

TECHNICAL MANUAL

AVIATION UNIT AND  
AVIATION INTERMEDIATE  
MAINTENANCE MANUAL

ENGINE, GAS TURBINE  
MODEL T55-L-712  
NSN 840-01-030-4890

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26 APRIL 1983

CHANGE

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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## Aviation Unit and Aviation Intermediate Maintenance Manual

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

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ENGINE, GAS TURBINE  
MODEL T55-L-712  
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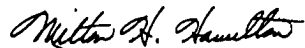
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Aviation Unit and Aviation Intermediate  
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ENGINE, GAS TURBINE  
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## WARNING AND FIRST AID DATA

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.

<b>WARNING</b>
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### 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.

<b>WARNING</b>
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### 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.

<b>WARNING</b>
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### 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.
- If 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.

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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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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 Troop Command, ATTN: AMSAT-I-MP, 4300 Goodfellow Blvd., St. Louis, MO 63120-1798. You may also submit your recommended changes by E-mail directly to <mpmt%avma28@st-louis-emh7.army.mil>. A reply will be furnished directly to you. Instructions for sending an electronic 2028 may be found at the back of this manual immediately preceding the hard copy 2028.

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## HOW TO USE THIS MANUAL

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### **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.

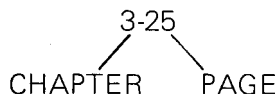
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## HOW TO USE THIS MANUAL (Continued)

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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.

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## HOW TO USE THIS MANUAL (Continued)

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### 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.

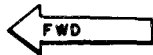
G. **Illustration Arrows.** You will find five types of arrows used. They areas shown below:



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.

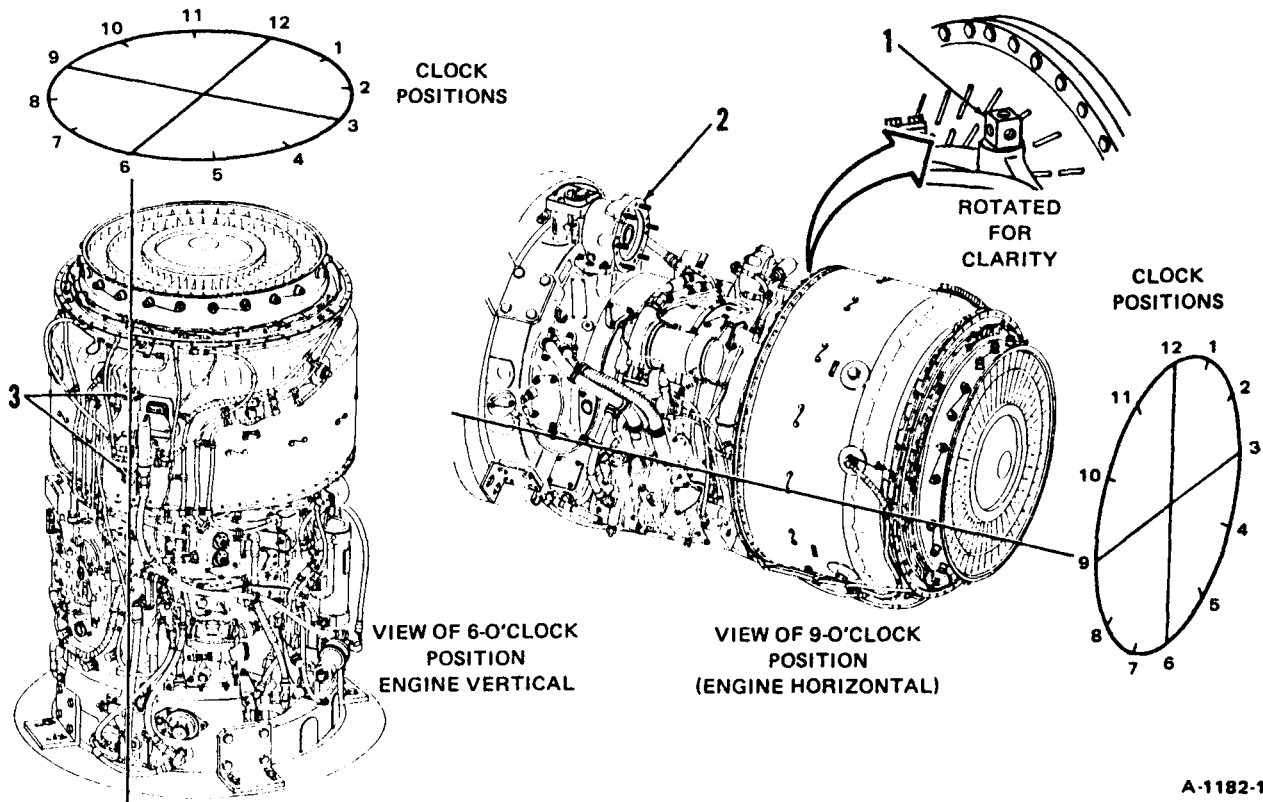
H. **Procedures.** Step by step procedures tell you how to do the job. They are arranged in logical sequence to help you get the job done efficiently.



**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

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## HOW TO USE THIS MANUAL (Continued)

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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.

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HOW TO USE THIS MANUAL (Continued)

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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:

	<u>Para./ Task</u>	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.

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## HOW TO USE THIS MANUAL (Continued)

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### 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	
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	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

*Tools:*

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

*Materials:*

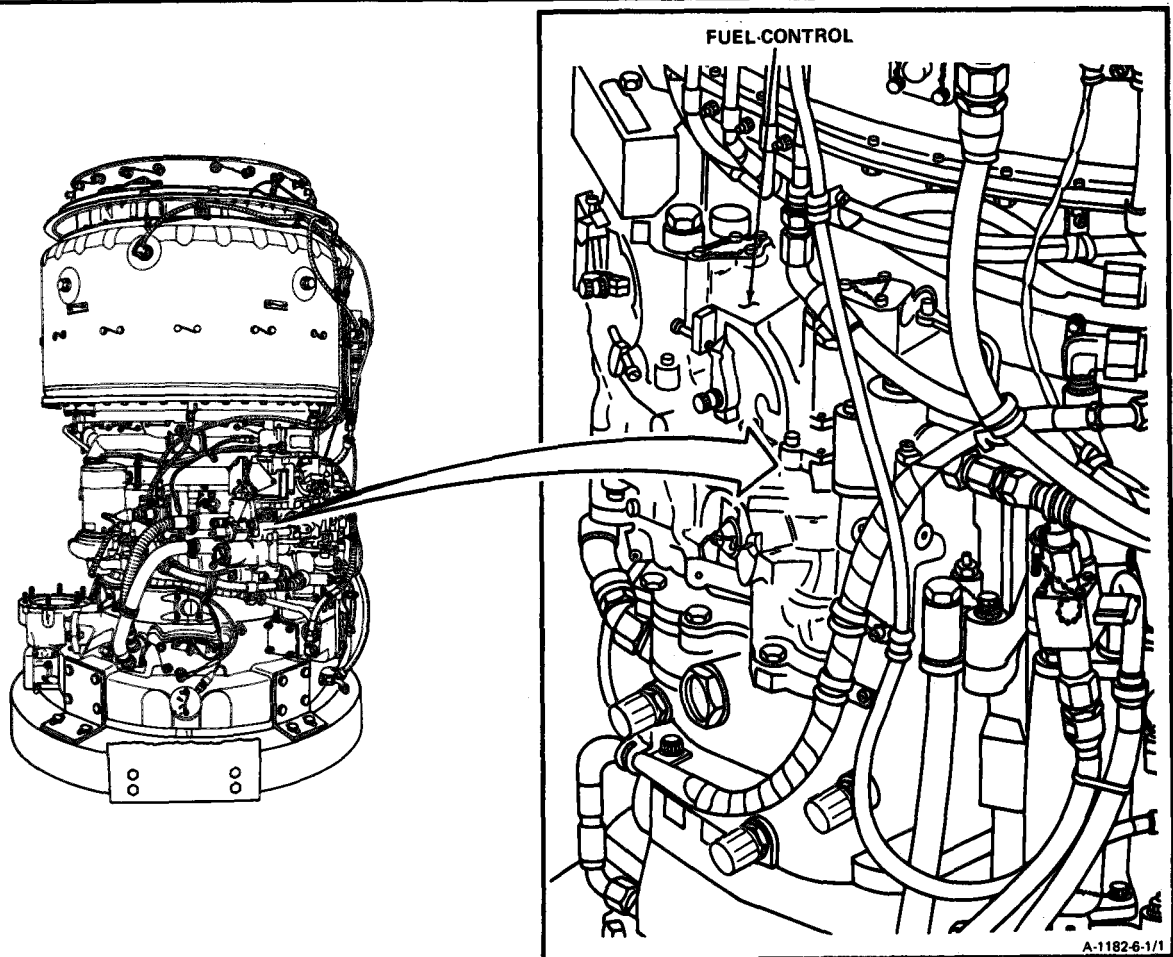
Wiping Rag (E58)  
Caps

*Personal 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 area of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.



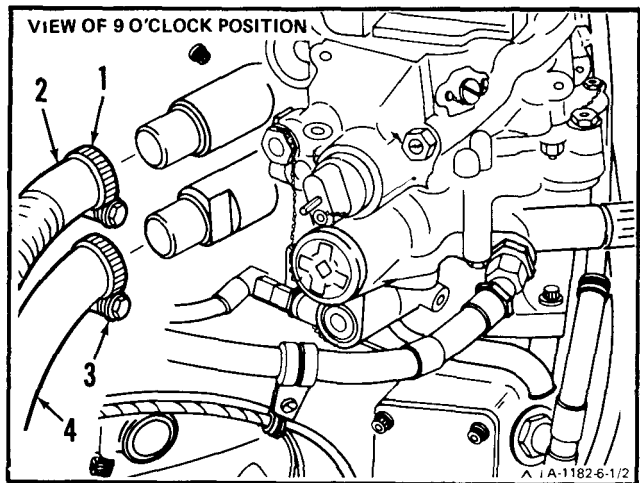
GO TO NEXT PAGE

6-1 REMOVE FUEL CONTROL (Continued)

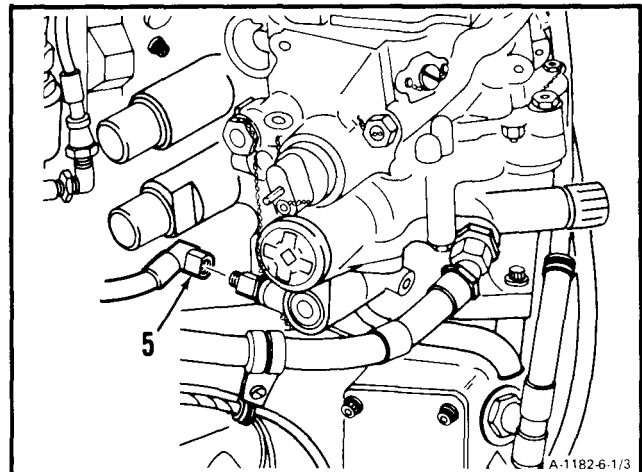
**NOTE**

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

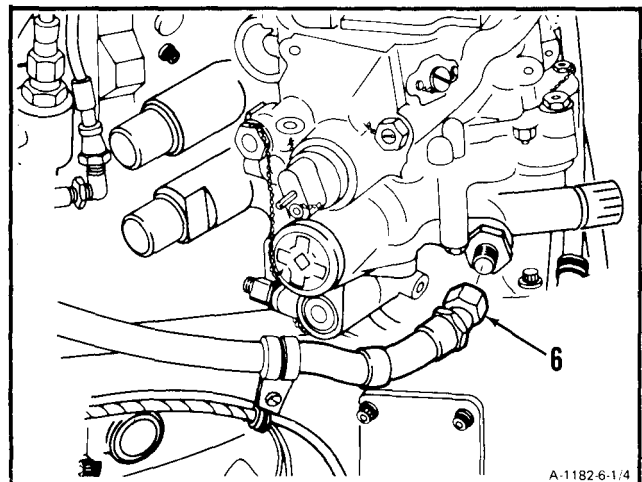
1. Loosen clamp (1) and **disconnect hose (2)**.
2. Loosen clamp (3) and **disconnect hose (4)**.



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



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



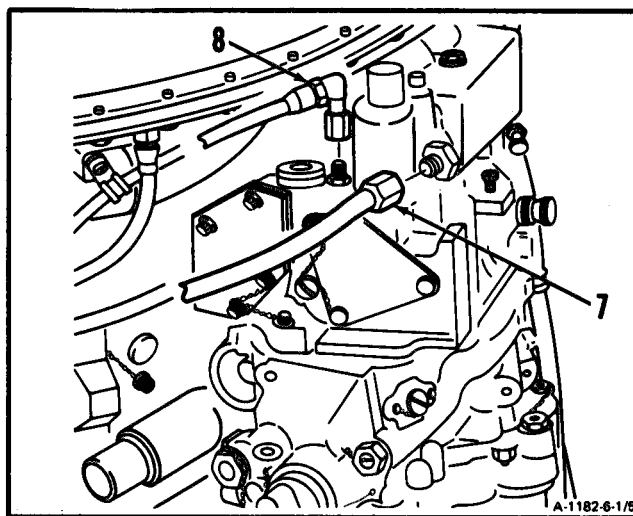
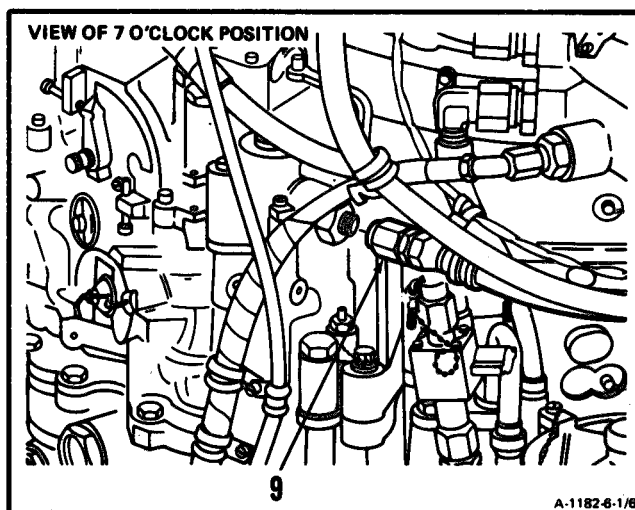
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**6-1 REMOVE FUEL CONTROL (Continued)**

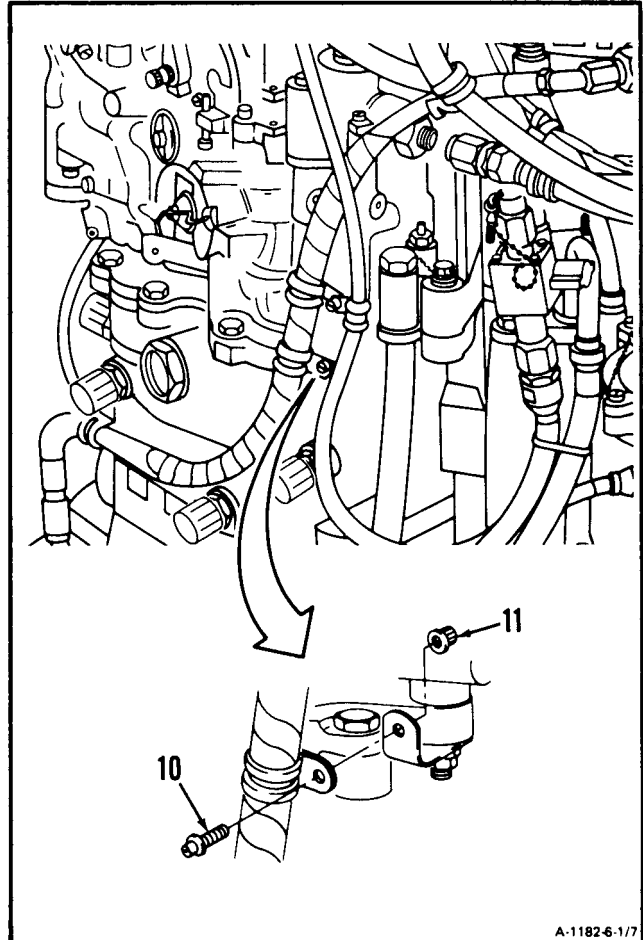
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6-1

**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).



GO TO NEXT PAGE

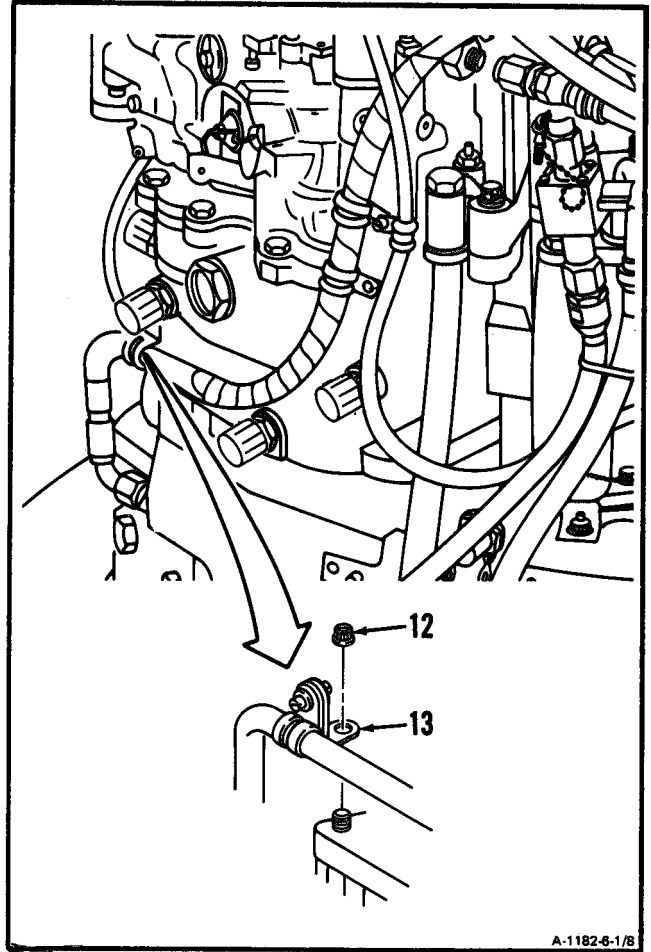
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**6-1 REMOVE FUEL CONTROL (Continued)**

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6-1

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



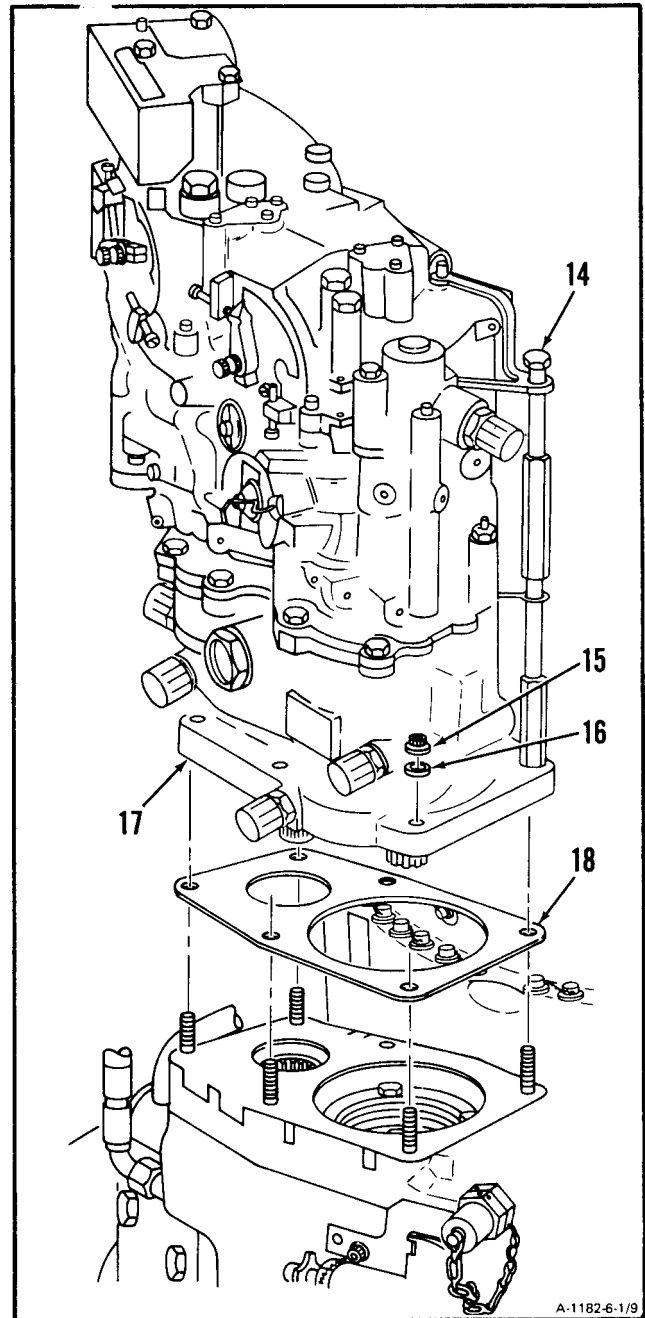
**GO TO NEXT PAGE**

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

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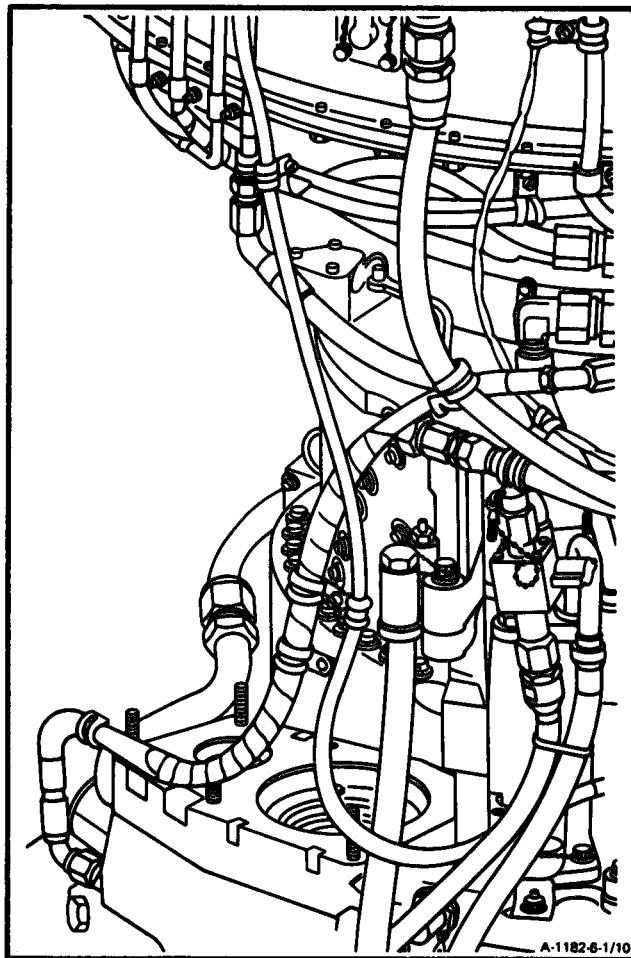
**6-1 REMOVE FUEL CONTROL (Continued)**

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6-1

**FOLLOW-ON MAINTENANCE:**

None

**END OF TASK**



---

**6-2 DISASSEMBLE FUEL CONTROL**

---

6-2

**INITIAL SETUP****Applicable Configurations:**

All

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

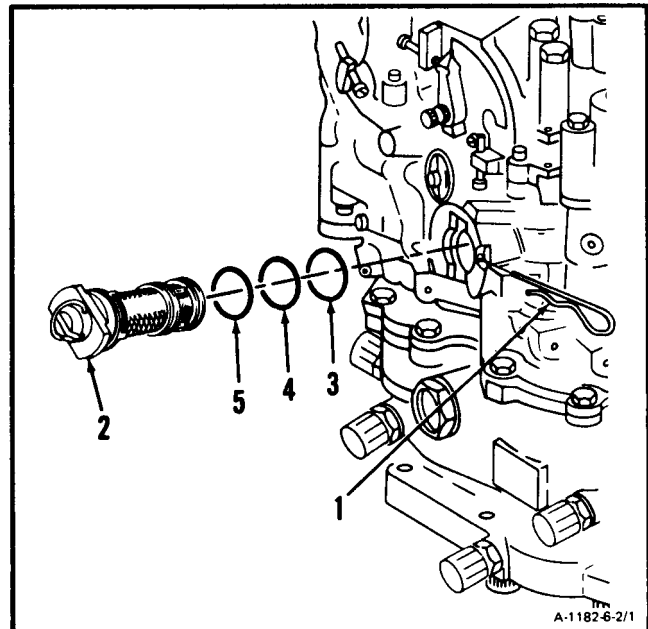
None

**Personnel Required:**

68B10 Aircraft Powerplant Repairer

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

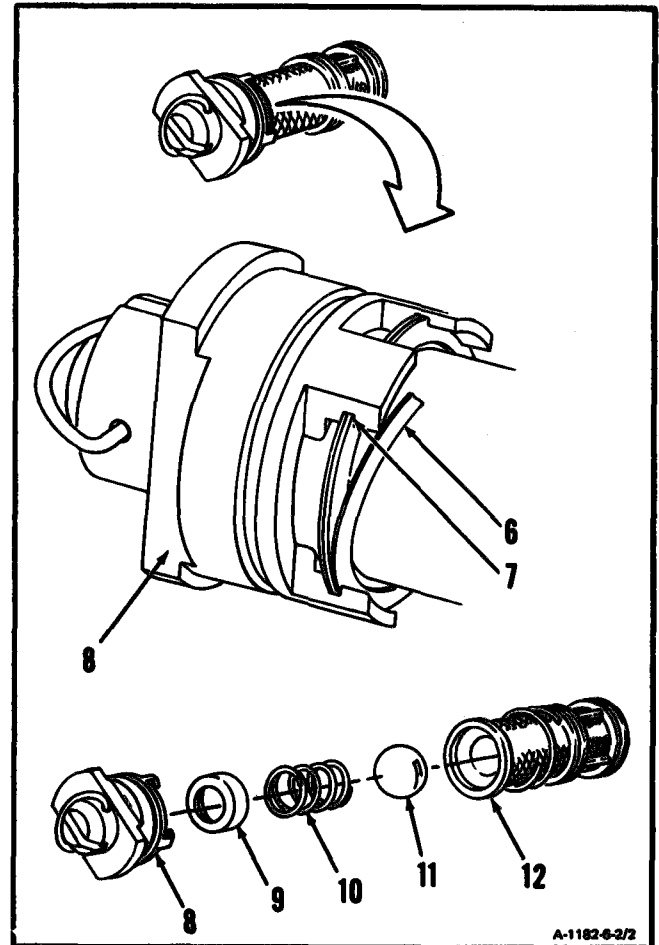
1. Remove lockwire and lockpin (1).
2. Rotate filter (2) counterclockwise 90 degrees.  
**Remove filter (2).**
3. Remove packings (3, 4, and 5).

**GO TO NEXT PAGE**

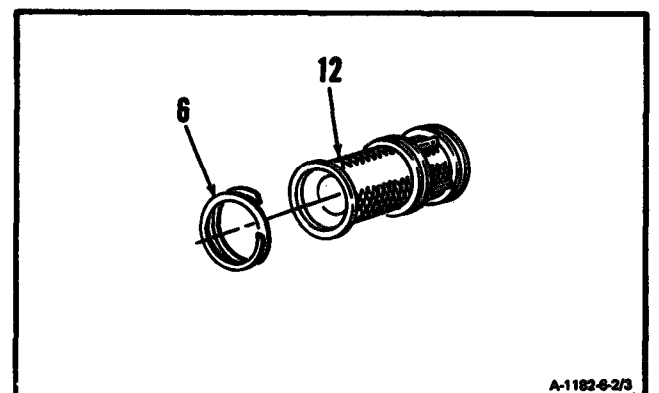
## 6-2 DISASSEMBLE FUEL CONTROL (Continued)

6-2

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



6. Remove retaining ring (6) from strainer



## FOLLOW-ON MAINTENANCE:

None

## END OF TASK

6-3 CLEAN FUEL CONTROL

6-3

INITIAL SETUP

**Applicable Configurations:**

All

**Tools:**

- Goggles
- Compressed Air Source

**Materials:**

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

**Personnel Required:**

68B10 Aircraft Powerplant Repairer

**Equipment Condition:**

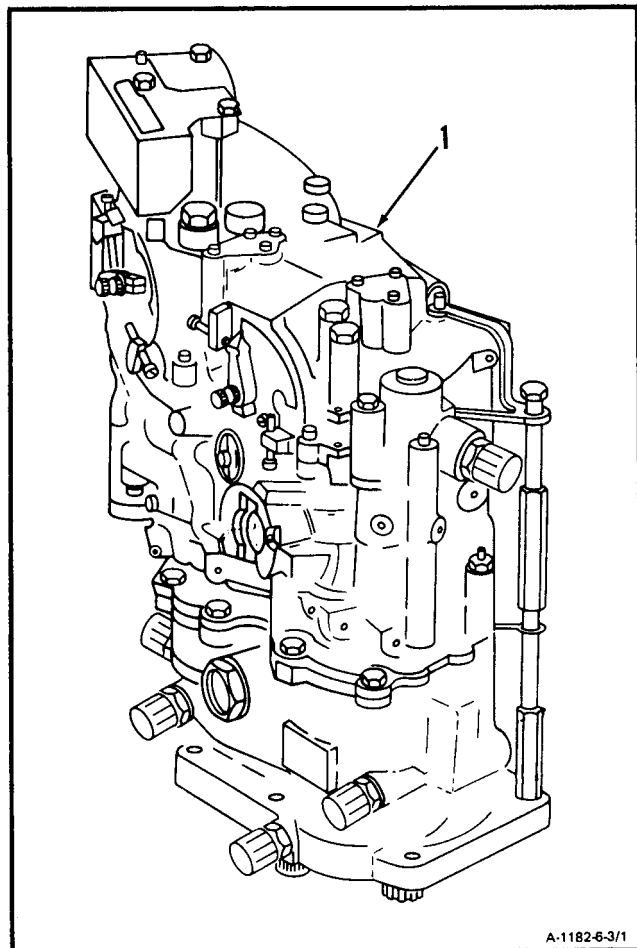
- Off Engine Task
- Fuel Control Removed (Task 6-1)
- Fuel Control Disassembled (Task 6-2)

**General Safety Instructions:**

**WARNING**

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

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



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**GO TO NEXT PAGE**

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

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6-3

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

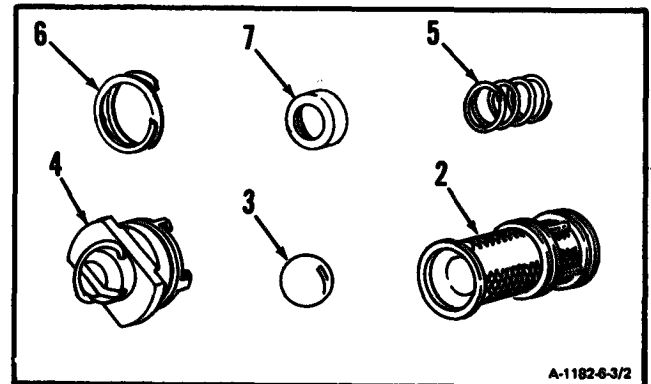
**WARNING**

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

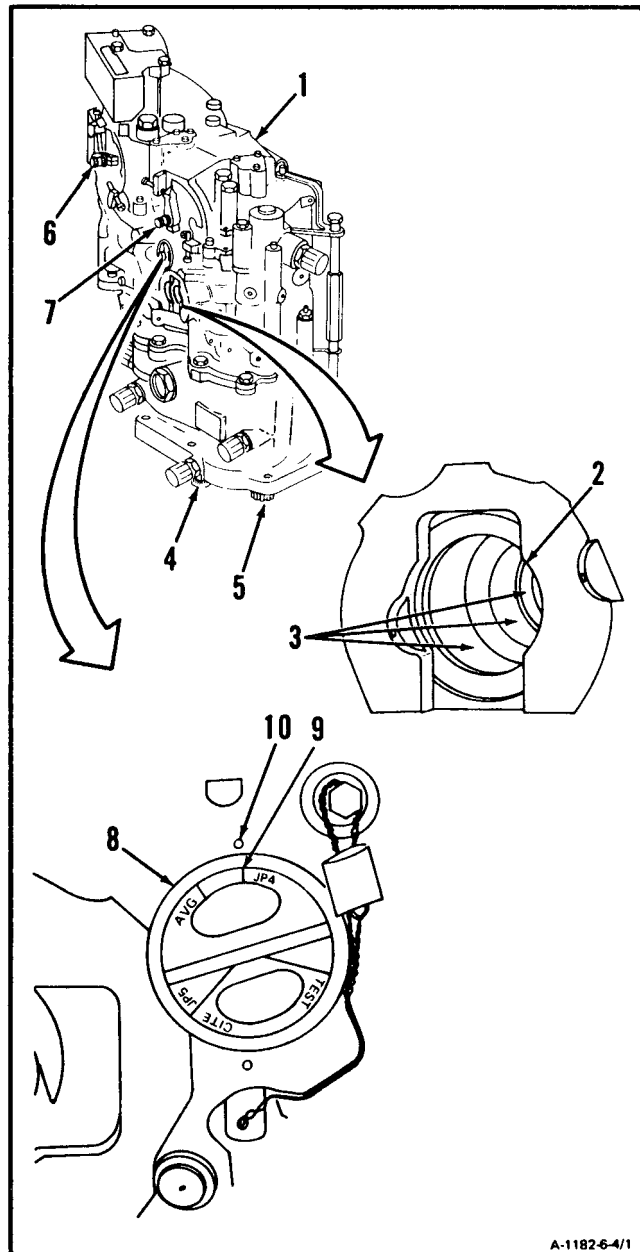
**References:**

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).



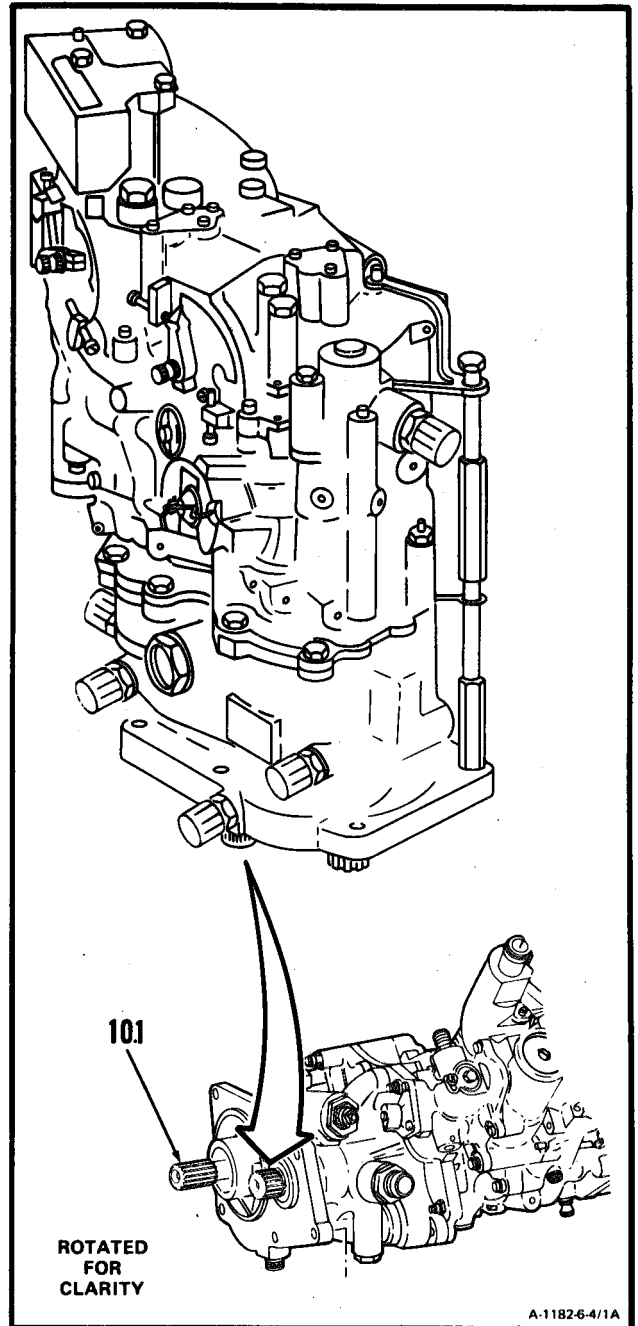
A-1182-6-4/1

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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.

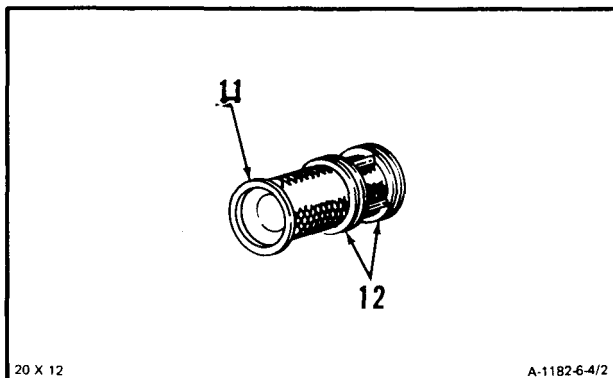


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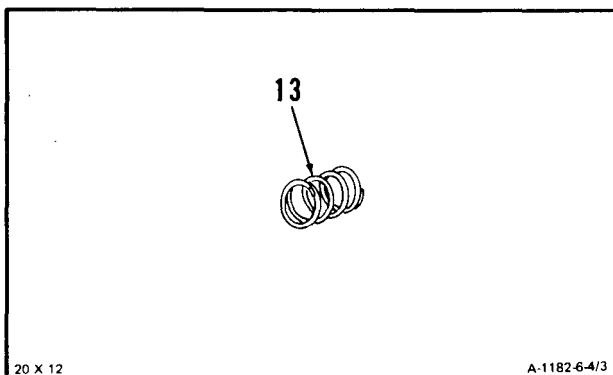
6-4 INSPECT FUEL CONTROL

6-4

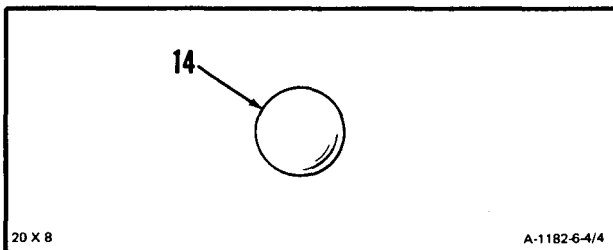
2. **Inspect strainer element (11).** There shall be no tears, punctures, or broken wires in screen. There shall be no nicks, dents or scratches deeper than 0.010 inch in two packing grooves (12).



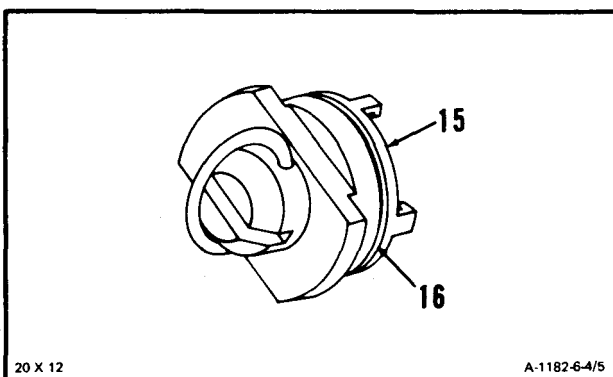
3. **Inspect spring (13).** There shall be no broken coils.



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**

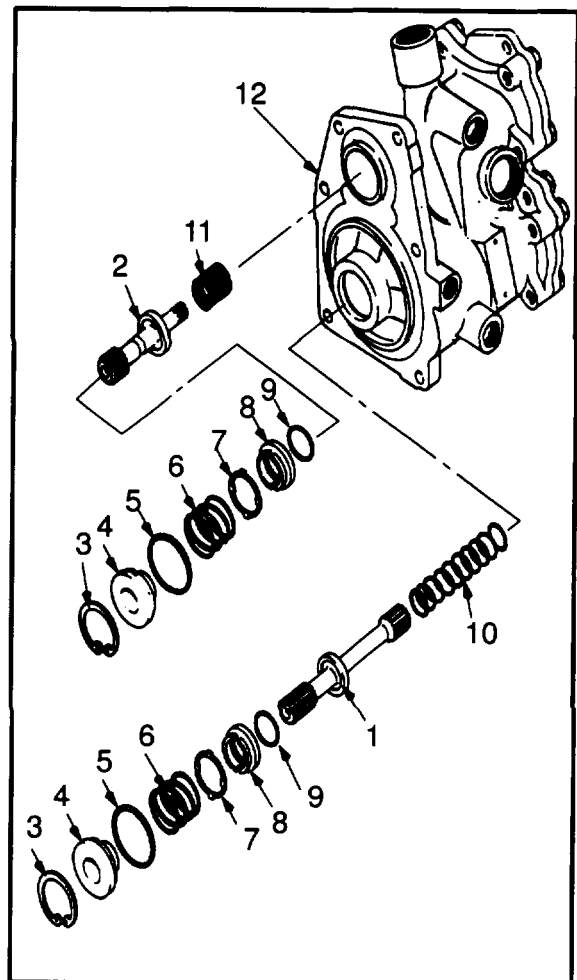
**Use care when removing the retaining ring. The seal retainer is spring loaded and exerts approximately 4.5 pounds of force.**

- 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**

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**6-4.1 REPAIR FUEL CONTROL**

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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)

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**6-5 ASSEMBLE FUELCONTROL**

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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

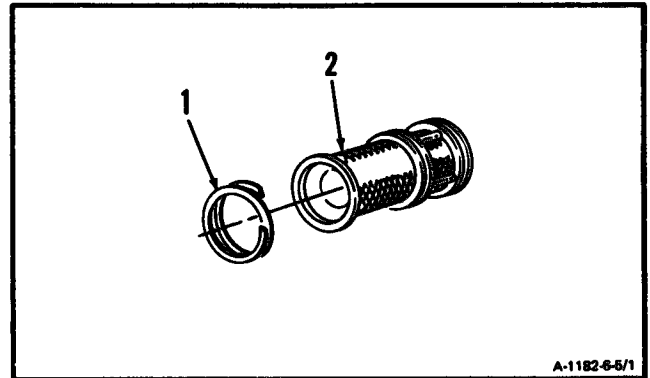
**References:**

TM 55-2840-254-23P

**Equipment Condition:**

Off Engine Task

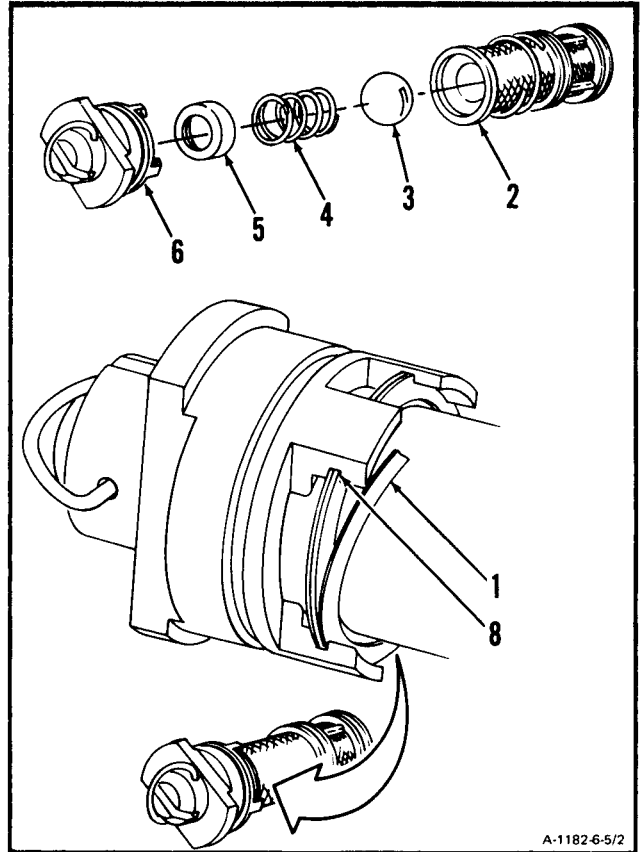
1. Slide retaining ring (1) on strainer (2).

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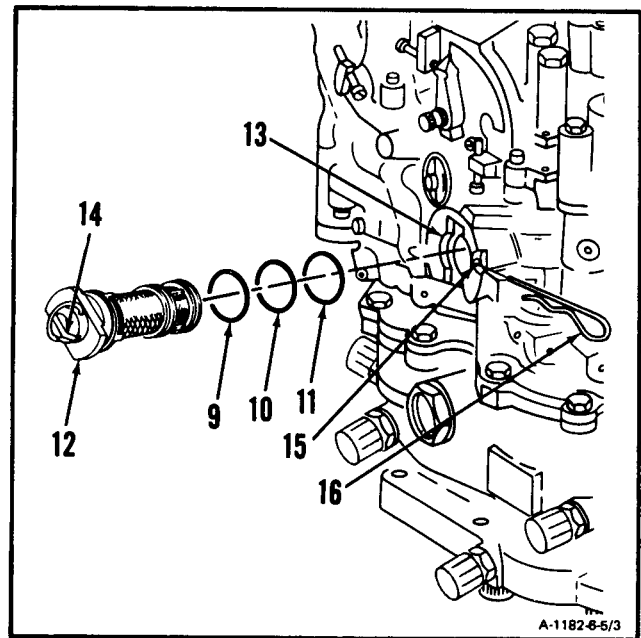
6-5 ASSEMBLE FUEL CONTROL (Continued)

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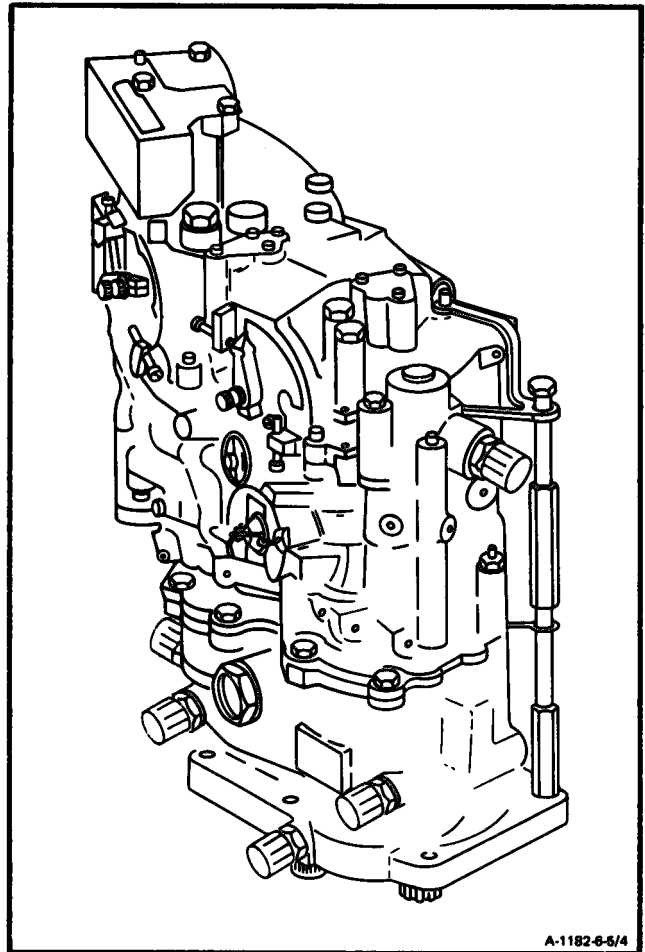
**6-5 ASSEMBLE FUEL CONTROL (Continued)**

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6-5

**FOLLOW-ON MAINTENANCE:**

None

**END OF TASK**

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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:**

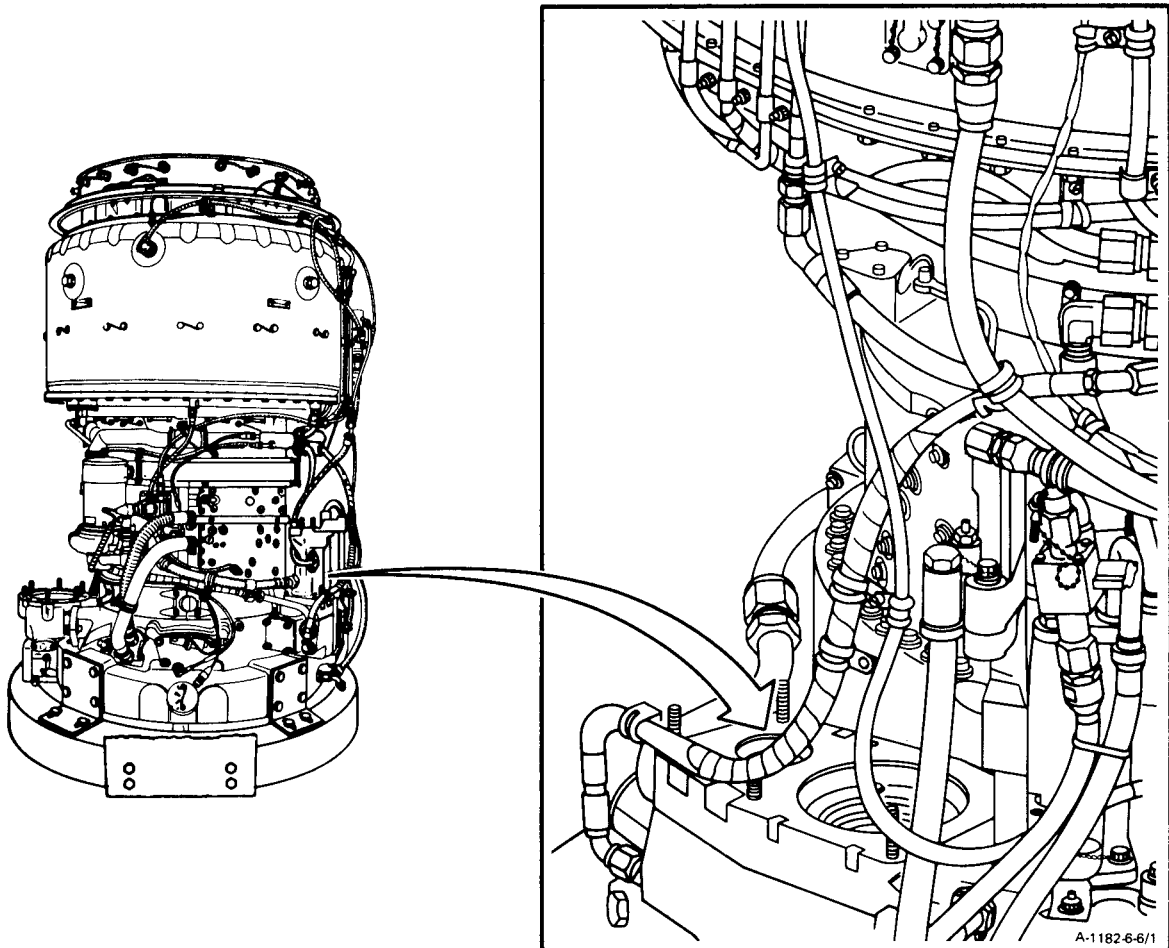
Gasket

**Personnel Required:**

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

**References:**

TM 55-2840-254-23P



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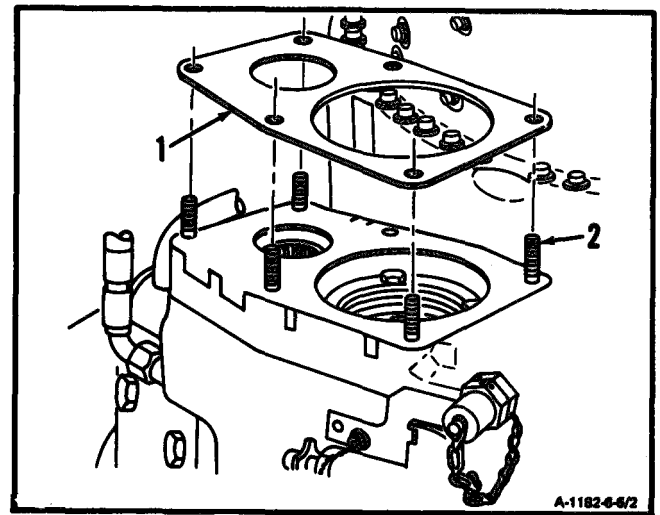
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**6-6 INSTALL FUEL CONTROL (Continued)**

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6-6

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



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

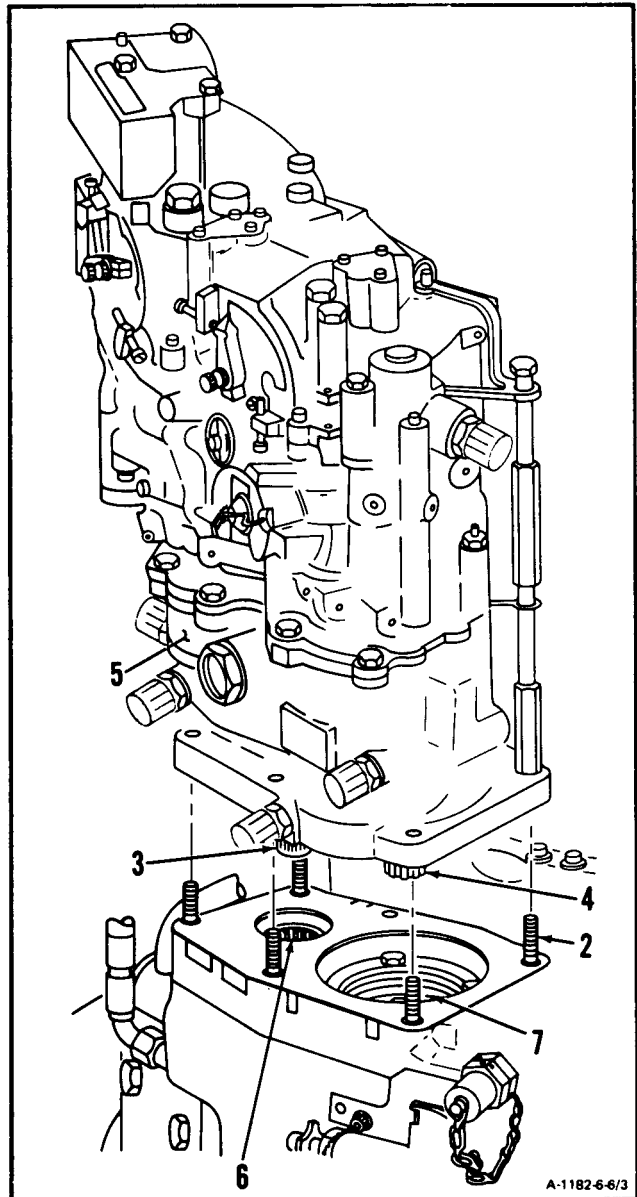
6-6

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).

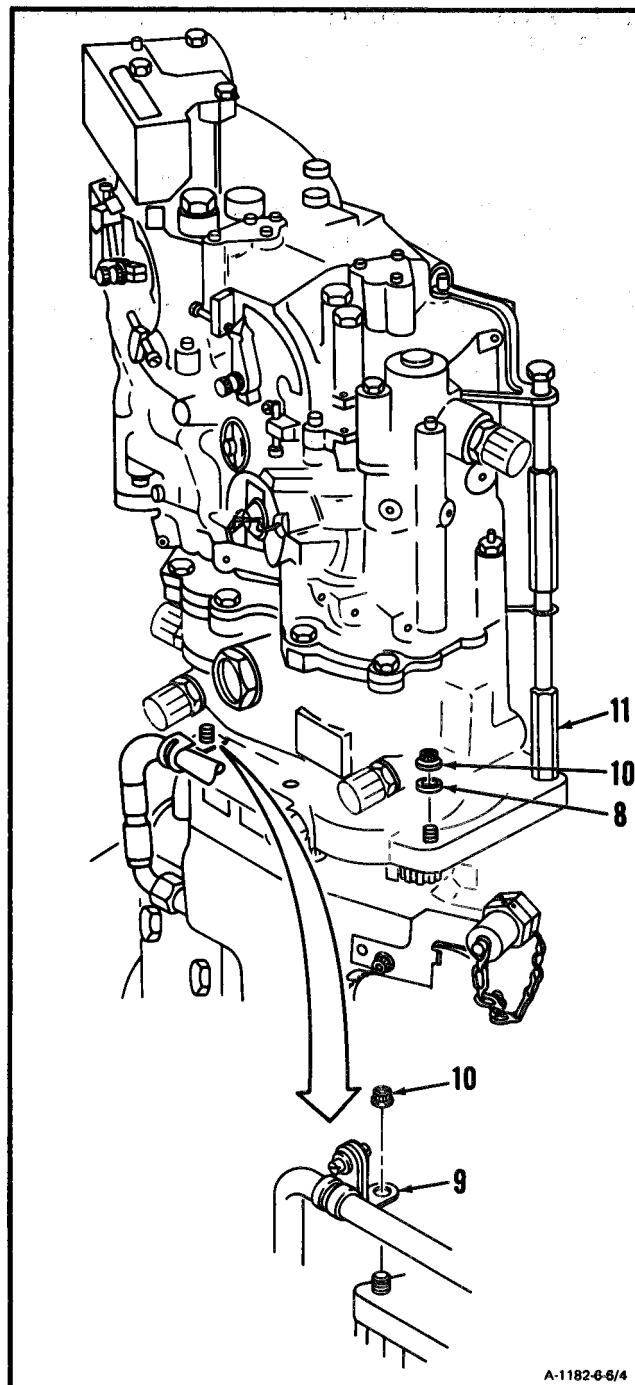
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## 6-6 INSTALL FUEL CONTROL (Continued)

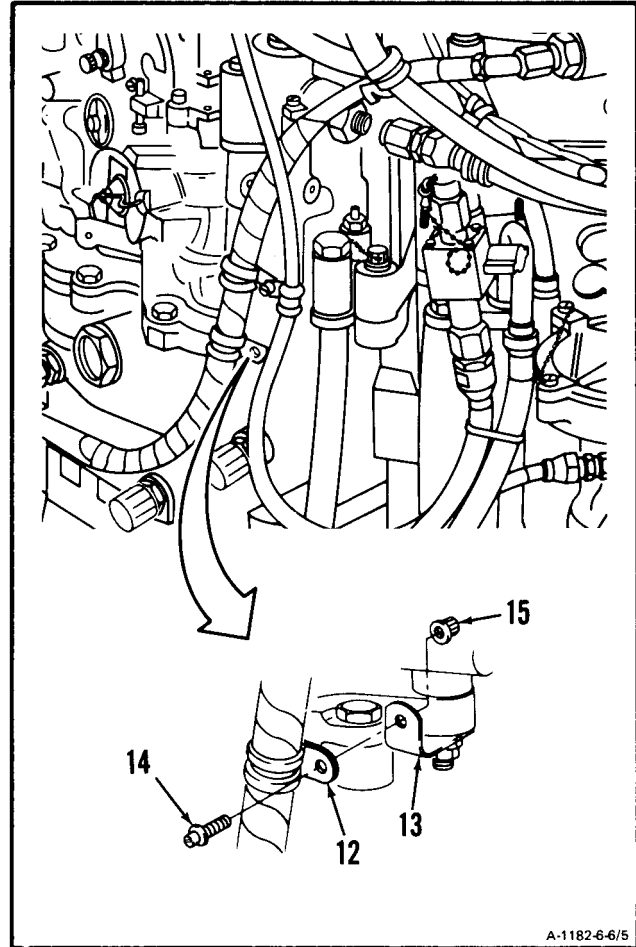
6-6

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

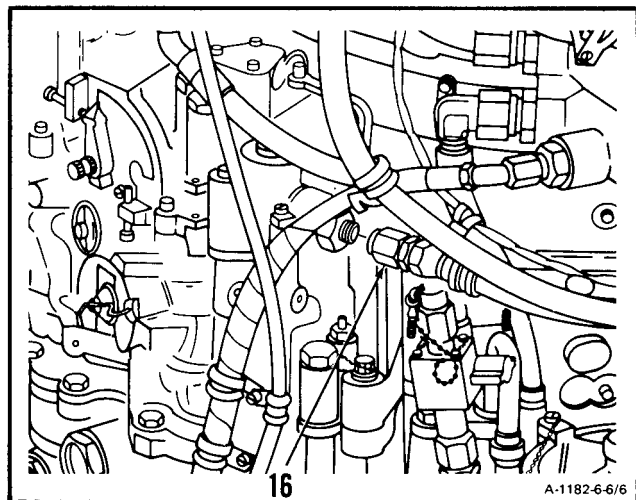


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5. Position clamp (12) on bracket (13), and install bolt (14) and nut (15).



6. Install hose assembly ( 16).



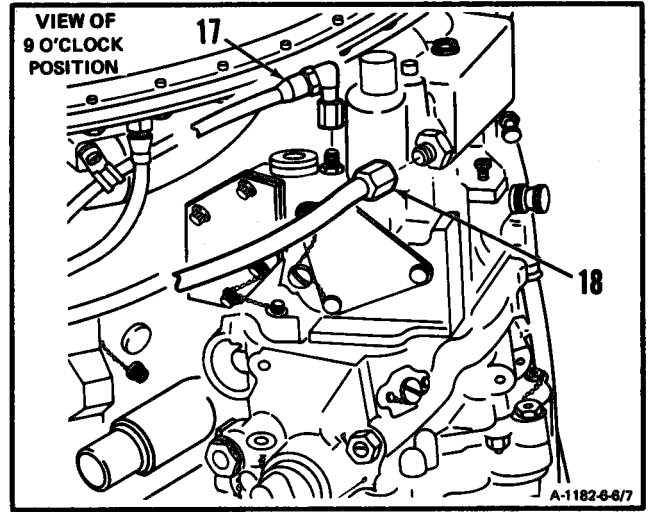
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6-6 INSTALL FUEL CONTROL (Continued)

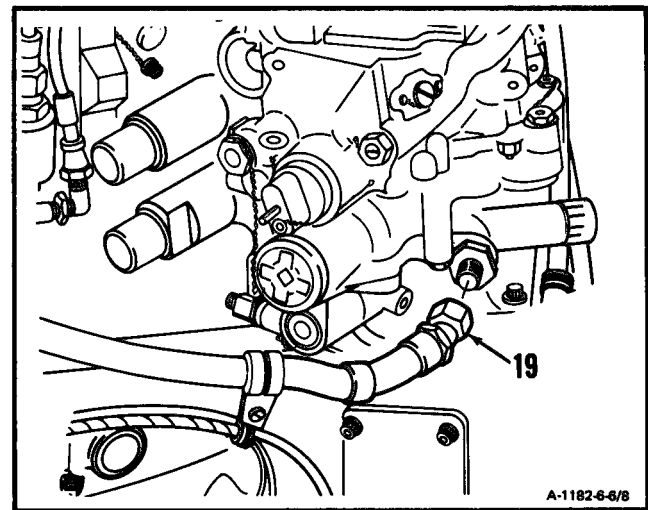
6-6

7. Install hose assembly (17).

8. Install hose assembly (18).

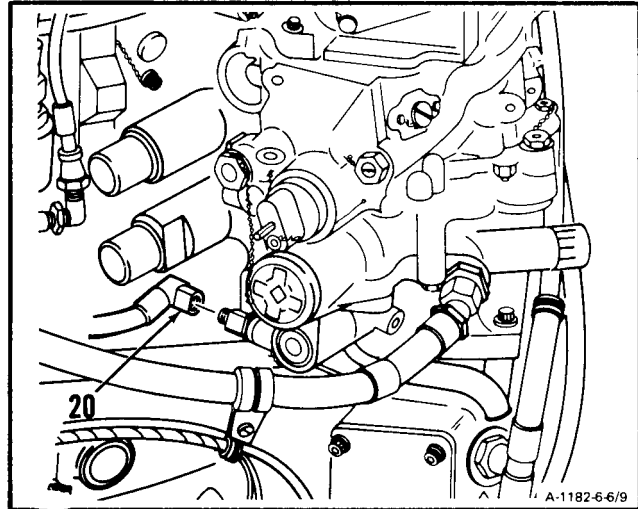


9. Install hose assembly (19).



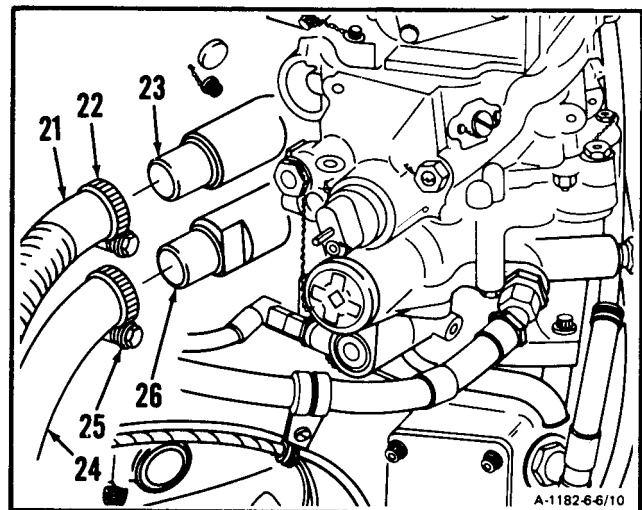
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10. Install hose assembly (20).



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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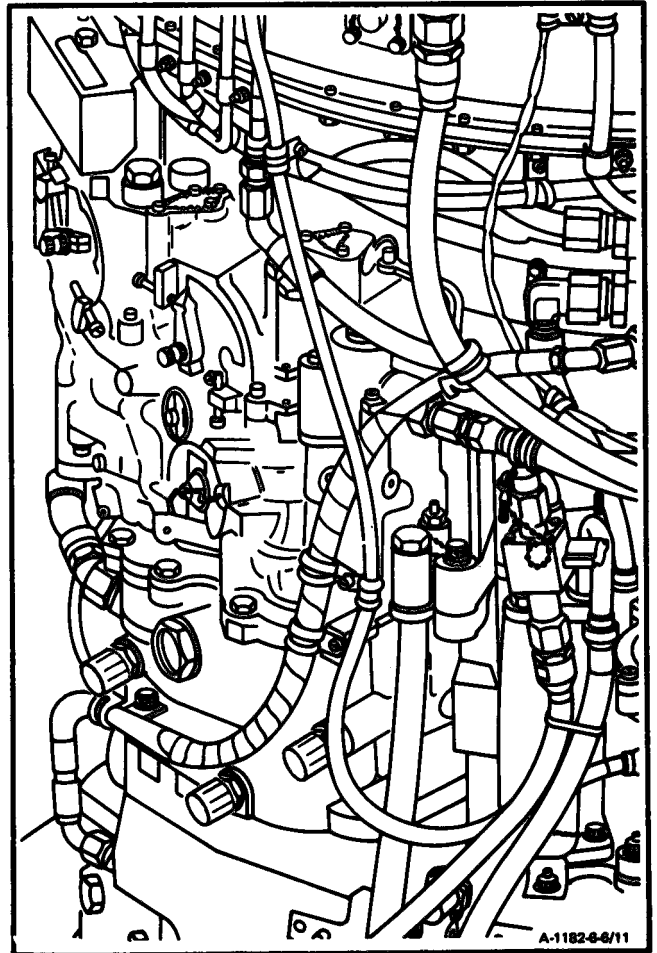
**6-6 INSTALL FUELCONTROL(Continued)**

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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)

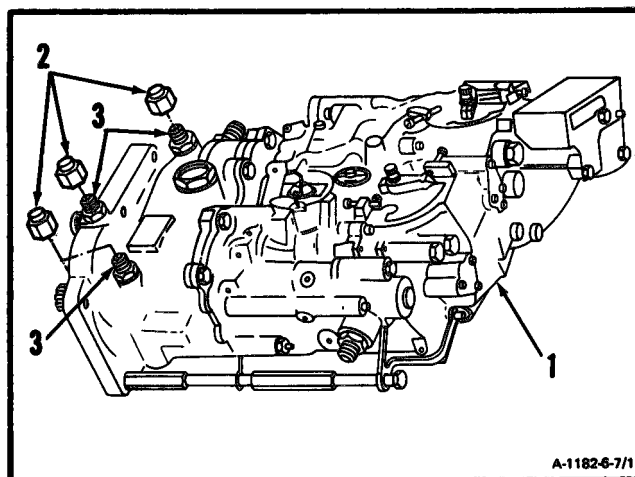
**General Safety Instructions:****WARNING**

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.

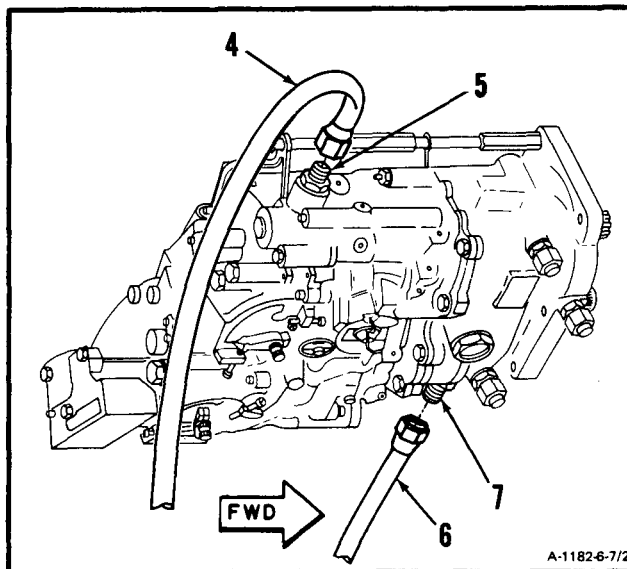
1. Place fuel control (1) in horizontal position.
2. Install three high pressure caps (2) on three fittings (3).



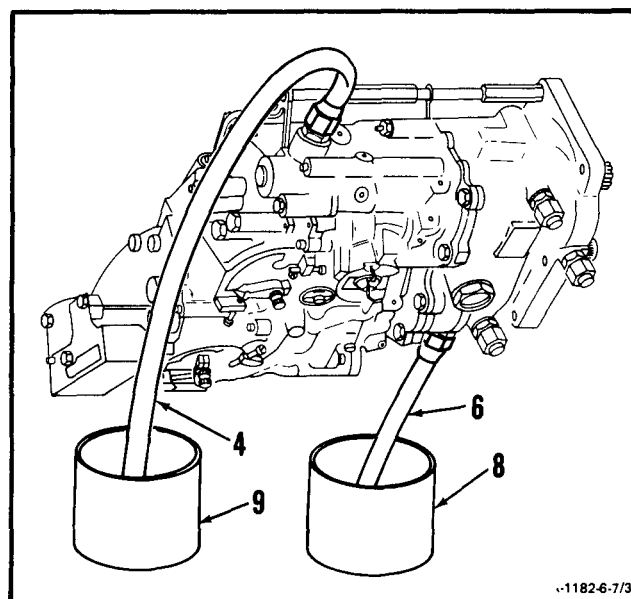
A-1182-6-7/1

**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).

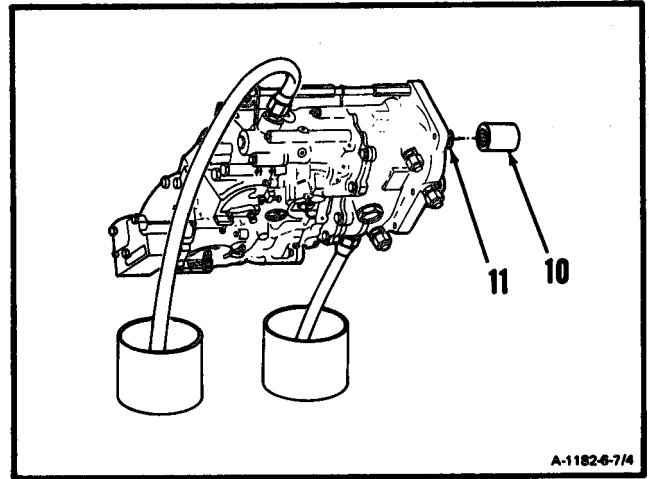


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## 6-7 PRESERVE FUEL CONTROL (Continued)

6-7

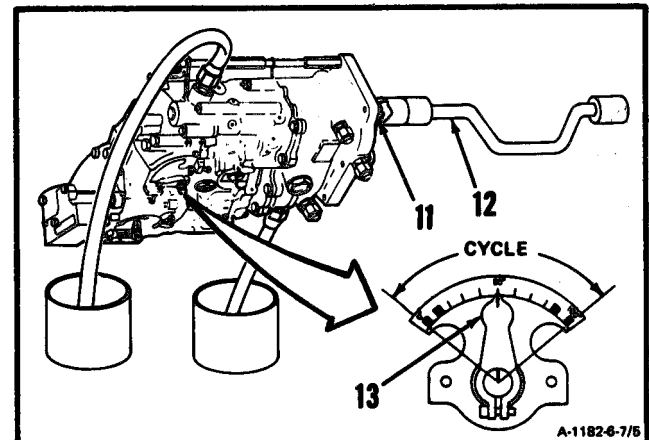
- 8.. Install 9/16 inch-12 point deep socket (10) on N1 drive spline (11).



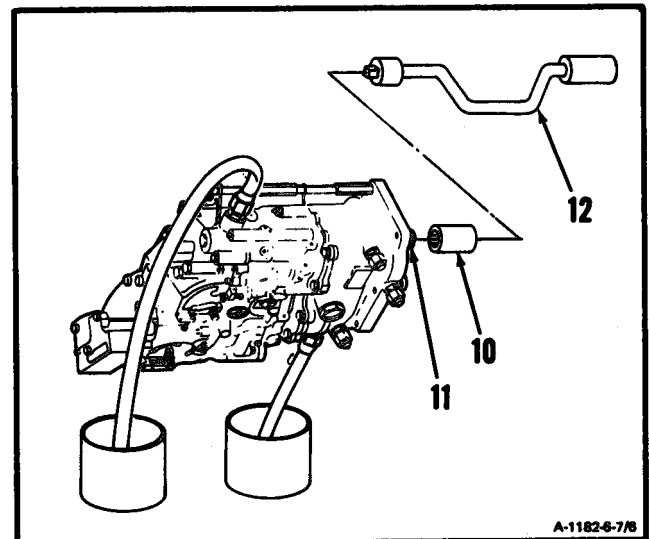
## NOTE

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).

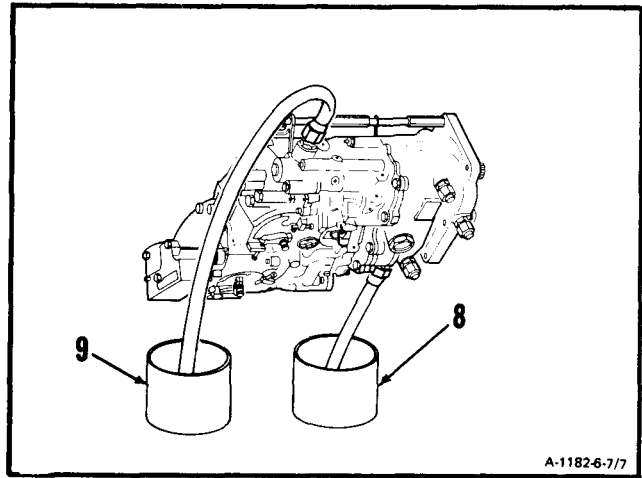


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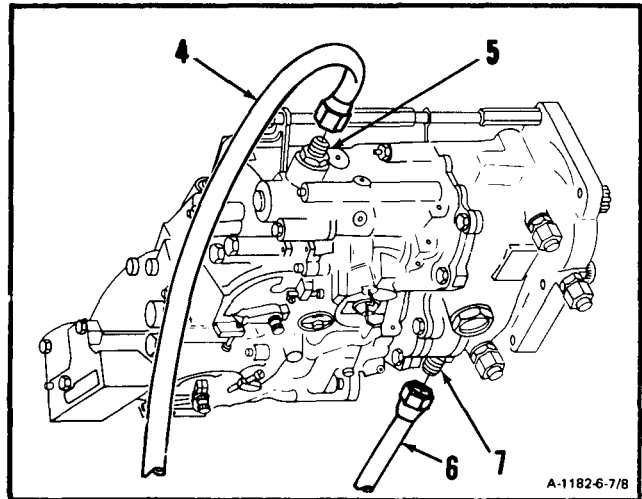


6-7 PRESERVE FUEL CONTROL (Continued)

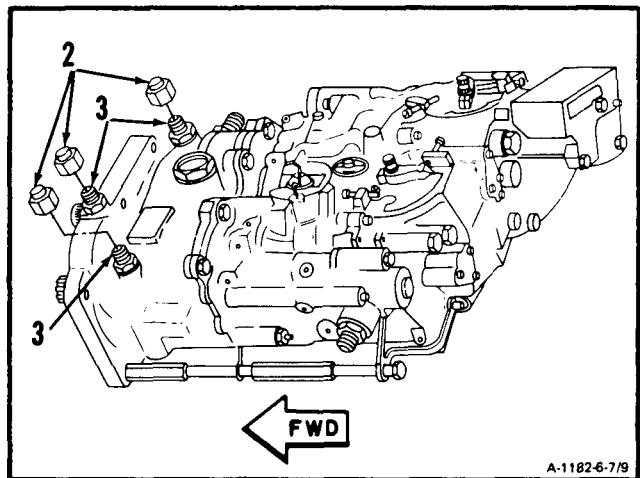
11. Remove two containers (8 and 9). Discard lubricating oil (E31) from container (9).



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.



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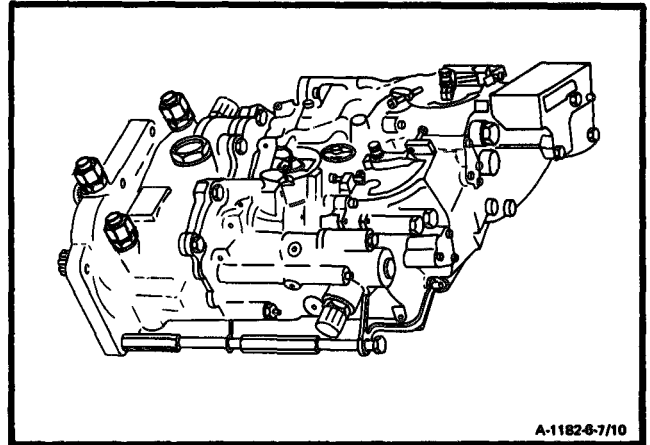
**6-7 PRESERVE FUEL CONTROL (Continued)**

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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).

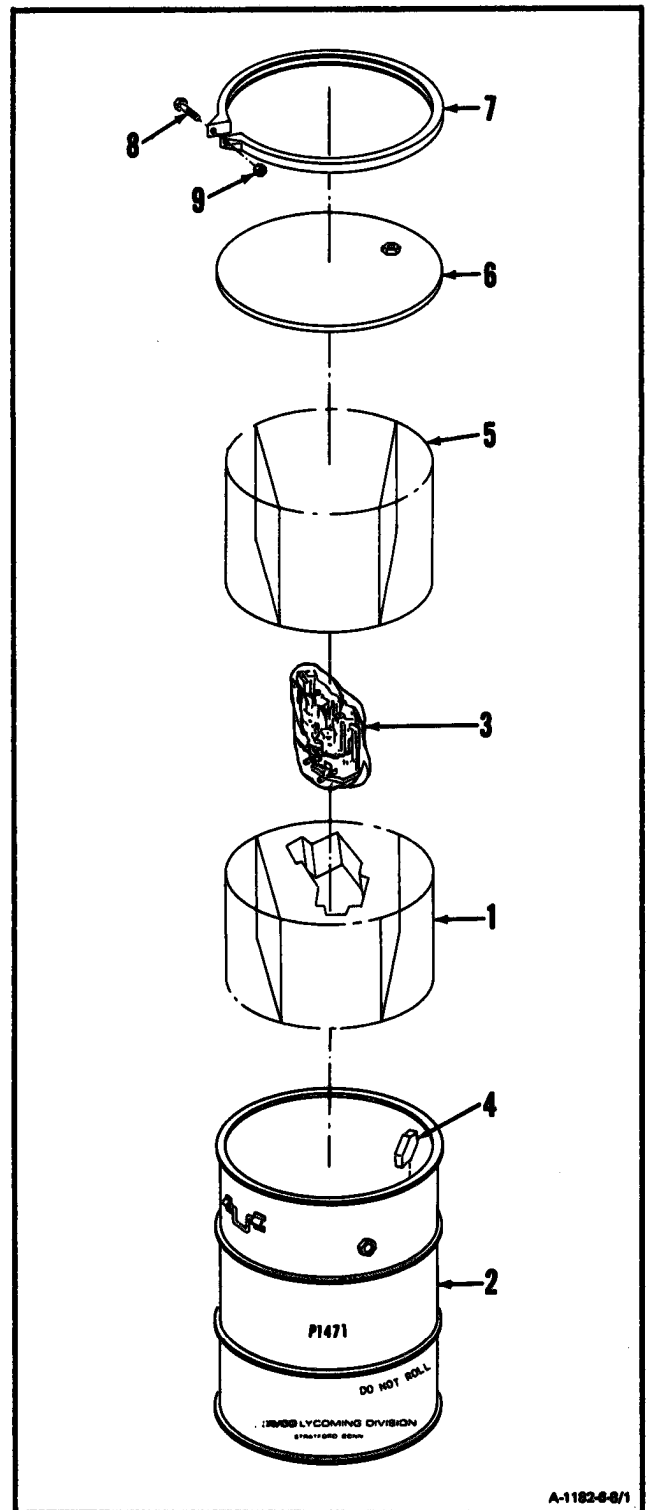
**NOTE**

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).

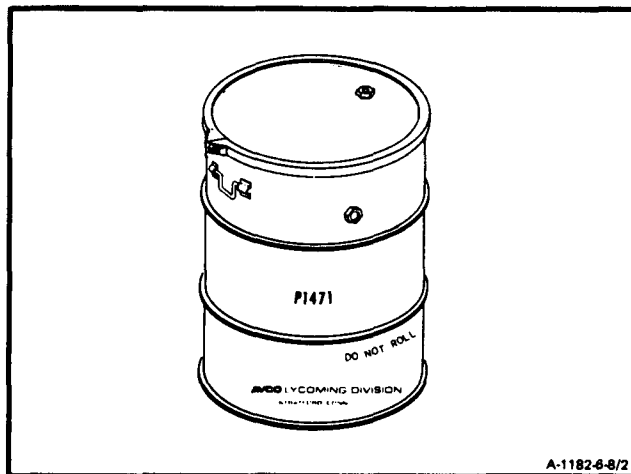
**INSPECT****GO TO NEXT PAGE**

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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:**

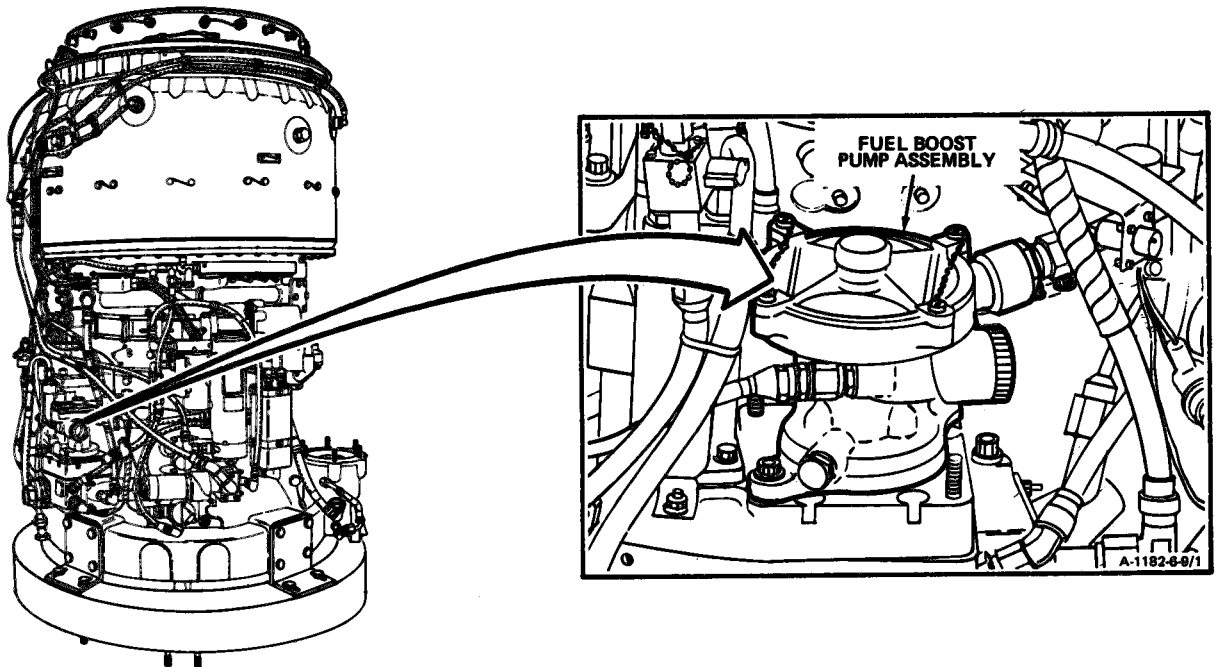
68B10 Aircraft Powerplant Repairer

**References:**

Task 6-11

**WARNING**

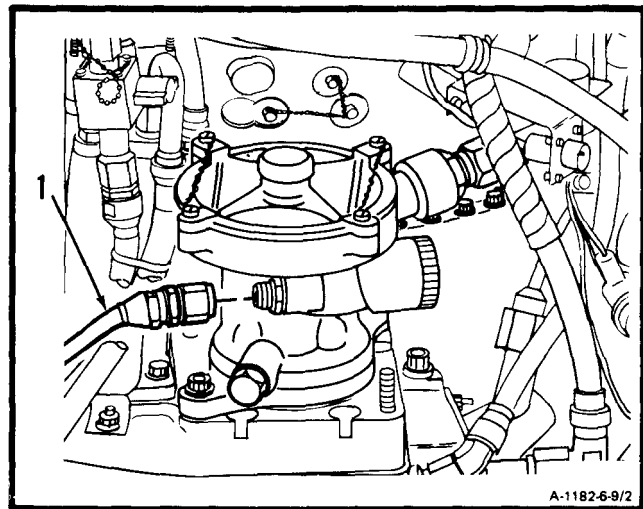
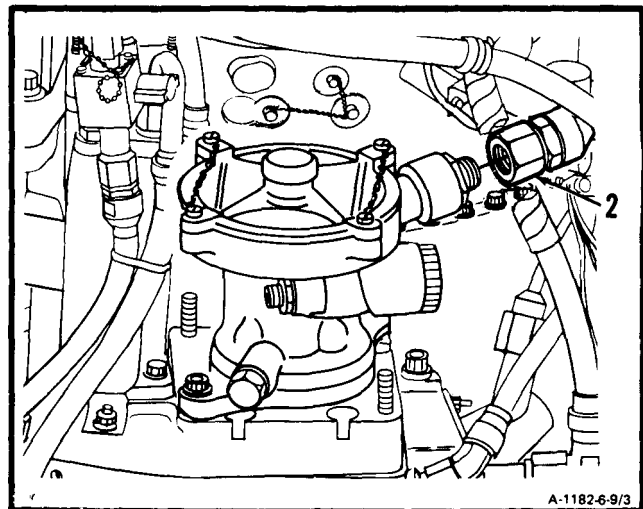
Turbine fuels are very flammable. They may cause drying and irritation of skin or eyes. Handle only in well-ventilated areas away from heat and open flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin and do not take internally. Wash contacted area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



GO TO NEXT PAGE

**NOTE**

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

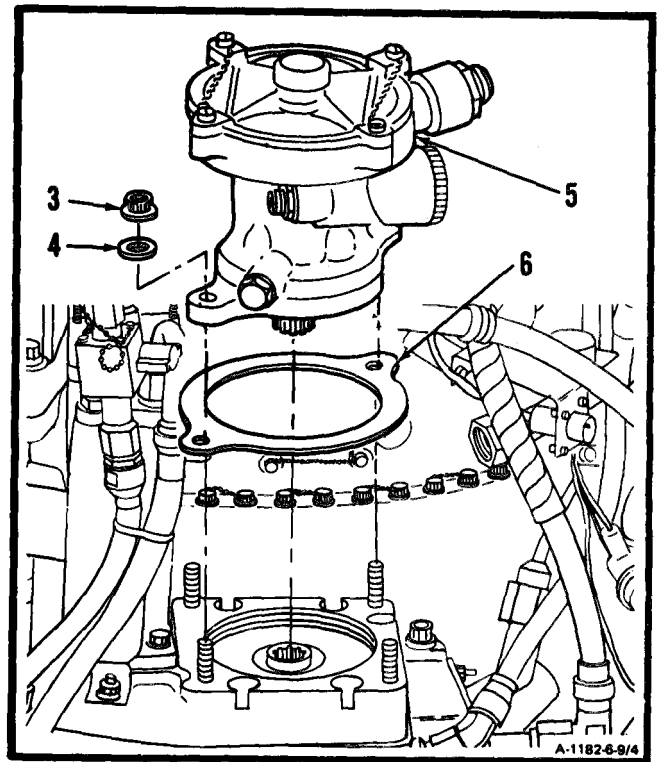
**1. Disconnect hose assembly (1).****2. Disconnect hose assembly (2).**

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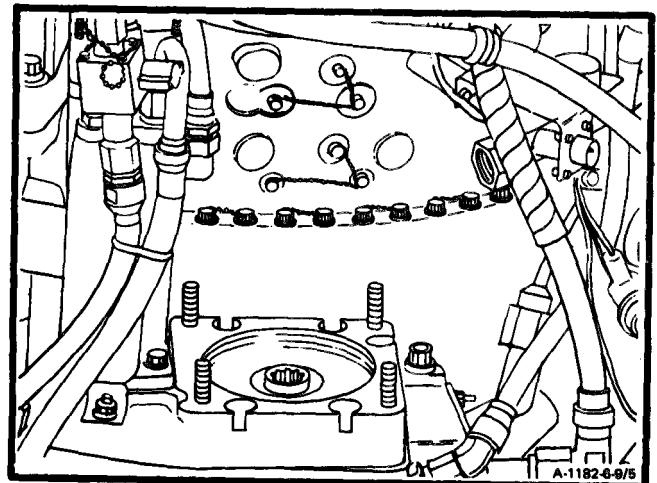
**6-9 REMOVE FUEL BOOST PUMP ASSEMBLY (Continued)**

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

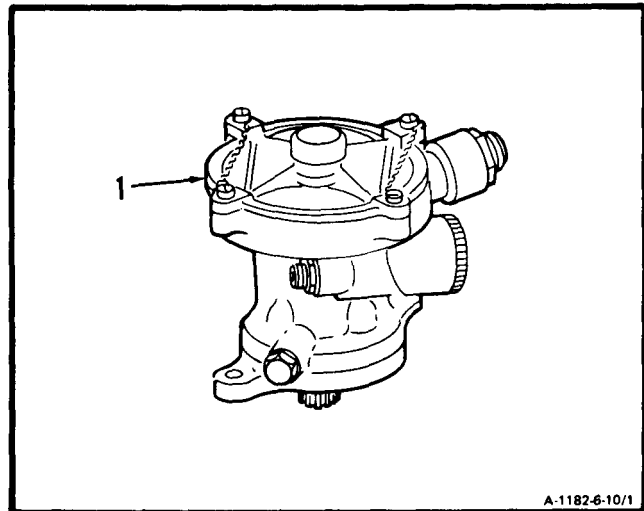
**Equipment Condition:**

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).



A-1182-6-10/1

## 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

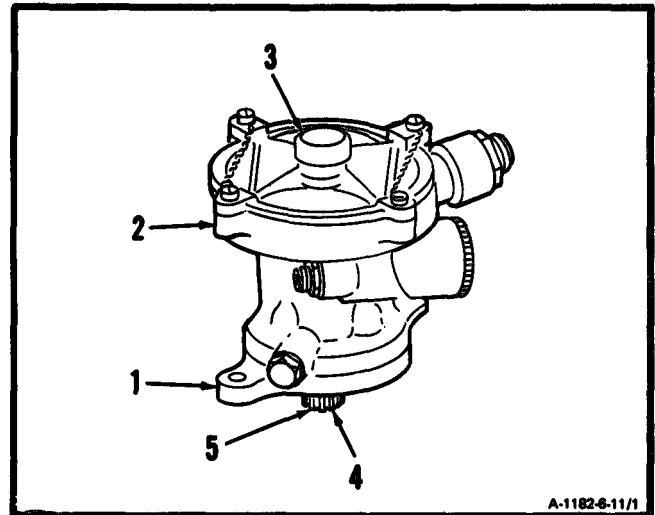
**Equipment Condition:**

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:**

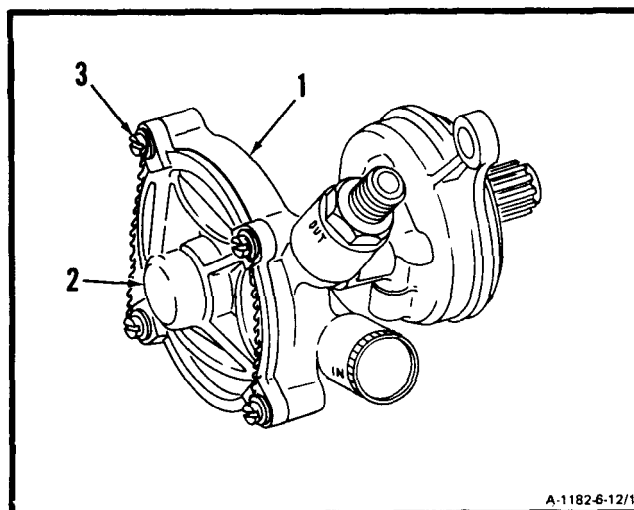
TM 55-2840-254-23P

**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.

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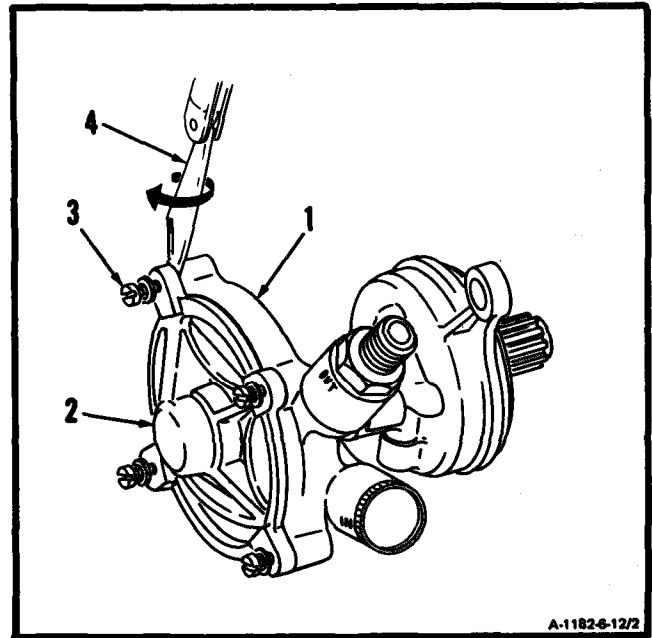
## 6-12 REPAIR FUEL BOOST PUMP ASSEMBLY (Continued)

6-12

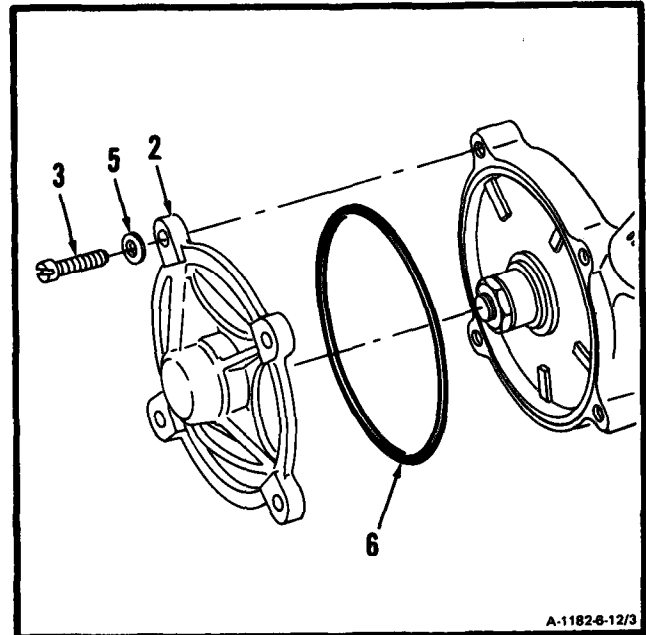
**CAUTION**

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).

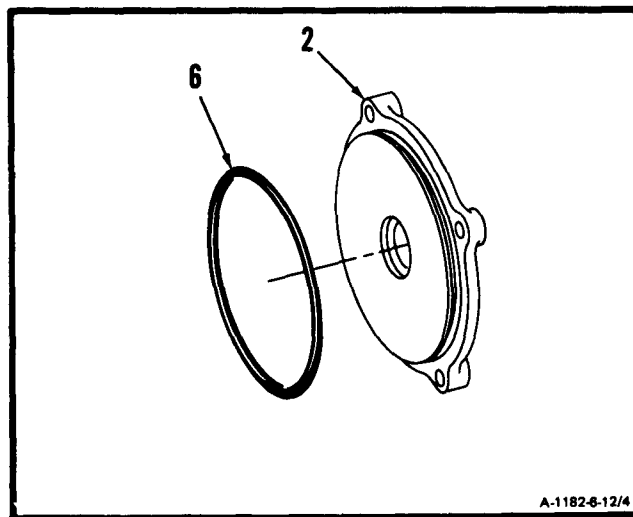


- c. Remove four screws (3), washers (5), cover (2), and packing (6).



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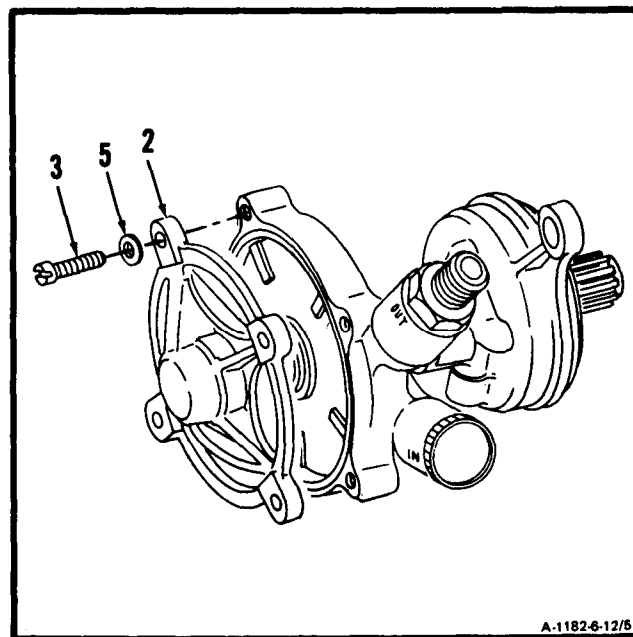
d. Install new packing (6) on cover (2).



**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).

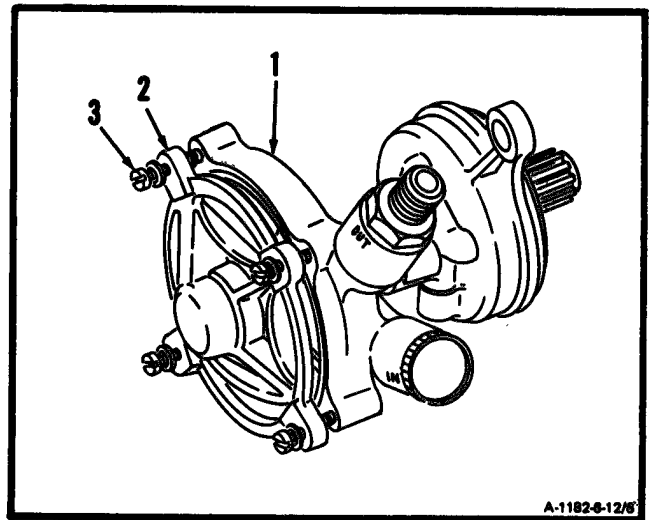


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## 6-12 REPAIR FUEL BOOST PUMP ASSEMBLY(Continued)

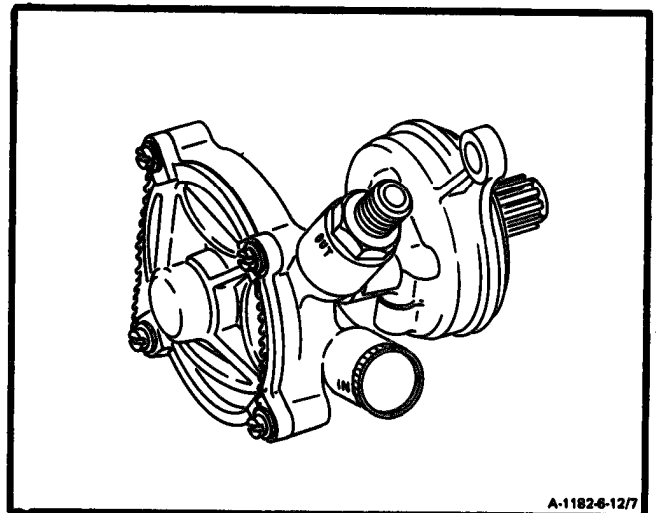
6-12

- 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

---

6-13

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:**

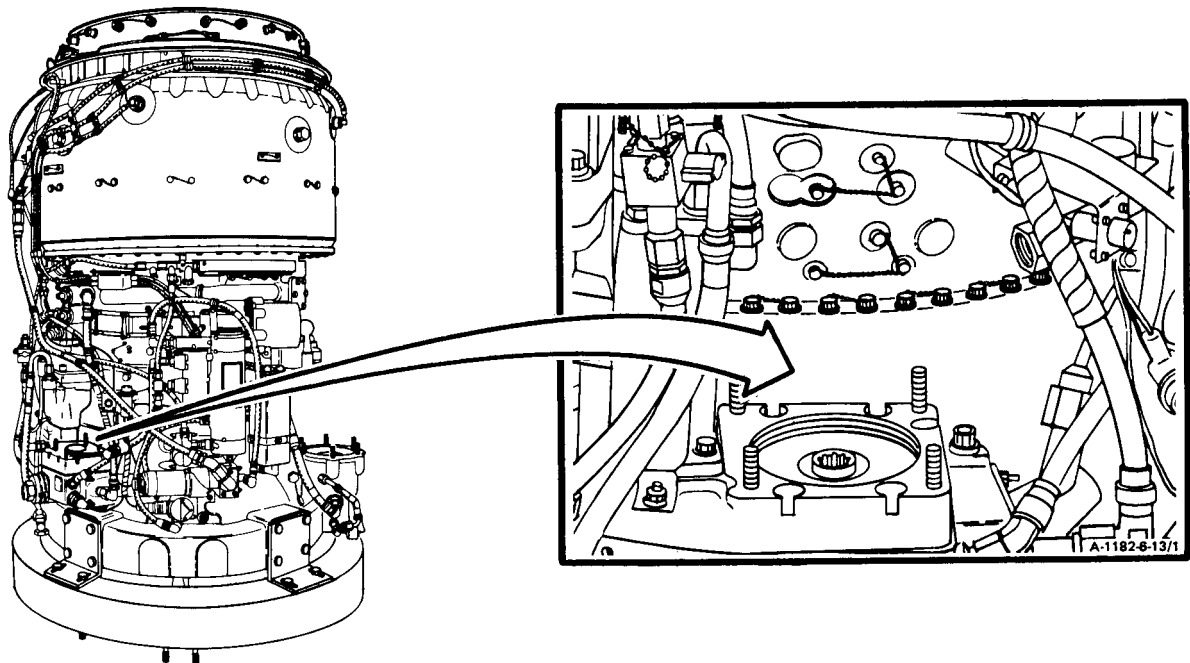
Gasket  
Packings

**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)**

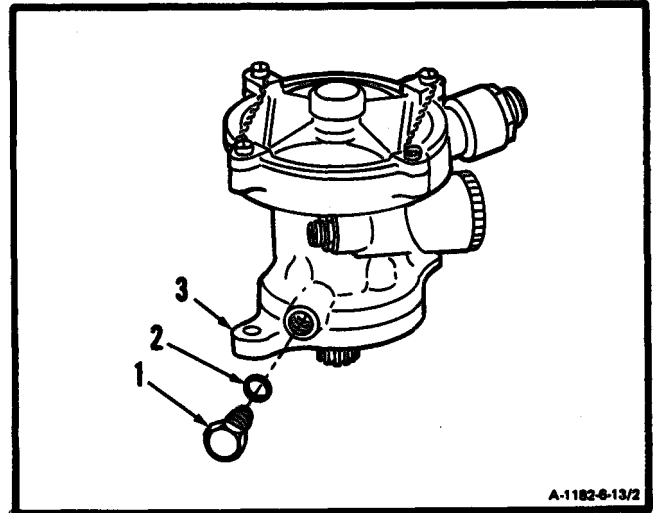
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6-13

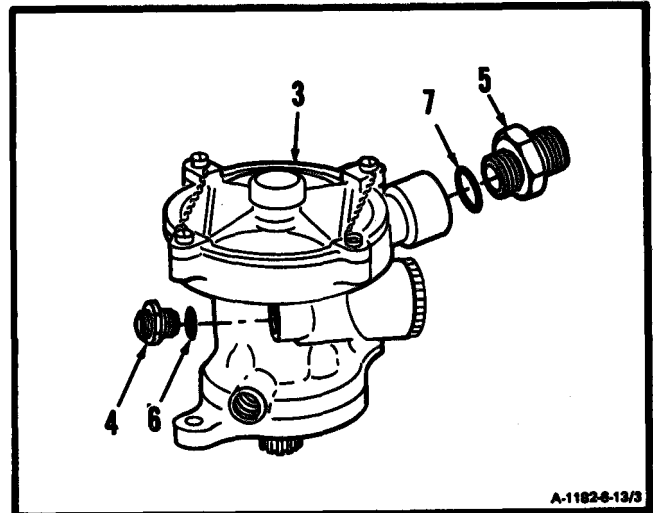
**NOTE**

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).

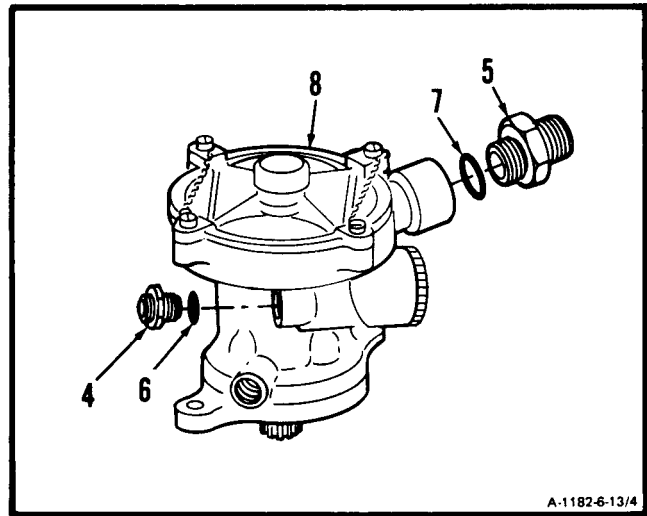


2. Remove nipples (4 and 5) and packings (6 and 7) from removed fuel boost pump (3).

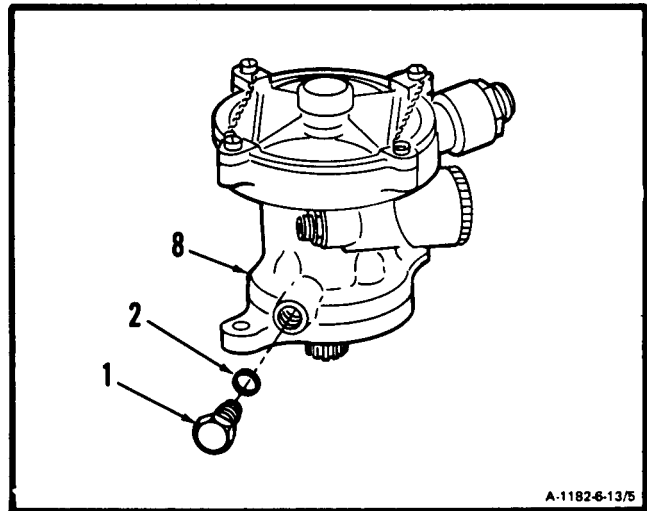
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3. Install packings (6 and 7) and nipples (4 and 5) in serviceable fuel boost pump (8).



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



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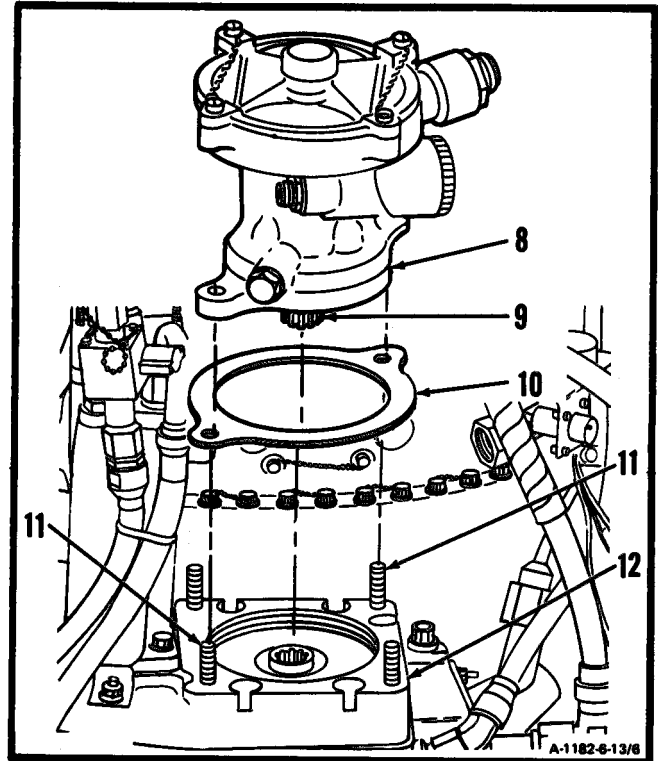
**6-13 INSTALL FUEL BOOST PUMP ASSEMBLY (Continued)**

6-13

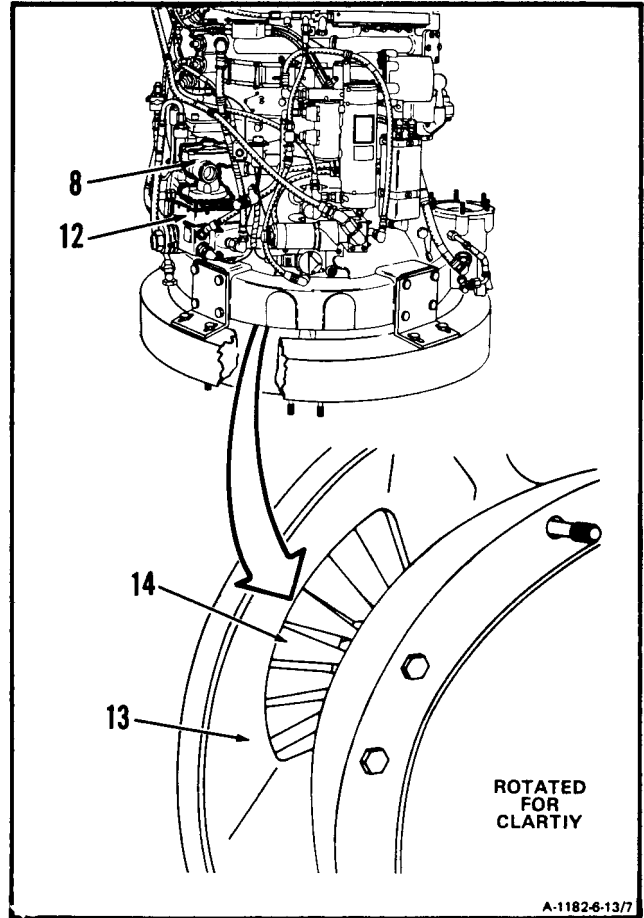
5. Apply lubricant (E30) to splines (9).
6. Install gasket (10) and fuel boost pump assembly (8) on studs (11) of accessory gearbox assembly (12).

**NOTE**

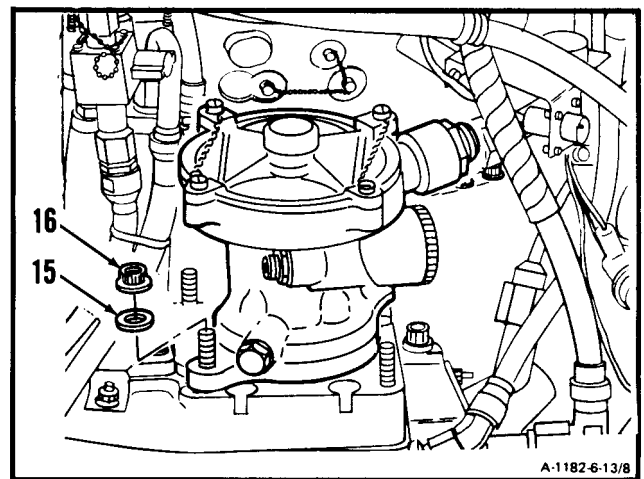
If splines of fuel boost pump shaft and accessory gearbox do not engage, do step 7. If splines do engage and pump assembly seats against gearbox assembly, skip step 7.

**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).

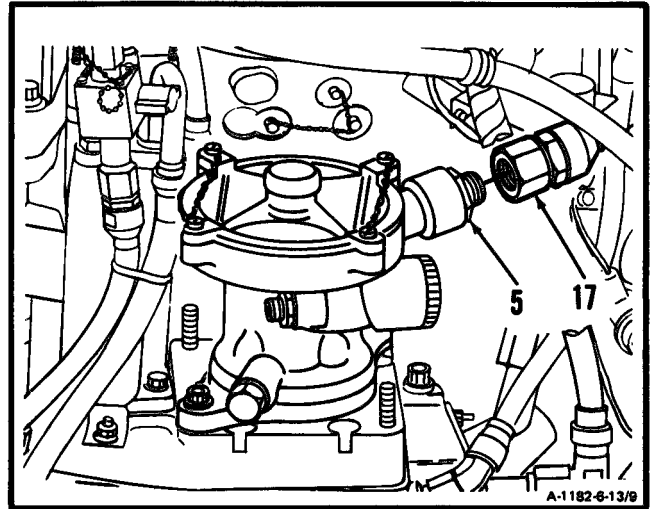


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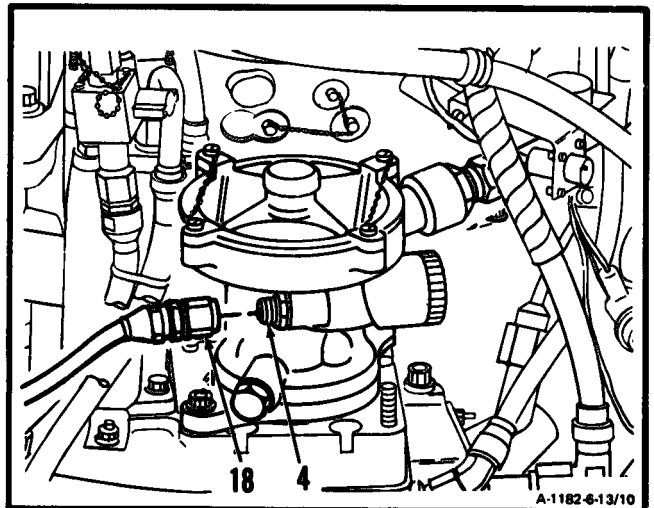
6-13 INSTALL FUEL BOOST PUMP ASSEMBLY (Continued)

6-13

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



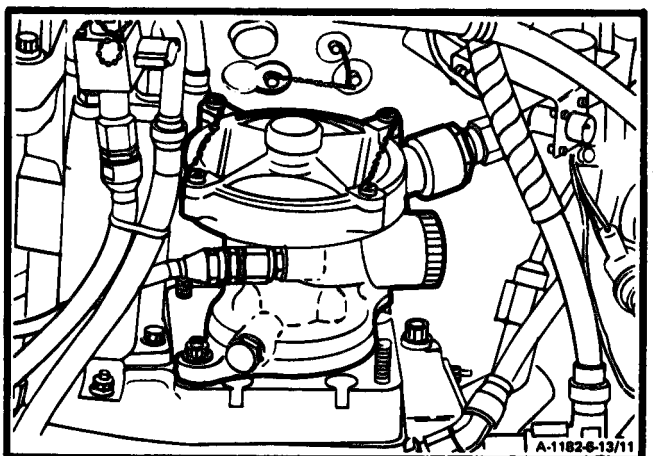
10. Connect hose assembly (18) to nipple (4).



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

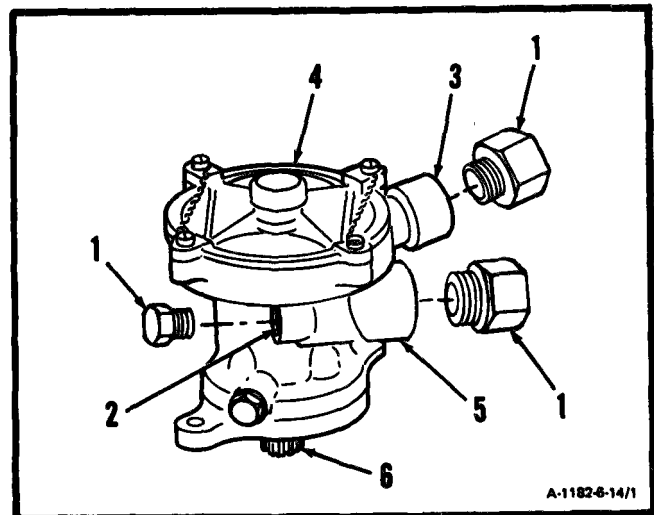
**Personnel Required:**

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:**

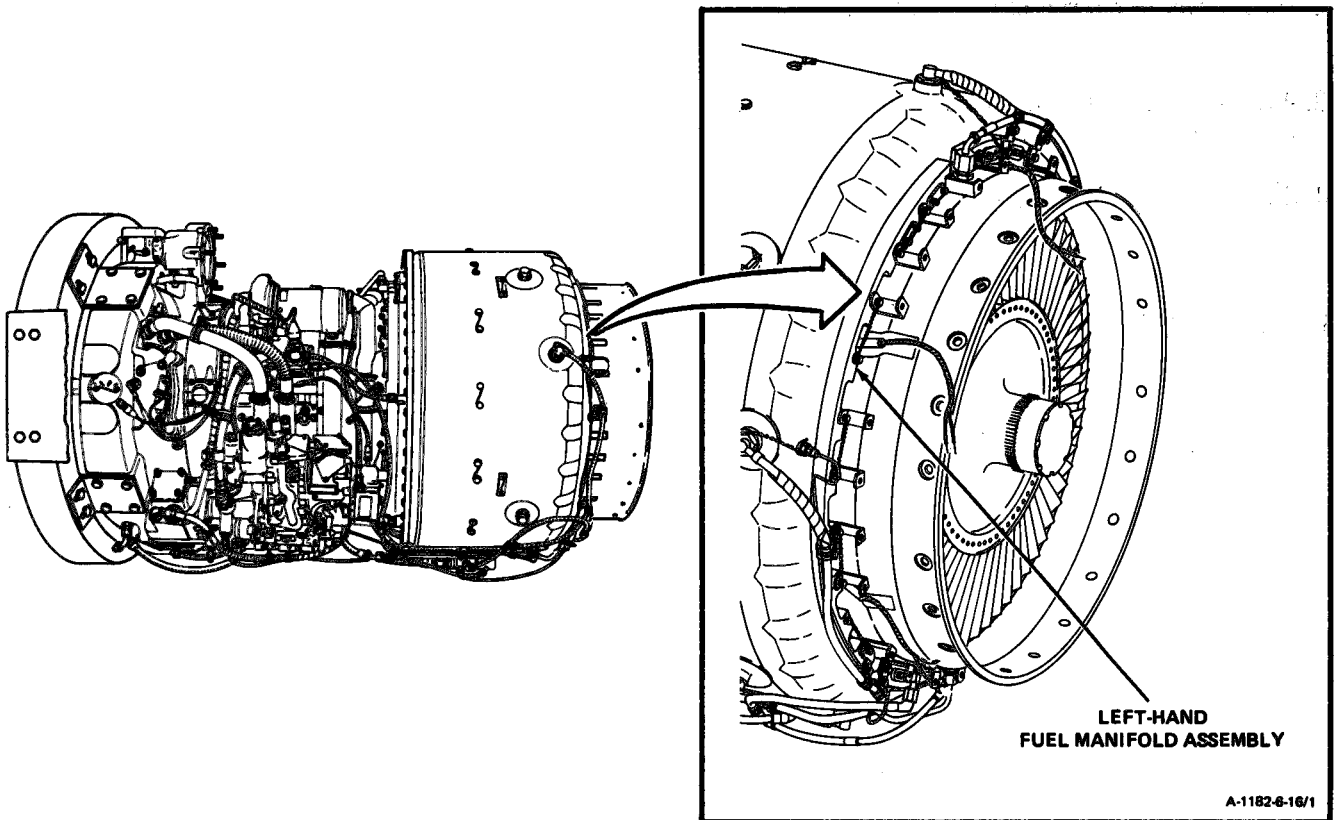
None

**Personnel Required:**

68B10 Aircraft Powerplant Repairer

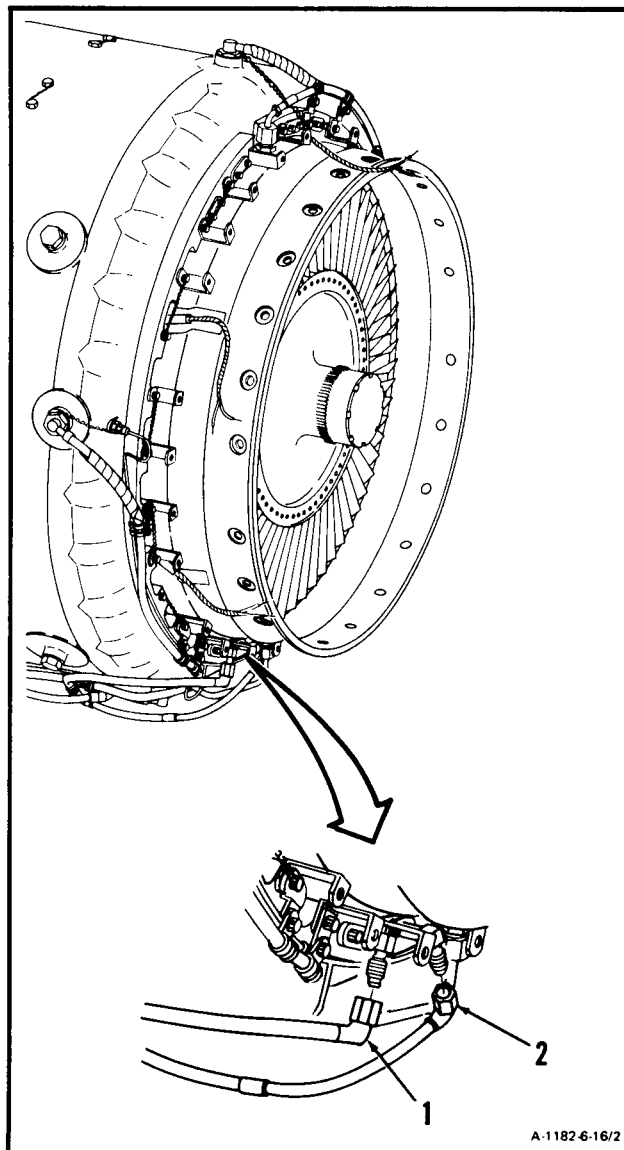
**Equipment Condition:**

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).



A-1182-6-16/2

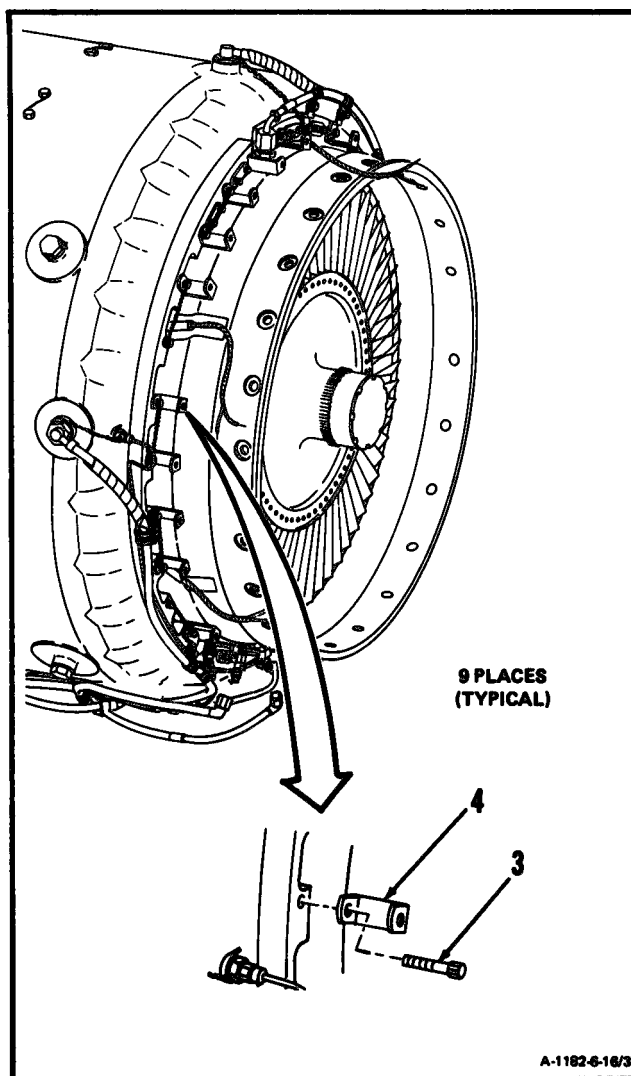
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## 6-16 REMOVE LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued)

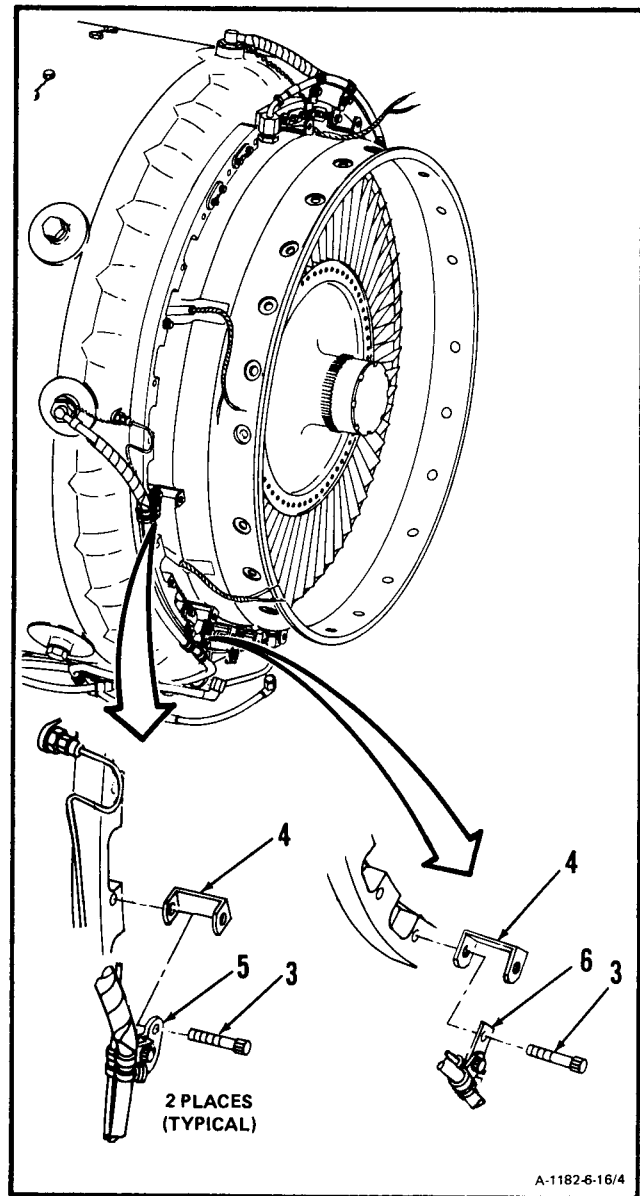
6-16

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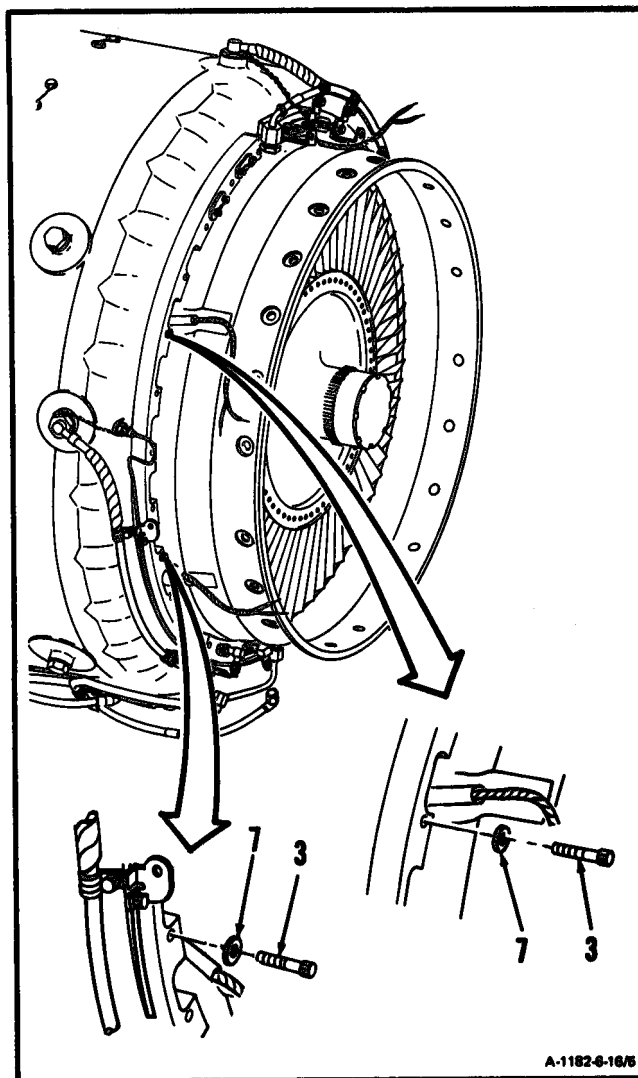
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**6-16 REMOVE LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continual)**

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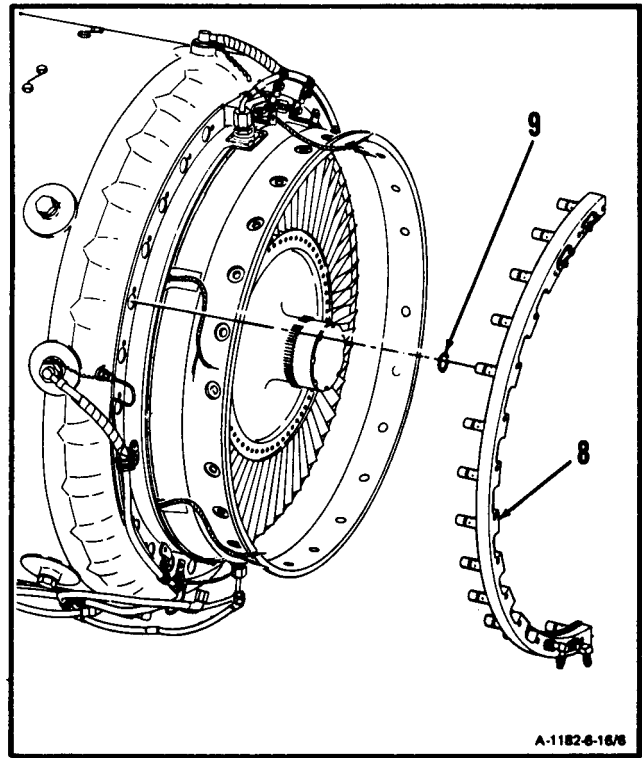
6-16

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).

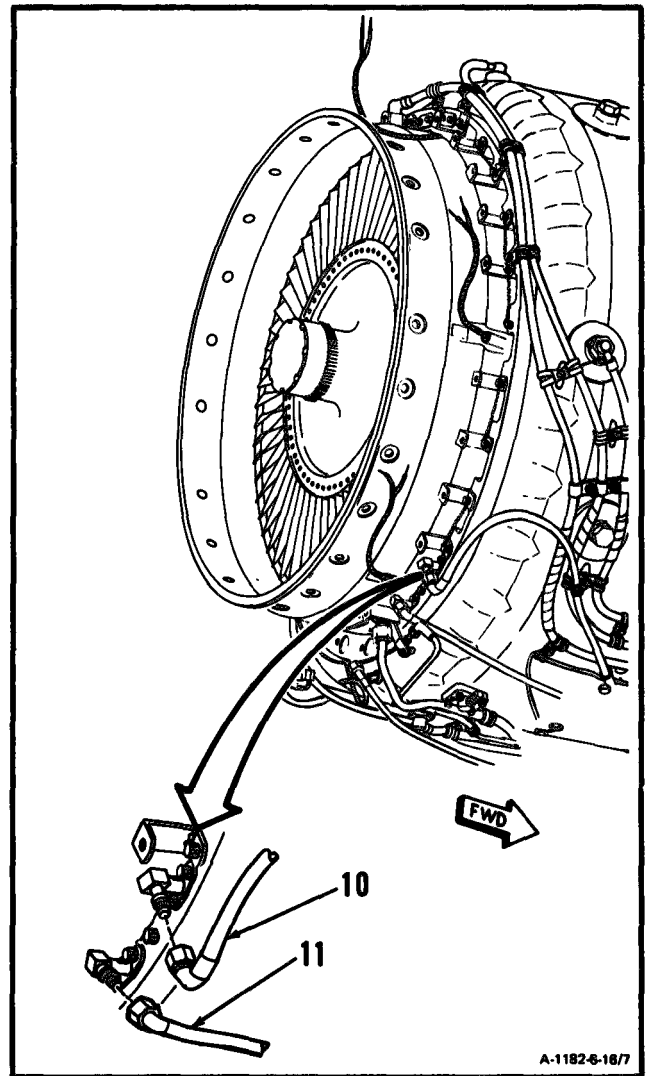


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6-16 REMOVE LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued)

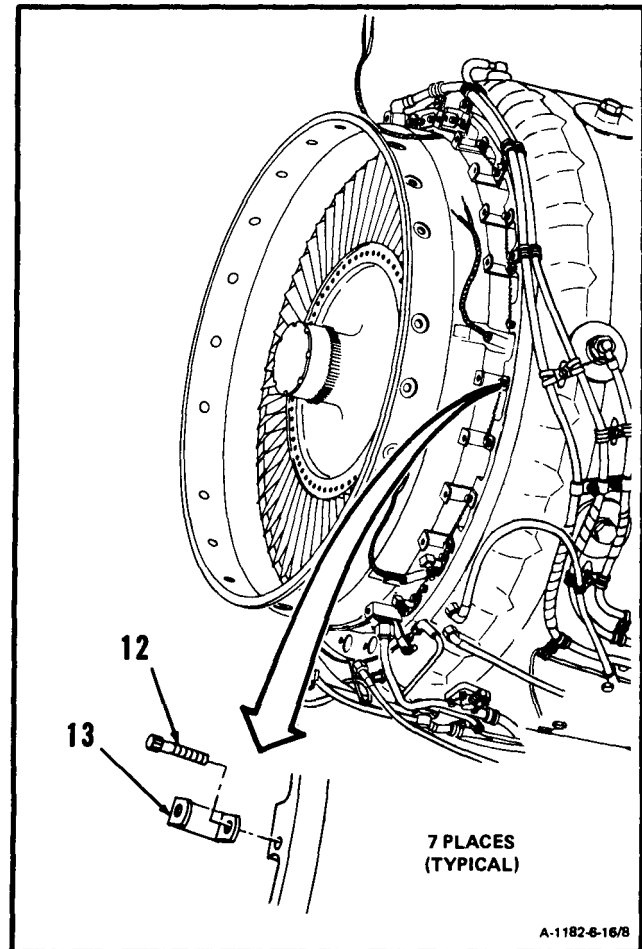
6-16

6. Disconnect hose assemblies (10 and 11).



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

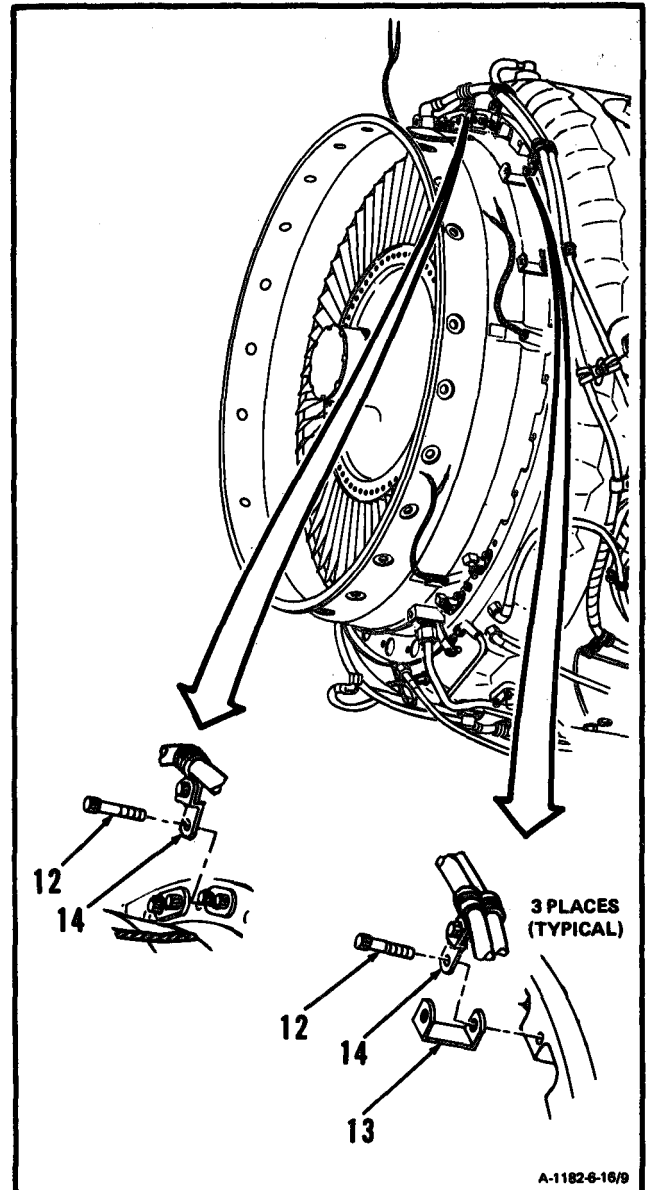


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6-16 REMOVE LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued)

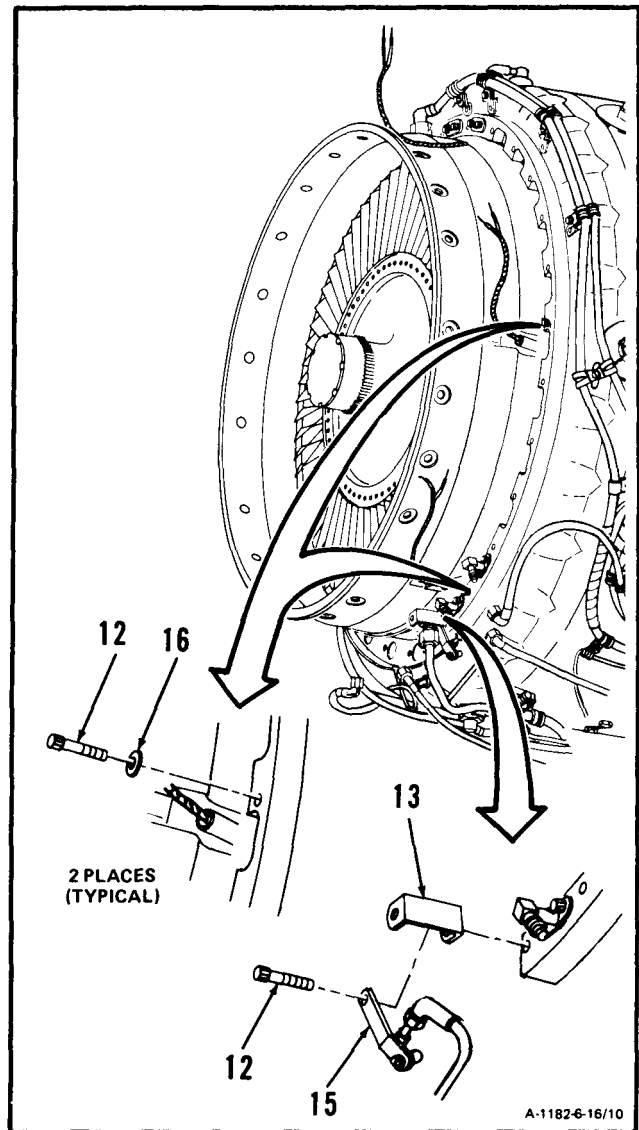
6-16

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).

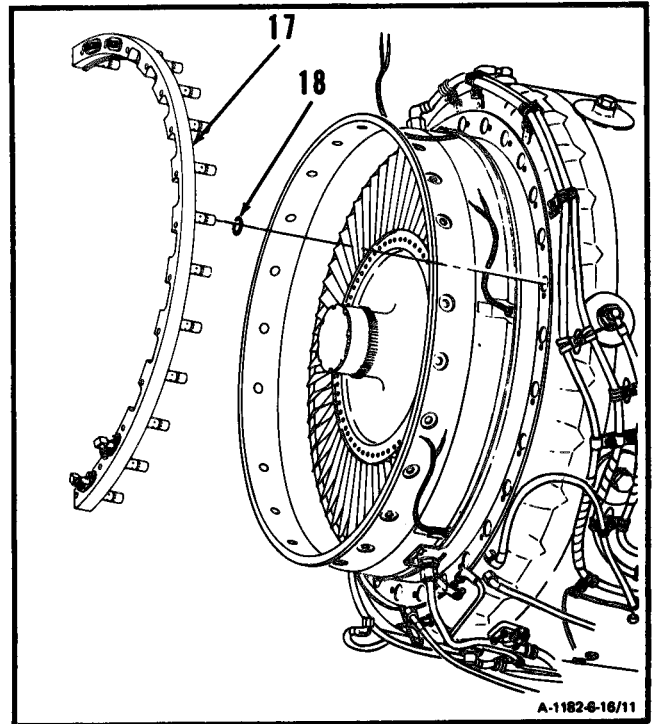


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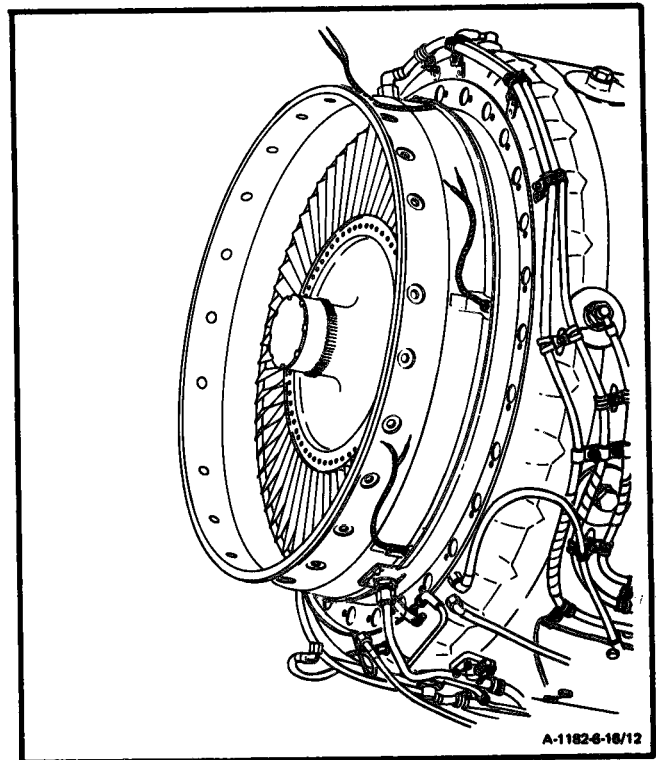
6-16 REMOVE LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued)

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).

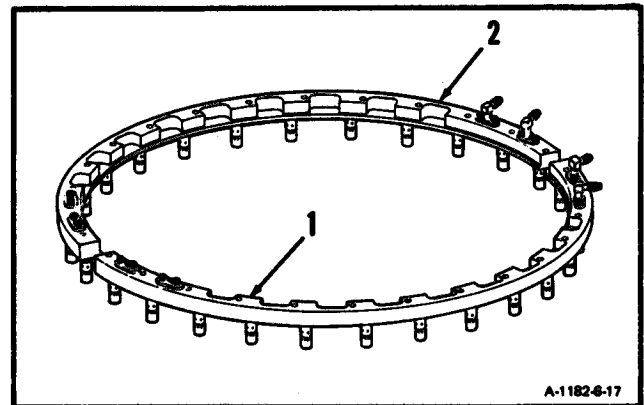
**WARNING**

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

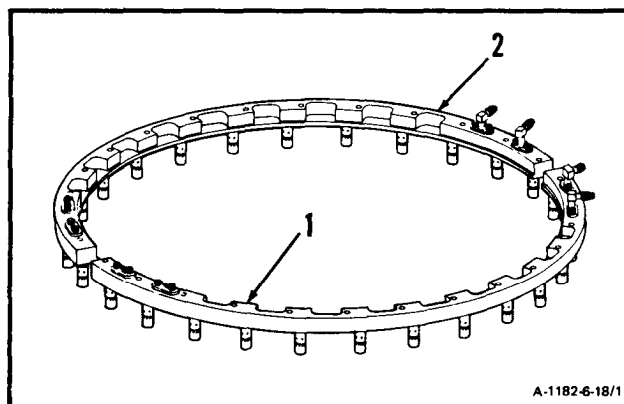
**Materials:**  
None

**Personnel Required:**  
68B30 Aircraft Powerplant Inspector

**References:**  
Task 6-17

**Equipment Condition:**  
Off Engine Task

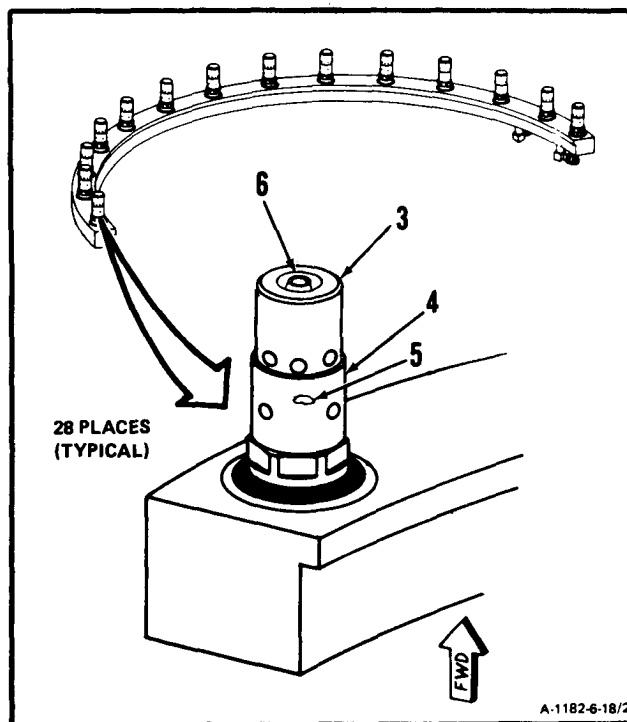
1. Inspect left- and right-hand fuel manifold assemblies (1 and 2). There shall be no cracks.



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).



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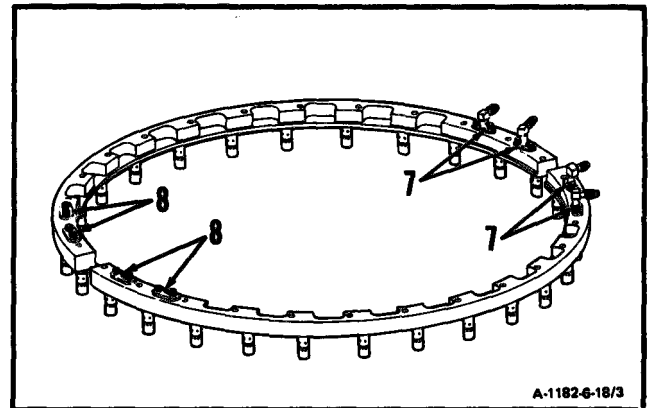
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**6-18 INSPECT LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued)**

---

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

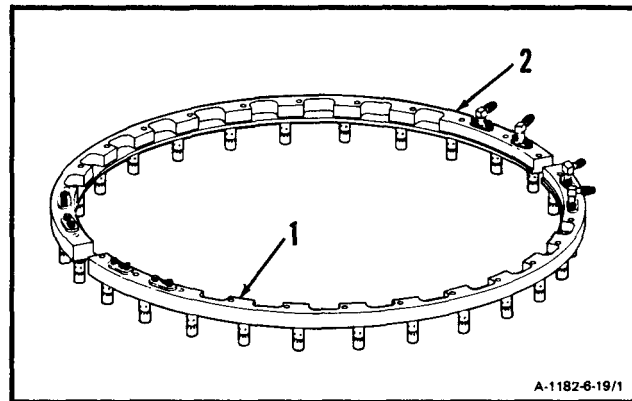
**References:**

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:



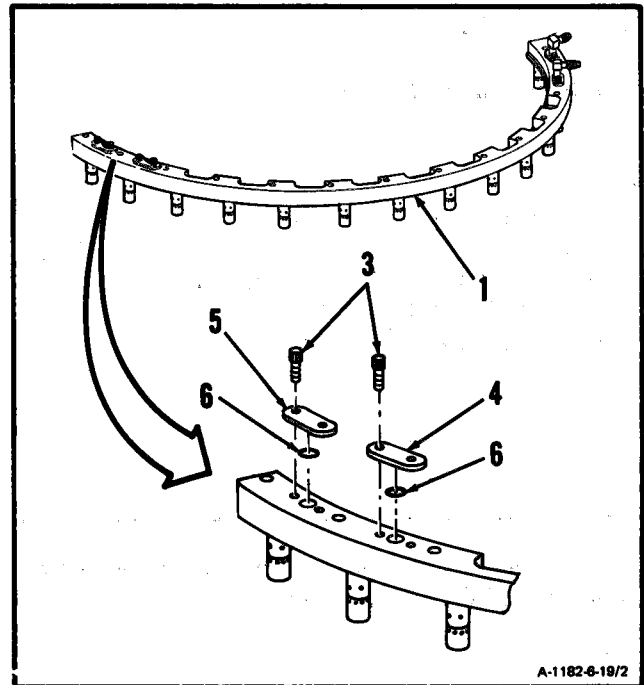
**NOTE**

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

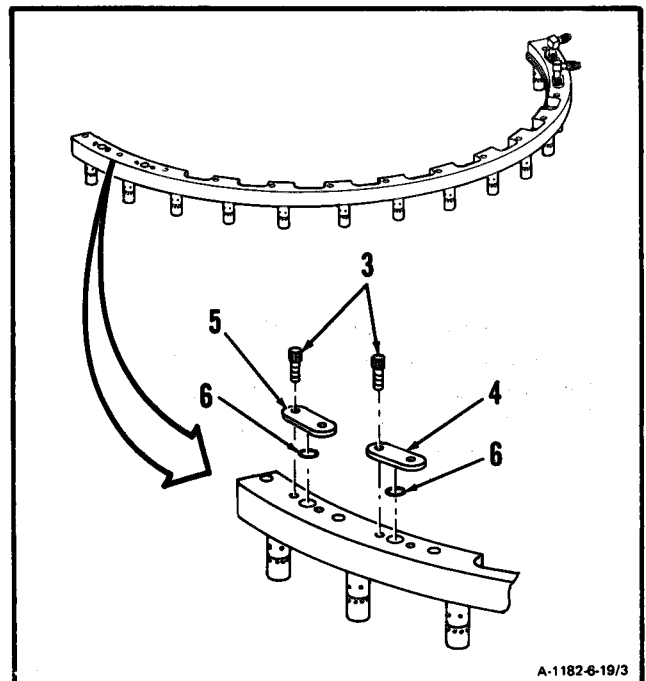
**GO TO NEXT PAGE**

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

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

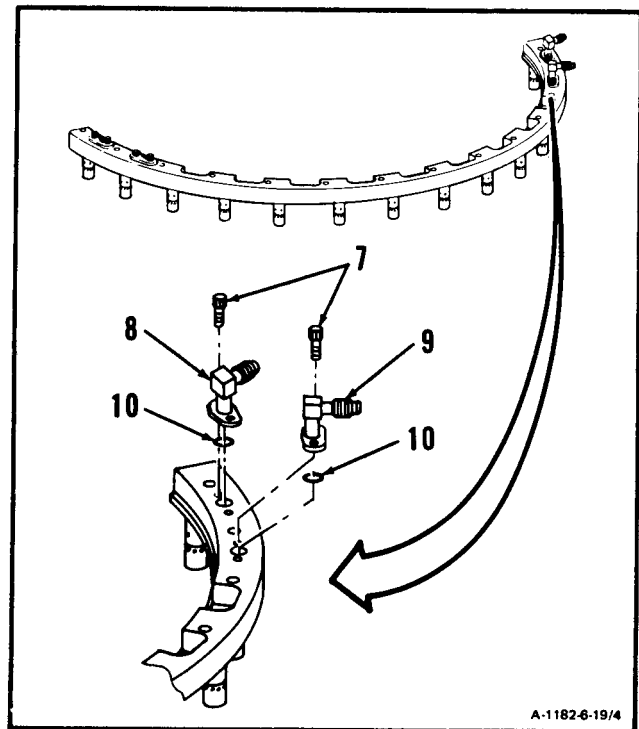


(2) Install two new packings (6), covers (4 and 5), and four bolts (3). Lockwire bolts (3). Use lockwire (E29).



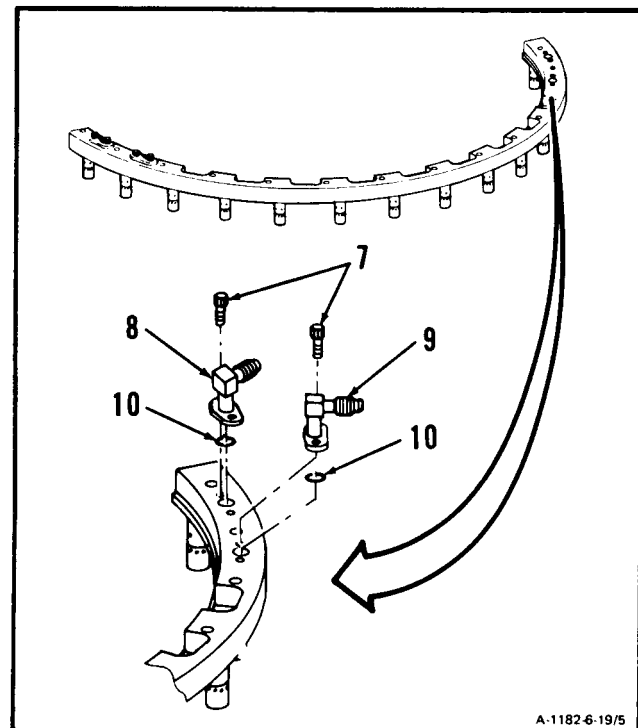
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- (3) **Remove** lockwire, four bolts (7), **elbows (8 and 9)**, and two packings (10). Use 7/32-inch torque adapter.



- (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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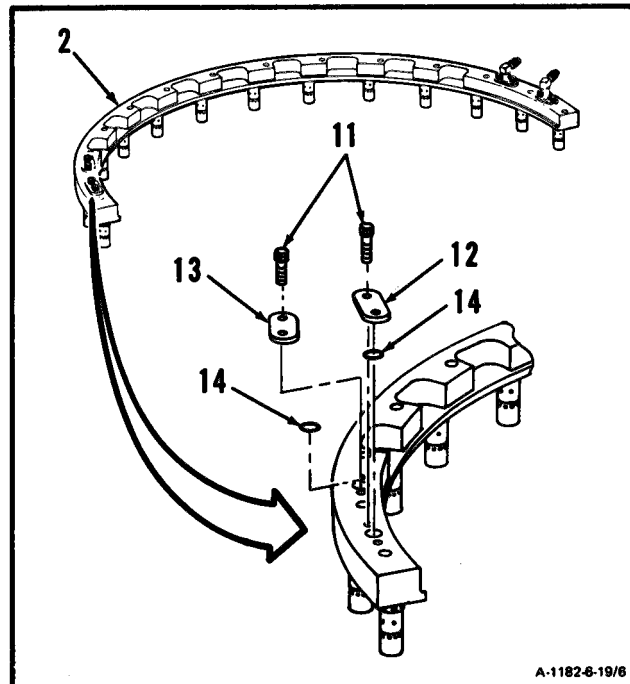


## 6-19 REPAIR LEFT-AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued)

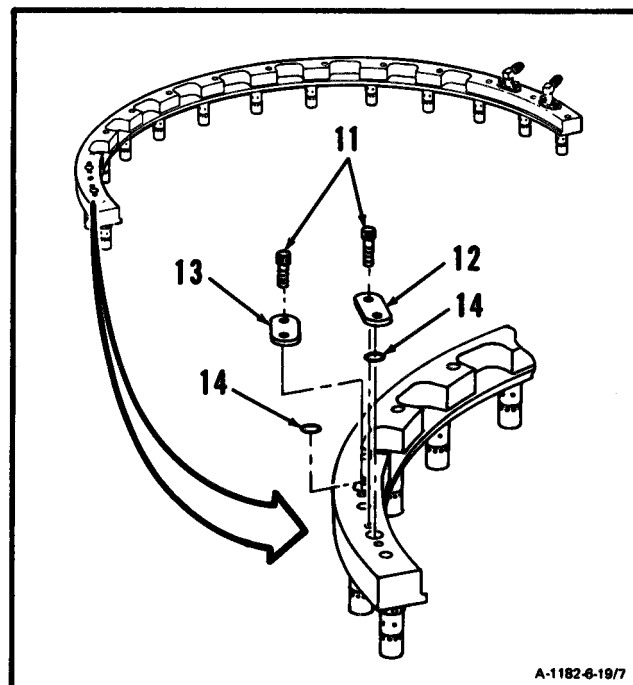
6-19

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

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

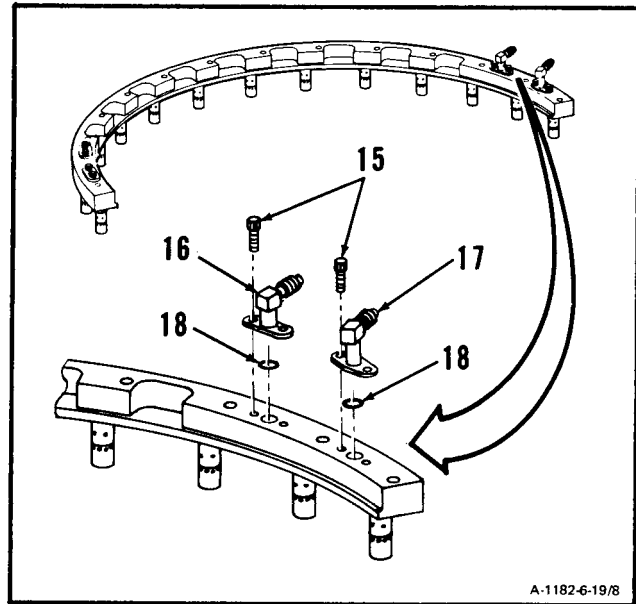


- (2) Install two new packings (14), **covers (12 and 13)**, and four bolts (11). Lockwire bolts (11). Use lockwire (E29).

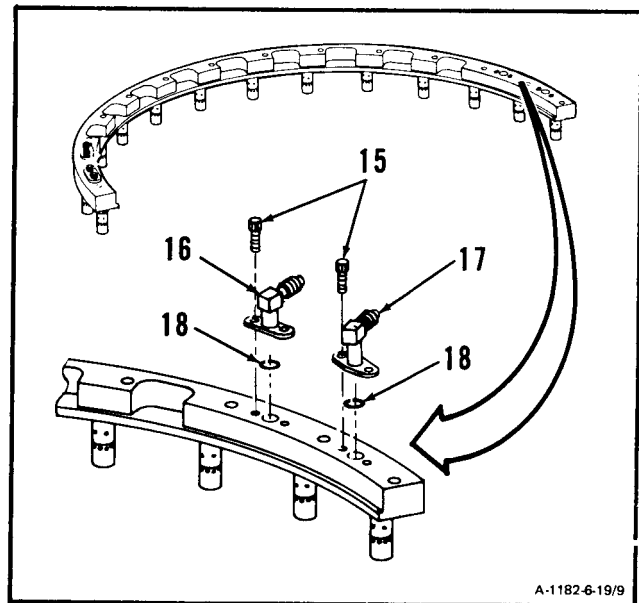


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- (3) **Remove** lockwire, four bolts (15), elbows (16 and 17), and two packings (18). Use 7/32-inch torque adapter.



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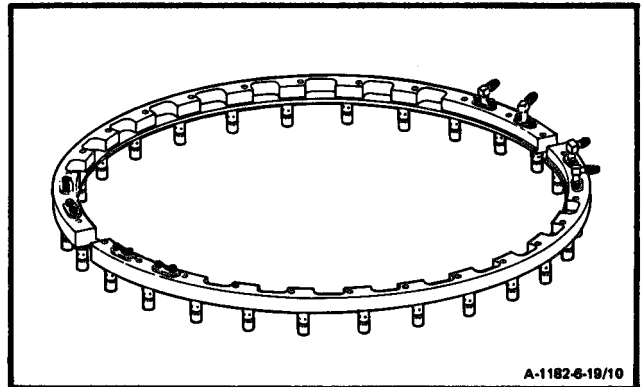
**6-19 REPAIR LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued)**

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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

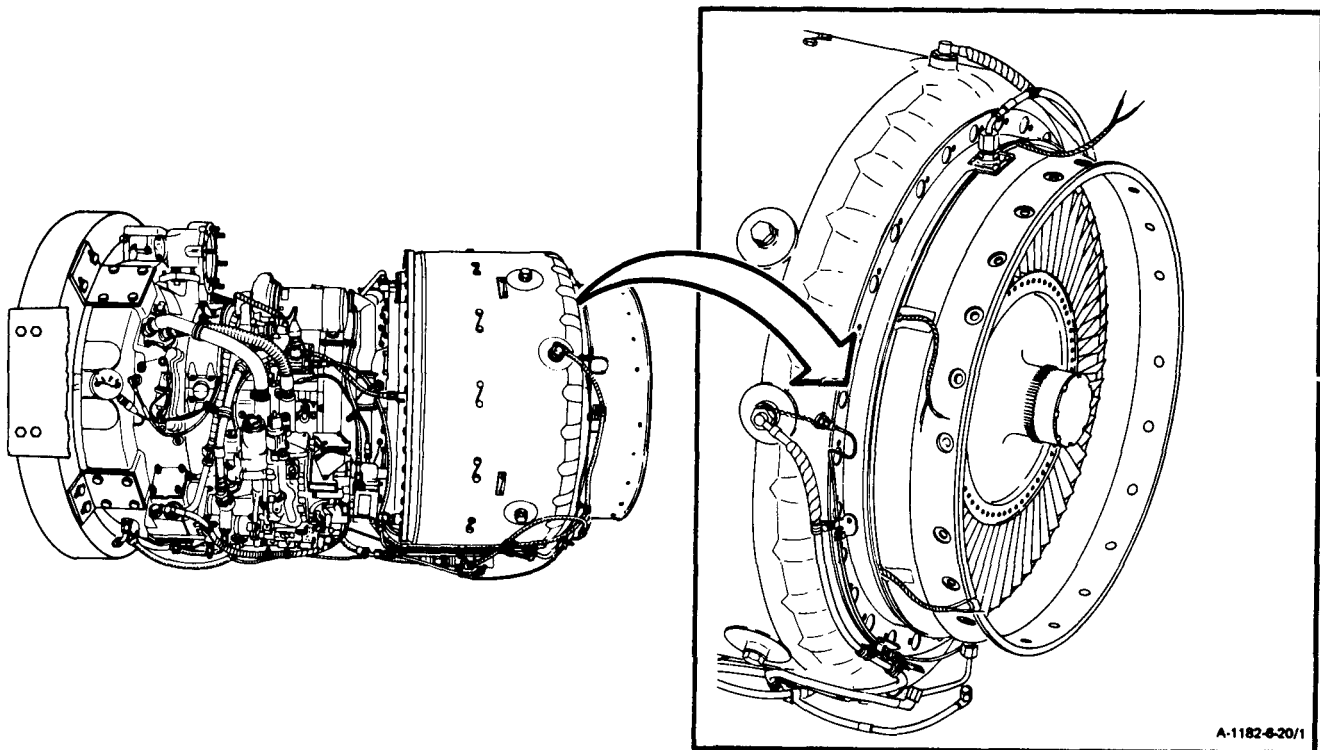
**Personnel Required:**

68B10 Aircraft Powerplant Repairer  
68B30 Aircraft Powerplant Inspector

**References:**

TM 55-2840-254-23P

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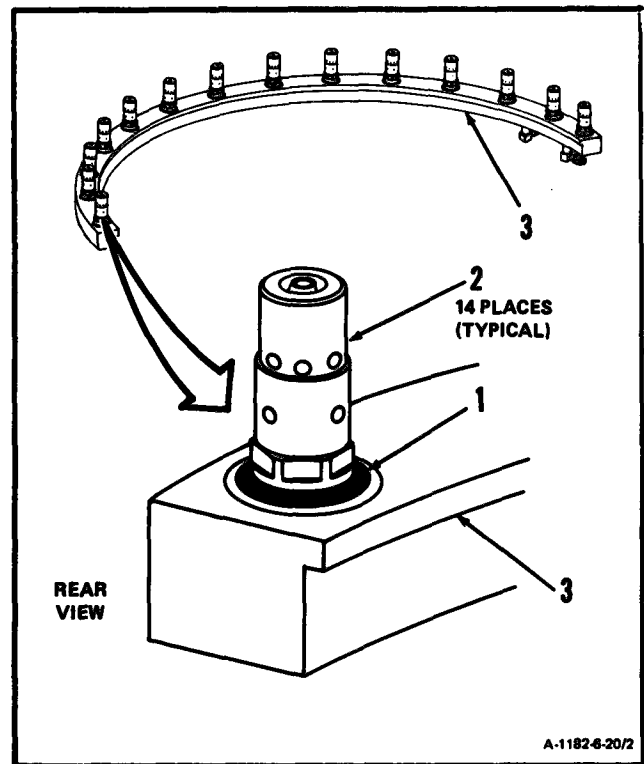
## 6-20 INSTALL LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued)

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).



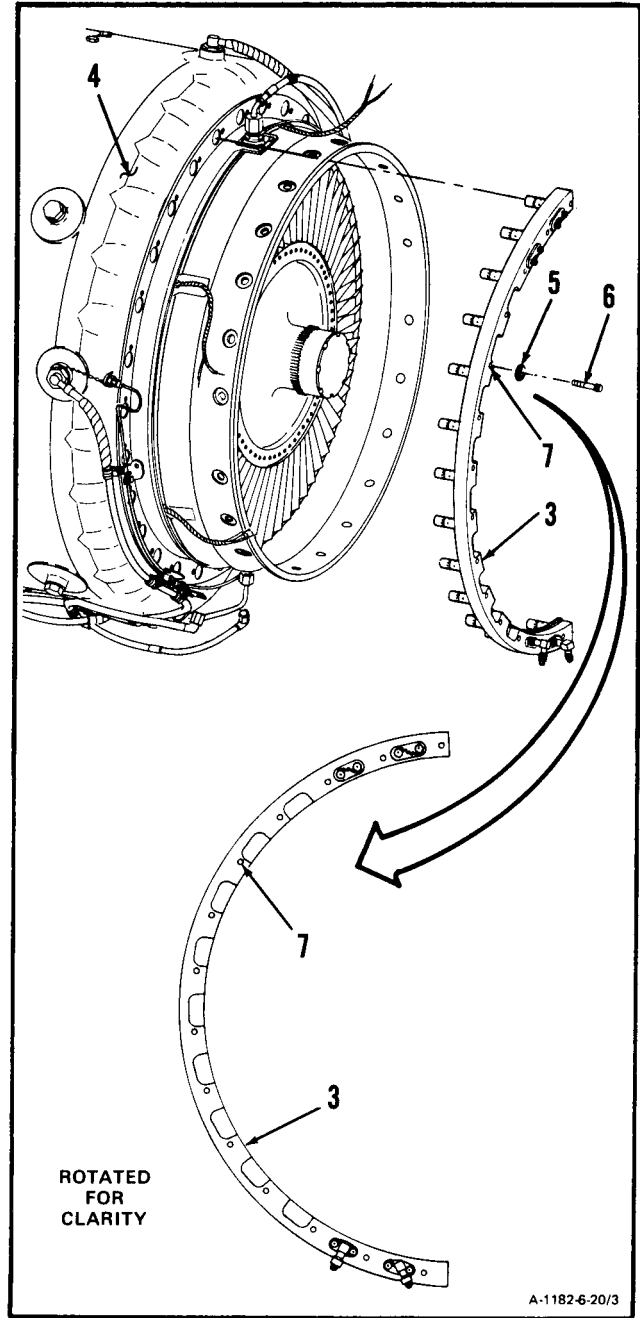
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2. Install left-hand fuel manifold assembly (3) in housing (4).

**NOTE**

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

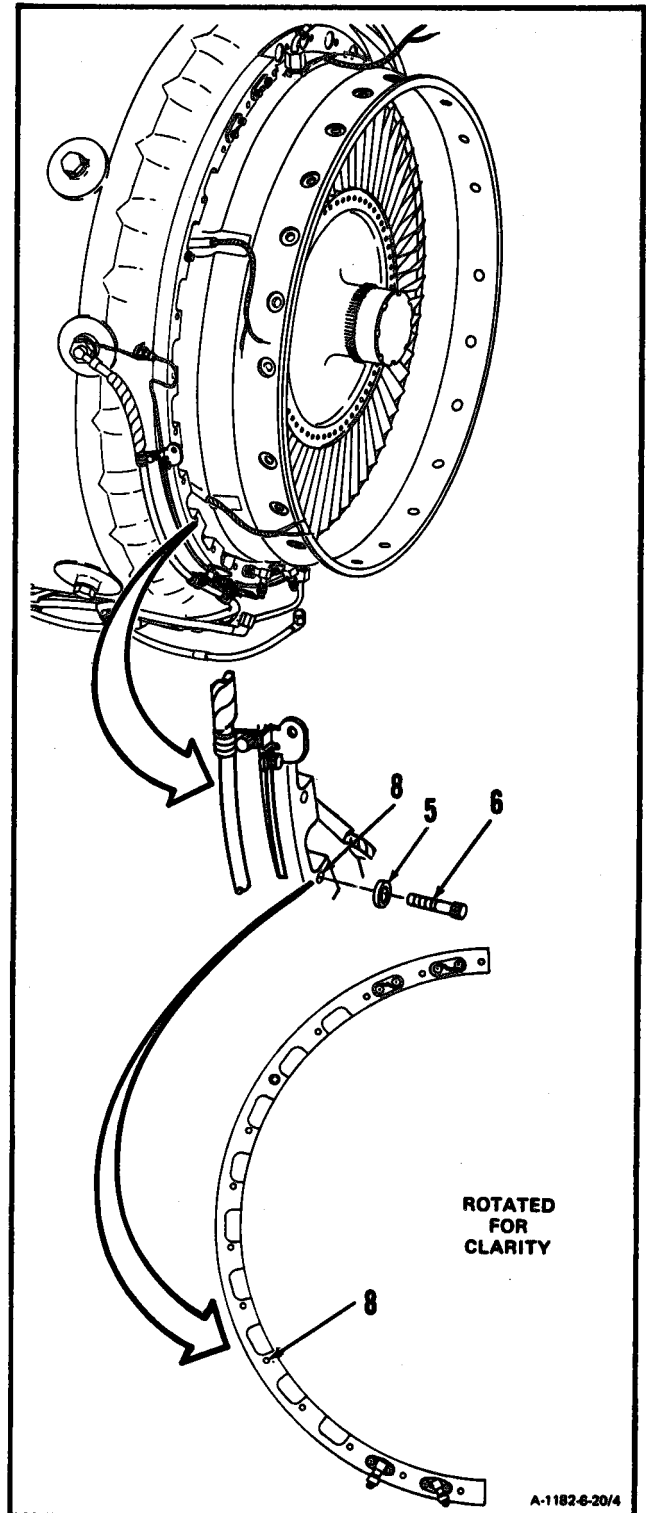
3. Install washer (5) and bolt (6) in hole (7).



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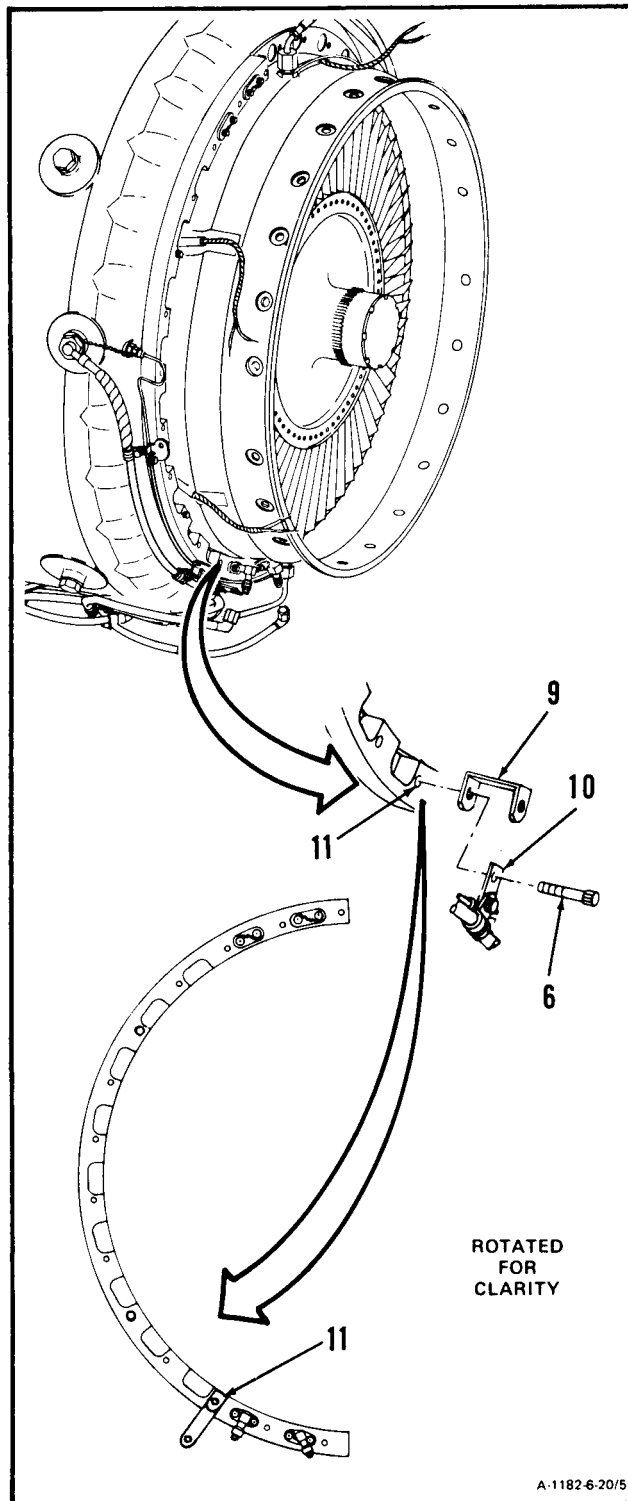
6-20 INSTALL LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued)

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).



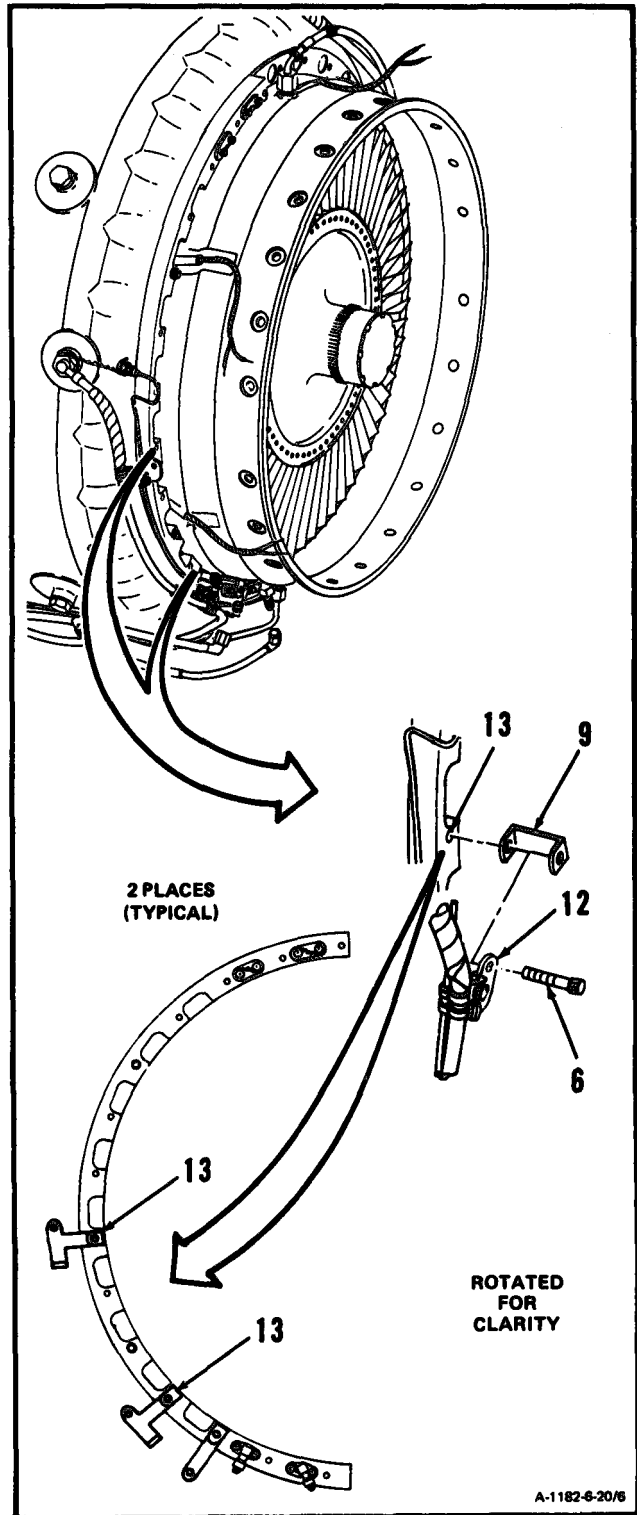
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6-20 INSTALL LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued)

6-20

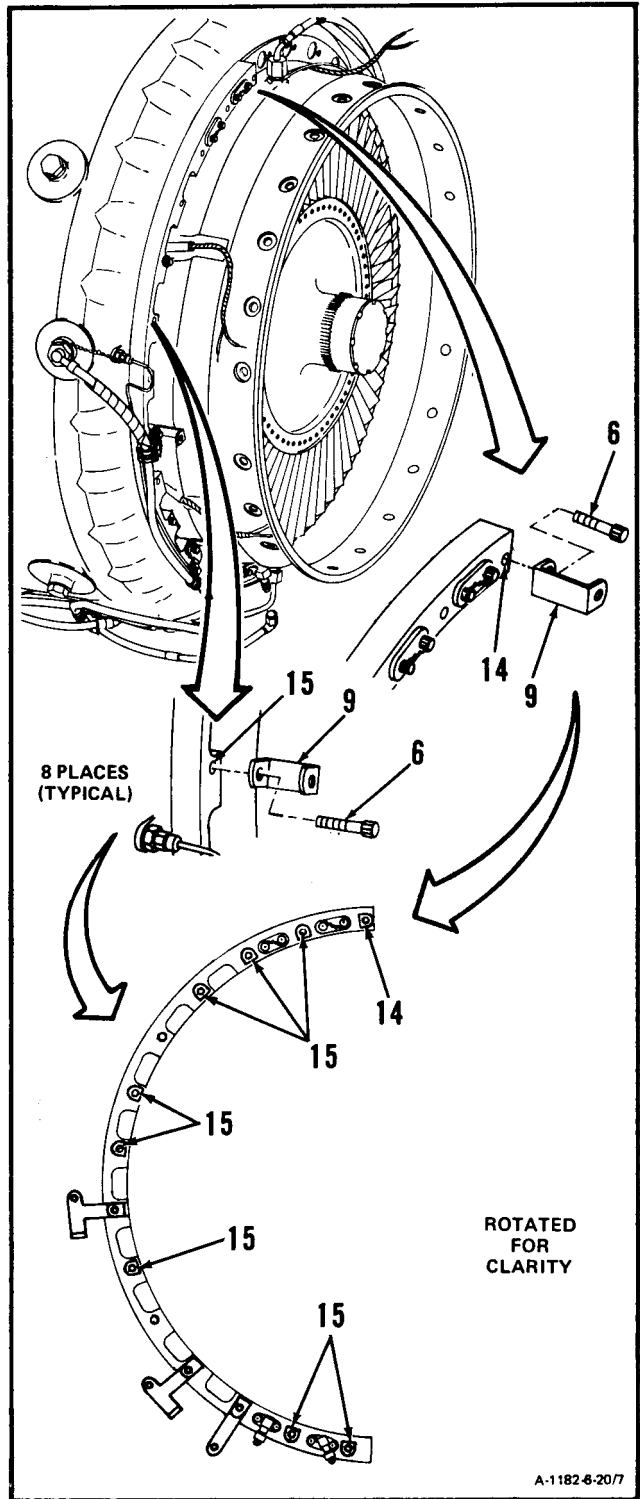
6. Install two supports (9), two brackets (12), and two bolts (6) in holes (13).



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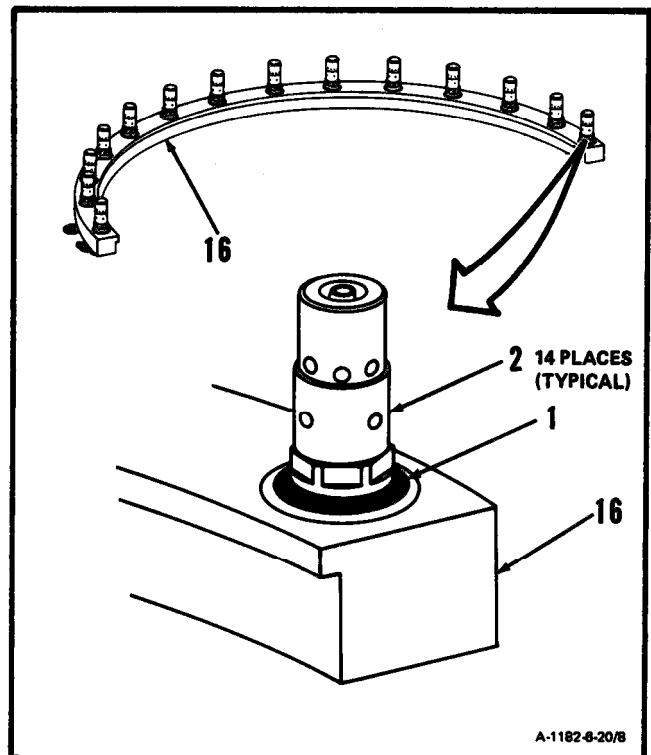
## 6-20 INSTALL LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued)

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).



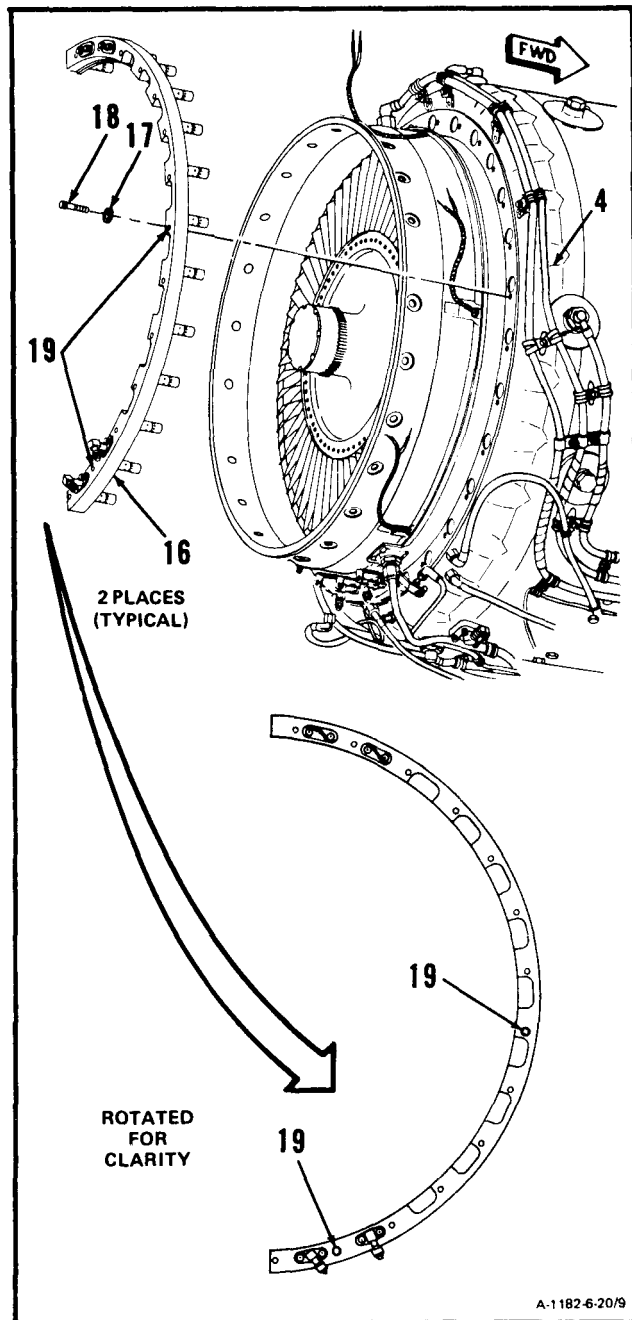
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10. Install right-hand fuel manifold assembly (16) in housing (4).

**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).

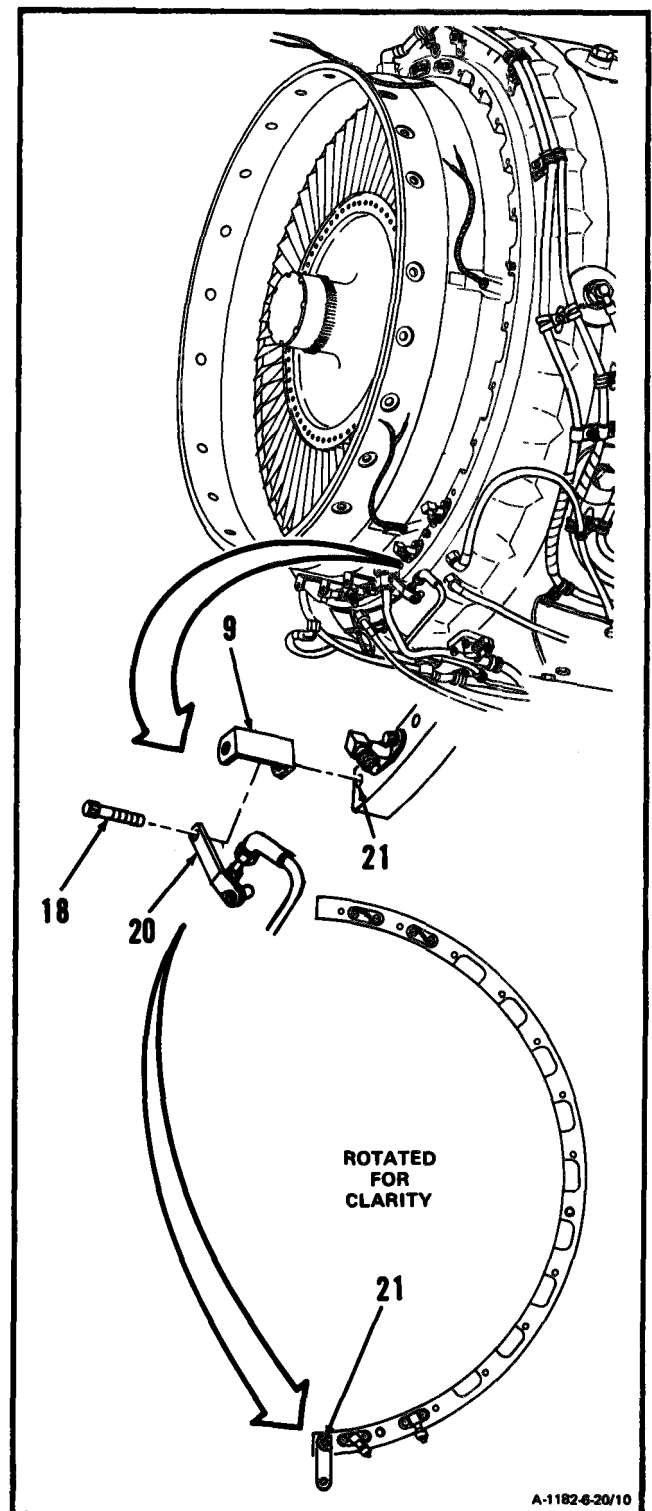


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## 6-20 INSTALL LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued)

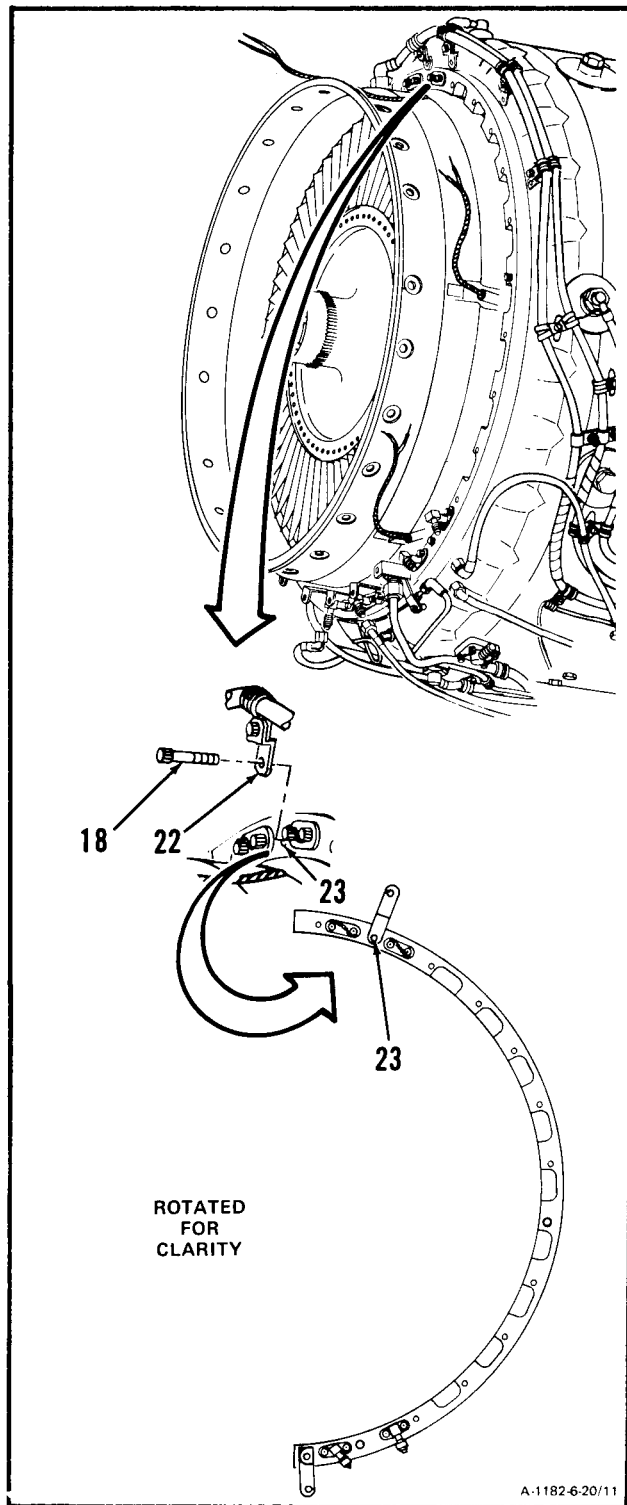
6-20

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



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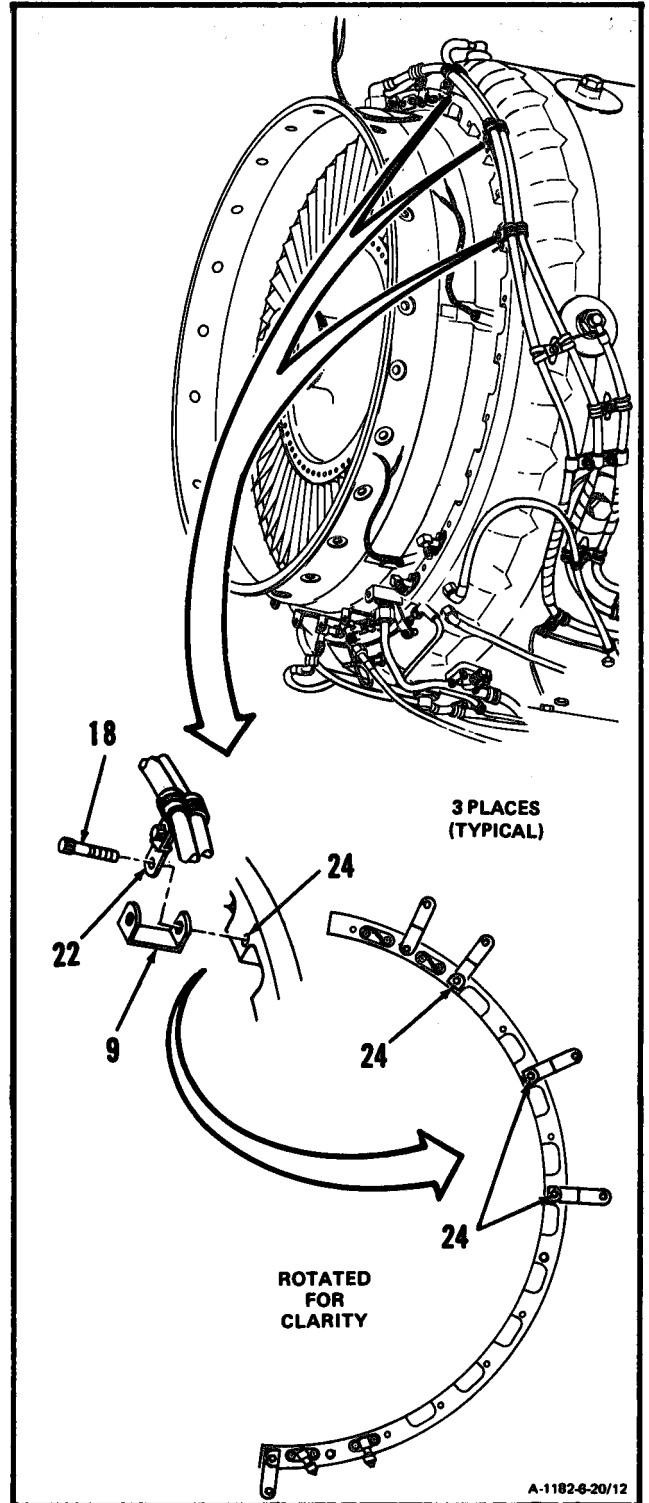
13. Install bracket (22) and bolt (18) in hole (23).



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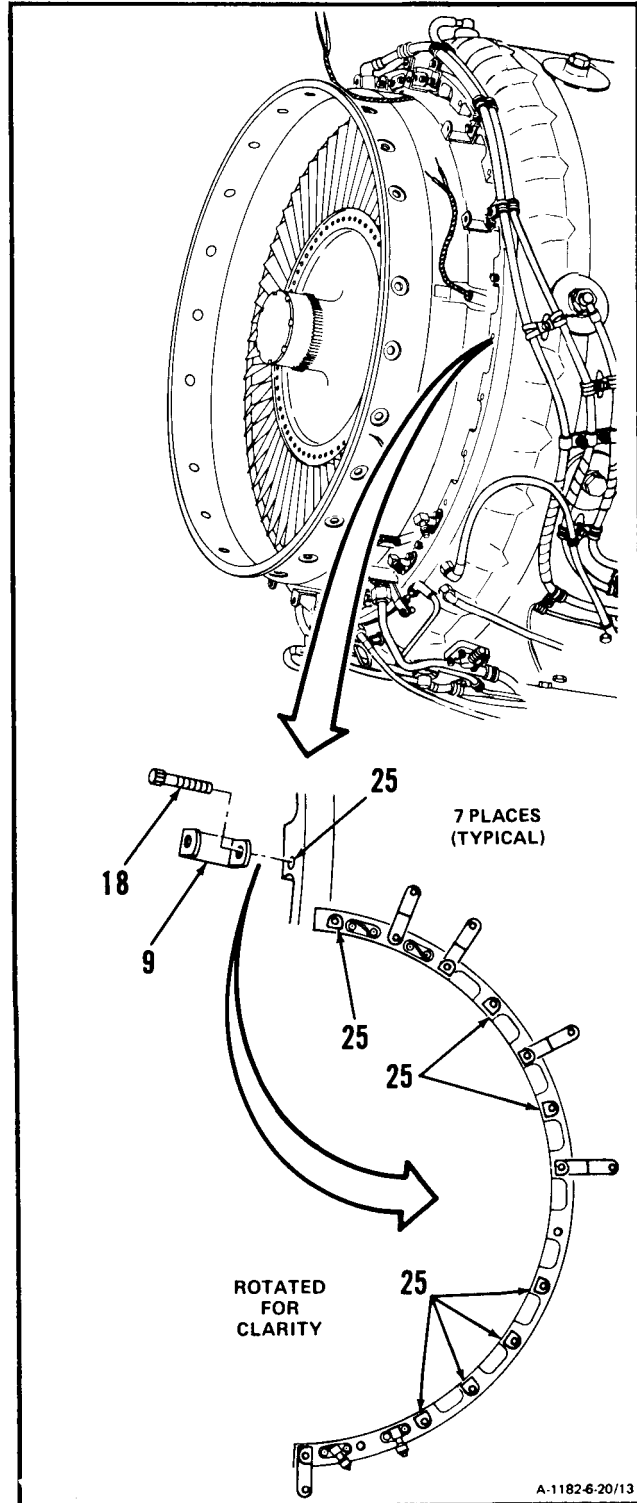
6-20 INSTALL LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued)

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).



