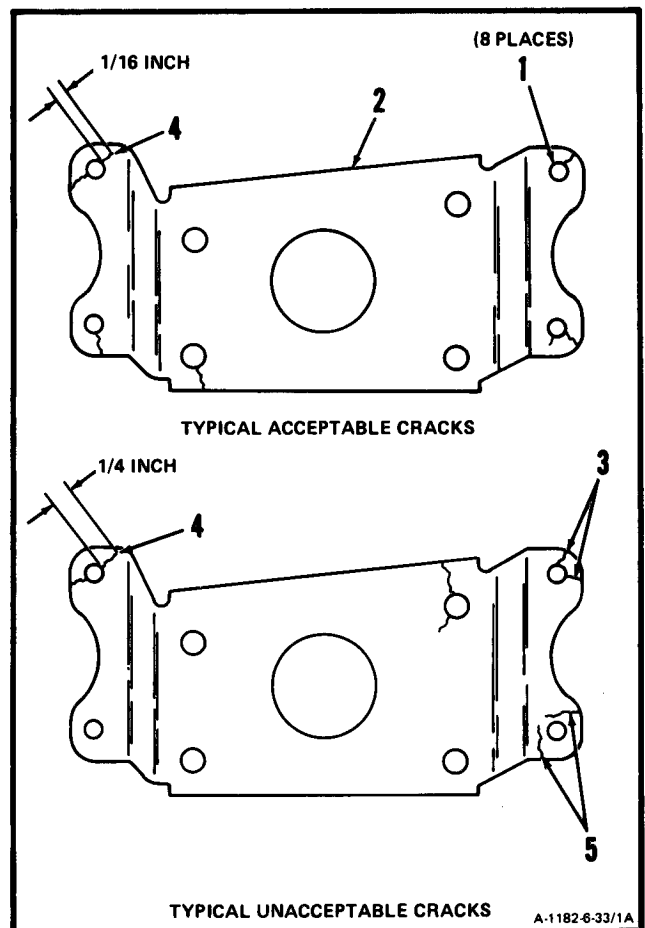
This repair is allowed as long as it does not generate cracks beyond the following limits:

- a. There shall be no more than one edge-to-bolt hole crack (3) per each bolt hole(1).
- b. At bolt holes with edge-to-bolt hole crack (3), there shall be no more than one additional crack (4). Crack (4) shall be no more than 1 /16 inch long.
- c. There shall be no converging cracks (5) that might cause material to fall out.

INSPECT

FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-34 ASSEMBLE MAIN FUEL FILTER AND BRACKET

6-34

INITIAL SETUP

Applicable Configurations:

All

Tools:

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

Materials:

Lockwire (E29)

Parts:

Filter Element
Packings

Personnel Required:

68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

References:

TM 55-2840-254-23P

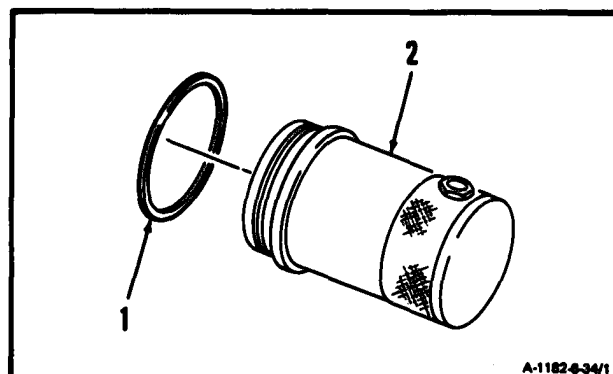
Equipment Condition:

Off Engine Task

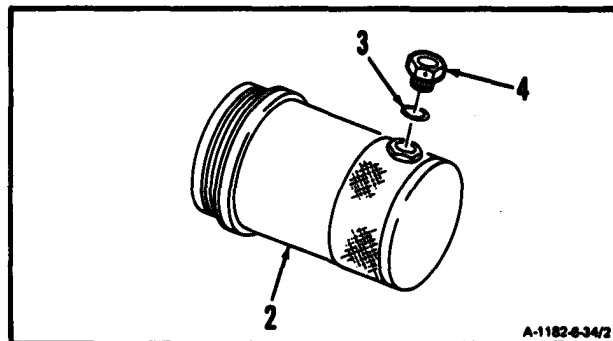
NOTE

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

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



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

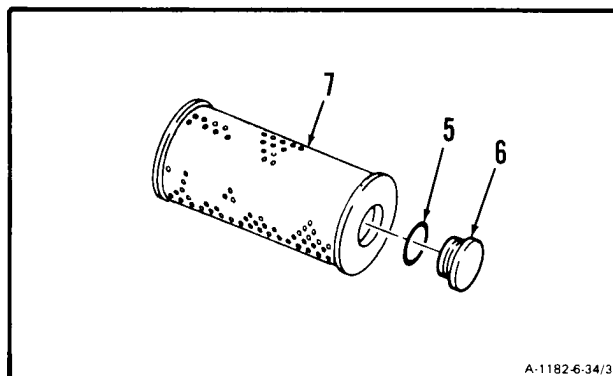


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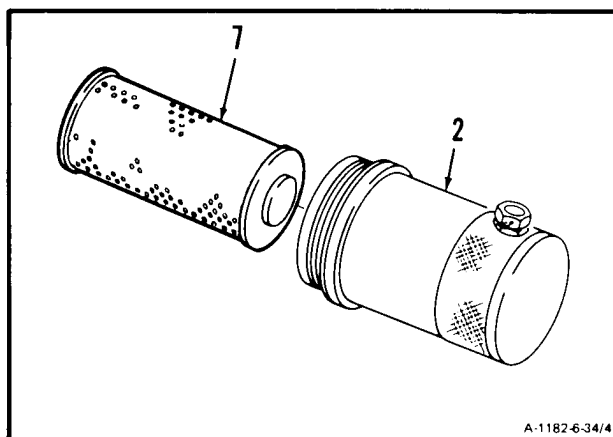
NOTE

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

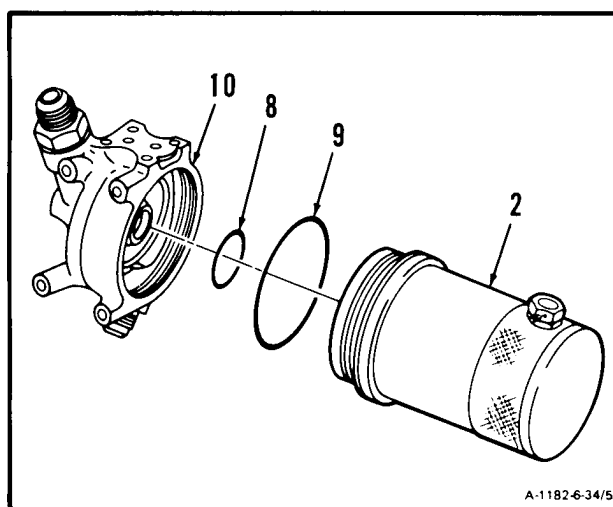
- 3 **Install** packing (5) and **plug** (6) in filter element (7).



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



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

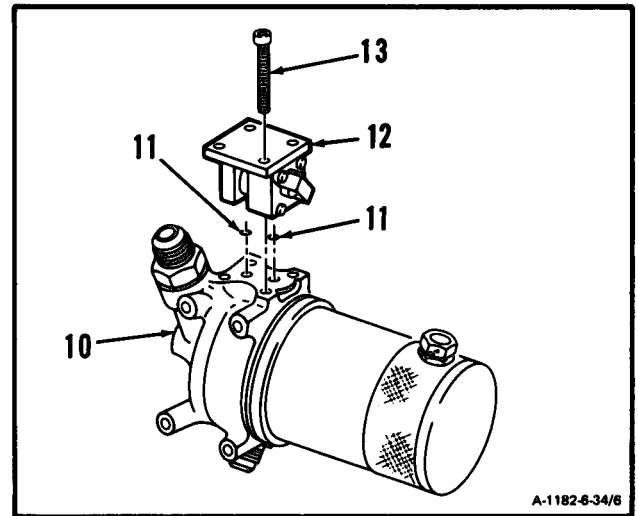


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CAUTION

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

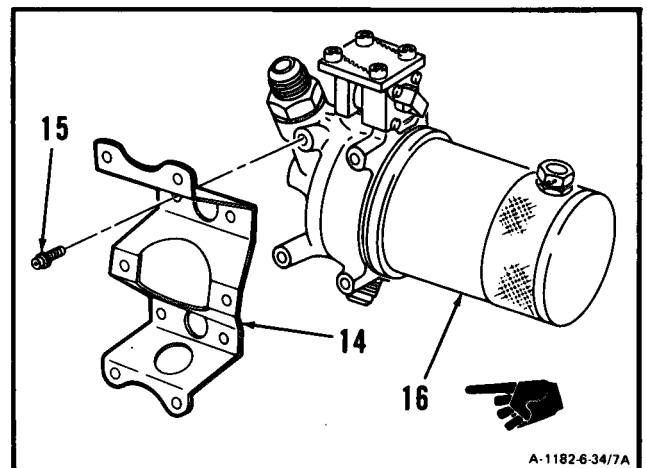
6. Install two packings (11) and differential pressure indicator (12) on filter head (10). Install four screws (13) and lockwire. Use lockwire (E29)



NOTE

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

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

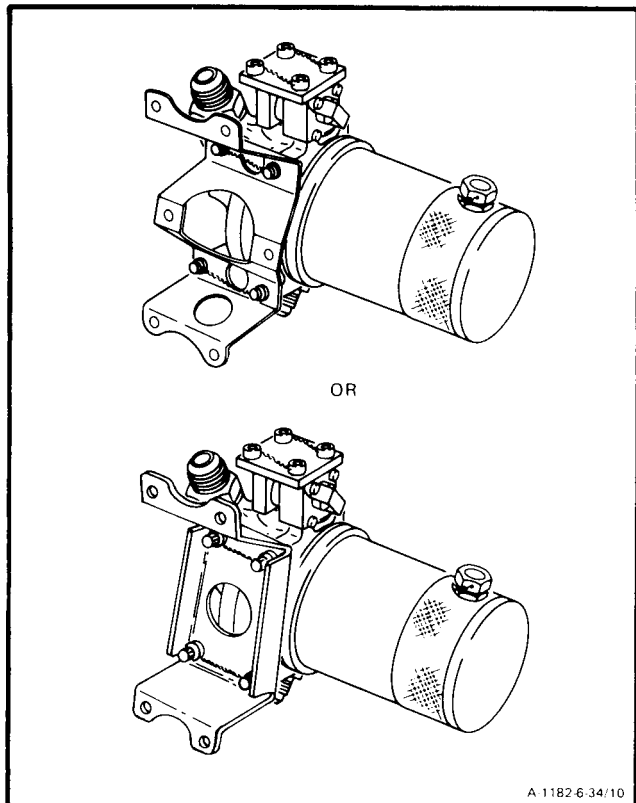
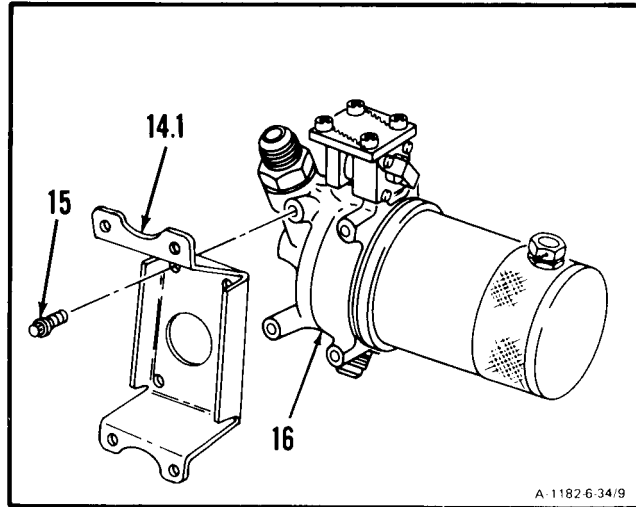


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7.1 Install bracket (14.1) and four bolts (15) on main fuel filter (16). Lockwire bolts (15), Use lockwire (E29).

INSPECT

FOLLOW-ON MAINTENANCE:
None



END OF TASK

6-35 INSTALL MAIN FUEL FILTER AND BRACKET

6-35

INITIAL SETUP**Applicable Configurations:**

All

Tools:

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

Materials:

Lockwire (E29)

Parts:

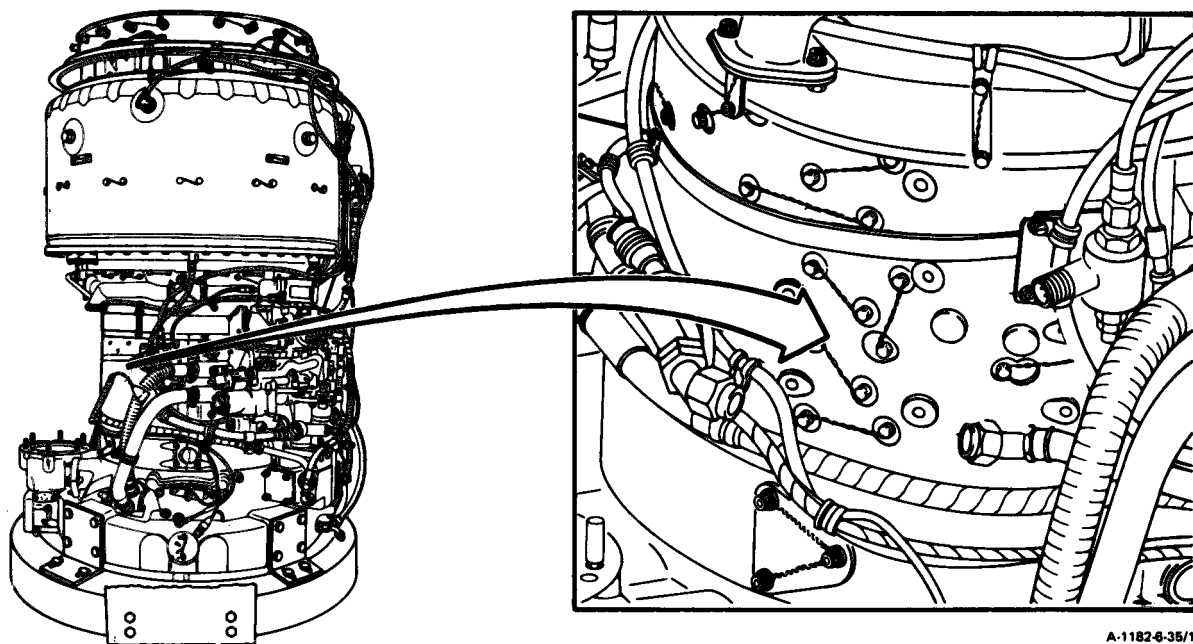
Packings

Personnel Required:

68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

References:

TM 55-2840-254-23P



A-1182-6-35/1

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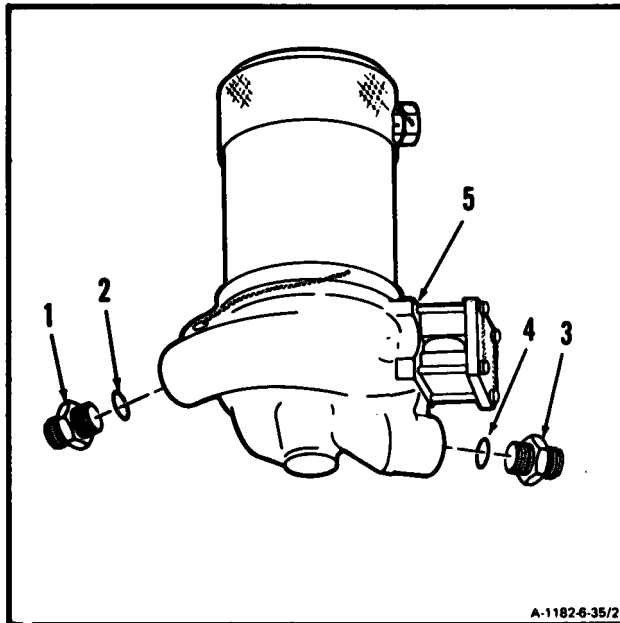
6-35 INSTALL MAIN FUEL FILTER AND BRACKET (Continued)

6-35

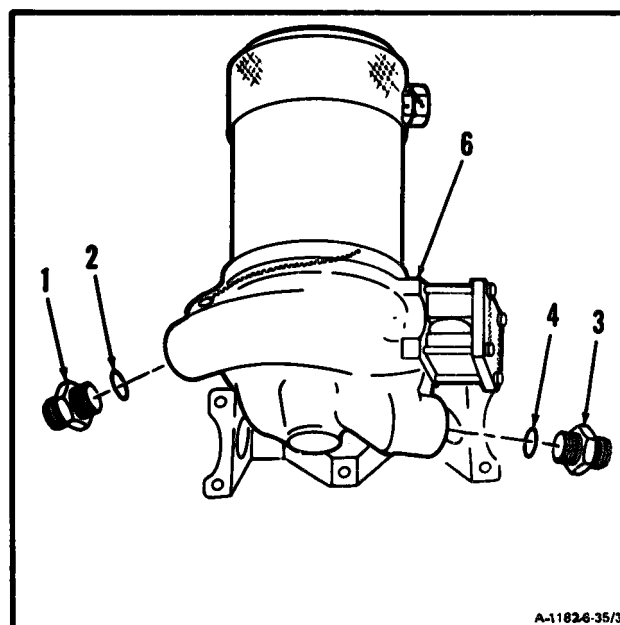
NOTE

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

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



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

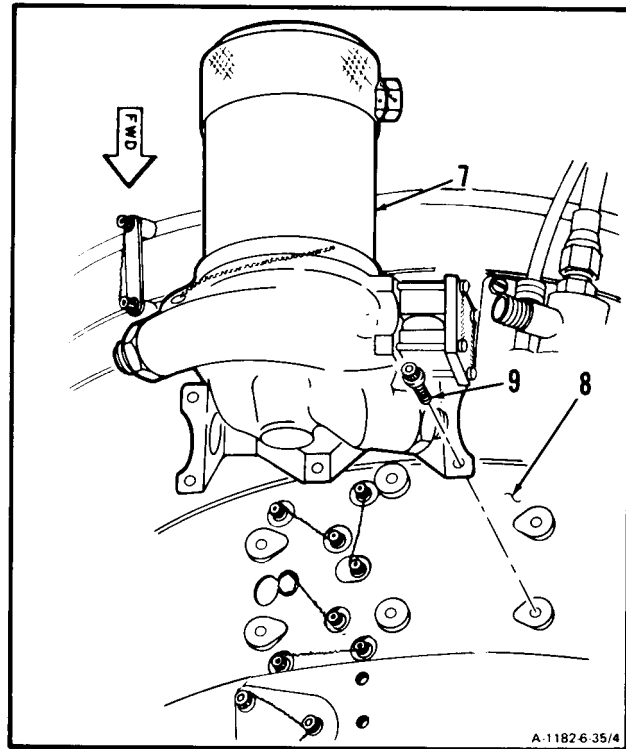


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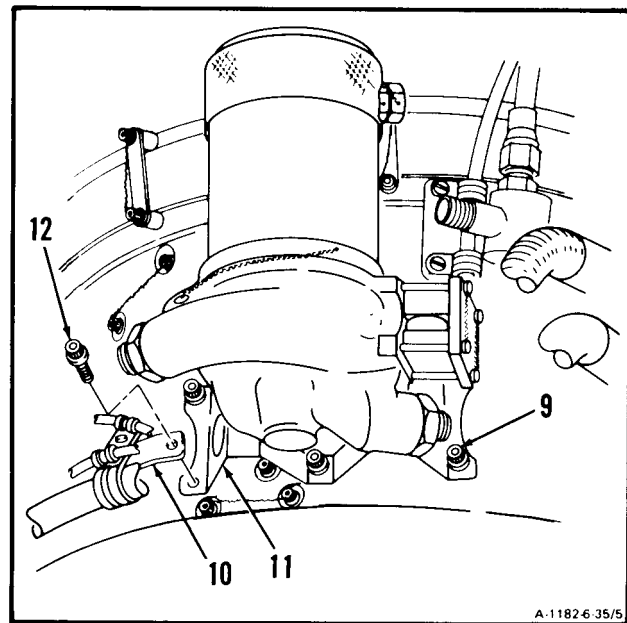
NOTE

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

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



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

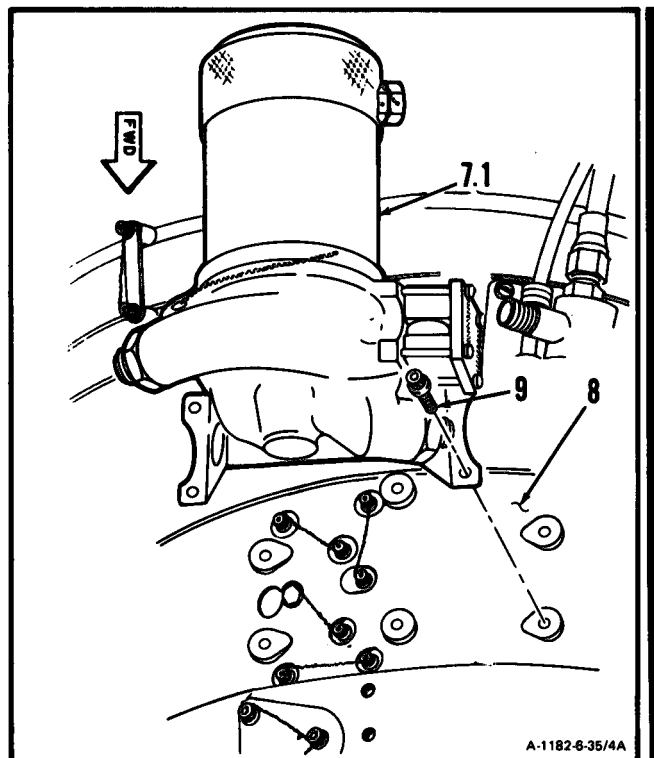


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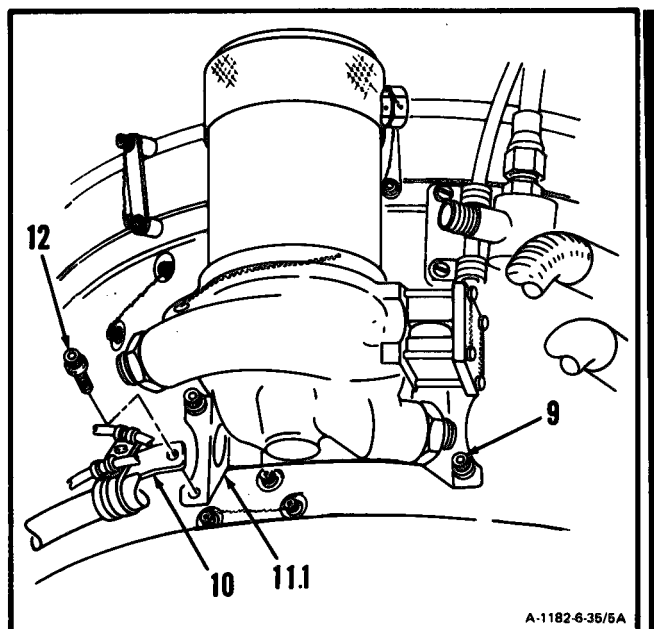
6-35 INSTALL MAIN FUEL FILTER AND BRACKET (Continued)

6-35

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



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

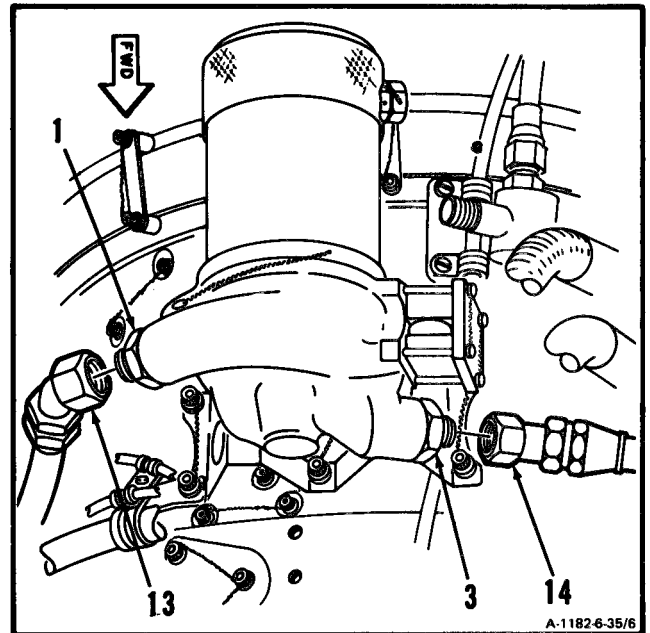


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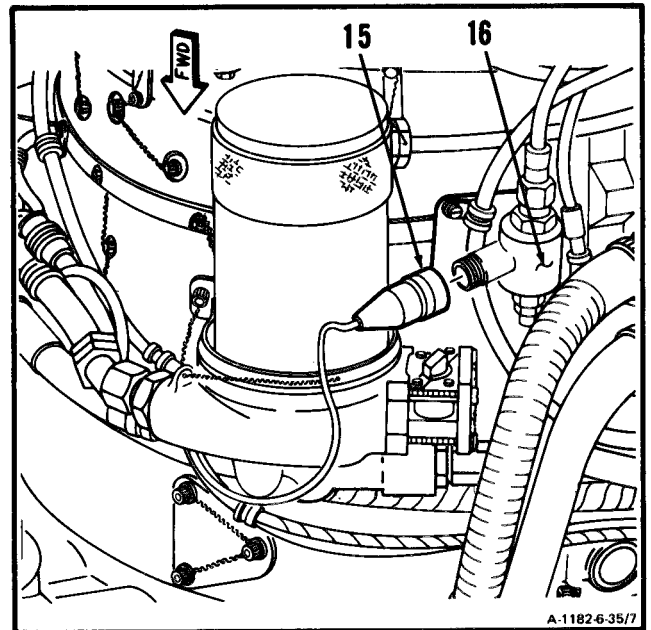
6-35 INSTALL MAIN FUEL FILTER AND BRACKET (Continued)

6-35

5. Connect hose assembly (13) to nipple (1).
6. Connect hose assembly (14) to nipple (3).



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



INSPECT

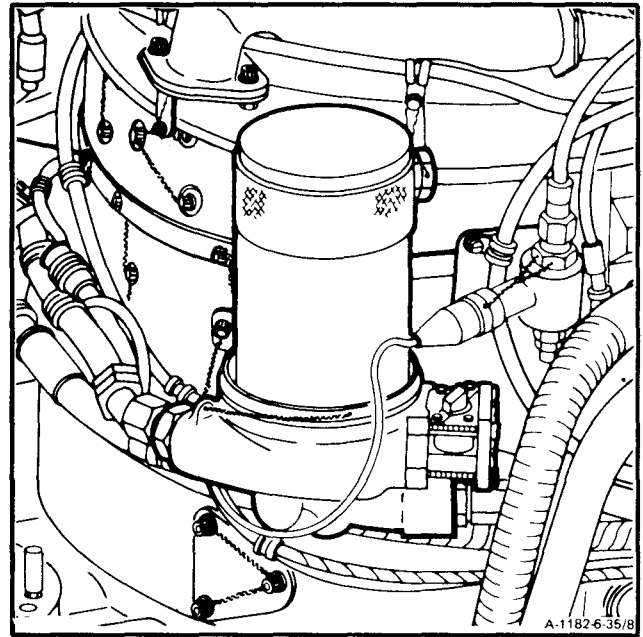
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6-35 INSTALL MAIN FUEL FILTER AND BRACKET (Continued)

6-35

FOLLOW-ON MAINTENANCE:

None



END OF TASK

Section IX. IN-LINE FUEL FILTER ASSEMBLY - MAINTENANCE PROCEDURES

6-36 REMOVE IN-LINE FUEL FILTER ASSEMBLY

6-36

INITIAL SETUP

*General Safety Instructions:***Applicable Configurations:**

All

Tools:

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

Materials:

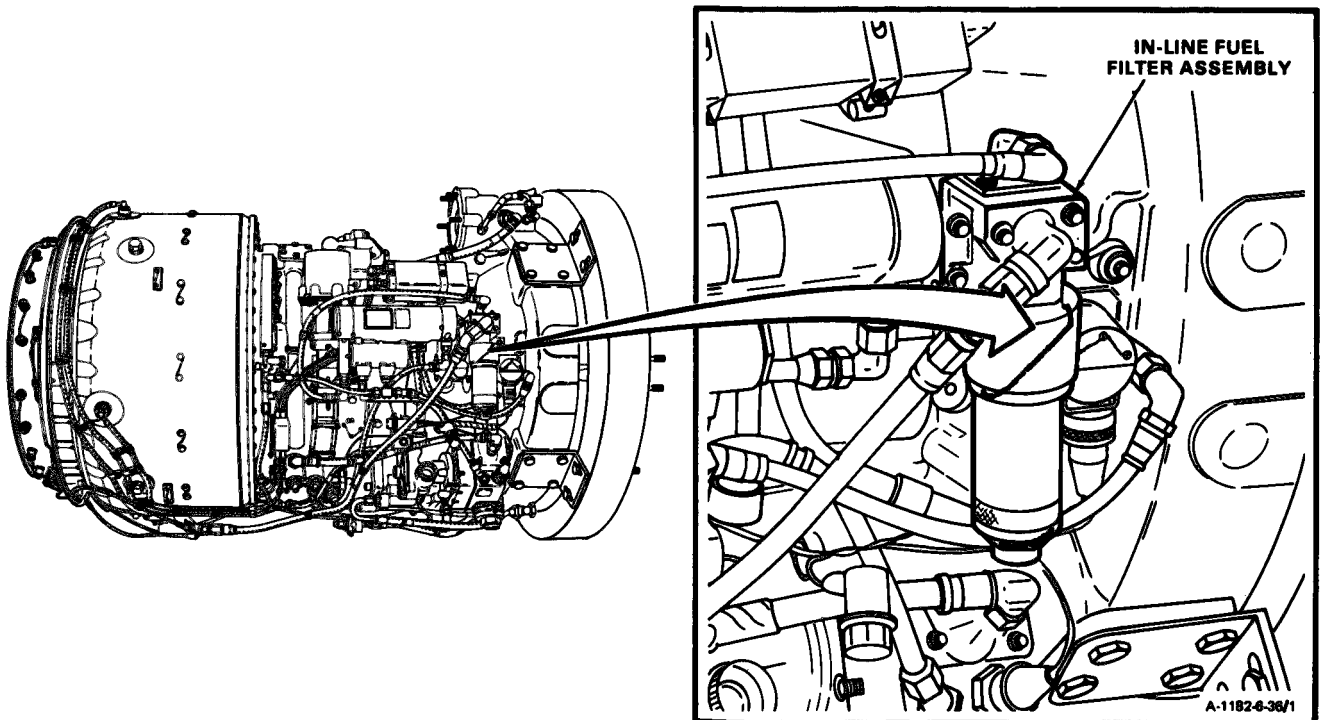
Wiping Rag (E58)

Personnel Required:

68B10 Aircraft Powerplant Repairer

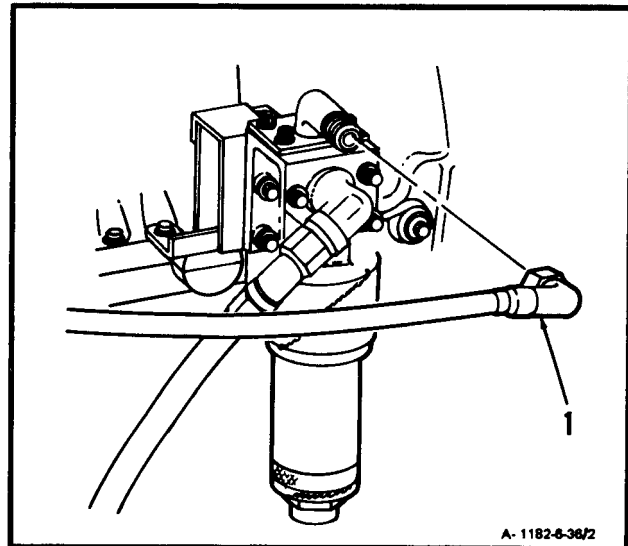
WARNING

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

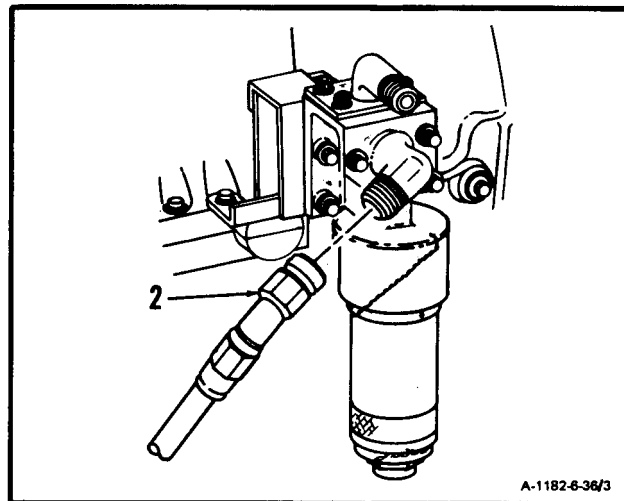


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1. Disconnect hose assembly (1).



2. Disconnect hose assembly (2).

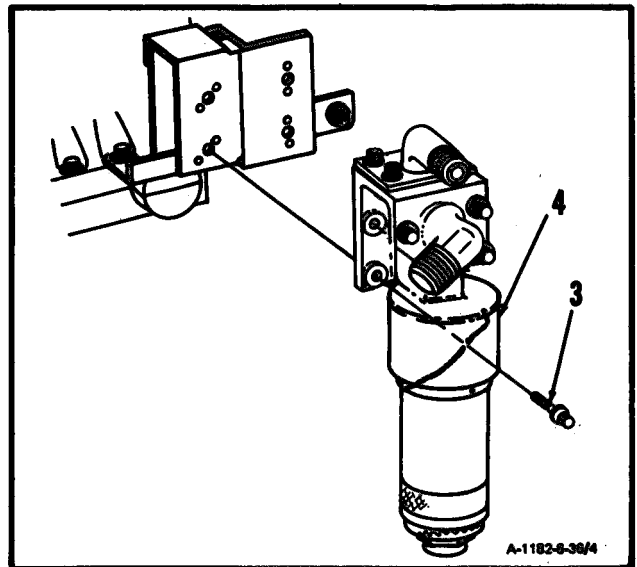


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6-36 REMOVE IN-LINE FUEL FILTER ASSEMBLY (Continued)

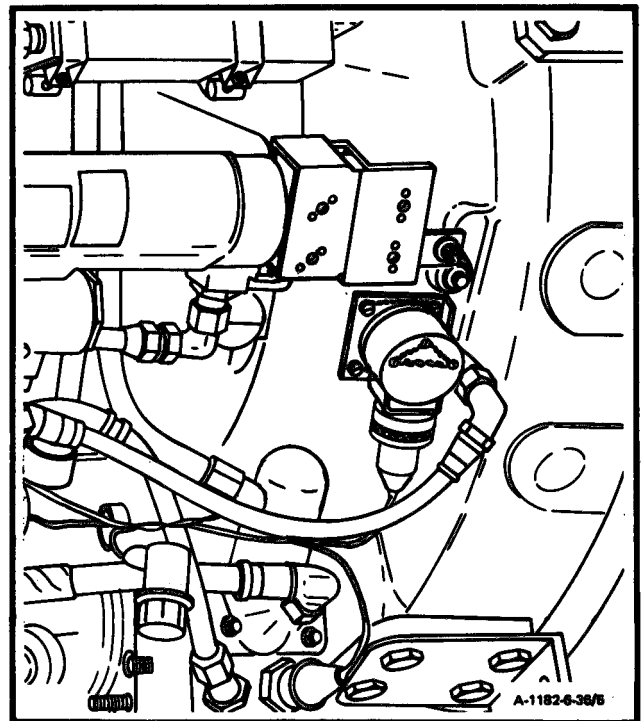
6-36

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



FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-37 DISASSEMBLE IN-LINE FUEL FILTER ASSEMBLY

6-37

INITIAL SETUP**Applicable Configurations:**

All

Tools:

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

Materials:

Wiping Rag (E58)

Personnel Required:

68B10 Aircraft Powerplant Repairer

References:

Task 6-39

Equipment Condition:

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

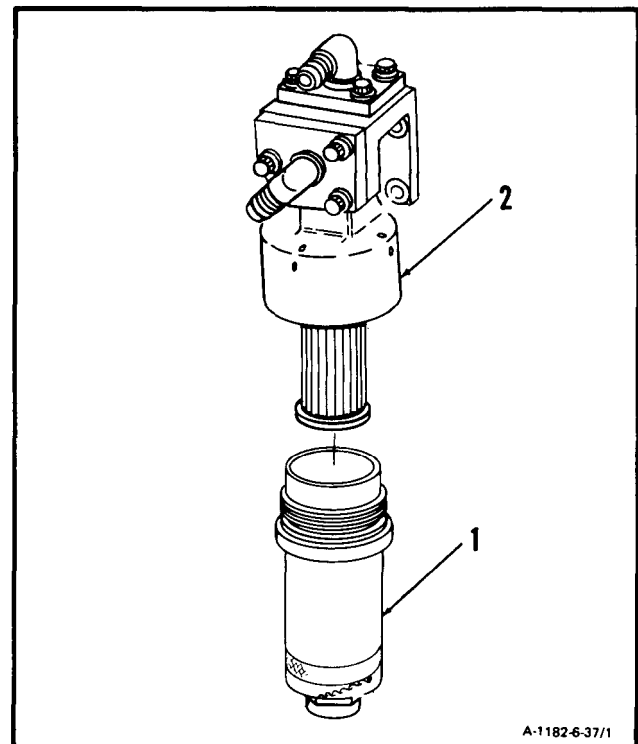
General Safety Instructions:**WARNING**

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

NOTE

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

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



A-1182-6-37/1

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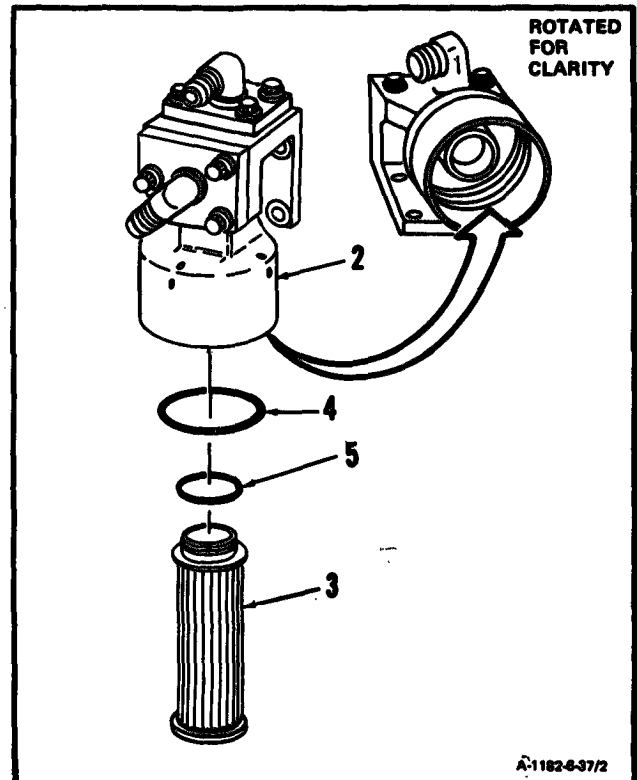
6-37 DISASSEMBLE IN-LINE FUEL FILTER ASSEMBLY (Continued)

6-37

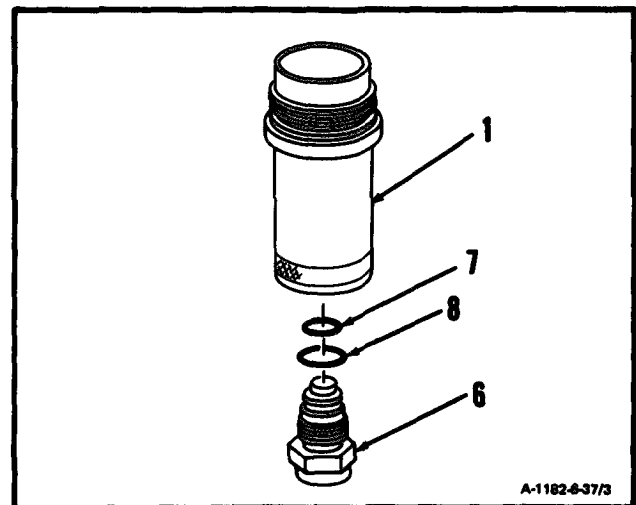
CAUTION

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

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



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



FOLLOW-ON MAINTENANCE:

None

END OF TASK

INITIAL SETUP

Applicable Configurations:

All

Tools:

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

Materials:

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

Personnel Required:

68B10 Aircraft Powerplant Repairer

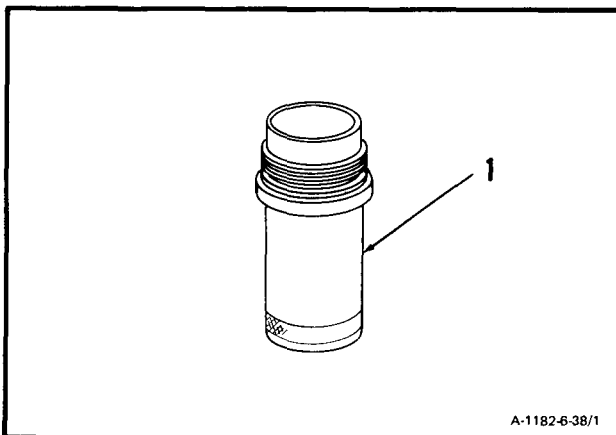
Equipment Condition:

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

General Safety Instructions:**WARNING**

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

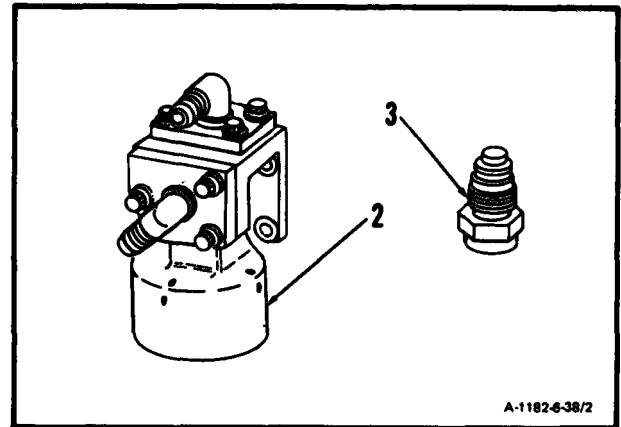
1. Wear gloves (E20). **Clean filter bowl (1)**. Use dry cleaning solvent (E17) and brush.
2. After cleaning, **remove residue** with clean lint-free cloth (E26)

**GO TO NEXT PAGE**

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

6-38

3. **Clean filter head (2) and differential pressure indicator (3)** with lint-free cloth (E26) dampened in dry cleaning solvent (E17).
4. After cleaning, **remove residue** with clean lint-free cloth (E26).

**FOLLOW-ON MAINTENANCE:**

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

END OF TASK

6-39 INSPECT IN-LINE FUEL FILTER ASSEMBLY

6-39

INITIAL SETUP**Applicable Configurations:**

All

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

None

Personnel Required:

68B30 Aircraft Powerplant Inspector

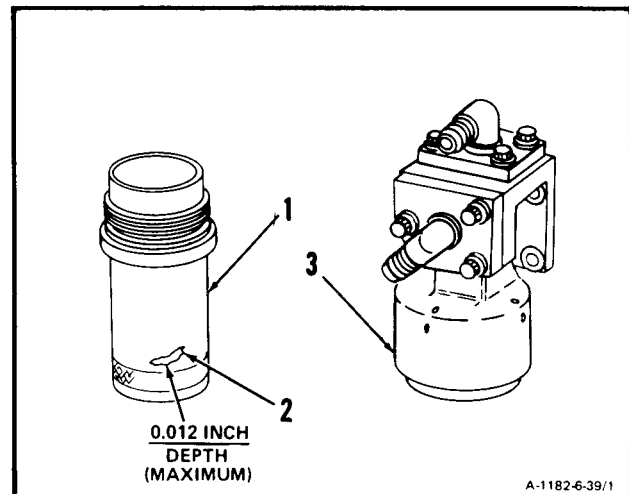
References:

Task 1-85

Equipment Condition:

Off Engine Task

1. **Inspect filter bowl (1).** There shall be no cracks. There shall be no chafing (2) deeper than 0.012 inch.
2. **Inspect filter head (3).** There shall be no cracks.



3. Deleted

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

6-39

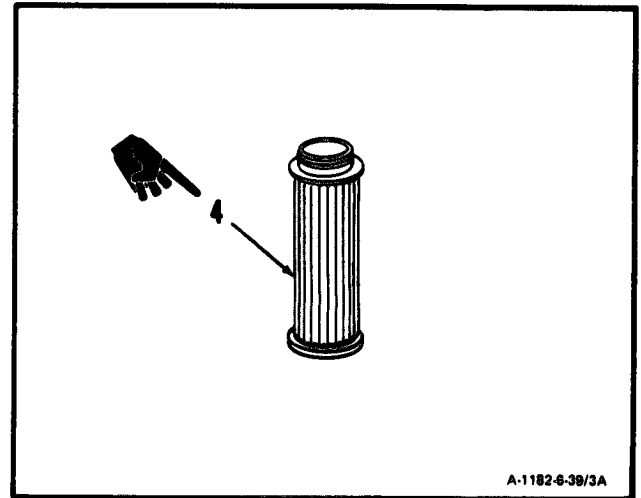
4. **Inspect filter element (4).** There shall be no contamination. If contaminated, throw away.

NOTE

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

FOLLOW-ON MAINTENANCE:

None

**END OF TASK**

6-40 ASSEMBLE IN-LINE FUEL FILTER ASSEMBLY

6-40

INITIAL SETUP

Applicable Configurations:

All

Tools:

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

Materials:

Lockwire (E29)

Parts:

Packings
Filter Element

Personnel Required:

68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

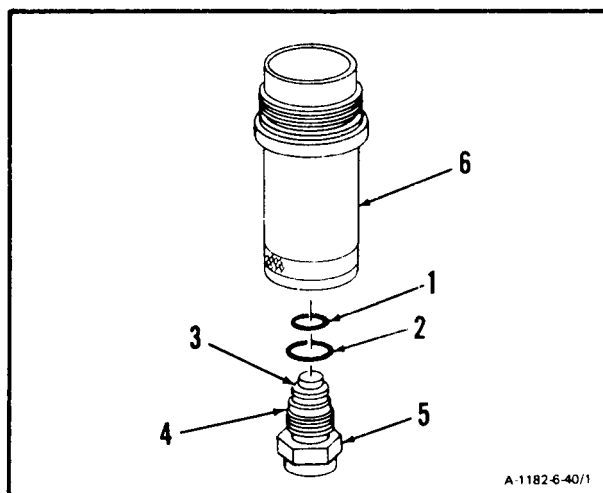
References:

TM 55-2840-254-23P

Equipment Condition:

Off Engine Task

-
1. Install packings (1 and 2) in grooves (3 and 4) on differential pressure indicator (5).
 2. **Install differential pressure indicator (5)** in filter bowl (6). Bottom by hand, then turn 1/4 to 1/2 turn. Use deep style socket and hold bowl (6) with strap wrench. Lockwire indicator (5). Use lockwire (E29).

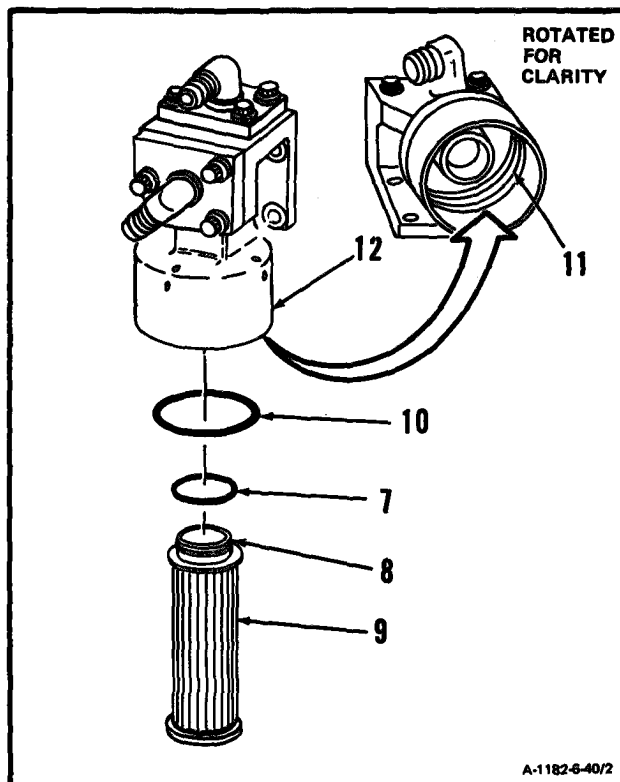


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6-40 ASSEMBLE IN-LINE FUEL FILTER ASSEMBLY (Continued)

6-40

3. Install packing (7) in groove (8) of serviceable filter element (9).
4. Install packing (10) in groove (11) and filter element (9) in filter head (12). Press in by hand.

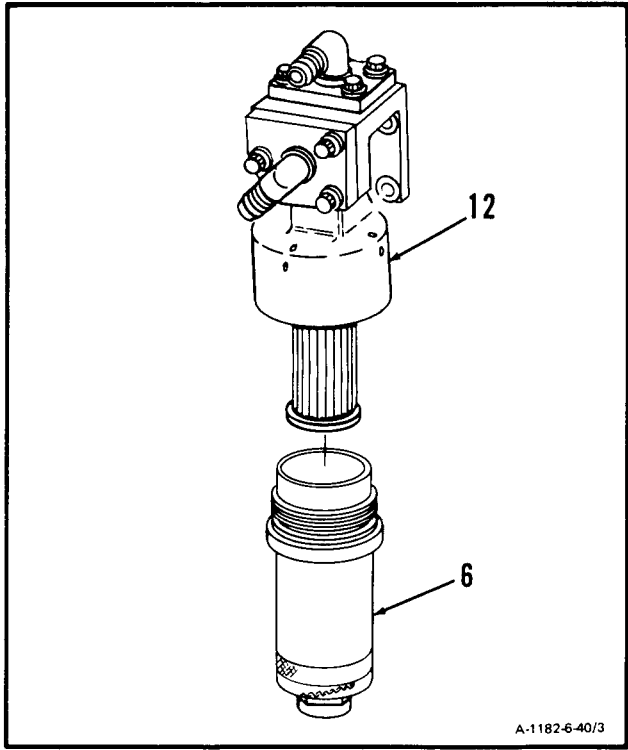


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CAUTION

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

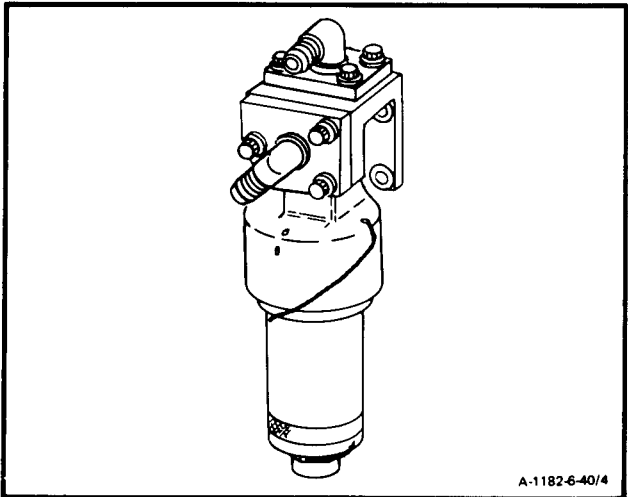
5. Install filter bowl (6) in filter head (12) and hand-tighten. Lockwire filter bowl (6). Use lockwire (E29).



INSPECT

FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-41 INSTALL IN-LINE FUEL FILTER ASSEMBLY

6-41

INITIAL SETUP**Applicable Configurations:**

All

Tools:

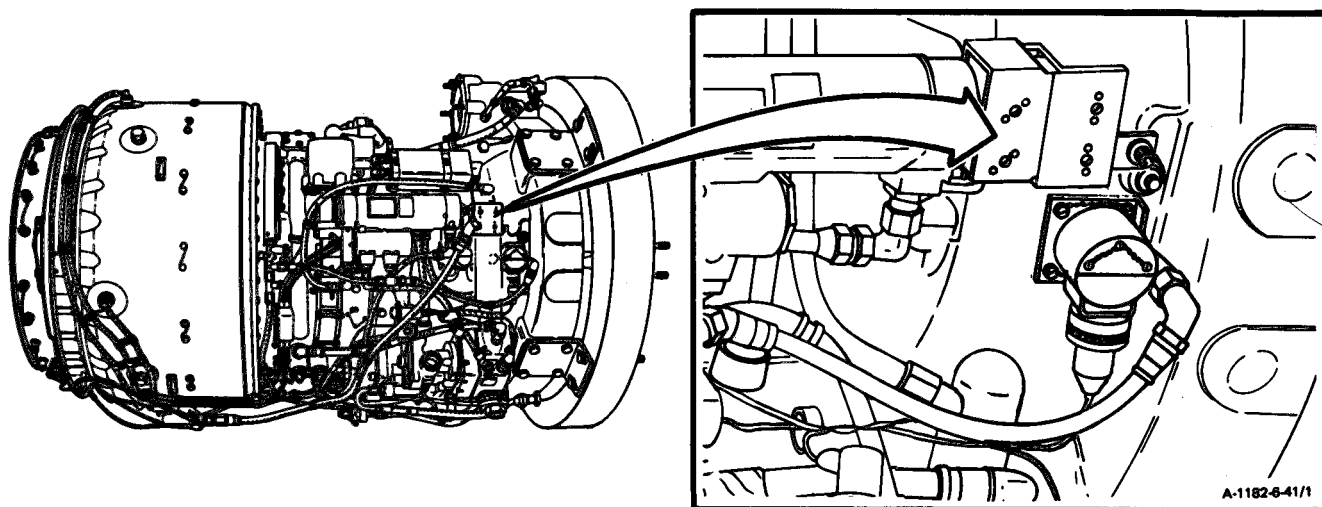
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:

None

Personnel Required:

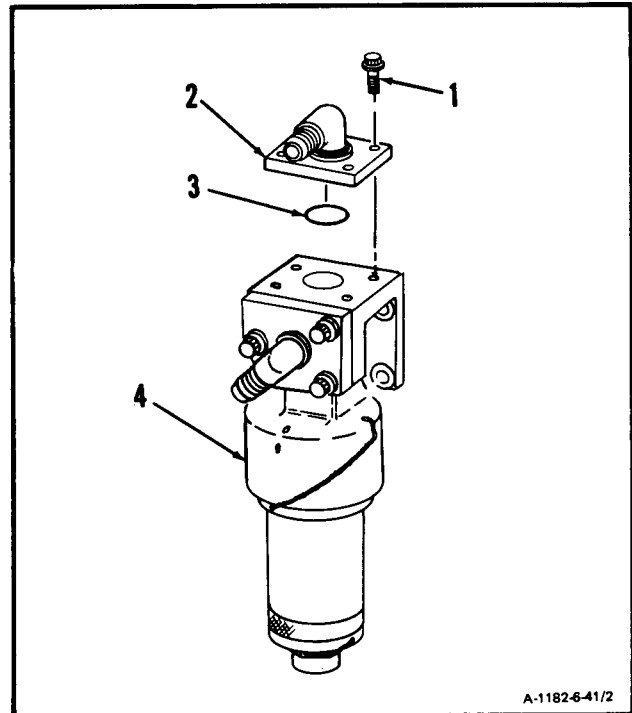
68610 Aircraft Powerplant Repairer
68630 Aircraft Powerplant Inspector

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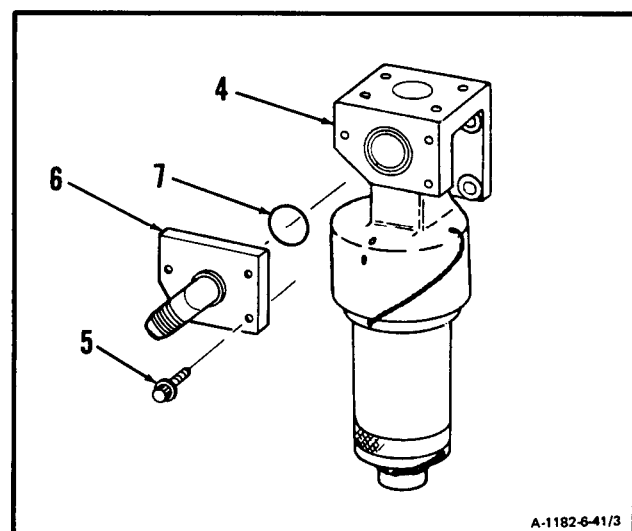
NOTE

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

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



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

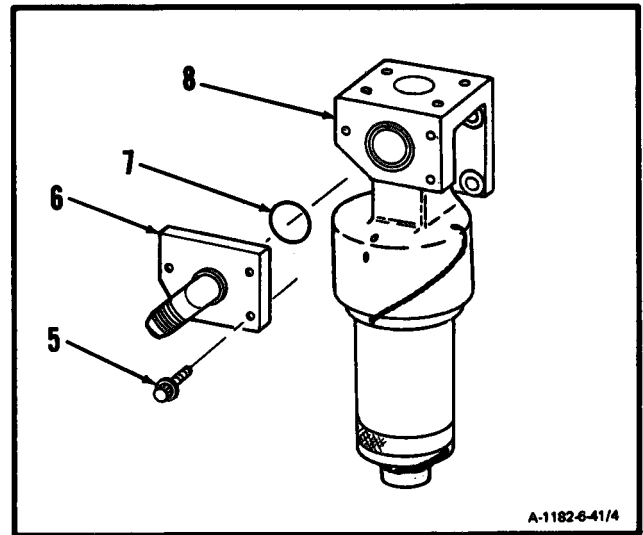


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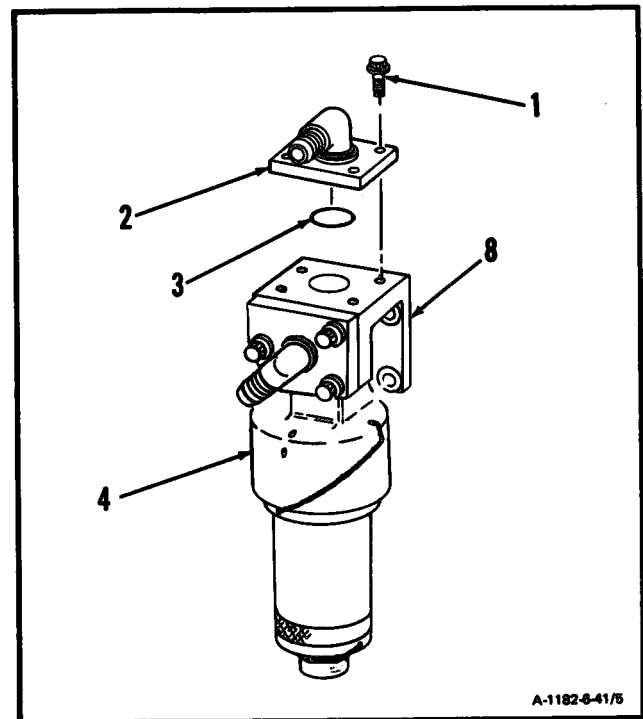
6-41 INSTALL IN-LINE FUEL FILTER ASSEMBLY (Continued)

6-41

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

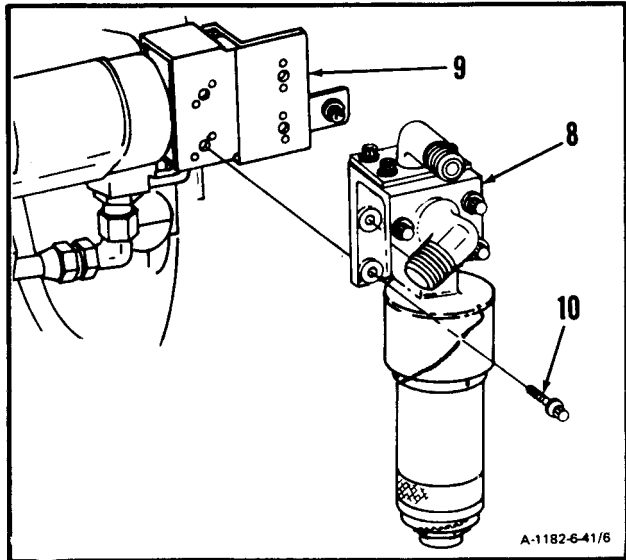


4. Install packing (3) and fitting (2) on serviceable in-line fuel filter assembly (8). Install four bolts (1).

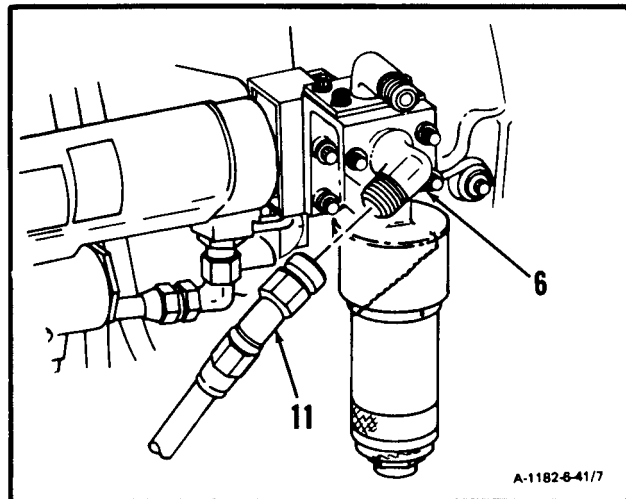


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5. Install in-line fuel filter assembly (8) on bracket (9). Install four bolts (10).



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

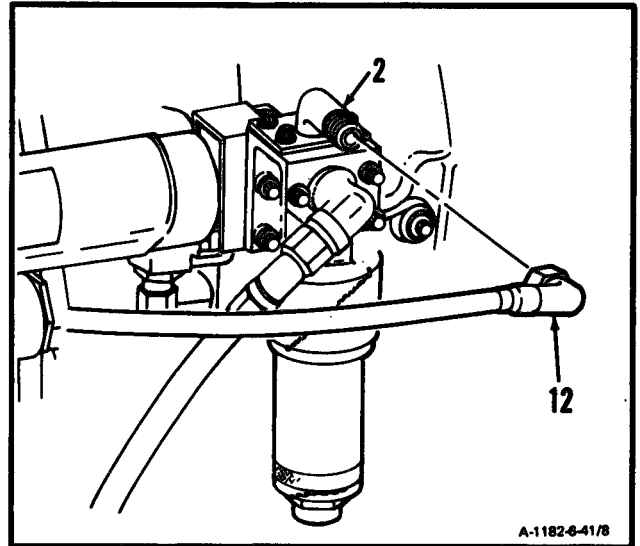


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6-41 INSTALL IN-LINE FUEL FILTER ASSEMBLY (Continued)

6-41

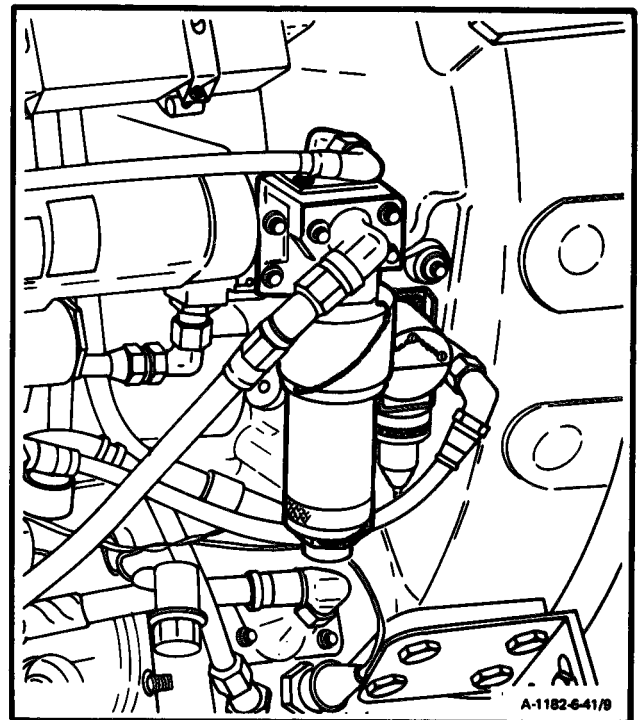
7. Connect hose assembly (12) to fitting (2).



INSPECT

FOLLOW-ON MAINTENANCE:

None



END OF TASK

Section X. FLOW DIVIDER AND BRACKET - MAINTENANCE PROCEDURES

6-42 REMOVE FLOW DIVIDER AND BRACKET

6-42

INITIAL SETUP

*General Safety Instructions:***Applicable Configurations:**

All

WARNING**Tools:**

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

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

Materials:

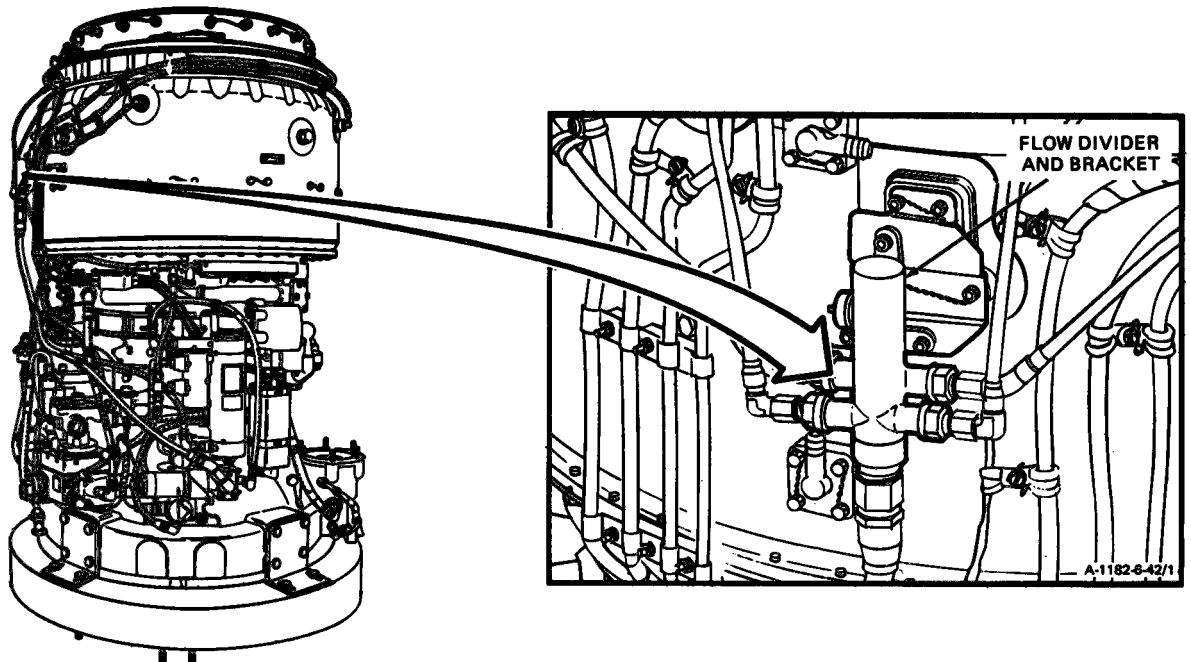
Wiping Rag (E58)

Personnel Required:

68610 Aircraft Powerplant Repairer

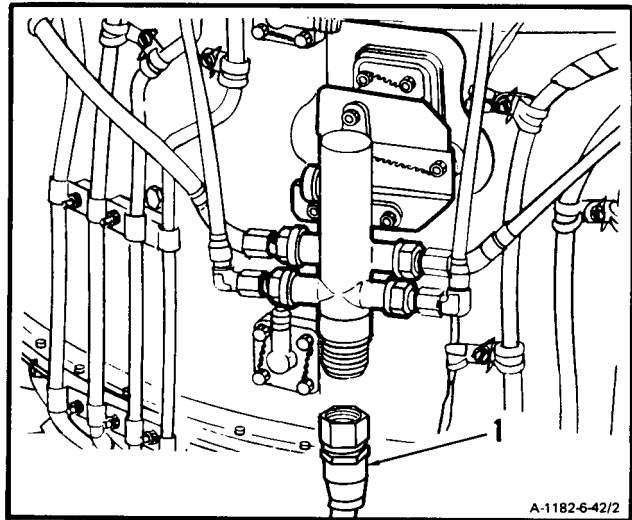
Equipment Condition:

Fuel Check Valve Removed (Task 6-46)

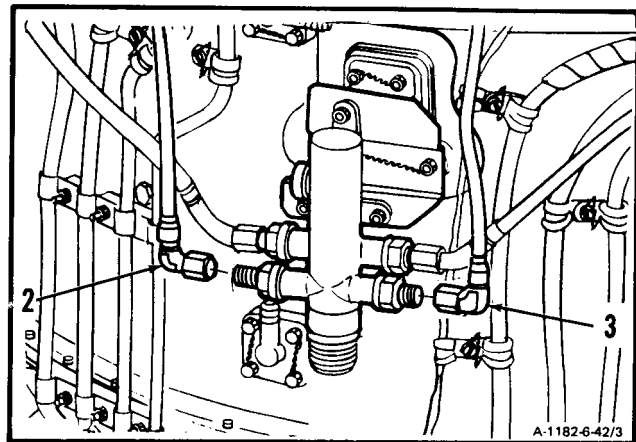


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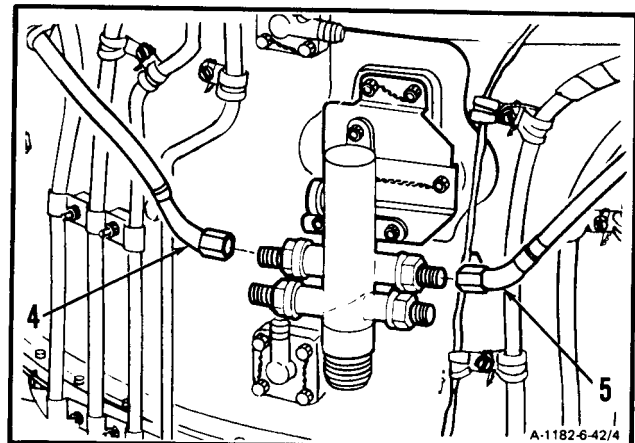
1. Disconnect hose assembly (1).



2. Disconnect hose assemblies (2 and 3).



3. Disconnect hose assemblies (4 and 5).

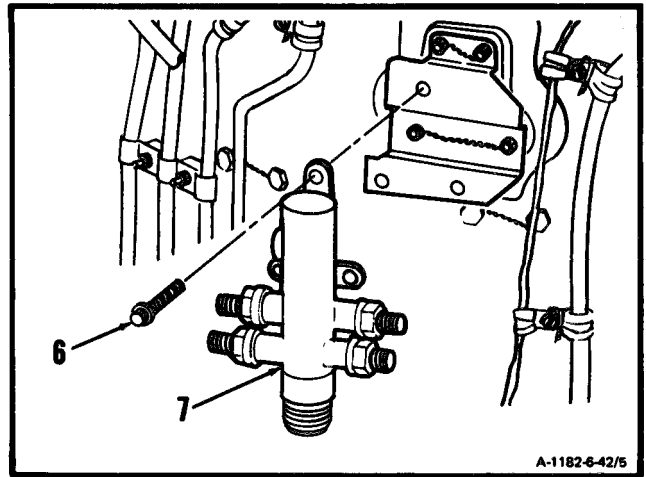


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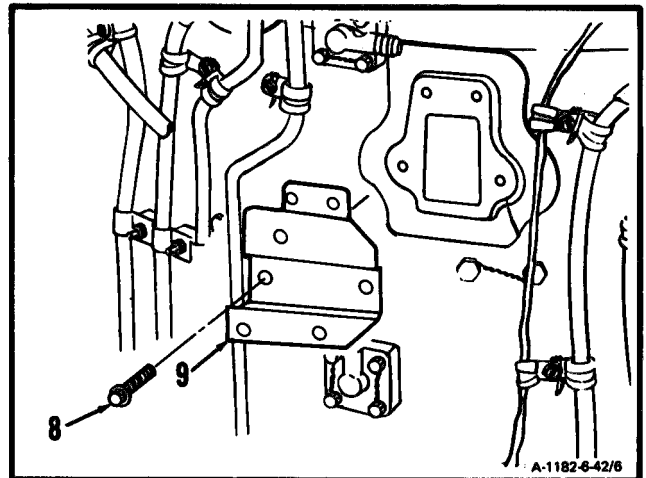
6-42 REMOVE FLOW DIVIDER AND BRACKET (Continued)

6-42

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

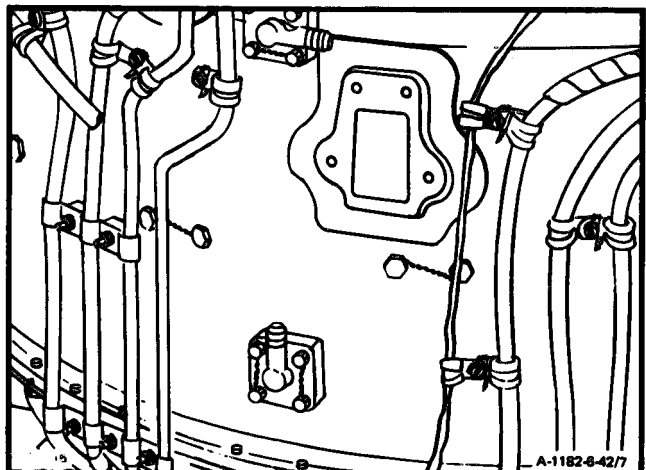


5. Remove lockwire and four bolts (8) and bracket (9).



FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-43 CLEAN FLOW DIVIDER AND BRACKET

6-43

INITIAL SETUP

Applicable Configurations:

All

Tools:

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

Materials:

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

Personnel Required:

68610 Aircraft Powerplant Repairer

Equipment Condition:

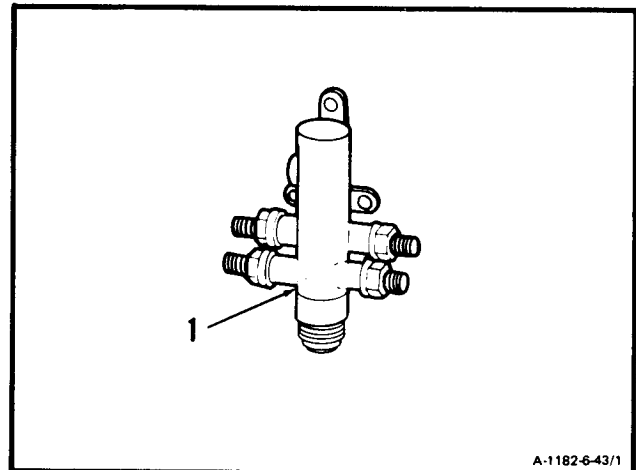
Off Engine Task
Fuel Check Valve Removed (Task 6-46)
Flow Divider and Bracket Removed (Task 6-42)

General Safety Requirements:**WARNING**

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

1. Clean flow divider (1) as follows:

- a. Wear gloves (E20). Clean flow divider using dry cleaning solvent (E17) and brush.
- b. Wipe dry. Use lint-free cloth (E26).



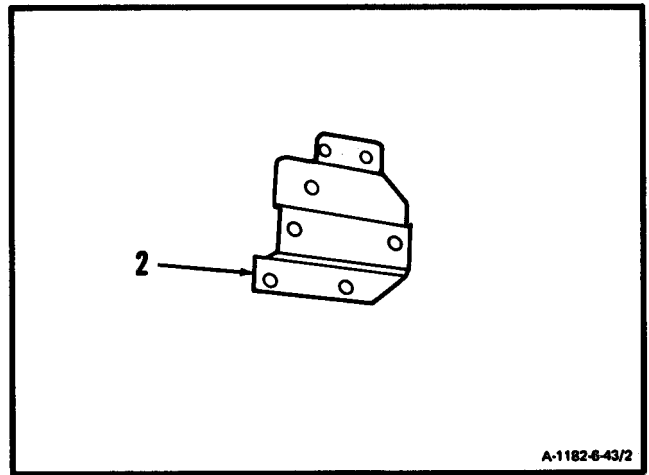
A-1182-6-43/1

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6-43 CLEAN FLOW DIVIDER AND BRACKET (Continued)

6-43

2. Clean bracket (2) as follows:
 - a. Use lint-free cloth (E26) dampened in dry-cleaning solvent (E17).
 - b. Wipe dry. Use lint-free cloth (E26).

**FOLLOW-ON MAINTENANCE:**

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

END OF TASK

6-44 INSPECT FLOW DIVIDER AND BRACKET

6-44

INITIAL SETUP

Materials:

None

Applicable Configurations:

All

Personnel Required:

68B30 Aircraft Powerplant Inspector

Tools:

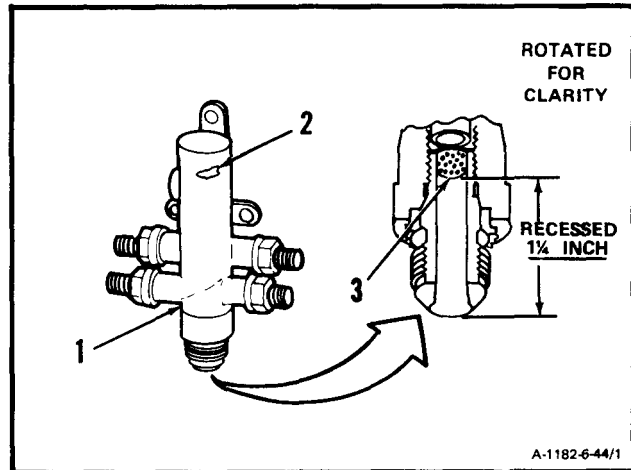
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Equipment Condition:

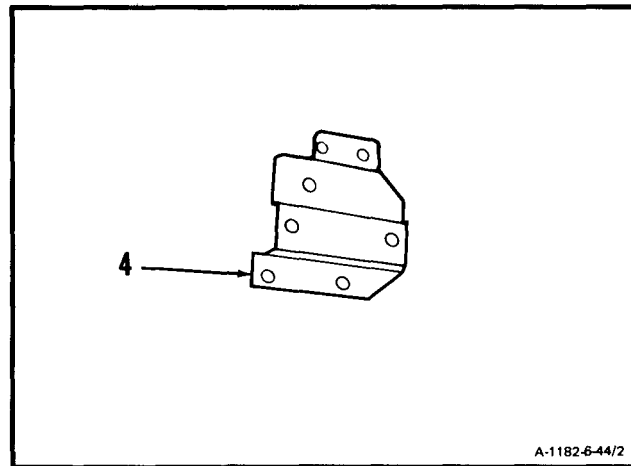
Off Engine Task

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

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



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



FOLLOW-ON MAINTENANCE:

None

END OF TASK

6-45 INSTALL FLOW DIVIDER AND BRACKET

6-45

INITIAL SETUP

Applicable Configurations:

All

Tools:

Powerplant Mechanic's Tool Kit,

NSN 5180-00-323-4944

Technical inspection Tool Kit,

NSN 5180-00-323-5114

Vise

Jaw Caps

Materials:

Lockwire (E29)

Parts:

Packings

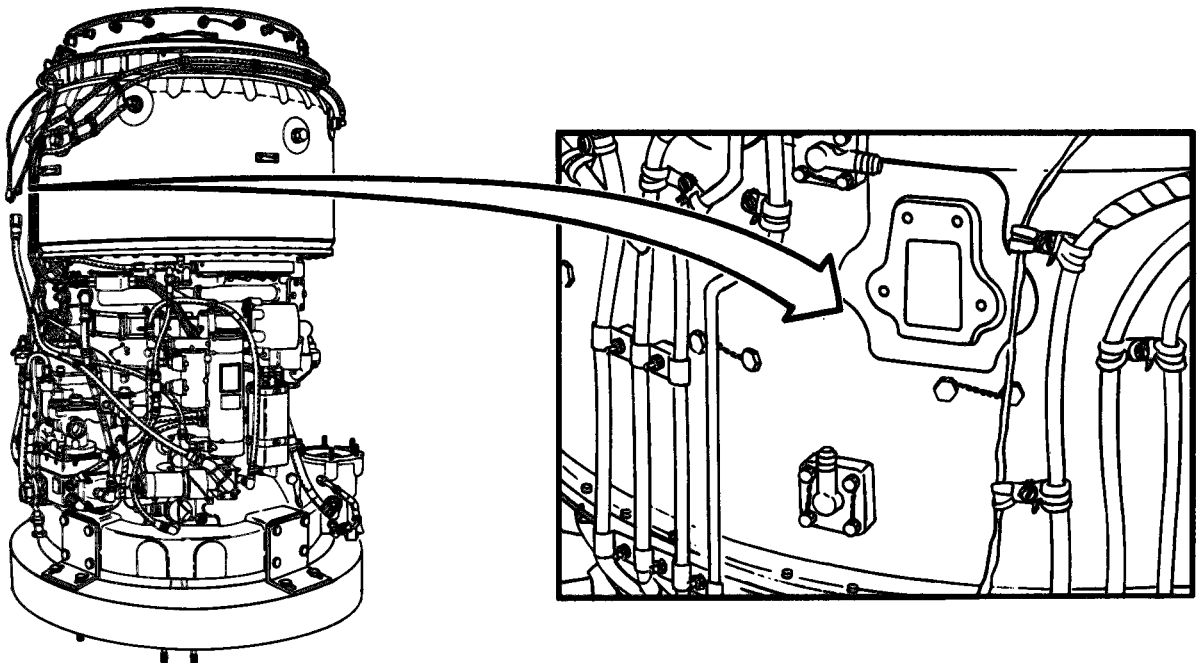
Personnel Required:

68010 Aircraft Powerplant Repairer

68B30 Aircraft Powerplant Inspector

References:

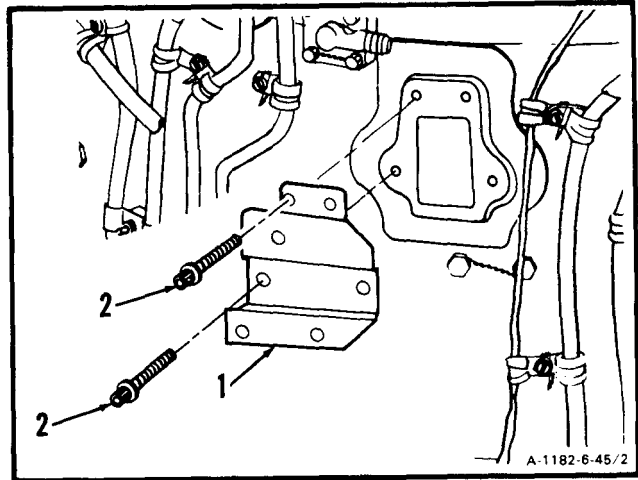
TM 55-2840-254-23P



A-1182-6-45/1

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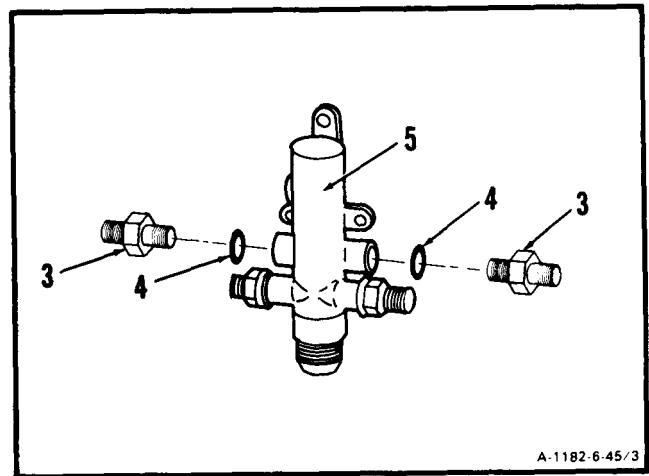
1. Install bracket (1) and four bolts (2). Lockwire bolts (2). Use lockwire (E29).



NOTE

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

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

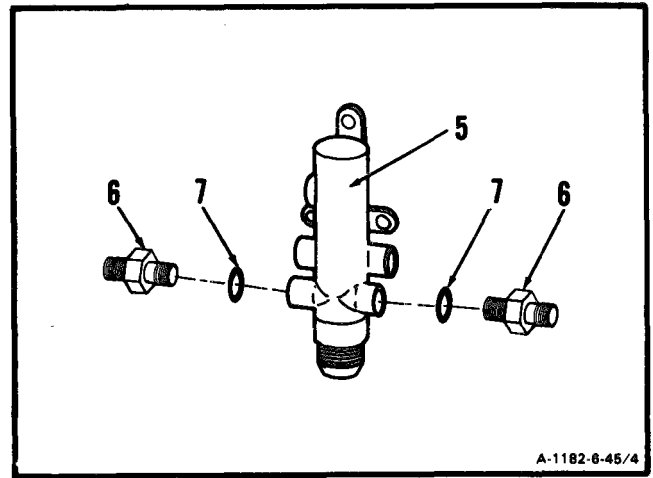


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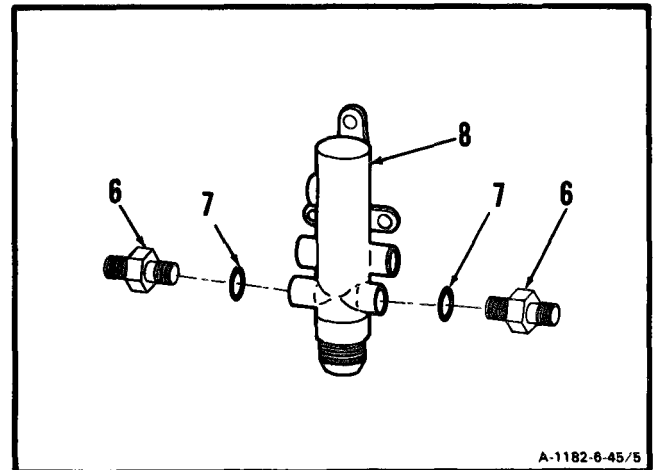
6-45 INSTALL FLOW DIVIDER AND BRACKET (Continued)

6-45

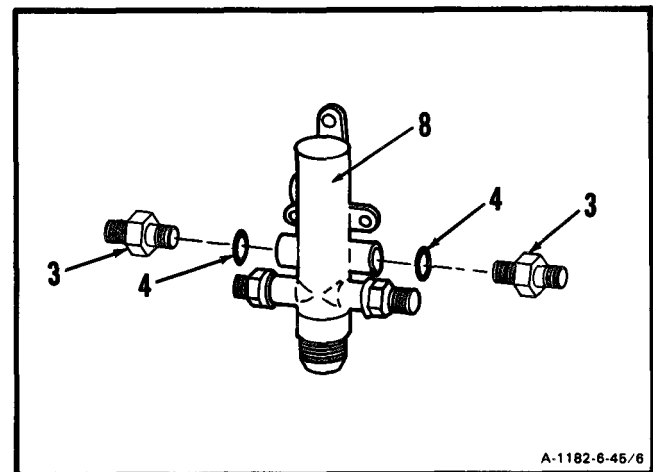
3. Remove two nipples (6) and packings (7) from removed flow divider (5).



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



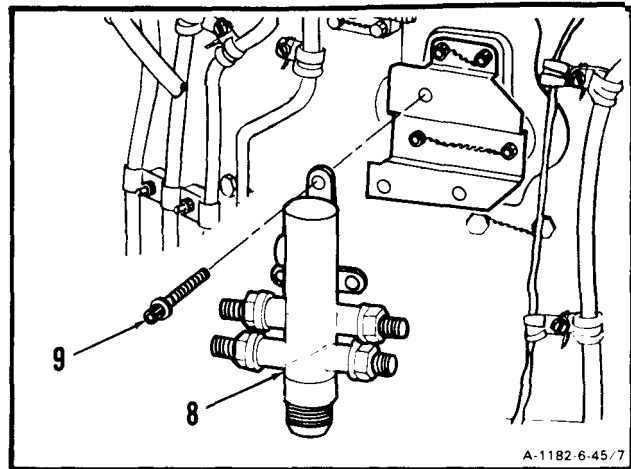
5. Install two packings (4) and reducers (3) on serviceable flow divider (8).



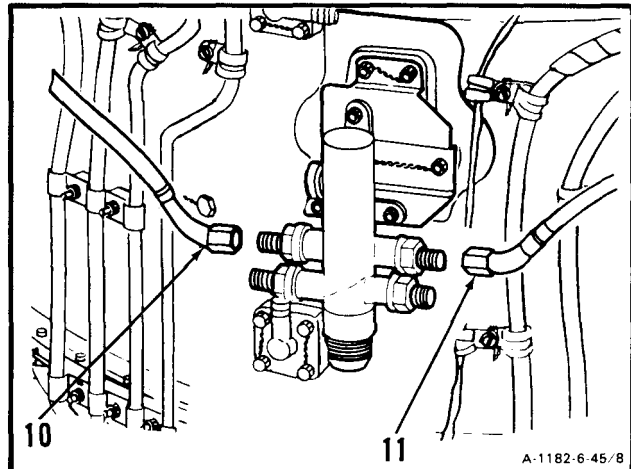
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6-45 INSTALL FLOW DIVIDER AND BRACKET (Continued)

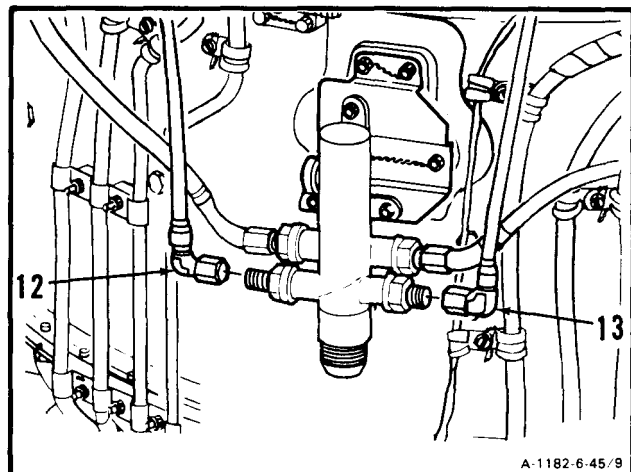
6. Install flow divider (8) and three bolts (9).



7. Connect hose assemblies (10 and 11).



8. Connect hose assemblies (12 and 13).

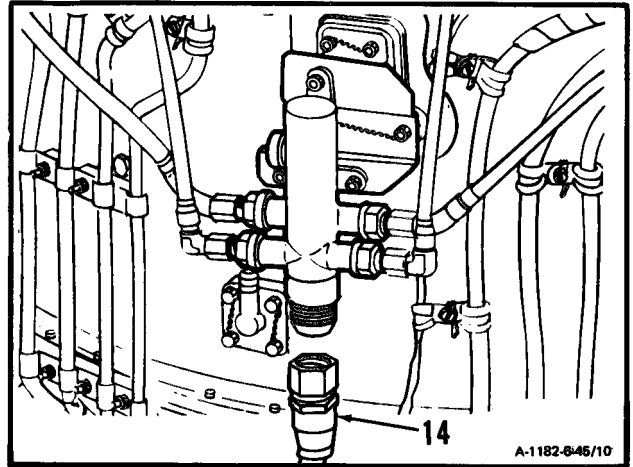


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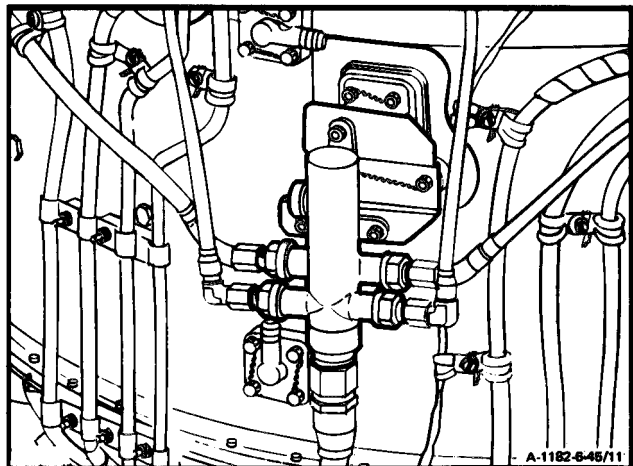
6-45 INSTALL FLOW DIVIDER AND BRACKET (Continued)

6-45

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

INSPECT**FOLLOW-ON MAINTENANCE:**

Install Fuel Check Valve
(Task 6-48).

**END OF TASK**

Section XI. FUEL CHECK VALVE – MAINTENANCE PROCEDURES

6-46 REMOVE FUEL CHECK VALVE

6-46

INITIAL SETUP

Applicable Configurations:

All

Tools:

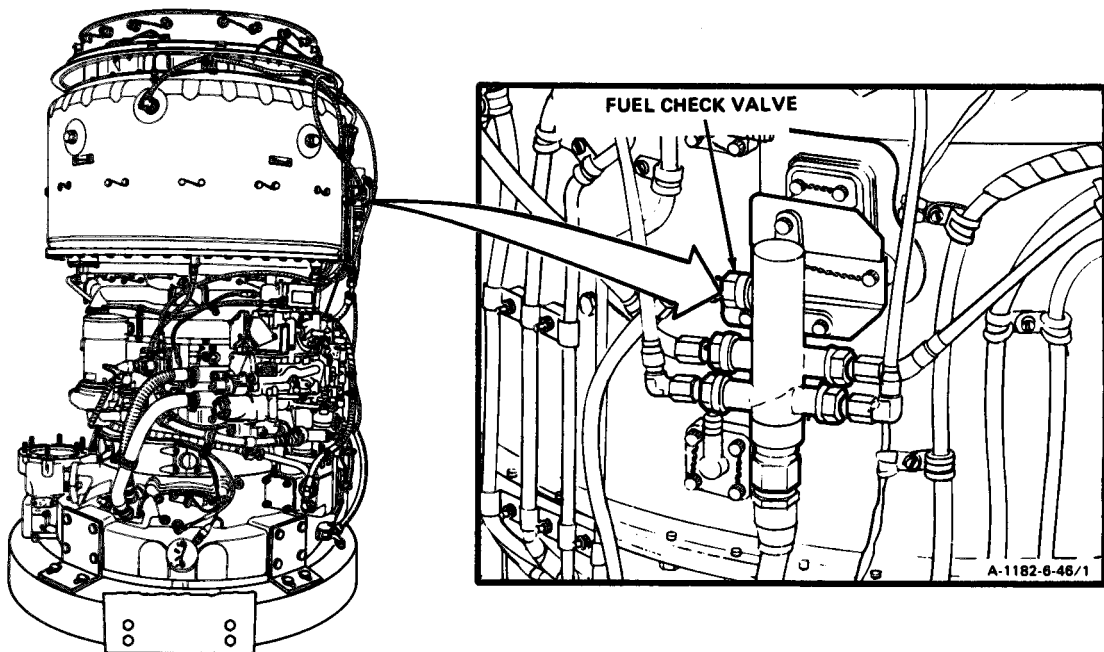
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944

Materials:

Wiping Rag (E58)

Personnel Required:

68B10 Aircraft Powerplant Repairer

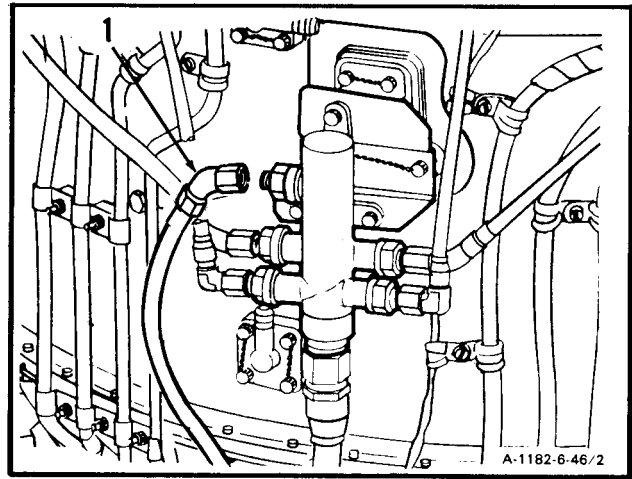


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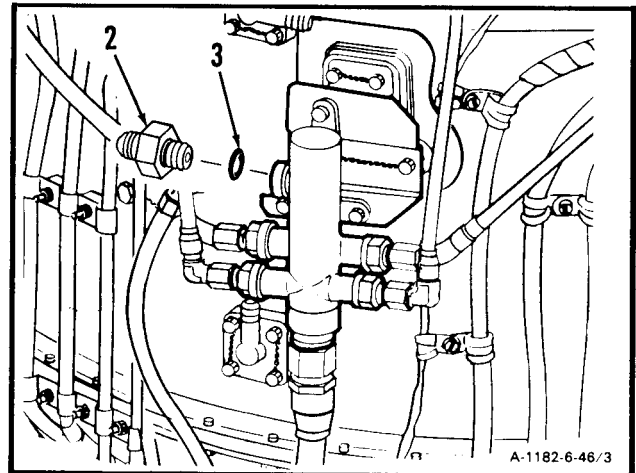
6-46 REMOVE FUEL CHECK VALVE (Continued)

6-46

1. Disconnect hose assembly (1).

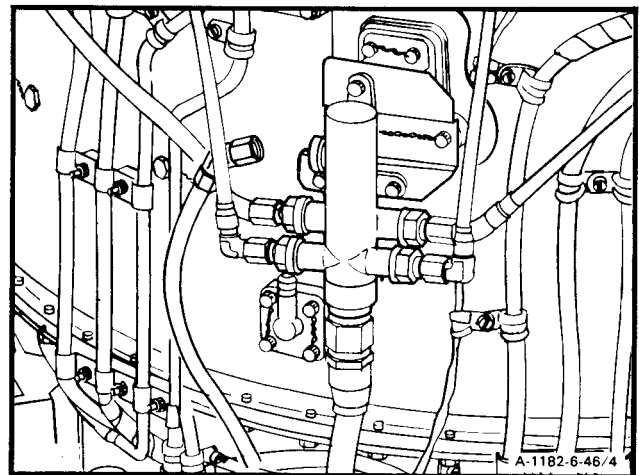


2. Remove fuel check valve (2) and packing (3).



FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-47 CLEAN FUEL CHECK VALVE

6-47

INITIAL SETUP**Applicable Configurations:**

All

Tools:

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

Materials:

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

Personnel Required:

68B10 Aircraft Powerplant Repairer

Equipment Condition:

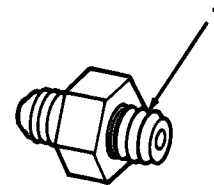
Off Engine Task
Fuel Check Valve Removed (Task 6-46)

General Safety Instructions:**WARNING**

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

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

- a. Wear gloves (E20). Immerse valve in dry cleaning solvent (E17) and agitate. Use brush on external surfaces.
- b. Use lint-free cloth (E26) to remove solvent.



A-1182-6-47/1

FOLLOW-ON MAINTENANCE:

None

END OF TASK

6-48 INSTALL FUEL CHECK VALVE

6-48

INITIAL SETUP

Applicable Configurations:

All

Tools:

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

Materials:

None

Parts:

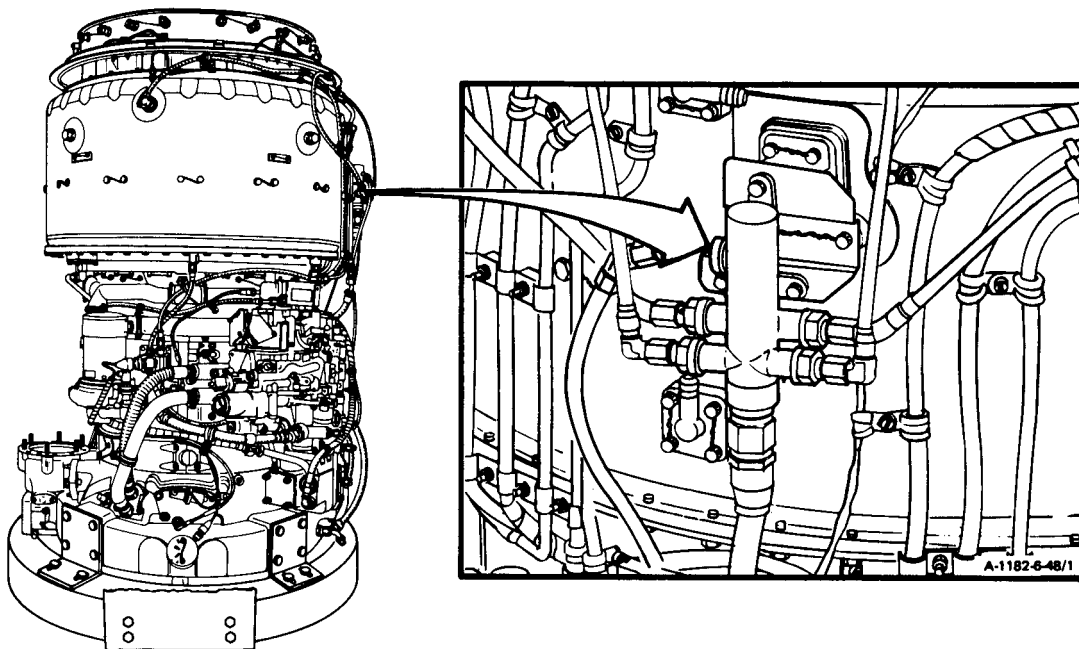
Packing

Personnel Required:

68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

References:

TM 55-2840-254-23P

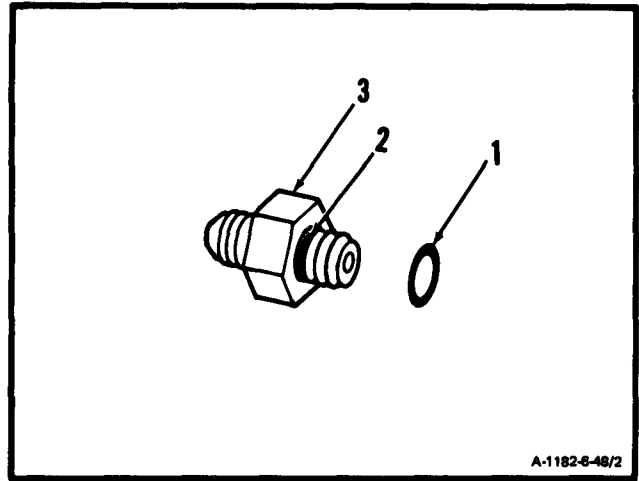


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6-48 INSTALL FUEL CHECK VALVE (Continued)

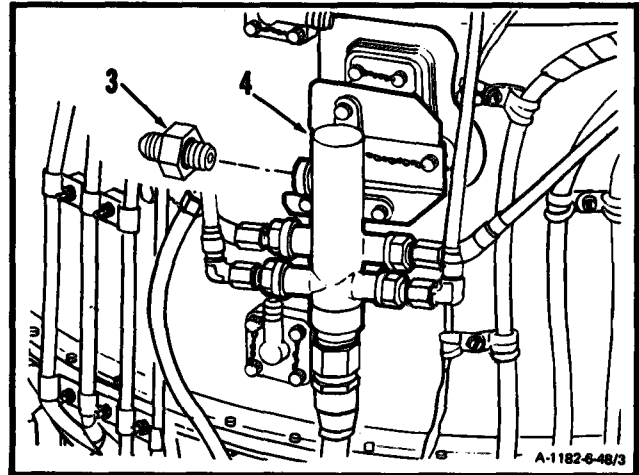
6-48

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



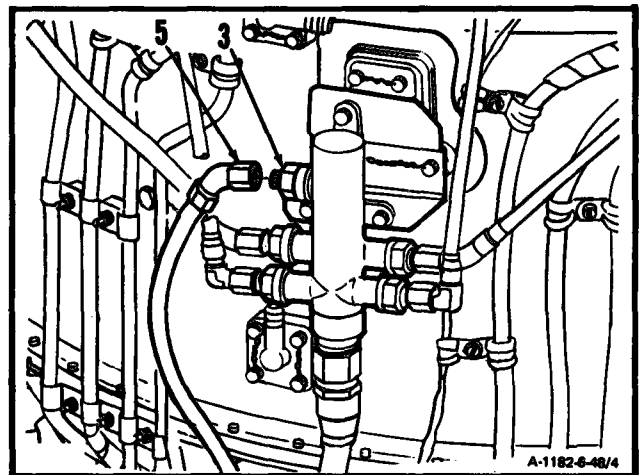
A-1182-6-48/2

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



A-1182-6-48/3

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



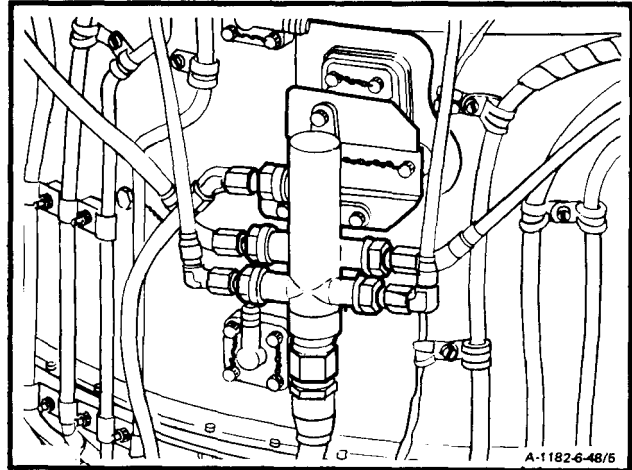
A-1182-6-48/4

INSPECT

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FOLLOW-ON MAINTENANCE:

None



END OF TASK

Section XII. STARTING FUEL SOLENOID VALVE – MAINTENANCE PROCEDURES

6-49 REMOVE STARTING FUEL SOLENOID VALVE

6-49

INITIAL SETUP

*General Safety Instructions:***Applicable Configurations:**

All

WARNING**Tools:**

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

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

Materials:

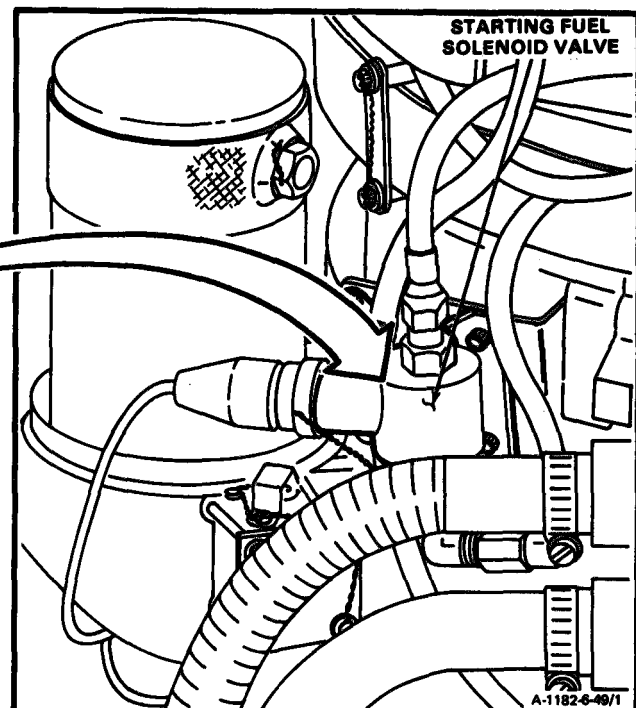
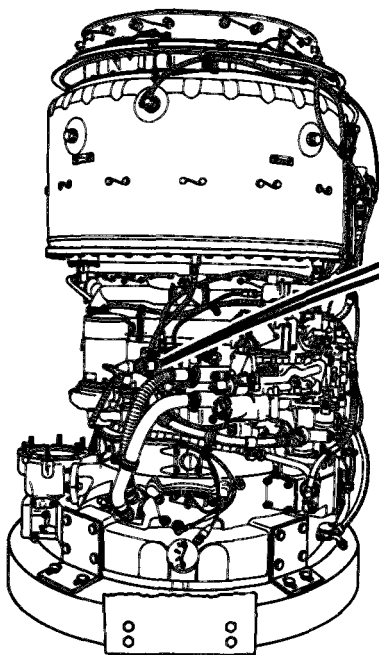
Wiping Rag (E58)

Personnel Required:

68B10 Aircraft Powerplant Repairer

References:

Task 6-51

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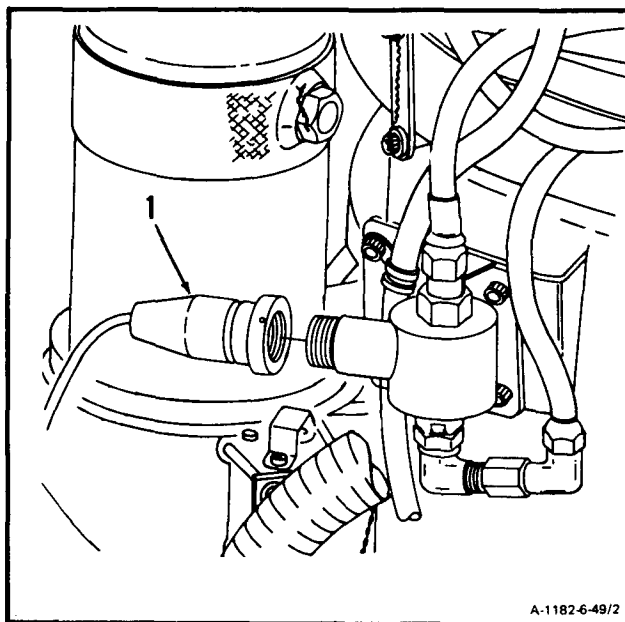
NOTE

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

NOTE

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

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

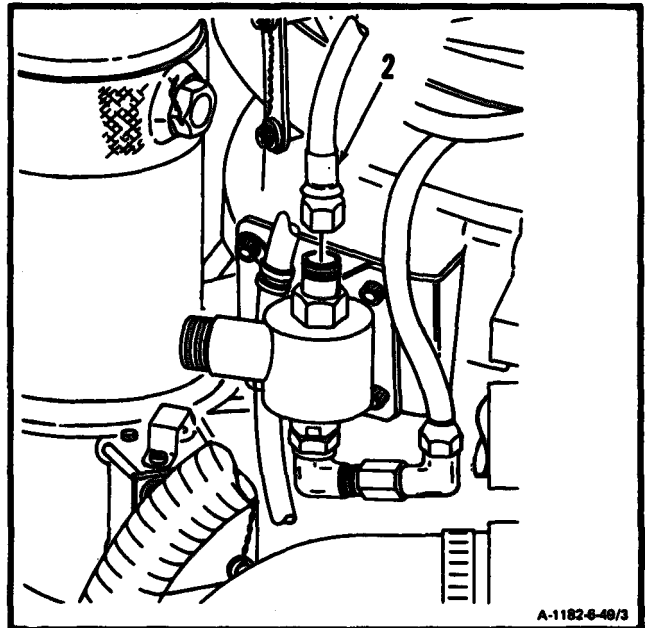


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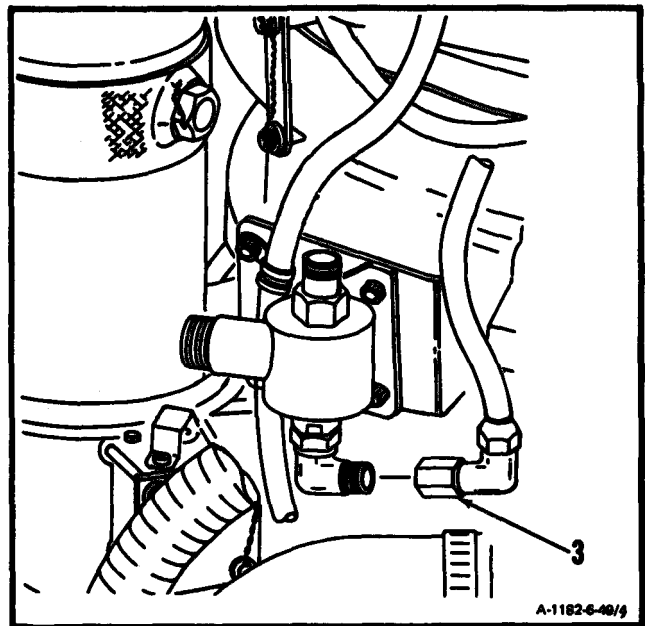
6-49 REMOVE STARTING FUEL SOLENOID VALVE (Continued)

6-49

2. Disconnect hose assembly (2).



3. Disconnect hose assembly (3).

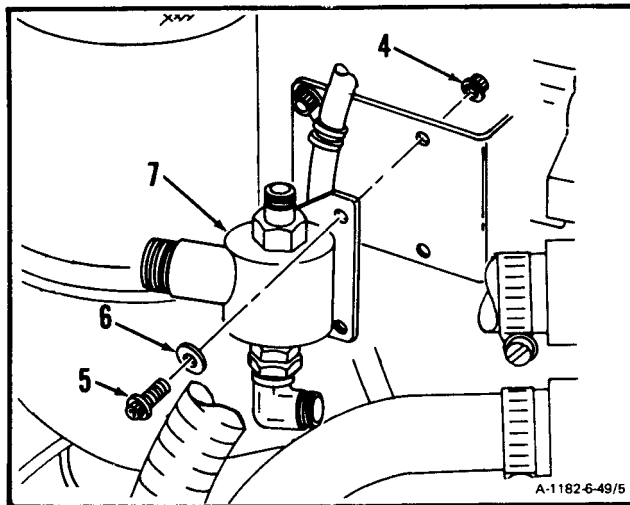


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6-49 REMOVE STARTING FUEL SOLENOID VALVE (Continued)

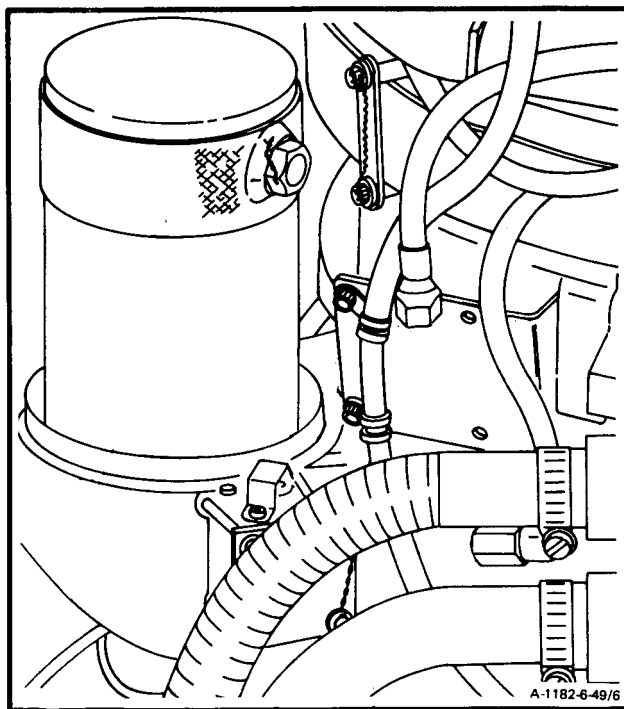
6-49

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



FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-50 CLEAN STARTING FUEL SOLENOID VALVE

6-50

INITIAL SETUP*General Safety Instructions:***Applicable Configurations:**

All

Tools:

None

Materials:

Dry Cleaning Solvent (E17)

Gloves (E20)

Lint-Free Cloth (E26)

Personnel Required:

68B10 Aircraft Powerplant Repairer

Equipment Condition:

Off Engine Task

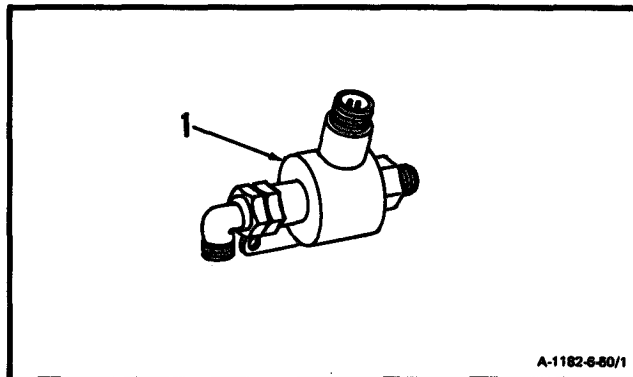
Starting Fuel Solenoid Valve Removed

(Task 6-49)

WARNING

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

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



A-1182-6-50/1

FOLLOW-ON MAINTENANCE:

Inspect Starting Fuel Solenoid Valve
(Task 6-51).

END OF TASK

6-51 INSPECT STARTING FUEL SOLENOID VALVE

6-51

INITIAL SETUP

Personnel Required:

68B30 Aircraft Powerplant Inspector

Applicable Configurations:

All

Equipment Condition:

Off Engine Task

Tools:

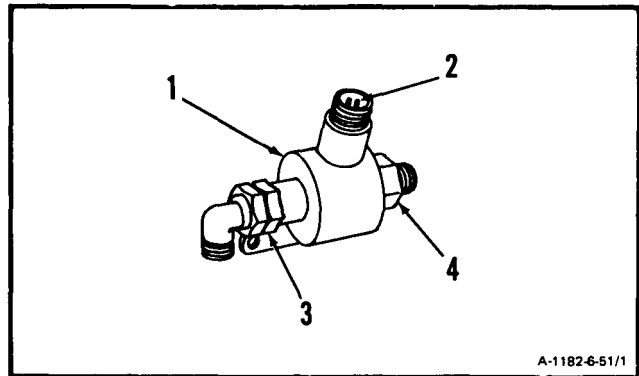
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:

None

1. Inspect starting fuel solenoid valve (1).

- a. There shall be no cracks.
- b. Pins (2) shall not be broken or bent.
- c. There shall be no corrosion on pins (2).
- d. Fittings (3 and 4) shall not be loose. If fittings are loose, tighten fittings.



FOLLOW-ON MAINTENANCE:

None

END OF TASK

6-52 REPAIR STARTING FUEL SOLENOID VALVE

6-52

INITIAL SETUP

Applicable Configurations:

All

Tools:

Powerplant Mahanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114
Goggles
Compressed Air Source

Materials:

Crocus Cloth (E15)

Personnel Required:

68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

Equipment Condition:

Off Engine Task

NOTE

This repair is allowed provided it does not cause pins to break or crack.

1. **Straighten bent pins (1)** of starting fuel solenoid valve (2). Using long-nose pliers, gently move pins (1) until they are straight.
2. **Remove corrosion from pins (1)** of starting fuel solenoid valve (2). Polish pins, using in and out motion over entire length of pin until corrosion is removal. Use crocus cloth (E15).

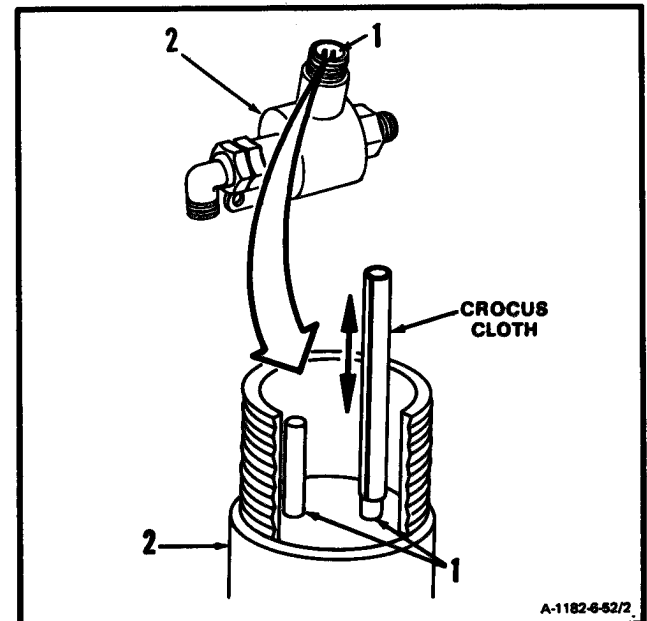
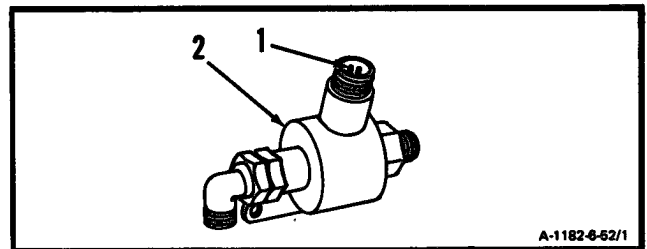
WARNING

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

3. Wear goggles. **Remove loosened particles** from pins (1), using clean, dry compressed air.

INSPECT**FOLLOW-ON MAINTENANCE:**

None

END OF TASK

6-53 INSTALL STARTING FUEL SOLENOID VALVE

6-53

INITIAL SETUP

Applicable Configurations:

All

Tools:

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

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

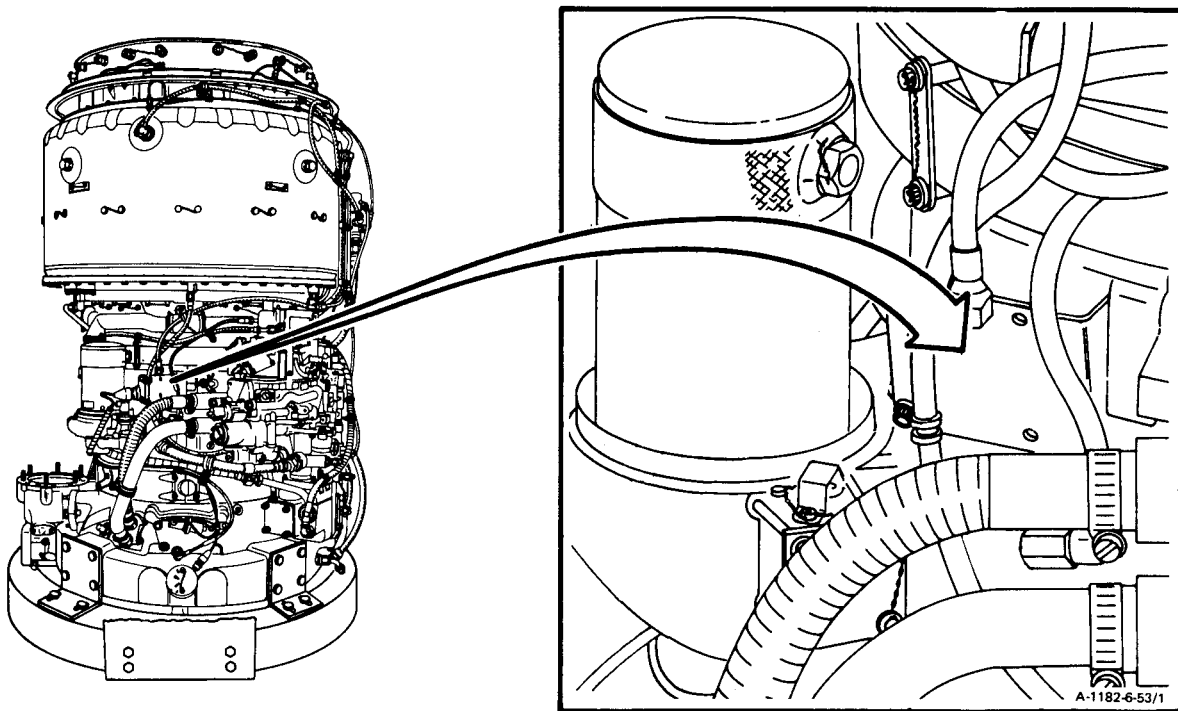
Materials:

Lockwire (E29)

Personnel Required:

68B10 Aircraft Powerplant Repairer

68B30 Aircraft Powerplant Inspector



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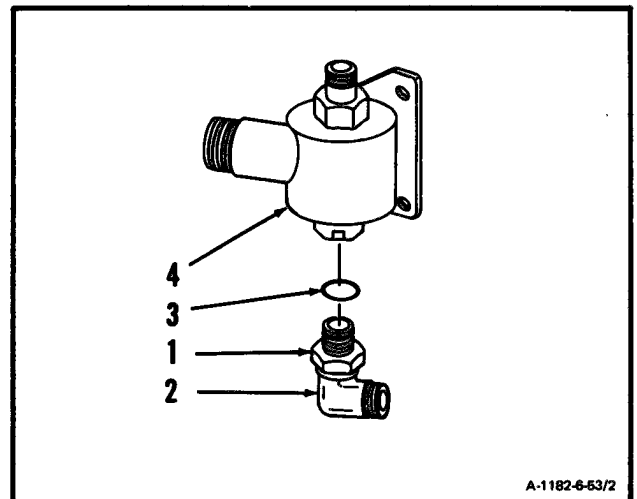
6-53 INSTALL STARTING FUEL SOLENOID VALVE (Continued)

6-53

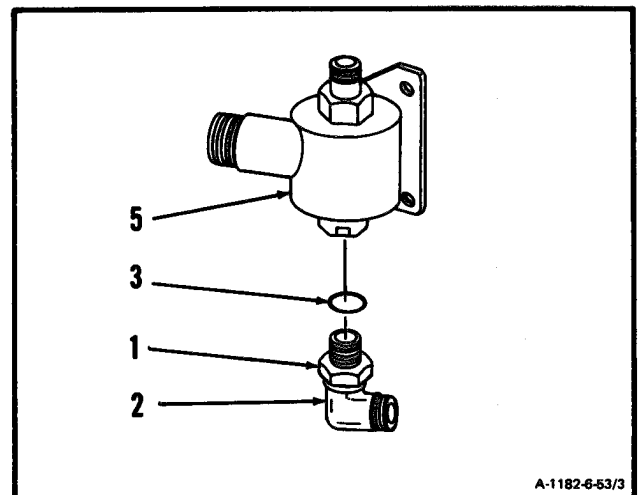
NOTE

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

1. Loosen nut (1), and **remove elbow (2) and packing (3) from moved starting fuel solenoid valve (4).**



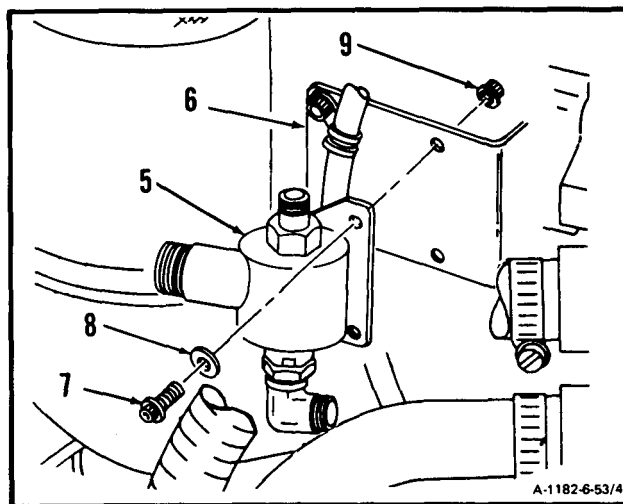
2. **Install elbow (2) and packing (3) in serviceable starting fuel solenoid valve (5).** Position elbow (2) as shown and tighten nut (1).

**GO TO NEXT PAGE**

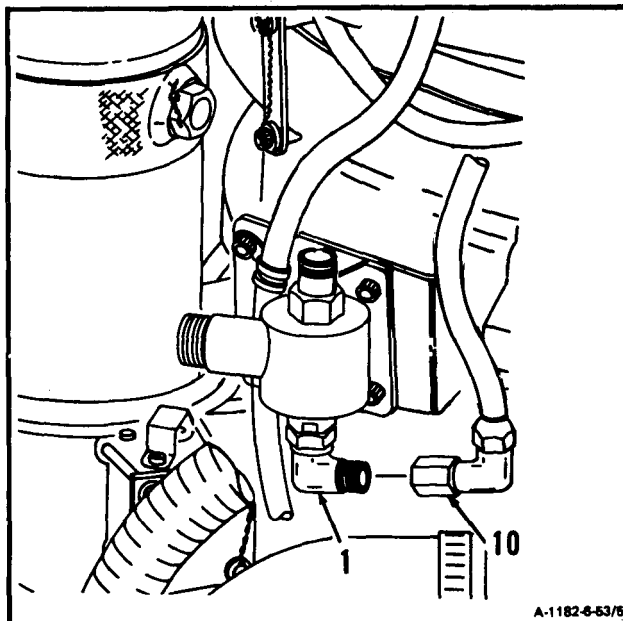
NOTE

It may be necessary to gently pry mounting bracket outward to install mounting hardware.

3. Install starting fuel solenoid valve (5) on bracket (6). Install two screws (7), two washers (8), and two nuts (9).



4. Connect hose assembly (10) to elbow (1).

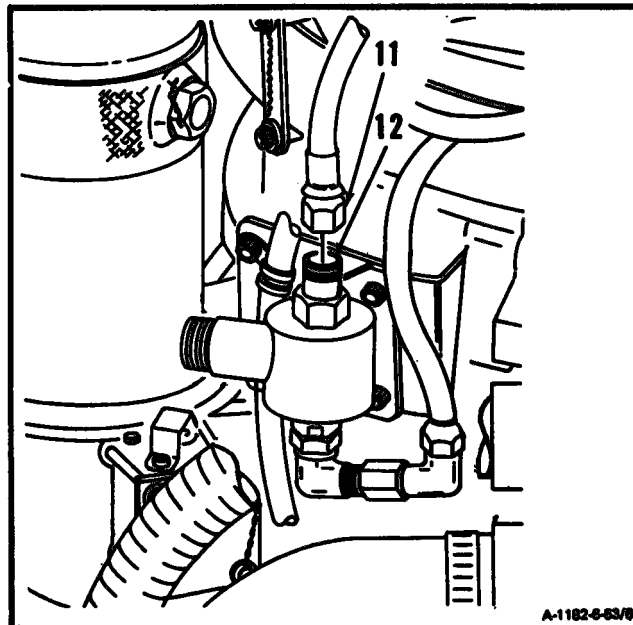


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6-63 INSTALL STARTING FUEL SOLENOID VALVE (Continued)

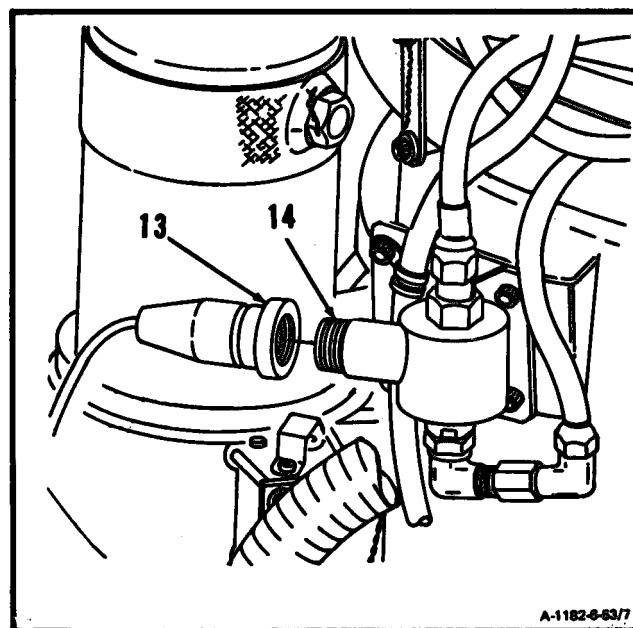
6-53

5. Connect hose assembly (11) to valve (12).

**NOTE**

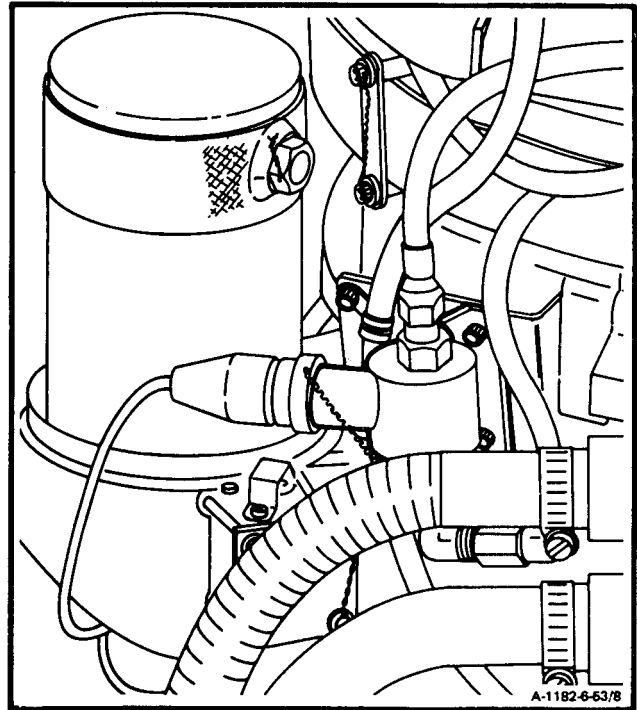
It may be necessary to gently pry mounting bracket outward to connect electrical connector.

6. Connect electrical connector (13) to connector (14). Lockwire electrical connector (13). Use lockwire (E29).

**INSPECT****GO TO NEXT PAGE**

FOLLOW-ON MAINTENANCE:

None



END OF TASK

Section XIII. FUEL LINES – MAINTENANCE PROCEDURES

6-54 REMOVE HOSE ASSEMBLY (OIL COOLER TO IN-LINE FUEL FILTER)

6-54

INITIAL SETUP

*General Safety Instructions:**Applicable Configurations:*

All

Tools:

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

Materials:

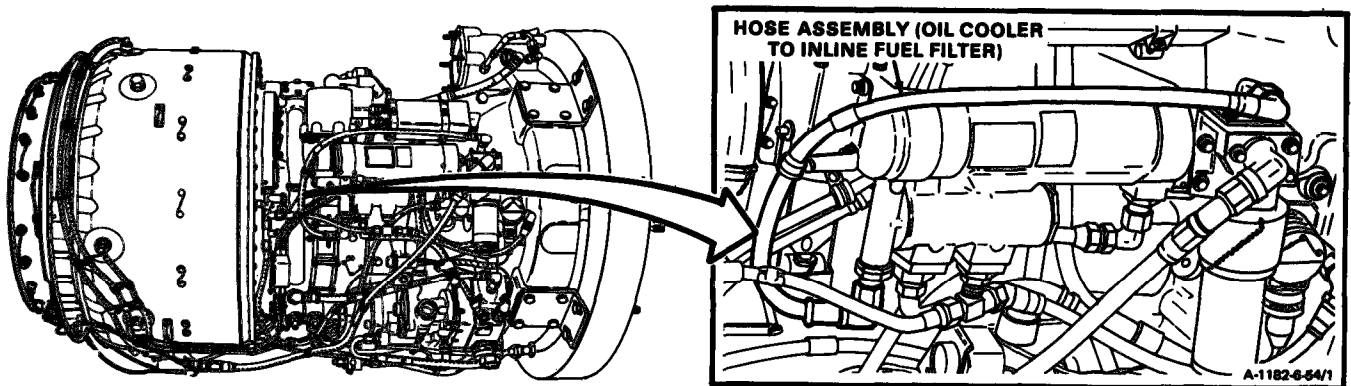
Wiping Rag (E58)

Personnel Required:

68B10 Aircraft Powerplant Repairer

WARNING

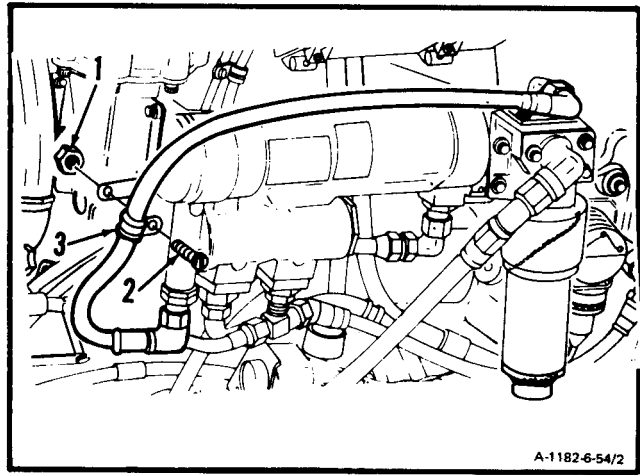
Turbine fuels are very flammable. They may cause drying and irritation of skin or eyes. Handle only in well-ventilated areas away from heat and open flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin, and do not take internally. Wash contacted areas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



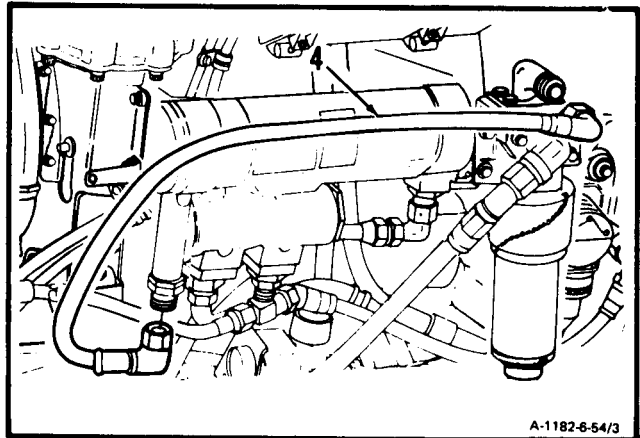
GO TO NEXT PAGE

6-54 REMOVE HOSE ASSEMBLY (OIL COOLER TO IN-LINE FUEL FILTER) (Continued) 6-54

1. Remove nut (1), screw (2), and clamp (3).

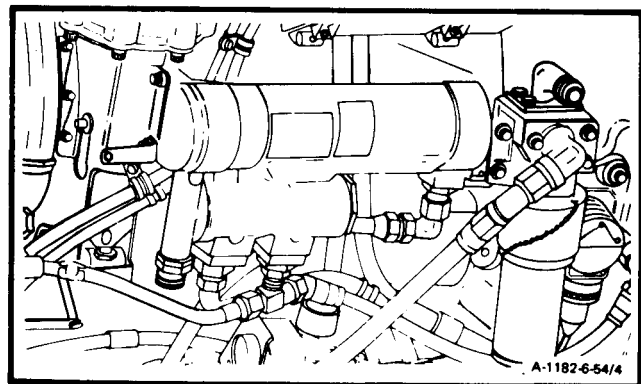


2. Disconnect and remove hose assembly (4).



FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-55 INSTALL HOSE ASSEMBLY (OIL COOLER TO IN-LINE FUEL FILTER)

6-55

INITIAL SETUP**Applicable Configurations:**

All

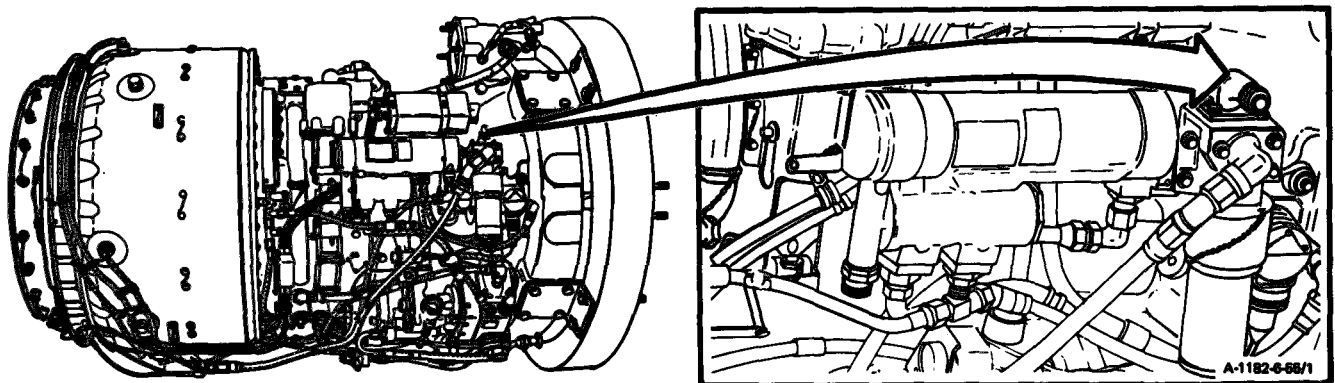
Tools:Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944Technical Inspection Tool Kit,
NSN 5180-00-323-5114**Materials:**

None

Personnel Required:

68610 Aircraft Powerplant Repairer

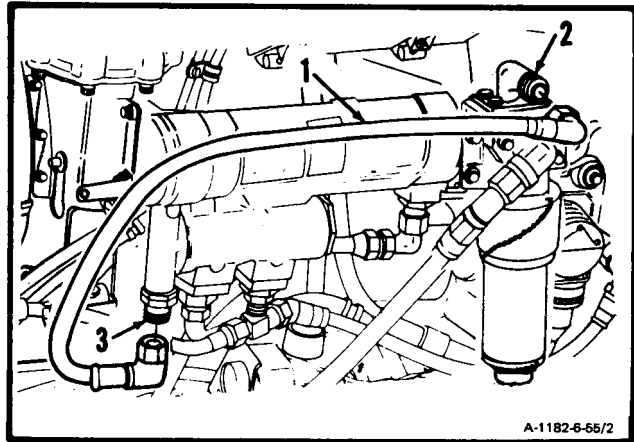
68630 Aircraft Powerplant Inspector

**GO TO NEXT PAGE**

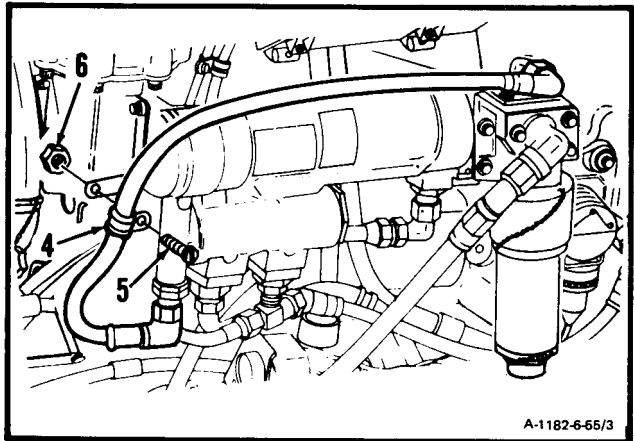
6-55 INSTALL HOSE ASSEMBLY (OIL COOLER TO IN-LINE FUEL FILTER) (Continued)

6-55

1. Install hose assembly (1) on flange elbow (2) and tube assembly (3).



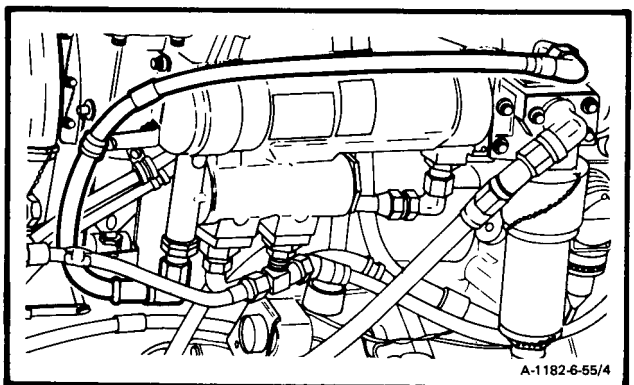
2. Install clamp (4), screw (5), and nut (6).



INSPECT

FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-56 REMOVE HOSE ASSEMBLY (FUEL CONTROL TO OIL COOLER)

6-56

INITIAL SETUP**General Safety Instructions:****Applicable Configurations:**

All

Tools:

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

Materials:

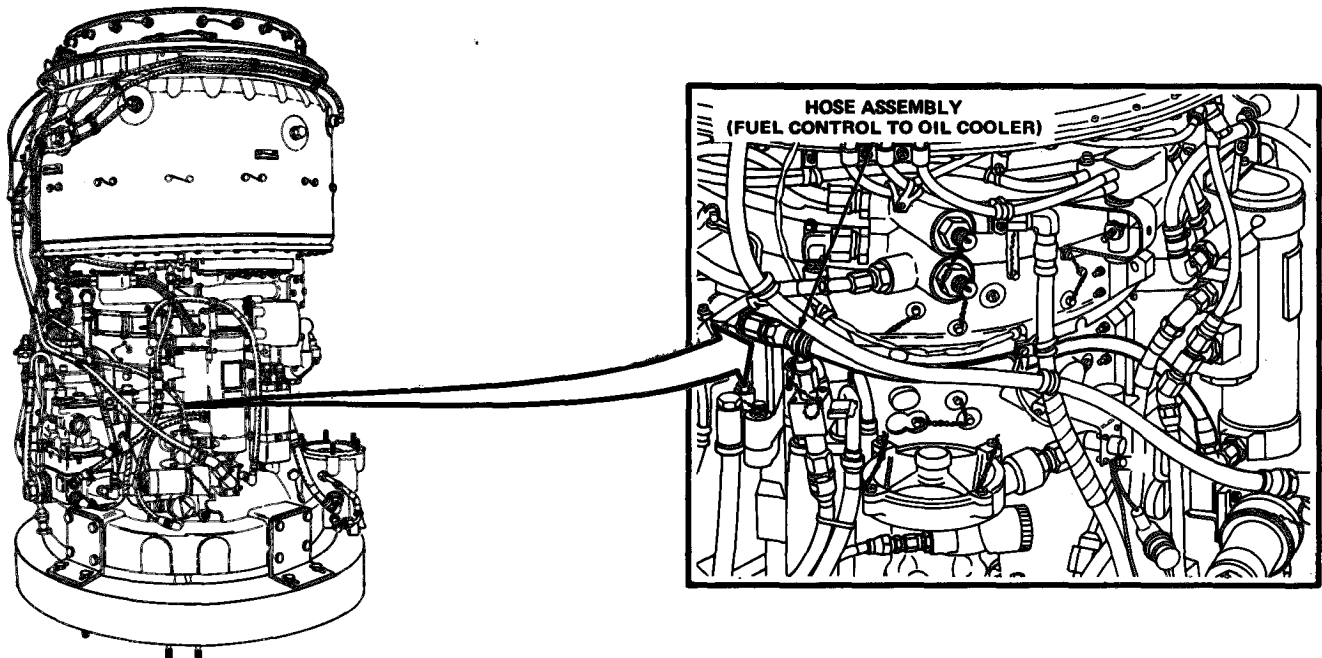
Wiping Rag (E58)

Personnel Required:

68B10 Aircraft Powerplant Repairer

WARNING

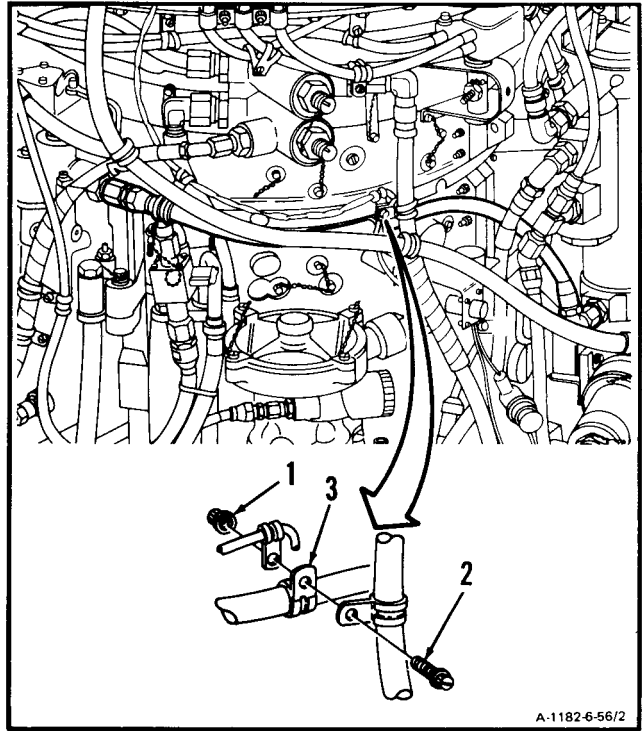
Turbine fuels are very flammable, They cause drying and irritation of skin or eyes. Handle only in well-ventilated areas away from heat and open flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin and do not take internally. Wash contacted area of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



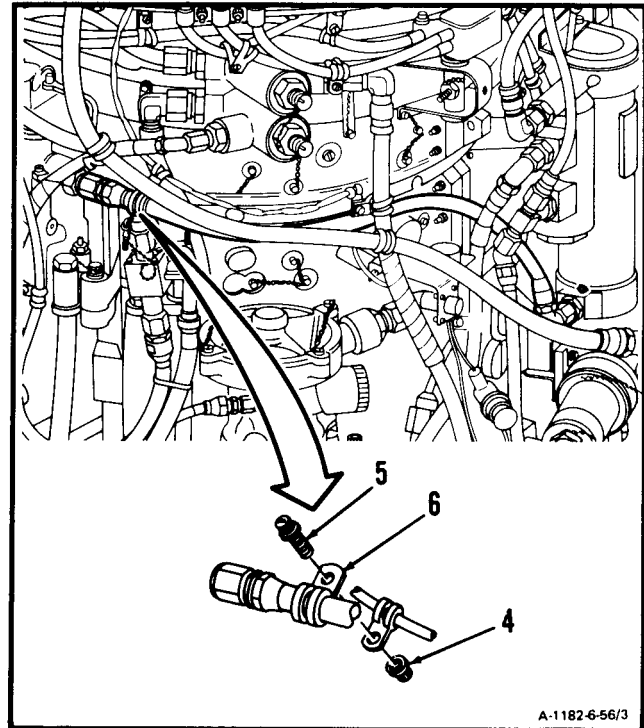
A-1182-6-56/1

GO TO NEXT PAGE

1. Remove nut (1), screw (2) and clamp (3).



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

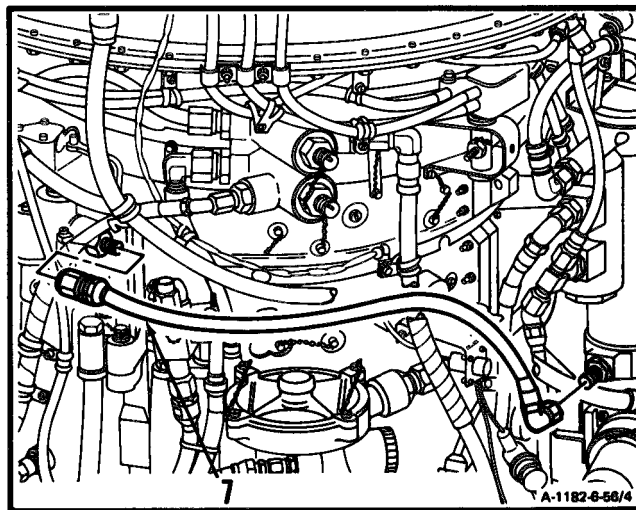


GO TO NEXT PAGE

6-56 REMOVE HOSE ASSEMBLY (FUEL CONTROL TO OIL COOLER) (Continued)

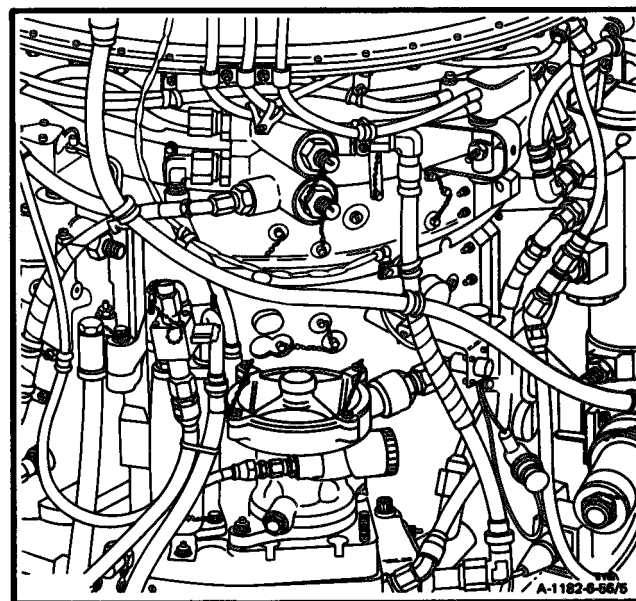
6-56

3. Disconnect and remove hose assembly (7).



FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-57 INSTALL HOSE ASSEMBLY(FUEL CONTROL TOOL COOLER)

6-57

INITIAL SETUP

Applicable Configurations:

All

Tools:

Powerplant Mechanic's Tool Kit,

NSN 5180-00-323-4944

Technical Inspection Tool Kit,

NSN 5180-00-323-5114

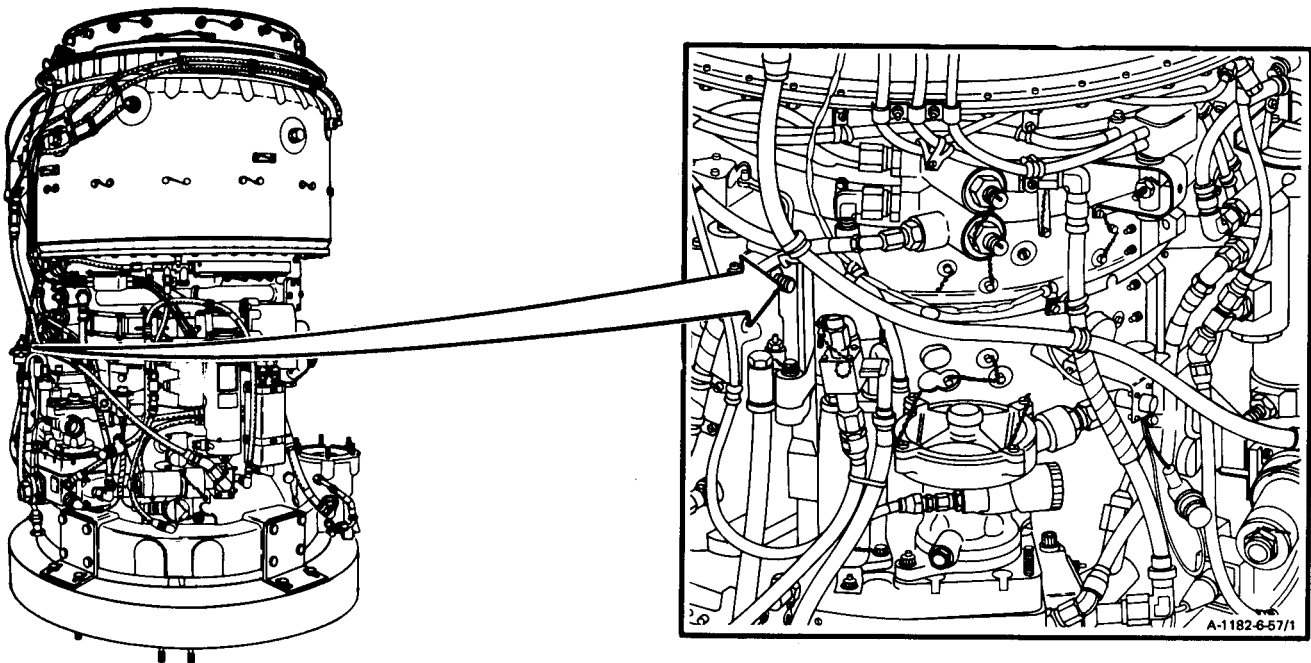
Materials:

None

Personnel Required:

68B10 Aircraft Powerplant Repairer

68B30 Aircraft Powerplant Inspector

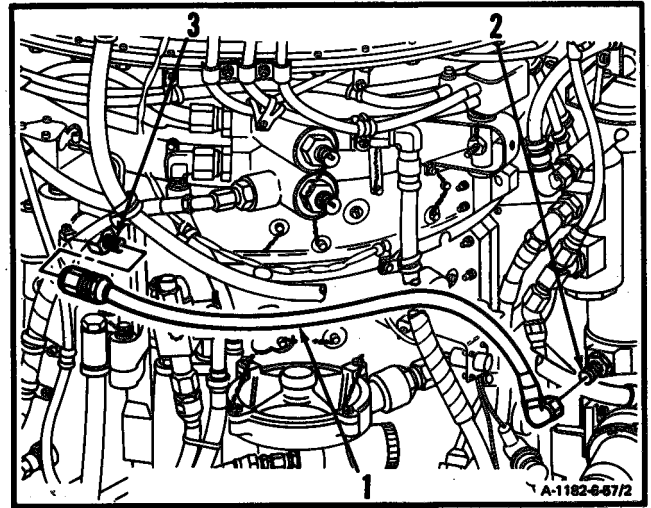


GO TO NEXT PAGE

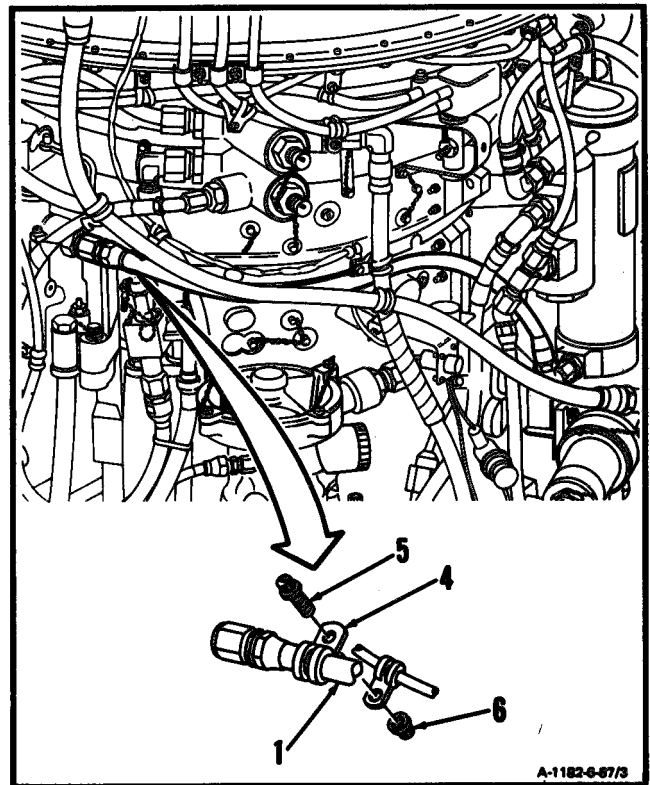
6-57 INSTALL HOSE ASSEMBLY (FUEL CONTROL TO OIL COOLER) (Continual)

6-57

1. Install boss assembly (1) on unions (2 and 3).



2. Install clamp (4) on hose assembly (1) and install screw (5) and nut (6).

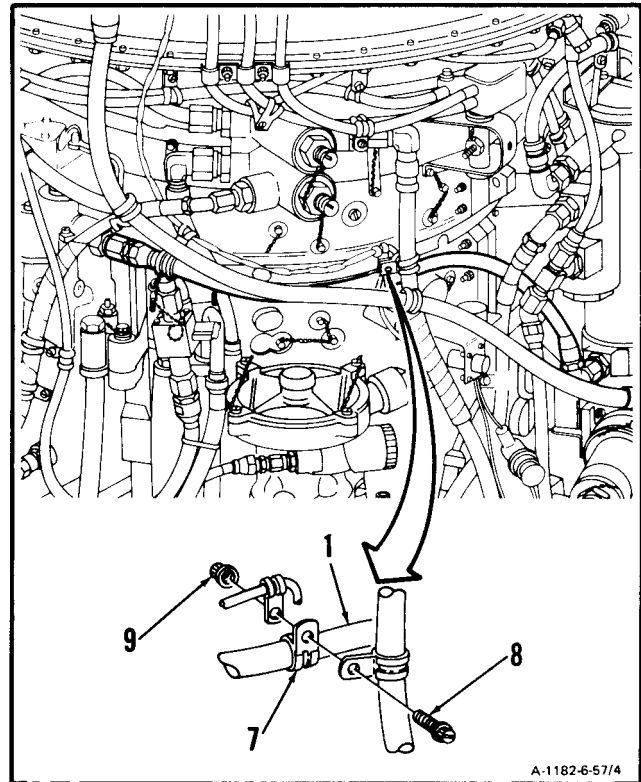


GO TO NEXT PAGE

6-57 INSTALL HOSE ASSEMBLY (FUEL CONTROL TO OIL COOLER) (Continued)

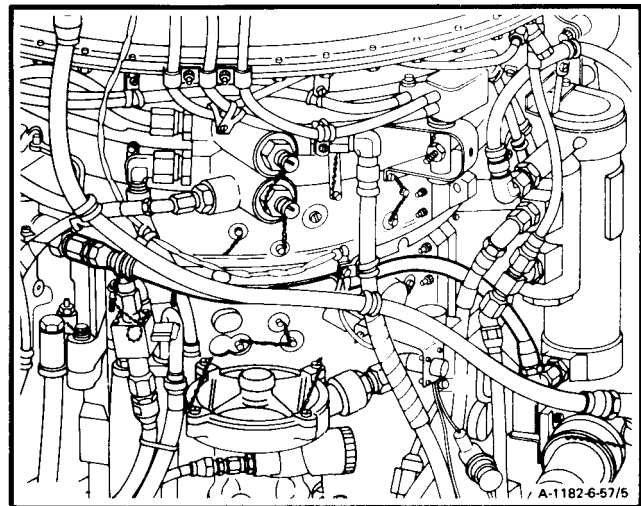
3. Install clamp (7) on hose assembly (1) and install screw (8) and nut (9).

INSPECT



FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-58 REMOVE HOSE ASSEMBLY (IN-LINE FUEL FILTER TO FLOW DIVIDER)

6-58

INITIAL SETUP

*General Safety Instructions:***Applicable Configurations:**

All

Tools:

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

Materials:

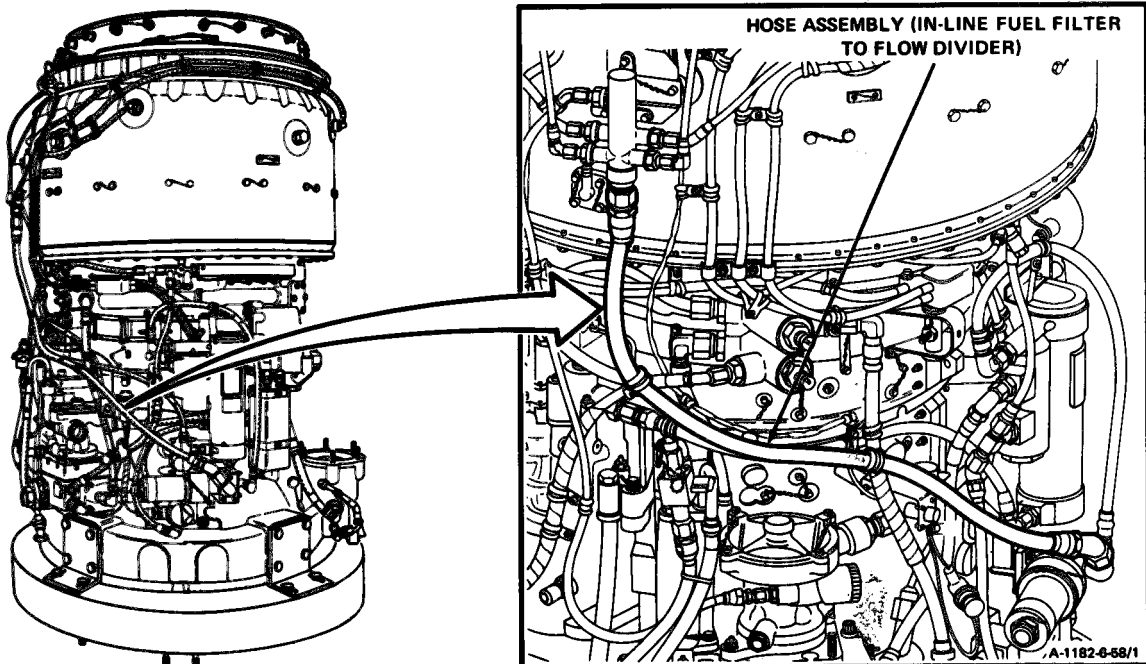
Wiping Rag (E58)

Personnel Required:

68B10 Aircraft Powerplant Repairer

WARNING

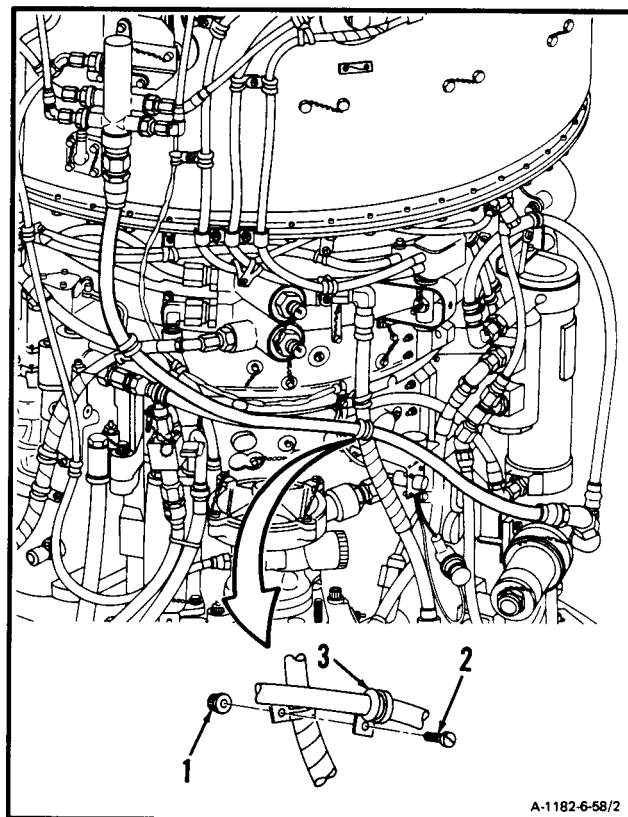
Turbine fuels are very flammable. They may cause drying and irritation of skin or eyes. Handle only in well-ventilated areas away from heat and open flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin and do not take internally. Wash contacted area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



GO TO NEXT PAGE

6-58 REMOVE HOSE ASSEMBLY (IN-LINE FUEL FILTER TO FLOW DIVIDER) (Continued) 6-58

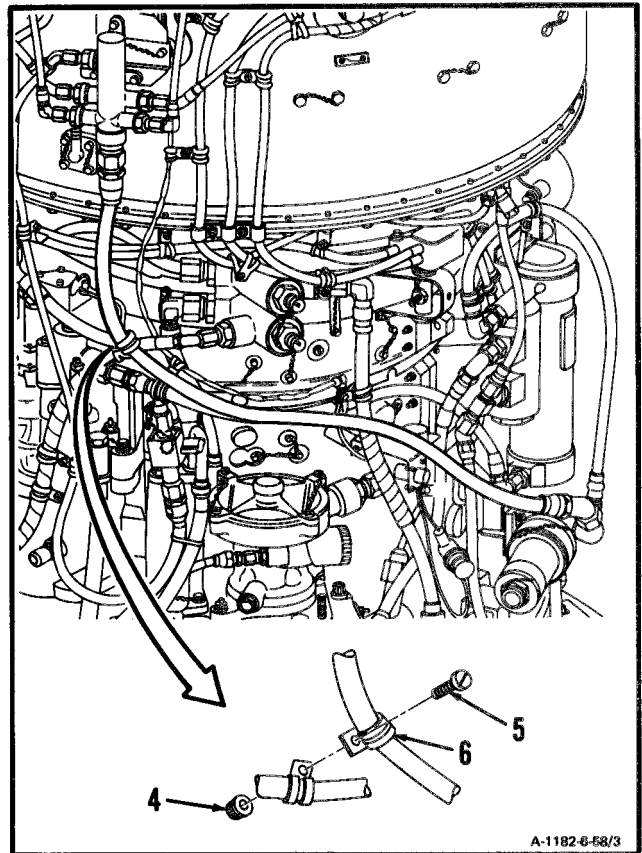
1. Remove nut (1), screw (2), and clamp (3).



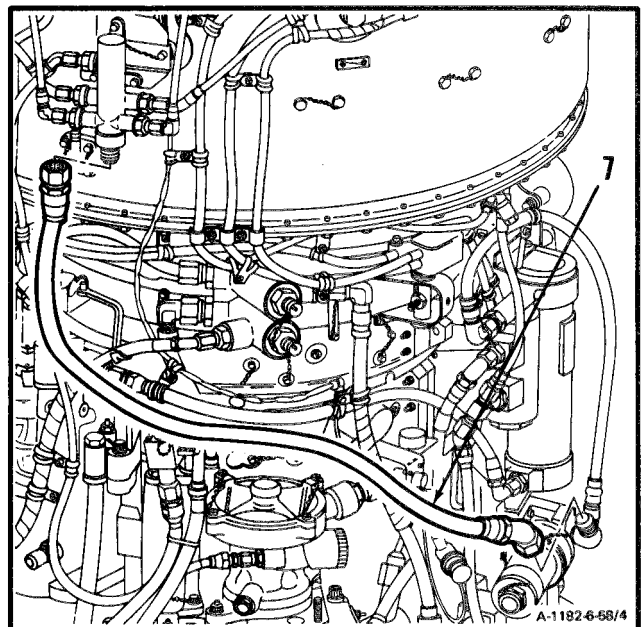
GO TO NEXT PAGE

6-58 REMOVE HOSE ASSEMBLY (IN-LINE FUEL FILTER TO FLOW DIVIDER) (Continual) 6-58

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



3. Disconnect and remove hose assembly (7).

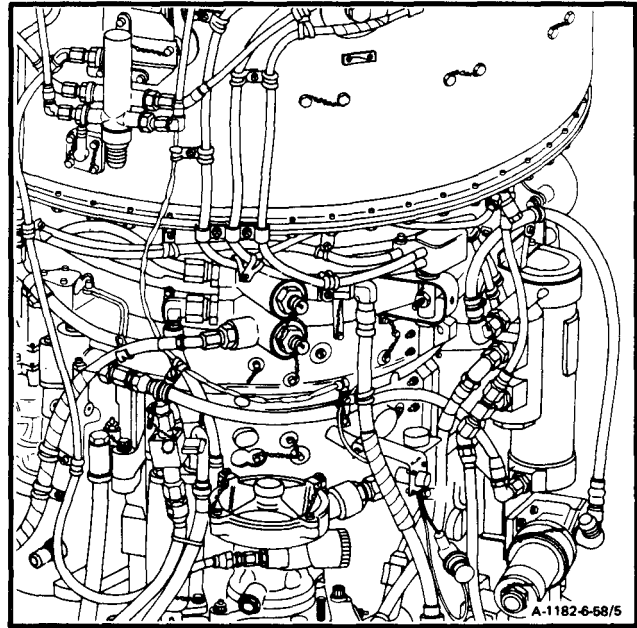


GO TO NEXT PAGE

6-58 REMOVE HOSE ASSEMBLY (IN-LINE FUEL FILTER TO FLOW DIVIDER) (Continued) 6-58

FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-59 INSTALL HOSE ASSEMBLY (IN-LINE FUEL FILTER TO FLOW DIVIDER)

6-59

INITIAL SETUP**Materials:**

None

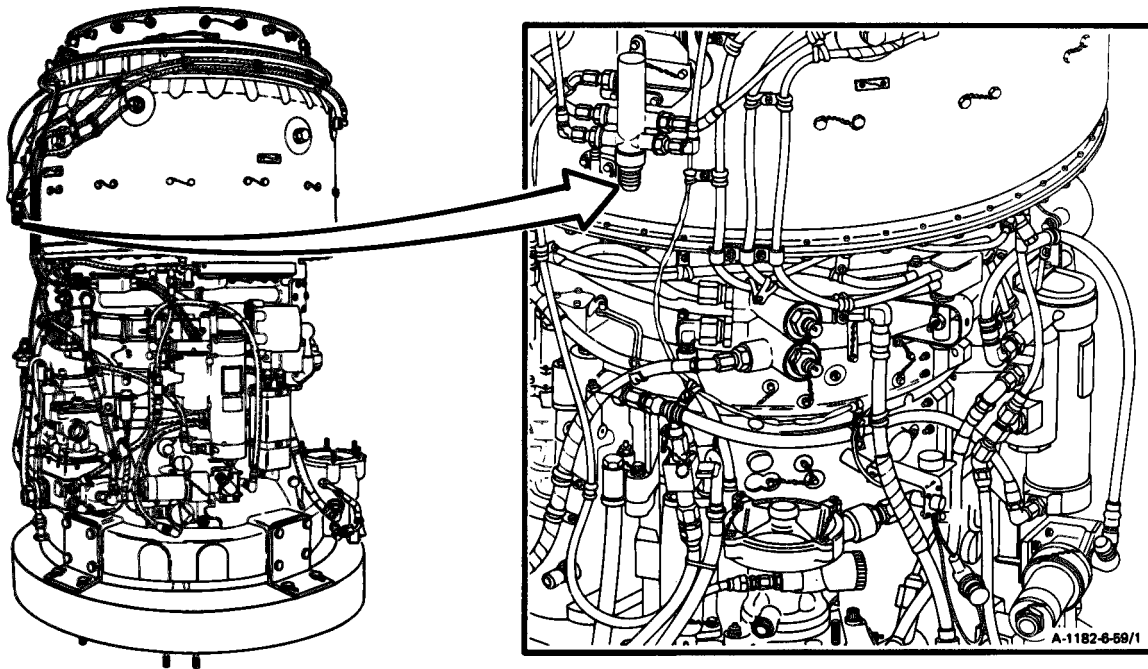
Applicable Configurations:

All

Personnel Required:

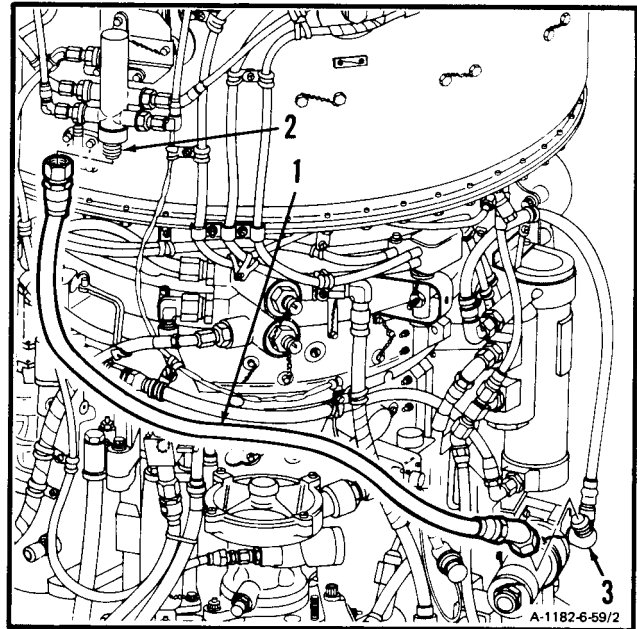
68B10 Aircraft Powerplant Repairer

68B30 Aircraft Powerplant Inspector

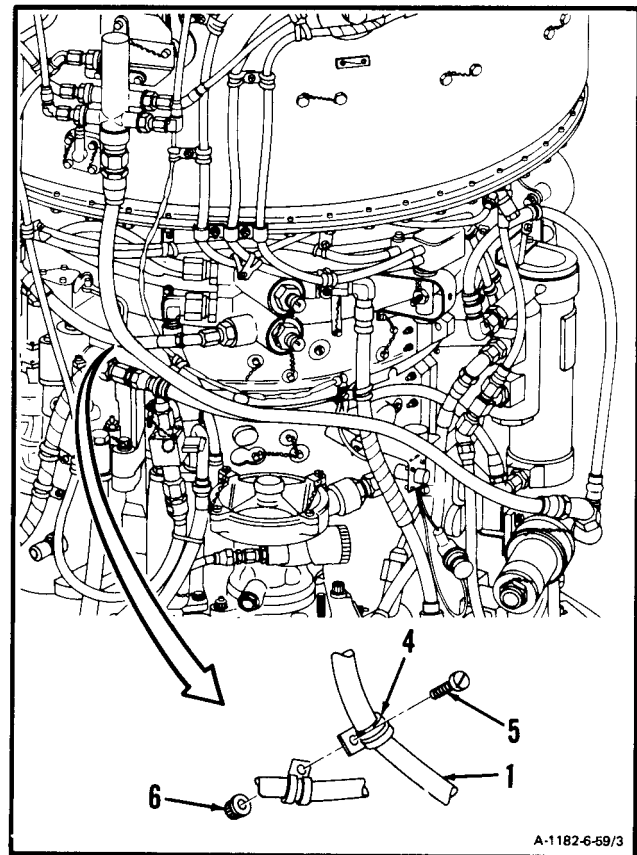
Tools:Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944Technical Inspection Tool Kit,
NSN 5180-00-323-5114**GO TO NEXT PAGE**

6-59 INSTALL HOSE ASSEMBLY (IN-LINE FUEL FILTER TO FLOW DIVIDER) (Continued) 6-59

1. Install hose assembly (1) on unions (2 and 3).



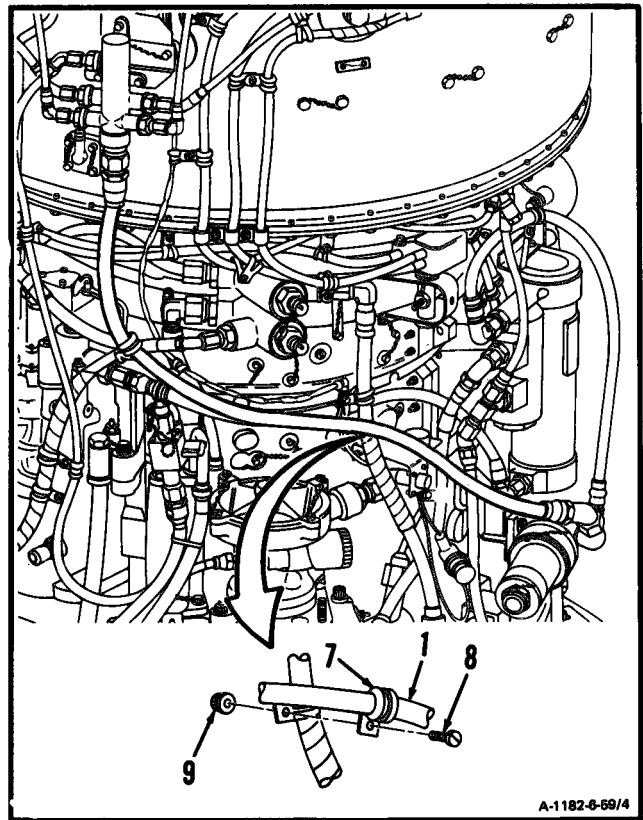
2. Install clamp (4) on hose assembly (1), and install screw (5) and nut (6).



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6-59 INSTALL HOSE ASSEMBLY (IN-LINE FUEL FILTER TO FLOW DIVIDER) (Continued) 6-59

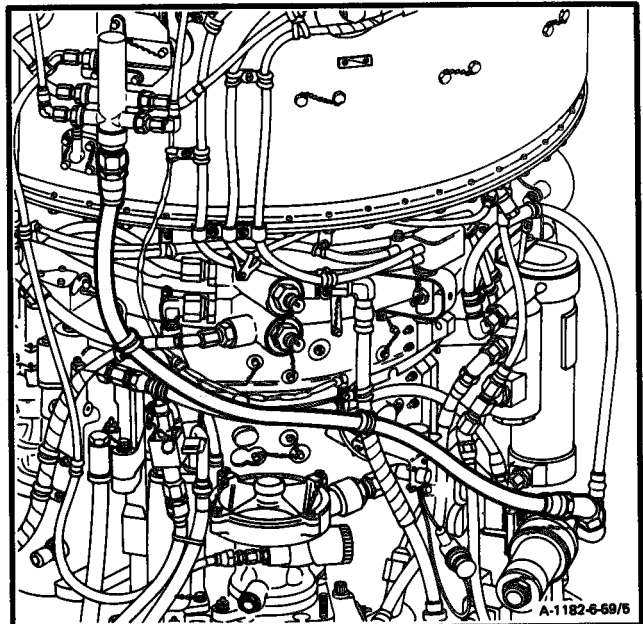
3. **Install clamp (7)** on hose assembly (1), and install screw (8) and nut (9).



INSPECT

FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-60 REMOVE HOSE ASSEMBLY (FUEL BOOST PUMP TO MAIN FUEL FILTER)

INITIAL SETUP

General Safety Instructions:

Applicable Configurations:

All

Tools:

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

Open-End Wrench, 1-Inch
Container, 1 Quart

Materials:

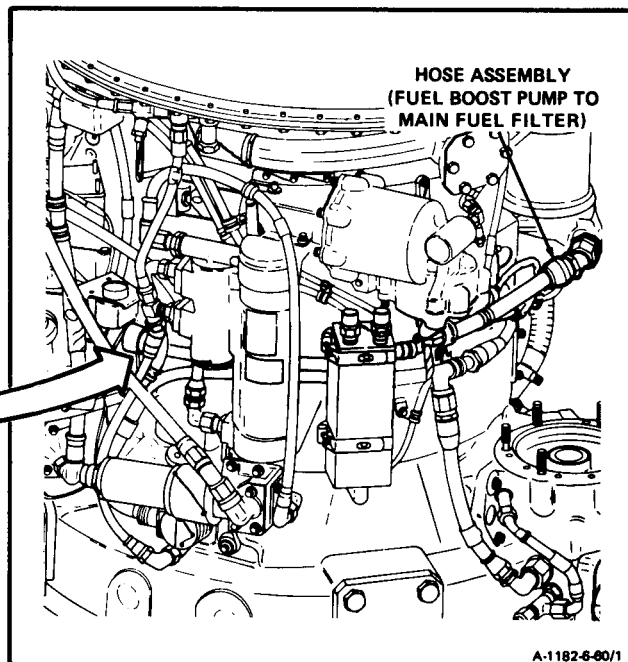
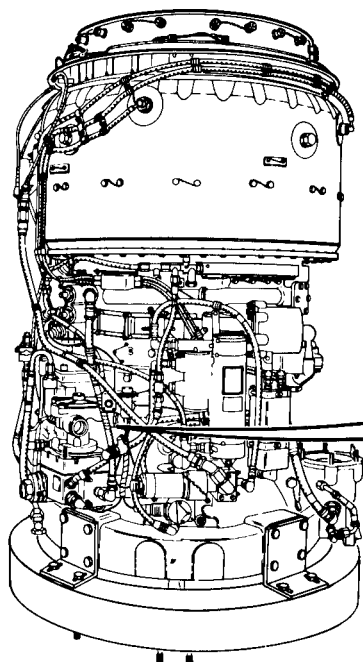
Wiping Rag (E58)

Personnel Required:

68B10 Aircraft Powerplant Repairer

WARNING

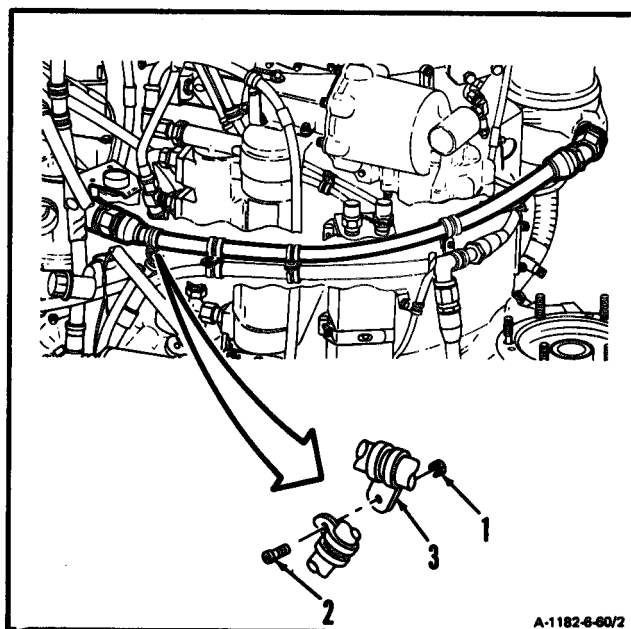
Turbine fuels are very flammable. They may cause drying and irritation of skin or eyes. Handle only in well-ventilated areas away from heat and open flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin and do not take internally. Wash contacted area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



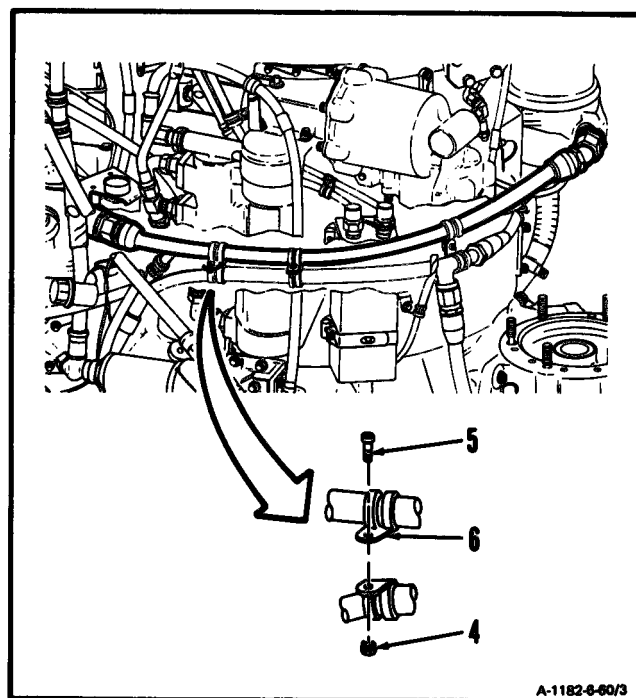
GO TO NEXT PAGE

6-60 REMOVE HOSE ASSEMBLY (FUEL BOOST PUMP TO MAIN FUEL FILTER) (Continued) 6-60

1. Remove nut (1), screw (2), and clamp (3).



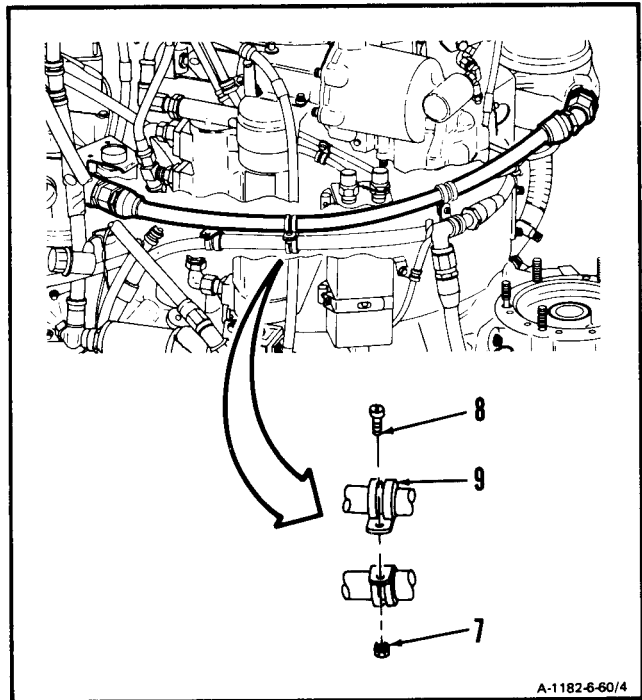
2. Remove nut (4), screw (5), and clamp (6).



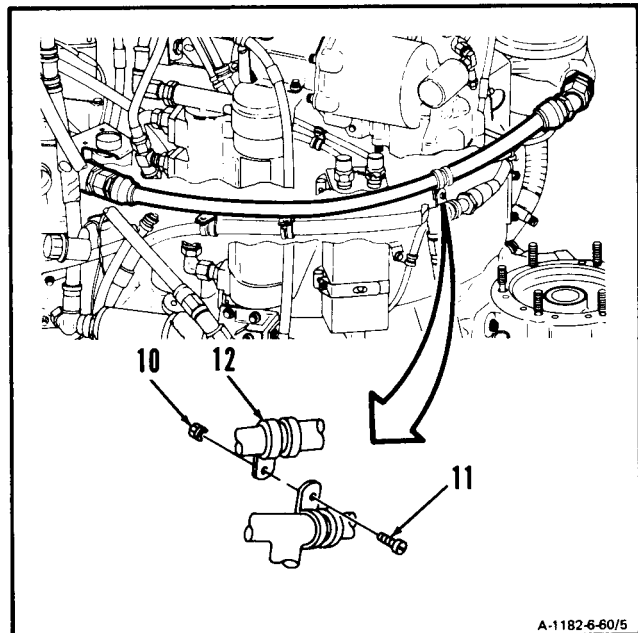
GO TO NEXT PAGE

6-60 REMOVE HOSE ASSEMBLY (FUEL BOOST PUMP TO MAIN FUEL FILTER) (Continued) 6-60

3. Remove nut (7), screw (8), and clamp (9).



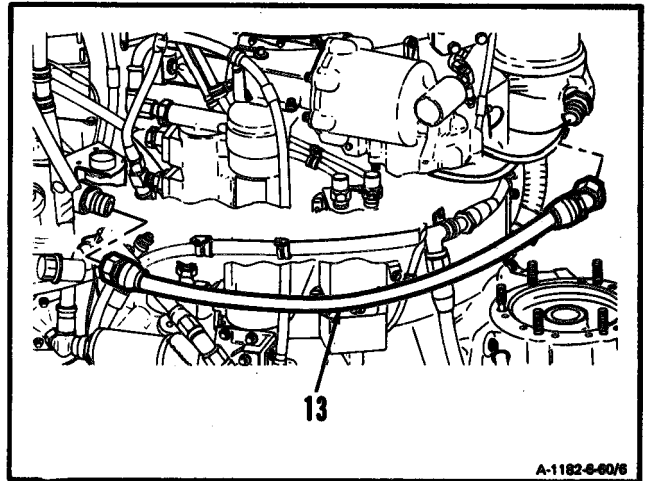
4. Remove nut (10), screw (11), and clamp (12).



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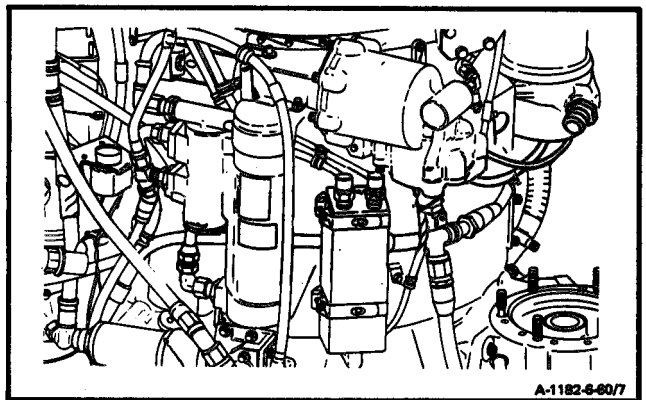
6-60 REMOVE HOSE ASSEMBLY (FUEL BOOST PUMP TO MAIN FUEL FILTER) (Continued) 6-60

5. Disconnect and **remove hose assembly (13)**. Use 1-inch open-end wrench.



FOLLOW-ON MAINTENANCE;

None



END OF TASK

INITIAL SETUP

Materials:

None

Applicable Configurations:

All

Personnel Required:

68B10 Aircraft Powerplant Repairer

68B30 Aircraft Powerplant Inspector

Tools:

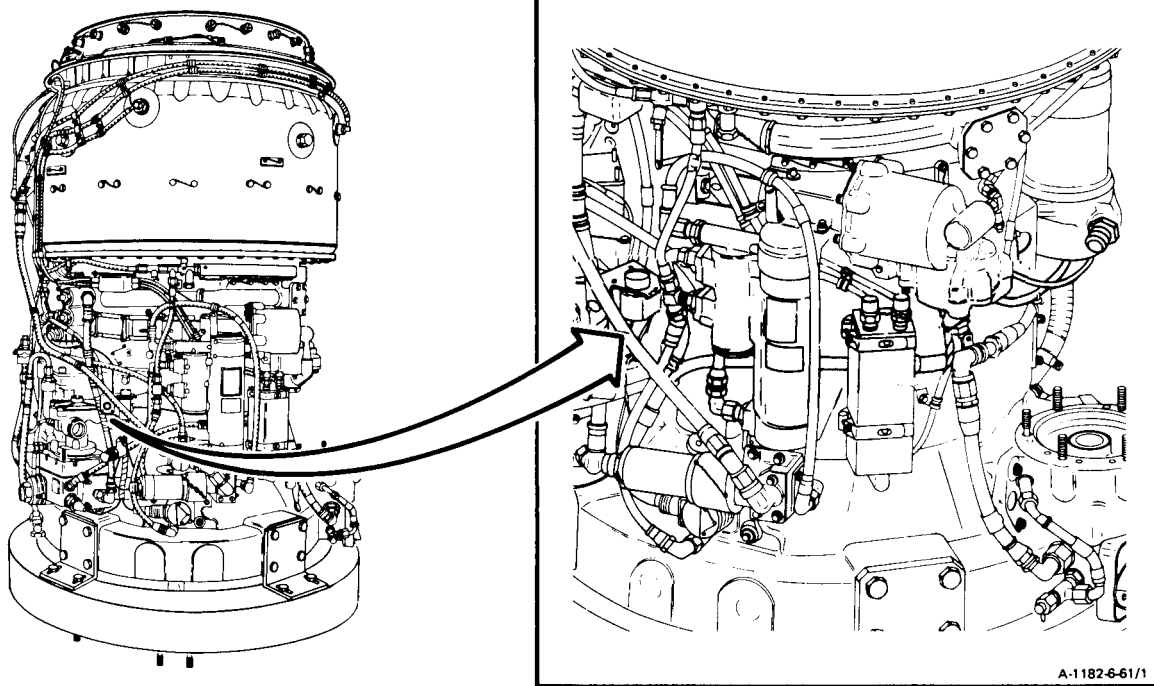
Powerplant Mechanic's Tool Kit,

NSN 5180-00-323-4944

Technical Inspection Tool Kit,

NSN 5180-00-323-5114

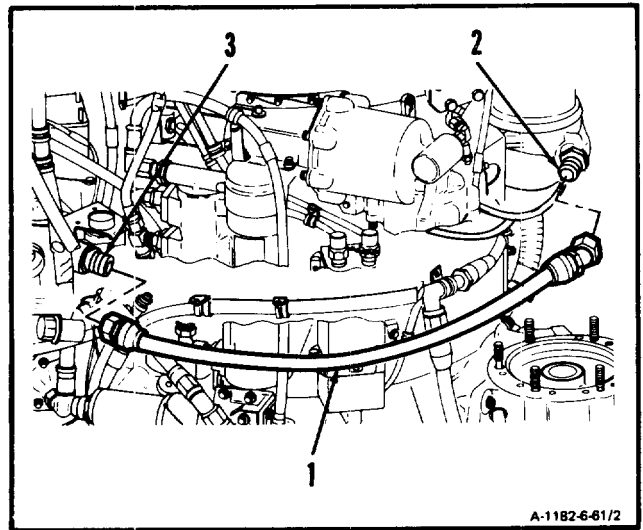
Open-End Wrench, 1-inch



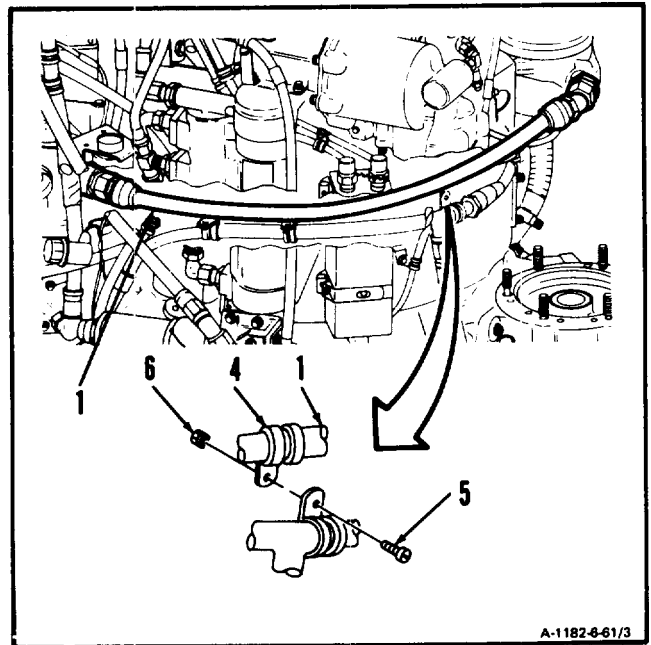
GO TO NEXT PAGE

6-61 INSTALL HOSE ASSEMBLY (FUEL BOOST PUMP TO MAIN FUEL FILTER) (Continued) 6-61

1. **Install hose assembly (1)** on nipples (2 and 3).
Use 1-inch open-end wrench.



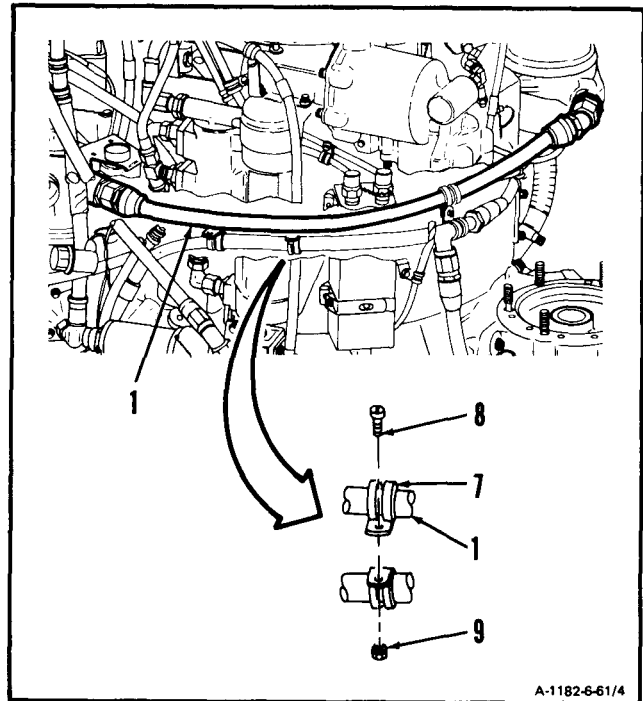
2. **Install clamp (4)** on hose assembly (1), and install screw (5) and nut (6).



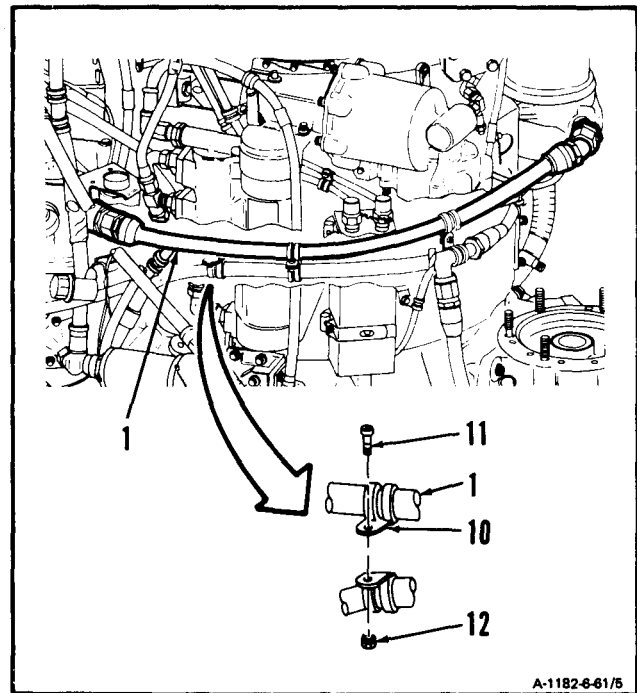
GO TO NEXT PAGE

6-61 INSTALL HOSE ASSEMBLY (FUEL BOOST PUMP TO MAIN FUEL FILTER) (Continued) 6-61

3. Install **clamp (7)** on hose assembly (1), and install screw (8) and nut (9).



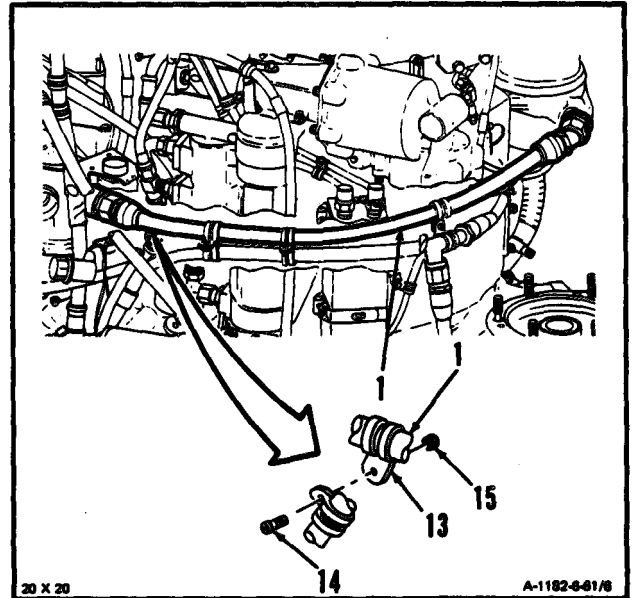
4. Instal **clamp (10)** on hose assembly (1), and install screw (11) and nut (12).



GO TO NEXT PAGE

6-61 INSTALL HOSE ASSEMBLY (FUEL BOOST PUMP TO MAIN FUEL FILTER) (Continued) 6-61

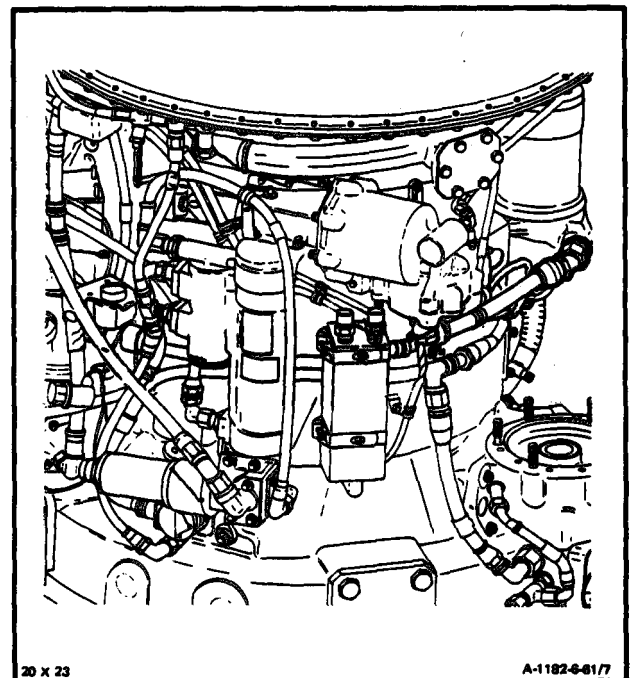
5. Install clamp (13) on hose assembly (1), and install straw (14) and nut (15).



INSPECT

FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-62 REMOVE HOSE ASSEMBLY (FUEL CHECK VALVE TO FUEL BOOST PUMP)

6-62

INITIAL SETUP

Applicable Configurations:

All

Tools:

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

Materials:

- Wiping Rag (E58)

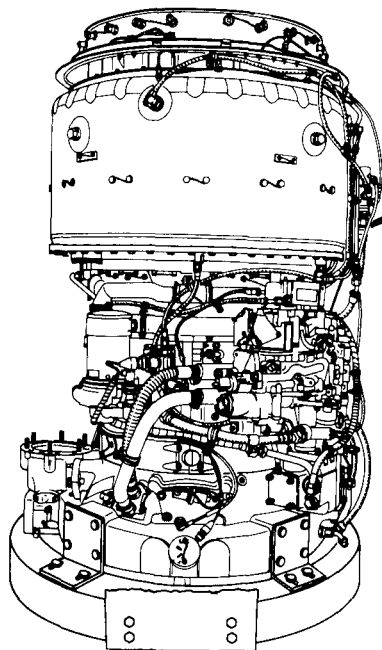
Personnel Required:

- 68B10 Aircraft Powerplant Repairer

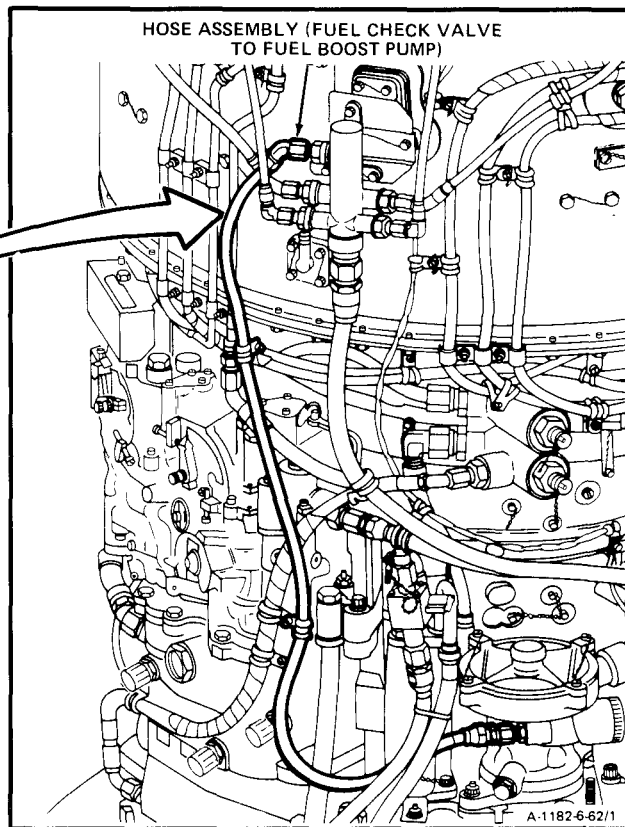
General Safety Instructions:

WARNING

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



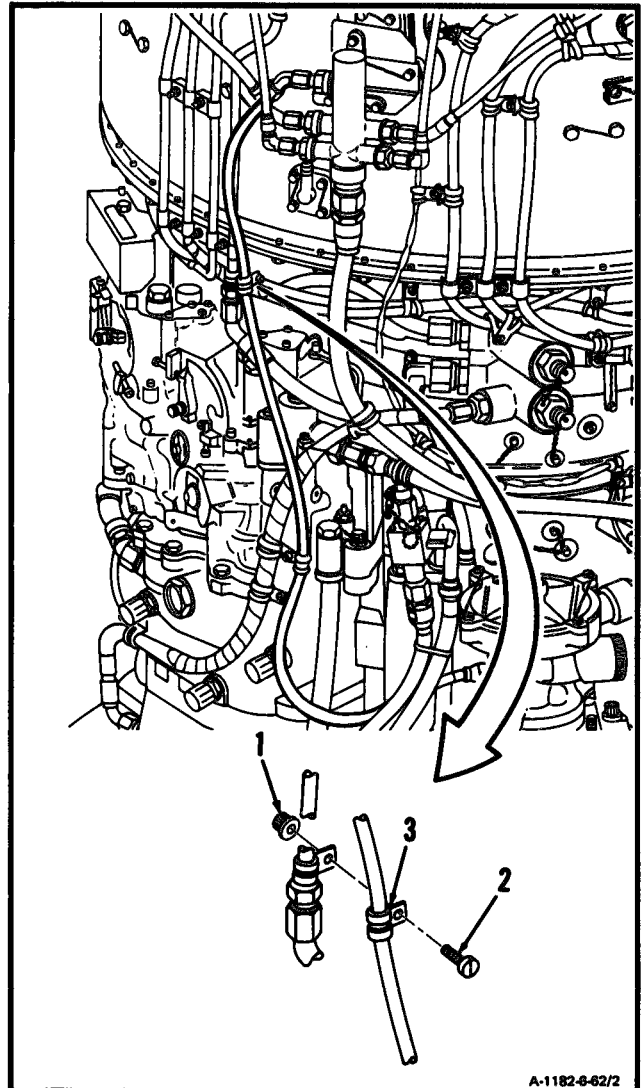
42 x 26



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6-62 REMOVE HOSE ASSEMBLY (FUEL CHECK VALVE TO FUEL BOOST PUMP) (Continued) 6-62

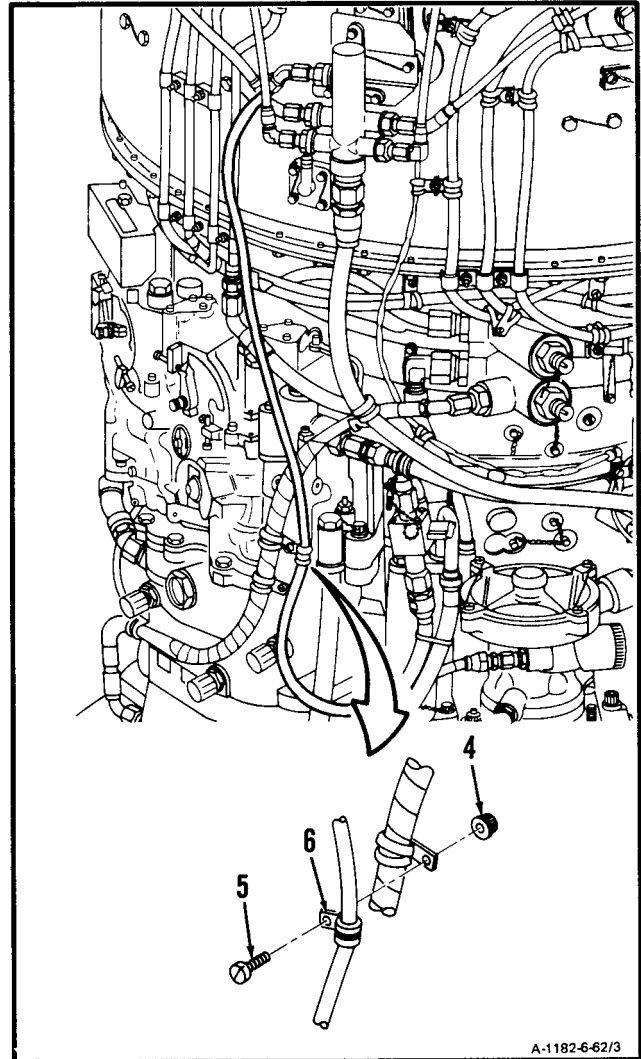
1. Remove nut (1), screw (2), and clamp (3).



GO TO NEXT PAGE

6-62 REMOVE HOSE ASSEMBLY(FUEL CHECK VALVE TO FUEL BOOST PUMP)(Continued) 6-62

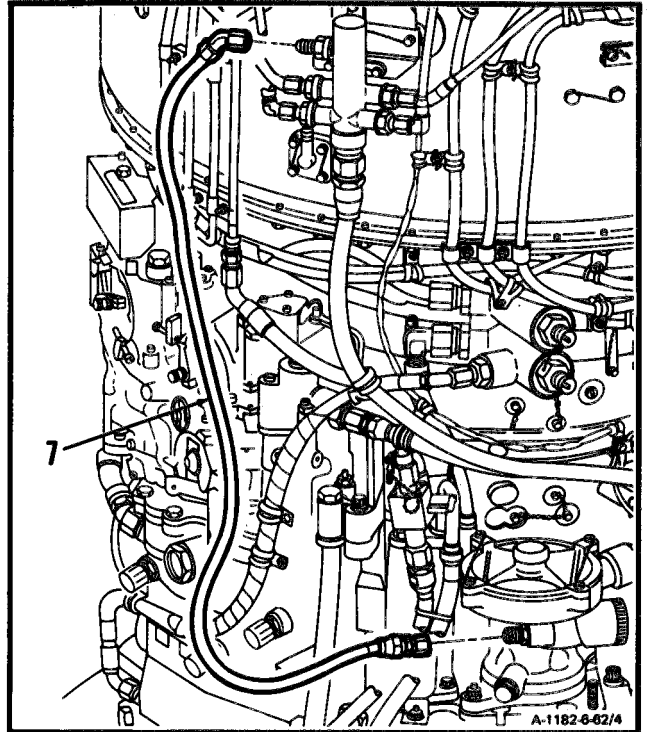
2. Remove nut (4), screw (5), and clamp (6).



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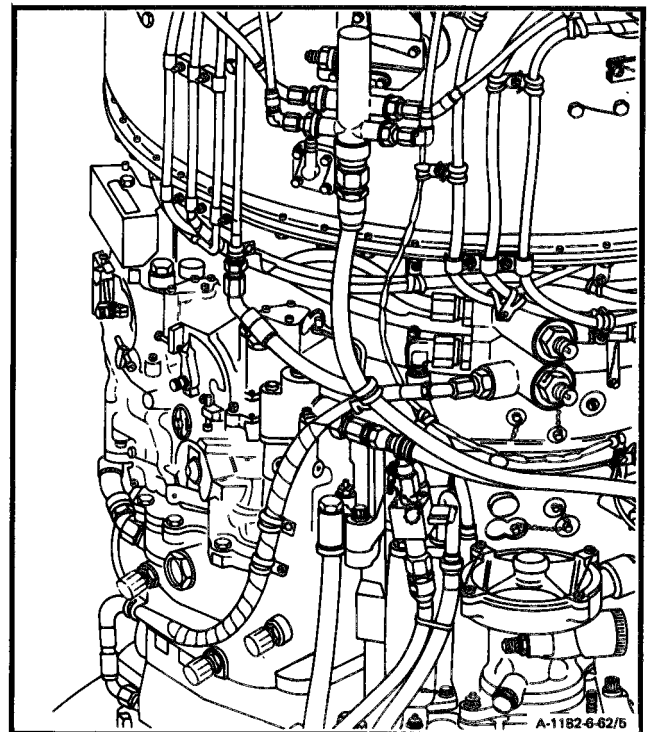
6-62 REMOVE HOSE ASSEMBLY (FUEL CHECK VALVE TO FUEL BOOST PUMP) (Continued) 6-62

3. Disconnect and remove hose assembly (7).



FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-63 INSTALL HOSE ASSEMBLY (FUEL CHECK VALVE TO FUEL BOOST PUMP)

6-63

INITIAL SETUP

Materials:

None

Applicable Configurations:

All

Personnel Required:

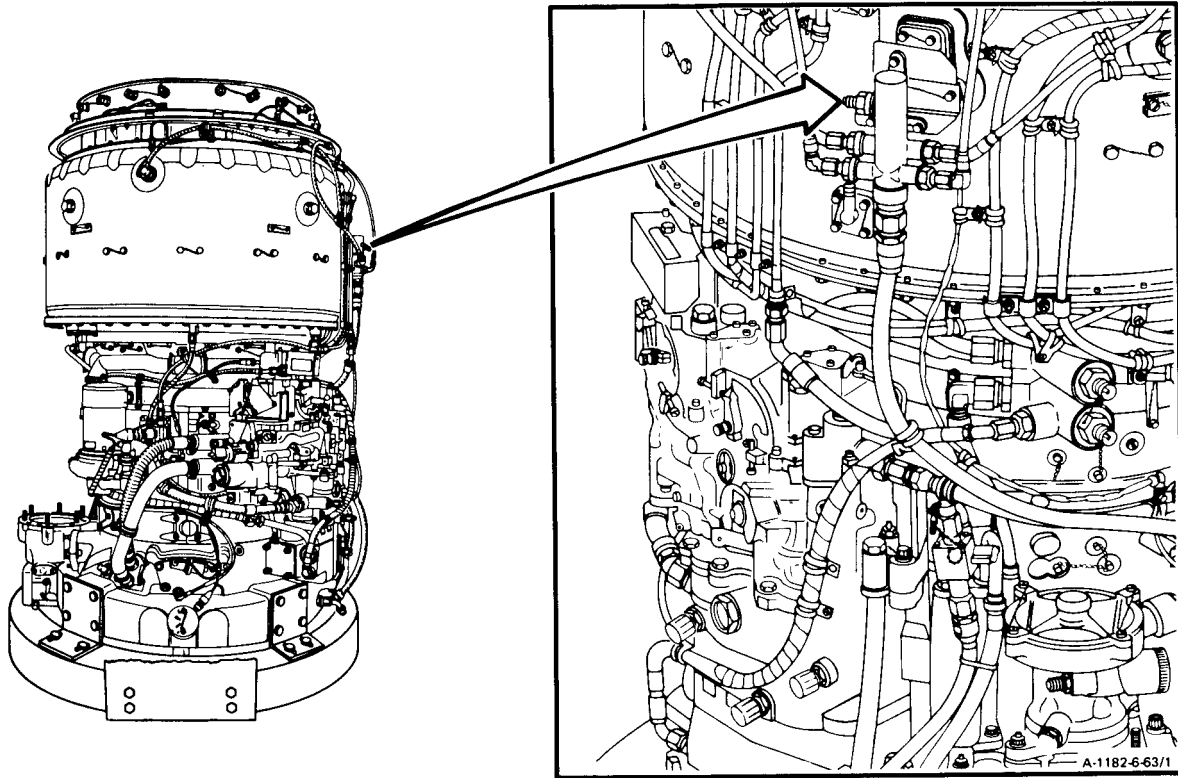
68B10 Aircraft Powerplant Repairer

681330 Aircraft Powerplant Inspector

Tools:

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

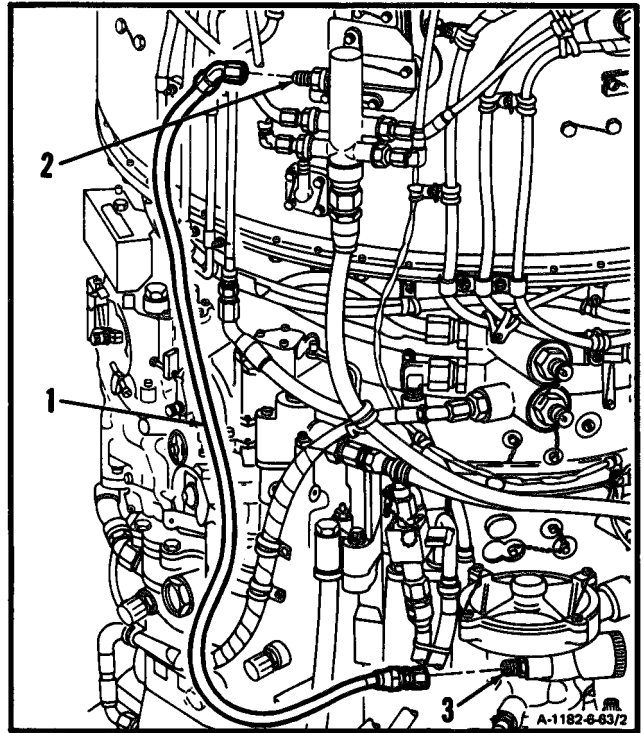
Technical Inspection Tool Kit,
NSN 5180-00-323-5114



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6-63 INSTALLHOSE ASSEMBLY (FUEL CHECK VALVE TO FUEL BOOST PUMP) (Continued) 6-63

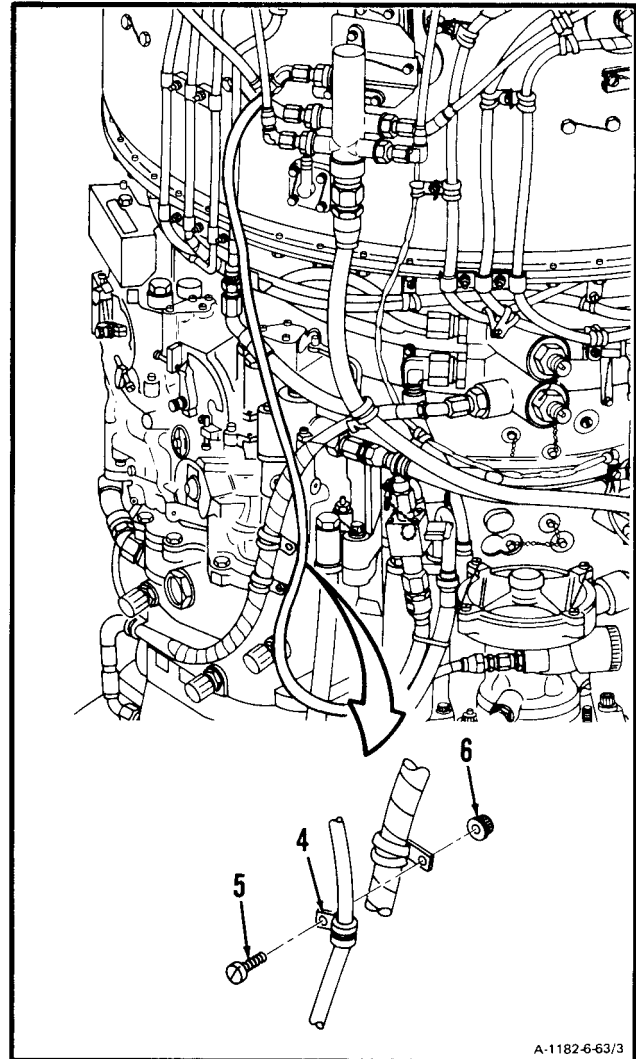
1. Install hose assembly (1) on check valve (2) and nipple (3).



GO TO NEXT PAGE

6-63 INSTALL HOSE ASSEMBLY (FUEL CHECK VALVE TO FUEL BOOST PUMP) (Continued) 6-63

2. Install clamp (4), screw (5), and nut (6).

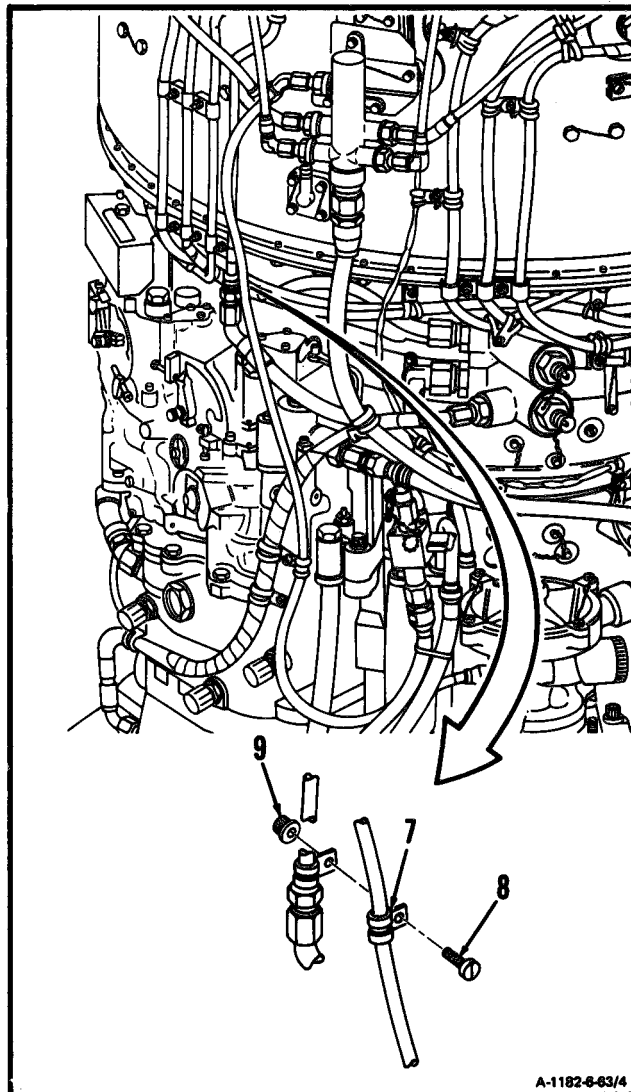


A-1182-6-63/3

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6-63 INSTALL HOSE ASSEMBLY (FUEL CHECK VALVE TO FUEL BOOST PUMP) (Continued) 6-63

3. Install clamp (7), screw (8), and nut (9).



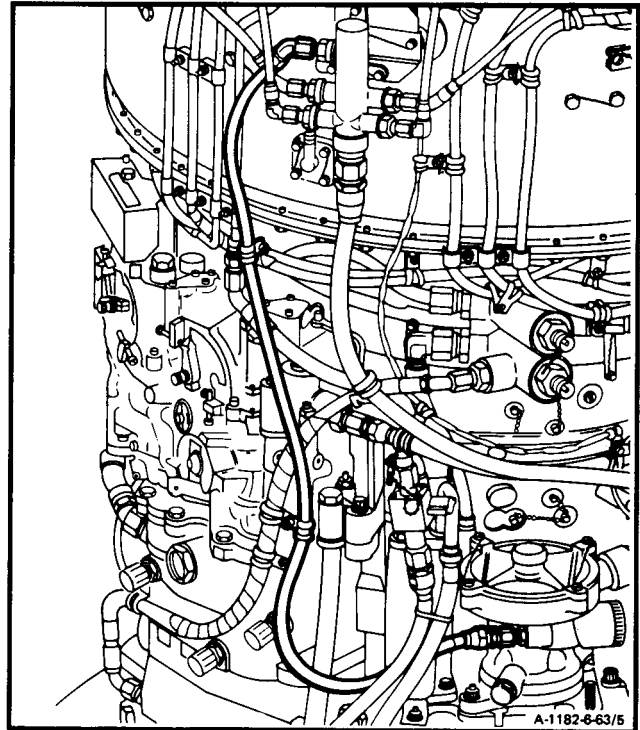
INSPECT

GO TO NEXT PAGE

6-63 INSTALL HOSE ASSEMBLY (FUEL CHECK VALVE TO FUEL BOOST PUMP) (Continua) 6-63

FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-64 REMOVE HOSE ASSEMBLY (FLOW DIVIDER LEFT SIDE PRIMARY TO MANIFOLD ASSEMBLY)

6-64

INITIAL SETUP

Applicable Configurations:

All

Tools:

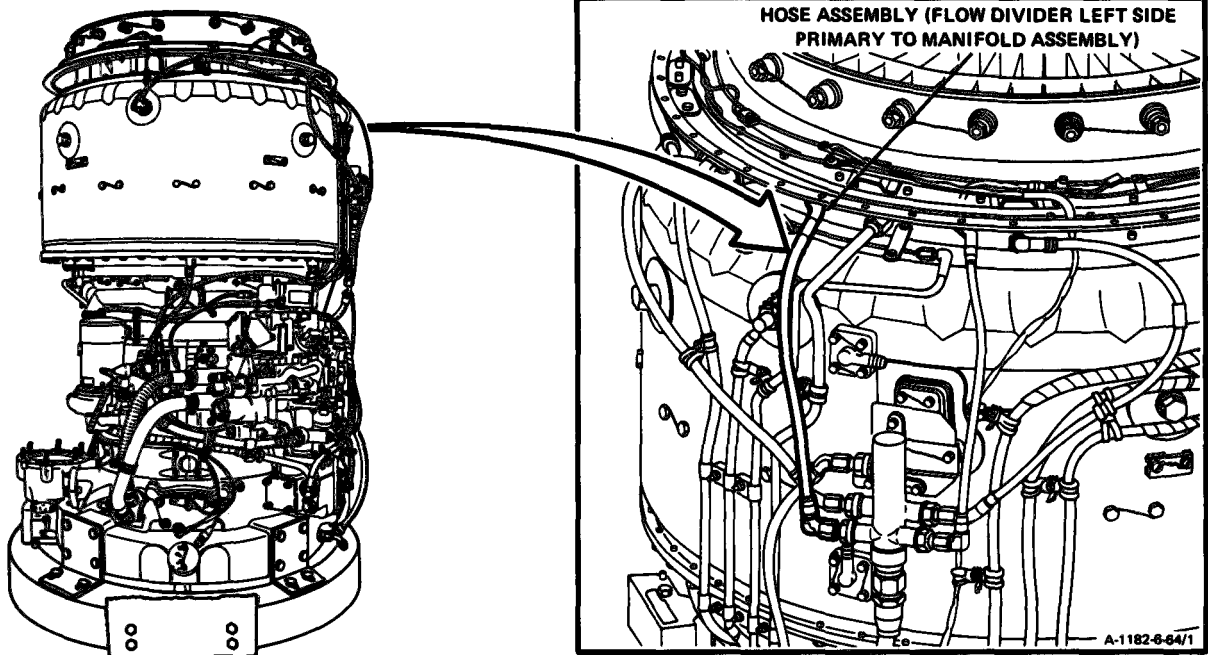
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Container, 1 Quart

Materials:

Wiping Rag (E58)

Personnel Required:

68B10 Aircraft Powerplant Repairer

**GO TO NEXT PAGE**

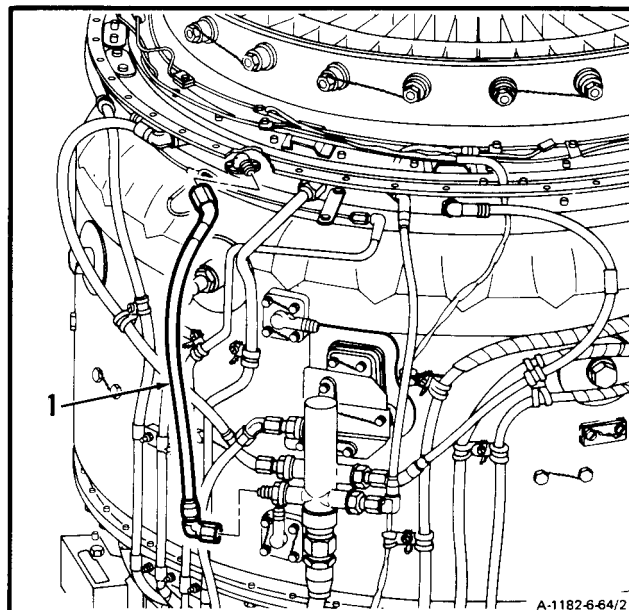
**6-64 REMOVE HOSE ASSEMBLY (FLOW DIVIDER LEFT SIDE PRIMARY TO
MANIFOLD ASSEMBLY) (Continued)**

6-64

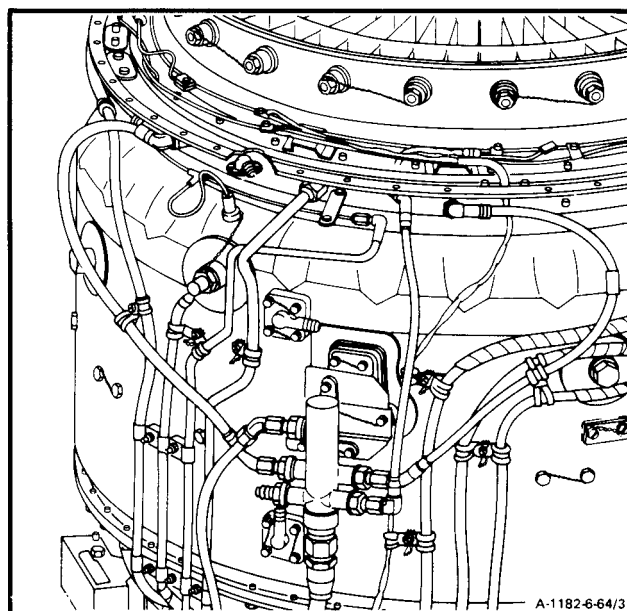
WARNING

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

1. Disconnect and remove hose assembly (1).

**FOLLOW-ON MAINTENANCE:**

None

**END OF TASK**

**6-65 INSTALL HOSE ASSEMBLY (FLOW DIVIDER LEFT SIDE PRIMARY TO
MANIFOLD ASSEMBLY)**

6-65**INITIAL SETUP****Materials:**

None

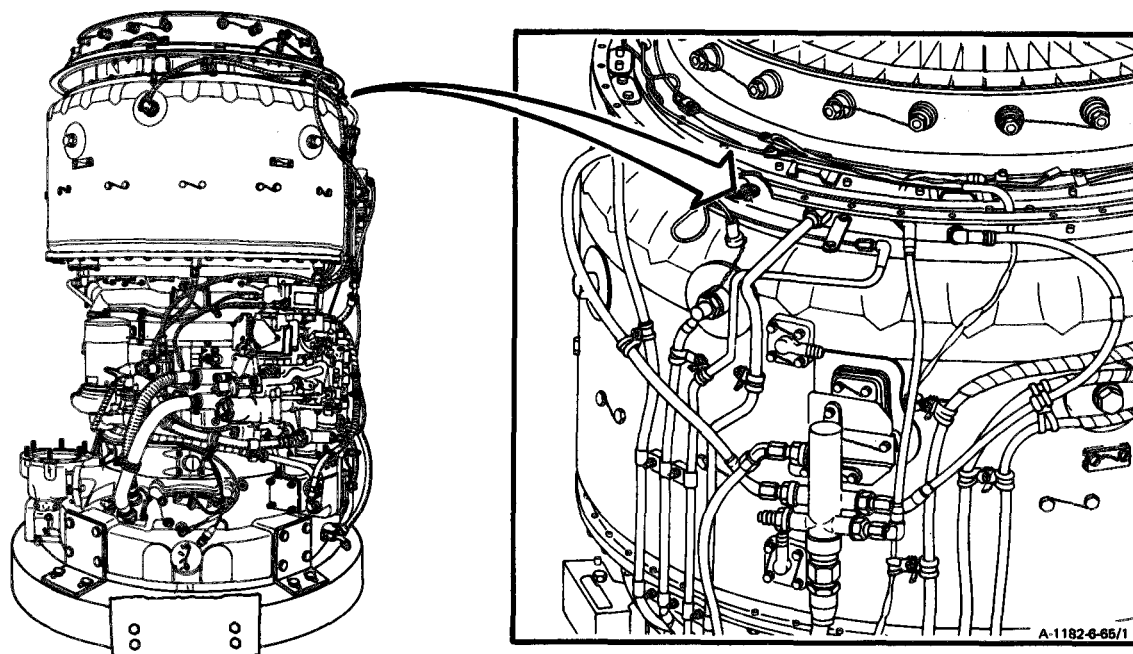
Applicable Configurations:

All

Personnel Required:

68B10 Aircraft Powerplant Repairer

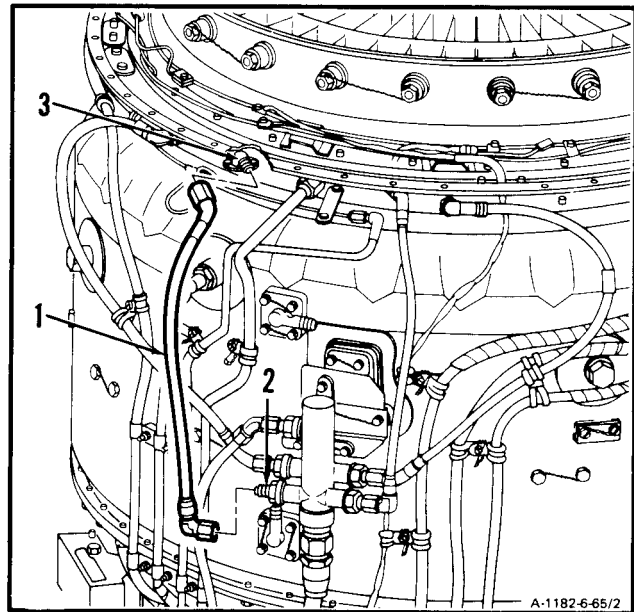
68B30 Aircraft Powerplant Inspector

Tools:Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4994Technical Inspection Tool Kit,
NSN 5180-00-323-5114**GO TO NEXT PAGE**

6-65 INSTALL HOSE ASSEMBLY (FLOW DIVIDER LEFT SIDE PRIMARY TO MANIFOLD ASSEMBLY) (Continued)

6-65

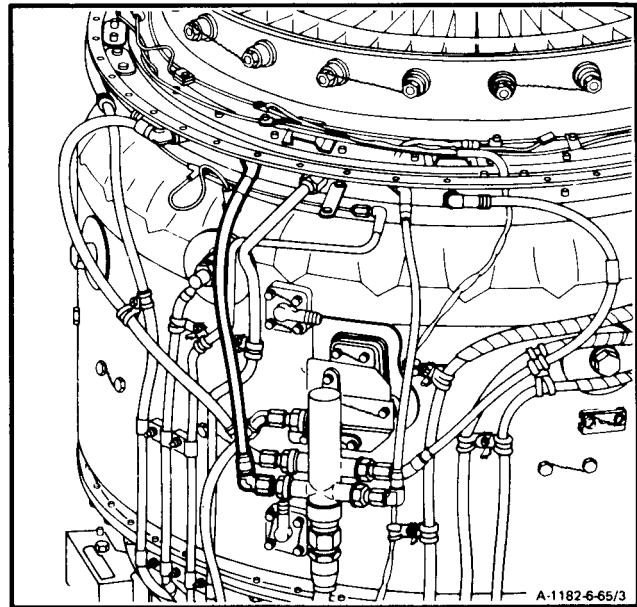
1. Install hose assembly (1) on nipple (2) and elbow (3).



INSPECT

FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-66 REMOVE HOSE ASSEMBLY (FLOW DIVIDER RIGHT SIDE PRIMARY TO MANIFOLD ASSEMBLY)

6-66

INITIAL SETUP

Applicable Configurations:

All

Tools:

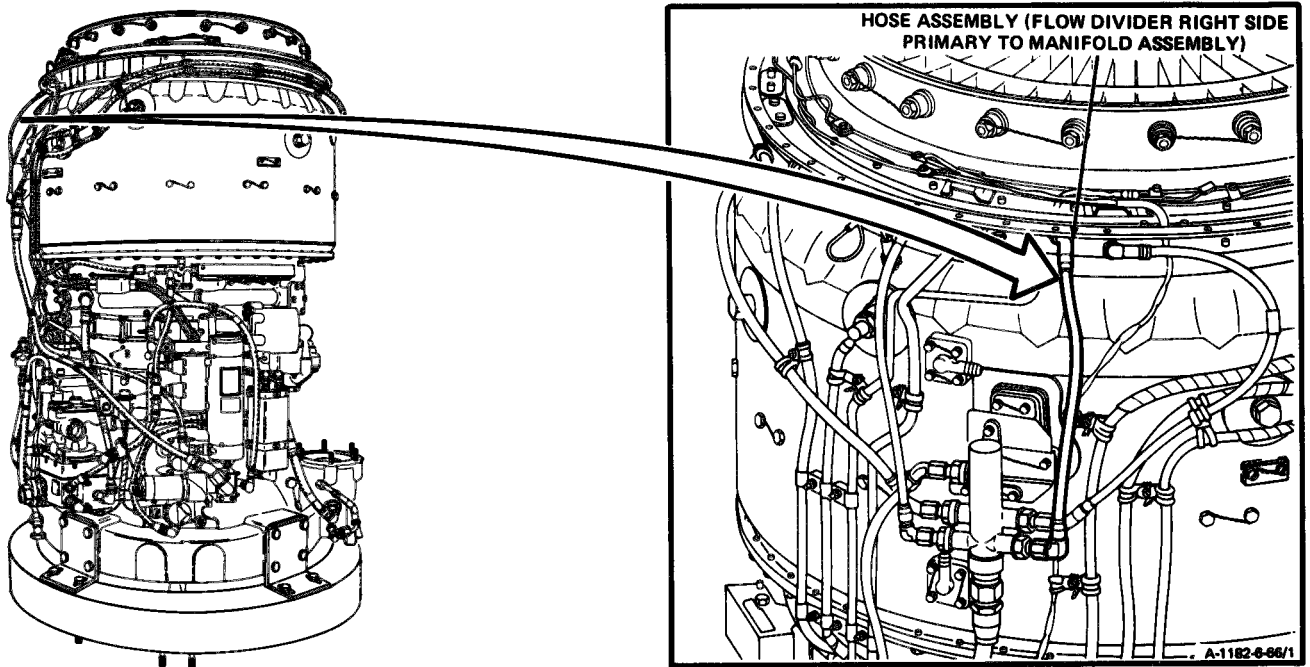
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Container, 1 Quart

Materials:

Wiping Rag (E58)

Personnel Required:

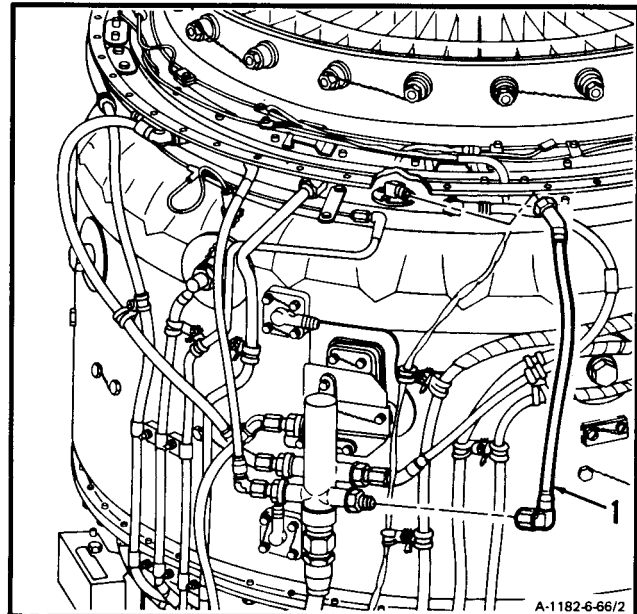
68B10 Aircraft Powerplant Repairer

**GO TO NEXT PAGE**

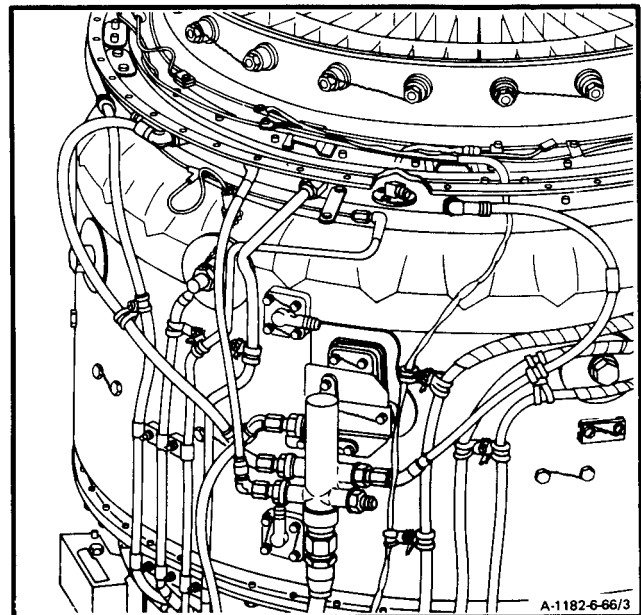
**6-66 REMOVE HOSE ASSEMBLY (FLOW DIVIDER RIGHT SIDE PRIMARY TO
MANIFOLD ASSEMBLY) (Continued)****6-66****WARNING**

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

1. Disconnect and remove hose assembly (1).

**FOLLOW-ON MAINTENANCE:**

None

**END OF TASK**

**6-67 INSTALL HOSE ASSEMBLY (FLOW DIVIDER RIGHT SIDE PRIMARY TO
MANIFOLD ASSEMBLY)**

6-67

INITIAL SETUP**Materials:**

None

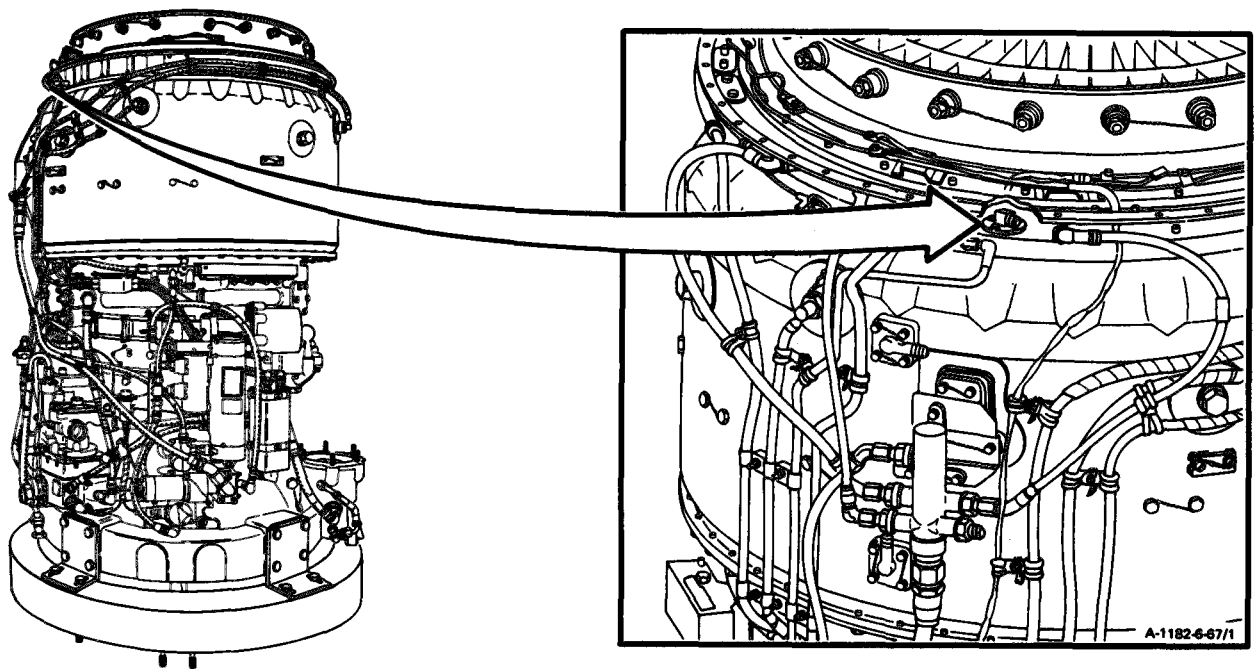
Applicable Configurations:

All

Personnel Required:

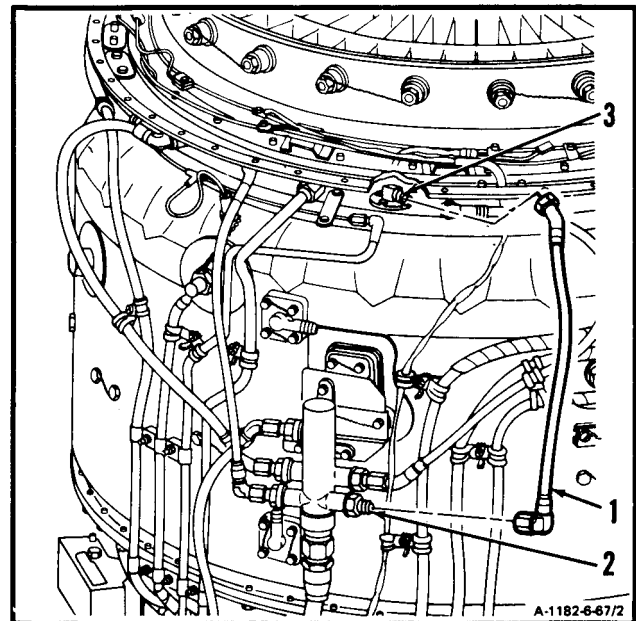
68B10 Aircraft Powerplant Repairer

68B30 Aircraft Powerplant Inspector

Tools:Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944Technical Inspection Tool Kit,
NSN 5180-00-323-5114**GO TO NEXT PAGE**

6-67 INSTALL HOSE ASSEMBLY (FLOW DIVIDER RIGHT SIDE PRIMARY TO MANIFOLD ASSEMBLY) (Continued)

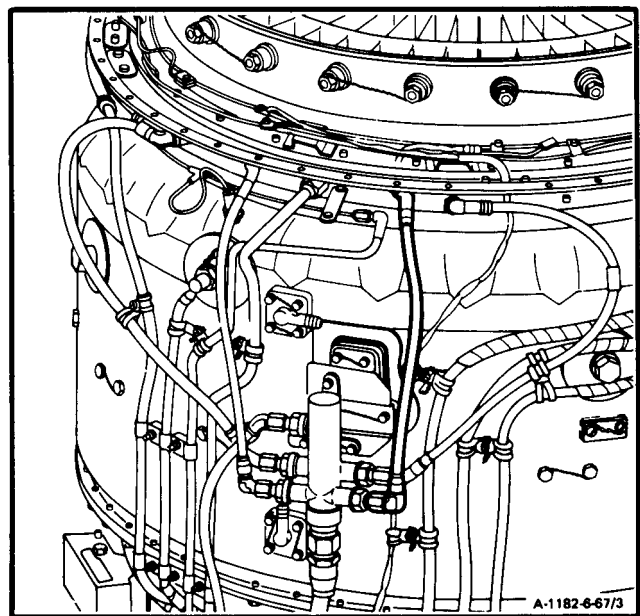
1. Install hose assembly (1) on nipple (2) and elbow (3).



INSPECT

FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-68 REMOVE HOSE ASSEMBLY (FLOW DIVIDER LEFT SIDE SECONDARY TO MANIFOLD ASSEMBLY)

6-68

INITIAL SETUP**General Safety Precautions:****Applicable Configurations:**

All

Tools:

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

Materials:

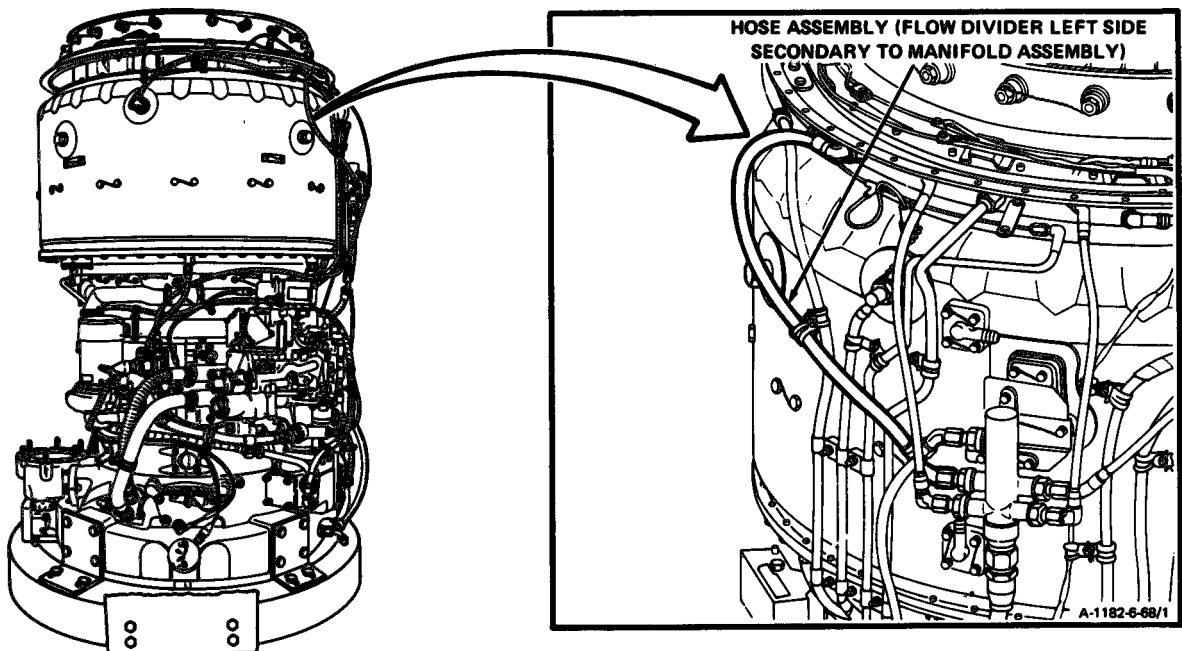
Wiping Rag (E58)

Personnel Required:

68B10 Aircraft Powerplant Repairer

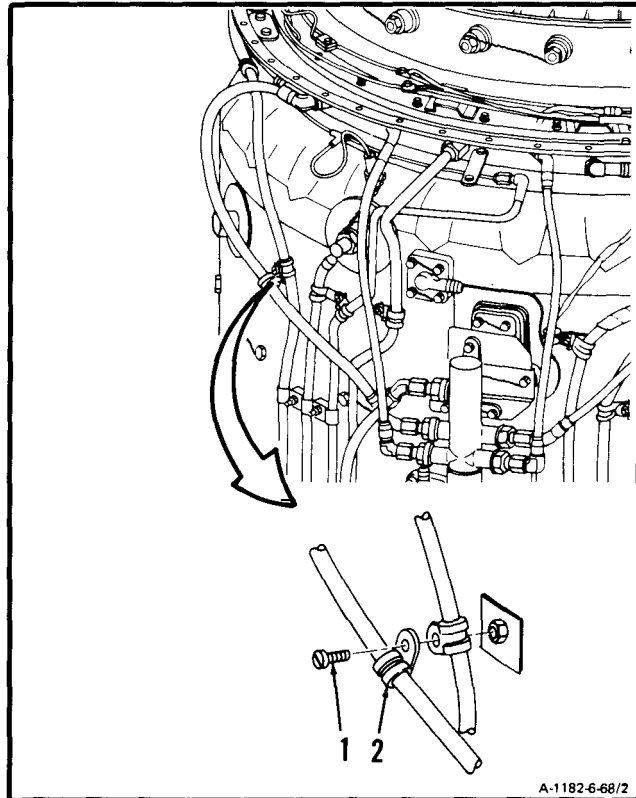
WARNING

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

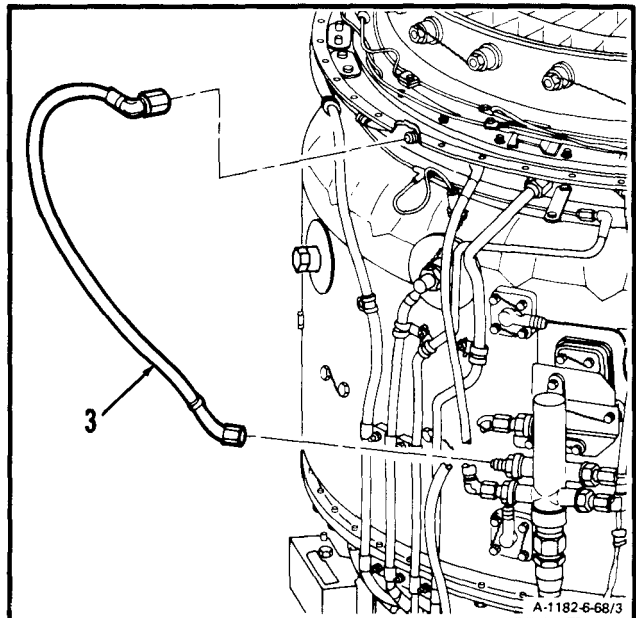
**GO TO NEXT PAGE**

6-68 REMOVE HOSE ASSEMBLY (FLOW DIVIDER LEFT SIDE SECONDARY TO MANIFOLD ASSEMBLY (Continued)

1. Remove lockwire, screw (1) and **clamp (2)**.



2. Disconnect and **remove hose assembly (3)**.



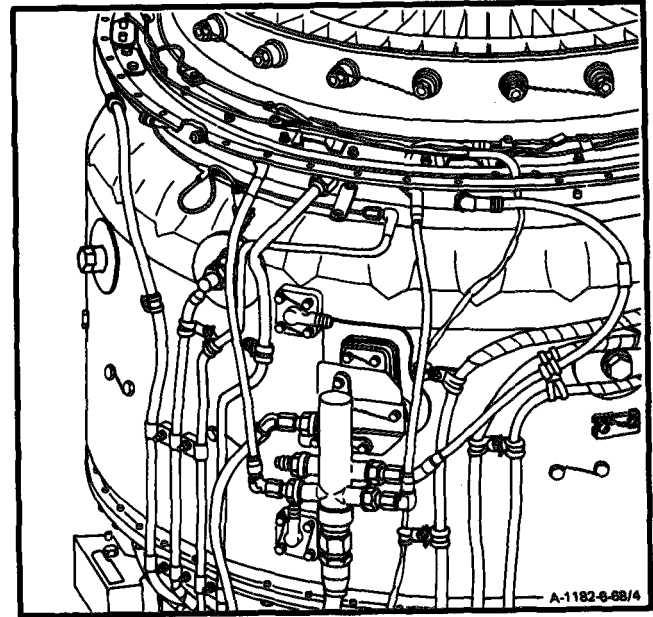
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**6-68 REMOVE HOSE ASSEMBLY (FLOW DIVIDER LEFT SIDE SECONDARY TO
MANIFOLD ASSEMBLY (Continued)**

6-68

FOLLOW-ON MAINTENANCE:

None

**END OF TASK**

6-233

6-69 INSTALL HOSE ASSEMBLY (FLOW DIVIDER LEFT SIDE SECONDARY TO MANIFOLD ASSEMBLY)

6-69

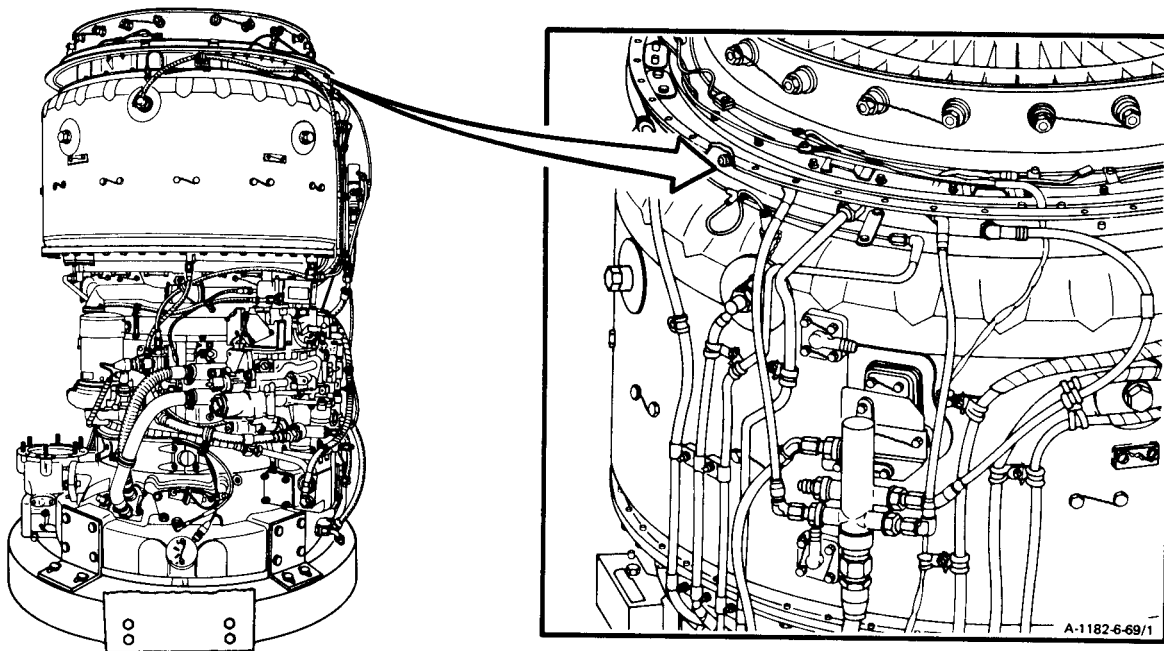
INITIAL SETUP

Applicable Configurations:
All

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

Materials:
Lockwire (E29)

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

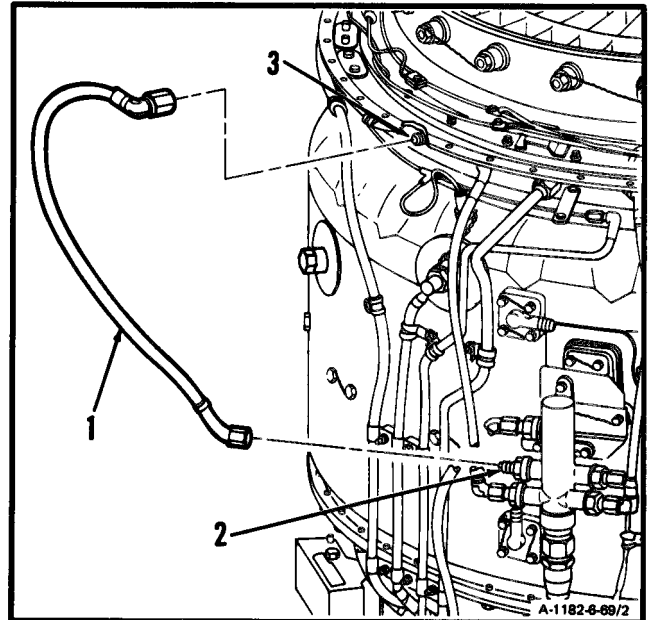


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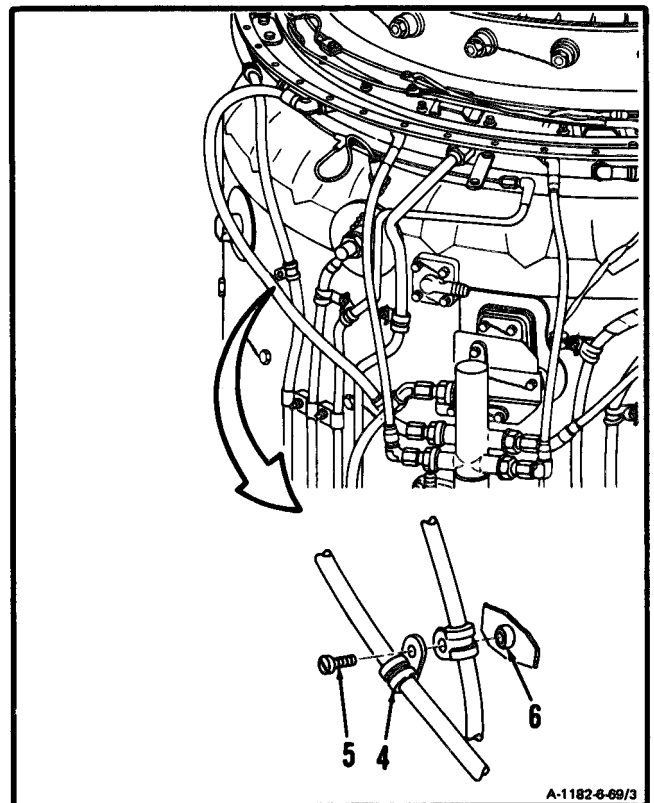
6-69 INSTALL HOSE ASSEMBLY (FLOW DIVIDER LEFT SIDE SECONDARY TO MANIFOLD ASSEMBLY) (Continued)

6-69

1. Install hose assembly (1) on reducer (2) and elbow (3).



2. Install clamp (4), and screw (5) on nutplate (6). Lockwire screw (5). Use lockwire (E29).



INSPECT

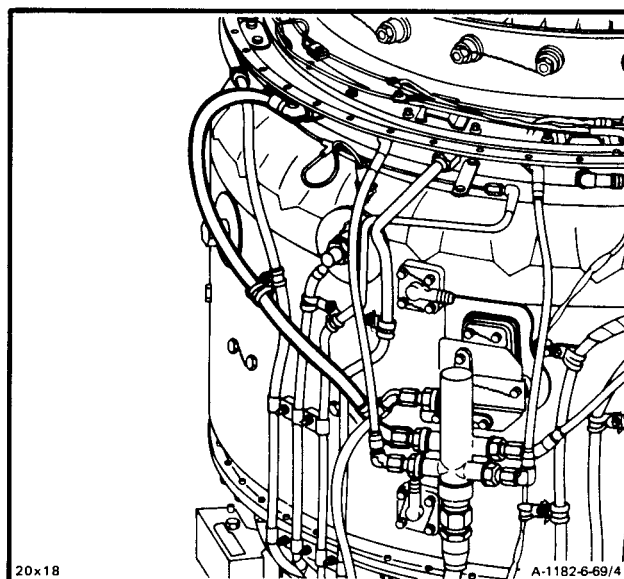
GO TO NEXT PAGE

**6-69 INSTALL HOSE ASSEMBLY(FLOW DIVIDER LEFT SIDE SECONDARY TO
MANIFOLD ASSEMBLY) (Continued)**

6-69

FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-70 REMOVE HOSE ASSEMBLY (FLOW DIVIDER RIGHT SIDE SECONDARY TO MANIFOLD ASSEMBLY)

6-70

INITIAL SETUP

*General Safety Instructions:***Applicable Configurations:**

All

Tools:

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

Materials:

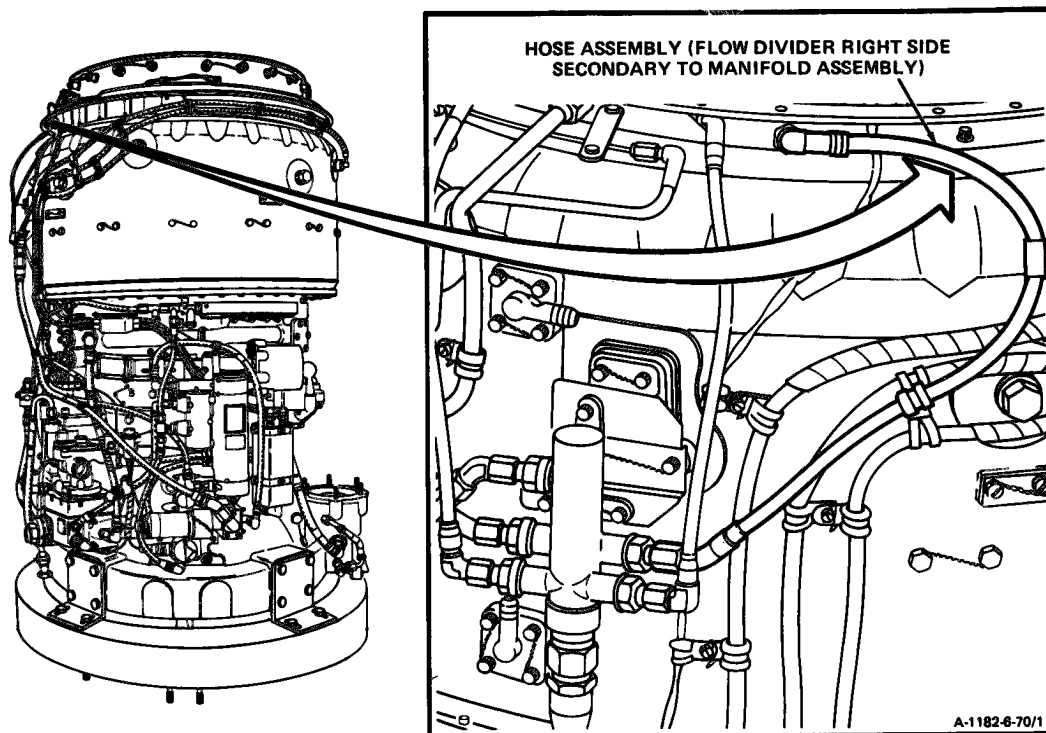
Wiping Rag (E58)

Personnel Required:

68B10 Aircraft Powerplant Repairer

WARNING

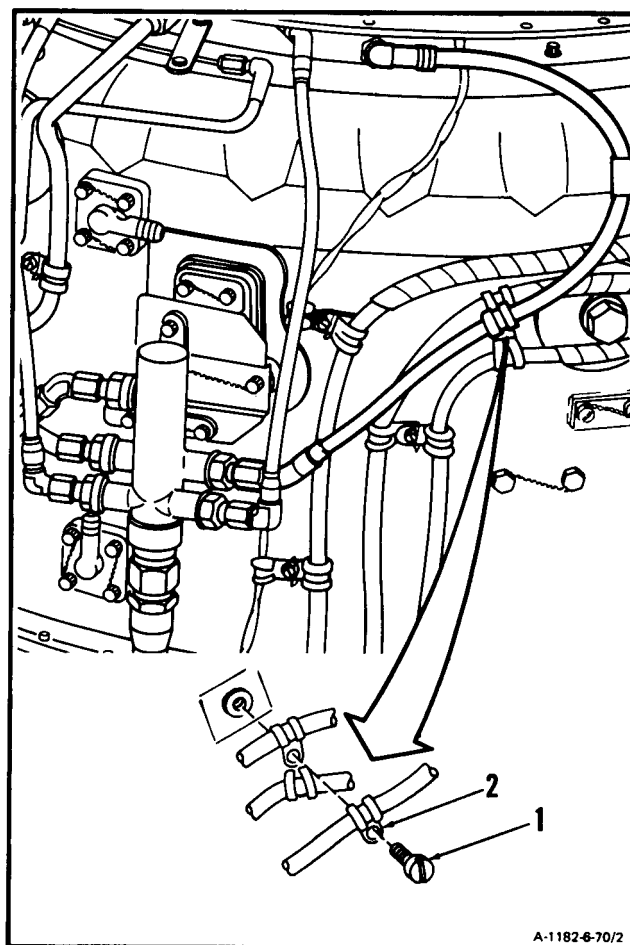
Turbine fuels are very flammable. They may cause drying and irritation of skin or eyes. Handle only in wall-ventilated areas away from heat and open flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin, and do not take internally. Wash contacted areas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

**GO TO NEXT PAGE**

**6-70 REMOVE HOSE ASSEMBLY (FLOW DIVIDER RIGHT SIDE SECONDARY
TO MANIFOLD ASSEMBLY) (Continued)**

6-70

1. Remove lockwire, screw (1), and clamp (2).

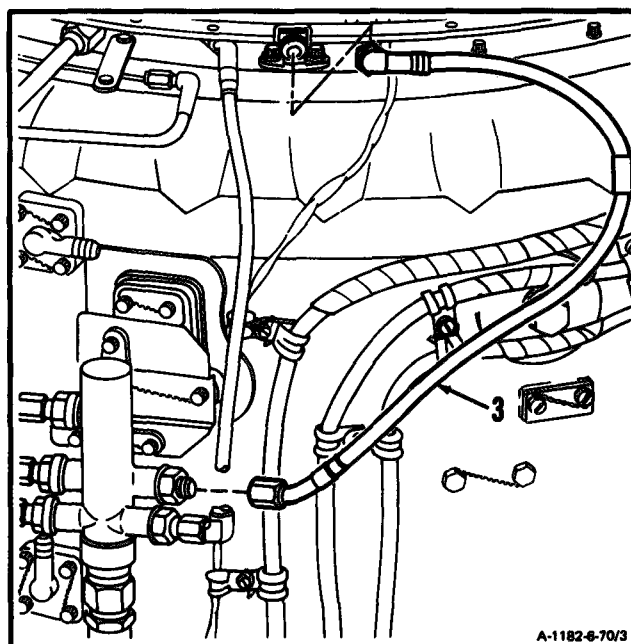


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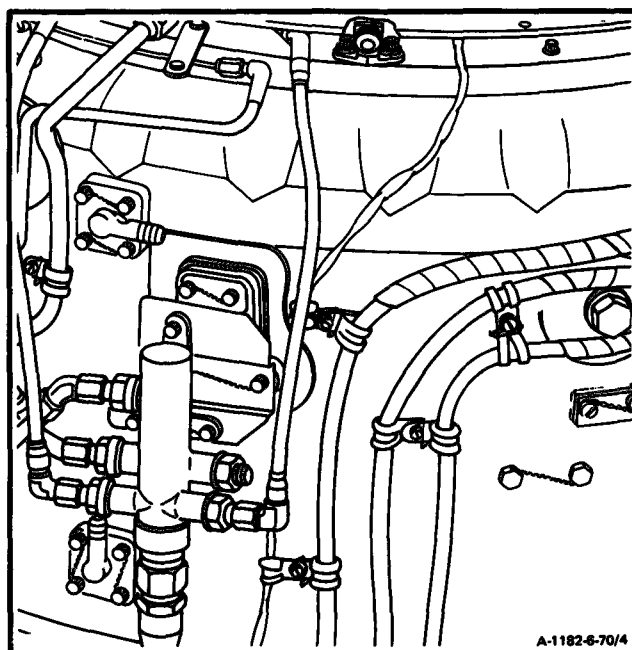
**6-70 REMOVE HOSE ASSEMBLY (FLOW DIVIDER RIGHT SIDE SECONDARY
TO MANIFOLD ASSEMBLY) (Continued)**

6-70

2. Disconnect and **remove hose assembly (3)**.

**FOLLOW-ON MAINTENANCE:**

None

**END OF TASK**

**6-71 INSTALL HOSE ASSEMBLY (FLOW DIVIDER RIGHT SIDE SECONDARY
TO MANIFOLD ASSEMBLY)**

6-71

INITIAL SETUP

Applicable Configurations:

All

Tools:

Powerplant Mechanic's Tool Kit,

NSN 5180-00-323-4944

Technical Inspection Tool Kit,

NSN 5180-00-323-5114

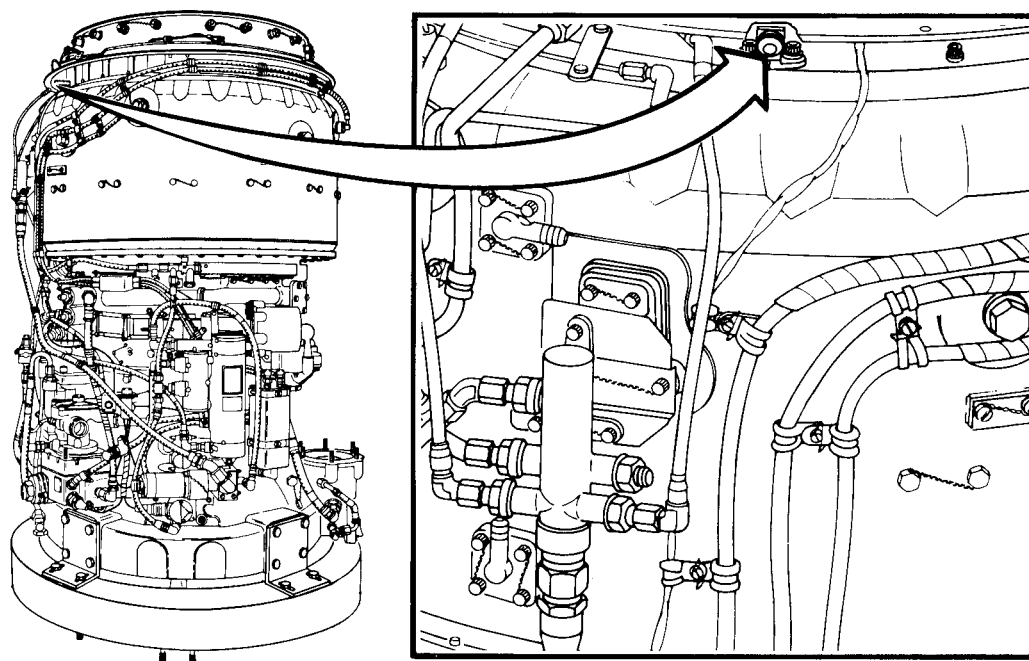
Materials:

Lockwire (E29)

Personnel Required:

68B10 Aircraft Powerplant Repairer

68B30 Aircraft Powerplant Inspector



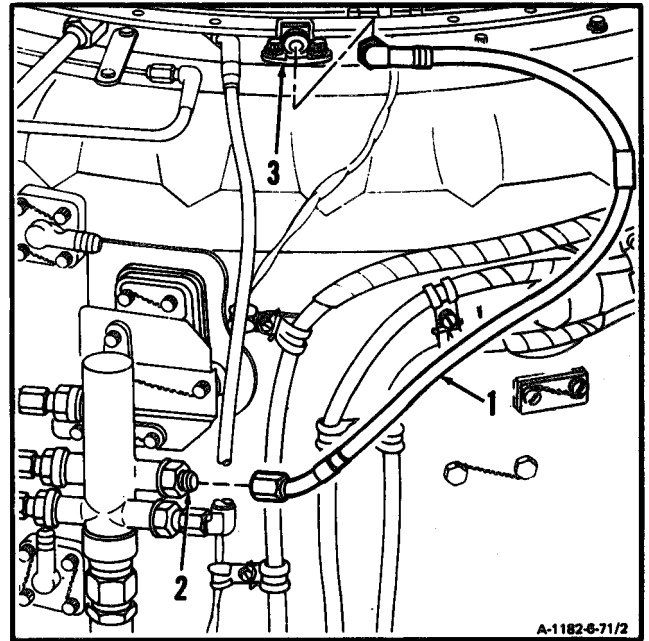
A-1182-6-71/1

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**6-71 INSTALL HOSE ASSEMBLY (FLOW DIVIDER RIGHT SIDE SECONDARY
TO MANIFOLD ASSEMBLY) (Continued)**

6-71

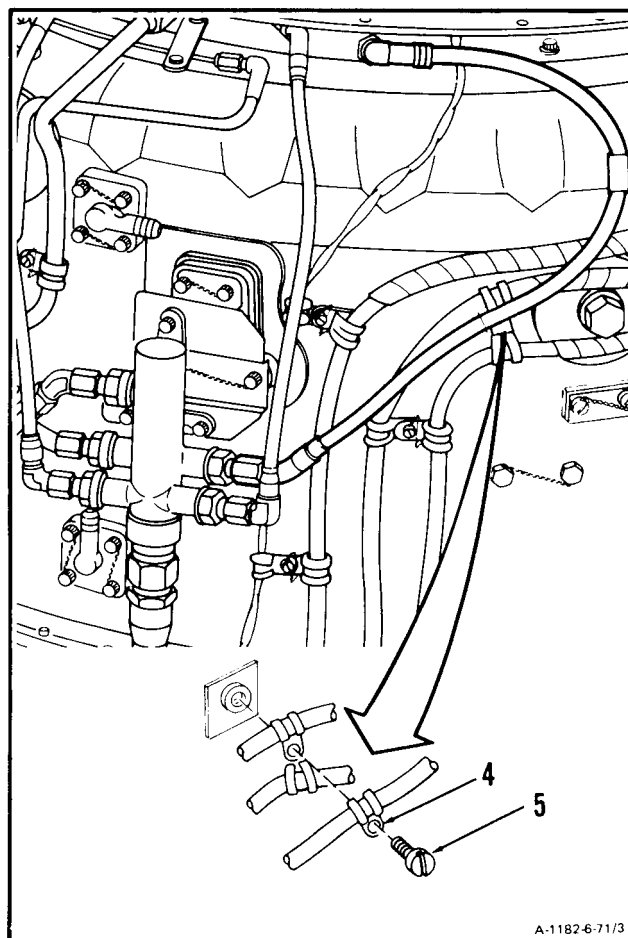
1. Install hose assembly (1) on reducer (2) and elbow (3).



GO TO NEXT PAGE

6-71 INSTALL HOSE ASSEMBLY (FLOW DIVIDER RIGHT SIDE SECONDARY TO MANIFOLD ASSEMBLY) (Continued)

2. Install **clamp (4)** and screw (5). Lockwire screw (5). Use lockwire (E29).



INSPECT

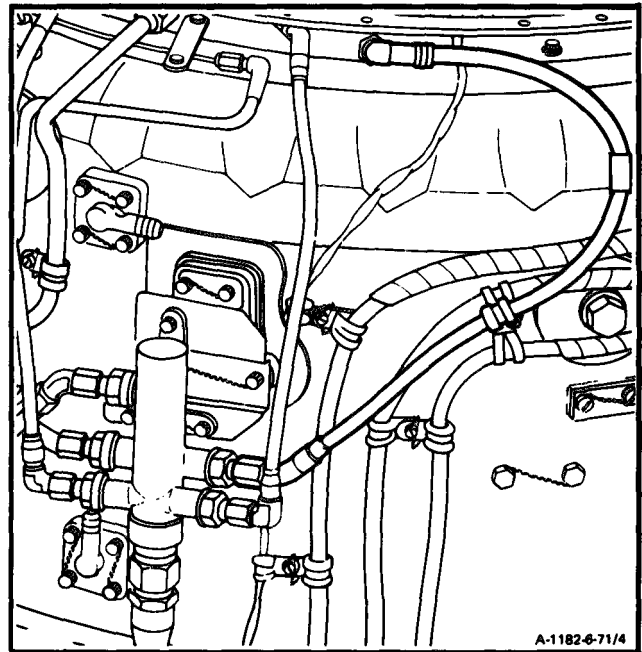
GO TO NEXT PAGE

**6-71 INSTALL HOSE ASSEMBLY (FLOW DIVIDER RIGHT SIDE SECONDARY
TO MANIFOLD ASSEMBLY) (Continued)**

6-71

FOLLOW-ON MAINTENANCE:

None

**END OF TASK**

INITIAL SETUP

General Safety Instructions:

Applicable Configurations:

All

Tools:

- Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
- Open-End Wrench, 1-Inch
- Container, 1 Quart

Materials:

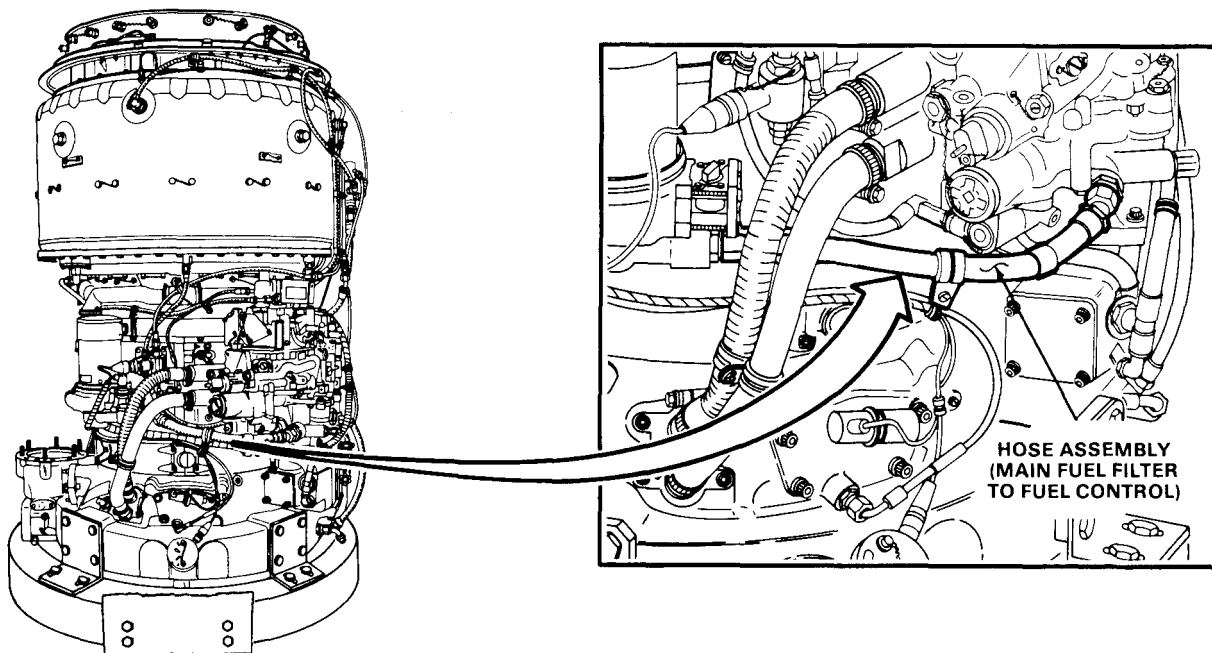
- Wiping Rag (E58)

Personnel Required:

- 68B10 Aircraft Powerplant Repairer

WARNING

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



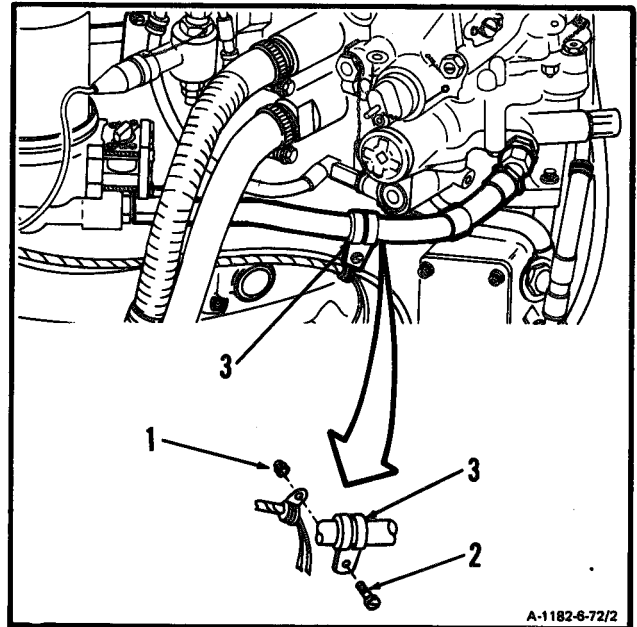
A-1182-6-72/1

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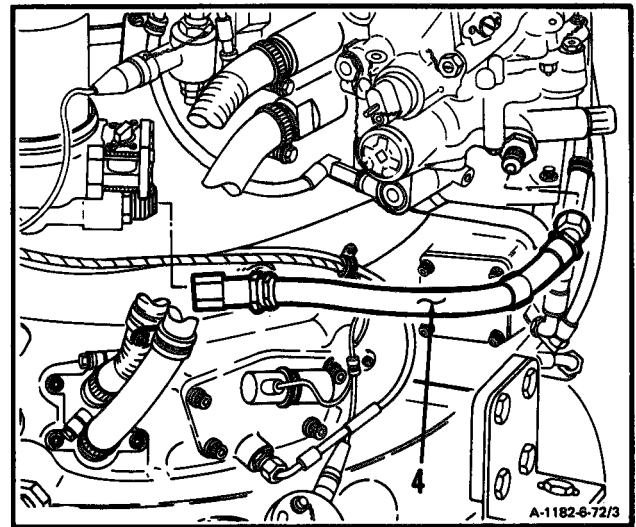
6-72 REMOVE HOSE ASSEMBLY (MAIN FUEL FILTER TO FUEL CONTROL) (Continued)

6-72

1. **Remove** nut (1), screw (2), and clamp (3).



2. Disconnect and **remove hose assembly** (4). Use 1-inch open-end wrench.

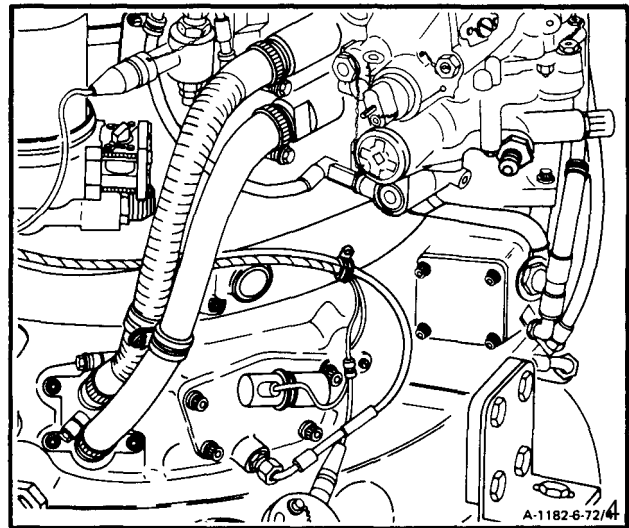


GO TO NEXT PAGE

6-72 REMOVE HOSE ASSEMBLY (MAIN FUEL FILTER TO FUEL CONTROL) (Continued) 6-72

FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-73 INSTALL HOSE ASSEMBLY (MAIN FUEL FILTER TO FUEL CONTROL)

6-73

INITIAL SETUP**Applicable Configurations:**

All

Tools:

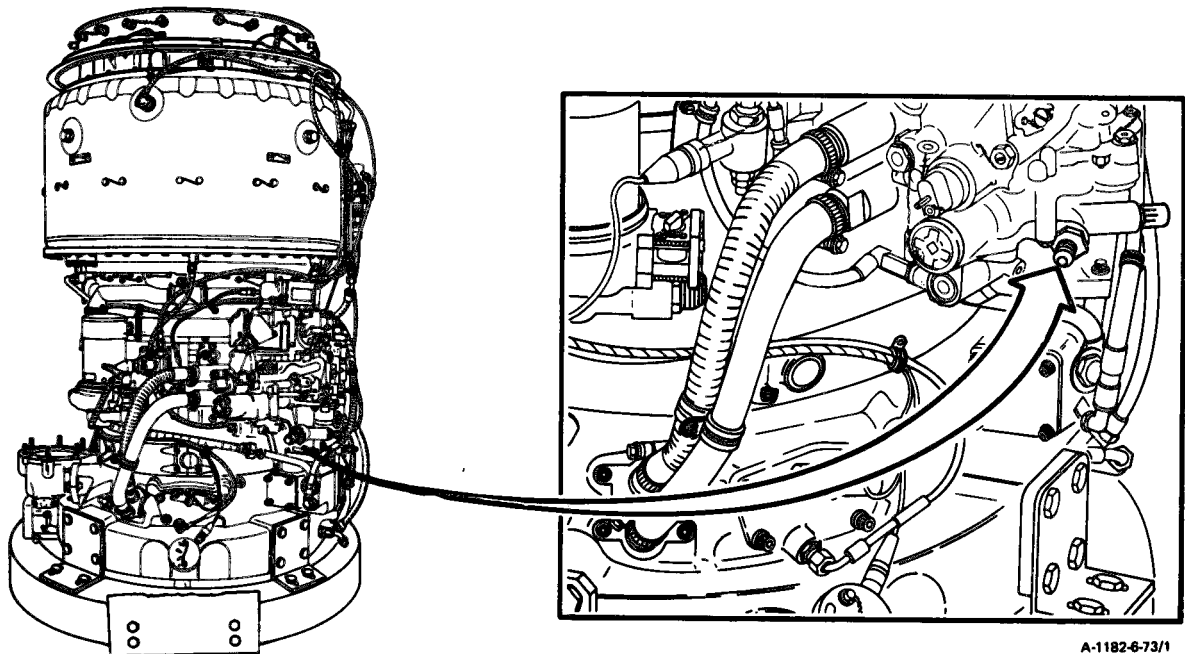
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114
Open-End Wrench, 1-Inch

Materials:

None

Personnel Required:

68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

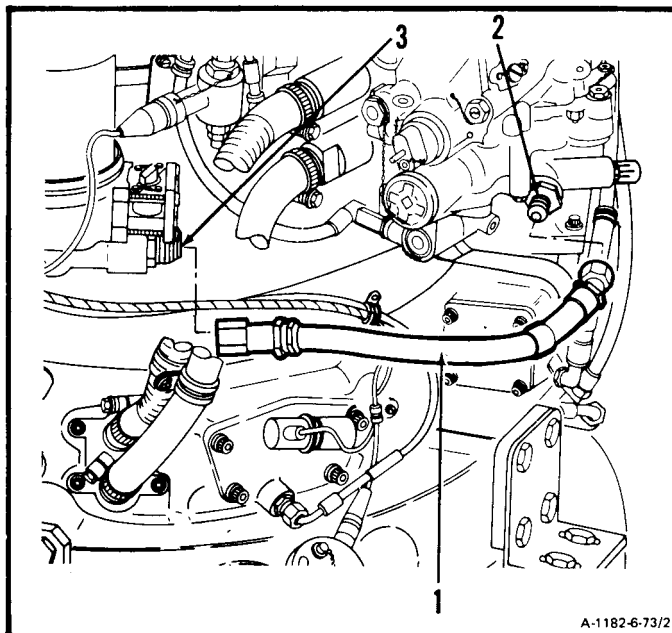


A-1182-6-73/1

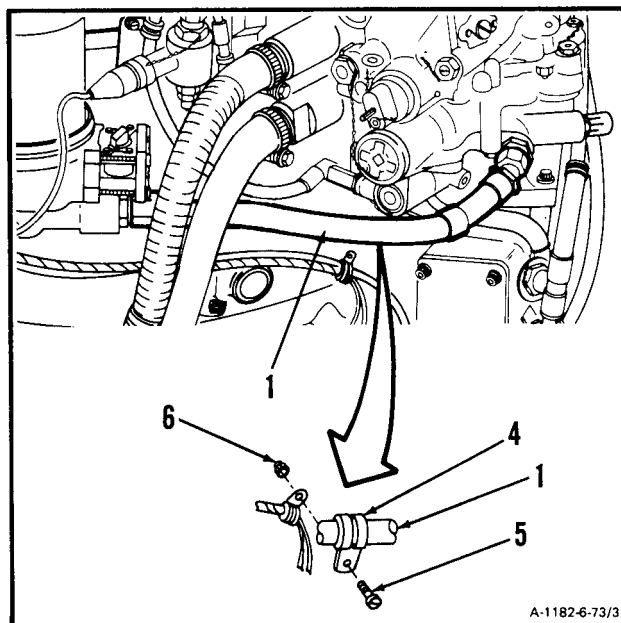
GO TO NEXT PAGE

6-73 INSTALL HOSE ASSEMBLY (MAIN FUEL FILTER TO FUEL CONTROL) (Continued)

1. Install hose assembly (1) on unions (2 and 3).
Use 1-inch open-end wrench.



2. Install clamp (4) on hose assembly (1), and install screw (5) and nut (6).



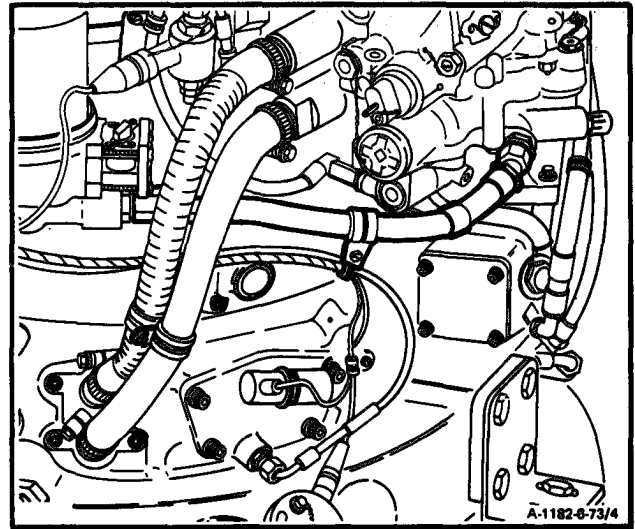
INSPECT

GO TO NEXT PAGE

6-73 INSTALL HOSE ASSEMBLY (MAIN FUEL FILTER TO FUEL CONTROL) (Continued) 6-73

FOLLOW-ON MAINTENANCE:

None

**END OF TASK**

6-74 REMOVE HOSE ASSEMBLY (FUEL CONTROL TO STARTING FUEL SOLENOID VALVE)

INITIAL SETUP

General Safety Instructions:

Applicable Configurations:

All

Tools:

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

Materials:

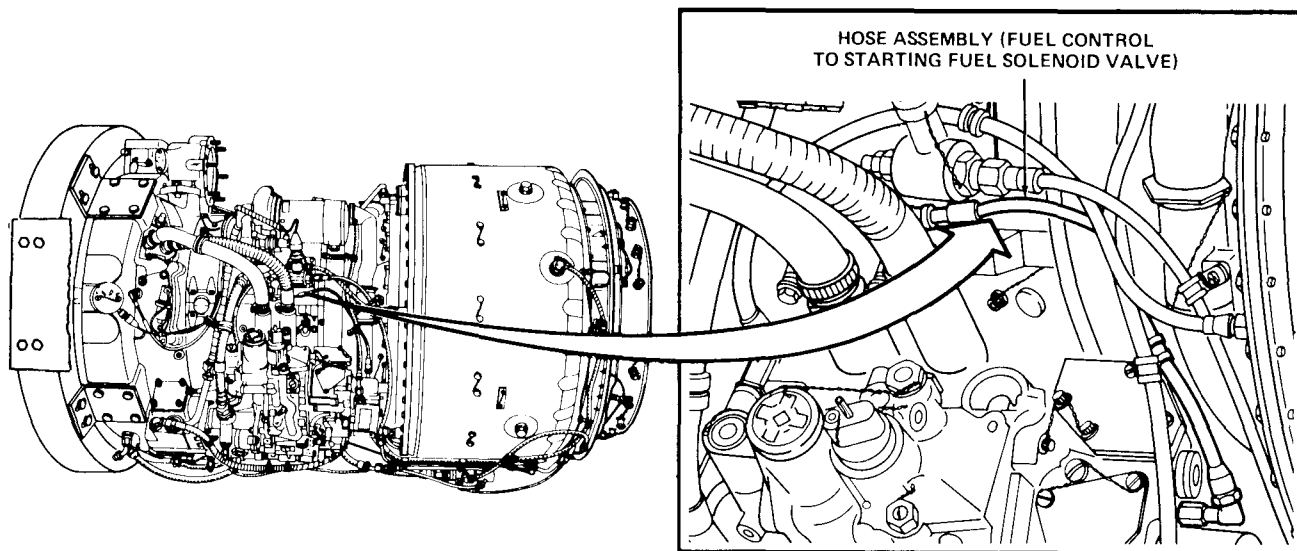
Wiping Rag (E58)

Personnel Required:

68B10 Aircraft Powerplant Repairer

WARNING

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



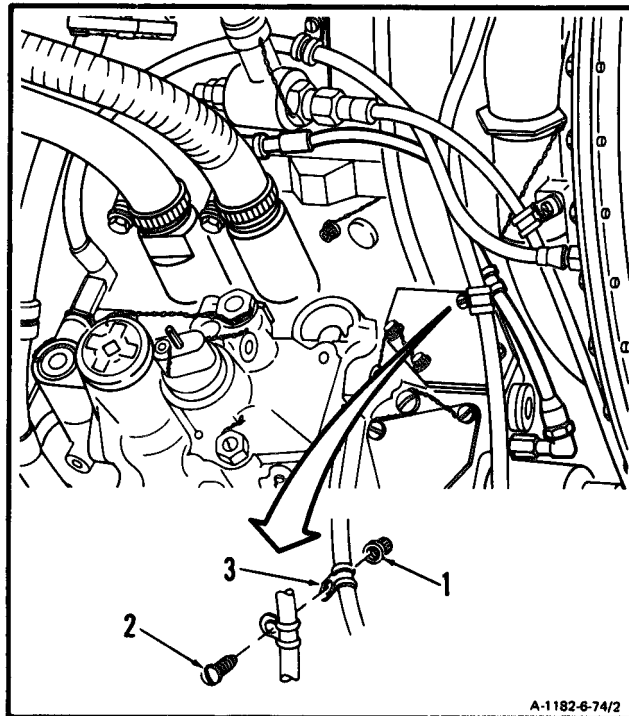
A-1182-6-74/1

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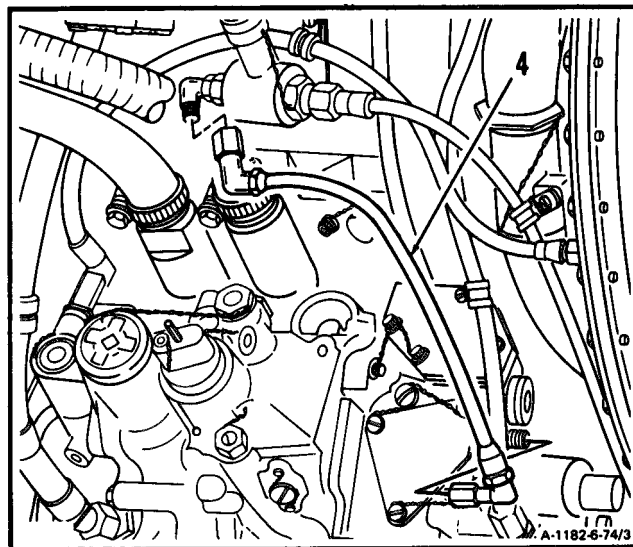
6-74 REMOVE HOSE ASSEMBLY(FUEL CONTROL TO STARTING FUEL SOLENOID VALVE) (Continued)

6-74

1. Remove nut (1), screw (2), and clamp (3).



2. Disconnect and remove hose assembly (4).

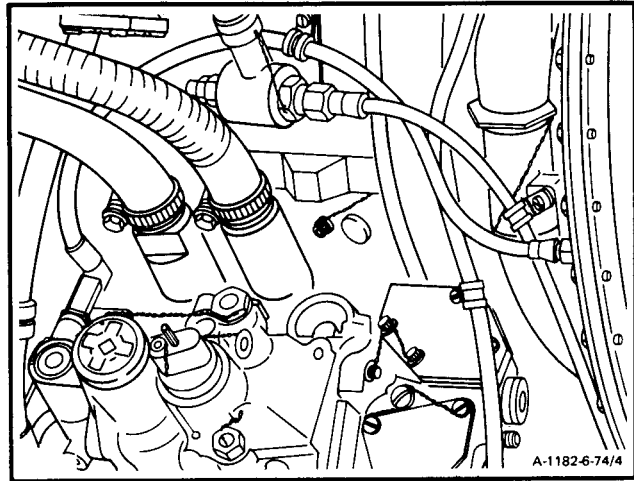
**GO TO NEXT PAGE**

6-74 REMOVE HOSE ASSEMBLY (FUEL CONTROL TO STARTING FUEL SOLENOID VALVE) (Continued)

6-74

FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-75 INSTALL HOSE ASSEMBLY (FUEL CONTROL TO STARTING FUEL SOLENOID VALVE)

6-75

INITIAL SETUP**Applicable Configurations:**

All

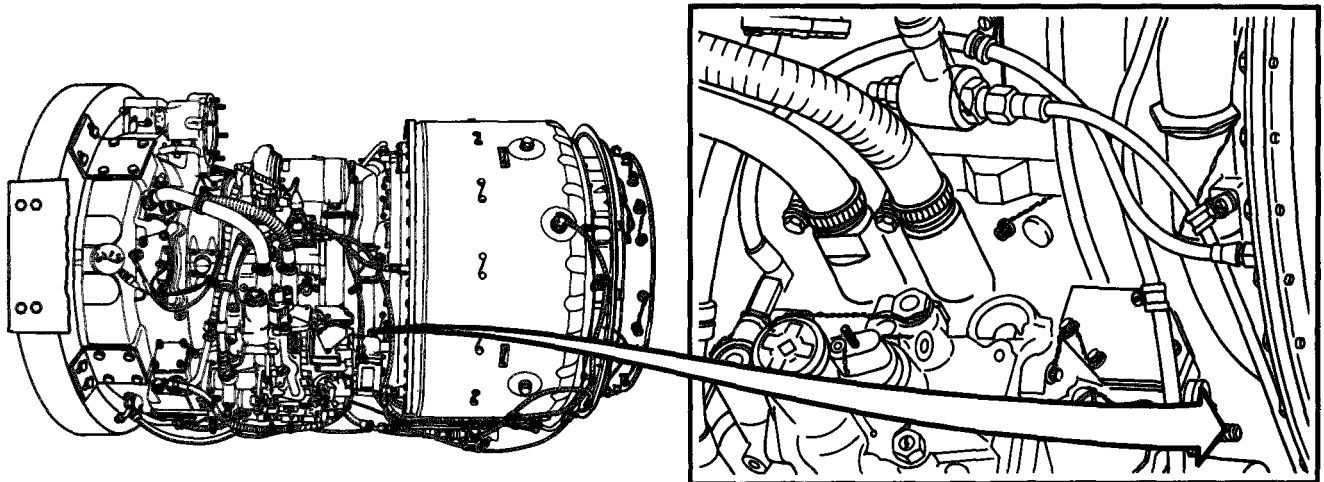
Tools:Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944Technical Inspection Tool Kit,
NSN 5180-00-323-5114**Materials:**

None

Personnel Required:

68B10 Aircraft Powerplant Repairer

68B30 Aircraft Powerplant Inspector

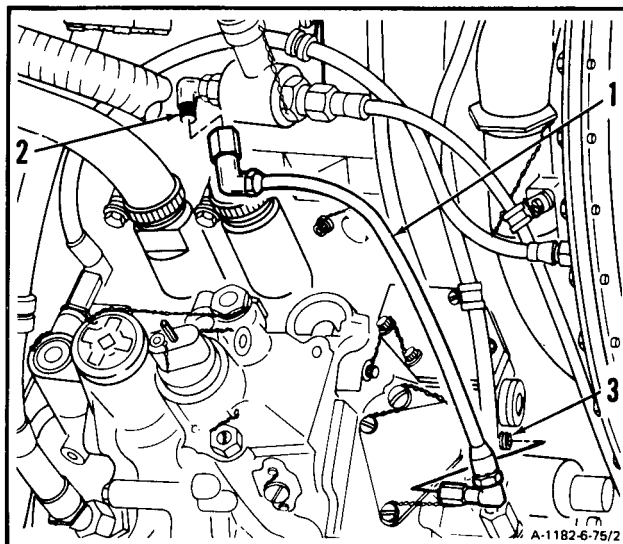


A-1182-6-75/1

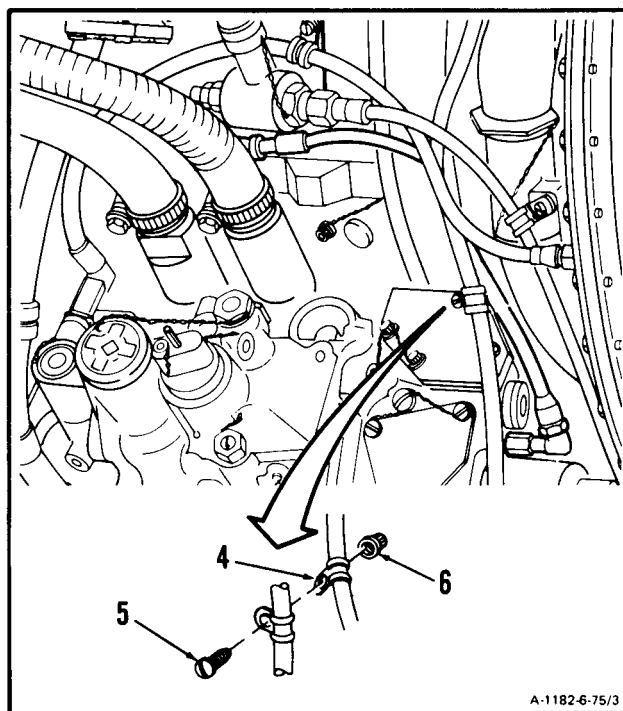
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6-75 INSTALL HOSE ASSEMBLY (FUEL CONTROL TO STARTING FUEL SOLENOID VALVE) (Continued)

1. Install hose assembly (1) on elbow (2) and nipple (3).



2. Install clamp (4), screw (5), and nut (6).



INSPECT

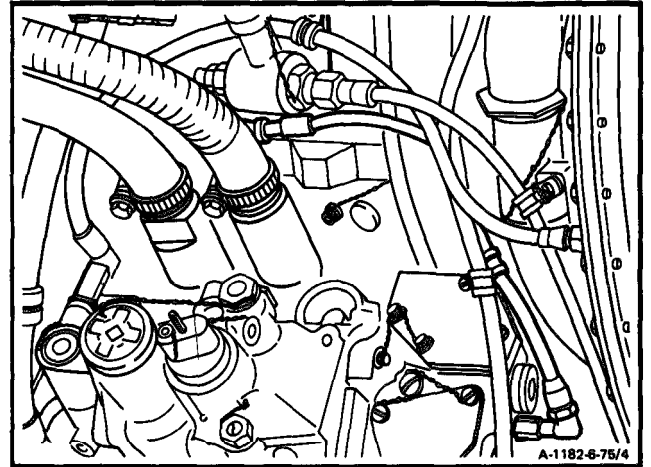
GO TO NEXT PAGE

**6-75 INSTALL HOSE ASSEMBLY (FUEL CONTROL TO STARTING FUEL
SOLENOID VALVE) (Continued)**

6-75

FOLLOW-ON MAINTENANCE:

None

**END OF TASK**

6-76 REMOVE HOSE ASSEMBLY (Starting FUEL SOLENOID VALVE TO TUBE ASSEMBLY)

6-76

INITIAL SETUP

General Safety Instructions:

Applicable Configurations:

All

Tools:

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

Materials:

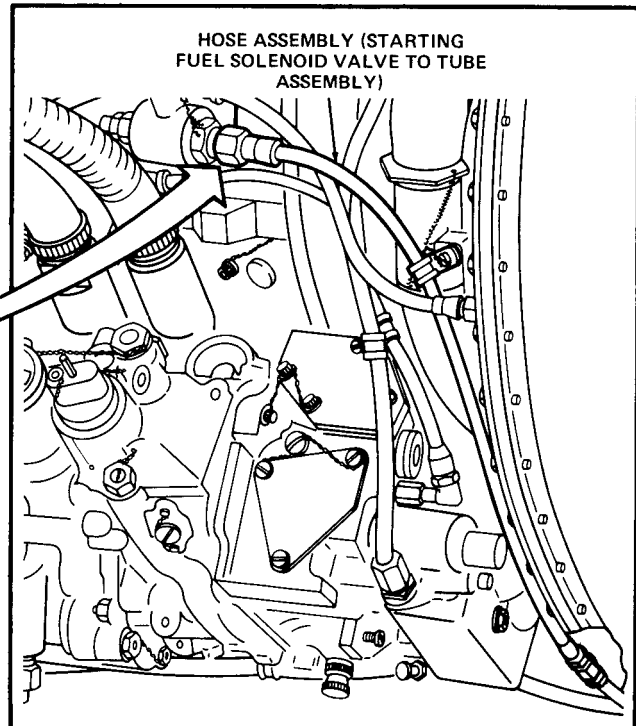
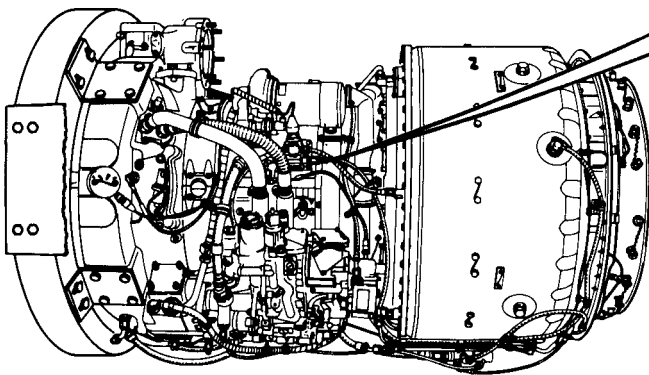
Wiping Rag (E58)

Personnel Required:

68B10 Aircraft Powerplant Repairer

WARNING

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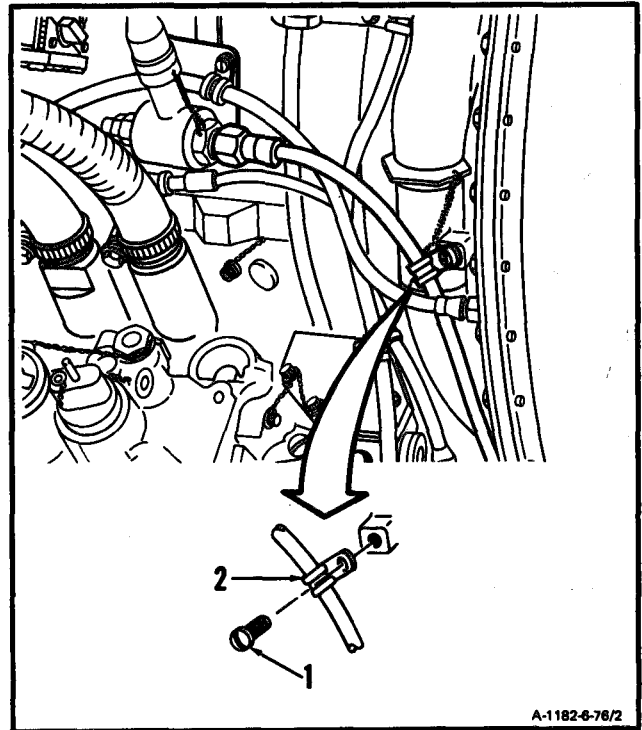
A-1182-6-76/1

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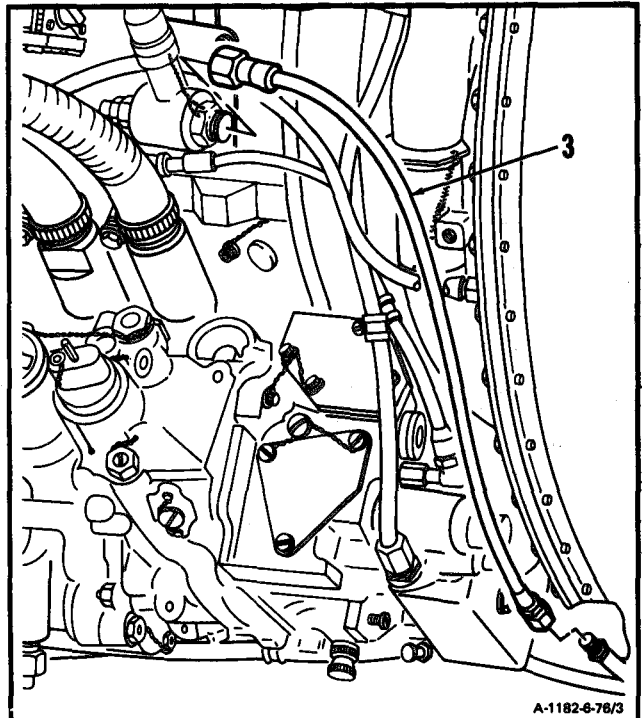
6-76 REMOVE HOSE ASSEMBLY (Starting FUEL SOLENOID VALVE TO TUBE ASSEMBLY) (Continued)

6-76

1. Remove lockwire, screw (1) and clamp (2).



2. Disconnect and remove hose assembly (3).

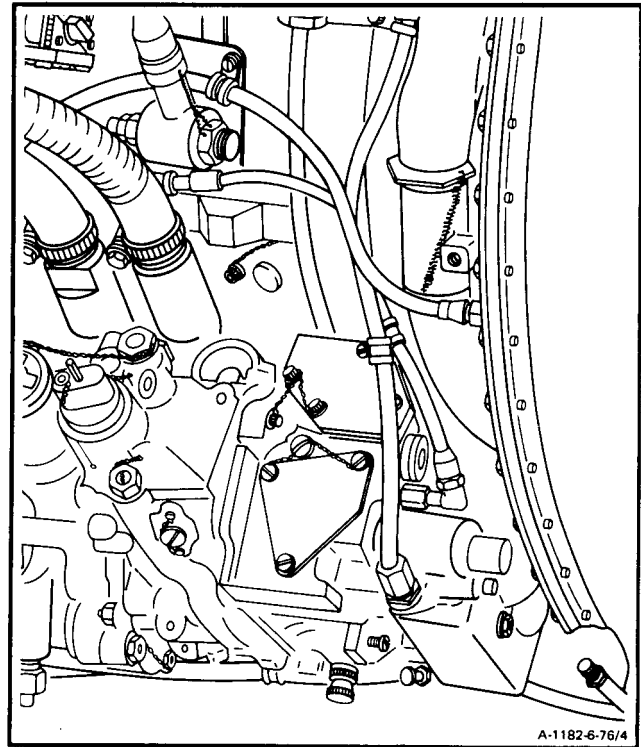
**GO TO NEXT PAGE**

6-76 REMOVE HOSE ASSEMBLY (Starting FUEL SOLENOID VALVE TO TUBE ASSEMBLY) (Continued)

6-76

FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-77 INSTALL HOSE ASSEMBLY (Starting FUEL SOLENOID VALVE TO TUBE ASSEMBLY)

6-77

INITIAL SETUP**Applicable Configurations:**

All

Tools:

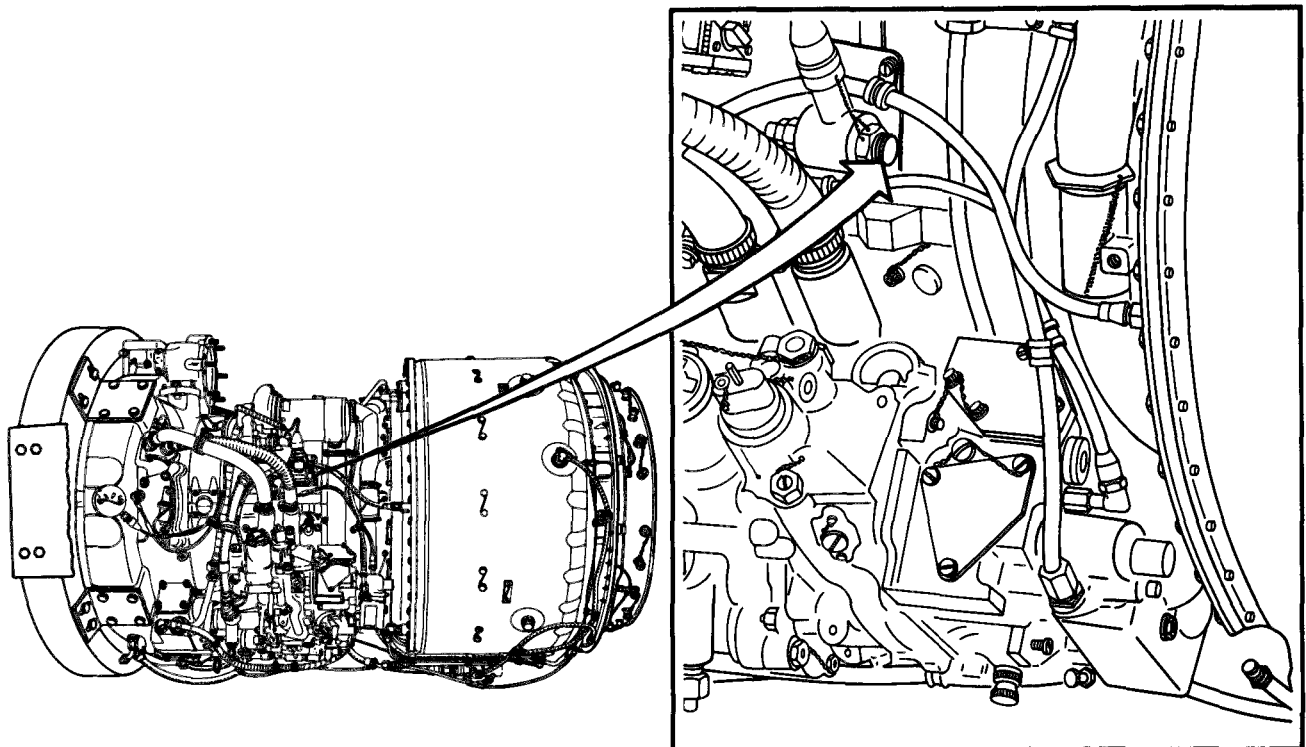
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:

Lockwire (E29)

Personnel Required:

68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

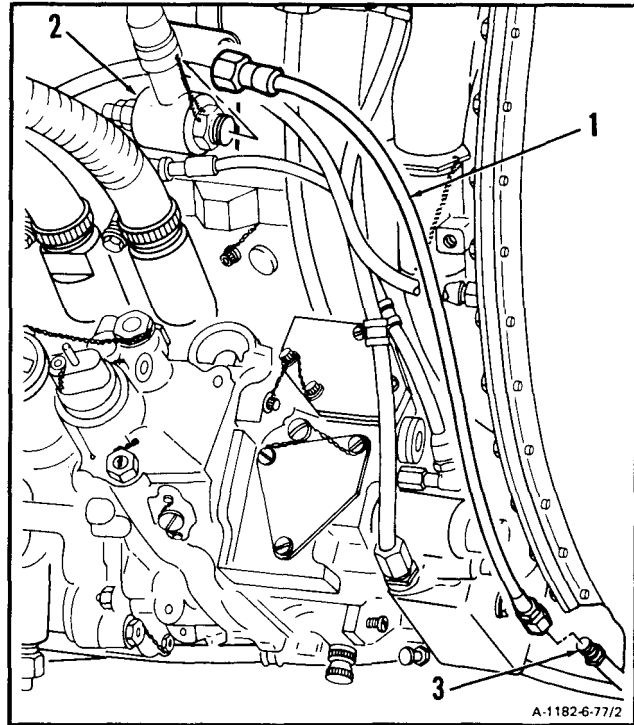


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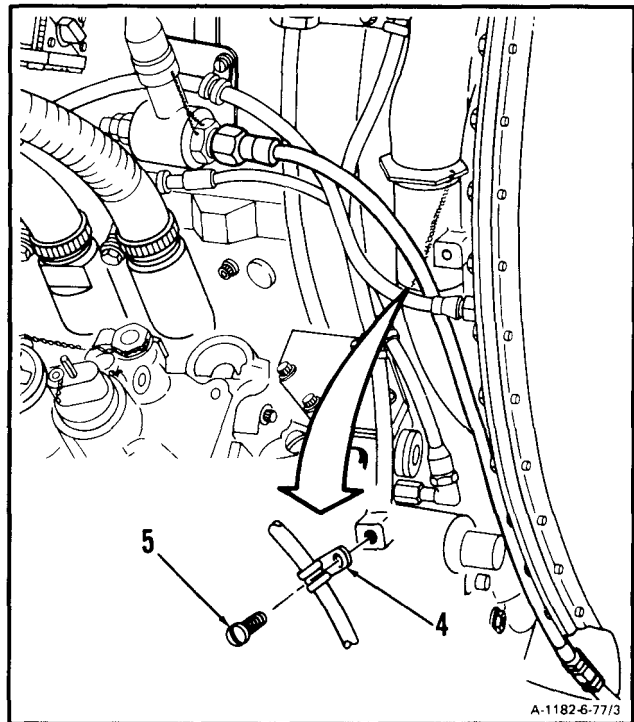
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6-77 INSTALL HOSE ASSEMBLY (Starting FUEL SOLENOID VALVE TO TUBE ASSEMBLY) (Continued)

1. Install hose assembly (1) on starting fuel solenoid valve (2) and tube assembly (3).



2. Install clamp (4) and screw (5). Lockwire screw (5). Use lockwire (E29).



INSPECT

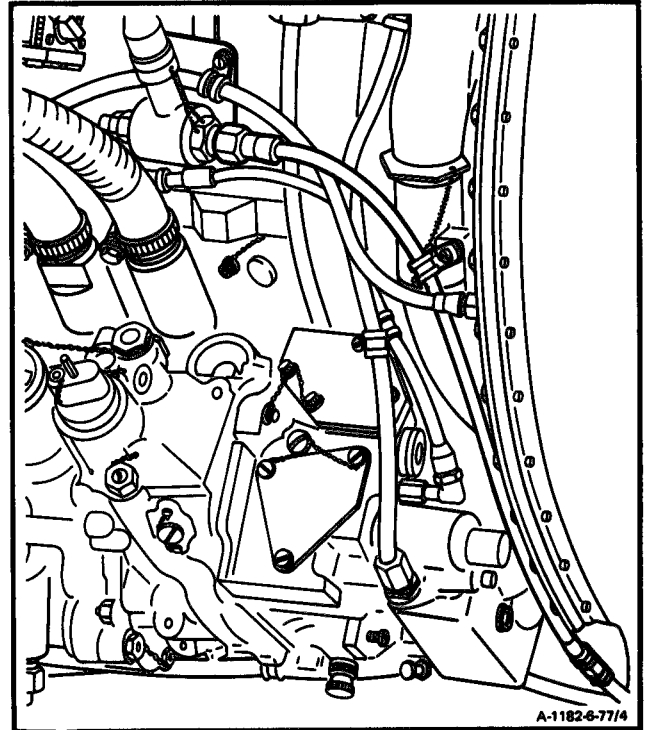
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6-77 INSTALL HOSE ASSEMBLY (STARTING FUEL SOLENOID VALVE TO TUBE ASSEMBLY) (Continued)

6-77

FOLLOW-ON MAINTENANCE:

None

**END OF TASK**

INITIAL SETUP

*General Safety Instructions:***Applicable Configurations:**

All

WARNING**Tools:**

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

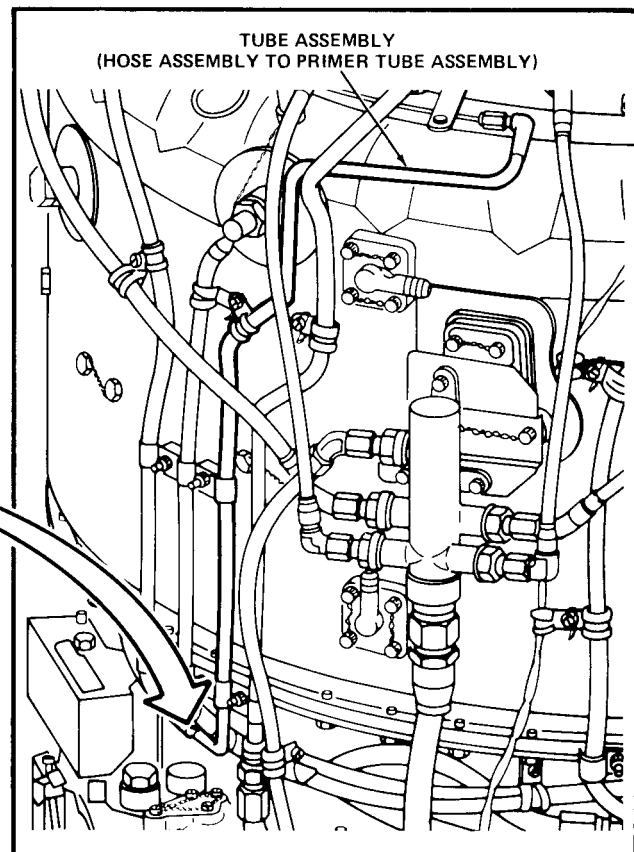
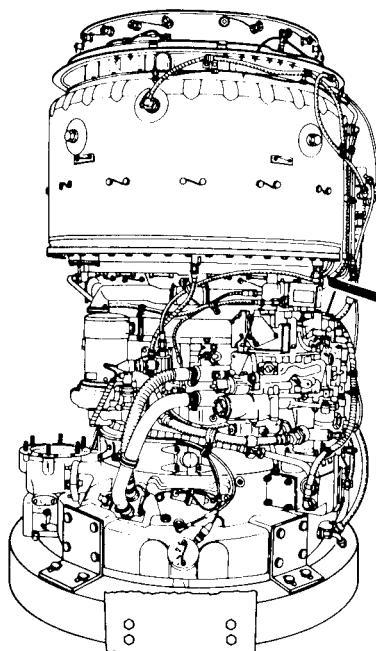
Materials:

Wiping Rag (E58)

Personnel Required:

68B10 Aircraft Powerplant Repairer

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



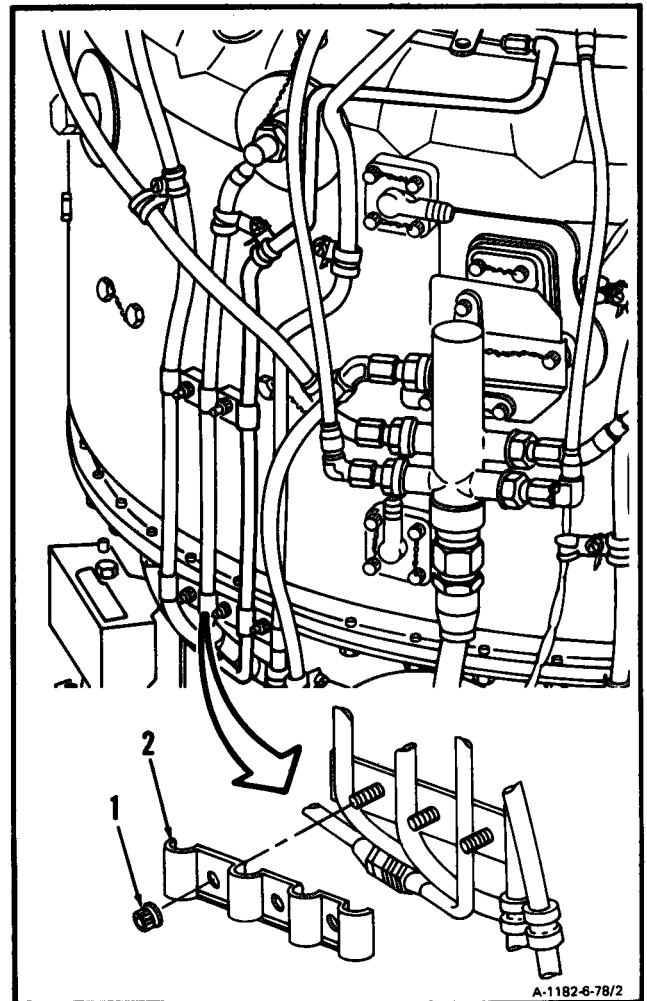
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6-78 REMOVE TUBE ASSEMBLY (HOSE ASSEMBLY TO PRIMER TUBE ASSEMBLY) (Continued)

6-78

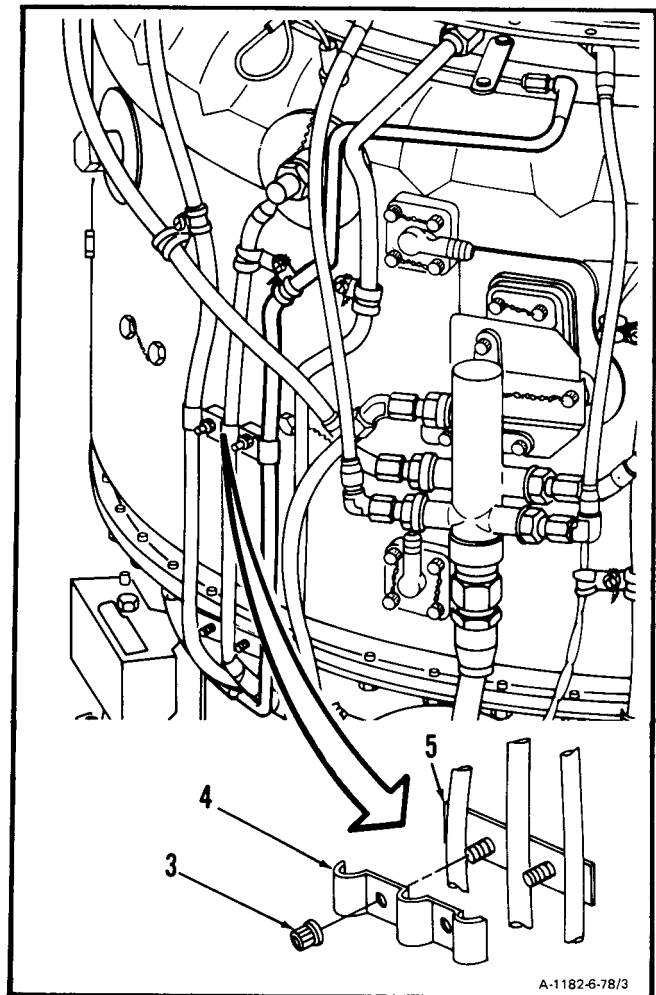
1. Remove three nuts (1) and **clamp** (2).

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6-78 REMOVE TUBE ASSEMBLY (HOSE ASSEMBLY TO PRIMER TUBE ASSEMBLY) (Continued)

6-78

2. Remove two nuts (3) and clamps (4 and 5).

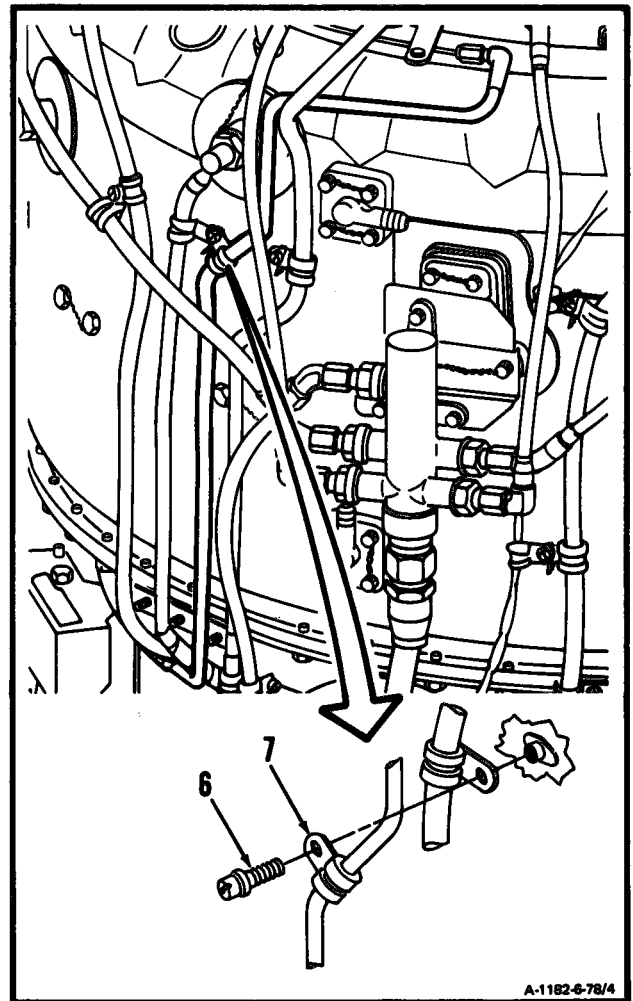


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6-78 REMOVE TUBE ASSEMBLY (HOSE ASSEMBLY TO PRIMER TUBE ASSEMBLY) (Continued)

6-78

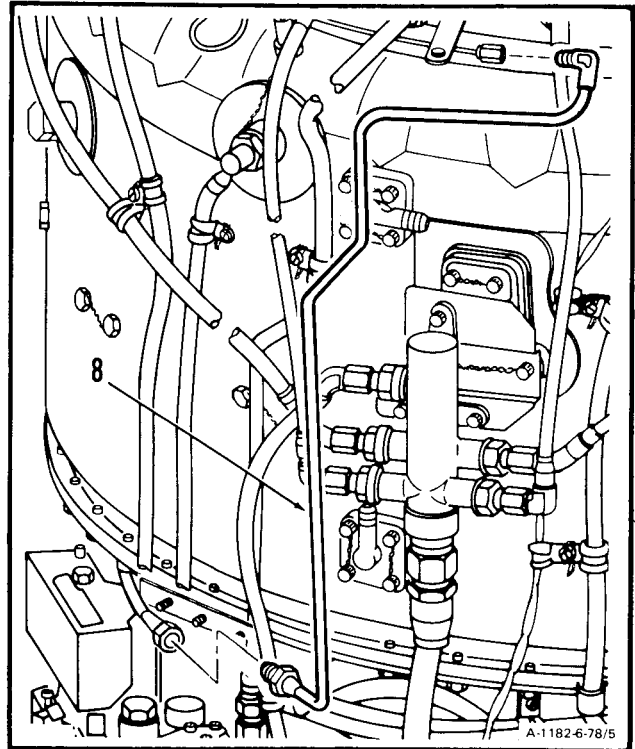
3. Remove lockwire, screw (6) and clamp (7).



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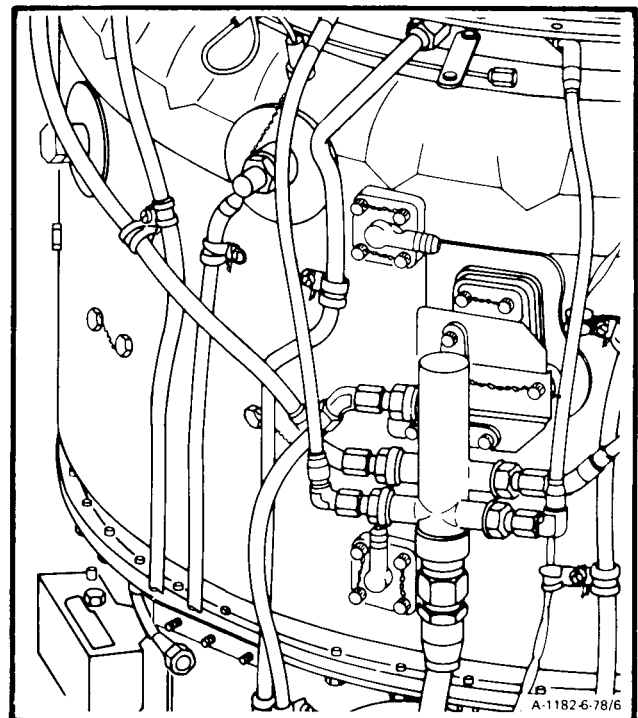
6-78 REMOVE TUBE ASSEMBLY (HOSE ASSEMBLY TO PRIMER TUBE ASSEMBLY) (Continued)

4. Disconnect and remove tube assembly (8).



FOLLOW-ON MAINTENANCE:

None



END OF TASK

6-79 INSTALL TUBE ASSEMBLY (HOSE ASSEMBLY TO PRIMER TUBE ASSEMBLY)

6-79

INITIAL SETUP**Applicable Configurations:**

All

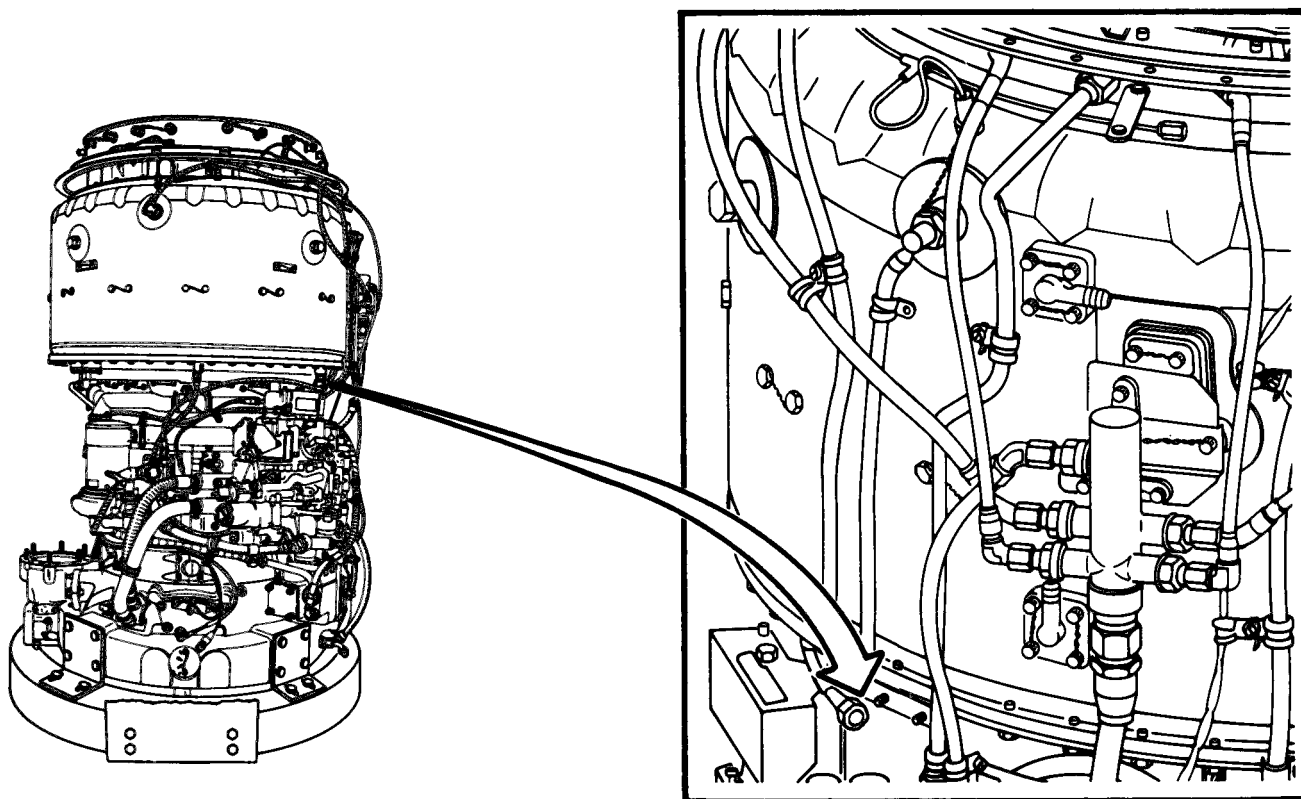
Tools:Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944Technical Inspection Tool Kit,
NSN 5180-00-323-5114**Materials:**

Lockwire (E29).

Personnel Required:

68B10 Aircraft Powerplant Repairer

68B30 Aircraft Powerplant Inspector

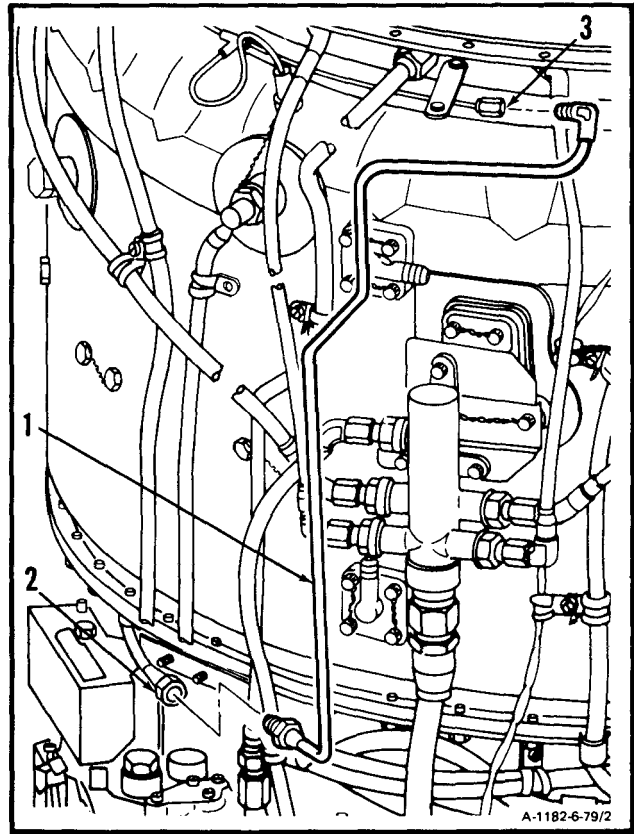


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6-79 INSTALL TUBE ASSEMBLY (HOSE ASSEMBLY TO PRIMER TUBE ASSEMBLY)
(Continued)

1. Install tube assembly (1) on hose assembly (2) and primer tube assembly (3).

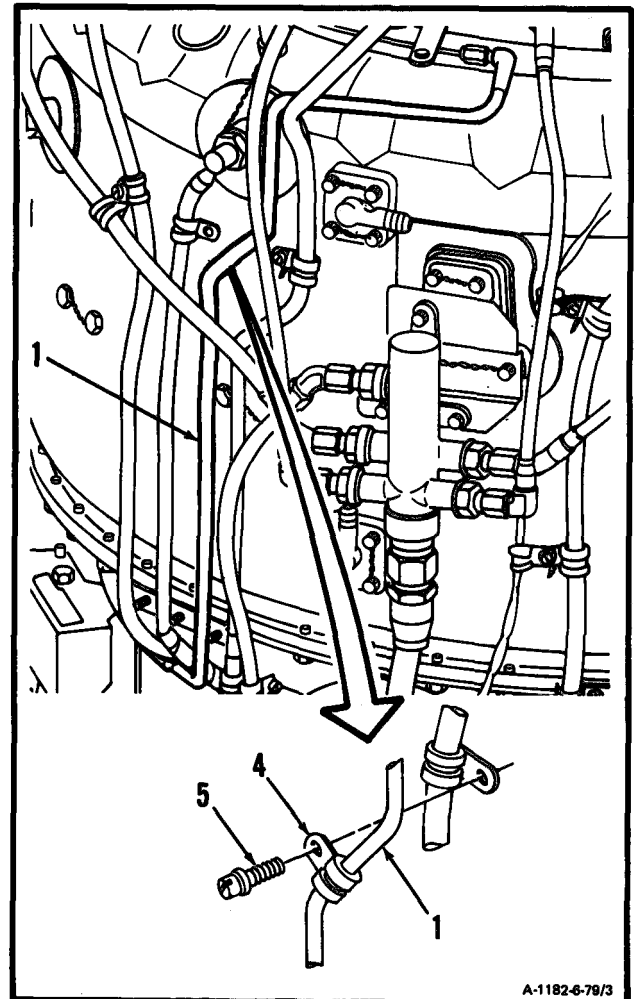


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6-79 INSTALL TUBE ASSEMBLY (HOSE ASSEMBLY TO PRIMER TUBE ASSEMBLY)
(Continued)

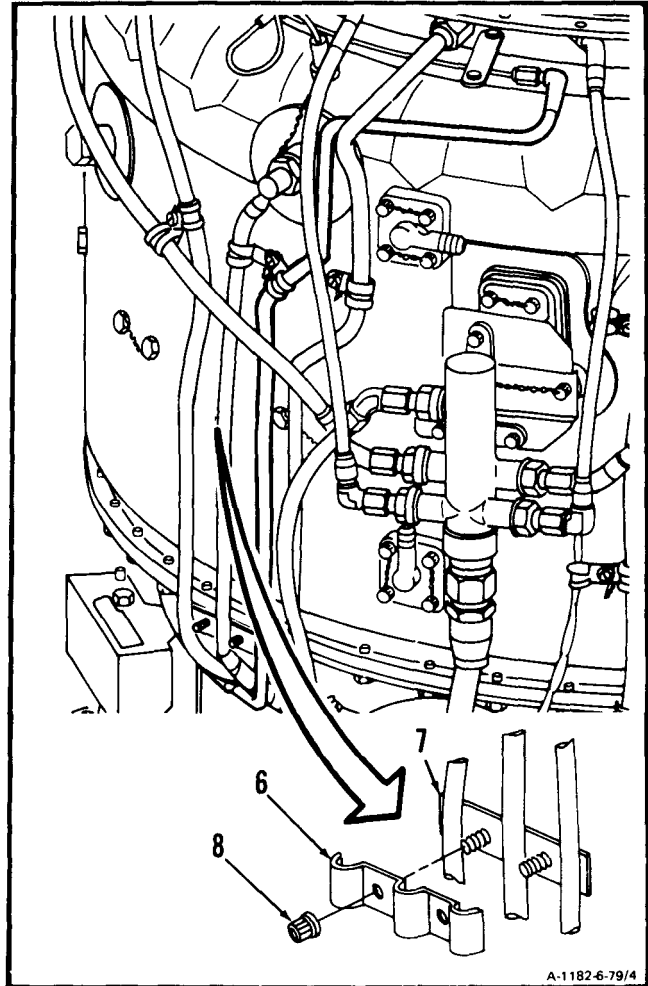
6-79

2. **Install clamp (4)** on tube assembly (1) and install screw (5). Lockwire screw (5). Use lockwire (E29).

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6-79 INSTALL TUBE ASSEMBLY (HOSE ASSEMBLY TO PRIMER TUBE ASSEMBLY)
(Continued)

3. Install two clamps (6 and 7) and two nuts (8).

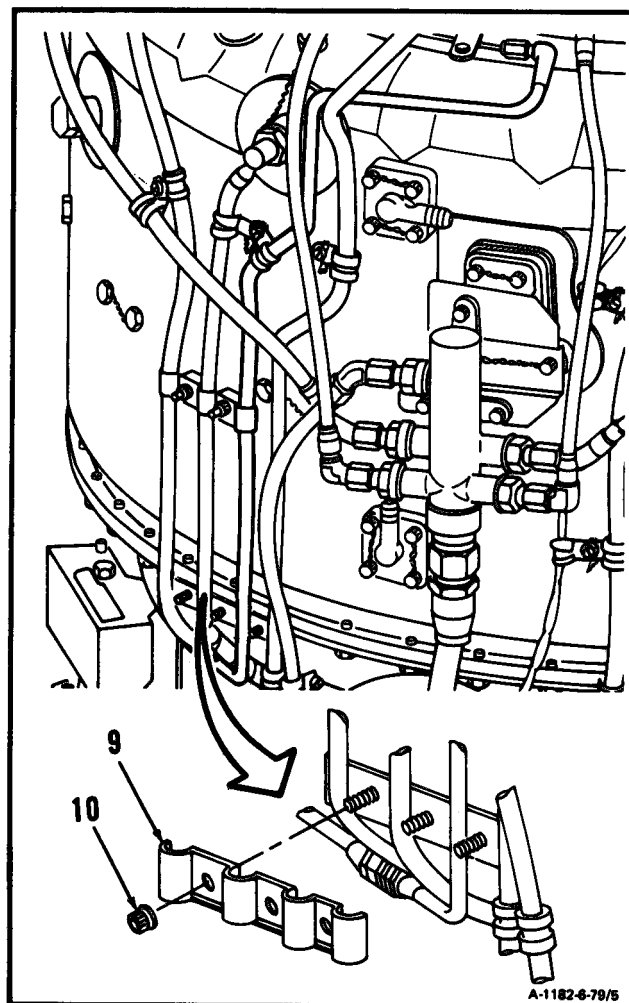


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6-79 INSTALL TUBE ASSEMBLY (HOSE ASSEMBLY TO PRIMER TUBE ASSEMBLY)
(Continued)

6-79

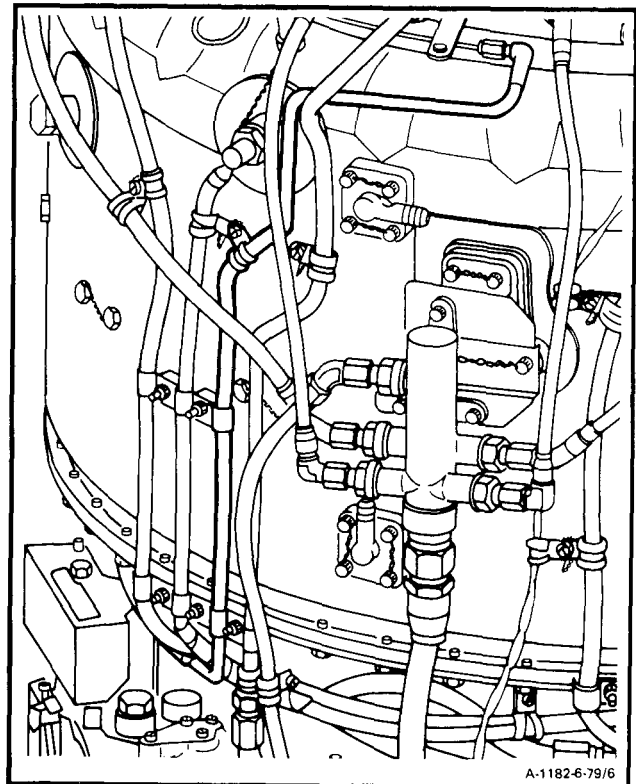
4. Install clamp (9) and three nuts (10).

**INSPECT****GO TO NEXT PAGE**

6-79 INSTALL TUBE ASSEMBLY (HOSE ASSEMBLY TO PRIMER TUBE ASSEMBLY)
(Continued)

FOLLOW-ON MAINTENANCE:

None



END OF TASK

CHAPTER 7

ELECTRICAL AND IGNITION SYSTEMS – MAINTENANCE INSTRUCTIONS

CHAPTER OVERVIEW

This chapter contains maintenance procedures for the electrical and ignition systems. It is divided into the following sections and tasks.

<u>SECTION</u>	<u>TASK No.</u>	<u>TITLE</u>	<u>PAGE</u>
I		IGNITION COIL AND CABLE ASSEMBLY– MAINTENANCE PROCEDURES	
	7-1	Remove Ignition Coil and Cable Assembly	7-3
	7-2	Clean Ignition Coil and Cable Assembly	7-30
	7-3	Inspect Ignition Coil and Cable Assembly	7-32
	7-4	Repair Ignition Coil and Cable Assembly	7-35
	7-5	Install Ignition Coil and Cable Assembly	7-41
II		SPARK IGNITERS–MAINTENANCE PROCEDURES	
	7-6	Remove Spark Igniters	7-69
	7-7	Clean Spark Igniters	7-73
	7-8	Inspect Spark Igniters	7-74
	7-9	Repair Spark Igniters	7-75
	7-10	Install Spark Igniters	7-78
III		IGNITION EXCITER–MAINTENANCE PROCEDURES	
	7-11	Remove Ignition Exciter	7-85
	7-12	Clean Ignition Exciter	7-89
	7-13	Inspect Ignition Exciter	7-91
	7-14	Repair Ignition Exciter	7-92
	7-15	Install Ignition Exciter	7-94
IV		MAIN ELECTRICAL CABLE ASSEMBLY– MAINTENANCE PROCEDURES	
	7-16	Remove Main Electrical Cable Assembly (Nine Connector)	7-99
	7-16.1	Remove Main Electrical Cable Assembly (Six Connector)	7-110.1
	7-17	Clean Main Electrical Cable Assembly (Nine Connector)	7-111
	7-17.1	Clean Main Electrical Cable Assembly (Six Connector)	7-112.1

<u>SECTION</u>	<u>TASK NO.</u>	<u>TITLE</u>	<u>PAGE</u>
IV		MAIN ELECTRICAL CABLE ASSEMBLY- MAINTENANCE PROCEDURES (Continued)	
	7-18	Inspect Main Electrical Cable Assembly (Nine Connector)	7-113
	7-18.1	Inspect Main Electrical Cable Assembly (Six Connector)	7-114.1
	7-19	Repair Main Electrical Cable Assembly (Nine Connector)	7-115
	7-19.1	Repair Main Electrical Cable Assembly (Six Connector)	7-116
	7-20	Test Main Electrical Cable Assembly (Nine Connector)	7-116.1
	7-20.1	Test Main Electrical Cable Assembly (Six Connector)	7-126
	7-21	Install Main Electrical Cable Assembly (Nine Connector)	7-126.10
	7-21.1	Install Main Electrical Cable Assembly (Six Connector)	7-138

Section I. IGNITION COIL AND CABLE ASSEMBLY - MAINTENANCE PROCEDURES

7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY

7-1

INITIAL SETUP

General Safety Instructions:

Applicable Configurations:
All

Tools:

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

Materials:

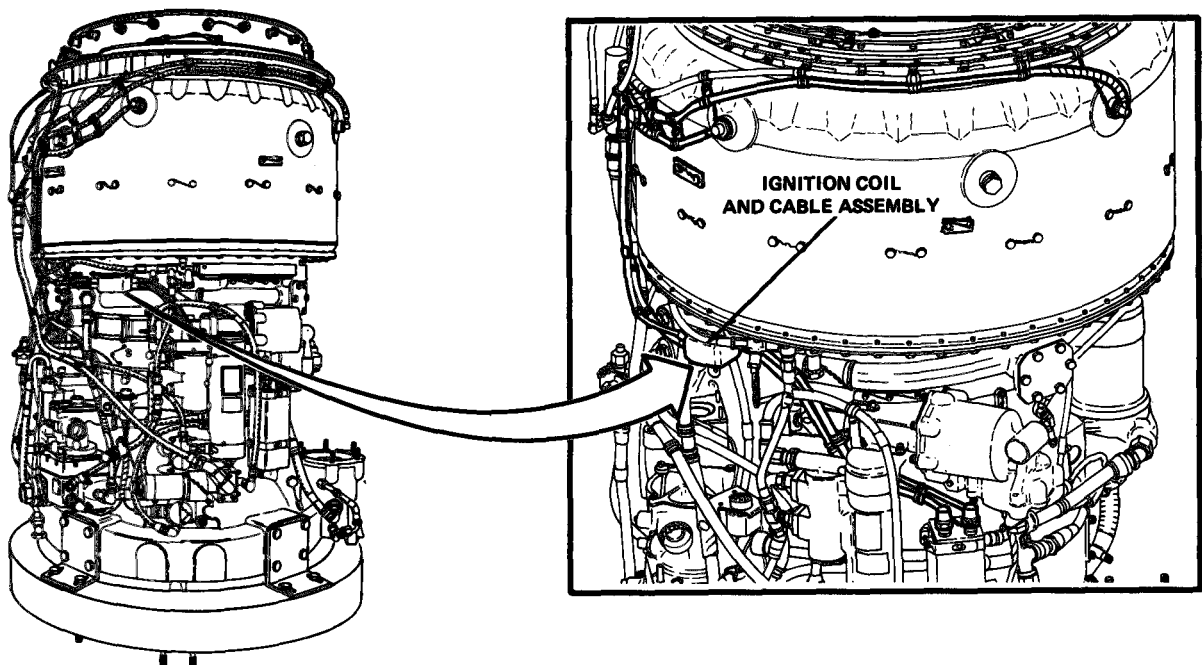
None

Personnel Required:

68510 Aircraft Powerplant Repairer

WARNING

The ignition exciter stores very high and possibly fatal voltage. Use extreme care when working around ignition exciter. Serious injury could result if exciter is accidentally grounded. Do not probe inside of output receptacles with fingers or metal object. Discharge exciter only with insulated screwdriver. In case of shock or injury, get medical attention.

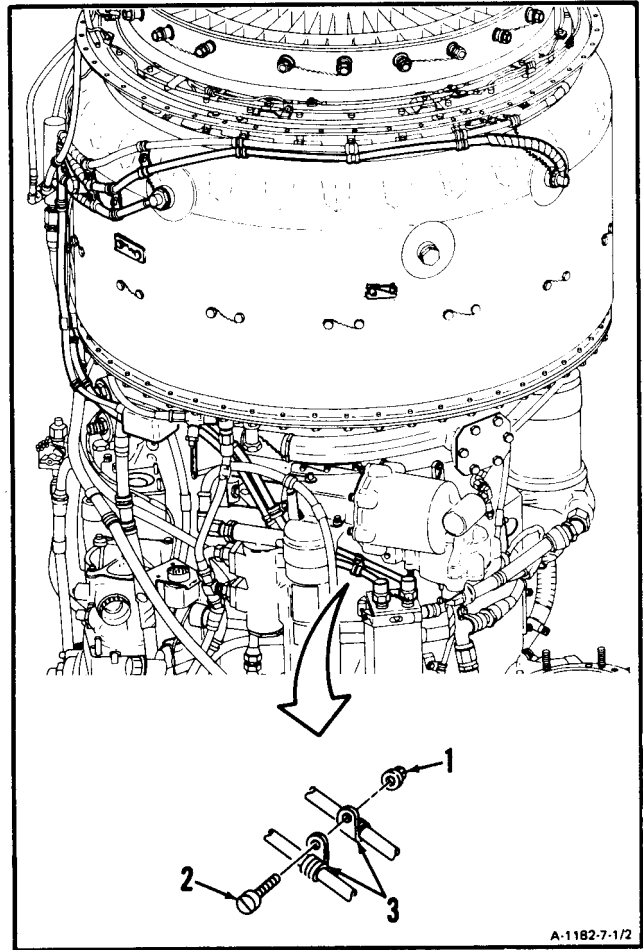


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7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued)

1. Remove nut (1), screw (2), and two clamps (3).



A-1182-7-1/2

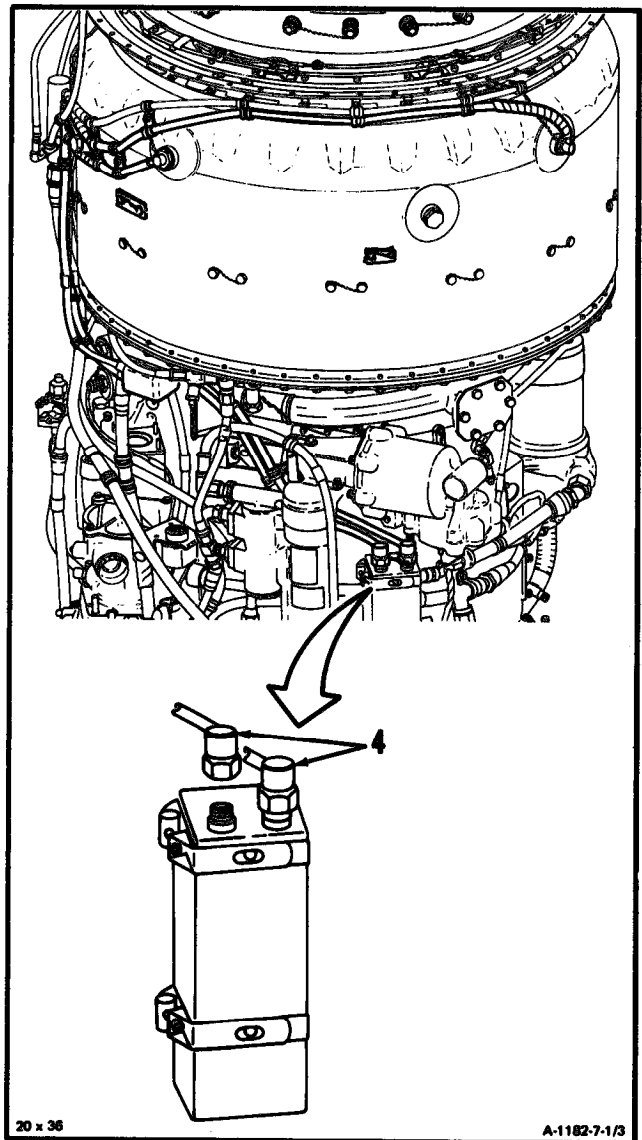
7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued)

7-1

WARNING

The ignition exciter stores very high and possibly fatal voltage. Use extreme care when working around ignition exciter. Serious injury could result if exciter is accidentally grounded. Do not probe inside of output receptacles with fingers or metal object. Discharge exciter only with insulated screwdriver. When discharging ignition exciter, remove one lead at a time and discharge receptacle that lead was removed from. In case of shock or injury, get medical attention.

2. Remove lockwire and **disconnect two coil and cable assembly leads (4)**. Place leads to one side.

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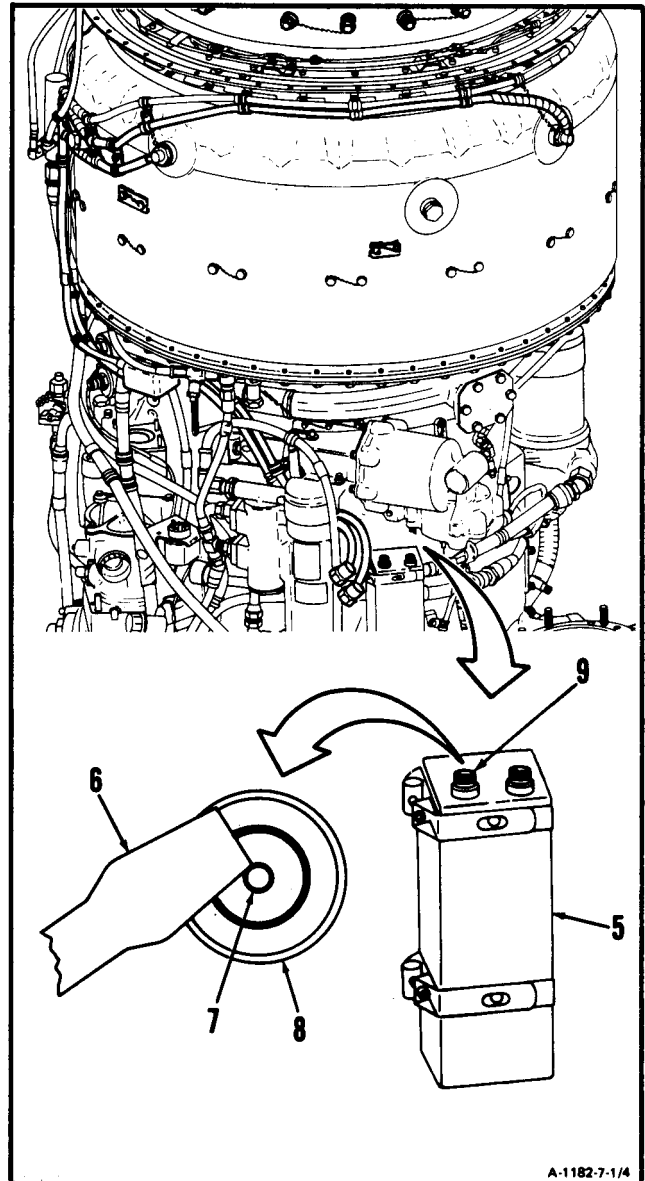
WARNING

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

NOTE

Step 3. applies to both output receptacles.

3. **Discharge ignition exciter (5)** by placing tip of insulated screwdriver (6) against pin (7) and edge (8) of receptacle (9).

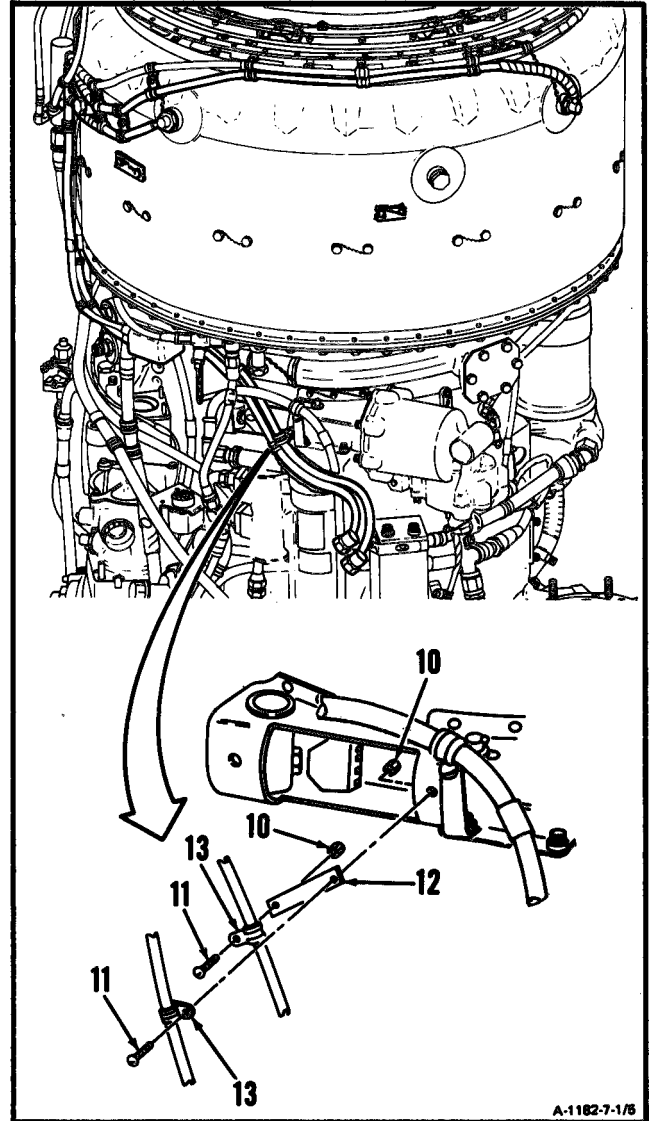


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7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued)

7-1

4. Remove two nuts (10), screws (11), bracket (12), and two clamps (13).

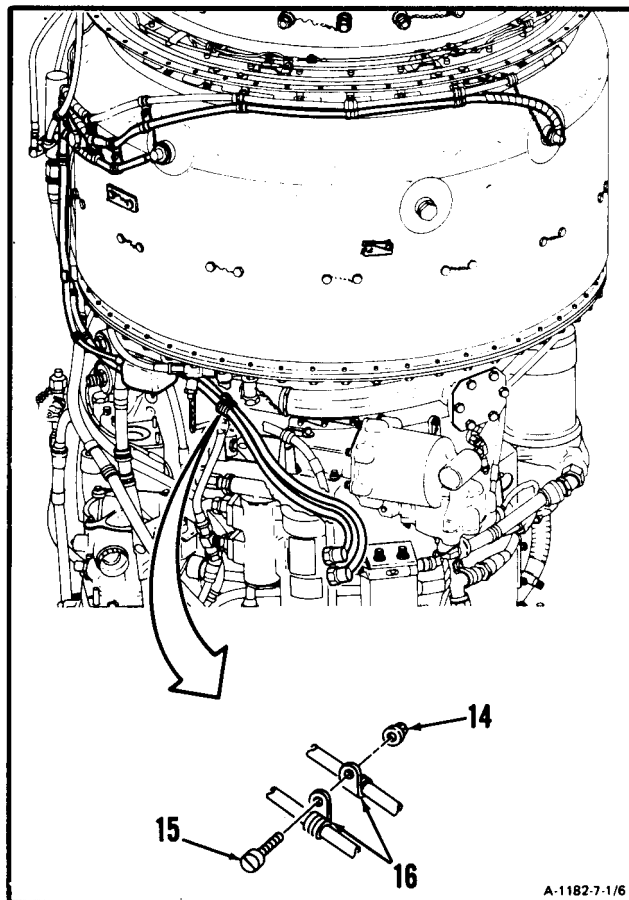


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7-7

7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued)

5. Remove nut (14), screw (15), and two clamps (16).

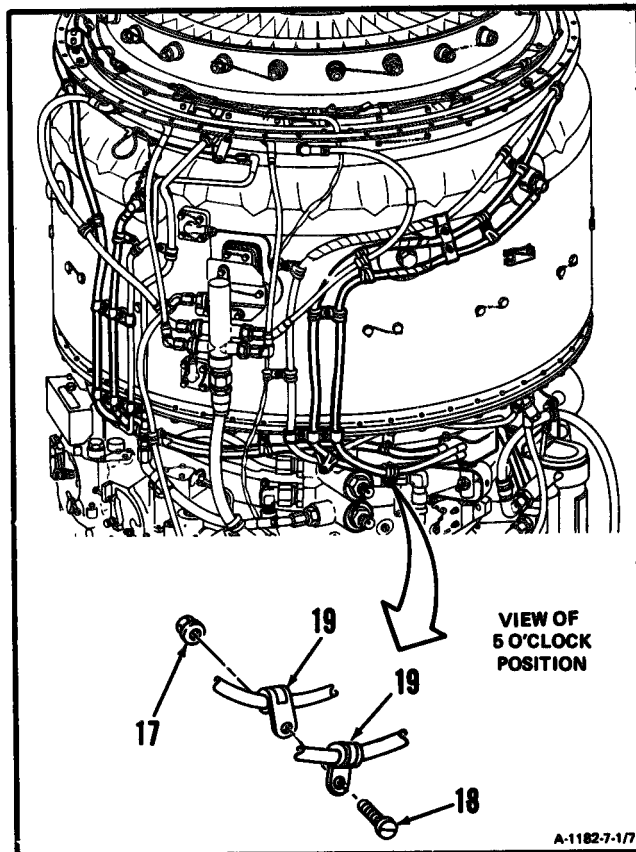


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7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued)

7-1

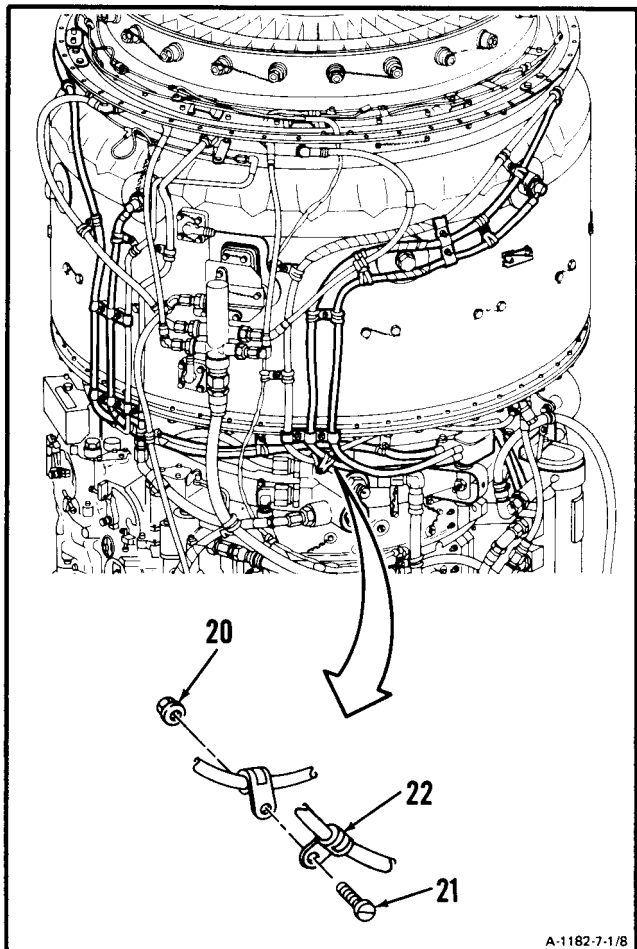
6. Remove nut (17), screw (18), and two clamps (19).



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7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued)

7. Remove nut (20), screw (21), and clamp (22).

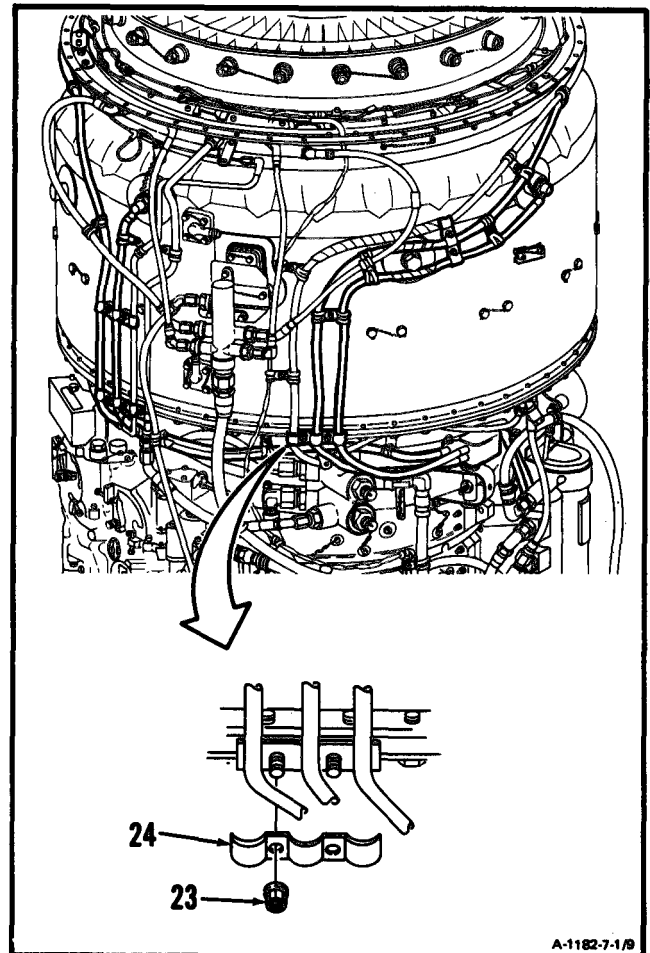


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7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued)

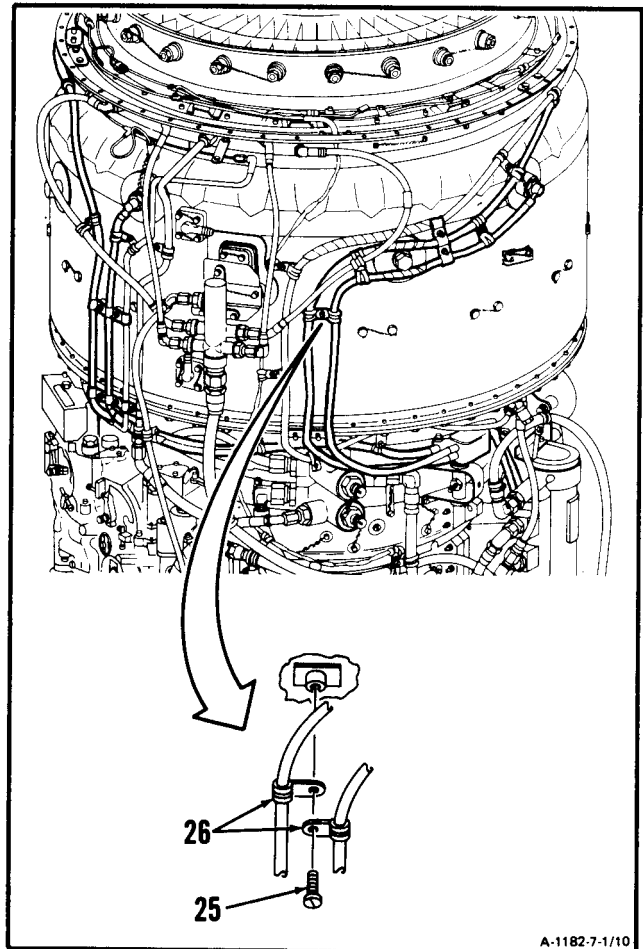
7-1

8. Remove two nuts (23) and retaining strap (24).



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9. **Remove** lockwire, screw (25), and **two clamps** (26).



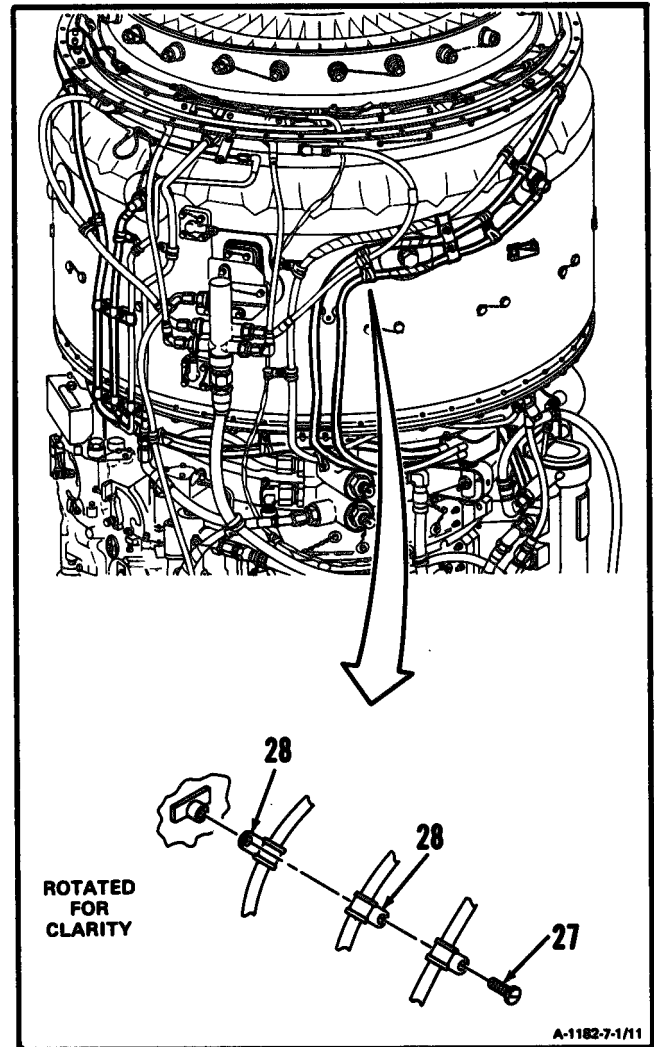
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7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued)

7-1

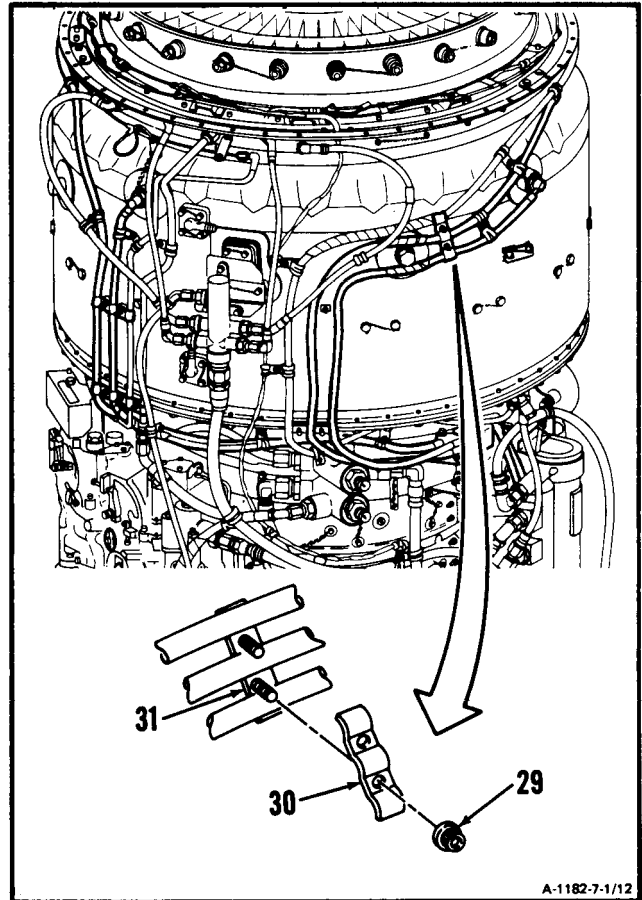
10. Remove lockwire, screw (27), and two clamps (28).



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7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued)

11. Remove two nuts (29) and clamps (30 and 31).

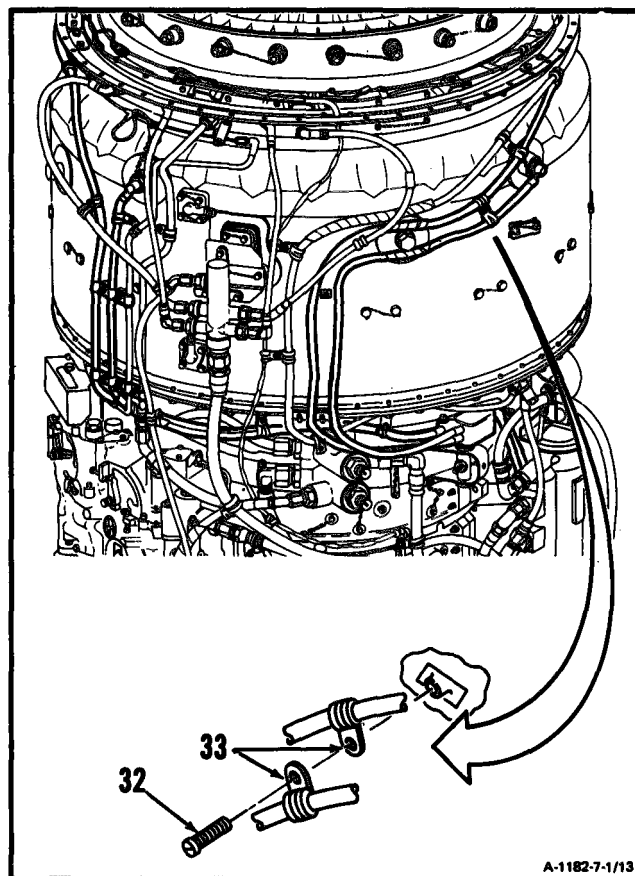


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7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued)

7-1

12. Remove lockwire, screw (32), and two clamps (33).



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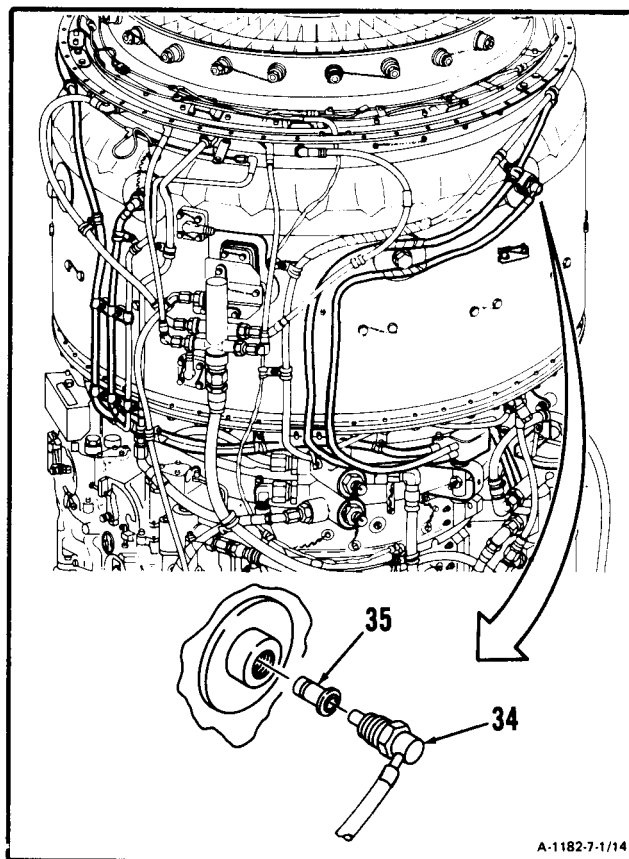
7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued)

13. Remove lockwire. Disconnect and remove ignition lead (34).

NOTE

Spark igniter may remain in combustion chamber housing or on ignition lead.

14. Remove spark igniter (35).

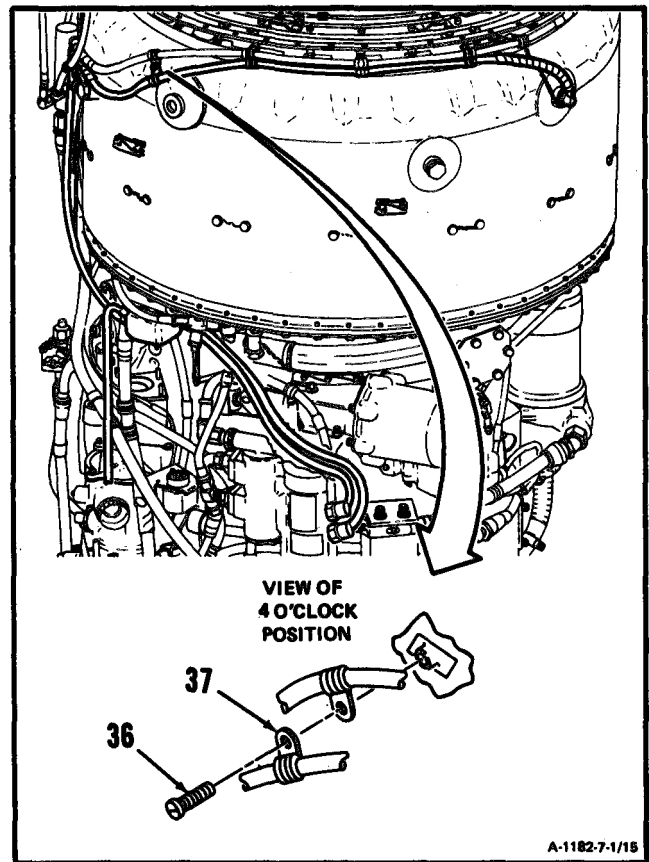


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7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued)

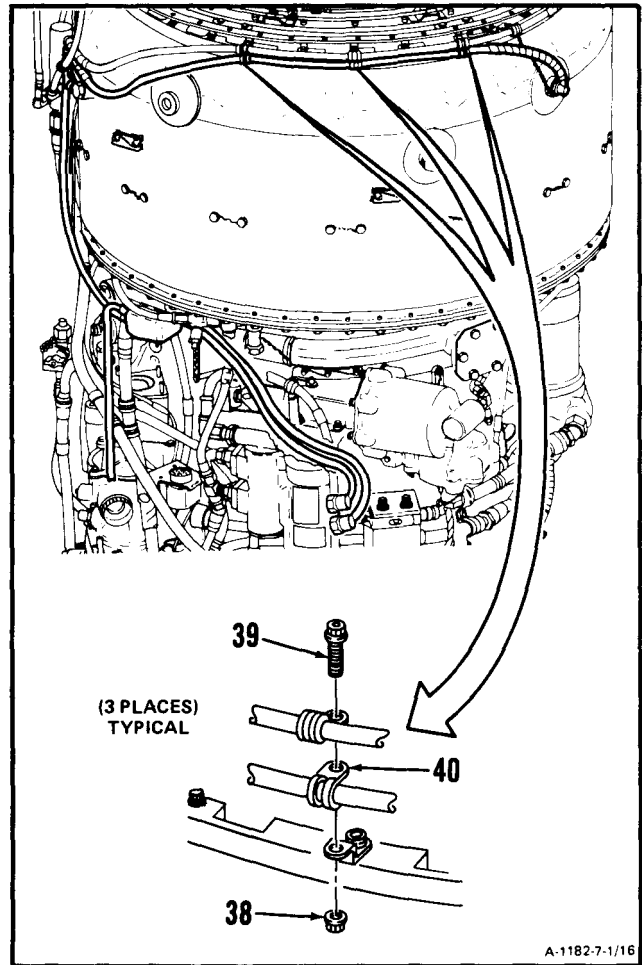
7-1

15. Remove lockwire, screw (36), and clamp (37).



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16. Remove three nuts (38), bolts (39), and clamps (40).



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7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued)

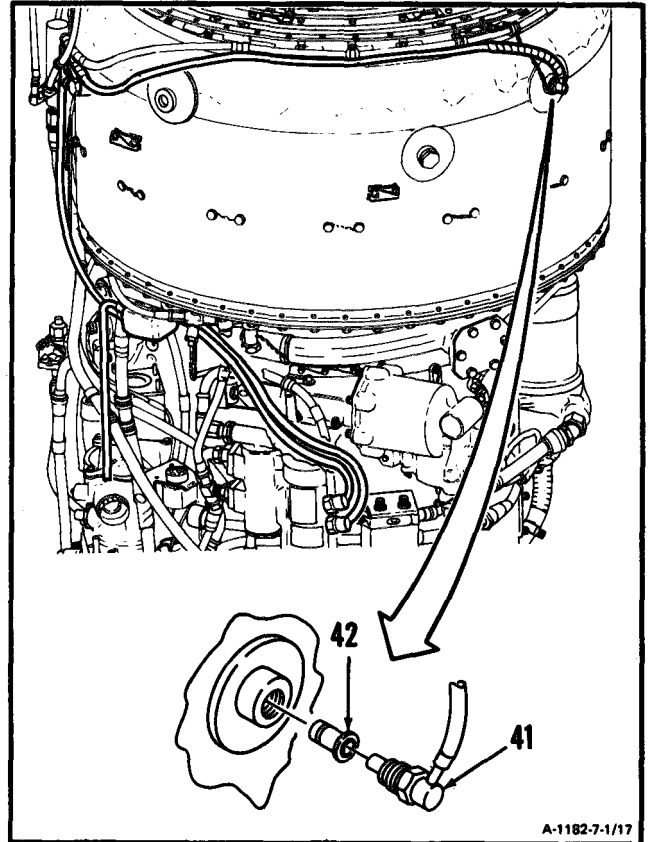
7-1

17. Remove lockwire. **Disconnect and remove ignition lead (41).**

NOTE

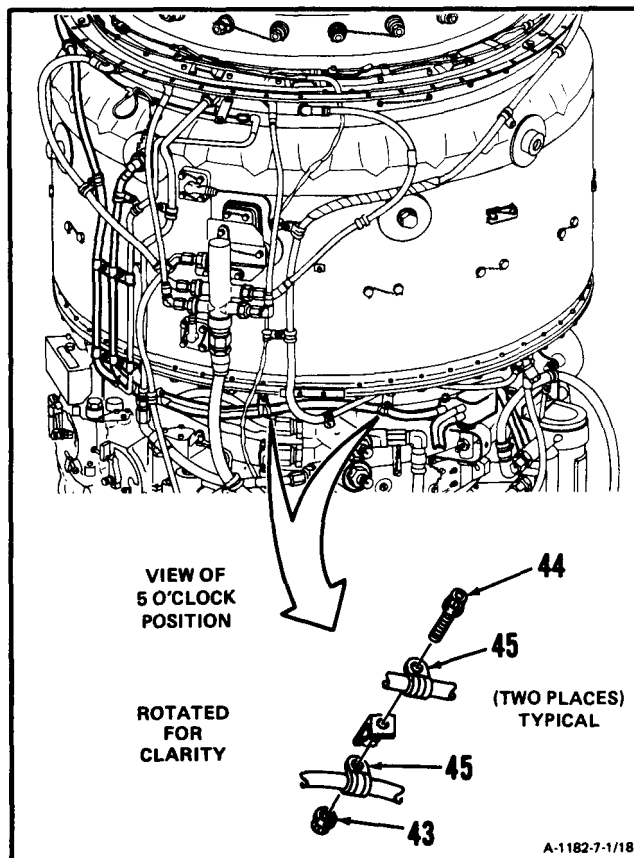
Spark igniter may remain in combustion chamber housing or on ignition lead.

18. Remove spark igniter (42).



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19. Remove two nuts (43), bolts (44), and four clamps (45).

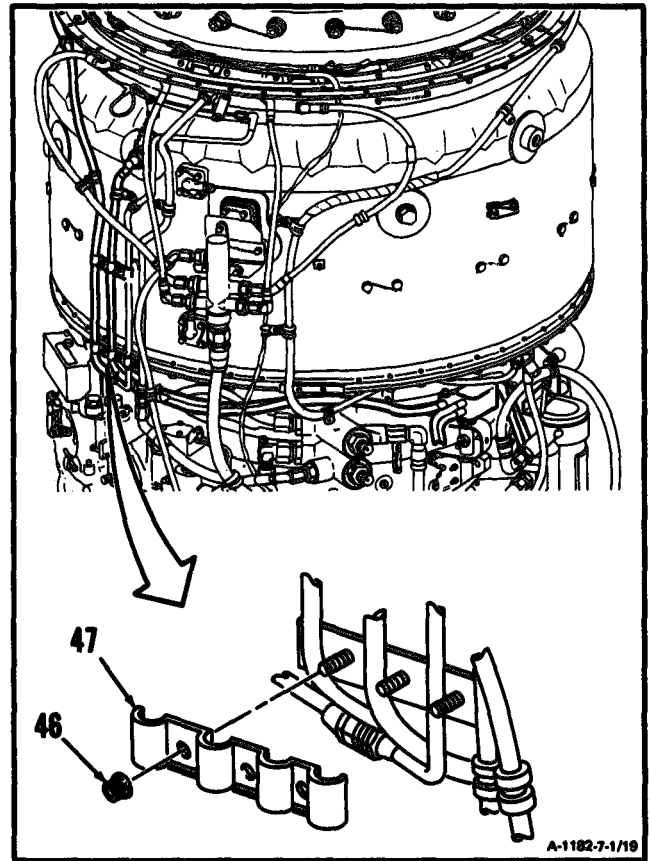


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7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued)

7-1

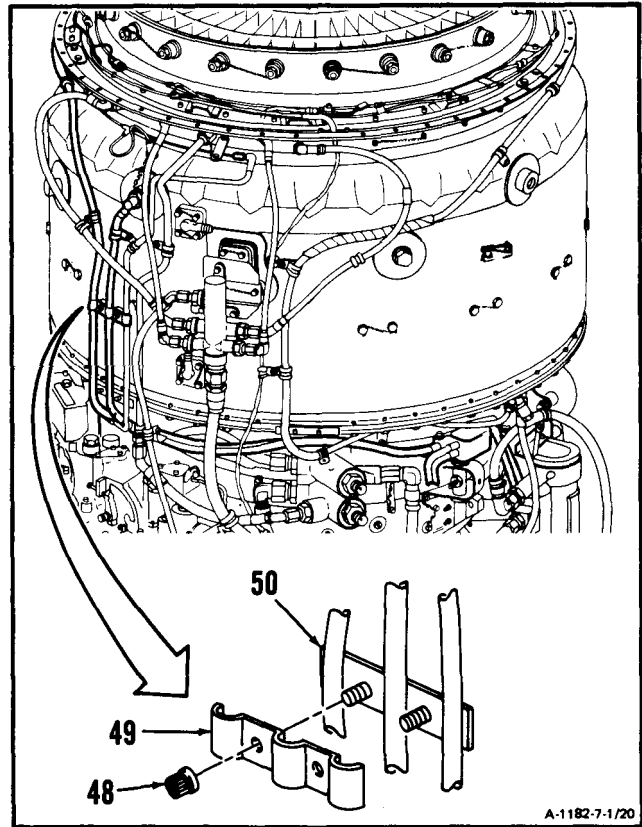
20. Remove three nuts (46) and clamp (47).



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7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued)

21. Remove two nuts (48) and clamps (49 and 50).

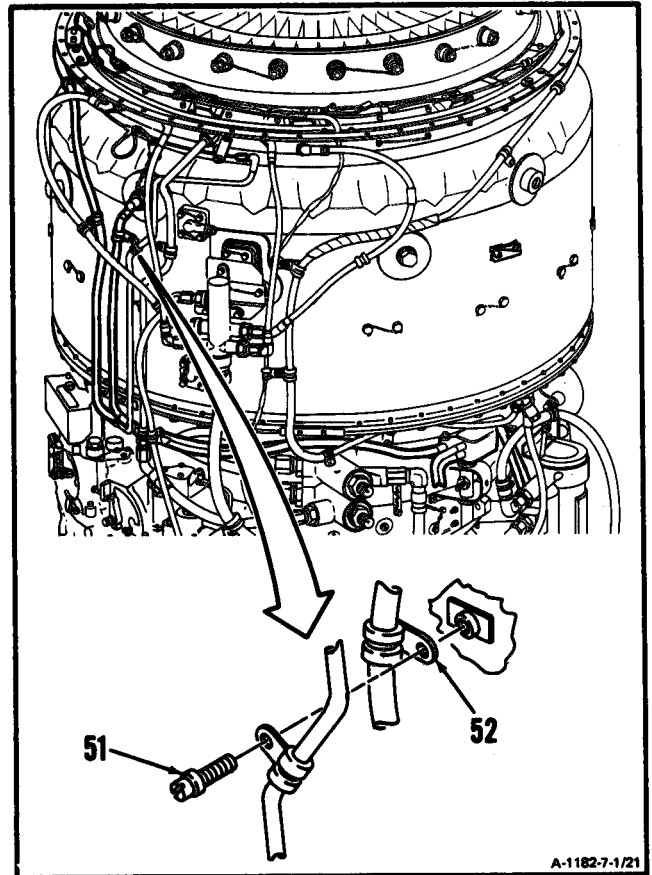


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7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued)

7-1

22. Remove lockwire, screw (51), and clamp (52).



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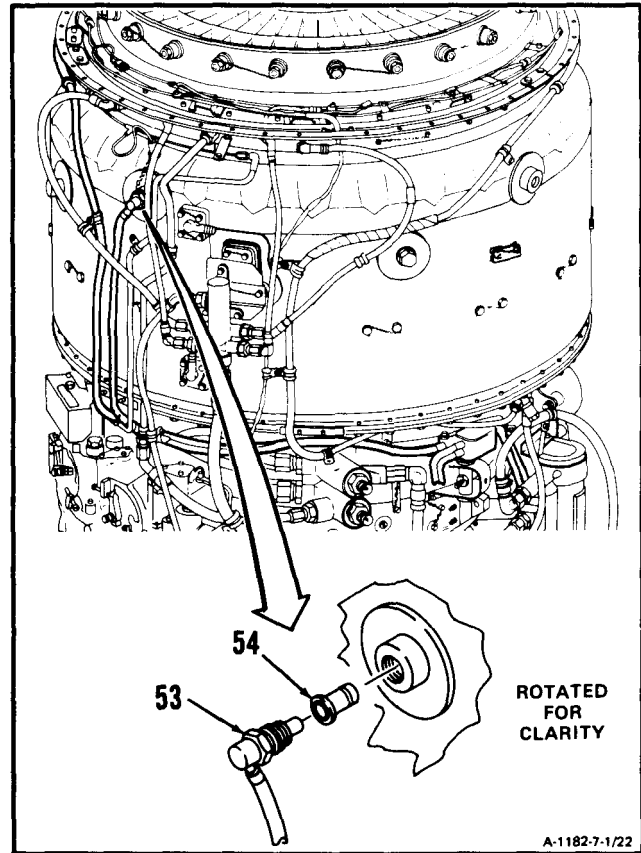
7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued)

23. Remove lockwire. **Disconnect and remove ignition lead (53).**

NOTE

Spark igniter may remain in combustion chamber housing or on ignition lead.

24. **Remove spark igniter (54).**

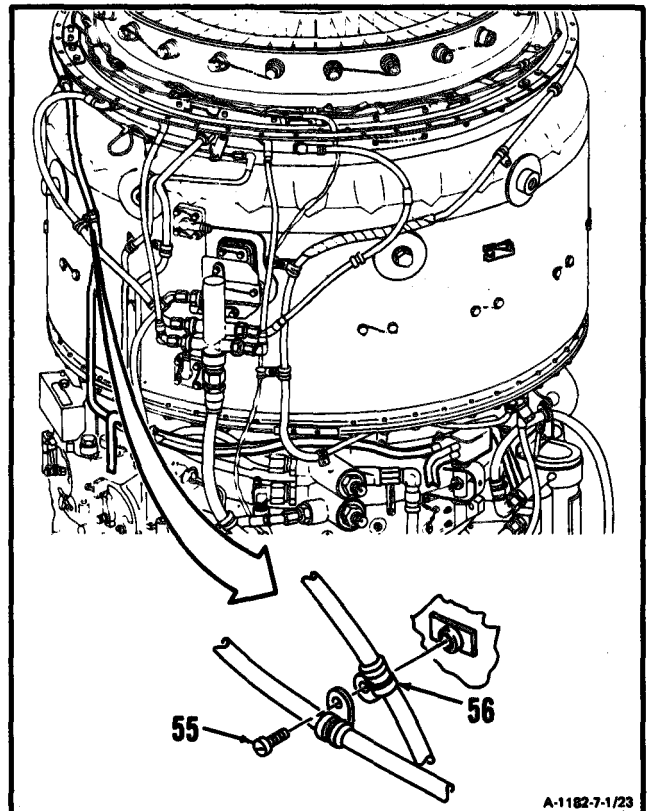


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7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued)

7-1

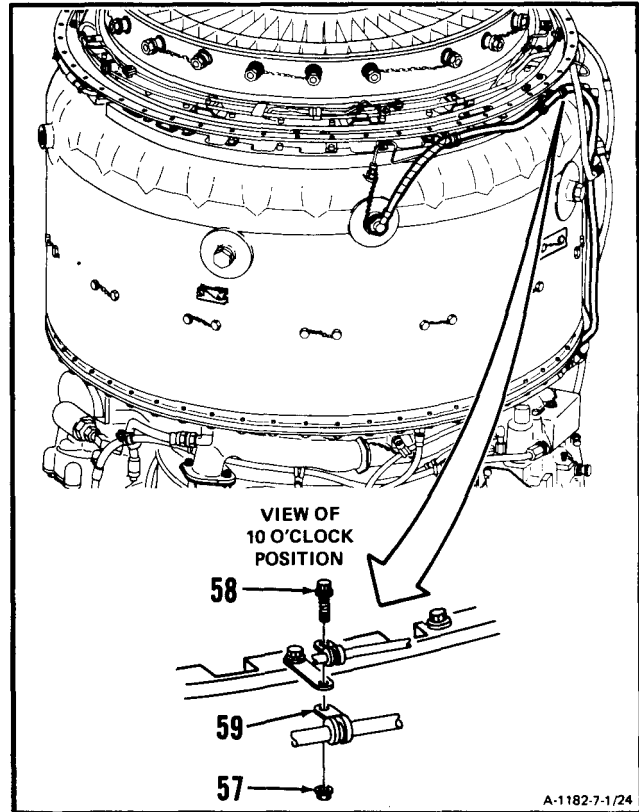
25. Remove lockwire, screw (55), and clamp (56).



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7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued)

26. Remove nut (57), bolt (58), and clamp (59).

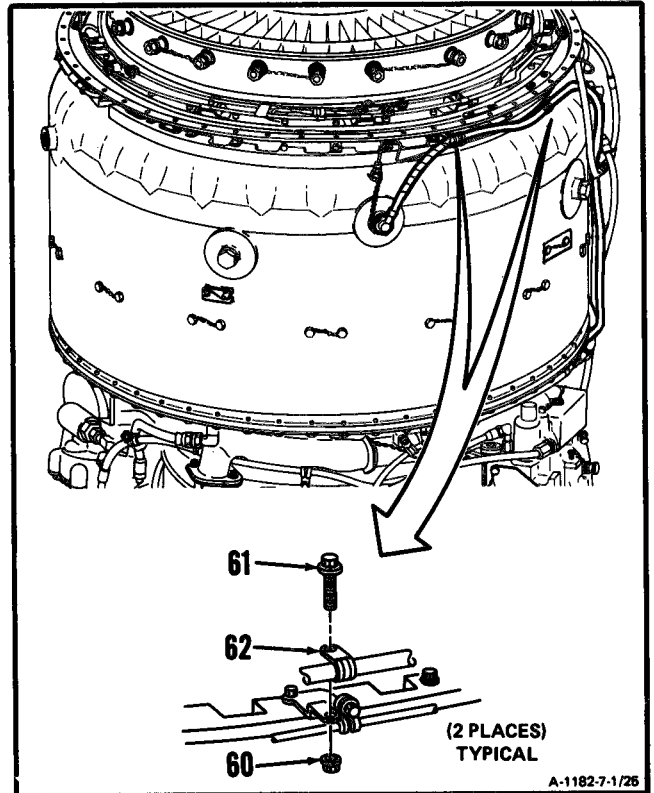


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7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued)

7-1

27. Remove two nuts (60), bolts (61), and clamps (62).



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7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued)

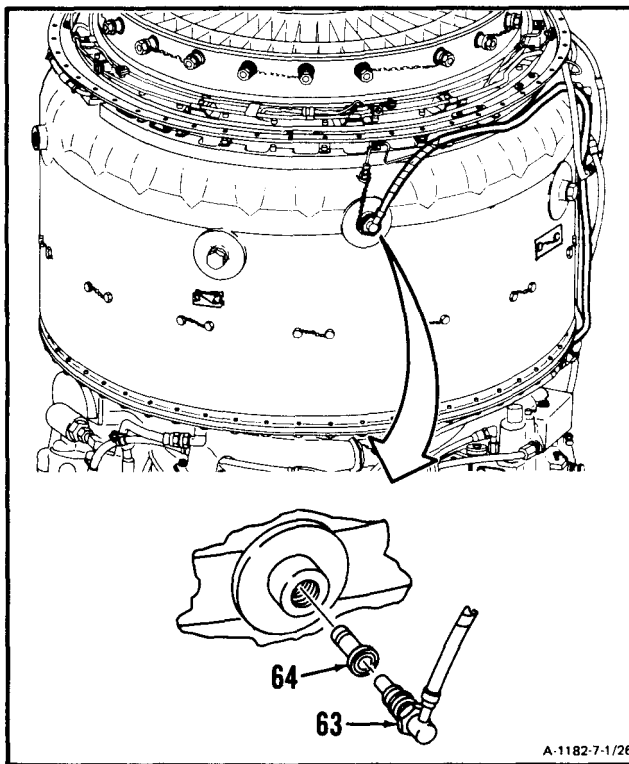
7-1

28. Remove lockwire. **Disconnect and remove ignition lead (63).**

NOTE

Spark igniter may remain in combustion chamber housing or on igniter lead.

29. **Remove spark igniter (64).**

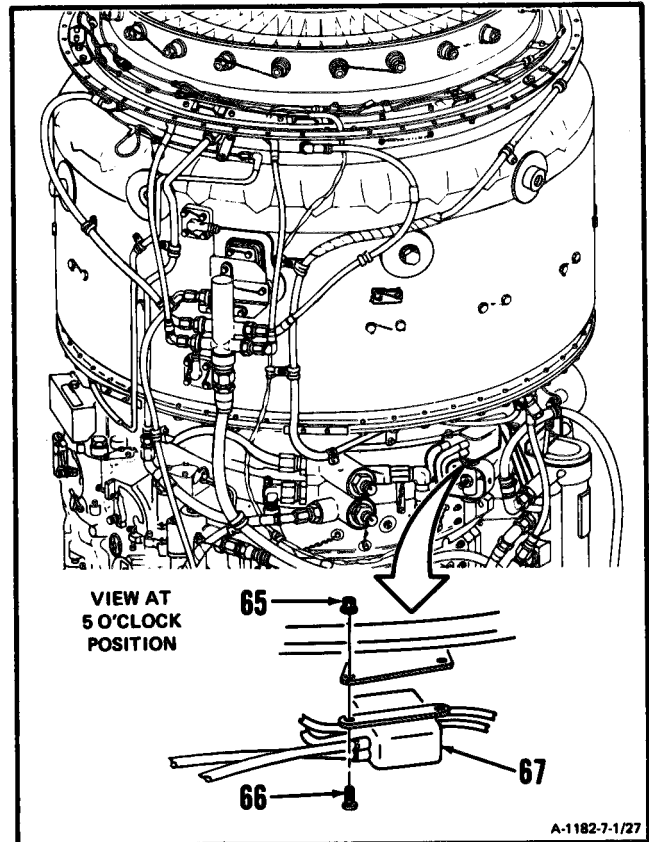


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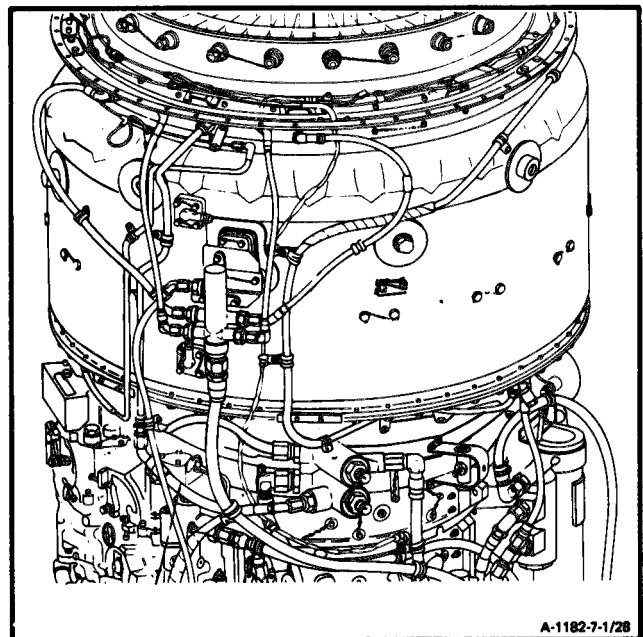
7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued)

7-1

30. Remove two nuts (65) and bolts (66).
31. Remove ignition coil and cable assembly (67).

**FOLLOW-ON MAINTENANCE:**

None

**END OF TASK**

7-2 CLEAN IGNITION COIL AND CABLE ASSEMBLY

7-2

INITIAL SETUP**Applicable Configurations:**

All

Tools:

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

Materials:

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

Personnel Required:

68B0 Aircraft Powerplant Repairer

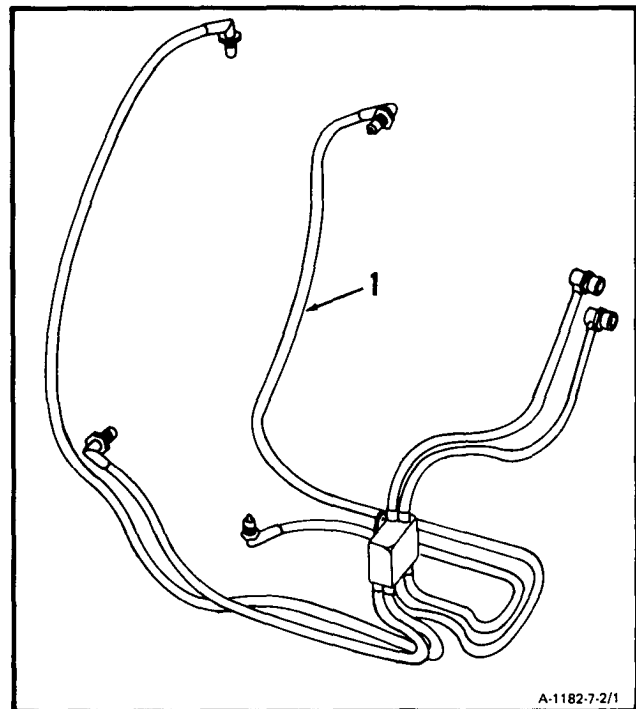
Equipment Condition:

Off Engine Task

General Safety Instructions:**WARNING**

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

1. Wear gloves (E20). **Clean ignition coil and cable assembly (1)** with lint-free cloth (E26) and brush dampened in dry cleaning solvent (E17).

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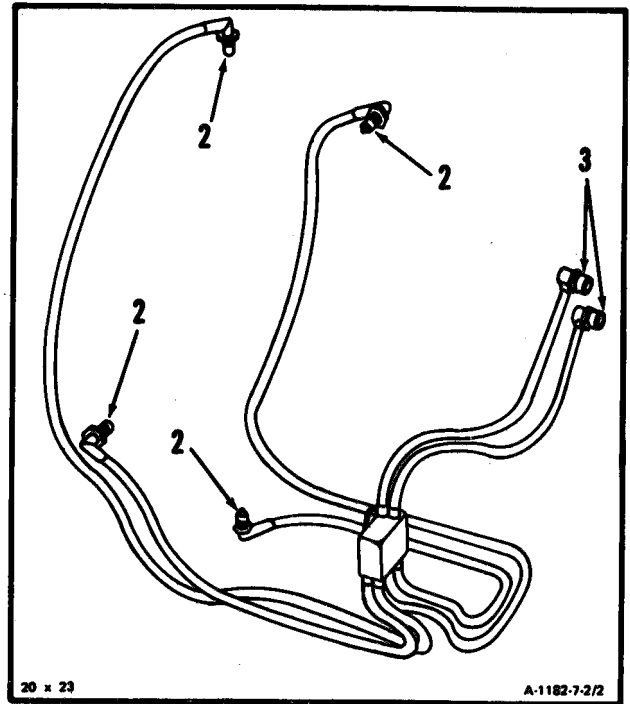
7-2 CLEAN IGNITION COIL AND CABLE ASSEMBLY (Continued)

7-2

WARNING

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

2. Wear goggles. Blow dry four spark plug connectors (2) and two exciter connectors (3) thoroughly using clean, dry compressed air.



FOLLOW-ON MAINTENANCE:

Inspect Ignition Coil and Cable Assembly
(Task 7-3).

END OF TASK

7-3 INSPECT IGNITION COIL AND CABLE ASSEMBLY

INITIAL SETUP

Applicable Configurations:

All

Tools:

Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4844
Multimeter

Materials:

None

Personnel Required:

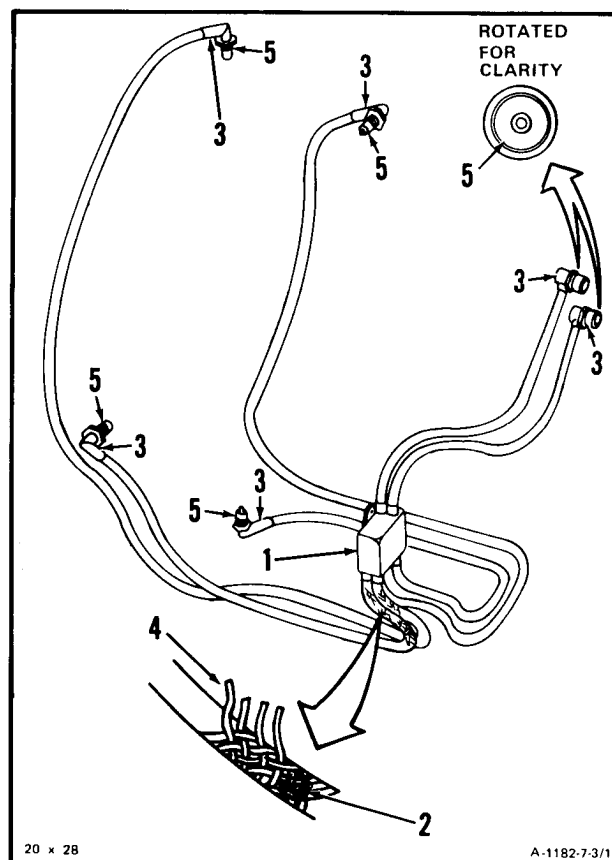
68B30 Aircraft Powerplant Inspector

Equipment Condition:

Off Engine Task

1. Inspect ignition coil and cable assembly (1).

- a. There shall be no burned insulation (2).
- b. Check connectors (3) attached to sheathing. There shall be no loose connectors (3).
- c. Frayed or worn outer steel braid is acceptable up to 3/4 of the cable circumference; 1/4 of the cable circumference shall remain intact to provide continuity for ground. Repair frayed or broken wires (4) on sheathing (Ref. Task 7-4). Replace coil and cable assembly if damage is exceeded.
- d. The outer steel braid shall not be frayed or worn over more than 3/4 of the cable circumference. Remaining continuity for ground shall be over at least 1/4 of the braid.
- e. There shall be no cracked or broken insulators (5).



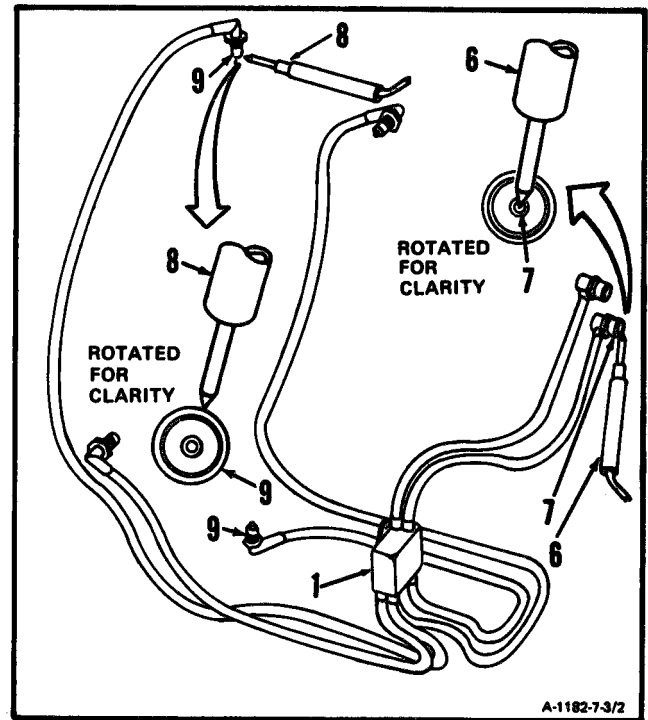
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7-3 INSPECT IGNITION COIL AND CABLE ASSEMBLY (Continued)

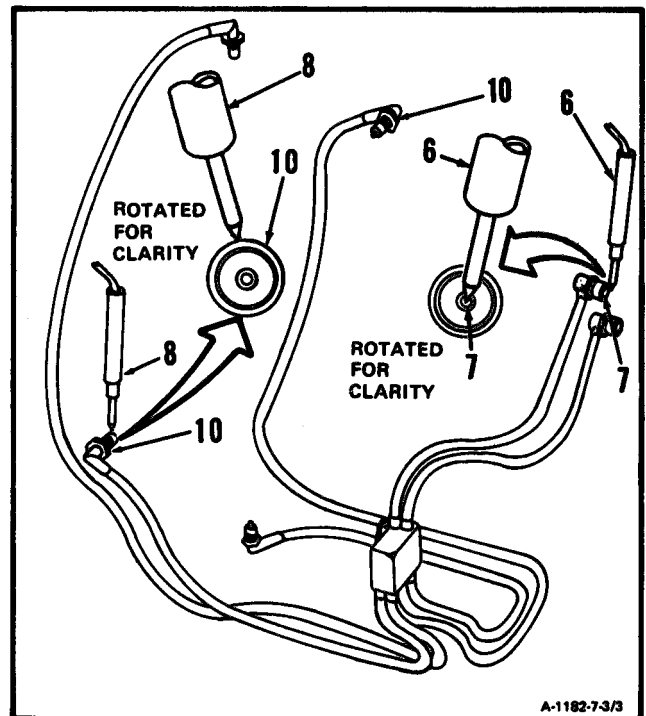
7-3

2. Measure insulation resistance on ignition coil and cable assembly (1) as follows:

- a. Set multimeter- range switch to R x 1000.
Touch red probe (6) to electrical connector conductor (7).
- b. Touch black probe (8) to electrical connector outer housing (9).
- c. Meter shall indicate 1000 ohms minimum.



- d. Touch red probe (6) to electrical connector conductor (7).
- e. Touch black probe (8) to electrical connector outer housing (10).
- f. Meter shall indicate 1000 ohms minimum.

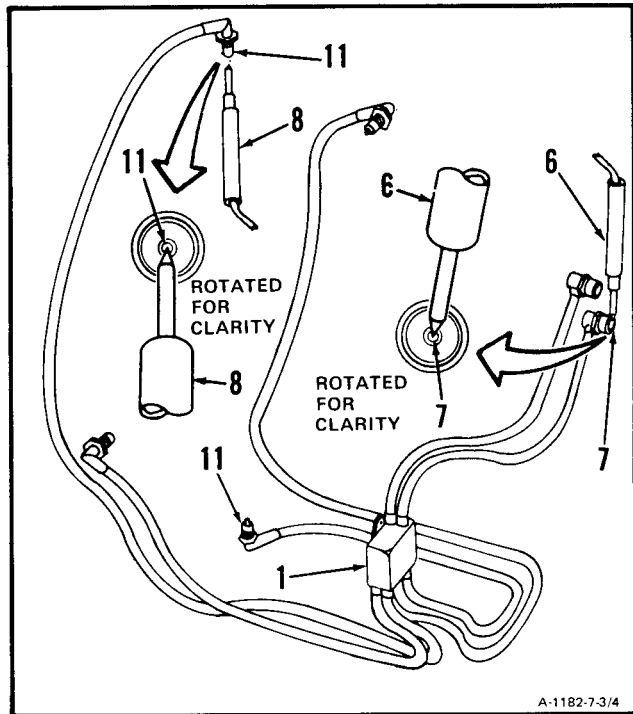


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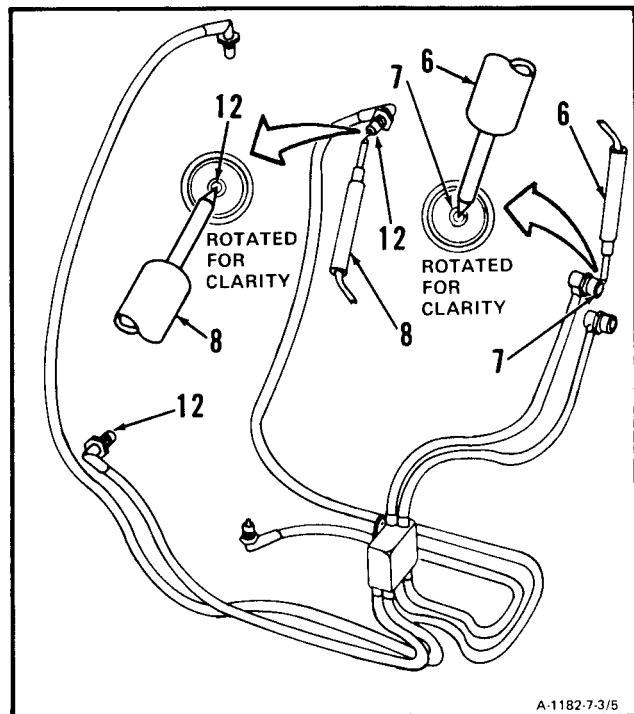
7-3 INSPECT IGNITION COIL AND CABLE ASSEMBLY (Continued)

3. **Measure continuity** on ignition coil and cable assembly (1) as follows:

- a. Set multi meter range switch to R x 1. Touch red probe (6) to electrical connector conductor (7).
- b. Touch black probe (8) to electrical connector conductors (11).
- c. Meter shall indicate 1 ohm maximum.



- d. Touch red probe (6) to electrical connector conductor (7).
- e. Touch black probe (8) to electrical connector center conductors (12).
- f. Meter shall indicate 1 ohm maximum.



FOLLOW-ON MAINTENANCE:

None

END OF TASK

7-4 REPAIR IGNITION COIL AND CABLE ASSEMBLY

7-4

INITIAL SETUP***Applicable Configurations:***

All

Tools:

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

Materials:

Lockwire (E28)
Spiral Chafing Sleeve (E50)

Parts:

Insulator

Personnel Required:

68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

References:

TM 55-2840-254-23P

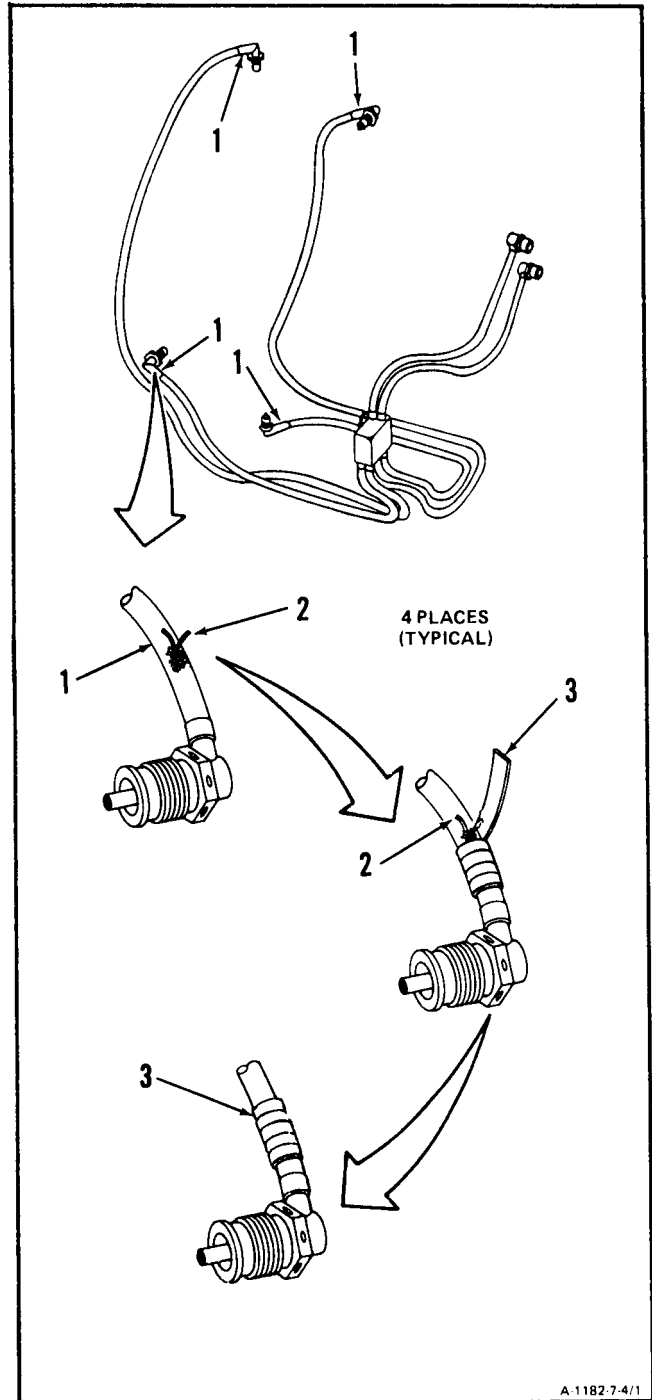
Equipment Condition:

Off Engine Task

GO TO NEXT PAGE

1. Repair fraying (broken) individual cable leads (1) as follows:

- a. Wrap individual broken wires (2) in cable lead (1) with spiral chafing sleeve (E50) (3). Be sure that spiral chafing sleeve (3) extends beyond damaged area.



INSPECT

GO TO NEXT PAGE

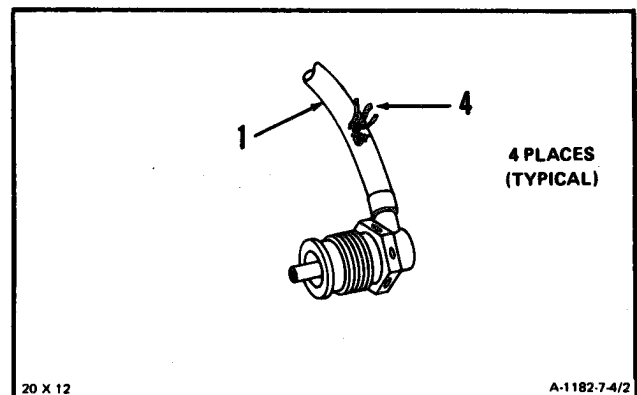
7-4 REPAIR IGNITION COIL AND CABLE ASSEMBLY (Continued)

7-4

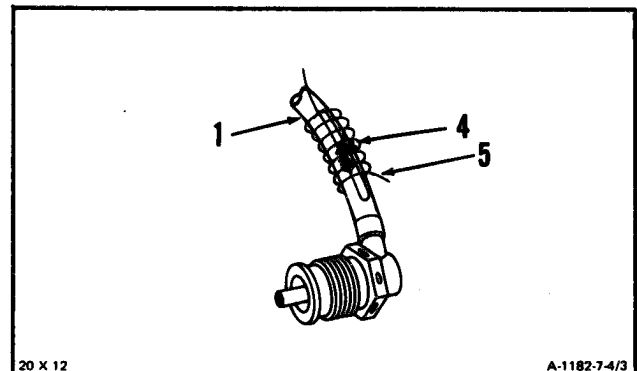
NOTE

This cable assembly consists of a transformer and shielded cabling which has six leads. Two leads are connected to the ignition exciter which carry high voltages to the transformer to be distributed equally to four individual cable leads. Two repairs total shall be allowed to the two shorter individual cable leads and three repairs total shall be allowed to the two longer individual cable leads.

- b. If three or more wires (4) of individual cable leads are broken, flatten broken wires (4) without damaging insulation of individual cable lead (1) at damaged area. The outer steel braid shall have a minimum of 1/4 of its circumference intact to provide continuity of grounding purposes. Damaged area shall be 3 inches minimum from either the transformer or spark igniter end of each cable lead (1). Damaged areas on each cable lead (1) shall be a minimum of 6 inches apart.



- c. Use lockwire (E28) (5) to wind clockwise around damaged cable lead (1). Lockwire (5) should cover damaged area by 3/8-inch. Do not pass wrapping limits of 1-1/4 inch length.



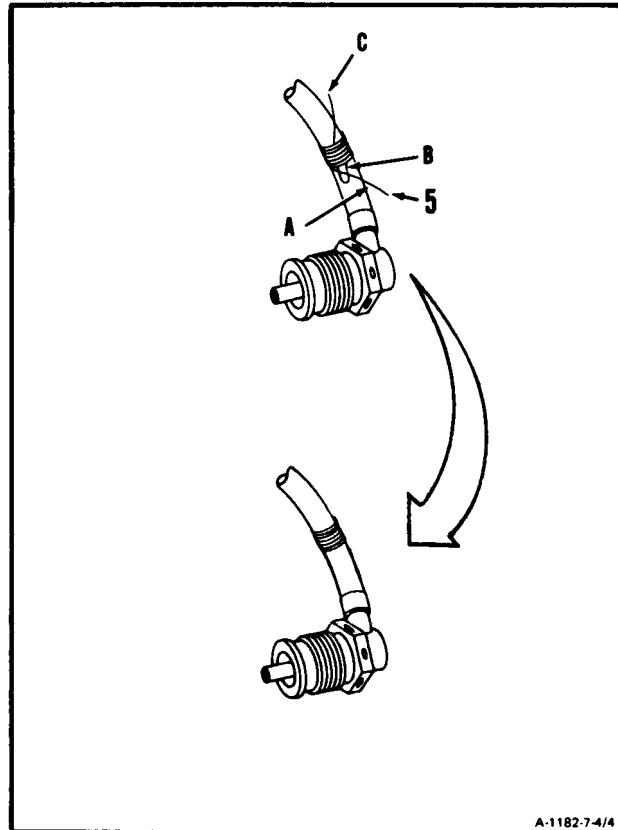
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NOTE

In following step, use care when pulling end C. Pull only far enough to firmly anchor end A beneath several wraps of the lockwire.

- d. Finish wrap by inserting lockwire (5) end A through loop B. Hold A tight while pulling C to close loop. Release A and carefully pull C until end A is anchored beneath wrapping. Cut excess wire ends.

INSPECT



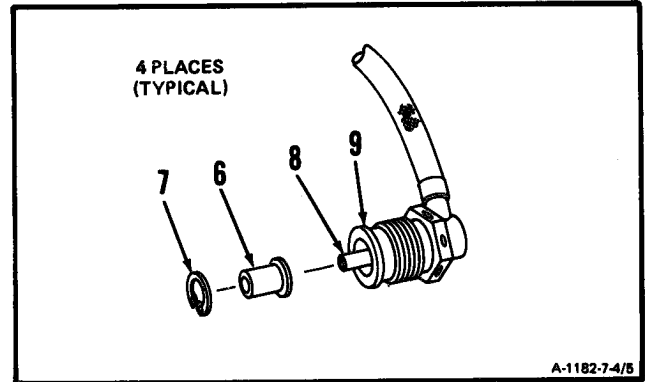
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7-4 REPAIR IGNITION COIL AND CABLE ASSEMBLY (Continued)

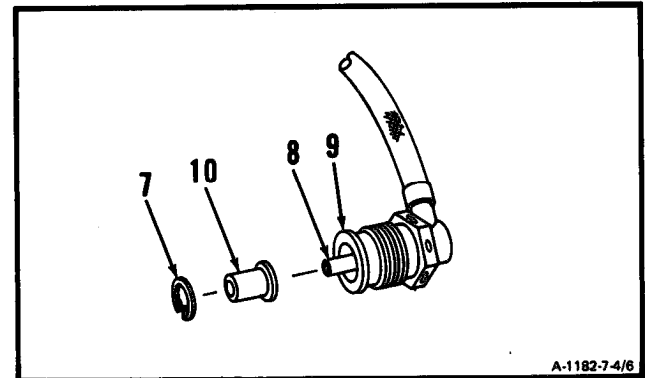
7-4

2. Replace cracked insulator (6) as follows:

- a. Remove retaining ring (7).
- b. Remove insulator (6) from wire (8) and out of sleeve (9).



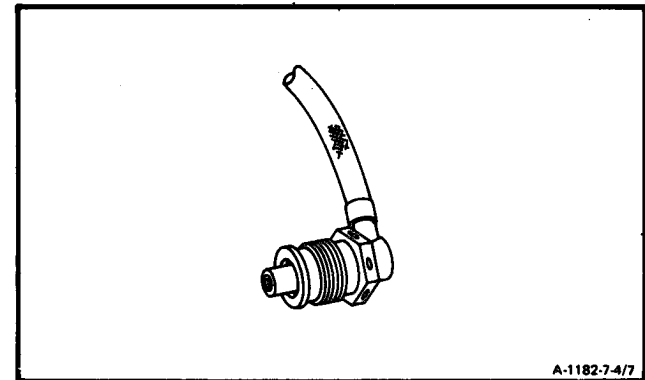
- c. Insert new insulator (10) in sleeve (9) and over wire (8).
- d. Install retaining ring (7).



INSPECT

FOLLOW-ON MAINTENANCE:

None



END OF TASK

7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY

7-5

INITIAL SETUP**Applicable Configurations:**

All

Tools:

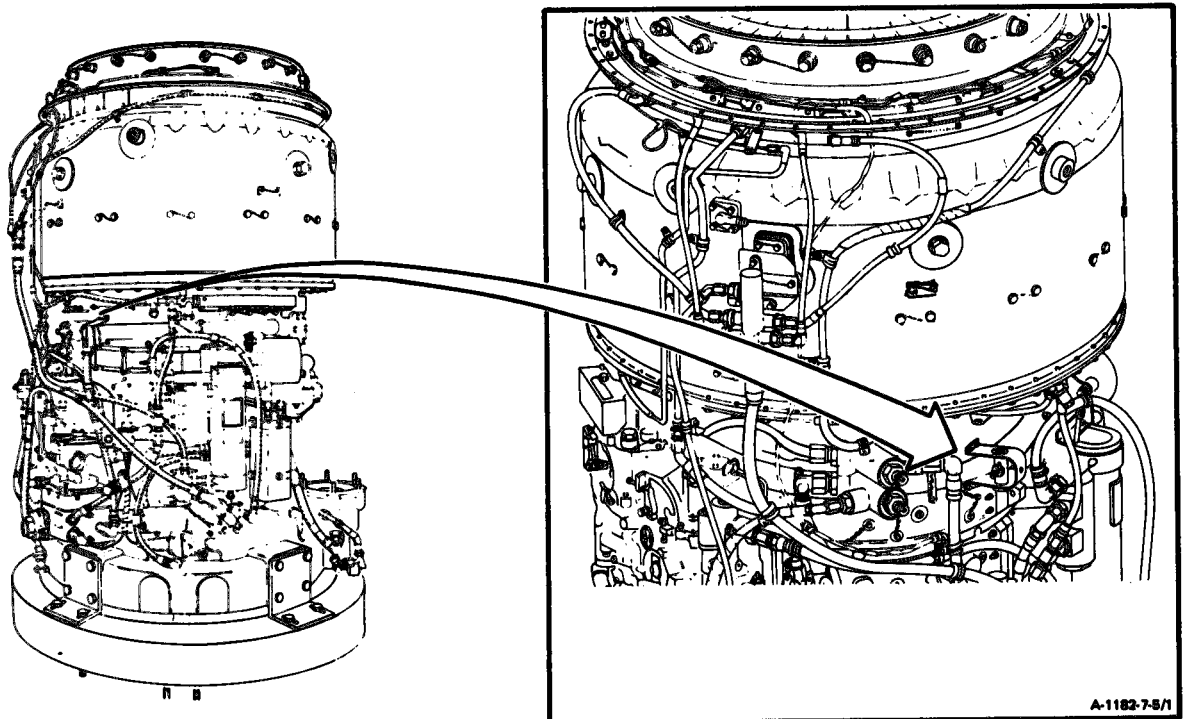
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114
Torque Wrench, 30-150 Inch-Pounds
Crowfoot Attachment, 7/8-Inch

Materials:

Anti-Seize Compound (E5)
Lockwire (E29)

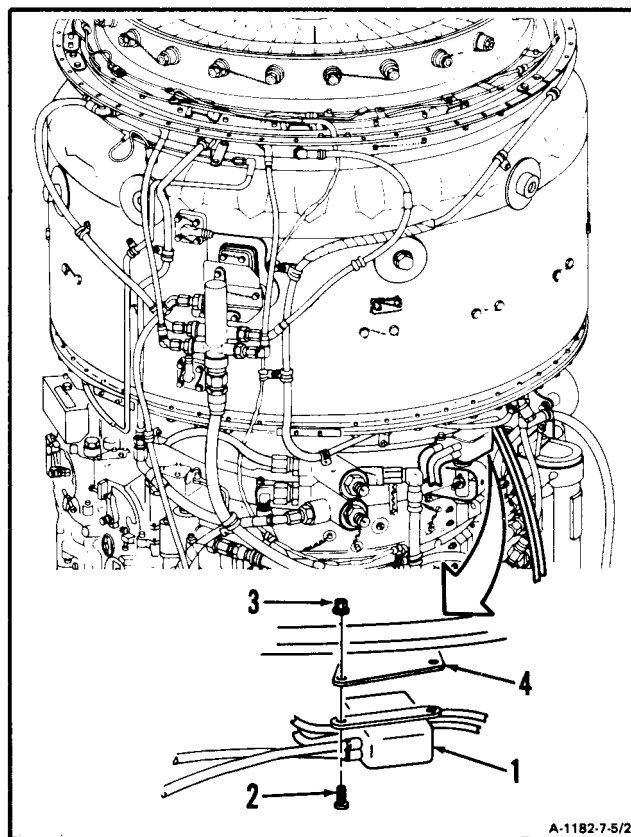
Personnel Required:

68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

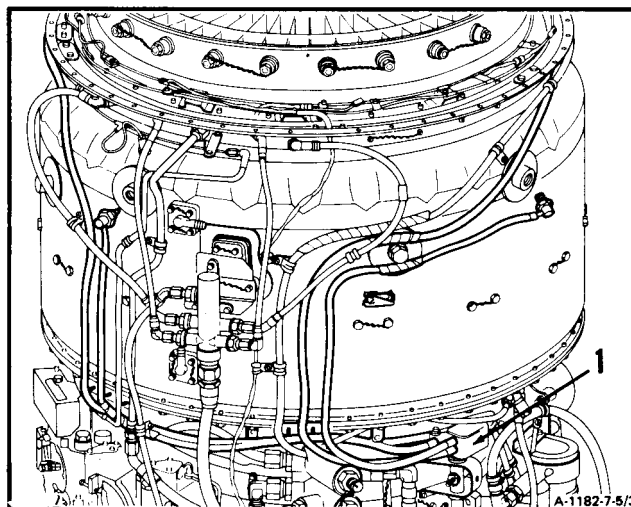
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7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued)

1. Install ignition coil and cable assembly (1), two bolts (2), and nuts (3) on bracket (4).



2. Route ignition coil and cable assembly (1) as shown.

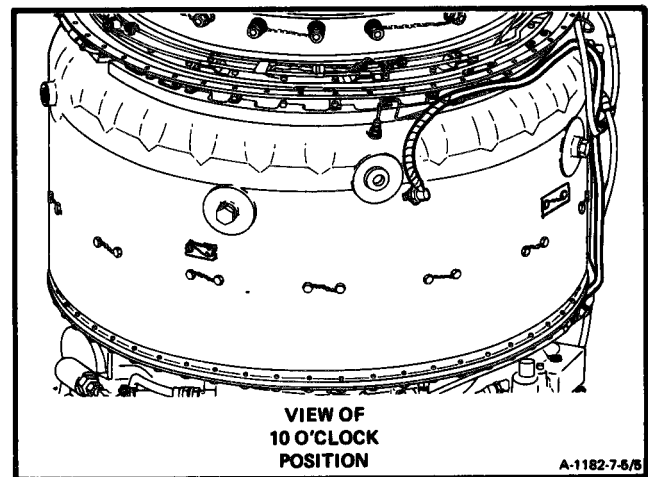
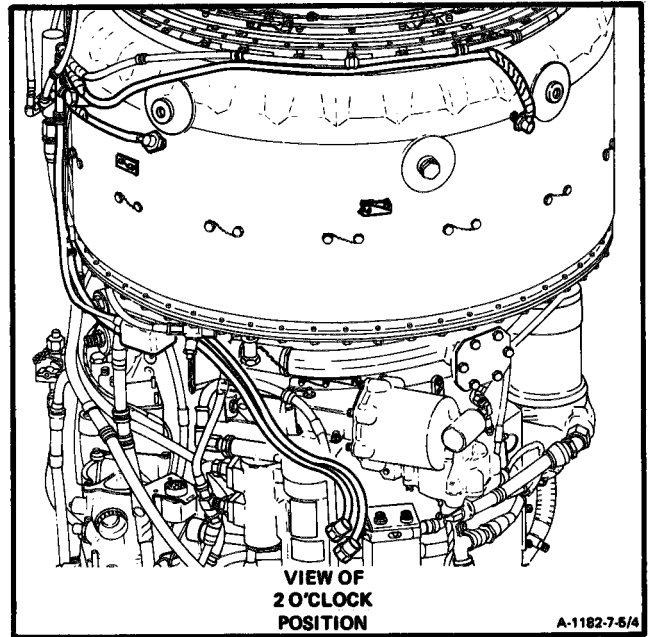


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7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued)

7-5

2. (Continued)



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7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued)

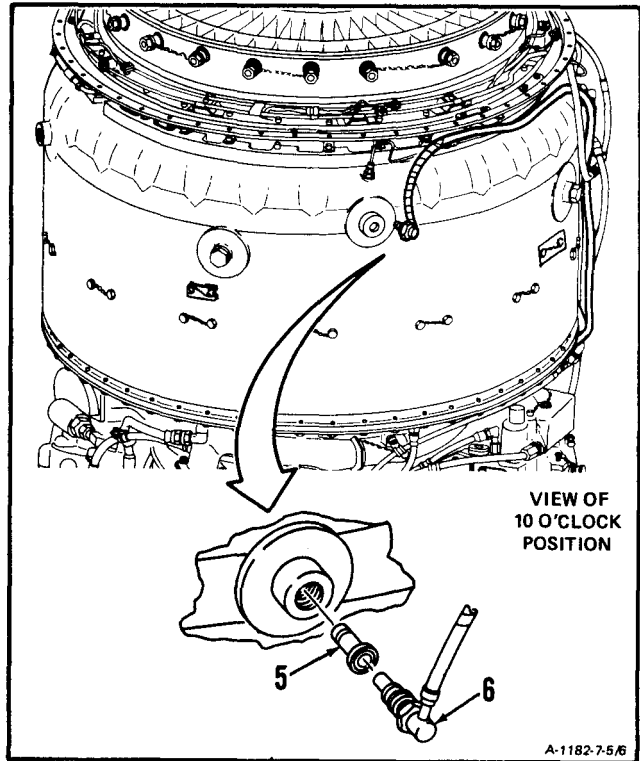
7-5

3. Install spark igniter (5) on ignition lead (6).

CAUTION

To prevent shorting of ignition lead, do not allow anti-seize compound to touch electrical contacts and insulators.

4. Coat threads of ignition lead (6) with anti-seize compound (E5).
5. Install ignition lead (6). Torque to 135 inch-pounds. Use crowfoot attachment. Lockwire ignition lead (6). Use lockwire (E29).

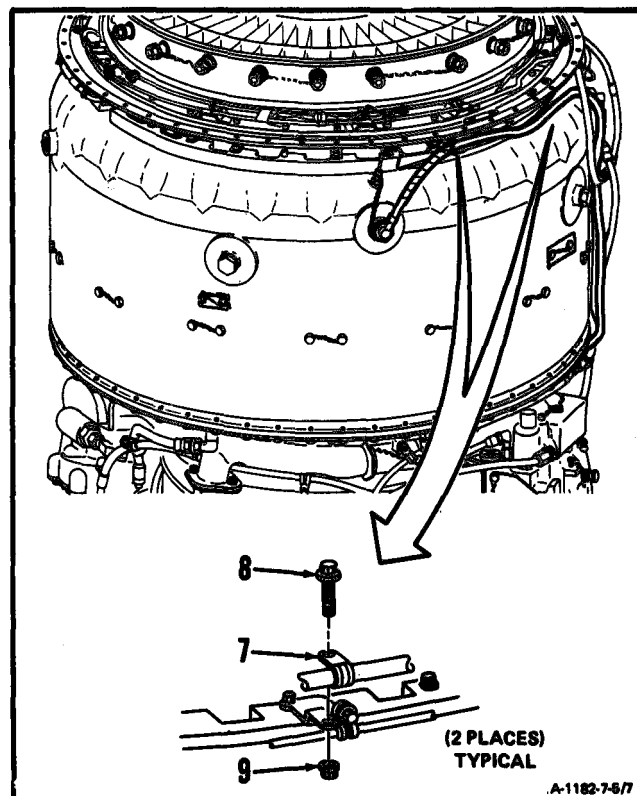


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7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued)

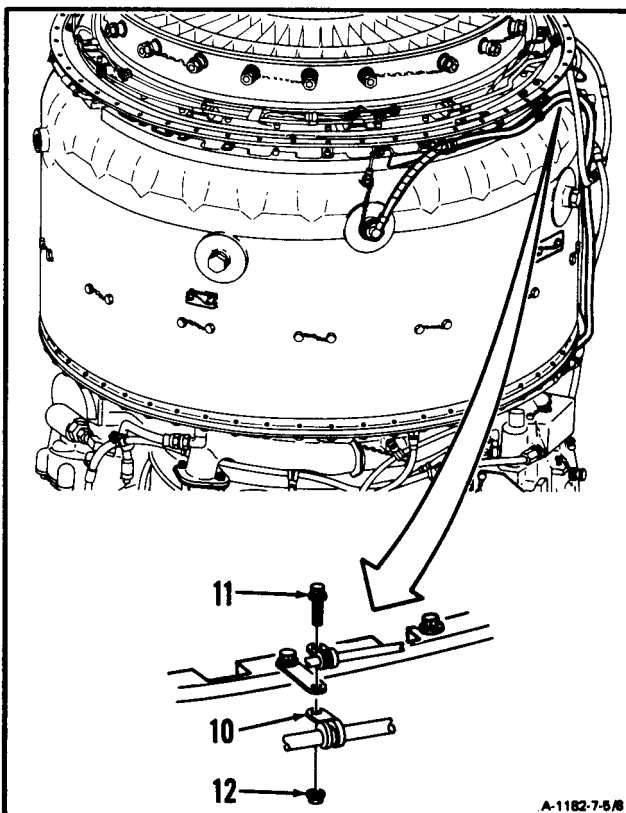
7-5

6. Install two clamps (7), bolts (8), and nuts (9).



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7. Install clamp (10), bolt (11), and nut (12).

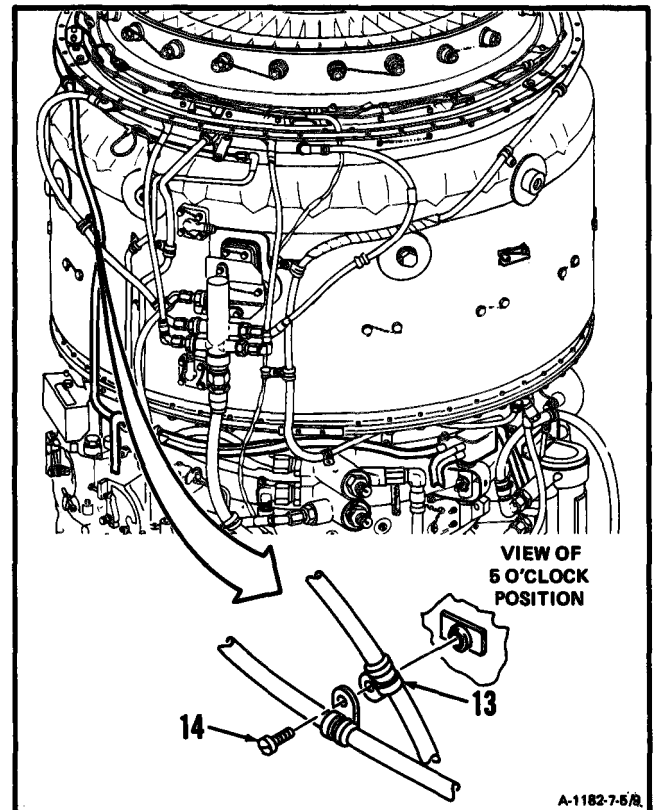


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7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued)

7-5

8. Install damp (13) and screw (14). Lockwire screw (14). Use lockwire (E29).



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7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued)

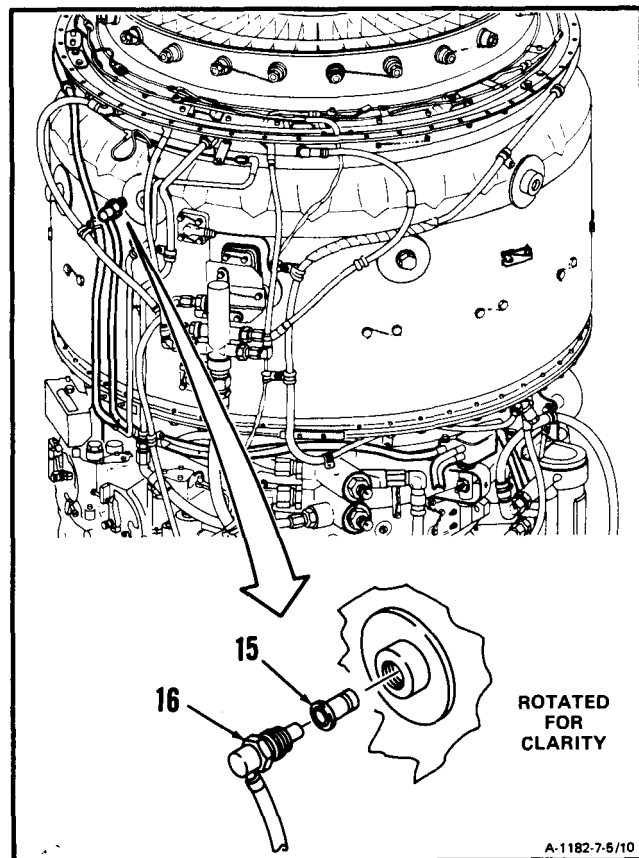
7-5

9. Install spark igniter (15) on ignition lead (16).

CAUTION

To prevent shorting of ignition lead, do not allow anti-seize compound to touch electrical contacts and insulators.

10. Coat threads of ignition lead (16) with anti-seize compound (E5).
11. Install ignition lead (16). Torque to 135 inch-pounds. Use crowfoot attachment. Lockwire ignition lead (16). Use lockwire (E29).

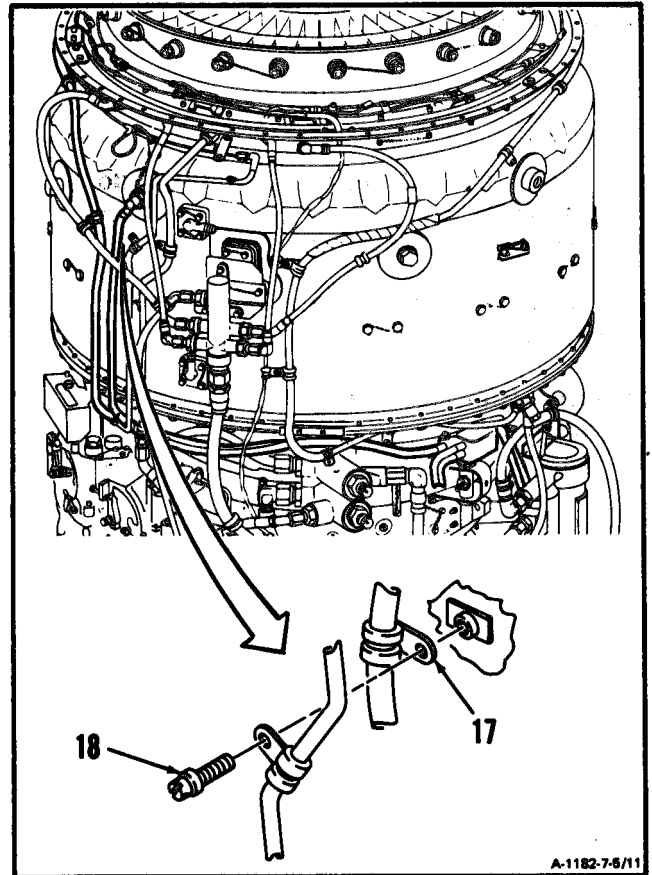


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7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued)

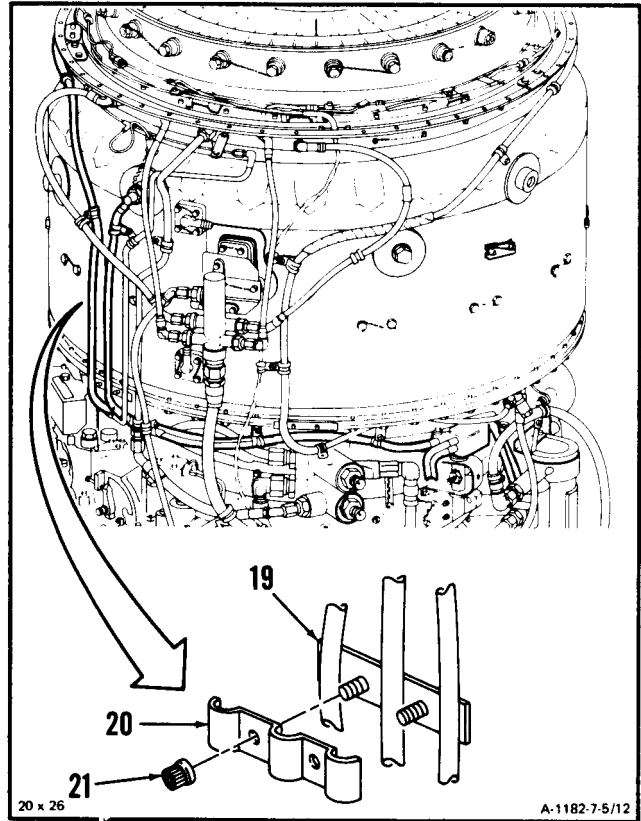
7-5

12. Install clamp (17) and screw (18). Lockwire screw (18). Use lockwire (E29).



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13. Install clamps (19 and 20) and two nuts (21).

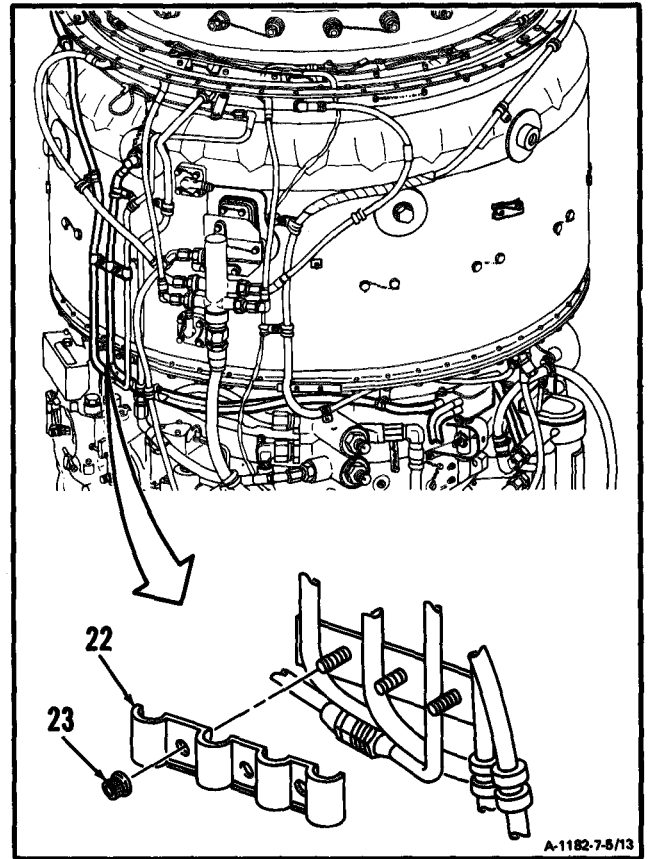


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7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued)

7-5

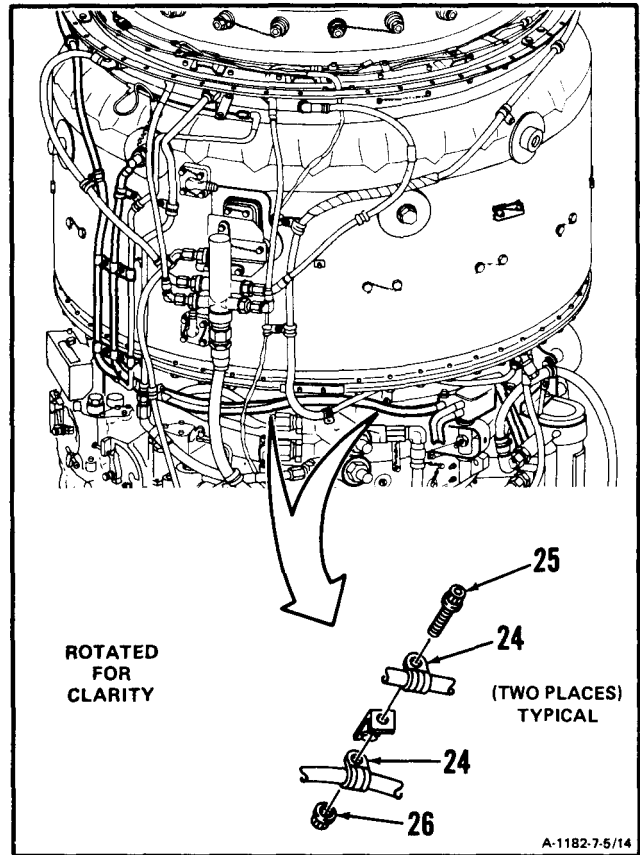
14. Install clamp (22) and three nuts (23).



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7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued)

15. Install four clamps (24), two bolts (25), and nuts (26).



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7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY(Continued)

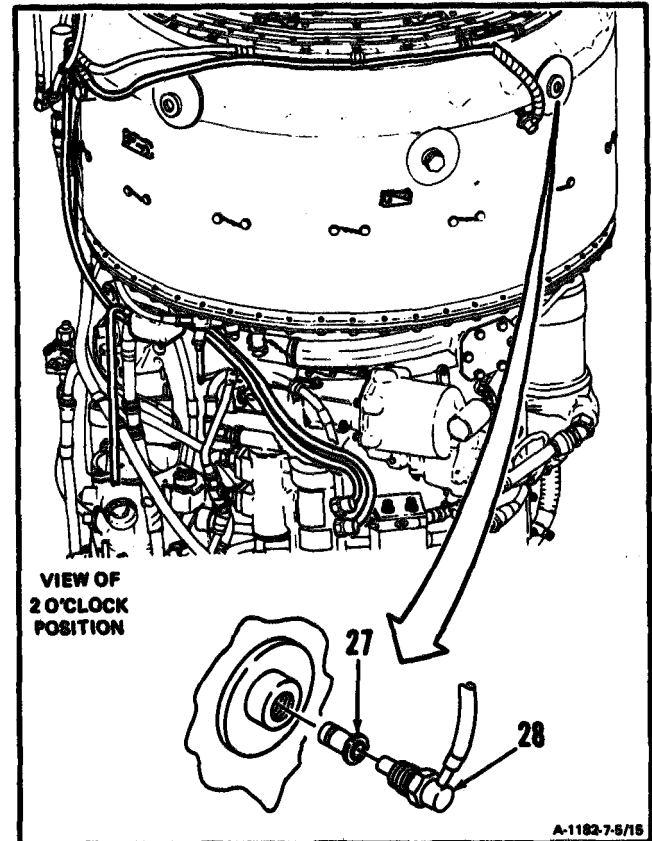
7-5

16. Install spark ignitar (27) on ignition lead (28).

CAUTION

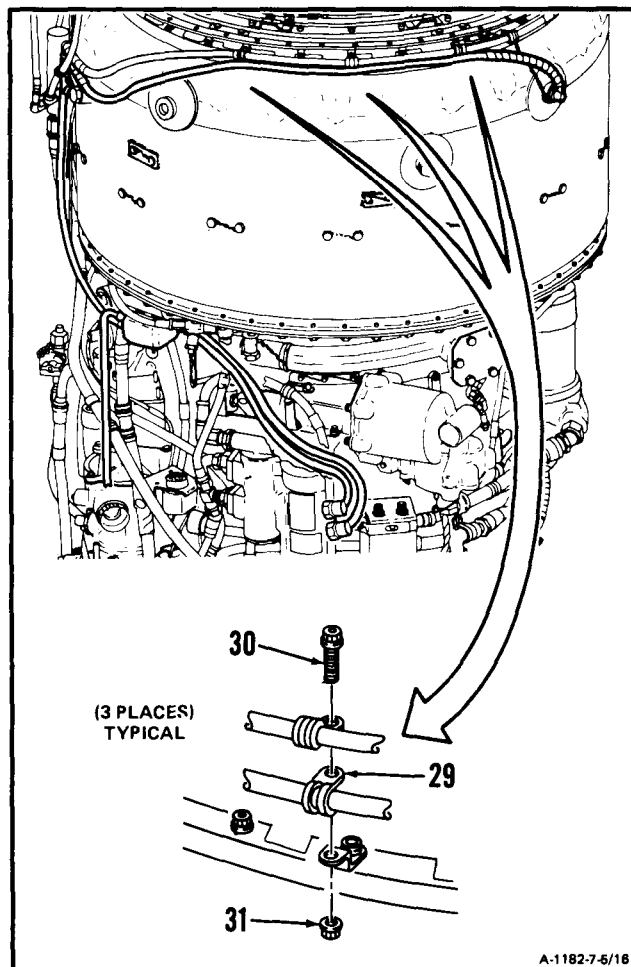
To prevent shorting of ignition lead, do not allow anti-seized compound to touch electrical oontacts and insulators.

17. Coat threads of ignition lead (28) with anti-seize compound (E5).
18. Install ignition lead (28). Torque to 136 inch-pounds. Use crowfoot attachment. Lockwire ignition lead (28). Use lockwire (E29).



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19. Install three clamps (29), bolts (30), and nuts (31).

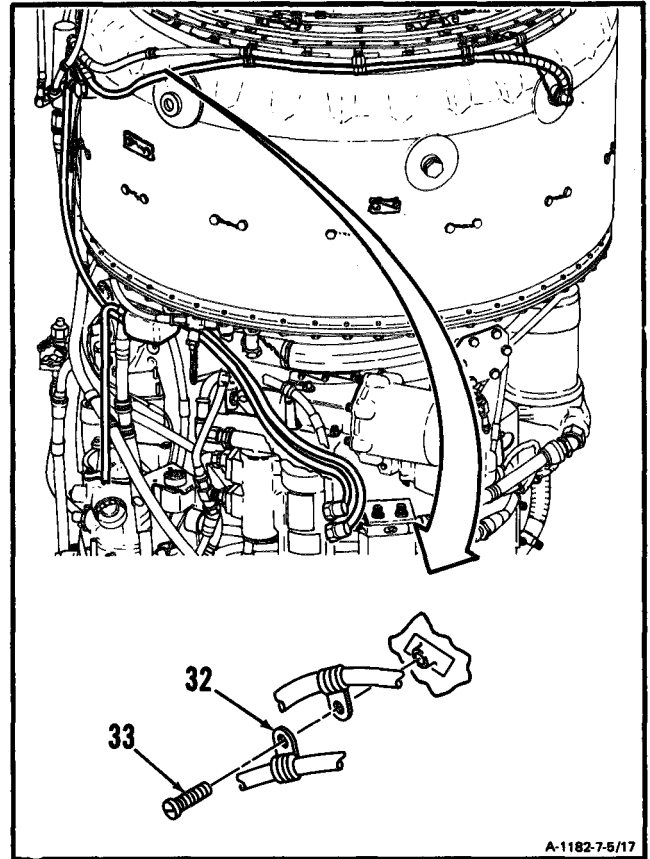


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7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued)

7-5

20. **Install clamp (32), and screw (33).** Lockwire screw (33). Use lockwire (E29).



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7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued)

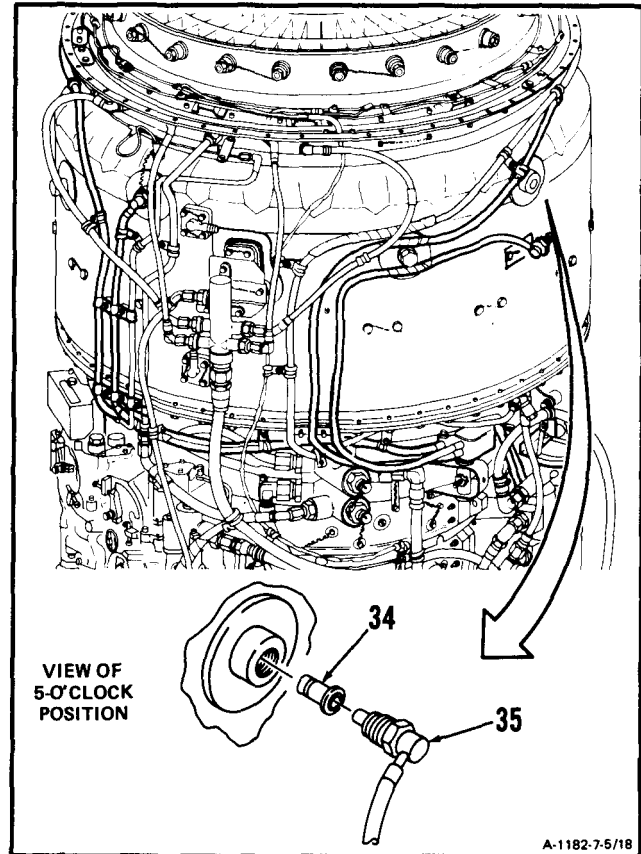
7-5

21. Install spark igniter (34) on ignition lead (35).

CAUTION

To prevent shorting of ignition lead, do not allow anti-seize compound to touch electrical contacts and insulators.

22. Coat threads of ignition lead (35) with anti-seize compound (E5).
23. Install ignition lead (35). Torque to **135 inch-pounds**. Use crowfoot attachment. Lockwire ignition lead (35). Use lockwire (E29).

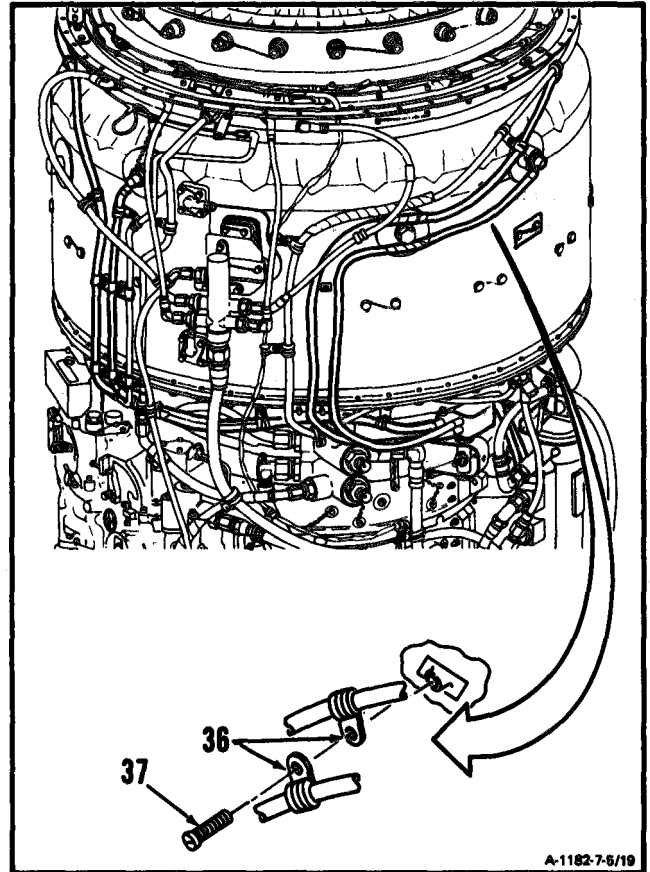


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7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued)

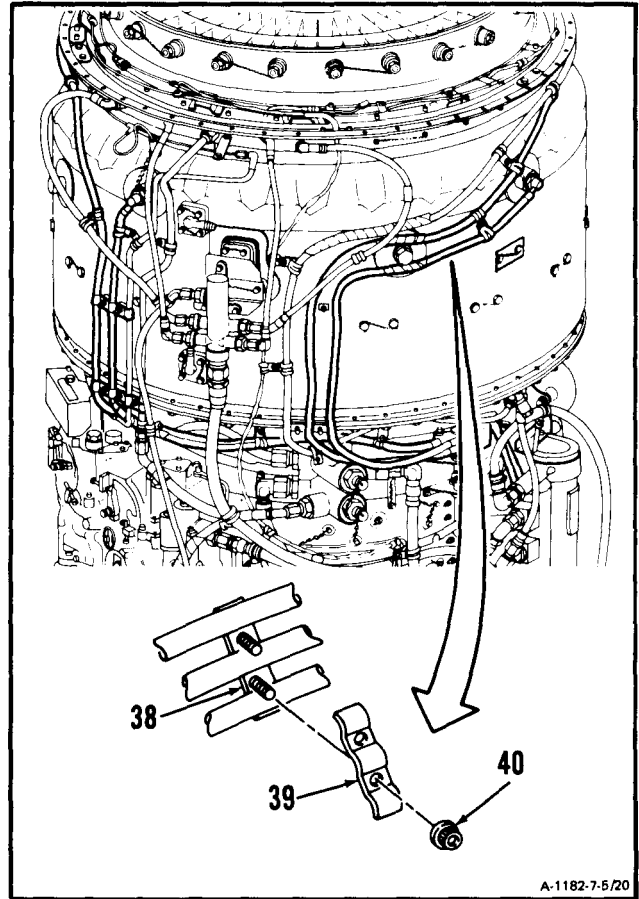
7-5

24. Install two clamps (36), and screw (37). Lock-wire screw (37). Use lockwire (E29).



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25. Install clamps (38 and 39) and two nuts (40).

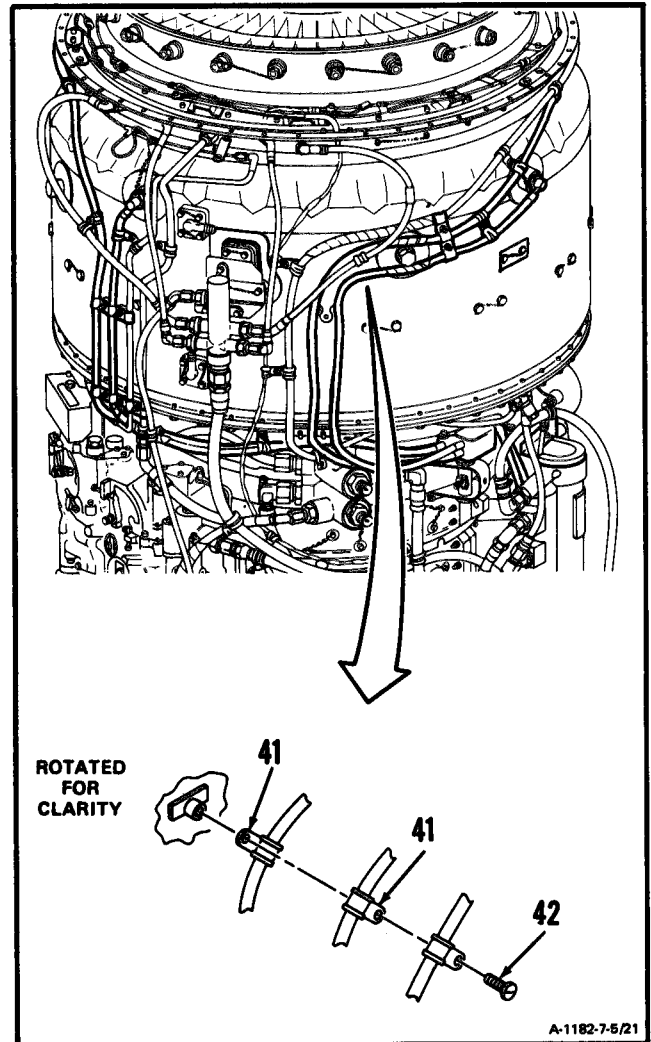


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7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued)

7-5

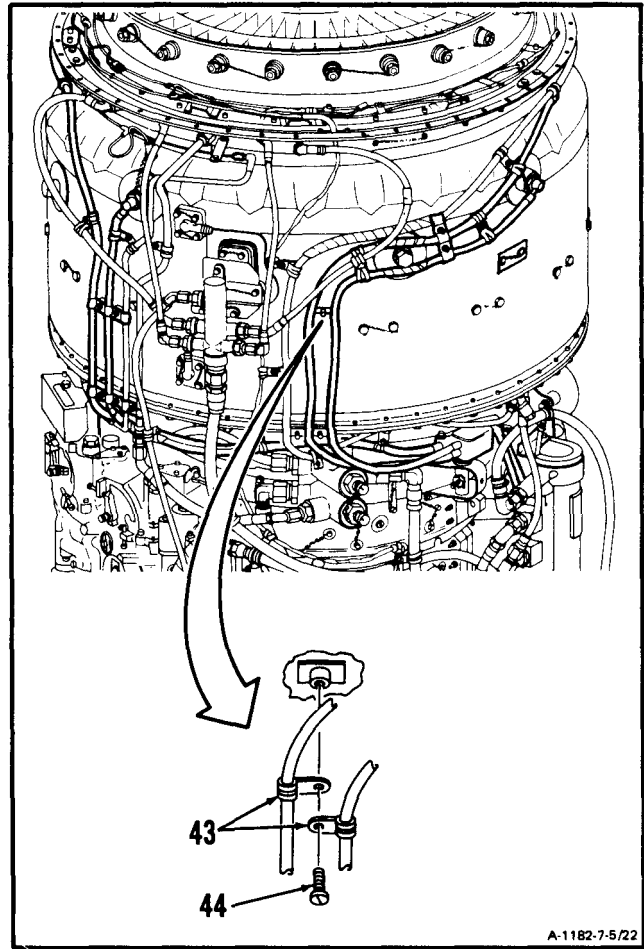
26. Install two clamps (41) and screw (42). Lockwire screw (42). Use lockwire (E29).



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7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued)

27. Install two clamps (43) and screw (44). Lock-wire screw (44). Use lockwire (E29).



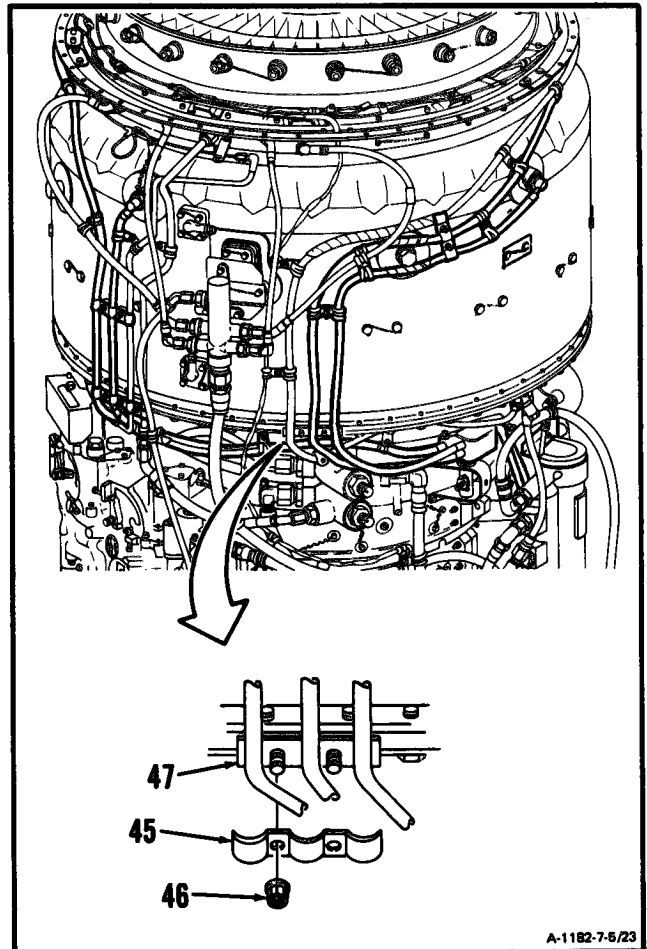
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7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued)

7-5

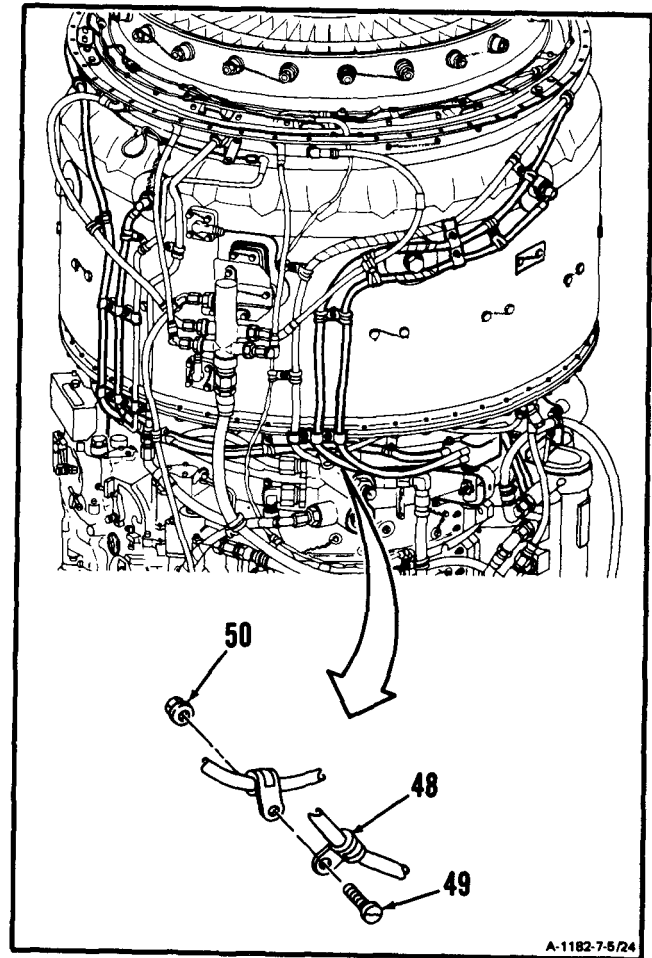
28. Install retainig strap (45) and two nuts (46) to bracket (47).



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7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued)

29. Install clamp (48), screw (49), and nut (50).

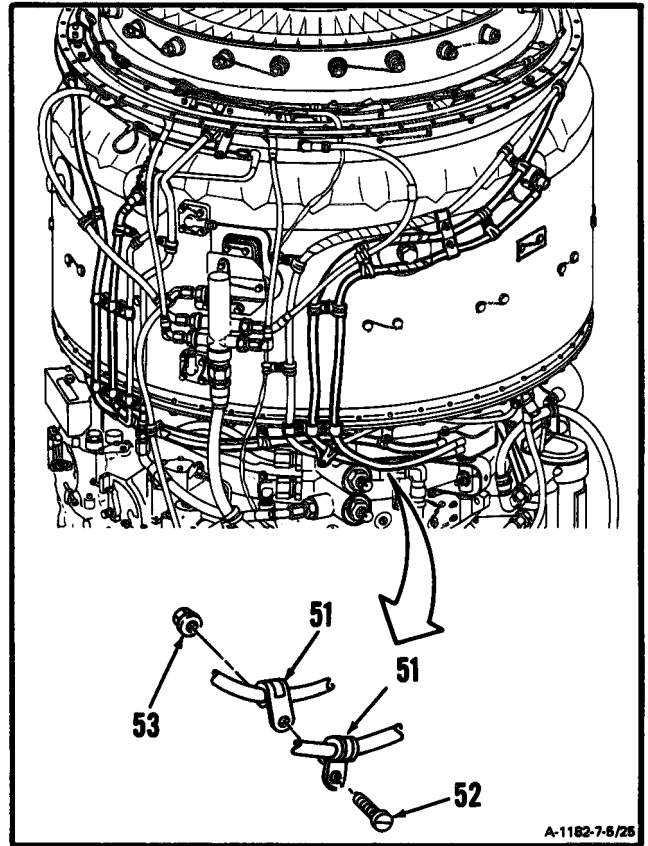


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7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued)

7-5

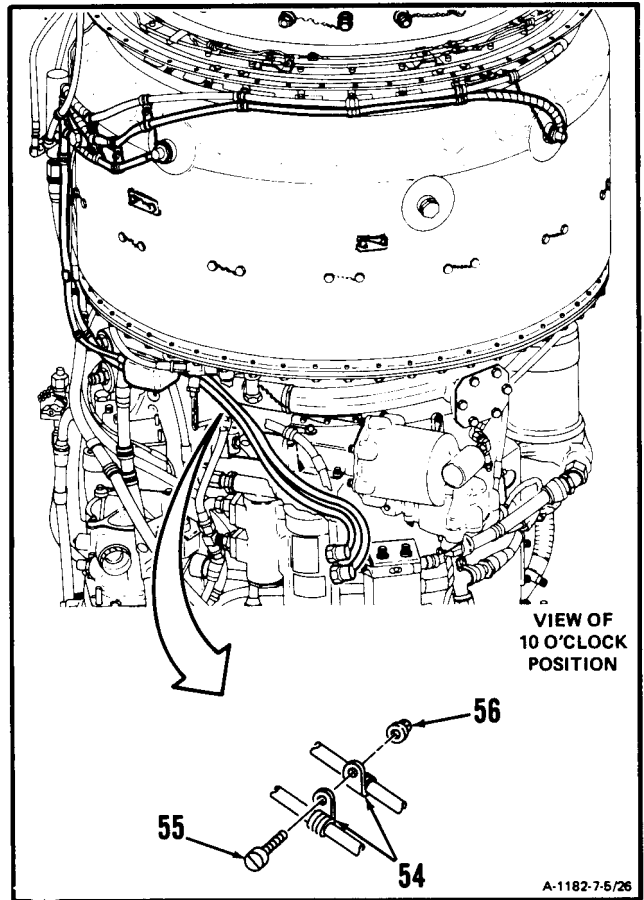
30. Install two clamps (51), screw (52), and nut (53).