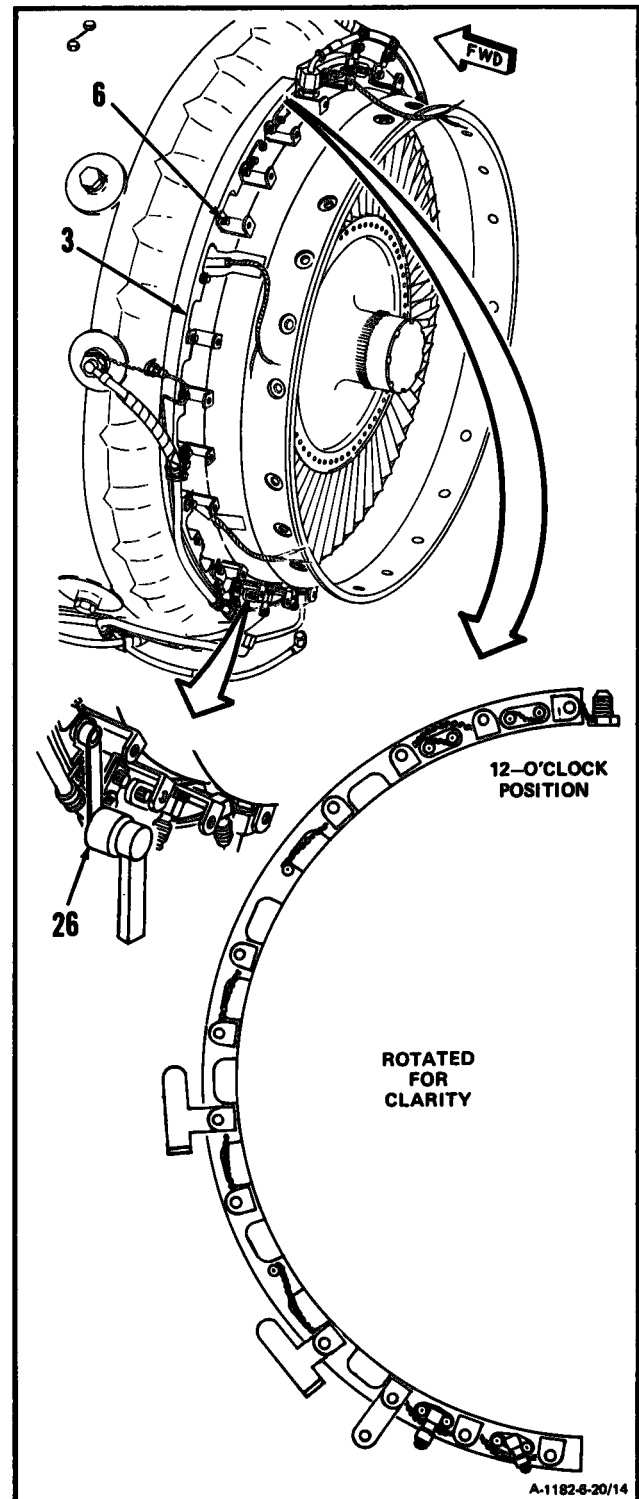
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## 6-20 INSTALL LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued)

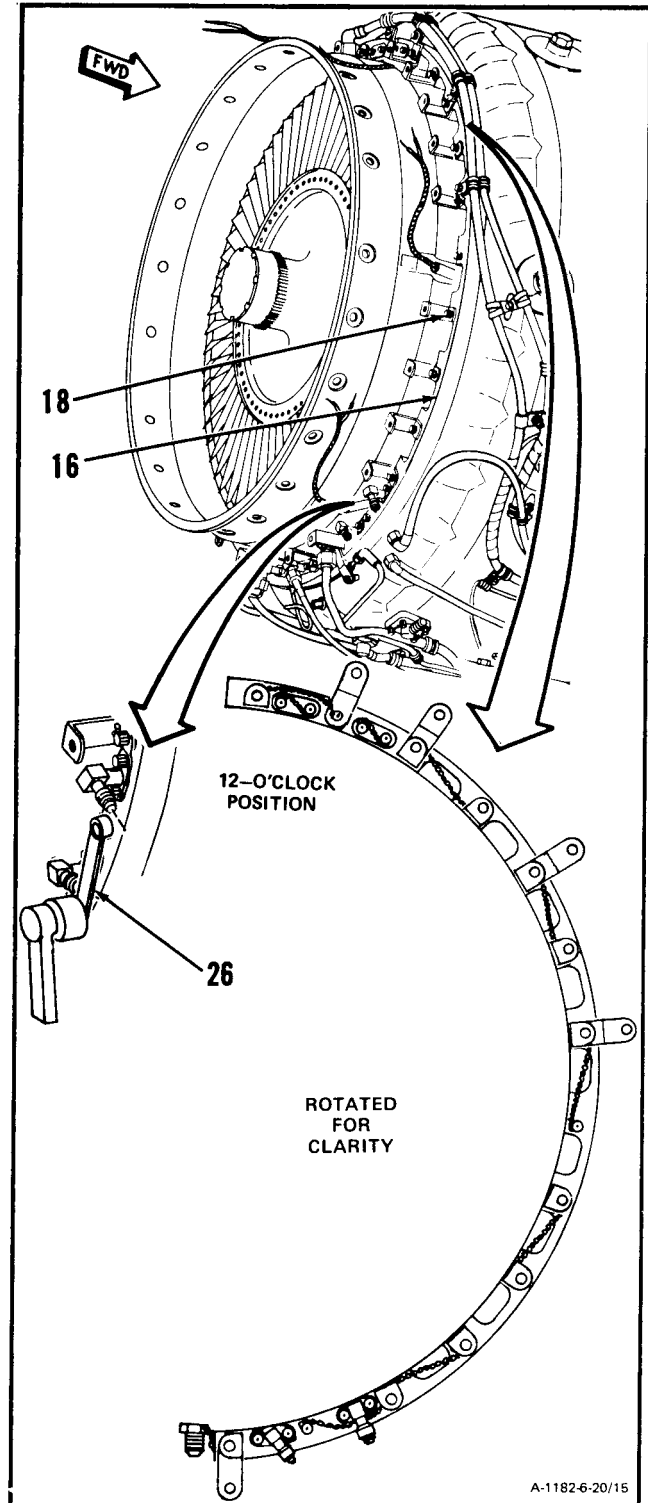
6-20

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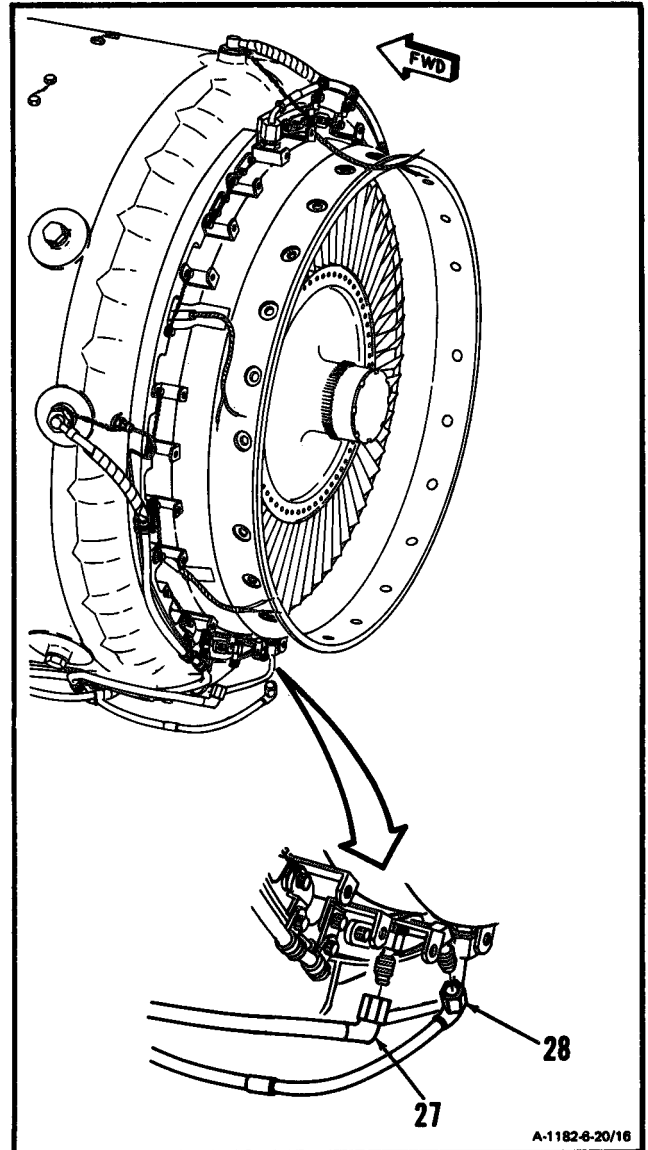
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**6-20 INSTALL LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued)**

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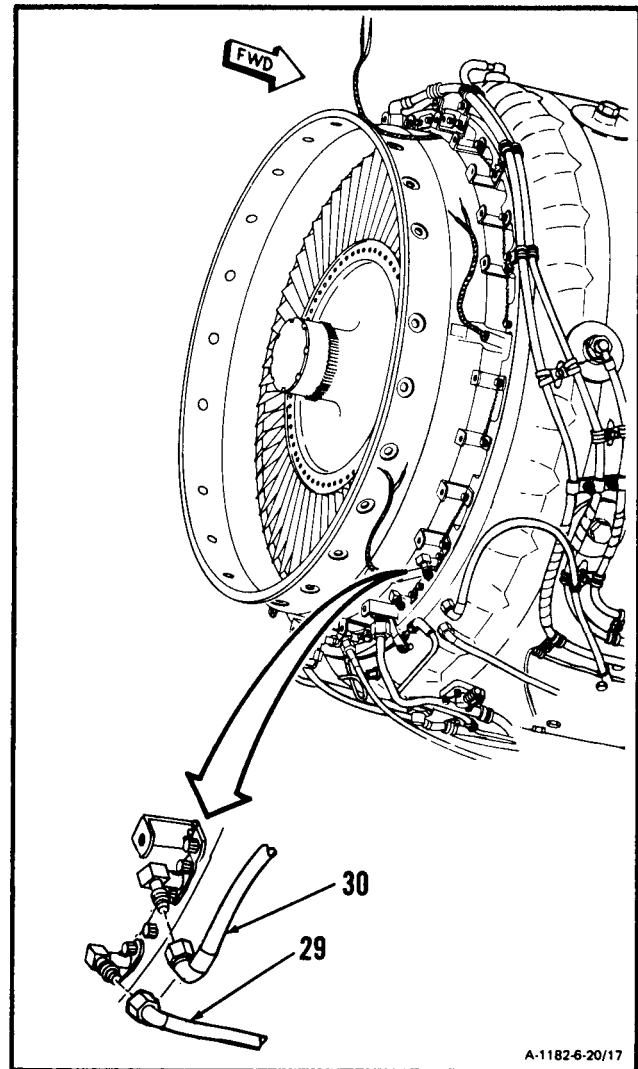
6-20

20. Connect hose assemblies (27 and 28).



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21. Connect hose assemblies (29 and 30).

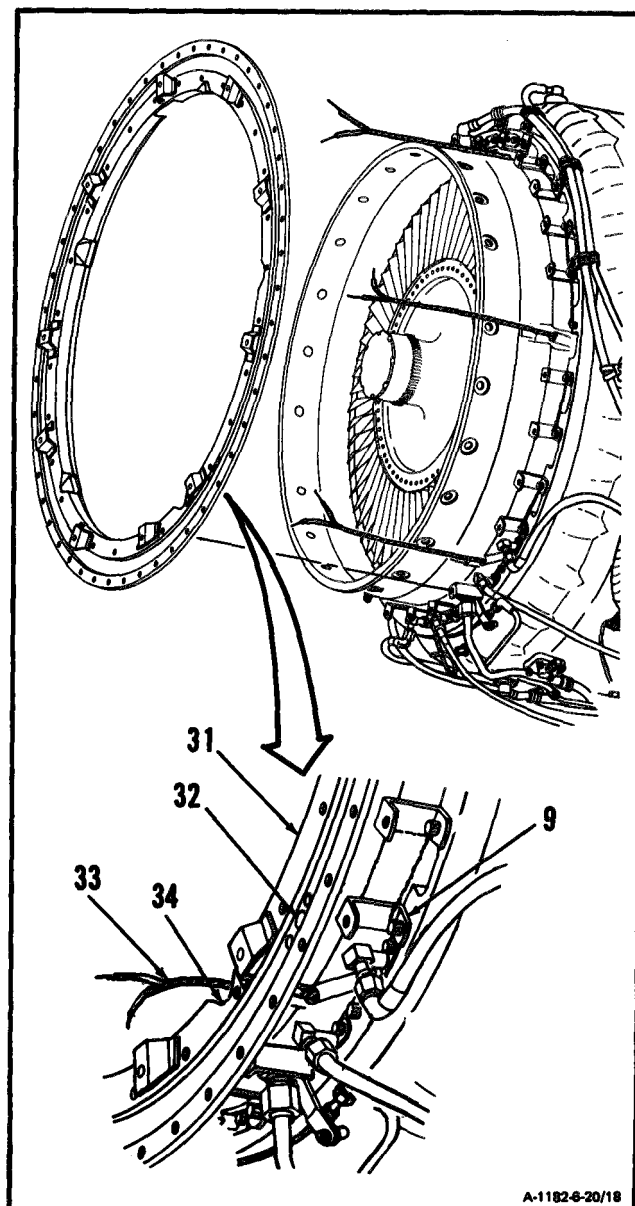


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**CAUTION**

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).

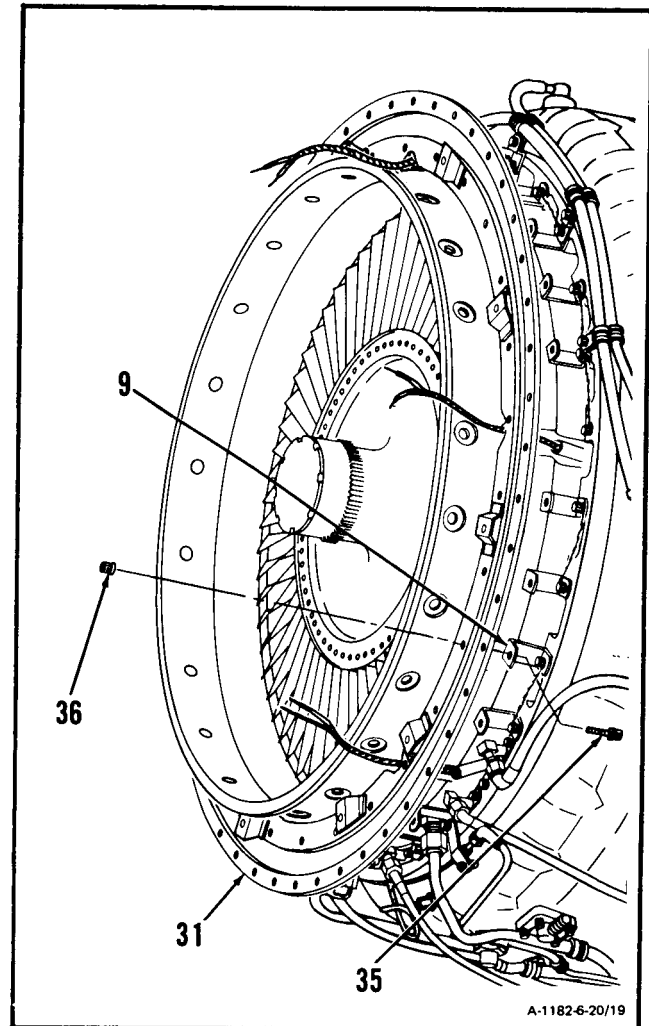


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**NOTE**

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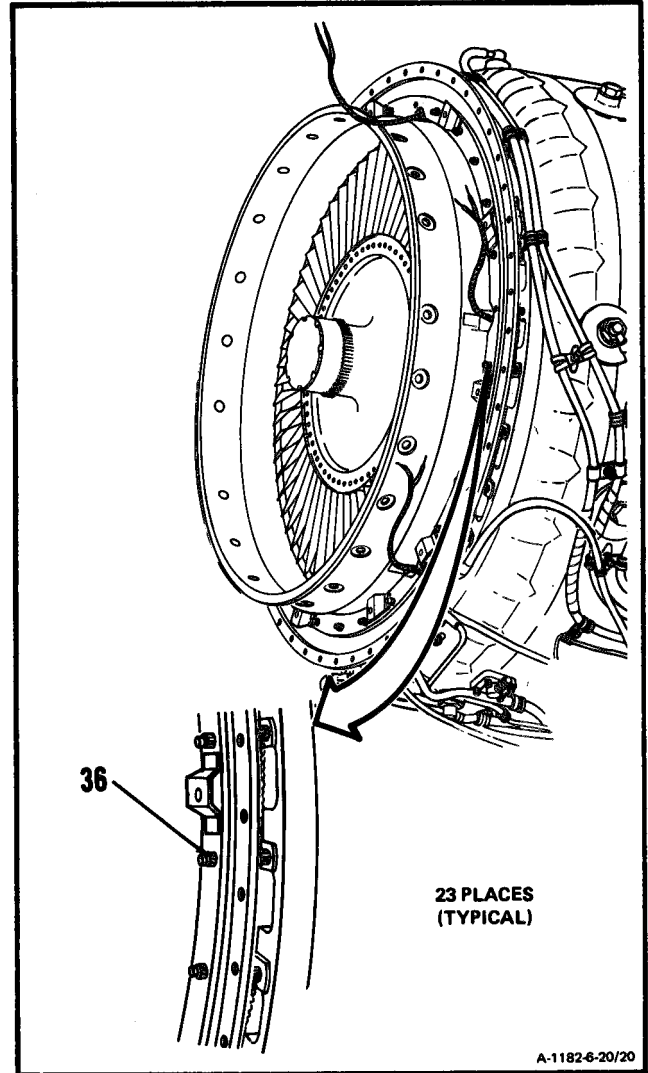
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**6-20 INSTALL LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued)**

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6-20

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



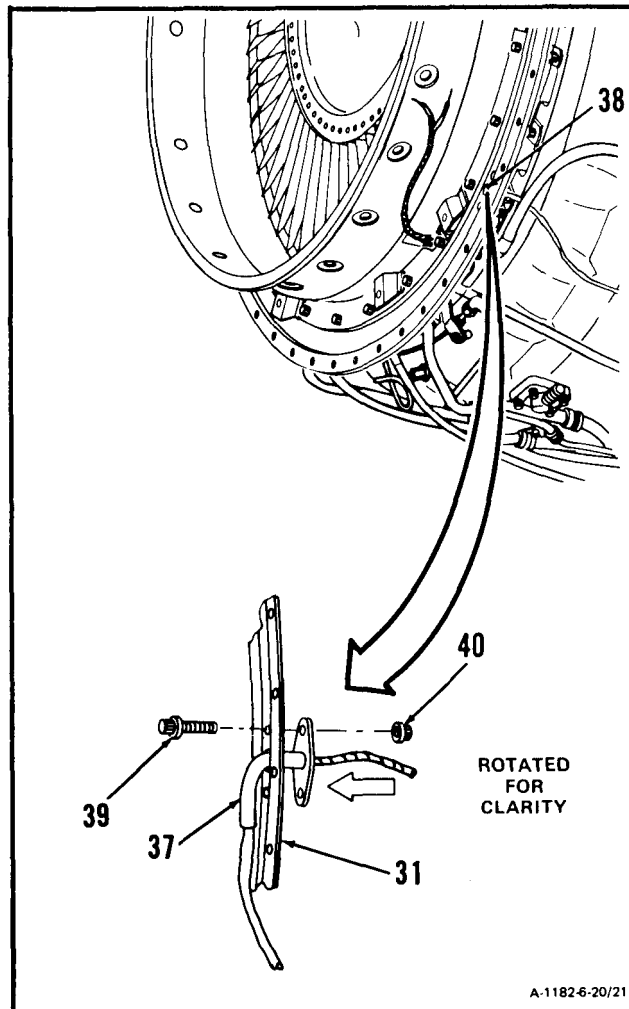
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**6-20 INSTALL LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued)**

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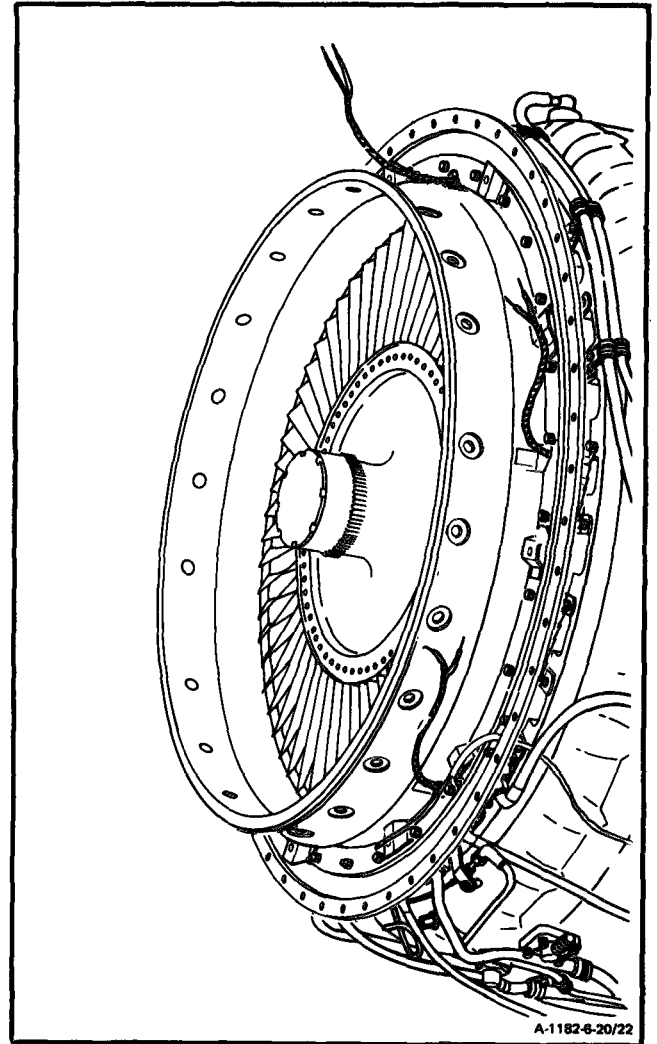
**6-20 INSTALL LEFT- AND RIGHT-HAND FUEL MANIFOLD ASSEMBLIES (Continued)**

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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:**

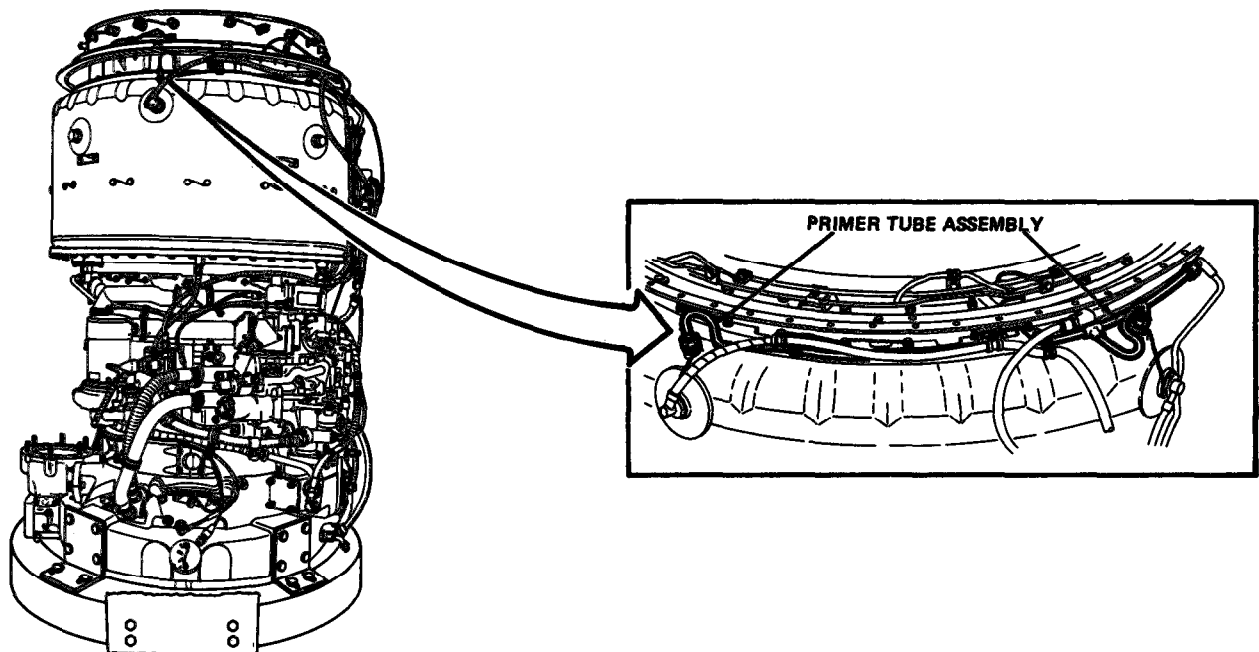
Wiping Rag (E58)

**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.



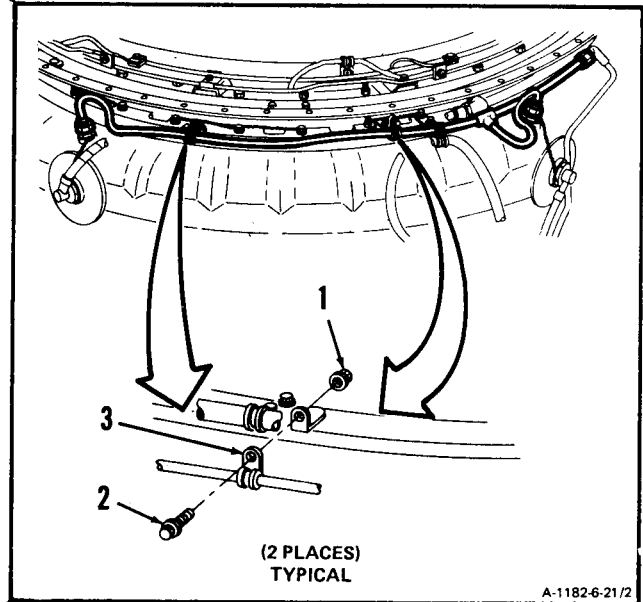
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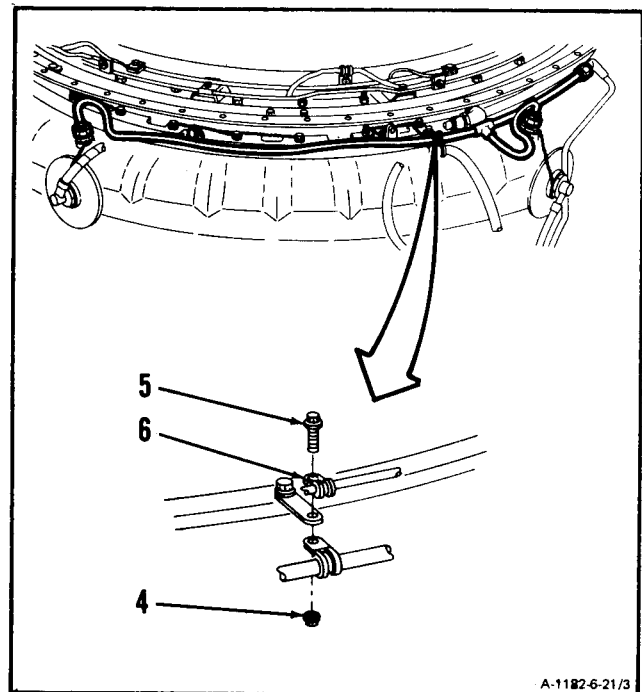
6-21 REMOVE PRIMER TUBE ASSEMBLY (Continued)

6-21

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



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

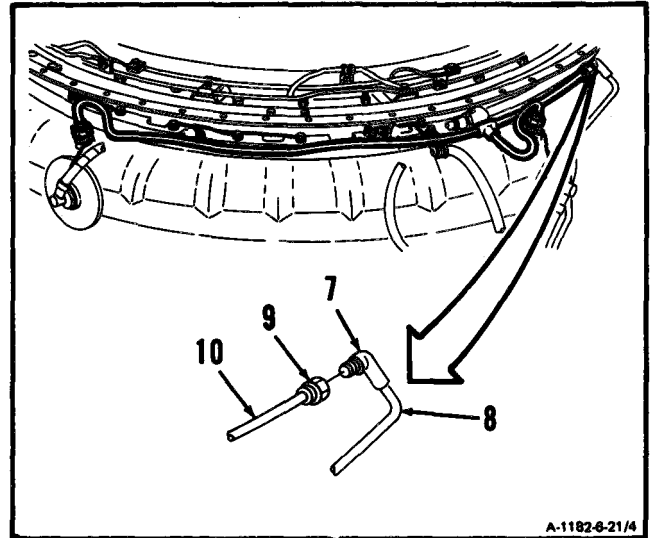


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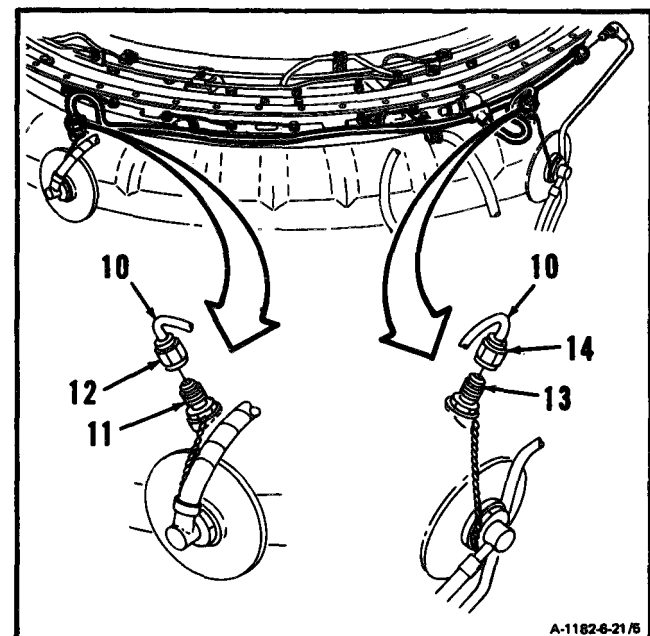
## 6-21 REMOVE PRIMER TUBE ASSEMBLY (Continued)

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).**

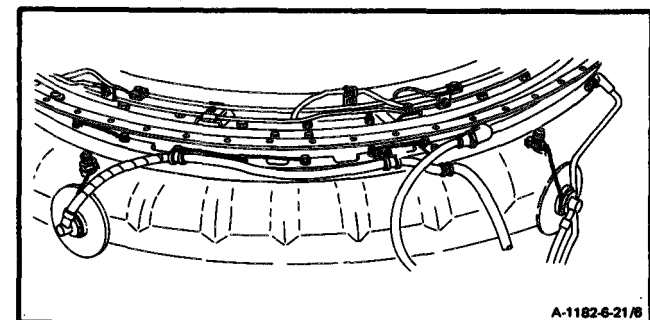


5. Using two wrenches, hold start fuel nozzle (11) and loosen swivel nut (12).
6. Using two wrenches, hold start fuel nozzle (13) and loosen swivel nut (14).
7. **Disconnect and remove primer tube assembly (10) from start fuel nozzles (11 and 13).**



## 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:**

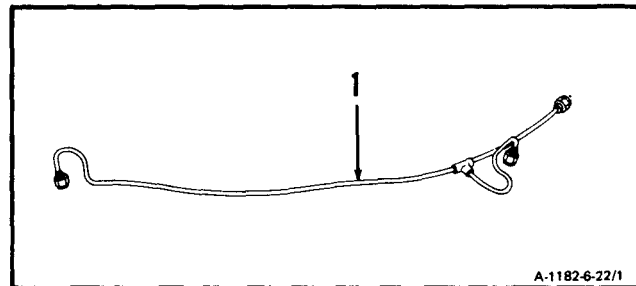
Off Engine Task  
Primer Tube Assembly Removed (Task 6-21)

**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).



**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.

- 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

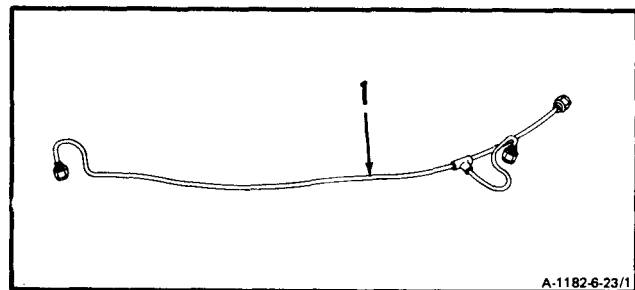
**Equipment Condition:**

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****Materials:**

None

**Applicable Configurations:**

All

**Personnel Required:**

68B10 Aircraft Powerplant Repairer

68B30 Aircraft Powerplant Inspector

**Tools:**

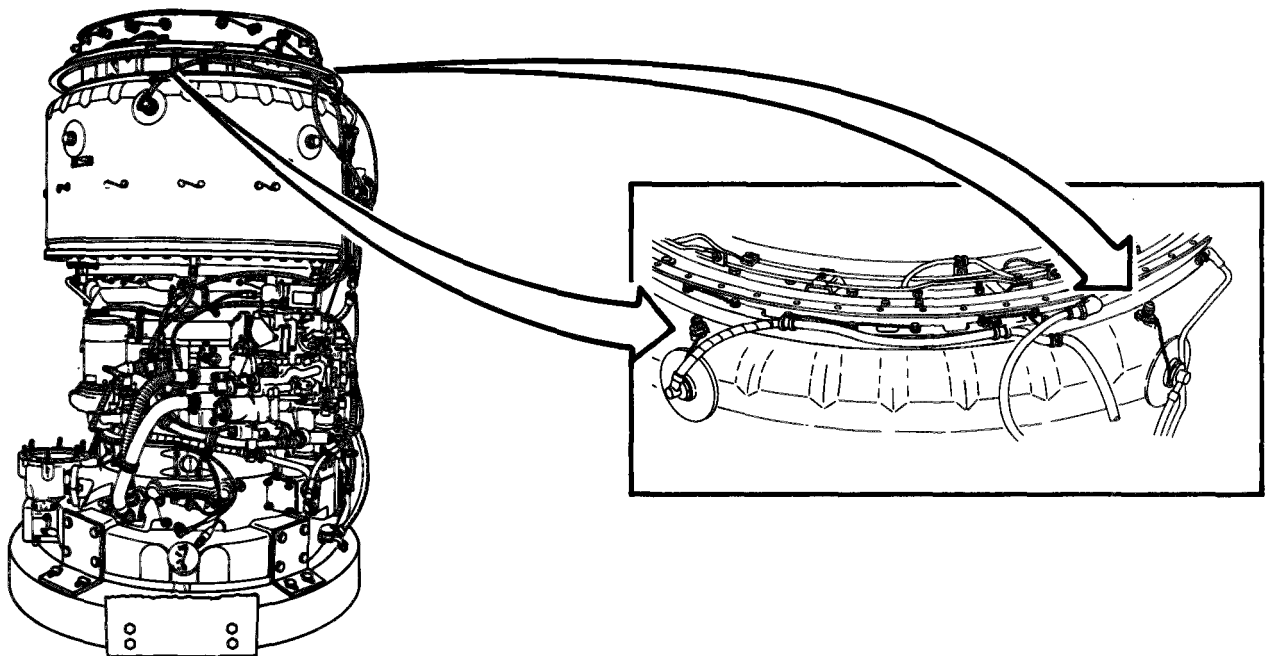
Powerplant Mechanic's Tool Kit,

NSN 5180-00-323-4944

Technical Inspection Tool Kit,

NSN 5180-00-323-5114

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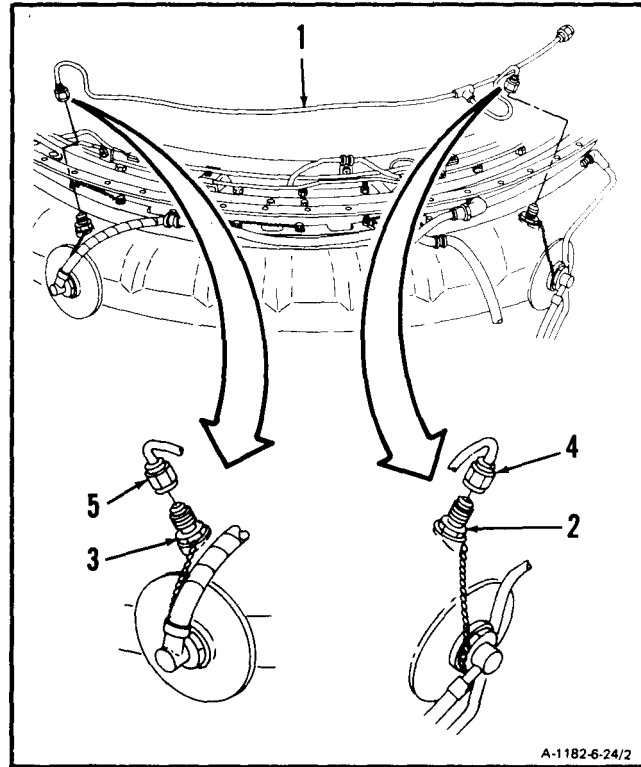
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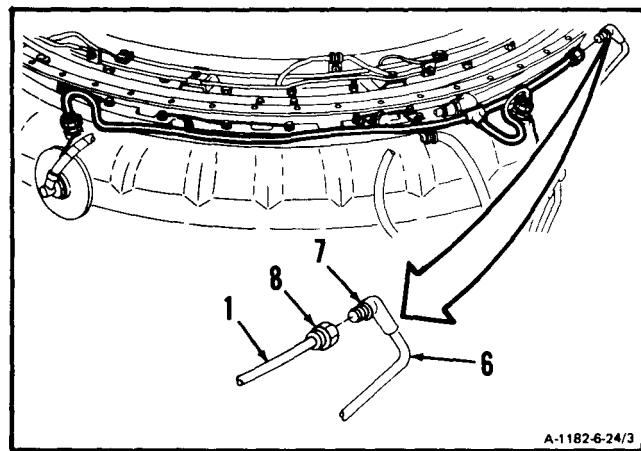
6-24 INSTALL PRIMER TUBE ASSEMBLY (Continued)

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 ).



A-1182-6-24/2

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 ).



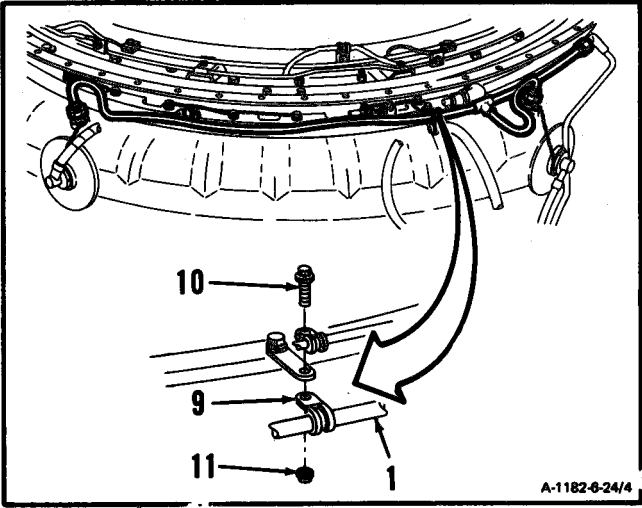
A-1182-6-24/3

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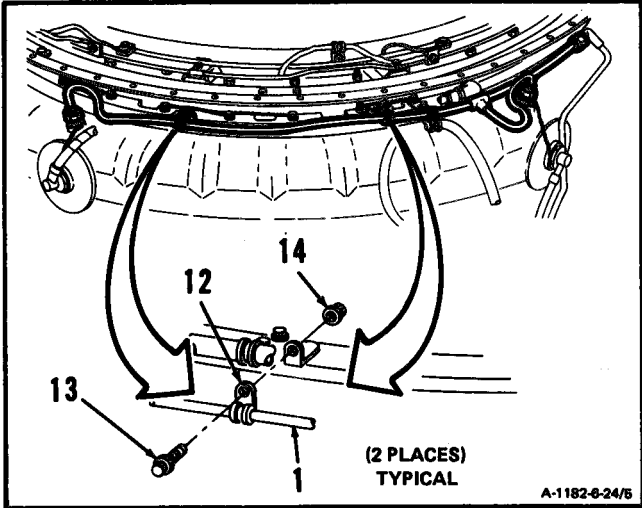
6-24 INSTALL PRIMER TUBE ASSEMBLY (Continued)

6-24

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



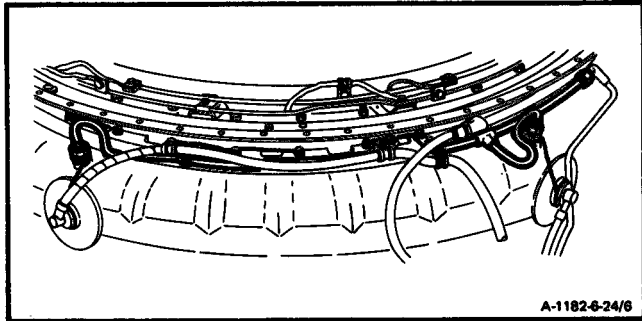
7. Install two clamps (12) on primer tube assembly (1), and install two bolts (13) and nuts (14).



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:*

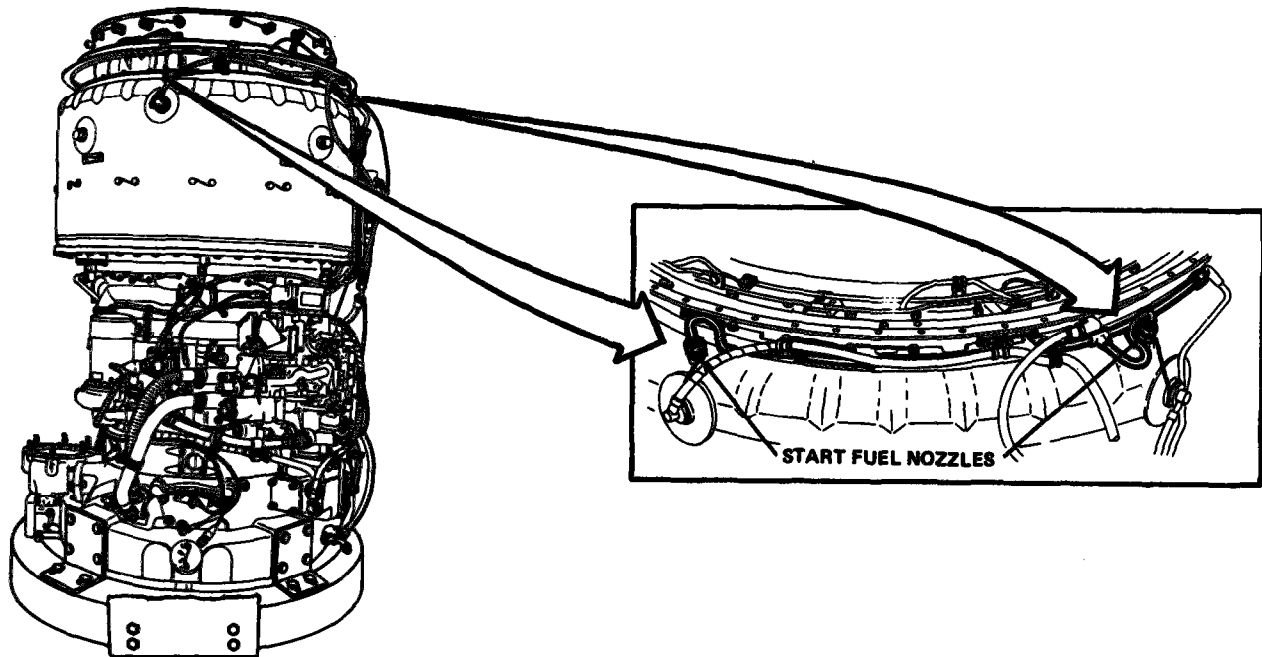
Wiping Rag (E58)

*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.

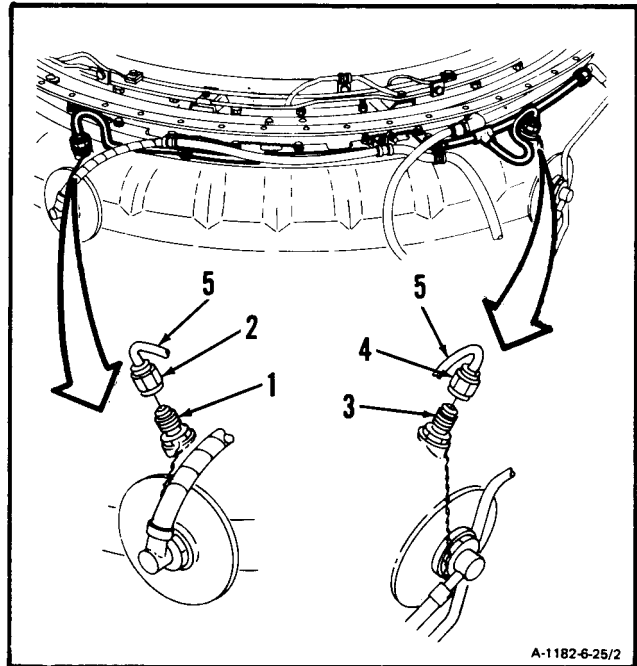


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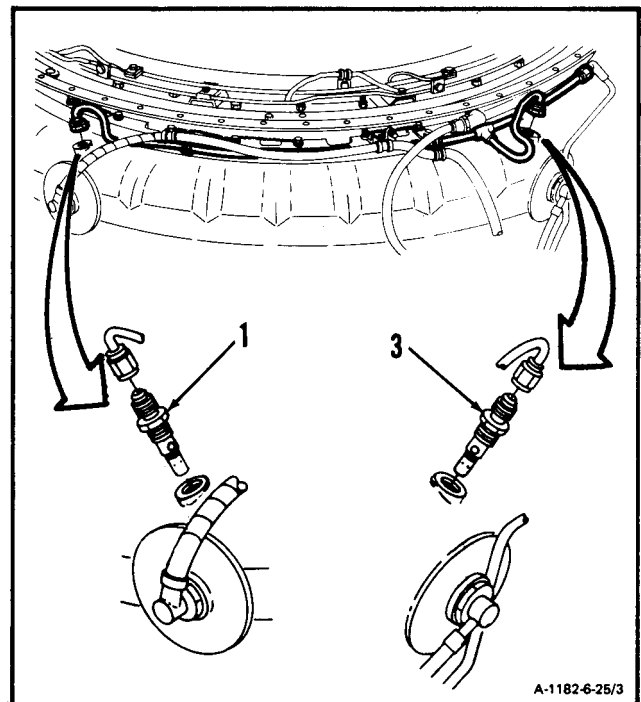
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6-25 REMOVE START FUEL NOZZLES (Continued)

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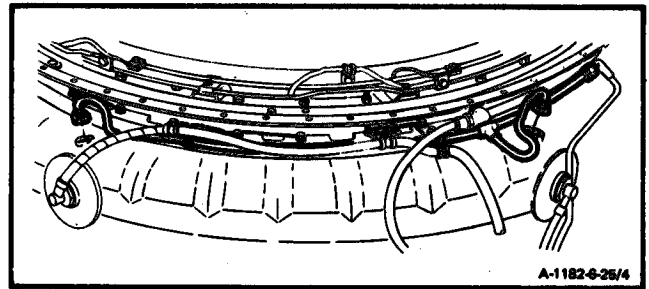
**6-25 REMOVE START FUEL NOZZLES (Continued)**

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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**

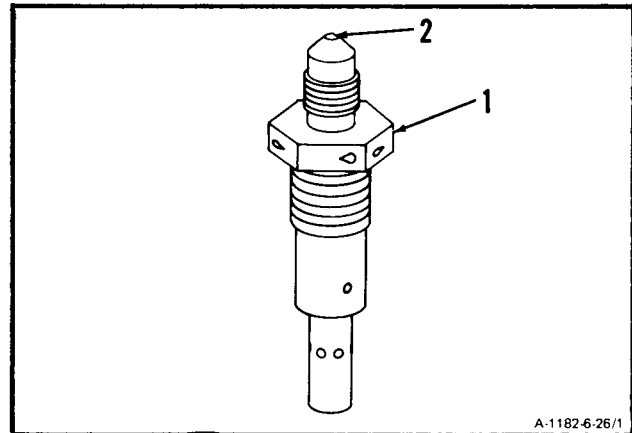
When using compressed air for cleaning, use approved protective equipment for eyes and face. Do not use more than 30 psig air pressure. Do not direct air toward yourself or another person. Failure to comply could result in injury to eyes or skin. In case of injury, get medical attention.

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:

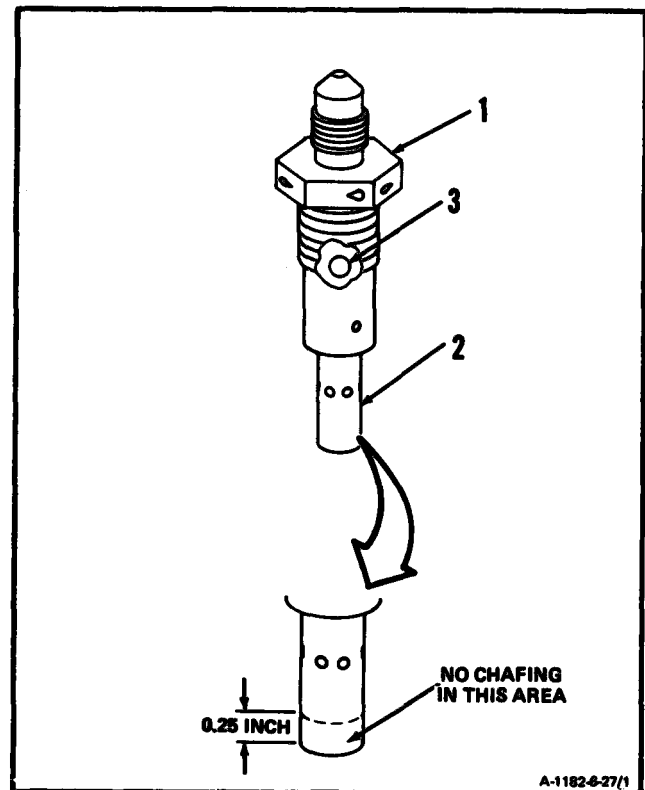
- a. There shall be no bent shroud ends.
- b. There shall be no distorted or burned out shroud ends.
- c. There shall be no chafing in area 0.25-inch from bottom of shroud ends.

- 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:**

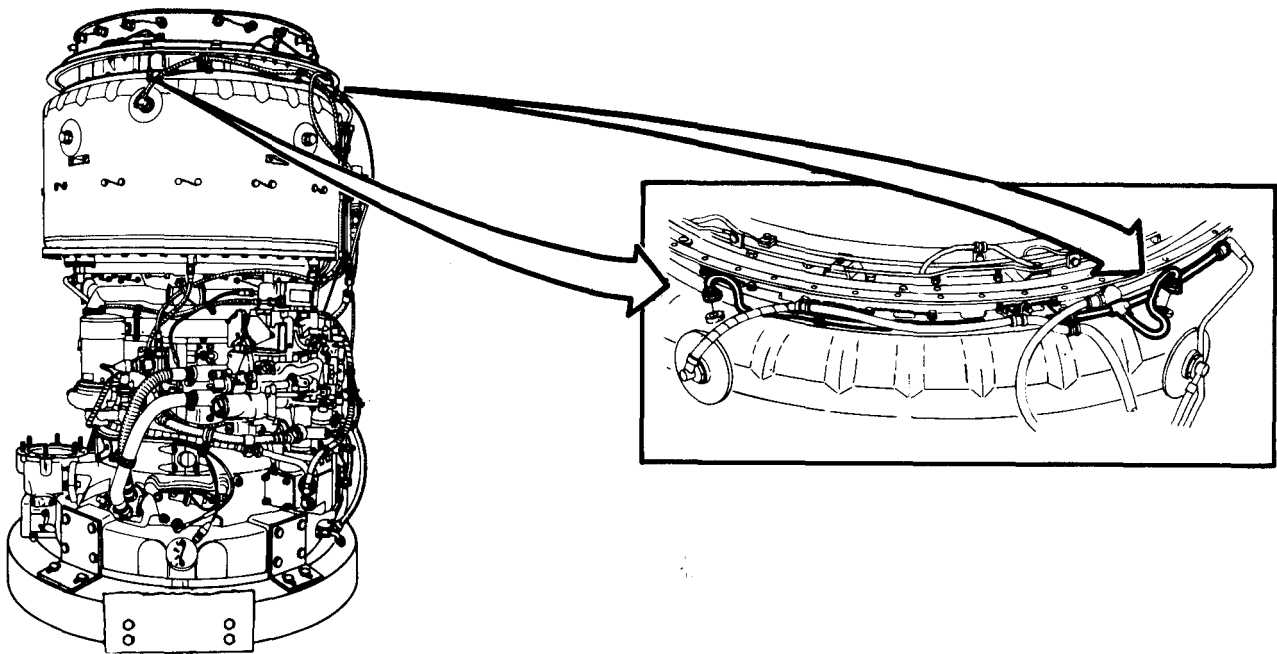
Lockwire (E29)

**Personnel Required:**

68B10 Aircraft Powerplant Repairer

68B30 Aircraft Powerplant Inspector

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A-1182-6-28/1

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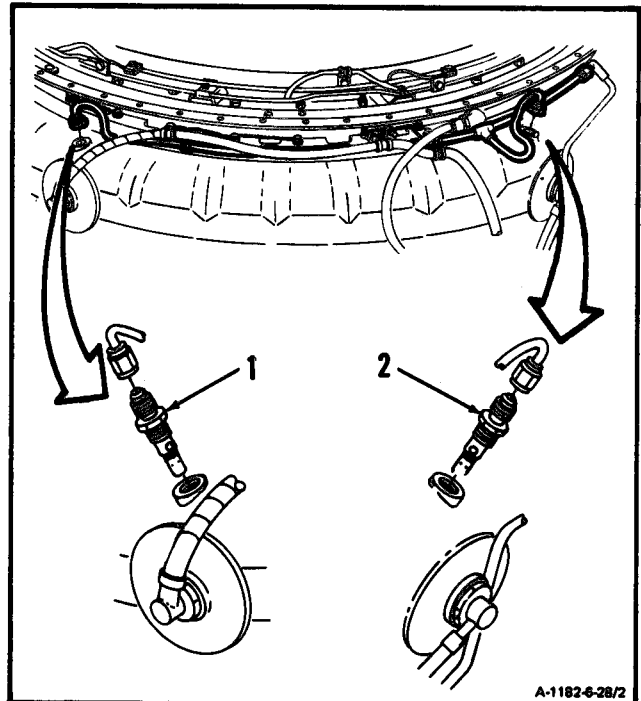
## 6-28 INSTALL START FUEL NOZZLES (Continued)

6-28

**CAUTION**

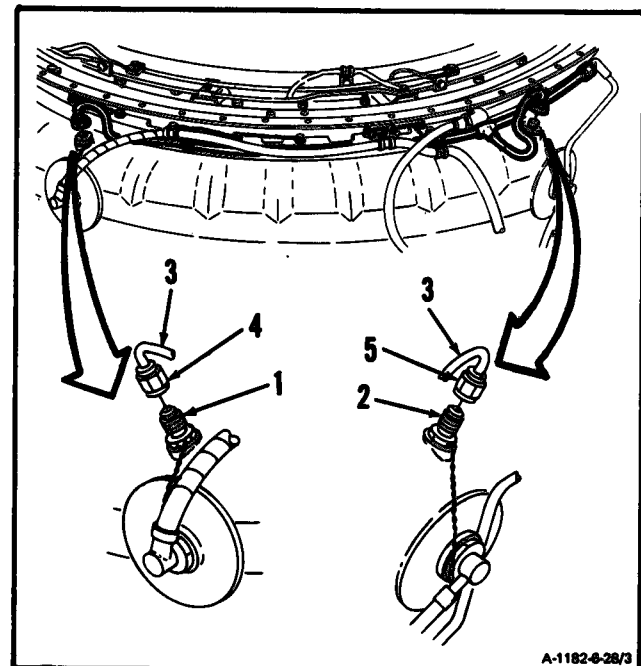
In following step, insert nozzles hand tight to insure that they do not hit combustion chamber liner. Shift liner port as needed. Failure to comply may cause and leakage.

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

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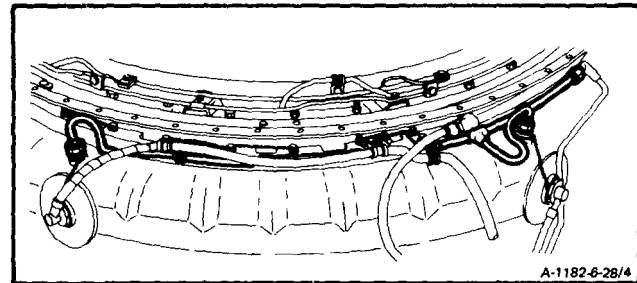
**6-28 INSTALL START FUEL NOZZLES (Continued)**

---

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:**

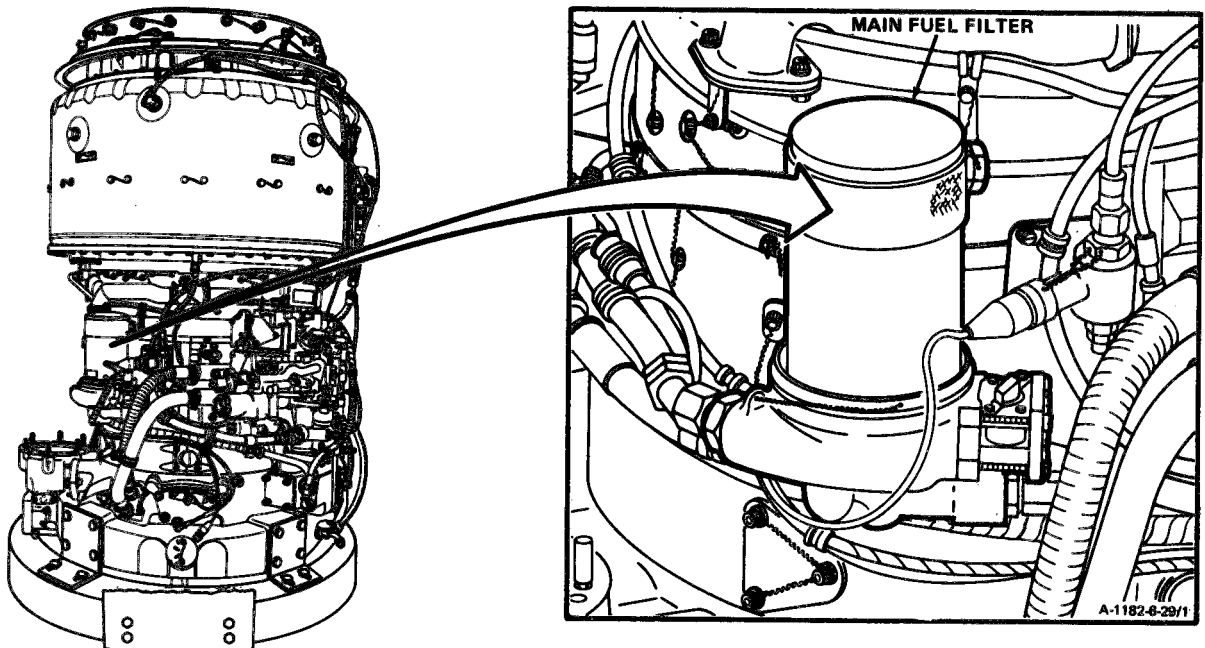
Wiping Rag (E58)

**Personnel Required:**

68B10 Aircraft Powerplant Repairer

**WARNING**

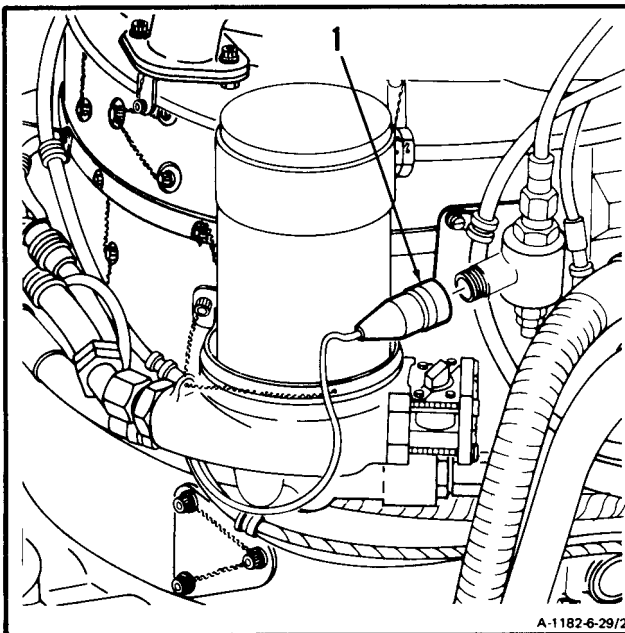
Turbine fuels are very flammable. They may cause drying and irritation of skin or eyes. Handle only in well-ventilated areas away from heat and open flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin and do not take internally. Wash contacted area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



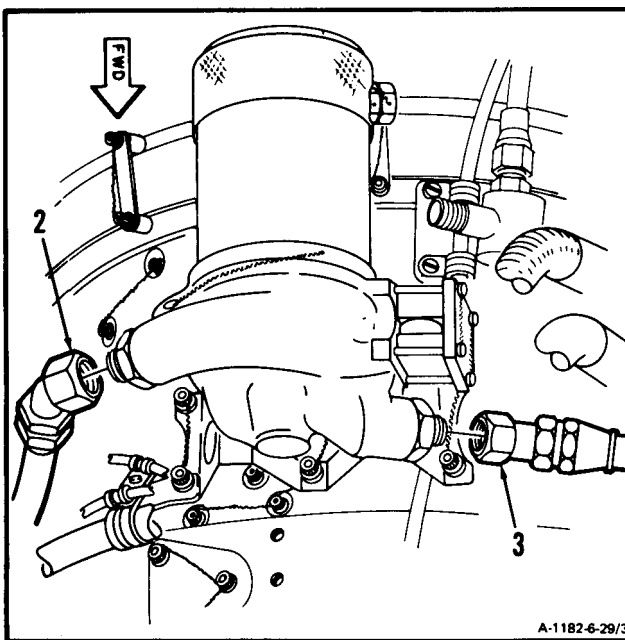
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6-29 REMOVE MAIN FUEL FILTER AND BRACKET (Continued)

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



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



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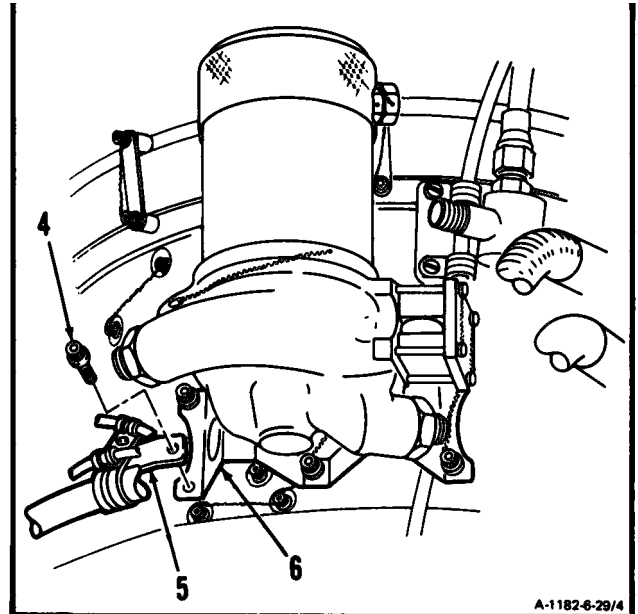
## 6-29 REMOVE MAIN FUEL FILTER AND BRACKET (Continued)

6-29

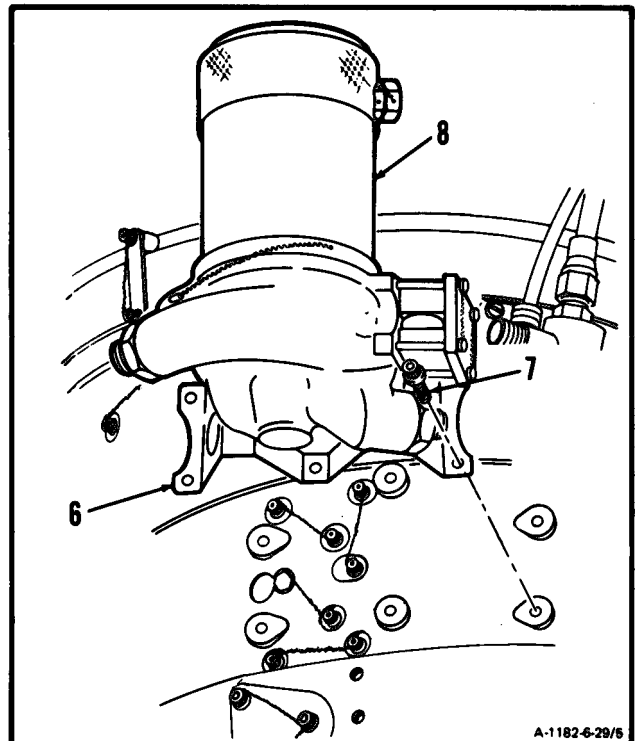
**NOTE**

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.

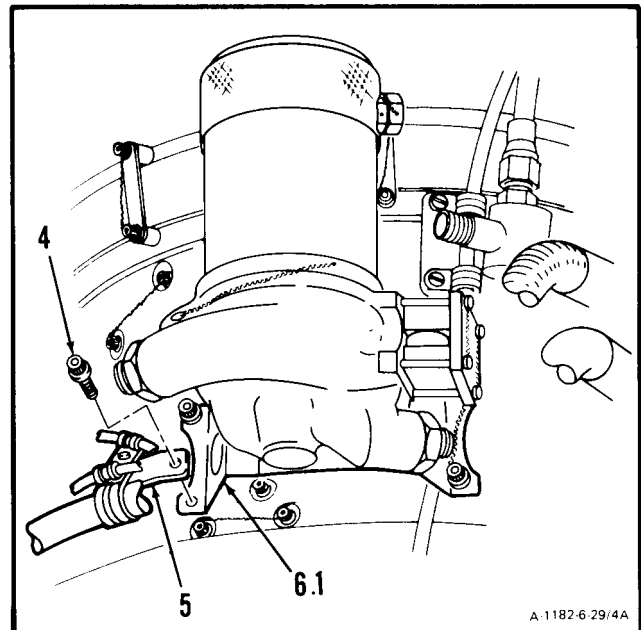


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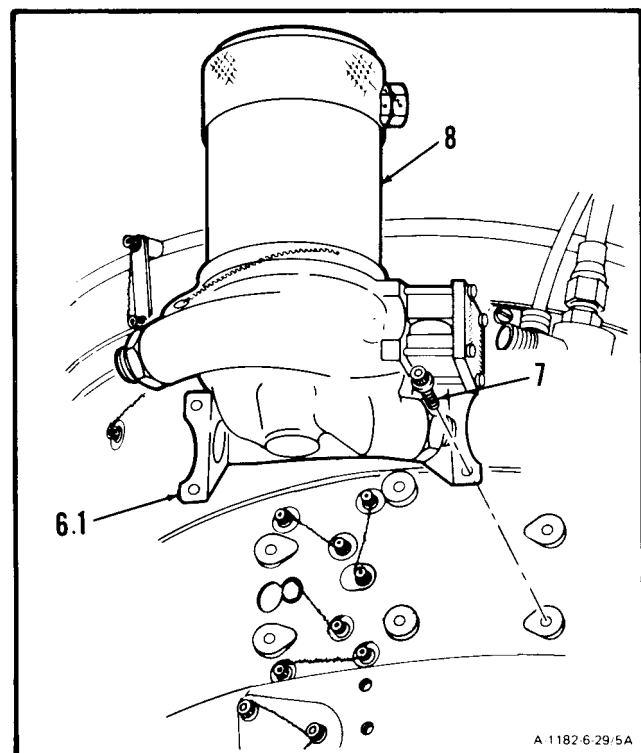
6-29 REMOVE MAIN FUEL FILTER AND BRACKET (Continued)

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.



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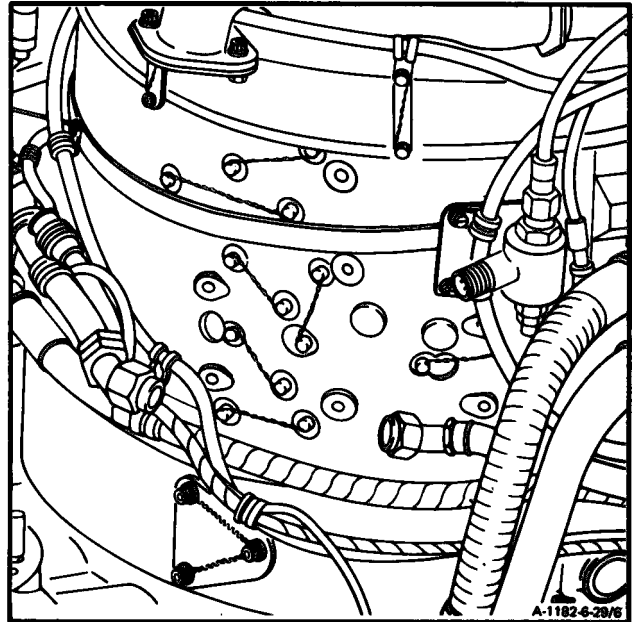
**6-29 REMOVE MAIN FUEL FILTER AND BRACKET (Continued)**

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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)

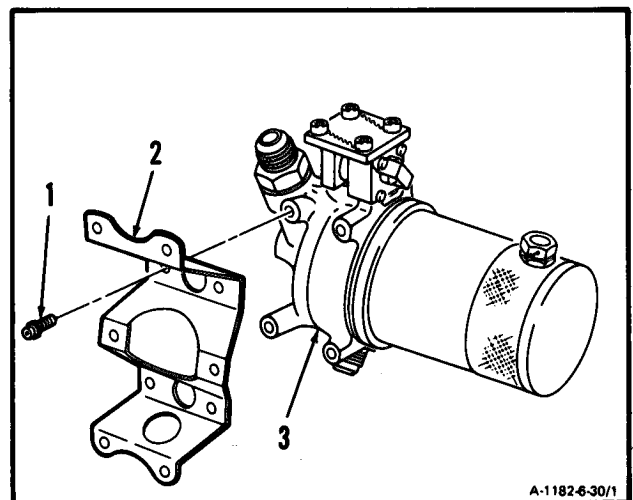
**General Safety Instructions:****WARNING**

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).**

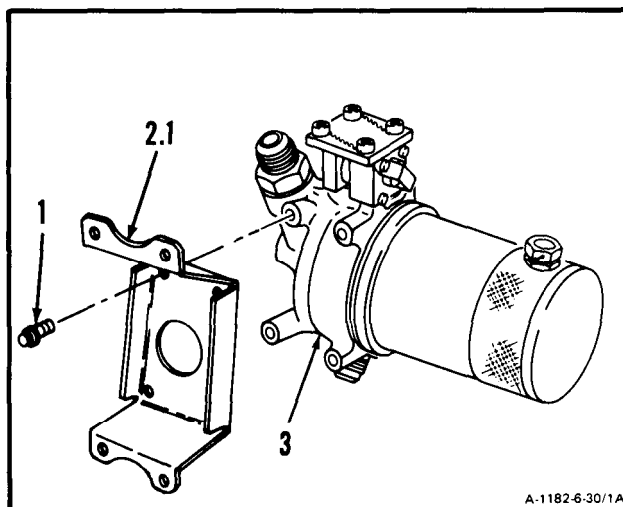
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**6-30 DISASSEMBLE MAIN FUEL FILTER AND BRACKET**

**6-30**

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

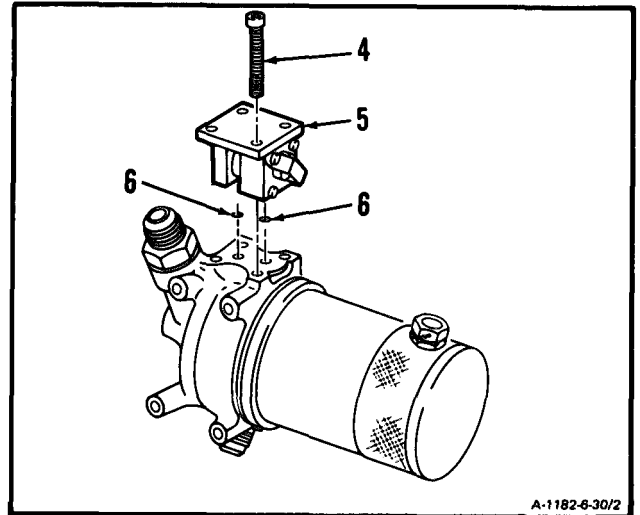


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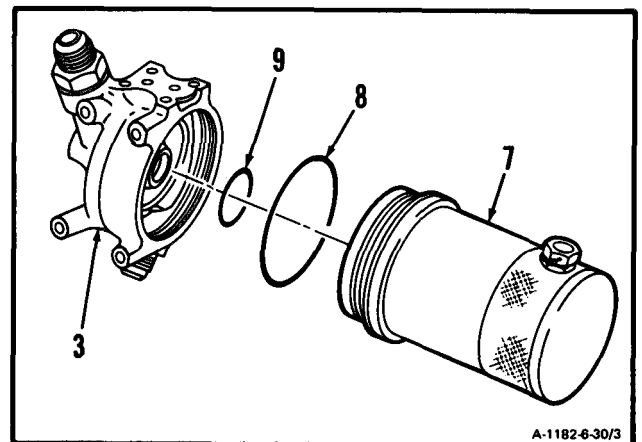
6-30 DISASSEMBLE MAIN FUEL FILTER AND BRACKET (Continued)

6-30

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



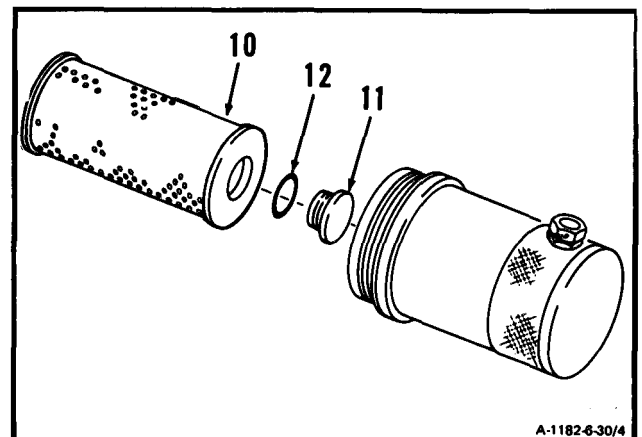
3. Remove lockwire, filter bowl (7), and packings (8 and 9) from filter head (3). Use vise with jaw caps and strap wrench.



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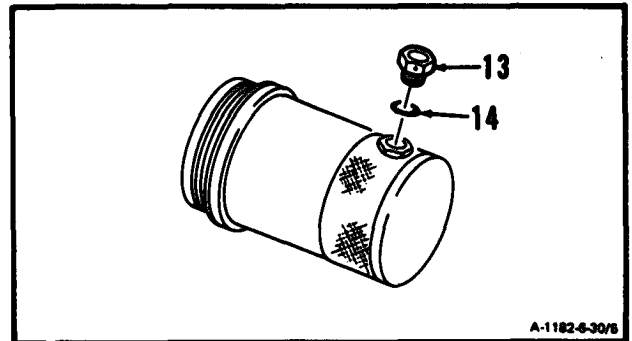
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**6-30 DISASSEMBLE MAIN FUEL FILTER AND BRACKET (Continued)**

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6-30

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

**FOLLOW-ON MAINTENANCE:**

None

**END OF TASK**

**6-31 CLEAN MAIN FUEL FILTER AND BRACKET**

INITIAL SETUP

**Applicable Configurations:**

All

**Tools:**

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

**Materials:**

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

**Personnel Required:**

68B10 Aircraft Powerplant Repairer

**Equipment Condition:**

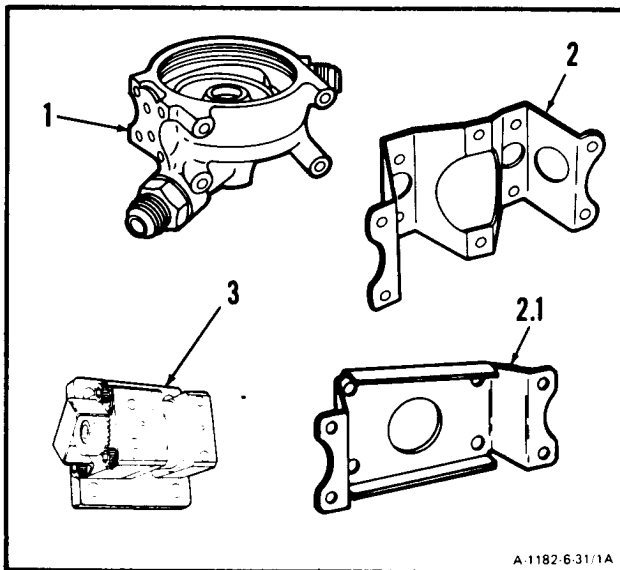
- Off Engine Task
- Main Fuel Filter and Bracket Removed  
(Task 6-29)
- Main Fuel Filter and Bracket Disassembled  
(Task 6-30)

*General Safety Instructions:*

**WARNING**

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

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



**GO TO NEXT PAGE**

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

6-31

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

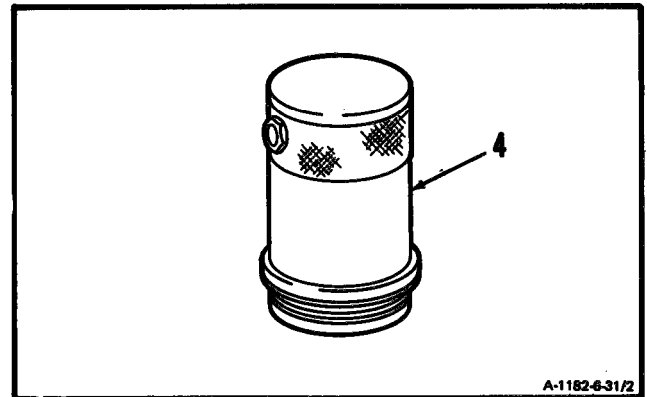
**WARNING**

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

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

## FOLLOW-ON MAINTENANCE:

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

**END OF TASK**

6-32 INSPECT MAIN FUEL FILTER AND BRACKET

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

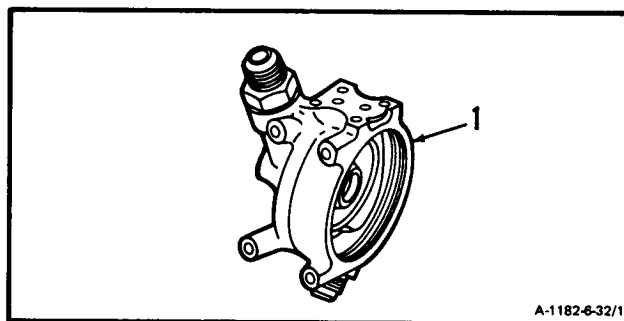
**References:**

Task 1-85

**Equipment Condition:**

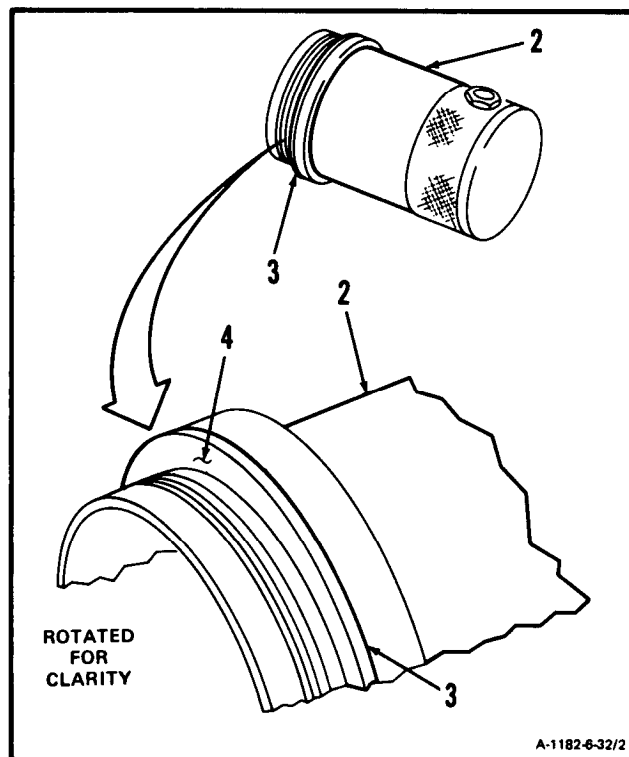
Off Engine Task

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**

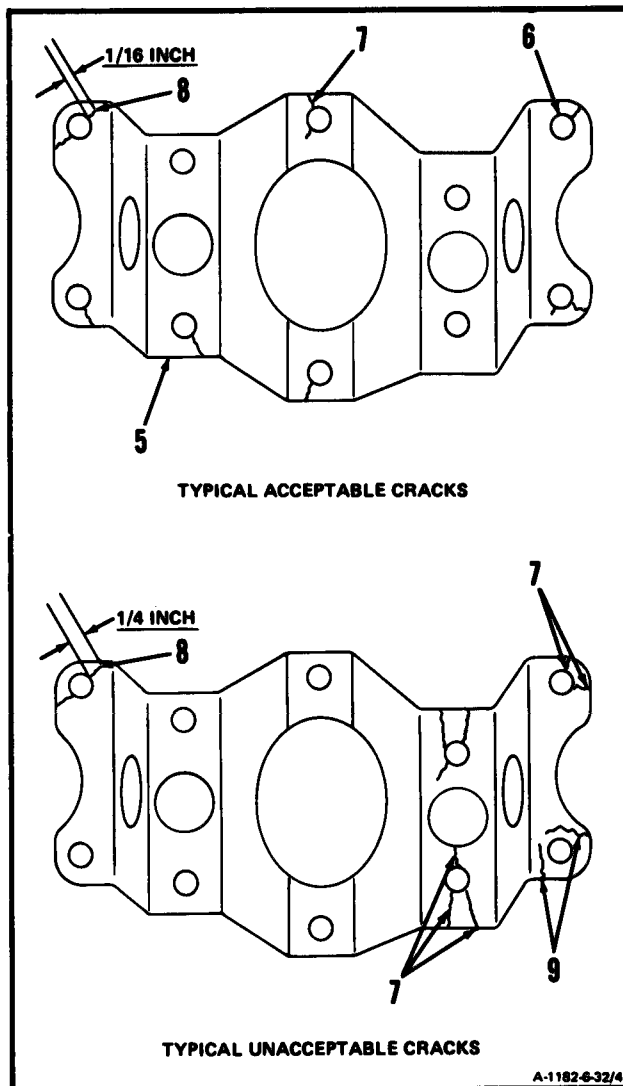
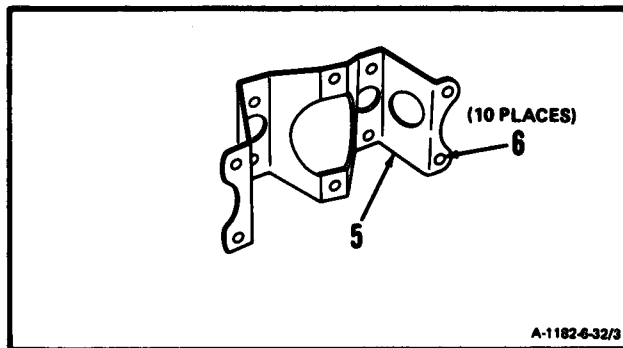
If bracket has **ten bolt holes** do steps 4. and 5. and omit step 5.1. and 5.2. If bracket has **eight bolt holes** omit steps 4. and 5. and do steps 5.1. and 5.2.

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:

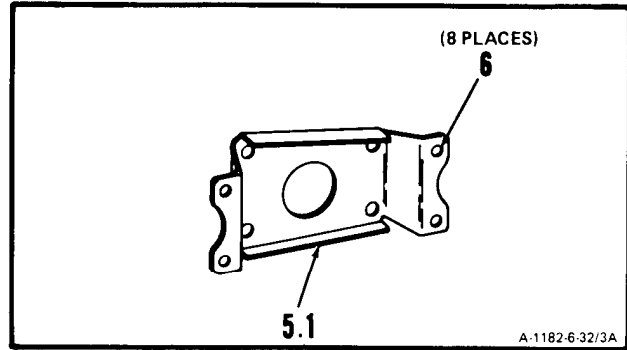
- a. **There shall be no more than one edge-to-bolt hole crack (7) per each bolt hole (6).**
- b. At bolt holes with edge-to-bolt hole crack (7), **there shall be no more than one additional crack (8).** Crack (8) shall be no more than 1/16 inch long.
- c. **There shall be no converging cracks (9)**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



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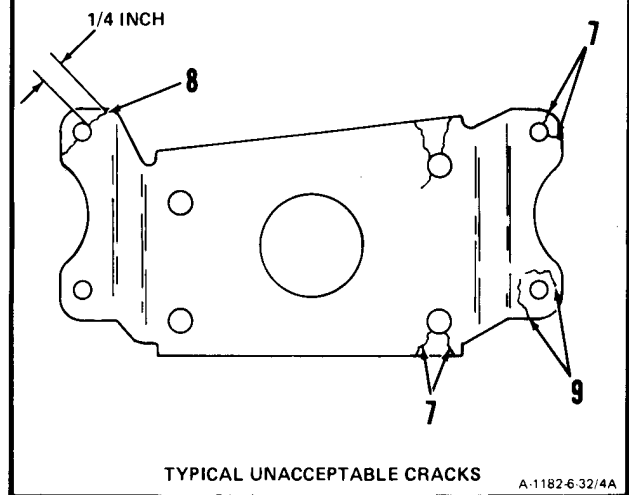
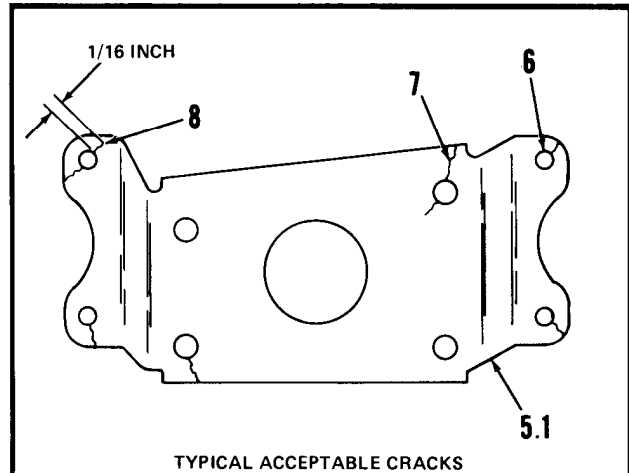
5.1 Inspect bracket (5.1).

- 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.

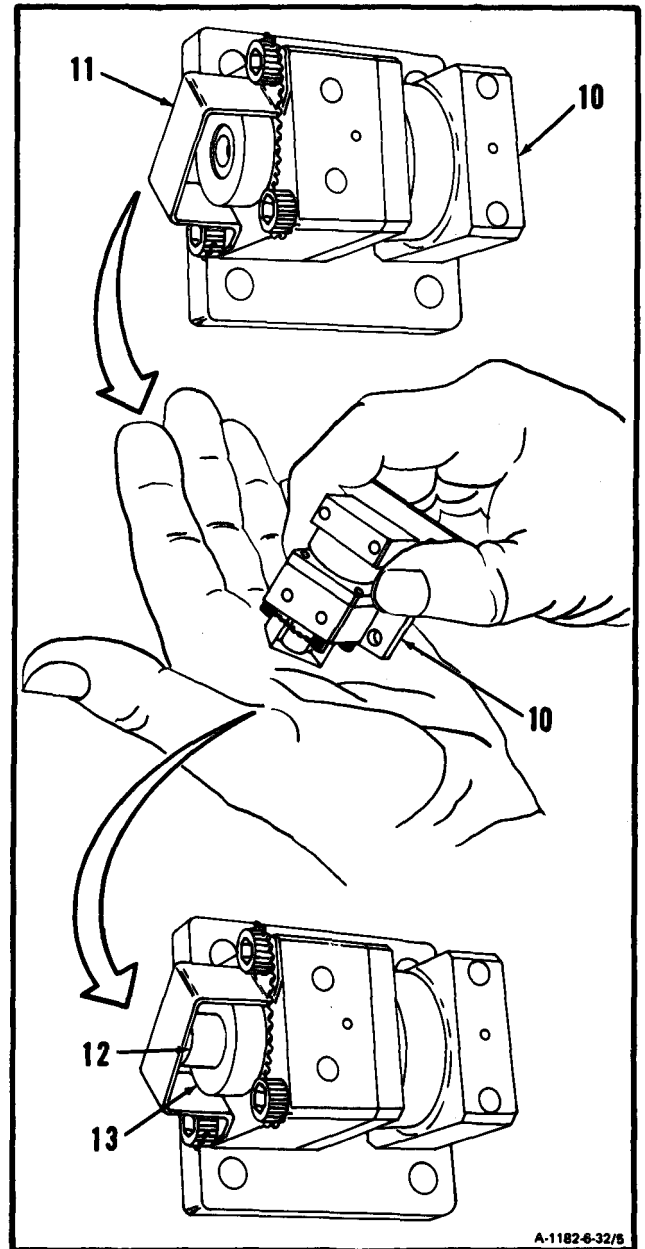


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6. Inspect pressure differential switch (10) as follows:

- 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.

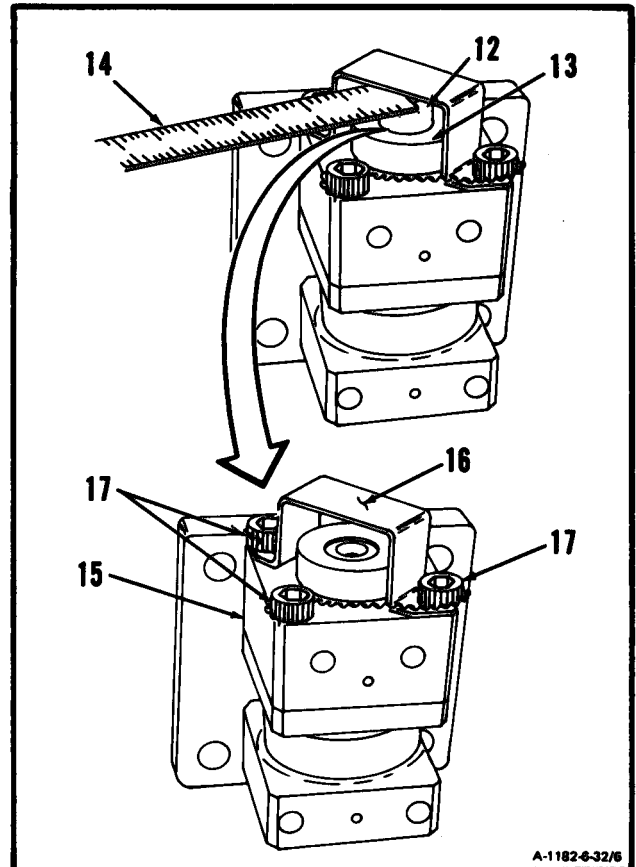


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## 6-32 INSPECT MAIN FUEL FILTER AND BRACKET (Continued)

6-32

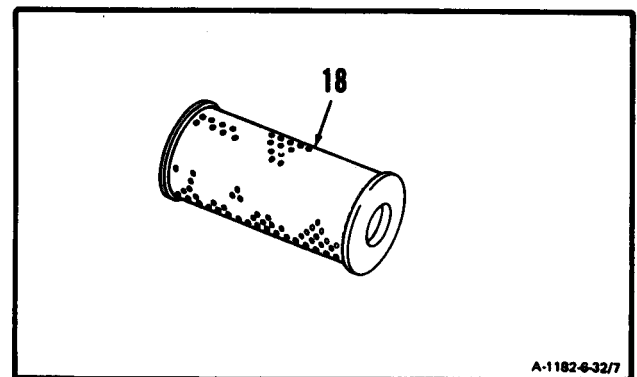
- b. Using machinist's steel rule (14), push poppet (12) into housing (13). Poppet (12) should snap back into housing (13) smoothly with light pressure applied:
- c. Inspect housing (15). There shall be no cracks.
- d. Inspect bracket (16). There shall be no looseness. If looseness exists, proceed as 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**

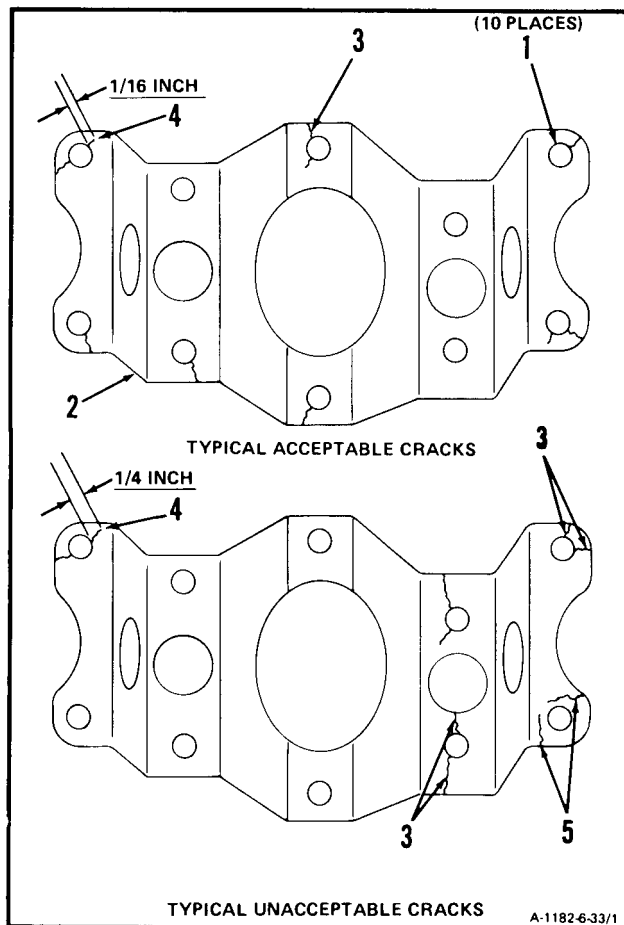
This repair is allowed as long as it does not generate cracks beyond the following limits:

- 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**

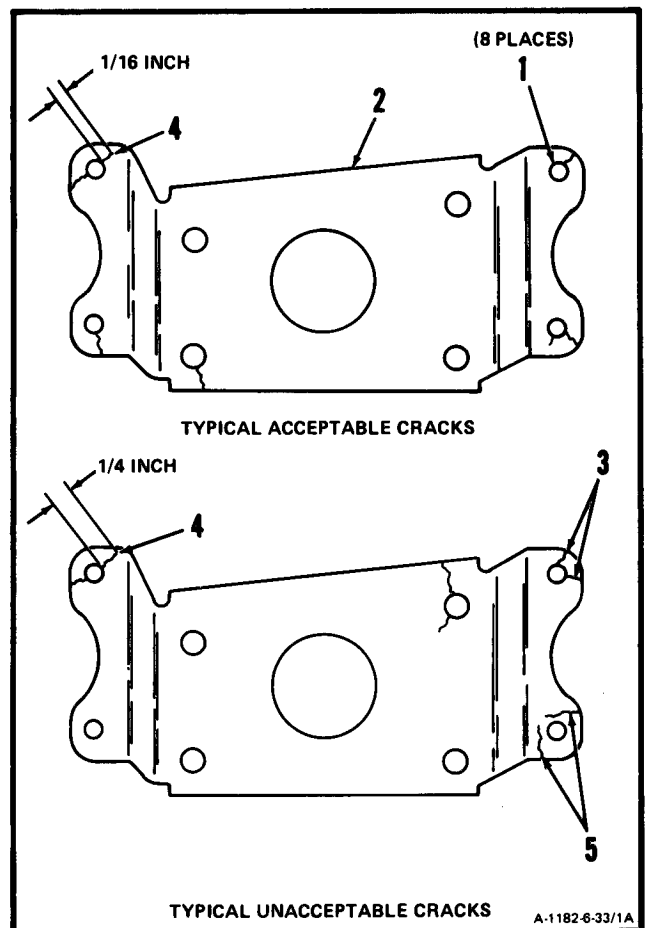
This repair is allowed as long as it does not generate cracks beyond the following limits:

- 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:**

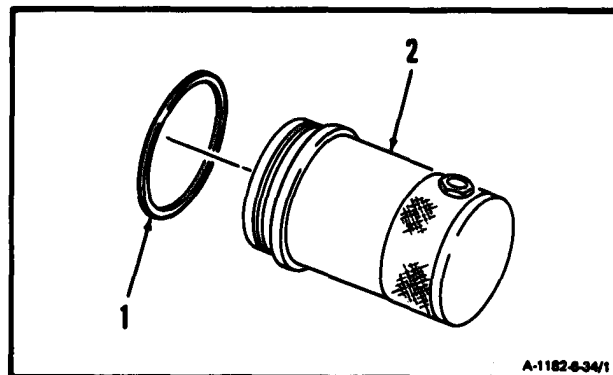
Off Engine Task

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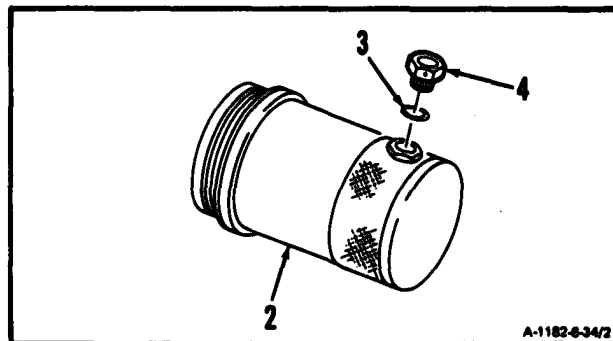
**NOTE**

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

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



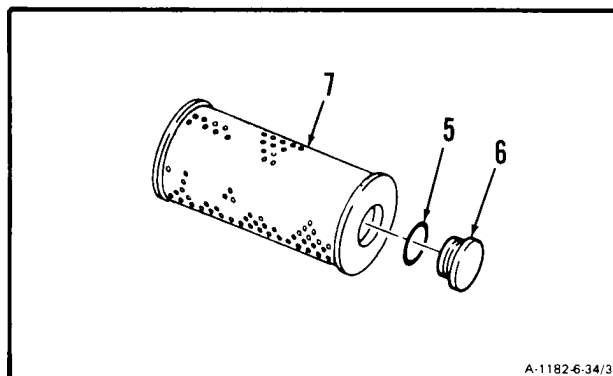
2. Install packing (3) and drain plug (4) in bowl (2). Lockwire drain plug (4), Use lockwire (E29).

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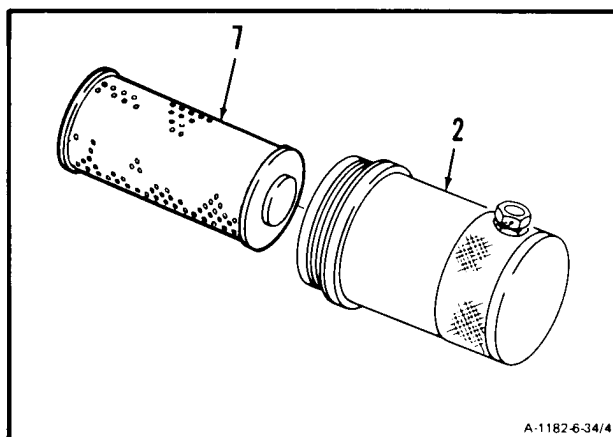
**NOTE**

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

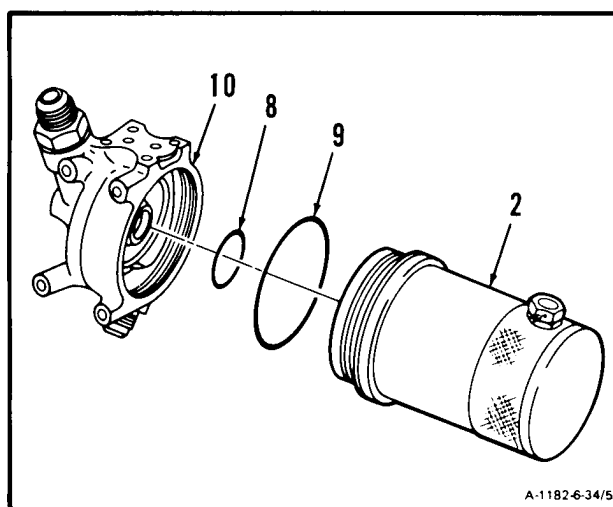
- 3 **Install** packing (5) and **plug** (6) in filter element (7).



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).

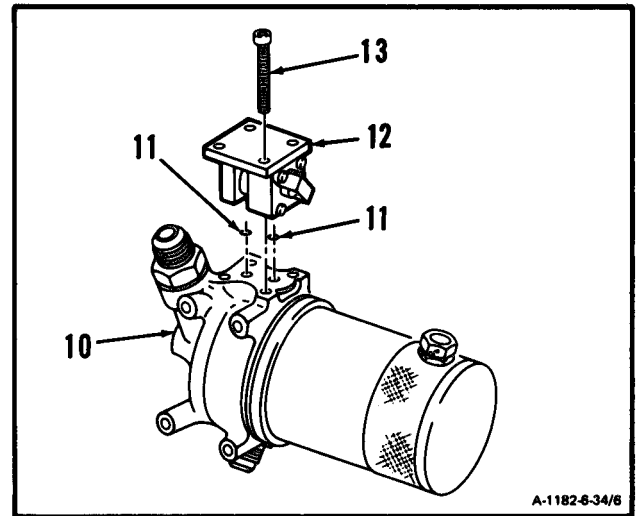


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**CAUTION**

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

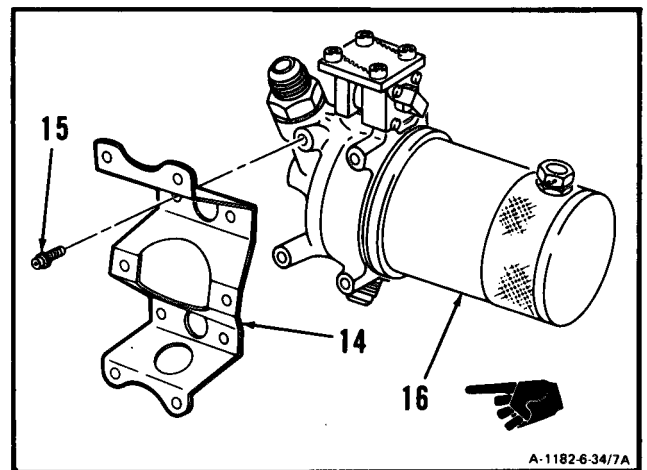
6. Install two packings (11) and differential pressure indicator (12) on filter head (10). Install four screws (13) and lockwire. Use lockwire (E29)



**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).

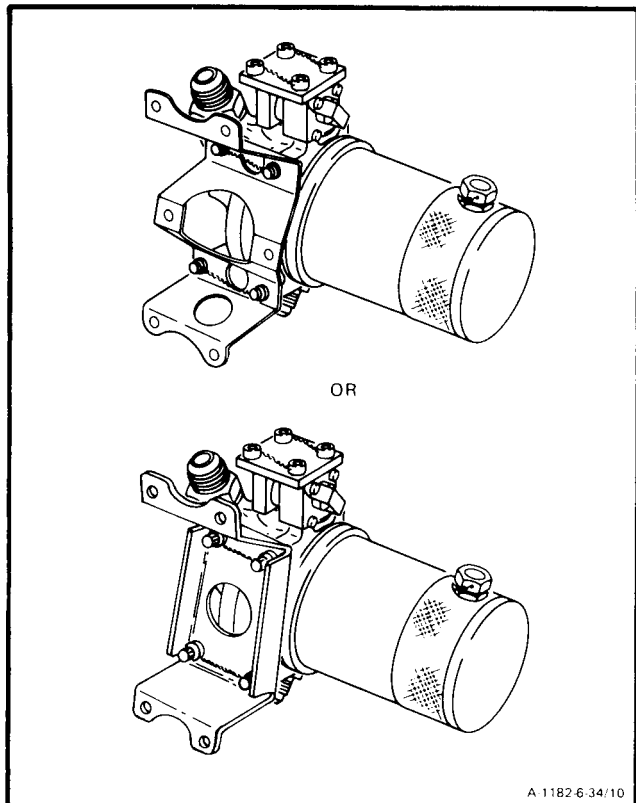
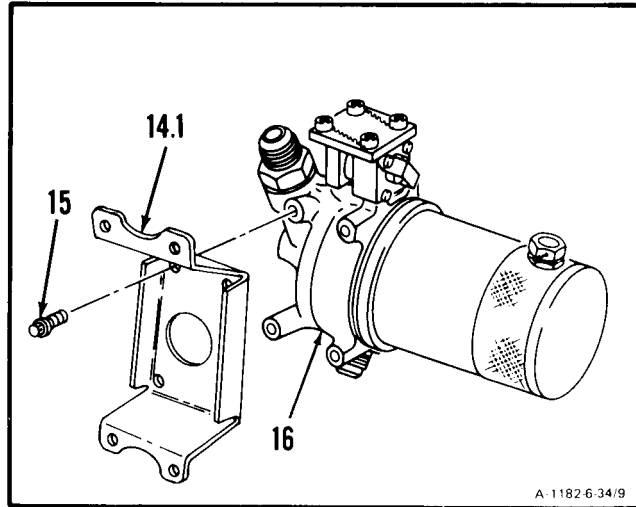


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7.1 Install bracket (14.1) and four bolts (15) on main fuel filter (16). Lockwire bolts (15), Use lockwire (E29).

**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:**

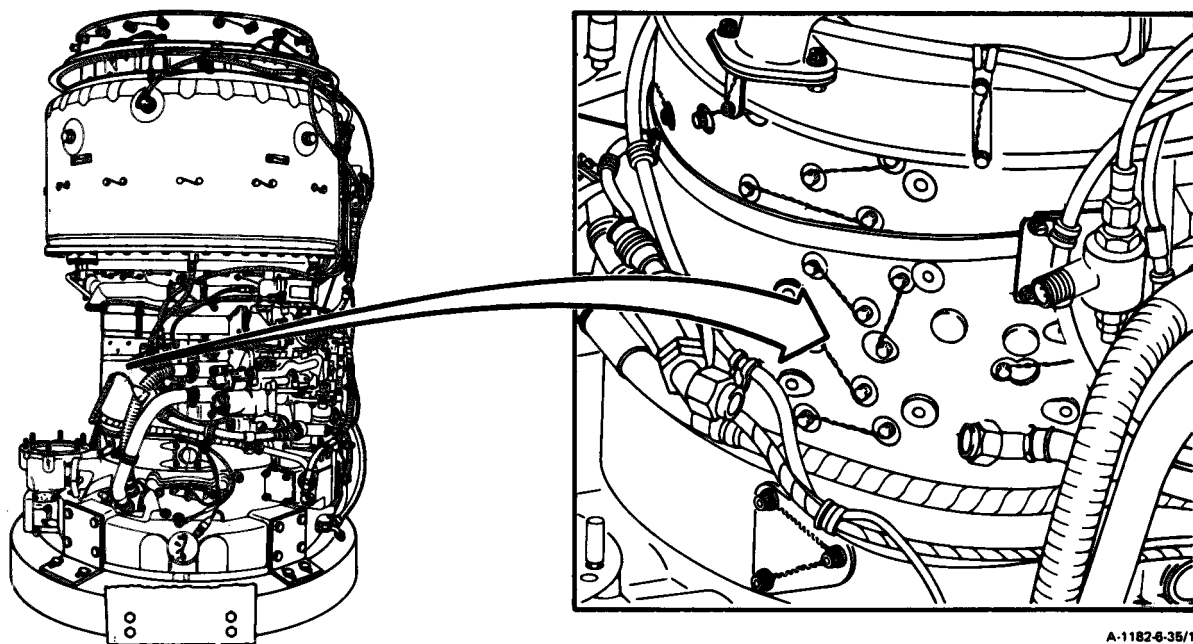
Packings

**Personnel Required:**

68B10 Aircraft Powerplant Repairer  
68B30 Aircraft Powerplant Inspector

**References:**

TM 55-2840-254-23P



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**GO TO NEXT PAGE**

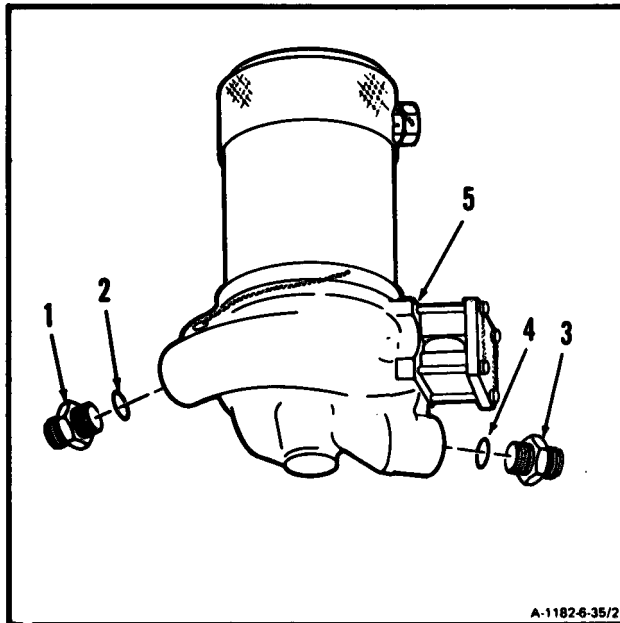
## 6-35 INSTALL MAIN FUEL FILTER AND BRACKET (Continued)

6-35

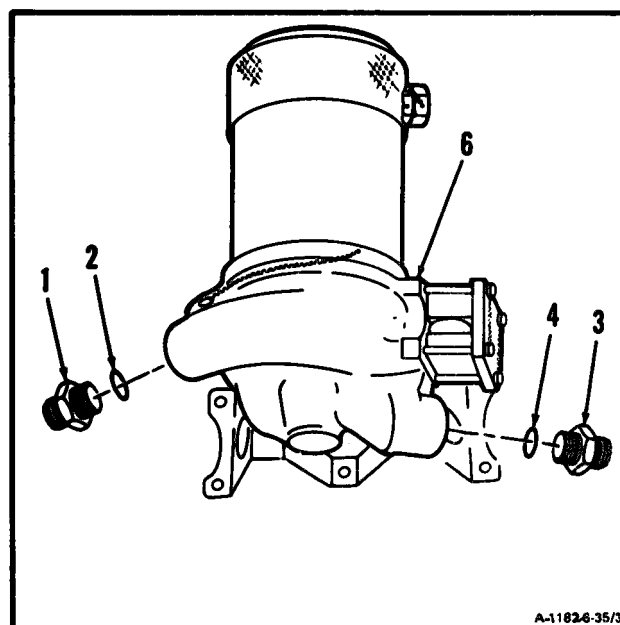
**NOTE**

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

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



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

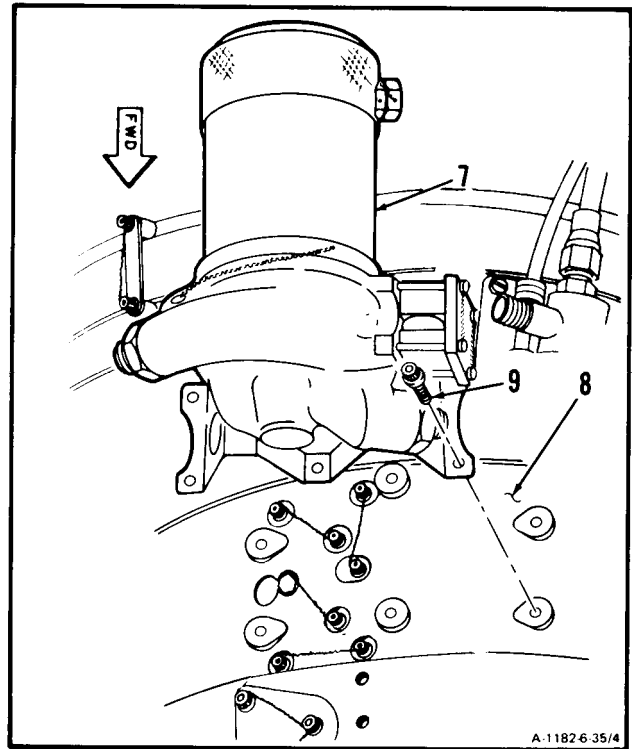


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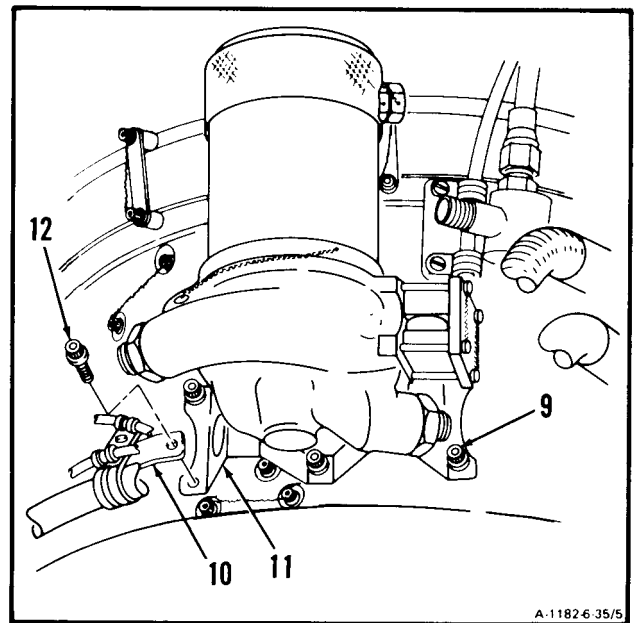
**NOTE**

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).

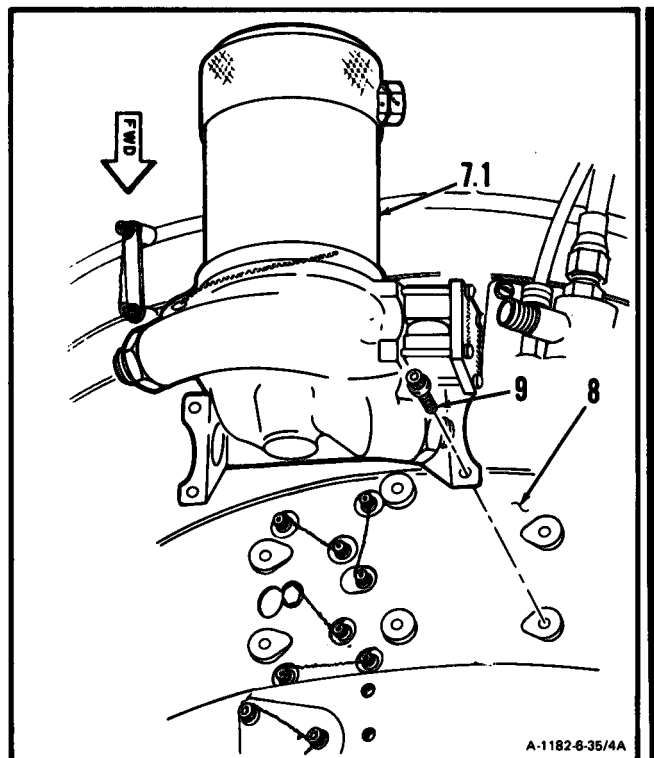


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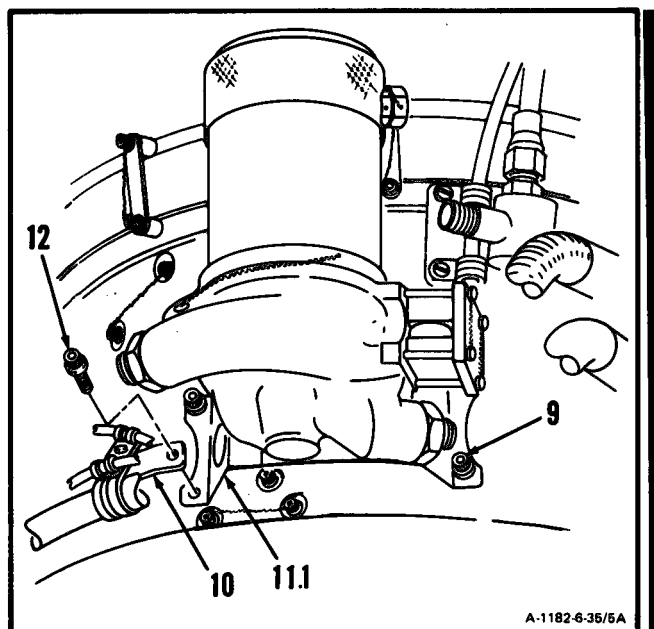
## 6-35 INSTALL MAIN FUEL FILTER AND BRACKET (Continued)

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).

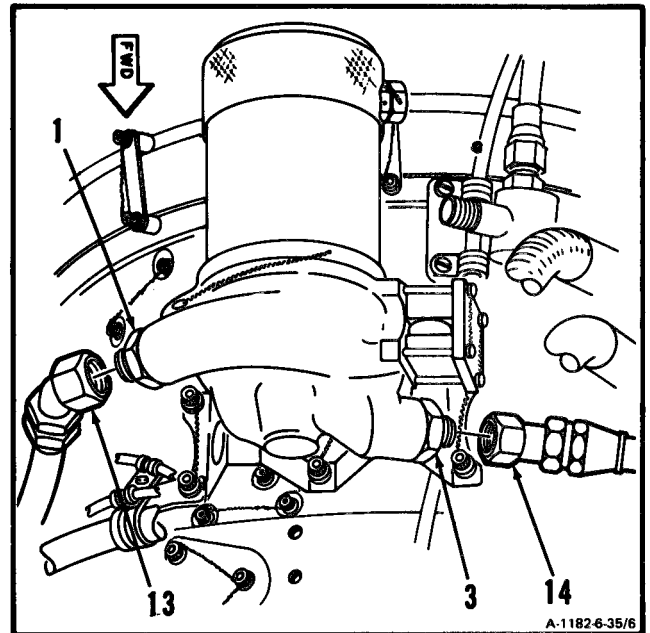


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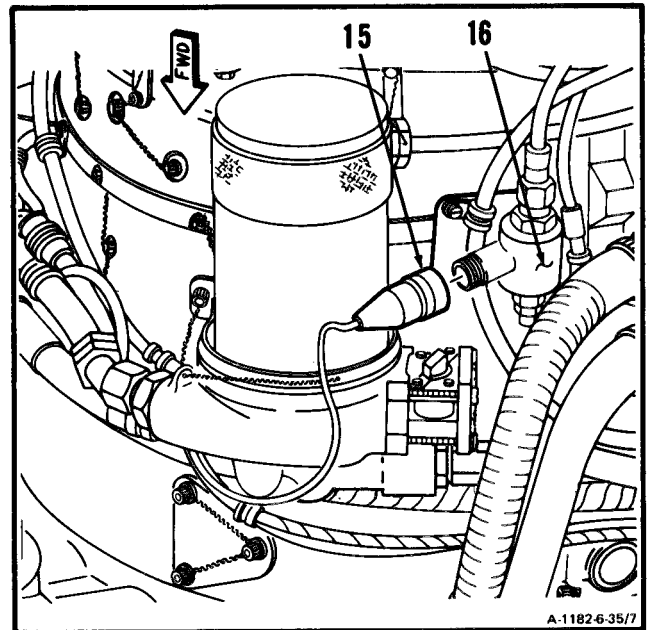
## 6-35 INSTALL MAIN FUEL FILTER AND BRACKET (Continued)

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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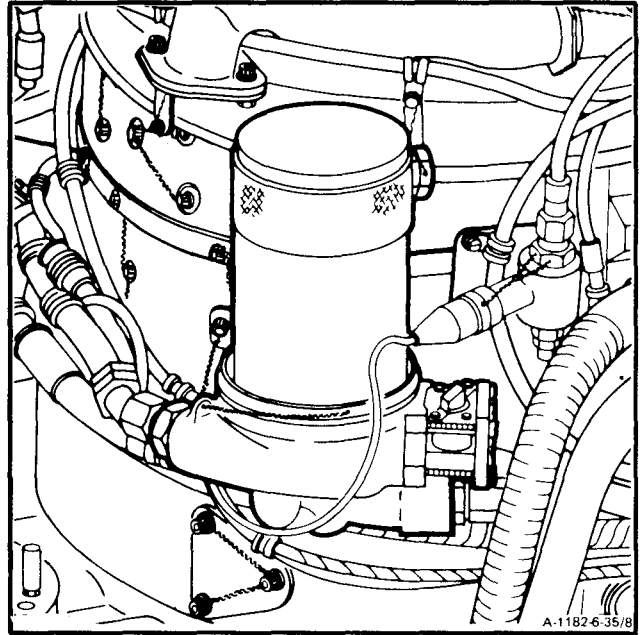
---

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

---

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:**

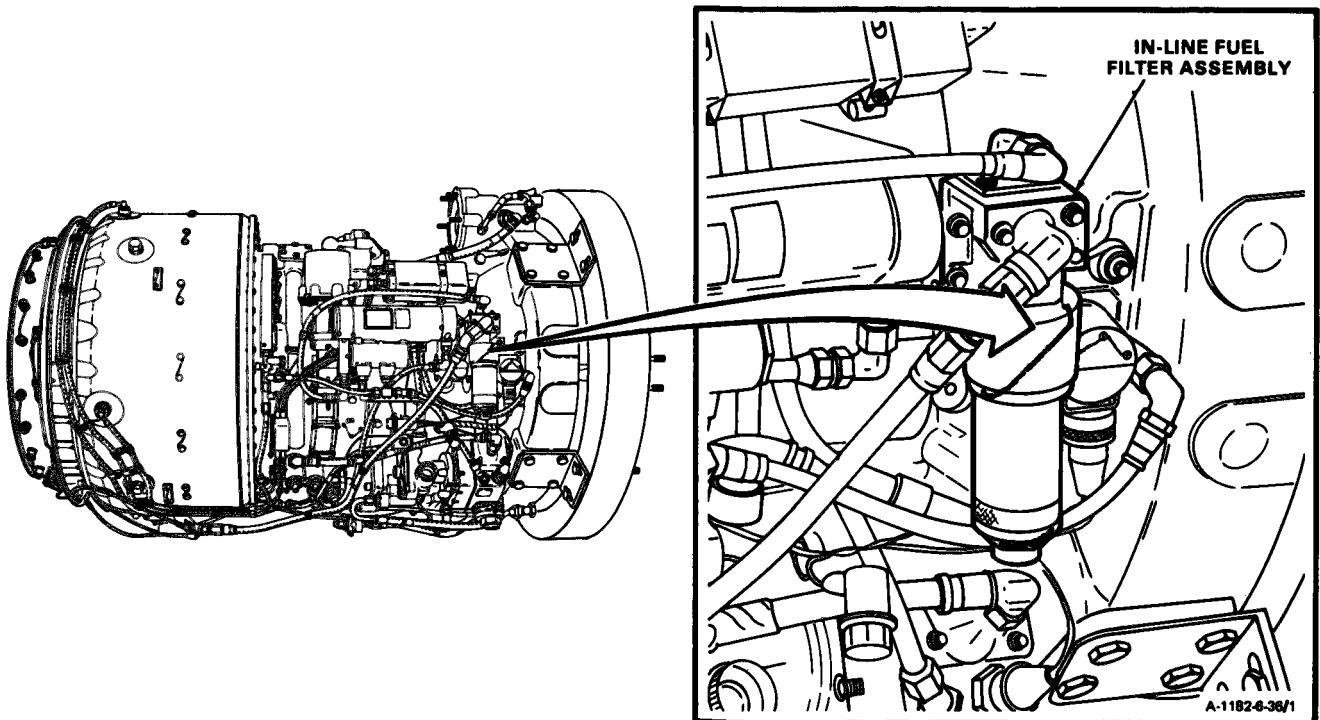
Wiping Rag (E58)

**Personnel Required:**

68B10 Aircraft Powerplant Repairer

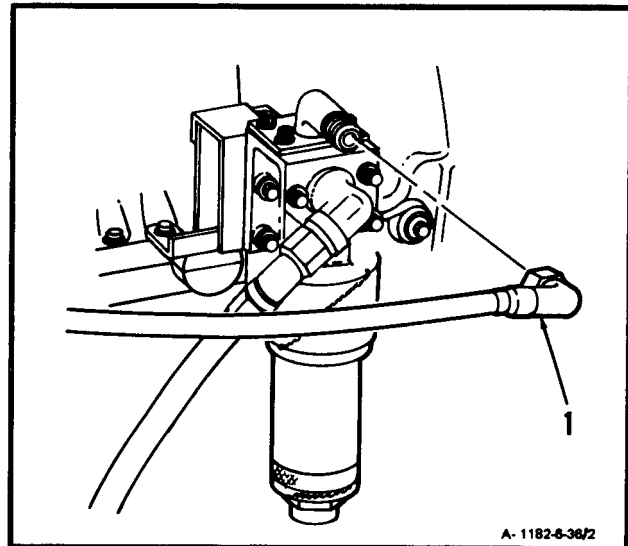
**WARNING**

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.

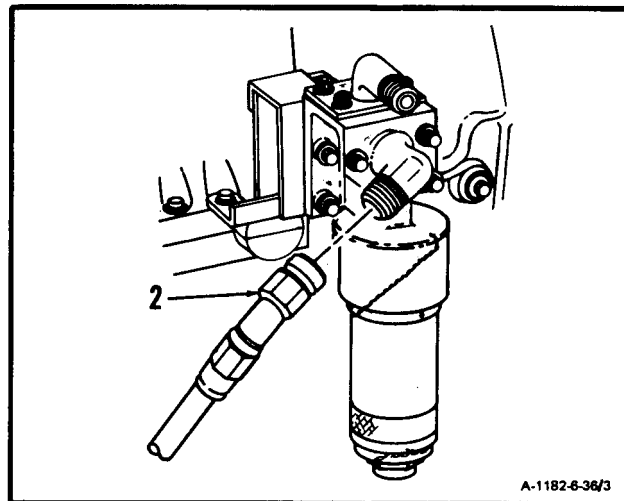


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1. Disconnect hose assembly (1).



2. Disconnect hose assembly (2).



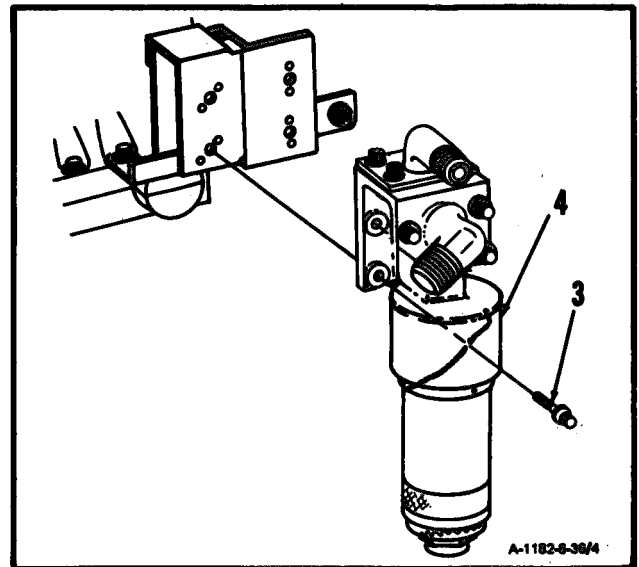
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## 6-36 REMOVE IN-LINE FUEL FILTER ASSEMBLY (Continued)

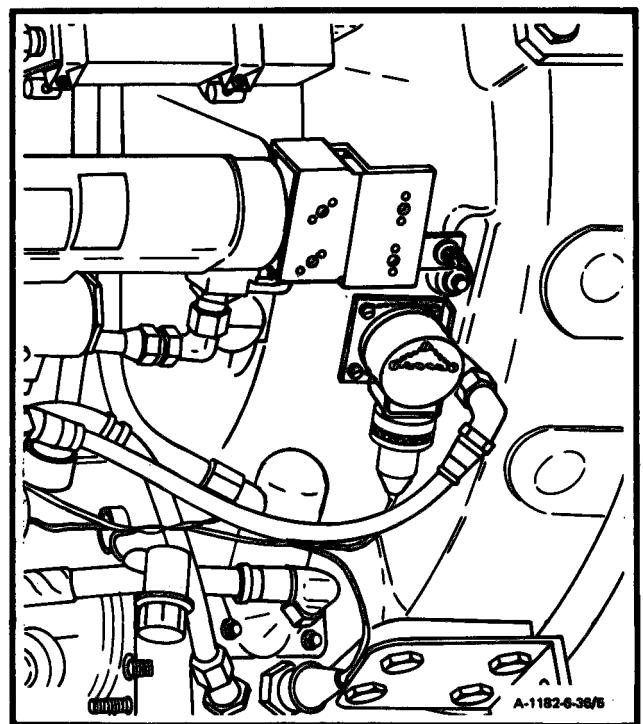
6-36

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)

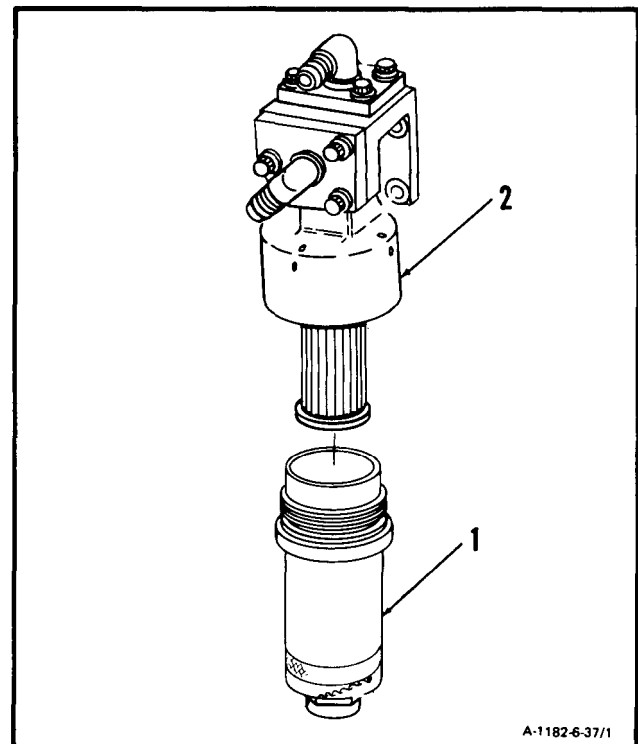
**General Safety Instructions:****WARNING**

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.



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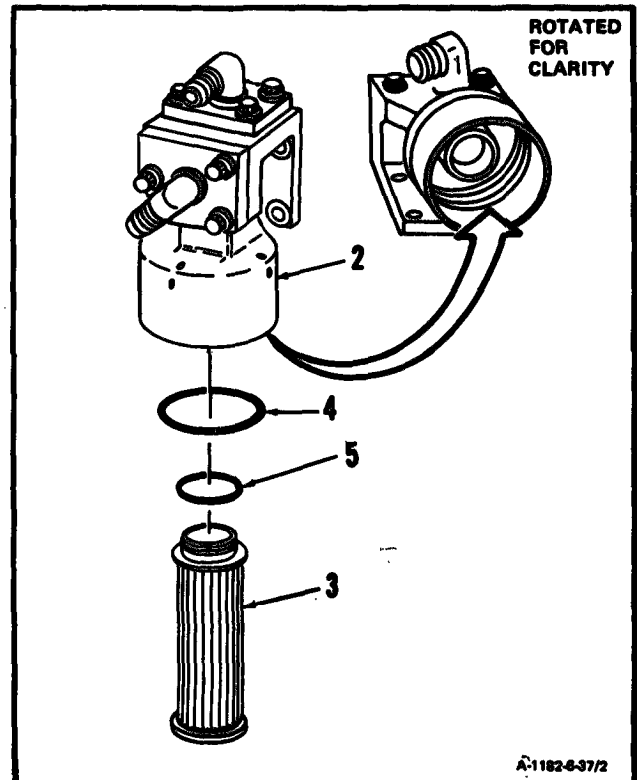
## 6-37 DISASSEMBLE IN-LINE FUEL FILTER ASSEMBLY (Continued)

6-37

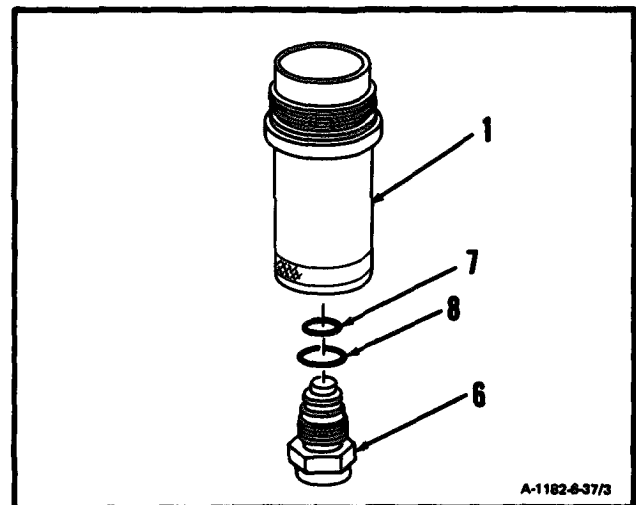
**CAUTION**

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

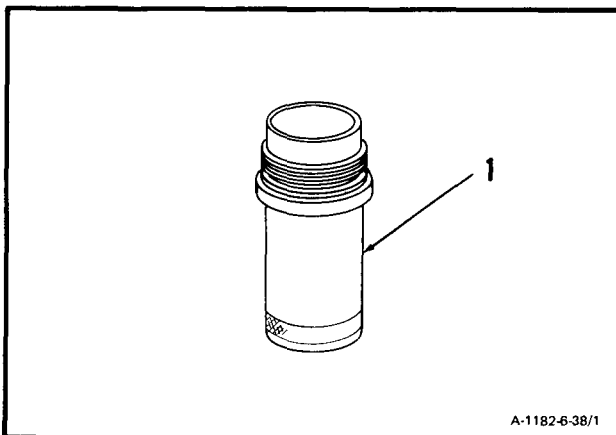
**Equipment Condition:**

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)



A-1182-6-38/1

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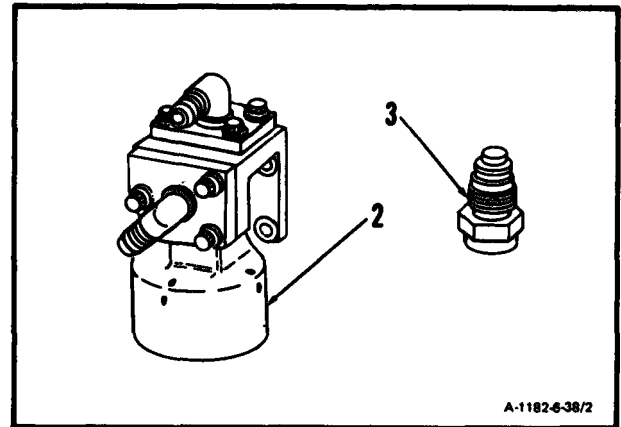
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**6-38 CLEAN IN-LINE FUEL FILTER ASSEMBLY (Continued)**

---

**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

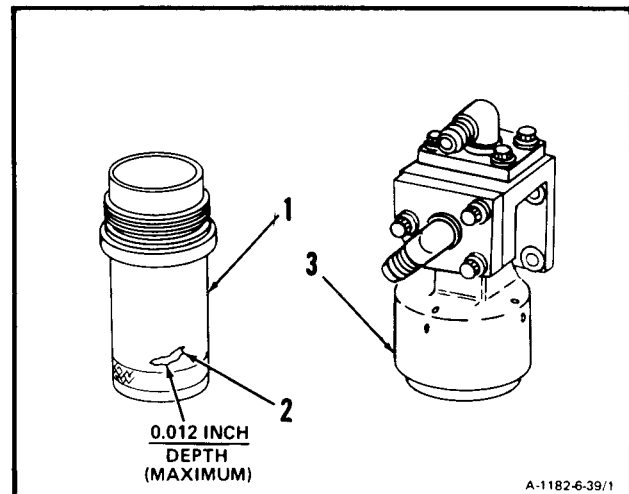
**References:**

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)**

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6-39

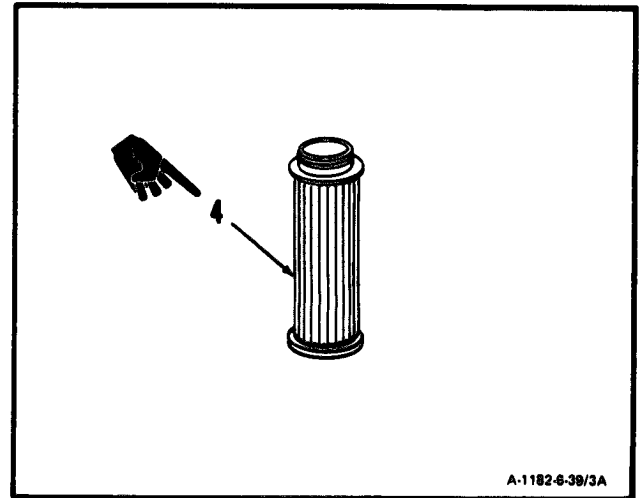
4. **Inspect filter element (4).** There shall be no contamination. If contaminated, throw away.

**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

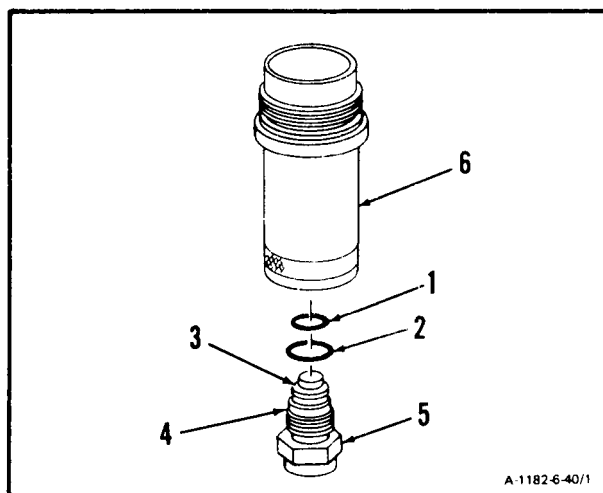
**References:**

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).



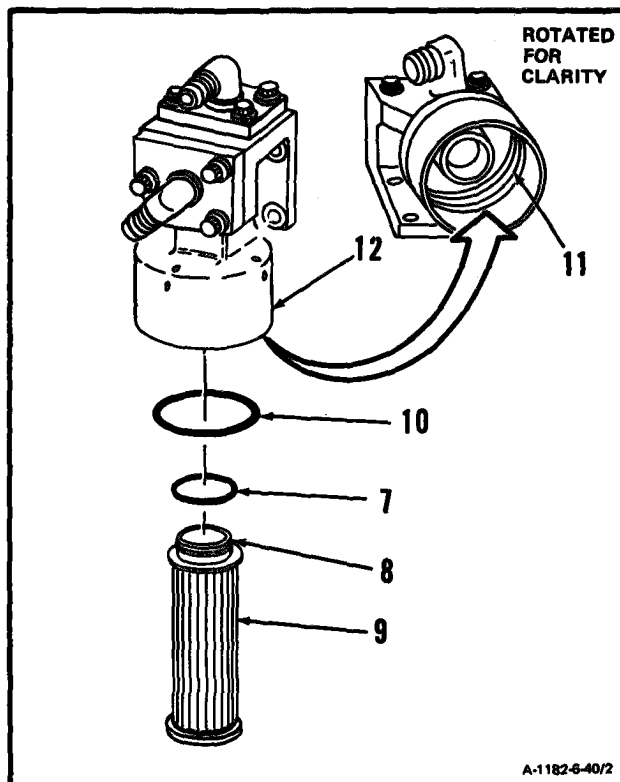
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## 6-40 ASSEMBLE IN-LINE FUEL FILTER ASSEMBLY (Continued)

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.

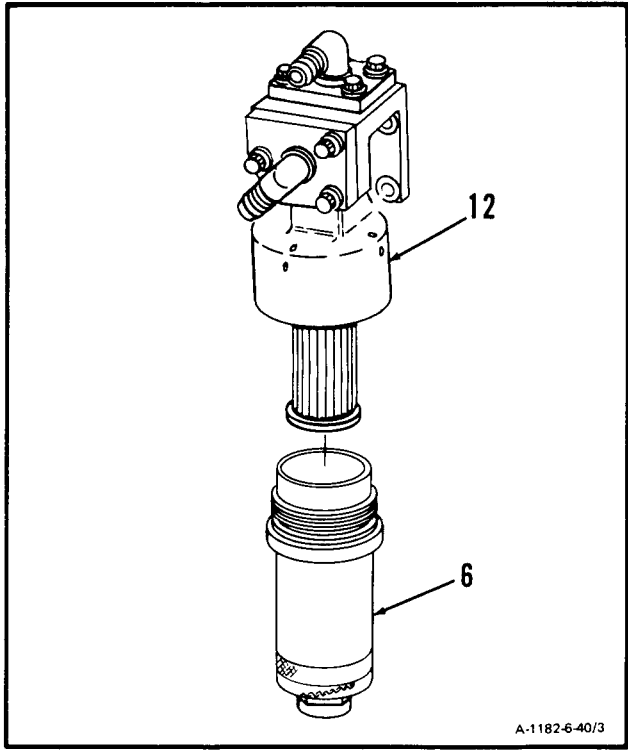


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**CAUTION**

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

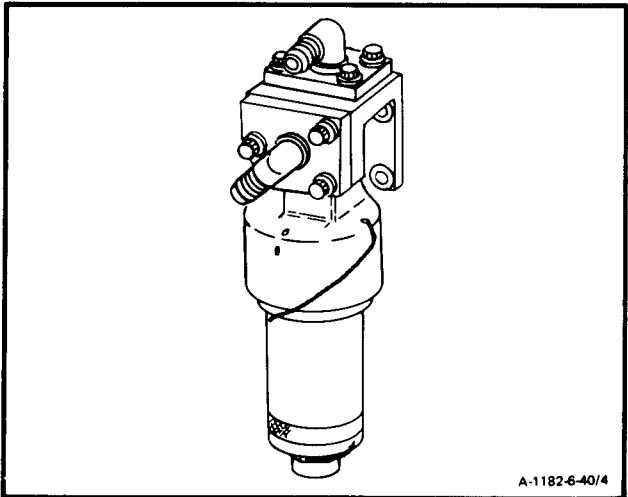
5. Install filter bowl (6) in filter head (12) and hand-tighten. Lockwire filter bowl (6). Use lockwire (E29).



**INSPECT**

**FOLLOW-ON MAINTENANCE:**

None



**END OF TASK**

---

**6-41 INSTALL IN-LINE FUEL FILTER ASSEMBLY**

---

6-41

**INITIAL SETUP****Applicable Configurations:**

All

**Tools:**

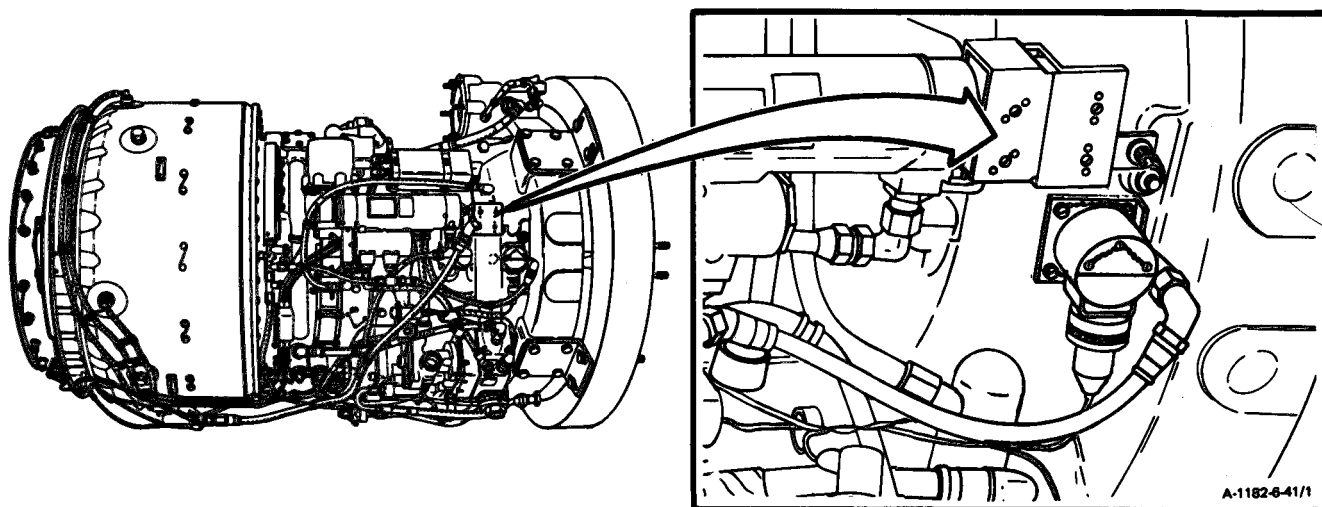
Powerplant Mechanic's Tool Kit,  
NSN 5180-00-323-4944  
Technical Inspection Tool Kit,  
NSN 5180-00-323-5114

**Materials:**

None

**Personnel Required:**

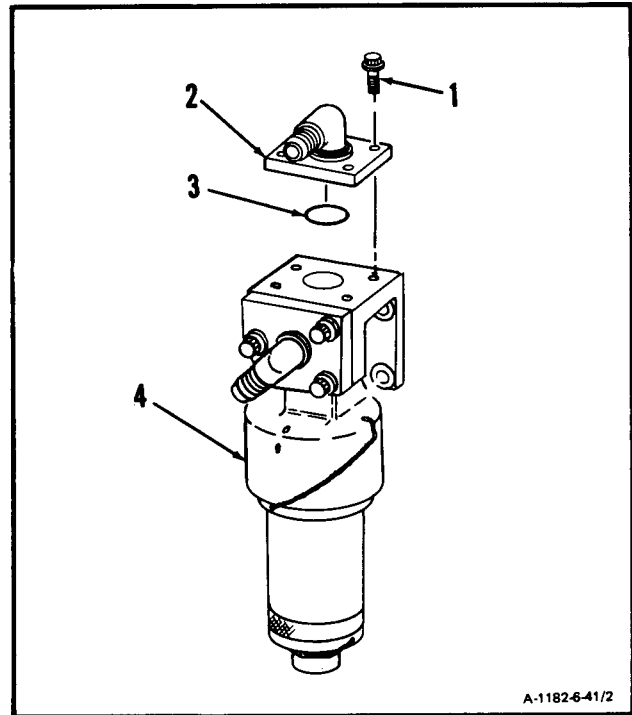
68610 Aircraft Powerplant Repairer  
68630 Aircraft Powerplant Inspector

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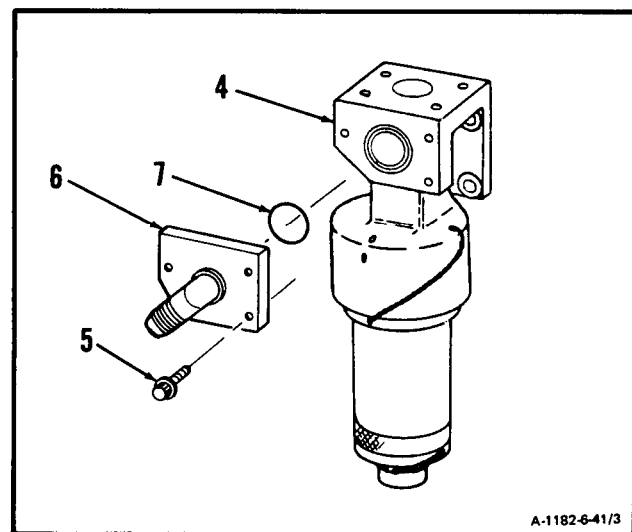
**NOTE**

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).

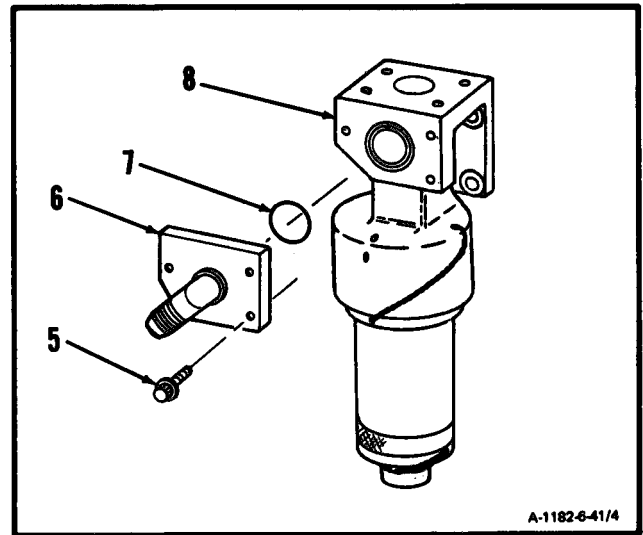


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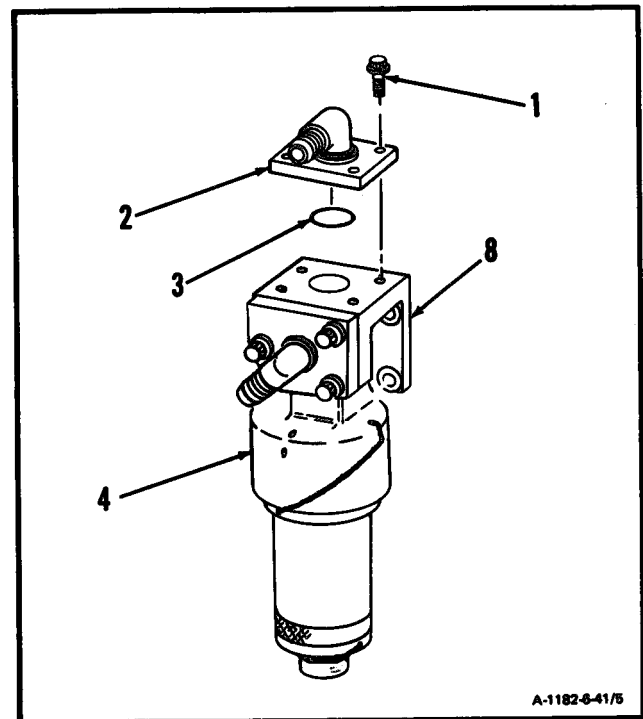
## 6-41 INSTALL IN-LINE FUEL FILTER ASSEMBLY (Continued)

6-41

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

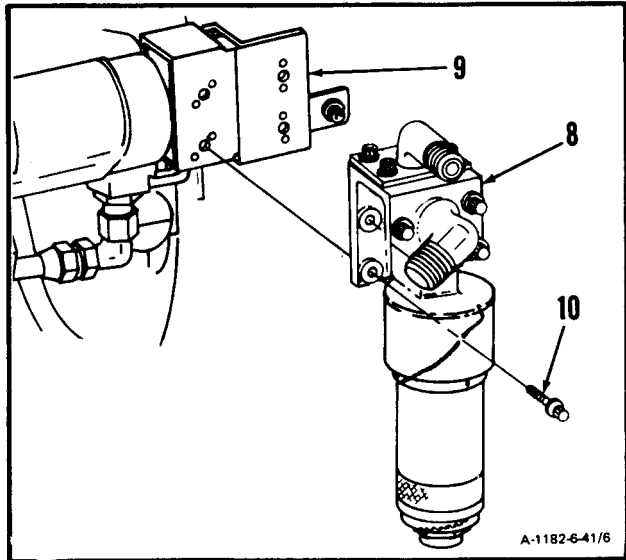


4. Install packing (3) and fitting (2) on serviceable in-line fuel filter assembly (8). Install four bolts (1).

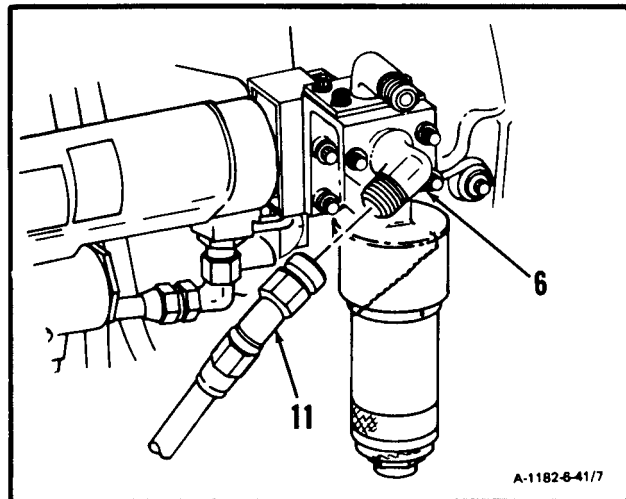


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5. Install in-line fuel filter assembly (8) on bracket (9). Install four bolts (10).



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

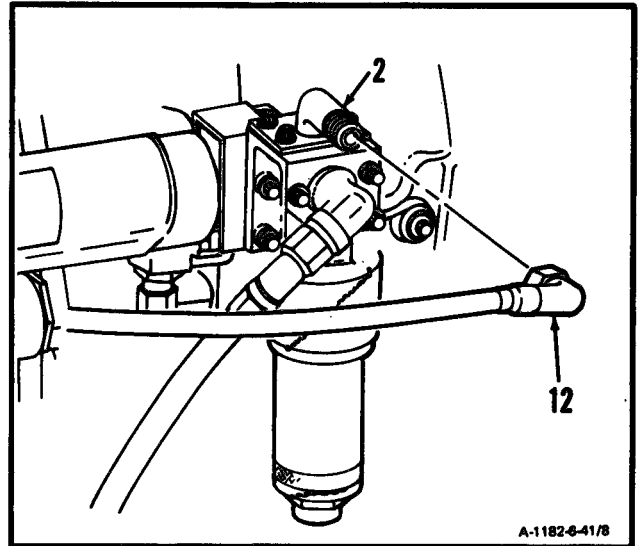


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**6-41 INSTALL IN-LINE FUEL FILTER ASSEMBLY (Continued)**

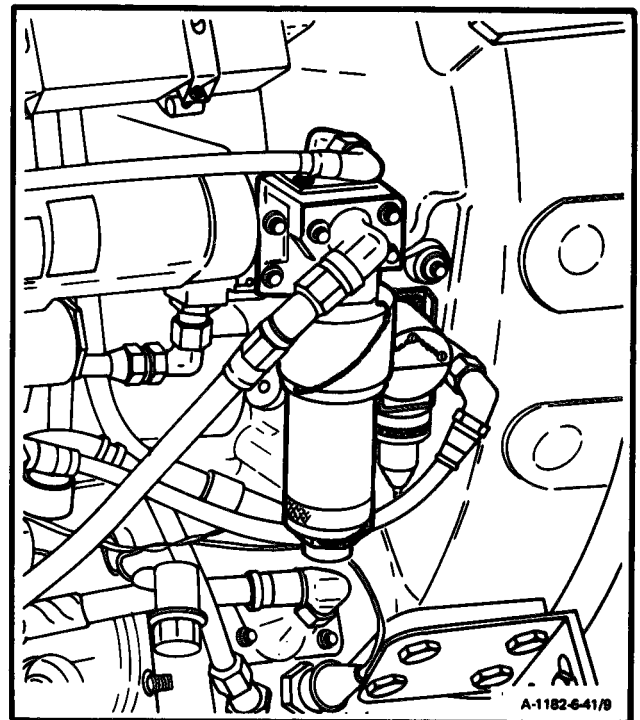
6-41

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:**

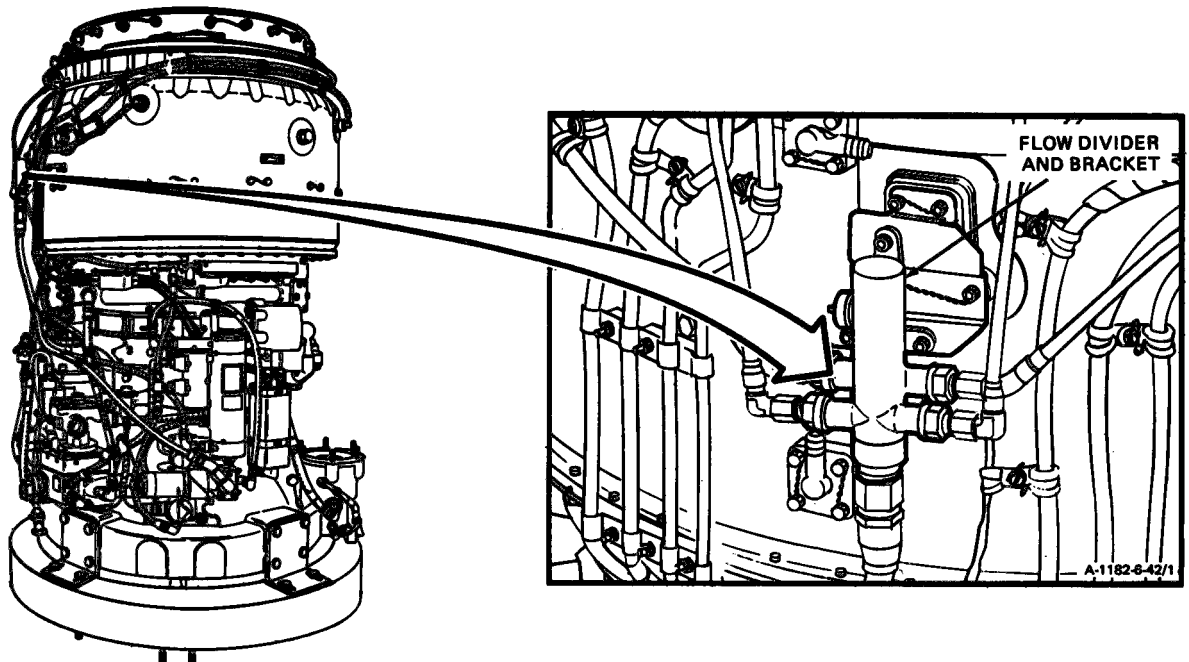
Wiping Rag (E58)

**Personnel Required:**

68610 Aircraft Powerplant Repairer

**Equipment Condition:**

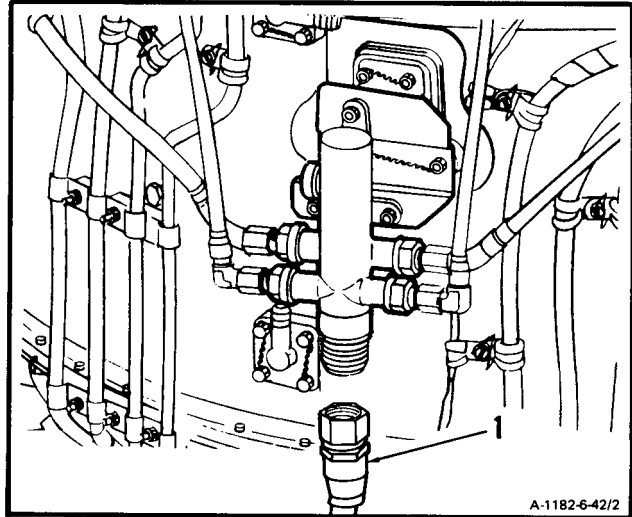
Fuel Check Valve Removed (Task 6-46)



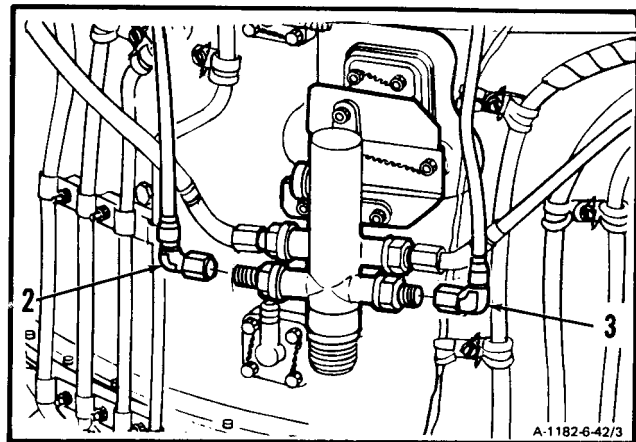
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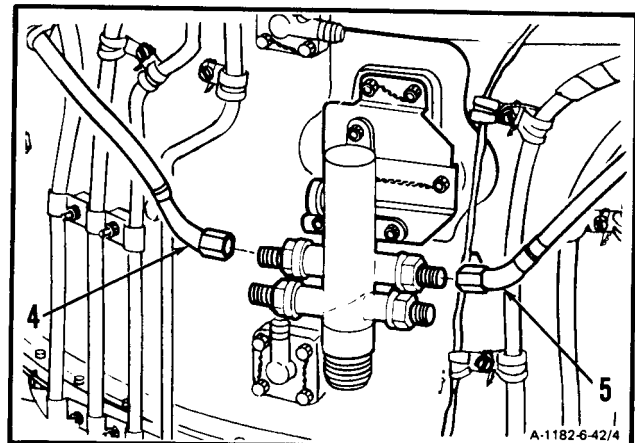
1. Disconnect hose assembly (1).



2. Disconnect hose assemblies (2 and 3).



3. Disconnect hose assemblies (4 and 5).

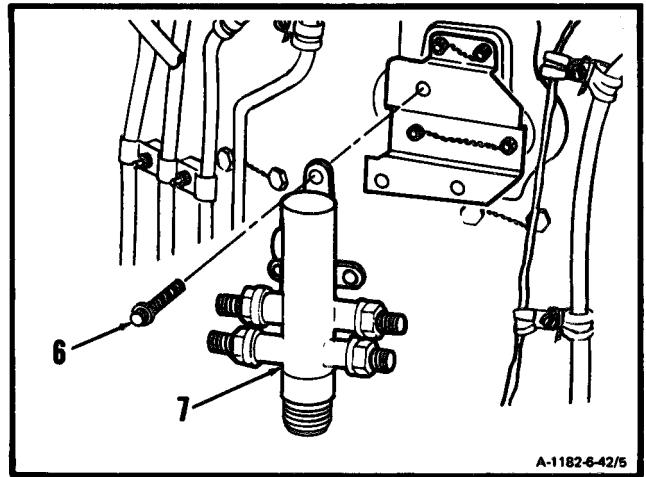


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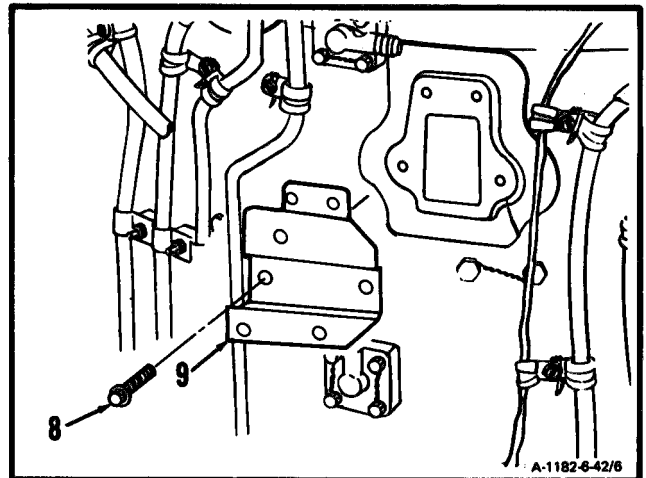
6-42 REMOVE FLOW DIVIDER AND BRACKET (Continued)

6-42

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

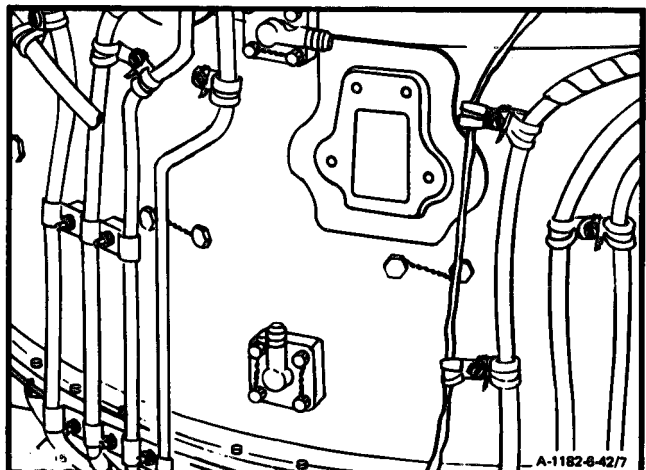


5. Remove lockwire and four bolts (8) and bracket (9).



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:**

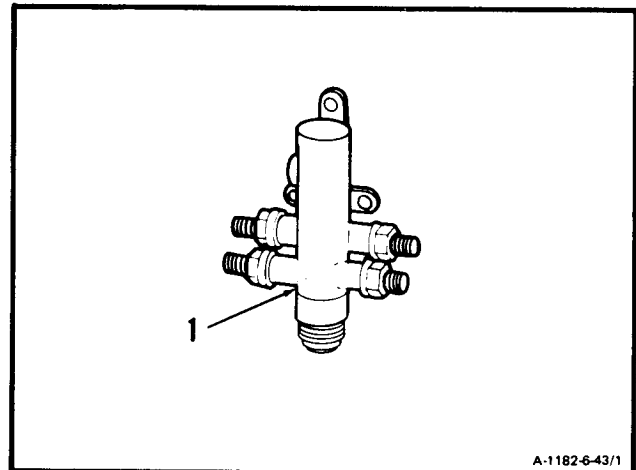
Off Engine Task  
Fuel Check Valve Removed (Task 6-46)  
Flow Divider and Bracket Removed (Task 6-42)

**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).

**GO TO NEXT PAGE**

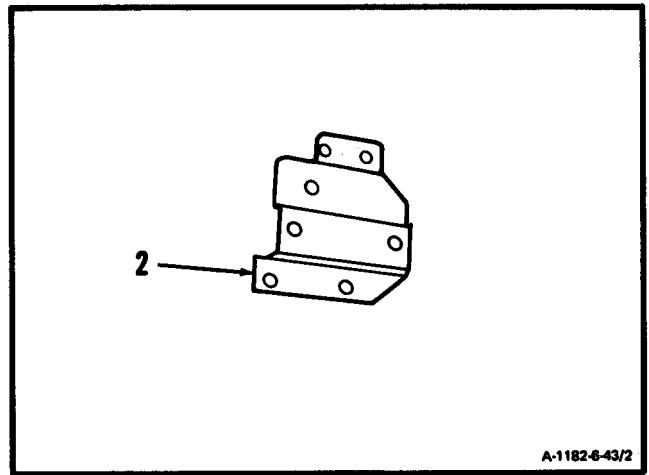
---

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

---

**6-43**

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

**FOLLOW-ON MAINTENANCE:**

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

**END OF TASK**

6-44 INSPECT FLOW DIVIDER AND BRACKET

6-44

INITIAL SETUP

**Materials:**

None

**Applicable Configurations:**

All

**Personnel Required:**

68B30 Aircraft Powerplant Inspector

**Tools:**

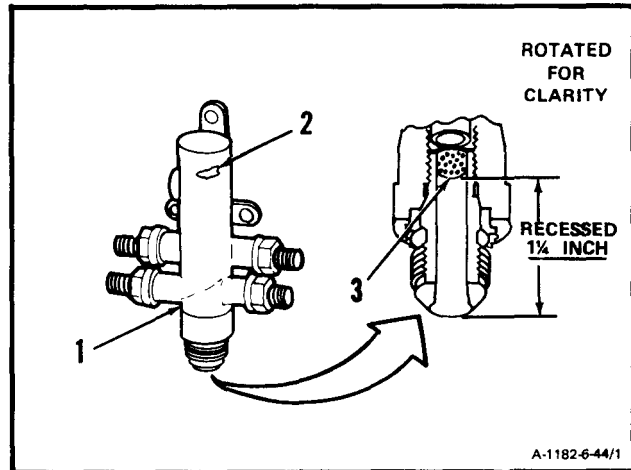
Technical Inspection Tool Kit,  
NSN 5180-00-323-5114

**Equipment Condition:**

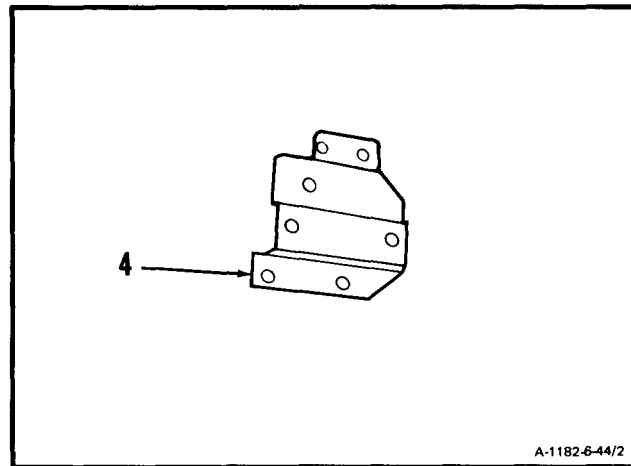
Off Engine Task

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

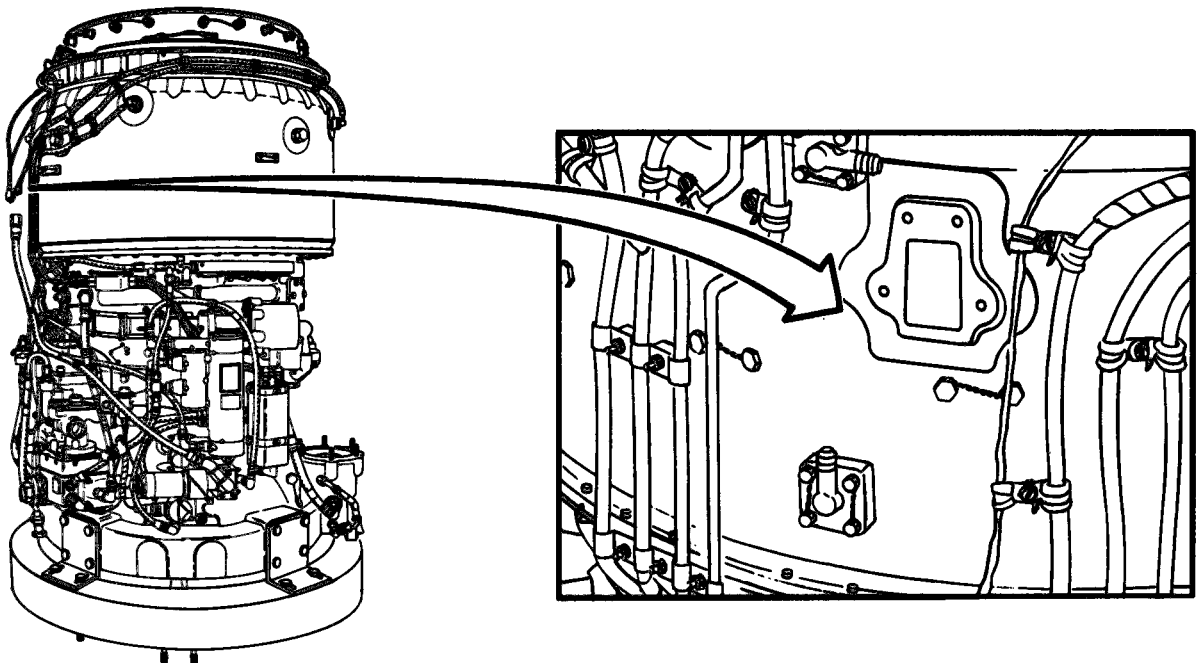
**Personnel Required:**

68010 Aircraft Powerplant Repairer

68B30 Aircraft Powerplant Inspector

**References:**

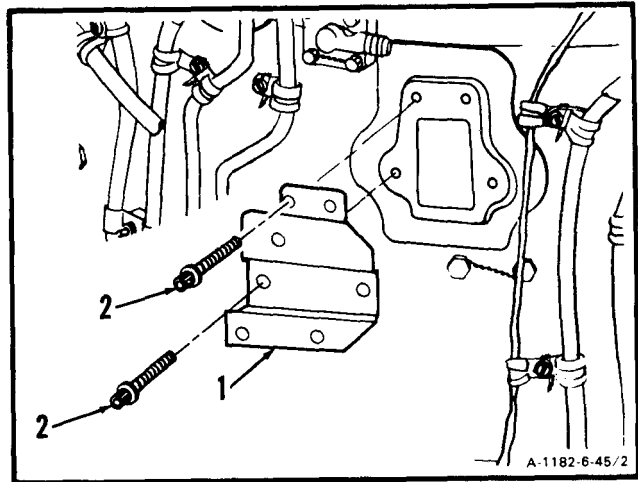
TM 55-2840-254-23P



A-1182-6-45/1

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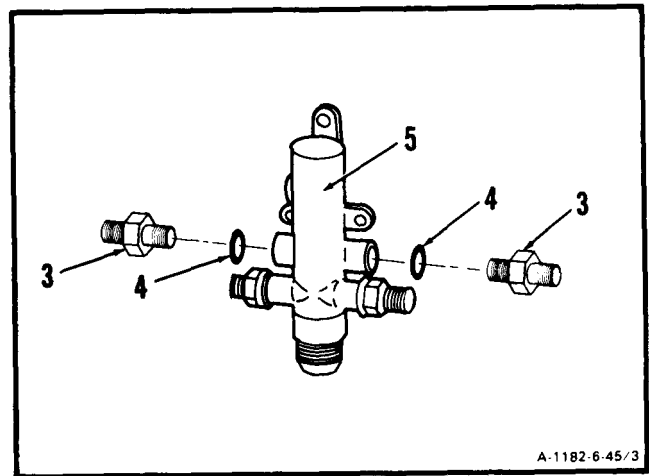
1. Install bracket (1) and four bolts (2). Lockwire bolts (2). Use lockwire (E29).



**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.

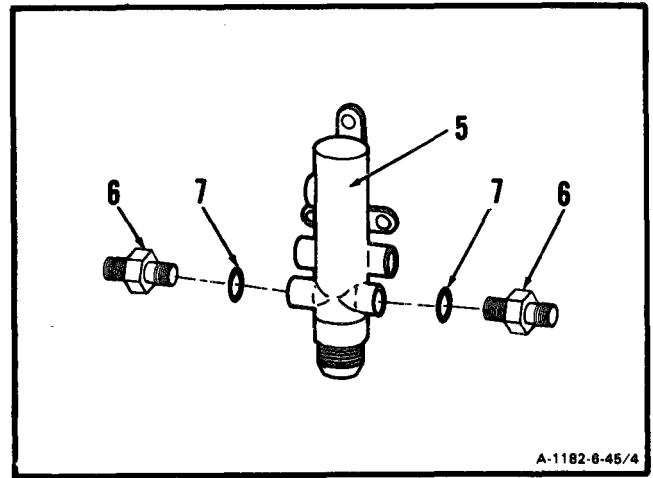


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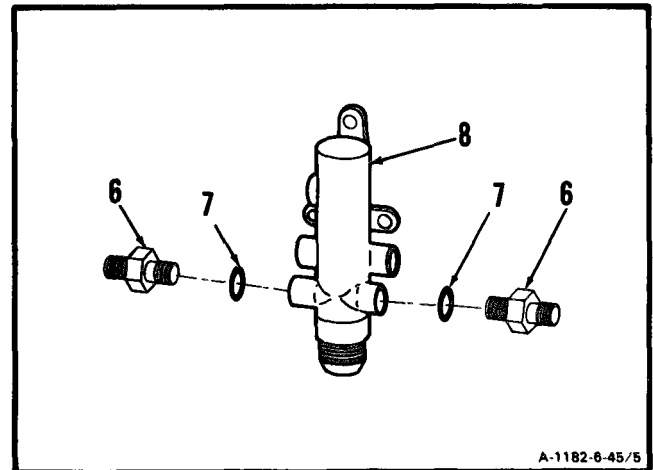
6-45 INSTALL FLOW DIVIDER AND BRACKET (Continued)

6-45

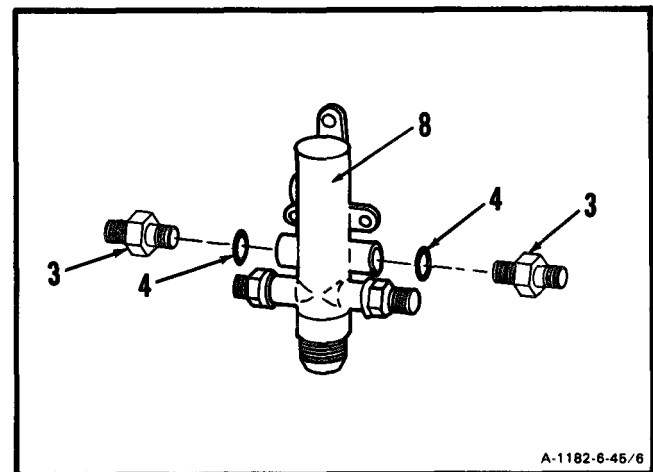
3. Remove two nipples (6) and packings (7) from removed flow divider (5).



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).

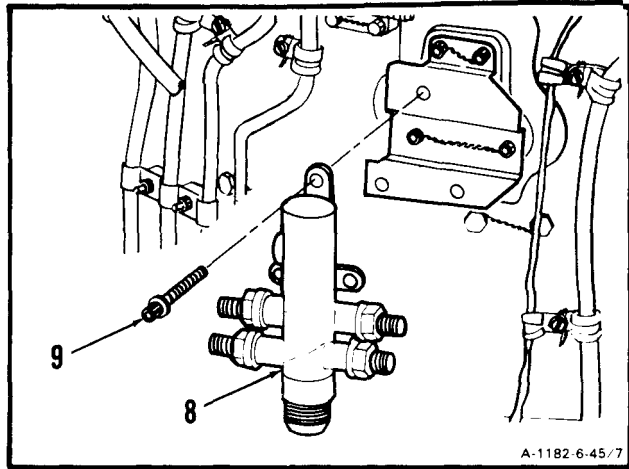


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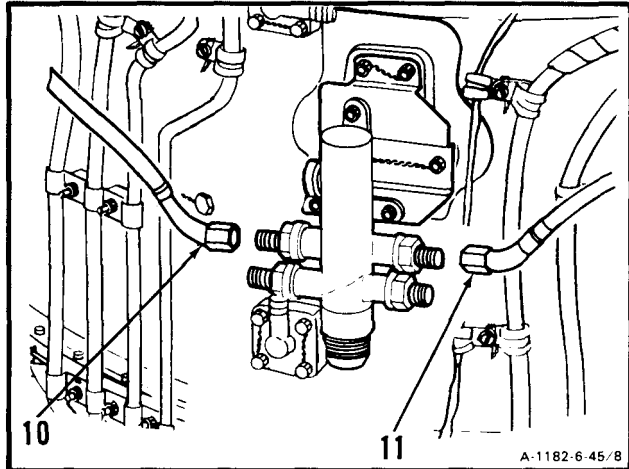


6-45 INSTALL FLOW DIVIDER AND BRACKET (Continued)

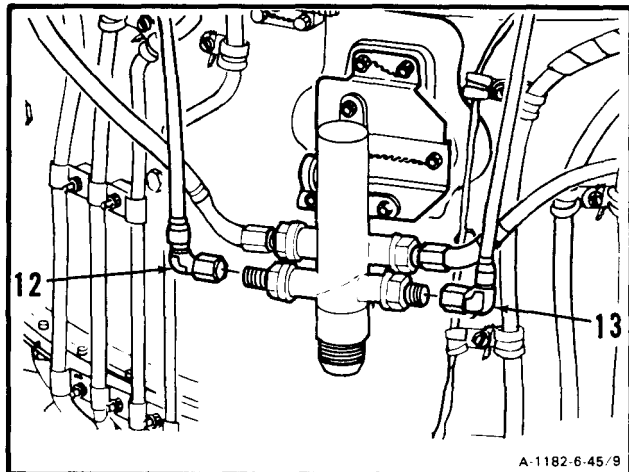
6. Install flow divider (8) and three bolts (9).



7. Connect hose assemblies (10 and 11).



8. Connect hose assemblies (12 and 13).

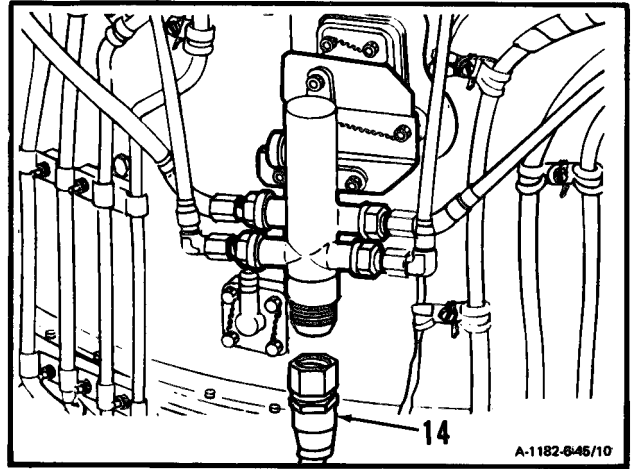


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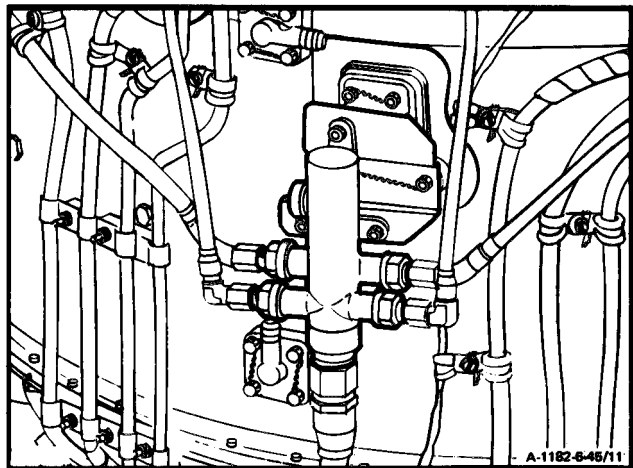
**6-45 INSTALL FLOW DIVIDER AND BRACKET (Continued)**

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

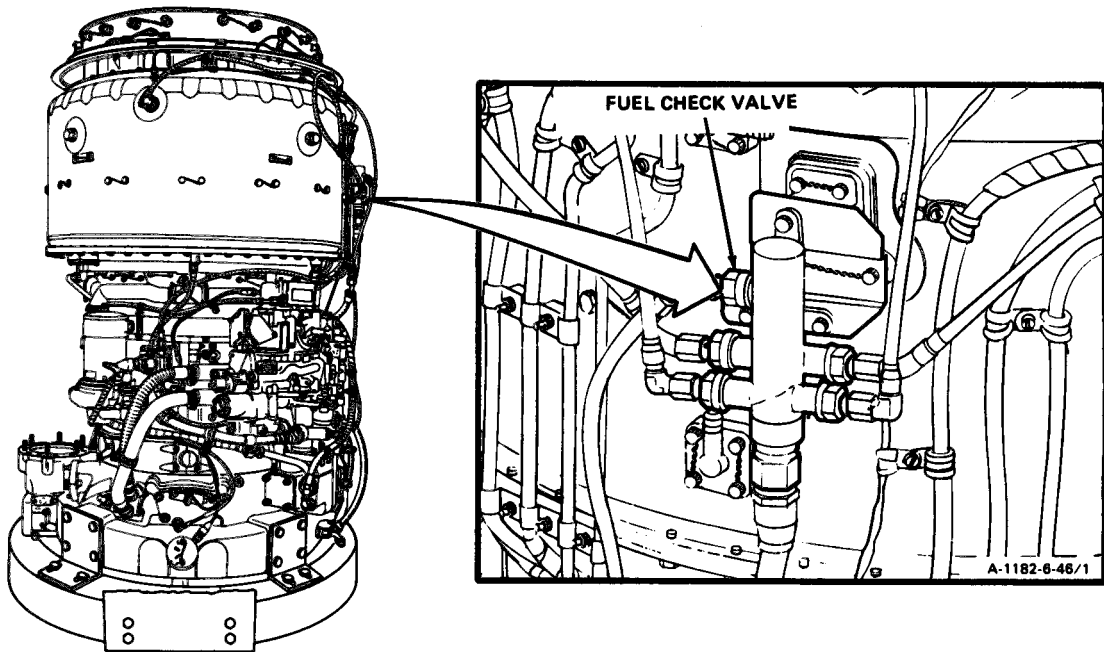
INITIAL SETUP

**Applicable Configurations:**  
All

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

**Materials:**  
Wiping Rag (E58)

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

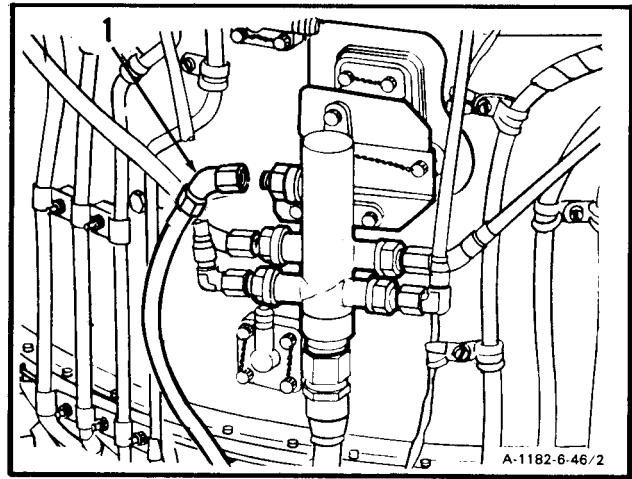


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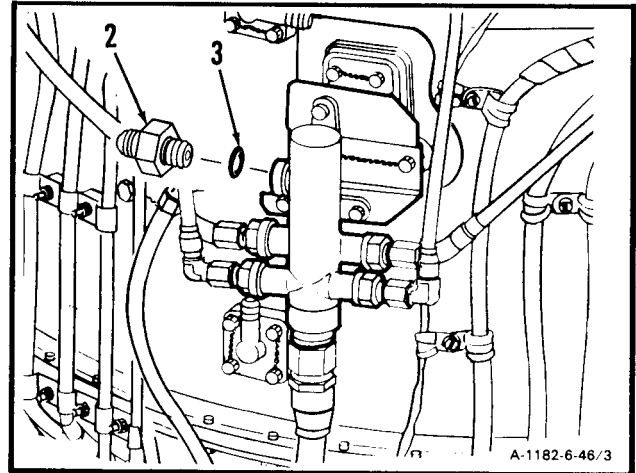
6-46 REMOVE FUEL CHECK VALVE (Continued)

6-46

1. Disconnect hose assembly (1).

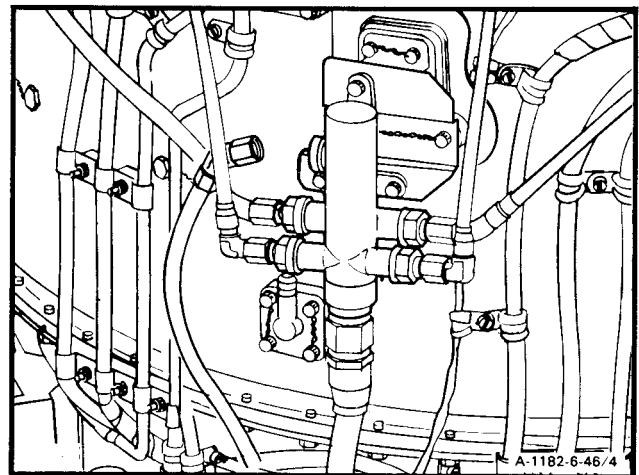


2. Remove fuel check valve (2) and packing (3).



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:**

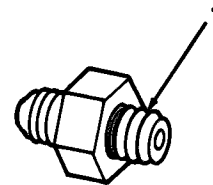
Off Engine Task  
Fuel Check Valve Removed (Task 6-46)

**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:**

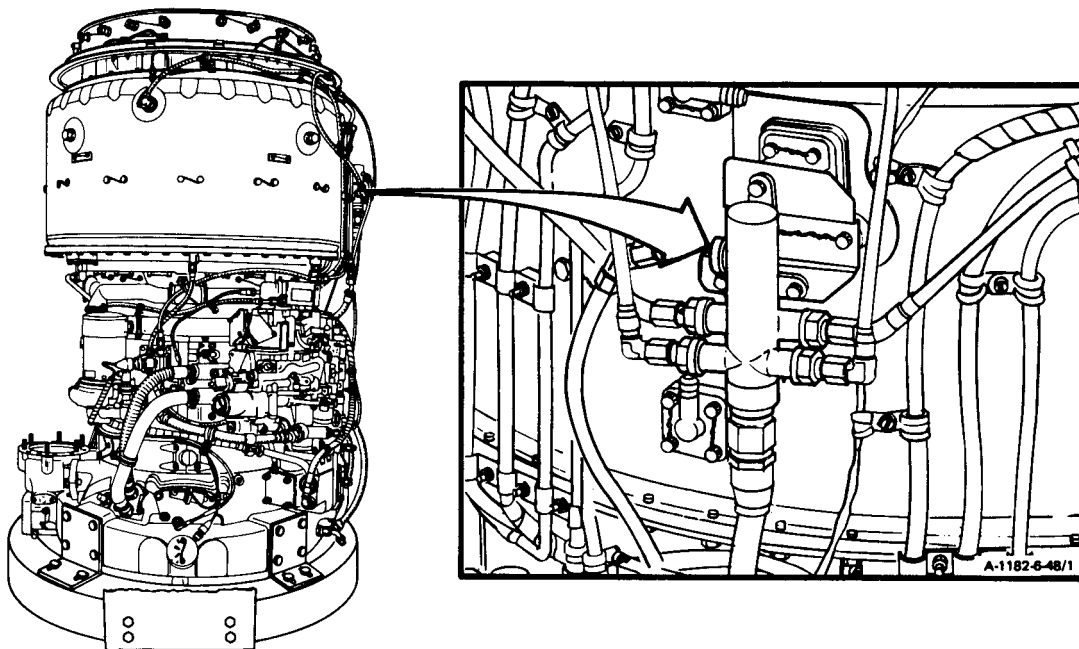
Packing

**Personnel Required:**

68B10 Aircraft Powerplant Repairer  
68B30 Aircraft Powerplant Inspector

**References:**

TM 55-2840-254-23P

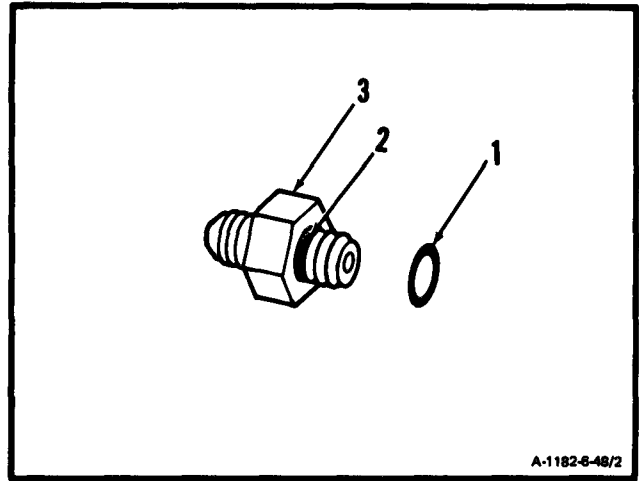


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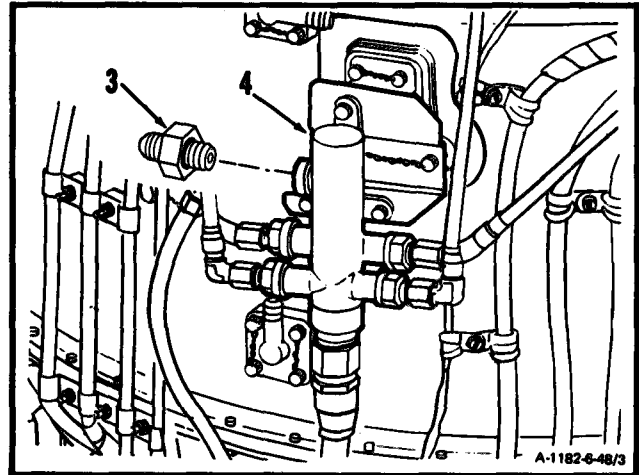
**6-48 INSTALL FUEL CHECK VALVE (Continued)**

**6-48**

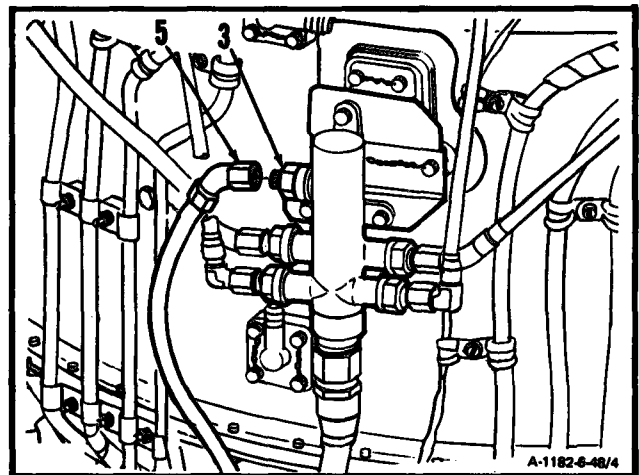
1. Install packing (1) in groove (2) in check valve (3).



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



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

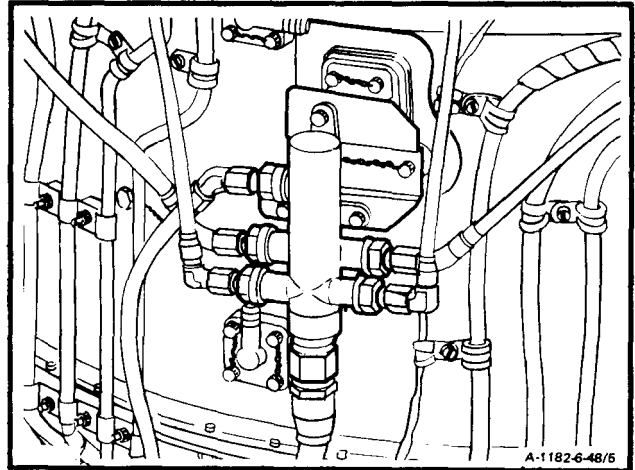


**INSPECT**

**GO TO NEXT PAGE**

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:**

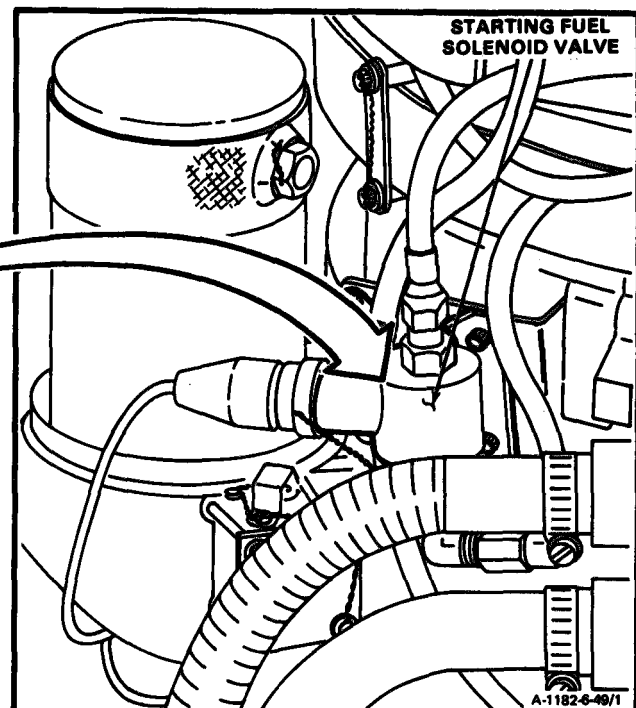
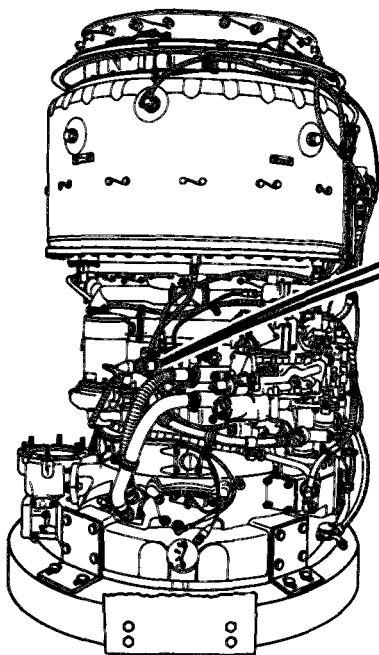
Wiping Rag (E58)

**Personnel Required:**

68B10 Aircraft Powerplant Repairer

**References:**

Task 6-51

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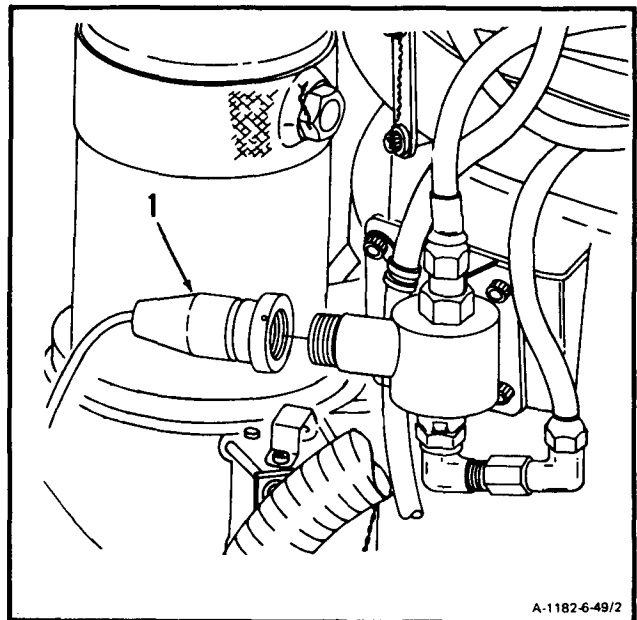
**NOTE**

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)**.

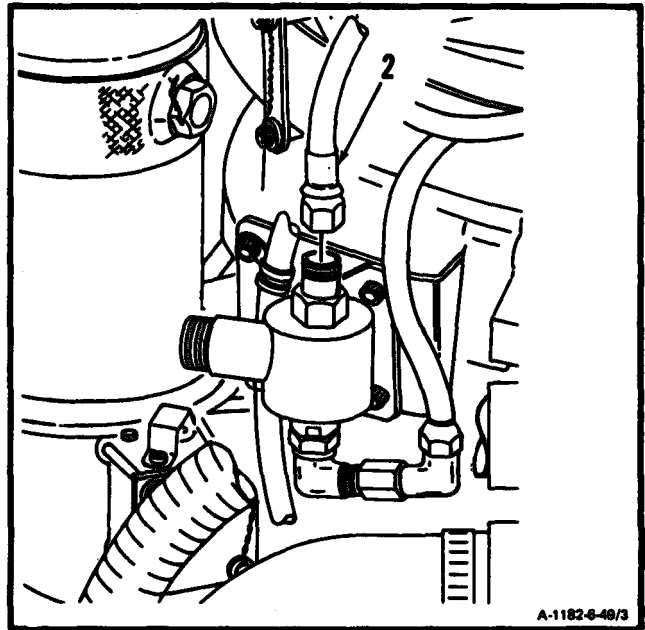


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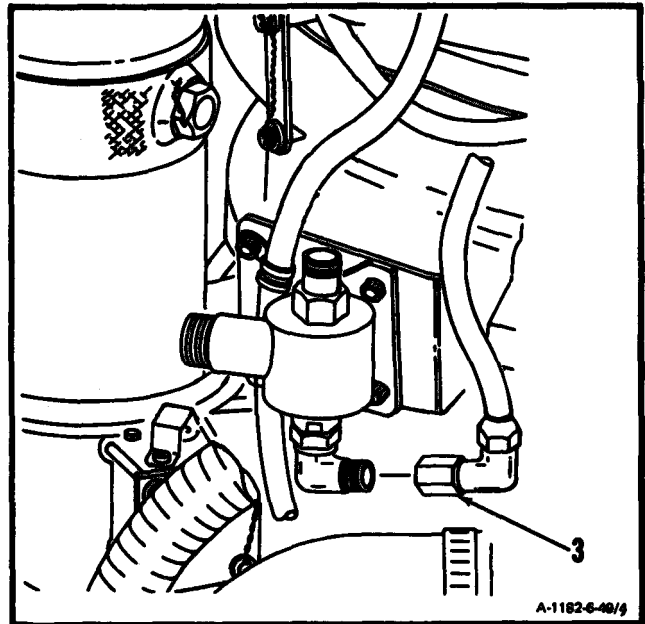
6-49 REMOVE STARTING FUEL SOLENOID VALVE (Continued)

6-49

2. Disconnect hose assembly (2).



3. Disconnect hose assembly (3).

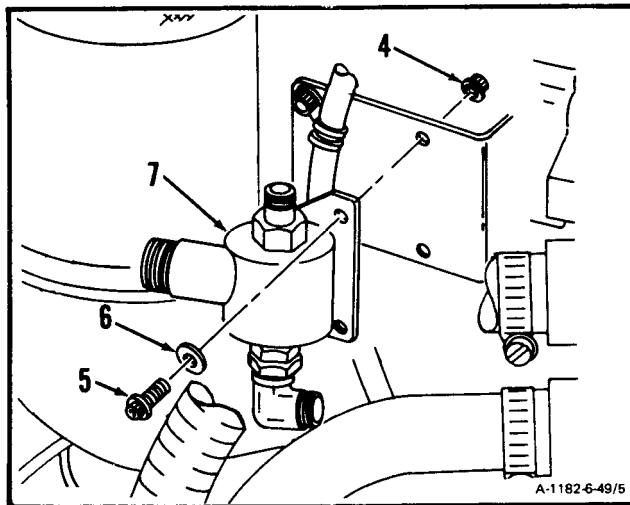


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6-49 REMOVE STARTING FUEL SOLENOID VALVE (Continued)

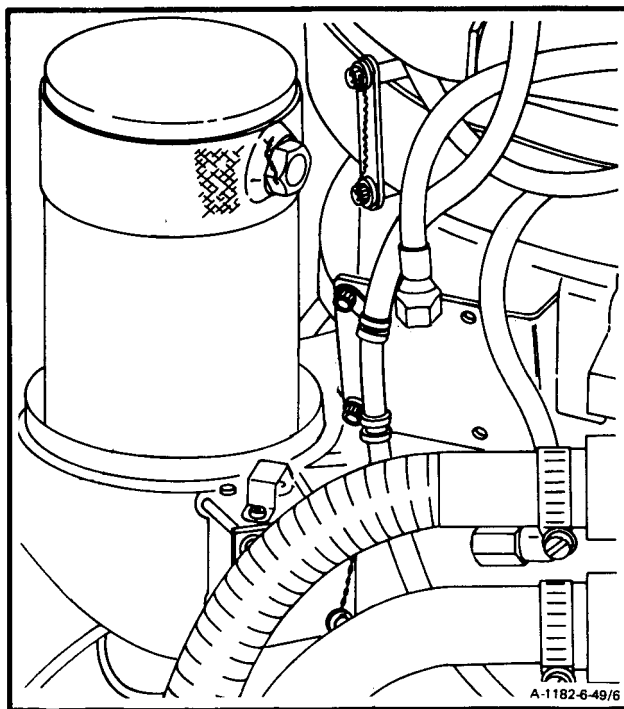
6-49

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

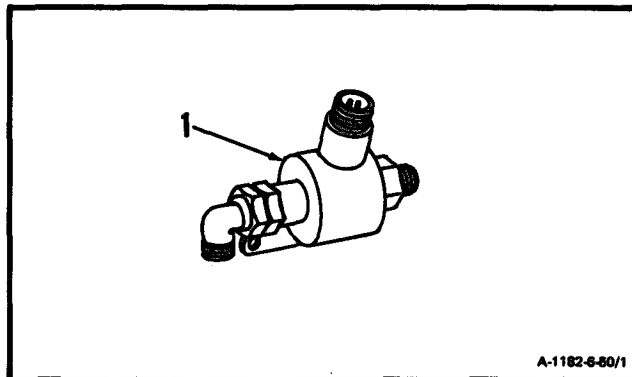
Starting Fuel Solenoid Valve Removed

(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

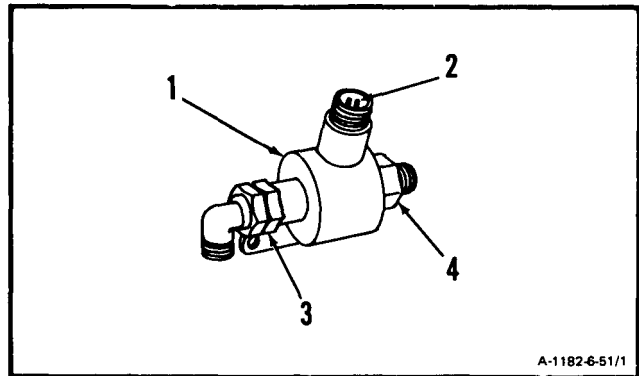
**Tools:**Technical Inspection Tool Kit,  
NSN 5180-00-323-5114**Materials:**

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).