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7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued)

31. Install two clamps (54), screw (55), and nut (56).

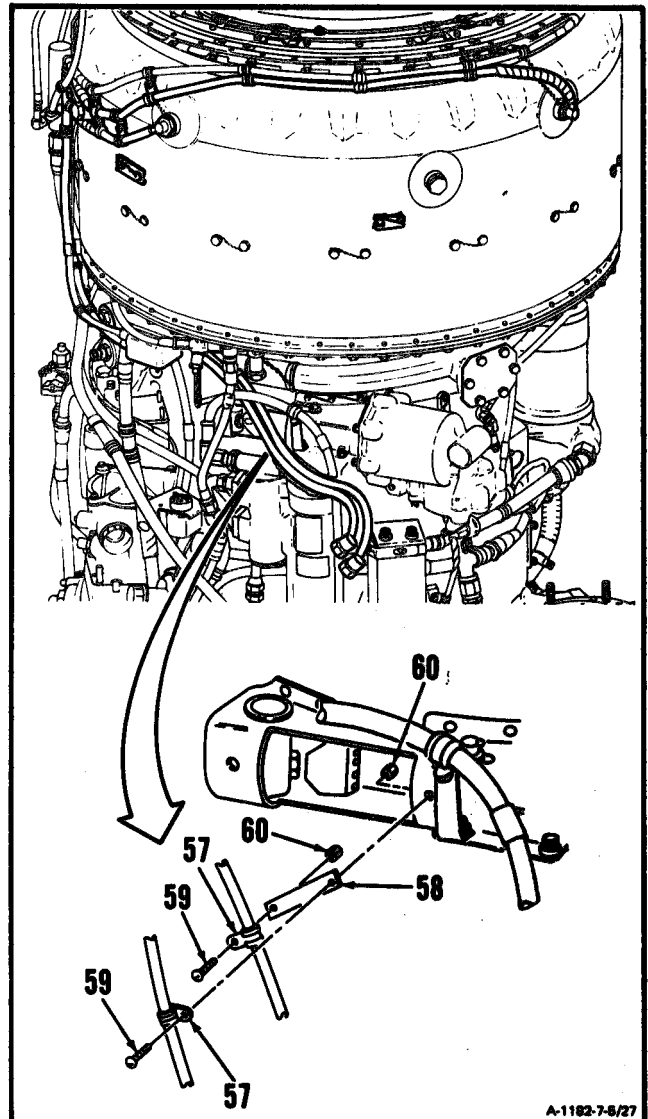


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7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued)

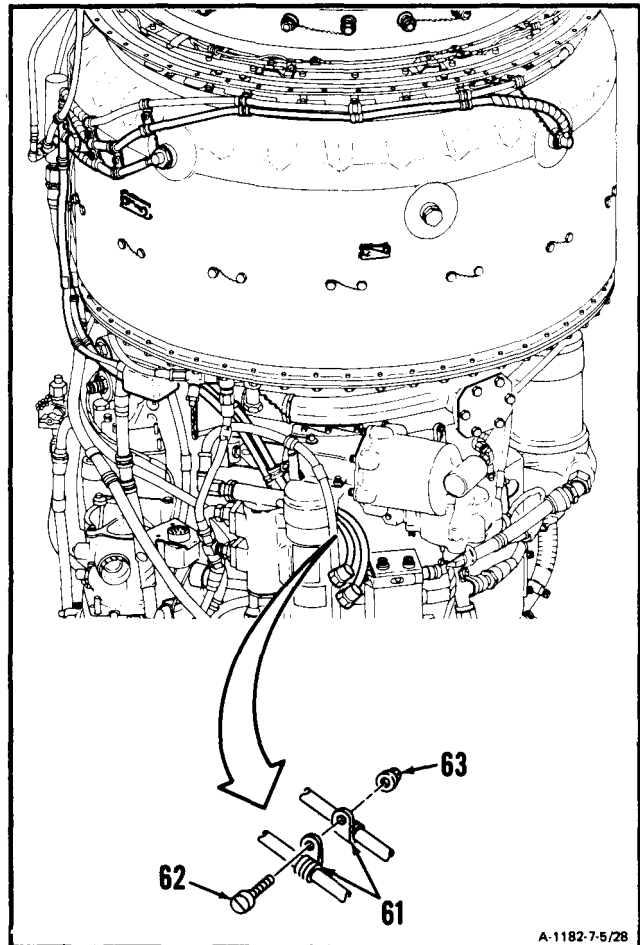
7-5

32. Install two clamps (57), bracket (58), two screws (53), and nuts (60).



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33. Install two clamps (61), screw (62), and nut (63).

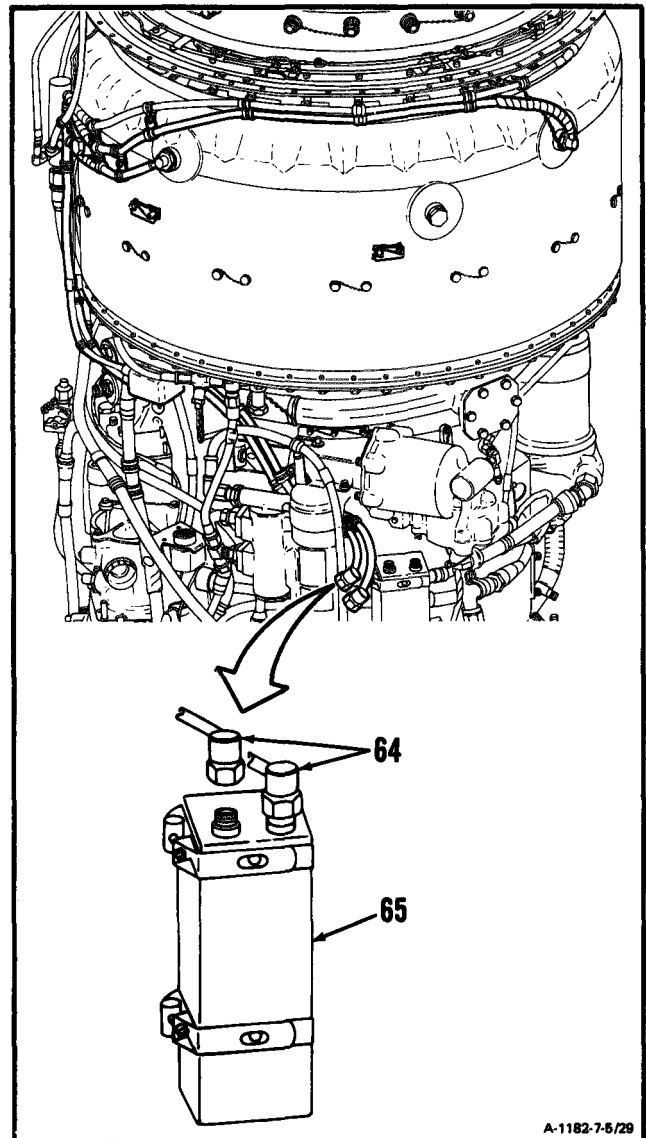


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7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued)

7-5

34. **Connect two coil and cable assembly leads (64)** to ignition exciter (65). Lockwire leads (64). Use lockwire (E29).

**INSPECT**

A-1182-7-5/29

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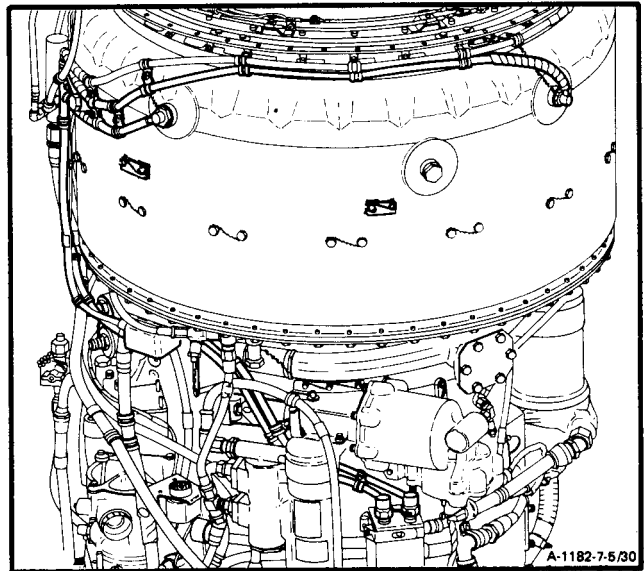
7-67

7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued)

7-5

FOLLOW-ON MAINTENANCE:

None



END OF TASK

Section II. SPARK IGNITERS - MAINTENANCE PROCEDURES

7-6 REMOVE SPARK IGNITERS

7-6

INITIAL SETUP

General Safety Instructions:

Applicable Configurations

All

WARNING

Tools:

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

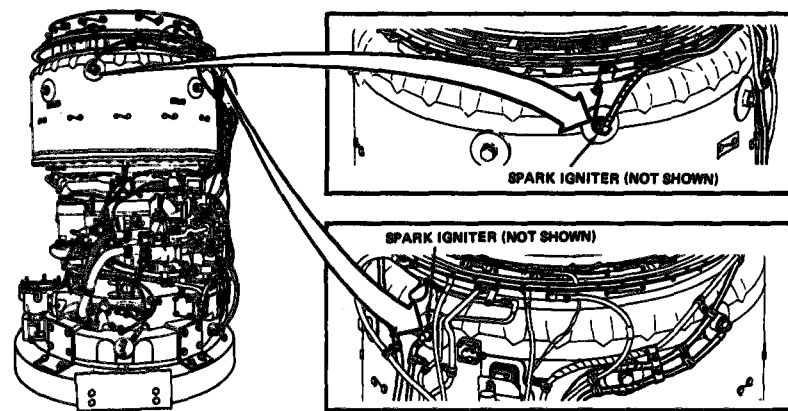
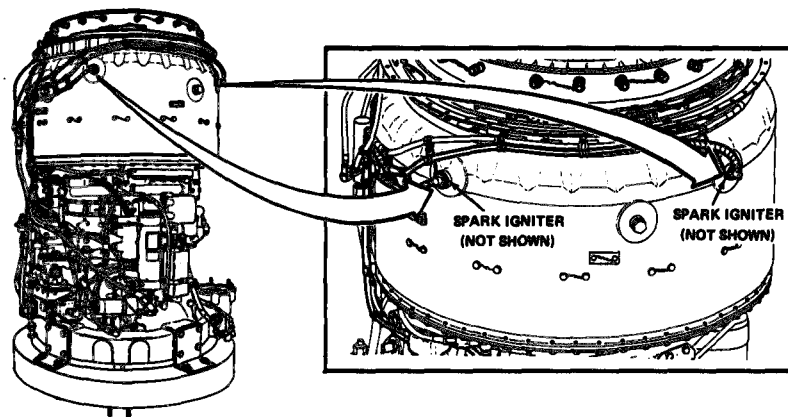
Materials:

None

Personnel Required:

68B10 Aircraft Powerplant Repairer

The ignition exciter stores very high and possibly fetal voltage. Use extreme care when working around ignition igniter. Serious injury could result if exciter is accidentally grounded. Do not probe inside of output receptacles with fingers or metal objects. Discharge exciter only with insulated screwdriver. In case of shock or injury, get medical attention.



42 X 42

A-1182-7-6/1

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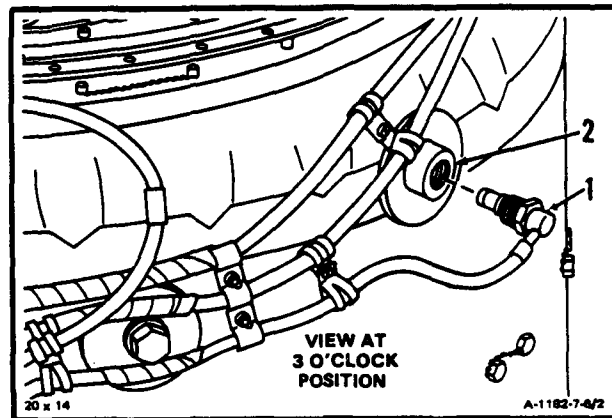
WARNING

When discharging ignition leads, remove one lead at a time and discharge to combustor housing. Failure to do so may result in serious shock when you are removing other leads. In case of serious shock, get medical attention.

NOTE

The procedure for removal of four spark igniters located at the 3-, 6-, 9-, and 12-o'clock positions is the same. Only the 3-o'clock position is shown.

1. **Remove** lockwire and **ignition lead (1)** from combustor housing (2).



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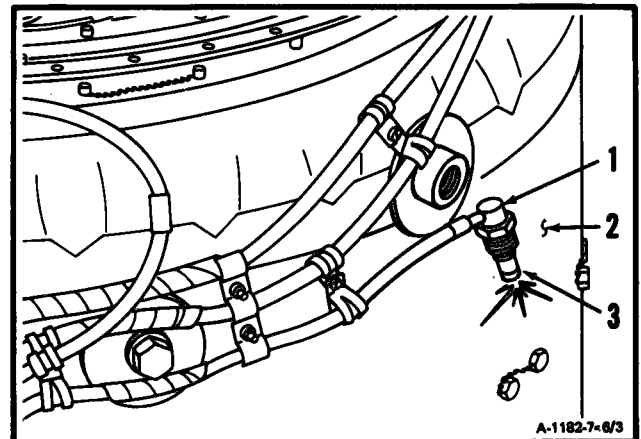
7-6 REMOVE SPARK IGNITERS (Continued)

7-6

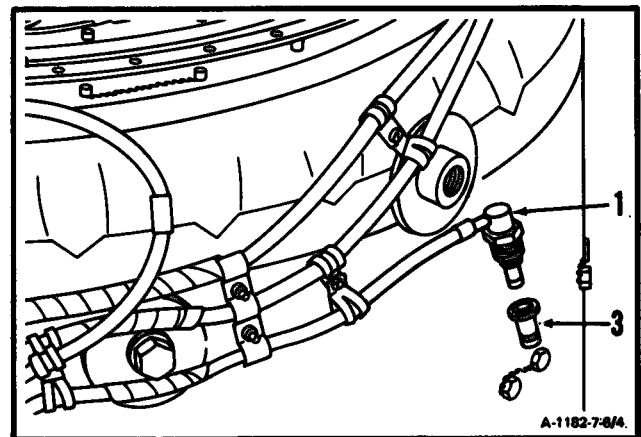
NOTE

If spark igniter stays with ignition lead, do steps 2 and 3. If spark igniter stays in combustor housing do steps 4. and 5.

2. Discharge ignition lead (1) and spark igniter (3) by touching to combustor housing (2).



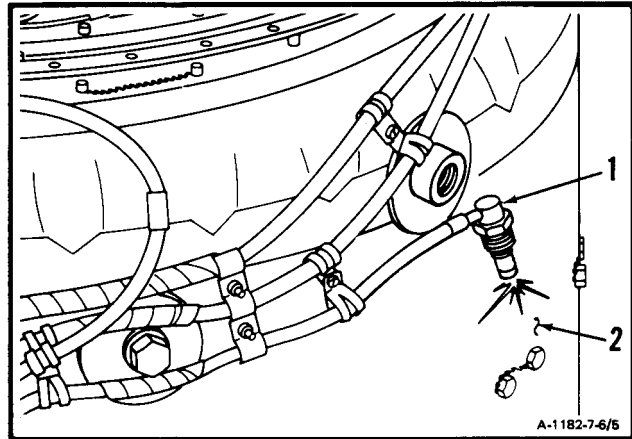
3. Remove spark ignitar (3) from ignition lead (1).

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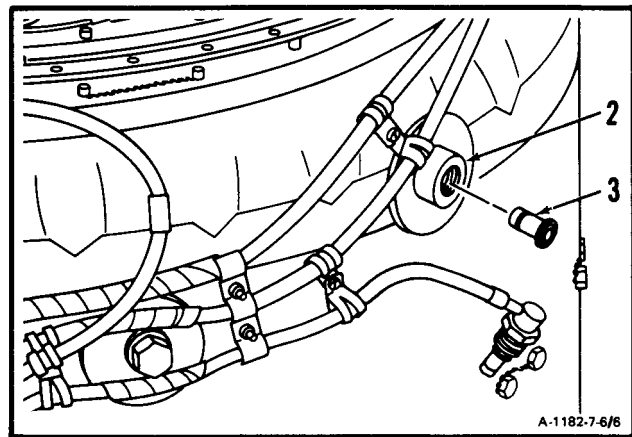
7-71

7-6 REMOVE SPARK IGNITERS (Continued)

- 4. Discharge ignition lead (1) by touching to combustor housing (2).

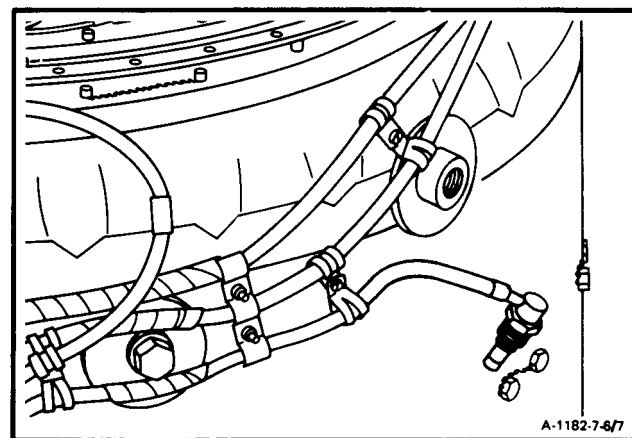


- 5. Remove spark igniter (3) from combustor housing (2).



FOLLOW-ON MAINTENANCE:

None



END OF TASK

7-7 CLEAN SPARK IGNITERS

7-7

INITIAL SETUP**Applicable Configurations:**

All

Tools:

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

Materials:

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

Personnel Required:

68B10 Aircraft Powerplant Repairer

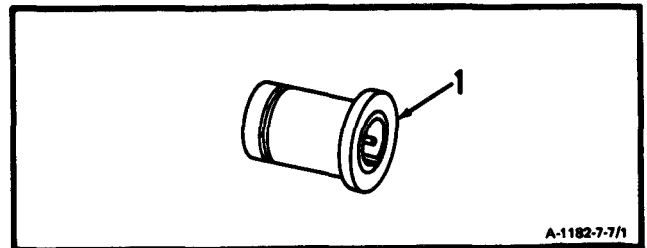
Equipment Condition:

Off Engine Task
Spark igniters Removed (Task 7-6)

General Safety Instructions:**WARNING**

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

1. Wear gloves (E20). **Clean four spark igniters (1)**, using dry cleaning solvent (E17) and brush.
2. Remove any **remaining solvent** using clean, dry lint-free cloth (E26).

**FOLLOW-ON MAINTENANCE:**

Inspect Spark Igniters (Task 7-8).

END OF TASK

7-8 INSPECT SPARK IGNITERS

7-8

INITIAL SETUP**Applicable Configurations:**

All

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

None

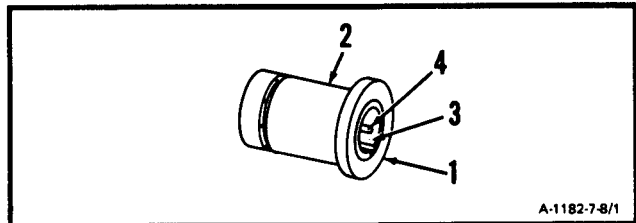
Personnel Required:

68630 Aircraft Powerplant Inspector

Equipment Condition:Off Engine Task

1. Inspect four spark igniters (1).

- a. There shall be no cracks or gouges in shank (2). Chafing allowed to 0.010 inch depth.
- b. There shall be no chips or cracks in ceramic surface (3).
- c. Pin (4) shall not be bent or broken.

**FOLLOW-ON MAINTENANCE:**

None

END OF TASK

7-9 REPAIR SPARK IGNITERS

7-9

INITIAL SETUP**Applicable Configurations:**

All

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

Goggles

Compressed Air Source

Materials:

Crocus Cloth (E15)

Personnel Required:

68B10 Aircraft Powerplant Repairer

68B30 Aircraft Powerplant Inspector

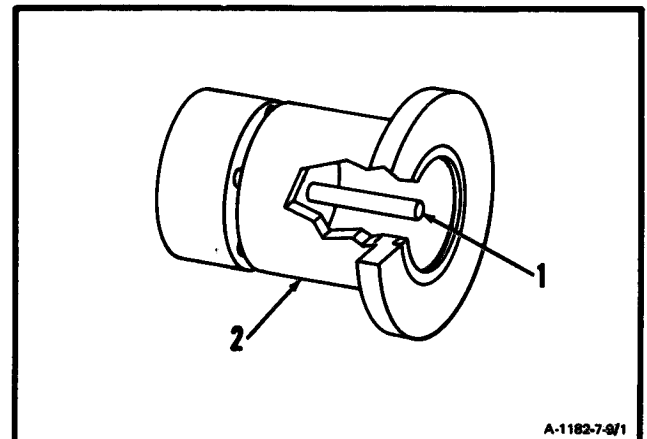
Equipment Condition:

Off Engine Task

NOTE

This repair is allowed provided it does not cause pin to break or crack.

1. **Straighten bent pin (1)** of spark igniter (2). Using long-nose pliers, gently move pin (1) until straight.

**GO TO NEXT PAGE**

7-9 REPAIR SPARK IGNITERS (Continued)

7-9

2. **Remove corrosion from pin (1)** of spark igniter (2). Polish pin, using in and out motion over entire length of pin until corrosion is removed. Use crocus cloth (E15).

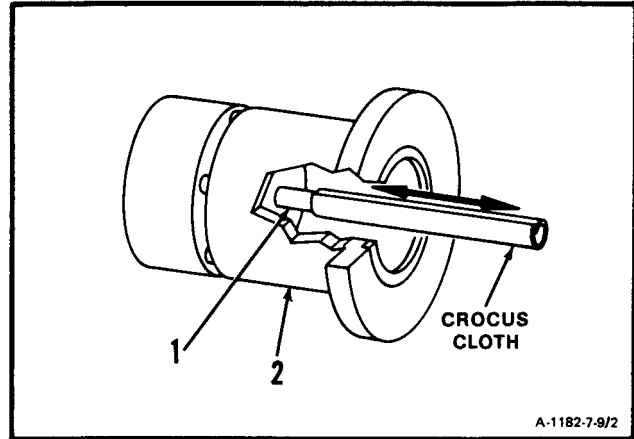
WARNING

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

3. Wear goggles. **Remove loosened particles** from pin (1), using clean, dry compressed air.

INSPECT**FOLLOW-ON MAINTENANCE:**

Clean Spark Igniters (Task 7-7).

**END OF TASK**

7-10 INSTALL SPARK IGNITERS

7-10

INITIAL SETUP

Applicable Configurations:

All

Tools:

Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114
Torque Wrench, 30-150 Inch-Pounds
Crowfoot Attachment, 7/8 Inch

Materials:

Anti-Seize Compound (E5)
Lockwire (E29)

Personnel Required:

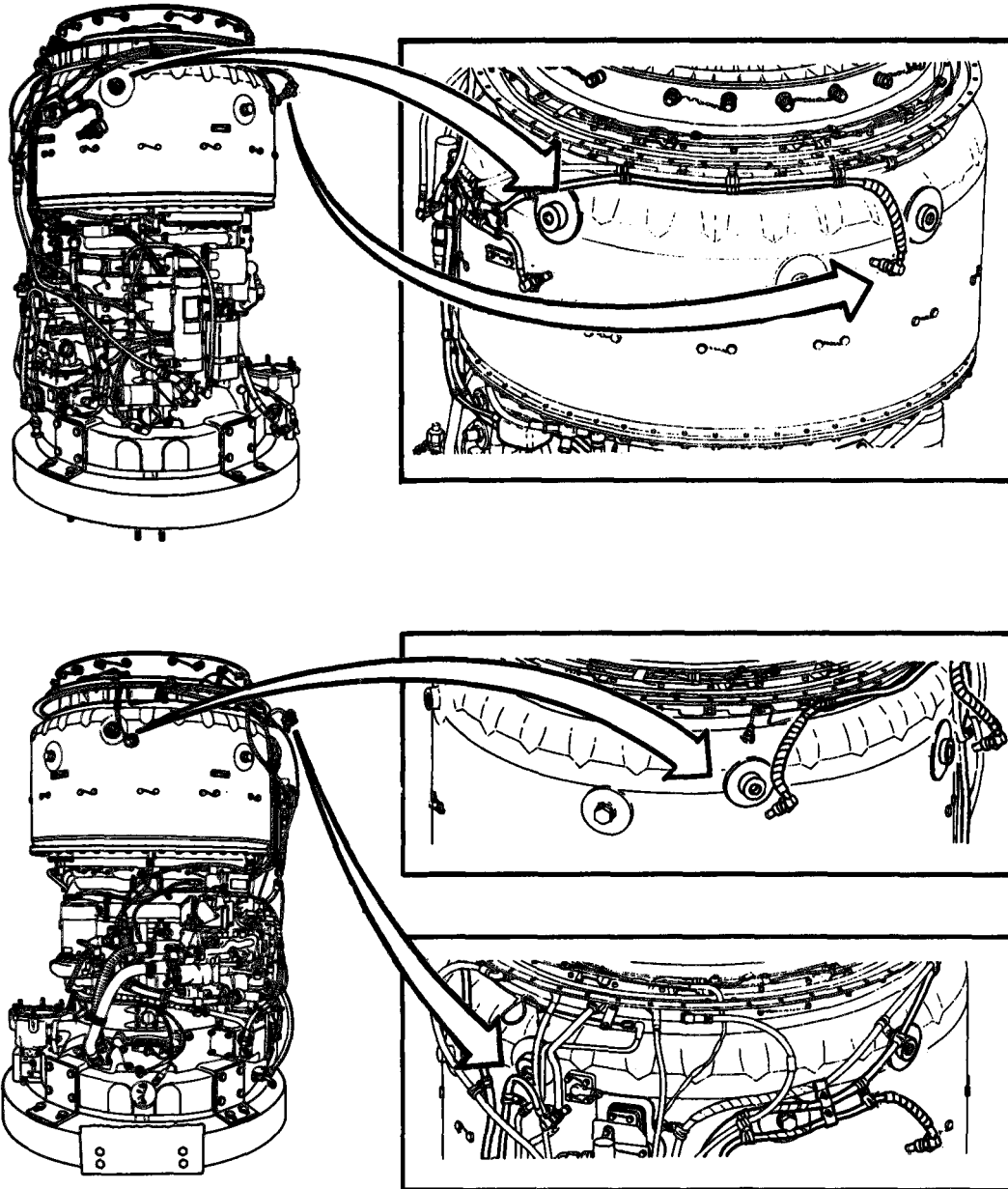
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

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7-10 INSTALL SPARK IGNITERS (Continued)

7-10



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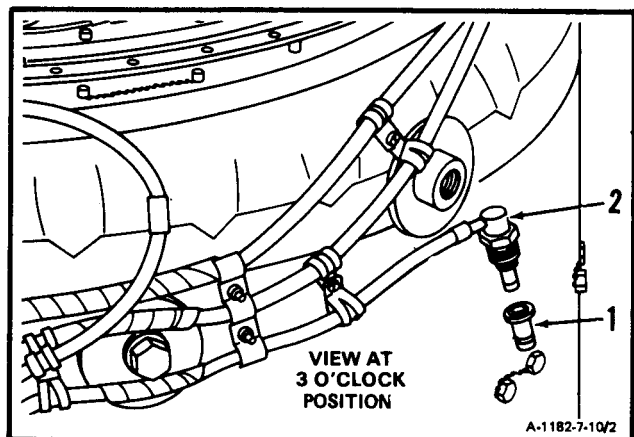
NOTE

The procedure for installing four spark igniters at 3-, 6-, 9-, and 12-o'clock positions is the same except for lockwiring. Only the 3-o'clock position is shown for installation.

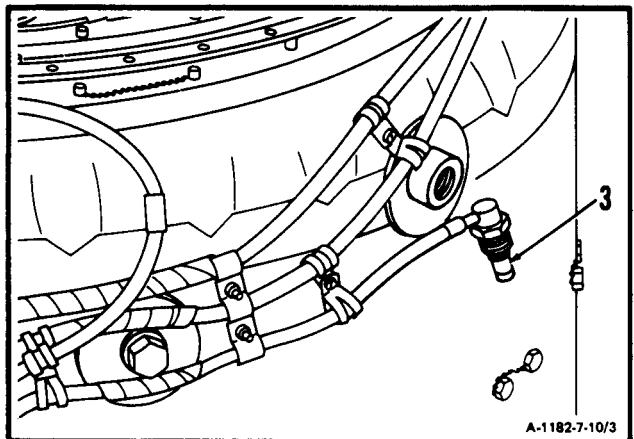
NOTE

Install gently by hand until fully engaged.

1. Install spark igniter (1) on ignition lead (2).



2. Apply a light coat of anti-seize compound (E5) to ignition lead threads (3).

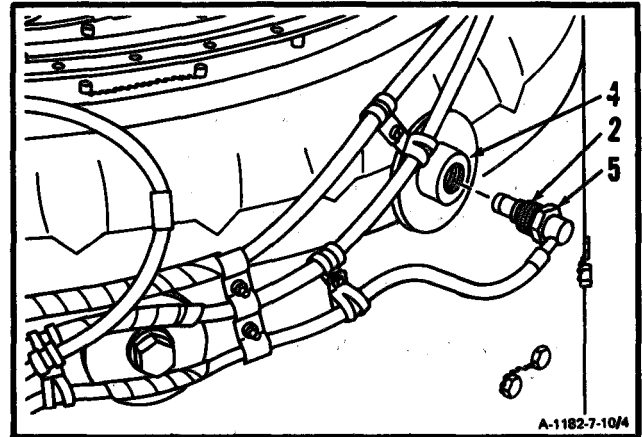


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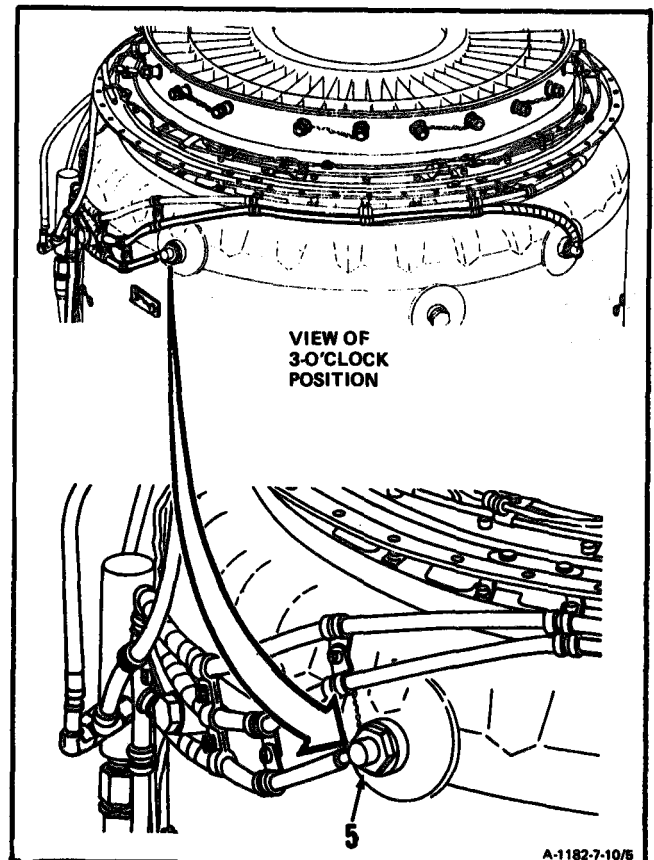
7-10 INSTALL SPARK IGNITERS (Continued)

7-10

3. Install ignition lead (2) in combustor housing (4). Torque ignition lead connector (5) to 135 inch-pounds. Use crowfoot attachment.



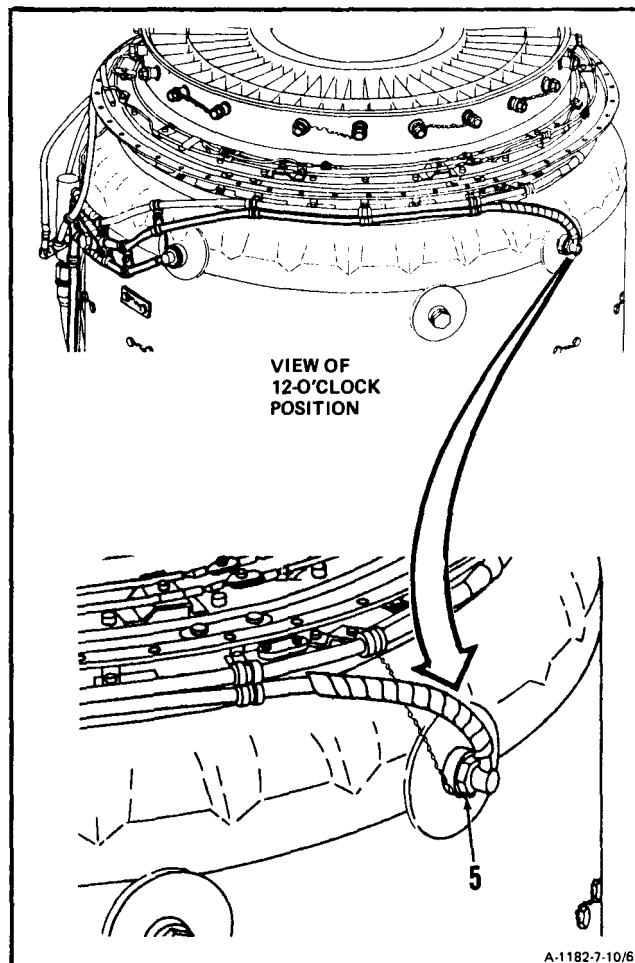
4. Lockwire connector (5) at 3-o'clock position. Use lockwire (E29).

**GO TO NEXT PAGE**

7-10 INSTALL SPARK IGNITERS (Continued)

7-10

5. Lockwire connector (5) at 12-o'clock position.
Use lockwire (E29).

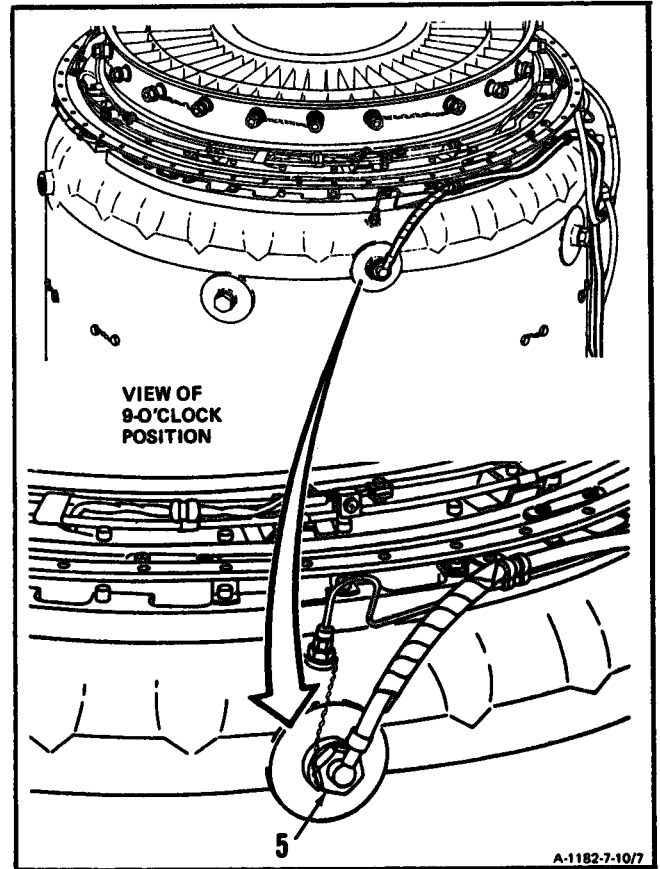


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7-10 INSTALL SPARK IGNITERS (Continued)

7-10

6. Lockwire corrector (5) at 9-o'clock position.
Use lockwire (E29).

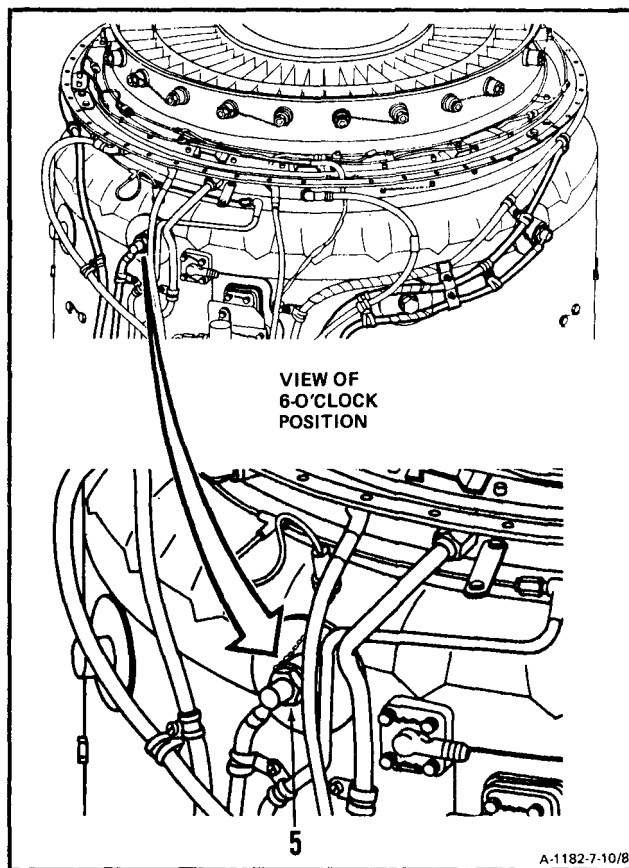


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7-10 INSTALL SPARK IGNITERS (Continued)

7-10

7. Lockwire connector (5) at 6-o'clock position.
Use lockwire (E29).



INSPECT

FOLLOW-ON MAINTENANCE:

None

END OF TASK

Section III. IGNITION EXCITER – MAINTENANCE PROCEDURES

7-11 REMOVE IGNITION EXCITER

7-11

INITIAL SETUP

Applicable Configurations:

All

Tools:

Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4994

Materials:

None

Personnel Required:

68B10 Aircraft Powerplant Repairer

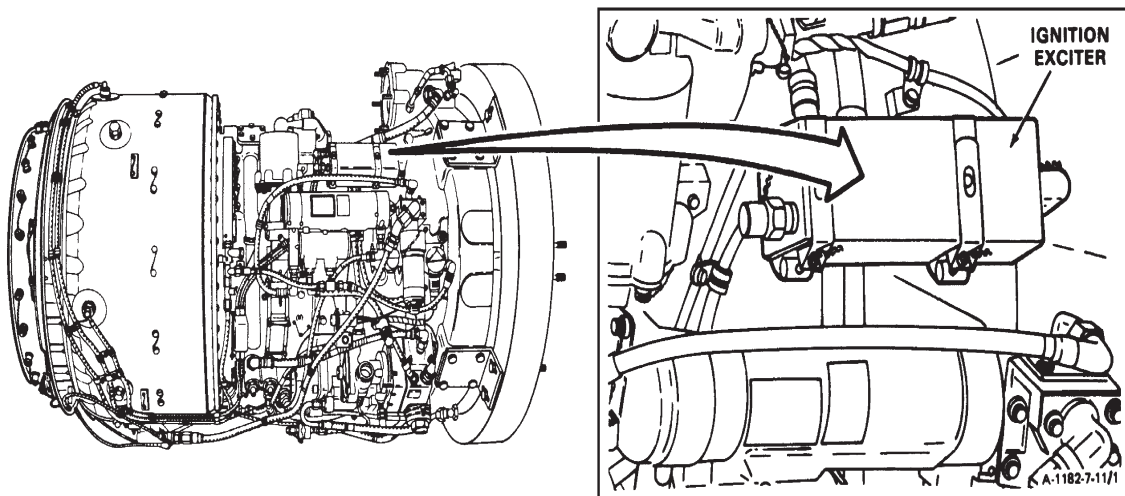
General Safety Instructions:

WARNING

The ignition exciter stores very high and possibly fatal voltage. Use extreme care when working around ignition exciter. Serious injury could result if exciter is accidentally grounded. Do not probe inside of output receptacles with fingers or metal object. Discharge exciter only with insulated screwdriver. In case of shock or injury, get medical attention.

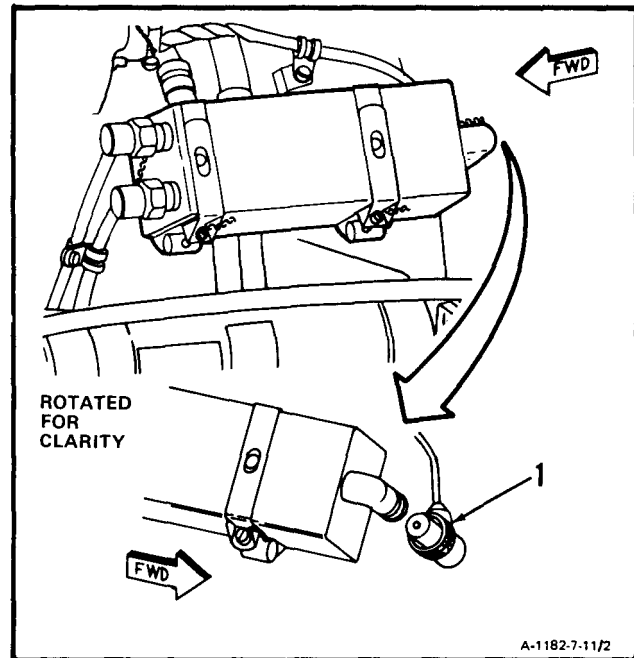
WARNING

The ignition unit contains a very small amount of radioactive material (CESIUM-BARIUM 137) and normally requires no handling precautions. However, severely damaged units that have been broken open, must be handled with forceps or lead gloves and disposed of in accordance with TB 43-0108 and AR 385-11.



GO TO NEXT PAGE

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



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7-11 REMOVE IGNITION EXCITER (Continued)

7-11

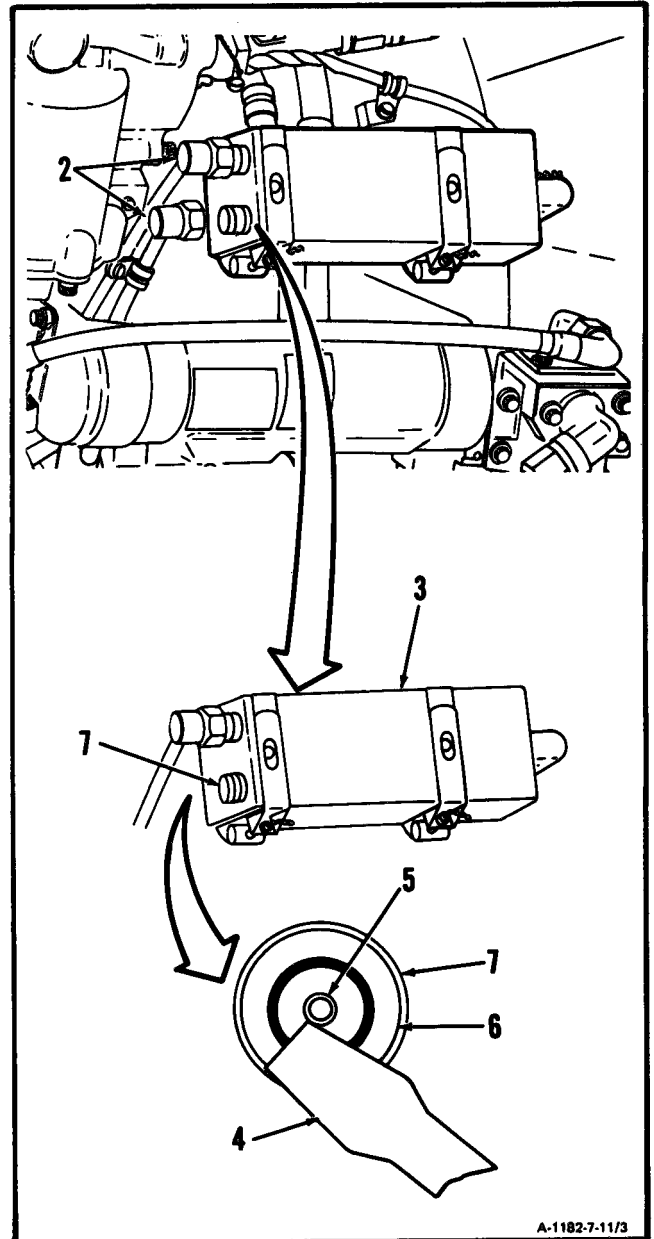
WARNING

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

NOTE

Step 2. applies to both output receptacles.

2. Remove lockwire and **disconnect coil and cable assembly lead (2)**.
3. **Discharge ignition exciter (3)** by placing tip of insulated screwdriver (4) against pin (5) and edge (6) of receptacle (7).

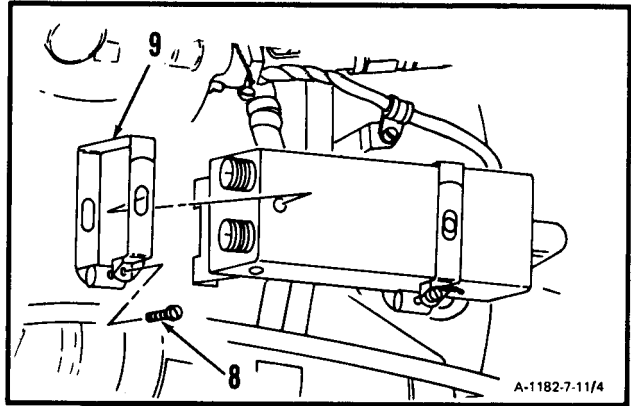


A-1182-7-11/3

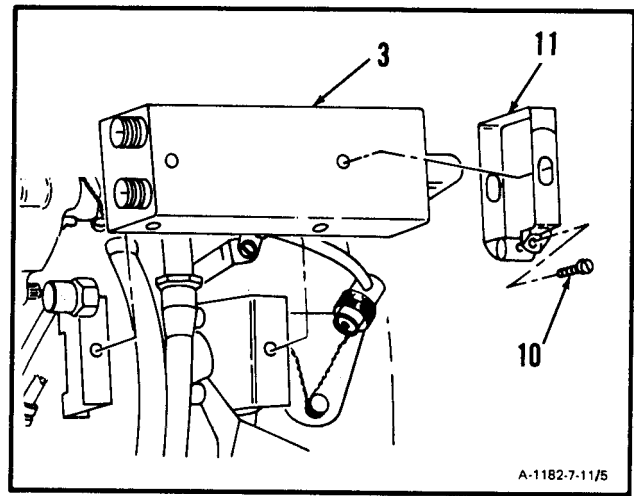
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7-11 REMOVE IGNITION EXCITER (Continued)

4. Remove lockwire, screw (8), and clamp (9).

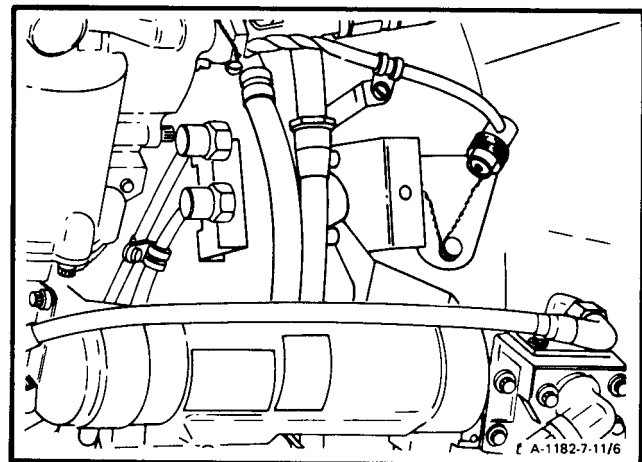


5. Remove lockwire, screw (10), clamp (11), and ignition exciter (3).



FOLLOW-ON MAINTENANCE:

None



END OF TASK

7-12 CLEAN IGNITION EXCITER

7-12

INITIAL SETUP**Applicable Configurations:**

All

Tools:

None

Materials:

Dry Cleaning Solvent (E17)

Gloves (E20)

Lint-Free Cloth (E26)

Personnel Required:

68B10 Aircraft Powerplant Repairer

Equipment Condition:

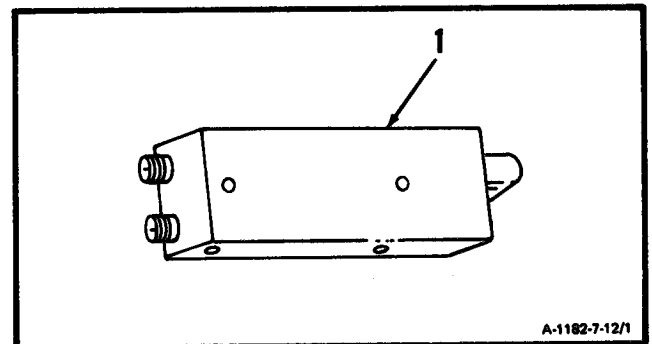
Off Engine Task

Ignition Exciter Removed (Task 7-11)

WARNING

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

1. Wear gloves (E20). **Clean ignition exciter (1)** with clean lint-free cloth (E26) dampened in dry cleaning solvent (E17).

**FOLLOW-ON MAINTENANCE:**

Inspect Ignition Exciter (Task 7-13).

END OF TASK

7-13 INSPECT IGNITION EXCITER

7-13

INITIAL SETUP**Materials:**

None

Applicable Configurations:

All

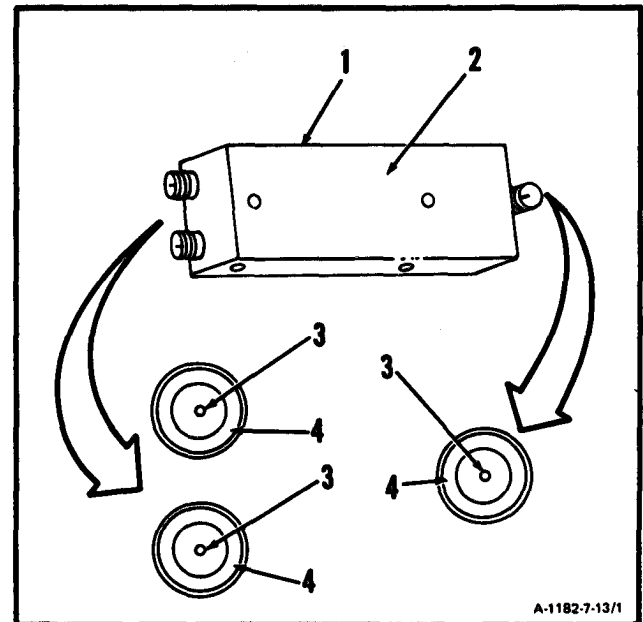
Personnel Required:

68B30 Aircraft Powerplant Inspector

Tools:Technical Inspection Tool Kit,
NSN 5180-00-323-5114**Equipment Condition:**Off Engine Task

1. Inspect ignition exciter (1).

- a. There shall be no cracks or dents in housing (2).
- b. There shall be no bent or broken pins (3).
- c. There shall be no cracks in insulators (4).
- d. There shall be no corrosion.

**FOLLOW-ON MAINTENANCE:**

None

END OF TASK

INITIAL SETUP

Applicable Configurations:

All

Tools:

- Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
- Technical Inspection Tool Kit,
NSN 5180-00-323-5114
- Goggles
- Compressed Air Source

Materials:

Crocus Cloth (E15)

Personnel Required:

- 68B10 Aircraft Powerplant Repairer
- 68B30 Aircraft Powerplant Inspector

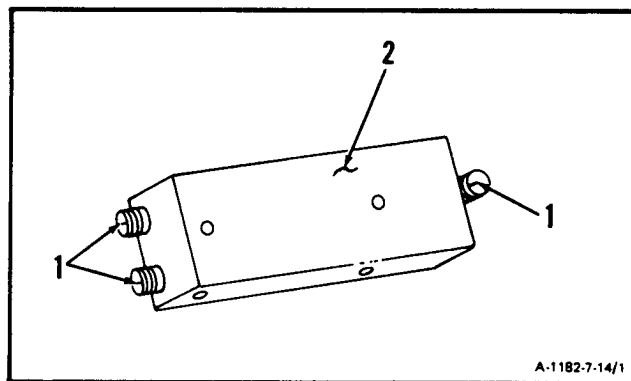
Equipment Condition:

Off Engine Task

NOTE

This repair is allowed provided it does not cause pins to break or crack.

1. **Straighten bent pins (1)** of ignition exciter (2). Using long-nose pliers, gently move pins (1) until they are straight.

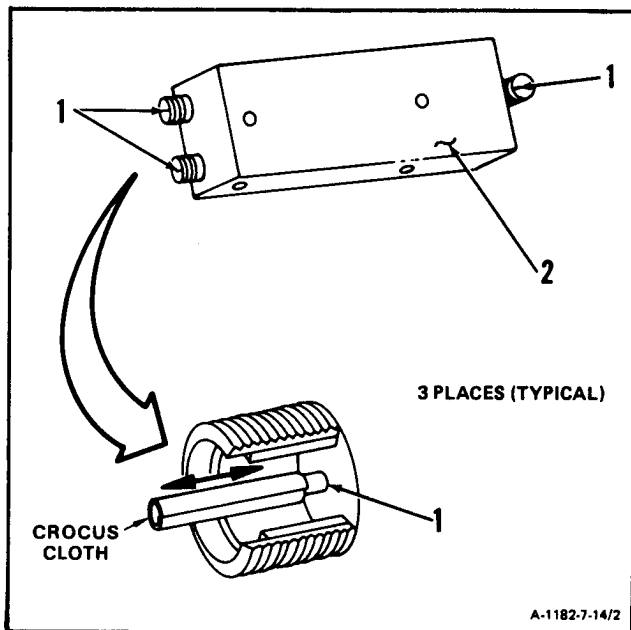


2. **Remove corrosion from pins (1)** of ignition exciter (2). Polish pins, using in and out motion over entire length of pin until corrosion is removed. Use crocus cloth (E15).

WARNING

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

3. Wear goggles. **Remove loosened particles** from pins (1), using clean, dry compressed air.



INSPECT

GO TO NEXT PAGE

7-14 REPAIR IGNITION EXCITER (Continued)

7-14

FOLLOW-ON MAINTENANCE:

None

END OF TASK

7-15 INSTALL IGNITION EXCITER

7-15

INITIAL SETUP

Applicable Configurations:

All

Tools:

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

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

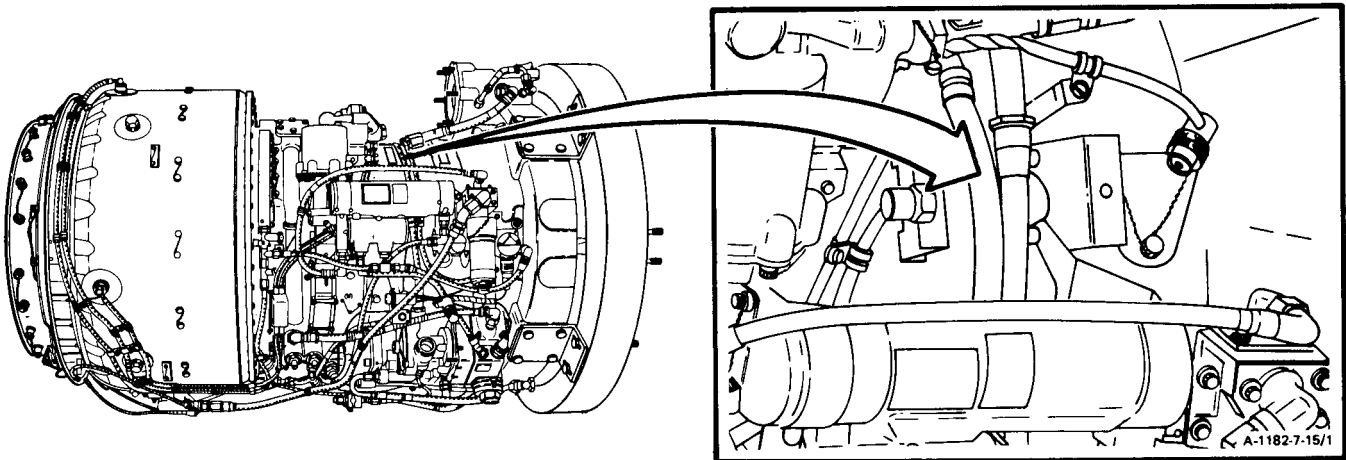
Materials:

Lockwire (E29)

Personnel Required:

68B10 Aircraft Powerplant Repairer

68B30 Aircraft Powerplant Inspector



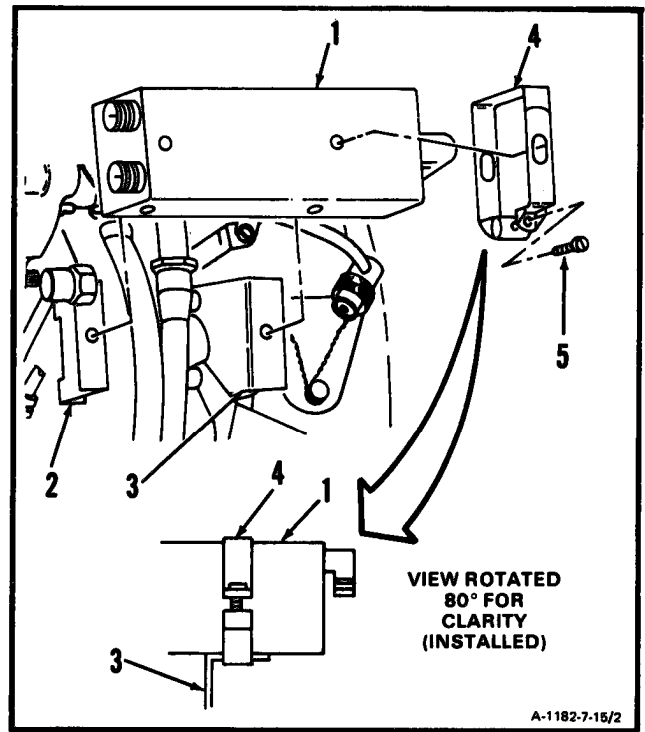
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7-15 INSTALL IGNITION EXCITER (Continued)

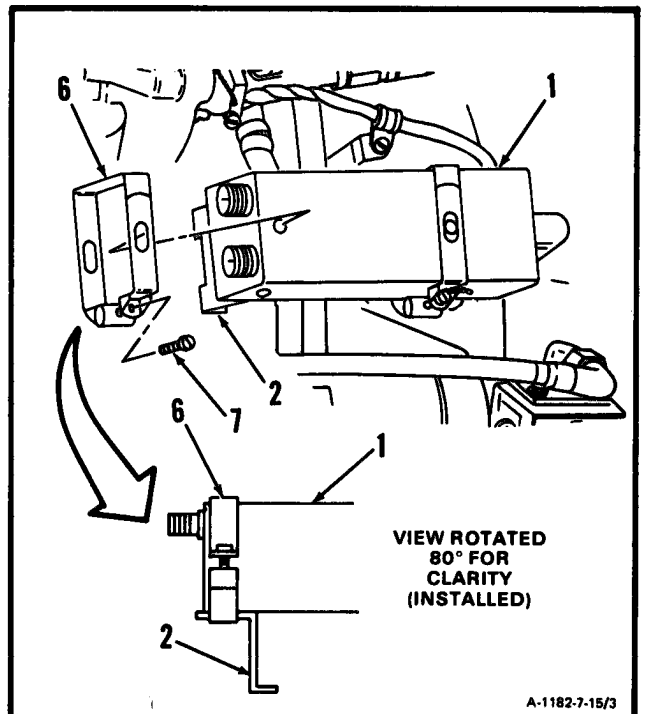
7-15

1. Install ignition exciter (1) on brackets (2 and 3).

- a. Loosely install clamp (4) and screw (5) on ignition exciter (1) and bracket (3).



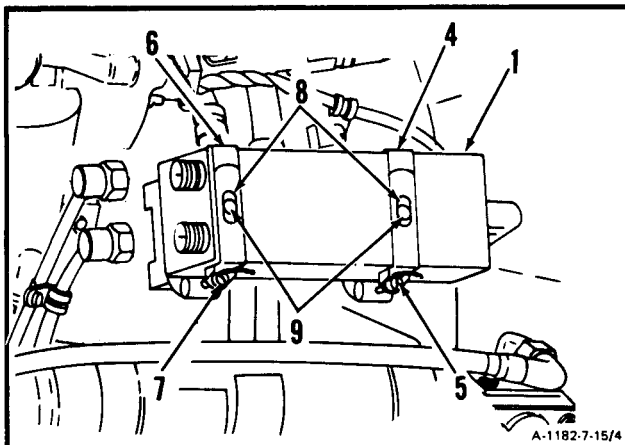
- b. Loosely install clamp (6) and screw (7) on ignition exciter (1) and bracket (2).



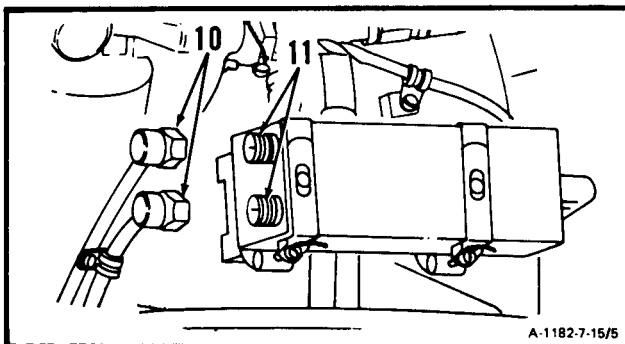
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7-15 INSTALL IGNITION EXCITER (Continued)

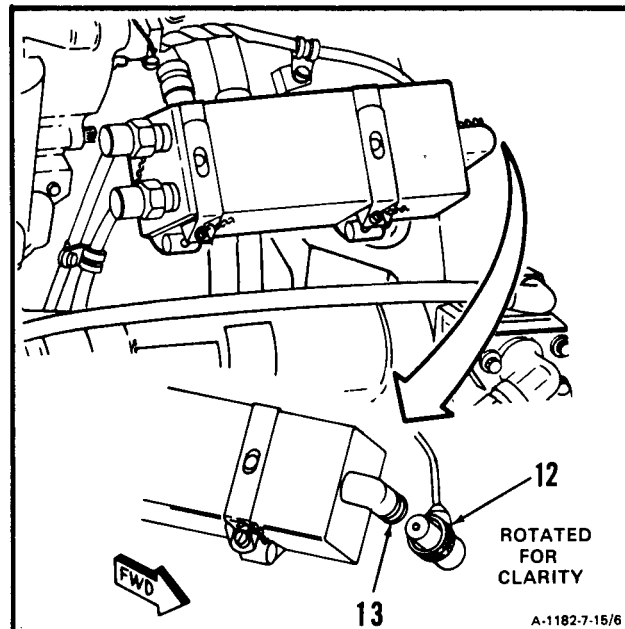
c. Align slots (8) in clamps (4 and 6) with locating lugs (9) on ignition exciter (1). Tighten screws (5 and 7) and lockwire. Use lockwire (E29).



2. Connect two coil and cable assembly leads (10) to ignition exciter output receptacles (11). Lockwire leads. Use lockwire (E29).



3. Connect electrical connector (12) to input receptacle (13). Lockwire electrical connector (12). Use lockwire (E29).



INSPECT

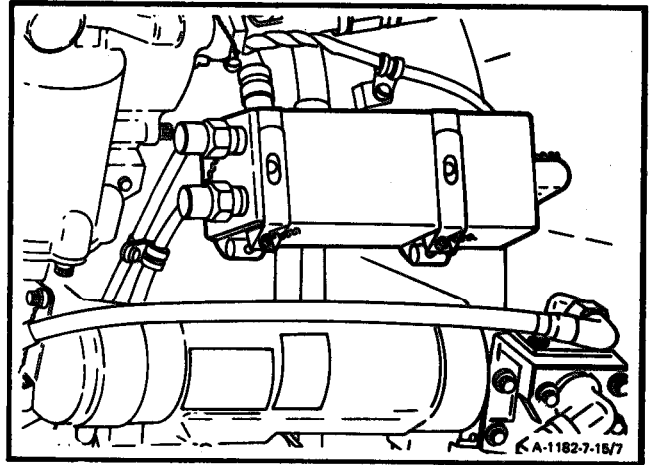
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7-15 INSTALL IGNITION EXCITER (Continued)

7-15

FOLLOW-ON MAINTENANCE:

None



END OF TASK

Section IV. MAIN ELECTRICAL CABLE ASSEMBLY- MAINTENANCE PROCEDURES

7-16 REMOVE MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR)

7-16

INITIAL SETUP

Personnel Required:

68B10 Aircraft Powerplant Repairer

Applicable Configurations:

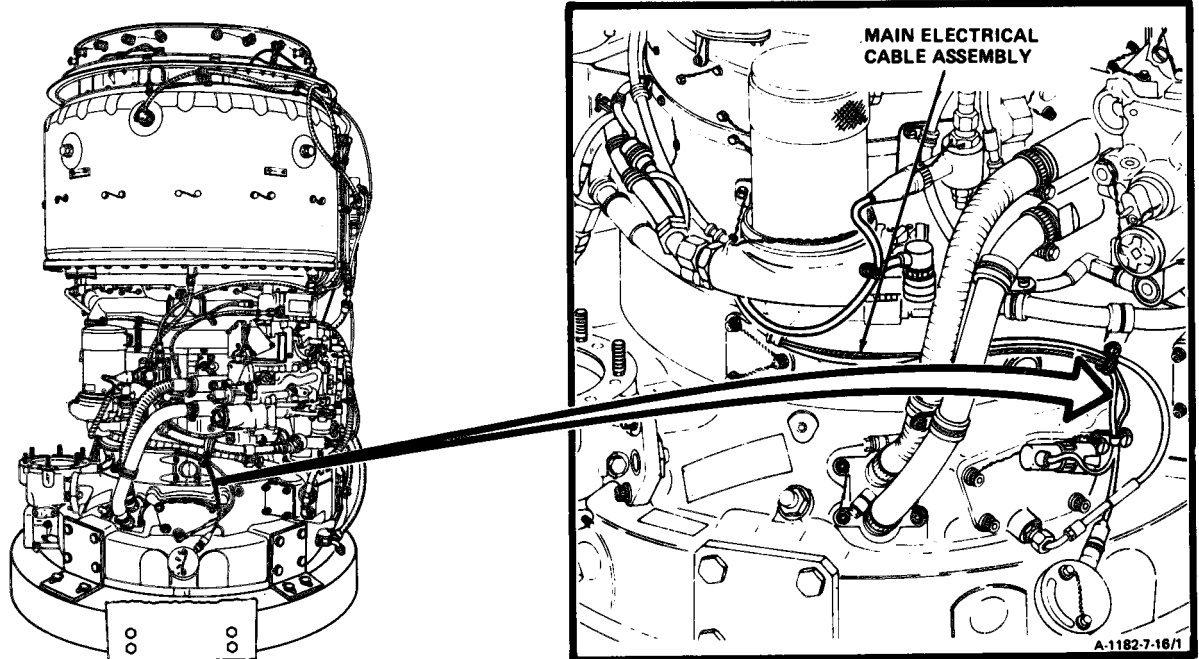
All

Tools:

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

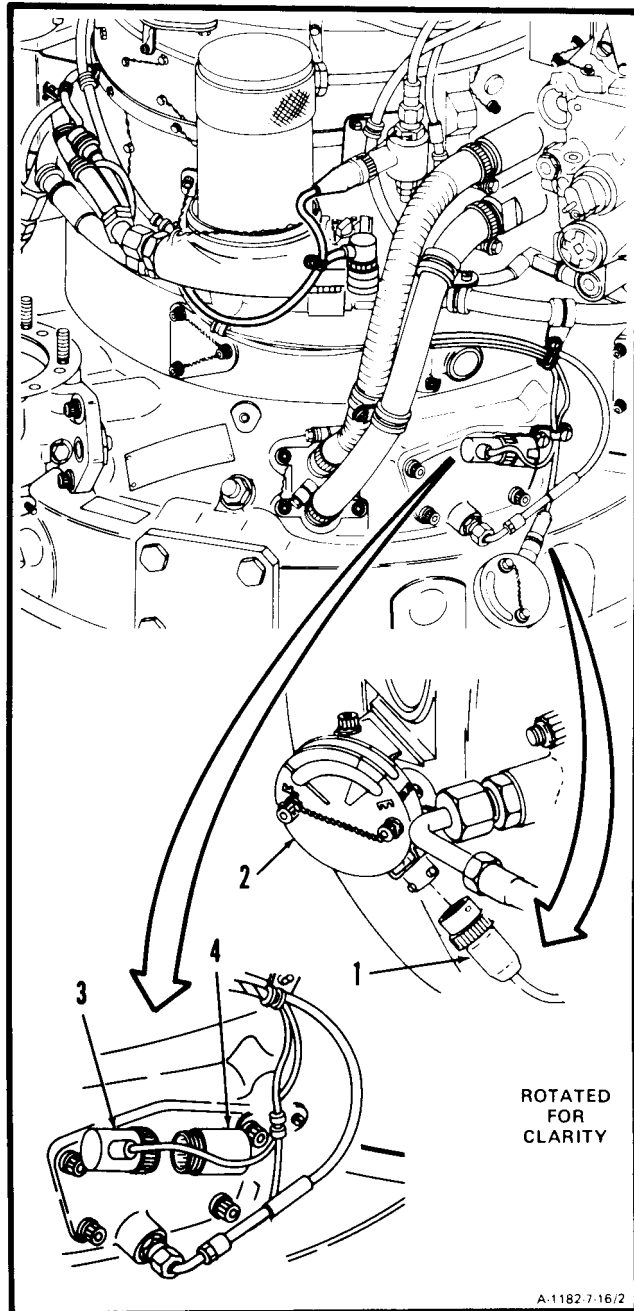
Materials:

None



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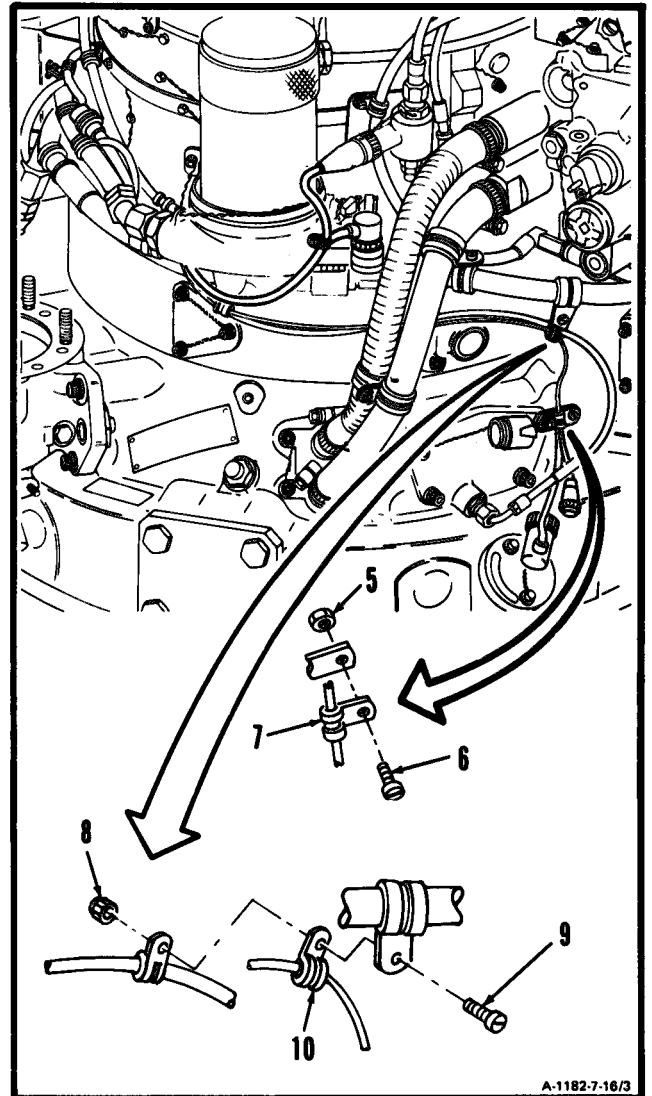
1. **Disconnect electrical connector (1)** from oil level indicator (2).
2. **Remove lockwire.** Disconnect electrical connector (3) from plug (4).



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7-16 REMOVE MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR)(Contin.ed) 7-16

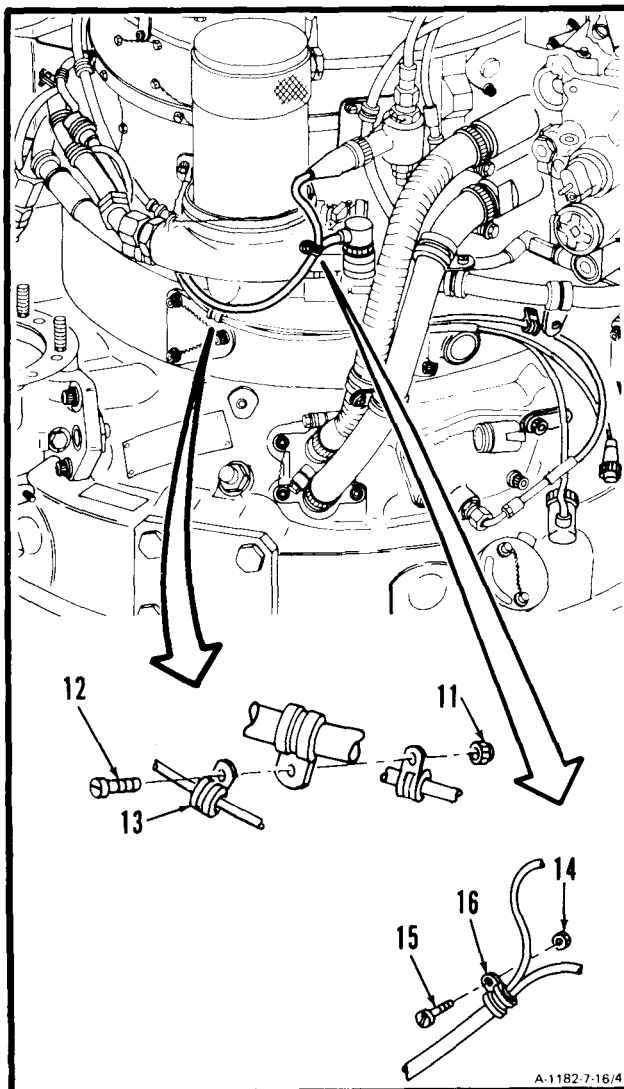
3. Remove nut (5), screw (6), and clamp (7).
4. Remove nut (8), screw (9), and clamp (10).



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5. Remove nut (11), screw (12), and clamp (13).

6. Remove nut (14), screw (15), and clamp (16).

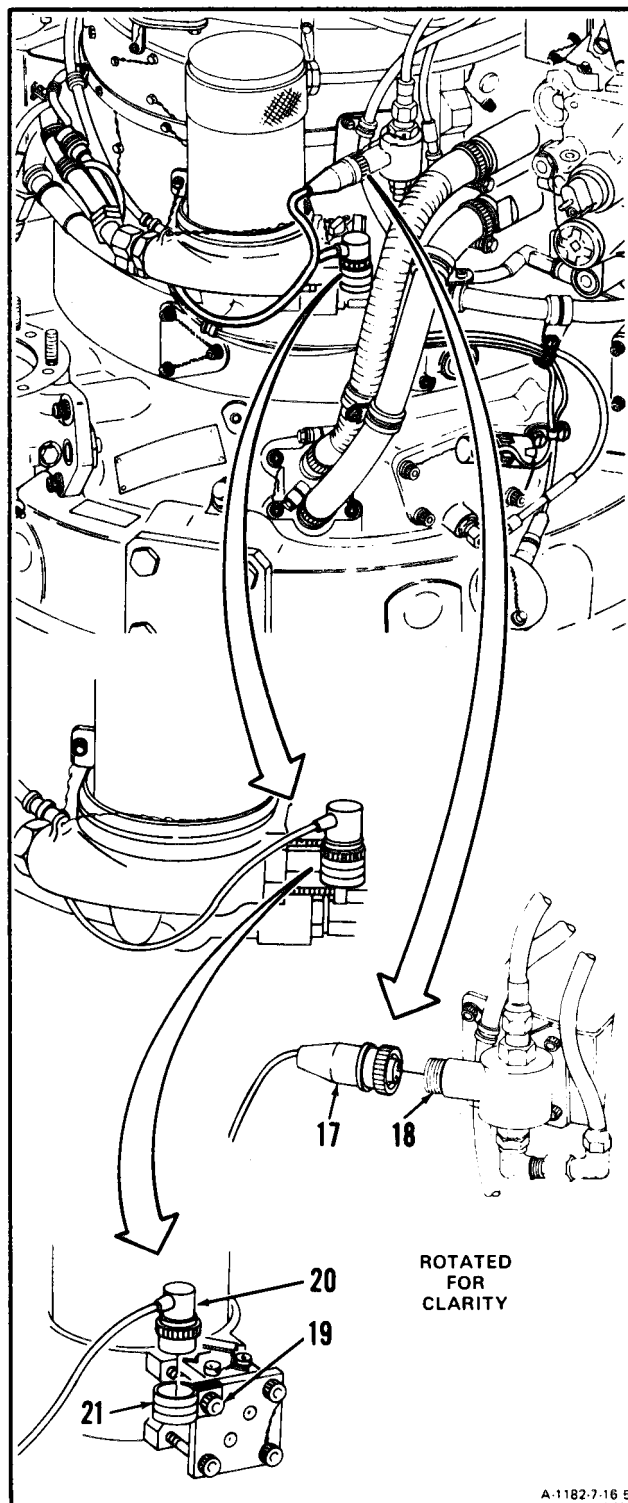


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7-16 REMOVE MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) (Continued)

7-16

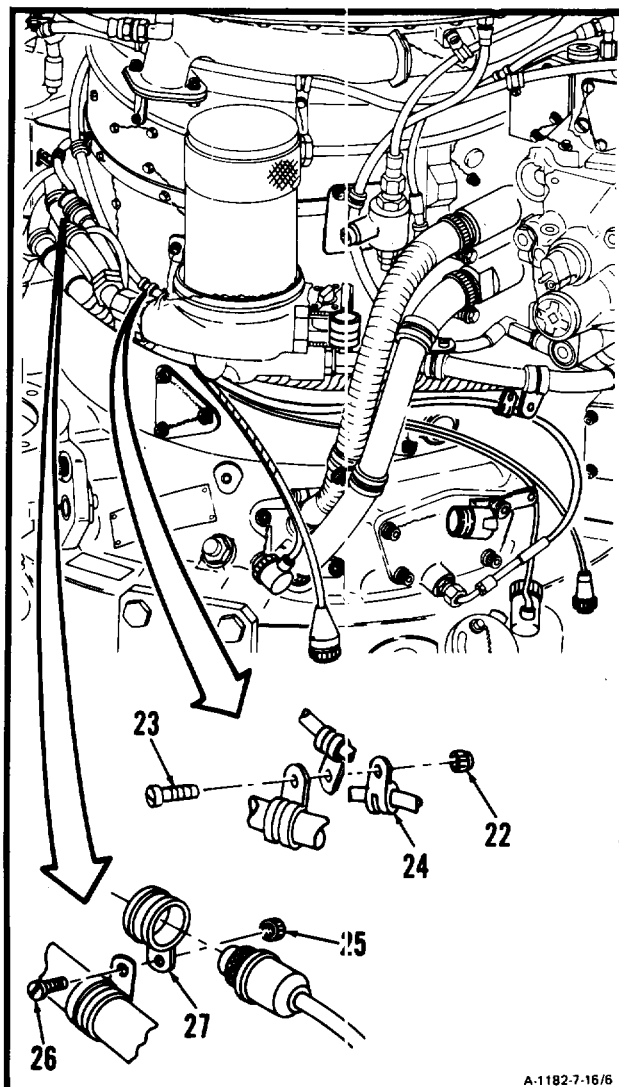
7. Remove lockwire and disconnect electrical connector (17) from starting fuel solenoid valve (18).
8. Remove lockwire. Loosen screw (19) and remove electrical connector (20) from clamp (21).

**GO TO NEXT PAGE**

7-16 REMOVE MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) (Continued)

7-16

9. **Remove** nut (22), screw (23), and **clamp** (24).
10. **Remove** nut (25), screw (26), and **clamp** (27).

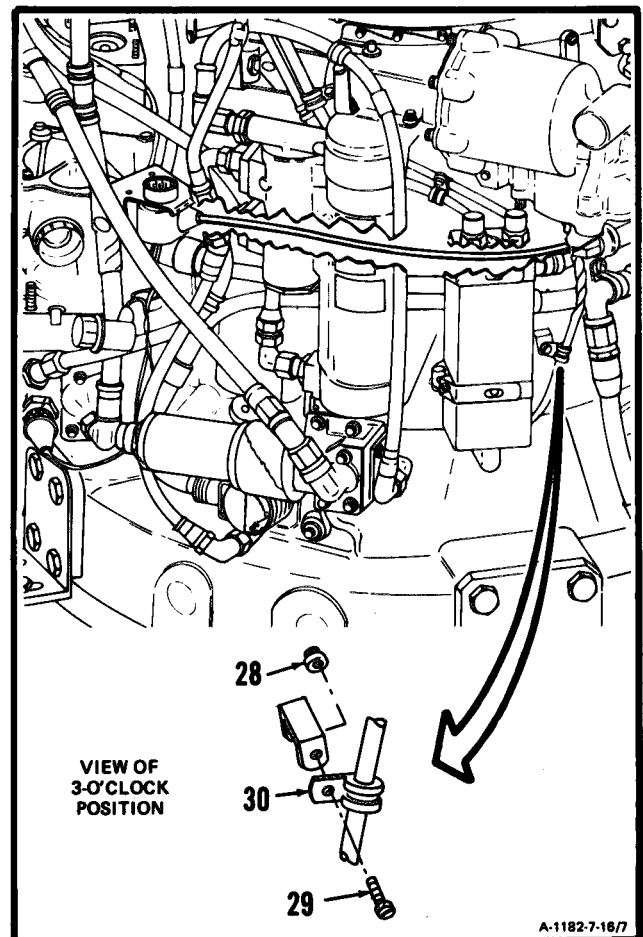


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7-16 REMOVE MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) (Continued)

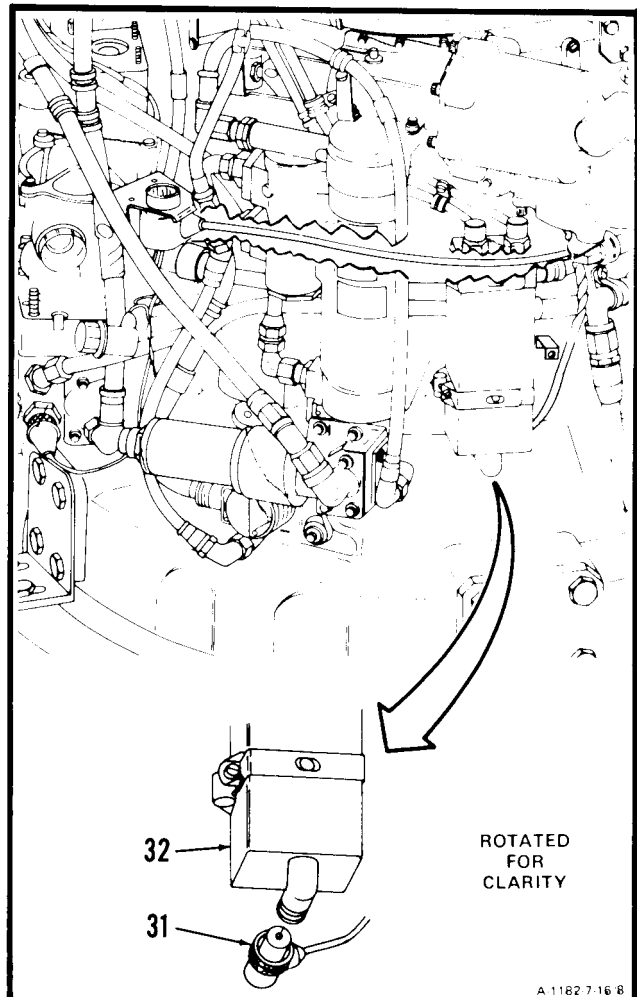
7-16

11. Remove nut (28), screw (29), and clamp (30).



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12. Remove lockwire and **disconnect electrical connector (31)** from ignition exciter (32).

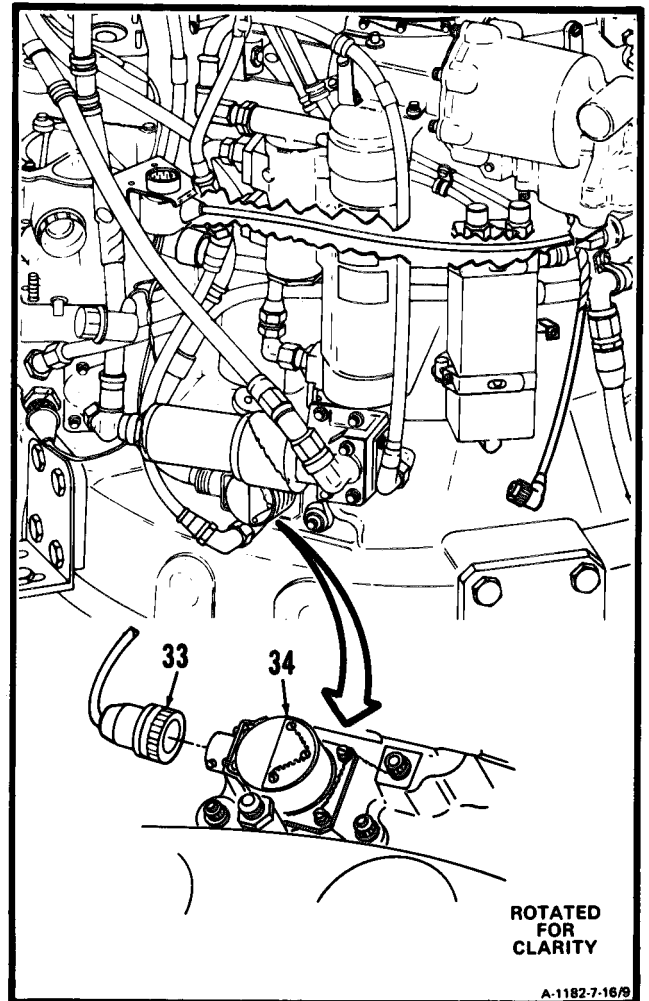


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7-16 REMOVE MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) (Continued)

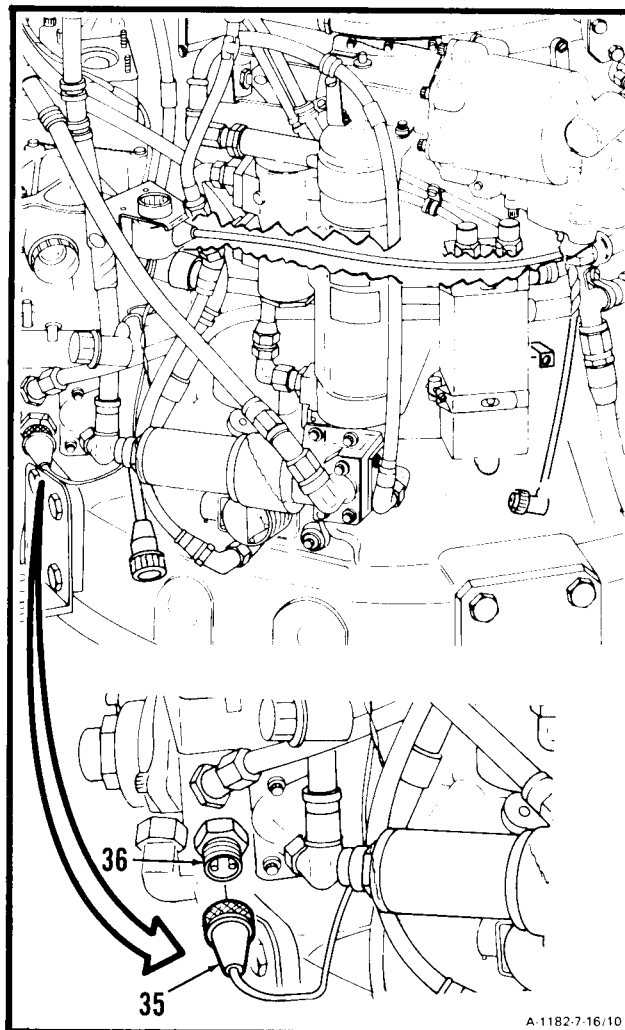
7-16

13. Disconnect electrical connector (33) from torquemeter junction box (34).



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14. Remove lockwire. Disconnect electrical connector (35) from oil temperature transmitter (36).

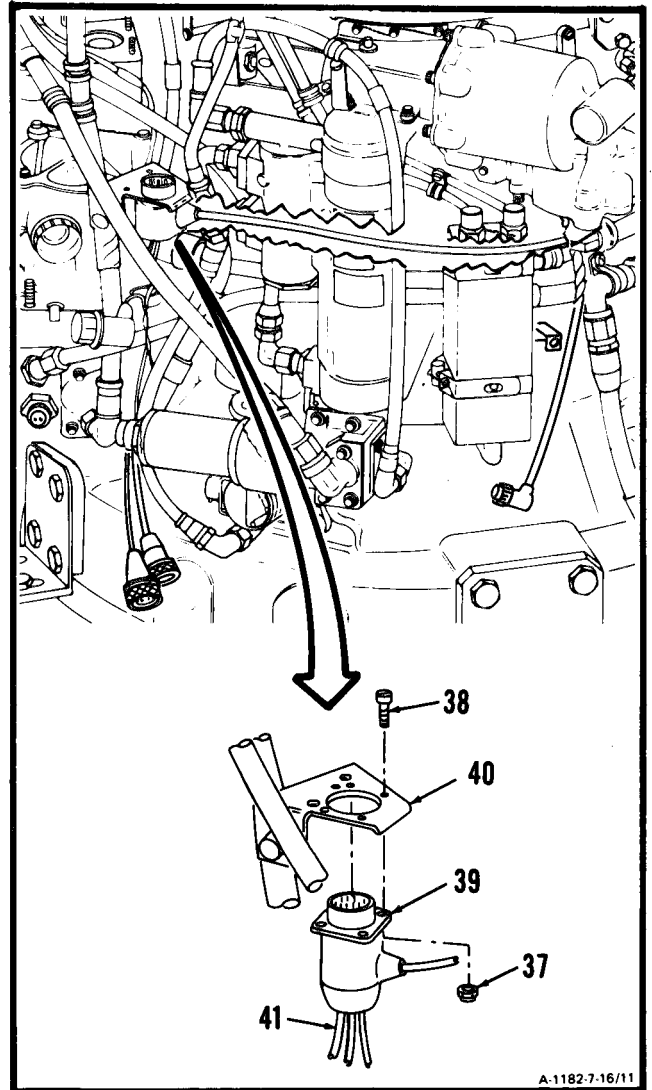


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7-16 REMOVE MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) (Continued)

7-16

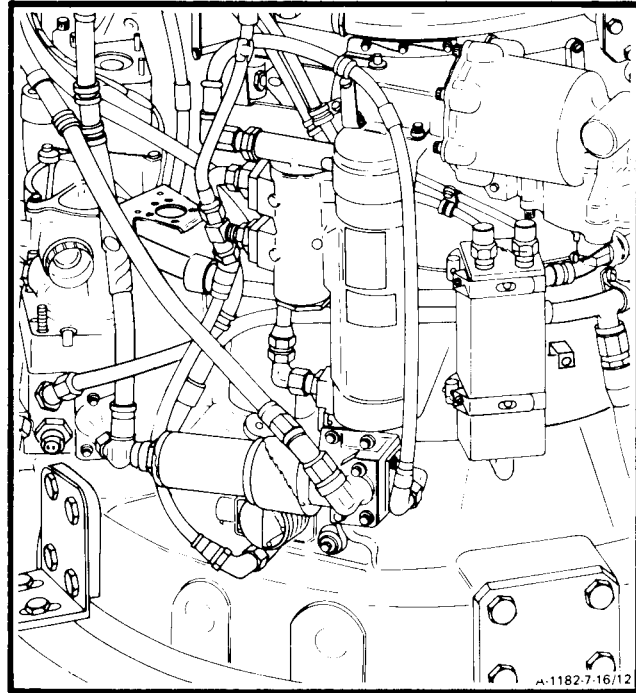
15. **Remove** four nuts (37), four screws (38), and **electrical connector (39)** from bracket (40),
Remove main electrical cable assembly (41).



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FOLLOW-ON MAINTENANCE:

None



END OF TASK

7-16.1 REMOVE MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR)

7-16.1

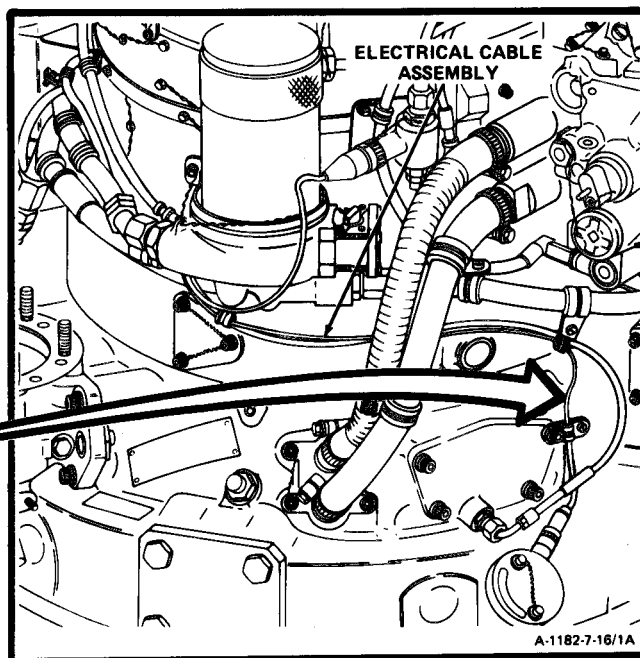
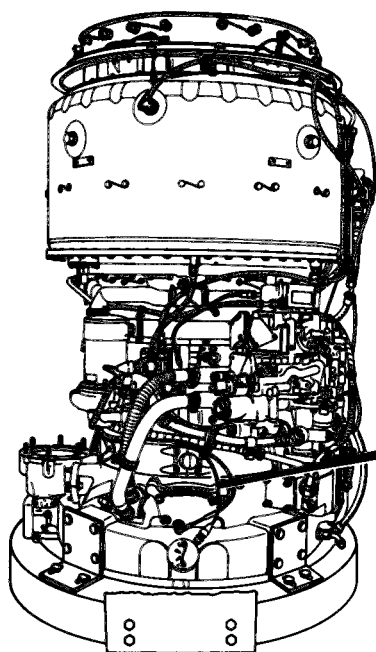
INITIAL SETUP

Personnel Required:
68B10 Aircraft Powerplant Repairer

Applicable Configurations:
All

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

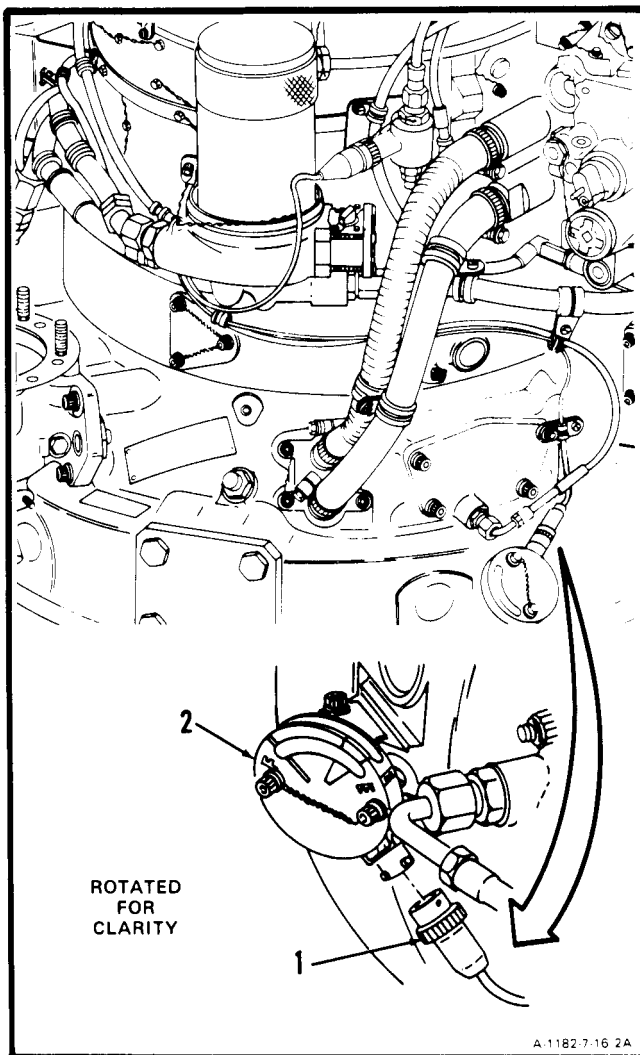
Materials:
None



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7-16.1 REMOVE MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued) 7-16.1

1. Disconnect electrical connector (1) from oil level indicator (2).

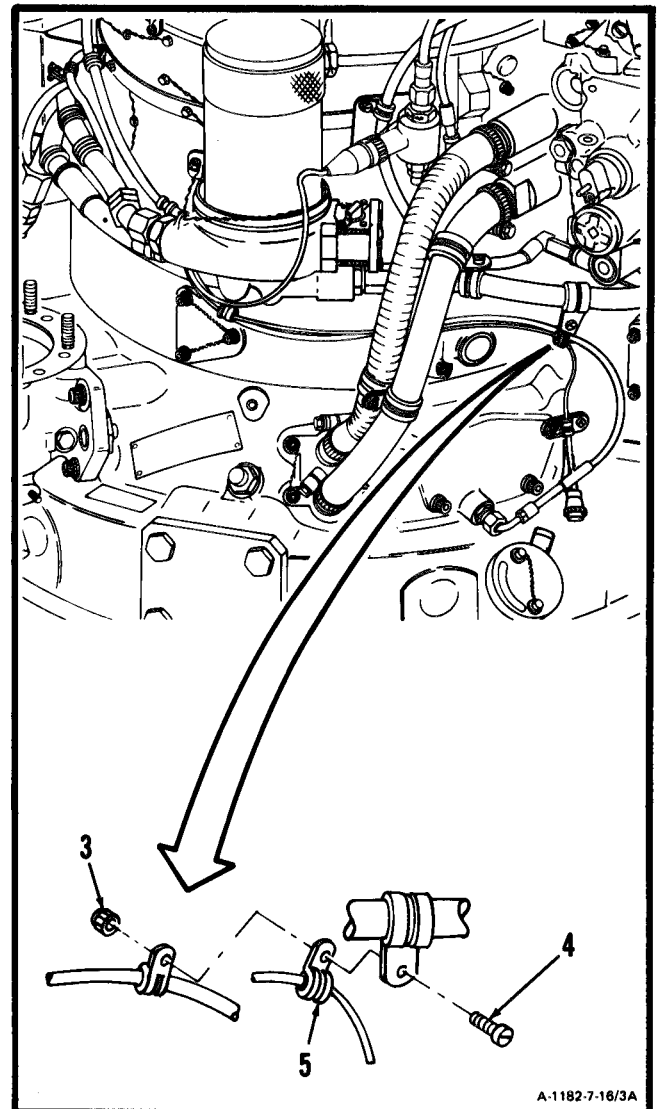


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7-16.1 REMOVE MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued)

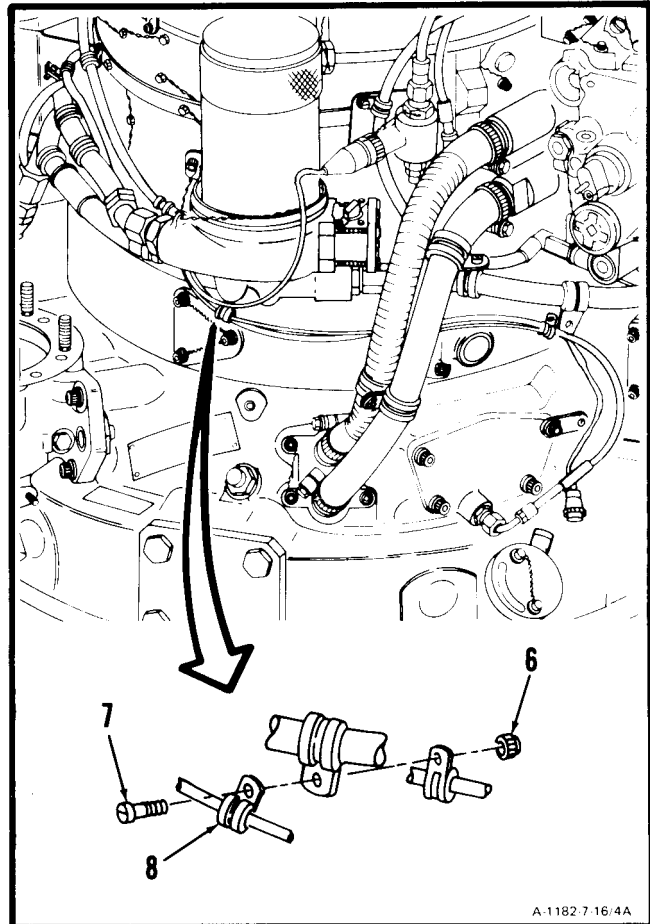
7-16.1

2. Remove nut (3), screw (4), and clamp (5).



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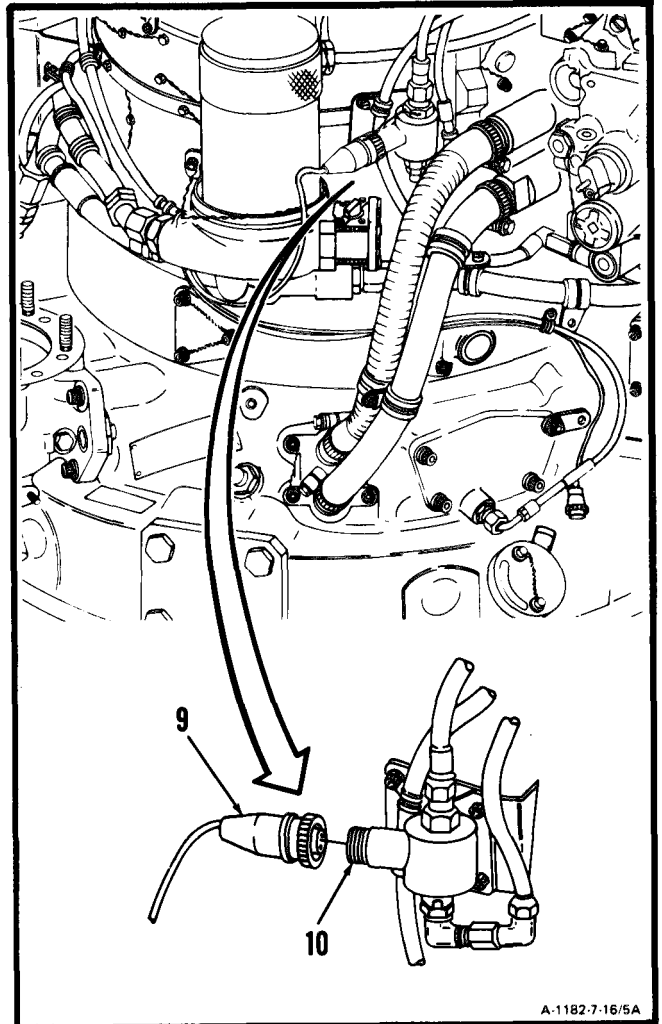
3. Remove nut (6), screw (7), and clamp (8).



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7-16.1 REMOVE MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued) 7-16.1

4. Remove lockwire and **disconnect electrical connector (9)** from starting fuel solenoid valve (10).

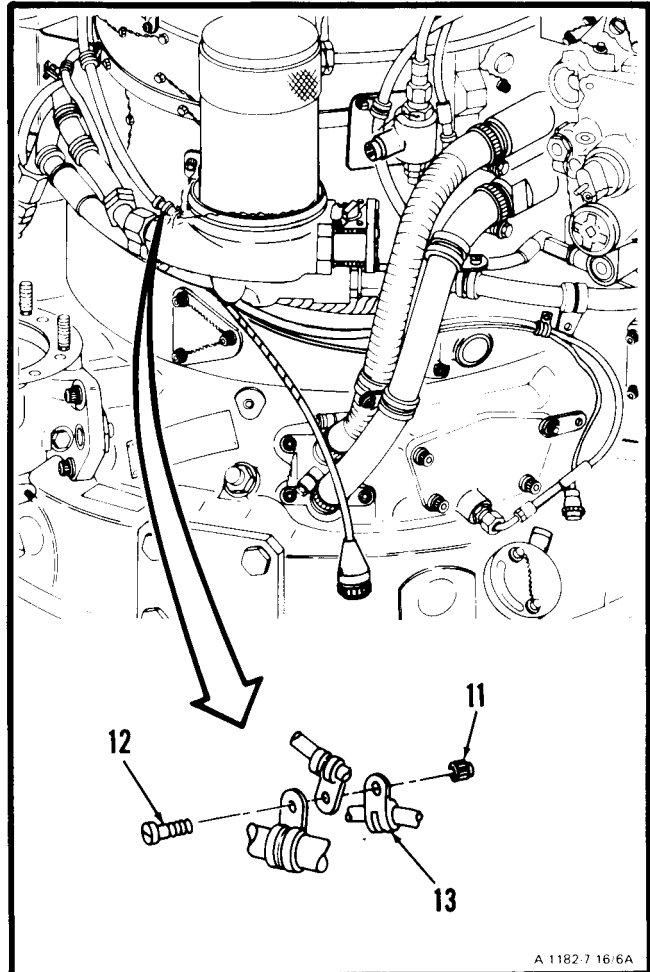


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7-16.1 REMOVE MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued)

7-16.1

5. Remove nut (11), screw (12), and clamp (13).



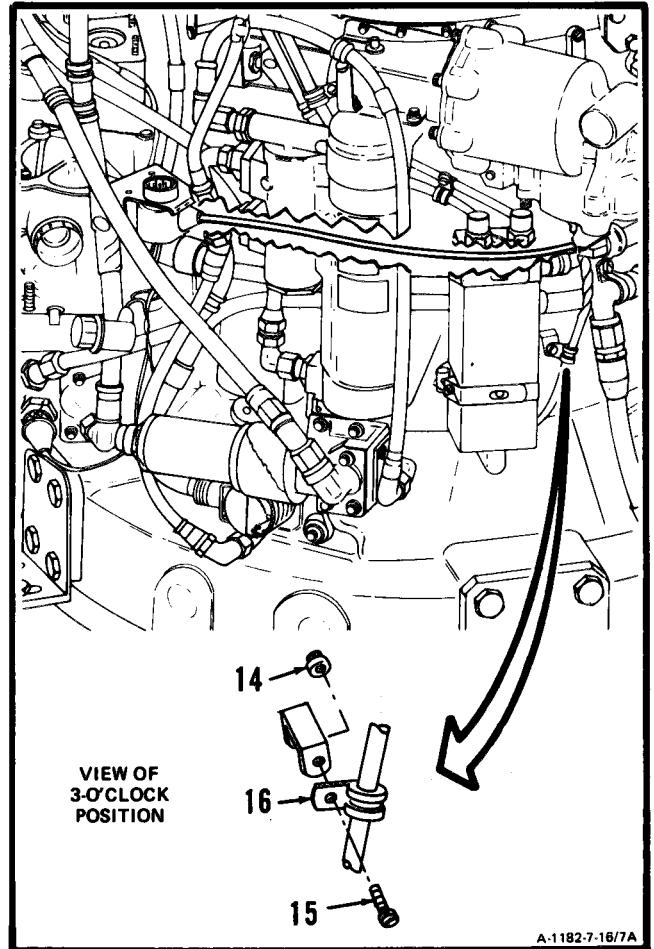
A 1182-7 16/6A

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7-16.1 REMOVE MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued)

7-16.1

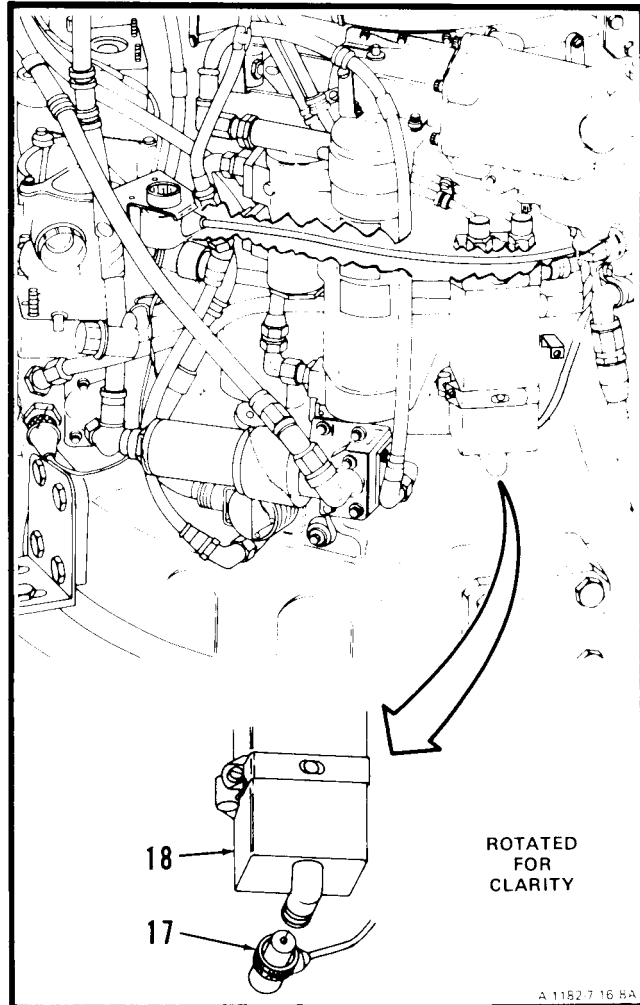
6. Remove nut (14), screw (15), and clamp (16).



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7-16.1 REMOVE MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR)(Continued) 7-16.1

7. Remove lockwire and **disconnect electrical connector (17)** from Ignition exciter (18)

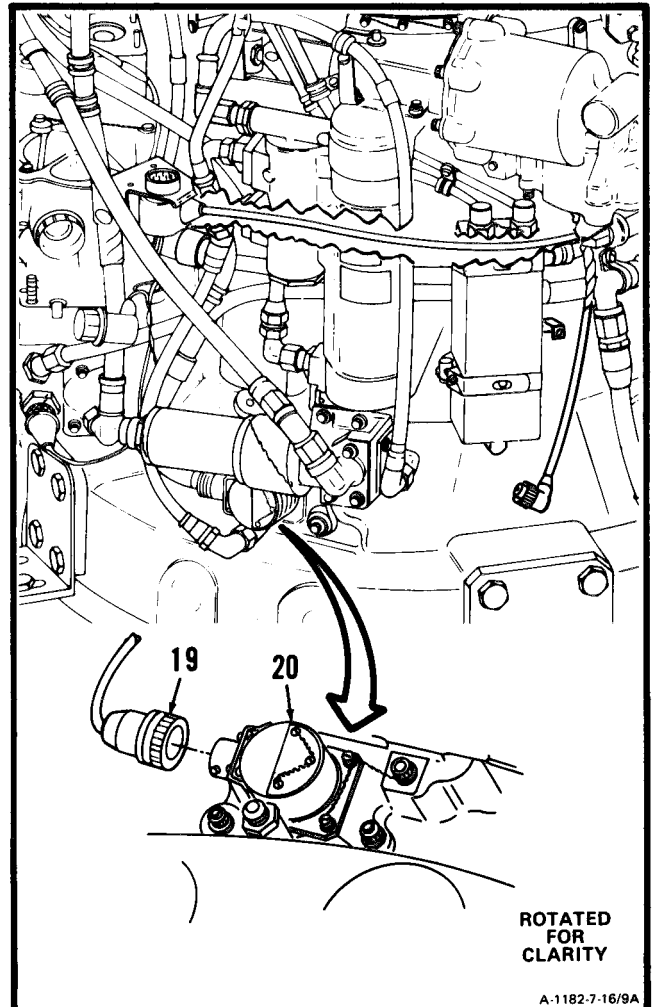


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7-16.1 REMOVE MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued)

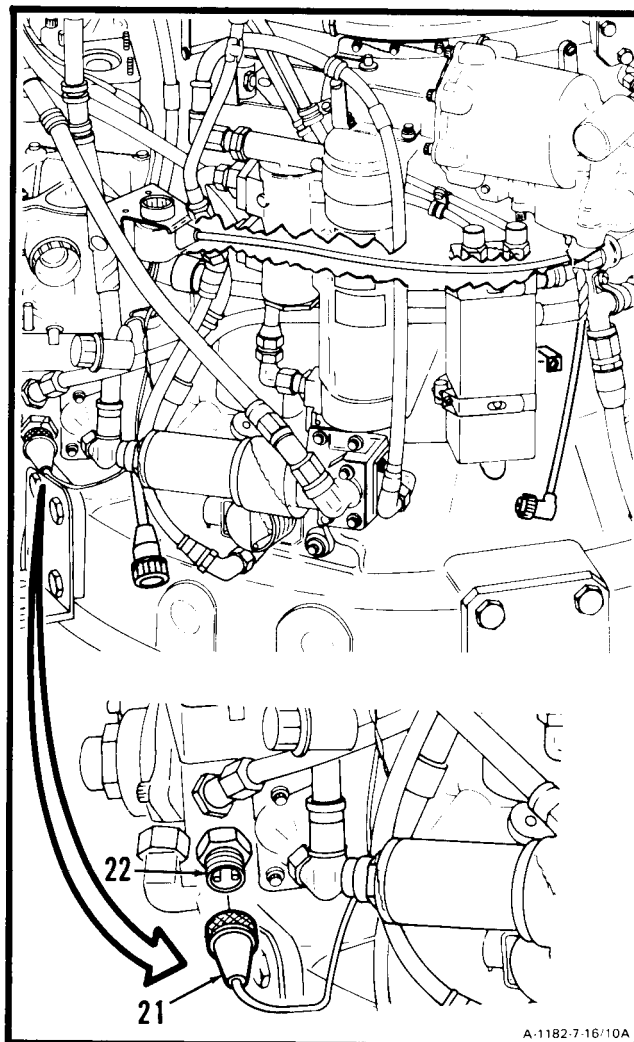
7-16.1

8. Disconnect electrical connector (19) from torquemeter junction box (20).



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9. Remove lockwire. Disconnect electrical connector (21) from oil temperature transmitter (22).

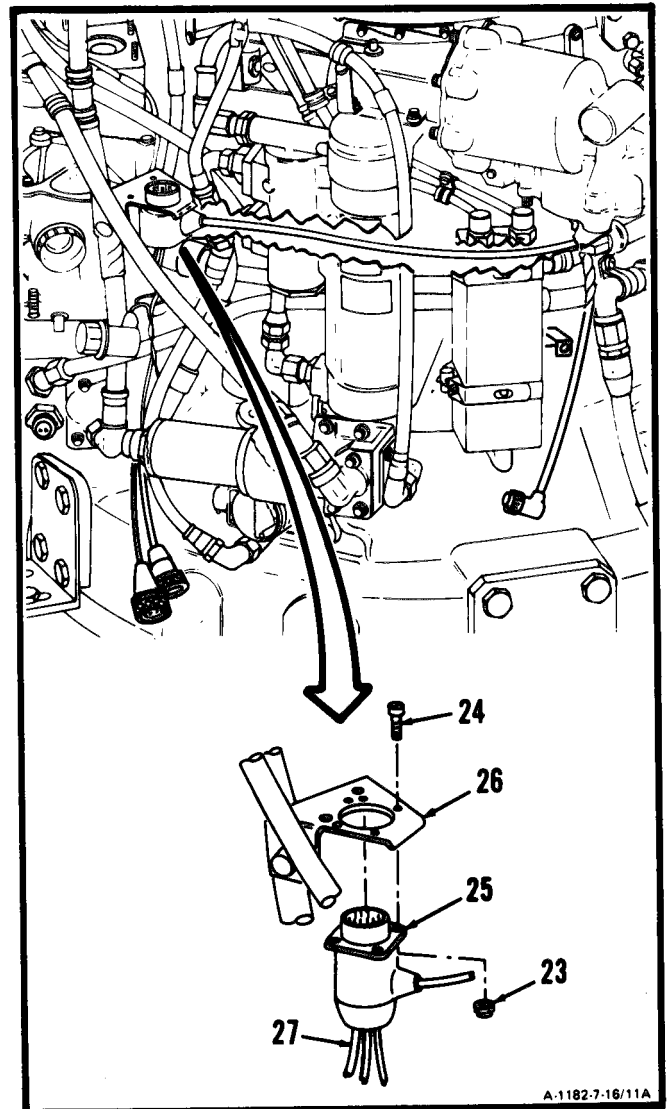


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7-16.1 REMOVE MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued)

7-16.1

10. **Remove** four nuts (23), four screws (24), and **electrical connector (25)** from bracket (26).
Remove main electrical cable assembly (27).

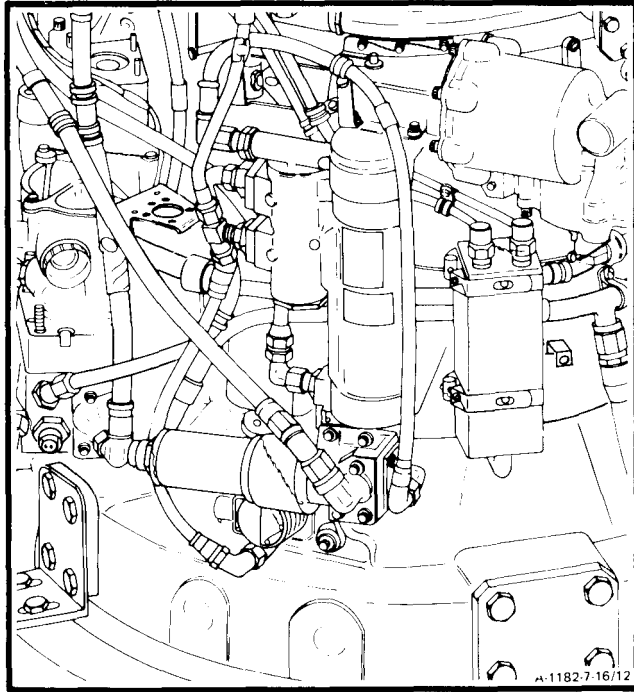


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7-16.1 REMOVE MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued) 7-16.1

FOLLOW-ON MAINTENANCE

None



END OF TASK

7-17 CLEAN MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR)

7-17

INITIAL SETUP

Applicable Configurations:

All

Tools:

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

Materials:

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

Personnel Required:

68B10 Aircraft Powerplant Repairer

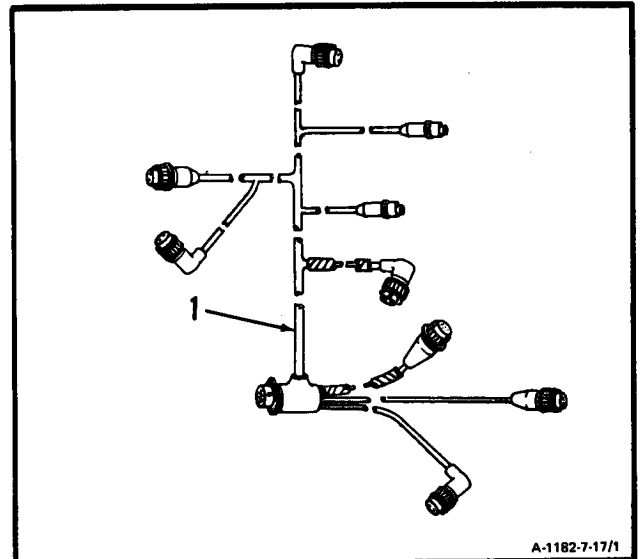
Equipment Condition:

Off Engine Task
Main Electrical Cable Assembly Removed
(Task 7-16)

General Safety Instructions:**WARNING**

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

1. Wear gloves (E20). **Clean main electrical cable assembly (1).** Use lint-free cloth (E26) dampened with methyl ethyl ketone (E36). Wipe dry using clean, dry, lint-free cloth (E26).



A-1182-7-17/1

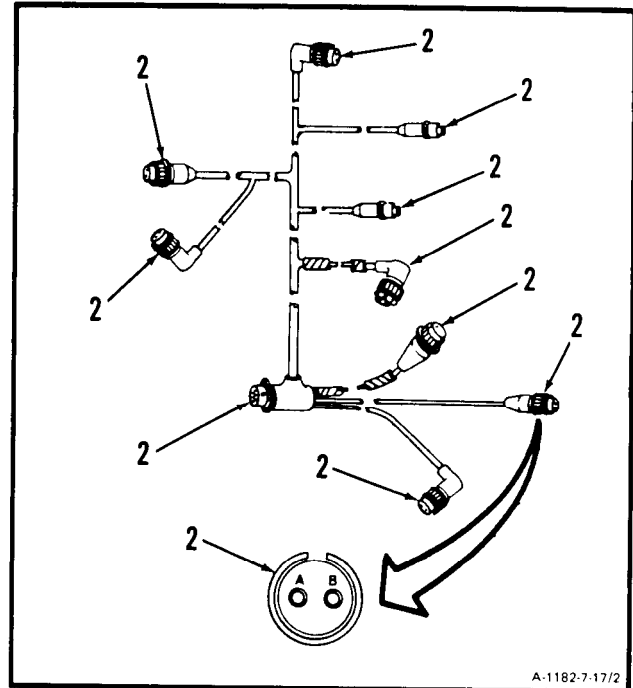
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2. Clean ten electrical connectors (2). Use methyl ethyl ketone (E36) and brush.

WARNING

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

3. Wear goggles. **Blow dry electrical connectors (2).** Use clean, dry compressed air.



A-1182-7-17/2

FOLLOW-ON MAINTENANCE:

Inspect Main Electrical Cable Assembly
(Task 7-18)

END OF TASK

7-17.1 CLEAN MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR)

7-17.1

INITIAL SETUP

Applicable Configurations:

All

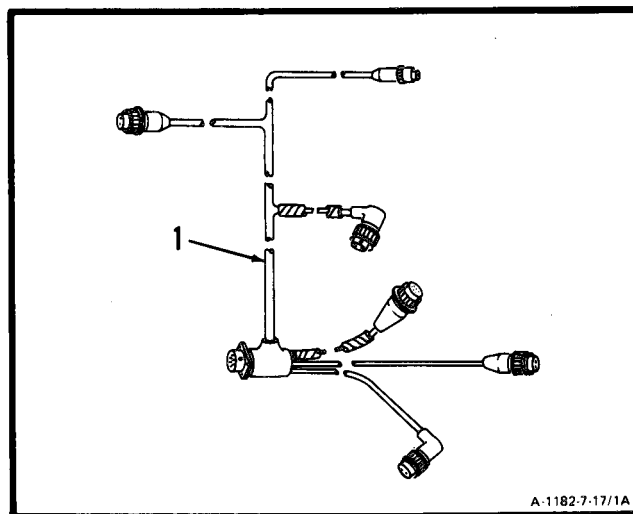
Tools:Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944Goggles
compressed Air Source**Materials:**Gloves (E20)
Lint-Free Cloth (E26)
Methyl Ethyl Ketone (E36)**Personnel Required:**

68B10 Aircraft Powerplant Repairer

Equipment Condition:Off Engine Task
Main Electrical Cable Assembly Removed
(Task 7-16)**General Safety Instructions:****WARNING**

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

1. Wear gloves (E20). **Clean main electrical cable assembly (1)**. Use lint-free cloth (E26) dampened with methyl ethyl ketone (E36). Wipe dry using clean, dry, lint-free cloth (E26).



A-1182-7-17/1A

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7-17.1 CLEAN MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued)

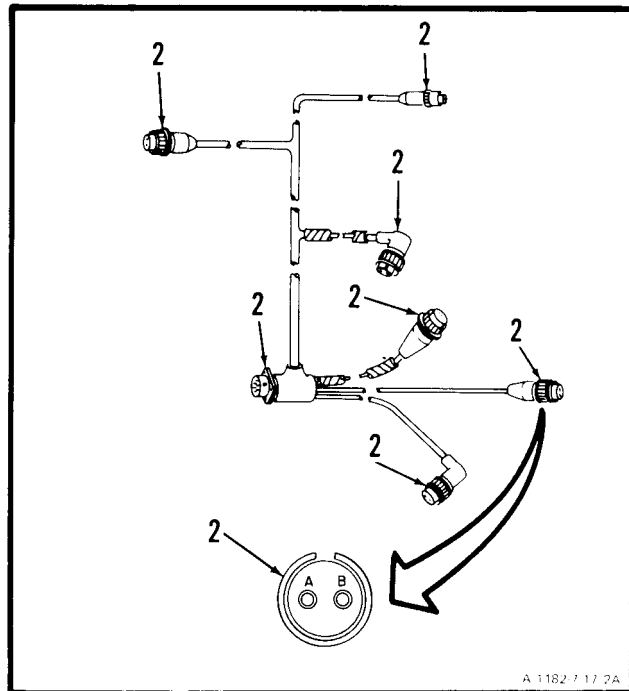
7-17.1

2. Clean seven electrical connectors (2). Use methyl ethyl ketone (E36) and brush.

WARNING

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

3. Wear goggles. Blow dry electrical connectors (2). Use clean, dry compressed air.

**FOLLOW-ON MAINTENANCE:**

Inspect Main Electrical Cable Assembly
(Task 7-18.1)

END OF TASK

7-18 INSPECT MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR)

7-18

INITIAL SETUP

Applicable Configurations:
All

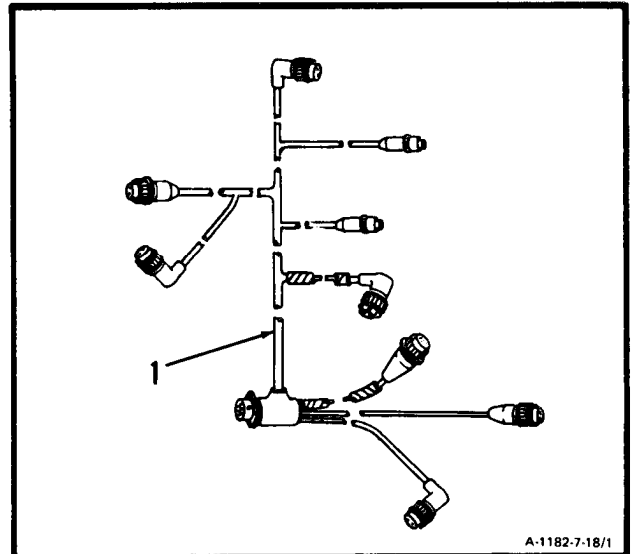
Tools:
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
None

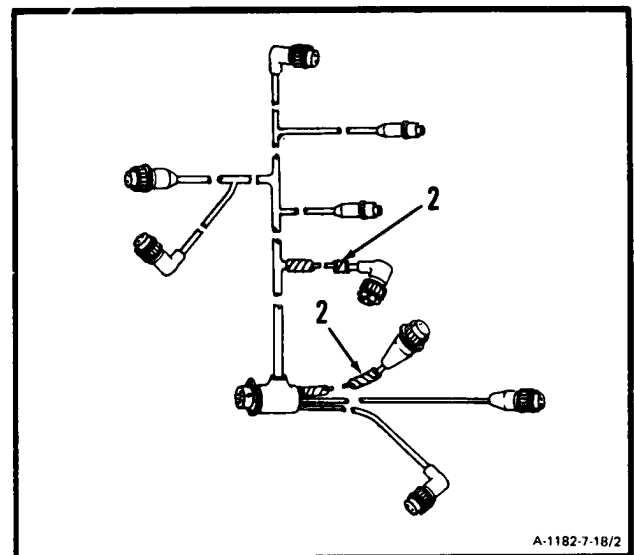
Personnel Required:
68B30 Aircraft Powerplant Inspector

Equipment Condition:
Off Engine Task

- 1 **Inspect main electrical cable assembly (1).** There shall be no frayed or burned insulation. There shall be no loose connections or broken wires.

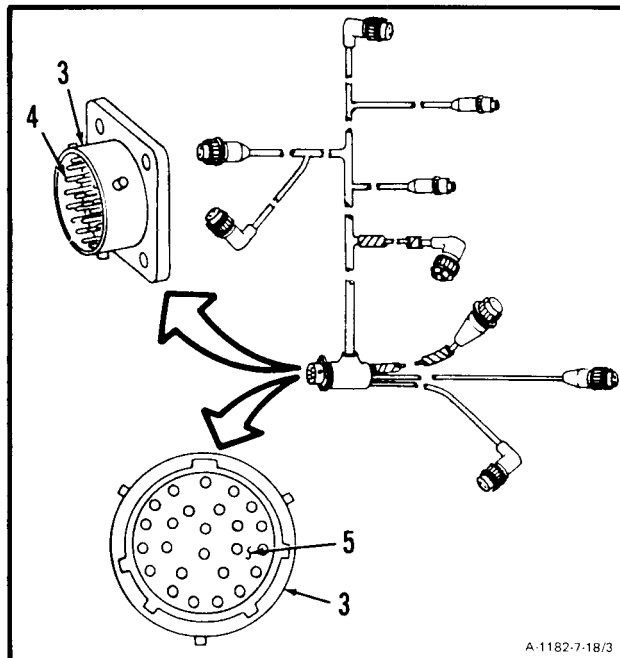


- 2 **Inspect sleeving (2).** There shall be no frayed or broken sleeving.

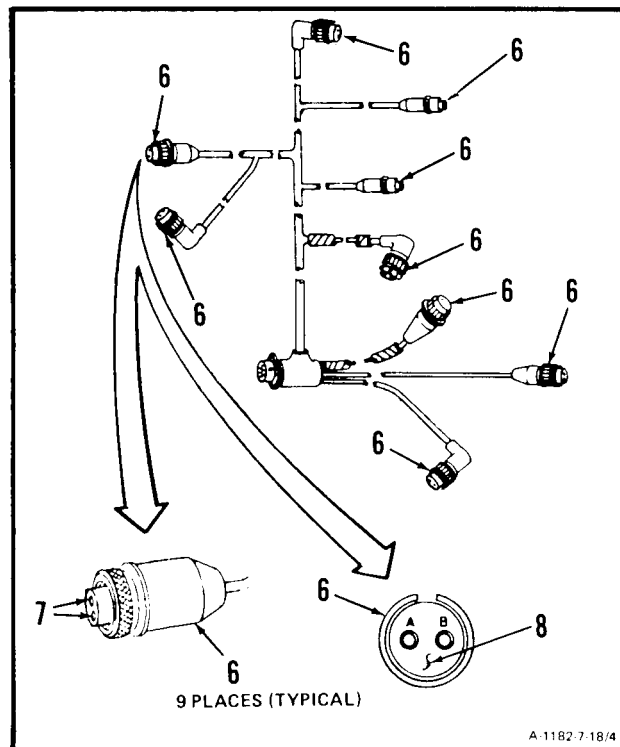


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3. **Inspect electrical connector (3).** There shall be no corrosion, broken or bent pins (4), or cracked insulation (5).



4. **Inspect nine electrical connectors (6).** There shall be no corrosion, broken or bent sleeves (7) or cracked insulation (8).



FOLLOW-ON MAINTENANCE:

None

END OF TASK

7-18.1 INSPECT MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR)

7-18.1

INITIAL SETUP

Applicable Configurations:
All

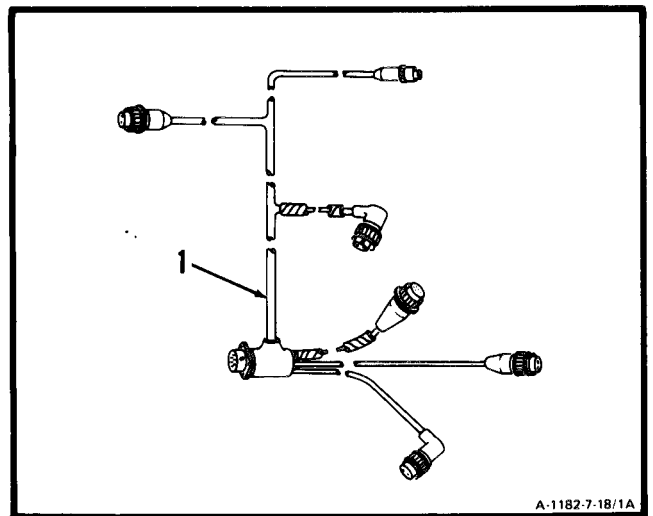
Tools:
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:
None

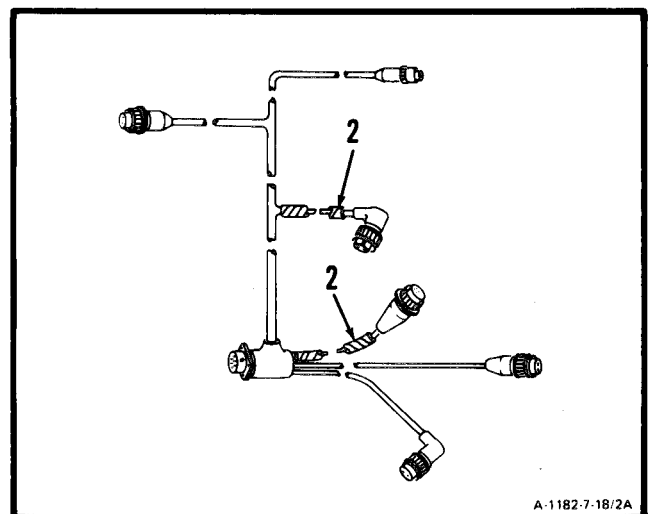
Personnel Required:
68B30 Aircraft Powerplant Inspector

Equipment Condition:
Off Engine Task

1. **Inspect main electrical cable assembly (1).** There shall be no frayed or burned insulation. There shall be no loose connections or broken wires.



2. **Inspect sleeving (2).** There shall be no frayed or broken sleeving.

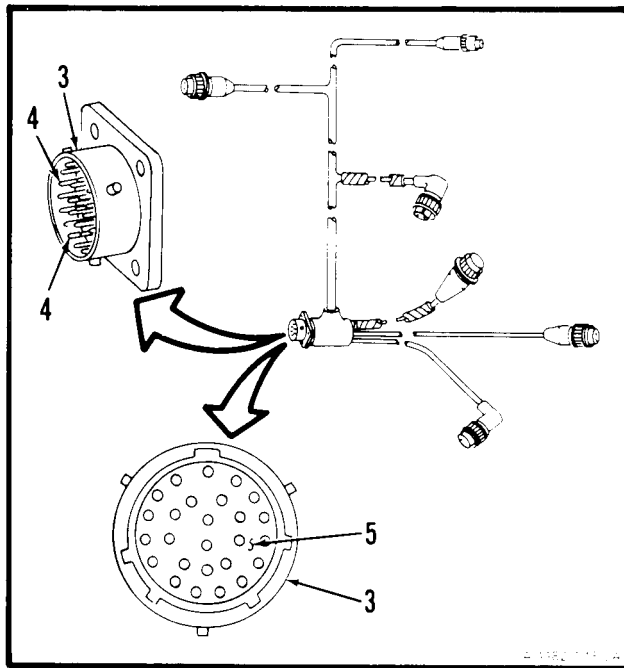


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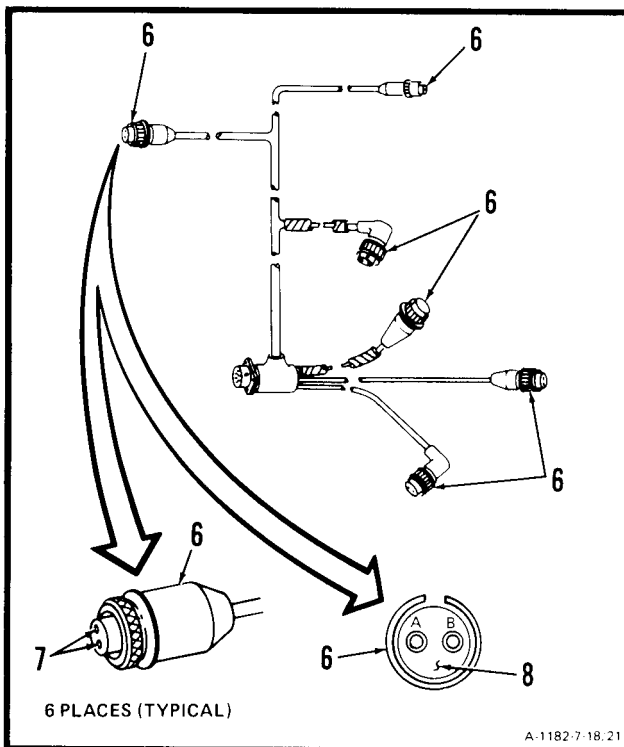
7-18.1 INSPECT MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued)

7-18.1

- 3. **Inspect electrical connector (3).** There shall be no corrosion, broken or bent pins (4), or cracked insulation (5).



- 4. **Inspect six electrical connectors (6).** There shall be no corrosion, broken or bent sleeves (7) or cracked insulation (8).



FOLLOW-ON MAINTENANCE:

None

END OF TASK

7-19 REPAIR MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR)

7-19

INITIAL SETUP**Applicable Configurations:**

All

Tools:

Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114
Hand File Set

Materials:

Crocus Cloth (E15)

Personnel Required:

68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

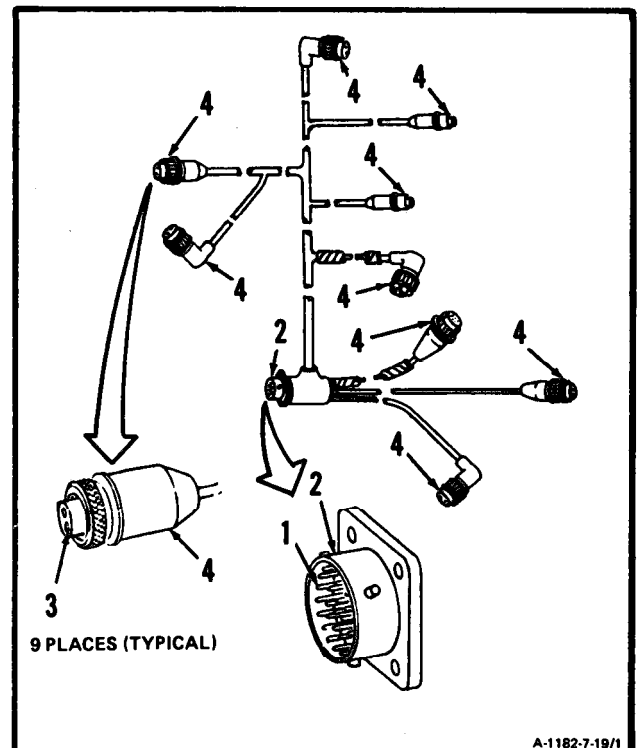
Equipment Condition:

Off Engine Task

NOTE

This repair is allowed provided it does not cause pin to break or crack.

1. **Straighten bent pin (1)** of electrical connector (2). Use long nose pliers to gently move pin (1) until it is straight.
2. **Remove corrosion from pin (1)** of electrical connector (2). Use crocus cloth (E15).
3. **Remove corrosion from sleeve (3)** of electrical connectors (4). Use round hand file.

**INSPECT****FOLLOW-ON MAINTENANCE:**

None

END OF TASK

7-19.1 REPAIR MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR)

7-19.1

INITIAL SETUP

Applicable Configurations:

All

Tools:

Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114
Hand File Set

Materials:

Crocus Cloth (E15)

Personnel Required:

68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

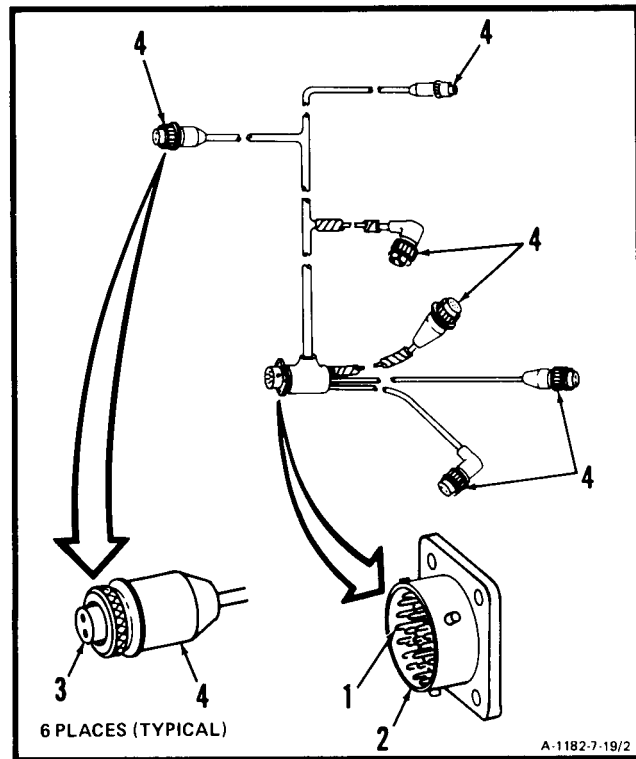
Equipment Condition:

Off Engine Task

NOTE

This repair is allowed provided it does not cause pin to break or crack.

1. **Straighten bent pin (1)** of electrical connector (2). Use long nose pliers to gently move pin (1) until it is straight.
2. **Remove corrosion from pin (1)** of electrical connector (2). Use crocus cloth (E15).
3. **Remove corrosion from sleeve (3)** of electrical connectors (4). Use round hand file.



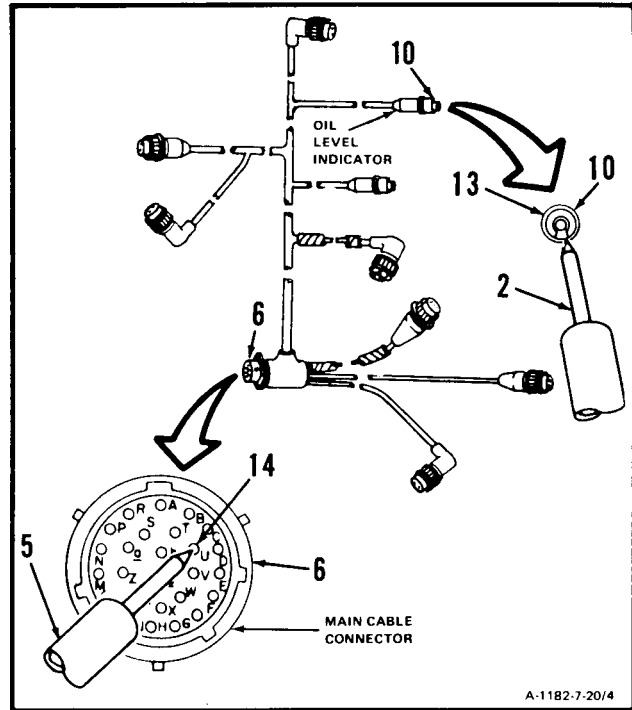
INSPECT

FOLLOW-ON MAINTENANCE:

None

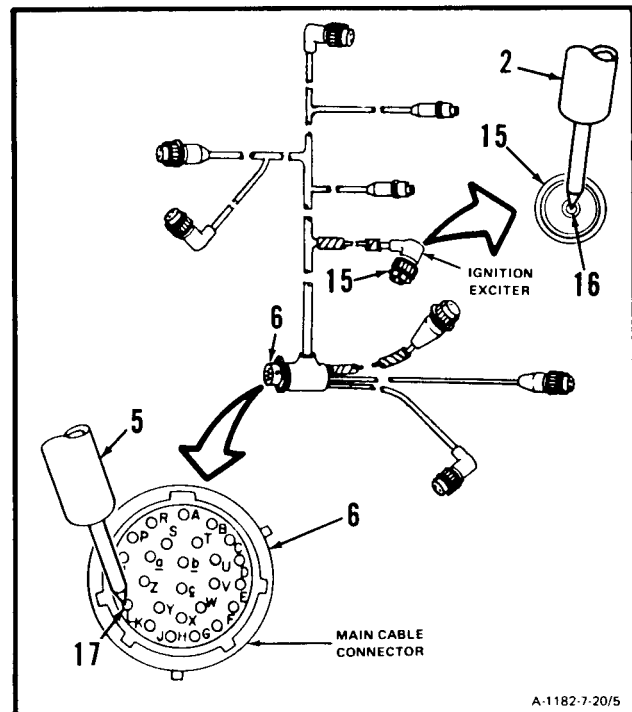
END OF TASK

- s. Touch red probe (2) to electrical connector (10), shell (13).
- t. Touch black probe (5) to electrical connector (6), pin U (14).
- u. Meter shall indicate **zero ohms**.



A-1182-7-20/4

- v. Set multi meter range switch to R x 1,
- w. Touch red probe (2) to electrical connector (15), center pin (16).
- x. Touch black probe (5) to electrical connector (6), pin L (17).
- y. Meter shall indicate **zero ohms**.
- z. Set multimeter range switch to R x 1000.
- aa. Touch black probe (5) to all other pins on electrical connector (6).
- ab. Meter shall indicate **1000 ohms** minimum.



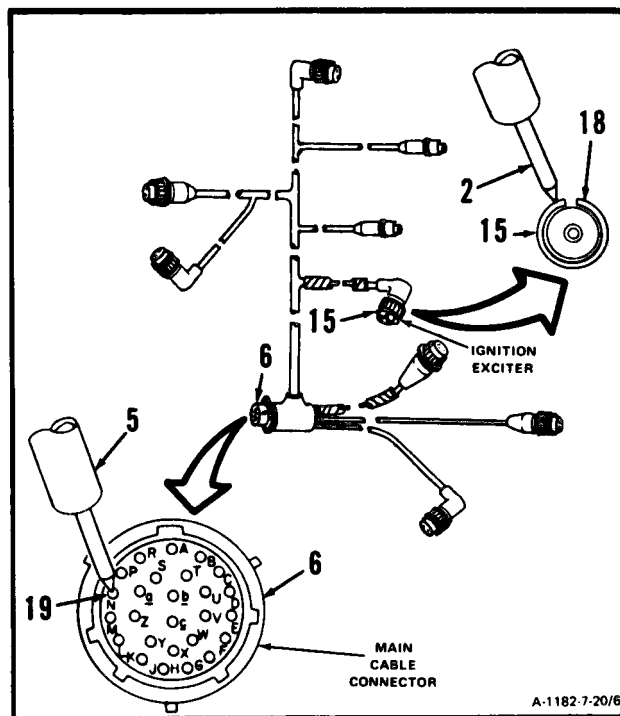
A-1182-7-20/5

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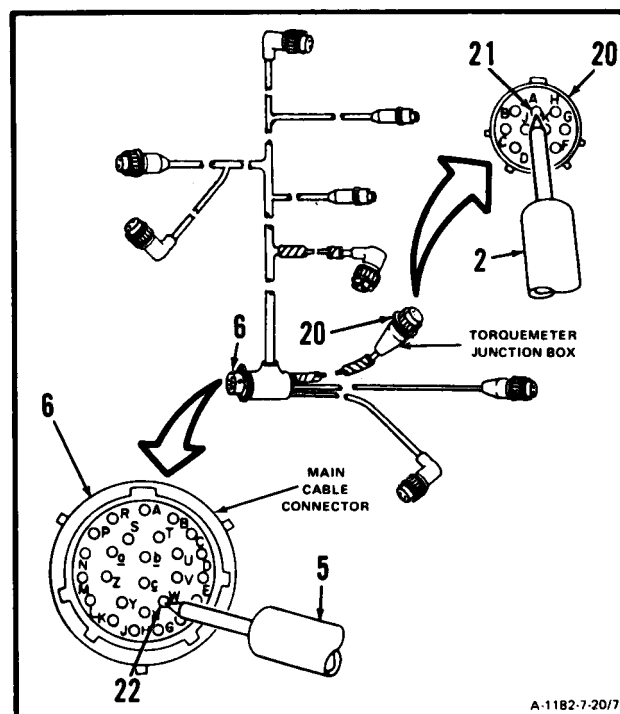
7-20 TEST MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) (Continued)

7-20

- ac. Touch red probe (2) to electrical connector (15), shell (18).
- ad. Touch black probe (5) to electrical connector (6), pin N (19).
- ae. Meter shall indicate **zero ohms**.

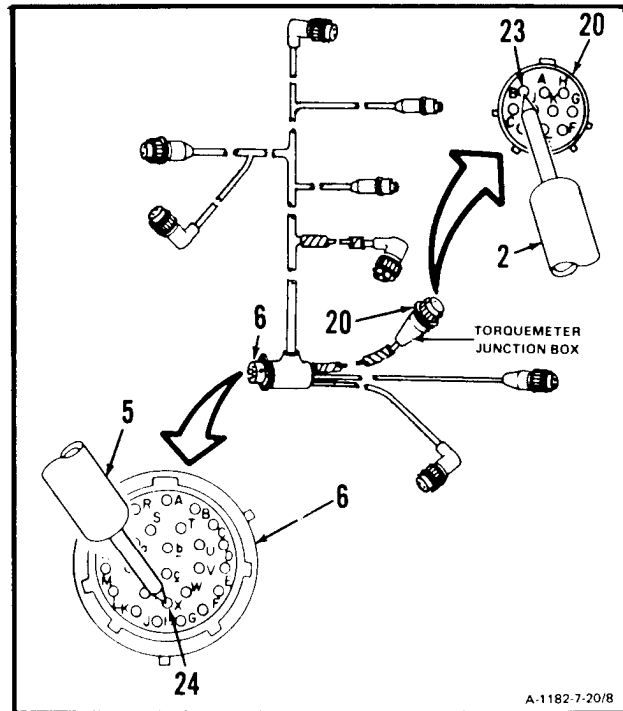


- af. Set multimeter range switch to R x 1.
- ag. Touch red probe (2) to electrical connector (20), pin A (21).
- ah. Touch black probe (5) to electrical connector (6), pin W (22).
- ai. Meter shall indicate **zero ohms**.
- aj. Set multimeter range switch to R x 1000.
- ak. Touch black probe (5) to all other pins on electrical connector (6).
- al. Meter shall indicate **1000 ohms** minimum.

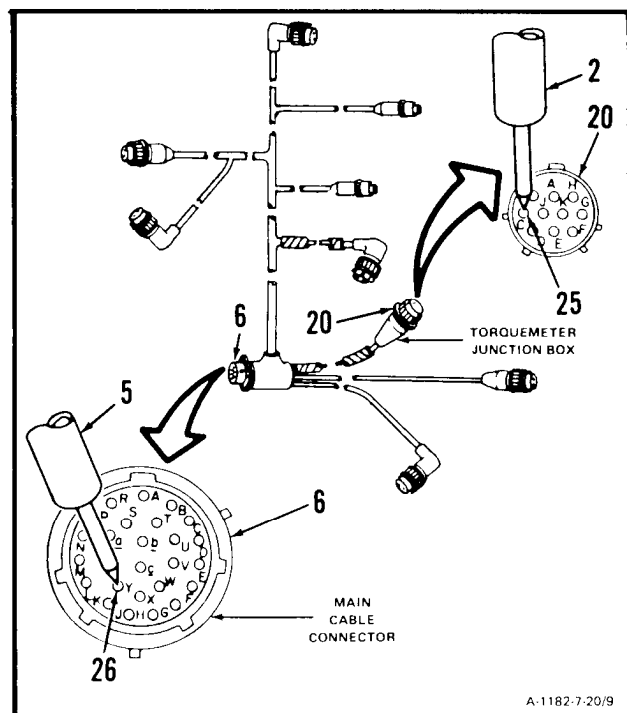


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- am. Set multimeter range switch to R x 1.
- an. Touch red probe (2) to electrical connector (20), pin B (23).
- ao. Touch black probe (5) to electrical connector (6), pin X (24).
- ap. Meter shall indicate **zero ohms.**
- aq. Set multimeter range switch to R x 1000.
- ar. Touch black probe (5) to all other pins on electrical connector (6).
- as. Meter shall indicate **1000 ohms** minimum.



- at. Set multimeter range switch to R x 1.
- au. Touch red probe (2) to electrical connector (20), pin C (25).
- av. Touch black probe (5) to electrical connector (6), pin Y (26).
- aw. Meter shall Indicate **zero ohms.**
- ax. Set multimeter range switch to R x 1000.
- ay. Touch black probe (5) to all ether pins on electrical connector (6).
- az. Meter shall Indicate **1000 ohms** minimum.

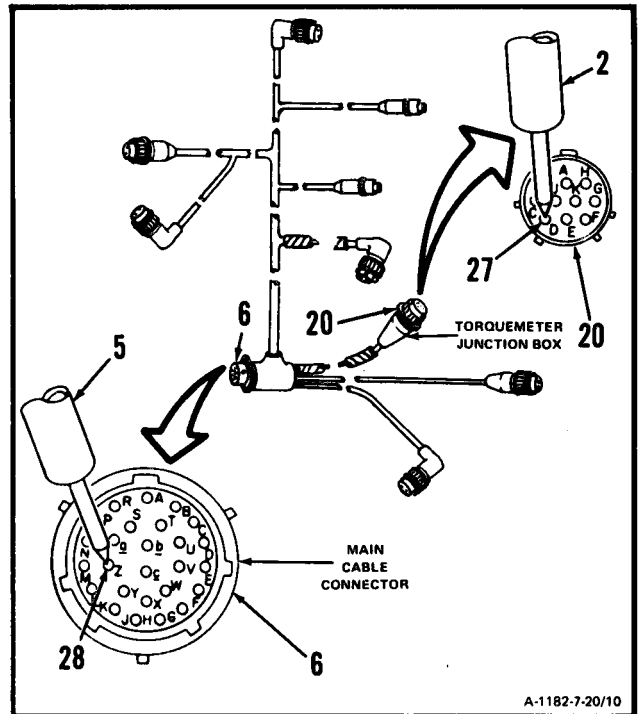


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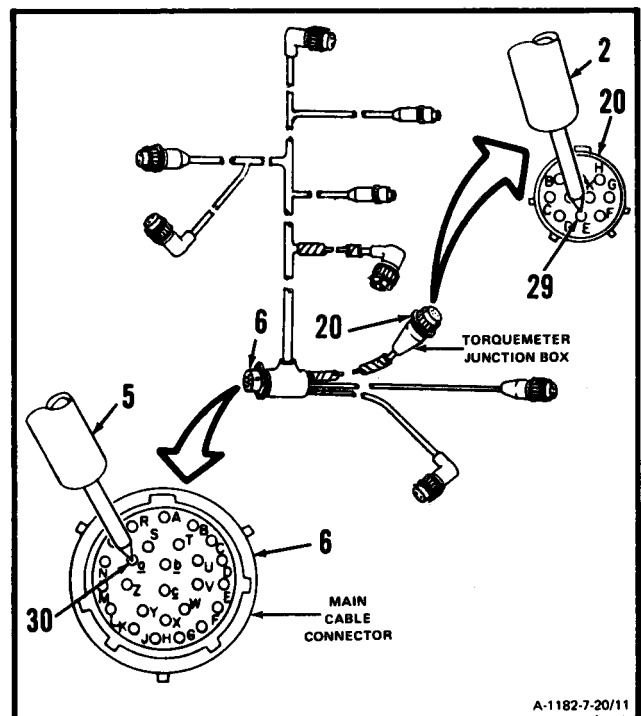
7-20 TEST MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) (Continued)

7-20

- ba. Touch red probe (2) to electrical connector (20), pin D (27).
- bb. Touch black probe (5) to electrical connector (6), pin Z (28).
- bc. Meter shall indicate **zero ohms.**
- bd. Set multimeter range switch to R x 1000.
- be. Touch black probe (5) to all other pins on electrical connector (6).
- bf. Meter shall indicate **1000 ohms** minimum.



- bg. Set multimeter range switch to R x 1.
- bh. Touch red probe (2) to electrical connector (20), pin E (29).
- bi. Touch black probe (5) to electrical connector (6), pin a (30).
- bj. Meter shall indicate **zero ohms.**
- bk. Set multimeter range switch to R x 1000
- bl. Touch black probe (5) to all other pins on electrical connector (6).
- bm. Meter shall indicate **1000 ohms** minimum.

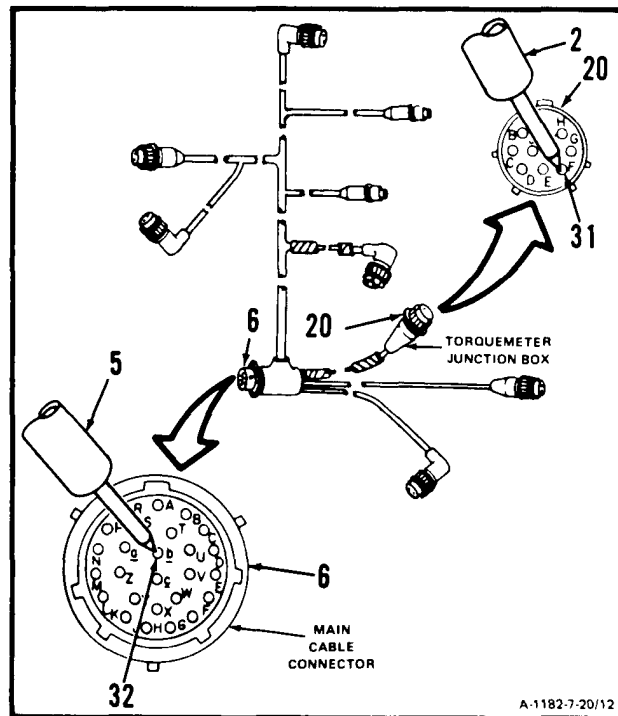


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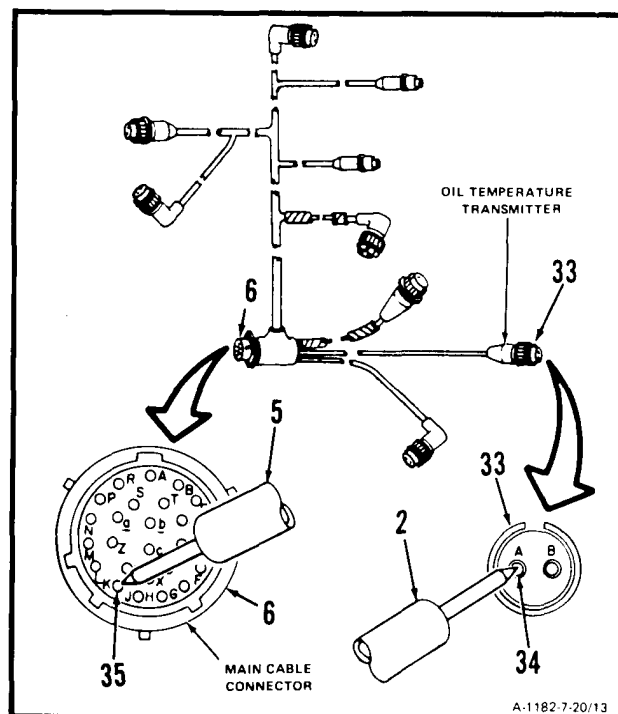
7-20 TEST MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) (Continued)

7-20

- bn. Set multimeter range switch to R x 1.
- bo. Touch red probe (2) to electrical connector (20), pin F (31).
- bp. Touch black probe (5) to electrical connector (6), pin b (32).
- bq. Meter shall indicate **zero ohms**.
- br. Set multimeter range switch to R x 1000.
- bs. Touch black probe (5) to all other pins on electrical connector (6).
- bt. Meter shall indicate **1000 ohms** minimum.



- bu. Set multimeter range switch to R x 1.
- bv. Touch red probe (2) to electrical connector (33), pin A (34).
- bw. Touch black probe (5) to electrical connector (6), pin K (35).
- bx. Meter shall indicate **zero ohms**.
- by. Set multimeter range switch to R x 1000.
- bz. Touch black probe (5) to all other pins on electrical connector (6).
- ca. Meter shall indicate **1000 ohms** minimum.

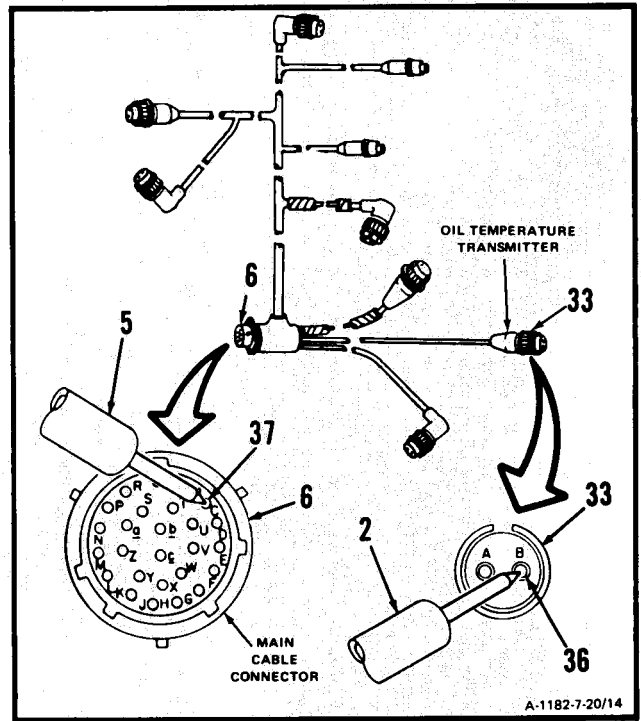


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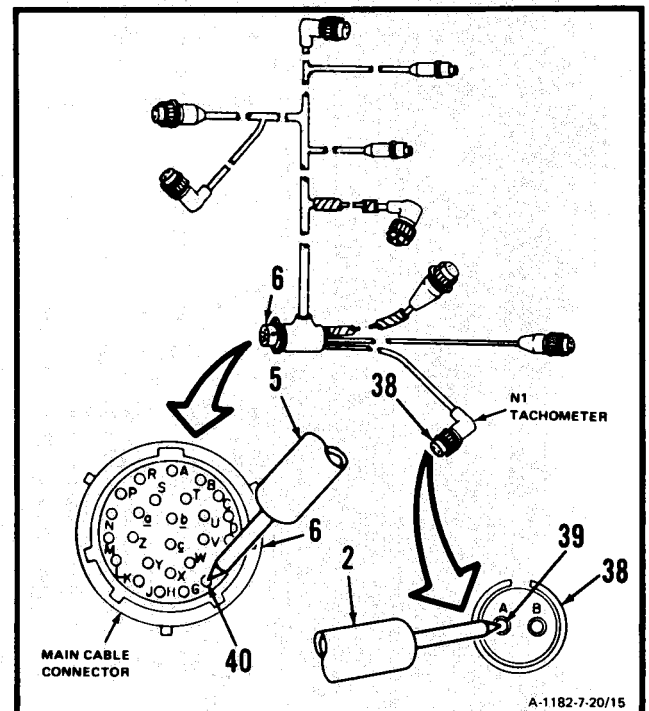
7-20 TEST MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) (Continued)

7-20

- cb. Touch red probe (2) to electrical connector (33), pin B (36).
- cc. Touch black probe (5) to electrical connector (6), pin C (37).
- cd. Meter shall indicate **zero ohms**.

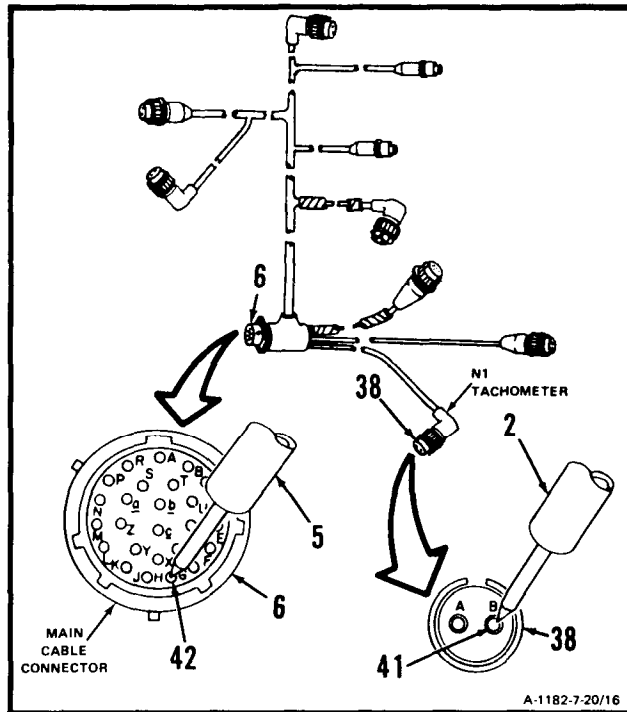


- ce. Set multimeter range switch to R x 1.
- cf. Touch red probe (2) to electrical connector (38), pin A (39).
- cg. Touch black probe (5) to electrical connector (6), pin G (40).
- ch. Meter shall indicate **zero ohms**.
- ci. Set multimeter range switch to R x 1000.
- cj. Touch black probe (5) to all other pins on electrical connector (6).
- ck. Meter shall indicate **1000 ohms** minimum.



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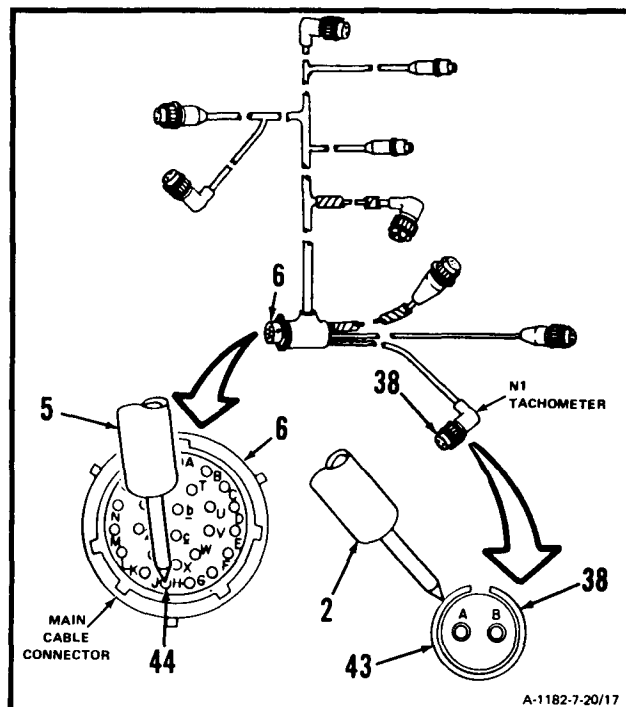
- cl. Set multimeter range switch to R x 1.
- cm. Touch red probe (2) to electrical connector (38), pin B (41).
- cn. Touch black probe (5) to electrical connector (6), pin H (42).
- co. Meter shall indicate **zero ohms**.
- cp. Set multimeter range switch to R x 1000.
- cq. Touch black probe (5) to all other pins on electrical connector (6).
- cr. Meter shall indicate **1000 ohms** minimum.



- cs. Set multimeter range switch to R x 1
- ct. Touch red probe (2) to electrical connector (38), shell (43).
- cu. Touch black probe (5) to electrical connector (6), pin J (44).
- cv. Meter shall indicate **zero ohms**.
- cw. Set multimeter range switch to R x 1000.
- cx. Touch black probe (5) to all other pins on electrical connector (6).
- cy. Meter shall indicate **1000 ohms** minimum.

NOTE

It is not necessary to test three remaining electrical connectors, They will not be used.



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7-20 TEST MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) (Continued)

7-20

FOLLOW-ON MAINTENANCE:

None

END OF TASK

7-20.1 TEST MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR)

7-20.1

INITIAL SETUP

Materials:

None

Applicable Configurations:

All

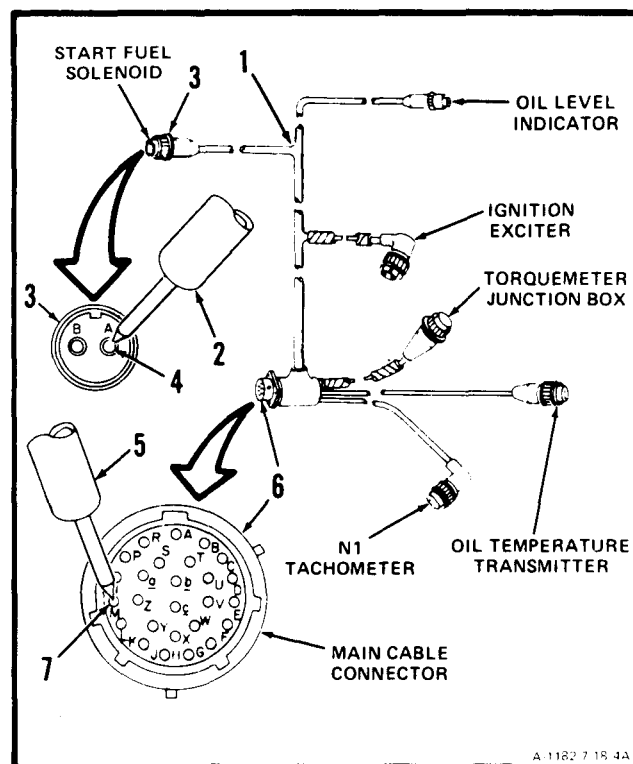
Personnel Required:

68B10 Aircraft Powerplant Repairer

Tools:

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

1. Using multimeter, measure continuity and insulation resistance of electrical cable assembly (1) as follows:
 - a. Set multimeter range switch to R x 1.
 - b. Touch red probe (2) to electrical connector (3), pin A (4).
 - c. Touch black probe (5) to electrical connector (6), pin M (7).
 - d. Meter shall indicate **zero ohms**.
 - e. Set multimeter range switch to R x 1000.
 - f. Touch black probe (5) to all other pins on electrical connector (6).
 - g. Meter shall indicate **1000 ohms** minimum.

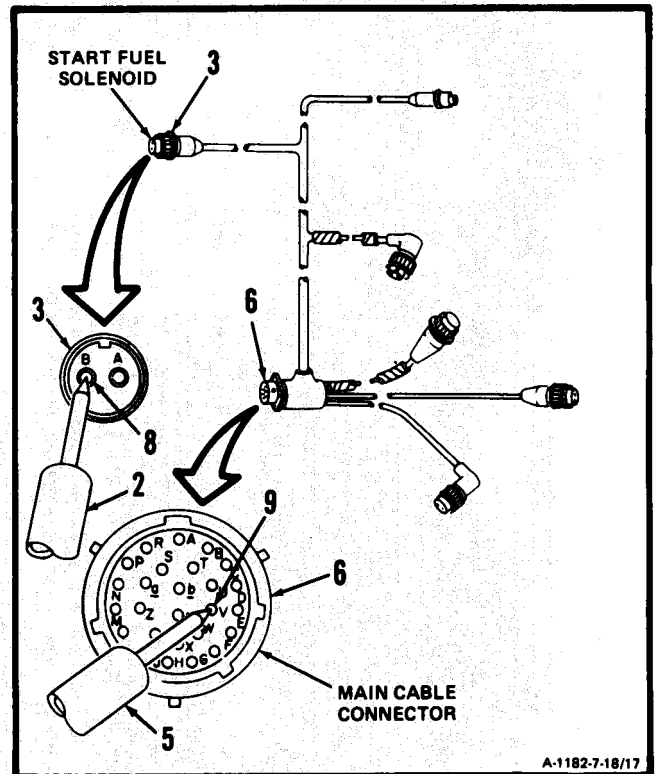


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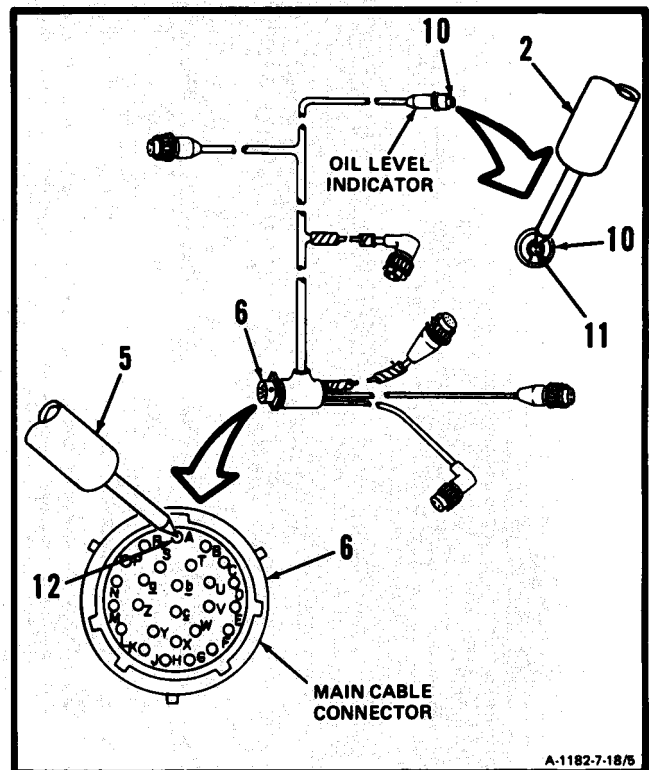
7-20.1 TEST MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued)

7-20.1

- h. Set multimeter range switch to R x 1.
- i. Touch red probe (2) to electrical connector (3), pin B (8).
- j. Touch black probe (5) to electrical connector (6), pin V (9).
- k. Meter shall indicate **zero ohms**.



- l. Set multimeter range switch to R x 1.
- m. Touch red probe (2) to electrical connector (10), center pin (11).
- n. Touch black probe (5) to electrical connector (6), pin A (12).
- o. Meter shall indicate **zero ohms**.
- p. Set multimeter range switch to R x 1000.
- q. Touch black probe (5) to all other pins on electrical connector (6).
- r. Meter shall indicate **1000 ohms** minimum.

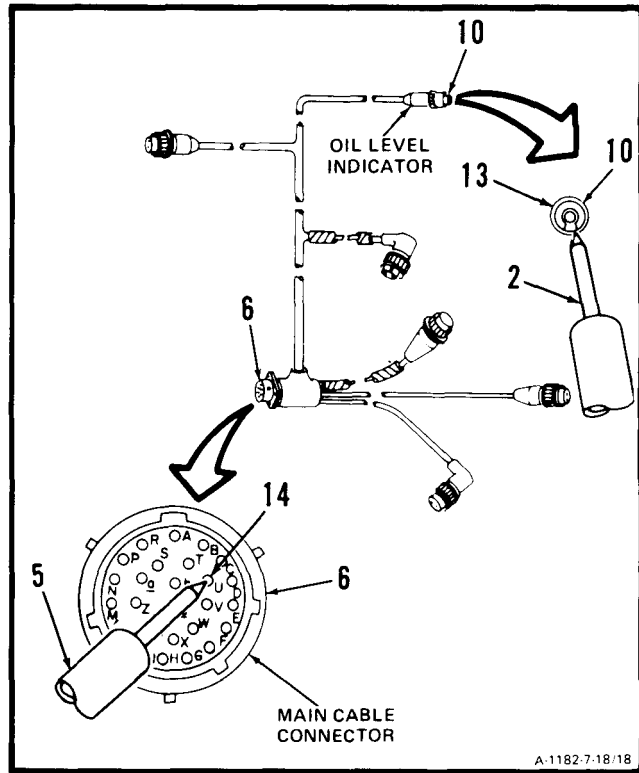


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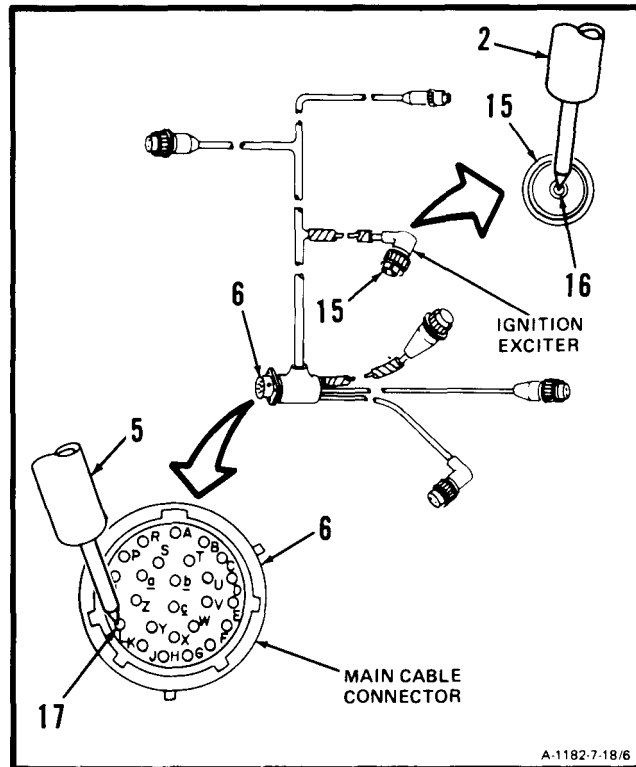
7-20.1 TEST MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR)(Continued)

7-20.1

- s. Touch red probe (2) to electrical connector (10), shell (13).
- t. Touch black probe (5) to electrical connector (6), pin U (14).
- u. Meter shall indicate **zero ohms**.



- v. Set multimeter range switch to R x 1.
- w. Touch red probe (2) to electrical connector (15), center pin (16).
- x. Touch black probe (5) to electrical connector (6), pin L (17).
- y. Meter shall indicate **zero ohms**.
- z. Set multimeter range switch to R x 1000.
- aa. Touch black probe (5) to all other pins on electrical connector (6).
- ab. Meter shall indicate **1000 ohms** minimum.

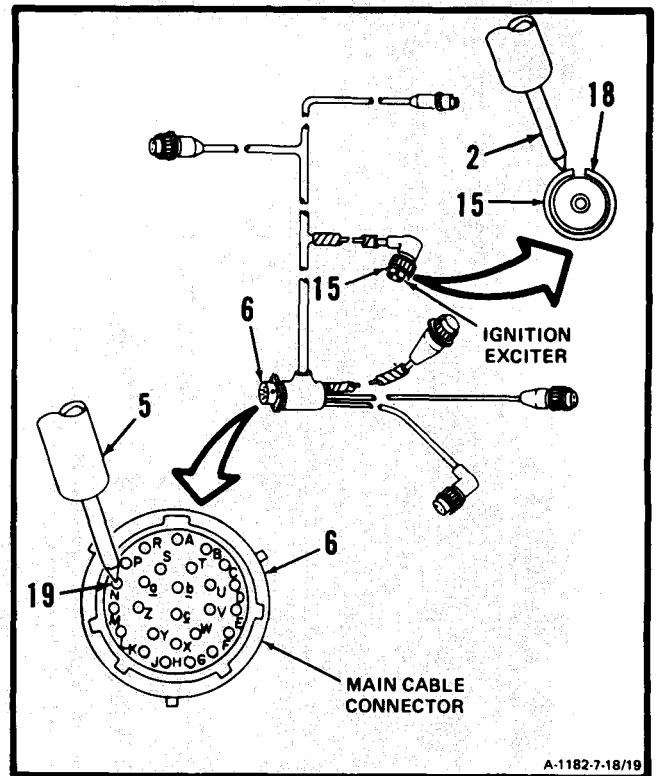


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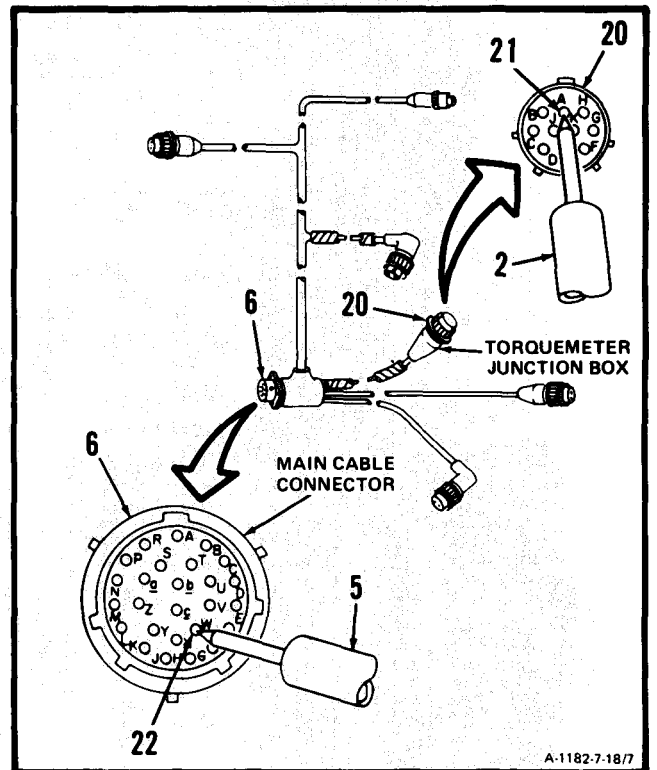
7-20.1 TEST MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued)

7-20.1

- ac. Touch red probe (2) to electrical connector (15), shell (18).
- ad. Touch black probe (5) to electrical connector (6), pin N (19).
- ae. Meter shall indicate **zero ohms**.



- af. Set multimeter range switch to R x 1.
- ag. Touch red probe (2) to electrical connector (20), pin A (21).
- ah. Touch black probe (5) to electrical connector (6), pin W (22).
- ai. Meter shall indicate **zero ohms**.
- aj. Set multimeter range switch to R x 1000.
- ak. Touch black probe (5) to all other pins on electrical connector (6).
- al. Meter shall indicate **1000 ohms** minimum.

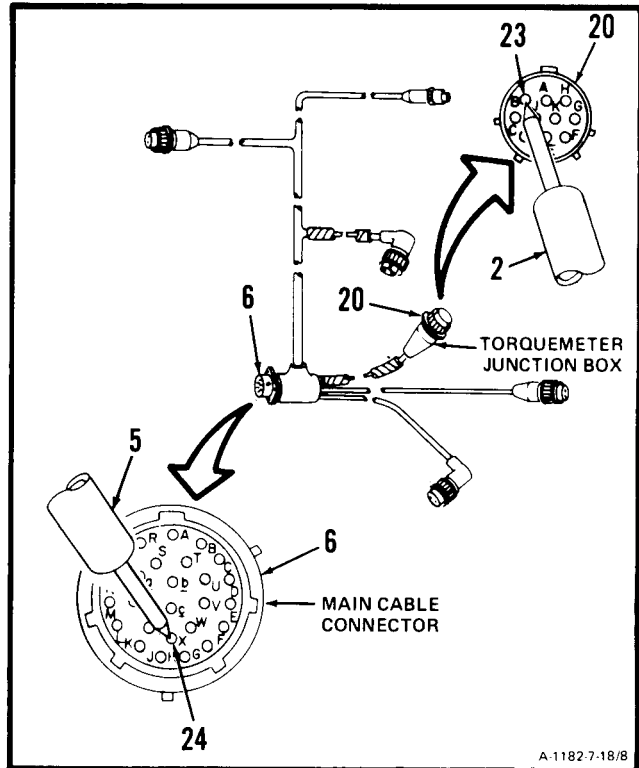


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7-20.1 TEST MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued)

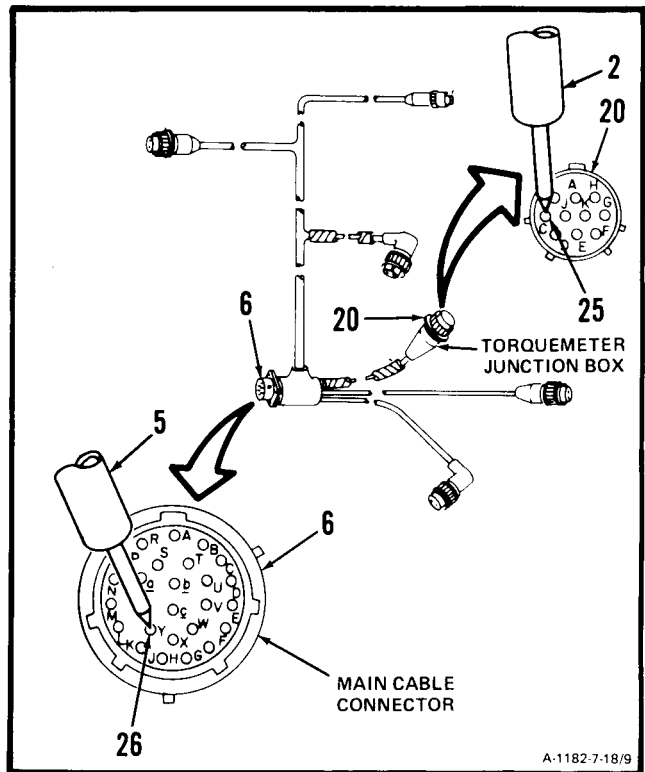
7-20.1

- am. Set multimeter range switch to R x 1.
- an. Touch red probe (2) to electrical connector (20), pin B (23).
- ao. Touch black probe (5) to electrical connector (6), pin X (24).
- ap. Meter shall indicate **zero ohms.**
- aq. Set multimeter range switch to R x 1000.
- ar. Touch black probe (5) to all other pins on electrical connector (6).
- as. Meter shall indicate **1000 ohms** minimum.



A-1182-7-18/8

- at. Set multimeter range switch to R x 1.
- au. Touch red probe (2) to electrical connector (20), pin C (25).
- av. Touch black probe (5) to electrical connector (6), pin Y (26).
- aw. Meter shall indicate **zero ohms.**
- ax. Set multimeter range switch to R x 1000.
- ay. Touch black probe (5) to all other pins on electrical connector (6).
- az. Meter shall indicate **1000 ohms** minimum.



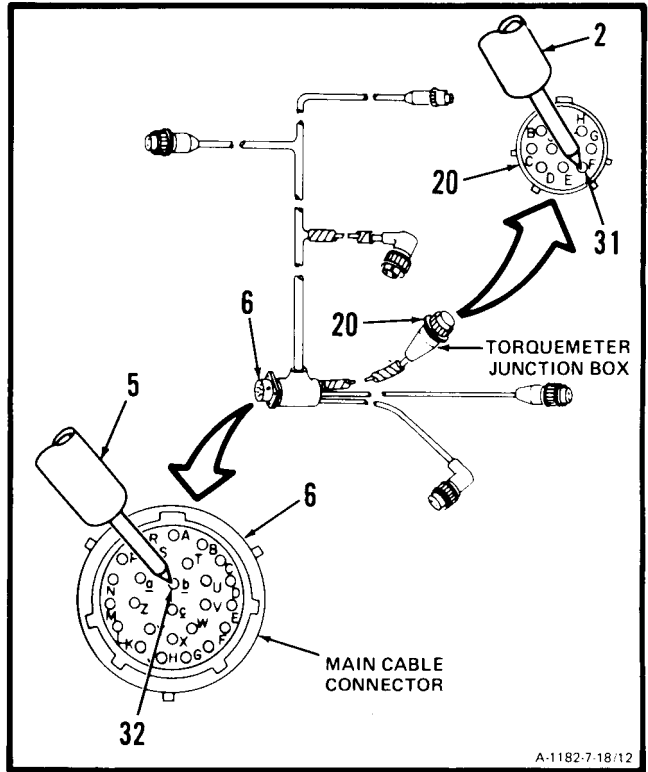
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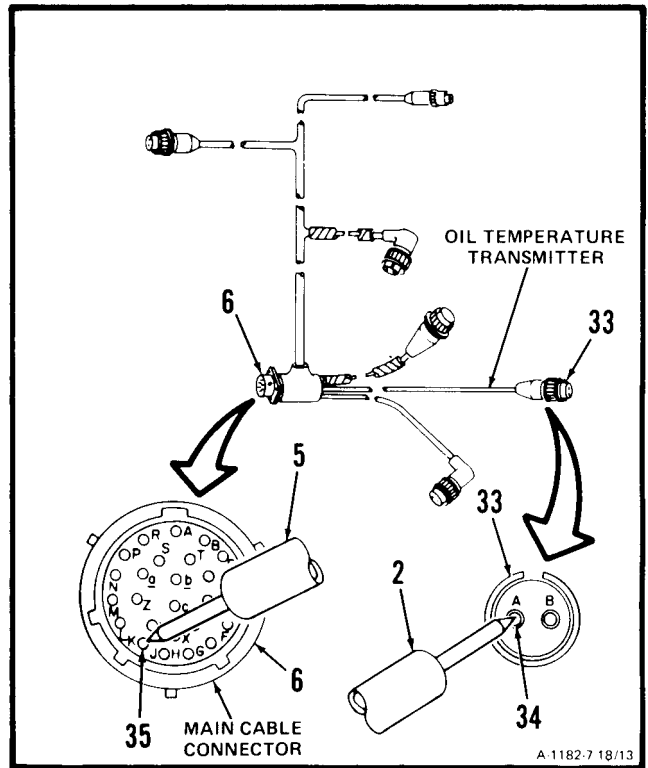
7-20.1 TEST MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued)

7-20.1

- bn. Set multimeter range switch to R x 1.
- bo. Touch red probe (2) to electrical connector (20), pin F (31).
- bp. Touch black probe (5) to electrical connector (6), pin b (32).
- bq. Meter shall indicate **zero ohms**.
- br. Set multimeter range switch to R x 1000.
- bs. Touch black probe (5) to all other pins on electrical connector (6).
- bt. Meter shall indicate **1000 ohms** minimum.



- bu. Set multimeter range switch to R x 1.
- bv. Touch red probe (2) to electrical connector (33), pin A (34).
- bw. Touch black probe (5) to electrical connector (6), pin K (35).
- bx. Meter shall indicate **zero ohms**.
- by. Set multimeter range switch to R x 1000.
- bz. Touch black probe (5) to all other pins on electrical connector (6).
- ca. Meter shall indicate **1000 ohms** minimum.

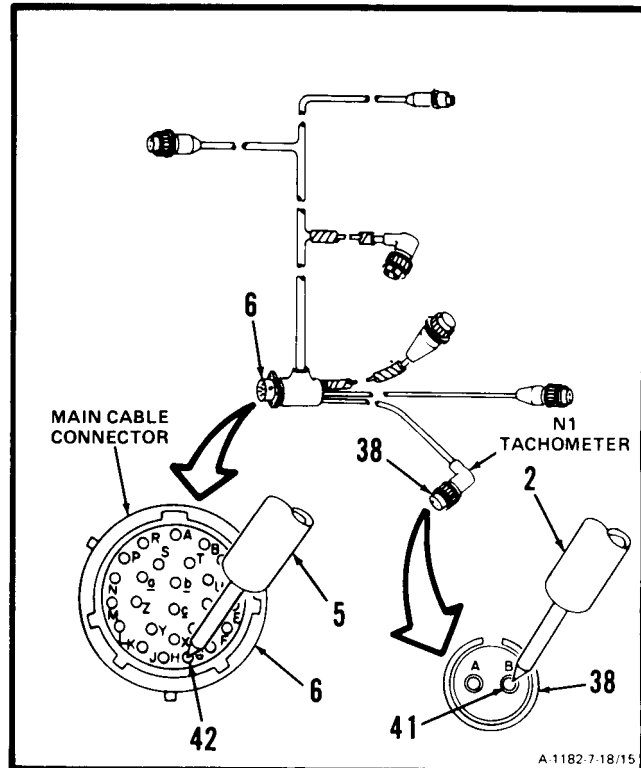


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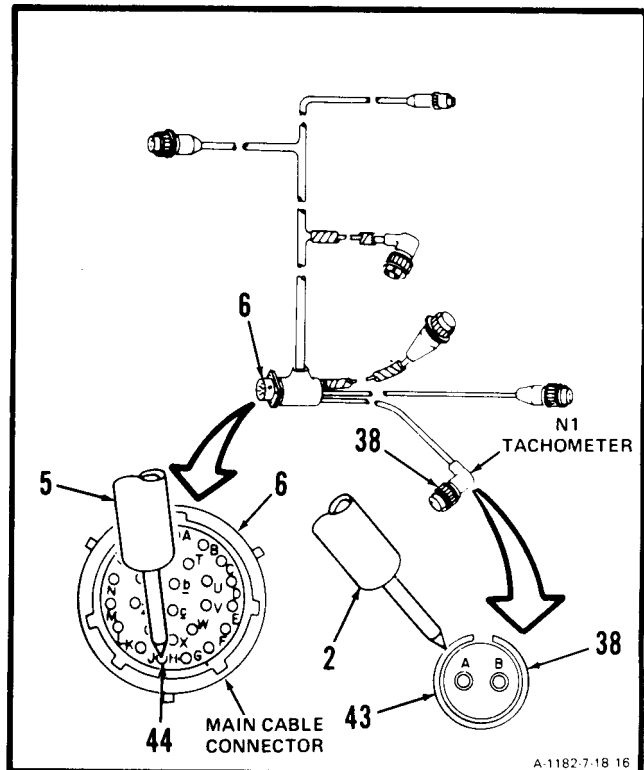
7-20.1 TEST MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued)

7-20.1

- cl. Set multimeter range switch to R x 1.
- cm. Touch red probe (2) to electrical connector (38), pin B (41).
- cn. Touch black probe (5) to electrical connector (6), pin H (42).
- co. Meter shall indicate **zero ohms**.
- cp. Set multimeter range switch to R x 1000.
- cq. Touch black probe (5) to all other pins on electrical connector (6).
- cr. Meter shall indicate **1000 ohms** minimum.



- cs. Set multimeter range switch to R x 1.
- ct. Touch red probe (2) to electrical connector (38), shell (43).
- cu. Touch black probe (5) to electrical connector (6), pin J (44).
- cv. Meter shall indicate **zero ohms**.
- cw. Set multimeter range switch to R x 1000.
- cx. Touch black probe (5) to all other pins on electrical connector (6).
- cy. Meter shall indicate **1000 ohms** minimum.



GO TO NEXT PAGE

7-20.1 TEST MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued)

7-20.1

FOLLOW-ON MAINTENANCE:

None

END OF TASK

7-21 INSTALL MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR)

7-21

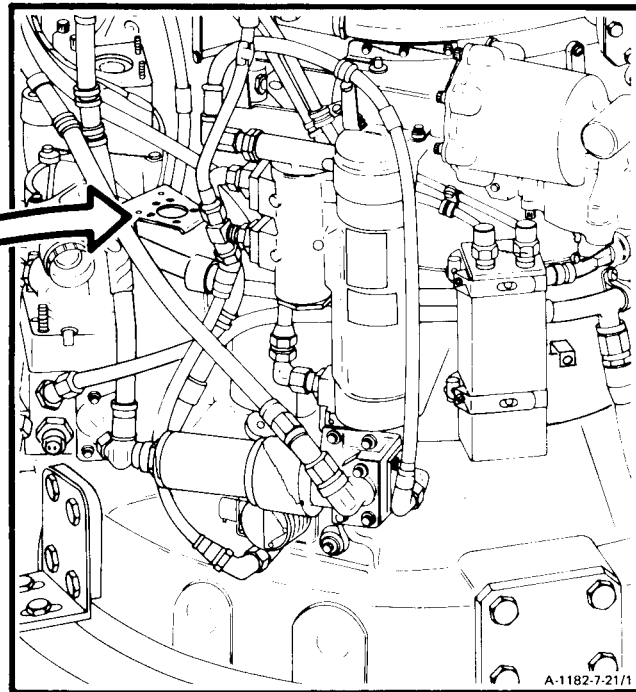
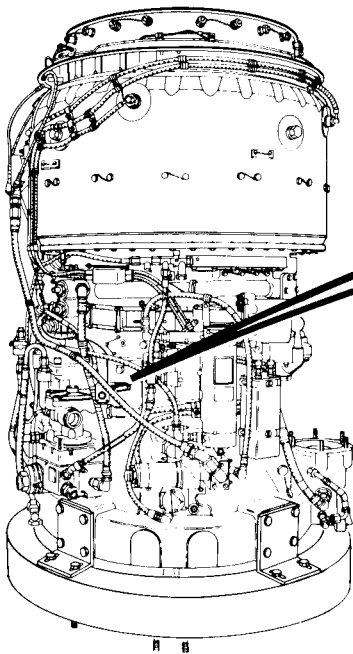
INITIAL SETUP

Applicable Configurations:
All

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

Materials:
Lockwire (E29)

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

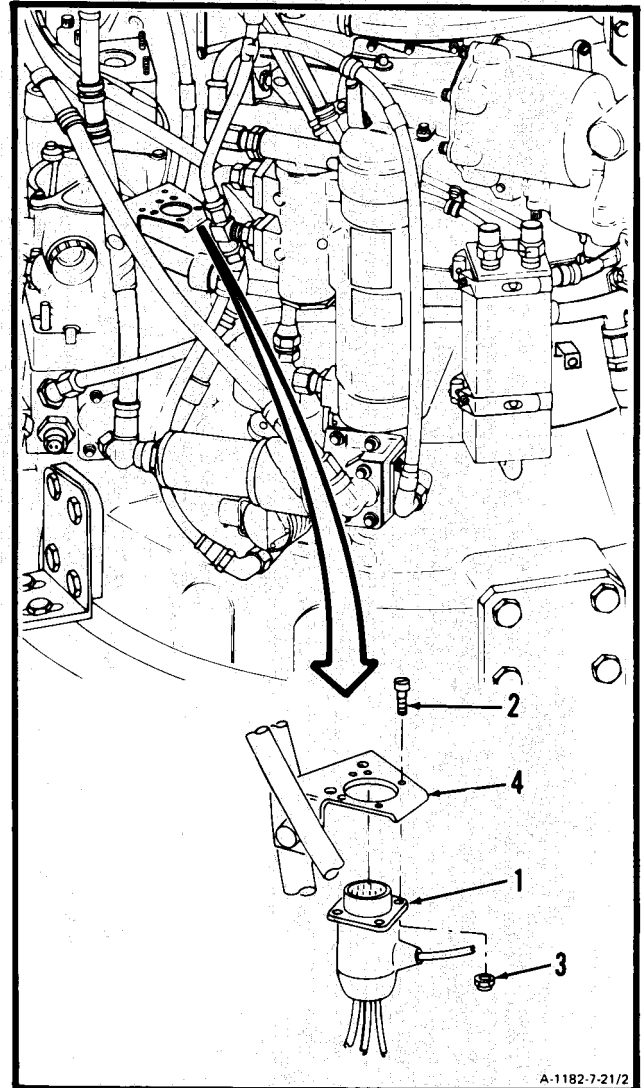


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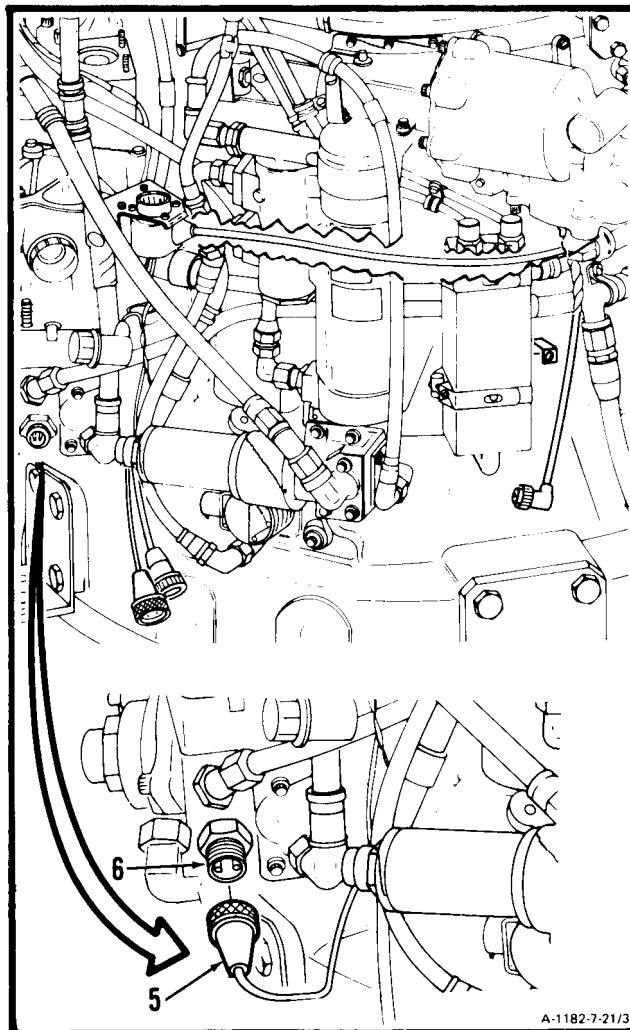
7-21 INSTALL MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) (Continued)

7-21

1. Install electrical connector (1), four screws (2), and nuts (3) in bracket (4).

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2. Connect electrical connector (5) to oil temperature transmitter (6). Lockwire connector (5). Use lockwire (E29).

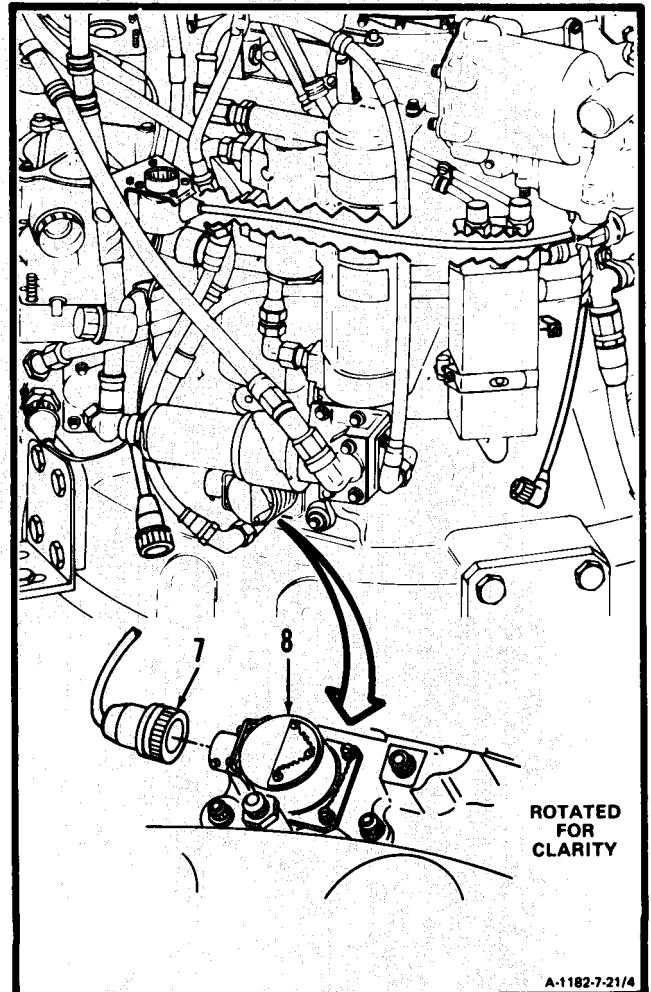


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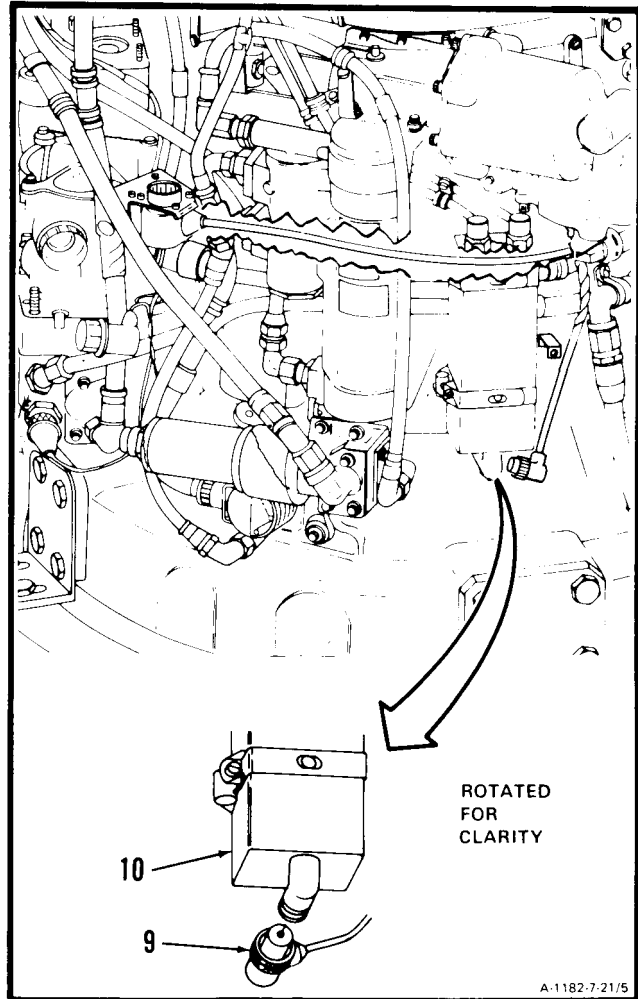
7-21 INSTALL MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) (Continued)

7-21

3. Connect electrical connector (7) to torquemeter junction box (8).

**GO TO NEXT PAGE**

4. **Connect electrical connector (9)** to ignition exciter (10). Lockwire electrical connector (9), Use lockwire (E29).

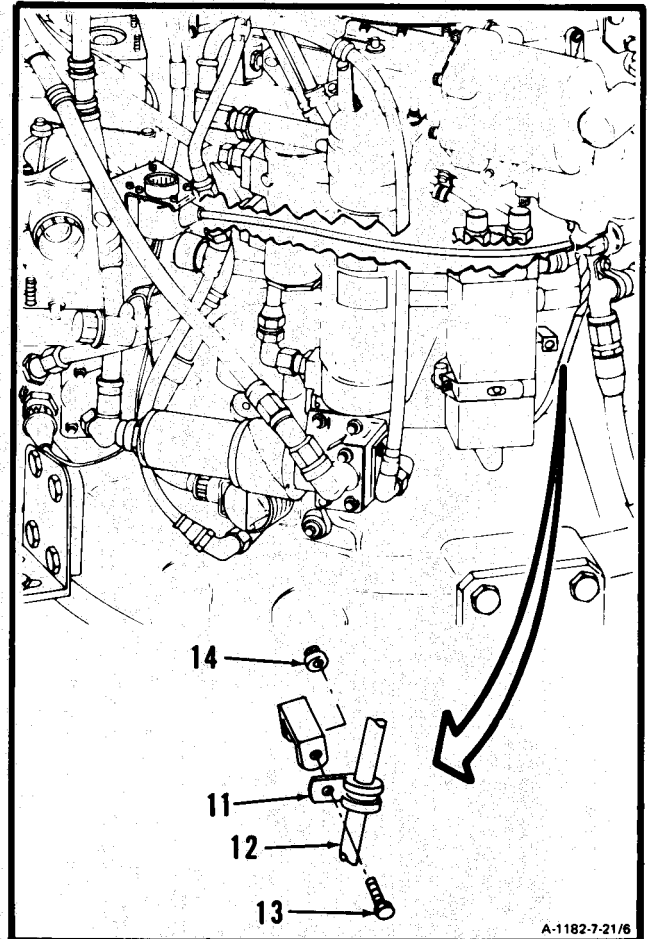


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7-21 INSTALL MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) (Continued)

7-21

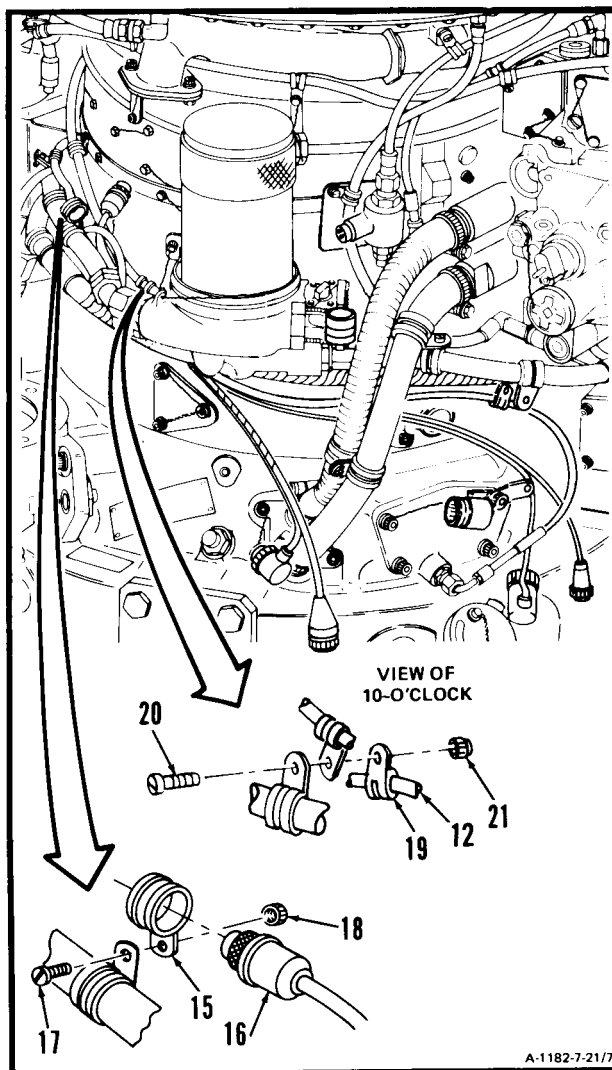
5. Install clamp (11) on electrical cable assembly (12), and install screw (13) and nut (14).



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7-21 INSTALL MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) (Continued)

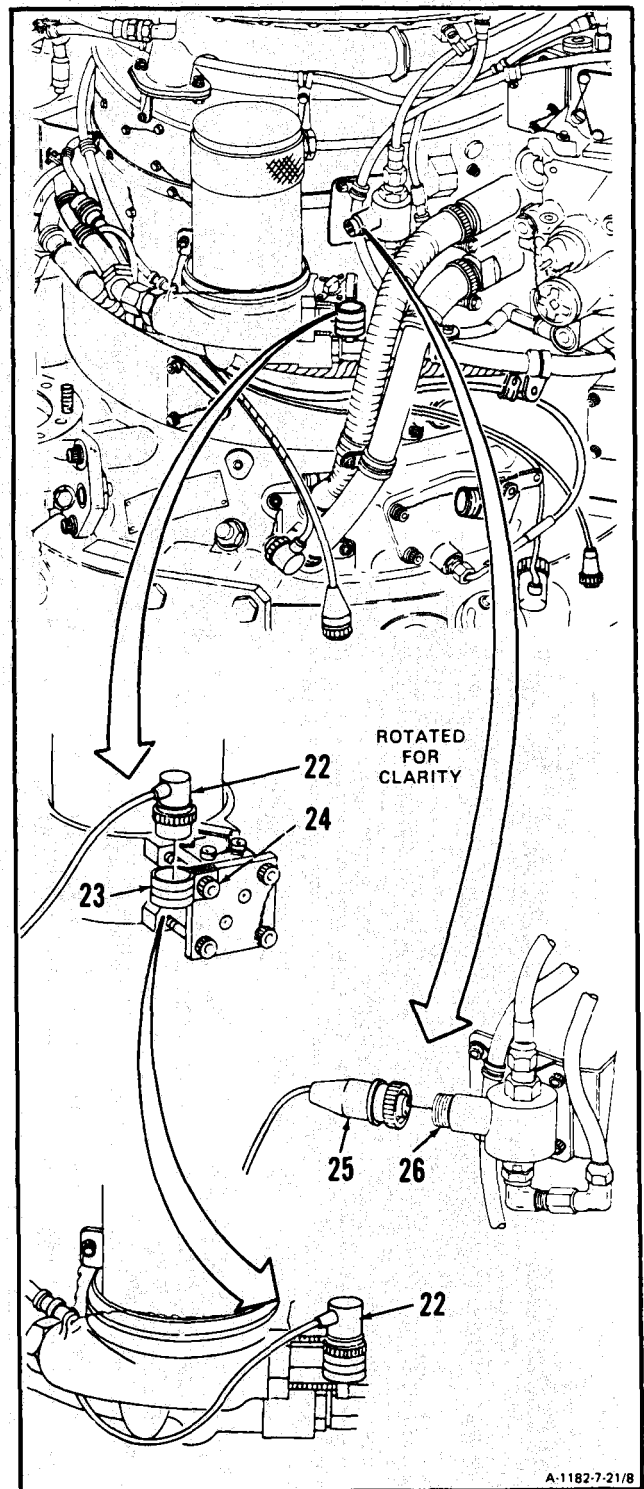
6. **Install clamp (15)** on electrical connector (16).
Install screw (17) and nut (18).
7. **Install clamp (19)** on electrical cable assembly (12).
Install screw (20) and nut (21).



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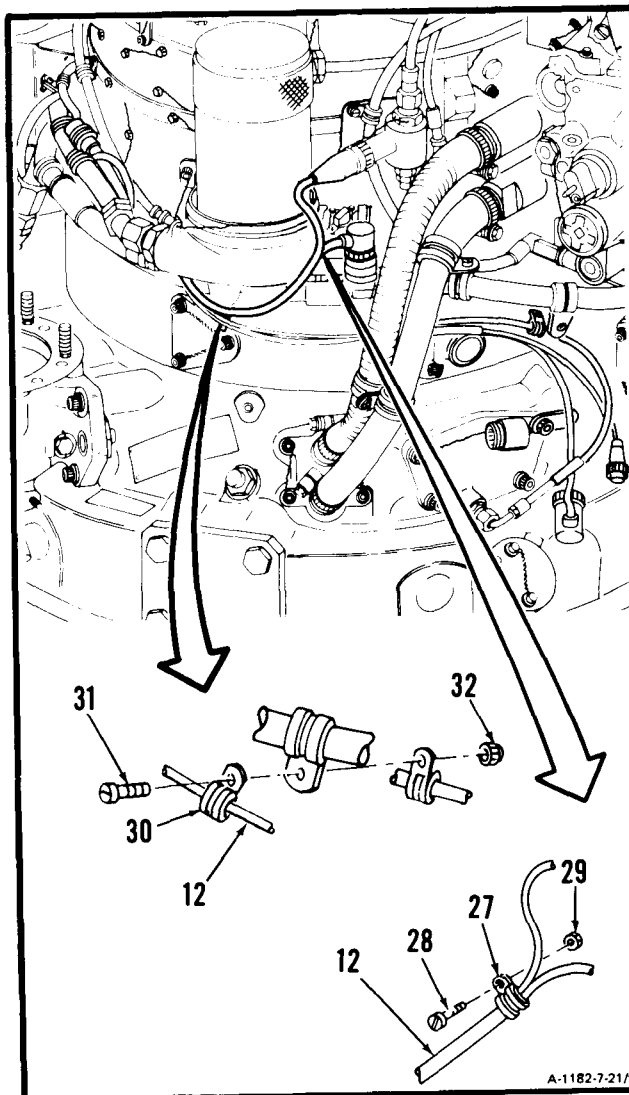
7-21 INSTALL MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR)(Continued)**7-21**

8. Install right-angle electrical connector (22) in clamp (23). Tighten screw (24) and lockwire. Use lockwire (E29).
9. **Connect electrical connector (25) to starting fuel solenoid valve (26).** Lockwire electrical connector (25). Use lockwire (E29).



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10. **Install clamp (27)** on electrical cable assembly (12), and install screw (28) and nut (29).
11. **Install clamp (30)** on electrical cable assembly (12), and install screw (31) and nut (32).

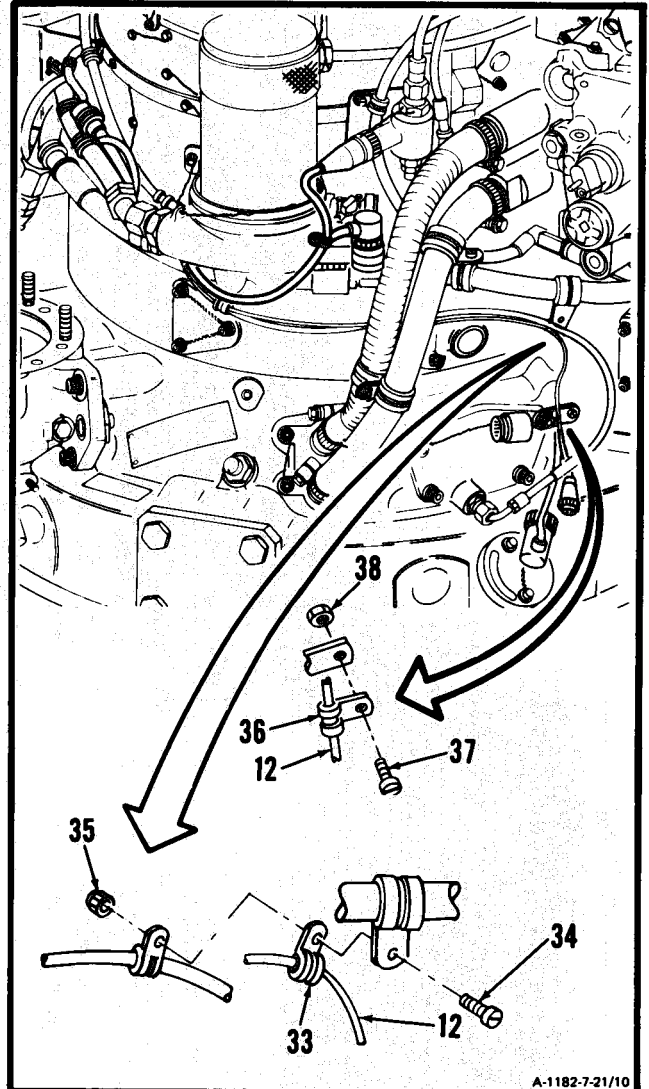


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7-21 INSTALL MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) (Continued)

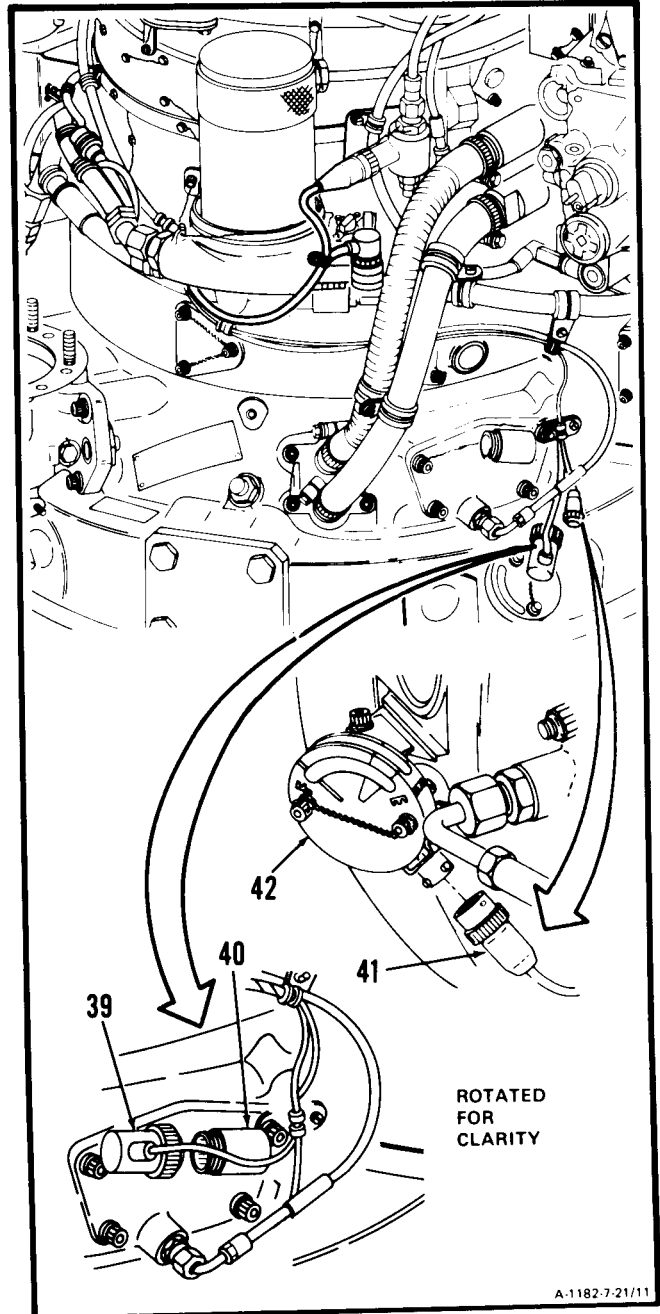
7-21

12. **Install clamp (33)** on electrical cable assembly (12), and install screw (34) and nut (35).
13. **Install clamp (36)** on electrical cable assembly (12), and install screw (37) and nut (38).



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14. Connect right-angle electrical connector (39) to plug (40). Lockwire connector (39). Use lockwire (E29).
15. Connect electrical connector (41) to oil level indicator (42).



INSPECT

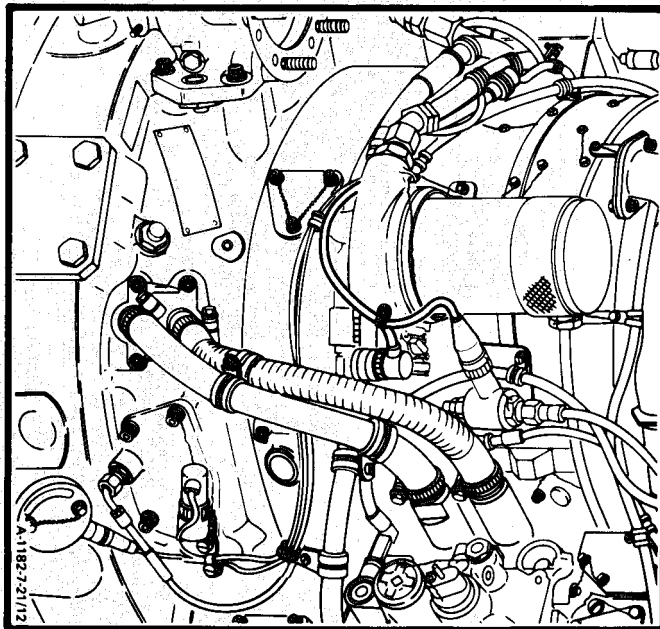
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7-21 INSTALL MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR)(Continued)

7-21

FOLLOW-ON MAINTENANCE:

None

**END OF TASK**

7-21.1 INSTALL MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR)

7-21.1

INITIAL SETUP

Applicable Configurations:

All

Tools:

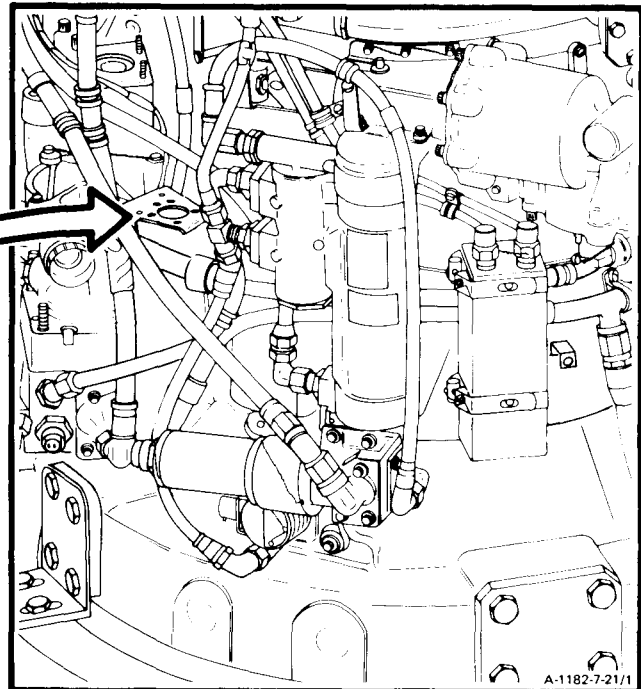
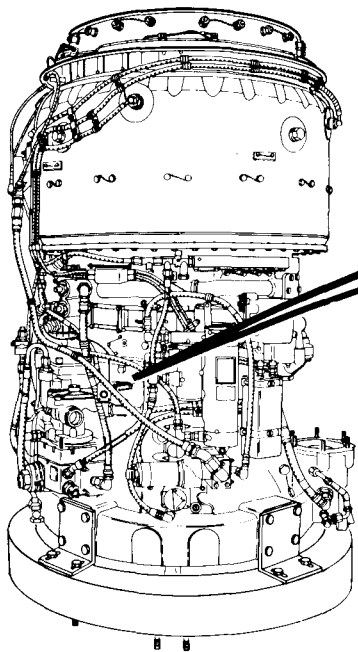
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:

Lockwire (E29)

Personnel Required:

68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

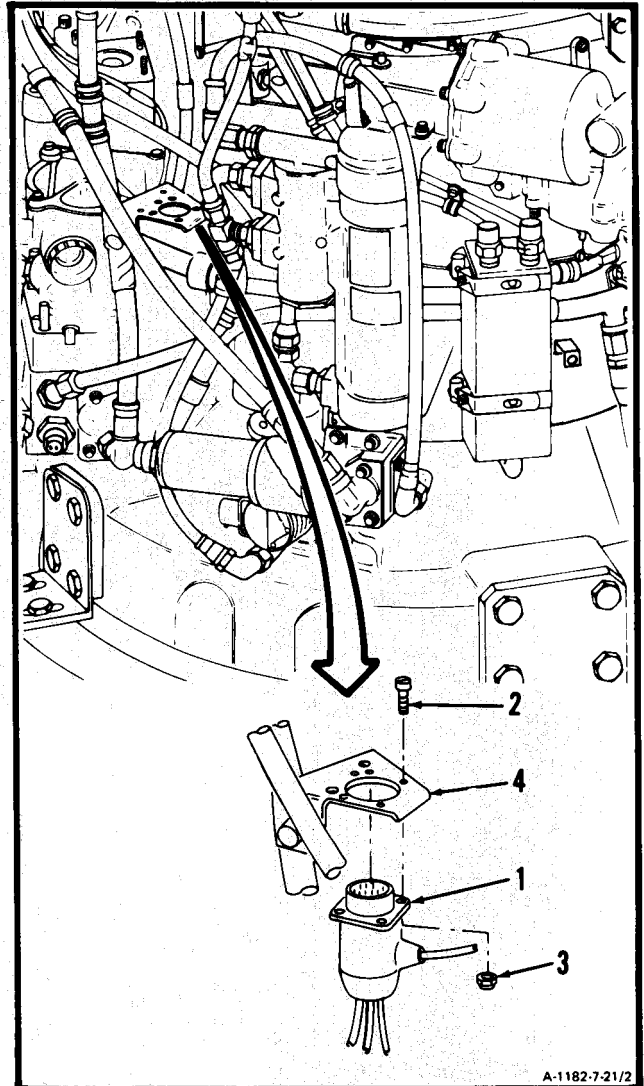


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7-21.1 INSTALL MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued)

7-21.1

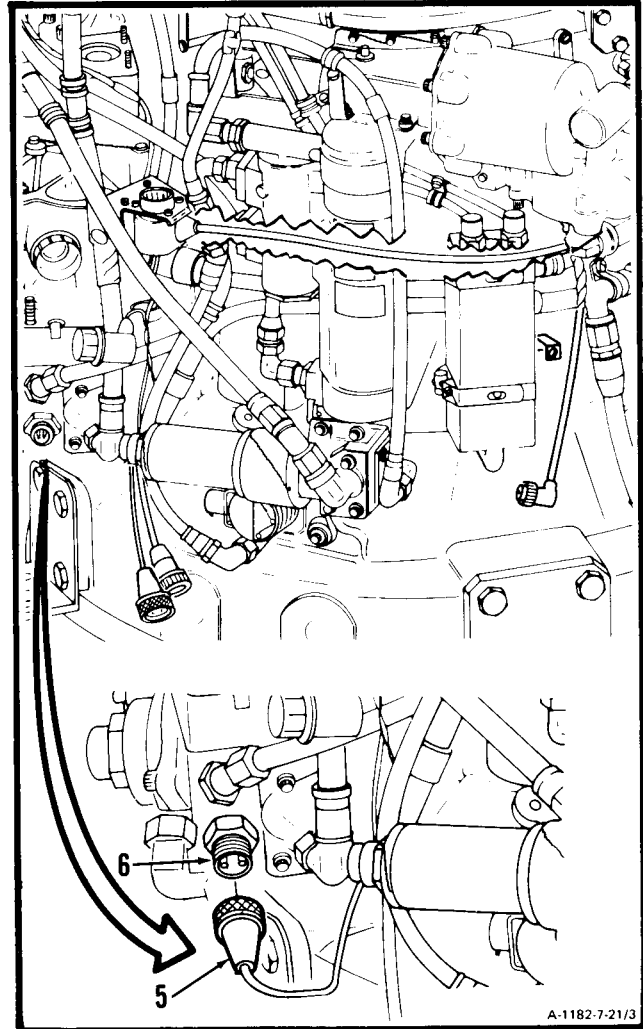
1. Install electrical connector (1), four screws (2), and nuts (3) in bracket (4).



A-1182-7-21/2

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2. Connect electrical connector (5) to oil temperature transmitter (6). Lockwire connector (5). Use lockwire (E29).

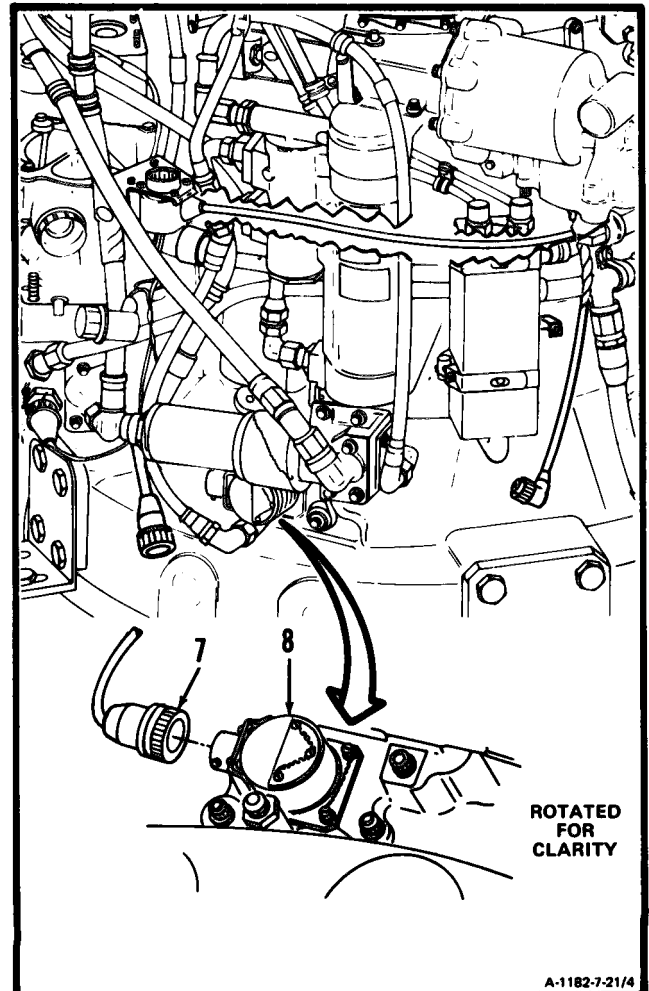


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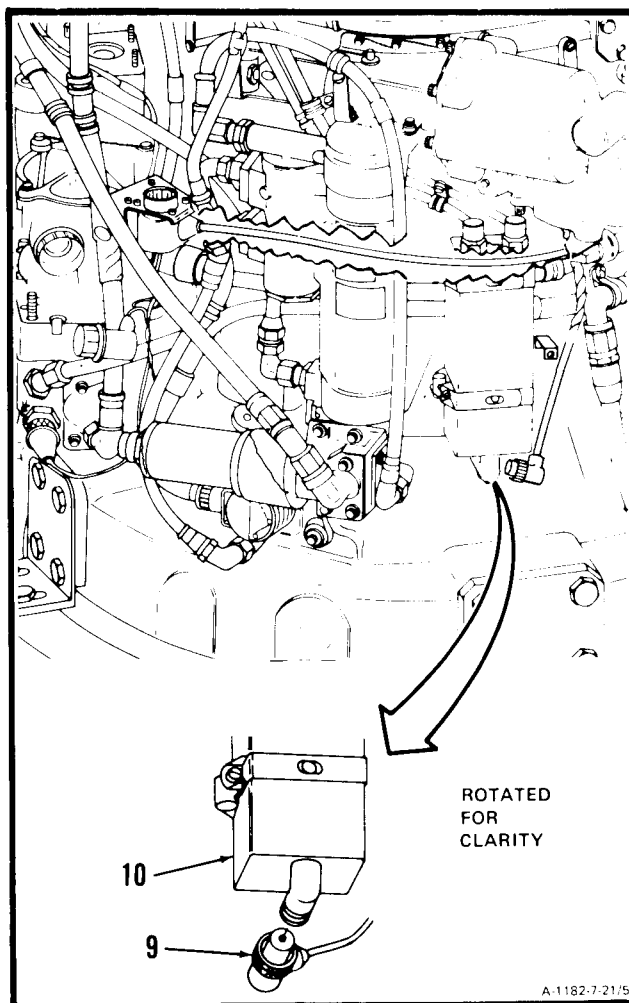
7-21.1 INSTALL MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued)

7-21.1

3. Connect electrical connector (7) to torquemeter junction box (8).

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4. **Connect electrical connector (9)** to ignition exciter (10). Lockwire electrical connector (9). Use lockwire (E29).

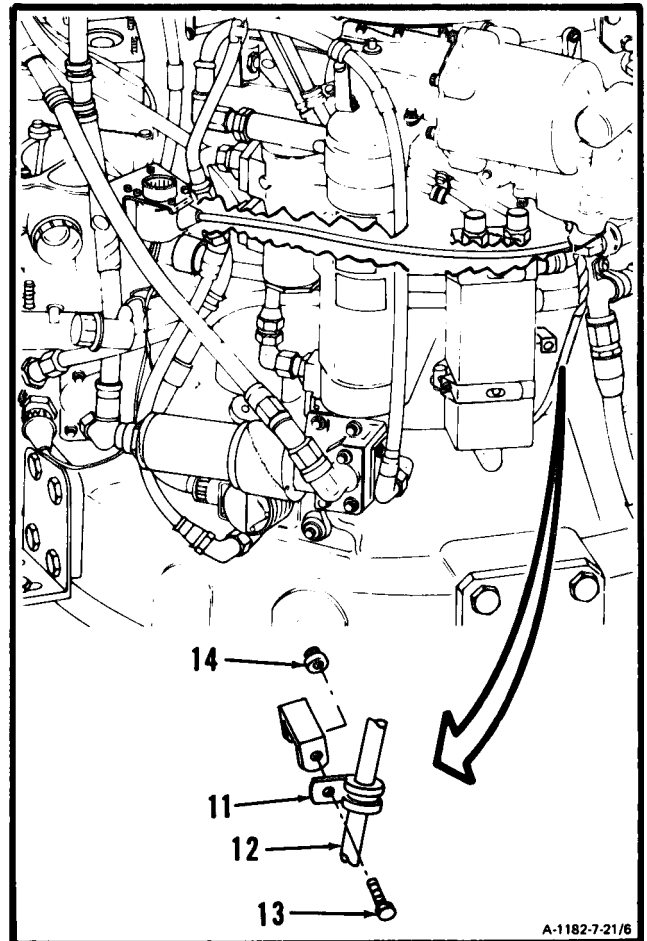


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7-21.1 INSTALL MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR)(Continued)

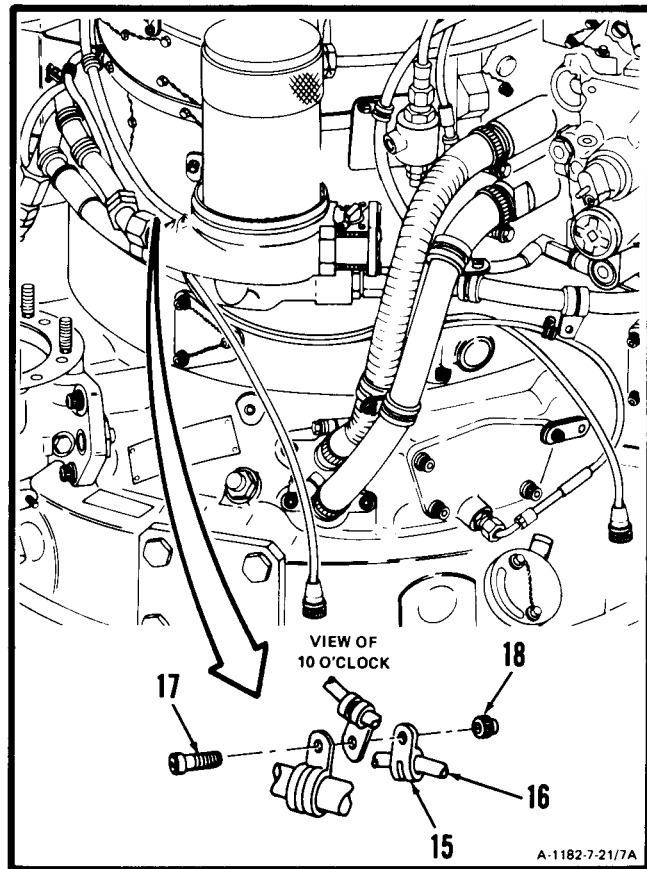
7-21.1

5. Install clamp (11) on electrical cable assembly (12), and install screw (13) and nut (14).



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6. Install clamp (15) on electrical cable assembly (16). Install screw (17) and nut (18).

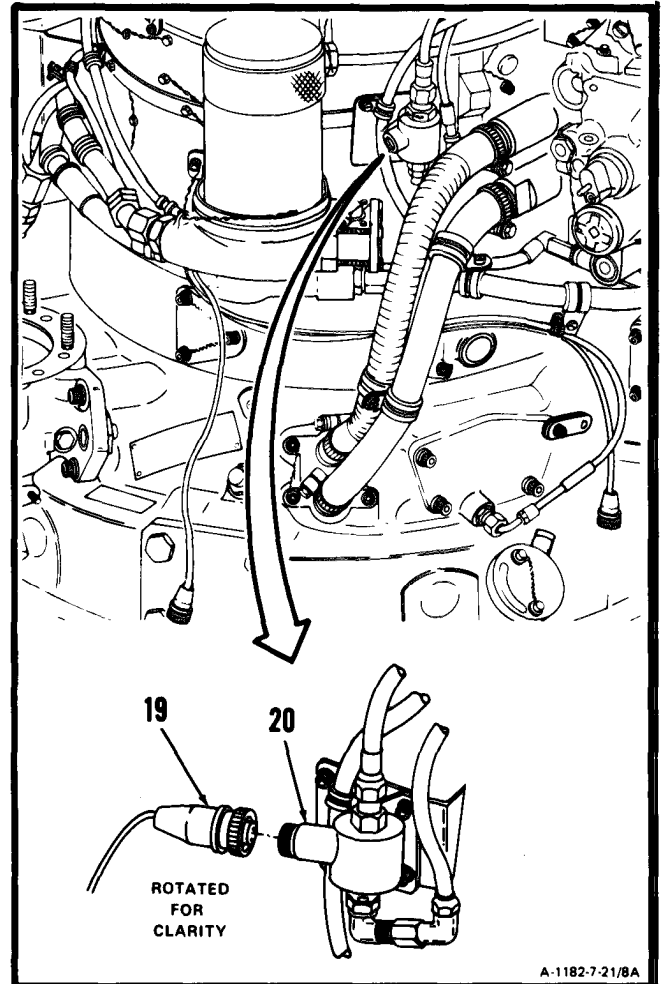


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7-21.1 INSTALL MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued)

7-21.1

7. **Connect electrical connector (19)** to starting fuel solenoid valve (20). Lockwire electrical connector (19). Use lockwire (E29).

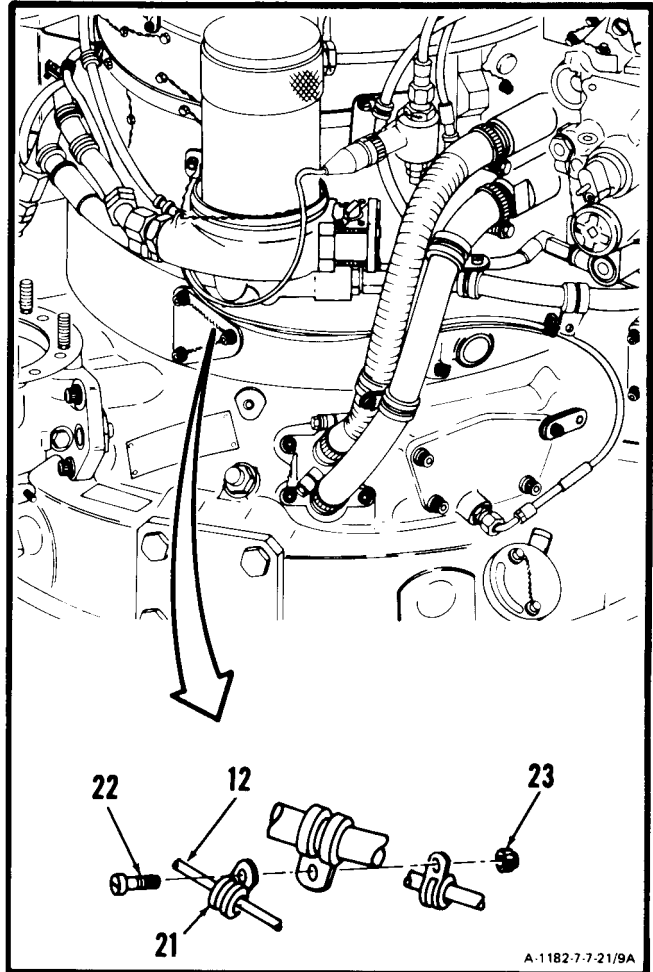


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7-21.1 INSTALL MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued)

7-21.1

8. Install clamp (21) on electrical cable assembly (12), and install screw (22) and nut (23).

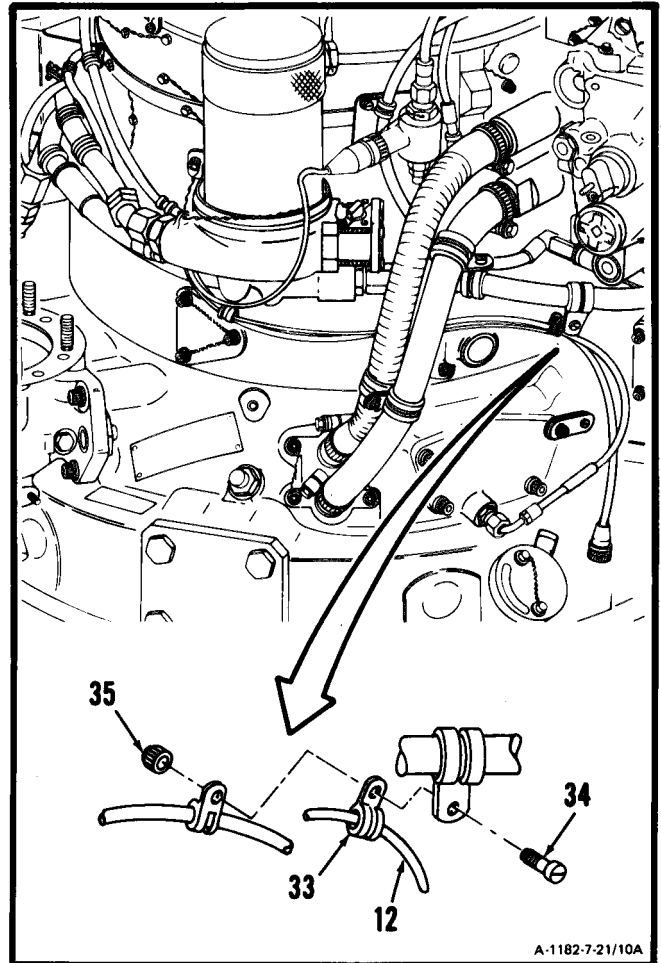


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7-21.1 INSTALL MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued)

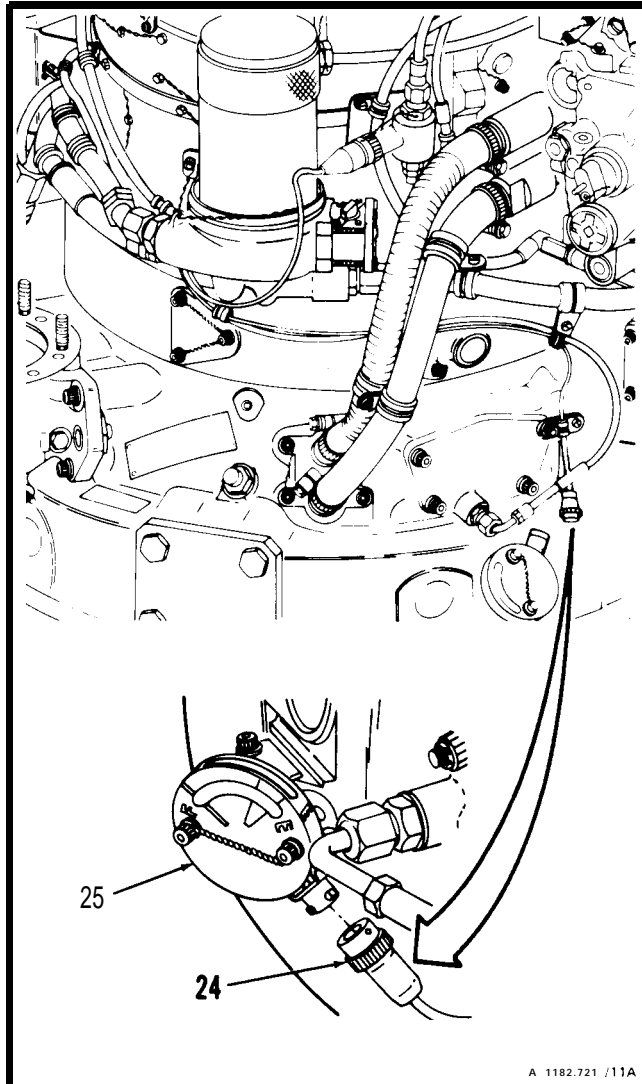
7-21.1

9. Install clamp (33) on electrical cable assembly (12), and install screw (34) and nut (35).



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10. Connect electrical connector (24) to oil level indicator (25).