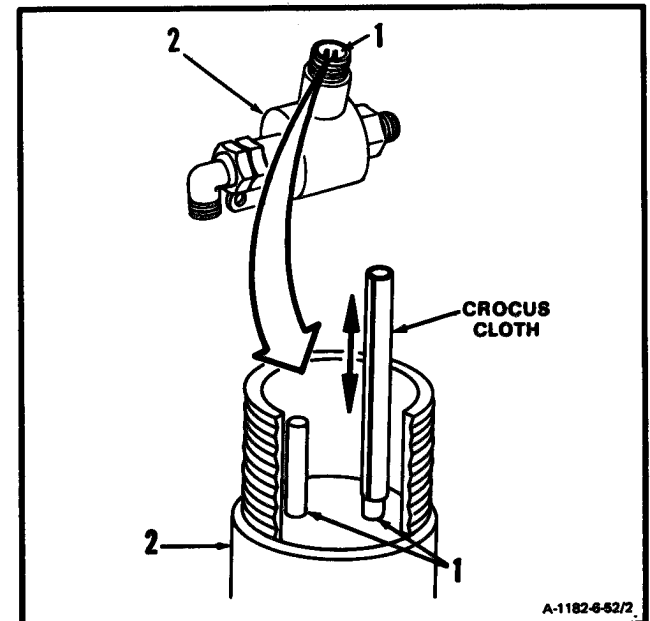
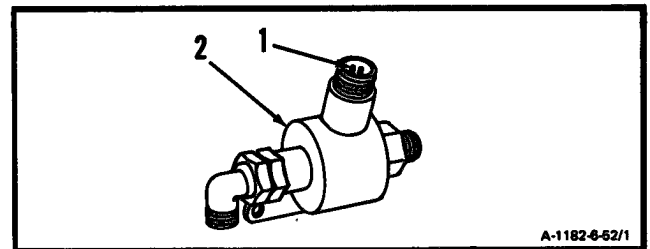
**WARNING**

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

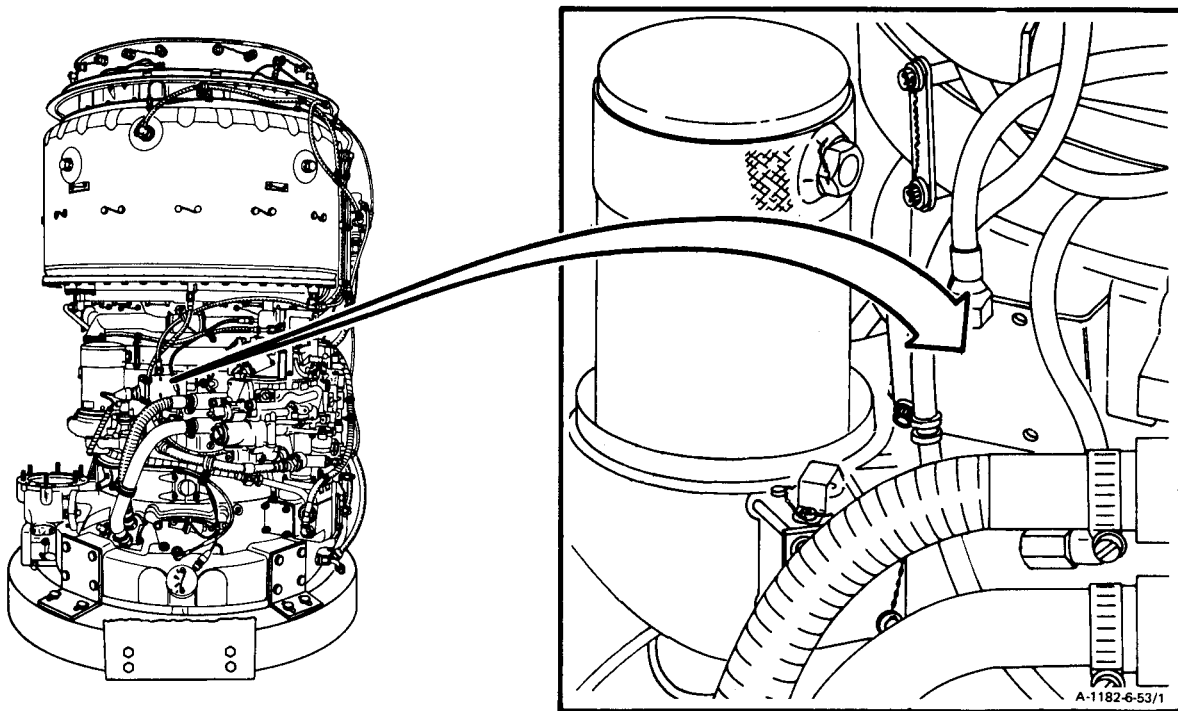
**Materials:**

Lockwire (E29)

**Personnel Required:**

68B10 Aircraft Powerplant Repairer

68B30 Aircraft Powerplant Inspector



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**6-53 INSTALL STARTING FUEL SOLENOID VALVE (Continued)**

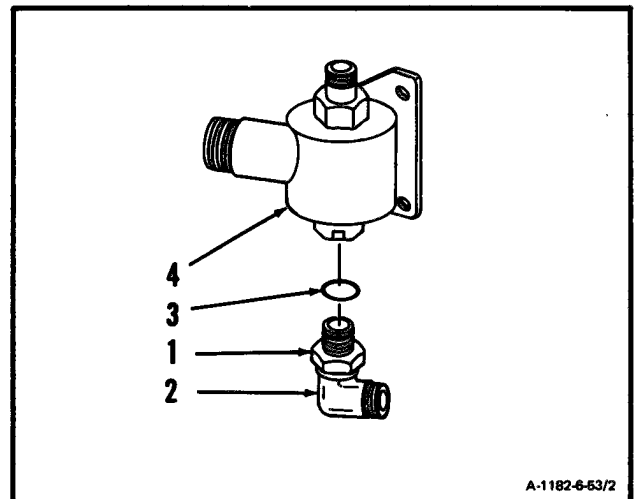
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6-53

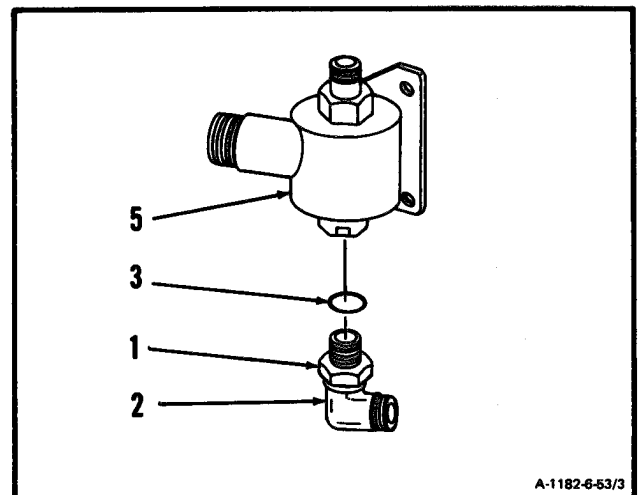
**NOTE**

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).**



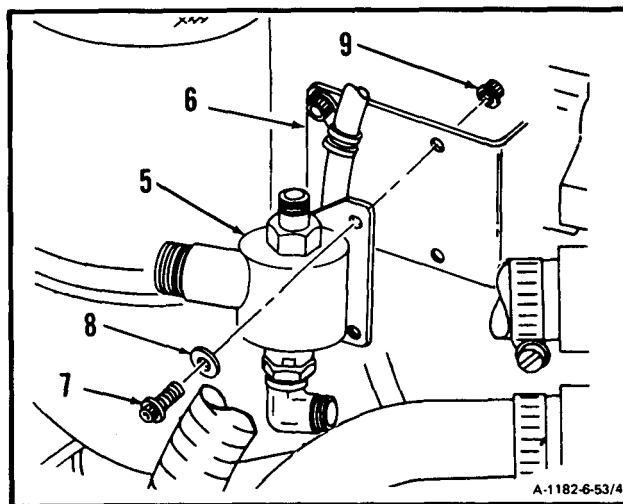
2. **Install elbow (2) and packing (3) in serviceable starting fuel solenoid valve (5).** Position elbow (2) as shown and tighten nut (1).

**GO TO NEXT PAGE**

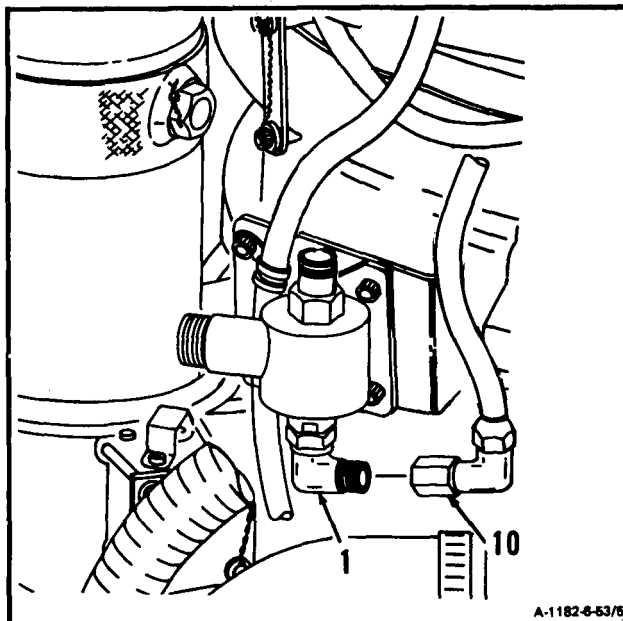
## NOTE

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).

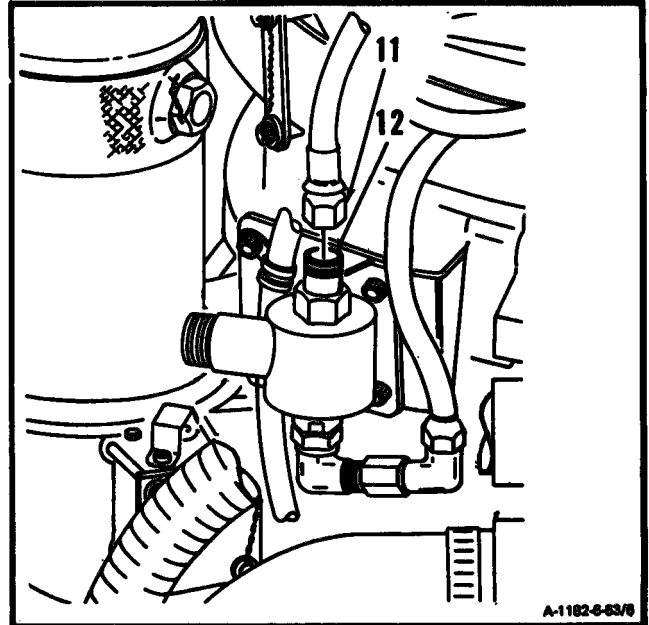


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**6-63 INSTALL STARTING FUEL SOLENOID VALVE (Continued)**

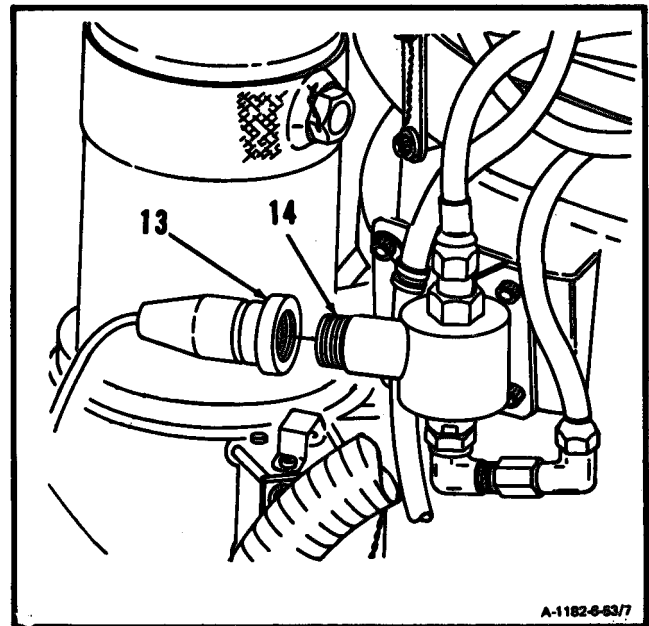
6-53

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

**NOTE**

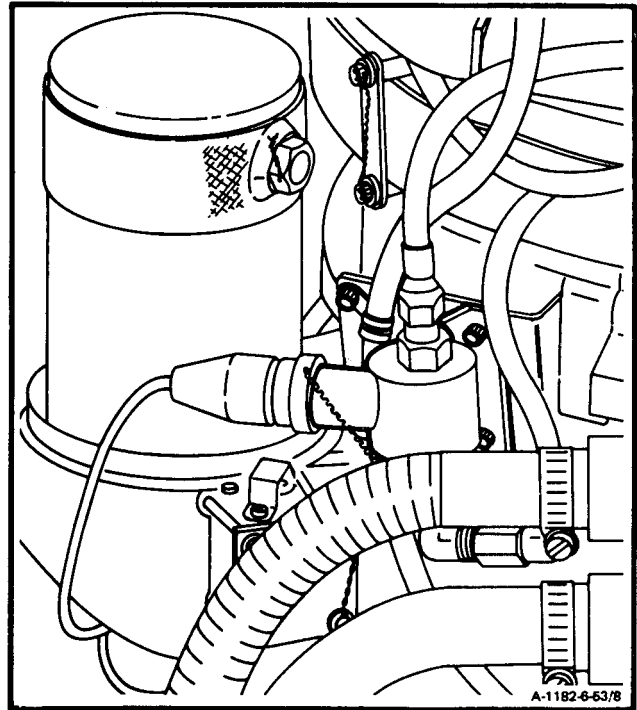
It may be necessary to gently pry mounting bracket outward to connect electrical connector.

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:*

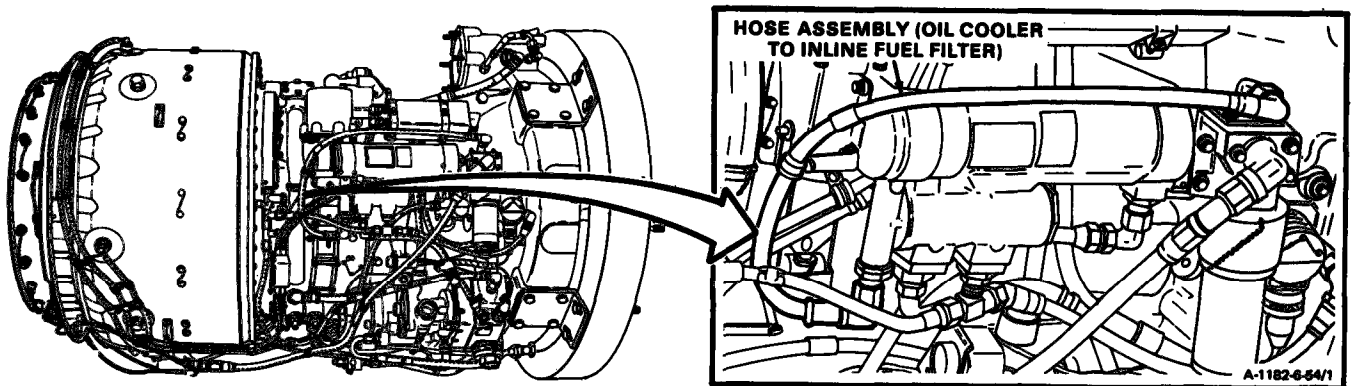
Wiping Rag (E58)

*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.



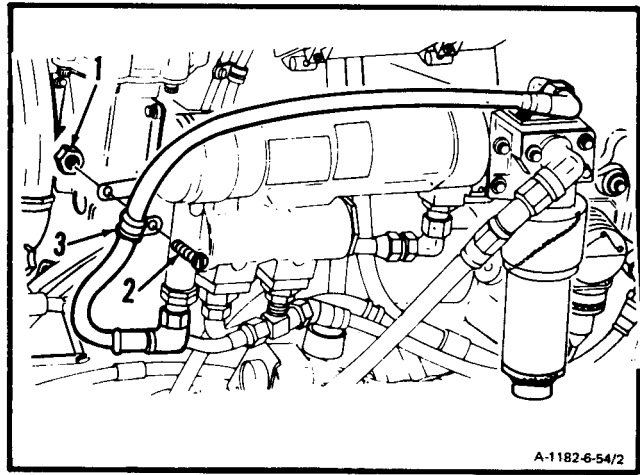
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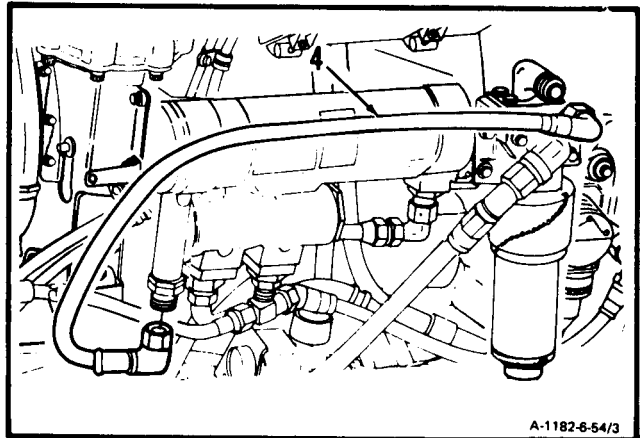
**6-54 REMOVE HOSE ASSEMBLY (OIL COOLER TO IN-LINE FUEL FILTER) (Continued) 6-54**

---

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

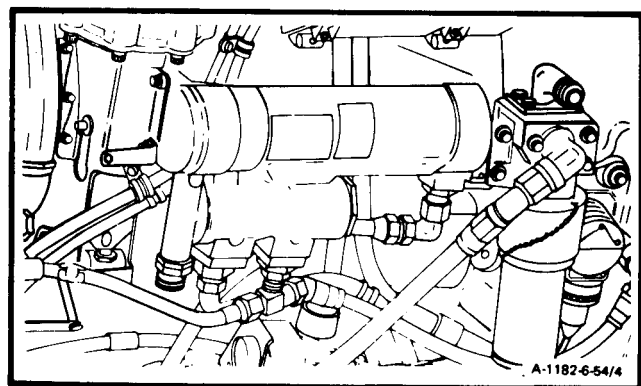


2. Disconnect and remove hose assembly (4).



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

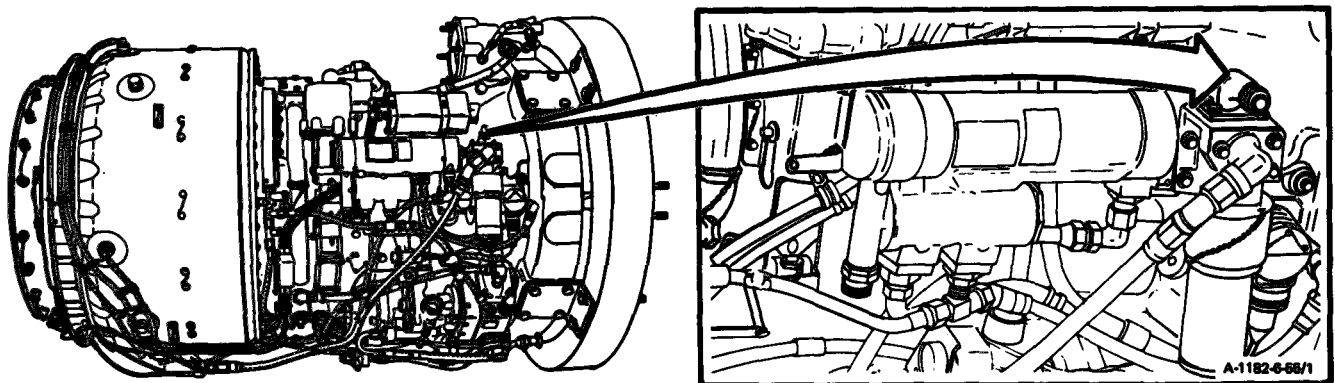
**Tools:**Powerplant Mechanic's Tool Kit,  
NSN 5180-00-323-4944Technical Inspection Tool Kit,  
NSN 5180-00-323-5114**Materials:**

None

**Personnel Required:**

68610 Aircraft Powerplant Repairer

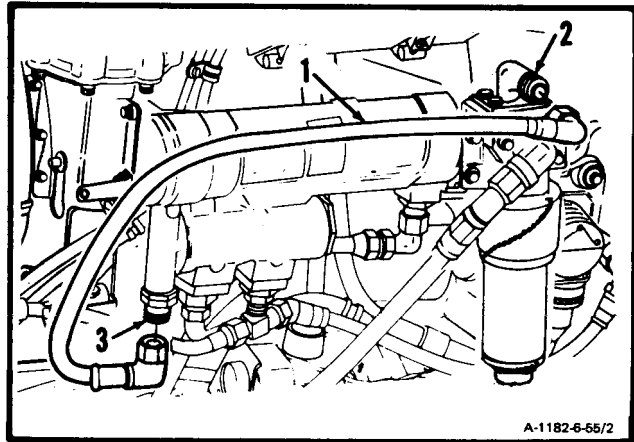
68630 Aircraft Powerplant Inspector

**GO TO NEXT PAGE**

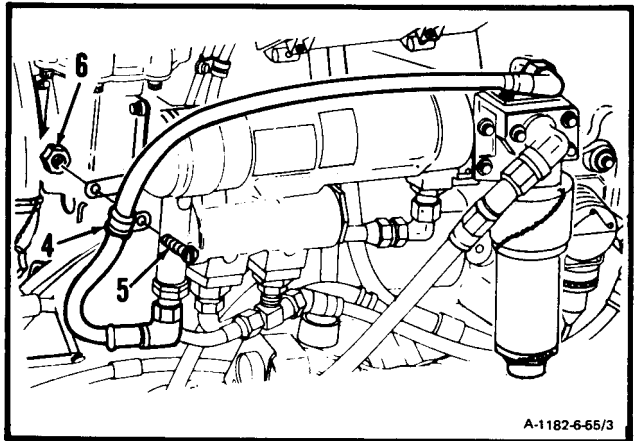
6-55 INSTALL HOSE ASSEMBLY (OIL COOLER TO IN-LINE FUEL FILTER) (Continued)

6-55

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



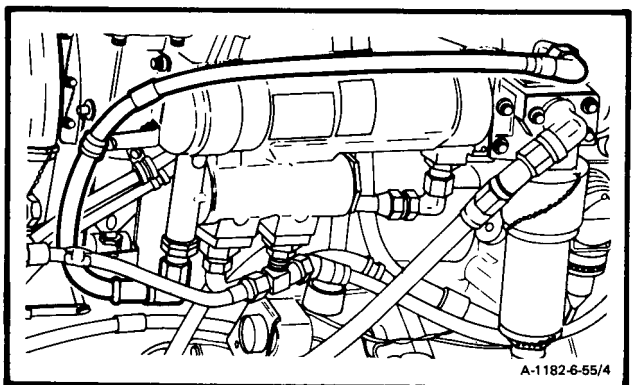
2. Install clamp (4), screw (5), and nut (6).



**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;**

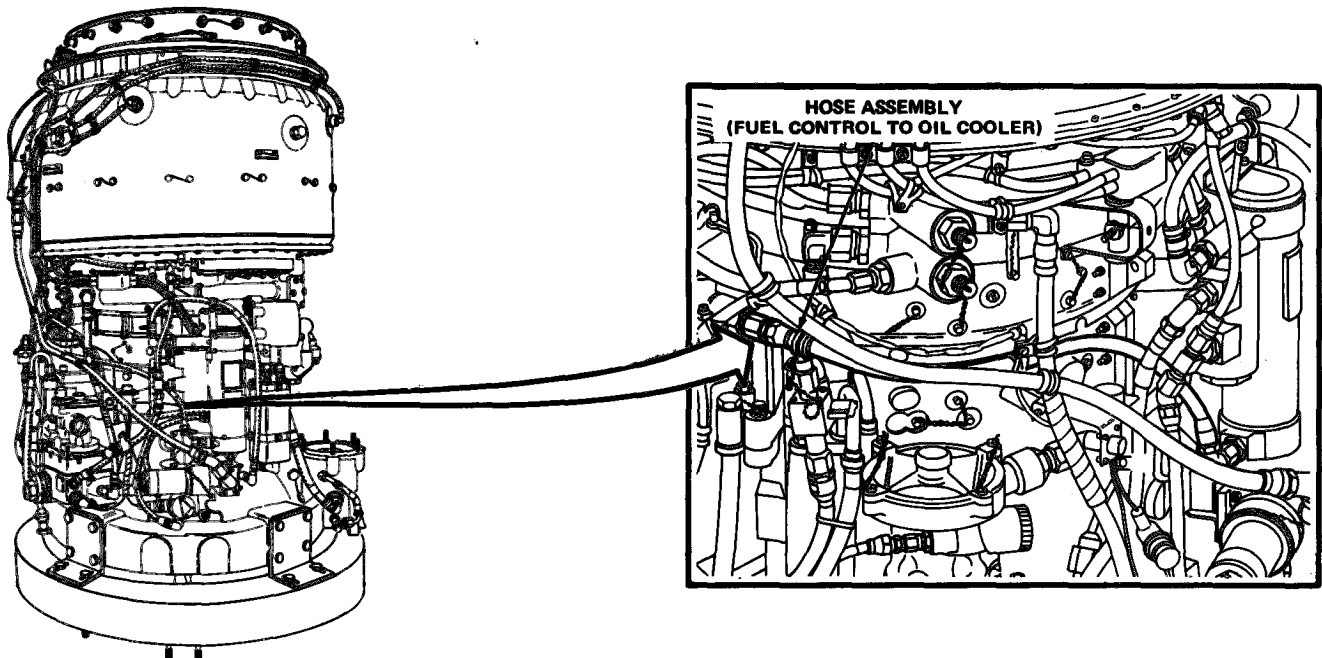
Wiping Rag (E58)

**Personnel Required:**

68B10 Aircraft Powerplant Repairer

**WARNING**

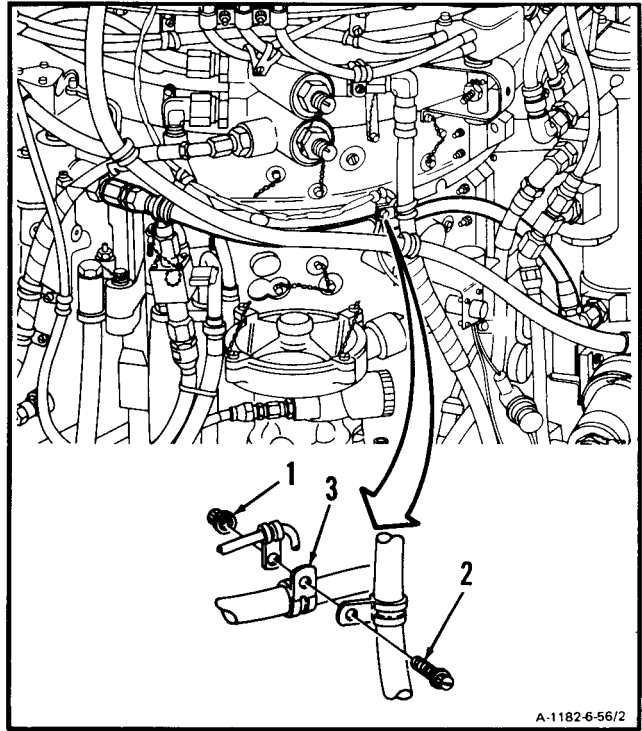
Turbine fuels are very flammable, They cause drying and irritation of skin or eyes. Handle only in well-ventilated areas away from heat and open flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin and do not take internally. Wash contacted area of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



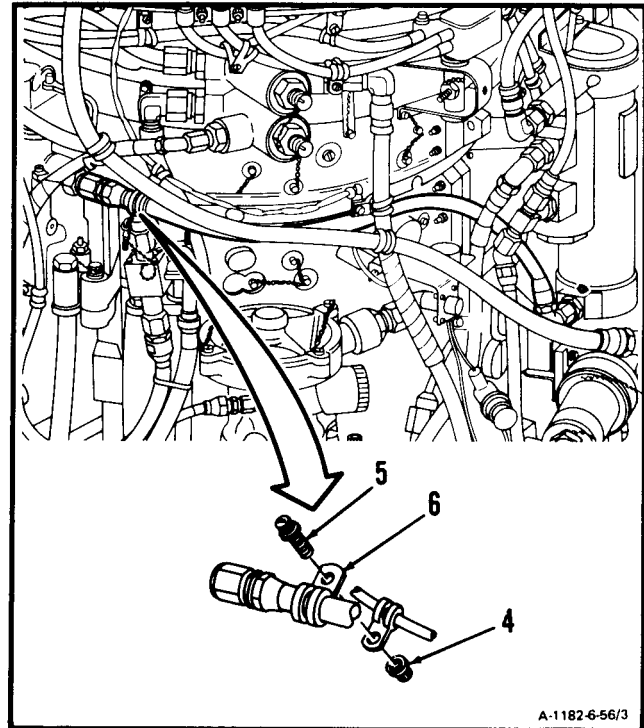
A-1182-6-56/1

**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

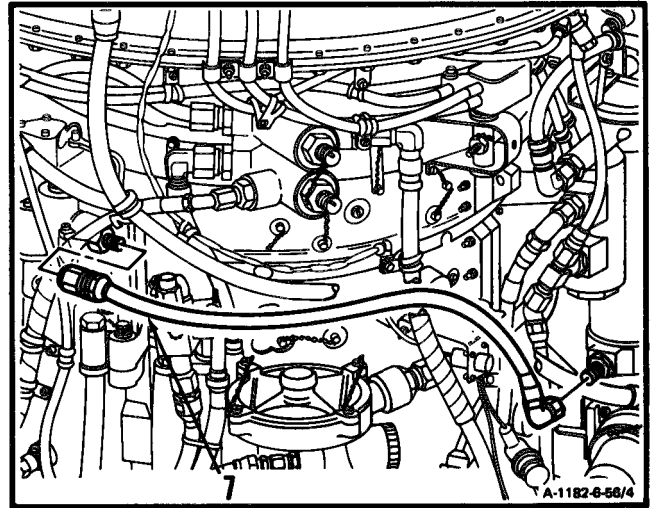
---

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

---

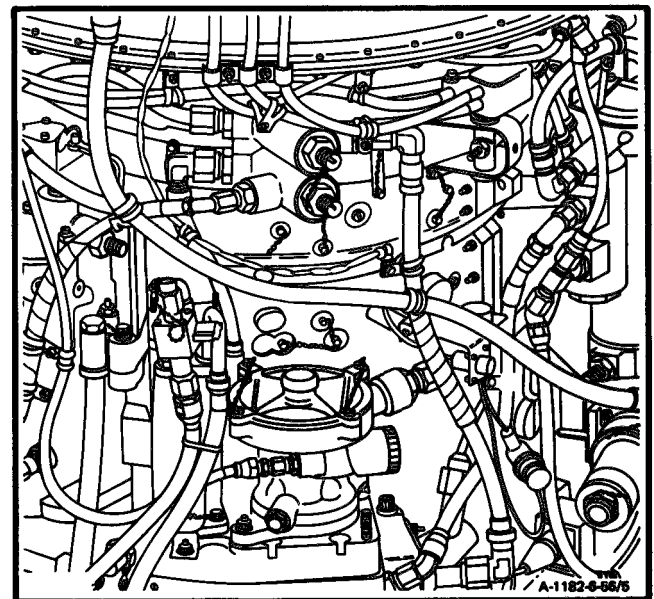
6-56

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

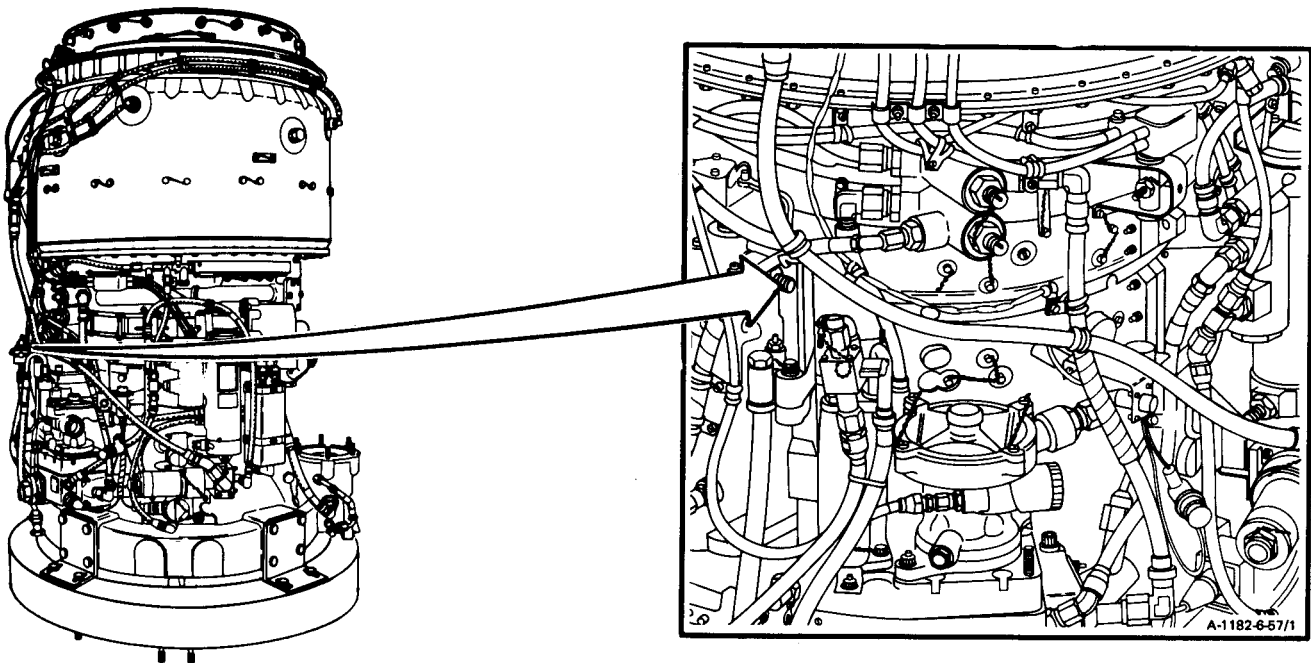
**Materials:**

None

**Personnel Required:**

68B10 Aircraft Powerplant Repairer

68B30 Aircraft Powerplant Inspector

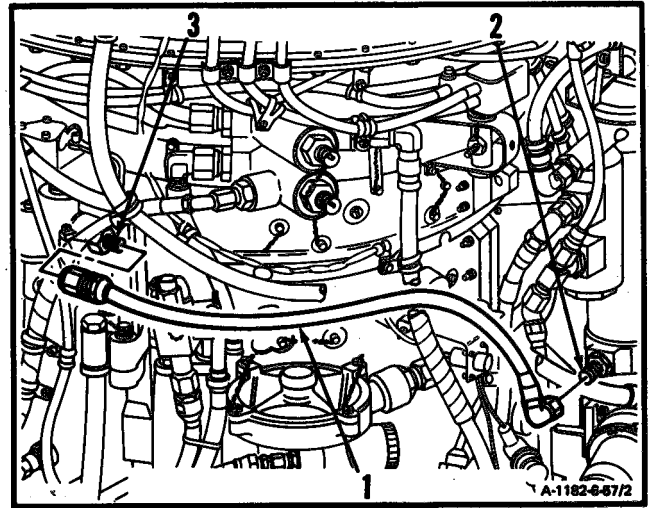


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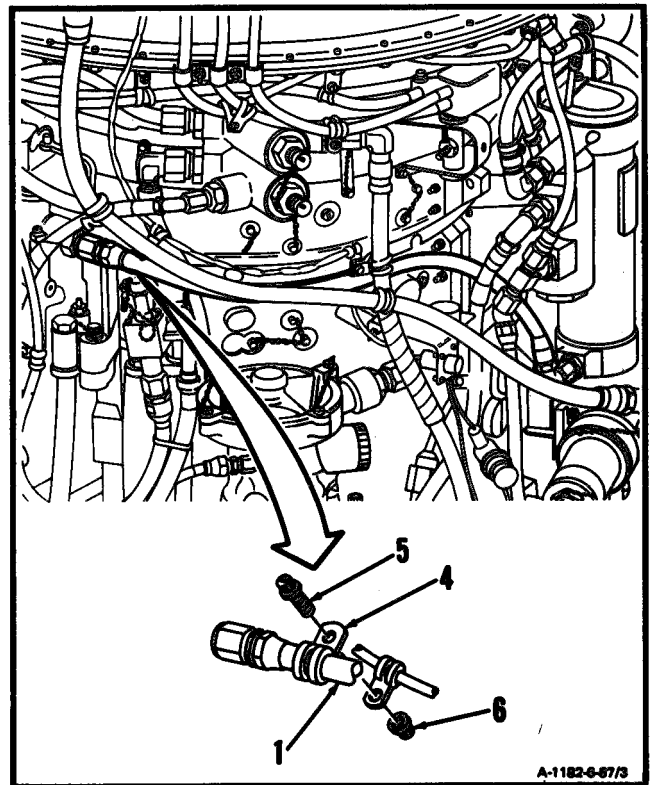
**6-57 INSTALL HOSE ASSEMBLY (FUEL CONTROL TO OIL COOLER) (Continual)**

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).

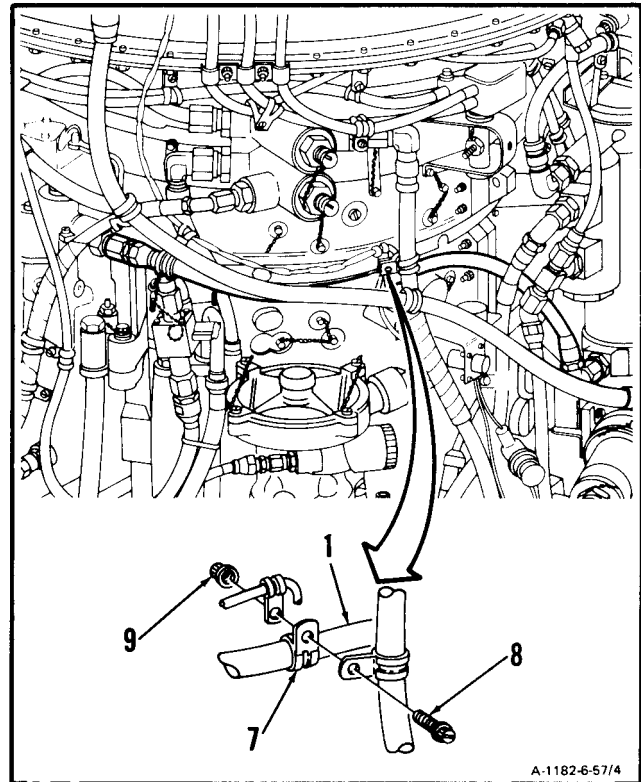


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6-57 INSTALL HOSE ASSEMBLY (FUEL CONTROL TO OIL COOLER) (Continued)

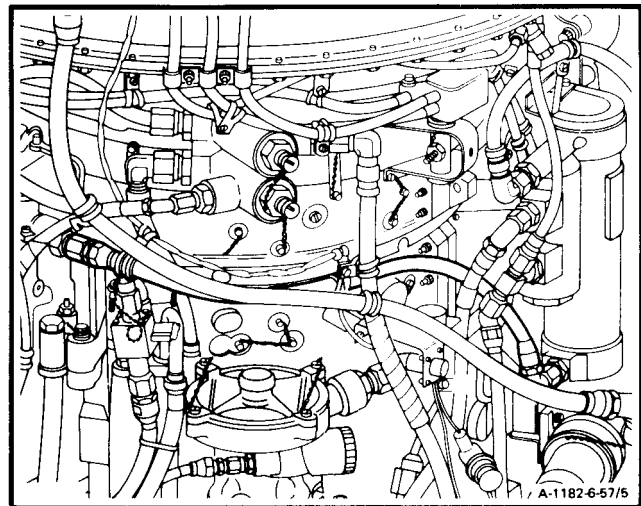
3. Install clamp (7) on hose assembly (1) and install screw (8) and nut (9).

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:**

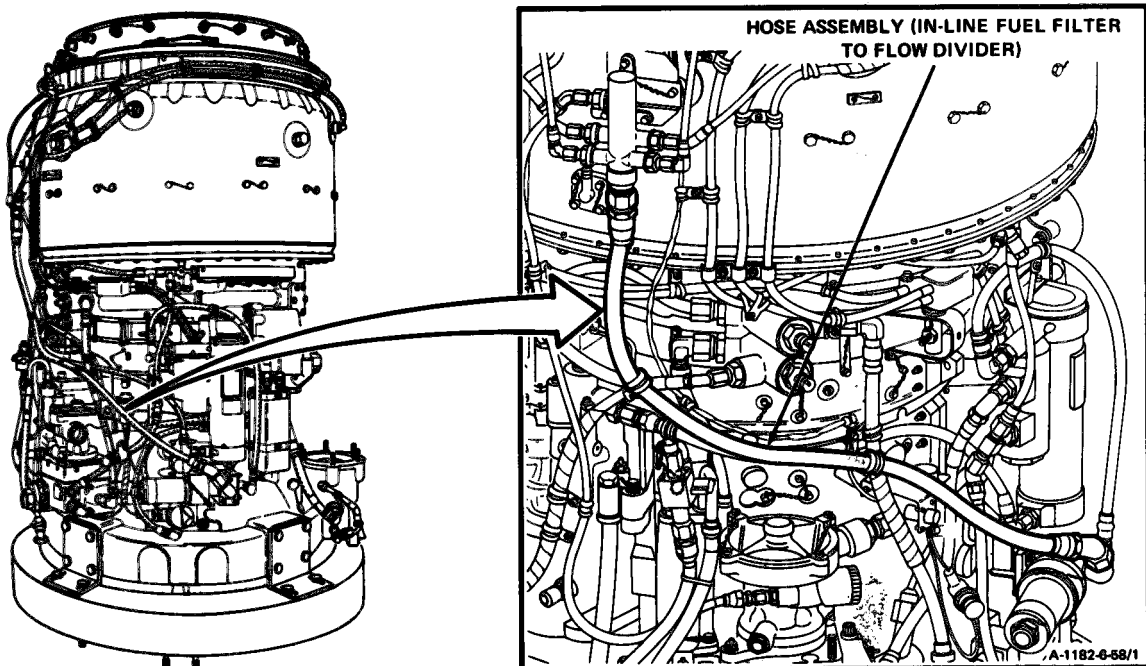
Wiping Rag (E58)

**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.

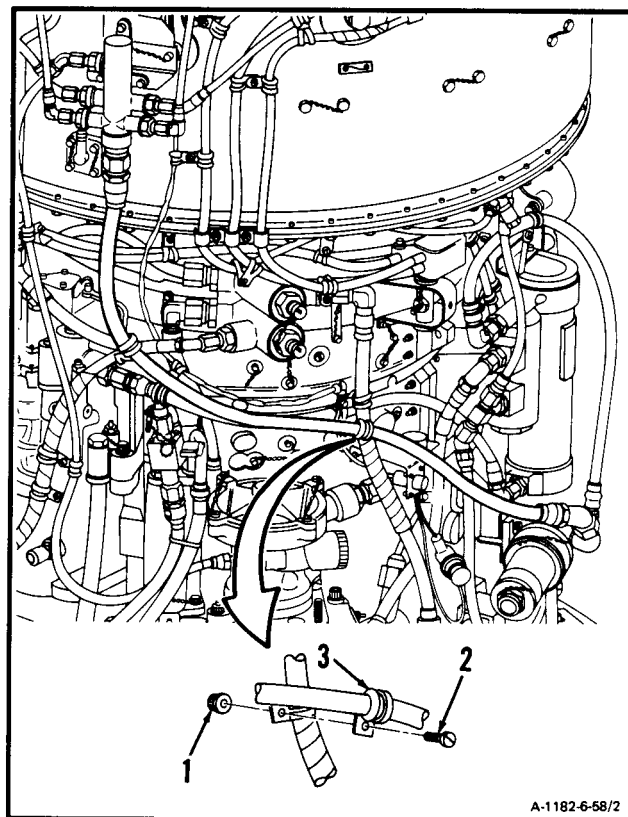
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---

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

---

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

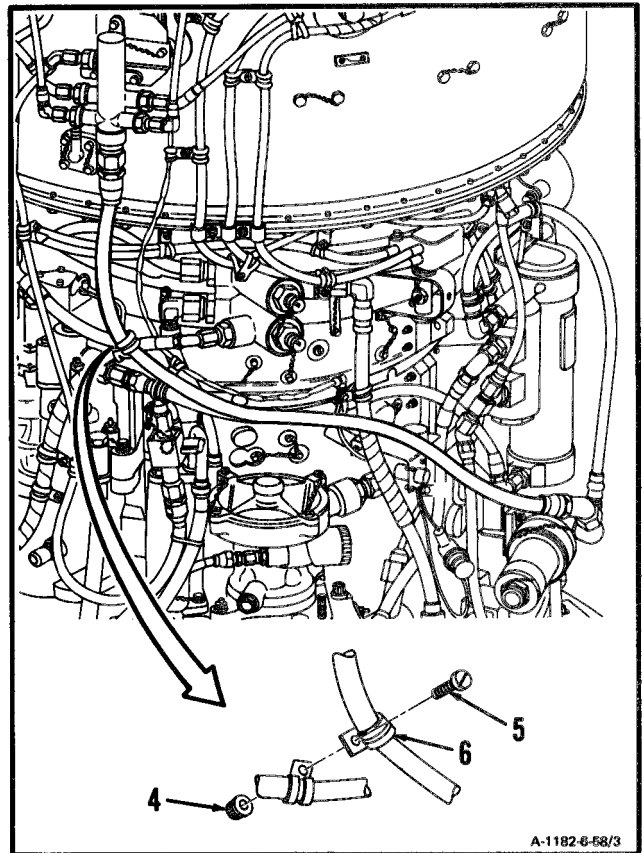


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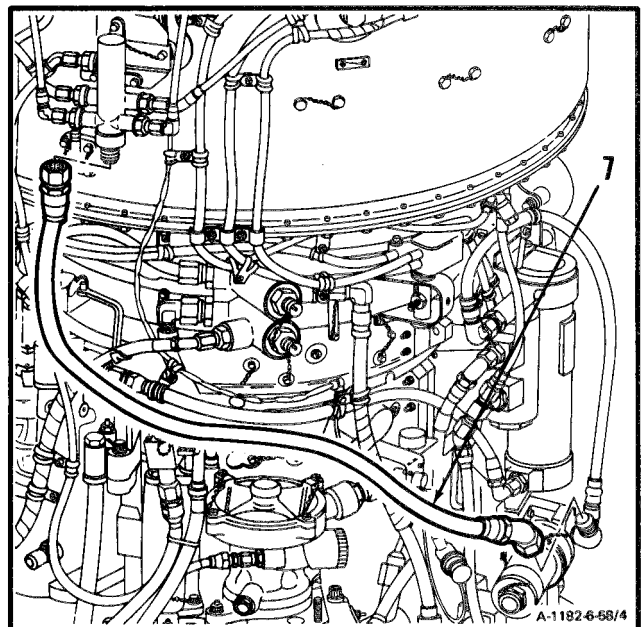


**6-58 REMOVE HOSE ASSEMBLY (IN-LINE FUEL FILTER TO FLOW DIVIDER) (Continual) 6-58**

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



3. Disconnect and remove hose assembly (7).



**GO TO NEXT PAGE**

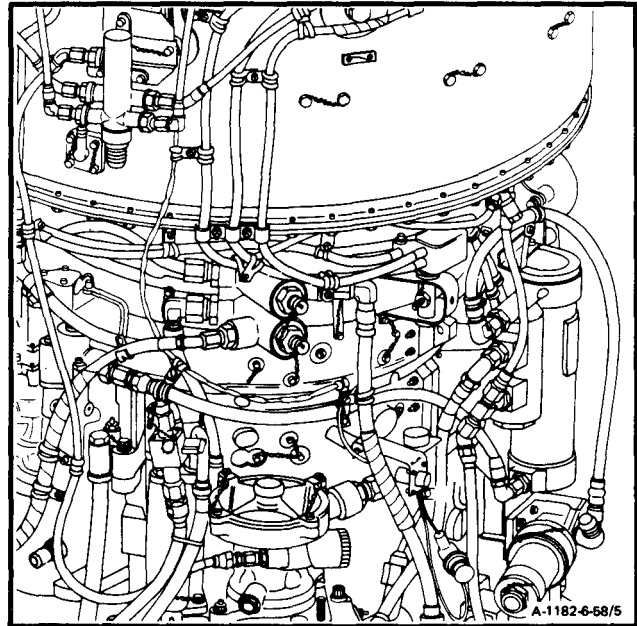
---

**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

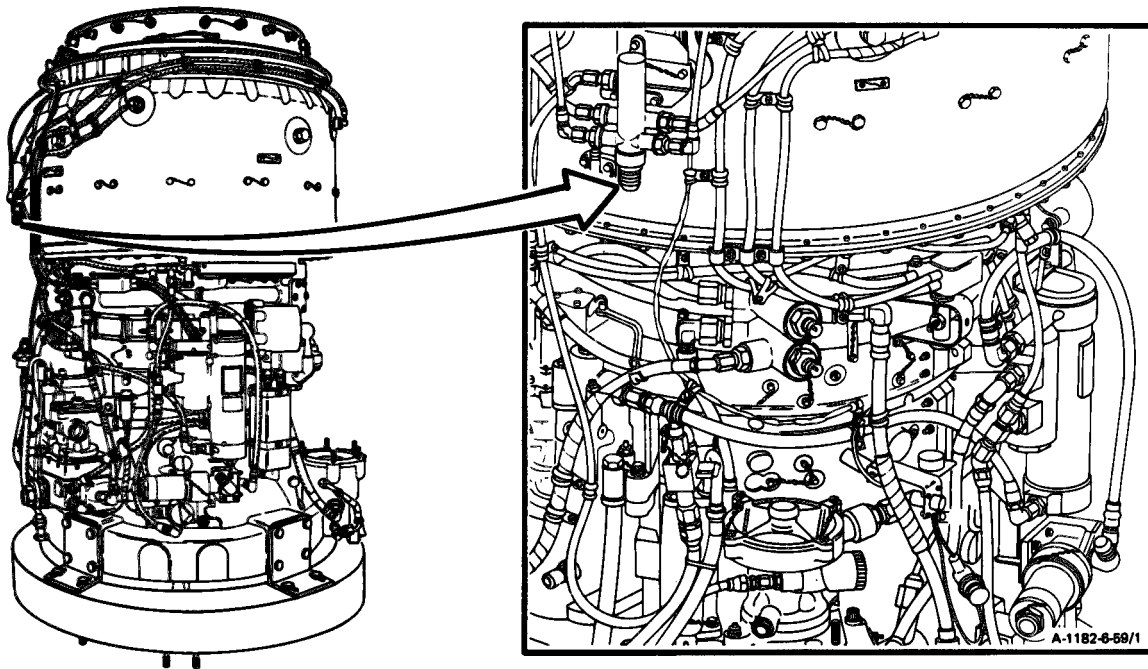
**Applicable Configurations:**

All

**Personnel Required:**

68B10 Aircraft Powerplant Repairer

68B30 Aircraft Powerplant Inspector

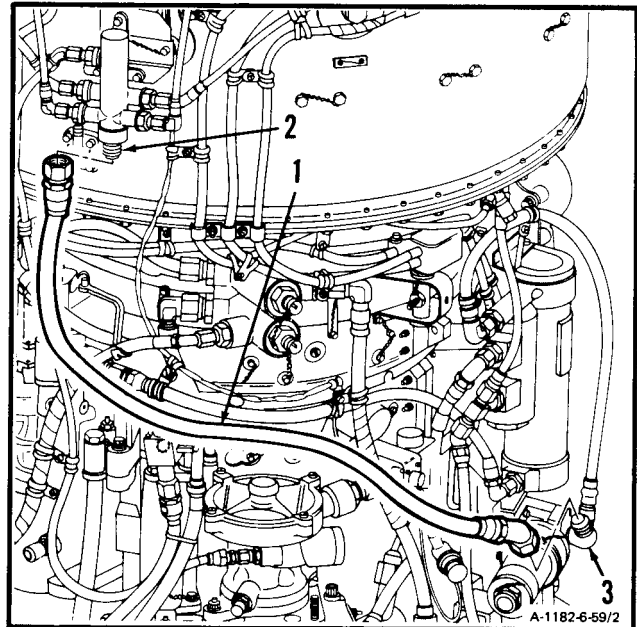
**Tools:**Powerplant Mechanic's Tool Kit,  
NSN 5180-00-323-4944Technical Inspection Tool Kit,  
NSN 5180-00-323-5114**GO TO NEXT PAGE**

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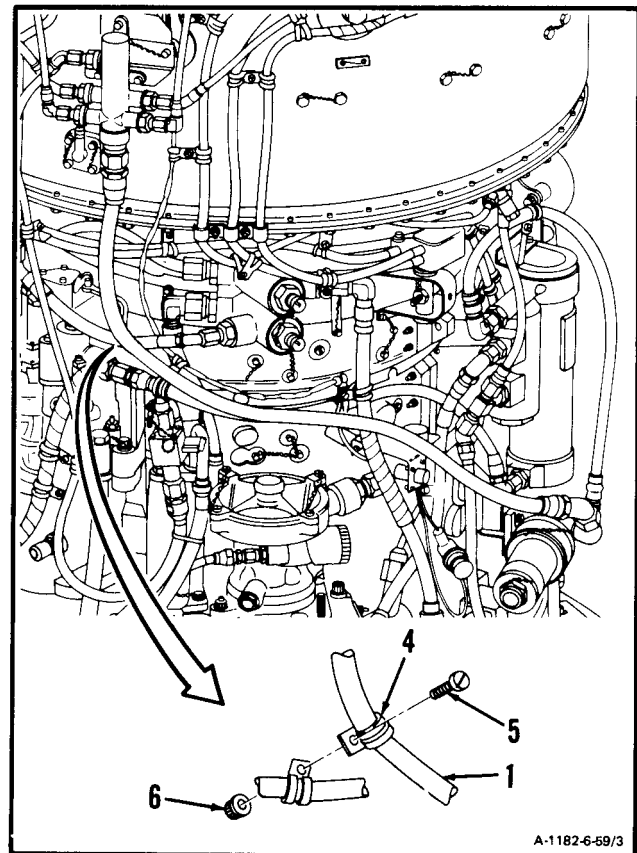
**6-59 INSTALL HOSE ASSEMBLY (IN-LINE FUEL FILTER TO FLOW DIVIDER) (Continued) 6-59**

---

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



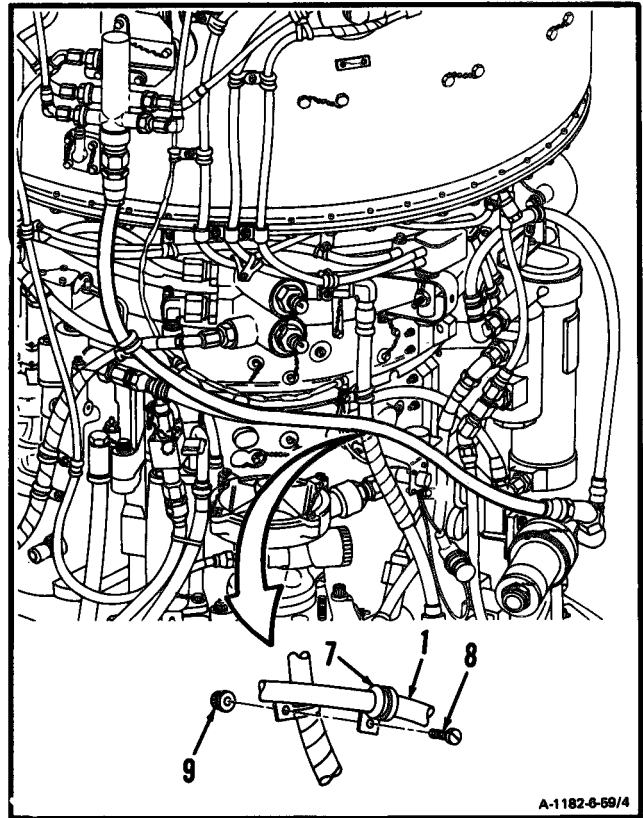
2. Install clamp (4) on hose assembly (1), and install screw (5) and nut (6).



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

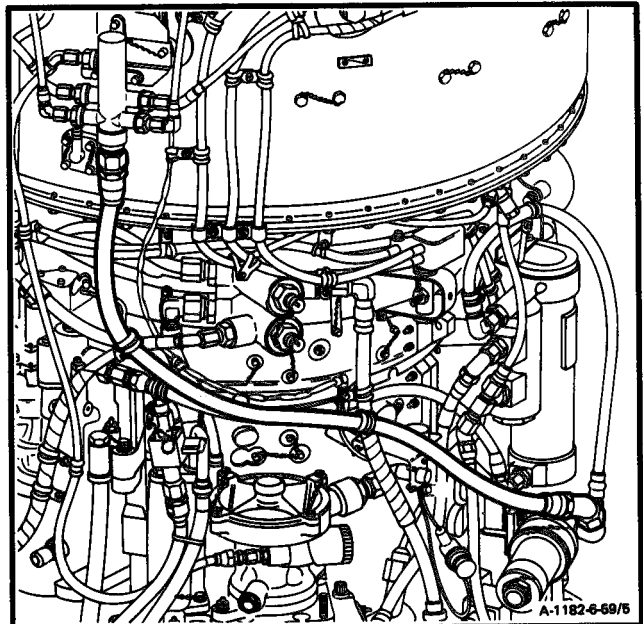
3. **Install clamp (7)** on hose assembly (1), and install screw (8) and nut (9).



**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:**

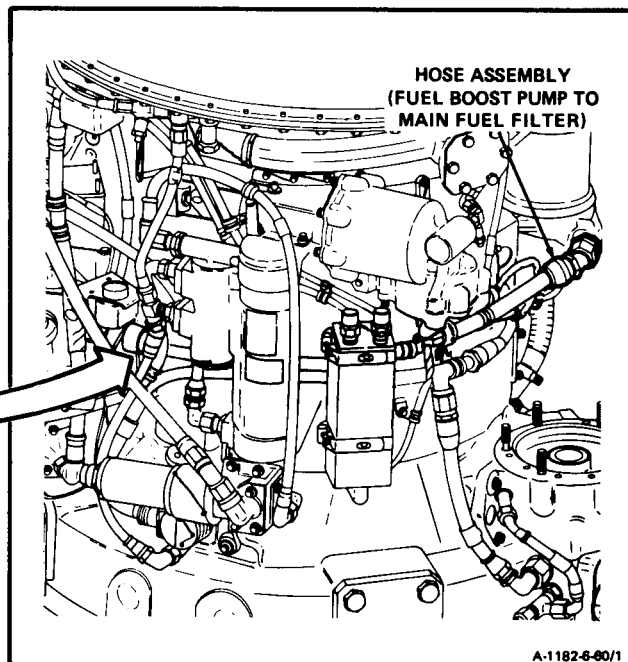
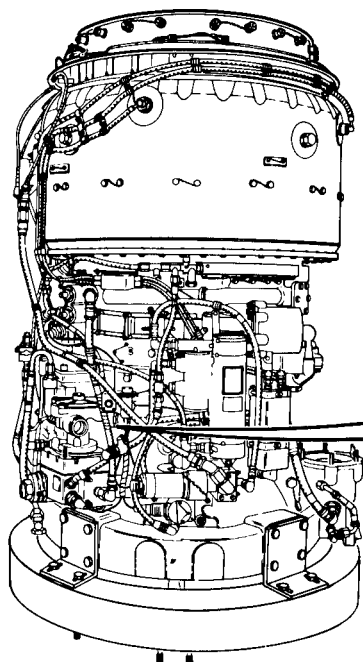
Wiping Rag (E58)

**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.

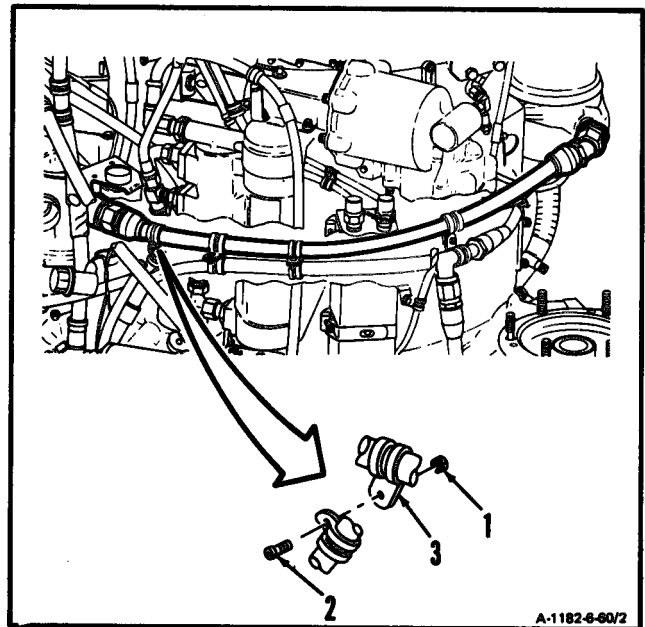


A-1182-6-00/1

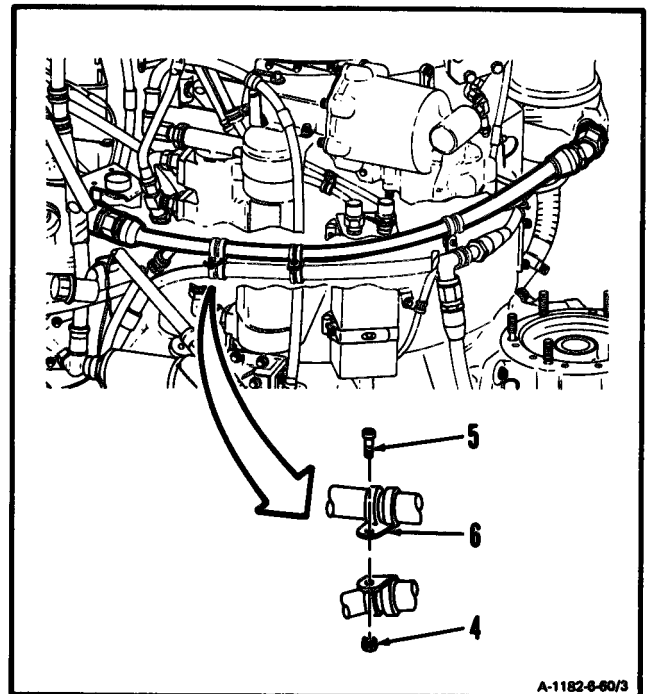
**GO TO NEXT PAGE**

**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).



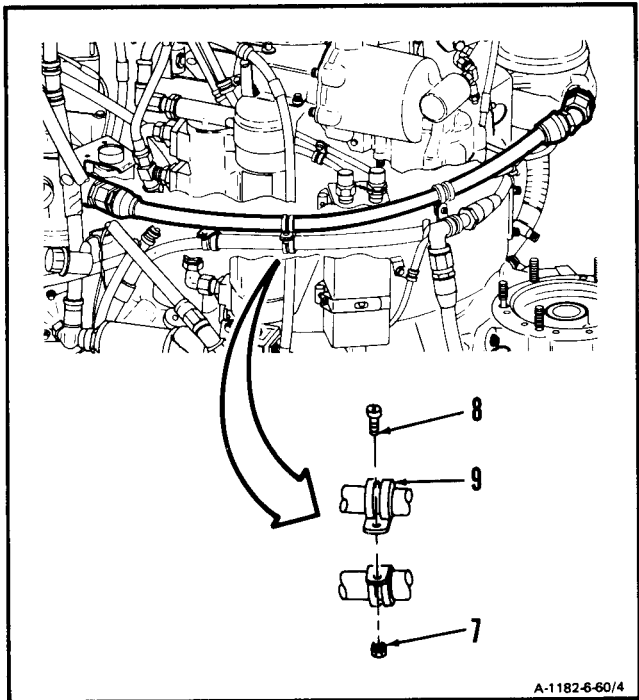
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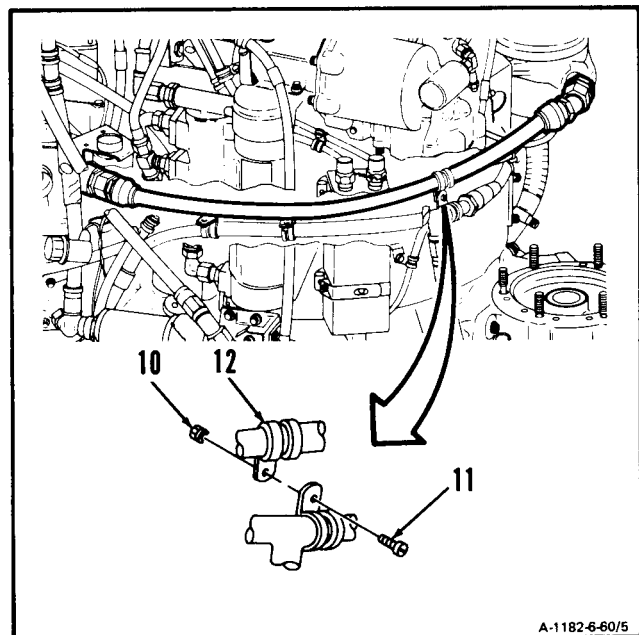
**6-60 REMOVE HOSE ASSEMBLY (FUEL BOOST PUMP TO MAIN FUEL FILTER) (Continued) 6-60**

---

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



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



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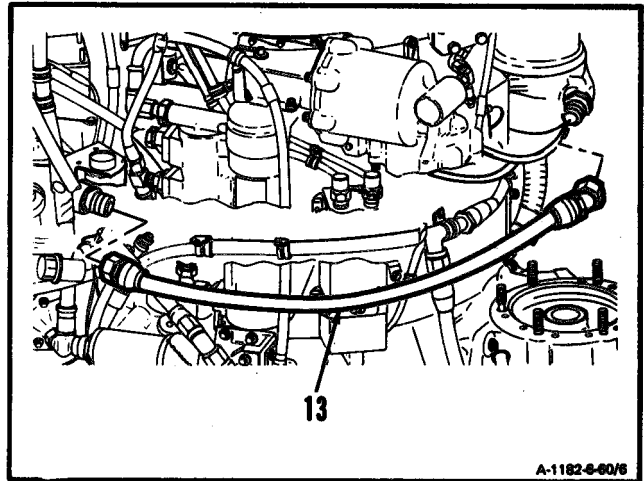


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**6-60 REMOVE HOSE ASSEMBLY (FUEL BOOST PUMP TO MAIN FUEL FILTER) (Continued) 6-60**

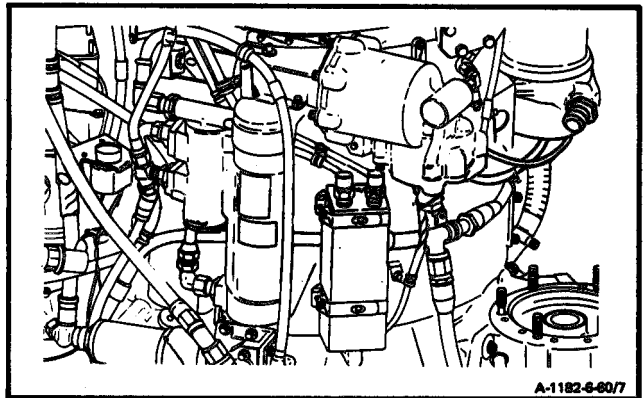
---

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:**

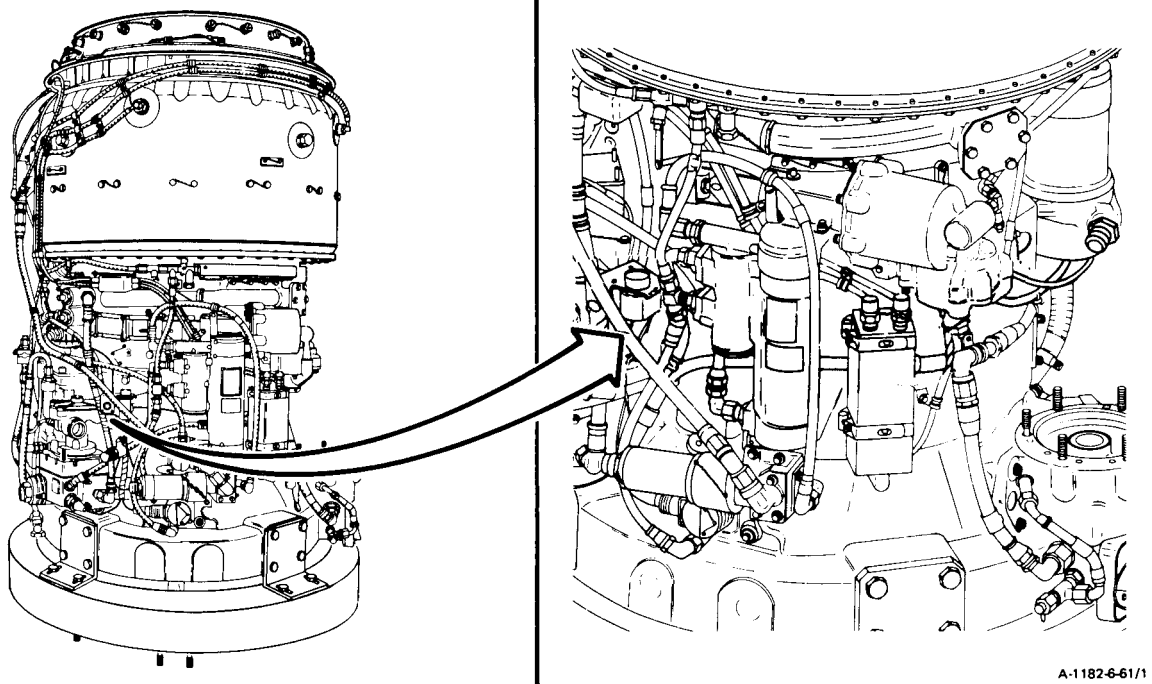
Powerplant Mechanic's Tool Kit,

NSN 5180-00-323-4944

Technical Inspection Tool Kit,

NSN 5180-00-323-5114

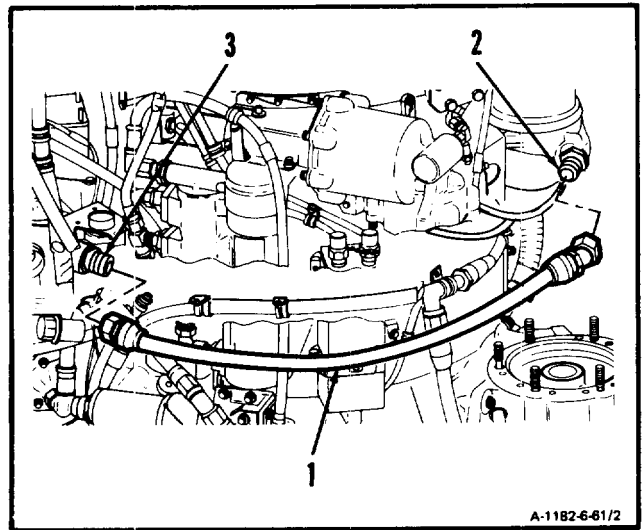
Open-End Wrench, 1-inch



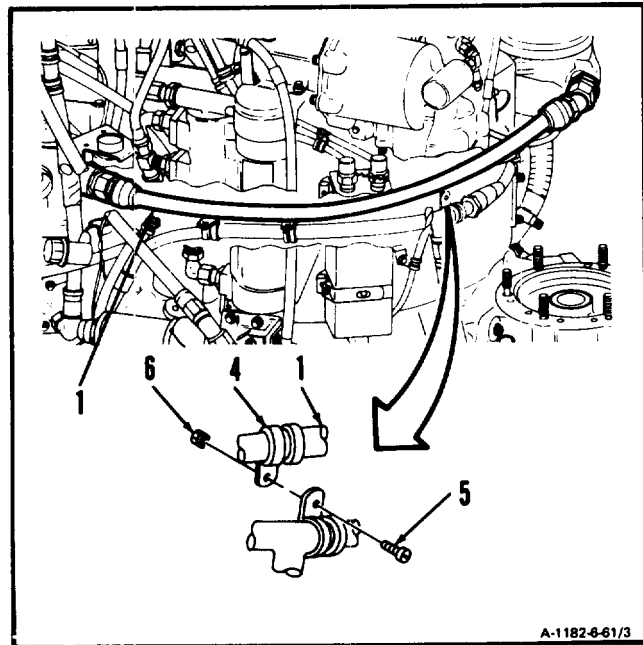
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**6-61 INSTALL HOSE ASSEMBLY (FUEL BOOST PUMP TO MAIN FUEL FILTER) (Continued) 6-61**

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).



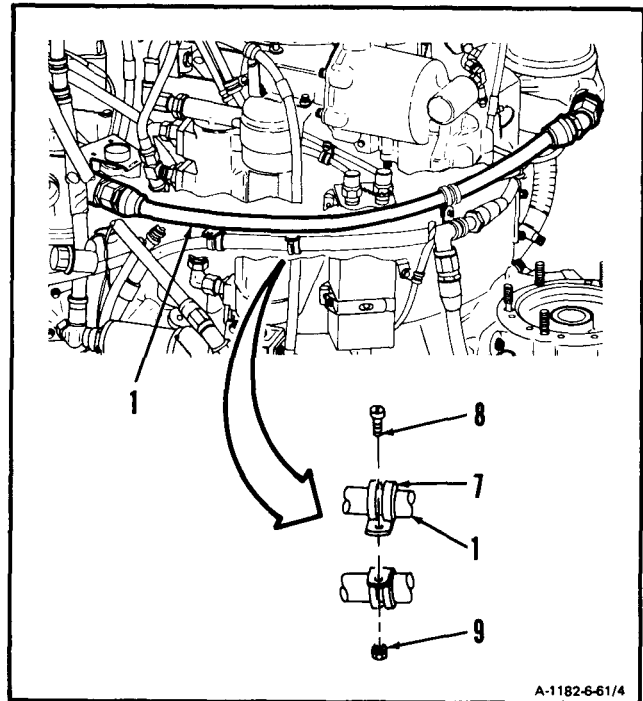
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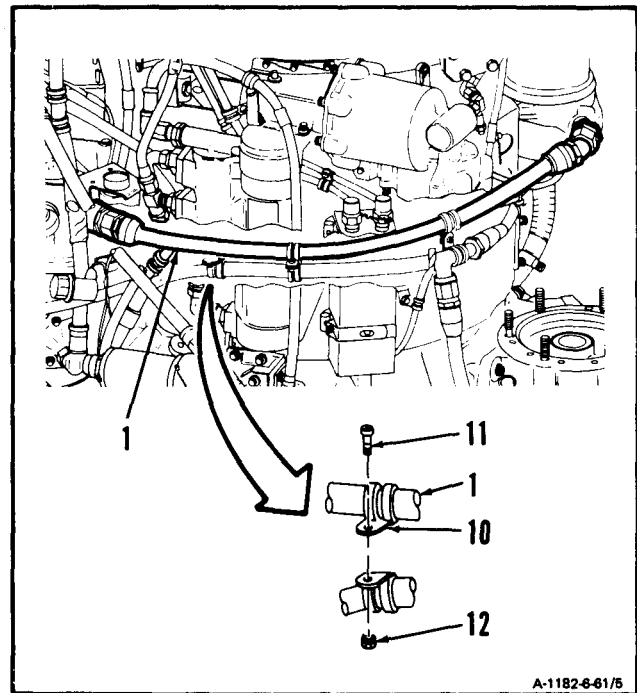
**6-61 INSTALL HOSE ASSEMBLY (FUEL BOOST PUMP TO MAIN FUEL FILTER) (Continued) 6-61**

---

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



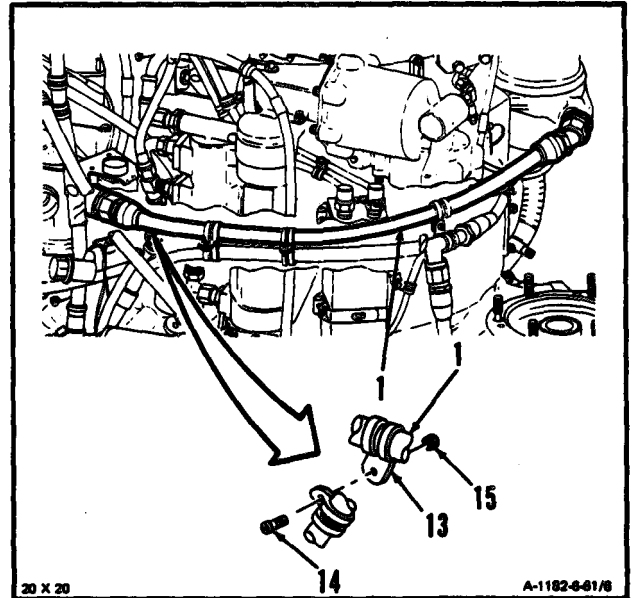
4. **Instal clamp (10)** on hose assembly (1), and install screw (11) and nut (12).



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

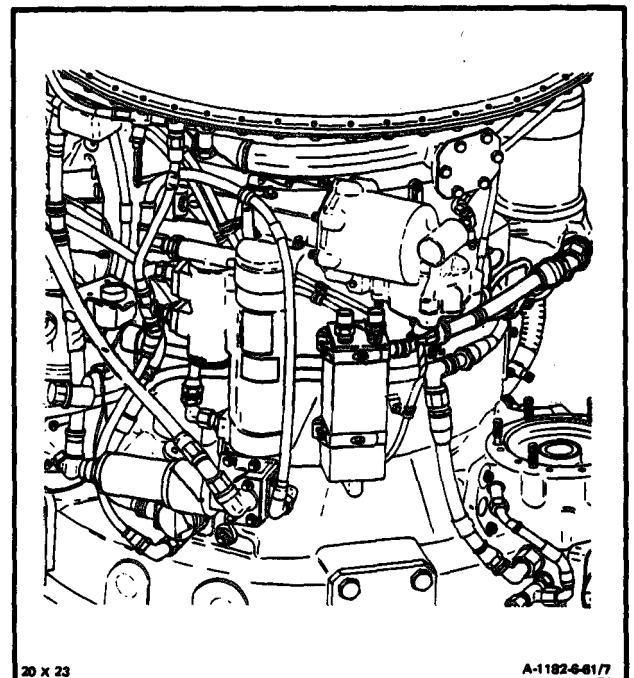
5. Install clamp (13) on hose assembly (1), and install straw (14) and nut (15).



**INSPECT**

**FOLLOW-ON MAINTENANCE:**

None



**END OF TASK**

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

6-62

INITIAL SETUP

**Applicable Configurations:**

All

**Tools:**

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

**Materials:**

Wiping Rag (E58)

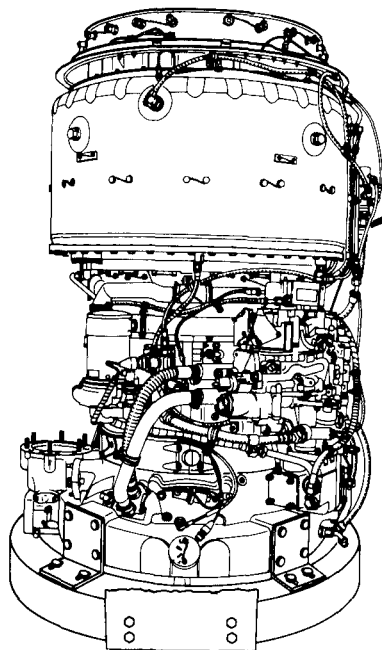
**Personnel Required:**

68B10 Aircraft Powerplant Repairer

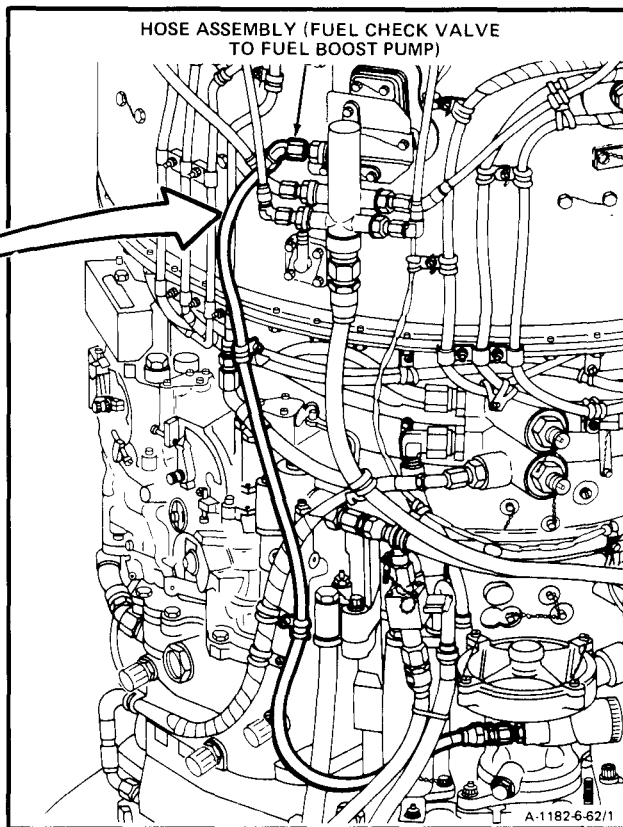
*General Safety Instructions:*

**WARNING**

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



42 x 26



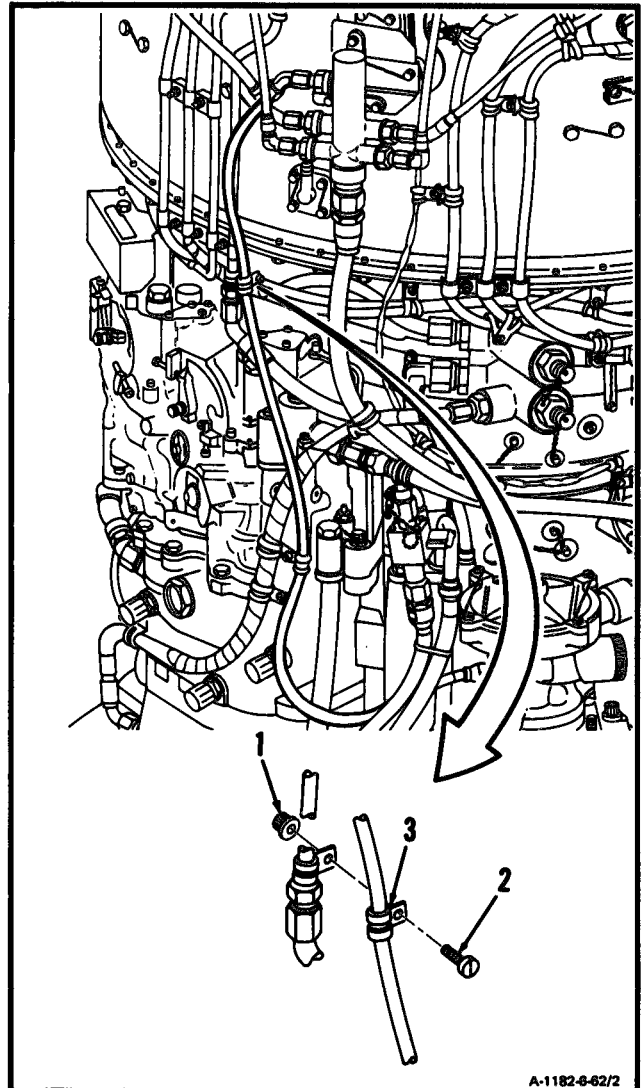
**GO TO NEXT PAGE**

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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).



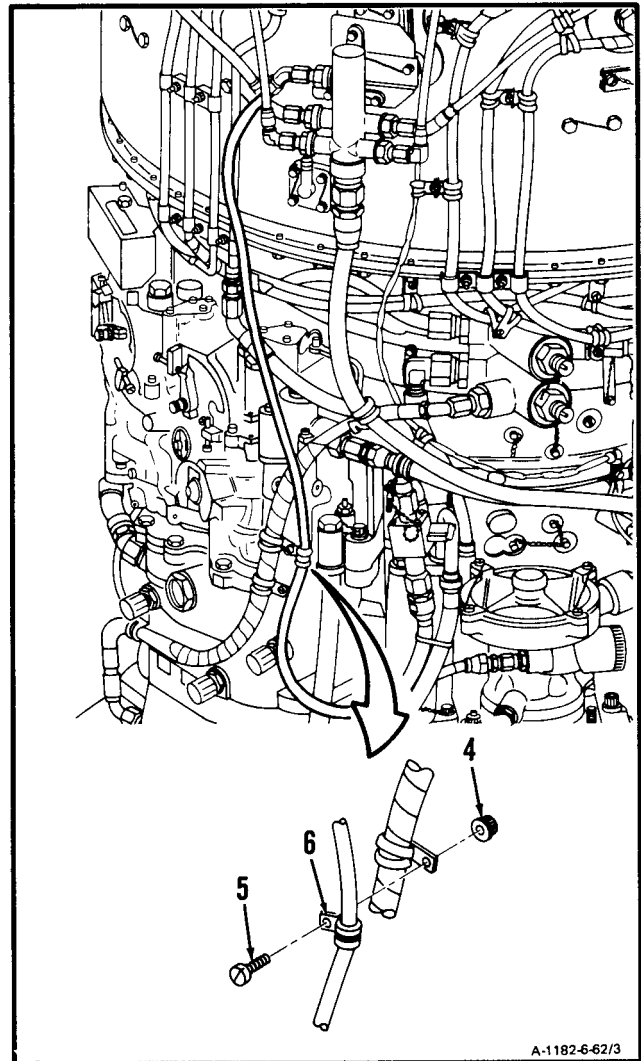
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---

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

---

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



**GO TO NEXT PAGE**

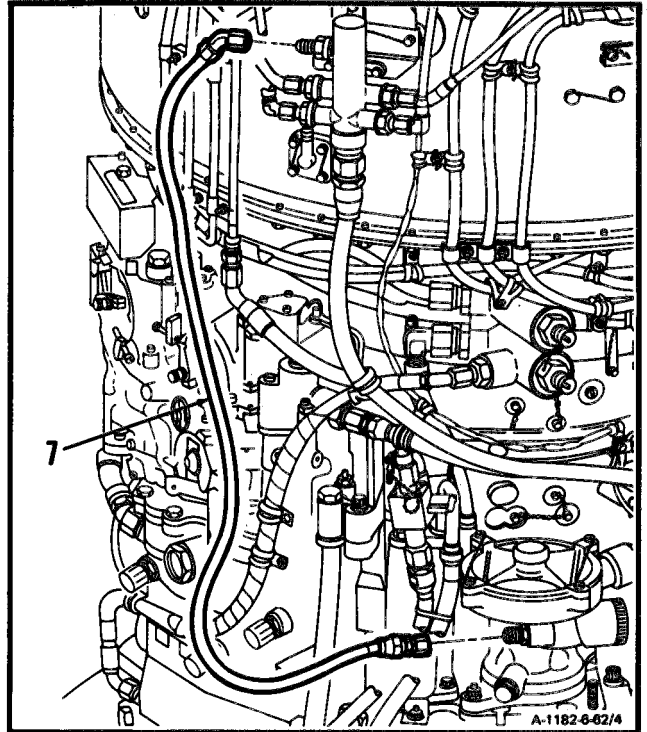


---

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

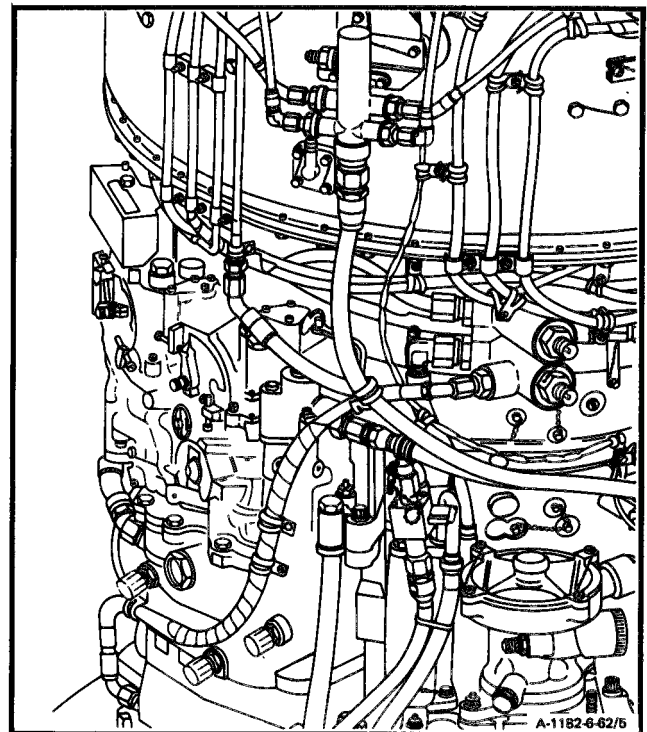
---

3. Disconnect and remove hose assembly (7).



FOLLOW-ON MAINTENANCE:

None



**END OF TASK**

---

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

---

6-63

INITIAL SETUP

**Materials:**

None

**Applicable Configurations:**

All

**Personnel Required:**

68B10 Aircraft Powerplant Repairer

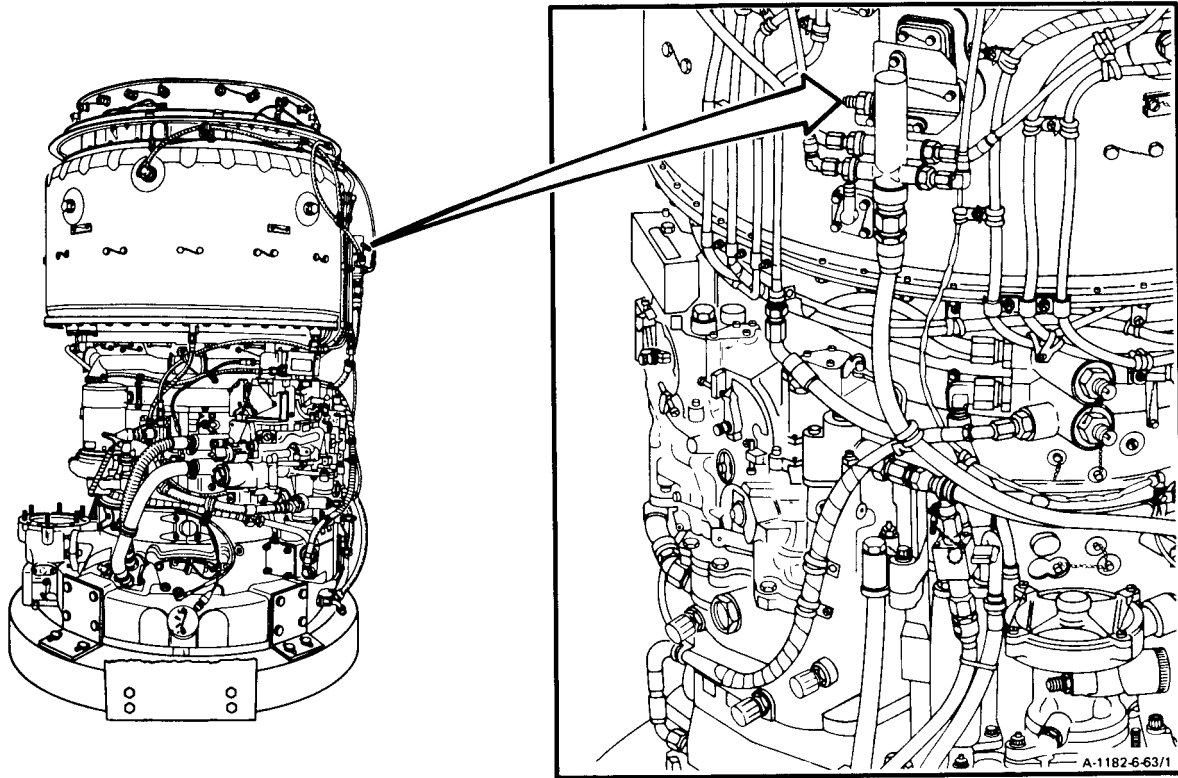
681330 Aircraft Powerplant Inspector

**Tools:**

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

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

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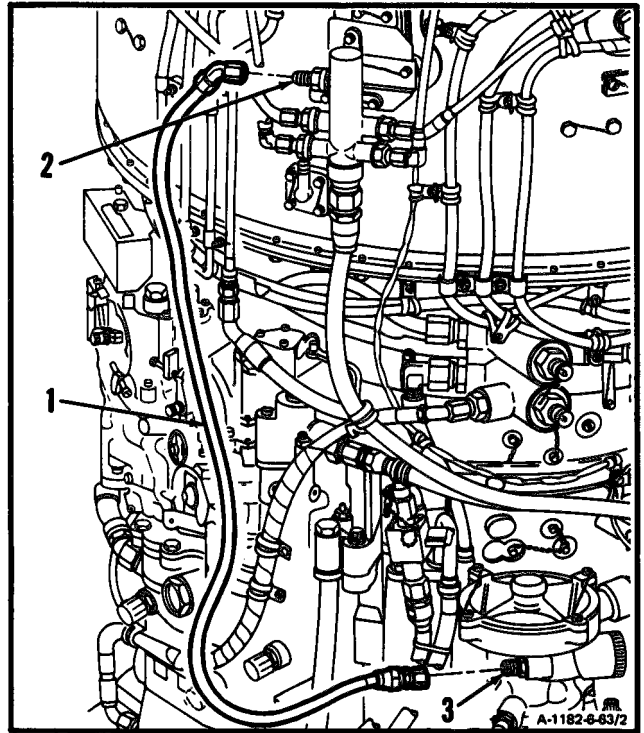
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**6-63 INSTALLHOSE ASSEMBLY (FUEL CHECK VALVE TO FUEL BOOST PUMP) (Continued) 6-63**

---

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



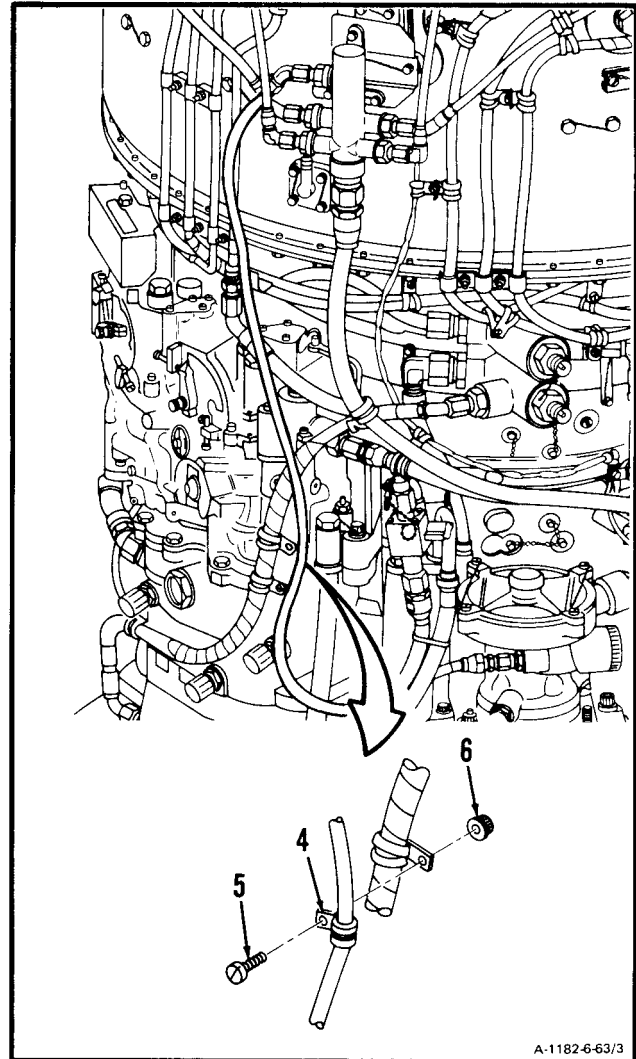
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**6-63 INSTALL HOSE ASSEMBLY (FUEL CHECK VALVE TO FUEL BOOST PUMP) (Continued) 6-63**

---

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



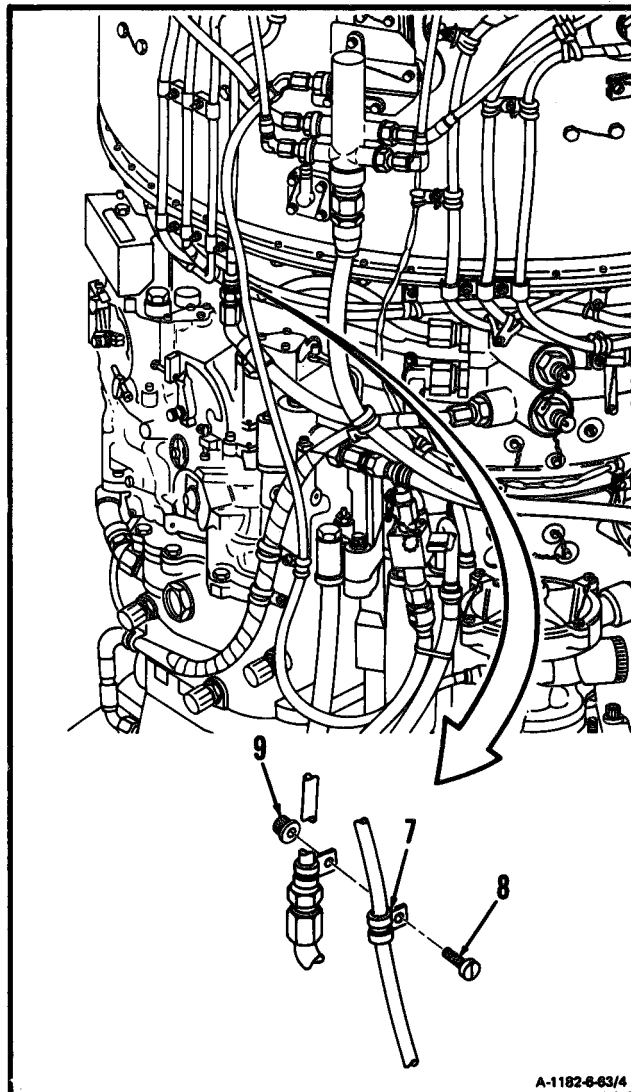
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**6-63 INSTALL HOSE ASSEMBLY (FUEL CHECK VALVE TO FUEL BOOST PUMP) (Continued) 6-63**

---

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



**INSPECT**

**GO TO NEXT PAGE**

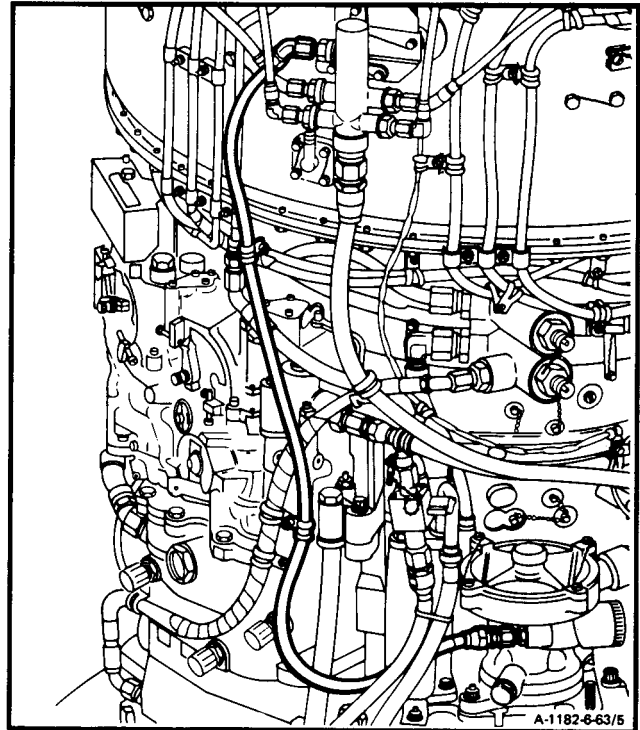
---

**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:**

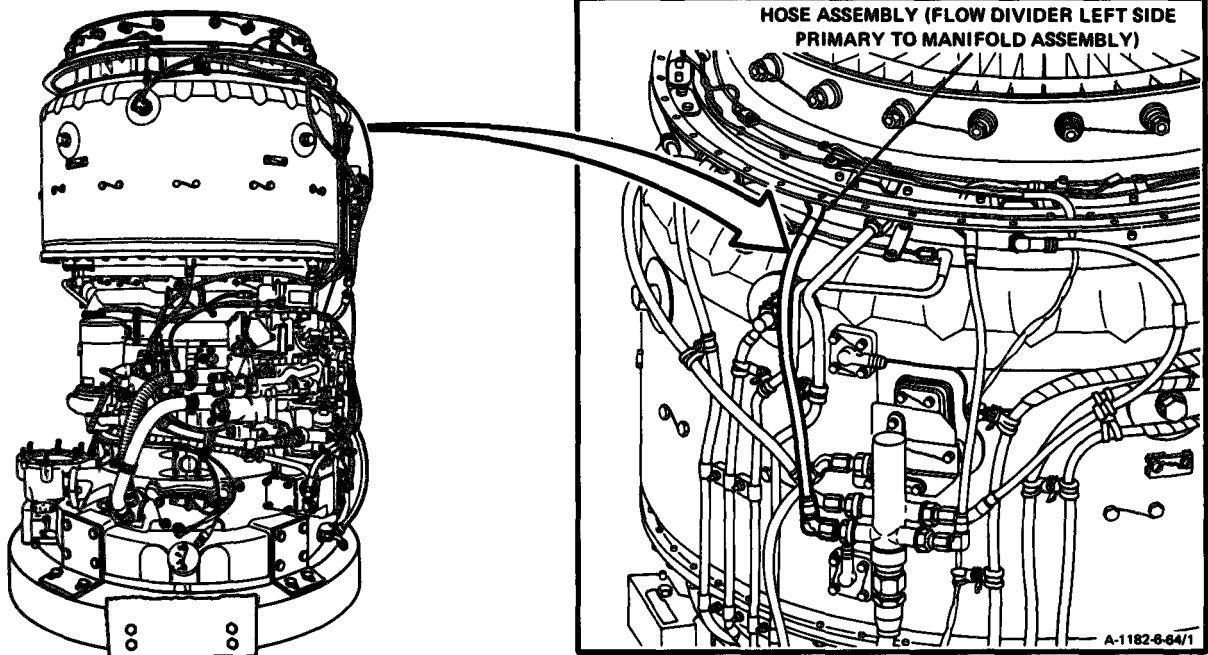
Powerplant Mechanic's Tool Kit,  
NSN 5180-00-323-4944  
Container, 1 Quart

**Materials:**

Wiping Rag (E58)

**Personnel Required:**

68B10 Aircraft Powerplant Repairer

**GO TO NEXT PAGE**

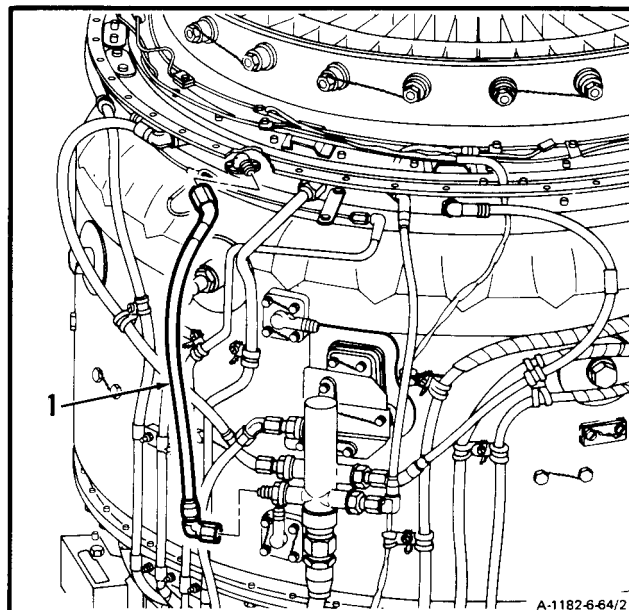
**6-64 REMOVE HOSE ASSEMBLY (FLOW DIVIDER LEFT SIDE PRIMARY TO  
MANIFOLD ASSEMBLY) (Continued)**

6-64

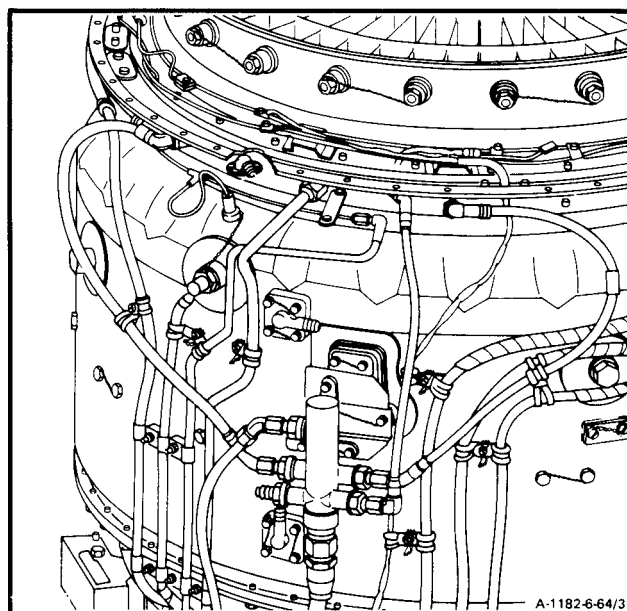
**WARNING**

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

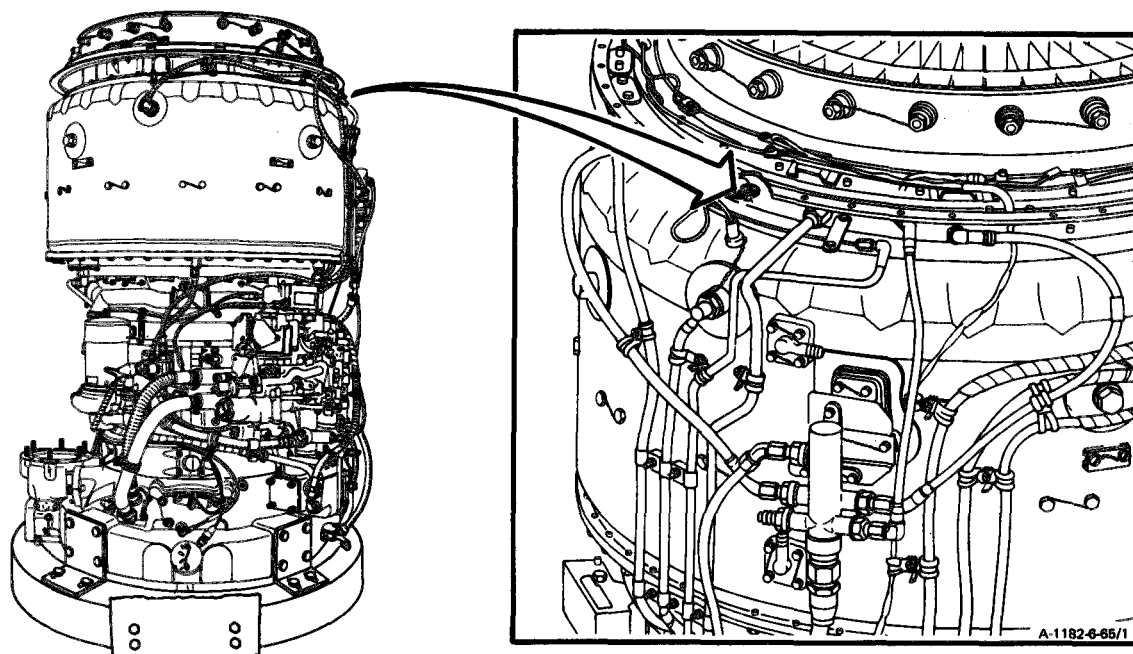
**Applicable Configurations:**

All

**Personnel Required:**

68B10 Aircraft Powerplant Repairer

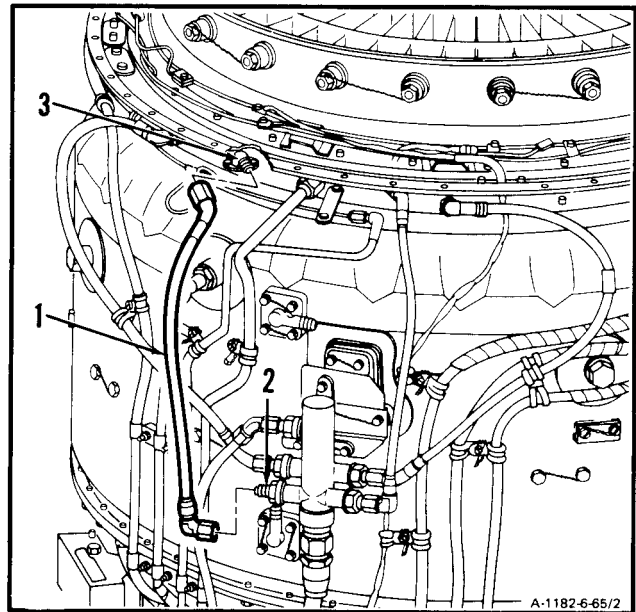
68B30 Aircraft Powerplant Inspector

**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

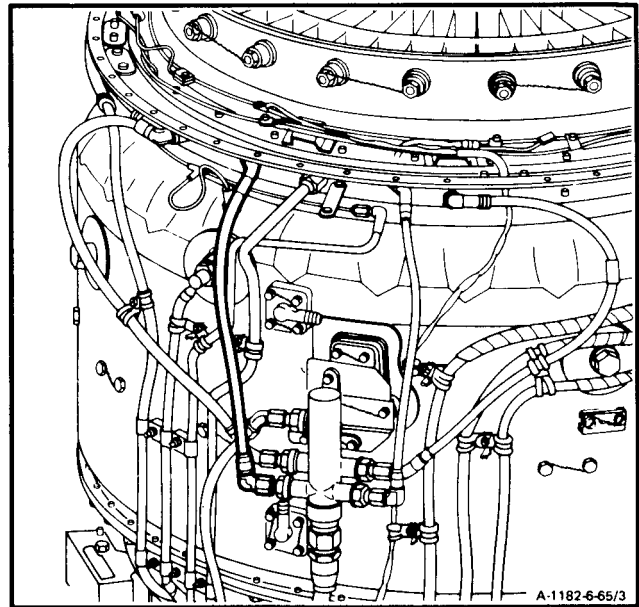
1. Install hose assembly (1) on nipple (2) and elbow (3).



**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****Materials:**

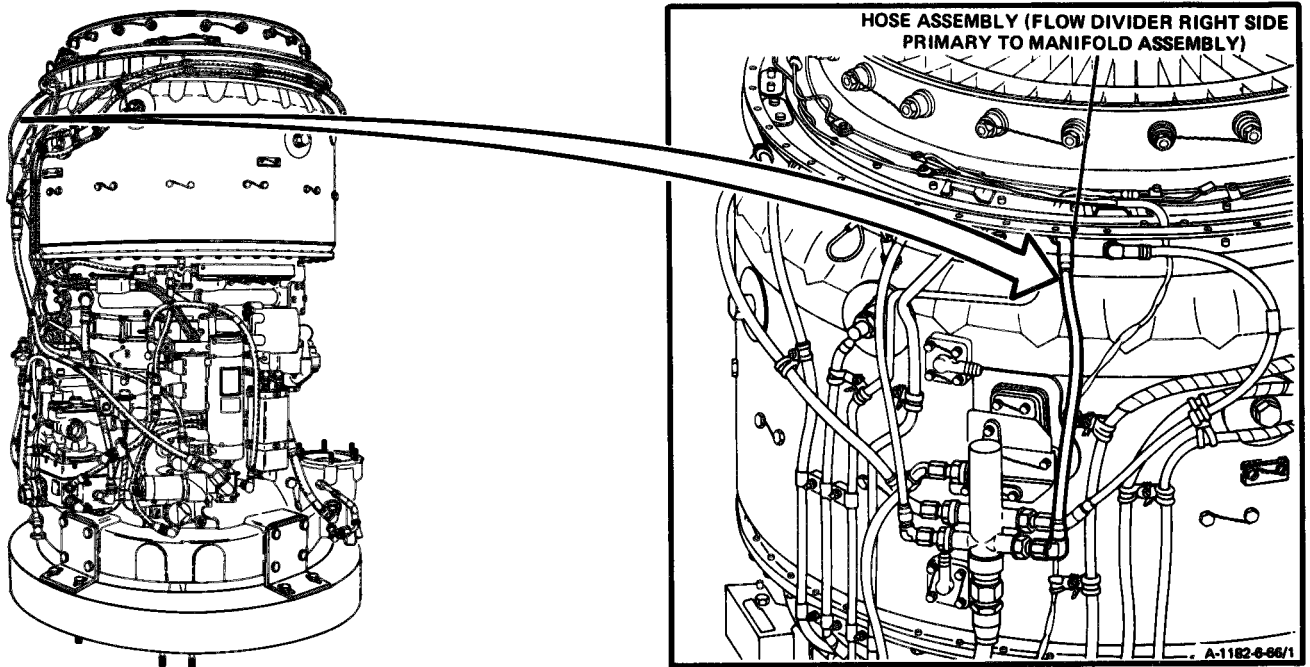
Wiping Rag (E58)

**Applicable Configurations:**

All

**Personnel Required:**

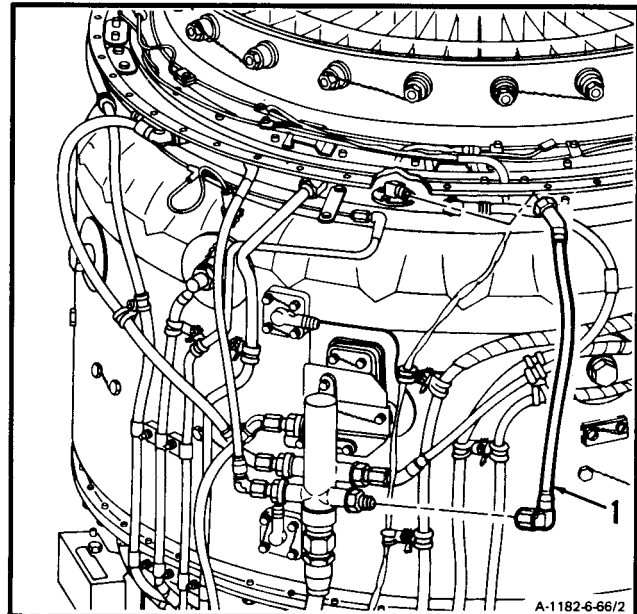
68B10 Aircraft Powerplant Repairer

**Tools:**Powerplant Mechanic's Tool Kit,  
NSN 5180-00-323-4944  
Container, 1 Quart**GO TO NEXT PAGE**

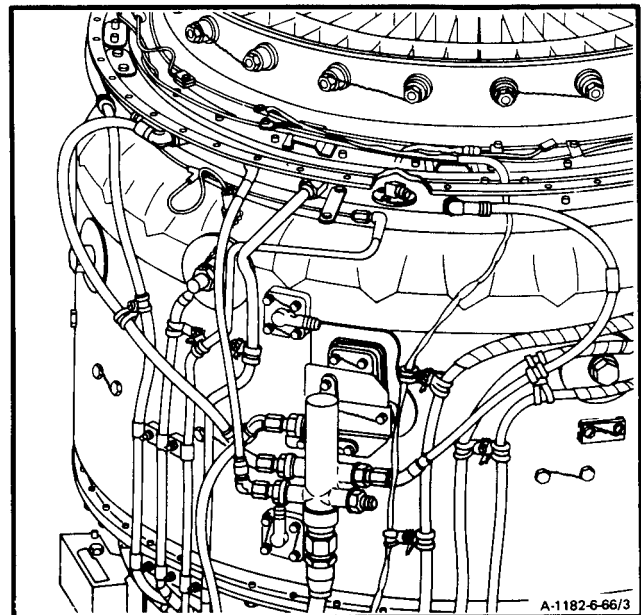
**6-66 REMOVE HOSE ASSEMBLY (FLOW DIVIDER RIGHT SIDE PRIMARY TO  
MANIFOLD ASSEMBLY) (Continued)****6-66****WARNING**

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

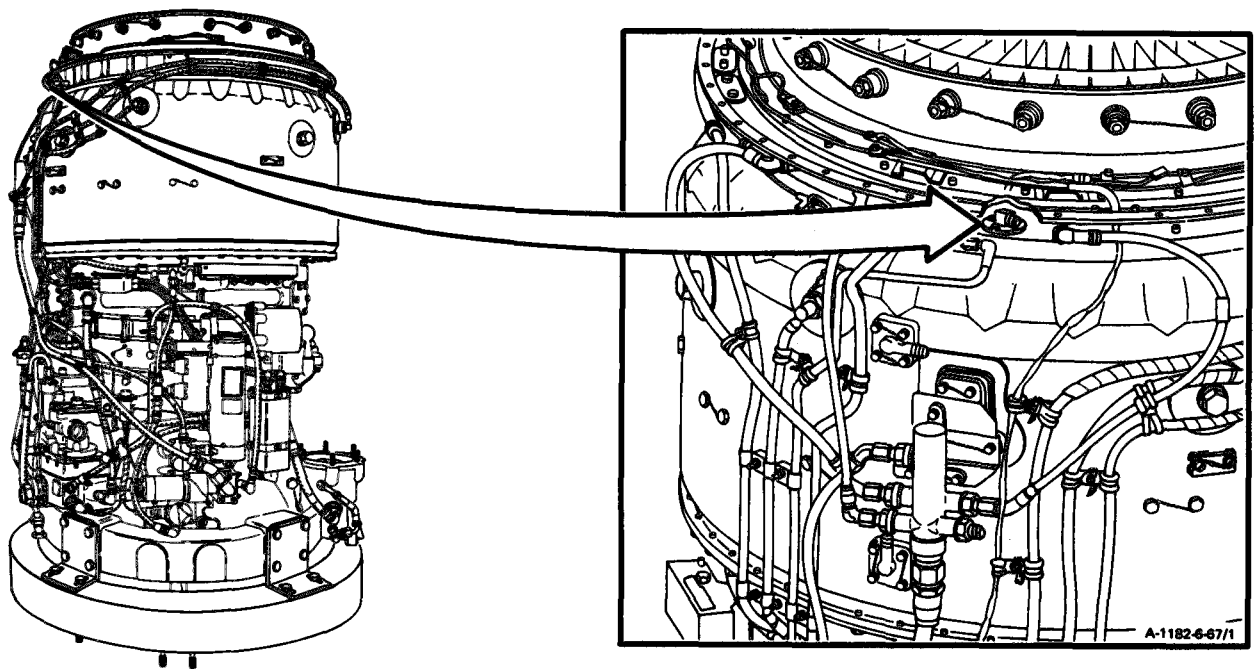
**INITIAL SETUP**

**Materials:**  
None

**Applicable Configurations:**  
All

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

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

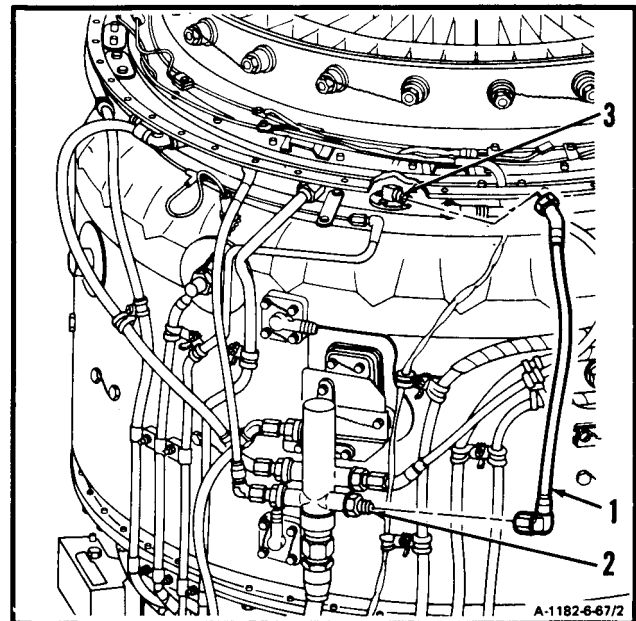


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**6-67 INSTALL HOSE ASSEMBLY (FLOW DIVIDER RIGHT SIDE PRIMARY TO  
MANIFOLD ASSEMBLY) (Continued)**

6-67

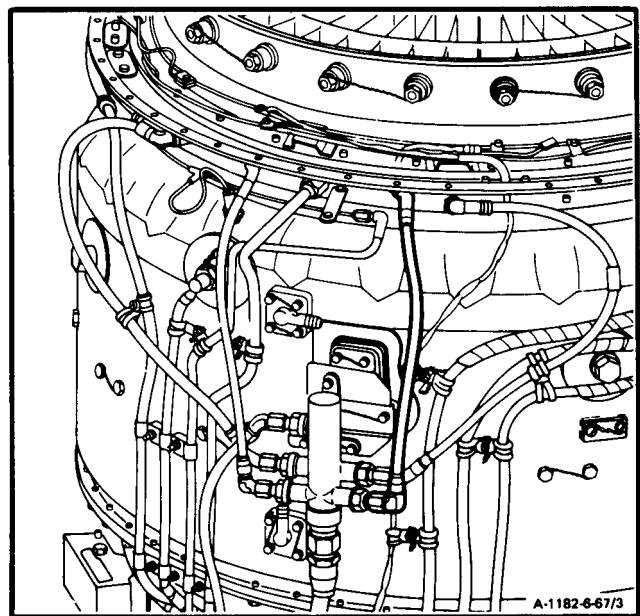
1. Install hose assembly (1) on nipple (2) and elbow (3).



**INSPECT**

**FOLLOW-ON MAINTENANCE:**

None



**END OF TASK**

---

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


---

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:**

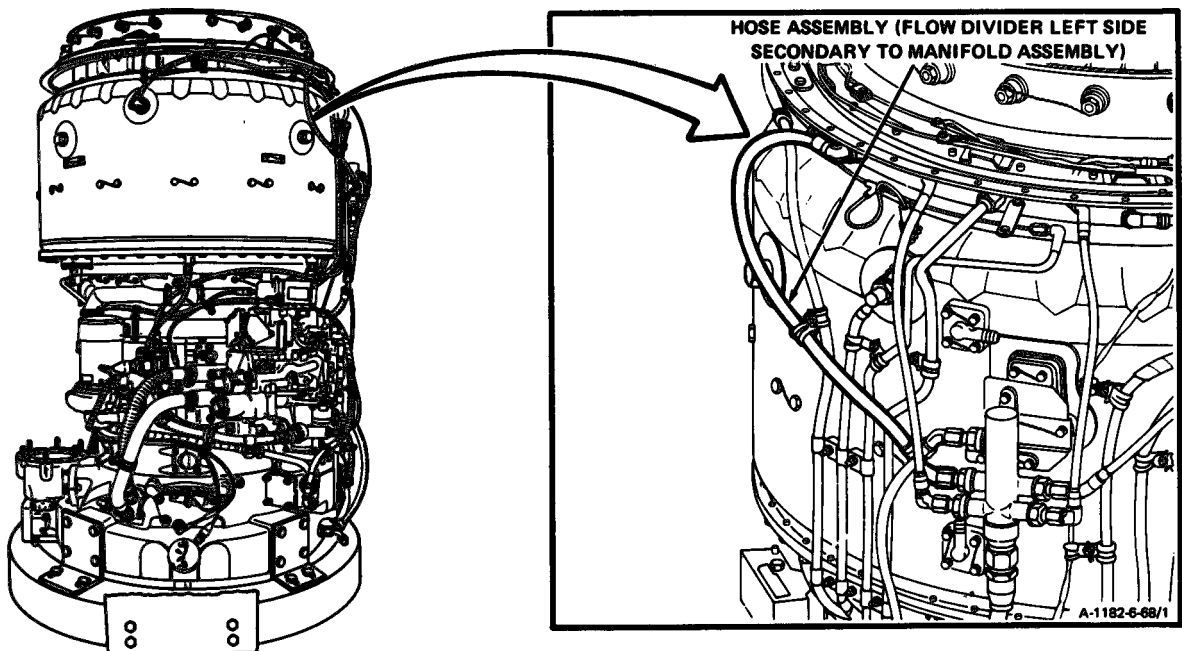
Wiping Rag (E58)

**Personnel Required:**

68B10 Aircraft Powerplant Repairer

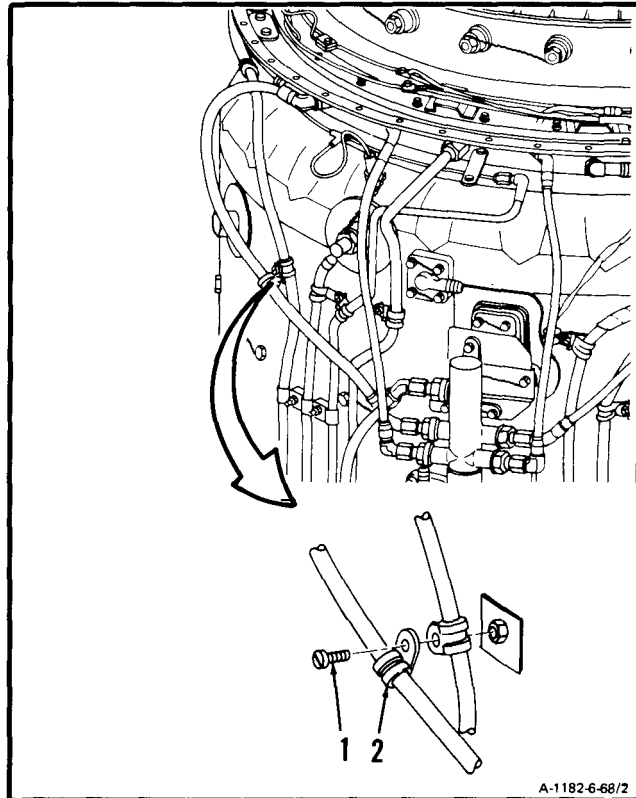
**WARNING**

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.

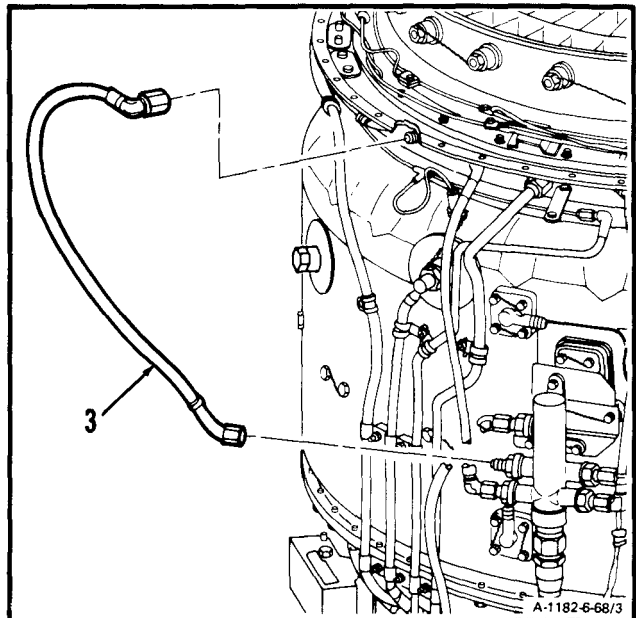
**GO TO NEXT PAGE**

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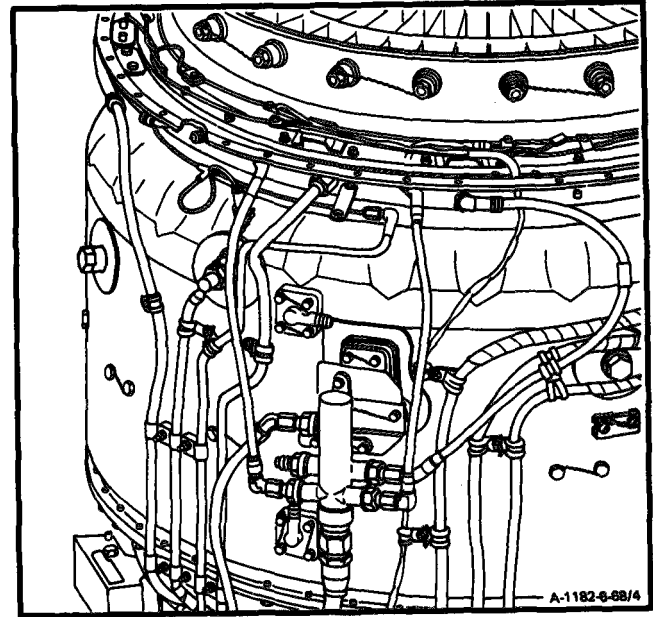
**6-68 REMOVE HOSE ASSEMBLY (FLOW DIVIDER LEFT SIDE SECONDARY TO  
MANIFOLD ASSEMBLY (Continued)**

---

6-68

FOLLOW-ON MAINTENANCE:

None

**END OF TASK**

6-233

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

---

6-69

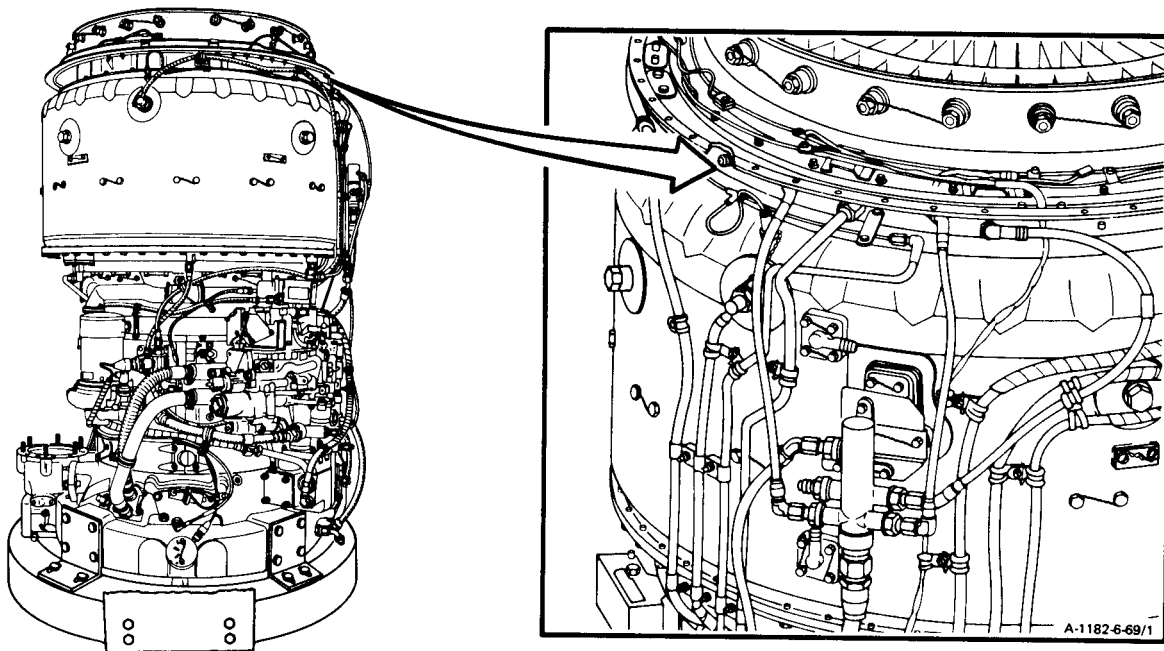
INITIAL SETUP

**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

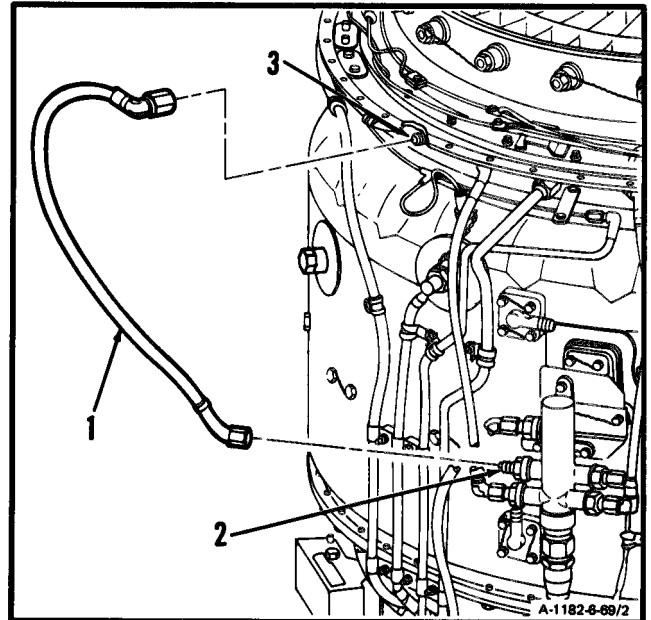


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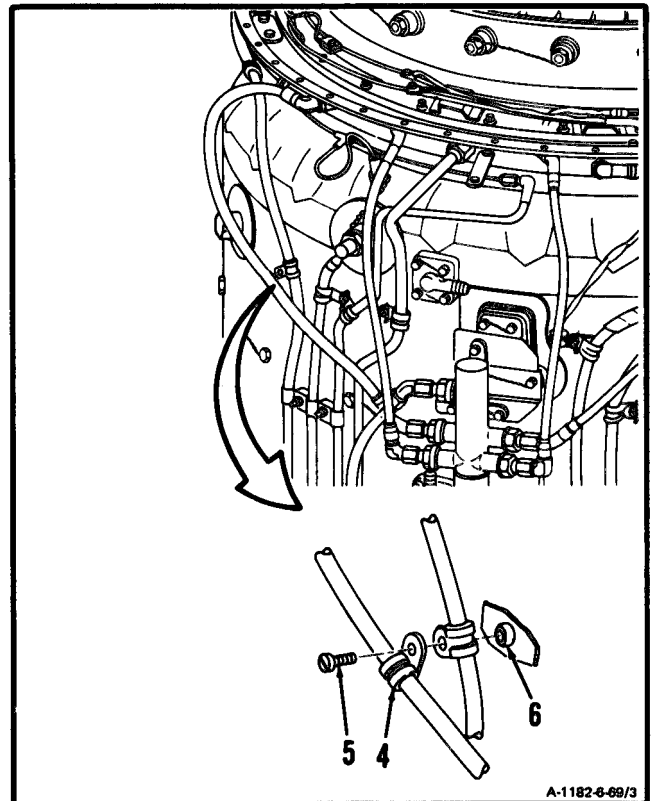
**6-69 INSTALL HOSE ASSEMBLY (FLOW DIVIDER LEFT SIDE SECONDARY TO MANIFOLD ASSEMBLY) (Continued)**

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**

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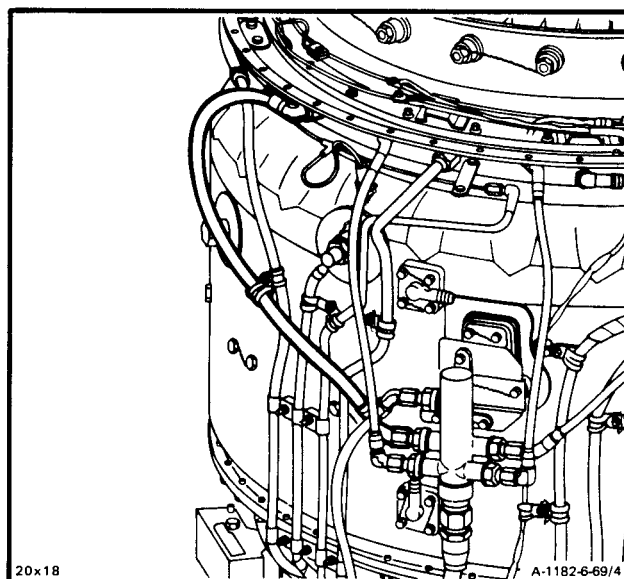
**6-69 INSTALL HOSE ASSEMBLY(FLOW DIVIDER LEFT SIDE SECONDARY TO  
MANIFOLD ASSEMBLY) (Continued)**

---

6-69

FOLLOW-ON MAINTENANCE:

None



**END OF TASK**

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

6-70

### INITIAL SETUP

#### **Applicable Configurations:**

All

#### **Tools:**

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

#### **Materials:**

Wiping Rag (E58)

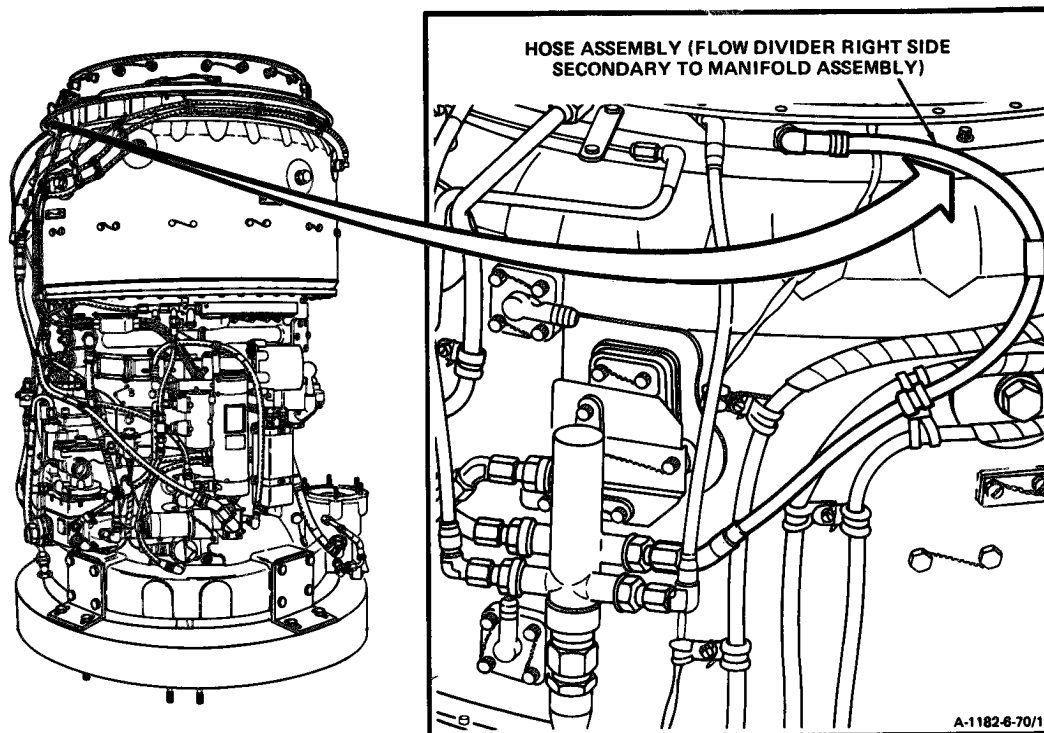
#### **Personnel Required:**

68B10 Aircraft Powerplant Repairer

### *General Safety Instructions:*

**WARNING**

Turbine fuels are very flammable. They may cause drying and irritation of skin or eyes. Handle only in 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.

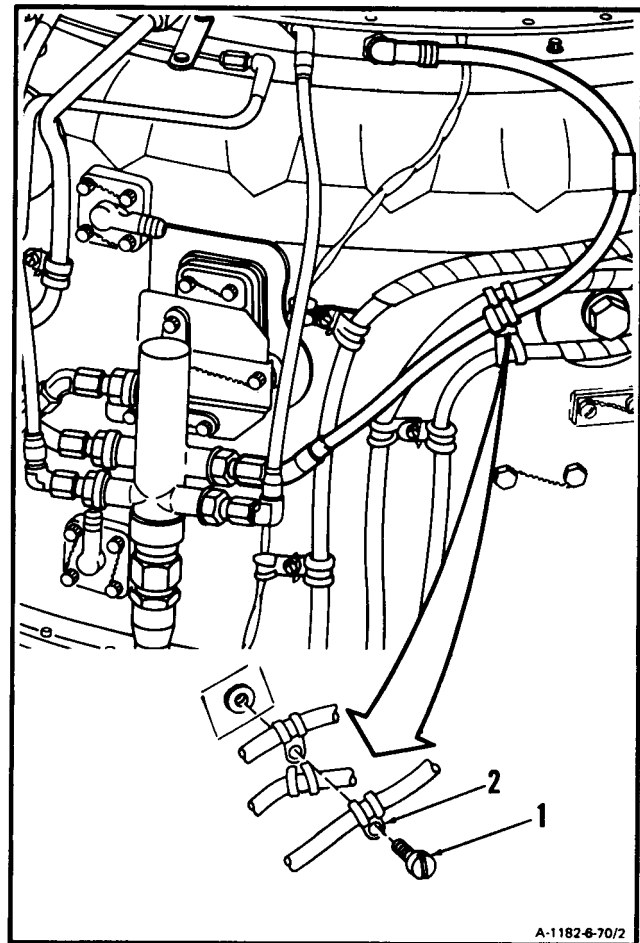


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**6-70 REMOVE HOSE ASSEMBLY (FLOW DIVIDER RIGHT SIDE SECONDARY  
TO MANIFOLD ASSEMBLY) (Continued)**

6-70

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



A-1182-6-70/2

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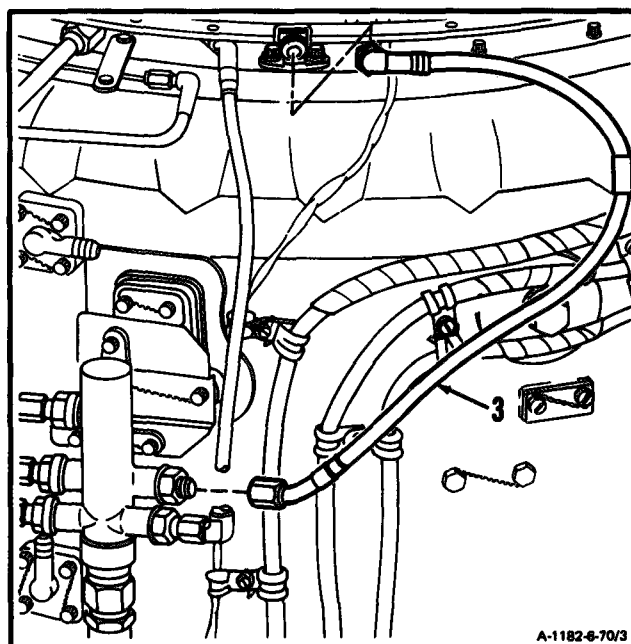
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**6-70 REMOVE HOSE ASSEMBLY (FLOW DIVIDER RIGHT SIDE SECONDARY  
TO MANIFOLD ASSEMBLY) (Continued)**

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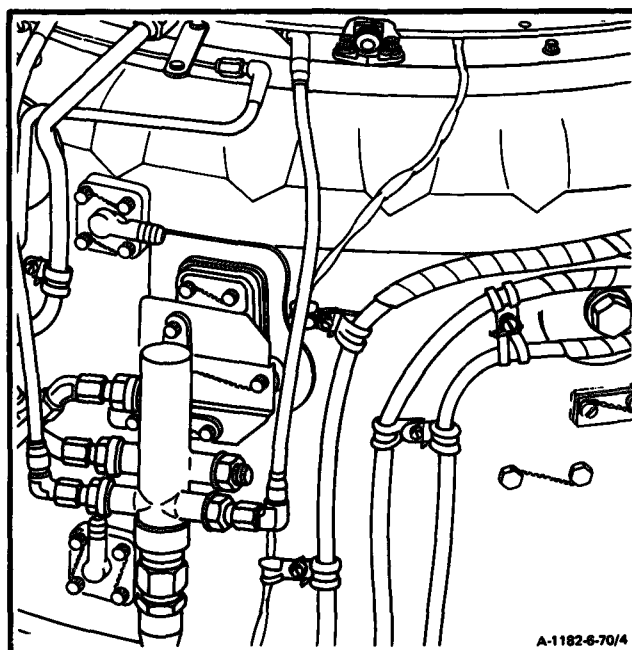
6-70

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



FOLLOW-ON MAINTENANCE:

None



**END OF TASK**

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

INITIAL SETUP

**Applicable Configurations:**

All

**Tools:**

Powerplant Mechanic's Tool Kit,

NSN 5180-00-323-4944

Technical Inspection Tool Kit,

NSN 5180-00-323-5114

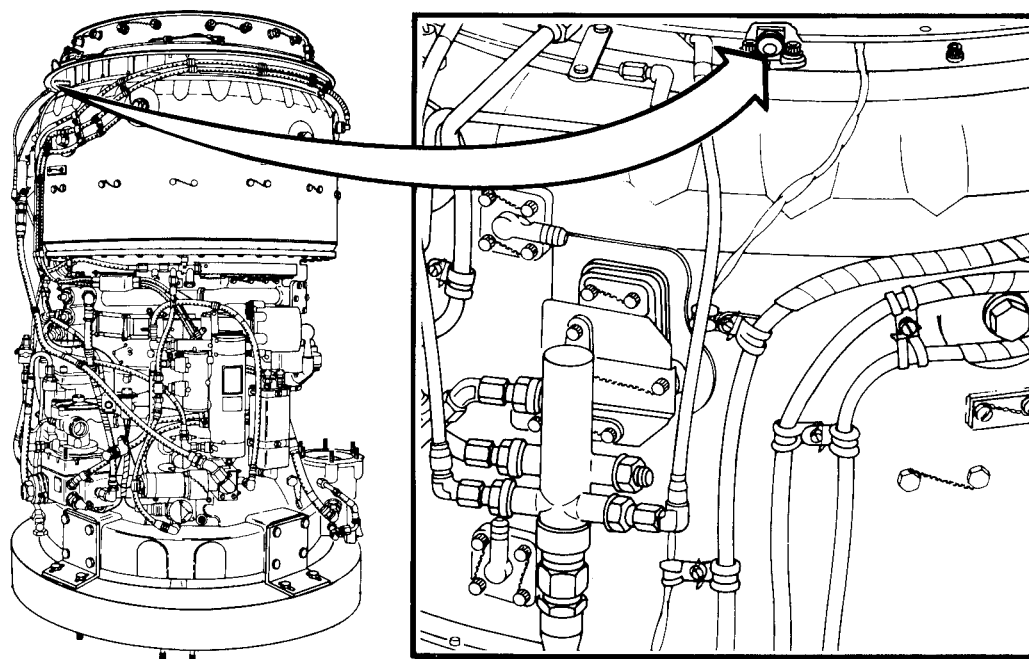
**Materials:**

Lockwire (E29)

**Personnel Required:**

68B10 Aircraft Powerplant Repairer

68B30 Aircraft Powerplant Inspector



A-1182-6-71/1

**GO TO NEXT PAGE**



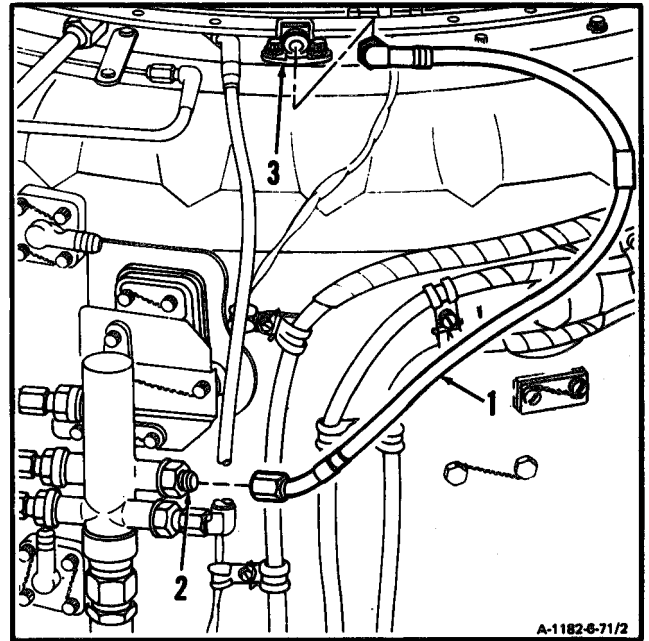
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**6-71 INSTALL HOSE ASSEMBLY (FLOW DIVIDER RIGHT SIDE SECONDARY  
TO MANIFOLD ASSEMBLY) (Continued)**

---

6-71

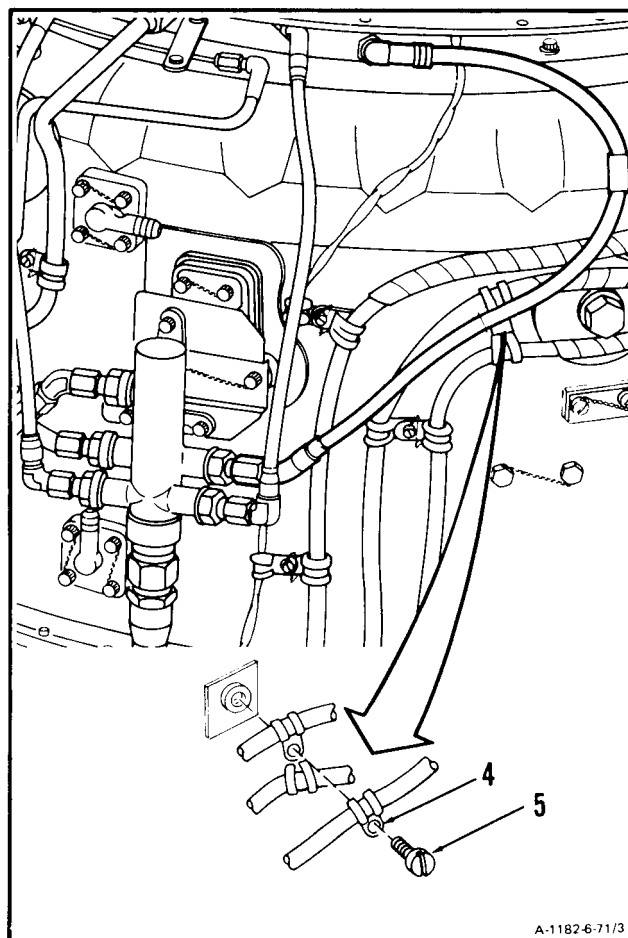
1. Install hose assembly (1) on reducer (2) and elbow (3).



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**

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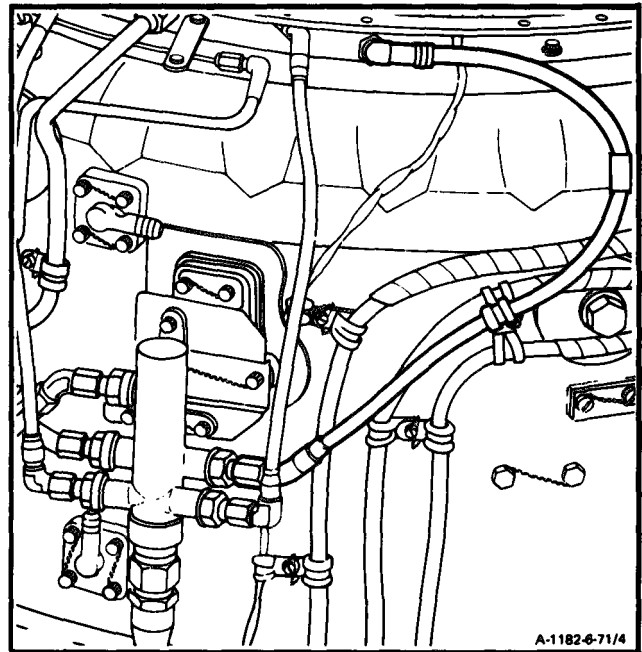
**6-71 INSTALL HOSE ASSEMBLY (FLOW DIVIDER RIGHT SIDE SECONDARY  
TO MANIFOLD ASSEMBLY) (Continued)**

---

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:**

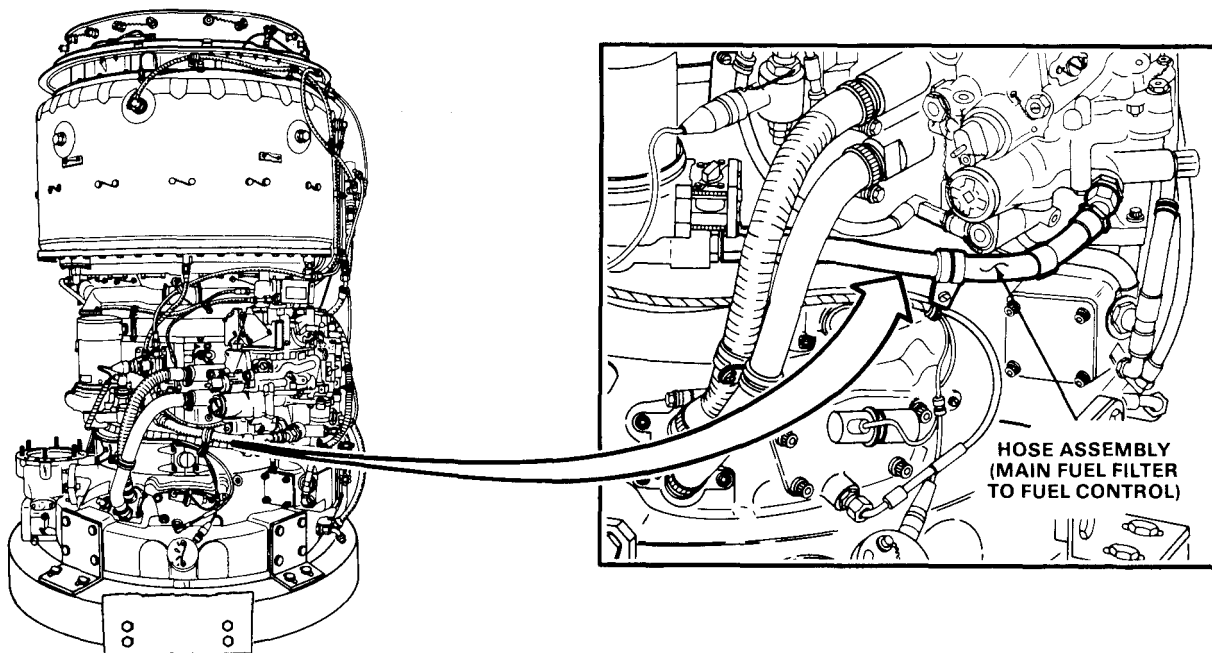
- Wiping Rag (E58)

**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.



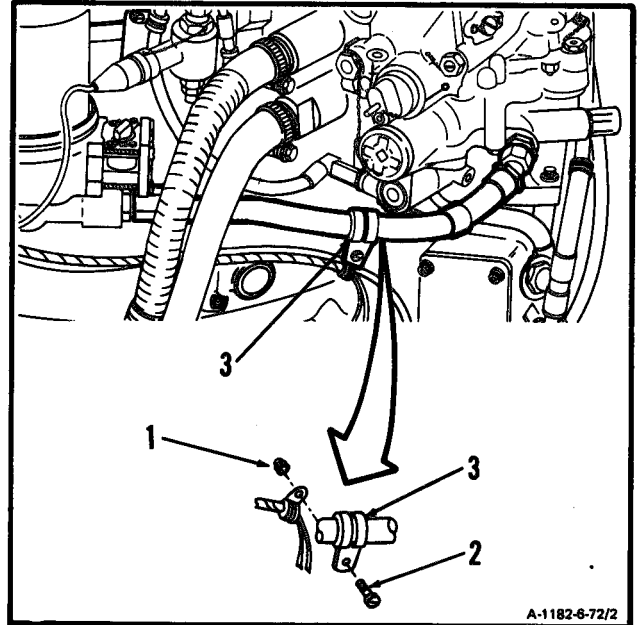
A-1182-6-72/1

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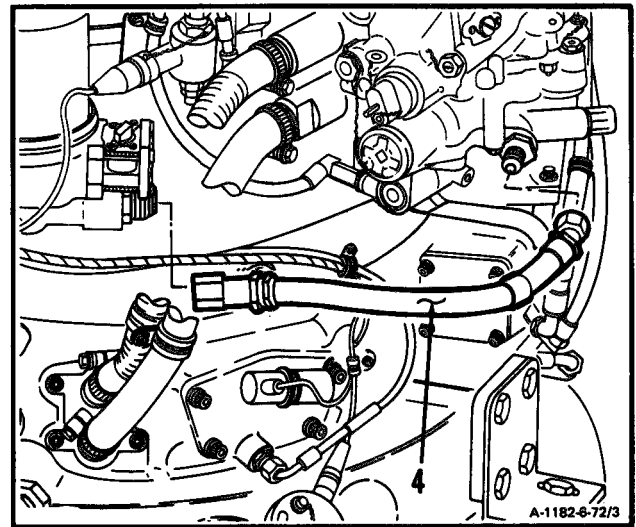
**6-72 REMOVE HOSE ASSEMBLY (MAIN FUEL FILTER TO FUEL CONTROL) (Continued)**

6-72

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



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



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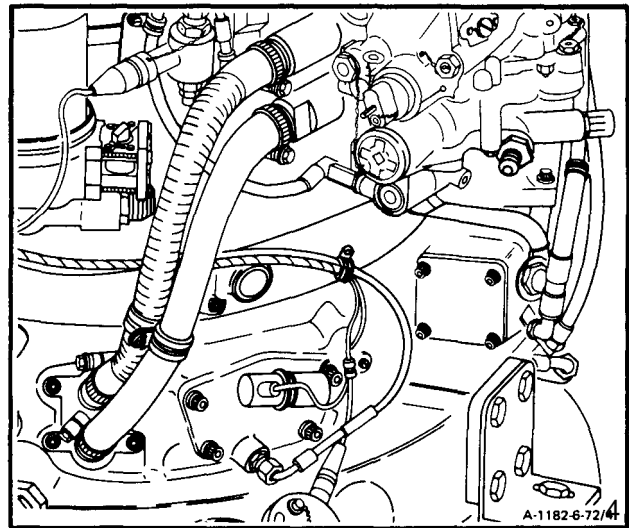
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**6-72 REMOVE HOSE ASSEMBLY (MAIN FUEL FILTER TO FUEL CONTROL) (Continued)** 6-72

---

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 5180-00-323-4944Technical Inspection Tool Kit,  
NSN 5180-00-323-5114

Open-End Wrench, 1-Inch

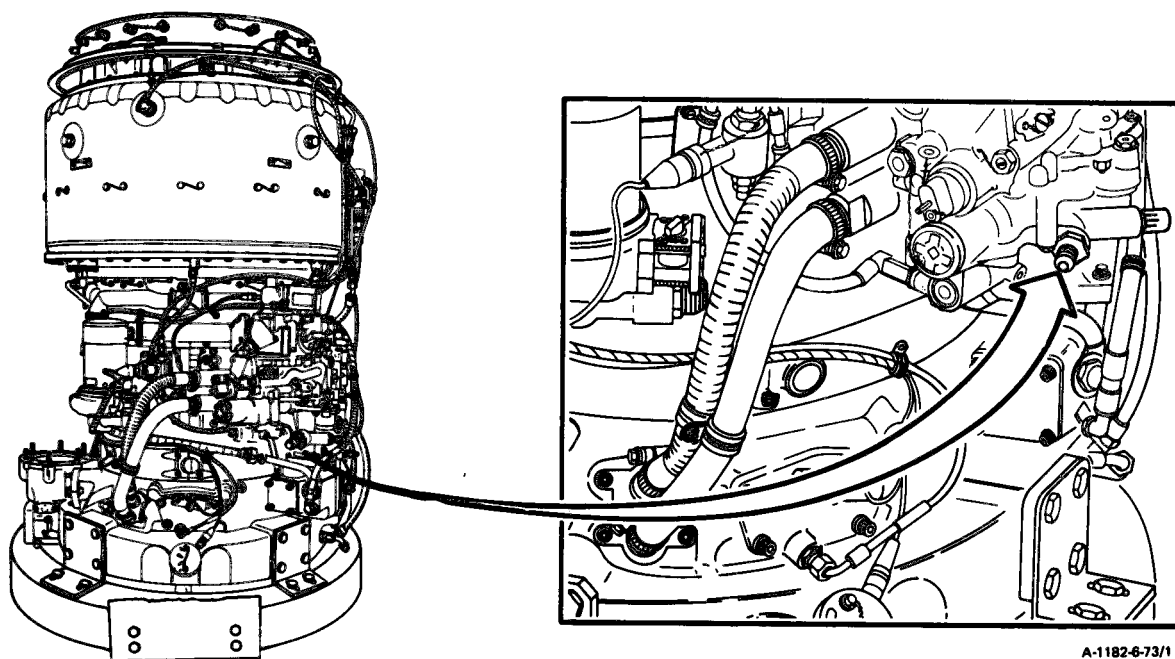
**Materials:**

None

**Personnel Required:**

68B10 Aircraft Powerplant Repairer

68B30 Aircraft Powerplant Inspector

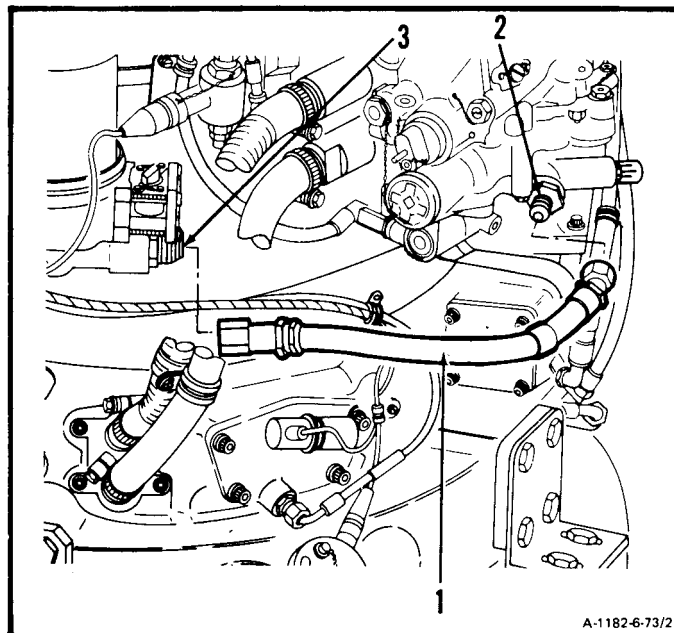


A-1182-6-73/1

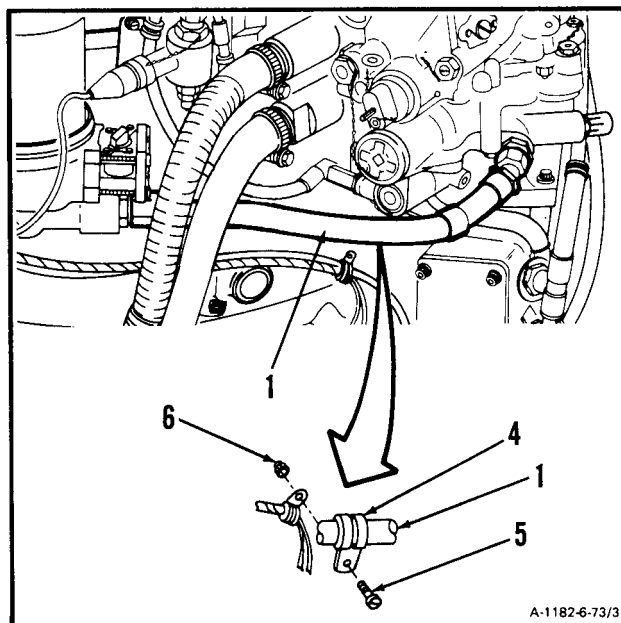
**GO TO NEXT PAGE**

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**

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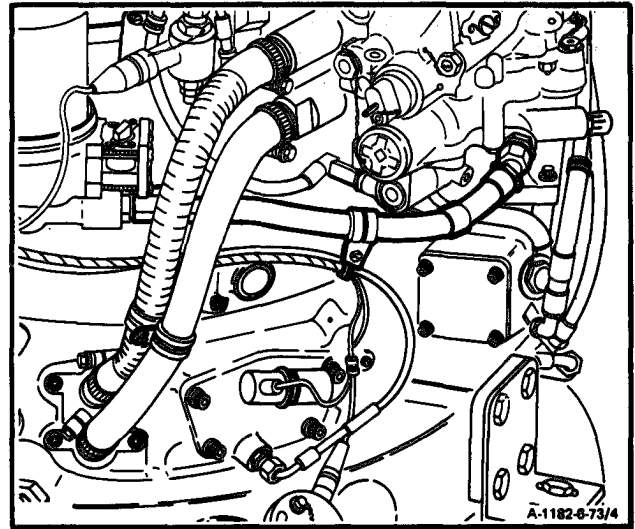
**6-73 INSTALL HOSE ASSEMBLY (MAIN FUEL FILTER TO FUEL CONTROL) (Continued)**

---

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:**

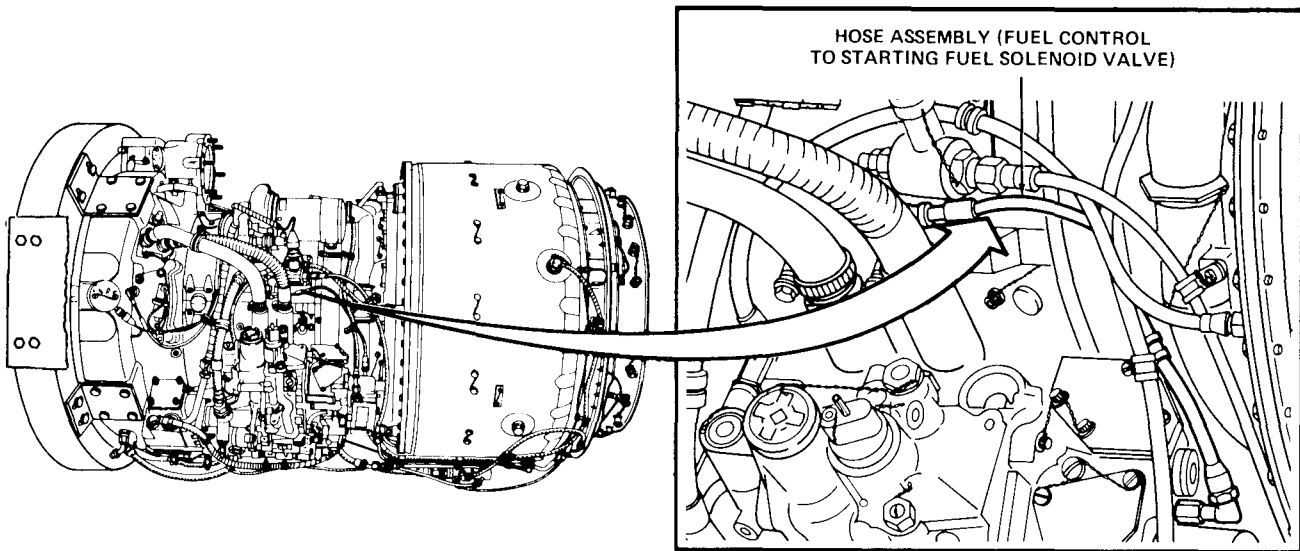
Wiping Rag (E58)

**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.



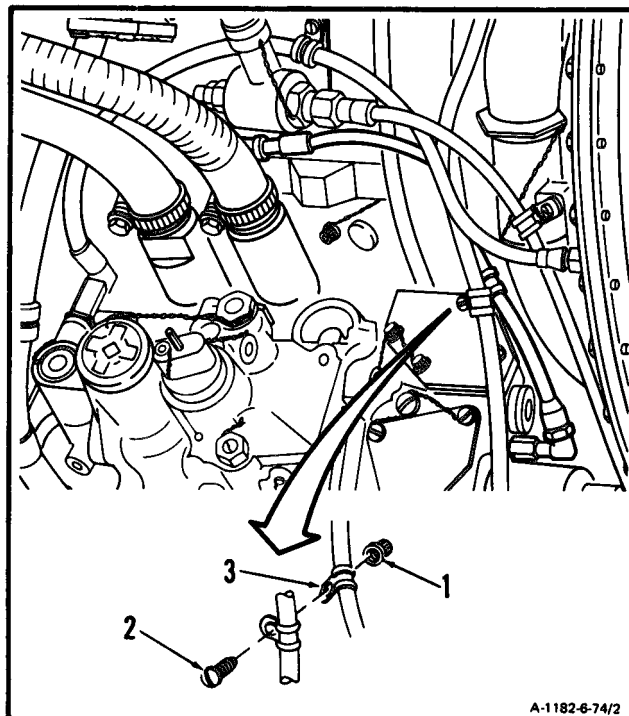
A-1182-6-74/1

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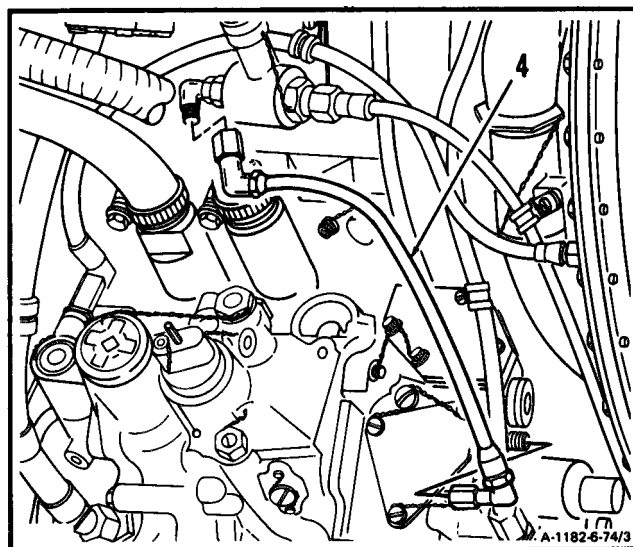
**6-74 REMOVE HOSE ASSEMBLY(FUEL CONTROL TO STARTING FUEL SOLENOID VALVE) (Continued)**

6-74

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



2. Disconnect and remove hose assembly (4).

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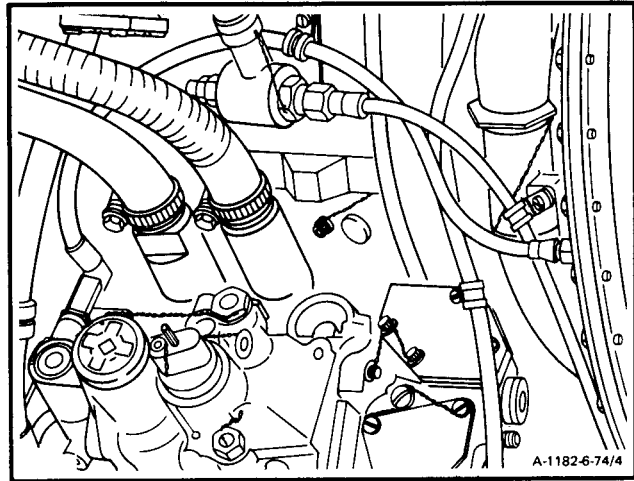
**6-74 REMOVE HOSE ASSEMBLY (FUEL CONTROL TO STARTING FUEL SOLENOID VALVE) (Continued)**

---

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

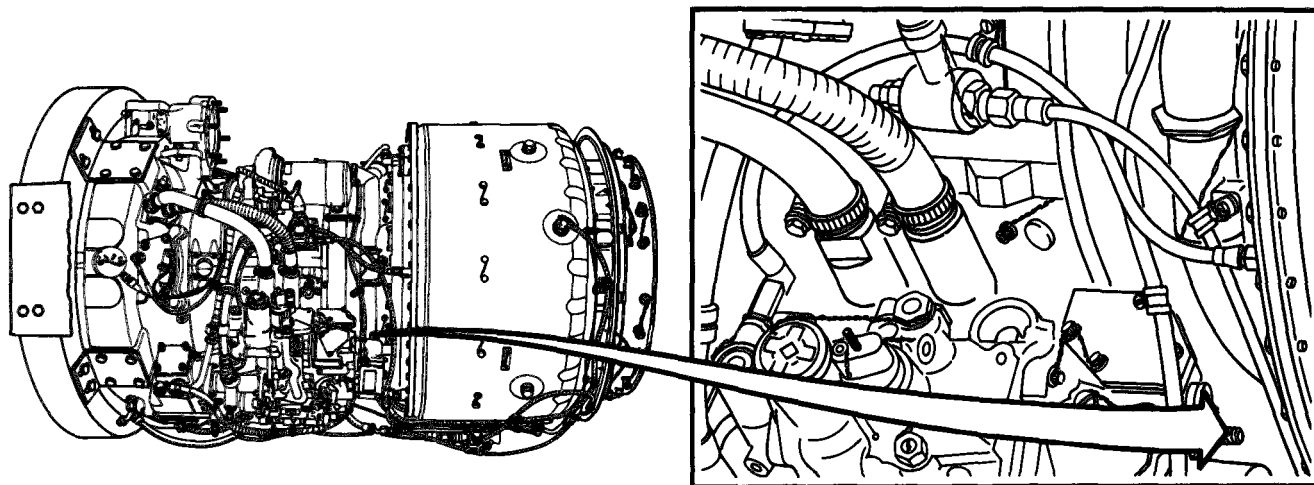
**Tools:**Powerplant Mechanic's Tool Kit,  
NSN 5180-00-323-4944Technical Inspection Tool Kit,  
NSN 5180-00-323-5114**Materials:**

None

**Personnel Required:**

68B10 Aircraft Powerplant Repairer

68B30 Aircraft Powerplant Inspector

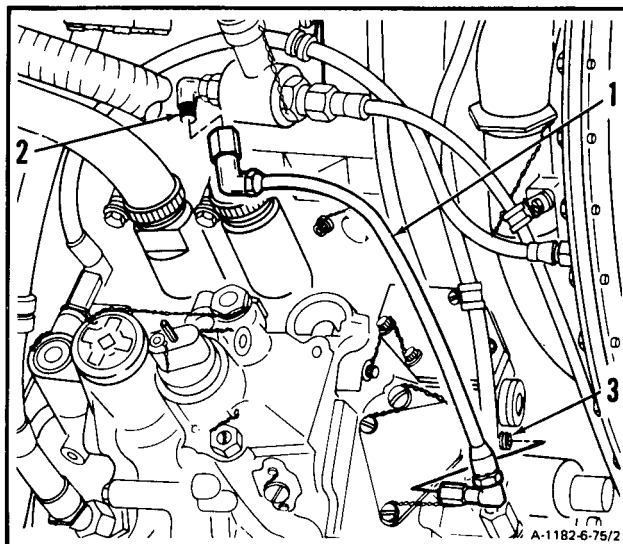


A-1182-6-75/1

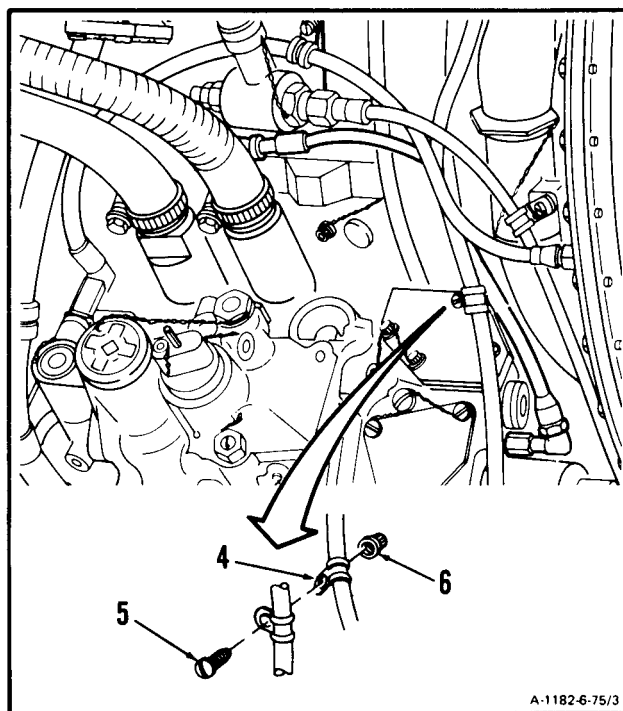
**GO TO NEXT PAGE**

**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**

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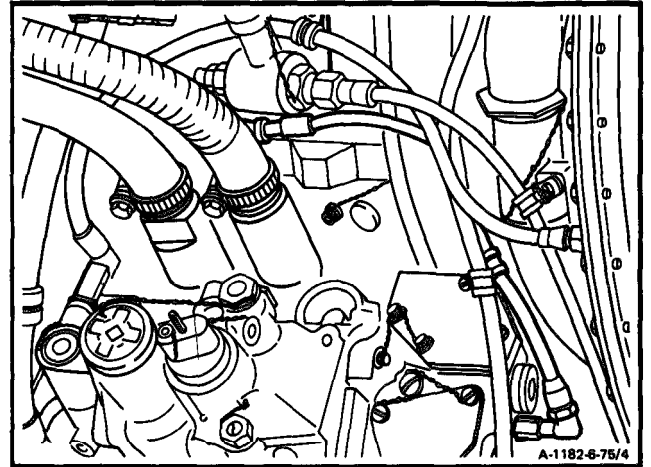
**6-75 INSTALL HOSE ASSEMBLY (FUEL CONTROL TO STARTING FUEL  
SOLENOID VALVE) (Continued)**

---

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:**

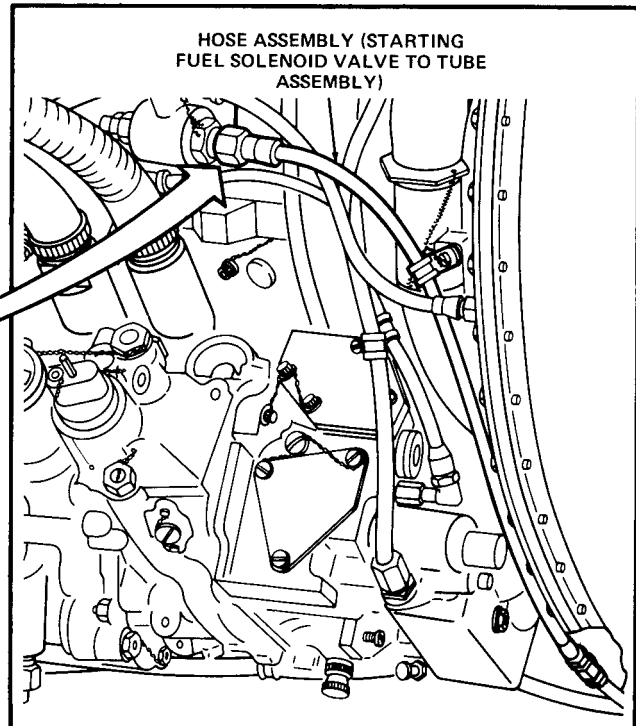
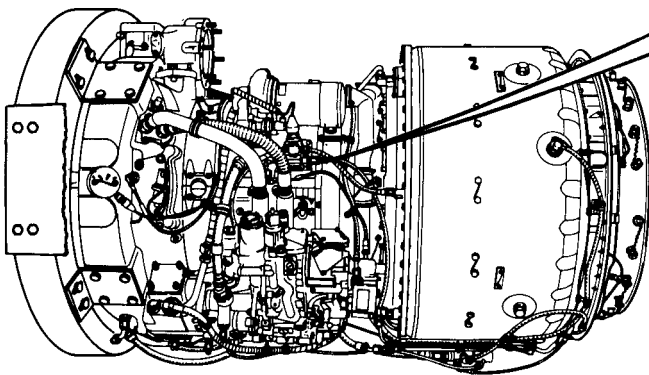
Wiping Rag (E58)

**Personnel Required:**

68B10 Aircraft Powerplant Repairer

**WARNING**

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.



HOSE ASSEMBLY (STARTING FUEL SOLENOID VALVE TO TUBE ASSEMBLY)

A-1182-6-76/1

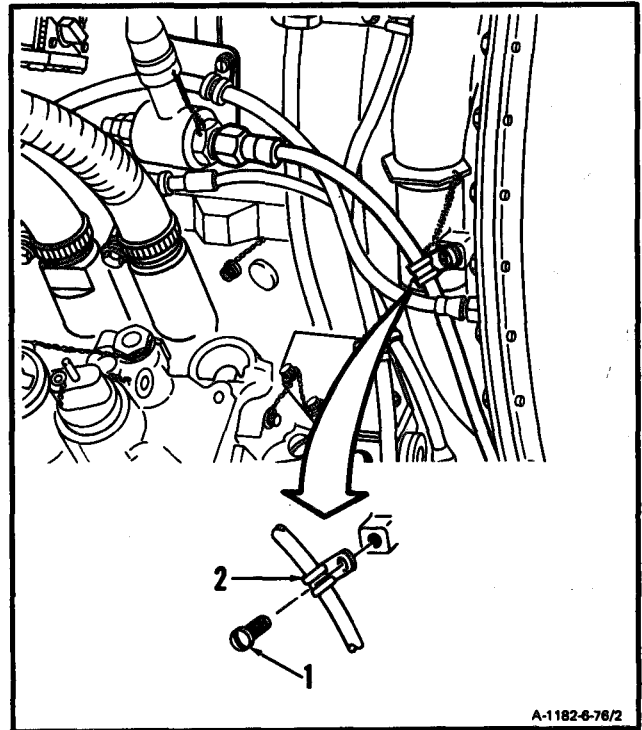
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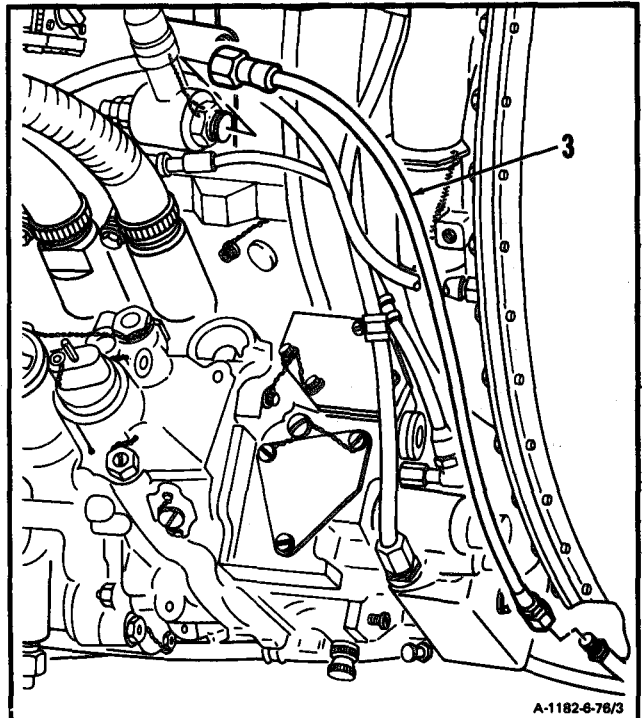
**6-76 REMOVE HOSE ASSEMBLY (Starting FUEL SOLENOID VALVE TO TUBE ASSEMBLY) (Continued)**

6-76

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



2. Disconnect and remove hose assembly (3).

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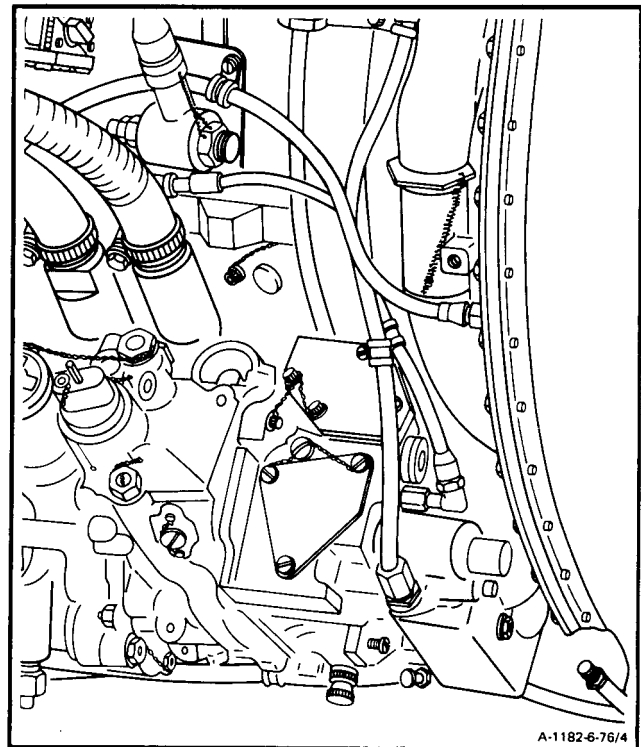
**6-76 REMOVE HOSE ASSEMBLY (Starting FUEL SOLENOID VALVE TO TUBE ASSEMBLY) (Continued)**

---

6-76

**FOLLOW-ON MAINTENANCE:**

None



**END OF TASK**

---

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

---

6-77

**INITIAL SETUP****Applicable Configurations:**

All

**Tools:**

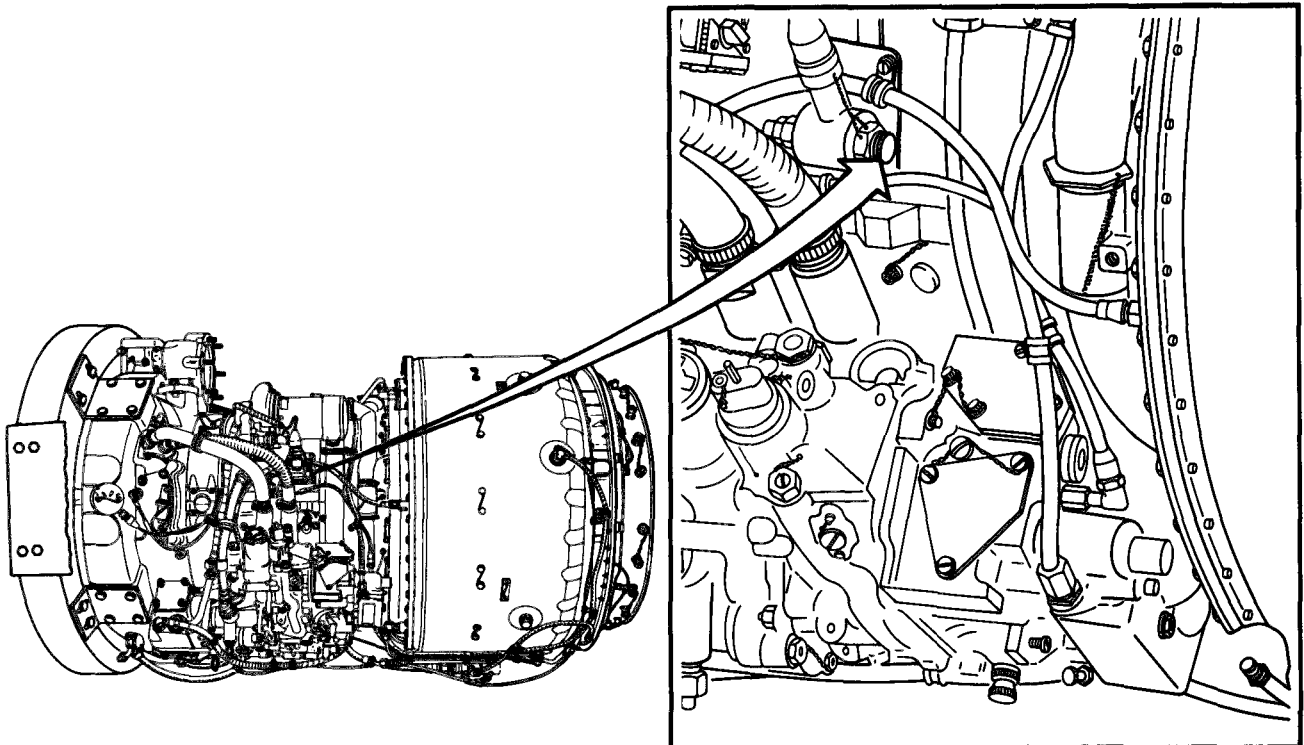
Powerplant Mechanic's Tool Kit,  
NSN 5180-00-323-4944  
Technical Inspection Tool Kit,  
NSN 5180-00-323-5114

**Materials:**

Lockwire (E29)

**Personnel Required:**

68B10 Aircraft Powerplant Repairer  
68B30 Aircraft Powerplant Inspector

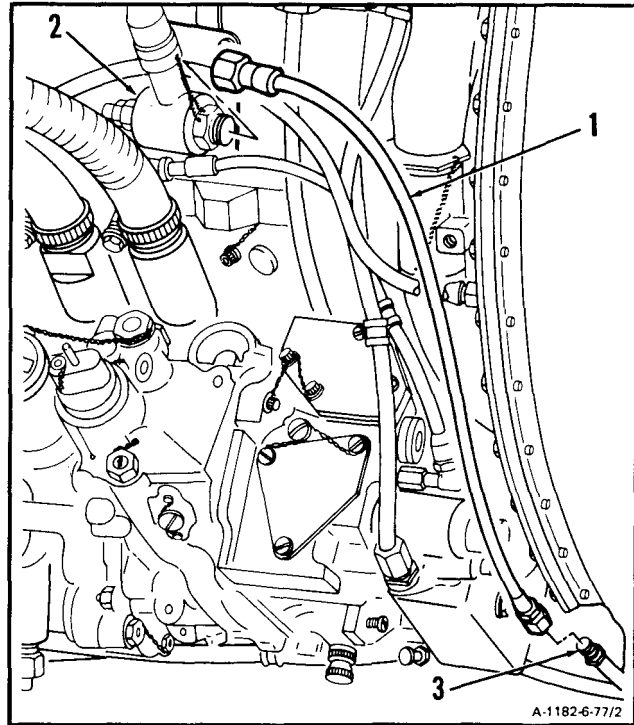


A-1182-6-77/1

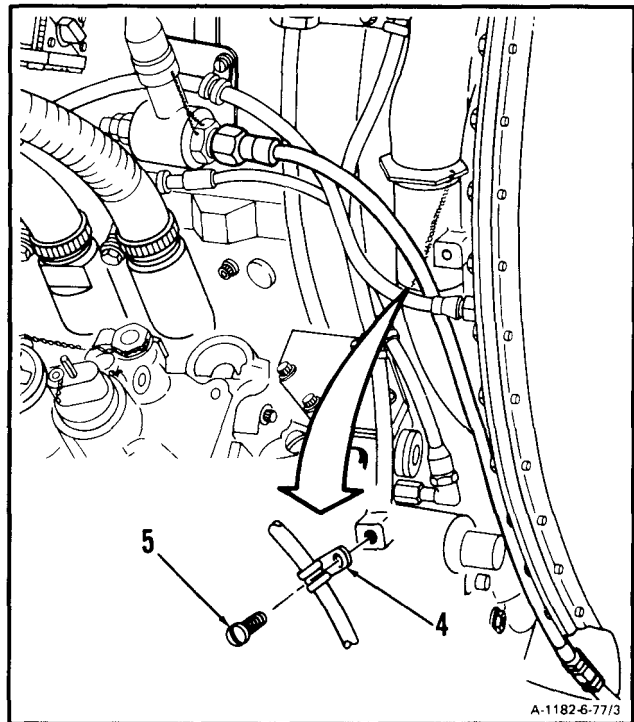
**GO TO NEXT PAGE**

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

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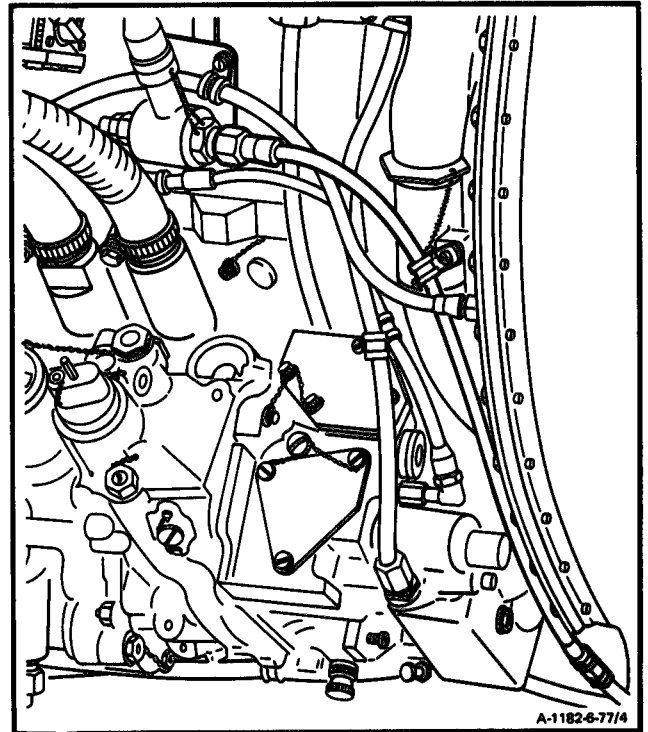
**6-77 INSTALL HOSE ASSEMBLY (STARTING FUEL SOLENOID VALVE TO TUBE ASSEMBLY) (Continued)**

---

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

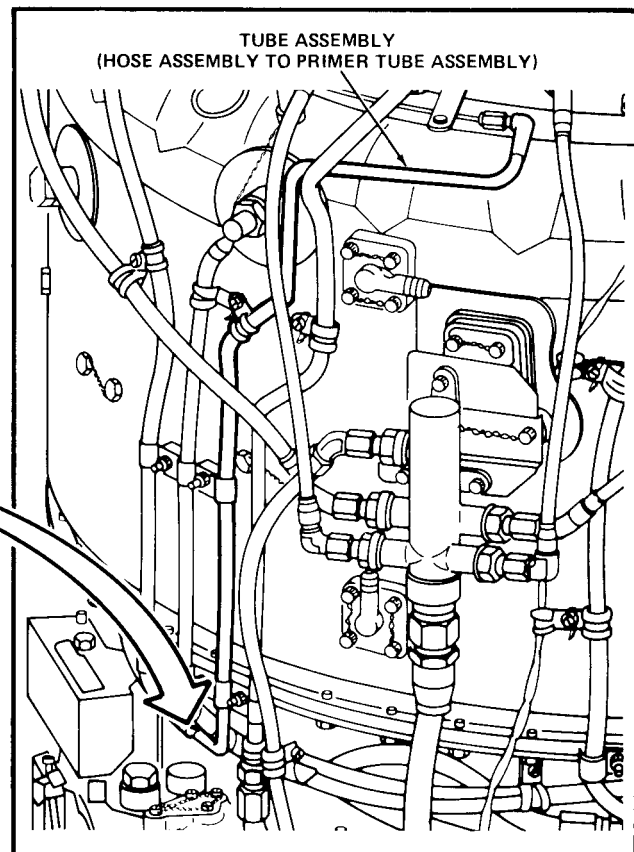
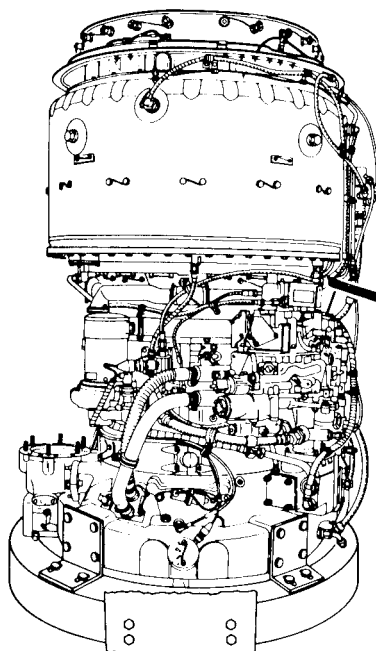
**Materials:**

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.



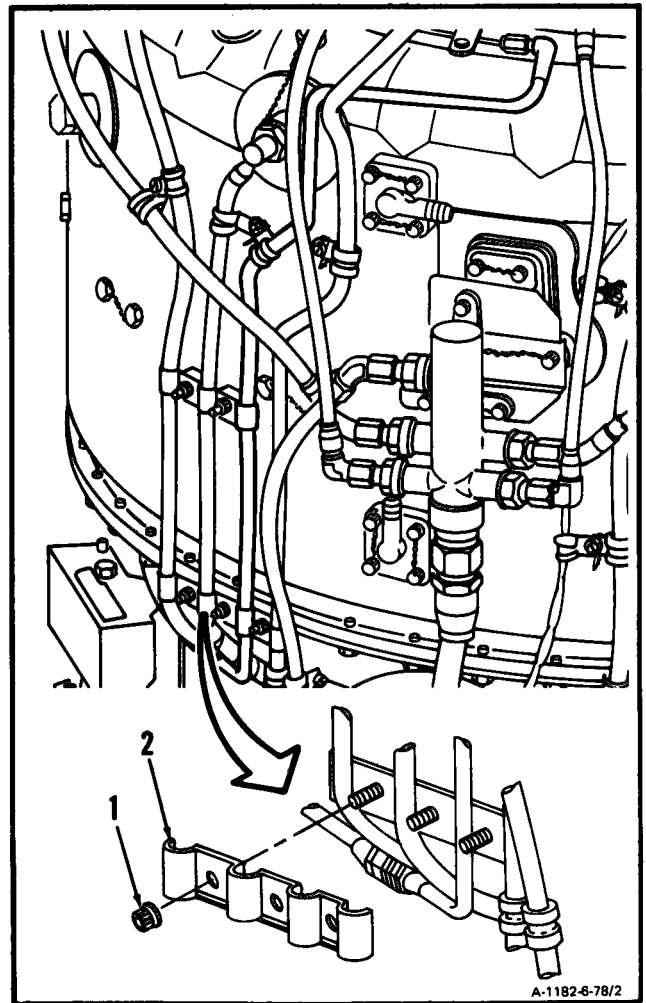
A-1182-6-78/1

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

6-78

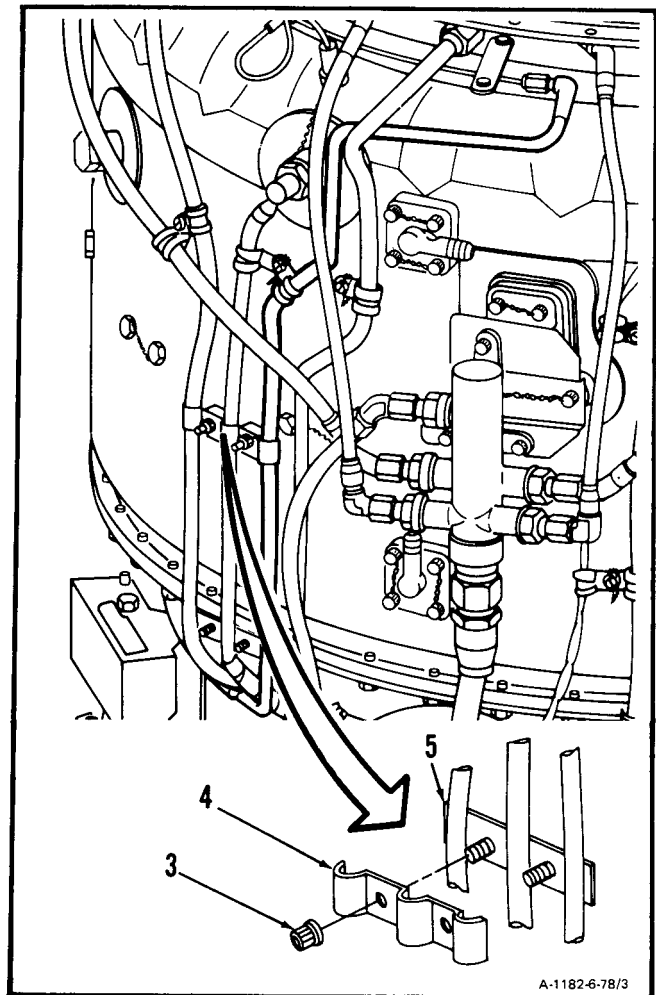
1. Remove three nuts (1) and **clamp** (2).

**GO TO NEXT PAGE**

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

6-78

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



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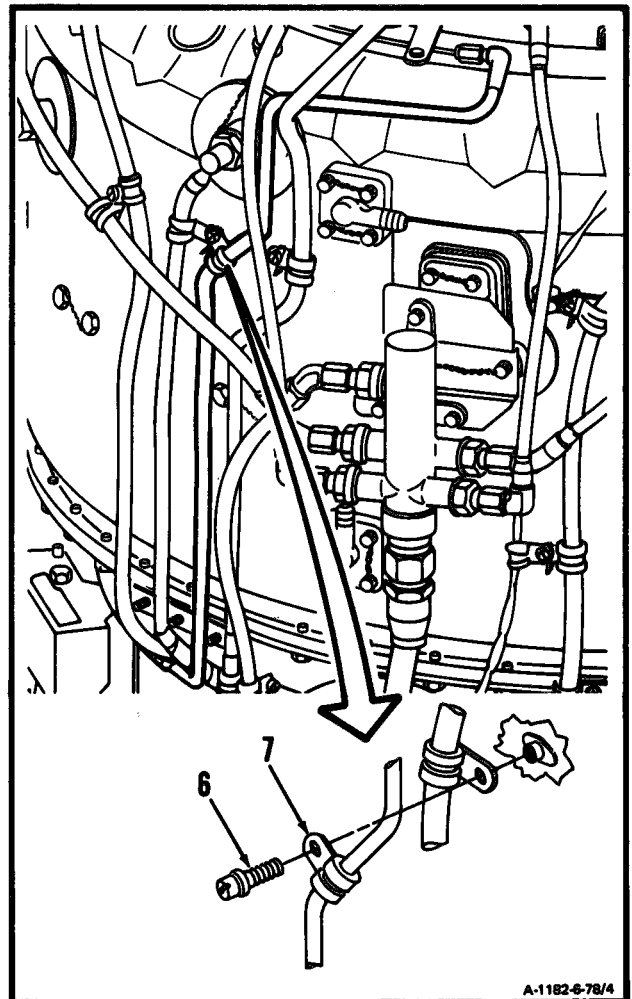
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**6-78 REMOVE TUBE ASSEMBLY (HOSE ASSEMBLY TO PRIMER TUBE ASSEMBLY) (Continued)**

---

6-78

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

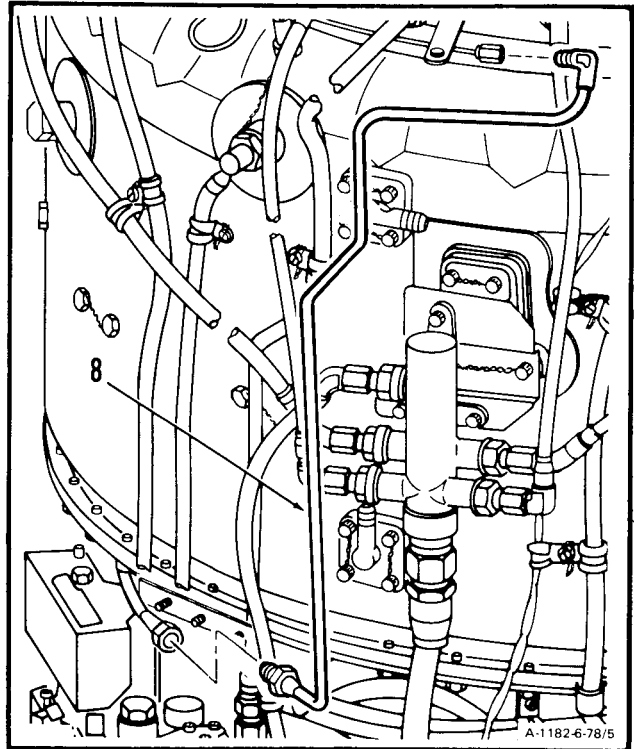


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**6-78 REMOVE TUBE ASSEMBLY (HOSE ASSEMBLY TO PRIMER TUBE ASSEMBLY) (Continued)**

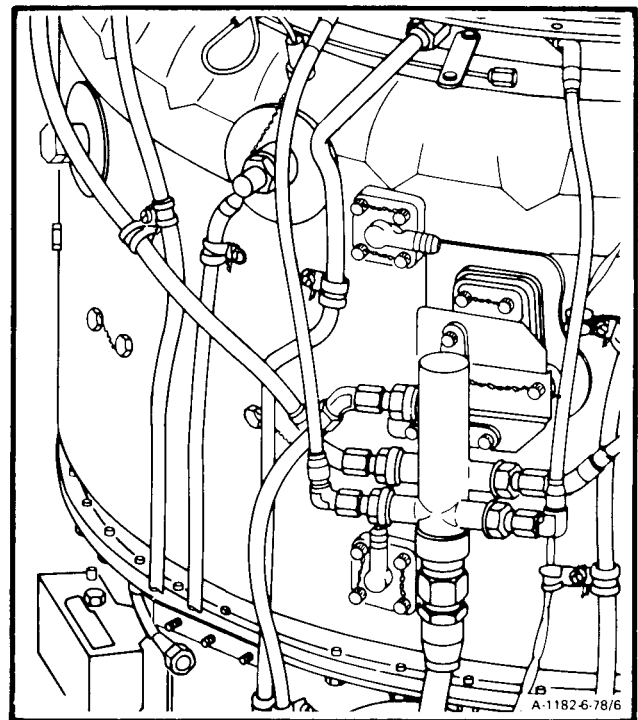
6-78

4. Disconnect and remove tube assembly (8).



FOLLOW-ON MAINTENANCE:

None



**END OF TASK**

---

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

---

6-79

**INITIAL SETUP****Applicable Configurations:**

All

**Tools:**

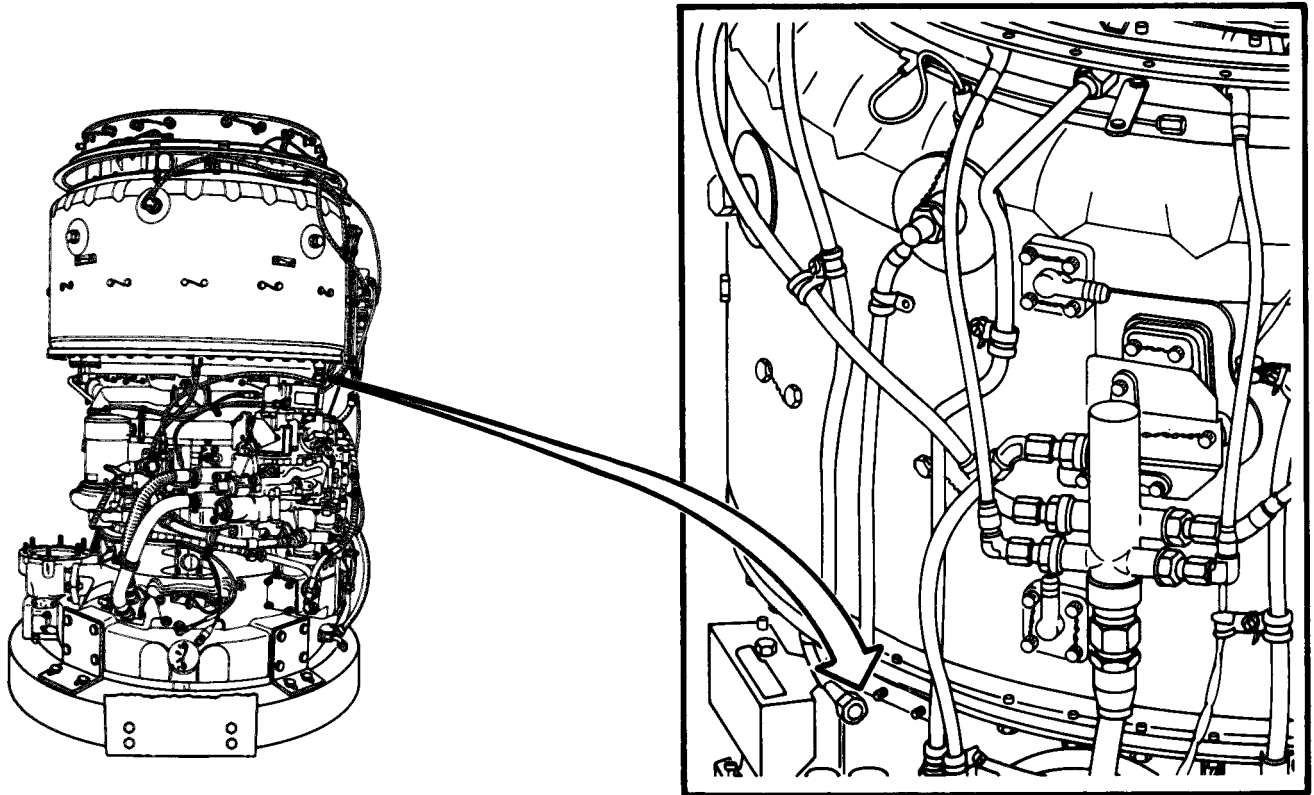
Powerplant Mechanic's Tool Kit,  
NSN 5180-00-323-4944  
Technical Inspection Tool Kit,  
NSN 5180-00-323-5114

**Materials:**

Lockwire (E29).