INSPECT

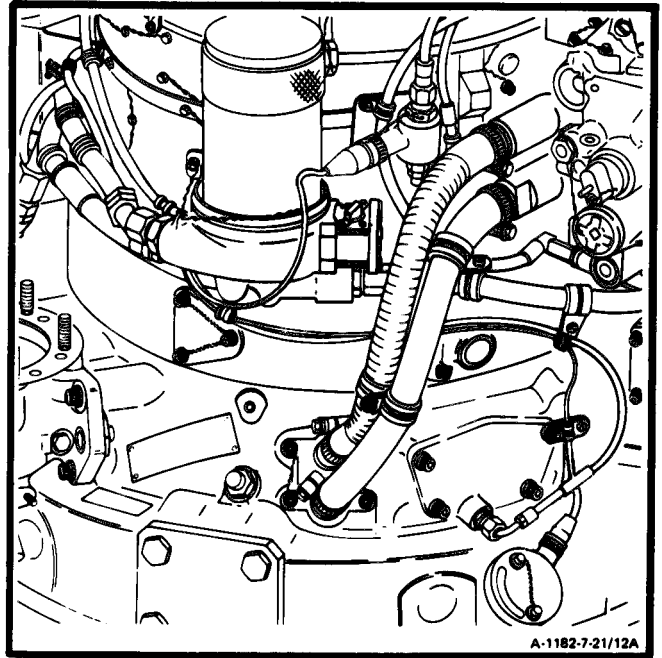
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7-21.1 INSTALL MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued)

7-21.1

FOLLOW-ON MAINTENANCE:

None

**END OF TASK**

CHAPTER 8

LUBRICATION SYSTEM – MAINTENANCE INSTRUCTIONS

CHAPTER OVERVIEW

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

<u>SECTION</u>	<u>TASK N.O.</u>	<u>TITLE</u>	<u>PAGE</u>
I		MAIN OIL PUMP AND SCAVENGE OIL SCREEN – MAINTENANCE PROCEDURES	
	8-1	Remove Main Oil Pump and Scavenge Oil Screen	8-7
	8-2	Clean Main Oil Pump and Scavenge Oil Screen	8-12
	8-3	Inspect Main Oil Pump and Scavenge Oil Screen	8-14
	8-4	Install Main Oil Pump and Scavenge Oil Screen	8-15
	8-4.1	Remove Oil Pump Check Valve (AVIM)	8-20.1
	8-4.2	Install Oil Pump Check Valve (AVIM)	8-20.3
II		OIL COOLER ASSEMBLY – MAINTENANCE PROCEDURES	
	8-5	Remove Oil Cooler Assembly	8-21
	8-6	Disassemble Oil Cooler Assembly	8-26
	8-7	Clean Oil Cooler Assembly	8-29
	8-8	Inspect Oil Cooler Assembly	8-31
	8-9	Repair Oil Cooler Assembly	8-32
	8-10	Assemble Oil Cooler Assembly	8-33
	8-11	Install Oil Cooler Assembly	8-35
III		OIL TEMPERATURE TRANSMITTER – MAINTENANCE PROCEDURES	
	8-12	Remove Oil Temperature Transmitter	8-41
	8-13	Clean Oil Temperature Transmitter	8-43
	8-14	Inspect Oil Temperature Transmitter	8-44
	8-15	Install Oil Temperature Transmitter	8-45
IV		OIL FILLER ASSEMBLY AND OIL FILLER STRAINER – MAINTENANCE PROCEDURES	
	8-16	Remove Oil Filler Assembly and Oil Filler Strainer	8-47
	8-17	Disassemble Oil Filler Assembly and Oil Filler Strainer	8-50
	8-18	Clean Oil Filler Assembly and Oil Filler Strainer	8-52
	8-19	Inspect Oil Filler Assembly and Oil Filler Strainer	8-54
	8-20	Repair Oil Filler Assembly and Oil Filler Strainer	8-56
	8-21	Assemble Oil Filler Assembly and Oil Filler Strainer	8-57
	8-22	Install Oil Filler Assembly and Oil Filler Strainer	8-60

<u>SECTION</u>	<u>TASK NO.</u>	<u>TITLE</u>	<u>PAGE</u>
v		OIL FILTER CAP AND STEM ASSEMBLY AND OIL FILTER ELEMENT - MAINTENANCE PROCEDURES	
	8-23	Remove Oil Filter Cap and Stem Assembly and Oil Filter Element	8-63
	8-24	Clean Oil Filter Cap and Stem Assembly and Oil Filter Element	8-66
	8-25	Inspect Oil Filter Cap and Stem Assembly and Oil Filter Element	8-68
	8-26	Repair Oil Filter Cap and Stem Assembly and Oil Filter Element	8-69
	8-27	Install Oil Filter Cap and Stem Assembly and Oil Filter Element	8-70
VI		DUAL CHIP DETECTOR – MAINTENANCE PROCEDURES	
	8-28	Remove Dual Chip Detector	8-73
	8-29	Disassemble Dual Chip Detector	8-77
	8-30	Clean Dual Chip Detector	8-79
	8-31	Inspect Dual Chip Detector	8-81
	8-32	Repair Dual Chip Detector	8-83
	8-33	Assemble Dual Chip Detector	8-85
	8-34	Test Dual Chip Detector	8-87
	8-35	Install Dual Chip Detector	8-88
VII		OIL LINES – MAINTENANCE PROCEDURES	
	8-36	Remove Hose Assembly (Oil Cooler to Inlet Housing)	8-93
	8-37	Install Hose Assembly (Oil Cooler to Inlet Housing)	8-95
	8-38	Remove Hose Assembly (Oil Cooler to Accessory Gearbox Assembly)	8-97
	8-39	Install Hose Assembly (Oil Cooler to Accessory Gearbox Assembly)	8-100
	8-40	Remove Hose Assembly (Oil Cooler to Pressure Connector)	8-103
	8-41	Install Hose Assembly (Oil Cooler to Pressure Connector)	8-105
	8-42	Remove Hose Assembly (Dual Chip Detector to Accessory Gearbox Assembly)	8-107
	8-43	Install Hose Assembly (Dual Chip Detector to Accessory Gearbox Assembly)	8-113
	8-44	Remove Hose Assembly (Dual Chip Detector to Accessory Gearbox Collector)	8-118
	8-45	Install Hose Assembly (Dual Chip Detector to Accessory Gearbox Collector)	8-123
	8-46	Remove Hose Assembly (Dual Chip Detector to Air Diffuser Assembly)	8-128
	8-47	Install Hose Assembly (Dual Chip Detector to Air Diffuser Assembly)	8-131
	8-48	Remove Hose Assembly (Main Oil Pump to Dual Chip Detector)	8-133

<u>SECTION</u>	<u>TASK NO.</u>	<u>TITLE</u>	<u>PAGE</u>
VII	8-49	Install Hose Assembly (Main Oil Pump to Dual Chip Detector)	8-135
	8-50	Remove Tube Assembly (Inlet Housing to Main Oil Pump)	8-137
	8-51	Install Tube Assembly (Inlet Housing to Main Oil Pump)	8-140
	8-52	Remove Hose Assembly (Main Oil Pump to Inlet Housing Oil Scavenge Tee)	8-148
	8-53	Install Hose Assembly (Main Oil Pump to Inlet Housing Oil Scavenge Tee)	8-152
	8-54	Remove Hose Assembly (Main Oil Pump to No. 4 and 5 Bearing Scavenge Tube Assembly)	8-156
	8-55	Install Hose Assembly (Main Oil Pump to No. 4 and 5 Bearing Scavenge Tube Assembly)	8-159
	8-56	Remove Tube Assembly (No. 4 and 5 Bearing Scavenge Connector to Hose Assembly)	8-162
	8-57	Install Tube Assembly (No. 4 and 5 Bearing Scavenge Connector to Hose Assembly)	8-170
	8-58	Remove Hose Assembly (Pressure Connector to No. 4 and 5 Bearing Filter)	8-178
	8-59	Install Hose Assembly (Pressure Connector to No. 4 and 5 Bearing Filter)	8-191
	8-60	Remove Hose Assembly (Inlet Housing to Oil Scavenge Tee)	8-204
	8-61	Install Hose Assembly (Inlet Housing to Oil Scavenge Tee)	8-207
	8-62	Remove Hose Assembly (Inlet Housing to Oil Drain Cock)	8-209
	8-63	Install Hose Assembly (Inlet Housing to Oil Drain Cock)	8-215
	8-64	Remove Hose Assembly (Oil Filler to Starter Drive)	8-221
	8-65	Install Hose Assembly (Oil Filler to Starter Drive)	8-224
	8-66	Remove Hose Assembly (Starter Drive to Tube and Hose Assembly)	8-226
	8-67	Install Hose Assembly (Starter Drive to Tube and Hose Assembly)	8-229
	8-68	Remove Tube and Hose Assembly (Accessory Gearbox Collector to Tube Assembly)	8-231
	8-69	Install Tube and Hose Assembly (Accessory Gearbox Collector to Tube Assembly)	8-237
8-70	Remove Tube Assembly (Tube and Hose Assembly to Accessory Gearbox Assembly)	8-243	
8-71	Install Tube Assembly (Tube and Hose Assembly to Accessory Gearbox Assembly)	8-246	
VIII	STARTER GEARBOX FILTER – MAINTENANCE PROCEDURES		
	8-72	Remove Starter Gearbox Filter	8-249
	8-73	Clean Starter Gearbox Filter	8-252
	8-74	Inspect Starter Gearbox Filter	8-253
	8-75	Install Starter Gearbox Filter	8-254

<u>SECTION</u>	<u>TASK NO.</u>	<u>TITLE</u>	<u>PAGE</u>
IX		NO. 2 BEARING PRESSURE OIL STRAINER - MAINTENANCE PROCEDURES	
	8-76	Remove No. 2 Bearing Pressure Oil Strainer	8-257
	8-77	Clean No. 2 Bearing Pressure Oil Strainer	8-259
	8-78	Inspect No. 2 Bearing Pressure Oil Strainer	8-260
	8-79	Install No. 2 Bearing Pressure Oil Strainer	8-261
x		NO. 4 AND 5 BEARING FILTER-MAINTENANCE PROCEDURES	
	8-80	Remove No. 4 and 5 Bearing Filter	8-263
	8-81	Clean No. 4 and 5 Bearing Filter	8-269
	8-82	inspect No. 4 and 5 Bearing Filter	8-270
	8-83	Install No. 4 and 5 Bearing Filter	8-271
XI		OIL DRAIN COCK - MAINTENANCE PROCEDURES	
	8-84	Remove Oil Drain Cock	8-279
	8-85	Clean Oil Drain Cock	8-281
	8-86	Inspect Oil Drain Cock	8-283
	8-87	Install Oil Drain Cock	8-284
XII		CHIP DETECTOR – MAINTENANCE PROCEDURES	
	8-88	Remove Chip Detector	8-287
	8-89	Disassemble Chip Detector	8-289
	8-90	Clean Chip Detector	8-291
	8-91	Inspect Chip Detector	8-293
	8-92	Test Chip Detector	8-294
	8-93	Assemble Chip Detector	8-295
	8-94	Install Chip Detector	8-297
XIII		OIL LEVEL INDICATOR – MAINTENANCE PROCEDURES	
	8-95	Remove Oil Level Indicator	8-301
	8-96	Disassemble Oil Level Indicator	8-305
	8-97	Clean Oil Level Indicator	8-309
	8-98	Inspect Oil Level Indicator	8-311
	8-99	Repair Oil Level Indicator	8-313
	8-100	Assemble Oil Level Indicator	8-315
	8-101	Install Oil Level Indicator	8-321
	8-102	Adjust Oil Level Indicator	8-327

<u>SECTION</u>	<u>TASK NO.</u>	<u>TITLE</u>	<u>PAGE</u>
XIV		OIL LEVEL FLOAT ASSEMBLY - MAINTENANCE PROCEDURES	
	8-103	Remove Oil Level Float Assembly (AVIM)	8-335
	8-104	Disassemble Oil Level Float Assembly (AVIM)	8-339
	8-105	Clean Oil Level Float Assembly (AVIM)	8-340
	8-106	Inspect Oil Level Float Assembly (AVIM)	8-342
	8-107	Repair Oil Level Float Assembly (AVIM)	8-343
	8-108	Assemble Oil Level Float Assembly (AVIM)	8-344
	8-109	Install Oil Level Float Assembly (AVIM)	8-346

Section I. MAIN OIL PUMP AND SCAVENGE OIL SCREEN - MAINTENANCE PROCEDURES

8-1 REMOVE MAIN OIL PUMP AND SCAVENGE OIL SCREEN

8-1

INITIAL SETUP

General Safety Instructions:

Applicable Configurations:

All

Tools:

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

Materials:

Lockwire (E29)
Wiping Flag (E58)

Personnel Required:

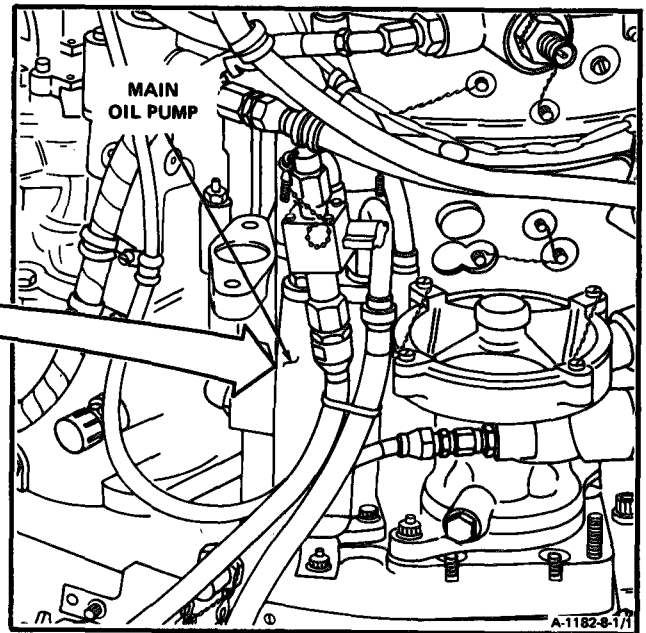
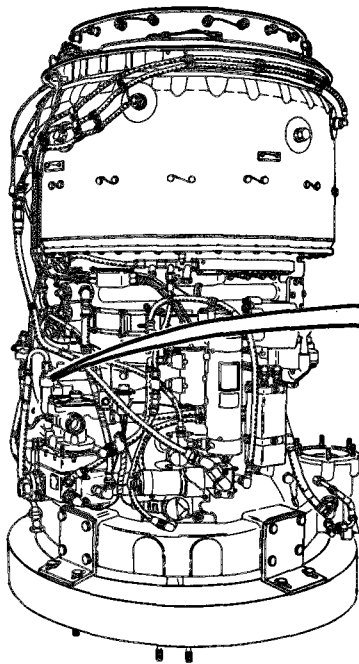
68B10 Aircraft Powerplant Repairer

Equipment Condition:

Tube Assembly Removed {Inlet Housing to Main
Oil Pump} (Task 8-50)

WARNING

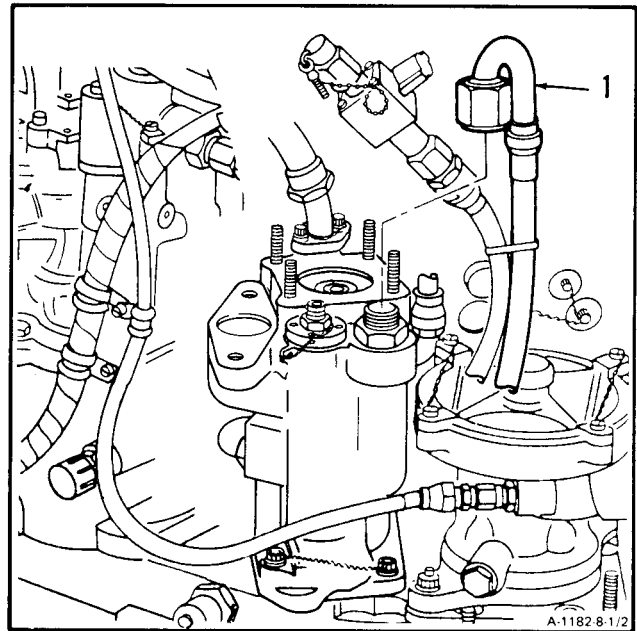
Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.



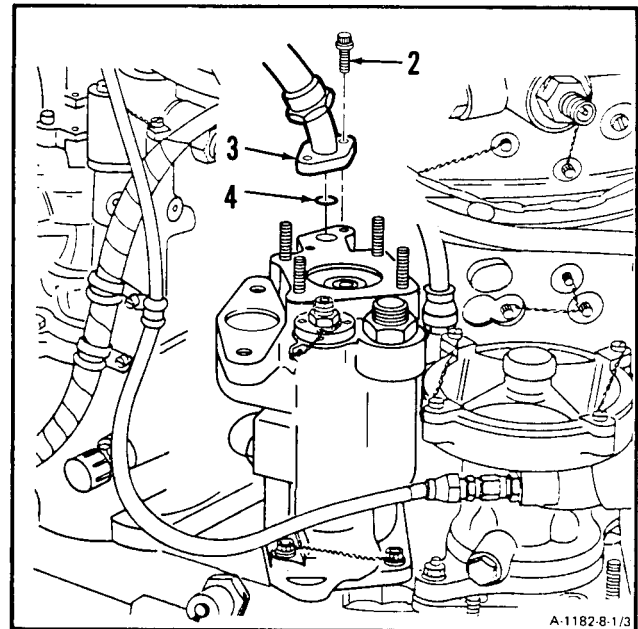
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8-1 REMOVE MAIN OIL PUMP AND SCAVENGE OIL SCREEN (Continued)

1. Disconnect tube assembly (1).



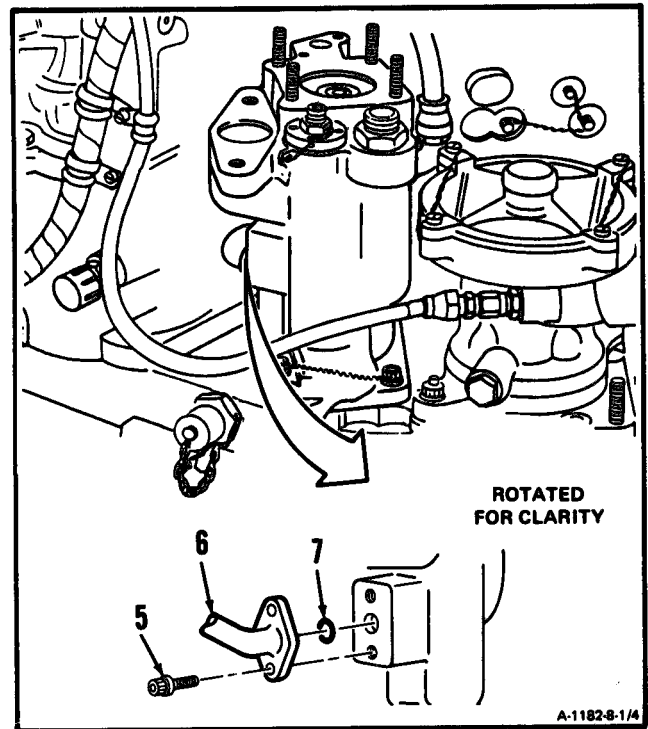
2. Remove lockwire, two bolts (2), end of tube assembly (3), and packing (4).



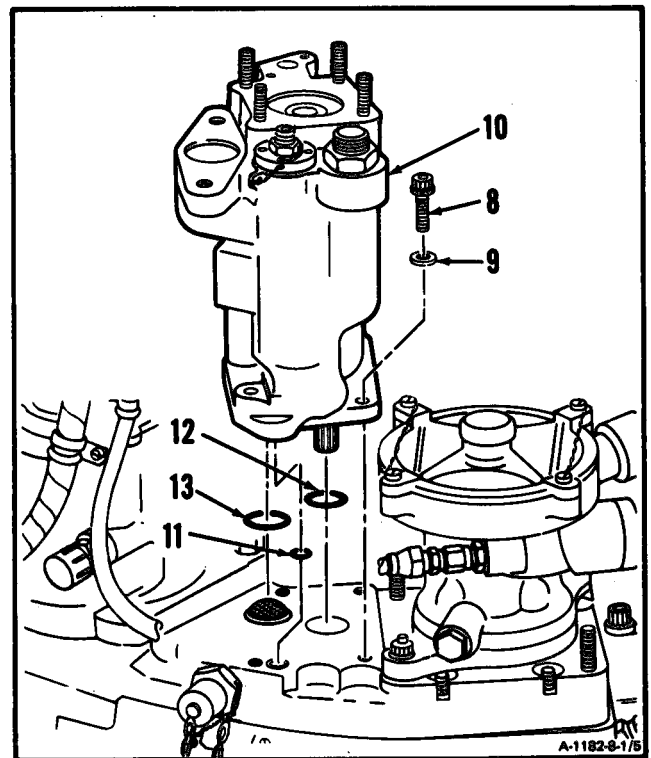
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8-1 REMOVE MAIN OIL PUMP AND SCAVENGE OIL SCREEN (Continued)

3. Remove lockwire, two bolts (5), end of tube assembly (6), and packing (7).



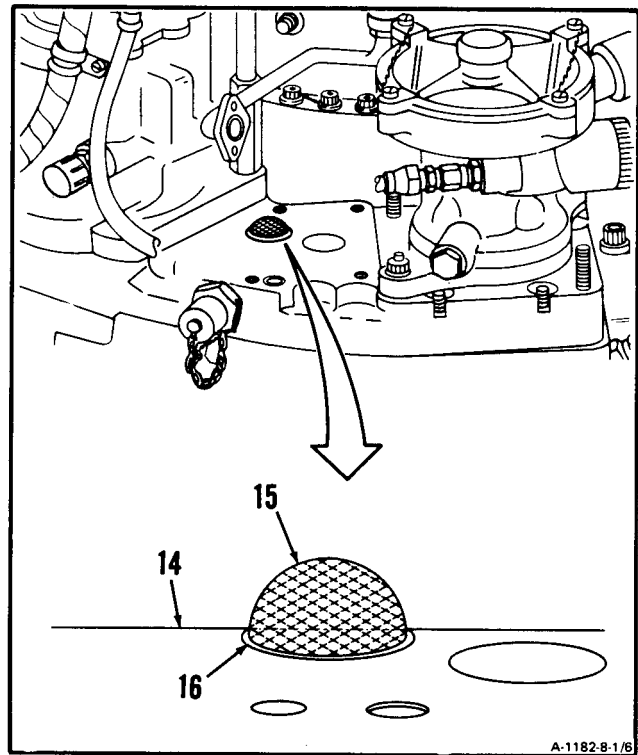
4. Remove lockwire, four bolts (8), washers (9), main oil pump (10), and packings (11, 12, and 13).



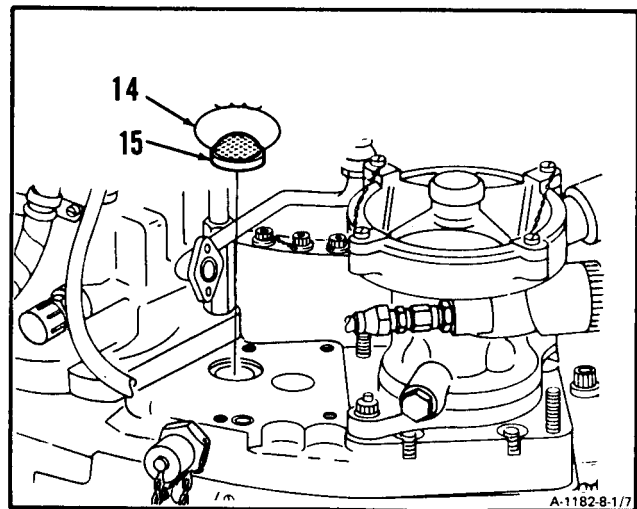
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8-1 REMOVE MAIN OIL PUMP AND SCAVENGE OIL SCREEN (Continued)

5. Insert 9 inch length of lockwire (E29) (14) through center of screen (15) near base (16) and form loop by twisting ends.



6. Using lockwire (14), **remove screen (15)**. Remove lockwire (14).



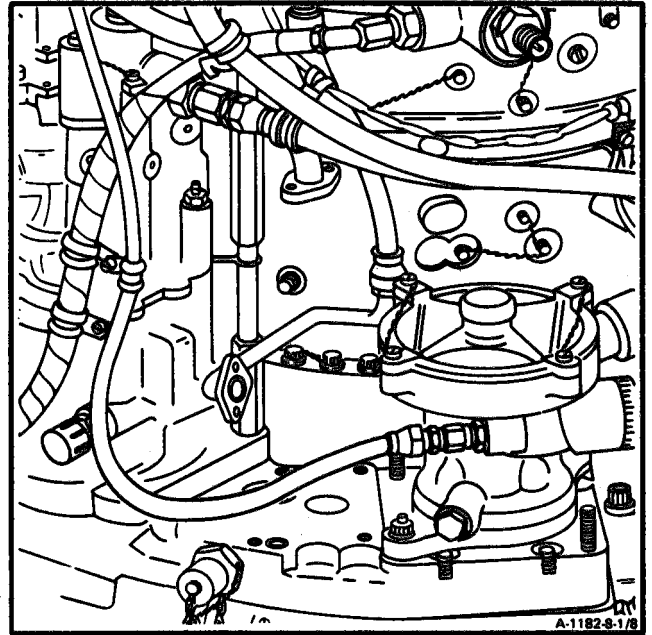
GO TO NEXT PAGE

8-1 REMOVE MAIN OIL PUMP AND SCAVENGE OIL SCREEN (Continued)

8-1

FOLLOW-ON MAINTENANCE:

None

**END OF TASK**

8-2 CLEAN MAIN OIL PUMP AND SCAVENGE OIL SCREEN

8-2

INITIAL SETUP**Applicable Configurations:**

All

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

Goggles

Compressed Air Source

Materials:

Dry Cleaning Solvent (E17)

Gloves (E20)

Lint-Free Cloth (E26)

Personnel Required:

68B10 Aircraft Powerplant Repairer

Equipment Condition:

Off Engine Task

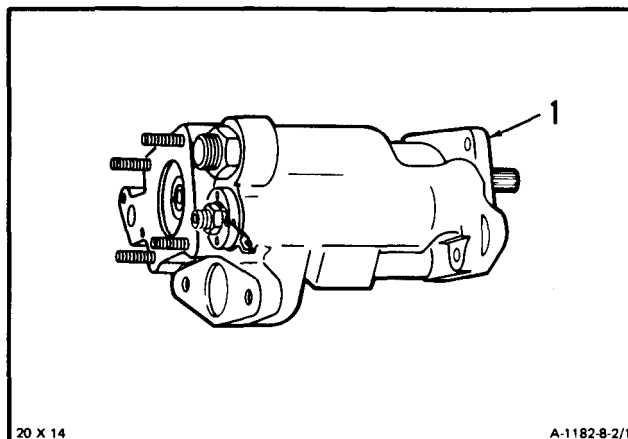
Main Oil Pump and Scavenge Oil Screen

Removed (Task 8-1)

General Safety Instructions:**WARNING**

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

1. Wear gloves (E20). **Clean oil pump (1)** using dry cleaning solvent (E17) and brush.
2. **Remove any remaining solvent** using clean, dry lint-free cloth (E26).

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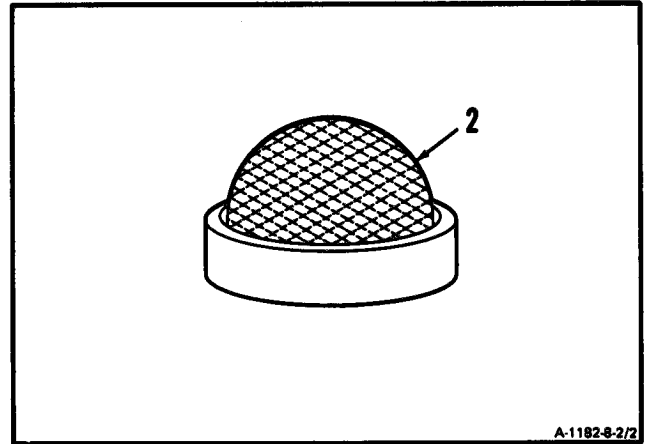
8-2 CLEAN MAIN OIL PUMP AND SCAVENGE OIL SCREEN (Continued)

8-2

3. **Clean scavenge oil screen (2).** Use dry cleaning solvent (E17) and brush.

WARNING

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



4. Wear goggles. **Blow dry screen (2)** using clean, dry compressed air.

FOLLOW-ON MAINTENANCE:

Inspect Main Oil Pump and Scavenge Oil Screen (Task 8-3).

END OF TASK

8-3 INSPECT MAIN OIL PUMP AND SCAVENGE OIL SCREEN

8-3

INITIAL SETUP

Personnel Required:

68630 Aircraft Powerplant Inspector

Applicable Configurations:

All

References:

Task 1-118

Tools:

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

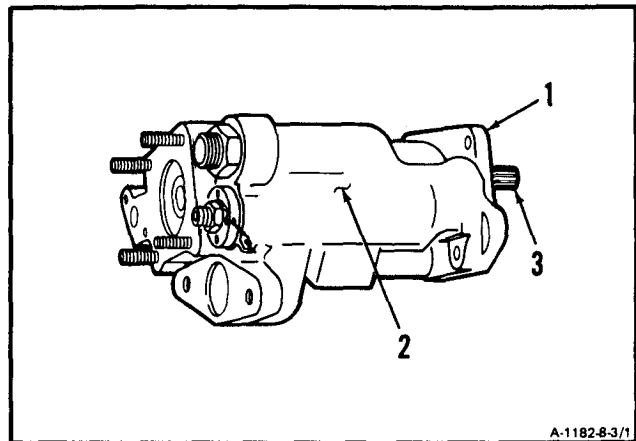
Equipment Condition:

Off Engine Task

Materials:

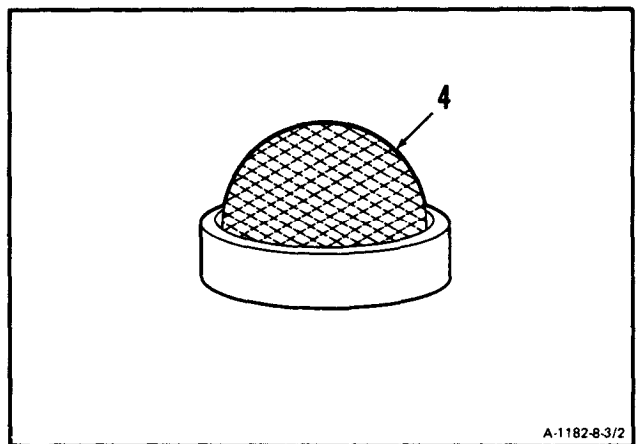
None

1. **Inspect main oil pump (1).** There shall be no cracks in housing (2) or, nicks or cracks in splines of gearshaft (3).
2. **Inspect gearshaft (3).** There shall be no improper wear pattern. Inspect gearshaft (3) for wear (Ref. Task 1-118).



A-1182-8-3/1

3. **Inspect scavenge oil screen (4).** There shall be no tears in screen.



A-1182-8-3/2

FOLLOW-ON MAINTENANCE:

None

END OF TASK

8-4 INSTALL MAIN OIL PUMP AND SCAVENGE OIL SCREEN

8-4

INITIAL SETUP**Applicable Configurations:**

All

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

■ Torque Wrench, 30-150 Inch-Pounds

Pam:

Packings

Personnel Required:

68B10 Aircraft Powerplant Repairer

68B30 Aircraft Powerplant Inspector

References:

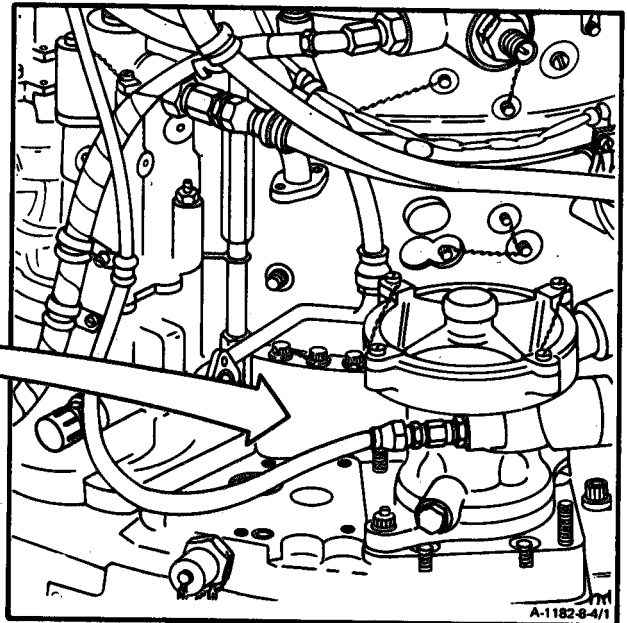
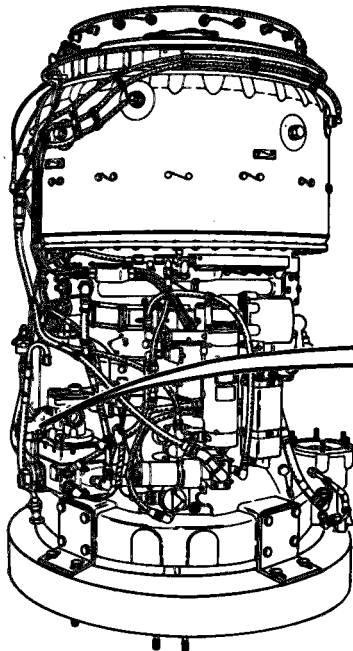
TM 55-2840-254-23P

Materials:

Lockwire (E29)

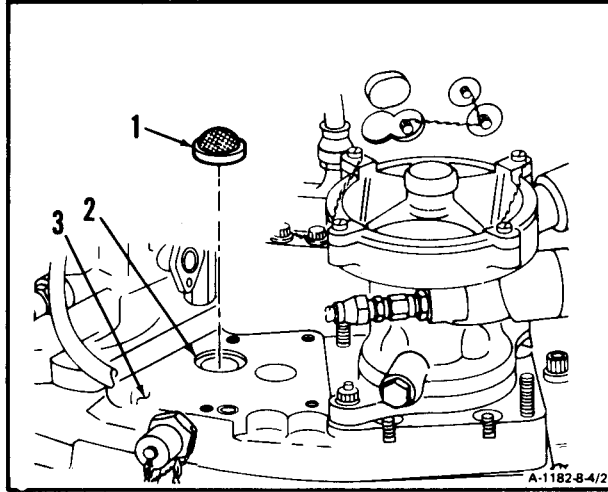
Lubricant (E30)

42 X 20

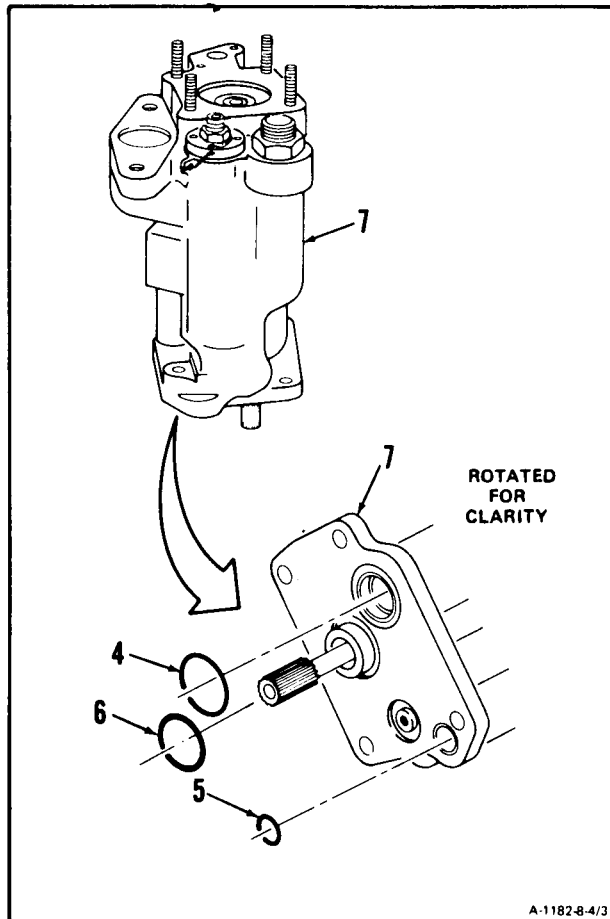
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8-4 INSTALL MAIN OIL PUMP AND SCAVENGE OIL SCREEN (Continued)

1. Install scavenge oil screen (1) in hole (2) in accessory gearbox assembly (3).



2. Install packings (4, 5, and 6) on main oil pump (7).

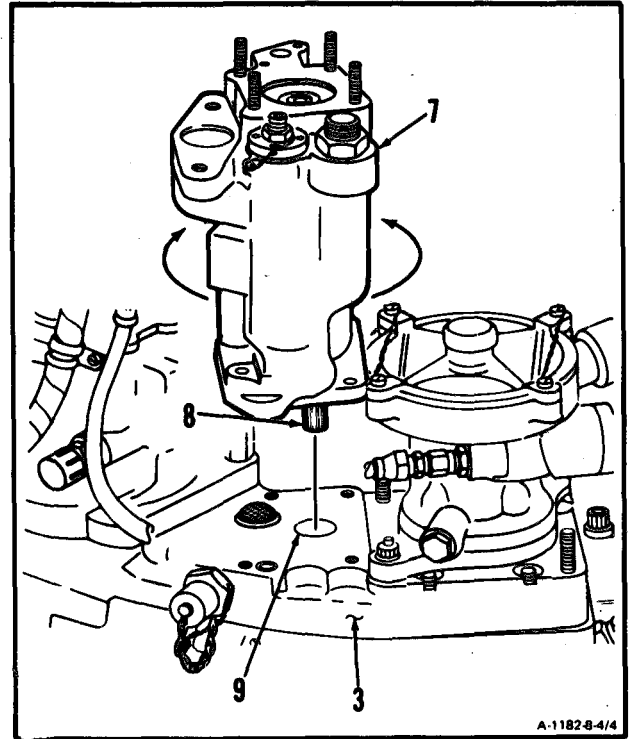


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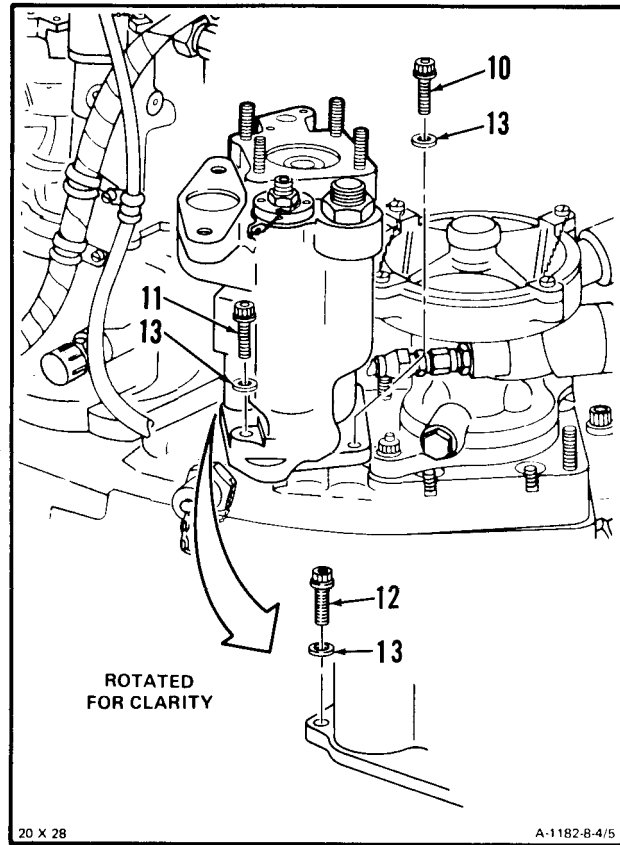
8-4 INSTALL MAIN OIL PUMP AND SCAVENGE OIL SCREEN (Continued)

8-4

3. Apply lubricant (E30) to splines (8).
4. Position main oil pump (7) over accessory gearbox assembly (3).
5. If required, rotate main oil pump (7) slightly left or right to align splines (8) with coupling in hole (9).
6. **Install main oil pump (7)** on accessory gearbox assembly (3).

**GO TO NEXT PAGE**

7. Install bolt (10), bolt (11), two bolts (12), and four washers (13). Torque bolts (10, 11, and 12) to 70 to 75 inch-pounds. Lockwire bolts (10 and 11). Use lockwire (E29).



GO TO NEXT PAGE

INITIAL SETUP

Screen Cleaned (Task 8-2)

Applicable Configurations:

All

Tools:

Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Machine Screw - 8132
Machinist's Scriber

Materials:

Wiping Rag (E58)

Personnel Required:

68B 10 Aircraft Powerplant Repairer

Equipment Condition:

Off Engine Task

Main Oil Pump and Scavenge Oil

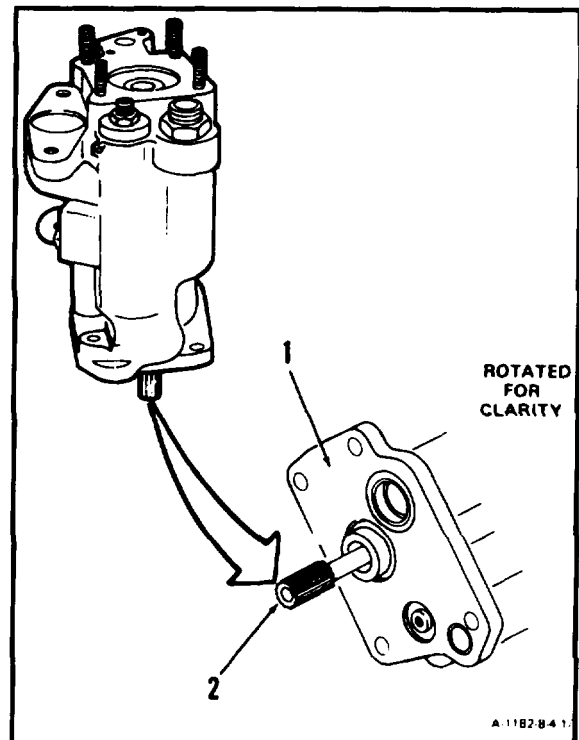
Screen Removed (Task 8-1)

Main Oil Pump and Scavenge Oil

General Safety Instructions:**WARNING**

Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.

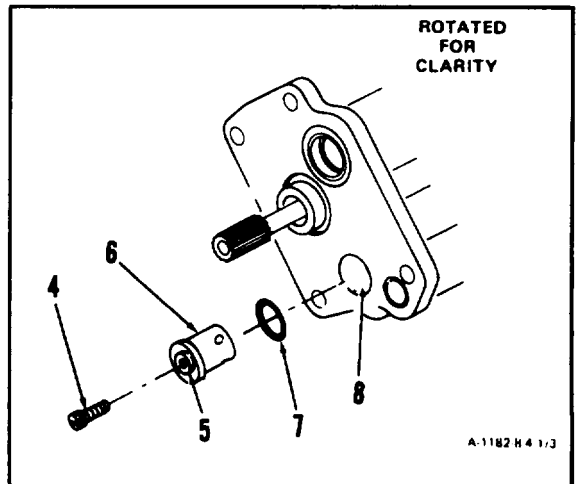
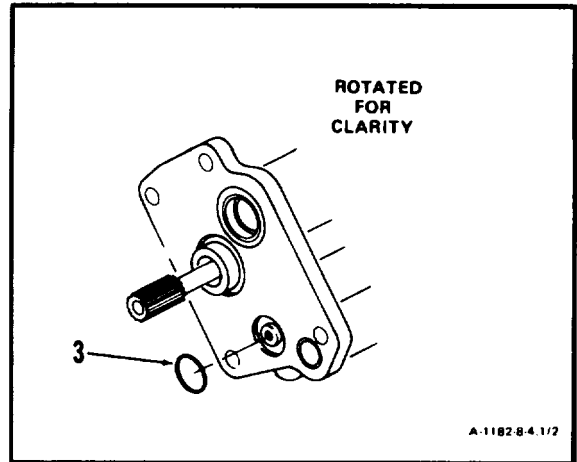
1. Check that main oil pump (1) turns freely by turning shaft (2). If shaft (2) does not turn freely, replace main oil pump (1).

**GO TO NEXT PAGE**

2. **Remove retaining ring (3).** Use machinist's scribe.

3. Thread machine screw (4) into hole (5). Using machine screw (4), carefully remove check valve (6) with a twisting motion. Remove packing (7) and machine screw (4).

4. Inspect check valve (6) and oil pump bore (8). There shall be no metal chips or other objects. If metal chips or other objects are present, clean check valve (6) with lint-free cloth (E26) dampened in dry cleaning solvent (E17).



FOLLOW-ON MAINTENANCE:
None

END OF TASK

8-20.2 Change 6

8-4.2 INSTALL OIL PUMP CHECK VALVE

8.4.2

INITIAL SETUP

Applicable Configurations:

All

Tools:

Powerplant Mechnaic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114
Machine Screw - 8f32

Materials:

Shortening Compound (E46)

Parts:

Check Valve
Packing

Personnel Required:

68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

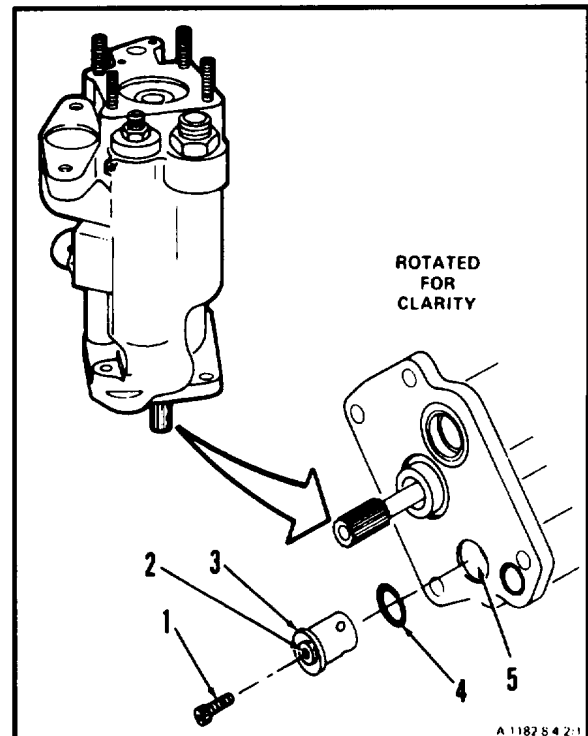
References:

TM 55-2840-254-23P

Equipment Condition:

Off Engine Task

1. Thread machine screw (1) into hole (2) of check valve (3).
2. Install packing (4). Using machine screw (1), install check valve (3) by twisting into place.
3. Remove machine screw (1).



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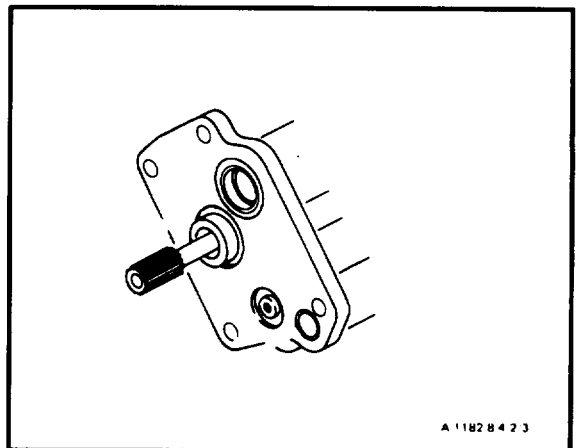
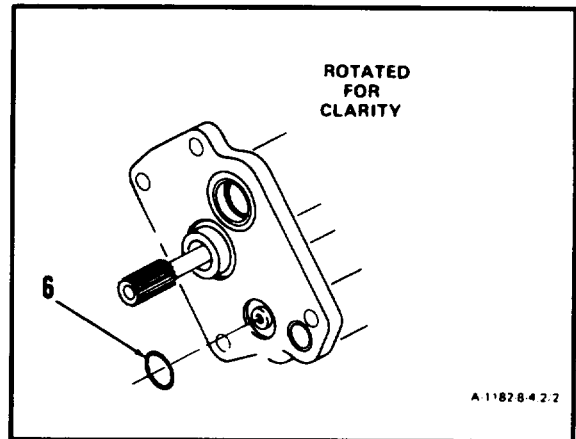
Change 6 8-20.3

4. Install retaining ring (6).

INSPECT

FOLLOW-ON MAINTENANCE

Install Main Oil Pump and Scavenge Oil Screen
(Task 8-4)



END OF TASK

8-20.4 Change 6

Section II. OIL COOLER ASSEMBLY – MAINTENANCE PROCEDURES

8-5 REMOVE OIL COOLER ASSEMBLY

8-5

INITIAL SETUP

Applicable Configurations:

All

Tools:

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

Materials:

Wiping Rag (E58)

Personnel Required:

68610 Aircraft Powerplant Repairer

General Safety Instructions:

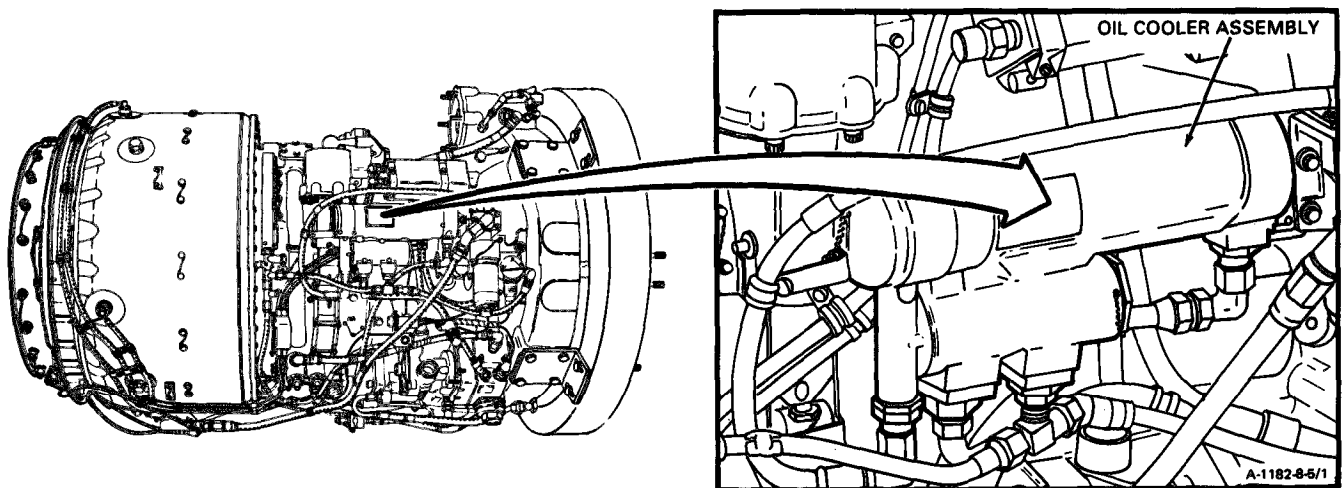
WARNING

Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas

away from heat and open flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.

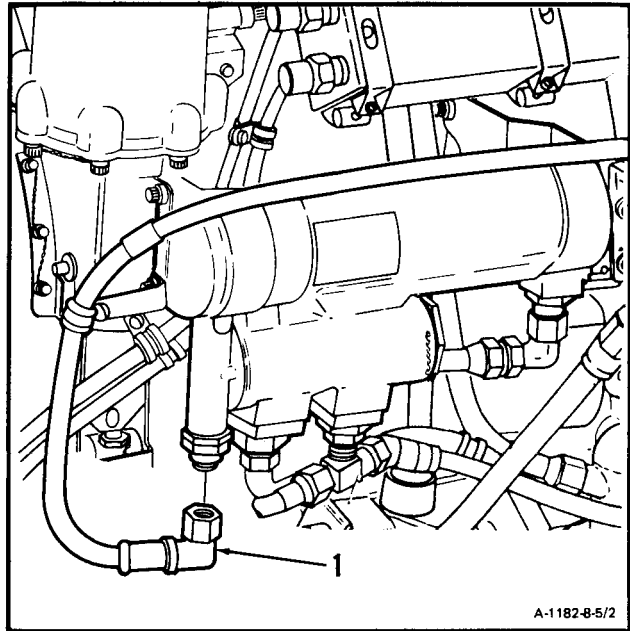
WARNING

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

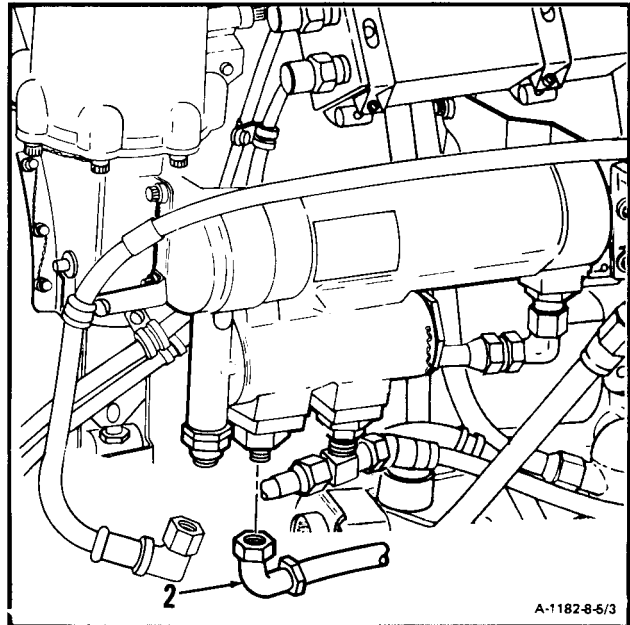


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1. Disconnect hose assembly (1).



2. Disconnect hose assembly (2).

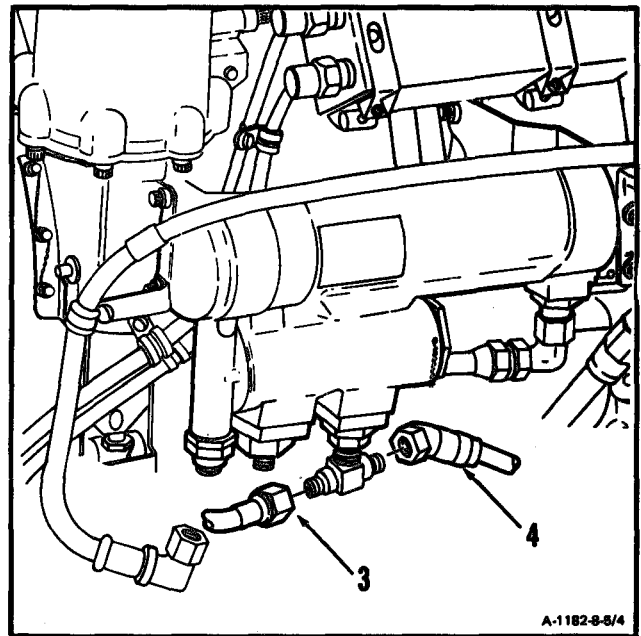


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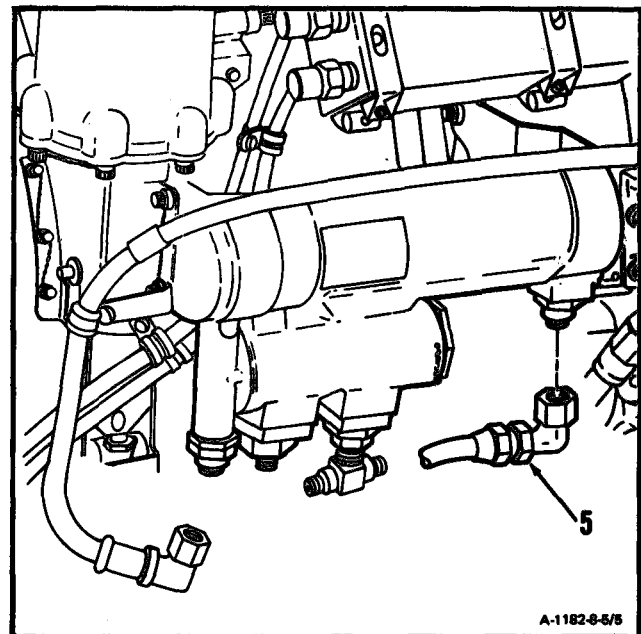
8-5 REMOVE OIL COOLER ASSEMBLY (Continued)

8-5

3. Disconnect hose assemblies (3 and 4).



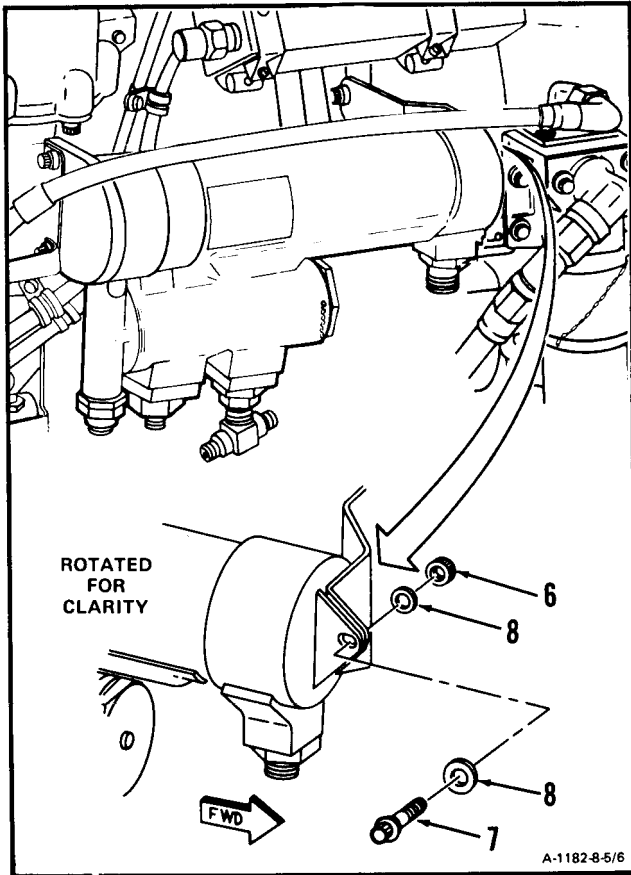
4. Disconnect hose assembly (5).



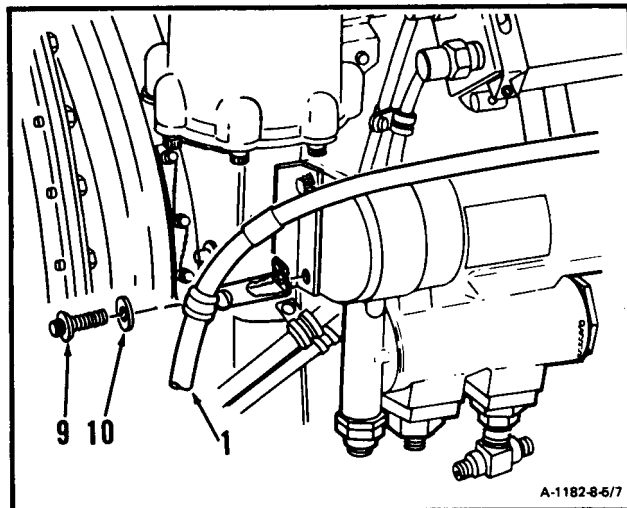
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8-5 REMOVE OIL COOLER ASSEMBLY (Continued)

5. Remove nut (6), bolt (7), and two washers (8).



6. Remove lockwire, bolt (9), and washer (10). Place hose assembly (1) to one side.

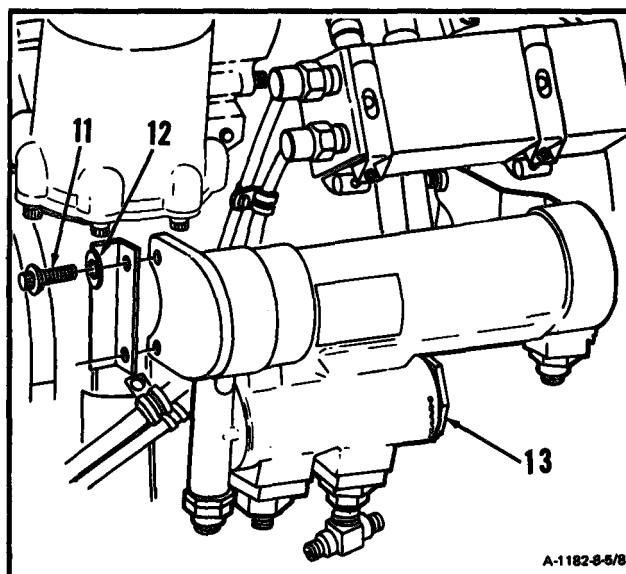


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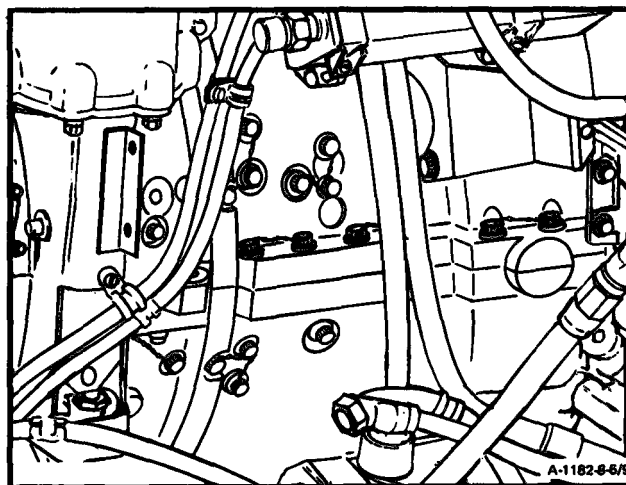
8-5 REMOVE OIL COOLER ASSEMBLY (Continued)

8-5

7. Remove bolt (11), washer (12), and oil cooler assembly (13).

**FOLLOW-ON MAINTENANCE:**

None

**END OF TASK**

INITIAL SETUP

General Safety Instructions:

Applicable Configurations:

All

WARNING

Tools:

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

Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention, Get medical attention for eyes.

Materials:

Wiping Rag (E58)

Personnel Required:

68B10 Aircraft Powerplant Repairer

Equipment Condition:

Off Engine Task
Oil Cooler Assembly Removed (Task 8-5)

WARNING

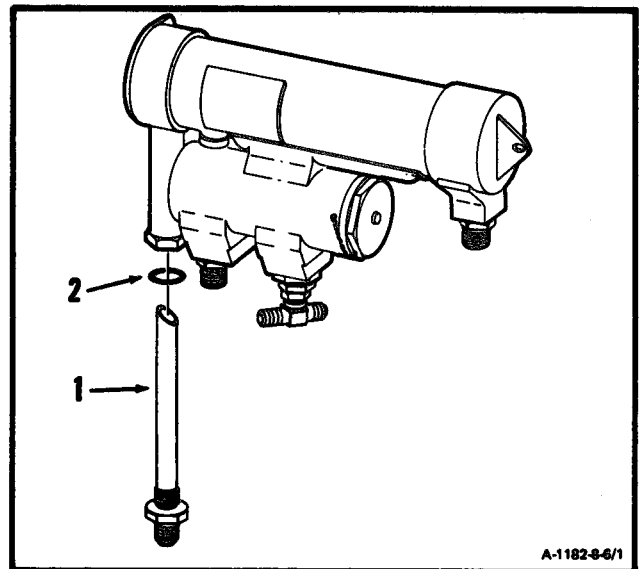
Turbine fuels are very flammable. They may cause drying and irritation of skin or eyes. Handle only in well-ventilated areas away from heat and open flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin and do not take internally. Wash contacted area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

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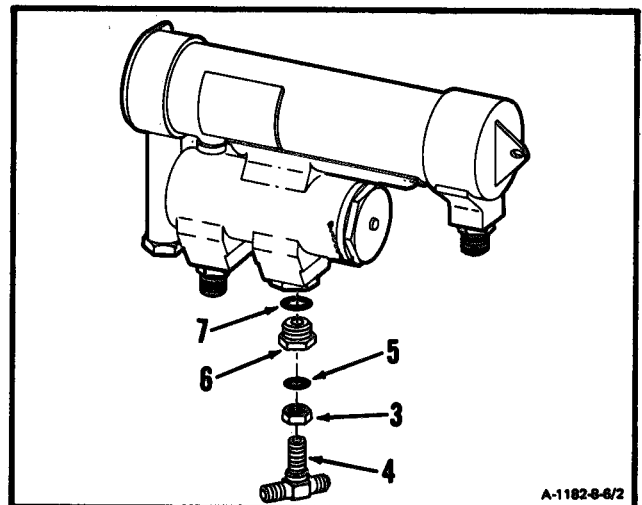
8-6 DISASSEMBLE OIL COOLER ASSEMBLY (Continued)

8-6

1. Remove tube assembly (1) and packing (2).
Use vise with jaw caps.



2. Loosen nut (3). Remove fitting (4), packing (5) and nut (3).
3. Remove bushing (6) and packing (7).

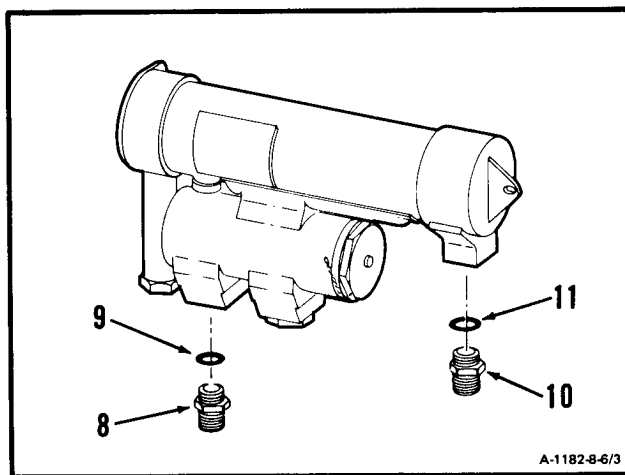


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8-6 DISASSEMBLE OIL COOLER ASSEMBLY (Continued)

8-6

4. Using deep style socket, **remove reducer (8)**.
Remove packing (9).
5. **Remove nipple (10)** and packing (11).

**FOLLOW-ON MAINTENANCE:**

None

END OF TASK

8-7 CLEAN OIL COOLER ASSEMBLY

8-7

INITIAL SETUP**General Safety Instructions:****Applicable Configurations:**

All

Tools:

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

Materials:

Dry Cleaning Solvent (E17)
Gloves (E20)

Personnel Required:

68B10 Aircraft Powerplant Repairer

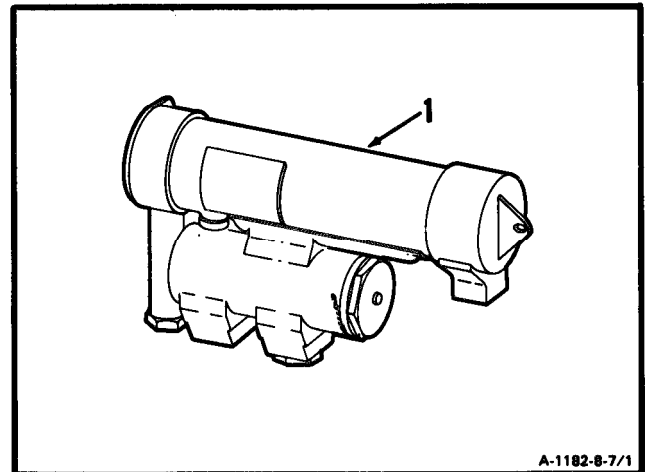
Equipmnt Condition:

Off Engine Task
Oil Cooler Assembly Removed (Task 8-5)
Oil Cooler Assembly Disassembled (Task 8-6)

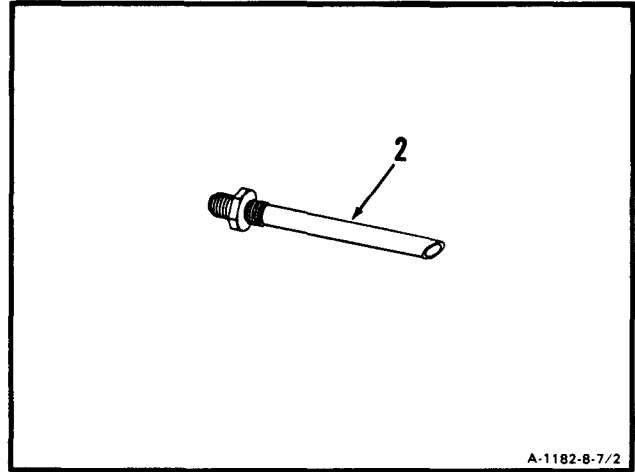
WARNING

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

1. Wear gloves (E20). **Flush internal passages** of oil cooler (1) with dry cleaning solvent (E17).
2. **Clean external surfaces** of oil cooler (1). Use dry cleaning solvent (E17) and brush.
3. Allow to drain and air-dry.

**GO TO NEXT PAGE**

4. **Clean tube assembly (2).** Use dry cleaning solvent (E17).



FOLLOW-ON MAINTENANCE:

Inspect Oil Cooler Assembly (Task 8-8).

END OF TASK

8-8 INSPECT OIL COOLER ASSEMBLY

8-8

INITIAL SETUP**Materials:**

None

Applicable Configurations:

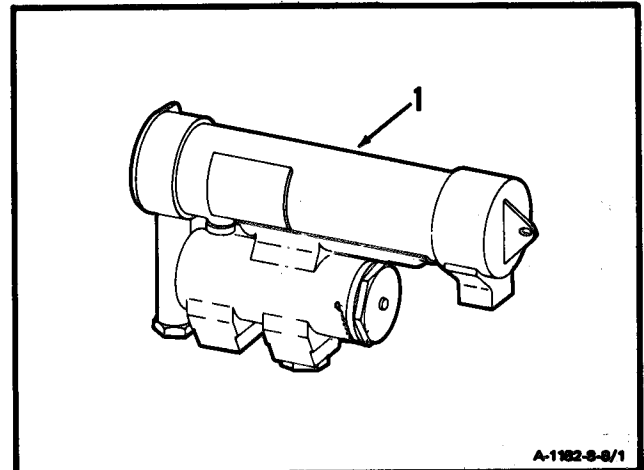
All

Personnel Required:

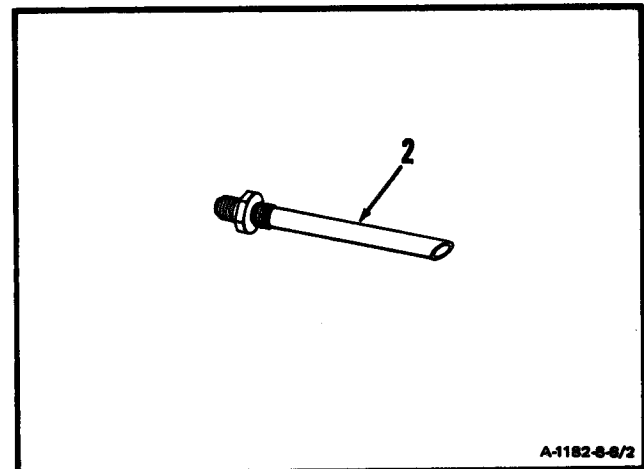
68B30 Aircraft Powerplant Inspector

Tools:Technical Inspection Tool Kit,
NSN 5180-00-323-5114**Equipment Condition:**Off Engine Task

1. **Inspect oil cooler (1).** There shall be no cracks.



2. **Inspect tube assembly (2).** There shall be no cracks, dents or bends.

**FOLLOW-ON MAINTENANCE:**

None

END OF TASK

8-9 REPAIR OIL COOLER ASSEMBLY

8-9

INITIAL SETUP

Applicable Configurations:

All

Tools:

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

Materials:

Acid Swabbing Brush (E2)
Engine Gray Enamel (E22)

Personnel Required:

68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

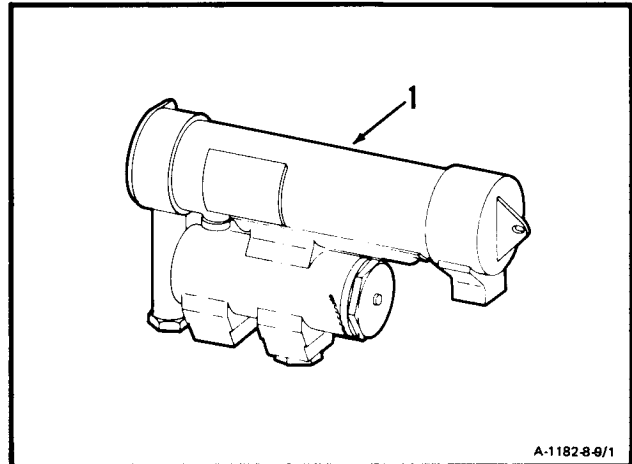
References:

Task 1-119

Equipment Condition:

Off Engine Task

1. **Repair damaged paint on oil cooler assembly (1).**
(Ref. Task 1-119). Use engine gray enamel (E22).



A-1182-8-9/1

INSPECT

FOLLOW-ON MAINTENANCE:

None

END OF TASK

8-10 ASSEMBLE OIL COOLER ASSEMBLY

8-10

INITIAL SETUP

Applicable Configurations:

All

Tools:Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944Technical inspection Tool Kit,
NSN 5180-00-323-5114Deep Style Socket, 1-Inch
Machinist's Vise

Jaw Caps

Materials:

None

Parts:

Packings

Personnel Required:

68B10 Aircraft Powerplant Repairer

68B30 Aircraft Powerplant Inspector

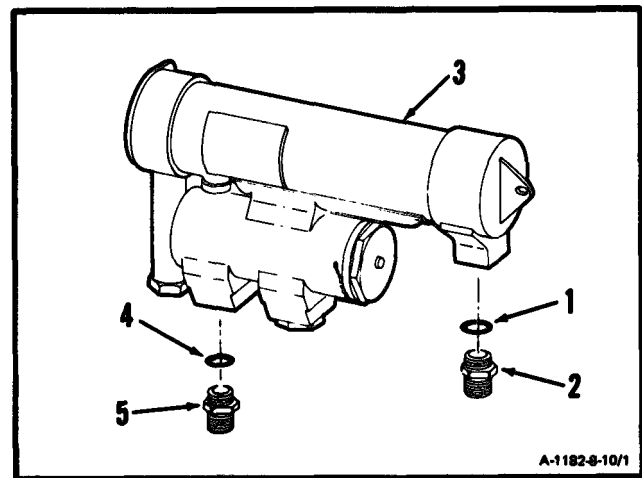
References:

TM 55-2840-254-23P

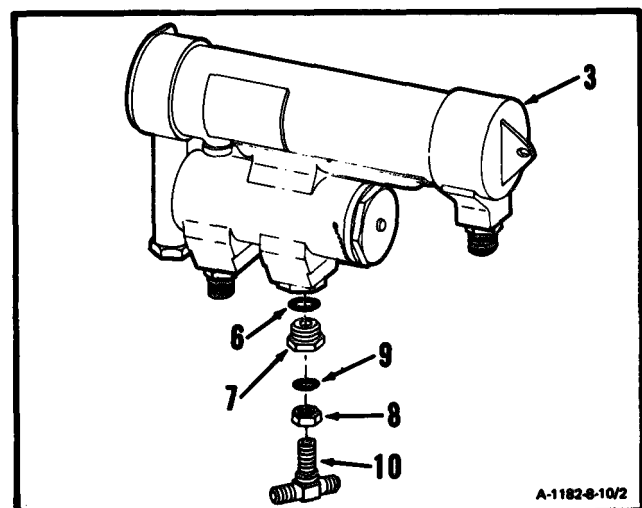
Equipment Condition:

Off Engine Task

1. **Install** packing (1) and **nipple** (2) in oil cooler (3). Use vise and jaw caps.
2. **Install** packing (4) and **reducer** (5) in oil cooler (3). Use deep style socket.



3. **Install** packing (6) and **bushing** (7) in oil cooler (3).
4. Install nut (8) on fitting (10). **Install** packing (9) and **fitting** (10) in oil cooler (3).



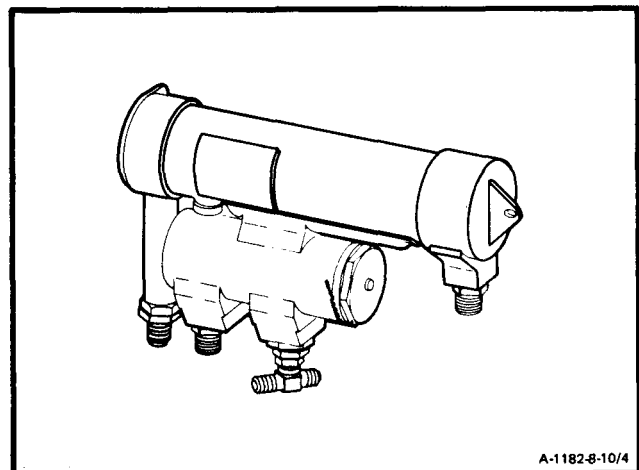
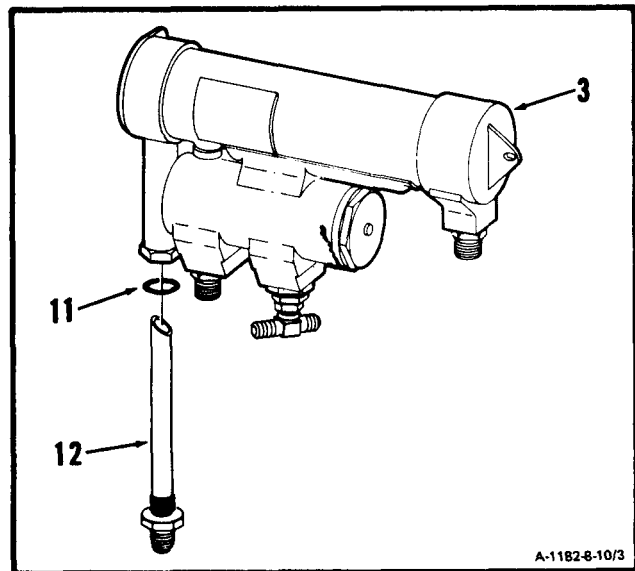
GO TO NEXT PAGE

5. Install packing (11) and tube assembly (12) in oil cooler (3).

INSPECT

FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-11 INSTALL OIL COOLER ASSEMBLY

8-11

INITIAL SETUP**Applicable Configurations:**

All

Tools:

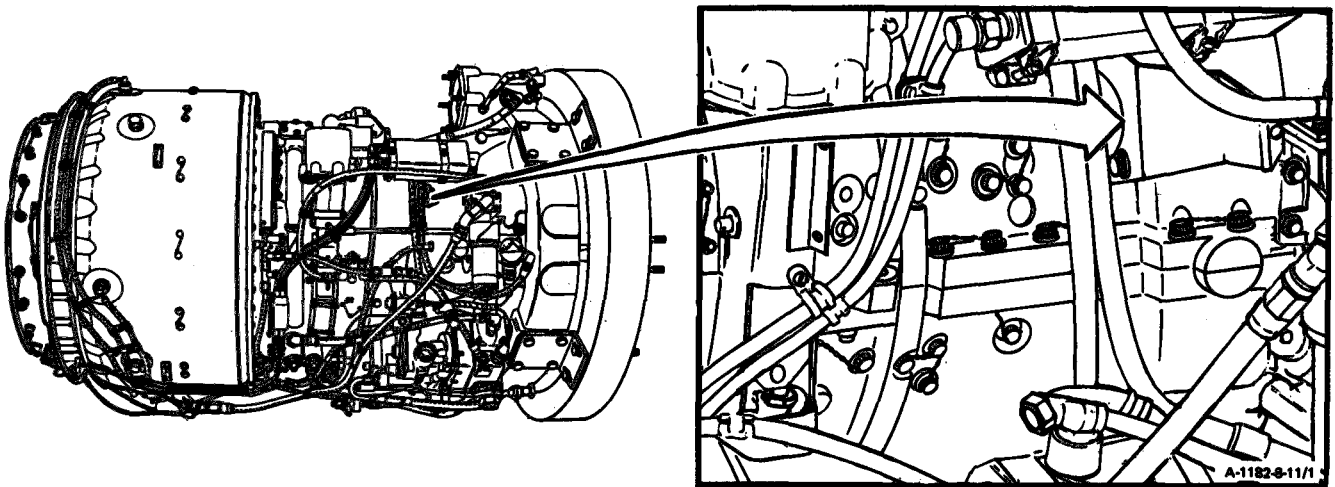
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:

Lockwire (E29)

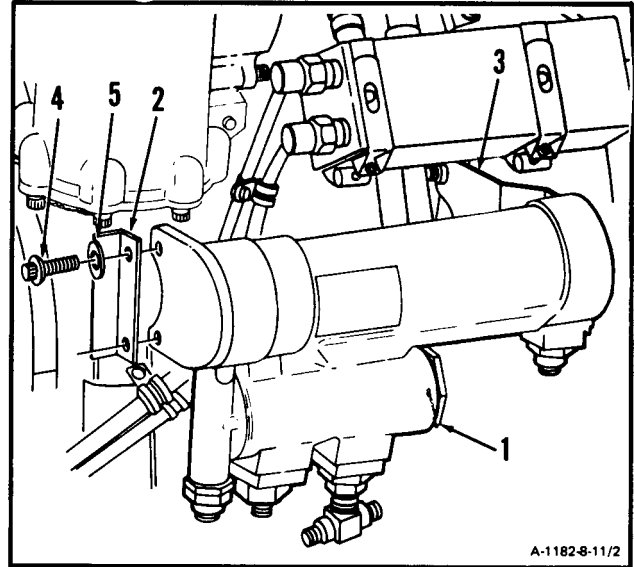
Personnel Required:

68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

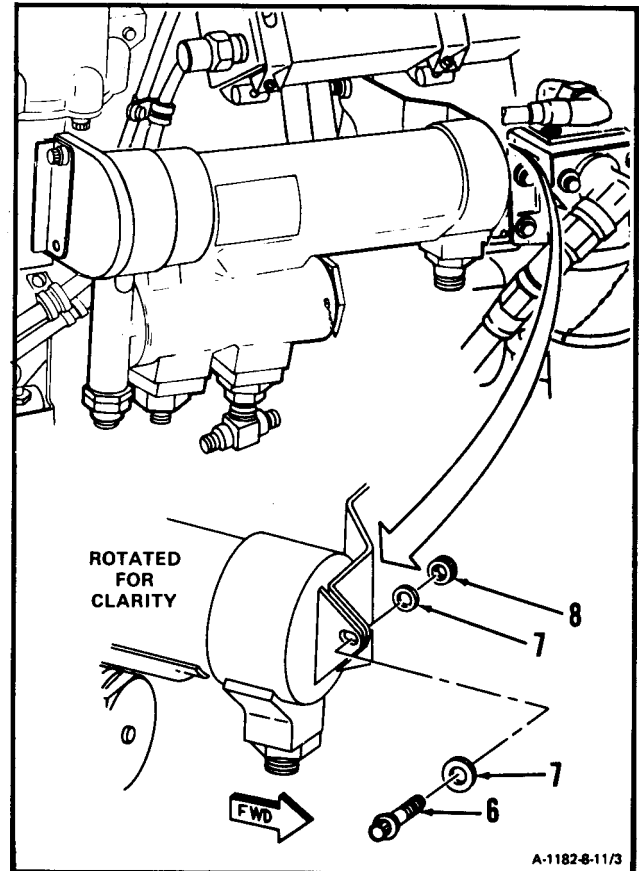
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8-11 INSTALL OIL COOLER ASSEMBLY (Continued)

1. Install oil cooler assembly (1) on interstage air-bleed actuator (2) and bracket (3). Loosely install bolt (4) and washer (5).



2. Install bolt (6), two washers (7), and nut (8).

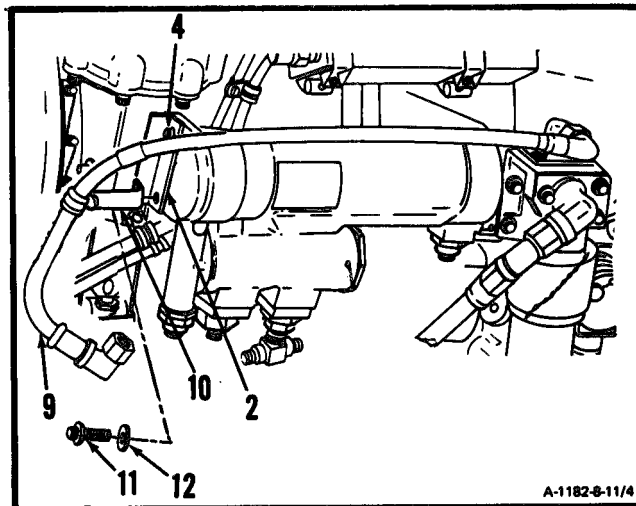


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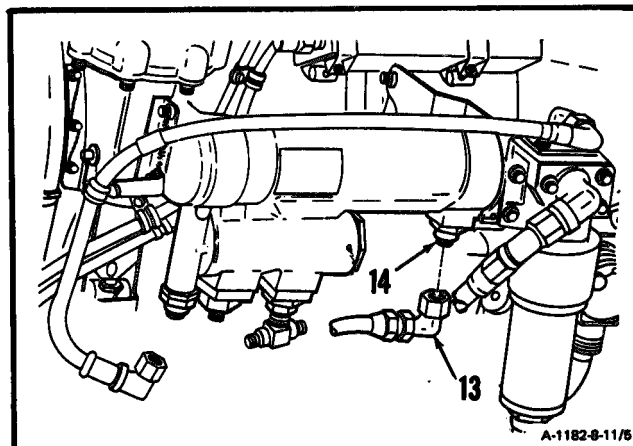
8-11 INSTALL OIL COOLER ASSEMBLY (Continued)

8-11

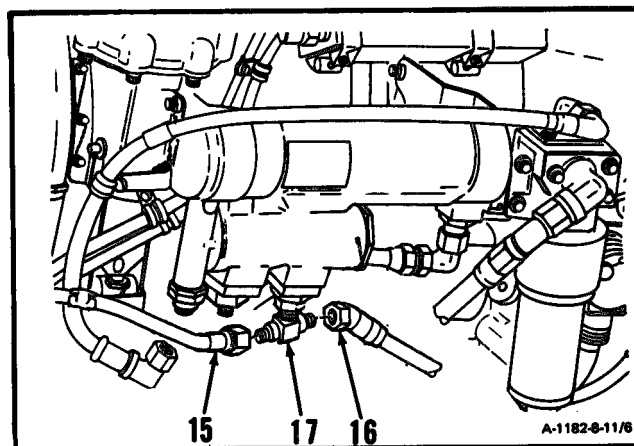
3. Route hose assembly (9), and install bracket (10) on interstate air-bleed actuator (2).
4. Install bolt (11) and washer (12), and tighten bolt (4). Lockwire bolts (4 and 11). Use lockwire (E29).



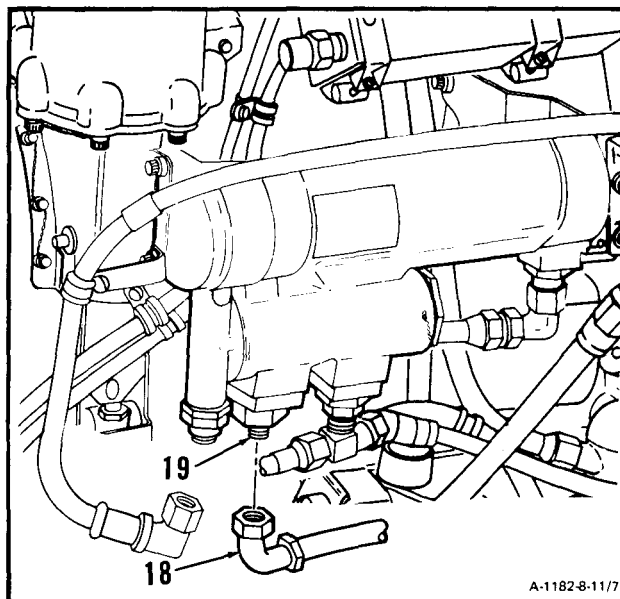
5. Connect hose assembly (13) to nipple (14).



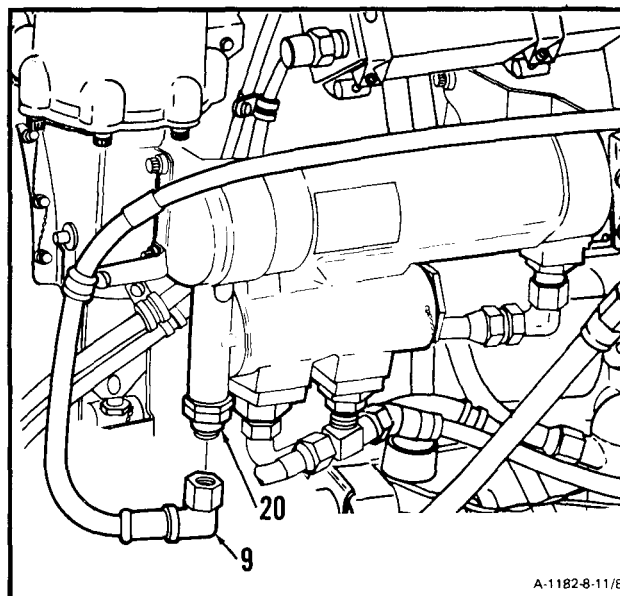
6. Connect hose assemblies 15 and 16) to fitting (17).

**GO TO NEXT PAGE**

7. Connect hose assembly (18) to reducer (19).



8. Connect hose assembly (9) to tube assembly (20).



INSPECT

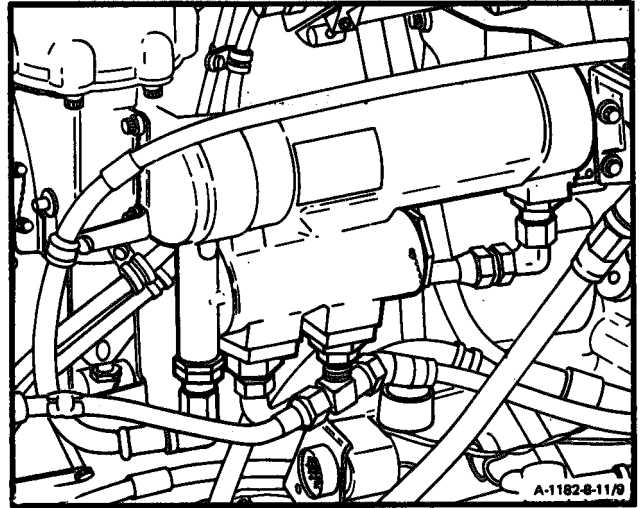
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8-11 INSTALL OIL COOLER ASSEMBLY (Continued)

8-11

FOLLOW-ON MAINTENANCE:

None

**END OF TASK**

Section III. OIL TEMPERATURE TRANSMITTER - MAINTENANCE PROCEDURES**8-12 REMOVE OIL TEMPERATURE TRANSMITTER**

8-12

INITIAL SETUP**General Safety Instructions:****Applicable Configurations:**

All

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

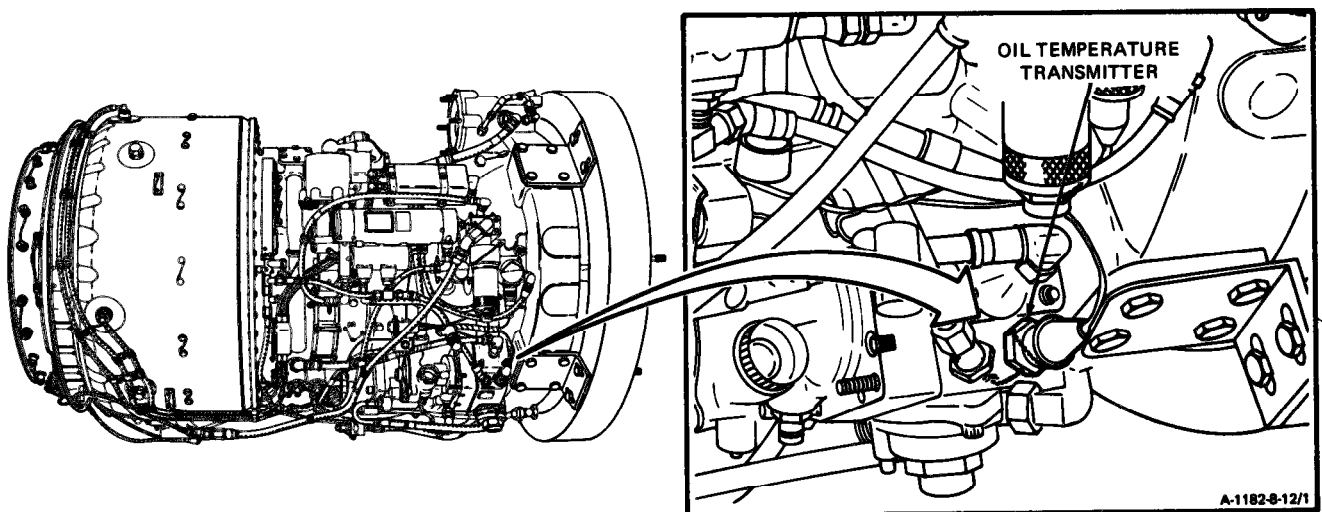
None

Personnel Required:

68B10 Aircraft Powerplant Repairer

WARNING

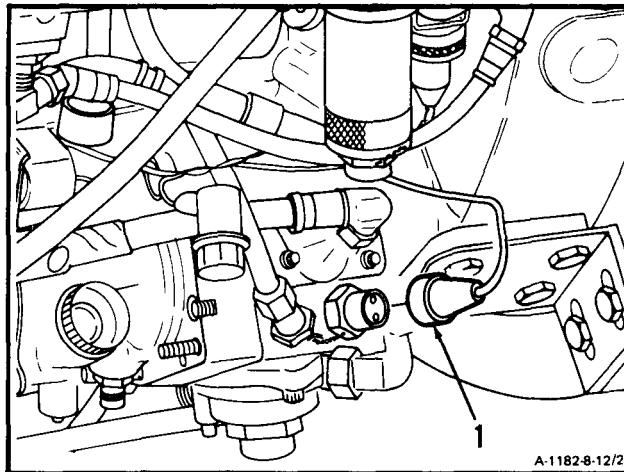
Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. They may burn if exposed to heat or flame. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin and eyes results, get medical attention.

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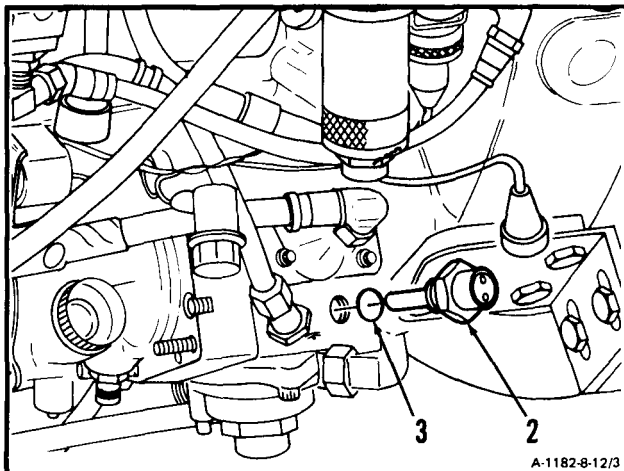
8-12 REMOVE OIL TEMPERATURE TRANSMITTER (Continued)

8-12

1. Remove lockwire and electrical connector (1).

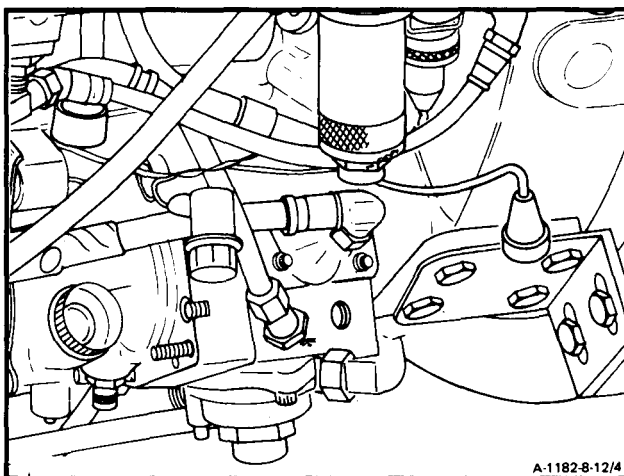


2. Remove lockwire, oil temperature transmitter (2), and gasket (3).



FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-13 CLEAN OIL TEMPERATURE TRANSMITTER

8-13

INITIAL SETUP**General Safety Instructions:****Applicable Configurations:**

All

Tools:

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

Materials:

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

Personnel Required:

68610 Aircraft Powerplant Repairer

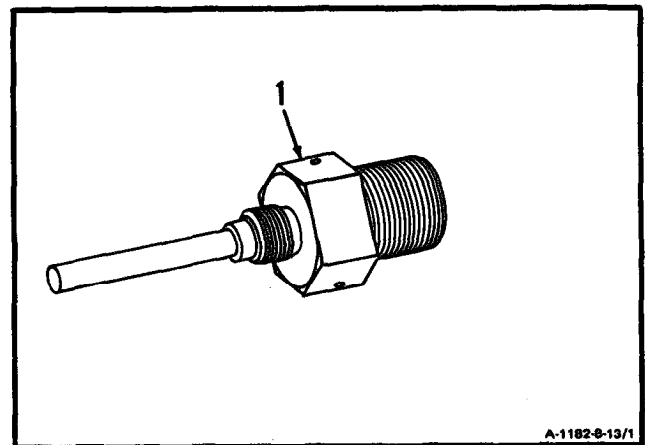
Equipment Condition:

Off Engine Task
Oil Temperature Transmitter Removed
(Task 8-12)

WARNING

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

1. Wear gloves (E20). **Clean oil temperature transmittal (1)**. Use dry cleaning solvent (E17) and brush.
2. **Wipe dry** using clean, dry, lint-free cloth (E26).

**FOLLOW-ON MAINTENANCE:**

Inspect Oil Temperature Transmitter (Task 8-14).

END OF TASK

8-14 INSPECT OIL TEMPERATURE TRANSMITTER

8-14

INITIAL SETUP

Applicable Configurations:

All

Tools:

Technical Inspection Tool Kit,
NSN 5181-00-323-5114

Materials:

None

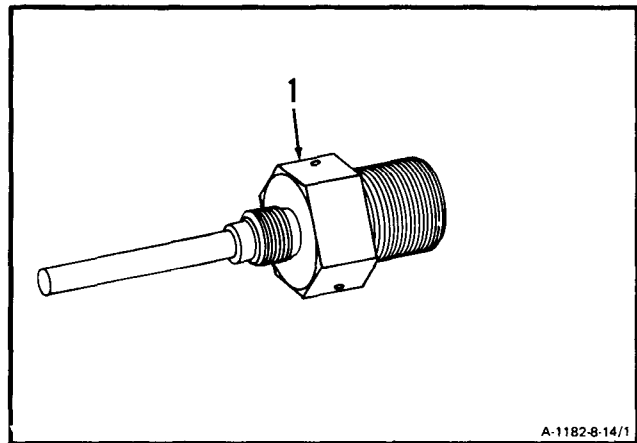
Personnel Required:

68B30 Aircraft Powerplant Inspector

Equipment Condition:

Off Engine Task

-
1. **Inspect oil temperature transmitter (1).** There shall be no cracks.



FOLLOW-ON MAINTENANCE:

None

END OF TASK

8-15 INSTALL OIL TEMPERATURE TRANSMITTER

8-15

INITIAL SETUP**Applicable Configurations:**

All

Tools:

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

Materials:

Lockwire (E29)

Parts:

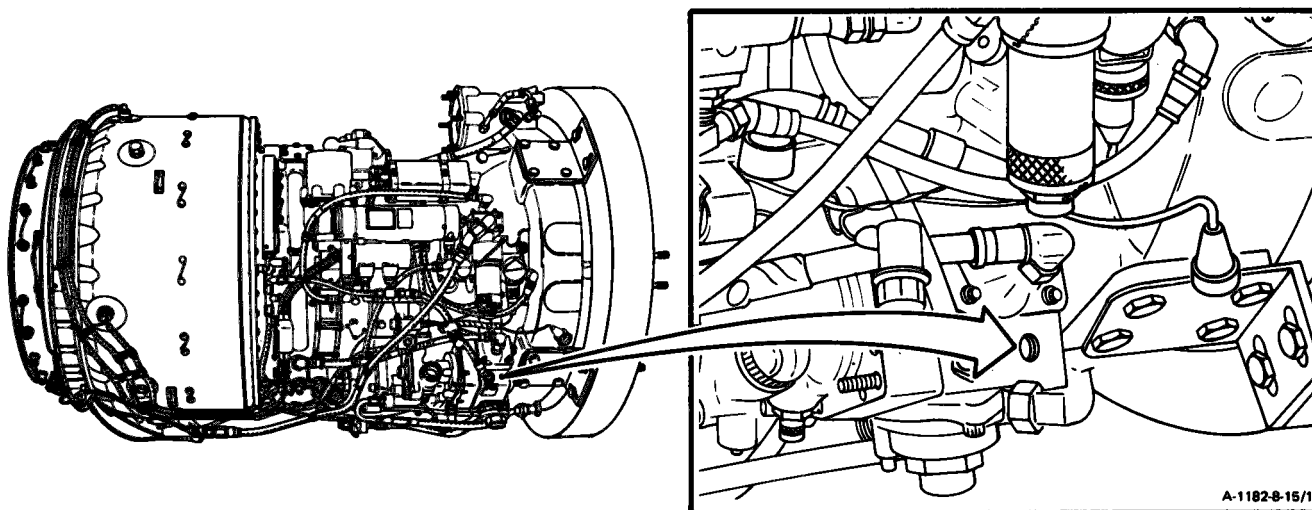
Gasket

Personnel Required:

68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

References:

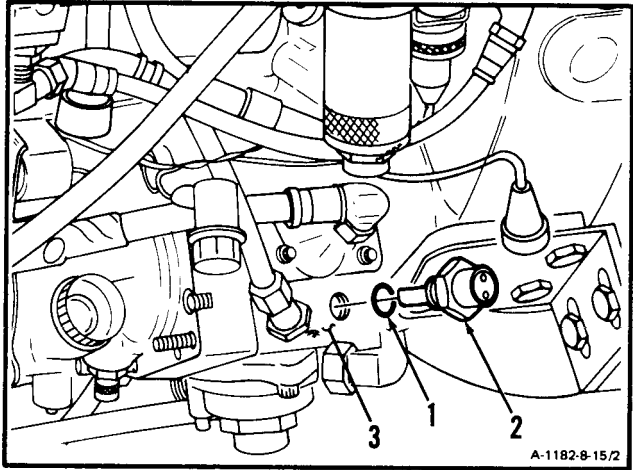
TM 55-2840-254-23P

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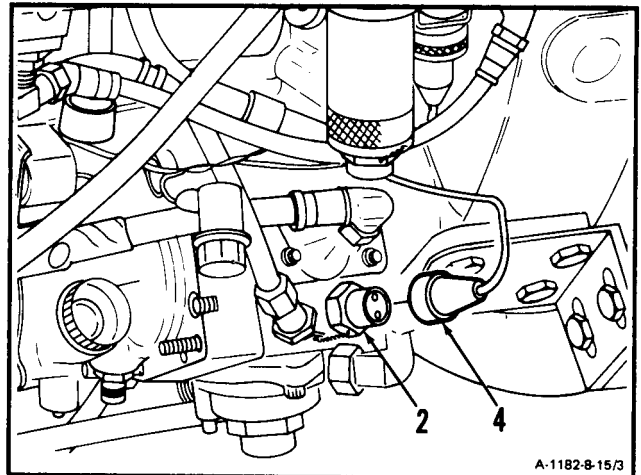
8-15 INSTALL OIL TEMPERATURE TRANSMITTER (Continued)

8-15

1. Install gasket (1) and oil temperature transmitter (2) in accessory gearbox assembly (3). Lockwire oil temperature transmitter (2). Use lockwire (E29).



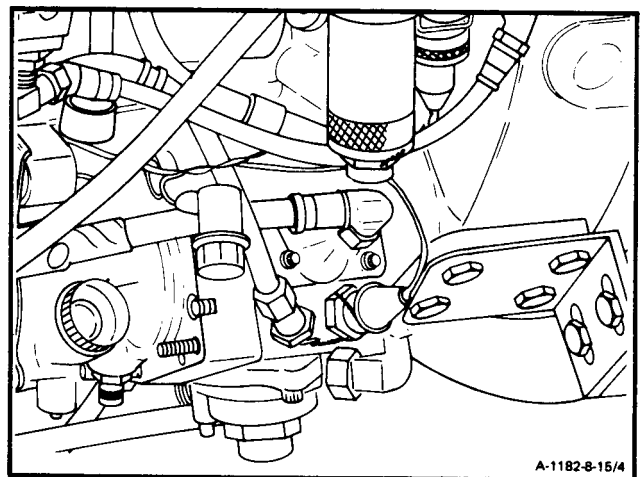
2. Install electrical connector (4) on oil temperature transmitter (2). Lockwire electrical connector (4). Use lockwire (E29).



INSPECT

FOLLOW-ON MAINTENANCE:

None



END OF TASK

Section IV. OIL FILLER ASSEMBLY AND OIL FILLER STRAINER - MAINTENANCE PROCEDURES

8-16 REMOVE OIL FILLER ASSEMBLY AND OIL FILLER STRAINER

8-16

INITIAL SETUP

Applicable Configurations:

All

Tools:

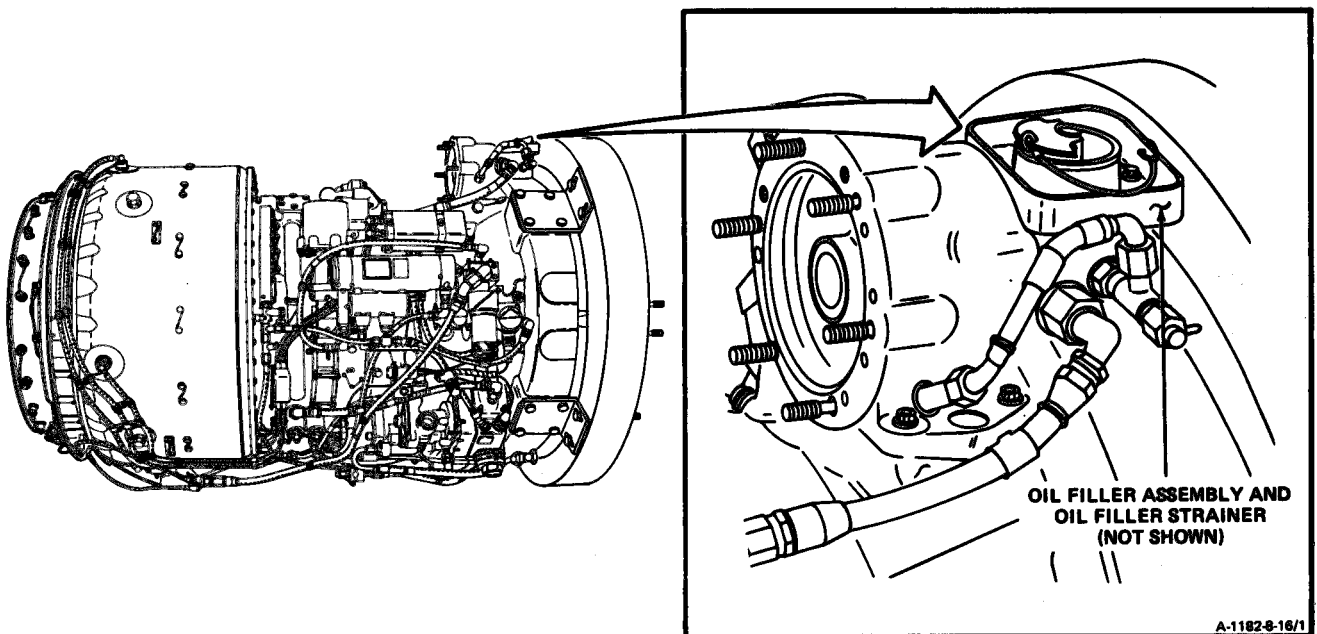
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944

Materials:

Wiping Rag (E58)

Personnel Required:

68B10 Aircraft Powerplant Repairer

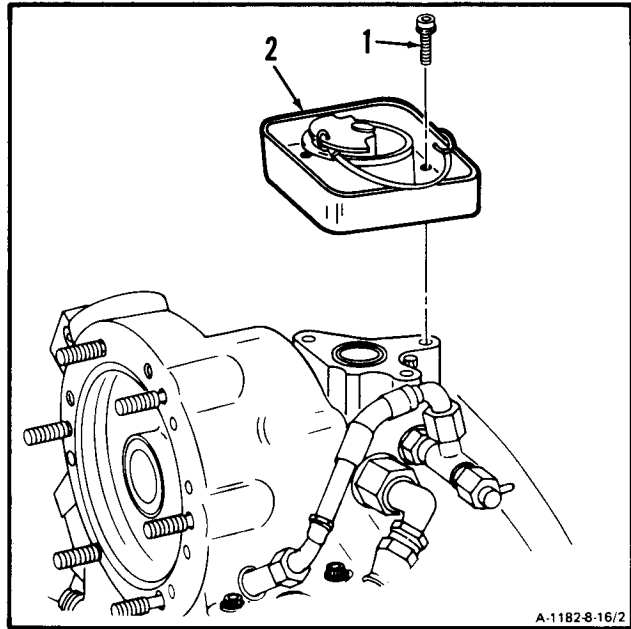


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8-16 REMOVE OIL FILLER ASSEMBLY AND OIL FILLER STRAINER (Continued)

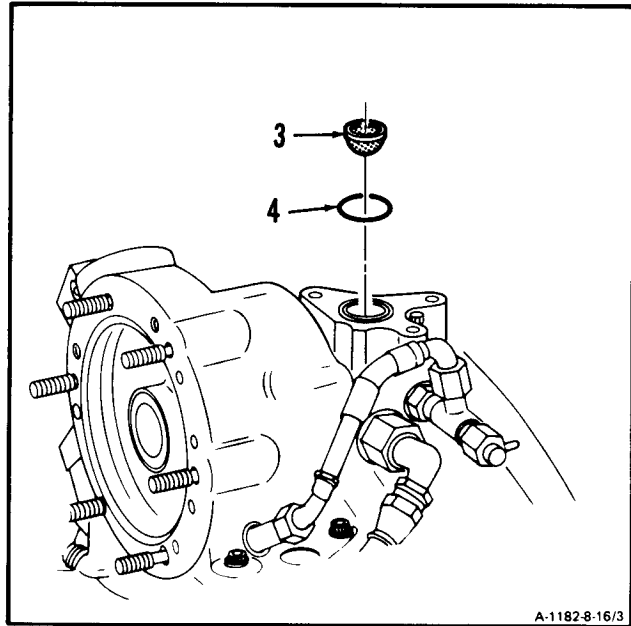
1. Remove lockwire, three bolts (1) and oil filler assembly (2).



CAUTION

If tools must be used to remove strainer care must be exercised to prevent damage to mating surfaces.

2. Remove oil filler strainer (3) and packing (4).



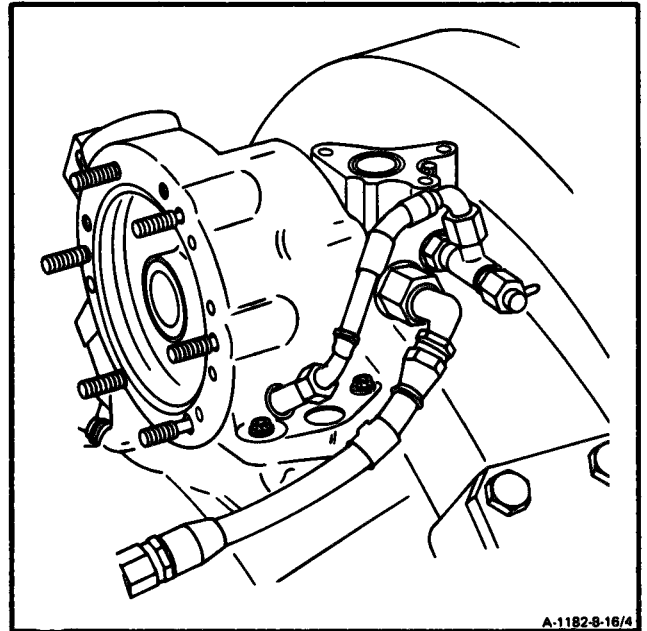
GO TO NEXT PAGE

8-16 REMOVE OIL FILLER ASSEMBLY AND OIL FILLER STRAINER (Continued)

8-16

FOLLOW-ON MAINTENANCE:

None

**END OF TASK**

INITIAL SETUP

Applicable Configurations:

All

Tools:

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

Personnel Required:

68B10 Aircraft Powerplant Repairer

Equipment Condition:

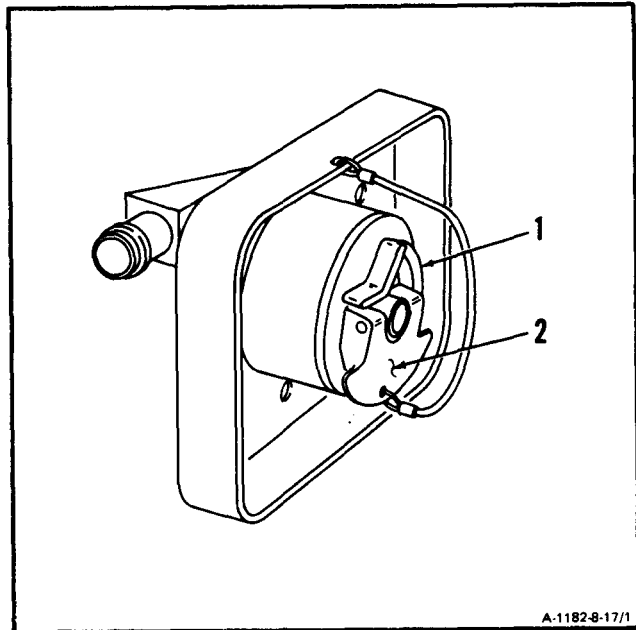
Off Engine Task
Oil Filler Assembly and Oil Filler Strainer
Removed (Task 8-16)

Materials

None

1. Remove cap assembly (1) as follows:

- a. Lift handle (2).

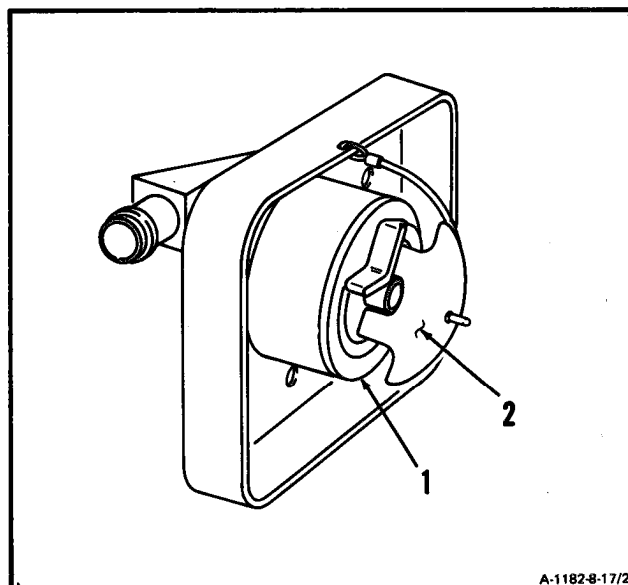


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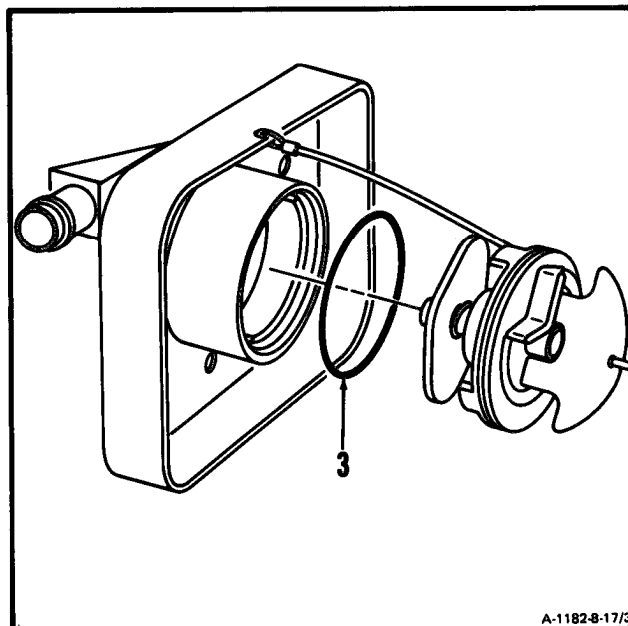
8-17 DISASSEMBLE OIL FILLER ASSEMBLY AND OIL FILLER STRAINER (Continued)

8-17

- b. Turn handle (2) counterclockwise and remove cap assembly (1).



- c. Remove packing (3).

**FOLLOW-ON MAINTENANCE:**

None

END OF TASK

INITIAL SETUP

General Safety Instructions:

Applicable Configurations:

All

Tools:

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

Materials:

- Dry Cleaning Solvent (E17)
- Gloves (E20)

Personnel Required:

68B10 Aircraft Powerplant Repairer

Equipment Condition:

- Off Engine Task
- Oil Filler Assembly and Oil Filler Strainer
Removed (Task 8-16)
- Oil Filler Assembly and Oil Filler Strainer
Disassembled (Task 8-17)

WARNING

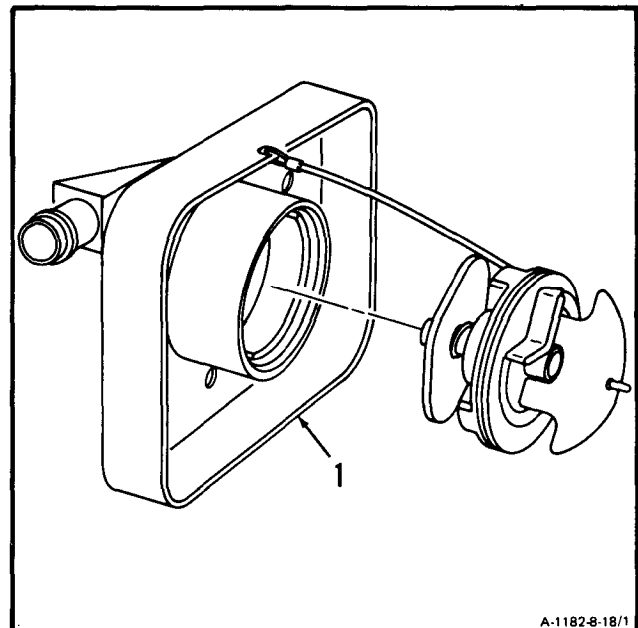
Dry cleaning solvent (E17) is flammable and toxic. It can irritate skin and cause burns. Use only in well-ventilated area, away from heat and open flame. In case of contact, immediately flush skin or eyes with water for at least 15 minutes. Get medical attention for eyes.

WARNING

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

1. Clean oil filler assembly (1) as follows:

- a. Wear gloves (E20). Immerse filler assembly (1) in dry cleaning solvent (E17) and agitate. Use brush on inner surfaces.
- b. Wear goggles and blow dry any remaining solvent. Use clean, dry compressed air.



A-1182-8-18/1

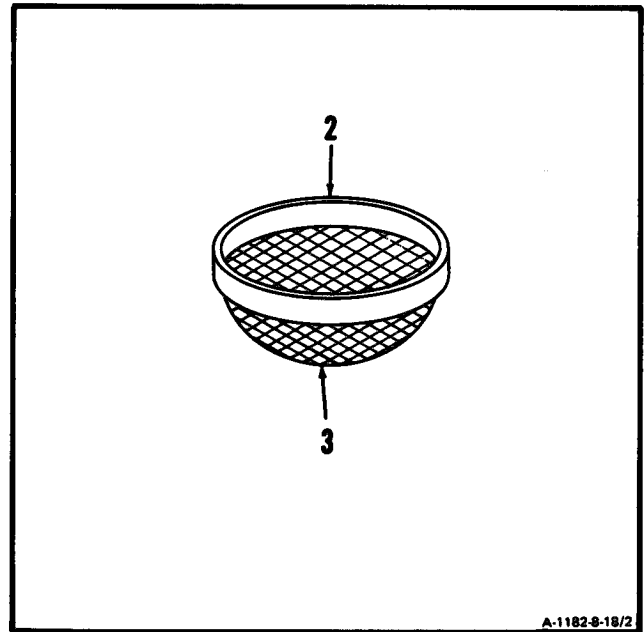
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8-18 CLEAN OIL FILLER ASSEMBLY AND OIL FILLER STRAINER (Continued)

8-18

2. Clean oil filler strainer (2) as follows:

- a. Immerse in dry cleaning solvent (E17) and agitate. Use brush on screen (3).
- b. Blow dry screen (3). Use clean, dry compressed air.

**FOLLOW-ON MAINTENANCE:**

Inspect Oil Filler Assembly and Oil Filler Strainer (Task 8-19).

END OF TASK

8-19 INSPECT OIL FILLER ASSEMBLY AND OIL FILLER STRAINER

8-19

INITIAL SETUP

Applicable Configurations:

All

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

None

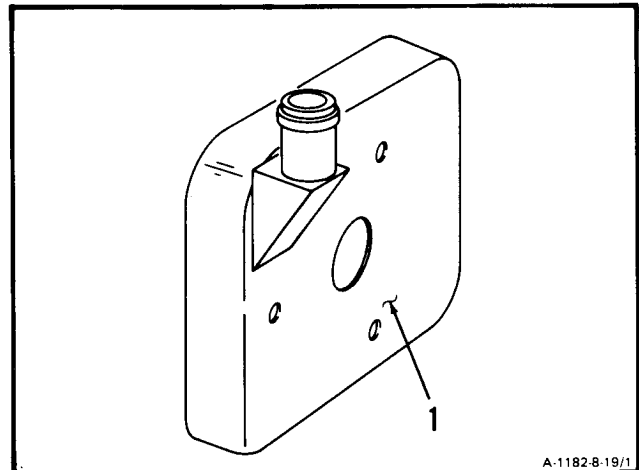
Personnel Required:

68B30 Aircraft Powerplant Inspector

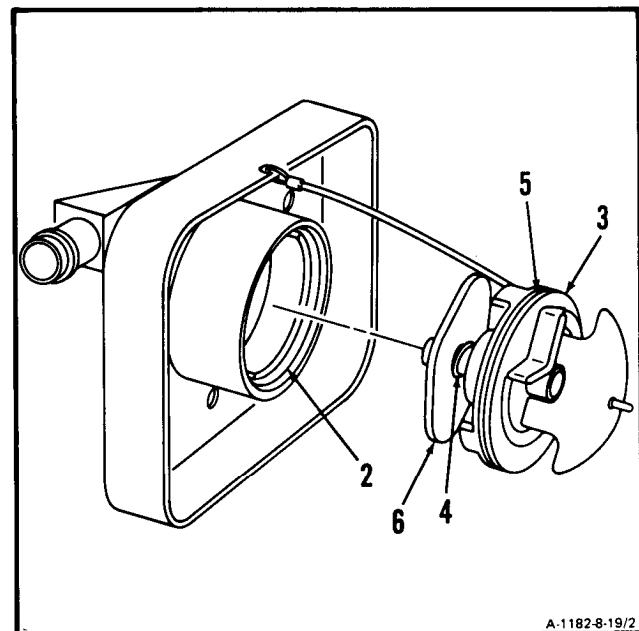
Equipment Condition:

Off Engine Task

1. **Inspect pan mounting surface (1).** There shall be no cracks.



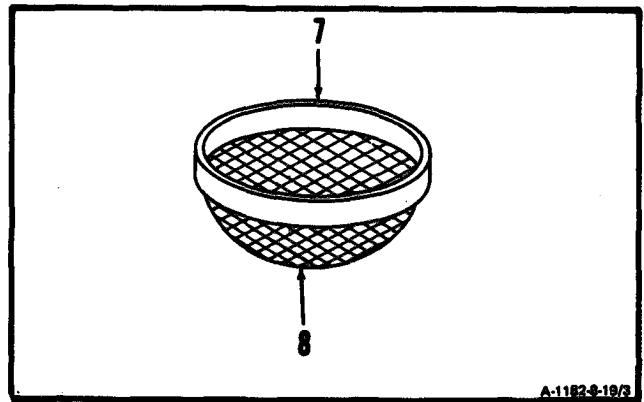
2. **Inspect packing sealing surface (2).** There shall be no nicks, dents and scratches greater than 0.015 inch. Inspect cap assembly (3). Spring (4) shall not be broken. There shall be no nicks, dents or scratches deeper than 0.015 inch in packing groove (5). Locking tabs (6) shall not be bent or distorted.

**GO TO NEXT PAGE**

8-19 INSPECT OIL FILLER ASSEMBLY AND OIL FILLER STRAINER (Continued)

8-19

3. Inspect oil filler strainer (7). There shall be no broken wires (8).

**FOLLOW-ON MAINTENANCE:**

None

END OF TASK

8-20 REPAIR OIL FILLER ASSEMBLY AND OIL FILLER STRAINER

8-20

INITIAL SETUP**Applicable Configurations:**

All

Tools:

Technical Inspection Tool Kit,
NSN 5180-00-323-5114
Hand File Set

Materials:

Crocus Cloth (E15)

Personnel Required:

68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

Equipment Condition:

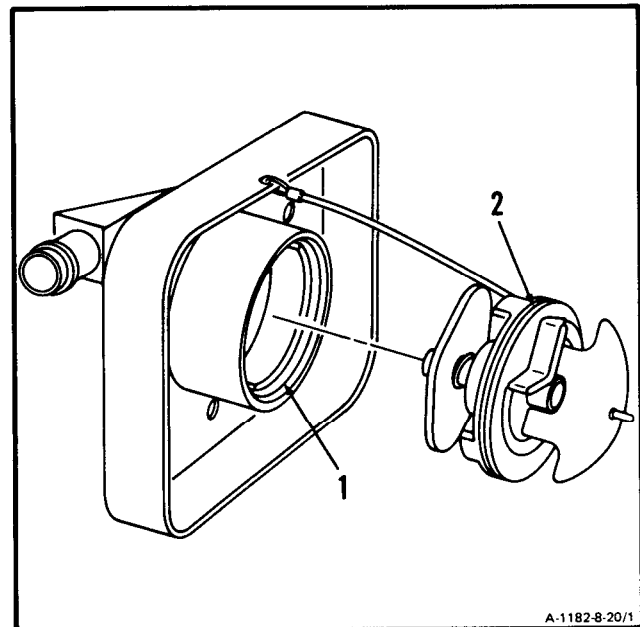
Off Engine Task

1. Repair nicks, dents and scratches in packing sealing surface (1) or in packing groove (2) as follows:

NOTE

Repair is allowed only if depth after repair is not more than 0.015 inch.

- a. Blend-repair using file.
- b. Polish repaired area. Use crocus cloth (E15).

**INSPECT****FOLLOW-ON MAINTENANCE:**

None

END OF TASK

8-21 ASSEMBLE OIL FILLER ASSEMBLY AND OIL FILLER STRAINER

8-21

INITIAL SETUP**Applicable Configurations:**

All

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

None

Parts:

Packing

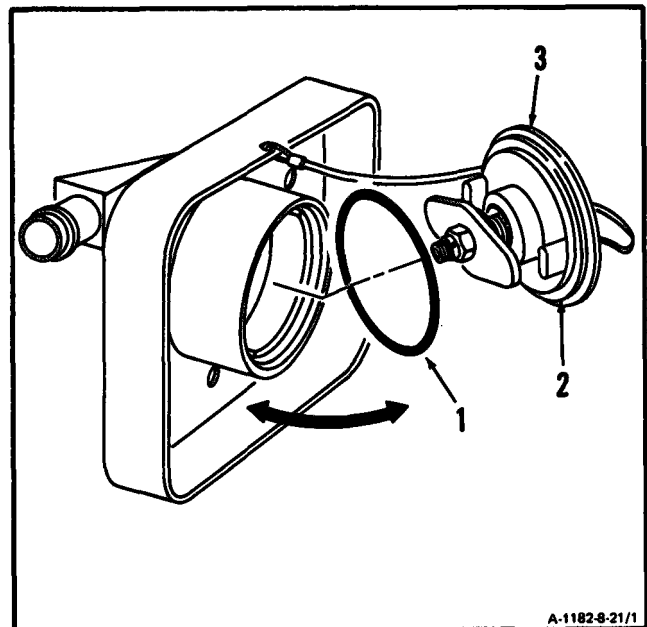
Personnel Required:68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector**References:**

TM 55-2840-254-23P

Equipment Condition:

Off Engine Task

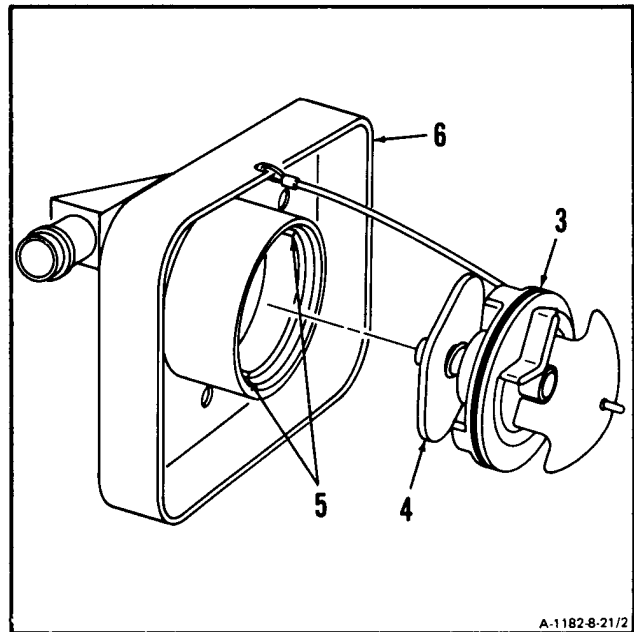
-
1. Install packing (1) in groove (2) of cap assembly (3).

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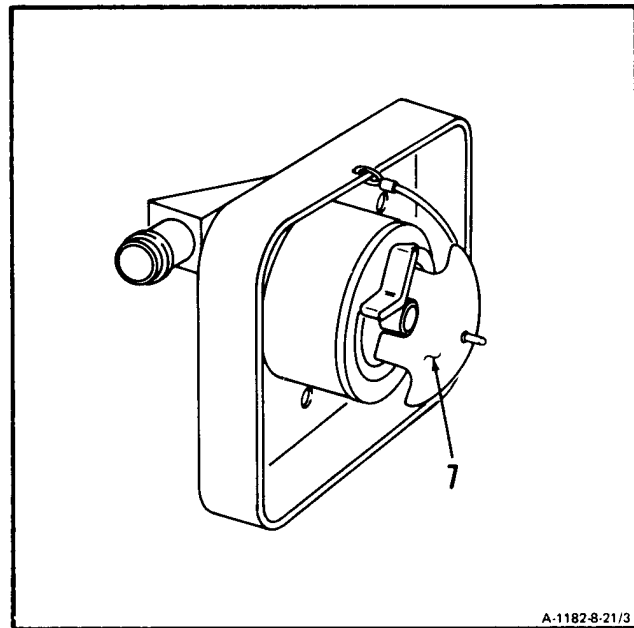
8-21 ASSEMBLE OIL FILLER ASSEMBLY AND OIL FILLER STRAINER (Continued)

8-21

- Align ends of lug (4) with slots (5) and **install cap assembly (3)** in pan (6).



- Turn handle (7) 1/8-turn clockwise and press down.



INSPECT

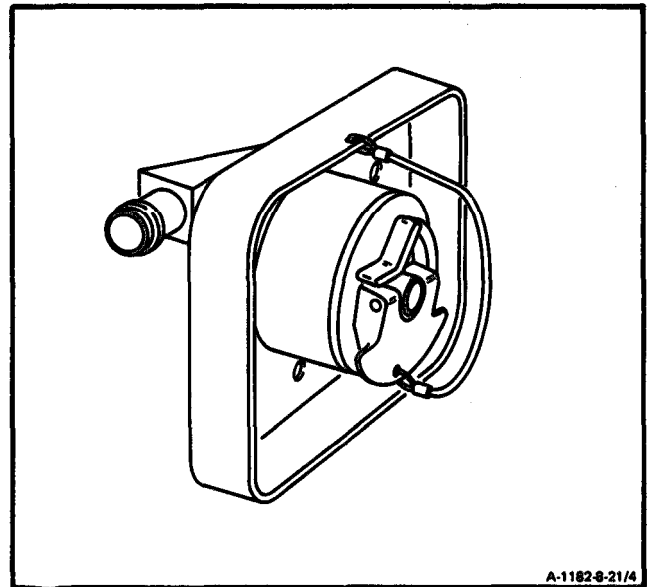
GO TO NEXT PAGE

8-21 ASSEMBLE OIL FILLER ASSEMBLY AND OIL FILLER STRAINER (Continued)

8-21

FOLLOW-ON MAINTENANCE:

None

**END OF TASK**

8-22 INSTALL OIL FILLER ASSEMBLY AND OIL FILLER STRAINER

8-22

INITIAL SETUP

Applicable Configurations:

All

Tools:

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

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

Materials:

Lockwire (E29)

Parts:

Packing

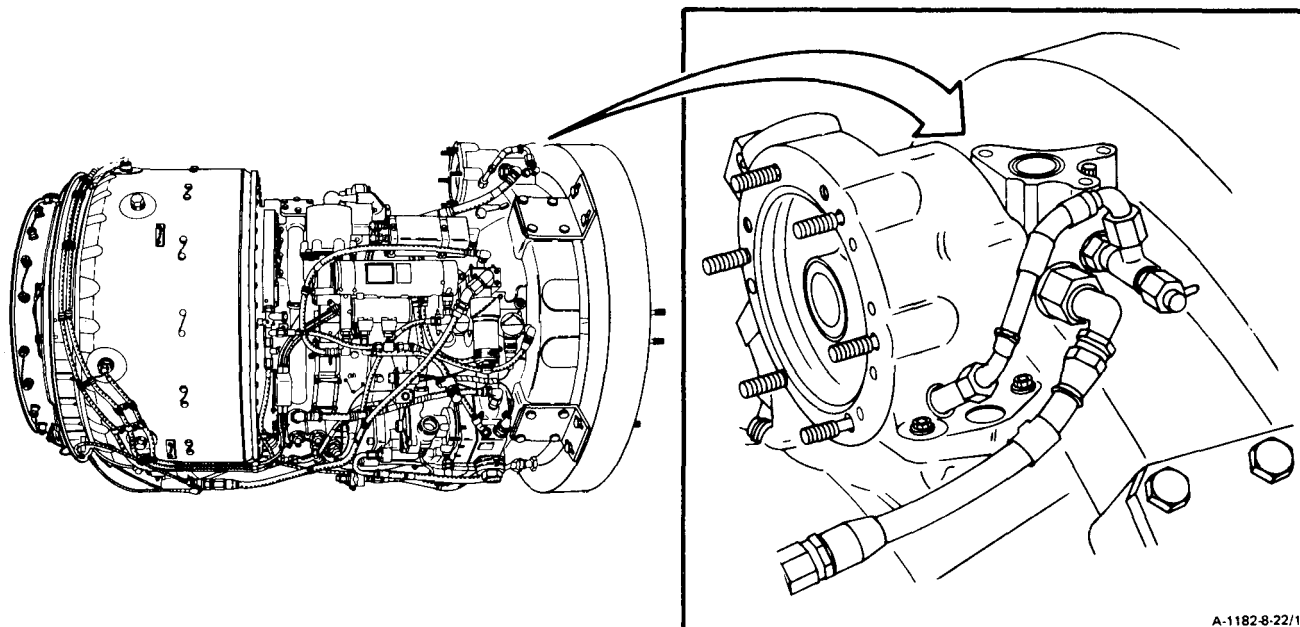
Personnel Required:

68B10 Aircraft Powerplant Repairer

68B30 Aircraft Powerplant Inspector

References:

TM 55-2840-254-23P



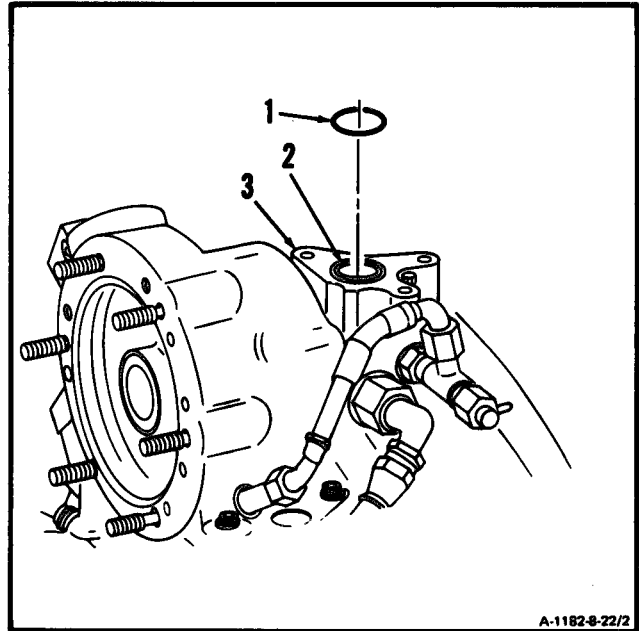
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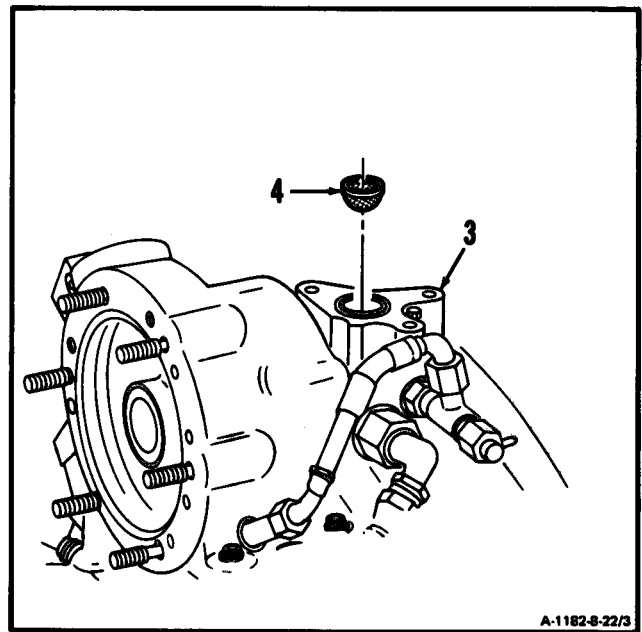
8-22 INSTALL OIL FILLER ASSEMBLY AND OIL FILLER STRAINER (Continued)

8-22

1. Install packing (1) in groove (2) in housing (3).



2. Install oil filler strainer (4) in housing (3).



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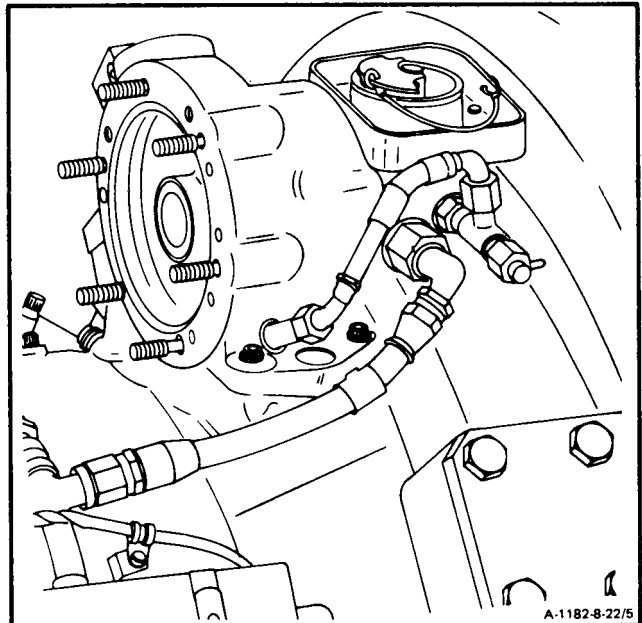
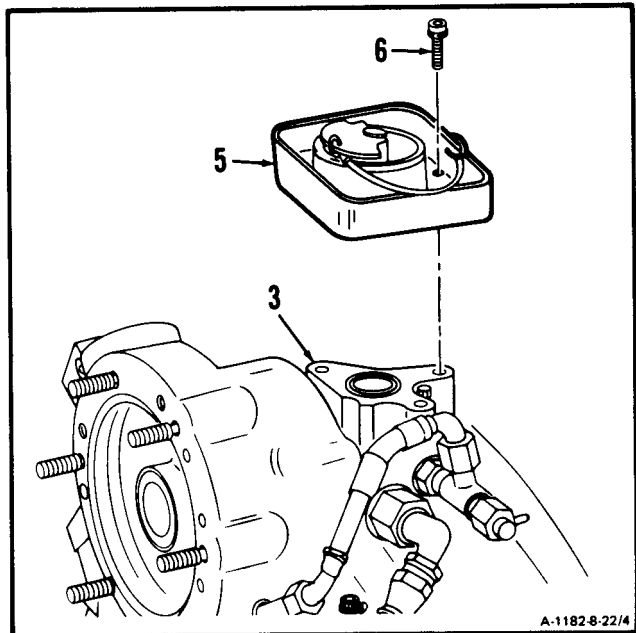
8-22 INSTALL OIL FILLER ASSEMBLY AND OIL FILLER STRAINER (Continued)

8-22

3. **Install oil filler assembly (5)** and three bolts (6) on housing (3). Lockwire bolts (6). Use lockwire (E29).

INSPECT**FOLLOW-ON MAINTENANCE:**

None

**END OF TASK**

Section V. OIL FILTER CAP AND STEM ASSEMBLY AND OIL FILTER ELEMENT -
 MAINTENANCE PROCEDURES

8-23 REMOVE OIL FILTER CAP AND STEM ASSEMBLY AND OIL FILTER ELEMENT

8-23

INITIAL SETUP

Applicable Configurations:

All

Tools:

Powerplant Mechanic's Tool Kit,
 NSN 5180-00-323-4944
 Open-End Wrench, 1-5/16 Inch
 Container, 1-Quart

Materials:

Wiping Rag (E58)

Personnel Required:

68B10 Aircraft Powerplant Repairer

References:

Task 1-86

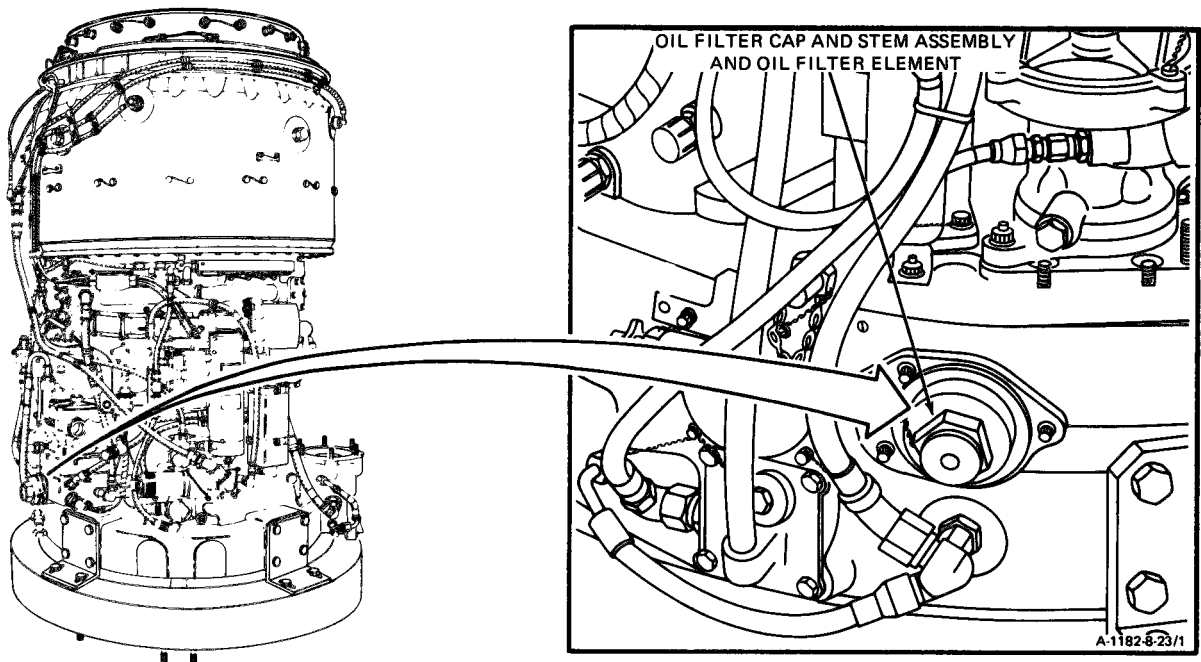
Equipment Condition:

Engine Oil System Drained (Task 1-75)

General Safety Instructions:

WARNING

Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.

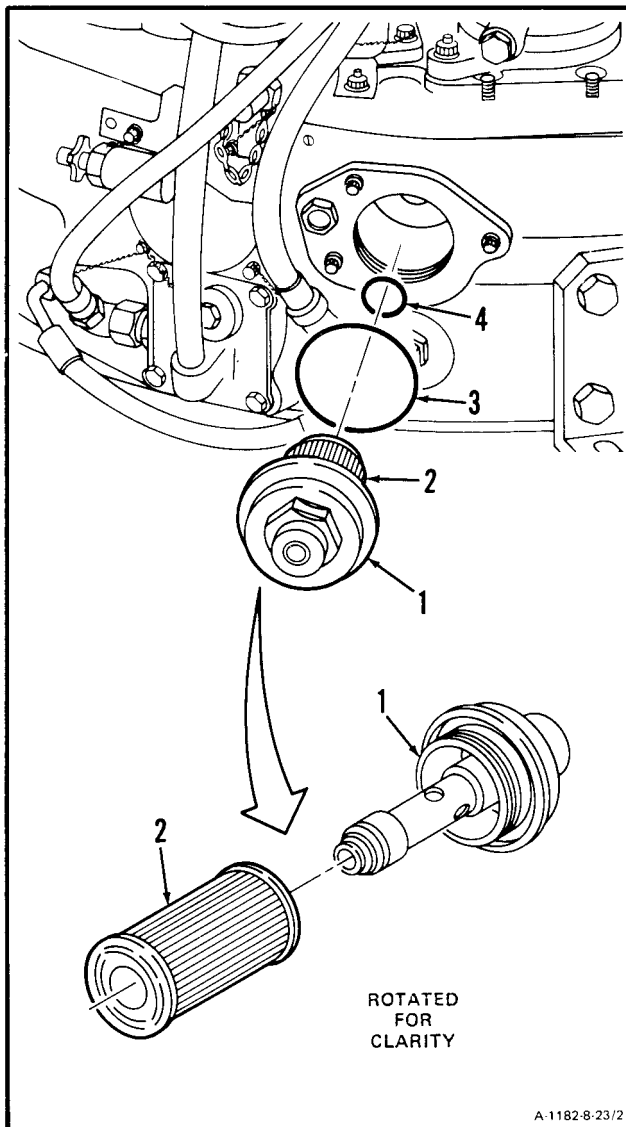


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8-23 REMOVE OIL FILTER CAP AND STEM ASSEMBLY AND OIL FILTER ELEMENT (Continued)

8-23

1. Remove lockwire and **oil filter cap and stem assembly (1)** with **oil filter element (2)**. Use 1-5/16 inch open-end wrench.
2. Remove packings (3 and 4) from oil filter cap and stem assembly (1).
3. Remove **oil filter element (2)** from oil filter cap and stem assembly (1).
4. **Inspect oil filter element (2)**. There shall be no contamination. If contamination is found, inspect contaminated oil system (Ref. Task 1-86).

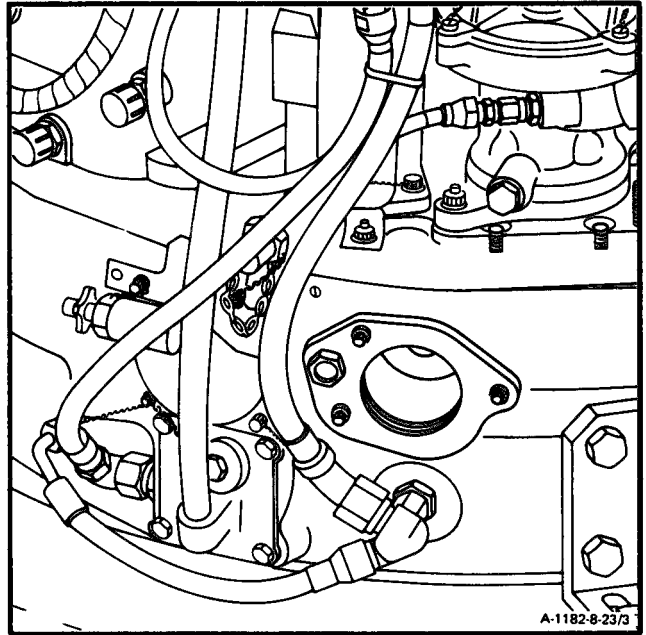
**GO TO NEXT PAGE**

**8-23 REMOVE OIL FILTER CAP AND STEM ASSEMBLY AND OIL FILTER
ELEMENT (Continued)**

8-23

FOLLOW-ON MAINTENANCE:

None

**END OF TASK**

INITIAL SETUP

Applicable Configurations:

All

Tools:

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

Materials:

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

Personnel Required:

68B10 Aircraft Powerplant Repairer

Equipment Condition:

Off Engine Task
Engine Oil System Drained (Task 1-75).
Oil Filter Cap and Stem Assembly and Oil
Filter Element Removed (Task 8-23).

General Safety Instructions:**WARNING**

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

1. Clean oil filter cap and stem assembly (1) as follows:

- a. Wear gloves (E20). Immerse and agitate oil filter cap and stem assembly (1) in dry cleaning solvent (E17). Use brush on outside surfaces.
- b. Wipe outside surfaces dry with clean, dry, lint-free cloth (E26).

WARNING

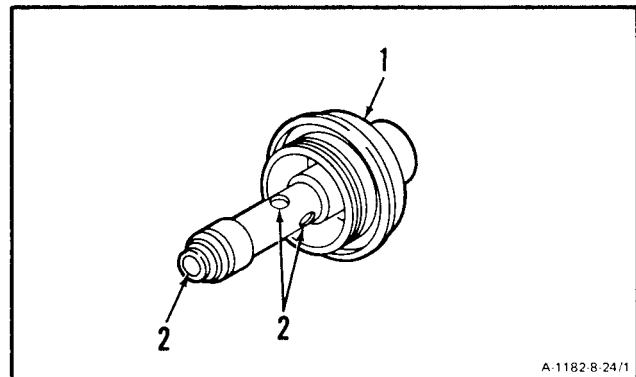
When using compressed air for cleaning, use approved protective equipment for eyes and face. Do not use more than 30 psig air pressure. Do not direct air toward yourself or another person. Failure to comply could result in injury to eyes or skin. In case of injury, get medical attention.

- c. Wear goggles. Blow dry internal passages (2) using clean, dry compressed air.

FOLLOW-ON MAINTENANCE:

Inspect Oil Filter Cap and Stem Assembly and Oil Filter Element (Task 8-25).

END OF TASK



8-25 INSPECT OIL FILTER CAP AND STEM ASSEMBLY AND OIL FILTER ELEMENT

8-25

INITIAL SETUP**Applicable Configurations:**

All

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

None

Personnel Required:

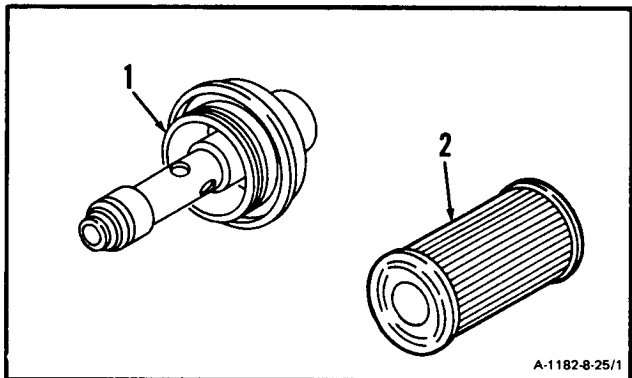
68B30 Aircraft Powerplant Inspector

Equipment Condition:

Off Engine Task

1. Inspect oil filter cap and stem assembly (1) as follows:

- a. There shall be no cracks.
- b. There shall be no nicks, dents or scratches deeper than 0.015 inch.

2. Inspect oil filter element (2). There shall be no damage.**FOLLOW-ON MAINTENANCE:**

None

END OF TASK

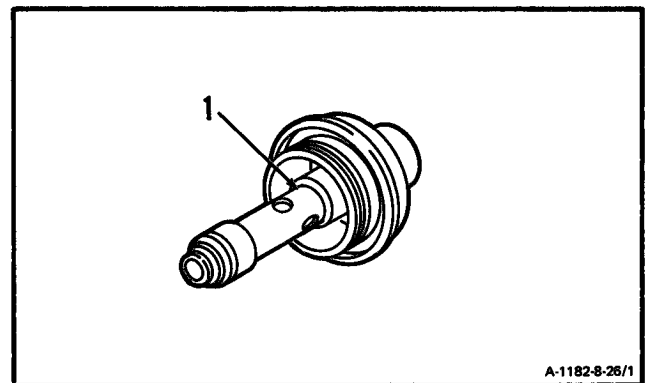
8-26 REPAIR OIL FILTER CAP AND STEM ASSEMBLY AND OIL FILTER ELEMENT

8-26**INITIAL SETUP****Applicable Configurations:**

All

Tools:Technical Inspection Tool Kit,
NSN 5180-00-323-5114**Materials:**Carborundum Stone (E10)
Crocus Cloth (E15)**Personnel Required:**68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector**Equipment Condition:**Off Engine Task

1. Repair nicks, dents, and scratches on oil filter cap and stem assembly (1) up to 0.015 inch deep. Blend repair. Use Carborundum stone (E10).
2. Final polish using crocus cloth (E15).



A-1182-8-26/1

INSPECT**FOLLOW-ON MAINTENANCE:**

None

END OF TASK

8-27 INSTALL OIL FILTER CAP AND STEM ASSEMBLY AND OIL FILTER ELEMENT

8-27

INITIAL SETUP

Applicable Configurations:

All

Tools:

Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114
Torque Wrench, 30-150 Inch-Pounds
Deep-Style Socket, 1-5/16 Inch

Materials:

Lockwire (E29)

Parts:

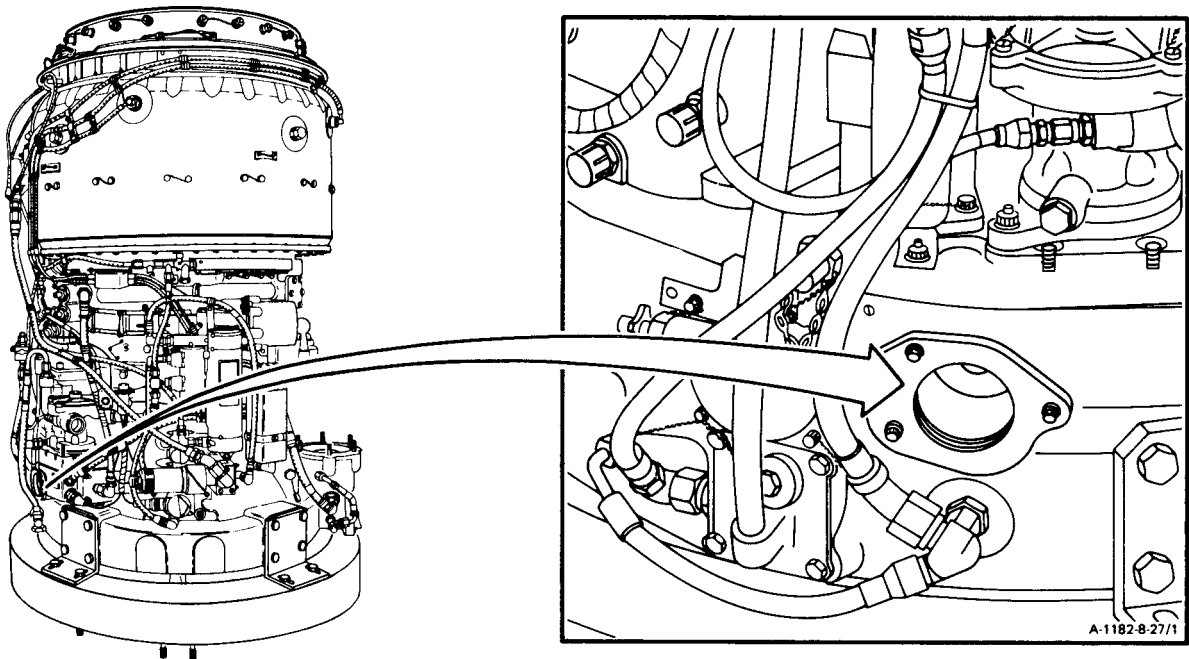
Packings

Personnel Required:

68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

References:

TM 55-2840-254-23P

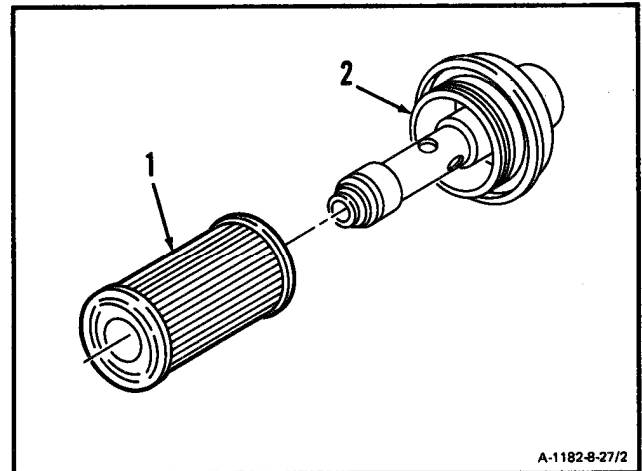


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8-27 INSTALL OIL FILTER CAP AND STEM ASSEMBLY AND OIL FILTER ELEMENT (Continued)

8-27

1. Install oil filter element (1) on oil filter cap and stem assembly (2).

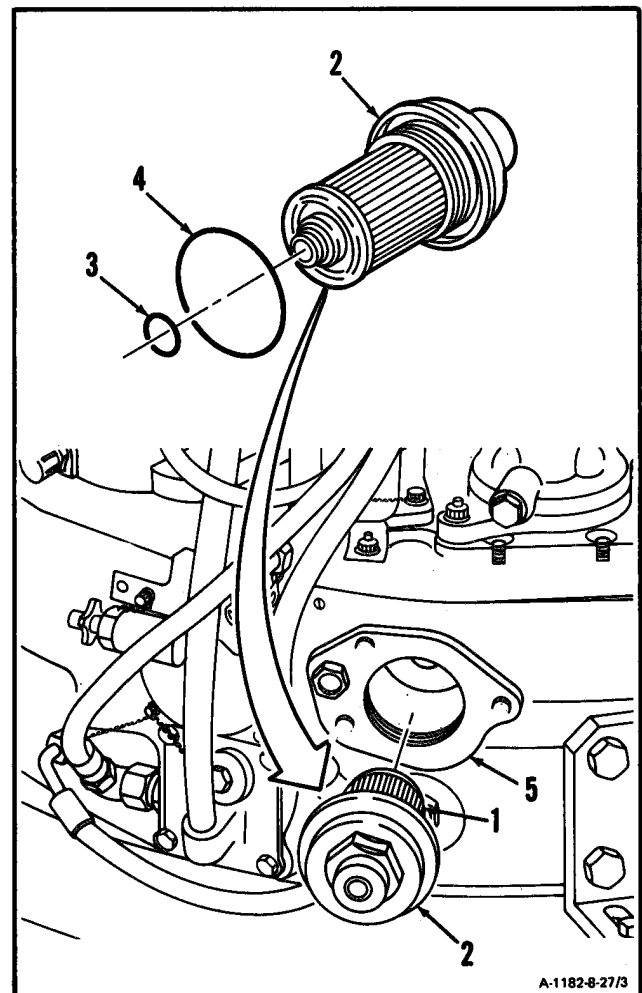


2. Install packings (3 and 4) on oil filter cap and stem assembly (2).

CAUTION

Do not torque oil filter cap and stem assembly more than 50 inch-pounds. Failure to comply may cause damage to oil filter cover.

3. Install oil filter cap and stem assembly (2), with oil filter element (1), on oil filter cover (5). Torque oil filter cap and stem assembly (2) to 50 inch-pounds. Lockwire oil filter cap and stem assembly (2). Use lockwire (E29).



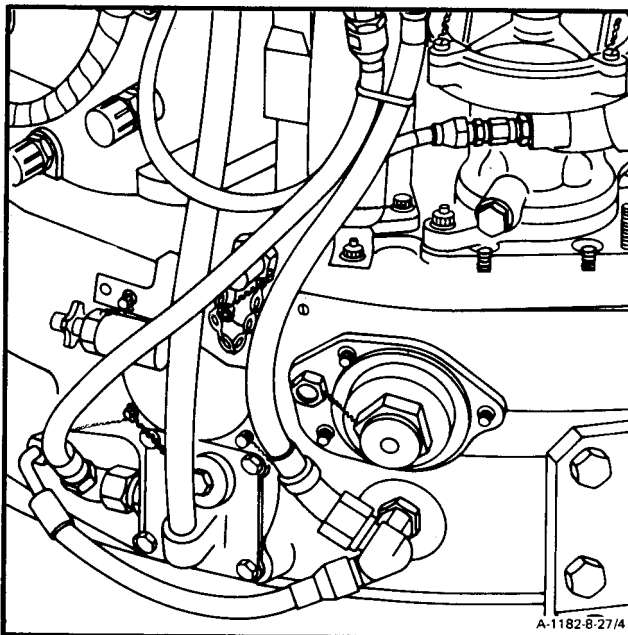
INSPECT

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**8-27 INSTALL OIL FILTER CAP AND STEM ASSEMBLY AND OIL FILTER
ELEMENT (Continued)**

FOLLOW-ON MAINTENANCE:

Service Engine Oil System (Task 1-74).



END OF TASK

Section VI. DUAL CHIP DETECTOR - MAINTENANCE PROCEDURES

8-28 REMOVE DUAL CHIP DETECTOR

8-28

INITIAL SETUP

Applicable Configurations:

All

Tools:

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

Materials:

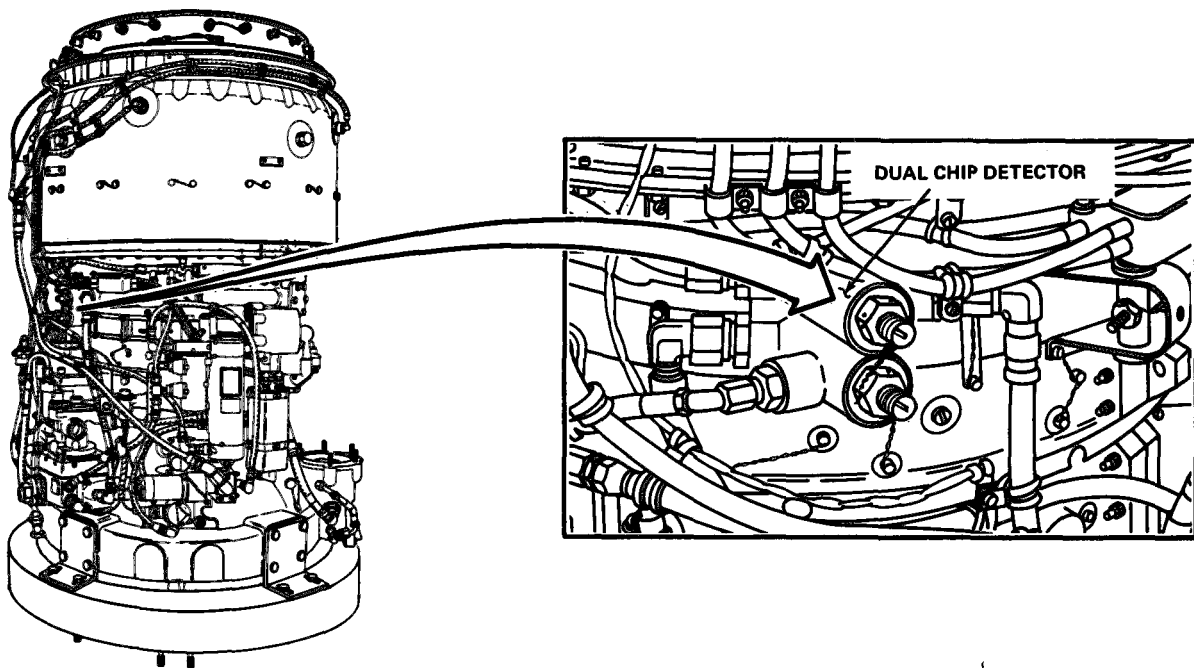
Wiping Rag (E58)

Personnel Required:

68B10 Aircraft Powerplant Repairer

General Safety Instructions:**WARNING**

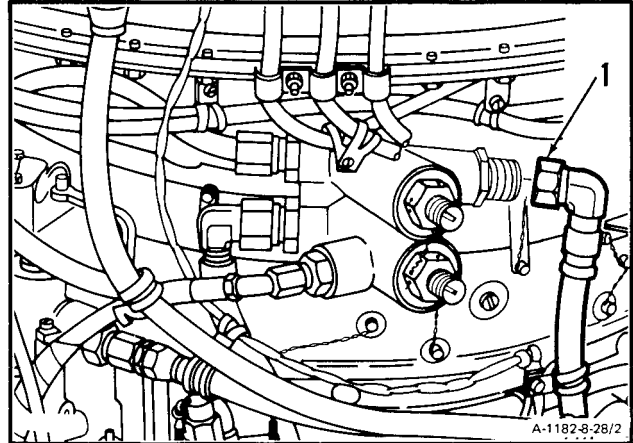
Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.



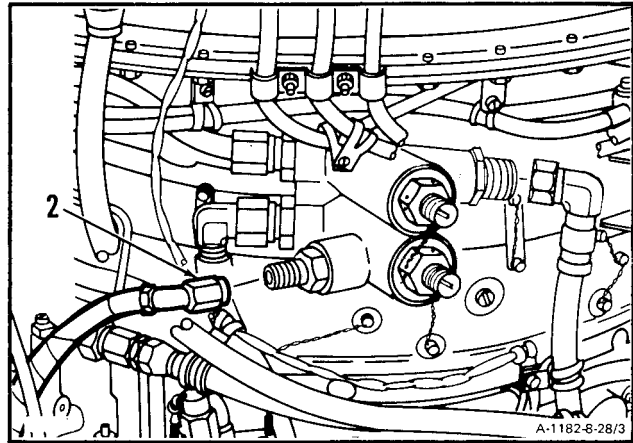
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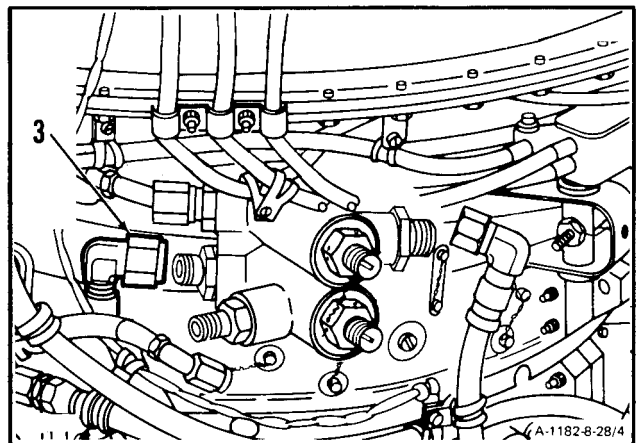
1. Disconnect hose assembly (1).



2. Disconnect hose assembly (2).



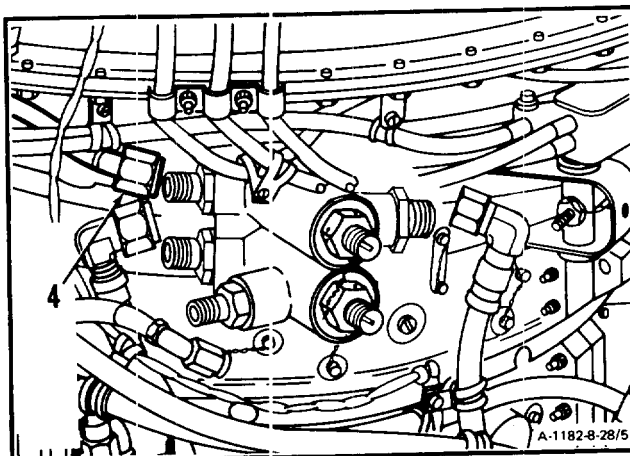
3. Disconnect hose assembly (3).



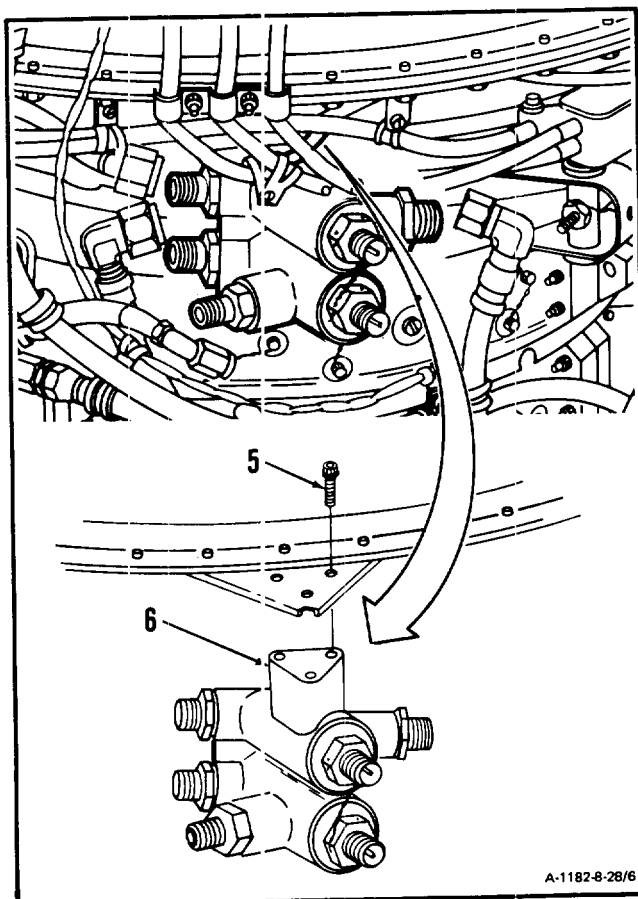
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8-28 REMOVE DUAL CHIP DETECTOR (Continued)

4. Disconnect tube assembly (4).



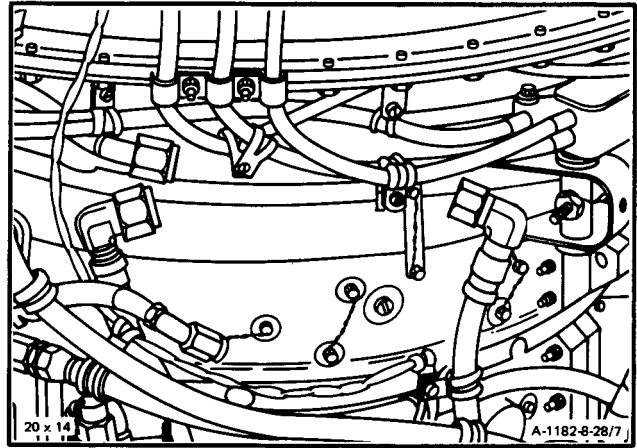
5. Remove lockwire, three bolts (5), and dual chip detector (6).



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FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-29 DISASSEMBLE DUAL CHIP DETECTOR

8-29

INITIAL SETUP**Applicable Configurations:**

All

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

Vise

Jaw Caps

Materials:

Wiping Rag (E58)

Personnel Required:

68B10 Aircraft Powerplant Repairer

Equipment Condition:

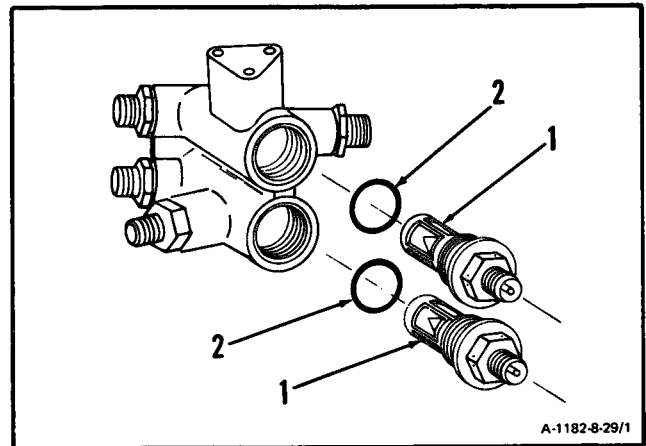
Off Engine Task

Dual Chip Detector Removed (Task 8-28)

General Safety Instructions:**WARNING**

Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin, and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.

1. Remove lockwire, two magnetic chip detectors (1) and packings (2). Use vise with jaw caps.

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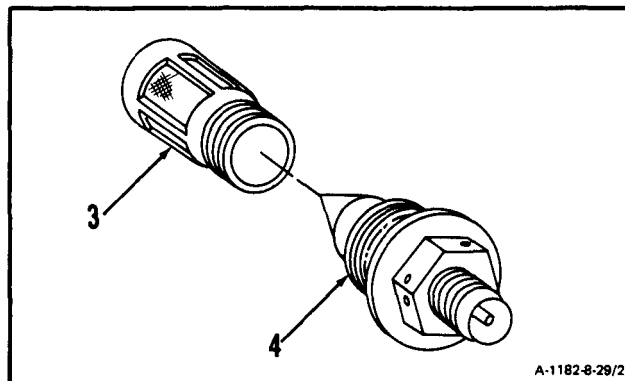
CAUTION

When removing filter from connector, be careful not to push in or deform screen of filter. Pushed in or deformed screen are cause for rejection.

NOTE

The following step applies to both magnetic chip detectors.

2. Unscrew and **remove filter (3)** from connector (4).

**FOLLOW-ON MAINTENANCE:**

None

END OF TASK

8-30 CLEAN DUAL CHIP DETECTOR

8-30

INITIAL SETUP

*General Safety Instructions:***Applicable Configurations:**

All

Tools:

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

Goggles
Compressed Air Source

Materials:

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

Personnel Required:

68B10 Aircraft Powerplant Repairer

Equipment Condition:

Off Engine Task
Dual Chip Detector Removed (Task 8-28)
Dual Chip Detector Disassembled (Task 8-29)

WARNING

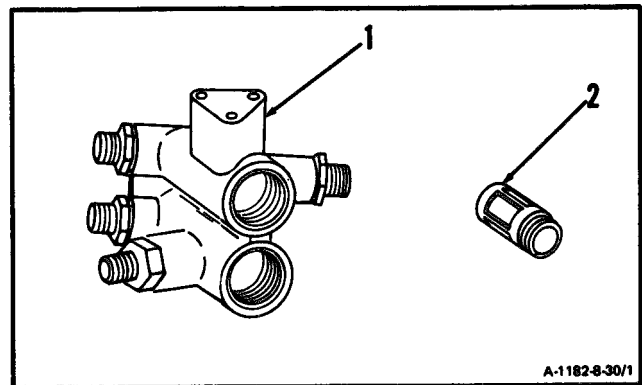
Dry cleaning solvent (E17) is flammable and toxic. It can irritate skin and cause burns. Use only in wall-ventilated area, away from heat and open flame. In case of contact, immediately flush skin or eyes with water for at least 15 minutes. Get medical attention for eyes.

1. Wear gloves (E20). **Clean housing (1) and two filters (2).** Use dry cleaning solvent (E17) and brush.

WARNING

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

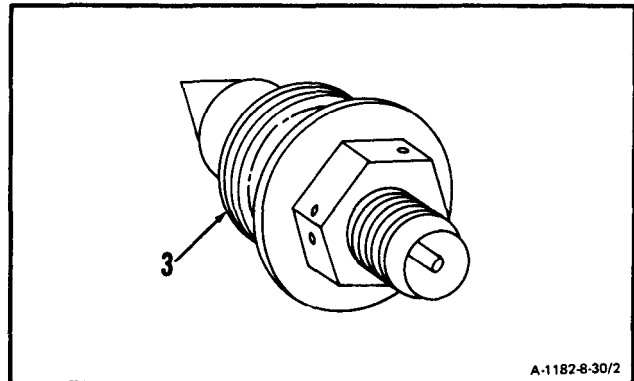
2. Wear goggles. **Blow dry housing (1) and filters (2),** using clean, dry compressed air.

**GO TO NEXT PAGE**

8-30 CLEAN DUAL CHIP DETECTOR (Continued)

8-30

3. **Clean two connectors (3)** with lint-free cloth (E26) dampened in dry cleaning solvent (E17).

**FOLLOW-ON MAINTENANCE:**

Inspect Dual Chip Detector (Task 8-31).

END OF TASK

8-31 INSPECT DUAL CHIP DETECTOR

8-31

INITIAL SETUP**Applicable Configurations:**

All

Tools:

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

Materials:

None

Personnel Required:

68B30 Aircraft Powerplant Inspector

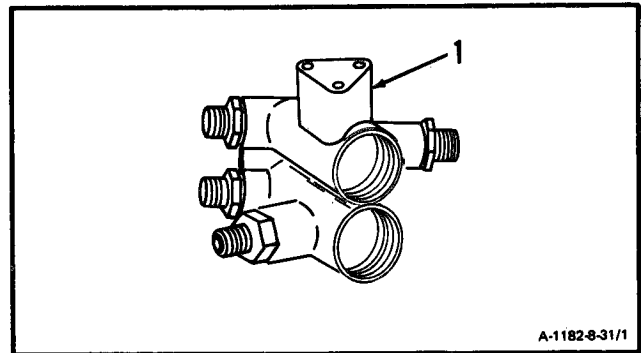
References:

Task 1-86

Equipment Condition:

Off Engine Task

1. **Inspect housing (1).** There shall be no cracks.

**NOTE**

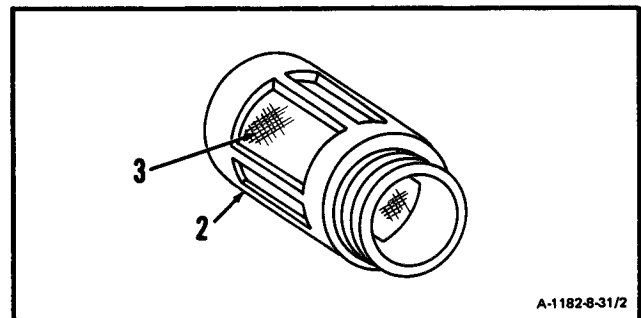
Following steps apply to both filters.

2. **Inspect filter (2).**

- a. There shall be no tears, punctures, or broken wires in screen (3).
- b. Screen (3) shall not be pushed in or broken away from filter (2).
- c. There shall be no contamination.

NOTE

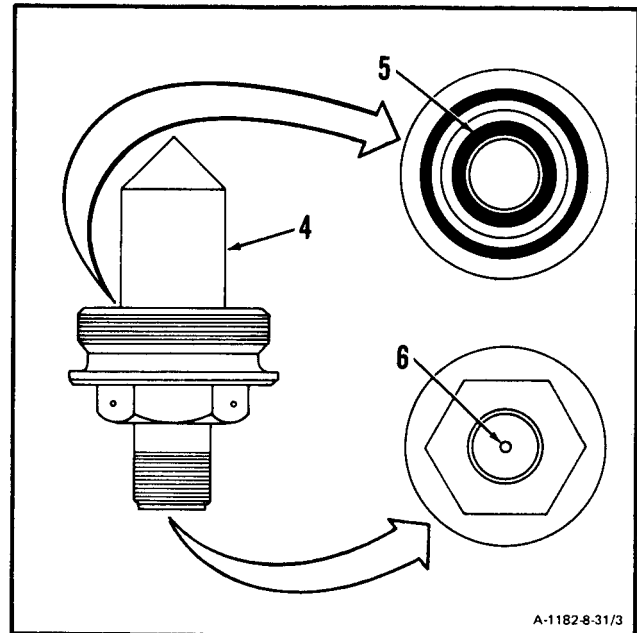
If there is contamination, further inspection of oil system must be done to determine cause. Inspect contaminated oil system (Ref. Task 1-86).

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NOT E

Following steps apply to both connectors.

3. **Inspect connector (4).**
 - a. There shall be no cracks in phenolic insert (5).
 - b. Pin (6) shall not be broken or bent.
 - c. There shall be no corrosion on pin (6).



FOLLOW-ON MAINTENANCE:

None

END OF TASK

8-32 REPAIR DUAL CHIP DETECTOR

8-32

INITIAL SETUP

Applicable Configurations:

All

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

Goggles

Compressed Air Source

Materials:

Crocus Cloth (E15)

Personnel Rewired:

68B10 Aircraft Powerplant Repairer

68B30 Aircraft Powerplant Inspector

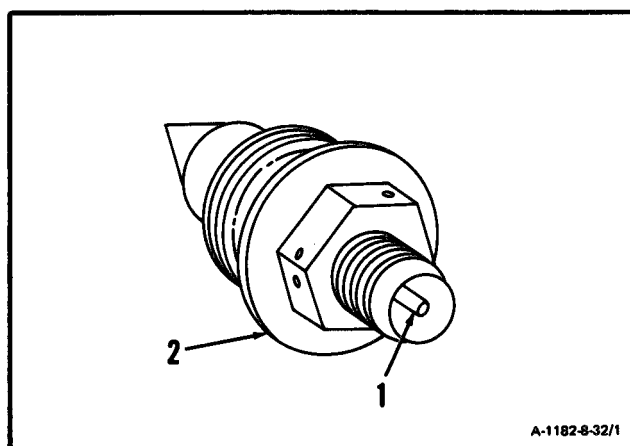
Equipment Condition:

Off Engine Task

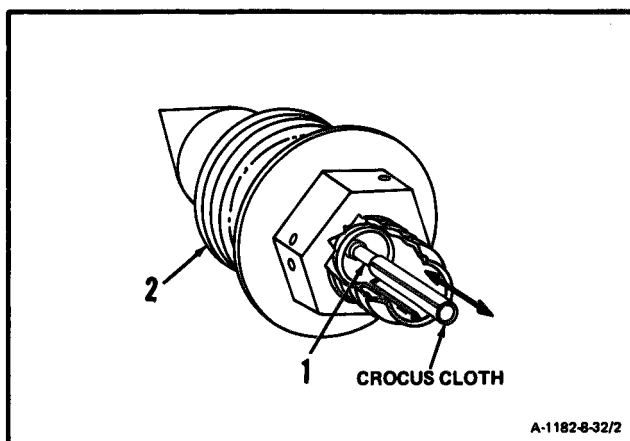
NOTE

This repair is allowed, provided it does not cause pin to break or crack.

1. **Straighten bent pin (1) of connector (2).** Use long-nose pliers to gently move pin (1) until it is straight.



2. **Remove corrosion from pin (1) of connector (2).** Polish pin, using in and out motion over entire length of pin until corrosion is removed. Use crocus cloth (E15).

**GO TO NEXT PAGE**

WARNING

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

3. Wear goggles. **Remove loosened particles**, using clean, dry compressed air.

INSPECT

FOLLOW-ON MAINTENANCE:

None

END OF TASK

8-33 ASSEMBLE DUAL CHIP DETECTOR

8-33

INITIAL SETUP

Applicable Configurations:

All

Tools:

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

Materials:

Lockwire (E29)

Parts:

Packings

Personnel Required:

- 68B10 Aircraft Powerplant Repairer
- 68B30 Aircraft Powerplant Inspector

References:

TM 55-2840-254-23P

Equipment Condition:

Off Engine Task

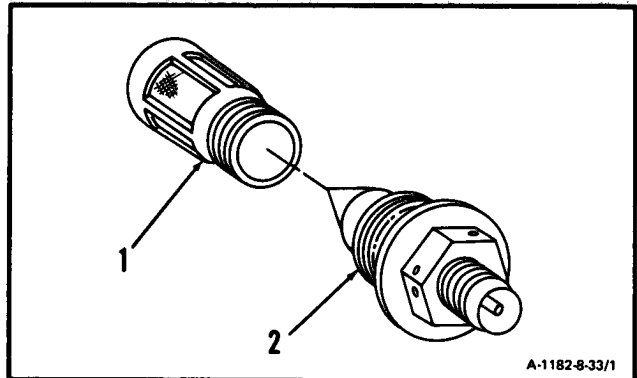
NOTE

The following step applies to both magnetic chip detectors.

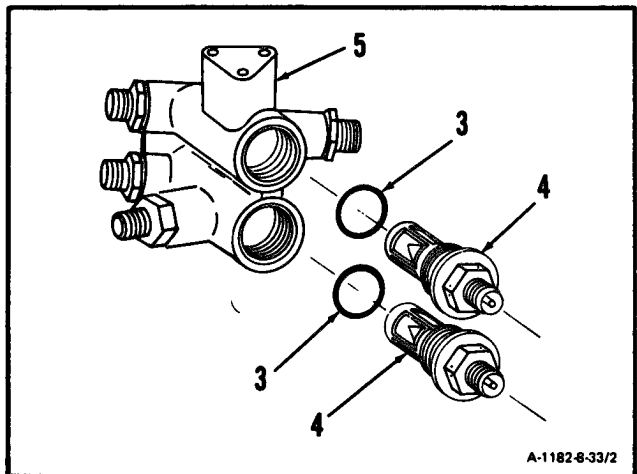
CAUTION

When installing filter (1) on connector (2), be careful not to push in or deform screen or filter. Pushed in or deformed screen may cause false chip indications.

1. Install filter (1) on connector (2).



2. Install two packings (3) and magnetic chip detectors (4) in housing (5). Lockwire chip detector (4). Use lockwire (E29). Use vise with jaw caps.

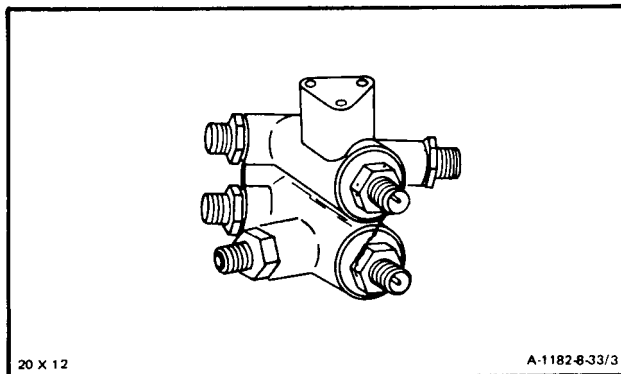


INSPECT

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FOLLOW-ON MAINTENANCE:

Test Dual Chip Detector (Task 8-34)



END OF TASK

8-34 TEST DUAL CHIP DETECTOR

8-34

INITIAL SETUP**Applicable Configurations:**

All

Tools:

Multimeter

Materials:

None

Personnel Required:

68B10 Aircraft Powerplant Repairer

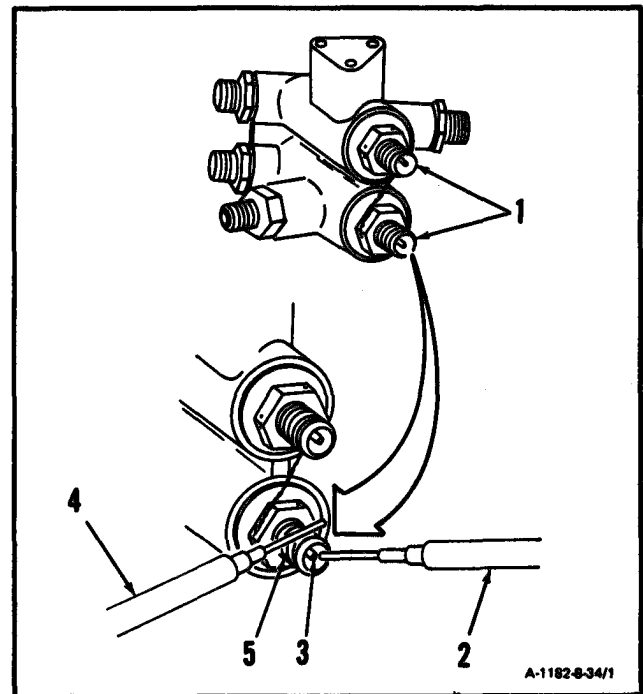
Equipment Condition:Off Engine Task

1. **Measure insulation resistance of magnetic chip detectors (1)** as follows: Use multimeter.

NOTE

The following steps apply to both magnetic chip detectors.

- Set multimeter range switch to R x 1000.
- Touch red probe (2) to pin (3).
- Touch black probe (4) to threads (5).
- Meter shall indicate 10,000 ohms, minimum.

**FOLLOW-ON MAINTENANCE:**

None

END OF TASK

8-35 INSTALL DUAL CHIP DETECTOR

INITIAL SETUP

Applicable Configurations:

All

Tools:

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

Materials:

Lockwire (E29)

Parts:

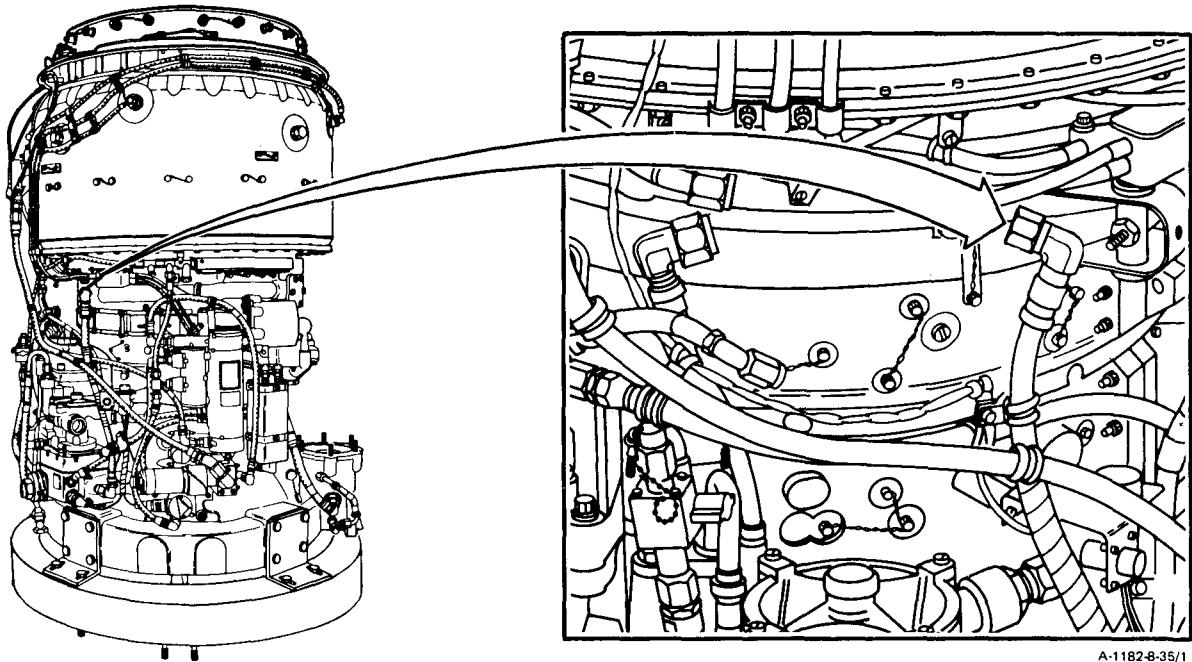
Packing

Personnel Required:

68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

References:

TM 55-2840-254-23P



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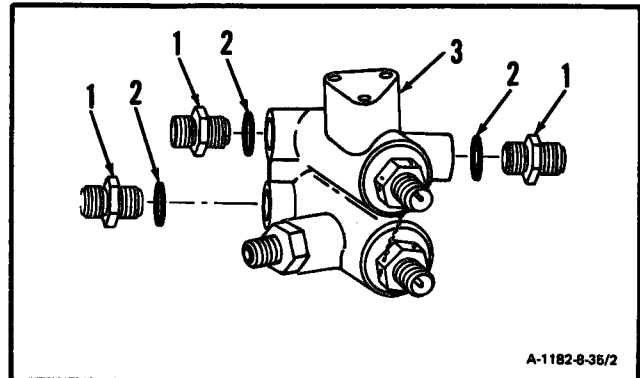
8-35 INSTALL DUAL CHIP DETECTOR (Continued)

8-35

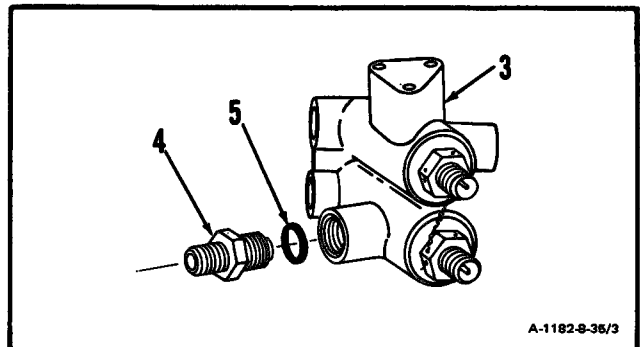
NOTE

If dual chip detector is a replacement, do steps 1. through 4. If same dual chip detector that was removed is to be installed, skip steps 1. through 4.

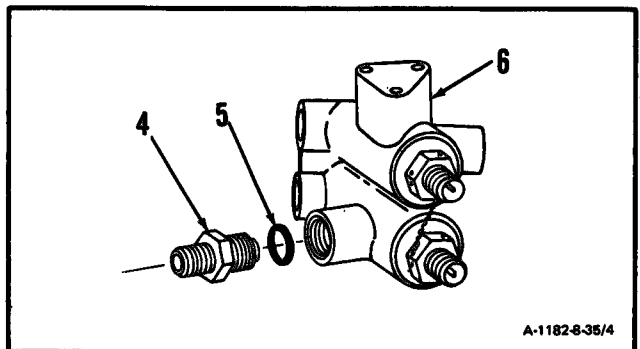
1. Remove three nipples (1) and packings (2) from removed dual chip detector (3).



2. Remove reducer (4) and packing (5) from removed dual chip detector (3).



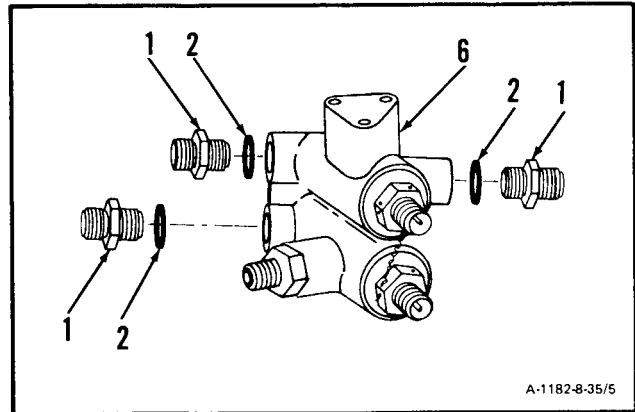
3. Install packing (5) and reducer (4) in serviceable dual chip detector (6).



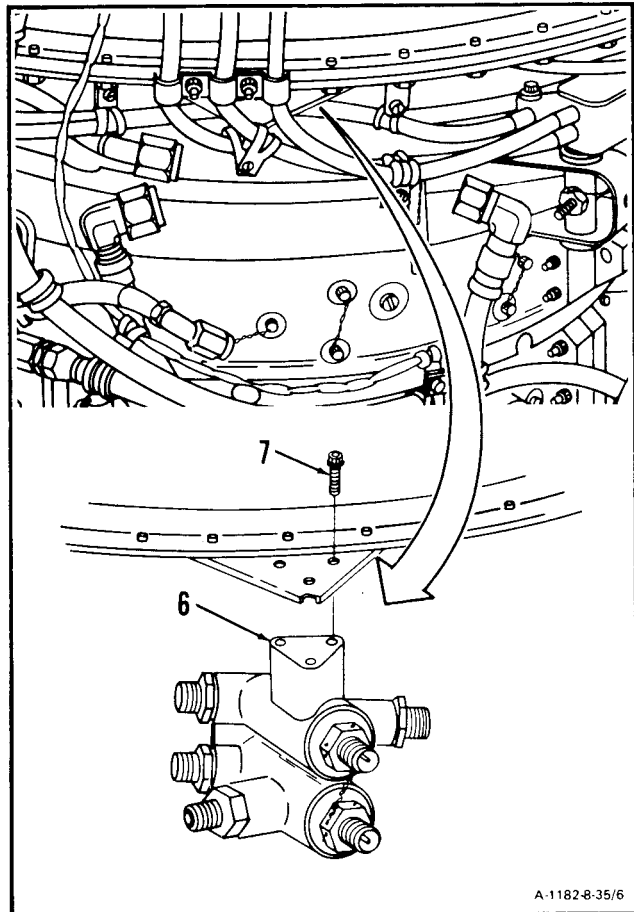
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8-35 INSTALL DUAL CHIP DETECTOR (Continued)

4. Install three packings (2) and nipples (1) in serviceable dual chip detector (6).



5. Install dual chip detector (6) and three bolts (7). Lockwire bolts (7). Use lockwire (E29).

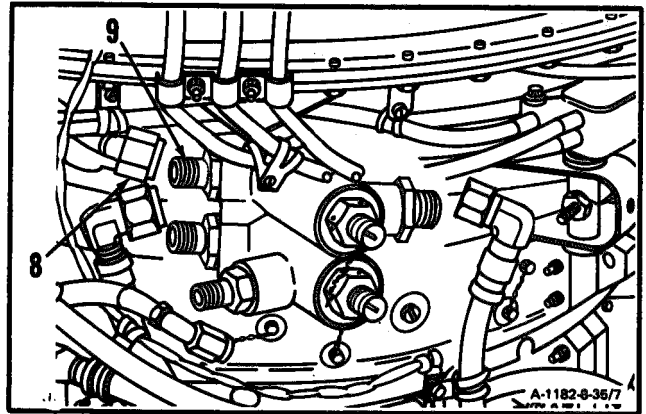


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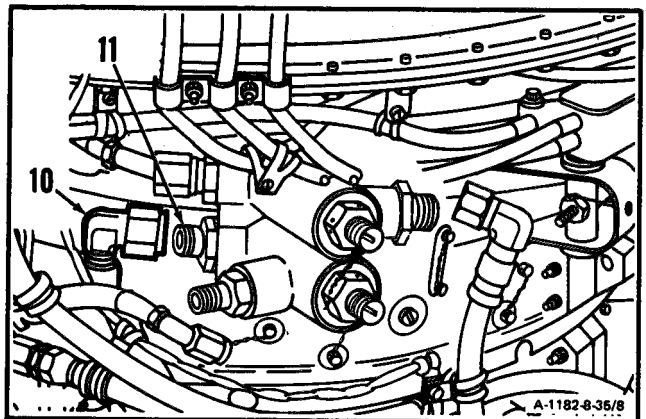
8-35 INSTALL DUAL CHIP DETECTOR (Continued)

8-35

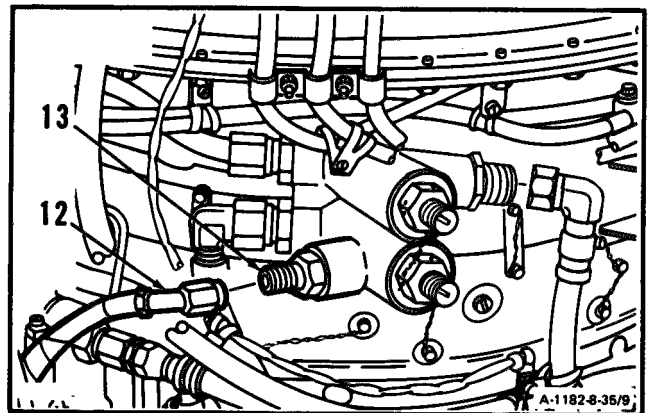
6. Connect hose assembly (8) to nipple (9).



7. Connect hose assembly (10) to nipple (11).

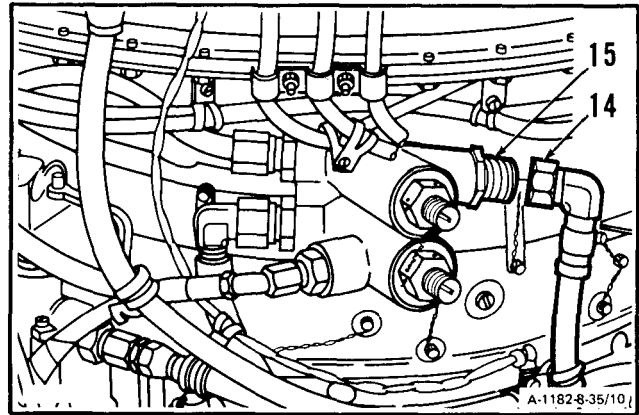


8. Connect hose assembly (12) to reducer (13).



GO TO NEXT PAGE

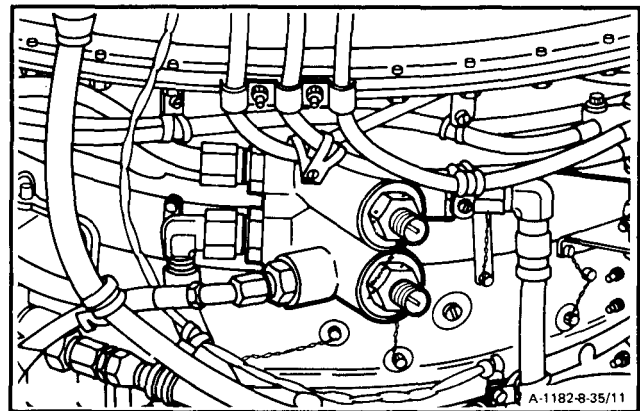
9. Connect hose assembly (14) to nipple (15).



INSPECT

FOLLOW-ON MAINTENANCE:

None



END OF TASK

Section VII. OIL LINES - MAINTENANCE PROCEDURES

8-36 REMOVE HOSE ASSEMBLY (OIL COOLER TO INLET HOUSING)

8-36

INITIAL SETUP

*General Safety Instructions:***Applicable Configurations:**

All

Tools:

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

Materials:

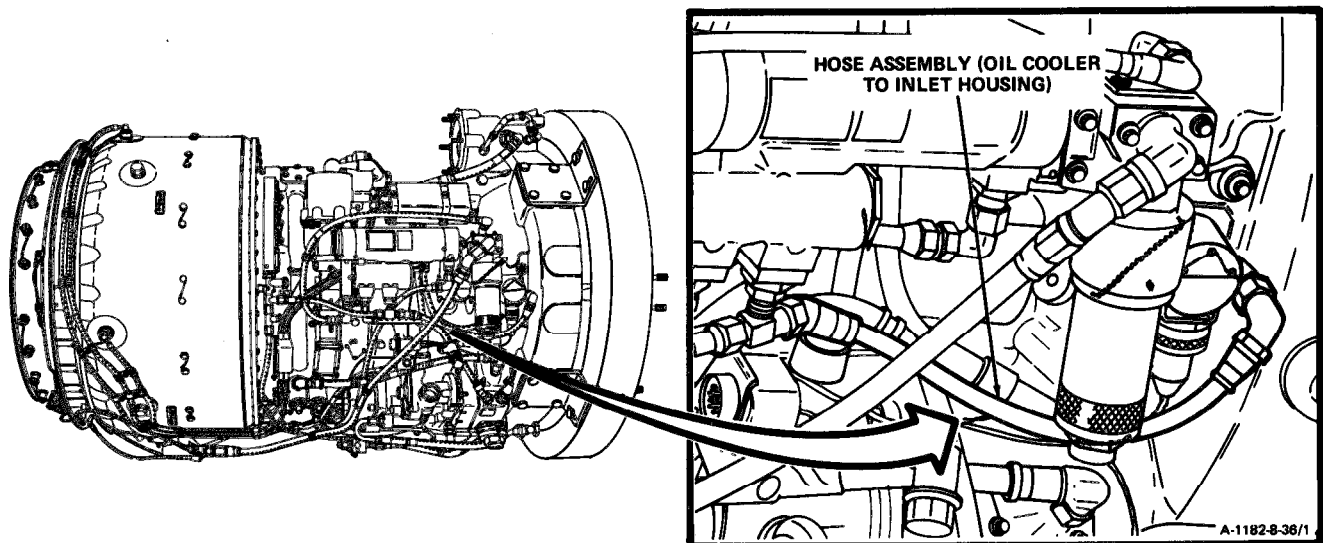
Wiping Rag (E58)

Personnel Required:

68B10 Aircraft Powerplant Repairer

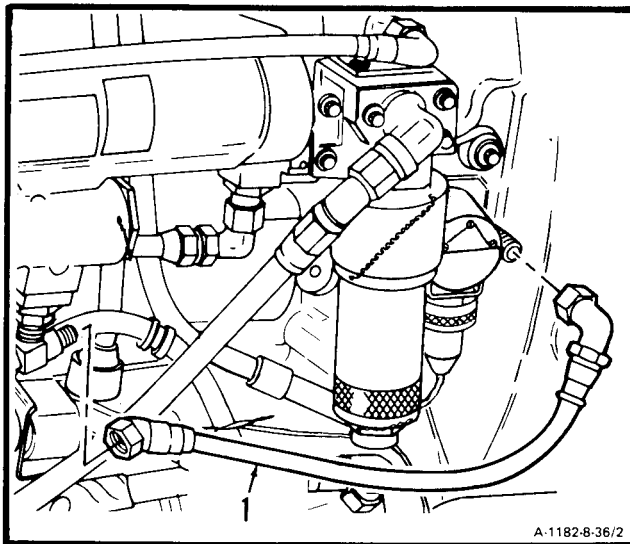
WARNING

Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin, and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.



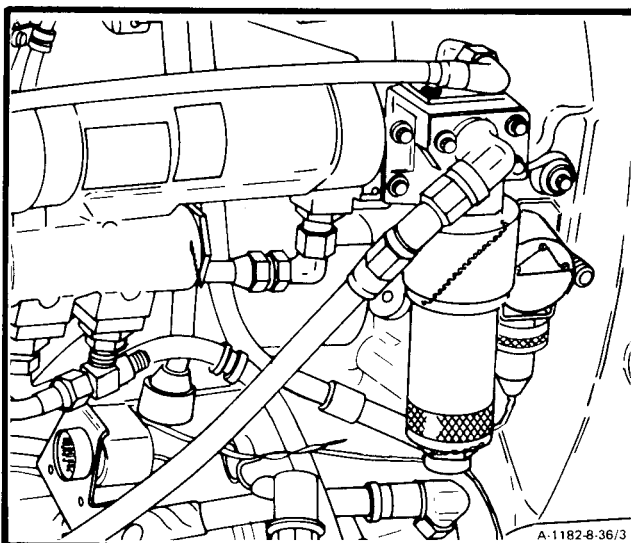
GO TO NEXT PAGE

1. Disconnect and remove hose assembly (1).



FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-37 INSTALL HOSE ASSEMBLY (OIL COOLER TO INLET HOUSING)

8-37

INITIAL SETUP**Applicable Configurations:**

All

Tools:

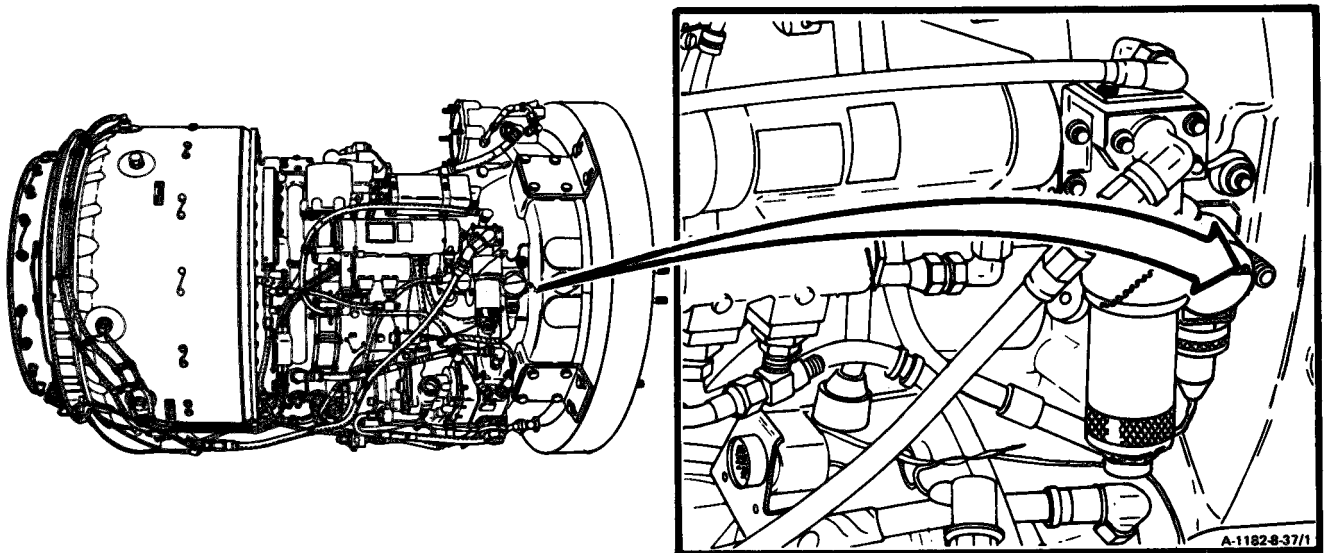
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:

None

Personnel Required:

68610 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

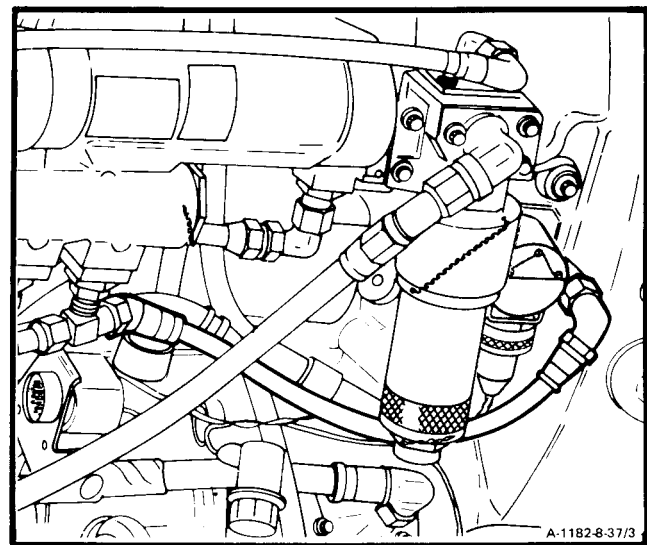
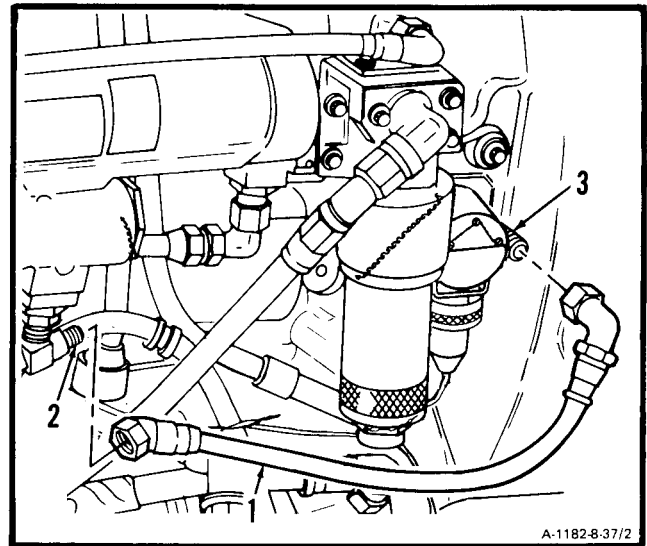
**GO TO NEXT PAGE**

1. Install hose assembly (1) on tee (2) and nipple (3).

INSPECT

FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-38 REMOVE HOSE ASSEMBLY (OIL COOLER TO ACCESSORY GEARBOX ASSEMBLY) 8-38

INITIAL SETUP**Applicable Configurations:**

All

Tools:

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

Materials:

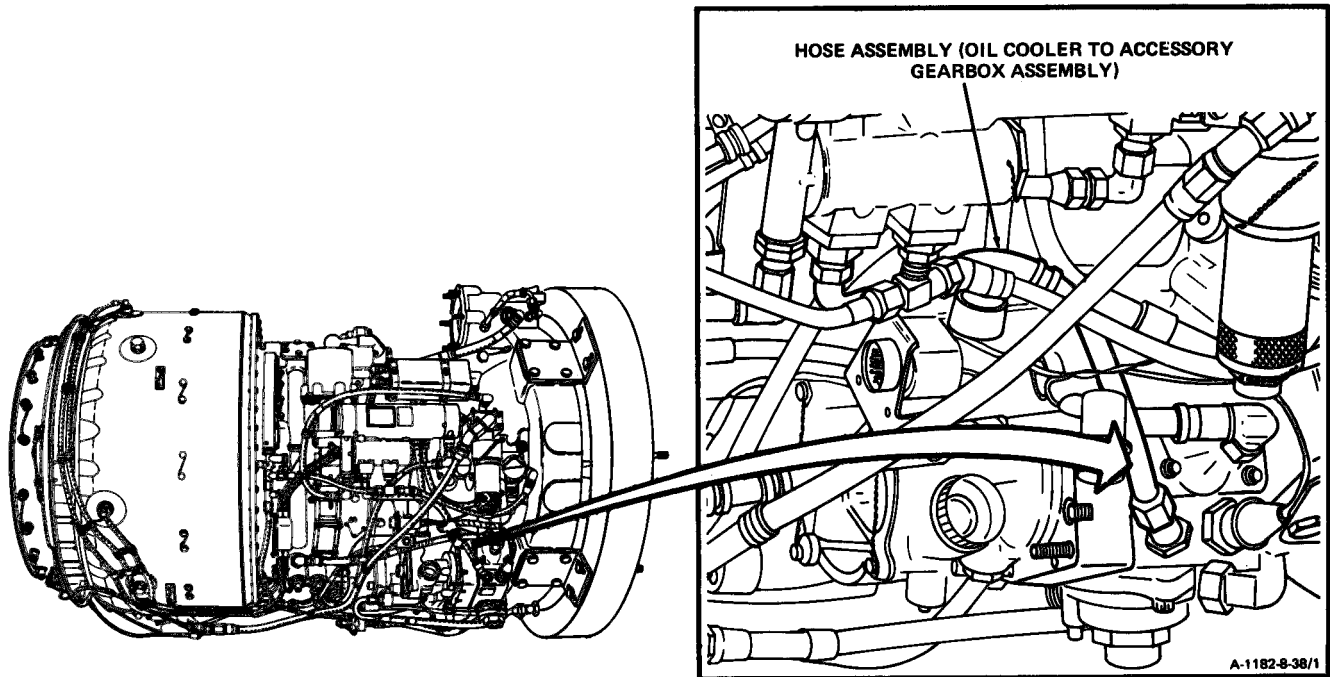
Wiping Rag (E58)

Personnel Required:

68B10 Aircraft Powerplant Repairer

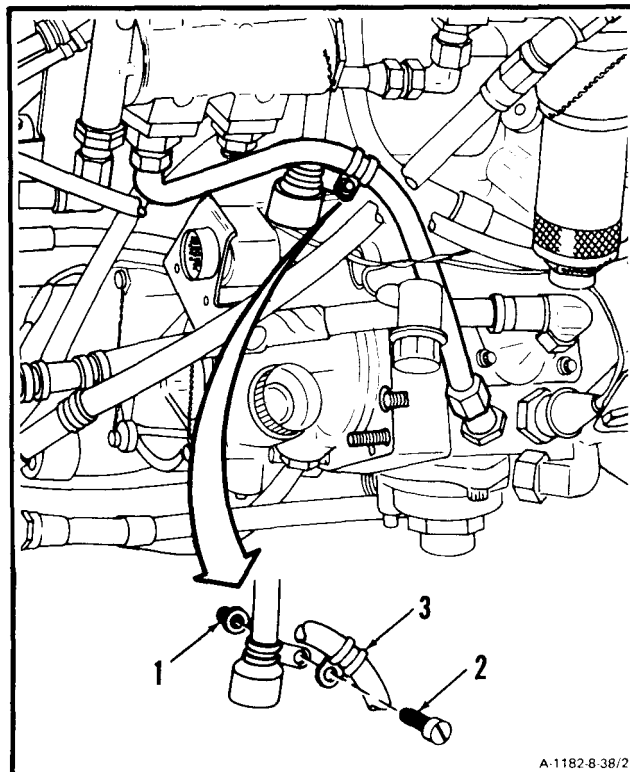
General Safety Instructions:**WARNING**

Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin, and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.

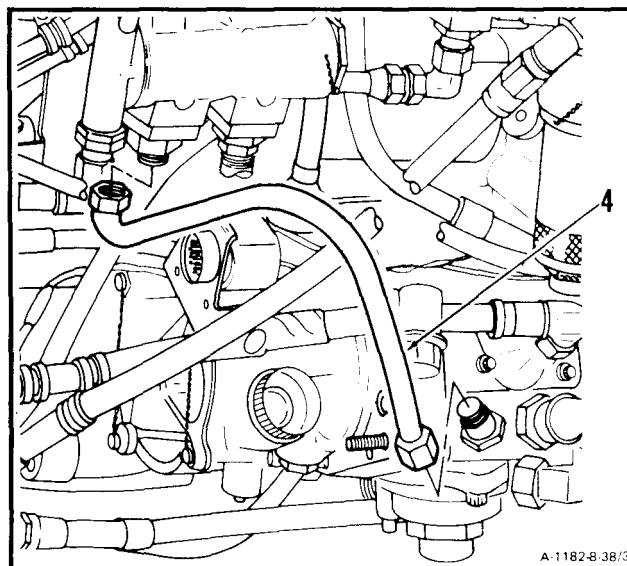
**GO TO NEXT PAGE**

8-38 REMOVE HOSE ASSEMBLY (OIL COOLER TO ACCESSORY GEARBOX ASSEMBLY) (Continued)

1. Remove nut (1), screw (2), and clamp (3).



2. Disconnect and remove hose assembly (4).



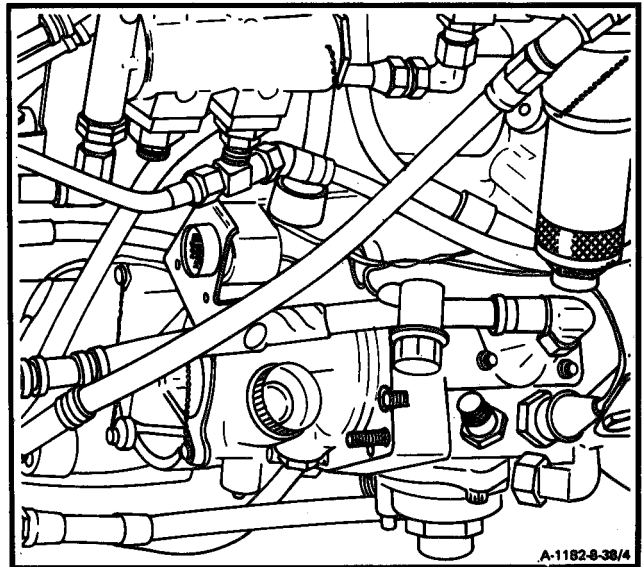
GO TO NEXT PAGE

8-38 REMOVE HOSE ASSEMBLY (OIL COOLER TO ACCESSORY GEARBOX ASSEMBLY) (Continued)

8-38

FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-39 INSTALL HOSE ASSEMBLY (OIL COOLER TO ACCESSORY GEARBOX ASSEMBLY)

8-39

INITIAL SETUP

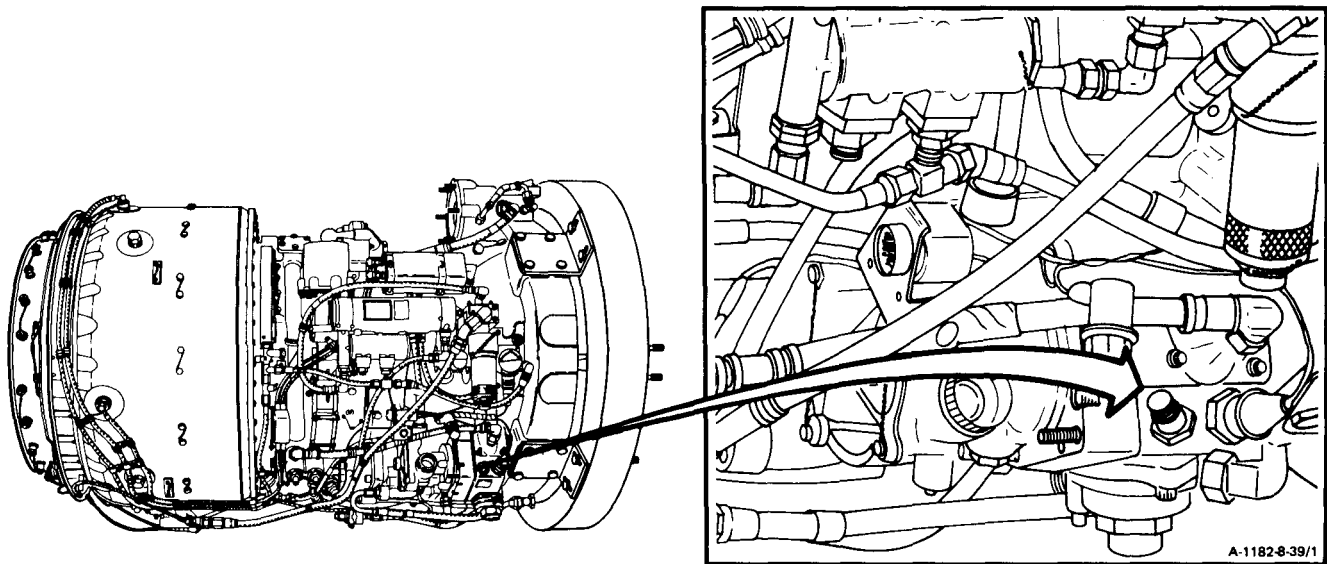
Applicable Configurations:
All

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

Materials:
None

Personnel Required:

68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

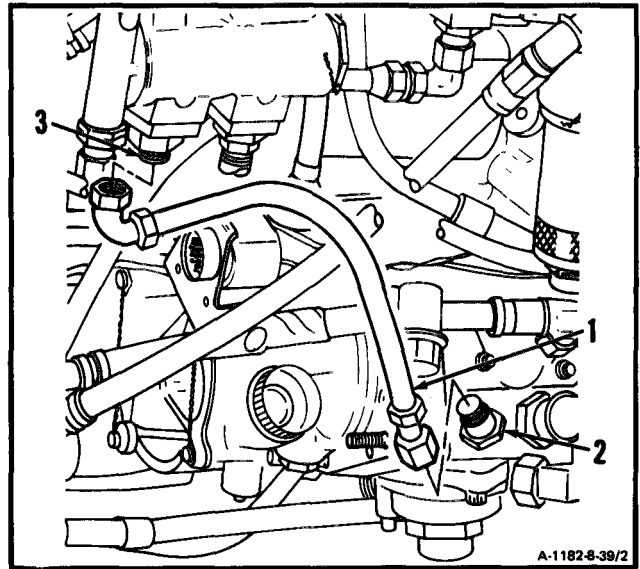


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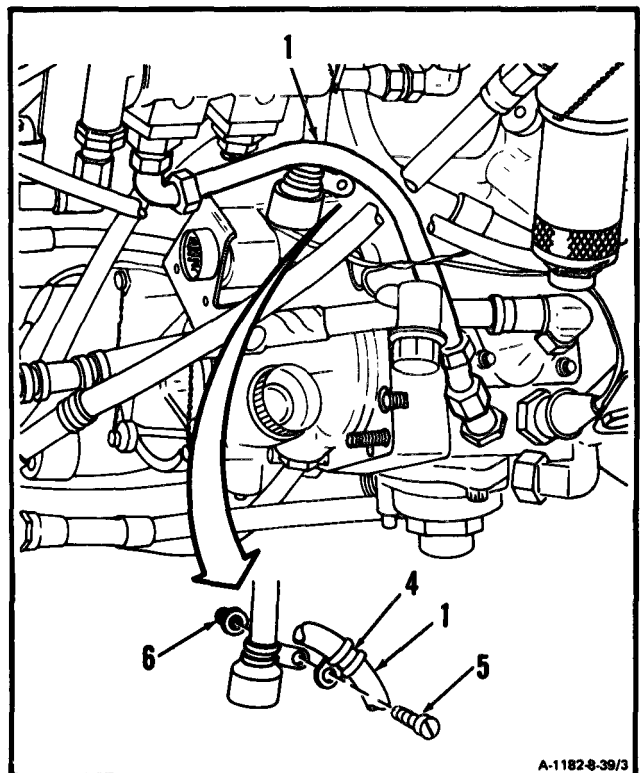
8-39 INSTALL HOSE ASSEMBLY (OIL COOLER TO ACCESSORY GEARBOX ASSEMBLY) (Continued)

8-39

1. **Install hose assembly (1)** on nipple (2) and reducer (3).



2. **Install clamp (4)** on hose assembly (1), and install screw (5) and nut (6).



INSPECT

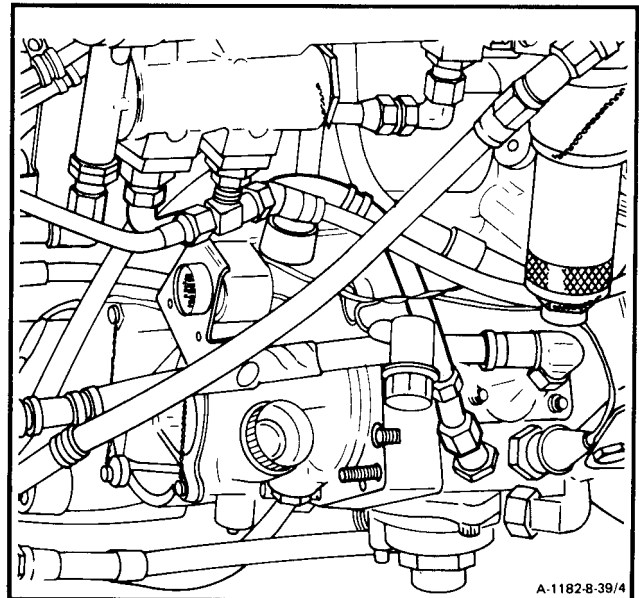
GO TO NEXT PAGE

8-39 INSTALL HOSE ASSEMBLY (OIL COOLER TO ACCESSORY GEARBOX ASSEMBLY) (Continued)

8-39

FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-40 REMOVE HOSE ASSEMBLY (OIL COOLER TO PRESSURE CONNECTOR)

8-40

INITIAL SETUP**General Safety Instructions:****Applicable Configurations:**

All

Tools:

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

Materials:

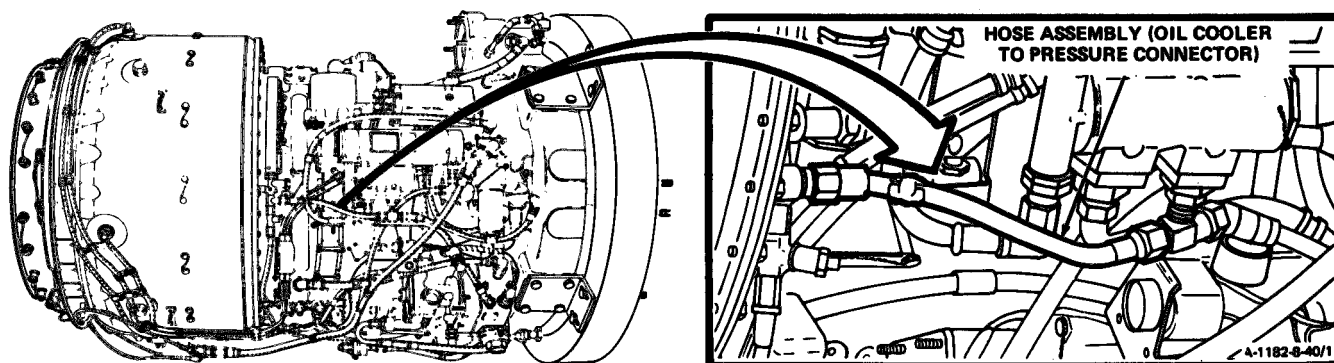
Wiping Rag (E58)

Personnel Required:

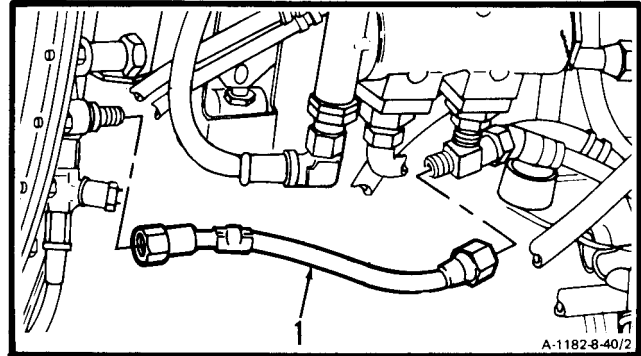
68B10 Aircraft Powerplant Repairer

WARNING

Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin, and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.

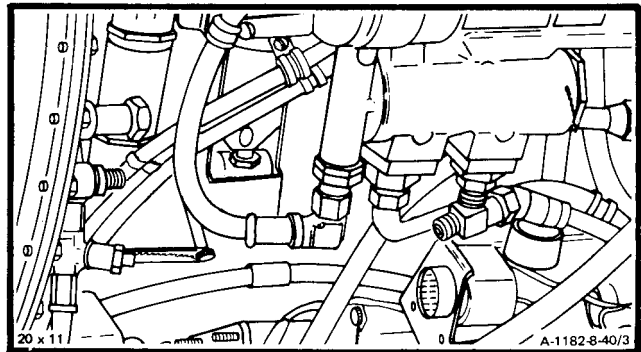
**GO TO NEXT PAGE**

1. Disconnect and remove hose assembly (1).



FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-41 INSTALL HOSE ASSEMBLY (OIL COOLER TO PRESSURE CONNECTOR)

8-41

INITIAL SETUP**Applicable Configurations:**

All

Tools:

Powerplant Mechanic's Tool Kit,

NSN 5180-00-323-4944

Technical Inspection Tool Kit,

NSN 5180-00-323-5114

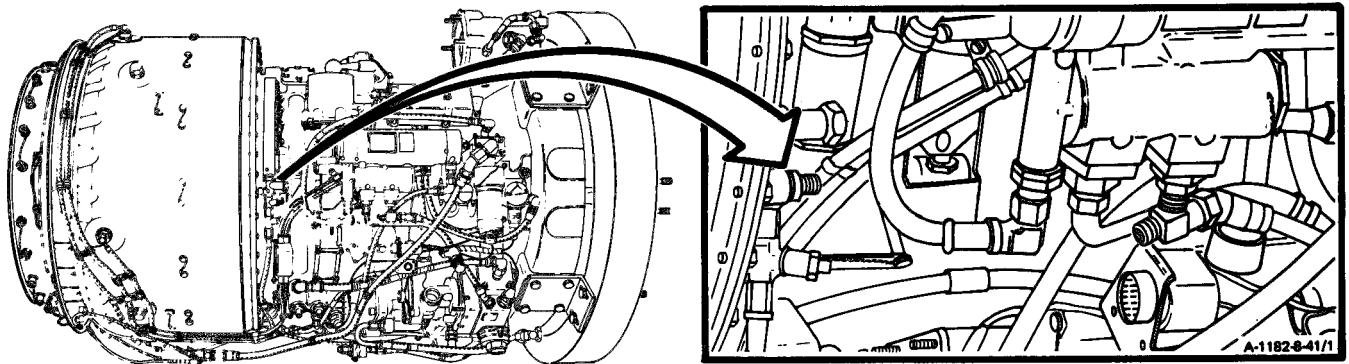
Materials:

None

Personnel Required:

68B10 Aircraft Powerplant Repairer

68B30 Aircraft Powerplant Inspector

**GO TO NEXT PAGE**

8-41 INSTALL HOSE ASSEMBLY (OIL COOLER TO PRESSURE CONNECTOR) (Continued)

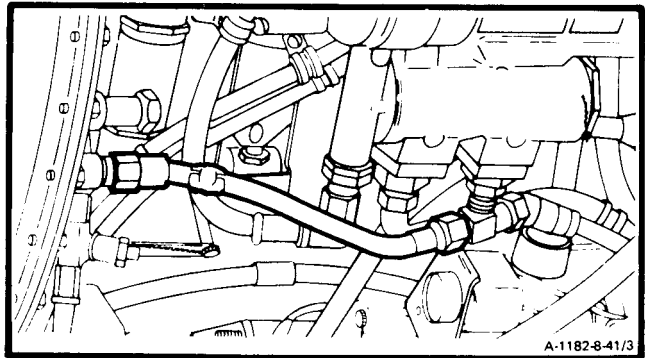
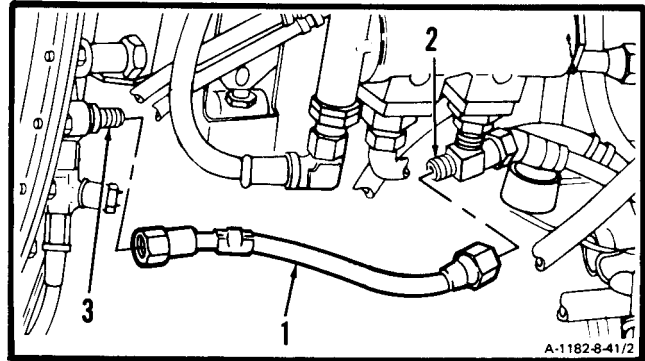
8-41

1. Install hose assembly (1) on tee (2) and pressure connector (3).

INSPECT

FOLLOW-ON MAINTENANCE:

None



END OF TASK

**8-42 REMOVE HOSE ASSEMBLY (DUAL CHIP DETECTOR TO ACCESSORY
GEARBOX ASSEMBLY)**

8-42

INITIAL SETUP**General Safety Instructions:****Applicable Configurations:**

All

Tools:

Powerplant Ivlechanic's Tool Kit,
NSN 5180-00-323-4944
Container, 1 Quart

Materials:

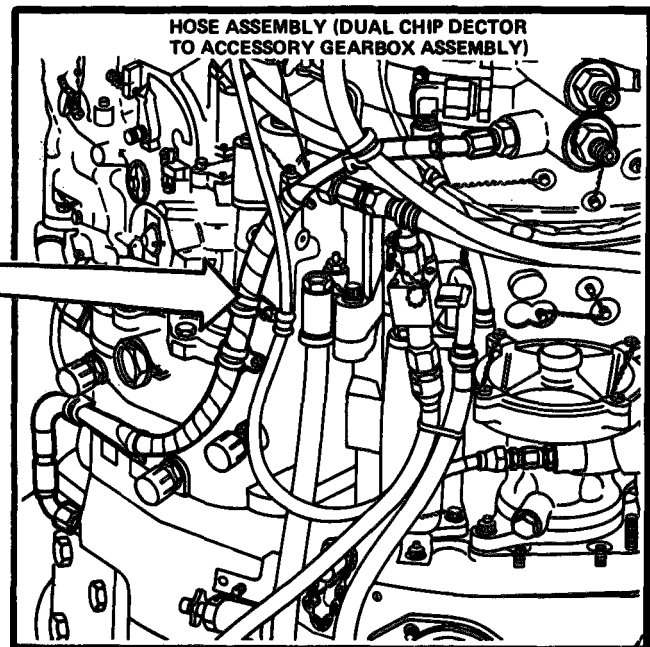
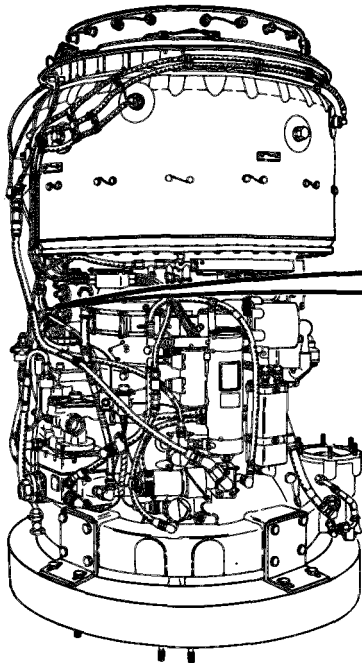
Wiping Rag (E58)

Personnel Required:

68B10 Aircraft Powerplant Repairer

WARNING

Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin, and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.