**Personnel Required:**

68B10 Aircraft Powerplant Repairer  
68B30 Aircraft Powerplant Inspector



A-1182-6-79/1

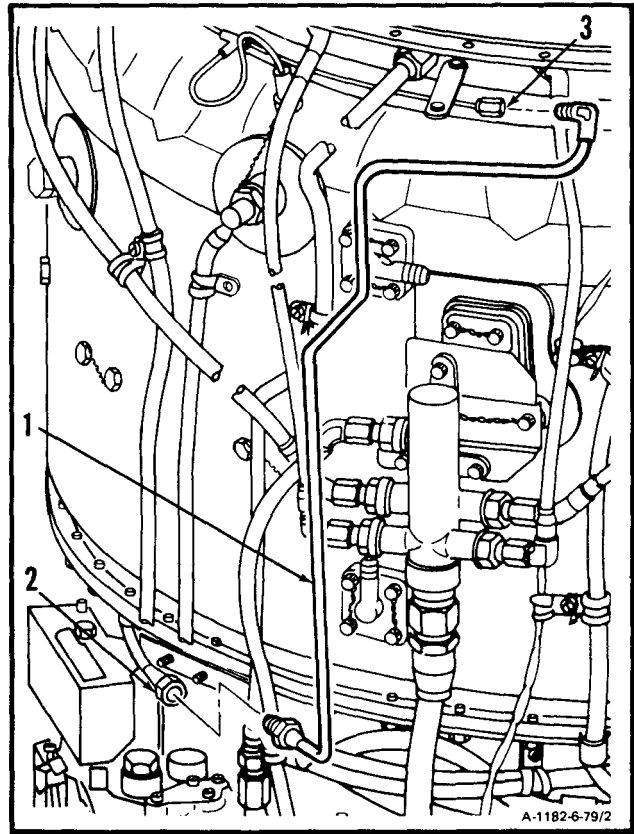
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**6-79 INSTALL TUBE ASSEMBLY (HOSE ASSEMBLY TO PRIMER TUBE ASSEMBLY)**  
(Continued)

---

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

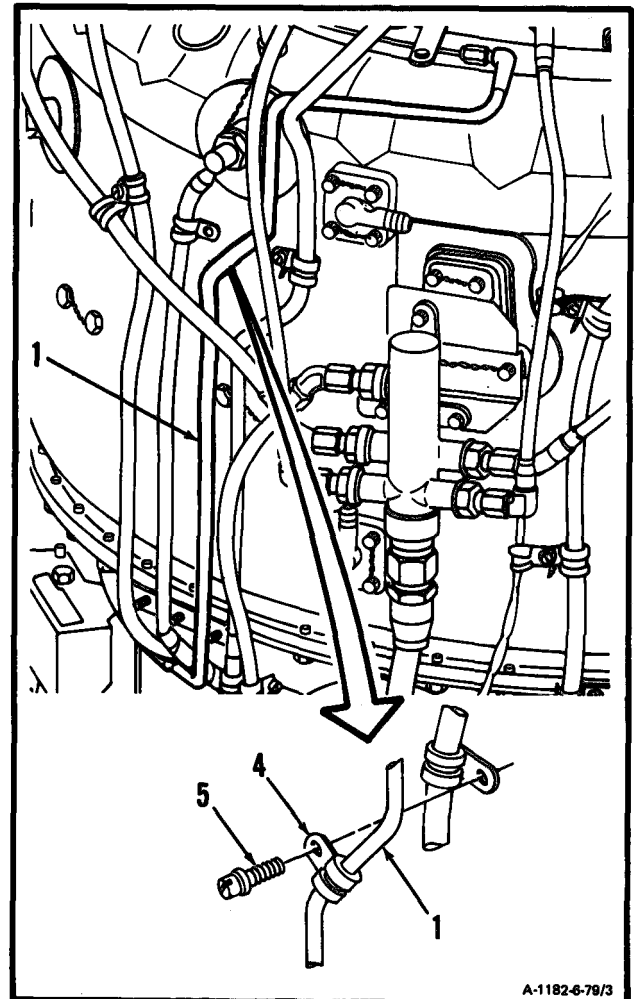


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**6-79 INSTALL TUBE ASSEMBLY (HOSE ASSEMBLY TO PRIMER TUBE ASSEMBLY)**  
(Continued)

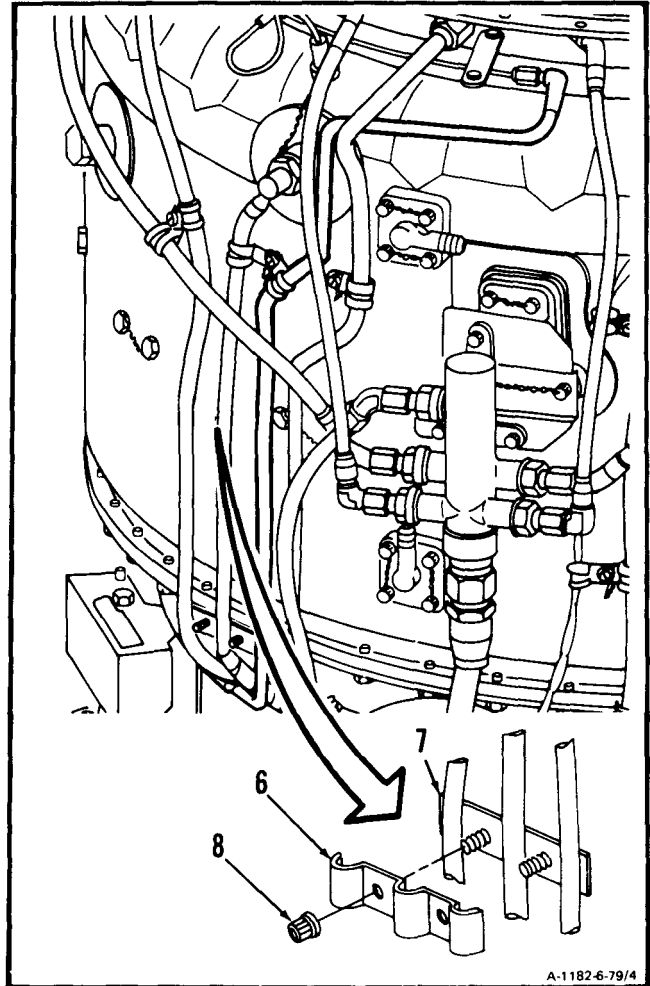
6-79

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

**GO TO NEXT PAGE**

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

3. Install two clamps (6 and 7) and two nuts (8).



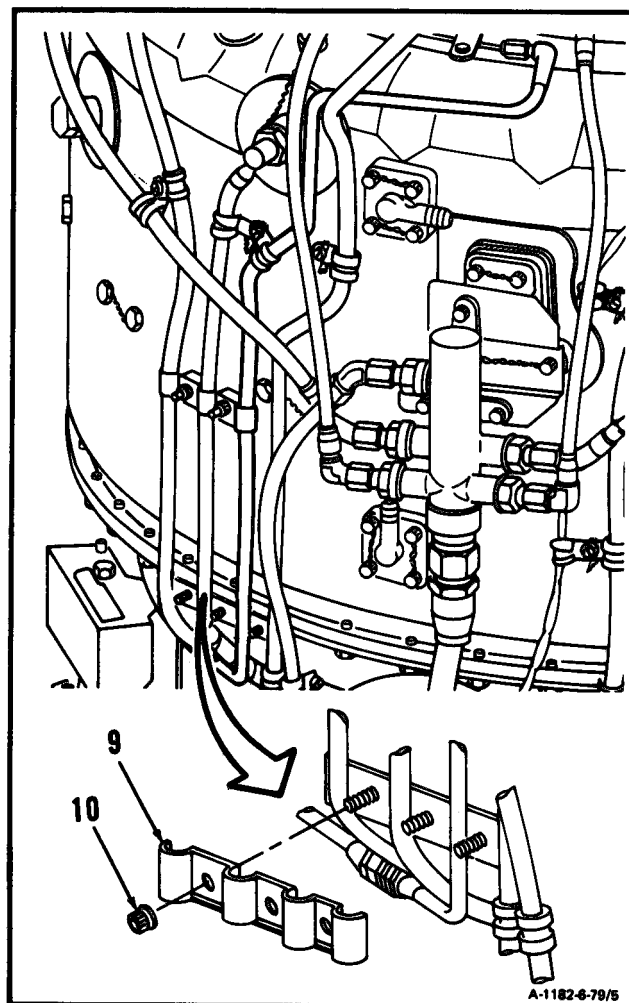
A-1182-6-79/4

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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**

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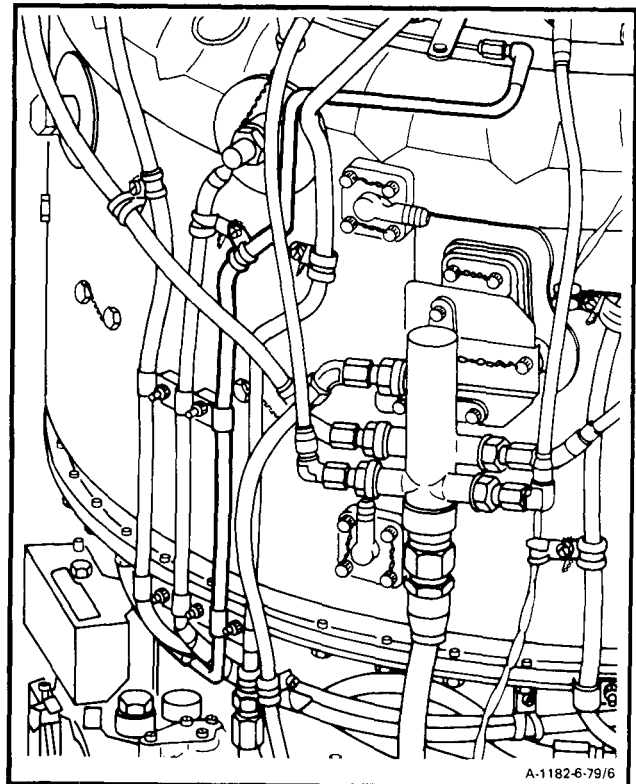
---

**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:**

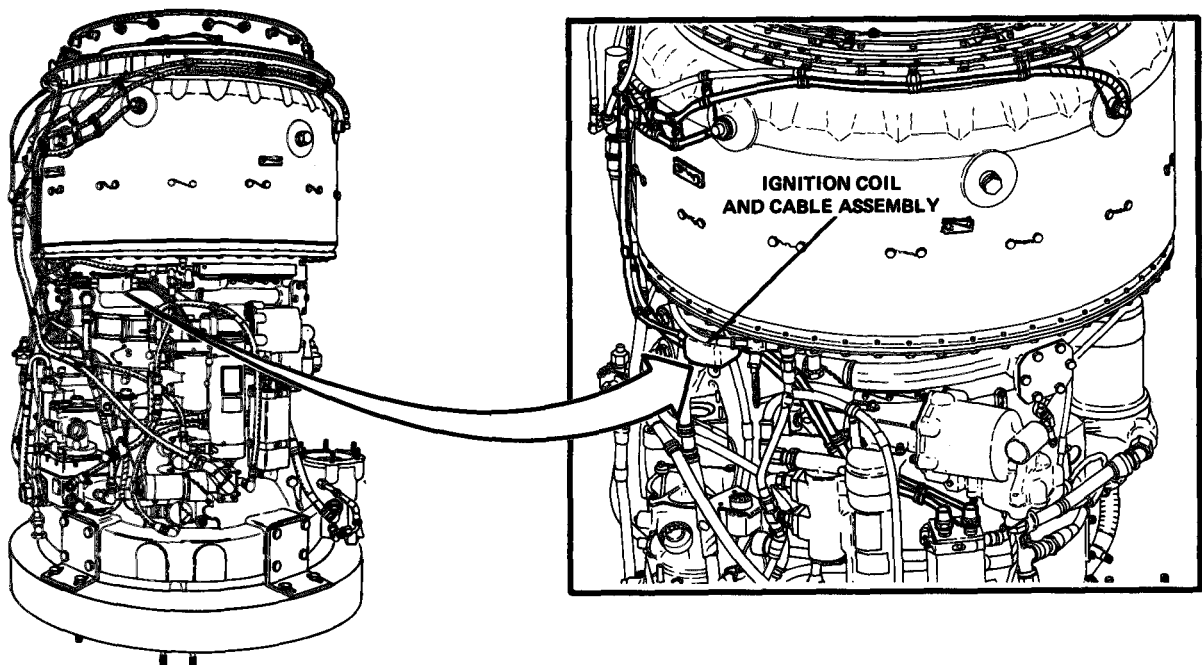
None

**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.

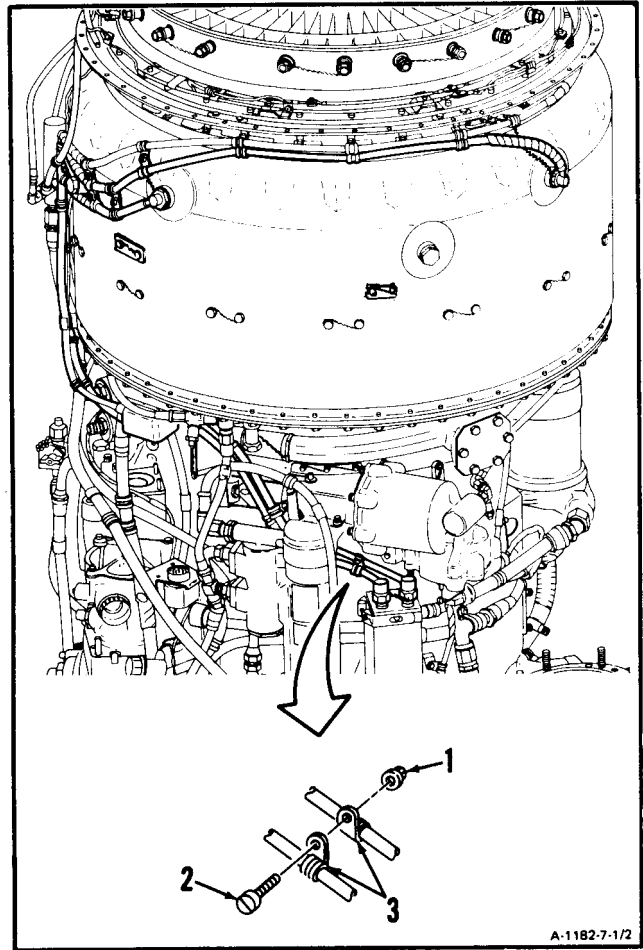


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7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued)

1. Remove nut (1), screw (2), and two clamps (3).



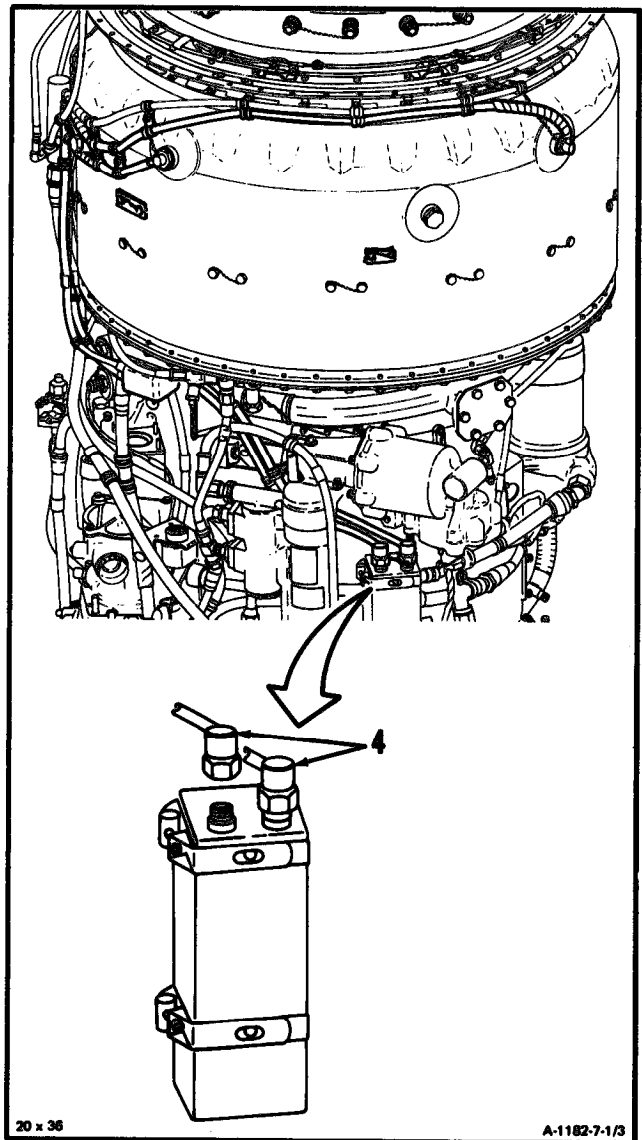
## 7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued)

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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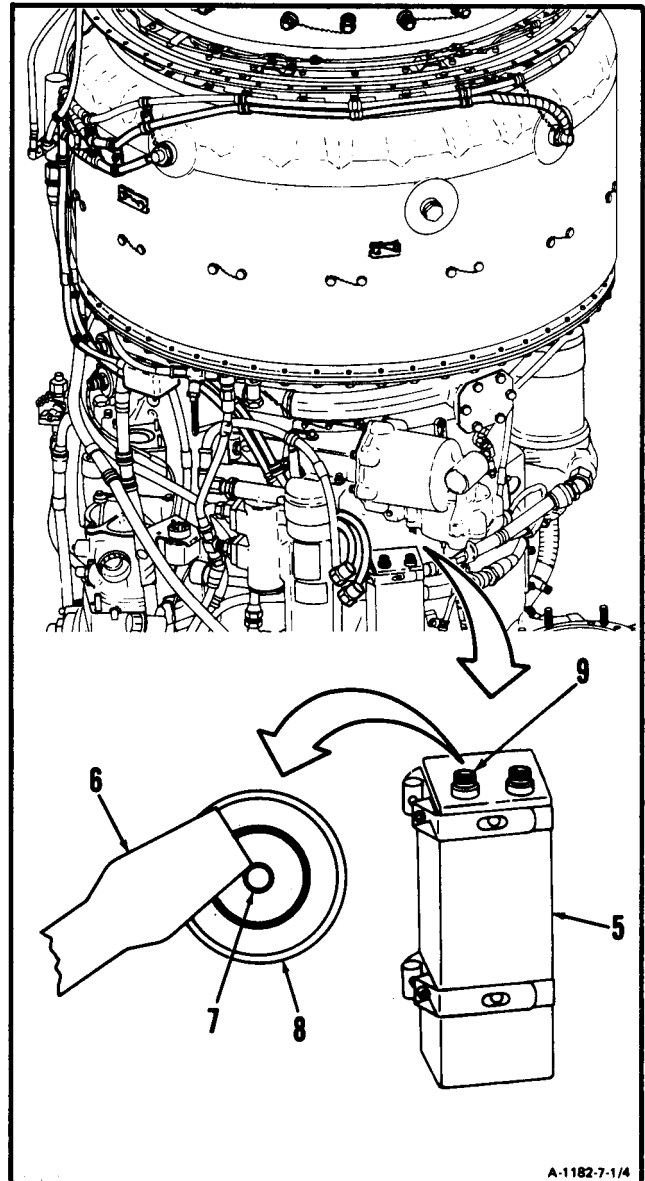
**WARNING**

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).

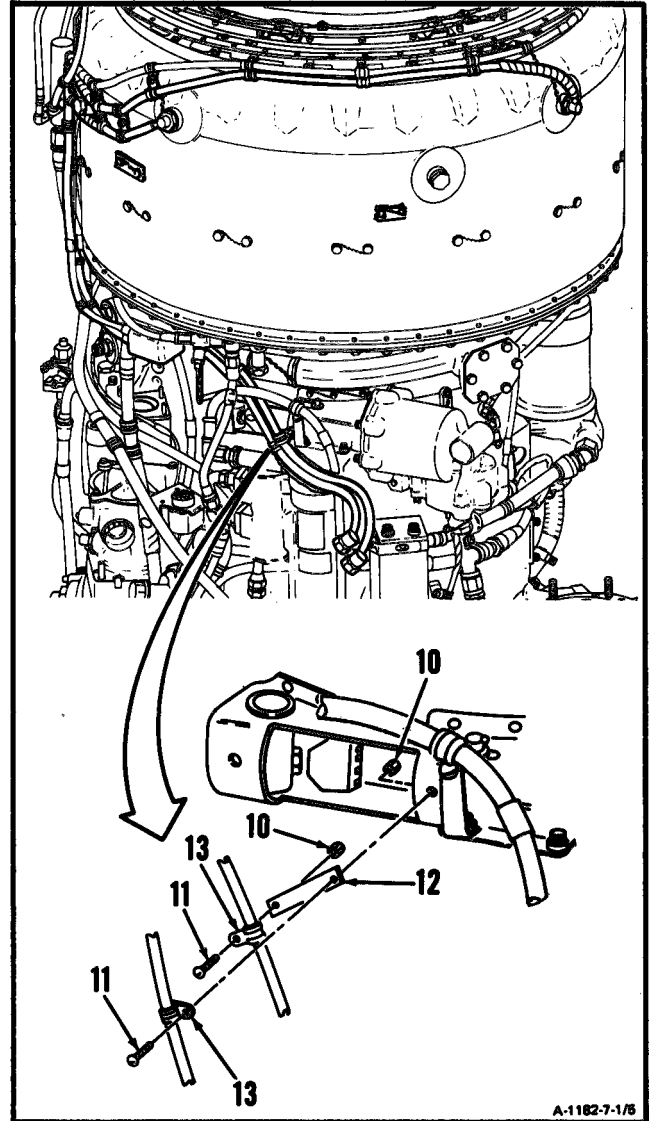


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## 7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued)

7-1

4. Remove two nuts (10), screws (11), bracket (12), and two clamps (13).

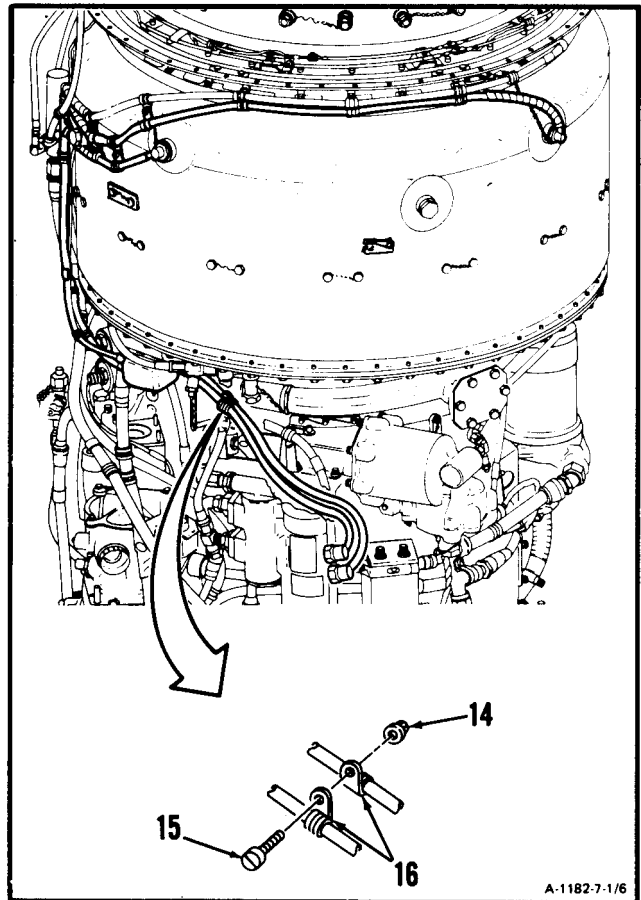


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7-7

7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued)

5. Remove nut (14), screw (15), and two clamps (16).



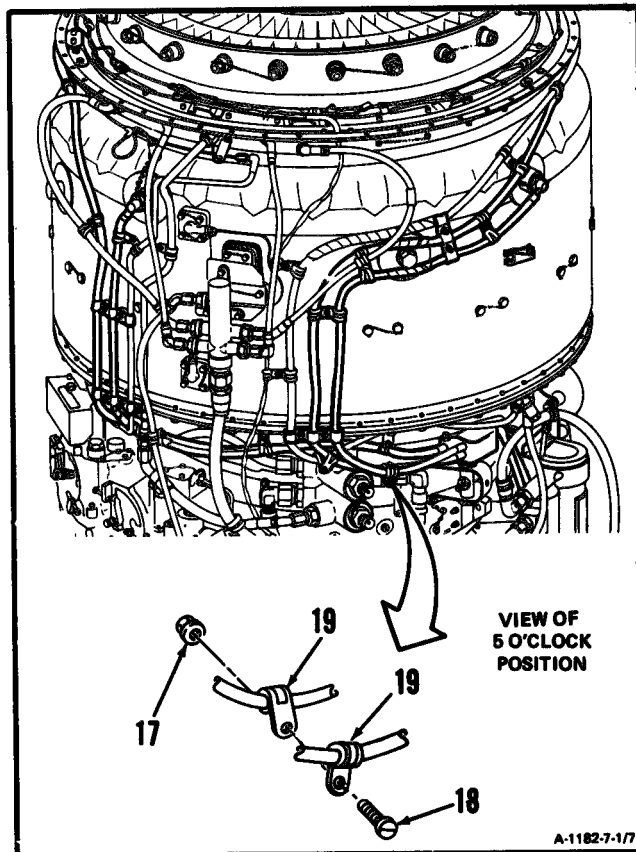
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**7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued)**

7-1

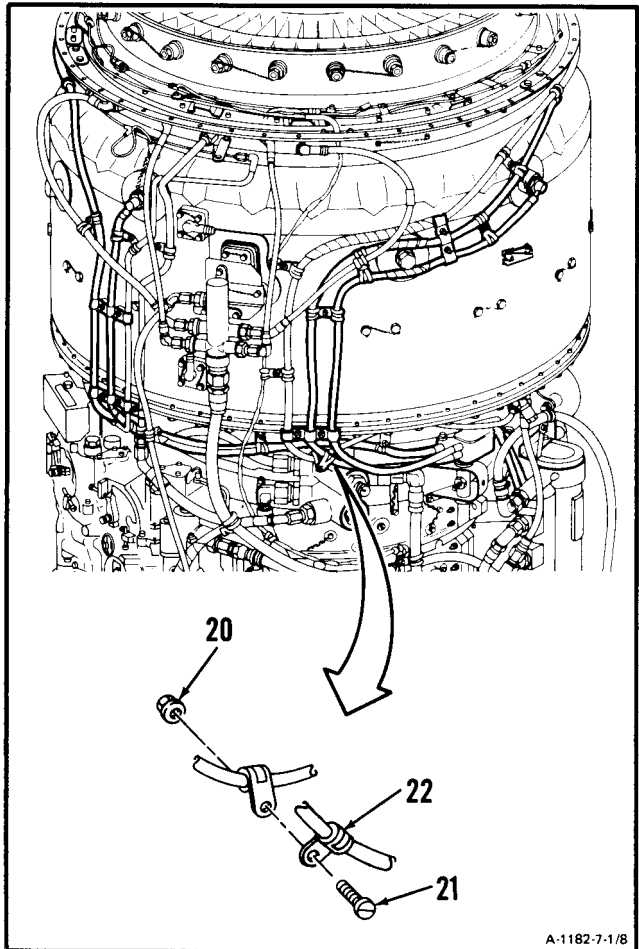
6. Remove nut (17), screw (18), and two clamps (19).



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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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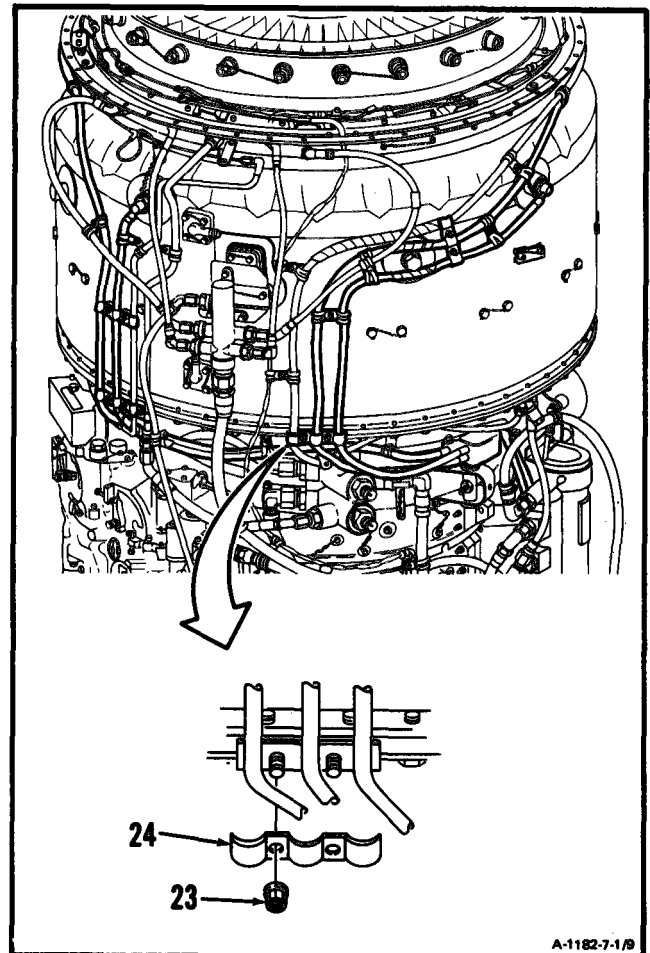
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**7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued)**

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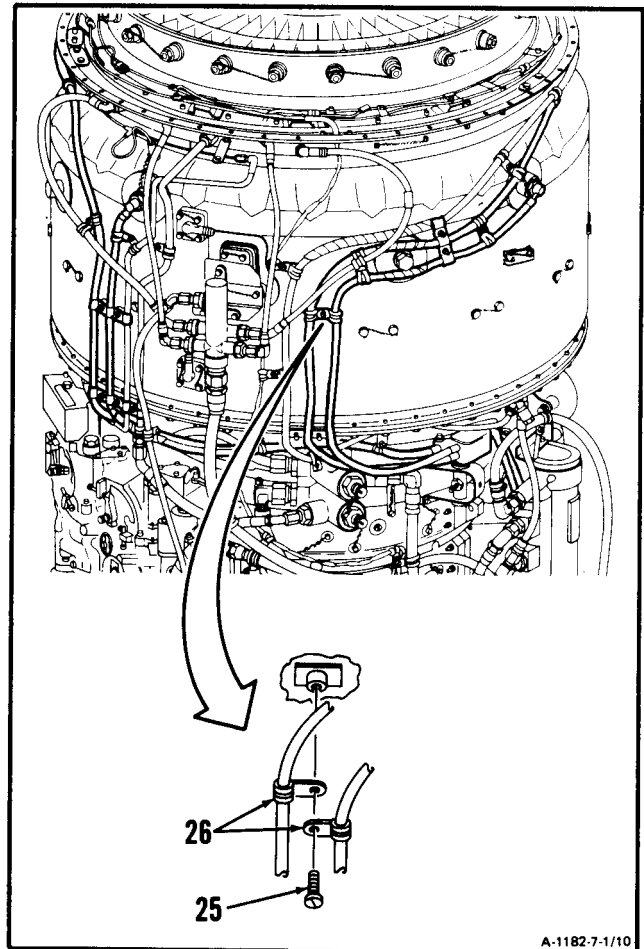
7-1

8. Remove two nuts (23) and retaining strap (24).



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9. **Remove** lockwire, screw (25), and **two clamps** (26).

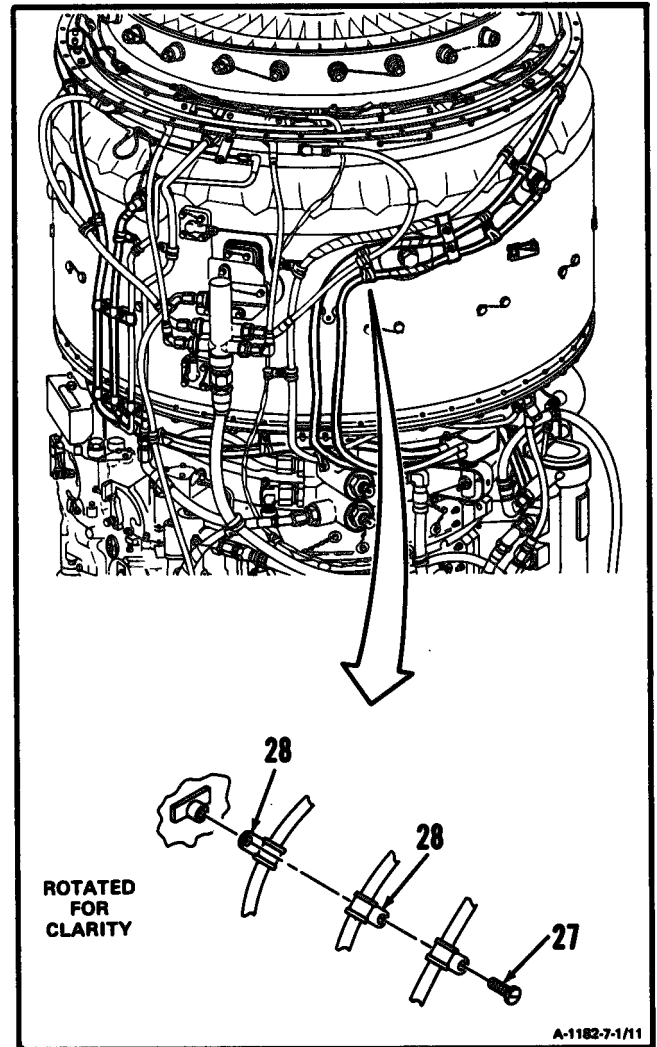


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**7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued)**

7-1

10. Remove lockwire, screw (27), and two clamps (28).



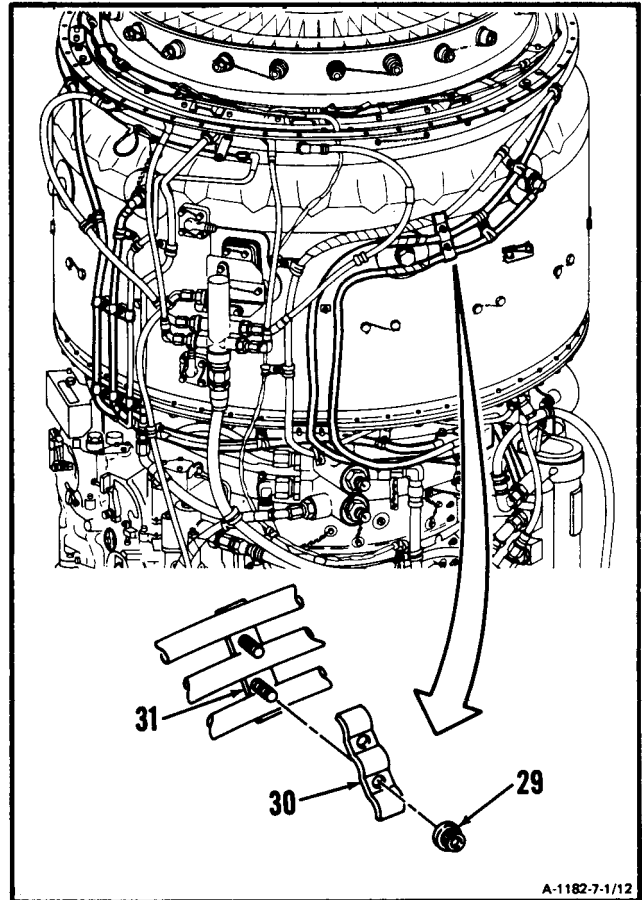
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7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued)

---

11. Remove two nuts (29) and clamps (30 and 31).



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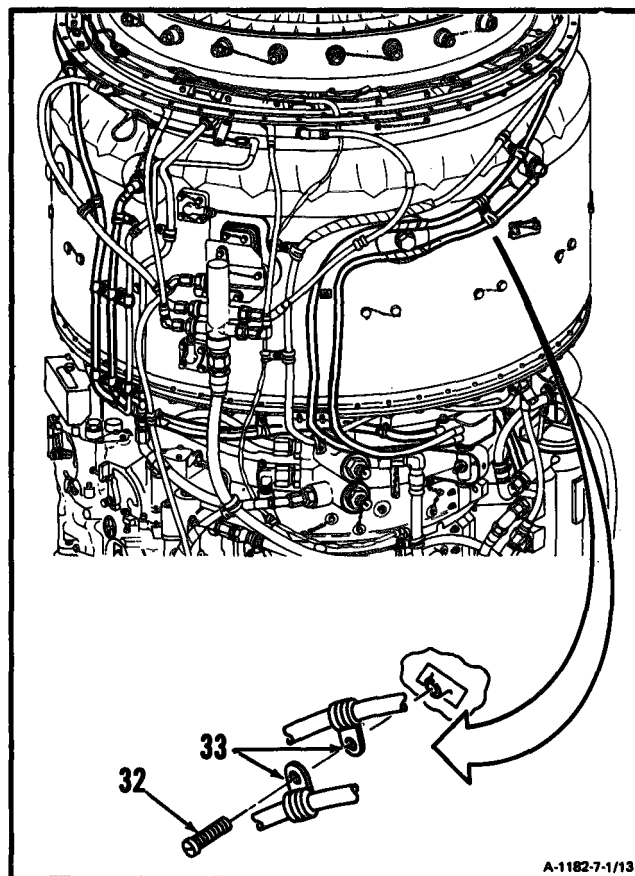
---

**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)

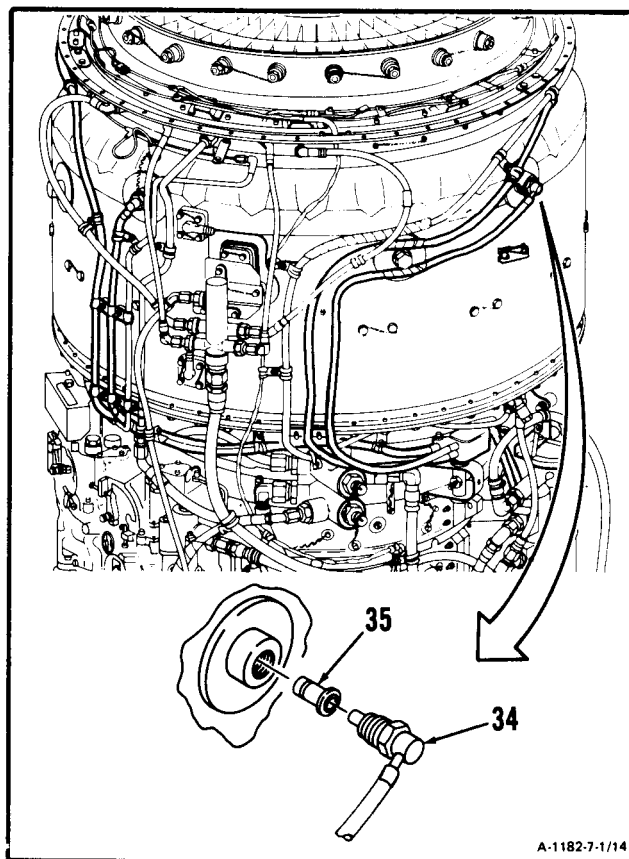
---

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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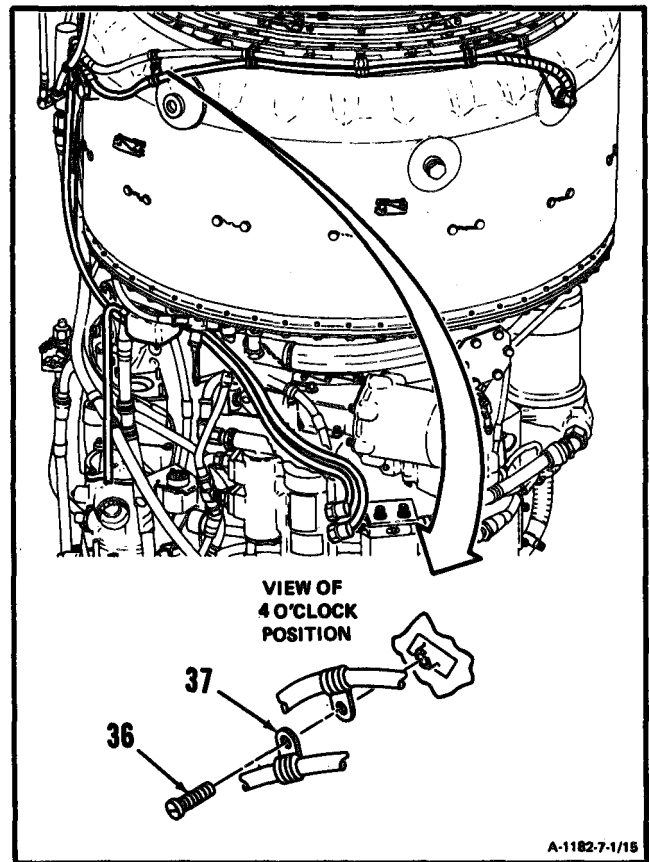
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**7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued)**

---

7-1

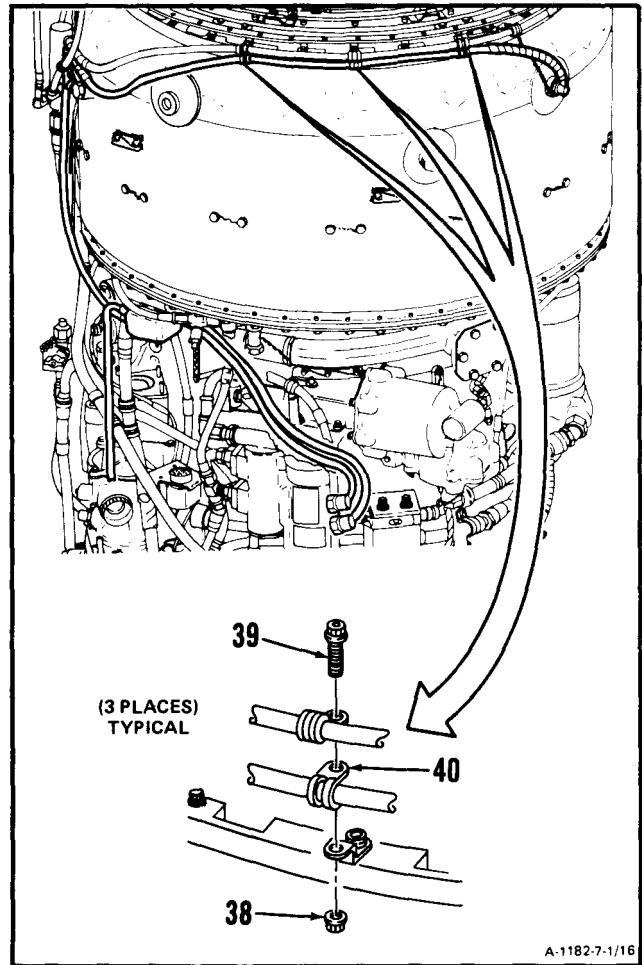
15. Remove lockwire, screw (36), and clamp (37).



**GO TO NEXT PAGE**

7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued)

16. Remove three nuts (38), bolts (39), and clamps (40).



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**7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued)**

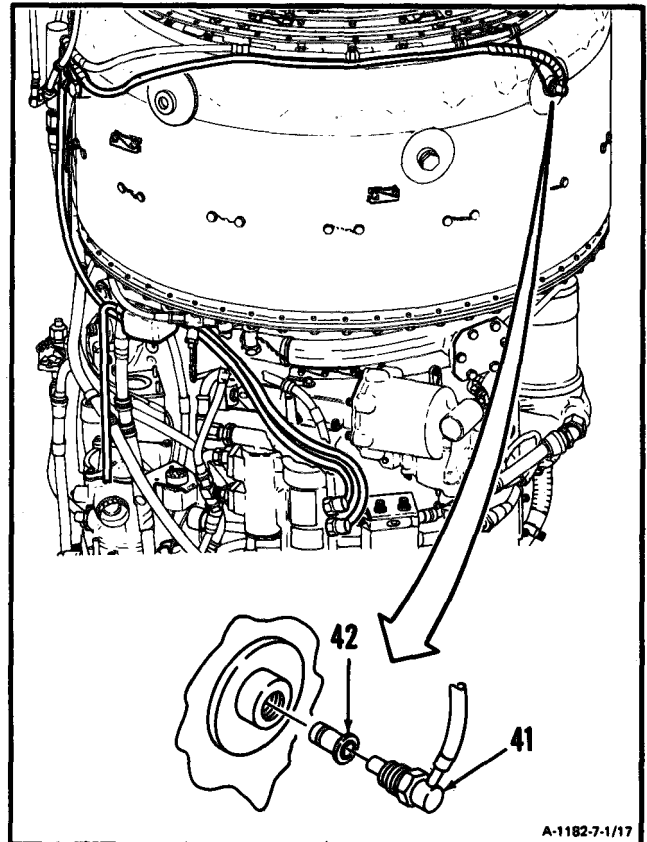
7-1

17. Remove lockwire. **Disconnect and remove ignition lead (41).**

**NOTE**

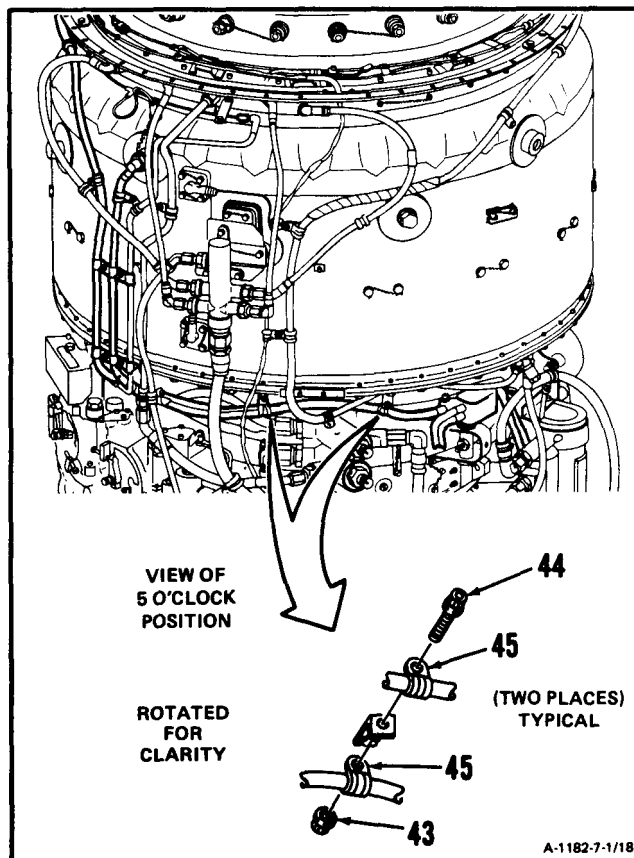
Spark igniter may remain in combustion chamber housing or on ignition lead.

18. Remove spark igniter (42).



**GO TO NEXT PAGE**

19. Remove two nuts (43), bolts (44), and four clamps (45).

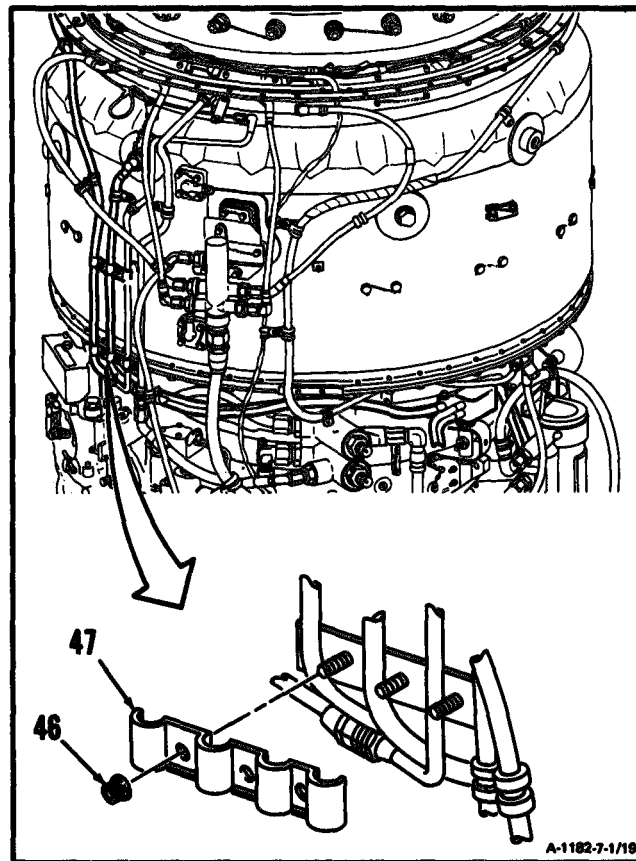


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## 7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued)

7-1

20. Remove three nuts (46) and clamp (47).



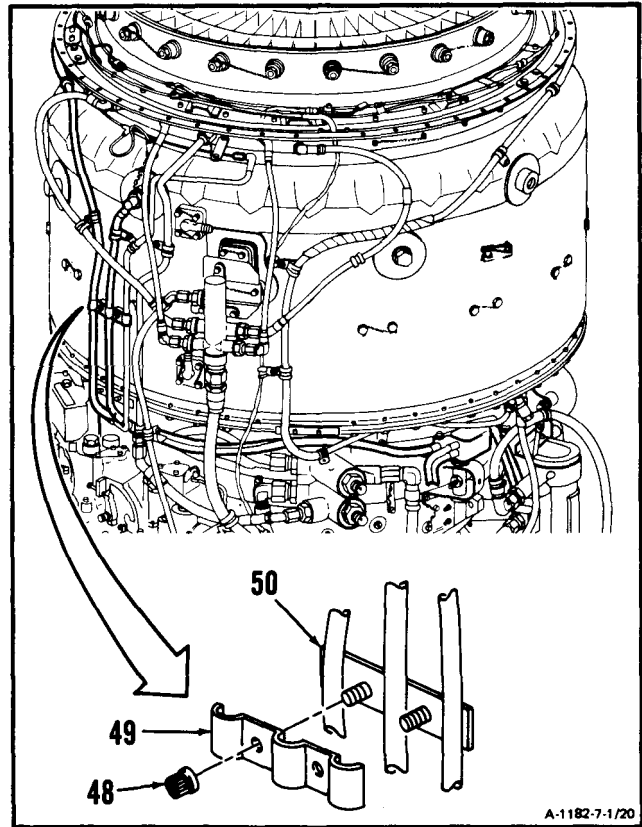
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7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued)

---

21. Remove two nuts (48) and clamps (49 and 50).



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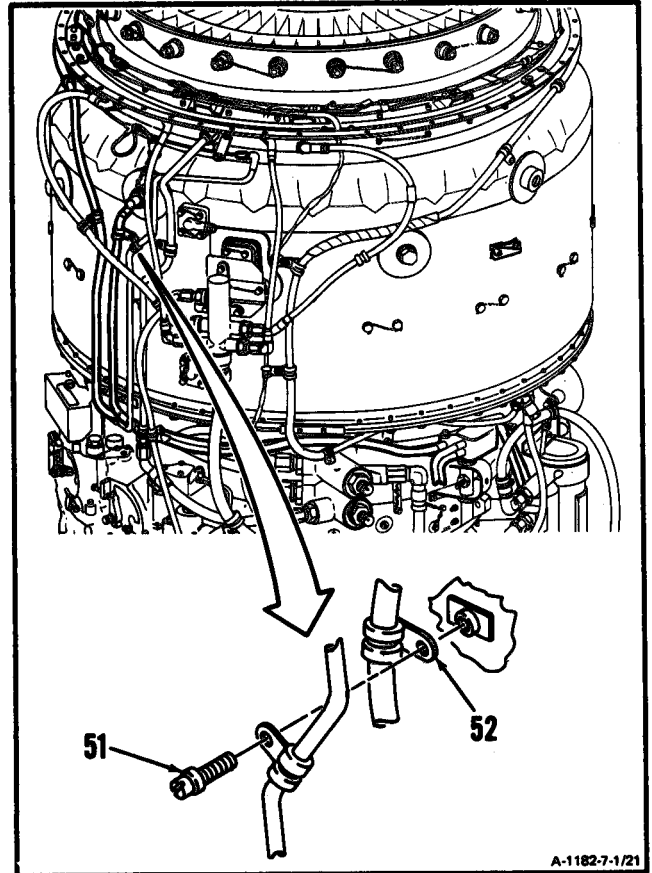
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**7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued)**

---

7-1

22. Remove lockwire, screw (51), and clamp (52).



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**7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued)**

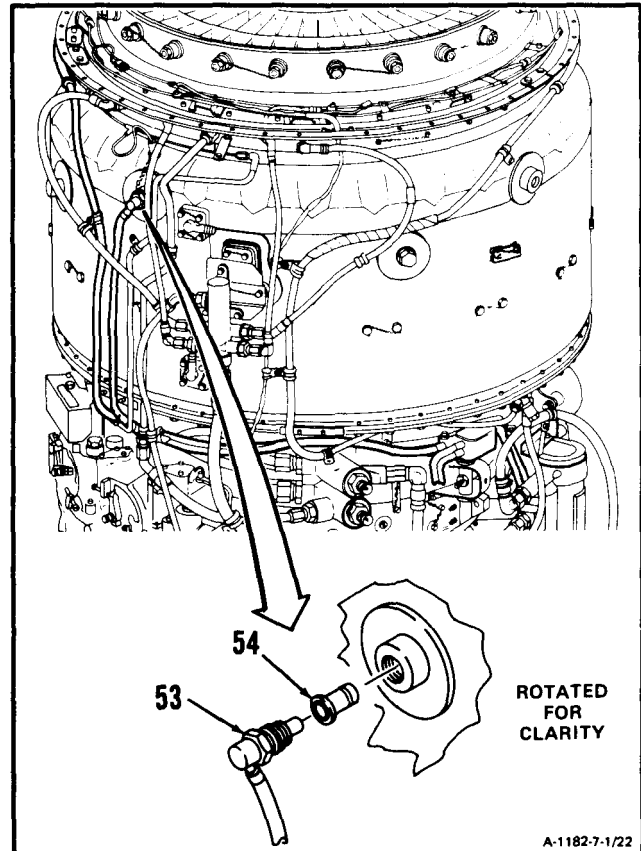
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23. Remove lockwire. **Disconnect and remove ignition lead (53).**

**NOTE**

Spark igniter may remain in combustion chamber housing or on ignition lead.

24. **Remove spark igniter (54).**



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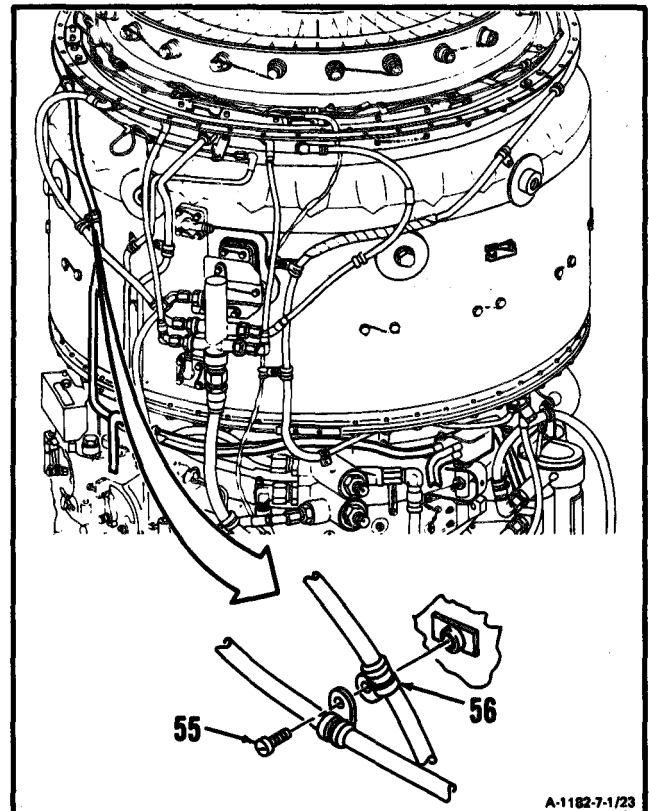
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**7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued)**

---

7-1

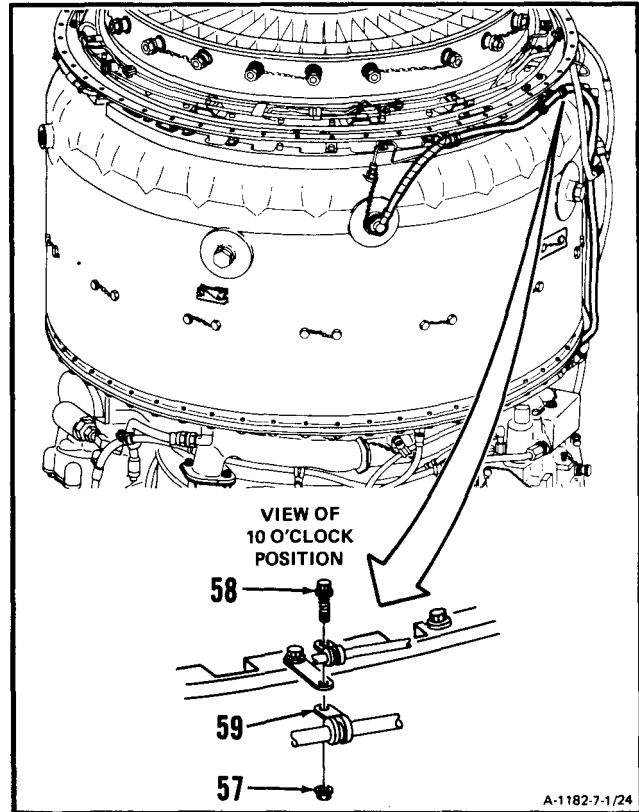
25. Remove lockwire, screw (55), and clamp (56).



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7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued)

26. Remove nut (57), bolt (58), and clamp (59).

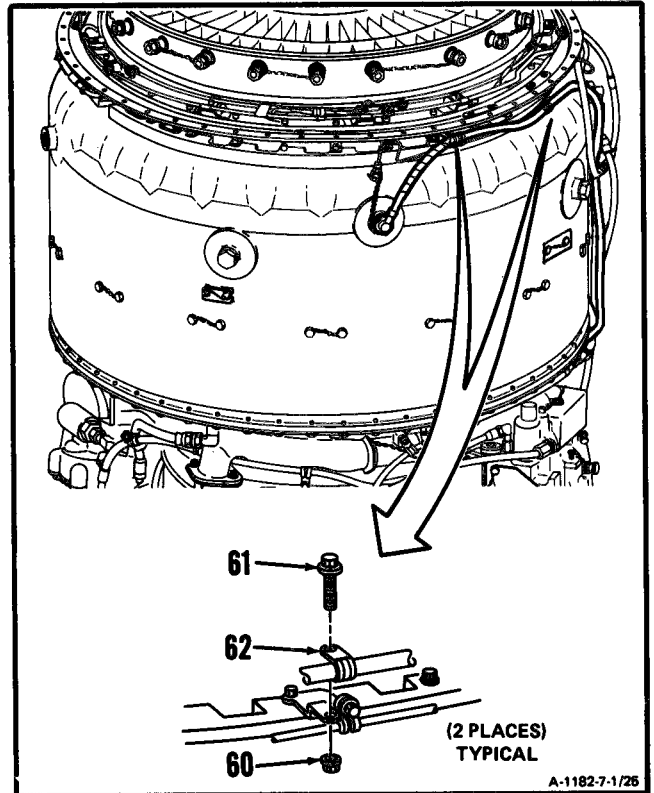


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## 7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued)

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)**

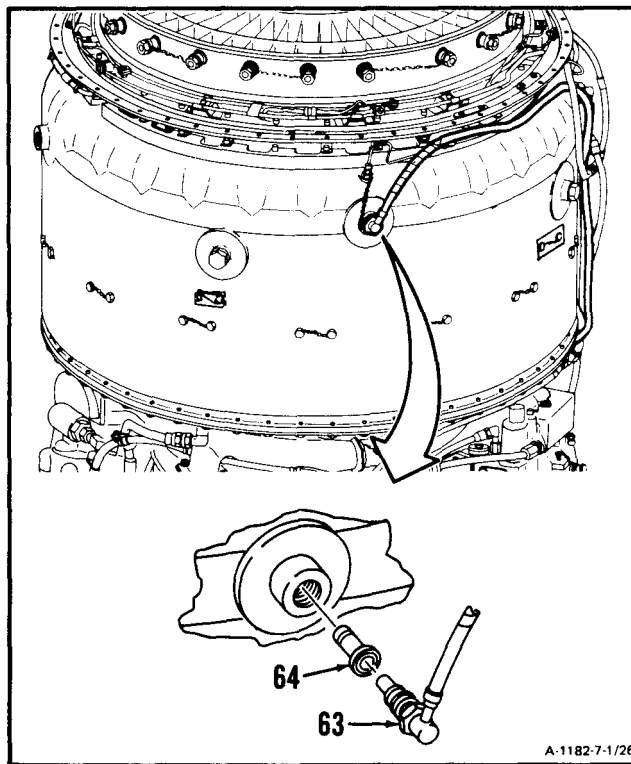
7-1

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).**

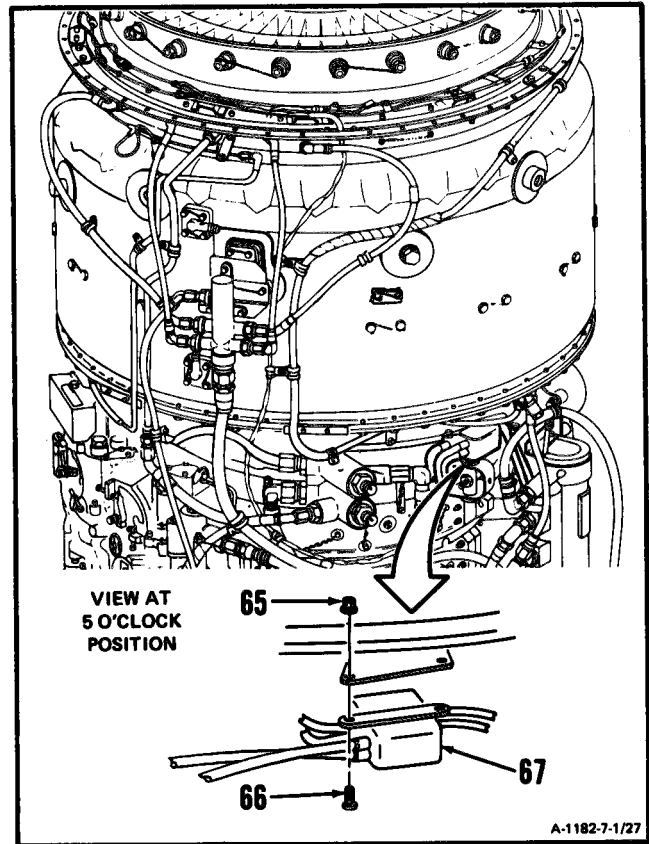


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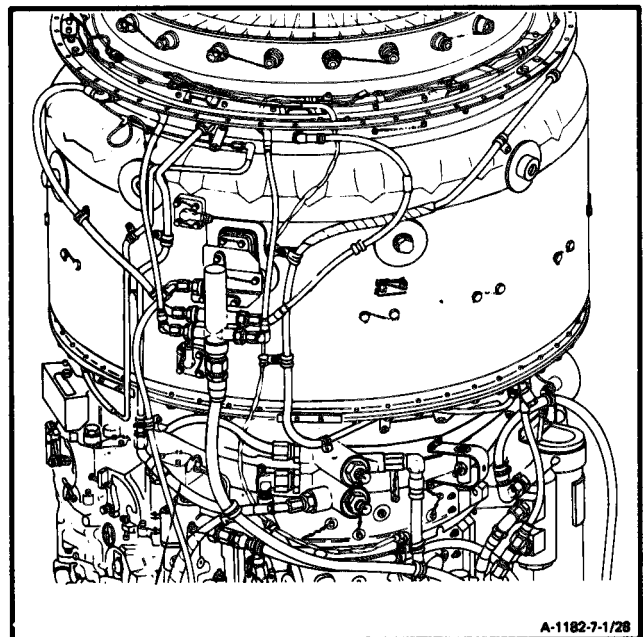
**7-1 REMOVE IGNITION COIL AND CABLE ASSEMBLY (Continued)**

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

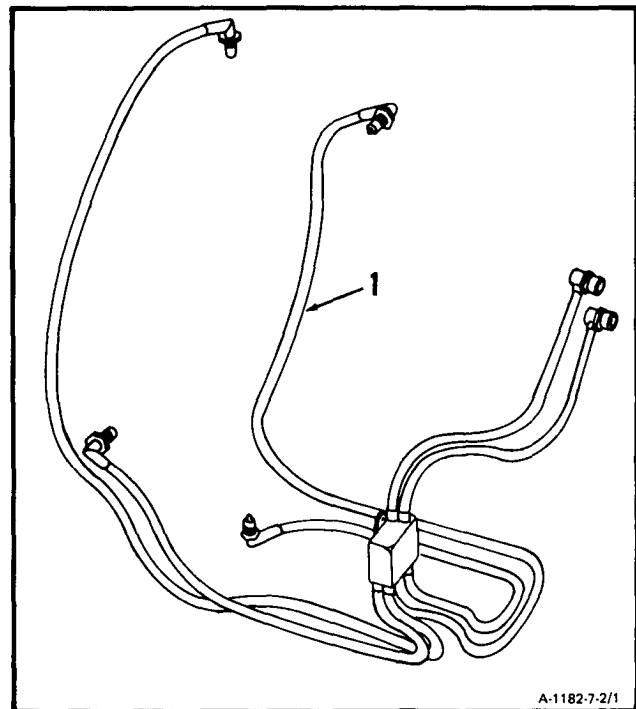
**Equipment Condition:**

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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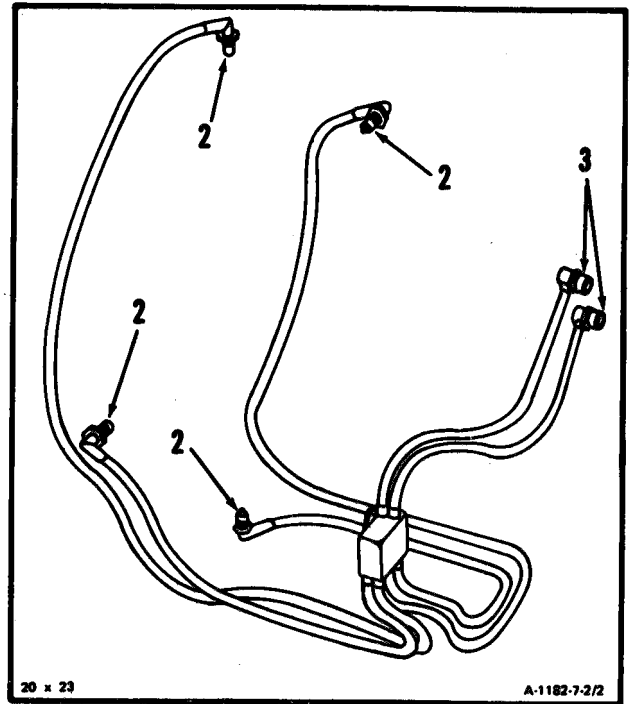
## 7-2 CLEAN IGNITION COIL AND CABLE ASSEMBLY (Continued)

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:**

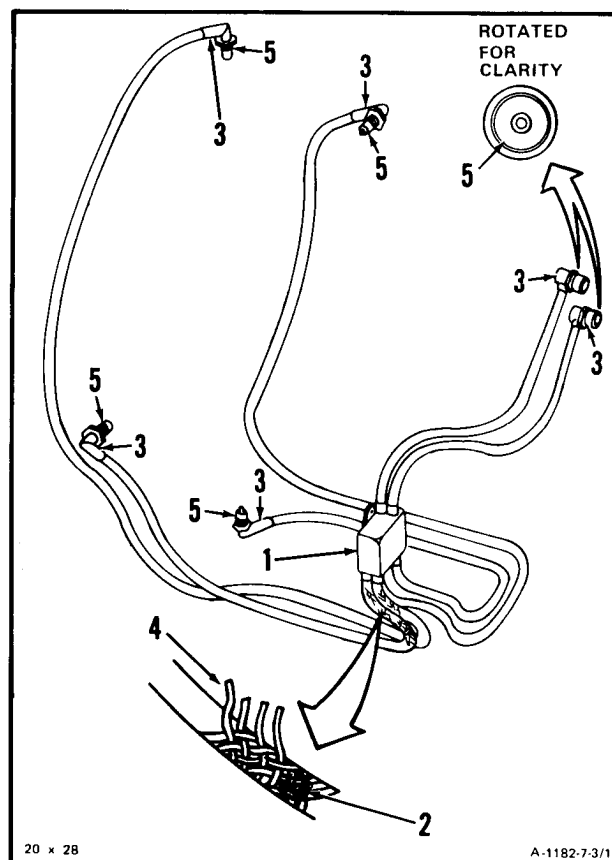
68B30 Aircraft Powerplant Inspector

**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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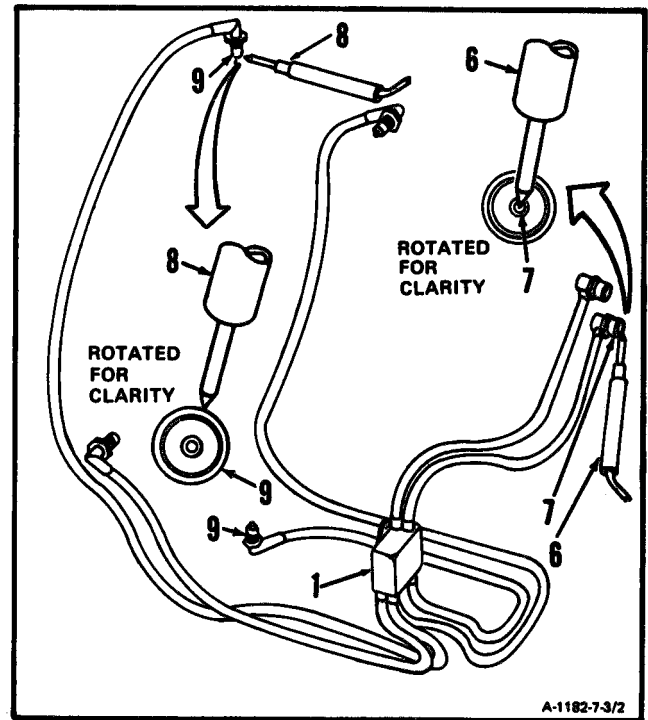


## 7-3 INSPECT IGNITION COIL AND CABLE ASSEMBLY (Continued)

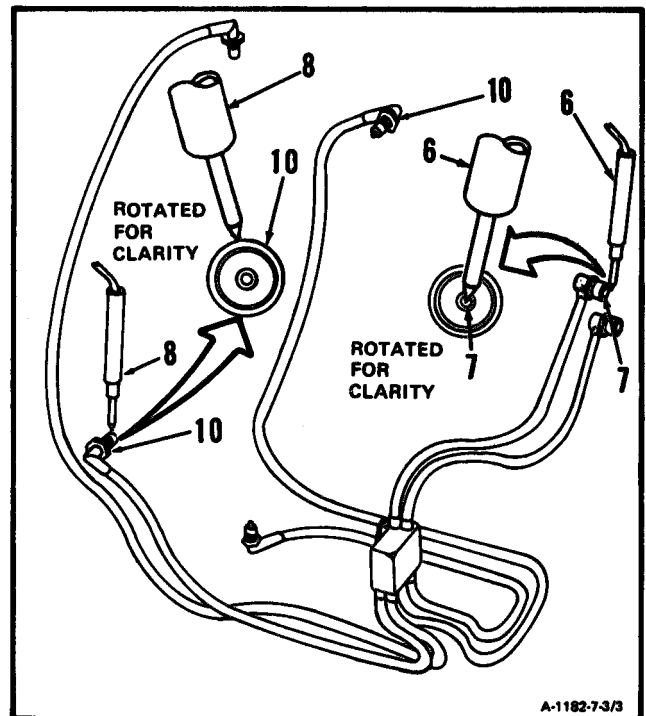
7-3

## 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.

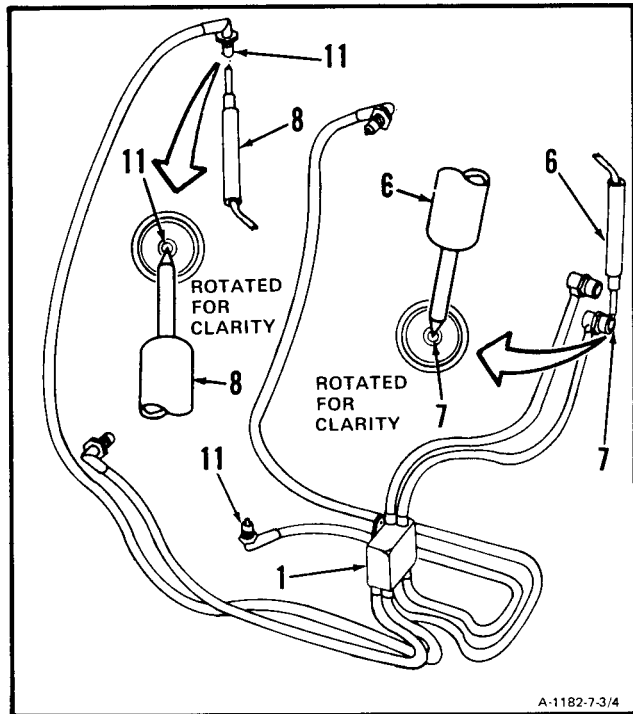


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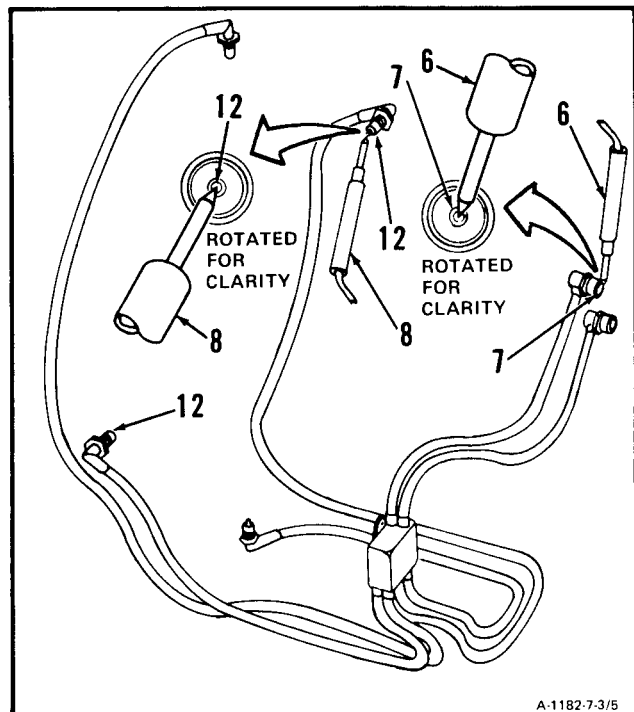
7-3 INSPECT IGNITION COIL AND CABLE ASSEMBLY (Continued)

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

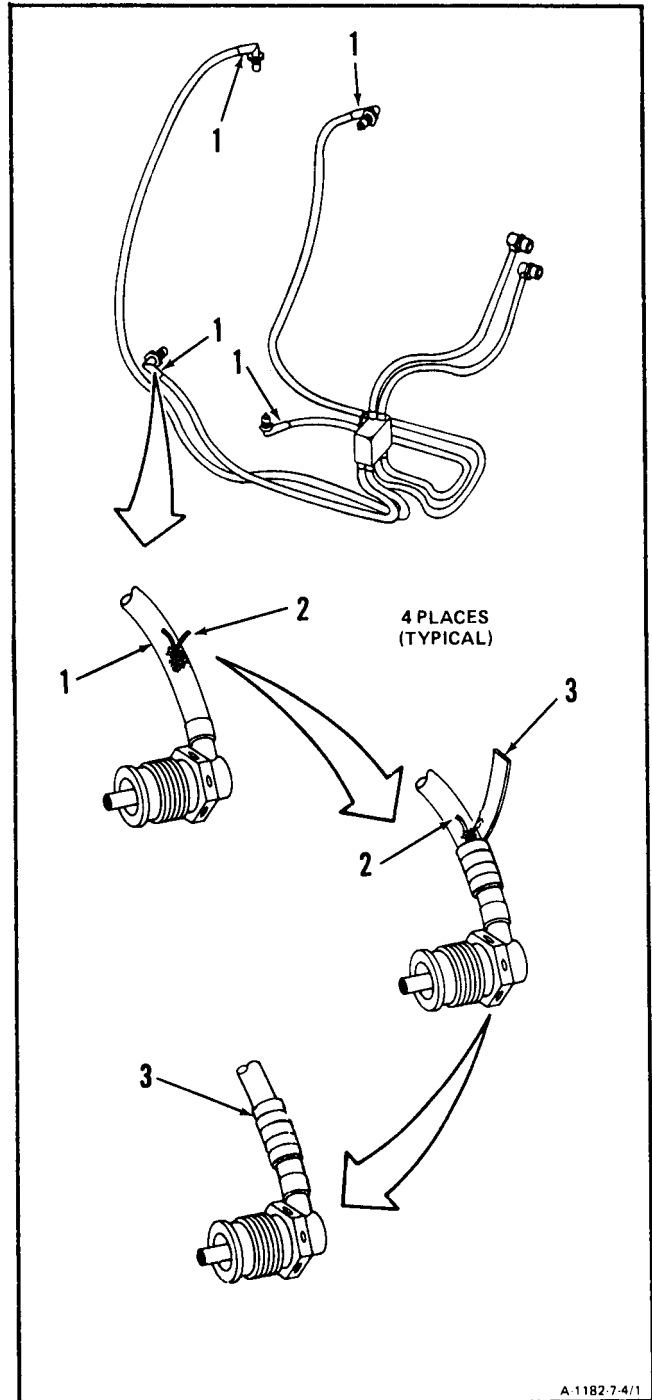
***Equipment Condition:***

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.



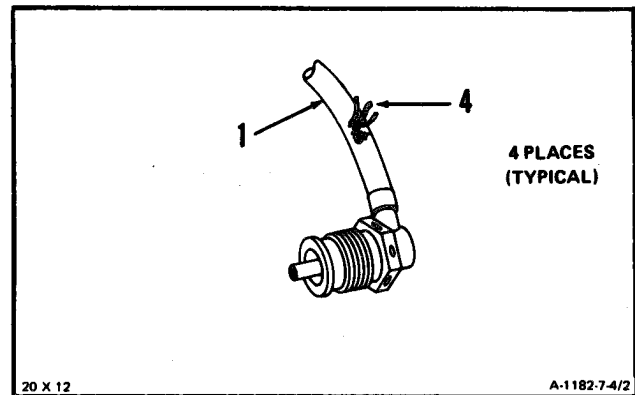
INSPECT

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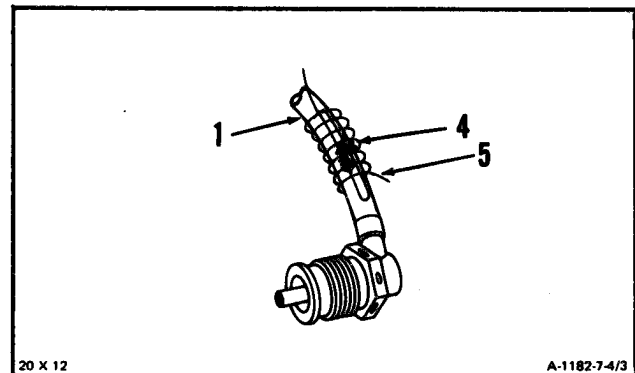
**NOTE**

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.

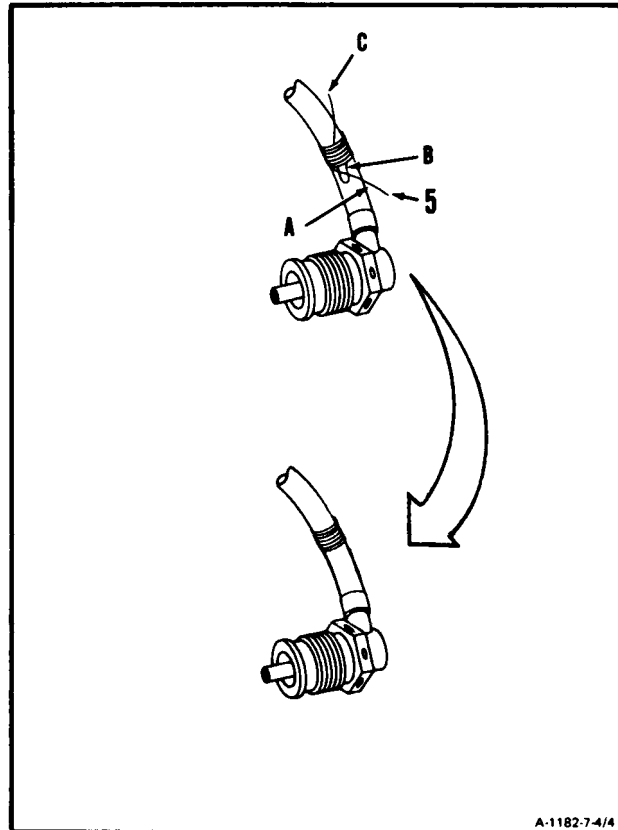


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**NOTE**

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.



A-1182-7-4/4

**INSPECT**

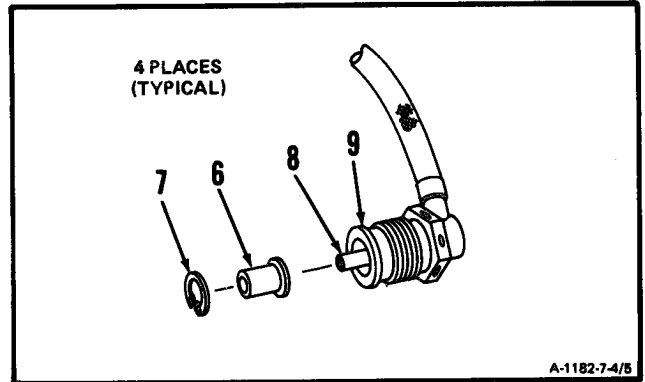
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7-4 REPAIR IGNITION COIL AND CABLE ASSEMBLY (Continued)

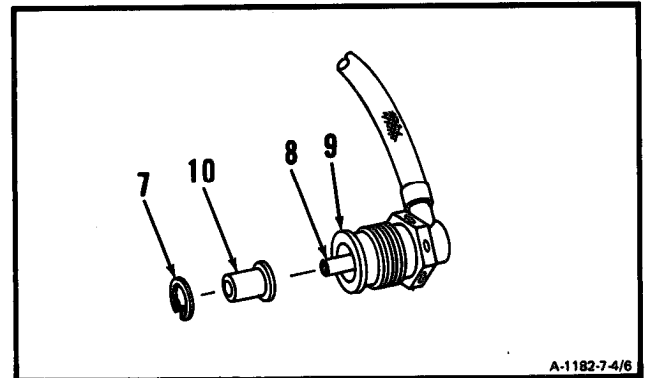
7-4

2. Replace cracked insulator (6) as follows:

- a. Remove retaining ring (7).
- b. Remove insulator (6) from wire (8) and out of sleeve (9).



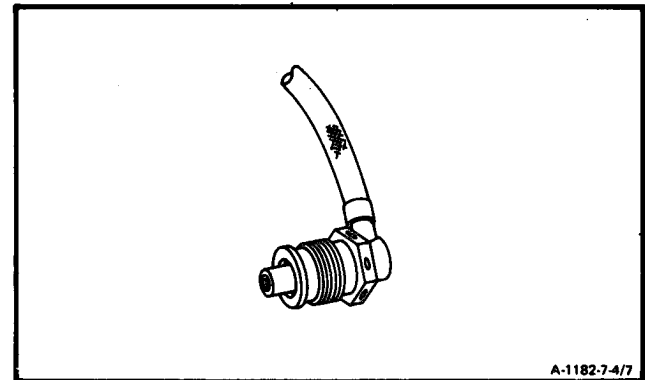
- c. Insert new insulator (10) in sleeve (9) and over wire (8).
- d. Install retaining ring (7).



INSPECT

FOLLOW-ON MAINTENANCE:

None



END OF TASK

---

**7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY**

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7-5

**INITIAL SETUP****Applicable Configurations:**

All

**Tools:**

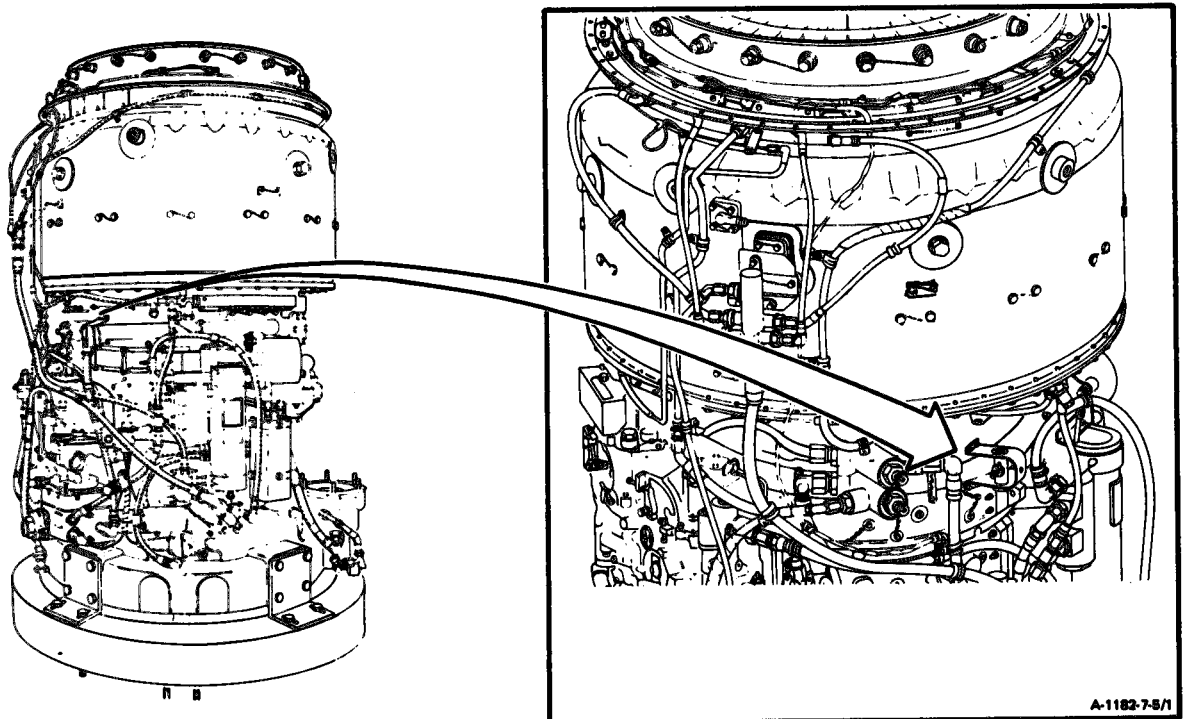
Powerplant Mechanic's Tool Kit,  
NSN 5180-00-323-4944  
Technical Inspection Tool Kit,  
NSN 5180-00-323-5114  
Torque Wrench, 30-150 Inch-Pounds  
Crowfoot Attachment, 7/8-Inch

**Materials:**

Anti-Seize Compound (E5)  
Lockwire (E29)

**Personnel Required:**

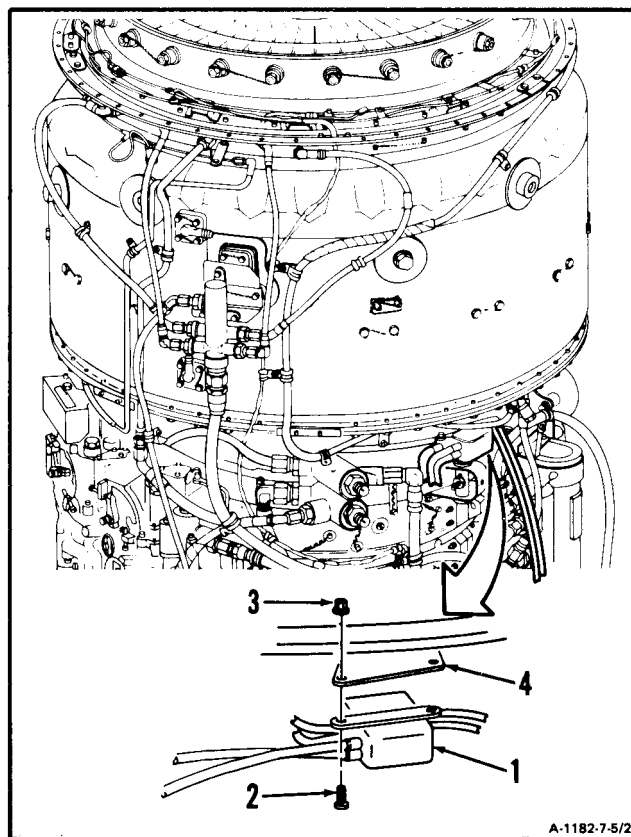
68B10 Aircraft Powerplant Repairer  
68B30 Aircraft Powerplant Inspector

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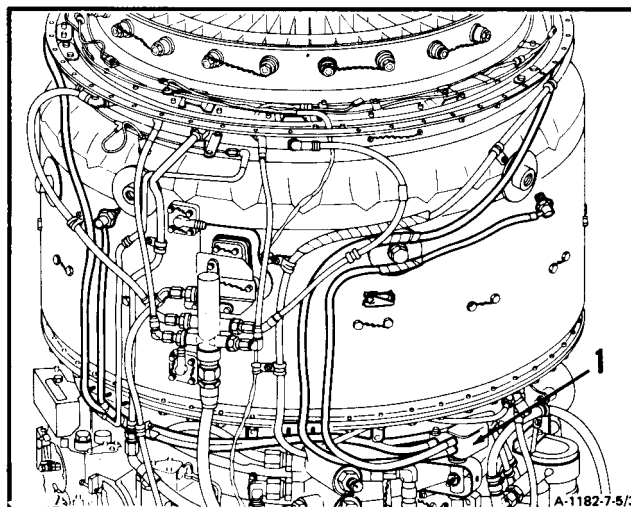


7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued)

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.

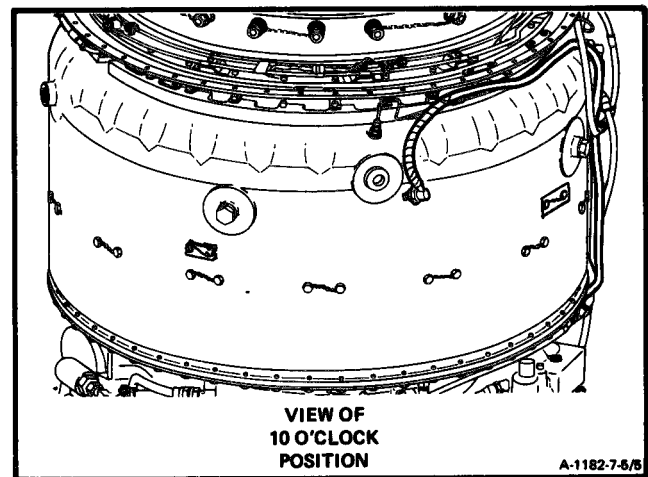
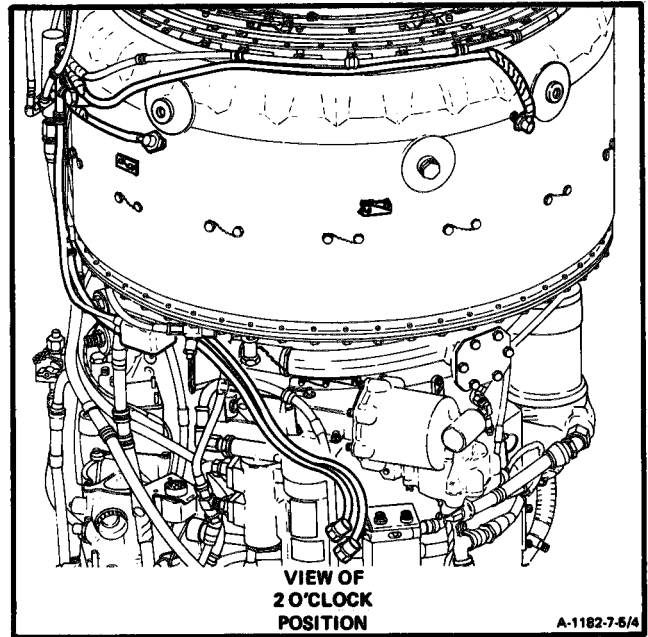


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7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued)

7-5

2. (Continued)



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## 7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued)

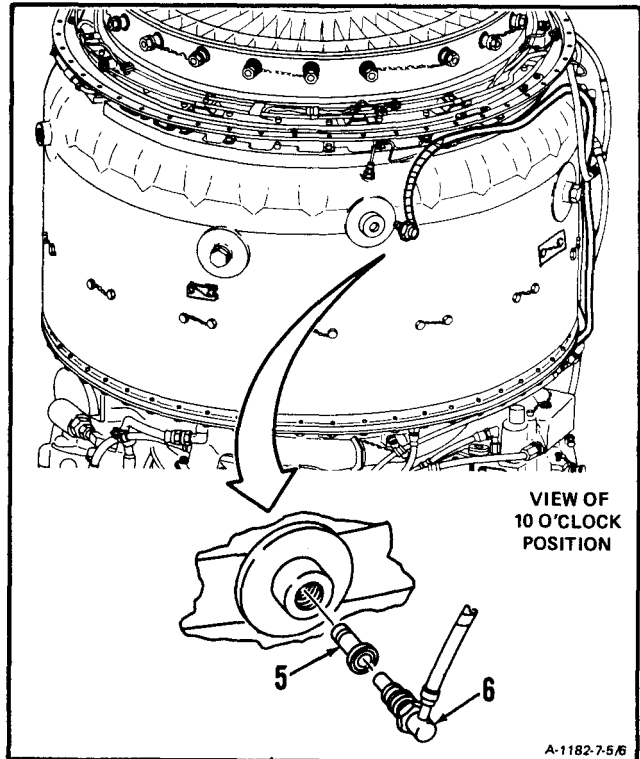
7-5

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).

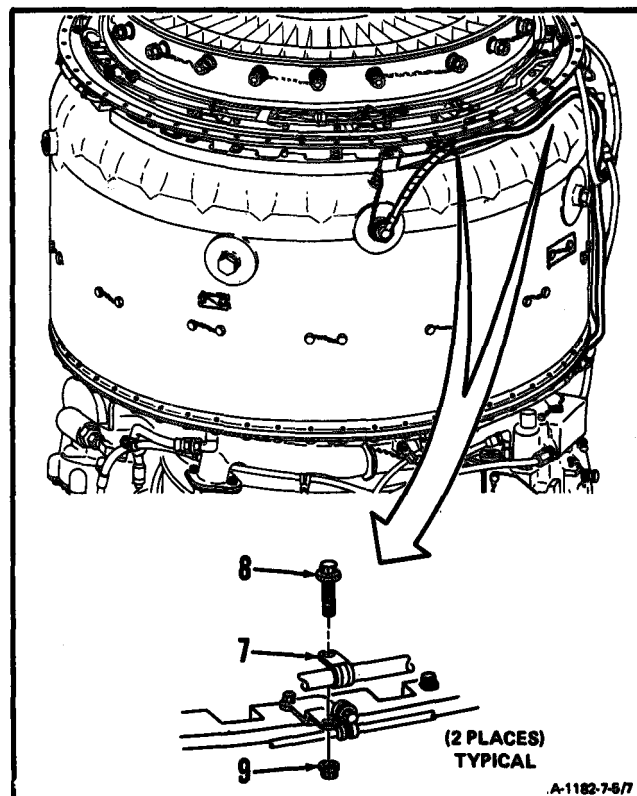


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7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued)

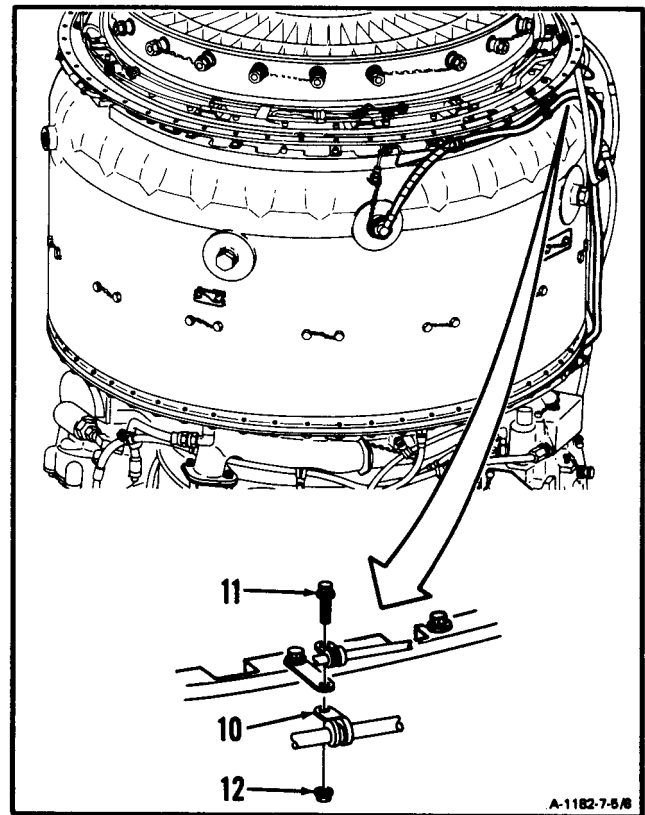
7-5

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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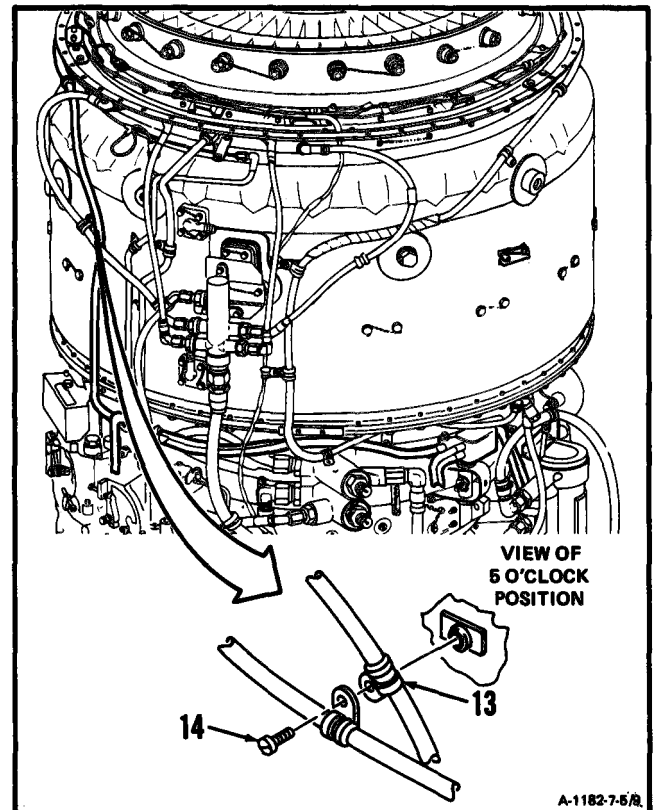
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**7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued)**

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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)

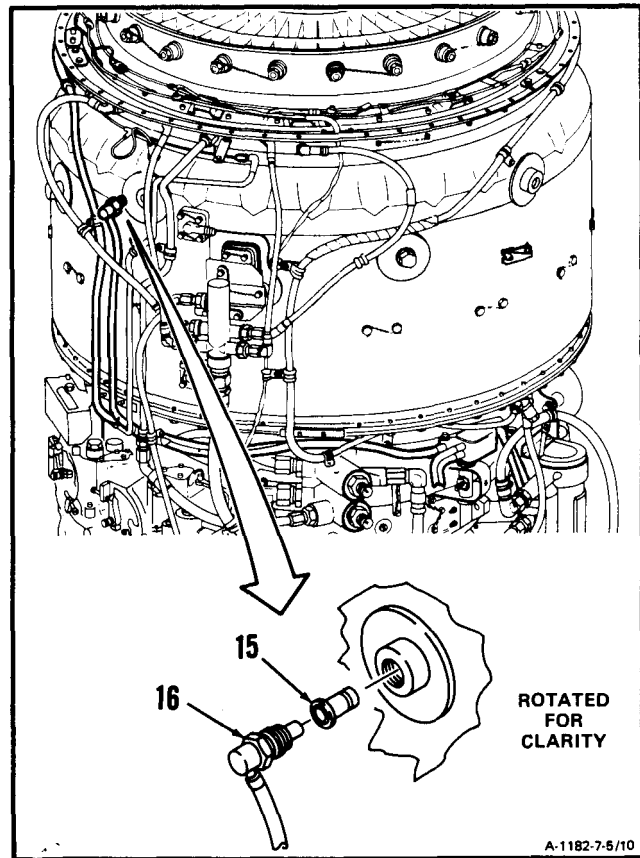
7-5

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).

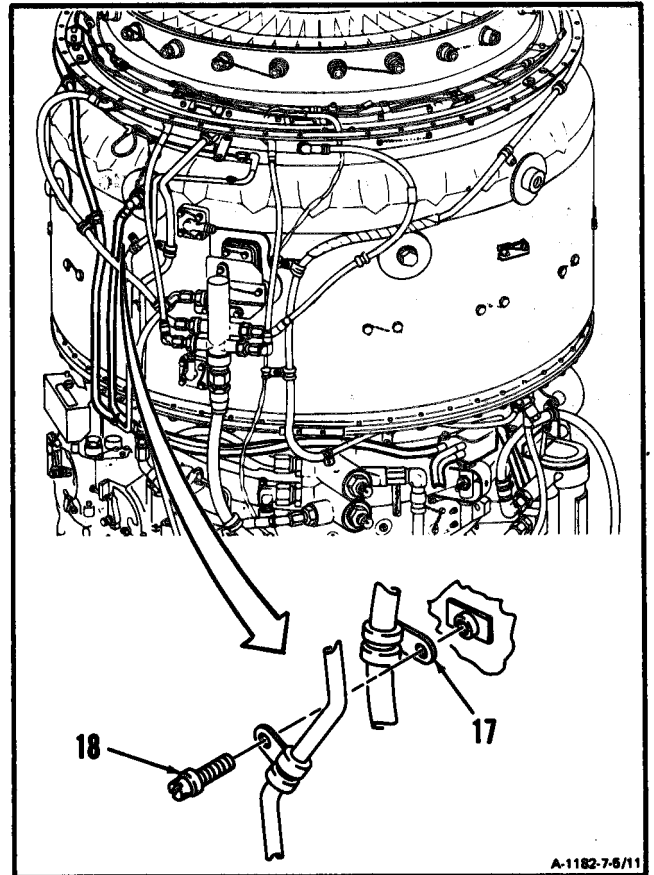


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## 7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued)

7-5

12. Install clamp (17) and screw (18). Lockwire screw (18). Use lockwire (E29).



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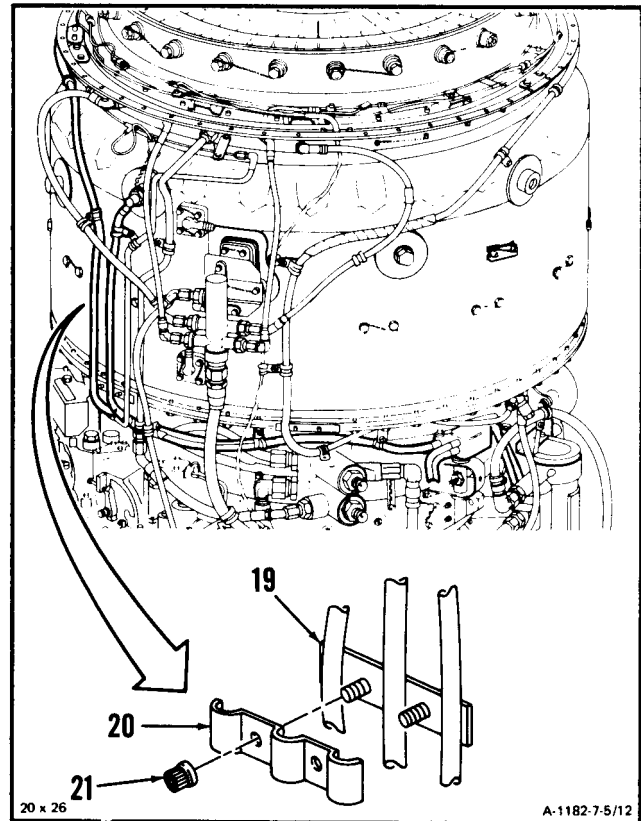
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**7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued)**

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7-5

13. Install clamps (19 and 20) and two nuts (21).



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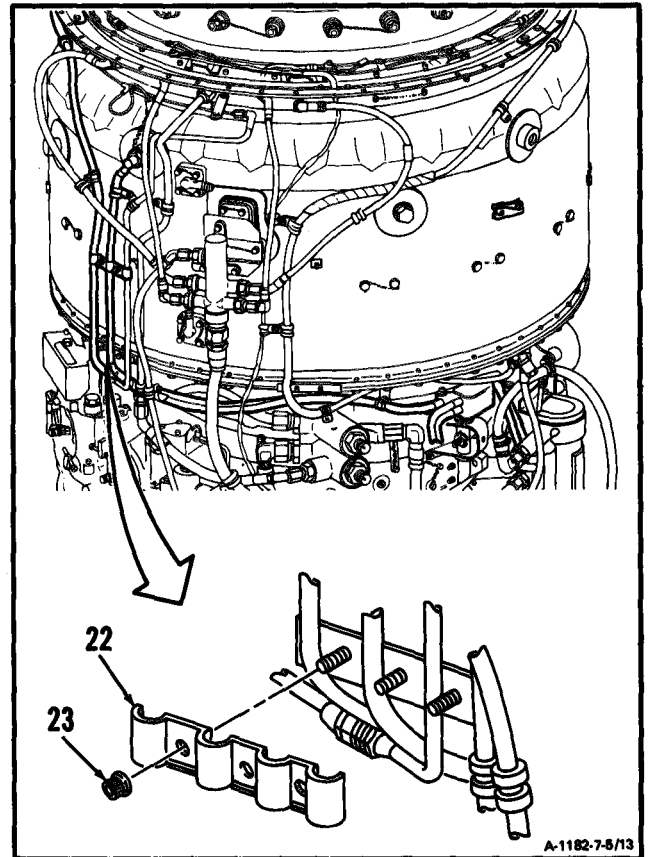
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**7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued)**

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7-5

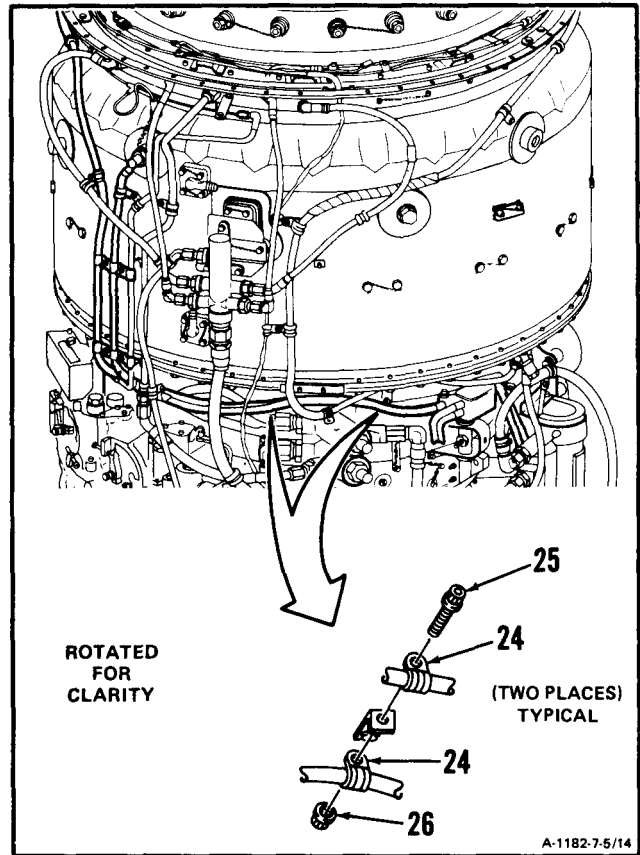
14. Install clamp (22) and three nuts (23).



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7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued)

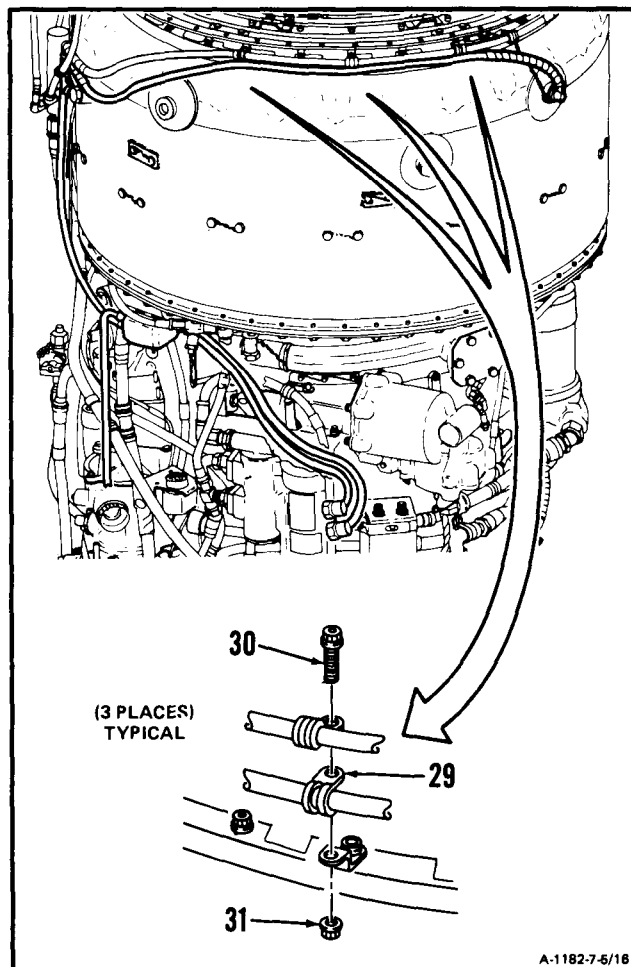
15. Install four clamps (24), two bolts (25), and nuts (26).



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19. Install three clamps (29), bolts (30), and nuts (31).



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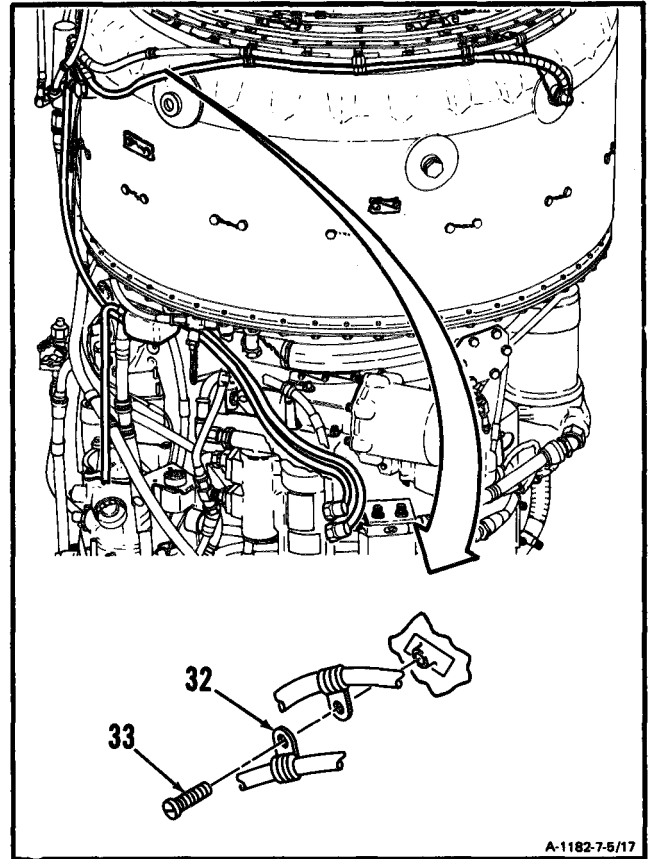
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**7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued)**

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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)

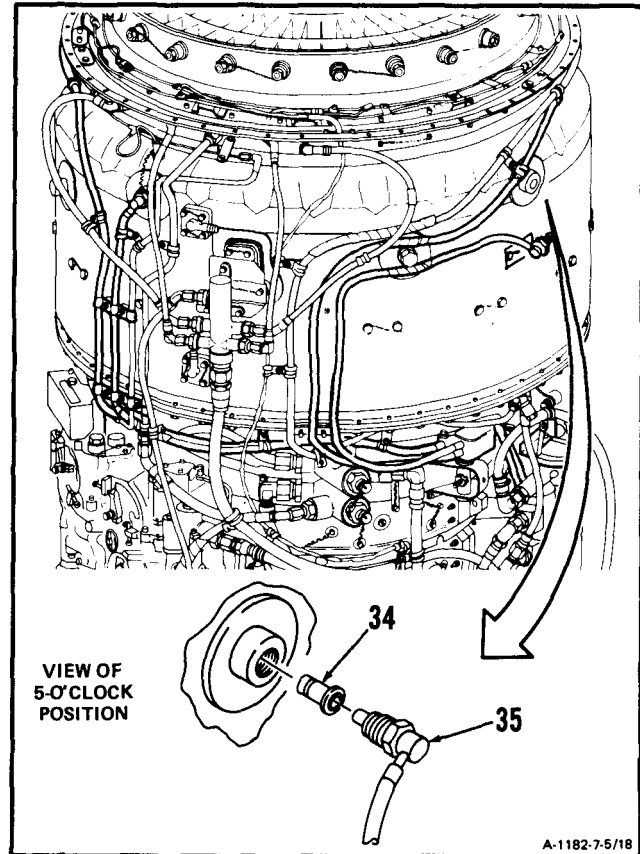
7-5

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).

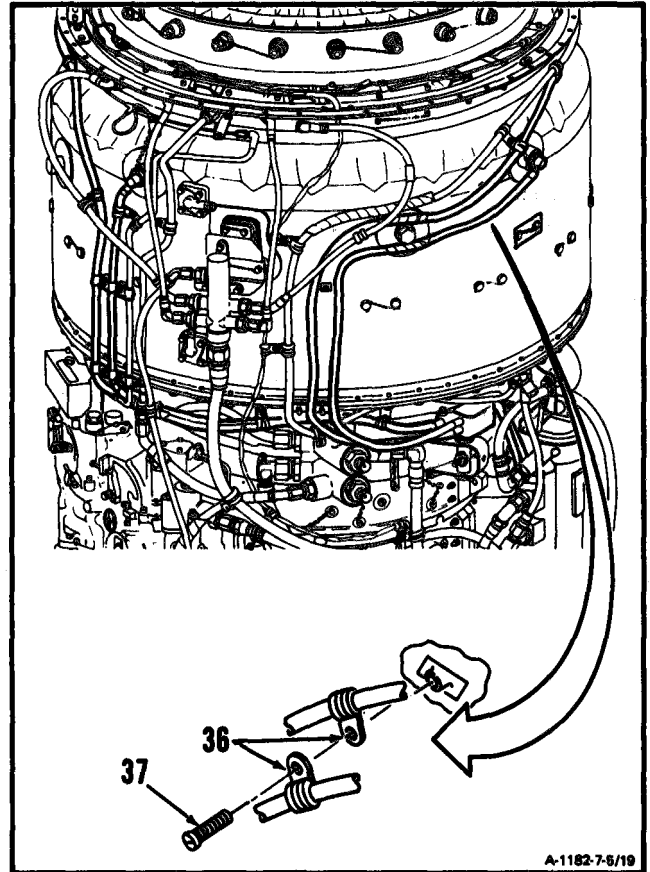


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**7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued)**

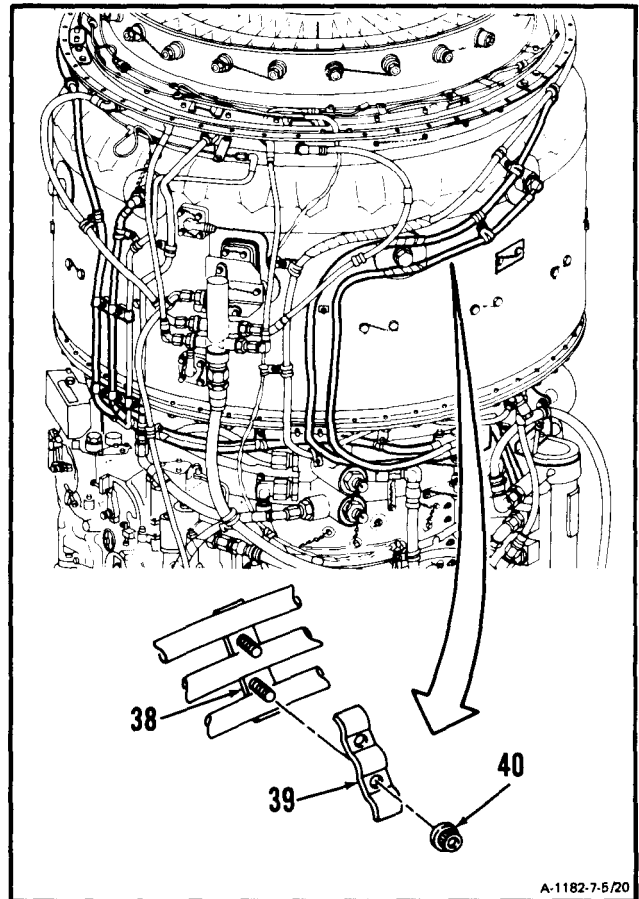
7-5

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).



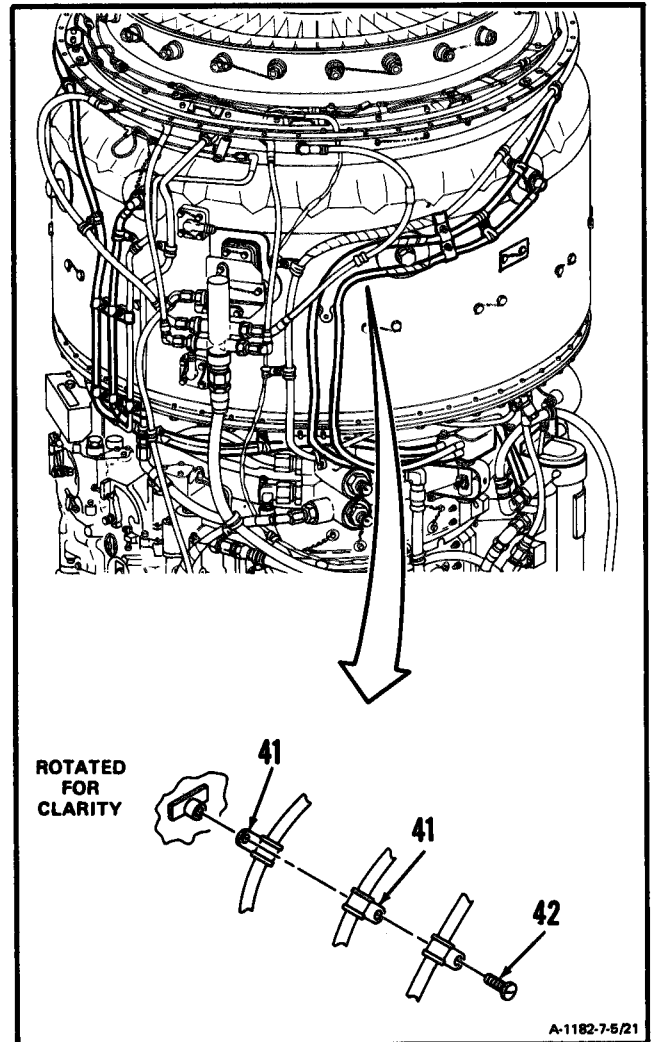
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## 7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued)

7-5

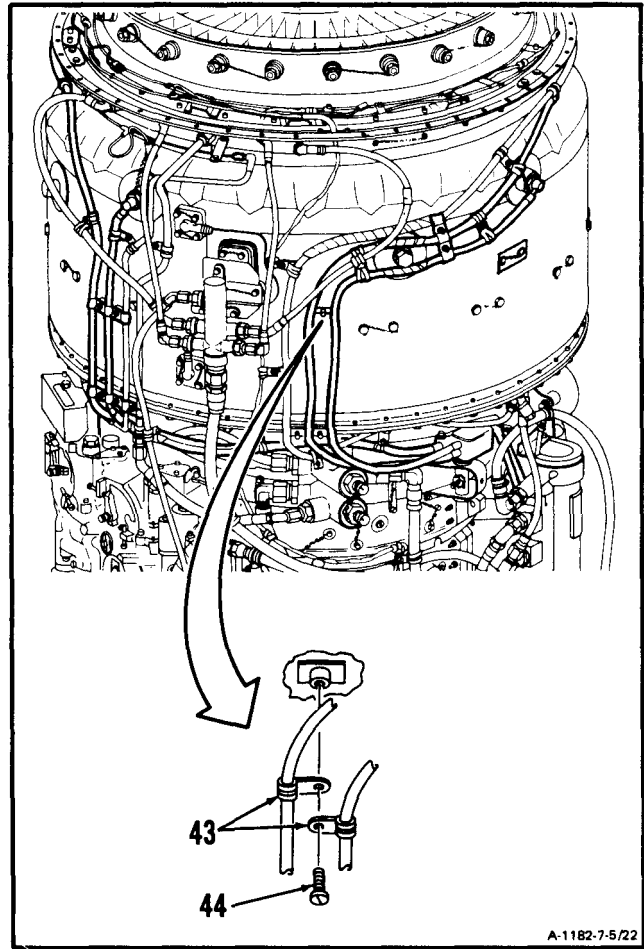
26. Install two clamps (41) and screw (42). Lockwire screw (42). Use lockwire (E29).



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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).

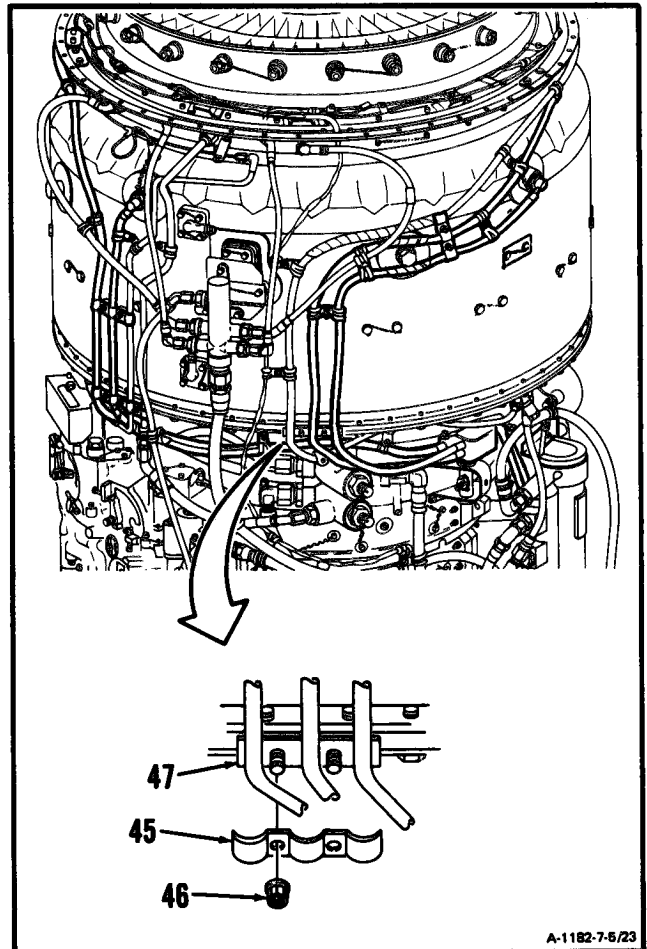


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## 7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued)

7-5

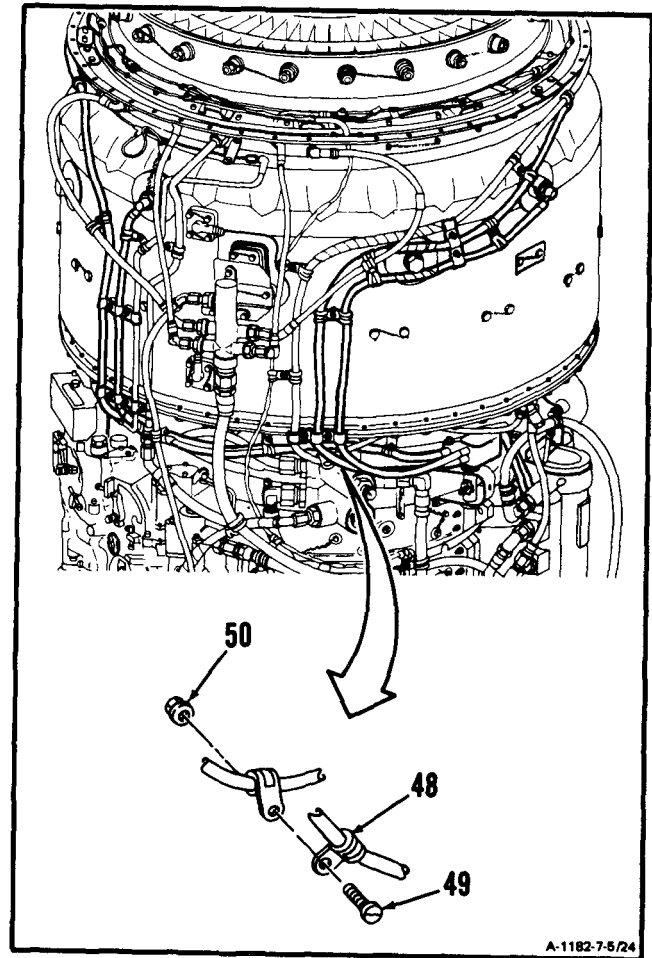
28. Install retainig strap (45) and two nuts (46) to bracket (47).



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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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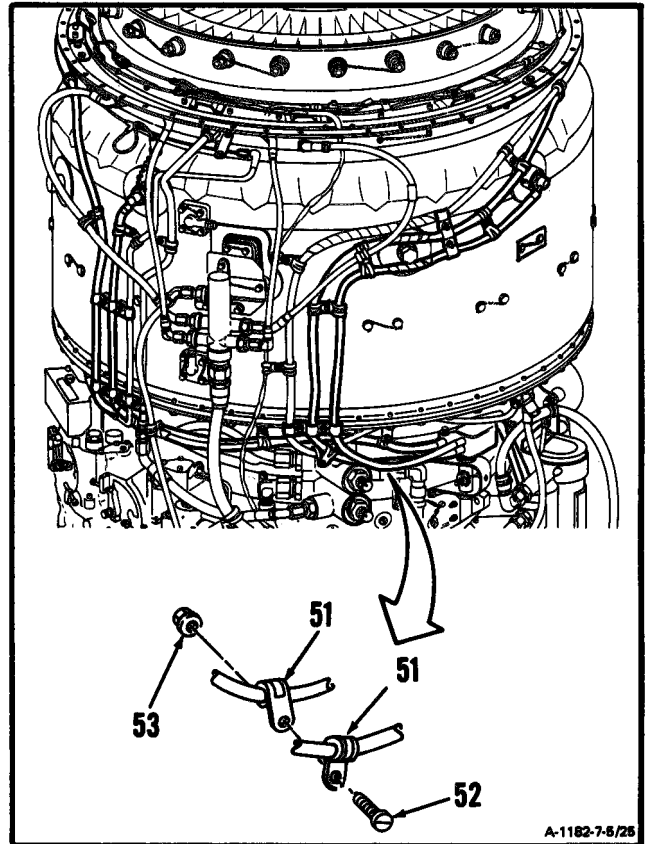
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**7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued)**

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7-5

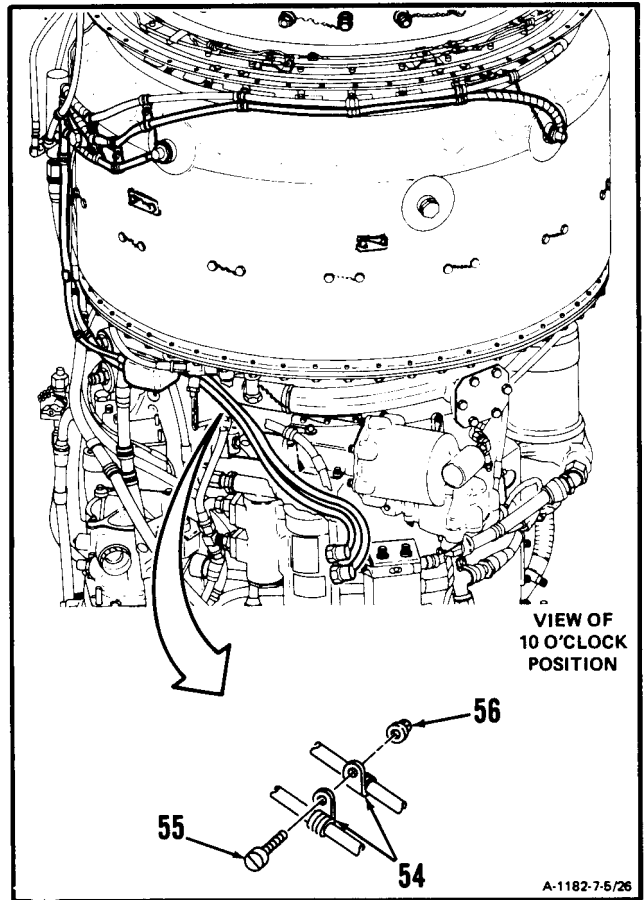
30. Install two clamps (51), screw (52), and nut (53).



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7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued)

31. Install two clamps (54), screw (55), and nut (56).

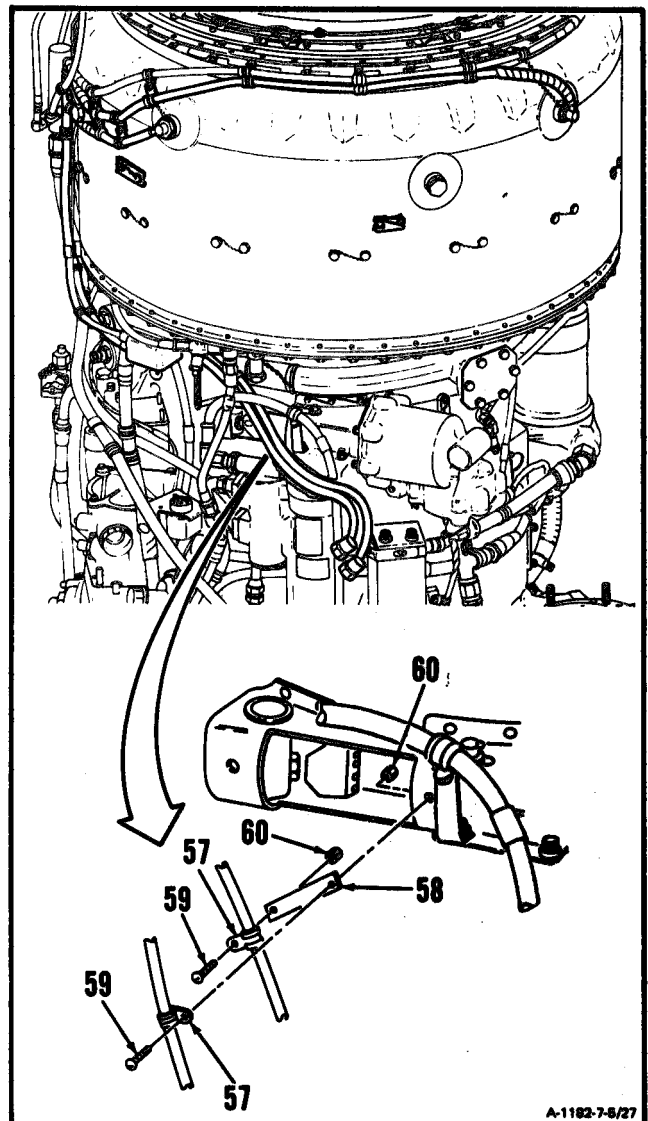


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## 7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued)

7-5

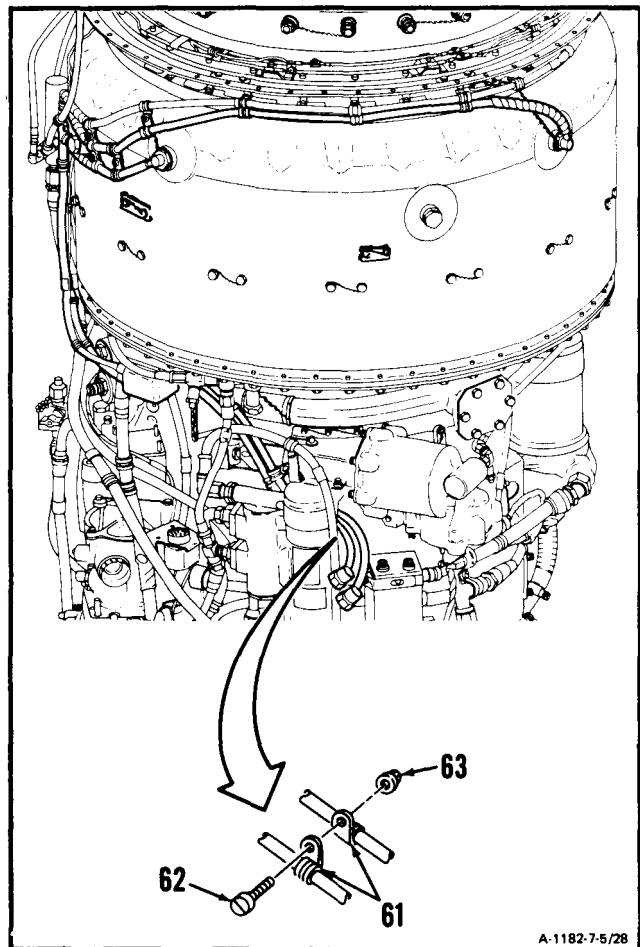
32. Install two clamps (57), bracket (58), two screws (53), and nuts (60).



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33. Install two clamps (61), screw (62), and nut (63).



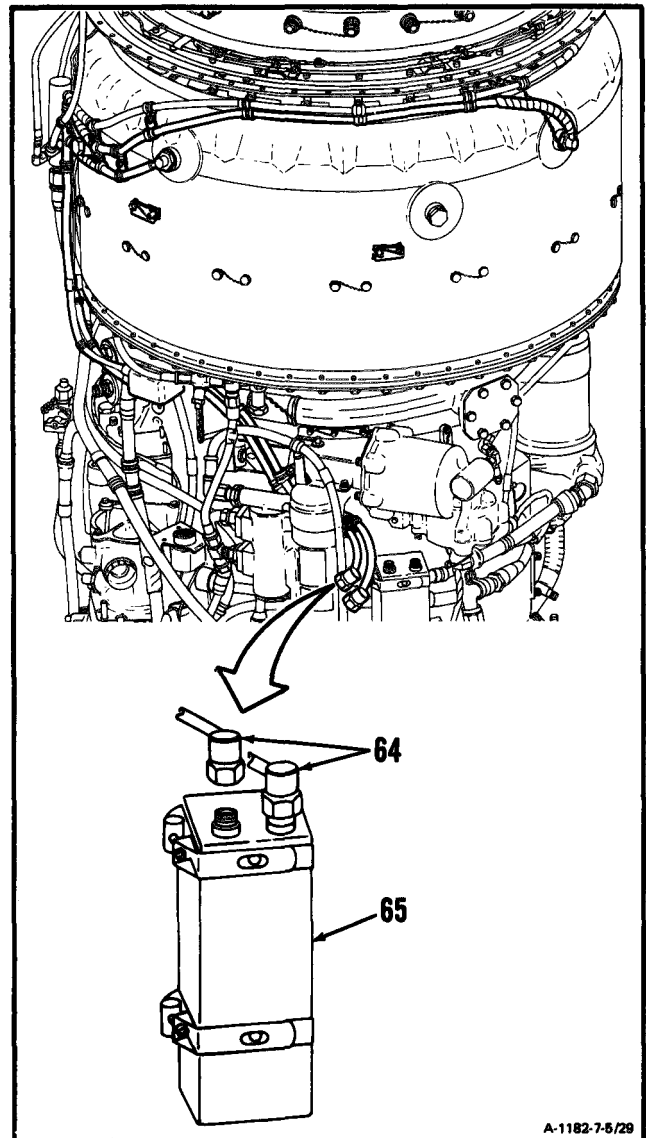
A-1182-7-5/28

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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**

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7-67

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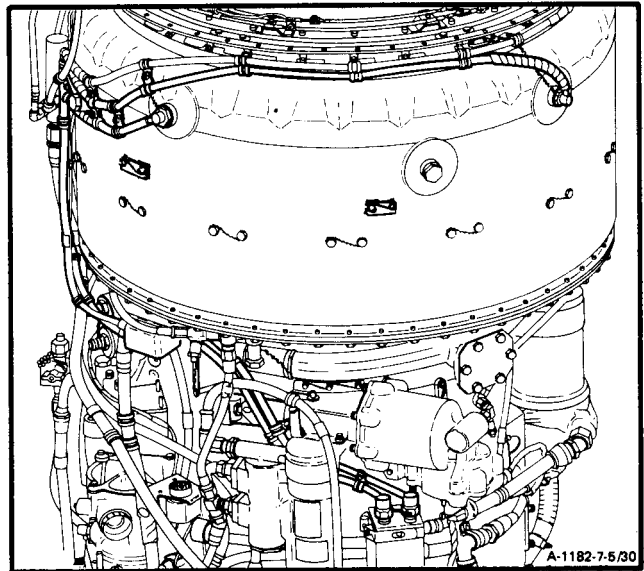
**7-5 INSTALL IGNITION COIL AND CABLE ASSEMBLY (Continued)**

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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

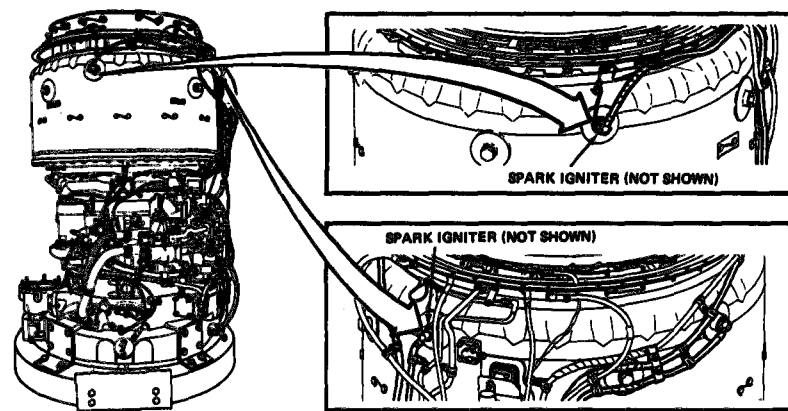
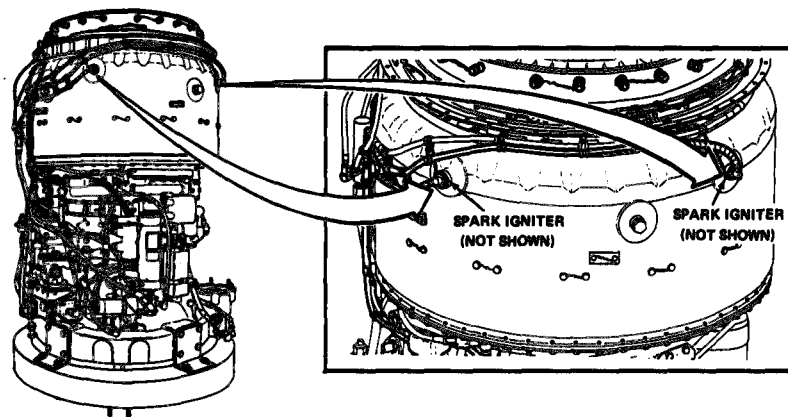
Materials:

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

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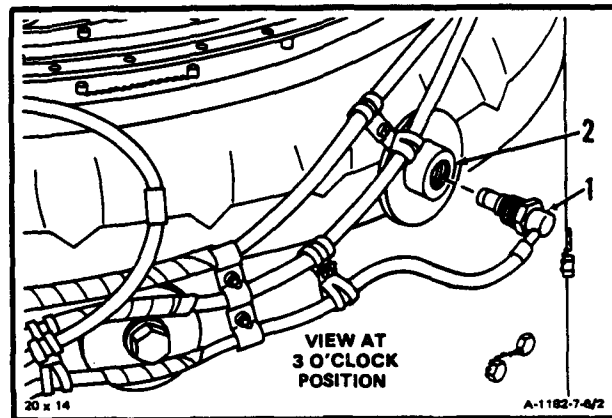
**WARNING**

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)**

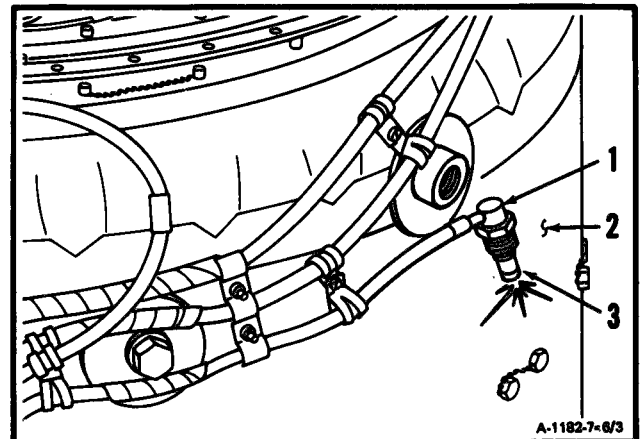
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7-6

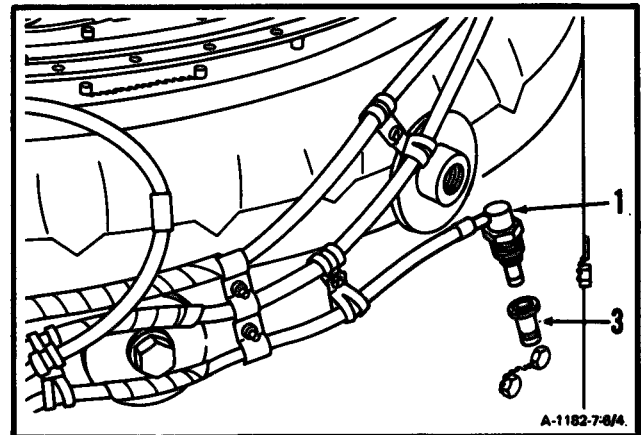
**NOTE**

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).

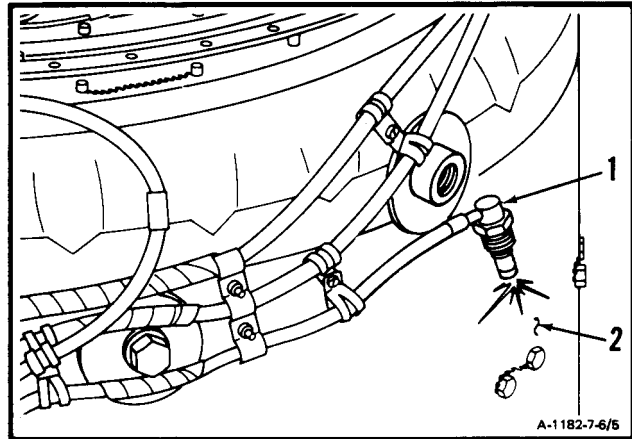


3. Remove spark ignitar (3) from ignition lead (1).

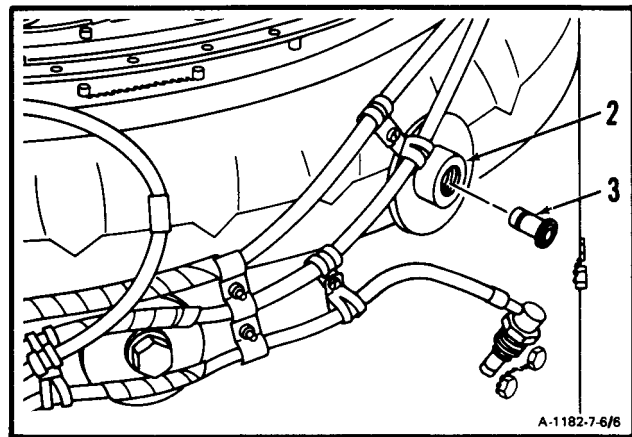
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7-6 REMOVE SPARK IGNITERS (Continued)

- 4. Discharge ignition lead (1) by touching to combustor housing (2).

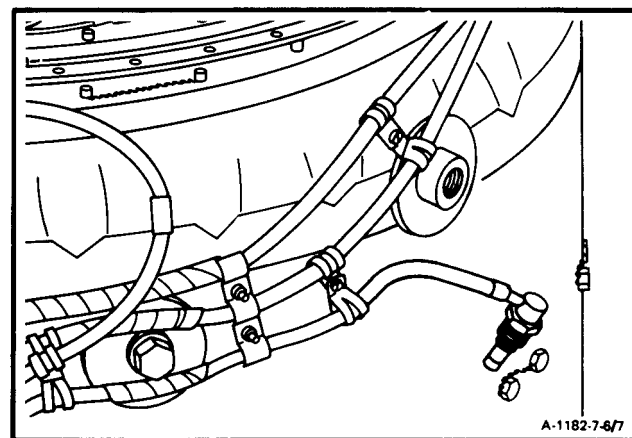


- 5. Remove spark igniter (3) from combustor housing (2).



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

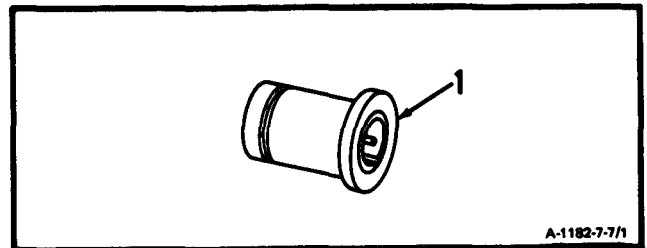
**Equipment Condition:**

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:**

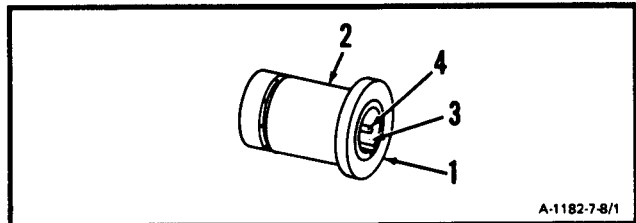
68630 Aircraft Powerplant Inspector

**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:**

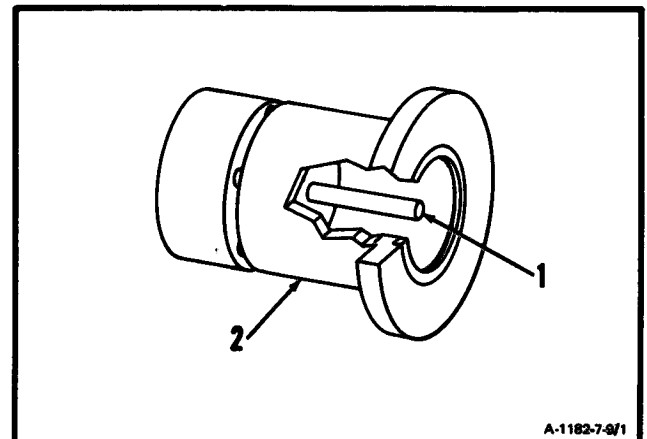
Off Engine Task

---

**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).

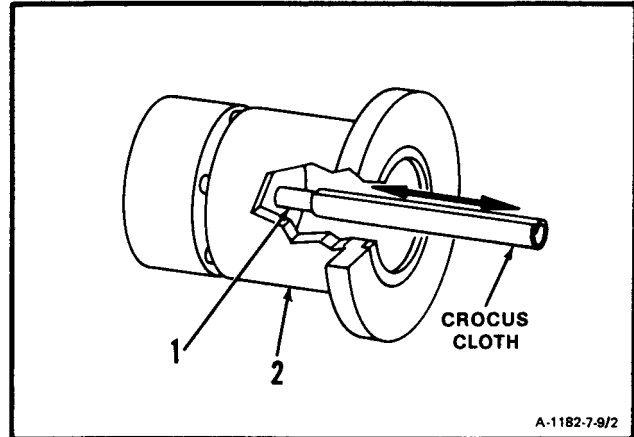
**WARNING**

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:***

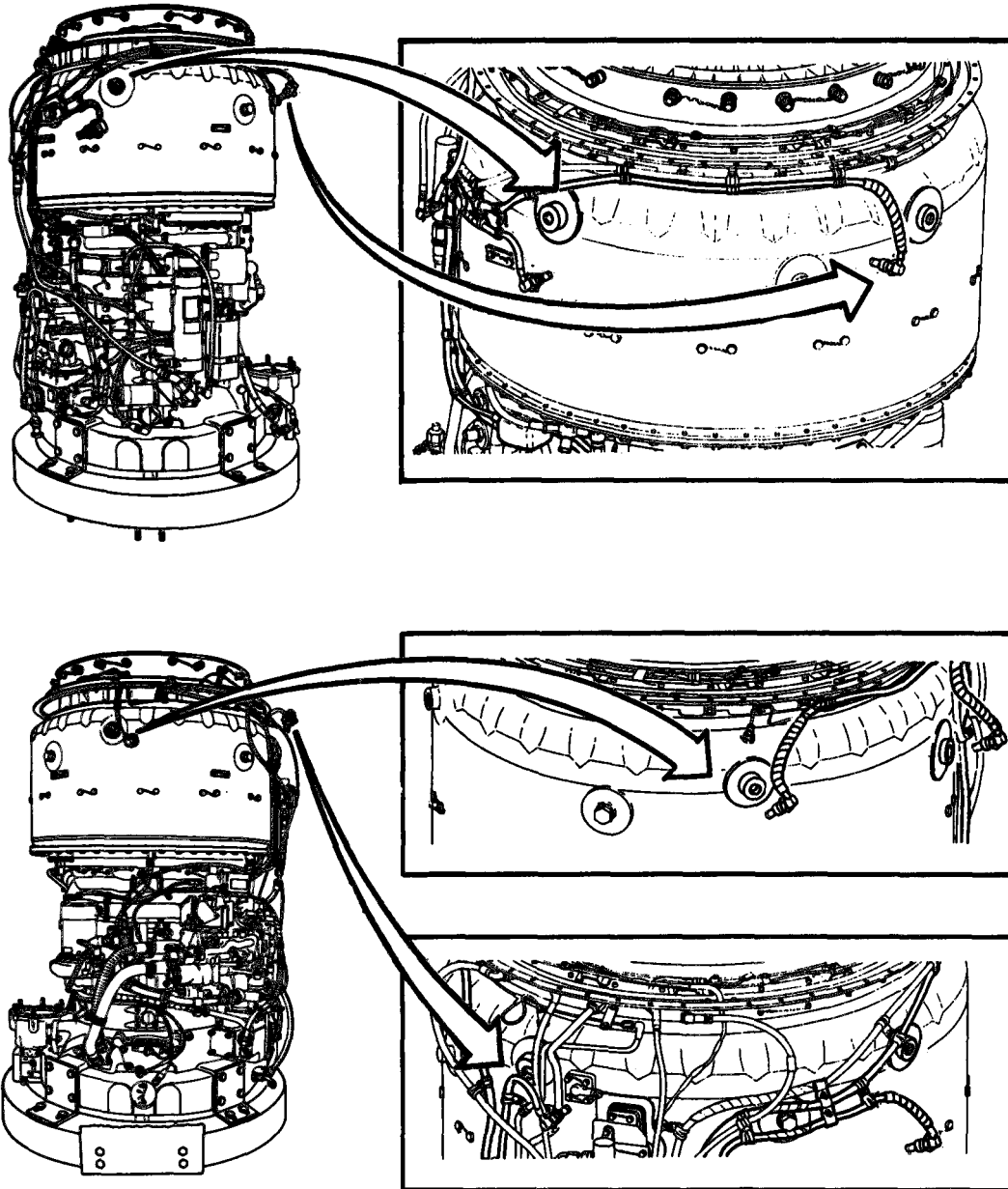
68B10 Aircraft Powerplant Repairer  
68B30 Aircraft Powerplant Inspector

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7-10 INSTALL SPARK IGNITERS (Continued)

7-10



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**7-10 INSTALL SPARK IGNITERS (Continued)**

7-10

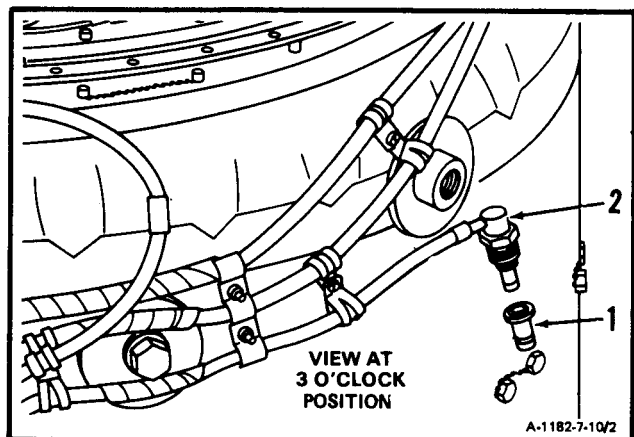
**NOTE**

The procedure for installing four spark igniters at 3-, 6-, 9-, and 12-o'clock positions is the same except for lockwiring. Only the 3-o'clock position is shown for installation.

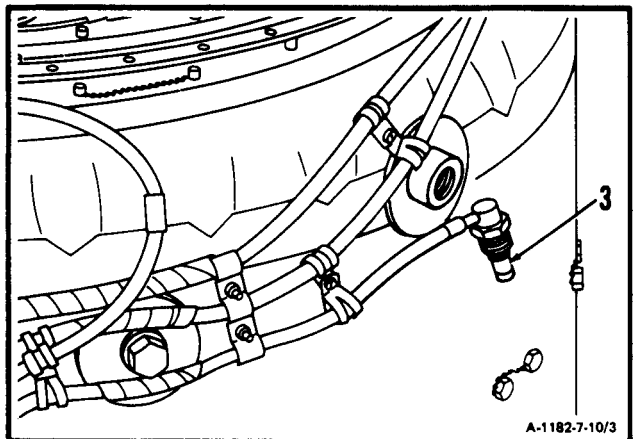
**NOTE**

Install gently by hand until fully engaged.

1. Install spark igniter (1) on ignition lead (2).



2. Apply a light coat of anti-seize compound (E5) to ignition lead threads (3).

**GO TO NEXT PAGE**

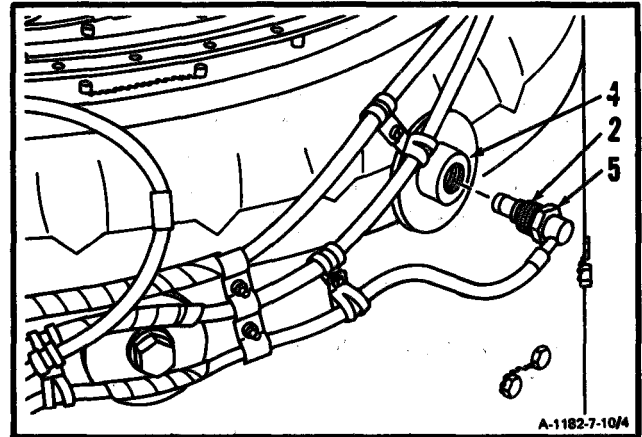
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**7-10 INSTALL SPARK IGNITERS (Continued)**

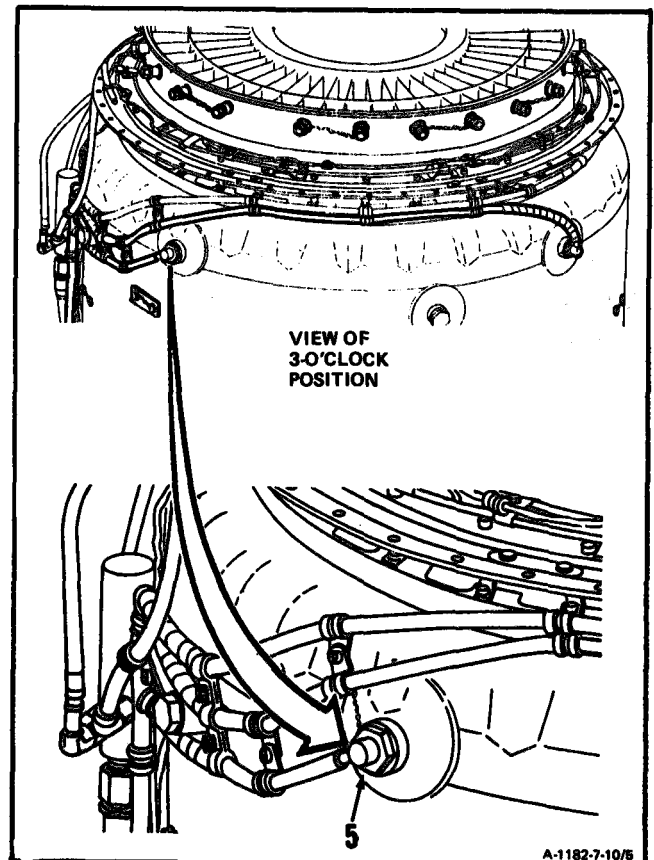
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7-10

3. Install ignition lead (2) in combustor housing (4). Torque ignition lead connector (5) to 135 inch-pounds. Use crowfoot attachment.

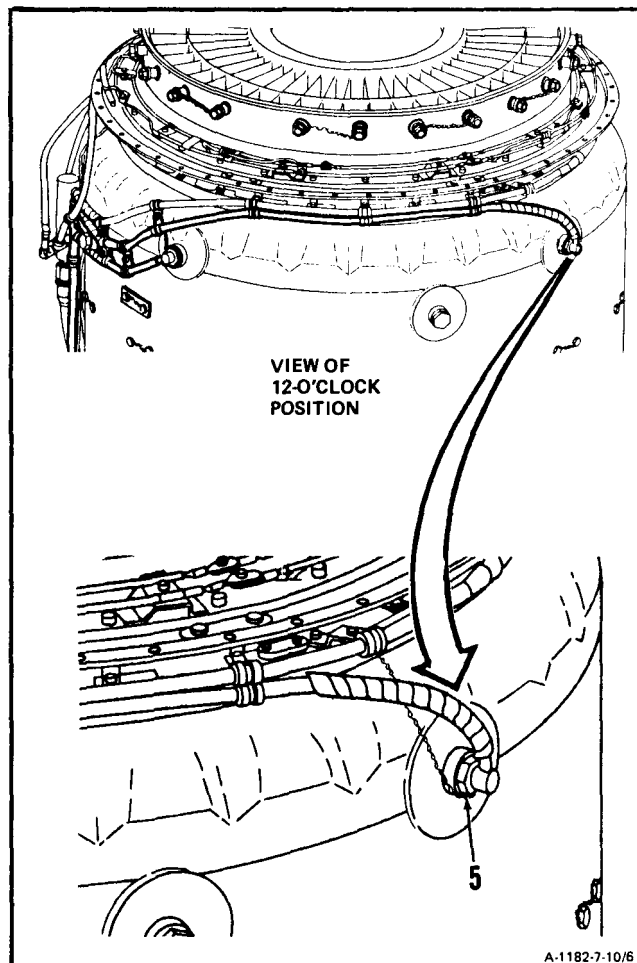


4. Lockwire connector (5) at 3-o'clock position. Use lockwire (E29).

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7-10 INSTALL SPARK IGNITERS (Continued)

5. Lockwire connector (5) at 12-o'clock position.  
Use lockwire (E29).



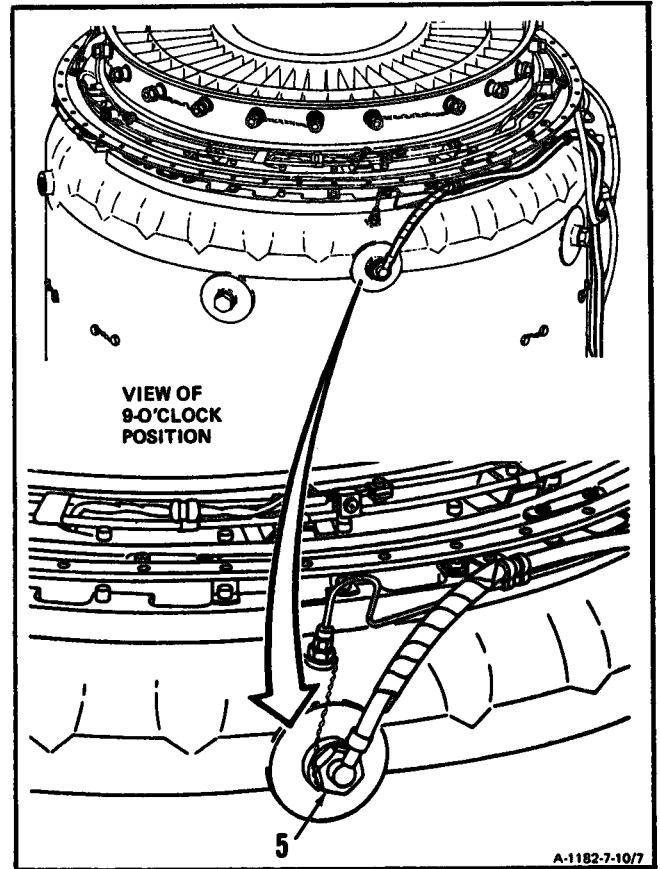
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## 7-10 INSTALL SPARK IGNITERS (Continued)

7-10

6. Lockwire corrector (5) at 9-o'clock position.  
Use lockwire (E29).

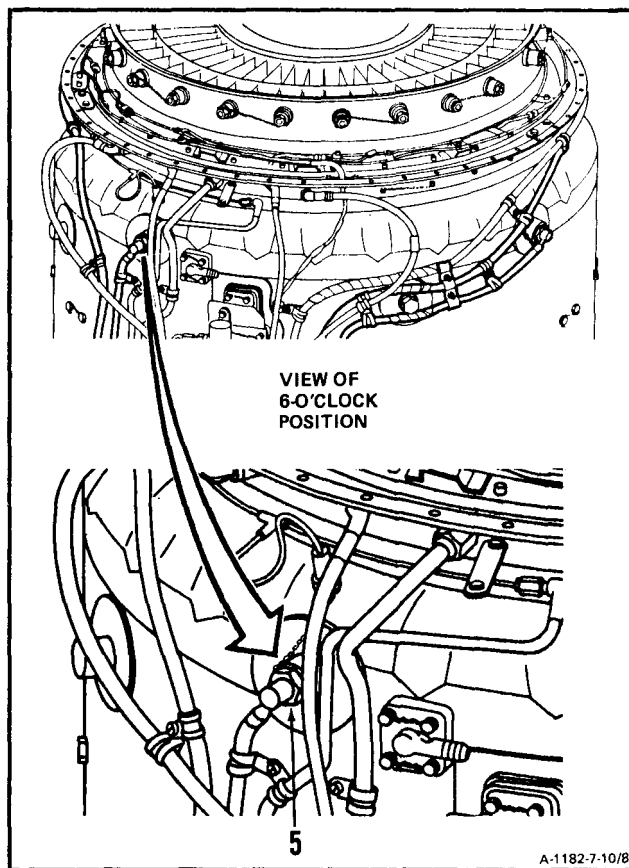


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7-10 INSTALL SPARK IGNITERS (Continued)

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

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

All

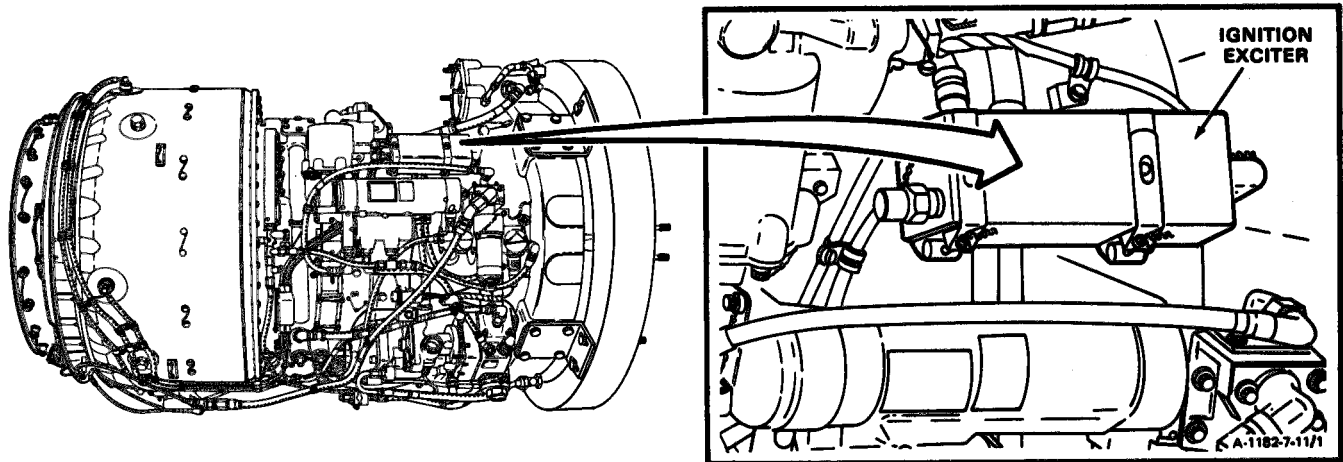
**Tools:**Powerplant Mechanic's Tool Kit,  
NSN 5180-00-323-4944**Materials:**

None

**Personnel Required:**

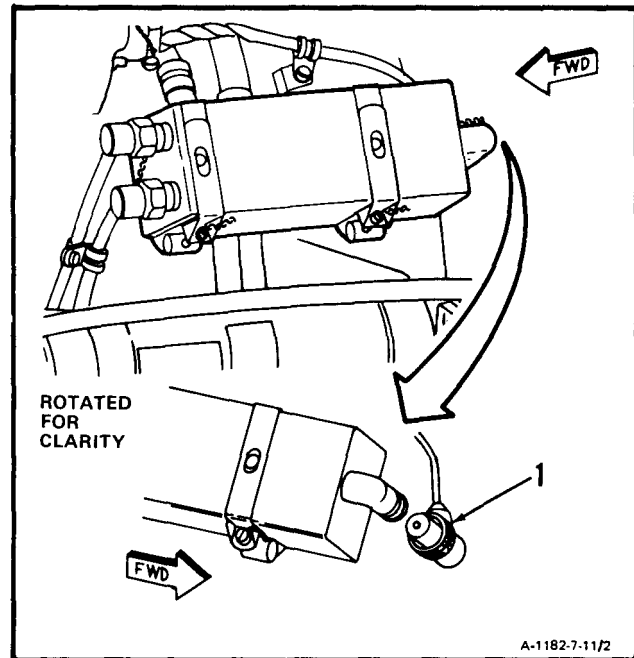
68B10 Aircraft Powerplant Repairer

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.



GO TO NEXT PAGE

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



GO TO NEXT PAGE

## 7-11 REMOVE IGNITION EXCITER (Continued)

7-11

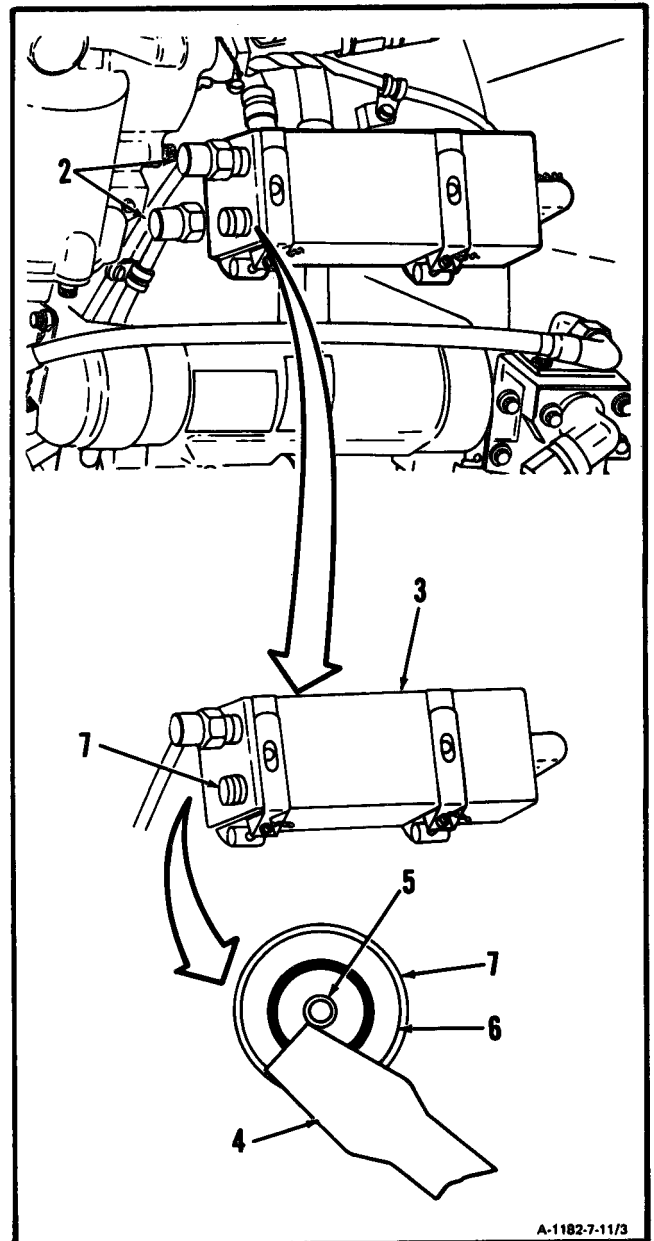
**WARNING**

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

**NOTE**

Step 2. applies to both output receptacles.

2. Remove lockwire and **disconnect coil and cable assembly lead (2)**.
3. **Discharge ignition exciter (3)** by placing tip of insulated screwdriver (4) against pin (5) and edge (6) of receptacle (7).

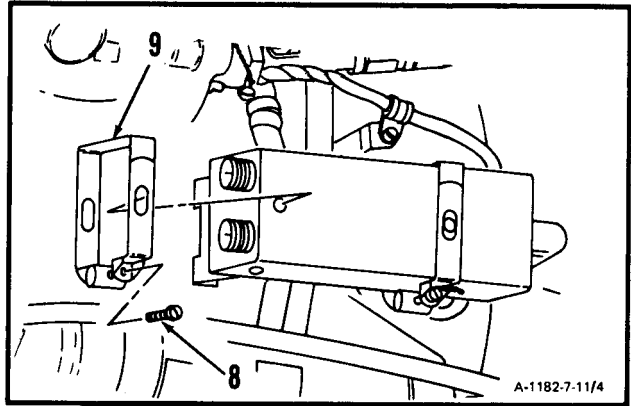


A-1182-7-11/3

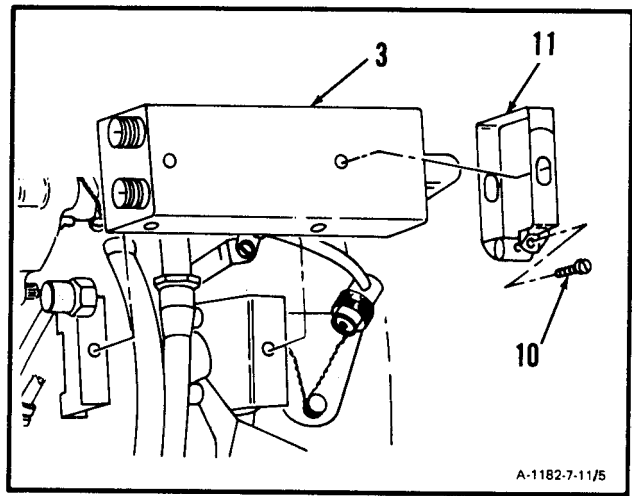
**GO TO NEXT PAGE**

7-11 REMOVE IGNITION EXCITER (Continued)

4. Remove lockwire, screw (8), and clamp (9).

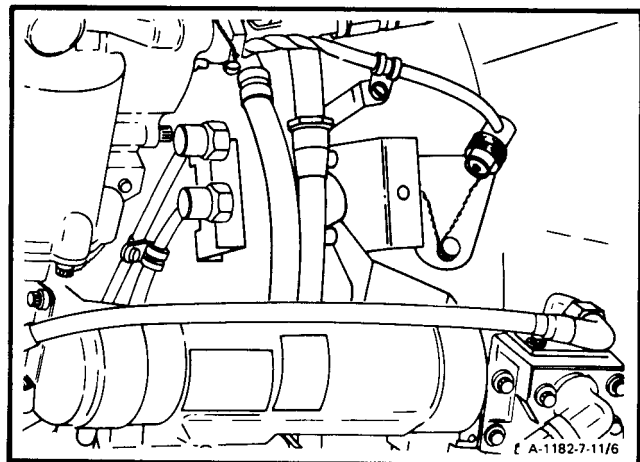


5. Remove lockwire, screw (10), clamp (11), and ignition exciter (3).



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:**

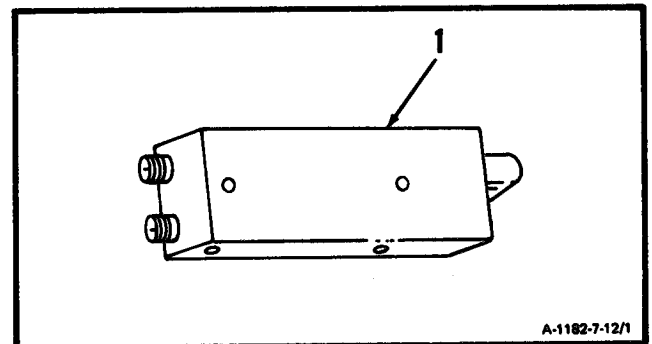
Off Engine Task

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:**

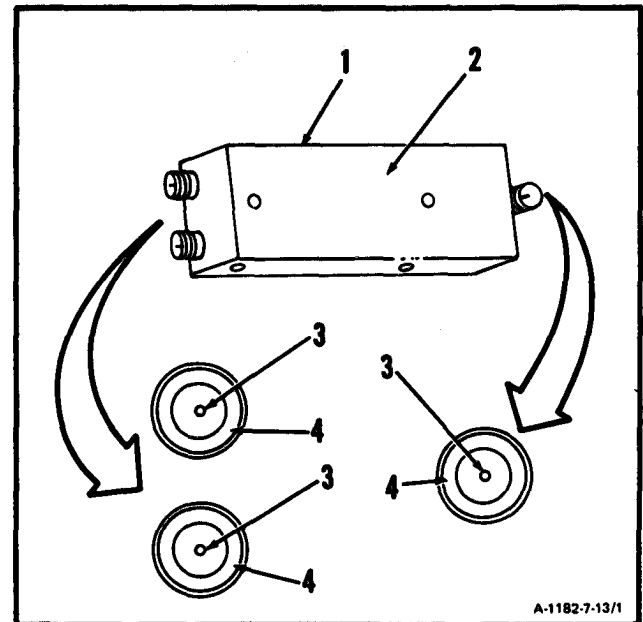
68B30 Aircraft Powerplant Inspector

**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

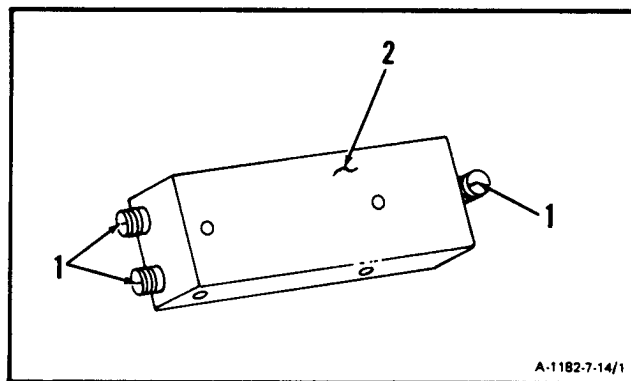
**Equipment Condition:**

Off Engine Task

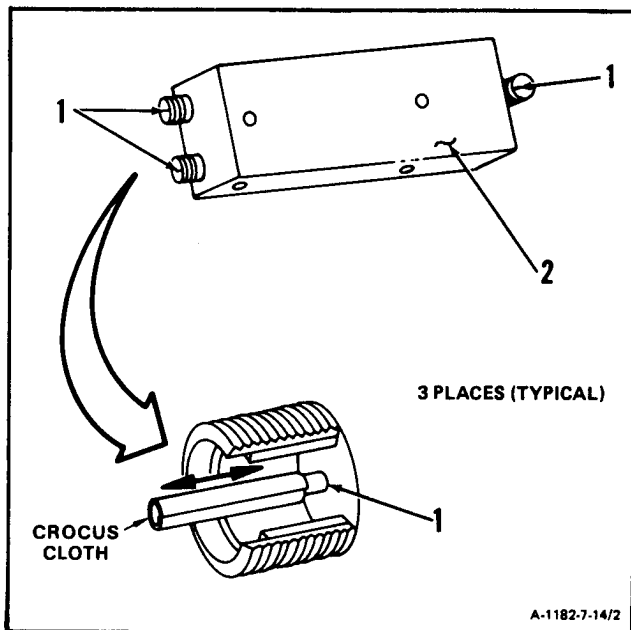
**NOTE**

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

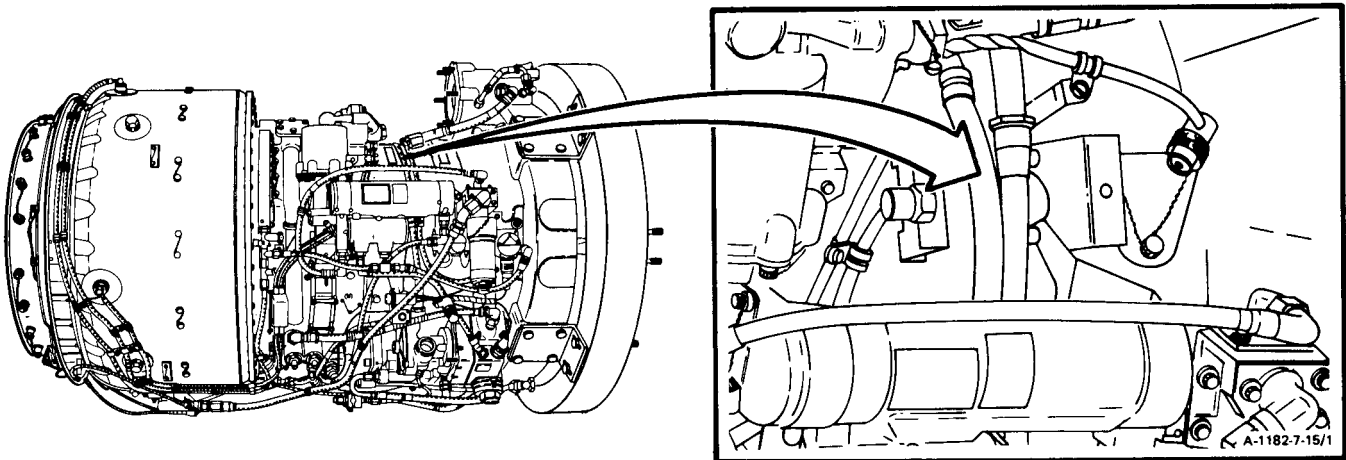
**Materials:**

Lockwire (E29)

**Personnel Required:**

68B10 Aircraft Powerplant Repairer

68B30 Aircraft Powerplant Inspector



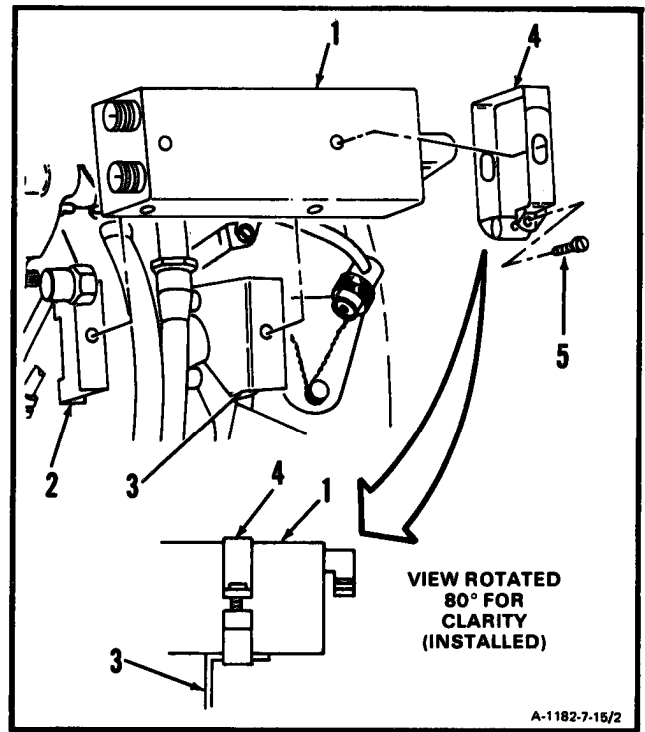
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**7-15 INSTALL IGNITION EXCITER (Continued)**

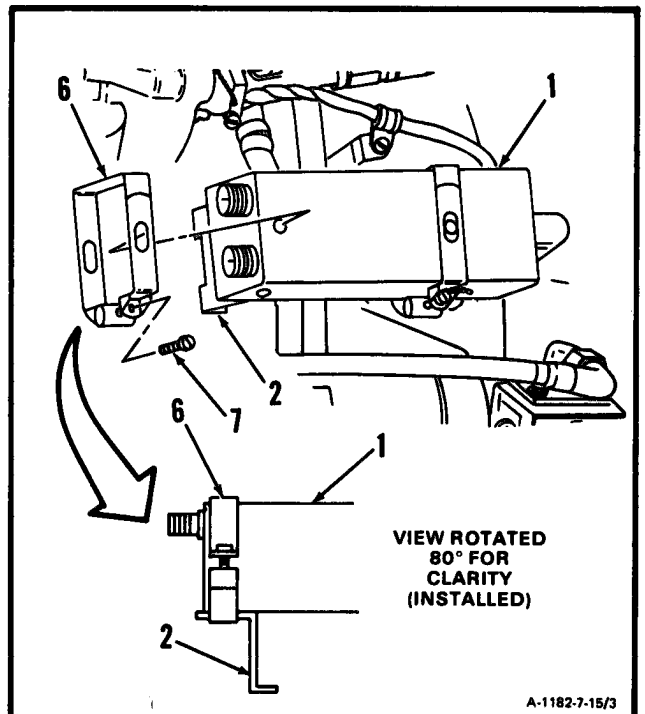
7-15

**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).



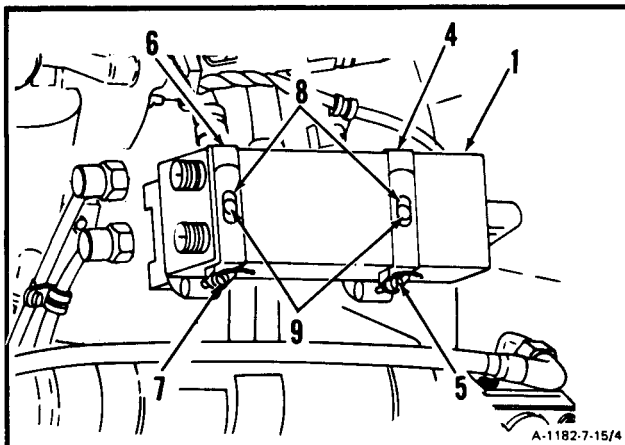
- b. Loosely install clamp (6) and screw (7) on ignition exciter (1) and bracket (2).



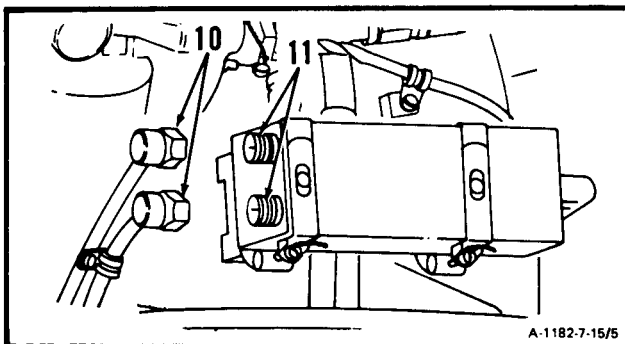
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7-15 INSTALL IGNITION EXCITER (Continued)

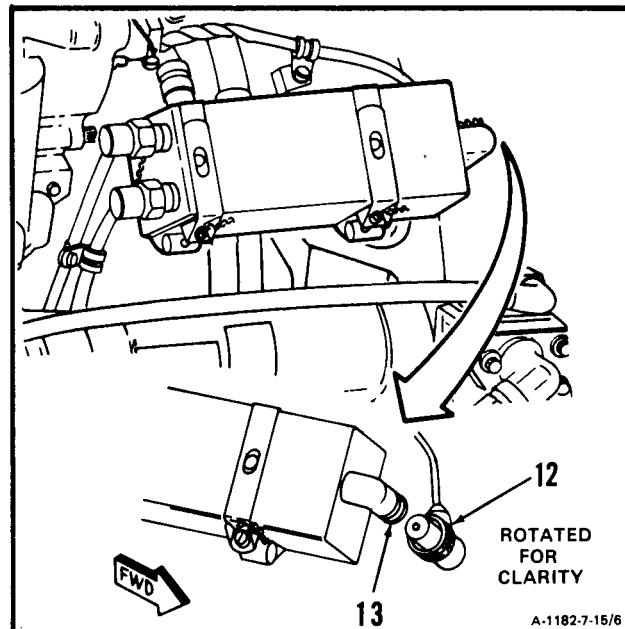
c. Align slots (8) in clamps (4 and 6) with locating lugs (9) on ignition exciter (1). Tighten screws (5 and 7) and lockwire. Use lockwire (E29).



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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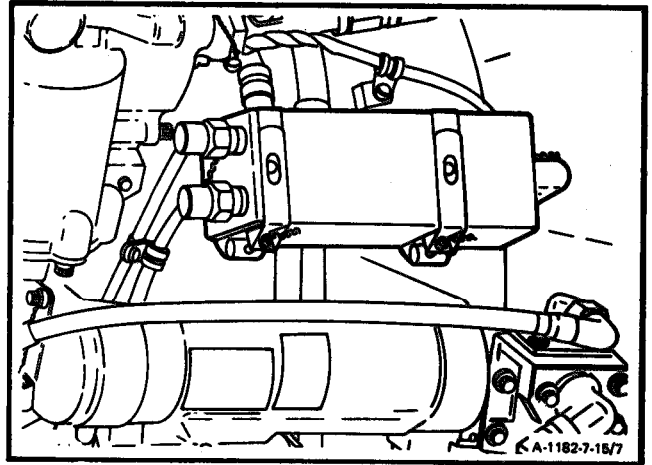
**7-15 INSTALL IGNITION EXCITER (Continued)**

---

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:**

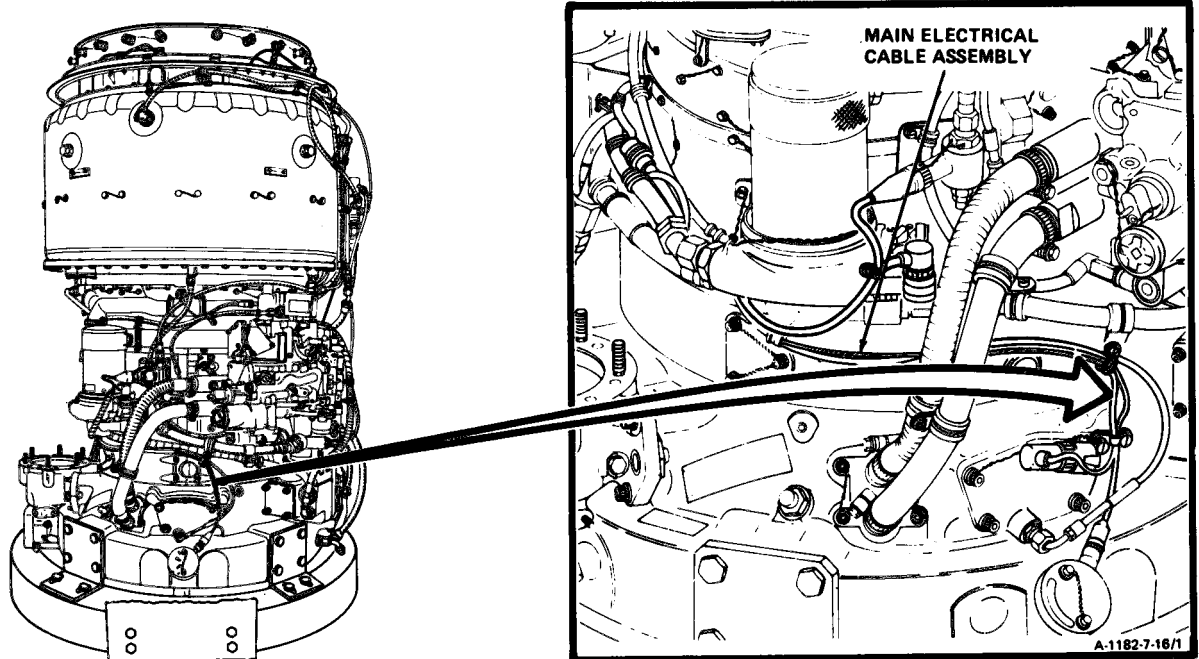
All

**Tools:**

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

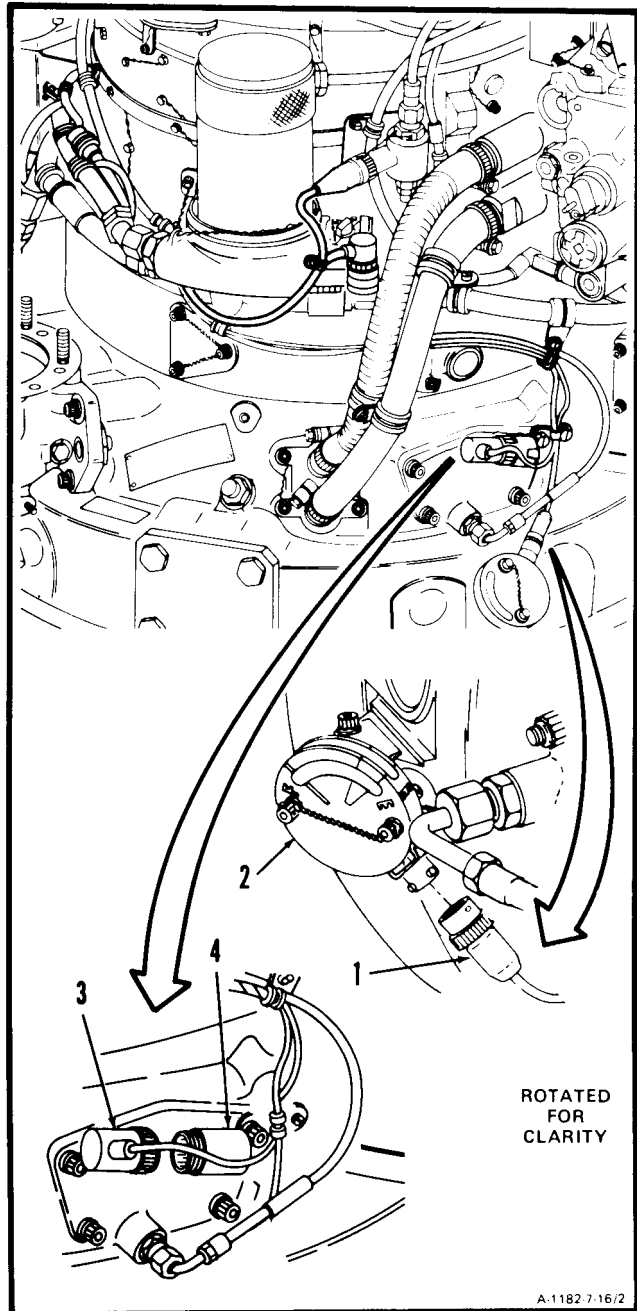
**Materials:**

None



GO TO NEXT PAGE

1. **Disconnect electrical connector (1)** from oil level indicator (2).
2. **Remove lockwire.** Disconnect electrical connector (3) from plug (4).

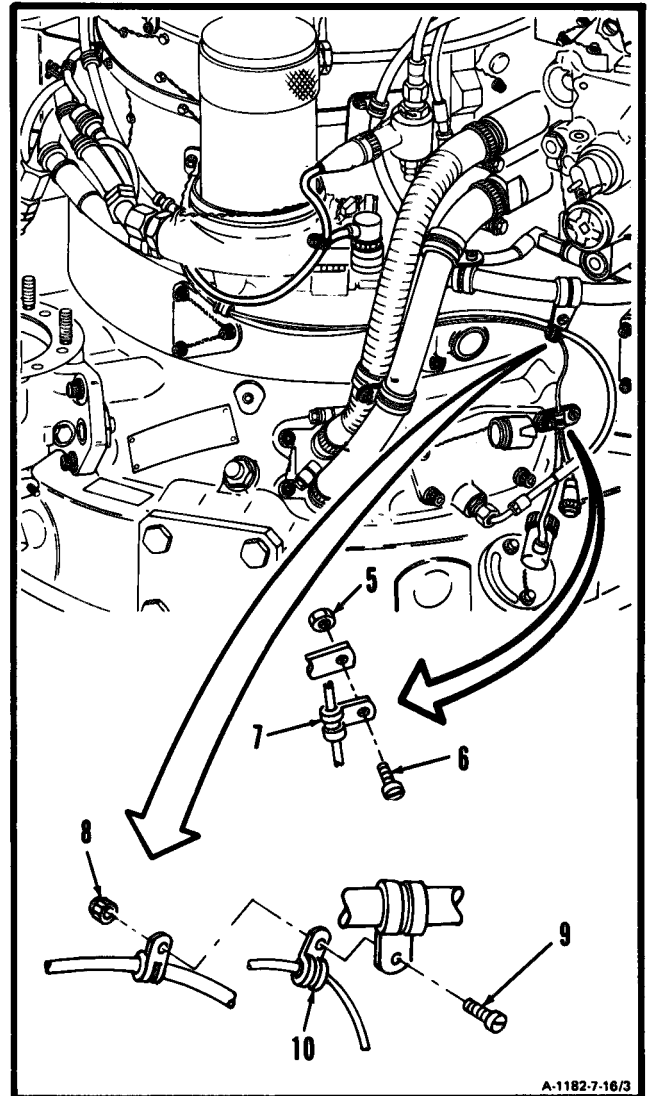


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**7-16 REMOVE MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR)(Contin.ed) 7-16**

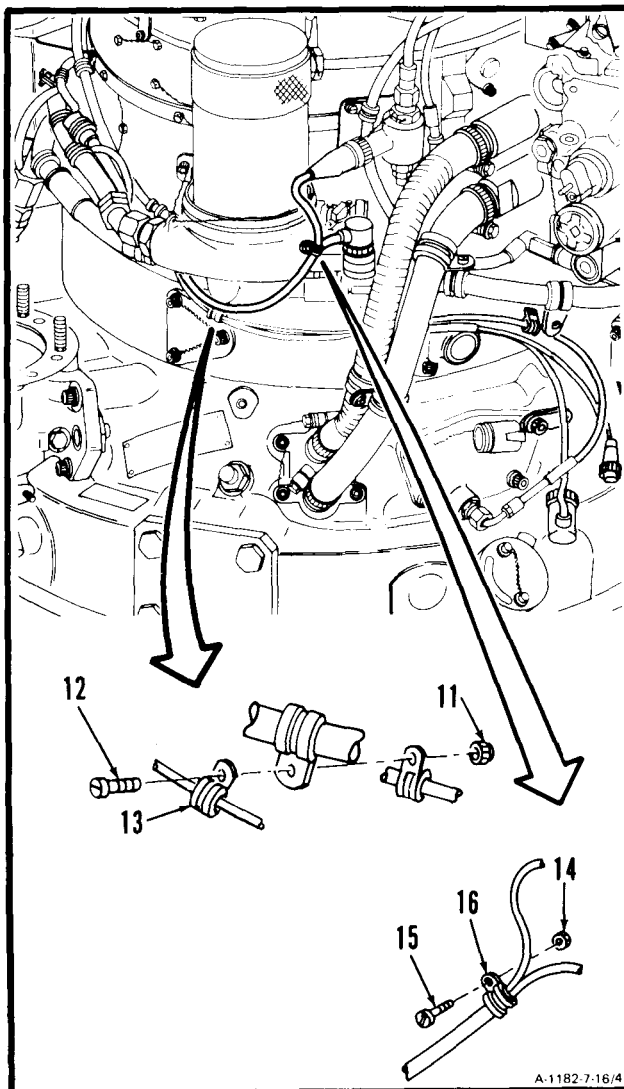
3. Remove nut (5), screw (6), and clamp (7).
4. Remove nut (8), screw (9), and clamp (10).



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5. Remove nut (11), screw (12), and clamp (13).

6. Remove nut (14), screw (15), and clamp (16).

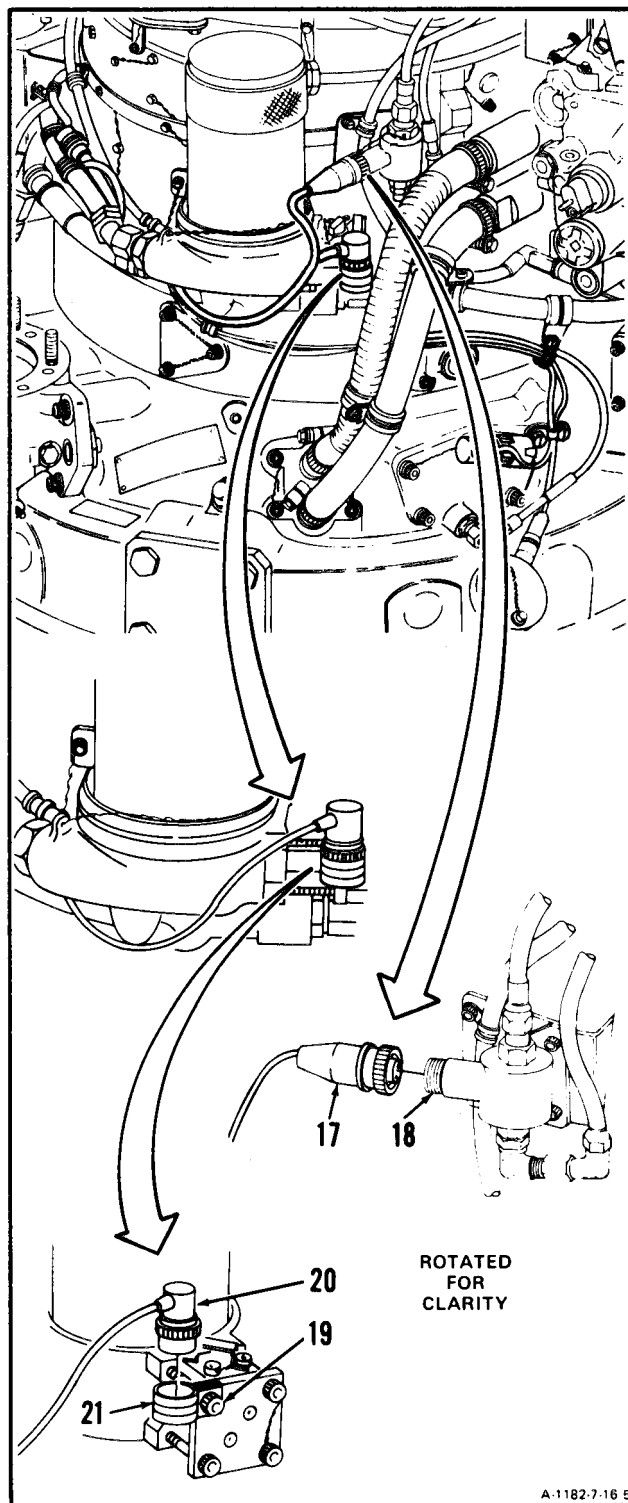


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**7-16 REMOVE MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) (Continued)**

7-16

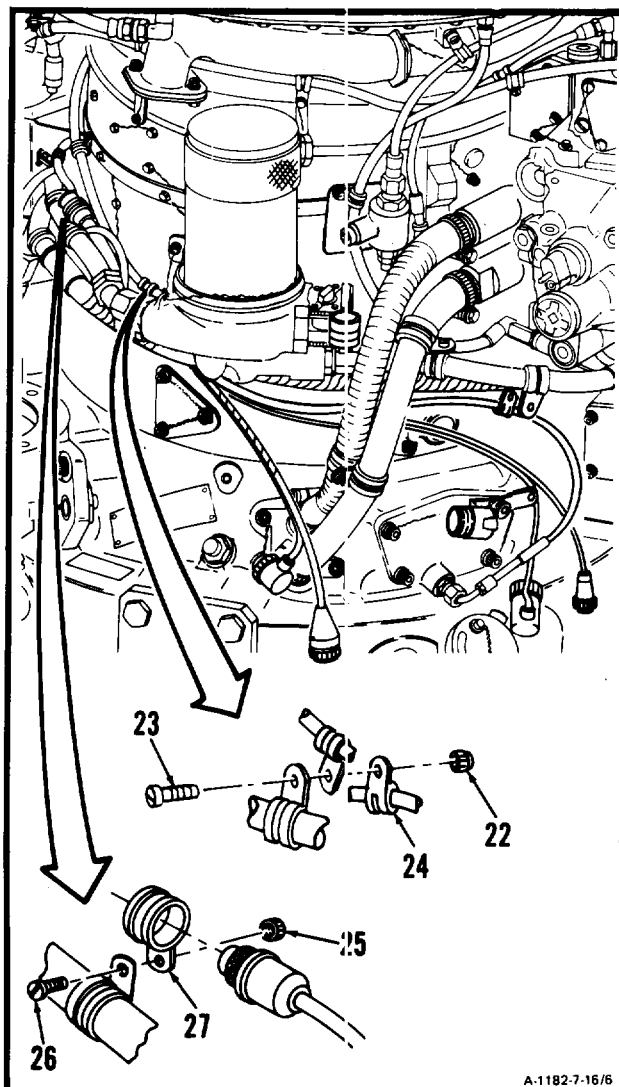
7. Remove lockwire and disconnect electrical connector (17) from starting fuel solenoid valve (18).
8. Remove lockwire. Loosen screw (19) and remove electrical connector (20) from clamp (21).

**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).

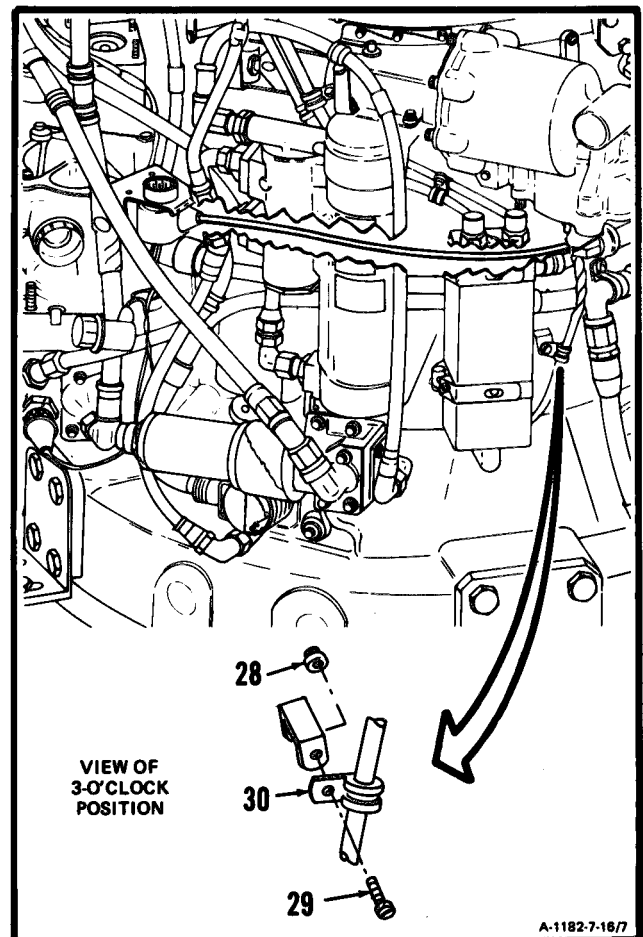


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**7-16 REMOVE MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) (Continued)**

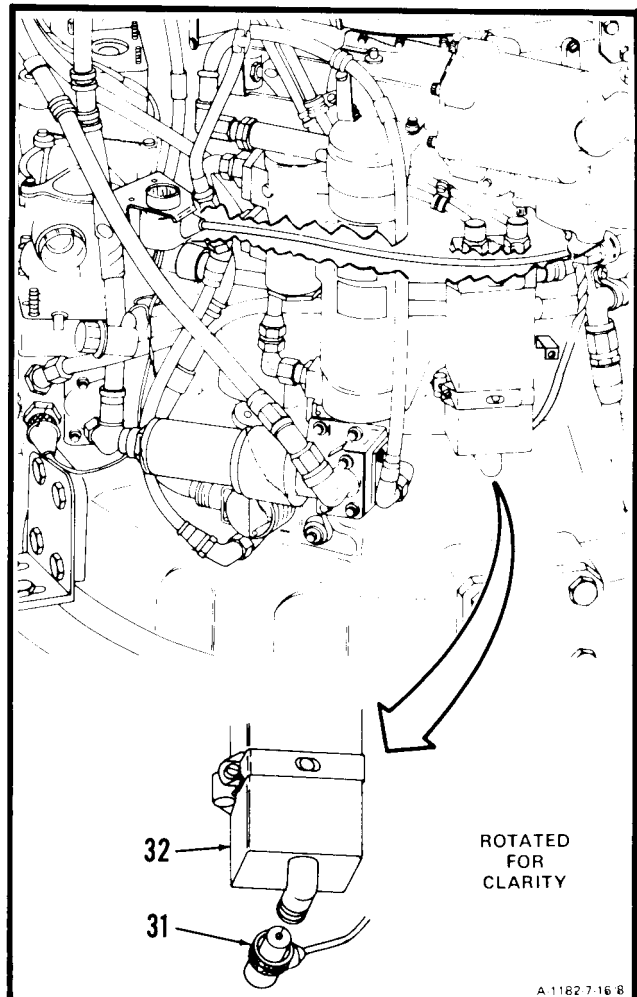
7-16

11. Remove nut (28), screw (29), and clamp (30).



GO TO NEXT PAGE

12. Remove lockwire and **disconnect electrical connector (31)** from ignition exciter (32).

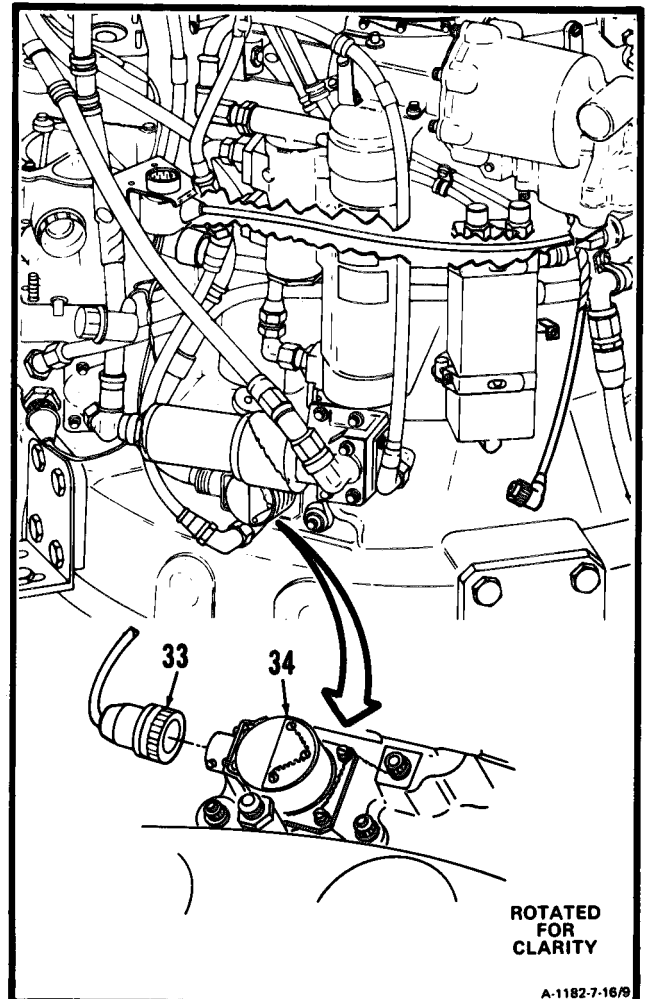


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**7-16 REMOVE MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) (Continued)**

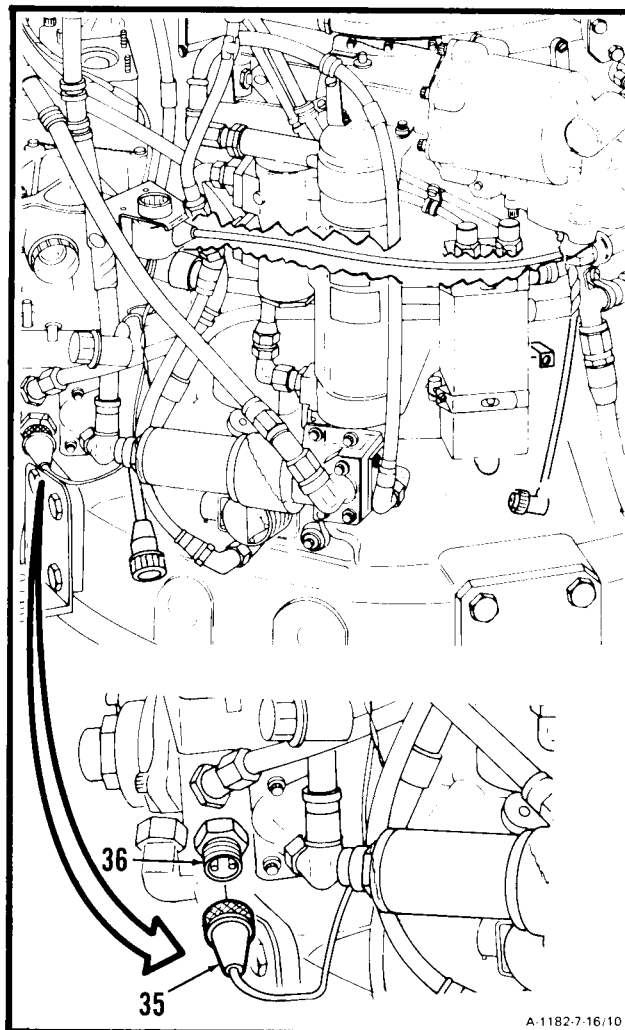
7-16

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).



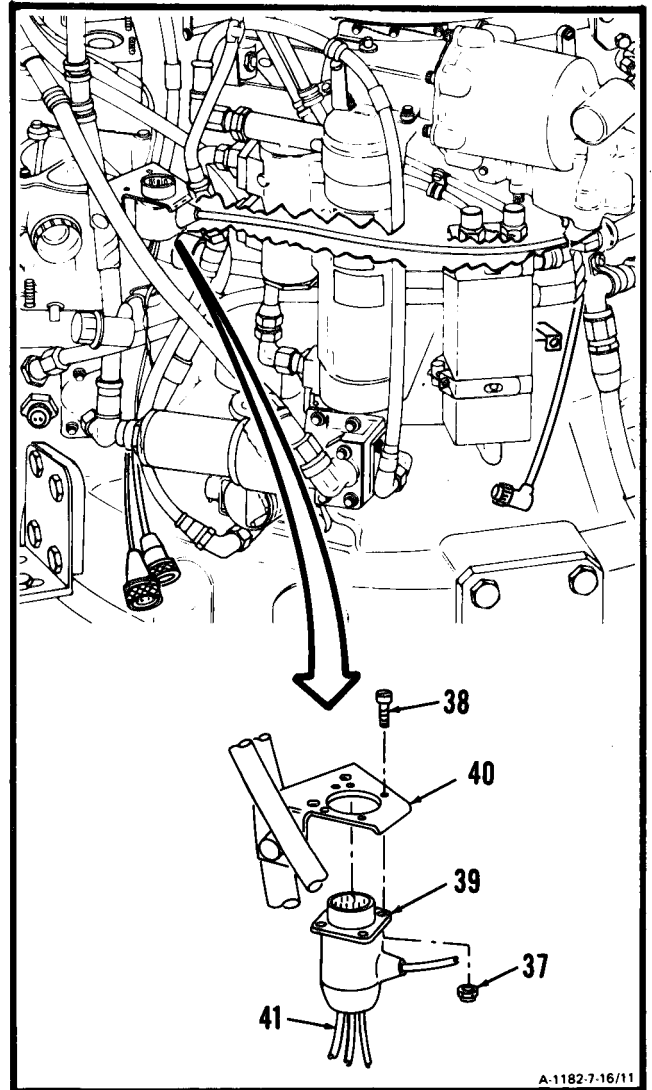
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**7-16 REMOVE MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) (Continued)**

7-16

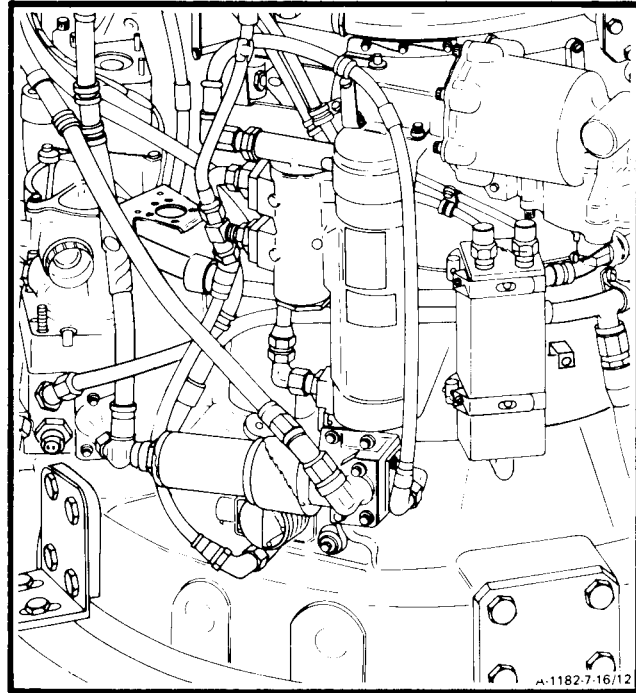
15. **Remove** four nuts (37), four screws (38), and **electrical connector (39)** from bracket (40),  
Remove main electrical cable assembly (41).



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FOLLOW-ON MAINTENANCE:

None



END OF TASK

7-16.1 REMOVE MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR)

7-16.1

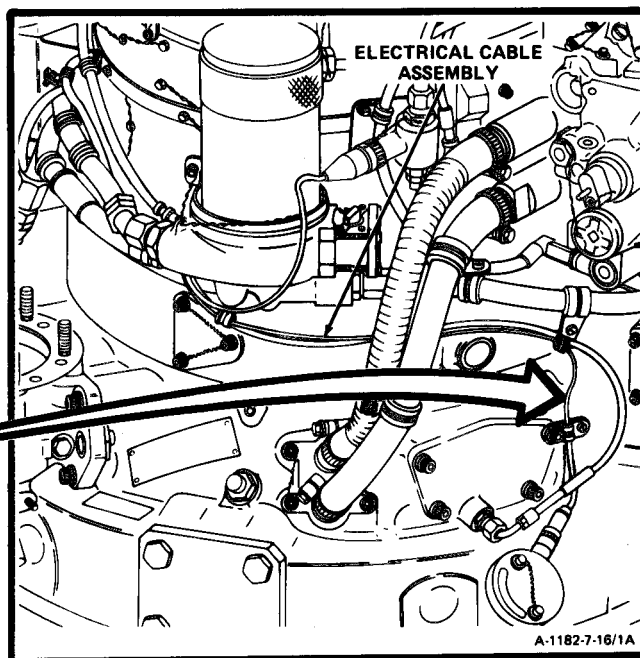
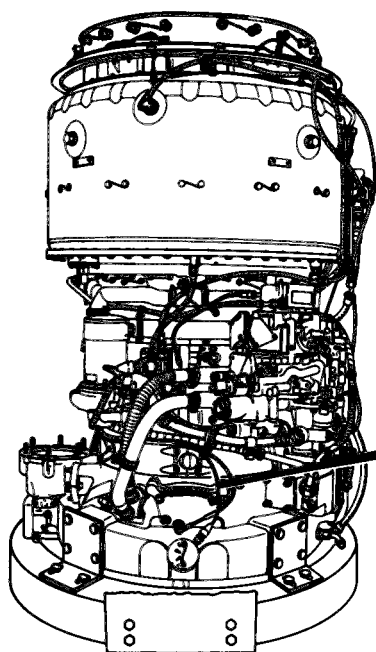
INITIAL SETUP

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

**Applicable Configurations:**  
All

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

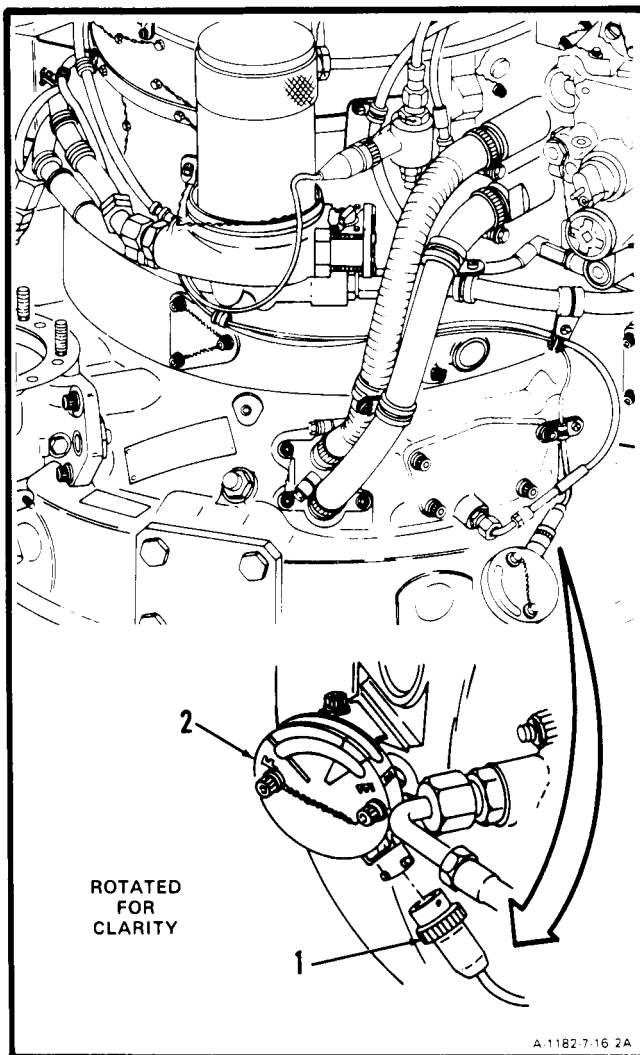
**Materials:**  
None



GO TO NEXT PAGE

7-16.1 REMOVE MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued) 7-16.1

1. Disconnect electrical connector (1) from oil level indicator (2).

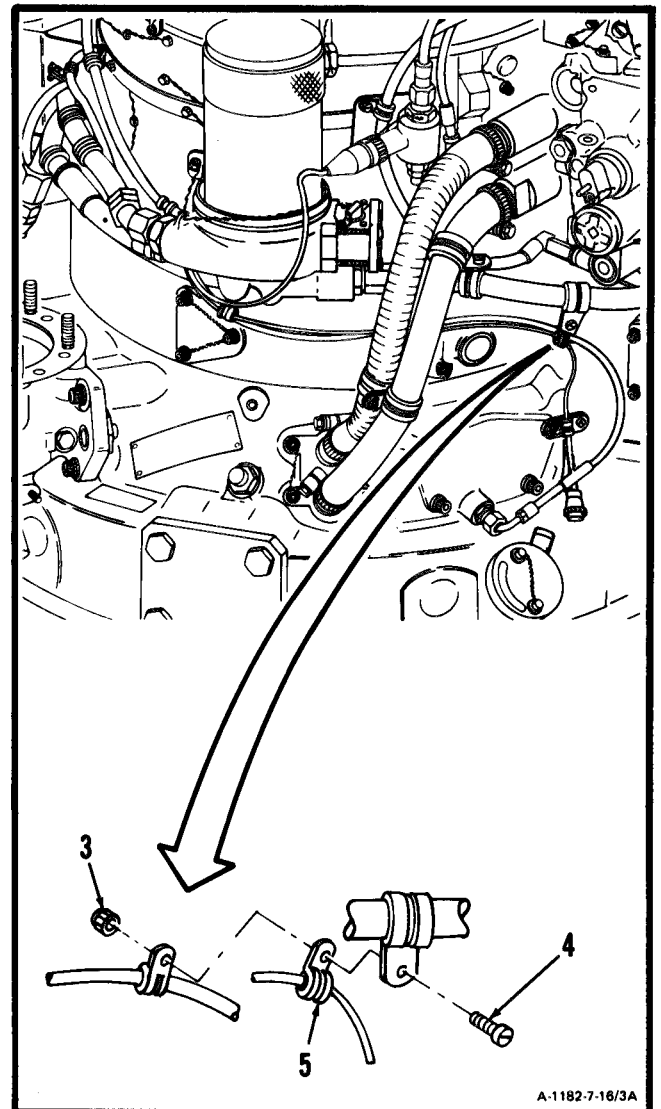


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## 7-16.1 REMOVE MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued)

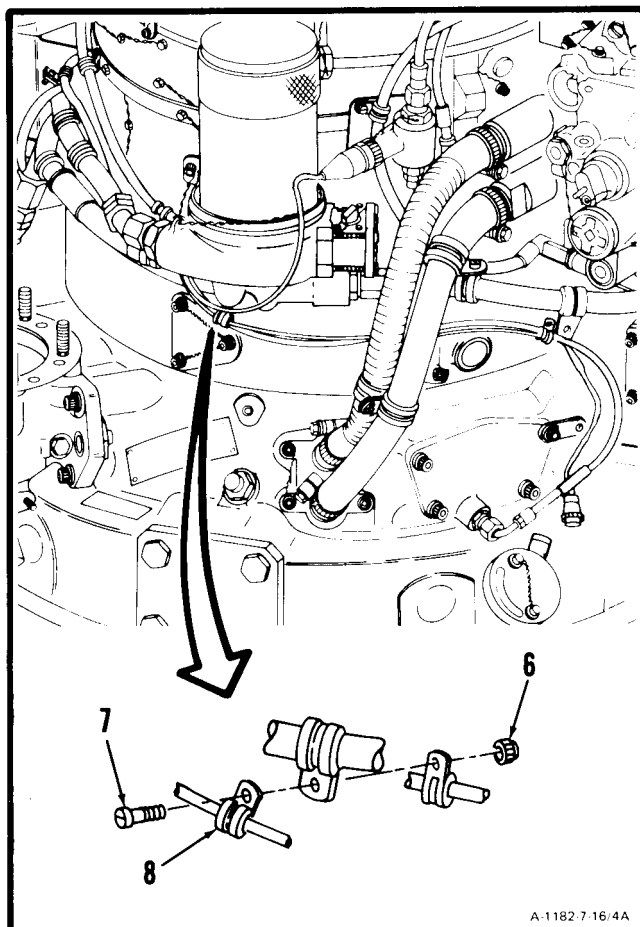
7-16.1

2. Remove nut (3), screw (4), and clamp (5).



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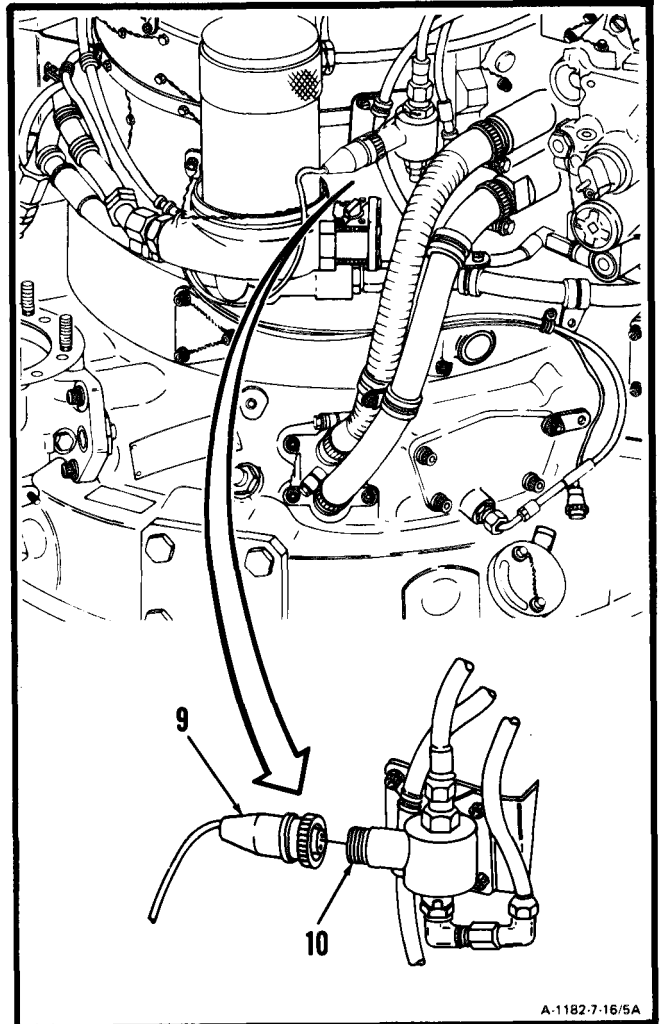
3. Remove nut (6), screw (7), and clamp (8).



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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).

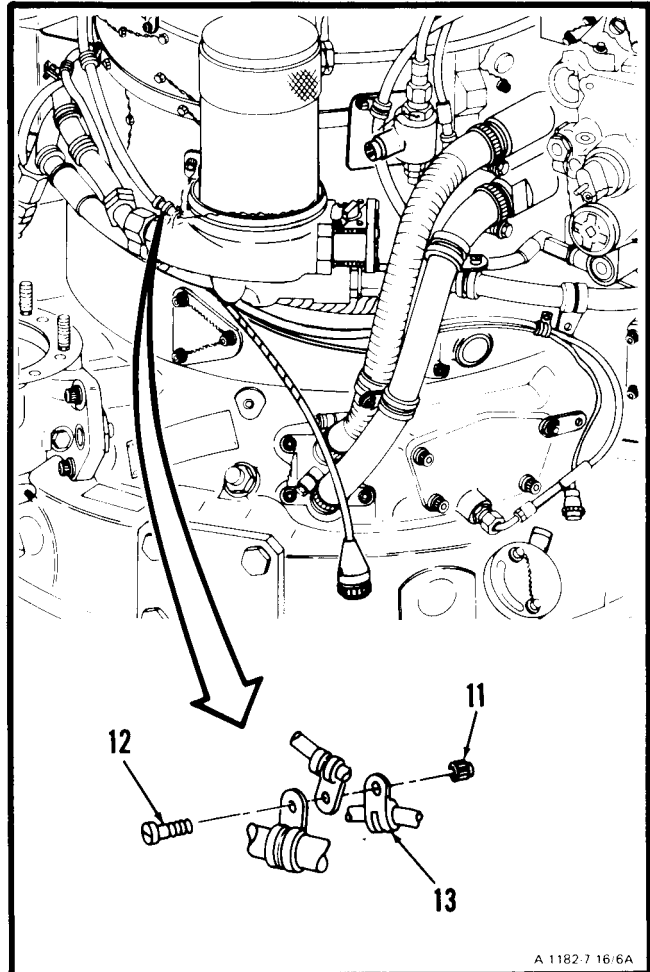


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7-16.1 REMOVE MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued)

7-16.1

5. Remove nut (11), screw (12), and clamp (13).



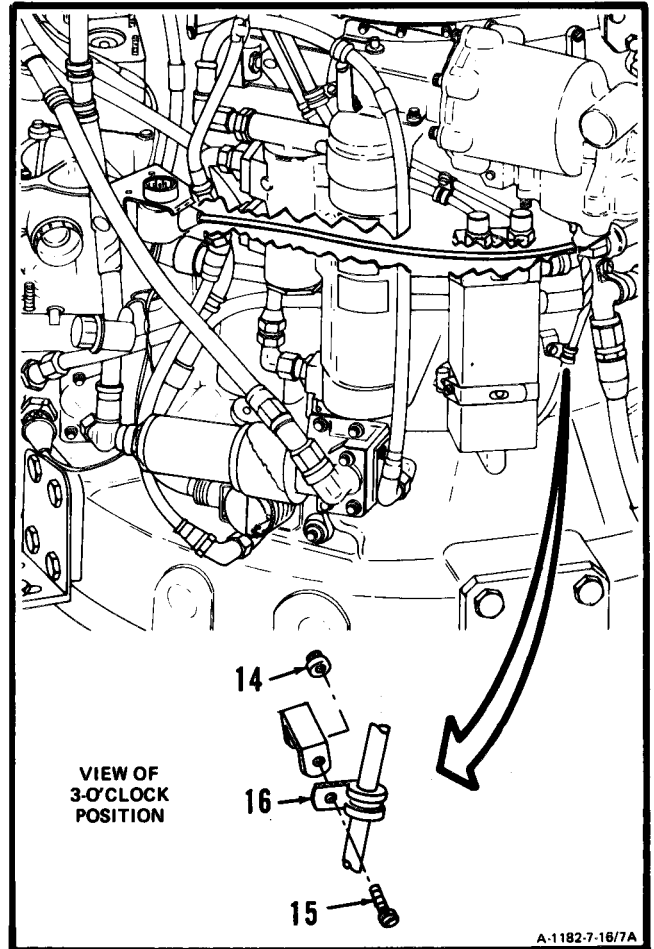
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7-16.1 REMOVE MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued)

7-16.1

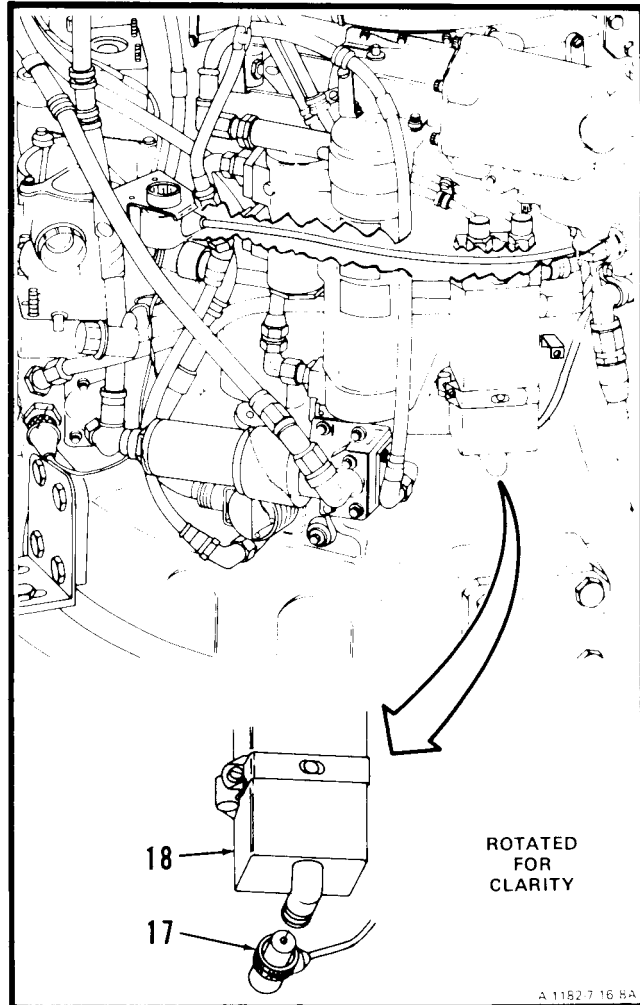
6. Remove nut (14), screw (15), and clamp (16).



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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)

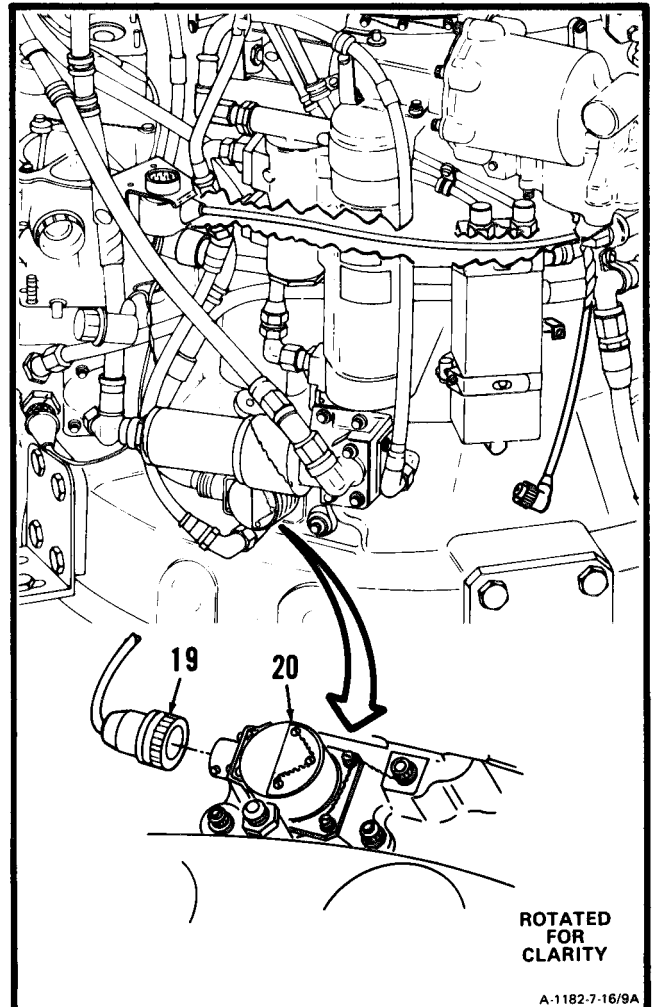


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## 7-16.1 REMOVE MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued)

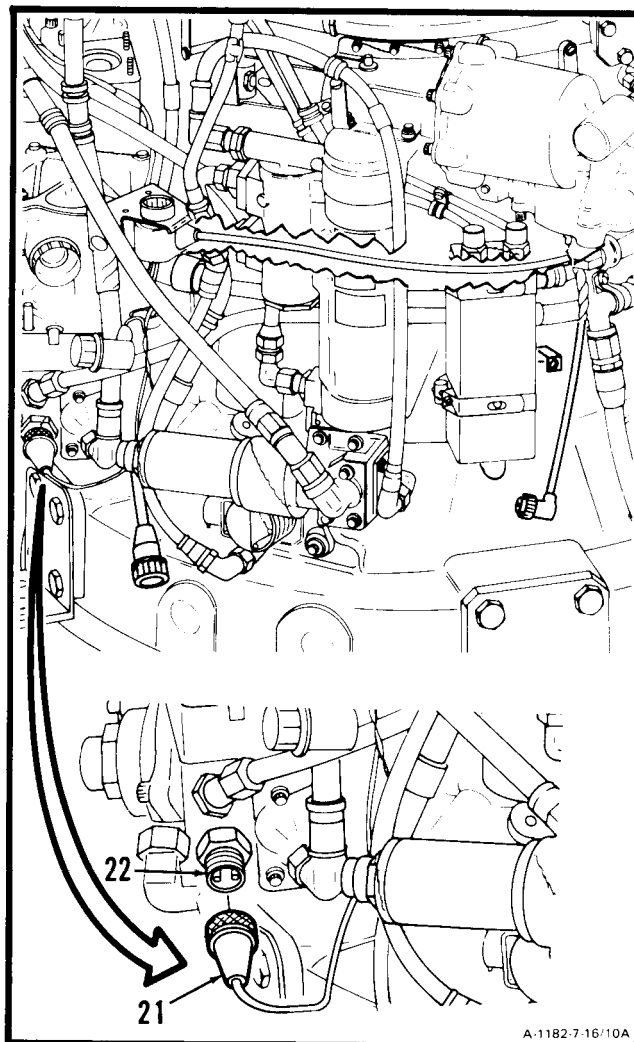
7-16.1

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).

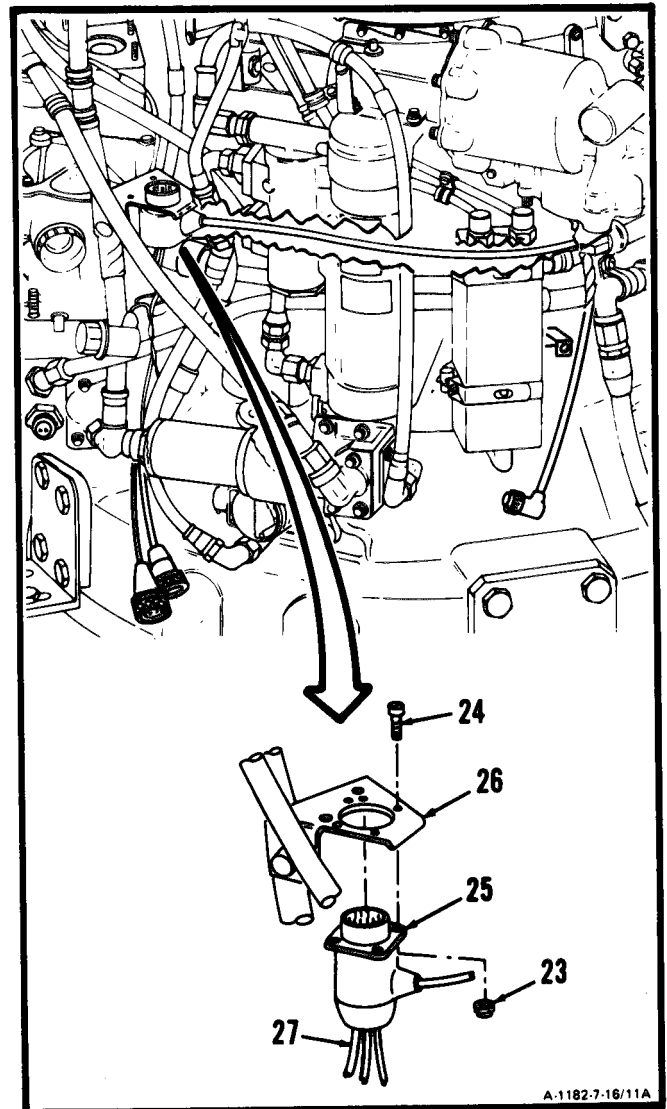


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## 7-16.1 REMOVE MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued)

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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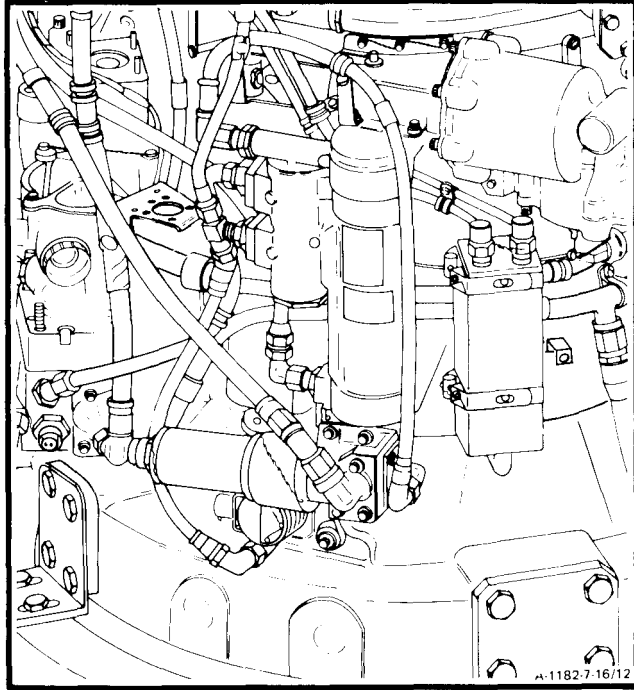
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7-16.1 REMOVE MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued) 7-16.1

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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

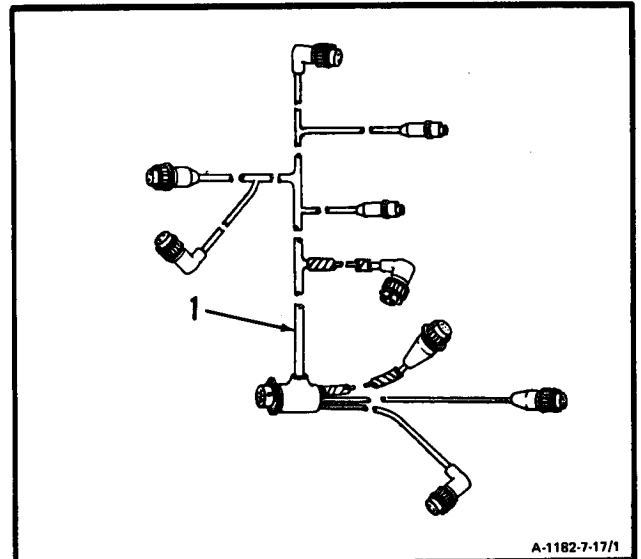
**Equipment Condition:**

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

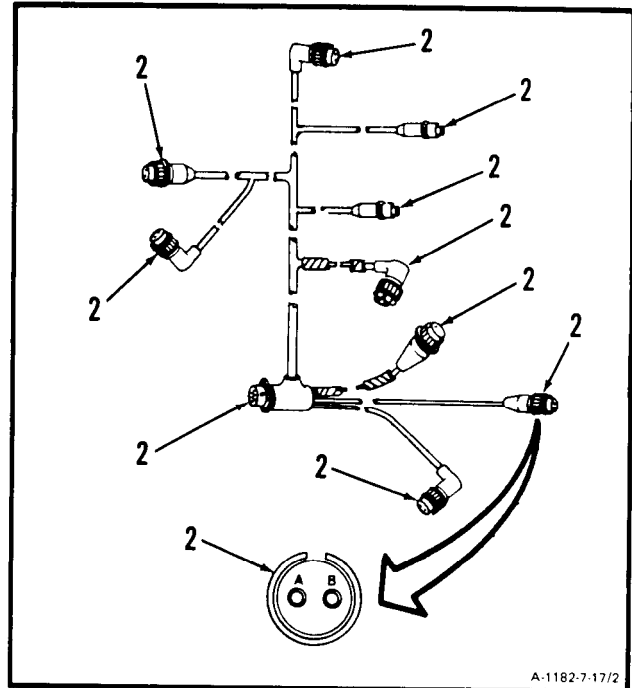
**GO TO NEXT PAGE**

2. Clean ten electrical connectors (2). Use methyl ethyl ketone (E36) and brush.

**WARNING**

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

3. Wear goggles. **Blow dry electrical connectors (2).** Use clean, dry compressed air.

**FOLLOW-ON MAINTENANCE:**

Inspect Main Electrical Cable Assembly  
(Task 7-18)

**END OF TASK**



## 7-17.1 CLEAN MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR)

7-17.1

## INITIAL SETUP

**Applicable Configurations:**

All

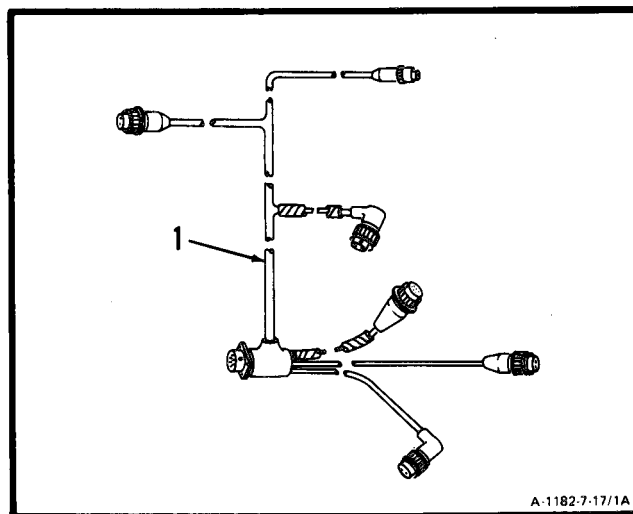
**Tools:**Powerplant Mechanic's Tool Kit,  
NSN 5180-00-323-4944Goggles  
compressed Air Source**Materials:**Gloves (E20)  
Lint-Free Cloth (E26)  
Methyl Ethyl Ketone (E36)**Personnel Required:**

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).



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## 7-17.1 CLEAN MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued)

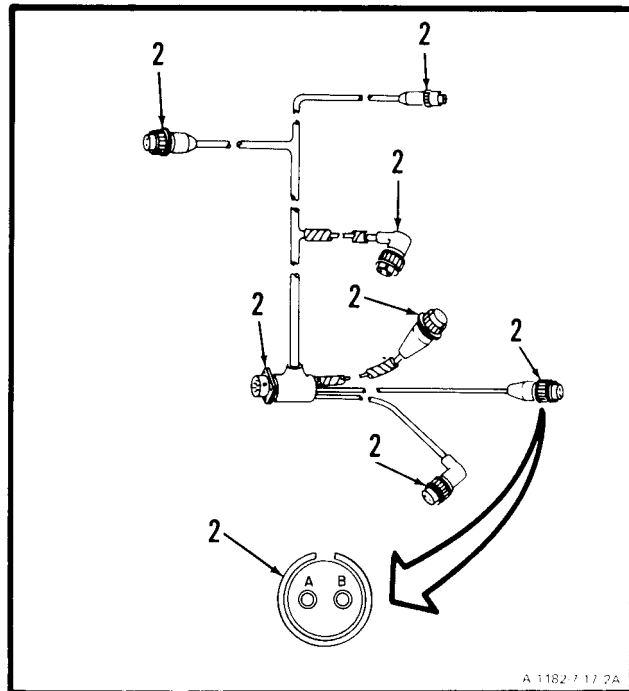
7-17.1

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

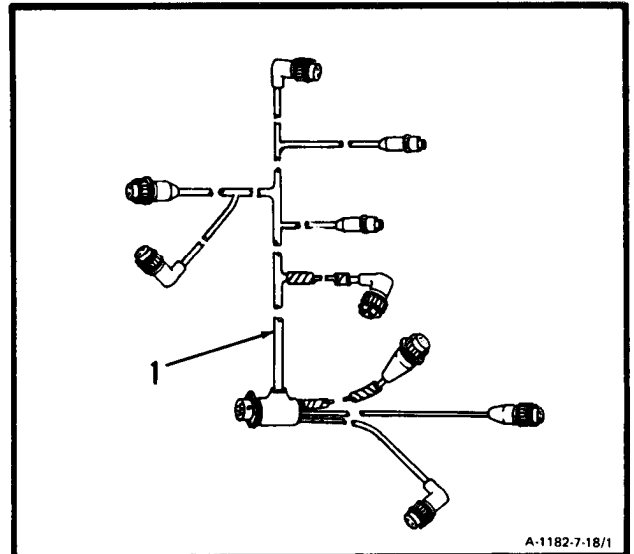
**Tools:**  
Technical Inspection Tool Kit,  
NSN 5180-00-323-5114

**Materials:**  
None

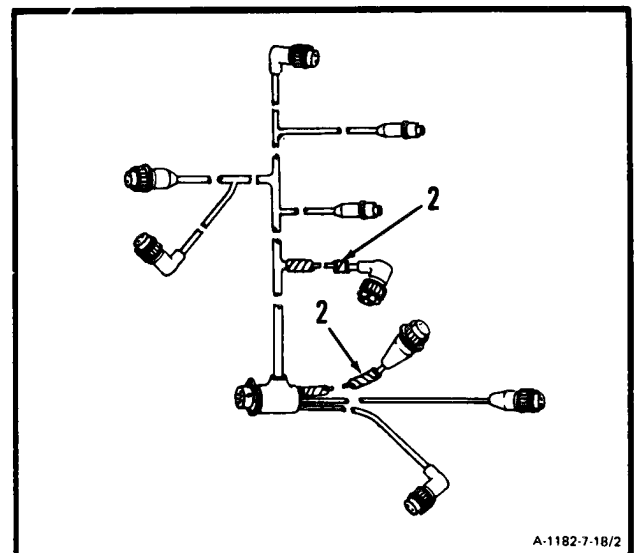
**Personnel Required:**  
68B30 Aircraft Powerplant Inspector

**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.

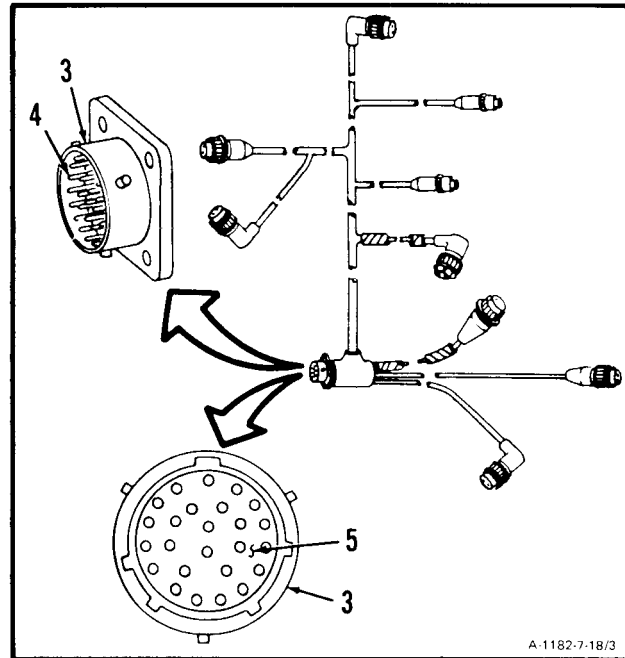


- 2 **Inspect sleeving (2).** There shall be no frayed or broken sleeving.

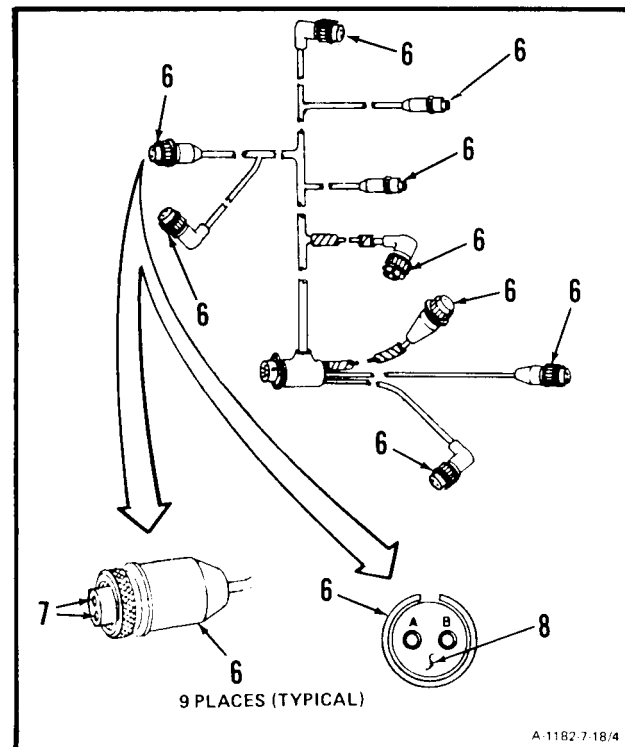


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3. **Inspect electrical connector (3).** There shall be no corrosion, broken or bent pins (4), or cracked insulation (5).



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

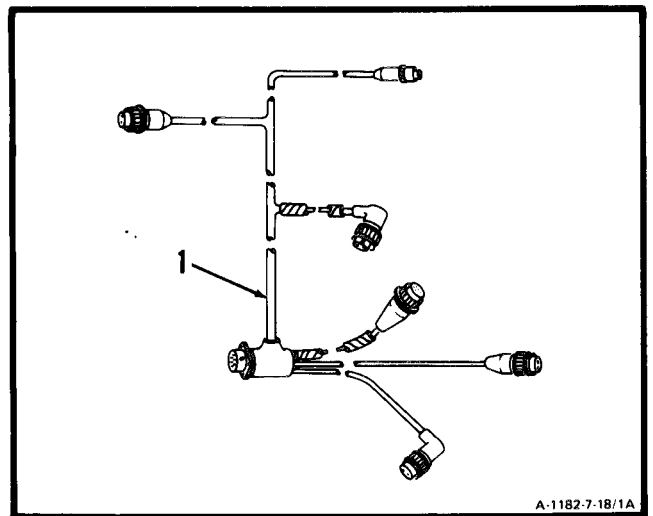
**Tools:**  
Technical Inspection Tool Kit,  
NSN 5180-00-323-5114

**Materials:**  
None

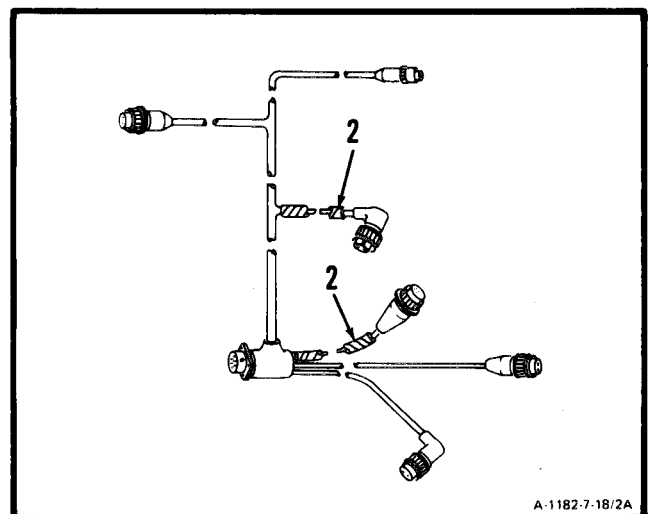
**Personnel Required:**  
68B30 Aircraft Powerplant Inspector

**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.

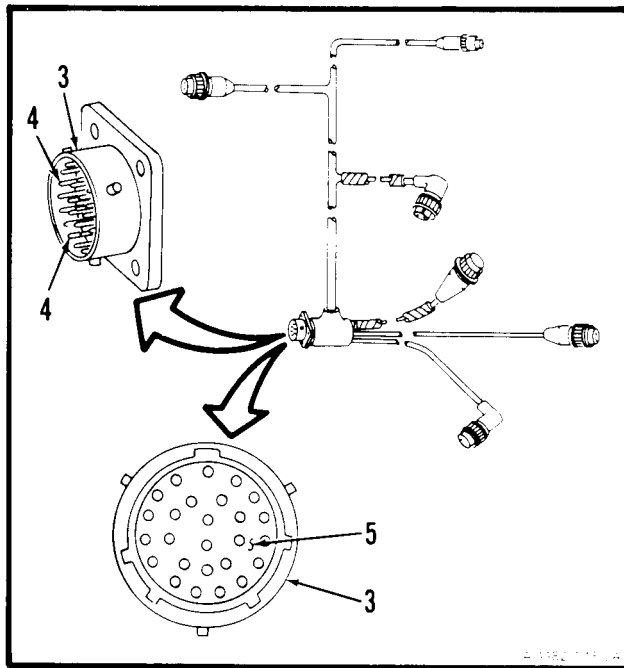


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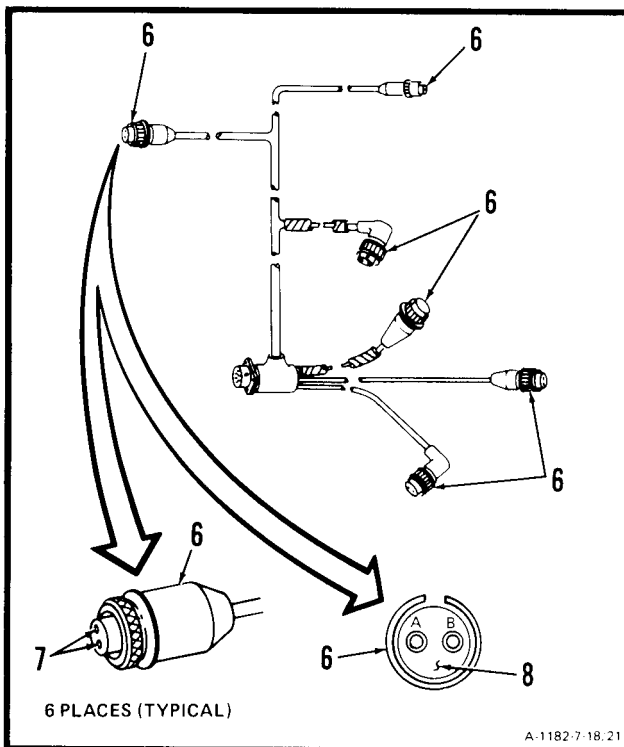
7-18.1 INSPECT MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued)

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

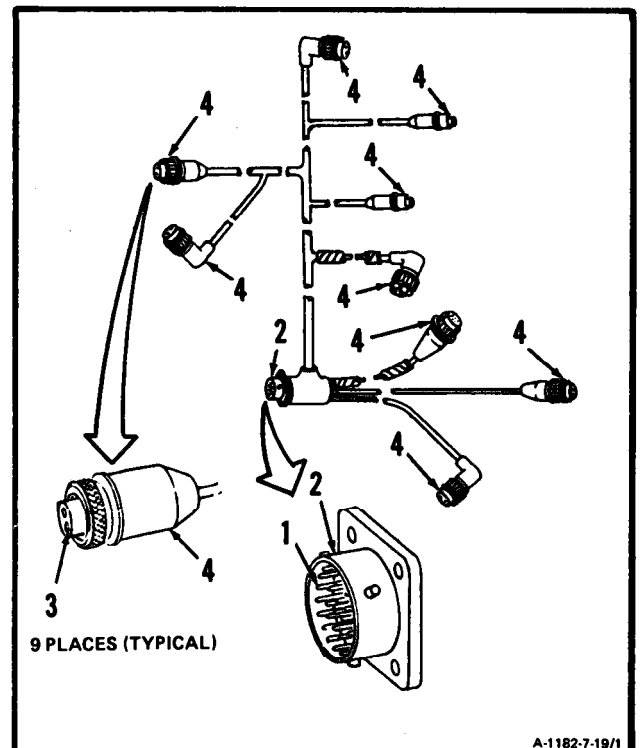
**Equipment Condition:**

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

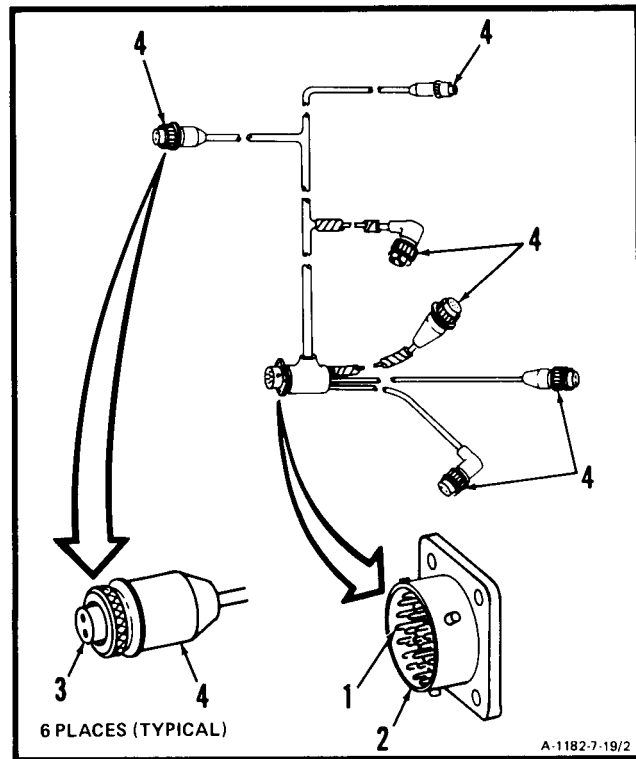
**Equipment Condition:**

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



7-20 TEST MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR)

7-20

INITIAL SETUP

**Materials:**

None

**Applicable Configurations:**

All

**Personnel Required:**

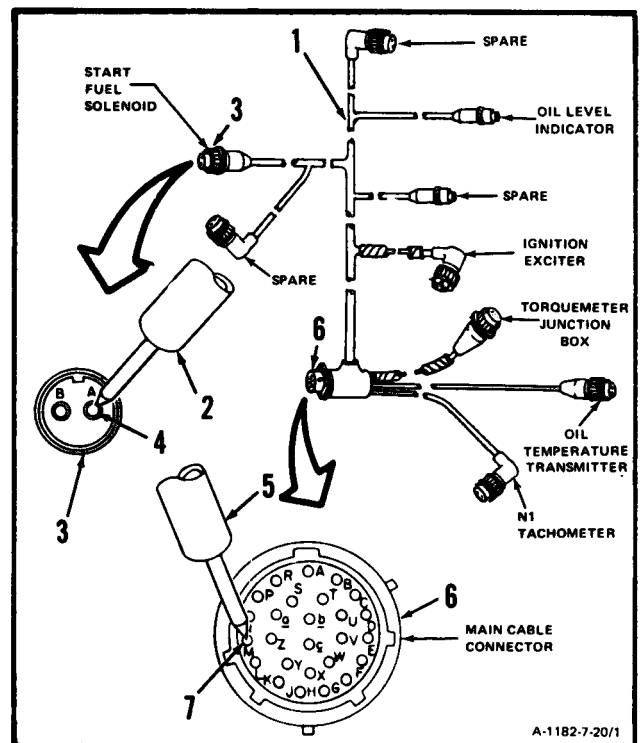
68B10 Aircraft Powerplant Repairer

**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:

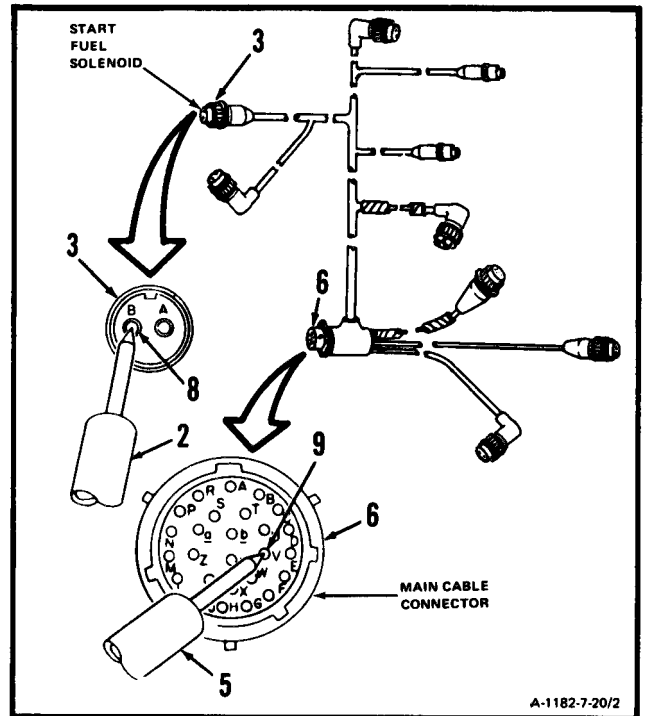
- a. Set multimeter range switch to R x 1.
- b. Touch red probe (2) to electrical connector (3), pin A (4).
- c. Touch black probe (5) to electrical connector (6), pin M (7).
- d. Meter shall indicate **zero ohms**.
- e. Set multimeter range switch to R x 1000.
- f. Touch black probe (5) to all other pins on electrical connector (6).
- g. Meter shall indicate **1000 ohms** minimum.



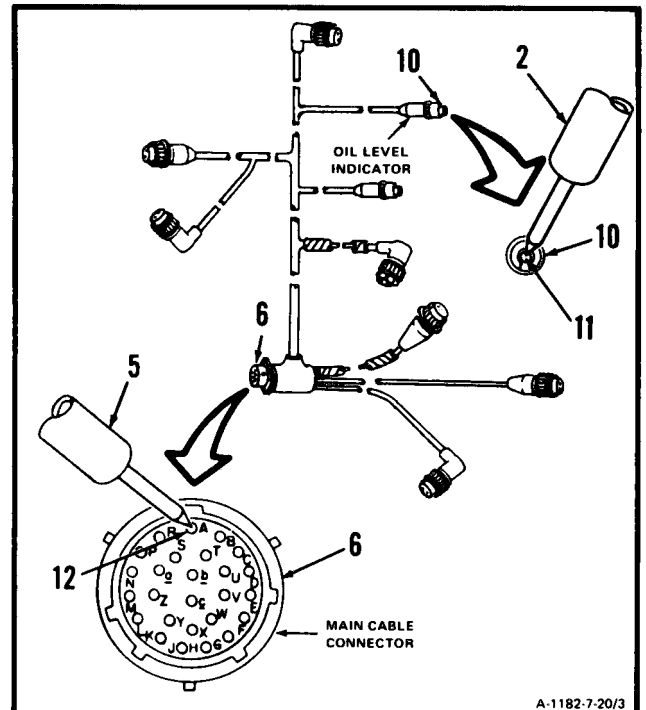
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**7-20 TEST MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) (Continued)**

- h. Set multimeter range switch to R x 1.
- i. Touch red probe (2) to electrical connector (3), pin B (8).
- j. Touch black probe (5) to electrical connector (6), pin V (9).
- k. Meter shall indicate **zero ohms**.

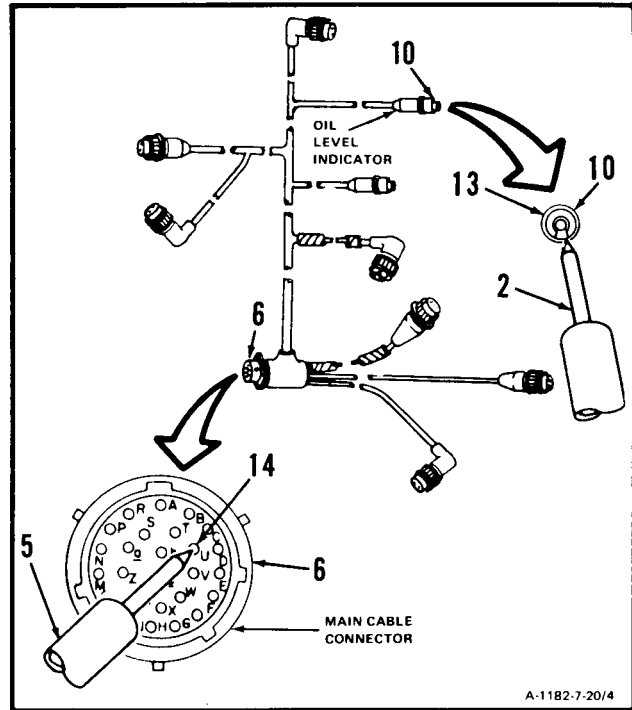


- l. Set multimeter range switch to R x 1.
- m. Touch red probe (2) to electrical connector (10), center pin(11).
- n. Touch black probe (5) to electrical connector (6), pin A (12).
- o. Meter shall indicate **zero ohms**
- p. Set multimeter range switch to R x 1000
- q. Touch black probe (5) to all other pins on electrical connector (6).
- r. Meter shall indicate **1000 ohms** minimum.

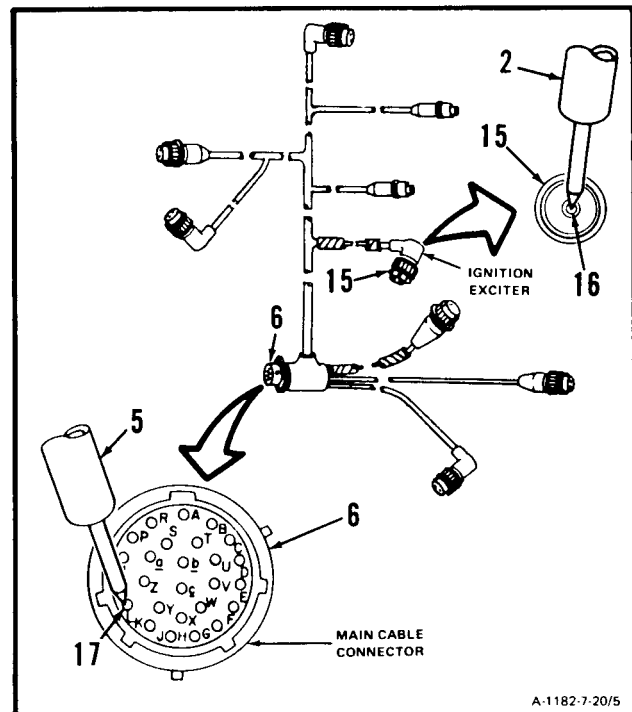


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- s. Touch red probe (2) to electrical connector (10), shell (13).
- t. Touch black probe (5) to electrical connector (6), pin U (14).
- u. Meter shall indicate **zero ohms**.



- v. Set multi meter range switch to R x 1,
- w. Touch red probe (2) to electrical connector (15), center pin (16).
- x. Touch black probe (5) to electrical connector (6), pin L (17).
- y. Meter shall indicate **zero ohms**.
- z. Set multimeter range switch to R x 1000.
- aa. Touch black probe (5) to all other pins on electrical connector (6).
- ab. Meter shall indicate **1000 ohms** minimum.

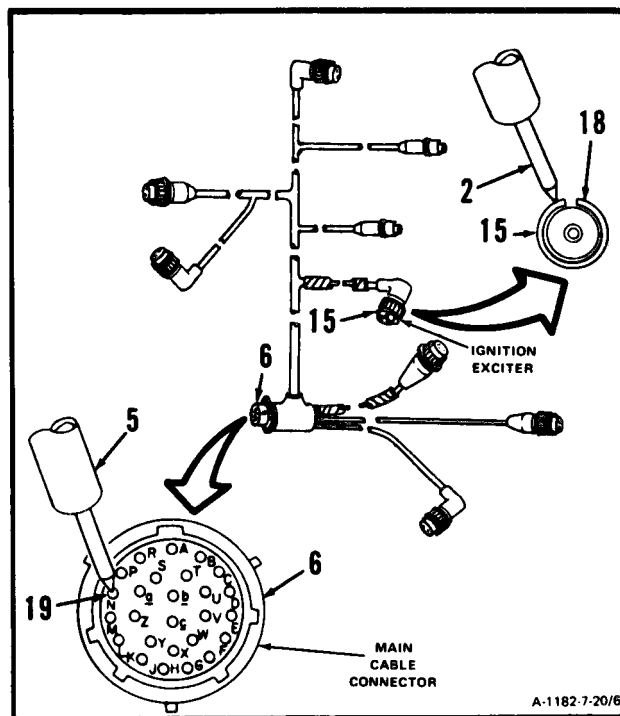


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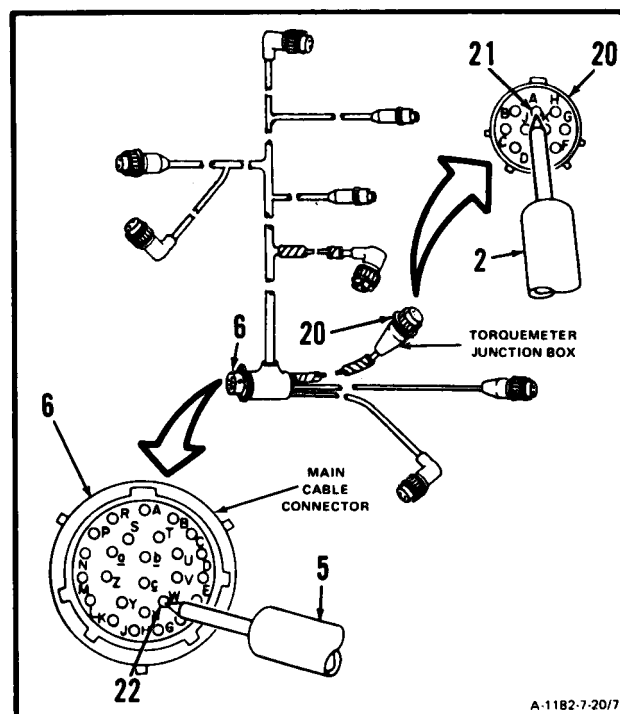
7-20 TEST MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) (Continued)

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**.

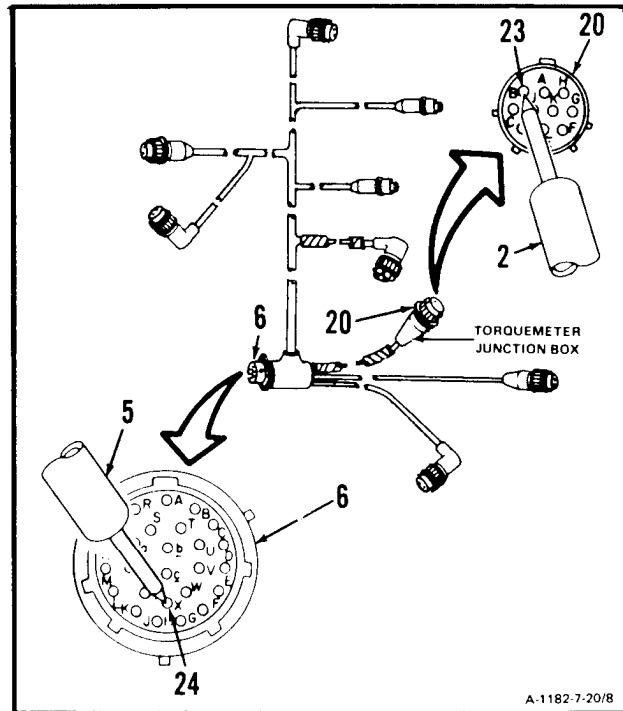


- af. Set multimeter range switch to R x 1.
- ag. Touch red probe (2) to electrical connector (20), pin A (21).
- ah. Touch black probe (5) to electrical connector (6), pin W (22).
- ai. Meter shall indicate **zero ohms**.
- aj. Set multimeter range switch to R x 1000.
- ak. Touch black probe (5) to all other pins on electrical connector (6).
- al. Meter shall indicate **1000 ohms** minimum.

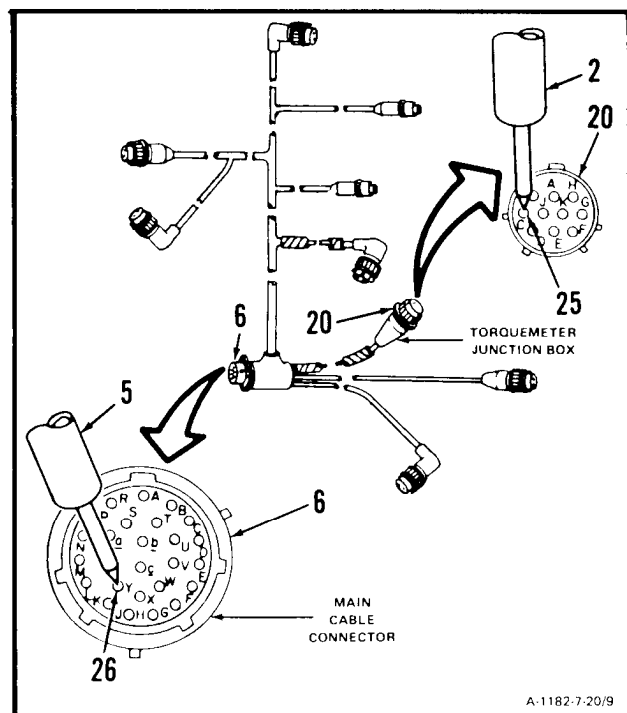


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- am. Set multimeter range switch to R x 1.
- an. Touch red probe (2) to electrical connector (20), pin B (23).
- ao. Touch black probe (5) to electrical connector (6), pin X (24).
- ap. Meter shall indicate **zero ohms.**
- aq. Set multimeter range 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 Indlcate **1000 ohms** minimum.

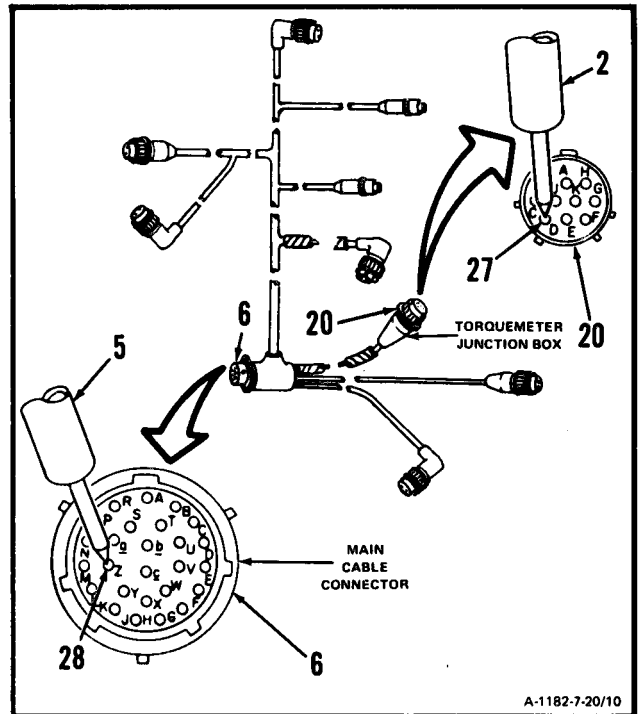


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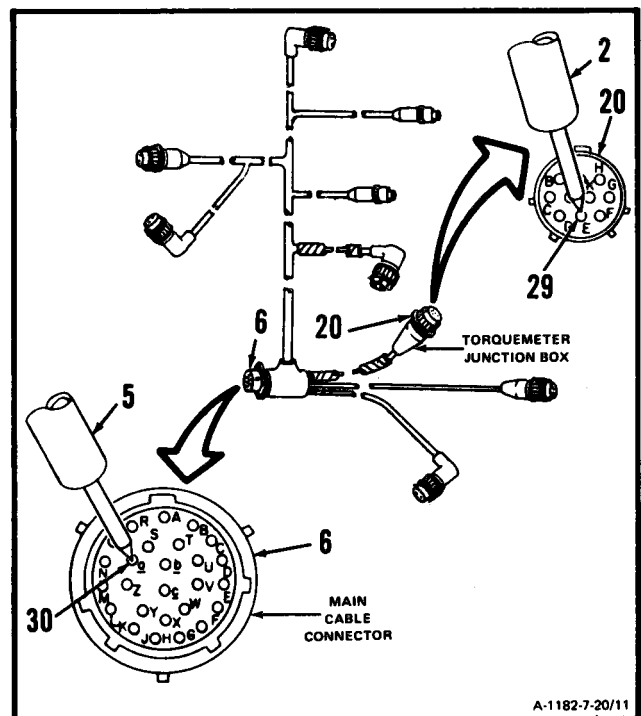
**7-20 TEST MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) (Continued)**

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.

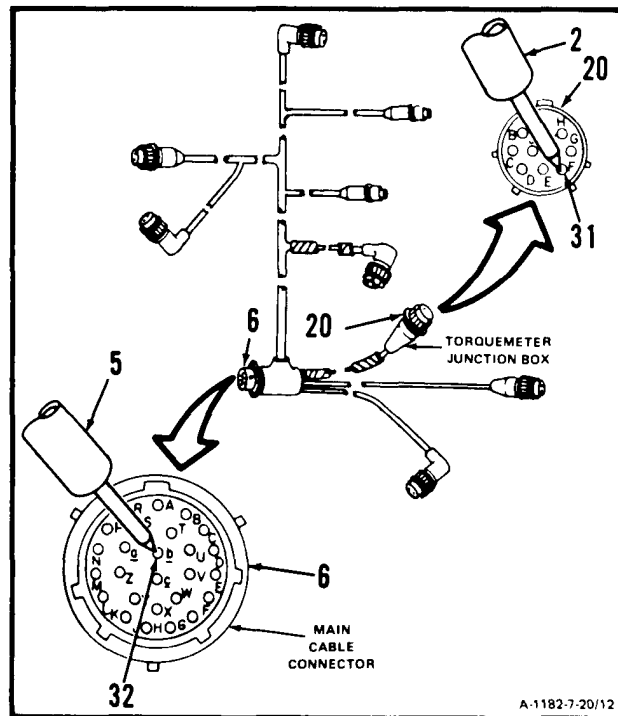


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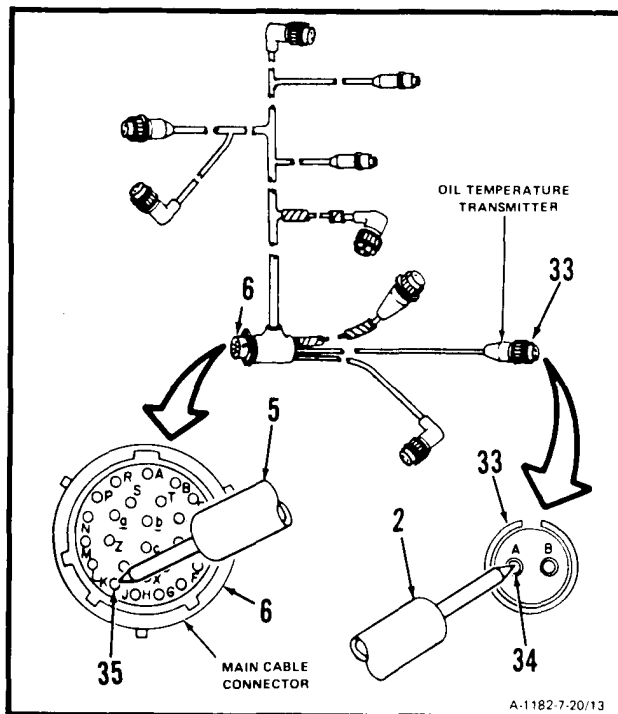
7-20 TEST MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) (Continued)

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.

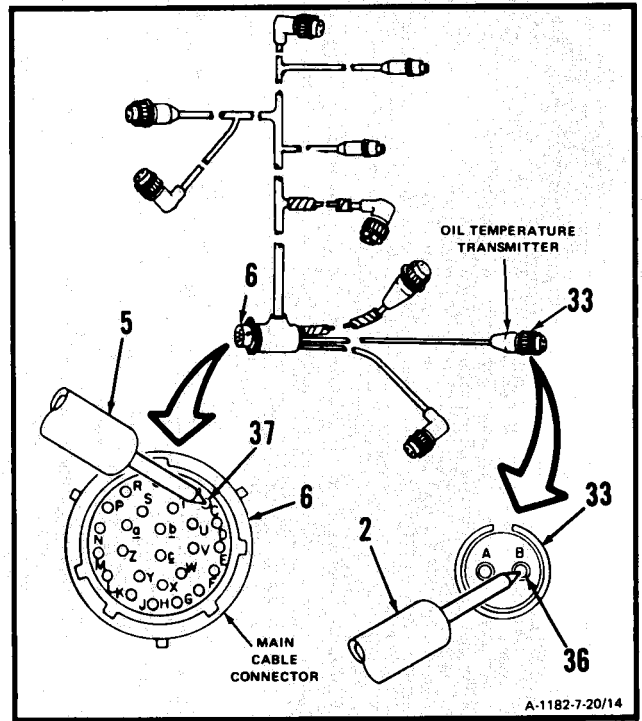


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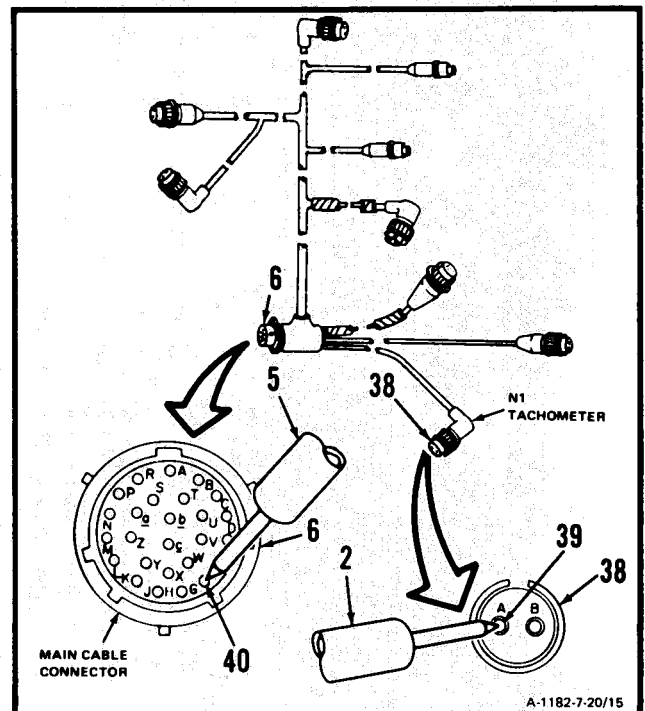
7-20 TEST MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) (Continued)

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**.



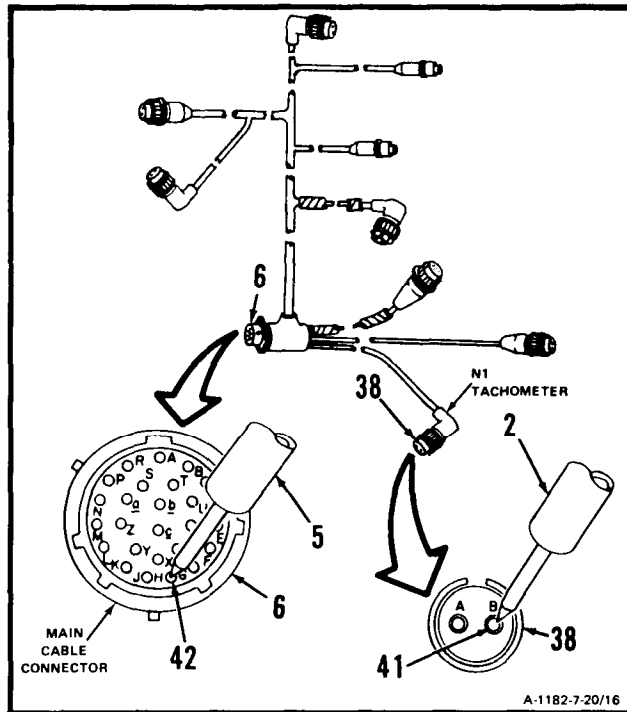
- ce. Set multimeter range switch to R x 1.
- cf. Touch red probe (2) to electrical connector (38), pin A (39).
- cg. Touch black probe (5) to electrical connector (6), pin G (40).
- ch. Meter shall indicate **zero ohms**.
- ci. Set multimeter range switch to R x 1000.
- cj. Touch black probe (5) to all other pins on electrical connector (6).
- ck. Meter shall indicate **1000 ohms** minimum.



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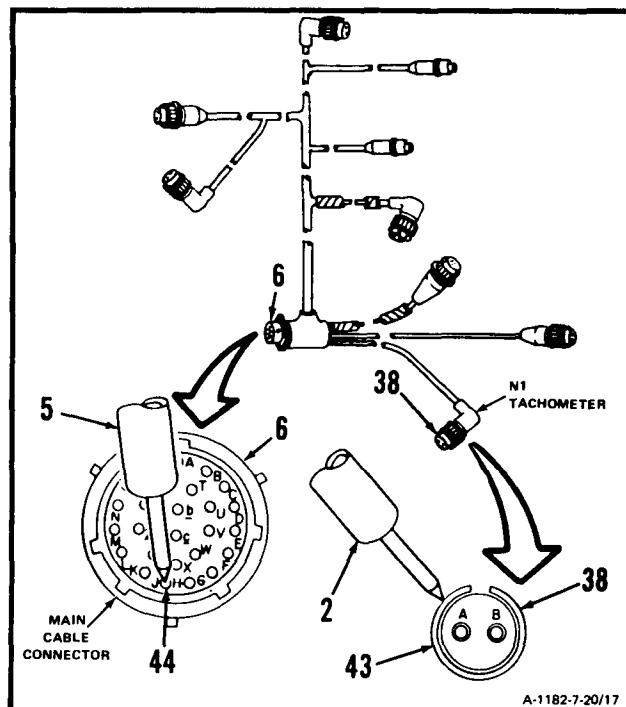
- cl. Set multimeter range switch to R x 1.
- cm. Touch red probe (2) to electrical connector (38), pin B (41).
- cn. Touch black probe (5) to electrical connector (6), pin H (42).
- co. Meter shall indicate **zero ohms**.
- cp. Set multimeter range switch to R x 1000.
- cq. Touch black probe (5) to 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

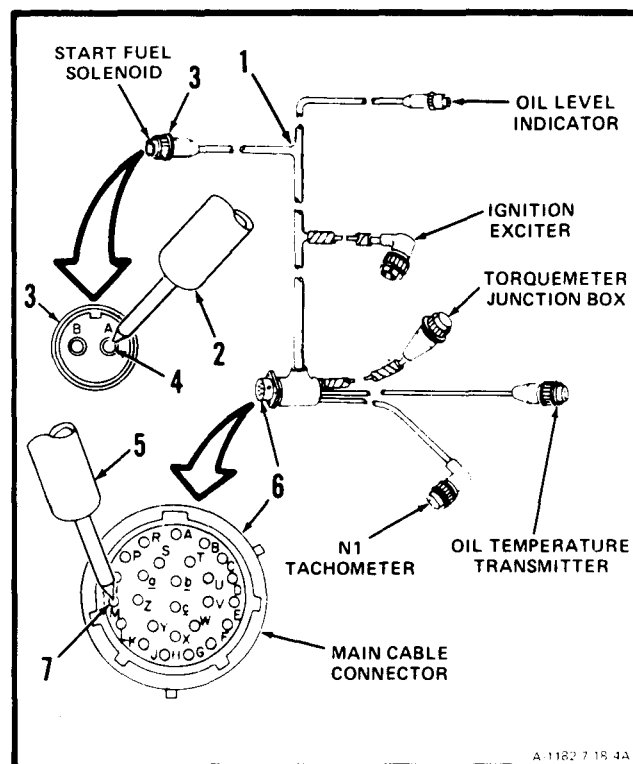
**Personnel Required:**

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.

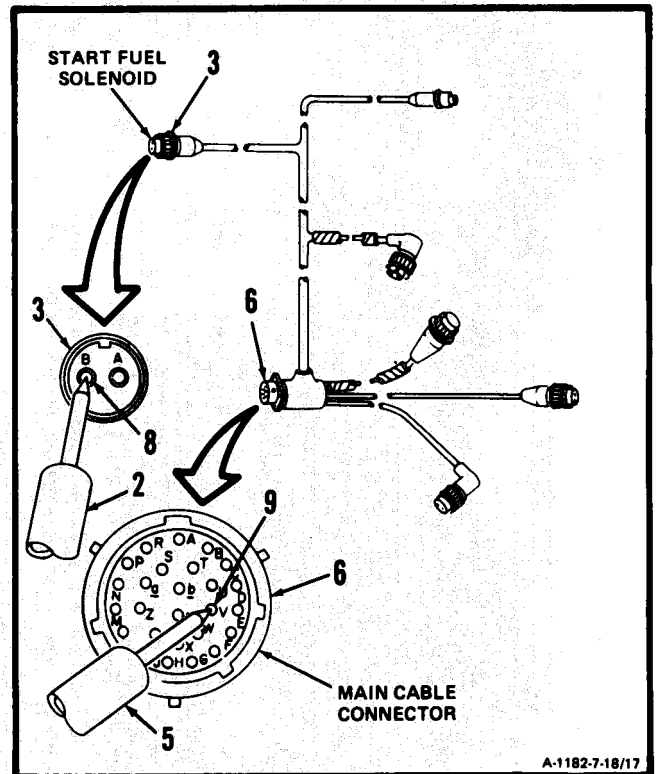


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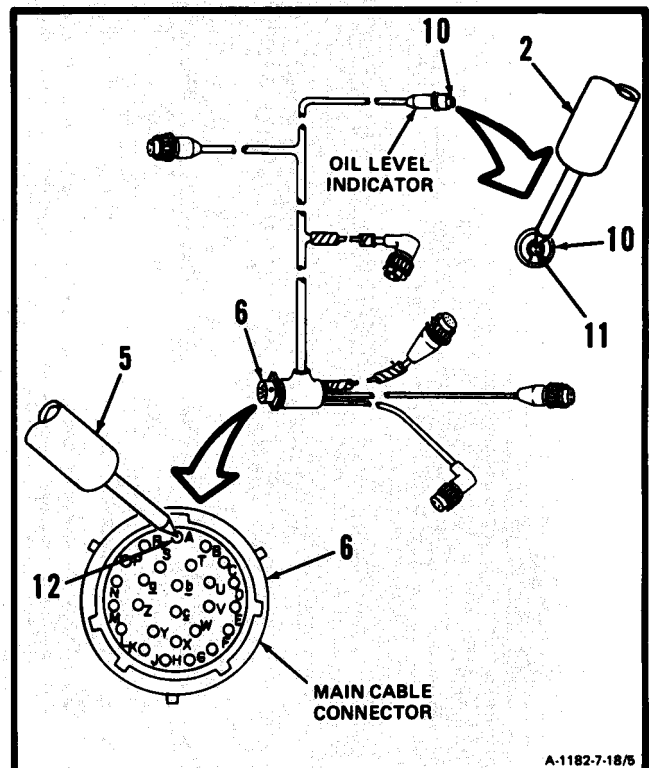
7-20.1 TEST MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued)

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.

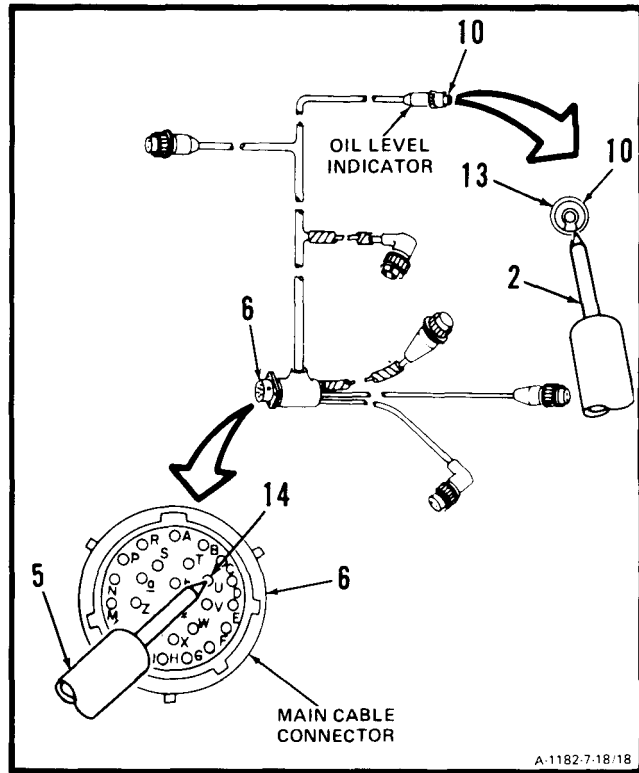


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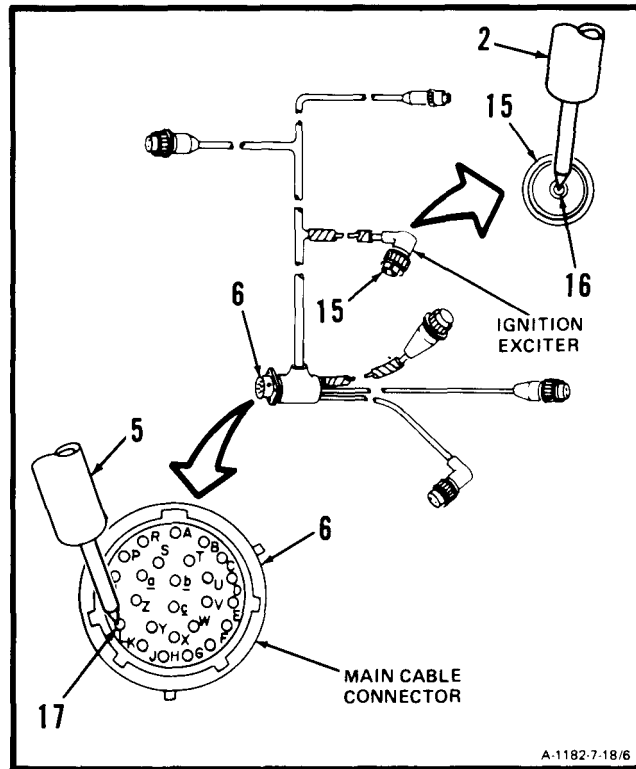
7-20.1 TEST MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR)(Continued)

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.

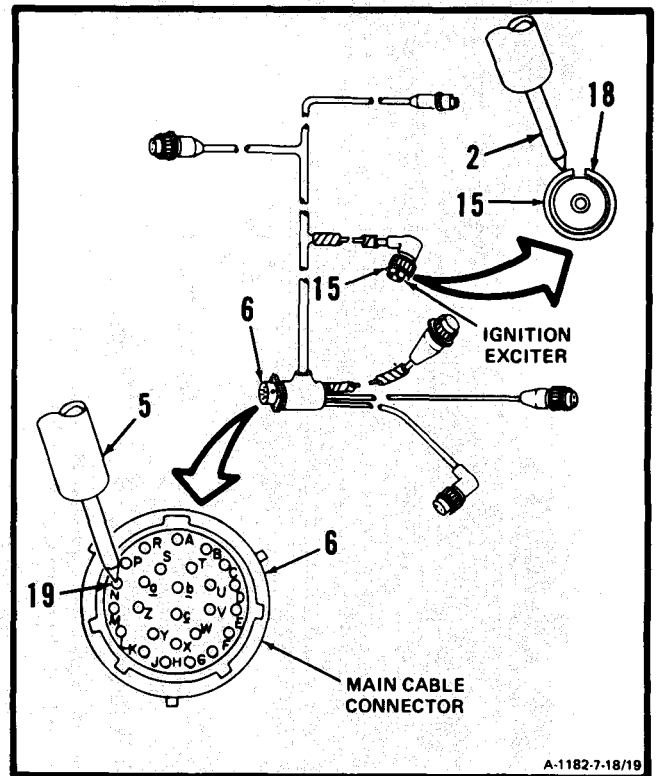


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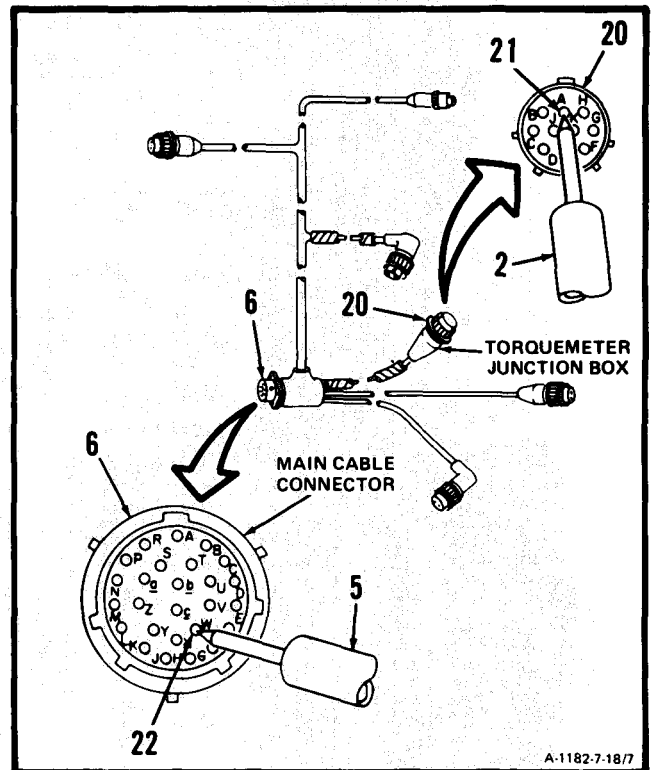
7-20.1 TEST MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued)

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.

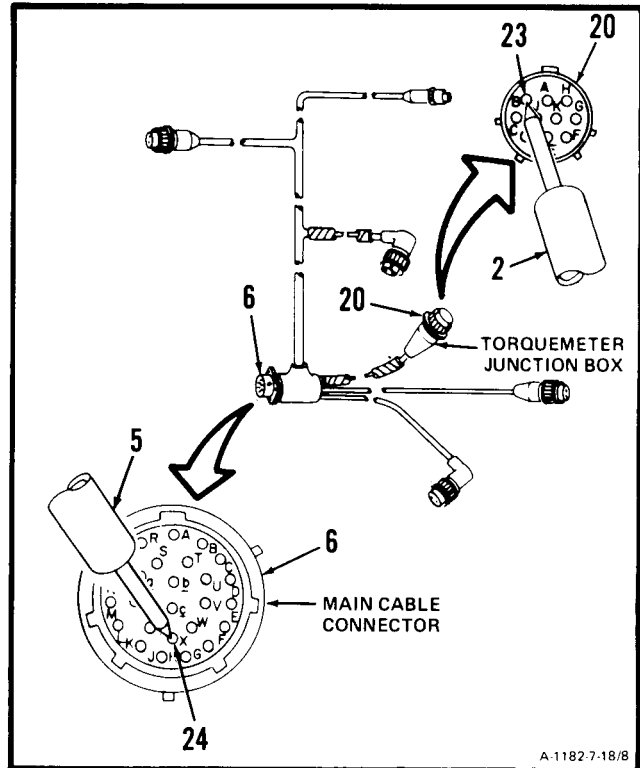


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7-20.1 TEST MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued)

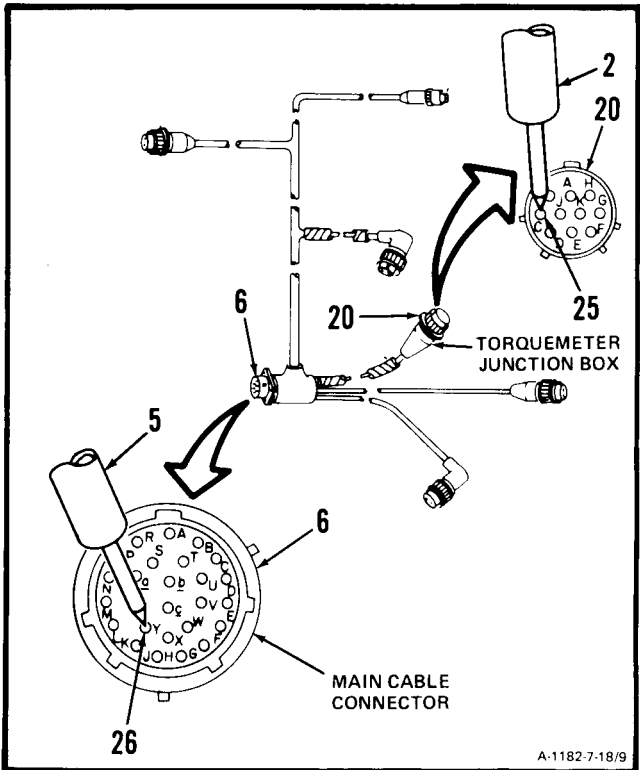
7-20.1

- 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.



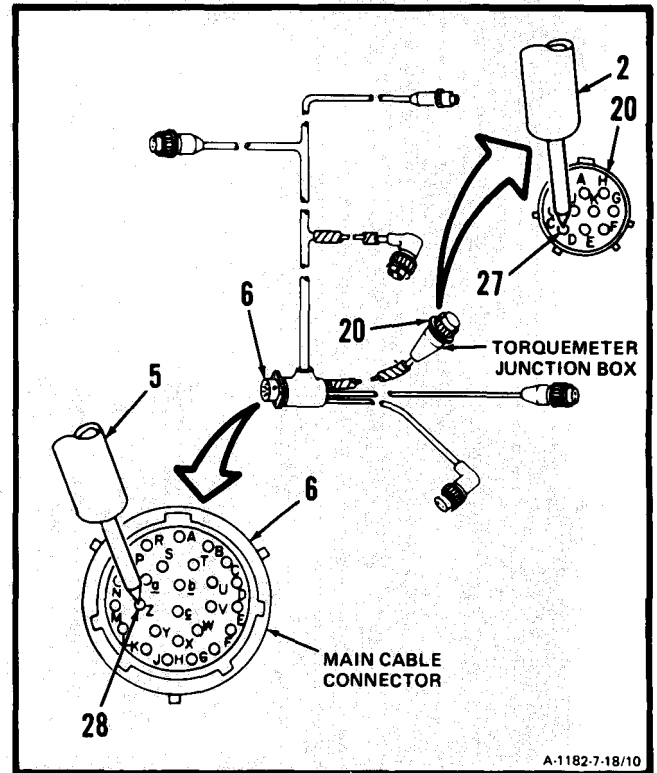
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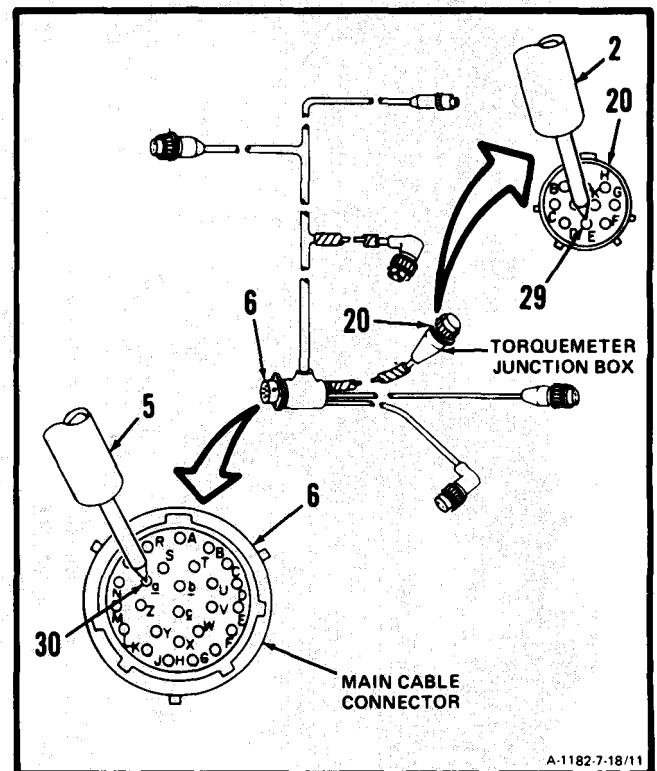
7-20.1 TEST MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued)

7-20.1

- 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.



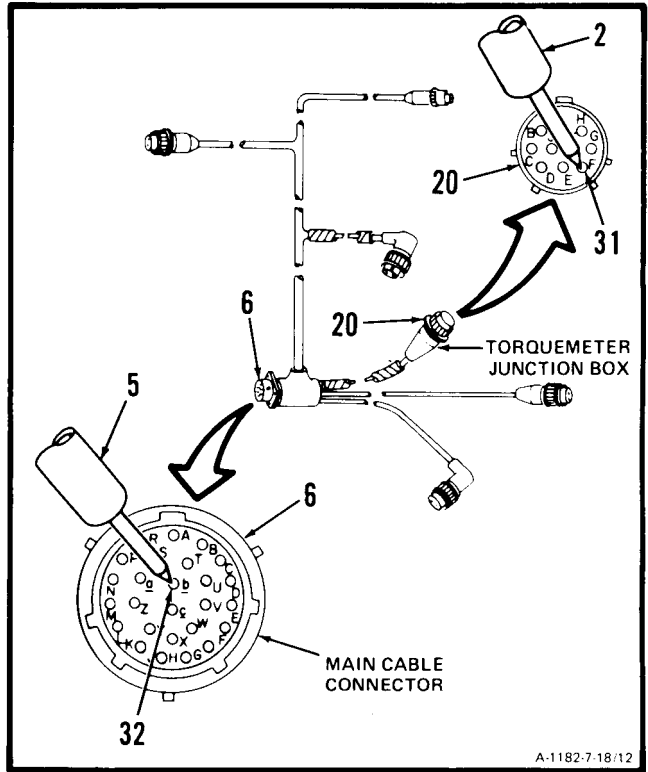
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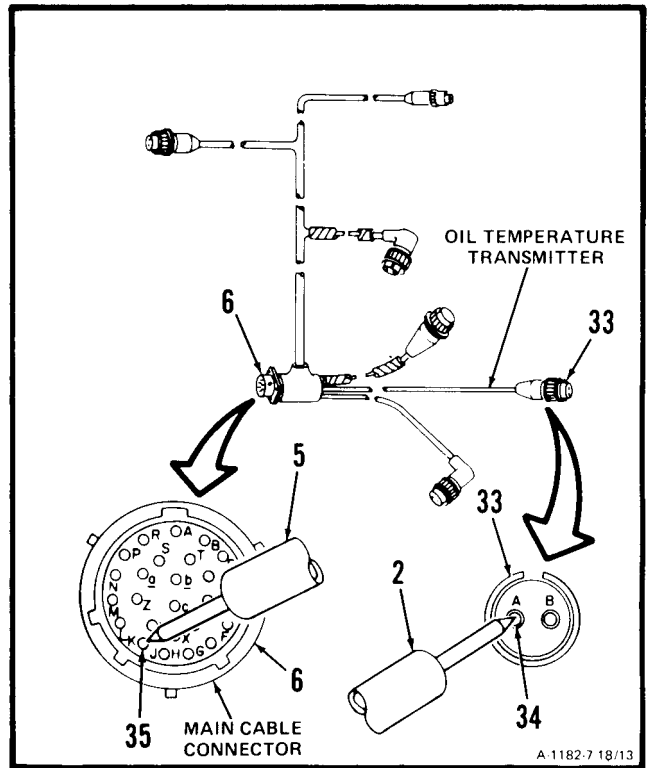
7-20.1 TEST MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued)

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.



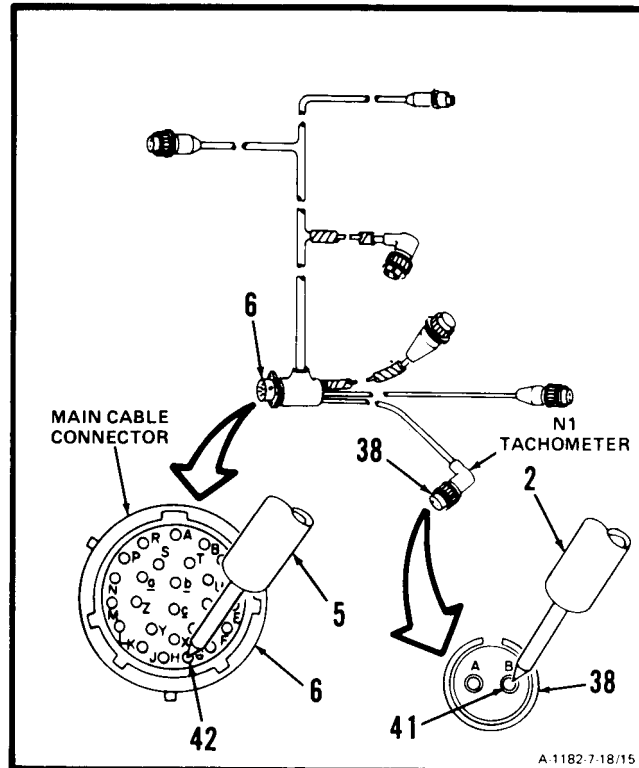
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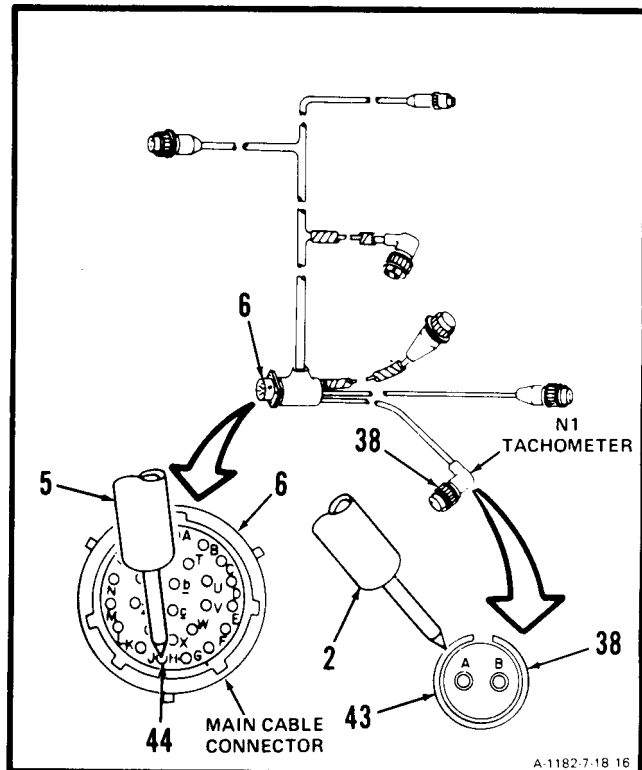
7-20.1 TEST MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued)

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.



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**7-20.1 TEST MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued)**

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7-20.1

FOLLOW-ON MAINTENANCE:

None

**END OF TASK**

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**7-21 INSTALL MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR)**

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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

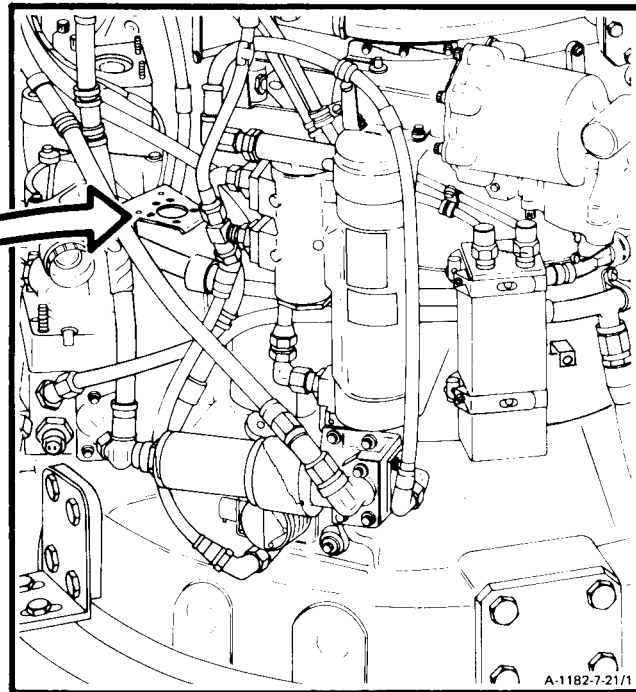
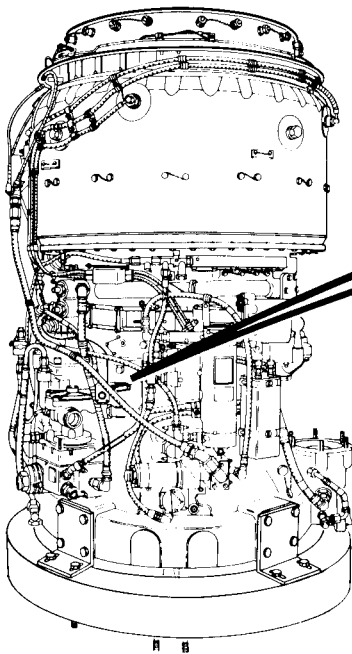
**Materials:**

Lockwire (E29)

**Personnel Required:**

68B10 Aircraft Powerplant Repairer

68B30 Aircraft Powerplant Inspector

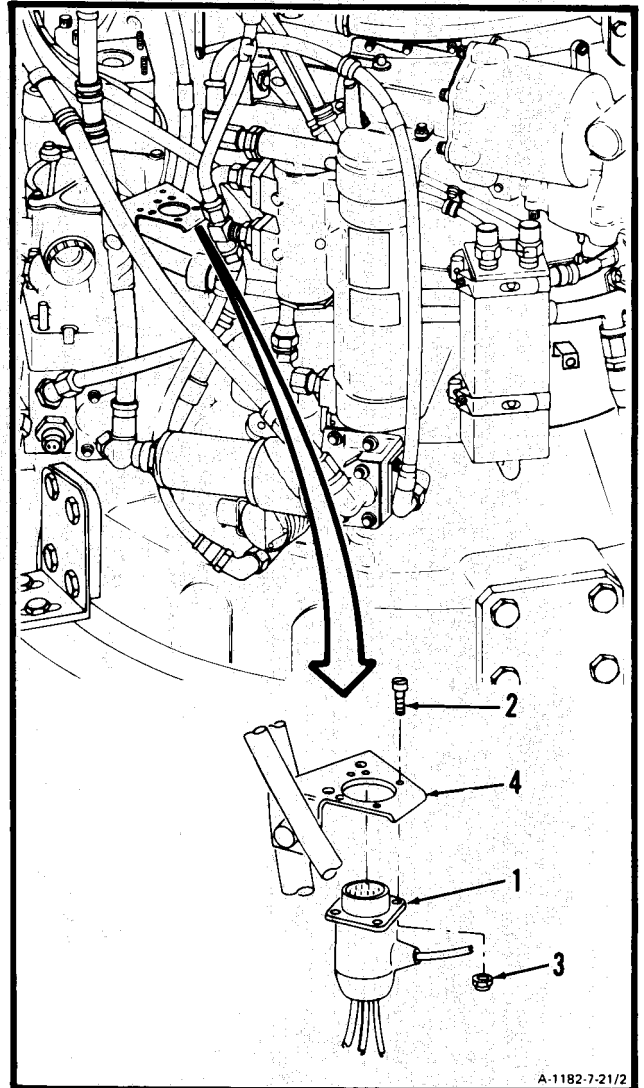


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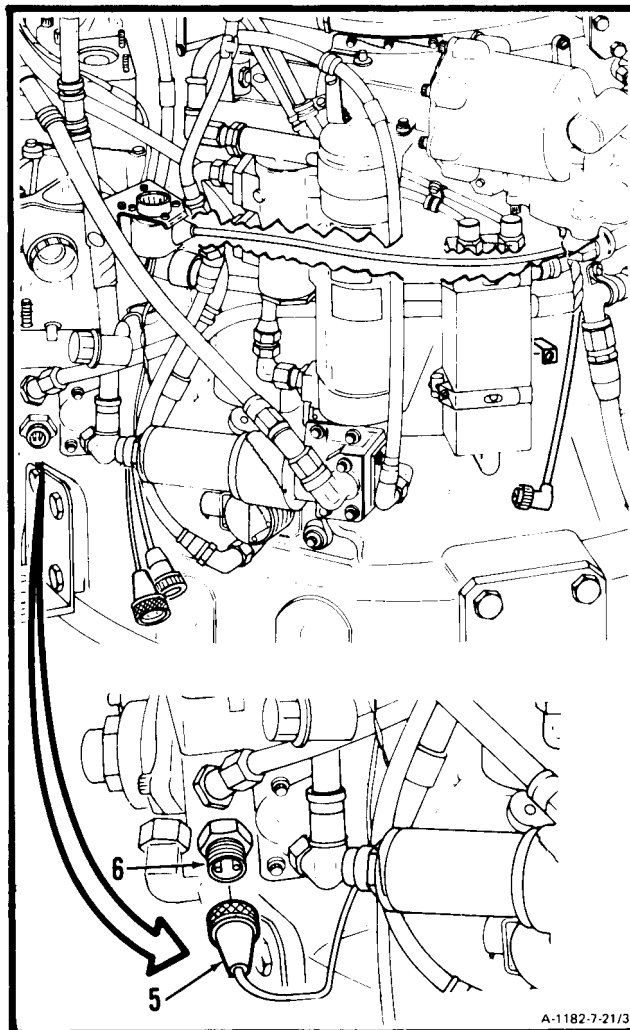
**7-21 INSTALL MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) (Continued)**

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).

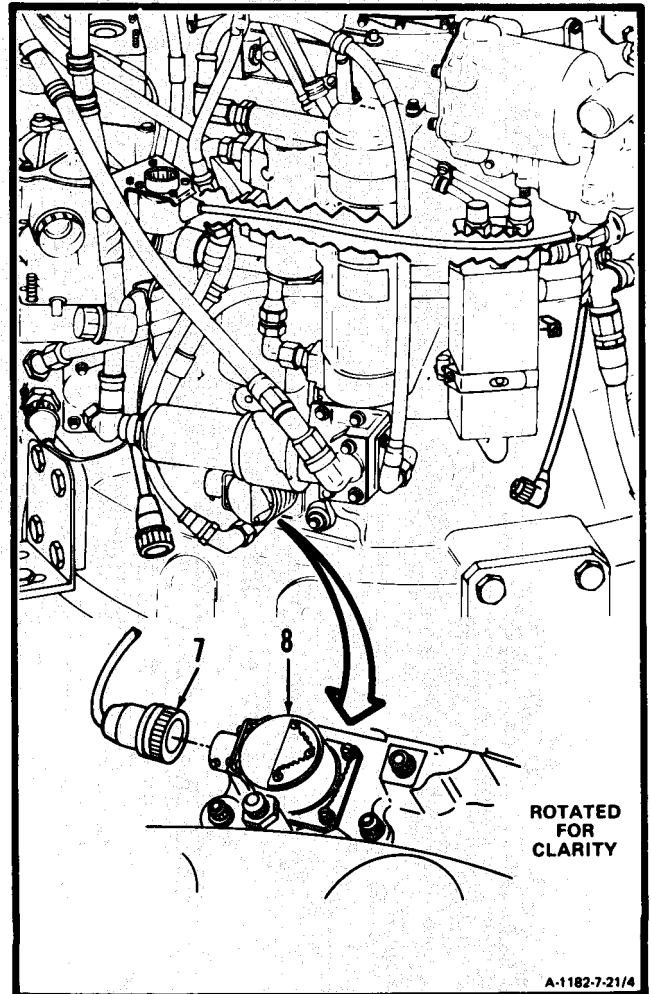


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**7-21 INSTALL MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) (Continued)**

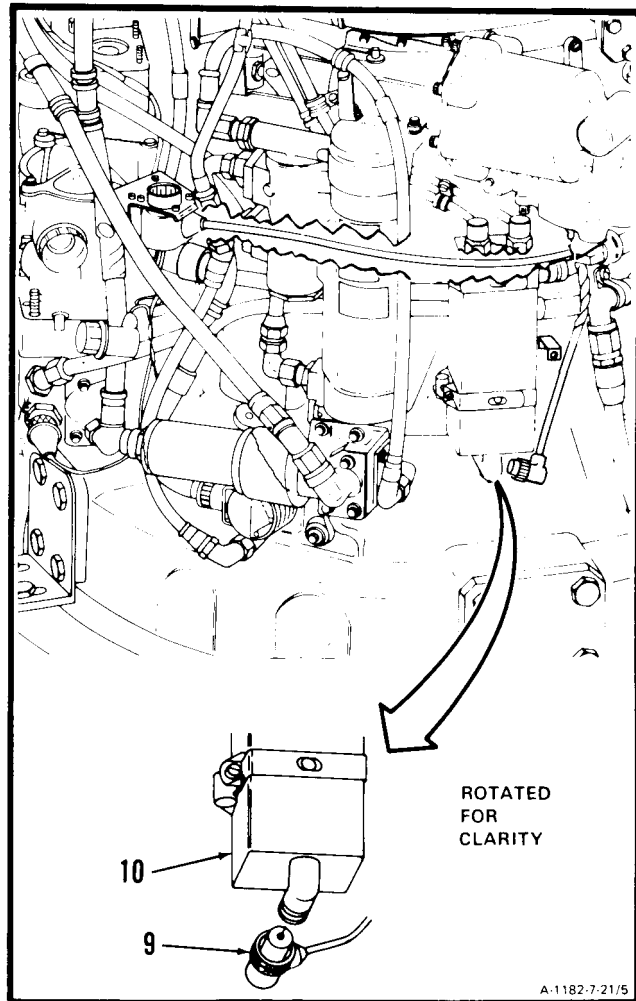
7-21

3. Connect electrical connector (7) to torquemeter junction box (8).

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4. **Connect electrical connector (9)** to ignition exciter (10). Lockwire electrical connector (9), Use lockwire (E29).

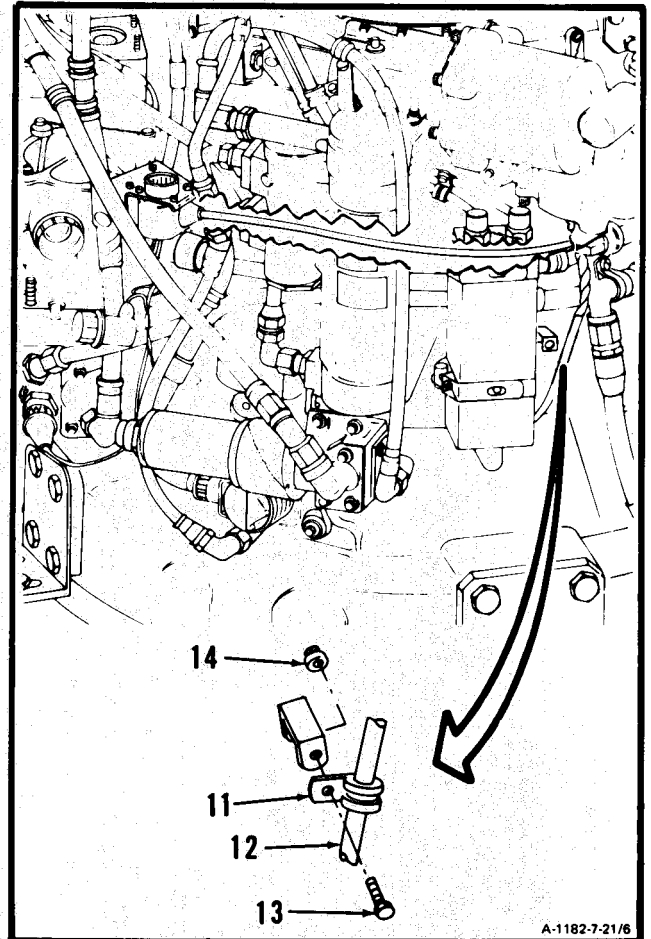


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**7-21 INSTALL MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) (Continued)**

7-21

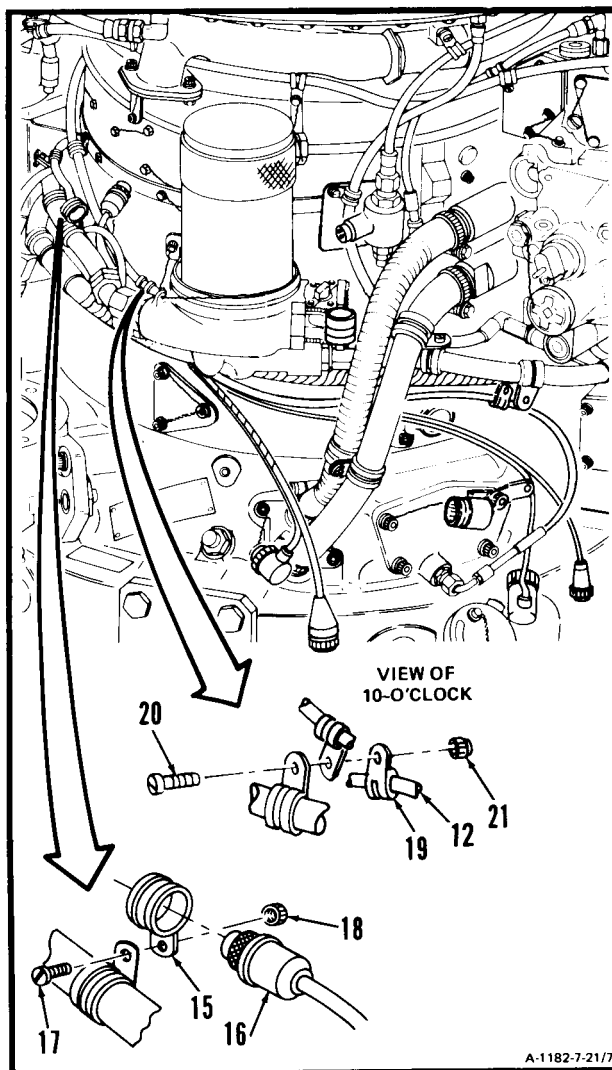
5. Install clamp (11) on electrical cable assembly (12), and install screw (13) and nut (14).



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**7-21 INSTALL MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) (Continued)**

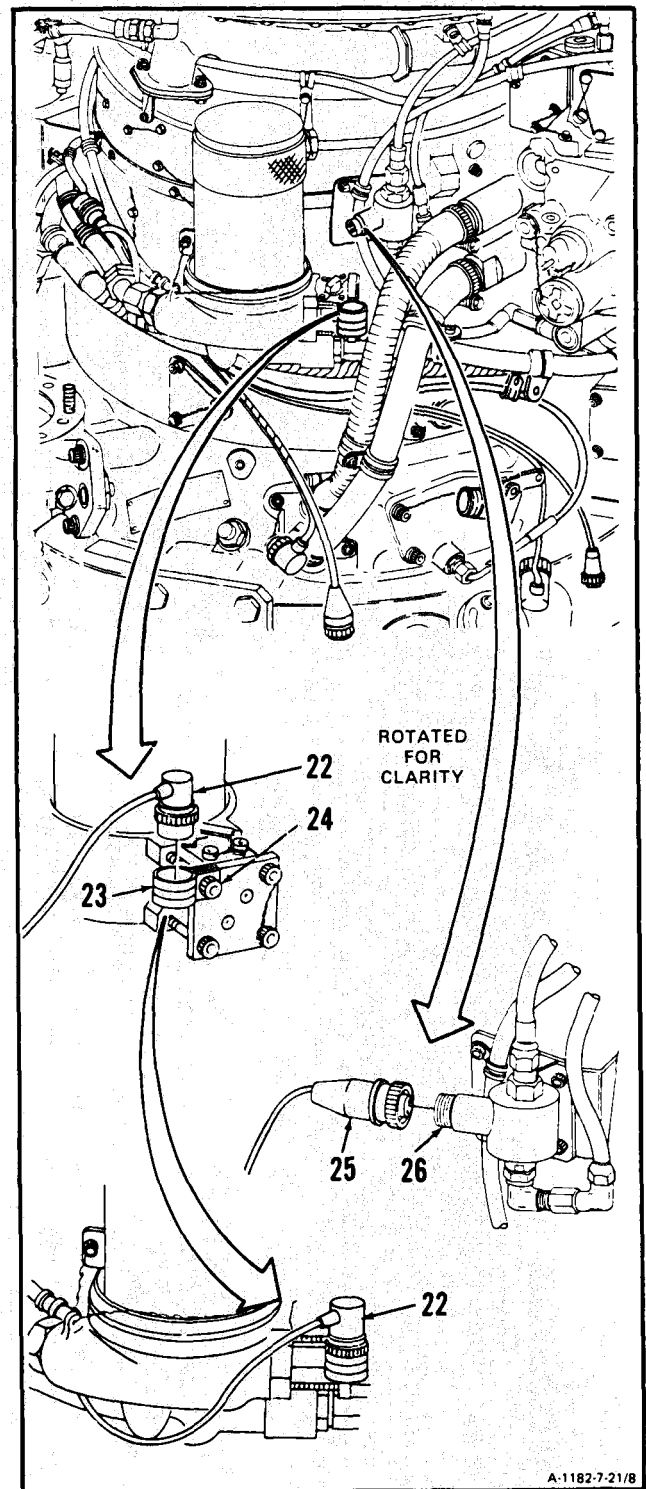
6. **Install clamp (15)** on electrical connector (16).  
Install screw (17) and nut (18).
7. **Install clamp (19)** on electrical cable assembly (12). Install screw (20) and nut (21).



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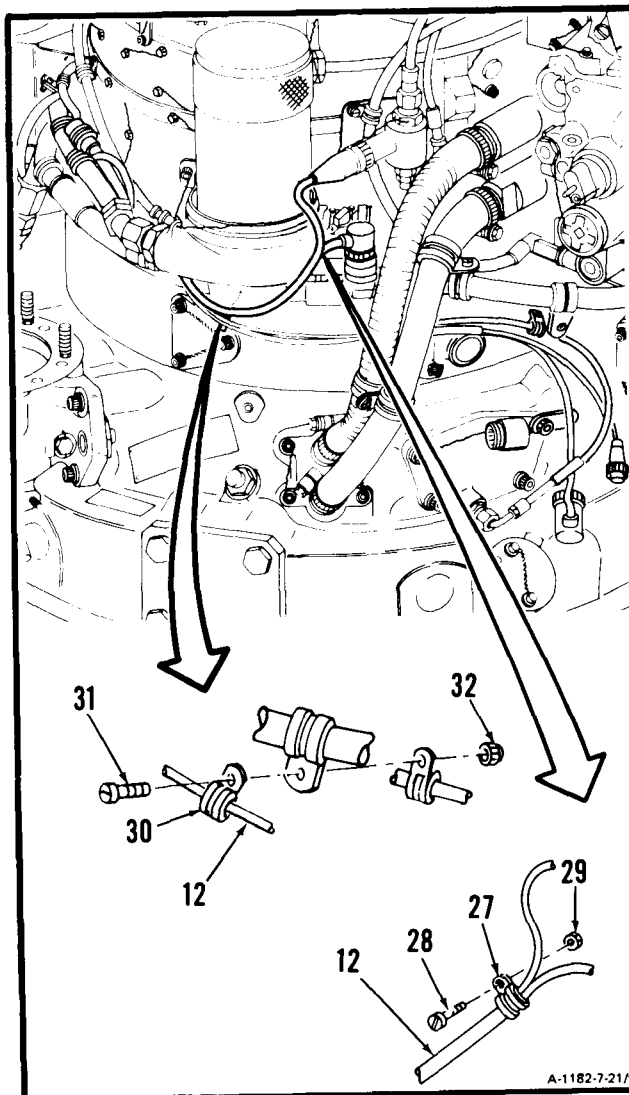
**7-21 INSTALL MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR)(Continued)****7-21**

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).

**GO TO NEXT PAGE**

7-21 INSTALL MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) (Continued)

10. **Install clamp (27)** on electrical cable assembly (12), and install screw (28) and nut (29).
11. **Install clamp (30)** on electrical cable assembly (12), and install screw (31) and nut (32).

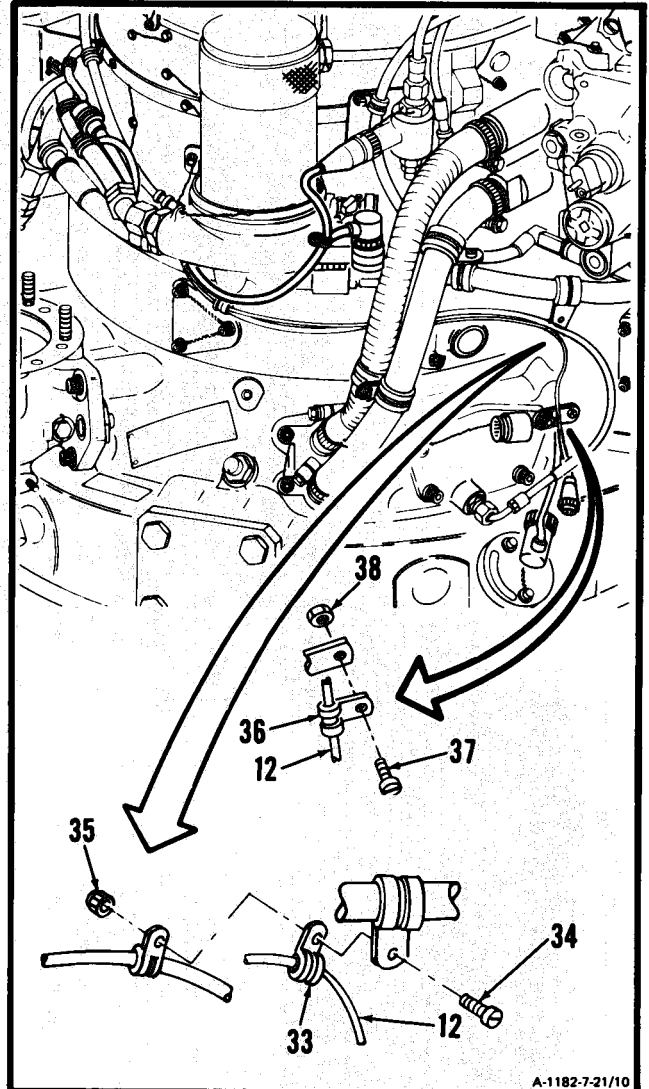


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**7-21 INSTALL MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR) (Continued)**

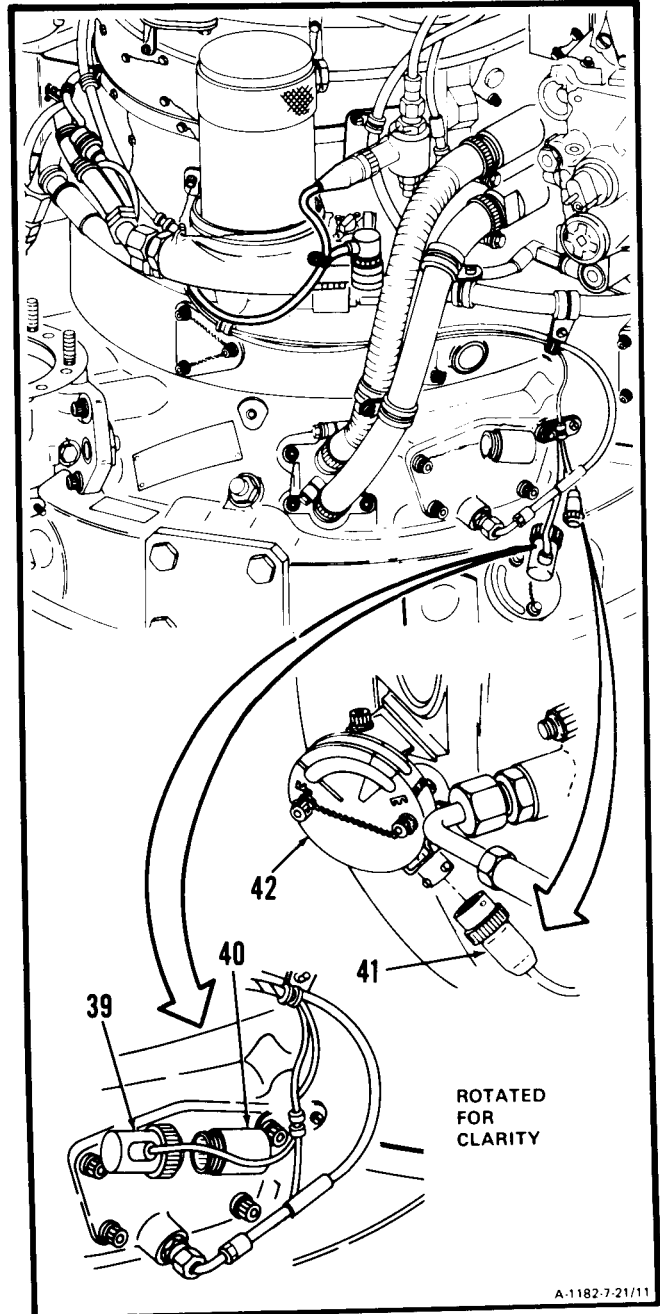
7-21

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

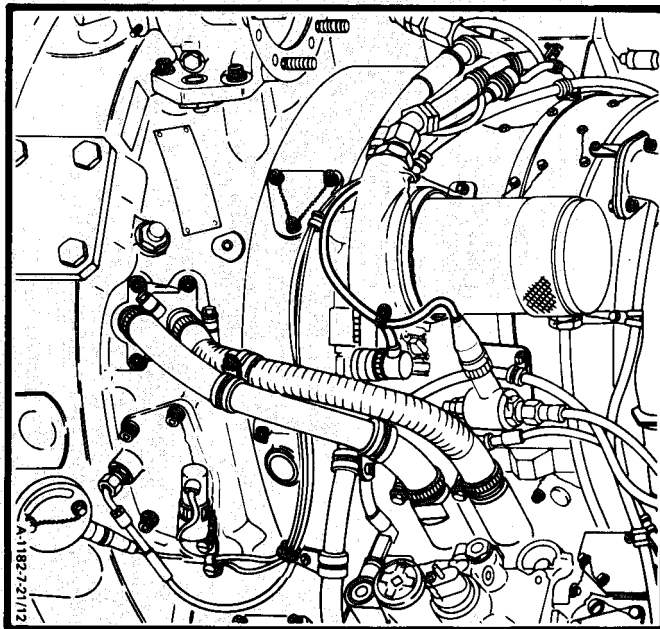
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**7-21 INSTALL MAIN ELECTRICAL CABLE ASSEMBLY (NINE CONNECTOR)(Continued)**

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:**

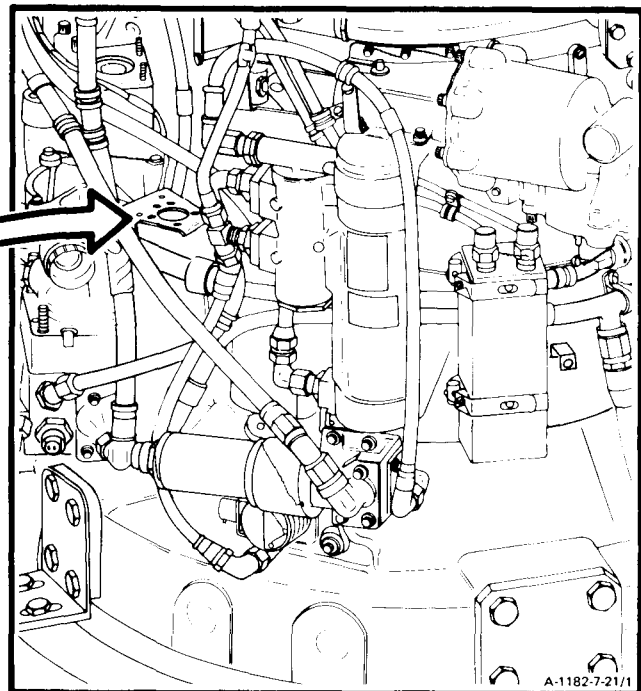
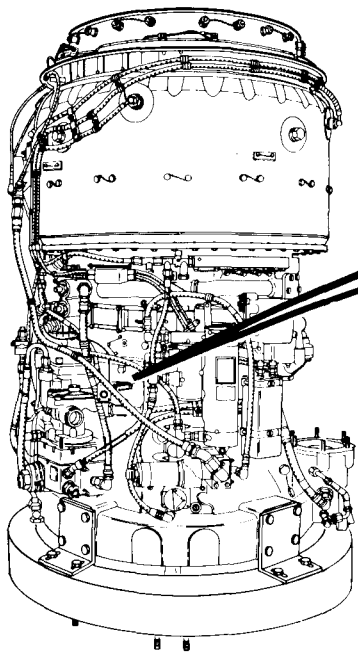
Powerplant Mechanic's Tool Kit,  
NSN 5180-00-323-4944  
Technical Inspection Tool Kit,  
NSN 5180-00-323-5114

**Materials:**

Lockwire (E29)

**Personnel Required:**

68B10 Aircraft Powerplant Repairer  
68B30 Aircraft Powerplant Inspector

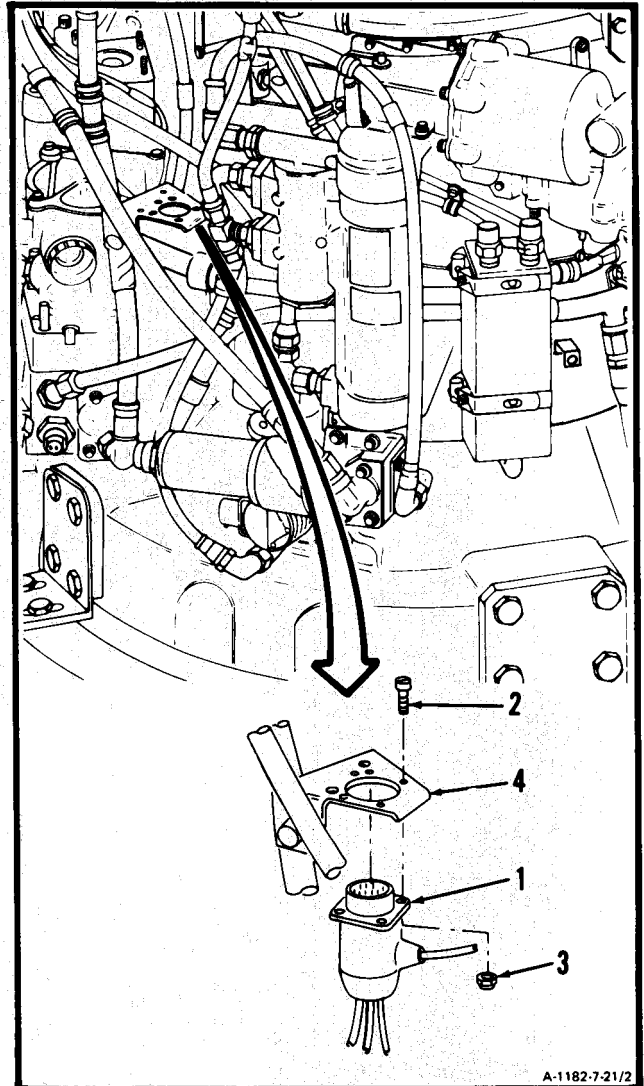


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## 7-21.1 INSTALL MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued)

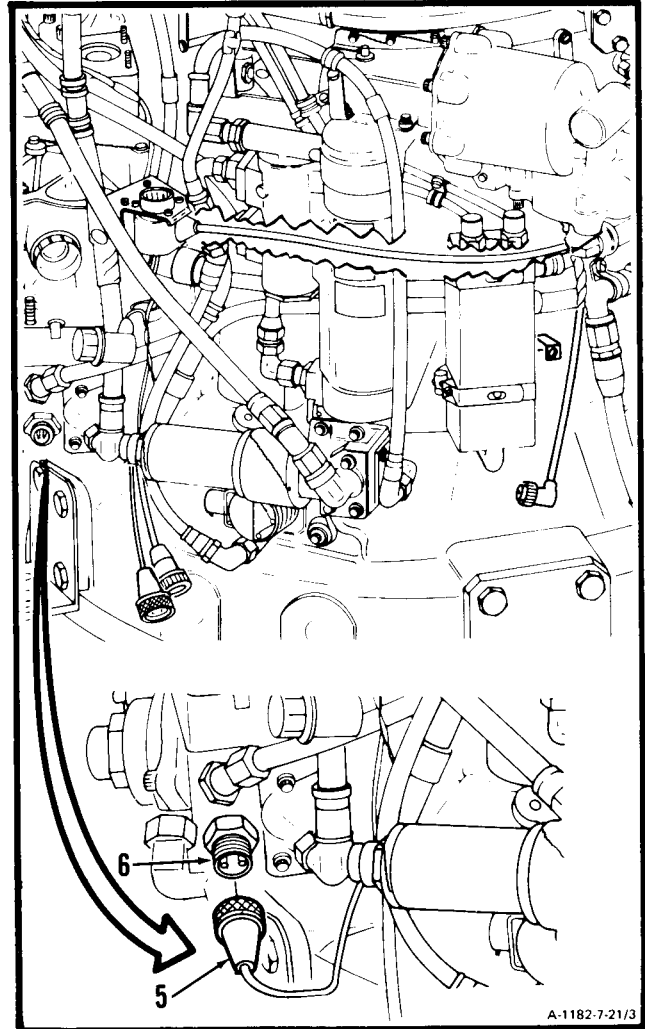
7-21.1

1. Install electrical connector (1), four screws (2), and nuts (3) in bracket (4).



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2. Connect electrical connector (5) to oil temperature transmitter (6). Lockwire connector (5). Use lockwire (E29).

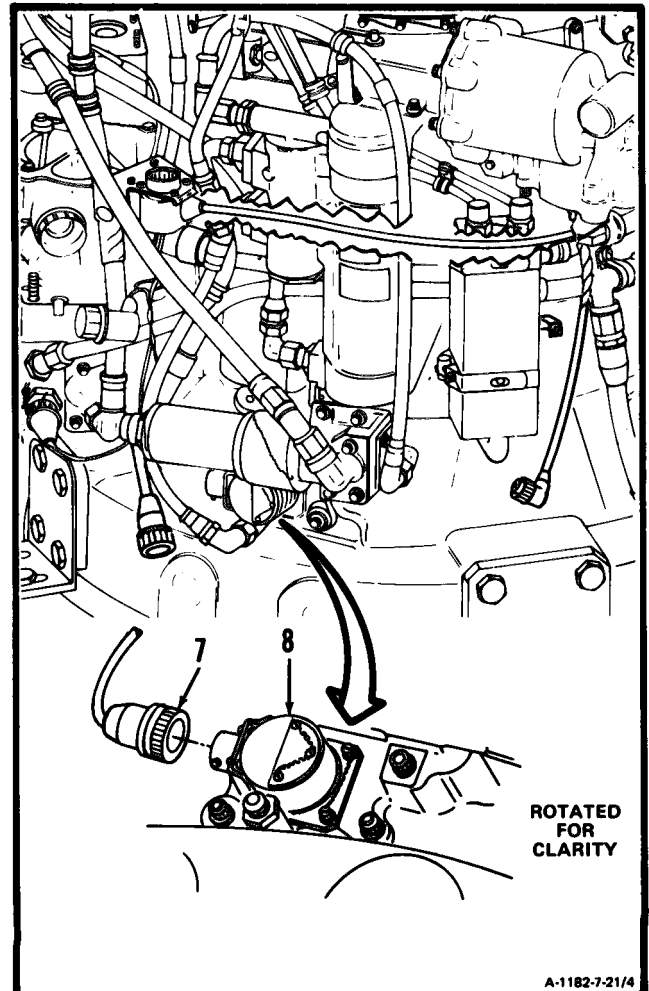


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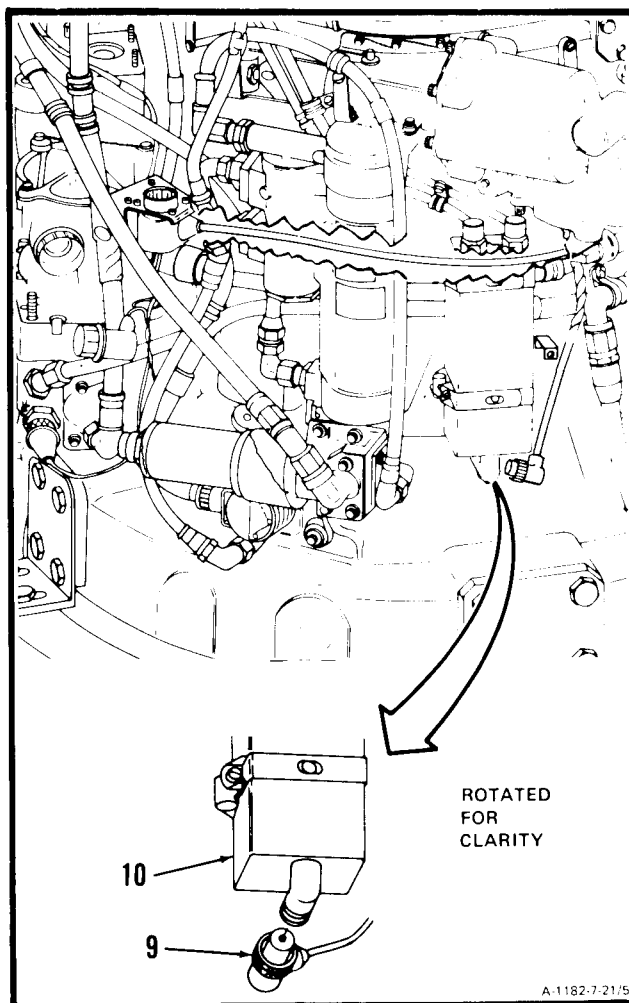
**7-21.1 INSTALL MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued)**

7-21.1

3. Connect electrical connector (7) to torquemeter junction box (8).

**GO TO NEXT PAGE**

4. **Connect electrical connector (9)** to ignition exciter (10). Lockwire electrical connector (9). Use lockwire (E29).

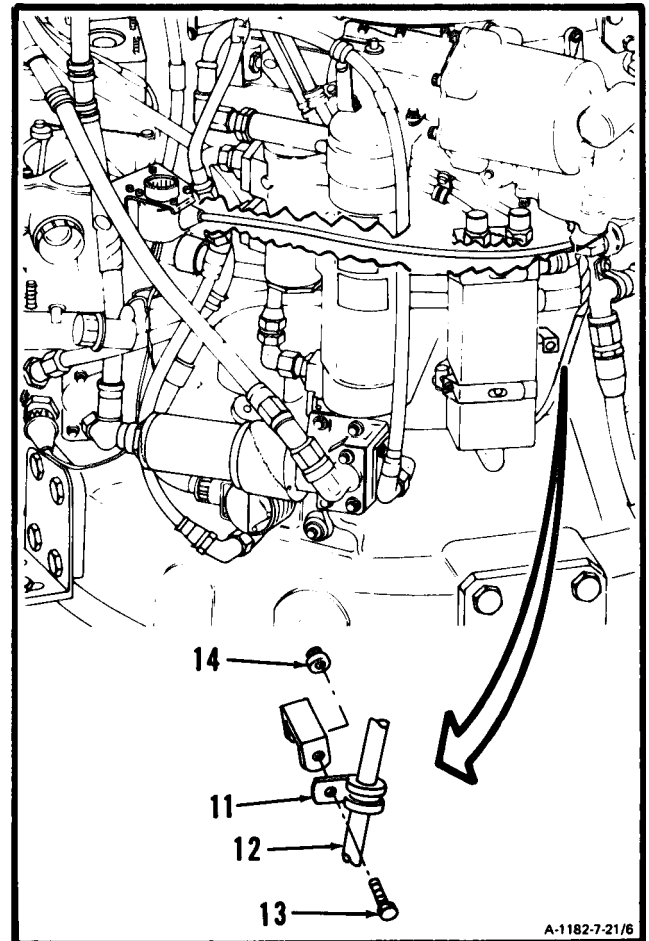


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## 7-21.1 INSTALL MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR)(Continued)

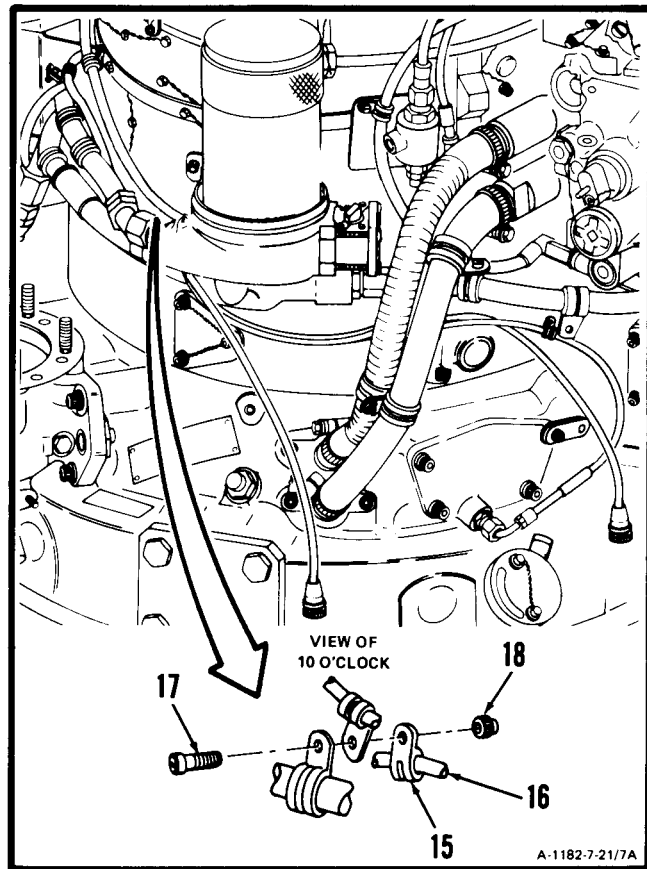
7-21.1

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).

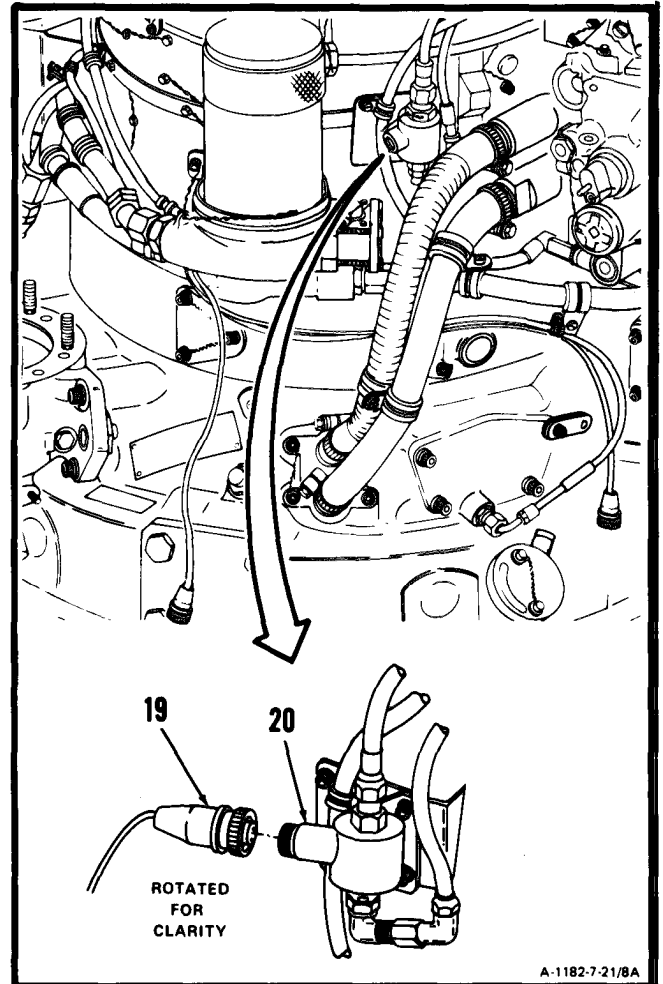


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## 7-21.1 INSTALL MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued)

7-21.1

7. **Connect electrical connector (19)** to starting fuel solenoid valve (20). Lockwire electrical connector (19). Use lockwire (E29).



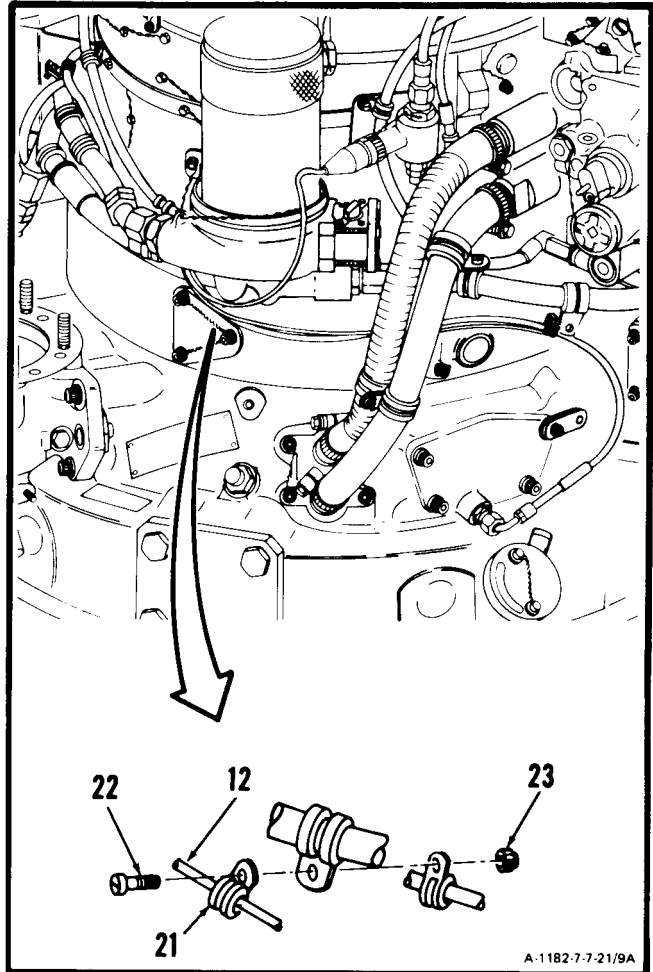
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7-21.1 INSTALL MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued)

7-21.1

8. Install clamp (21) on electrical cable assembly (12), and install screw (22) and nut (23).

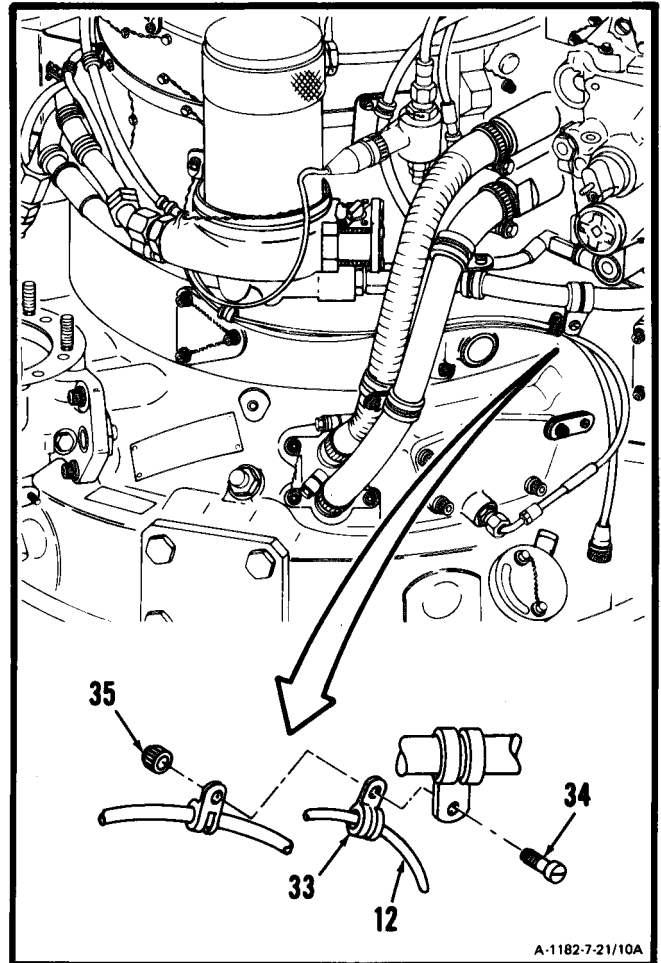


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7-21.1 INSTALL MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued)

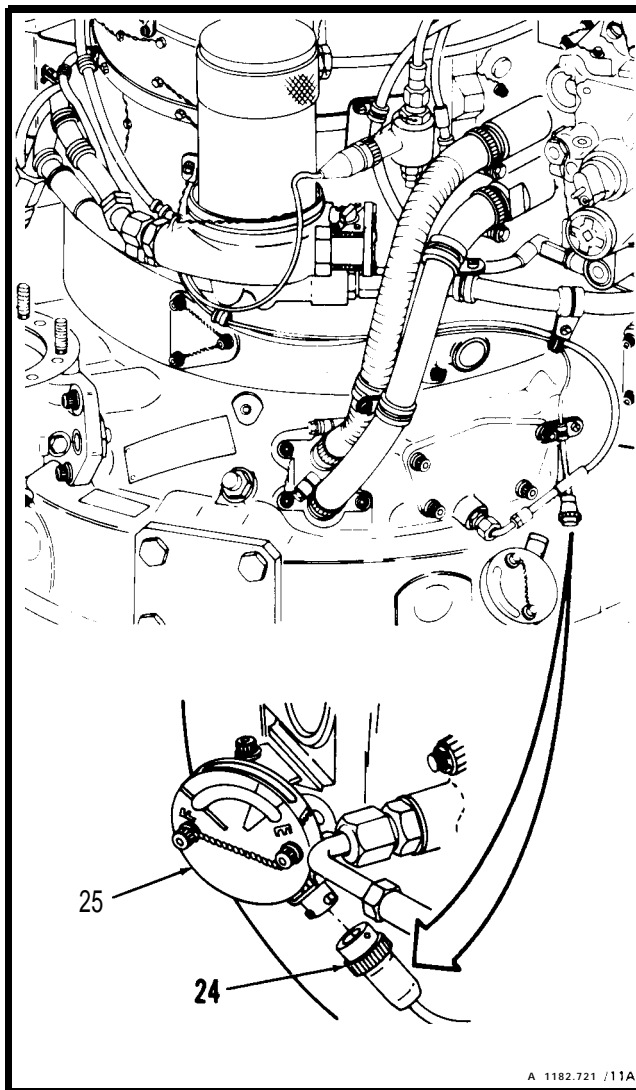
7-21.1

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**

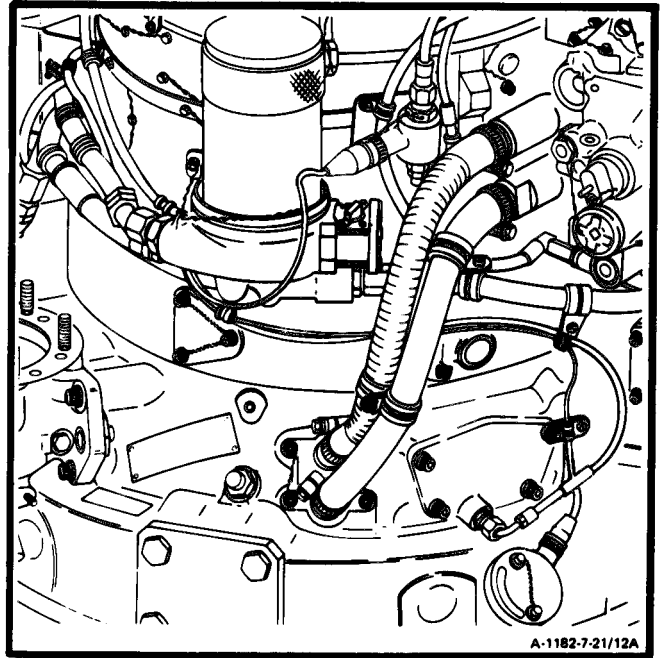
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**7-21.1 INSTALL MAIN ELECTRICAL CABLE ASSEMBLY (SIX CONNECTOR) (Continued)**

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.

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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:**

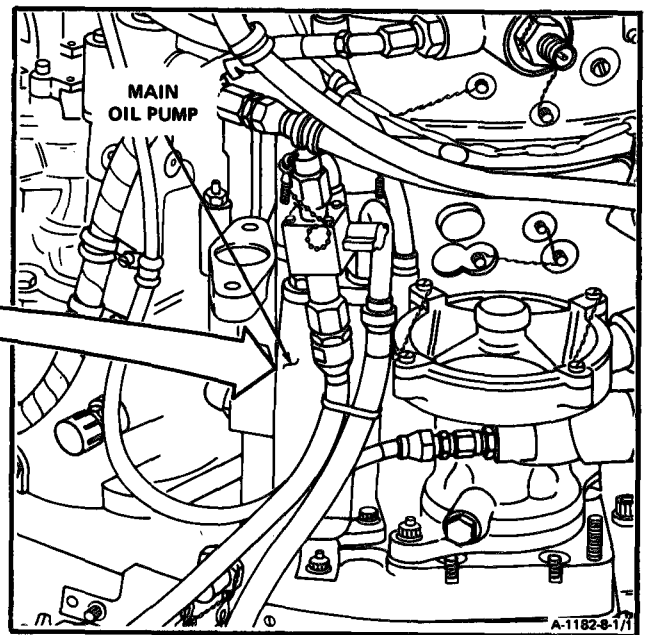
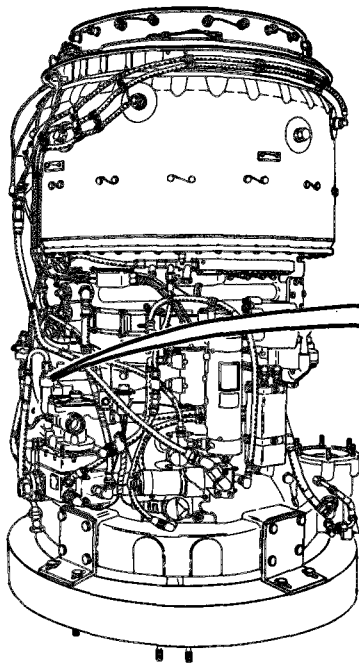
68B10 Aircraft Powerplant Repairer

**Equipment Condition:**

Tube Assembly Removed {Inlet Housing to Main  
Oil Pump} (Task 8-50)

**WARNING**

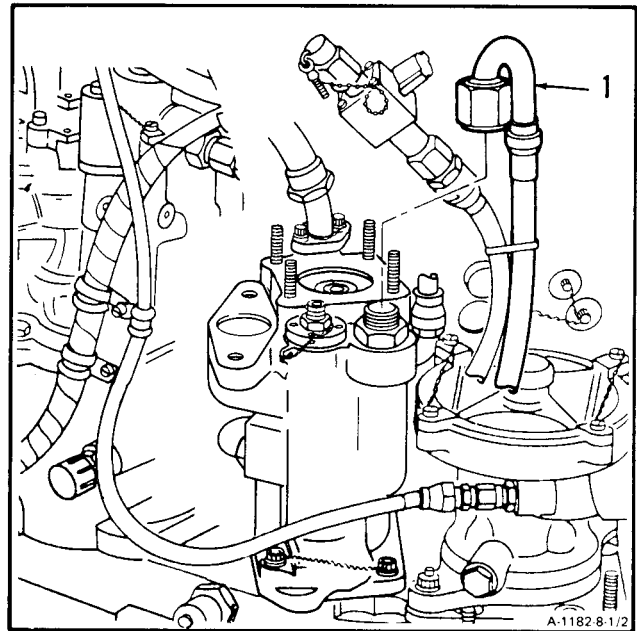
Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.



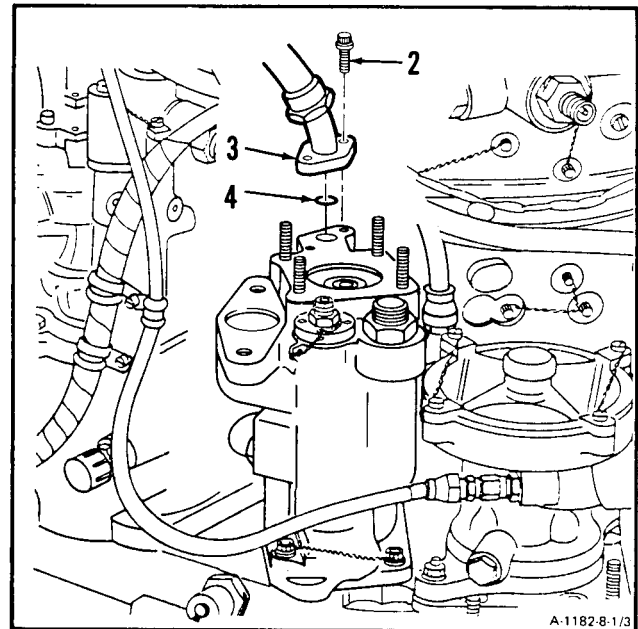
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8-1 REMOVE MAIN OIL PUMP AND SCAVENGE OIL SCREEN (Continued)

1. Disconnect tube assembly (1).



2. Remove lockwire, two bolts (2), end of tube assembly (3), and packing (4).

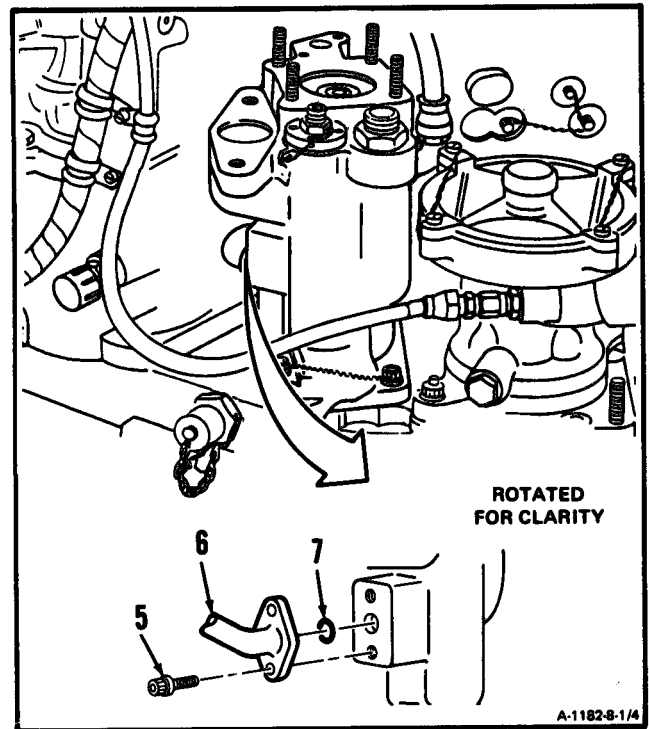


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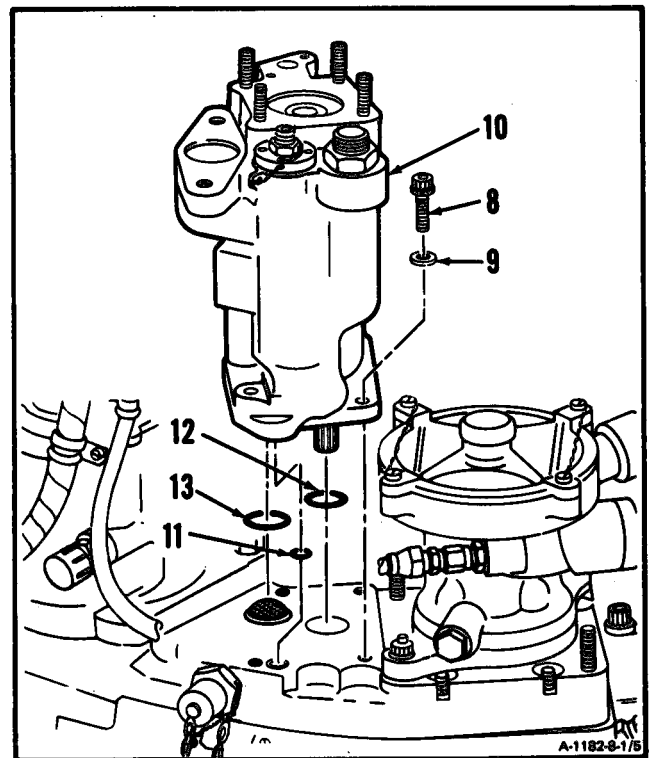
8-1 REMOVE MAIN OIL PUMP AND SCAVENGE OIL SCREEN (Continued)

8-1

3. Remove lockwire, two bolts (5), end of tube assembly (6), and packing (7).



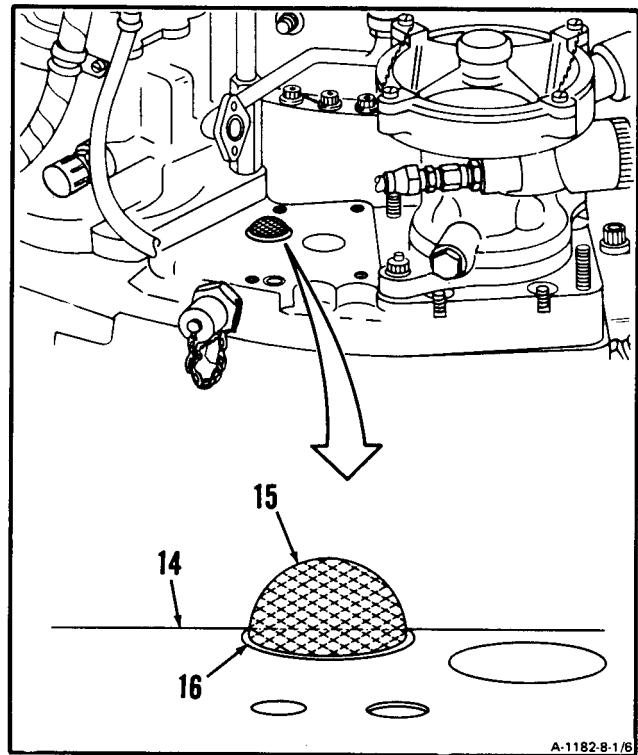
4. Remove lockwire, four bolts (8), washers (9), main oil pump (10), and packings (11, 12, and 13).



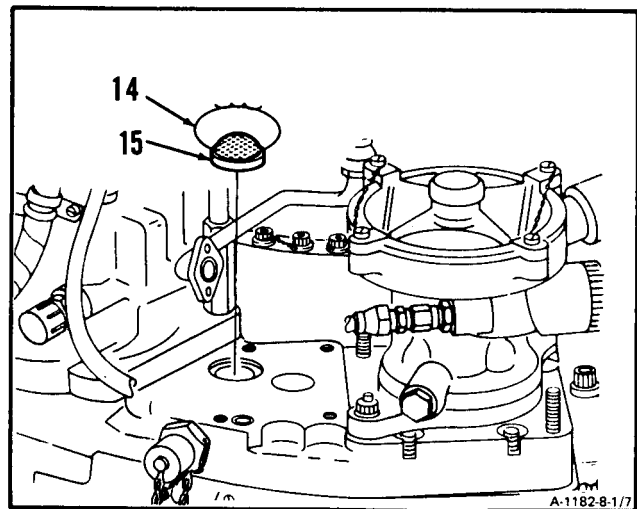
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8-1 REMOVE MAIN OIL PUMP AND SCAVENGE OIL SCREEN (Continued)

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).



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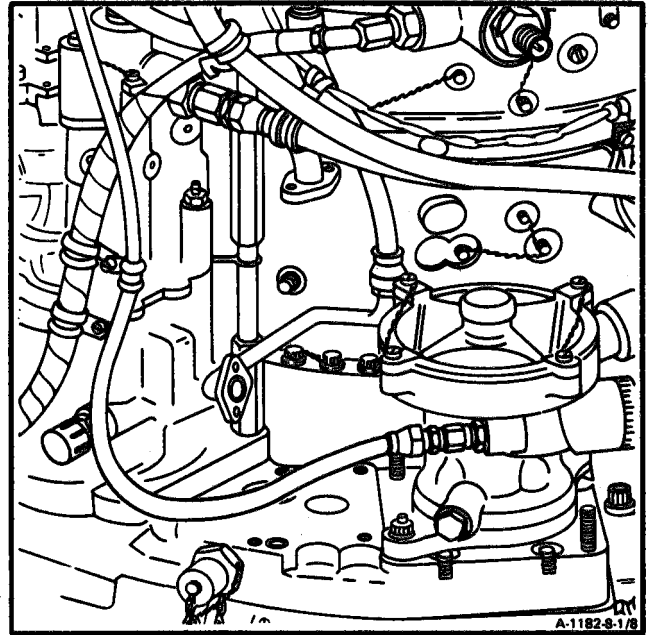
**8-1 REMOVE MAIN OIL PUMP AND SCAVENGE OIL SCREEN (Continued)**

---

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

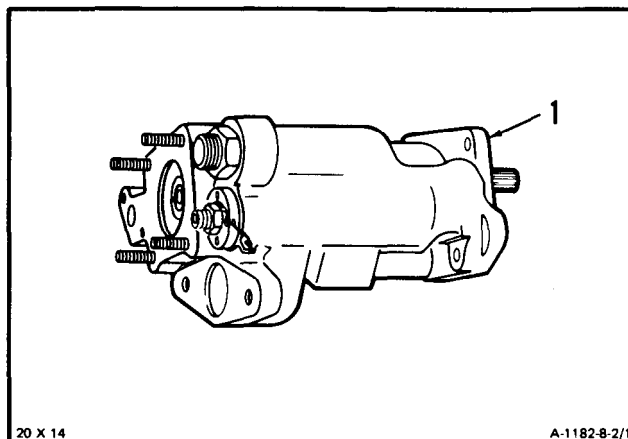
Main Oil Pump and Scavenge Oil Screen

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)**

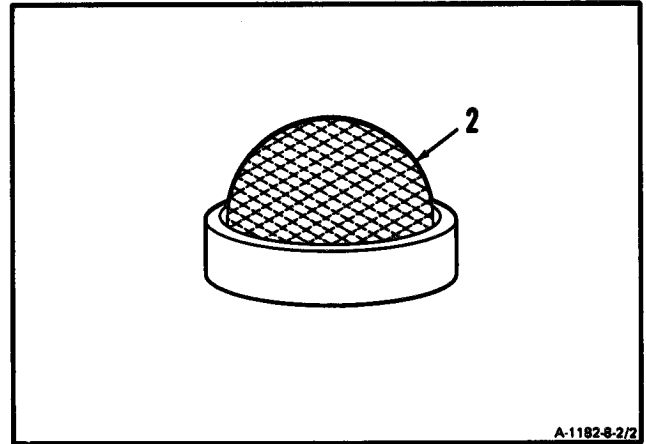
---

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

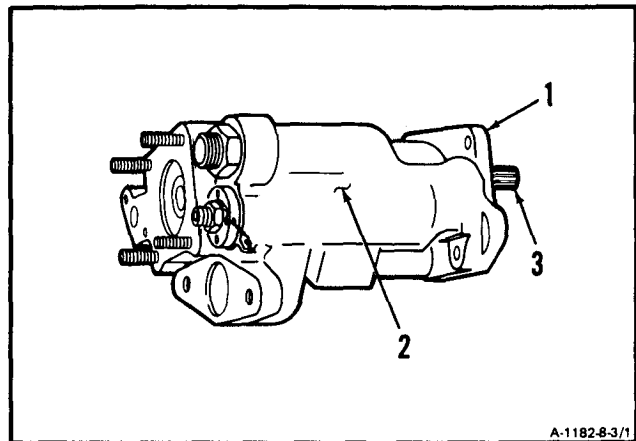
**Equipment Condition:**

Off Engine Task

**Materials:**

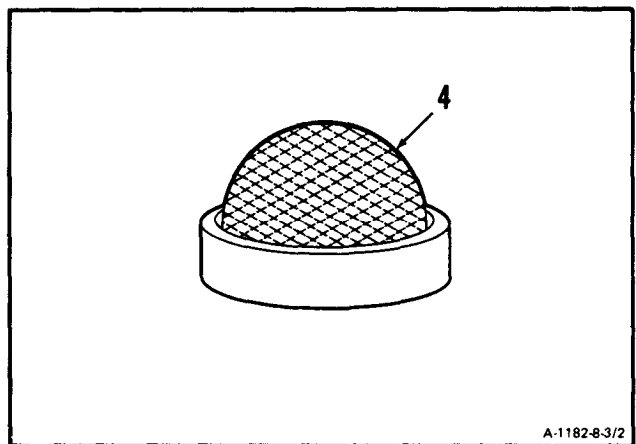
None

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:**

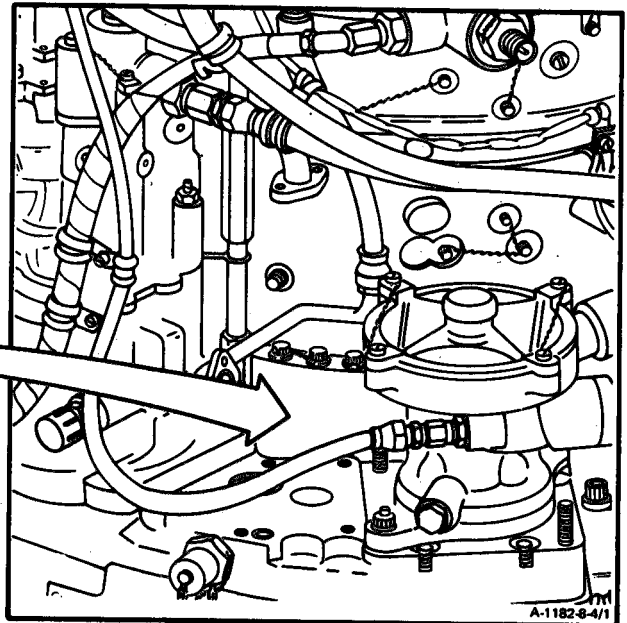
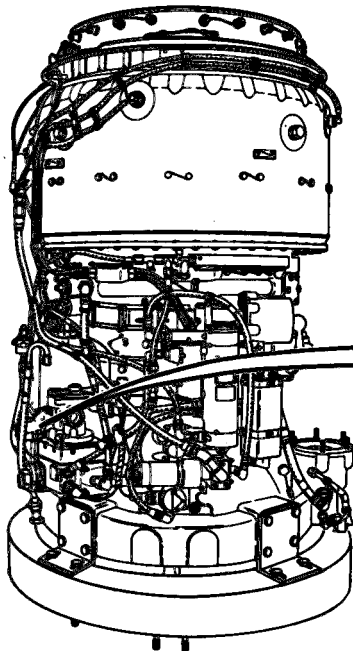
TM 55-2840-254-23P

**Materials:**

Lockwire (E29)

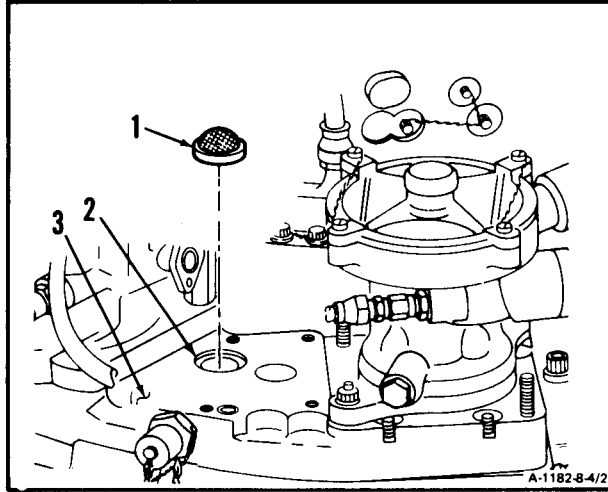
Lubricant (E30)

42 X 20

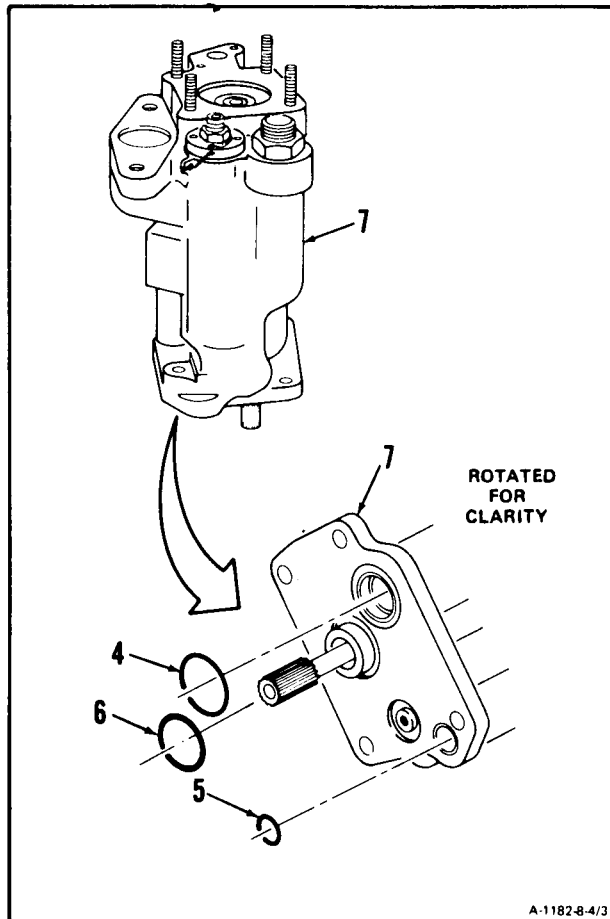
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8-4 INSTALL MAIN OIL PUMP AND SCAVENGE OIL SCREEN (Continued)

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).

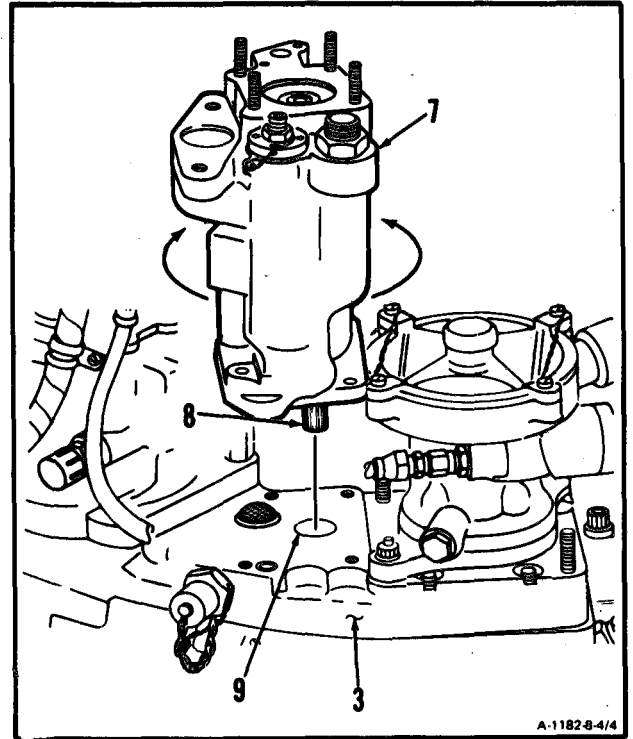


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**8-4 INSTALL MAIN OIL PUMP AND SCAVENGE OIL SCREEN (Continued)**

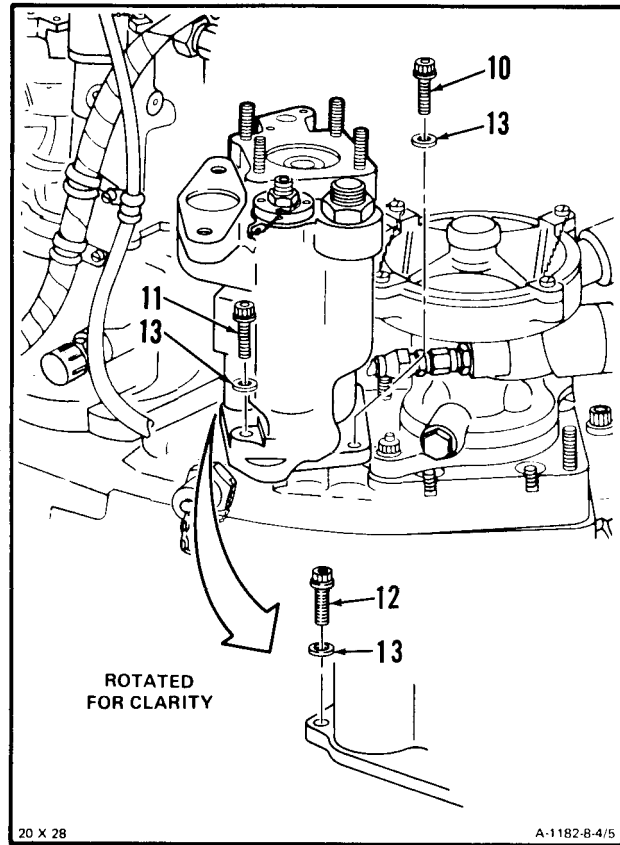
8-4

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**

8-4 INSTALL MAIN OIL PUMP AND SCAVENGE OIL SCREEN (Continued)

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

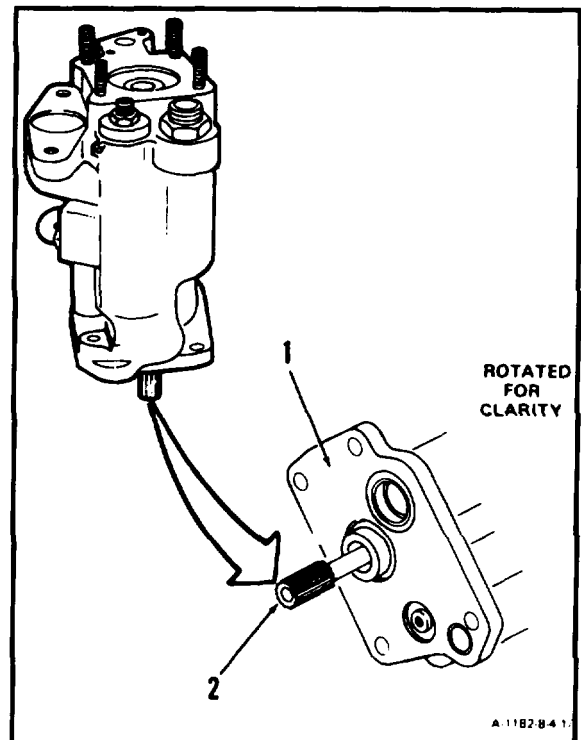
Screen Removed (Task 8-1)

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.

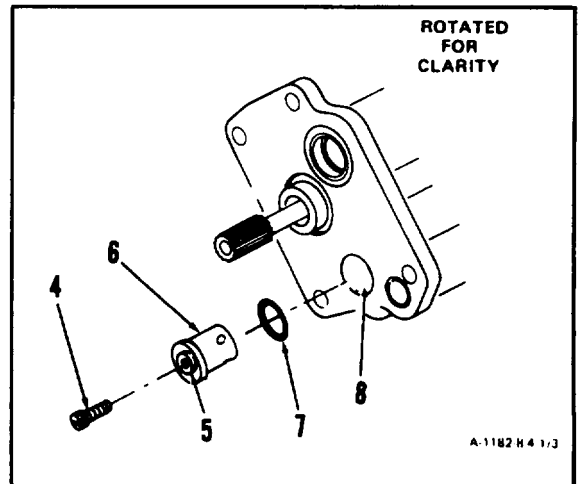
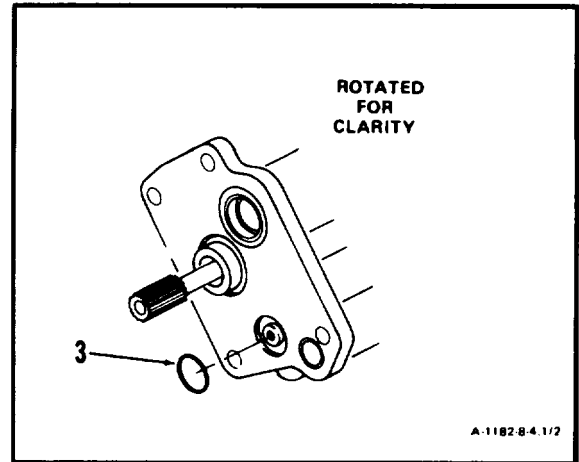
1. Check that main oil pump (1) turns freely by turning shaft (2). If shaft (2) does not turn freely, replace main oil pump (1).

**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

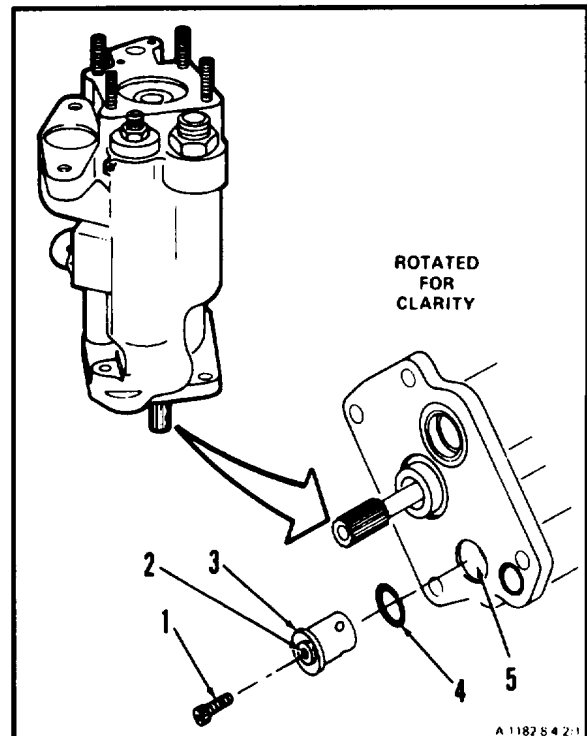
**References:**

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).



GO TO NEXT PAGE

Change 6 8-20.3

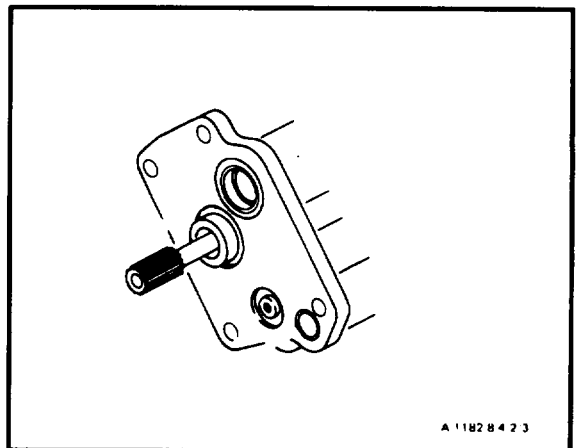
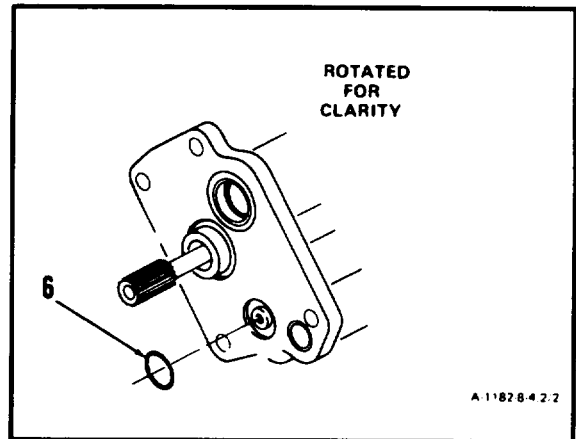


4. Install retaining ring (6).

**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:**

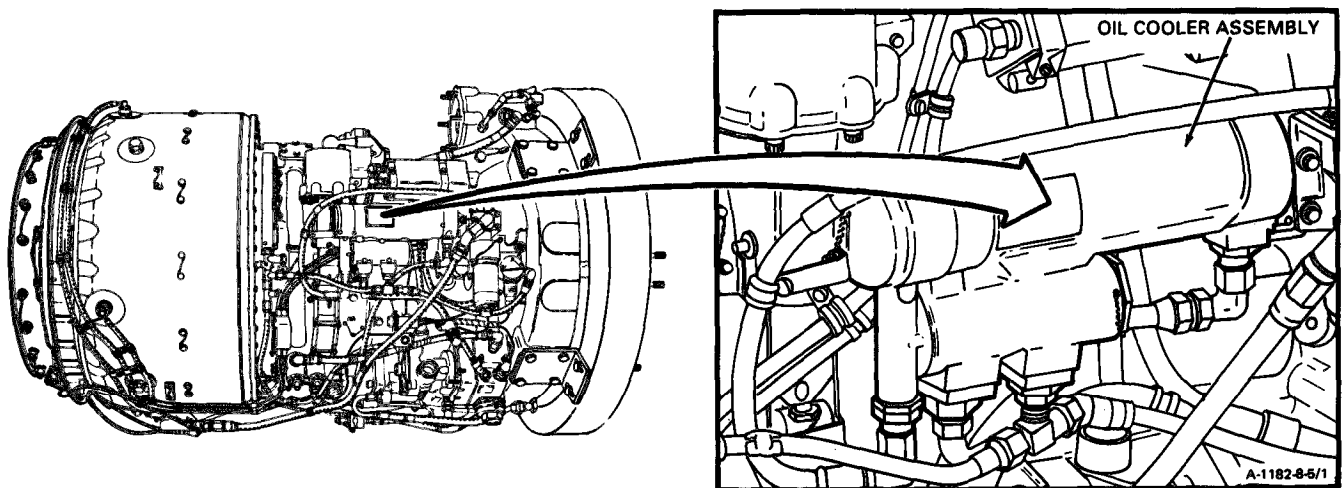
**WARNING**

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.

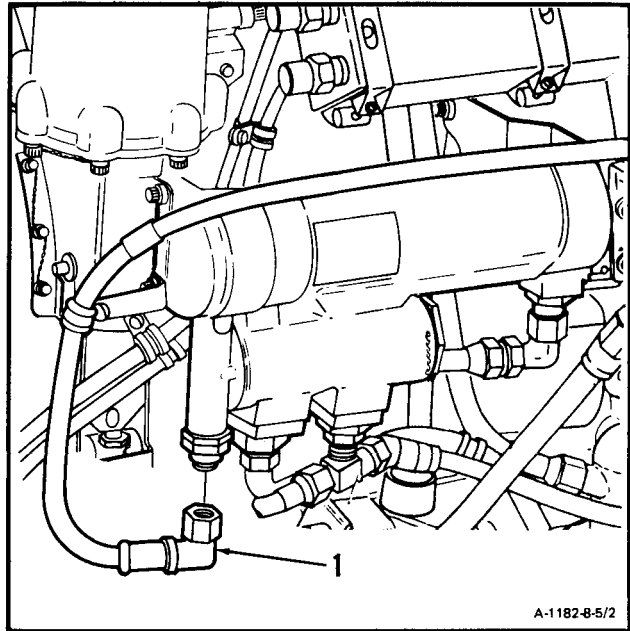
**WARNING**

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.