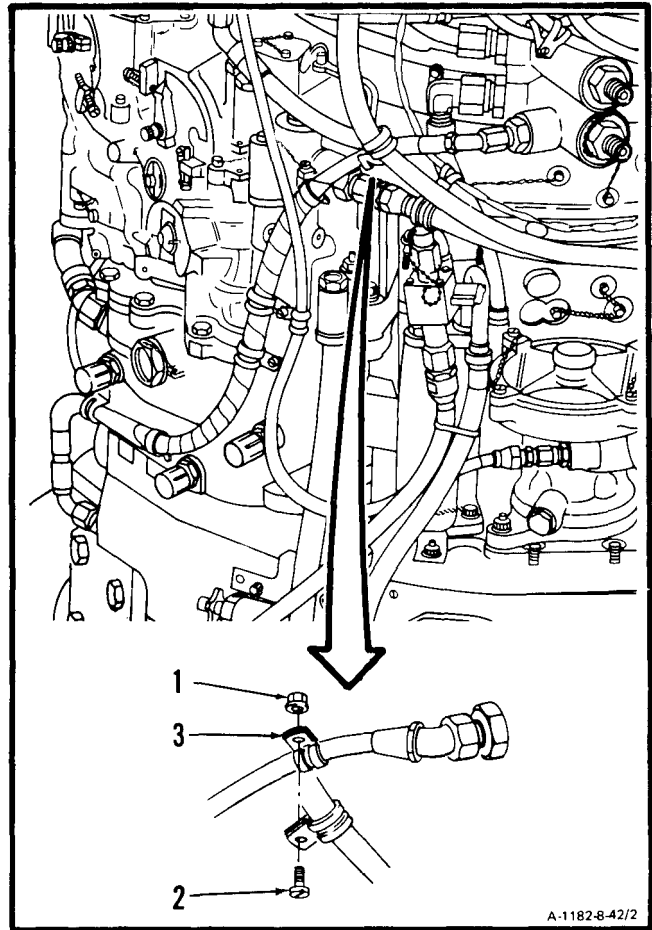


A-1182-8-42/1

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**8-42 REMOVE HOSE ASSEMBLY (DUAL CHIP DETECTOR TO ACCESSORY
GEARBOX ASSEMBLY) (Continued)**

1. Remove nut (1), screw (2), and clamp (3).



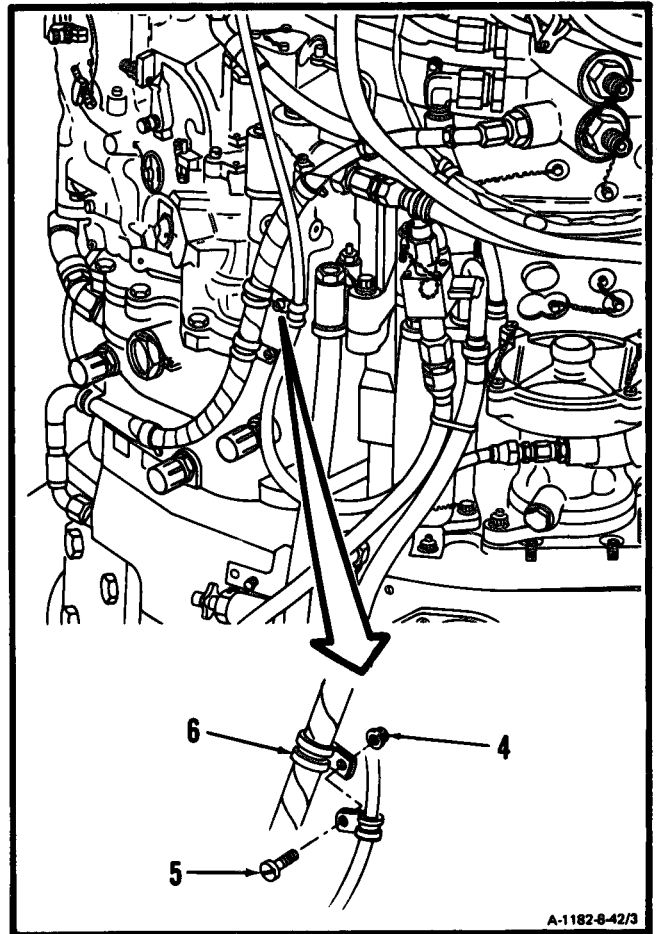
A-1182-8-42/2

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**8-42 REMOVE HOSE ASSEMBLY (DUAL CHIP DETECTOR TO ACCESSORY
GEARBOX ASSEMBLY) (Continued)**

8-42

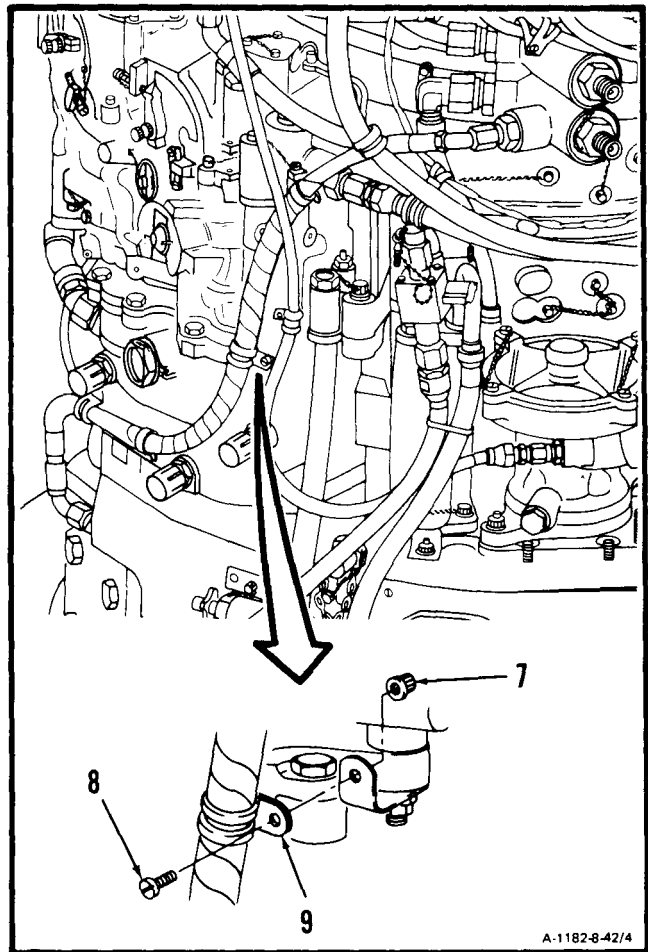
2. Remove nut (4), screw (5), and clamp (6).



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8-42 REMOVE HOSE ASSEMBLY (DUAL CHIP DETECTOR TO ACCESSORY GEARBOX ASSEMBLY) (Continued)

3. Remove nut (7), screw (8), and clamp (9).



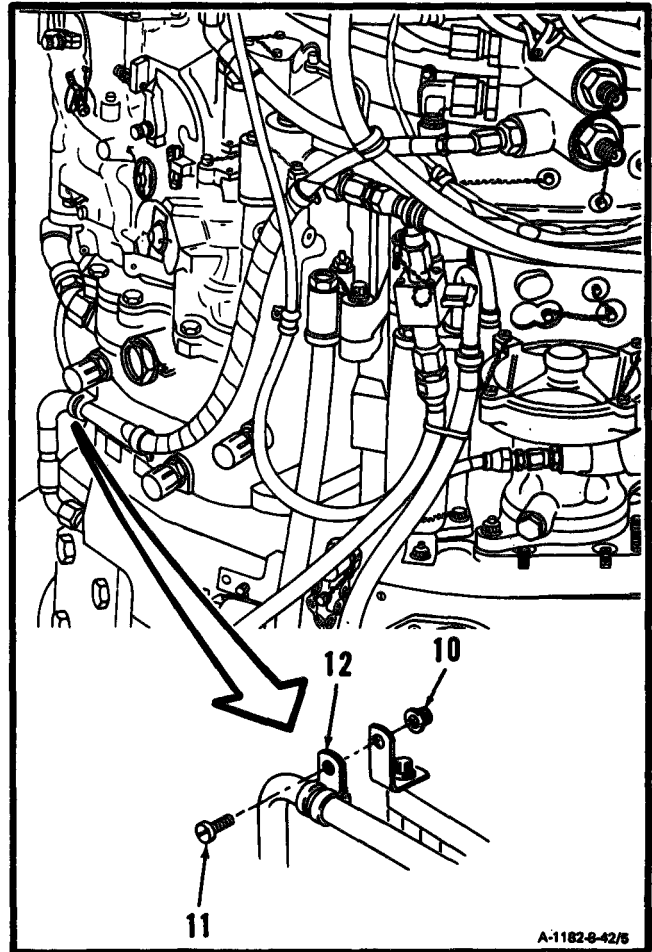
A-1182-8-42/4

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**8-42 REMOVE HOSE ASSEMBLY (DUAL CHIP DETECTOR TO ACCESSORY
GEARBOX ASSEMBLY) (Continued)**

8-42

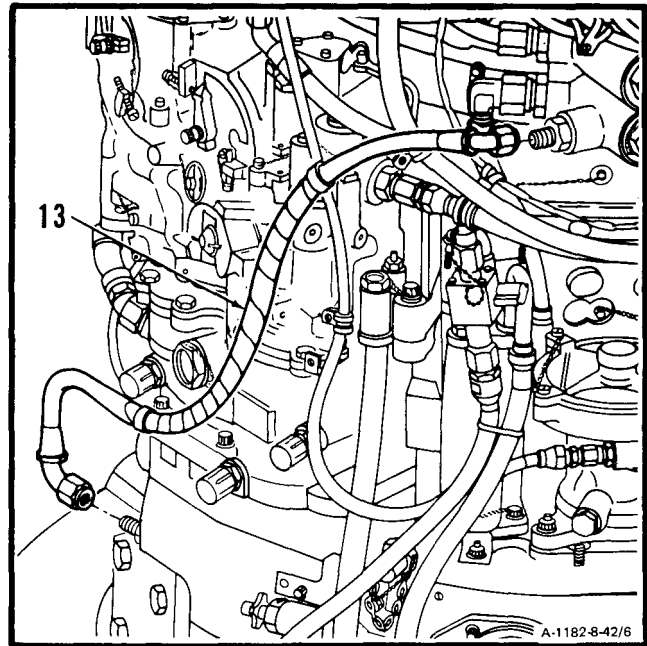
4. Remove nut (10), screw (11), and clamp (12).



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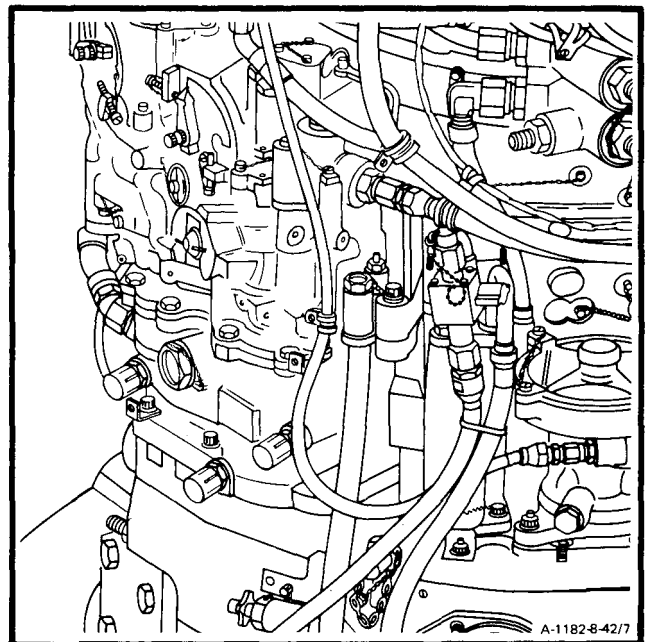
**8-42 REMOVE HOSE ASSEMBLY (DUAL CHIP DETECTOR TO ACCESSORY
GEARBOX ASSEMBLY) (Continued)**

5. Disconnect and remove hose assembly (13).



FOLLOW-ON MAINTENANCE:

None



END OF TASK

**8-43 INSTALL HOSE ASSEMBLY (DUAL CHIP DETECTOR TO ACCESSORY
GEARBOX ASSEMBLY)**

8-43

INITIAL SETUP**Materials:**

None

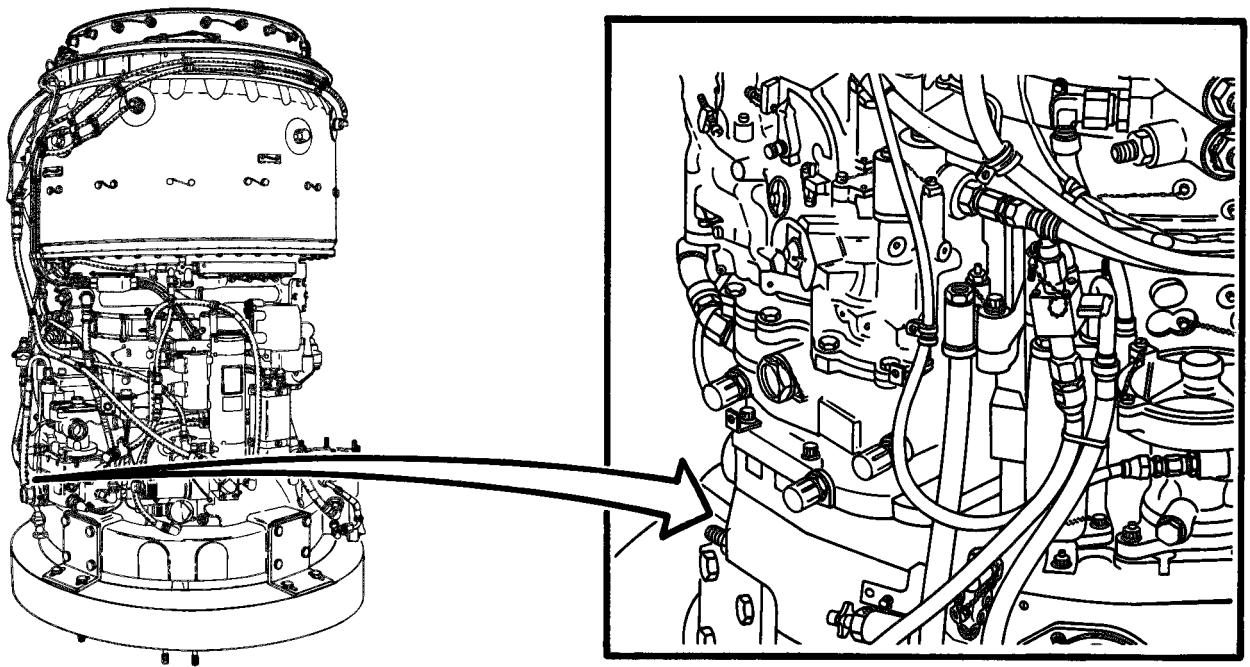
Applicable Configurations:

All

Personnel Required:

68B10 Aircraft Powerplant Repairer

68B30 Aircraft Powerplant Inspector

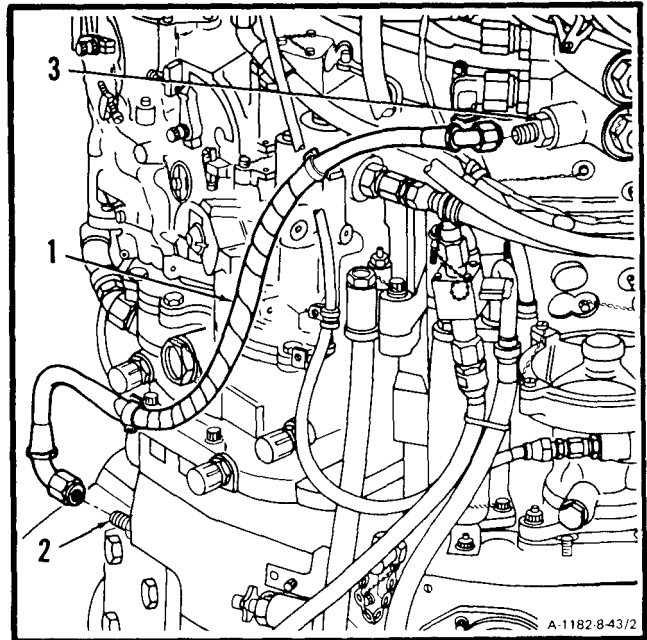
Tools:Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944Technical Inspection Tool Kit,
NSN 5180-00-323-5114

A-1182-8-43/1

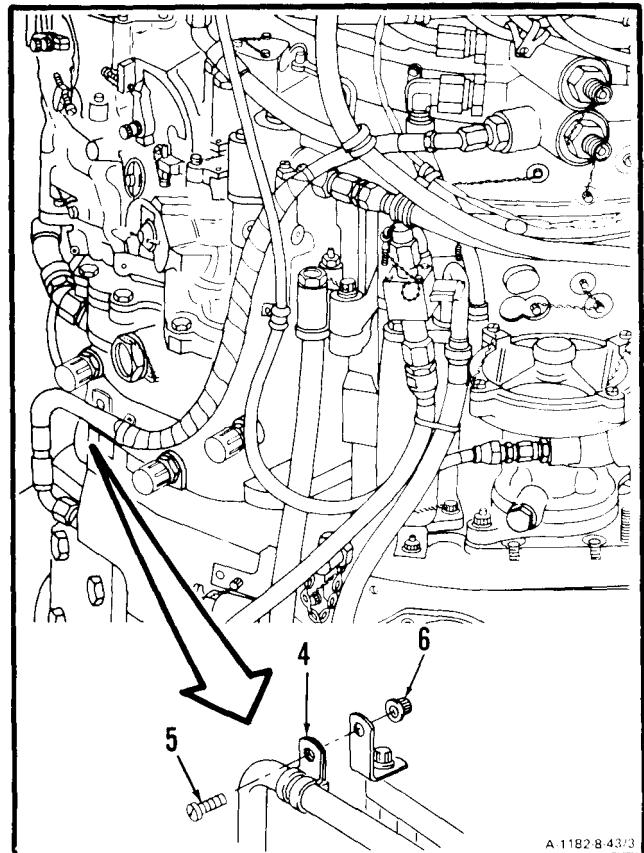
GO TO NEXT PAGE

8-43 INSTALL HOSE ASSEMBLY (DUAL CHIP DETECTOR TO ACCESSORY GEARBOX ASSEMBLY) (Continued)

1. Install hose assembly (1) on adapter (2) and reducer (3).



2. install clamp (4), screw (5), and nut (6).

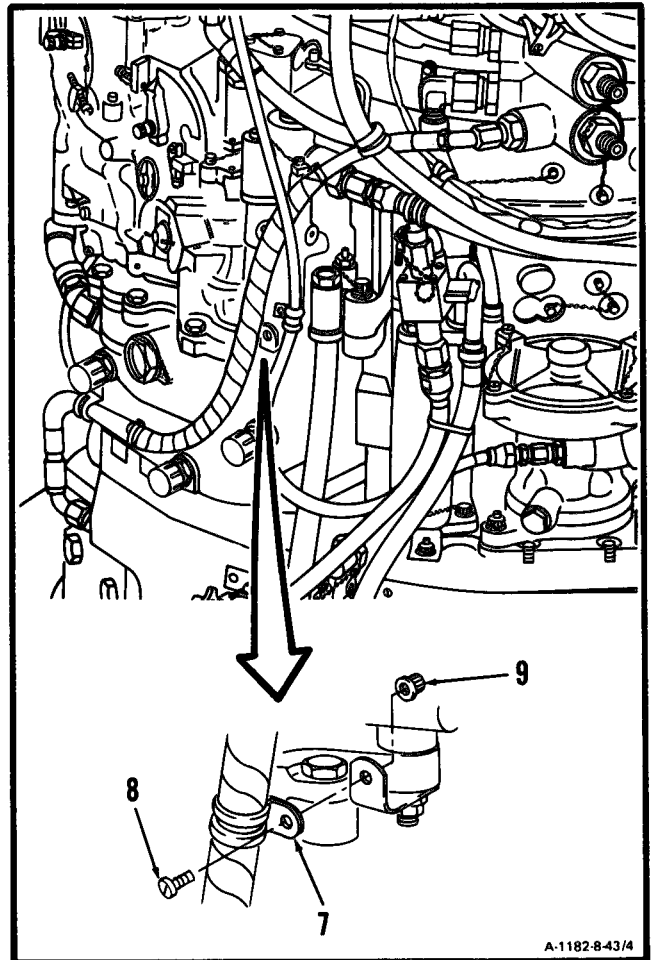


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**8-43 INSTALL HOSE ASSEMBLY (DUAL CHIP DETECTOR TO ACCESSORY
GEARBOX ASSEMBLY) (Continued)**

8-43

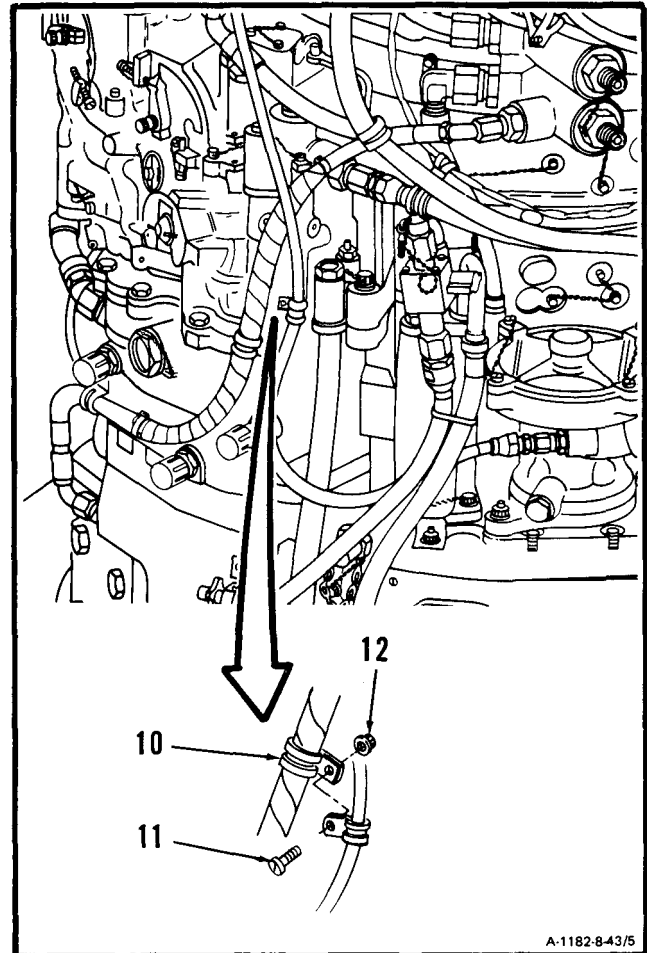
3. Install clamp (7), screw (8), and nut (9).



GO TO NEXT PAGE

**8-43 INSTALL HOSE ASSEMBLY (DUAL CHIP DETECTOR TO ACCESSORY
GEARBOX ASSEMBLY) (Continued)**

4. Install clamp (10), screw (11), and nut (12).

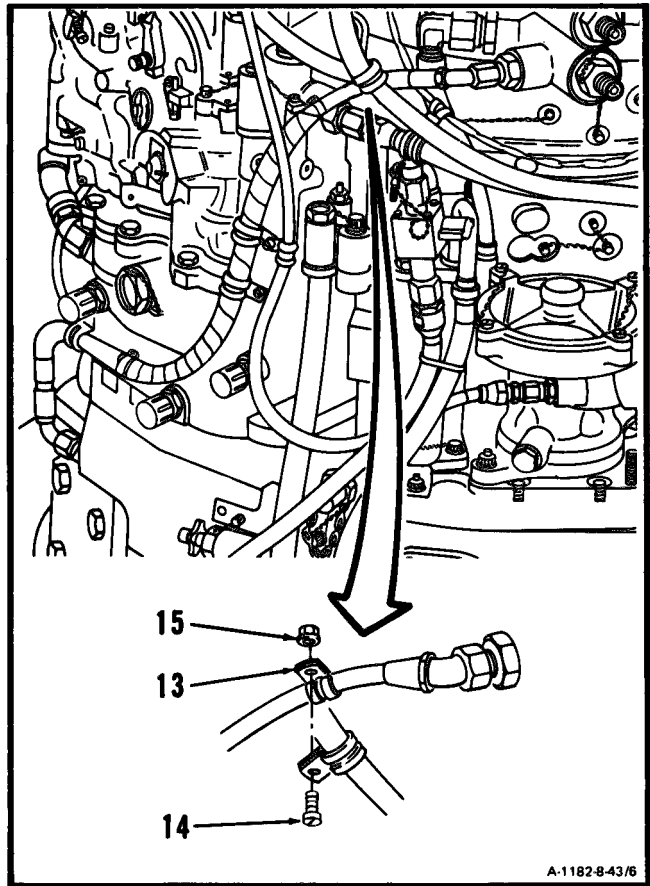


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**8-43 INSTALL HOSE ASSEMBLY (DUAL CHIP DETECTOR TO ACCESSORY
GEARBOX ASSEMBLY) (Continued)**

8-43

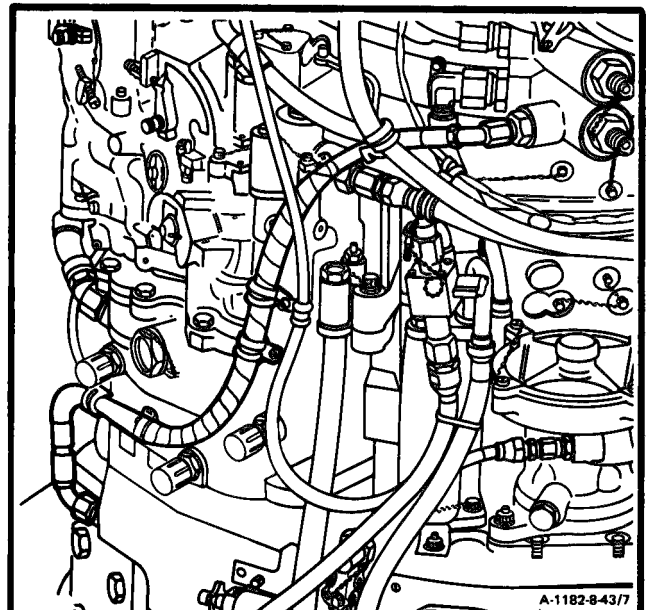
5. Install clamp (13), screw (14), and nut (15).



INSPECT

FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-44 REMOVE HOSE ASSEMBLY (DUAL CHIP DETECTOR TO ACCESSORY GEARBOX COLLECTOR)

INITIAL SETUP

General Safety Instructions:

Applicable Configurations:

All

Tools:

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

Materials:

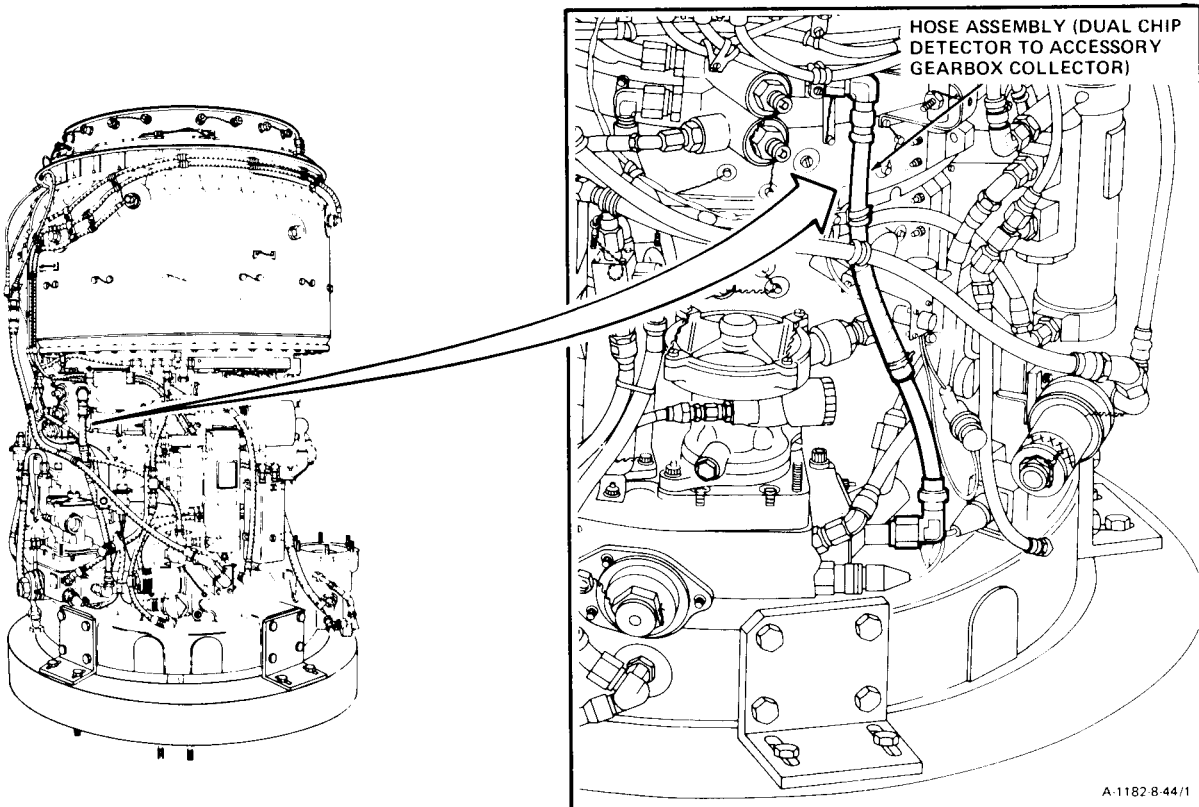
Wiping Flag (E58)

Personnel Required:

68B10 Aircraft Powerplant Repairer

WARNING

Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin, and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.

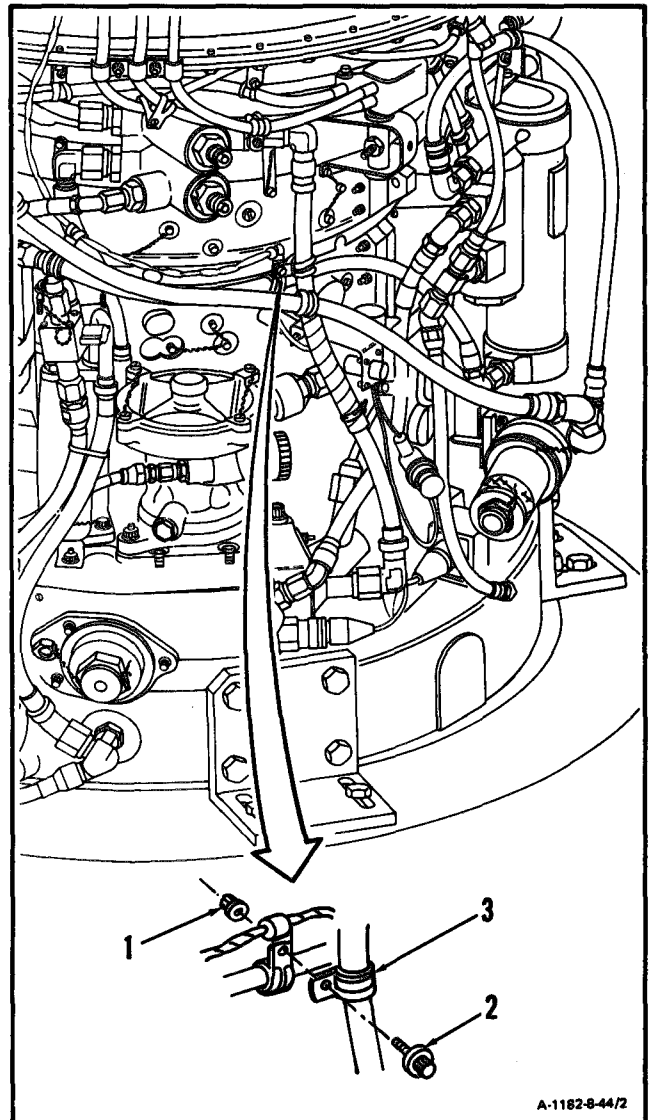


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**8-44 REMOVE HOSE ASSEMBLY (DUAL CHIP DETECTOR TO ACCESSORY
GEARBOX COLLECTOR) (Continued)**

8-44

1. Remove nut (1), screw (2) and clamp (3).

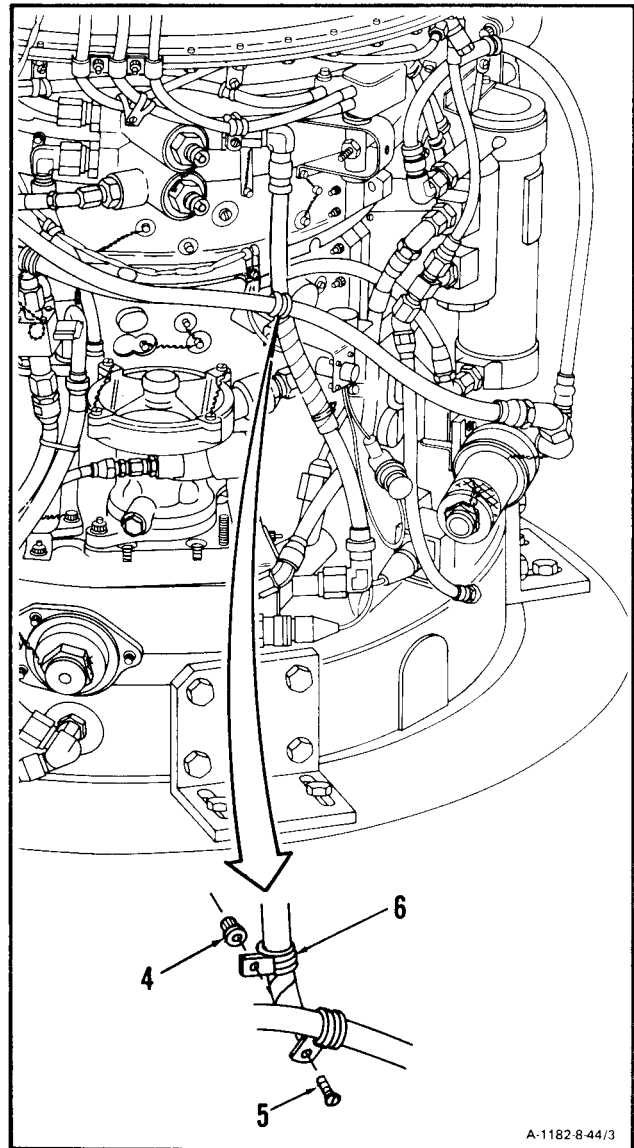


A-1182-8-44/2

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8-44 REMOVE HOSE ASSEMBLY (DUAL CHIP DETECTOR TO ACCESSORY GEARBOX COLLECTOR) (Continued)

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



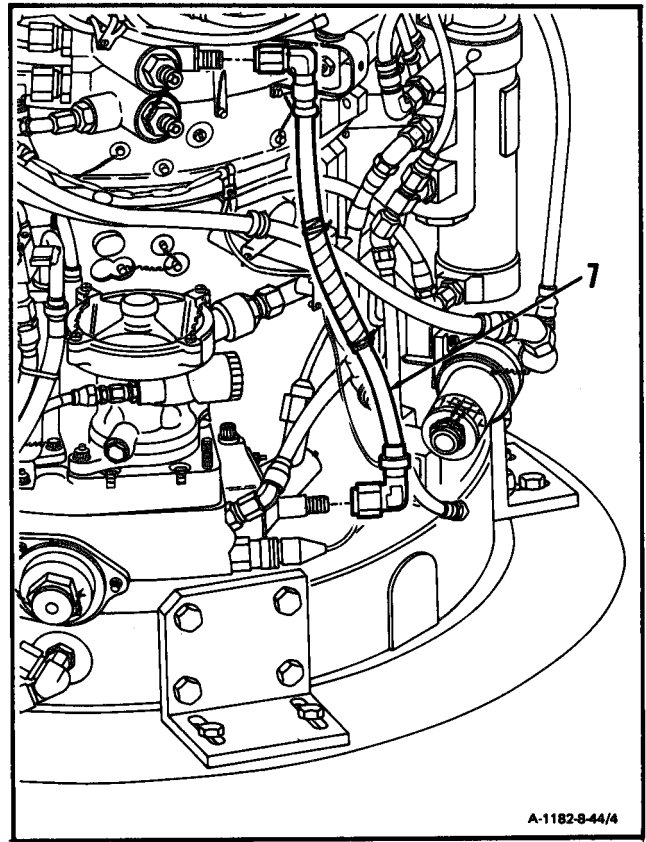
A-1182-8-44/3

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**8-44 REMOVE HOSE ASSEMBLY (DUAL CHIP DETECTOR TO ACCESSORY
GEARBOX COLLECTOR) (Continued)**

8-44

3. Disconnect and remove hose assembly (7).



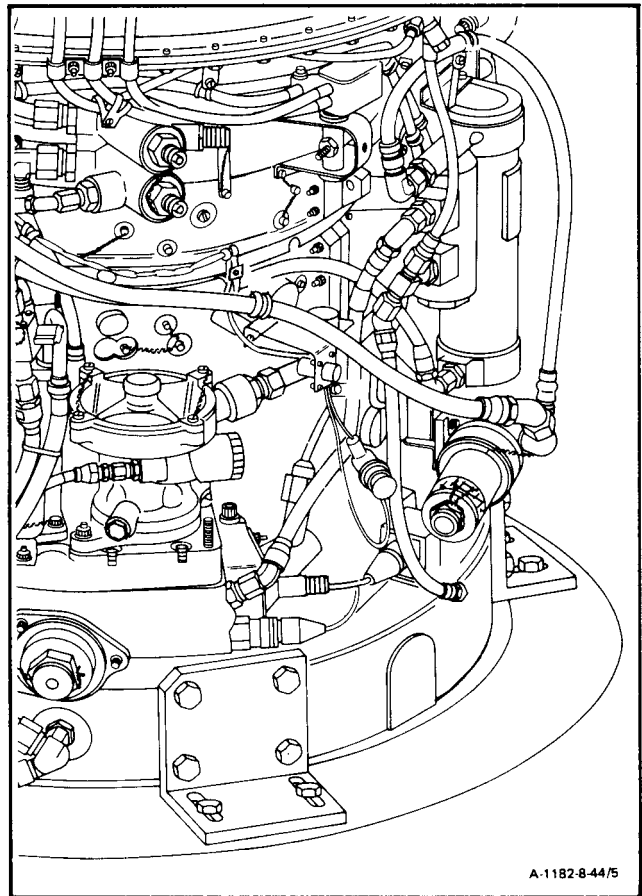
GO TO NEXT PAGE

8-44 REMOVE HOSE ASSEMBLY (DUAL CHIP DETECTOR TO ACCESSORY
GEARBOX COLLECTOR) (Continued)

8-44

FOLLOW-ON MAINTENANCE:

None



END OF TASK

**8-45 INSTALL HOSE ASSEMBLY (DUAL CHIP DETECTOR TO ACCESSORY
GEARBOX COLLECTOR)**

8-45

INITIAL SETUP**Applicable Configurations:**

All

Tools:

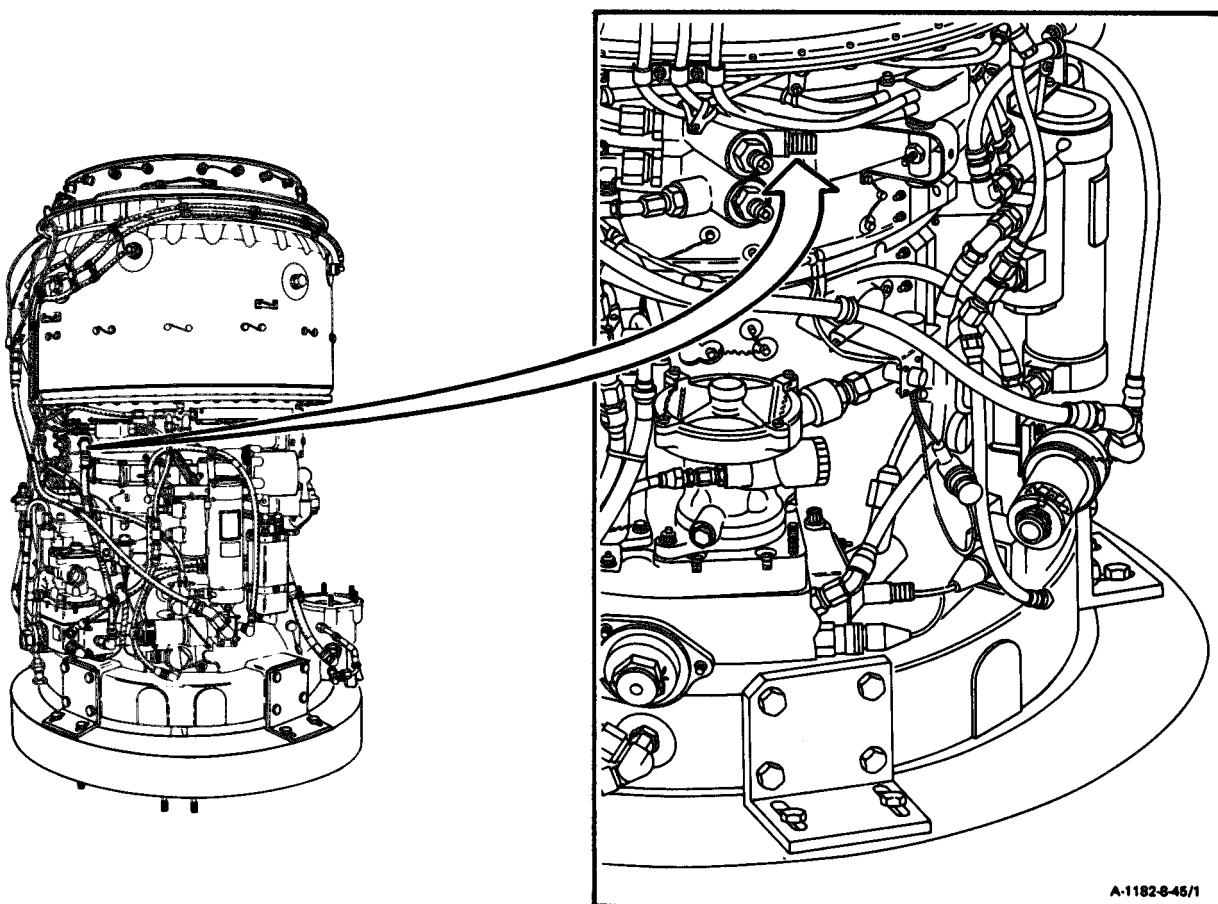
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical inspection Tool Kit,
NSN 5180-00-323-5114

Materials:

None

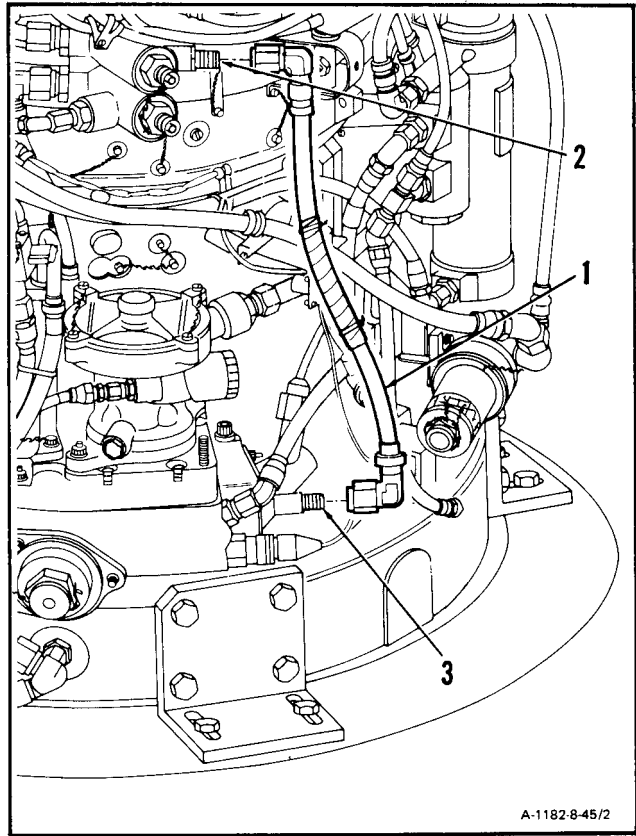
Personnel Required:

68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

**GO TO NEXT PAGE**

**8-45 INSTALL HOSE ASSEMBLY (DUAL CHIP DETECTOR TO ACCESSORY
GEARBOX COLLECTOR) (Continued)**

1. Install hose assembly (1) on nipples (2 and 3).



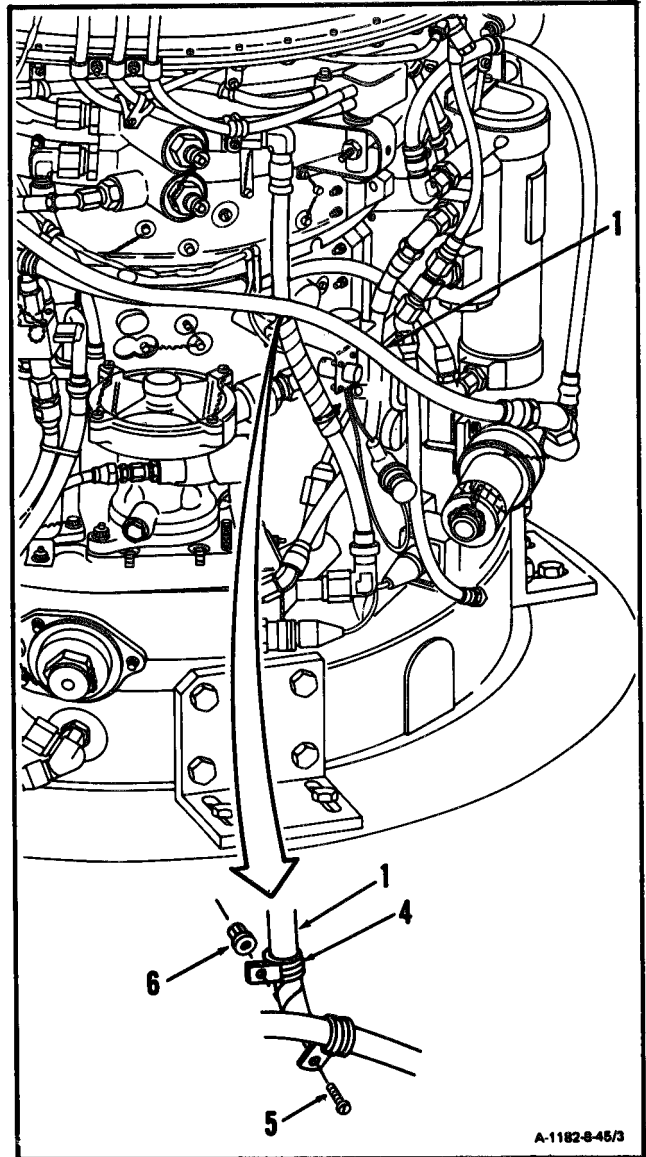
A-1182-8-45/2

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**8-45 INSTALL HOSE ASSEMBLY (DUAL CHIP DETECTOR TO ACCESSORY
GEARBOX COLLECTOR) (Continued)**

8-45

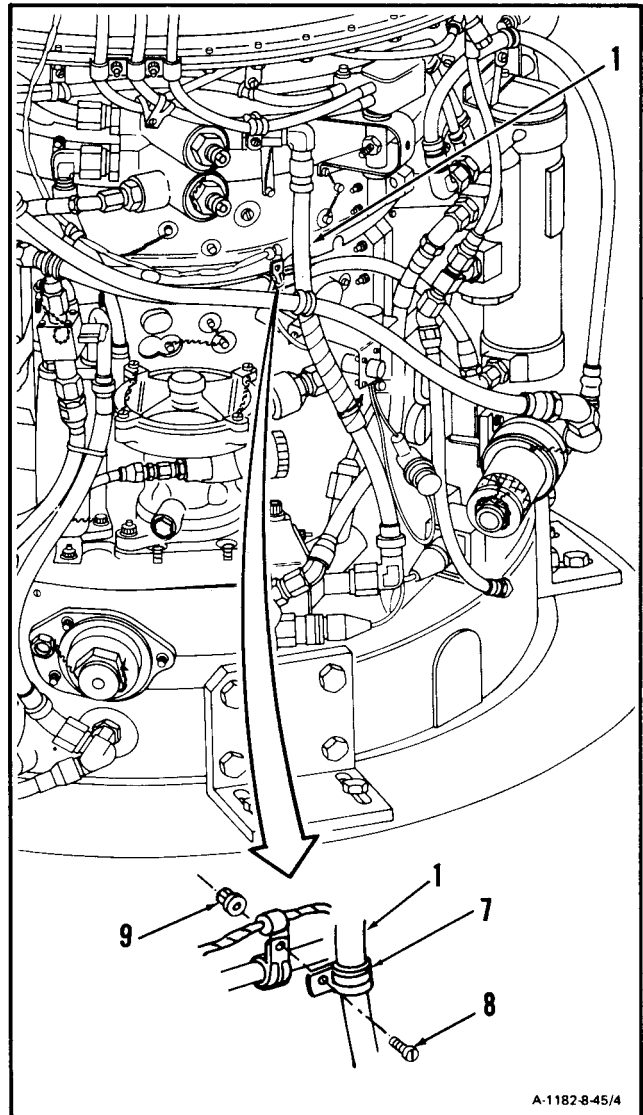
2. Install clamp (4) on hose assembly (1) and install screw (5) and nut (6).



GO TO NEXT PAGE

**8-45 INSTALL HOSE ASSEMBLY (DUAL CHIP DETECTOR TO ACCESSORY
GEARBOX COLLECTOR) (Continued)**

3. **Install clamp (7)** on hose assembly (1) and in-
install screw (8) and nut (9).



INSPECT

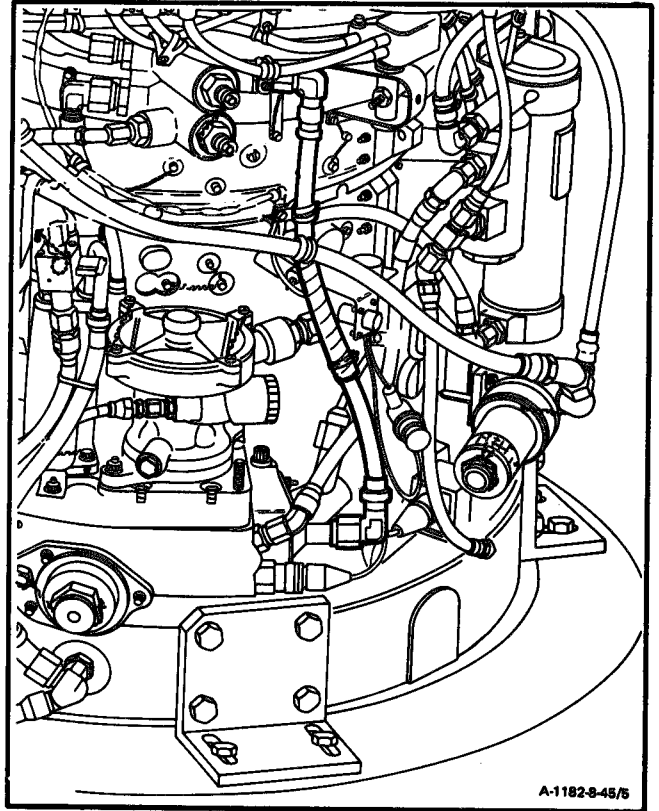
GO TO NEXT PAGE

**8-45 INSTALL HOSE ASSEMBLY (DUAL CHIP DETECTOR TO ACCESSORY
GEARBOX COLLECTOR) (Continued)**

8-45

FOLLOW-ON MAINTENANCE:

None

**END OF TASK**

8-46 REMOVE HOSE ASSEMBLY (DUAL CHIP DETECTOR TO AIR DIFFUSER ASSEMBLY)

8-46

INITIAL SETUP

Applicable Configurations:

All

Tools:

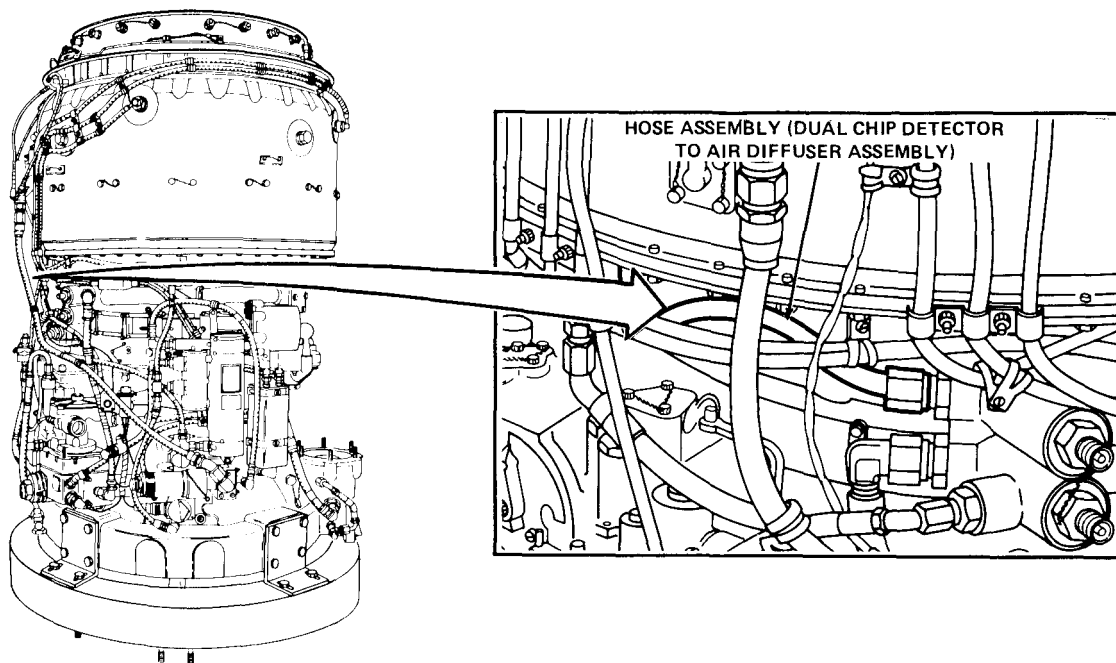
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Container, 1 Quart

Materials:

Wiping Rag (E58)

Personnel Required:

68910 Aircraft Powerplant Repairer



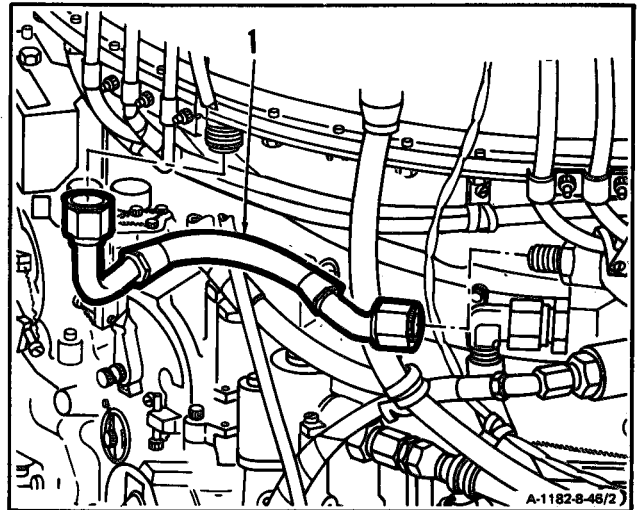
A-1182-8-46/1

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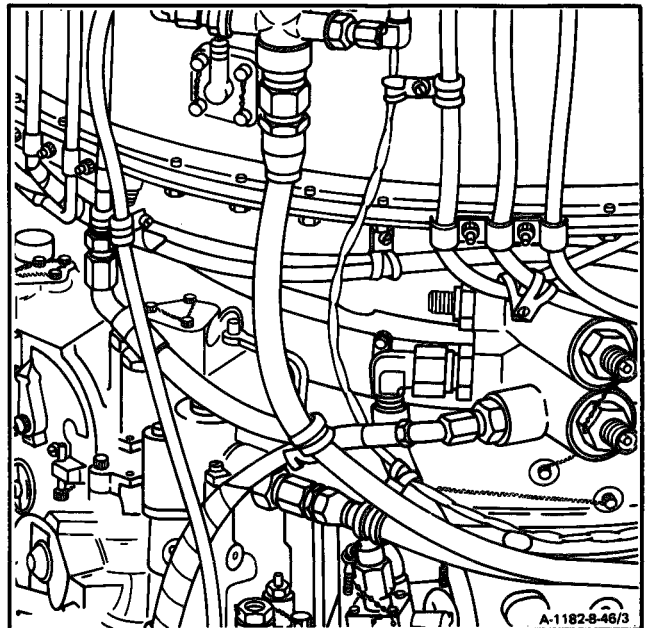
8-46 REMOVE HOSE ASSEMBLY (DUAL CHIP DETECTOR TO AIR DIFFUSER ASSEMBLY) 8-46
(Continued)**WARNING**

Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approval metal safety containers. Avoid prolonged or repeated contact with skin, and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.

1. Disconnect and remove hose assembly (1).

**FOLLOW-ON MAINTENANCE:**

None



END OF TASK

8-47 INSTALL HOSE ASSEMBLY (DUAL CHIP DETECTOR TO AIR DIFFUSER ASSEMBLY)8-47

INITIAL SETUP**Materials:**

None

Applicable Configurations:

All

Personnel Required:

68B10 Aircraft Powerplant Repairer

68B30 Aircraft Powerplant Inspector

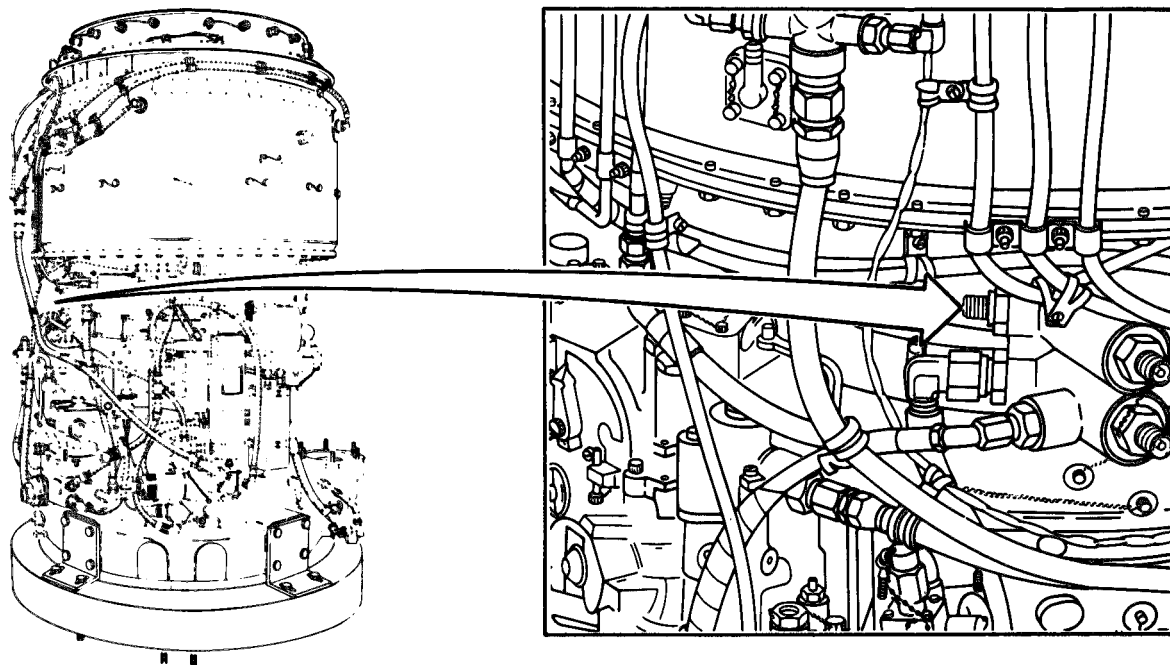
Tools:

Powerplant Mechanic's Tool Kit,

NSN 5180-00-323-4944

Technical Inspection Tool Kit,

NSN 5180-00-323-5114

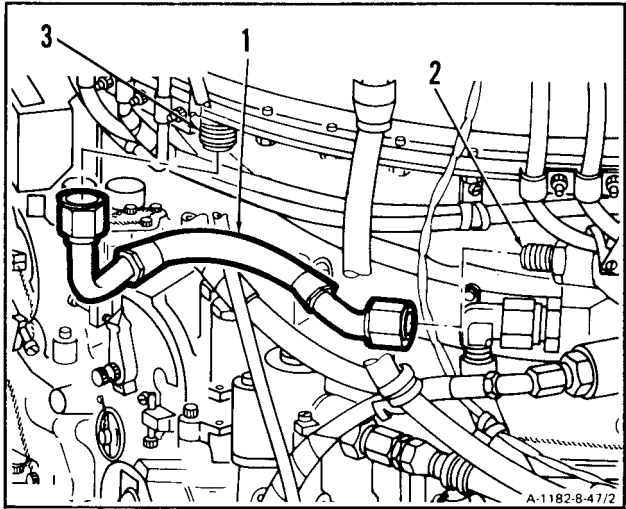


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8-47 INSTALL HOSE ASSEMBLY (DUAL CHIP DETECTOR TO AIR DIFFUSER ASSEMBLY)
(Continued)

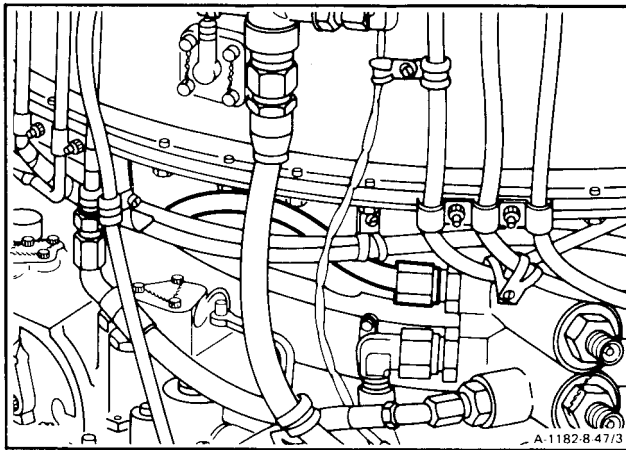
1. Install hose assembly (1) to nipple (2) and adapter (3).



INSPECT

FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-48 REMOVE HOSE ASSEMBLY (MAIN OIL PUMP TO DUAL CHIP DETECTOR)

8-48

INITIAL SETUP

Applicable Configurations:

All

Tools:

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

Materials:

Wiping Rag (E58)

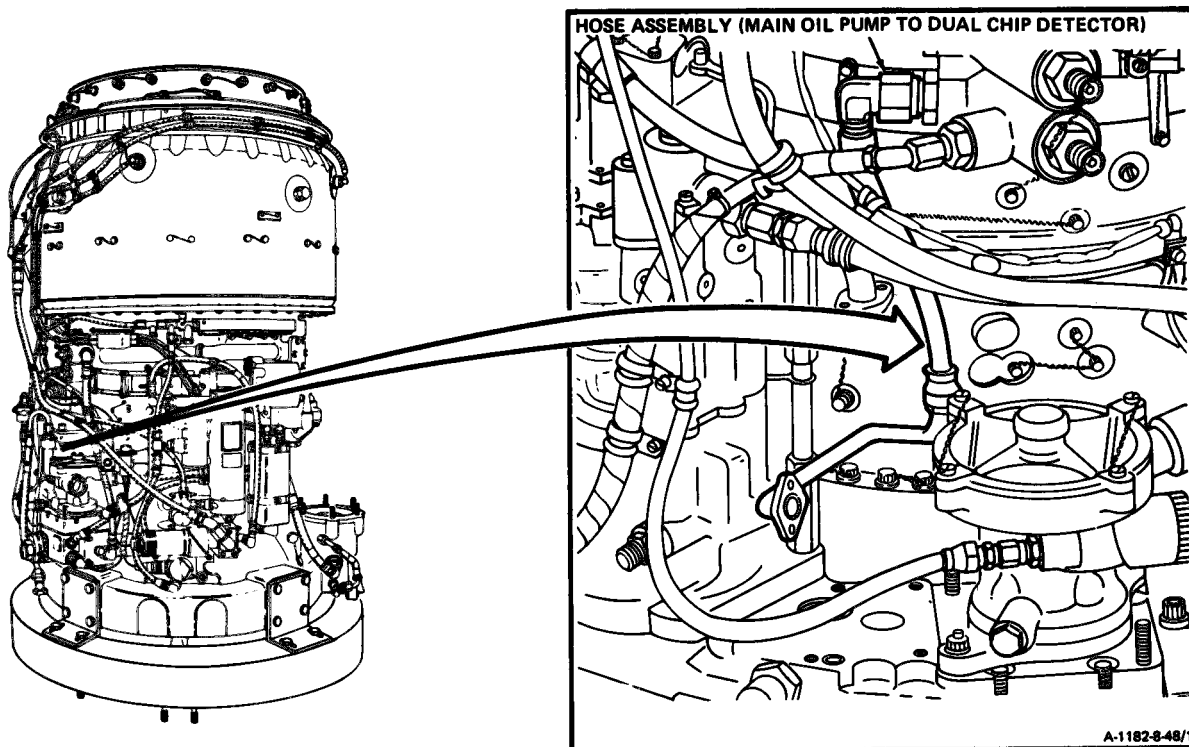
Personnel Required:

68B10 Aircraft Powerplant Repairer

Equipment Condition:

Main Oil Pump and Scavenge Oil Screen
Removed (Task 8-1)

Tube Assembly Removed (Inlet Housing to Main
Oil Pump) (Task 8-50)



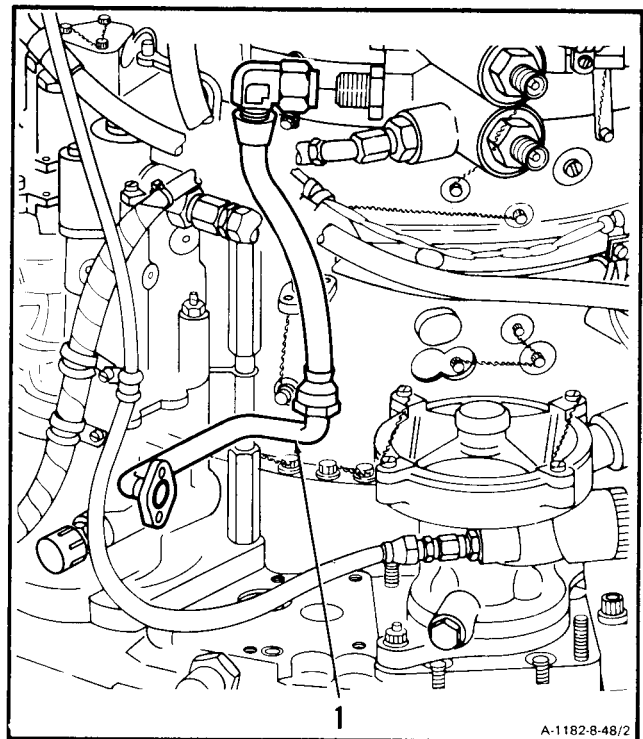
GO TO NEXT PAGE

8-48 REMOVE HOSE ASSEMBLY (MAIN OIL PUMP TO DUAL CHIP DETECTOR) (Continued) 8-48

WARNING

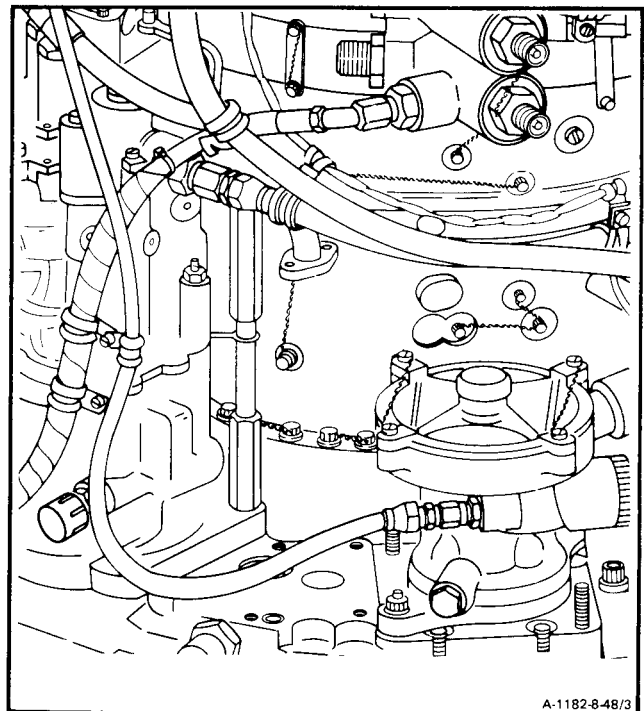
Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.

1. Disconnect and remove hose assembly (1).



FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-49 INSTALL HOSE ASSEMBLY (MAIN OIL PUMP TO DUAL CHIP DETECTOR)

8-49

INITIAL SETUP**Materials:**

None

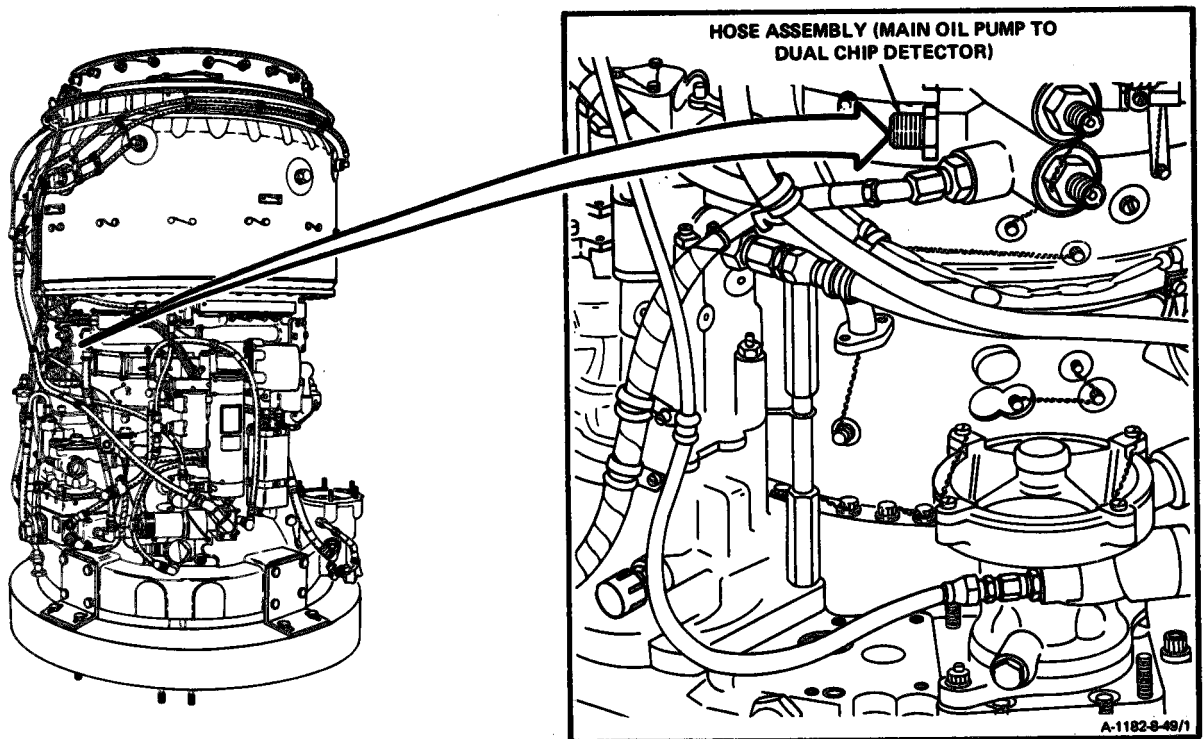
Applicable Configurations:

All

Personnel Required:

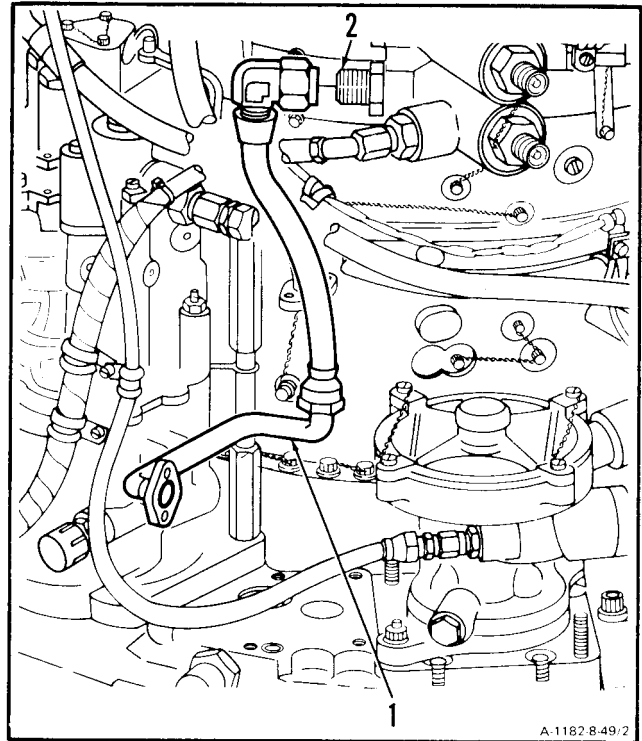
68B10 Aircraft Powerplant Repairer

68B30 Aircraft Powerplant Inspector

Tools:Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944Technical Inspection Tool Kit,
NSN 5180-00-323-5114**GO TO NEXT PAGE**

8-49 INSTALL HOSE ASSEMBLY (MAIN OIL PUMP TO DUAL CHIP DETECTOR) (Continued) 8-49

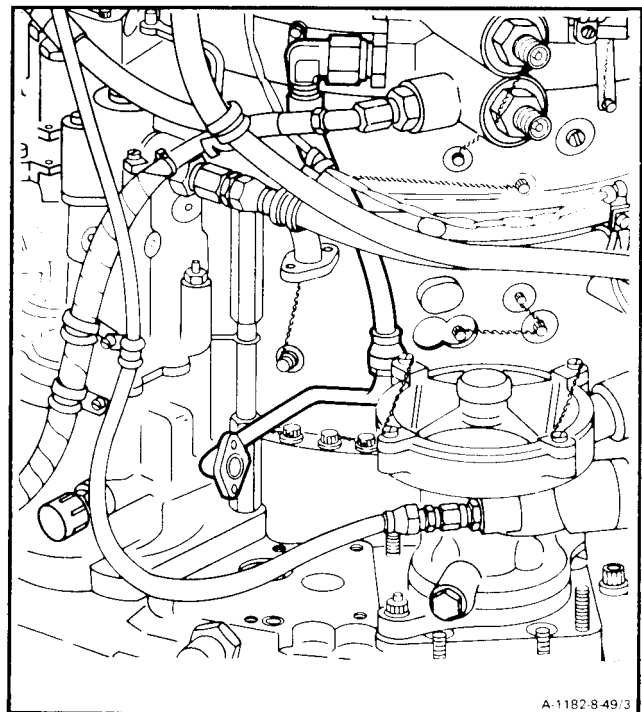
1. Install hose assembly (1) on nipple (2).



INSPECT

FOLLOW-ON MAINTENANCE:

- Install Main Oil Pump and Scavenge Oil Screen (Task 8-4).
- Install Tube Assembly (Inlet Housing to Main Oil Pump) (Task 8-51)



END OF TASK

8-50 REMOVE TUBE ASSEMBLY (INLET HOUSING TO MAIN OIL PUMP)

8-50

INITIAL SETUP

Applicable Configurations:

All

Tools:

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

Materials:

Wiping Rag (E58)

Personnel Required:

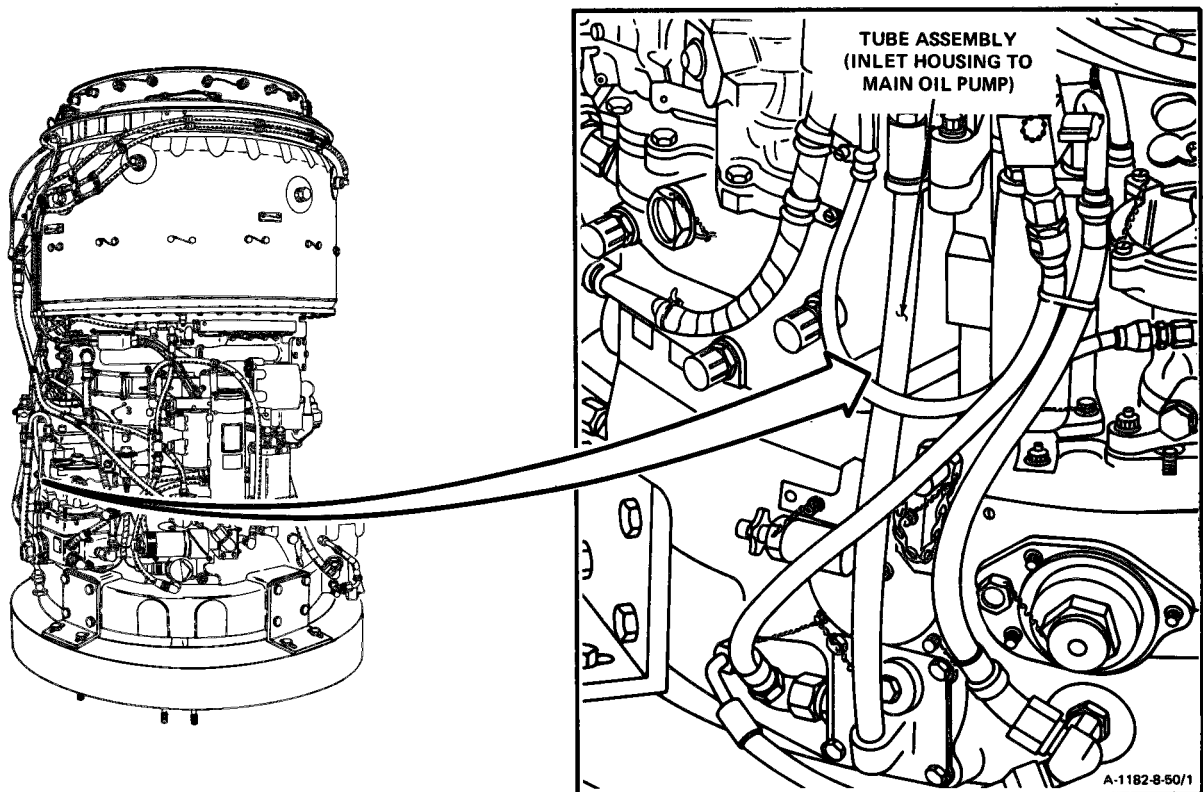
68510 Aircraft Powerplant Repairer

References:

Task 1-75

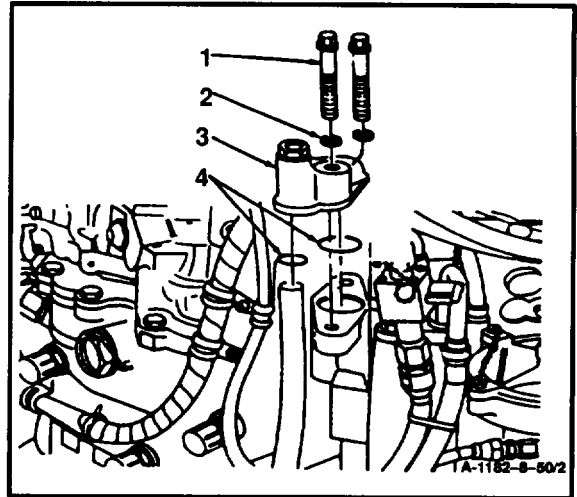
General Safety Instructions:**WARNING**

Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.

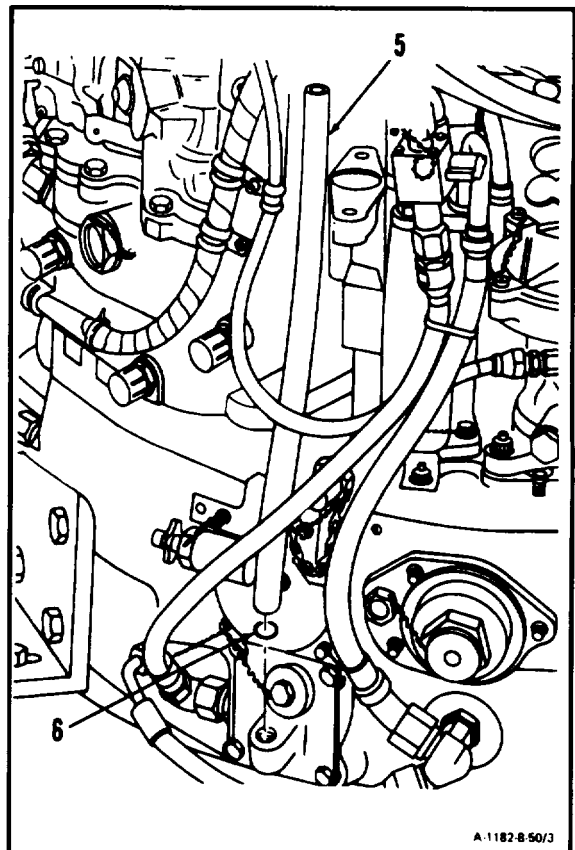


GO TO NEXT PAGE

1. **Drain engine oil system** (Ref. Task 1-75).
2. **Remove** lockwire, two bolts (1), two washers (2), connector (3), and two packings (4).



3. **Remove tube assembly (5)** and packing (6).



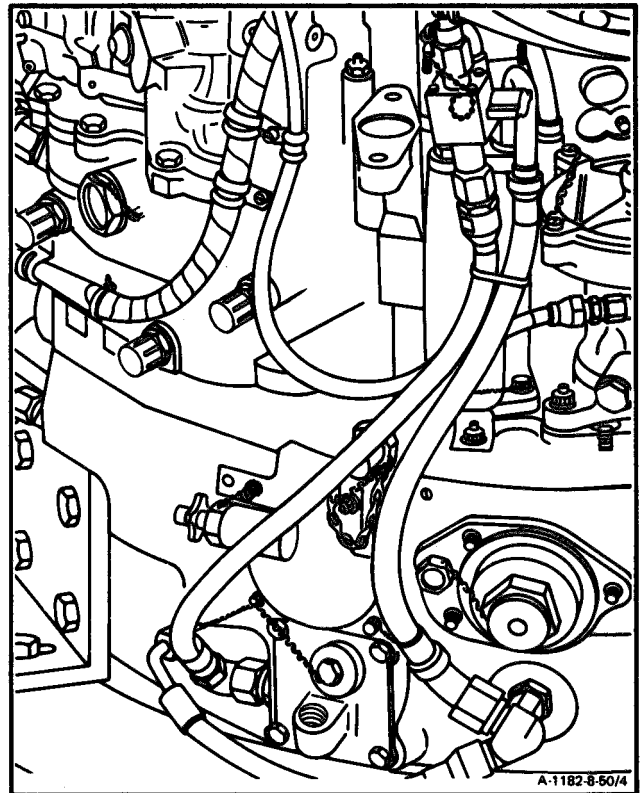
GO TO NEXT PAGE

8-50 REMOVE TUBE ASSEMBLY (INLET HOUSING TO MAIN OIL PUMP) (Continued)

8-50

FOLLOW-ON MAINTENANCE:

None

**END OF TASK**

8-51 INSTALL TUBE ASSEMBLY (INLET HOUSING TO MAIN OIL PUMP)

8-51

INITIAL SETUP

Applicable Configurations:

All

Tools:

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

Materials:

Lockwire (E29)

Parts:

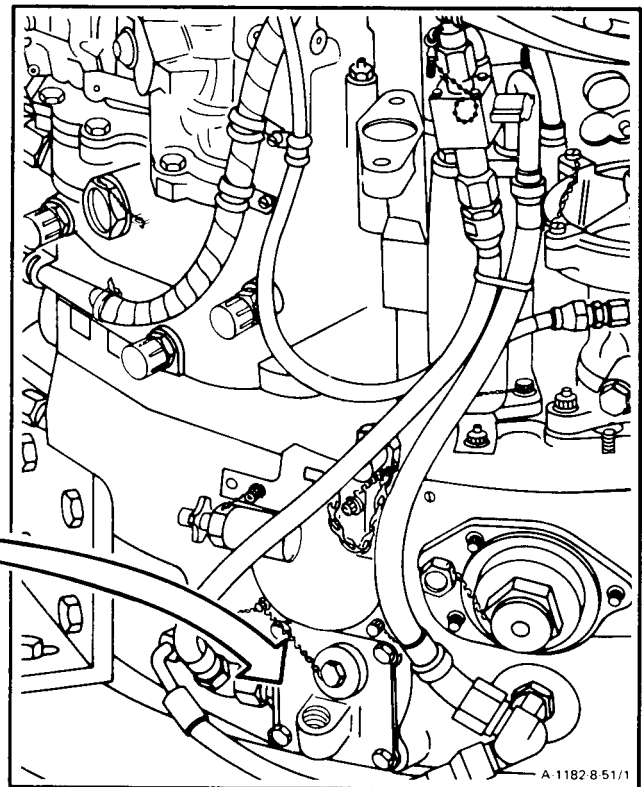
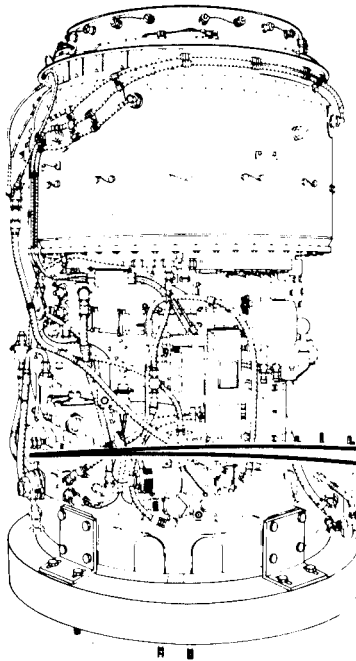
Packings

Personnel Required:

68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

References:

TM 55-2840-254-23P
Task 8-50

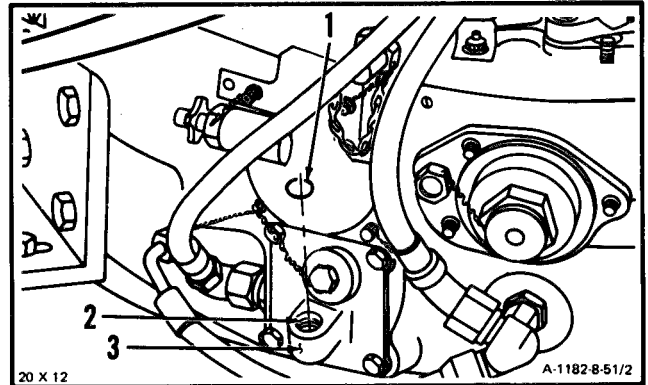


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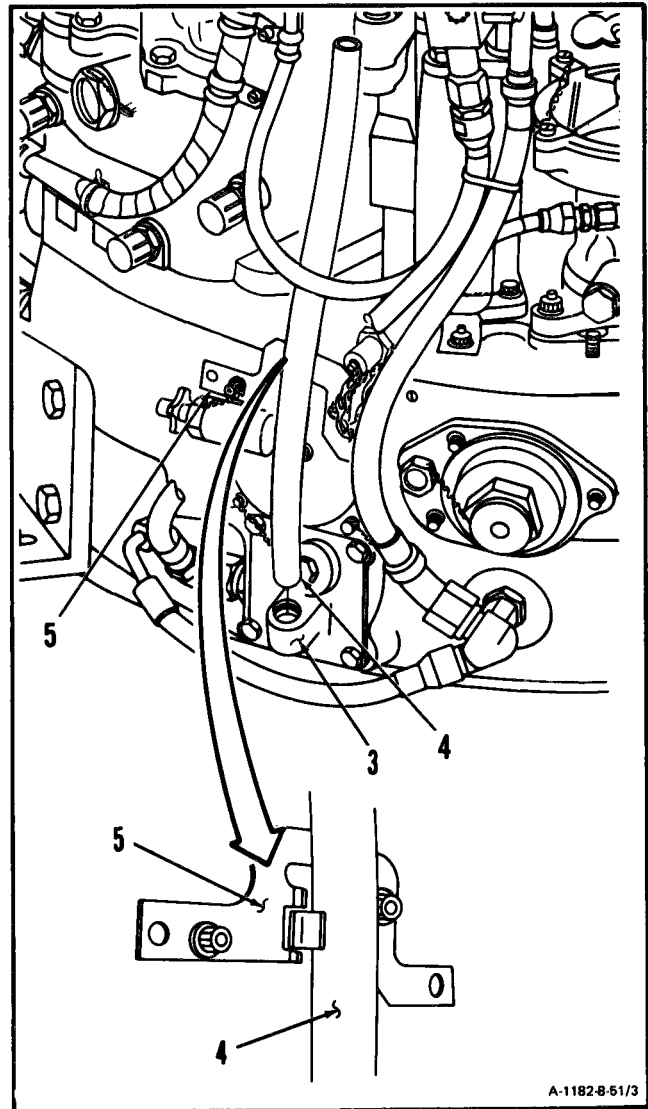
8-51 INSTALL TUBE ASSEMBLY (INLET HOUSING TO MAIN OIL PUMP) (Continued)

8-51

1. Install packing (1) in groove (2) in cover assembly (3).

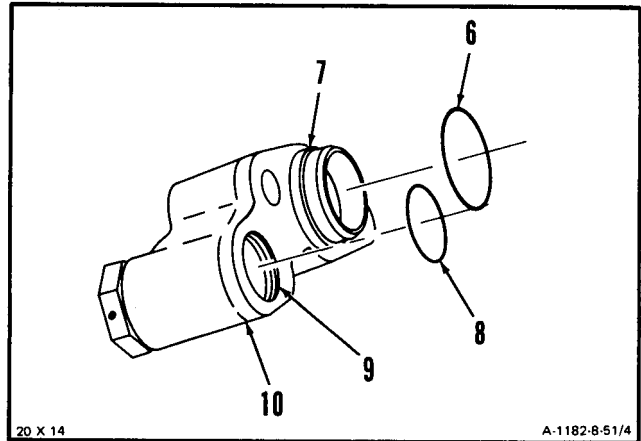


2. Install tube assembly (4) in cover assembly (3) and bracket (5).

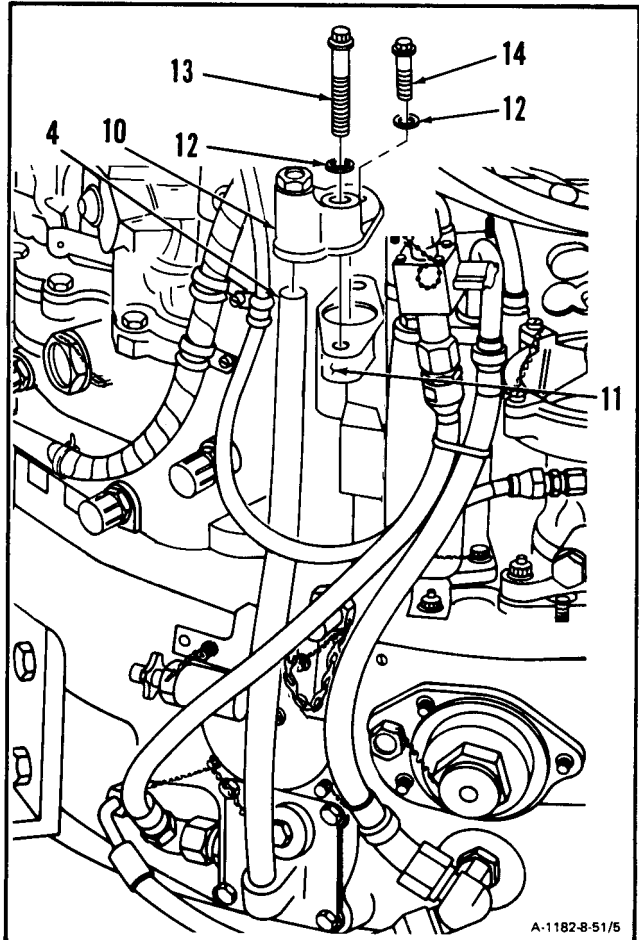


GO TO NEXT PAGE

3. Install packing (6) in groove (7) and packing (8) in groove (9) of connector (10).



4. Install connector (10) on tube assembly (4), and oil pump (11), install two washers (12), bolt (13), and bolt (14).



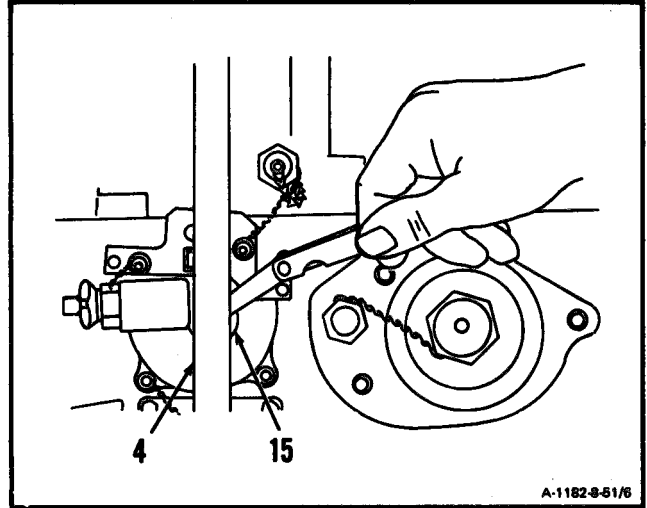
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8-51 INSTALL TUBE ASSEMBLY (INLET HOUSING TO MAIN OIL PUMP) (Continued)

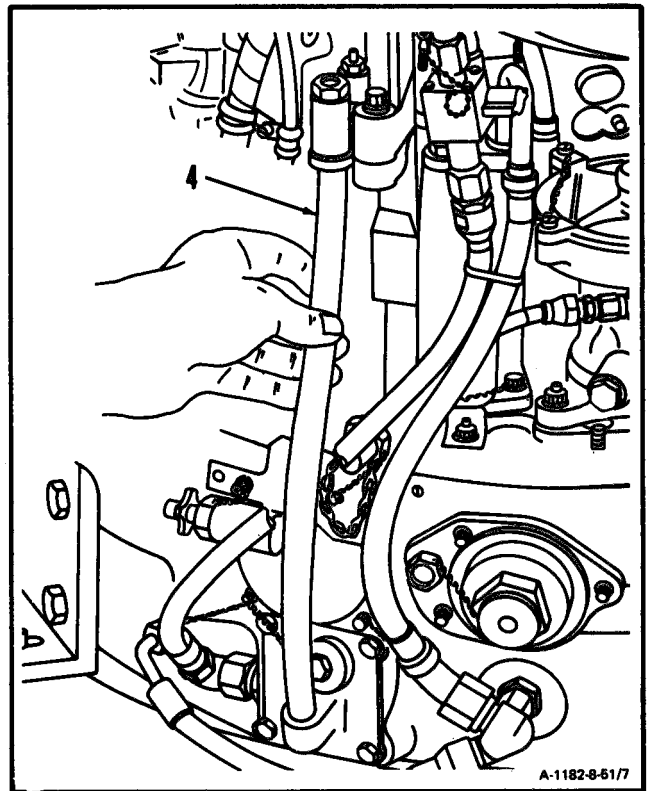
8-51

5. Check for proper installation of tube assembly (4) as follows:

- a. Check clearance between tube assembly (4) and washer (15). Clearance shall be 0.002 inch minimum.



- b. Check tube assembly (4) for freedom of movement in all directions. Tube assembly (4) shall be free to move forward and aft a total of 3/32-inch minimum. Tube assembly (4) shall be free to move sideways a total of 0.002 inch minimum. Tube assembly (4) shall be free to move radially a total of 0.004 inch minimum.



INSPECT

NOTE

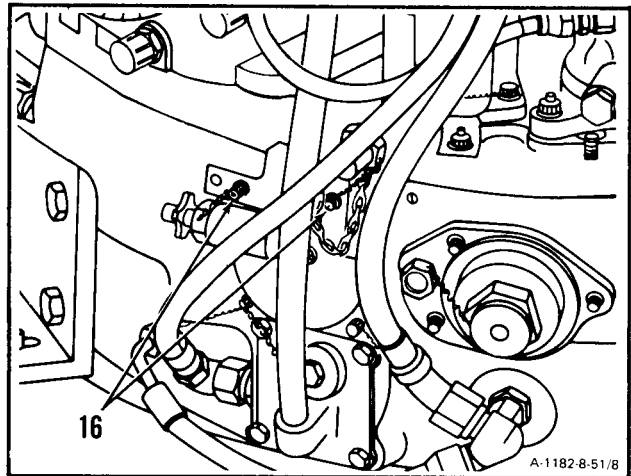
If clearance is not obtained or if tube assembly is not free to move, go to step 6.
If proper clearance is obtained and tube assembly is free to move, go to step 9.

GO TO NEXT PAGE

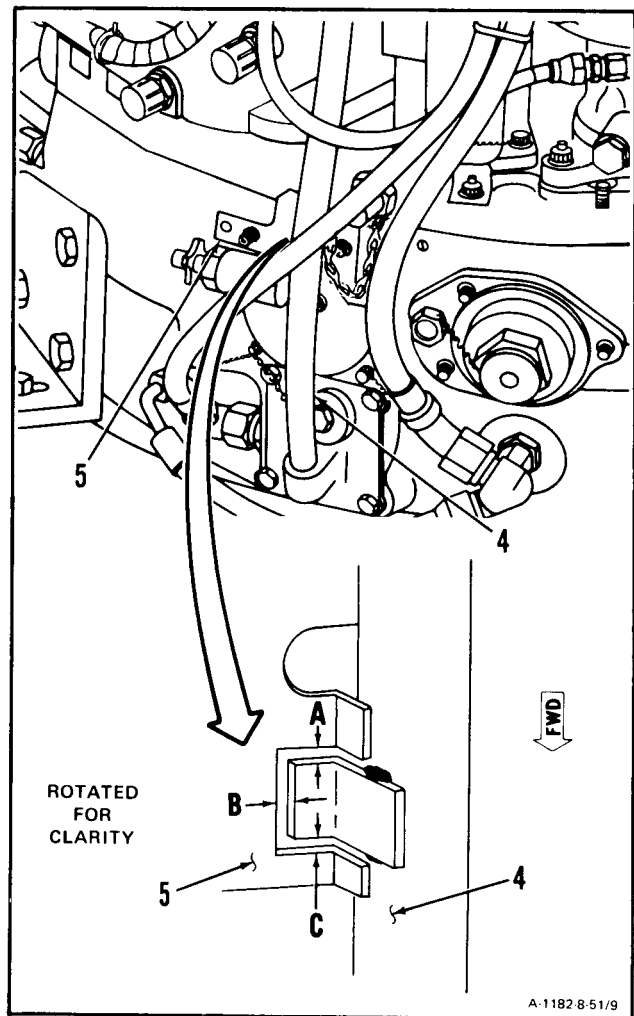
6. Remove lockwire and loosen bolts (16).

CAUTION

In following step 7., make sure bracket is positioned properly. This will ensure that tube assembly does not hit housing at either end when engine is hot. This could cause tube assembly to bend and result in oil leakage.



7. Reposition bracket (5) to obtain equal clearance at points A, B, and C between bracket (5) and tube assembly (4).



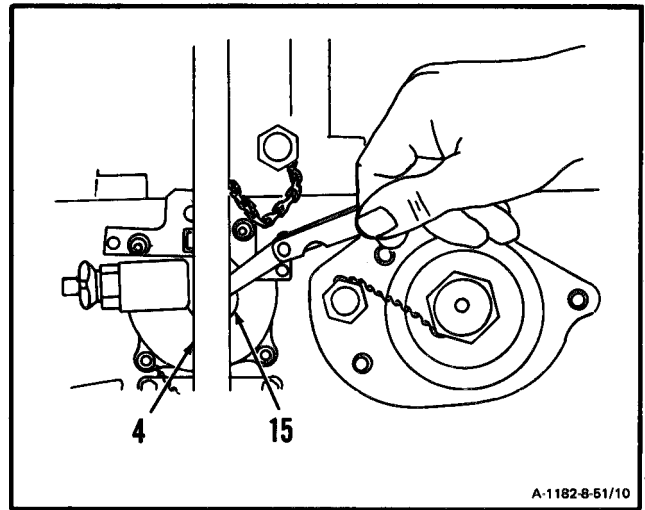
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8-51 INSTALL TUBE ASSEMBLY (INLET HOUSING TO MAIN OIL PUMP) (Continued)

8-51

8. Check for proper installation of tube assembly (4) as follows:

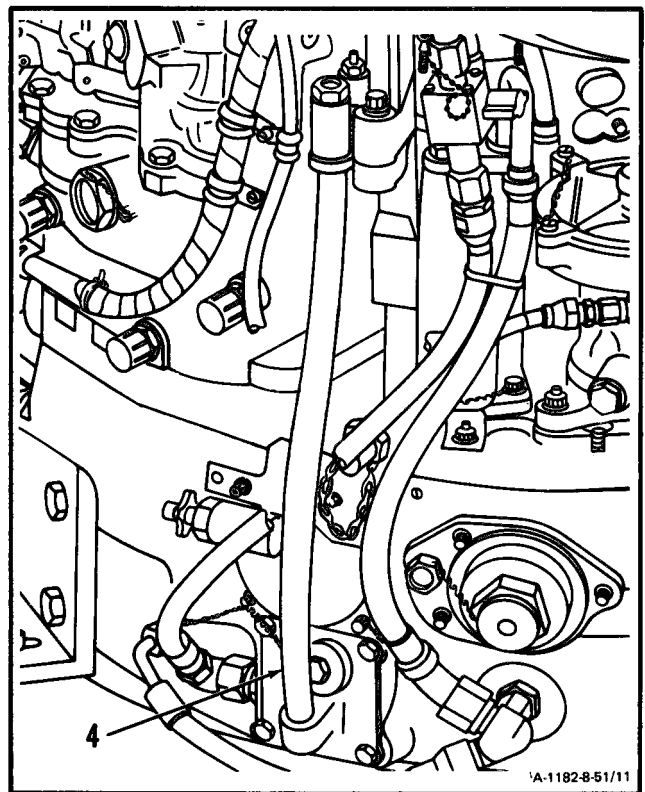
- a. Check clearance between tube assembly (4) and washer (15). Clearance shall be 0.002 inch minimum.



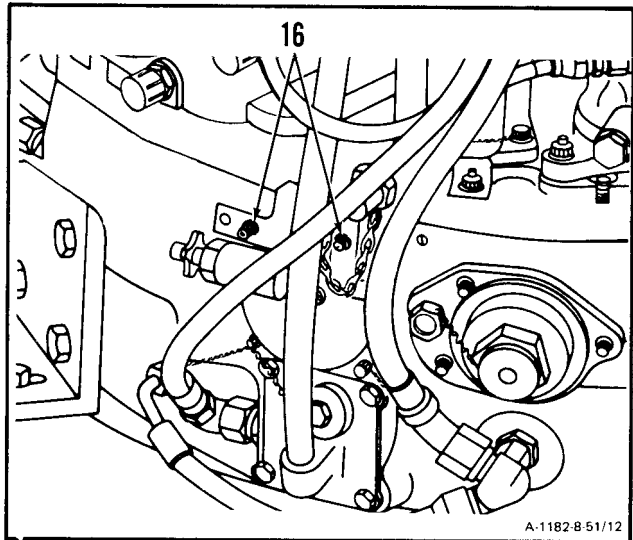
- b. Check tube assembly (4) for freedom of movement in all directions. Tube assembly (4) shall be free to move forward and aft a total of 3/32-inch minimum. Tube assembly (4) shall be free to move sideways a total of 0.002 inch minimum. Tube assembly (4) shall be free to move radially a total of 0.004 inch minimum.

NOTE

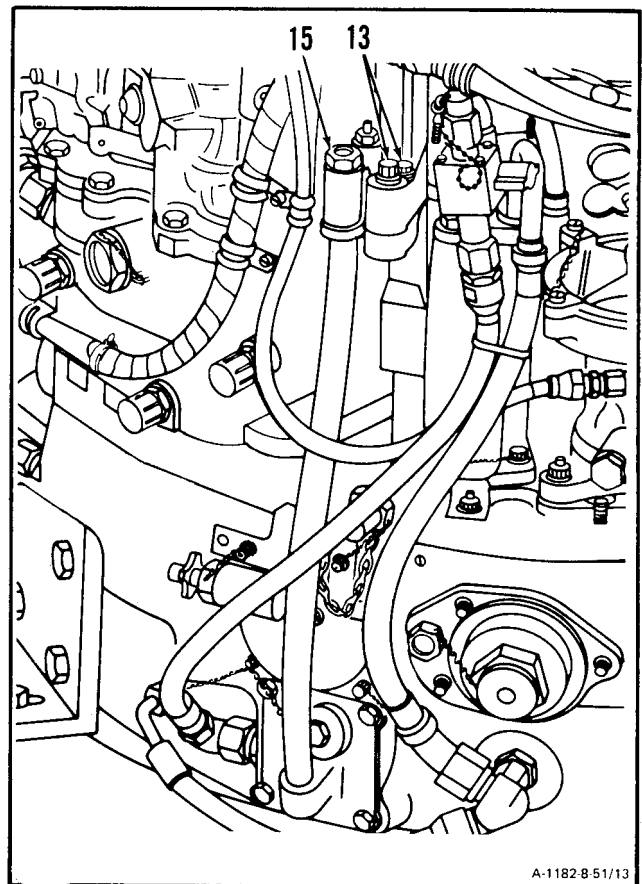
If proper clearance and freedom of movement is still not obtained, remove tube assembly (Ref. Task 8-50) and install serviceable tube assembly (Steps 1 thru 8).

**GO TO NEXT PAGE**

9. Install two bolts (16) and lockwire. Use lockwire (E29).



10. Lockwire bolts (13) and plug (15). Use lockwire (E29).



INSPECT

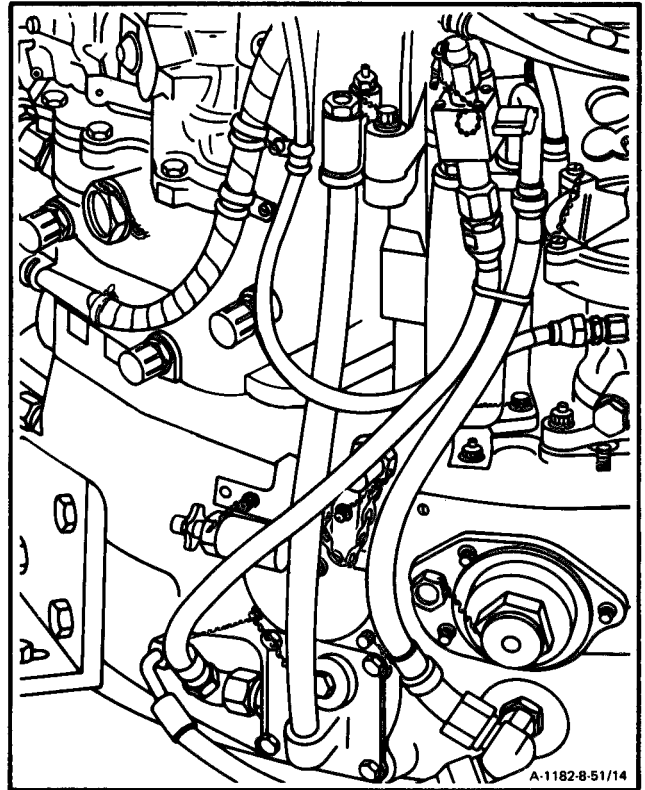
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8-51 INSTALL TUBE ASSEMBLY (INLET HOUSING TO MAIN OIL PUMP) (Continued)

8-51

FOLLOW-ON MAINTENANCE:

Service Engine Oil System (Task 1-74).

**END OF TASK**

**8-52 REMOVE HOSE ASSEMBLY (MAIN OIL PUMP TO INLET HOUSING OIL
SCAVENGE TEE)**

INITIAL SETUP

Applicable Configurations:

All

Tools:

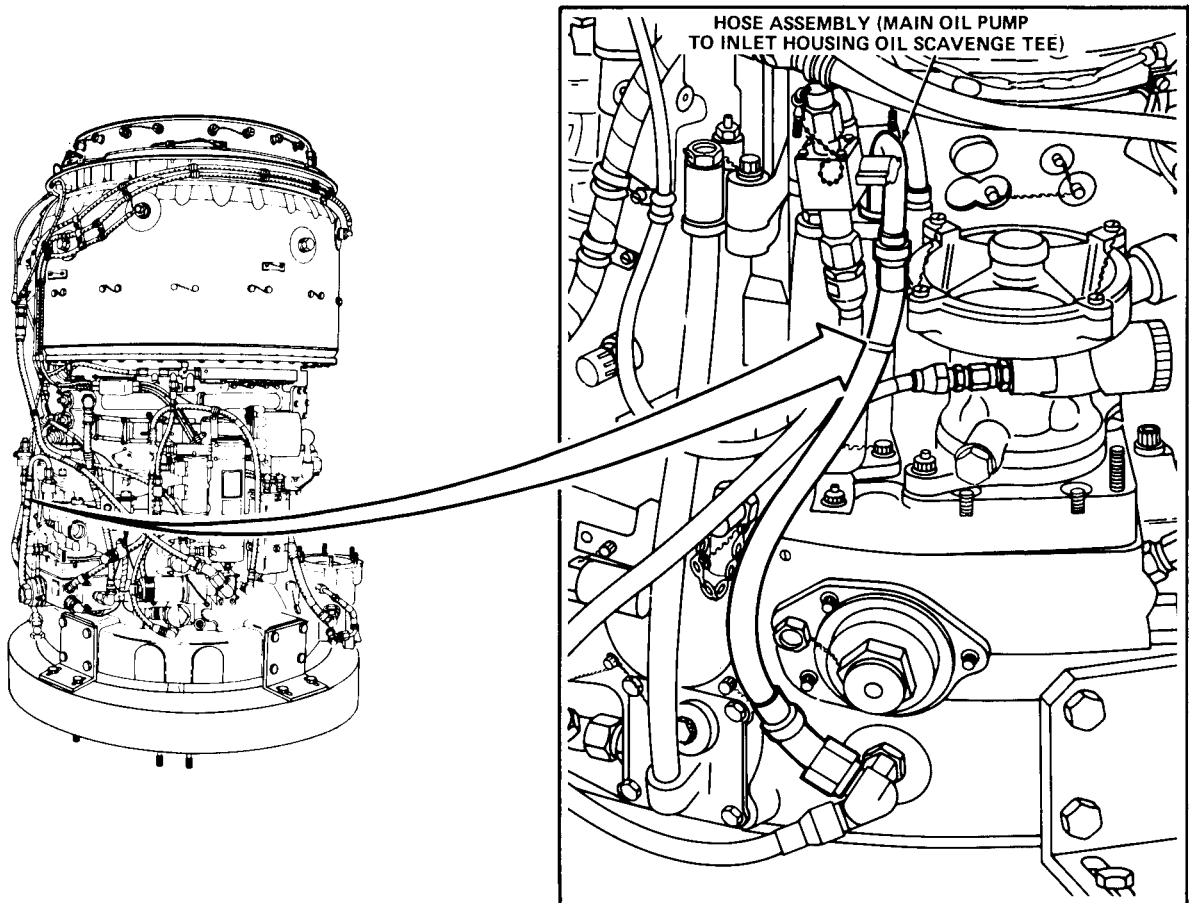
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Container, 1 Quart

Materials:

Wiping Rag (E58)

Personnel Required:

68B10 Aircraft Powerplant Repairer



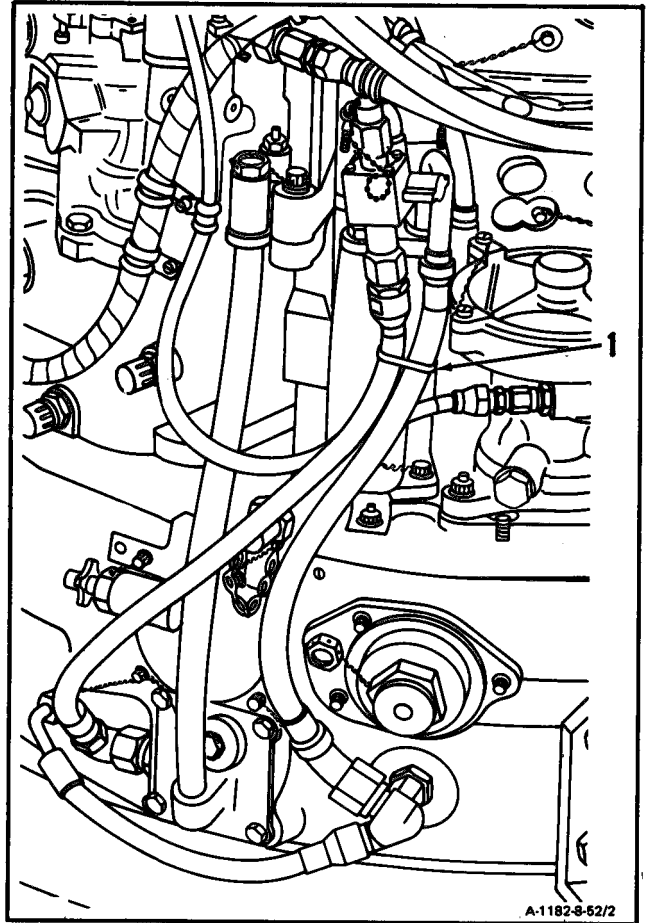
A-1182-8-52/1

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**8-52 REMOVE HOSE ASSEMBLY (MAIN OIL PUMP TO INLET HOUSING OIL
SCAVENGE TEE) (Continued)**

8-52

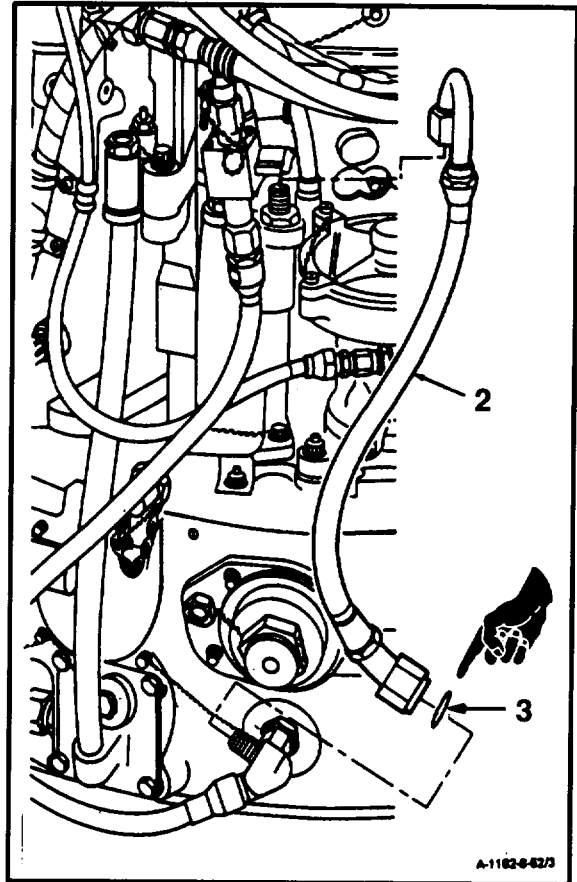
1. Cut and remove cable tie (1).

**GO TO NEXT PAGE**

WARNING

Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin, and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.

2. Disconnect and remove hose assembly (2) and gasket (3).

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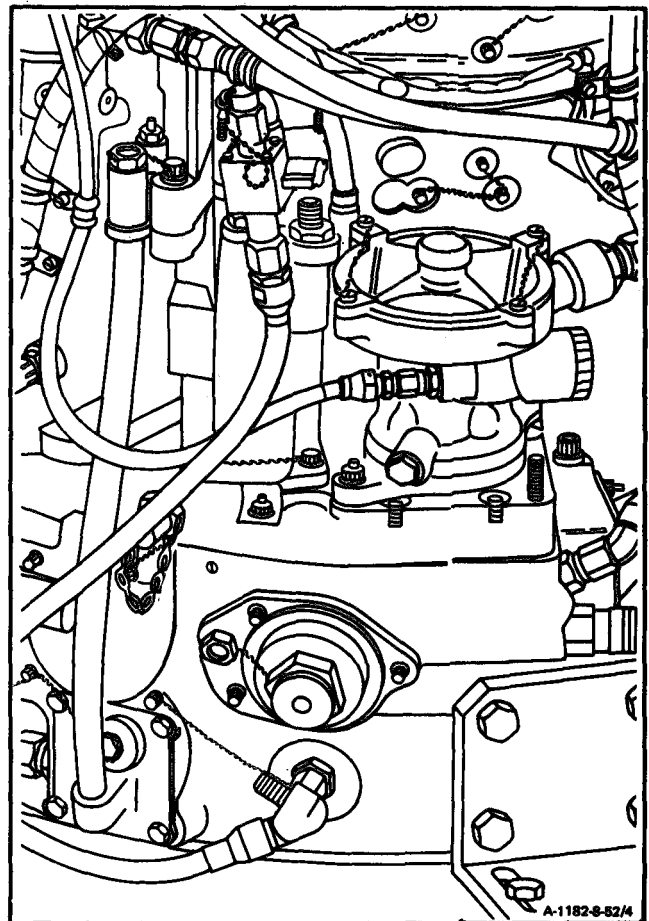
8-150 Change 6

**8-52 REMOVE HOSE ASSEMBLY (MAIN OIL PUMP TO INLET HOUSING OIL
SCAVENGE TEE) (Continued)**

8-52

FOLLOW-ON MAINTENANCE:

None



END OF TASK

**8-53. INSTALL HOSE ASSEMBLY (MAIN OIL PUMP TO INLET HOUSING OIL
SCAVENGE TEE)**

8-53

INITIAL SETUP

Applicable Configurations:

All

Tools:

Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5810-99-323-5114

Materials:

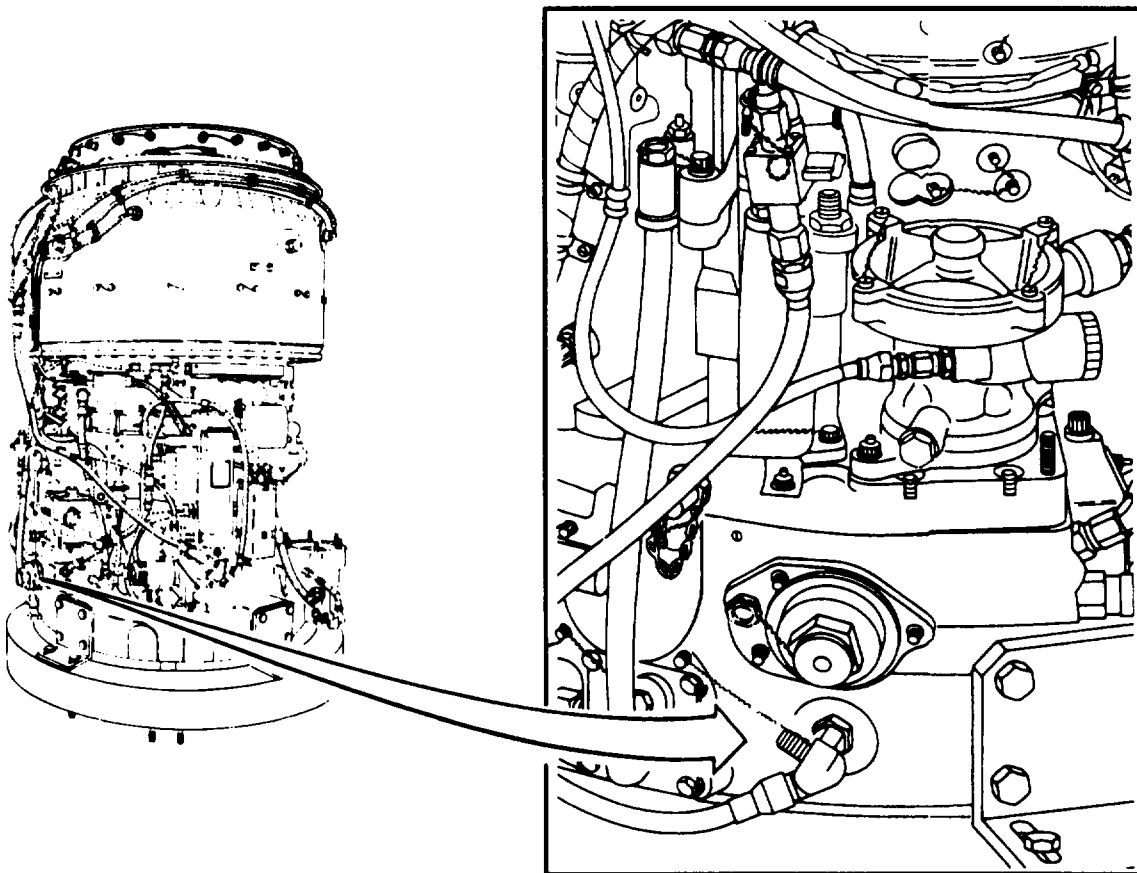
None

Parts:

Cable Tie
Gasket

Personnel Required:

68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspection



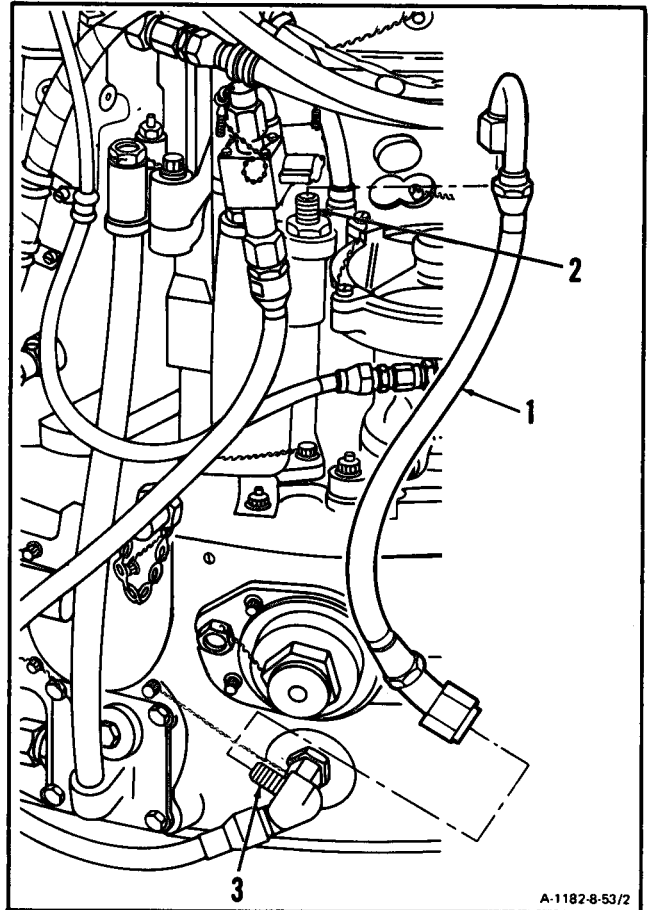
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8-152 Change 6

**8-53 INSTALL HOSE ASSEMBLY (MAIN OIL PUMP TO INLET HOUSING OIL
SCAVENGE TEE) (Continued)**

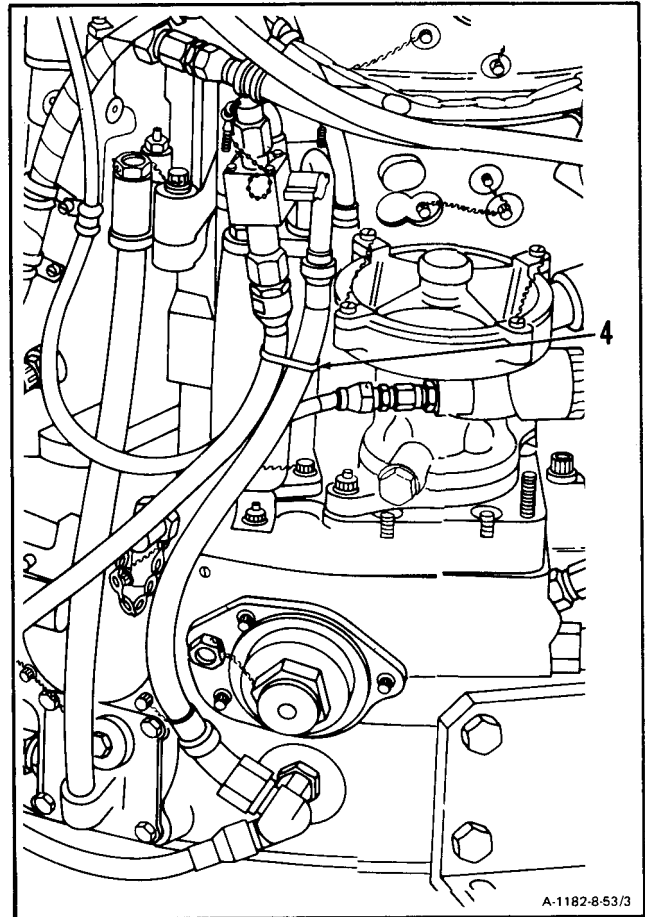
8-53

1. Install hose assembly (1) on nipple (2) and tee (3).

**GO TO NEXT PAGE**

**8-53 INSTALL HOSE ASSEMBLY (MAIN OIL PUMP TO INLET HOUSING OIL
SCAVENGE TEE) (Continued)**

2. Install cable tie (4).



INSPECT

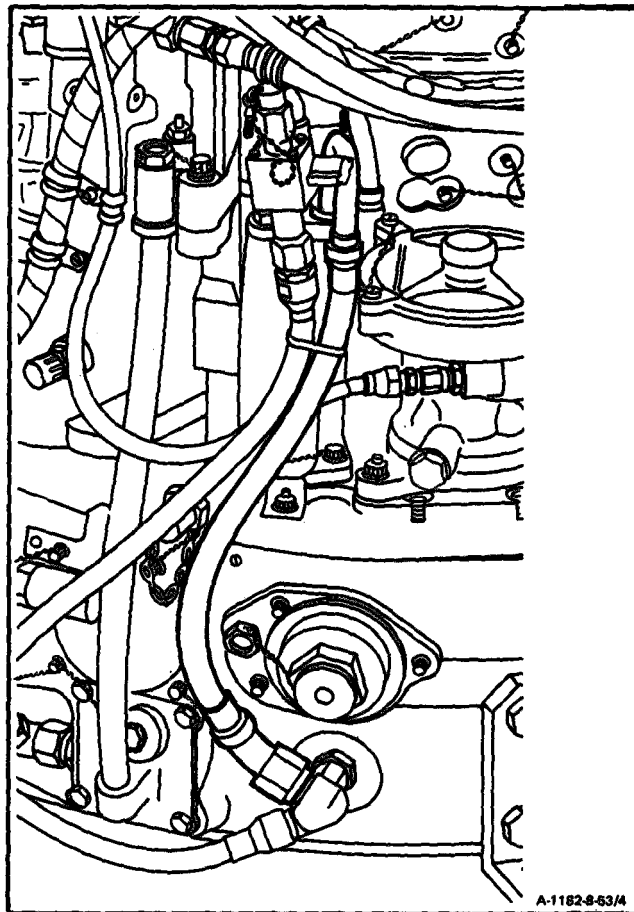
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**8-53 INSTALL HOSE ASSEMBLY (MAIN OIL PUMP TO INLET HOUSING OIL
SCAVENGE TEE) (Continued)**

8-53

FOLLOW-ON MAINTENANCE:

None



END OF TASK

**8-54 REMOVE HOSE ASSEMBLY (MAIN OIL PUMP TO NO. 4 AND 5 BEARING
SCAVENGE TUBE ASSEMBLY)**

INITIAL SETUP

General Safety Instructions:

Applicable Configurations:

All

Tools:

- Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
- 1/4-1 Inch Universal Joint Socket,
12 Point, 1/4-inch Drive,
NSN 5120-00-018-1553
- Container, 1 Quart

Materials:

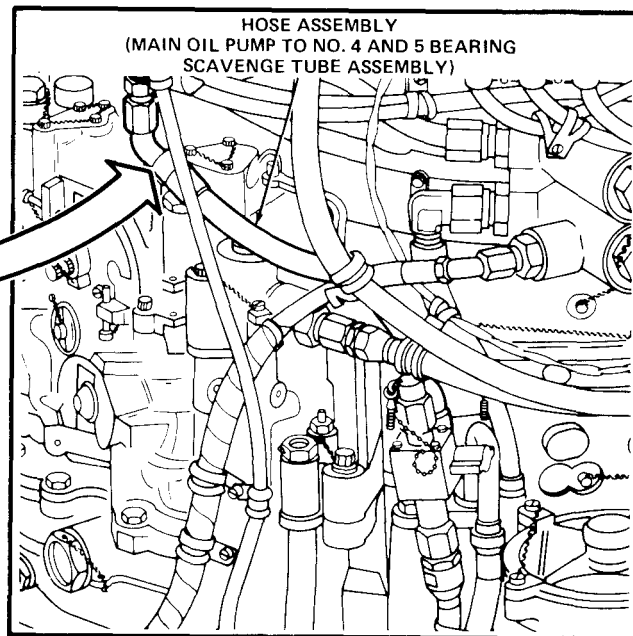
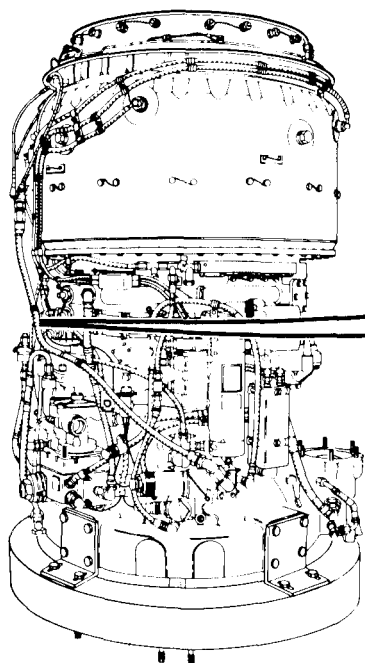
- Wiping Rag (E58)

Personnel Required:

- 68B10 Aircraft Powerplant Repairer

WARNING

Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin, and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.



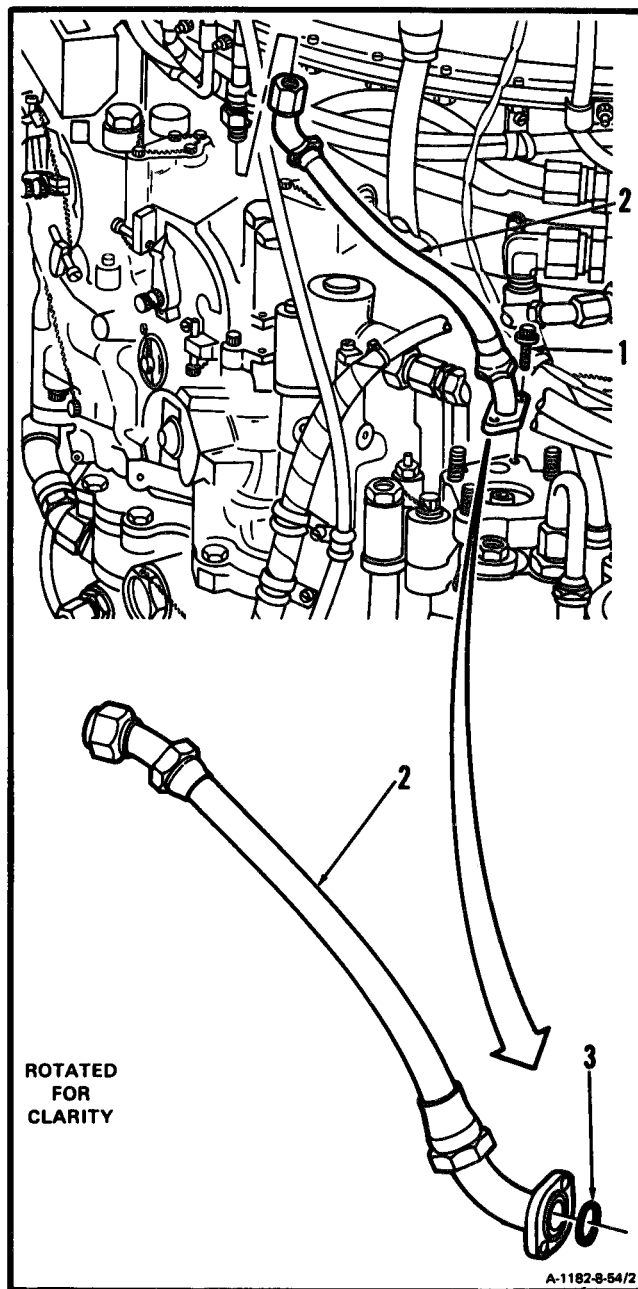
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**8-54 REMOVE HOSE ASSEMBLY (MAIN OIL PUMP TO NO. 4 AND 5 BEARING
SCAVENGE TUBE ASSEMBLY) (Continued)**

8-54

1. **Remove** lockwire and two bolts (1). Use 1/4-inch universal joint socket. Disconnect and remove **hose assembly (2)**.



2. **Remove packing (3)** from hose assembly (2).

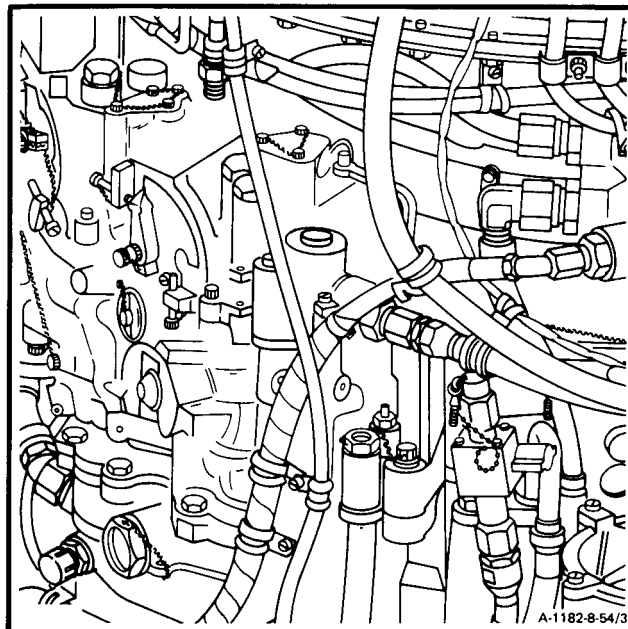
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**8-54 REMOVE HOSE ASSEMBLY (MAIN OIL PUMP TO NO. 4 AND 5 BEARING
SCAVENGE TUBE ASSEMBLY) (Continued)**

8-54

FOLLOW-ON MAINTENANCE:

None



END OF TASK

**8-55 INSTALL HOSE ASSEMBLY (MAIN OIL PUMP TO NO. 4 AND 5 BEARING
SCAVENGE TUBE ASSEMBLY)**

8-55

INITIAL SETUP**Applicable Configurations:**

All

Tools:

Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114
1/4-Inch Universal Joint Stocket,
12 Point, 1/4-inch Drive,
NSN 5120-00-018-1553

Materials:

Lockwire (E29)

Parts:

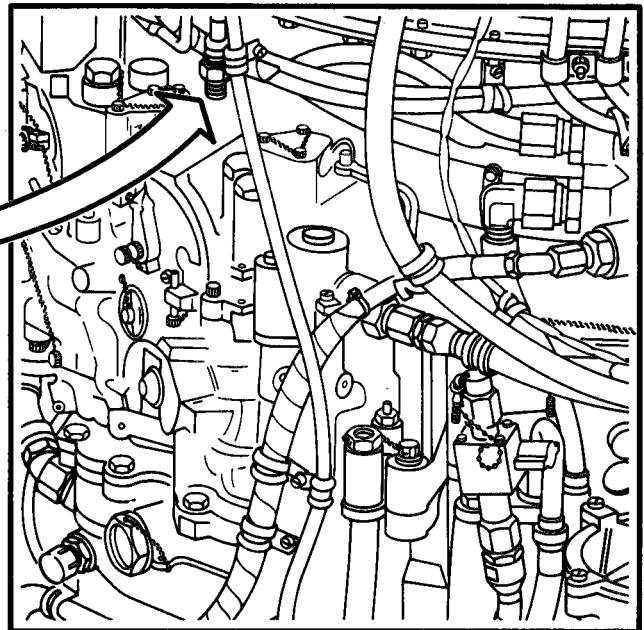
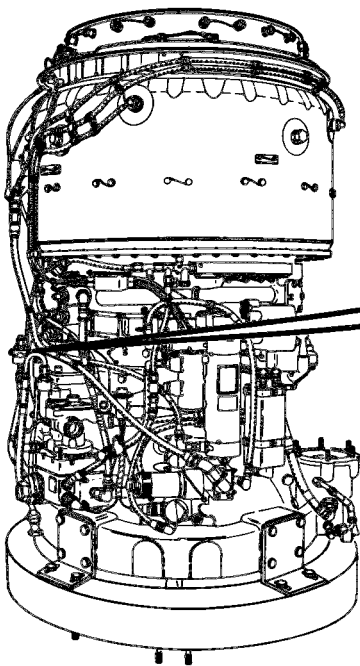
Packing

Personnel Required:

68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

References:

TM 55-2840-254-23P

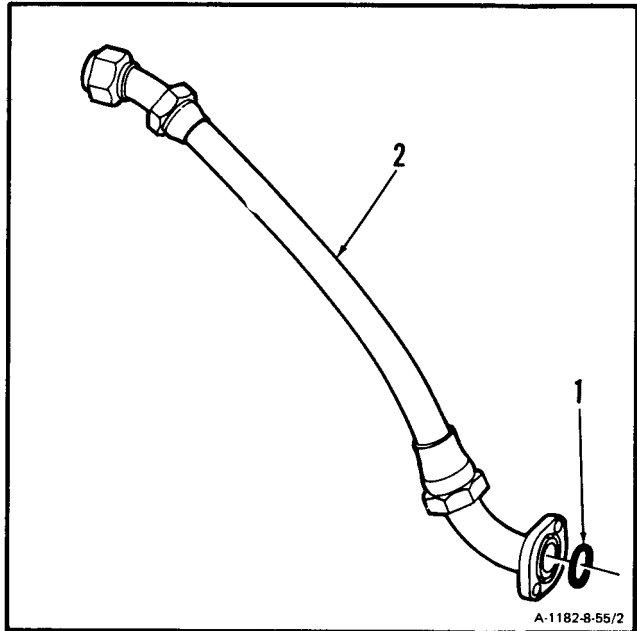


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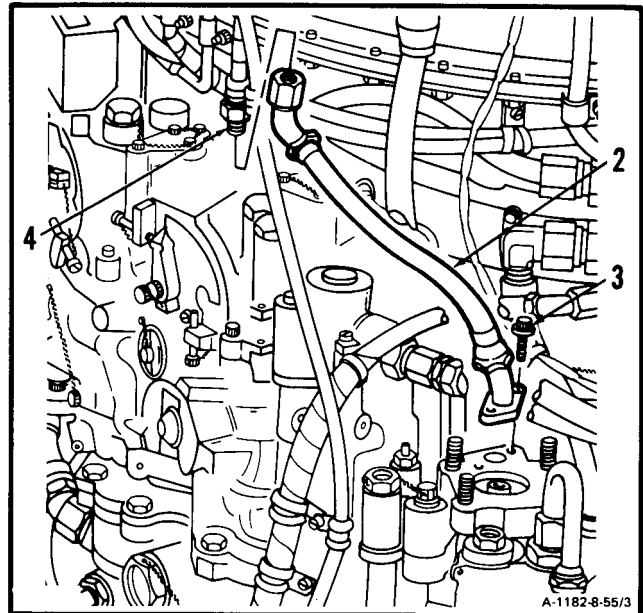
**8-55 INSTALL HOSE ASSEMBLY (MAIN OIL PUMP TO NO. 4 AND 5 BEARING
SCAVENGE TUBE ASSEMBLY) (Continued)**

1. Install packing (1) in hose assembly (2).



2. Install hose assembly (2) and two bolts (3). Use 1/4-inch universal joint socket. Lockwire bolts (3). Use lockwire (E29).

3. Connect hose assembly (2) to tube assembly (4).



INSPECT

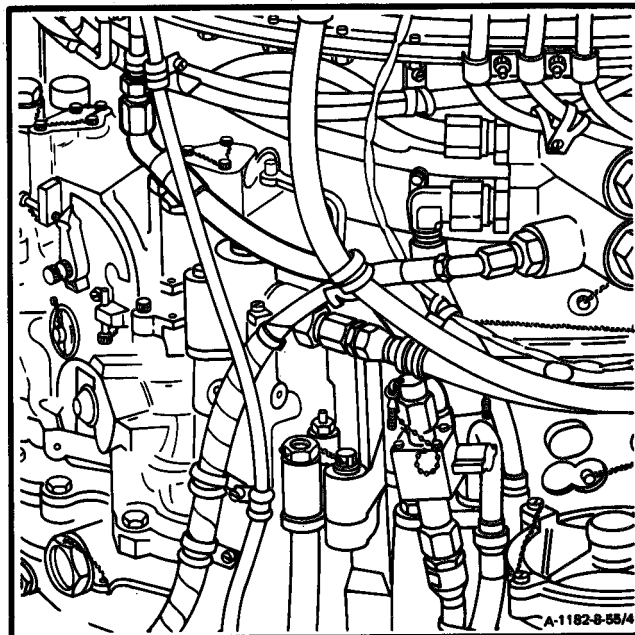
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**8-55 INSTALL HOSE ASSEMBLY (MAIN OIL PUMP TO NO. 4 AND 5 BEARING
SCAVENGE TUBE ASSEMBLY) (Continued)**

8-55

FOLLOW-ON MAINTENANCE:

None

**END OF TASK**

8-56 REMOVE TUBE ASSEMBLY (NO. 4 AND 5 BEARING SCAVENGE CONNECTOR TO HOSE ASSEMBLY)

8-56

INITIAL SETUP

Applicable Configurations:

All

Tools:

Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Container, 1 Quart
Open-End Wrench (T53)

Materials:

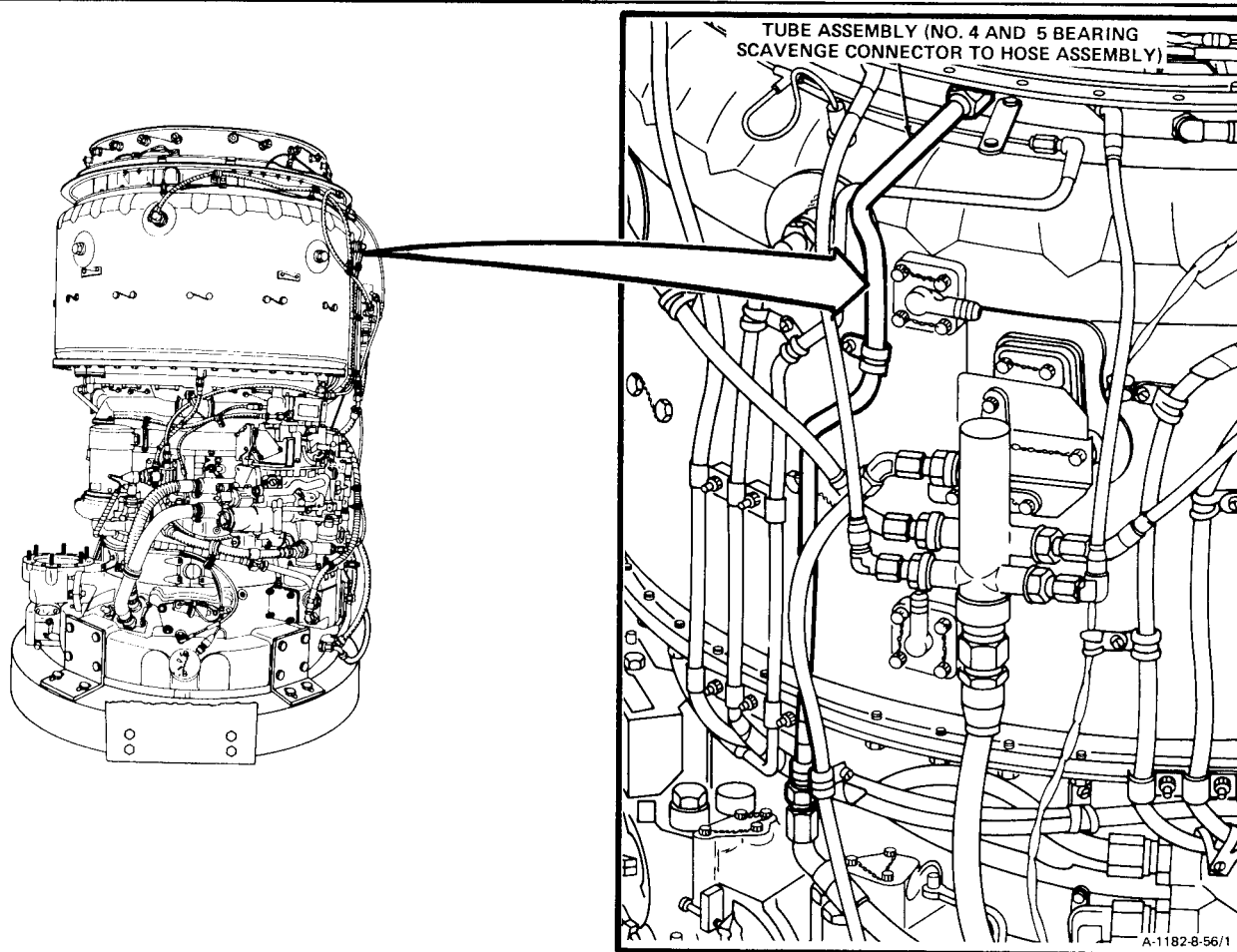
Wiping Rag (E58)

Personnel Required:

68B10 Aircraft Powerplant Repairer

General Safety Instructions:**WARNING**

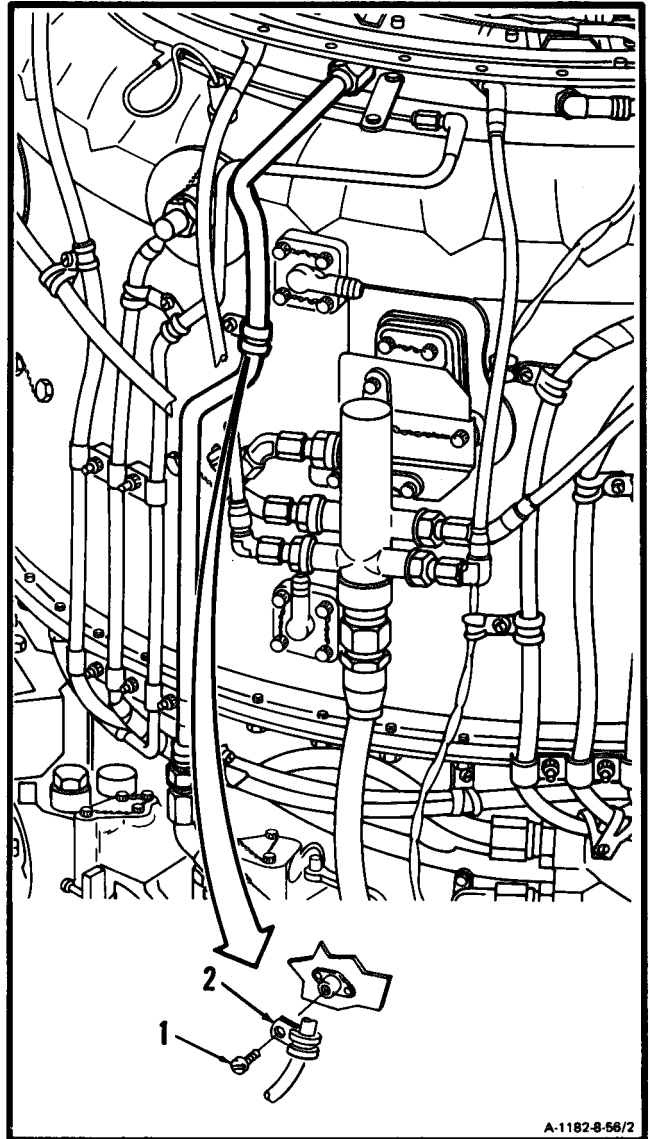
Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin, and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.

**GO TO NEXT PAGE**

**8-56 REMOVE TUBE ASSEMBLY (NO. 4 AND 5 BEARING SCAVENGE CONNECTOR
TO HOSE ASSEMBLY) (Continued)**

8-56

1. Remove lockwire, screw (1), and clamp (2).

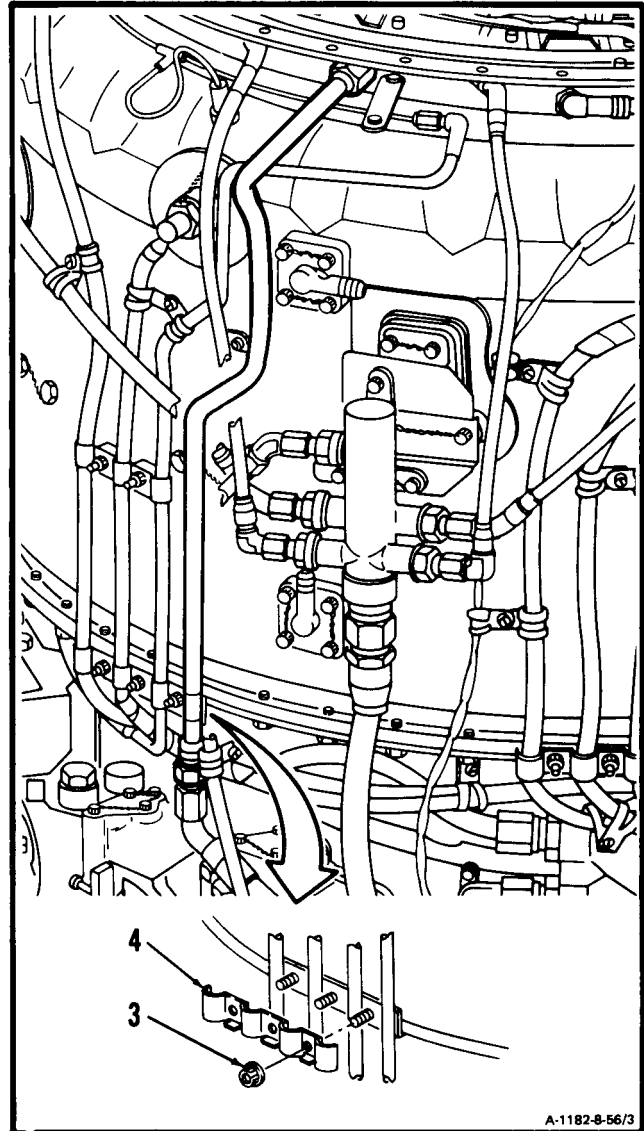


A-1182-8-56/2

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8-56 REMOVE TUBE ASSEMBLY (NO. 4 AND 5 BEARING SCAVENGE CONNECTOR TO HOSE ASSEMBLY) (Continued)

2. Remove three nuts (3) and strap (4).

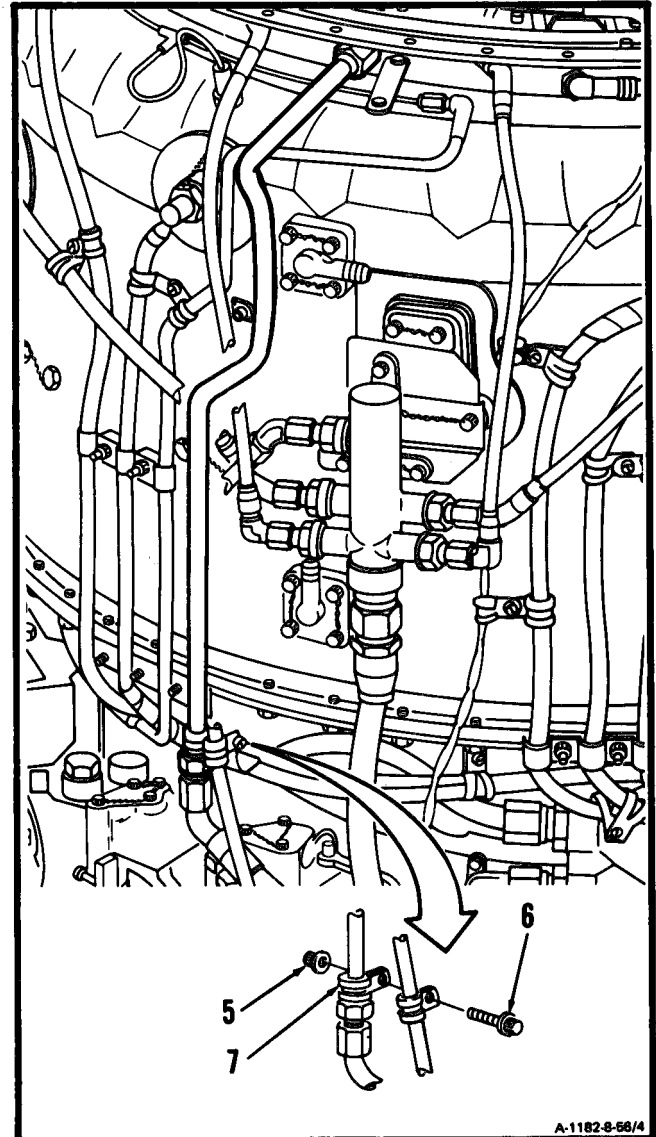


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8-56 REMOVE TUBE ASSEMBLY (NO. 4 AND 5 BEARING SCAVENGE CONNECTOR TO HOSE ASSEMBLY) (Continued)

8-56

3. Remove nut (5), screw (6), and clamp (7).

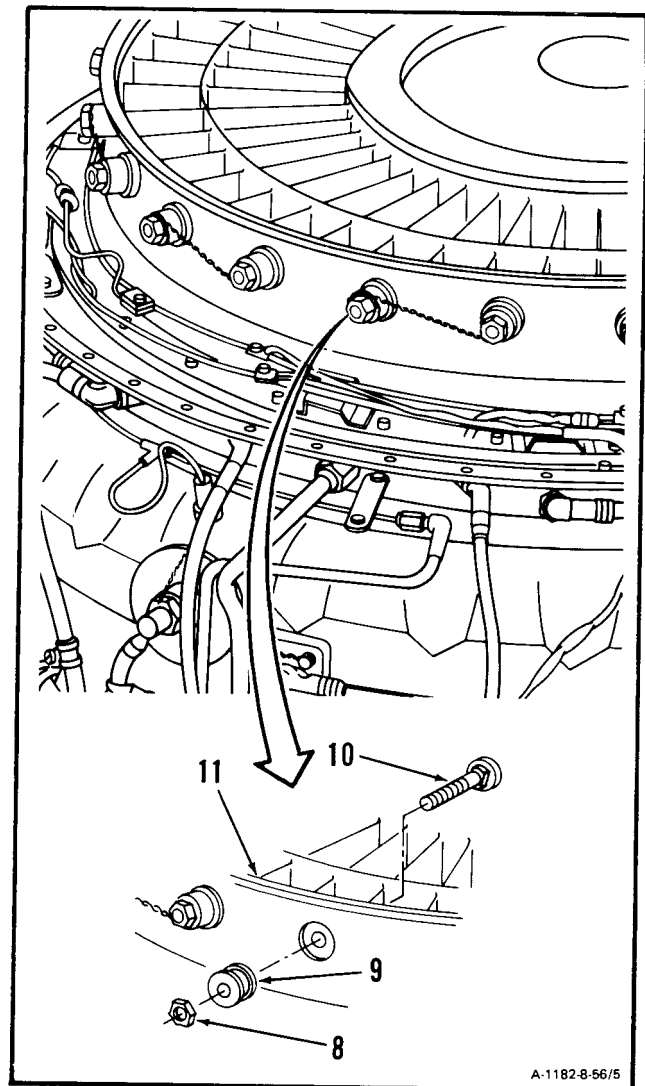


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**8-56 REMOVE TUBE ASSEMBLY (NO. 4 AND 5 BEARING SCAVENGE CONNECTOR
TO HOSE ASSEMBLY (Continued)**

8-56

4. **Remove** lockwire, nut (8), spacer (9), and bolt (10) from exit vane assembly (11).



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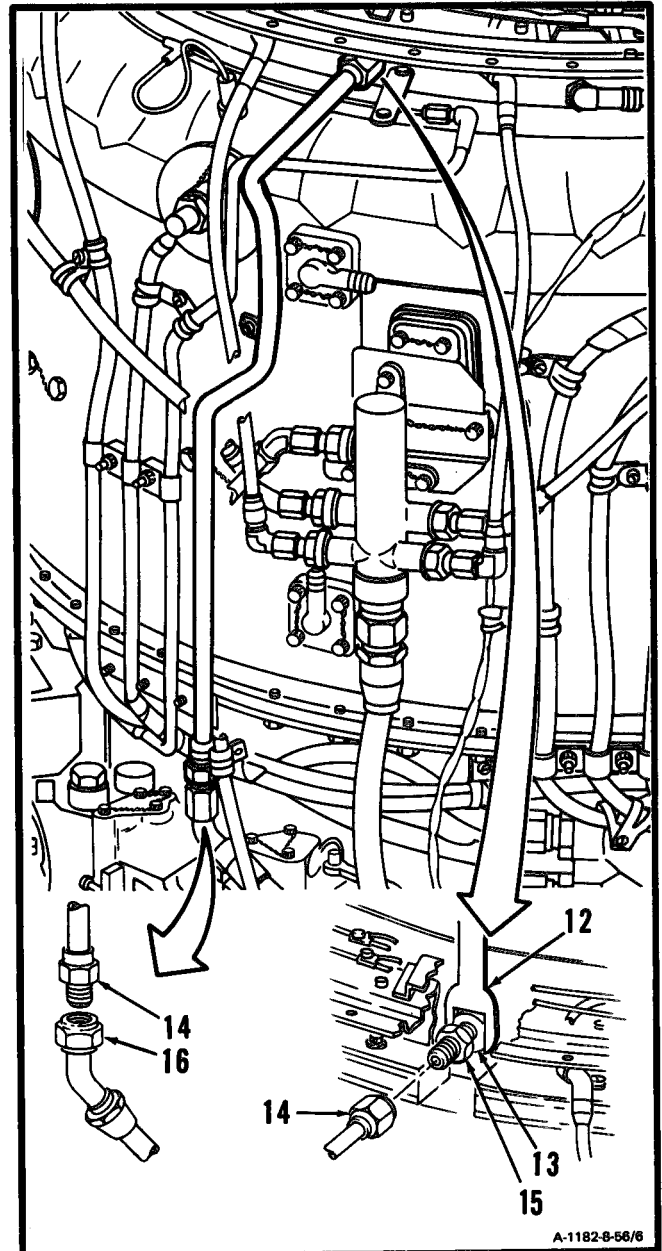
8-56 REMOVE TUBE ASSEMBLY (NO. 4 AND 5 BEARING SCAVENGE CONNECTOR TO HOSE ASSEMBLY (Continued)

8-56

CAUTION

In following step, hold No. 4 and 5 bearing scavenge adapter using open-end wrench (T53). Failure to use wrench may result in damage and mislocation of oil transfer tube resulting in oil leaks.

5. Place open-end wrench (T53) (12) on No. 4 and 5 bearing scavenge adapter (13).
6. Disconnect tube assembly (14) from reducer (15).
7. Disconnect tube assembly (14) from hose assembly (16).



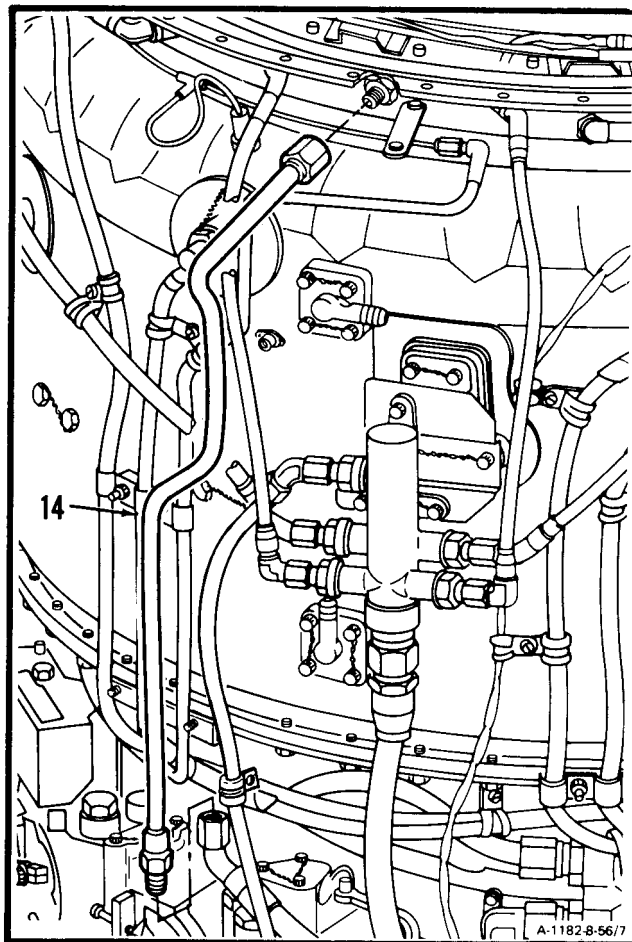
A-1182-8-56/6

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**8-56 REMOVE TUBE ASSEMBLY (NO. 4 AND 5 BEARING SCAVENGE CONNECTOR
TO HOSE ASSEMBLY) (Continued)**

8-56

8. Remove tube assembly (14).



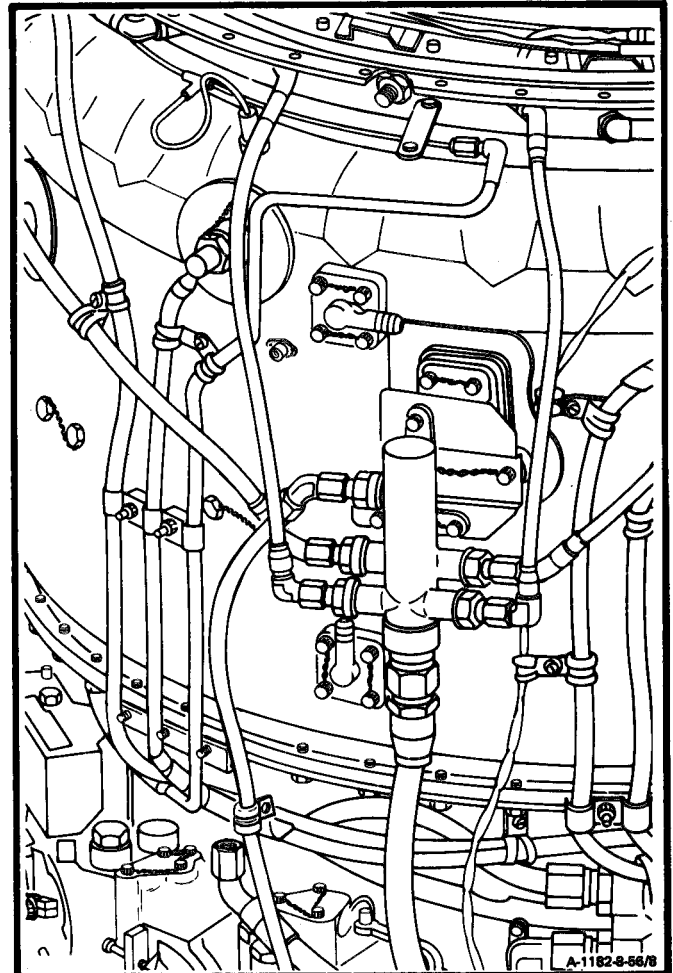
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**8-56 REMOVE TUBE ASSEMBLY (NO. 4 AND 5 BEARING SCAVENGE CONNECTOR
TO HOSE ASSEMBLY) (Continued)**

8-56

FOLLOW-ON MAINTENANCE:

None

**END OF TASK**

**8-57 INSTALL TUBE ASSEMBLY (NO. 4 AND 5 BEARING SCAVENGE CONNECTOR
TO HOSE ASSEMBLY)**

8-57

INITIAL SETUP

Applicable Configurations:

All

Tools:

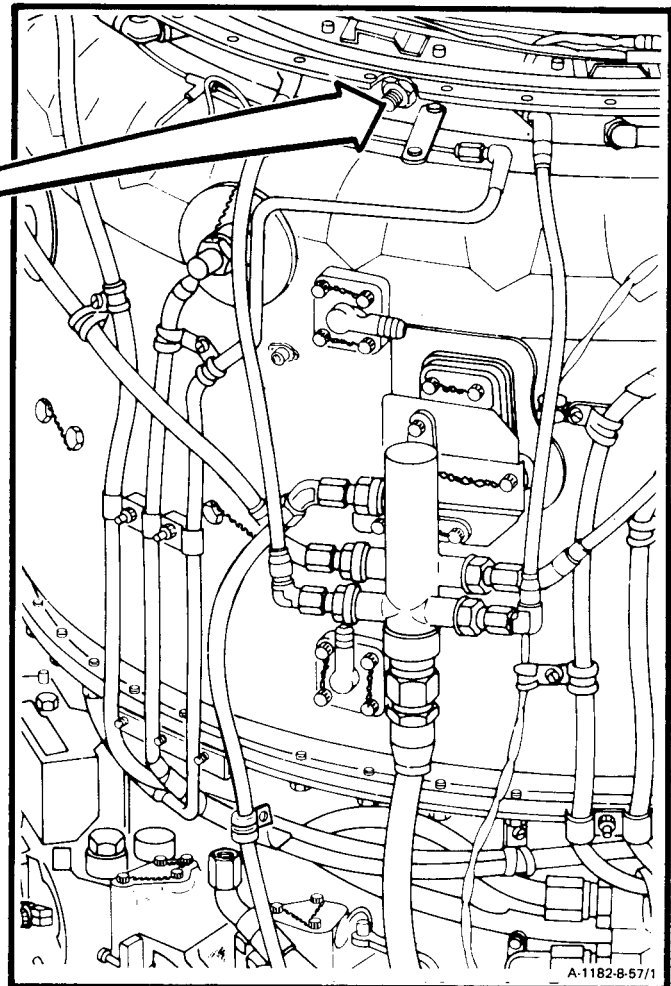
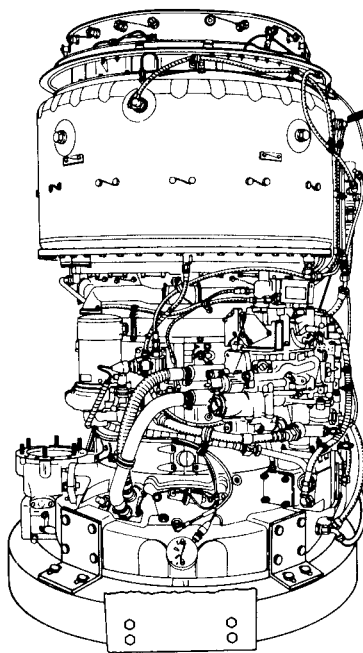
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114
Open-End Wrench (T53)
Torque Wrench, 30-150 Inch-Pounds

Materials:

Lockwire (E29)

Personnel Required:

68610 Aircraft Powerplant Repairer
68630 Aircraft Powerplant Inspector



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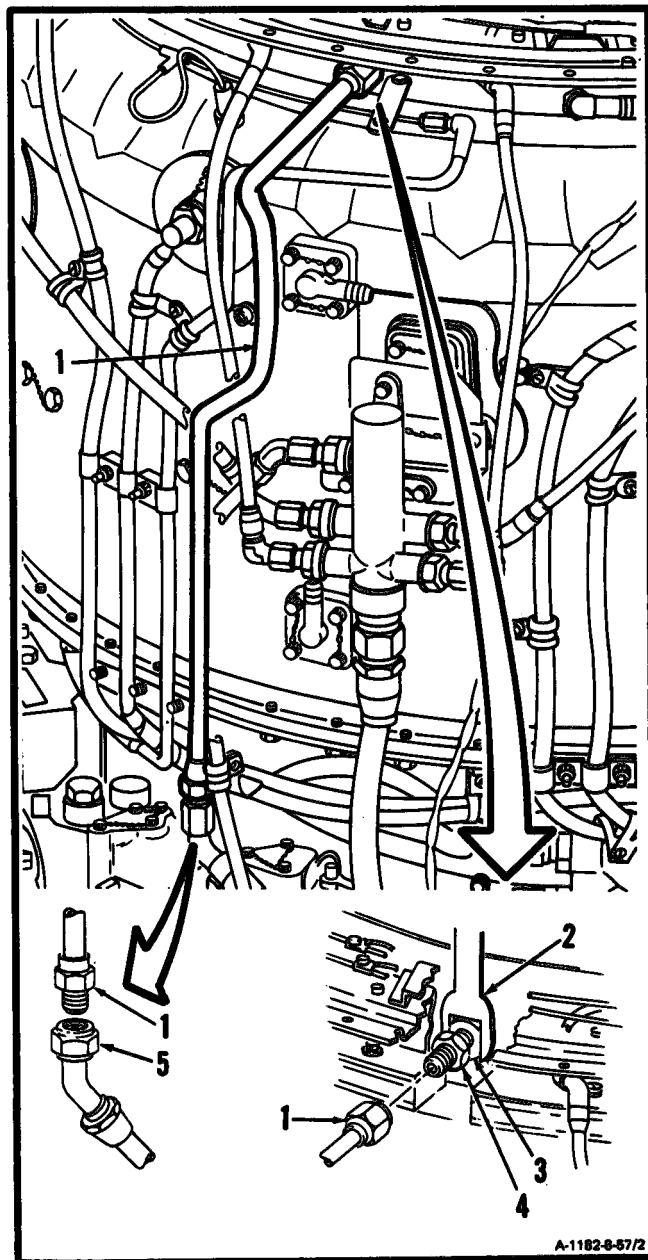
8-57 INSTALL TUBE ASSEMBLY (NO. 4 AND 5 BEARING SCAVENGE CONNECTOR TO HOSE ASSEMBLY) (Continued)

8-57

CAUTION

In following step, hold No. 4 and 5 bearing and scavenge adapter using open-end wrench (T53). Failure to use wrench may result in damage and mislocation of oil transfer tube resulting in oil leaks.

1. Install tube assembly (1) as follows:
 - a. Place open-end wrench (T53) (2) on No. 4 and 5 bearing scavenge adapter (3).
 - b. Connect tube assembly (1) to reducer (4).
 - c. Connect tube assembly (1) to hose assembly (5).

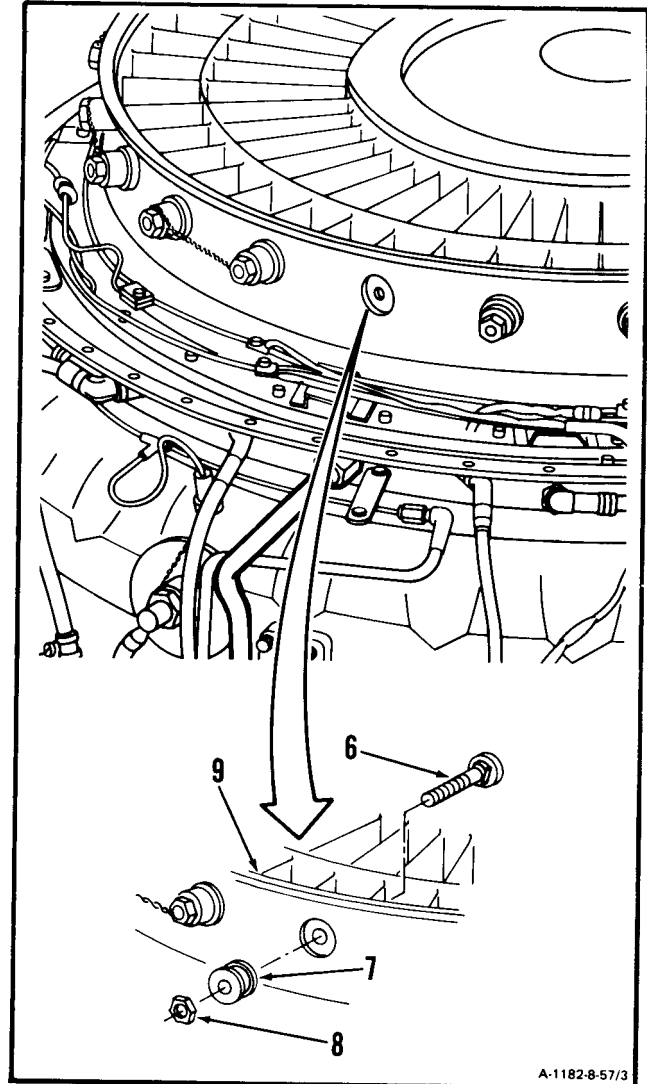


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8-57 INSTALL TUBE ASSEMBLY (NO. 4 AND 5 BEARING SCAVENGE CONNECTOR TO HOSE ASSEMBLY) (Continued)

8-57

2. **Install bolt (6), spacer (7) and nut (8) in exit vane assembly (9). Torque nut (8) to 125-inch-pounds.**

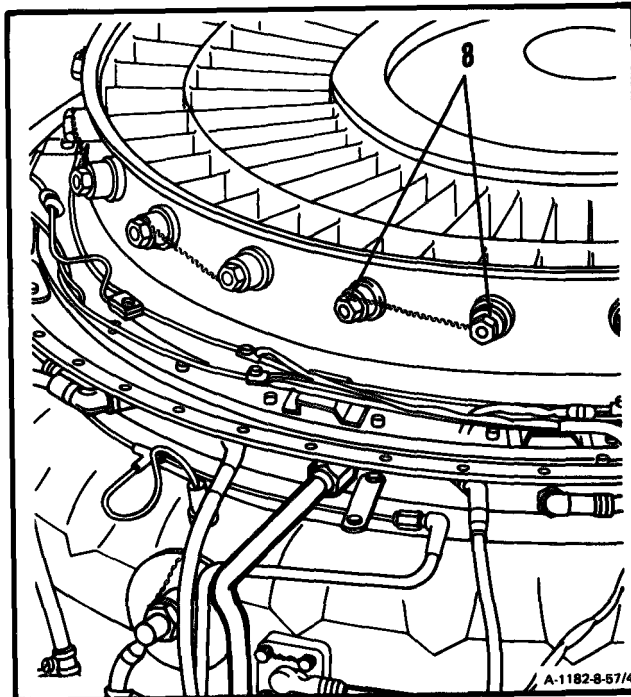


A-1182-8-57/3

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**8-57 INSTALL TUBE ASSEMBLY (NO. 4 AND 5 BEARING SCAVENGE CONNECTOR
TO HOSE ASSEMBLY) (Continued)**

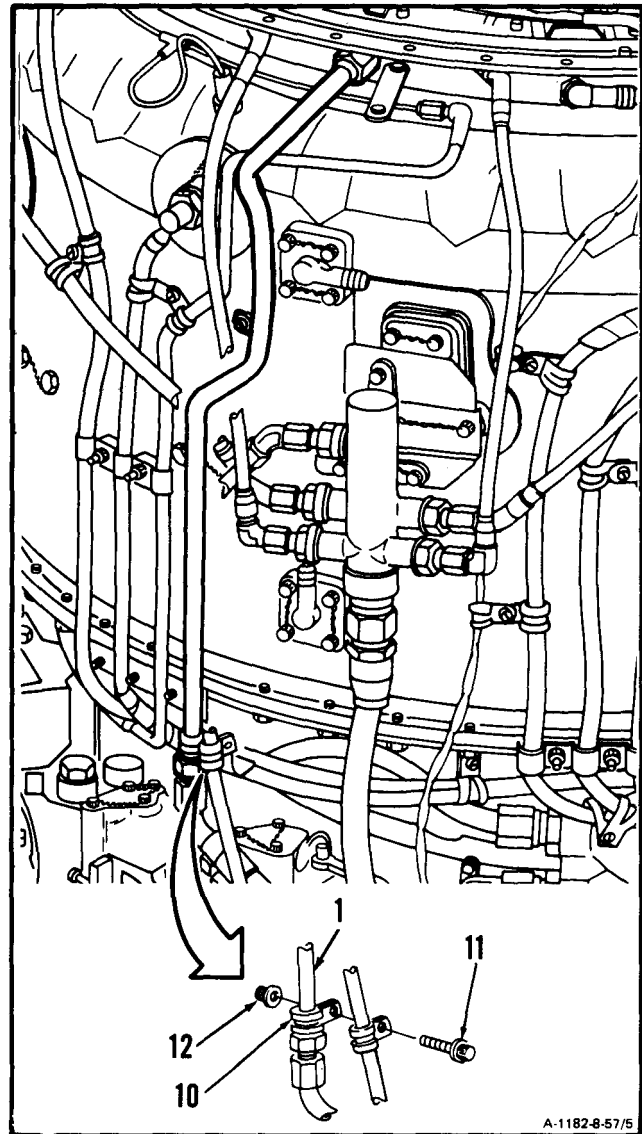
3. LockWire nuts (8) together. Use lockwire (E29).



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8-57 INSTALL TUBE ASSEMBLY (NO. 4 AND 5 BEARING SCAVENGE CONNECTOR TO HOSE ASSEMBLY) (Continued)

4. **Install clamp (10)** on tube assembly (1), and install screw (11) and nut (12).



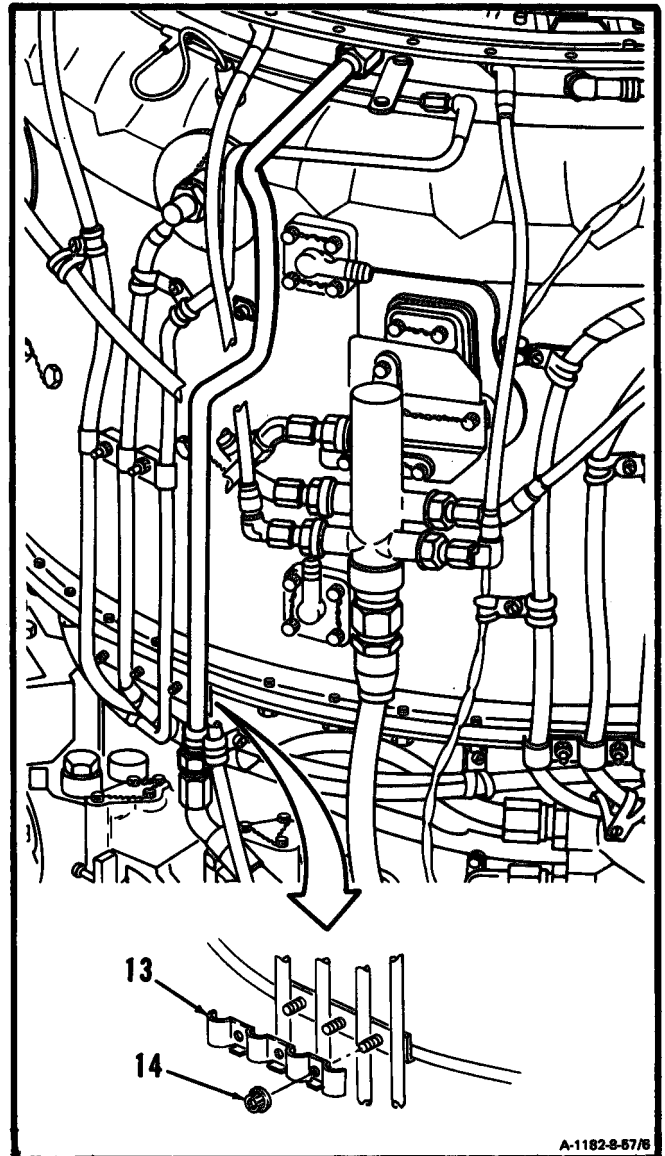
A-1182-8-57/5

GO TO NEXT PAGE

8-57 INSTALLTUBE ASSEMBLY (No. 4 AND 5 BEARING SCAVENGE CONNECTOR TO HOSE ASSEMBLY) (Continued)

8-57

5. Install strap (13) and three nuts (14).

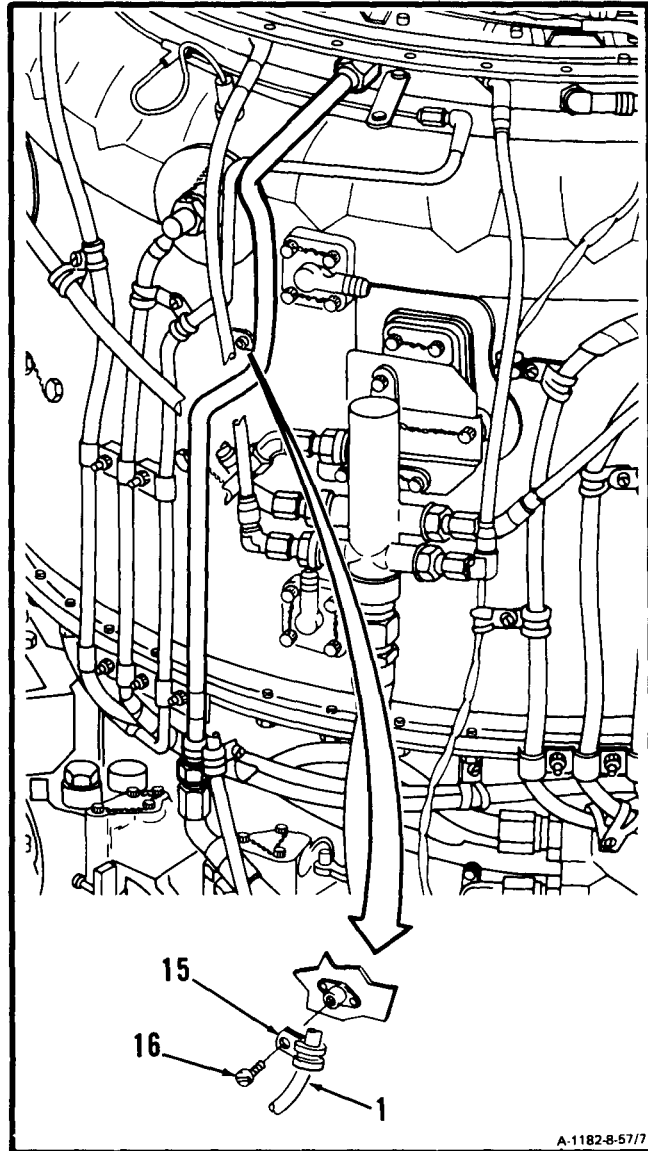


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**8-57 INSTALL TUBE ASSEMBLY (NO. 4 AND 5 BEARING SCAVENGE CONNECTOR
TO HOSE ASSEMBLY) (Continued)**

8-57

6. **Install clamp (15)** on tube assembly (1), and install screw (16). Lockwire screw. Use lockwire (E29).

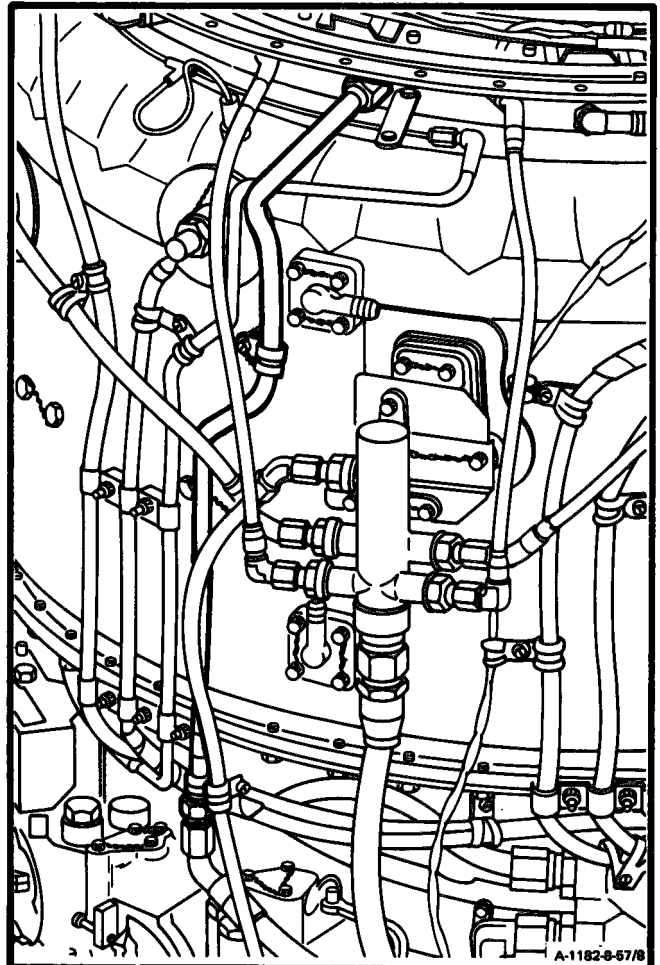
**INSPECT****GO TO NEXT PAGE**

8-57 INSTALL TUBE ASSEMBLY (NO. 4 AND 5 BEARING SCAVENGE CONNECTOR TO HOSE ASSEMBLY) (Continued)

8-57

FOLLOW-ON MAINTENANCE:

None

**END OF TASK**

8-58 REMOVE HOSE ASSEMBLY (PRESSURE CONNECTOR TO NO. 4 AND 5 BEARING FILTER)

8-58

INITIAL SETUP

Applicable Configurations:

All

Tools:

Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Container, 1 Quart
Open-End Wrench (T53)

Materials:

Wiping Rag (E58)

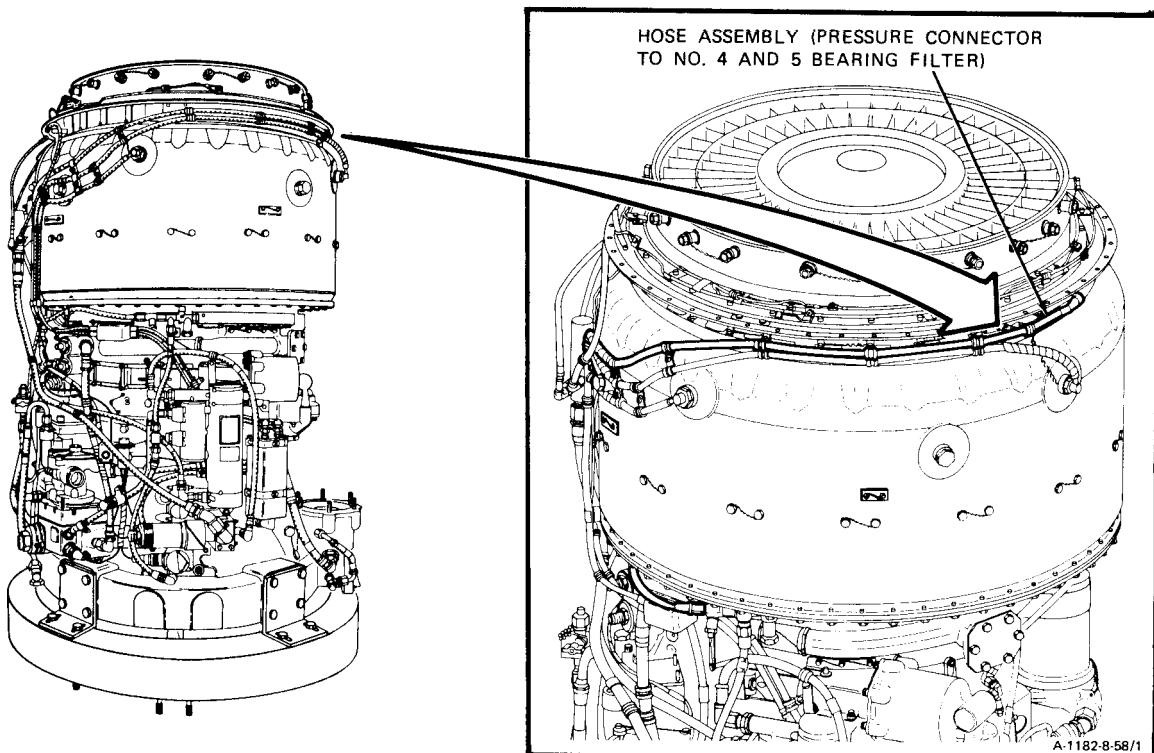
Personnel Required:

68B10 Aircraft Powerplant Repairer

General Safety Instructions:

WARNING

Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin, and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.

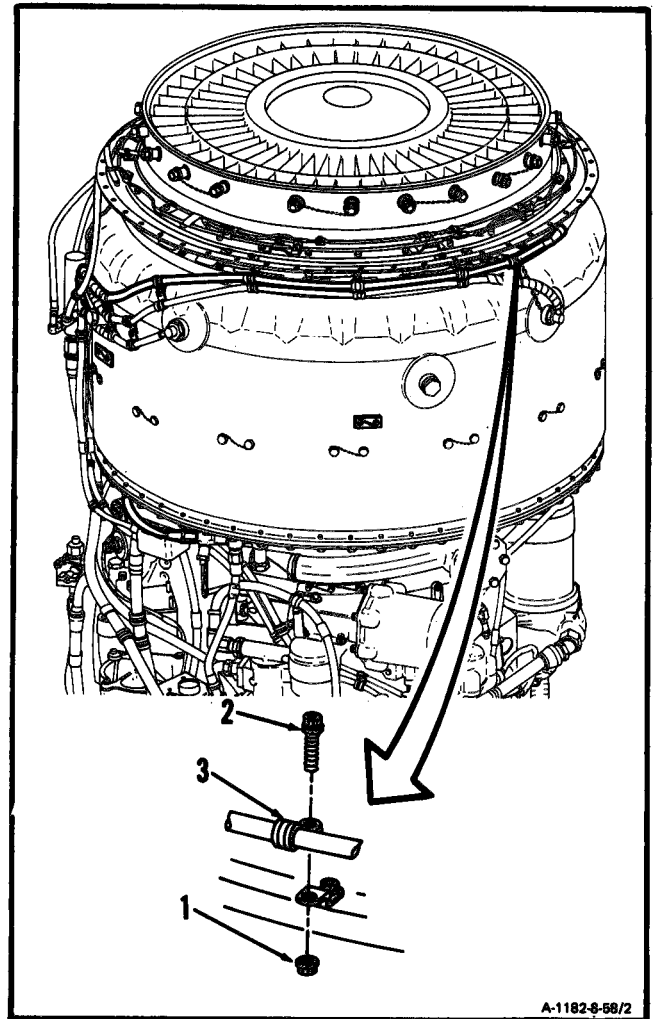


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8-58 REMOVE HOSE ASSEMBLY (PRESSURE CONNECTOR TO NO. 4 AND 5 BEARING FILTER) (Continued)

8-58

1. Remove nut (1), bolt (2), and clamp (3).

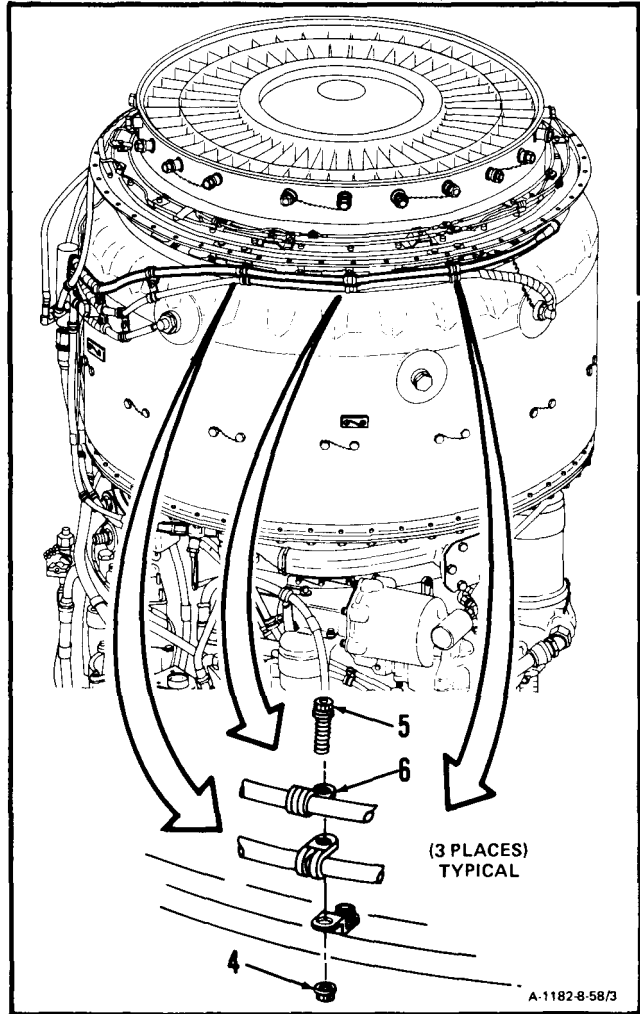


A-1182-9-58/2

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8-58 REMOVE HOSE ASSEMBLY (PRESSURE CONNECTOR TO NO. 4 AND 5 BEARING FILTER) (Continued)

2. Remove three nuts (4), bolts (5), and clamps (6).

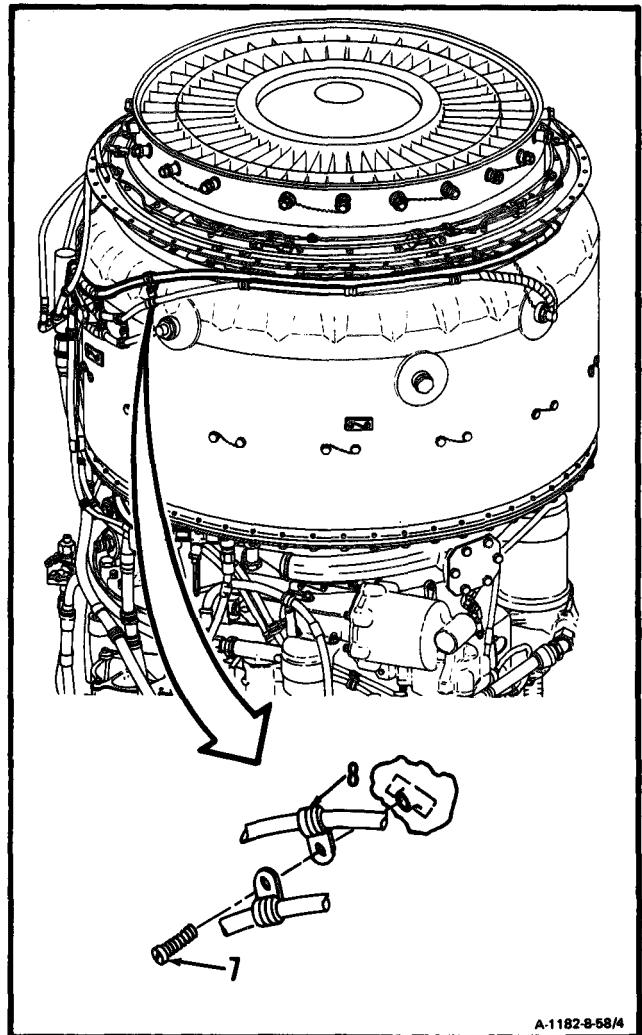


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8-58 REMOVE HOSE ASSEMBLY (PRESSURE CONNECTOR TO NO. 4 AND 5 BEARING FILTER) (Continued)

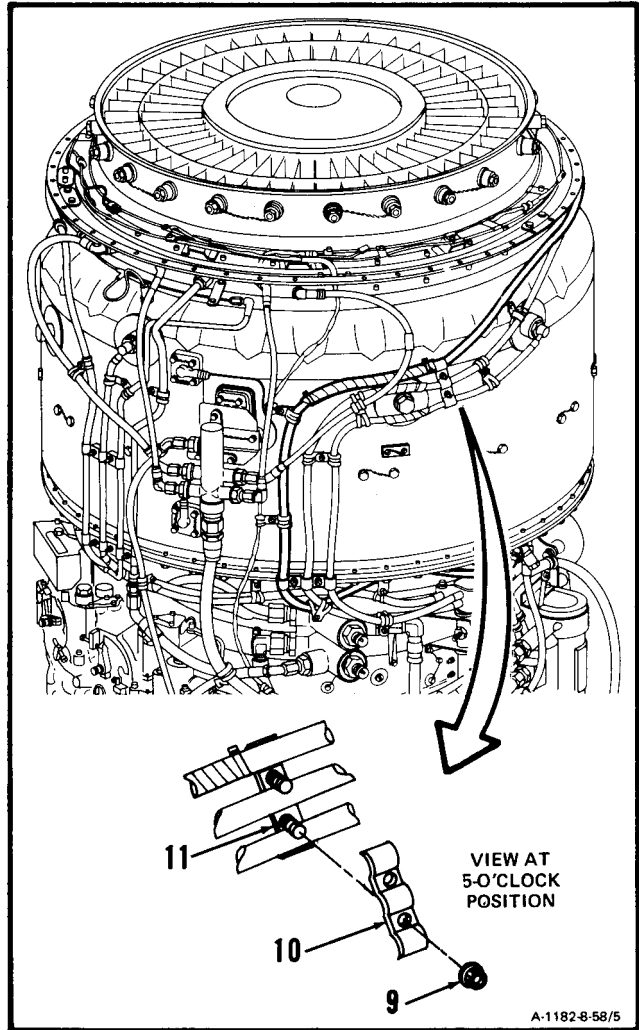
8-58

3. Remove lockwire, screw (7), and clamp (8).



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4. Remove two nuts (9) and clamps (10 and 11).

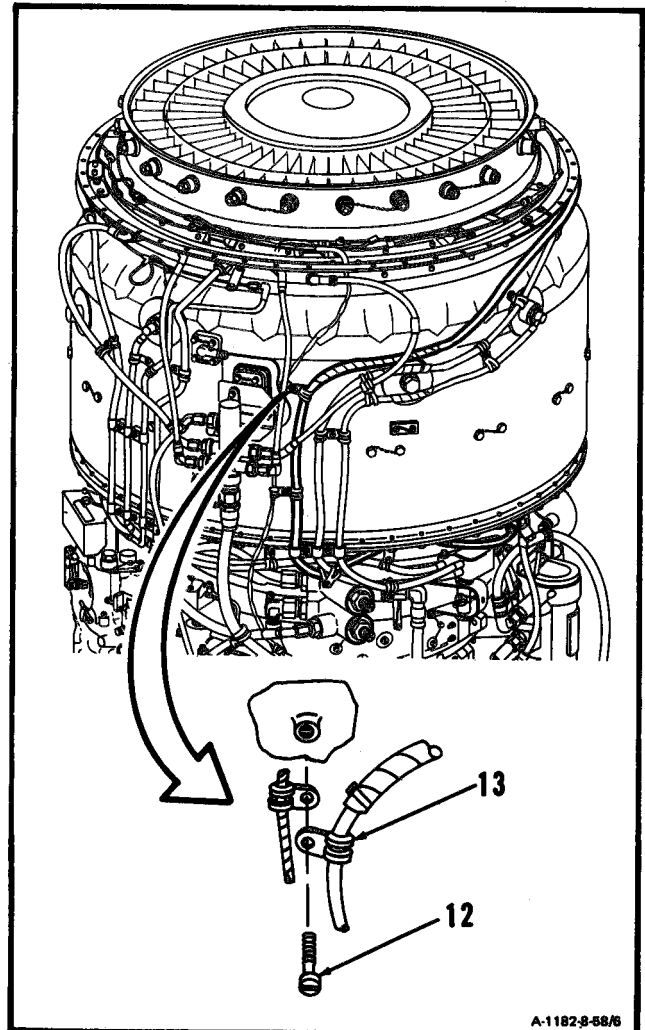


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8-58 REMOVE HOSE ASSEMBLY (PRESSURE CONNECTOR TO NO. 4 AND 5 BEARING FILTER) (Continued)

8-58

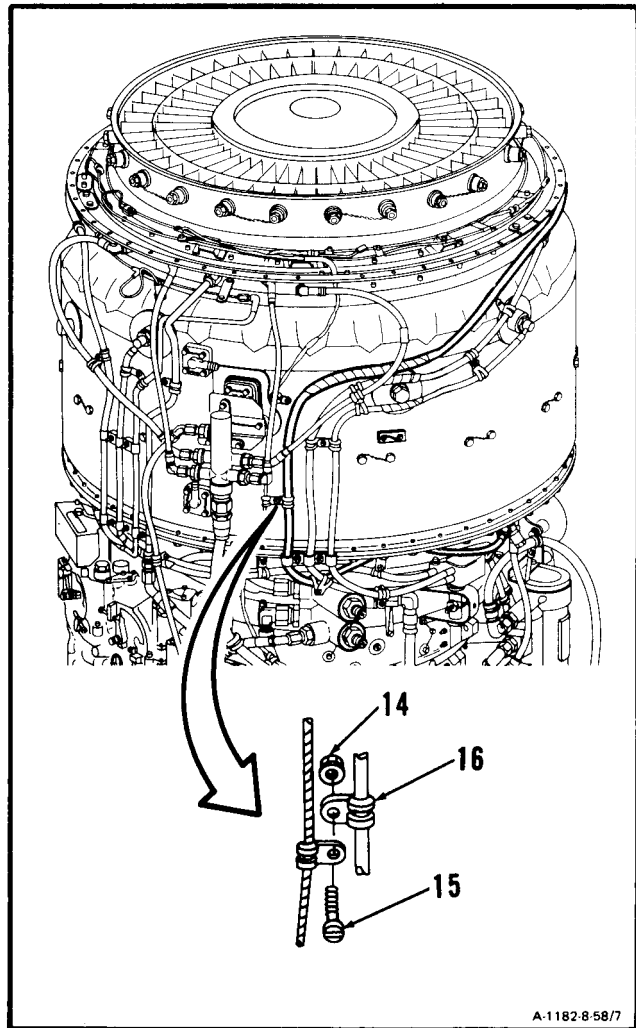
5. Remove lockwire, screw (12), and clamp (13).



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8-58 REMOVE HOSE ASSEMBLY (PRESSURE CONNECTOR TO NO. 4 AND 5 BEARING FILTER) (Continued)

6. Remove nut (14), screw (15), and clamp (16).

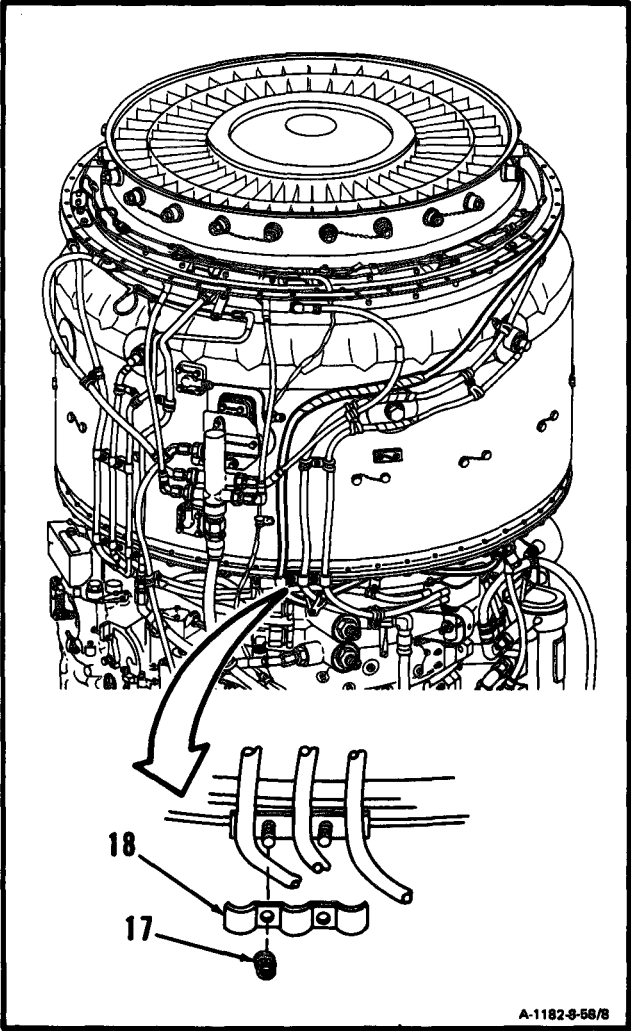


A-1182-8-58/7

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8-58 REMOVE HOSE ASSEMBLY (PRESSURE CONNECTOR TO NO. 4 AND 5 BEARING FILTER) (Continued)

7. Remove two nuts (17) and strap (18).

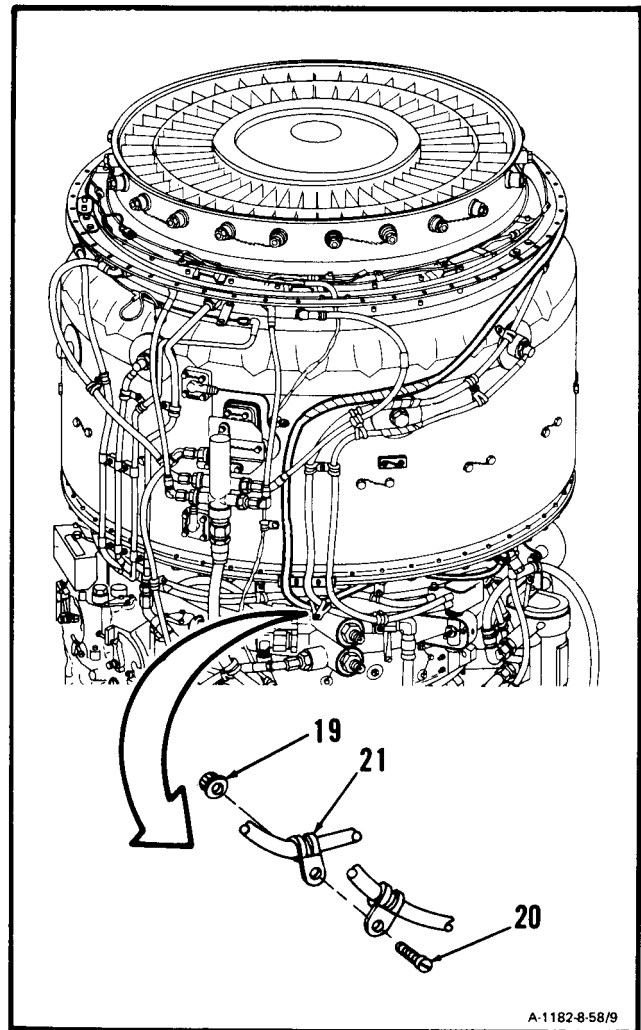


A-1182-8-58/8

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8-58 REMOVE HOSE ASSEMBLY (PRESSURE CONNECTOR TO NO. 4 AND 5 BEARING FILTER) (Continued)

8. Remove nut (19), screw (20), and clamp (21).



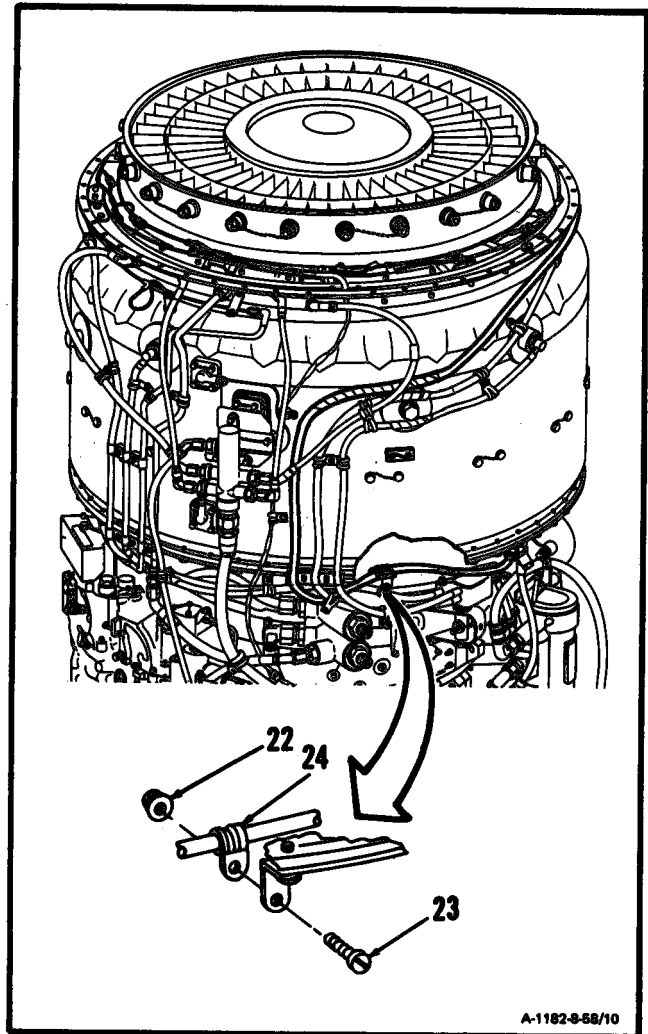
A-1182-8-58/9

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8-58 REMOVE HOSE ASSEMBLY (PRESSURE CONNECTOR TO NO. 4 AND 5 BEARING FILTER) (Continued)

8-58

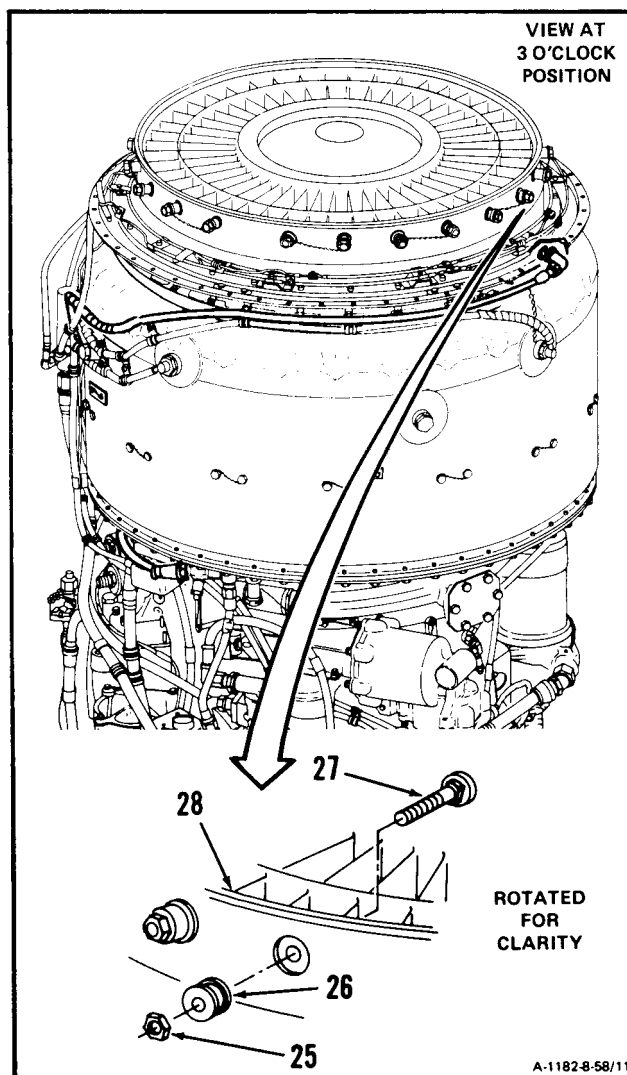
9. Remove nut (22), screw (23), and clamp (24).



GO TO NEXT PAGE

8-58 REMOVE HOSE ASSEMBLY (PRESSURE CONNECTOR TO NO. 4 AND 5 BEARING FILTER) (Continued)

10. Remove lockwire, nut (25), spacer (26), and bolt (27), from exit vane assembly (28).



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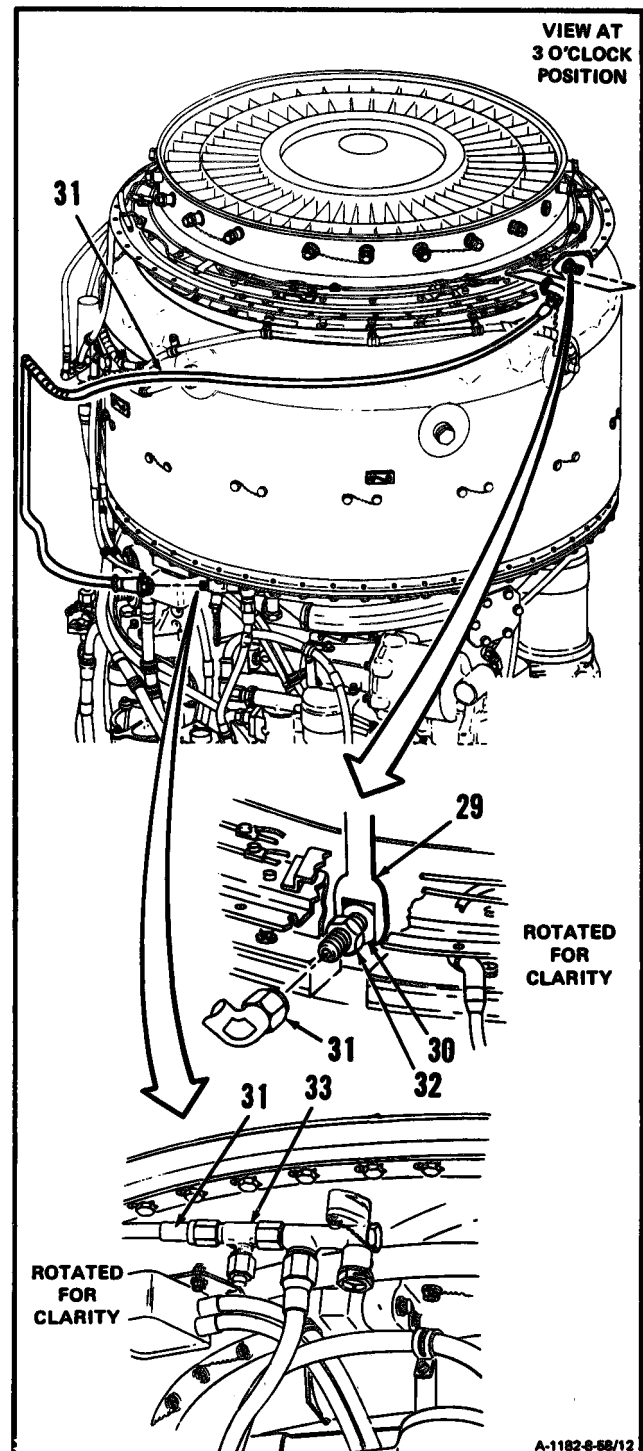
8-58 REMOVE HOSE ASSEMBLY (PRESSURE CONNECTOR TO NO. 4 AND 5 BEARING LUBE ADAPTER) (Continued)

8-58

CAUTION

In following step, hold No. 4 and 5 bearing lube adapter using open-end wrench (T53). Failure to use wrench may result in damage and dislocation of oil transfer tube resulting in oil leaks.

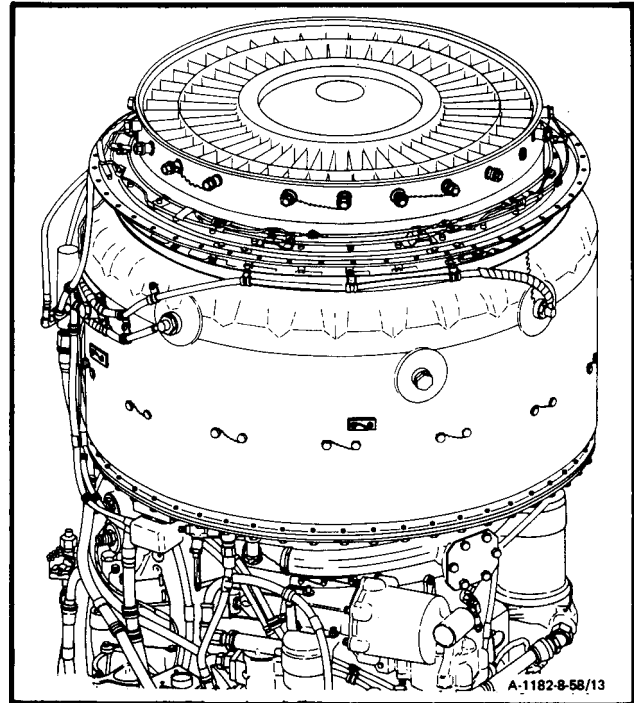
11. Place open-end wrench (T53) (29) on No. 4 and 5 bearing lube adapter (30).
12. Disconnect hose assembly (31) from reducer (32).
13. Disconnect hose assembly (31) from oil tee and snubber (33) and remove hose assembly (31).



GO TO NEXT PAGE

FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-59 INSTALL HOSE ASSEMBLY (PRESSURE CONNECTOR TO NO. 4 AND 5 BEARING FILTER)

8-59

INITIAL SETUP

Applicable Configurations:

All

Tools:

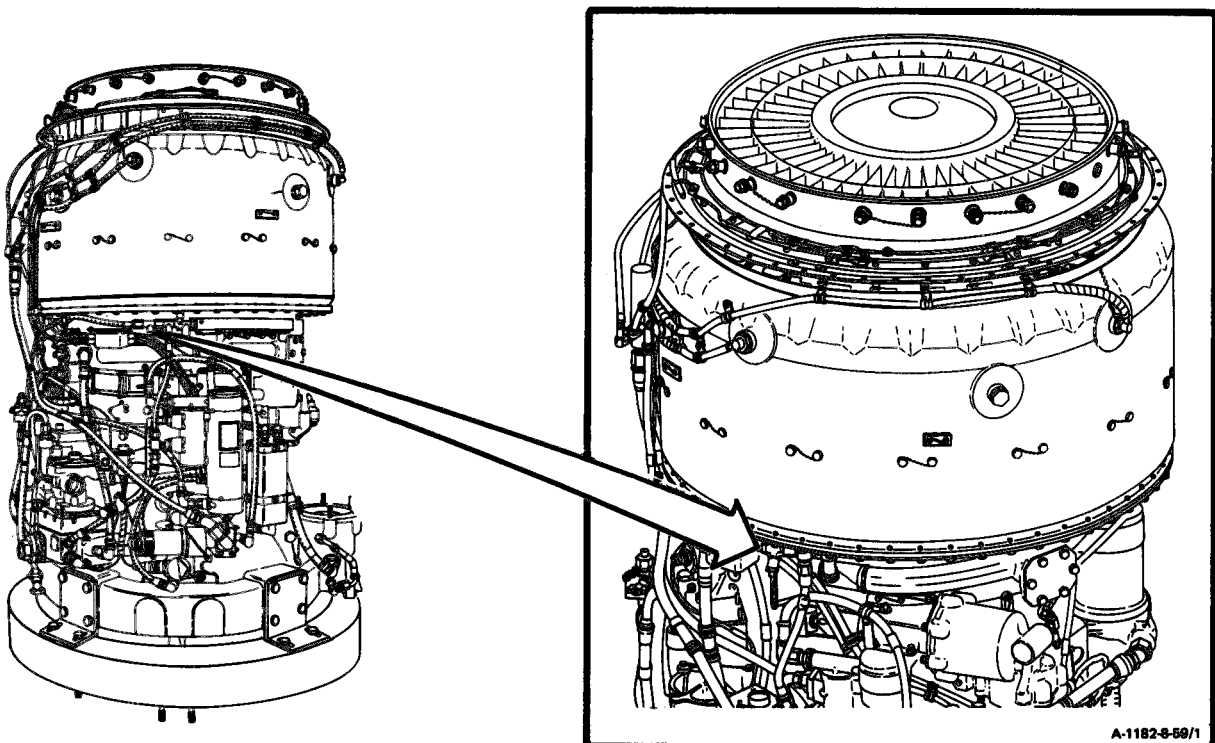
- Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
- Technical Inspection Tool Kit,
NSN 5180-00-323-5114
- Open-End Wrench (T53)
- Torque Wrench, 30-150 Inch-Pounds

Materials:

Lockwire (E29)

Personnel Required:

- 68B10 Aircraft Powerplant Repairer
- 68B30 Aircraft Powerplant Inspector

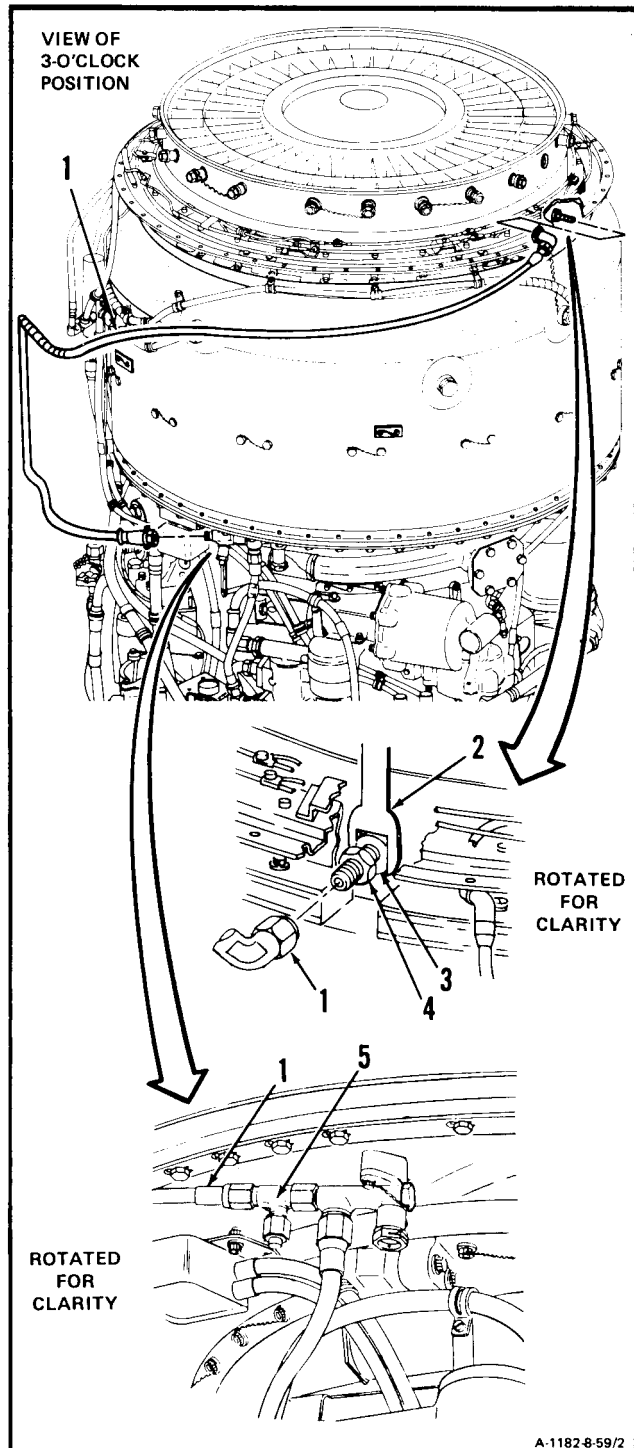


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CAUTION

In following step, hold No. 4 and 5 bearing lube adapter, using open-end wrench (T53). Failure to use wrench may result in damage and dislocation of oil transfer tube resulting in oil leaks.

1. Install hose assembly (1) as follows:
 - a. Place open-end wrench (T53) (2) on No. 4 and 5 bearing lube adapter (3).
 - b. Connect hose assembly (1) to reducer (4).
 - c. Connect hose assembly (1) to tee and snubber (5).

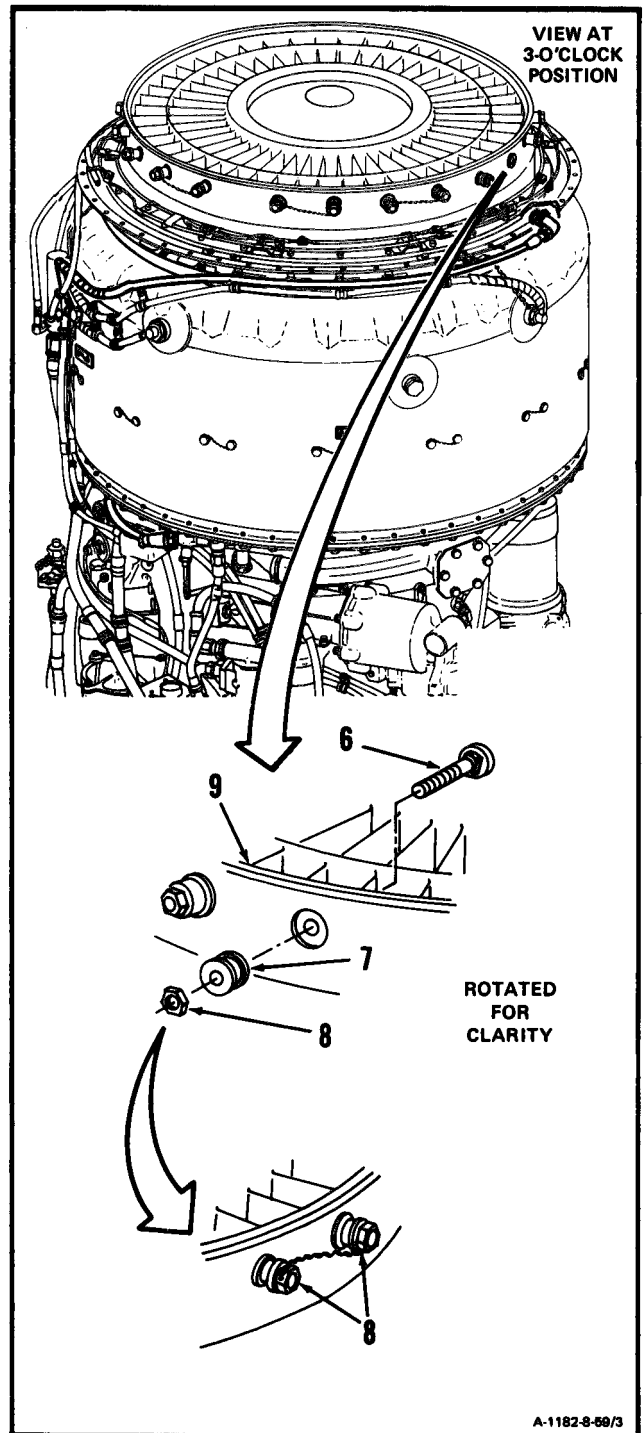


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8-59 INSTALL HOSE ASSEMBLY (PRESSURE CONNECTOR TO NO. 4 AND 5 BEARING FILTER) (Continued)

8-59

2. Install bolt (6), spacer (7), and nut (8) in exit vane assembly (9). Torque nut (8) to 125 inch-pounds.

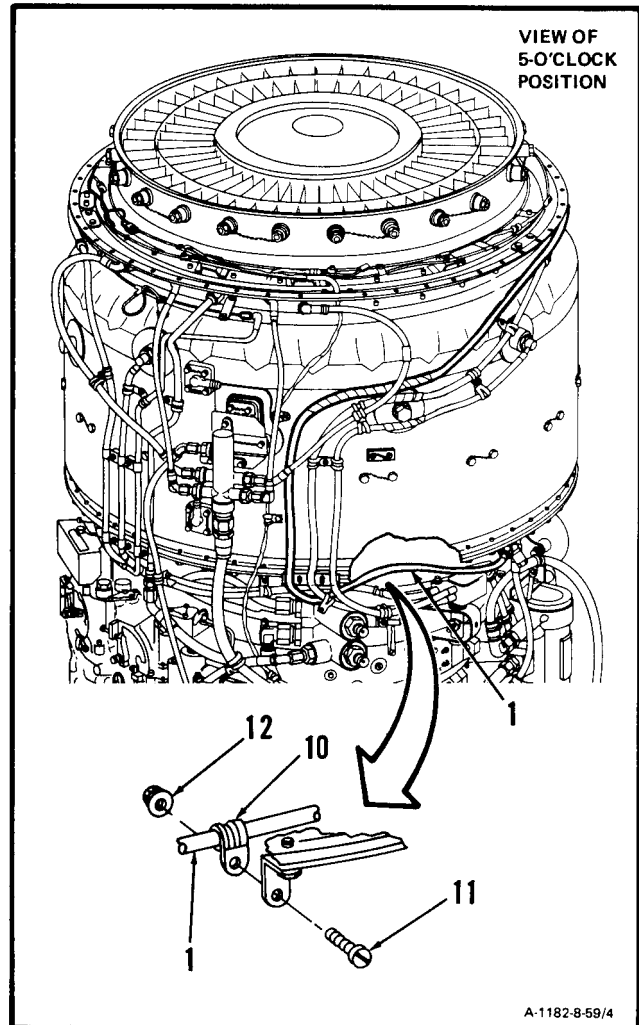


3. Lockwire nuts (8) together. Use lockwire (E29).

GO TO NEXT PAGE

8-59 INSTALL HOSE ASSEMBLY (PRESSURE CONNECTOR TO NO. 4 AND 5 BEARING FILTER) (Continued)

4. **Install clamp (10)** on hose assembly (1), and install screw (11) and nut (12).

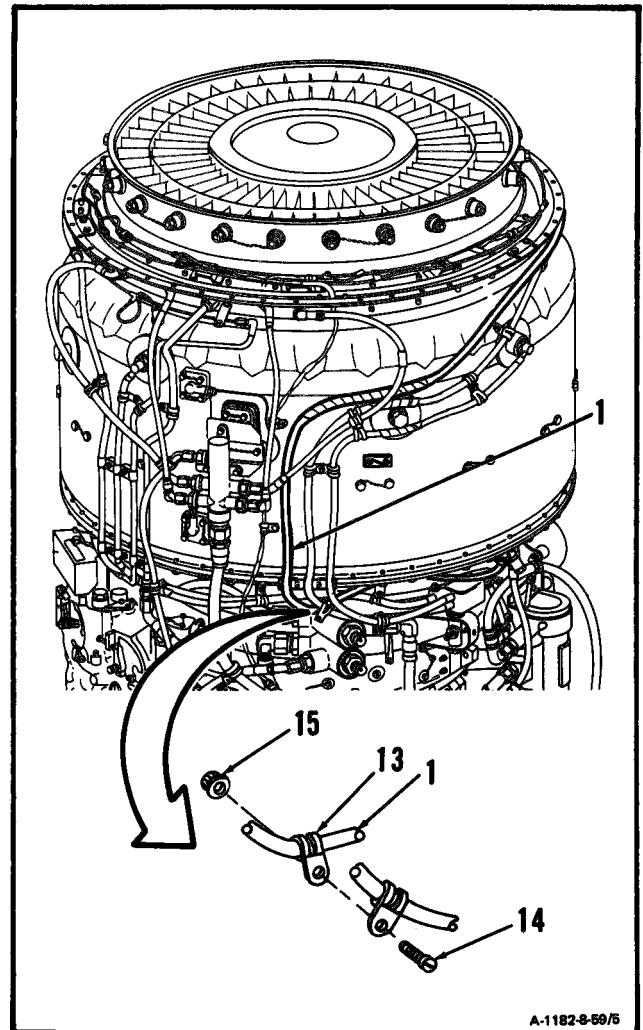


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8-59 INSTALL HOSE ASSEMBLY (PRESSURE CONNECTOR TO NO. 4 AND 5 BEARING FILTER) (Continued)

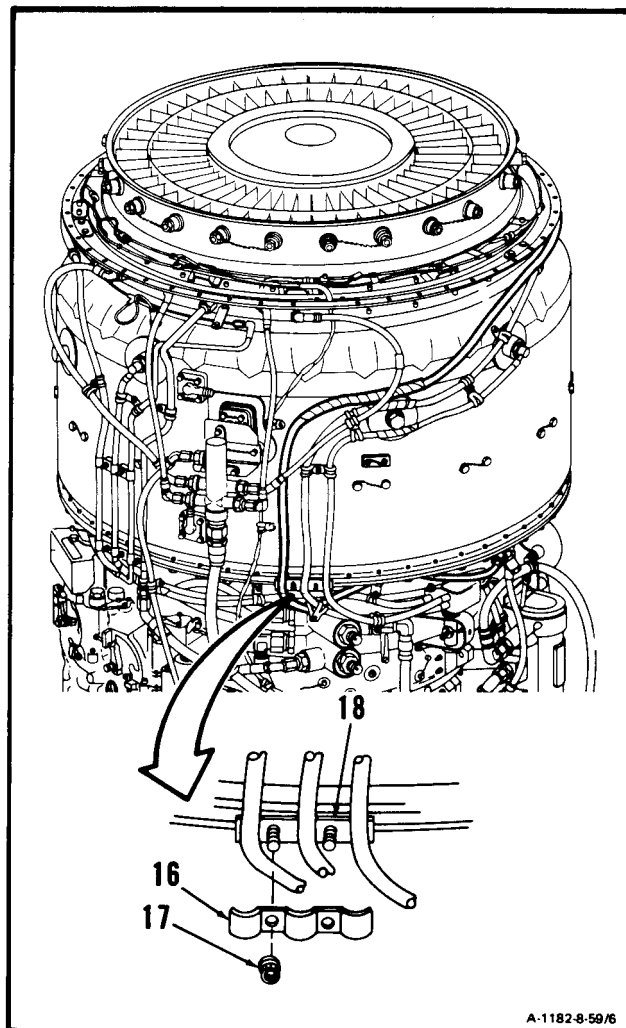
8-59

5. **Install clamp (13)** on hose assembly (1), and install screw (14) and nut (15).



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6. Install strap (16) and two nuts (17) on bracket (18).



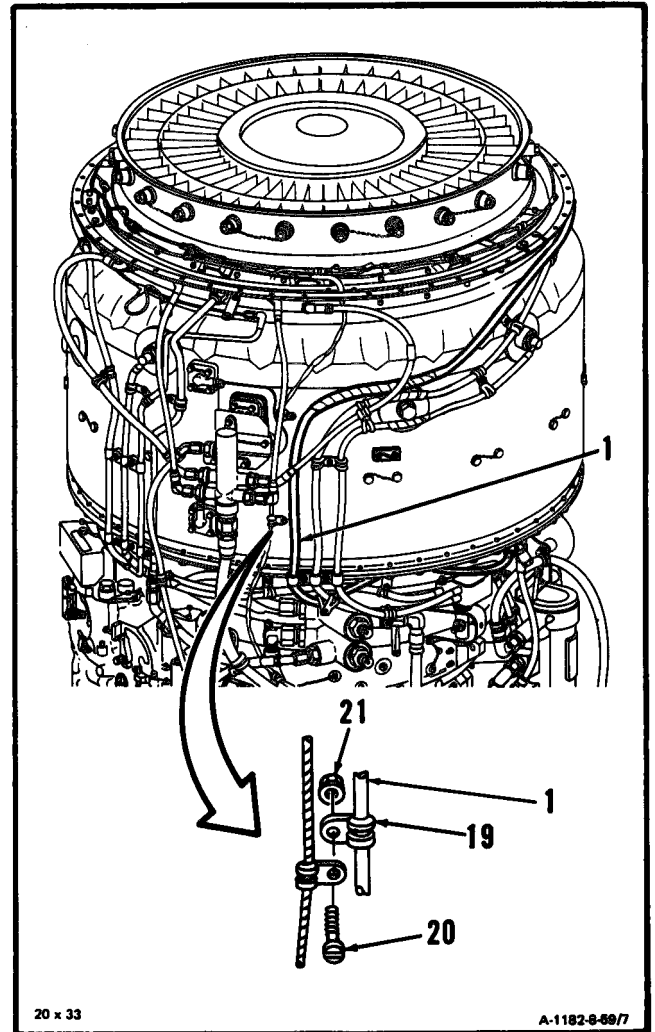
A-1182-8-59/6

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8-59 INSTALL HOSE ASSEMBLY (PRESSURE CONNECTOR TO NO. 4 AND 5 BEARING FILTER) (Continued)

8-59

7. **Install clamp (19)** on hose assembly (1), and install screw (20) and nut (21).

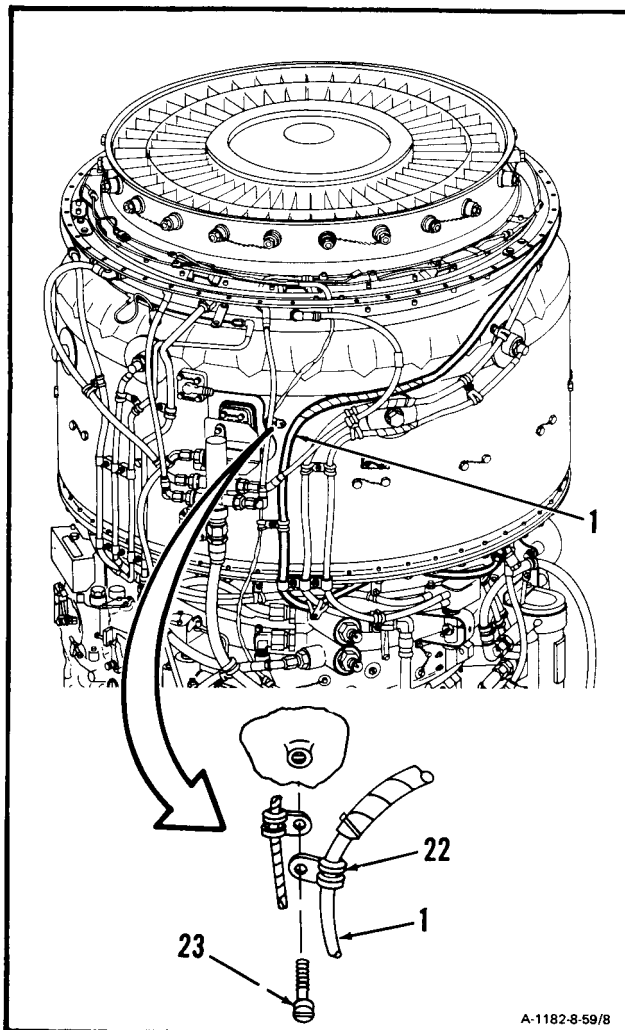


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8-59 INSTALL HOSE ASSEMBLY (PRESSURE CONNECTOR TO NO. 4 AND 5 BEARING FILTER) (Continued)

8-59

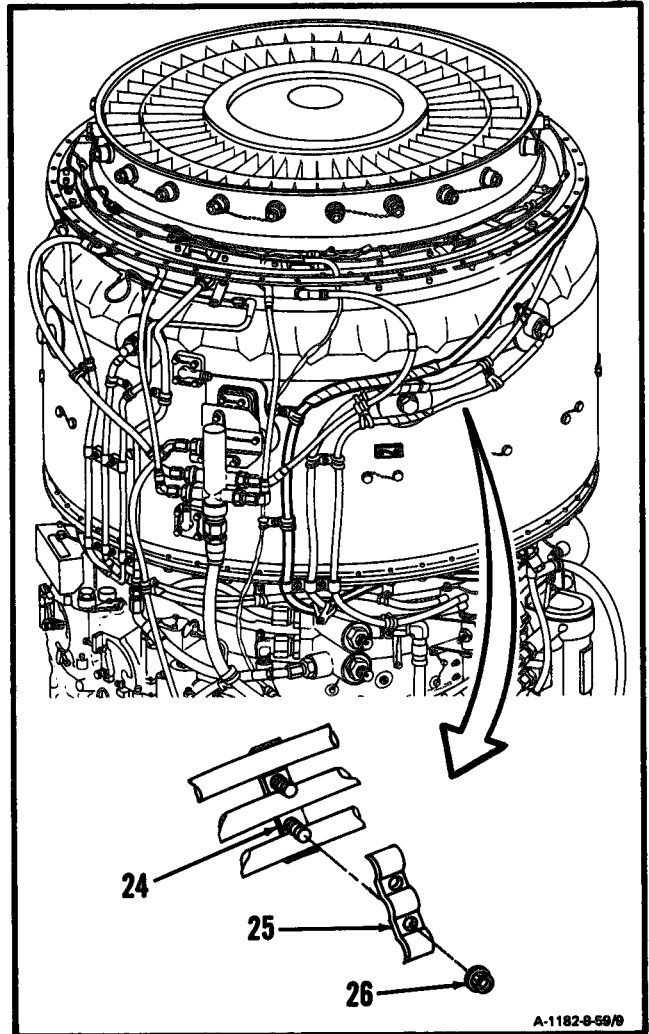
8. Install clamp (22) on hose assembly (1), and install screw (23). Lockwire screw. Use lockwire (E29).

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8-59 INSTALL HOSE ASSEMBLY (PRESSURE CONNECTOR TO NO. 4 AND 5 BEARING FILTER) (Continued)

8-59

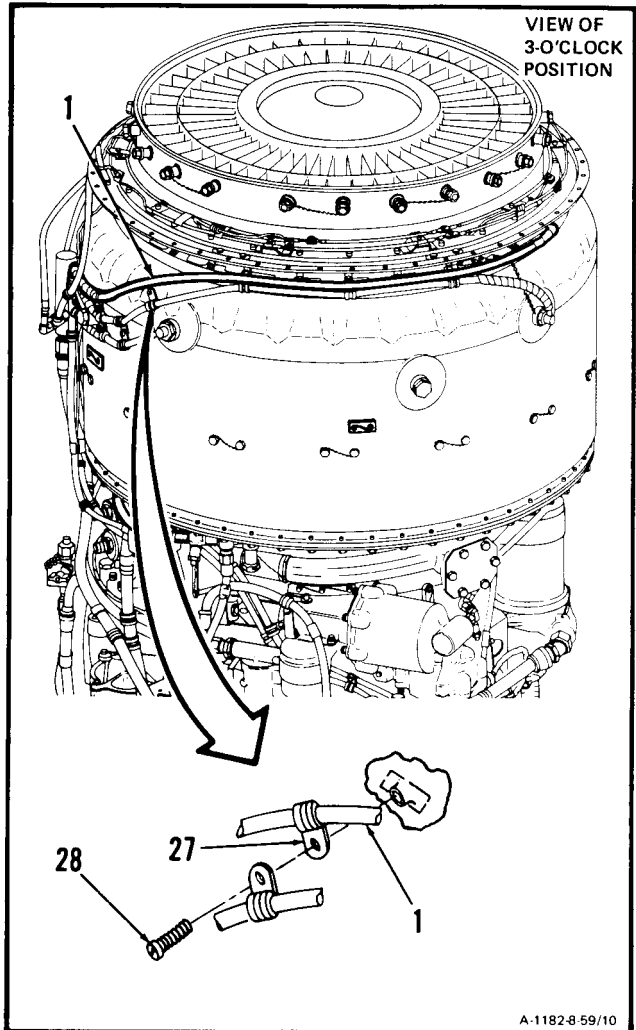
9. Install clamps (24 and 25) and two nuts (26).



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8-59 INSTALL HOSE ASSEMBLY (PRESSURE CONNECTOR TO NO. 4 AND 5 BEARING FILTER) (Continued)

10. **Install clamp (27)** on hose assembly (1) and install screw (28). Lockwire screw. Use lockwire (E29).