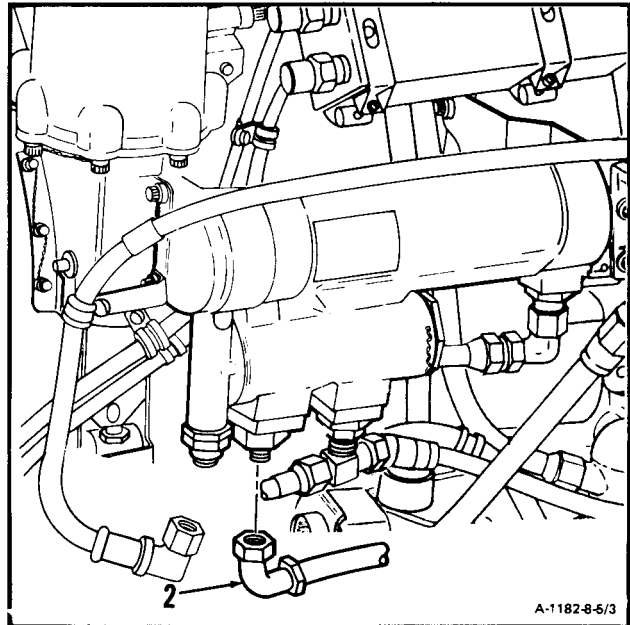


GO TO NEXT PAGE

1. Disconnect hose assembly (1).



2. Disconnect hose assembly (2).

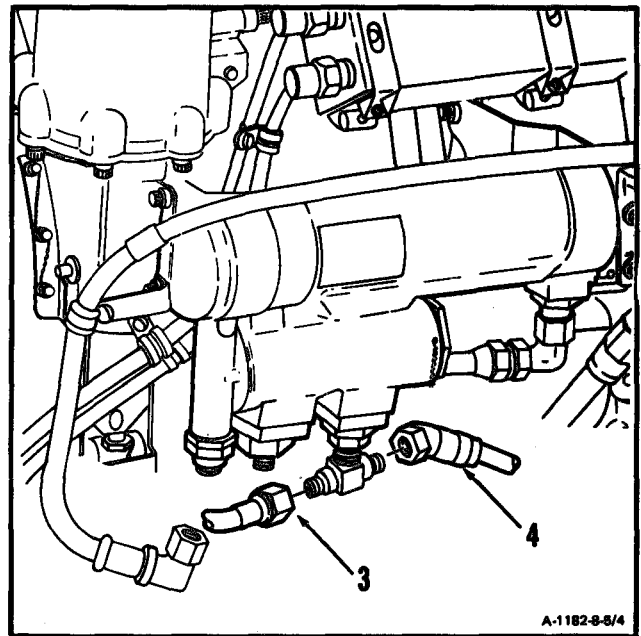


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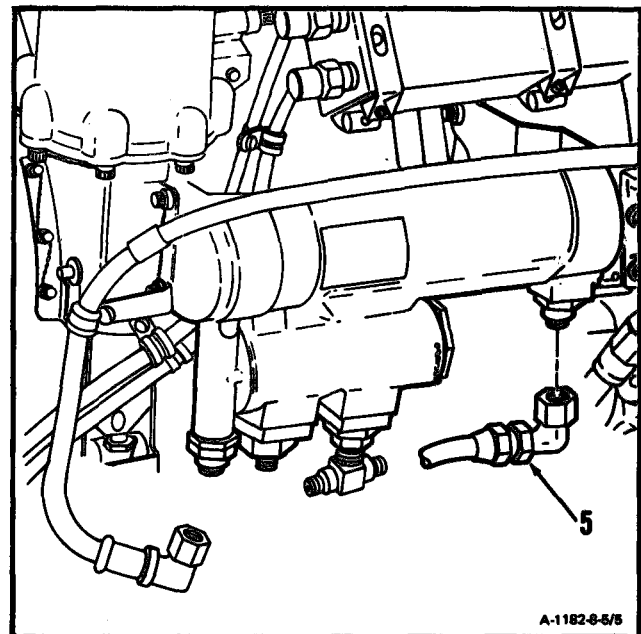
8-5 REMOVE OIL COOLER ASSEMBLY (Continued)

8-5

3. Disconnect hose assemblies (3 and 4).



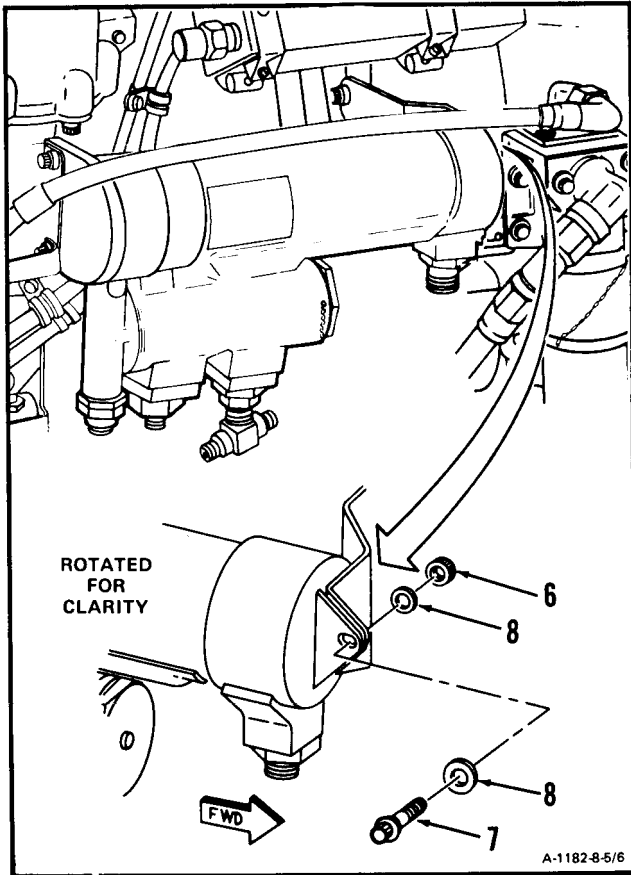
4. Disconnect hose assembly (5).



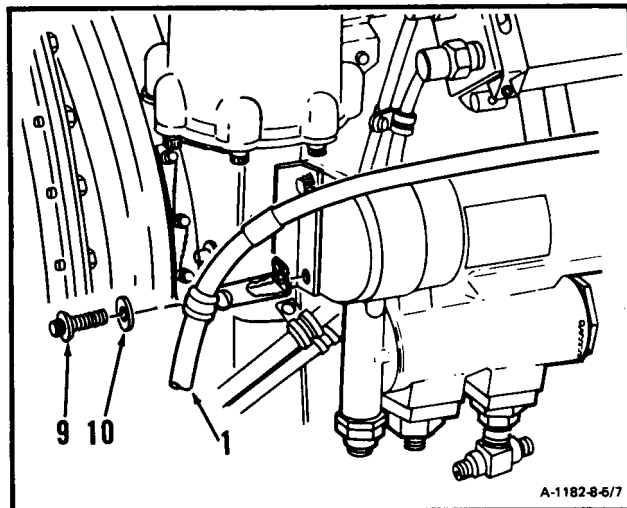
GO TO NEXT PAGE

8-5 REMOVE OIL COOLER ASSEMBLY (Continued)

5. Remove nut (6), bolt (7), and two washers (8).



6. Remove lockwire, bolt (9), and washer (10). Place hose assembly (1) to one side.

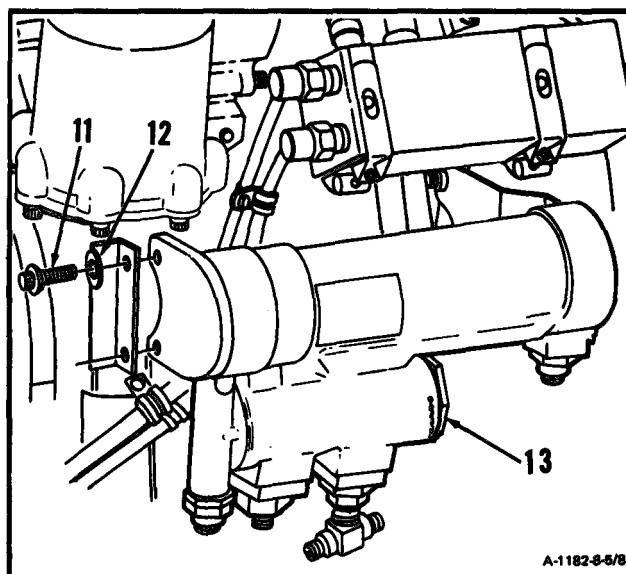


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## 8-5 REMOVE OIL COOLER ASSEMBLY (Continued)

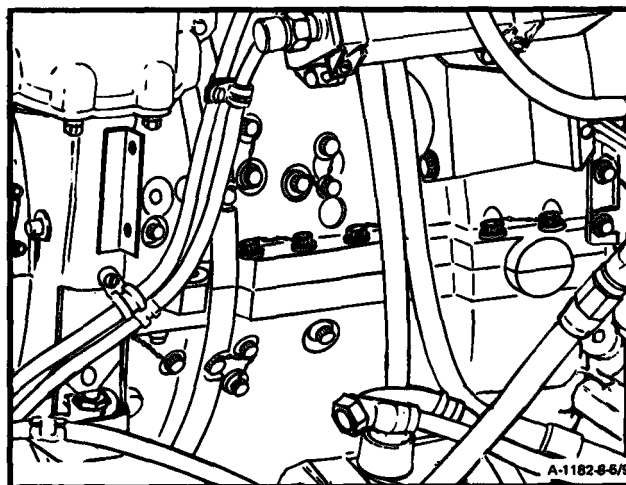
8-5

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**

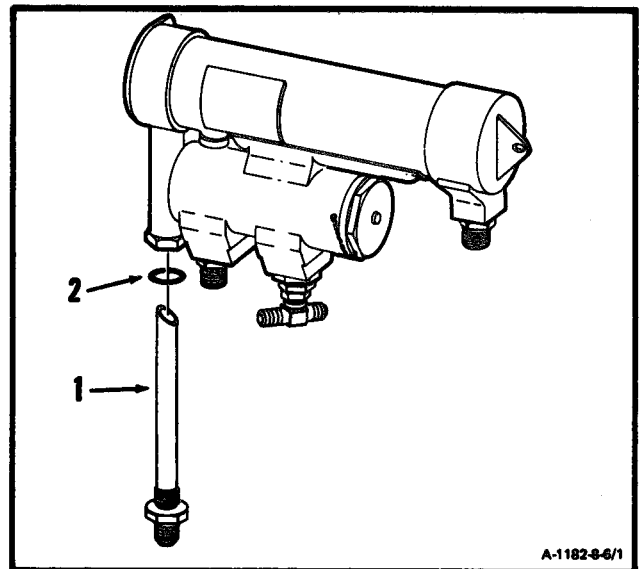
Turbine fuels are very flammable. They may cause drying and irritation of skin or eyes. Handle only in well-ventilated areas away from heat and open flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin and do not take internally. Wash contacted area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

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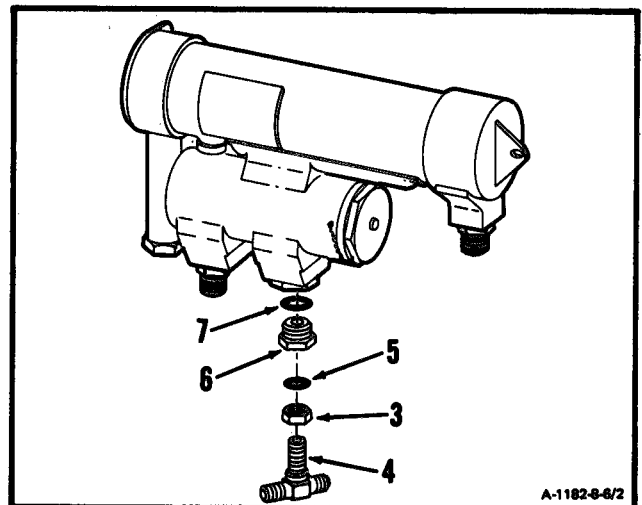
## 8-6 DISASSEMBLE OIL COOLER ASSEMBLY (Continued)

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).



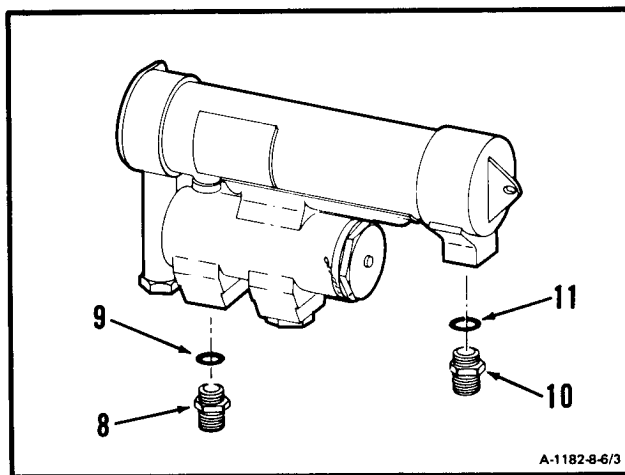
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**8-6 DISASSEMBLE OIL COOLER ASSEMBLY (Continued)**

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

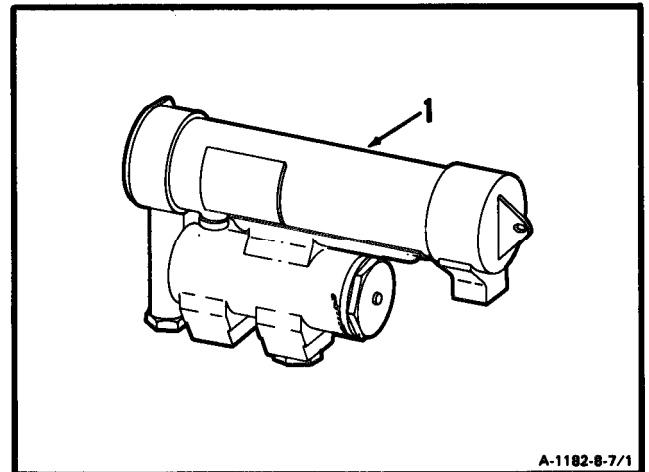
**Equipmnt Condition:**

Off Engine Task  
Oil Cooler Assembly Removed (Task 8-5)  
Oil Cooler Assembly Disassembled (Task 8-6)

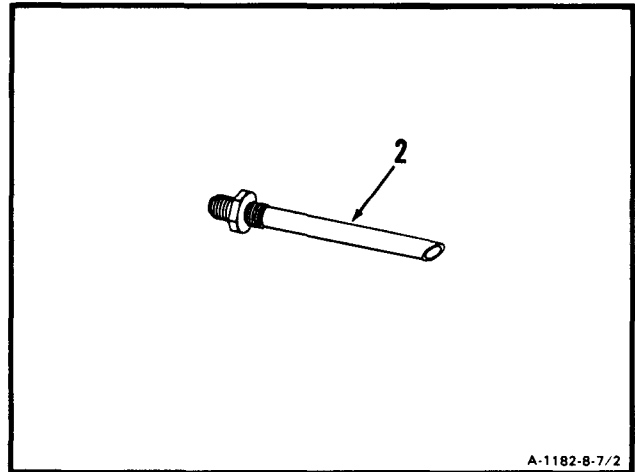
**WARNING**

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

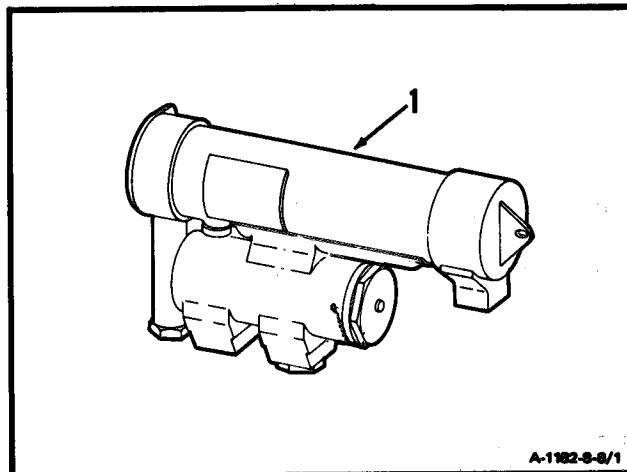
**Personnel Required:**

68B30 Aircraft Powerplant Inspector

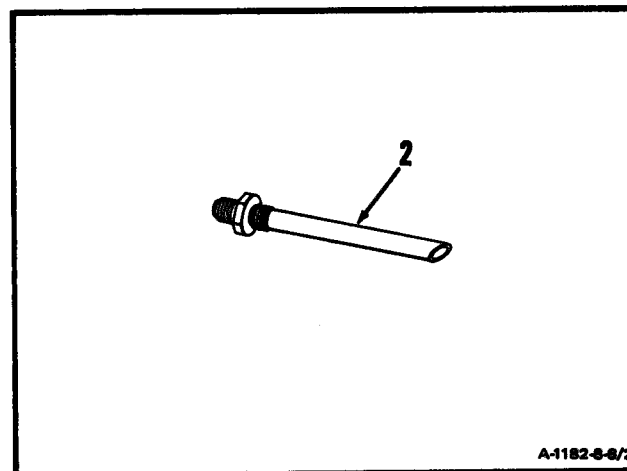
**Tools:**Technical Inspection Tool Kit,  
NSN 5180-00-323-5114**Equipment Condition:**Off Engine Task

---

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

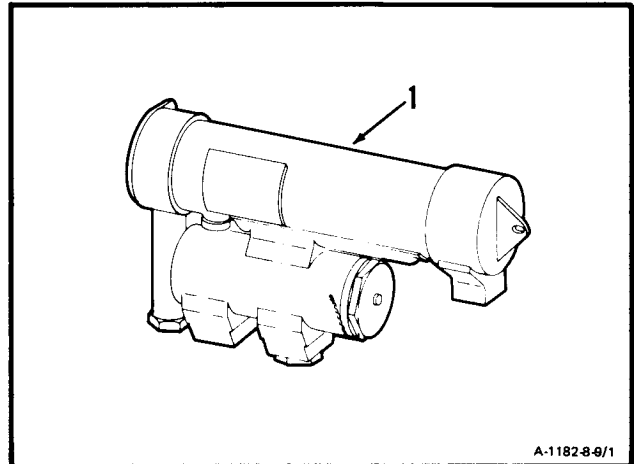
**References:**

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).



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

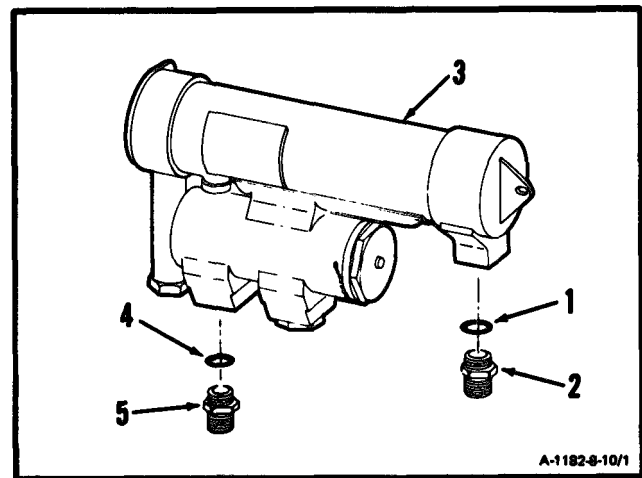
**References:**

TM 55-2840-254-23P

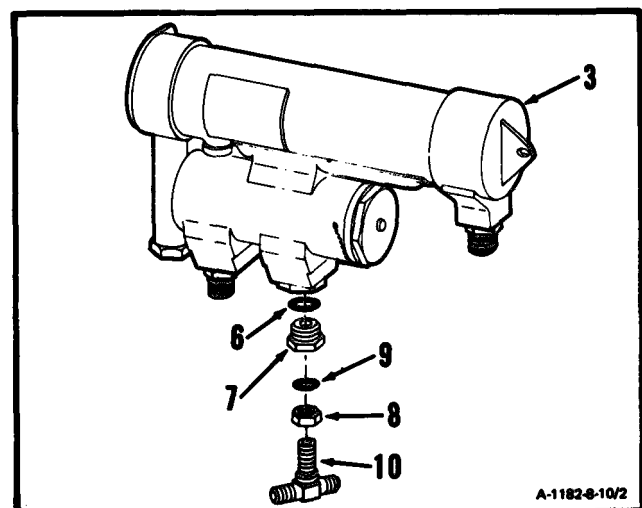
**Equipment Condition:**

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).



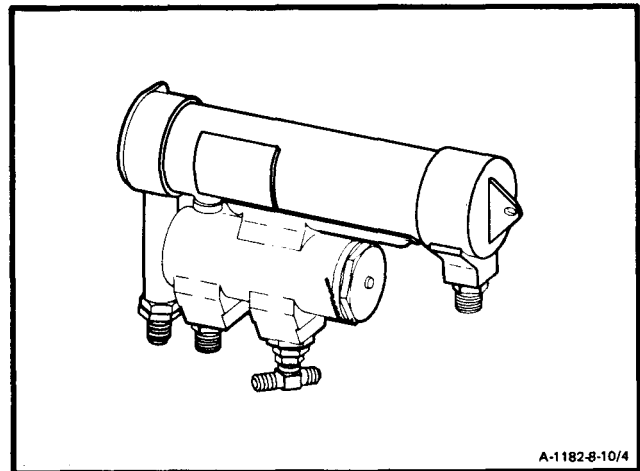
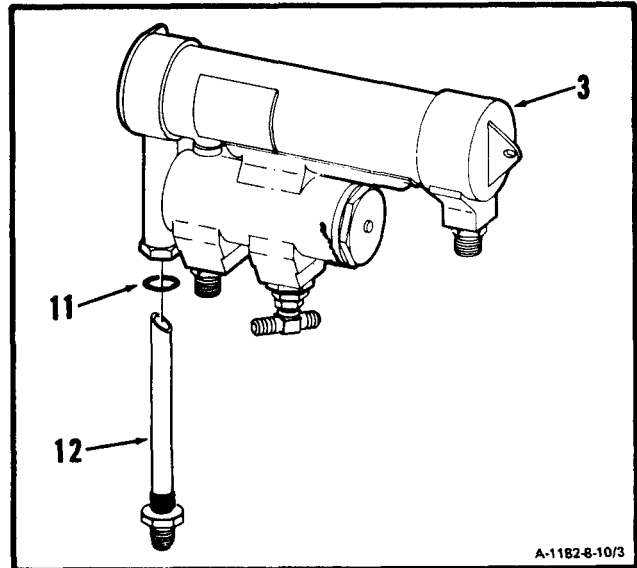
GO TO NEXT PAGE

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:**

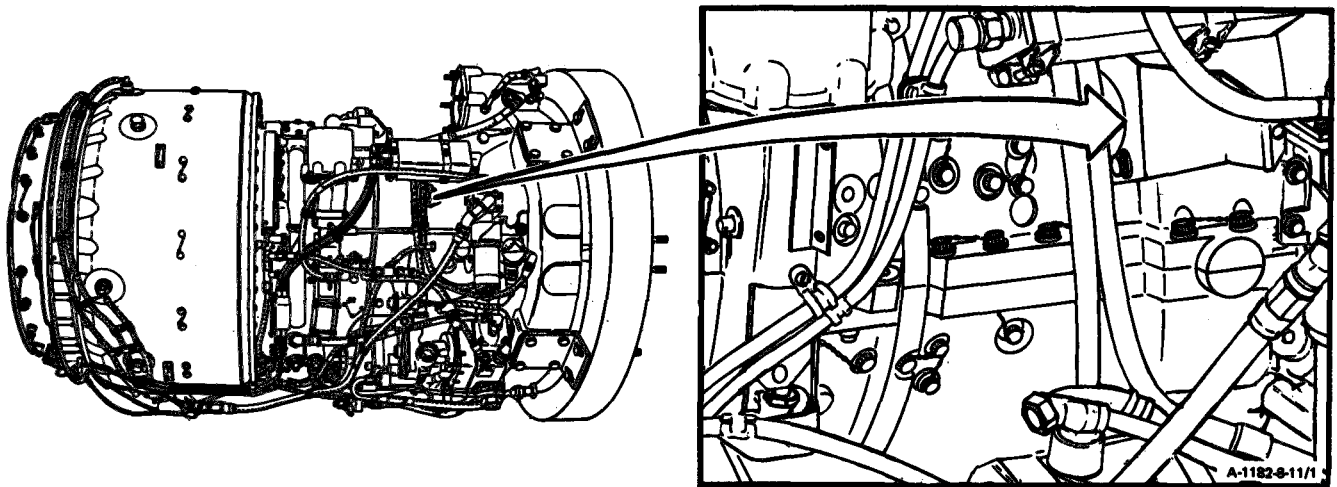
Powerplant Mechanic's Tool Kit,  
NSN 5180-00-323-4944  
Technical Inspection Tool Kit,  
NSN 5180-00-323-5114

**Materials:**

Lockwire (E29)

**Personnel Required:**

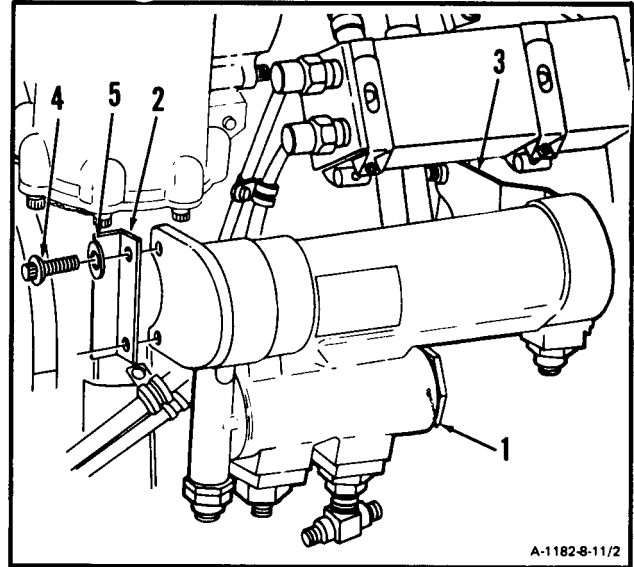
68B10 Aircraft Powerplant Repairer  
68B30 Aircraft Powerplant Inspector

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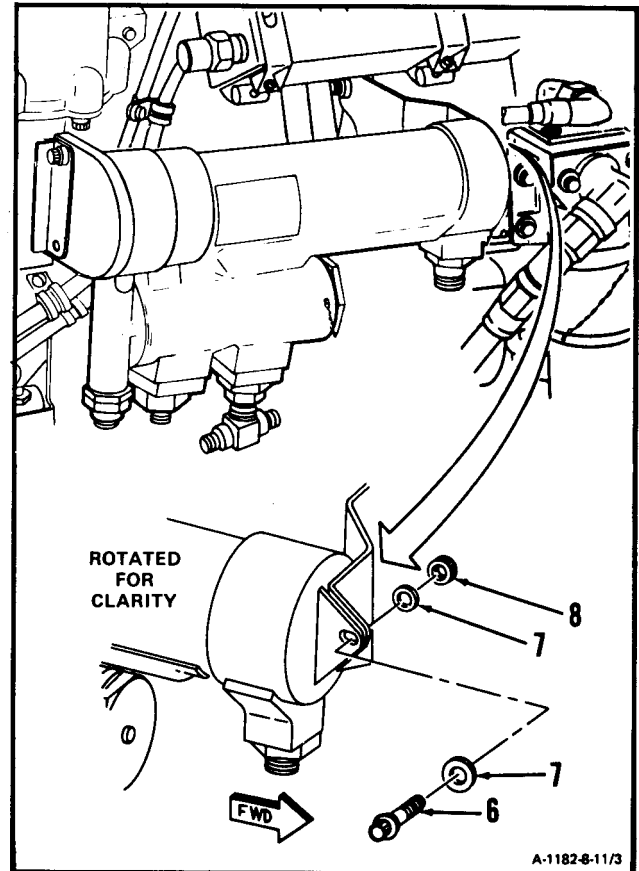


8-11 INSTALL OIL COOLER ASSEMBLY (Continued)

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).

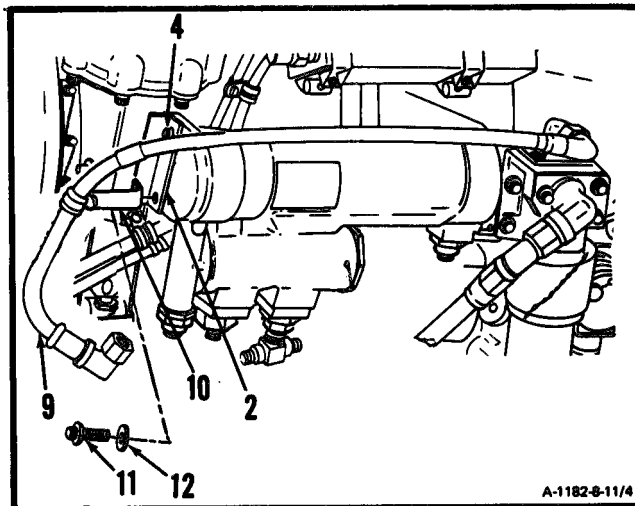


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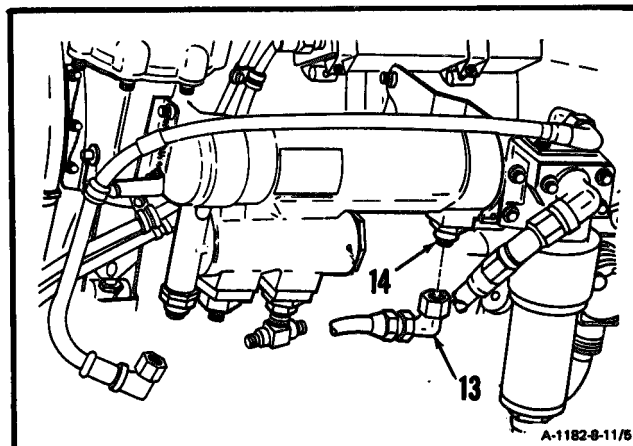
**8-11 INSTALL OIL COOLER ASSEMBLY (Continued)**

8-11

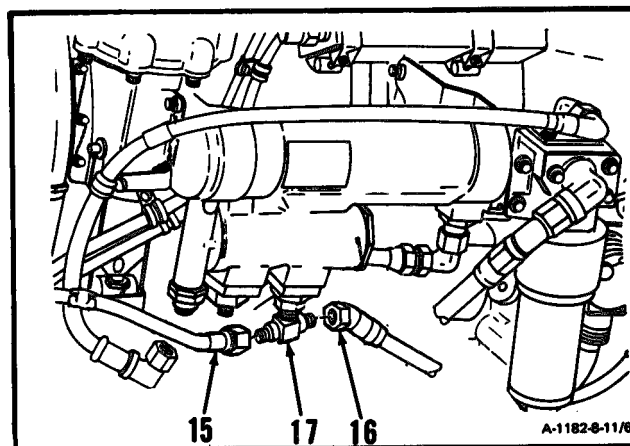
3. Route hose assembly (9), and install bracket (10) on interstate air-bleed actuator (2).
4. Install bolt (11) and washer (12), and tighten bolt (4). Lockwire bolts (4 and 11). Use lockwire (E29).



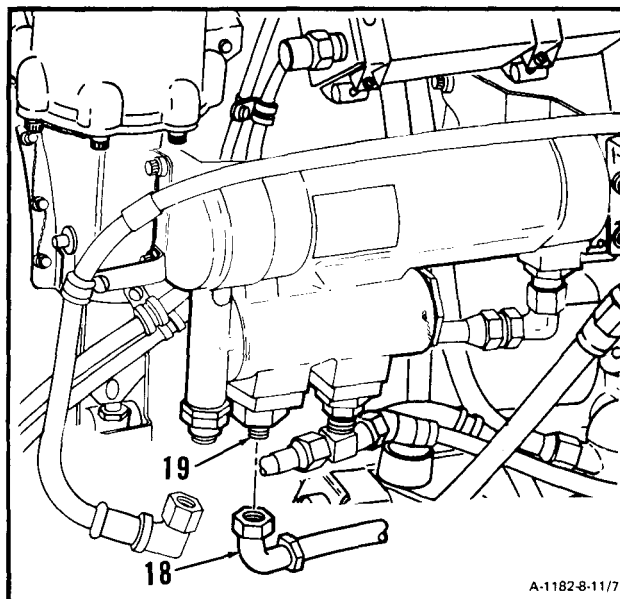
5. Connect hose assembly (13) to nipple (14).



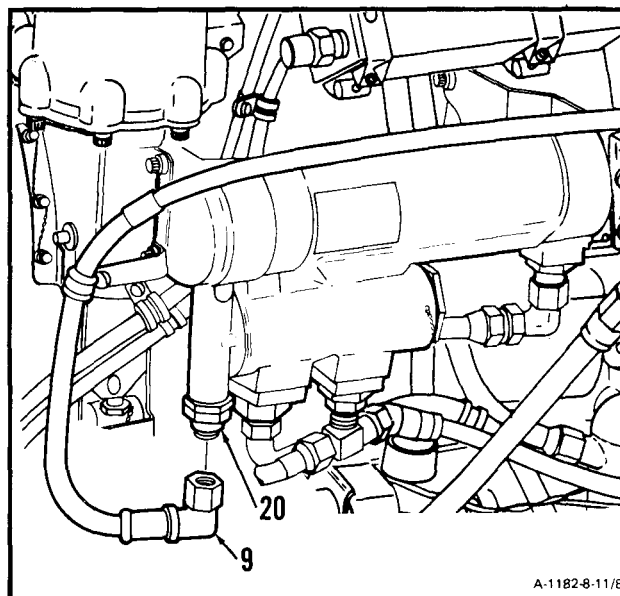
6. Connect hose assemblies 15 and 16) to fitting (17).

**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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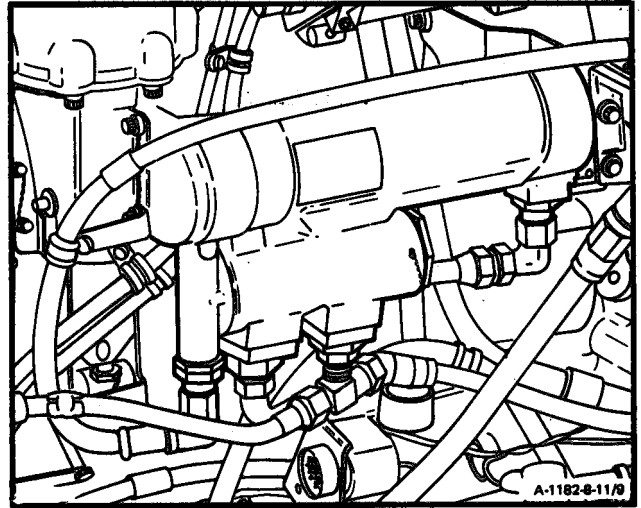
**8-11 INSTALL OIL COOLER ASSEMBLY (Continued)**

---

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:**

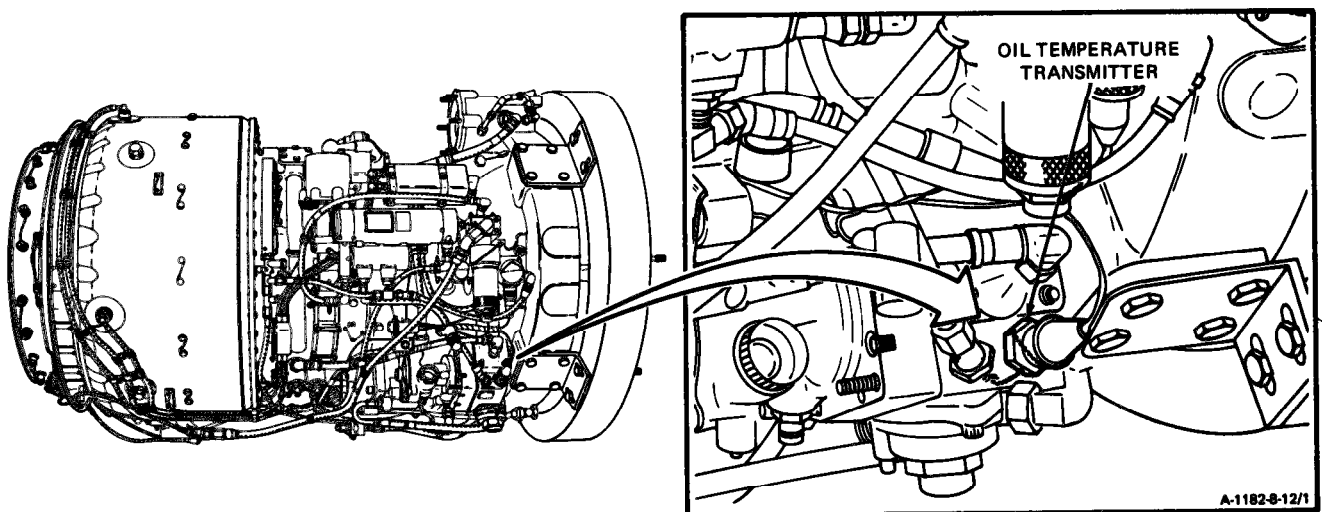
None

**Personnel Required:**

68B10 Aircraft Powerplant Repairer

**WARNING**

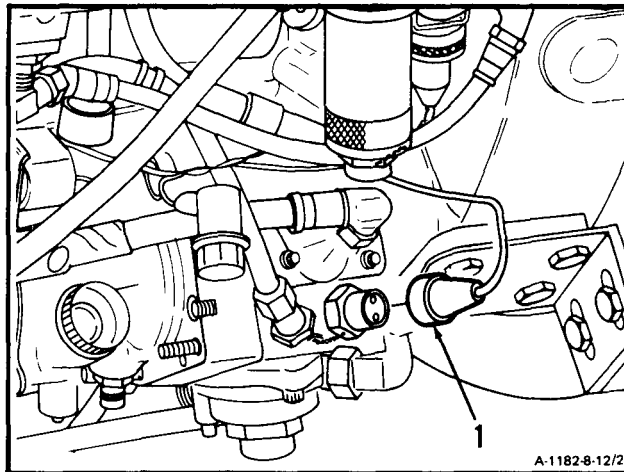
Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. They may burn if exposed to heat or flame. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact 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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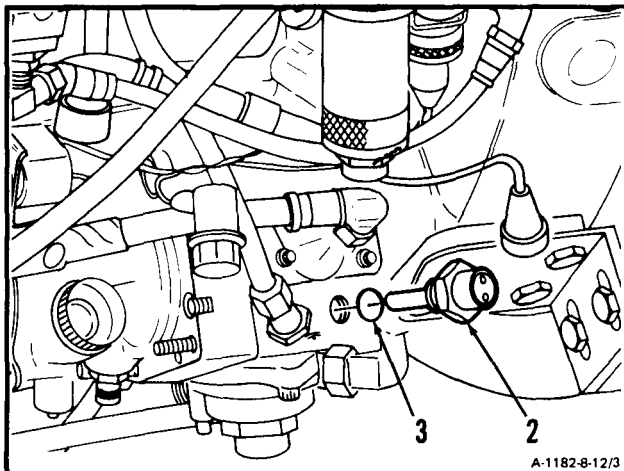
8-12 REMOVE OIL TEMPERATURE TRANSMITTER (Continued)

8-12

1. Remove lockwire and electrical connector (1).

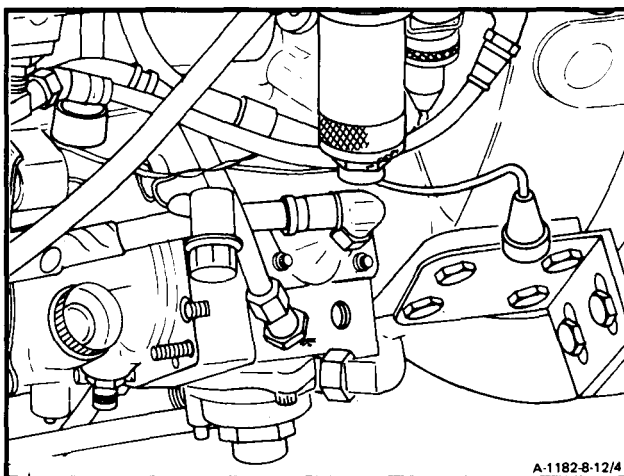


2. Remove lockwire, oil temperature transmitter (2), and gasket (3).



FOLLOW-ON MAINTENANCE:

None



END OF TASK

---

**8-13 CLEAN OIL TEMPERATURE TRANSMITTER**

---

8-13

**INITIAL SETUP****Applicable Configurations:**

All

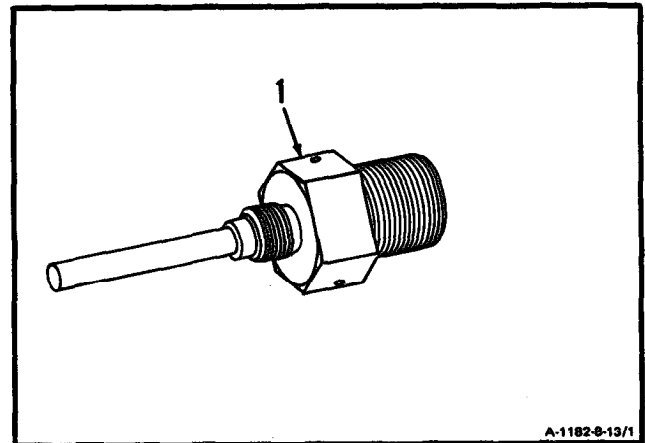
**Tools:**Powerplant Mechanic's Tool Kit,  
NSN 5180-00-323-4944**Materials:**Dry Cleaning Solvent (E17)  
Gloves (E20)  
Lint-Free Cloth (E26)**Personnel Required:**

68610 Aircraft Powerplant Repairer

**Equipment Condition:**Off Engine Task  
Oil Temperature Transmitter Removed  
(Task 8-12)**General Safety Instructions:****WARNING**

Dry cleaning solvent (E17) is flammable and toxic. It can irritate 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

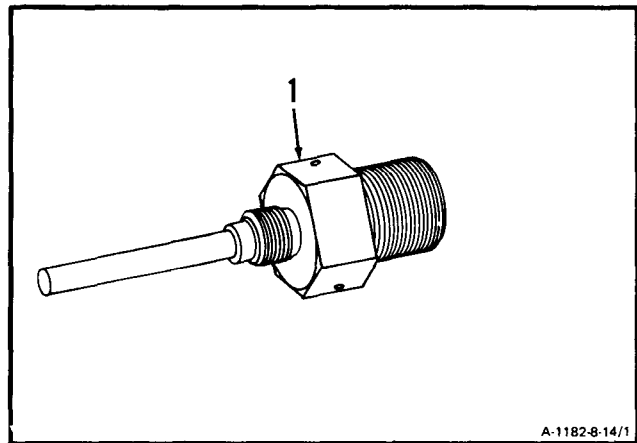
**Personnel Required:**

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:**

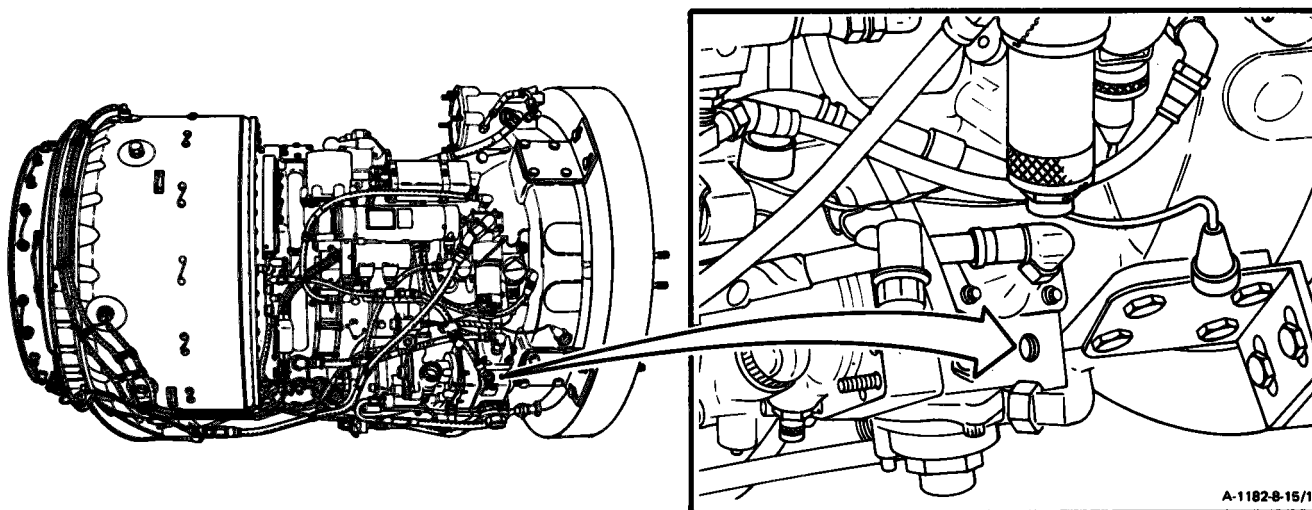
Gasket

**Personnel Required:**

68B10 Aircraft Powerplant Repairer  
68B30 Aircraft Powerplant Inspector

**References:**

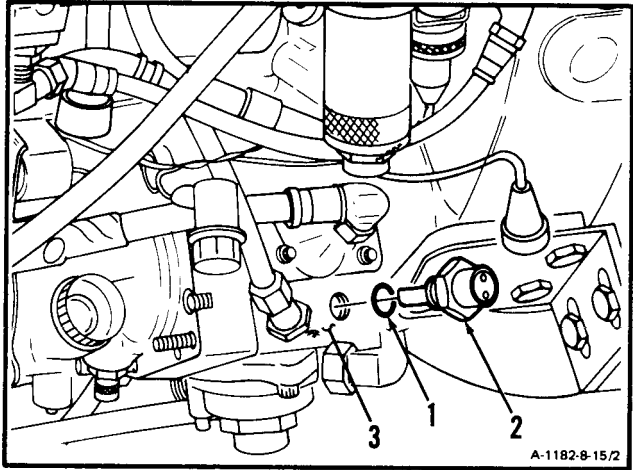
TM 55-2840-254-23P

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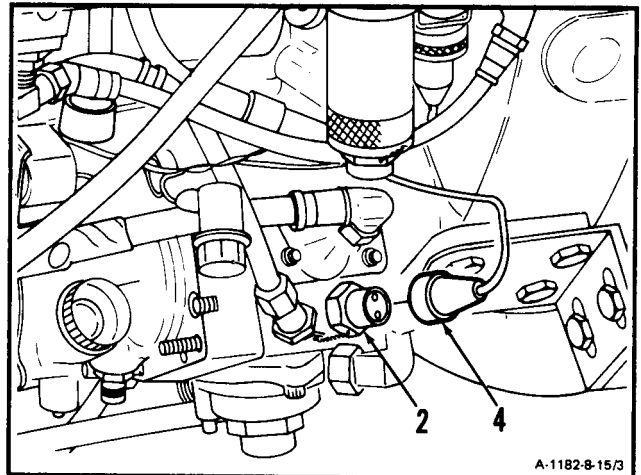
8-15 INSTALL OIL TEMPERATURE TRANSMITTER (Continued)

8-15

1. Install gasket (1) and oil temperature transmitter (2) in accessory gearbox assembly (3). Lockwire oil temperature transmitter (2). Use lockwire (E29).



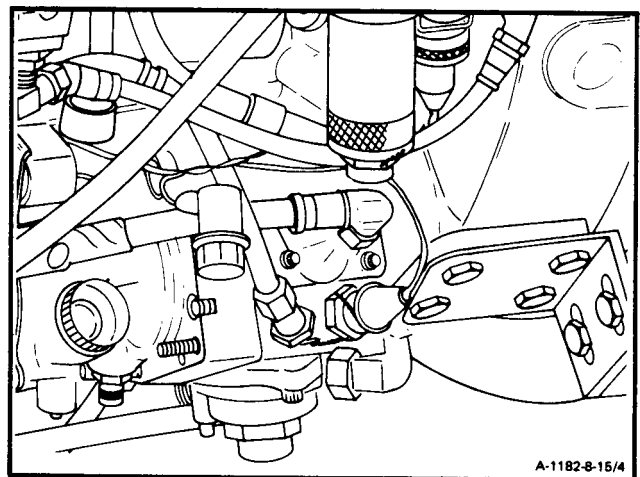
2. Install electrical connector (4) on oil temperature transmitter (2). Lockwire electrical connector (4). Use lockwire (E29).



**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:**

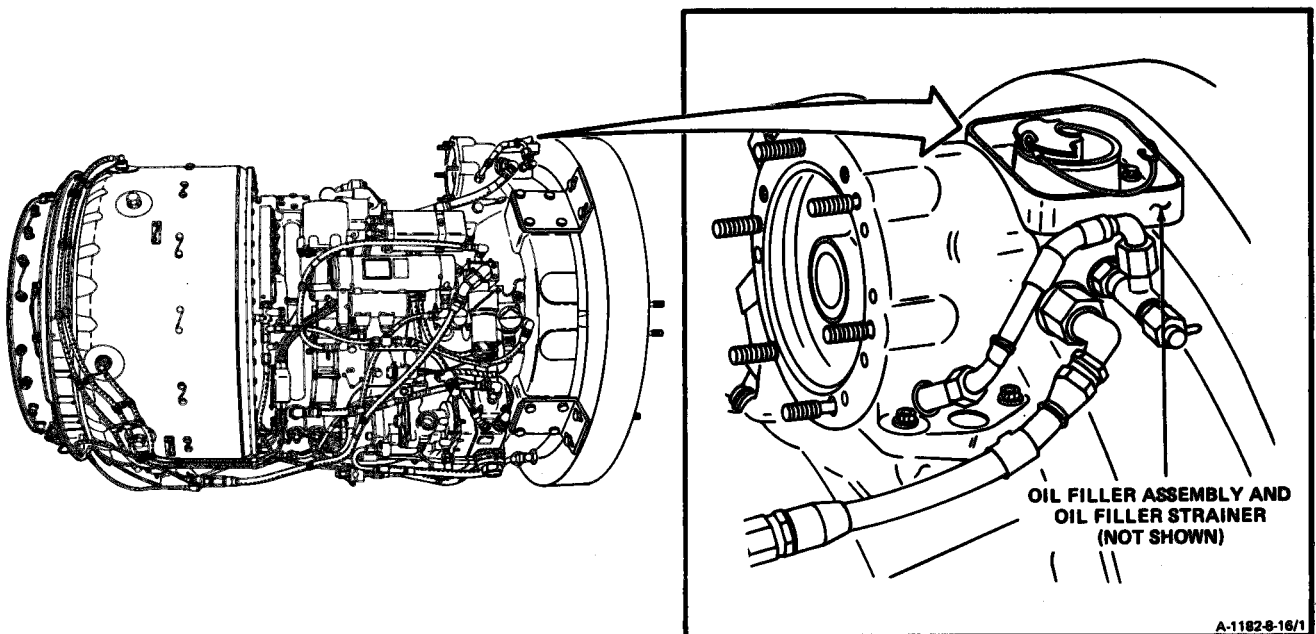
All

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

Wiping Rag (E58)

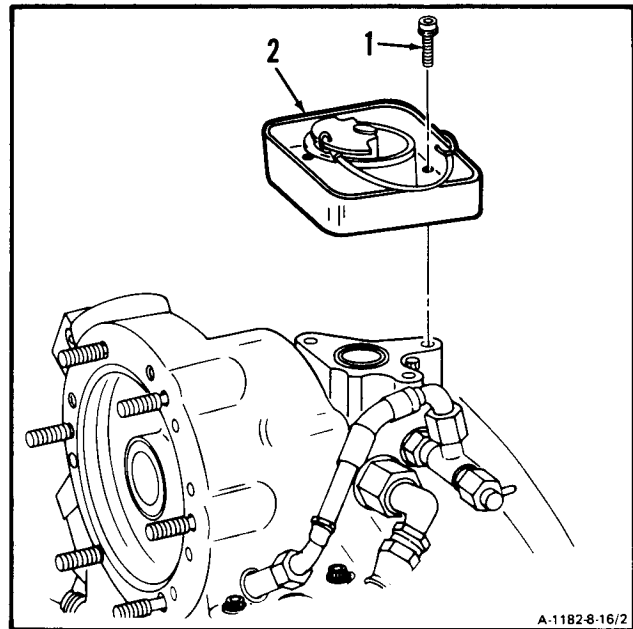
**Personnel Required:**

68B10 Aircraft Powerplant Repairer



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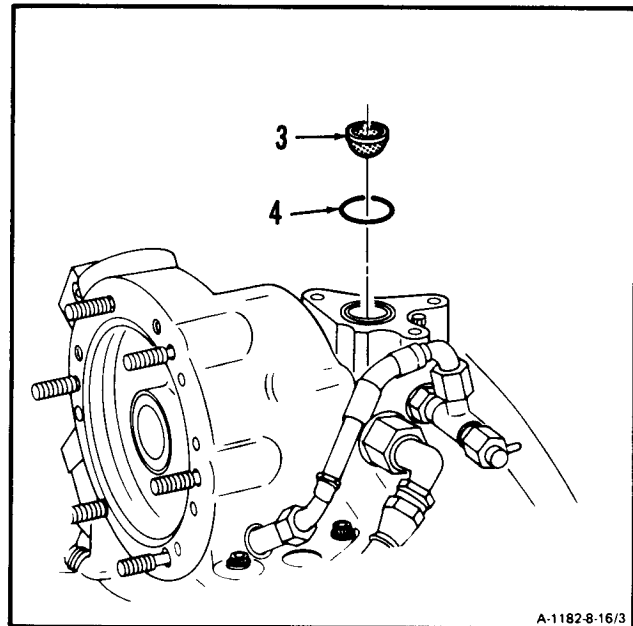
1. Remove lockwire, three bolts (1) and oil filler assembly (2).



**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).



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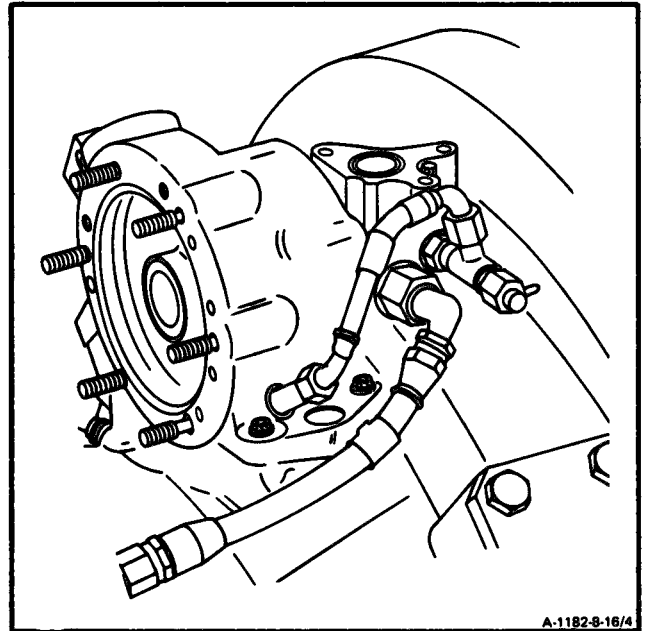
**8-16 REMOVE OIL FILLER ASSEMBLY AND OIL FILLER STRAINER (Continued)**

---

8-16

**FOLLOW-ON MAINTENANCE:**

None

**END OF TASK**

---

8-17 DISASSEMBLE OIL FILLER ASSEMBLY AND OIL FILLER STRAINER

---

8-17

INITIAL SETUP

**Applicable Configurations:**

All

Tools:

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

**Personnel Required:**

68B10 Aircraft Powerplant Repairer

**Equipment Condition:**

Off Engine Task  
Oil Filler Assembly and Oil Filler Strainer  
Removed (Task 8-16)

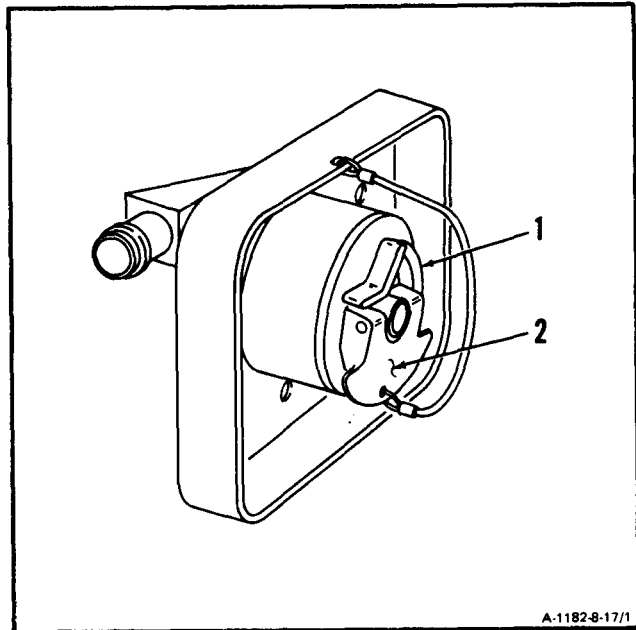
**Materials**

None

---

1. Remove cap assembly (1) as follows:

- a. Lift handle (2).

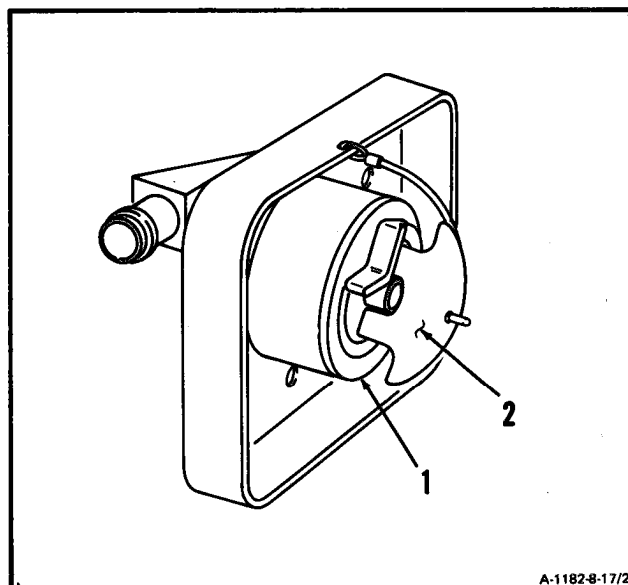


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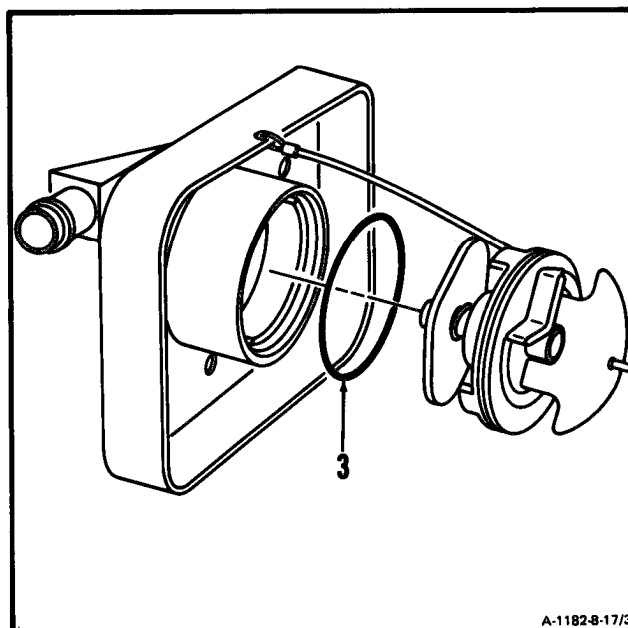
**8-17 DISASSEMBLE OIL FILLER ASSEMBLY AND OIL FILLER STRAINER (Continued)**

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**

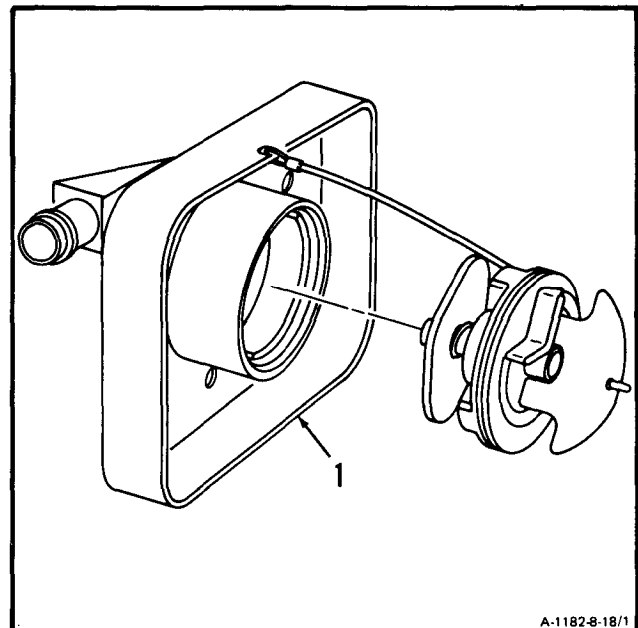
Dry cleaning solvent (E17) is flammable and toxic. It can irritate skin and cause burns. Use only in well-ventilated area, away from heat and open flame. In case of contact, immediately flush skin or eyes with water for at least 15 minutes. Get medical attention for eyes.

**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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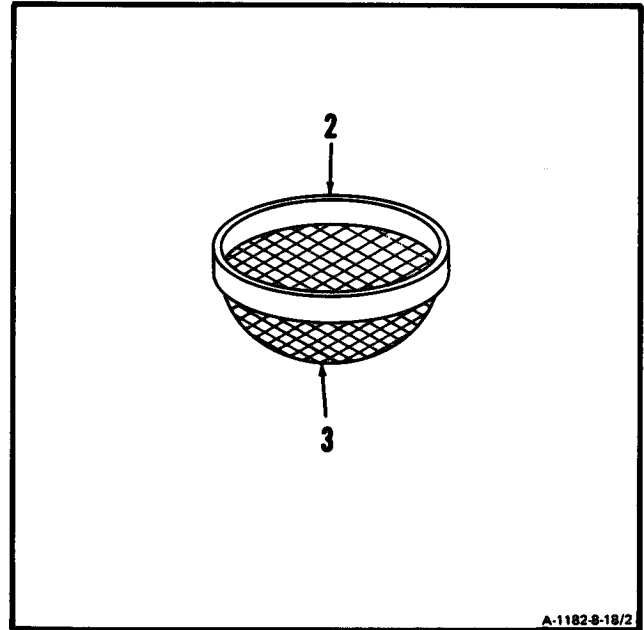
**8-18 CLEAN OIL FILLER ASSEMBLY AND OIL FILLER STRAINER (Continued)**

---

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

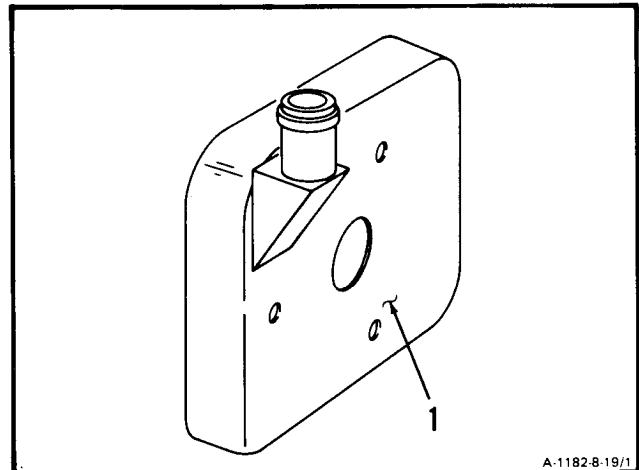
**Personnel Required:**

68B30 Aircraft Powerplant Inspector

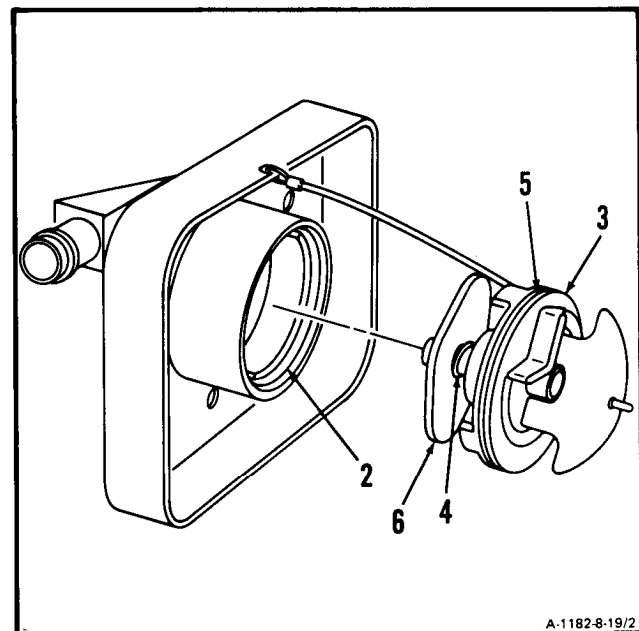
**Equipment Condition:**

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.

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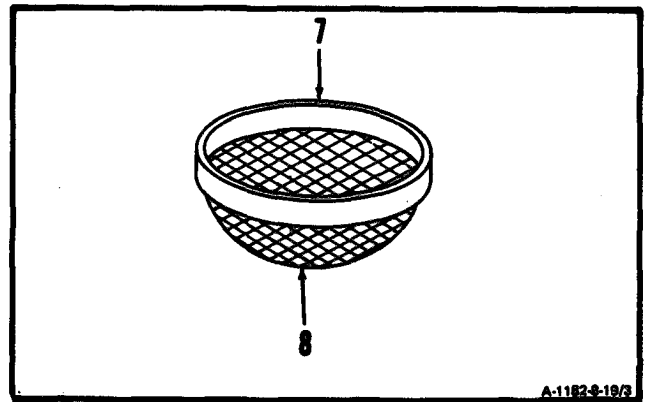
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**8-19 INSPECT OIL FILLER ASSEMBLY AND OIL FILLER STRAINER (Continued)**

---

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:**

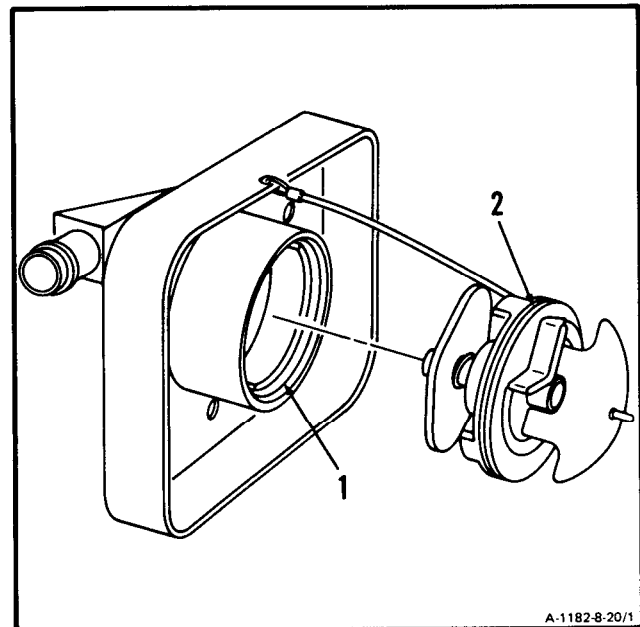
Off Engine Task

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

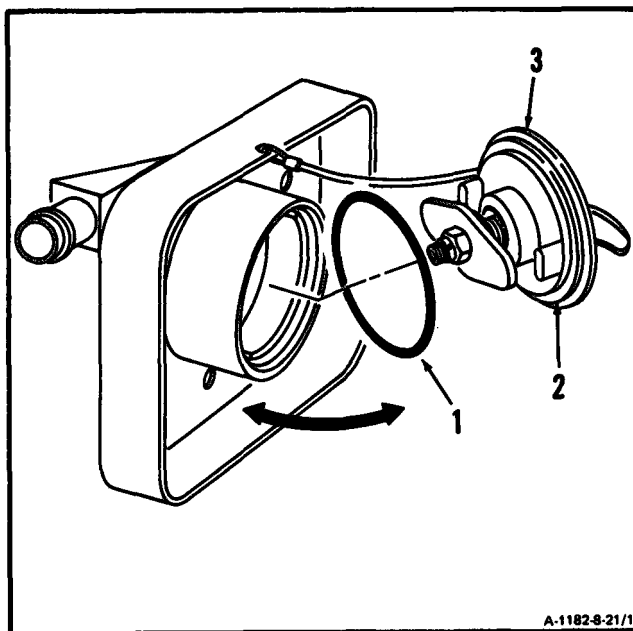
**Personnel Required:**68B10 Aircraft Powerplant Repairer  
68B30 Aircraft Powerplant Inspector**References:**

TM 55-2840-254-23P

**Equipment Condition:**

Off Engine Task

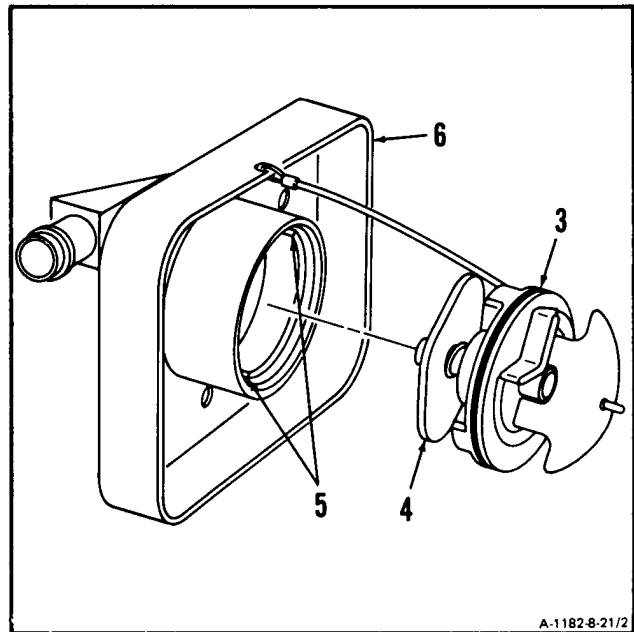
- 
1. Install packing (1) in groove (2) of cap assembly (3).



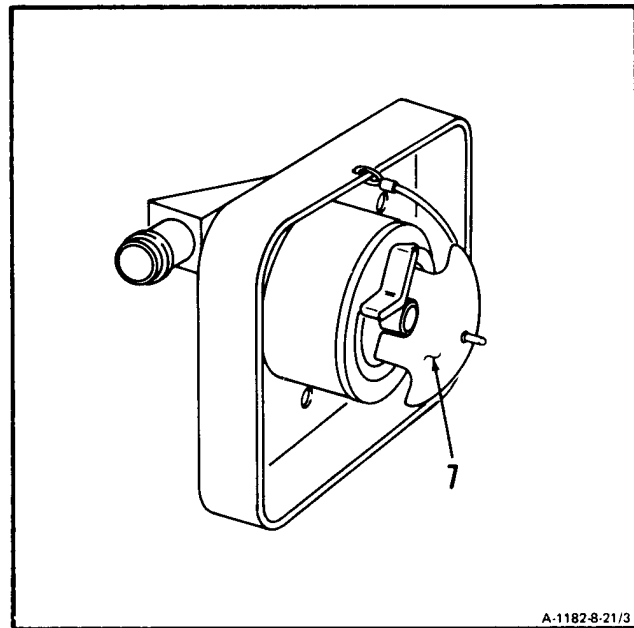
A-1182-8-21/1

**GO TO NEXT PAGE**

- 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**

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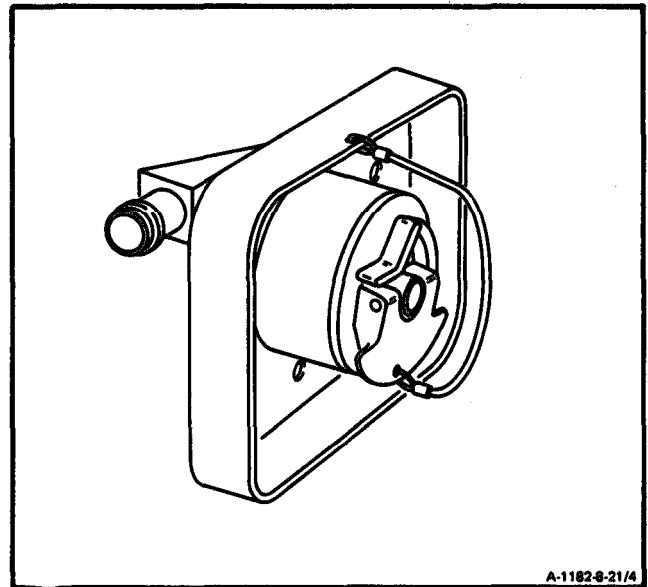
**8-21 ASSEMBLE OIL FILLER ASSEMBLY AND OIL FILLER STRAINER (Continued)**

---

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

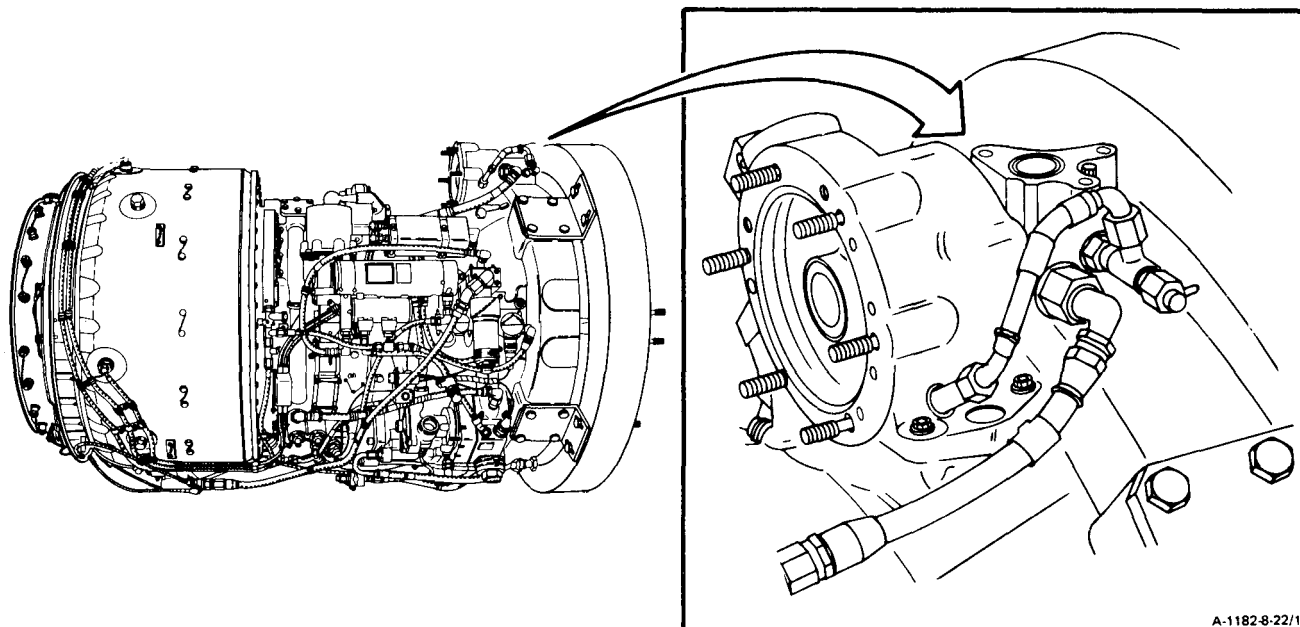
**Personnel Required:**

68B10 Aircraft Powerplant Repairer

68B30 Aircraft Powerplant Inspector

**References:**

TM 55-2840-254-23P



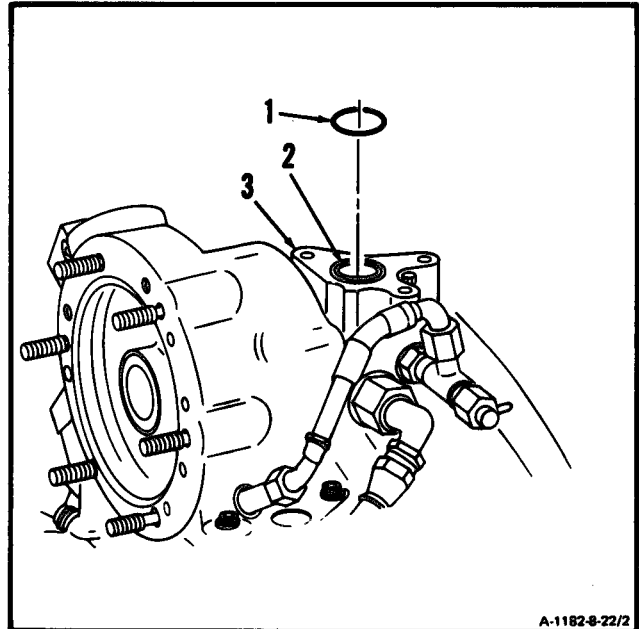
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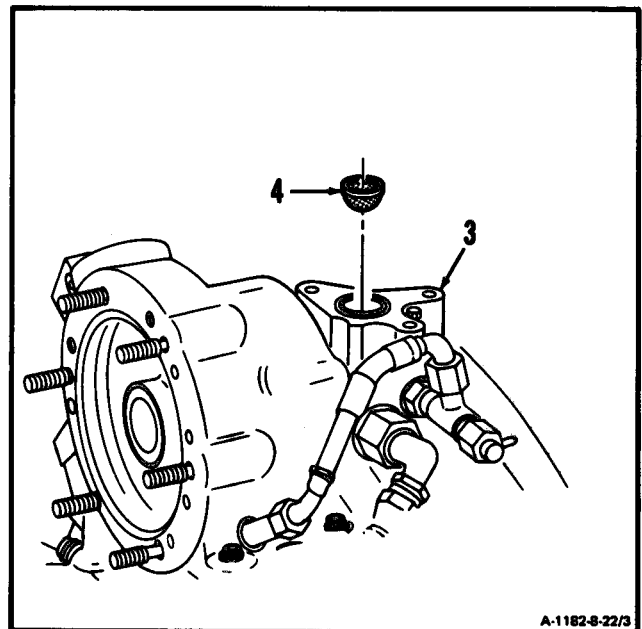
8-22 INSTALL OIL FILLER ASSEMBLY AND OIL FILLER STRAINER (Continued)

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)

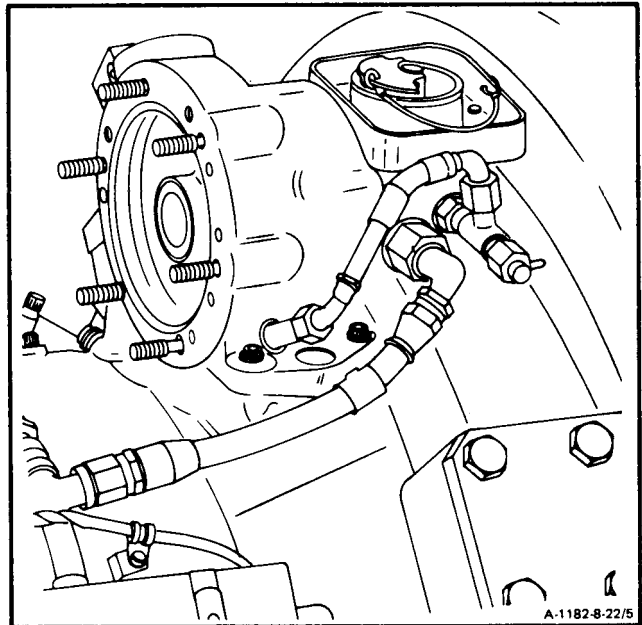
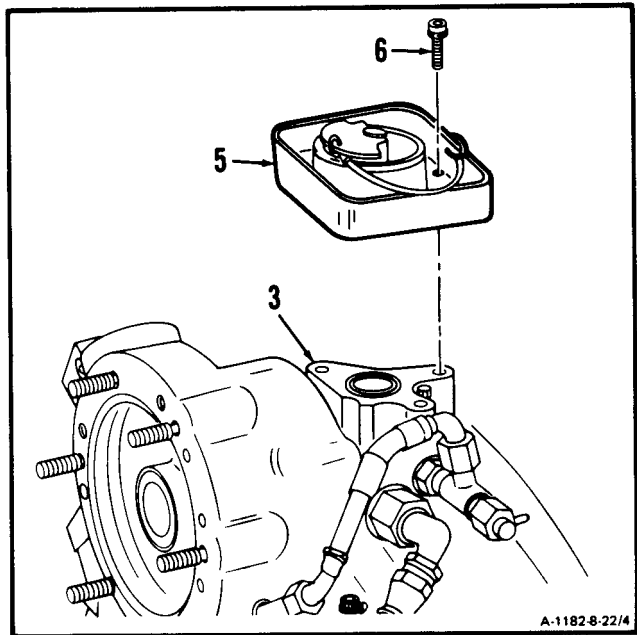
8-22

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

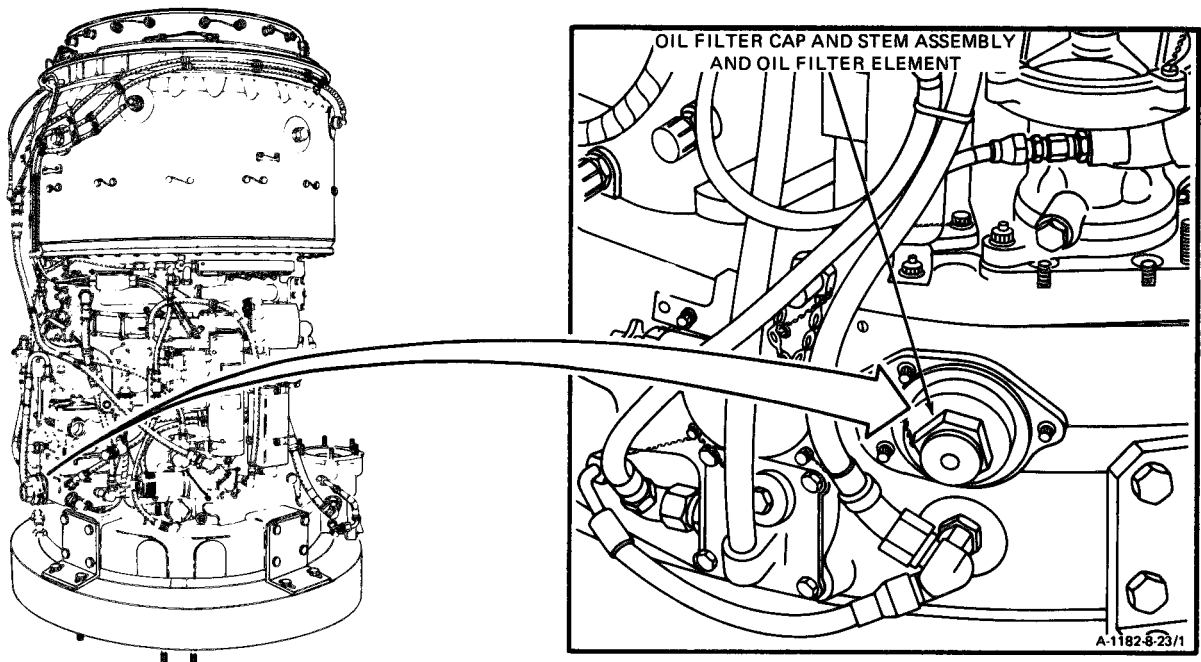
**Equipment Condition:**

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.

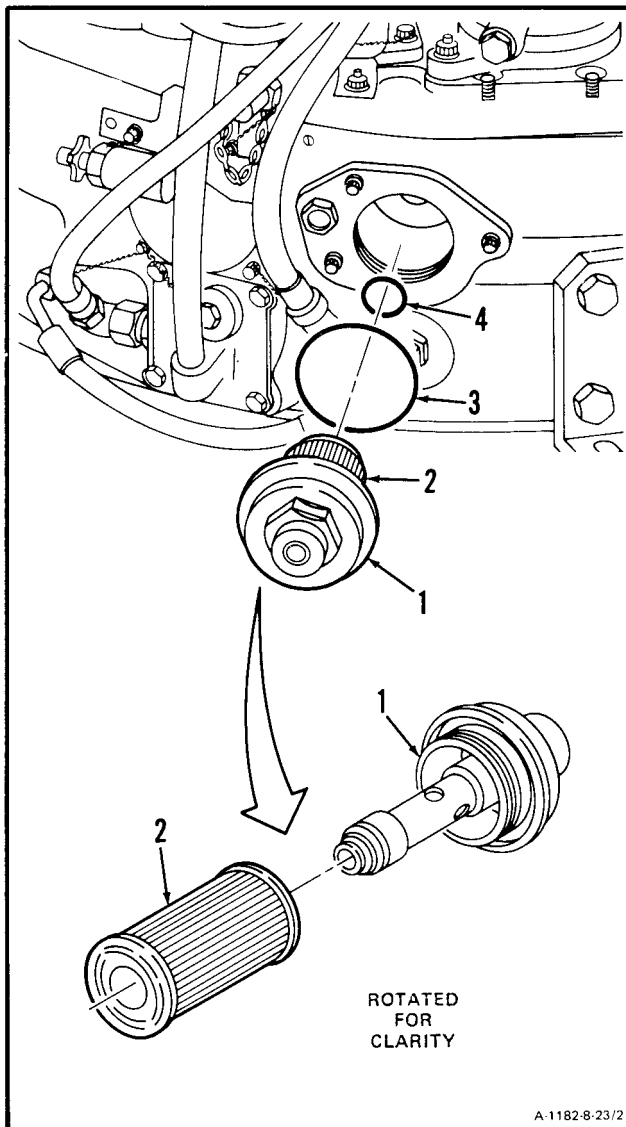


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**8-23 REMOVE OIL FILTER CAP AND STEM ASSEMBLY AND OIL FILTER ELEMENT (Continued)**

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).

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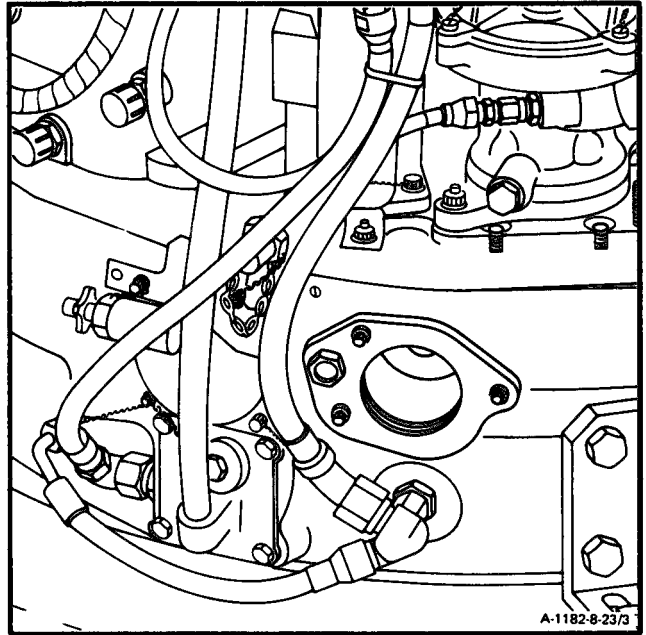
**8-23 REMOVE OIL FILTER CAP AND STEM ASSEMBLY AND OIL FILTER  
ELEMENT (Continued)**

---

8-23

**FOLLOW-ON MAINTENANCE:**

None

**END OF TASK**

**8-24 CLEAN OIL FILTER CAP AND STEM ASSEMBLY AND OIL FILTER ELEMENT**

8-24

**INITIAL SETUP****Applicable Configurations:**

All

**Tools:**

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

**Materials:**

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

**Personnel Required:**

68B10 Aircraft Powerplant Repairer

**Equipment Condition:**

Off Engine Task  
Engine Oil System Drained (Task 1-75).  
Oil Filter Cap and Stem Assembly and Oil  
Filter Element Removed (Task 8-23).

**General Safety Instructions:****WARNING**

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

**1. Clean oil filter cap and stem assembly (1) as follows:**

- a. Wear gloves (E20). Immerse and agitate oil filter cap and stem assembly (1) in dry cleaning solvent (E17). Use brush on outside surfaces.
- b. Wipe outside surfaces dry with clean, dry, lint-free cloth (E26).

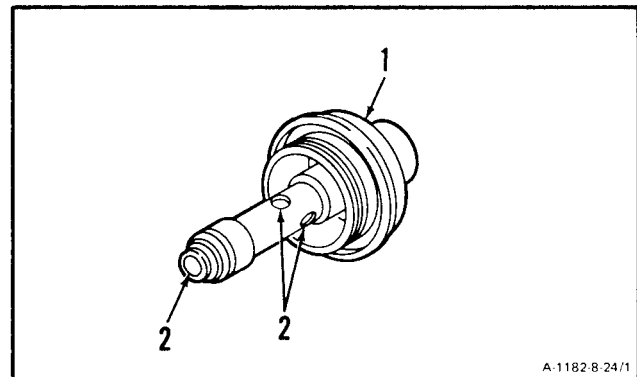
**WARNING**

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

- c. Wear goggles. Blow dry internal passages (2) using clean, dry compressed air.

**FOLLOW-ON MAINTENANCE:**

Inspect Oil Filter Cap and Stem Assembly and Oil Filter Element (Task 8-25).

**END OF TASK**



---

**8-25 INSPECT OIL FILTER CAP AND STEM ASSEMBLY AND OIL FILTER ELEMENT**

---

8-25

**INITIAL SETUP****Applicable Configurations:**

All

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

None

**Personnel Required:**

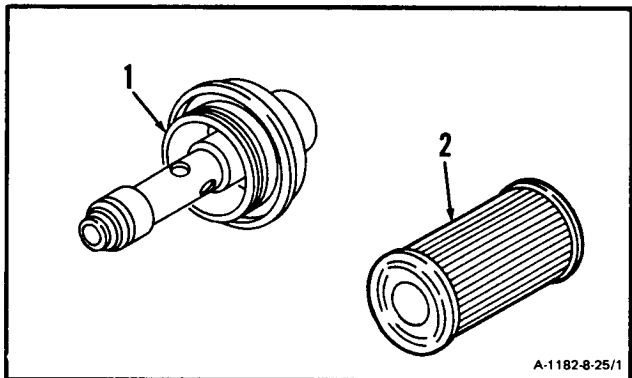
68B30 Aircraft Powerplant Inspector

**Equipment Condition:**

Off Engine Task

**1. Inspect oil filter cap and stem assembly (1) as follows:**

- a. There shall be no cracks.
- b. There shall be no nicks, dents or scratches deeper than 0.015 inch.

**2. Inspect oil filter element (2).** There shall be no damage.**FOLLOW-ON MAINTENANCE:**

None

**END OF TASK**



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**8-26 REPAIR OIL FILTER CAP AND STEM ASSEMBLY AND OIL FILTER ELEMENT**

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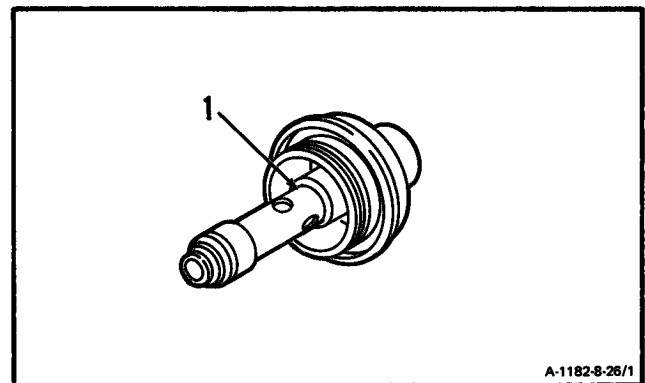
**8-26****INITIAL SETUP****Applicable Configurations:**

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:**

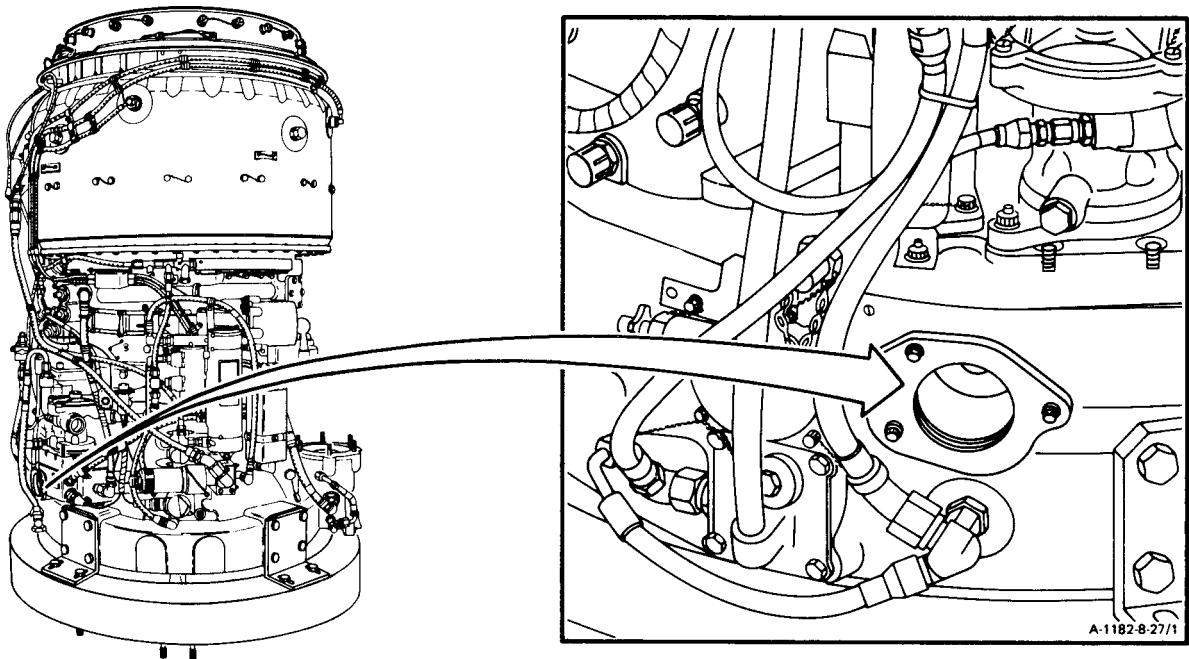
Packings

**Personnel Required:**

68B10 Aircraft Powerplant Repairer  
68B30 Aircraft Powerplant Inspector

**References:**

TM 55-2840-254-23P

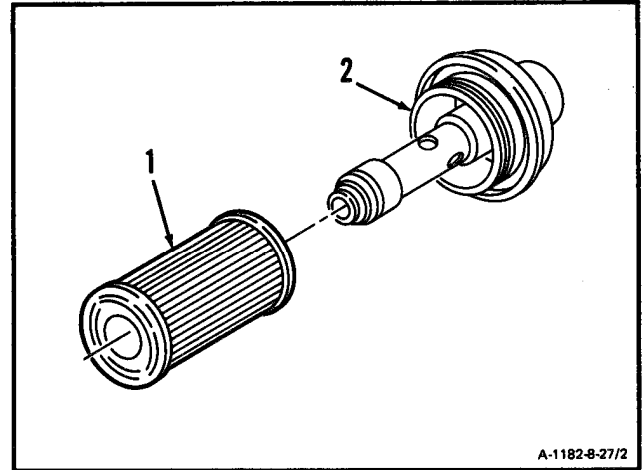


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**8-27 INSTALL OIL FILTER CAP AND STEM ASSEMBLY AND OIL FILTER ELEMENT (Continued)**

8-27

1. Install oil filter element (1) on oil filter cap and stem assembly (2).

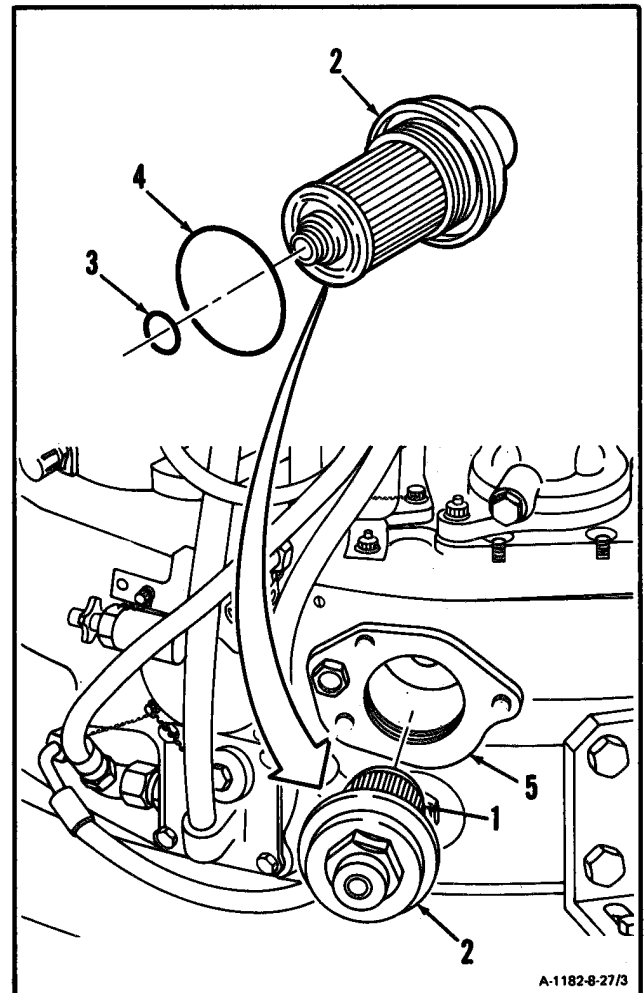


2. Install packings (3 and 4) on oil filter cap and stem assembly (2).

**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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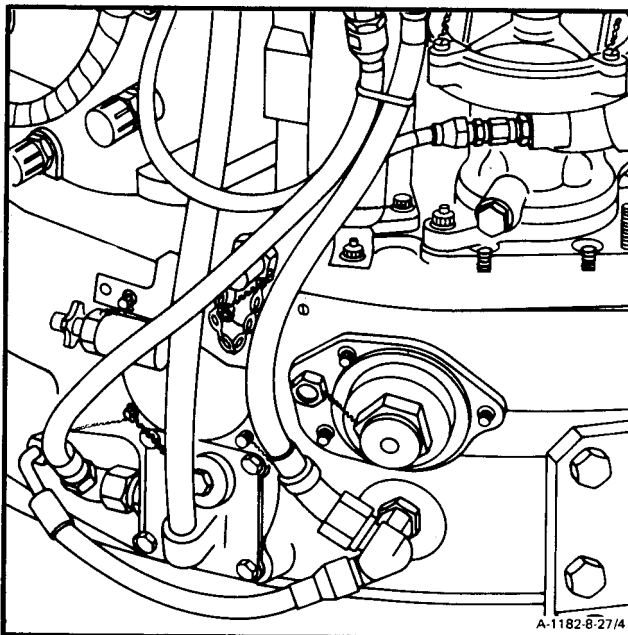
**8-27 INSTALL OIL FILTER CAP AND STEM ASSEMBLY AND OIL FILTER  
ELEMENT (Continued)**

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8-27

**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:**

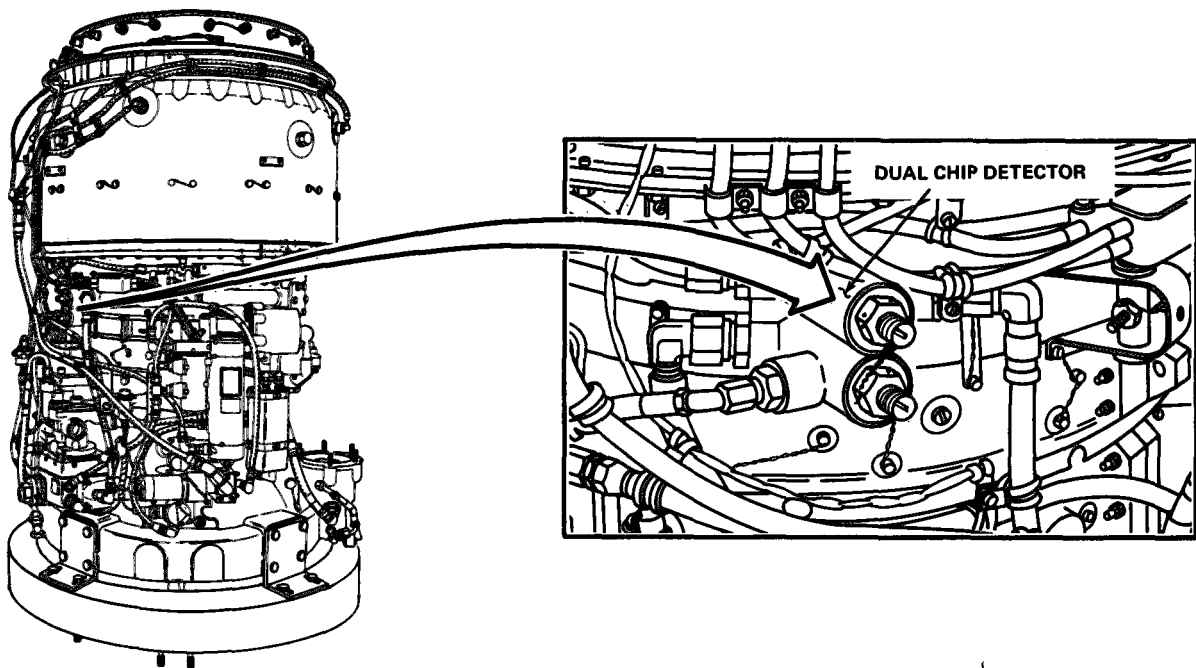
Wiping Rag (E58)

**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.

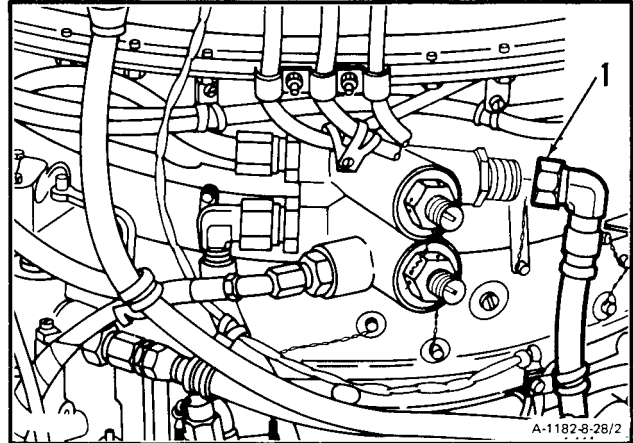


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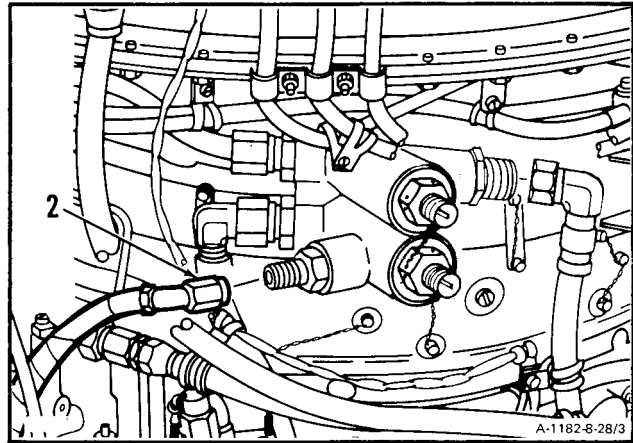
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8-28 REMOVE DUAL CHIP DETECTOR (Continued)

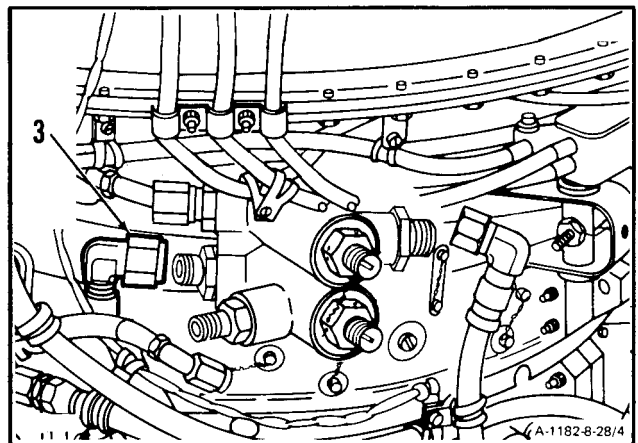
1. Disconnect hose assembly (1).



2. Disconnect hose assembly (2).



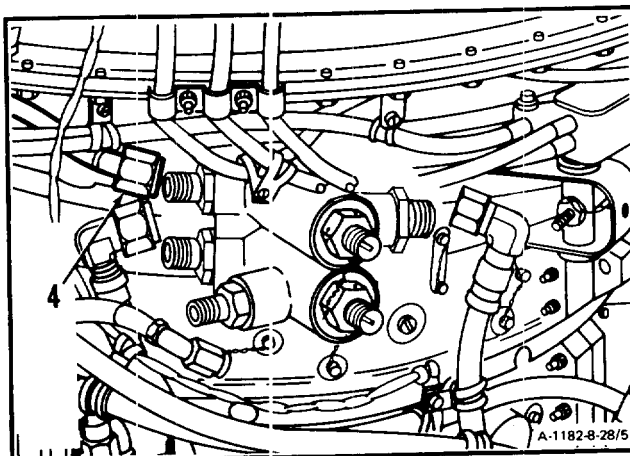
3. Disconnect hose assembly (3).



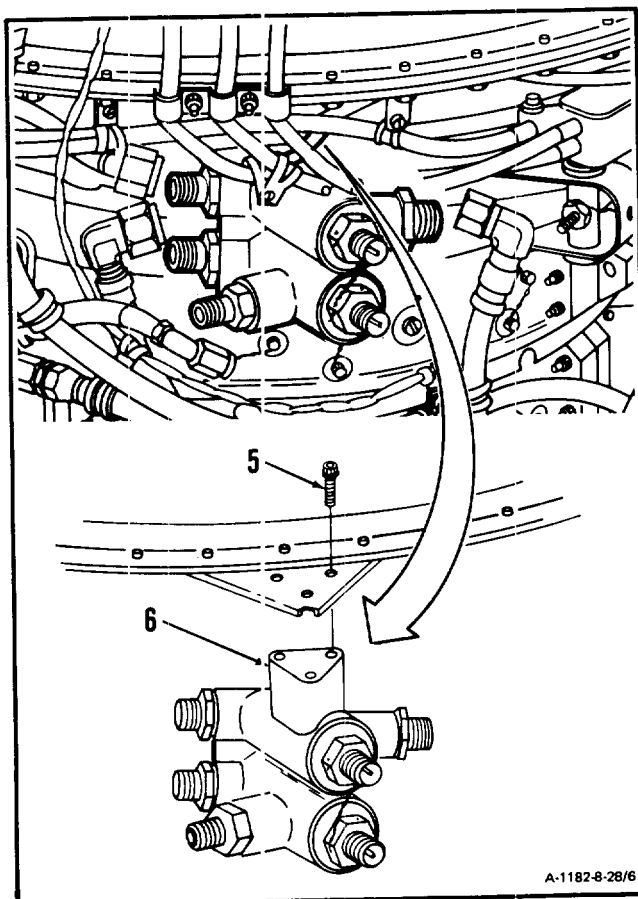
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8-28 REMOVE DUAL CHIP DETECTOR (Continued)

4. Disconnect tube assembly (4).



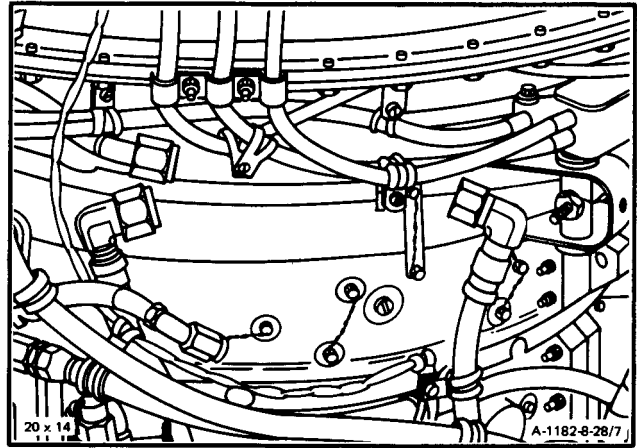
5. Remove lockwire, three bolts (5), and dual chip detector (6).



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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:**

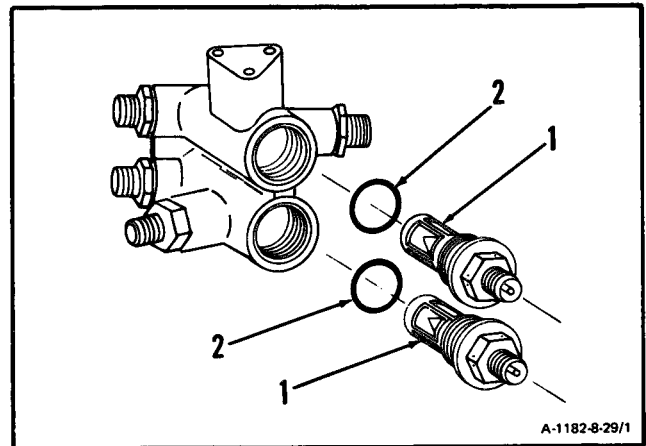
Off Engine Task

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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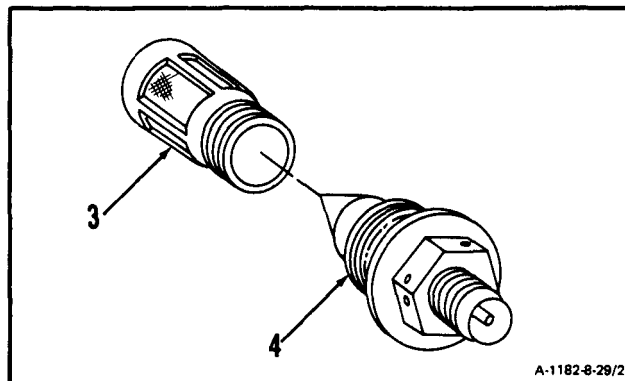
**CAUTION**

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)

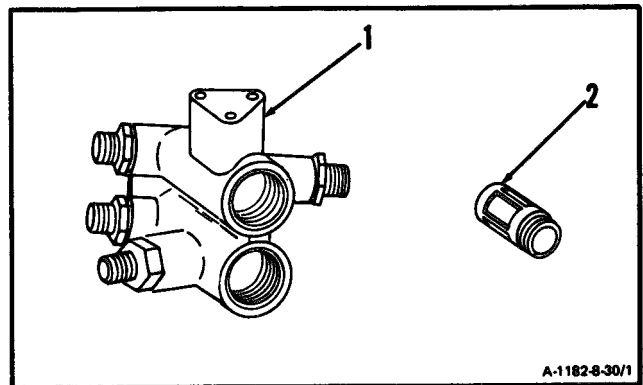
**WARNING**

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.

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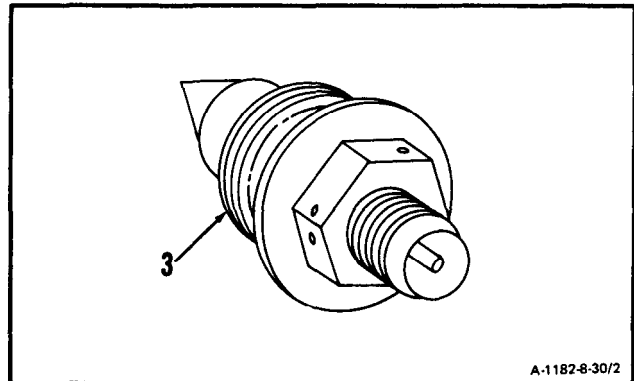
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**8-30 CLEAN DUAL CHIP DETECTOR (Continued)**

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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

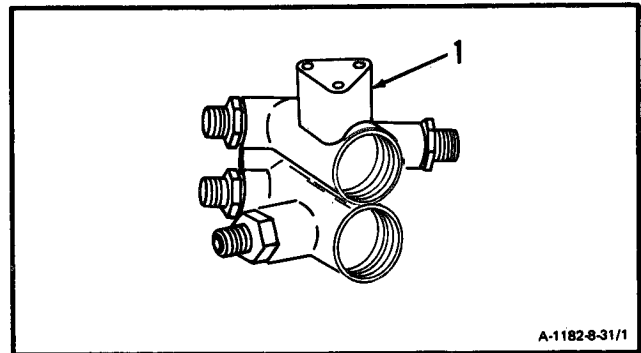
**References:**

Task 1-86

**Equipment Condition:**

Off Engine Task

1. **Inspect housing (1).** There shall be no cracks.



A-1182-8-31/1

**NOTE**

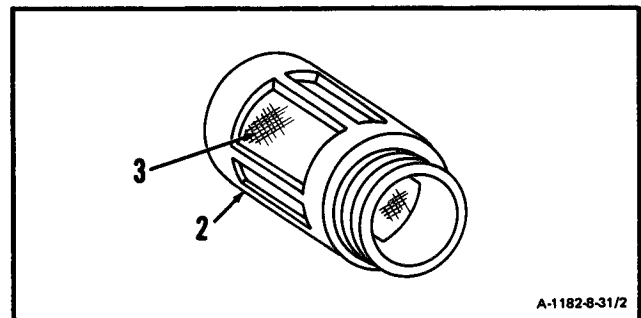
Following steps apply to both filters.

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).



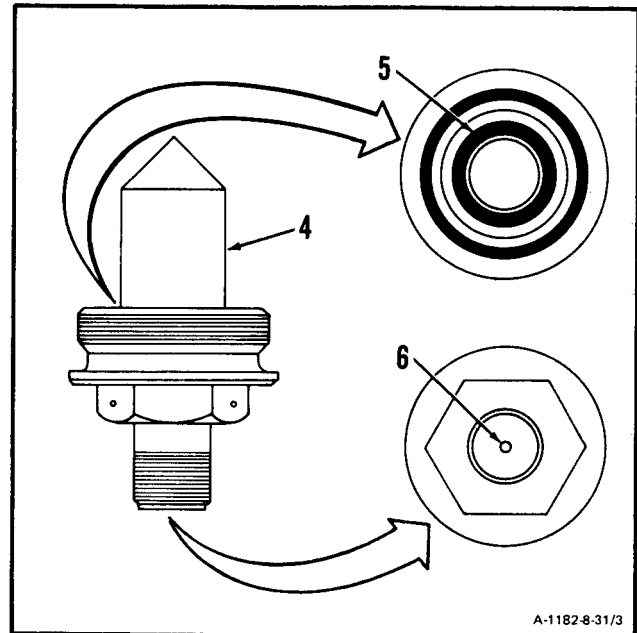
A-1182-8-31/2

**GO TO NEXT PAGE**

## 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

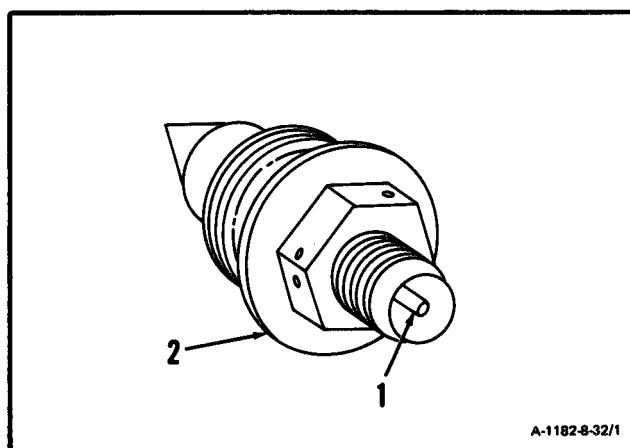
**Equipment Condition:**

Off Engine Task

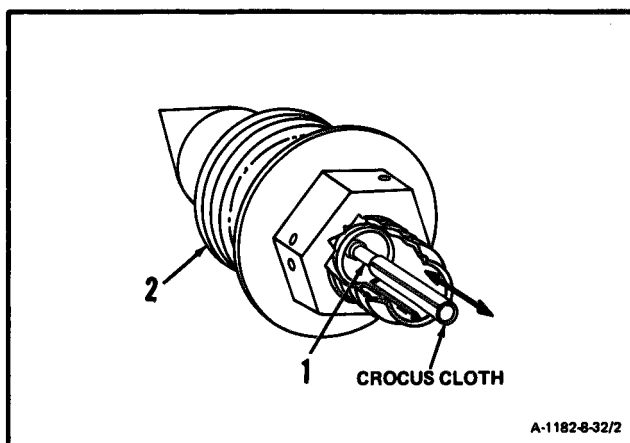
**NOTE**

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

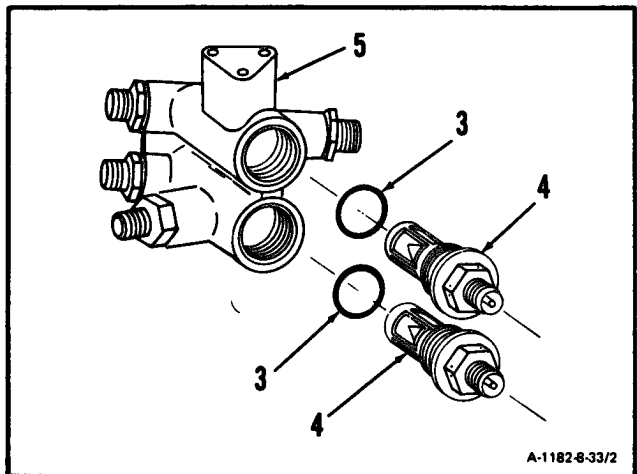
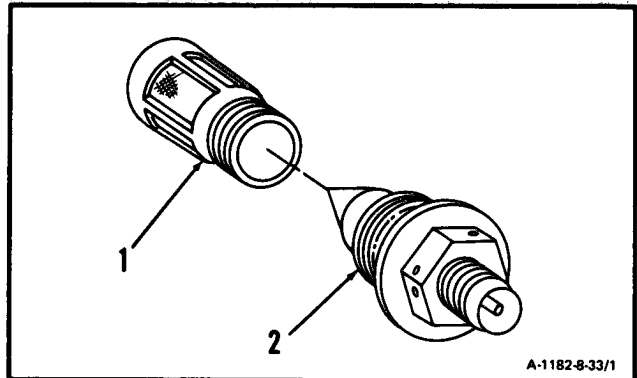
NOTE

The following step applies to both magnetic chip detectors.



When installing filter on connector, be careful not to push in or deform screen or filter. Pushed in or deformed screen may cause false chip indications.

1. Install filter (1) on connector (2).
  
2. Install two packings (3) and magnetic chip detectors (4) in housing (5). Lockwire chip detector (4). Use lockwire (E29). Use vise with jaw caps.

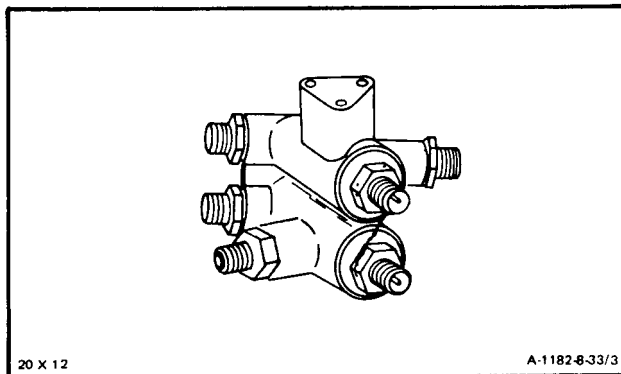


INSPECT

GO TO NEXT PAGE

FOLLOW-ON MAINTENANCE:

Test Dual Chip Detector (Task 8-34)



END OF TASK

**8-34 TEST DUAL CHIP DETECTOR**

8-34

**INITIAL SETUP****Materials:**

None

**Applicable Configurations:**

All

**Personnel Required:**

68B10 Aircraft Powerplant Repairer

**Tools:**

Multimeter

**Equipment Condition:**

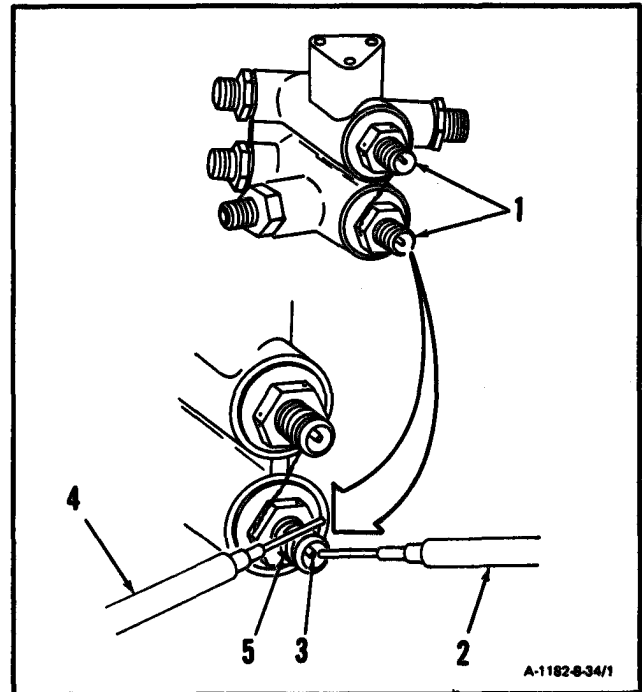
Off Engine Task

1. **Measure insulation resistance of magnetic chip detectors (1) as follows:** Use multimeter.

**NOTE**

The following steps apply to both magnetic chip detectors.

- a. Set multimeter range switch to R x 1000.
- b. Touch red probe (2) to pin (3).
- c. Touch black probe (4) to threads (5).
- d. Meter shall indicate 10,000 ohms, minimum.

**FOLLOW-ON MAINTENANCE:**

None

**END OF TASK**

---

8-35 INSTALL DUAL CHIP DETECTOR

---

INITIAL SETUP

**Applicable Configurations:**

All

**Tools:**

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

**Materials:**

Lockwire (E29)

**Parts:**

Packing

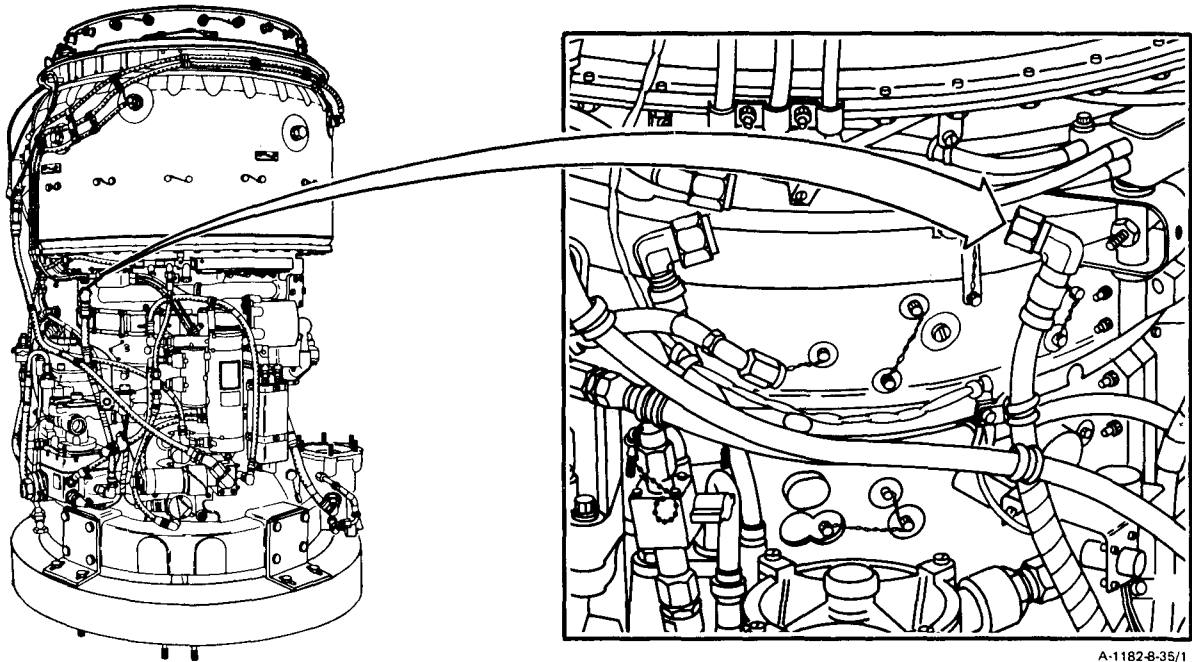
**Personnel Required:**

68B10 Aircraft Powerplant Repairer  
68B30 Aircraft Powerplant Inspector

**References:**

TM 55-2840-254-23P

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A-1182-8-35/1

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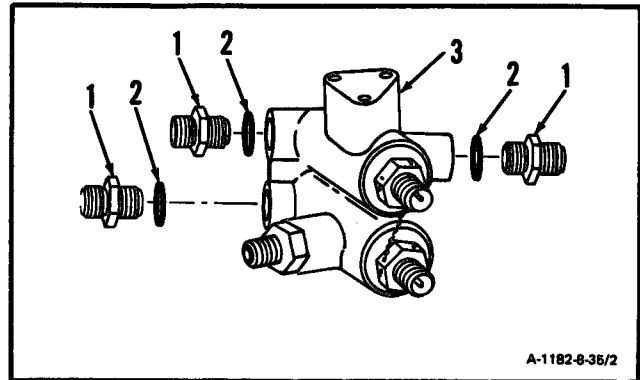
## 8-35 INSTALL DUAL CHIP DETECTOR (Continued)

8-35

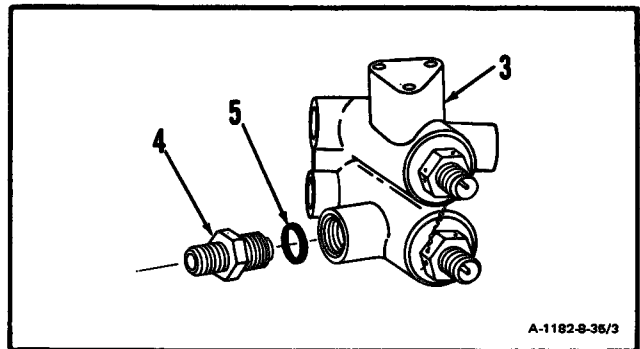
## NOTE

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.

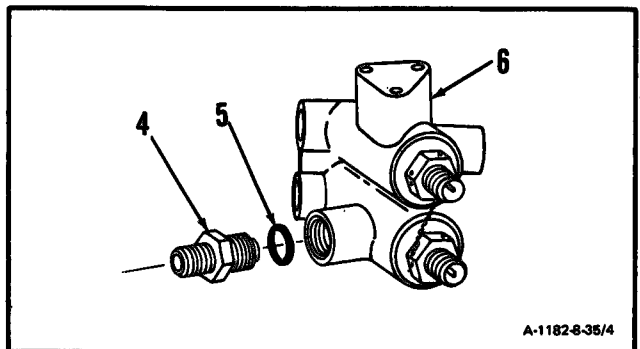
1. Remove three nipples (1) and packings (2) from removed dual chip detector (3).



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).

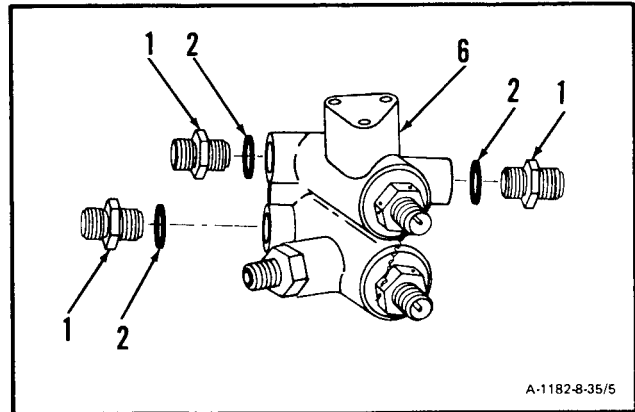


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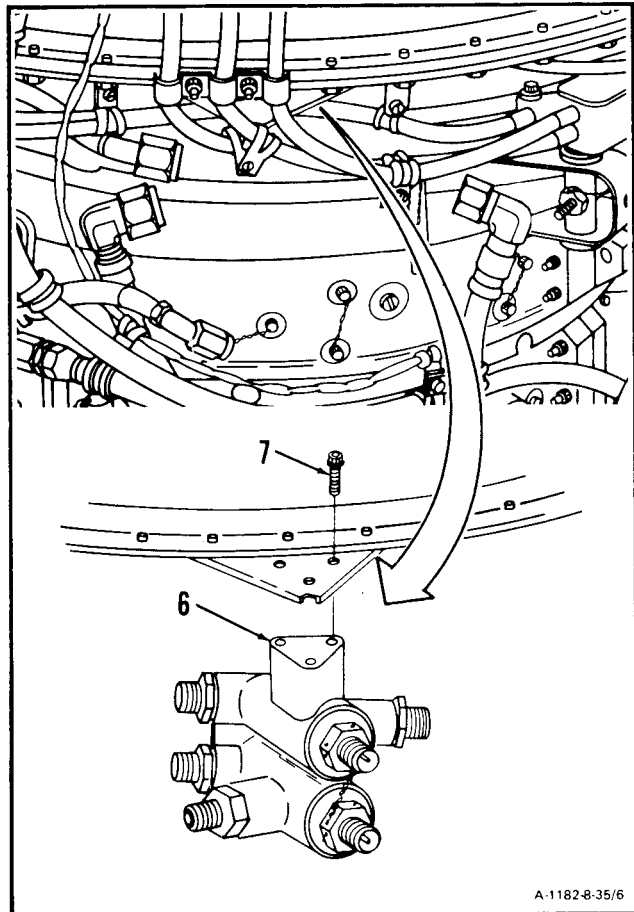
8-35 INSTALL DUAL CHIP DETECTOR (Continued)

8-35

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).

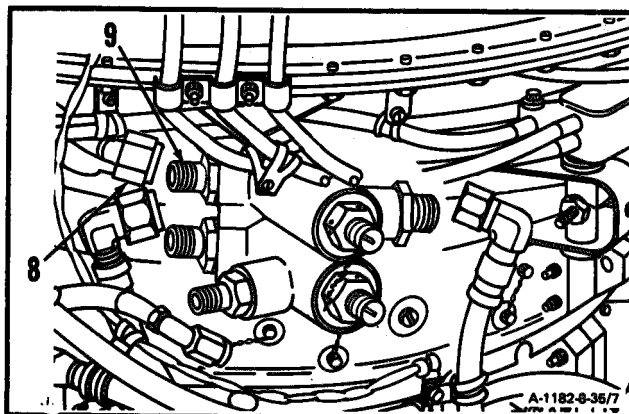


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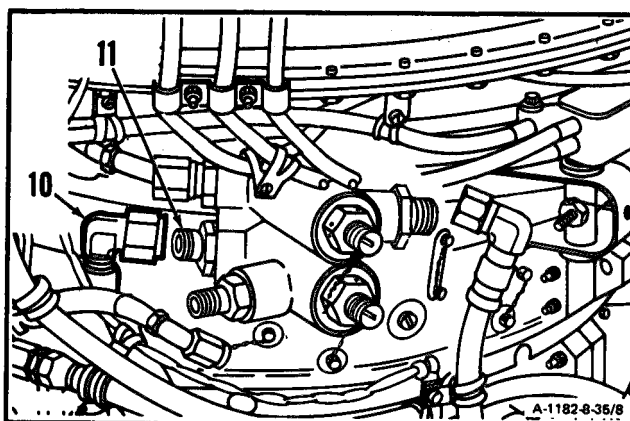
8-35 INSTALL DUAL CHIP DETECTOR (Continued)

8-35

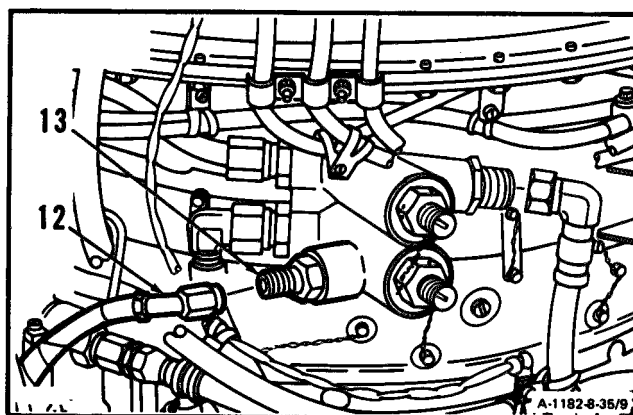
6. Connect hose assembly (8) to nipple (9).



7. Connect hose assembly (10) to nipple (11).

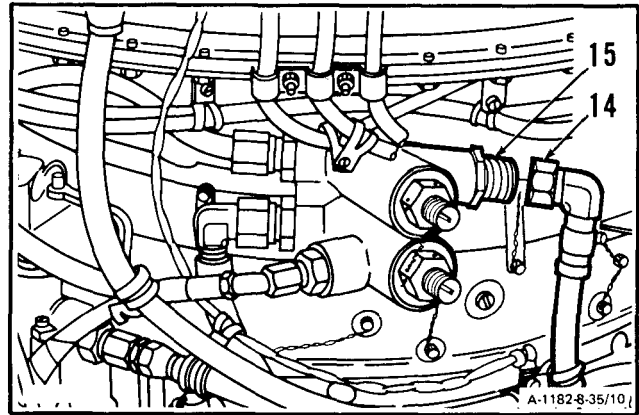


8. Connect hose assembly (12) to reducer (13).



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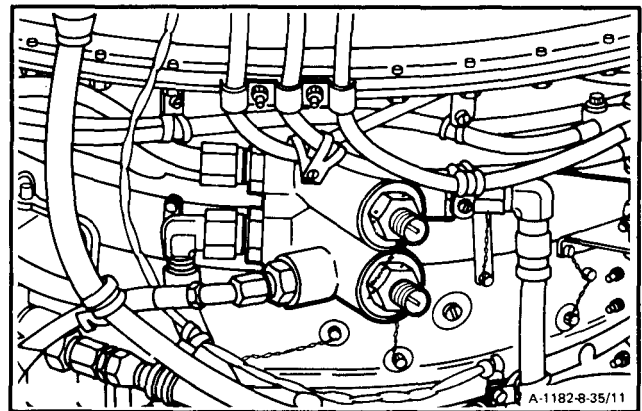
9. Connect hose assembly (14) to nipple (15).



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:**

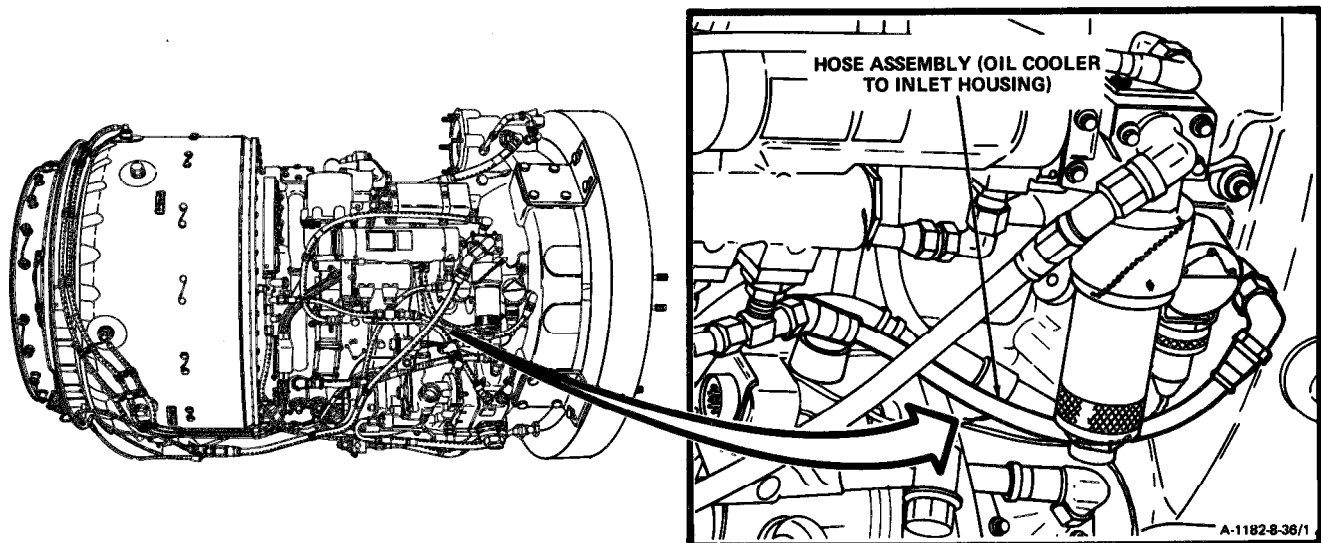
Wiping Rag (E58)

**Personnel Required:**

68B10 Aircraft Powerplant Repairer

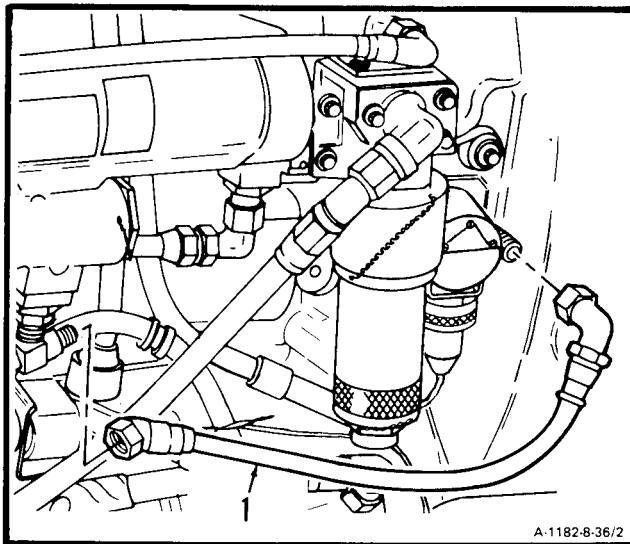
**WARNING**

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.



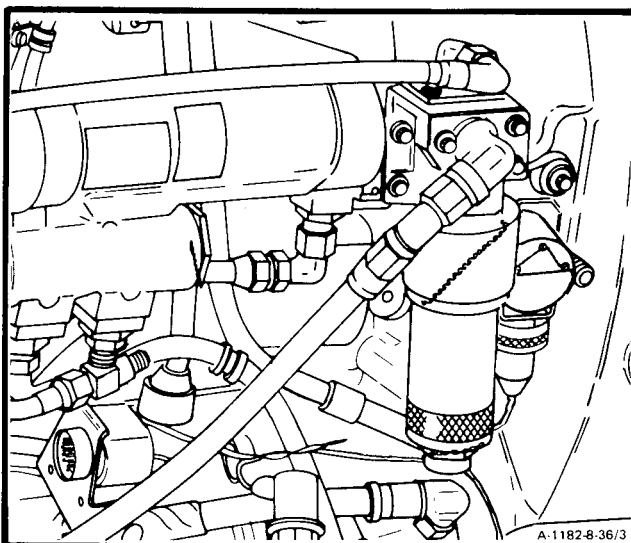
GO TO NEXT PAGE

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:**

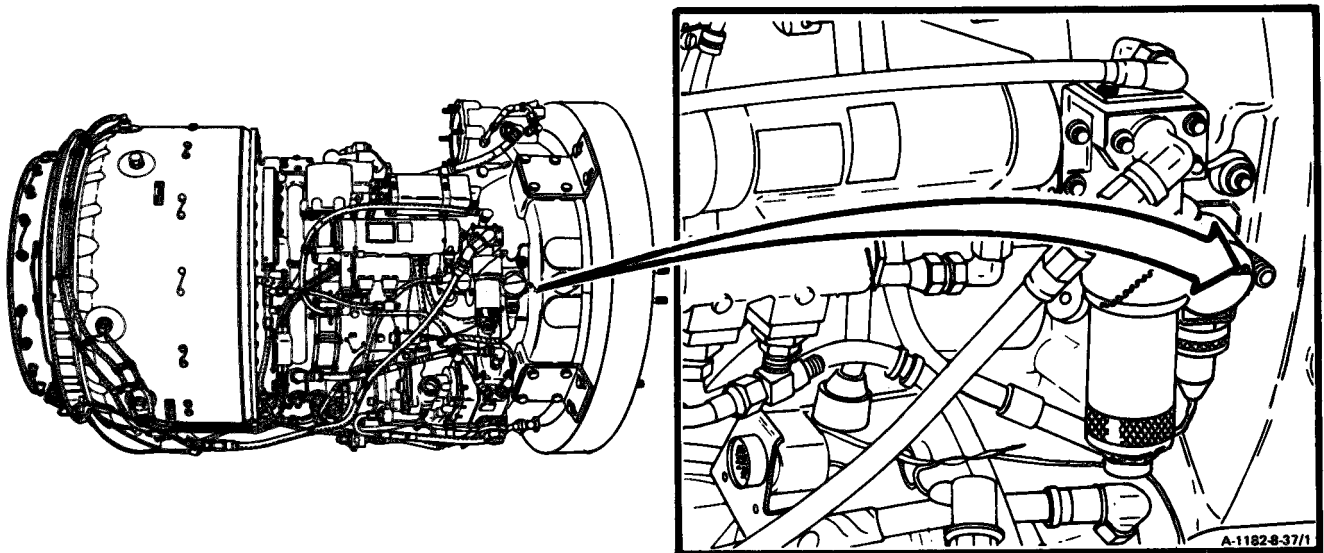
Powerplant Mechanic's Tool Kit,  
NSN 5180-00-323-4944  
Technical Inspection Tool Kit,  
NSN 5180-00-323-5114

**Materials:**

None

**Personnel Required:**

68610 Aircraft Powerplant Repairer  
68B30 Aircraft Powerplant Inspector

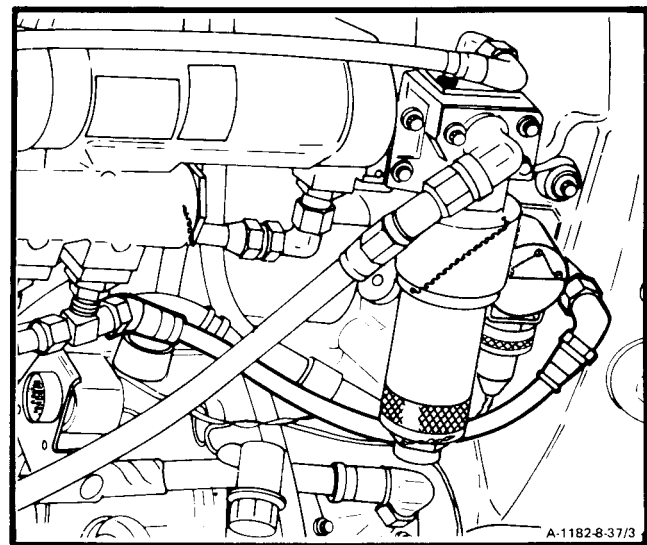
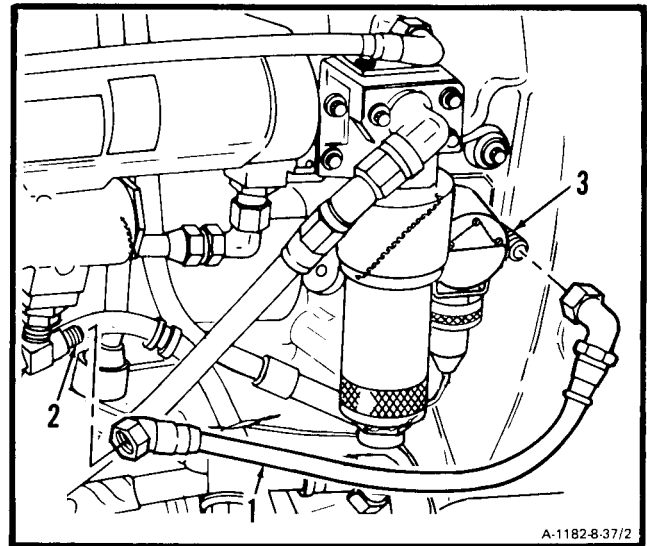
**GO TO NEXT PAGE**

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:**

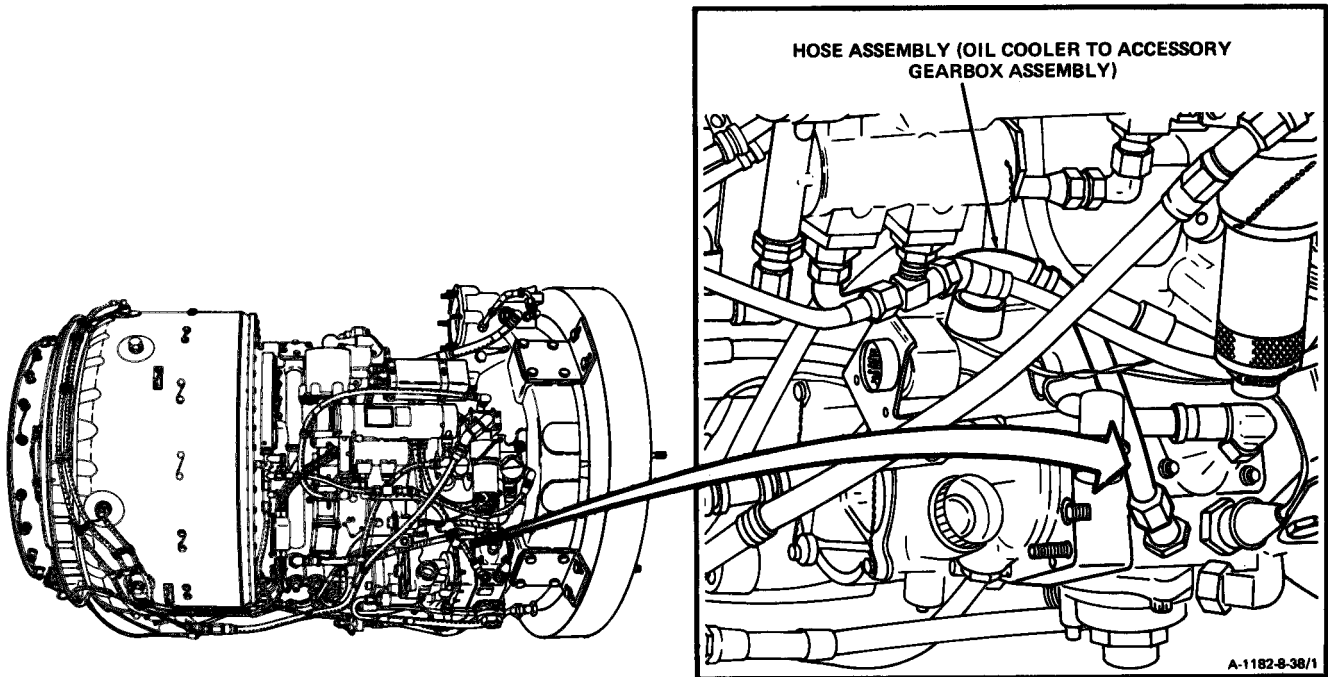
Wiping Rag (E58)

**Personnel Required:**

68B10 Aircraft Powerplant Repairer

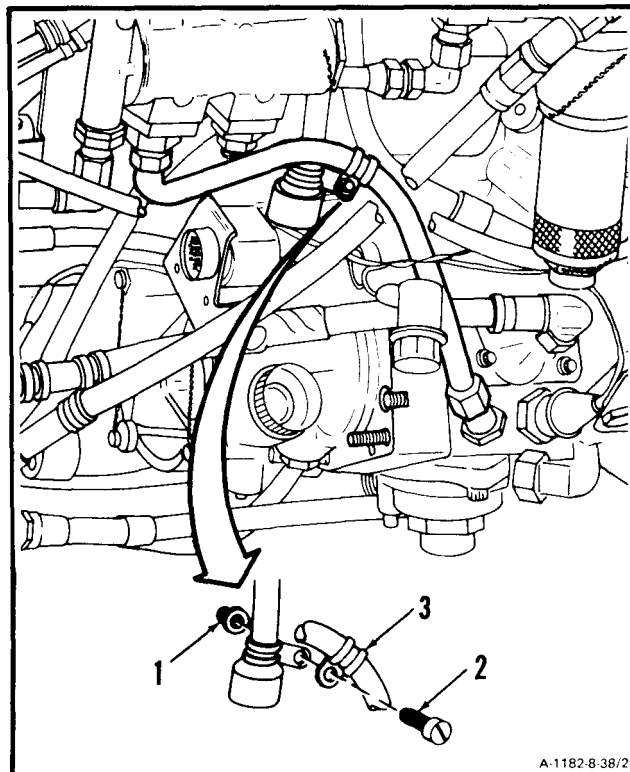
**General Safety Instructions:****WARNING**

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.

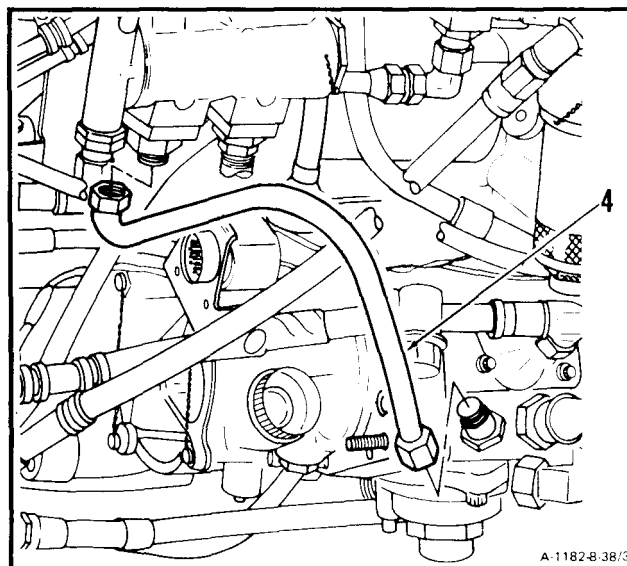
**GO TO NEXT PAGE**

**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).



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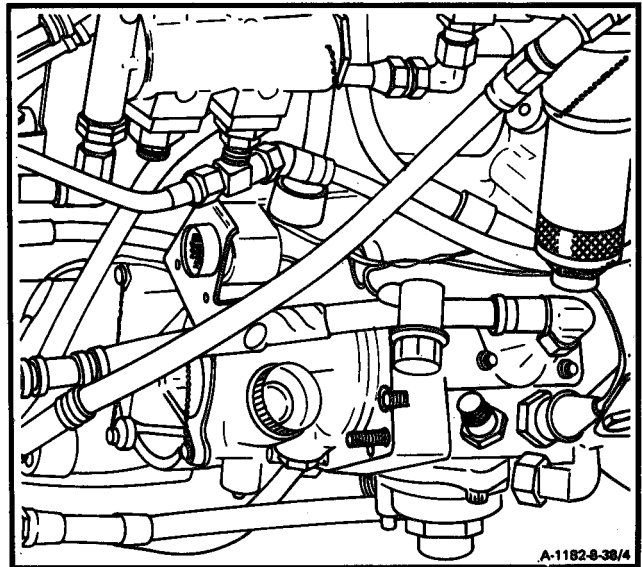
**8-38 REMOVE HOSE ASSEMBLY (OIL COOLER TO ACCESSORY GEARBOX ASSEMBLY) (Continued)**

---

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

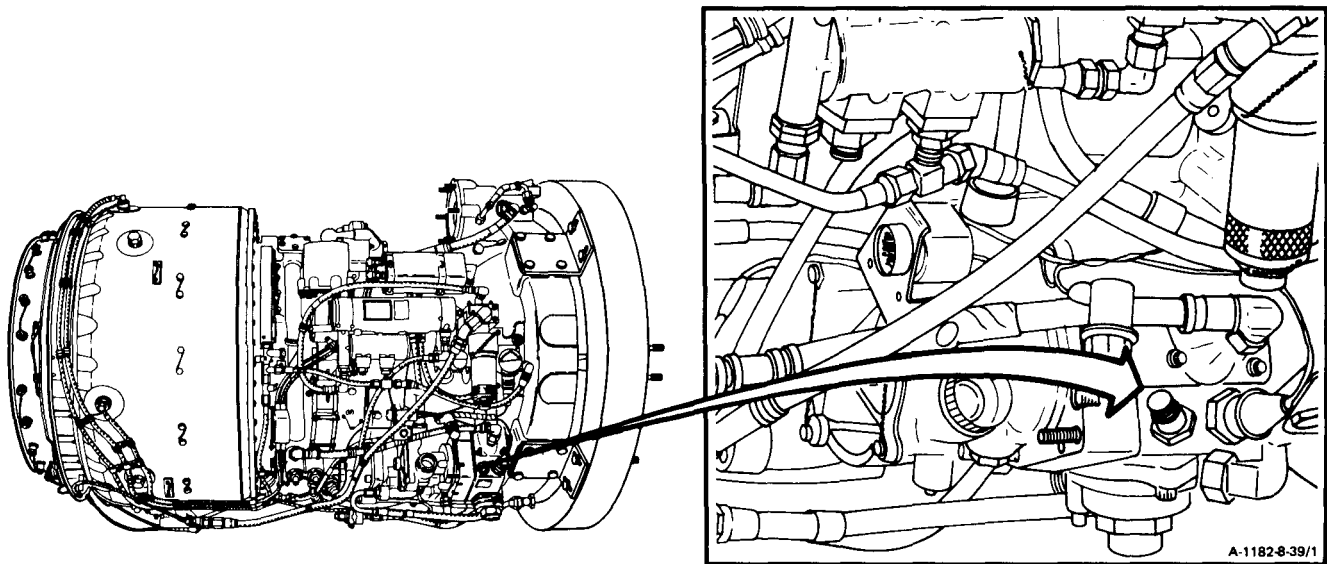
**Materials:**

None

---

**Personnel Required:**

68B10 Aircraft Powerplant Repairer  
68B30 Aircraft Powerplant Inspector



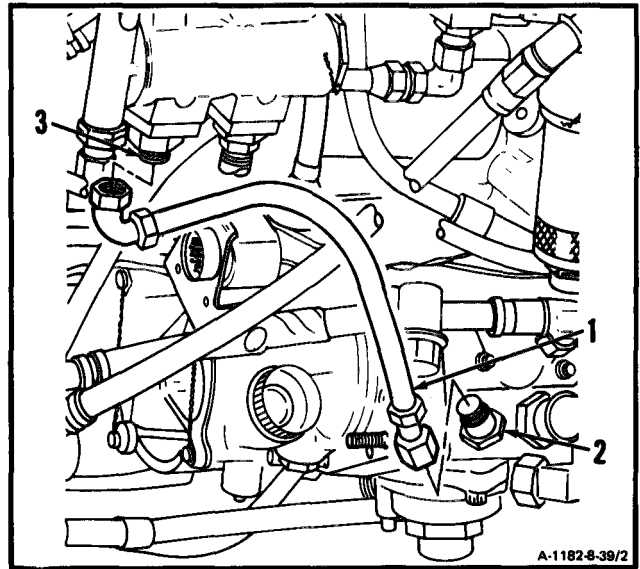
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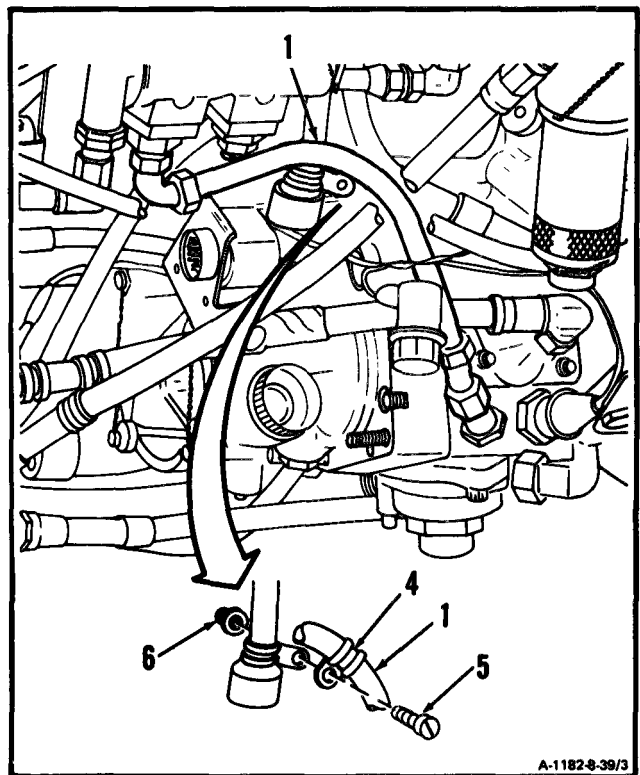
**8-39 INSTALL HOSE ASSEMBLY (OIL COOLER TO ACCESSORY GEARBOX ASSEMBLY) (Continued)**

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**

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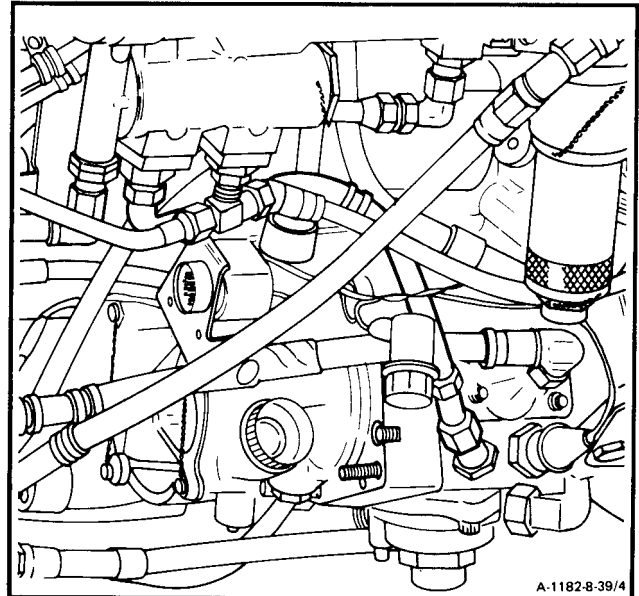
**8-39 INSTALL HOSE ASSEMBLY (OIL COOLER TO ACCESSORY GEARBOX ASSEMBLY) (Continued)**

---

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:**

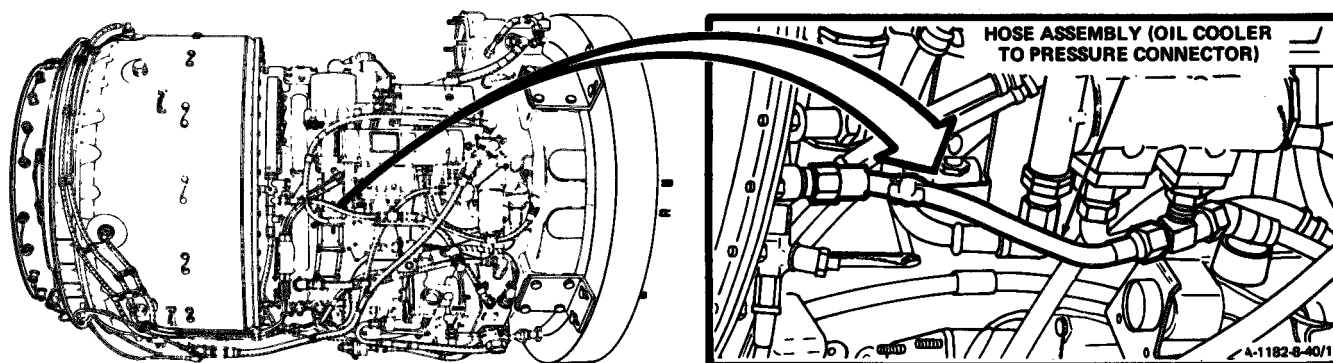
Wiping Rag (E58)

**Personnel Required:**

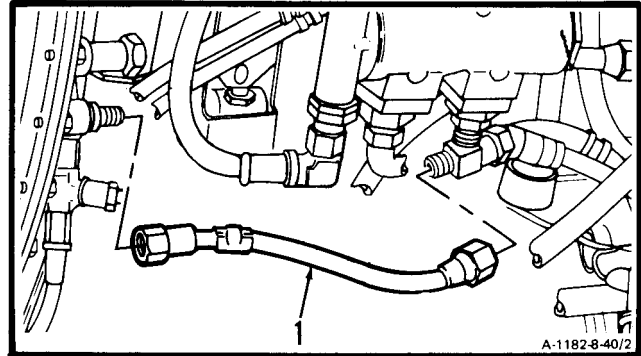
68B10 Aircraft Powerplant Repairer

**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.

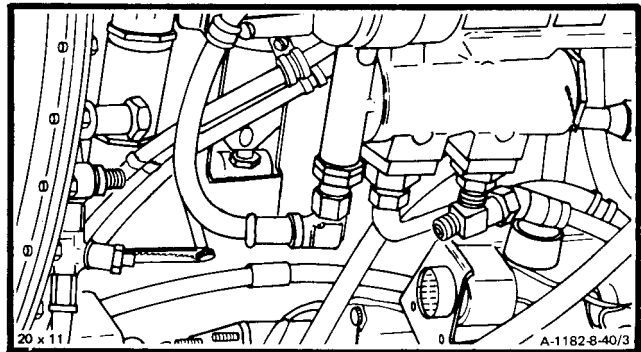
**GO TO NEXT PAGE**

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****Personnel Required:**

68B10 Aircraft Powerplant Repairer  
68B30 Aircraft Powerplant Inspector

**Applicable Configurations:**

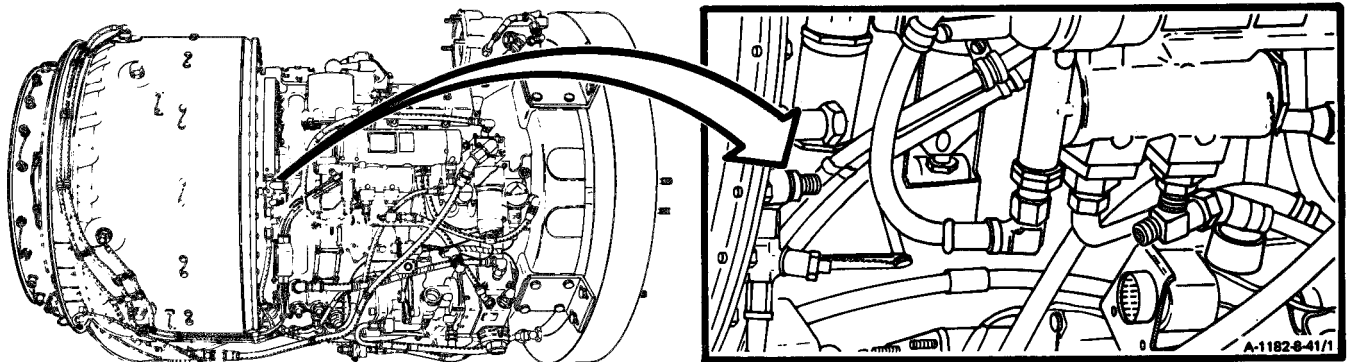
All

**Tools:**

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

**Materials:**

None

**GO TO NEXT PAGE**

8-41 INSTALL HOSE ASSEMBLY (OIL COOLER TO PRESSURE CONNECTOR) (Continued)

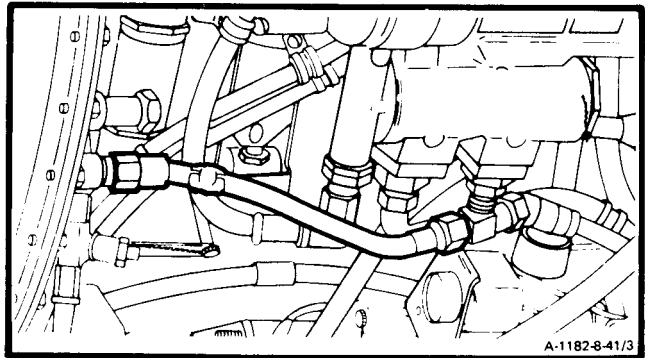
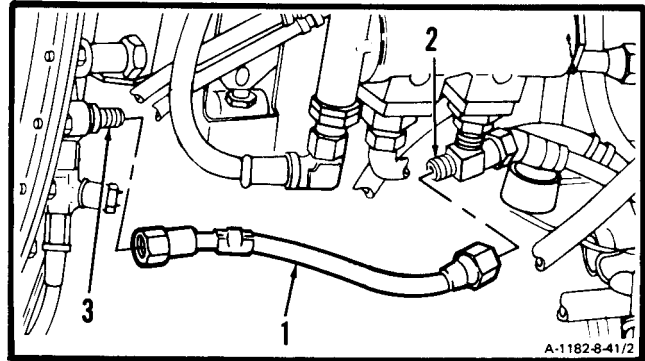
8-41

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:**

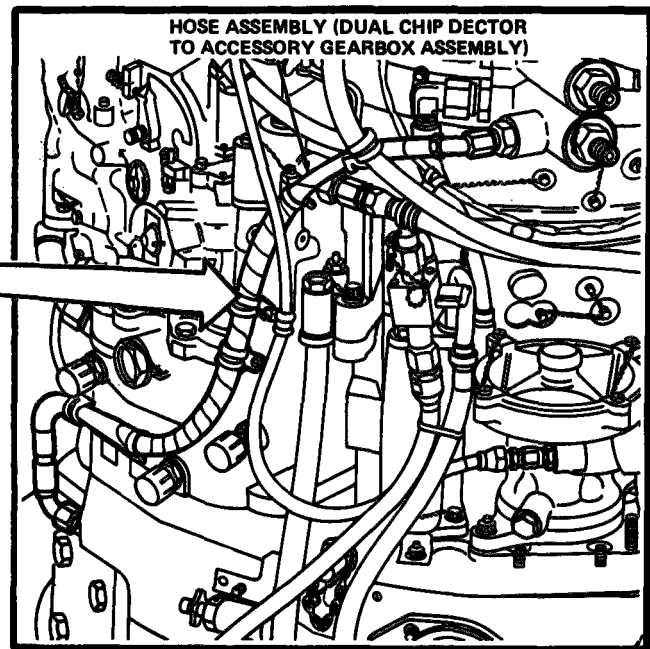
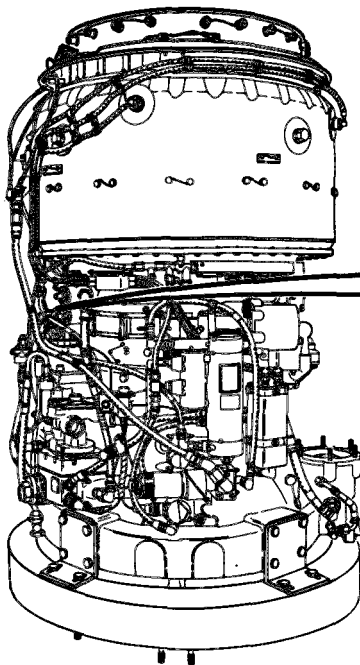
Wiping Rag (E58)

**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.

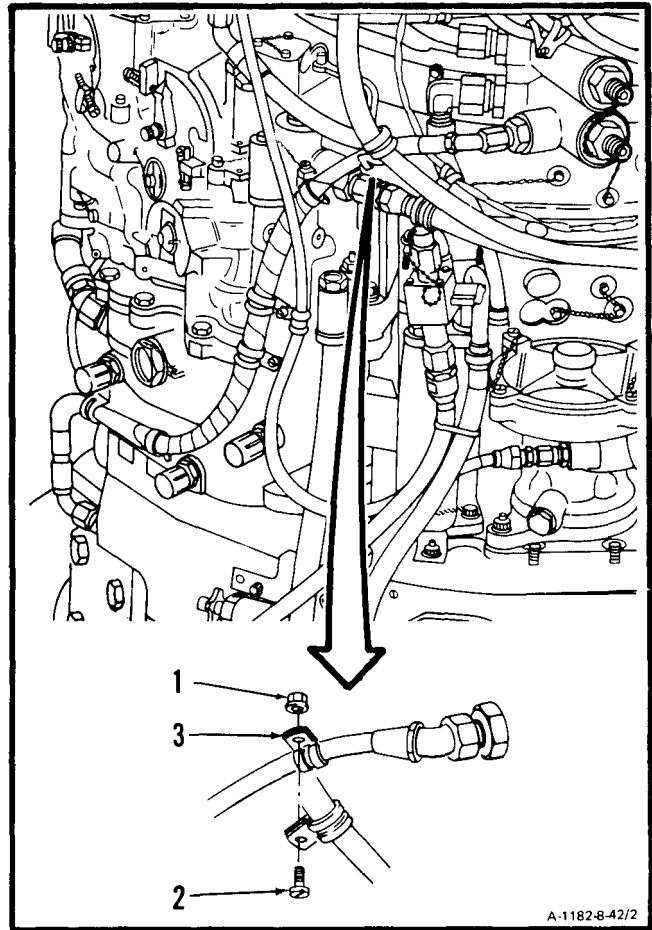


A-1182-8-42/1

**GO TO NEXT PAGE**

**8-42 REMOVE HOSE ASSEMBLY (DUAL CHIP DETECTOR TO ACCESSORY  
GEARBOX ASSEMBLY) (Continued)**

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



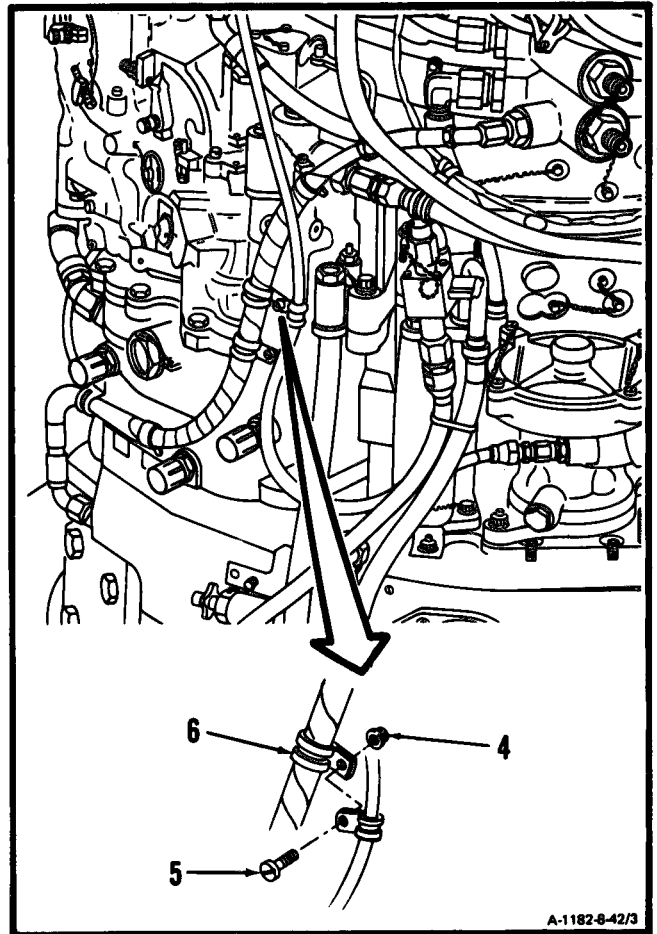
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**8-42 REMOVE HOSE ASSEMBLY (DUAL CHIP DETECTOR TO ACCESSORY  
GEARBOX ASSEMBLY) (Continued)**

8-42

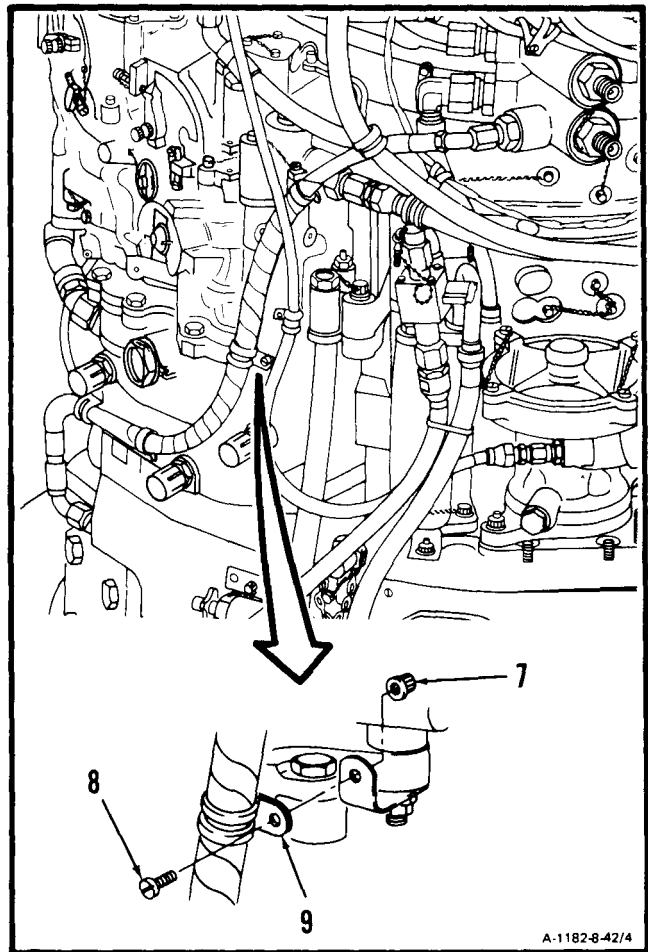
2. Remove nut (4), screw (5), and clamp (6).



**GO TO NEXT PAGE**

**8-42 REMOVE HOSE ASSEMBLY (DUAL CHIP DETECTOR TO ACCESSORY  
GEARBOX ASSEMBLY) (Continued)**

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



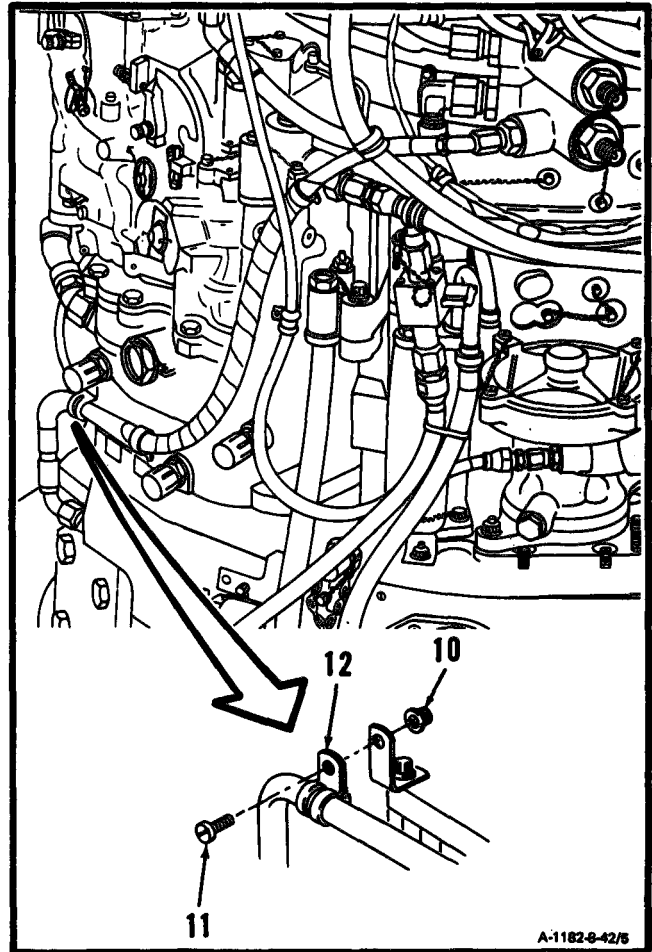
A-1182-8-42/4

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**8-42 REMOVE HOSE ASSEMBLY (DUAL CHIP DETECTOR TO ACCESSORY  
GEARBOX ASSEMBLY) (Continued)**

8-42

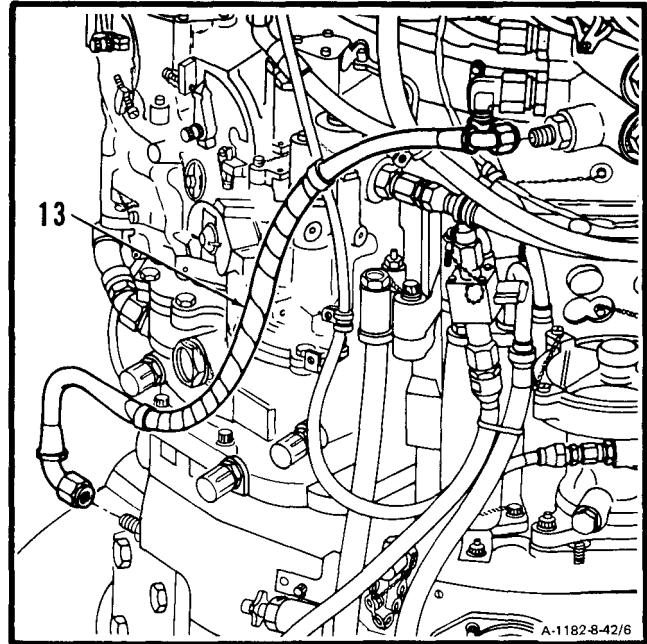
4. Remove nut (10), screw ( 11 ), and clamp (12).



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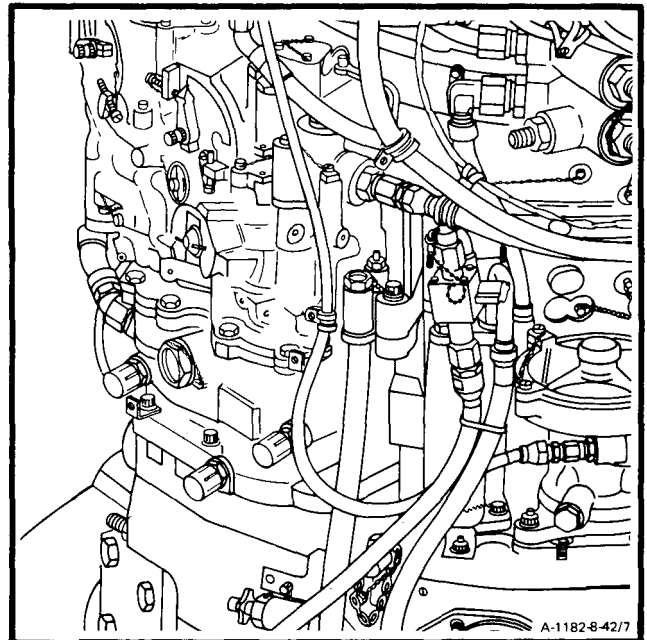
**8-42 REMOVE HOSE ASSEMBLY (DUAL CHIP DETECTOR TO ACCESSORY  
GEARBOX ASSEMBLY) (Continued)**

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

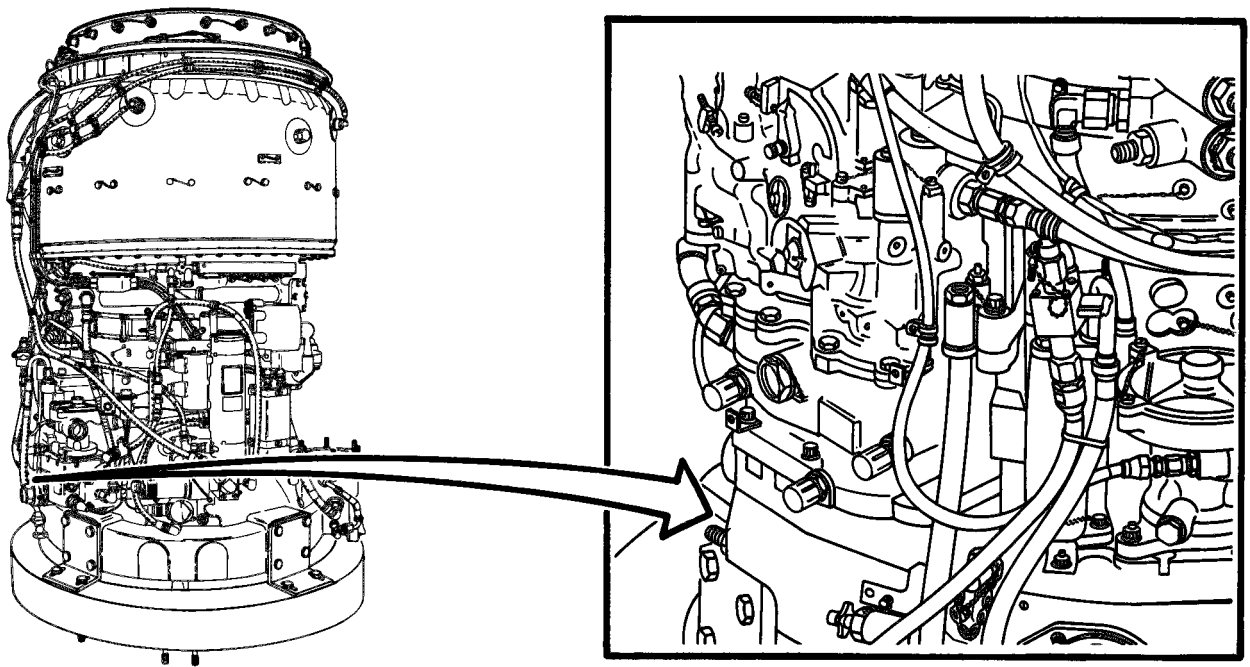
**Applicable Configurations:**

All

**Personnel Required:**

68B10 Aircraft Powerplant Repairer

68B30 Aircraft Powerplant Inspector

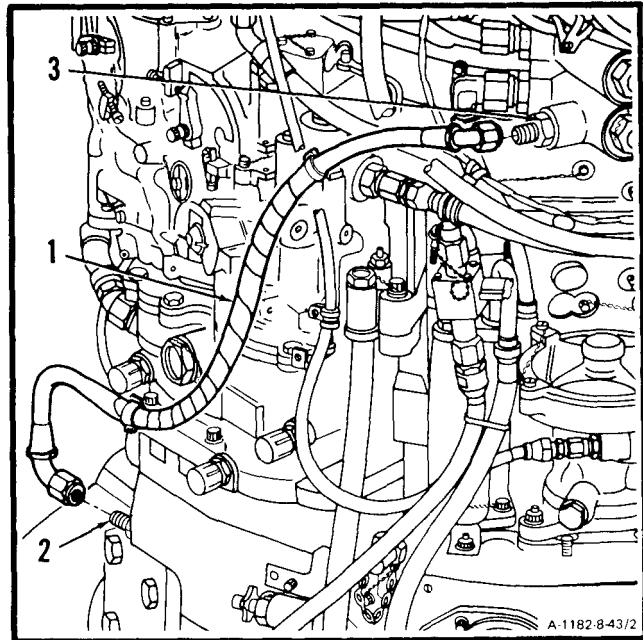
**Tools:**Powerplant Mechanic's Tool Kit,  
NSN 5180-00-323-4944Technical Inspection Tool Kit,  
NSN 5180-00-323-5114

A-1182-8-43/1

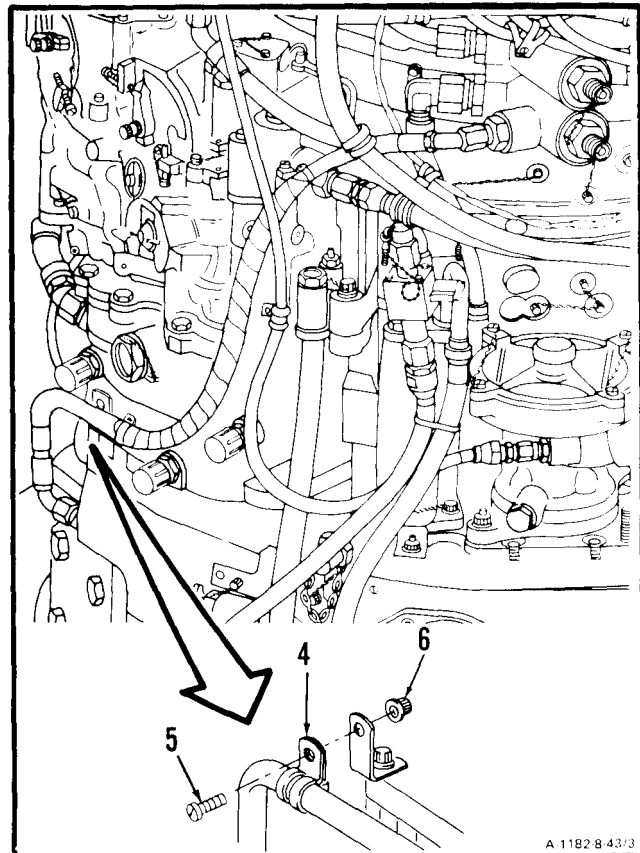
**GO TO NEXT PAGE**

**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).

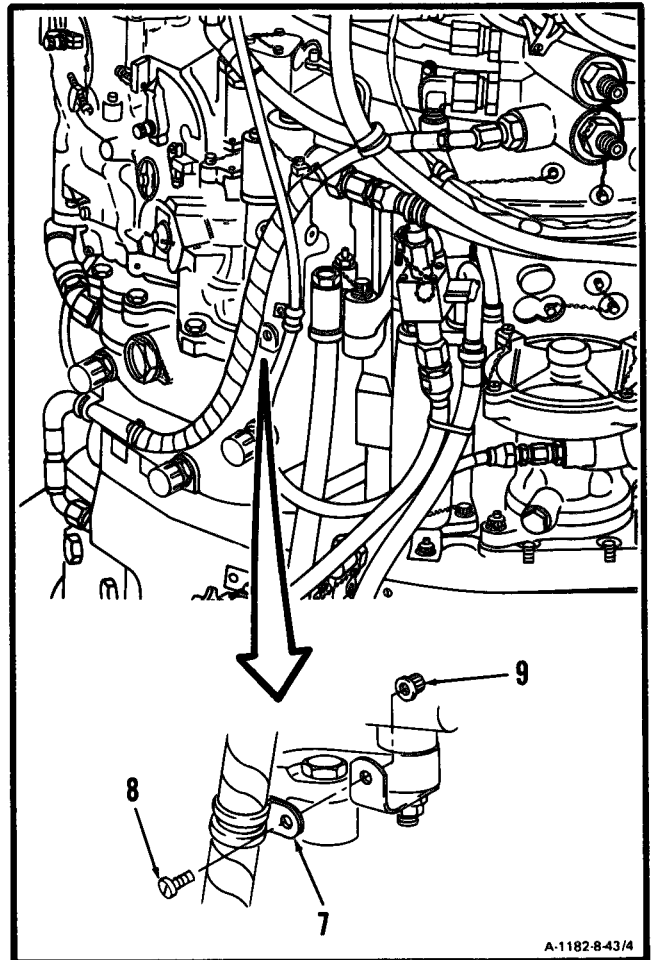


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**8-43 INSTALL HOSE ASSEMBLY (DUAL CHIP DETECTOR TO ACCESSORY  
GEARBOX ASSEMBLY) (Continued)**

8-43

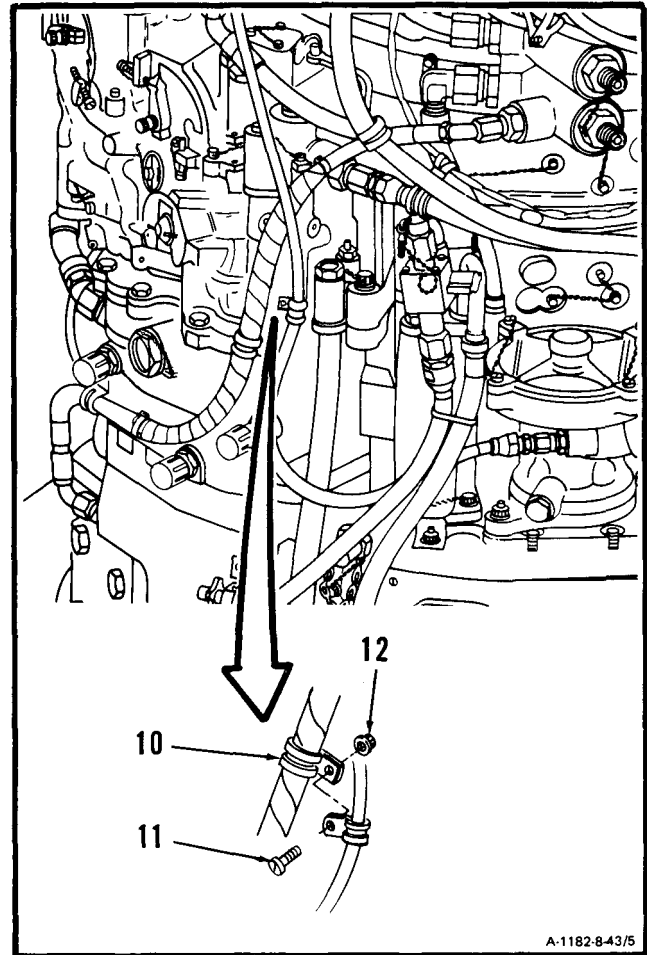
3. Install clamp (7), screw (8), and nut (9).



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**8-43 INSTALL HOSE ASSEMBLY (DUAL CHIP DETECTOR TO ACCESSORY  
GEARBOX ASSEMBLY) (Continued)**

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



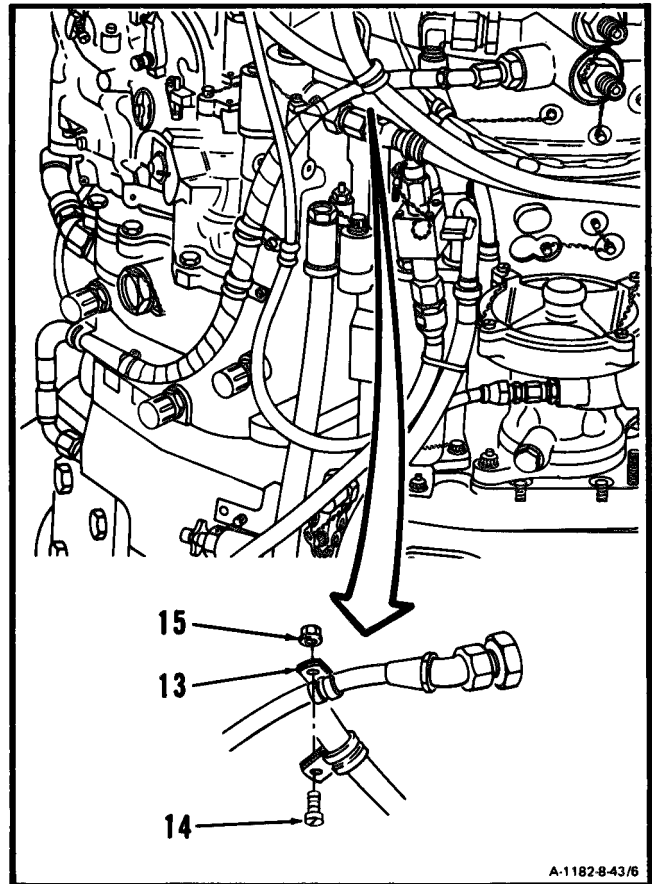
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**8-43 INSTALL HOSE ASSEMBLY (DUAL CHIP DETECTOR TO ACCESSORY  
GEARBOX ASSEMBLY) (Continued)**

8-43

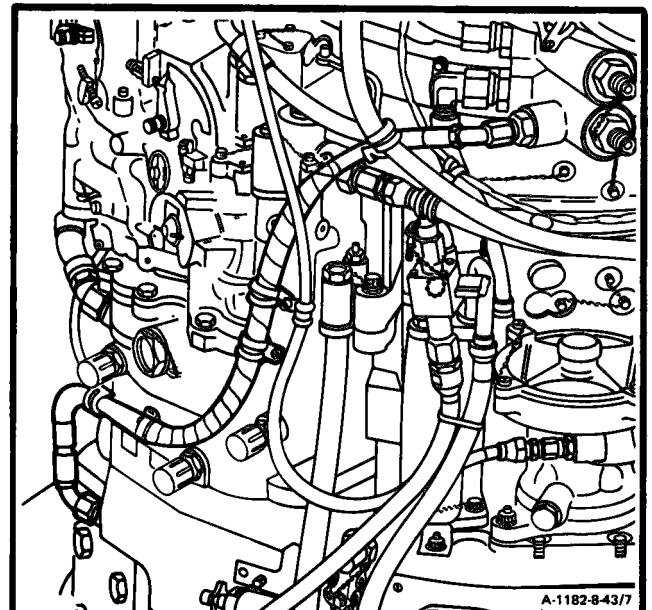
5. Install clamp (13), screw (14), and nut (15).



**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:**

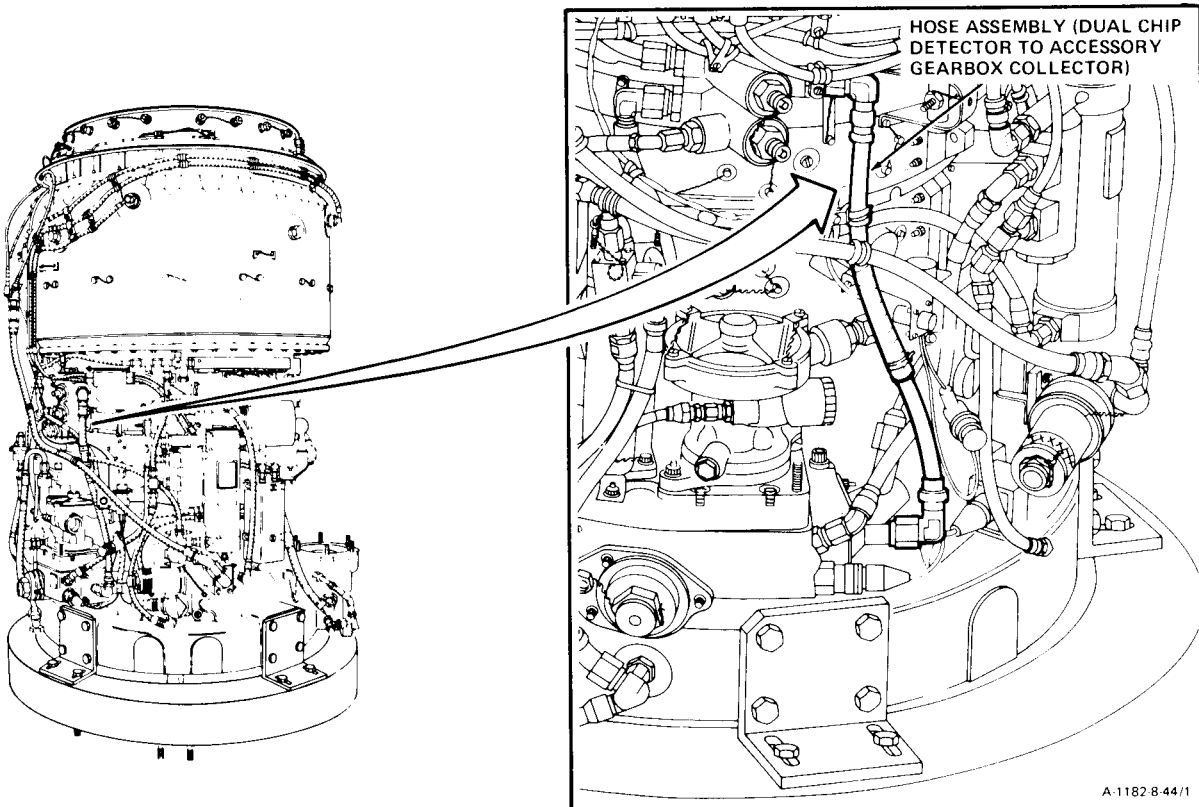
Wiping Flag (E58)

**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.

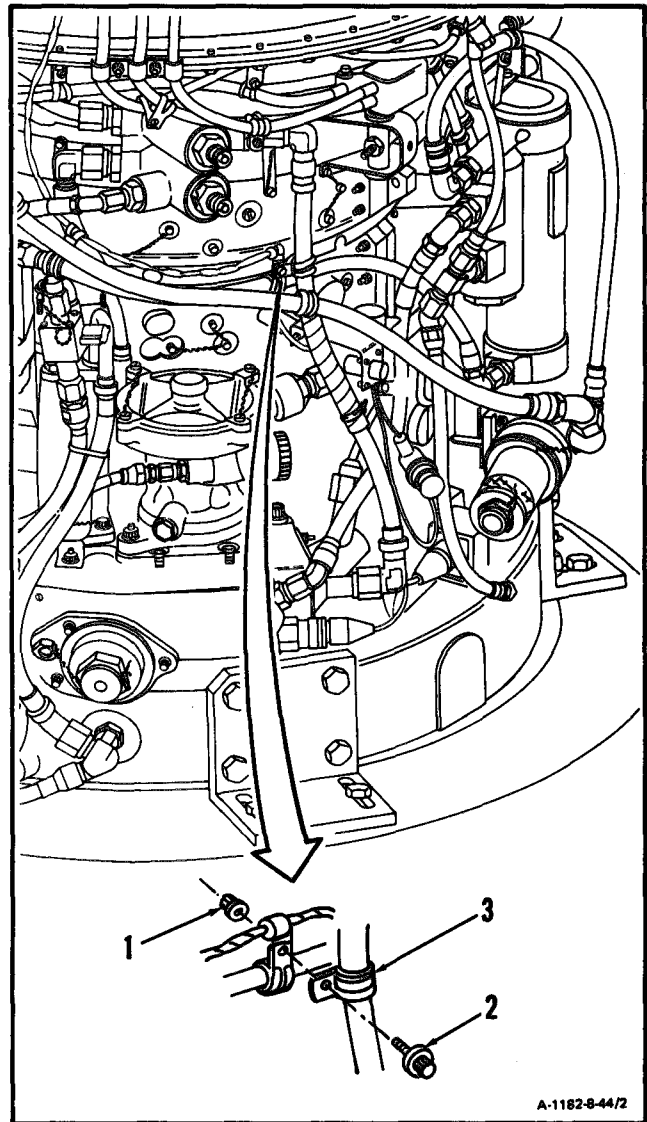


GO TO NEXT PAGE

**8-44 REMOVE HOSE ASSEMBLY (DUAL CHIP DETECTOR TO ACCESSORY GEARBOX COLLECTOR) (Continued)**

8-44

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

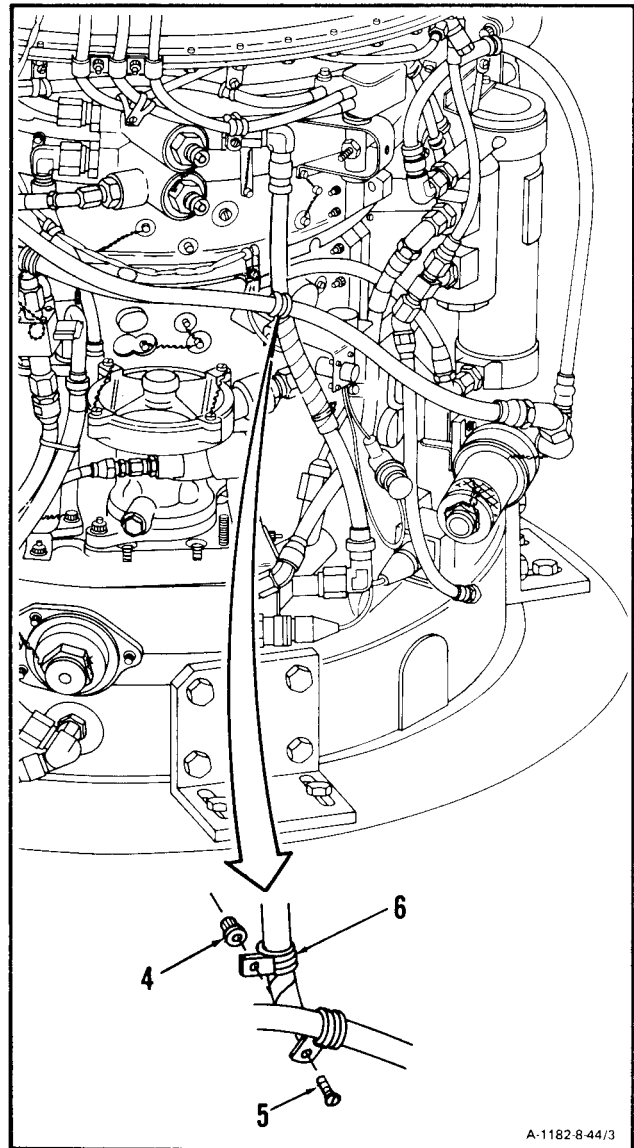


A-1182-8-44/2

**GO TO NEXT PAGE**

**8-44 REMOVE HOSE ASSEMBLY (DUAL CHIP DETECTOR TO ACCESSORY  
GEARBOX COLLECTOR) (Continued)**

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



A-1182-8-44/3

GO TO NEXT PAGE

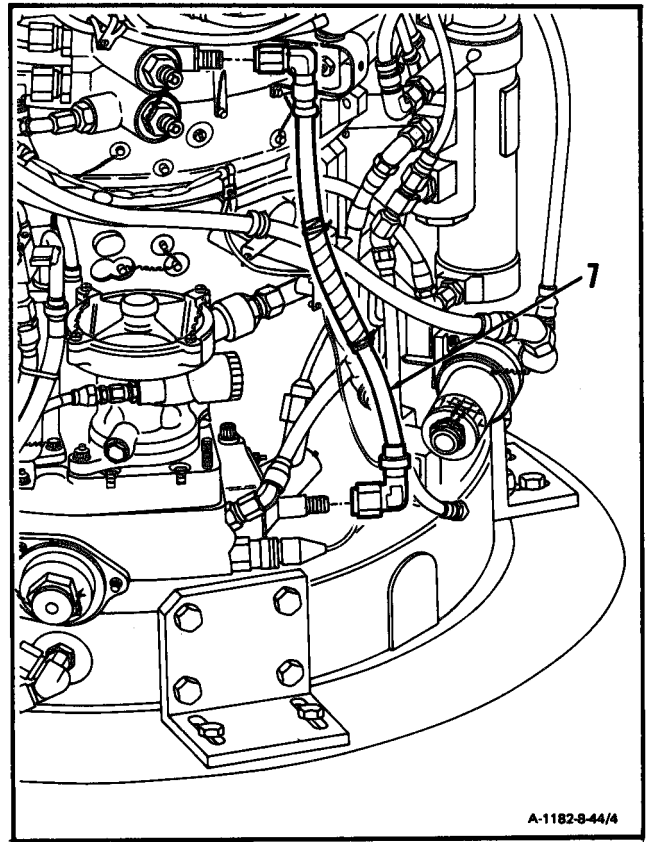
---

**8-44 REMOVE HOSE ASSEMBLY (DUAL CHIP DETECTOR TO ACCESSORY  
GEARBOX COLLECTOR) (Continued)**

---

8-44

3. Disconnect and remove hose assembly (7).



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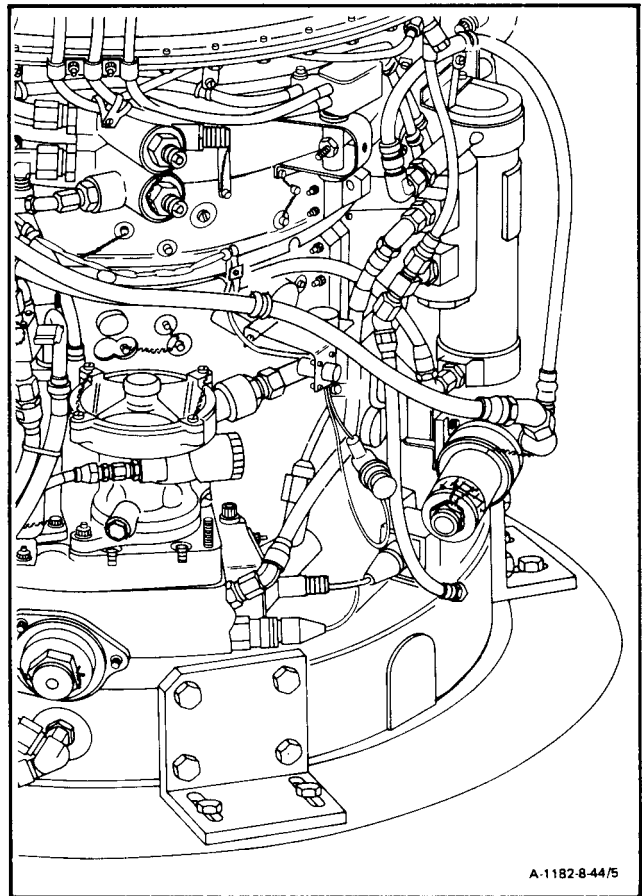
8-44 REMOVE HOSE ASSEMBLY (DUAL CHIP DETECTOR TO ACCESSORY  
GEARBOX COLLECTOR) (Continued)

---

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:**

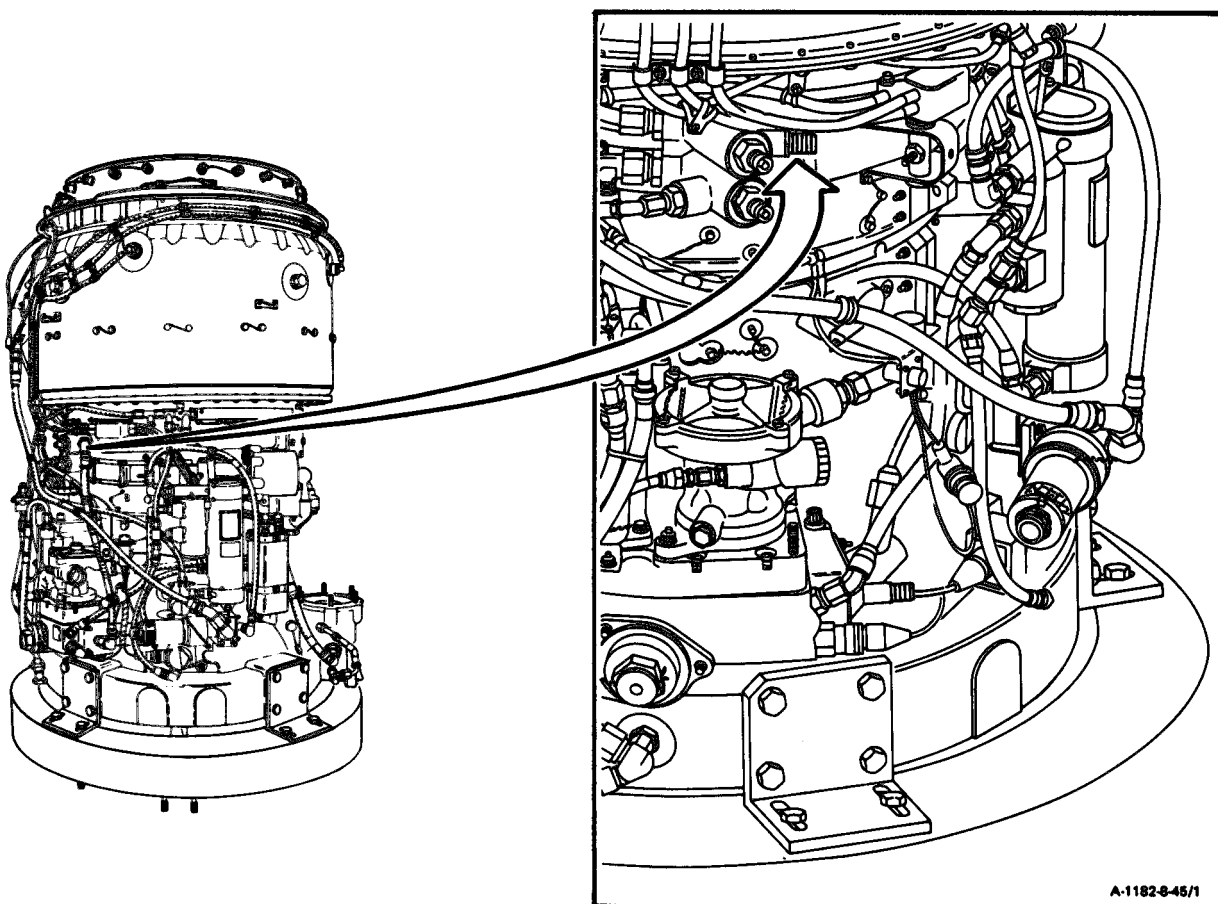
Powerplant Mechanic's Tool Kit,  
NSN 5180-00-323-4944  
Technical inspection Tool Kit,  
NSN 5180-00-323-5114

**Materials:**

None

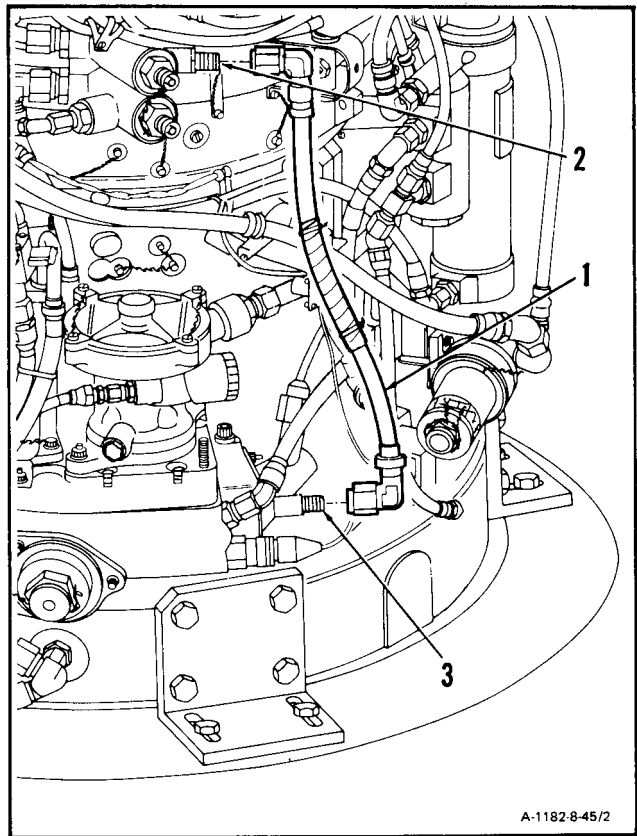
**Personnel Required:**

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).