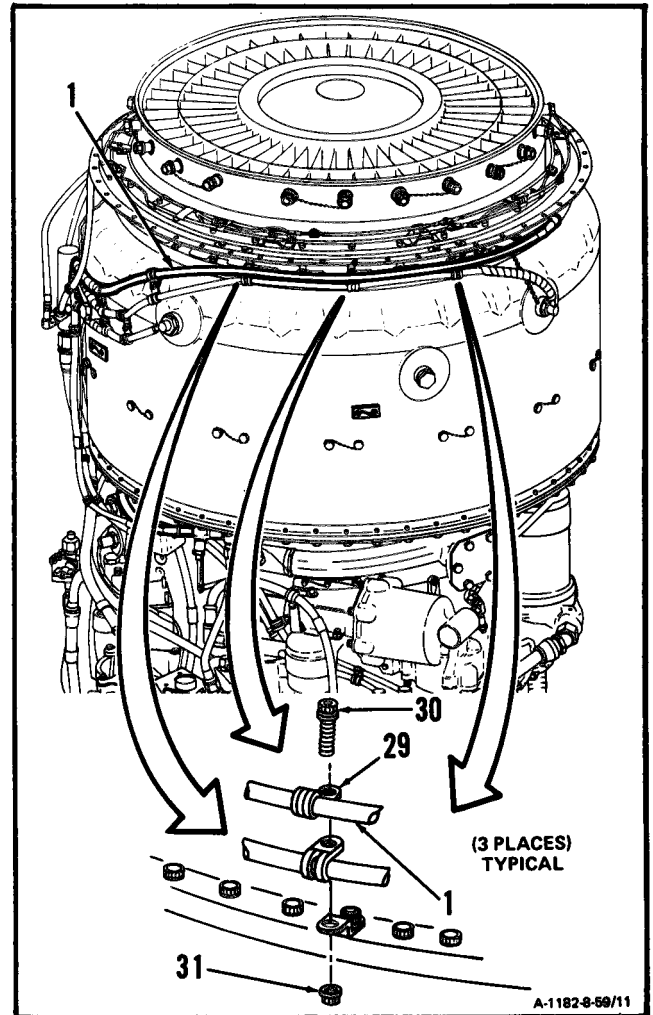


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8-59 INSTALL HOSE ASSEMBLY (PRESSURE CONNECTOR TO NO. 4 AND 5 BEARING FILTER) (Continued)

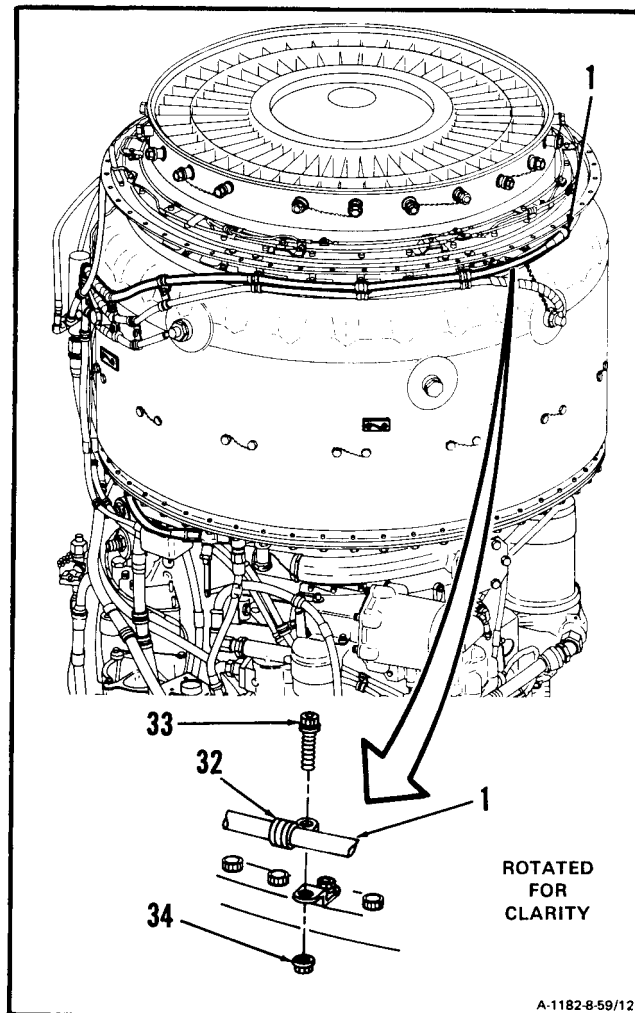
8-59

11. Install three clamps (29) on hose assembly (1), and install three bolts (30) and nuts (31).



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12. Install clamp (32) on hose assembly (1), and install bolt (33) and nut (34).



INSPECT

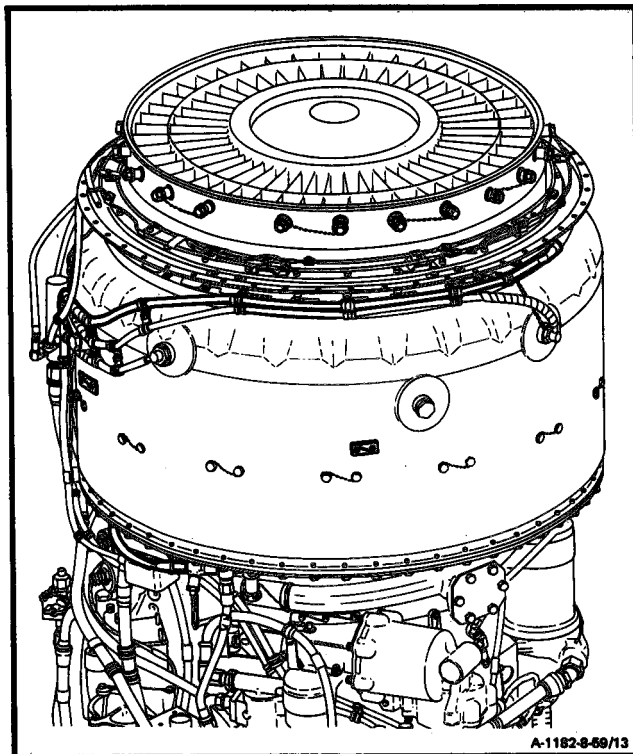
GO TO NEXT PAGE

**8-59 INSTALL HOSE ASSEMBLY (PRESURE CONNECTOR To NO. 4 AND 5 BEARING
FILTER) (Continued)**

8-59

FOLLOW-ON MAINTENANCE:

None

**END OF TASK**

8-60 REMOVE HOSE ASSEMBLY (INLET HOUSING TO OIL SCAVENGE TEE)

8-60

INITIAL SETUP

Applicable Configurations:

All

Tools:

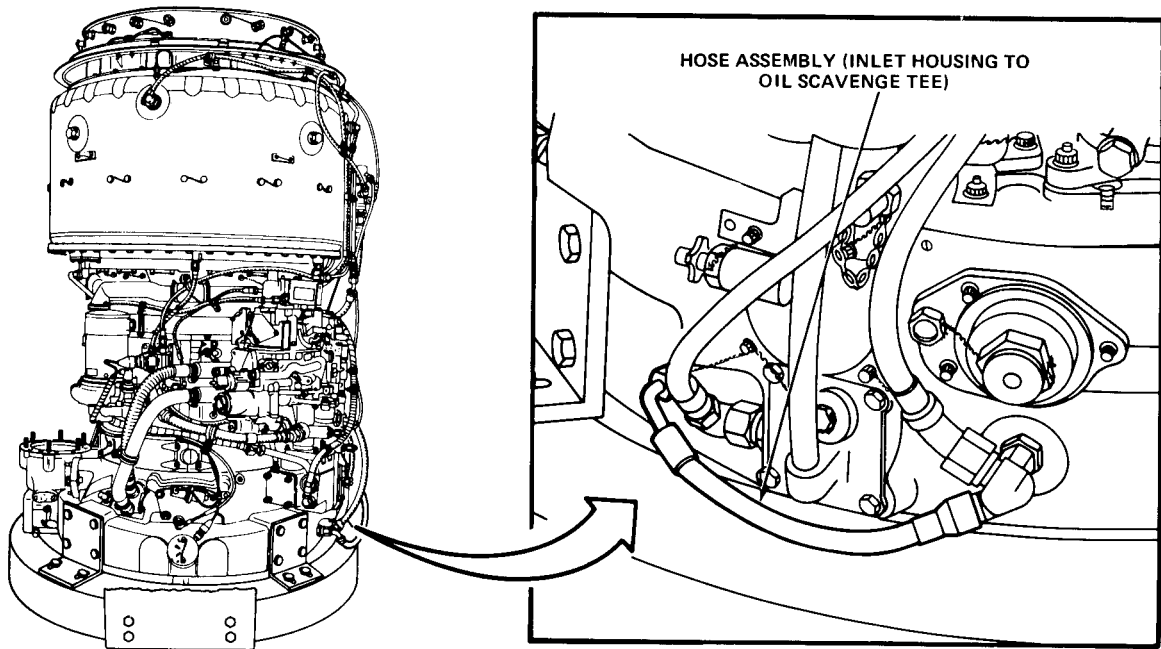
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Container, 1 -Quart

Materials:

Wiping Rag (E58)

Personnel Required:

68B10 Aircraft Powerplant Repairer



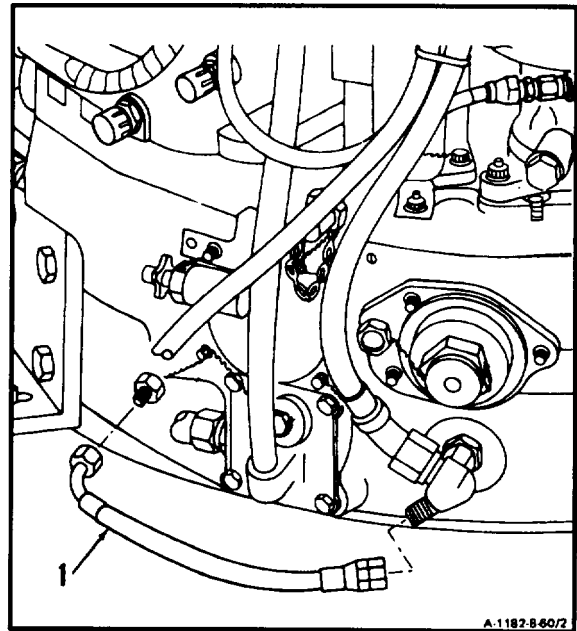
A-1182-8-60/1

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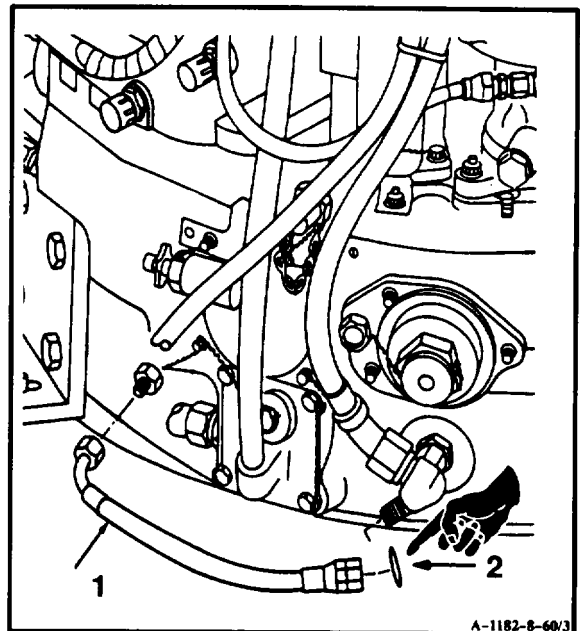
WARNING

Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin, and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.

1. Disconnect and remove hose assembly (1) and gasket (2).

**FOLLOW-ON MAINTENANCE:**

None



END OF TASK

INITIAL SETUP

Applicable Configurations:

All

Tools:

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

Materials:

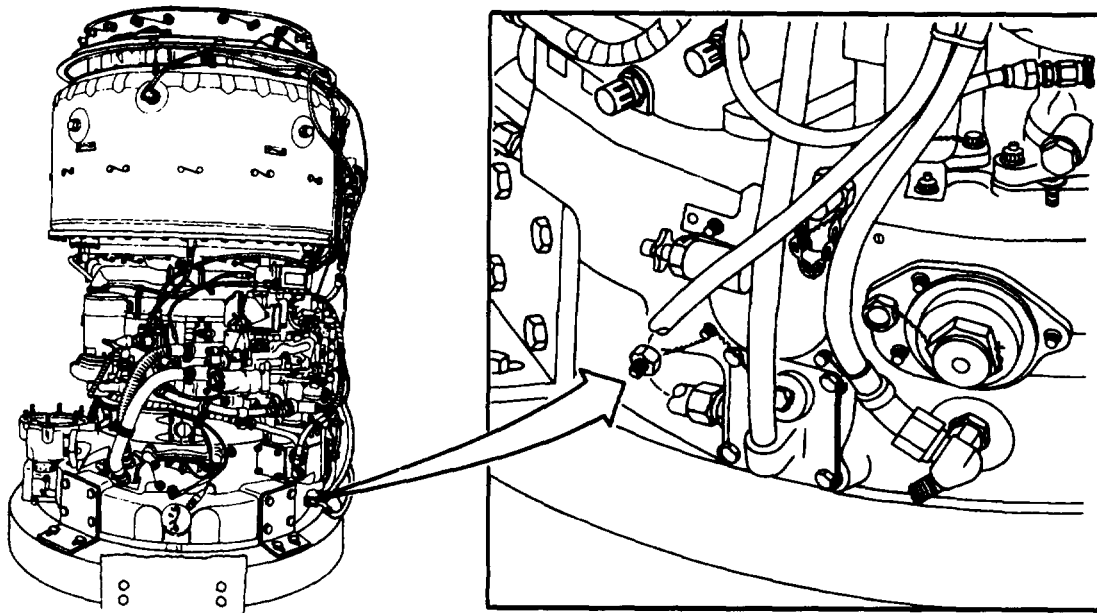
None

Parts:

Gasket

Personnel Required:

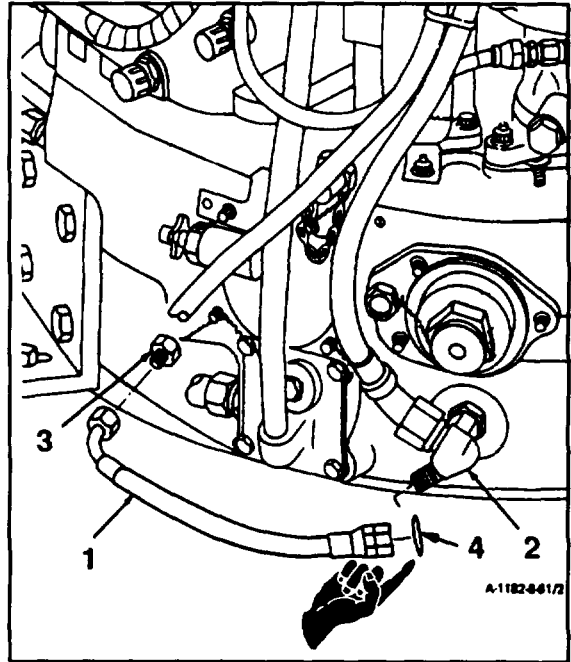
68B 10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector



A-1182-8-61/1

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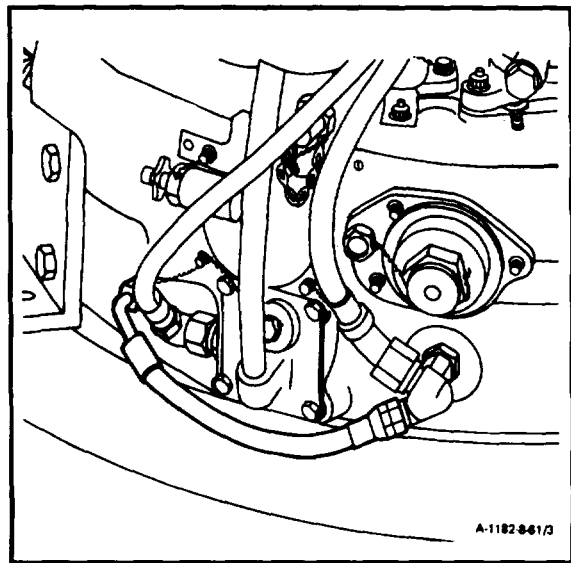
1. Install gasket (4) on oil scavenge tee (2) and install hose assembly (91) on oil scavenge tee (2) and fluid passage bolt (3).



INSPECT

FOLLOW-ON MAINTENANCE:

NONE



END OF TASK

8-62 REMOVE HOSE ASSEMBLY (INLET HOUSING TO OIL DRAIN COCK)

8-62

INITIAL SETUP**Applicable Configurations:**

All

Tools:

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

Materials:

Wiping Rag (E58)

Personnel Required:

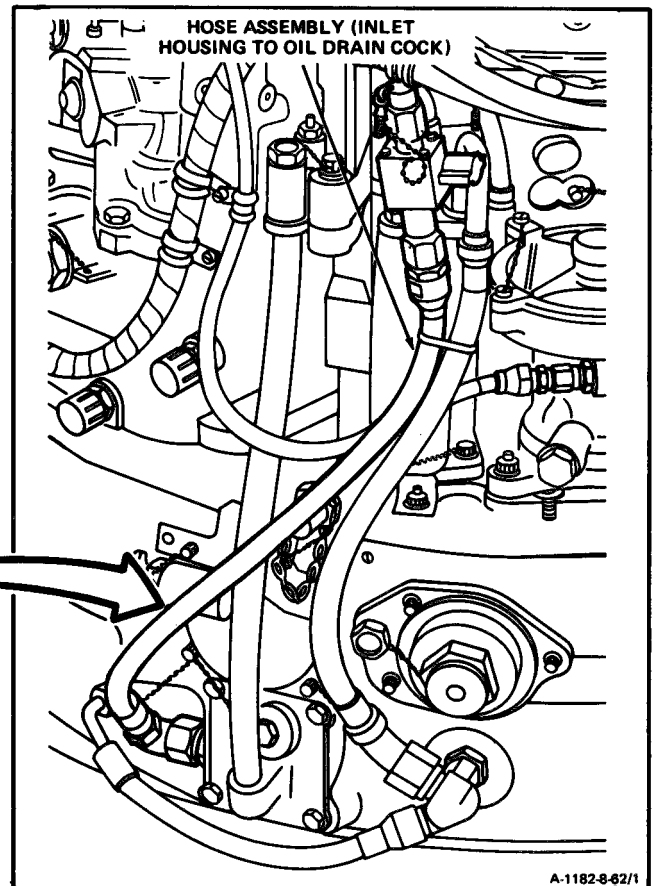
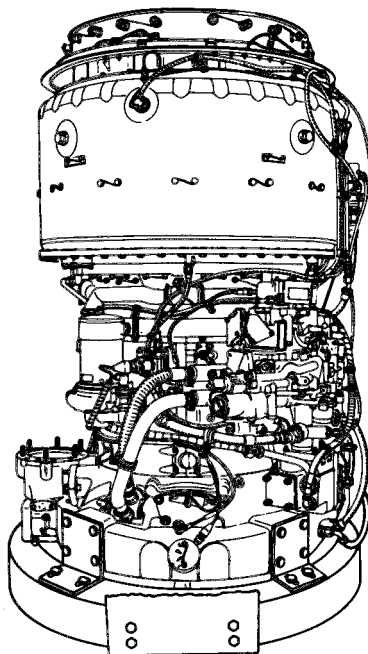
68B10 Aircraft Powerplant Repairer

Equipment Condition:

Engine Oil System Drained (Task 1-75)

General Safety Instructions:**WARNING**

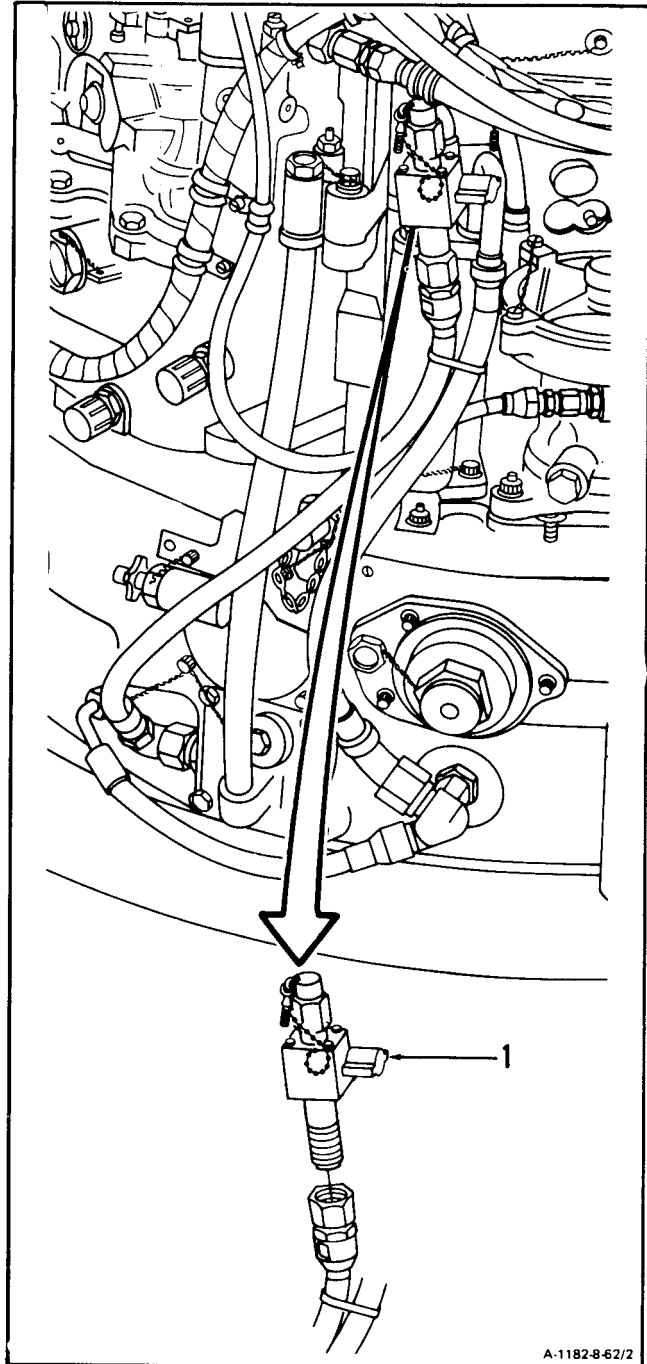
Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin, and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.



A-1182-8-62/1

GO TO NEXT PAGE

1. Remove oil drain cock (1).



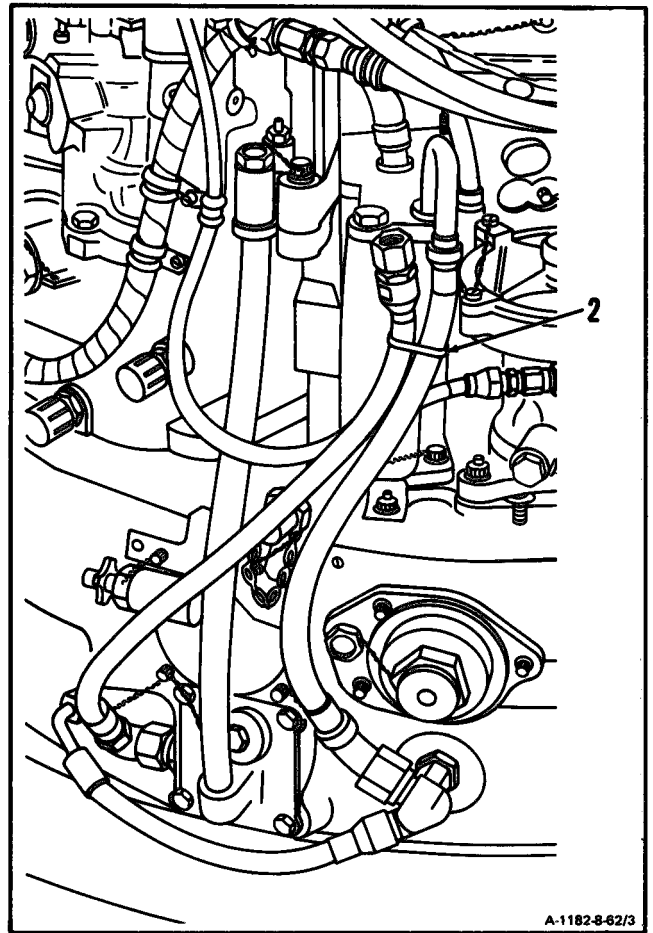
A-1182-8-62/2

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8-62 REMOVE HOSE ASSEMBLY (INLET HOUSING TO OIL DRAIN COCK) (Continued)

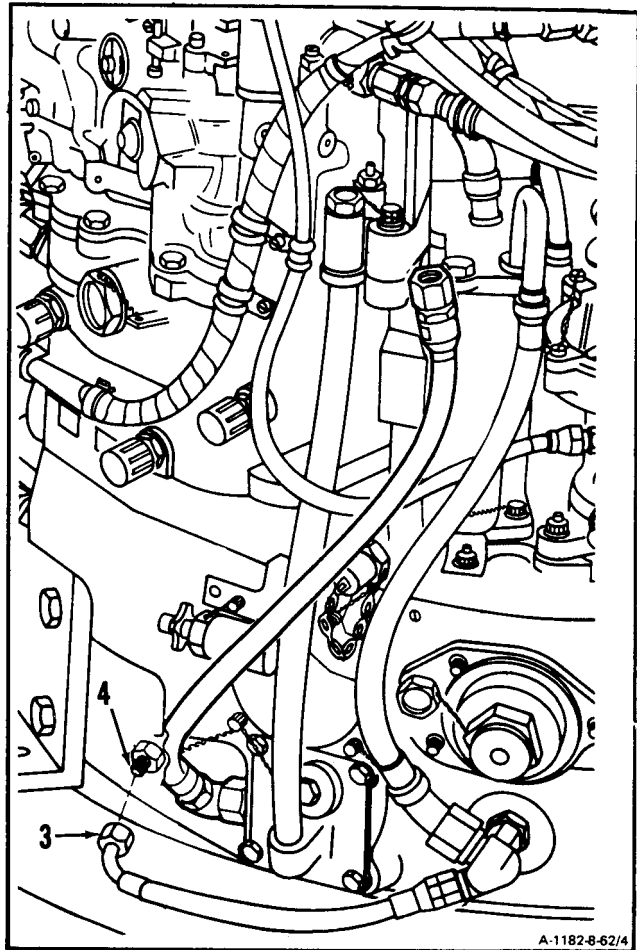
8-62

2. Remove cable tie (2).



GO TO NEXT PAGE

3. Disconnect hose assembly (3) from fluid passage bolt (4).

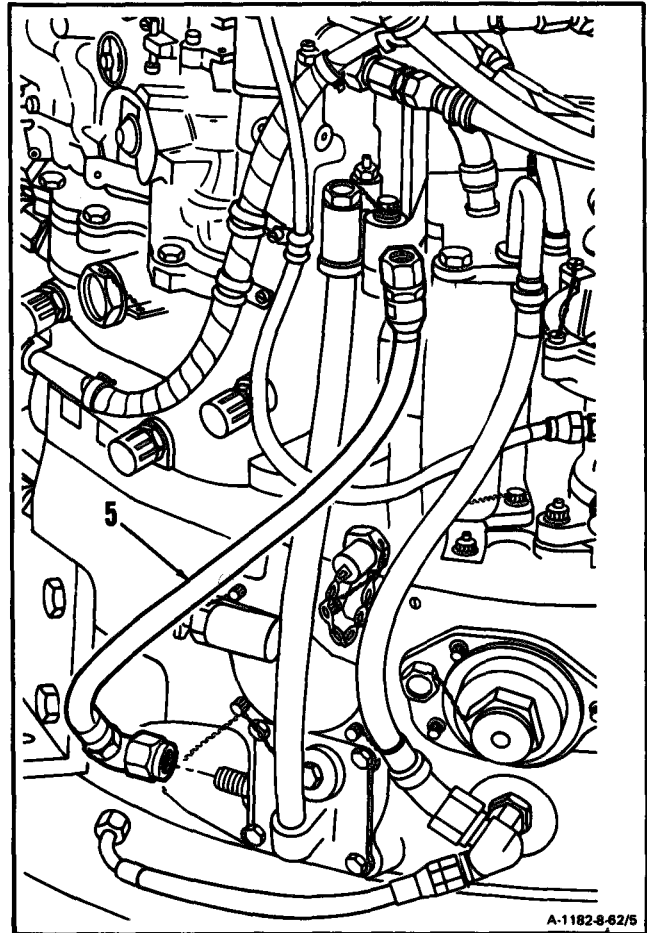


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8-62 REMOVE HOSE ASSEMBLY (INLET HOUSING TO OIL DRAIN COCK) (Continued)

8-62

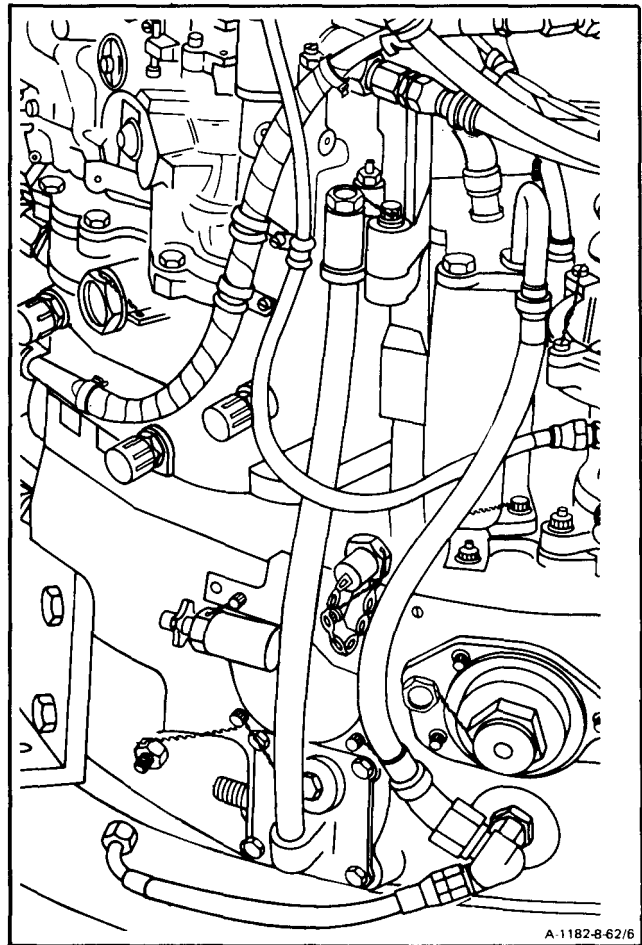
4. Disconnect and remove hose assembly (5).



GO TO NEXT PAGE

FOLLOW-ON MAINTENANCE:

None



A-1182-8-62/6

END OF TASK

8-63 INSTALL HOSE ASSEMBLY (INLET HOUSING TO OIL DRAIN COCK)

8-63

INITIAL SETUP

Applicable Configurations:

All

Tools:

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

Materials:

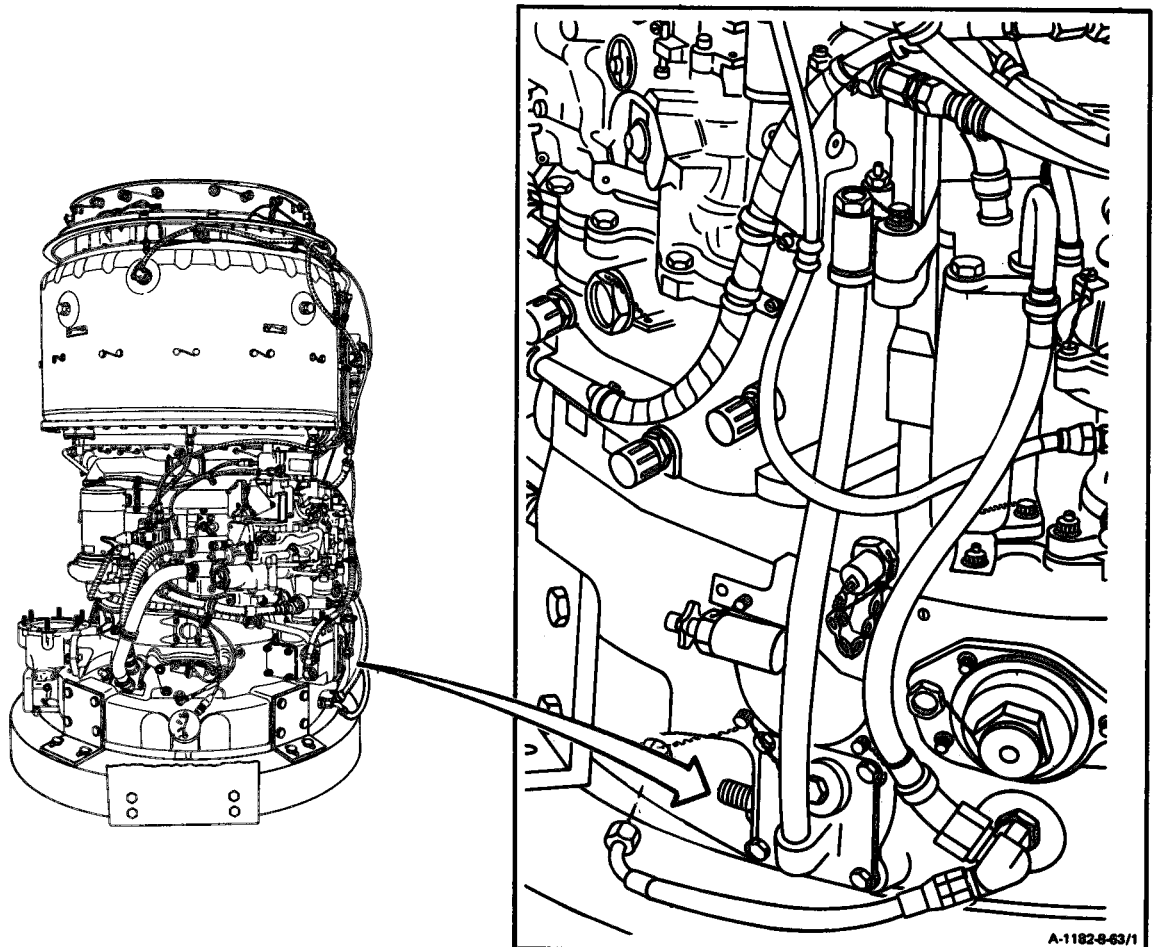
None

Parts:

Cable Tie

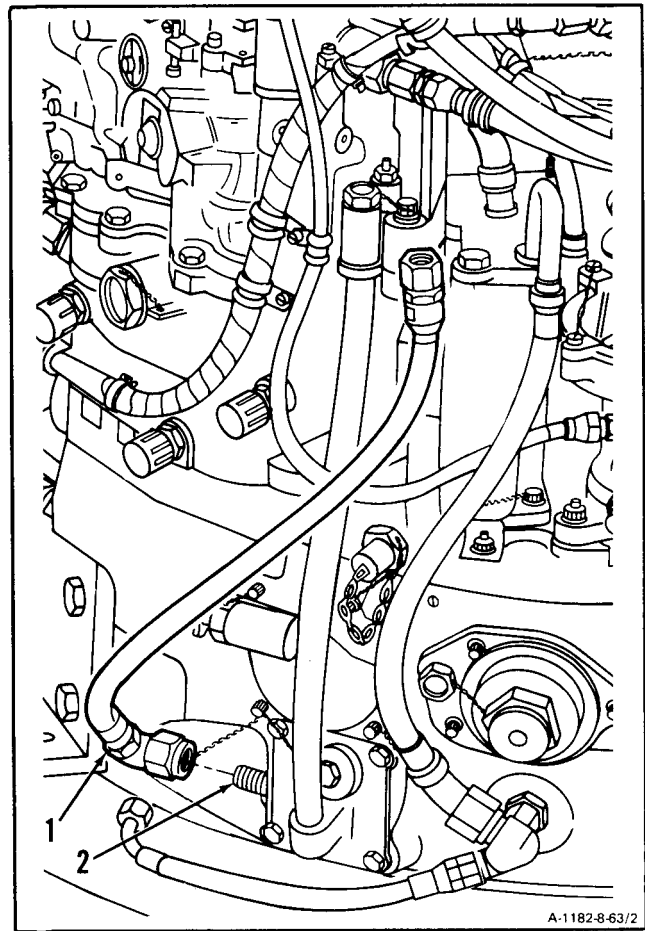
Personnel Required:

68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector



GO TO NEXT PAGE

1. Install hose assembly (1) on nipple (2).

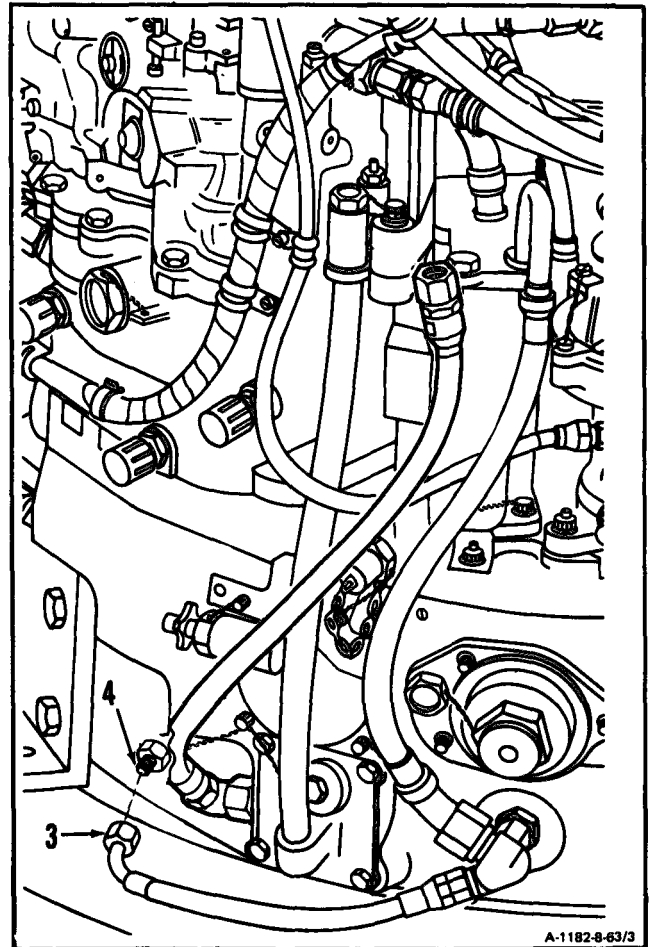


A-1182-8-63/2

GO TO NEXT PAGE

8-63 INSTALL HOSE ASSEMBLY (INLET HOUSING TO OIL DRAIN COCK) (Continued)**8-63**

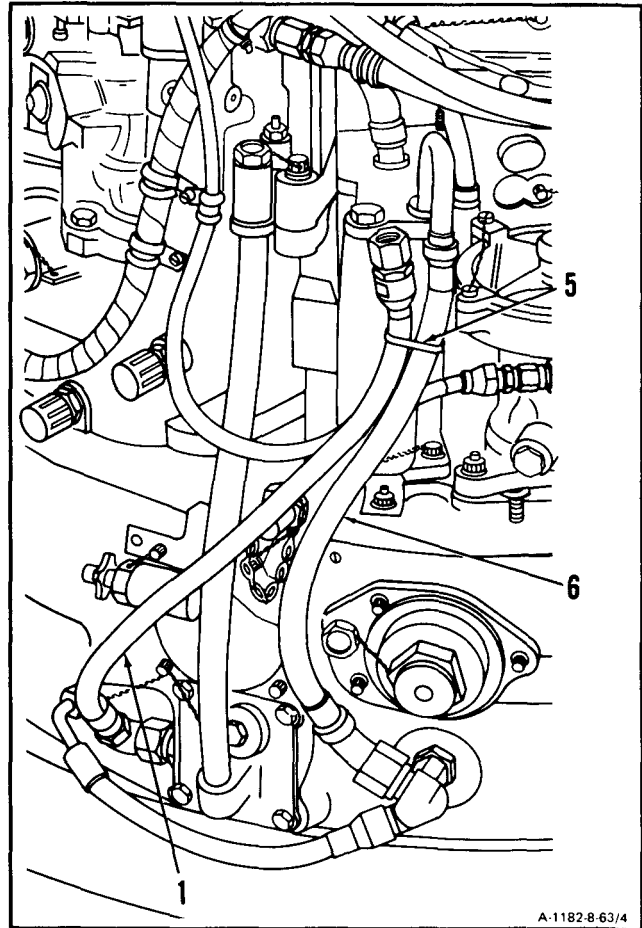
2. Connect hose assembly (3) to fluid passage bolt (4).

**GO TO NEXT PAGE**

8-63 INSTALL HOSE ASSEMBLY (INLET HOUSING TO OIL DRAIN COCK) (Continued)

8-63

3. Install cable tie (5) on hose assembly (1) and hose assembly (6).

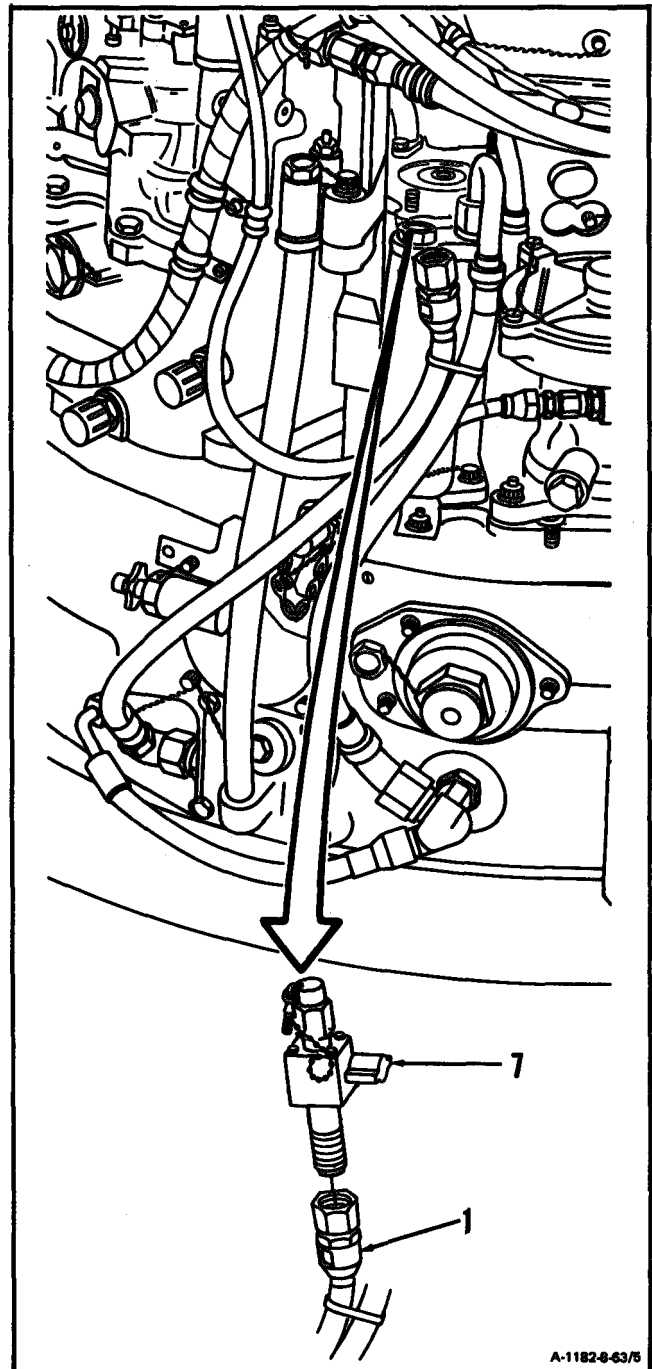


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8-63 INSTALL HOSE ASSEMBLY (INLET HOUSING TO OIL DRAIN COCK) (Continued)

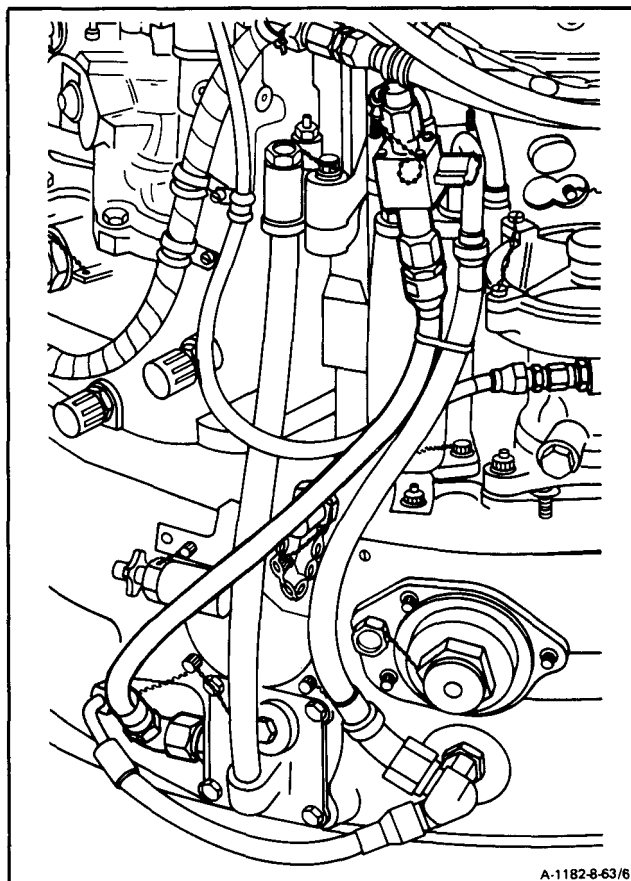
8-63

4. Install oil drain cock (7) on hose assembly (1).

**INSPECT****GO TO NEXT PAGE**

FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-64 REMOVE HOSE ASSEMBLY (OIL FILLER TO STARTER DRIVE)

8-64

INITIAL SETUP**Applicable Configurations:**

All

Tools:

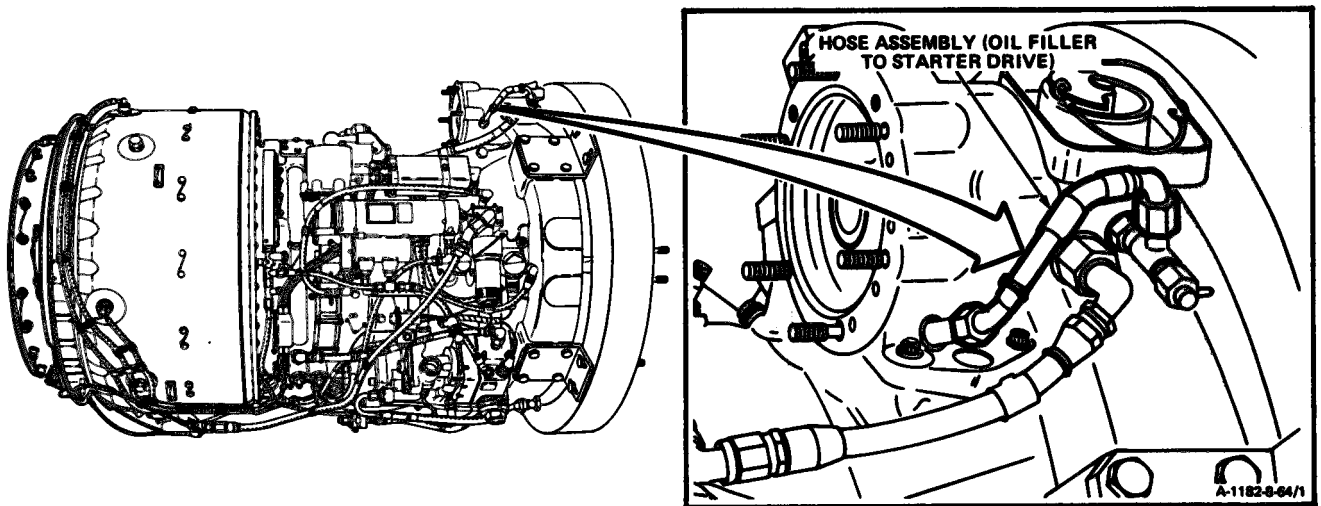
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Container, 1-Quart

Materials:

Wiping Rag (E58)

Personnel Required:

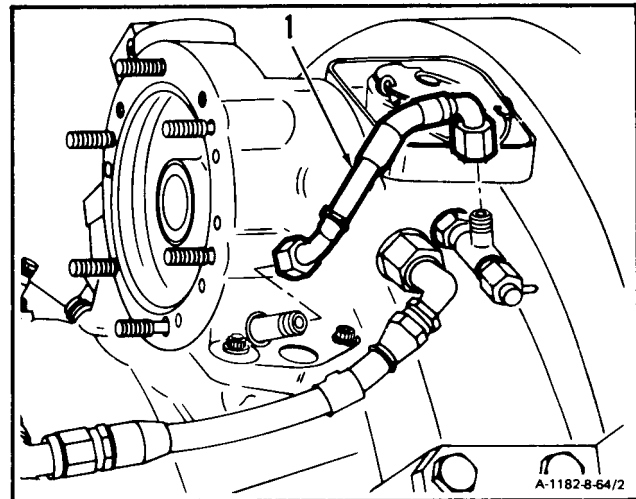
68B10 Aircraft Powerplant Repairer

**GO TO NEXT PAGE**

WARNING

Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin, and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.

1. Disconnect and remove hose assembly (1).



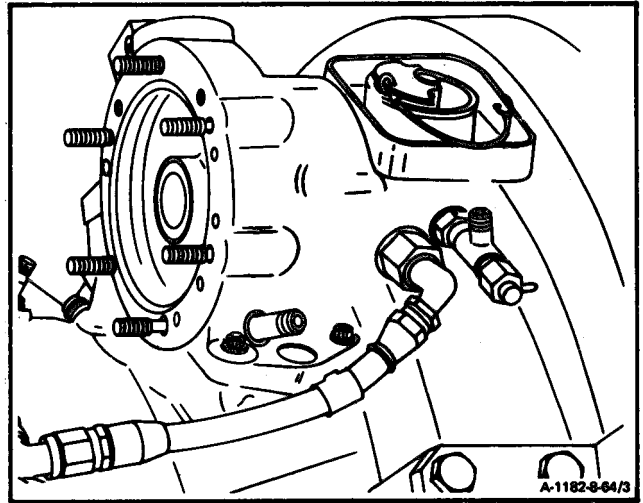
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8-64 REMOVE HOSE ASSEMBLY OIL FILLER TO STARTER DRIVE) (Continued)

8-64

FOLLOW-ON MAINTENANCE:

None

**END OF TASK**

8-65 INSTALL HOSE ASSEMBLY (OIL FILLER TO STARTER DRIVE)

8-65

INITIAL SETUP

Applicable Configurations:

All

Tools:

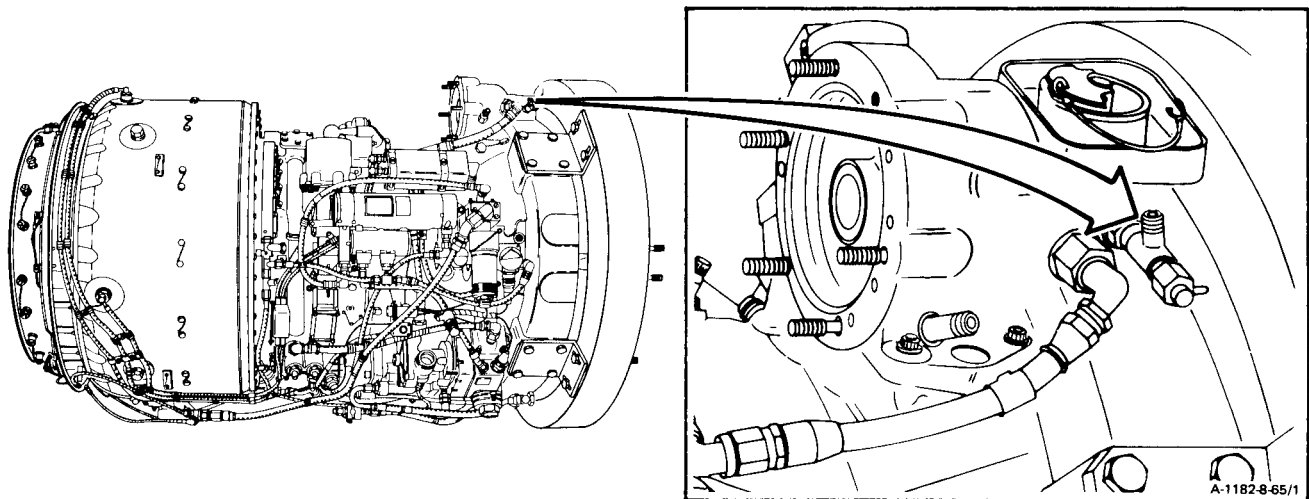
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:

None

Personnel Required:

68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

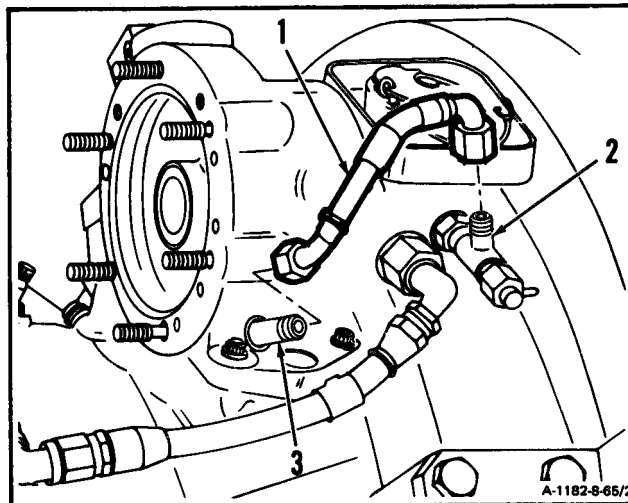


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8-65 INSTALL HOSE ASSEMBLY OIL FILLER TO STARTER DRIVE) (Continua)

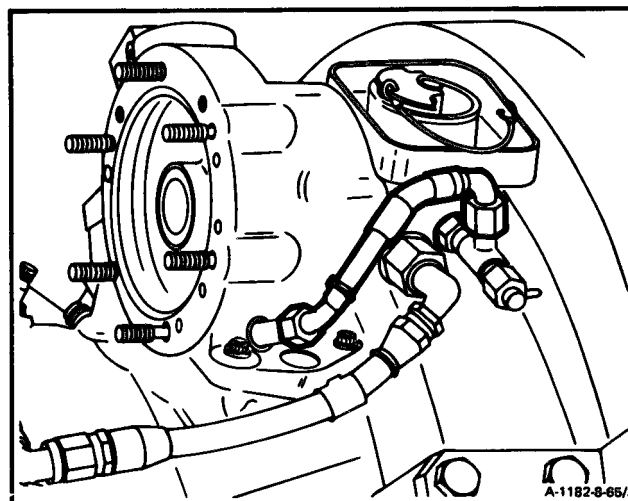
8-65

1. Install hose assembly (1) on tee (2) and fitting (3)

**INSPECT**

FOLLOW-ON MAINTENANCE:

None

**END OF TASK**

8-225

8-66 REMOVE HOSE ASSEMBLY (STARTER DRIVE TO TUBE AND HOSE ASSEMBLY)

8-66

INITIAL SETUP

Applicable Configurations:

All

Tools:

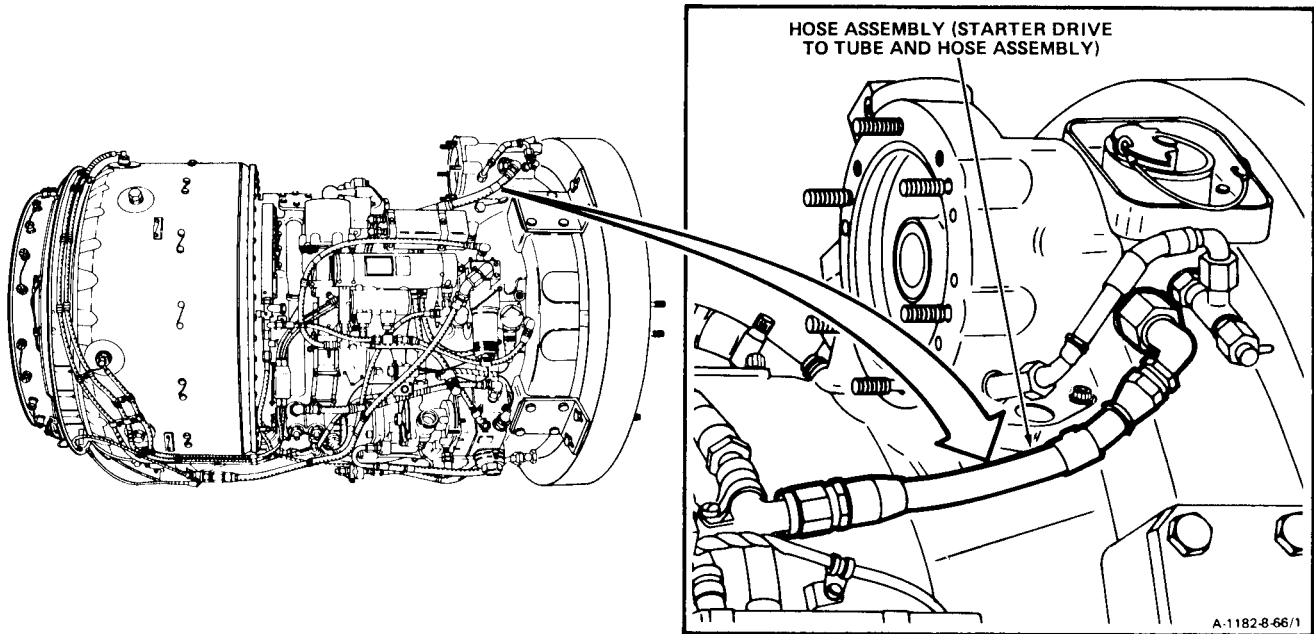
Open-End Wrench, 1-Inch
Container, 1-Quart

Materials:

Wiping Rag (E58)

Personnel Required:

68B10 Aircraft Powerplant Repairer



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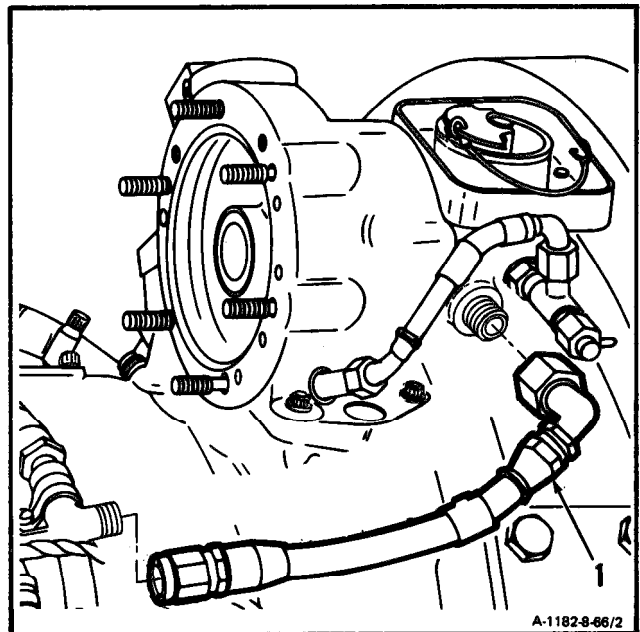
8-66 REMOVE HOSE ASSEMBLY (STARTER DRIVE TO TUBE AND HOSE ASSEMBLY)
(Continued)

8-66

WARNING

Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin, and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.

1. Disconnect and **remove hose assembly (1)**, using open-end wrench.

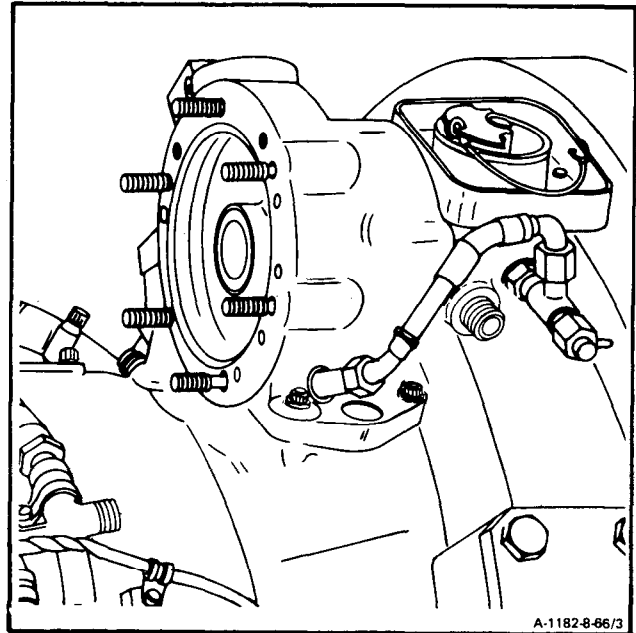
**GO TO NEXT PAGE**

8-66 REMOVE HOSE ASSEMBLY (STARTER DRIVE TO TUBE AND HOSE ASSEMBLY)
(Continued)

8-66

FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-67 INSTALL HOSE ASSEMBLY (STARTER DRIVE TO TUBE AND HOSE ASSEMBLY)**8-67****INITIAL SETUP****Applicable Configurations:**

All

Tools:

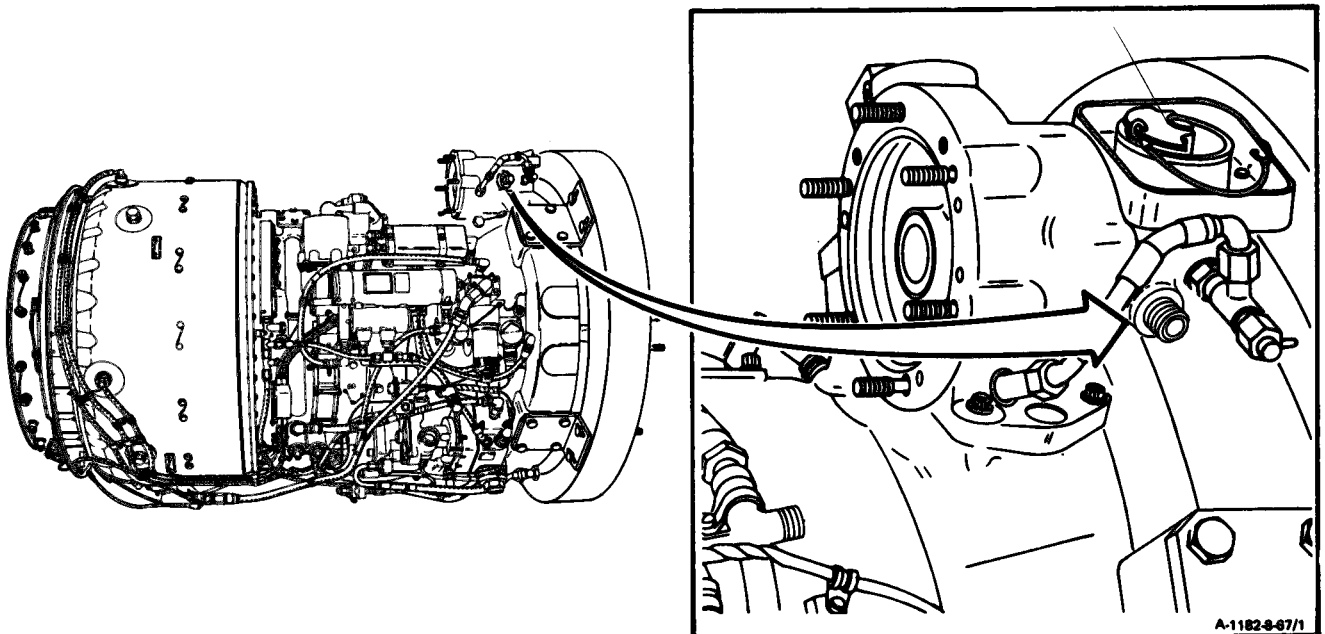
Technical Inspection Tool Kit,
NSN 5180-00-323-5114
Open-End Wrench, 1-inch

Materials:

None

Personnel Required:

68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

**GO TO NEXT PAGE**

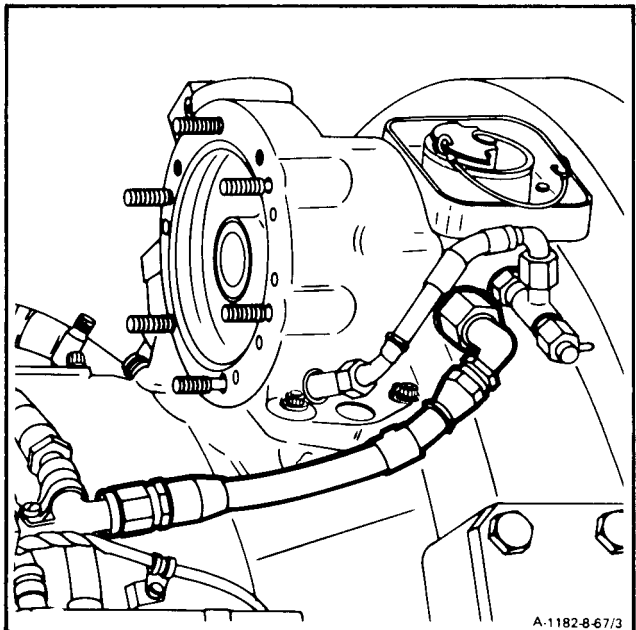
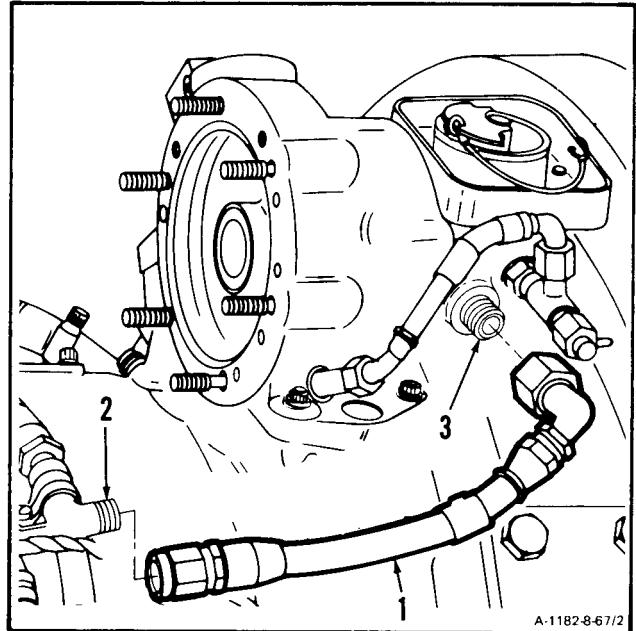
8-67 INSTALL HOSE ASSEMBLY (STARTER DRIVE TO TUBE AND HOSE ASSEMBLY) (Continued)

1. Install hose assembly (1) on tube and hose assembly (2) and reducer (3). Use open-end wrench.

INSPECT

FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-68 REMOVE TUBE AND HOSE ASSEMBLY (ACCESSORY GEARBOX COLLECTOR TO TUBE ASSEMBLY)

8-68

INITIAL SETUP

General Safety Instructions:

Applicable Configurations:

All

Tools:

- Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
- Open-End Wrench, 1-Inch

Materials:

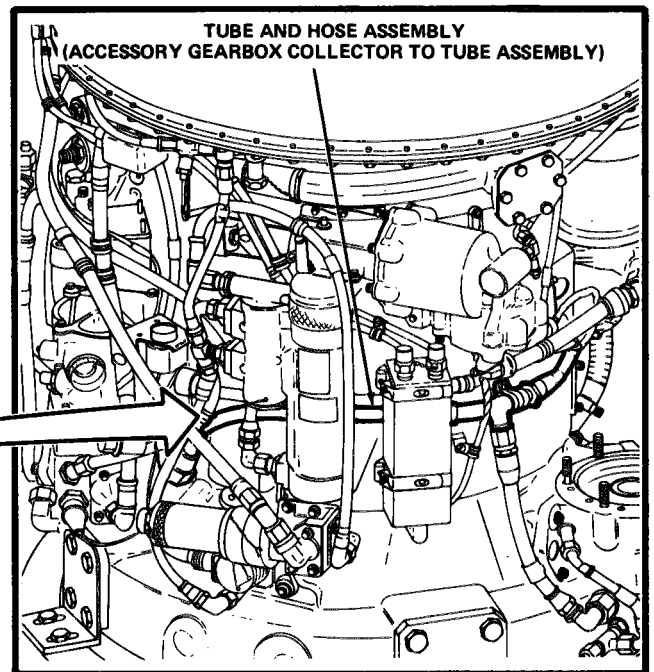
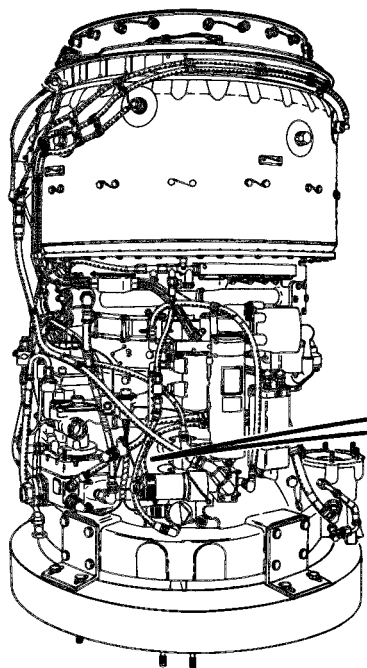
- Wiping Rag (E58)

Personnel Required:

- 68B10 Aircraft Powerplant Repairer

WARNING

Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.

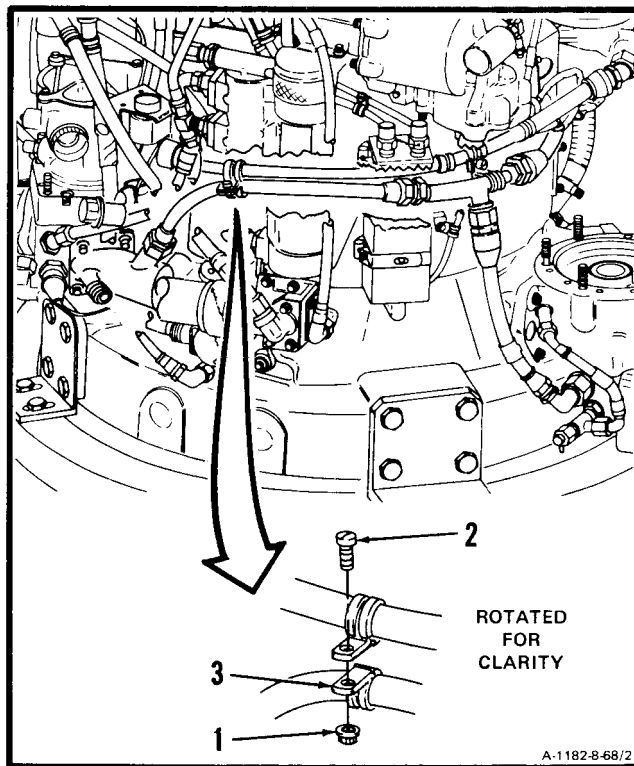


A-1182-8-68/1

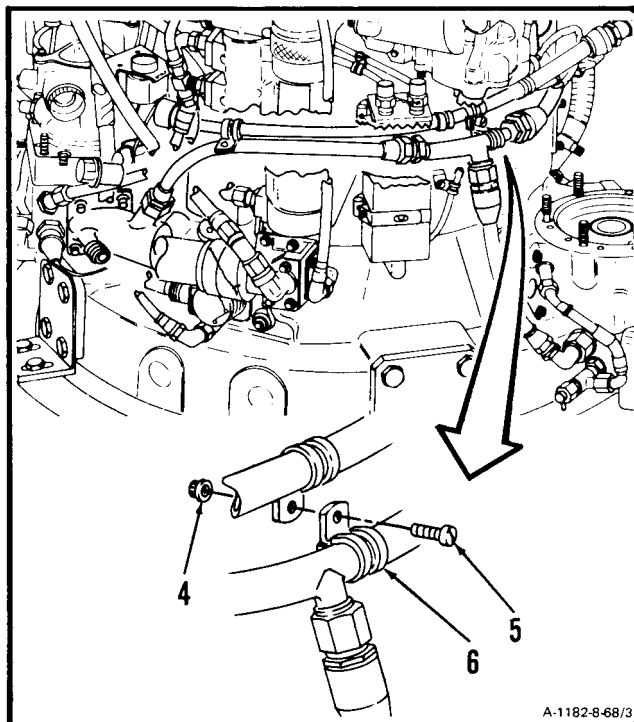
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8-68 REMOVE TUBE AND HOSE ASSEMBLY (ACCESSORY GEARBOX COLLECTOR TO TUBE ASSEMBLY) (Continued)

1. Remove nut (1), screw (2), and clamp (3).



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

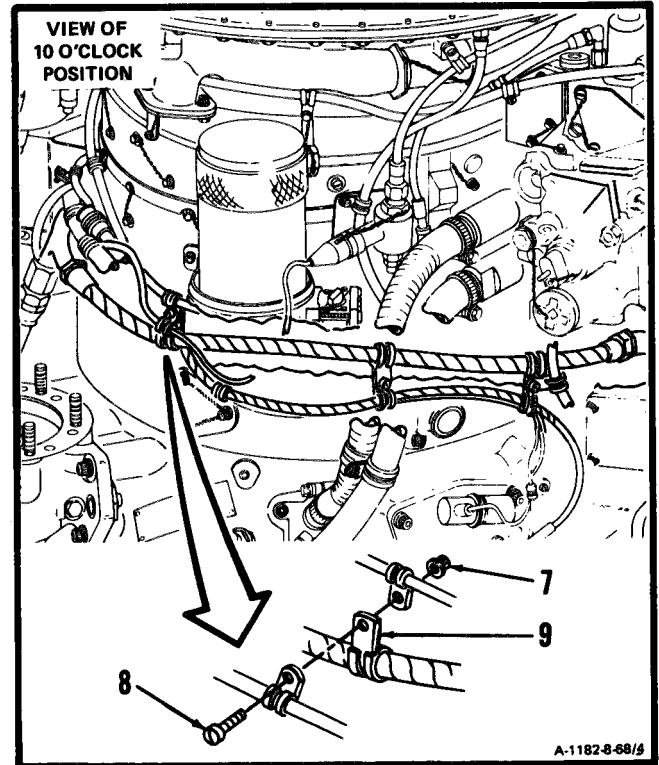


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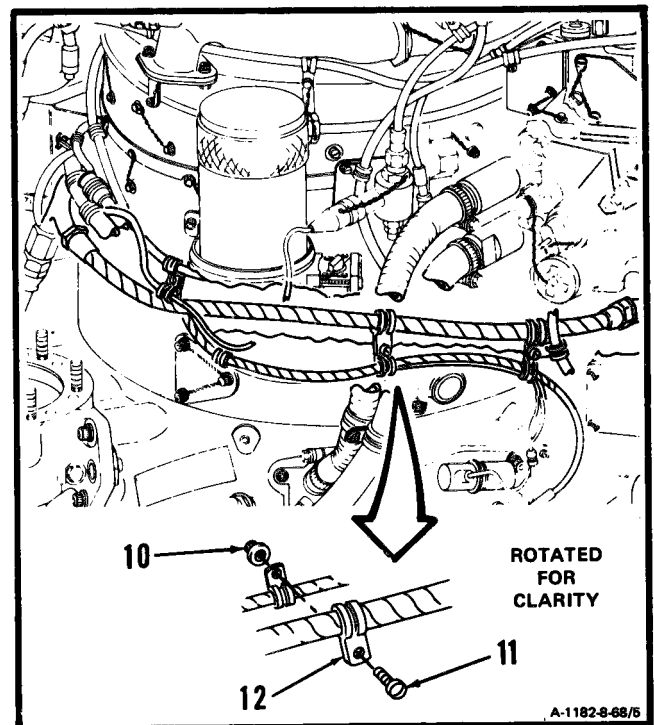
8-68 REMOVE TUBE AND HOSE ASSEMBLY (ACCESSORY GEARBOX COLLECTOR TO TUBE ASSEMBLY) (Continued)

8-68

3. Remove nut (7), screw (8), and clamp (9).



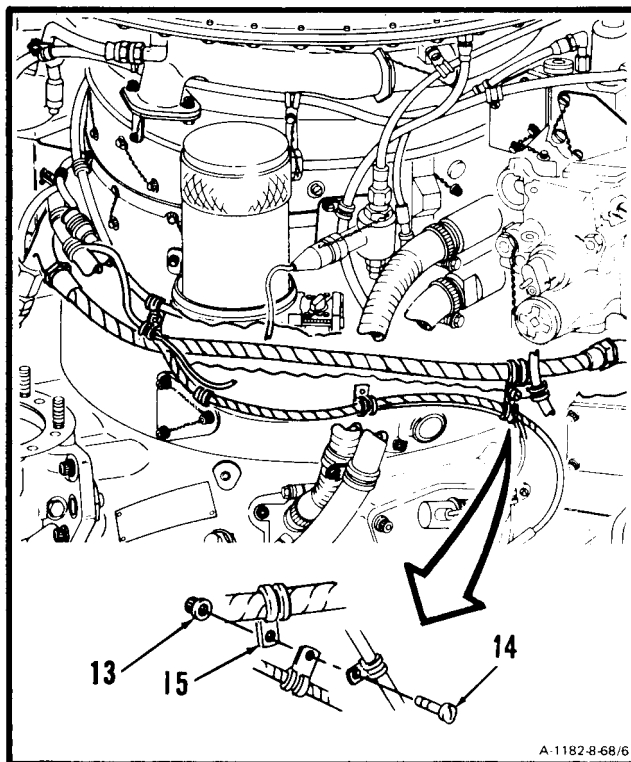
4. Remove nut (10), screw (11), and clamp (12).



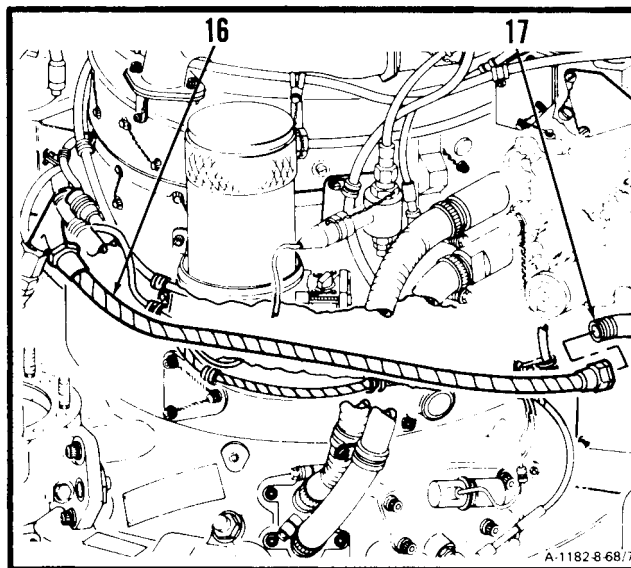
GO TO NEXT PAGE

8-68 REMOVE TUBE AND HOSE ASSEMBLY (ACCESSORY GEARBOX COLLECTOR TO TUBE ASSEMBLY) (Continued)

5. Remove nut (13), screw (14), and clamp (15).



6. Disconnect tube and hose assembly (16) from tube assembly (17). Use open-end wrench.

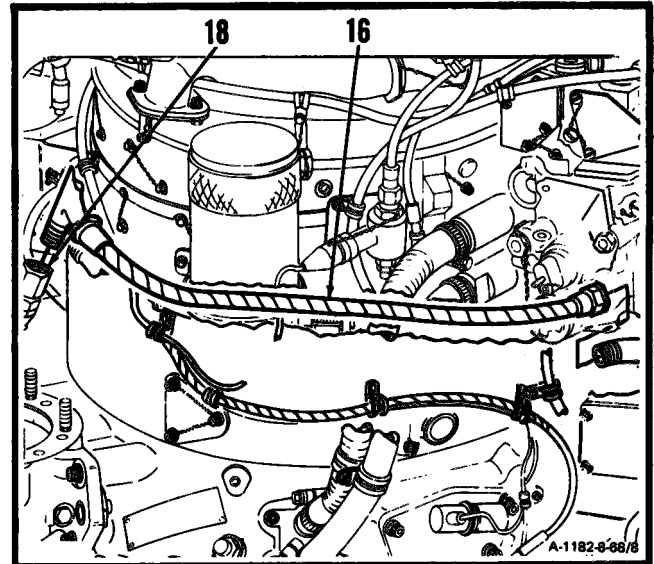


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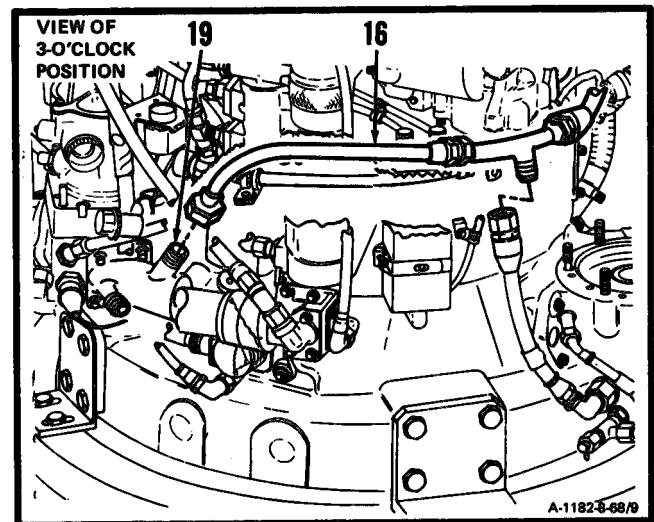
8-68 REMOVE TUBE AND HOSE ASSEMBLY (ACCESSORY GEARBOX COLLECTOR TO TUBE ASSEMBLY) (Continued)

8-68

7. Disconnect hose assembly (18) from tube and hose assembly (16).



8. Disconnect tube and hose assembly (16) from nipple (19). Remove tube and hose assembly (16).



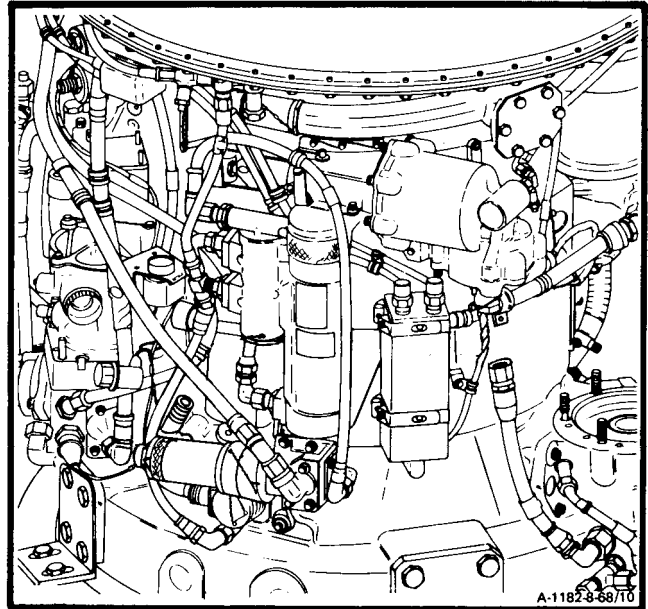
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**8-68 REMOVE TUBE AND HOSE ASSEMBLY (ACCESSORY GEARBOX COLLECTOR
TO TUBE ASSEMBLY) (Continued)**

8-68

FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-69 INSTALL TUBE AND HOSE ASSEMBLY (ACCESSORY GEARBOX COLLECTOR TO TUBE ASSEMBLY)

8-69

INITIAL SETUP**Applicable Configurations:**

All

Tools:

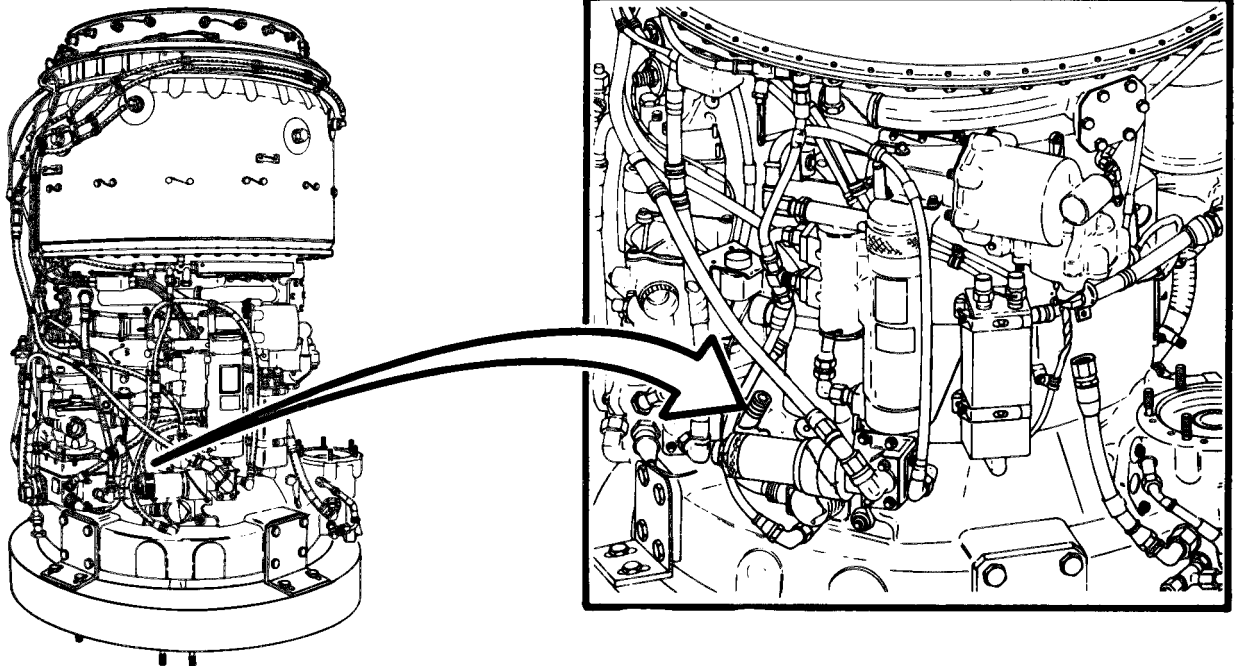
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114
Open-End Wrench, 1-Inch

Materials:

None

Personnel Required:

68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

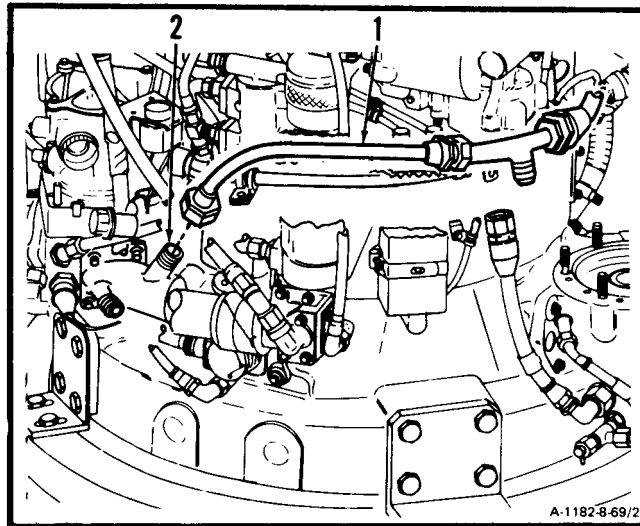


A-1182-8-69/1

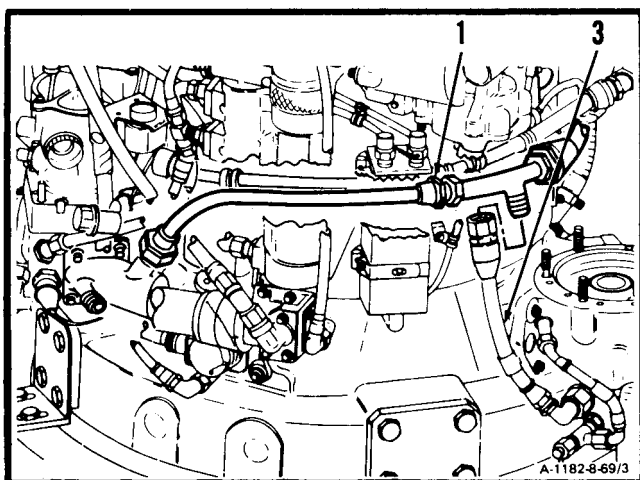
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8-69 INSTALL TUBE AND HOSE ASSEMBLY (ACCESSORY GEARBOX COLLECTOR TO TUBE ASSEMBLY) (Continued)

1. Connect tube and hose assembly (1) to nipple (2).



2. Connect hose assembly (3) to tube and hose assembly (1).

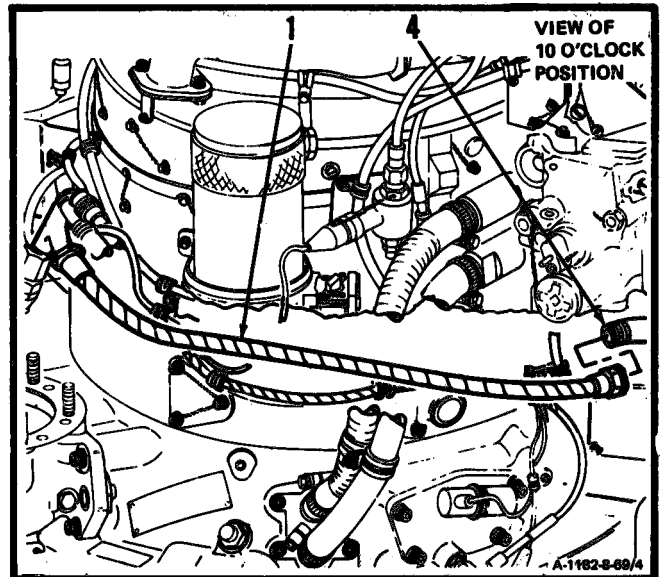


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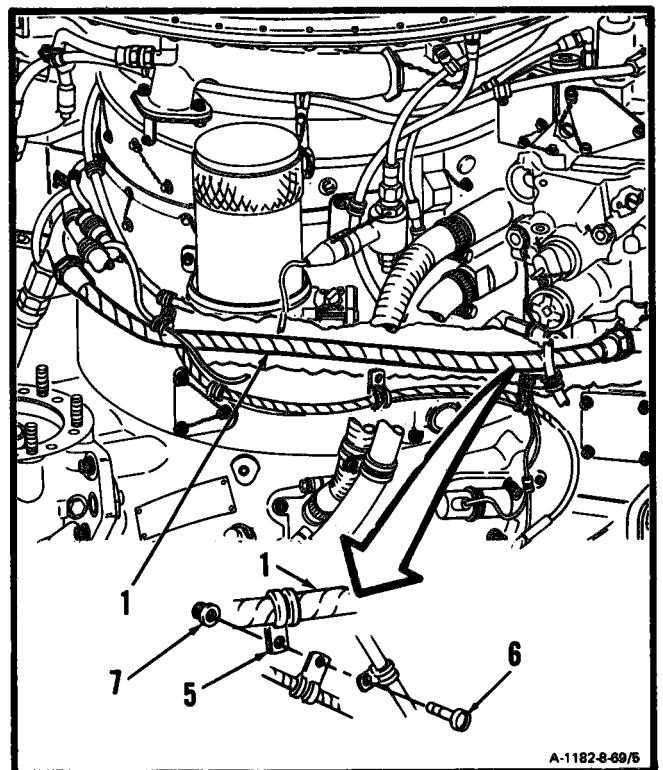
8-69 INSTALL TUBE AND HOSE ASSEMBLY (ACCESSORY GEARBOX COLLECTOR TO TUBE ASSEMBLY) (Continued)

8-69

3. Connect tube and hose assembly (1) to tube assembly (4). Use open-end wrench.

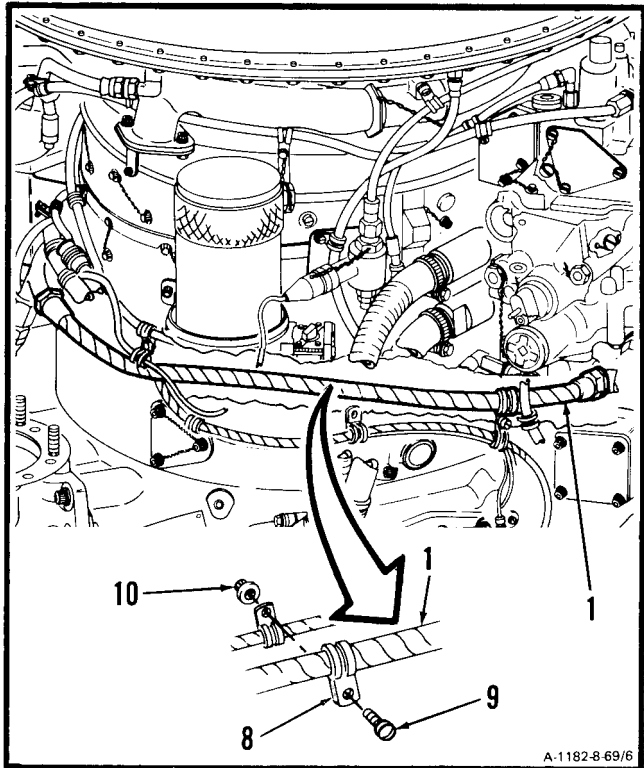


4. Install clamp (5) on tube and hose assembly (1) and install screw (6) and nut (7).

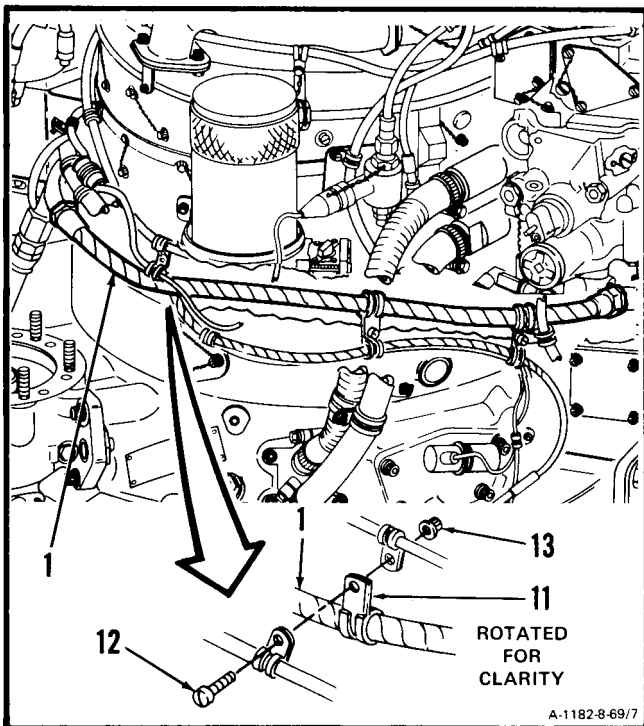
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8-69 INSTALL TUBE AND HOSE ASSEMBLY (ACCESSORY GEARBOX COLLECTOR TO TUBE ASSEMBLY) (Continued)

5. **Install clamp (8)** on tube and hose assembly (1) and install screw (9) and nut (10).



6. **Install clamp (11)** on tube and hose assembly (1) and install screw (12) and nut (13).

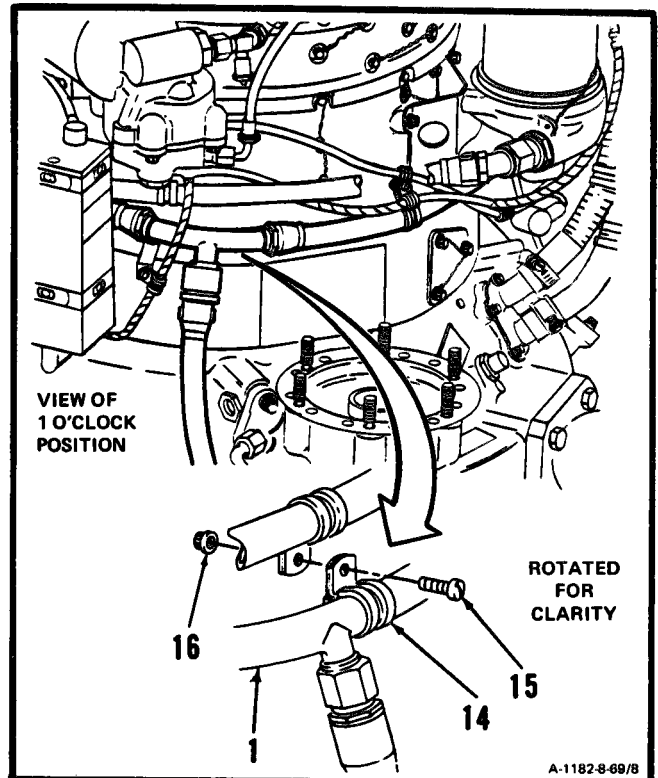


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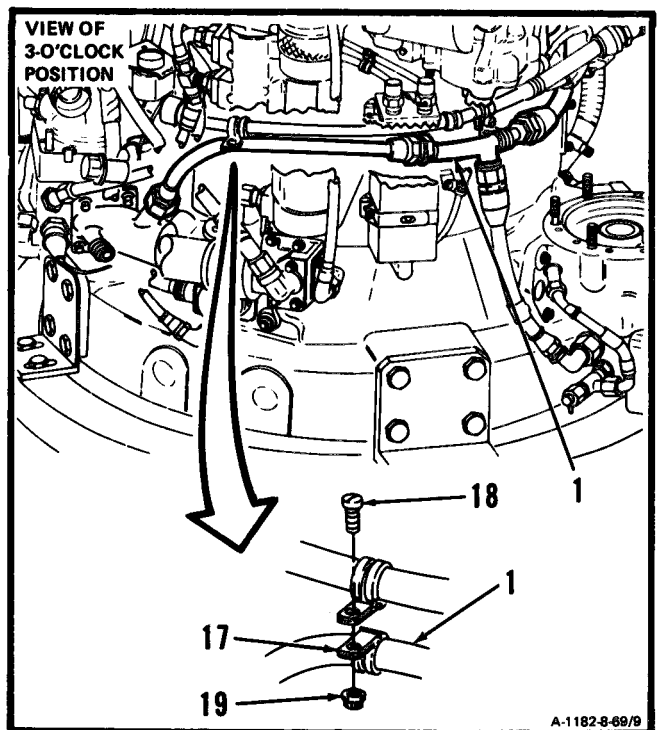
8-69 INSTALL TUBE AND HOSE ASSEMBLY (ACCESSORY GEARBOX COLLECTOR TO TUBE ASSEMBLY) (Continued)

8-69

7. Install clamp (14) on tube and hose assembly (1) and install screw (15) and nut (16).



8. Install clamp (17) on tube and hose assembly (1) and install screw (18) and nut (19).



INSPECT

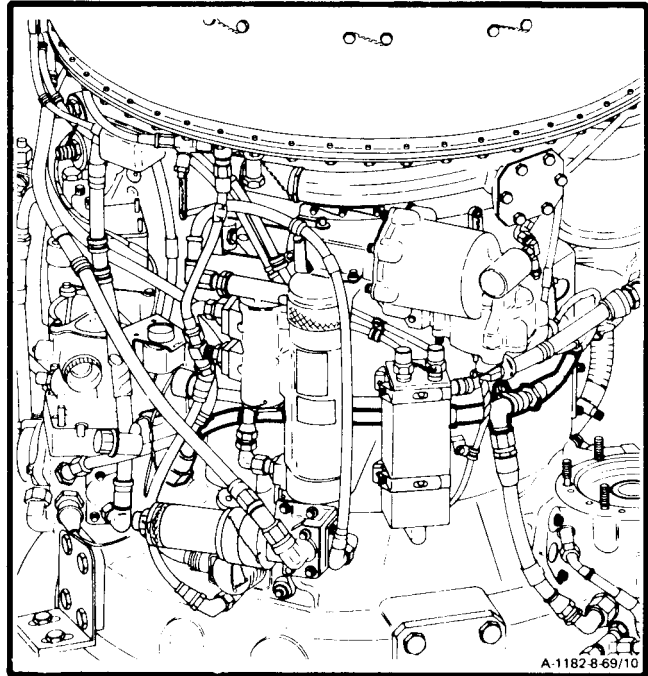
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**8-69 INSTALL TUBE AND HOSE ASSEMBLY (ACCESSORY GEARBOX COLLECTOR
TO TUBE ASSEMBLY) (Continued)**

8-69

FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-70 REMOVE TUBE ASSEMBLY (TUBE AND HOSE ASSEMBLY TO ACCESSORY GEARBOX ASSEMBLY)

8-70

INITIAL SETUP**Applicable Configurations:**

All

Tools:

Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Container, 1 Quart
Open-End Wrench, 1-Inch

Materials:

Wiping Rag (E58)

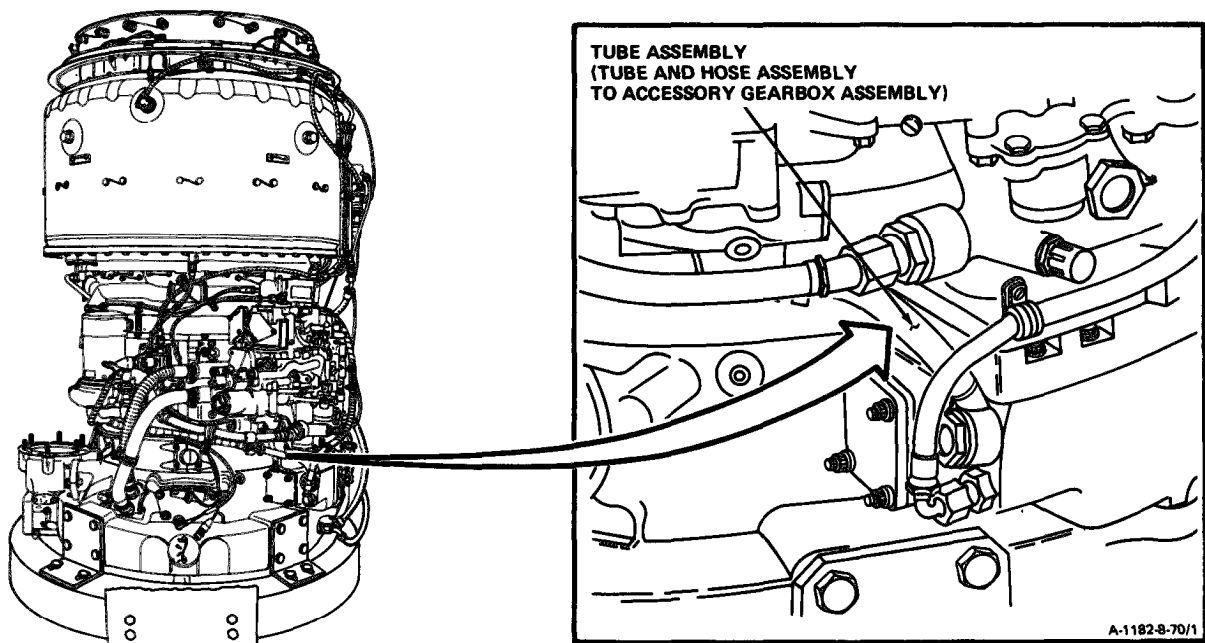
Personnel Required:

68B10 Aircraft Powerplant Repairer

General Safety Instructions:

WARNING

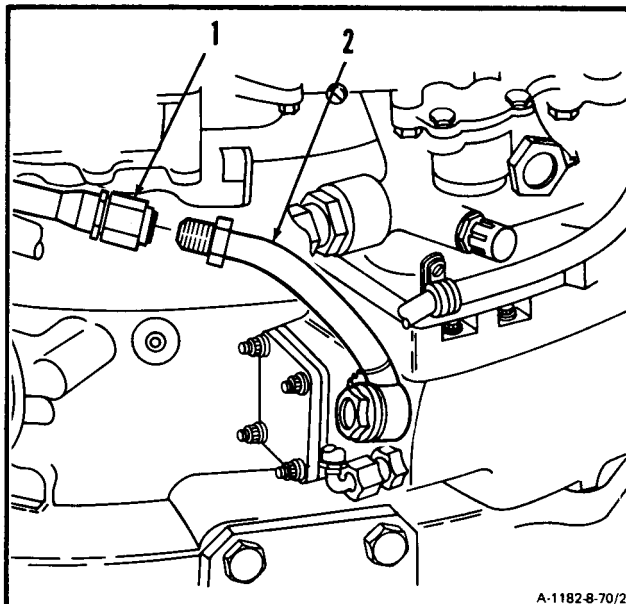
Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin, and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.

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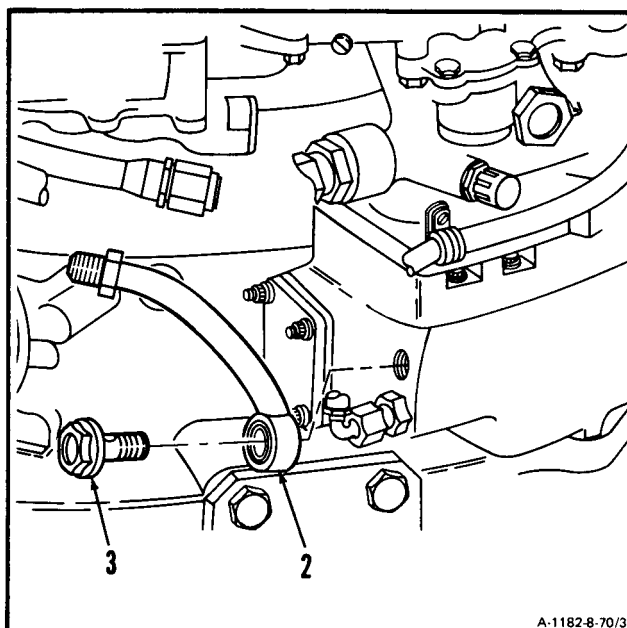
**8-70 REMOVE TUBE ASSEMBLY (TUBE AND HOSE ASSEMBLY TO ACCESSORY
GEARBOX ASSEMBLY) (Continued)**

8-70

1. Disconnect tube and hose assembly (1) from tube assembly (2). Use 1-inch open-end wrench.



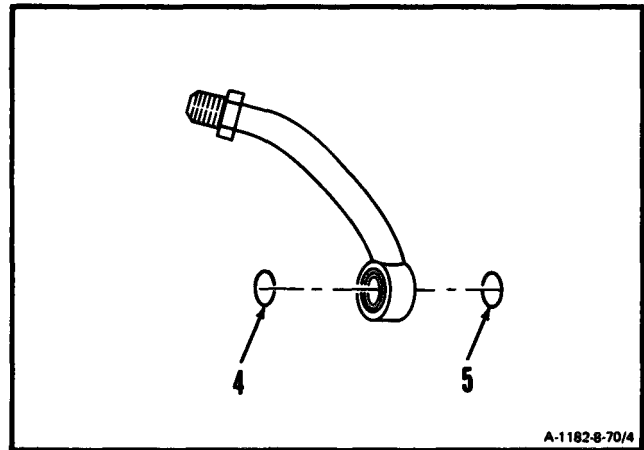
2. Remove lockwire and bolt (3). **Remove tube assembly (2).**

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8-70 REMOVE TUBE ASSEMBLY (TUBE AND HOSE ASSEMBLY TO ACCESSORY GEARBOX ASSEMBLY) (Continued)

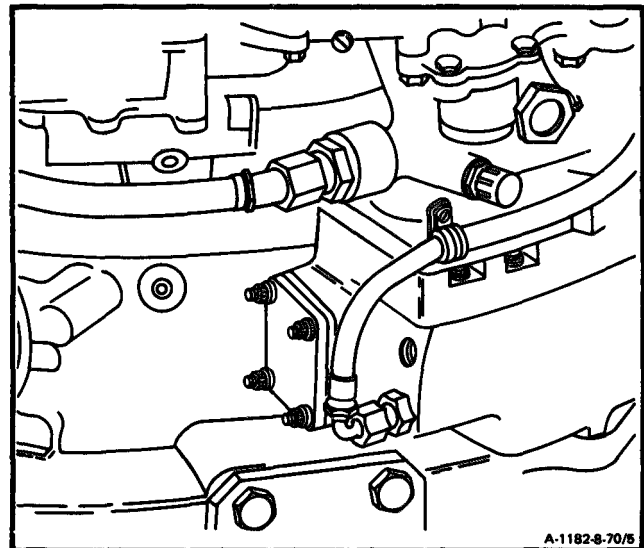
8-70

3. Remove packings (4 and 5).



FOLLOW-ON MAINTENANCE:

None



END OF TASK

**8-71 INSTALL TUBE ASSEMBLY (TUBE AND HOSE ASSEMBLY TO ACCESSORY
GEARBOX ASSEMBLY)**

INITIAL SETUP

Applicable Configurations:

All

Tools:

Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114
Open-End Wrench, 1-Inch

Materials:

Lockwire (E29)

Parts:

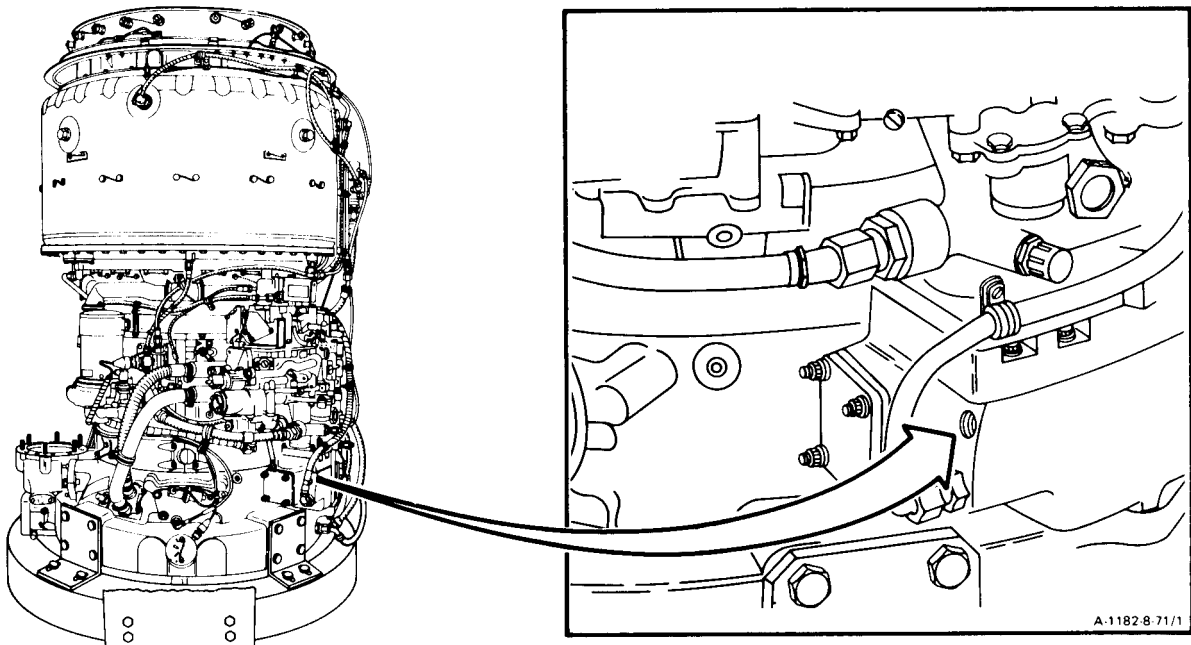
Packings

Personnel Required:

68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

References:

TM 55-2840-254-23P

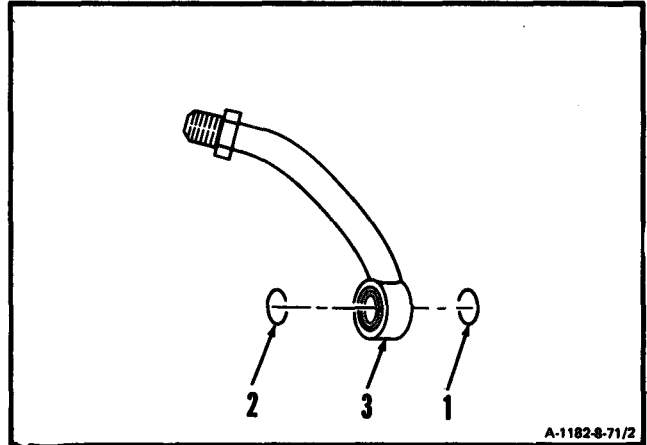


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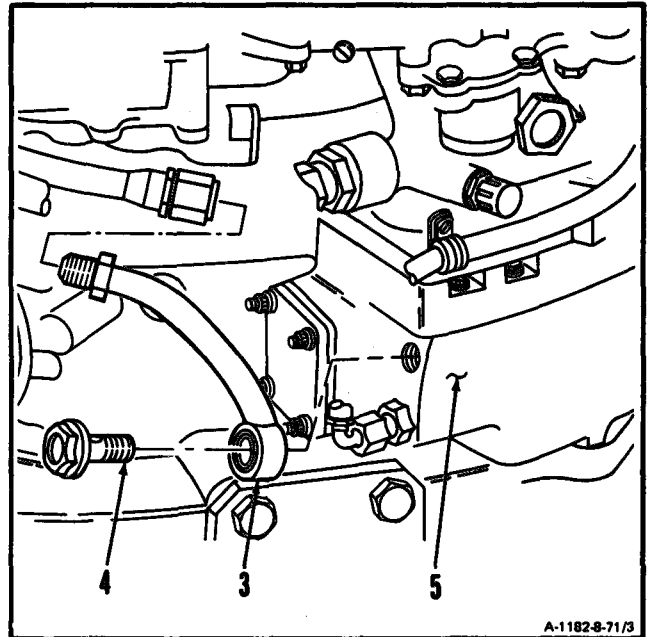
**8-71 INSTALL TUBE ASSEMBLY (TUBE AND HOSE ASSEMBLY TO ACCESSORY
GEARBOX ASSEMBLY) (Continued)**

8-71

1. Install packings (1 and 2) into tube assembly (3).



2. Install tube assembly (3) and bolt (4) on accessory gearbox assembly (5). Lockwire bolt (4). Use lockwire (E29).

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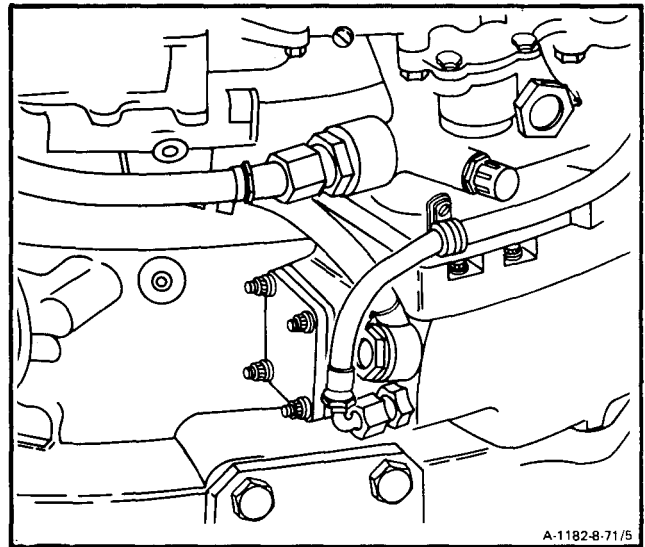
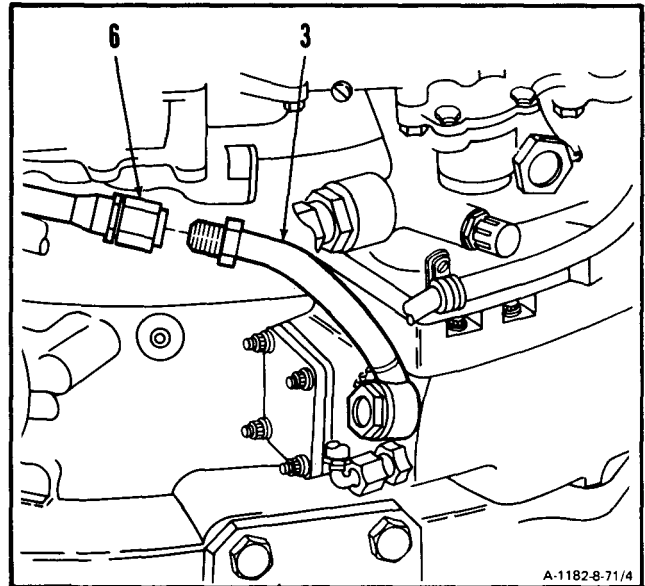
8-71 INSTALL TUBE ASSEMBLY (TUBE AND HOSE ASSEMBLY TO ACCESSORY GEARBOX ASSEMBLY) (Continued)

3. Connect tube and hose assembly (6) to tube assembly (3). Use 1-inch open-end wrench.

INSPECT

FOLLOW-ON MAINTENANCE:

None



END OF TASK

Section VIII. STARTER GEARBOX FILTER – MAINTENANCE PROCEDURES

8-72 REMOVE STARTER GEARBOX FILTER

8-72

INITIAL SETUP

Materials:

Wiping Rag (E58)

Applicable Configurations:

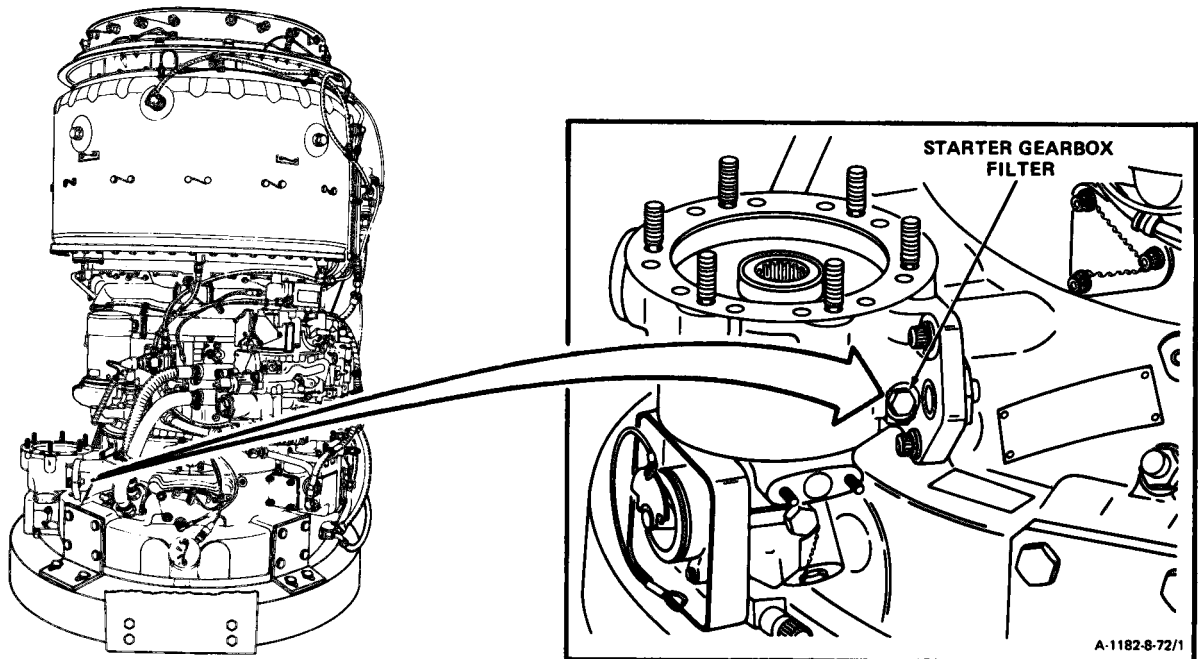
All

Personnel Required:

68B10 Aircraft Powerplant Repairer

Tools:

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



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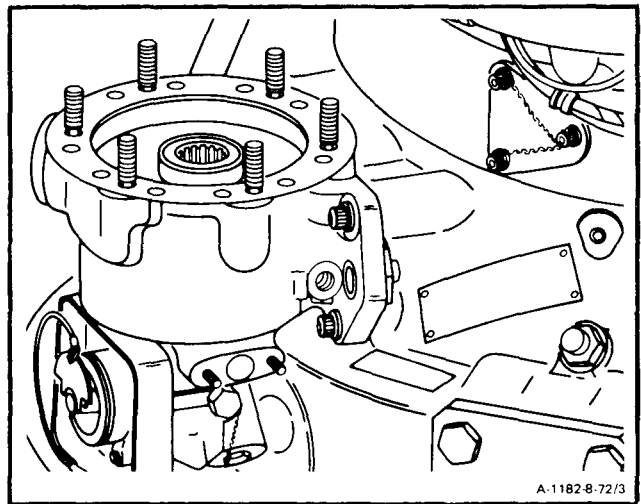
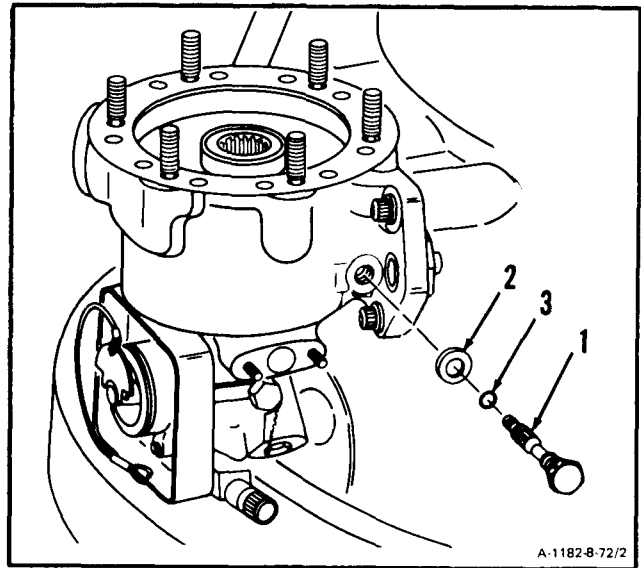
WARNING

Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.

1. Remove lockwire, starter gearbox filter (1), washer (2), and packing (3).

FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-73 CLEAN STARTER GEARBOX FILTER

8-73

INITIAL SETUP

Applicable Configurations:

All

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

Goggles

Compressed Air Source

Materials:

Dry Cleaning Solvent (E17)

Gloves (E20)

Lint-Free Cloth (E26)

Personnel Required:

68B10 Aircraft Powerplant Repairer

Equipment Condition:

Off Engine Task

Starter Gearbox Filter Removed (Task 8-72)

General Safety Instructions:**WARNING**

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

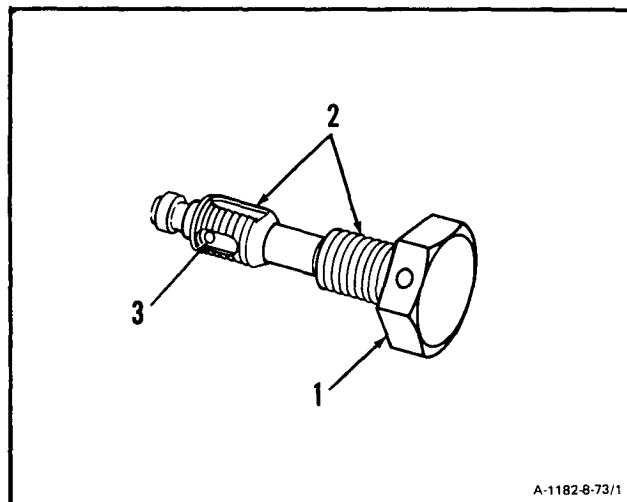
1. Clean starter gearbox filter (1) as follows:

- a. Wear gloves (E20). Immerse filter in dry cleaning solvent (E17) and agitate. Use brush on external surfaces (2).
- b. Use lint-free cloth (E26) to remove solvent.

WARNING

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

- c. Wear goggles. **Blow dry internal passage (3)**. Use clean, dry compressed air.



A-1182-8-73/1

FOLLOW-ON MAINTENANCE:

Inspect starter gearbox filter (Task 8-74).

END OF TASK

8-74 INSPECT STARTER GEARBOX FILTER

8-74

INITIAL SETUP**Applicable Configurations:**

All

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

None

Personnel Required:

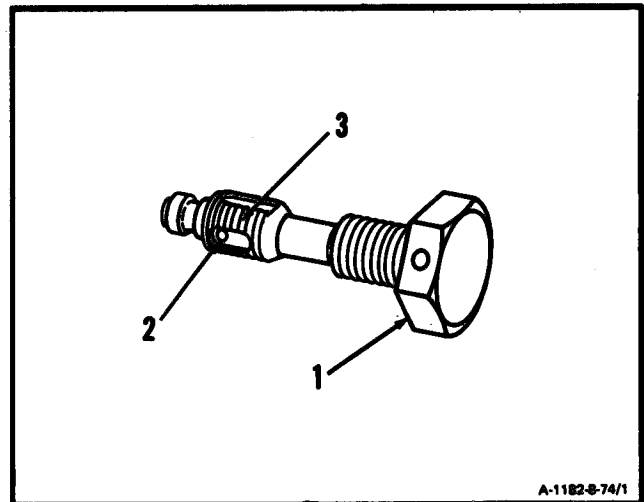
68B30 Aircraft Powerplant Inspector

Equipment Condition:

Off Engine Task

1. Inspect starter gearbox filter (1).

- a. There shall be no cracks.
- b. There shall be no clogged holes (2).
- c. There shall be no clogged threads (3).

**FOLLOW-ON MAINTENANCE:**

None

END OF TASK

8-75 INSTALL STARTER GEARBOX FILTER

8-75

INITIAL SETUP

Applicable Configurations:

All

Tools:

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

Materials:

Lockwire (E29)

Parts:

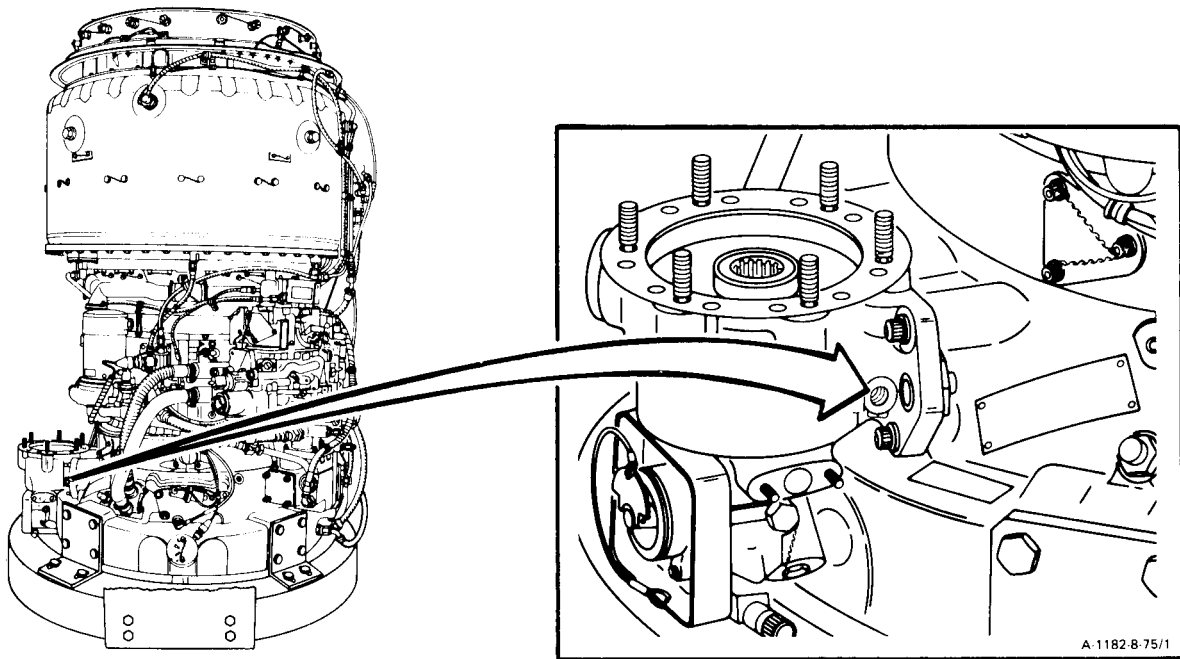
Packing
Washer

Personnel Required:

68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

References:

TM 55-2840-254-23P

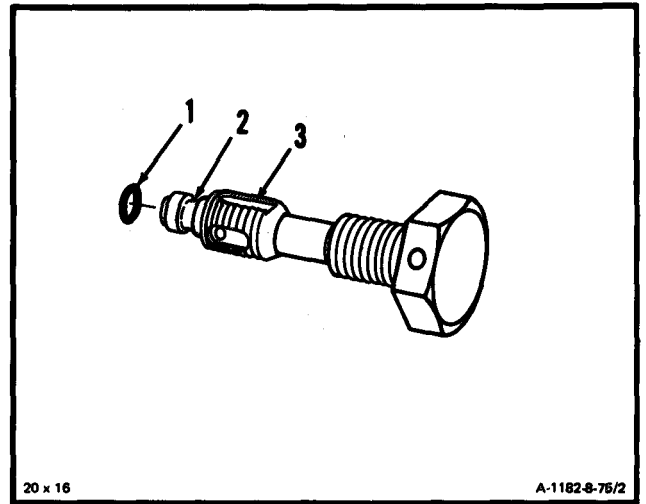


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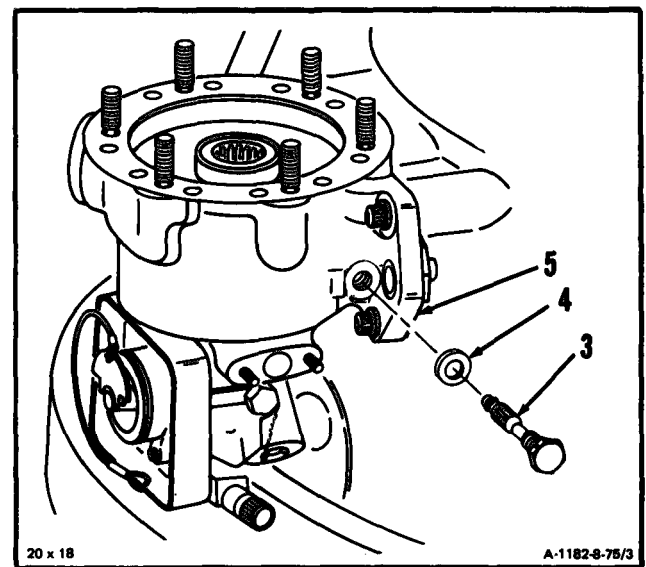
8-75 INSTALL STARTER GEARBOX FILTER (Continued)

8-75

1. **Install packing (1)** in groove (2) on starter gearbox filter (3).



2. **Install washer (4)** and **starter gearbox fitter (3)** in housing (5). Torque starter gearbox filter (3) 20 to 25 inch-pounds. Lockwire starter gearbox filter (3). Use lockwire (E29).

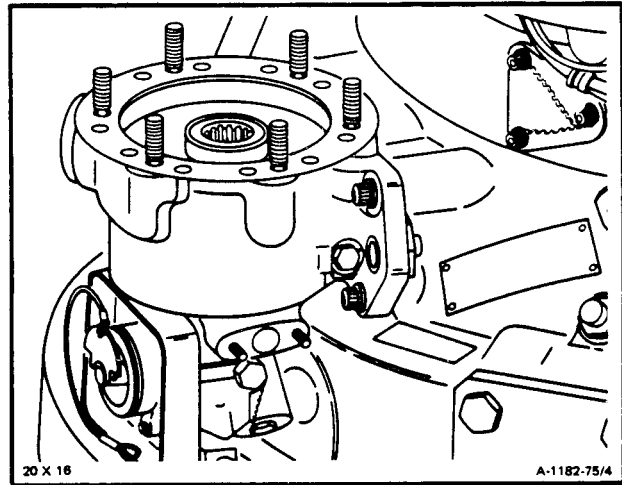


INSPECT

GO TO NEXT PAGE

FOLLOW-ON MAINTENANCE:

None



END OF TASK

Section IX. NO. 2 BEARING PRESSURE OIL STRAINER – MAINTENANCE PROCEDURES

8-76 REMOVE NO. 2 BEARING PRESSURE OIL STRAINER

8-76

INITIAL SETUP

*General Safety Instructions:***Applicable Configurations:**

All

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

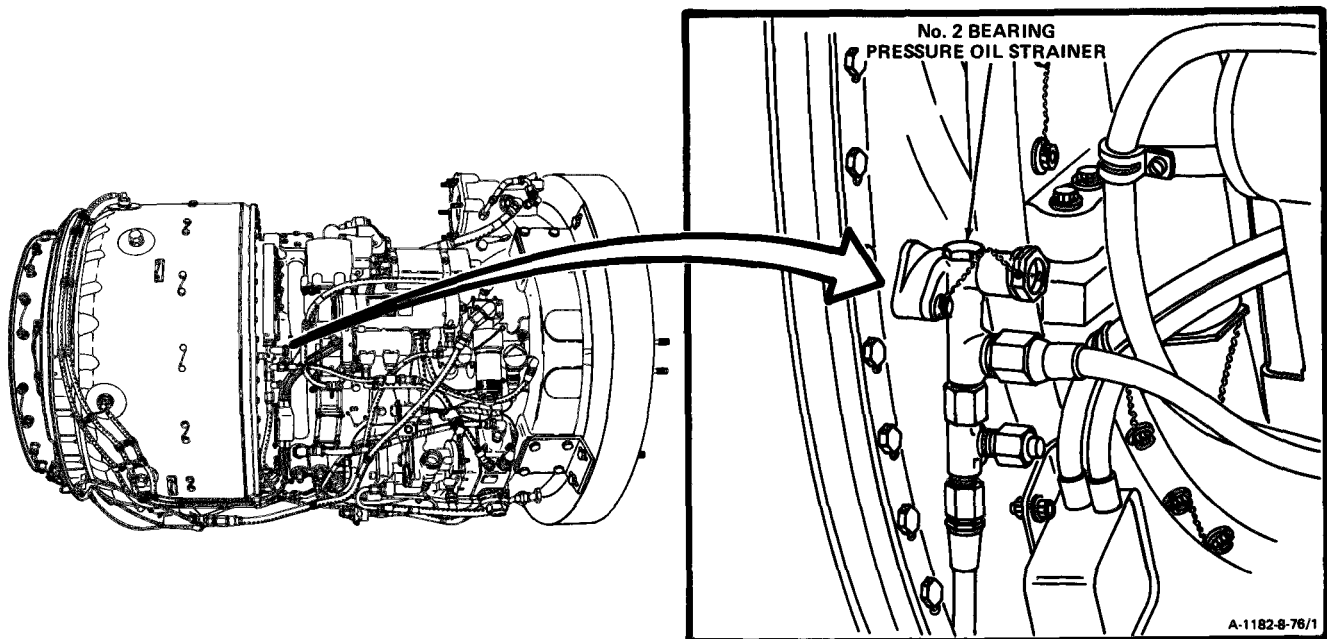
None

Personnel Required:

68B10 Aircraft Powerplant Repairer

WARNING

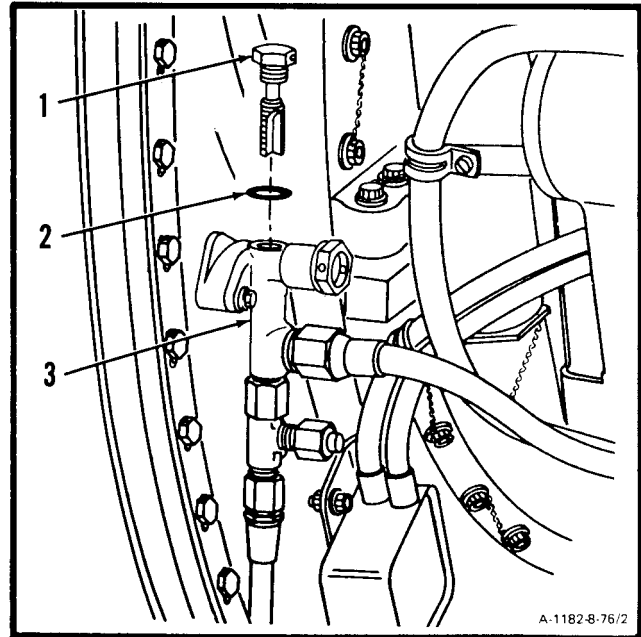
Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.

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8-76 REMOVE NO. 2 BEARING PRESSURE OIL STRAINER (Continued)

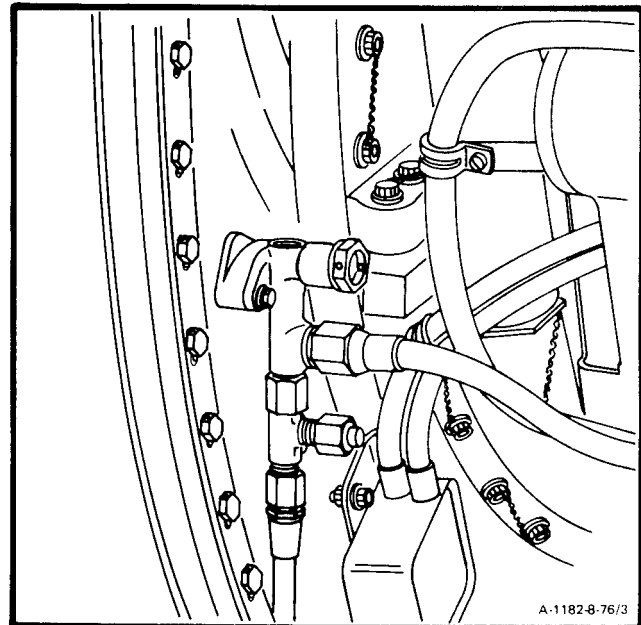
8-76

1. Remove lockwire, No. 2 bearing pressure oil strainer (1) and packing (2) from connector (3).



FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-77 CLEAN NO. 2 BEARING PRESSURE OIL STRAINER

8-77

INITIAL SETUP

Applicable Configurations:

All

Tools:

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

Materials:

Dry Cleaning Solvent (E17)
Gloves (E20)

Personnel Required:

68B10 Aircraft Powerplant Repairer

Equipment Condition:

Off Engine Task
No. 2 Bearing Pressure Oil Strainer Removed
(Task 8-76)

General Safety Instructions:**WARNING**

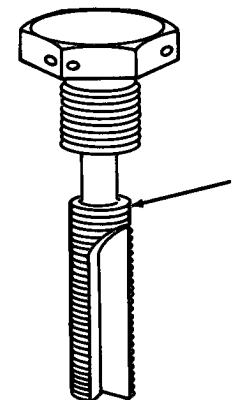
Dry cleaning solvent (E17) is flammable and toxic. It can irritate skin and cause burns. Use only in well-ventilated area, away from heat and open flame. In case of contact, immediately flush skin or eyes with water for at least 15 minutes. Get medical attention for eyes.

1. Wear gloves (E20). **Clean strainer (1)**, using brush and dry cleaning solvent (E17).

WARNING

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

2. Wear goggles. **Blow dry strainer (1)**, using clean, dry compressed air.



A-1182-8-77/1

FOLLOW-ON MAINTENANCE:

Inspect No. 2 Bearing Pressure Oil Strainer
(Task 8-78).

END OF TASK

8-78 INSPECT NO. 2 BEARING PRESSURE OIL STRAINER

8-78

INITIAL SETUP

Materials:

None

Applicable Configurations:

All

Personnel Required:

68B30 Aircraft Powerplant Inspector

Tools:

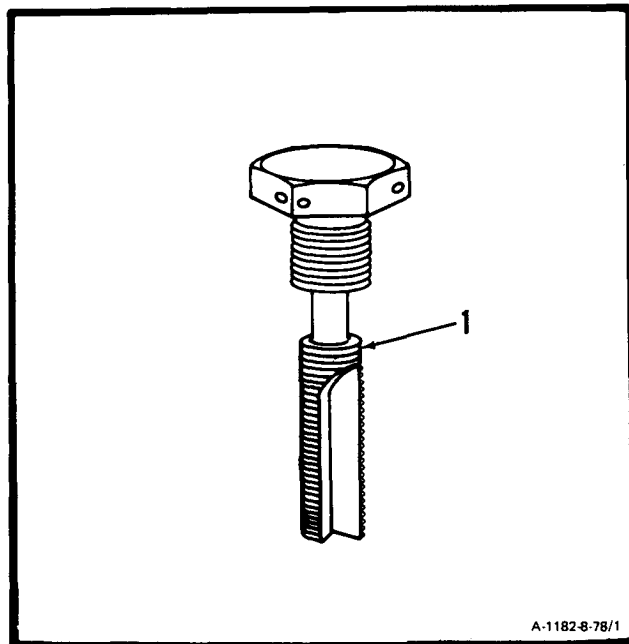
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Equipment Condition:

Off Engine Task

1. Inspect No. 2 bearing pressure oil strainer

(1). There shall be no cracks.



FOLLOW-ON MAINTENANCE:

None

END OF TASK

8-79 INSTALL NO. 2 BEARING PRESSURE OIL STRAINER

8-79

INITIAL SETUP**Applicable Configurations:**

All

Tools:

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

Materials:

Lockwire (E29)

Parts:

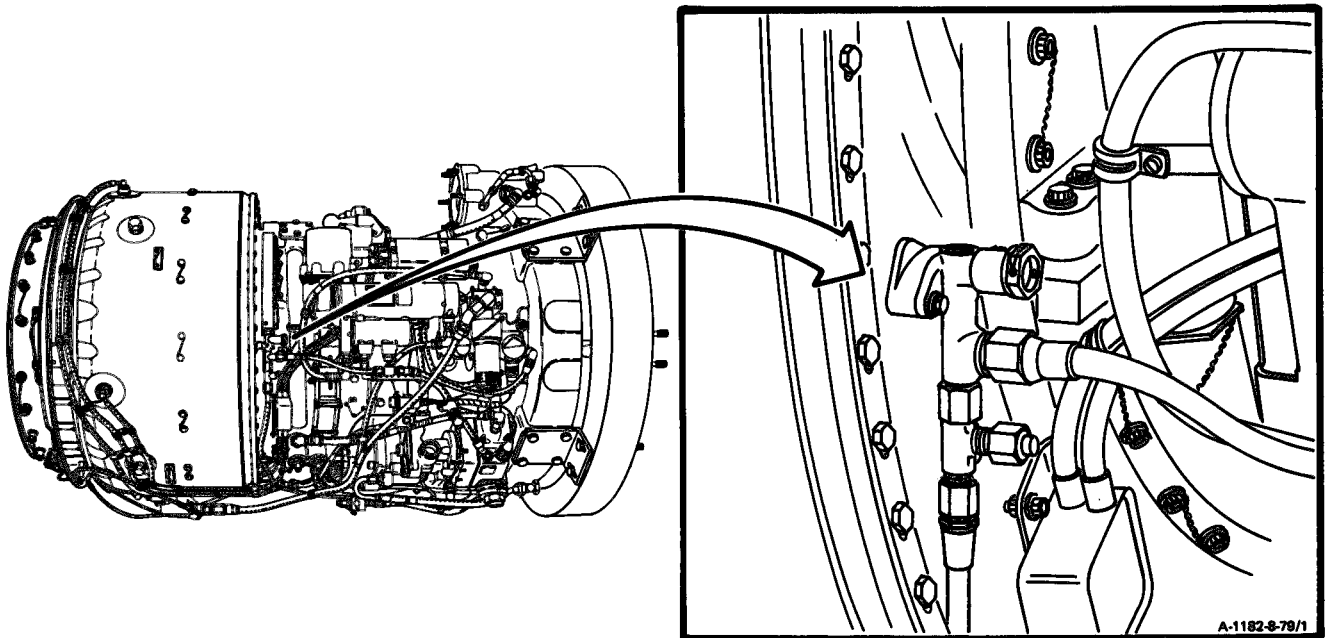
Packing

Personnel Required:

68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

References:

TM 55-2840-254-23P

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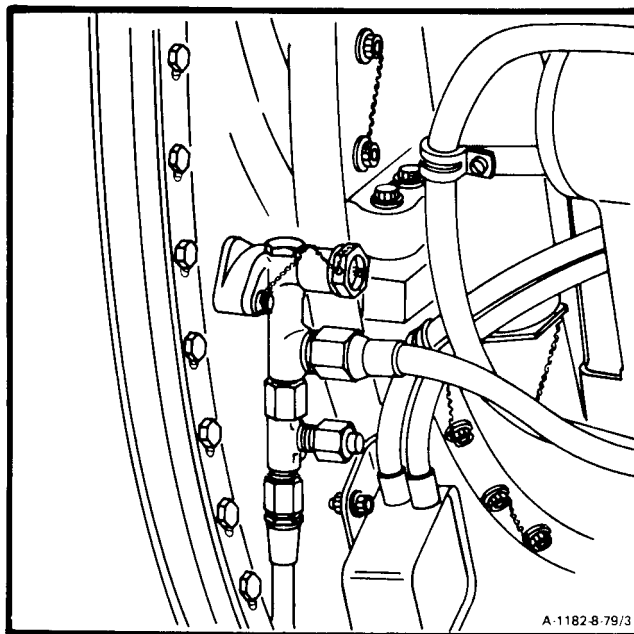
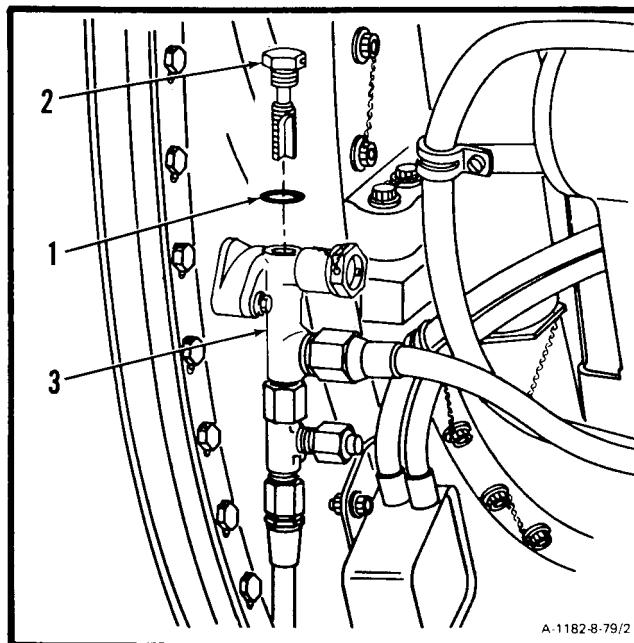
8-79 INSTALL NO. 2 BEARING PRESSURE OIL STRAINER (Continued)

8-79

1. Install packing (1) and No. 2 bearing pressure oil strainer (2) in connector (3). Lockwire strainer (2). Use lockwire (E29).

INSPECT**FOLLOW-ON MAINTENANCE:**

None

**END OF TASK**

Section X. NO. 4 AND 5 BEARING FILTER – MAINTENANCE PROCEDURES

8-80 REMOVE NO. 4 AND 5 BEARING FILTER

8-80

INITIAL SETUP

*General Safety Instructions:**Applicable Configurations:*

All

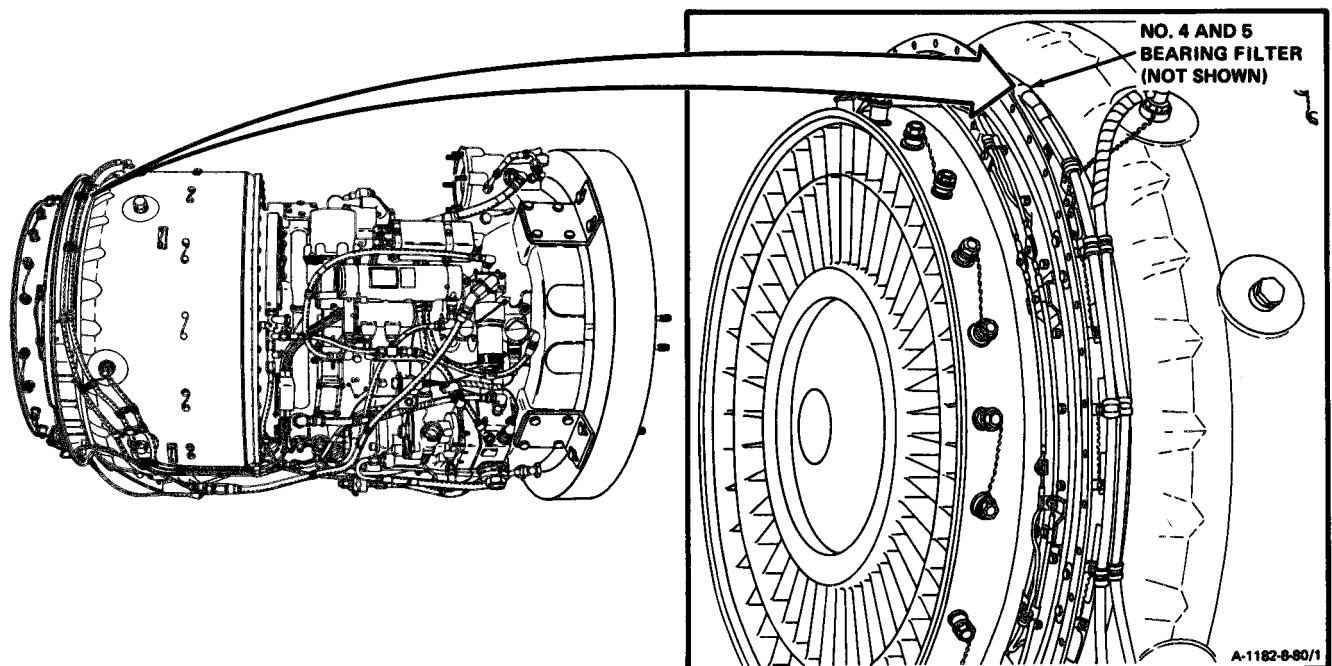
WARNING*Tools:*

Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Open-End Wrench (T53)
Container, 1-Quart
Goggles
Slave Screw, Part Number NAS1352-01-6,
NSN 5305-00-224-1168

Materials:

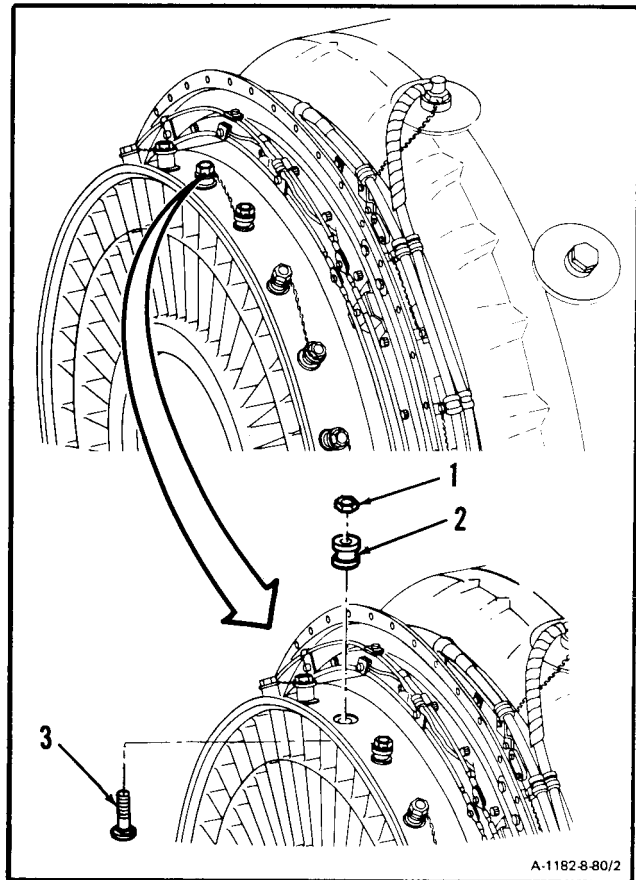
Wiping Rag (E58)

Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin, and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.



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1. Remove lockwire, nut (1), spacer (2), and bolt (3).

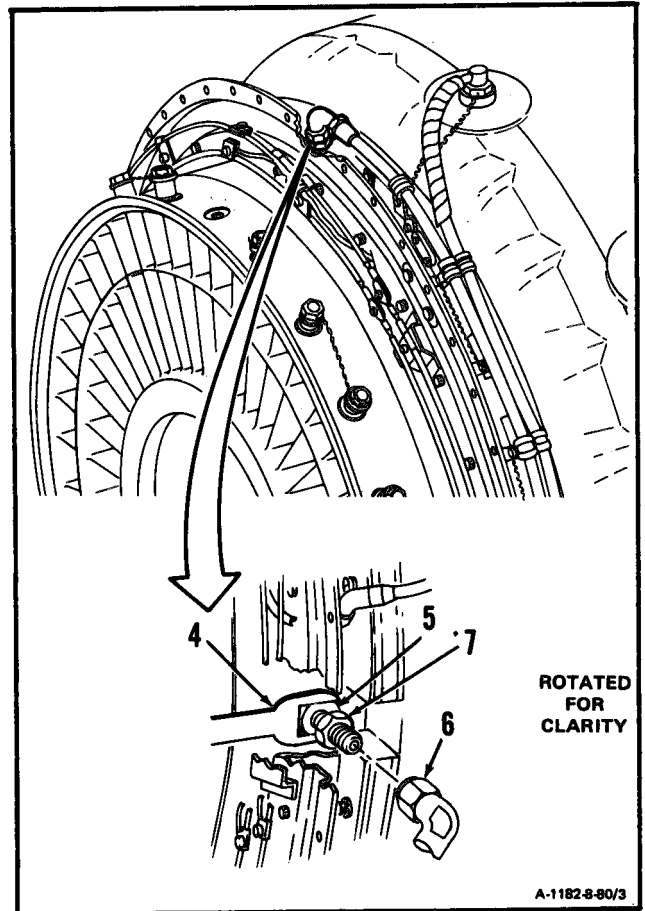


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CAUTION

In following step, hold No. 4 and 5 bearing lube adapter using open-end wrench (T53). Failure to use wrench may result in damage and dislocation of oil transfer tube resulting in oil leaks.

2. Place open-end wrench (T53) (4) on No. 4 and 5 bearing lube adapter (5).
3. **Disconnect hose assembly (6) from reducer (7).**



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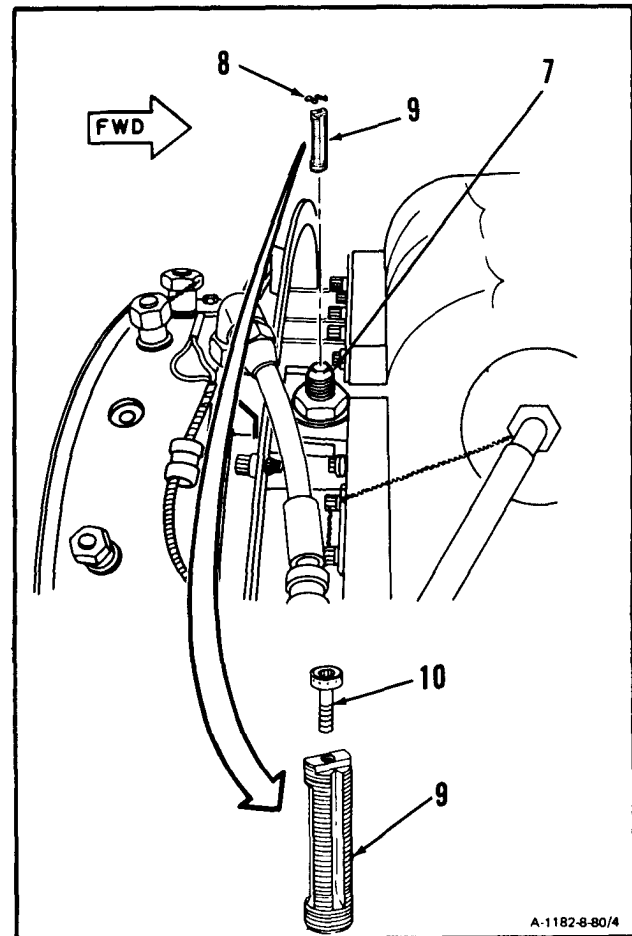
WARNING

In following step, wear goggles when removing spring. Spring may fly apart when removed. Failure to comply may cause serious eye injury. If eye injury occurs, get medical attention.

4. Remove spring (8).
5. Remove filter (9) from reducer (7). Use slave screw (10).

NOTE

If it is not possible to remove filter from reducer, do steps 6. thru 8.

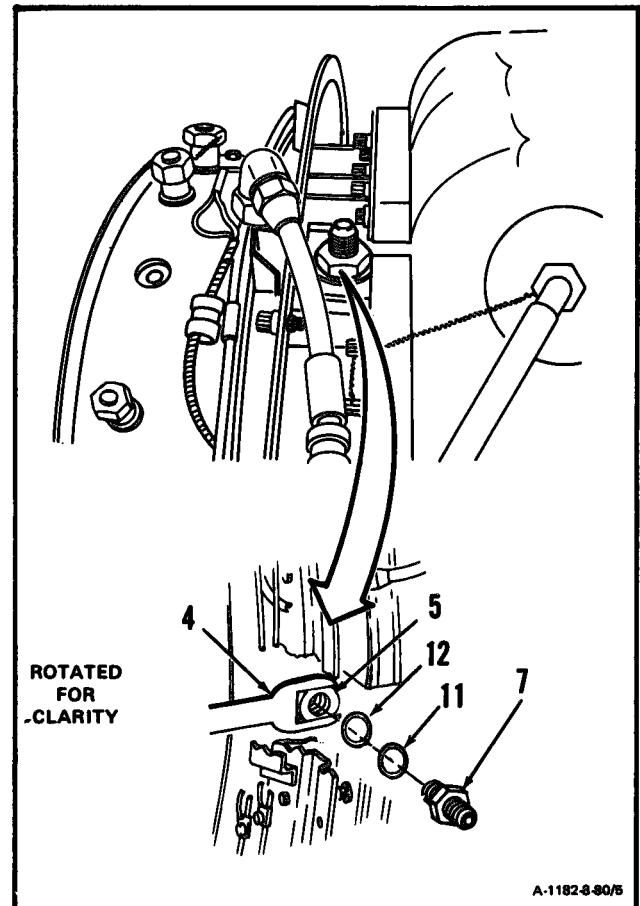


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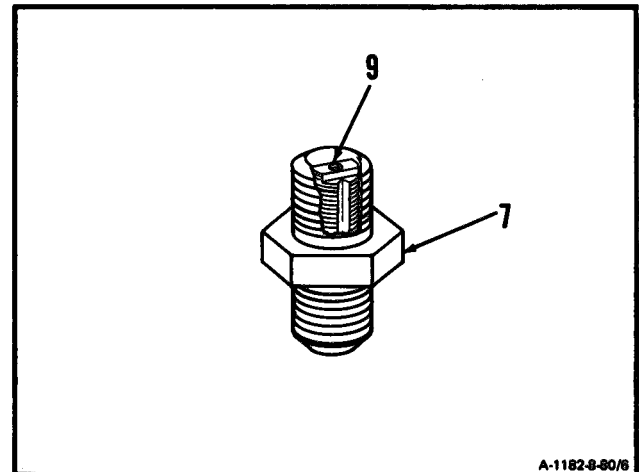
8-80 REMOVE NO. 4 AND 5 BEARING FILTER (Continued)

8-80

6. Place open-end wrench (T53) (4) on No. 4 and 5 bearing lube adapter (5).
7. **Remove reducer (7), washer (11), and shim (12)** from adapter (5).



8. **Discard reducer (7) and filter (9).**



FOLLOW-ON MAINTENANCE:

None

END OF TASK

8-81 CLEAN NO. 4 AND 5 BEARING FILTER

8-81

INITIAL SETUP**Applicable Configuration:**

All

Tools:

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

Personnel Required:

68510 Aircraft Powerplant Repairer

Materials:

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

Equipment Condition:

Off Engine Task
No. 4 and 5 Bearing Filter Removed (Task 8-80)

General Safety Instructions:**WARNING**

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

1. Wear gloves (E20). **Clean No. 4 and 5 bearing filter (1)**. Use brush and dry cleaning solvent (E17).
2. Clean spring (2). Immerse in dry cleaning solvent (E17) and agitate.

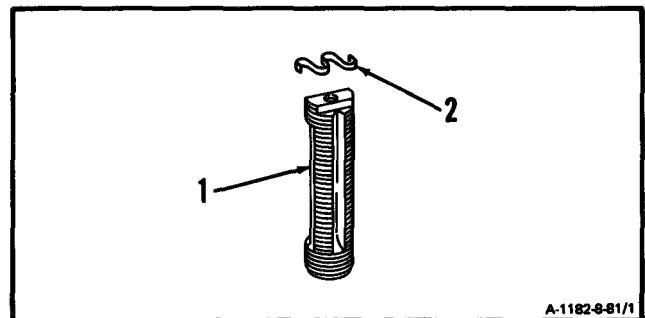
WARNING

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

3. Wear goggles. **Blow dry No. 4 and 5 bearing filter (1)**. Use clean, dry compressed air.
4. Wipe spring (2) dry. Use clean, dry lint-free cloth (E26).

FOLLOW-ON MAINTENANCE:

inspect No. 4 and 5 Bearing Filter (Task 8-82).

END OF TASK

A-1182-9-81/1

8-82 INSPECT NO. 4 AND 5 BEARING FILTER

8-82

INITIAL SETUP**Applicable Configurations:**

All

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

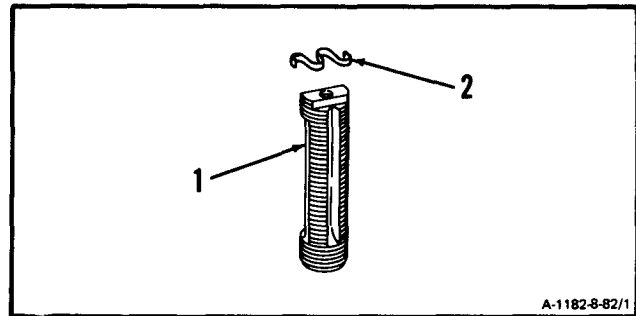
None

Personnel Required:

68B30 Aircraft Powerplant Inspector

Equipment ConditionOff Engine Task

1. **Inspect No. 4 and 5 bearing filter (1).** There shall be no nicks, tears, or broken segments.
2. Inspect spring (2). Spring shall not be broken.

**FOLLOW-ON MAINTENANCE:**

None

END OF TASK

8-83 INSTALL NO. 4 AND 5 BEARING FILTER

8-83

INITIAL SETUP**Applicable Configurations:**

All

Tools:

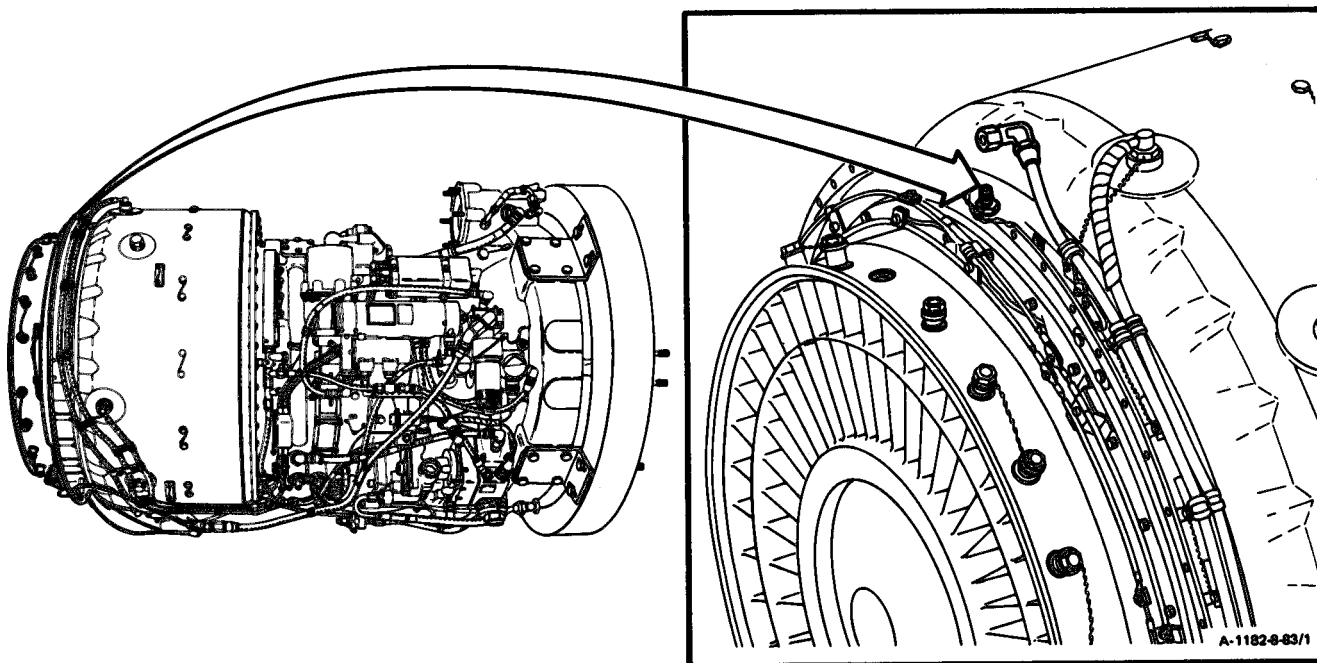
Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114
Open-End Wrench (T53)
Torque Wrench, 30-150 Inch-Pounds
Outside Micrometer Caliper Set
Goggles

Materials:

Lockwire (E29)

Personnel Required:

68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

**GO TO NEXT PAGE**

NOTE

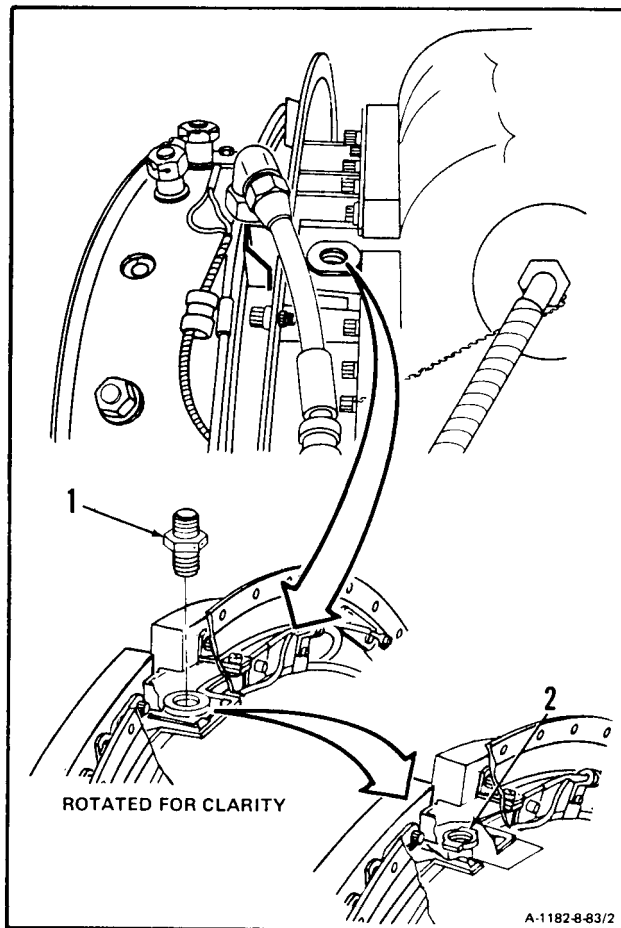
If reducer was removed in Task 8-80, perform steps 1 thru 3. If reducer was not removed, omit steps 1 thru 3.

- 1 Determine shims needed under reducer (1) as follows:

CAUTION

Do not tighten reducer in following step. Tightening of reducer may damage internal oil tube.

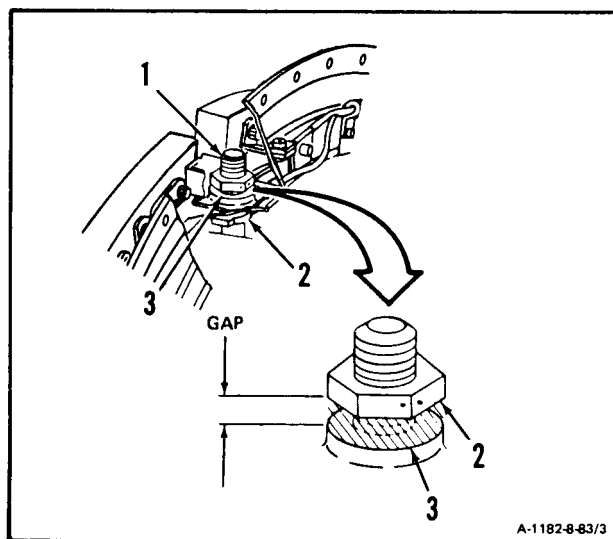
- a. Thread reducer (1) in adapter (2) until it is seated.



CAUTION

In following step, fireshield must be seated against adapter to obtain correct measurement. Failure to do so will result in incorrect gap.

- b. Seat fireshield section (3) against adapter (2) and measure gap between fireshield section and reducer (1).



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8-83 INSTALL NO. 4 AND 5 BEARING FILTER (Continued)

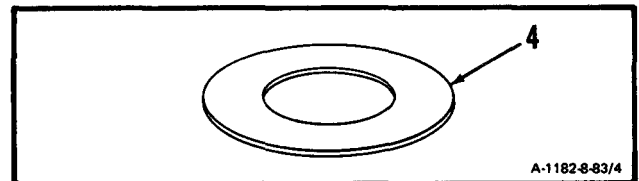
8-83

c. Find gap measured in shim selection table.
Read across table to find shim thickness needed.

SHIM SELECTION TABLE

IF GAP MEASURES	SHIM THICKNESS REQUIRED
INCH	INCH
0.060	NONE
0.061	NONE
0.062	0.003 to 0.005
0.063	0.003 to 0.005
0.064	0.003 to 0.005
0.065	0.006 to 0.010
0.066	0.006 to 0.010
0.067	0.006 to 0.010
0.068	0.008 to 0.012
0.069	0.008 to 0.012
0.070	0.008 to 0.012
0.071	0.009 to 0.015
0.072	0.011 to 0.017
0.073	0.011 to 0.017
0.074	0.011 to 0.017
0.075	0.012 to 0.020
0.076	0.014 to 0.022
0.077	0.014 to 0.022
0.078	0.016 to 0.024
0.079	0.016 to 0.024
0.080	0.016 to 0.024
0.081	0.016 to 0.024
0.082	0.019 to 0.029
0.083	0.019 to 0.029
0.084	0.019 to 0.029
0.085	0.022 to 0.034
0.086	0.022 to 0.034
0.087	0.022 to 0.034
0.088	0.022 to 0.034
0.089	0.024 to 0.036
0.090	0.024 to 0.035

d. Measure thickness of shims (4). Check against shim selection table. Use outside micrometer caliper.



A-1182-8-83/4

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CAUTION

Concave side of washer must face fire-shield section. Failure to comply will place wrong tension on internal oil tube.

CAUTION

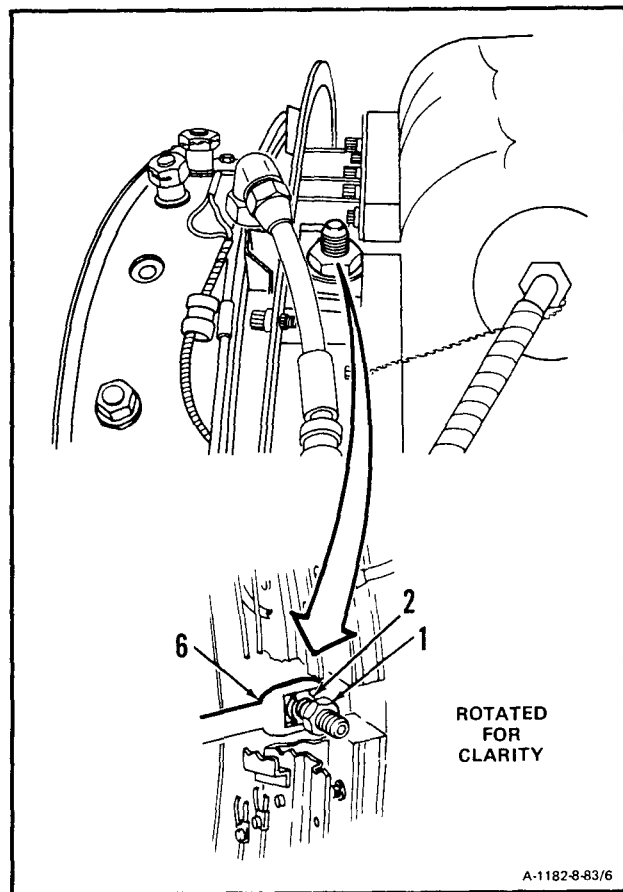
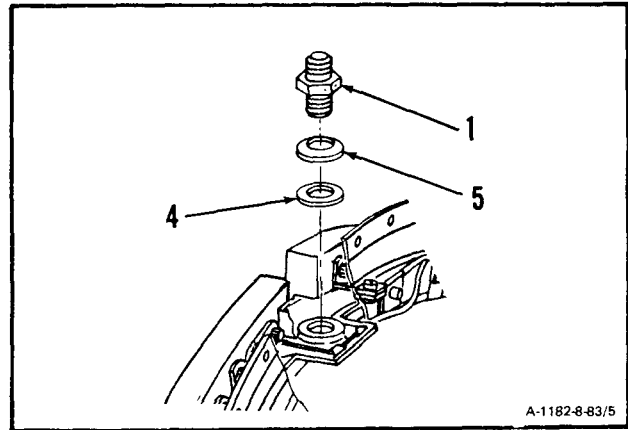
Do not tighten reducer in following step. Tightening of reducer may damage internal oil tube.

2. Remove reducer (1). Loosely install shims (4), washer (5), concave side down, and reducer (1).

CAUTION

Adapter must be held firmly when tightening reducer. Failure to comply will cause damage to internal tube assembly.

3. Hold adapter (2) with open-end wrench (T53) (6). Torque reducer (1) to 115 inch-pounds.



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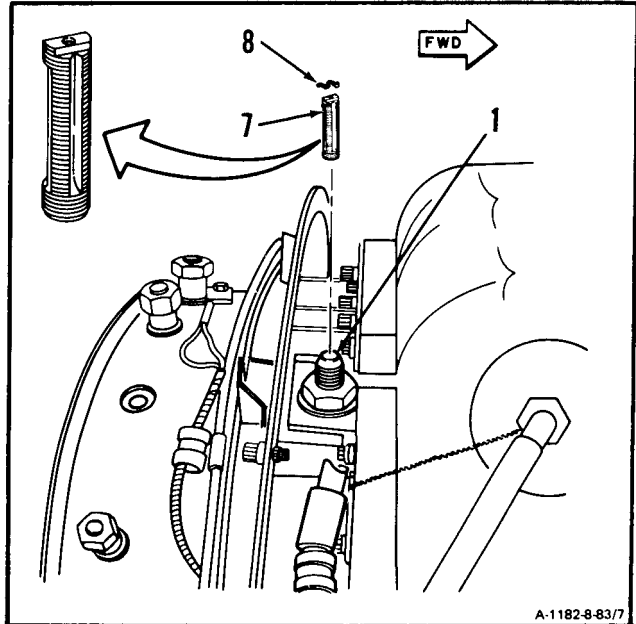
WARNING

In following step, wear goggles when installing spring. Spring may fly apart when installing. Failure to comply may cause serious eye injury. If eye injury occurs, get medical attention.

CAUTION

In following step, be sure that filter is installed in reducer with small diameter hole facing up. Failure to comply will cause less oil flow to bearings and result in bearing failure.

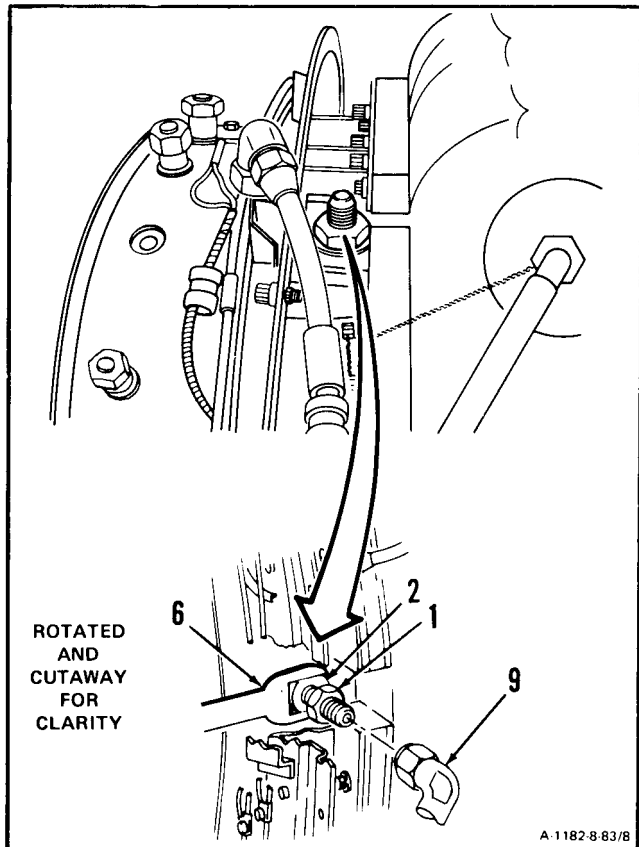
- 4. Wear goggles. Install No. 4 and 5 bearing filter (7) and spring (8) in reducer (1).



CAUTION

In following step, hold No. 4 and 5 bearing lube adapter using open-end wrench (T53). Failure to use wrench may result in damage and dislocation of oil transfer tube resulting in oil leaks.

- 5. Place open-end wrench (T53) (6) on adapter (2).
- 6. Install hose assembly (9) on reducer (1).

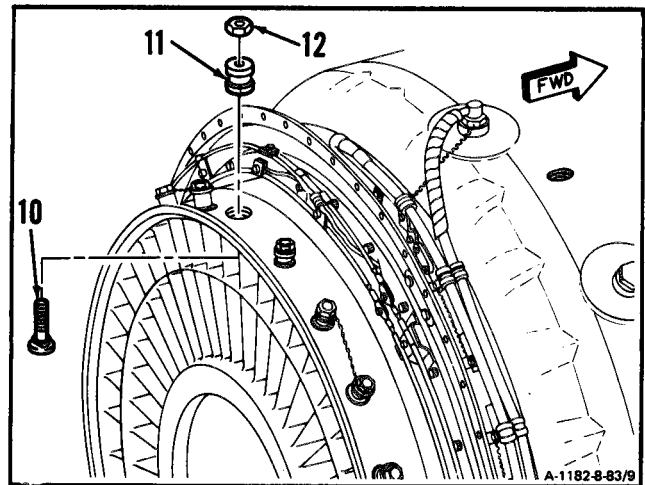


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8-83 INSTALL NO. 4 AND 5 BEARING FILTER (Continued)

8-83

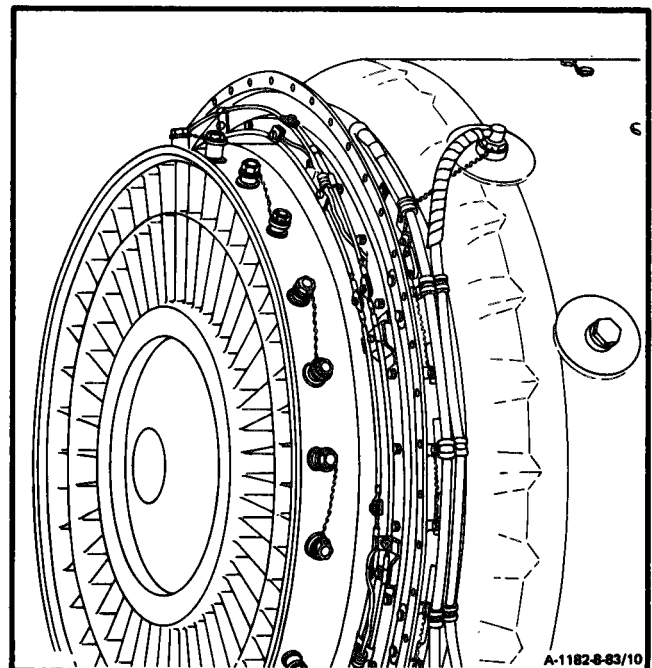
7. Install bolt (10), spacer (11), and nut (12).
Torque nut (12) to 125 inch-pounds. Lockwire
nut (12). Use lockwire (E29).



INSPECT

FOLLOW-ON MAINTENANCE:

None



END OF TASK

Section XI. OIL DRAIN COCK – MAINTENANCE PROCEDURES

8-84 REMOVE OIL DRAIN COCK

8-84

INITIAL SETUP

General Safety Instructions:

Applicable Configurations:

All

Tools:

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

Materials:

Wiping Rag (E58)

Personnel Required:

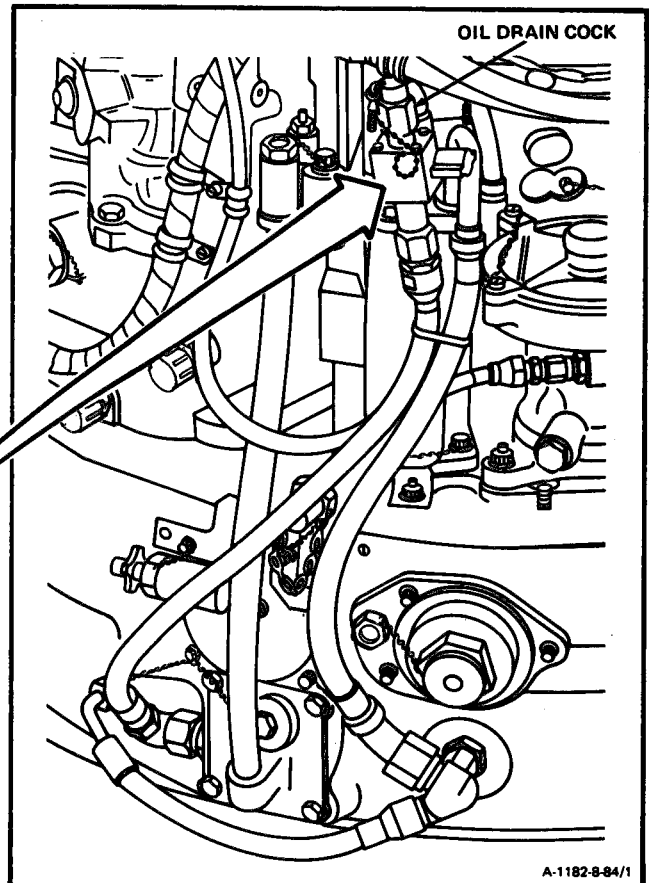
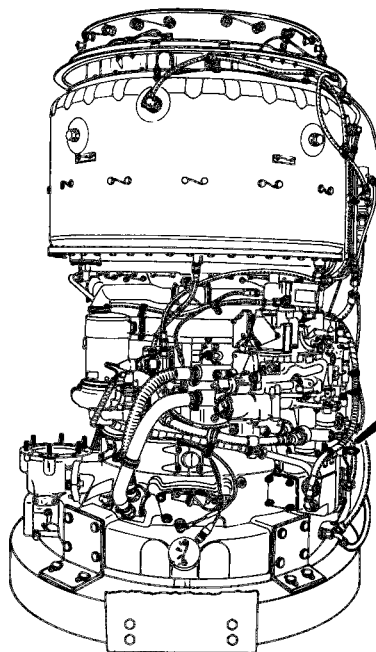
68510 Aircraft Powerplant Repairer

Equipment Condition:

Engine Oil System Drained (Task 1-75)

WARNING

Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin, and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.

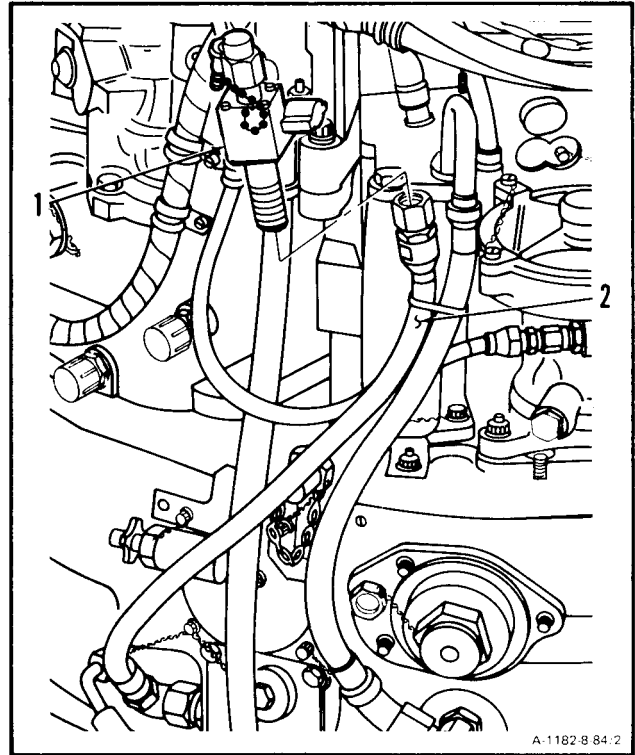


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8-84 REMOVE OIL DRAIN COCK (Continued)

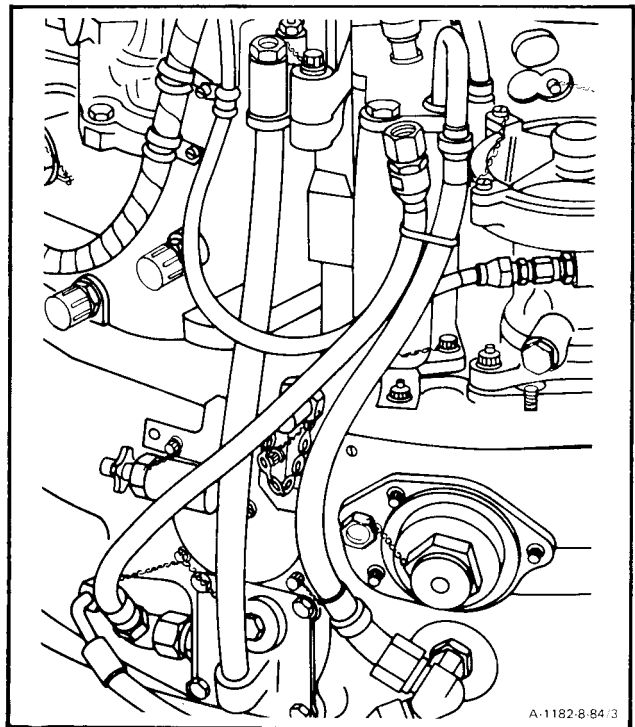
8-84

1. Remove oil drain cock (1) from hose assembly (2).



FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-85 CLEAN OIL DRAIN COCK

8-85

INITIAL SETUP**Applicable Configurations:**

All

Tools:

Goggles
Compressed Air Source

Materials:

Dry Cleaning Solvent (E17)
Gloves (E20)
Lint-Free Cloth (E269)

Personnel Required:

68510 Aircraft Powerplant Repairer

Equipment Condition:

Off Engine Task
Oil Drain Cock Removed (Task 8-84)

WARNING

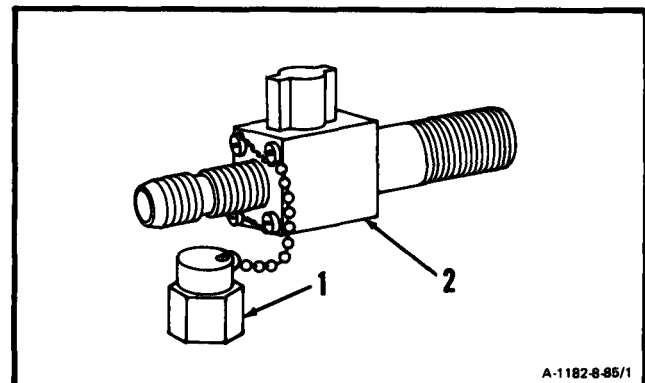
Dry cleaning solvent (E17) is flammable and toxic. It can irritate skin and cause burns. Use only in well-ventilated area, away from heat and open flame. In case of contact, immediately flush skin or eyes with water for at least 15 minutes. Get medical attention for eyes.

1. Remove cap (1).

NOTE

Make sure valve is in open position in following step 2.

2. **Clean oil drain cock (2)** as follows:
 - a. Wear gloves (E20). Immerse in dry cleaning solvent (E17) and agitate. Use brush on external surfaces.
 - b. Use lint-free cloth (E26) to remove solvent.



A-1182-6-85/1

WARNING

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

- c. Wear goggles and **blow dry internal passage**. Use clean, dry compressed air.

GO TO NEXT PAGE

8-85 CLEAN OIL DRAIN COCK (Continued)

8-85

FOLLOW-ON MAINTENANCE:

Inspect Oil Drain Cock (Task 8-86).

END OF TASK

8-282

8-86 INSPECT OIL DRAIN COCK

8-86

INITIAL SETUP**Personnel Required:**

68B30 Aircraft Powerplant Inspector

Applicable Configurations:

All

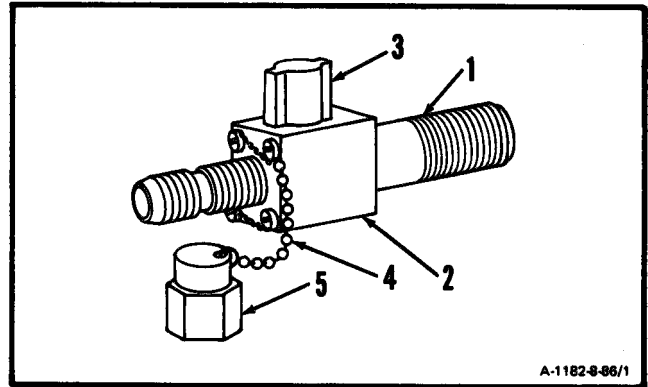
Equipment Condition:

Off Engine Task

Tools:Technical Inspection Tool Kit,
NSN 5180-00-323-5114**Materials:**None

1. Inspect oil drain cock (1) as follows:

- a. Inspect housing (2). There shall be no cracks.
- b. Turn valve (3). There shall be no binding.
- c. Inspect chain (4). There shall be no broken links.

2. Install cap (5).**FOLLOW-ON MAINTENANCE:**

None

END OF TASK

8-87 INSTALL OIL DRAIN COCK

8-87

INITIAL SETUP

Applicable Configurations:

All

Tools:

Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspector's Tool Kit,
NSN 5180-00-323-5114

Materials:

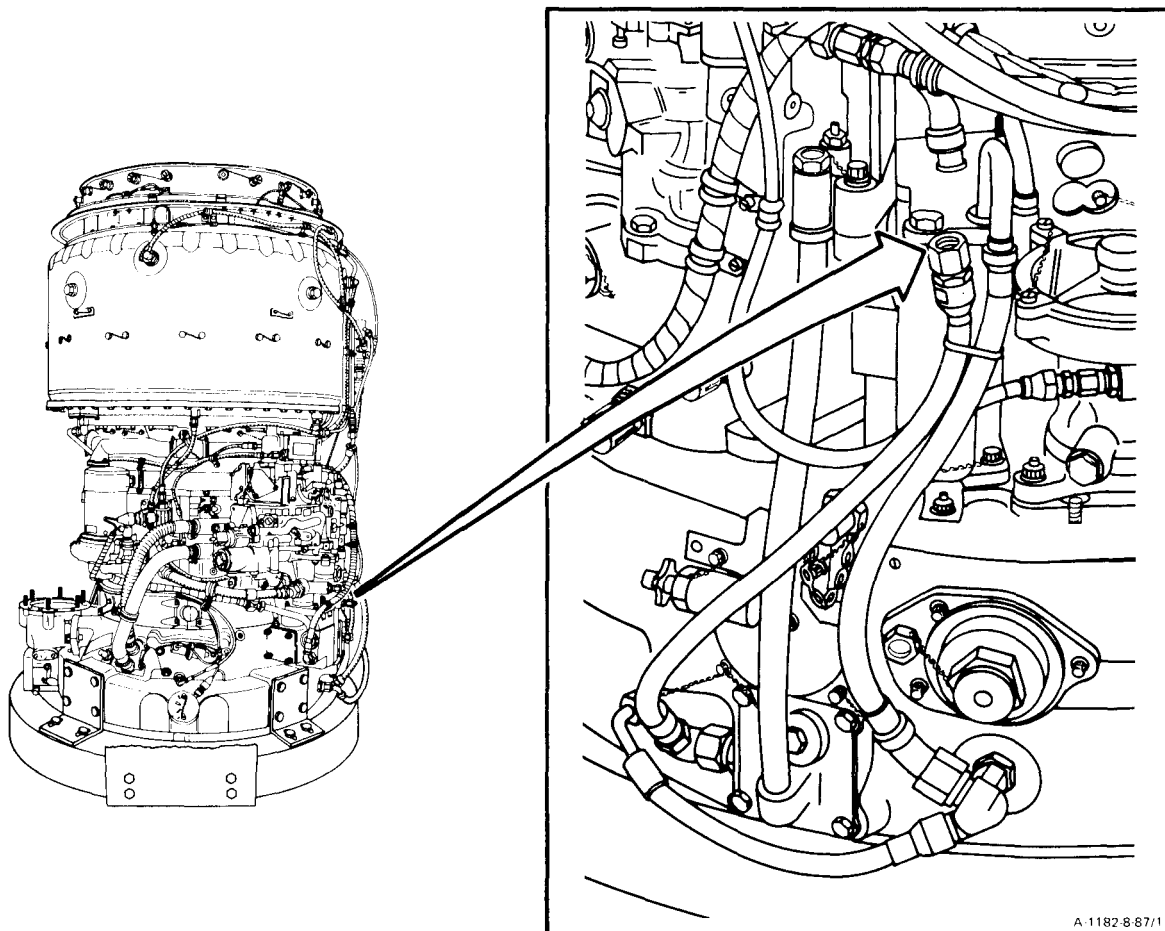
Wiping Rag (E58)

Personnel Required:

68610 Aircraft Powerplant Repairer
68630 Aircraft Powerplant Inspector

General Safety Instructions:**WARNING**

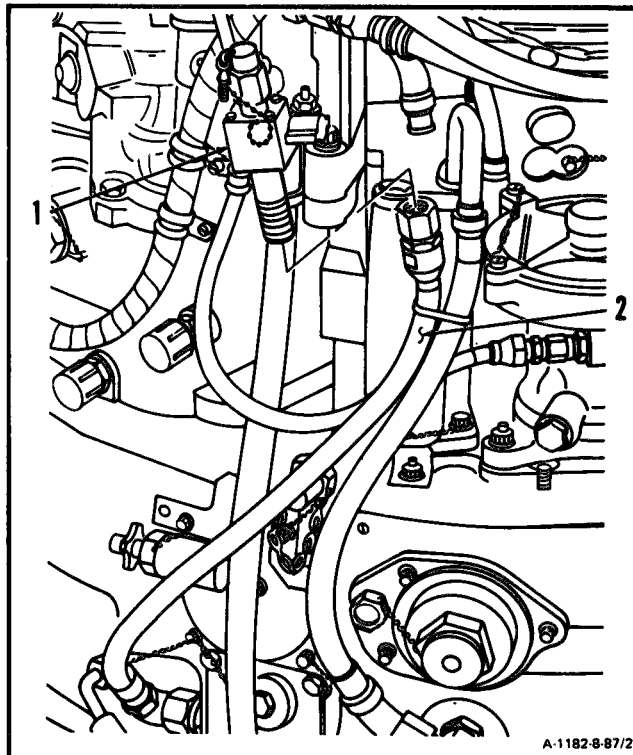
Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin, and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.

**GO TO NEXT PAGE**

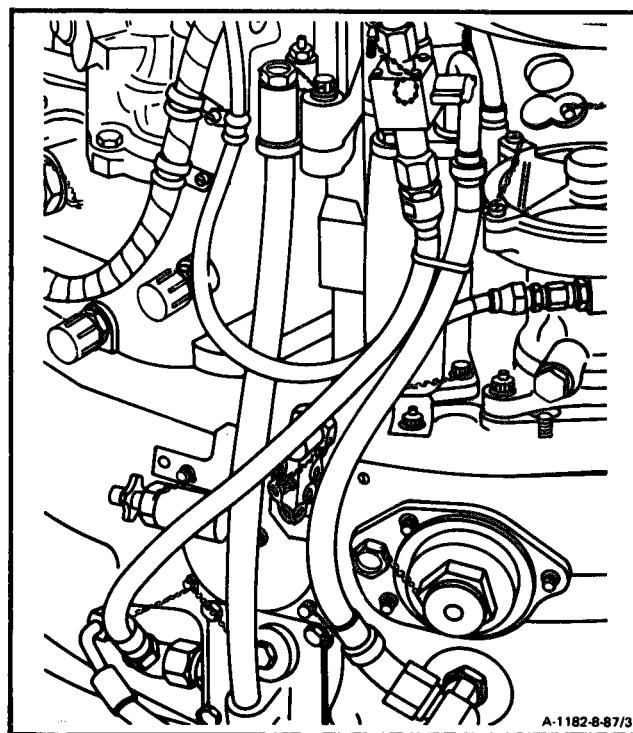
8-87 INSTALL OIL DRAIN COCK (Continued)

8-87

1. Install oil drain cock (1) on hose assembly (2).

INSPECT**FOLLOW-ON MAINTENANCE:**

Service Engine Oil System (Task 1-74).

**END OF TASK**

Section XII. CHIP DETECTOR – MAINTENANCE PROCEDURES

8-88 REMOVE CHIP DETECTOR

8-88

INITIAL SETUP

Applicable Configurations:

All

Tools:

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

Materials:

Wiping Rag (E58)

Personnel Required:

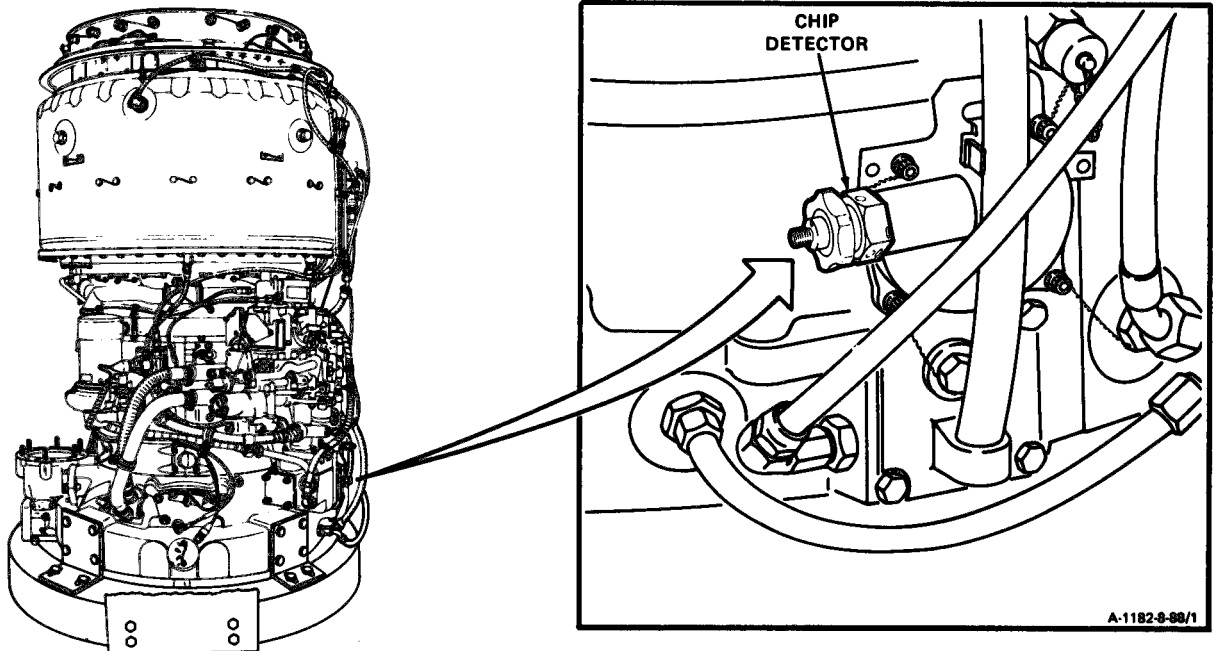
68B10 Aircraft Powerplant Repairer

Equipment Condition:

Engine Oil System Drained (Task 1-75)

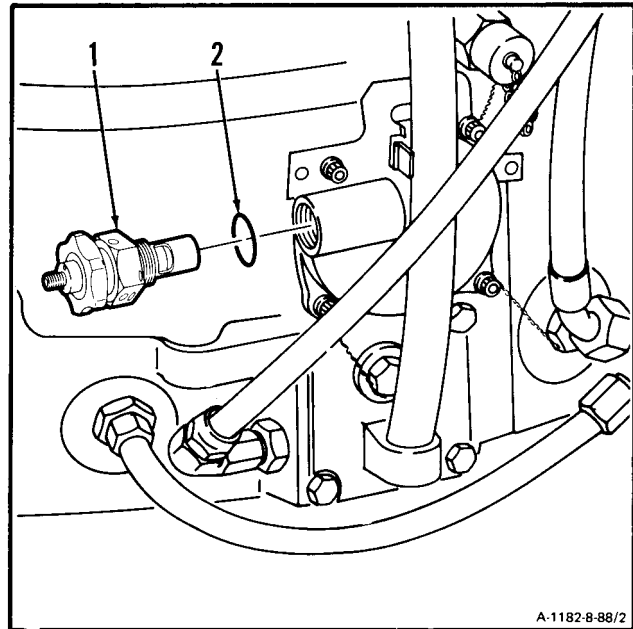
General Safety Instructions:**WARNING**

Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin, and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.



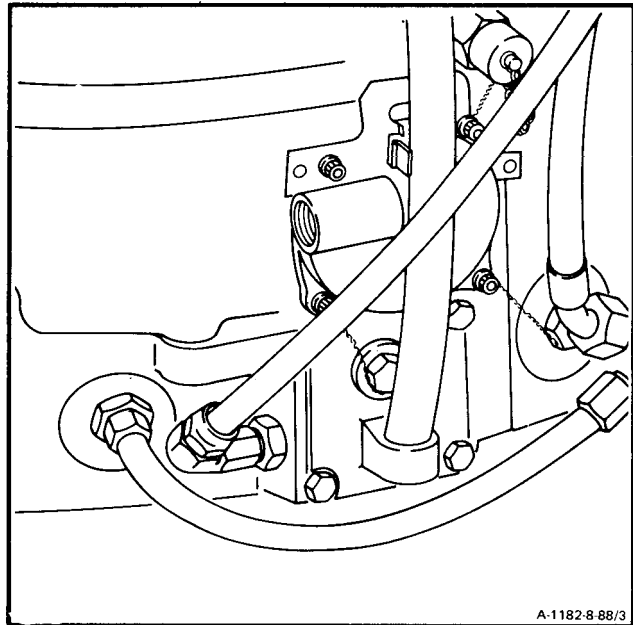
GO TO NEXT PAGE

1. Remove lockwire, chip detector (1) and packing (2).



FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-89 DISASSEMBLE CHIP DETECTOR

8-89

INITIAL SETUP**Applicable Configurations:**

All

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

None

Personnel Required:

68B10 Aircraft Powerplant Repairer

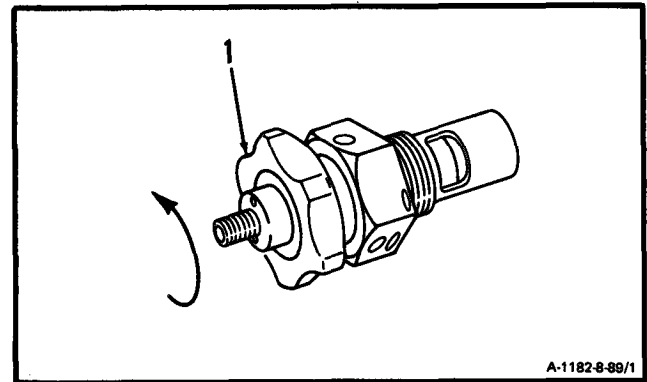
Equipment Condition:

Off Engine Task

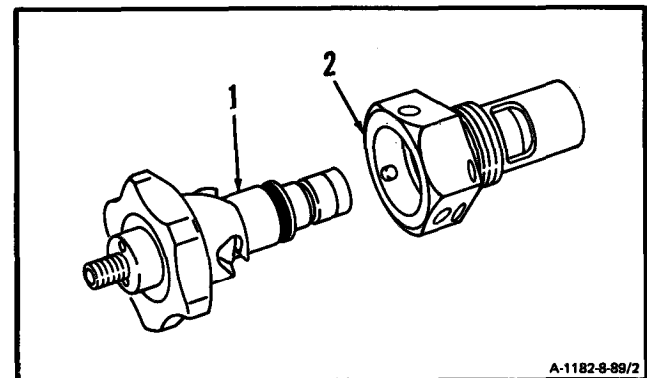
Engine Oil System Drained (Task 1-75)

Chip Detector Removed (Task 8-88)

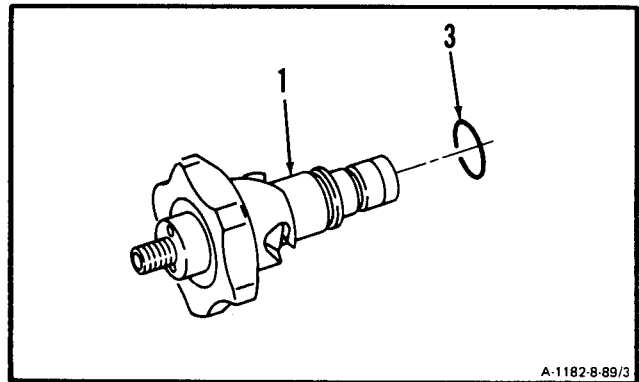
1. **Unlock plug (1).** Push in on plug and turn counterclockwise.



2. **Remove plug (1)** from housing (2).

**GO TO NEXT PAGE**

3. Remove packing (3) from plug (1).



FOLLOW-ON MAINTENANCE:

None

END OF TASK

8-90 CLEAN CHIP DETECTOR

8-90

INITIAL SETUP**Applicable Configurations:**

All

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

Goggles

Compressed Air Source

Materials:

Dry Cleaning Solvent (E17)

Gloves (E20)

Lint-Free Cloth (E26)

Personnel Required:

68B10 Aircraft Powerplant Repairer

Equipment Condition:

Off Engine Task

Engine Oil System Drained (Task 1-75)

Chip Detector Removed (Task 8-88)

Chip Detector Disassembled (Task 8-89)

General Safety Instructions:**WARNING**

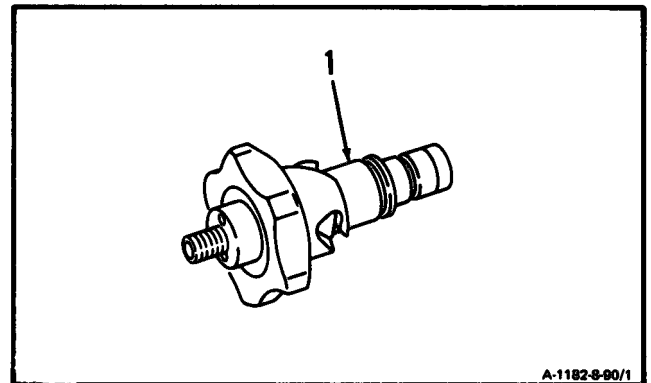
Dry cleaning solvent (E17) is flammable and toxic. It can irritate skin and cause burns. Use only in well-ventilated area, away from heat and open flame. In case of contact, immediately flush skin or eyes with water for at least 15 minutes. Get medical attention for eyes.

WARNING

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

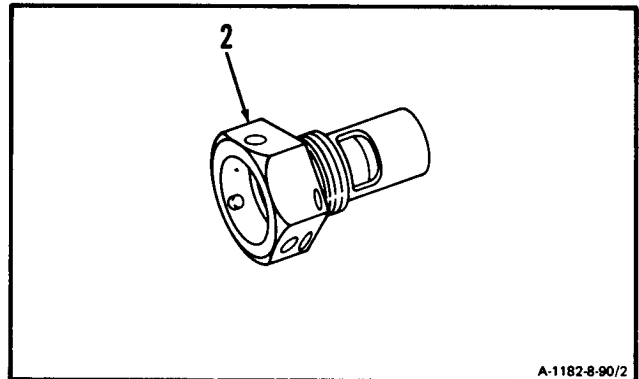
1. Clean plug (1) as follows:

- a. Wear gloves (E20). Immerse plug (1) in dry cleaning solvent (E17) and agitate. Use brush on external surfaces.
- b. Use lint-free cloth (E26) to remove solvent.
- c. Wear goggles. **Blow dry plug.** Use clean, dry compressed air.

**GO TO NEXT PAGE**

2. **Clean housing (2)** as follows:

- a. Immerse in dry cleaning solvent (E17) and agitate. Use brush on external surfaces.
- b. Use lint-free cloth (E26) to remove solvent.
- c. Wear goggles and **blow dry internal passage**. Use clean, dry compressed air.



FOLLOW-ON MAINTENANCE:

Inspect Chip Detector (Task 8-91).

END OF TASK

8-91 INSPECT CHIP DETECTOR

8-91

INITIAL SETUP

Applicable Configurations:

All

Tools:

Technical Inspection Tool Kit,
NSN 5180-00-323-5114
Steel Nut, 1/4-28

Materials

None

Personnel Required:

68B30 Aircraft Powerplant Inspector

Equipment Condition:

Off Engine Task

1. **Inspect plug (1) and housing (2).** There shall be no cracks.

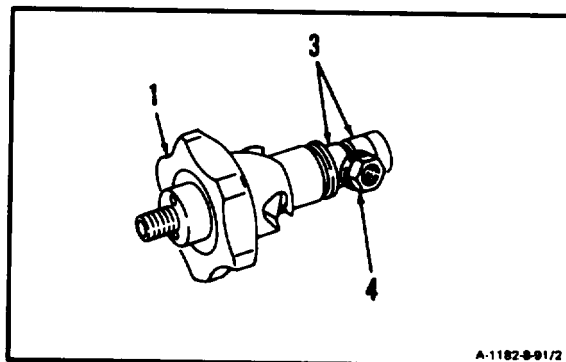
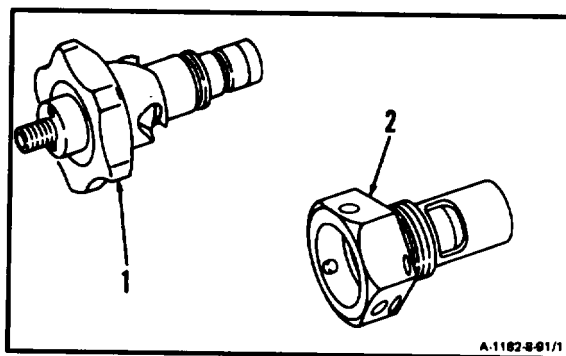
NOTE

Do not drain oil solely for the purpose of removing the housing (2) for inspection. Inspect housing (2) for cracks without removal from engine when inspection is performed while engine oil is not drained.

2. **Check strength of magnets (3)** on plug (1) by placing 1/4-28 steel nut (4) against them. Magnets (3) shall be strong enough to support weight of steel nut (4).

FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-92 TEST CHIP DETECTOR

8-92

INITIAL SETUP**Applicable Configurations:**

All

Tools:

Multimeter

Materials:

None

Personnel Required:

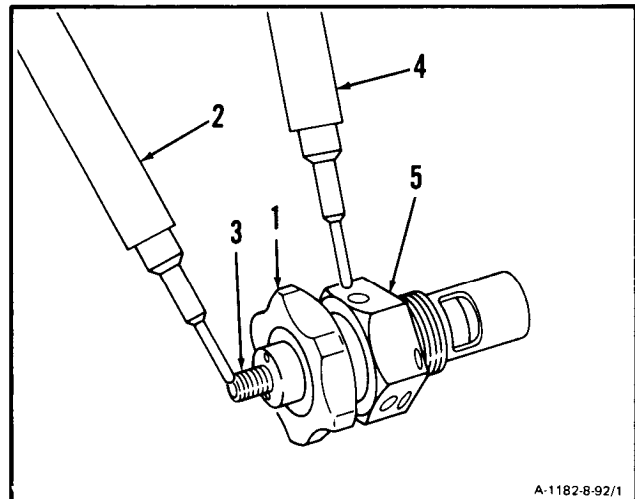
68B10 Aircraft Powerplant Repairer

Equipment Condition:

Chip Detector Assembled (Task 8-93)

1. Measure insulation resistance of chip detector (1)
as follows: Use multi meter.

- a. Set multi meter range switch to R x 1000.
- b. Touch red probe (2) to stud (3).
- c. Touch black probe (4) to housing (5).
- d. Meter shall indicate 10,000 ohms minimum.

**FOLLOW-ON MAINTENANCE:**

None

END OF TASK

8-93 ASSEMBLE CHIP DETECTOR

8-93

INITIAL SETUP

Applicable Configurations:

All

Tools:

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

Materials:

None

Parts:

Packing

Personnel Required:

68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

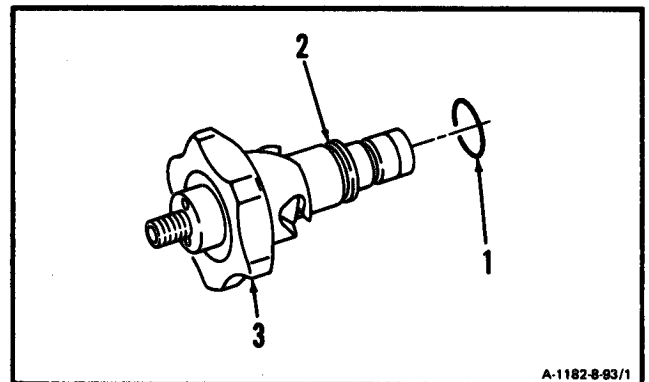
References:

TM 55-2840-254-23P

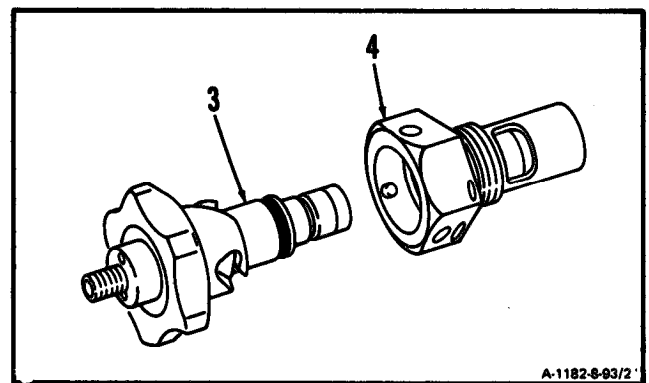
Equipment Condition:

Off Engine Task

1. Install packing (1) in groove (2) on plug (3).



2. Install plug (3) in housing (4).



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8-93 ASSEMBLE CHIP DETECTOR (Continued)

8-93

CAUTION

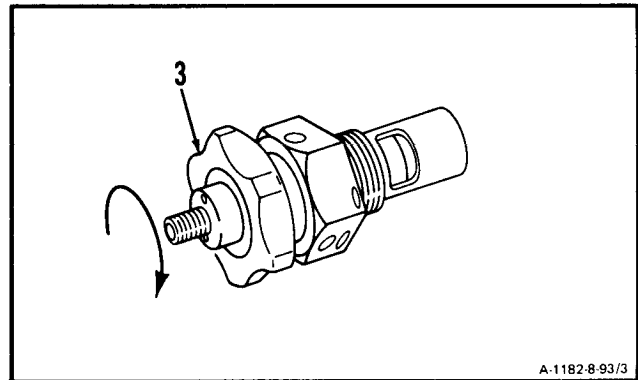
Plug shall be fully seated and firmly locked into housing. A loose fitting plug will cause oil leakage, resulting in engine damage.

3. **Lock plug (3)** by pushing and turning plug 1/8-inch clockwise.

INSPECT

FOLLOW-ON MAINTENANCE:

Test Chip Detector (Task 8-92).

**END OF TASK**

8-94 INSTALL CHIP DETECTOR

8-94

INITIAL SETUP**Applicable Configurations:**

All

Tools:

Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114
Crowfoot Attachment, 7/8-Inch
Torque Wrench, 30-150 Inch-Pounds

Materials:

Lockwire (E29)

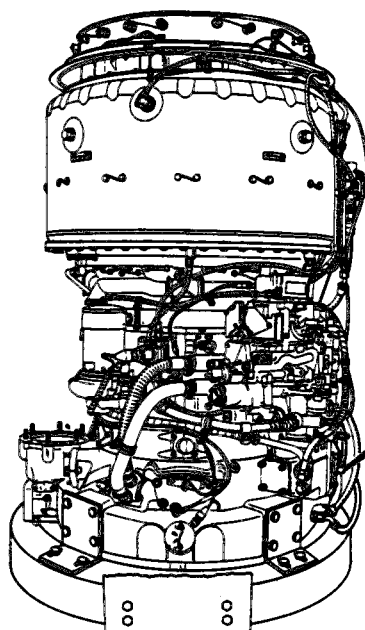
Parts:

Packing

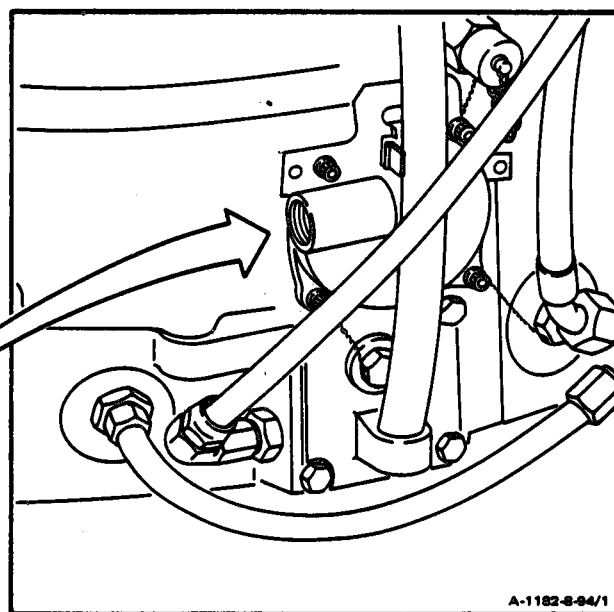
Personnel Required:

68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

References:TM 55-2840-254-23P



42 X 20



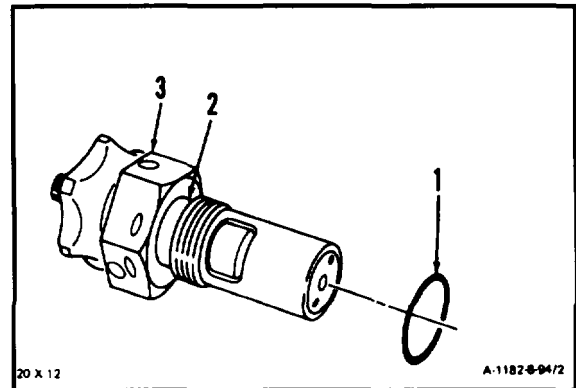
A-1182-8-84/1

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NOTE

If airframe MWO 55-1520-240-50-24 has been complied with, chip detector P/N IB737P must be installed. If MWO has not been complied with, chip detector P/N 2-300-809-01 or K203AG must be used.

1. **Install packing (1)** in groove (2) on chip detector (3).
2. **Install chip detector (3)** in housing (4). **Torque to 95 inch-pounds. Use crowfoot attachment.**
3. Lockwire chip detector (3) to bolt (5). Use lockwire (E29).

**INSPECT**

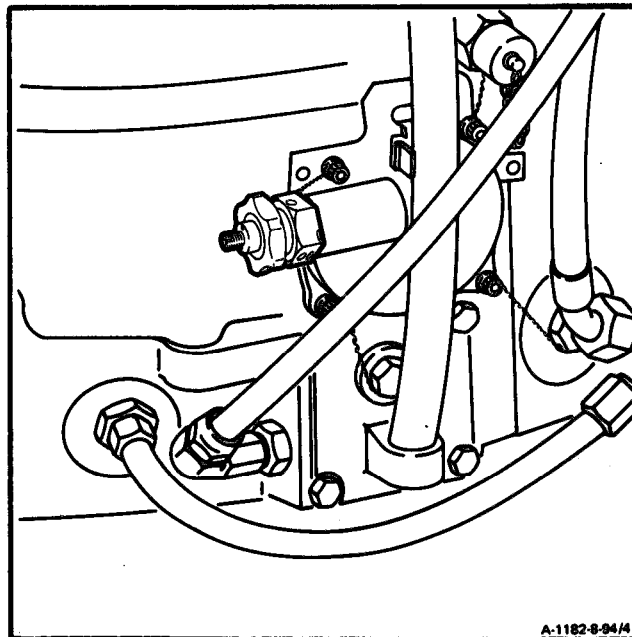
GO TO NEXT PAGE

8-94 INSTALL CHIP DETECTOR (Continued)

8-94

FOLLOW-ON MAINTENANCE:

Service Engine Oil System (Task 1-74).

**END OF TASK**

Section XIII. OIL LEVEL INDICATOR – MAINTENANCE PROCEDURES

8-95 REMOVE OIL LEVEL INDICATOR

8-95

INITIAL SETUP

Applicable Configurations:

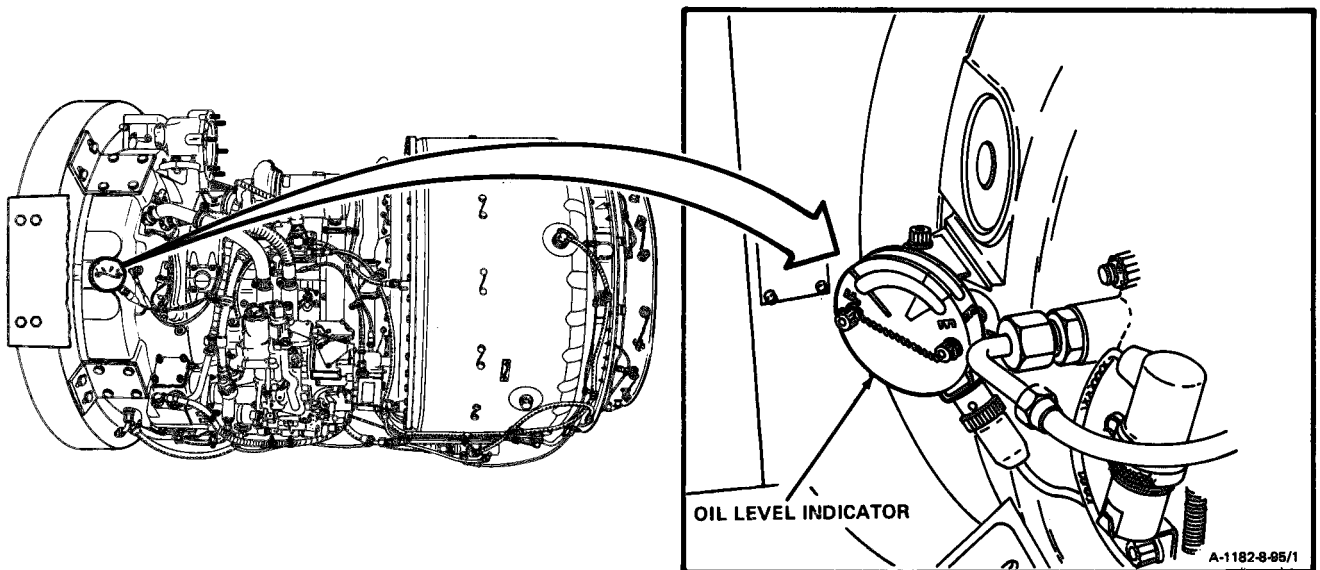
All

Tools:Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944**Materials:**Twine (E47)
Wiping Rag (E58)**Personnel Required:**

68B10 Aircraft Powerplant Repairer

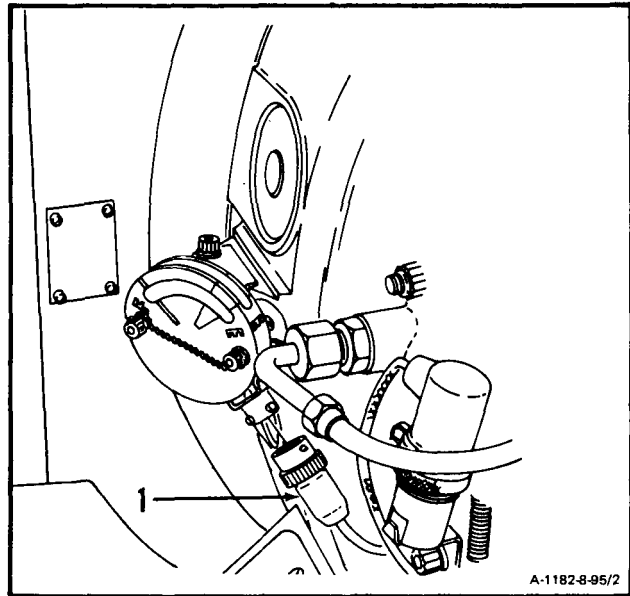
Equipment Condition:

Engine Oil System Drained (Task 1-75)

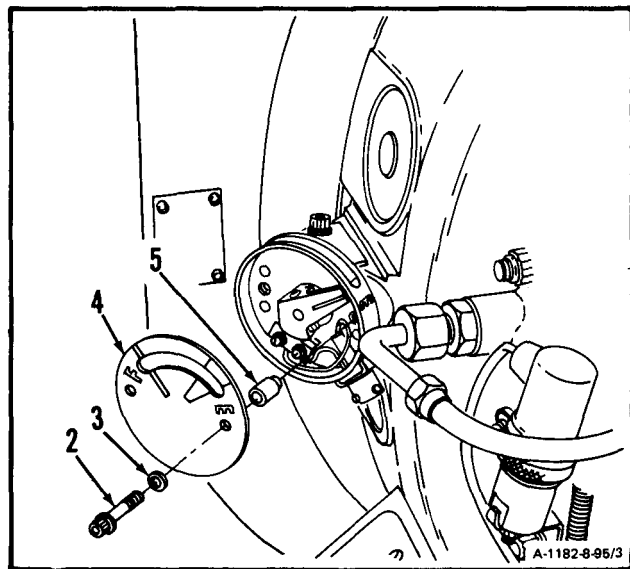


GO TO NEXT PAGE

1. Disconnect electrical connector (1).



2. Remove lockwire, two bolts (2), two washers (3), cover (4), and two spacers (5).



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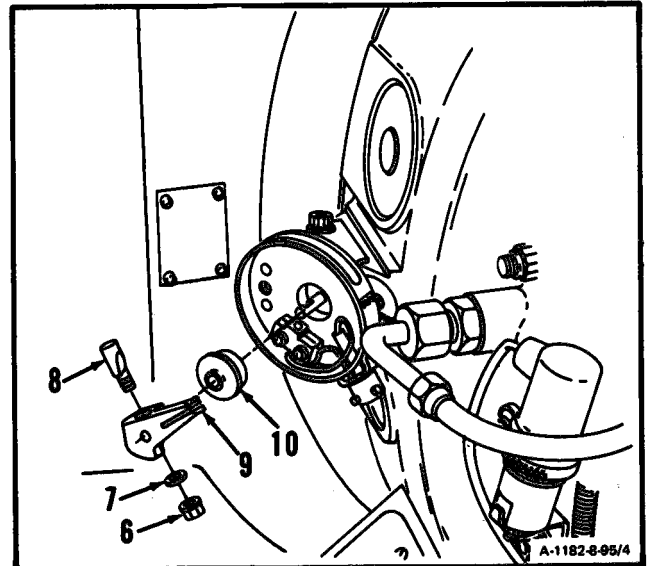
8-95 REMOVE OIL LEVEL INDICATOR (Continued)

8-95

NOTE

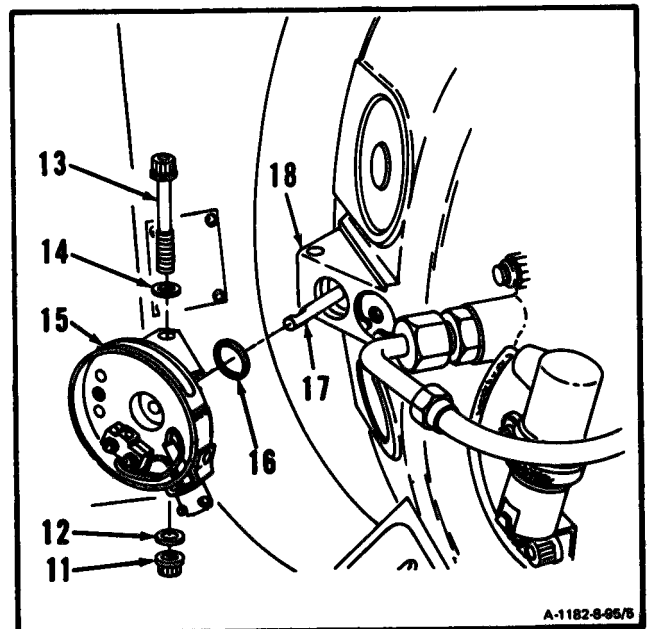
In following steps 3. and 4., do not let shaft of float slip back into housing.

3. Remove nut (6), washer (7), bolt (8), pointer (9), and washer (10).



4. Remove nut (11), washer (12), bolt (13), washer (14), housing assembly (15), and packing (16).

5. Secure shaft (17) with twine (E47) to keep it from slipping back into inlet housing (18).



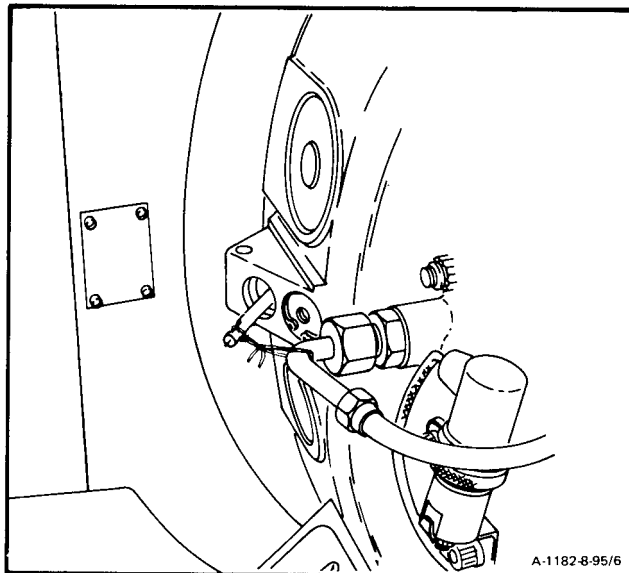
GO TO NEXT PAGE

8-95 REMOVE OIL LEVEL INDICATOR (Continued)

8-95

FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-96 DISASSEMBLE OIL LEVEL INDICATOR

8-96

INITIAL SETUP

Applicable Configurations:

All

Tools:

Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Soldering Iron, 15/32-Pound
Twist Drill, 15/64-inch
Retaining Ring Pliers

Materials:

None

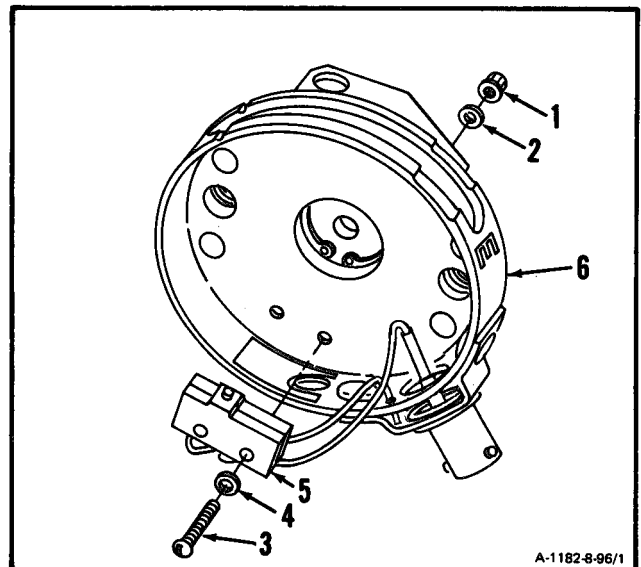
Personnel Required:

68B10 Aircraft Powerplant Repairer
68F10 Aircraft Electrician

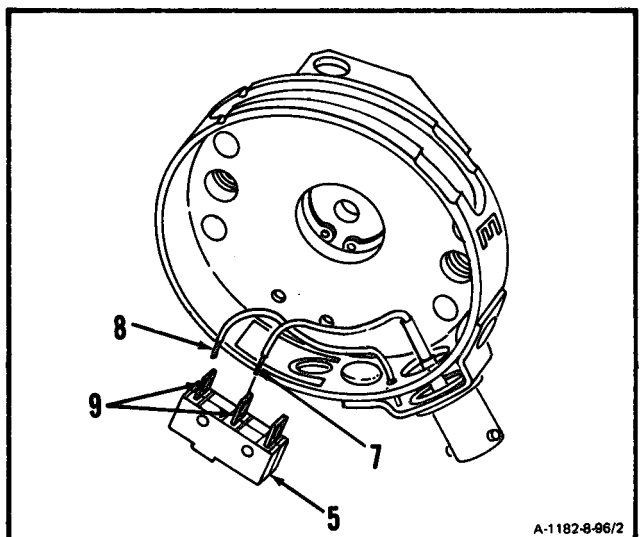
Equipment Condition:

Off Engine Task
Oil Level Indicator Removed
(Task 8-95)

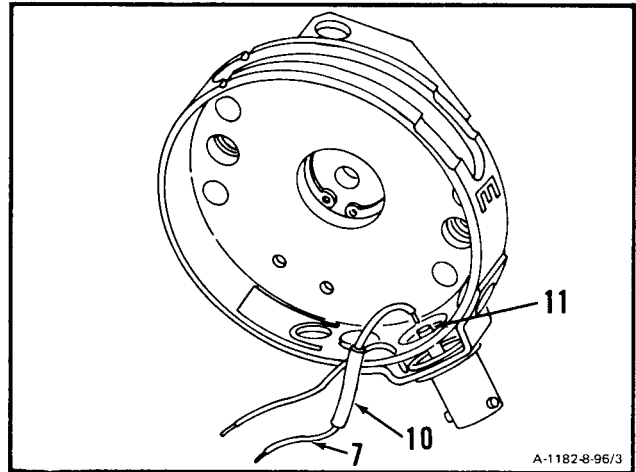
1. Remove two nuts (1), two washers (2), two screws (3), two washers (4), and pull switch (5) clear of housing (6).



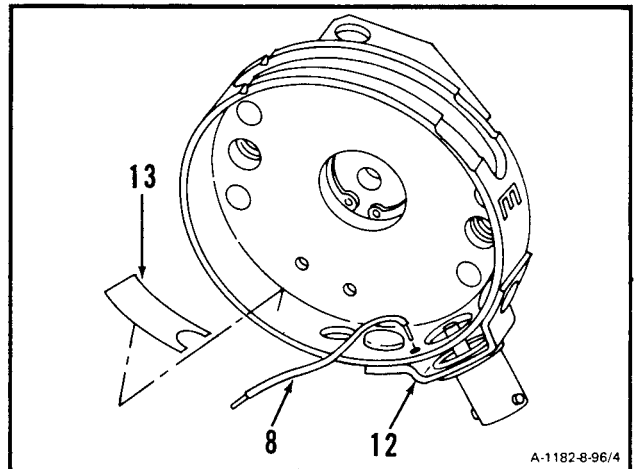
2. Unsolder two wires (7 and 8) from two switch terminals (9) and **remove switch (5)**.

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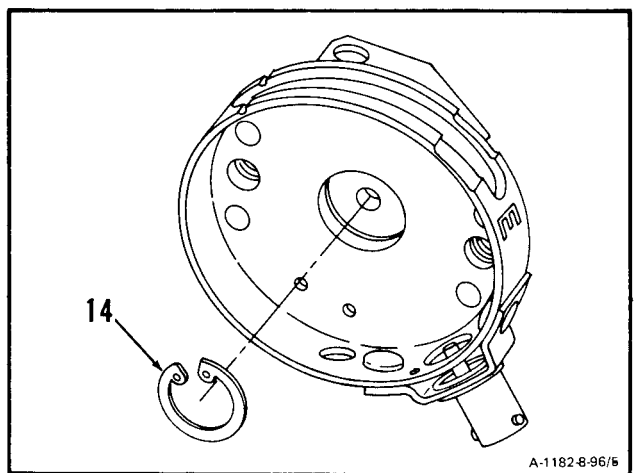
3. Slide insulation sleeving (10) back along wire (7). Unsolder and **remove wire (7)** from electrical connector pin (11).



4. Unsolder and **remove wire (8)** from bracket (12).
5. **Remove tape (13).**



6. **Remove retaining ring (14).** Use retaining ring pliers.

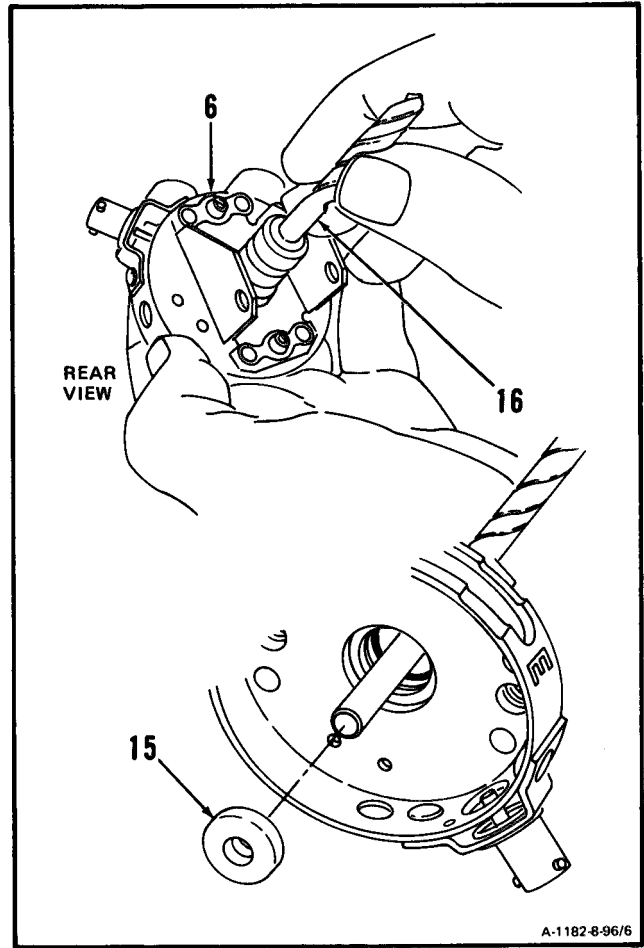


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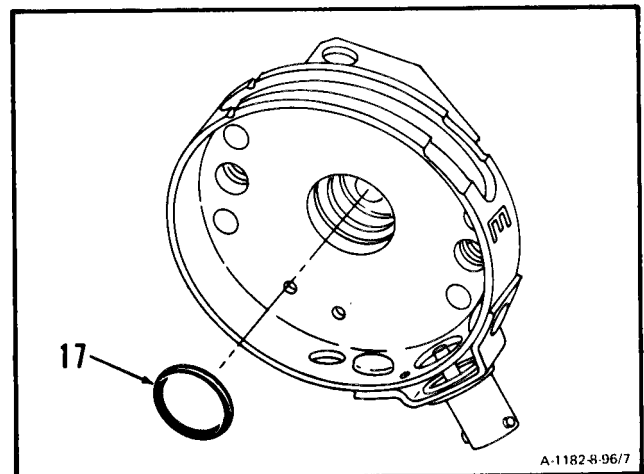
8-96 DISASSEMBLE OIL LEVEL INDICATOR (Continued)

8-96

7. Remove seal (15). Push out from rear of housing (6). Use shaft of twist drill (16) as pusher.



8. Remove packing (17).



FOLLOW-ON MAINTENANCE:

None

END OF TASK

8-97 CLEAN OIL LEVEL INDICATOR

8-97

INITIAL SETUP**Applicable Configurations:**

All

Tools:

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

Materials:

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

Personnel Required:

68B10 Aircraft Powerplant Repairer

Equipment Condition:

Off Engine Task
Oil Level Indicator Removed
(Task 8-95)
Oil Level Indicator Disassembled
(Task 8-96)

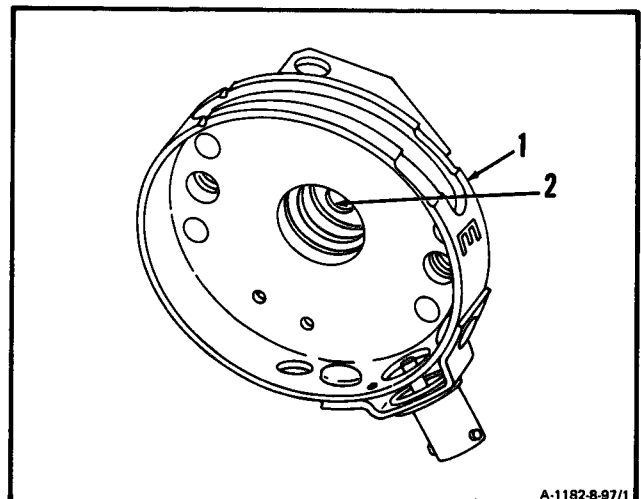
General Safety Instructions:**WARNING**

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

WARNING

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

1. Wear gloves (E20) and **clean housing (1)**. Use dry cleaning solvent (E17) and brush.
2. Wipe dry using lint-free cloth (E26).
3. Wear goggles and **blow dry internal passage (2)**. Use clean, dry compressed air.



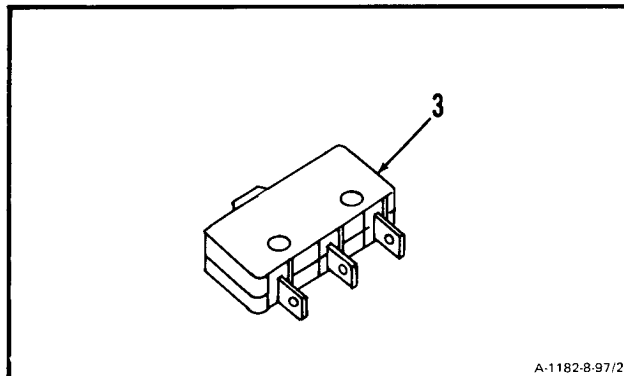
A-1182-8-97/1

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8-97 CLEAN OIL LEVEL INDICATOR (Continued)

8-97

4. **Clean switch (3)** using lint-free cloth (E26) dampened in dry cleaning solvent (E17).
5. **Blow dry switch (3)** using clean, dry compressed air.

**FOLLOW-ON MAINTENANCE:**

Inspect Oil Level Indicator (Task 8-98).