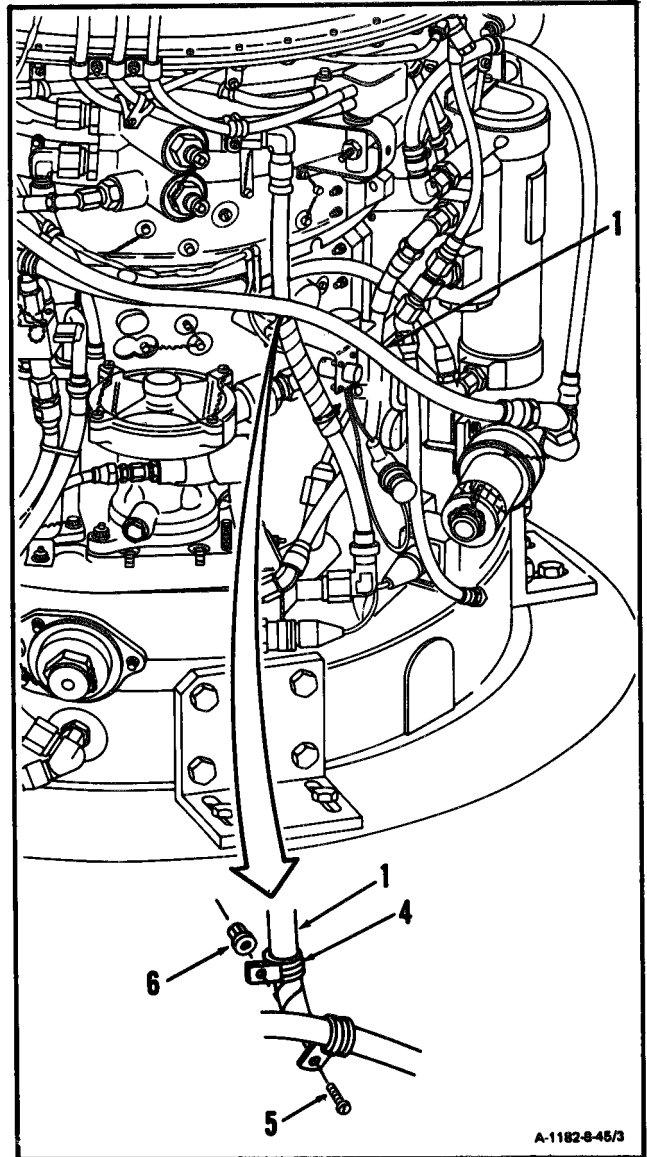
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**8-45 INSTALL HOSE ASSEMBLY (DUAL CHIP DETECTOR TO ACCESSORY  
GEARBOX COLLECTOR) (Continued)**

8-45

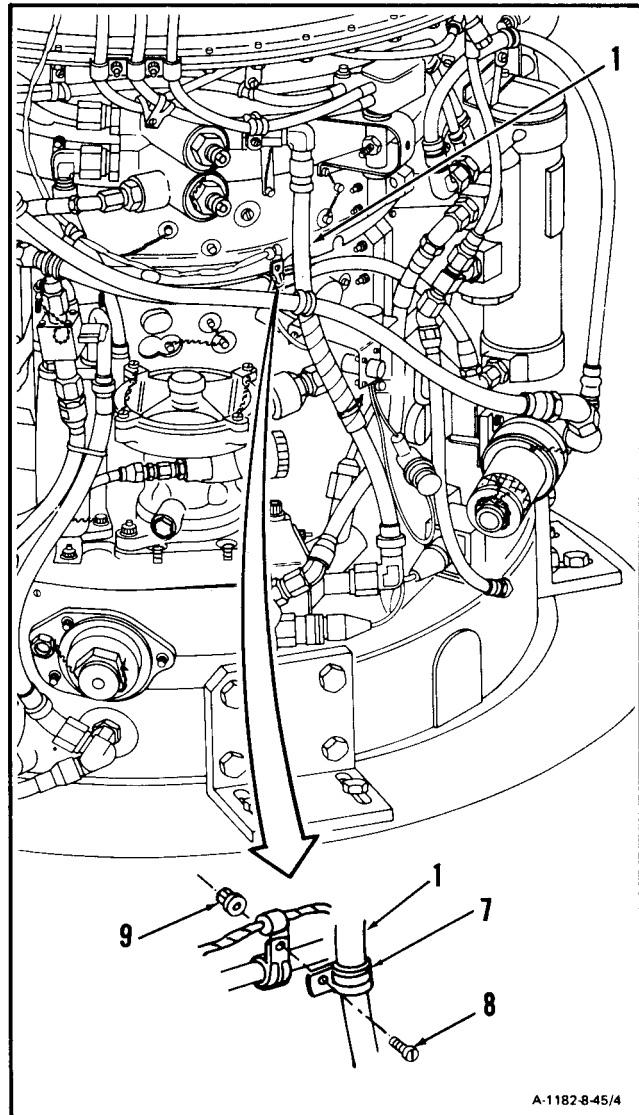
2. Install clamp (4) on hose assembly (1) and install screw (5) and nut (6).



**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**

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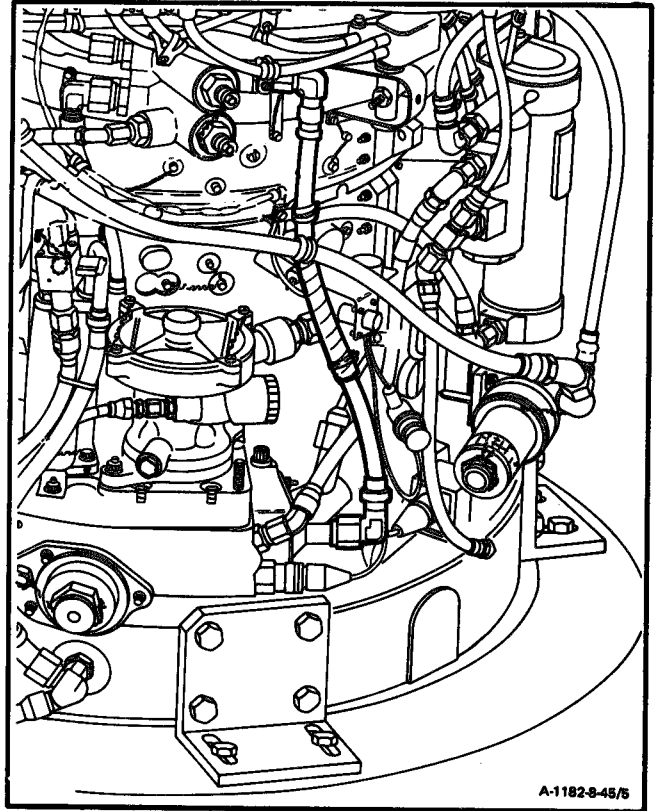
**8-45 INSTALL HOSE ASSEMBLY (DUAL CHIP DETECTOR TO ACCESSORY  
GEARBOX COLLECTOR) (Continued)**

---

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**

**Materials:**

Wiping Rag (E58)

**Applicable Configurations:**

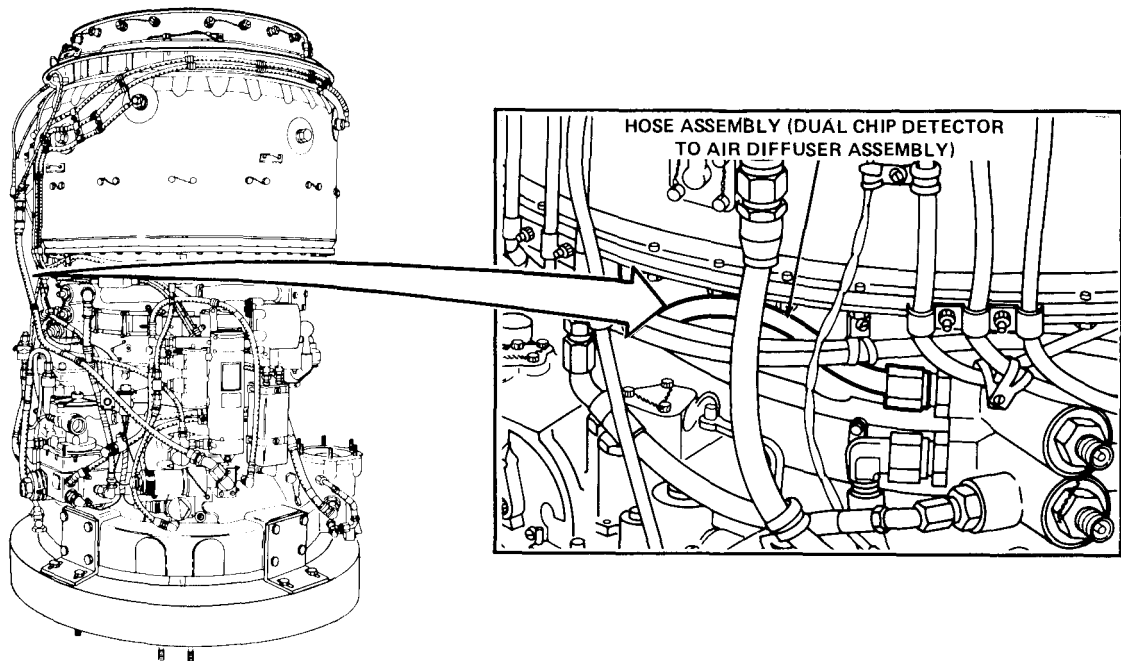
All

**Personnel Required:**

68910 Aircraft Powerplant Repairer

**Tools:**

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



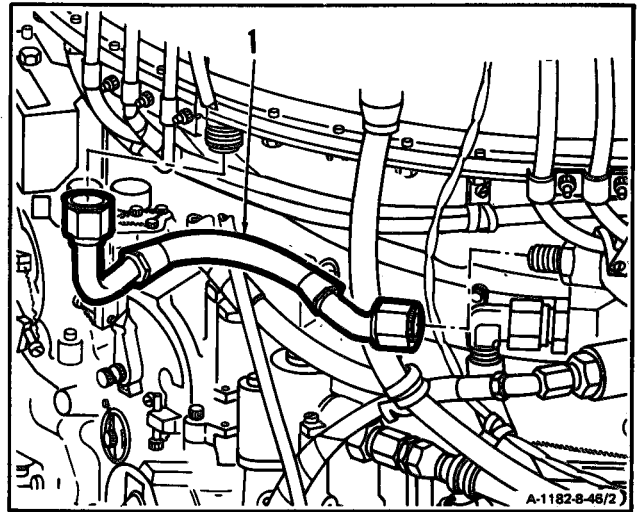
A-1182-8-46/1

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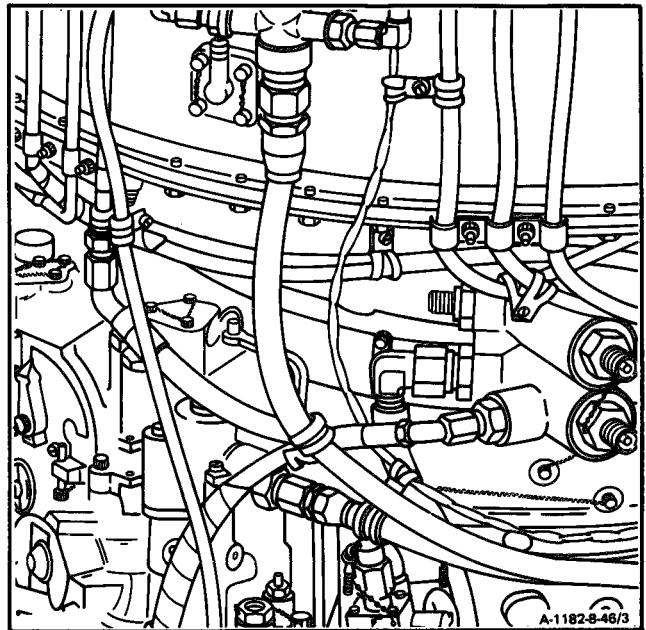
**8-46 REMOVE HOSE ASSEMBLY (DUAL CHIP DETECTOR TO AIR DIFFUSER ASSEMBLY) 8-46**  
(Continued)**WARNING**

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

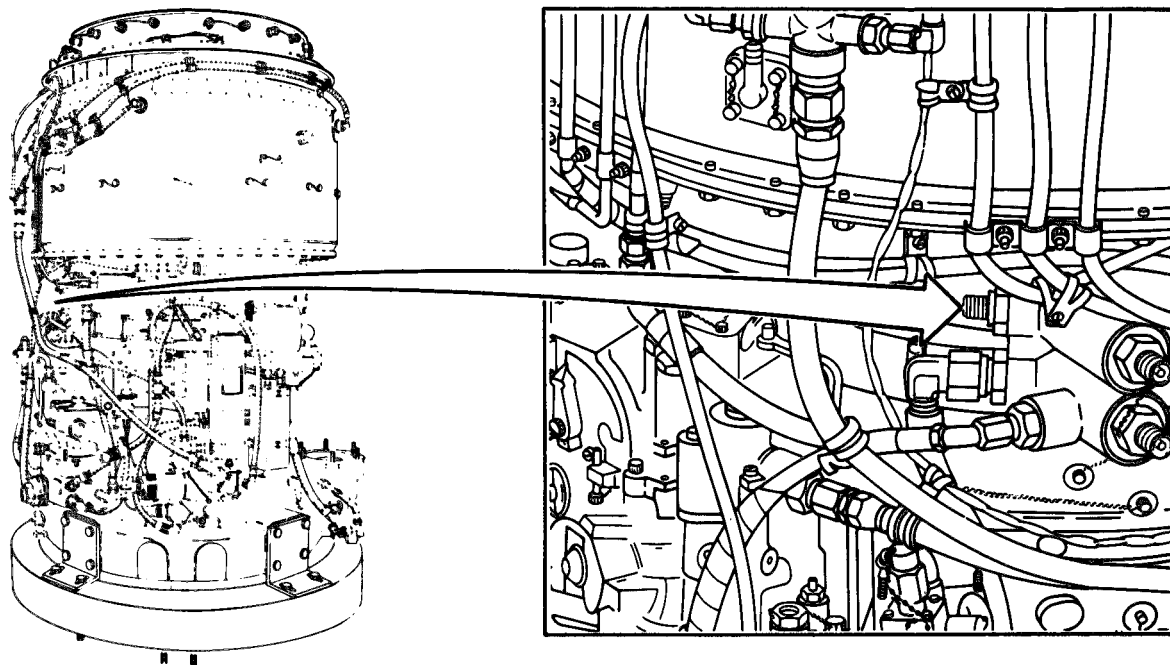
**Tools:**

Powerplant Mechanic's Tool Kit,

NSN 5180-00-323-4944

Technical Inspection Tool Kit,

NSN 5180-00-323-5114

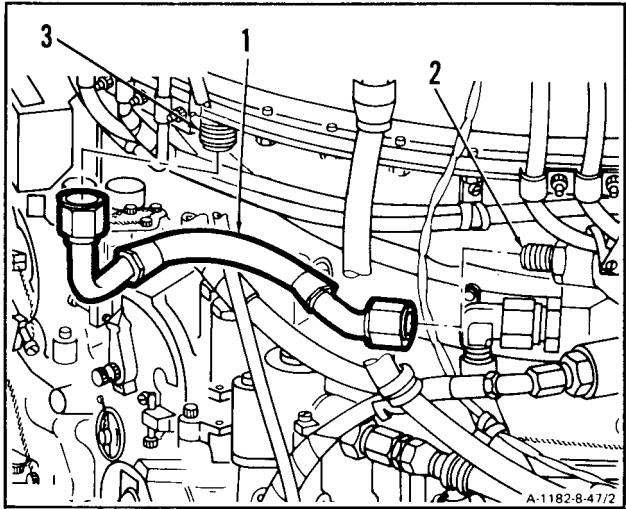


A-1182-8-47/1

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**8-47 INSTALL HOSE ASSEMBLY (DUAL CHIP DETECTOR TO AIR DIFFUSER ASSEMBLY)**  
(Continued)

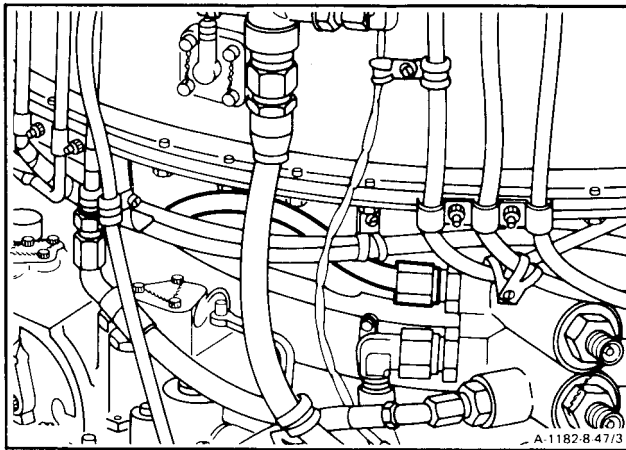
1. Install hose assembly (1) to nipple (2) and adapter (3).



**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)

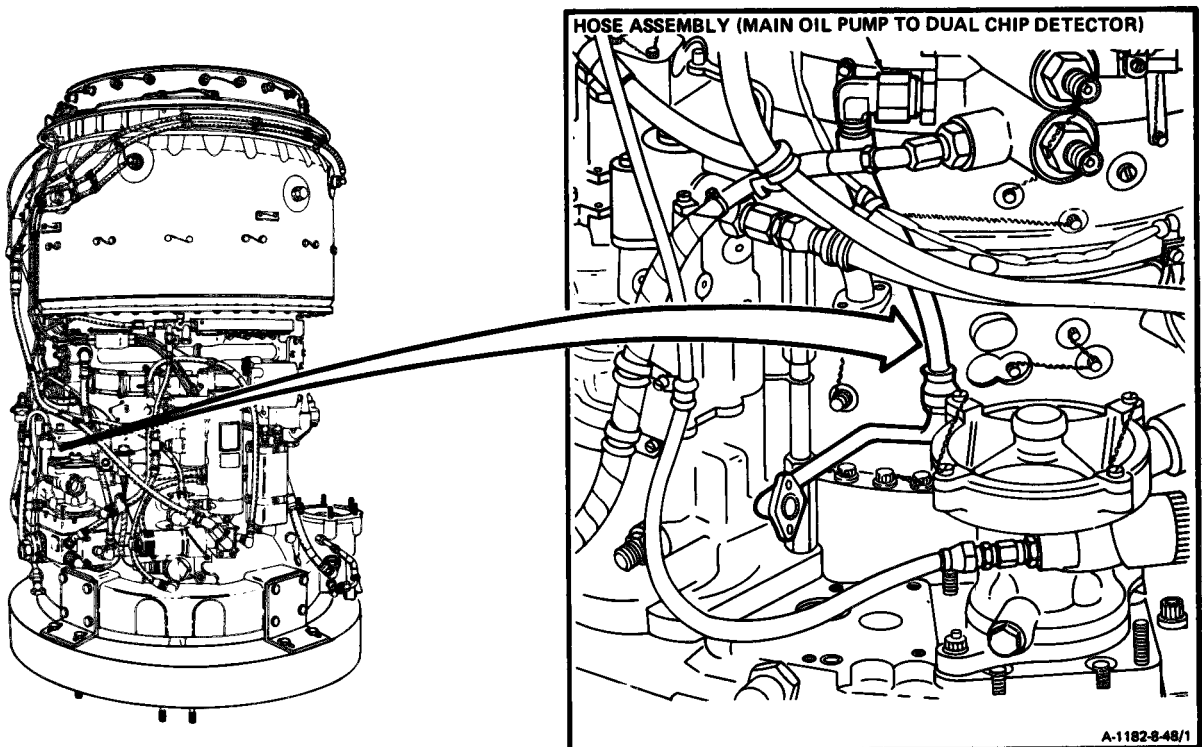
**Personnel Required:**

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)



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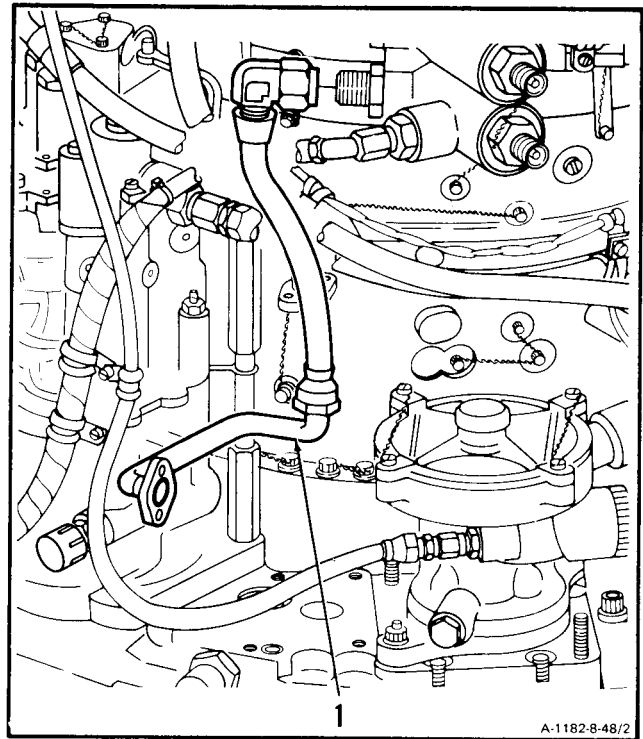


8-48 REMOVE HOSE ASSEMBLY (MAIN OIL PUMP TO DUAL CHIP DETECTOR) (Continued) 8-48

**WARNING**

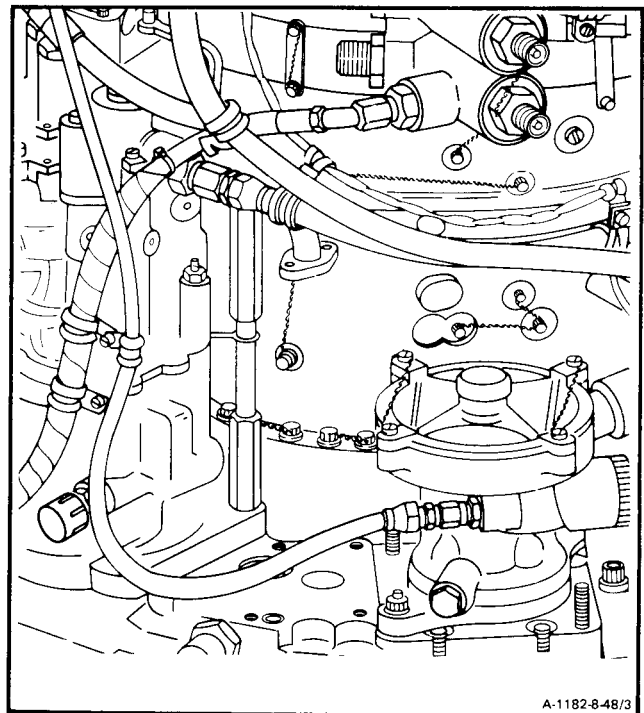
Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin and do not take internally. 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:**

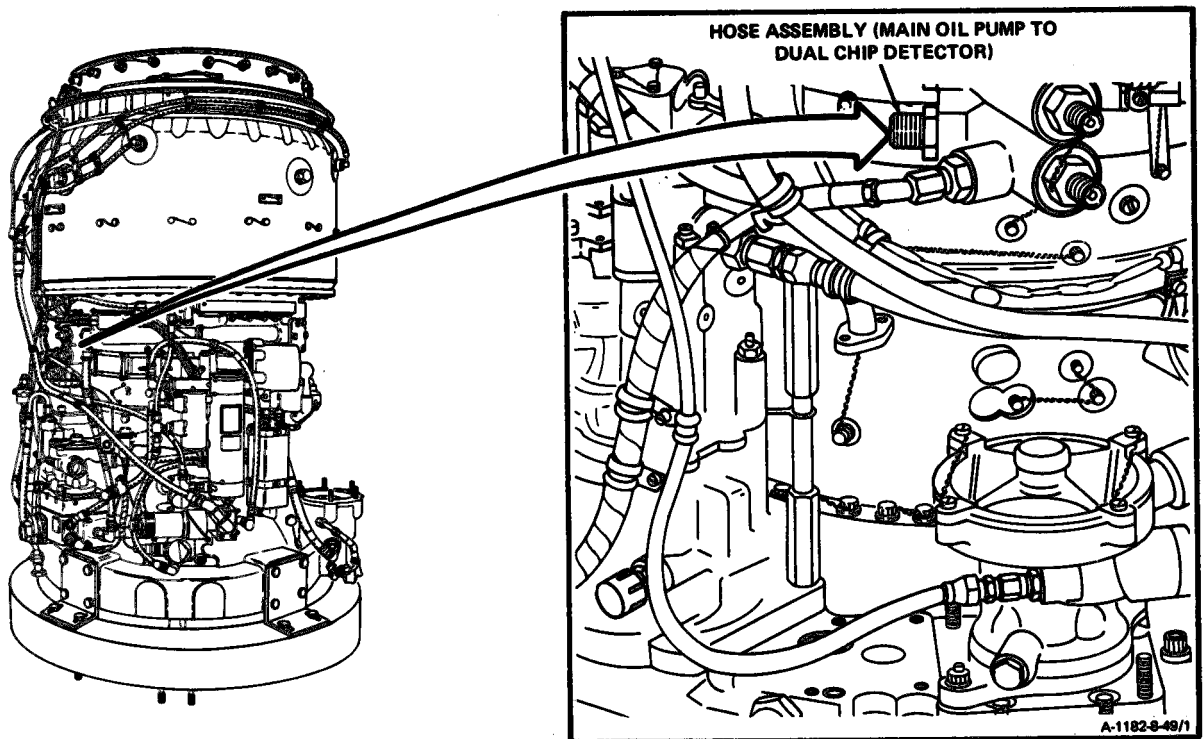
68B10 Aircraft Powerplant Repairer

68B30 Aircraft Powerplant Inspector

**Tools:**

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

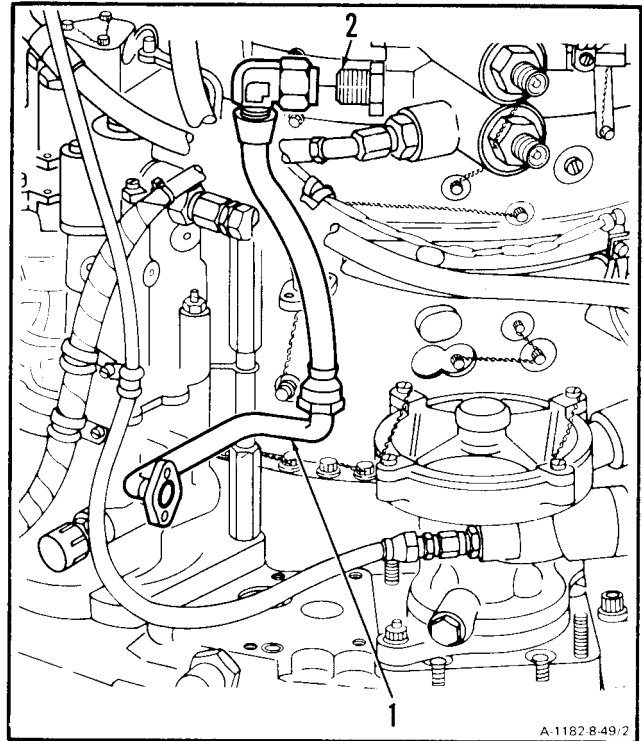
Technical Inspection Tool Kit,  
NSN 5180-00-323-5114



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8-49 INSTALL HOSE ASSEMBLY (MAIN OIL PUMP TO DUAL CHIP DETECTOR) (Continued) 8-49

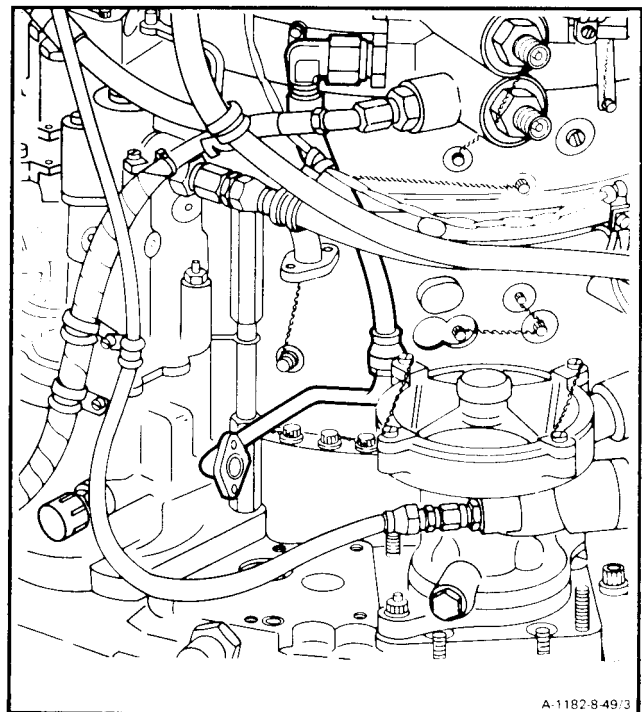
1. Install hose assembly (1) on nipple (2).



**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

*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:**

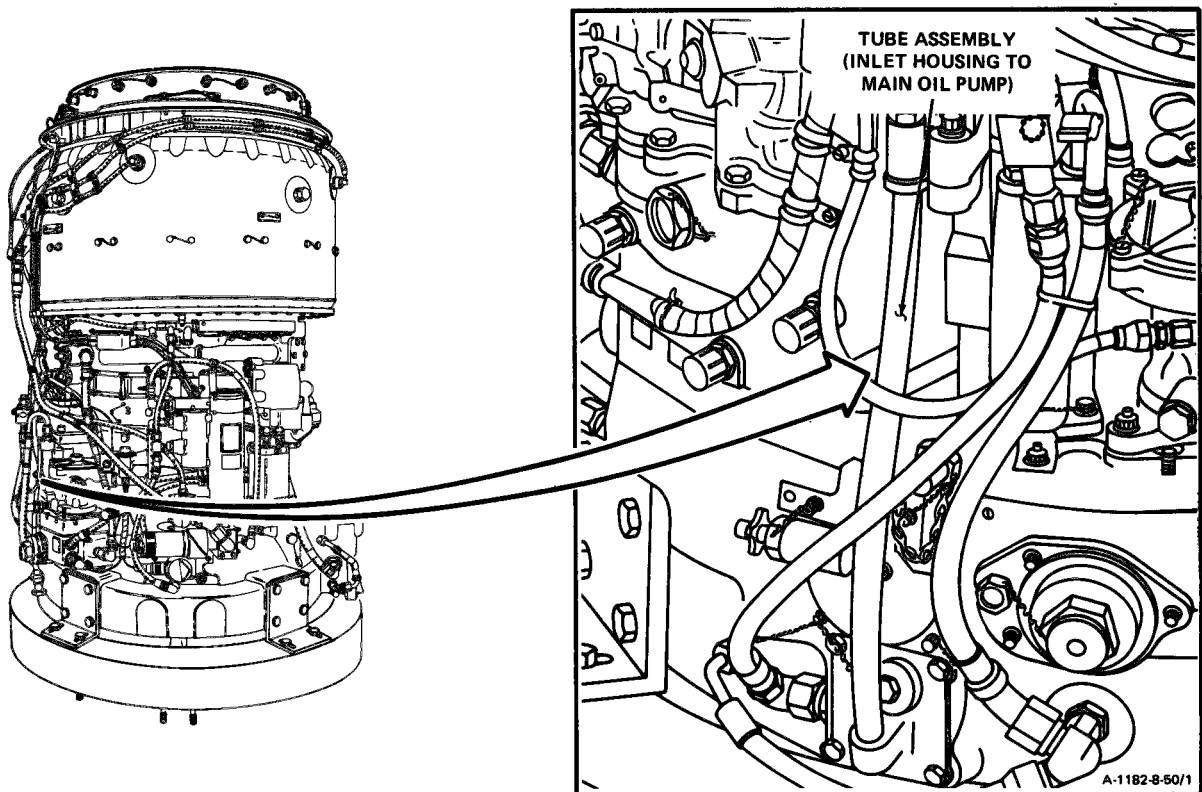
68510 Aircraft Powerplant Repairer

**References:**

Task 1-75

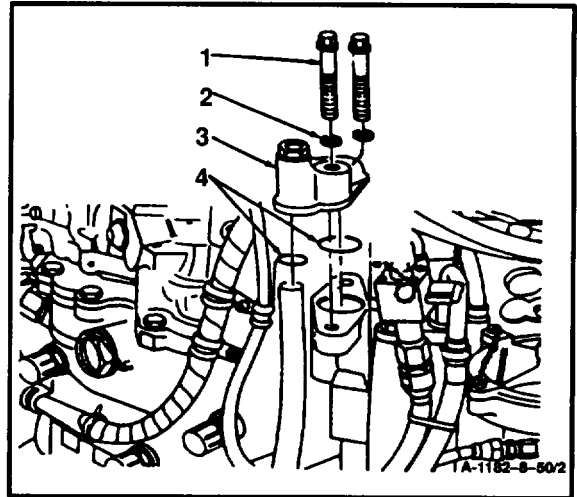
**WARNING**

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.

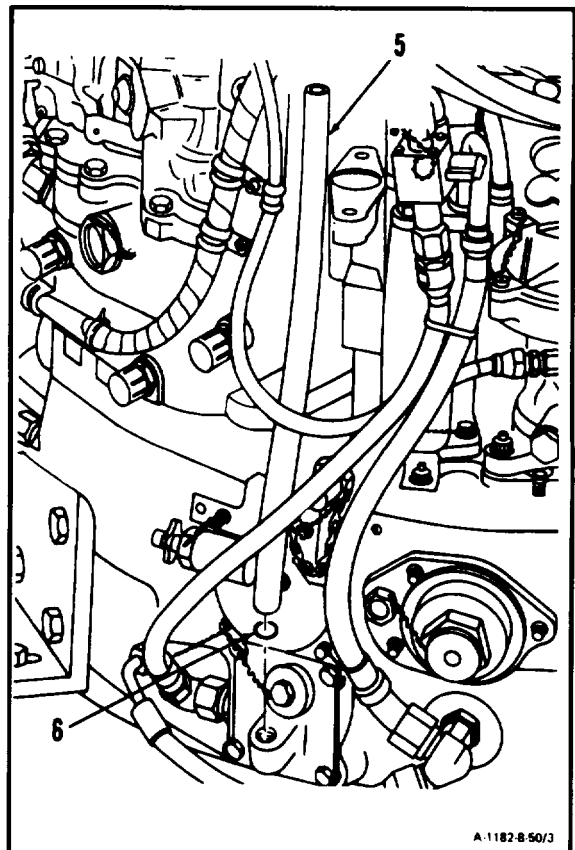


GO TO NEXT PAGE

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).



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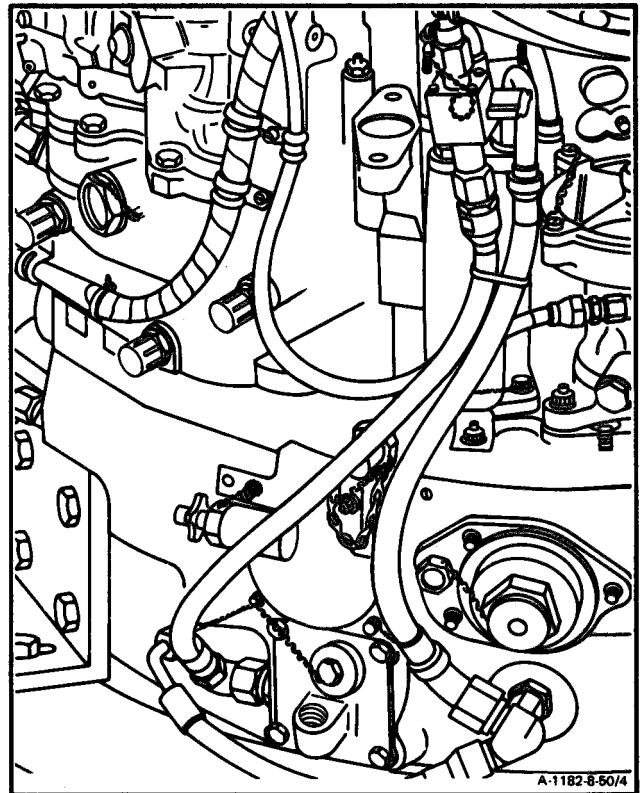
**8-50 REMOVE TUBE ASSEMBLY (INLET HOUSING TO MAIN OIL PUMP) (Continued)**

---

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:**

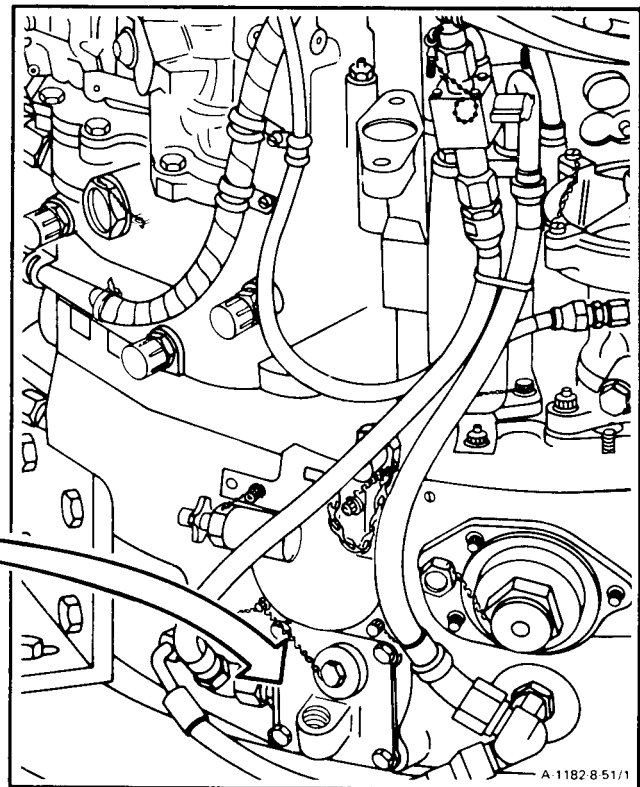
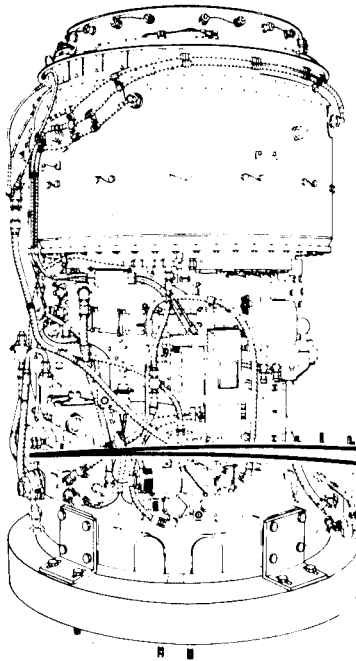
Packings

**Personnel Required:**

68B10 Aircraft Powerplant Repairer  
68B30 Aircraft Powerplant Inspector

**References:**

TM 55-2840-254-23P  
Task 8-50

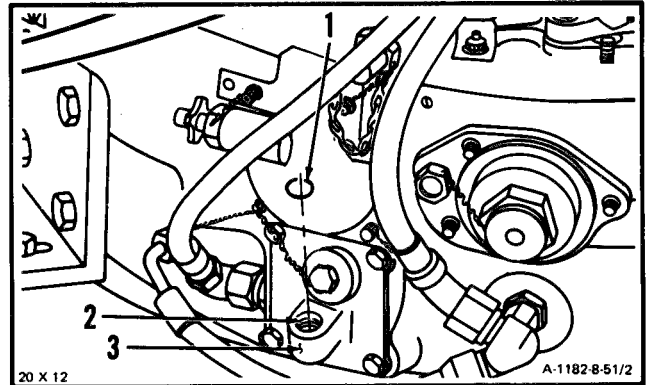


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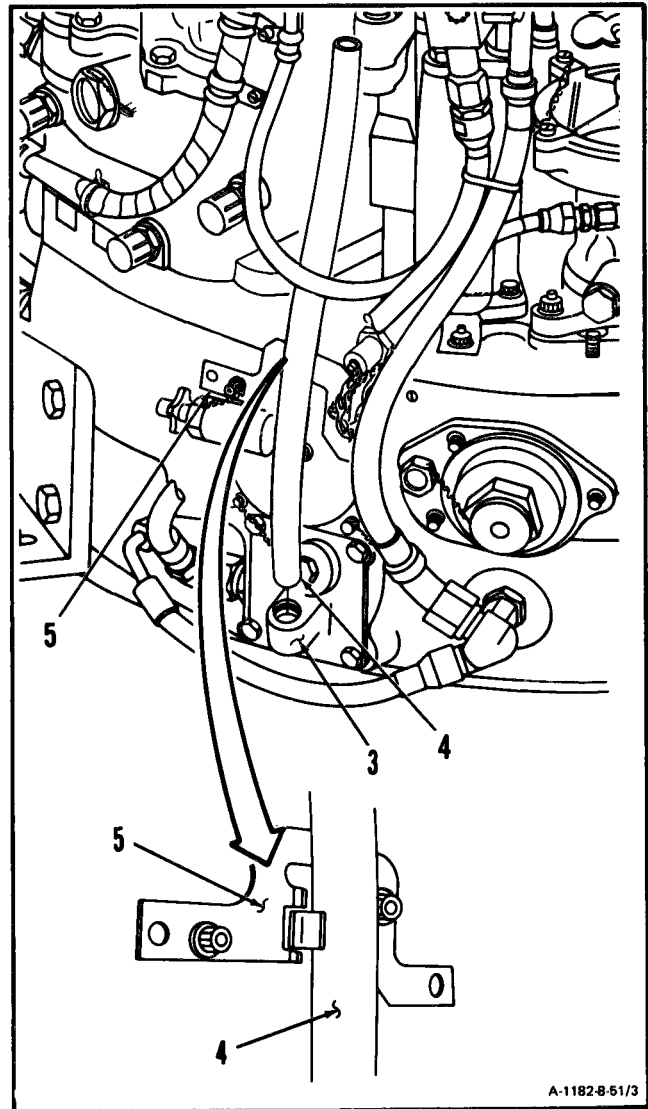
8-51 INSTALL TUBE ASSEMBLY (INLET HOUSING TO MAIN OIL PUMP) (Continued)

8-51

1. Install packing (1) in groove (2) in cover assembly (3).



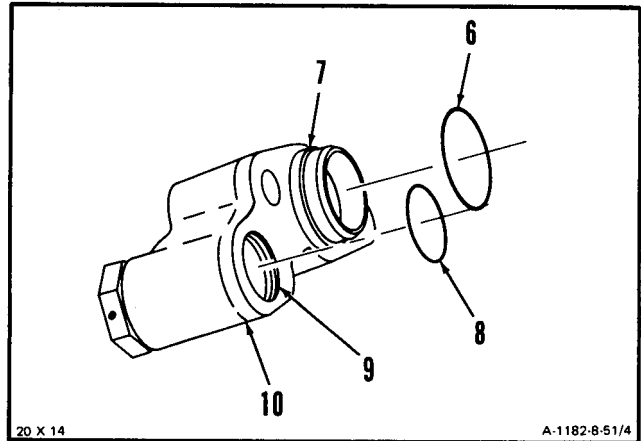
2. Install tube assembly (4) in cover assembly (3) and bracket (5).



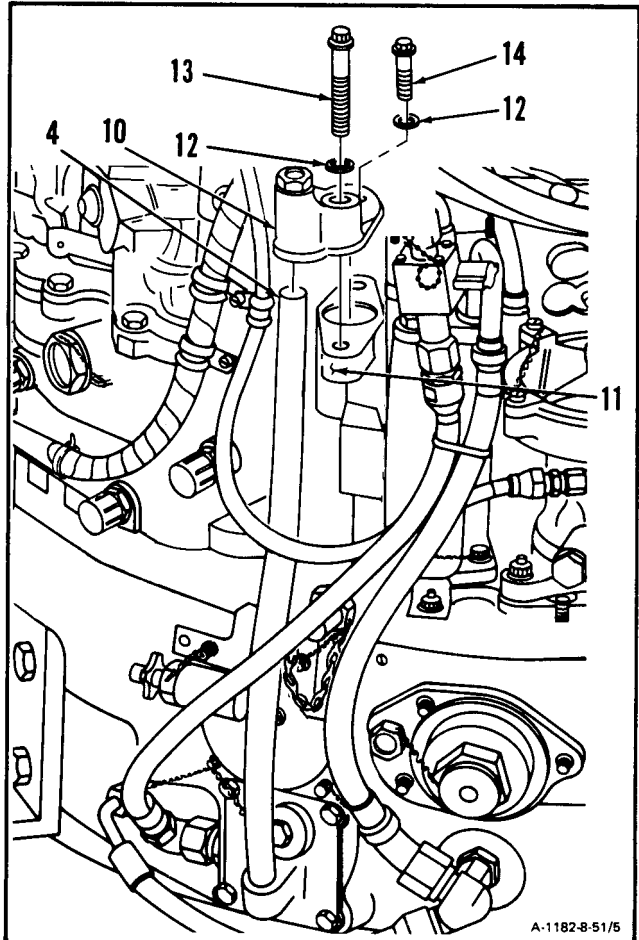
GO TO NEXT PAGE



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).



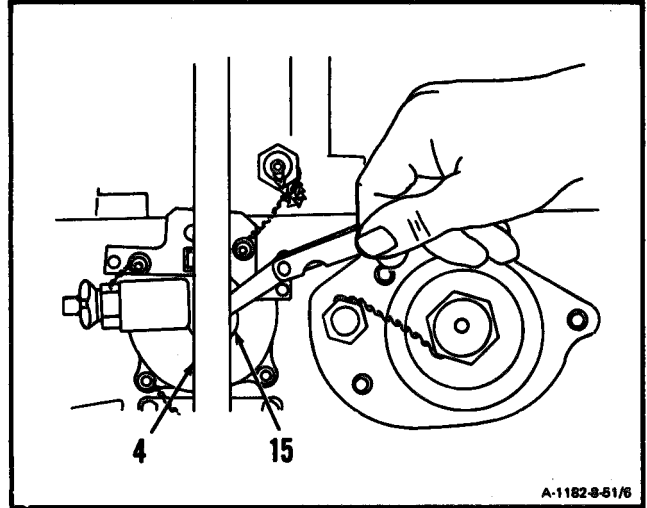
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## 8-51 INSTALL TUBE ASSEMBLY (INLET HOUSING TO MAIN OIL PUMP) (Continued)

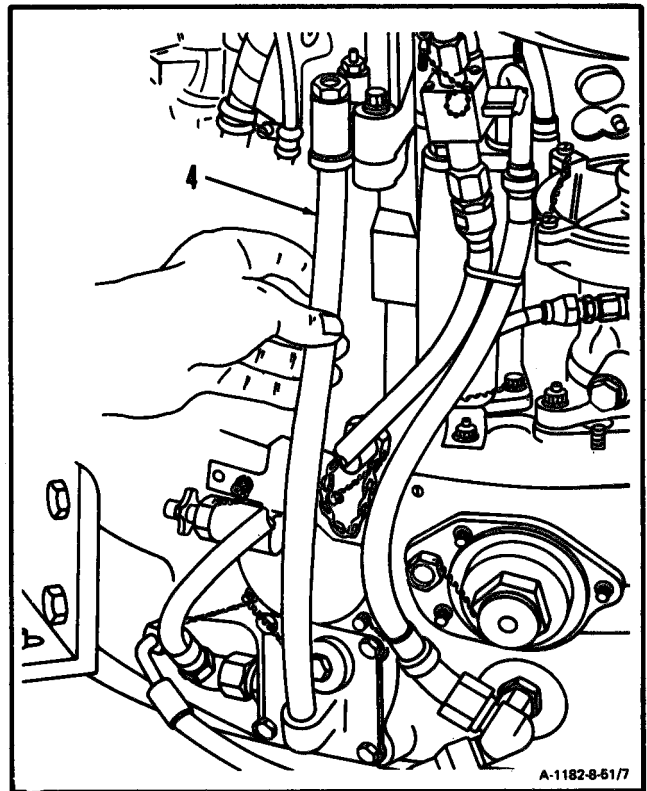
8-51

## 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**

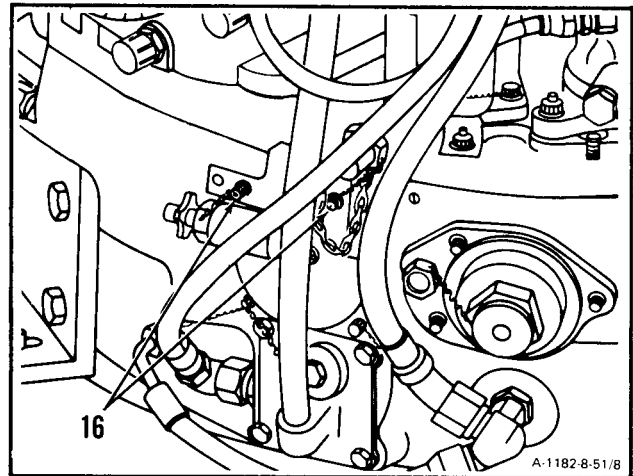
If clearance is not obtained or if tube assembly is not free to move, go to step 6.  
If proper clearance is obtained and tube assembly is free to move, go to step 9.

**GO TO NEXT PAGE**

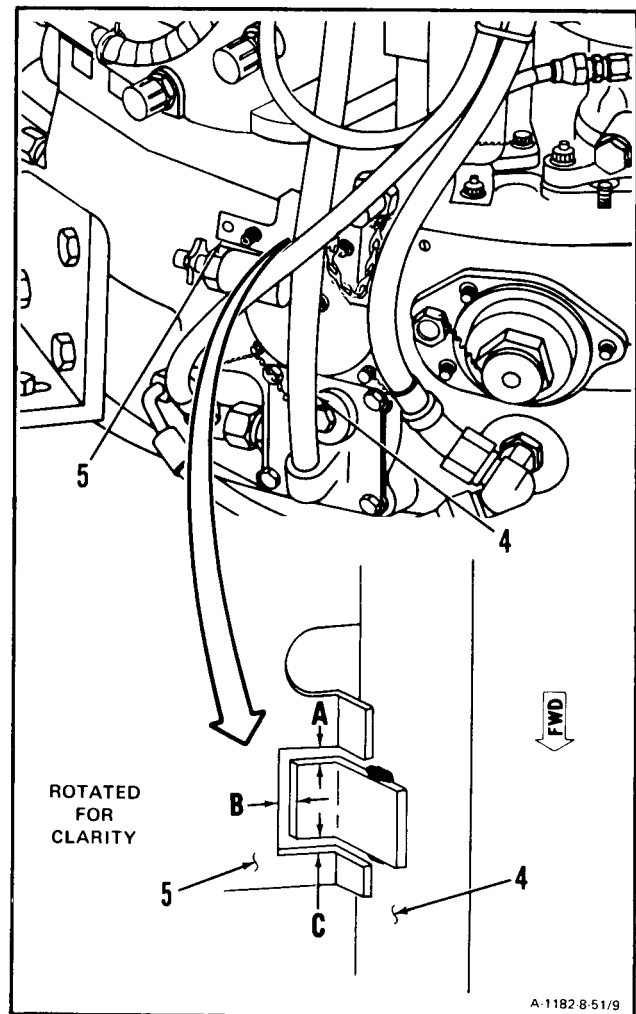
6. Remove lockwire and loosen bolts (16).

**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).



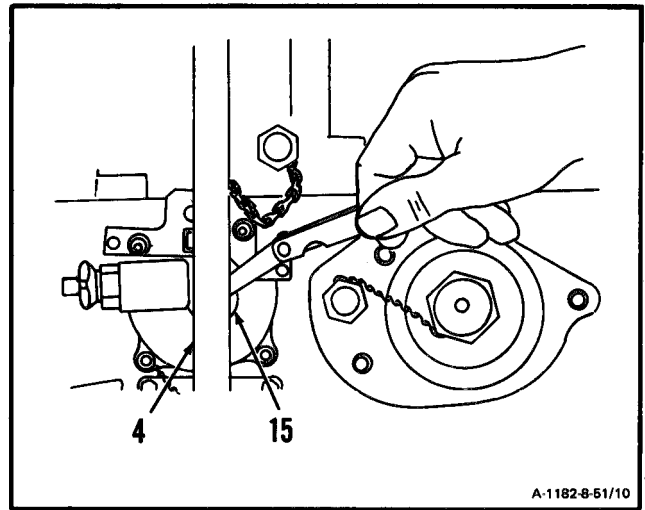
GO TO NEXT PAGE

**8-51 INSTALL TUBE ASSEMBLY (INLET HOUSING TO MAIN OIL PUMP) (Continued)**

8-51

**8. Check for proper installation of tube assembly (4) as follows:**

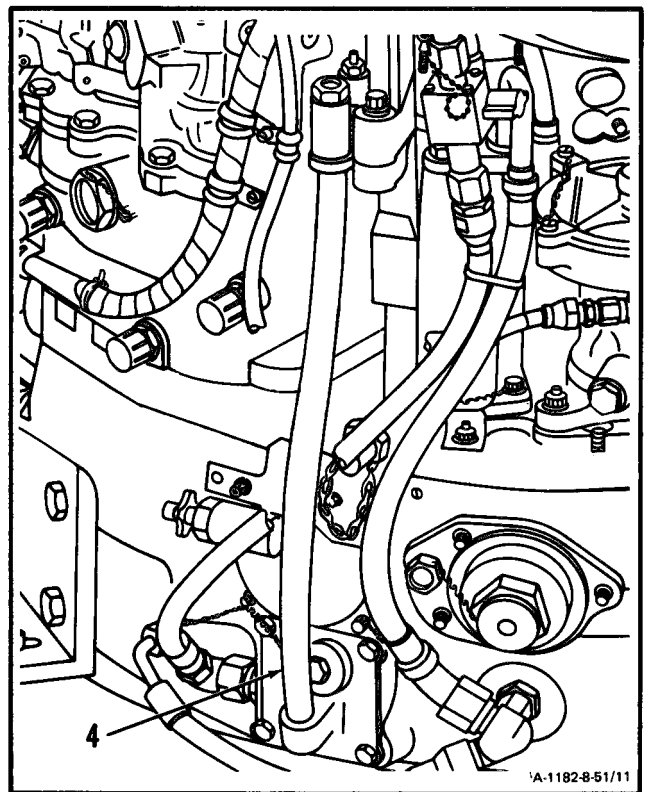
- a. Check clearance between tube assembly (4) and washer (15). Clearance shall be 0.002 inch minimum.



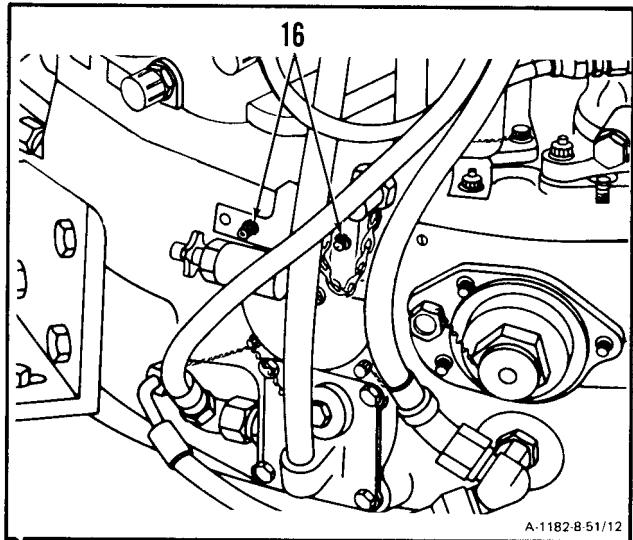
- b. Check tube assembly (4) for freedom of movement in all directions. Tube assembly (4) shall be free to move forward and aft a total of 3/32-inch minimum. Tube assembly (4) shall be free to move sideways a total of 0.002 inch minimum. Tube assembly (4) shall be free to move radially a total of 0.004 inch minimum.

**NOTE**

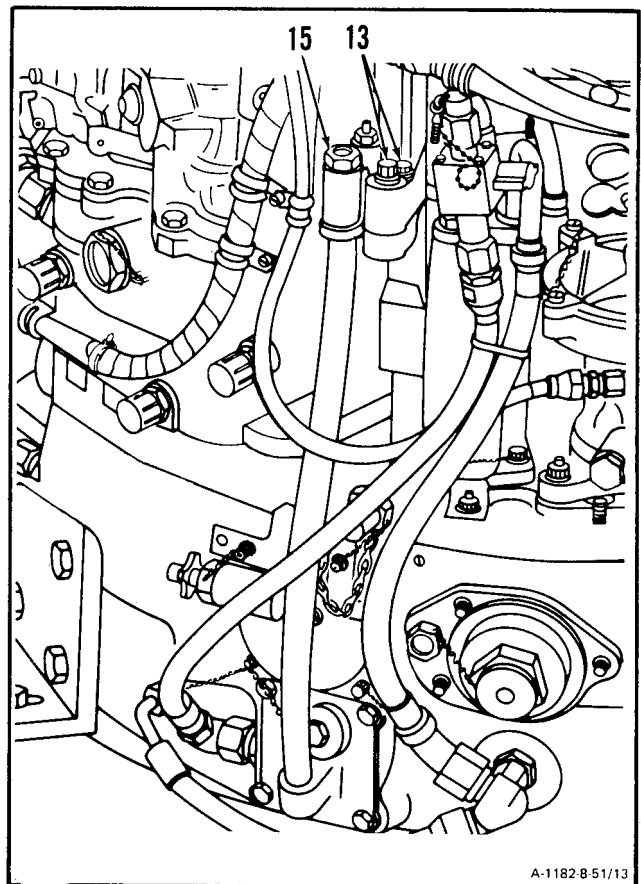
If proper clearance and freedom of movement is still not obtained, remove tube assembly (Ref. Task 8-50) and install serviceable tube assembly (Steps 1 thru 8).

**GO TO NEXT PAGE**

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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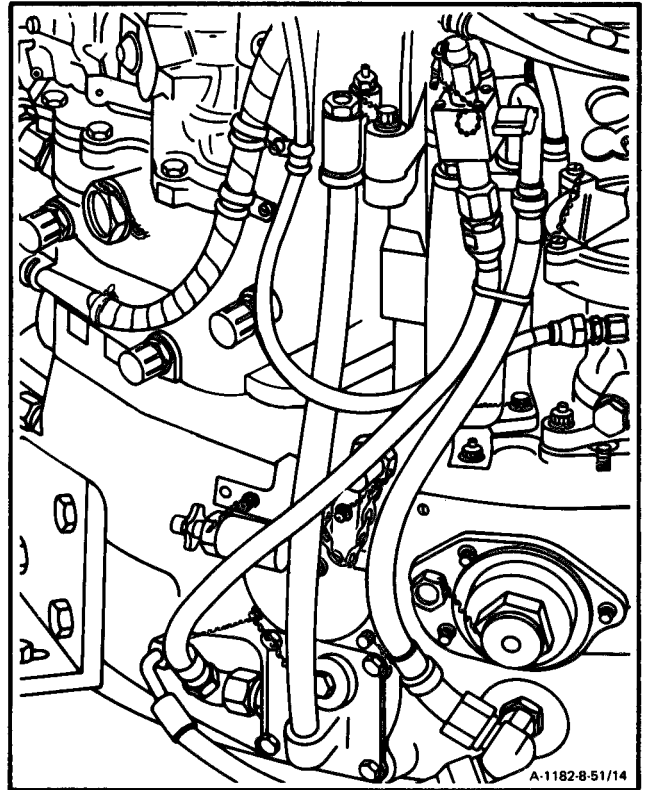
**8-51 INSTALL TUBE ASSEMBLY (INLET HOUSING TO MAIN OIL PUMP) (Continued)**

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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:**

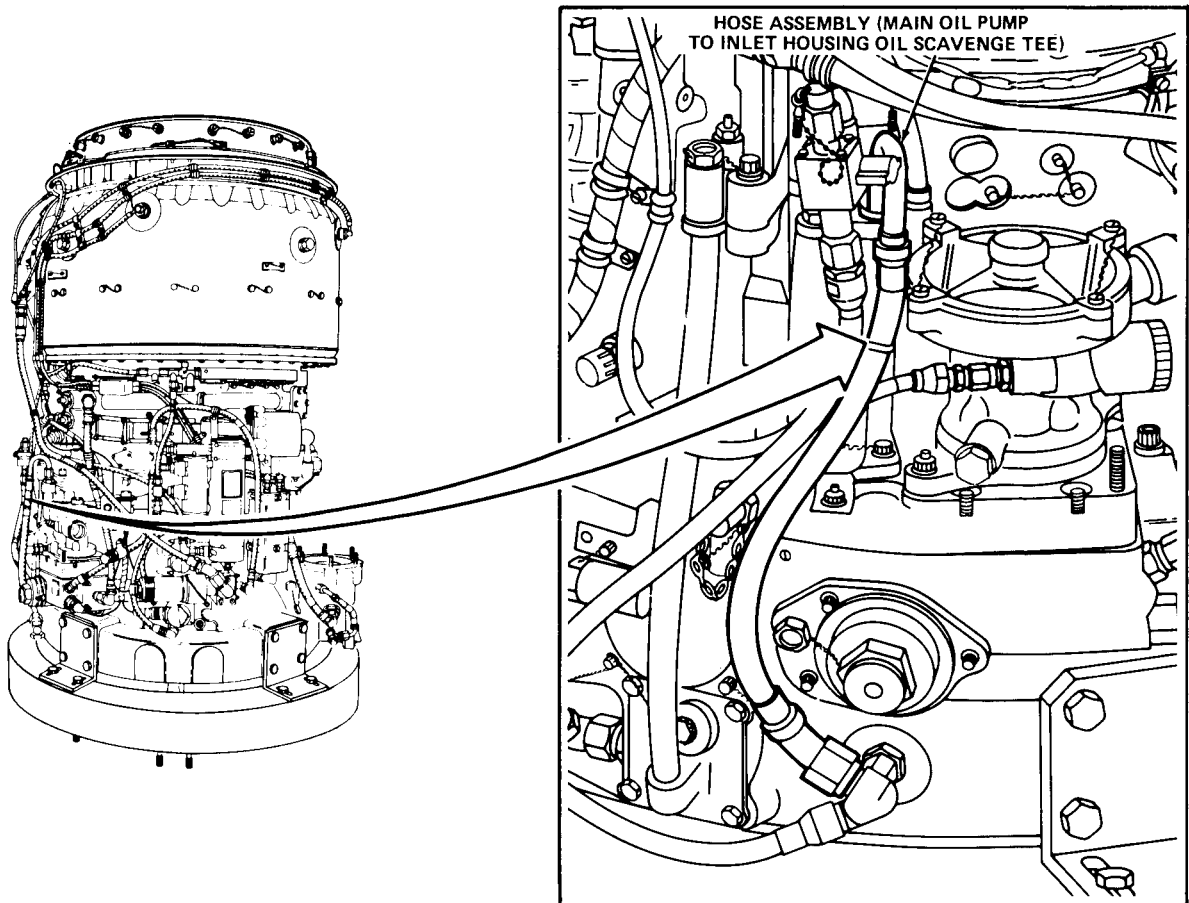
Powerplant Mechanic's Tool Kit,  
NSN 5180-00-323-4944  
Container, 1 Quart

**Materials:**

Wiping Rag (E58)

**Personnel Required:**

68B10 Aircraft Powerplant Repairer



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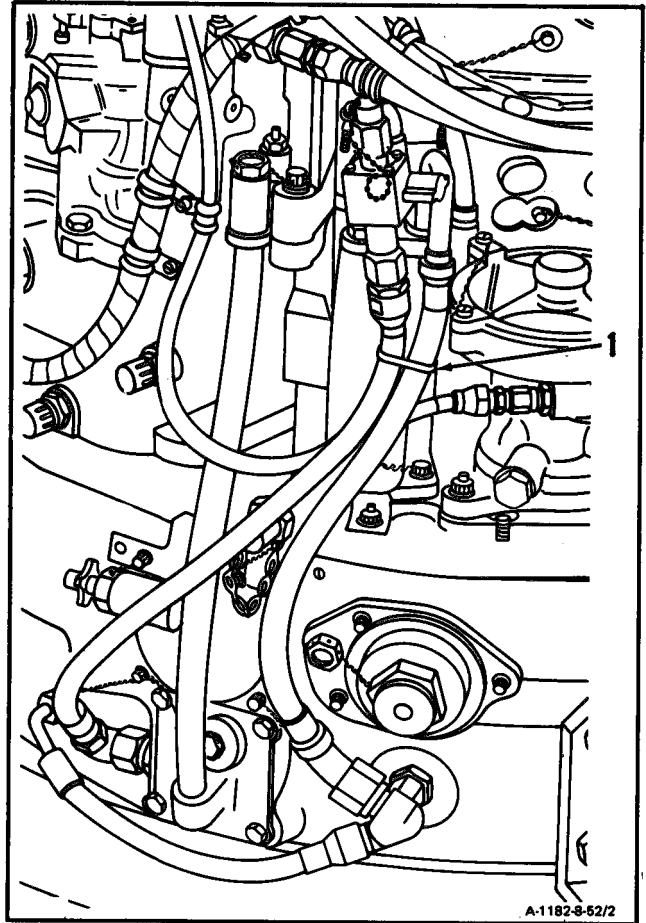
---

**8-52 REMOVE HOSE ASSEMBLY (MAIN OIL PUMP TO INLET HOUSING OIL  
SCAVENGE TEE) (Continued)**

---

8-52

1. Cut and remove cable tie (1).

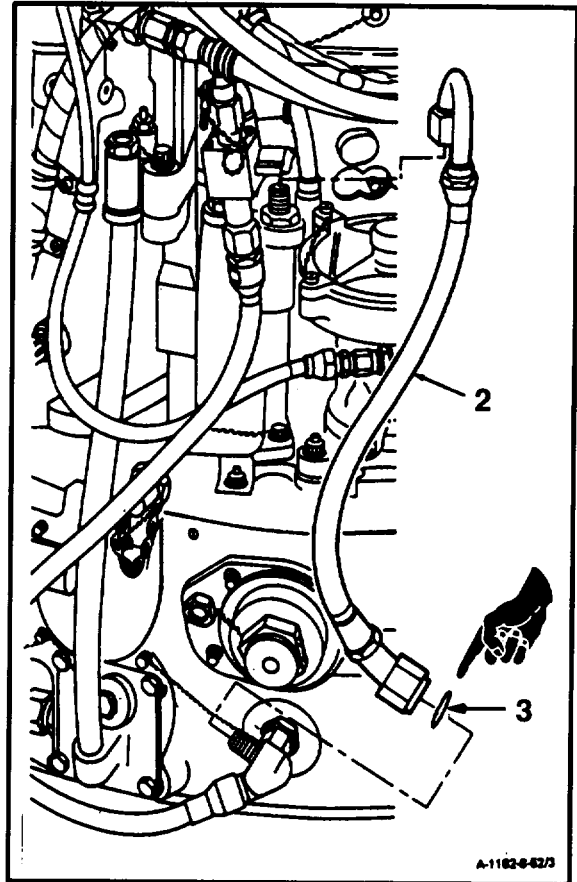
**GO TO NEXT PAGE**



**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).

**GO TO NEXT PAGE**

8-150 Change 6

---

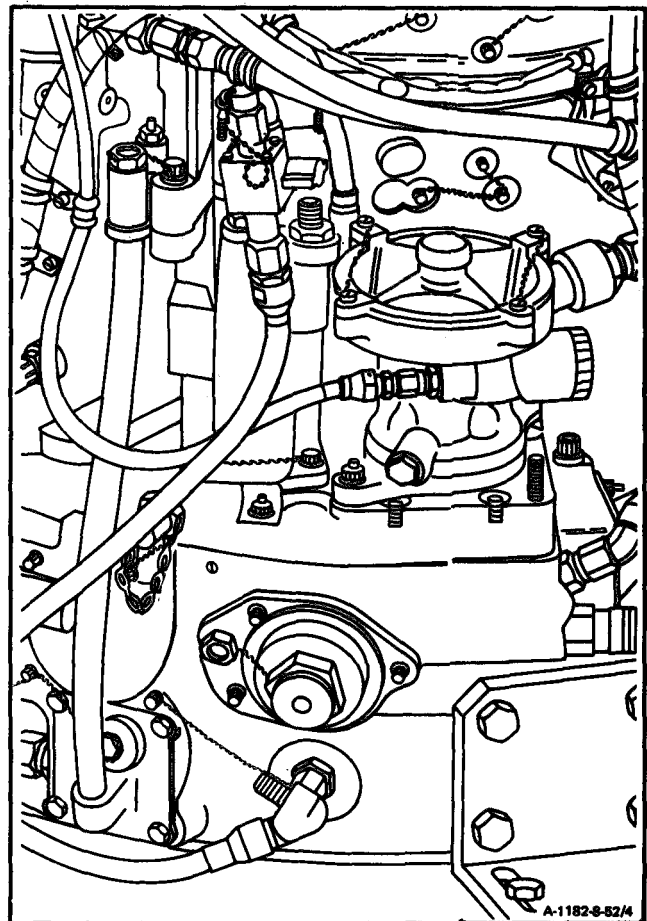
**8-52 REMOVE HOSE ASSEMBLY (MAIN OIL PUMP TO INLET HOUSING OIL  
SCAVENGE TEE) (Continued)**

---

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

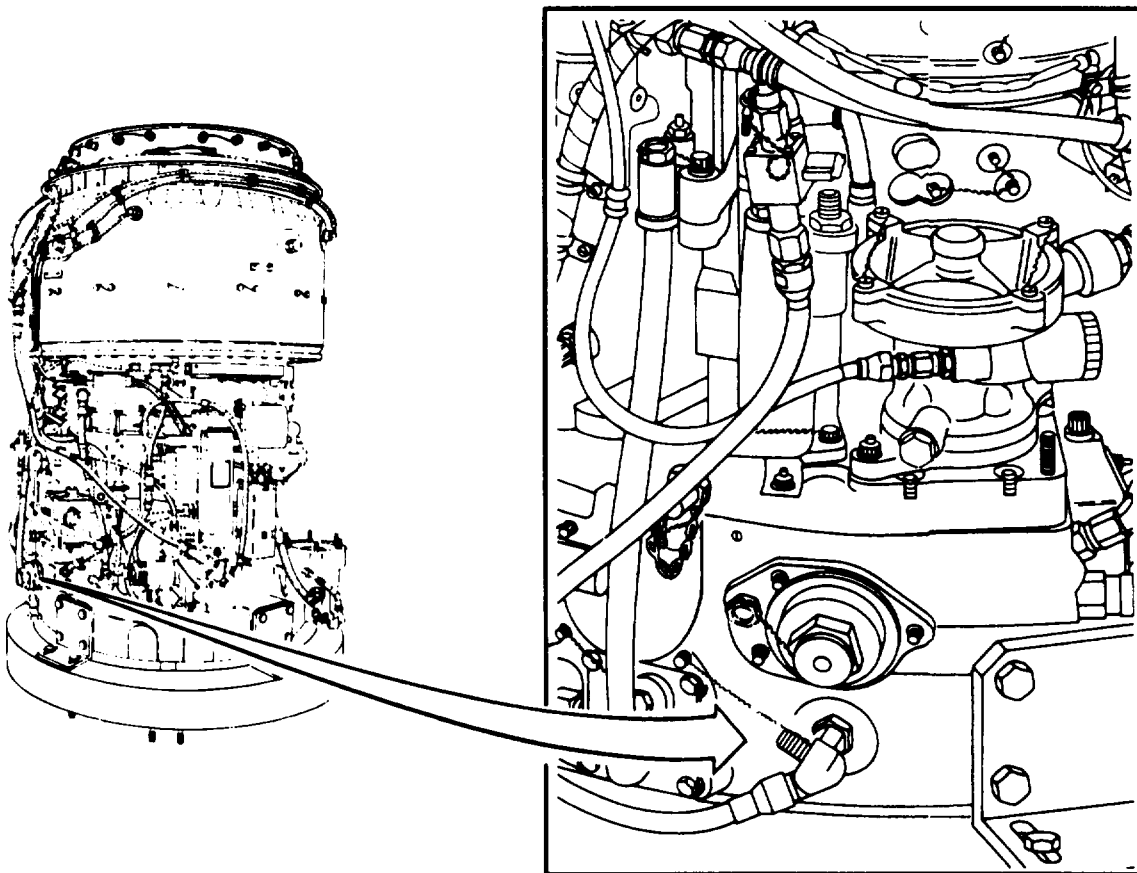
*Parts:*

Cable Tie  
Gasket

*Personnel Required:*

68B10 Aircraft Powerplant Repairer  
68B30 Aircraft Powerplant Inspection

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A-1182-8-53/1

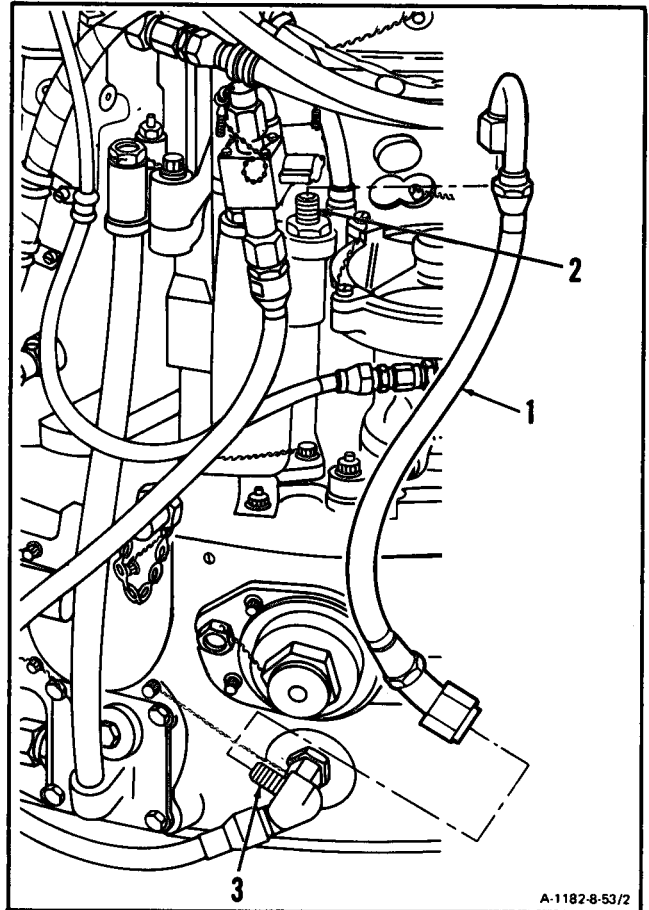
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8-152 Change 6

**8-53 INSTALL HOSE ASSEMBLY (MAIN OIL PUMP TO INLET HOUSING OIL  
SCAVENGE TEE) (Continued)**

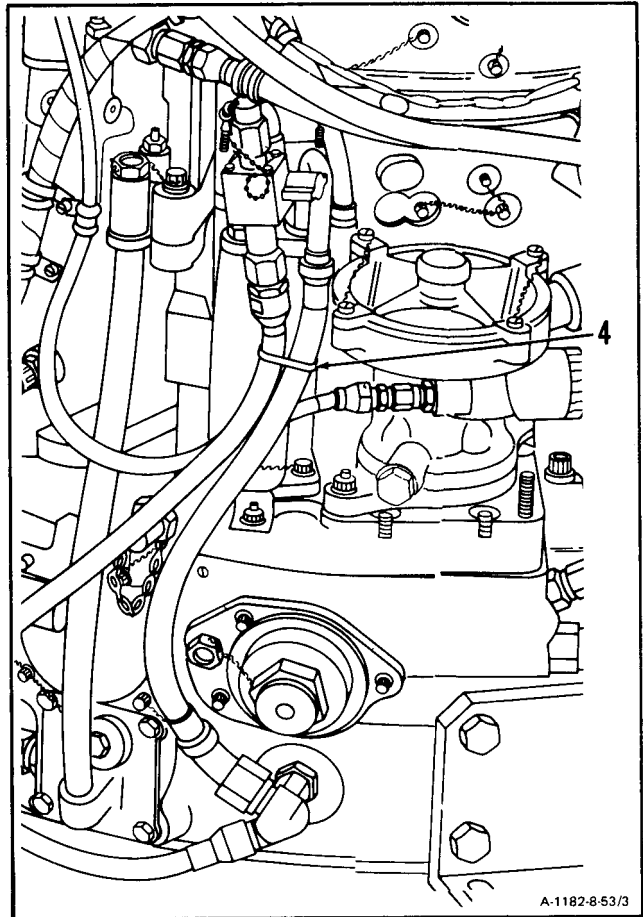
8-53

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**

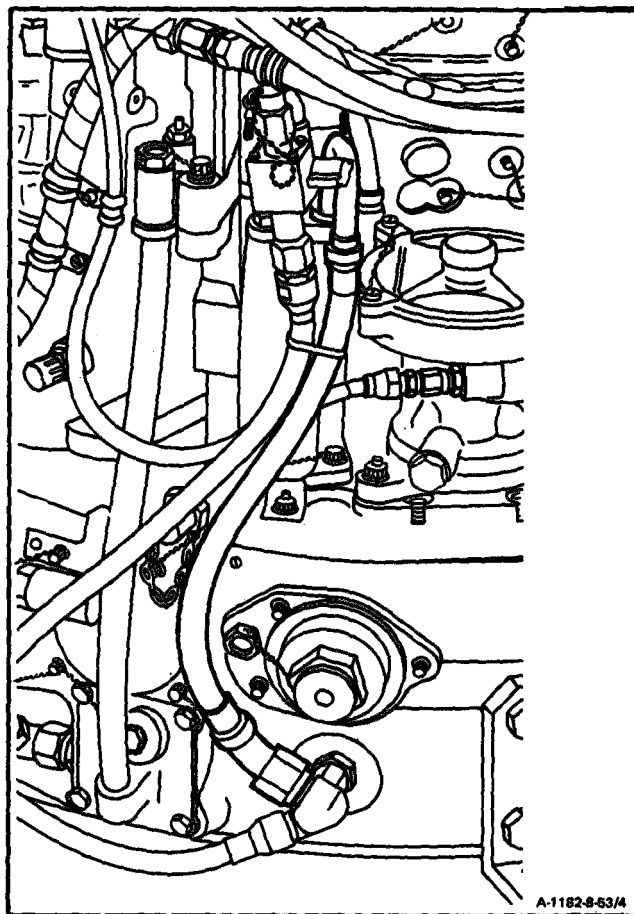
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**8-53 INSTALL HOSE ASSEMBLY (MAIN OIL PUMP TO INLET HOUSING OIL  
SCAVENGE TEE) (Continued)**

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:**

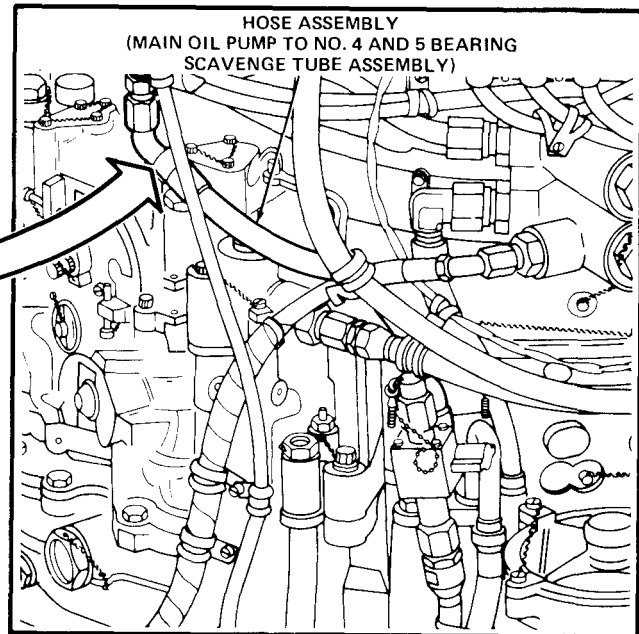
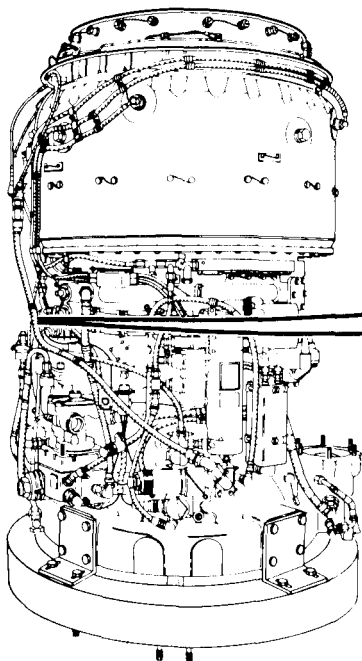
Wiping Rag (E58)

**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.



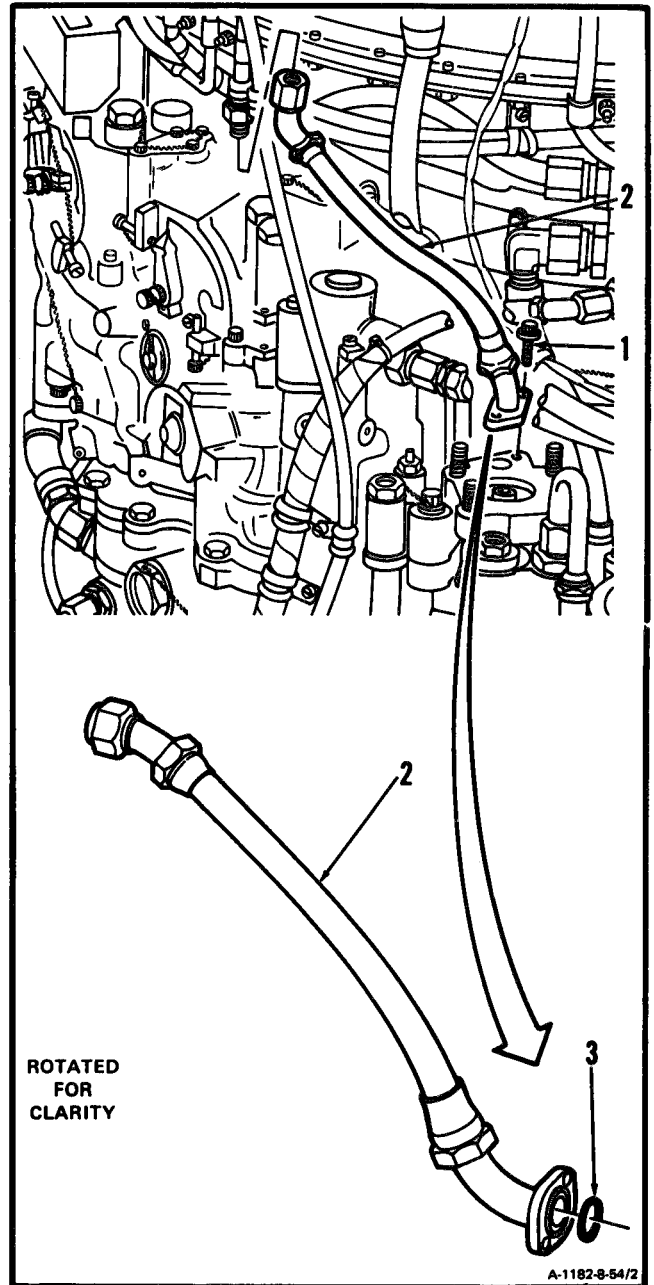
A-1182-8-54/1

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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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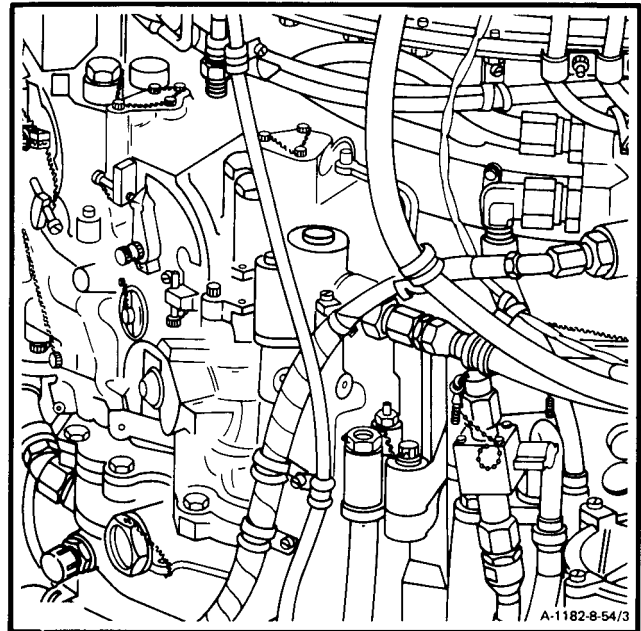
---

**8-54 REMOVE HOSE ASSEMBLY (MAIN OIL PUMP TO NO. 4 AND 5 BEARING  
SCAVENGE TUBE ASSEMBLY) (Continued)**

---

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:**

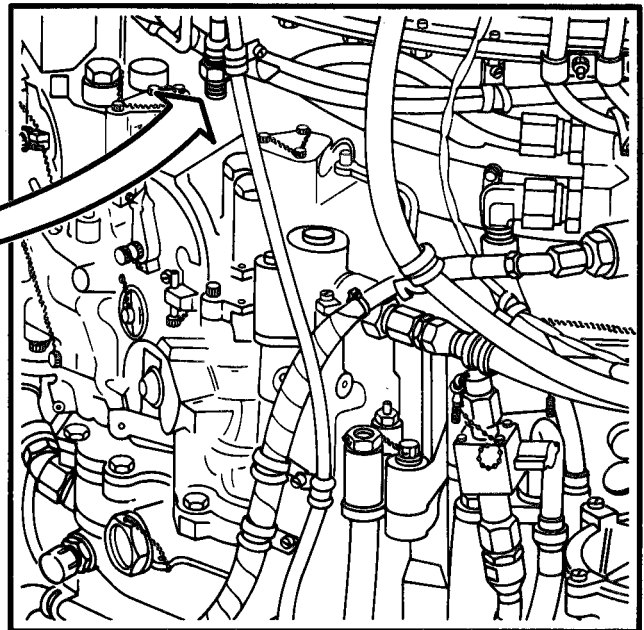
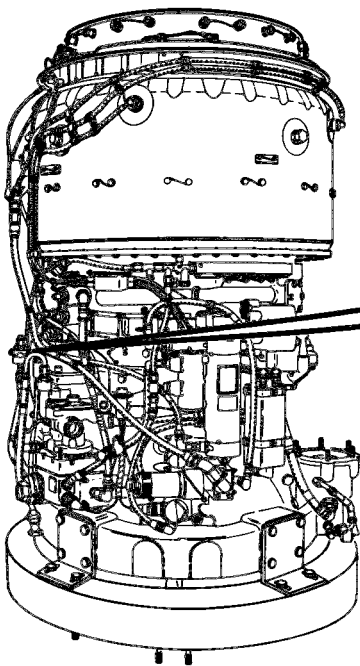
Packing

**Personnel Required:**

68B10 Aircraft Powerplant Repairer  
68B30 Aircraft Powerplant Inspector

**References:**

TM 55-2840-254-23P

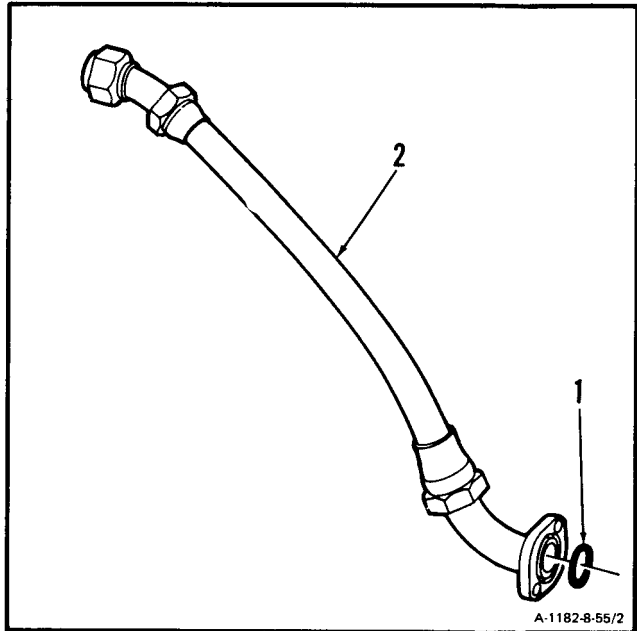


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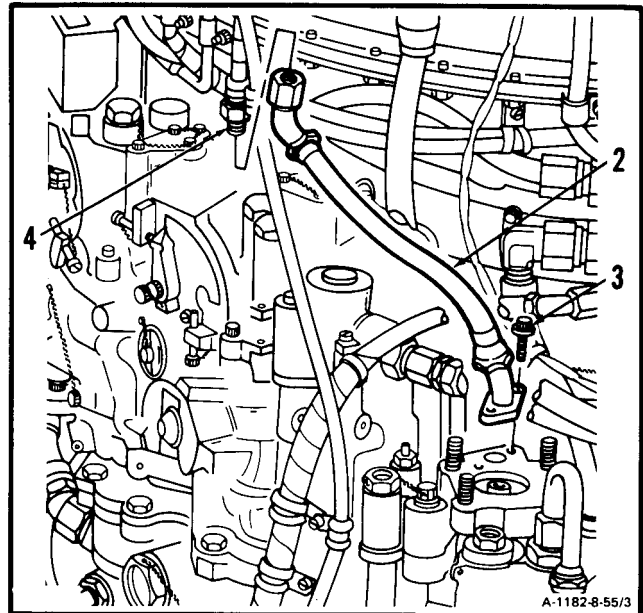
**8-55 INSTALL HOSE ASSEMBLY (MAIN OIL PUMP TO NO. 4 AND 5 BEARING  
SCAVENGE TUBE ASSEMBLY) (Continued)**

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**

**GO TO NEXT PAGE**



**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:**

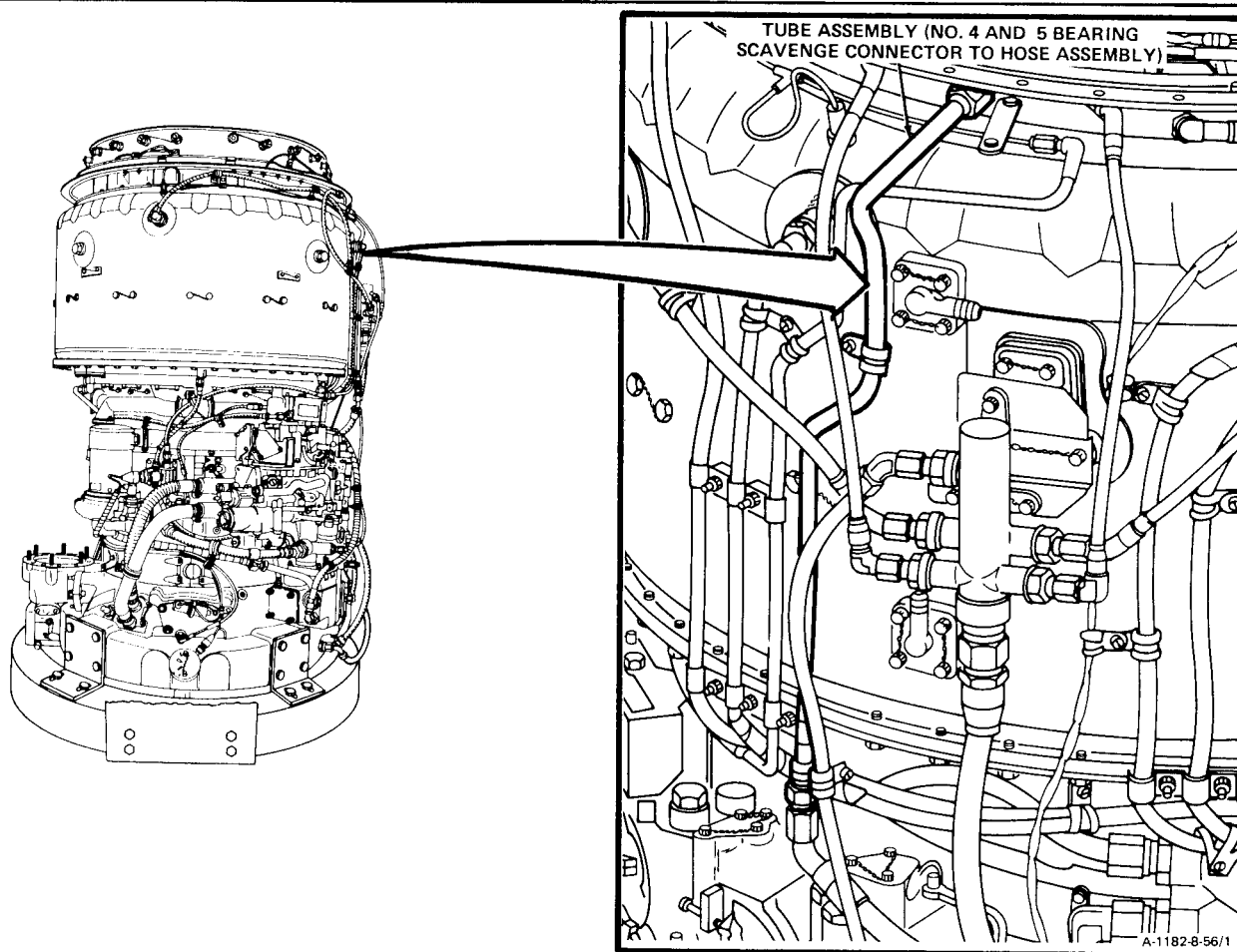
Wiping Rag (E58)

**Personnel Required:**

68B10 Aircraft Powerplant Repairer

**General Safety Instructions:****WARNING**

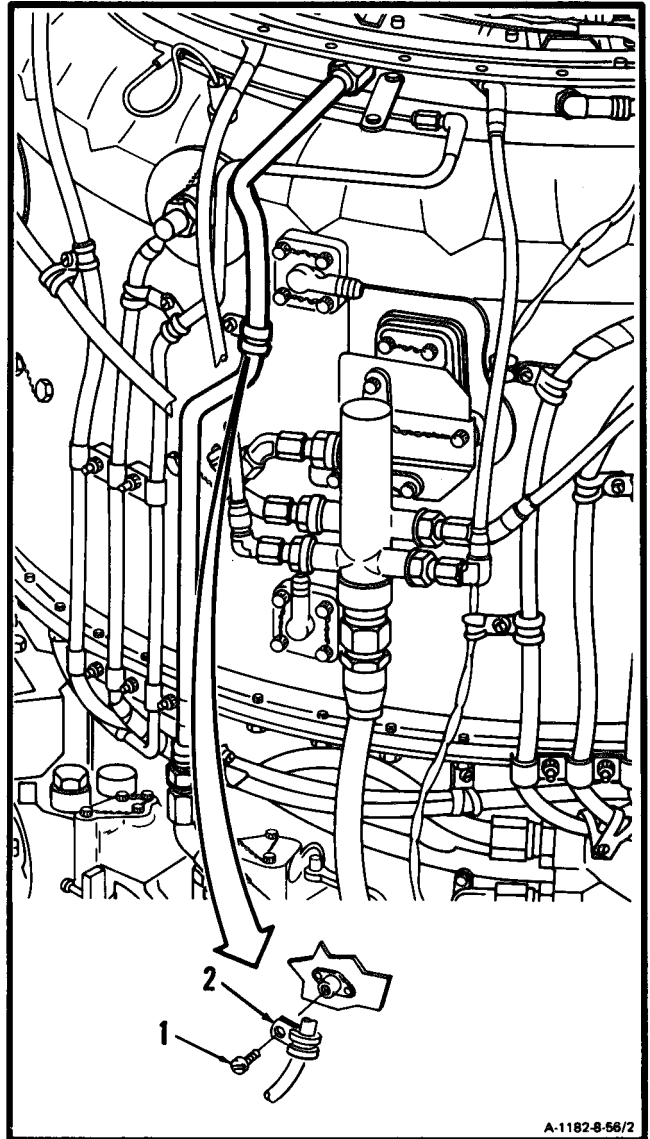
Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin, and do not take internally. 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).

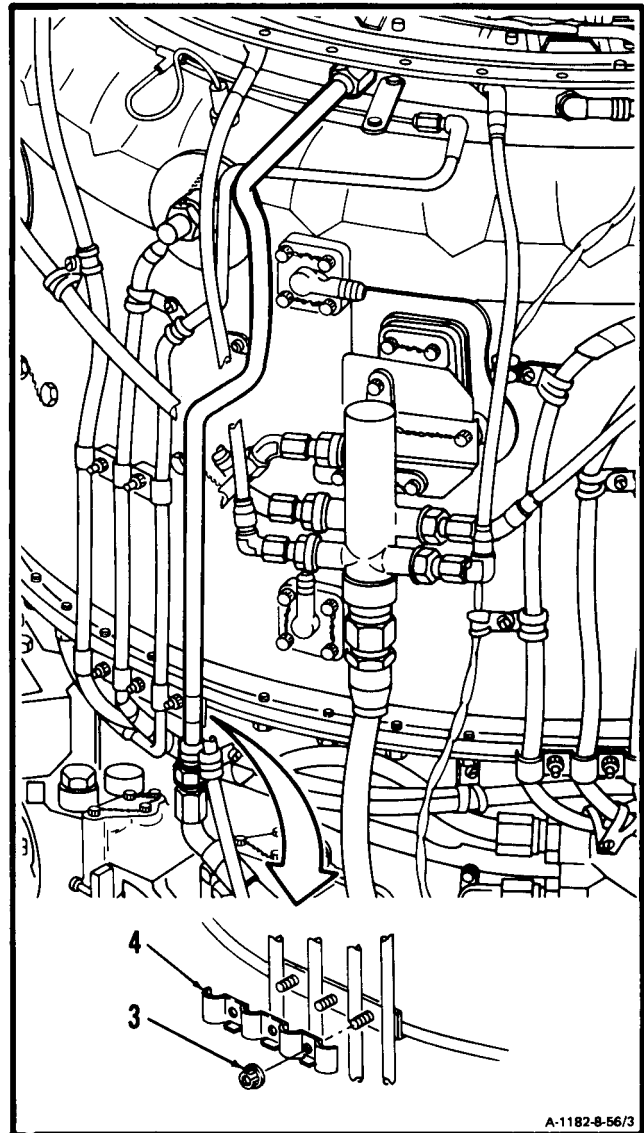


A-1182-8-56/2

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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).

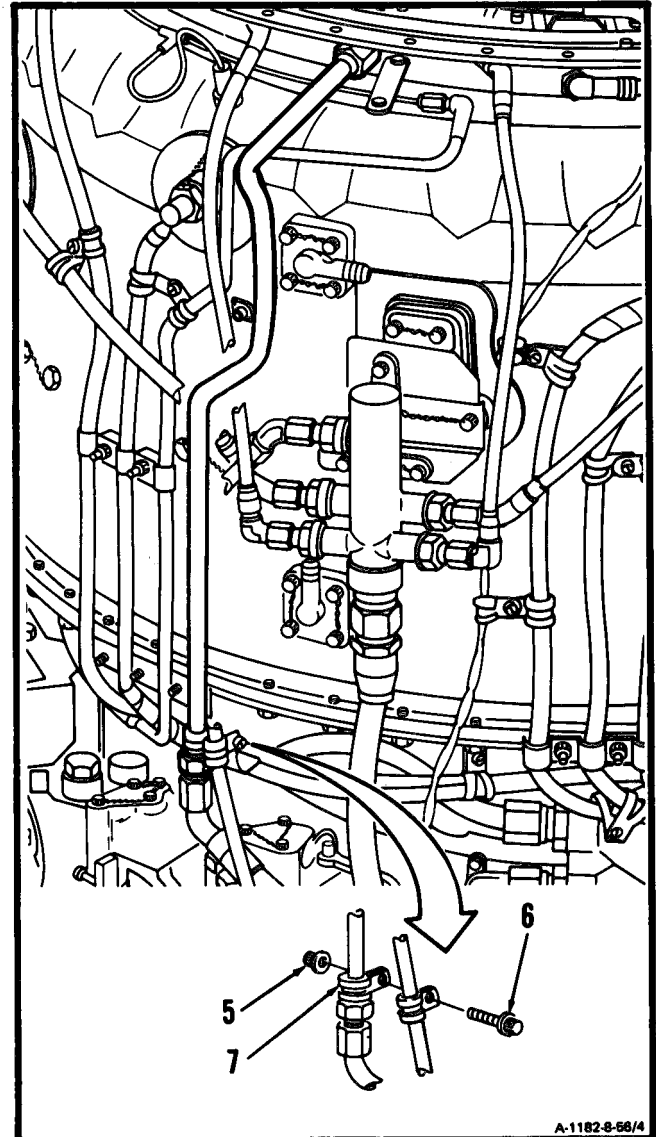


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**8-56 REMOVE TUBE ASSEMBLY (NO. 4 AND 5 BEARING SCAVENGE CONNECTOR TO HOSE ASSEMBLY) (Continued)**

8-56

3. Remove nut (5), screw (6), and clamp (7).



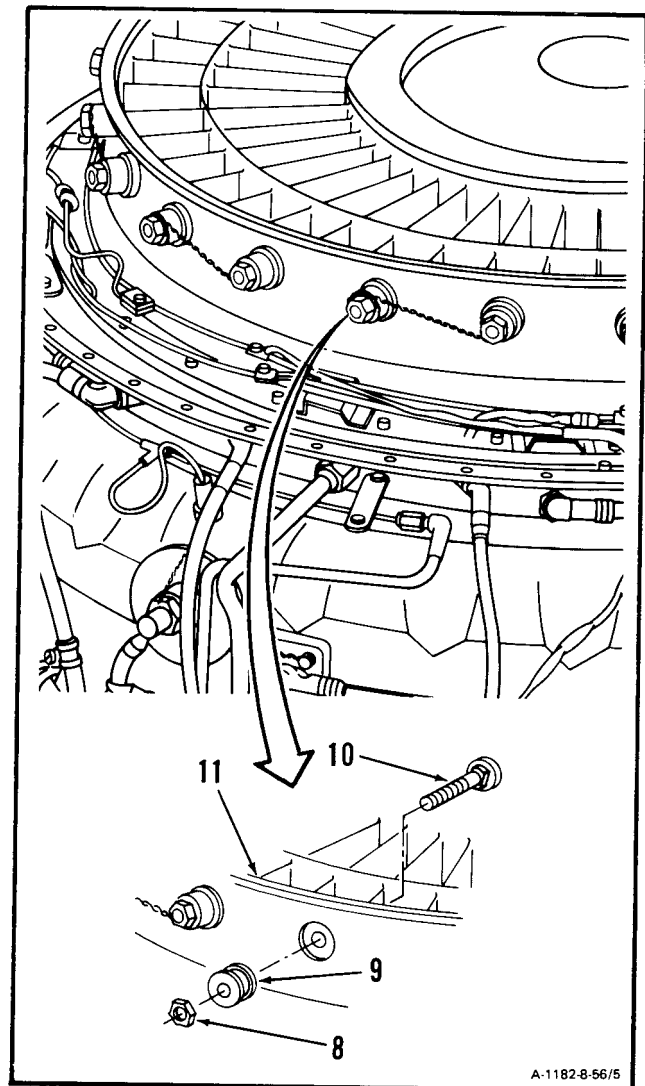
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**8-56 REMOVE TUBE ASSEMBLY (NO. 4 AND 5 BEARING SCAVENGE CONNECTOR  
TO HOSE ASSEMBLY (Continued)**

8-56

4. **Remove** lockwire, nut (8), spacer (9), and bolt (10) from exit vane assembly (11).



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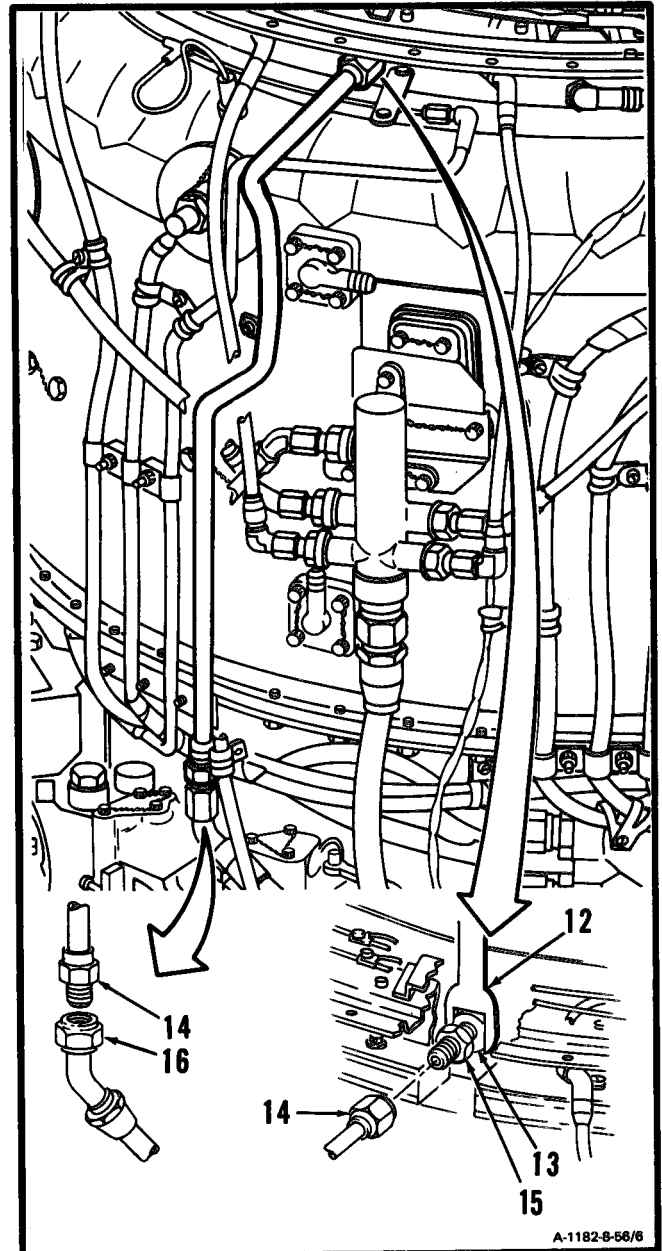
**8-56 REMOVE TUBE ASSEMBLY (NO. 4 AND 5 BEARING SCAVENGE CONNECTOR  
TO HOSE ASSEMBLY (Continued)**

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).

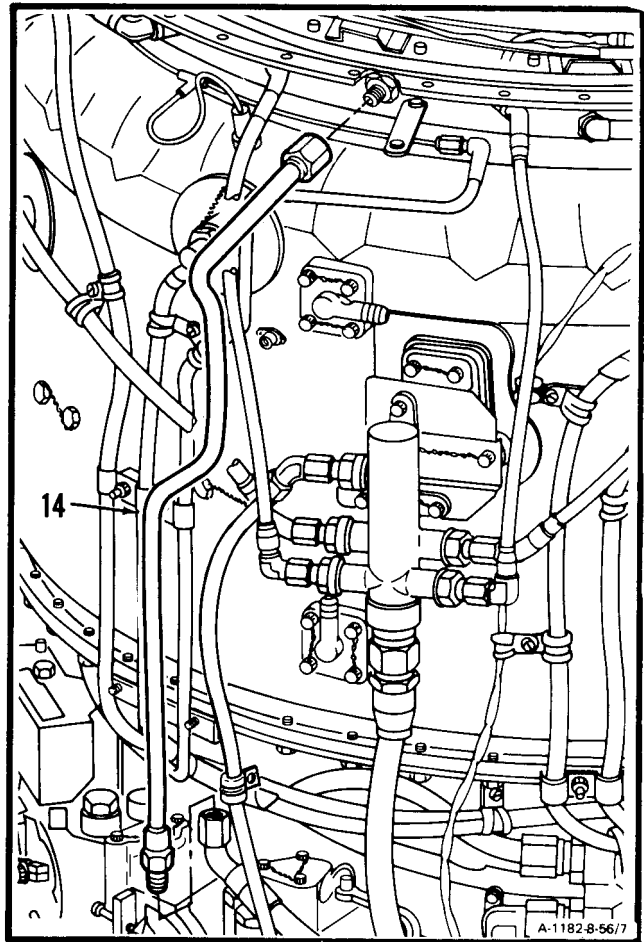
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**8-56 REMOVE TUBE ASSEMBLY (NO. 4 AND 5 BEARING SCAVENGE CONNECTOR  
TO HOSE ASSEMBLY) (Continued)**

---

8. Remove tube assembly (14).



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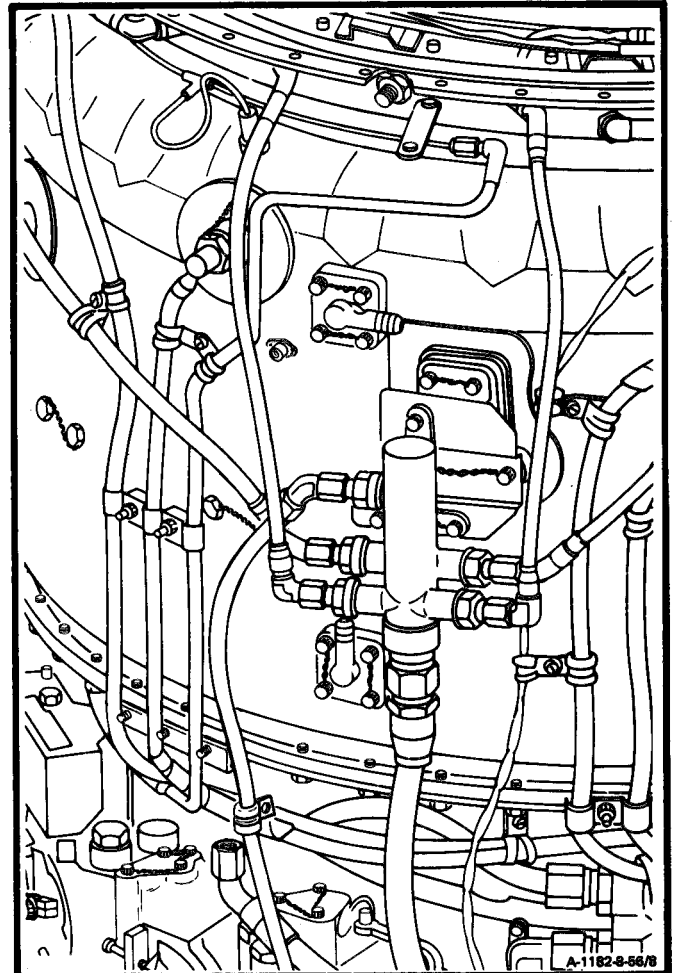
**8-56 REMOVE TUBE ASSEMBLY (NO. 4 AND 5 BEARING SCAVENGE CONNECTOR  
TO HOSE ASSEMBLY) (Continued)**

---

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:**

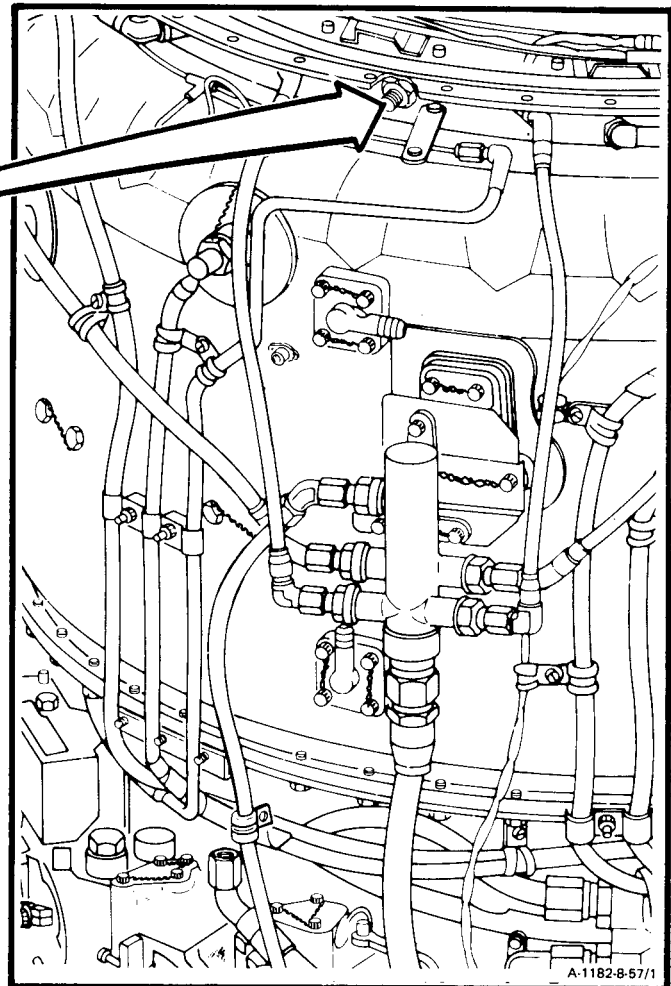
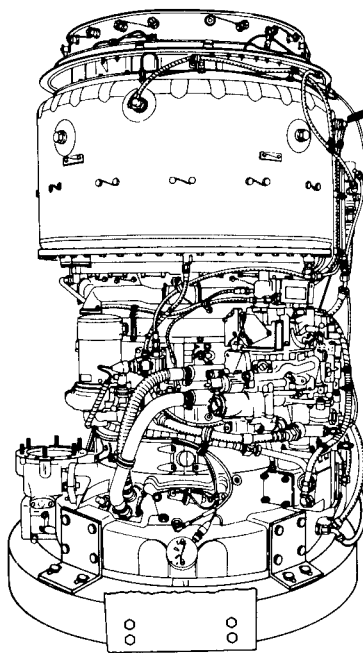
Powerplant Mechanic's Tool Kit,  
NSN 5180-00-323-4944  
Technical Inspection Tool Kit,  
NSN 5180-00-323-5114  
Open-End Wrench (T53)  
Torque Wrench, 30-150 Inch-Pounds

**Materials:**

Lockwire (E29)

**Personnel Required:**

68610 Aircraft Powerplant Repairer  
68630 Aircraft Powerplant Inspector



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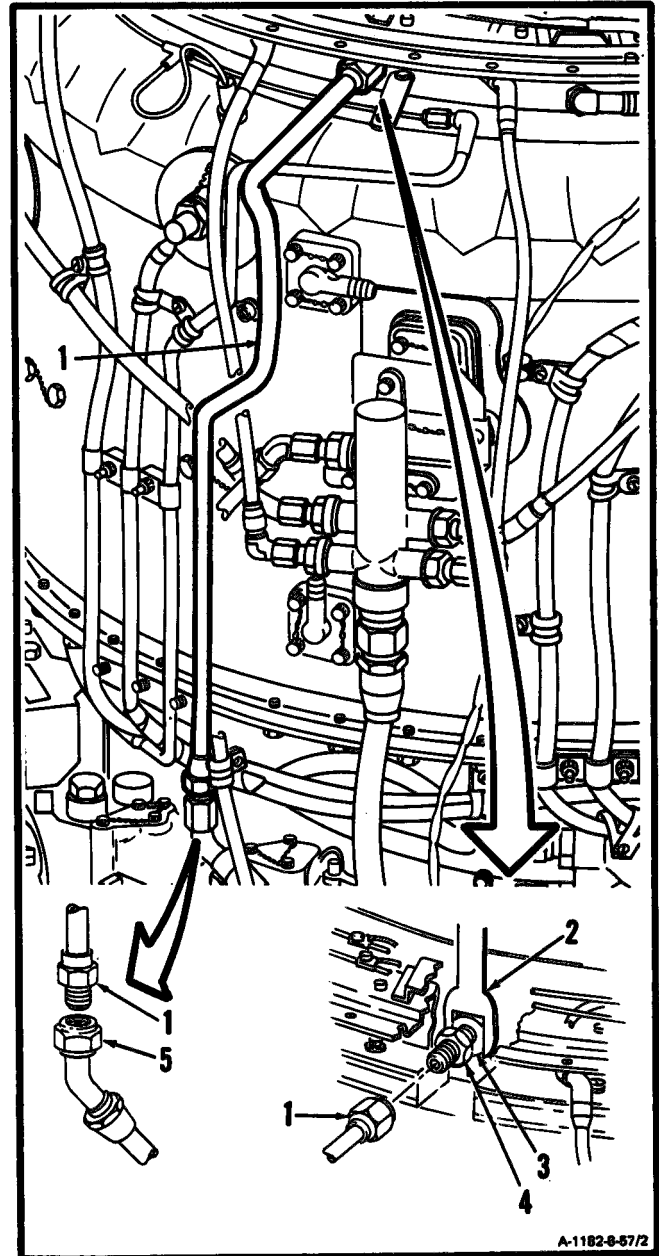
## 8-57 INSTALL TUBE ASSEMBLY (NO. 4 AND 5 BEARING SCAVENGE CONNECTOR TO HOSE ASSEMBLY) (Continued)

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).

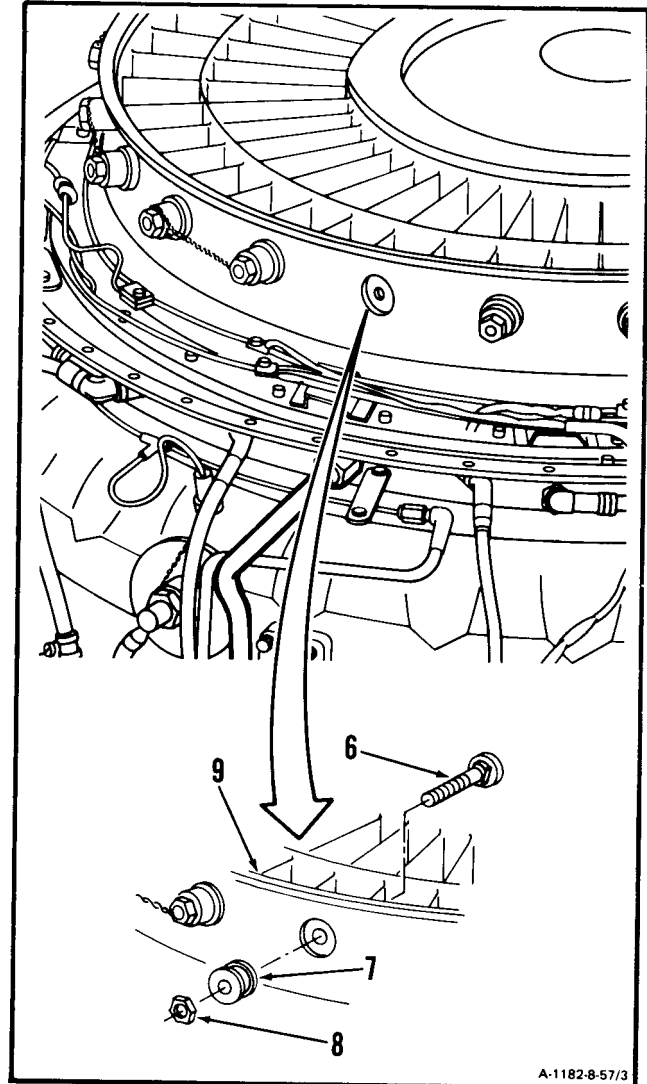


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**8-57 INSTALL TUBE ASSEMBLY (NO. 4 AND 5 BEARING SCAVENGE CONNECTOR TO HOSE ASSEMBLY) (Continued)**

8-57

2. Install bolt (6), spacer (7) and nut (8) in exit vane assembly (9). Torque nut (8) to 125-inch-pounds.



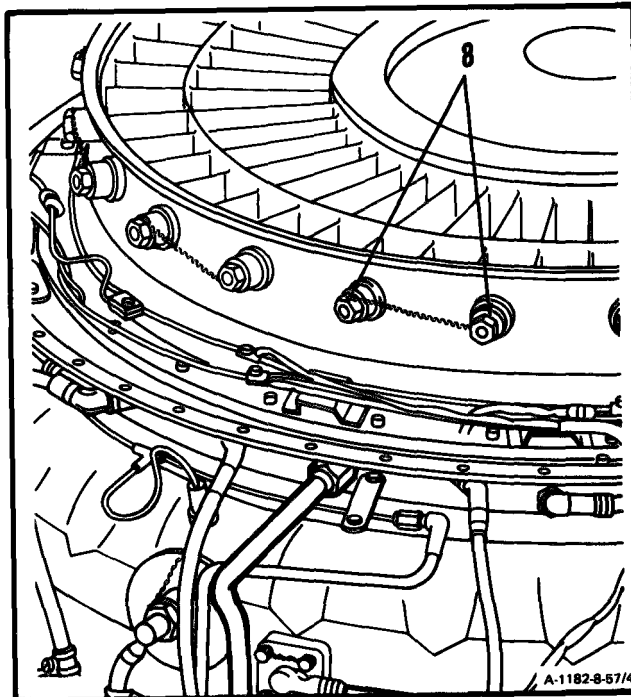
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**8-57 INSTALL TUBE ASSEMBLY (NO. 4 AND 5 BEARING SCAVENGE CONNECTOR  
TO HOSE ASSEMBLY) (Continued)**

---

3. LockWire nuts (8) together. Use lockwire (E29).

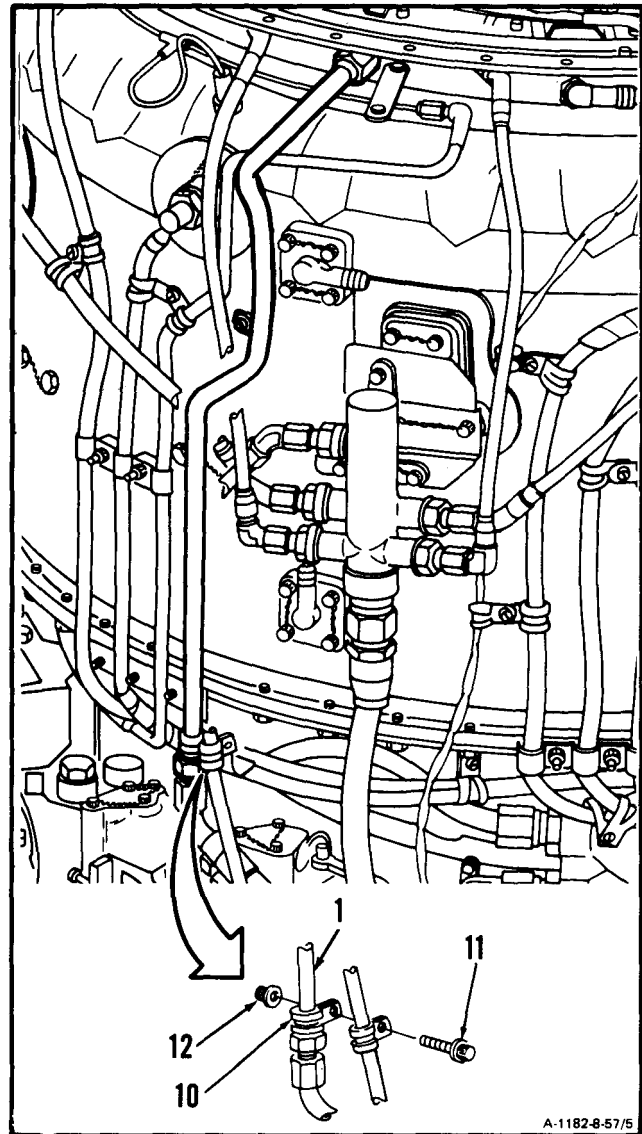


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**8-57 INSTALL TUBE ASSEMBLY (NO. 4 AND 5 BEARING SCAVENGE CONNECTOR TO HOSE ASSEMBLY) (Continued)**

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



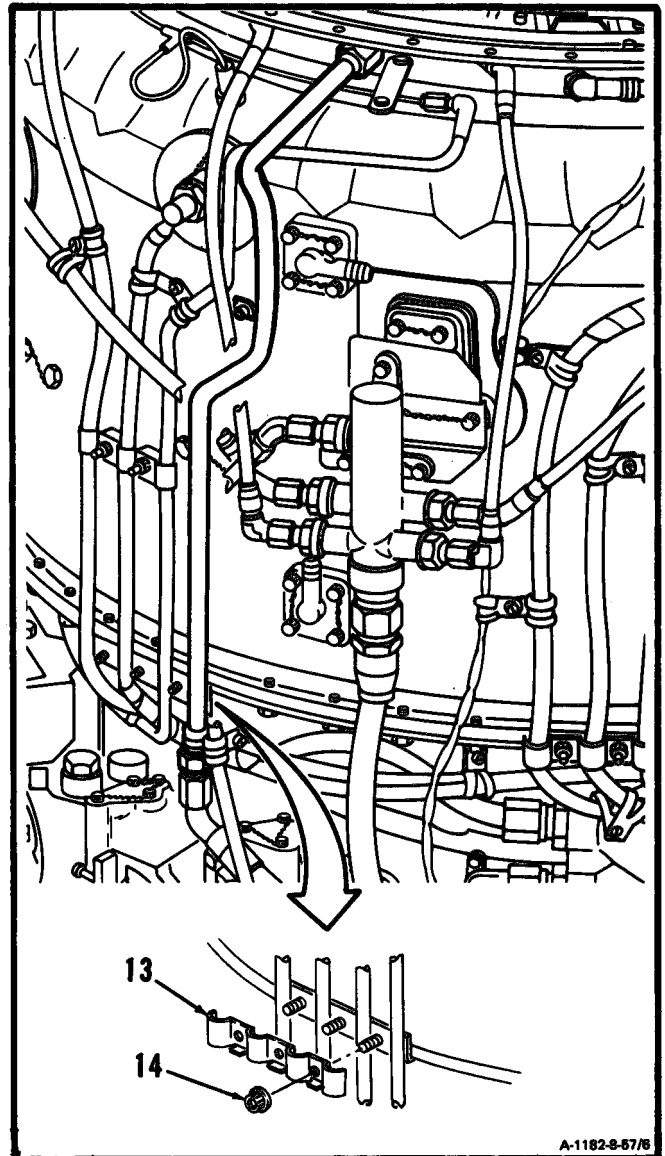
A-1182-8-57/5

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**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).

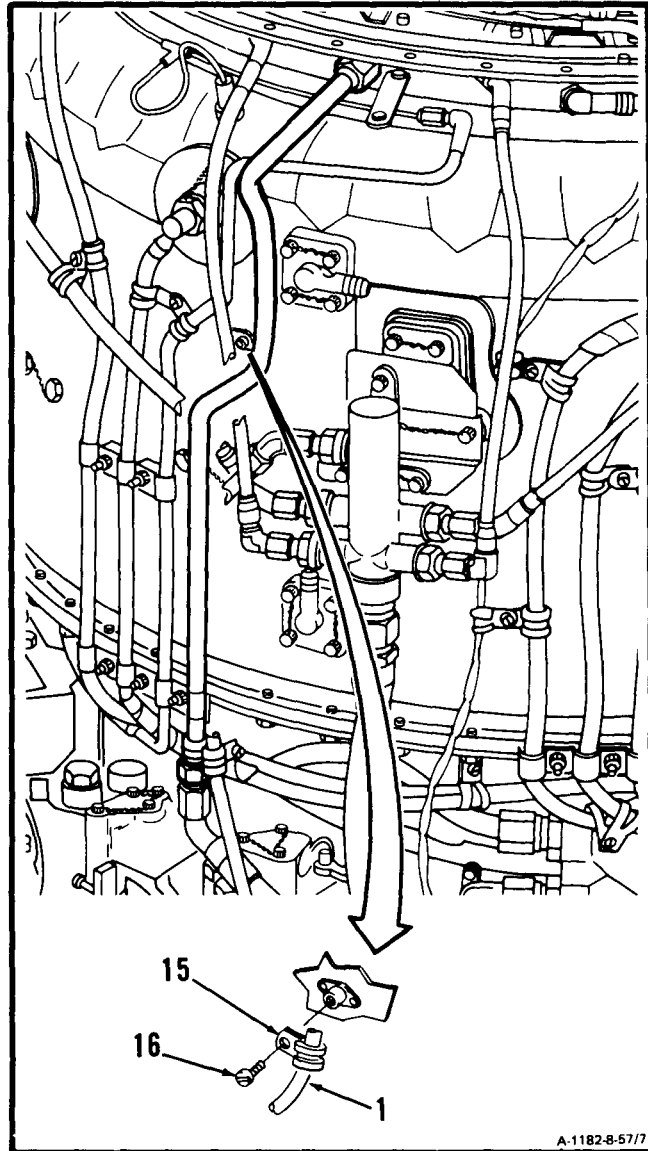


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**8-57 INSTALL TUBE ASSEMBLY (NO. 4 AND 5 BEARING SCAVENGE CONNECTOR TO HOSE ASSEMBLY) (Continued)**

8-57

6. **Install clamp (15)** on tube assembly (1), and install screw (16). Lockwire screw. Use lockwire (E29).

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

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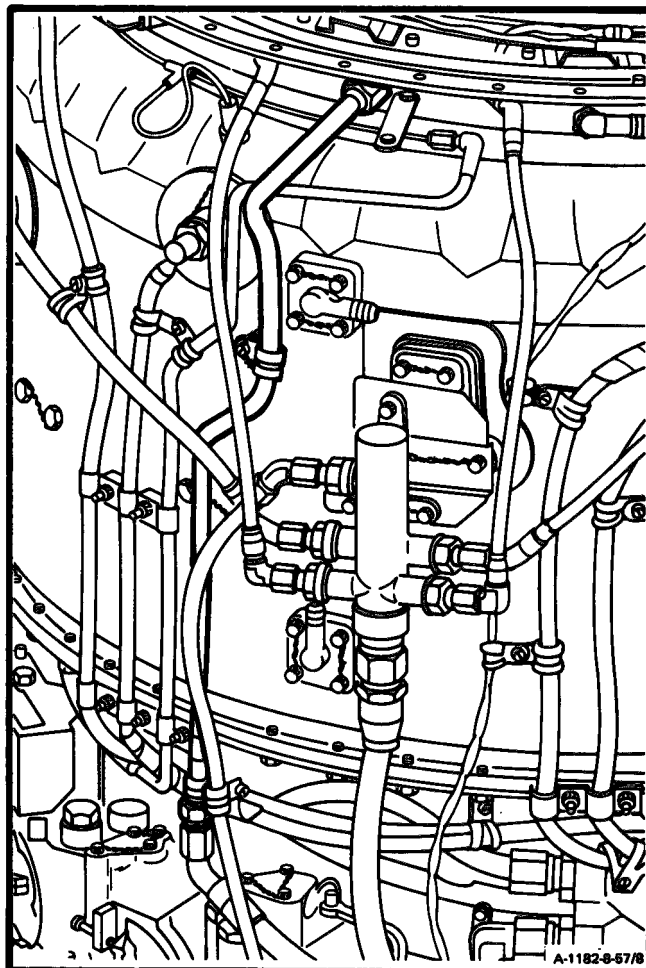
**8-57 INSTALL TUBE ASSEMBLY (NO. 4 AND 5 BEARING SCAVENGE CONNECTOR TO HOSE ASSEMBLY) (Continued)**

---

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**

**General Safety Instructions:**

**WARNING**

**Applicable Configurations:**

All

**Tools:**

- Powerplant Mechanic's Tool Kit,  
NSN 5180-00-323-4944
- Container, 1 Quart
- Open-End Wrench (T53)

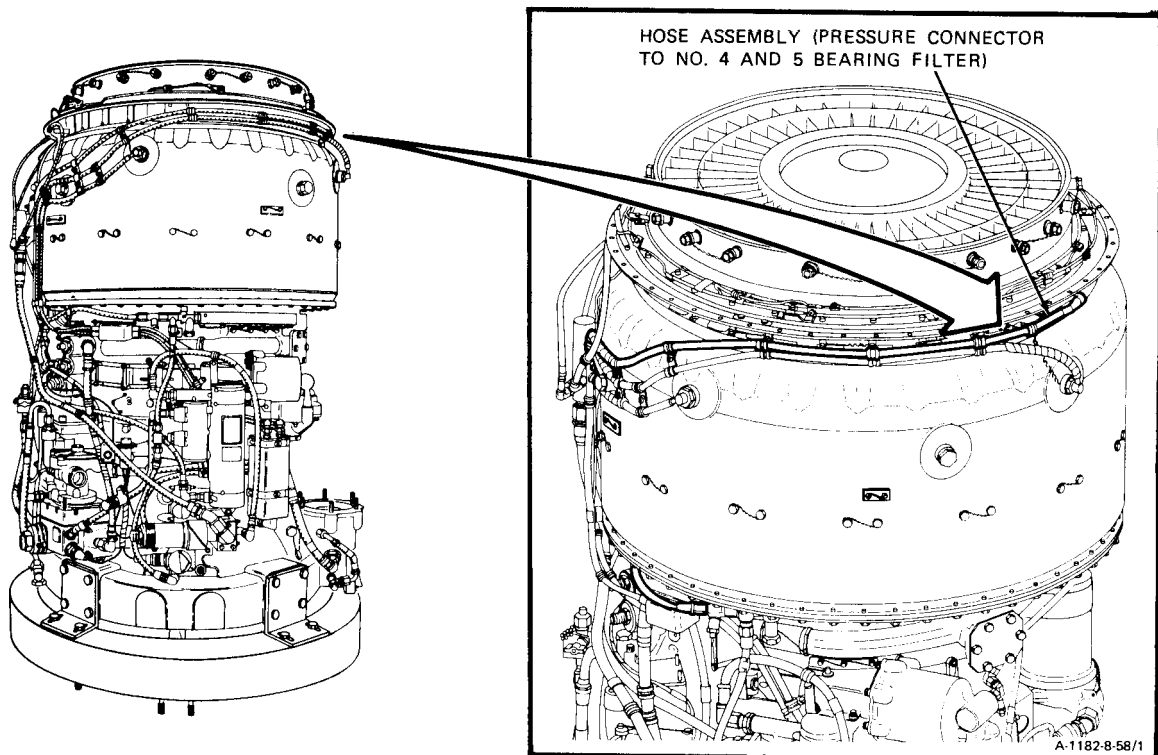
**Materials:**

- Wiping Rag (E58)

**Personnel Required:**

- 68B10 Aircraft Powerplant Repairer

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.

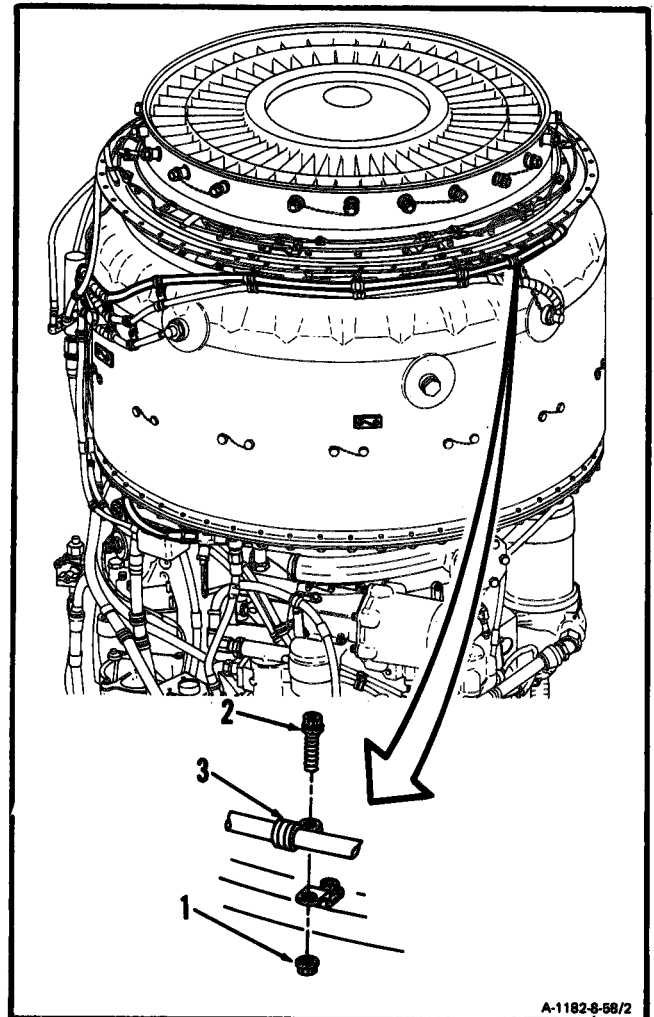


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**8-58 REMOVE HOSE ASSEMBLY (PRESSURE CONNECTOR TO NO. 4 AND 5 BEARING FILTER) (Continued)**

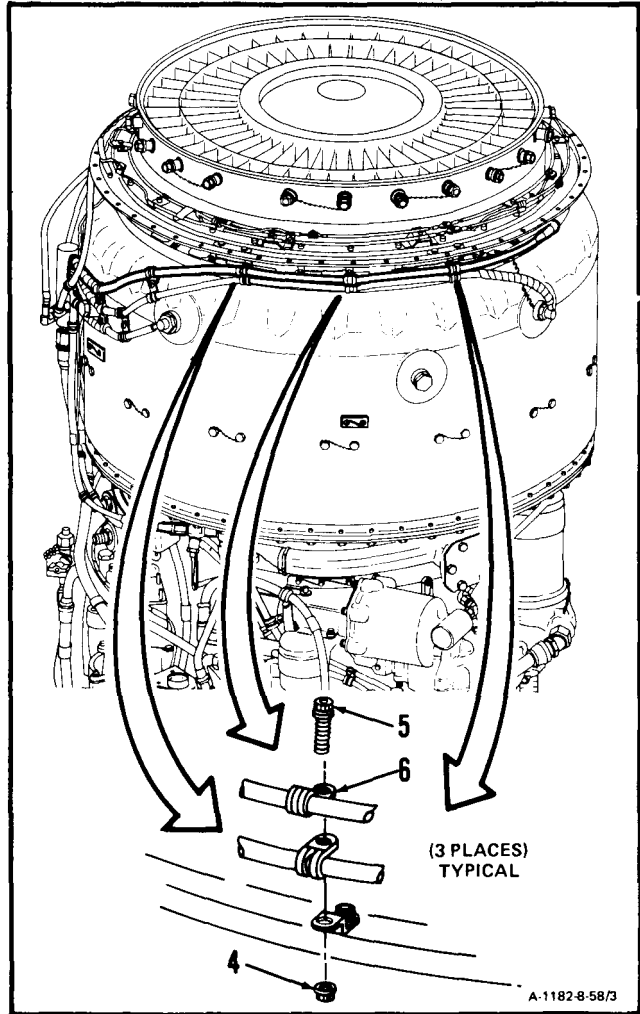
8-58

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

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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).

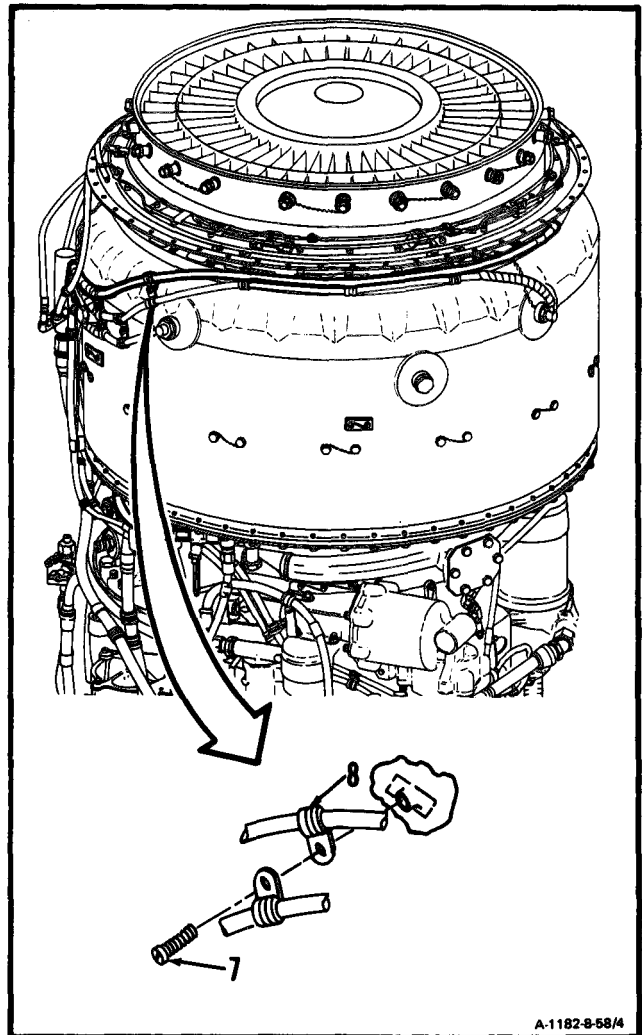


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**8-58 REMOVE HOSE ASSEMBLY (PRESSURE CONNECTOR TO NO. 4 AND 5 BEARING FILTER) (Continued)**

8-58

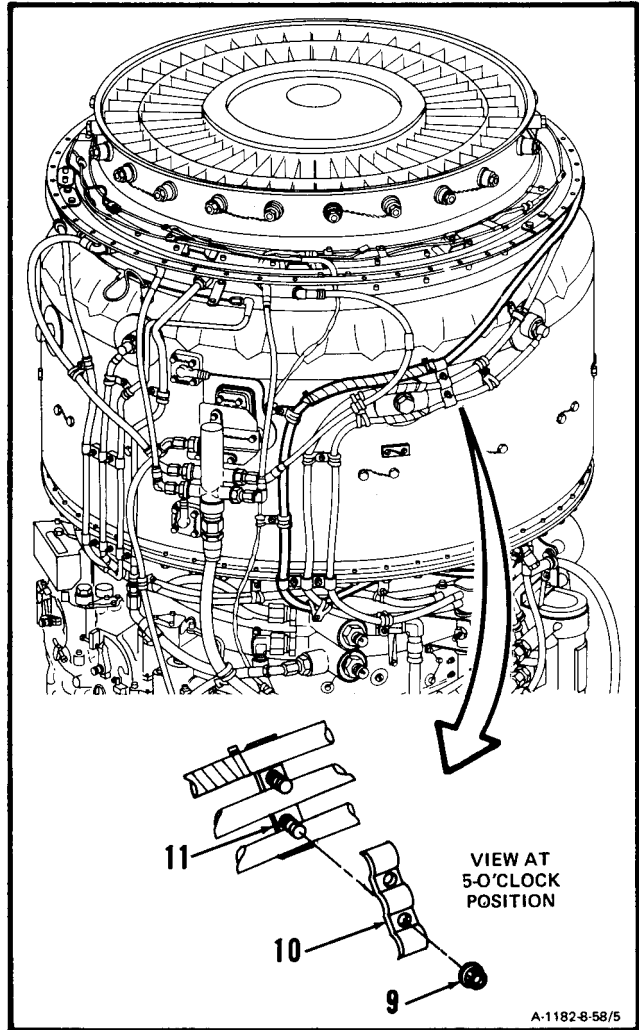
3. Remove lockwire, screw (7), and clamp (8).



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4. Remove two nuts (9) and clamps (10 and 11).

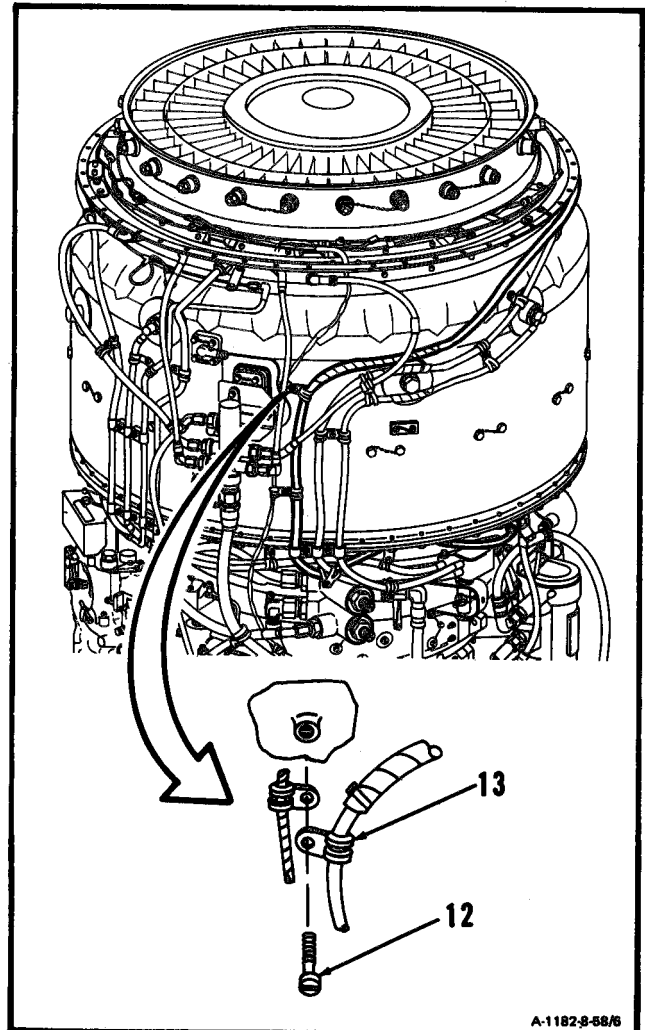


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**8-58 REMOVE HOSE ASSEMBLY (PRESSURE CONNECTOR TO NO. 4 AND 5 BEARING FILTER) (Continued)**

8-58

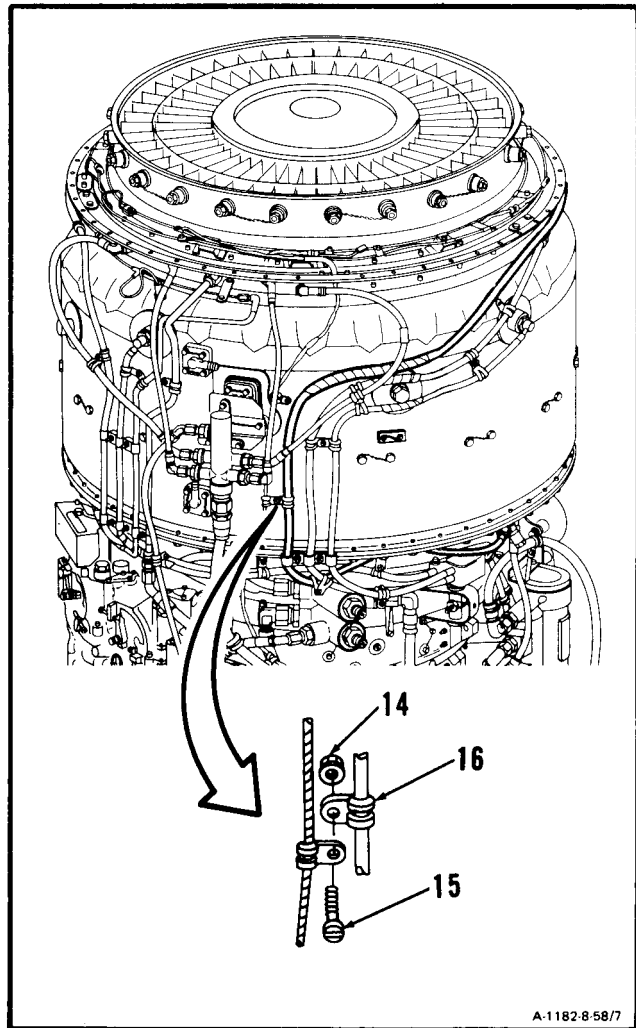
5. Remove lockwire, screw (12), and clamp (13).



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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).



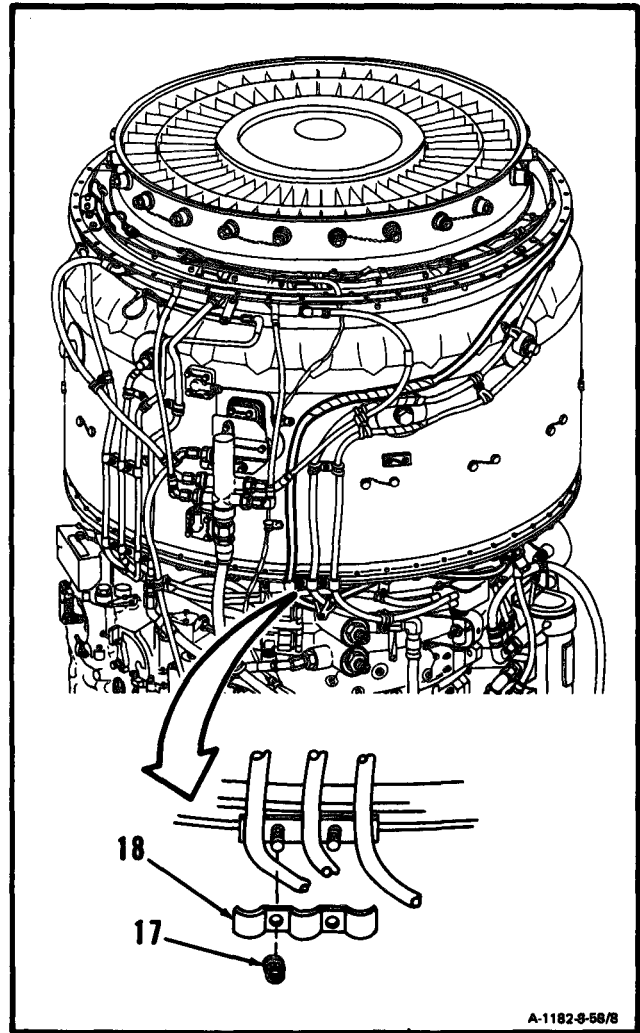
A-1182-8-58/7

**GO TO NEXT PAGE**

**8-58 REMOVE HOSE ASSEMBLY (PRESSURE CONNECTOR TO NO. 4 AND 5 BEARING FILTER) (Continued)**

8-58

7. Remove two nuts (17) and strap (18).

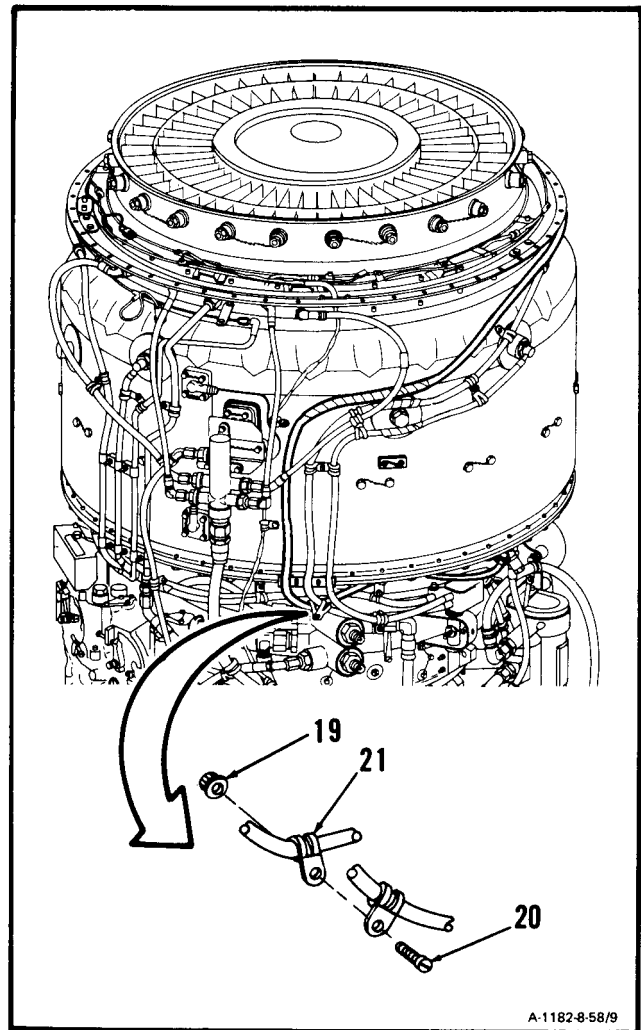


A-1182-8-58/8

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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).



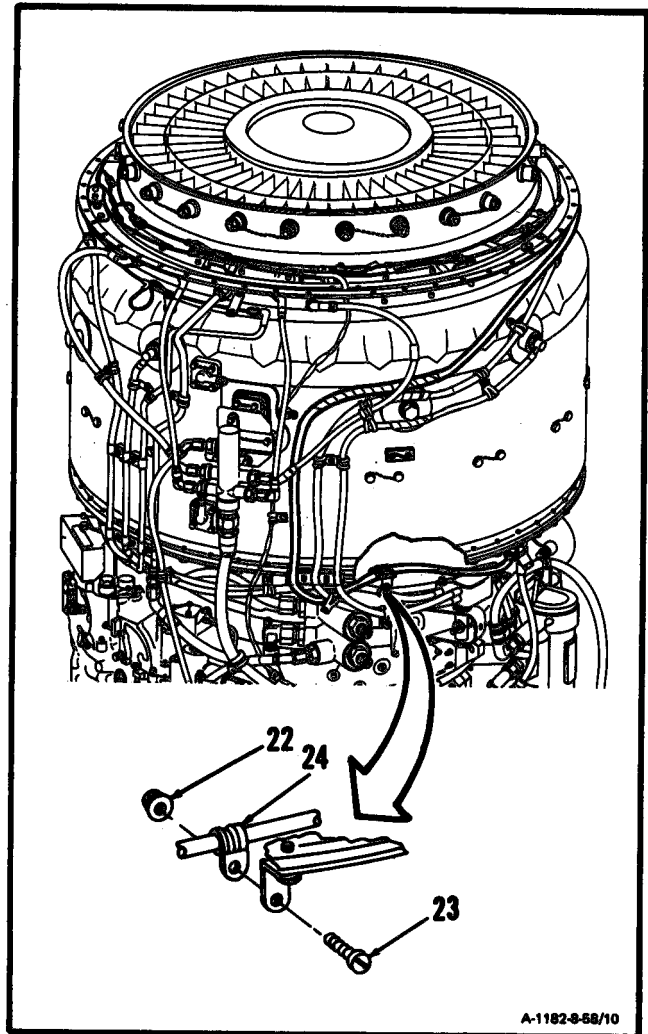
A-1182-8-58/9

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**8-58 REMOVE HOSE ASSEMBLY (PRESSURE CONNECTOR TO NO. 4 AND 5 BEARING FILTER) (Continued)**

8-58

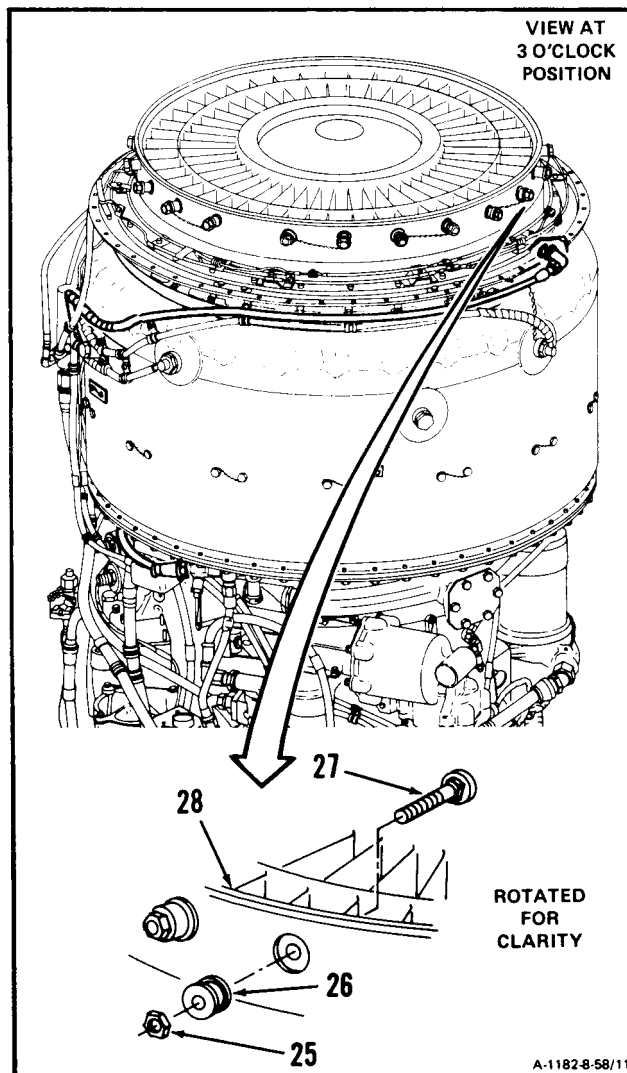
9. Remove nut (22), screw (23), and clamp (24).



**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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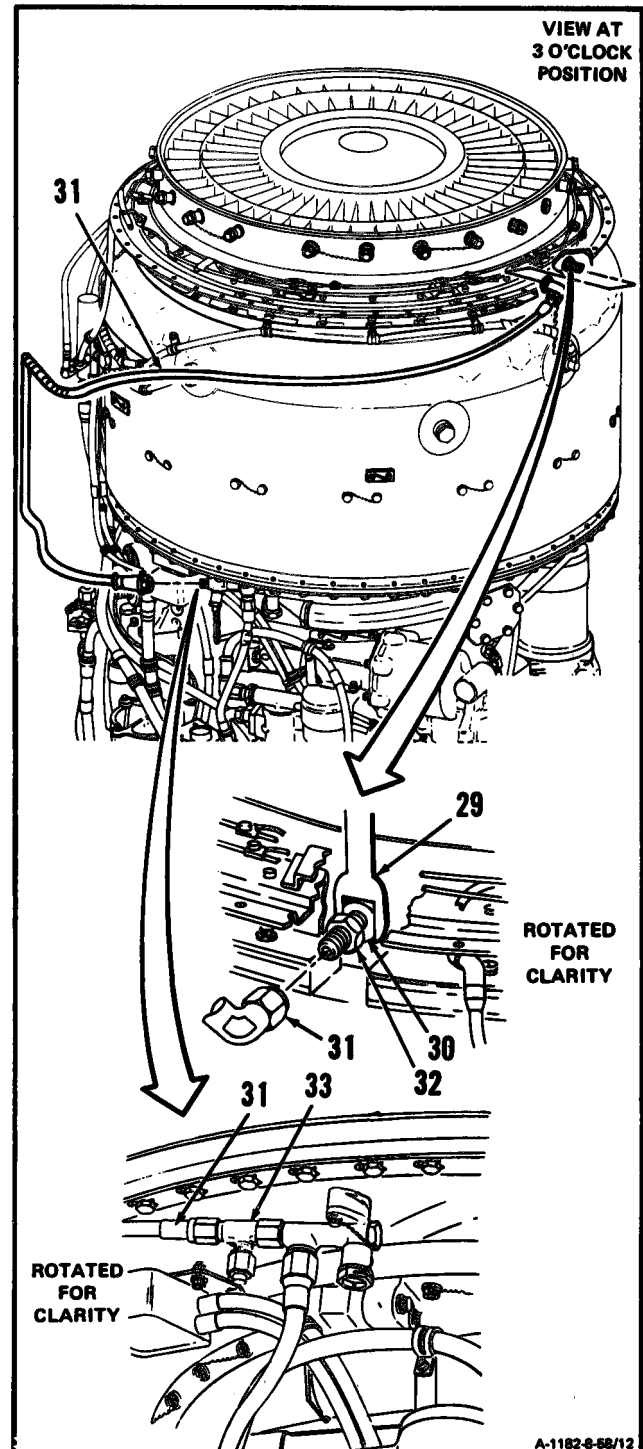
**8-58 REMOVE HOSE ASSEMBLY (PRESSURE CONNECTOR TO NO. 4 AND 5 BEARING LUBE ADAPTER) (Continued)**

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).

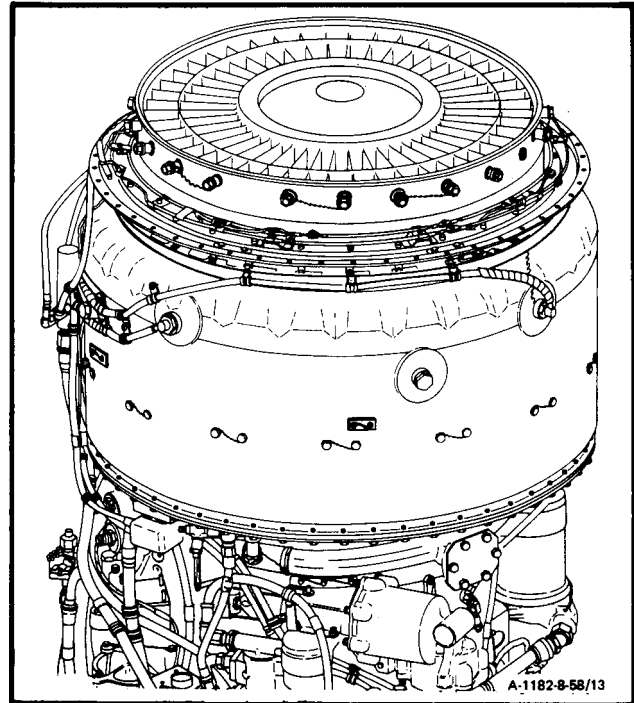


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FOLLOW-ON MAINTENANCE:

None



END OF TASK

**8-59 INSTALL HOSE ASSEMBLY (PRESSURE CONNECTOR TO NO. 4 AND 5 BEARING FILTER)**

8-59

**INITIAL SETUP**

**Applicable Configurations:**

All

**Tools:**

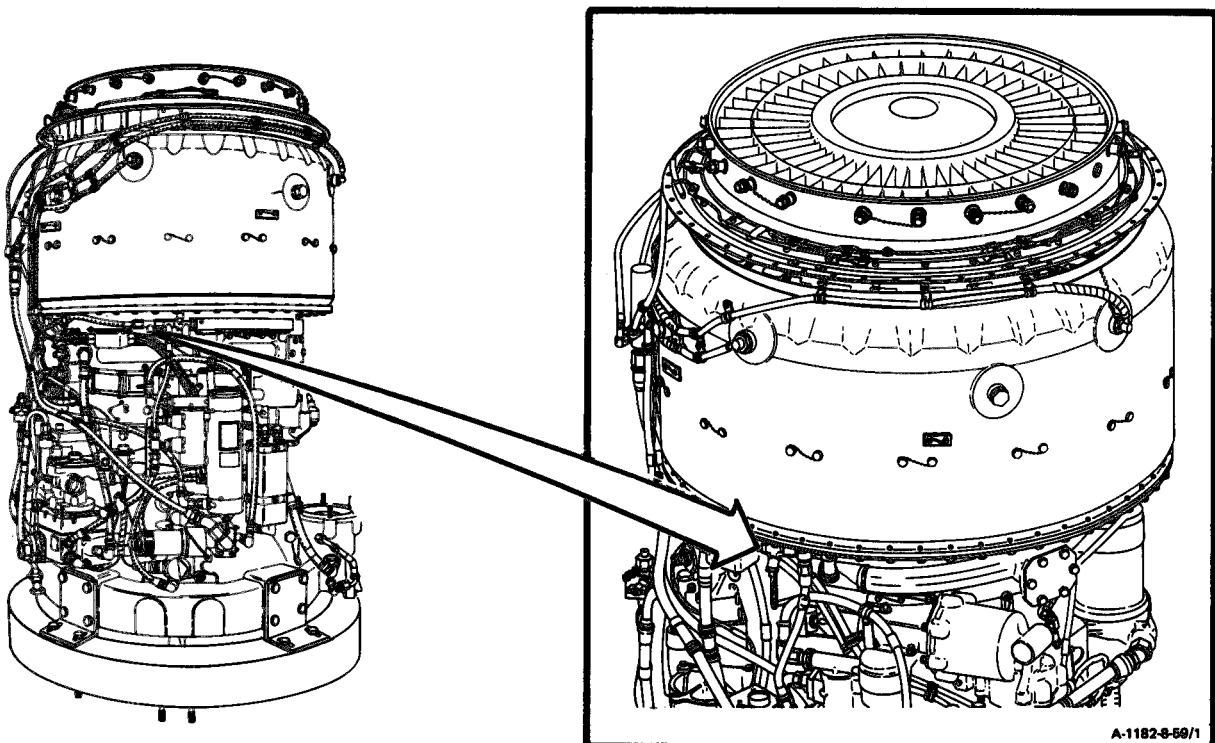
- Powerplant Mechanic's Tool Kit,  
NSN 5180-00-323-4944
- Technical Inspection Tool Kit,  
NSN 5180-00-323-5114
- Open-End Wrench (T53)
- Torque Wrench, 30-150 Inch-Pounds

**Materials:**

Lockwire (E29)

**Personnel Required:**

- 68B10 Aircraft Powerplant Repairer
- 68B30 Aircraft Powerplant Inspector

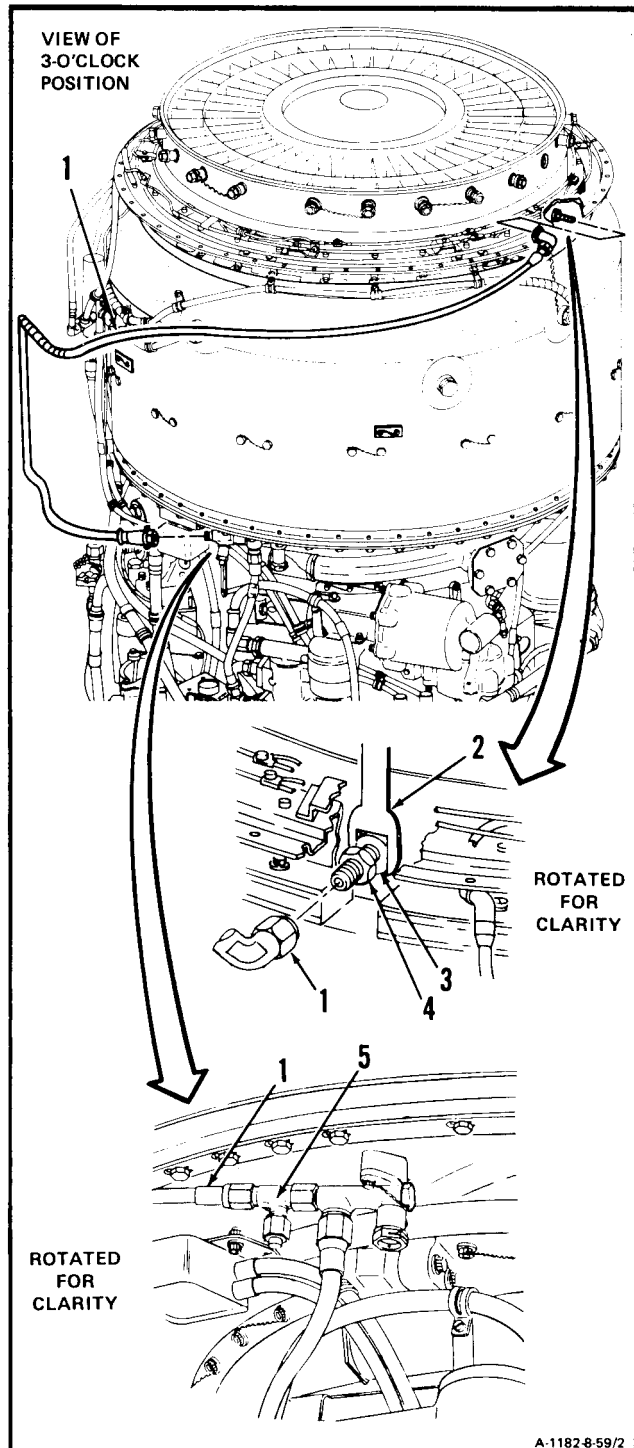


**GO TO NEXT PAGE**

**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).

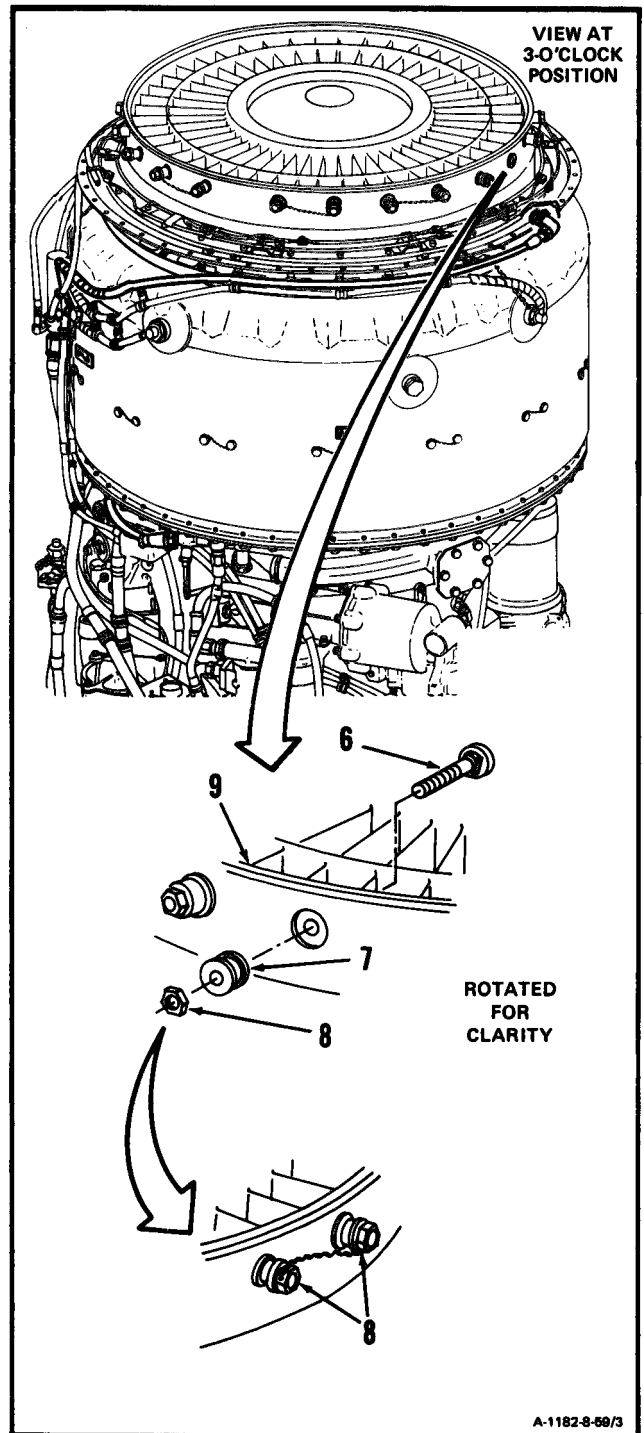


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**8-59 INSTALL HOSE ASSEMBLY (PRESSURE CONNECTOR TO NO. 4 AND 5 BEARING FILTER) (Continued)**

8-59

2. Install bolt (6), spacer (7), and nut (8) in exit vane assembly (9). Torque nut (8) to 125 inch-pounds.

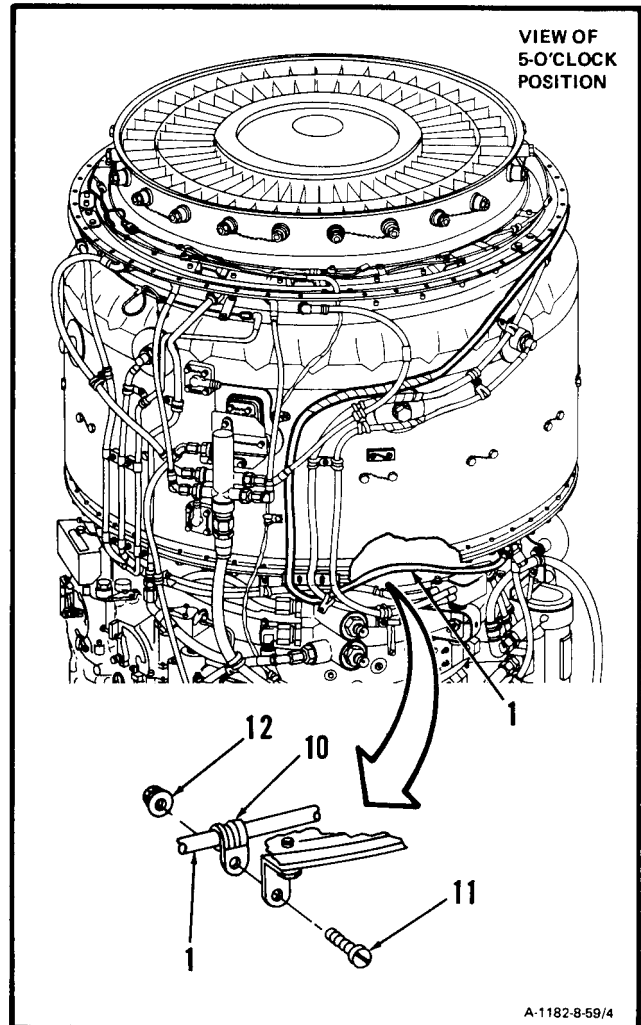


3. Lockwire nuts (8) together. Use lockwire (E29).

**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).

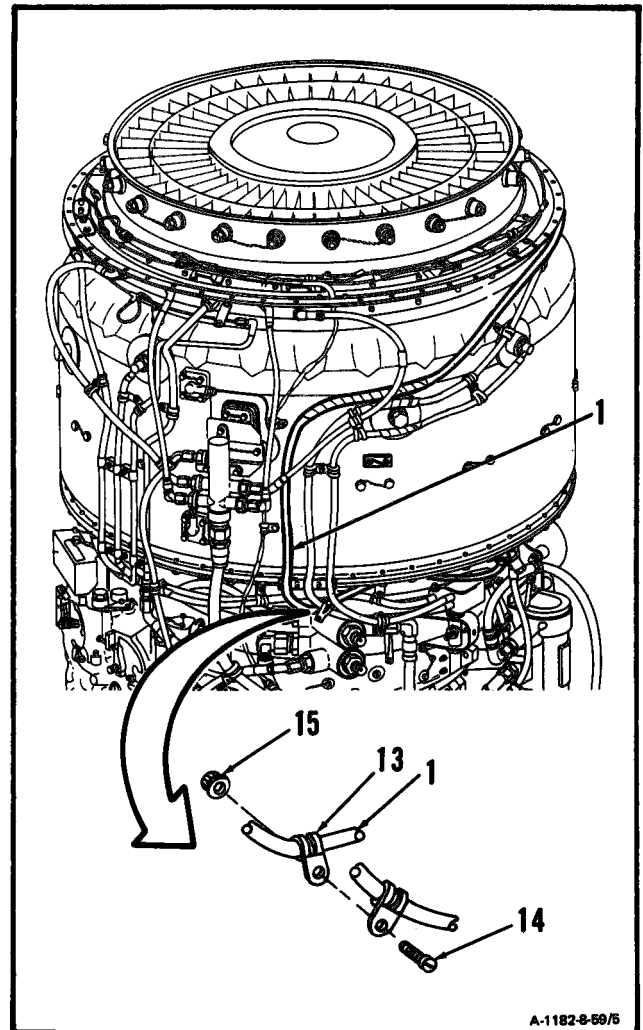


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**8-59 INSTALL HOSE ASSEMBLY (PRESSURE CONNECTOR TO NO. 4 AND 5 BEARING FILTER) (Continued)**

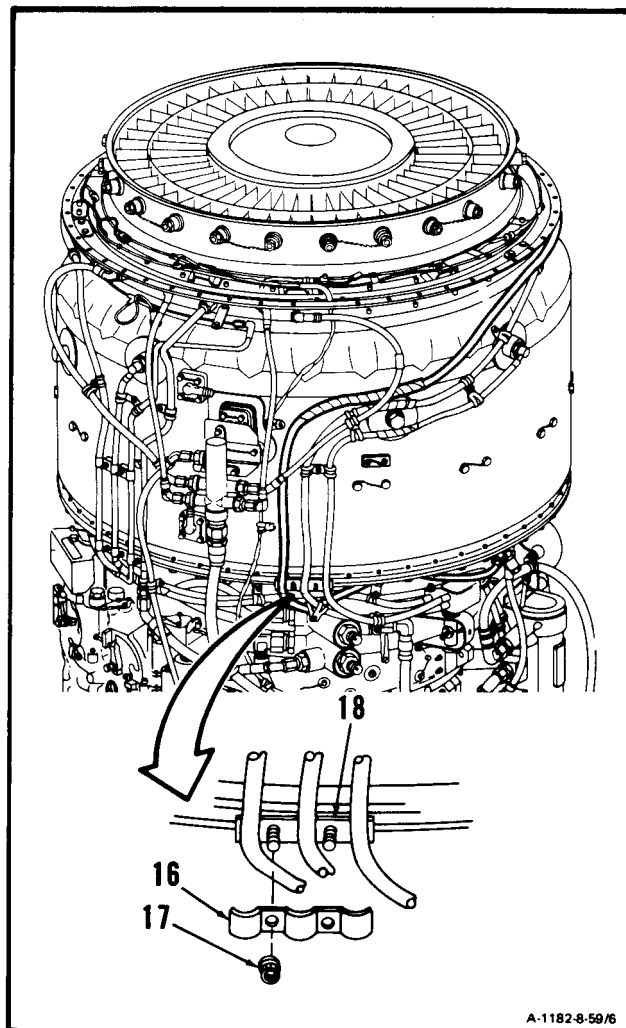
8-59

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).

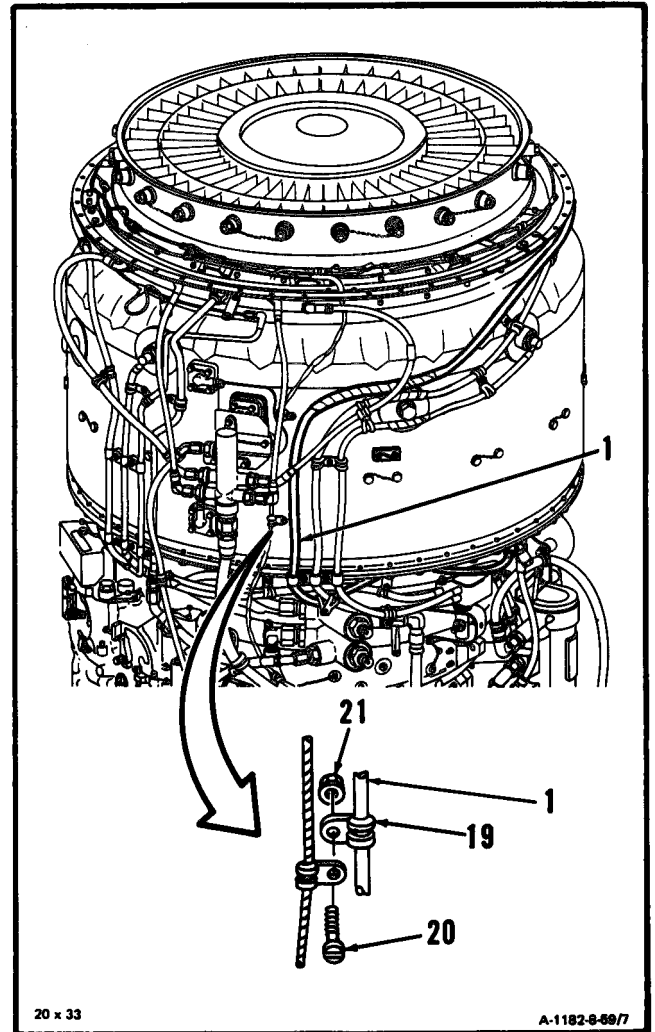


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**8-59 INSTALL HOSE ASSEMBLY (PRESSURE CONNECTOR TO NO. 4 AND 5 BEARING FILTER) (Continued)**

8-59

7. **Install clamp (19)** on hose assembly (1), and install screw (20) and nut (21).



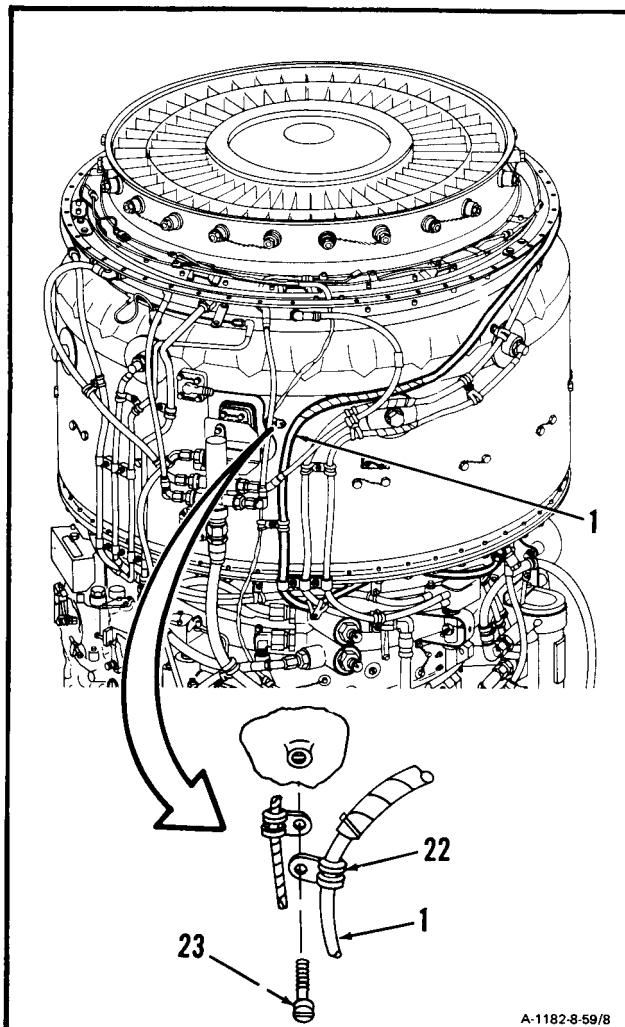
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**8-59 INSTALL HOSE ASSEMBLY (PRESSURE CONNECTOR TO NO. 4 AND 5 BEARING FILTER) (Continued)**

8-59

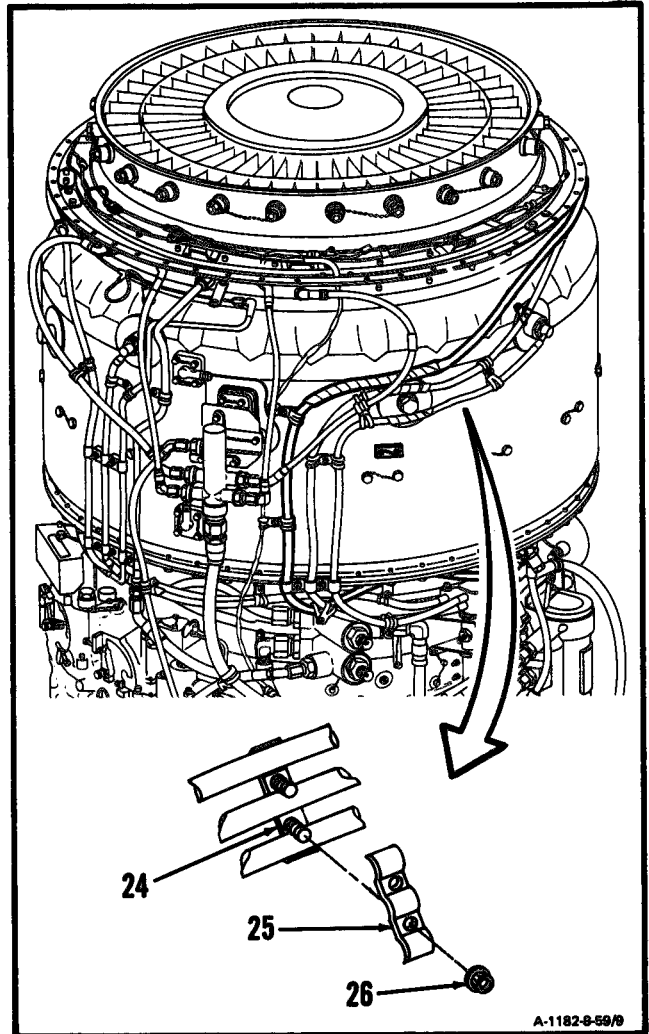
8. Install clamp (22) on hose assembly (1), and install screw (23). Lockwire screw. Use lockwire (E29).

**GO TO NEXT PAGE**

**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).

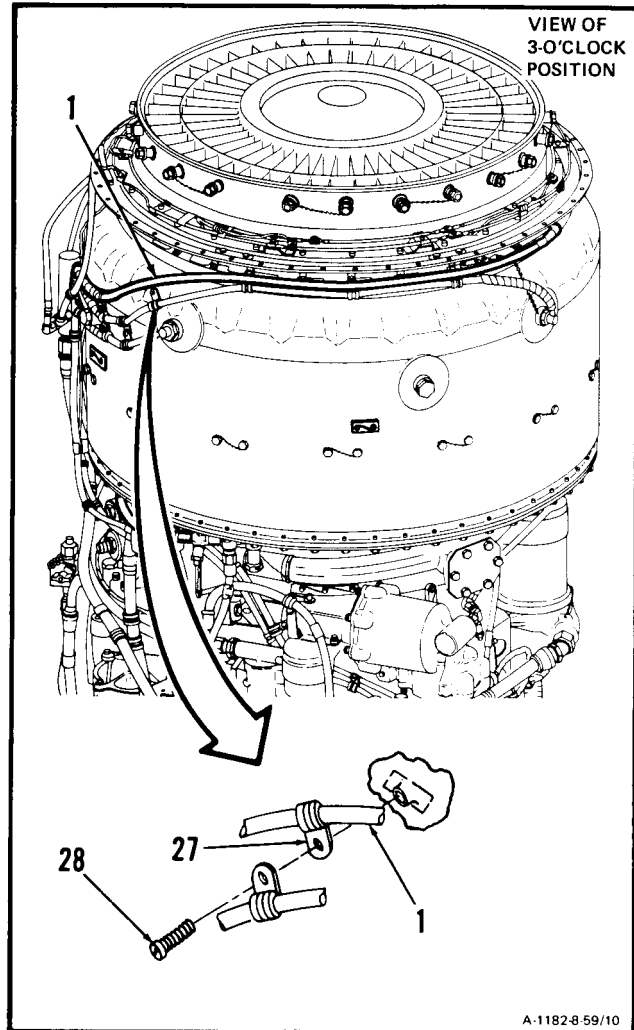


A-1182-8-59/9

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**8-59 INSTALL HOSE ASSEMBLY (PRESSURE CONNECTOR TO NO. 4 AND 5 BEARING FILTER) (Continued)**

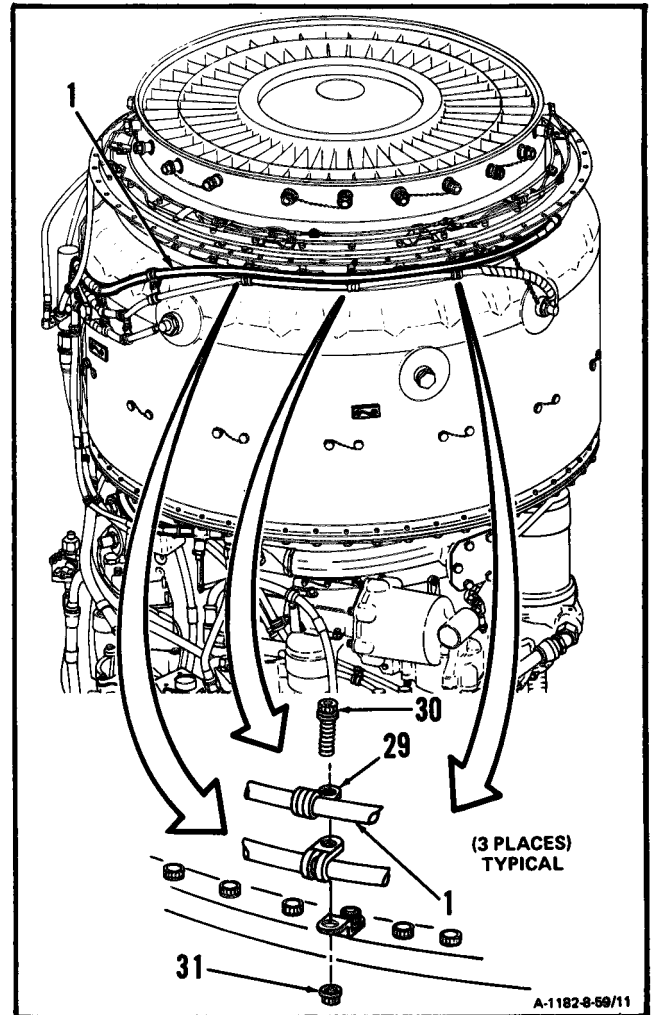
10. **Install clamp (27)** on hose assembly (1) and install screw (28). Lockwire screw. Use lockwire (E29).



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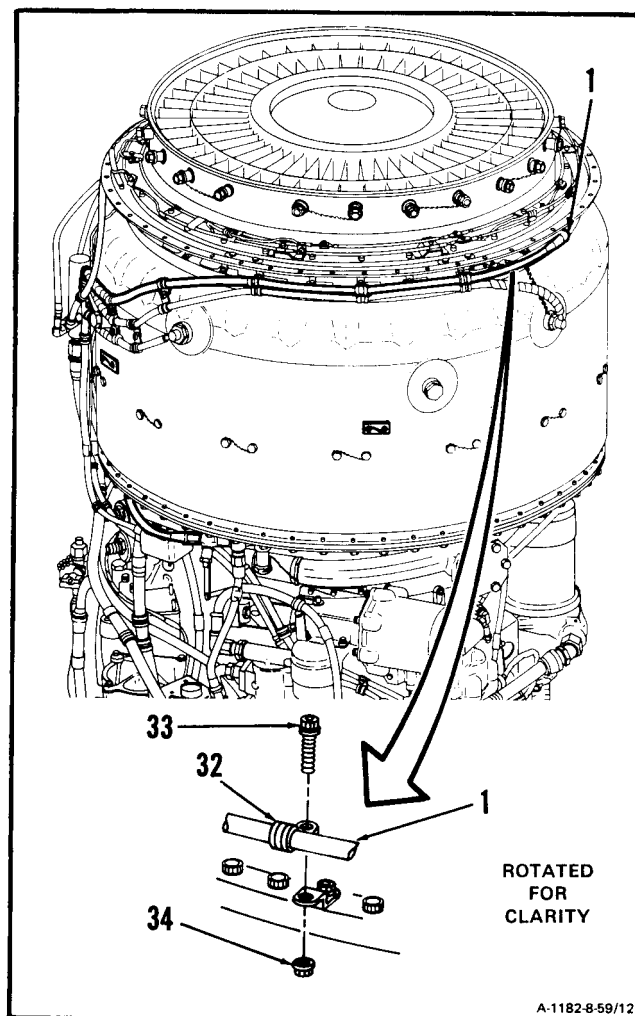
8-59 INSTALL HOSE ASSEMBLY (PRESSURE CONNECTOR TO NO. 4 AND 5 BEARING FILTER) (Continued)

11. Install three clamps (29) on hose assembly (1), and install three bolts (30) and nuts (31).



GO TO NEXT PAGE

12. Install clamp (32) on hose assembly (1), and install bolt (33) and nut (34).



INSPECT

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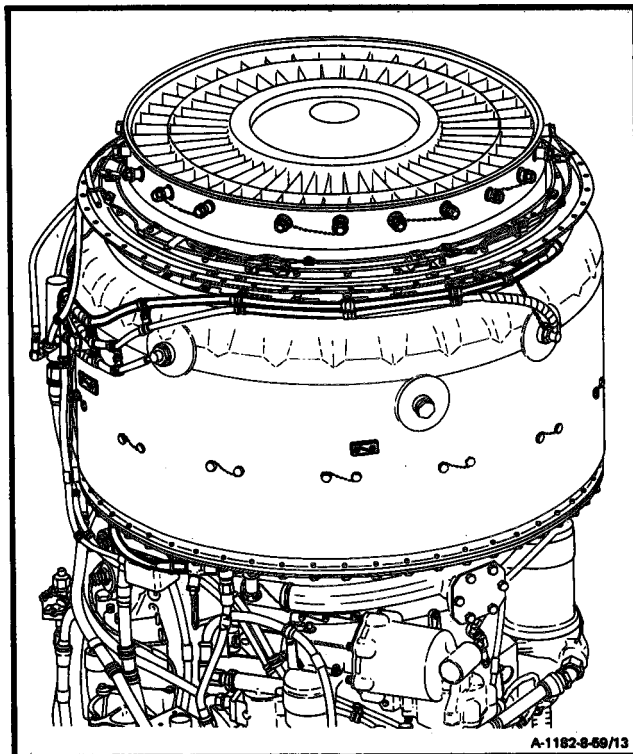
**8-59 INSTALL HOSE ASSEMBLY (PRESURE CONNECTOR To NO. 4 AND 5 BEARING  
FILTER) (Continued)**

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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:**

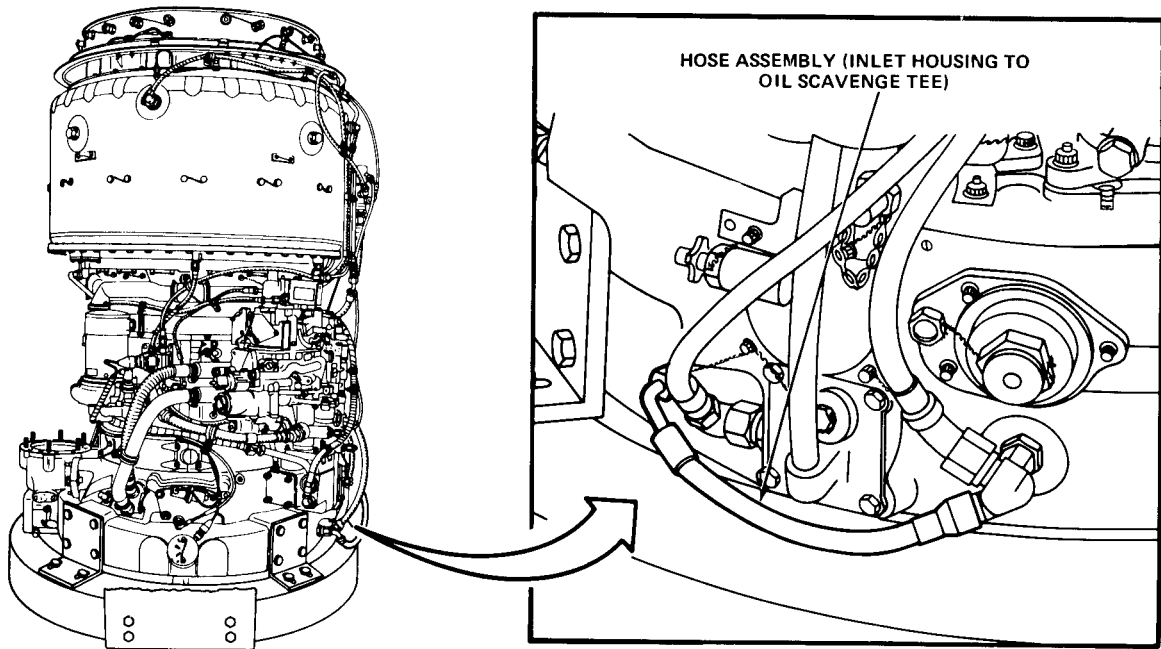
Powerplant Mechanic's Tool Kit,  
NSN 5180-00-323-4944  
Container, 1 -Quart

**Materials:**

Wiping Rag (E58)

**Personnel Required:**

68B10 Aircraft Powerplant Repairer



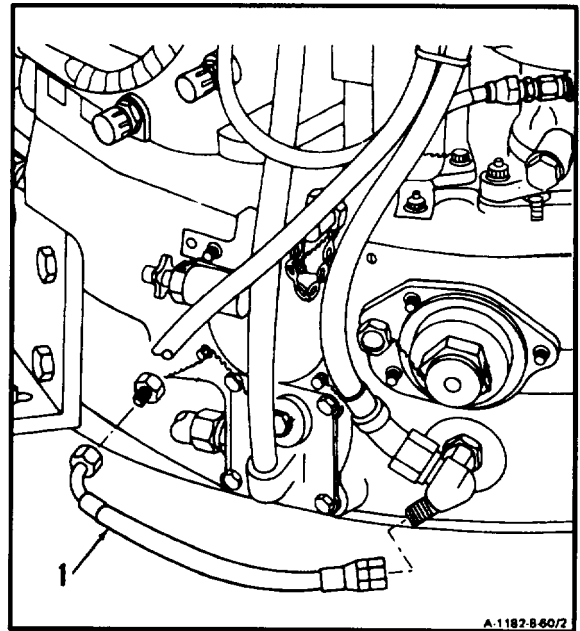
A-1182-8-60/1

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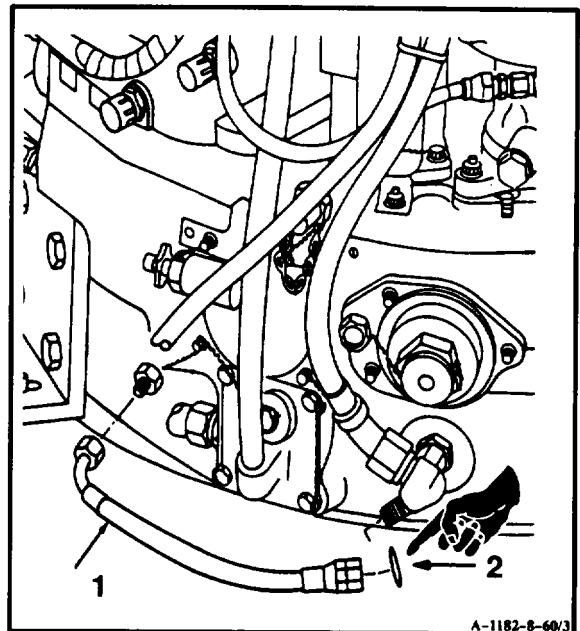
**WARNING**

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:**

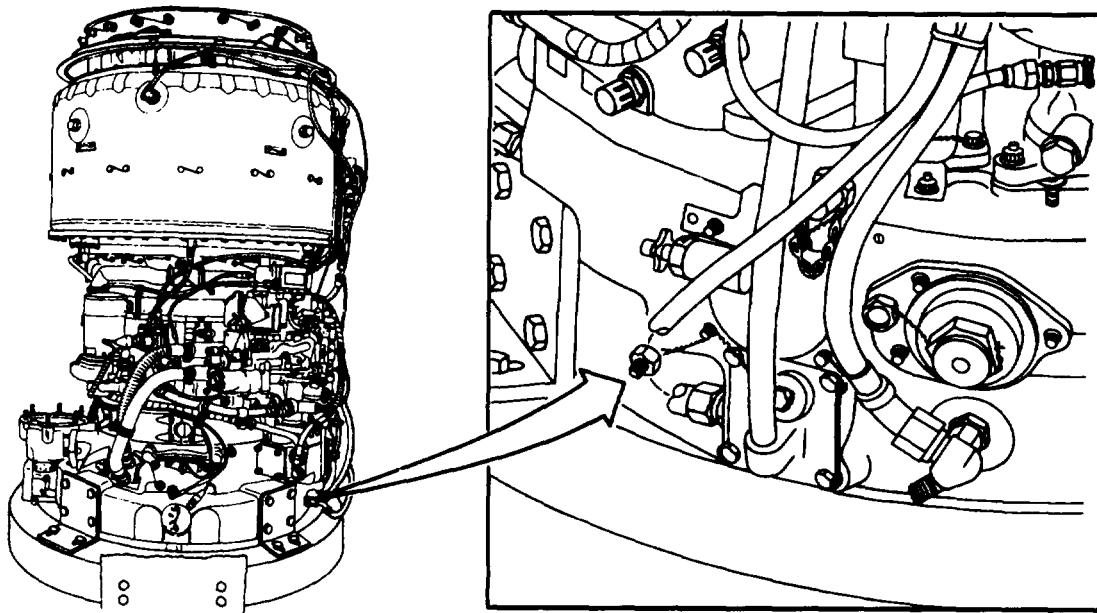
None

**Parts:**

Gasket

**Personnel Required:**

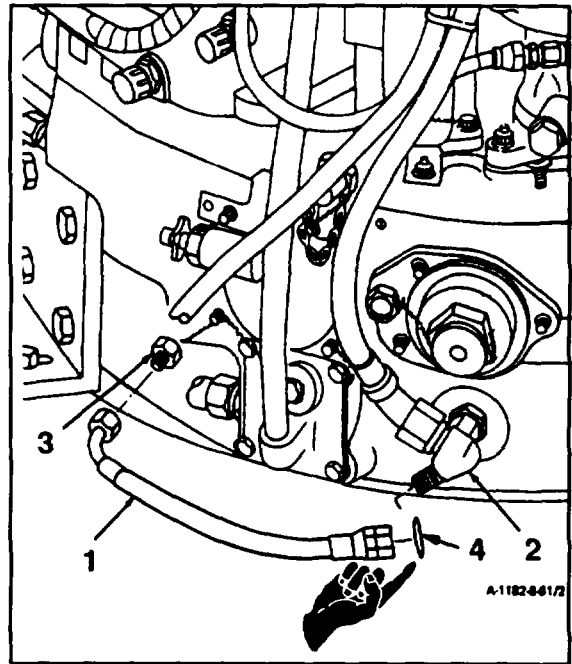
68B 10 Aircraft Powerplant Repairer  
68B30 Aircraft Powerplant Inspector



A-1182-8-61/1

**GO TO NEXT PAGE**

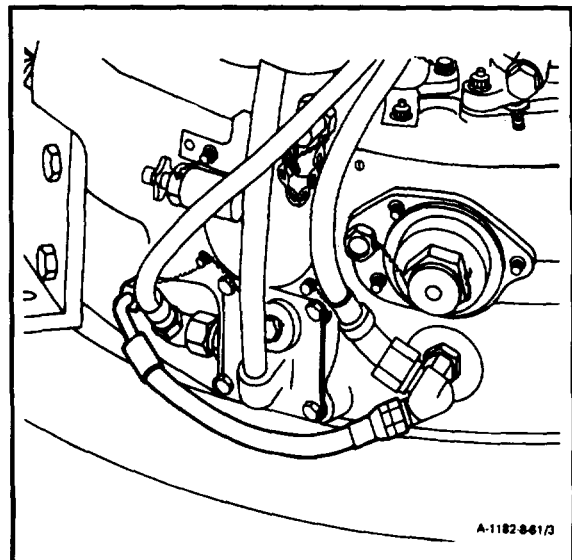
1. Install gasket (4) on oil scavenge tee (2) and install hose assembly (91) on oil scavenge tee (2) and fluid passage bolt (3).