END OF TASK

8-98 INSPECT OIL LEVEL INDICATOR

8-98

INITIAL SETUP**Applicable Configurations:**

All

Tools:

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

Materials:

None

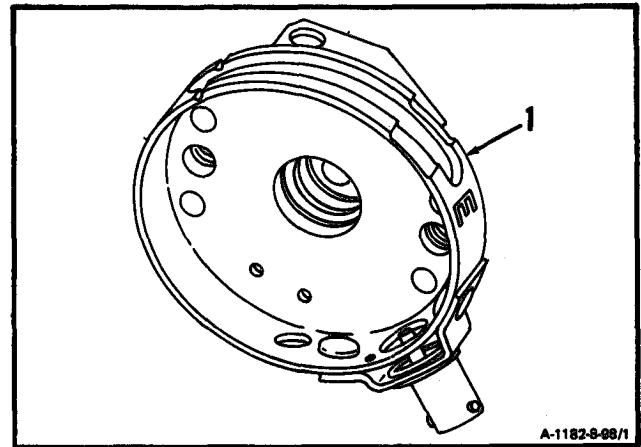
Personnel Required:

68B30 Aircraft Powerplant Inspector

Equipment Condition:

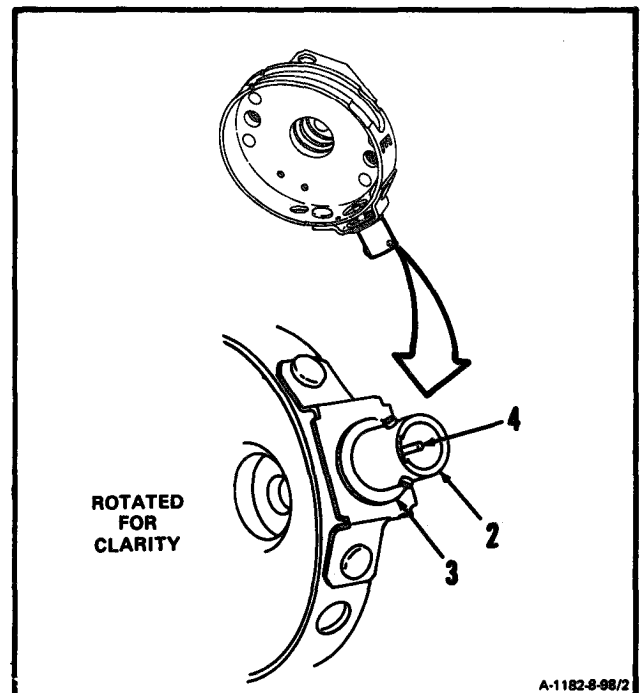
Off Engine Task

1. **Inspect housing (1).** There shall be no cracks.

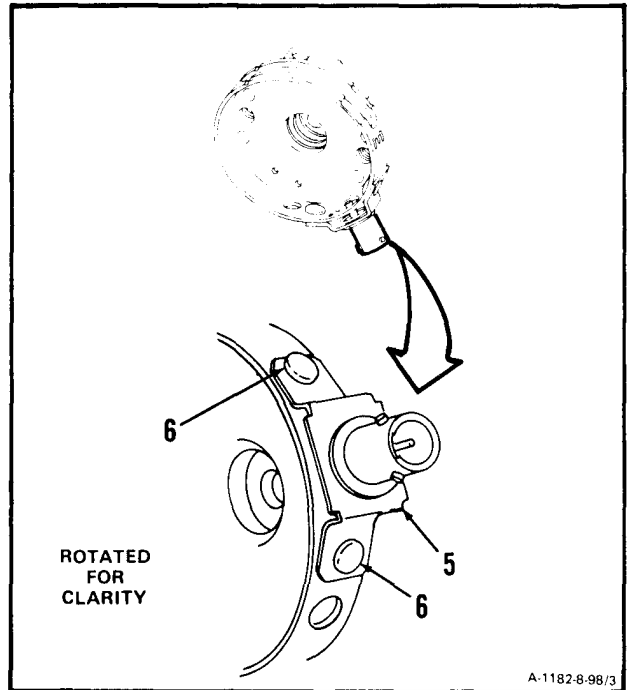


2. **Inspect electrical connector (2).**

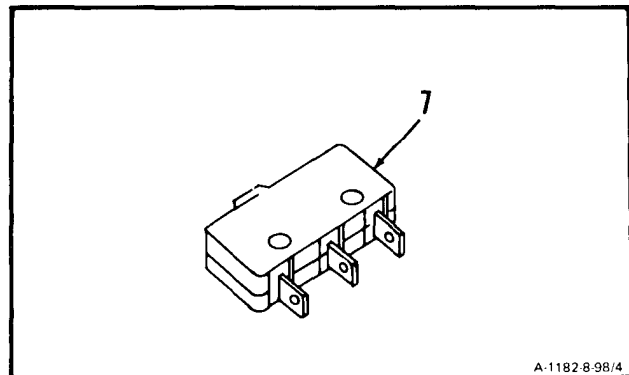
- a. There shall be no cracks, corrosion, or looseness at joint (3).
- b. Pin (4) shall not be bent, broken, or corroded.

**GO TO NEXT PAGE**

3. **Inspect bracket (5).** There shall be no cracks or loose rivets (6).



4. **Inspect switch (7).** There shall be no cracks.



FOLLOW-ON MAINTENANCE:

None

END OF TASK

8-99 REPAIR OIL LEVEL INDICATOR

8-99

INITIAL SETUP**Applicable Configurations:**

All

Tools:

Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114
Soldering Iron, 15/32-Pound
Stainless Steel Wire Brush

Materials:

Black Baking Enamel (E8)
Crocus Cloth (E15)
Solder (E49)

Personnel Required:

68610 Aircraft Powerplant Repairer
68F10 Aircraft Electrician
68B30 Aircraft Powerplant Inspector

Equipment Condition:

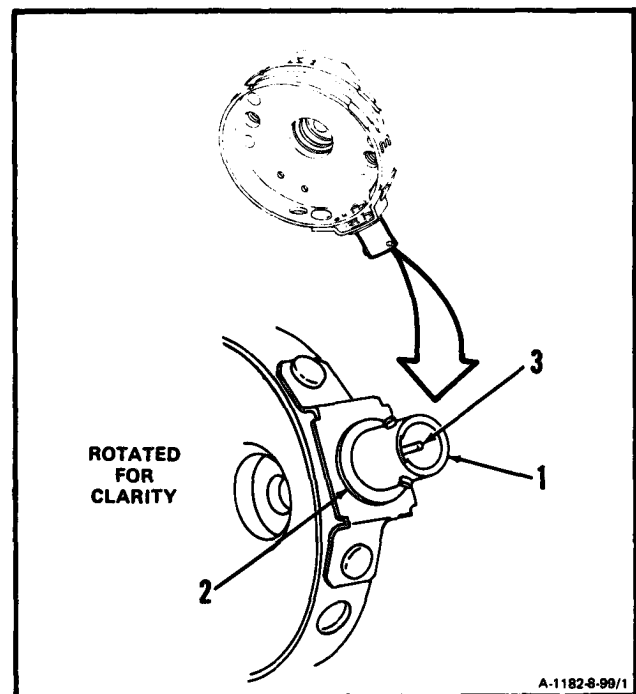
Off Engine Task

1. Repair loose electrical connector (1) as follows:

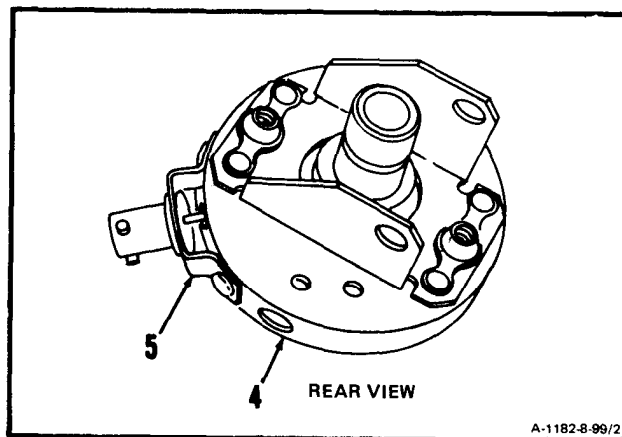
- a. Remove all surface contamination near joint (2). Use stainless steel wire brush.
- b. Solder joint (2). Use solder (E49) and soldering iron.

2. Repair electrical connector pin (3) as follows:

- a. Straighten bent pin (3). Use long nose-pliers to gently move pin (3) until it is straight.
- b. Remove corrosion from pin (3). Polish pin (3), using in and out motion over entire length of pin until corrosion is removed. Use crocus cloth (E15).

**GO TO NEXT PAGE**

3. **Repair damaged paint** on outside of housing (4) and bracket (5). Use black baking enamel (E8).



INSPECT

FOLLOW-ON MAINTENANCE:

None

END OF TASK

8-100 ASSEMBLE OIL LEVEL INDICATOR

8-100

INITIAL SETUP**Applicable Configurations:**

All

Tools:

Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114
Twist Drill, 15/64-Inch
Retaining Ring Pliers
Soldering Iron, 15/32-Pound

Materials:

Insulation Sleeving (E24)
Insulation Tape (E42)
Solder (E49)
Wire (E59)

Parts:

Packing
Seal

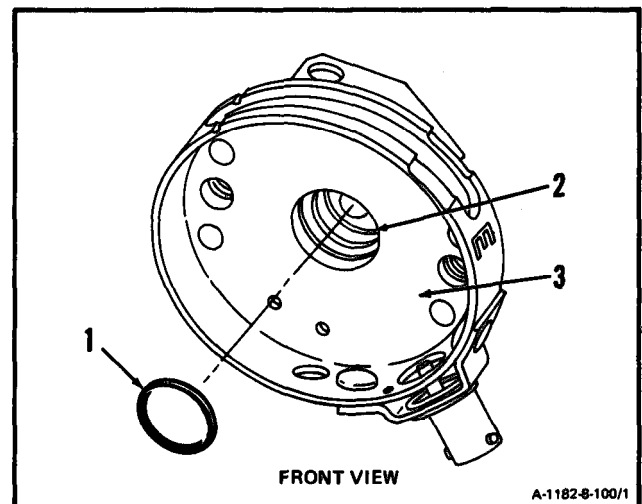
Personnel Required:

68B10 Aircraft Powerplant Repairer
68F10 Aircraft Electrician
68B30 Aircraft Powerplant Inspector

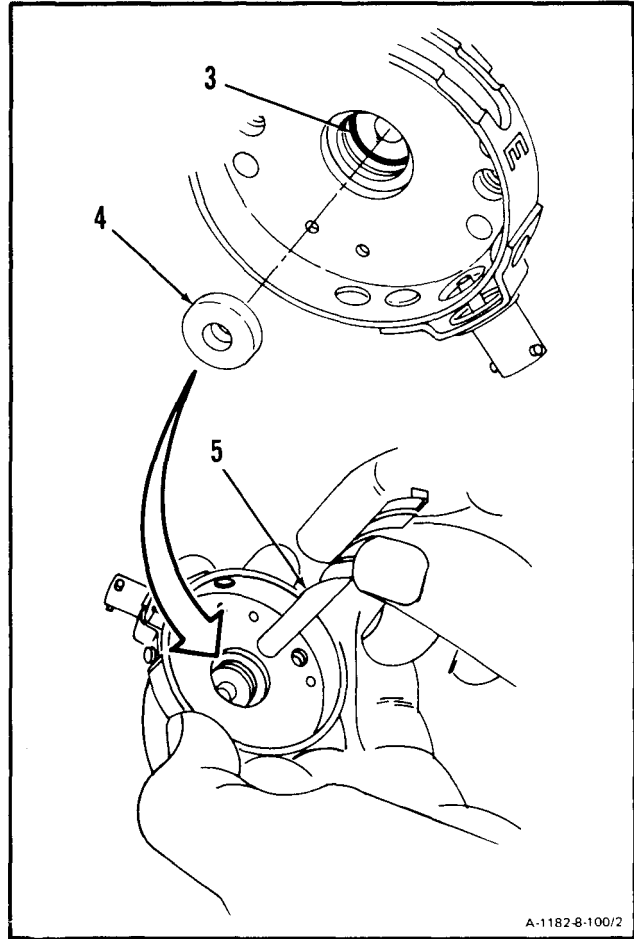
References:

TM 55-2840-254-23P

-
1. Install packing (1) in groove (2) in housing (3).

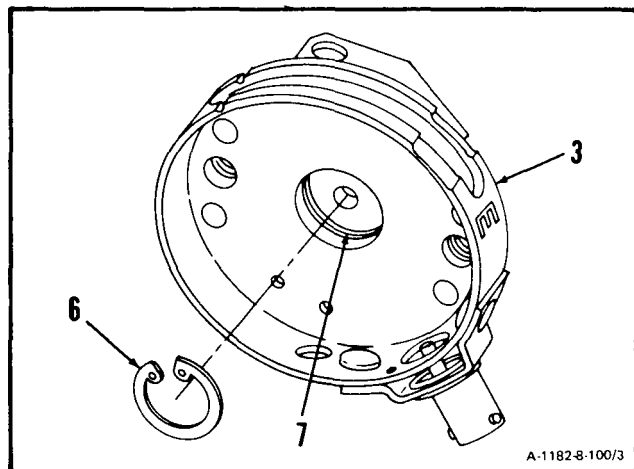
**GO TO NEXT PAGE**

2. **Install seal (4)** in housing (3). Use shaft of twist drill (5) to push seal (4) into housing until fully seated.



A-1182-8-100/2

4. **Install retaining ring (6)** in groove (7) in housing (3). Use retaining ring pliers.



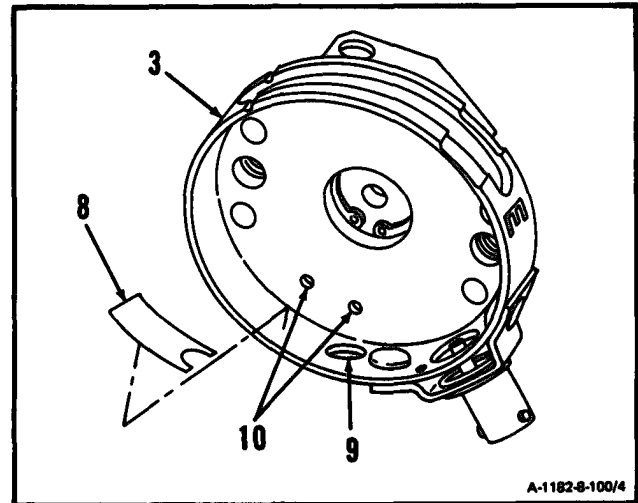
A-1182-8-100/3

GO TO NEXT PAGE

CAUTION

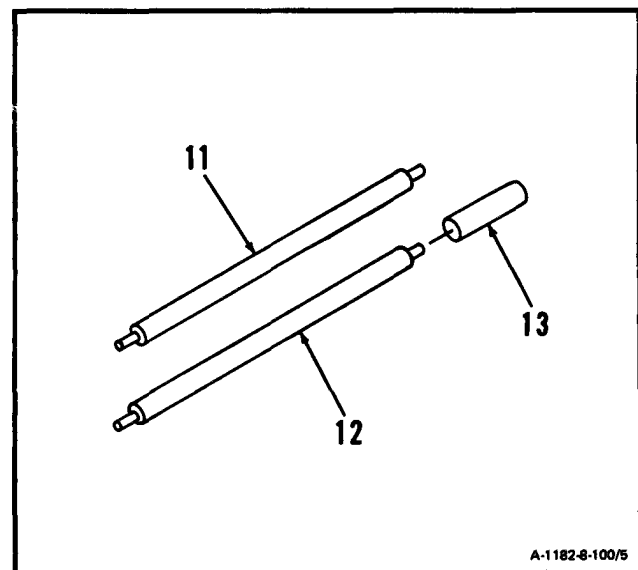
In following step 4., do not cover drain hole with tape. Failure to comply could cause accumulation of oil. This could cause faulty oil level indication.

4. **Install insulation tape (8)** inside housing (3). Use insulation tape (E42). Do not cover drain hole (9). Center insulation tape between switch mounting holes (10).



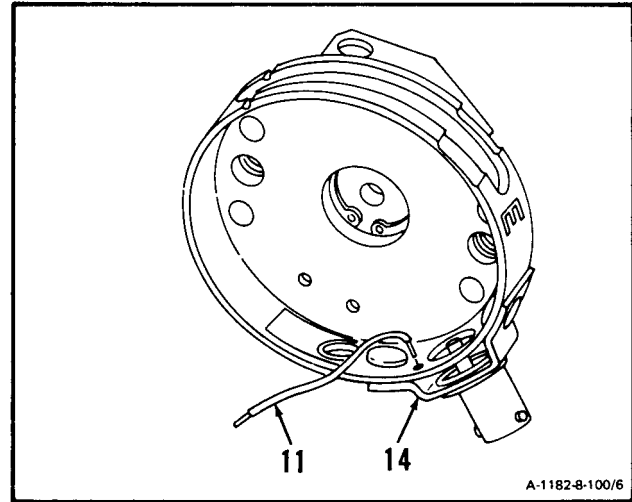
5. **Install two wires(11 and 12)** as follows:

- Cut wires (11 and 12) to 1 1/2-inch length. Use wire (E59).
- Strip both ends of wires (11 and 12) to 1/4 inch length.
- Tin both ends of wires (11 and 12). Use solder (E49) and soldering iron.
- Cut 1/2-inch piece of insulation sleeving (E24). Slide sleeving (13) over wire (12).

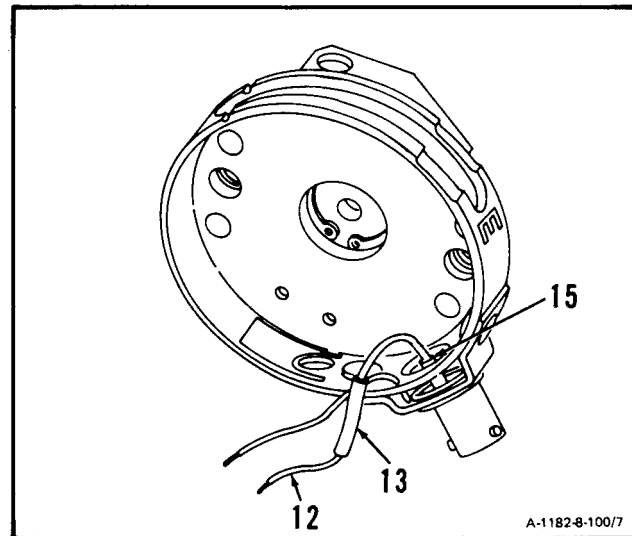


GO TO NEXT PAGE

- e. Solder wire (11) to bracket (14). Use solder (E49) and soldering iron.



- f. Solder wire (12) to electrical connector pin (15). Use solder (E49) and soldering iron. Slide insulation sleeving (13) over pin (15).

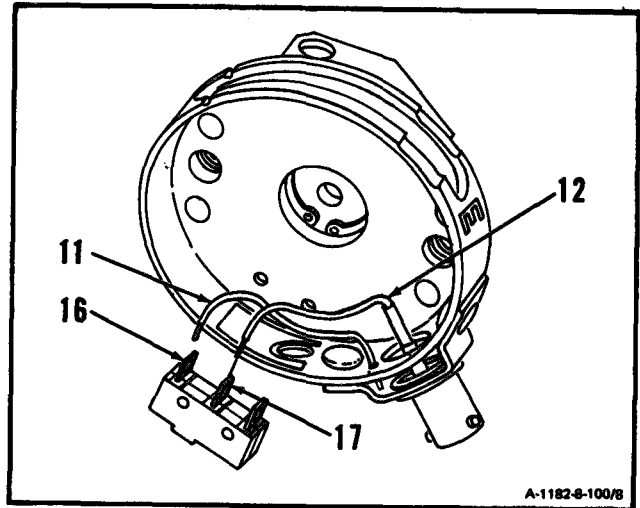


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8-100 ASSEMBLE OIL LEVEL INDICATOR (Continued)

8-100

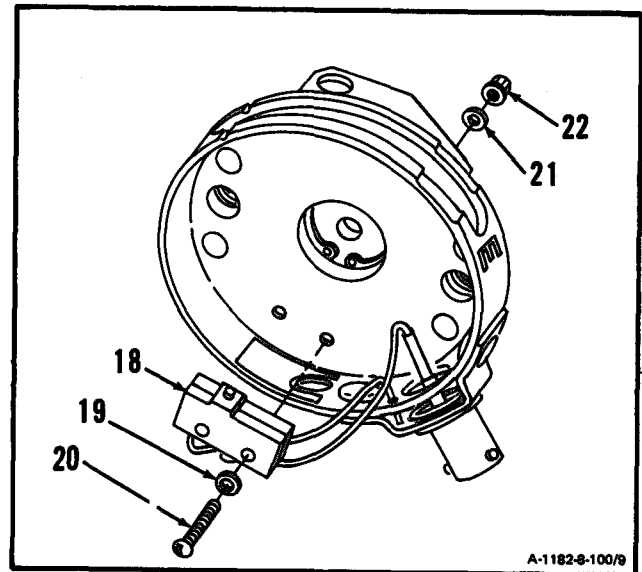
- g. Solder wire (11) to switch terminal (16). Use solder (E49) and soldering iron.
- h. Solder wire (12) to switch terminal (17). Use solder (E49) and soldering iron.

**CAUTION**

In following step 6., do not strain or kink wires. Defective wiring could cause faulty oil level indication.

6. Install switch (18), two washers (19), two screws (20), two washers (21), and two nuts (22).

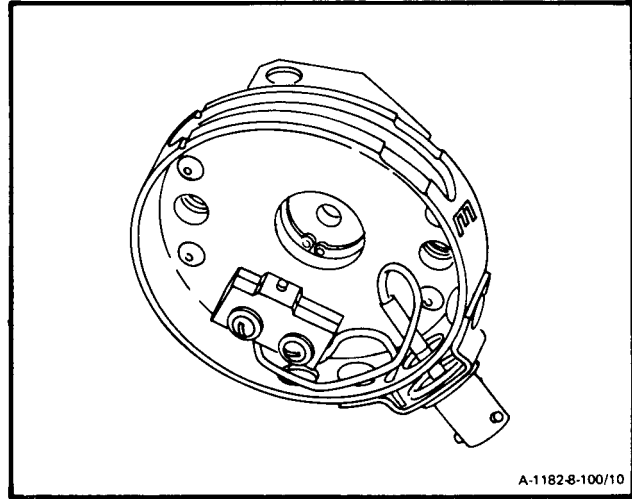
INSPECT



GO TO NEXT PAGE

FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-101 INSTALL OIL LEVEL INDICATOR

8-101

INITIAL SETUP**Applicable Configurations:**

All

Tools:

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

Materials:

Lockwire (E29)

Parts:

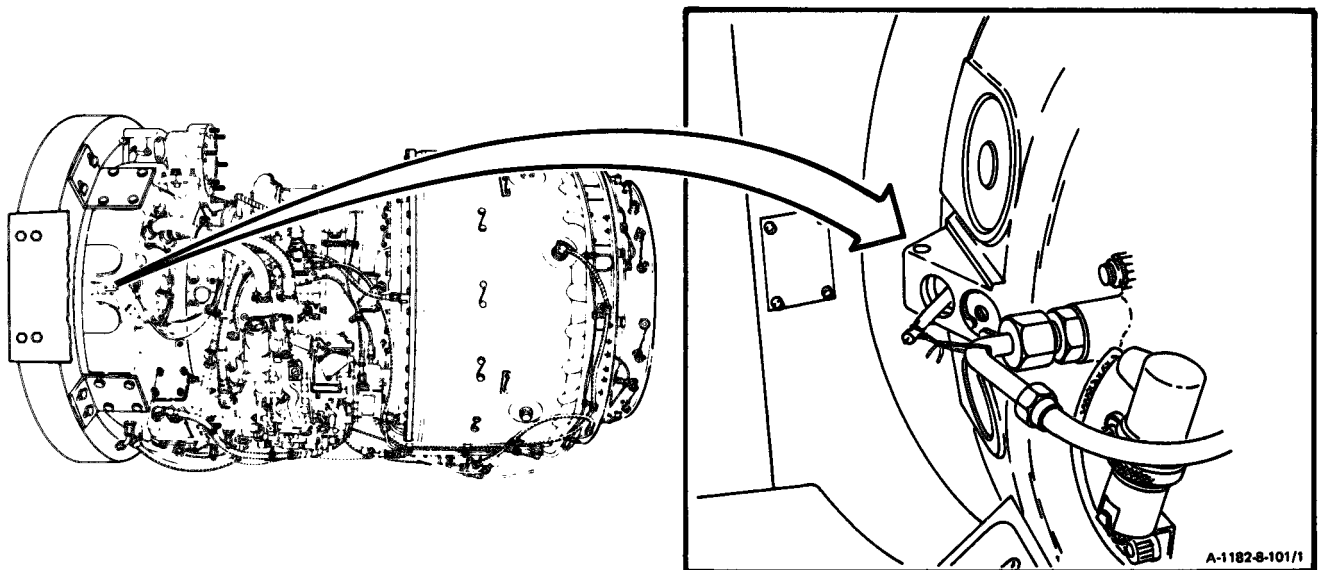
Packing

Personnel Required:

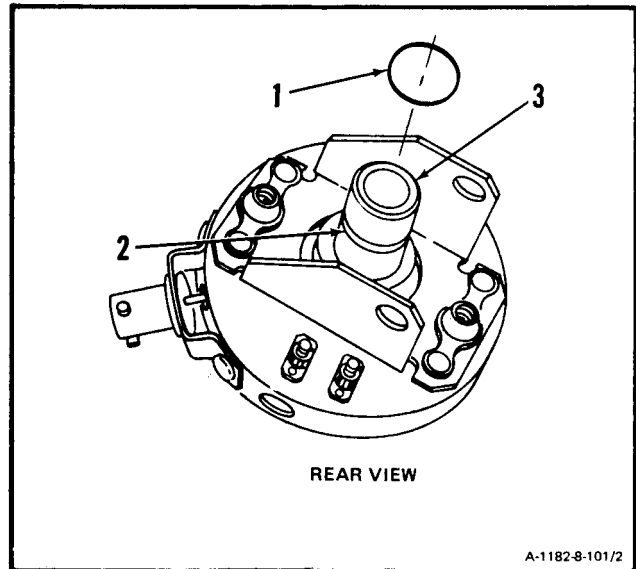
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Power plant Inspector

References:

TM 55-2840-254-23P
Task 8-102

**GO TO NEXT PAGE**

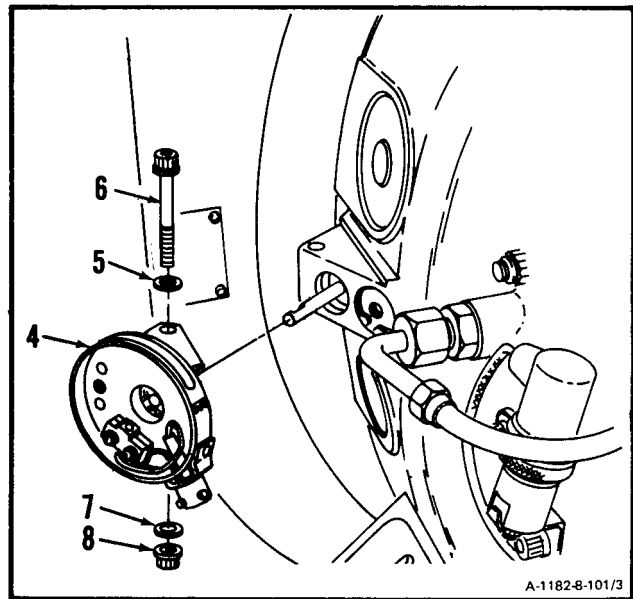
1. Install packing (1) in groove (2) in shaft (3).



NOTE

In following steps 2. thru 5. do not let shaft of float slip back into inlet housing.

2. Remove twine. Install assembly (4), washer (5), bolt (6), washer (7), and nut (8).

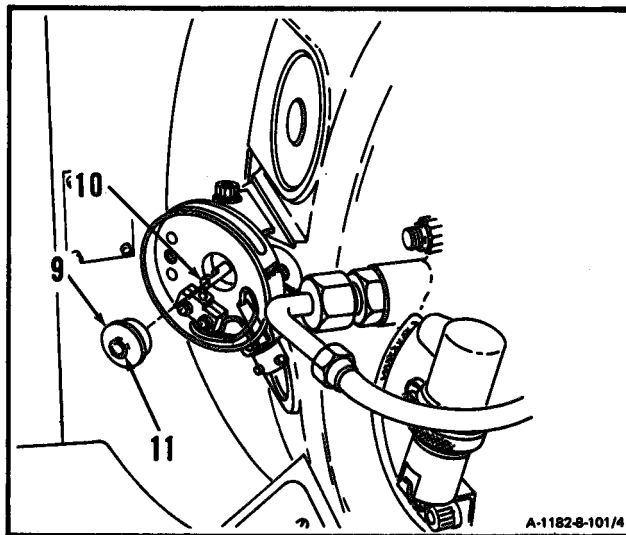


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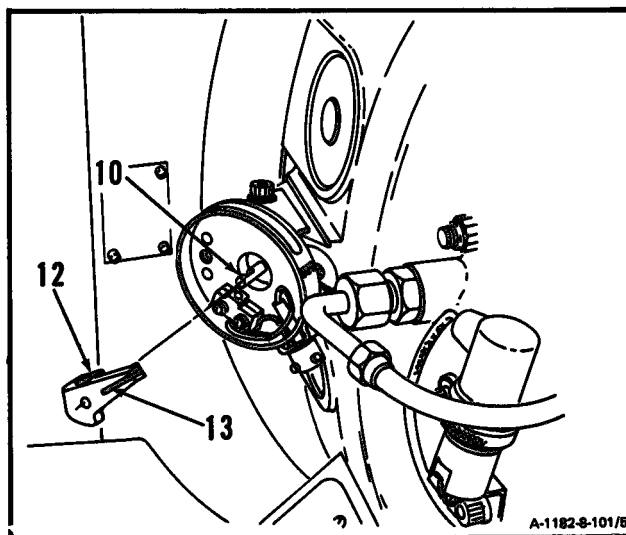
8-101 INSTALL OIL LEVEL INDICATOR (Continued)

8-101

3. **Install washer (9)** on shaft (10) with smaller diameter (11) facing out.



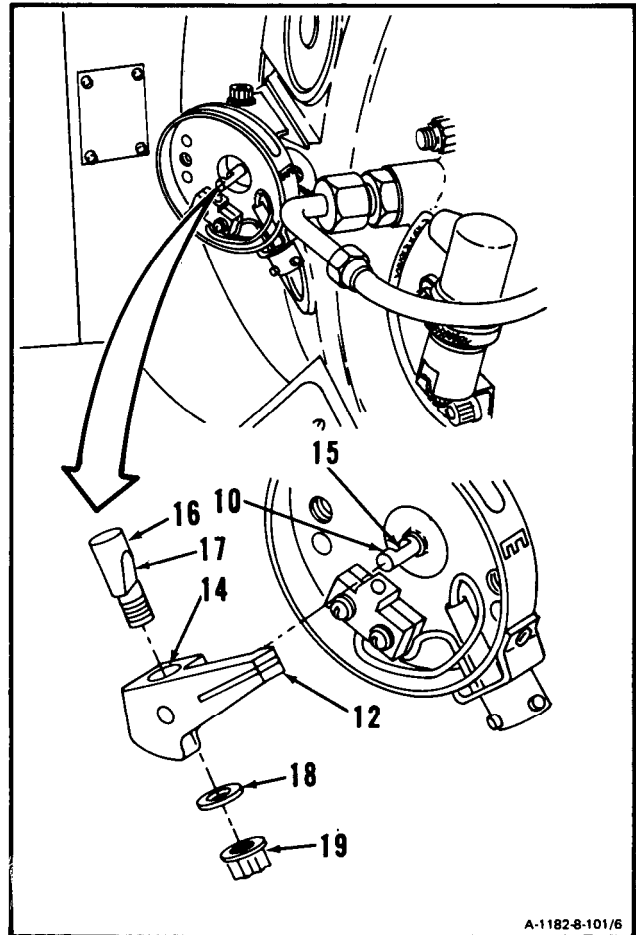
4. **Position pointer (12)** on shaft (10) with white stripe (13) facing out.



GO TO NEXT PAGE

8-101 INSTALL OIL LEVEL INDICATOR (Continued)**8-101**

5. **Install pointer (12)** on shaft (10), with hole (14) aligned with notch (15).
6. **Install bolt (16)** with flat (17) against notch (15). Install washer (18) and nut (19).

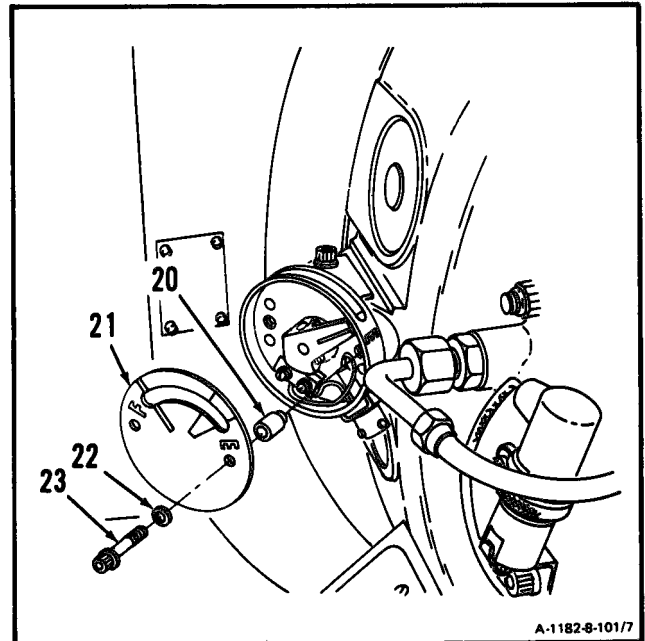


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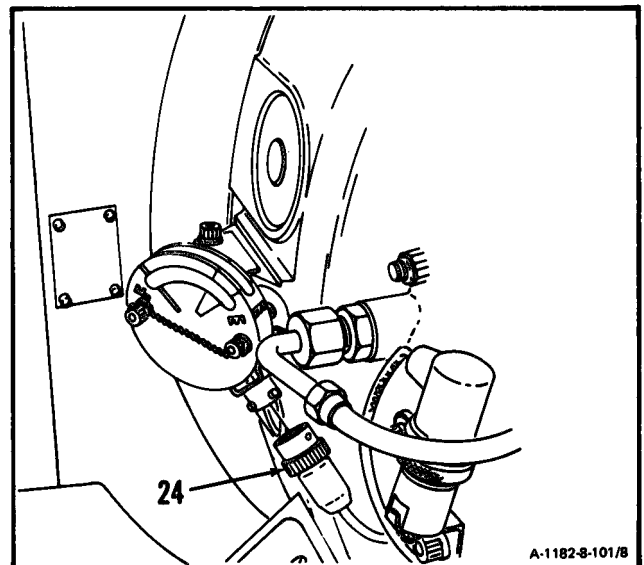
8-101 INSTALL OIL LEVEL INDICATOR (Continued)

8-101

7. **Adjust oil level indicator** (Ref. Task 8-102, steps 3. thru 7.).
8. **Install two spacers (20), cover (21), two washers (22), and bolts (23).** **Torque two bolts (23) to 15 inch-pounds.** Lockwire bolts (23). Use lockwire (E29).

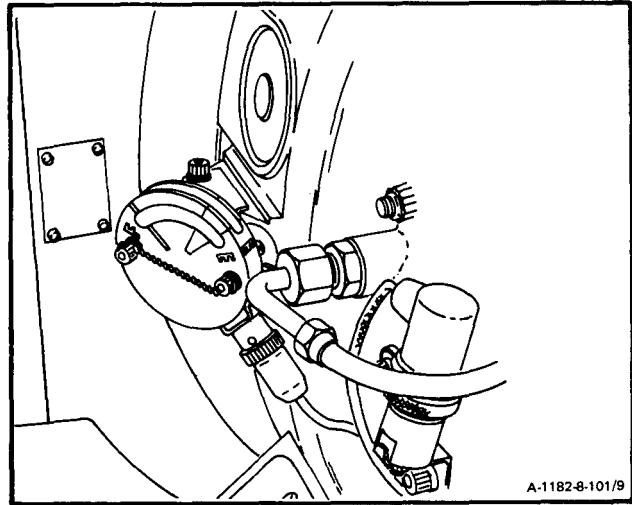


9. **Connect electrical connector (24).**

**INSPECT****GO TO NEXT PAGE**

FOLLOW-ON MAINTENANCE:

Service Engine Oil System (Task 1-74).



END OF TASK

8-102 ADJUST OIL LEVEL INDICATOR

8-102

INITIAL SETUP**Applicable Configurations:**

All

Tools:

Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114
Oil Level Test Light (T11)
Torque Wrench, 0-30 Inch-Pounds

Materials:

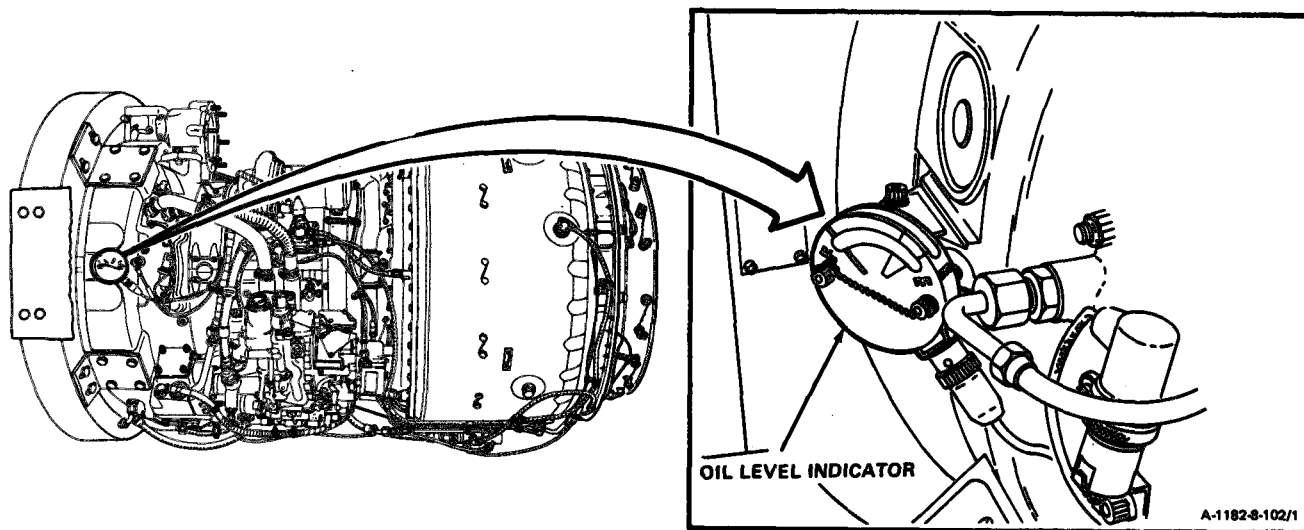
Lockwire (E29)

Personnel Required:

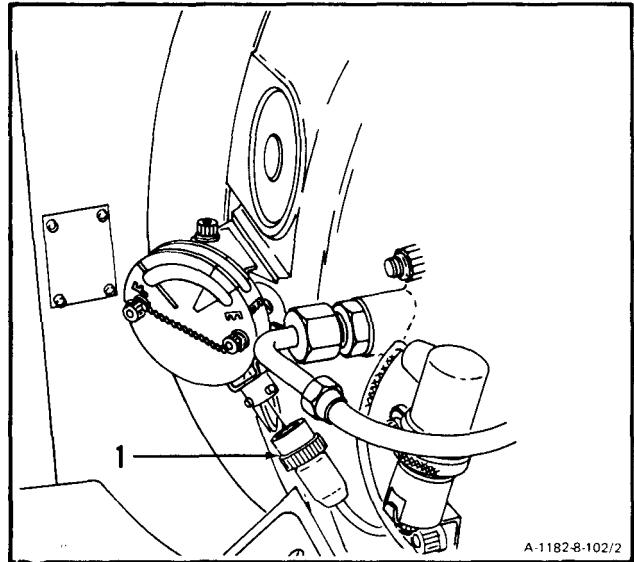
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

Equipment Condition:

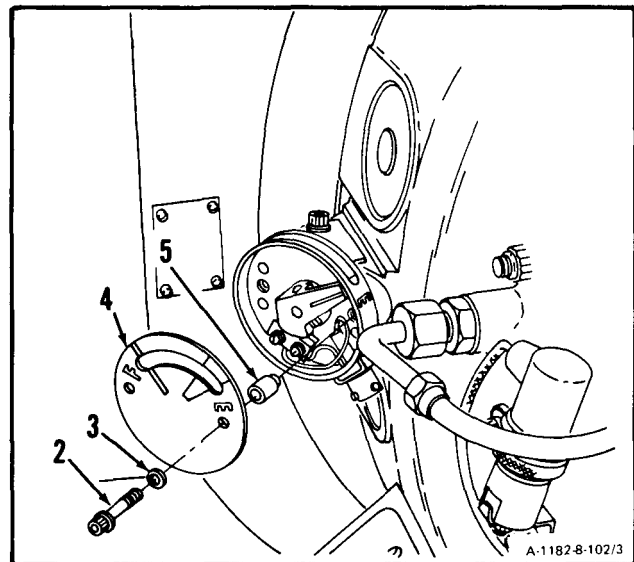
Engine Oil System Drained (Task 1-75)

**GO TO NEXT PAGE**

1. Disconnect electrical connector (1).



2. Remove lockwire, two bolts (2), two washers (3), cover (4), and two spacers (5).

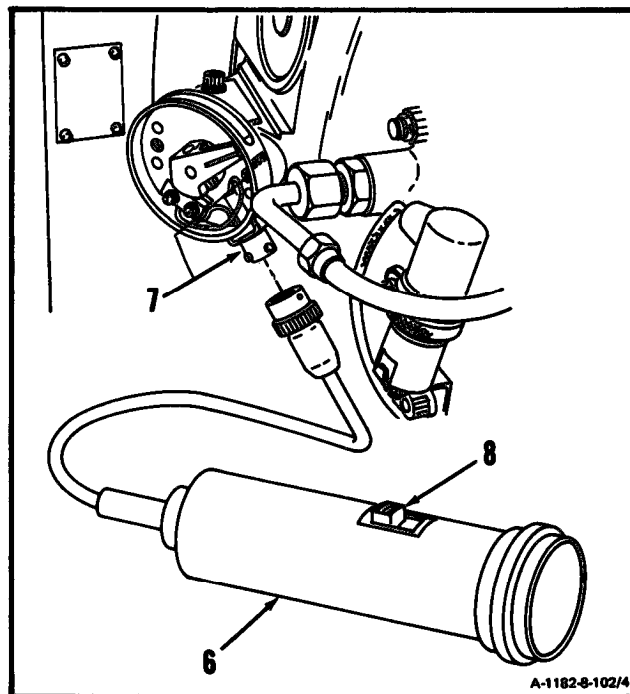


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8-102 ADJUST OIL LEVEL INDICATOR (Continued)

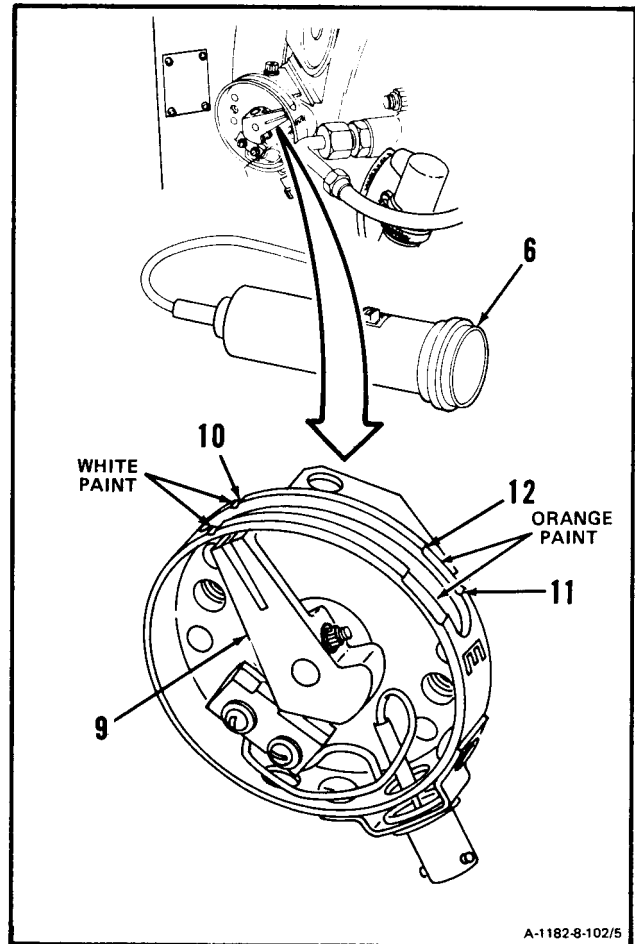
8-102

3. Connect oil level test light (T11) (6) to electrical connector (7) and turn switch (8) on.



GO TO NEXT PAGE

4. Move pointer (9) from full position (10) toward empty position (11). **Test light (T11) (6) shall come on at low oil level warning position (12).**



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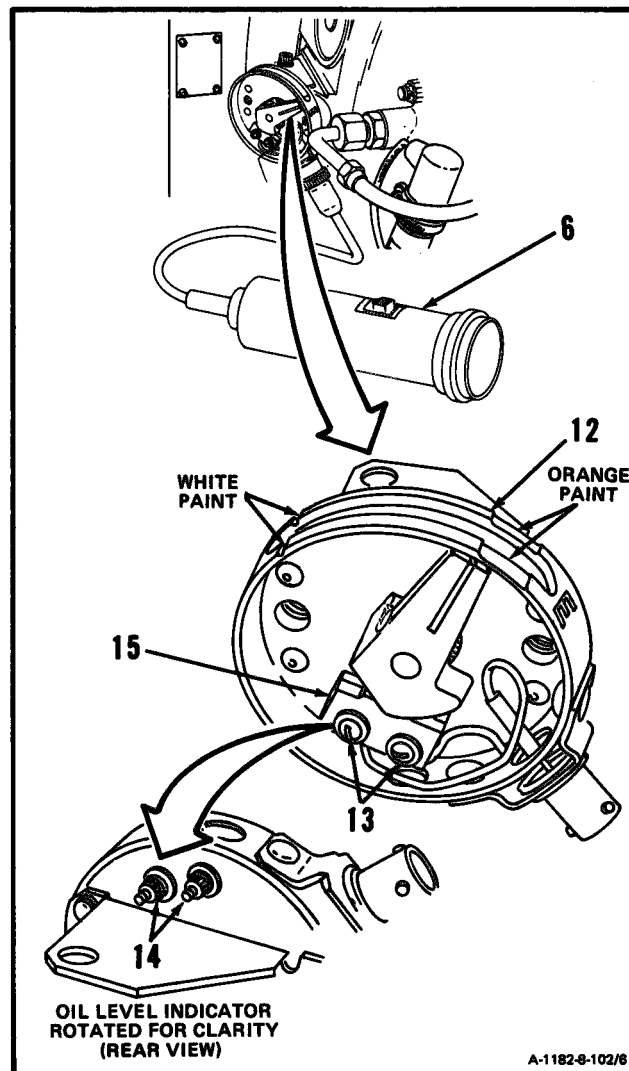
8-102 ADJUST OIL LEVEL INDICATOR (Continued)

8-102

NOTE

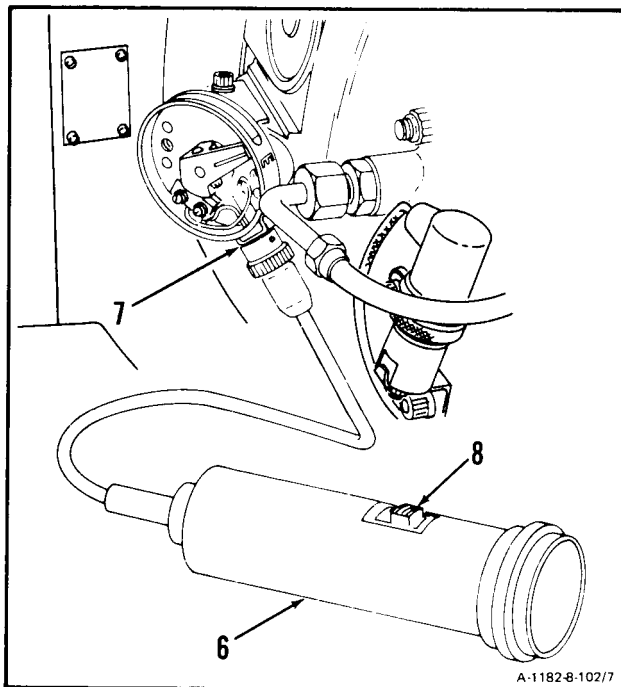
If test light indicates adjustment is needed, do steps 5. and 6. If test light indicates adjustment is not needed, omit steps 5 and 6.

5. Loosen two screws (13) and two nuts (14). **Move switch (15) until test light (T11) (6) comes on** at low oil level warning position (12).
6. Tighten two nuts (14) and two screws (13).

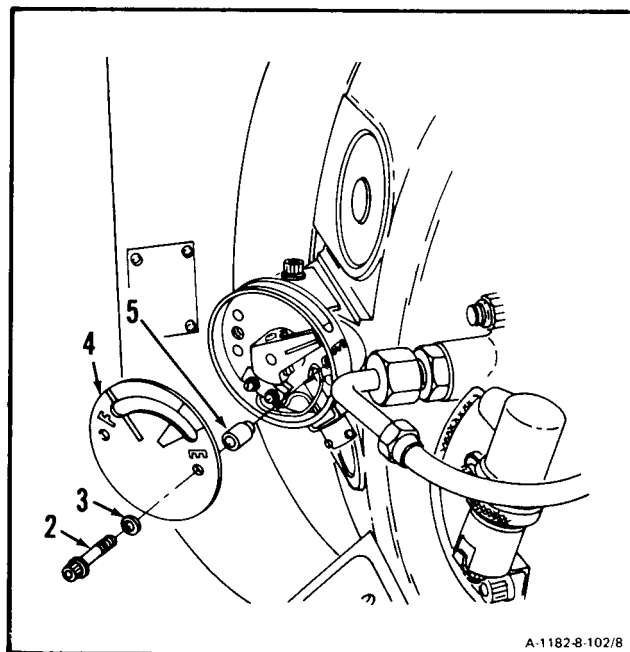


GO TO NEXT PAGE

7. Turn switch (8) off and **disconnect test light (T11) (6)** from electrical connector (7).



8. **Install** two spacers (5), **cover (4)**, two washers (3), and two bolts (2). **Torque two bolts (2) to 15 inch-pounds.** Lockwire two bolts (2). Use lockwire (E29).

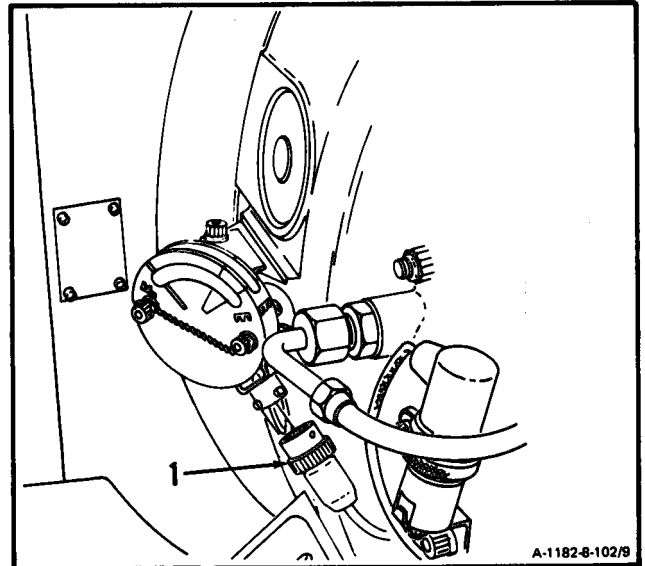


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8-102 ADJUST OIL LEVEL INDICATOR (Continued)

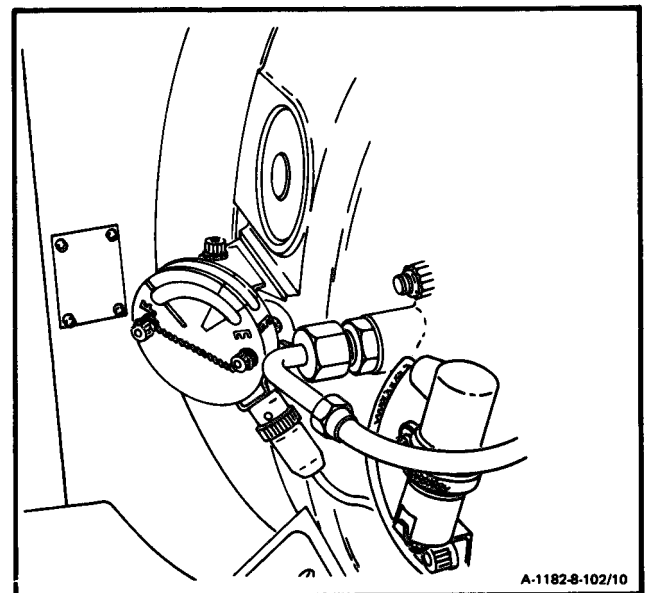
8-102

9. Connect electrical connector (1).

INSPECT

FOLLOW-ON MAINTENANCE:

Service Engine Oil System (Task 1-74).

**END OF TASK**

Section XIV. OIL LEVEL FLOAT ASSEMBLY – MAINTENANCE PROCEDURES

8-103 REMOVE OIL LEVEL FLOAT ASSEMBLY (AVIM)

8-103

INITIAL SETUP

Applicable Configurations:

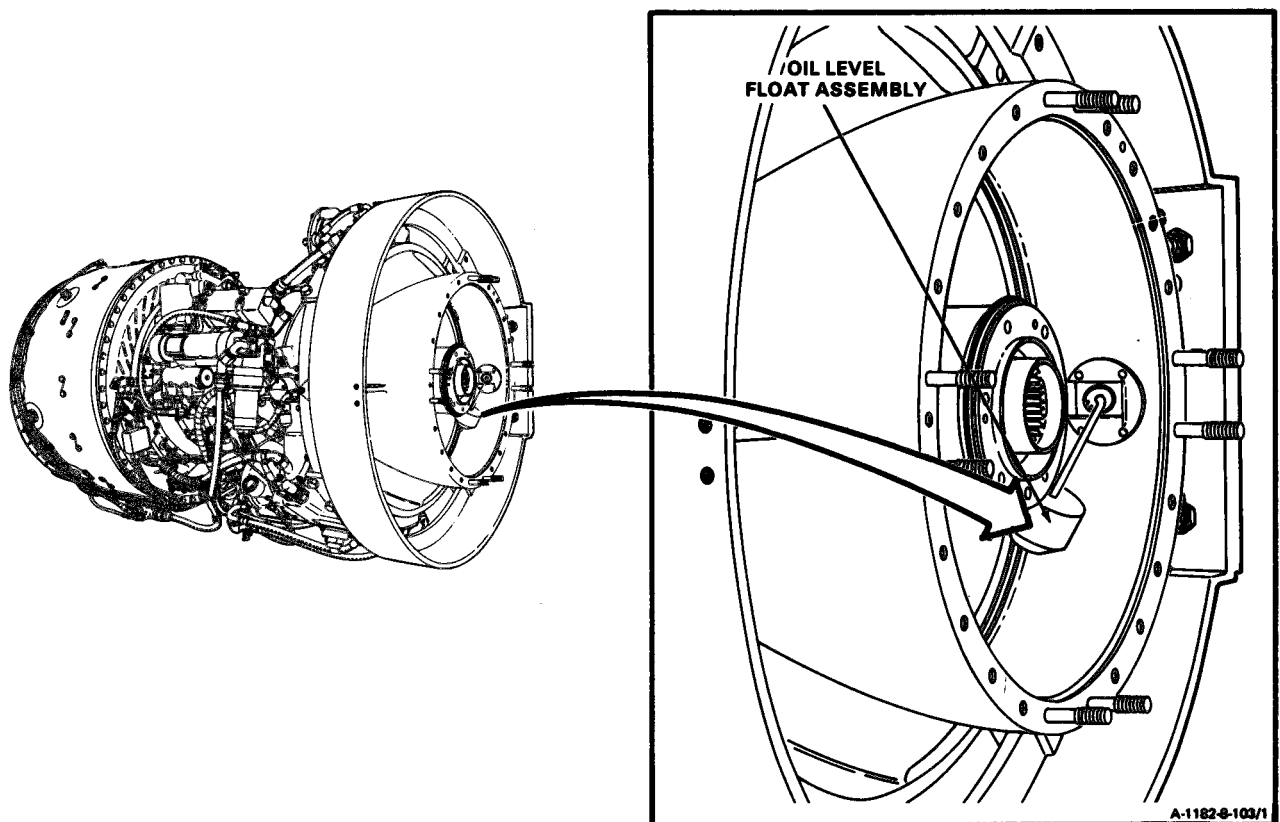
All

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

Wiping Rag (E58)

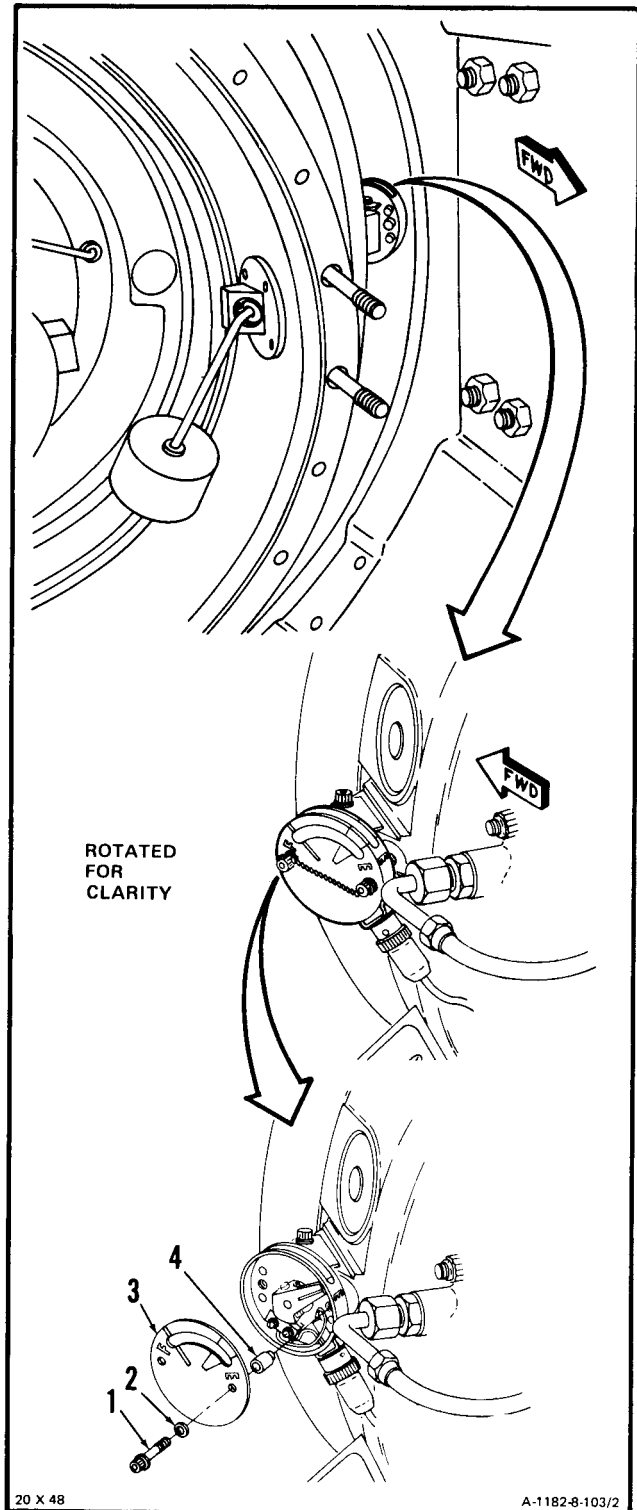
Personnel Required:

68B10 Aircraft Powerplant Repairer

Equipment Condition:Engine Oil System Drained (Task 1-75)
Output Shaft Seal and Housing Assembly
Removed (Task 2-48)
Inlet Housing Cover Assembly Removed
(Task 2-53)

GO TO NEXT PAGE

1. Remove lockwire, two bolts (1), two washers (2), cover (3), and two spacers (4).

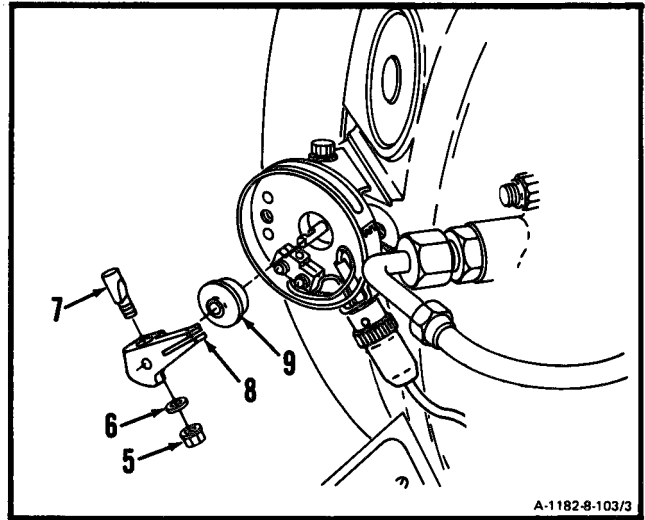


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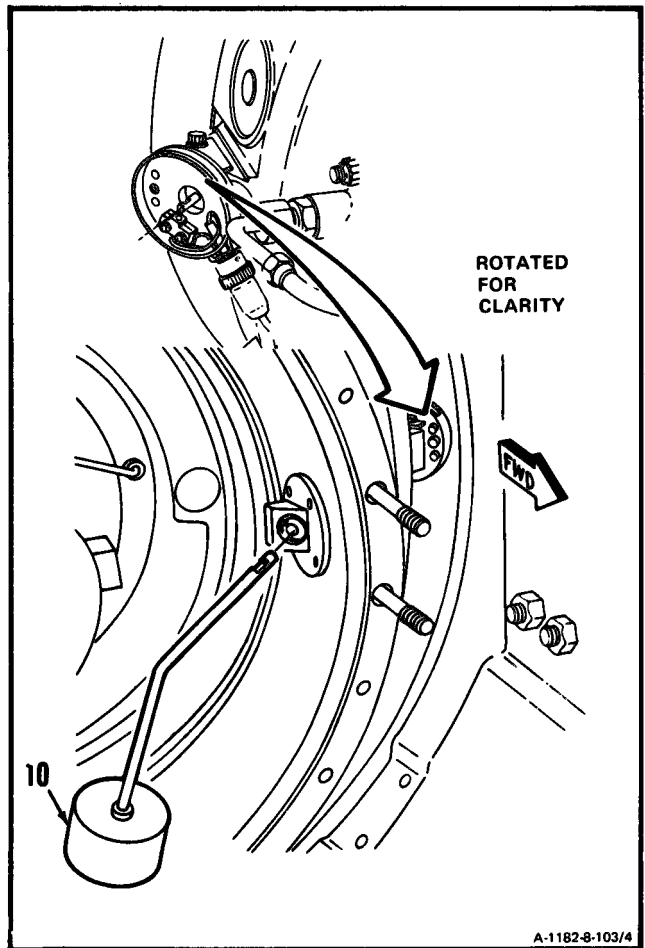
8-103 REMOVE OIL LEVEL FLOAT ASSEMBLY (AVIM) (Continued)

8-103

2. Remove nut (5), washer (6), bolt (7), pointer (8), and washer (9).



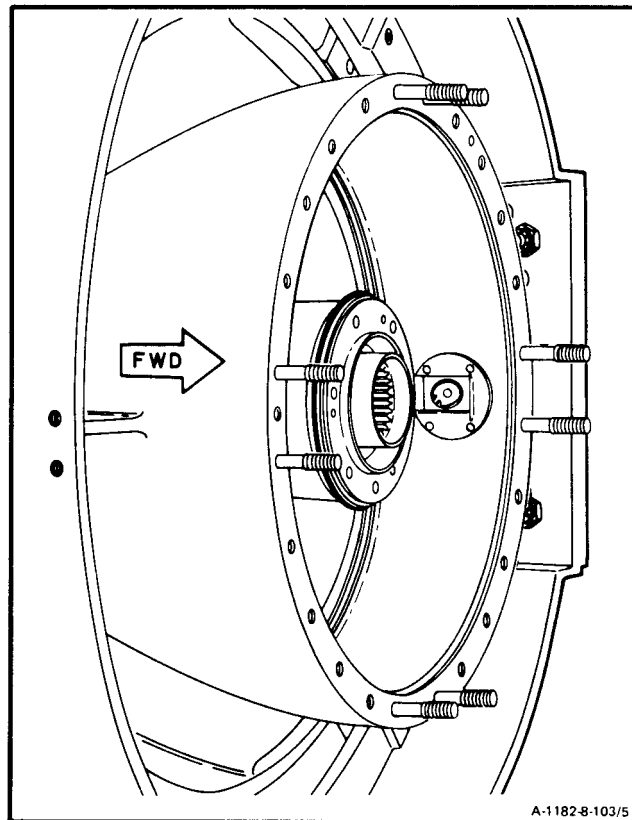
3. Remove oil level float assembly (10).



GO TO NEXT PAGE

FOLLOW-ON MAINTENANCE:

None



END OF TASK

8-104 DISASSEMBLE OIL LEVEL FLOAT ASSEMBLY (AVIM)

8-104

INITIAL SETUP**Applicable Configurations:**

All

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

None

Personnel Required:

68B10 Aircraft Powerplant Repairer

Equipment Condition:

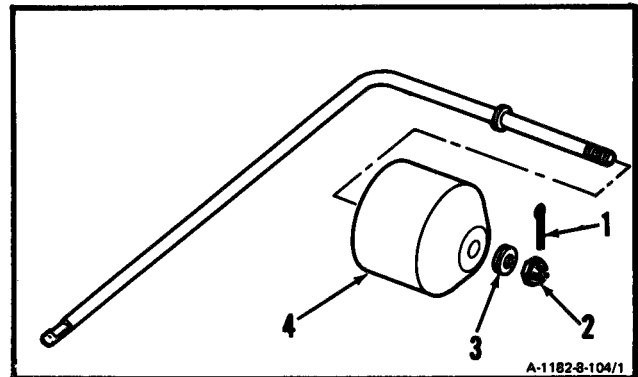
Off Engine Task

Engine Oil System Drained (Task 1-75)

Output Shaft Seal and Housing Assembly
Removed (Task 2-48)Inlet Housing Cover Assembly Removed
(Task 2-53)

Oil Level Float Assembly Removed (Task 8-103)

-
1. Remove cotter pin (1), nut (2), washer (3), and float (4).

**FOLLOW-ON MAINTENANCE:**

None

END OF TASK

INITIAL SETUP

General Safety Instructions:

Applicable Configurations:

All



Tools:

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

Materials:

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

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

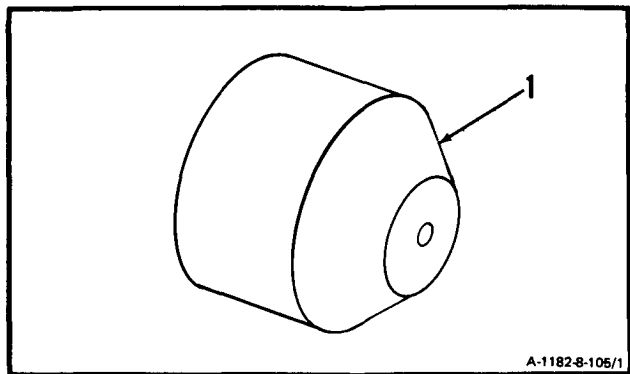
Personnel Required:

68B10 Aircraft Powerplant Repairer

Equipment Condition:

Off Engine Task
Output Shaft Engine Oil System Drained
(Task 1-75)
Output Shaft Seal and Housing Assembly
Removed (Task 2-48)
Inlet Housing Cover Assembly Removed
(Task 2-53)
Oil Level Float Assembly Removed
(Task 8-103)
Oil Level Float Assembly Disassembled
(Task 8-104)

1. Wear gloves (E20) and **clean float (1)**. Use dry-cleaning solvent (E17) and brush.
2. Wipe dry using lint-free cloth (E26).



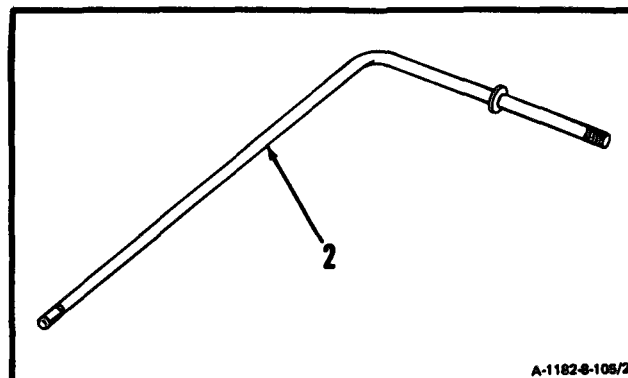
A-1182-8-105/1

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8-105 CLEAN OIL LEVEL FLOAT ASSEMBLY (AVIM) (Continued)

8-105

3. **Clean shaft (2).** Use dry-cleaning solvent (E17) and brush.
4. Wipe dry using lint-free cloth (E26).

**FOLLOW-ON MAINTENANCE:**

Inspect Oil Level Float Assembly (Task 8-106).

END OF TASK

INITIAL SETUP

Applicable Configurations:

All

Tools:

Technical Inspection Tool Kit,
NSN 5180-00-323-5114
Outside Micrometer Caliper Set

Materials:

None

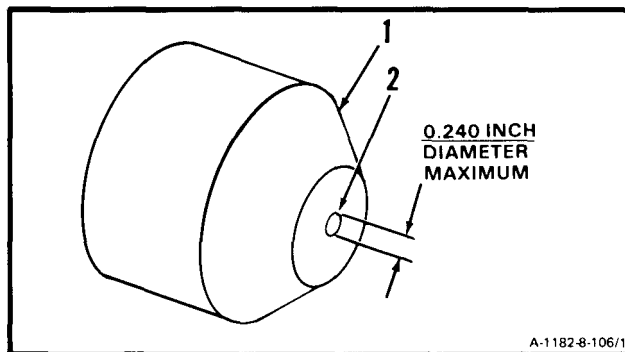
Personnel Required:

68B30 Aircraft Powerplant Inspector

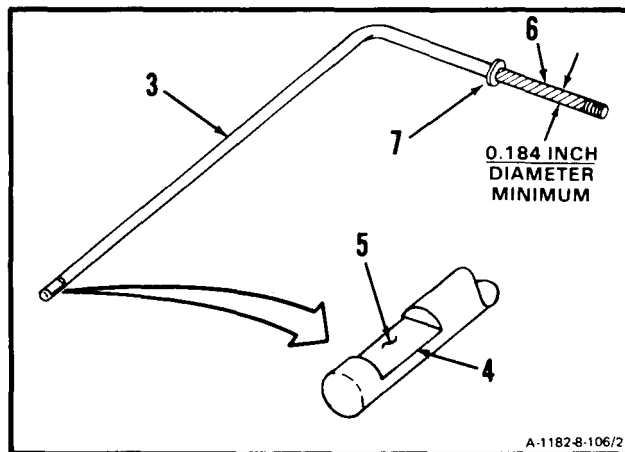
Equipment Condition:

Off Engine Task

1. **Inspect float (1).** There shall be no cracks.
2. **Inspect hole (2) in float (1).** Hole diameter shall be 0.240 inch maximum.



3. **Inspect shaft (3).** There shall be no cracks.
4. **Inspect notch (4).** There shall be no nicks, burrs, or scratches deeper than 0.020 inch on flat surface (5).
5. **Inspect float mounting area (6).** Use outside micrometer caliper. Shaft diameter shall be 0.184 inch minimum.
6. **Inspect washer (7).** Washer (7) shall not be cracked, loose, or missing.



FOLLOW-ON MAINTENANCE:

None

END OF TASK

8-107 REPAIR OIL LEVEL FLOAT ASSEMBLY (AVIM)

8-107

INITIAL SETUP**Applicable Configurations:**

All

Tools:

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

Materials:

Carborundum Stone (E10)
Crocus Cloth (E15)

Personnel Required:

68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

Equipment Condition:

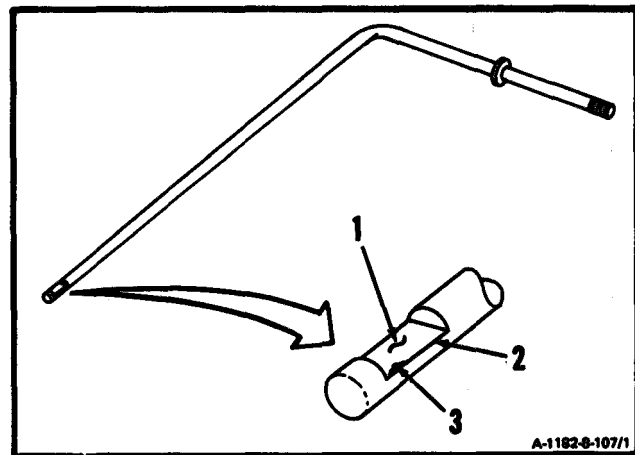
Off Engine Task

1. Repair nicks, burrs and scratches on flat surface (1) of float shaft notch (2) as follows:

NOTE

Repair is allowed only if depth of defect after repair is not more than 0.020 inch.

- a. Blend all raised edges (3). Use Carborundum stone (E10).
- b. Polish to smooth finish. Use crocus cloth

**INSPECT****FOLLOW-ON MAINTENANCE:**

None

END OF TASK

8-108 ASSEMBLE OIL LEVEL FLOAT ASSEMBLY (AVIM)

8-108

INITIAL SETUP

Applicable Configurations:

All

Tools:

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

Materials:

None

Parts:

Cotter Pin

Personnel Required:

68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

References:

TM 55-2840-254-23P

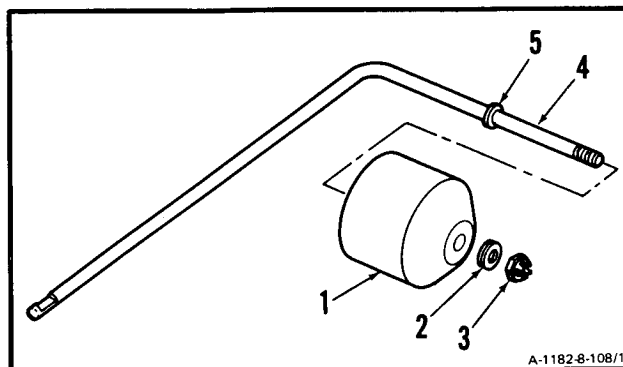
Equipment Condition:

Off Engine Task

CAUTION

When installing float, tighten nut only enough to seat float against washer. If nut is overtightened, damage to float will occur.

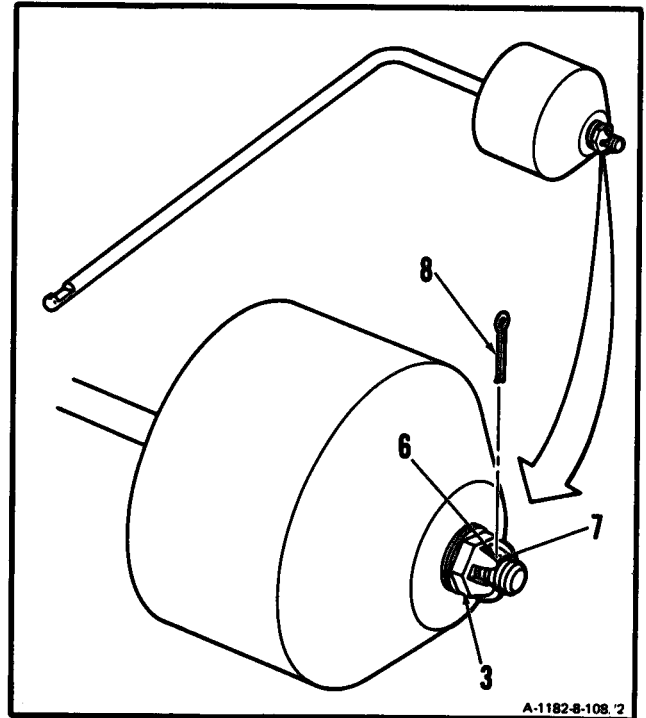
1. Install float (1), washer (2), and nut (3) on shaft (4).
2. Hand-tighten nut (3) until float (1) is seated against washer (5).

**GO TO NEXT PAGE**

8-108 ASSEMBLE OIL LEVEL FLOAT ASSEMBLY (AVIM) (Continued)

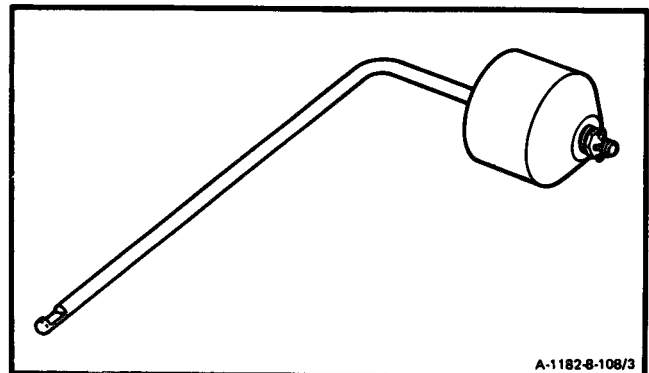
8-108

3. Back off nut (3), a maximum of one slot, until nut slot (6) aligns with shaft hole (7).
4. Install cotter pin (8).

**INSPECT**

FOLLOW-ON MAINTENANCE:

None

**END OF TASK**

8-109 INSTALL OIL LEVEL FLOAT ASSEMBLY (AVIM)

8-109

INITIAL SETUP

Applicable Configurations:

All

Tools:

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

Materials:

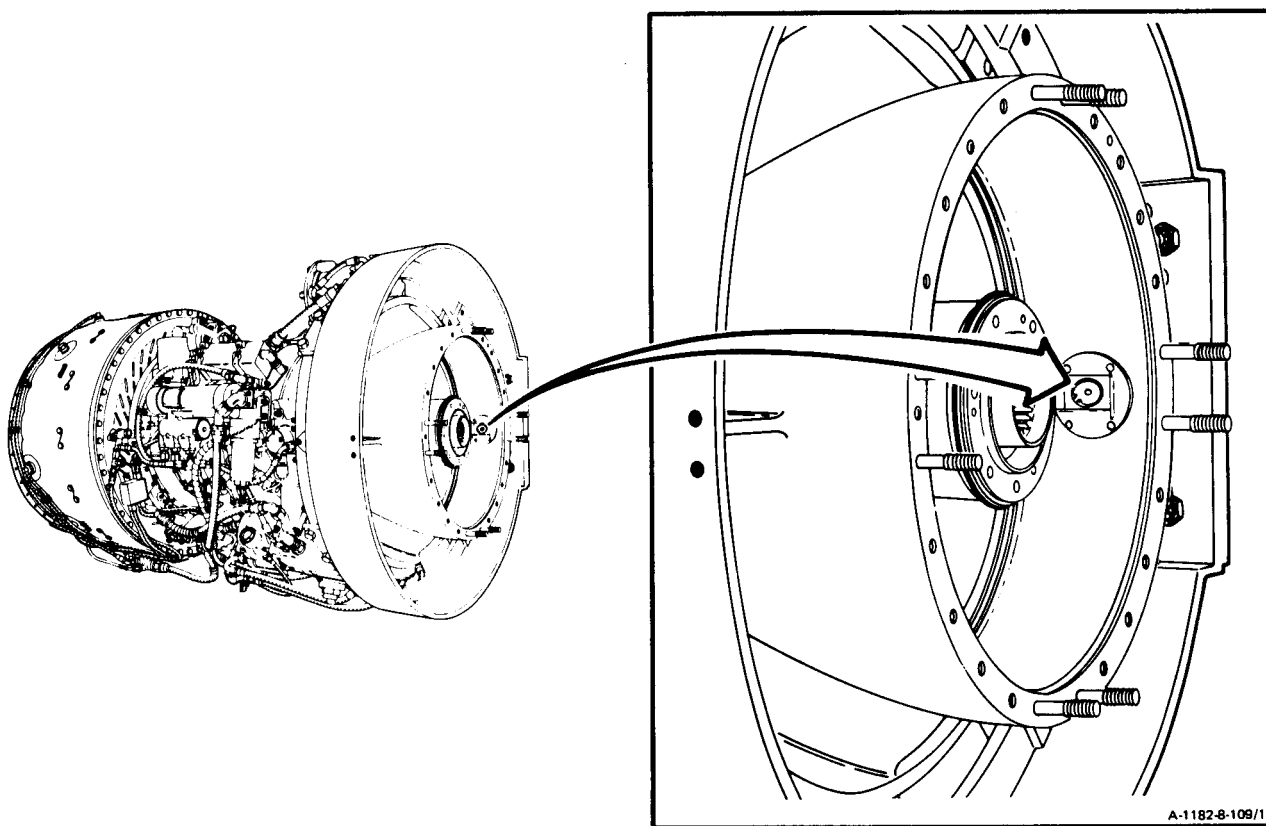
Lockwire (E29)

Personnel Required:

68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

References:

Task 8-102



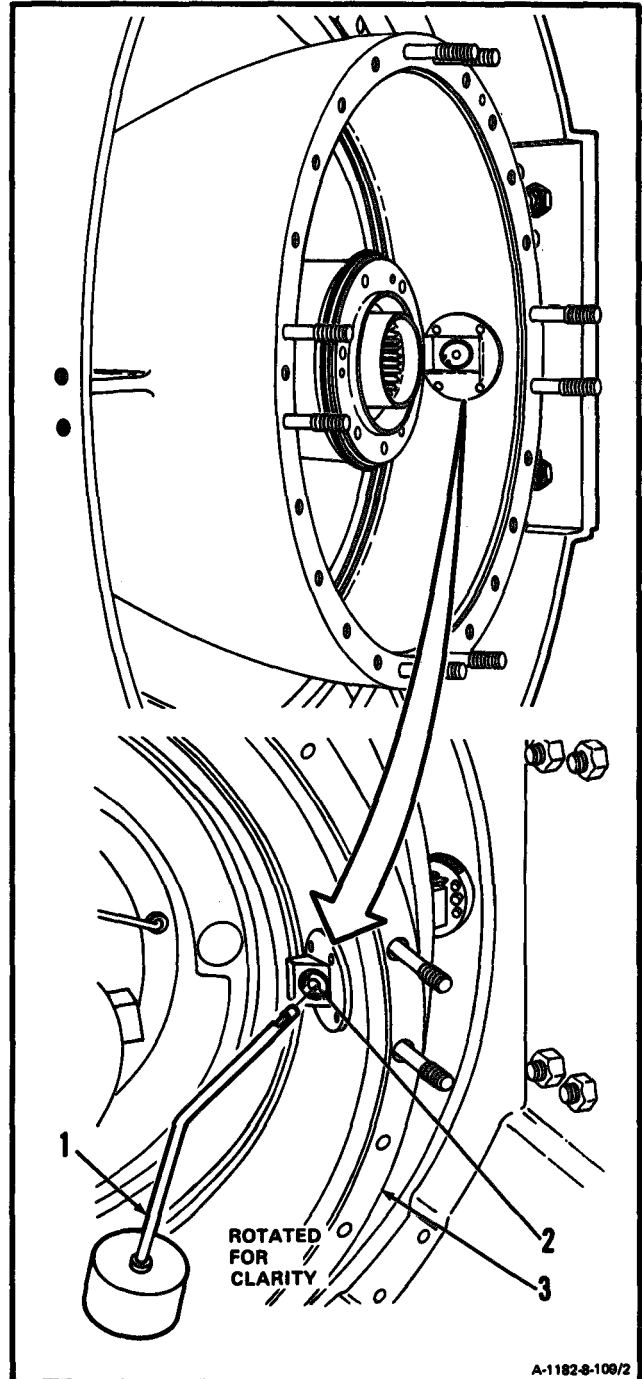
A-1182-8-109/1

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8-109 INSTALL OIL LEVEL FLOAT ASSEMBLY (AVIM) (Continued)

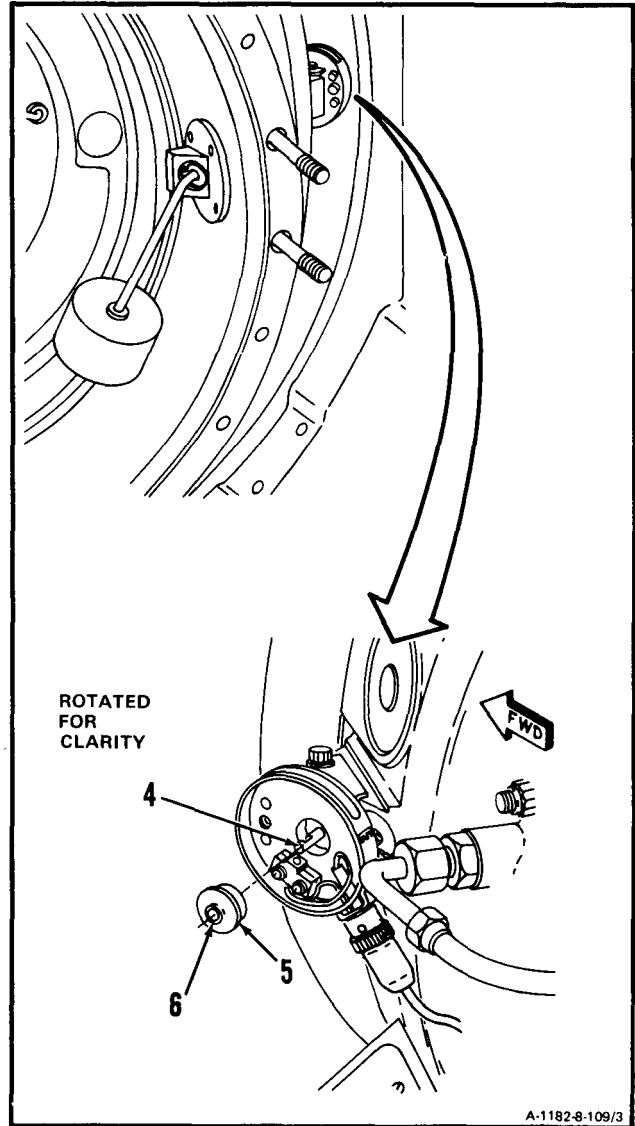
8-109

1. Install oil level float assembly (1) in hole (2) in inlet housing (3).



GO TO NEXT PAGE

2. Hold shaft (4) in place. **Install washer (5)** on shaft (4) with smaller diameter (6) facing out.

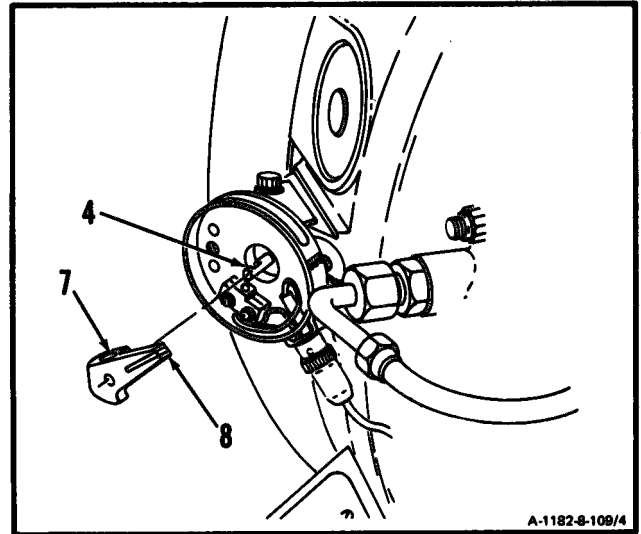


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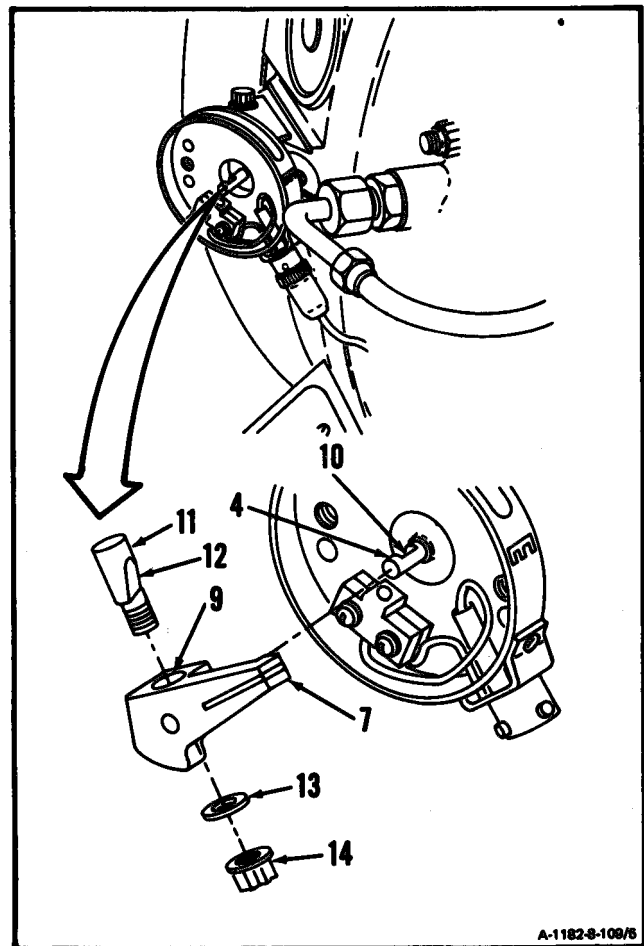
8-109 INSTALL OIL LEVEL FLOAT ASSEMBLY (AVIM) (Continued)

8-109

3. **Position pointer (7)** on shaft (4) with white stripe (8) facing out.



4. **Install pointer (7)** on shaft (4) with hole (9) aligned with notch (10).
5. **Install bolt (11)** with flat (12) against notch (10). Install washer (13) and nut (14).

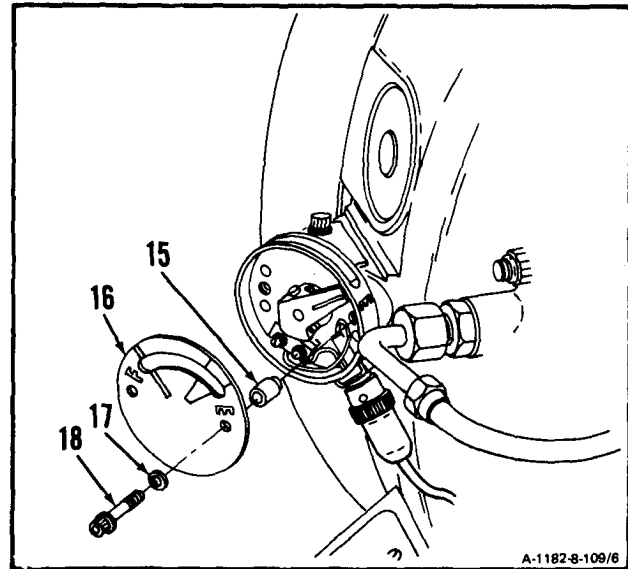


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8-109 INSTALL OIL LEVEL FLOAT ASSEMBLY (AVIM) (Continued)

8-109

6. **Adjust oil level indicator** (Ref. Task 8-102, steps 3. thru 7.)
7. **Install** two spacers (15), **cover (16)**, two washers (17), and two bolts (18). **Torque bolts (18) to 15 inch-pounds**. Lockwire bolts (18), Use lockwire (E29).

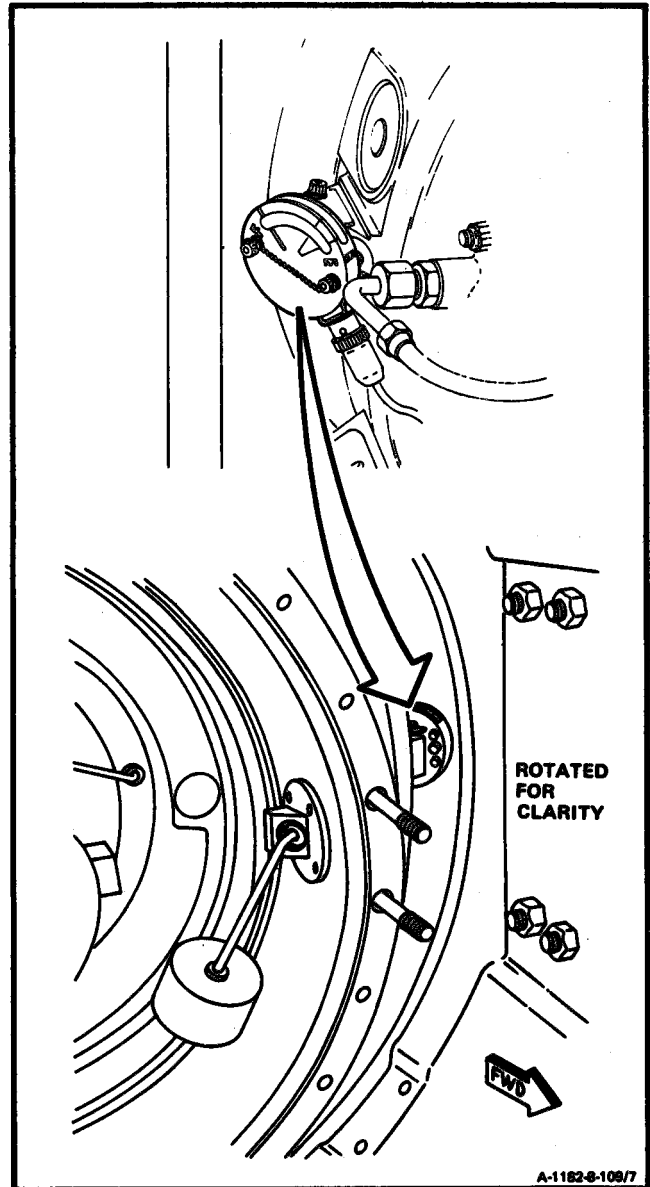
**INSPECT****GO TO NEXT PAGE**

8-109 INSTALL OIL LEVEL FLOAT ASSEMBLY (AVIM) (Continued)

8-109

FOLLOW-ON MAINTENANCE:

- Install Inlet Housing Cover Assembly (Task 2-57).
- Install Output Shaft Seal and Housing Assembly (Task 2-52).
- Service Engine Oil System (Task 1-74).

**END OF TASK**

CHAPTER 9

TORQUEMETER SYSTEM - MAINTENANCE INSTRUCTIONS

CHAPTER OVERVIEW

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

<u>SECTION</u>	<u>TASK NO.</u>	<u>TITLE</u>	<u>PAGE</u>
I		TORQUEMETER JUNCTION BOX - MAINTENANCE PROCEDURES	
	9-1	Remove Torquemeter Junction Box	9-3
	9-2	Clean Torquemeter Junction Box	9-8
	9-3	Inspect Torquemeter Junction Box	9-9
	9-4	Repair Torquemeter Junction Box	9-11
	9-5	Install Torquemeter Junction Box	9-13
II		OUTPUT SHAFT - MAINTENANCE PROCEDURES	
	9-6	Remove Output Shaft	9-19
	9-7	Clean Output Shaft	9-26
	9-8	Inspect Output Shaft	9-28
	9-9	Repair Output Shaft	9-30
	9-10	Install Output Shaft	9-31
III		TORQUEMETER HEAD ASSEMBLY - MAINTENANCE PROCEDURES	
	9-11	Remove Torquemeter Head Assembly	9-39
	9-12	Clean Torquemeter Head Assembly	9-44
	9-13	Inspect Torquemeter Head Assembly	9-46
	9-14	Install Torquemeter Head Assembly	9-49

GO TO NEXT PAGE

Change 6 9-1/(9-2 blank)

Section I. TORQUEMETER JUNCTION BOX - MAINTENANCE PROCEDURES

9-1 REMOVE TORQUEMETER JUNCTION BOX

9-1

INITIAL SETUP

*General Safety Instructions:***Applicable Configurations:**

All

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

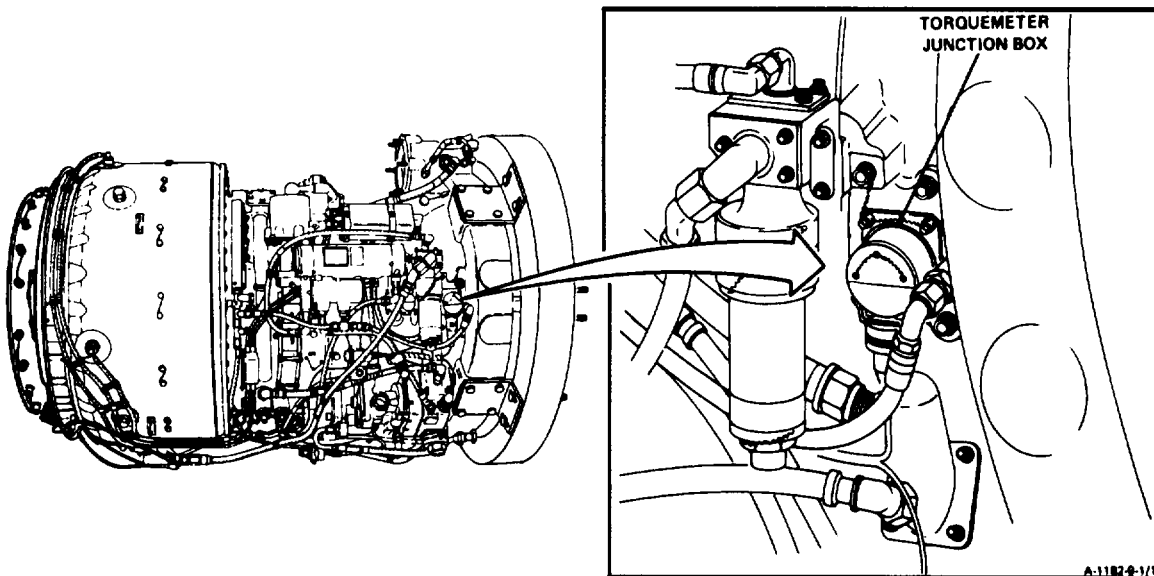
Wiping Rag (E58)

Personnel Required:

68B10 Aircraft Powerplant Repairer

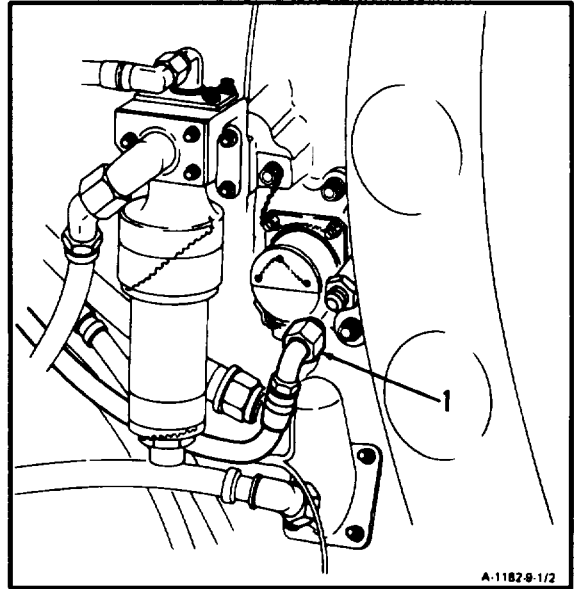
WARNING

Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.

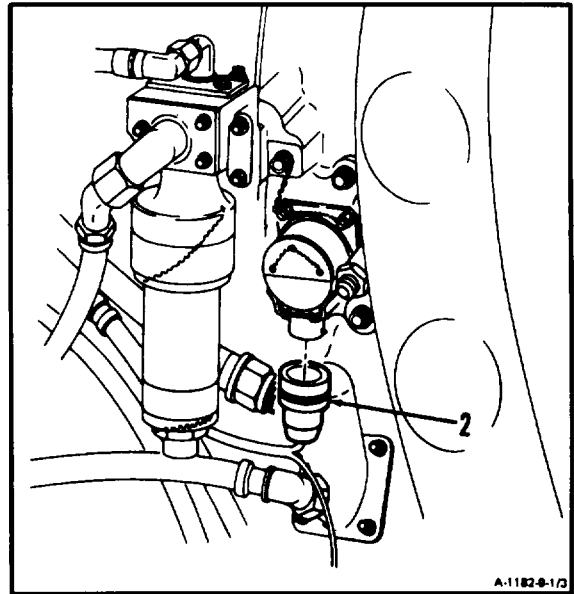
**GO TO NEXT PAGE**

Change 6 9-3

1. Disconnect hose assembly (1).



2. Disconnect electrical connector (2).

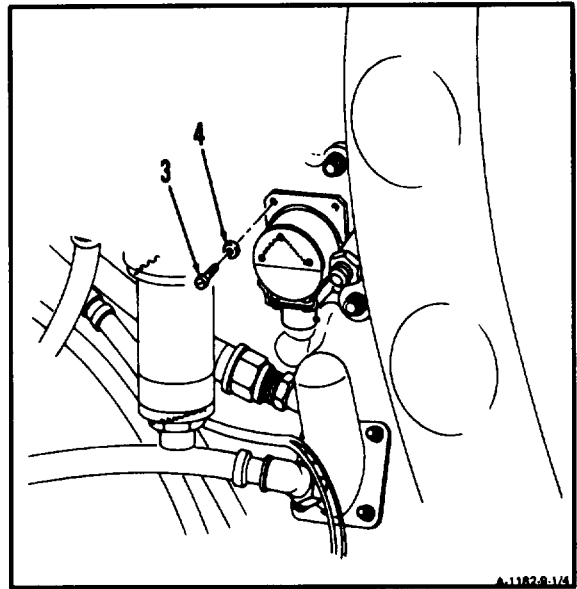


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9-1 REMOVE TORQUEMETER JUNCTION BOX (Continued)

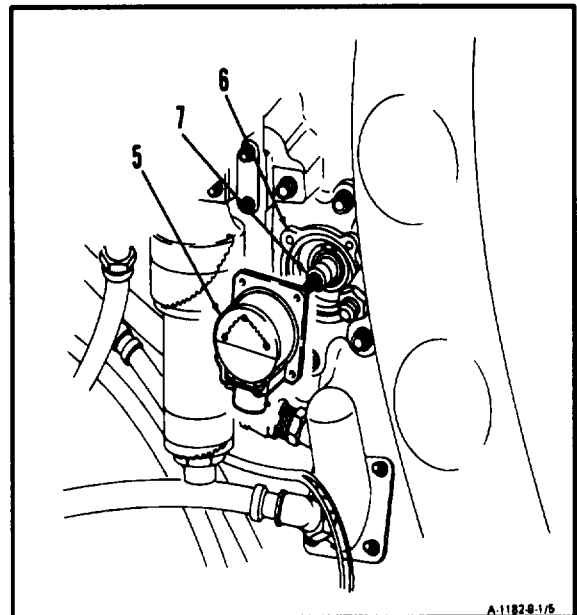
9-1

3. Remove lockwire, four screws (3), and washers (4).

**CAUTION**

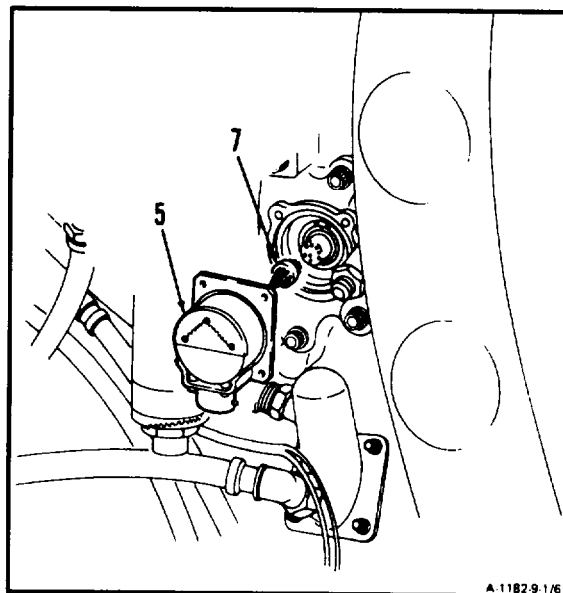
In following step 4, do not jerk torque meter junction box away from flange. This will strain electrical connectors and cause damage to wiring.

4. Carefully separate torque meter junction box (5) from flange (6) to permit access to electrical connector (7).

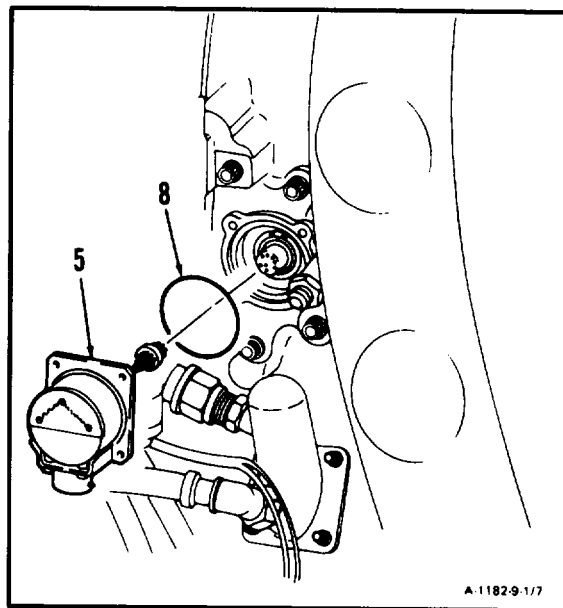
**GO TO NEXT PAGE**

9-1 REMOVE TORQUEMETER JUNCTION BOX (Continued)

5. Hold torquemeter junction box (5) and disconnect electrical connector (7).



6. Remove torquemeter junction box (5) and packing (8).



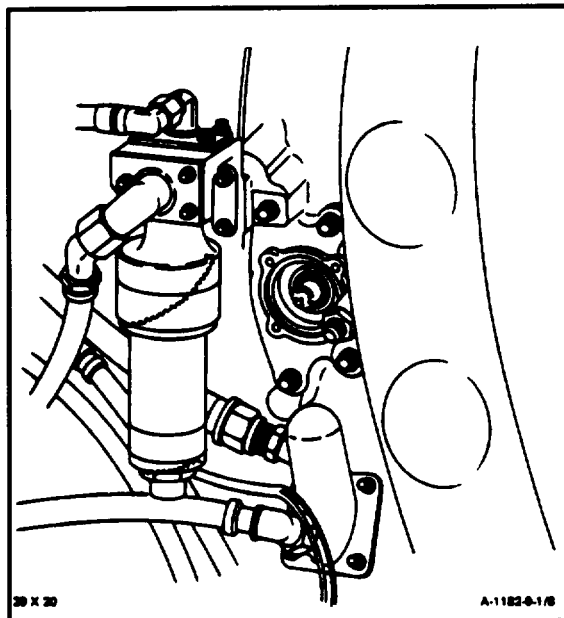
GO TO NEXT PAGE

9-1 REMOVE TORQUEMETER JUNCTION BOX (Continued)

9-1

FOLLOW-ON MAINTENANCE:

None



END OF TASK

Change 6 9-7

INITIAL SETUP

Applicable Configurations:

All

Tools:

Powerplant Mechanics Tool Kit,
NSN 5180-00-323-4944

Goggles

Compressed Air Source

Materials/Parts:

Solvent (E48.1)

Gloves (E20)

Lint Free Cloth (E26)

Personnel Required:

68B10 Aircraft Powerplant Repairer

Equipment Condition:

Off Engine Task

Torquemeter Junction Box Removed (Task 9-1)

WARNING

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

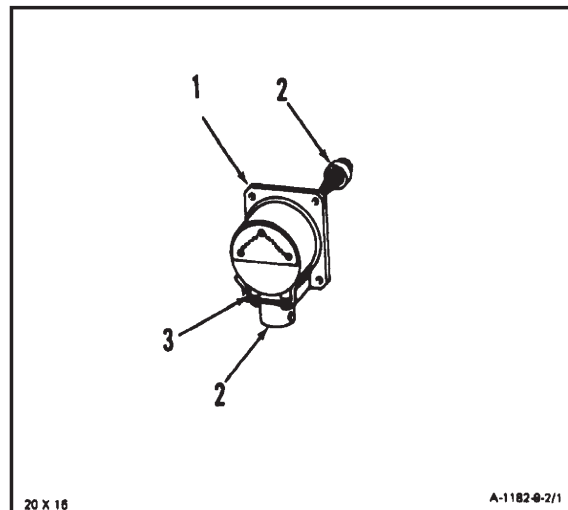
1. **Clean torquemeter junction box (1)** as follows:
 - a. Wear gloves (E20) and clean junction box (1). Use lint-free cloth (E26) dampened with solvent (E49.1).
 - b. Use dry, lint-free cloth (E26) to remove solvent.

WARNING

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

- c. Wear goggles. Blow dry electrical connectors (2) and inside surfaces (3). use clean, dry compressed air.

END OF TASK



FOLLOW-ON MAINTENANCE:

Install Torquemeter Junction Box (Task 9-3)

9-3 INSPECT TORQUEMETER JUNCTION BOX

9-3

INITIAL SETUP

Applicable Configurations:

All

Tools:

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

Materials/Parts:

None

Personnel Required:

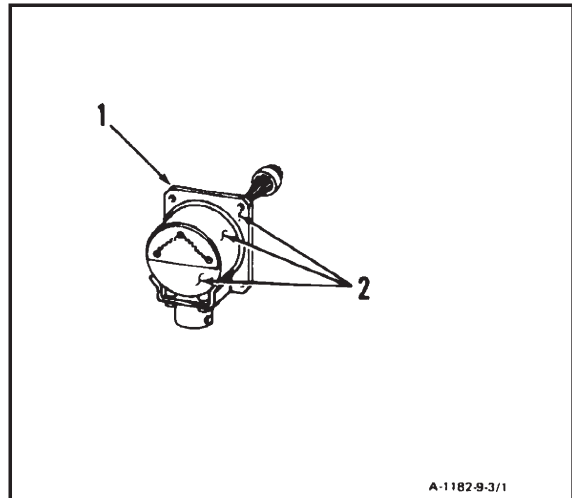
68B30 Aircraft Powerplant Inspector

Equipment Condition:

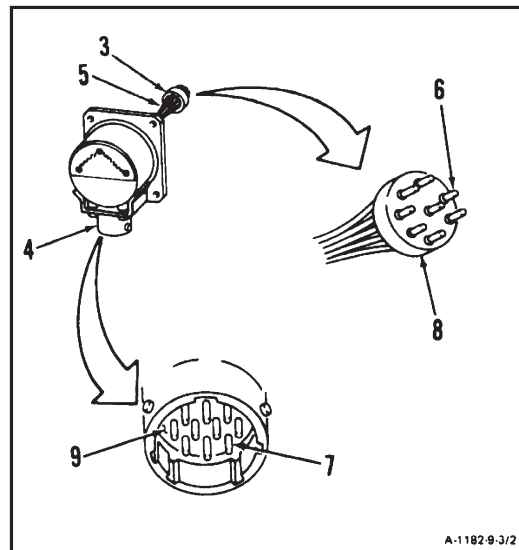
Off Engine Task

1. **Inspect torquemeter junction box (1)** as follows:

a. **Inspect body (2).** There shall be no cracks, distortion or dents.



b. **Inspect electrical connectors (3 and 4)** and wires (5). There shall be no broken wires (5), broken, corroded or bent pins (6 and 7), or damaged insulation (8 and 9).



FOLLOW-ON MAINTENANCE

None

END OF TASK

9-4 REPAIR TORQUEMETER JUNCTION BOX

9-4

INITIAL SETUP

Applicable Configurations:

All

Tools:

Powerplant Mechnaic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114
Goggles
Compressed Air Source

Materials:

Crocus Cloth (E15)

Personnel Required:

68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

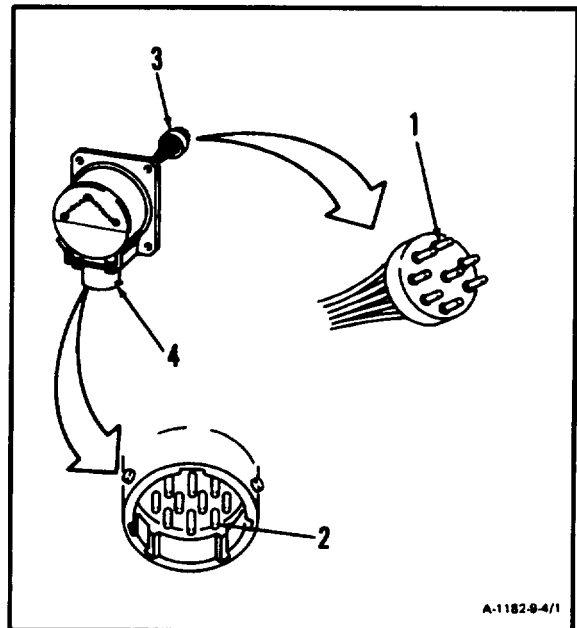
Equipment Condition:

Off Engine Task

NOTE

This repair is allowed provided it does not cause pins to break or crack.

1. Straighten bent pins (1 and 2) of electrical connectors (3 and 4). Using long-nose pliers, gently move pins (1 and 2) until they are straight.

**GO TO NEXT PAGE**

9-4 REPAIR TORQUEMETER JUNCTION BOX (Continued)

9-4

2. Remove corrosion from pins (1 and 2) of electrical connectors (3 and 4). Polish pins using in and out motion over entire length of pin until corrosion is removed. Use crocus cloth (E15).

WARNING

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

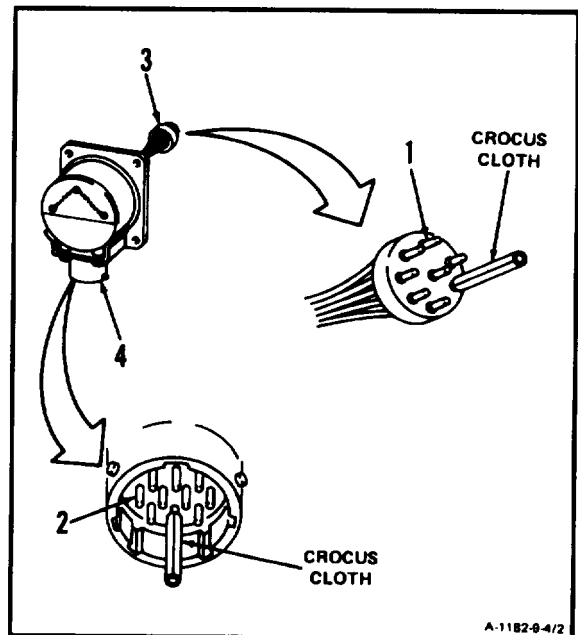
INSPECT

FOLLOW-ON MAINTENANCE:

None

END OF TASK

9-12 Change 6



9-5 INSTALL TORQUEMETER JUNCTION BOX

9-5

INITIAL SETUP**Applicable Configurations:**

All

Tools:

Powerplant Mechnaic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114

Materials:

Sealant, RTV (88) (E45.1)
Grease Silicone (E23.1)

Lockwire (E29)**Parts:**

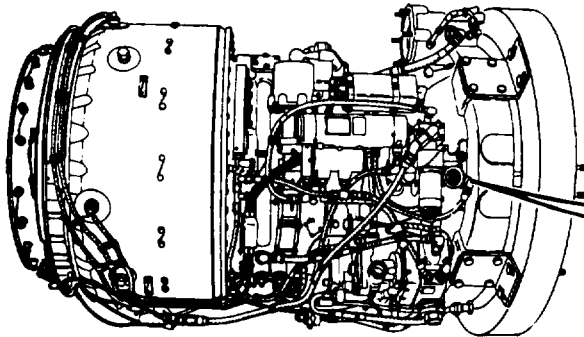
Packings

Personnel Required:

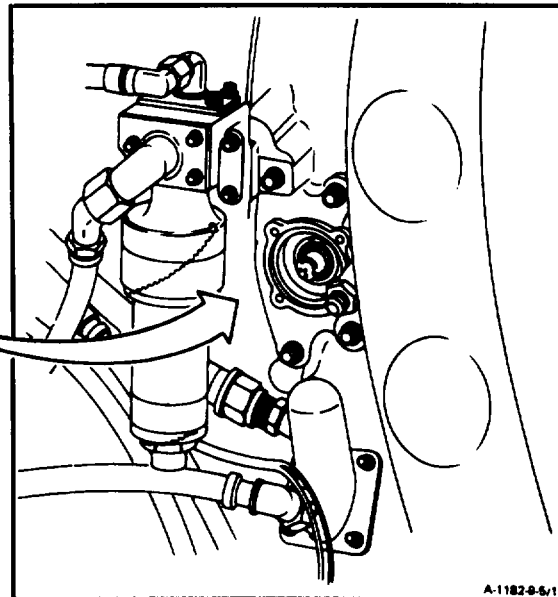
68B10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector

References:

TM 55-2840-254-23P
Task 9-6
Task 9-10
Task 9-11
Task 9-14



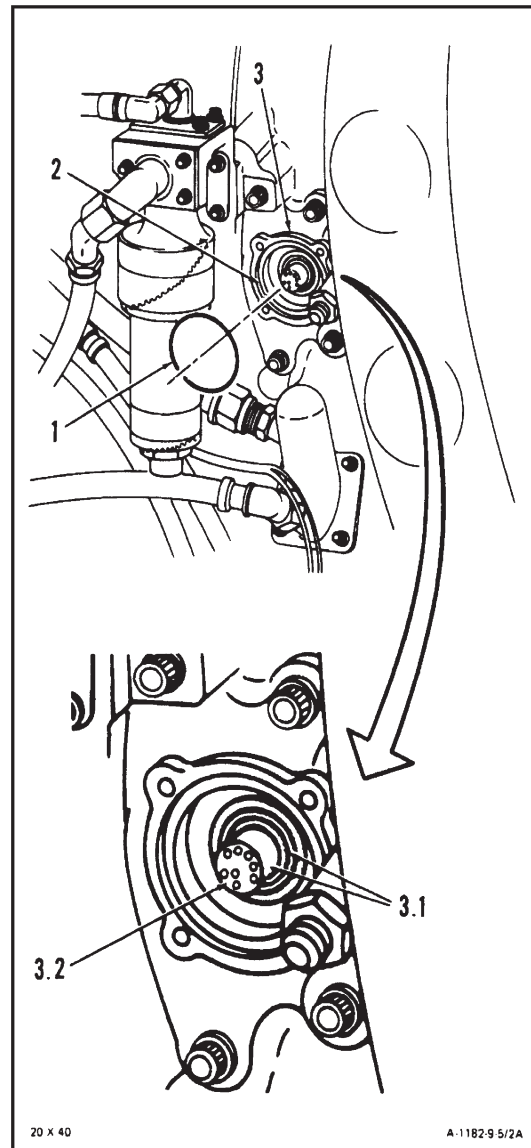
42 X 20

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NOTE

The output shaft, torque meter head and torque meter junction box are supplied as a calibrated set. If you replace the torque meter junction box, you must replace the output shaft (Tasks 9-6 and 9-10) and the torque meter head assembly (Tasks 9-11 and 9-14).

1. Install packing (1) in groove (2) of flange (3). Coat torque meter head assembly connector and flange area (3.1) (screened area) with silicone grease (E23.1). Coat pin area (3.2) of connector with silicone grease (E23.1).

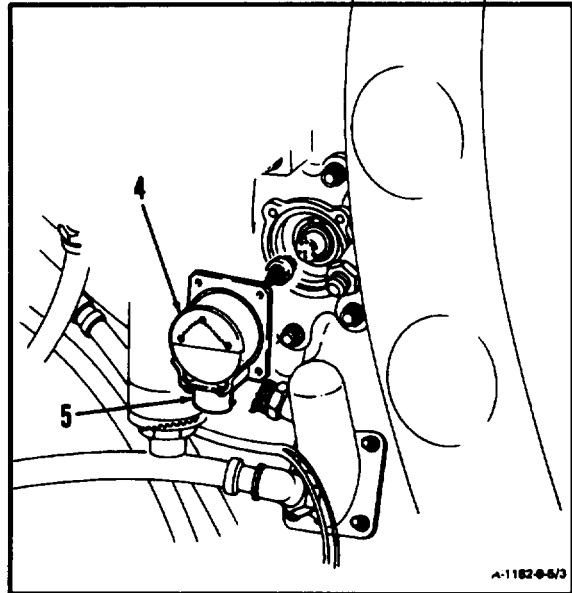


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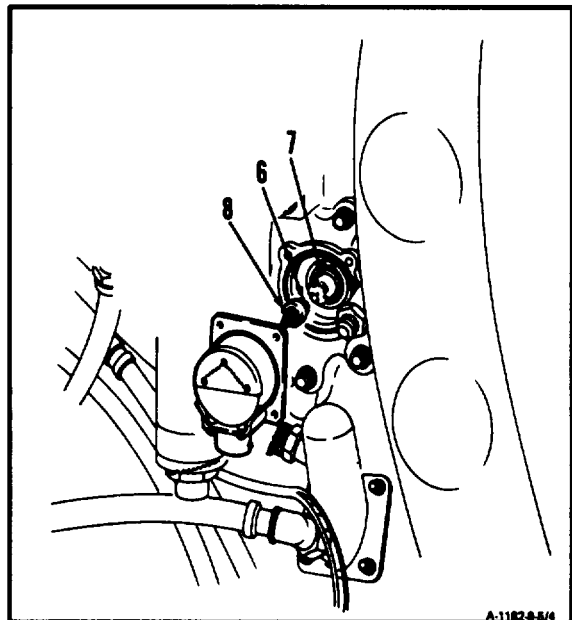
9-5 INSTALL TORQUEMETER JUNCTION BOX (CONTINUED)

9-5

2. Position torquemeter junction box (4) with electrical connector (5) at 6-o'clock location.



3. Align pins (6) with holes (7) and **connect electrical connector (8)**.

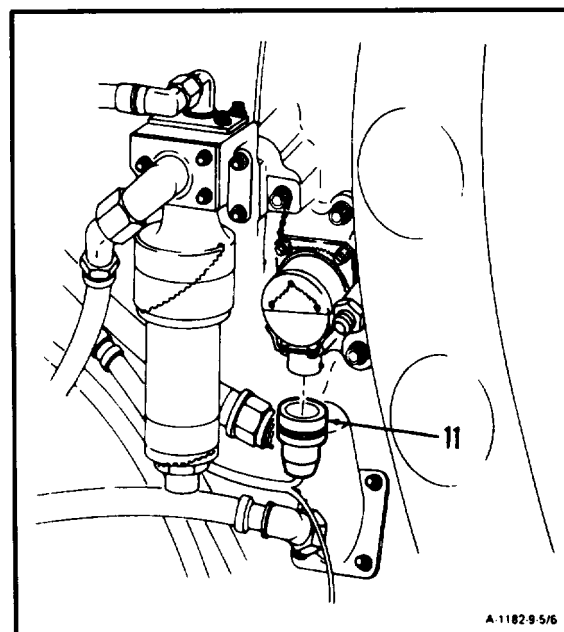
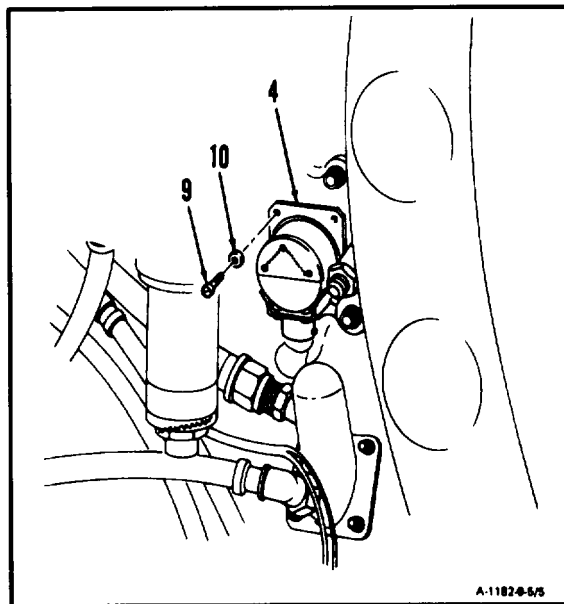


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9-5 INSTALL TORQUEMETER JUNCTION BOX

4. **Install torquemeter junction box (4),** four screws (9), and washers (10). Lockwire screws (9). Use lockwire (E29).

5. **Connect electrical connector (11).**



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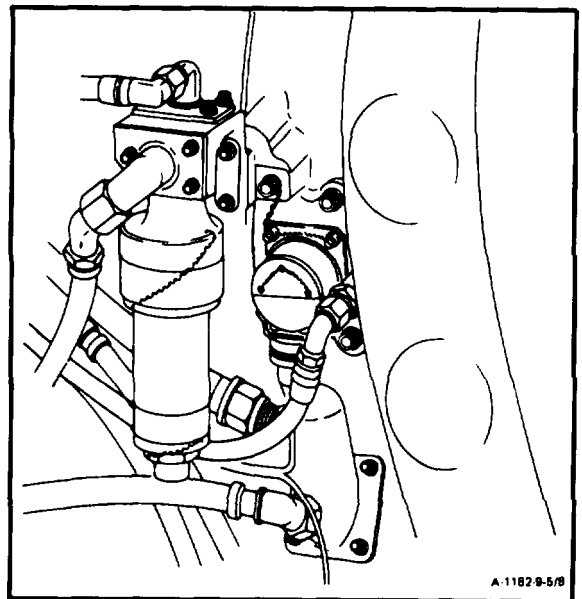
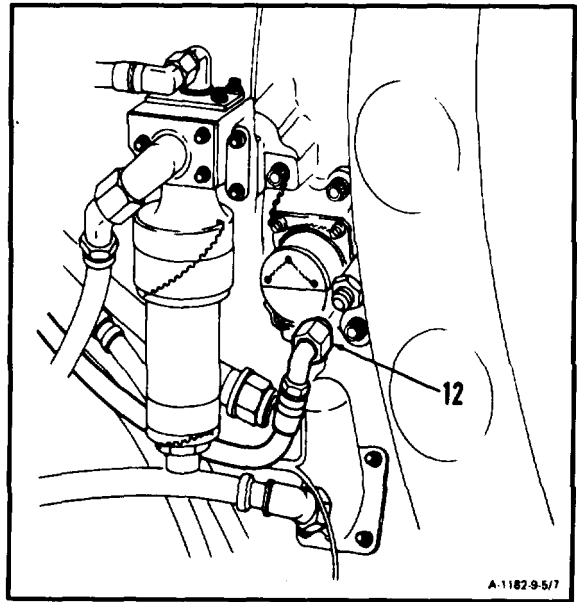
9-5 INSTALL TORQUEMETER JUNCTION BOX

- 6. Connect hose assembly (12).

INSPECT

FOLLOW-ON MAINTENANCE

None



END OF TASK

Section II. OUTPUT SHAFT - MAINTENANCE PROCEDURES

9-6 REMOVE OUTPUT SHAFT

9-6

INITIAL SETUP

Applicable Configurations:

All

Tools:

Powerplant Mechnaic's Tool Kit,
NSN 5180-00-323-4944
Mechanical Puller (T6)
Socket Wrench Assembly (T22)
Shaft Holding Tool (T23)
Output Shaft Puller Adapter (T35)
Bearing Removal Tool (T59)
Arbor Press
Breaker Bar, 1/2-inch

Socket Wrench Adapter, 1/2-inch Female to
3/4-Inch Male
Work Table

Materials:

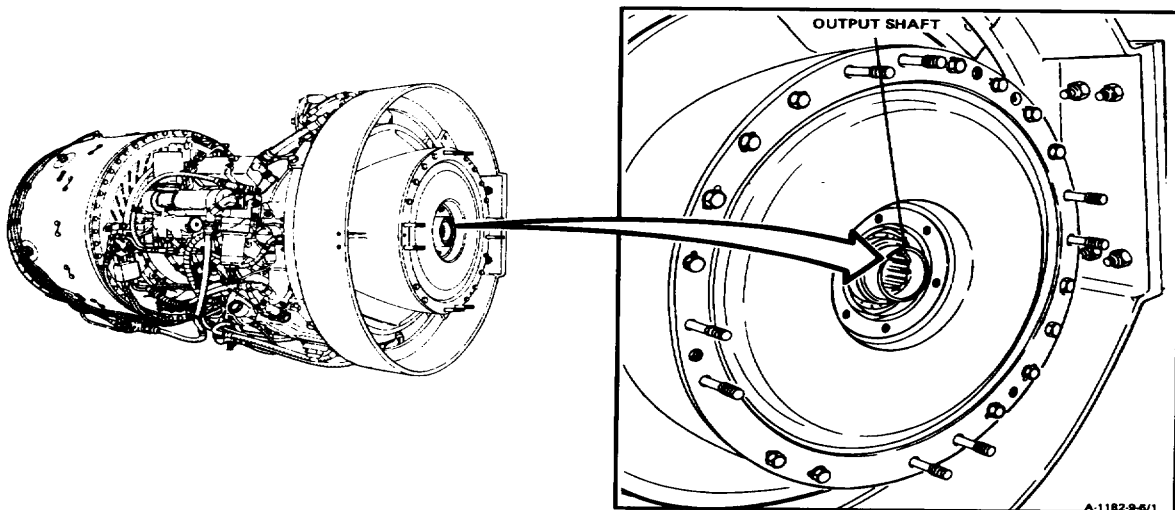
Lint-Free Cloth (E26)
Wiping Rag (E58)

Personnel Required:

68B10 Aircraft Powerplant Repairer

Equipment Condition:

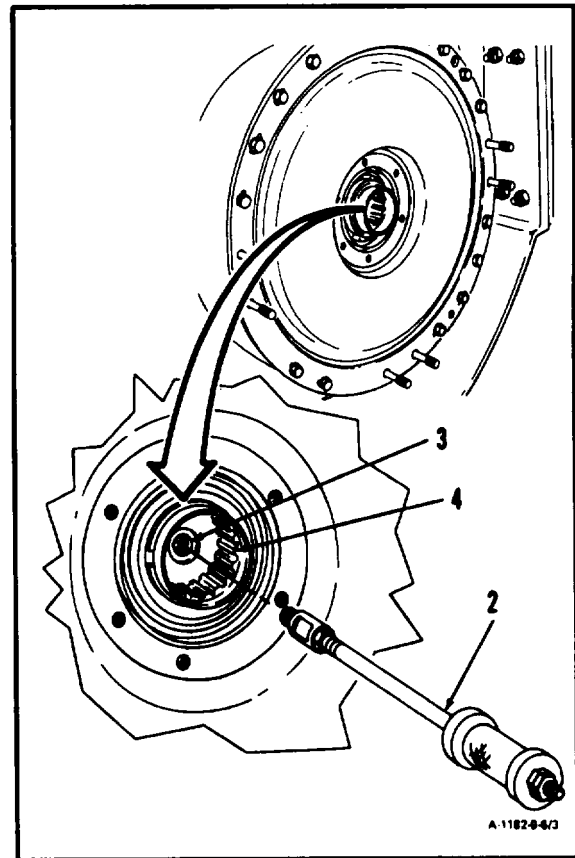
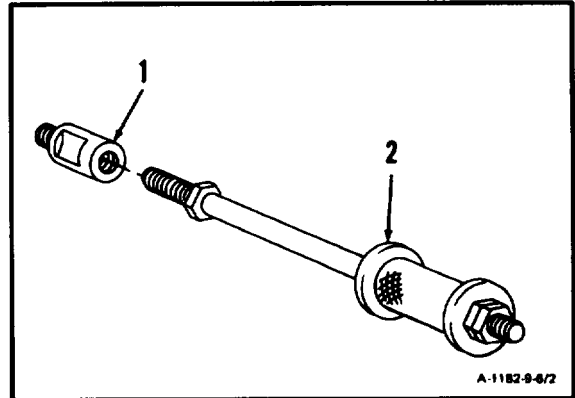
Engine Oil System Drained (Task 1-75)
Output Shaft Seal and Housing Assembly
Removed
(Task 2-48)



GO TO NEXT PAGE

9-6 REMOVE OUTPUT SHAFT (Continued)

1. Install output shaft puller adapter (T35) (1) on mechanical puller (T6) (2).
2. Install mechanical puller (T6) (2) in threaded hole (3) in output shaft (4).



GO TO NEXT PAGE

9-6 REMOVE OUTPUT SHAFT (Continued)

9-6

CAUTION

In following step 3, be sure to remove out-put shaft carefully. Failure to lift rear of shaft as it is being removed will cause damage to internal components.

3. Carefully pull and lift output shaft (4) from housing (5).
4. Remove mechanical puller (T6) (2).

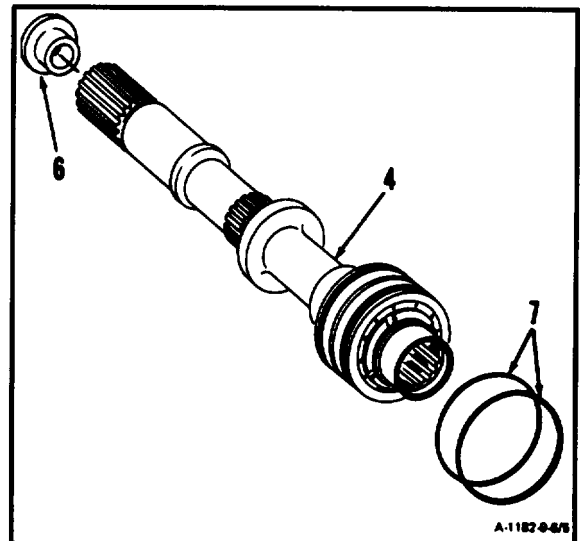
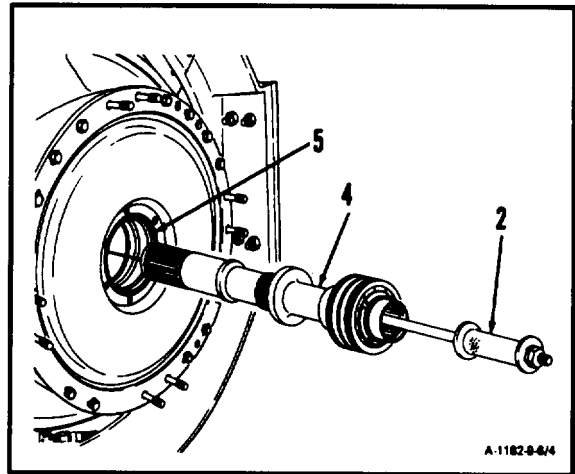
NOTE

If output shaft is not being replaced, bearings should not be removed.

5. Remove spacer (6) from output shaft (4). Remove packings (7).

NOTE

Remove packing pieces from output shaft housing.



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Change 6 9-21

CAUTION

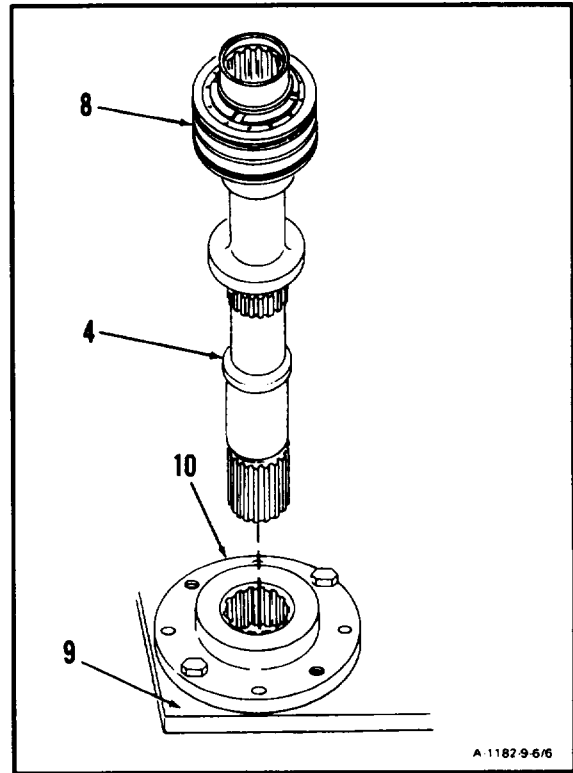
Protect bearings from damage. Handle only in clean area. Use clean, lint-free cloth (E26). Damaged bearings can cause engine failure.

6. Remove bearings (8) from output shaft (4) as follows:

WARNING

To prevent slipping, ensure that shaft holding tool is secured to work table. Injury could result.

- a. Secure shaft holding tool (T23) (10) to work table (9). Install output shaft (4) in shaft holding tool (T23) (10).

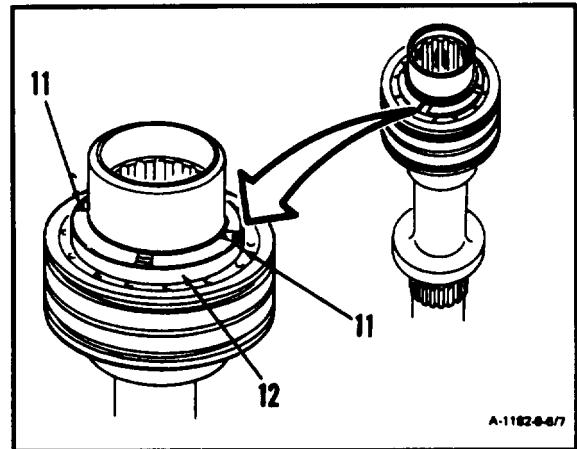


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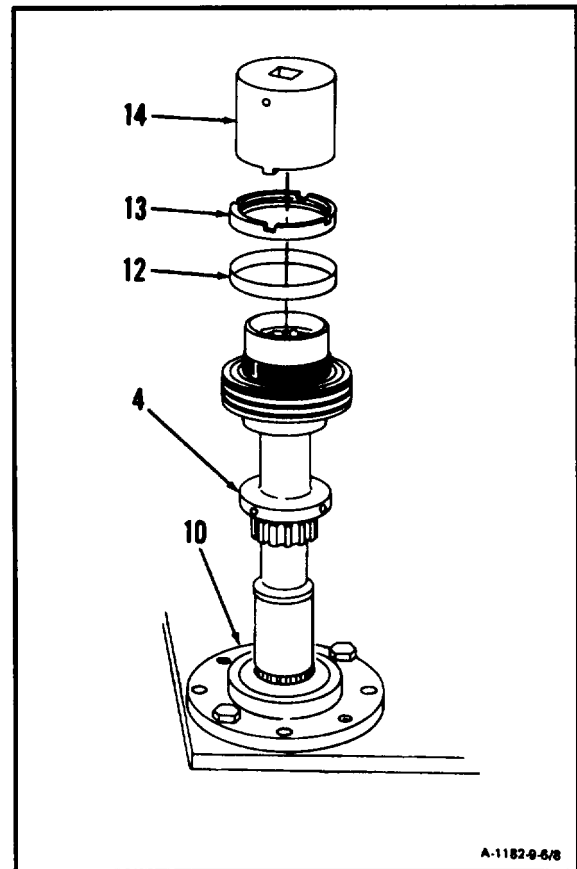
9-6 REMOVE OUTPUT SHAFT (Continued)

9-6

- b. **Straighten** bent portions (11) of **locking cup (12)**.

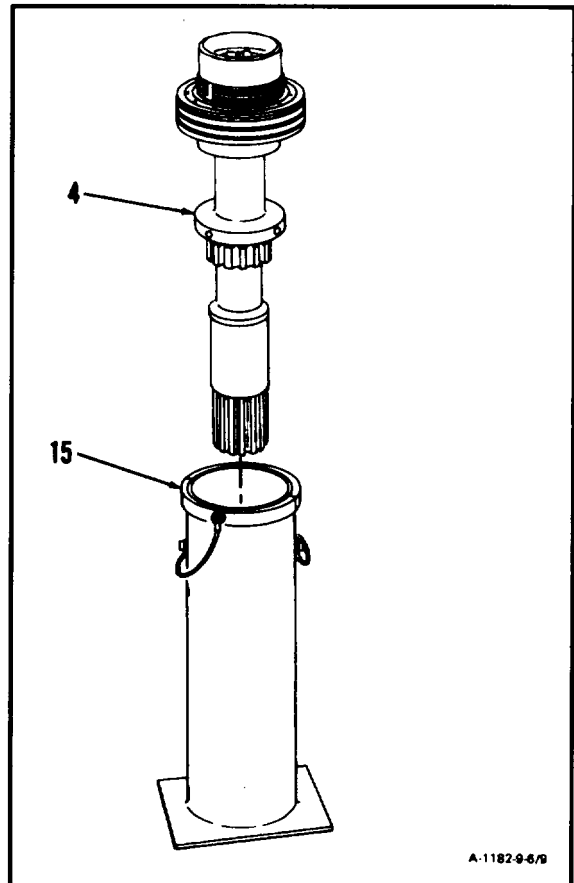


- c. **Remove nut (13) and recessed washer (12)**. Use socket wrench assembly (T22) (14), socket wrench adapter, and 1/2-inch breaker bar.
- d. Remove output shaft (4) from shaft holding tool (T23) (10).



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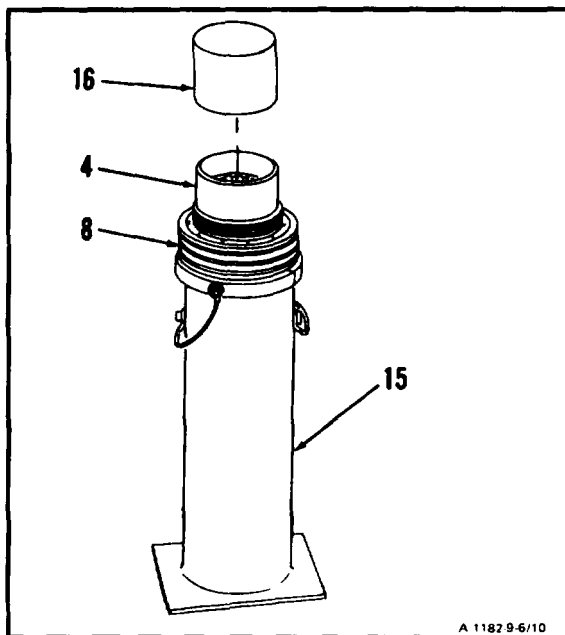
- e. Install output shaft (4) in bearing removal tool (T59) base (15).



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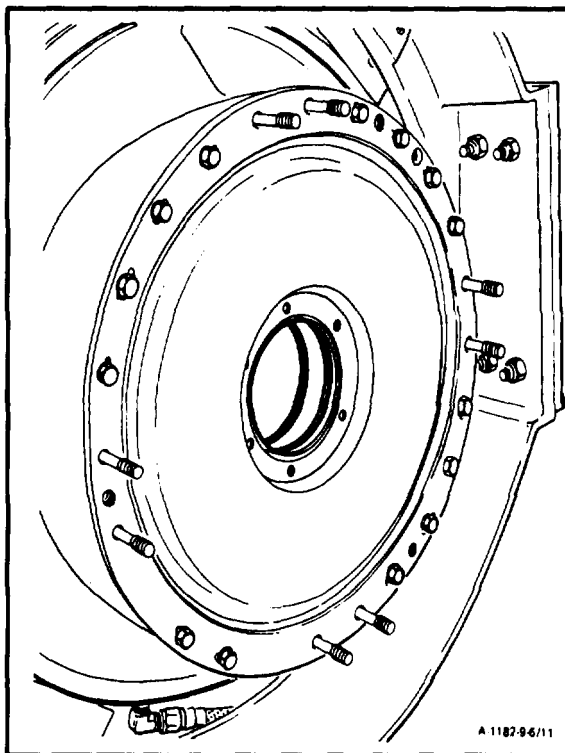
Change 6 9-24

- f. Press output shaft (4) through bearings (8). Use bearing removal tool (T59) (15), ram (16), and an arbor press.



FOLLOW-ON MAINTENANCE

None



END OF TASK

INITIAL SETUP*General Safety Instructions:***Applicable Configurations:**

All

Tools:

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

Materials:

Dry Cleaning Solvent (E17)
Gloves (E20)
Lint-Free Cloth (E26)
Lubricating Oil (E32)

Personnel Required:

68B 10 Aircraft Powerplant Repairer

Equipment Condition:

Off engine Task
Engine Oil System Drained (Task 1-75)
Output Shaft Seal and Housing Assembly
Removed (Task 2-48)
Output Shaft Removed (Task 9-6)

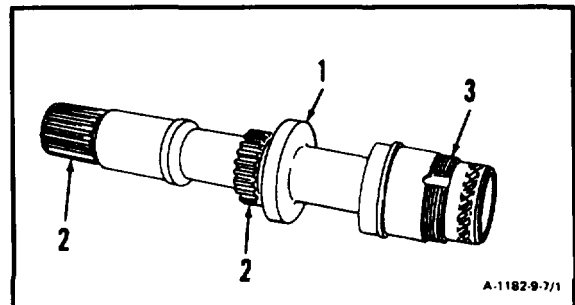
1. Clean output shaft (1). Wear gloves (E20). Immerse dry-cleaning solvent (E17) and agitate. Use brush on splines (2) and threads (3).
2. Wipe dry. Use clean, dry lint-free cloth (E26).
3. Wear goggles. Blow dry. Use clean, dry compressed air.

WARNING

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

WARNING

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

**GO TO NEXT PAGE**

9-26 Change 6

9-7 CLEAN OUTPUT SHAFT (Continued)

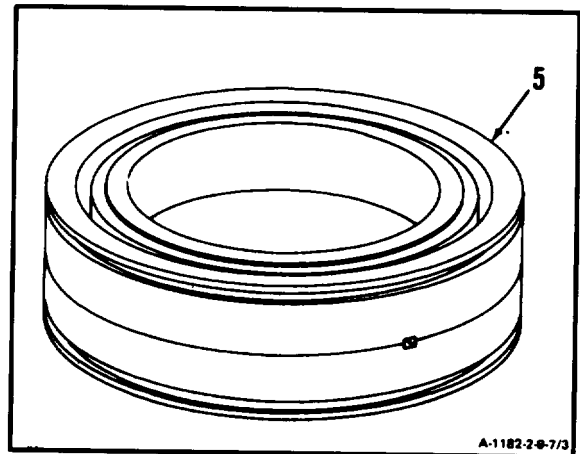
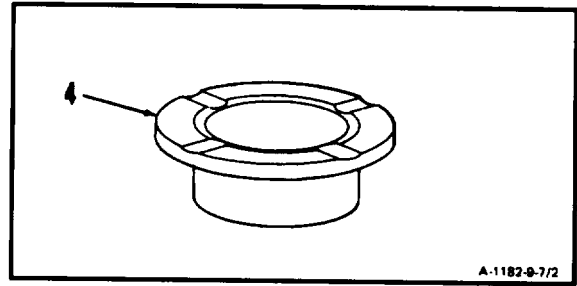
9-7

4. Wear gloves (E20). Clean spacer (4). Immerse in dry cleaning solvent (E17) and agitate. Wipe with lint-free cloth (E26) dampened in dry cleaning solvent (E17).
5. Wipe dry. Use clean, dry lint-free cloth (E26).
6. Wear goggles. Blow dry. Use clean, dry compressed air.

CAUTION

Protect bearings from damage. Handle only in clean area. Use clean, lint-free cloth (E26). Damaged bearings can cause engine failure.

7. Wear gloves (E20). **Clean bearing (5).** Immerse in clean dry-cleaning solvent (E17) and agitate. Rinse in clean dry-cleaning solvent (E17).
8. Wipe dry. Use clean, dry lint-free cloth (E26).
9. Wear goggles. Blow dry. Use clean, dry compressed air.
10. Coat with lubricating oil (E32) and wrap in clean, lint-free cloth (E26).

**FOLLOW-ON MAINTENANCE:**

Inspect Output Shaft (Task 9-8).

END OF TASK

Change 6 9-27

INITIAL SETUP**Applicable Configurations:**

All

Tools:

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

Materials:

Lint-Free Cloth (E26)

Personnel Required:

68B30 Aircraft Powerplant Inspector

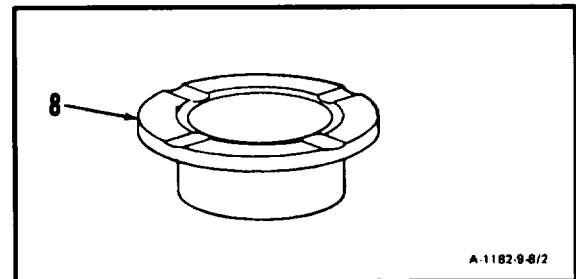
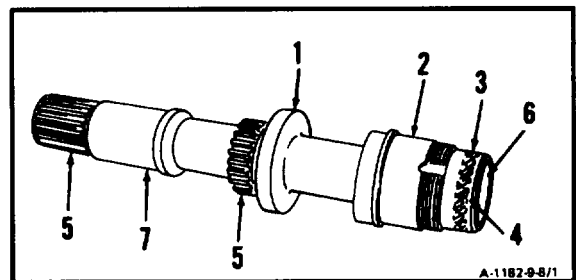
References:

Task 1-118

Equipment Condition:

Off Engine Task

1. **Inspect output shaft (1)** as follows:
 - a. There shall be no cracks.
 - b. There shall be no scratches on bearing journal (2) deeper than 0.002 inch.
 - c. There shall be no nicks or scratches on seal contact area (3).
 - d. There shall be no nicks or scratches deeper than 0.002 inch on edge of seal flange (4).
 - e. Inspect splines (5 and 6) (Ref. Task 1-118). There shall be no chips. There shall be no wear deeper than 0.007 inch on splines (5) and 0.005 inch on spline (6).
 - f. There shall be no nicks or scratches on magnetic pickup area (7) deeper than 0.008 inch.
2. **Inspect spacer (8)**. There shall be no cracks.

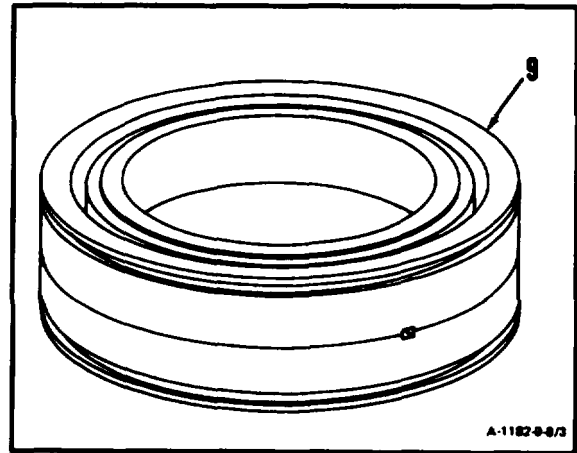
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9-28 Change 6

CAUTION

Protect bearings from damage. Handle only in clean area. Use clean, lint-free cloth (E26). Damaged bearings can cause engine failure.

3. **Inspect bearing (9)** as follows:
 - a. There shall be no rust or broken parts.
 - b. There shall be no pits or dents deeper than 0.002 inch.
 - c. There shall be no foreign matter clogging the bearing which would obstruct free rotation.
 - d. There shall be no purple, red-purple or blue discoloration.



FOLLOW-ON MAINTENANCE:

None

END OF TASK

Change 6 9-29

INITIAL SETUP

Crocus Cloth (E1 5)

Applicable Configurations:

All

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

Carborundum Stone (E10)

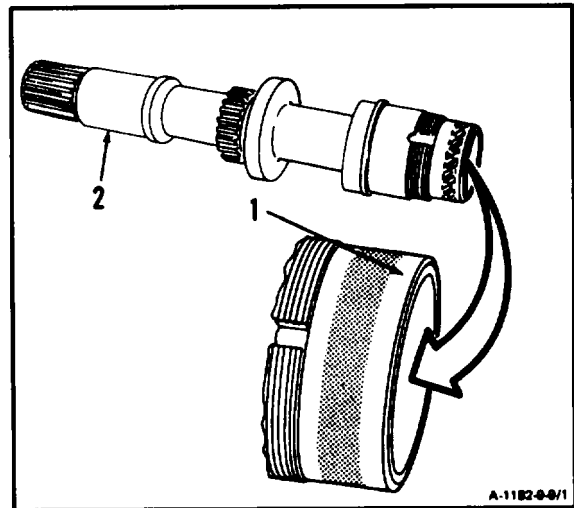
Personnel Required:68B 10 Aircraft Powerplant Repairer
68B30 Aircraft Powerplant Inspector**References:**

Off Engine Task

1. Repair nicks and scratches less than 0.002 inch deep on edge of seal flange (1) and less than 0.008 inch deep on magnetic pickup area (2) as follows:
 - a. **Blend all sharp edges** next to nicks and scratches. Use carborundum stone (e10).
 - b. **Polish to smooth finish.** Use crocus cloth (E15).

INSPECT**FOLLOW-ON MAINTENANCE:**

None

**END OF TASK**

9-30 Change 6

9-10 INSTALL OUTPUT SHAFT

9-10

INITIAL SETUP

Applicable Configurations:

All

Tools:

- Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4994
- Technical Inspection Tool Kit
NSN 5180-00-323-5114
- Mechanical Puller (T6)
- Socket Wrench Assembly (T22)
- Shaft Holding Tool (T23)
- Output Shaft Puller Adapter (T35)
- 2-3/8 Inch Inside Diameter Sleeve (Appendix E)
- Torque Wrench, 100-750 Inch-Pounds
- Work Table
- Outside Micrometer Caliper Set
- Arbor Press
- Micrometer Depth Gage
- Socket Wrench Adapter, 1/2-Inch Female to
3/4-Inch Male

Materials:

- Lint-Free Cloth (E26)

Parts:

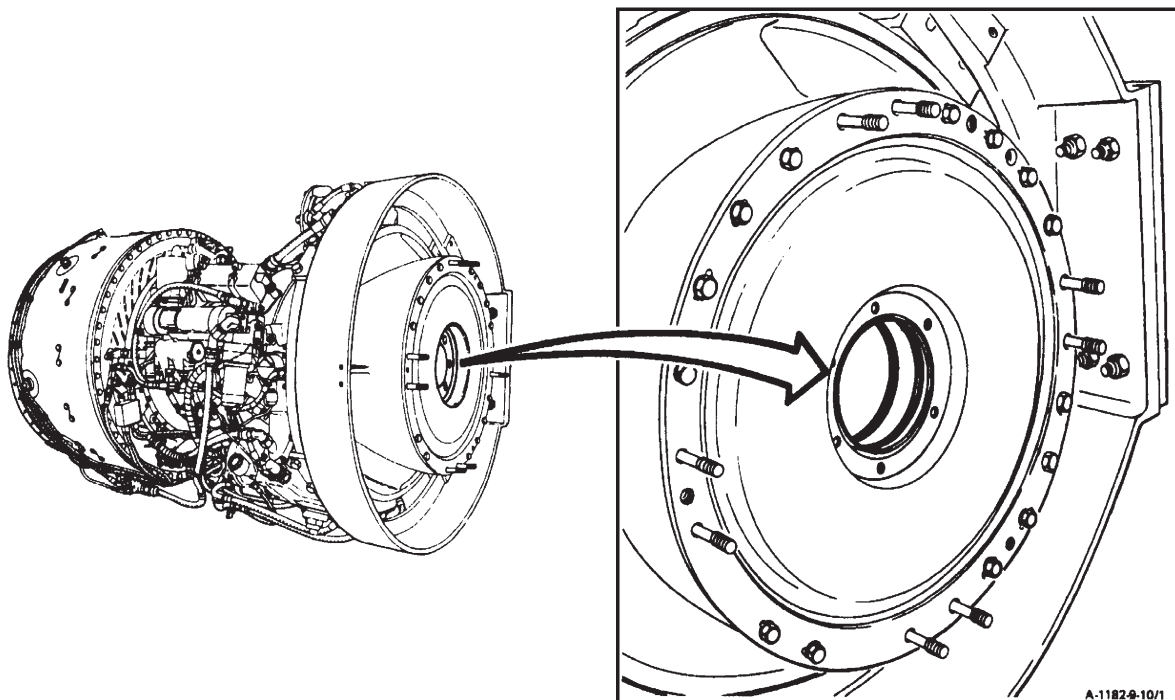
- Packings
- Spacer

Personnel Required:

- 68B10 Aircraft Powerplant Repairer
- 68B30 Aircraft Powerplant Inspector

References:

- TM 55-2840-240-23
- TM 55-2840-254-23P
- Task 9-1
- Task 9-5
- Task 9-11
- Task 9-14



GO TO NEXT PAGE

NOTE

The output shaft, torquemeter head, and torquemeter junction box are supplied as a calibrated, matched set. If you replace the output shaft, you must also replace the torquemeter junction box (Tasks 9-1 and 9-5) and torque-meter head (Tasks 9-11 and 9-14).

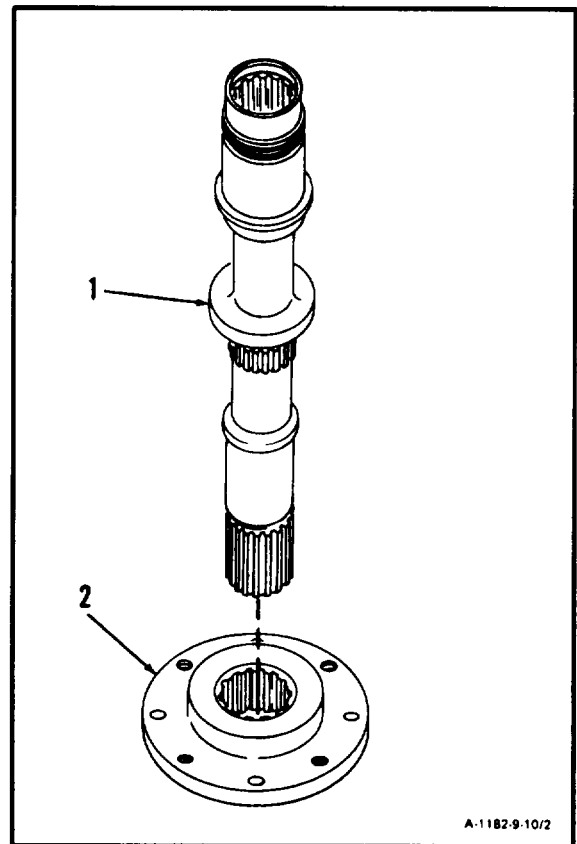
CAUTION

Protect bearings from damage. Handle only in clean area. Use clean, lint-free cloth (E26). Damaged bearings can cause engine failure.

NOTE

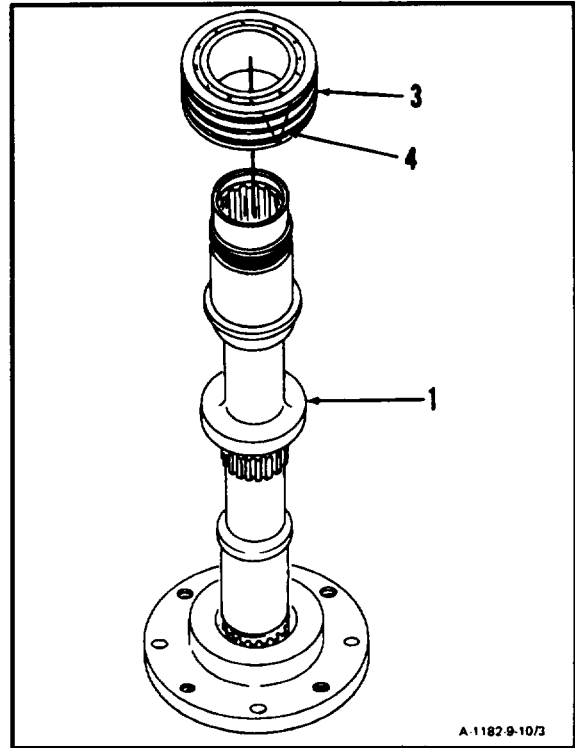
If bearings have not been removed omit step 1.

1. Install bearing on output shaft (1) as follows:
 - a. Install output shaft (1) in shaft holding tool (T23) (2).

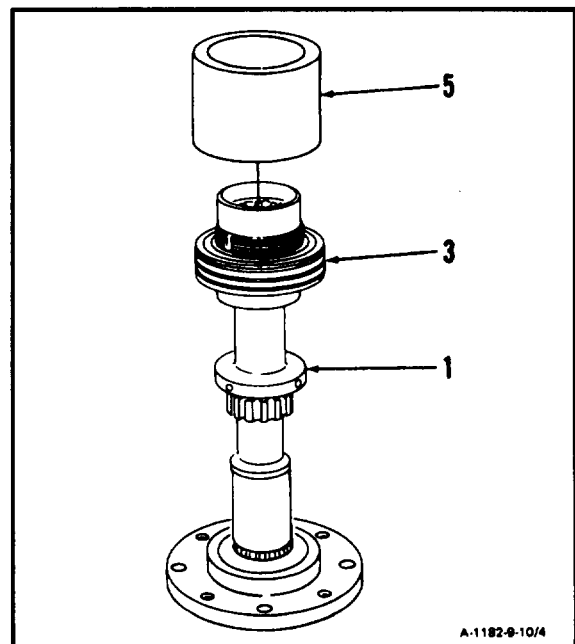


GO TO NEXT PAGE

- b. Position bearings (3) on output shaft (1) with V mark (4) pointing down.



- c. Press bearing (3) onto output shaft (1). Use $2\text{-}\frac{3}{8}$ inch inside diameter sleeve (Appendix E) (5) and arbor press.

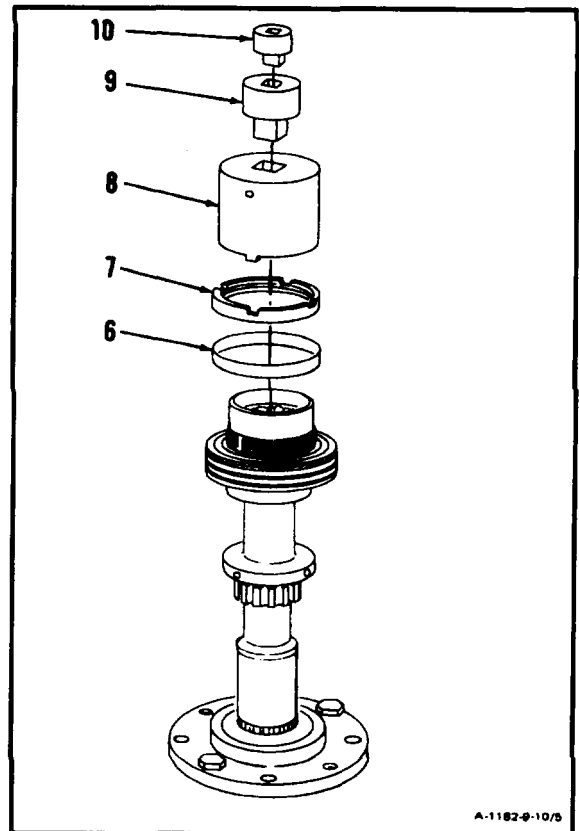


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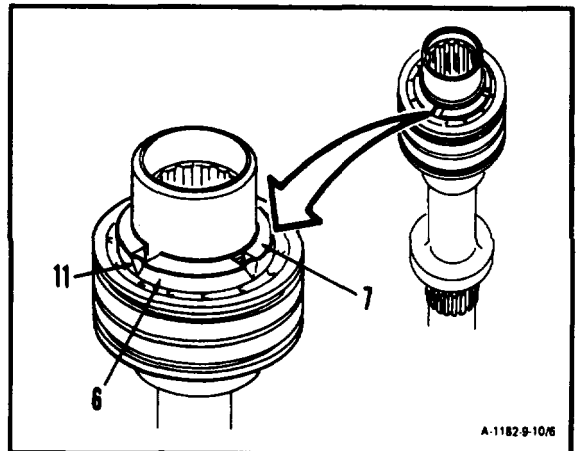
WARNING

To prevent slipping, ensure that shaft holding tool is secured to work table. Injury could result.

- d. **Install recessed washer (6) and nut (7).** Use socket wrench assembly (T22) (8) and adapters (9 and 10). **Torque to 675 inch-pounds.**

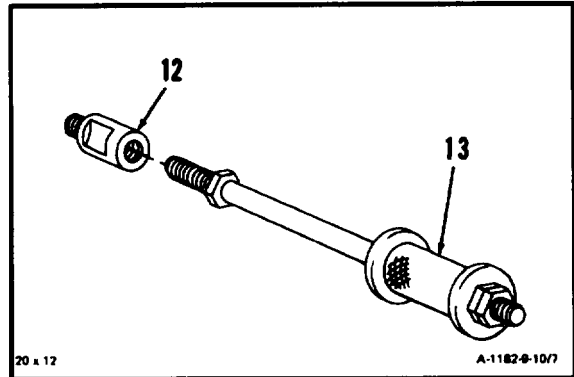


- e. **Bend recessed washer (6) into two opposite slots (11) in nut (7).**

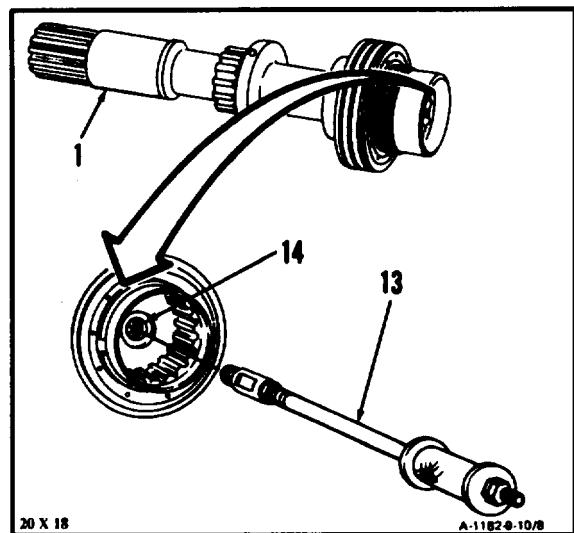


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2. Install output shaft puller adapter (T35) (12) on mechanical puller (T6) (13).



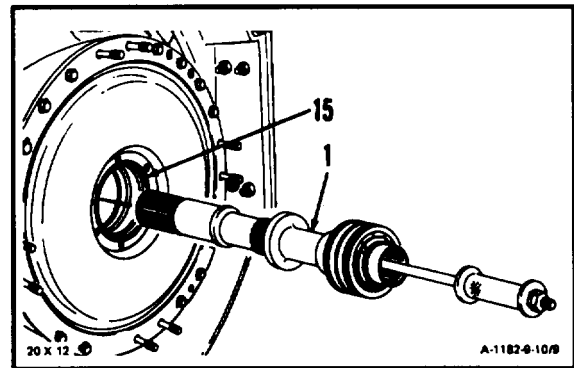
3. Install mechanical puller (T6) (13) in threaded hole (14) in output shaft (1).



CAUTION

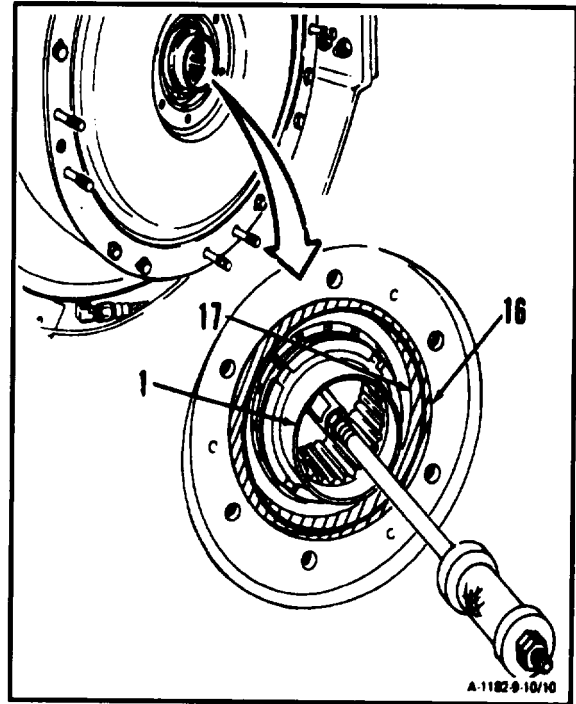
In following step 4; be sure all gear teeth are aligned when installing output shaft.

4. Determine what spacer you will need as follows:
 - a. Carefully install output shaft (1) on housing (15).



GO TO NEXT PAGE

- b. Push on output shaft (1) and measure depth from flange (16) to edge of bearing (17).



- c. Find your measurement in spacer selection table and read across to find spacer thickness and **part number needed**. Use outside micrometer to check thickness of spacer.

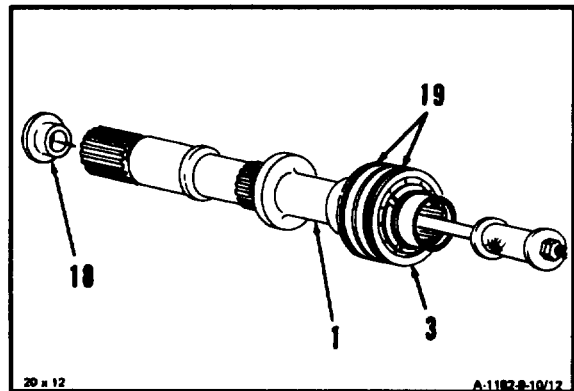
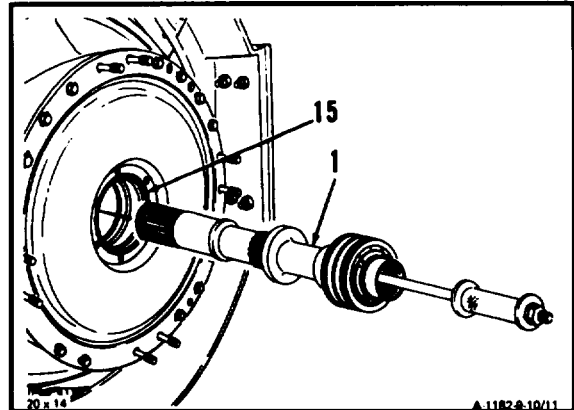
SPACER SELECTION TABLE		
IN DEPTH MEASURES	SPACER THICKNESS REQUIRED	USE SPACER PART NUMBER
INCHES	INCHES	
0.620 to 0.644	0.110	2-141-341-03
0.645 to 0.664	0.130	2-141-341-04
0.665 to 0.684	0.150	2-141-341-05
0.685 to 0.704	0.170	2-141-341-06
0.705 to 0.724	0.190	2-141-341-07
0.725 to 0.744	0.210	2-141-341-08
0.745 to 0.764	0.230	2-141-341-09
0.765 to 0.784	0.250	2-141-341-10
0.785 to 0.810	0.270	2-141-341-11

GO TO NEXT PAGE

CAUTION

In following step 5., be sure to remove output shaft carefully. If shaft is not lifted as it is being removed, it may damage internal components.

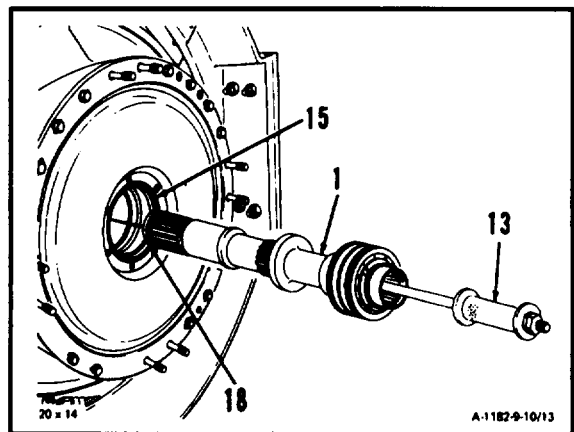
5. Carefully pull and lift output shaft (1) from housing (15).
6. Install spacer (18) in output shaft (1).
7. Install packings (19) on bearings (3).



CAUTION

In following step 8., be sure all gear teeth are aligned when installing the output shaft.

8. Carefully install output shaft (1) and spacer (18) in housing (15).
9. Remove mechanical puller (T6) (13).

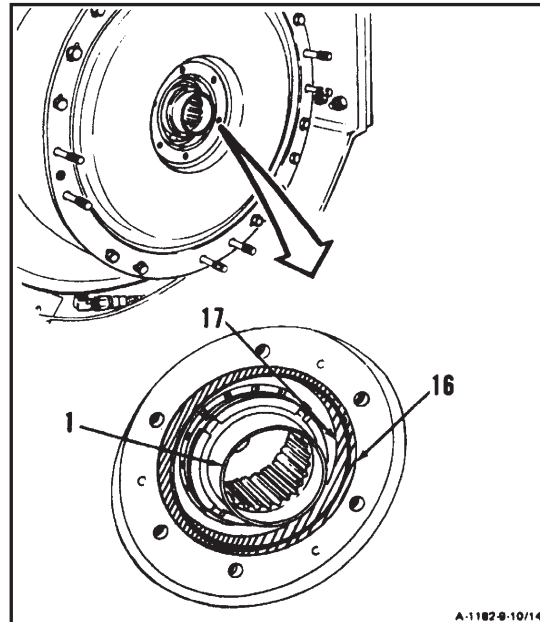


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10. Push on output shaft (1) and **check depth from flange (16) to edge of bearing (17). Depth shall not be less than 0.510 inches or more than 0.540 inches.**
11. Disassemble and repeat steps 4, thru 10. if dimensions are not within limits.

NOTE

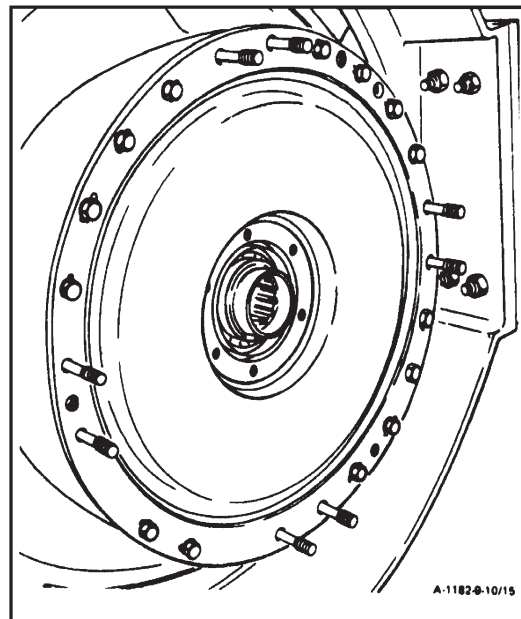
After replacement of the output shaft a Turbine Engine Analysis Check and Baseline Hit Check are required (Ref. TM 55-1520-240-23).



INSPECT

FOLLOW-ON MAINTENANCE:

- Install Output Shaft Seal and Housing Assembly (Task 2-52)
- Service Engine Oil System (Task 1-74)



GO TO NEXT PAGE

Section III - TORQUEMETER HEAD ASSEMBLY - MAINTENANCE PROCEDURES

9-11 REMOVE TORQUEMETER HEAD ASSEMBLY

9-11

INITIAL SETUP

Applicable Configurations:

All

Tools:

Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Retaining Ring Pliers

Materials:

Wiping Rag (E58)

Personnel Required:

68B 10 Aircraft Powerplant Repairer

Equipment Condition:

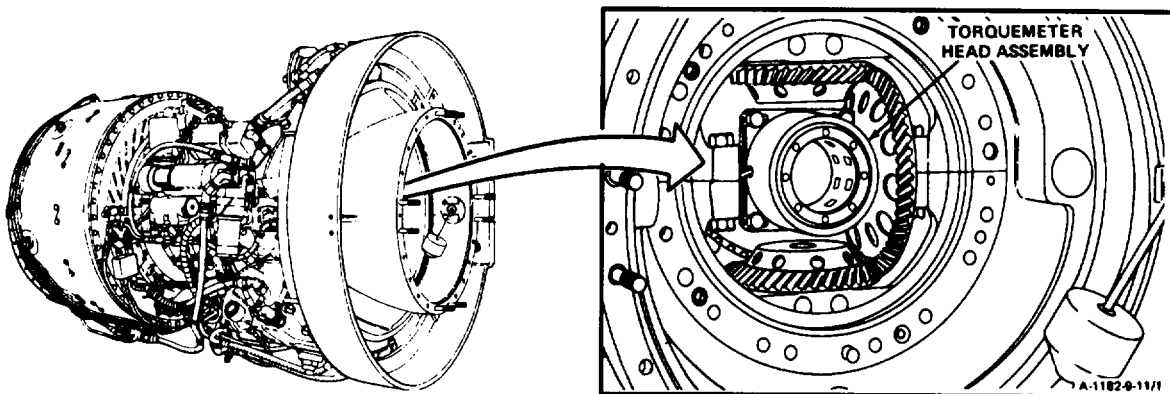
Engine Oil System Drained (Task 1-75)
Torquemeter Junction Box Removed (Task 9-1)
Tube Assembly Removed (Inlet Housing to Main
Oil Pump) (Task 8-50)
Overspeed Drive and Outlet Cover Assembly
Removed (Task 5-17)

Output Shaft Seal and Housing Assembly
Removed (Task 2-48)
Output Shaft Removed (Task 9-6)
Inlet Housing Cover Assembly Removed
(Task 2-53)
Output Shaft Support Housing Removed
(Task 2-58)

General Safety Instructions:

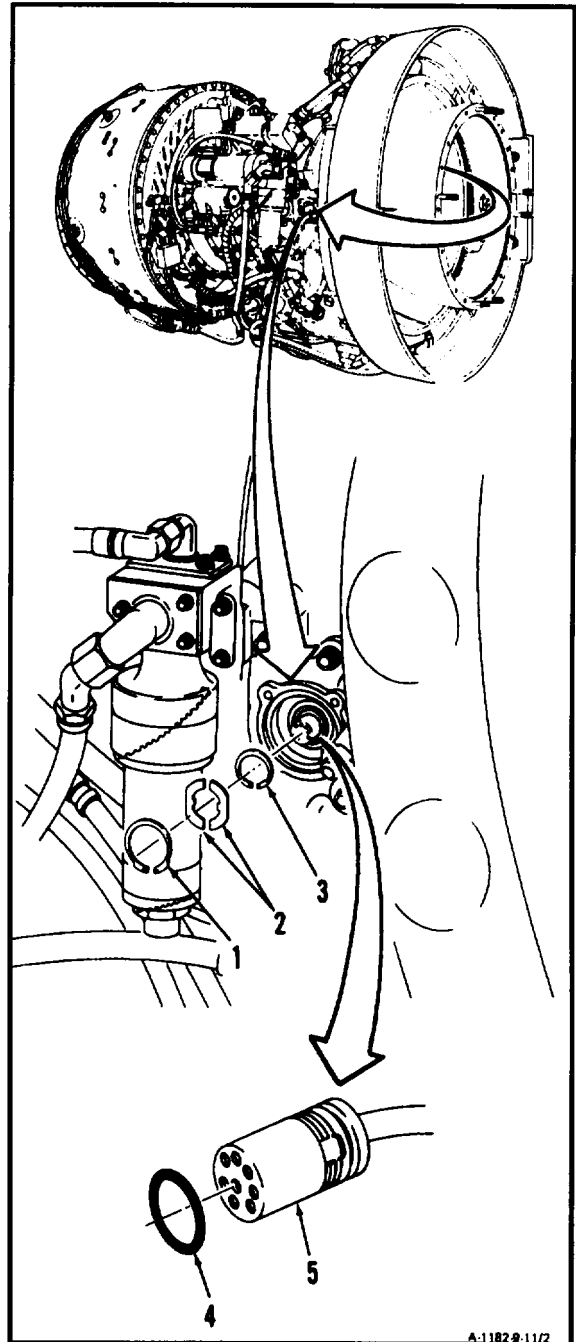
WARNING

Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.



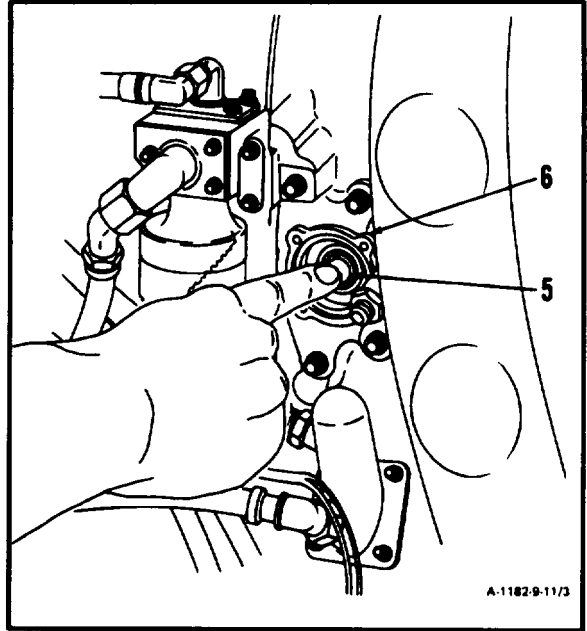
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1. Remove retaining ring (1), two spacers (2), and retaining ring (3).
2. Remove packing (4) from electrical connector (5).



GO TO NEXT PAGE

3. Push electrical connector (5) through flange (6).



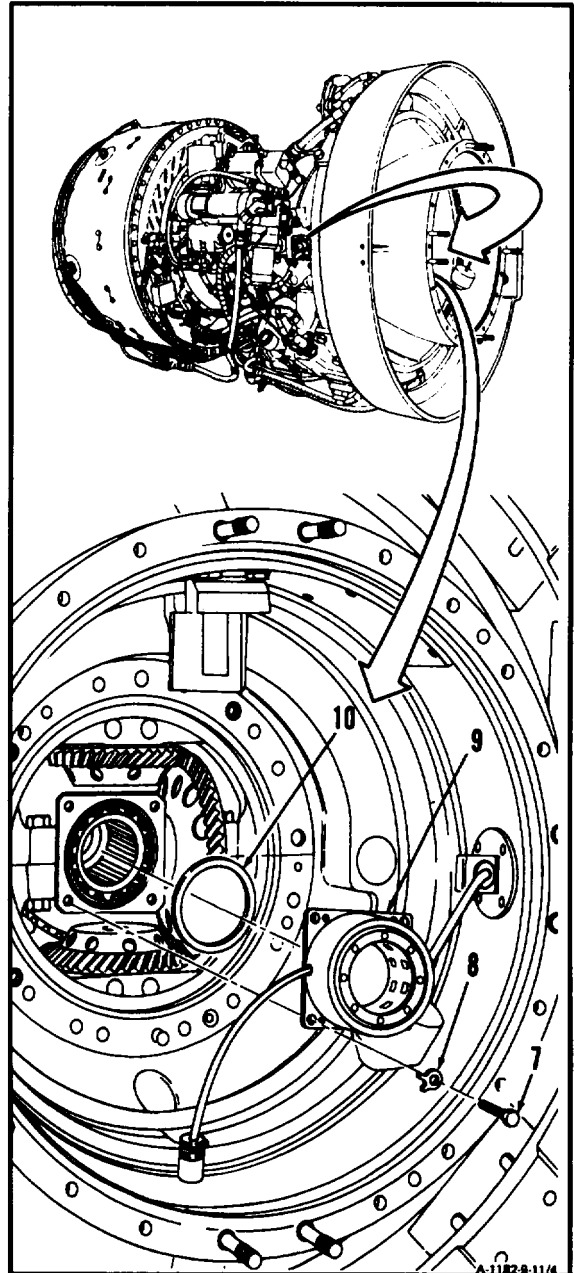
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Change 6 9-41

CAUTION

In following step, be sure to pull electrical cable carefully as torque meter head assembly is removed. Failure to comply could cause damage to wiring which would result in improper indication of engine operation.

4. Remove four bolts (7), four key washers (8), torque meter head assembly (9), and shim (10).



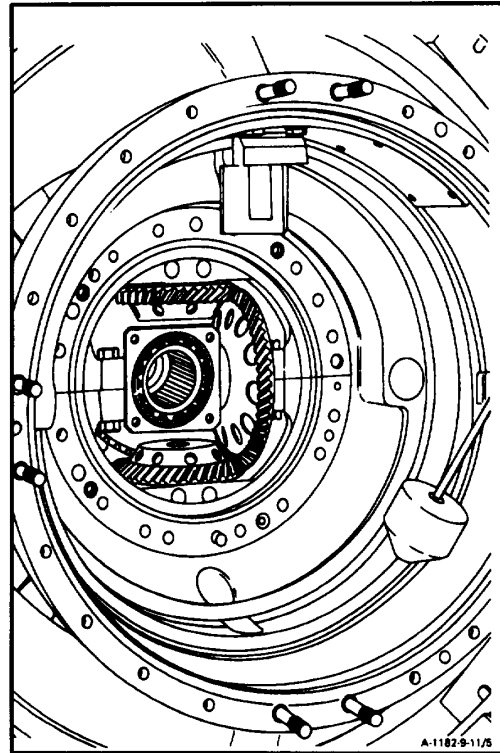
GO TO NEXT PAGE

9-11 REMOVE TORQUEMETER HEAD ASSEMBLY (Continued) 9-11

FOLLOW-ON MAINTENANCE:

None

END OF TASK



Change 6 9-43

INITIAL SETUP**Applicable Configurations:**

All

Tools:

Goggles
Compressed Air Source

Materials:

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

Personnel Required:

68B10 Aircraft Powerplant Repairer

Equipment Condition:
Engine Oil System Drained (Task 1-75)
Torquemeter Junction Box Removed (Task 9-1)
Tube Assembly Removed (Inlet Housing to
Main Oil Pump) (Task 8-50)

Overspeed Drive and Outlet Cover Assembly
Removed (Task 5-17)
Output Shaft Seal and Housing Assembly
Removed (Task 2-48)
Output Shaft Removed (Task 9-6)
Inlet Housing Cover Assembly Removed
(Task 2-53)
Output Shaft Support Housing Removed
(Task 2-58)
Torquemeter Head Assembly Removed

General Safety Instructions:**WARNING**

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

GO TO NEXT PAGE

9-44 Change 6

9-12 CLEAN TORQUEMETER HEAD ASSEMBLY (Continued)**9-12**

1. **Clean torquemeter head assembly (1).** Wear gloves (E20). Use lint-free cloth (E26) dampened in dry cleaning solvent (E17).
2. Wipe dry. Use clean, dry lint-free cloth (E26).

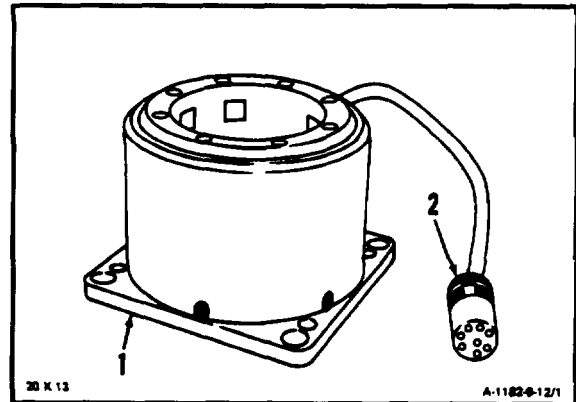
WARNING

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

3. Wear goggles. Blow dry electrical connector (2). Use clean, dry, compressed air.

FOLLOW-ON MAINTENANCE:

Inspect Torquemeter Head Assembly (Task 9-13).

END OF TASK

INITIAL SETUP

Applicable Configurations:

All

Tools:

Technical Inspection Tool Kit
NSN 5180-00-323-5114

Materials:

Insulation Sleeving Flexite (E24)

Personnel Required:

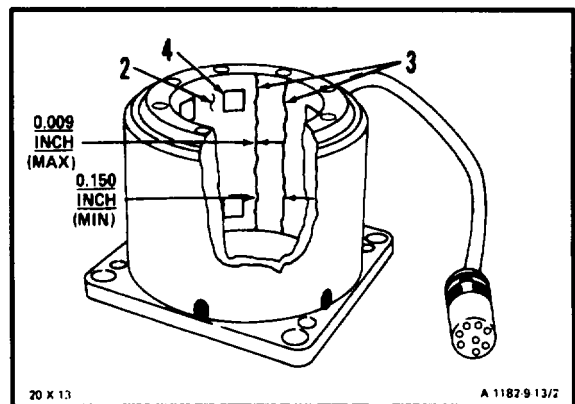
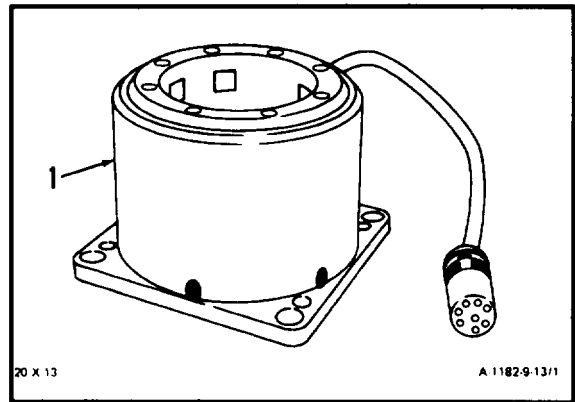
68B30 Aircraft Powerplant Inspector

Equipment Condition:

Off Engine Task

1. **Inspect housing (1).** There shall be no cracks.

2. **Inspect potting (2).** There is no limit to the number of cracks; however, there shall be no more than four full length axial cracks (3). Cracks shall not be wider than 0.009 inch or less than 0.150 inch apart. There shall be no loose or missing material. There shall be no bulges or warpage. There shall be no rubs on metal poles (4).

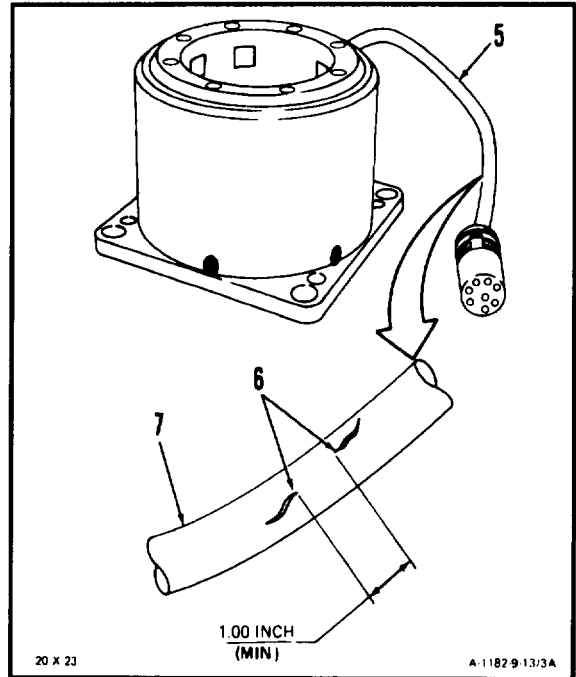


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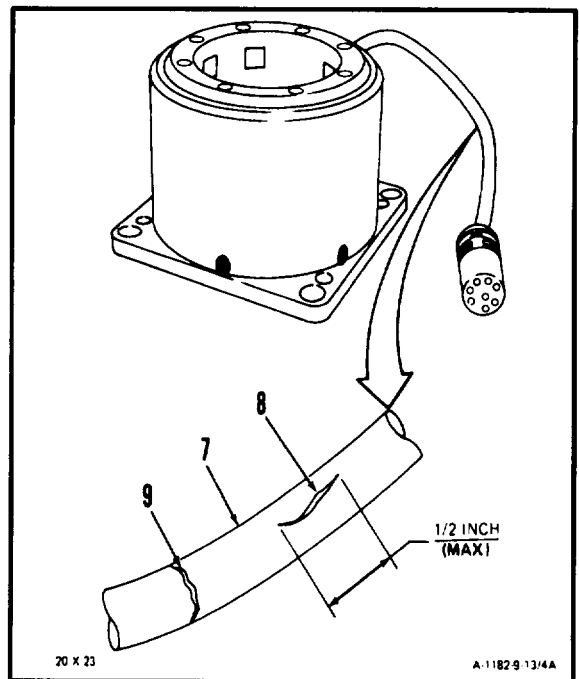
9-46 Change 6

3. Inspect outer sheathing of electrical cable (5) as follows:

- a. There shall be more than five cracks or tears (6) and (9) total in outer covering (7). These cracks or tears shall not be less than 1.00 inch apart.

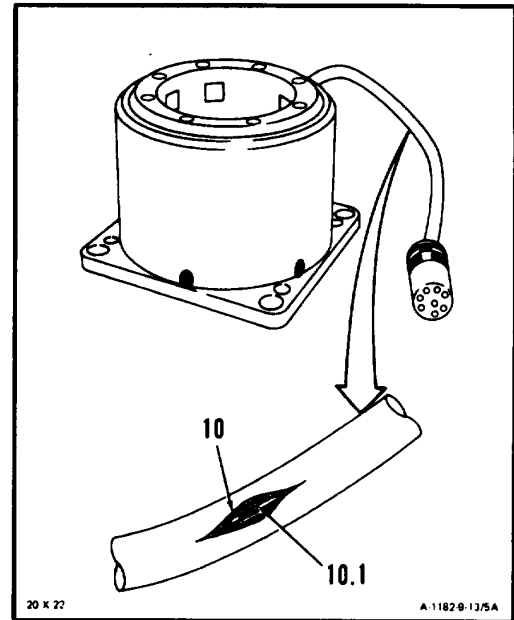


- b. There shall be no longitudinal cracks or tears (8) that exceed 1/2 inch in length.
- c. There shall be no circumferential cracks or tears (9) that extend more than half way around the outer covering (7). These cracks or tears shall not exceed 1/2 inch in length.



GO TO NEXT PAGE

- d. There shall be no cracks in wire insulation (10).
- e. There shall be no permissible circumstances allowing damage to the individual stranded wire insulation (10.1).



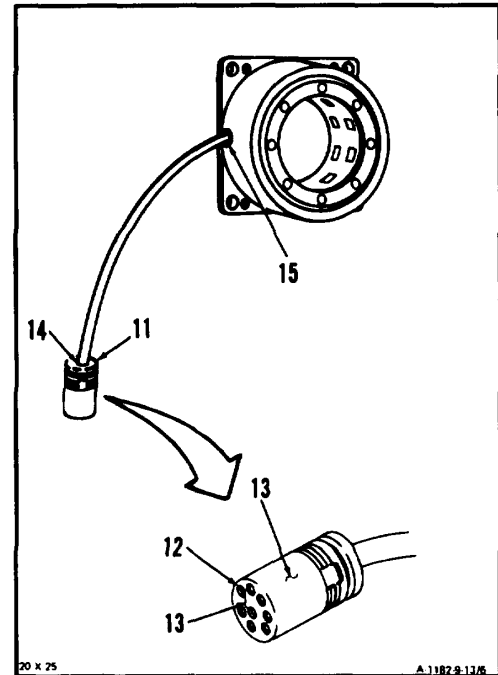
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9-48 Change 6

9-13 INSPECT TORQUEMETER HEAD ASSEMBLY (Continued)

9-13

4. **Inspect electrical connector (11).** There shall be no corrosion in sleeves (12) or cracked insulation (13). There shall be no cracks in seal (14).
5. **Inspect seal (15).** There shall be no cracks.

**FOLLOW-ON MAINTENANCE:**

None

END OF TASK

Change 6 9-48.1

INITIAL SETUP**Applicable Configurations:**

All

Tools:

Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-4944
Technical Inspection Tool Kit,
NSN 5180-00-323-5114
Goggles
Hot Air Gun

Materials:

Insulation Sleeving Flexite (E24)

Personnel Required:

68B10 Aircraft Powerplant Repairer

68B30 Aircraft Powerplant Inspector

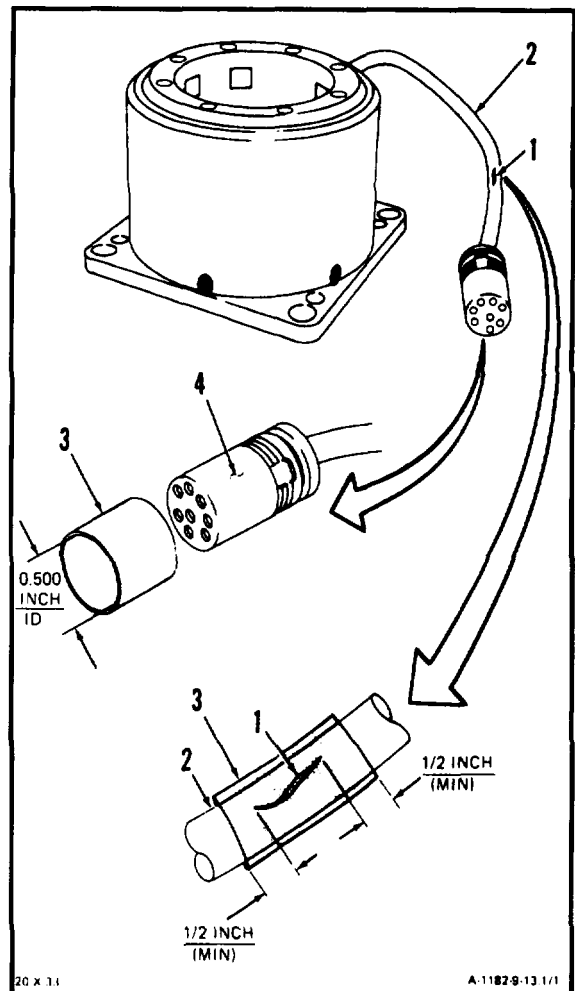
Equipment Condition:

Off Engine Task

1. **Repair cracks (1) in sheathing of electrical cable (2).**
 - a. Cut a length of 1/2 inch ID insulation sleeving flexite (E24). Shrink sleeving (3) shall belong enough to overlap damaged area by 1/2 inch minimum.
 - b. Slide sleeving (3) over connector (4) and using a **hot air gun**, **shrink sleeving to fit over crack (1)**.

INSPECT**FOLLOW-ON MAINTENANCE:**

None

**END OF TASK**

9-48.2 Change 6

INITIAL SETUP: Parts:**Applicable Configurations:** Tabwashers

All Packing
Shim

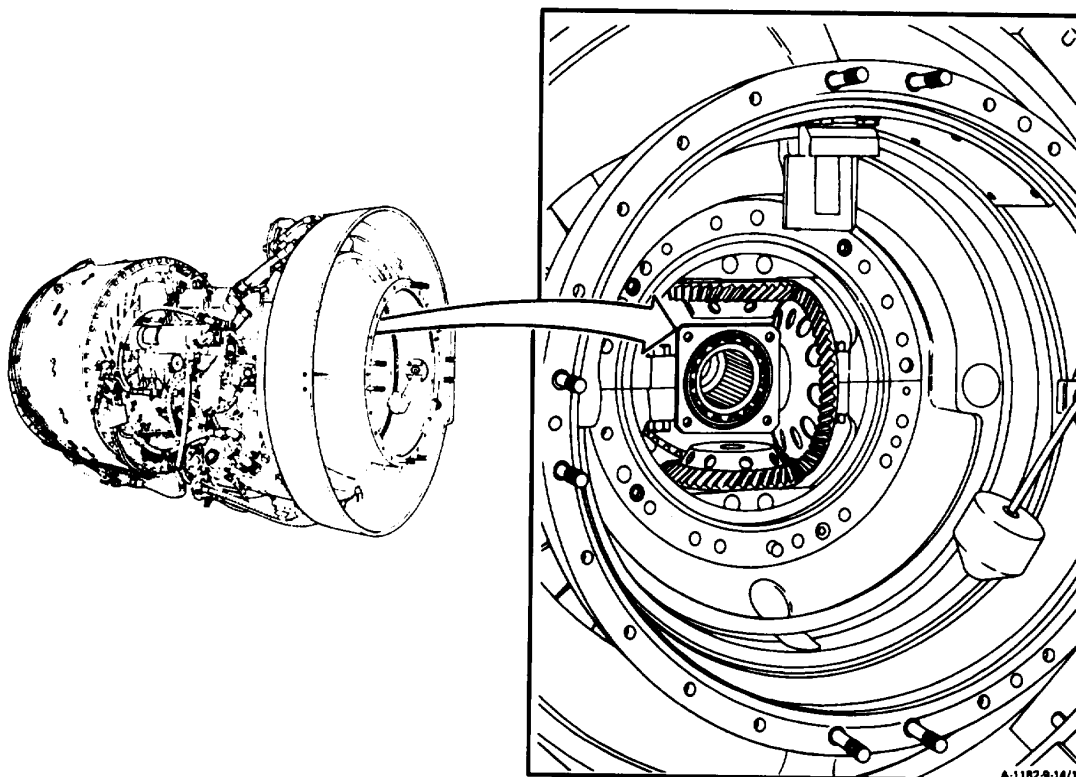
Tools:**Personnel Required:**

Powerplant Mechanic's Tool Kit,
NSN 5180-00-323-494468B 10 Aircraft Powerplant Repairer
Technical Inspection Tool Kit, 68B30 Aircraft Powerplant Inspector
NSN 5180-00-323-5114

Micrometer Depth Gage**References:**

Retaining Ring Pliers
Outside Micrometer Caliper Set TM 55-2840-254-23P

Materials: Task 9-1
Task 9-5
Task 9-6
None Task 9-10

**GO TO NEXT PAGE**

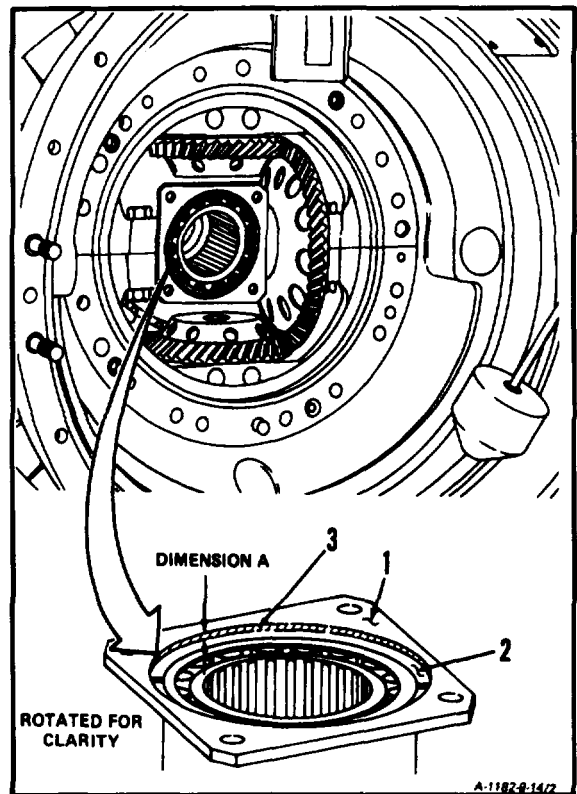
NOTE

The output shaft, torquehead assembly, and torquehead junction box are supplied as a calibrated, matched set. If you replace the torquehead assembly, you must also replace the output shaft (Tasks 9-6 and 9-10) and the torquehead junction box (Tasks 9-1 and 9-5).

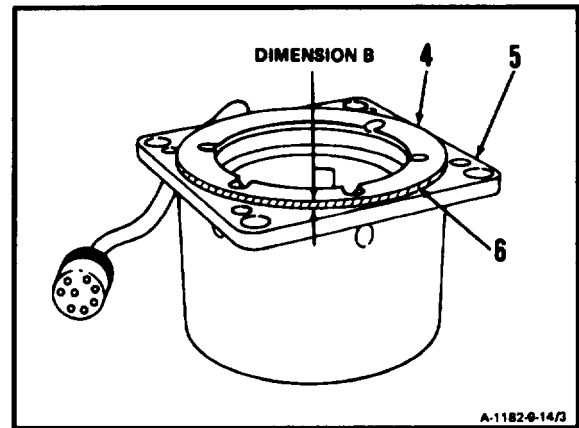
NOTE

If same torquehead assembly and shim that were removed are being installed, omit steps 1. and 2. If replacement torquehead assembly or shim is being installed, do all steps.

1. Determine what size shim you will need as follows:
 - a. Measure from flange (1) to bearing outer race (2). Result is Dimension A (3).
 - b. Record Dimension A (3).

INSPECT**GO TO NEXT PAGE**

- c. **Measure from surface (4) to flange (5).**
Result is Dimension B (6).
- d. Record Dimension B (6).
- e. Subtract Dimension B (6) from Dimension A (3).
- f. Record result.



INSPECT

GO TO NEXT PAGE

g. Find result recorded in step f. in shim selection table and read across to determine **shim(s) thickness you will need.**

h. Select required shim(s) (7).

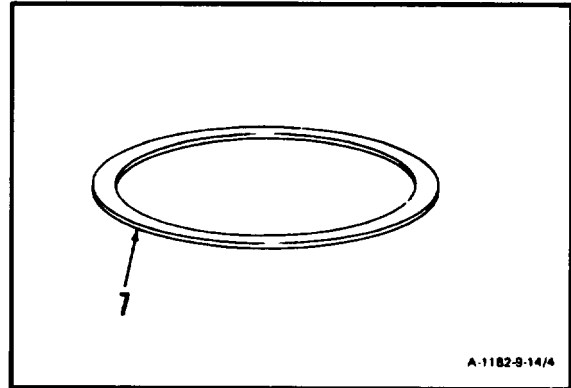
SHIM SELECTION TABLE

IF RESULT IS (INCHES)	SHIM THICKNESS NEEDED (INCHES)
-0.003	0.000 to 0.003
-0.002	0.001 to 0.004
-0.001	0.002 to 0.005
0.000	0.003 to 0.006
0.001	0.004 to 0.007
0.002	0.005 to 0.008
0.003	0.006 to 0.009
0.004	0.007 to 0.010
0.005	0.008 to 0.011
0.006	0.009 to 0.012
0.007	0.010 to 0.013
0.008	0.011 to 0.014
0.009	0.012 to 0.015
0.010	0.013 to 0.016
0.011	0.014 to 0.017
0.012	0.015 to 0.018
0.013	0.016 to 0.019
0.014	0.017 to 0.020
0.015	0.018 to 0.021
0.016	0.019 to 0.022
0.017	0.020 to 0.023
0.018	0.021 to 0.024
0.019	0.022 to 0.025
0.020	0.023 to 0.026
0.021	0.024 to 0.027
0.022	0.025 to 0.028
0.023	0.026 to 0.029
0.024	0.027 to 0.030
0.025	0.028 to 0.031
0.026	0.029 to 0.032
0.027	0.030 to 0.033

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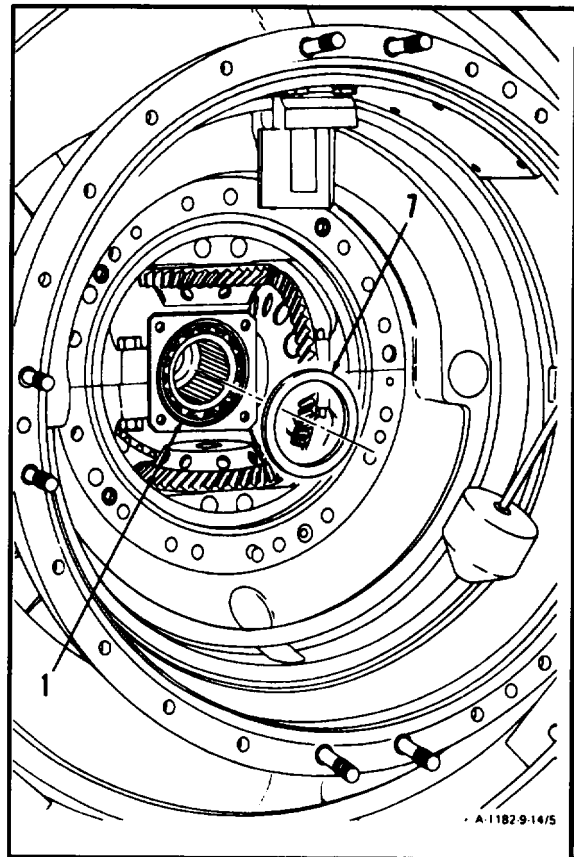
2. Measure thickness of shim (7) and check against shim selection table.

INSPECT



A-1182-9-14/4

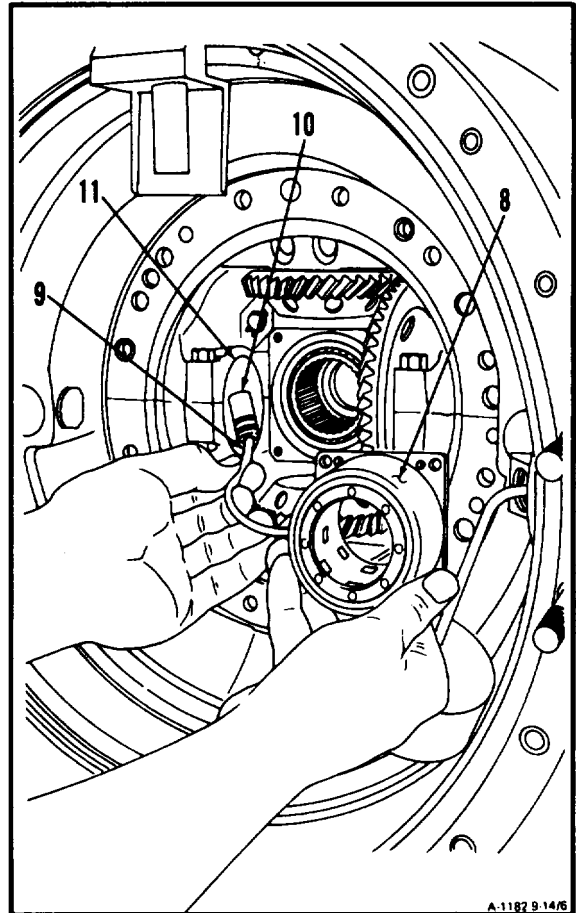
3. Install shim (7) inside flange (1).



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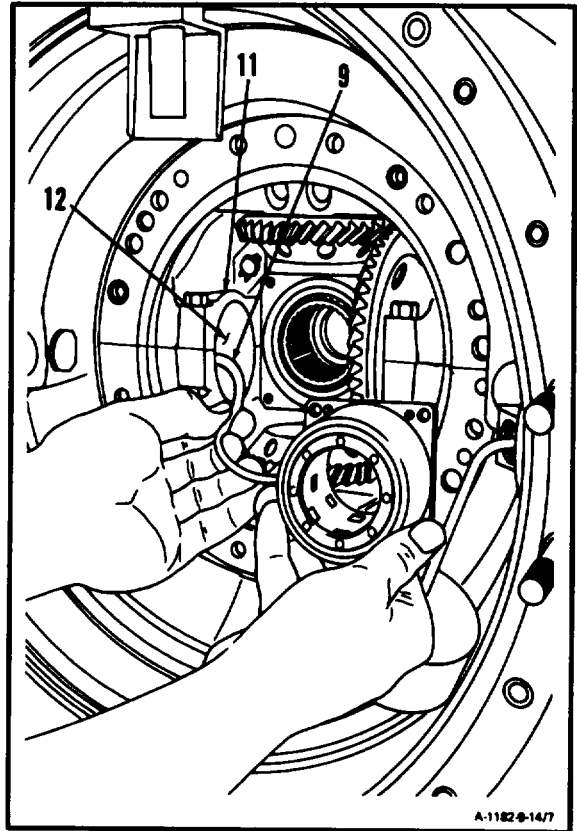
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4. Position torquemeter head assembly (8) with electrical cable (9) at 9-o'clock position (looking aft) and insert electrical connector (10) through carrier (11).



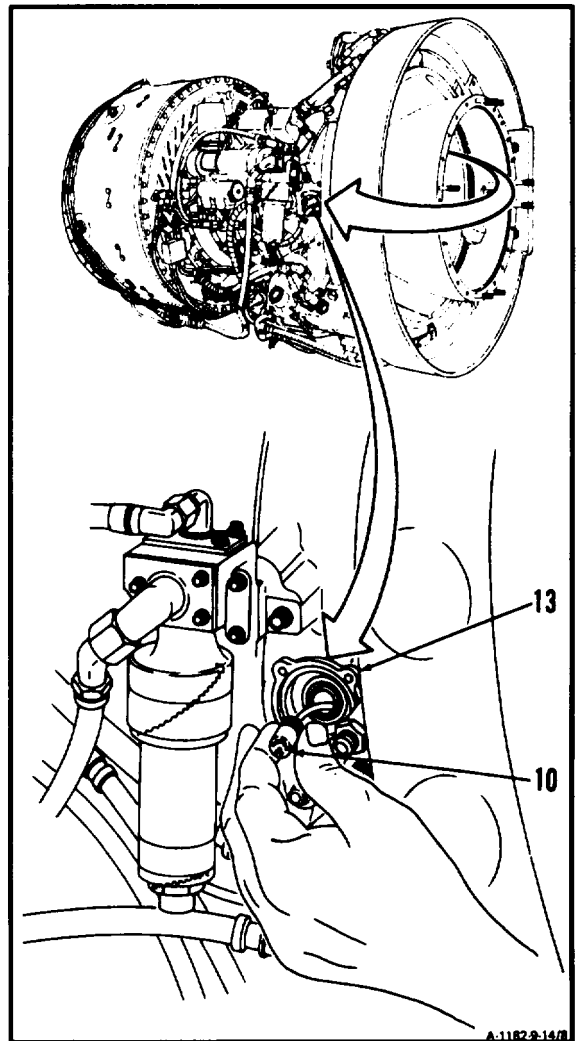
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5. Feed electrical cable (9) through carrier (11) into inlet housing hollow strut (12).



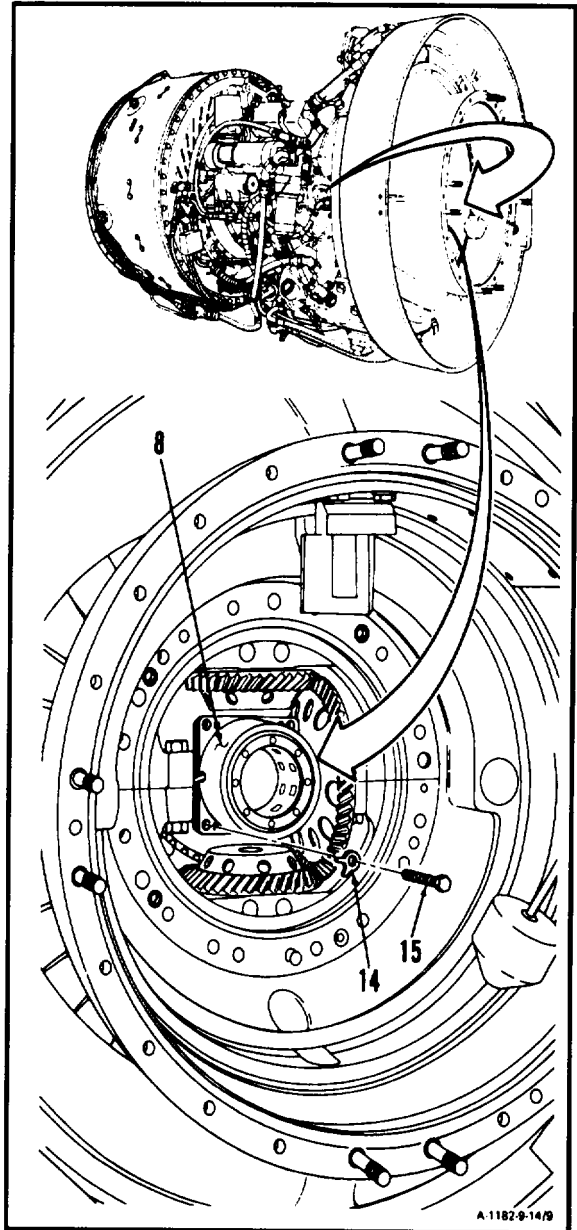
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6. Pull electrical connector (10) through housing (13).



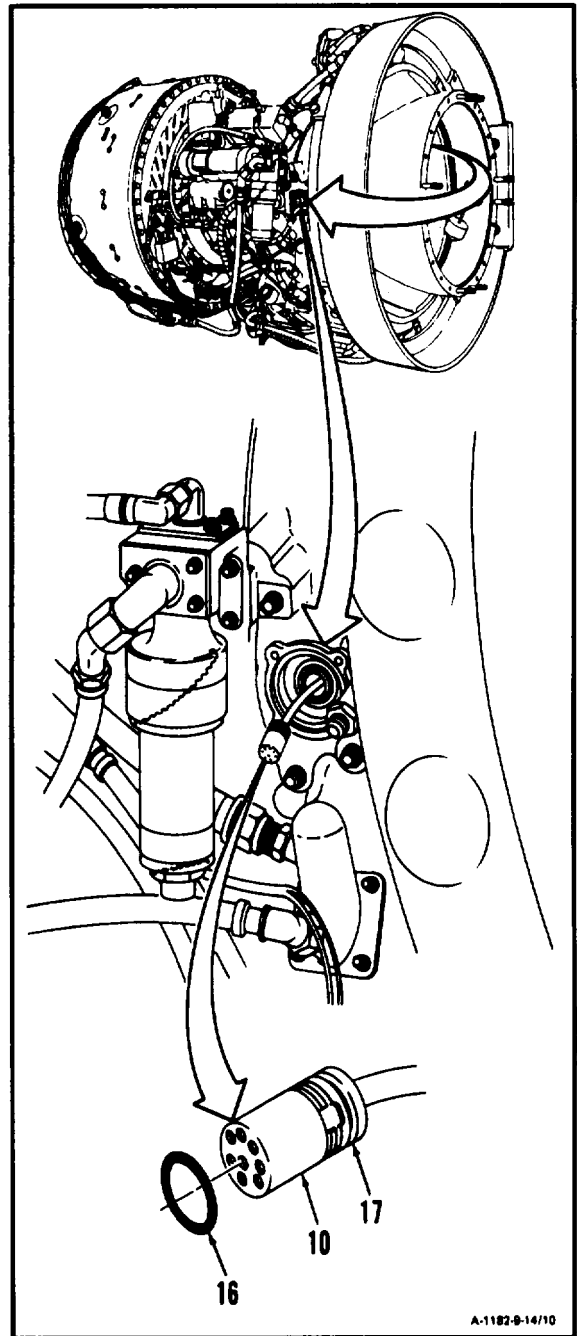
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7. Install torquemeter head assembly (8), four key washers (14), and four bolts (15). Bend key washers (14).



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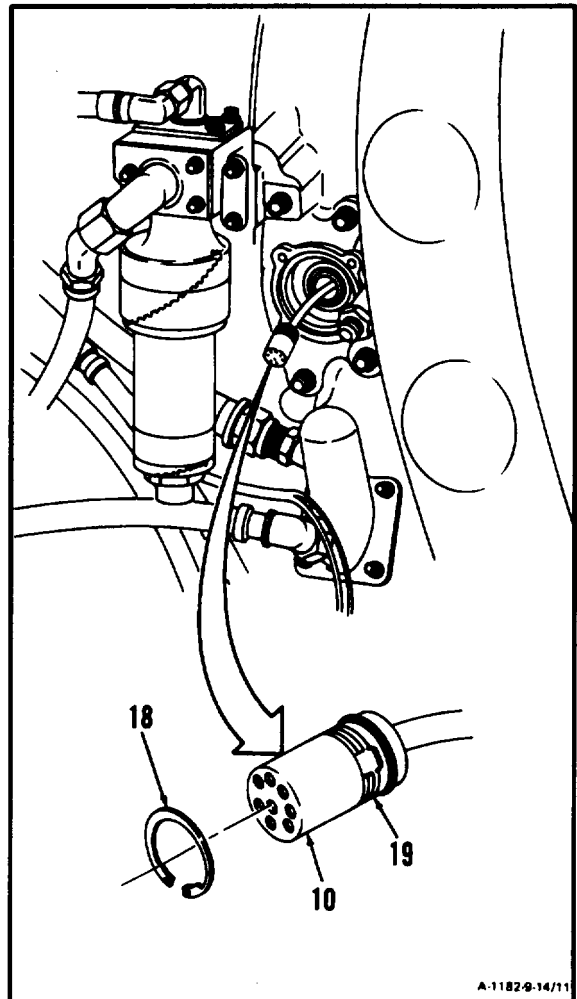
8. Install packing (16) in groove (17) on electrical connector (10).



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9. Install retaining ring (18) in groove (19) on electrical connector (10).

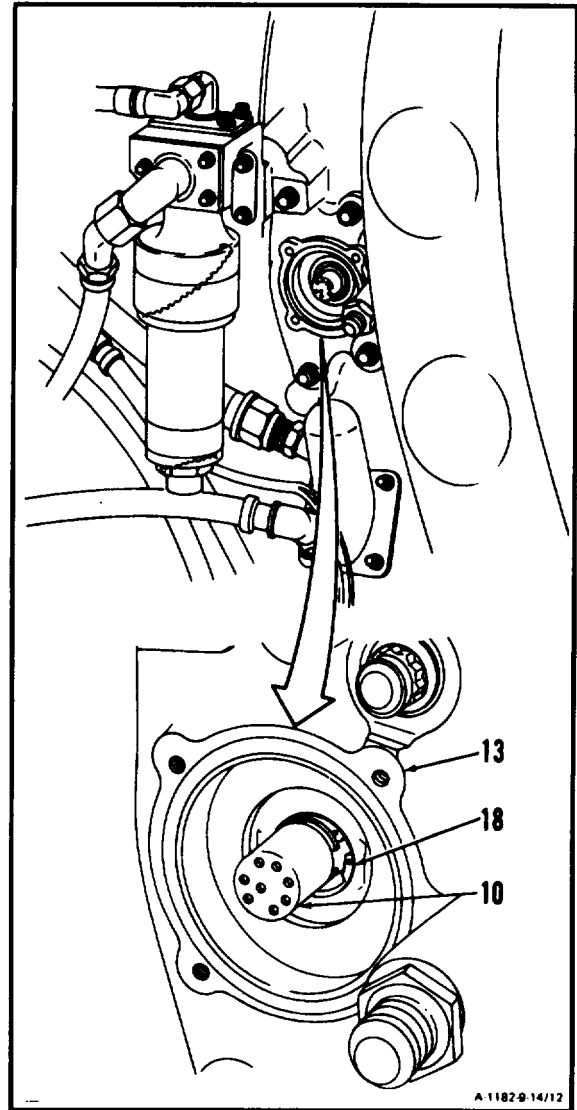


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9-14 INSTALL TORQUEMETER HEAD ASSEMBLY (Continued)

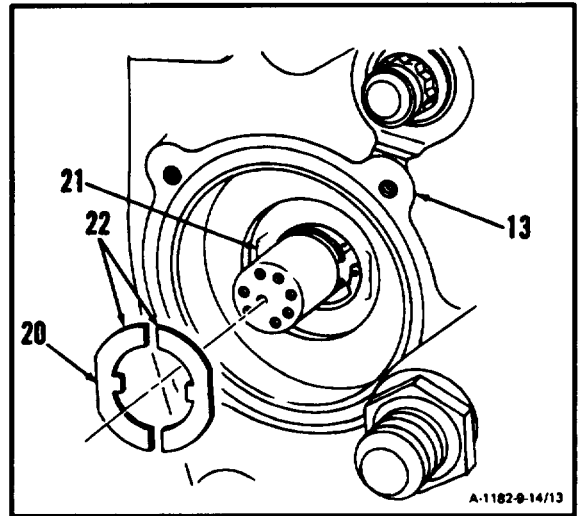
9-14

10. Carefully push electrical connector (10) back into housing (13) until retaining ring (18) is fully seated.

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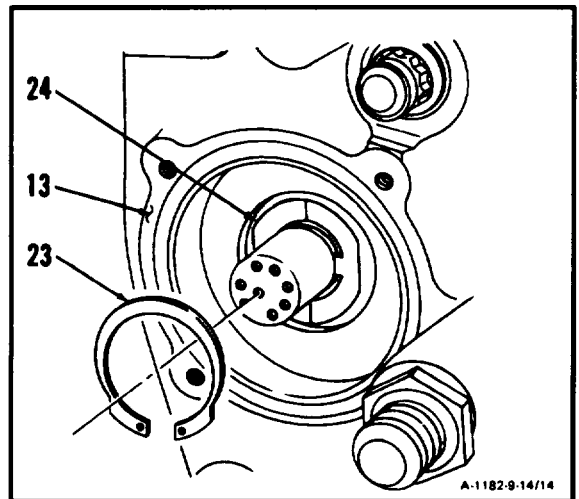
9-60 Change 6

11. Align spacer flats (20) with housing flats (21).
Install two spacers (22) in housing (13).



12. Install retaining ring (23) in groove (24) in housing (13).

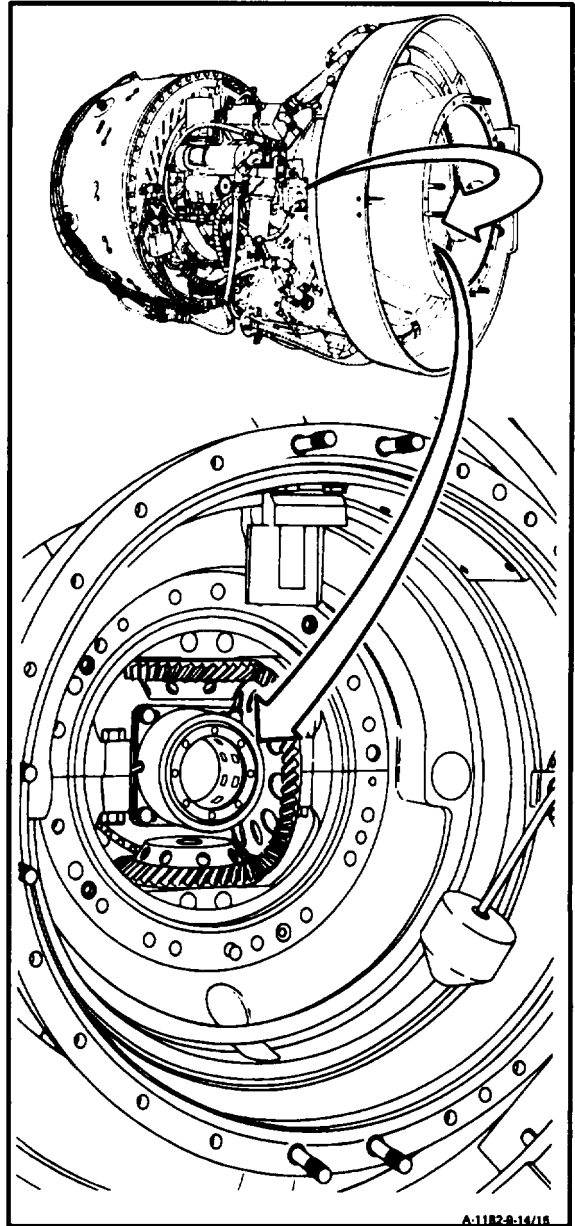
INSPECT



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FOLLOW-ON MAINTENANCE:

- Install Output Shaft Support Housing (Task 2-63).
- Install Inlet Housing Cover Assembly (Task 2-57).
- Install Output Shaft (Task 9-10).
- Install Output Shaft Seal and Housing Assembly (Task 2-52).
- Install Overspeed Drive and Outlet Cover Assembly (Task 5-23).
- Install Hose Assembly (Inlet Housing to Main Oil Pump) (Task 8-51).
- Install Torquemeter Junction Box (Task 9-5).
- Service Engine Oil System (Task 1-74).

**END OF TASK**

9-62 Change 6

APPENDIX A

REFERENCES

PUBLICATION NUMBER	TITLE
AR 750-50	Army Material Maintenance Concepts and Policies.
CTA 50-970	Expendable Items (Except Medical, Class V, Repair Parts, and Heraldic Items).
TB 43-0106	Spectrographic Oil Analysis.
TB 43-0142	Lifting Devices, Inspection, Testing and Maintenance.
TB 55-8100-200-25	Maintenance of Specialized Reusable Containers for Aircraft Equipment.
TB 55-9150-200-25	Engine and Transmission Oils, Fuels, and additives for Army Aircraft.
TM 1-1500-335-23	Non Destructive Inspection Methods
TM 1-1500-204-23	General Aircraft Maintenance Manual
TM 55-1500-328-25	Aeronautical Equipment Maintenance Management Policies and Procedures.
TM 55 1520-240-MTF	Maintenance Test Flight Manual Army Model CH47D Helicopter
TM 55-1520-240-T	Aviation Unit and Aviation Intermediate Troubleshooting Manual Army CH47D Helicopter.
TM 55-1520-240-10	Operator's Manual Army CH47D Helicopter Aircraft.
TM 55-1520-240-23	Aviation Unit and Aviation Intermediate Maintenance Manual Army CH47D Helicopter.
TM 1-2840-254-23P	Aviation Unit and Aviation Intermediate Maintenance Repair Parts and Special Tools List.
TM 55-4920-328-13	Modular Engine Test Systems Maintenance Manual.
FM 1-500	Army Aviation Maintenance.
FM 1-511	Maintenance Quality Control and Technical Inspection Guide for Army Aircraft.
DA PAM 738-751	The Army Maintenance Management System (TAMMS).
TM 750-244-1-5	Procedures for the Destruction of Aircraft and Associated Equipment to Prevent Enemy Use.

APPENDIX B

MAINTENANCE ALLOCATION CHART**Section I. INTRODUCTION****B-1 MAINTENANCE ALLOCATION CHART**

a. This Maintenance Allocation Chart (MAC) assigns maintenance functions in accordance with the Three Levels of Maintenance concept for Army aviation. These maintenance levels (categories) - Aviation Unit Maintenance (AVUM), Aviation Intermediate Maintenance (AVIM), and Depot Maintenance - are depicted on the MAC as:

AVUM, which corresponds to an O Code in the Repair Parts and Special Tools List (RPSTL)

AVIM, which corresponds to an F Code in the Repair Parts and Special Tools List (RPSTL)

DEPOT, which corresponds to a D Code in the Repair Parts and Special Tools List (RPSTL)

b. The maintenance to be performed below depot and in the field is described as follows:

(1) Aviation Unit Maintenance (AVUM) activities will be staffed and equipped to perform high frequency "On-Aircraft" maintenance tasks required to retain or return aircraft systems to a serviceable condition. The maintenance capability of the AVUM will be governed by the Maintenance Allocation Chart (MAC) and limited by the amount and complexity of ground support equipment (GSE), facilities required, authorized manning strength, and critical skills available. The range and quantity of authorized spare modules/components will be consistent with the mobility requirements dictated by the air mobility concept. (Assignments of maintenance tasks to divisional company size aviation units will consider the overall maintenance capability of the division, the requirement to conserve personnel and equipment resources, and air mobility requirements.)

(a) Company Size Aviation Units: Perform those tasks which consist primarily of preventive maintenance and maintenance repair and replacement functions associated with sustaining a high level of aircraft operational readiness. Perform maintenance inspections and servicing to include preflight, daily, intermediate, periodic (or phased), and special inspections as authorized by the MAC or high headquarters. Identify the cause of equipment/system malfunctions using applicable technical manual troubleshooting instructions, built-in test equipment (BITE), installed aircraft instruments, or test, measurement, and diagnostic equipment (TMDE). Replace worn or damaged modules/components that do not require complex adjustments or system alinement and which can be removed/installed with available skills, tools, and ground support equipment. Perform operational and continuity checks and make minor repairs to the electrical system. Inspect, service and make operational, capacity, and pressure checks to hydraulic systems. Perform servicing, functional adjustments, and minor repair/replacement to the flight control, propulsion, power train, and fuel systems. Accomplish airframe repair that does not require extensive disassembly, jiggling, or alignment. The manufacture of airframe repair will be limited to those items which can be fabricated with tools and equipment found in current air mobile tool and shop sets. Evacuate unserviceable modules/components and end items beyond the repair capability of AVUM to the supporting AVIM.

(b) Less than Company Size Aviation Units: Aviation elements organic to brigade, group, battalion headquarters, and detachment size units are normally small and have less than ten aircraft assigned. Maintenance tasks performed by these units will be those which can be accomplished by the aircraft crew chief or assigned aircraft repairman and will normally be limited to preventive maintenance, inspections, servicing, spot painting, stop drilling, application of nonstress patches, minor adjustments, module/component fault diagnosis, and replacement of selected modules/components. Repair functions will normally be accomplished by the supporting AVIM unit.

(2) Aviation Intermediate Maintenance (AVIM) provides mobile, responsive "One-Stop" maintenance support. (Maintenance functions which are not conducive to sustaining air mobility will be assigned to depot maintenance). AVIM may perform all maintenance functions authorized to be done at AVUM. Repair of equipment for return to user will emphasize support or operational readiness requirements. Authorized maintenance includes replacement and repair of modules/components and end items which can be accomplished efficiently with available skills, tools, and equipment. AVIM establishes the Direct Exchange (DX) program for AVUM units by repairing selected items for return to stock when such repairs cannot be accomplished at the AVUM level. The AVIM level inspects, troubleshoots, performs diagnostic tests, repairs, adjusts, calibrates, and aligns aircraft system modules/components. AVIM units will have capability to determine the serviceability of specified modules/components removed prior to the expiration of the Time Between Overhaul (TBO) or finite life. Module/component disassembly and repair will support the DX program and will normally be limited to tasks requiring cleaning and the replacement of seals, fittings, and items of common hardware. Airframe repair and fabrication of parts will be limited to those maintenance tasks which can be performed with available tools and test equipment. Unserviceable repairable modules/components and end items which are beyond the capability of AVIM to repair will be evacuated to Depot Maintenance. AVIM will perform aircraft weight and balance inspections and other special inspections which exceed AVUM capability. Provides quick response maintenance support, including aircraft recovery and air evacuation, on-the-job training, and technical assistance through the use of mobile maintenance contact teams. Maintains authorized operational readiness float aircraft. Provides collection and classification services for serviceable/unserviceable material. Operates a cannibalization activity in accordance with AR 750-1. (The aircraft maintenance company within the maintenance battalion of a division will perform AVIM functions consistent with air mobility requirements and conservation of personnel and equipment resources. Additional intermediate maintenance support will be provided by the supporting nondivisional AVIM unit.)

B-2 USE OF THE MAINTENANCE ALLOCATION CHART (SECTION II)

NOTE

Nomenclatures used throughout the MAC are approved item names. Those terms/nomenclatures expressed in parentheses are generic in nature and are not to be considered as official terminology.

a. The Maintenance Allocation Chart assigns maintenance functions based on past experience and the following consideration:

- (1) Skills available.
- (2) Work time required.
- (3) Tools and test equipment required and/or available.

- b. The assigned levels of maintenance authorized to perform a maintenance function are indicated.
- c. A maintenance function assigned to a maintenance category will automatically be authorized to be performed at any higher maintenance category.
- d. A maintenance function that cannot be performed at the assigned category of maintenance for any reason may be evacuated to the next higher maintenance category. Higher maintenance categories will perform the maintenance functions of lower maintenance categories when required or directed by the commander that has the authority to direct such tasking.
- e. The assignment of a maintenance function will not be construed as authorization to carry the related repair parts or spares in stock. Information to requisition or otherwise secure the necessary repair parts will be as specified in the associated Repair Parts and Special Tools List (RPSTL).
- f. Normally there will be no deviation from the assigned level of maintenance. In cases of operational necessity, maintenance functions assigned to a maintenance level may, on a one-time basis and at the request of the lower maintenance level, be specifically authorized by the maintenance officer of the level of maintenance to which the function is assigned. The special tools, equipment, etc., required by the lower level of maintenance to perform this function will be furnished by the maintenance level to which the function is assigned. This transfer of a maintenance function to a lower maintenance level does not relieve the higher maintenance level of the responsibility for the function. The higher level of maintenance will provide technical supervision and inspection of the function being performed at the lower level.
- g. Changes to the Maintenance Allocation Chart will be based on continuing evaluation and analysis by responsible technical personnel and on reports received from field activities.

B-3 MAINTENANCE FUNCTIONS

Maintenance functions will be limited to and defined as follows:

- a. Inspect. To determine the serviceability of an item by comparing its physical, mechanical, and/or electrical characteristics with established standards through examination (e.g., by sight, sound, or feel).
- b. Test. To verify serviceability by measuring the mechanical, pneumatic, hydraulic, or electrical characteristics of an item and comparing those characteristics with prescribed standards.
- c. Service. Operations required periodically to keep an item in proper operating condition, i.e., to clean (includes decontaminate, when required), to preserve, to drain, to paint, or to replenish fuel, lubricants, chemical fluids, or gases.
- d. Adjust. To maintain or regulate, within prescribed limits, by bringing into proper or exact position, or by setting the operating characteristics to specified parameters.
- e. Align. To adjust specified variable elements of an item to bring about optimum or desired performance.
- f. Calibrate. To determine and cause corrections to be made or to be adjusted on instruments or test, measuring, and diagnostic equipment used in precision measurement. Consists of comparisons of two instruments, one of which is a certified standard of known accuracy, to detect and adjust any discrepancy in the accuracy of the instrument being compared.

g. Remove/Install. To remove and install the same item when required to perform service or other maintenance functions. Install may be the act of emplacing, seating, or fixing into position a spare, repair part, or module (component or assembly) in a manner to allow the proper functioning of equipment or system.

h. Replace. To remove an unserviceable item and install a serviceable counterpart in its place. "Replace" is authorized by the MAC and is shown as the third position code of the SMR code.

i. Repair. The application of maintenance services¹, including fault location/troubleshooting², removal/installation, and disassembly/assembly³ procedures, and maintenance actions⁴ to identify troubles and restore serviceability to an item by correcting specific damage, fault, malfunction, or failure in a part, subassembly, module (component or assembly), end item, or system.

j. Overhaul. That maintenance effort (service/action) prescribed to restore an item to a completely serviceable/operational condition as required by maintenance standards in appropriate technical publications (i.e., DMWR). Overhaul is normally the highest degree of maintenance performed by the Army. Overhaul does not normally return an item to like new condition.

k. Rebuild. Consists of those services/actions necessary for the restoration of unserviceable equipment to a like new condition in accordance with original manufacturing standards. Rebuild is the highest degree of material maintenance applied to Army equipment. The rebuild operation includes the act of returning to zero those age measurements (hours/miles, etc.) considered in classifying Army equipment/components.

¹Services - inspect, test, service, adjust, align, calibrate, and/or replace.

²Fault locate/troubleshoot - The process of investigating and detecting the cause of equipment malfunctioning; the act of isolating a fault within a system or unit under test (UUT).

³Disassemble/assemble - encompasses the step-by-step taking apart (or breakdown) of a spare/functional group coded item to the level of its least component identified as maintenance significant (i.e., assigned an SMR code) for the category of maintenance under consideration.

⁴Actions - welding, grinding, riveting, straightening, facing, remachining and/or resurfacing.

B-4 FUNCTIONAL GROUPS (COLUMNS 1 and 2)

The functional groupings shown in the sample below identify maintenance significant components, assemblies, subassemblies, and modules with the next higher assembly.

GROUP NUMBER	DESCRIPTION	GROUP NUMBER	DESCRIPTION
04	POWERPLANT	0406	FUEL SYSTEM
0401	ENGINE GENERAL Servicing, handling, inspection requirements, lubrication charts, overhaul and retirement schedules, External lines & hoses. (As applicable)		Fuel control, fuel boost pump, governors, fuel filter assembly, sequence valve, fuel manifold, fuel nozzle, external lines and hoses.
0402	COMPRESSOR SECTION (COLD SECTION MODULE) Rotor, blades, vanes, impeller, stators, inlet guide vanes, main frame, particle separator, bleed valve, bearings, seals, external lines & hoses.	0407	ELECTRICAL SYSTEM Electrical control units, exciters, thermocouples, ignition harness, electrical cables, history record, torque overspeed sensor, Np sensor, alternate stator, blowers.
0403	COMBUSTION SECTION (HOT SECTION MODULE) Liners, nozzles, stators, rotor, seals, couplings, blades.	0408	OIL SYSTEM Tanks, oil filter, oil cooler, lube and scavenge pumps, oil filter bypass sensor, external lines and hoses.
0404	POWER-TURBINE (POWER TURBINE MODULE) Nozzles, rotors, blades, exit guide vanes, exhaust frame, drive shaft, bearings, seals, external lines and hoses.	0409	DRIVE SYSTEM Reduction gear assembly, output shaft, seal, bearing.
0405	ACCESSORY GEAR SECTION Input/and output gears, seals, chip detector, housings, drive shaft, bearings, and seals.	0410	MISCELLANEOUS EQUIPMENT (As applicable)

B-5 MAINTENANCE FUNCTION (COLUMN 3)

Column 3 lists the functions to be performed on the items listed in column 2.

B-6 MAINTENANCE CATEGORIES AND WORK TIMES (COLUMN 4)

The maintenance categories (levels) AVUM, AVIM, and DEPOT are listed on the Maintenance Allocation Chart with individual columns that include the work times for maintenance functions at each maintenance level. Work time presentations such as "0.1" indicate the average time it requires a maintenance level to perform a specified maintenance function. If a work time has not been established, the columnar presentation shall indicate "-.-." Maintenance levels higher than the level of maintenance indicated are authorized to perform the indicated function.

B-7 TOOLS AND TEST EQUIPMENT (COLUMN 5 AND SECTION III)

Common tool sets (not individual tools), special tools, test, and support equipment required to perform maintenance functions are listed alphabetically in Section III with a reference number to permit cross-referencing to column 5 in the MAC. In addition, the maintenance category authorized to use the device is listed along with the item National stock number (NSN), and, if applicable, the tool number to aid in identifying the tool/device.

B-8 REMARKS (COLUMN 6 AND SECTION IV)

Remarks (identified by an alphabetic code in column 6) and other notes (identified by a number in parentheses in the applicable column) are listed in Section IV to provide a ready reference to the definition of the remark/note.

Section II

MAINTENANCE ALLOCATION CHART							
NOMENCLATURE OF END ITEMS							
T55-L-712							
(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE CATEGORY			(5) TOOLS AND EQUIPMENT	(6) REMARKS
			AVUM	AVIM	DEPOT		
NOTE The Maintenance functions identified herein, are restricted to company size units. These units are authorized (AVUM #2) Tool Set SC4920-49-CL-A92 and have 10 or more aircraft assigned. Refer to paragraph B- 1.							
0400	POWERPLANT AND RELATED SYSTEMS						
0401	ENGINE, COMPLETE ASSEMBLY	INSPECT	--			56, 57	
		TEST	--			60	A, N
		ADJUST	--	--		5, 33, 46 56, 57	B H, I
		SERVICE	--			56, 57	
		REPLACE	--			50, 56, 57, 60	
		REPAIR	-.			-56, 57	C, D, E, K
		OVERHAUL		--	--	47, 48, 49, 56, 57	
0402	COMPRESSOR SECTION						
040201	COMPRESSOR HOUSINGS	INSPECT	--			56, 57	
		REPLACE	--			36, 45, 48, 56, 57	
		REPAIR	-.			-56, 57	C, D, E,
G	040202 ANTI-ICING GALLERY	INSPECT	--			56, 57	
		REPLACE	--			56, 57	C
		REPAIR	--			56, 57	C, D, E, G

MAINTENANCE ALLOCATION CHART							
NOMENCLATURE OF END ITEMS							
T55-L-712							
(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE CATEGORY			(5) TOOLS AND EQUIPMENT	(6) REMARKS
			AVUM	AVIM	DEPOT		
040203	STATOR VANES	INSPECT	--			56, 57	C, D, E, G
		REPLACE	--			36, 45, 56, 57	
		REPAIR	--			56, 57	
040204	ROTOR BLADES	INSPECT	--			56, 57	
		REPLACE	--			11, 51, 55, O 56, 57, 58 57C, D, E	
		REPAIR	--				
040205	IMPELLER	INSPECT	--			56, 57	
		REPAIR	--			56, 57D	
		REPLACE			--		
040206	NO. 1 BEARING	INSPECT			--		
		REPLACE			--		
040207	NO. 2 BEARING	INSPECT		--		48, 51, 53, 56	
		REPLACE		--		22, 28, 41, 53, 57	
040208	NO.3 BEARING	INSPECT		--		48, 58	
		REPLACE		--		2, 23, 48, 57	
040209	INTERSTAGE AIR BLEED BAND	INSPECT	--			56, 57	
		REPLACE	--			56, 57A	
040210	BLEED ACTUATOR	INSPECT	--			56, 57	
		ADJUST	--			56, 57A, I, H	

MAINTENANCE ALLOCATION CHART							
NOMENCLATURE OF END ITEMS							
T55-L-712							
(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE CATEGORY			(5) TOOLS AND EQUIPMENT	(6) REMARKS
			AVUM	AVIM	DEPOT		
040210	BLEED ACTUATOR	REPLACE	--			56, 57	C
		REPAIR	--			56, 57	D, E, G
040211	AIR DIFFUSER HOUSING	OVERHAUL			--		
		INSPECT	--			56, 57	
		REPLACE		--		2, 40, 48, 57	
		REPAIR		--		48, 49	D, E, F, G
040212	AIR INLET HOUSING	INSPECT	--			56, 57	
		REPLACE			--		
		REPAIR		--		56	D, E
040213	OUTPUT SHAFT SUPPORT	INSPECT		--		48, 57	
		REPLACE		--		8, 36, 48, 57	
		REPAIR		--		47, 48	D, E
040214	OUTPUT SHAFT SEAL HOUSING ASSEMBLY	INSPECT	--			56, 57	
		REPLACE	--			2, 22, 27, 56, 57	C, K
		REPAIR	--			26, 57	M
040215	NO. 6 AND NO. 7 BEARING	INSPECT		--		47, 48, 57	
		REPLACE		--		25, 47, 48, 57, 61	
0403	COMBUSTION SECTION						
040301	HOUSING	INSPECT	--			56, 57	
		REPLACE		--		16, 39, 47, 48	
		REPAIR		--		47, 48, 49	D, E, F, G
040302	LINER	INSPECT		--		48, 57	
		REPLACE		--		48, 57	
		REPAIR		--		47, 48	D, E, F, G

MAINTENANCE ALLOCATION CHART							
NOMENCLATURE OF END ITEMS							
T55-L-712							
(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE CATEGORY			(5) TOOLS AND EQUIPMENT	(6) REMARKS
			AVUM	AVIM	DEPOT		
40303	VANE ASSEMBLY	INSPECT		-.-		48,57	
		REPLACE		-.-		48,57	
		REPAIR		-.-		47,48	D,E,F,
40304	DRAIN VALVE	INSPECT	-.-			56,57	
		REPLACE	-.-			56,57	
		OVERHAUL			-.-		
404	TURBINE SECTION						
40401	1ST AND 2ND STAGE GAS PRODUCER TURBINE ROTORS (MATCHED SET)	INSPECT		-.-		48,57	
		REPLACE		-.-		3,6,13, 18,35, 37,42,48, 51,57	
		REPAIR		-.-		47,48	D,E
40402	CYLINDER ASSEMBLY 1ST G.P.	INSPECT		-.-		48,57	
		REPLACE		-.-		3,6,13, 18,35,37, 42,48,51, 57	
		REPAIR		-.-		47,48	D,E,F, G
40403	1ST AND 2ND STAGE GAS PRODUCER NOZZLES	INSPECT		-.-		48,57	
		REPLACE		-.-		2,3,37, 42,48,51, 57	
		REPAIR		-.-		47,48	D,E,F, G

MAINTENANCE ALLOCATION CHART							
NOMENCLATURE OF END ITEMS							
T55-L-712							
(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE CATEGORY			(5) TOOLS AND EQUIPMENT	(6) REMARKS
			AVUM	AVIM	DEPOT		
040404	CURL ASSEMBLY	INSPECT		--		48, 57	
		REPLACE		--		48, 57	
		REPAIR		--		47, 48	D, E, F, G
040405	POWER TURBINE ASSEMBLY	INSPECT		--		48, 57	
		REPLACE		--		16, 21, 48	
		REPAIR		--		47, 48	D, E, F, G
040406	NO. 4 AND NO. 5 BEARING PACKAGE SEALS	INSPECT		--		48, 53, 56, 57, 65	
		REPLACE		--		17, 38, 48, 53, 57, 59, 65	K
040407	3RD AND 4TH STAGE POWER TURBINE ROTORS/POWER SHAFF	INSPECT		--		48, 57	
		REPLACE			--		
		REPAIR		--		14, 48, 57	D, E
040408	3RD STAGE POWER TURBINE NOZZLE	INSPECT		--		48, 57	
		REPLACE		--		19, 39, 48, 57	
		REPAIR		--		47, 48, 49	D, E, F, G
040409	FOURTH STAGE POWER TURBINE NOZZLE	INSPECT		--		48, 57	
		REMOVE		--		19, 39, 48, 57	
		REPAIR		--		57, 72	
		INSTALL		--		19, 39, 48, 57	
		OVERHAUL			--	47, 48, 49	D, E, F, G

MAINTENANCE ALLOCATION CHART							
NOMENCLATURE OF END ITEMS							
T55-L-712							
(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE CATEGORY			(5) TOOLS AND EQUIPMENT	(6) REMARKS
			AVUM	AVIM	DEPOT		
040410	THERMOCOUPLE HARNESS SYSTEM	TEST	--			52, 56	A, H
		REPLACE		--		48	
040411	THERMOCOUPLE AND HARNESS ASSEMBLIES	INSPECT		--		48	
		REPAIR		--		48	
		REPLACE		--		48	
		TEST		--		48	
		INSPECT		--		48	
040412	BUS BAR R/H	INSPECT	--			56, 57	
		TEST	--			56, 57	
		REPLACE				56, 57	C
040413	BUS BAR L/H	INSPECT	--			56, 57	
		TEST	--			56, 57	
		REPLACE	--			56, 57	C
040414	THERMOCOUPLE JUMPER	INSPECT				56, 57	
		TEST				56, 57	
		REPLACE	--			56, 57	C
040415	FIRE SHIELDS	INSPECT	--			56, 57	
		REPLACE	--			56, 57	C
		REPAIR				56, 57	
040416	EXHAUST EXIT VANE ASSEMBLY	INSPECT				56, 57	
		REPLACE				39, 56, 57	
		REPAIR				56, 57	D, E, F
					48, 49	G	

MAINTENANCE ALLOCATION CHART							
NOMENCLATURE OF END ITEMS							
T55-L-712							
(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE CATEGORY			(5) TOOLS AND EQUIPMENT	(6) REMARKS
			AVUM	AVIM	DEPOT		
0405 040501	ACCESSORY GEAR SECTION ACCESSORY GEAR BOX	INSPECT	--			56, 57	
		REPLACE	--			2, 4, 21, 23, 34, 52, 56, 57, 62, 63	
		REPAIR	--			56, 57	D, E
		OVERHAUL		--	--	47, 48	C, D, E, G, J, K
040502	ACCESSORY DRIVE GEAR	INSPECT		--		48, 57	
		REPLACE		--		15, 20, 23, 48, 57	
040503	STARTER DRIVE	INSPECT	--			56, 57	
		REPLACE	--			56, 57	C
		REPAIR	--			4, 21, 56, 57	D, E, G, J, M
		OVERHAUL			--		
0406 040601	FUEL SYSTEM FUEL CONTROL	INSPECT	--			56, 57	
		ADJUST	--			56, 57	A, H, I
		REPLACE	--			56, 57	
		REPAIR	--			56, 57	C, D, E
		OVERHAUL			--		
040602	FUEL BOOST PUMP	INSPECT	--			56, 57	
		REPLACE	--			56, 57	
		REPAIR	--			56, 57	D, E, G, M
		OVERHAUL			--		

MAINTENANCE ALLOCATION CHART							
NOMENCLATURE OF END ITEMS							
T55-L-712							
(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE CATEGORY			(5) TOOLS AND EQUIPMENT	(6) REMARKS
			AVUM	AVIM	DEPOT		
40603	MAIN FUEL MANIFOLDS	INSPECT	--			56,57	
		REPLACE	--			56,57,69	C
		REPAIR	--			48	K
		OVERHAUL			--		
040604	START FUEL PRIMER TUBES	INSPECT	--			56,57	
		REPLACE	--			56,57	C
040605	MAIN FUEL FILTER	INSPECT	--			56,57	
		REPLACE	--			56,57	C
40606	FUEL FILTER IMPENDING BY-PASS INDICATOR	INSPECT	--			56,57	
		REPLACE	--			56,57	C
		REPAIR			--		
40607	INLINE FUEL FILTER AND ELEMENT ASSEMBLY	INSPECT	--			56,57	
		REPLACE	--			56,57	C, D, E, J
040608	FLOW DIVIDER	INSPECT	--			56,57	
		REPLACE	--			56,57	C
40609	FUEL CHECK VALVE	INSPECT	--			56,57	
		REPLACE	--			56,57	C
40610	START FUEL SOLENOID VALVE	INSPECT	--			56,57	
		REPLACE	--			56,57	C
40611	START FUEL NOZZLES	INSPECT	--			56,57	
		REPLACE	--			56,57	C

MAINTENANCE ALLOCATION CHART							
NOMENCLATURE OF END ITEMS							
T55-L-712							
(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE CATEGORY			(5) TOOLS AND EQUIPMENT	(6) REMARKS
			AVUM	AVIM	DEPOT		
040612	FUEL CONTROL FILTERS AND STRAINERS	INSPECT	--			56, 57	
		SERVICE	--			56, 57	C
		REPLACE	--			56, 57	C
040613	FUEL LINES	INSPECT	--			56, 57	
		REPLACE	--			56, 57	C
0407	ELECTRICAL AND IGNITION SYSTEM						
040701	IGNITION EXCITER	INSPECT	--			56, 57	A
		REPAIR	--			56	E
		REPLACE	--			56, 57	C
040702	SPARK IGNITERS	INSPECT	--			56, 57	A
		REPLACE	--			56, 57	C
		SERVICE	--			56	E
040703	IGNITION COIL AND CABLE ASSEMBLY	INSPECT	--			56, 57	A
		REPLACE	--			56, 57	C
		REPAIR	--			52, 56, 57	A, C, E
		TEST	--			52, 56, 57	
040704	MAIN ELECTRICAL CABLE ASSEMBLY	INSPECT	--			56, 57	
		TEST	--			56, 57	
		REPAIR	--			52, 56, 57	A, C, E
0408	LUBRICATION SYSTEM	REPLACE	--			56, 57	C
040801	OIL PUMP	INSPECT	--			56, 57	
		ADJUST	--			56, 57	
		REPLACE	--			56, 57	
		REPAIR	--			56, 57	D, G, J, M
		OVERHAUL	--		--		

MAINTENANCE ALLOCATION CHART							
NOMENCLATURE OF END ITEMS							
T55-L-712							
(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE CATEGORY			(5) TOOLS AND EQUIPMENT	(6) REMARKS
			AVUM	AVIM	DEPOT		
040802	OIL COOLER	INSPECT	--			56, 57	
		REPLACE	--			56, 57	C
		REPAIR	--			56, 57	D, E
		OVERHAUL			--		
040803	OIL TEMPERATURE TRANSMITTER	INSPECT	--			56, 57	
		REPLACE	--			56, 57	C
040804	STARTER GEARBOX FILTER	INSPECT	--			56, 57	
		SERVICE	--			56, 57	C
		REPLACE	--			56, 57	C
040805	OIL FILTER STRAINER	INSPECT	--			56, 57	
		SERVICE	--			56, 57	
		REPLACE	--			56, 57	
040806	NO.2 AND NO.4 AND NO. 5 BEARING FILTERS	INSPECT	--			56, 57, 65	
		SERVICE	--			56, 57, 65	C
		REPLACE	--			56, 57, 65	C
040807	OIL FILTER CAP AND STEM, ELEMENT AND INTEGRAL BYPASS INDICATOR	INSPECT	--			56, 57	
		SERVICE	--			56, 57	C
		REPLACE	--			56, 57	C
		REPAIR	--			56, 57	D
040808	SCAVENGE OIL SCREEN	INSPECT	--			56, 57	
		SERVICE	--			56, 57	C
		REPLACE	--			56, 57	C
040809	DUAL CHIP DETECTOR	INSPECT	--			56, 57	
		TEST	--			56, 57	C
		SERVICE	--			56, 57	C
		REPLACE	--			56, 57	C
		REPAIR	--			56, 57	A, E

MAINTENANCE ALLOCATION CHART

NOMENCLATURE OF END ITEMS

T55-L-712

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL			(5) TOOLS AND EQUIPMENT	(6) REMARKS
			AVUM	AVIM	DEPOT		
040810	OIL LINES	INSPECT REPLACE	-. --			56,57 56,57	C
040811	OIL FILLER ASSEMBLY	INSPECT REPLACE REPAIR	-. - -.			56, 57 56,57 56,57	C C,D,E
040812	OIL LEVEL INDICATOR	INSPECT ADJUST REPLACE REPAIR	-. -. -. -.			32, 56,57 32,56,57 32,56, 57 32, 56, 57	C C
040813	OIL LEVEL FLOAT	INSPECT REPLACE REPAIR		-. -. -.		48,57 48, 57 47,48, 49	
040814	OIL DRAIN VALVE	INSPECT REPLACE	-. -.			56,57 56, 57	C
040815	CHIP DETECTOR SELF SEALING	INSPECT SERVICE REPLACE	-. -. -.		56,57	56,57 56,57	
0409	TORQUEMETER SYSTEM	INSPECT REPLACE OVERHAUL CALIBRATE	-. -. -- --			56,57 56, 57	A
040901	TORQUEMETER JUNCTION BOX	OVERHAUL CALIBRATE	-- --				
040902	OUTPUT SHAFT	OVERHAUL CALIBRATE	-- --				
040903	TORQUEMETER HEAD ASSEMBLY	OVERHAUL CALIBRATE	--				

TOOL AND TEST EQUIPMENT REQUIREMENTS				
NOMENCLATURE OF END ITEMS				
Tool and Test Equipment Requirements, T55-L-712 Turbine Engine				
TOOL OR TEST EQUIPMENT REFERENCE CODE	MAINTENANCE CATEGORY	NOMENCLATURE	NATIONAL/NATO STOCK NUMBER	TOOL NUMBER
1	AVIM	Adapter Engine	4920-00-020-2687	LTCT 1255
2	AVIM	Alignment Pin	5120-00-898-0697	LTCT 387
3	AVIM	Alignment Pin	5120-00-178-0974	LTCT 13038
4	AVIM	Bar, Locating	5120-00-671-2129	LTCT 153
5	AVIM	Cable Assembly, Special	4920-00-409-8222	LTCT 13476-02
6	AVIM	Control Unit	6110-00-631-7196	LTCT 14547
7	AVIM	Coupling Half, Clamp	5340-00-156-1191	LTCT 9917
8	AVIM	Cover, Aircraft Group	1730-00-134-0979	LTCT 6271
9	AVIM	Cover, Aircraft Group	1730-00-133-9550	LTCT 3936
10	AVUM	Cover, Protective Engine	4920-00-916-2448	LTCT 1278
11	AVUM	Drift Assembly	4920-00-891-4653	LTCT 1643
12	AVIM	Fixture, Oil Tube	4920-01-137-3557	LTCT 7202
13	AVIM	Fixture, Assembling (Bore-heater)	4920-00-134-0162	LTCT 6354
14	DELETED			
15	AVIM	Fixture, Holding Gear	4920-00-012-8780	LTCT 1042
16	AVIM	Fixture, Power Turbine	4920-00-834-2182	LTCT 14360
17	AVIM	Fixture, Pressure	4920-00-866-0849	LTCT 13442
18	AVIM	Fixture, Torque	4920-00-866-0863	LTCT 13344
19	AVIM	Fixture, Torque	4920-00-372-4596	LTCT 13857-01
20	AVIM	Gage, Backlash	5220-00-015-6985	LTCT 1039
21	AVUM	Handling Tool	5120-00-959-7633	LTCT 1428
22	AVUM	Handling Tool	5120-00-959-7635	LTCT 1430
23	AVUM	Handling Tool	5120-00-959-7636	LTCT 1431
24	AVIM	Heater, Induction	4920-00-372-4595	LTCT 13873

TOOL AND TEST EQUIPMENT REQUIREMENTS

Nomenclature of End Items				
Tool and Test Equipment Requirements, T55-L-712 <small>T55-L-712</small> Turbine Engine				
TOOL OR TEST EQUIPMENT REFERENCE CODE	MAINTENANCE CATEGORY	NOMENCLATURE	NATIONAL/NATO STOCK NUMBER	TOOL NUMBER
25	AVIM	Holding Tool, Shaft	5120-00-109-4669	LTCT3927
26	AVUM	Installation Tool	4920-00-475-2552	LTCT1
27	AVUM	Installation Tool	4920-00-509-8087	LTCT1
28	AVIM	Installing Tool	5120-00-109-4568	LTCT4968
29	AVIM	Installing Tool, Bearing	5120-00-370-3939	LTCT1
30	AVIM	Kit, Maintenance (Skimming)	4920-00-134-0163	LTCT6629
31	AVIM	Kit, Torquemeter	4920-00-187-5728	LTCT1
32	AVUM	Light, Test, Oil Level	4920-00-940-2910	LTCT1
33	AVIM	Mobil, Engine, Test Stand	4920-00-167-9178	LTCT1
34	AVIM	Multiplier, Torque	5120-00-482-2543	PD2501
35	AVIM	Puller	5120-01-111-4312	LTCT1
36	AVUM	Puller, Mechanical	5120-00-509-2965	LTCT121
36.1	AVUM	Masking Kit, First Stage Stator, RTV		LTCT7612
37	AVIM	Puller, Mechanical	5120-00-110-4235	LTCT1
38	AVIM	Puller, Mechanical	5120-00-370-3934	LTCT1
38.1	AVUM	Application Kit, RTV		LTCT1
39	AVUM	Puller, Mechanical	5120-00-784-1276	LTCT1
40	AVIM	Puller, Mechanical	5120-00-109-4670	LTCT3961
41	AVIM	Puller, Mechanical	5120-00-109-4674	LTCT6173
42	AVIM	Puller, Turbine Disc	5120-01-111-4311	LTCT1
43	AVIM	Puller	5120-01-137-3852	LTCT1
44	AVIM	Puller, Wheel, Hydraulic	5130-01-115-6996	LTCT1
45	AVUM	Punch, Locking Cup	5120-00-951-8622	LTCT1
46	AVIM	Screwdriver, Special	5120-00-125-4015	LTCT6909
47	AVIM	Shop Set, Machine	4920-00-405-9279	SC492099-CLA91
48	AVIM	Shop Set, Turbine	4920-00-224-3684	SC492099-CLA91

TOOL AND TEST EQUIPMENT REQUIREMENTS

NOMENCLATURE OF END ITEMS

Tool and Test Equipment Requirements, T55-L-712 Turbine Engine

TOOL OR TEST EQUIPMENT REF CODE	MAINTENANCE CATEGORY	NOMENCLATURE	NATIONAL/NATO STOCK NUMBER	TOOL NUMBER
49	AVIM	Shop Set, Welding	4920-00-163-5093	SC492099CLA 1WEAM
50	AVUM	Sling, Aircraft Maintenance	1730-01-007-6990	LTCT14700
51	AVIM	Support, Dial Indicator	4920-00-110-9986	LTCT6098
52	AVIM	Plate, Wrenching Pin	4920-00-509-8060	LTCT1252
53	AVIM	Tester, Seal Leakage	4920-00-444-2362	LTCT13606
54	AVIM	Tool, Bearing Removal	5120-01-137-3558	LTCT14686
55	AVUM	Tool, Installing	4920-00-898-7925	LTCT1644
56	AVUM	Tool Kit, AVUM #2	4920-00-567-0476	SC492099CLA 92
57	AVUM	Tool Kit, Mechanics	5180-00-323-4944	SC5180- 99CLA07
58	AVIM	Tool Kit, Installation	5180-00-125-4106	LTCT6623
59	AVUM	Tool Set, Seal Removal	4920-00-866-0858	LTCT13868
60	AVUM	VIB, Monitoring Kit	4920-00-879-0331	171170-0104
61	AVIM	Wrench, Assembly Socket	5120-00-918-1883	LTCT3009
62	AVIM	Fixture, Torque	4920-00-834-2178	LTCT13771
63	AVUM	Fixture, Gear Holding	4920-00-872-7858	LTCT1260
64	AVIM	Puller, Mechanical	5120-00-012-8865	LTCT1009
65	AVUM	Wrench, Open End	5120-00-834-2141	LTCT13911
66	AVIM	Fixture, Holding Gear	4920-00-115-6995	LTCT14616
67	AVUM	Adapter, Puller, Output Shaft		LTCT7285
68	AVUM	Plate, Turbine Disc Separating		LTCT7309
69	AVUM	Torque Adapter, Wrench	5120-00-972-8191	LTCT1409
70	AVUM	Clinching Tool	5120-00-481-3117	LTCT13411
71	AVUM	Crawfoot, Open-End	5120-00-184-8414	FRES7
72	AVUM	Tool Kit, Technical Inspector	5180-00-323-5114	SC5180-99-A09

Section IV. REMARKS

REFERENCE CODE	REMARKS
A	Functional Test at AVUM - Engine in Airframe
B	Functional Test at AVIM - Engine in METS
C	Repairs at AVUM includes minor repair of the engine and minor repair/replacement of components and accessories
D	Blend Repair
E	Corrosion Control, Pitting
F	Magnetic-Particle Inspection
G	Nicks, Dents, Burrs, Cracks & Distortion
H	Adjust, Engine in Airframe
I	Bleed Band, Ground Idle, Maximum Power, Engine in Airframe
J	O-Rings, Drive Shaft Seal, Solenoid Valve
K	Seals and O-Rings
L	Torquemeter Junction Box, Output Shaft, Torquemeter Head Assembly, replace as a complete Calibrated Assembly
M	Repair is limited to Blend Repair and Seal/O-Ring Replacement
N	Refer to the airframe manual, TM 55-1520-240-23.
O	Less than 50 blades total since new or last depot repair.

APPENDIX C

EXPENDABLE SUPPLIES AND MATERIALS LIST

Section I. INTRODUCTION

C-1 SCOPE

This appendix lists expendable supplies and materials you will need to operate and maintain the engine. These items are authorized to you by CTA 50-970, Expendable Items (Except Medical, Class V, Repair Parts, and Heraldic Items).

C-2 EXPLANATION OF COLUMNS

- a. Column 1 - Item number. This number is assigned to the entry in the listing and is referenced in the narrative instructions to identify the material, e.g., "Use dry cleaning solvent (E17) ."
- b. Column 2- National Stock Number. This is the National Stock Number assigned to the item; use it to request or requisition the item.
- c. Column 3- Description. Indicates the Federal item name and, if required, a description to identify the item. The last line for each item indicates the part number followed by the Federal Supply Code for Manufacturer (FSCM) in parenthesis, if applicable.

EXPENDABLE SUPPLIES AND MATERIALS LIST

(1) Item Number	(2) National Stock Number	(3) Description
E1	6810-00-184-4796	Acetone, Technical (O-A-51
E2	7920-00-514-2417	Acid Swabbing Brush
E3	5350-00-224-7201	Aluminum Oxide Abrasive Paper (180 to 320 Grit)
E4	5350-00-161-9715	Aluminum Oxide Cloth Carborundum Co. Niagara Falls, New York
E4.1		Anti-Detonating Injection Fluid Mixture Lyndhurst Chemical Corp. (or equivalent)
E5	7030-00-778-4277	Anti-Seize Compound Ease Off 990 Texacone Co. Dallas, Texas
E6	8335-00-224-8885	Barrier Material MIL-B-121, Grade A
E7	8135-00-282-0565	Barrier Material MI
E8	8030-00-664-6146	Black Baking Enamel (AMS31
E9	5340-00-292-0886	Bonding Seal
E10		Carborundum Stone Carborundum Co. Niagara Falls, New York
E1	6850-00-181-7594	Cleaning Solution B&B 3100 B&B Chemical Co. Miami, Florida
E12		Clear Synthetic Sealant Reliance 456 Reliance Varnish Co. Irvington, New Jersey

EXPENDABLE SUPPLIES AND MATERIALS LIST (Continued)

(1) Item Number	(2) National Stock Number	(3) Description
E13	8030-00-231-2354	Corrosion Preventative Compound, MIL-C-11796, Class3
E14	8030-01-118-0666	Corrosion Preventive Compound, LPS3 LPS Research Laboratories Inc. Los Angeles, California
E15	5350-00-221-0572	Crocus Cloth (P-C-458)
E16	6850-00-264-6562	Desiccant Bag MIL-D-3464, Type III W.R. Grace & Co. Davison Chemical Div. Baltimore, MD 21203
E17	6850-00-285-8011	Dry Cleaning Solvent (P-D-680) Type II
E17.1		Dry Ice BB-C-104 Commercial
E18		Emery Cloth (No. 500) Carborundum Co. Niagara Falls, NY
E19	6850-00-782-2732 6850-00-782-2730	Fluorescent Penetrant Materials, Group, V, VI MIL-I-25135 Magnaflux Corp. Chicago, Illinois 60656
E19.1	8030-01-105-8625	Mold Release Compound
E20	8415-00-227-1220 8415-00-227-1221 8415-00-227-1222	Gloves MIL-G-10902
E21	6810-00-264-6548	Glycerol (O-G-491)
E22	8010-00-584-3078	Gray Enamel (TT-E-489)
E23	9150-00-269-2855	Grease, MIL-G-4343 Dow Corning Corp. Midland, Michigan

EXPENDABLE SUPPLIES AND MATERIALS LIST (Continued)

(1) Item Number	(2) National Stock Number	(3) Description
E23.1	9150-00-119-9291 9150-00-273-8633	2 Ounce Tube 8 Ounce Tube Grease, Silicone Molycote 55M or equivalent
E24	5970-00-929-8595	Insulation Sleeving Flexite HTI05C for No. 18 Wire MIL-I-23053/12
E25	8010-00-007-8165	Iron Blue Pigment (TT-P-385)
E26	7920-00-205-3453	Lint-Free Cloth (CCC-C-46A)
E27	8520-00-141-2519	Liquid Soap (P-S-624)
E28	9505-00-221-2650	Lockwire, MS20995C20
E29	9505-00-847-1663	Lockwire, MS20995C32
E30	9150-00-141-4481	Lubricant, Plastilube Moly No. 3 Warren Refining and Chemical Co. Cleveland, Ohio
E31	9150-00-274-2388	Lubricating Oil MIL-L-6081, Grade 1010
E32	9150-00-782-2627	Lubricating Oil MIL-L-7808
E33	9150-00-180-6266	Lubricating Oil MIL-L-23699
E34	7510-00-465-0994	Marking Pencil, Yellow Colorbrite No. 2127 or 4127 Eberhard Faber Inc. Crestwood Industrial Park Wilkes Barre, Pennsylvania 18703
E35	7510-00-266-6712	Masking Tape (UU-T-106)
E35.1	Methanol (O-M-232)	
E36	6810-00-281-2785	Methyl Ethyl Ketone (Tr-M-261)
C-4 Change 6		

EXPENDABLE SUPPLIES AND MATERIALS LIST (Continued)

(1) Item Number	(2) National Stock Number	(3) Description
E37	8030-00-105-0270	Nickel Ease, Nickel Special Fel-Pro Inc. Division of Felt Product Manufacturing Co Skokie, Illinois
E38 E38.1	6810-00-237-2918 3030-00-213-3079	Nitric Acid (O-N-350) Non-Lead Gear Marking Compound G-2 Stutz Company Chicago, Illinois
E39	9150-00-261-7899	Penetrating Oil (WVV-P-216)
E40	9150-00-250-0926	Petrolatum (W-P-236)
E41	1730-00-181-202	Plastic Covers (PSK 3355)
E42	5970-00-833-1702	Pressure Sensitive Teflon Tape, 3/8-inch wide by 0.006 inch thick with temperature range of -65 to 350°F Connecticut Hard Rubber Co. New Haven, Connecticut 06509
E43	6850-01-013-9937	Layout Dye, Red DX-296
E44	8030-00-213-3279	Rust Inhibitor and Preservative MIL-C-81309D
E45	5350-00-214-7203	Sandpaper (P-P-101)
E45.1		Silicone Rubber Adhesive Sealant RTV (106) General Electric Co. Waterford, NY 12188 or equivalent
E46	8945-00-125-6338	Shortening Compound (EE-S-321)
E47		Sisal Twine 2 ply hard fiber, light manila color, 265 pound tensile strength (minimum)
E48	6810-00-143-2000	Sodium Dichromate (D-S-595)
E49	3439-00-224-3567	Solder, 60/40 Tin Lead (QQ-S-571D)

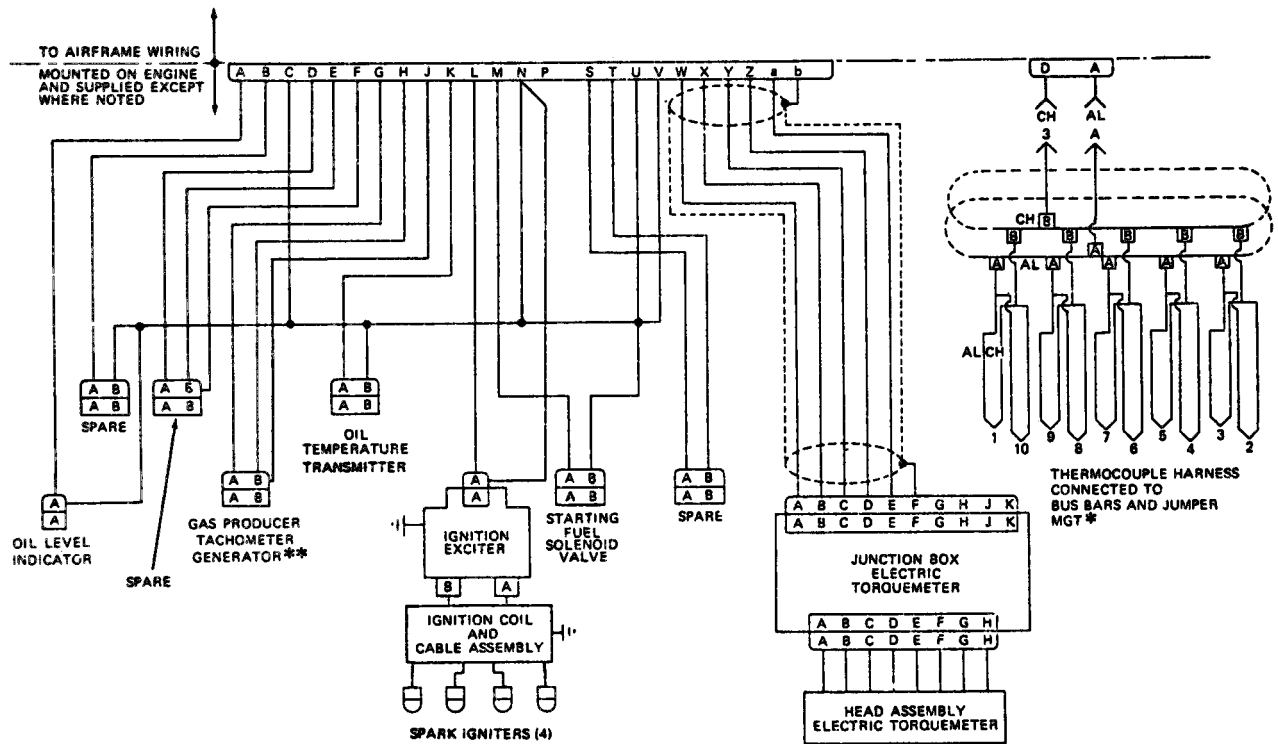
EXPENDABLE SUPPLIES AND MATERIALS LIST (Continued)

(1) Item Number	(2) National Stock Number	(3) Description
E49.1	6850-00-360-6588	Solvent LPS3 Freon Type TF (MIL-C-81302, Type IIA LPS Research Laboratory Los Angeles, CA (or equivalent))
E50	9330-00-890-3104	Spiral Chafing Sleeve 94835-1 Titeflex Co. Inc. Springfield, Massachusetts
E51	9330-00-890-3104	Spiral Chafing Sleeve 94835-2 Titeflex Co. Inc. Springfield, Massachusetts
E52	9330-00-890-3104	Spiral Chafing Sleeve 94835-3 Titeflex Co. Inc. Springfield, Massachusetts
E53	8135-00-066-0043	Tag (UU-T-81)
E54	7510-00-663-0196	Tape Masking (PPP-T-60) Type IV
E54.1	4470-01-011-3748	Tape, Acetate Fiber, 3-inch (PPP-T-60B, Class 2) Scratch 27 Minnesota Mining & Manufacturing St. Paul, MN (or equivalent)
E55	6505-01-050-8714	Tar Ashland Petroleum Co. Division of Ashland Oil Inc. Ashland, Kentucky 41101
E55.1		Ultrachem Assembly Fluid 1 Ultrachem Inc. 1400 North Walnut St. Wilmington, Delaware
E56		Vexar Nylon Webbing E.I. Dupont de Nemours Wilmington, Delaware
E57	8010-00-515-1596	White Enamel (TT-E-527)
E58	7920-00-205-1711	Wiping Rag <u>50 Pound</u> Bale (A-A-531)

EXPENDABLE SUPPLIES AND MATERIALS LIST (Continued)

(1) Item number	(2) National stock number	(3) Description
E59		Wire, <u>22 Gauge</u> Standard No. 8522-1 Type 4 (71002) Birnbach Co. Inc. Freeport, NY
E60	3439-00-166-9584	Wire, Welding AMS5786
E61	3439-00-882-7350	Wire Welding AMS5794
E62	8010-00-155-2208	Zinc Chromate Primer MIL-P-8585, or MIL-P-6899 Type II
E63	6850-01-372-8303	MIL-C-85704 Type II, 5 Gal
E64	6850-01-372-8304	MIL-C-85704 Type II, 55 Gal
E65	6850-01-370-5245	MIL-C-85704 Type IIA, 5 Gal
E66	6850-01-370-5244	MIL-C-85704 Type IIA, 55 Gal
E67		Compound Retaining MIL-R-46082 Type II Loctite 640 Loctite Corp. 705 North Mountain Rd. Newington, CT 06111
E68		Perchloroethylene O-T-236
E69		Isopropyl Alcohol TT-I-735

APPENDIX D
 WIRING DIAGRAM



* NOT PART OF MAIN ELECTRICAL CABLE ASSEMBLY
 ** NOT SUPPLIED WITH ENGINE

A-1182-D1

Electrical System Schematic

APPENDIX E
ILLUSTRATED LIST OF MANUFACTURED ITEMS

APPENDIX E

TABLE OF CONTENTS

Nomenclature	Reference Task No.	Page No.
Bent Wire Gage (0.066 inch) (AVIM)	4-61	E-1
Bent Wire Gage (0.100 inch) (AVIM)	4-66	E-2
Bent Wire Gage (0.101 inch) (AVIM)	4-32	E-3
Bent Wire Gage (0.104 inch) (AVIM)	4-36	E-4
Bent Wire Gage (0.115 inch) (AVIM)	4-36	E-5
Bent Wire Gage (0.228 inch) (AVIM)	4-36	E-6
Bent Wire Gage (0.290 inch) (AVIM)	4-36	E-7
Chain With Hooks	1-26, 1-112, 1-113	E-8 E-8
Drain Hose	1-27,1-111	E-9
Drain Hose	1-111	E-10
Guide Pin (AVIM) (3)	2-41	E-11
Hose Assembly	1-111	E-12
Hose Assembly	6-7	E-13
Hose Assembly	6-7	E-14
Inside Diameter Sleeve (AVIM)	9-10	E-15
Installation Tool (AVIM)	2-71	E-16
Oil Seal Installation Tool (AVIM)	2-46	E-17
Oil Seal Installation Tool	5-15	E-18
Oil Seal Removal Tool (AVIM)	2-43	E-19
Oil Seal Removal Tool	5-15	E-20
Phenolic Drift (AVIM)	2-72, 3-9	E-21
Pressure Gage Tube Assembly	1-110	E-22
Removal Tool (AVIM)	2-68	E-23
Sleeve	2-51	E-24
Sleeve	5-22	E-25
Sleeve Bushing (AVIM)	2-43	E-26
Sleeve Bushing (AVIM)	2-46	E-27
Sleeve Bushing (AVIM)	2-68,2-71	E-28
Sleeve Bushing	5-15	E-29
Stirring Rod	1-119	E-30
Swirler Installation Tool (AVIM)	3-18	E-31
Thickness Gage (AVIM)	1-93,4-57, 4-61	E-32
Third Turbine Rotor Support Block (AVIM)	4-37	E-33
Wooden Block (AVIM)	3-15	E-34
Wrench	5-18,5-22	E-35

GO TO NEXT PAGE

ILLUSTRATED LIST OF MANUFACTURED ITEMS

Nomenclature	Reference Task No.	Material Required
Bent Wire Gage (AVIM)	4-61	AMS5645 QQ-S-763 (CRES321) or AMS5754 (Hastelloy X)

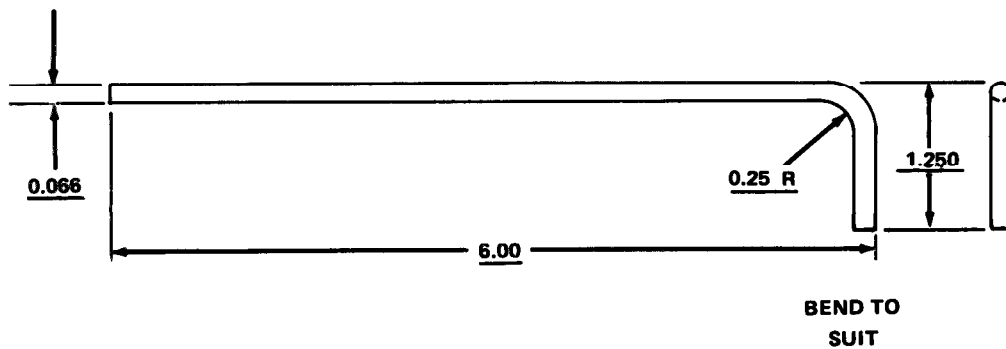
Fabrication Instructions:

Fabricate bent wire gage out of specified material as follows:

1. Form in accordance with sketch shown below.
2. Break all sharp edges.

NOTE: All dimensions are in inches.

Sketch or Diagram:



A-1182-E1

ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No.	Material Required
Bent Wire Gage (AVIM)	4-66	AMS5645 QQ-S-763 (CRES321) or AMS5754 (Hastelloy X)

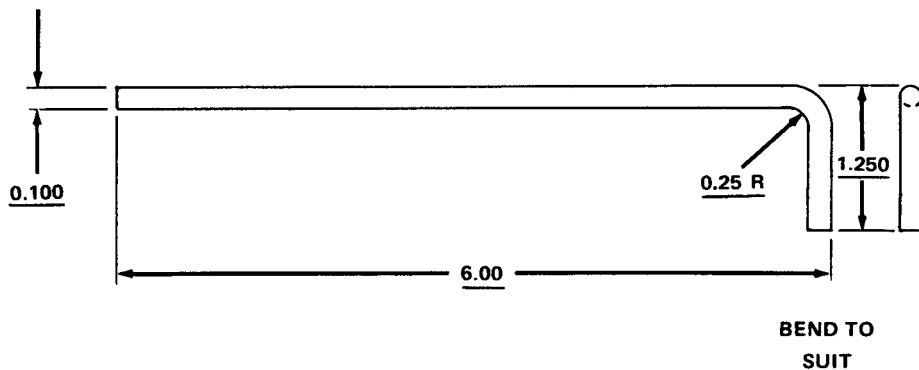
Fabrication Instructions:

Fabricate bent wire gage out of specified material as follows:

1. Fabricate in accordance with sketch shown below.
2. Break all sharp edges.

NOTE: All dimensions are in inches.

Sketch or Diagram:



A-1182-E2

ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No.	Material Required
Bent Wire Gage (AVIM)	4-32	AMS5645 QQ-S-763 (CRES321) or AMS5754 (Hastelloy X)

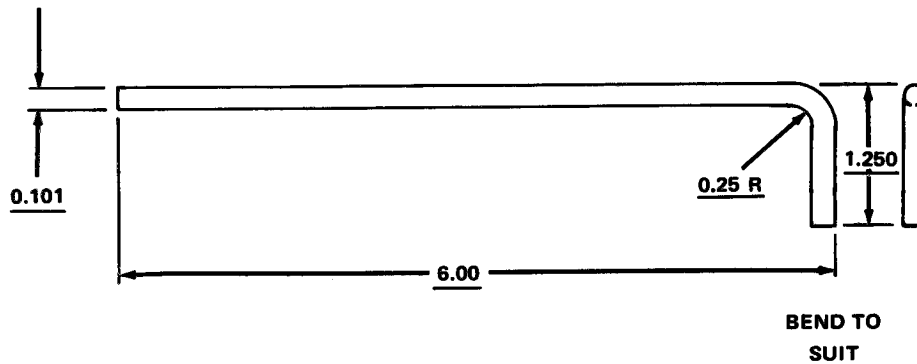
Fabrication Instructions:

Fabricate bent wire gage out of specified material as follows:

1. Fabricate in accordance with sketch shown below.
2. Break all sharp edges.

NOTE: All dimensions are in inches.

Sketch or Diagram:



A-1182-E3

ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No.	Material Required
Bent Wire Gage (AVIM)	4-36	AMS5645 QQ-S-763 (CRES321) or AMS5754 (Hastelloy X)

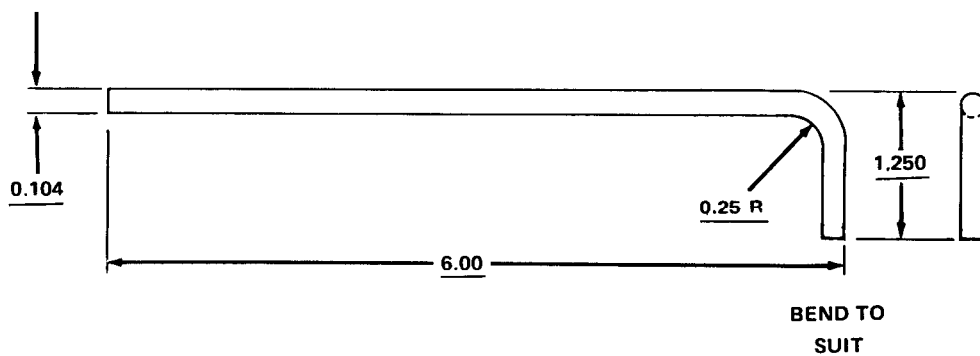
Fabrication Instructions:

Fabricate bent wire gage out of specified material as follows:

1. Form in accordance with sketch shown below.
2. Break all sharp edges.

NOTE: All dimensions are in inches.

Sketch or Diagram:



A-1182-E4

ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No.	Material Required
Bent Wire Gage (AVIM)	4-36	AMS5645 QQ-S-763 (CRES321) or AMS5754 (Hastelloy X)

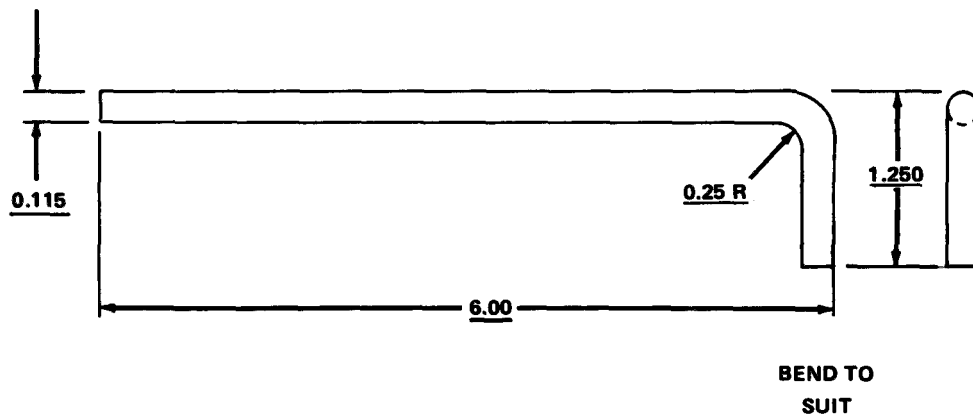
Fabrication Instructions:

Fabricate bent wire gage out of specified material as follows:

1. Form in accordance with sketch shown below.
2. Break all sharp edges.

NOTE: All dimensions are in inches.

Sketch or Diagram:



A-1182-E5

ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No.	Material Required
Bent Wire Gage (AVIM)	4-36	AMS5645 QQ-S-763 (CRES321) or AMS5754 (Hastelloy X)

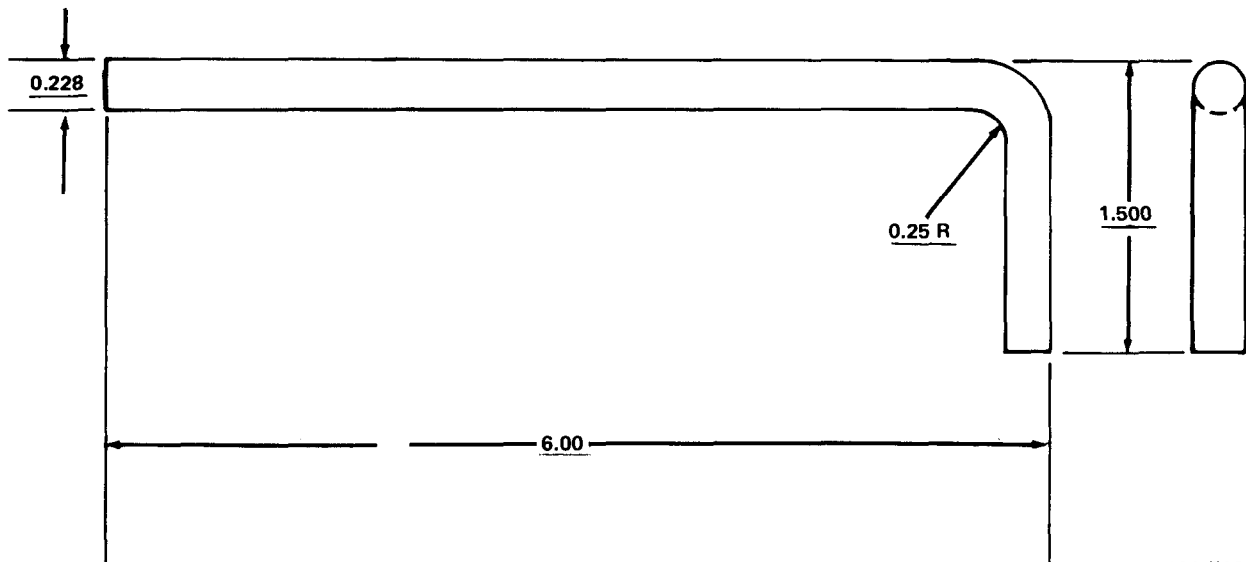
Fabrication Instructions:

Fabricate bent wire gage out of specified material as follows:

1. Form in accordance with sketch shown below.
2. Break all sharp edges.

NOTE: All dimensions are in inches.

Sketch or Diagram:



A-1182-E22

ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No.	Material Required
Bent Wire Gage (AVIM)	4-36	AMS5645 QQ-S-763 (CRES321) or AMS5754 (Hastelloy X)

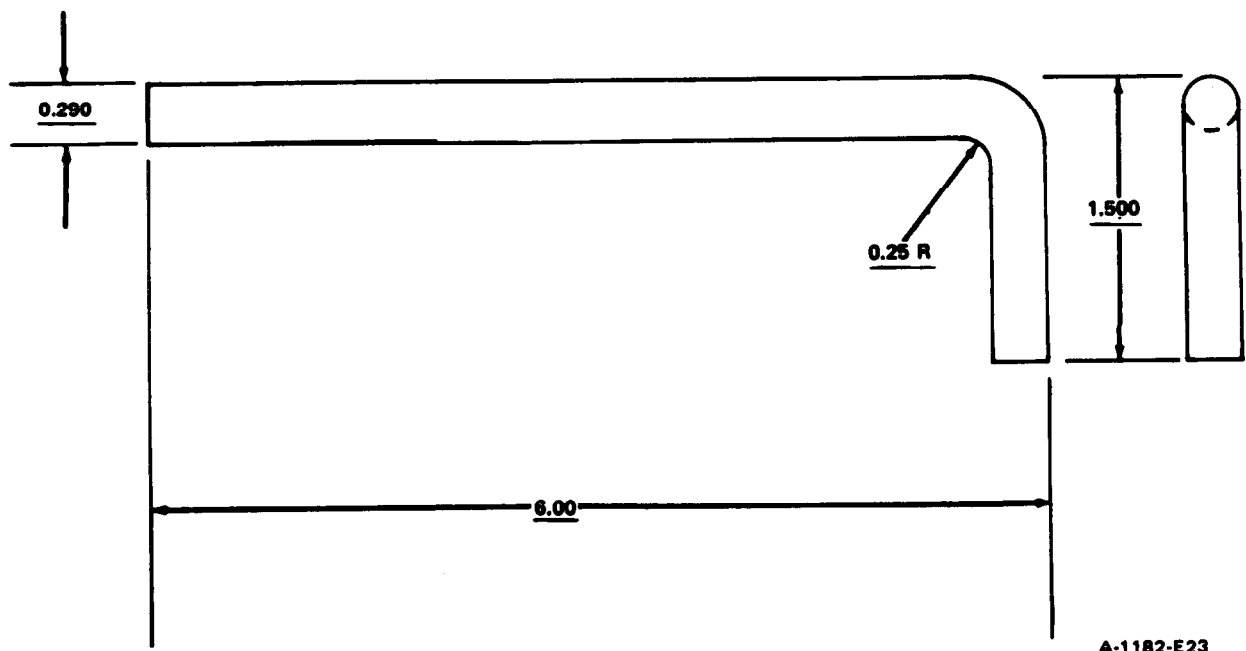
Fabrication Instructions:

Fabricate bent wire gage out of specified material as follows:

1. Form in accordance with sketch shown below.
2. Break all sharp edges.

NOTE: All dimensions are in inches.

Sketch or Diagram:



ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No.	Material Required
Chain with Hooks	1-26,1-112,1-113	(1) Slip hooks (2ea), (2) pins (2ea), (3) 3/8-inch welded link steel alloy chain (2ea), (4) couplings (2), (5) crosby 1/2 oblong link (1). (See sketch).

Fabrication Instructions:

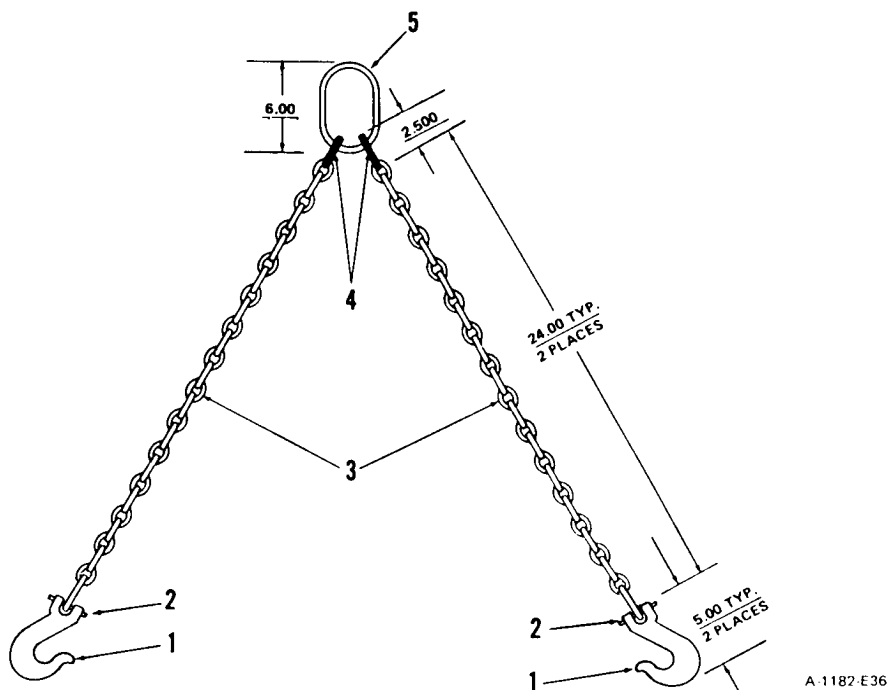
NOTE: The chain and hooks must have a certified 1 ton load limit capacity. Therefore it is suggested that only certified vendors be used to procure this item, The specifications require a (1) ton steel heavy duty chain hoist.

Suggested certified vendors are: (1) Paul's Wire, Rope & Sling Inc., 4 Indian Neck Ave., Branford, CT 06405.
 (2) McMaster-Carr Supply, P.O. Box 4355, Chicago, IL., 60680.

NOTE: All dimensions are in inches.

NOTE: Any suitable substitute may be utilized, i.e. cargo tiedown, rotor head sling etc. (Head sling NSN 1730-00-099-8099).

Sketch or Diagram:



ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

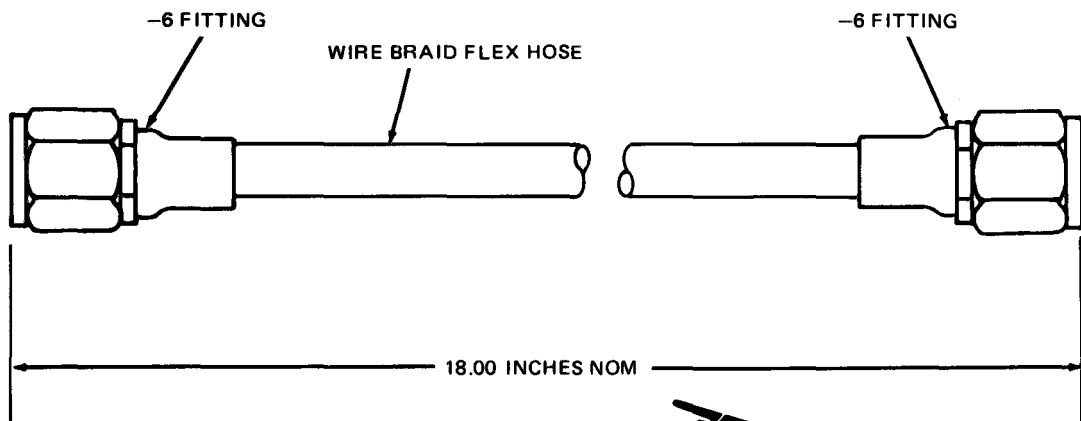
Nomenclature	Reference Task No.	Material Required
Drain Hose	1-27, 1-111	Scrap flexible hose with -6 fittings or hose assembly NSN 4720-01-114-1017.

Fabrication Instructions:

NOTE: Use suitable scrap hose (see sketch). If no such hose is available, use any scrap hose providing priming task can be accomplished successfully.

NOTE: If scrap hose is not available, hose assembly 2-300-845-01 or 2-300-845-02 (NSN 4720-01-114-1017) may be used to accomplish priming task.

Sketch or Diagram:



A-1182-E6A

ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

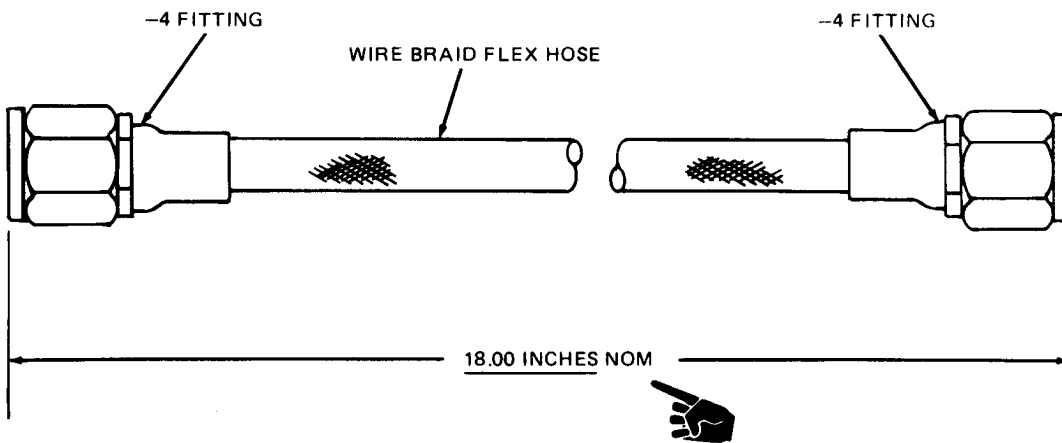
Nomenclature	Reference Task No.	Material Required
Drain Hose	1-111	Scrap flexible hose with -4 fittings or hose assembly NSN 4720-00-725-5659.

Fabrication Instructions:

NOTE: Use suitable scrap hose (see sketch). If no such hose is available, use any scrap hose providing draining task can be accomplished successfully.

NOTE: If scrap hose is not available, hose assembly P/N 2-300-234-01 (NSN 4720-00-725-5659) may be used to accomplish draining task.

Sketch or Diagram:



A-1182-E29A

ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No.	Material Required
Guide Pin (AVIM)	2-41	MS 9501-22 bolt (NSN 5306-00-392-0749)

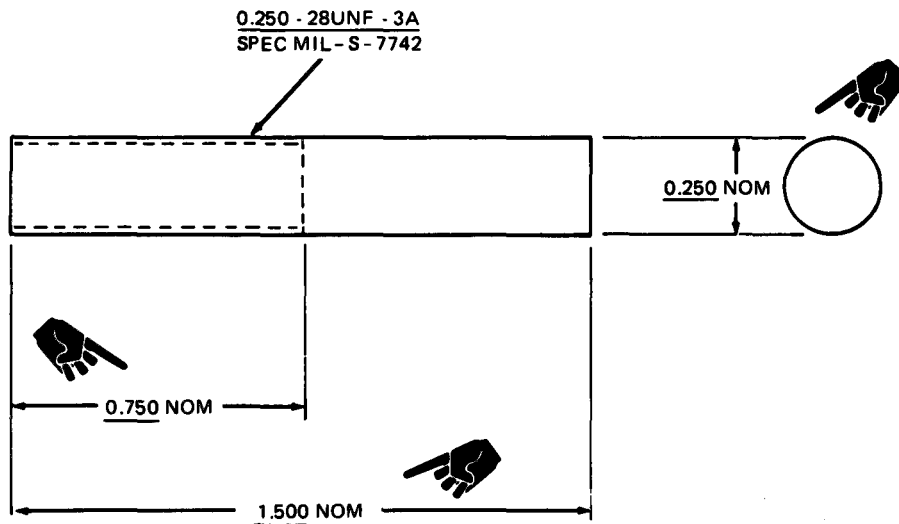
Fabrication Instructions:

Fabricate guide pin out of AN 106522 Bolt as follows:

1. Cut bolt in accordance with sketch shown below.
2. Lightly sand or file rough edges.
3. Surface treat with black oxide per MIL-C- 13924 CLASS

NOTE: All dimensions are in inches.

Sketch or Diagram:



A-1182-E7A

ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

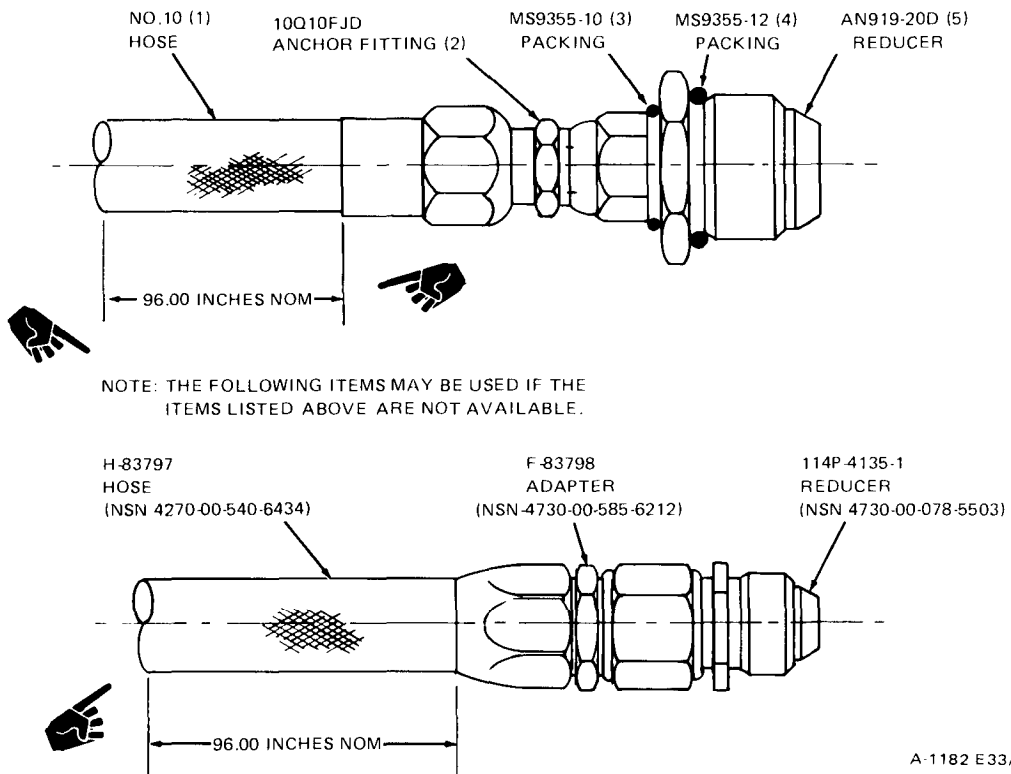
Nomenclature	Reference Task No.	Material Required
Hose Assembly	1-111	(8 Feet) No. 10 Hose, (1) 10Q10FJD Anchor Fitting, (2) MS9355-10 Packing, (3) MS9355-12 Packing, (4) AN919-20D Reducer, (5)

Fabrication Instructions:

Assemble hose assembly from material required and sketch shown below as follows:

1. Install 10Q10FJD Anchor fitting (2) on No. 10 hose (1).
2. Coat MS9355-10 Packing (3) and MS9355-12 Packing (4) with silicone grease MIL-G-4343.
3. Install Packing (3) and Packing (4) on AN919-20D Reducer (5).
4. Connect reducer (5) to anchor fitting (2).

Sketch or Diagram:



ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

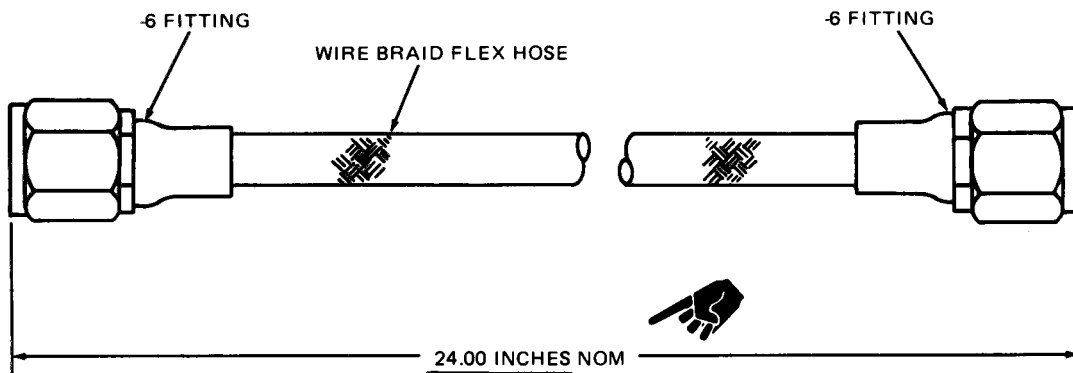
Nomenclature	Reference Task No.	Material Required
Hose Assembly	6-7	Scrap flexible hose with -6 fittings or hose assembly NSN 4720-00-105-2957

Fabrication Instructions:

NOTE: Use suitable scrap hose (see sketch). If no such hose is available, use any scrap hose providing preservation task can be successfully accomplished.

NOTE: If scrap hose is not available, hose assembly, P/N 2-300-241-01 (NSN 4720-00-105-2957) may be used to accomplish preservation task.

Sketch or Diagram:



A-1182-E34A

ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

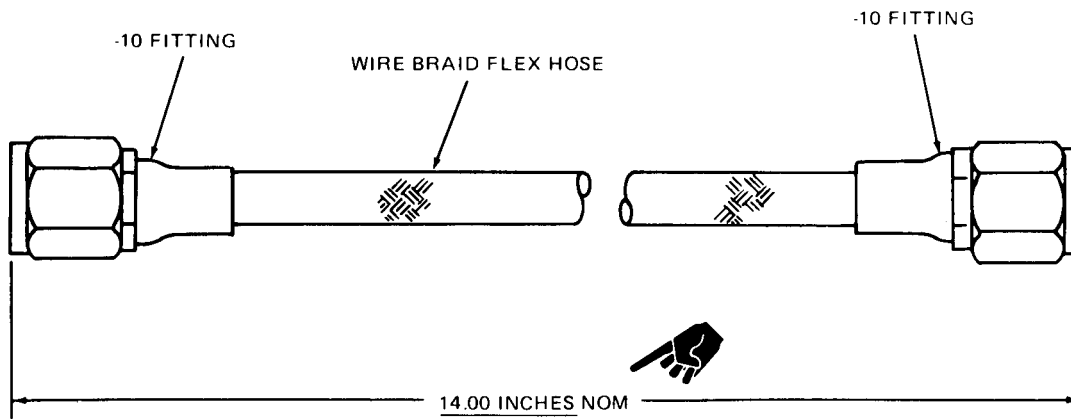
Nomenclature	Reference Task No.	Material Required
Hose Assembly	6-7	Scrap flexible hose with -10 fittings or hose assembly NSN 4720-00-103-9439

Fabrication Instructions:

NOTE: Use suitable scrap hose (see sketch). If no such hose is available, use any scrap hose providing preservation task can be successfully accomplished.

NOTE: If scrap hose is not available, hose assembly P/N 2-300-251 -01 (NSN 4720-00-103-9439) may be used to accomplish preservation task.

Sketch or Diagram:



A-1182 E35A

ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No.	Material Required
Inside Diameter Sleeve (AVIM)	9-10	Aluminum QQ-A-200/8T6

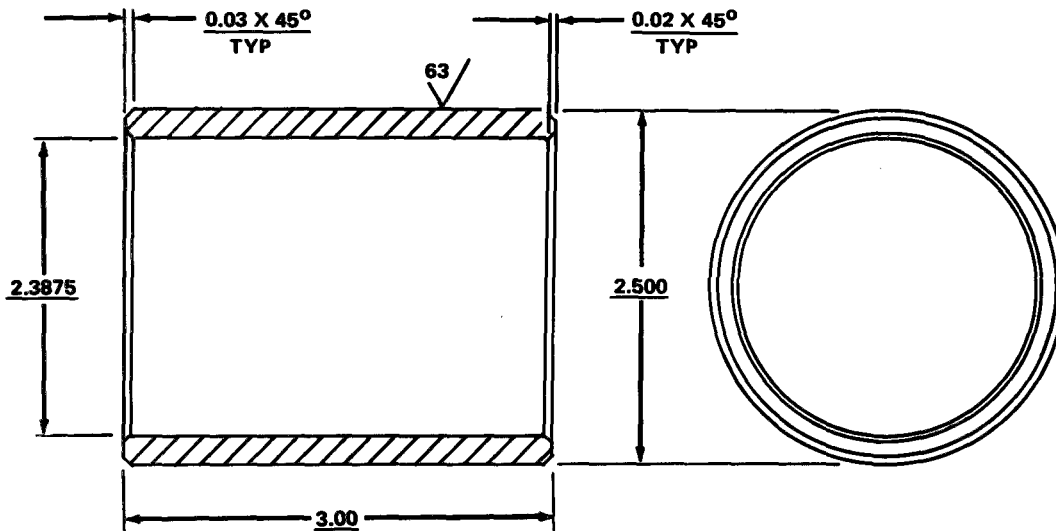
Fabrication Instructions:

Fabricate sleeve bushing out of Aluminum Stock as follows:

1. Machine in accordance with sketch shown below.
2. Surface treat with Anodize MIL-A-8625 Type II

NOTE: All dimensions are in inches.

Sketch or Diagram:



A-1182-E8

ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No.	Material Required
Installation Tool (AVIM)	2-71	Aluminum QQ-A-325/T6

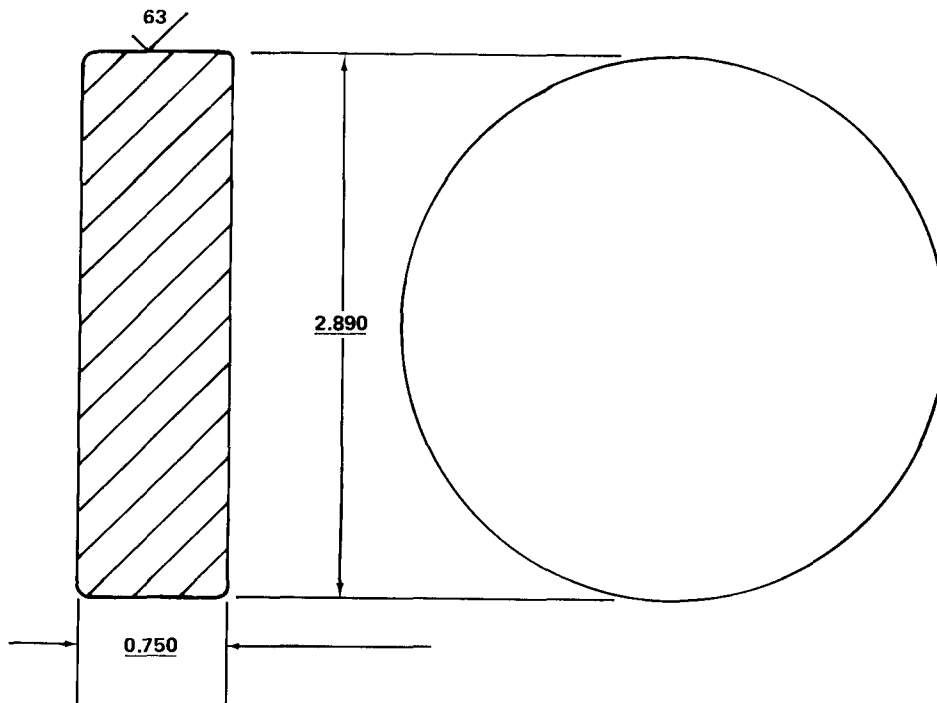
Fabrication Instructions:

Fabricate installation tool out of aluminum stock as follows:

1. Machine in accordance with sketch shown below:
2. Break all sharp edges.
3. Surface treat with anodize per MIL-A-8625 Type I

NOTE: All dimensions are in inches.

Sketch or Diagram:



A-1182-E25

ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No.	Material Required
Oil Seal Installation Tool (AVIM)	2-46	Aluminum QQ-A-325/T6

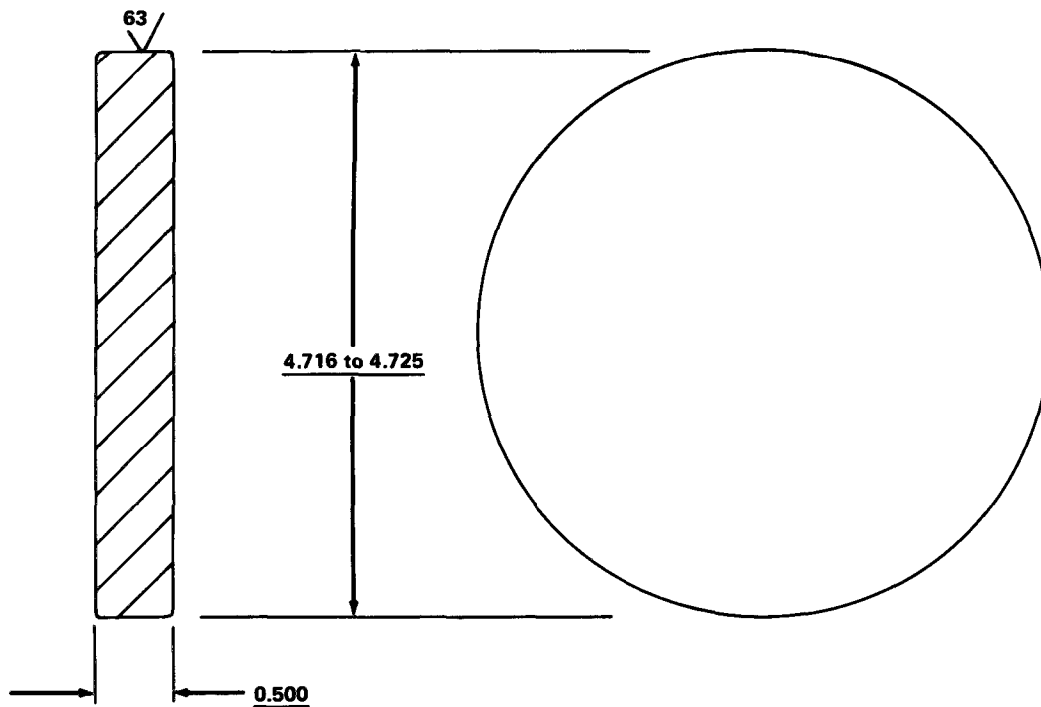
Fabrication Instructions:

Fabricate oil seal installation tool out of aluminum stock as follows:

1. Machine in accordance with sketch shown below:
2. Break all sharp edges.
3. Surface treat with anodize per MIL-A-8625 Type I

NOTE: All dimensions are in inches.

Sketch or Diagram:



A-1182-E9

ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No.	Material Required
Oil Seal Installation Tool	5-15	Aluminum QQ-A-200/8T6

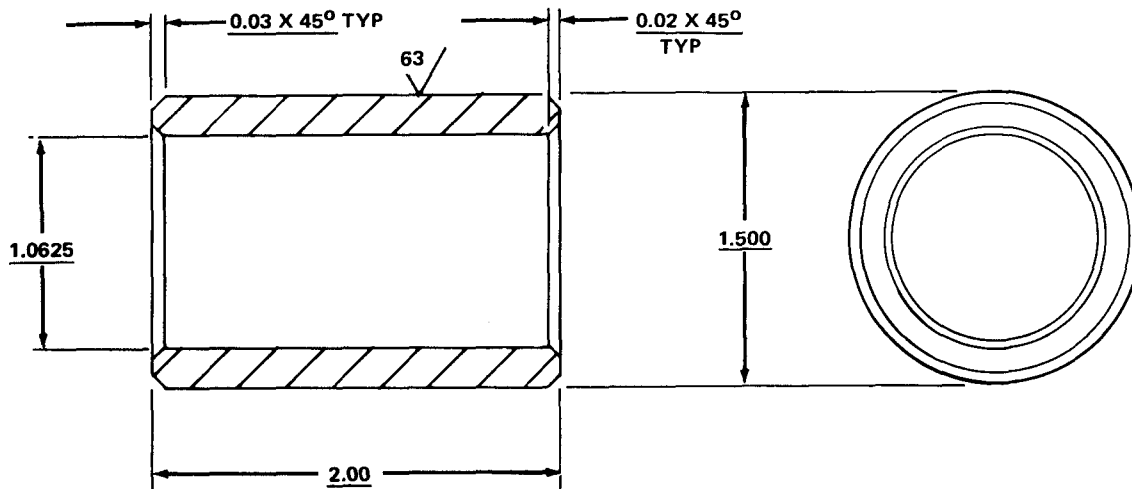
Fabrication Instructions:

Fabricate oil seal installation tool out of aluminum stock as follows:

1. Machine in accordance with sketch shown below.
2. Surface treat with anodize MIL-A-8625 Type II.

NOTE: All dimensions are in inches.

Sketch or Diagram:



A-1182-E10


ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No	Material Required
Oil Seal Installation Tool (E-39)	5-5.6	Aluminum QQ-A-200/8T6

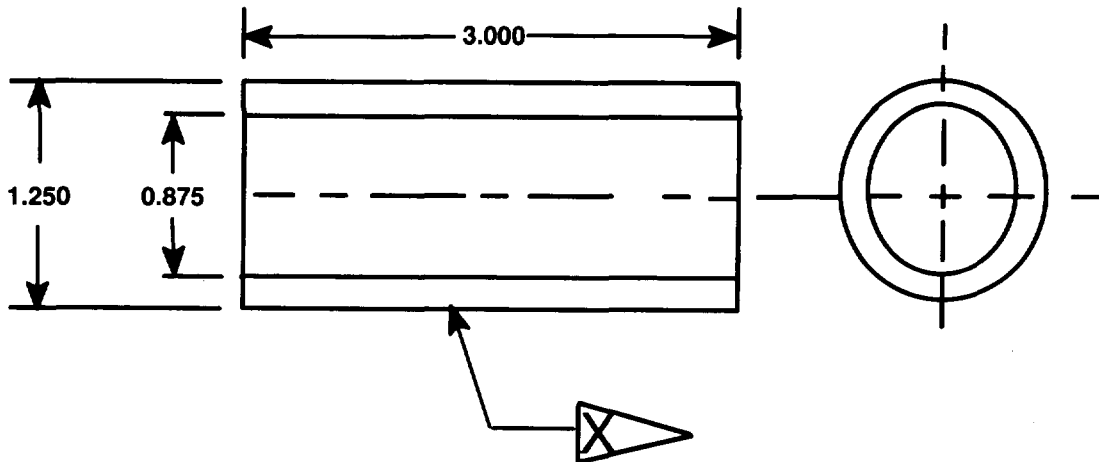
FABRICATION INSTRUCTIONS:

1. Machine in accordance with sketch shown below.
2. Surface treat with anodizk MIL-A-8625 Type II.

NOTE

1. All dimensions are in inches.
2. Break all sharp edges 0.005 - 0.015 radius.
3.  Mark tool number E-39. Vibro-peen method 0.001 to 0.006 deep.

Sketch or Diagram:



ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No.	Material Required
Oil Seal Removal Tool (AVIM)	2-43	Aluminum QQ-A-225/8T6

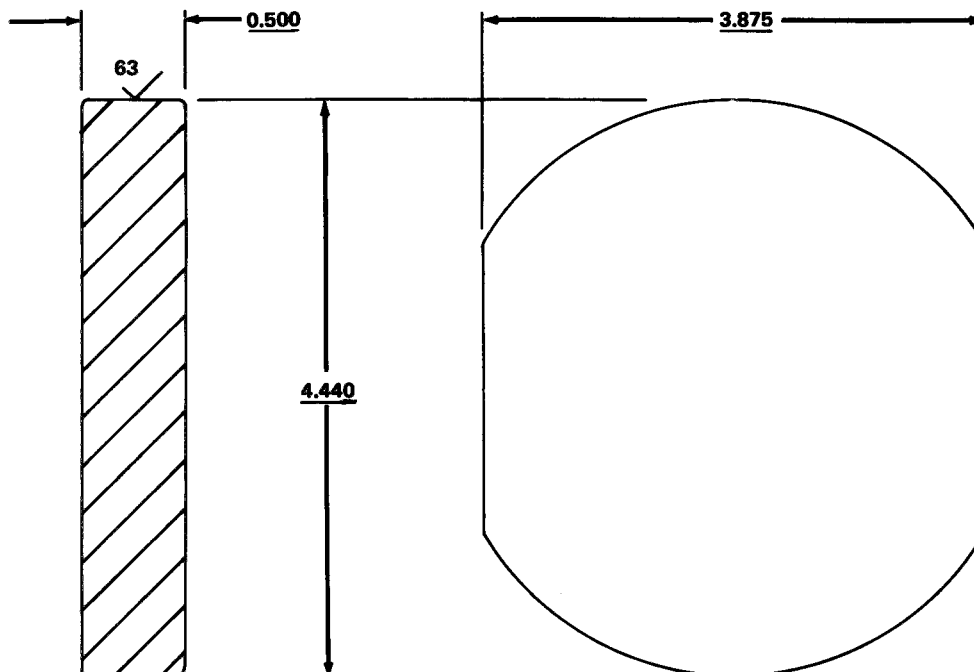
Fabrication Instructions:

Fabricate oil seal removal tool out of aluminum stock as follows:

1. Machine in accordance with sketch shown below.
2. Break all sharp edges.
3. Surface treat with anodize per MIL-A-8625 Type I.

NOTE: All dimensions are in inches.

Sketch or Diagram:



A-1182-E11

ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No.	Material Required
Oil Seal Removal Tool	5-15	Aluminum QQ-A-225/8T6

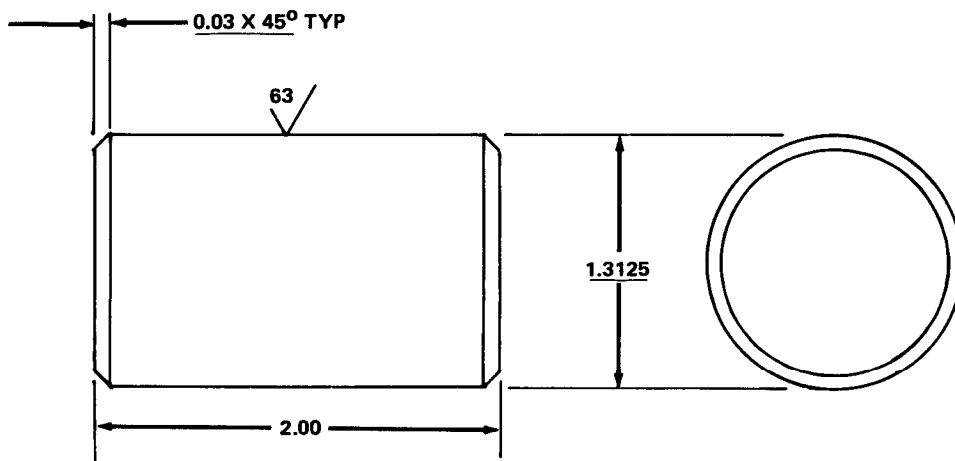
Fabrication Instructions:

Fabricate oil seal removal tool out of aluminum stock as follows:

1. Machine in accordance with sketch shown below.
2. Surface treat with anodize per MIL-A-8625 Type I.

NOTE: All dimensions are in inches.

Sketch or Diagram:



A-1182-E12


ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No	Material Required
Oil Seal Installation Tool (E-40)	5-5.2	Aluminum QQ-A-200/8T6

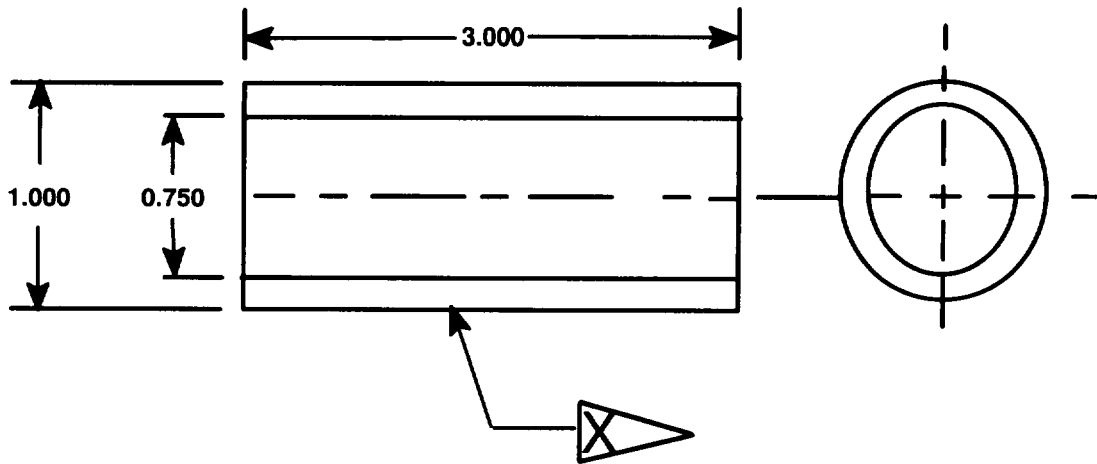
FABRICATION INSTRUCTIONS:

1. Machine in accordance with sketch shown below.
2. Surface treat with anodizk MIL-A-8625 Type II.

NOTE

1. All dimensions are in inches.
2. Break all sharp edges 0.005 - 0.015 radius.
3.  Mark tool number E-39. Vibro-peen method 0.001 to 0.006 deep.

Sketch or Diagram



ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No.	Material Required
Phenolic Drift (AVIM)	2-72,3-9	Plastic Phenolic LP513 NSN 9330-00-912-2572

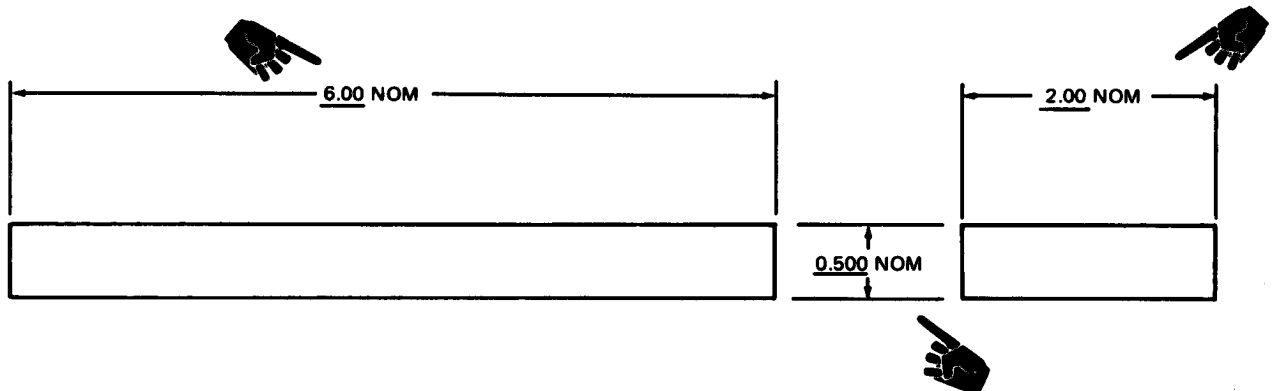
Fabrication Instructions:

Fabricate phenolic drift out of specified material as follows:

1. Cut in accordance with sketch shown below.

NOTE: All dimensions are in inches.

Sketch or Diagram:



A-1182-E13A

ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

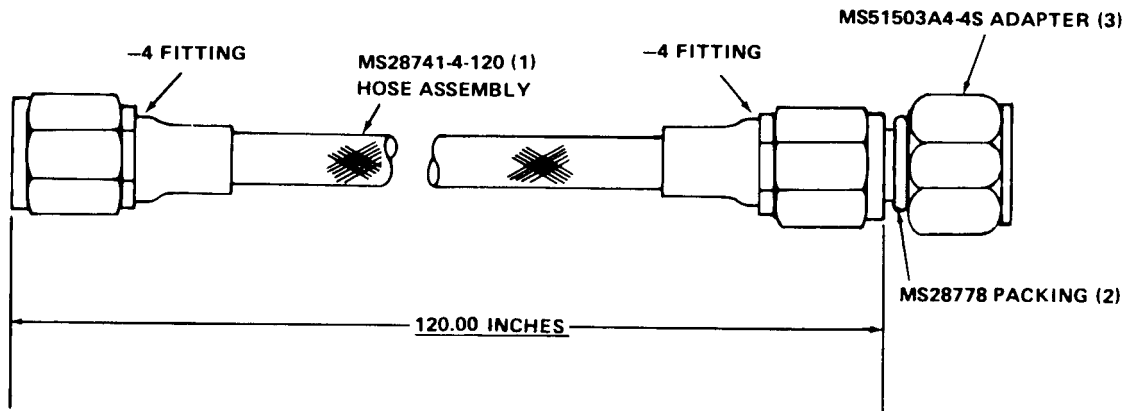
Nomenclature	Reference Task No.	Material Required
Pressure Gage Tube Assembly	1-110	(2) MS28741-H-120 Hose Assembly (2) MS28778 Packing (2) MS51503A4-4S Adapter

Fabrication Instructions:

Assemble two pressure gage tube assemblies from material required and sketch shown below as follows:

1. Coat MS28778 packing (2) with silicone grease MIL-G-4343.
2. Install packing (2) on MS51503A4-4S adapter (3)
3. Connect adapter (3) to MS28741-4-120 hose assembly (1).

Sketch or Diagram:



A-1182-E30

ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No.	Material Required
Phenolic Drift (AVIM)	2-72,3-9	AMS3903 - Cloth Organic Fiber-Epoxy Resin Impregnated

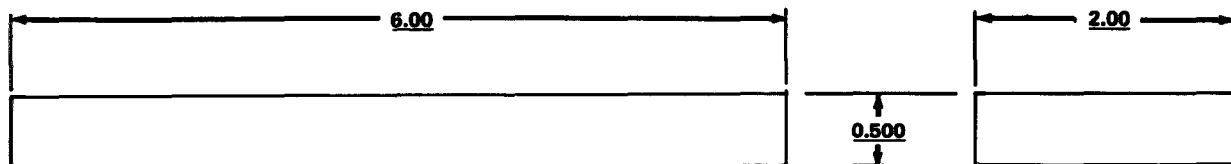
Fabrication Instructions:

Fabricate phenolic drift out of specified material as follows:

1. Machine in accordance with sketch shown below.

NOTE: All dimensions are in inches.

Sketch or Diagram:



A-1182-E13

ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

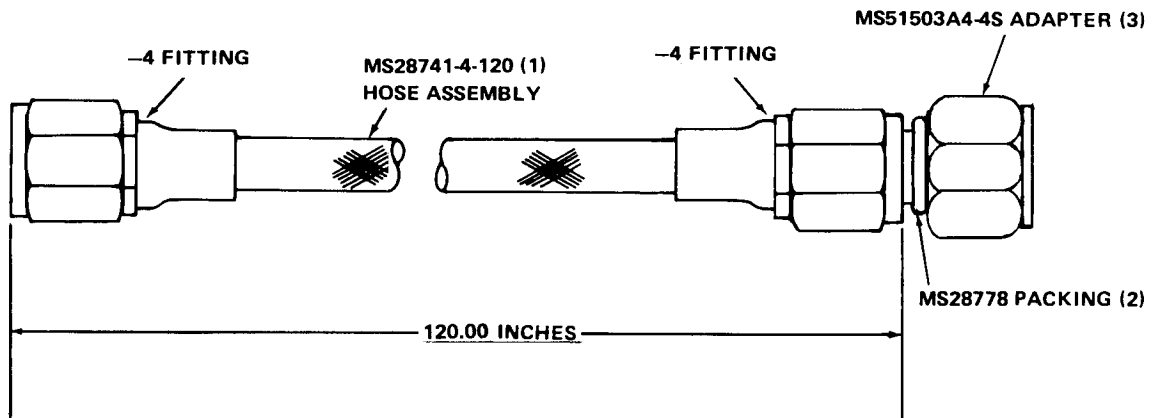
Nomenclature	Reference Task No.	Material Required
Pressure Gage Tube Assembly	1-110	(2) MS28741-H-120 Hose Assembly (2) MS28778 Packing (2) MS51503A4-4S Adapter

Fabrication Instructions:

Assemble two pressure gage tube assemblies from material required and sketch shown below as follows:

1. Coat MS28778 packing (2) with silicone grease MIL-G-4343.
2. Install packing (2) on MS51503A4-4S adapter (3).
3. Connect adapter (3) to MS28741-4-120 hose assembly (1).

Sketch or Diagram:



A-1182-E30

ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No.	Material Required
Removal Tool (AVIM)	2-68	Aluminum QQ-A-325/T6

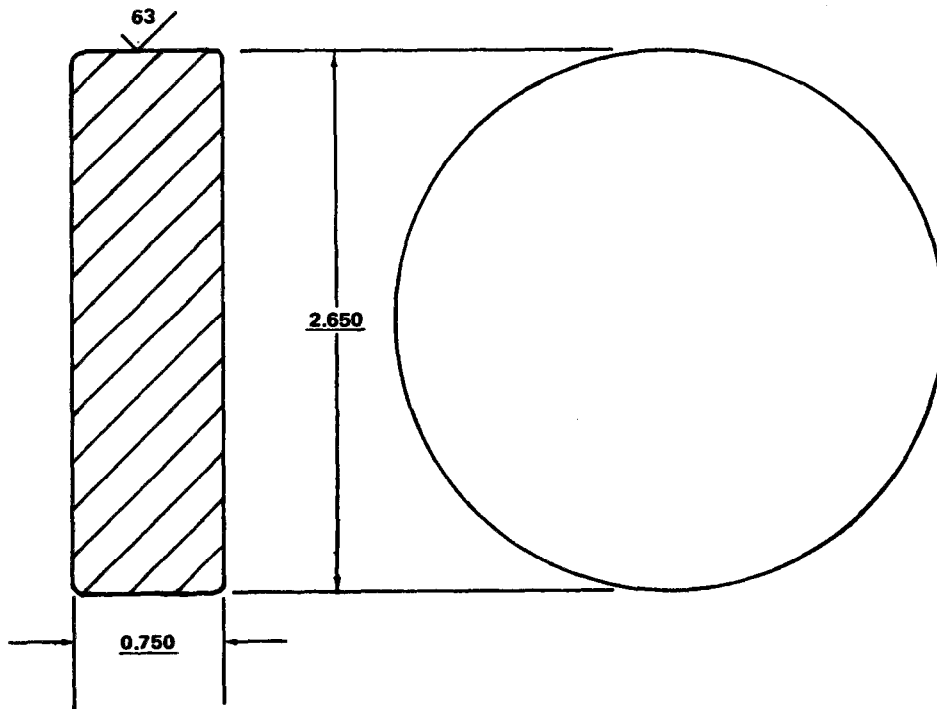
Fabrication Instructions:

Fabricate seal/bearing removal tool out of aluminum stock as follows:

1. Machine in accordance with sketch shown below.
2. Break all sharp edges.
3. Surface treat with anodize per MIL-A-8625 Type I

NOTE: All dimensions are in inches.

Sketch or Diagram:



E-1182-E26

ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No.	Material Required
Sleeve	2-51	Aluminum QQ-A-200/8T6

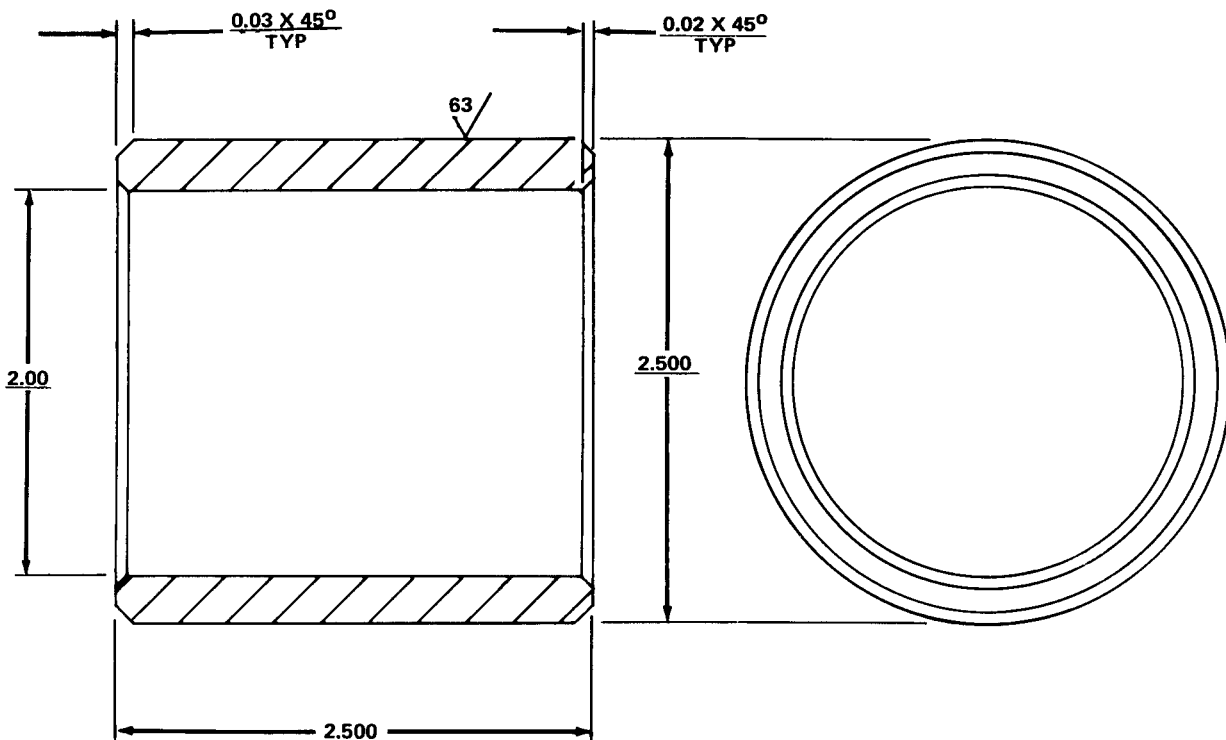
Fabrication Instructions:

Fabricate sleeve bushing out of aluminum stock as follows:

1. Machine in accordance with sketch shown below.
2. Surface treat with anodize MIL-A-8625 Type II

NOTE: All dimensions are in inches.

Sketch or Diagram:



A-1182-E14

ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No.	Material Required
Sleeve	5-22	Aluminum QQ-A-200/8T6

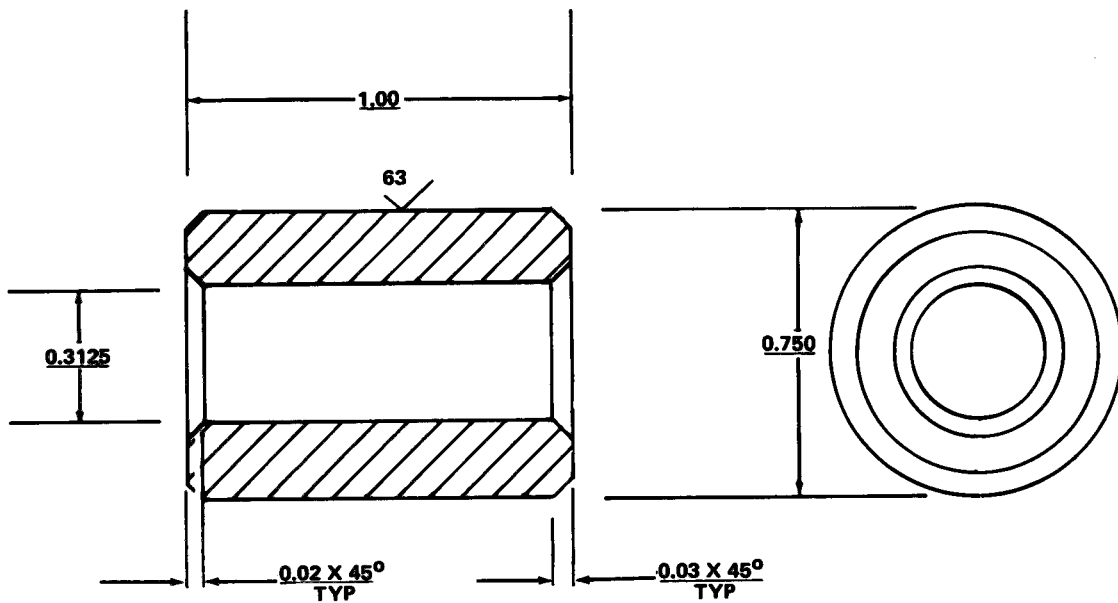
Fabrication Instructions:

Fabricate sleeve bushing out of aluminum stock as follows:

1. Machine in accordance with sketch shown below:
2. Surface treat with anodize per MIL-A-8625 Type II.

NOTE: All dimensions are in inches.

Sketch or Diagram:



A-1182-E15

ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No.	Material Required
Sleeve Bushing (AVIM)	2-43	Aluminum QQ-A-200/8T6

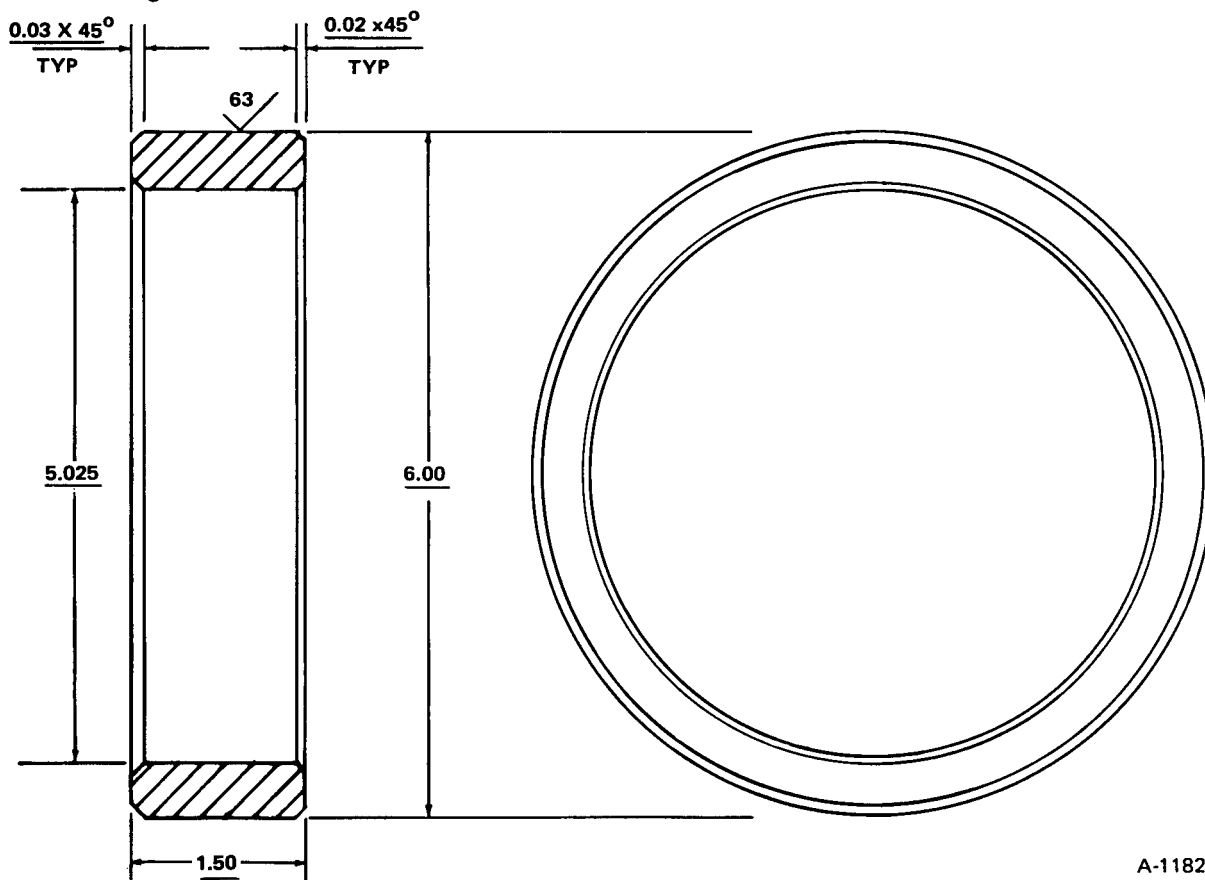
Fabrication Instructions:

Fabricate sleeve bushing out of aluminum stock as follows:

1. Machine in accordance with sketch shown below.
2. Surface treat with anodize MIL-A-8625 Type II.

NOTE: All dimensions are in inches.

Sketch or Diagram:



A-1182-E28

ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No.	Material Required
Sleeve Bushing (AVIM)	2-46	Aluminum QQ-A-200/8T6

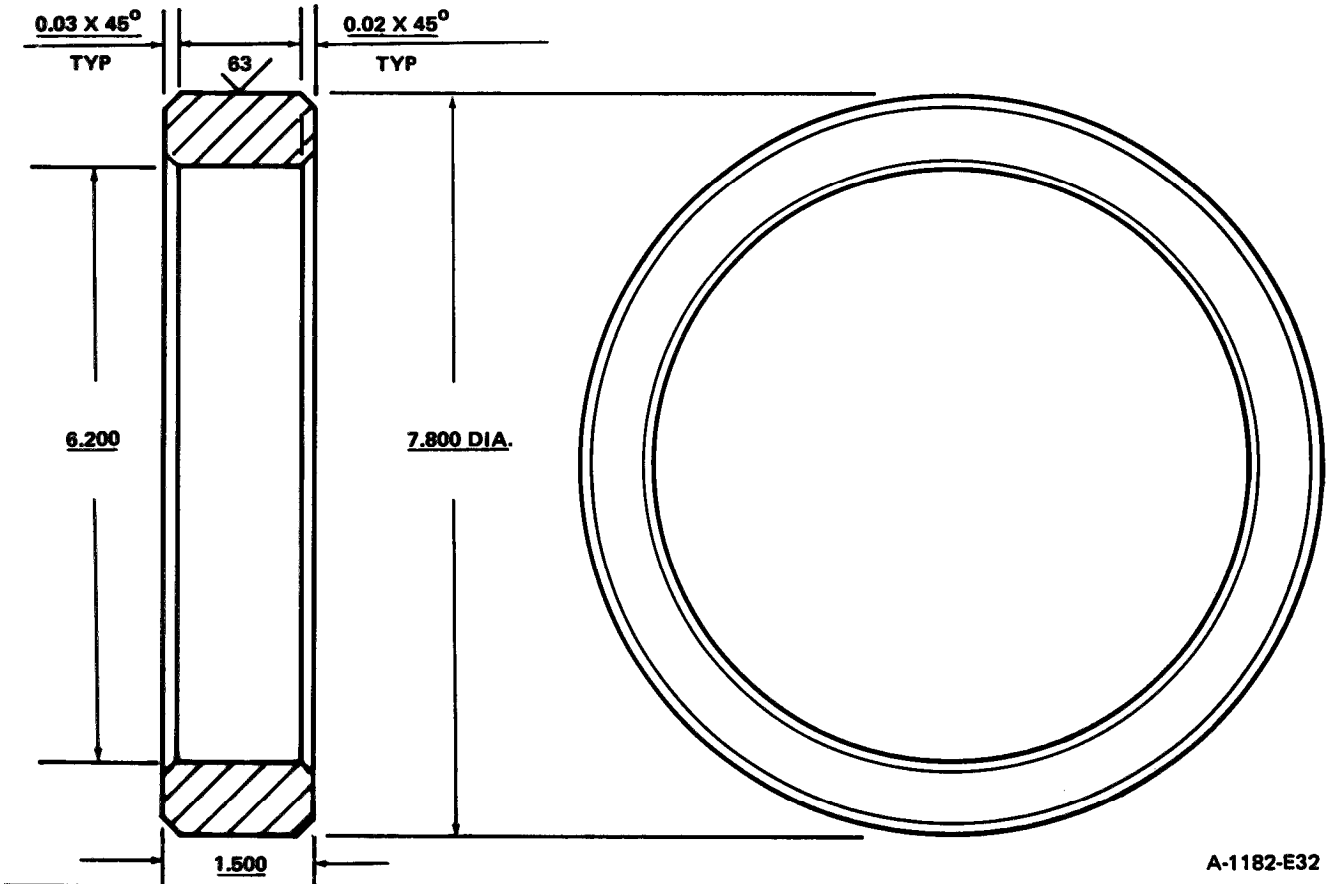
Fabrication Instructions:

Fabricate sleeve bushing out of aluminum stock as follows:

1. Machine in accordance with sketch shown below.
2. Surface treat with anodize MIL-A-825 Type II.

NOTE: All dimensions are in inches.

Sketch or Diagram:



ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No.	Material Required
Sleeve Bushing (AVIM)	2-68,2-71	Aluminum QQ-A-200/8T6

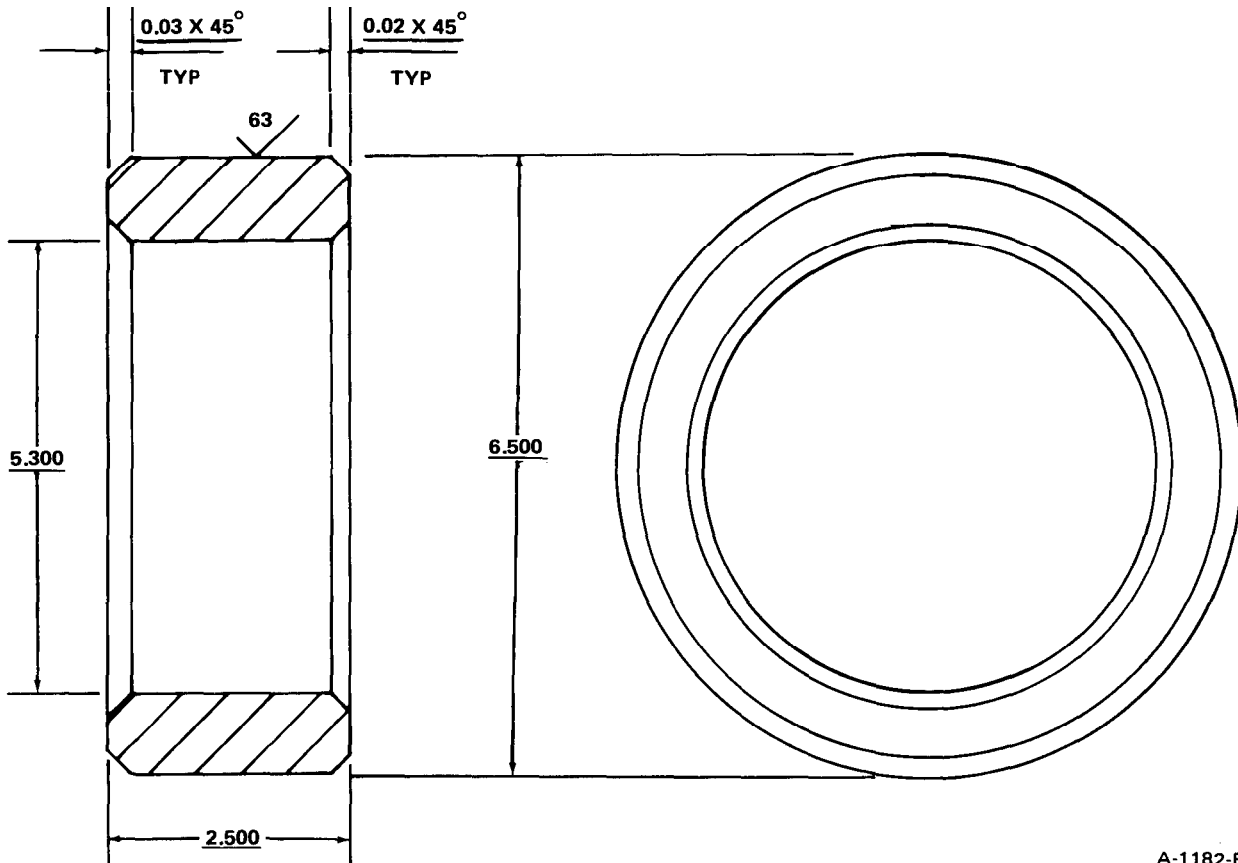
Fabrication Instructions:

Fabricate sleeve bushing out of aluminum stock as follows:

1. Machine in accordance with sketch shown below.
2. Surface treat with anodize MIL-A-8625 Type II.

NOTE: All dimensions are in inches

Sketch or Diagram:



A-1182-E27

ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No.	Material Required
Sleeve Bushing	5-15	Aluminum QQ-A-200/8T6

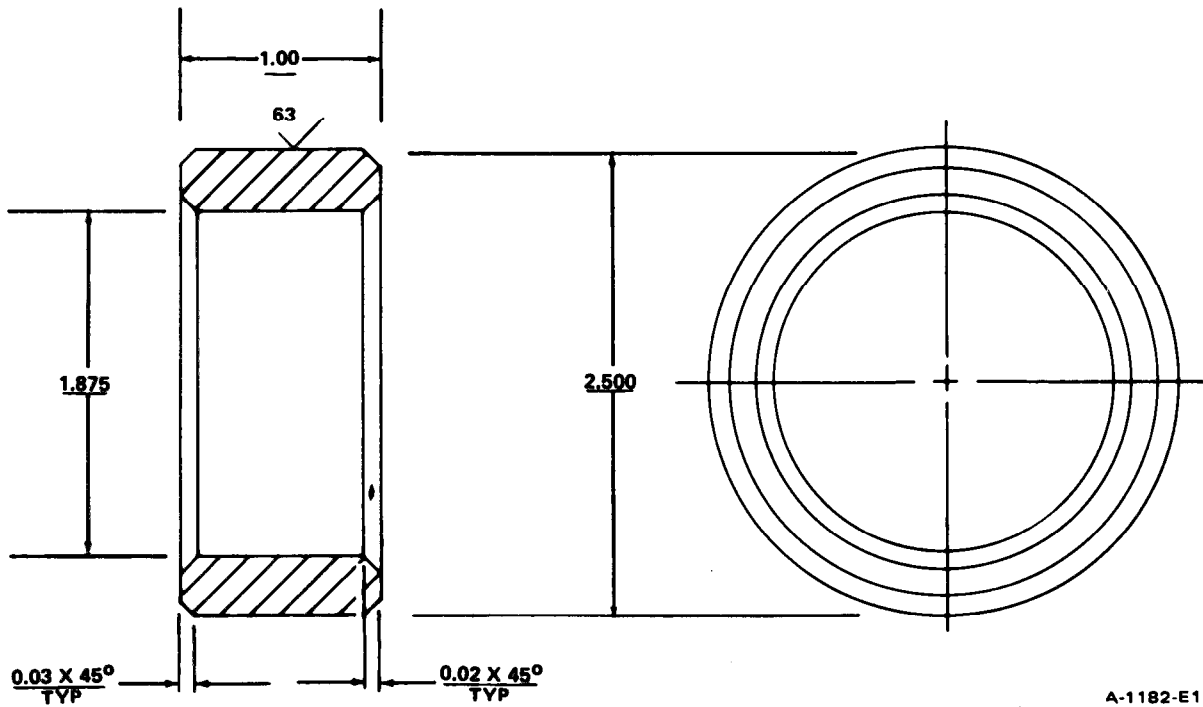
Fabrication Instructions:

Fabricate sleeve bushing out of aluminum stock as follows:

1. Machine in accordance with sketch shown below.
2. Surface treat with anodize per MIL-A-8625 Type II.

NOTE: All dimensions are in inches.

Sketch or Diagram:



A-1182-E17

ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No.	Material Required
Stirring Rod	1-119	Hardwood Stock

Fabrication Instructions:

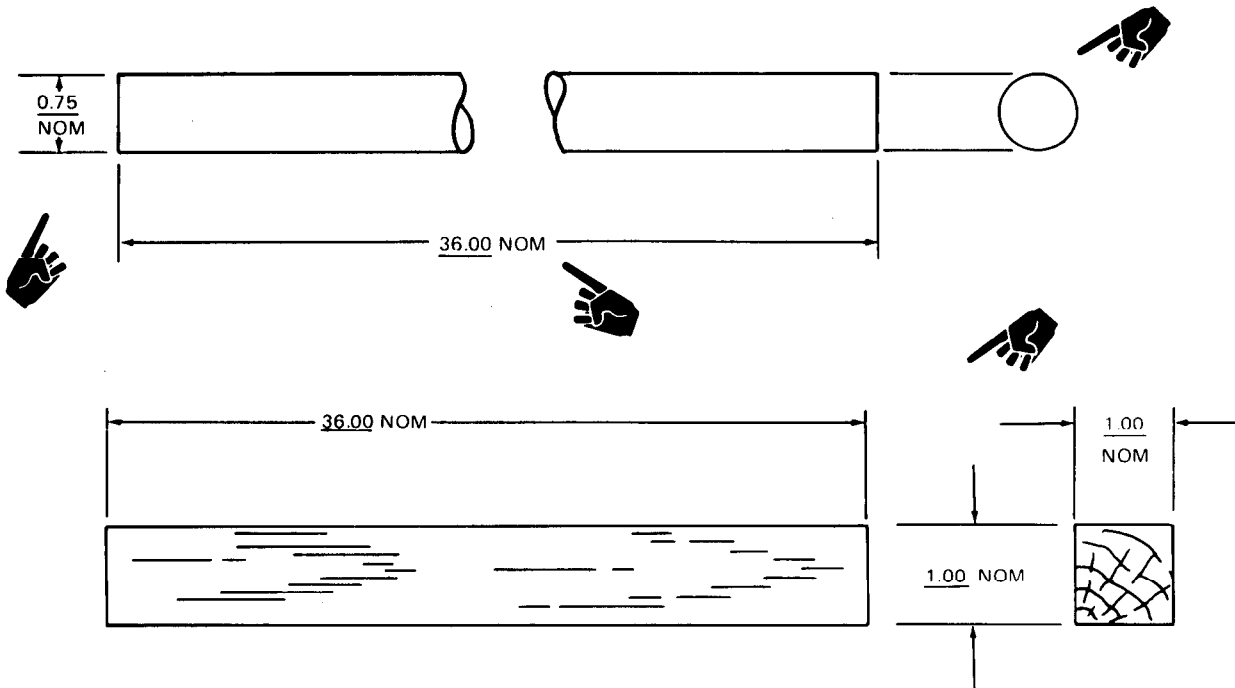
Fabricate stirring rod from hardwood stock as follows:

1. Cut wood in accordance with sketch shown below.
2. Remove all rough edges with fine grain sandpaper.

NOTE: All dimensions are in inches.

NOTE: Either of the following stirring rods maybe used.

Sketch or Diagram:



A 1182 E31A

ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No.	Material Required
Swirler Installation Tool (AVIM)	3-18	Hardwood Stock

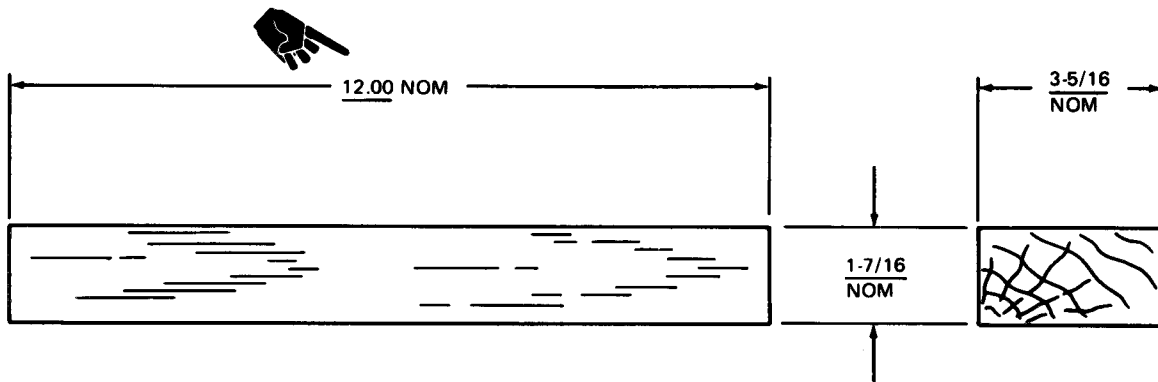
Fabrication Instructions:

Fabricate swirler installation tool out of hardwood stock as follows:

1. Saw wood in accordance with sketch shown below.
2. Remove all rough edges with fine grain sandpaper.

NOTE: All dimensions are in inches.

Sketch or Diagram:



A-1182-E18A

ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No.	Material Required
Thickness Gage (AVIM)	1-93,4-57,4-61	AMS5519 (CRES301) Steel

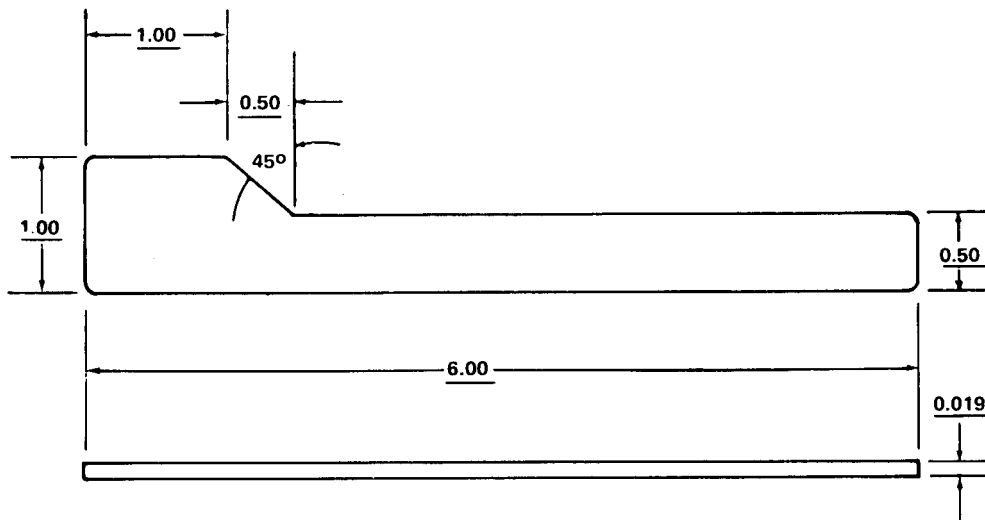
Fabrication Instructions:

Fabricate feeler gage out of steel as follows:

1. Fabricate in accordance with sketch shown below.
2. Break all sharp edges.

NOTE: All dimensions are in inches.

Sketch or Diagram:



A-1182-E19

ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No.	Material Required
Third Turbine Rotor Support Block (AVIM)	4-37	Hardwood Stock

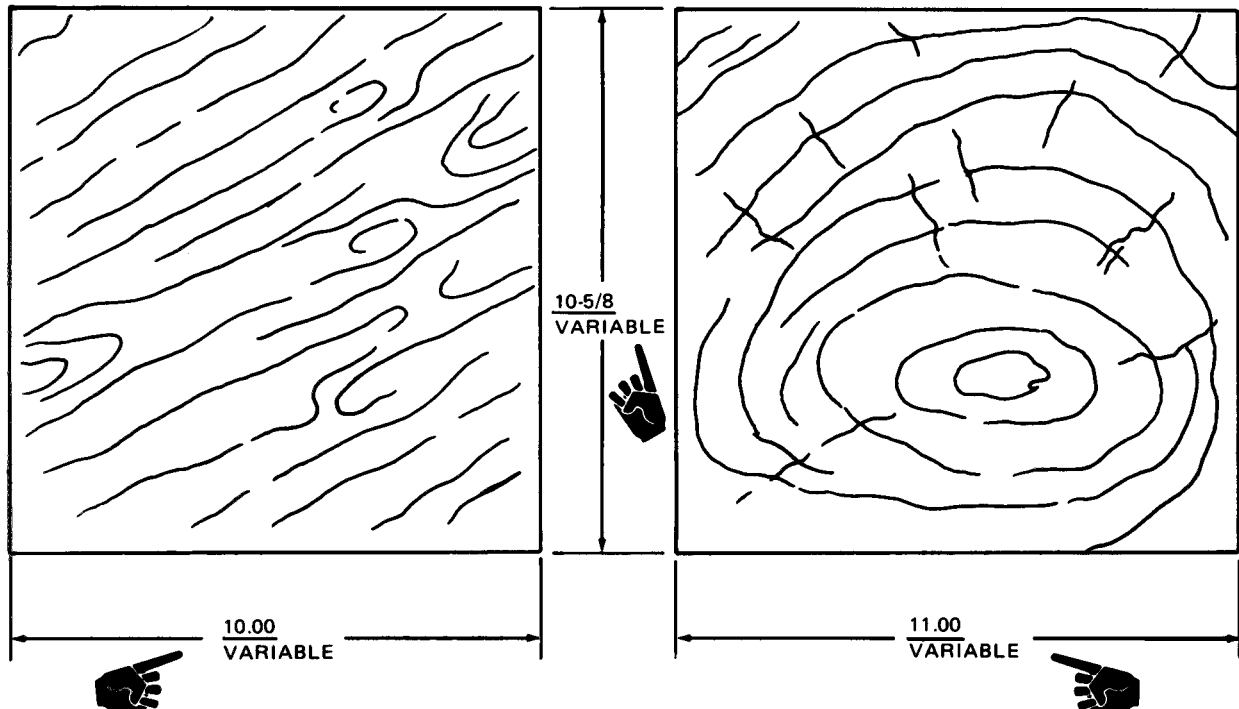
Fabrication Instructions:

Fabricate third turbine rotor support block out of hardwood stock as follows:

1. Saw wood in accordance with sketch shown below.
2. Remove all rough edges with fine grain sandpaper.

NOTE: Size of required block will vary with distance from floor to turbine shaft. All dimensions are in inches. Dimensions given below are examples only.

Sketch or Diagram:



A-1182-E37A

ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No.	Material Required
Wooden Block (AVIM)	3-15	Hardwood Stock

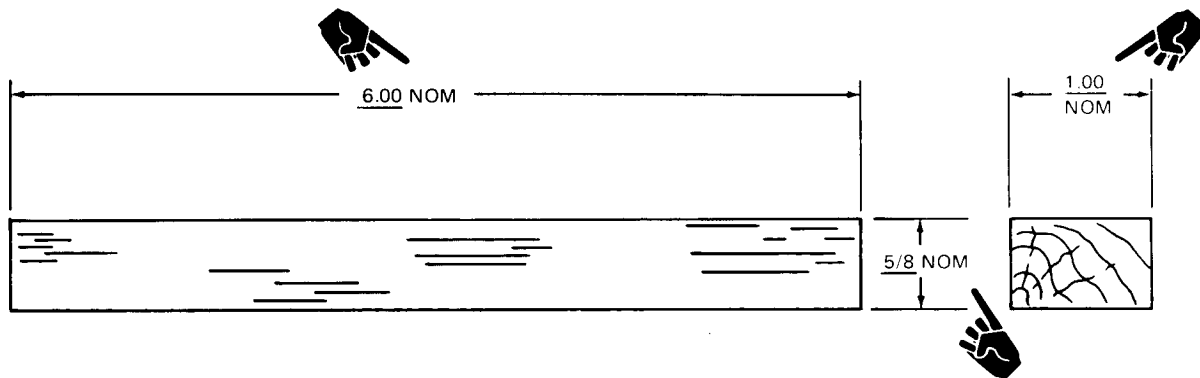
Fabrication Instructions:

Fabricate wooden block out of hardwood stock as follows:

1. Saw wood in accordance with sketch shown below.
2. Remove all rough edges with fine grain sandpaper.

NOTE: All dimensions are in inches.

Sketch or Diagram:



A 1182 E24A

ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No.	Material Required
Wrench	5-18,5-22	Crowfoot Wrench NSN 5120-00-541-4071

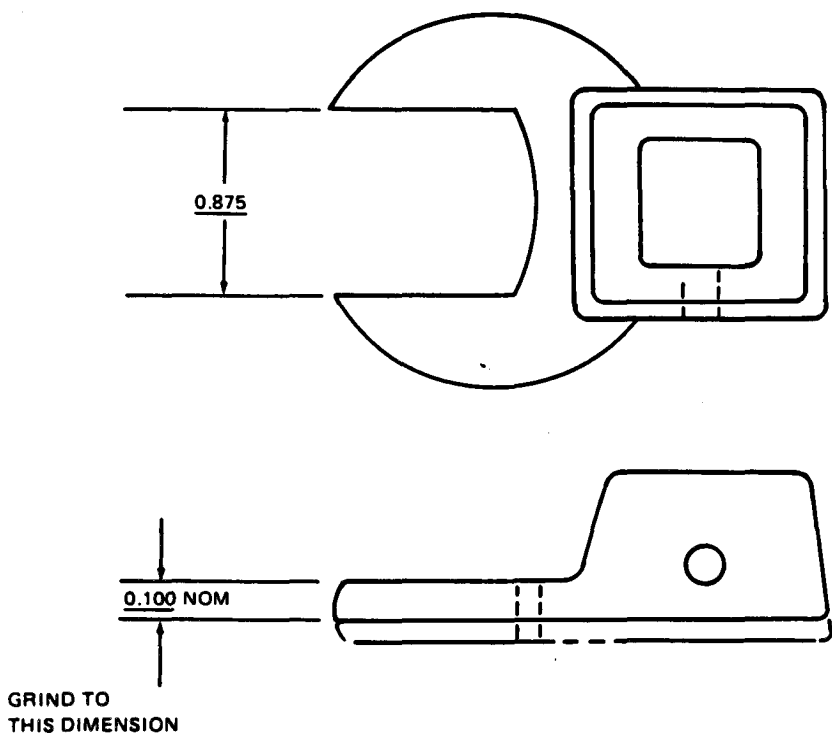
Fabrication Instructions:

Fabricate crowfoot wrench out of specified material as follows:

1. Using bench grinder, grind sufficient material from bottom of crowfoot until approximately 0.100 inch of material remains.
2. Sand or file rough edges

NOTES: All dimensions are in inches.

Sketch or Diagram:



A-1182-E20A

ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No	Material Required
Oil Seal Installation Tool (E-39)	5-5.6	Aluminum QQ-A-200/8T6

FABRICATION INSTRUCTIONS:

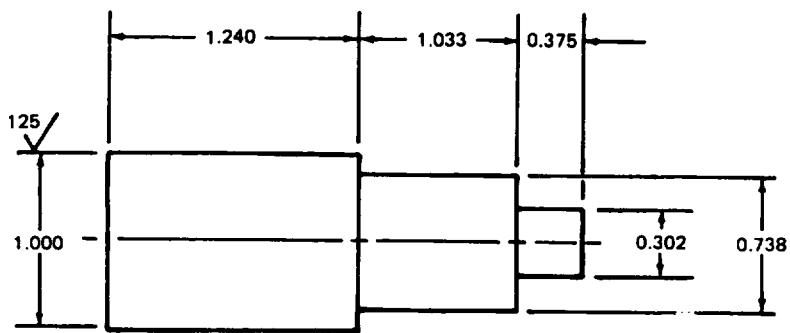
Fabricate top seal installation tool out of aluminum stock as follows:

1. Machine in accordance with sketch shown below.
2. Surface treat with anodize MIL-A-8625 Type II.

NOTES:

1. All dimensions are in inches.
Tolerance 0.005

Sketch or Diagram:



ALL DIMENSIONS ARE IN INCHES

A-1182-E-38

ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

Nomenclature	Reference Task No.	Material Required
Bottom Seal Installation Tool	2-62	Aluminum QQ-A-200/8T6

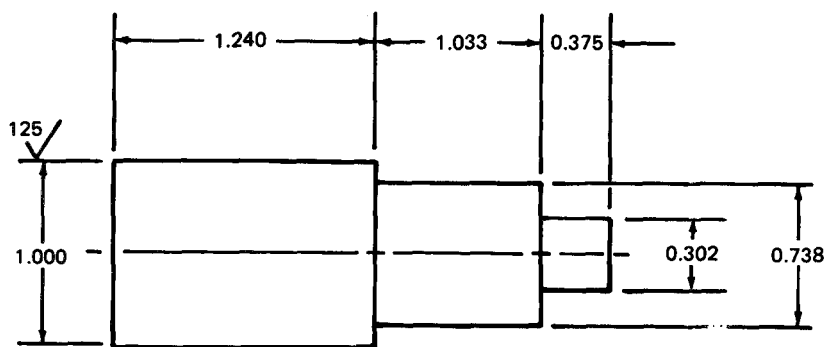
Fabrication Instructions:

Fabricate bottom seal installation tool out of aluminum stock as follows:

1. Machine in accordance with sketch shown below.
2. Surface treat with anodize MIL-A-8625 Type II.

NOTES: All dimensions are in inches.
Tolerance ± 0.005

Sketch or Diagram



ALL DIMENSIONS ARE IN INCHES

A-1182-E-38

APPENDIX F
ABBREVIATIONS

AVIM	Aviation Intermediate Maintenance
AVUM	Aviation Unit Maintenance
BITE	Built-In Test Equipment
°C	Degrees Celsius
CC	Cubic Centimeters
DMWR	Depot Maintenance Work Requirement
DX	Direct Exchange
EIR	Equipment Improvement Recommendations
°F	Degrees Fahrenheit
FOD	Foreign Object Damage
FSCM	Federal Supply Code for Manufacturers
FWD	Forward
GI	Ground Idle
GSE	Ground Support Equipment
Hg	Mercury
Hz	Hertz
L/H	Left Hand
MAC	Maintenance Allocation Chart
Max	Maximum
METS	Modular Engine Test Systems
Min	Minimum
MOS	Military Occupation Specialty
MTOE	Modified Table of Organization and Equipment
N1	Compressor Rotor RPM
N2	PowerTurbine RPM
NATO	North Atlantic Treaty Organization
No	Number
NOM	Nominal
NSN	National Stock Numbr
PHR	Pounds per Hour
P/N	Part Number
PSI	Pounds per Square Inch
PSIG	Pounds per Square Inch Gage
PT	PowerTurbine
PTIT	Power Turbine Inlet Temperature
QA	Quality Assurance
QC	QualityControl
R/H	Right Hand
RPM	Revolutions per Minute
RPSTL	Repair Parts and Special Tool List
RTV	Room Temperature Vulcanizing
SHP	Shaft Horsepower
SMR	Source, Maintenance and Recoverability
TBO	Time Between Overhaul
TM	Tehnical Manual
TMDE	Test Measurement and Diagnostic Equipment
UUT	Unit UnderTest
Vac	Volts Alternating Current
Vdc	Volts Direct Current
W f	Fuel Flow

GLOSSARY

Definition

A

Abrasion A roughened surface.

B

Bend Distortion in a part.

Binding To confine and restrict the liberty of a free moving part, material, or component. May cause serious damage if a chafing force is being imposed.

Break Separation of a part.

Buckling A large-scale deformation of the original contour of a part, usually due to pressure or impact from a foreign object, structural stresses, excessive localized heating, high pressure differentials, or to any-combination of these.

Burn A rapid destructive oxidizing action usually caused by higher temperatures than the material can withstand structurally. Change in color and appearance often indicates this condition.

Burr A rough or sharp edge on a hole or corner, usually caused by machining, sometimes by wearing.

C

Carborundum. The trade name for a manufactured aluminum oxide abrasive similar to natural emery. It is used for grinding wheels and for abrasive papers.

Chafing A worn or rubbed area caused by friction: refers to the wear produced by parts such as fuel, air and oil lines rubbing against other parts.

Chipping Breaking away of metallic particles.

Concave A hollow surface curved like the inside of a bowl.

Contamination (Foreign Material) Any foreign substance such as metal chips, lint, rust, and water that would be harmful to the functioning of a part or system.

GLOSSARY (Continued)

Definition

C (Continued)

- Converging Tending to move toward one point or another.
- Convex A surface shaped like the outside of a sphere or a ball.
- Corrosion A mass of small pits which cumulatively create a large cavity (usually shallow) in the surface of the parent metal.
- Corrosion Pitting Irregular surface depressions having ragged edges due to metal removal caused by corrosive substance adhering to exposed surfaces.
- Corrugated The forming and shaping of sheet metal into wrinkles or folds or into alternating ridges and grooves.
- Crack Parting of parent metal.

D

- Dent A completely smooth surface depression caused by pressure or impact from a smooth ball-like foreign object. The parent material is displaced, but usually none is separated.
- Desiccant A drying agent; usually placed in containers along with parts being stored, to absorb moisture and prevent corrosion.
- Diagnostic Equipment Test equipment used to determine what the defective part is.
- Distortion Twisting or bending out of a normal, natural or original shape, usually caused from being exposed to excessive pressure or temperature either when restrained or unrestrained.

F

- Fatigue The progressive weakening of a material under repeated cycles of stress.
- Foreign Material See Contamination.
- Foreign Object Any object such as a tool, piece of equipment, engine part (nut, bolt, lockwire) that could in any way damage the engine.
- Fraying Wearing or rubbing of areas, generally used in reference to damage on wire-braid covering (of teflon hose) or on thermocouple harness.

GLOSSARY (Continued)

Definition

G

Gouge A wide rough scratch or group of scratches, usually, with one or more sharply impressed corners, and frequently accompanied by deformation or removal of parent metal.

H

Heat Discoloration Characterized by a discoloring film. Color varies from light straw, tan, or light brown changing to red-purple, purple, or blue. Caused by high temperature operation.

I

Insulation A material or device used to prevent passage of heat electricity, or sound from one medium to another.

K

Kinks Short, tight twists or curls caused by a doubling or winding of a hose or line upon itself. Likely to cause difficulties in the operation.

L

Loose Abnormal movement of a part.

N

Nick A surface impression with sharp corners or bottom, usually caused by pressure or impact from a sharp-edged foreign body. The parent material is displaced but usually none is separated.

O

Overhaul To restore an item to a completely serviceable condition as prescribed by serviceability standards developed and published by the Government.

Overshooting When the expected N1 or N2 speed is exceeded momentarily and then drops below the expected level.

Overspend When the expected N1 or N2 speed is exceeded.

Oxidation A chemical action in which a metallic element is united with oxygen causing deterioration of the metal or material.

GLOSSARY (Continued)

Definition

P

- Parent Metal The basic metal of a part, sometimes referred to as base metal; the term is used particularly in connection with welding, where the parent metal is that being welded rather than that used in welding rod.
- Peening Surface deformation.
- Phenolic. A thermosetting resin or plastic made especially for molding and insulating, coatings and adhesives.
- Pitting Very shallow depressions in a surface, usually caused by chemical reaction (rusting chemical corrosion).
- Popping Sharp abrupt noise normally caused by erratic bleed band operation.
- Protrusion Projection sticking out from the rest of the surrounding material or surface.
- Puncture A hole that is pierced in a material.

R

- Repair To restore a defective part, component, subassembly or assembly to a serviceable condition.
- Rollover A curl usually on the leading edge of a blade, resulting from deformation by the peening action of foreign objects.
- Rub When one component contacts another and is moved in relationship to it causing material to be removed from it.
- Rust Oxidation of iron. A red, crusty product which forms on iron or steel when it unites with oxygen.

S

- Scoring Multiple scratches, usually parallel and resulting from the same cause.
- Scratch A long, narrow sharp-cornered impression caused by the movement of a sharp object across the surface of parent material.

GLOSSARY (Continued)

Definition

S (Continued)

Serviceable Equipment or parts that are in a condition which allows them to be returned to operational status on an aircraft.

Subassembly A self-contained unit of an assembly that can be removed, replaced and repaired separately; turbine nozzles and combustion liners are typical subassemblies.

T

Tear A forcible, somewhat crude pulling or wrenching away of material so that ragged or irregular edges result.

Testing Testing of equipment to determine that the unit functions properly within specified limits.

Tolerance The range of variation allowed in maintaining a specified dimension in making part.

Torque To tighten a nut, bolt, or fitting, using a torque wrench, to a specified torque value expressed as inch-pounds or as foot-pounds.

U

Undershooting When the expected N1 or N2 speed is not reached and then creeps up to the expected level.

Underspeed When the expected N1 or N2 speed is not reached.

V

Void A continuous lack of braze material through a braze joint cross-section caused by improper repair.

W

Wear Relatively slow removal of parent material from any cause, frequently not visible to the naked eye.

INDEX

Subject	Para/ Task	Page	Subject	Para/ Task	Page
A					
Abbreviations	F-1		Adjust Fuel Control	1-108	1-526
Acceleration Checks	1-107	1-488	Adjust Fuel Control (AVIM)	1-109	1-538
Accessory Gear Assembly (AVIM)			Adjust Maximum Power	1-107	1-481
Clean	5-9	5-53	Adjust Maximum Trim	1-107	1-478
Inspect	5-10	5-54	Adjust Oil Pump	1-110	1-542
Install	5-11	5-56	Air-Bleed Actuator, Interstage (With Water Wash Kit P/N 2-200-071-54 Installed) - (See Interstage Air-Bleed Actuator (With Water Wash Kit P/N 2-200-071-54 Installed))		
Remove	5-8	5-45	Air-Bleed Actuator, Interstage (Without Water Wash Kit PIN 2-200-071-54 Installed) - (See Interstage Air-Bleed Actuator (Without Water Wash Kit P/N 2-200-071-54 Installed))		
Accessory Gear Section	1-17	1-23	Air Diffuser Assembly		
Accessory Gearbox Assembly			Clean (AVIM)	2-37	2-361
Assemble	5-6	5-25	Inspect (AVIM)	2-38	2-363
Clean	5-3	5-19	Install (AVIM)	2-41	2-383
Disassemble	5-2	5-13	Remove (AVIM)	2-36	2-351
Inspect	5-4	5-22	Repair (AVIM)	2-39	2-371
Install	5-7	5-32	Repair	2-40	2-375
Remove	5-1	5-3	Air Gallery Cover, Anti-Icing - See Anti-Icing Air Gallery Cover		
Repair	5-5	5-24	Air Inlet Housing		
Accessory Gearbox Chip Detector,			Assembly		
Service - See Service Accessory Gearbox Chip Detector			Clean	2-64	2-497
Activate Engine After Storage	1-27	1-88	Inspect	2-65	2-498
Actuator, Interstage Air-Bleed			Repair	2-66	2-499
(With Water Wash Kit P/N 2-200-071-4 Installed) - (See Interstage Air-Bleed Actuator (With Water Wash Kit P/N 2-200-07154 Installed))			Air Lines - See Hose Assembly		
Actuator, Interstage Air-Bleed			Alloys, Touch Up Magnesium and Magnesium - See Touch Up Magnesium and Magnesium Alloys		
(Without Water Wash Kit P/N 2-200-071-54 Installed) - (See Interstage Air-Bleed Actuator (Without Water Wash Kit P/N 2-200-071-54 Installed))			Anti-icing Air Gallery Cover		
Adjust			Clean	2-15	2-55
Interstage Air-Bleed Actuator (With Water Wash Kit P/N 2-200-071-54 Installed)	2-8.1	2-40.1	Inspect	2-16	2-58
Interstage Air-Bleed Actuator (Without Water Wash Kit PIN 2-200-071-4 Installed)	2-8	2-28	Install	2-18	2-62
			Remove	2-14	2-51
			Repair	2-17	2-60

INDEX (Continued)

Subject	Para/ Task	Page	Subject	Para/ Task	Page
Check, Seventy-Five Percent Maximum Continuous Power – See Seventy-Five Percent Maximum Continuous Power Check			Clean (cont)		
Check Valve Assembly			Combustion Chamber Housing (AVIM)	3-19	3-213
Clean	8-4.1	8-20.2	Combustion Chamber Liner (AVIM)	3-16	3-183
Inspect	8-4.1	8-20.2	Combustion Chamber Vane Assembly (AVIM)	3-13	3-171
Install	8-4.2	8-20.3	Compressor Bleed Band	2-10	2-44
Remove	8-4.1	8-20.1	Compressor Housing	2-21	2-144
Check Valve, Fuel – See Fuel Check Valve			Compressor Rotor Blades	2-32	2-278
Check, Vibration Meter – See Vibration Meter Check			Diffuser Curl	4-74	4-481
Check, Waveoff – See Waveoff Check			Dual Chip Detector	8-30	8-79
Checks, Acceleration – See Acceleration Checks			Exit Vane Assembly	4-79	4-494
Checks and Services, Preventive Maintenance – See Preventive Maintenance Checks and Services			Fireshield Assembly	4-13	4-69
Chip Detector			Fireshield Section	4-17	4-84
Assemble	8-93	8-295	First Turbine Disc Assembly (AVIM)	4-63	4-406
Clean	8-90	8-291	First Turbine Nozzle (AVIM)	4-68	4-433
Disassemble	8-89	8-289	Flow Divider and Bracket	6-43	6-162
Inspect	8-91	8-293	Fourth Stage Power Turbine Nozzle (AVIM)	4-46	4-271
Install	8-94	8-297	Fourth Stage Power Turbine Rotor (AVIM)	4-34	4-158
Remove	8-88	8-287	Fuel Boost Pump Assembly	6-10	6-42
Test	8-92	8-294	Fuel Check Valve	6-47	6-173
Chip Detector, Accessory Gearbox, Service – See Service Accessory Gearbox Chip Detector			Fuel Control	6-3	6-14
Chip Detector Dual – See Dual Chip Detector			Fuel Drain Valve	3-2	3-6
Chip Detector, Dual Service – See Service Dual Chip Detector			Ignition Coil and Cable Assembly	7-2	7-30
Clean			Ignition Exciter	7-12	7-89
Accessory Gear Assembly (AVIM)	5-9	5-53	Inlet Housing Cover Assembly (AVIM)	2-54	2-458
Accessory Gearbox Assembly	5-3	5-19	In-Line Fuel Filter Assembly	6-38	6-146
Air Diffuser Assembly (AVIM)	2-37	2-361	Interstage Air-Bleed Actuator	2-3	2-14
Air Inlet Housing Assembly	2-64	2-497	Left- and Right-Hand Bus Bar Assemblies	4-8	4-42
Anti-Icing Air Gallery Cover	2-15	2-55	Left- and Right-Hand Fuel Manifold Assemblies	6-17	6-68
Check Valve Assembly	8-18.2	8-40.3	Main Electrical Cable Assembly (Nine Connector)	7-17	7-111
Chip Detector	8-90	8-291	Main Electrical Cable Assembly (Six Connector)	7-17.1	7-112.1
			Main Fuel Filter and Bracket	6-31	6-126
			Main Oil Pump and Scavenge Oil Screen	8-2	8-12
			No. 2 Bearing Package (AVIM)	2-44	2-411
			No. 2 Bearing Pressure Oil Strainer	8-77	8-259
			No. 3 Bearing Package (AVIM)	2-69	2-508
			No. 4 and 5 Bearing Filter	8-81	8-269
			No. 4 and 5 Bearing Oil Tubes (AVIM)	4-42	4-249
			No. 4 and 5 Bearing Package (AVIM)	4-38	4-198
			Oil Cooler Assembly	8-7	8-29

INDEX (Continued)

Subject	Para/ Task	Page	Subject	Para/ Task	Page
Clean (cont)			Combustion Chamber Housing (AVIM)		
Oil Drain Cock	8-85	8-281	Clean	3-19	3-213
Oil Filter Assembly and Oil Filter Strainer	8-18	8-52	Inspect	3-20	3-215
Oil Filter Cap and Stem Assembly and Oil Filter Element	8-24	8-66	Repair	3-21	3-217
Oil Level Float Assembly (AVIM)	8-105	8-340	Combustion Chamber Liner (AVIM)		
Oil Level Indicator	8-97	8-309	Clean	3-16	3-183
Oil Temperature Transmitter	8-13	8-43	Inspect	3-17	3-185
Output Shaft (AVIM)	9-7	9-26	Repair	3-18	3-197
Output Shaft Seal and Housing Assembly	2-49	2-436	Combustion Chamber Vane Assembly (AVIM)		
Output Shaft Support Housing (AVIM).....	2-60	2-478	Clean	3-13	3-171
Overspeed Drive and Outlet Cover Assembly	5-19	5-105	Inspect	3-14	3-173
Primer Tube Assembly	6-22	6-104	Repair	3-15	3-180
Second Turbine Disc Assembly (AVIM)	4-54	4-320	Combustion Section	1-15	1-19
Second Turbine Nozzle, Spacer, and Case (AVIM)	4-58	4-345	Combustion Section		
Spark Igniters	7-7	7-73	Assemble	3-12	3-169
Start Fuel Nozzles	6-26	6-114	Assemble (AVIM)	3-10	3-157
Starter Drive Assembly	5-13	5-85	Disassemble	3-11	3-168
Starter Gearbox Filter	8-73	8-252	Disassemble (AVIM)	3-9	3-151
Starting Fuel Solenoid Valve	6-50	6-181	Combustion Section and Power		
Stator Vane Assemblies	2-27	2-228	Turbine (AVIM)		
Thermocouple Harness Assemblies (AVIM)	4-21	4-102	Assemble	3-7	3-77
Thermocouple Jumper Lead	4-2	4-11	Disassemble	3-6	3-40
Third Stage Power Turbine Rotor (AVIM)	4-50	4-303	Install	3-8	3-116
Third Turbine Nozzle and Support (AVIM)	4-28	4-130	Remove	3-5	3-11
Torquemeter Head Assembly (AVIM)	9-12	9-44	Common Tools and Equipment	1-22	1-41
Torquemeter Junction Box (AVIM)	9-2	9-8	Components, Location and Description of Major - See Location and Description of Major Components		
Clean, Inspect and Repair Splines and Gears	1-118	1-630	Compressor Bleed Band		
Closure Check, Bleed Band - See Bleed Band Closure Check			Clean	2-10	2-44
Coastdown Time, Check Engine - See Check Engine Coastdown Time			Inspect	2-11	2-45
Coil and Cable Assembly, Ignition - See Ignition Coil and Cable Assembly			Install	2-13	2-47
			Remove	2-9	2-41
			Repair	2-12	2-46

INDEX (Continued)

Subject	Para/ Task	Page	Subject	Para/ Task	Page
Compressor Housing			Contaminated Fuel System. Inspect -		
Clean	2-21	2-144	See Inspect Contaminated Fuel		
Inspect	2-22	2-146	System		
Install Lower	2-25	2-178	Contaminated Oil System, Inspect -		
Install Upper	2-24	2-149	See Inspect Contaminated Oil		
Remove Lower	2-20	2-104	System		
Remove Upper	2-19	2-71	Continuous Power Check, Forty		
Repair	2-23	2-147	Percent Maximum - See Forty		
Compressor Rotor Blades			Percent Maximum Continuous		
Clean	2-32	2-278	Power Check		
Inspect	2-33	2-281	Continuous Power Check, Maximum		
Install	2-35	2-317	- See Maximum Continuous		
Remove	2-31	2-255	Power Check		
Repair	2-34	2-312	Continuous Power Check, Seventy-Five		
Compressor Section	1-14	1-15	Percent Maximum - See Seventy-		
Compressor Stall (Surge), Inspect Engine			Five Percent Maximum Continuous		
After - See Inspect Engine After			Power Check		
Compressor Stall (Surge)			Control, Adjust Fuel -		
Compressor Wash (With Water Wash Kit			See Adjust Fuel Control		
P/N 2-200-071-54 Installed) - See			Control, (AVIM) Adjust Fuel -		
Wash Compressor (With Water Wash			See Adjust Fuel Control (AVIM)		
Kit P/N 2-200-071-54 Installed)			Control, Fuel - See Fuel Control		
Compressor, Wash (Without Water Wash			Control Priming, Fuel- See		
Kit P/N 2-200-071-54 Installed) -			Fuel Control Priming		
See Wash Compressor (Without Water			Control (QAIQC), Quality Assurance/		
Wash Kit P/N 2-200-071-54 Installed)			Quality - See Quality Assurance/		
Container, Inspect Pressurized Shipping			Quality Control (QAIQC)		
and Storage - See Inspect Pressur-			Cooler Assembly, Oil -		
ized Shipping and Storage Container			See Oil Cooler Assembly		
Container, Install Engine into Shipping			Cover, Anti-Icing Air Gallery -		
and Storage - See Install Engine into			See Anti-Icing Air Gallery Cover		
Shipping and Storage Container			Cover Assembly (AVIM), Inlet Housing -		
Container, Mark Shipping and Storage -			See Inlet Housing Cover Assembly		
See Mark Shipping and Storage			(AVIM)		
Container, Prepare and Inspect Storage			Curl (AVIM), Diffuser -		
and Shipping - See Prepare and			See Diffuser Curl (AVIM)		
Inspect Storage and Shipping					D
Container			Damage from Chafing, Denting,		
Container, Remove Engine from Ship-			Scratching, Gouging, or Wear,		
ping and Storage - See Remove			Determine Depth of - See		
Engine from Shipping and Storage			Determine Depth of Damage from		
Container			Chafing, Denting, Scratching,		
			Gouging, or Wear		

Subject	Para/ Task	Page	Subject	Para/ Task	Page
Data, Equipment - See Equipment Data			Diffuser Curl (AVIM)		
Data, Equipment Description-and - See Equipment Description and Data			Clean	4-74	4-481
Denting, Scratching, Gouging, or Wear, Determine Depth of Damage from Chafing - See Determine Depth of Damage from Chafing, Denting, Scratching, Gouging, or Wear			Inspect	4-75	4-483
Depth of Damage from Chafing, Denting, Scratching, Gouging, or Wear, Determine - See Determine Depth of Damage from Chafing, Denting, Scratching, Gouging, or Wear			Install	4-77	4-486
Description and Data, Equipment - See Equipment Description and Data			Remove	4-73	4-479
Description of Major Components, Location and - See Location and Description of Major Components			Repair	4.76	4-485
Designations, Official Nomenclature, Names and - See Official Nomenclature, Names, and Designations			Directional References	1-10	1-10
Destruction of Army Material to Prevent Enemy Use	1-3	1-2	Disassemble		
Detector, Chip - See Chip Detector			Accessory Gearbox Assembly.....	5-2	5-13
Detector, Dual Chip - See Dual Chip Detector			Chip Detector	8-89	8-289
Detector, Service Accessory Gearbox Chip - See Service Accessory Gearbox Chip Detector			Combustion Section	3-11	3-168
Detector, Service Dual Chip - See Service Dual Chip Detector			Combustion Section (AVIM).....	3-9	3-151
Determine Depth of Damage from Chafing, Denting, Scratching, Gouging, or Wear	1-120	1-646	Combustion Section and Power Turbine (AVIM)	3-6	3-40
Diffuser Assembly (AVIM), Air - See Air Diffuser Assembly (AVIM)			Dual Chip Detector	8-29	8-77
			Fuel Control	6-2	6-12
			In-Line Fuel Filter Assembly.....	6-37	6-144
			Interstage Air-Bleed Actuator	2-2	2-12
			Main Fuel Filter and Bracket	6-30	6-123
			No. 2 Bearing Package (AVIM)	2-43	2-402
			No. 3 Bearing Package (AVIM)	2-68	2-506
			Oil Cooler Assembly	8-6	8-26
			Oil Filler Assembly and Oil Filler Strainer	8-17	8-50
			Oil Level Float Assembly (AVIM)	8-104	8-339
			Oil Level Indicator	8-96	8-305
			Output Shaft Support Housing (AVIM)	2-59	2-470
			Overspeed Drive and Outlet Cover Assembly	5-18	5-101
			Third Turbine Nozzle and Support (AVIM)	4-27	4-128
			Disc Assembly (AVIM), First Turbine - See First Turbine Disc Assembly (AVIM)		
			Disc Assembly (AVIM), Second Turbine - See Second Turbine Disc Assembly (AVIM)		
			Divider and Bracket, Flow - See Flow Divider and Bracket		
			Drain Cock, Oil - See Oil Drain Cock		
			Drain Engine Oil System	1-75	1-226
			Drain Valve, Fuel - See Fuel Drain Valve		
			Drive Assembly, Starter - See Starter Drive Assembly		

INDEX (Continued)

Subject	Para/ Task	Page	Subject	Para/ Task	Page
Dropped Engine, Inspect - See Inspect Dropped Engine			Engine after N1 Overspeed (AVIM), Inspect - See Inspect Engine after N1 Overspeed (AVIM)		
Dual Chip Detector			Engine after N2 Overspeed (AVIM), Inspect - See Inspect Engine after N2 Overspeed (AVIM)		
Assemble	8-33	8-85	Engine after Power Turbine Overtorque (AVIM), Inspect - See Inspect Engine after Power Turbine Overtorque (AVIM)		
Clean	8-30	8-79	Engine after Storage, Activate - See Activate Engine after Storage		
Disassemble	8-29	8-77	Engine (AVIM), Test - See Test Engine (AVIM)		
Inspect	8-31	8-81	Engine Coastdown Time, Check - See Check Engine Coastdown Time		
Install	8-35	8-88	Engine for Shipment or Storage, Preserve and Prepare - See Preserve and Prepare Engine for Shipment or Storage		
Remove	8-28	8-73	Engine from Maintenance Stand, Remove - See Remove Engine from Maintenance Stand		
Repair	8-32	8-83	Engine from Shipping and Storage Container, Remove - See Remove Engine from Shipping and Storage Container		
Test	8-34	8-87	Engine Hot End (AVIM), Inspect - See Inspect Engine Hot End (AVIM)		
Dual Chip Detector, Service - See Service Dual Chip Detector			Engine Identification 1-107		1-525
E			Engine in Storage Over Six Months, Represerve - See Represerve Engine in Storage Over Six Months		
Electrical and Ignition System	1-191-32		Engine, Inspect Dropped - See Inspect Dropped Engine		
Electrical Cable Assembly, Main - See Main Electrical Cable Assembly			Engine into Shipping and Storage Container, Install - See Install Engine into Shipping and Storage Container		
Element, Oil Filter Cap and Stem Assembly and Oil Filter - See Oil Filter Cap and Stem Assembly and Oil Filter Element			Engine Maintenance Sling, Install - See Install Engine Maintenance Sling		
Element, Service Oil Filter Cap and Stem Assembly and Oil Filter - See Service Oil Filter Cap and Stem Assembly and Oil Filter Element			Engine Maintenance Sling, Remove - See Remove Engine Maintenance Sling		
Enemy Use, Destruction of Army Material to Prevent - See Destruction of Army Material To Prevent Enemy Use			Engine Oil System, Drain - See Drain Engine Oil System		
Engine	1-13	1-13			
Engine after Check Runs, Inspect - See Inspect Engine after Check Runs					
Engine after Compressor Stall (Surge), Inspect - See Inspect Engine after Compressor Stall (Surge)					
Engine after Foreign Object Ingestion, Inspect - See Inspect Engine after Foreign Object Ingestion					

INDEX (Continued)

Subject	Para/ Task	Page	Subject	Para/ Task	Page
Engine Oil System, Service - See Service Engine Oil System			Field Replacement First and Second Turbine Disc Assembly (AVIM), Place in Service - See Place in Service Field Replacement First and Second Turbine Disc Assembly (AVIM)		
Engine on Maintenance Stand, Install - See Install Engine on Maintenance Stand			Filler Assembly and Oil Filler Strainer, Oil - See Oil Filler Assembly and Oil Filler Strainer		
Engine Rating	1-107	1-523	Filler Strainer, Oil Filler Assembly and Oil - See Oil Filler Assembly and Oil Filler Strainer		
Engine Starting Procedure	1-107	1-460	Filler Strainer, Service Oil - See Service Oil Filler Strainer		
Engine Serviceability, Inspect - See Inspect Engine Serviceability			Filter and Bracket, Main Fuel - See Main Fuel Filter and Bracket		
Engine Subjected to Excessive GLoads, Inspect - See Inspect Engine Subjected to Excessive G-Loads			Filter Assembly, In-Line Fuel - See In- Line Fuel Filter Assembly		
Equipment Characteristics, Capabilities, and Features	1-8	1-3	Filter Cap and Stem Assembly and Oil Filter Element, Oil - See Oil Filter Cap and Stem Assembly and Oil Filter Element		
Equipment, Common Tools and - See Common Tools and Equipment			Filter Cap and Stem Assembly and Oil Filter Element, Service Oil - See Service Oil Filter Cap and Stem Assembly and Oil Filter Element		
Equipment Data -.....	1-11	1-11	Filter Element, Oil Filter Cap and Stem Assembly and Oil - See Oil Filter Cap and Stem Assembly and Oil Filter Element		
Equipment Description and Data		1-3	Filter Element, Service Oil Filter Cap and Stem Assembly and Oil - See Service Oil Filter Cap and Stem Assembly and Oil Filter Element		
Equipment Improvement Recommenda- tions (EIR), Reporting - See Reporting Equipment Improvement Recommen- dations (EIR)			Filter Element, Service Oil Filter Cap and Stem Assembly and Oil - See Service Oil Filter Cap and Stem Assembly and Oil Filter Element		
Excessive G-Loads, Inspect Engine Subjected to - See Inspect Engine Subjected to Excessive G-Loads			Filter, No. 4 and 5 Bearing - See No. 4 and 5 Bearing Filter		
Exciter, Ignition - See Ignition Exciter			Filter, Service No. 4 and 5 Bearing Oil Filter - See Service No. 4 and 5 Bearing Oil Filter		
Exit Vane Assembly			Filter, Service Starter Gearbox - See Service Starter Gearbox Filter		
Clean	4-79	4-494	Fireshield Assembly		
Inspect	4-80	4-496	Clean	4-13	4-69
Install	4-82	4-504	Inspect	4-14	4-71
Remove	4-78	4-489	Install	4-15	4-72
Repair	4-81	4-501	Remove	4-12	4-65
Expendable Supplies and Materials List	C-1				
F					
Features, Equipment Characteristics, Capabilities, and - See Equipment Characteristics, Capabilities, and Features					

INDEX (Continued)

Subject	Para/ Task	Page	Subject	Para Task	Page
Fireshield Section			Fourth Stage Power Turbine Nozzle (AVIM)		
Clean	4 17	4-84	Clear	4-46	4-271
Inspect	4-18	4-86	Inspect	4 47	4-272
Install	4-19	4-87	Install	4-49	4-282
Remove	4-16	4-79	Remove	4-45	4-269
			Repair	4-48	4-280
First and Second Turbine Disc Assembly (AVIM), Place in Service Field Replace- ment - See Place in Service Field Replacement First and Second Turbine Disc Assembly (AVIM)			Fourth Stage Power Turbine Rotor (AVIM)		
First Turbine Disc Assembly (AVIM)			Clean	4-34	4-158
Clean	4-63	4-406	Inspect	4-35	4-160
Inspect	4-64	4-408	Install	4-36	4-164
Install	4-66	4-411	Remove	4-33	4-151
Remove	4-62	4-397	Fuel Boost Pump Assembly		
Repair	4-65	4-410	Clean	6-10	6-42
First Turbine Nozzle (AVIM)			Inspect	6-11	6-43
Clean	4-68	4-433	Install	6-13	6-48
Inspect	4-69	4-435	Package	6-15	6-56
Install	4-71	4-464	Preserve	6-14	6-55
Remove	4-67	4-429	Remove	6-9	6-39
First Turbine Rotor Case (AVIM)			Repair	6-12	6-44
Repair	4-70	4-445	Fuel Check Valve		
Flight Idle Check	1-107	1-468	Clean	6-47	6-173
Float Assembly (AVIM), Oil Level - See Oil Level Float Assembly (AVIM)			Install	6-48	6-174
Flow Divider and Bracket			Remove	6-46	6-171
Clean	6-43	6-162	Fuel Control		
Inspect	6-44	6-164	Assembly	6-5	6-19
Install	6-45	6-165	Clean	6-3	6-14
Remove	6-42	6-159	Disassemble	6-2	6-12
Foreign Object Ingestion, Inspect Engine After - See Inspect Engine after Foreign Object Ingestion			Inspect	6-4	6-16
Forms, Records and Reports, Mainte- nance - See Maintenance Forms, Records and Reports			Install	6-6	6-22
Forty Percent Maximum Continuous Power Check	1-107	1-505	Package	6-8	6-36
			Preserve	6-7	6-31
			Remove	6-1	6-5
			Repair	6-4.1	6-18 1
			Fuel Control, Adjust - See Adjust Fuel Control		
			Fuel Control (AVIM), Adjust - See Adjust Fuel Control (AVIM)		
			Fuel Control Priming	1-27	1-89

INDEX (Continued)

Subject	Para/	Page	Subject	Para/	Page
	Task				
Fuel Drain Valve			Gearbox Filter, Service Starter - See		
Clean.....	3-2	3-6	Service Starter Gearbox Filter		
Inspect	3-3	3-7	General Information.....	1-1	
Install	3-4	3-8	Glossary		
Remove.....	3-1	3-3	Glossary-1		
Fuel Filter and Bracket, Main - See Main			Gouging, or Wear, Determine Depth of		
Fuel Filter and Bracket			Damage from Chafing, Denting,		
Fuel Filter Assembly, In—Line – See In-			Scratching - See Determining Depth of		
Line Fuel Filter Assembly			Damage from Chafing, Denting,		
Fuel Lines - See Hose Assembly and			Scratching, Gouging. or Wear		
Tube Assembly			Governor Operation Check, N2 – See N2		
Fuel Manifold Assemblies - See Left-			Governor Operation Check		
and Right—Hand Fuel Manifold Assem-			Ground Idle Check.....	1-107	1-463
blies			Ground Idle Trim Check.....	1-107	1-487
Fuel Nozzles, Start - See Start Fuel					
Nozzles			H		
Fuel Solenoid Valve, Starting - See			Handling, Safety, Care and - See Safety,		
Starting Fuel Solenoid Valve			Care, and Handling		
Fuel System.....	1-18	1-28	Harness Assemblies (AVIM), Thermo-		
Fuel System, Inspect Contaminated -			couple - See Thermocouple Harness		
See Inspect Contaminated Fuel System			Assemblies (AVIM)		
G			Head Assembly (AVIM), Torquemeter-		
G—Loads , Inspect Engine Subjected to			See Torquemeter Head Assembly		
Excessive - See Inspect Engine			(AVIM)		
Subjected to Excessive G Loads			Hoisting		1-109
Gallery Cover, Anti-Icing Air - See Anti			Hose Assembly (Air Diffuser Assembly		
Icing Air Gallery Cover			to Fuel Control)		
Gear Assembly (AVIM), Accessory - See			Install	2-80	2-553
Accessory Gear Assembly (AVIM)			Remove.....	2-79	2-550
Gear Section, Accessory - See Acces-			Hose Assembly (Compressor Housing		
sory Gear Section (AVIM)			to Inlet Housing)		
Gears, Clean, Inspect and Repair Splines			Install	2-78	2-543
and - See Clean, Inspect and Repair			Remove.....	2-77	2-536
Splines and Gears			Hose Assembly (Dual Chip Detector to		
Gearbox Assembly, Accessory - See			Accessory Gearbox Assembly)		
Accessory Gearbox Assembly			Install	8-43	8-113
Gearbox Chip Detector Service, Acces-			Remove.....	8-42	8-107
sory - See Service Accessory			Hose Assembly (Dual Chip Detector to		
Gearbox Chip Detector			Accessory Gearbox Collector)		
			Install	8-45	8-123
			Remove.....	8-44	8-118

INDEX (Continued)

Subject	Para/ Task	Page	Subject	Para/ Task	Page
Hose Assembly (Dual Chip Detector to Air Diffuser Assembly)			Hose Assembly (Inlet Housing to Oil Scavenge Tee)		
Install	8-47	8-131	Install	8-61	8-207
Remove.....	8-46	8-128	Remove.....	8-60	8-204
Hose Assembly (Flow Divider Left Side Primary to Manifold Assembly)			Hose Assembly (In-Line Fuel Filter to Flow Divider)		
Install	6-65	6-225	Install	6-59	6-203
Remove.....	6-64	6-223	Remove.....	6-58	6-199
Hose Assembly (Flow Divider Left Side Secondary to Manifold Assembly)			Hose Assembly (Interstage Air-Bleed Actuator to Air Diffuser Assembly)		
Install	6-69	6-234	Install	2-76	2-534
Remove.....	6-68	6-231	Remove.....	2-75	2-532
Hose Assembly (Flow Divider Right Side Primary to Manifold Assembly)			Hose Assembly (Interstage Air-Bleed Actuator to Fuel Control)		
Install	6-67	6-229	Install	2-74	2-528
Remove.....	6-66	6-227	Remove.....	2-73	2-525
Hose Assembly (Flow Divider Right Side Secondary to Manifold Assembly)			Hose Assembly (Main Fuel Filter to Fuel Control)		
Install	6-71	6-240	Install	6-73	6-247
Remove.....	6-70	6-237	Remove.....	6-72	6-244
Hose Assembly (Fuel Boost Pump to Main Fuel Filter)			Hose Assembly (Main Oil Pump to Dual Chip Detector)		
Install	6-61	6-210	Install	8-49	8-135
Remove.....	6-60	6-206	Remove.....	8-48	8-133
Hose Assembly (Fuel Check Valve to Fuel Boost Pump)			Hose Assembly (Main Oil Pump to Inlet Housing Oil Scavenge Tee)		
Install	6-63	6-218	Install	8-53	8-152
Remove.....	6-62	6-214	Remove.....	8-52	8-148
Hose Assembly (Fuel Control to Oil Cooler)			Hose Assembly (Main Oil Pump to No. 4 and 5 Bearing Scavenge Tube Assembly)		
Install	6-57	6-196	Install	8-55	8-159
Remove.....	6-56	6-193	Remove.....	8-54	8-156
Hose Assembly (Fuel Control to Starting Fuel Solenoid Valve)			Hose Assembly (Accessory Gearbox Assembly to Check Valve Assembly)		
Install	6-75	6-253	Install	8-39	8-100
Remove.....	6-74	6-250	Remove.....	8-38	8-97
Hose Assembly (Inlet Housing to Oil Drain Cock)			Hose Assembly (Oil Cooler to Inlet Housing)		
Install	8-63	8-215	Install	8-37	8-95
Remove.....	8-62	8-209	Remove.....	8-36	8-93

INDEX (Continued)

Subject	Para/ Task	Page	Subject	Para/ Task	Page
Hose Assembly (Oil Cooler to In-Line Fuel Filter)			Hose Assembly (Water Wash Kit Installation to Interstage Airframe Quick Disconnect Shelf)		
Install	6-55	6-191	Install	2-80.10	
Remove.....	6-54	6-189	Remove.....	2-80.9	
Hose Assembly (Oil Cooler to Pressure Connector)			Hoses, Install Spiral Chafing Sleeve on - See Install Spiral Chafing Sleeve on Hoses		
Install	8-41	8-105			
Remove.....	8-40	8-103	Hot End (AVIM), Inspect Engine - See Inspect Engine Hot End (AVIM)		
Hose Assembly (Oil Filler to Starter Drive)			Housing Assembly (AVIM), Air Inlet - See Air Inlet Housing Assembly (AVIM)		
Install	8-65	8-224			
Remove.....	8-64	8-221	Housing Assembly, Output Shaft Seal and - See Output Shaft Seal and Housing Assembly		
Hose Assembly (Pressure Connector to No. 4 and 5 Bearing Filter)			Housing (AVIM), Combustion Chamber- See Combustion Chamber Housing (AVIM)		
Install	8-59	8-191			
Remove.....	8-58	8-178	Housing (AVIM), Output Shaft Support - See Output Shaft Support Housing (AVIM)		
Hose Assembly (Starter Drive to Tube and Hose Assembly)			Housing, Compressor - See Compressor Housing		
Install	8-67	8-229			
Remove.....	8-66	8-226	Housing Cover Assembly (AVIM), Inlet - See Inlet Housing Cover Assembly (AVIM)		
Hose Assembly (Starting Fuel Solenoid Valve to Tube Assembly)					
Install	6-77	6-259	I		
Remove.....	6-76	6-256	Identification, Engine - See Engine Identification		
Hose Assembly (Water Wash Check Valve Elbow to Interstage Air-Bleed Actuator T/C Inlet)			Idle Check, Flight - See Flight Idle Check		
Install	2-80.8		Idle Check, Ground - See Ground Idle Check		
Remove.....	2-80.7		Idle Trim Check, Ground - See Ground Idle Trim Check		
Hose Assembly (Water Wash Check Valve Reducer to Interstage Air-Bleed Actuator P3 Inlet)			Igniters, Spark - See Spark Igniters		
Install	2-80.4		Ignition Coil and Cable Assembly		
Remove.....	2-80.3		Clean.....	7-2	7-30
Hose Assembly (Water Wash Tee Check Valve to Interstage Air-Bleed Actuator P3 Inlet)			Inspect	7-3	7-32
Install	2-80.6		Install	7-5	7-41
Remove.....	2-80.5		Remove.....	7-1	7-3
			Repair	7-4	7-35

INDEX (Continued)

Subject	Para/ Task	Page	Subject	Para Task	Page
Ignition Exciter			Inspect (cont)		
Clean.....	7-12	7-89	Air Inlet Housing Assembly	2-65	2-498
Inspect	7-13	7-91	Check Valve Assembly.....	8-18 3	8-40.4
Install	7-15	7-94	Anti-Icing Air Gallery Cover	2-16	2-58
Remove.....	7-11	7-85	Chip Detector	8-91	8-293
Repair	7-14	7-92	Combustion Chamber Housing (AVIM).....	3-20	3-215
Ignition System - Electrical and - See Electrical and Ignition System			Combustion Chamber Liner (AVIM) .3-17	3-185	
Illustrated List of Manufactured Items		E-1	Combustion Chamber Vane Assembly (AVIM)	3-14	3-173
Improvement Recommendations (EIR), Reporting Equipment - See Reporting Equipment Improvement Recommen- dations (EIR)			Compressor Bleed Band	2-11	2-45
Index, Symptom - See Symptom Index			Compressor Housing	2-22	2-146
Indicator, Oil Level - See Oil Level Indicator			Compressor Rotor Blades.....	2-33	2-281
Information, General - See General Information			Diffuser Curl	4-75	4-483
Ingestion, Inspect Engine after Foreign Object - See Inspect Engine after Foreign Object Ingestion			Dual Chip Detector.....	8-31	8-81
Inlet Housing Assembly (AVIM), Air- See Air Inlet Housing Assembly (AVIM)			Exit Vane Assembly	4-80	4-496
Inlet Housing Cover Assembly (AVIM)			Fireshield Assembly.....	4-14	4-71
Clean.....	2-54	2-458	Fireshield Section.....	4-18	4-86
Inspect	2-55	2-459	First Turbine Disc Assembly (AVIM) 4-644-408		
Install	2-57	2-461	First Turbine Nozzle (AVIM).....	4-69	4-435
Remove.....	2-53	2-455	Flow Divider and Bracket	6-44	6-164
Repair	2-56	2-460	Fourth Stage Power Turbine Nozzle (AVIM).....	4-47	4-273
In-Line Fuel Filter Assembly			Fourth Stage Power Turbine Rotor (AVIM).....	4-35	4-160
Assemble	6-40	6-150	Fuel Boost Pump Assembly	6-11	6-43
Clean.....	6-38	6-146	Fuel Control	6-4	6-16
Disassemble	6-37	6-144	Fuel Drain Valve.....	3-3	3-7
Inspect	6-39	6-148	Ignition Coil and Cable Assembly.....	7-3	7-32
Install	6-41	6-153	Ignition Exciter.....	7-13	7-91
Remove.....	6-36	6-141	Inlet Housing Cover Assembly (AVIM).....	2-55	2-459
Inspect			In-Line Fuel Filter Assembly.....	6-39	6-148
Accessory Gear Assembly (AVIM) ...5-10	5-54		Interstage Air-Bleed Actuator	2-4	2-16
Accessory Gearbox Assembly.....	5-4	5-22	Left- and Right-Hand Bus Bar Assemblies.....	4-9	4-43
Air Diffuser Assembly (AVIM).....	2-38	2-363	Left- and Right-Hand Fuel Manifold Assemblies.....	6-18	6-70
			Main Electrical Cable Assembly (Nine Connector)	7-18	7-113
			Main Electrical Cable Assembly (Six Connector).....	7-18.1	7-114 1
			Main Fuel Filter and Bracket	6-32	6-128
			Main Oil Pump and Scavenge Oil Screen.....	8-3	8-14
			No. 2 Bearing Package (AVIM)	2-45	2-414
			No. 2 Bearing Pressure Oil Strainer .8-78	8-260	
			No. 3 Bearing Package (AVIM)	2-70	2-511
			No. 4 and 5 Bearing Filter	8-82	8-270
			No. 4 and 5 Bearing Oil Tubes (AVIM).....	4-434-250	

INDEX (Continued)

Subject	Para/ Task	Page	Subject	Para/ Task	Page
Inspect (cant)			Inspect Engine Serviceability	1-851	1-262 1
No. 4 and 5 Bearing Package (AVIM).....	4-39	4-200	Inspect Engine after Compressor Stall (Surge).....	1-90	1-306
Oil Cooler Assembly.....	8-8	8-31	Inspect Engine after Foreign Object Ingestion	1-92	1-309
Oil Drain Cock.....	8-86	8-283	Inspect Engine after N1 Overspeed (AVIM).....	1-79	1-241
Oil Filler Assembly and Oil Filler Strainer	8-19	8-54	Inspect Engine after N2 Overspeed (AVIM).....	1-80	1-243
Oil Filter Cap and Stem Assembly and Oil Filter Element.....	8-25	8-68	Inspect Engine after Power Turbine Overtorque (AVIM).....	1-84	1-253
Oil Level Float Assembly (AVIM)....	8-106	8-342	Inspect Engine Hot End (AVIM).....	1-93	1-313
Oil Level Indicator	8-98	8-311	Inspect Engine Subjected to Excessive G-Loads	1-82	1-247
Oil Temperature Transmitter	8-14	8-44	Inspect Pressurized Shipping and Storage Container	1-25	1-45
Output Shaft (AVIM)	8	9-28	Inspect Shipping and Storage Container, Prepare and - See Prepare and Inspect Shipping and Storage Con- tainer		
Output Shaft Seal and Housing Assembly	2-50	2-437	Inspections, Special - See Special Inspections		
Output Shaft Support Housing (AVIM)2-61	2-481		Install		
Overspeed Drive and Outlet Cover Assembly	5-20	5-107	Accessory Gear Assembly (AVIM)	5-11	5-56
Primer Tube Assembly.....	6-23	6-106	Accessory Gearbox Assembly.....	5-7	5-32
Second Turbine Disc Assembly (AVIM).....	4-55	4-322	Air Diffuser Assembly (AVIM).....	2-41	2-383
Second Turbine Nozzle, Spacer, and Case (AVIM).....	4-59	4-347	Anti-Icing Air Gallery Cover	2-18	2-62
Spark Igniters.....	7-8	7-74	Check Valve Assembly.....	8-18,4	8-40.5
Start Fuel Nozzles.....	6-27	6-115	Chip Detector	8-94	8-297
Starter Drive Assembly	5-14	5-86	Combustion Section and Power Turbine (AVIM).....	3-8	3-116
Starter Gearbox Filter.....	8-74	8-253	Compressor Bleed Band	2-13	2-47
Starting Fuel Solenoid Valve.....	6-51	6-182	Compressor Rotor Blades.....	2-35	2-317
Stator Vane Assemblies.....	2-28	2-230	Diffuser Curl.....	4-77	4-486
Thermocouple Harness Assemblies (AVIM).....	4-22	4-103	Dual Chip Detector.....	8-35	8-88
Thermocouple Jumper Lead.....	4-3	4-12	Exit Vane Assembly	4-82	4-504
Third Stage Power Turbine Rotor (AVIM).....	4-51	4-305	Fireshield Assembly	4-15	4-72
Third Turbine Nozzle and Support (AVIM).....	4-29	4-132	Fireshield Section.....	4-19	4-87
Torquemeter Head Assembly (AVIM) 9-13	9-46		First Turbine Disc Assembly (AVIM) 4-66	4-411	
Torquemeter Junction Box (AVIM)	9-3	9-9	First Turbine Nozzle (AVIM).....	4-71	4-464
Inspect and Repair Splines and Gears, Clean - See Clean, Inspect and Repair Splines and Gears			Flow Divider and Bracket	6-45	6-165
Inspect Contaminated Fuel System	1-85	1-255	Fourth Stage Power Turbine Nozzle (AVIM).....	4-49	4-282
Inspect Contaminated Oil System.....	1-86	1-264			
Inspect Dropped Engine	1-83	1-249			
Inspect Engine after Check Runs	1-91	1-308			

INDEX (Continued)

Install (cont)	Subject	Para/ Task	Page	Install (cont)	Subject	Para/ Task	Page
	Fourth Stage Power Turbine Rotor (AVIM).....	4-36	4-164		Hose Assembly (Main Oil Pump to Inlet Housing Oil Scavenge Tee).....	8-53	8-152
	Fuel Boost Pump Assembly.....	6-13	6-48		Hose Assembly (Main Oil Pump to No. 4 and 5 Bearing Scavenge Tube Assembly).....	8-55	8-159
	Fuel Check Valve.....	6-48	6-174		Hose Assembly (Accessory Gearbox Assembly to Check Valve Assembly).....	8-39	8-100
	Fuel Control.....	6-6	6-22		Hose Assembly (Oil Cooler to Inlet Housing).....	8-37	8-95
	Fuel Drain Valve.....	3-4	3-8		Hose Assembly (Oil Cooler to In-Line Fuel Filter).....	6-55	6-191
	Hose Assembly (Ar Diffuser Assembly to Fuel Control).....	2-80	2-553		Hose Assembly (Oil Cooler to Pressure Connector).....	8-41	8-105
	Hose Assembly (Compressor Housing to Inlet Housing).....	2-78	2-543		Hose Assembly (Oil Filter to Starter Drive).....	8-65	8-224
	Hose Assembly (Dual Chip Detector to Accessory Gearbox Assembly).....	8-43	8-113		Hose Assembly (Pressure Connector to No. 4 and 5 Bearing Filter).....	8-59	8-191
	Hose Assembly (Dual Chip Detector to Accessory Gearbox Collector).....	8-45	8-123		Hose Assembly Starter Drive to Tube and Hose Assembly).....	8-67	8-229
	Hose Assembly (Dual Chip Detector to Air Diffuser Assembly).....	8-47	8-131		Hose Assembly (Starting Fuel Solenoid Valve to Tube Assembly).....	6-77	6-259
	Hose Assembly (Flow Divider Left Side Primary to Manifold Assembly).....	6-65	6-225		Hose Assembly (Water Wash Check Valve Elbow to Interstage Air-Bleed Actuator T/C Inlet).....	2-80.8	
	Hose Assembly (Flow Divider Left Side Secondary to Manifold Assembly).....	6-69	6-234		Hose Assembly (Water Wash Check Valve Reducer to Interstage Air-Bleed Actuator P3 Inlet).....	2-80.4	
	Hose Assembly (Flow Divider Right Side Primary to Manifold Assembly).....	6-67	6-229		Hose Assembly (Water Wash Tee Check Valve to Interstage Air-Bleed Actuator P3 Inlet).....	2-80.6	
	Hose Assembly (Flow Divider Right Side Secondary to Manifold Assembly).....	6-71	6-240		Hose Assembly (Water Wash Kit Installation to Airframe Quick Disconnect Shef).....	2-80.10	
	Hose Assembly (Fuel Boost Pump to Main Fuel Filter).....	6-61	6-210		Ignition Coil and Cable Assembly.....	7-5	7-41
	Hose Assembly (Fuel Check Valve to Fuel Boost Pump).....	6-63	6-218		Ignition Exciter.....	7-15	7-94
	Hose Assembly (Fuel Control to Oil Cooler).....	6-57	6-196		Inlet Housing Cover Assembly (AVIM).....	2-57	2-461
	Hose Assembly (Fuel Control to Starting Fuel Solenoid Valve).....	6-75	6-253		In-Line Fuel Filter Assembly.....	6-41	6-153
	Hose Assembly (Inlet Housing to Oil Drain Cock).....	8-63	8-215		Interstage Air-Bleed Actuator (With Water Wash Kit P/N 2-200-071-54 Installed).....	2-8.1	2-40 1
	Hose Assembly (Inlet Housing to Oil Scavenge Tee).....	8-61	8-207		Interstage Air Bleed Actuator (Without Water Wash Kit P/N 2-200-071-54 Installed).....	2-8	2-28
	Hose Assembly (In-Line Fuel Filter to Flow Divider).....	6-59	6-203		Interstage Air-Bleed Actuator.....	2-7	2-21
	Hose Assembly (Interstage Air-Bleed Actuator to Air Diffuser Assembly).....	2-76	2-534		Left- and Right-Hand Bus Bar Assemblies.....	4-11	4-51
	Hose Assembly (Interstage Air-Bleed Actuator to Fuel Control).....	2-74	2-528		Left- and Right-Hand Fuel Manifold Assemblies.....	6-20	6-78
	Hose Assembly (Main Fuel Filter to Fuel Control).....	6-73	6-247		Lower Compressor Housing.....	2-25	2-178
	Hose Assembly (Main Oil Pump to Dual Chip Detector).....	8-49	8-135		Main Electrical Cable Assembly (Nine Connector).....	7-21	7-26.10

INDEX (Continued)

Para/ Subject	Task	Page	Subject	Para/ Task	Page
Install (cont)			Install (cont)		
Main Electrical Cable Assembly (Six Connector)	7-21.1	7-138	Start Fuel Nozzles.....	6-28	6-116
Main Fuel Filter and Bracket	6-35	6-136.1	Starter Drive Assembly	5-16	5-95
Main Oil Pump and Scavenge			Starter Gearbox Filter.....	8-75	8-254
Oil Screen	8-4	8-15	Starter Fuel Solenoid Valve.....	6-53	6-184
No. 2 Bearing Package (AVIM)	2-47	2-427	Stator Vane Assemblies.....	2-30	2-234
No. 2 Bearing Pressure Oil			Thermocouple Harness		
Strainer	8-79	8-261	Assemblies (AVIM).....	4-25	4-110
No. 3 Bearing Package (AVIM)	2-72	2-515	Thermocouple Jumper Lead.....	4-6	4-21
No. 4 and 5 Bearing Filter	8-83	8-271	Third Turbine Nozzle Support (AVIM).....	4-32	4-143
No. 4 and 5 Bearing Oil Tubes (AVIM).....	4-44	4-252	Torquemeter Head Assembly (AVIM).....	9-14	9-49
No. 4 and 5 Bearing Package			Torquemeter Junction Box (AVIM).....	9-5	9-13
Seals (AVIM).....	4-40	4-202	Tube and Hose Assembly (Accessory Gearbox Collector to Tube Assembly)	8-69	8-237
Oil Cooler Assembly.....	8-11	8-35	Tube Assembly (Hose Assembly to Primer Tube Assembly).....	6-79	6-267
Oil Drain Cock.....	8-87	8-284	Tube Assembly (Inlet Housing to Main Oil Pump)	8-51	8-140
Oil Filler Assembly and Oil Filler Strainer	8-22	8-60	Tube Assembly (No. 4 and 5 Bearing Scavenge Connector to Hose Assembly).....	8-57	8-170
Oil Filter Cap and Stem Assembly and Oil Filter Element.....	8-27	8-70	Tube Assembly (Tube and Hose Assembly to Accessory Gearbox Assembly).....	8-71	8-246
Oil Level Float Assembly (AVIM).....	8-109	8-346	Tube Assembly (Water Wash Check Valve to Air Diffuser Assembly)	2-80.2	2-556.3
Oil Level Indicator	8-101	8-321	Upper Compressor Housing.....	2-24	2-149
Oil Pump Check Valve (AVIM)	8-4.2	8-20.3			
Oil Temperature Transmitter	8-15	8-45			
Output Shaft (AVIM).....	9-10	9-31			
Output Shaft Seal and Housing Assembly	2-52	2-447			
Output Shaft Support Housing (AVIM).....	2-63	2-490			
Overspeed Drive and Outlet Cover Assembly	5-23	5-114			
Primer Tube Assembly.....	6-24	6-107			
RTV in First Stage Stator Vane Assembly	2-30.1	2-253.1			
Seal.....	5-5.3	5-24.3			
Seal and Liner Assembly.....	5-5.4	5-24.4	Install Engine Into Shipping and Storage Container.....	1-113	1-589
Seal Assembly	5-5.6	5-24.7			
Second Turbine Disc Assembly (AVIM).....	4-56	4-324			
Second Turbine Nozzle, Spacer, and Case (AVIM).....	4-61	4-387			
Spark Igniters.....	7-10	7-78	Install Engine Maintenance Sling.....	1-30	1-111

INDEX (Continued)

Para/ Subject	Task	Page	Subject	Para/ Task	Page
Install (Cont)			Interstage Air-Bleed Actuator (Cont)		
Install Engine on Maintenance Stand.....	1-28	1-99	Assemble	2-6	2-19
Install Spiral Chafing Sleeve on Hoses.....	1-121	1-652	Clean.....	2-3	2-14
Intermediate Power Check.....	1-107	1-510	Disassemble	2-2	2-12
Interstage Air-Bleed Actuator			Inspect	2-4	2-16
Adjust (With Water Wash Kit P/N 2-200-071-54 Installed)	2-8.1	2-40.1	Install (With Water Wash Kit P/N 2-200-071-54 Installed)	2-7.1	2-27.1
Adjust (Without Water Wash Kit P/N 2-200-071-54 Installed)	2-8	2-40	Install (Without Water Wash Kit P/N 2-200-071-54 Installed)	2-7	2-21
			Remove (Without Water Wash Kit P/N 2-200-071-54 Installed)	2-1.1	2-11
			Remove (Without Water Wash Kit P/N 2-200-071-54 Installed)	2-1	2-5
			Repair	2-5	2-18

INDEX (Continued)

Subject	Para/ Task	Page	Subject	Para/ Task	Page
J					
Jumper Lead, Thermocouple, See Thermocouple Jumper Lead			Location and Description of Major Components.....	1-9	1-5
Junction Box (AVIM), Torquemeter- See Torquemeter Junction Box (AVIM)			Lubrication System	1-20	1-34
L					
Lead, Thermocouple Jumper - See Thermocouple Jumper Lead			Lubricating Oil, Change from MIL-L-7808 to MIL-L-23699 - See Change from MIL-L-7808 to MIL-L-23699 Lubricating Oil		
Leakage, Check for Static Oil - See Check for Static Oil Leakage			Lubricating Oil, Change from MIL-L-23699 to MIL-L-7808 - See Change from MIL-L-23699 to MIL-L-7808 Lubricating Oil		
Leakage (No. 2 Bearing Package) (AVIM), Check for Seal - See Check for Seal Leakage (No. 2 Bearing Package) (AVIM)			M		
Leakage (No. 4 and 5 Bearing) (AVIM), Check for Seal - See Check for Seal Leakage (No. 4 and 5 Bearing) (AVIM)			Magnesium Alloys, Touch Up Magnesium and - See Touch Up Magnesium and Magnesium Alloys		
Left- and Right-Hand Bus Bar Assemblies			Magnesium and Magnesium Alloys, Touch Up - See Touch Up Magnesium and Magnesium Alloys		
Clean.....	4-8	4-42	Main Electrical Cable Assembly (Nine Connector)		
Inspect	4-9	4-43	Clean.....	7-17	7-111
Install	4-11	4-51	Inspect	7-18	7-113
Remove.....	4-7	4-35	Install	7-21	7-26.10
Test.....	4-10	4-44	Main Electrical Cable Assembly (Nine Connector) (cont)		
Left- and Right-Hand Fuel Manifold Assemblies			Remove.....	7-16	7-99
Clean.....	6-17	6-68	Repair	7-19	7-115
Inspect	6-18	6-70	Test.....	7-20	7-116.1
Left- and Right-Hand Fuel Manifold Assemblies (cont)			Main Electrical Cable Assembly (Six Connector)		
Install	6-20	6-78	Clean.....	7-17.1	7-112.1
Remove.....	6-16	6-57	Inspect	7-18.1	7-114.1
Repair	6-19	6-72	Install	7-21.1	7-138
Level Float Assembly (AVIM), Oil - See Oil Level Float Assembly (AVIM)			Remove.....	7-16.1	7-110.1
Level Indicator, Oil, - See Oil Level Indicator			Repair	7-19.1	7-116
Limits, Standard Torque - See Standard Torque Limits			Test.....	7-20.1	7-126
Liner (AVIM), Combustion Chamber -See Combustion Chamber Liner (AVIM)			Main Fuel Filter and Bracket		
			Assemble	6-34	6-133
			Clean.....	6-31	6-126
			Disassemble	6-30	6-123
			Inspect	6-32	6-128
			Install	6-35	6-136
			Remove.....	6-29	6-119

INDEX (Continued)

Subject	Para/ Task	Page	Subject	Para/ Task	Page
Main Fuel Filter and Bracket (cont)			Maximum Continuous Power Check.....	1-107	1-497
Repair (Ten Bolt Holes).....	6-33	6-132	Maximum Continuous Power Check, Forty Percent- See Forty Percent Maximum Continuous Power Check		
Repair (Eight Bolt Holes).....	6-33.1	6-132.	Maximum Continuous Power Check, Seventy-Five Percent - See Seventy- Five Percent Maximum Continuous Power Check		
Main Oil Pump and Scavenge Oil Screen			Maximum Power, Adjust - See Adjust Maximum Power		
Clean.....	8-2	8-12	Maximum Power Check.....	1-107	1-502
Inspect	8-3	8-14	Maximum Trim, Adjust - See Adjust Maximum Trim		
Install	8-4	8-15	Meter Check, Vibration - See Vibration Meter Check		
Remove.....	8-1	8-7	MIL-L-7808 Lubricating Oil, Change from MIL-L-23699 - See Change from MIL- L-23699 to MIL-L-7808 Lubricating Oil		
Maintenance Allocation Chart.....		B-1	MIL-L-7808 to MIL-L-23699 Lubricating Oil, Change from - See Change from MIL-L-7808 to MIL-L-23699 Lubricating Oil		
Maintenance Checks and Services, Preventive - See Preventive Mainte- nance Checks and Services			MIL-L-23699 Lubricating Oil, Change from MIL-L-7808 - See Change from MIL- L-7808 to MIL-L-23699 Lubricating Oil		
Maintenance Forms, Records and Reports	1-2	1-1	MIL-L-23699 to MIL-L-7808 Lubricating Oil, Change from - See Change from MIL-L-23699 to MIL-L-7808 Lubricating Oil		
Maintenance Practices, Standard - See Standard Maintenance Practices			Minor Servicing.....	1-94	1-369
Maintenance Procedures.....		1-443	Months, Represerve Engine in Storage Over Six - See Represerve Engine in Storage Over Six Months		
Maintenance Sling, Install Engine - See Install Engine Maintenance Sling					
Maintenance Sling, Remove Engine - See Remove Engine Maintenance Sling			N		
Maintenance Stand, Install Engine on - See Install Engine on Maintenance Stand			Names and Designations, Official Nomenclature - See Official Nomen- clature, Names and Designations		
Maintenance Stand, Remove Engine from - See Remove Engine from Mainte- nance Stand			N1 Overspeed (AVIM), Inspect Engine after- See Inspect Engine after N1 Overspeed (AVIM)		
Major Components, Location and Description of - See Location and Description of Major Components			N2 Governor Operation Check	1-107	1-512
Manifold Assemblies - See Left- and Right-Hand Fuel Manifold Assemblies			N2 Overspeed (AVIM), Inspect Engine after- See Inspect Engine after N2 Overspeed (AVIM)		
Manufactured Items, Illustrated List of - See Illustrated List of Manufactured Items					
Mark Shipping and Storage Container.....	1-114	1-615			
Materials List, Expendable Supplies and - See Expendable Supplies and Materials List					

INDEX (Continued)

Subject	Para/ Task	Page	Subject	Para/ Task	Page
No. 2 Bearing Package (AVIM)			No. 4 and 5 Bearing Package (AVIM)		
Assemble	2-46	2-417	Clean.....	4-38	4-198
Clean.....	2-44	2-411	Inspect	4-39	4-200
Disassemble	2-43	2-402	No. 4 and 5 Bearing Package Seals (AVIM)		
Inspect	2-45	2-414	Install	4-40	4-202
Install	2-47	2-427	Remove.....	4-37	4-185
Remove.....	2-42	2-395	Nomenclature, Names, and Designations, Official - See Official Nomenclature, Names, and Designations		
No. 2 Bearing Package (AVIM), Check for Seal Leakage - See Check for Seal Leakage (No. 2 Bearing Package) (AVIM)			Normal Shutdown Procedure.....	1-107	1-521
No. 2 Bearing Pressure Oil Strainer			Nozzle and Support (AVIM), Third Turbine - See Third Turbine Nozzle and Support (AVIM)		
Clean.....	8-77	8-259	Nozzle (AVIM), First Turbine - See First Turbine Nozzle (AVIM)		
Inspect	8-78	8-260	Nozzle (AVIM), Fourth Stage Power Turbine - See Fourth Stage Power Turbine Nozzle (AVIM)		
Install	8-79	8-261	Nozzle, Spacer, and Case (AVIM), Second Turbine - See Second Turbine Nozzle, Spacer, and Case (AVIM)		
Remove.....	8-76	8-257	Nozzles, Start Fuel - See Start Fuel Nozzles		
No. 2 Bearing Pressure Oil Strainer, Service - See Service No. 2 Bearing Pressure Oil Strainer			O		
No. 3 Bearing Package (AVIM)			Object Ingestion, Inspect Engine after Foreign - See Inspect Engine after Foreign Object Ingestion		
Assemble	2-71	2-513	Official Nomenclature, Names, and Designations	1-6	1-2
Clean.....	2-69	2-508	Oil, Change from MIL-L-7808 to MIL-L- 23699 Lubricating - See Change from MIL-L-7808 to MIL-L-23699 Lubricating Oil		
Disassemble	2-68	2-506	Oil, Change from MIL-L-23699 to MIL-L- 7808 Lubricating - See Change from MIL-L-23699 to MIL-L-7808 Lubricating Oil		
Inspect	2-70	2-511			
Install	2-72	2-515			
Remove.....	2-67	2-501			
No. 4 and 5 Bearing (AVIM), Check for Seal Leakage - See Check for Seal Leakage (No. 4 and 5 Bearing) (AVIM)					
No. 4 and 5 Bearing Filter					
Clean.....	8-81	8-269			
Inspect	8-82	8-270			
Install	8-83	8-271			
Remove.....	8-80	8-263			
No. 4 and 5 Bearing Oil Filter, Service - See Service No. 4 and 5 Bearing Oil Filter					
No. 4 and 5 Bearing Oil Tubes (AVIM)					
Clean.....	4-42	4-249			
Inspect	4-43	4-250			
Install	4-44	4-252			
Remove.....	4-41	4-245			

INDEX (Continued)

Subject	Para/ Task	Page	Subject	Para/ Task	Page
Oil Cooler Assembly			Oil Filter Element, Service Oil Filter Cap and Stem Assembly and - See Service Oil Filter Cap and Stem Assembly and Oil Filter Element		
Assemble	8-10	8-33	Oil Filter, Service No. 4 and 5 Bearing - See Service No. 4 and 5 Bearing Oil Filter		
Clean.....	8-7	8-29	Oil Leakage, Check for Static - See Check for Static Oil Leakage		
Disassemble	8-6	8-26	Oil Level Float Assembly (AVIM)		
Inspect	8-8	8-31	Assemble	8-108	8-344
Install	8-11	8-35	Clean.....	8-105	8-340
Remove.....	8-5	8-21	Disassemble	8-104	8-339
Repair	8-9	8-32	Inspect	8-106	8-342
Oil Drain Cock			Install	8-109	8-346
Clean.....	8-85	8-281	Remove.....	8-103	8-335
Inspect	8-86	8-283	Repair	8-107	8-343
Install	8-87	8-284	Oil Level Indicator		
Remove.....	8-84	8-279	Adjust.....	8-102	8-327
Oil Filler Assembly and Oil Filler Strainer			Assemble	8-100	8-315
Assemble	8-21	8-57	Clean.....	8-97	8-309
Clean.....	8-18	8-52	Disassemble	8-96	8-305
Disassemble	8-17	8-50	Inspect	8-98	8-311
Inspect	8-19	8-54	Install	8-101	8-321
Install	8-22	8-60	Remove.....	8-95	8-301
Remove.....	8-16	8-47	Repair	8-99	8-313
Repair	8-20	8-56	Oil Lines - See Hose Assembly and Tube Assembly		
Oil Filler Strainer, Oil Filler Assembly and - See Oil Filler Assembly and Oil Filler Strainer			Oil Pump, Adjust - See Adjust Oil Pump		
Oil Filler Strainer, Service - See Service Oil Filler Strainer			Oil Pump and Scavenge Oil Screen, Main -See Main Oil Pump and Scavenge Oil Screen		
Oil Fitter Cap and Stem Assembly and Oil Filter Element			Oil Screen, Main Oil Pump and Scavenge - See Main Oil Pump and Scavenge Oil Screen		
Clean.....	8-24	8-66	Oil Screen, Service Scavenge - See Service Scavenge Oil Screen		
Inspect	8-25	8-68	Oil Strainer, No. 2 Bearing Pressure - See No. 2 Bearing Pressure Oil Strainer		
Install	8-27	8-70	Oil Strainer, Service No. 2 Bearing Pressure - See Service No. 2 Bearing Pressure Oil Strainer		
Remove.....	8-23	8-63	Oil System, Drain Engine - See Drain Engine Oil System		
Repair	8-26	8-69			
Oil Filter Cap and Stem Assembly and Oil Filter Element, Service - See Service Oil Filter Cap and Stem Assembly and Oil Filter Element					
Oil Filter Element, Oil Filter Cap and Stem Assembly and - See Oil Filter Cap and Stem Assembly and Oil Filter Element					

INDEX (Continued)

Subject	Para Task	Page	Subject	Para/ Task	Page
Oil System, Inspect Contaminated - See Inspect Contaminated Oil System			Overspeed (AVIM), Inspect Engine alter N2 - See Inspect Engine after N2 Overspeed (AVIM)		
Oil System, Service Engine - See Service Engine Oil System			Overspeed Drive and Outlet Cover Assembly		
Oil Temperature Transmitter			Assemble	5-22	5-110
Clean.....	8-13	8-43	Backlash Check	5-23.1	5-116
Inspect	8-14	8-44	Clean.....	5-19	5-105
Install	8-15	8-45	Disassemble	5-28	5-101
Remove.....	8-12	8-41	Inspect	5-20	5-107
Oil Tubes (AVIM), No. 4 and 5 Bearing - See No. 4 and 5 Bearing Oil Tubes (AVIM)			Install	5-23	5-114
Operation Check, N2 Governor - See N2 Governor Operation Check			Remove.....	5-17	5-99
Outlet Cover Assembly, Overspeed Drive and - See Overspeed Drive and Outlet Cover Assembly			Repair	5-21	5-109
Output Shaft (AVIM)			Overtorque (AVIM), Inspect Engine after Power Turbine - See Inspect Engine after Power Turbine Overtorque (AVIM)		
Clean.....	9-7	9-26	P		
Inspect	9-8	9-28	Package		
Install	9-10	9-31	Fuel Boost Pump Assembly	6-15	6-56
Remove.....	9-6	9-19	Fuel Control	6-8	6-36
Repair	9-9	9-30	Package (AVIM), No. 2 Bearing - See No. 2 Bearing Package (AVIM)		
Output Shaft Seal and Housing Assembly			Parts, Repair - See Repair Parts		
Clean.....	2-49	2-436	Percent Maximum Continuous Power Check, Forty - See Forty Percent Maximum Continuous Power Check		
Inspect	2-50	2-437	Percent Maximum Continuous Power Check, Seventy-Five - See Seventy- Five Percent Maximum Continuous Power Check		
Install	252	2-447	Place in Service Field Replacement First and Second Turbine Disc Assembly (AVIM)	4-72	4-469
Remove.....	2-48	2-431	Power, Adjust Maximum - See Adjust Maximum Power		
Repair	2-51	2-438	Power Check, Maximum - See Maxi- mum Power Check		
Output Shaft Support Housing (AVIM)			Power Check, Maximum Continuous - See Maximum Continuous Power Check		
Assemble	2-62	2-484	Power Check, Forty Percent Maximum Continuous - See Forty Percent Maximum Continuous Power Check		
Clean.....	2-60	2-478			
Disassemble	2-59	2-470			
Inspect	2-61	2-481			
Install	2-63	2-490			
Remove.....	2-58	2-465			
Overhaul and Retirement Schedule.....	1-105	1-441			
Overspeed (AVIM), Inspect Engine after N1 - See Inspect Engine after N1 Overspeed (AVIM)					

INDEX (Continued)

Subject	Para/ Task	Page	Subject	Para Task	Page
Power Check, Intermediate - See Intermediate Power Check			Preserve and Prepare Engine for Shipment or Storage	1-111	1-555
Power Check, Seventy-Five Percent Maximum Continuous - See Seventy-Five Percent Maximum Continuous Power Check			Pressure Oil Strainer, No 2 Bearing - See No. 2 Bearing Pressure Oil Strainer		
Power Turbine (AVIM), Combustion Section and - See Combustion Section and Power Turbine (AVIM)			Pressure Oil Strainer, Service No. 2 Bearing - See Service No. 2 Bearing Pressure Oil Strainer		
Power Turbine Nozzle (AVIM), Fourth Stage - See Fourth Stage Power Turbine Nozzle (AVIM)			Pressurized Shipping and Storage Container, Inspect -See Inspect Pressurized Shipping and Storage Container		
Power Turbine Overtorque (AVIM), Inspect Engine after - See Inspect Engine after Power Turbine Overtorque (AVIM)			Prestart Check Procedure	1-107	1-458
Power Turbine Rotor (AVIM), Fourth Stage - See Fourth Stage Power Turbine Rotor (AVIM)			Prevent Enemy Use, Destruction of Army Material to - See Destruction of Army Material to Prevent Enemy Use		
Power Turbine Rotor (AVIM), Third Stage - See Third Stage Power Turbine Rotor (AVIM)			Preventive Maintenance Checks and Services		1-239
Practices and Procedures, Standard - See Standard Practices and Procedures			Primer Tube Assembly		
Practices, Standard Maintenance - See Standard Maintenance Practices			Clean.....	6-22	6-104
Preparation for Storage and Shipment.....	1-4	1-2	Inspect	6-23	6-106
Preparation for Storage or Shipment, Fuel Boost Pump Assembly - See Fuel Boost Pump Assembly			Install	6-24	6-107
Preparation for Storage or Shipment, Fuel Control - See Fuel Control			Remove.....	6-21	6-101
Prepare and Inspect Shipping and Storage Container.....	1-112	1-581	Priming, Fuel Control - See Fuel Control Priming		
Prepare Engine for Shipment or Storage, Preserve and - See Preserve and Prepare Engine for Shipment or Storage			Principles of Operation		1-13
Preserve			Procedure, Engine Starting - See Engine Starting Procedure		
Fuel Boost Pump Assembly	6-14	6-55	Procedure, Normal Shutdown - See Normal Shutdown Procedure		
Fuel Control	6-7	6-31	Procedure, Prestart Check - See Prestart Check Procedure		
			Procedures, Maintenance - See Maintenance Procedures		
			Procedures, Standard Practices and - See Standard Practices and Procedures		
			Procedures, Troubleshooting - See Troubleshooting Procedures		
			Pump, Adjust Oil - See Adjust Oil Pump		
			Pump and Scavenge Oil Screen, Main Oil - See Main Oil Pump and Scavenge Oil Screen		

INDEX (Continued)

Subject	Para/ Task	Page	Subject	Para/ Task	Page
Pump Assembly, Fuel Boost - See Fuel Boost Pump Assembly			Remove (cont)		
Q			Flow Divider and Bracket	6-42	6-159
Quality Assurance/Quality Control (QAIQC)	1-5	1-2	Fourth Stage Power Turbine Nozzle (AVIM)	4-45	4-269
Quality Control (QA/QC), Quality Assurance/ - See Quality Assurance/Quality Control (QA/QC)			Fourth Stage Power Turbine Rotor (AVIM)	4-33	4-151
R			Fuel Boost Pump Assembly	6-9	6-39
Rating, Engine - See Engine Rating			Fuel Check Valve	6-46	6-171
Receipt, Service Upon - See Service Upon Receipt			Fuel Control	6-1	6-5
Recommendations (EIR), Reporting Equipment Improvement - See Reporting Equipment Improvement Recommendations (EIR)			Fuel Drain Valve	3-1	3-3
Records and Reports, Maintenance Forms - See Maintenance Forms, Records and Reports			Hose Assembly (Air Diffuser Assembly to Fuel Control)	2-79	2-550
References		A-1	Hose Assembly (Compressor Housing to Inlet Housing)	2-77	2-536
References, Directional - See Directional References			Hose Assembly (Dual Chip Detector to Accessory Gearbox Assembly)	8-42	8-107
Remove			Hose Assembly (Dual Chip Detector to Accessory Gearbox Collector)	8-44	8-118
Accessory Gear Assembly (AVIM)	5-8	5-45	Hose Assembly (Dual Chip Detector to Air Diffuser Assembly)	8-46	8-128
Accessory Gearbox Assembly	5-1	5-3	Hose Assembly (Flow Divider Left Side Primary to Manifold Assembly)	6-64	6-223
Air Diffuser Assembly (AVIM)	2-36	2-351	Hose Assembly (Flow Divider Left Side Secondary to Manifold Assembly)	6-68	6-231
Anti-Icing Air Gallery Cover	2-14	2-51	Hose Assembly (Flow Divider Right Side Primary to Manifold Assembly)	6-66	6-227
Check Valve Assembly	8-18.1	8-40.1	Hose Assembly (Flow Divider Right Side Secondary to Manifold Assembly)	6-70	6-237
Chip Detector	8-88	8-287	Hose Assembly (Fuel Boost Pump to Main Fuel Filter)	6-60	6-206
Combustion Section and Power Turbine (AVIM)	3-5	3-11	Hose Assembly (Fuel Check Valve to Fuel Boost Pump)	6-62	6-214
Compressor Bleed Band	2-9	2-41	Hose Assembly (Fuel Control to Oil Cooler)	6-56	6-193
Compressor Rotor Blades	2-31	2-255	Hose Assembly (Fuel Control to Starting Fuel Solenoid Valve)	6-74	6-250
Diffuser Curl	4-73	4-479	Hose Assembly (Inlet Housing to Oil Drain Cock)	8-62	8-209
Dual Chip Detector	8-28	8-73	Hose Assembly (Inlet Housing to Oil Scavenge Tee)	8-60	8-204
Exit Vane Assembly	4-78	4-489	Hose Assembly (In-Line Fuel Filter to Flow Divider)	6-58	6-199
Fireshield Assembly	4-12	4-65	Hose Assembly (Interstage Air- Bleed Actuator to Air Diffuser Assembly)	2-75	2-532
Fireshield Section	4-16	4-79	Hose Assembly (Interstage Air- Bleed Actuator to Fuel Control)	2-73	2-525
First Turbine Disc Assembly (AVIM)	4-62	4-397	Hose Assembly (Main Fuel Filter to Fuel Control)	6-72	6-244
First Turbine Nozzle (AVIM)	4-67	4-429	Hose Assembly (Main Oil Pump to Dual Chip Detector)	8-48	8-133

INDEX (Continued)

	Para/ Task	Page		Para/ Task	Page
Remove (cont)			Main Electrical Cable Assembly (Six Connector).....	7-16.1	7-110.1
Hose Assembly (Main Oil Pump to Inlet Housing Oil Scavenge Tee)	8-52	8-148	Main Fuel Filter and Bracket	6-29	6-119
Hose Assembly (Main Oil Pump to No. 4 and 5 Bearing Scavenge Tube Assembly).....	8-54	8-156	Main Oil Pump and Scavenge Oil Screen	8-1	8-7
Hose Assembly (Accessory Gearbox Assembly to Check Valve Assembly).....	8-38	8-97	No. 2 Bearing Package (AVIM)	2-42	2-395
Hose Assembly (Oil Cooler to Inlet Housing)	8-36	8-93	No. 2 Bearing Pressure Oil Strainer.....	8-76	8-257
Hose Assembly (Oil Cooler to In-Line Fuel Filter)	6-54	6-189	No. 3 Bearing Package Seals (AVIM)	2-67	2-501
Hose Assembly (Oil Cooler to Pressure Connector).....	8-40	8-103	No. 4 and 5 Bearing Filter	8-80	8-263
Hose Assembly (Oil Filter to Starter Drive)	8-64	8-221	No. 4 and 5 Bearing Oil Tubes (AVIM)	4-41	4-245
Hose Assembly (Pressure Connector to No. 4 and 4 Bearing Filter).....	8-58	8-178	No. 4 and 5 Bearing Package (AVIM)	4-37	4-185
Hose Assembly (Starter Drive to Tube and Hose Assembly).....	8-66	8-226	Oil Cooler Assembly.....	8-5	8-21
Hose Assembly (Starting Fuel Solenoid Valve to Tube Assembly).....	6-76	6-256	Oil Drain Cock.....	8-84	8-279
Hose Assembly (Water Wash Check Valve Elbow to Interstage Air-Bleed Actuator T/C Inlet)	2-80.7		Oil Filler Assembly and Oil Filler Strainer.....	8-16	8-47
Hose Assembly (Water Wash Check Valve Reducer to Interstage Air-Bleed Actuator P3 Inlet).....	2-80.3		Oil Filter Cap and Stem Assembly and Oil Filter Element	8-23	8-63
Hose Assembly (Water Wash Tee Check Valve to Interstage Air-Bleed Actuator P3 Inlet).....	2-80.5		Oil Level Float Assembly (AVIM).....	8-103	8-335
Hose Assembly (Water Wash Kit Installation to Interstage Airframe Quick Disconnect Shelf).....	2-80.9		Oil Level Indicator	8-95	8-301
Ignition Coil and Cable Assembly.....	7-1	7-3	Oil Pump Check Valve (AVIM)	8-4.1	8-20.1
Ignition Exciter.....	7-11	7-85	Oil Temperature Transmitter	8-12	8-41
Inlet Housing Cover Assembly (AVIM)	2-53	2-455	Output Shaft (AVIM).....	9-6	9-19
In-Line Fuel Filter Assembly.....	6-36	6-141	Output Shaft Seal and Housing Assembly	2-48	2-431
Interstage Air-bleed Actuator (With Water Wash Kit P/N 2-300-071-54 Installed).....	2-1.1	2-11.1	Output Shaft Support Housing (AVIM)	2-58	2-465
Interstage Air-Bleed Actuator (Without Water Wash Kit P/N 2-200-011-54 Installed).....	2-1	2-5	Overspeed Drive and Outlet Cover Assembly.....	5-17	5-99
Left-and Right-Hand Bus Bar Assemblies	4-7	4-35	Primer Tube Assembly.....	6-21	6-101
Left-and Right-Hand Fuel Manifold Assemblies	6-16	6-57	Seal	5-5.2	5-24.2
Lower Compressor Housing.....	2-20	2-104	Seal and Liner Assembly.....	5-5.1	5-24.1
Main Electrical Cable Assembly (Nine Connector)	7-16	7-99	Seal Assembly	5-5.5	5-24.5
Remove (cont)			Second Turbine Disc Assembly (AVIM)	4-53	4-313
			Second Turbine Nozzle, Spacer, and Case (AVIM)	4-57	4-335
			Spark Igniters.....	7-6	7-69
			Start Fuel Nozzles.....	6-25	6-111
			Starter Drive Assembly	5-12	5-81
			Starter Gearbox Filter.....	8-72	8-249
			Starting Fuel Solenoid Valve.....	6-49	6-177
			Stator Vane Assemblies.....	2-26	2-219
			Thermocouple Harness Assemblies (AVIM)	4-20	4-97
			Thermocouple Jumper Lead.....	4-1	4-5
			Third Turbine Nozzle and Support (AVIM)	4-26	4-123
			Torquemeter Head Assembly (AVIM)	9-11	9-39
			Torquemeter Junction Box (AVIM)	9-1	9-3
			Tube and Hose Assembly (Accessory Gearbox Collector to Tube Assembly).....	8-68	8-231
			Tube Assembly (Hose Assembly to Primer Tube Assembly)	6-78	6-262

INDEX (Continued)

Subject	Para/ Task	Page	Subject	Para/ Task	Page
Remove: (cont)			Repair (cont)		
Tube Assembly (Inlet Housing to Main Oil Pump)	8-50	8-137	Left- and Right-Hand Fuel Manifold Assemblies.....	6-19	6-72Main
Tube Assembly (No. 4 and 5 Bearing Scavenge Connector to Hose Assembly)	8-56	8-162	Electrical Cable Assembly (Nine Connector).....	7-19	7-115
Tube Assembly (Tube and Hose Assembly to Accessory Gearbox Assembly)	8-70	8-243	Main Electrical Cable Assembly (Six Connector)	7-19 1	7-116
Tube Assembly (Water Wash Check Valve to Air Diffuser Assembly).....	2-80.3		Main Fuel Filter and Bracket (Ten Bolt Holes)	6-33	6-132
Upper Compressor Housing.....	2-19	2-71	Main Fuel Filter and Bracket (Eight Bolt Holes)	6-33 1	6-132.1
Remove Engine from Maintenance Stand.....	1-29	1-105	Oil Cooler Assembly.....	8-9	8-32
Remove Engine from Shipping and Storage Container	1-26	1-63	Oil Filter Assembly and Oil Filter Strainer	8-20	8-56
Remove Engine Maintenance Sling.....	1-31	1-116	Oil Filter Cap and Stem Assembly and Oil Filter Element.....	8-26	8-69
Repair			Oil Level Float Assembly (AVIM).....	8-107	8-343
Accessory Gearbox Assembly.....	6-5	6-24	Oil Level Indicator	8-99	8-313
Air Diffuser Assembly.....	2-40	2-375	Output Shaft (AVIM).....	9-9	9-30
Air Diffuser Assembly (AVIM).....	2-39	2-371	Output Shaft Seal and Housing Assembly	2-51	2-438
Air Inlet Housing Assembly	2-66	2-499	Overspeed Drive and Outlet Cover Assembly	5-21	5-109
Anti-Icing Ar Gallery Cover.....	2-17	2-60	Second Turbine Nozzle, Spacer, and Case (AVIM).....	4-60	4-369
Combustion Chamber Housing (AVIM).....	3-21	3-217	Spark Igniters.....	7-9	7-75
Combustion Chamber Liner (AVIM) .3-18	3-197		Starter Drive Assembly	5-15	5-87
Combustion Chamber Vane Assembly (AVIM)	3-15	3-180	Starting Fuel Solenoid Valve.....	6-52	6-183
Compressor Bleed Band.....	2-12	2-46	Stator Vane Assemblies.....	2-29	2-232
Compressor Housing	2-23	2-147	Thermocouple Harness Assemblies (AVIM).....	4-23	4-105
Compressor Rotor Blades.....	2-34	2-312	Thermocouple Jumper Lead.....	4-4	4-14
Diffuser Curl.....	4-76	4-485	Third Stage Power Turbine Rotor (AVIM).....	4-52	4-309
Dual Chip Detector.....	8-32	8-83	Third Turbine Nozzle and Support (AVIM).....	4-30	4-140
Exit Valve Assembly.....	4-81	4-501	Torquemeter Junction Box (AVIM)	9-4	9-11
First Turbine Disc Assembly (AVIM).....	4-65	4-410	Torquemeter Head Assembly (AVIM) 9-13.1		9-48.2
First Turbine Rotor Case (AVIM).....	4-70	4-445	Repair Parts.....	1-24	1-42
Fourth Stage Power Turbine Nozzle (AVIM).....	4-48	4-280	Repair Parts; Special Tools; Test, Measurement, and Diagnostic Equipment (TMDE), and Support Equipment.....		1-41
Fuel Boost Pump Assembly	6-12	6-44	Repair Splines and Gears, Clean, Inspect and - See Clean, Inspect and Repair Splines and Gears		
Fuel Control	6-4.1	6-18.1	Reporting Equipment Improvement Recommendations (EIR).....	1-7	1-3
Ignition Coil and Cable Assembly.....	7-4	7-35	Reports, Maintenance Forms, Records and - See Maintenance Forms, Records and Reports		
Ignition Exciter.....	7-14	7-92			
Inlet Housing Cover Assembly (AVIM).....	2-56	2-460			
Interstage Air-Bleed Actuator	2-5	2-18			

INDEX (Continued)

Subject	Para/ Task	Page	Subject	Para/ Task	Page
Represerve Engine In Storage Over Six Months	1-115	1-620	Seal and Housing Assembly. Output Shaft - See Output Shaft Seal and Housing Assembly		
Retirement Schedule, Overhaul and - See Overhaul and Retirement Schedule			Seal Leakage (No. 2 Bearing Package) (AVIM), Check for - See Check for Seal Leakage (No. 2 Bearing Package) (AVIM)		
Right- and Left-Hand Bus Bar Assemblies - See Left- and Right-Hand Bus Bar Assemblies			Seal Leakage (No. 4 and 5 Bearing) (AVIM), Check for - See Check for Seal Leakage (No. 4 and 5 Bearing) (AVIM)		
Rotor (AVIM), Fourth Stage Power Turbine - See Fourth Stage Power Turbine Rotor (AVIM)			Seals (AVIM), No. 4 and 5 Bearing Package - See No. 4 and 5 Bearing Package Seals (AVIM)		
Rotor (AVIM), Third Stage Power Turbine - See Third Stage Power Turbine Rotor (AVIM)			Second Turbine Disc Assembly (AVIM)		
Rotor Blades, Compressor - See Compressor Rotor Blades			Clean.....	4-54	4-320
Rotor Case (AVIM), First Turbine - See First Turbine Rotor Case (AVIM)			Inspect	4-55	4-322
RTV in First Stage Stator Vane Assembly, Install	2-30.1	2-253.1	Install	4-56	4-324
S			Remove.....	4-53	4-313
Safety, Care, and Handling.....	1-12	1-11	Second Turbine Nozzle, Spacer, and Case (AVIM)		
Scavenge Oil Screen, Main Oil Pump and - See Main Oil Pump and Scavenge Oil Screen			Clean.....	4-58	4-345
Scavenge Oil Screen, Service - See Service Scavenge Oil Screen			Inspect	4-59	4-347
Schedule, Overhaul and Retirement - See Overhaul and Retirement Schedule			Install	4-61	4-387
Scope	1-1	1-1	Remove.....	4-57	4-335
Scratching, Gouging, or Wear, Determine Depth of Damage from Chafing, Denting - See Determine Depth of Damage from Chafing, Denting, Scratching, Gouging, or Wear			Repair	4-60	4-369
Screen, Main Oil Pump and Scavenge Oil - See Main Oil Pump and Scavenge Oil Screen			Section, Accessory Gear - See Accessory Gear Section		
Screen, Service Scavenge Oil - See Service Scavenge Oil Screen			Section, Combustion - See Combustion Section		
			Section, Compressor - See Compressor Section		
			Section, Turbine - See Turbine Section		
			Service Accessory Gearbox Chip Detector	1-86	1-268
			Service Dual Chip Detector.....	1-86	1-270
			Service Engine Oil System	1-74	1-221
			Service Fuel Control Filter and Air-Bleed Poppet Valve	1-101	1-414
			Service In-Line Fuel Filter.....	1-103	1-429
			Service Interstage Air-Bleed Actuator Strainer	1-104	1-434

INDEX (Continued)

Subject	Para/ Task	Page	Subject	Para/ Task	Page
Service Main Fuel Filter	1-102	1-425	Shipping and Storage Container, Inspect Pressurized - See Inspect Pressurized Shipping and Storage Container		
Service No 2 Bearing Pressure Oil Strainer	1-97	1-380	Shipping and Storage Container, Install Engine into - See Install Engine into Shipping and Storage Container		
Service No 4 and 5 Bearing Oil Filter.....	1-98	1-384	Shipping and Storage Container, Mark - See Mark Shipping and Storage Container		
Service Oil Filler Strainer	1-96	1-375	Shipping and Storage Container, Prepare and Inspect - See Prepare and Inspect Shipping and Storage Con- tainer		
Service Oil Filter Cap and Stem Assembly and Oil Filter Element	1-99	1-397	Shipping and Storage Container, Remove Engine from - See Remove Engine from Shipping and Storage Container		
Service Scavenge Oil Screen	1-100	1-402	Shutdown Procedure, Normal - See Normal Shutdown Procedure		
Service Starter Gearbox Filter	1-95	1-371	Six Months, Represerve Engine in Storage Over - See Represerve Engine in Storage Over Six Months		
Service Upon Receipt		1-43	Sleeve on Hoses, Install Spiral Chafing - See Install Spiral Chafing Sleeve on Hoses		
Services, Preventive Maintenance Checks and - See Preventive Maintenance Checks and Services			Sling, Install Engine Maintenance - See Install Engine Maintenance Sling		
Servicing.....		1-219	Sling, Remove Engine Maintenance - See Remove Engine Maintenance Sling		
Servicing, Minor - See Minor Servicing			Solenoid Valve, Starting Fuel - See Starting Fuel Solenoid Valve		
Seventy-Five Percent Maximum Continuous Power Check.....	1-107	1-493	Spacer, and Case (AVIM), Second Turbine Nozzle - See Second Turbine Nozzle, Spacer, and Case (AVIM)		
Shaft (AVIM), Output - See Output Shaft (AVIM)					
Shaft Seal and Housing Assembly, Output - See Output Shaft Seal and Housing Assembly					
Shaft Support Housing (AVIM), Output - See Output Shaft Support Housing (AVIM)					
Shipment, Fuel Boost Pump Assembly, Preparation for Storage or - See Fuel Boost Pump Assembly, Preserve and Package					
Shipment, Fuel Control, Preparation for Storage or - See Fuel Control, Preserve and Package					
Shipment or Storage, Preserve and Prepare Engine for - See Preserve and Prepare Engine for Shipment or Storage					
Shipment, Preparation for Storage and - See Preparation for Storage and Shipment					

INDEX (Continued)

Subject	Para/ Task	Page	Subject	Para/ Task	Page
Spark Igniters			Starter Drive Assembly		
Clean.....	7-7	7-73	Clean.....	5-13	5-85
Inspect	7-8	7-74	Inspect	5-14	5-86
Install	7-10	7-78	Install	5-16	5-95
Remove.....	7-6	7-69	Remove.....	5-12	5-81
Repair	7-9	7-75	Repair	5-15	5-87
Special Inspections.....	1-78	1-239	Starter Gearbox Filter		
Special Tools, TMDE, and Support Equipment.....	1-23	1-41	Clean.....	8-73	8-262
Spiral Chafing Sleeve on Hoses, Install - See Install Spiral Chafing Sleeve on Hoses			Inspect	8-74	8-253
Splines and Gears, Clean, Inspect and Repair - See Clean, Inspect and Repair Splines and Gears			Install	8-75	8-254
Stall (Surge), Inspect Engine after Compressor - See Inspect Engine after Compressor Stall (Surge)			Remove.....	8-72	8-249
Stand, Install Engine on Maintenance - See Install Engine on Maintenance Stand			Starter Gearbox Filter, Service - See Service Starter Gearbox Filter		
Stand, Remove Engine from Maintenance - See Remove Engine from Mainte- nance Stand			Starting Fuel Solenoid Valve		
Standard Maintenance Practices.....	1-117	1-627	Clean.....	6-50	6-181
Standard Practices and Procedures		1-627	Inspect	6-51	6-182
Standard Torque Limits		1-623	Install	6-53	6-184
Standard Torque Values.....	1-116	1-623	Remove.....	6-49	6-177
Start Fuel Nozzles			Repair	6-52	6-183
Clean.....	6-26	6-114	Starting Procedure, Engine - See Engine Starting Procedure		
Inspect	6-27	6-115	Static Oil Leakage, Check for - See Check for Static Oil Leakage		
Install	6-28	6-116	Stator Vane Assemblies		
Remove.....	6-25	6-111	Clean.....	2-27	2-228
			Inspect	2-28	2-230
			Install	2-30	2-234
			Remove.....	2-26	2-219
			Repair	2-29	2-232
			Stem Assembly and Oil Filter Element, Oil Filter Cap and - See Oil Filter Cap and Stem Assembly and Oil Filter Element		
			Stem Assembly and Oil Filter Element, Service Oil Filter Cap and - See Service Oil Filter Cap and Stem Assembly and Oil Filter Element		
			Storage, Activate Engine after - See Activate Engine after Storage		
			Storage and Shipment, Preparation for - See Preparation for Storage and Shipment		
			Storage Container, Inspect Pressurized Shipping and - See Inspect Pressur- ized Shipping and Storage Container		

INDEX (Continued)

Subject	Para/ Task	Page	Subject	Para/ Task	Page
Storage Container, Install Engine into Shipping and - See Install Engine into Shipping and Storage Container			Support Housing (AVIM), Output Shaft - See Output Shaft Support Housing (AVIM)		
Storage Container, Mark Shipping and - See Mark Shipping and Storage Container			(Surge), Inspect Engine after Compressor Stall - See Inspect Engine after Compressor Stall (Surge)		
Storage Container, Prepare and Inspect Shipping and - See Prepare and Inspect Shipping and Storage Container			Symptom Index..... 1-32		1-119
Storage Container, Remove Engine from Shipping and - See Remove Engine from Shipping and Storage Container			System, Drain Engine Oil - See Drain Engine Oil System		
Storage or Shipment, Fuel Boost Pump Assembly, Preparation for - See Fuel Boost Pump Assembly, Preserve and Package			System, Electrical and Ignition - See Electrical and Ignition System		
Storage or Shipment, Fuel Control, Preparation for - See Fuel Control, Preserve and Package			System, Fuel - See Fuel System		
Storage Over Six Months, Engine in - See Engine in Storage Over Six Months			System, Inspect Contaminated Fuel - See Inspect Contaminated Fuel System		
Storage, Preserve and Prepare Engine for Shipment or Storage - See Preserve and Prepare Engine for Shipment or Storage			System, Inspect Contaminated Oil - See Inspect Contaminated Oil System		
Strainer, No. 2 Bearing Pressure Oil - See No. 2 Bearing Pressure Oil Strainer			System, Lubrication - See Lubrication System		
Strainer, Oil Filler Assembly and Oil Filler - See Oil Filler Assembly and Oil Filler Strainer			System, Service Engine Oil - See Service Engine Oil System		
Strainer, Service No. 2 Bearing Pressure Oil - See Service No. 2 Bearing Pressure Oil Strainer			System, Torquemeter - See Torquemeter System		
Strainer, Service Oil Filler - See Service Oil Filler Strainer					
Support (AVIM), Third Turbine Nozzle and - See Third Turbine Nozzle and Support (AVIM)			T		
Support Equipment, Special Tools, TMDE, and - See Special Tools, TMDE, and Support Equipment			Temperature Transmitter, Oil - See Oil Temperature Transmitter		
			Test		
			Chip Detector	8-92	8-294
			Dual Chip Detector.....	8-34	8-87
			Left- and Right-Hand Bus Bar Assembles	4-10	4-44
			Main Electrical Cable Assembly (Nine Connector).....	7-20	7-116.1
			Main Electrical Cable Assembly (Six Connector).....	7-20.1	7-126
			Thermocouple Harness Assemblies (AVIM).....	4-24	4-108
			Thermocouple Jumper Lead	4-5	4-16
			Test Engine (AVIM)	1-107	1-457
			Test, Vibration - See Vibration Test		

INDEX (Continued)

Subject	Para/ Task	Page	Subject	Task	Para/ Page
Thermocouple Harness Assemblies (AVIM)			Torquemeter Head Assembly (AVIM)		
Clean.....	4-21	4-102	Clean.....	9-12	9-44
Inspect	4-22	4-103	Inspect	9-13	9-46
Install	4-25	4-110	Install	9-14	9-49
Remove.....	4-20	4-97	Remove.....	9-11	9-39
Repair	4-23	4-105	Repair	9-13 1	9-48 2
Test.....	4-24	4-108			
Thermocouple Jumper Lead			Torquemeter Junction Box (AVIM)		
Clean.....	4-2	4-11	Clean.....	9-2	9-8
Inspect	4-3	4-12	Inspect	9-3	9-9
Install	4-6	4-21	Install	9-5	9-13
Remove.....	4-1	4-5	Remove.....	9-1	9-3
Repair	4-4	4-14	Repair	9-4	9-11
Test.....	4-5	4-16			
Third Stage Power Turbine Rotor (AVIM)			Torquemeter System	1-21	1-40
Clean.....	4-50	4-303	Touch Up Magnesium and Magnesium Alloys	1-119	1-642
Inspect	4-51	4-305	Transmitter, Oil Temperature - See Oil Temperature Transmitter		
Repair	4-52	4-309	Trim, Adjust Maximum - See Adjust Maximum Trim		
Third Turbine Nozzle and Support (AVIM)			Trim Check, Ground Idle - See Ground Idle Trim Check		
Assemble	4-31	4-141	Troubleshooting.....		1-119
Clean.....	4-28	4-130	Troubleshooting Procedures.....	1-33	1-121
Disassemble	4-27	4-128			
Inspect	4-29	4-132	Tube and Hose Assembly (Accessory Gearbox Collector to Tube Assembly)		
Install	4-32	4-143	Install	8-69	8-237
Remove.....	4-26	4-123	Remove.....	8-68	8-231
Repair	4-30	4-140	Tube Assembly (Hose Assembly to Primer Tube Assembly)		
Time, Check Engine Coastdown - See Check Engine Coastdown Time			Install	6-79	6-267
Tools and Equipment, Common - See Common Tools and Equipment			Remove.....	6-78	6-262
Tools, TMDE and Support, Special - See Special Tools, TMDE, and Support Equipment			Tube Assembly (Inlet Housing to Main Oil Pump)		
Torque Limits, Standard - See Standard Torque Limits			Install	8-51	8-140
Torque Values, Standard - See Standard Torque Values			Remove.....	8-50	8-137
			Tube Assembly (No. 4 and 5 Bearing Scavenge Connector to Hose Assembly)		
			Install	8-57	8-170
			Remove.....	8-56	8-162
			Tube Assembly, Primer - See Primer Tube Assembly		

INDEX (Continued)

Subject	Task	Para/ Page	Subject	Task	Para/ Page
Tube Assembly (Tube and Hose Assembly to Accessory Gearbox Assembly)			V		
Install	8-71	8-246	Values, Standard Torque - See Standard Torque Values		
Remove.....	8-70	8-243	Valve, Fuel Check - See Fuel Check Valve		
Tube Assembly (Water Wash Check Valve to Air Diffuser Assembly)			Valve, Fuel Drain - See Fuel Drain Valve		
Install	2-80.2		Valve Assembly, Check - See Check Valve Assembly		
Remove.....	2-80.3		Valve, Starting Fuel Solenoid - See Starting Fuel Solenoid Valve		
Tubes (AVIM), No. 4 and 5 Bearing Oil - See No. 4 and 5 Bearing Oil Tubes (AVIM)			Vane Assemblies, Stator - See Stator Vane Assemblies		
Turbine Disc Assembly (AVIM), First - See First Turbine Disc Assembly (AVIM)			Vane Assembly (AVIM), Combustion Chamber - See Combustion Chamber Vane Assembly		
Turbine Disc Assembly (AVIM), Second - See Second Turbine Disc Assembly (AVIM)			Vane Assembly, Exit - See Exit Vane Assembly		
Third Nozzle and Support (AVIM), Third - See Third Turbine Nozzle and Support (AVIM)			Vibration Meter Check	1-107	1-475
Turbine Nozzle (AVIM), First - See First Turbine Nozzle (AVIM)			Vibration Test	1-107	1-474
Turbine Nozzle (AVIM), Fourth Stage Power - See Fourth Stage Power Turbine Nozzle (AVIM)			W		
Turbine Nozzle, Spacer, and Case (AVIM), Second - See Second Turbine Nozzle, Spacer, and Case (AVIM)			Wash Compressor (With Water Wash Kit 2-200-271-54 Installed).....	1-106.1	1-446 1
Turbine Overtorque (AVIM), Inspect Engine after Power - See Inspect Engine after Power Turbine Overtorque (AVIM)			Wash Compressor (Without Water Wash Kit 2-200-271-54 Installed).....	1-106	1-445
Turbine Rotor (AVIM), Fourth Stage Power -See Fourth Stage Power Turbine Rotor (AVIM)			Waveoff Check	1-107	1-492
Turbine Rotor (AVIM), Third Stage Power - See Third Stage Power Turbine Rotor (AVIM)			Wiring Diagram.....		D-1
Turbine Rotor Case (AVIM), First - See First Turbine Rotor Case (AVIM)			Wear, Determine Depth of Damage from Chafing, Denting, Scratching, Gouging, or - See Determine Depth of Damage from Chafing, Denting, Scratching, Gouging, or Wear		
Turbine Section	1-161-20				

By Order of the Secretary of the Army:

E. C. MEYER
General, United States Army
Chief of Staff

Official:

ROBERT M. JOYCE
Major General, United States Army
The Adjutant General

DISTRIBUTION:

To be distributed in accordance with DA Form 12-31, Organizational Maintenance requirements for CH-47 B/C&D Aircraft.

These are the instructions for sending an electronic 2028

The following format must be used if submitting an electronic 2028. The subject line must be exactly the same and all fields must be included; however only the following fields are mandatory: 1, 3, 4, 5, 6, 7, 8, 9, 10, 13, 15, 16, 17, and 27.

From: "Whomever" <whomever@wherever.army.mil>

To: 2028@redstone.army.mil

Subject: DA Form 2028

1. **From:** Joe Smith
2. **Unit:** home
3. **Address:** 4300 Park
4. **City:** Hometown
5. **St:** MO
6. **Zip:** 77777
7. **Date Sent:** 19-OCT-93
8. **Pub no:** 55-2840-229-23
9. **Pub Title:** TM
10. **Publication Date:** 04-JUL-85
11. **Change Number:** 7
12. **Submitter Rank:** MSG
13. **Submitter FName:** Joe
14. **Submitter MName:** T
15. **Submitter LName:** Smith
16. **Submitter Phone:** 123-123-1234
17. **Problem:** 1
18. **Page:** 2
19. **Paragraph:** 3
20. **Line:** 4
21. **NSN:** 5
22. **Reference:** 6
23. **Figure:** 7
24. **Table:** 8
25. **Item:** 9
26. **Total:** 123
27. **Text:**

This is the text for the problem below line 27.

RECOMMENDED CHANGES TO PUBLICATIONS AND BLANK FORMS For use of this form, see AR 25-30; the proponent agency is ODISC4.						Use Part II (reverse) for Repair Parts and Special Tool Lists (RPSTL) and Supply Catalogs/Supply Manuals (SC/SM)	DATE 8/30/02
TO: (Forward to proponent of publication or form)(Include ZIP Code) Commander, U.S. Army Aviation and Missile Command ATTN: AMSAM-MMC-MA-NP Redstone Arsenal, AL 35898						FROM: (Activity and location)(Include ZIP Code) MSG, Jane Q. Doe 1234 Any Street Nowhere Town, AL 34565	
PART 1 – ALL PUBLICATIONS (EXCEPT RPSTL AND SC/SM) AND BLANK FORMS							
PUBLICATION/FORM NUMBER TM 9-1005-433-24						DATE 16 Sep 2002	TITLE 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.	
<i>* Reference to line numbers within the paragraph or subparagraph.</i>							
TYPED NAME, GRADE OR TITLE MSG, Jane Q. Doe, SFC						TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION 788-1234	SIGNATURE

EXAMPLE

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) MSG, Jane Q. Doe 1234 Any Street Nowhere Town, AL 34565	DATE 8/30/02
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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, corrections, 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 MSG, Jane Q. Doe, SFC	TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION 788-1234	SIGNATURE
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RECOMMENDED CHANGES TO PUBLICATIONS AND BLANK FORMS <small>For use of this form, see AR 25-30; the proponent agency is ODISC4.</small>						Use Part II (<i>reverse</i>) for Repair Parts and Special Tool Lists (RPSTL) and Supply Catalogs/Supply Manuals (SC/SM)	DATE
TO: (<i>Forward to proponent of publication or form</i>)(<i>Include ZIP Code</i>) Commander, U.S. Army Aviation and Missile Command ATTN: AMSAM-MMC-MA-NP Redstone Arsenal, AL 35898						FROM: (<i>Activity and location</i>)(<i>Include ZIP Code</i>)	
PART 1 – ALL PUBLICATIONS (EXCEPT RPSTL AND SC/SM) AND BLANK FORMS							
PUBLICATION/FORM NUMBER TM 55-2840-254-23-4						DATE 26 April 1983	TITLE Engine, Gas Turbine Model T55-L-712
ITEM NO.	PAGE NO.	PARA-GRAPH	LINE NO. *	FIGURE NO.	TABLE NO.	RECOMMENDED CHANGES AND REASON	
<i>* Reference to line numbers within the paragraph or subparagraph.</i>							
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
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PART II – REPAIR PARTS AND SPECIAL TOOL LISTS AND SUPPLY CATALOGS/SUPPLY MANUALS

PUBLICATION NUMBER TM 55-2840-254-23-4	DATE 26 April 1983	TITLE Engine, Gas Turbine, Model T55-L-712
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PAGE NO.	COLM NO.	LINE NO.	NATIONAL STOCK NUMBER	REFERENCE NO.	FIGURE NO.	ITEM NO.	TOTAL NO. OF MAJOR ITEMS SUPPORTED	RECOMMENDED ACTION

PART III – REMARKS (Any general remarks or recommendations, or suggestions for improvement of publications and blank forms. Additional blank sheets may be used if more space is needed.)

TYPED NAME, GRADE OR TITLE	TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION	SIGNATURE
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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
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PART II – REPAIR PARTS AND SPECIAL TOOL LISTS AND SUPPLY CATALOGS/SUPPLY MANUALS

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TYPED NAME, GRADE OR TITLE	TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION	SIGNATURE
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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 decigrams = .035 ounce
 1 decagram = 10 grams = .35 ounce
 1 hectogram = 10 decagrams = 3.52 ounces
 1 kilogram = 10 hectograms = 2.2 pounds
 1 quintal = 100 kilograms = 220.46 pounds
 1 metric ton = 10 quintals = 1.1 short tons

Liquid Measure

1 centiliter = 10 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

<i>To change</i>	<i>To</i>	<i>Multiply by</i>	<i>To change</i>	<i>To</i>	<i>Multiply by</i>
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
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