**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:**

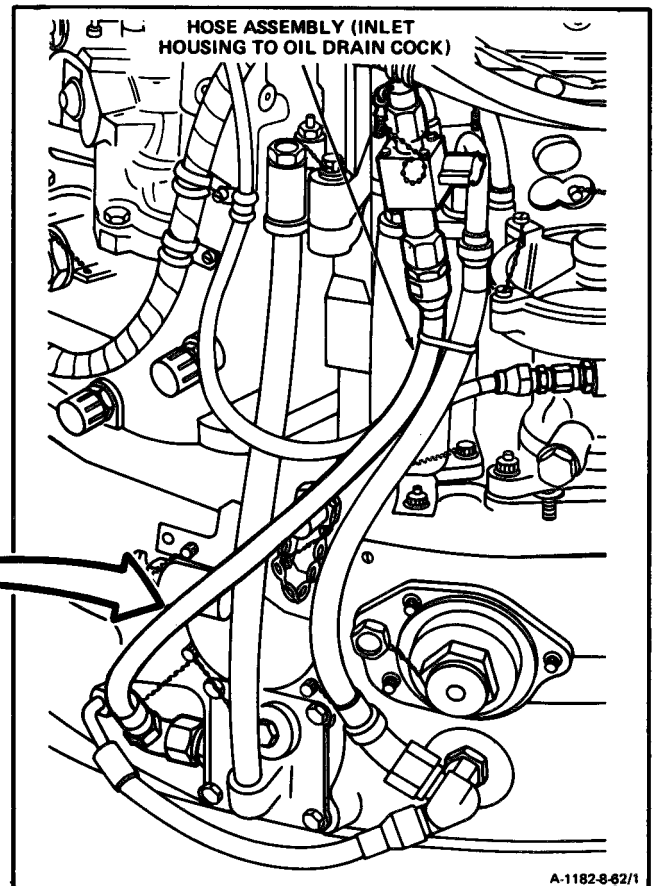
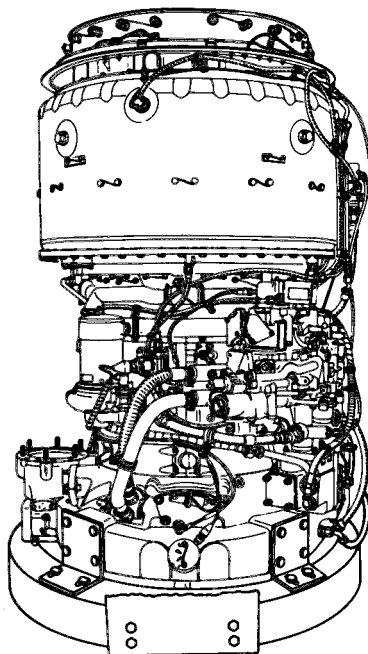
68B10 Aircraft Powerplant Repairer

**Equipment Condition:**

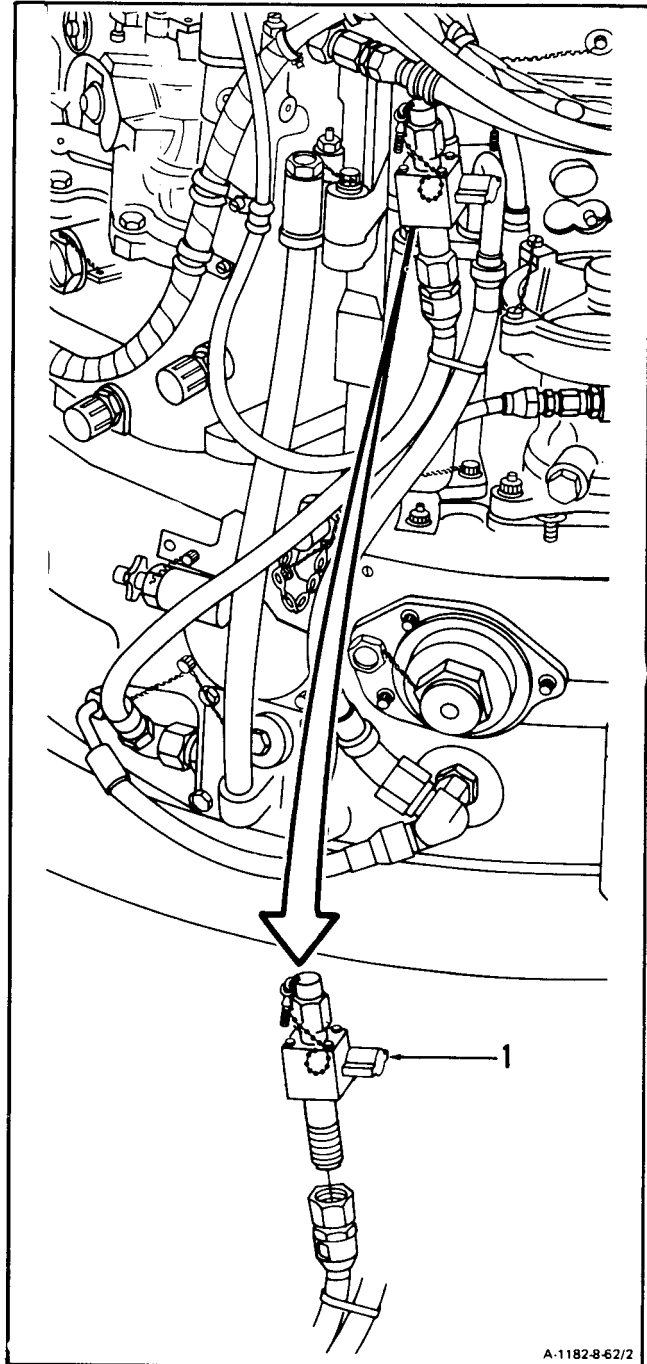
Engine Oil System Drained (Task 1-75)

**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.

**GO TO NEXT PAGE**

1. Remove oil drain cock (1).



**GO TO NEXT PAGE**

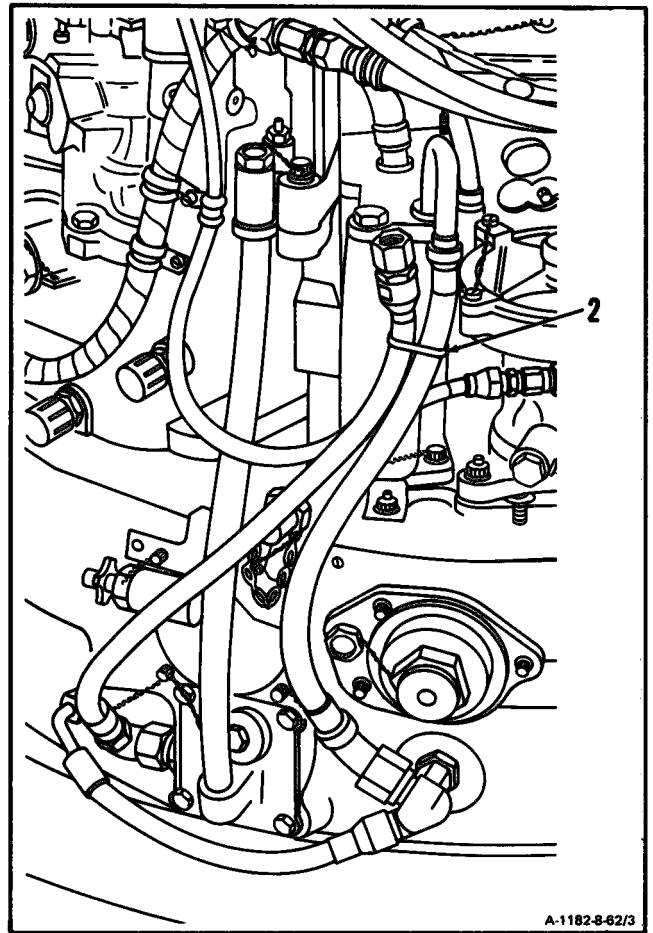
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**8-62 REMOVE HOSE ASSEMBLY (INLET HOUSING TO OIL DRAIN COCK) (Continued)**

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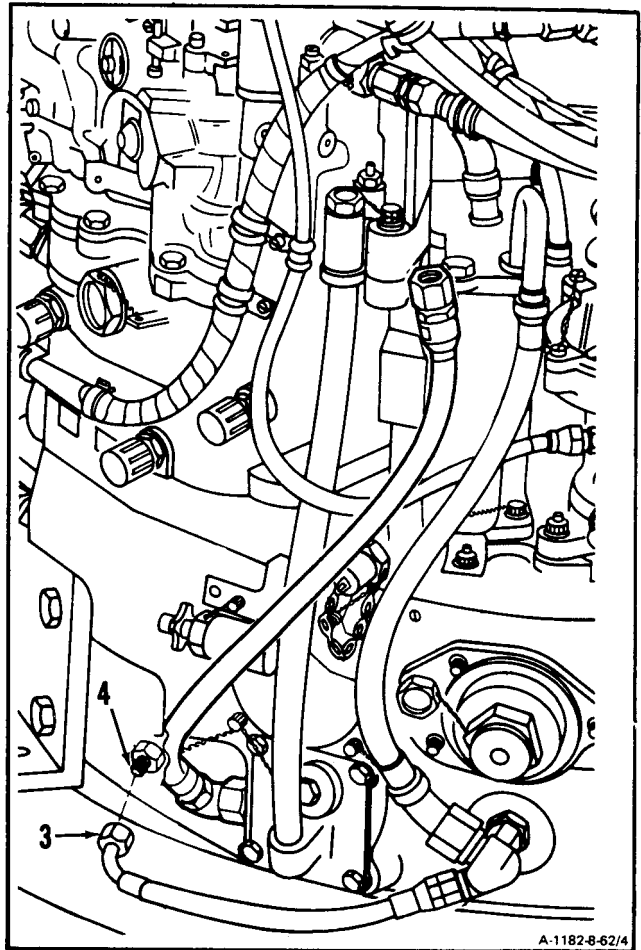
8-62

2. Remove cable tie (2).



**GO TO NEXT PAGE**

3. Disconnect hose assembly (3) from fluid passage bolt (4).



**GO TO NEXT PAGE**

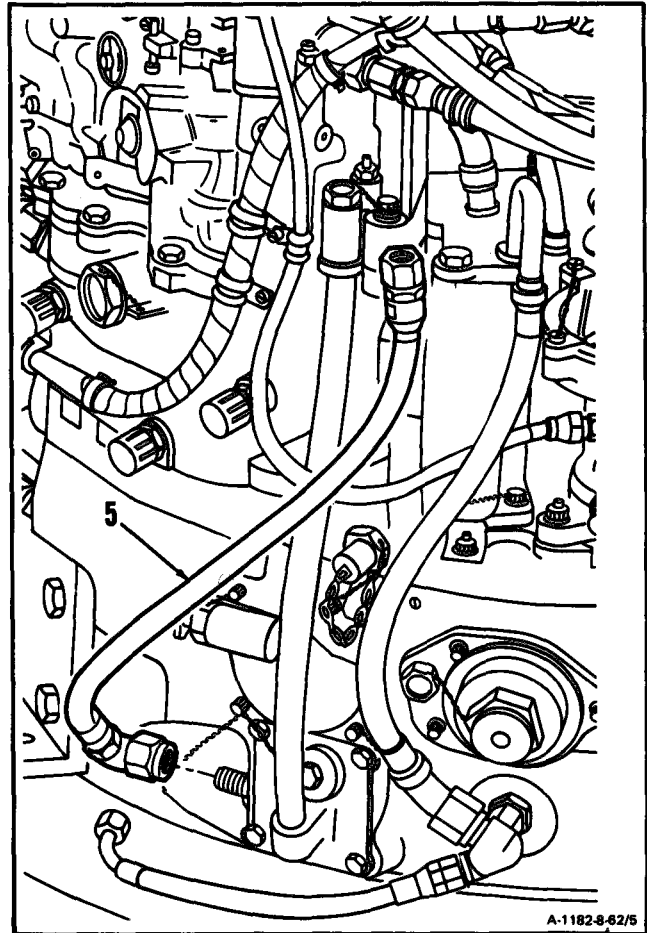
---

**8-62 REMOVE HOSE ASSEMBLY (INLET HOUSING TO OIL DRAIN COCK) (Continued)**

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8-62

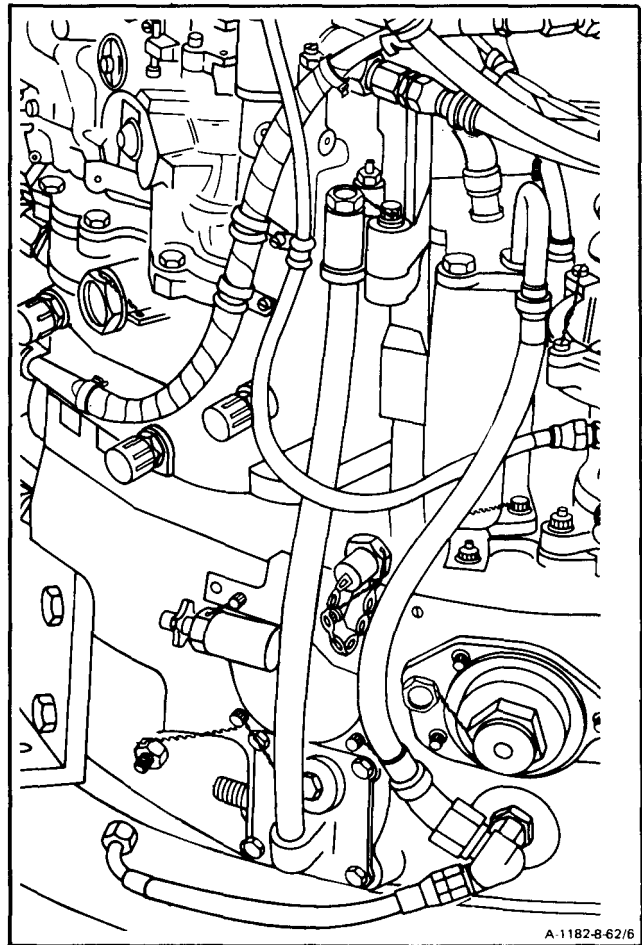
4. Disconnect and remove hose assembly (5).



**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:**

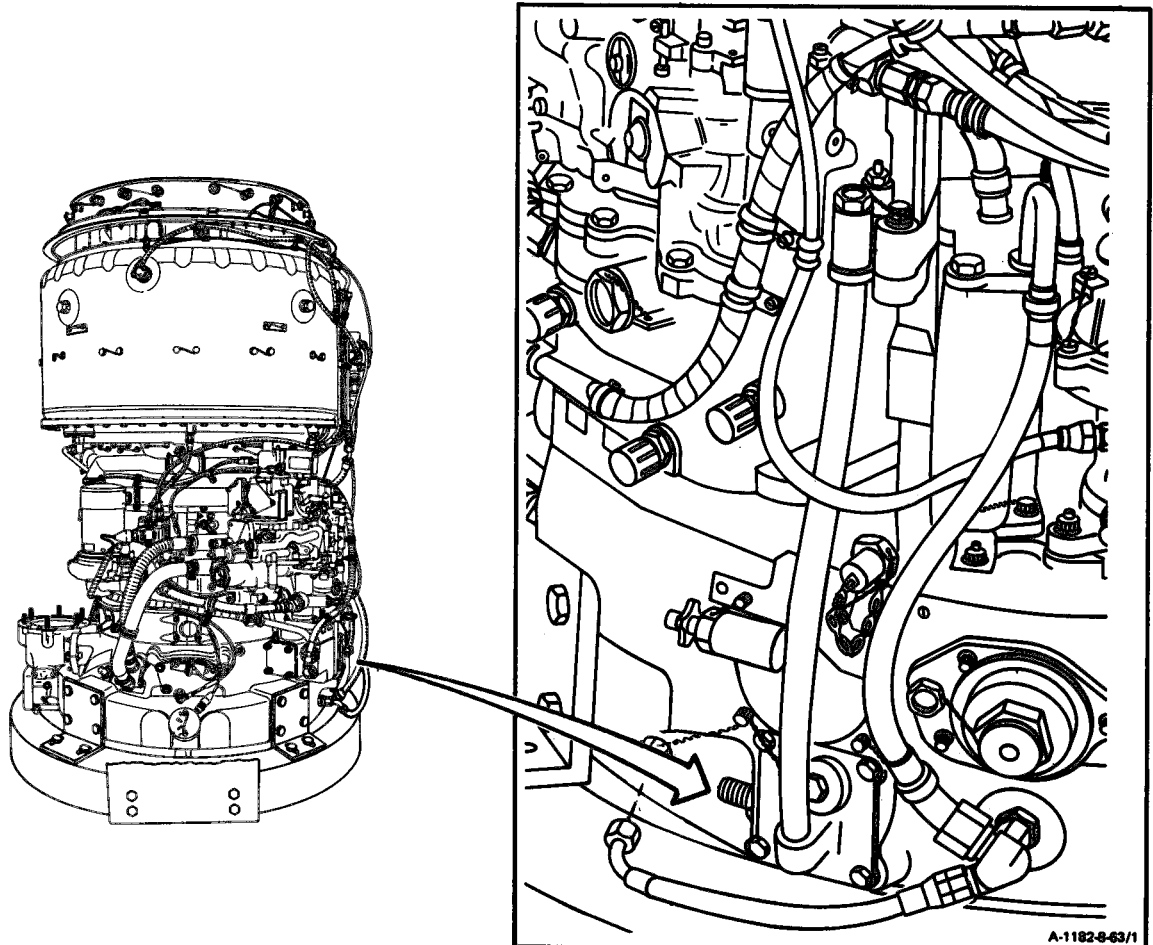
None

**Parts:**

Cable Tie

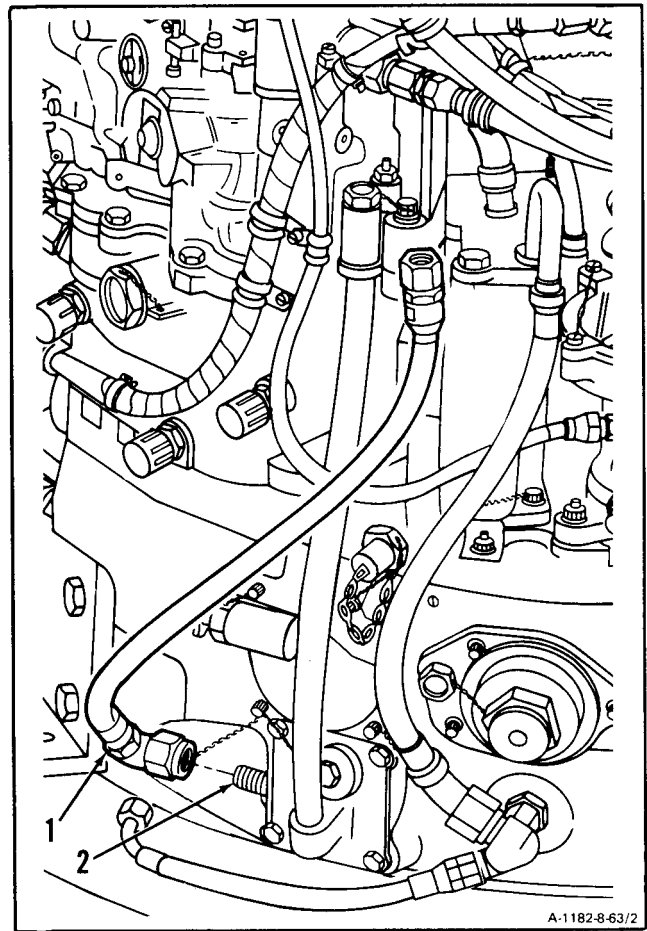
**Personnel Required:**

68B10 Aircraft Powerplant Repairer  
68B30 Aircraft Powerplant Inspector



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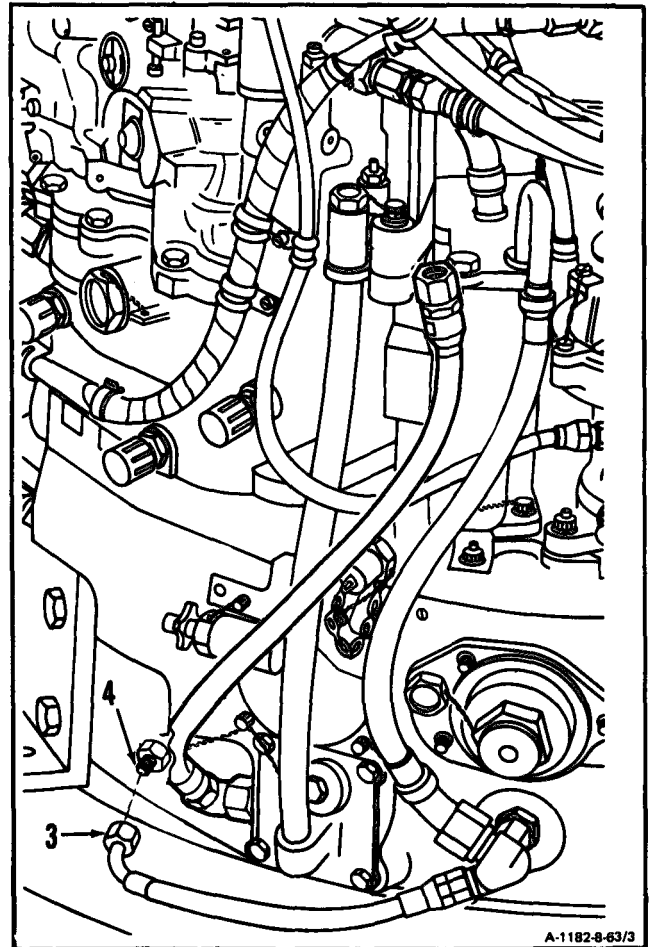
1. Install hose assembly (1) on nipple (2).



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**8-63 INSTALL HOSE ASSEMBLY (INLET HOUSING TO OIL DRAIN COCK) (Continued)****8-63**

2. Connect hose assembly (3) to fluid passage bolt (4).

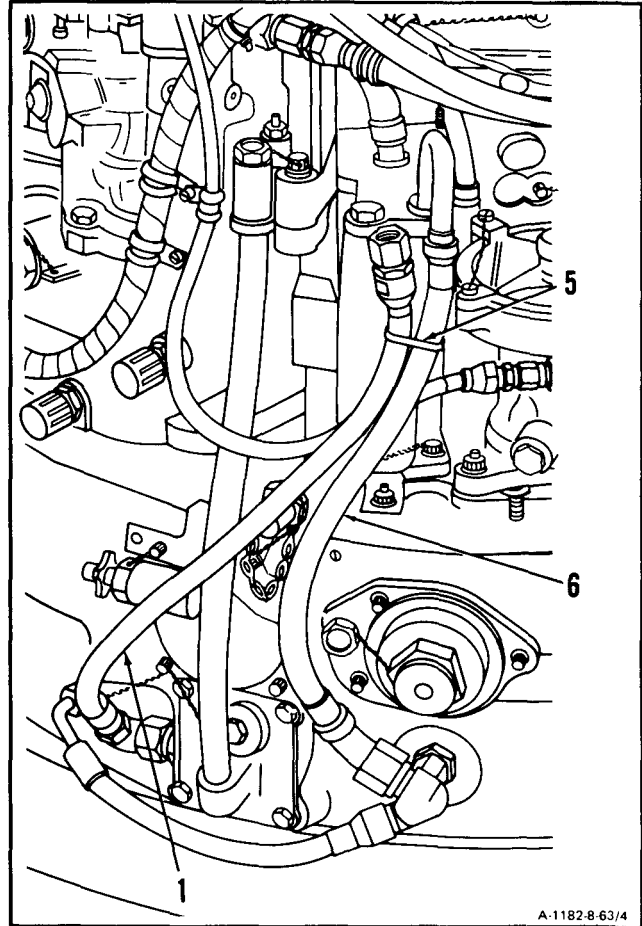
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8-63 INSTALL HOSE ASSEMBLY (INLET HOUSING TO OIL DRAIN COCK) (Continued)

---

3. Install cable tie (5) on hose assembly (1) and hose assembly (6).

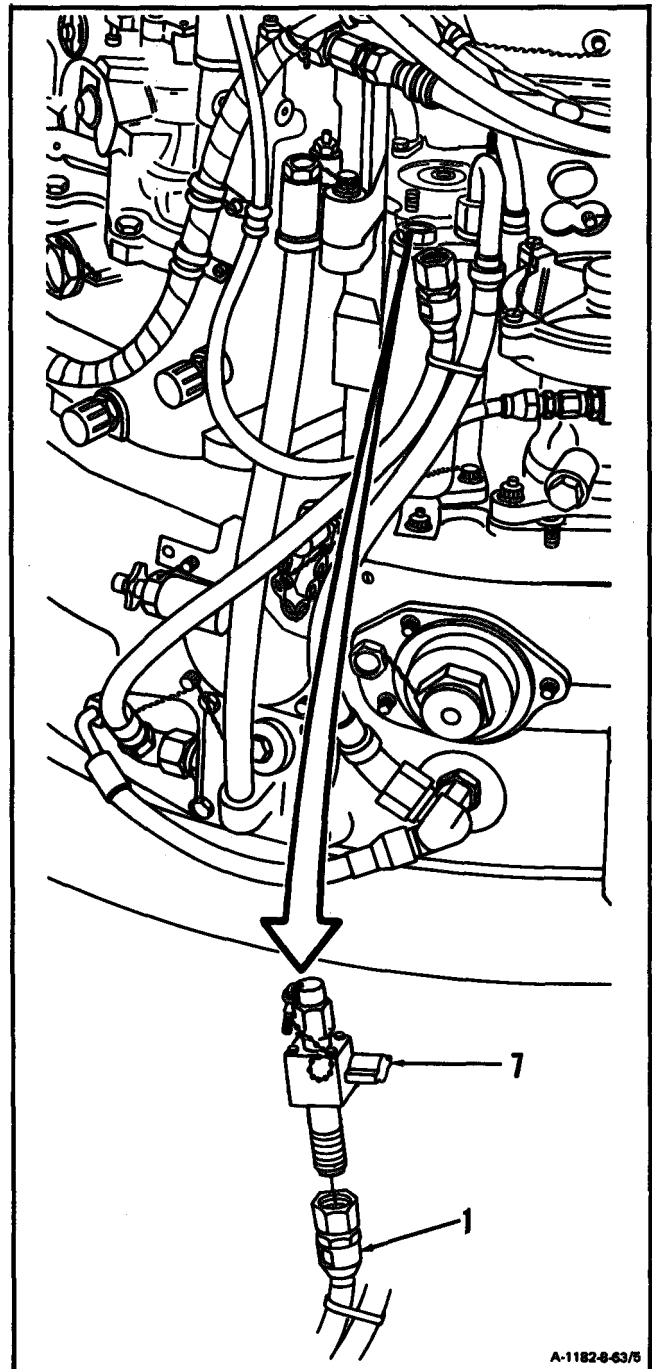


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**8-63 INSTALL HOSE ASSEMBLY (INLET HOUSING TO OIL DRAIN COCK) (Continued)**

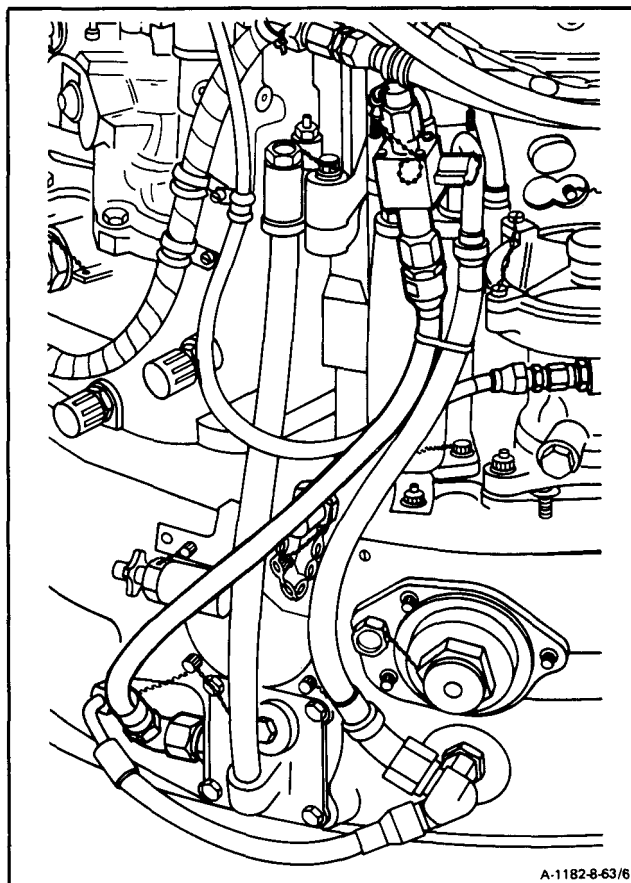
8-63

4. Install oil drain cock (7) on hose assembly (1).

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

FOLLOW-ON MAINTENANCE:

None



A-1182-8-63/8

END OF TASK

---

**8-64 REMOVE HOSE ASSEMBLY (OIL FILLER TO STARTER DRIVE)**

---

8-64

**INITIAL SETUP****Applicable Configurations:**

All

**Tools:**

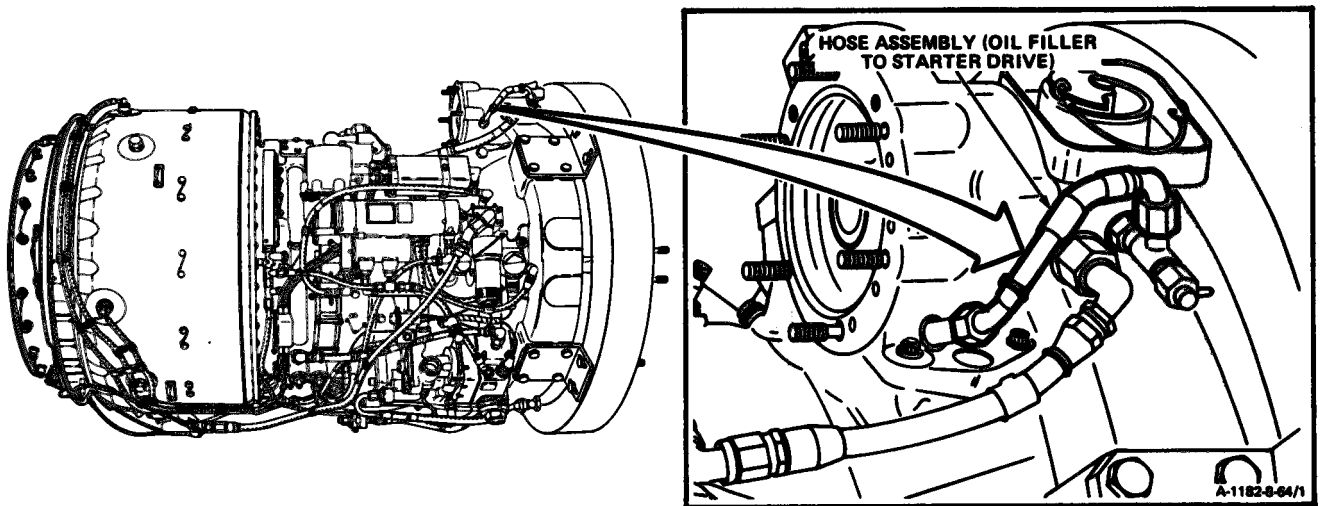
Powerplant Mechanic's Tool Kit,  
NSN 5180-00-323-4944  
Container, 1-Quart

**Materials:**

Wiping Rag (E58)

**Personnel Required:**

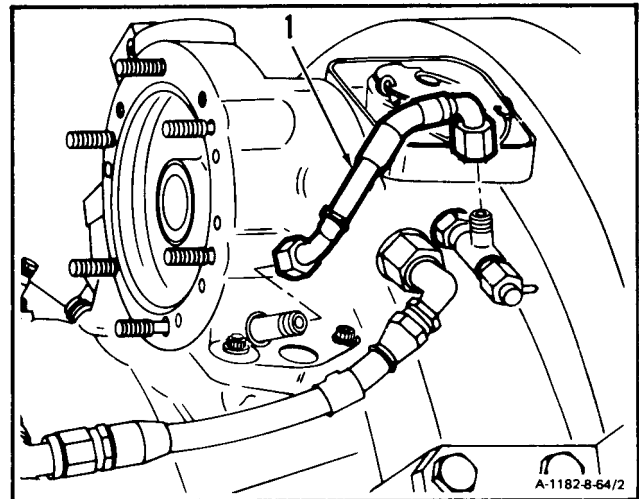
68B10 Aircraft Powerplant Repairer

**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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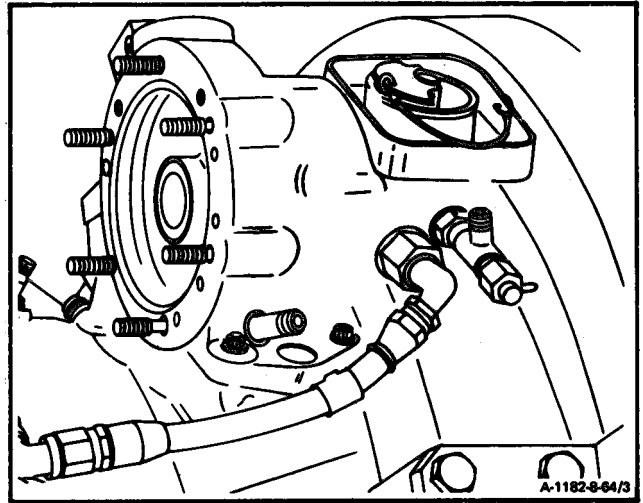
**8-64 REMOVE HOSE ASSEMBLY OIL FILLER TO STARTER DRIVE) (Continued)**

---

8-64

**FOLLOW-ON MAINTENANCE:**

None

**END OF TASK**

---

8-65 INSTALL HOSE ASSEMBLY (OIL FILLER TO STARTER DRIVE)

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8-65

INITIAL SETUP

**Applicable Configurations:**

All

**Tools:**

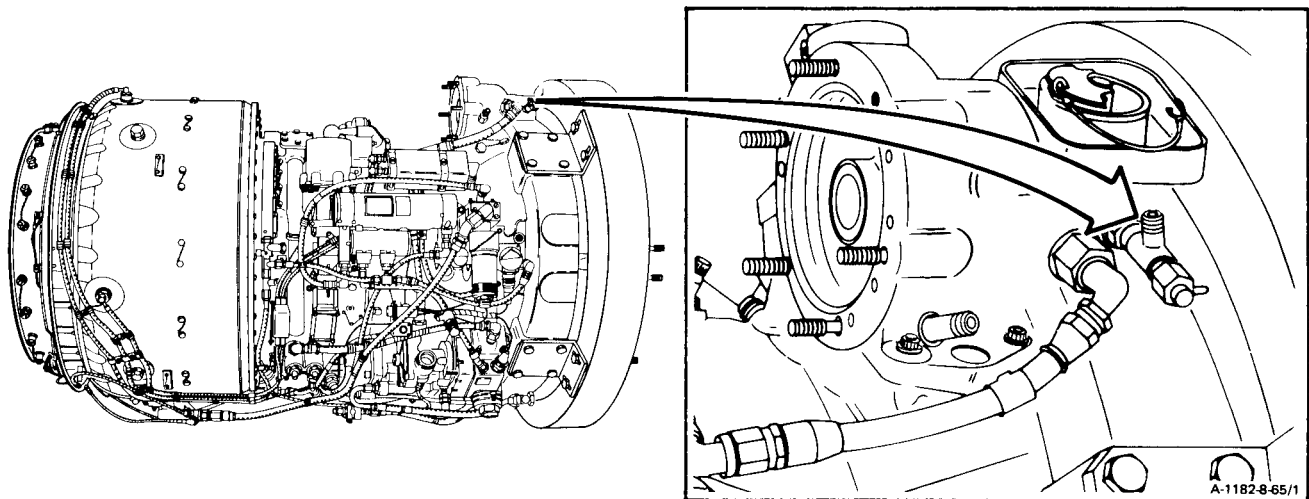
Powerplant Mechanic's Tool Kit,  
NSN 5180-00-323-4944  
Technical Inspection Tool Kit,  
NSN 5180-00-323-5114

**Materials:**

None

**Personnel Required:**

68B10 Aircraft Powerplant Repairer  
68B30 Aircraft Powerplant Inspector

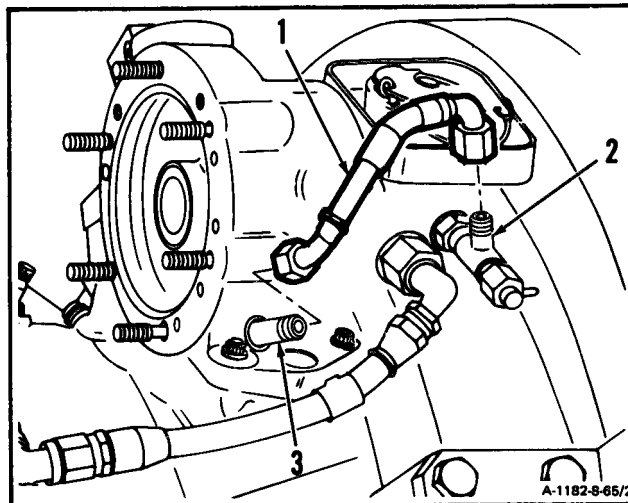


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## 8-65 INSTALL HOSE ASSEMBLY OIL FILLER TO STARTER DRIVE) (Continua)

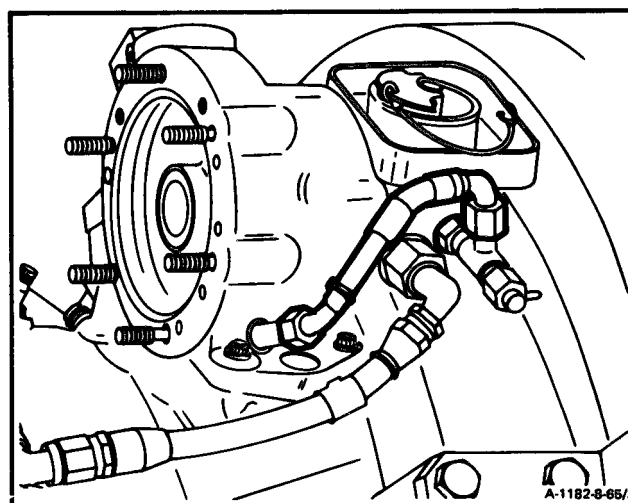
8-65

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

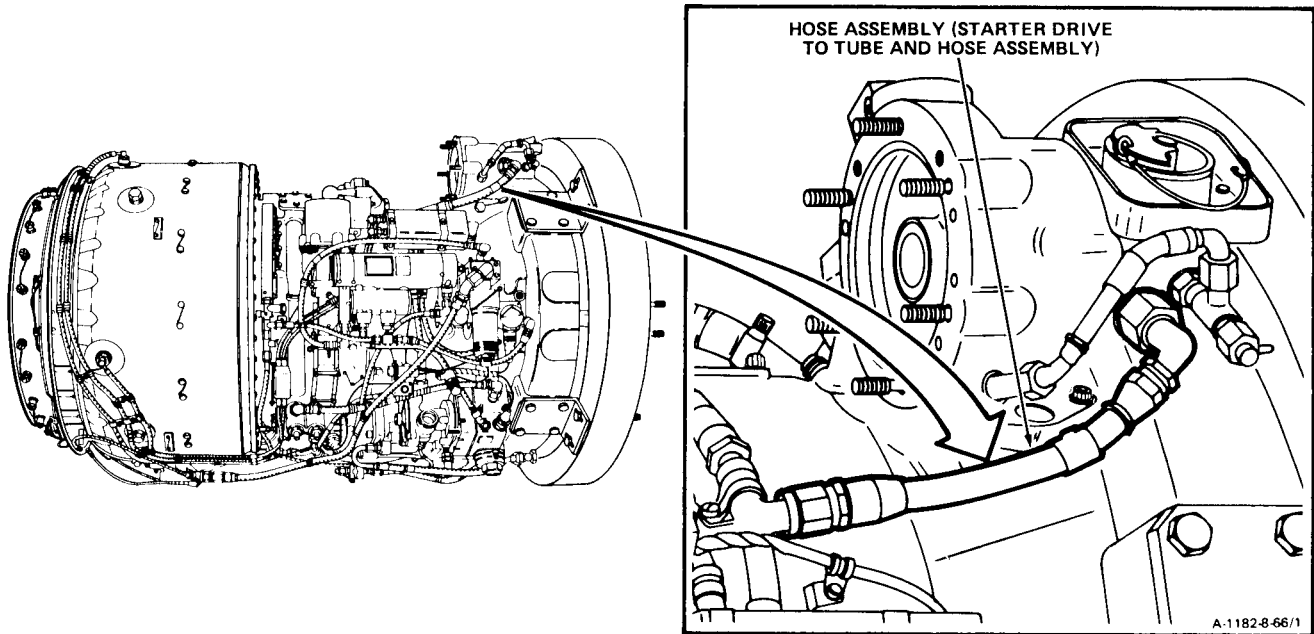
**Materials:**

Wiping Rag (E58)

**Personnel Required:**

68B10 Aircraft Powerplant Repairer

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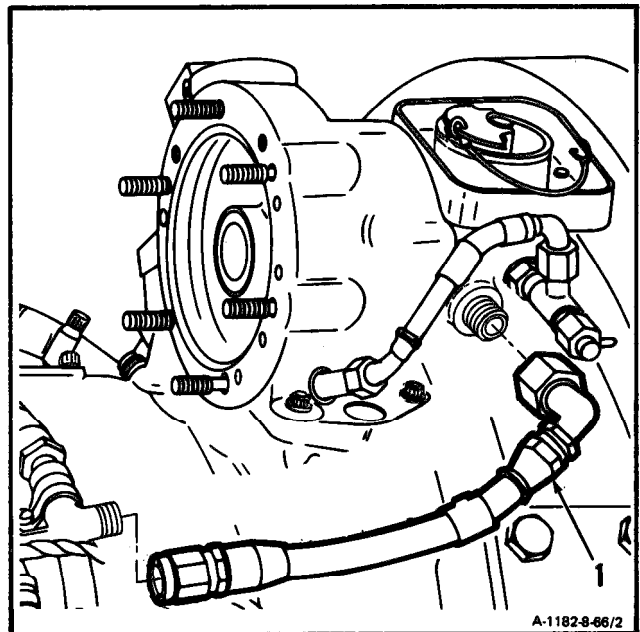
**8-66 REMOVE HOSE ASSEMBLY (STARTER DRIVE TO TUBE AND HOSE ASSEMBLY)**  
(Continued)

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.

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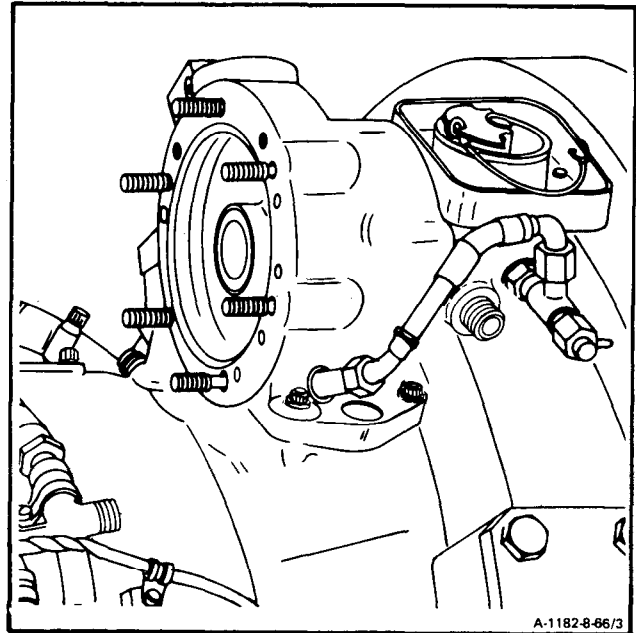
**8-66 REMOVE HOSE ASSEMBLY (STARTER DRIVE TO TUBE AND HOSE ASSEMBLY)**  
(Continued)

---

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:**

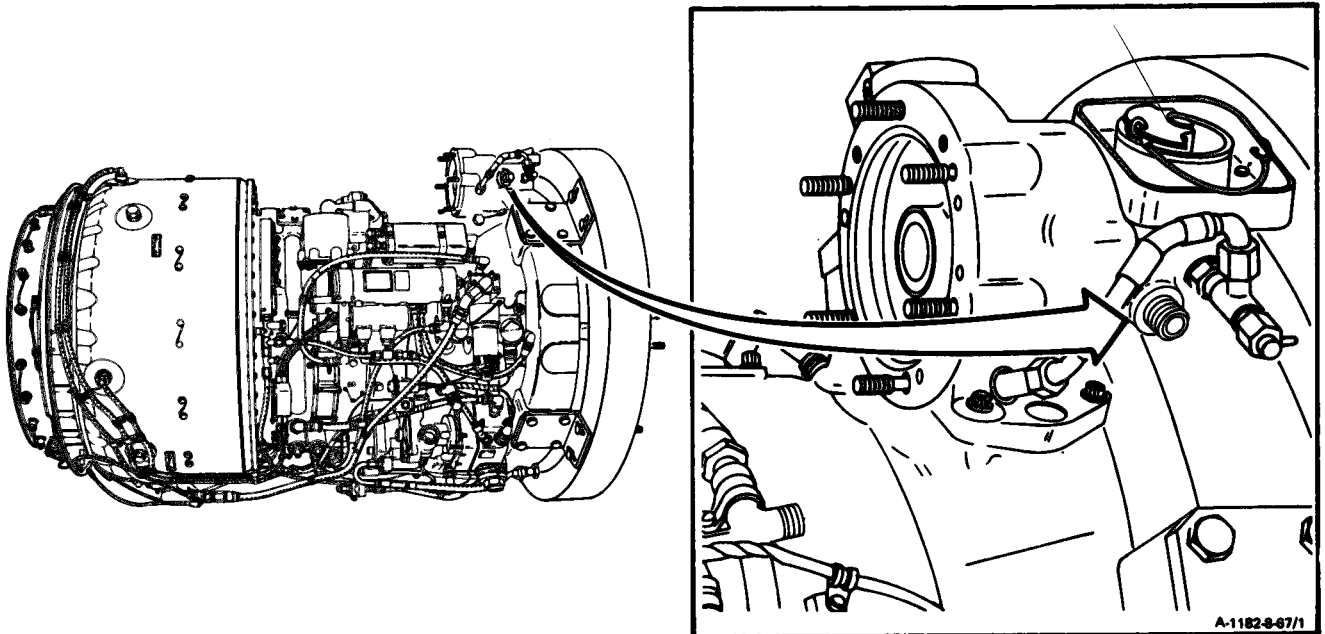
Technical Inspection Tool Kit,  
NSN 5180-00-323-5114  
Open-End Wrench, 1-inch

**Materials:**

None

**Personnel Required:**

68B10 Aircraft Powerplant Repairer  
68B30 Aircraft Powerplant Inspector

**GO TO NEXT PAGE**

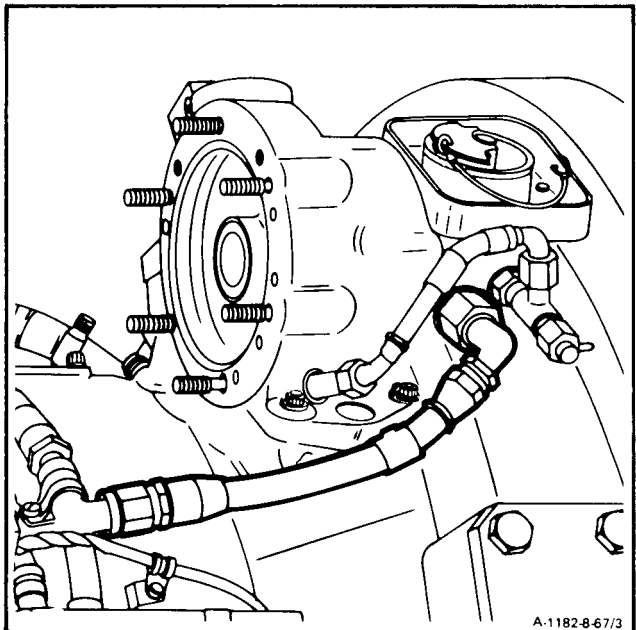
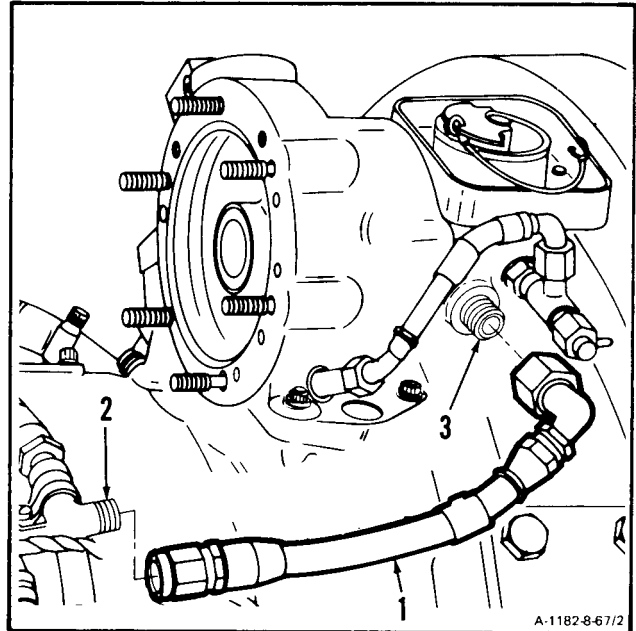
**8-67 INSTALL HOSE ASSEMBLY (STARTER DRIVE TO TUBE AND HOSE ASSEMBLY) (Continued)**

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:**

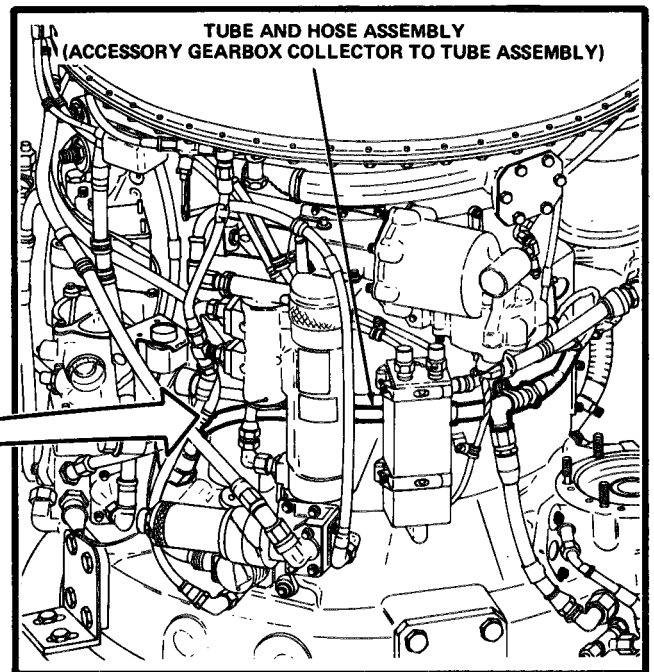
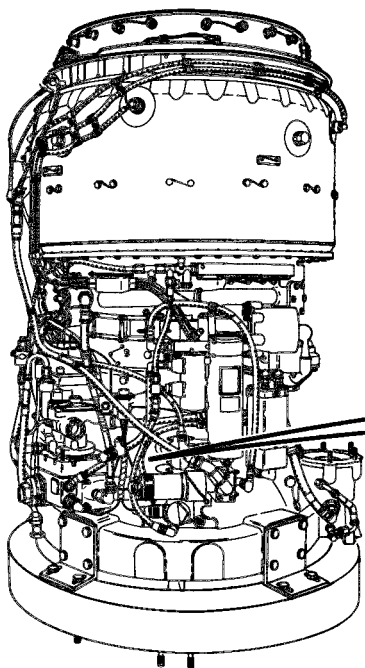
Wiping Rag (E58)

**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.

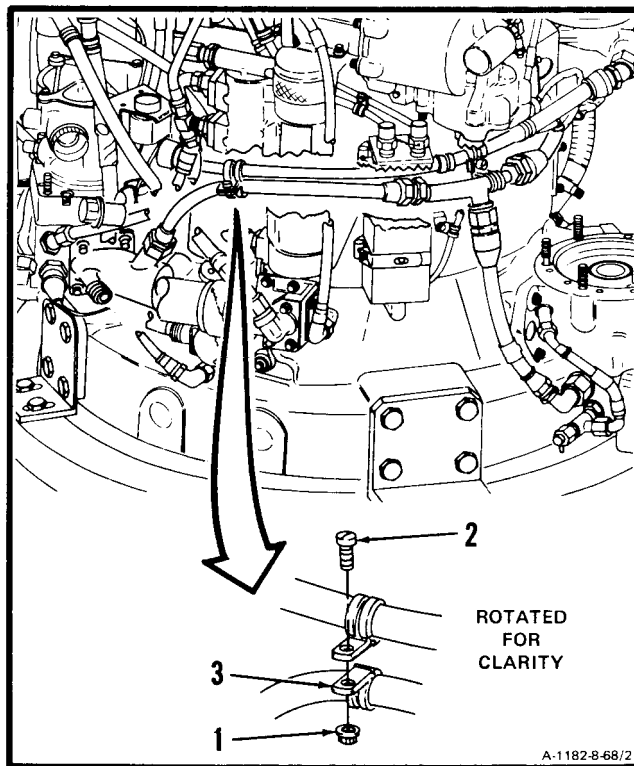


A-1182-8-68/1

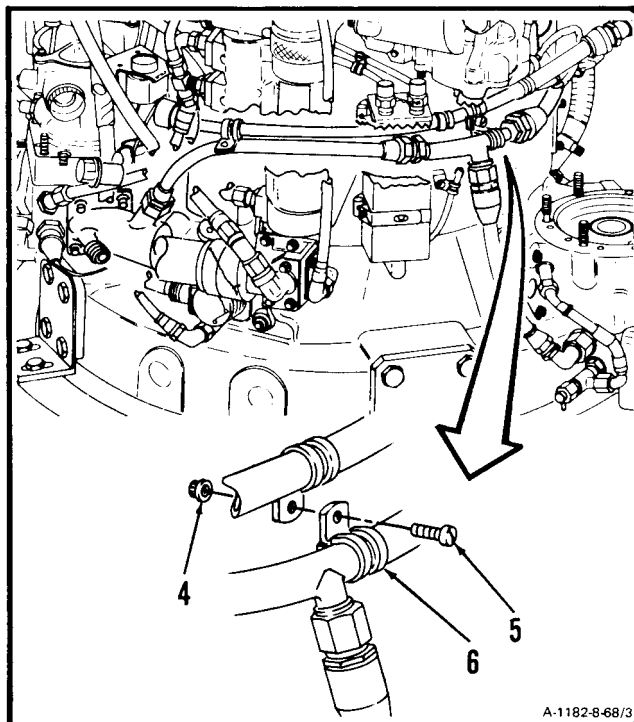
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**8-68 REMOVE TUBE AND HOSE ASSEMBLY (ACCESSORY GEARBOX COLLECTOR TO TUBE ASSEMBLY) (Continued)**

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



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

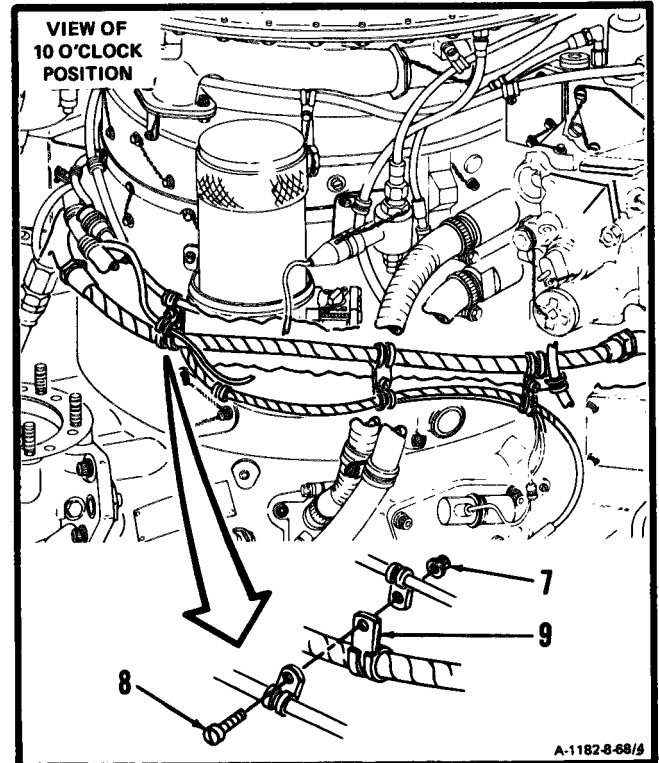


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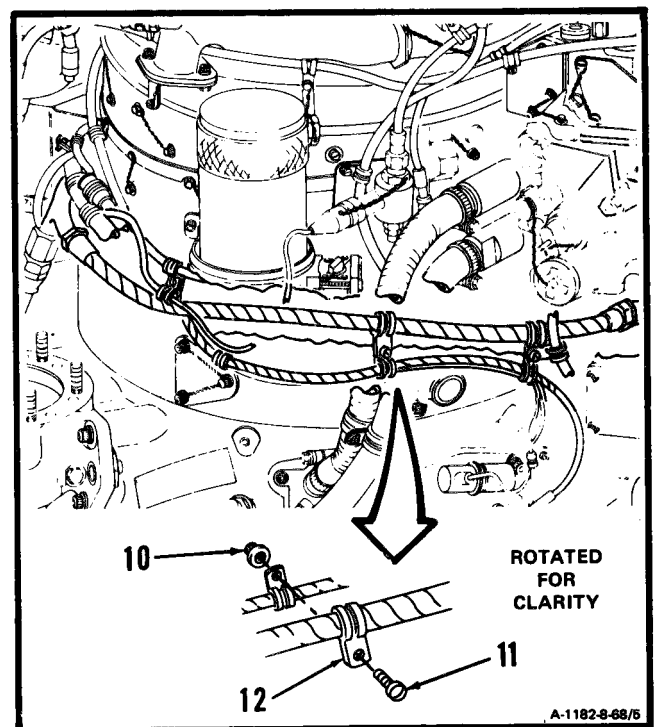
**8-68 REMOVE TUBE AND HOSE ASSEMBLY (ACCESSORY GEARBOX COLLECTOR TO TUBE ASSEMBLY) (Continued)**

8-68

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



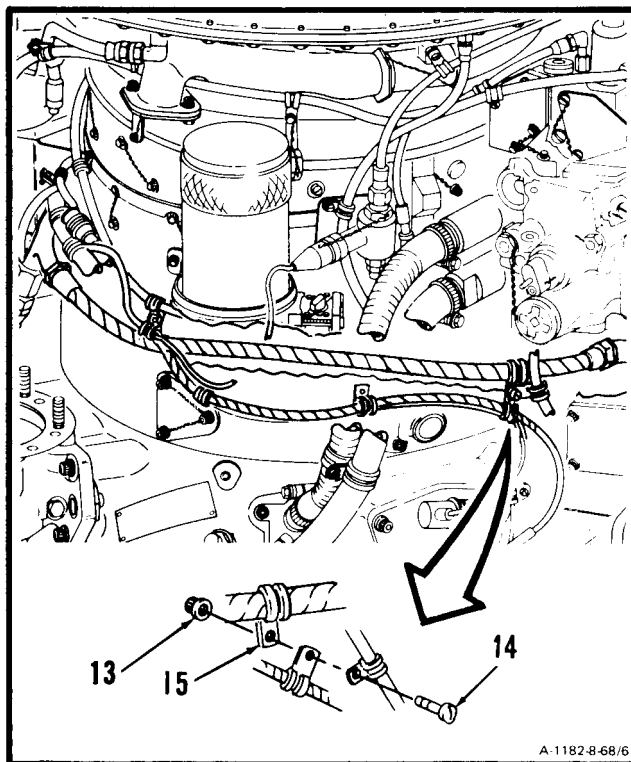
4. Remove nut (10), screw (11), and clamp (12).



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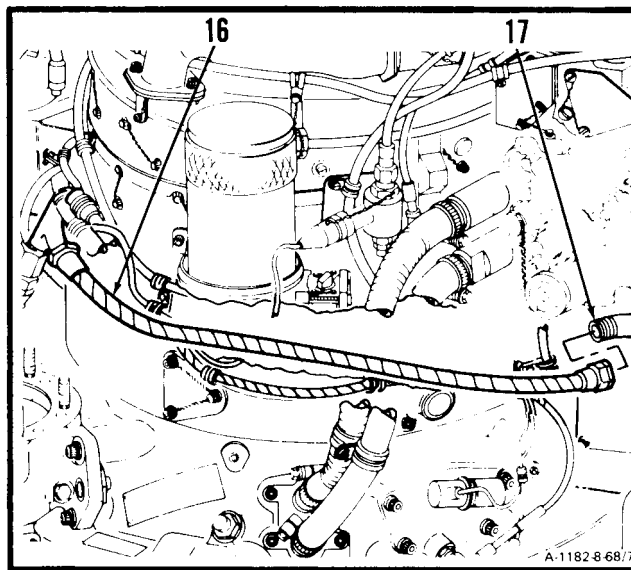
**8-68 REMOVE TUBE AND HOSE ASSEMBLY (ACCESSORY GEARBOX COLLECTOR TO TUBE ASSEMBLY) (Continued)**

5. Remove nut (13), screw (14), and clamp (15).



A-1182-8-68/6

6. Disconnect tube and hose assembly (16) from tube assembly (17). Use open-end wrench.



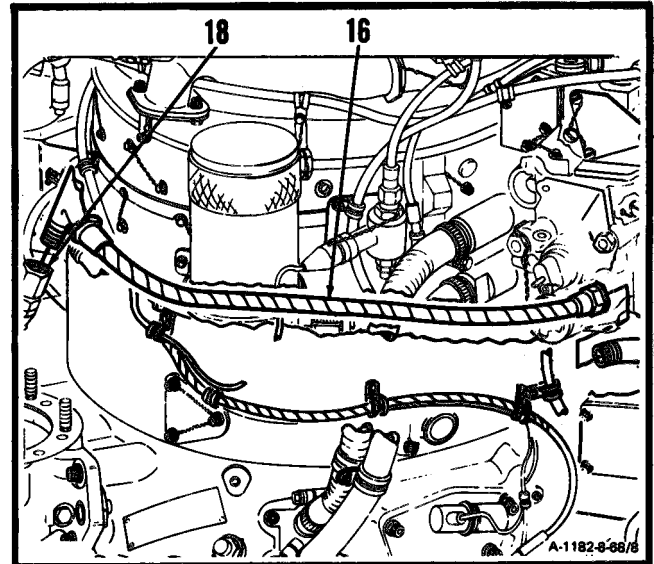
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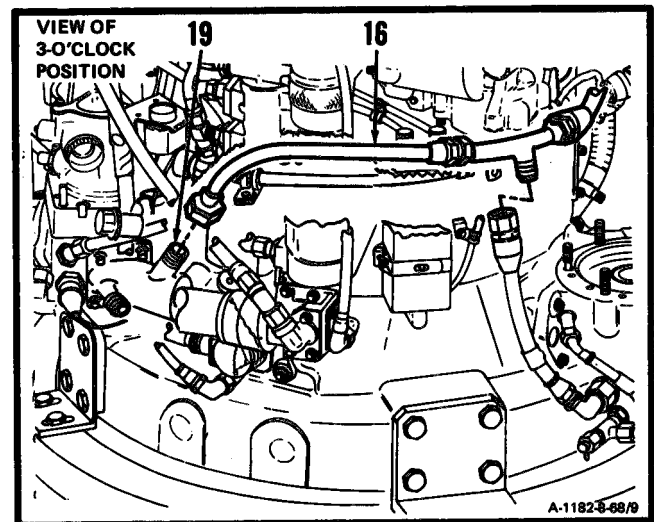
**8-68 REMOVE TUBE AND HOSE ASSEMBLY (ACCESSORY GEARBOX COLLECTOR TO TUBE ASSEMBLY) (Continued)**

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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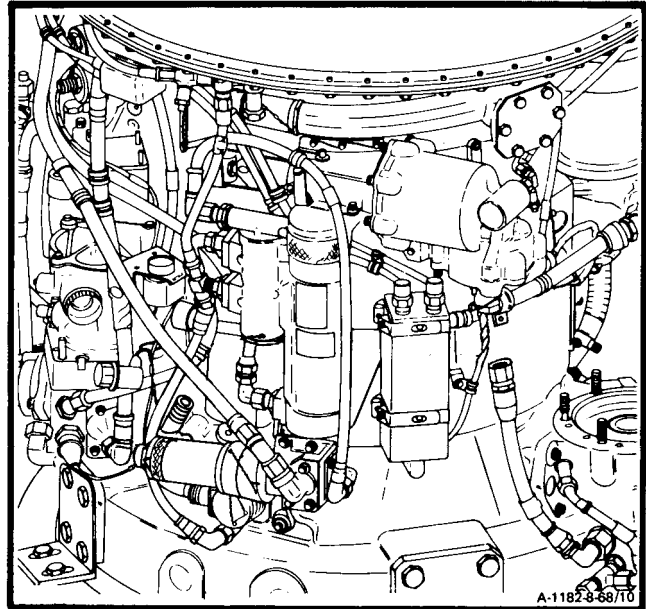
**8-68 REMOVE TUBE AND HOSE ASSEMBLY (ACCESSORY GEARBOX COLLECTOR  
TO TUBE ASSEMBLY) (Continued)**

---

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:**

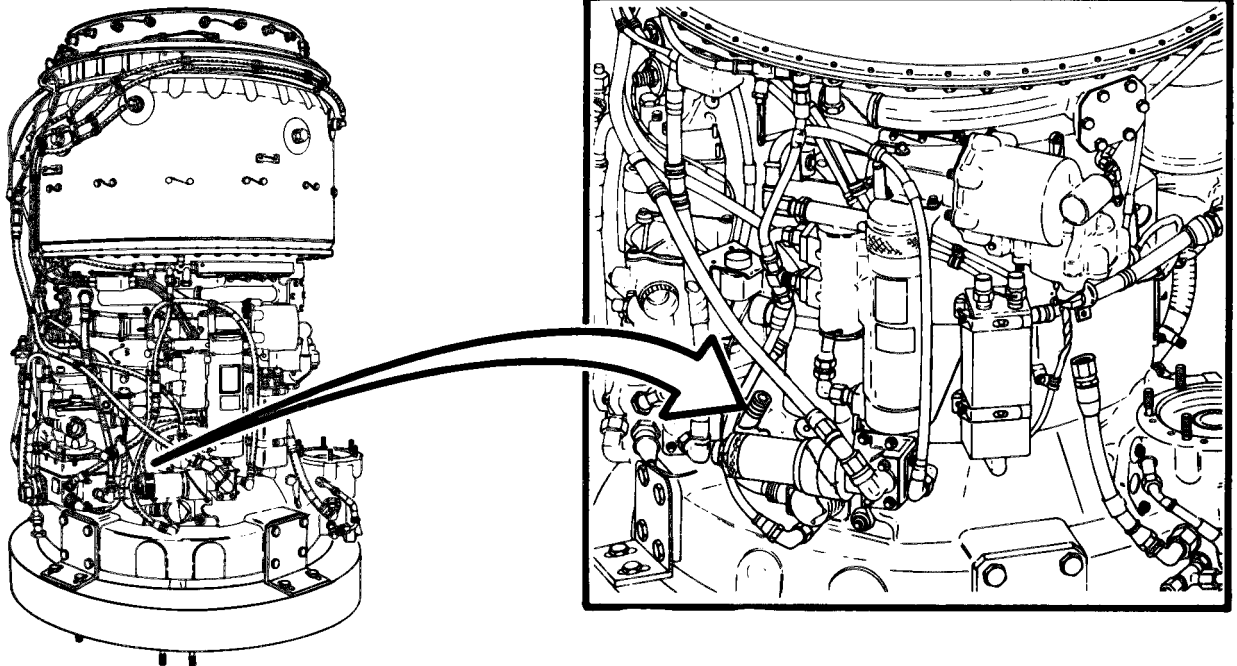
Powerplant Mechanic's Tool Kit,  
NSN 5180-00-323-4944  
Technical Inspection Tool Kit,  
NSN 5180-00-323-5114  
Open-End Wrench, 1-Inch

**Materials:**

None

**Personnel Required:**

68B10 Aircraft Powerplant Repairer  
68B30 Aircraft Powerplant Inspector



A-1182-8-69/1

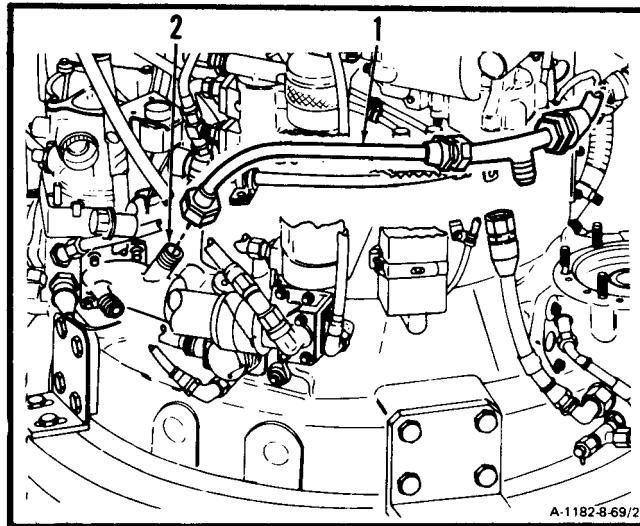
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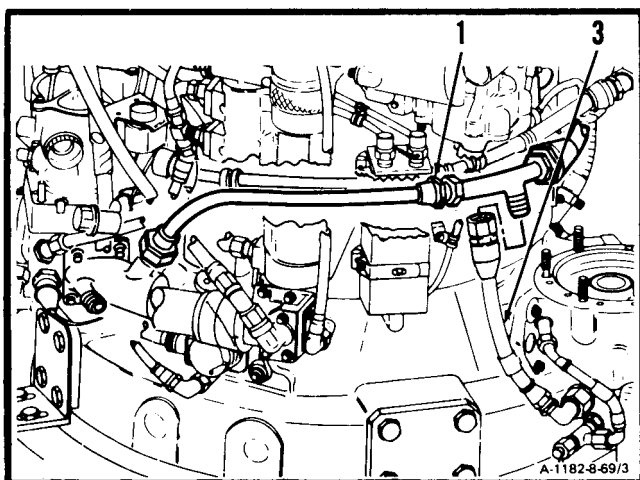
**8-69 INSTALL TUBE AND HOSE ASSEMBLY (ACCESSORY GEARBOX COLLECTOR TO TUBE ASSEMBLY) (Continued)**

---

1. Connect tube and hose assembly (1) to nipple (2).



2. Connect hose assembly (3) to tube and hose assembly (1).



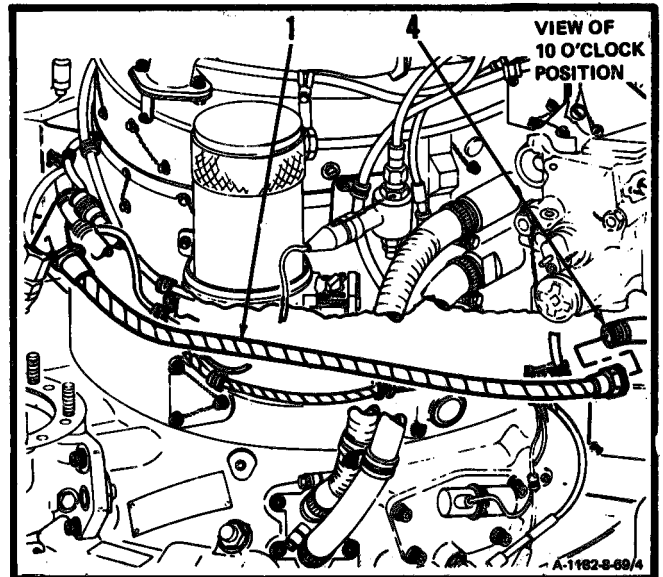
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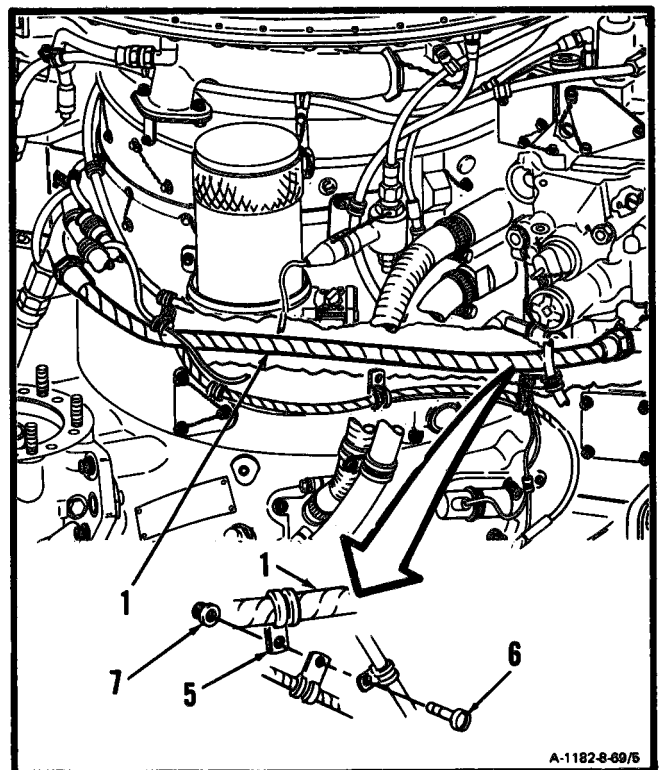
**8-69 INSTALL TUBE AND HOSE ASSEMBLY (ACCESSORY GEARBOX COLLECTOR TO TUBE ASSEMBLY) (Continued)**

8-69

3. Connect tube and hose assembly (1) to tube assembly (4). Use open-end wrench.



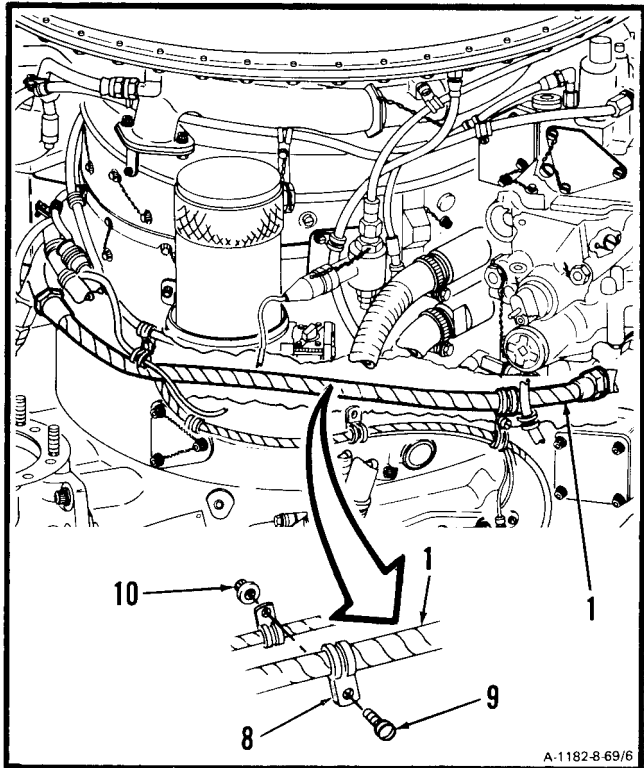
4. Install clamp (5) on tube and hose assembly (1) and install screw (6) and nut (7).



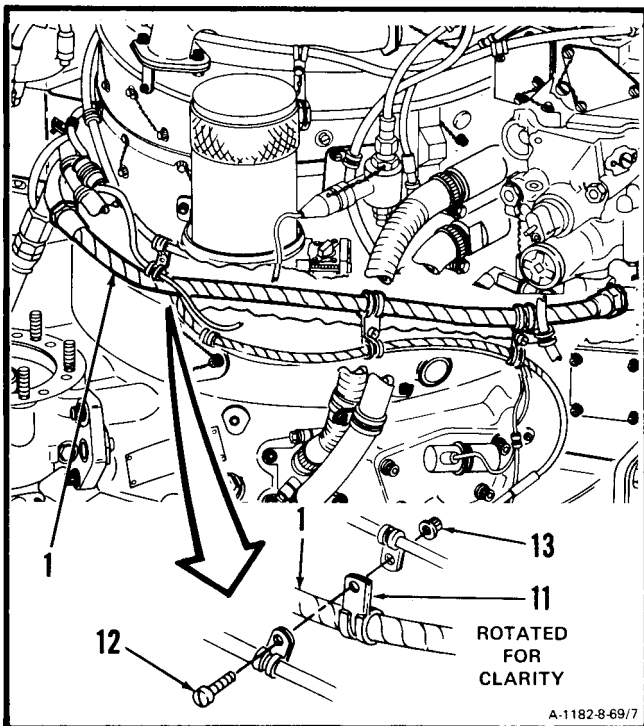
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**8-69 INSTALL TUBE AND HOSE ASSEMBLY (ACCESSORY GEARBOX COLLECTOR TO TUBE ASSEMBLY) (Continued)**

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).

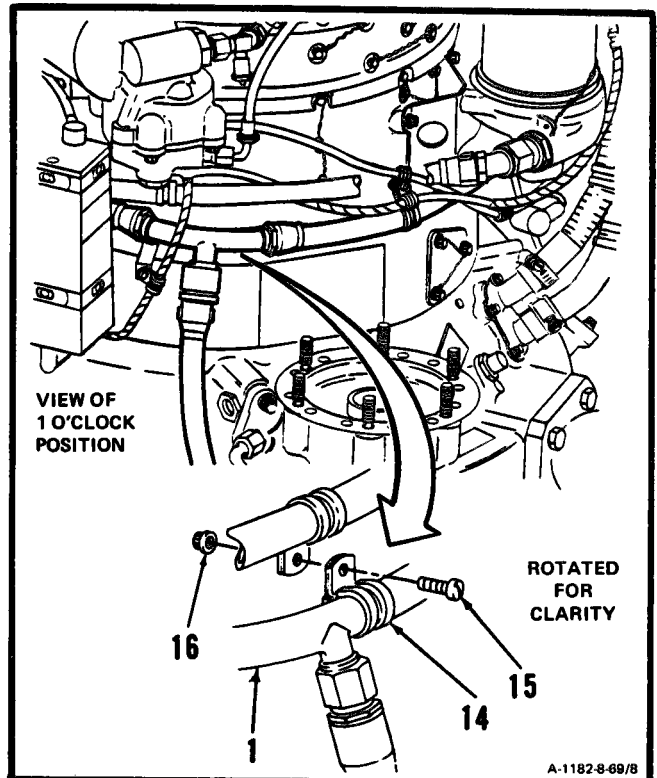


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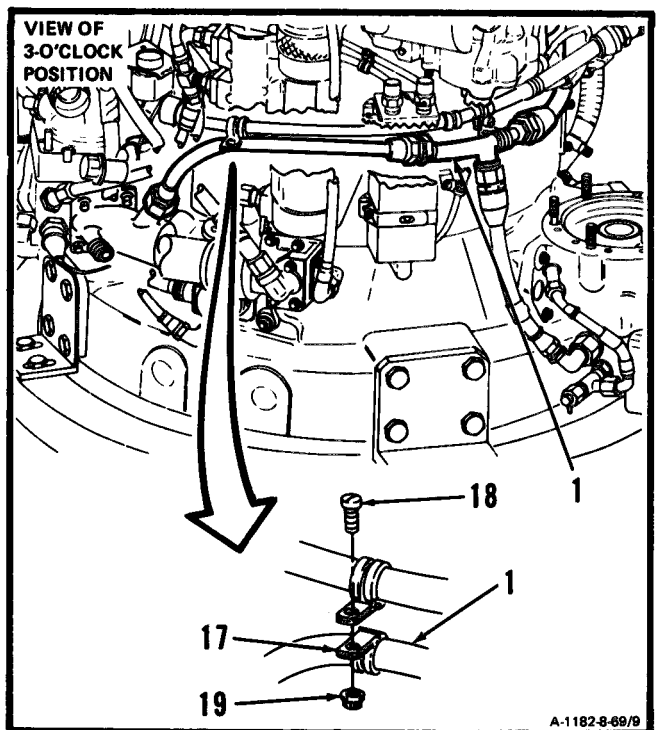
**8-69 INSTALL TUBE AND HOSE ASSEMBLY (ACCESSORY GEARBOX COLLECTOR TO TUBE ASSEMBLY) (Continued)**

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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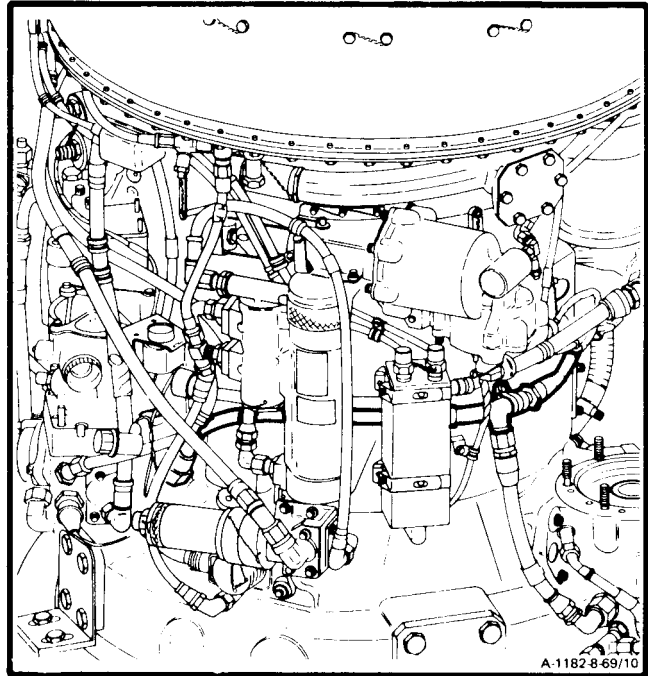
**8-69 INSTALL TUBE AND HOSE ASSEMBLY (ACCESSORY GEARBOX COLLECTOR  
TO TUBE ASSEMBLY) (Continued)**

---

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)

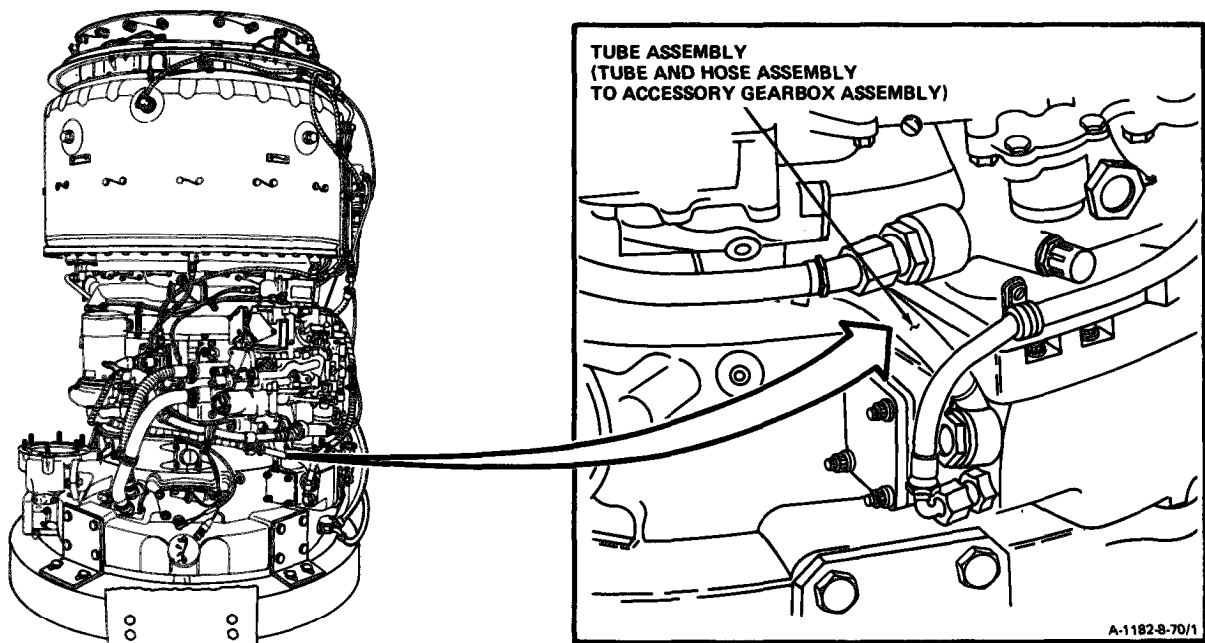
**Personnel Required:**

68B10 Aircraft Powerplant Repairer

**General Safety Instructions:**

**WARNING**

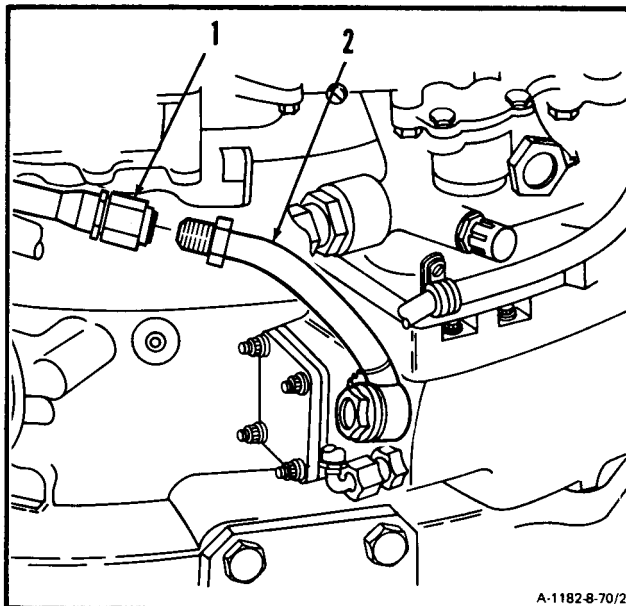
Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin, and do not take internally. 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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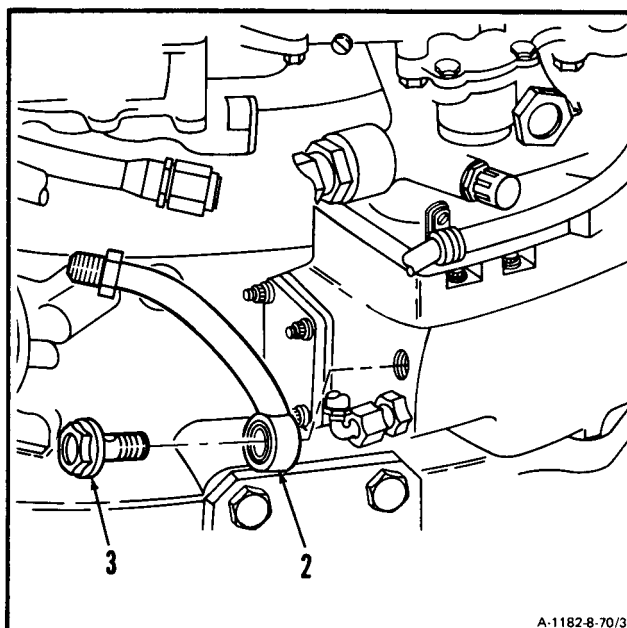
**8-70 REMOVE TUBE ASSEMBLY (TUBE AND HOSE ASSEMBLY TO ACCESSORY  
GEARBOX ASSEMBLY) (Continued)**

8-70

1. Disconnect tube and hose assembly (1) from tube assembly (2). Use 1-inch open-end wrench.



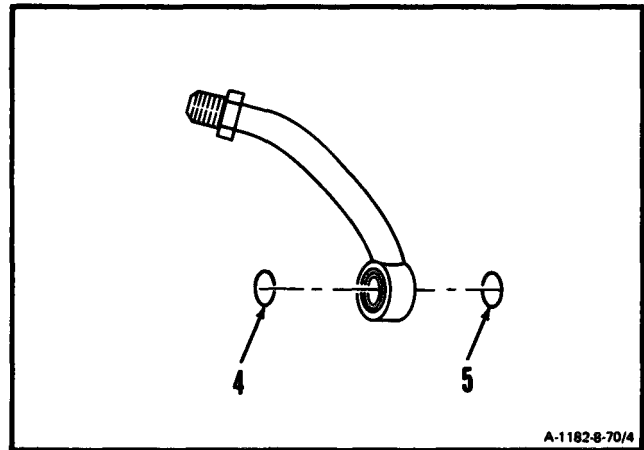
2. Remove lockwire and bolt (3). **Remove tube assembly (2).**

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**8-70 REMOVE TUBE ASSEMBLY (TUBE AND HOSE ASSEMBLY TO ACCESSORY GEARBOX ASSEMBLY) (Continued)**

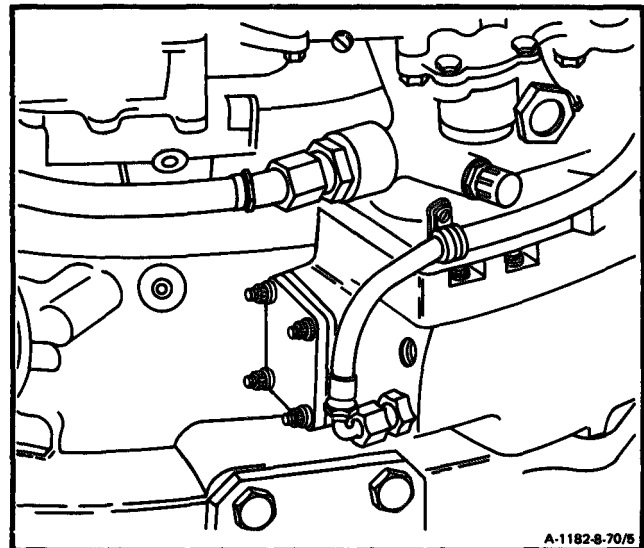
8-70

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:**

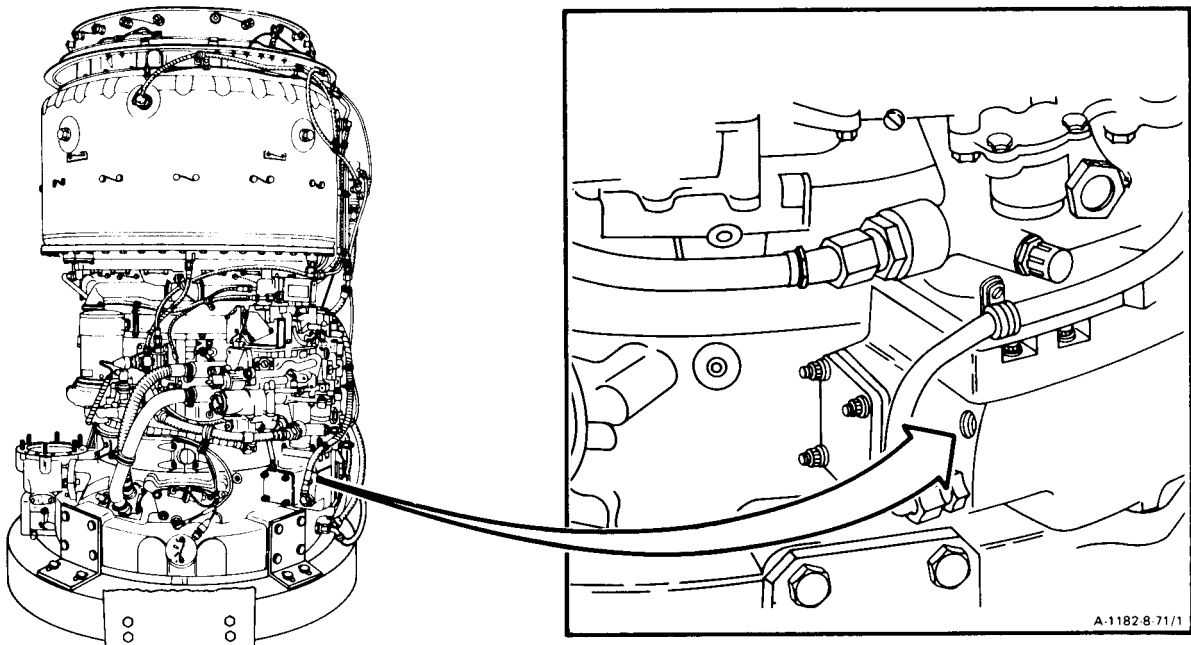
Packings

**Personnel Required:**

68B10 Aircraft Powerplant Repairer  
68B30 Aircraft Powerplant Inspector

**References:**

TM 55-2840-254-23P



A-1182 8 71/1

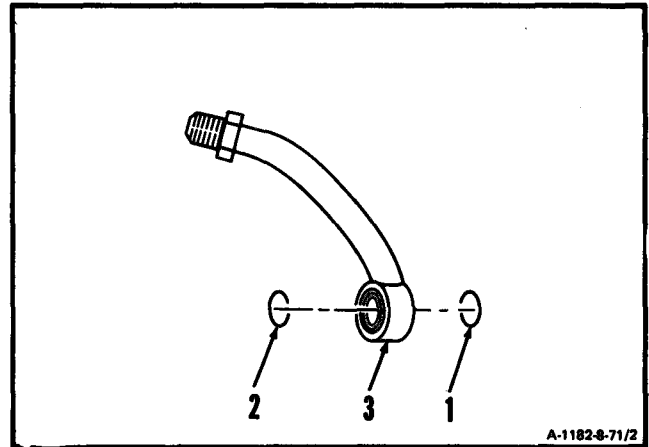
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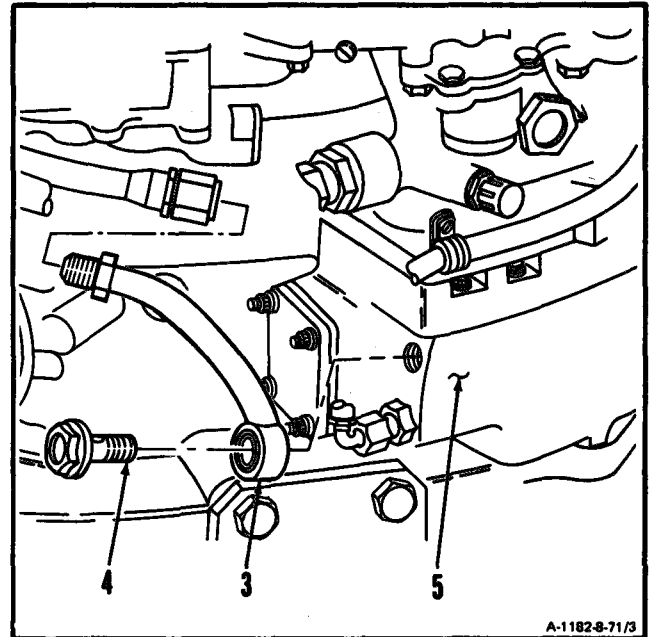
**8-71 INSTALL TUBE ASSEMBLY (TUBE AND HOSE ASSEMBLY TO ACCESSORY  
GEARBOX ASSEMBLY) (Continued)**

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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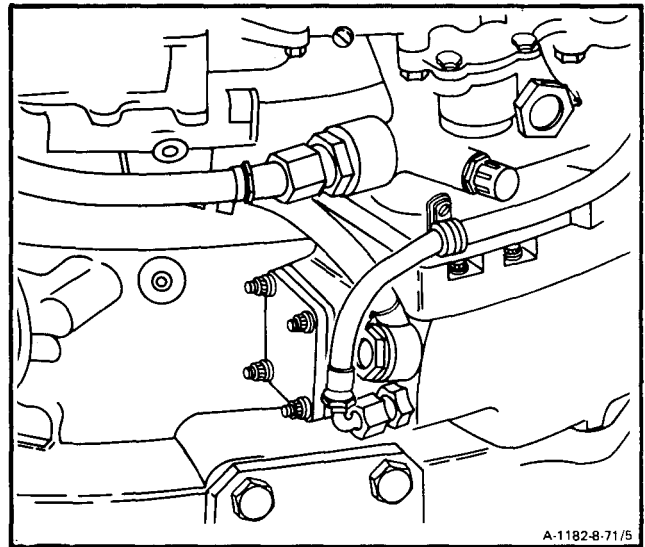
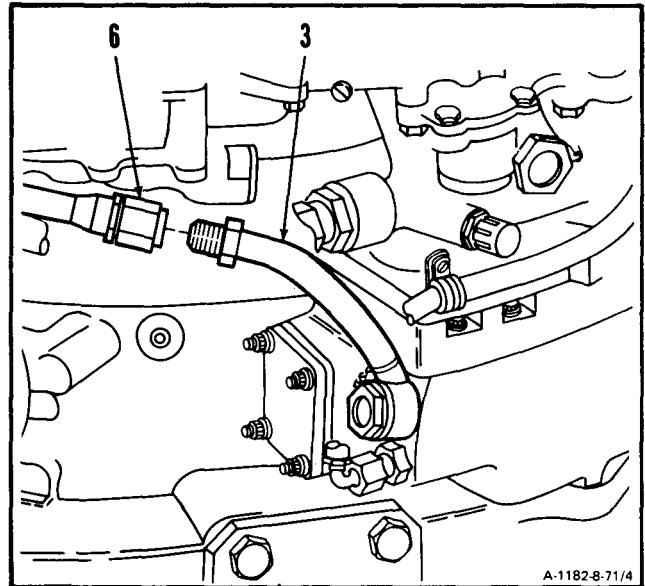
**8-71 INSTALL TUBE ASSEMBLY (TUBE AND HOSE ASSEMBLY TO ACCESSORY  
GEARBOX ASSEMBLY) (Continued)**

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:**

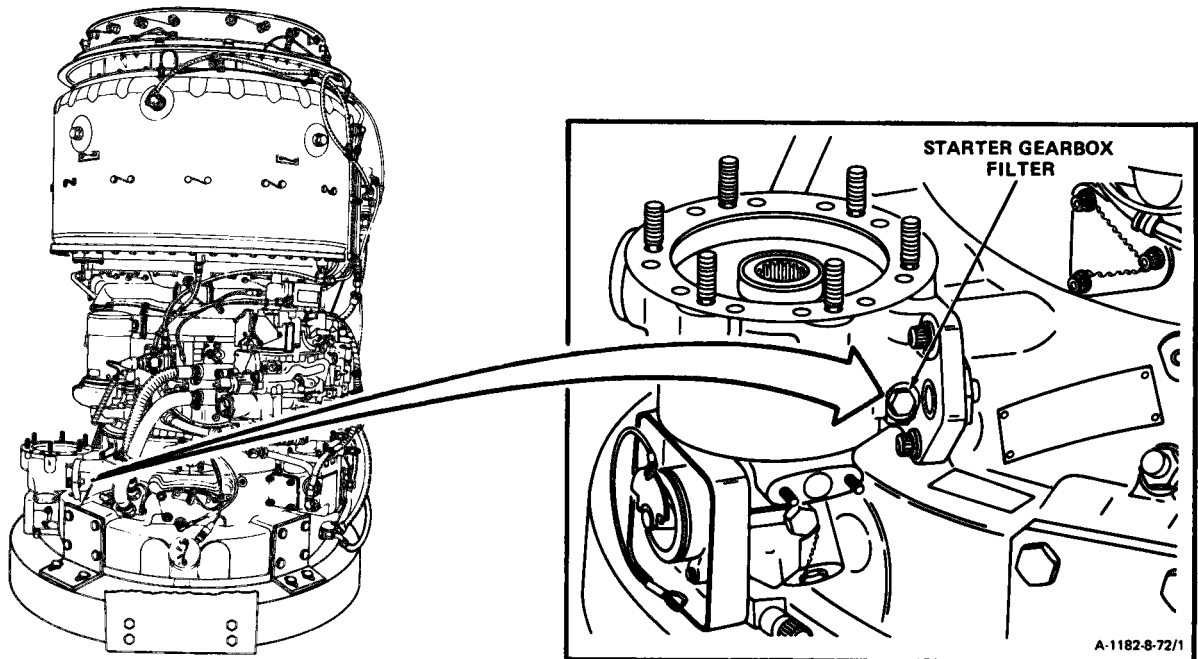
All

**Personnel Required:**

68B10 Aircraft Powerplant Repairer

**Tools:**

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



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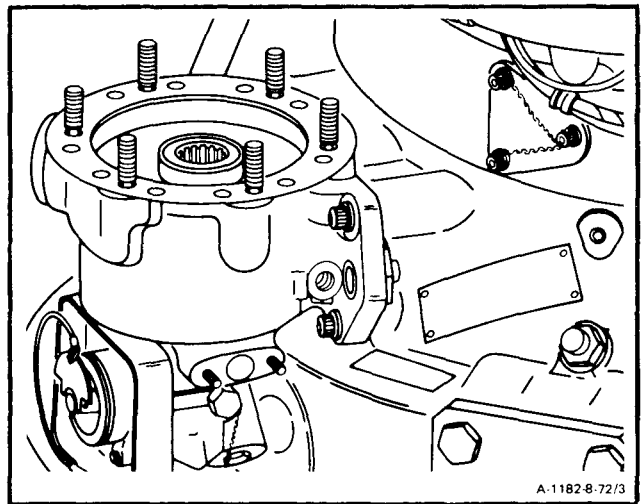
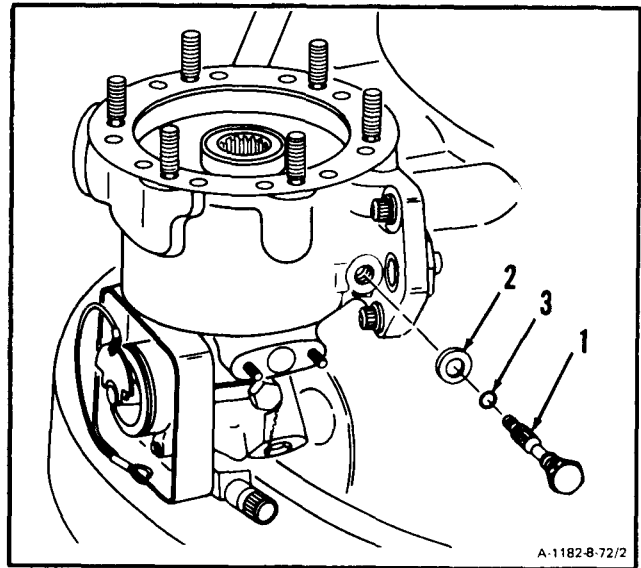
**WARNING**

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.

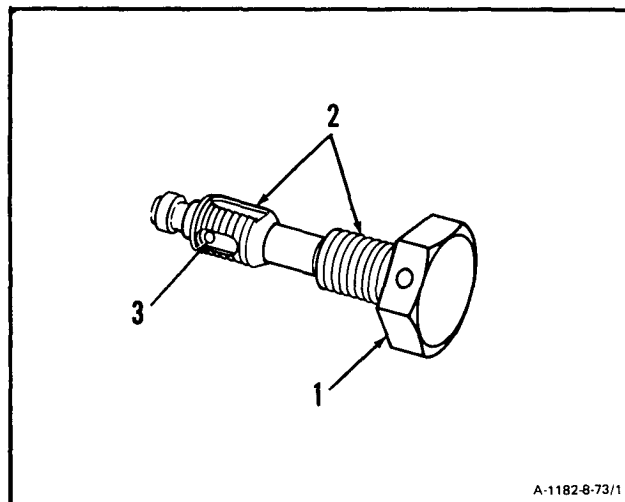
## 1. Clean starter gearbox filter (1) as follows:

- 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:**

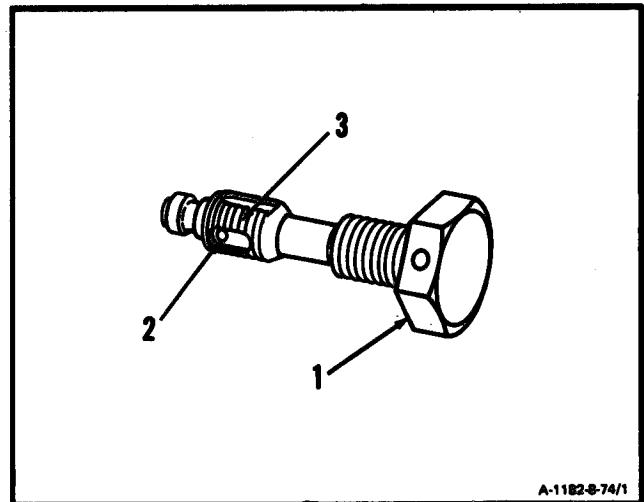
68B30 Aircraft Powerplant Inspector

**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:**

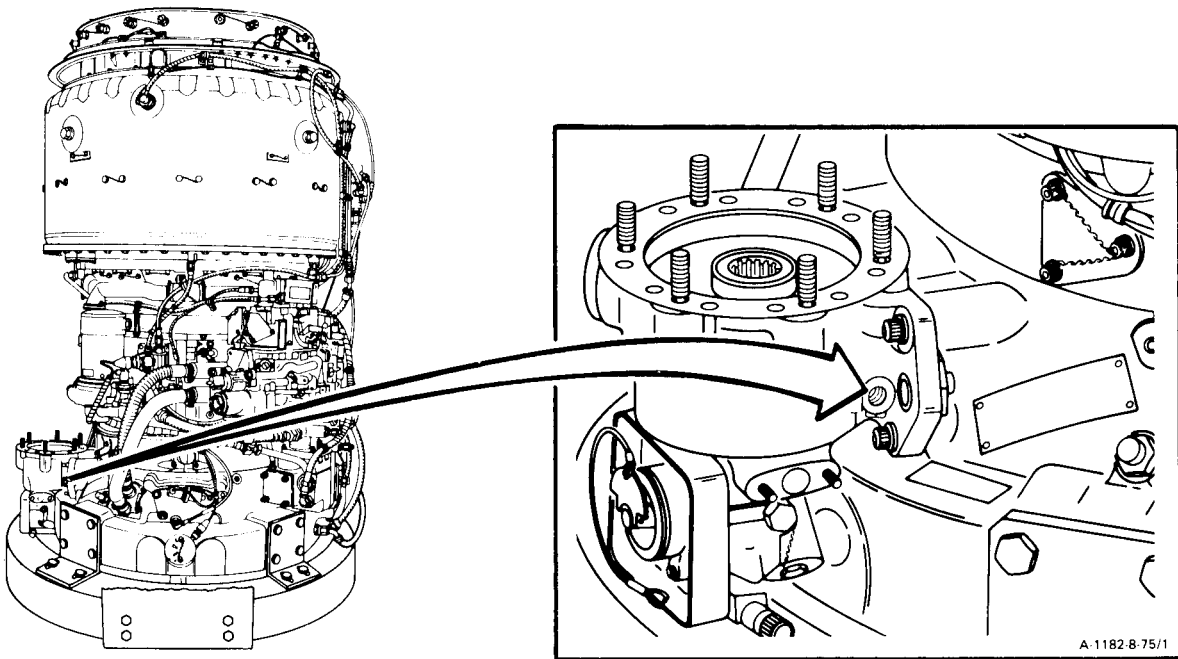
Packing  
Washer

**Personnel Required:**

68B10 Aircraft Powerplant Repairer  
68B30 Aircraft Powerplant Inspector

**References:**

TM 55-2840-254-23P



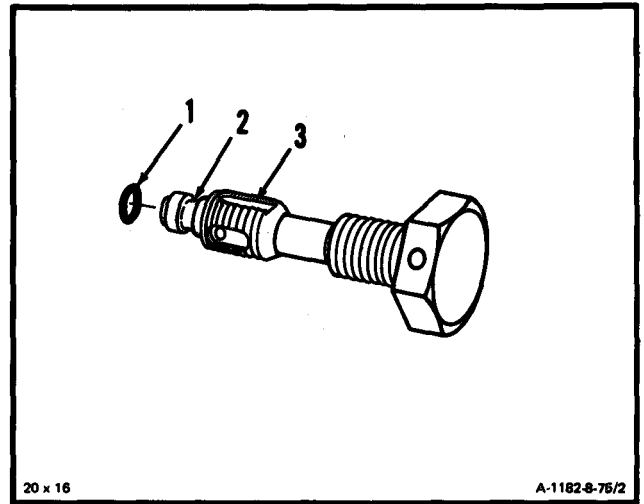
A 1182 8 75/1

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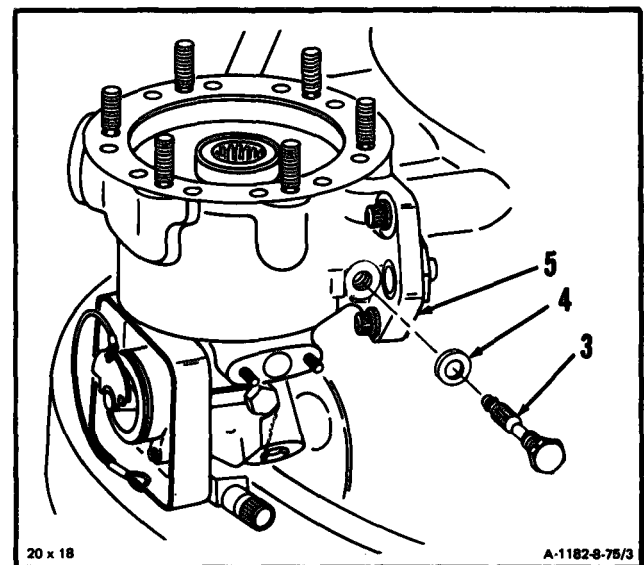
**8-75 INSTALL STARTER GEARBOX FILTER (Continued)**

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).



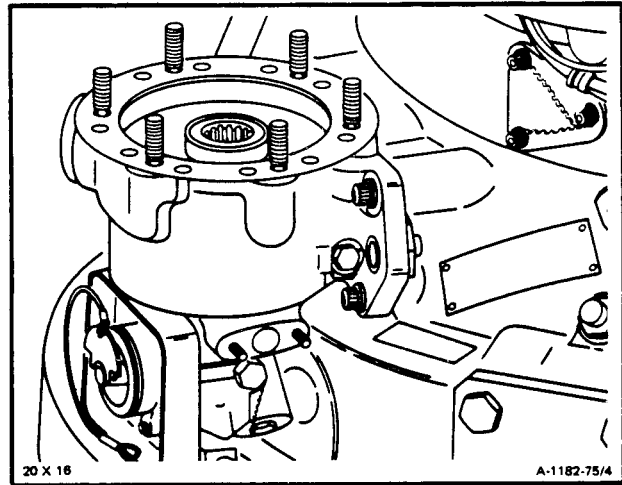
INSPECT

**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:**

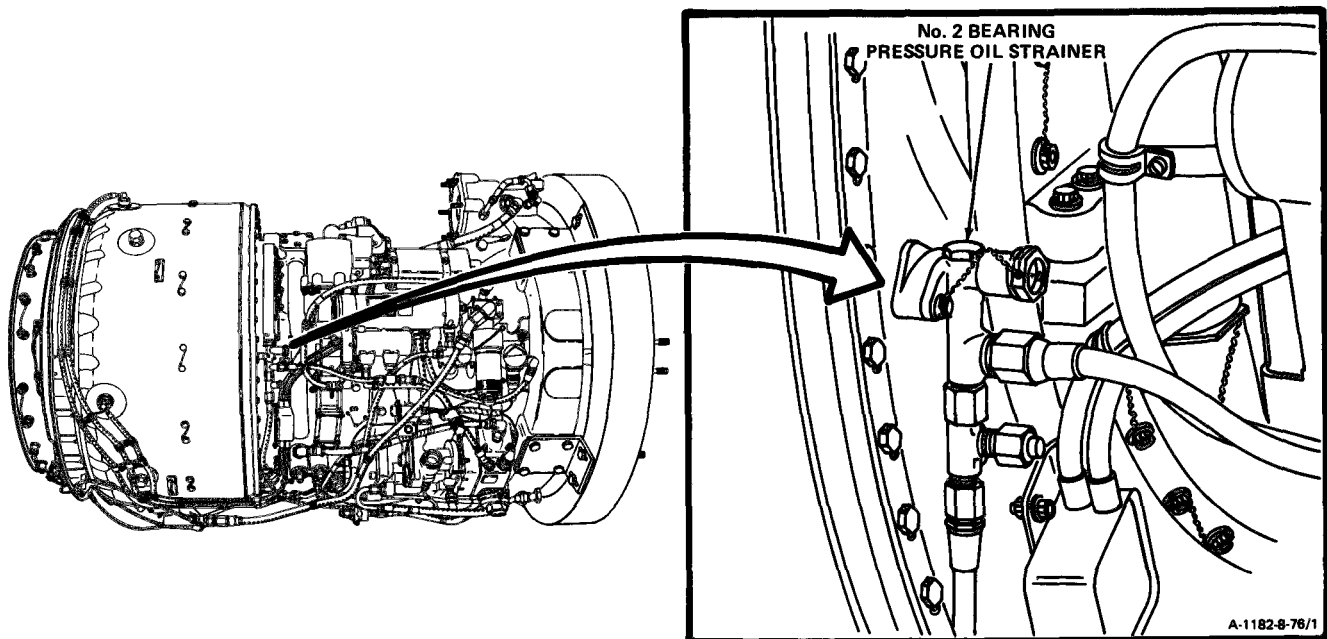
None

**Personnel Required:**

68B10 Aircraft Powerplant Repairer

**WARNING**

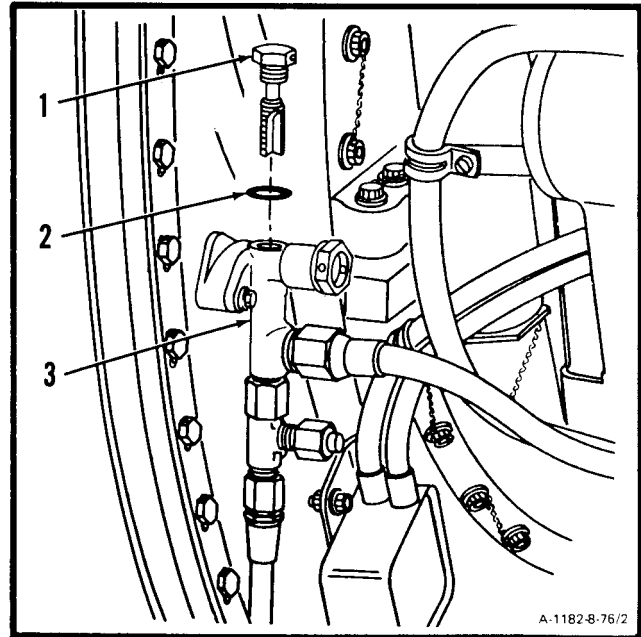
Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin and do not take internally. 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)

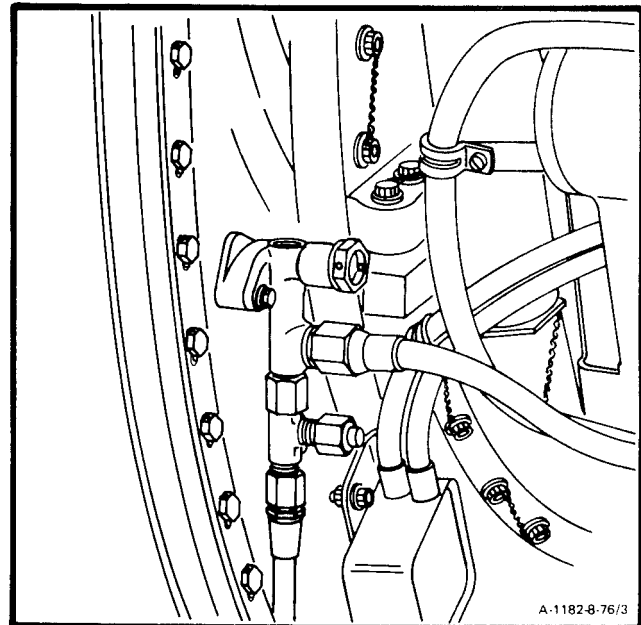
8-76

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**

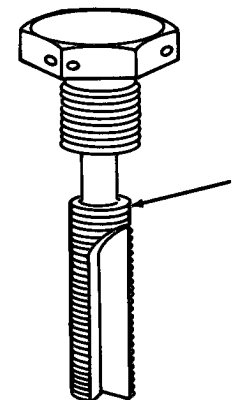
Dry cleaning solvent (E17) is flammable and toxic. It can irritate skin and cause burns. Use only in well-ventilated area, away from heat and open flame. In case of contact, immediately flush skin or eyes with water for at least 15 minutes. Get medical attention for eyes.

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

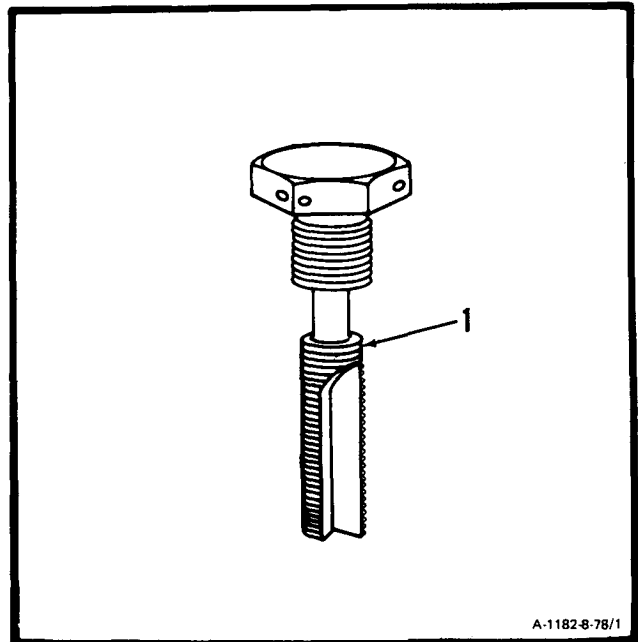
**Equipment Condition:**

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:**

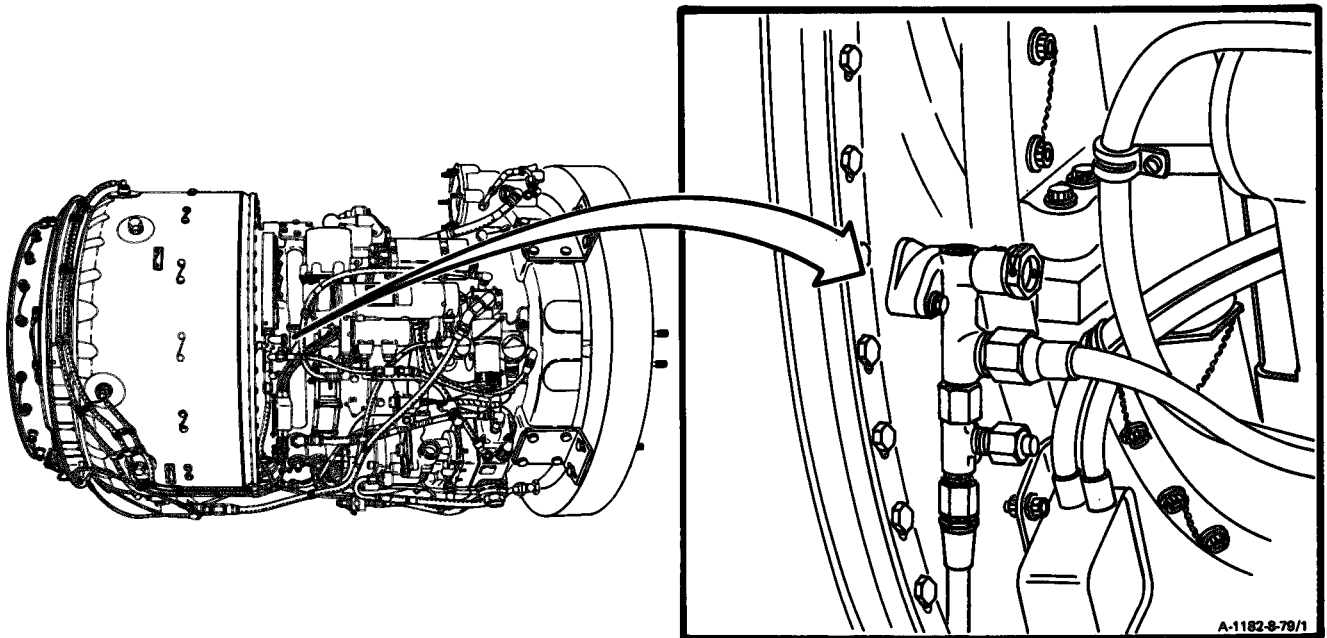
Packing

**Personnel Required:**

68B10 Aircraft Powerplant Repairer  
68B30 Aircraft Powerplant Inspector

**References:**

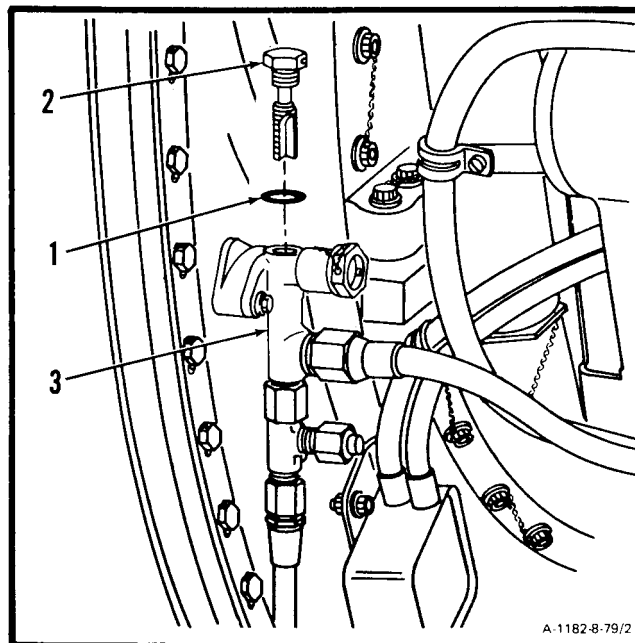
TM 55-2840-254-23P

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8-79 INSTALL NO. 2 BEARING PRESSURE OIL STRAINER (Continued)

8-79

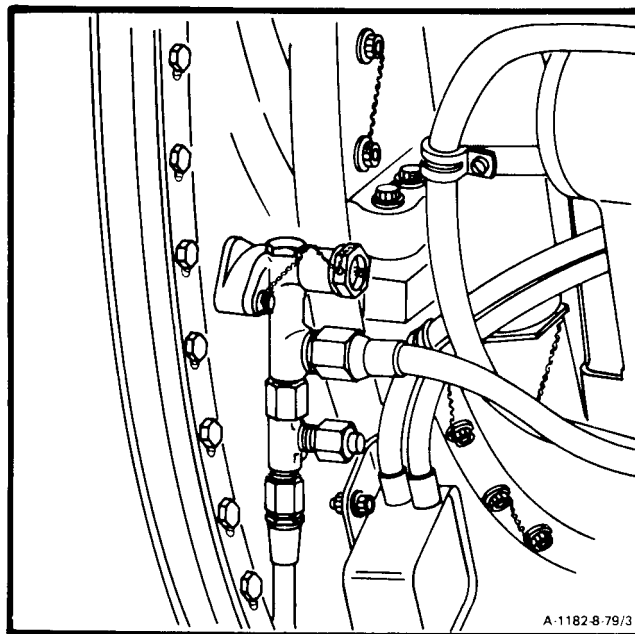
1. Install packing (1) and No. 2 bearing pressure oil strainer (2) in connector (3). Lockwire strainer (2). Use lockwire (E29).



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

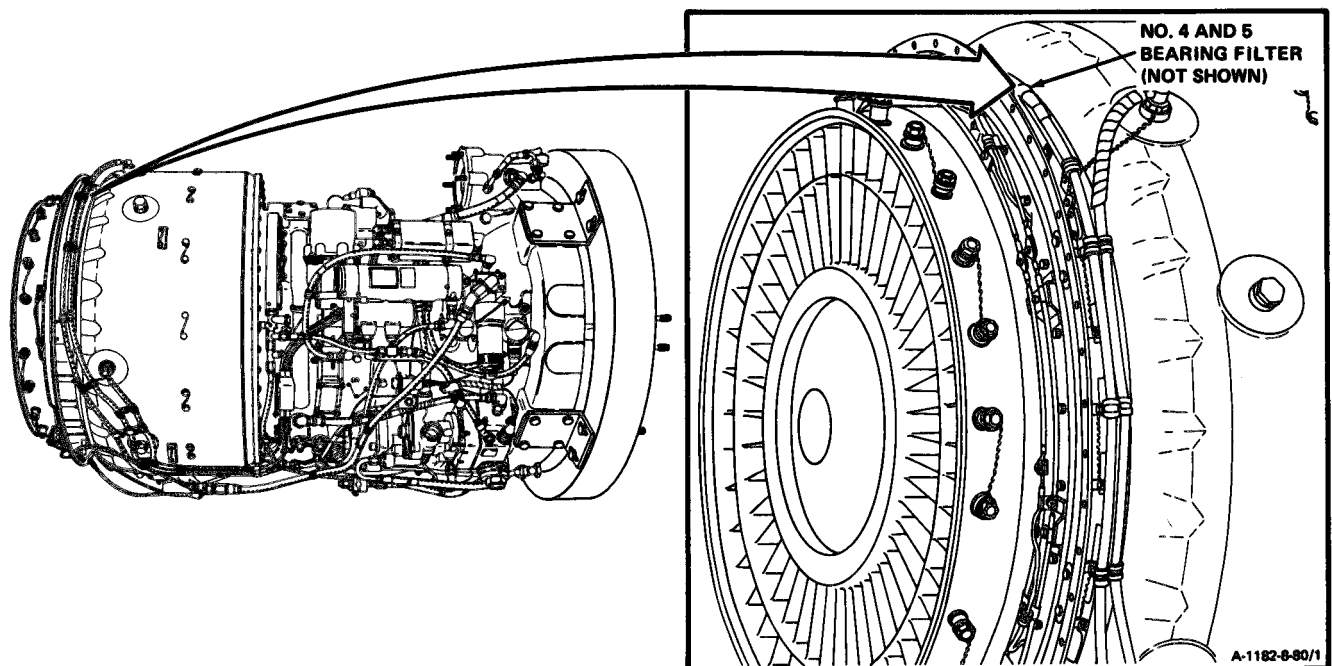
**WARNING***Tools:*

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)

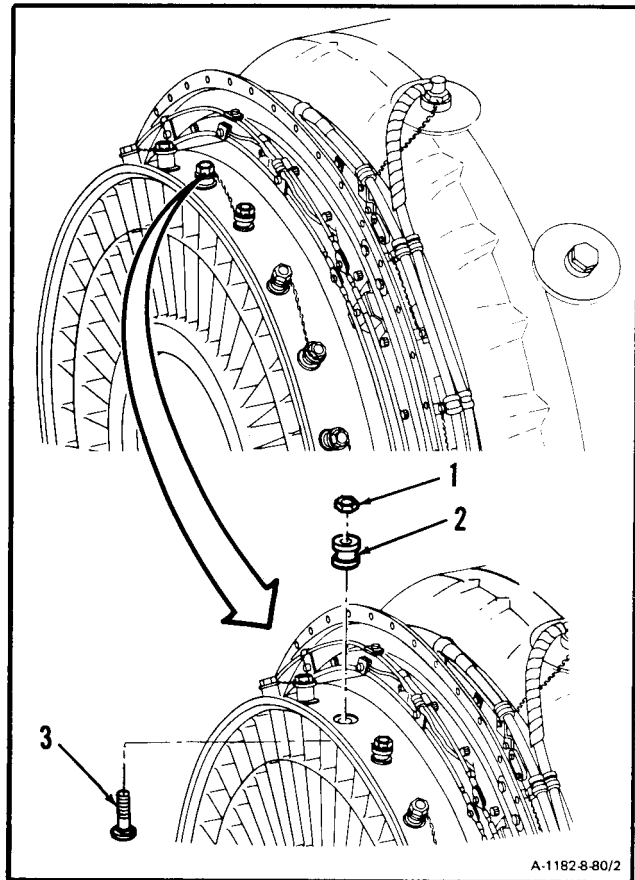
Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-ventilated areas away from heat and flame. Drain and store in approved metal safety containers. Avoid prolonged or repeated contact with skin, and do not take internally. Wash contacted areas of skin thoroughly after handling. If irritation of skin results, get medical attention. Get medical attention for eyes.



GO TO NEXT PAGE



1. Remove lockwire, nut (1), spacer (2), and bolt (3).

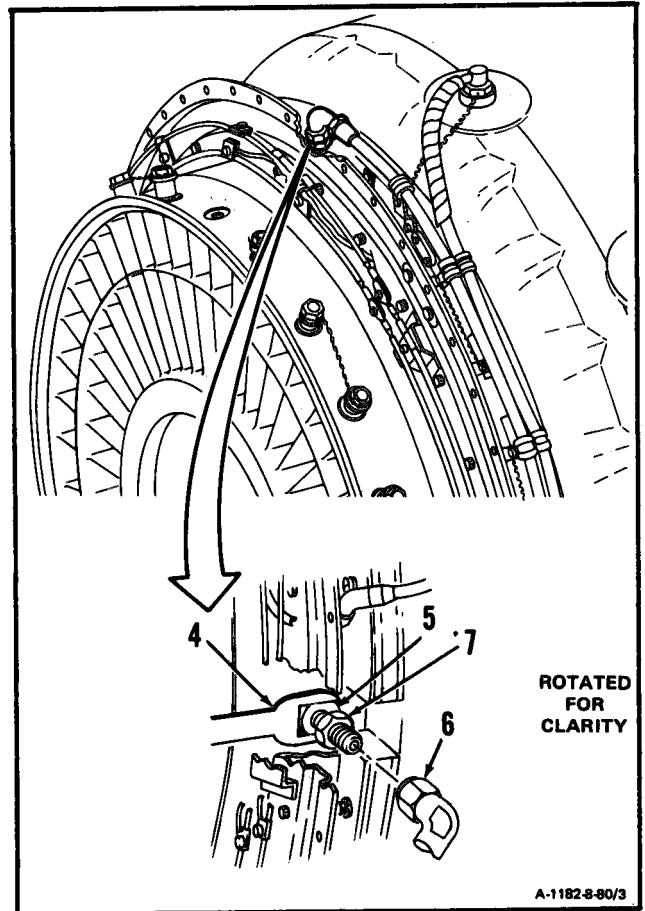


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**CAUTION**

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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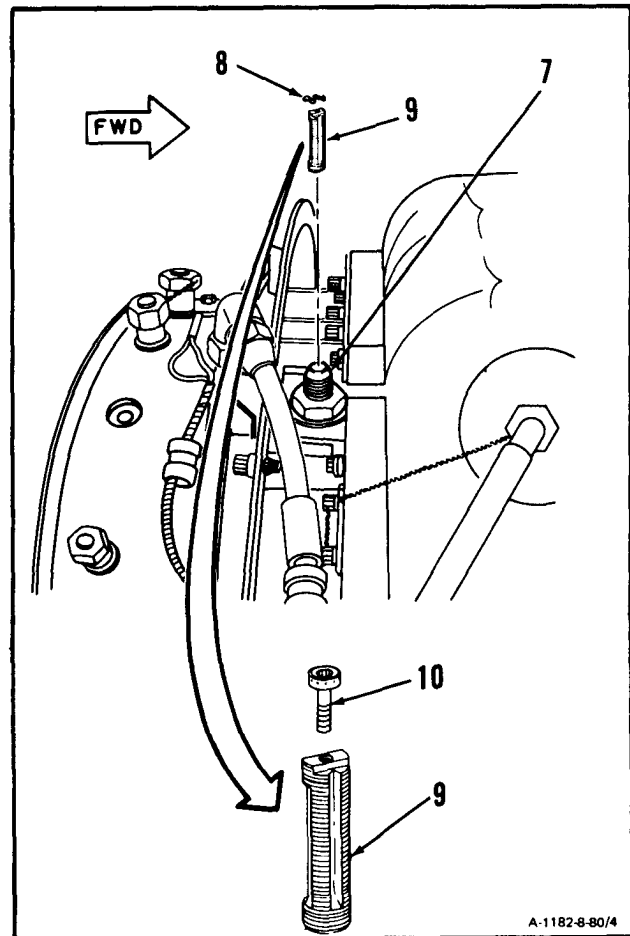
**WARNING**

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.

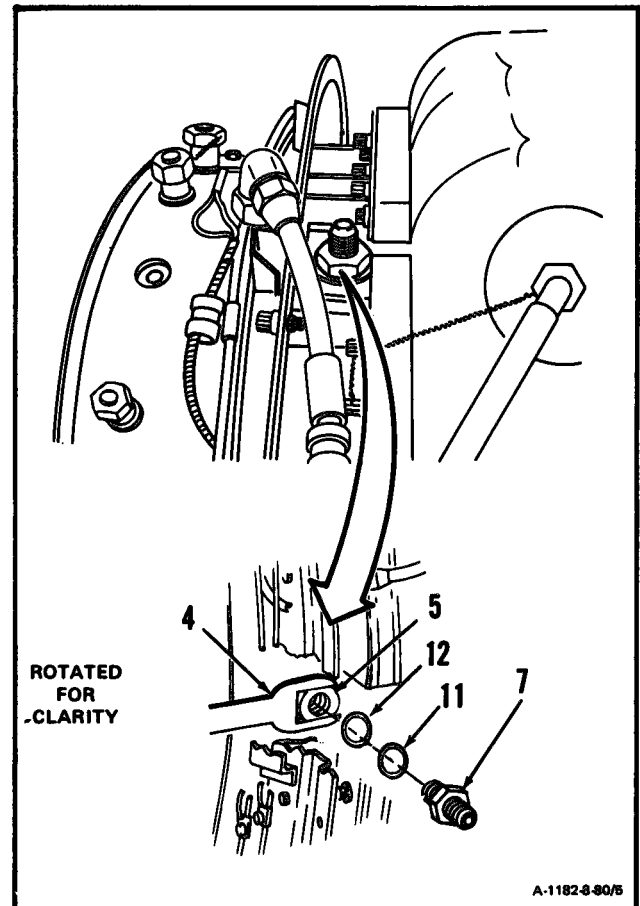


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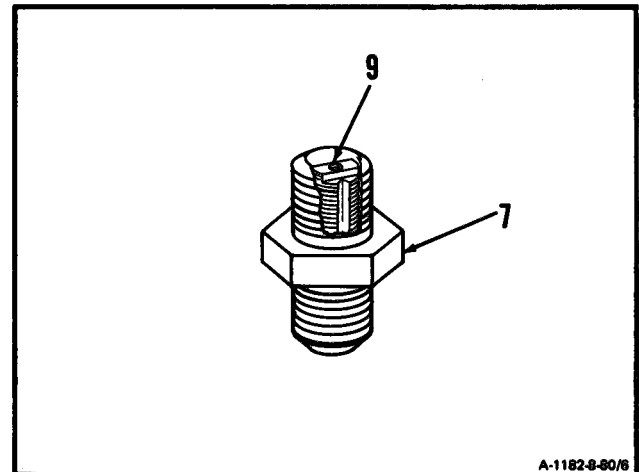
**8-80 REMOVE NO. 4 AND 5 BEARING FILTER (Continued)**

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.

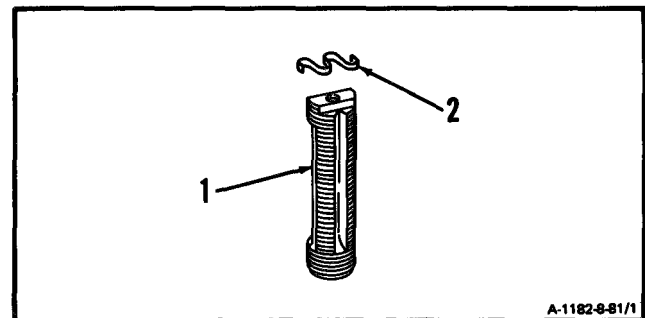
**WARNING**

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

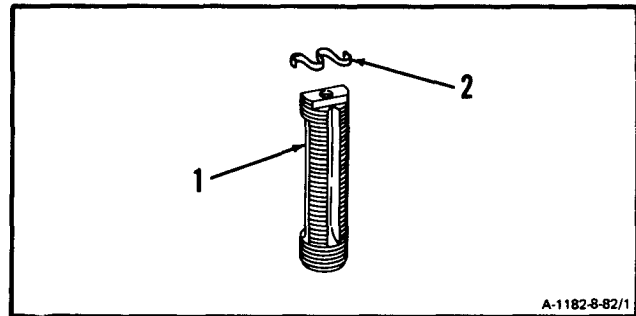
**Personnel Required:**

68B30 Aircraft Powerplant Inspector

**Equipment Condition**Off Engine Task

---

1. **Inspect No. 4 and 5 bearing filter (1).** There shall be no nicks, tears, or broken segments.
2. Inspect spring (2). Spring shall not be broken.

**FOLLOW-ON MAINTENANCE:**

None

**END OF TASK**

---

**8-83 INSTALL NO. 4 AND 5 BEARING FILTER**

---

8-83

**INITIAL SETUP****Applicable Configurations:**

All

**Tools:**

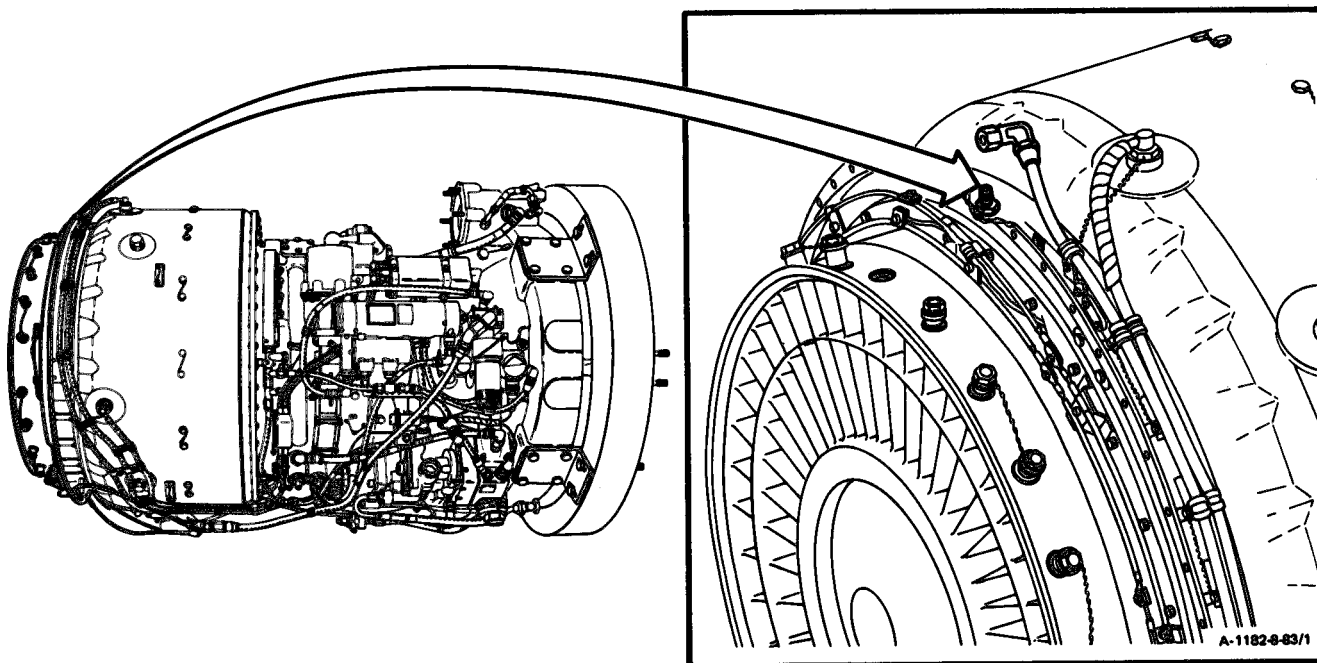
Powerplant Mechanic's Tool Kit,  
NSN 5180-00-323-4944  
Technical Inspection Tool Kit,  
NSN 5180-00-323-5114  
Open-End Wrench (T53)  
Torque Wrench, 30-150 Inch-Pounds  
Outside Micrometer Caliper Set  
Goggles

**Materials:**

Lockwire (E29)

**Personnel Required:**

68B10 Aircraft Powerplant Repairer  
68B30 Aircraft Powerplant Inspector

**GO TO NEXT PAGE**

**NOTE**

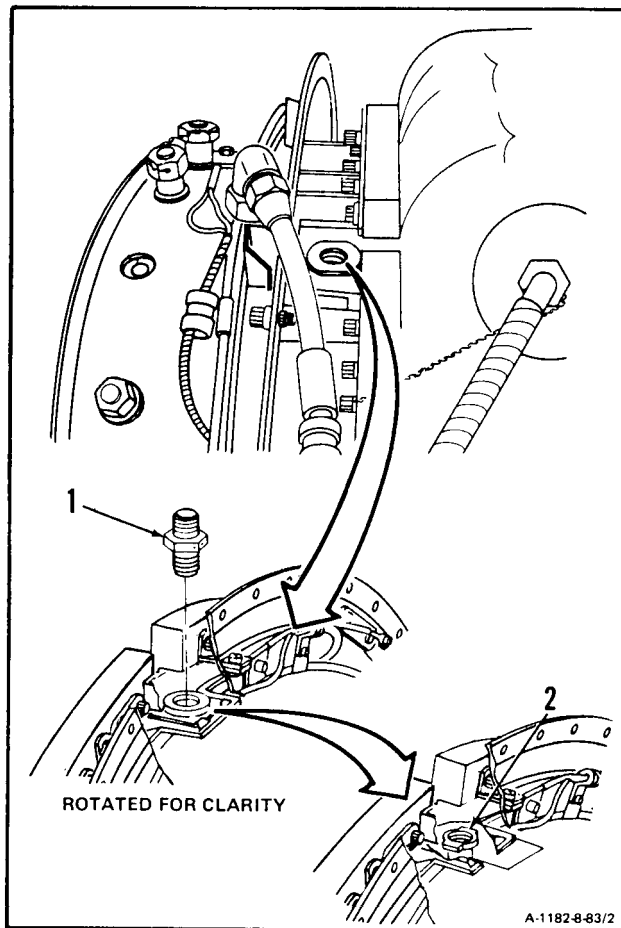
If reducer was removed in Task 8-80, perform steps 1 thru 3. If reducer was not removed, omit steps 1 thru 3.

- 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.**

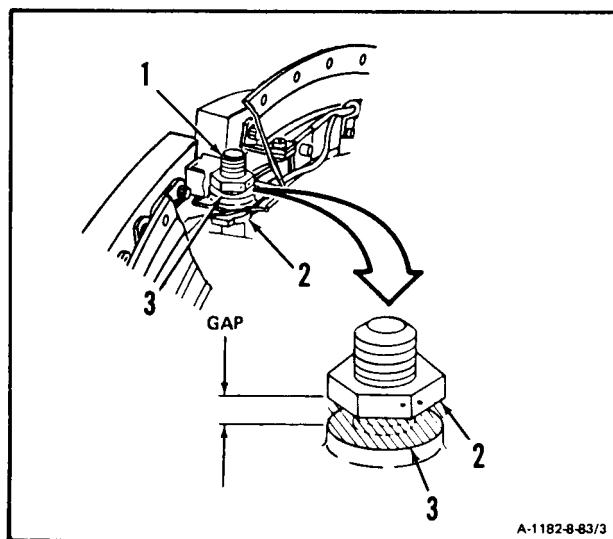
- a. Thread reducer (1) in adapter (2) until it is seated.



**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)

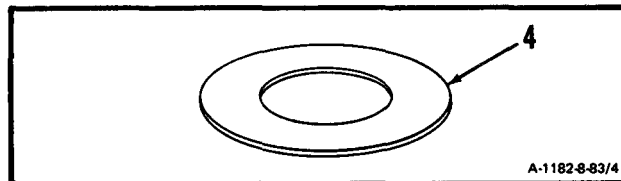
8-83

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**

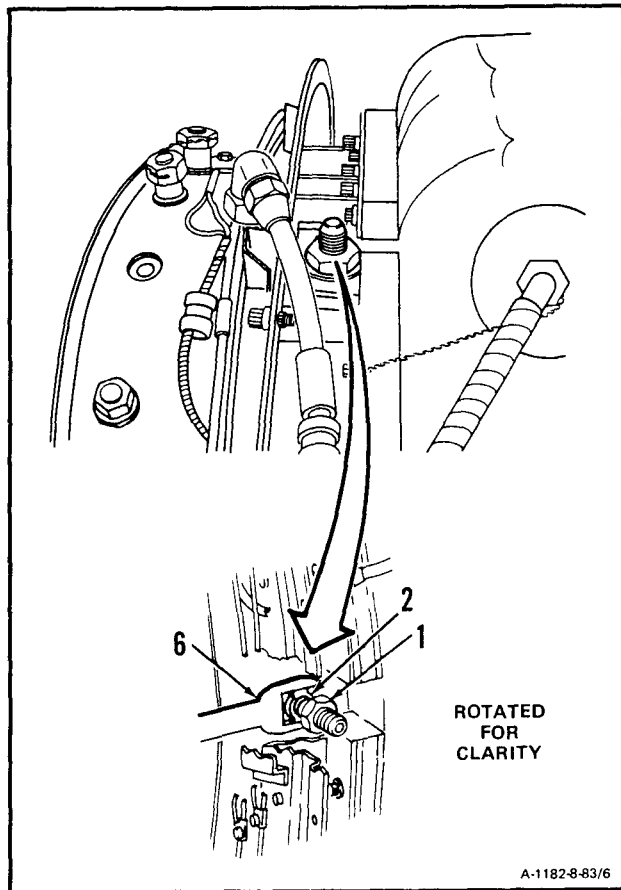
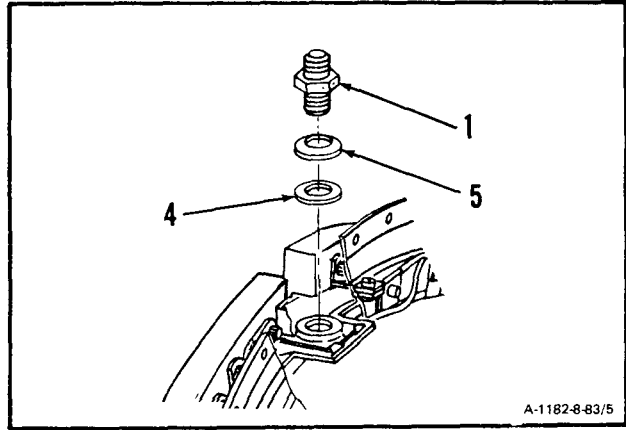
Do not tighten reducer in following step. Tightening of reducer may damage internal oil tube.

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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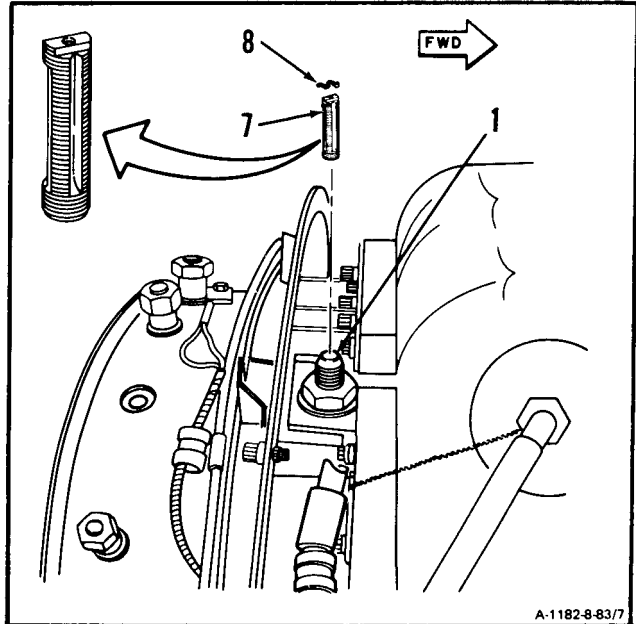
**WARNING**

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.

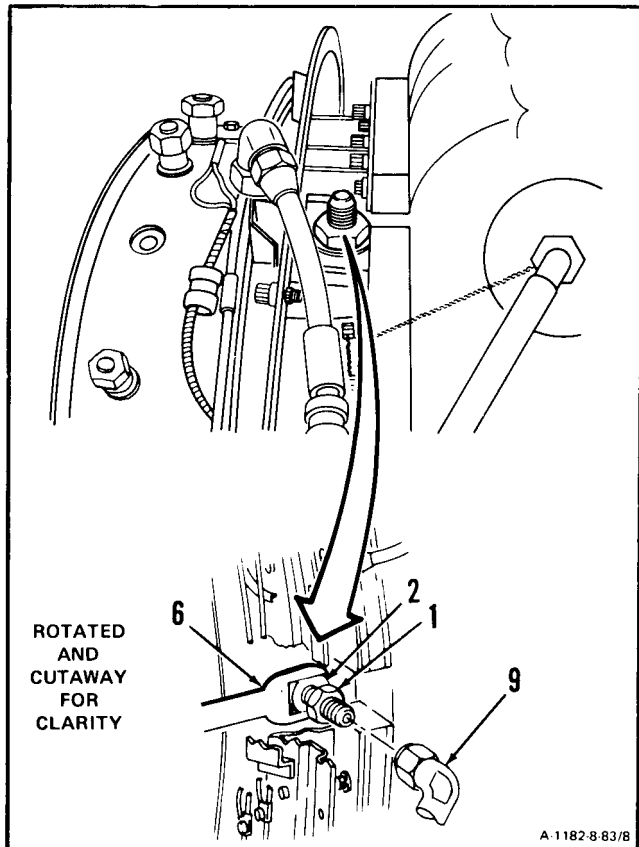
- 4. Wear goggles. Install No. 4 and 5 bearing filter (7) and spring (8) in reducer (1).



**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).

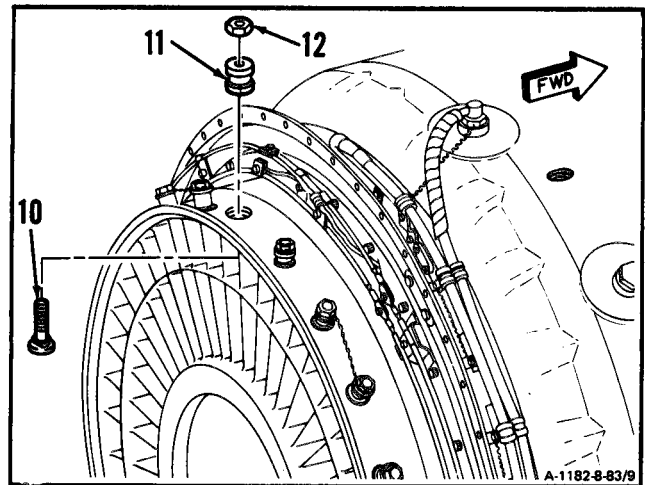


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## 8-83 INSTALL NO. 4 AND 5 BEARING FILTER (Continued)

8-83

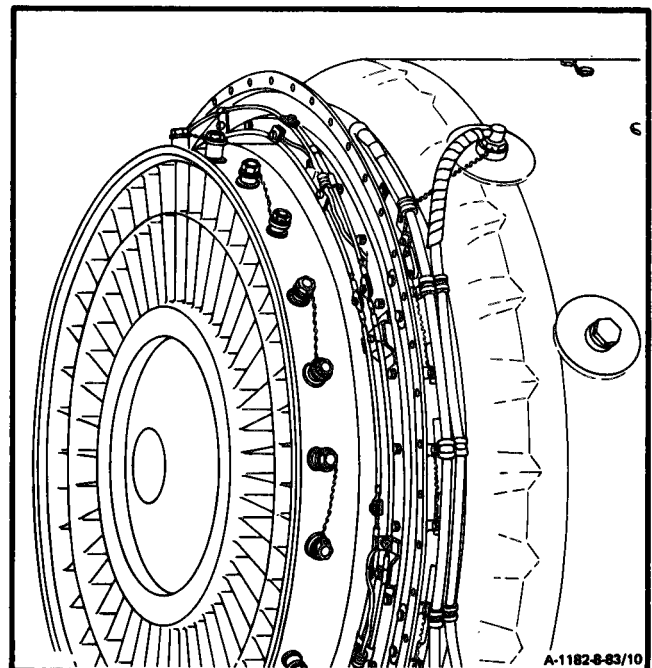
7. Install bolt (10), spacer (11), and nut (12).  
 Torque nut (12) to 125 inch-pounds. Lockwire  
 nut (12). Use lockwire (E29).



## 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

**Applicable Configurations:**

All

**Tools:**

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

**Materials:**

Wiping Rag (E58)

**Personnel Required:**

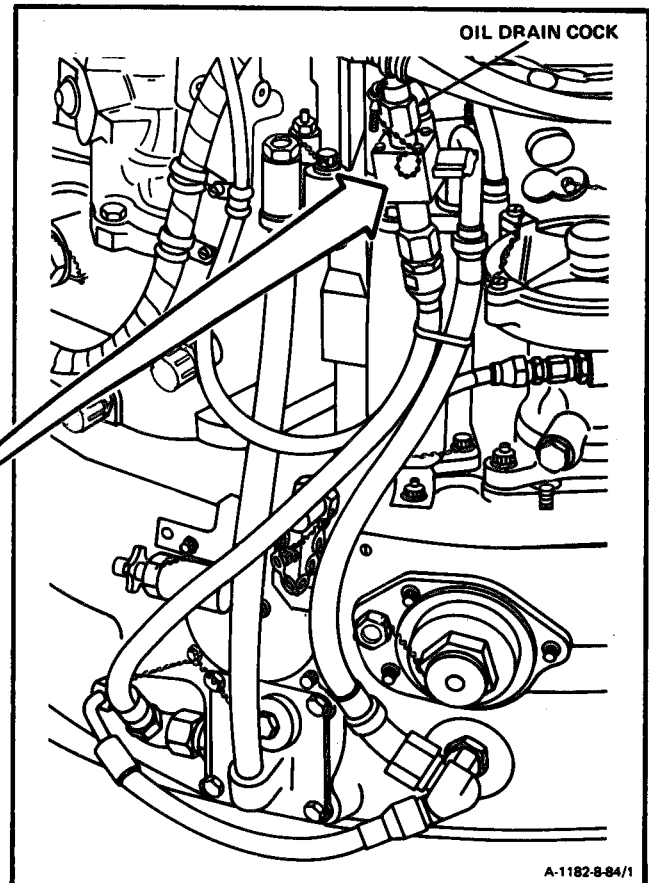
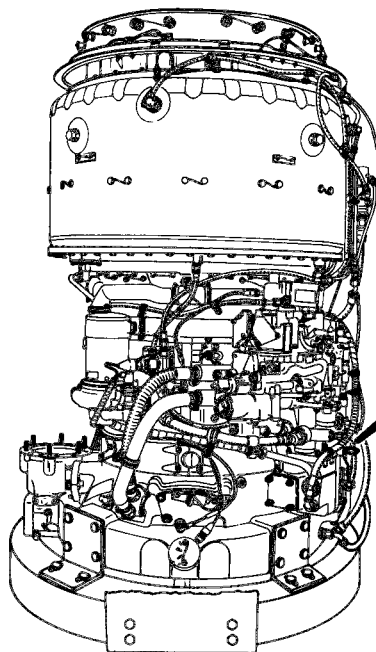
68510 Aircraft Powerplant Repairer

**Equipment Condition:**

Engine Oil System Drained (Task 1-75)

**General Safety Instructions:****WARNING**

Lubricating oils (E32 and E33) cause paralysis if swallowed. Prolonged contact with them may irritate the skin. Handle only in well-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.

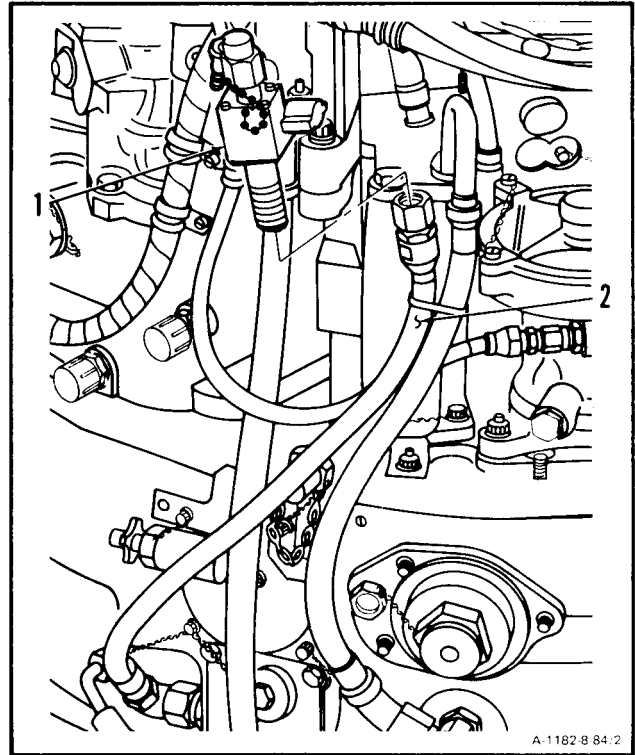


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8-84 REMOVE OIL DRAIN COCK (Continued)

8-84

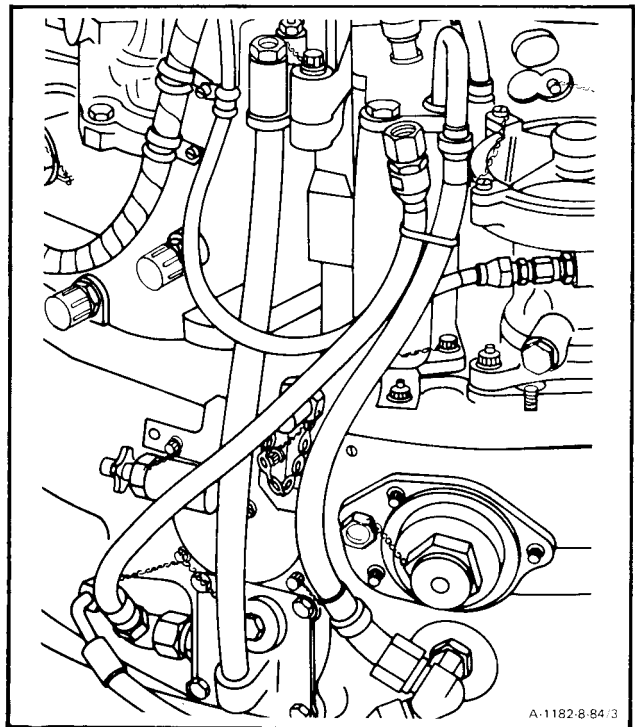
1. Remove oil drain cock (1) from hose assembly (2).



A-1182-8-84:2

FOLLOW-ON MAINTENANCE:

None



A-1182-8-84:3

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**

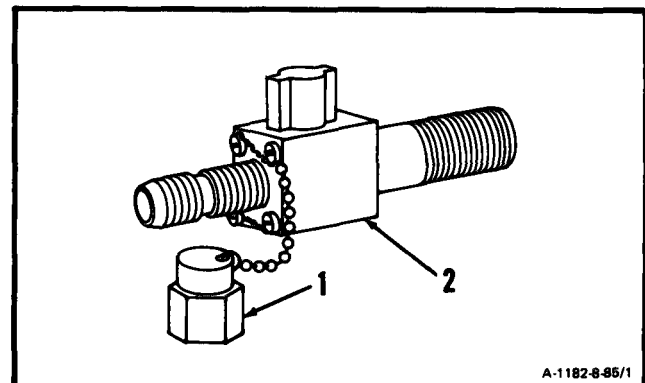
Dry cleaning solvent (E17) is flammable and toxic. It can irritate skin and cause burns. Use only in well-ventilated area, away from heat and open flame. In case of contact, immediately flush skin or eyes with water for at least 15 minutes. Get medical attention for eyes.

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**

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**8-85 CLEAN OIL DRAIN COCK (Continued)**

**8-85**

**FOLLOW-ON MAINTENANCE:**

Inspect Oil Drain Cock (Task 8-86).

**END OF TASK**

8-282



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**8-86 INSPECT OIL DRAIN COCK**

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8-86

**INITIAL SETUP****Personnel Required:**

68B30 Aircraft Powerplant Inspector

**Applicable Configurations:**

All

**Equipment Condition:**

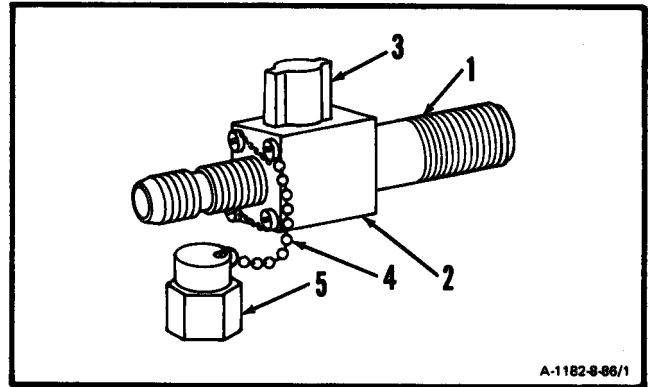
Off Engine Task

**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**

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)

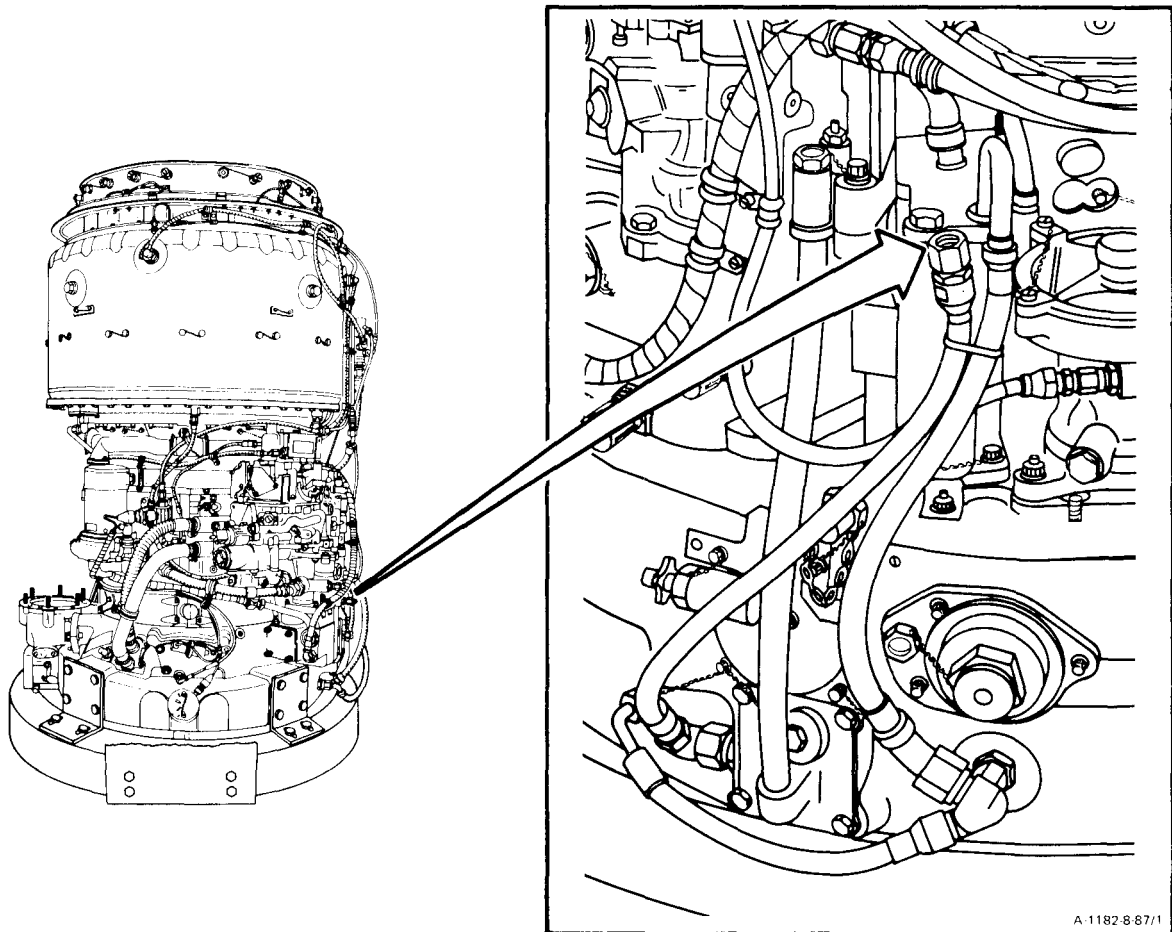
**Personnel Required:**

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.



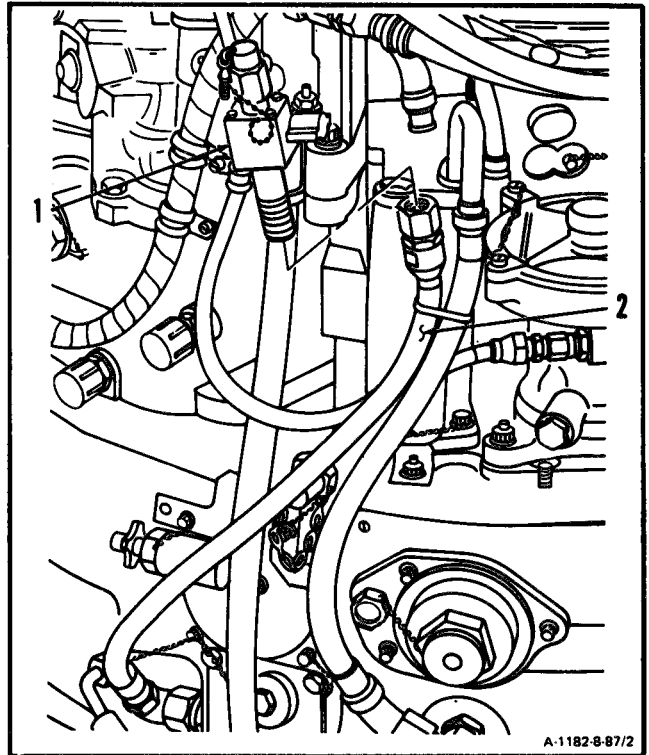
A-1182-8-87/1

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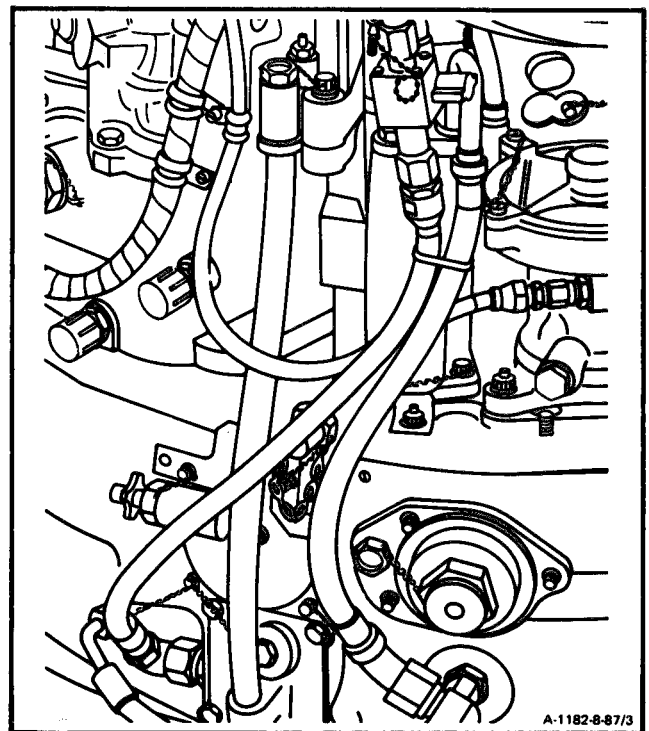
**8-87 INSTALL OIL DRAIN COCK (Continued)**

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:**

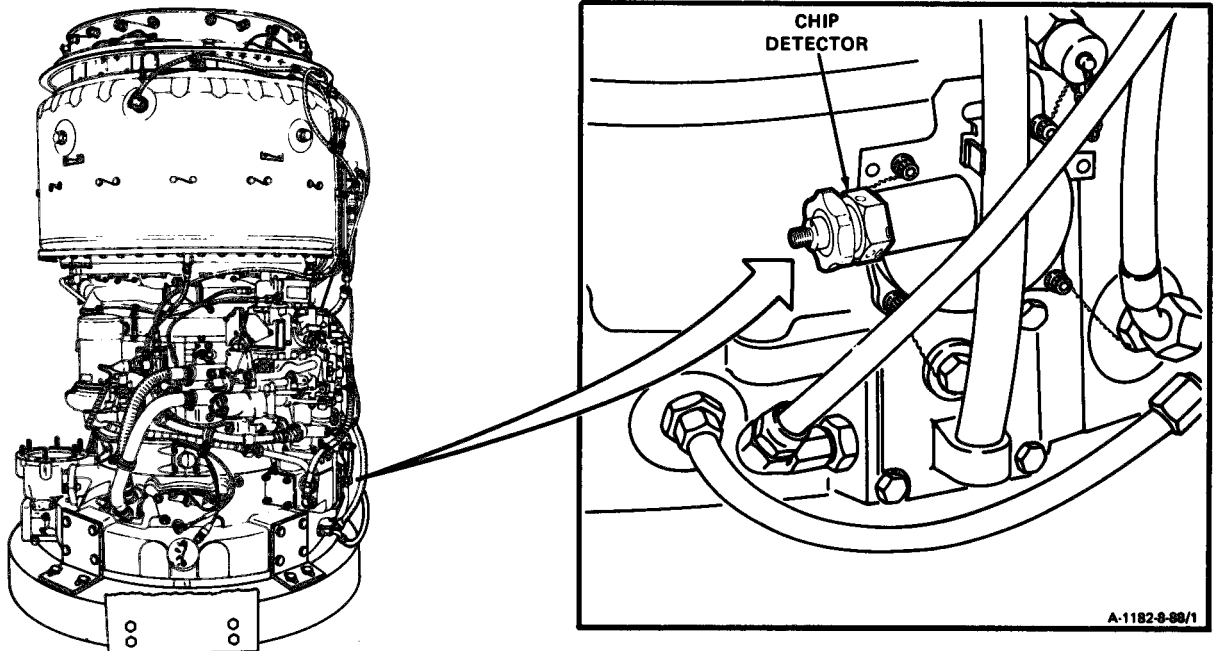
68B10 Aircraft Powerplant Repairer

**Equipment Condition:**

Engine Oil System Drained (Task 1-75)

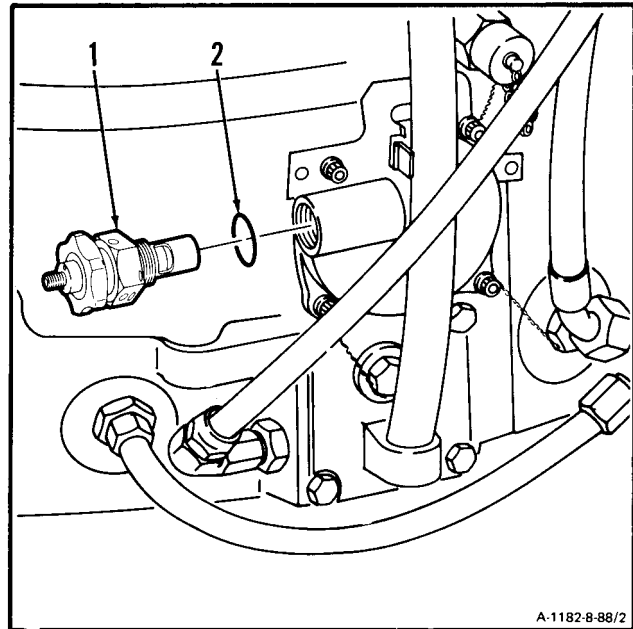
**General Safety Instructions:****WARNING**

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.



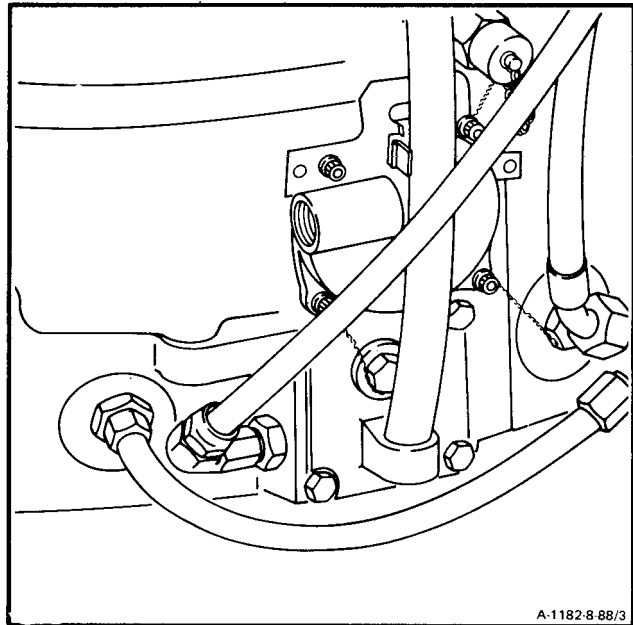
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1. Remove lockwire, chip detector (1) and packing (2).



FOLLOW-ON MAINTENANCE:

None



END OF TASK

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**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

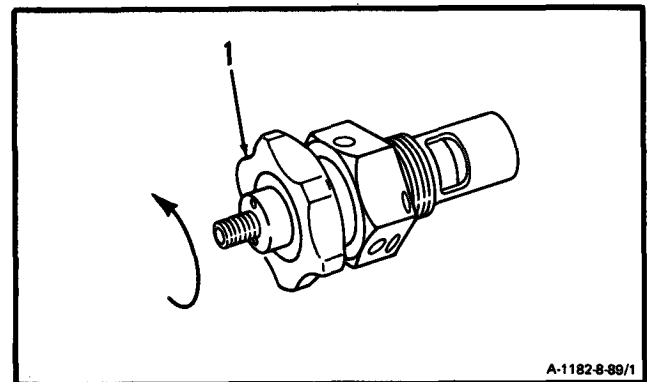
**Equipment Condition:**

Off Engine Task

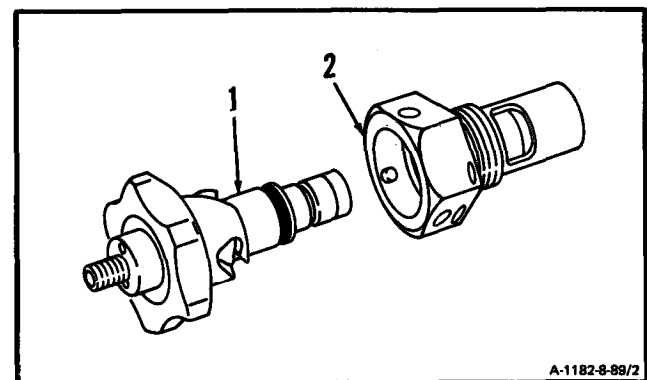
Engine Oil System Drained (Task 1-75)

Chip Detector Removed (Task 8-88)

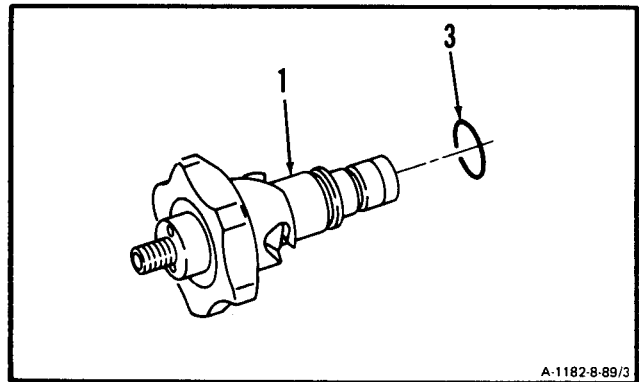
1. **Unlock plug (1).** Push in on plug and turn counterclockwise.



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**

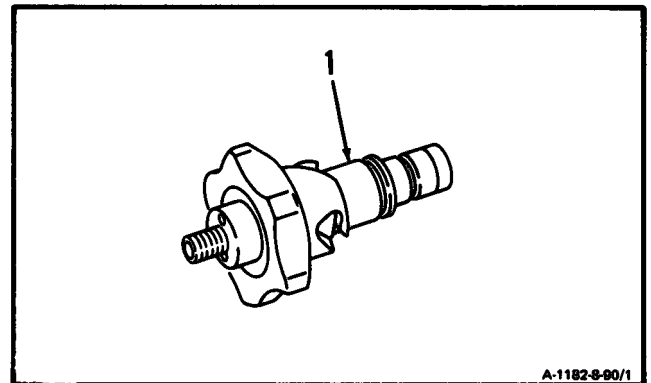
Dry cleaning solvent (E17) is flammable and toxic. It can irritate skin and cause burns. Use only in well-ventilated area, away from heat and open flame. In case of contact, immediately flush skin or eyes with water for at least 15 minutes. Get medical attention for eyes.

**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.



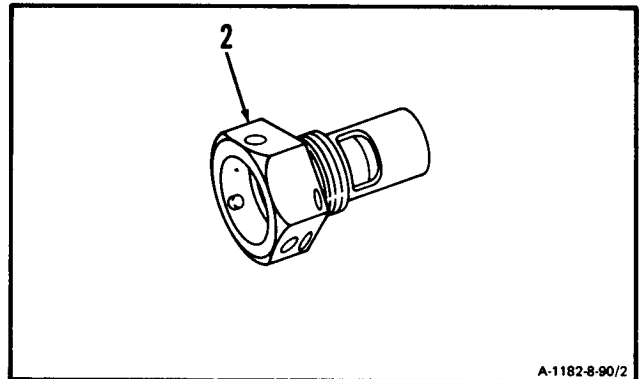
A-1182-8-90/1

**GO TO NEXT PAGE**



2. **Clean housing (2)** as follows:

- a. Immerse in dry cleaning solvent (E17) and agitate. Use brush on external surfaces.
- b. Use lint-free cloth (E26) to remove solvent.
- c. Wear goggles and **blow dry internal passage**. Use clean, dry compressed air.



## FOLLOW-ON MAINTENANCE:

Inspect Chip Detector (Task 8-91).

**END OF TASK**

8-91 INSPECT CHIP DETECTOR

8-91

INITIAL SETUP

**Applicable Configurations:**

All

**Tools:**

Technical Inspection Tool Kit,  
NSN 5180-00-323-5114  
Steel Nut, 1/4-28

**Materials**

None

**Personnel Required:**

68B30 Aircraft Powerplant Inspector

**Equipment Condition:**

Off Engine Task

1. **Inspect plug (1) and housing (2).** There shall be no cracks.

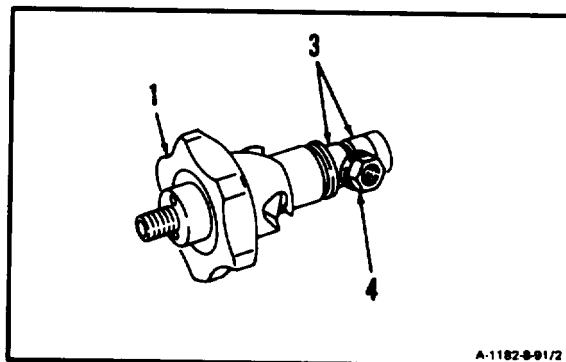
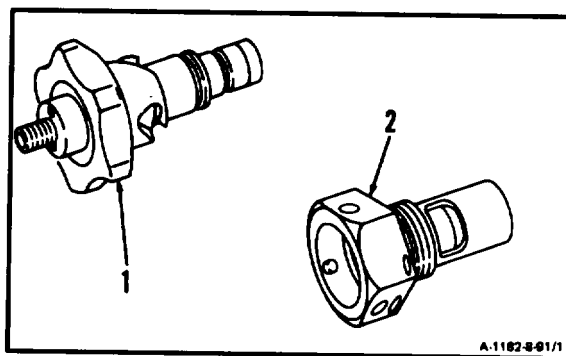
**NOTE**

Do not drain oil solely for the purpose of removing the housing (2) for inspection. Inspect housing (2) for cracks without removal from engine when inspection is performed while engine oil is not drained.

2. **Check strength of magnets (3)** on plug (1) by placing 1/4-28 steel nut (4) against them. Magnets (3) shall be strong enough to support weight of steel nut (4).

**FOLLOW-ON MAINTENANCE:**

None



**END OF TASK**

---

**8-92 TEST CHIP DETECTOR**

---

8-92

## INITIAL SETUP

**Applicable Configurations:**

All

**Tools:**

Multimeter

**Materials:**

None

**Personnel Required:**

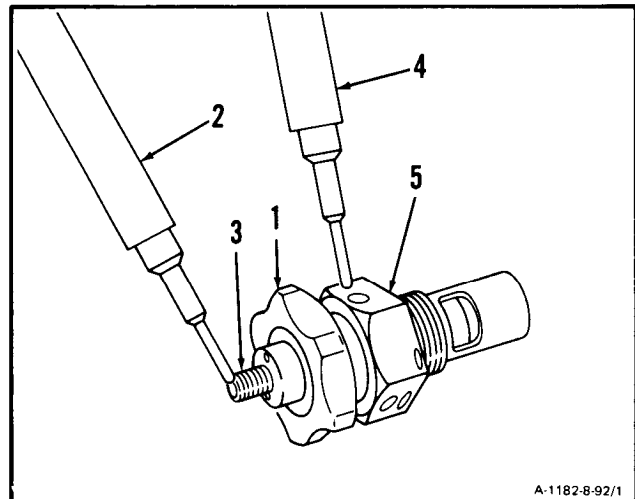
68B10 Aircraft Powerplant Repairer

**Equipment Condition:**

Chip Detector Assembled (Task 8-93)

**1. Measure insulation resistance of chip detector (1)**  
as follows: Use multi meter.

- a. Set multi meter range switch to R x 1000.
- b. Touch red probe (2) to stud (3).
- c. Touch black probe (4) to housing (5).
- d. Meter shall indicate 10,000 ohms minimum.



## FOLLOW-ON MAINTENANCE:

None

END OF TASK

8-93 ASSEMBLE CHIP DETECTOR

8-93

INITIAL SETUP

**Applicable Configurations:**

All

**Tools:**

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

**Materials:**

None

**Parts:**

Packing

**Personnel Required:**

68B10 Aircraft Powerplant Repairer  
68B30 Aircraft Powerplant Inspector

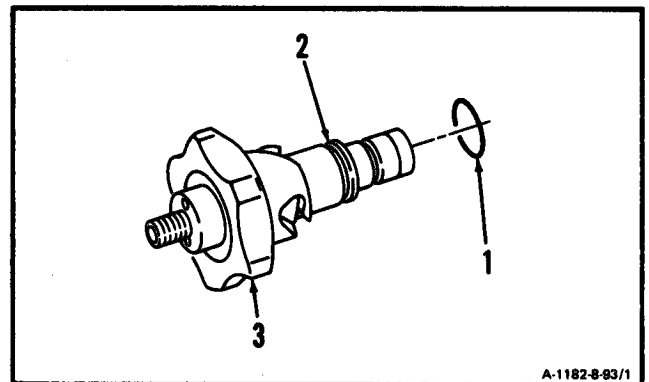
**References:**

TM 55-2840-254-23P

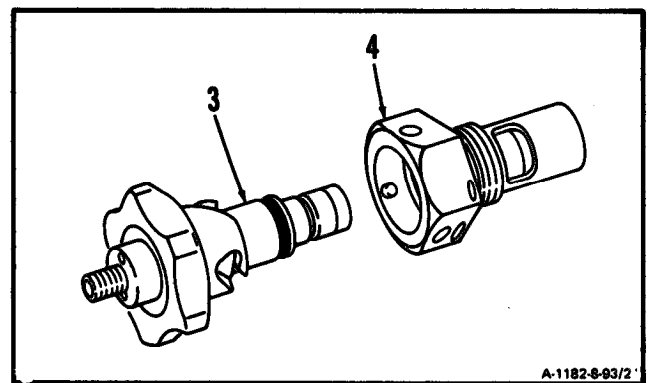
**Equipment Condition:**

Off Engine Task

1. Install packing (1) in groove (2) on plug (3).



2. Install plug (3) in housing (4).



GO TO NEXT PAGE

## 8-93 ASSEMBLE CHIP DETECTOR (Continued)

8-93

**CAUTION**

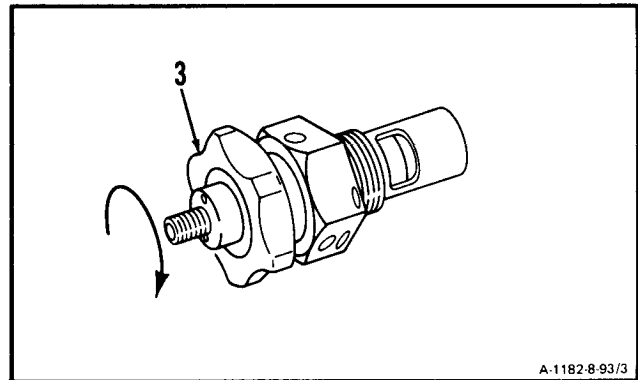
Plug shall be fully seated and firmly locked into housing. A loose fitting plug will cause oil leakage, resulting in engine damage.

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:**

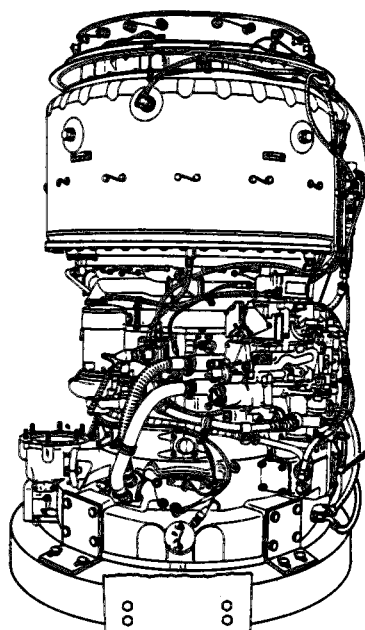
Packing

**Personnel Required:**

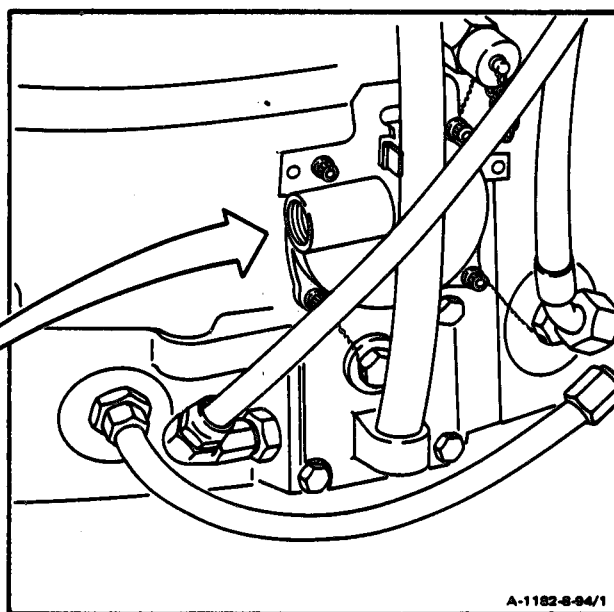
- 68B10 Aircraft Powerplant Repairer
- 68B30 Aircraft Powerplant Inspector

**References:**

TM 55-2840-254-23P



42 X 20



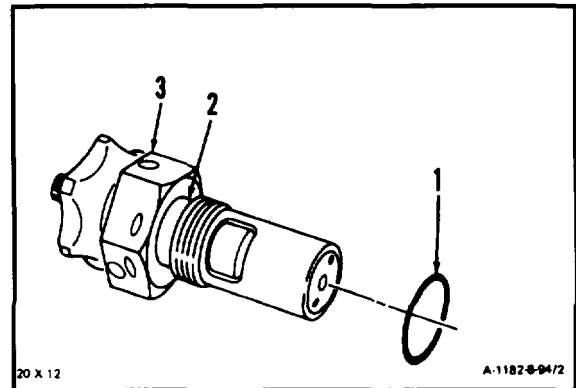
A-1182-8-84/1

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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**

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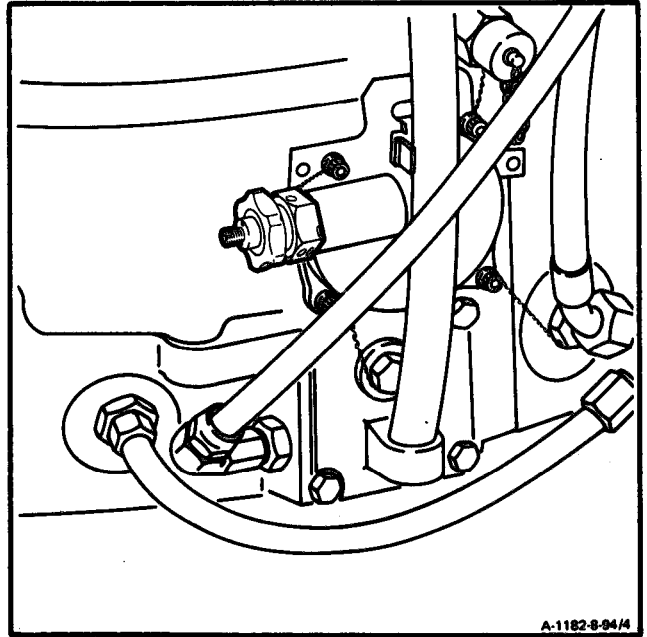
**8-94 INSTALL CHIP DETECTOR (Continued)**

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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:**

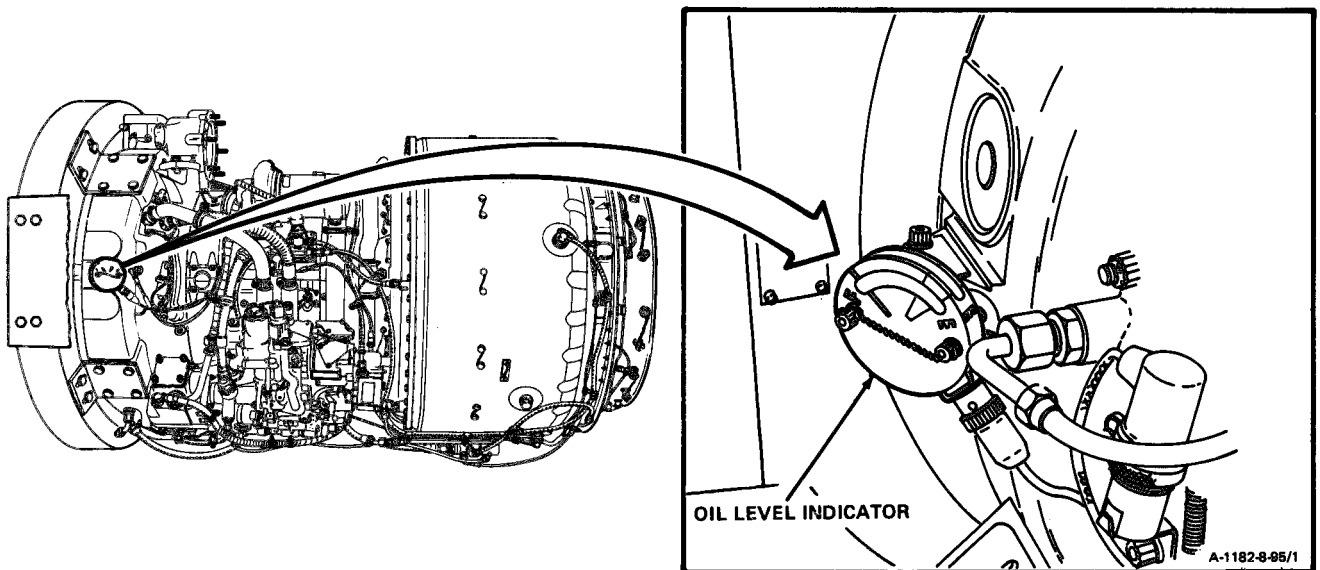
All

**Tools:**Powerplant Mechanic's Tool Kit,  
NSN 5180-00-323-4944**Materials:**Twine (E47)  
Wiping Rag (E58)**Personnel Required:**

68B10 Aircraft Powerplant Repairer

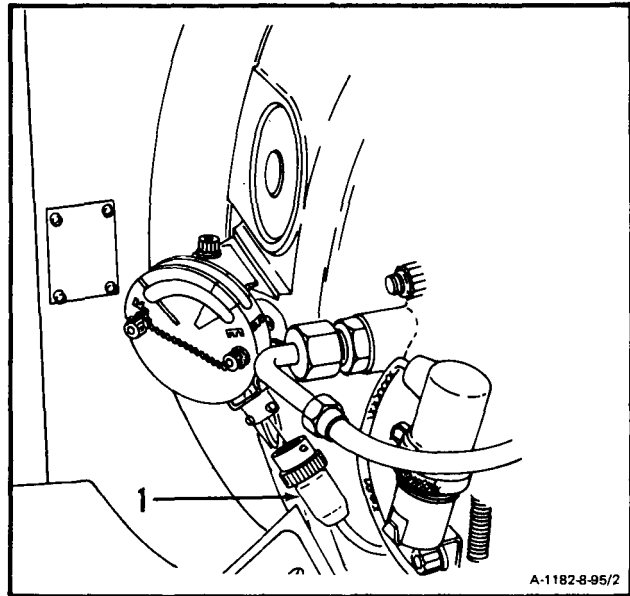
**Equipment Condition:**

Engine Oil System Drained (Task 1-75)

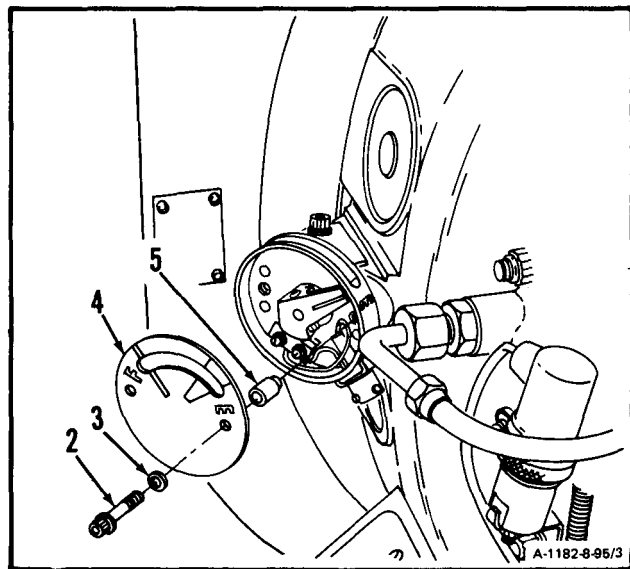


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1. Disconnect electrical connector (1).



2. Remove lockwire, two bolts (2), two washers (3), cover (4), and two spacers (5).



**GO TO NEXT PAGE**

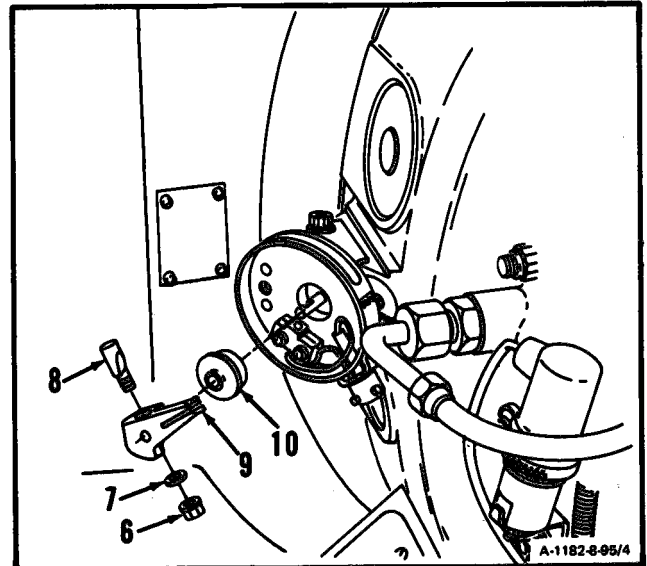
## 8-95 REMOVE OIL LEVEL INDICATOR (Continued)

8-95

## NOTE

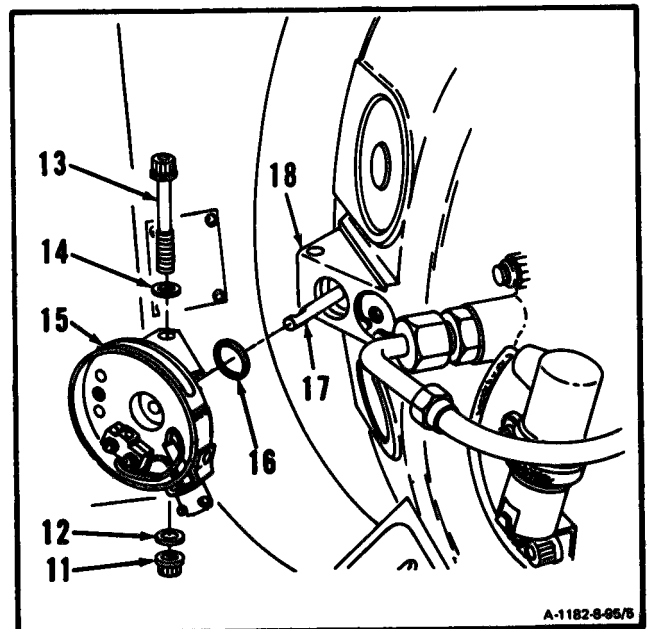
In following steps 3. and 4., do not let shaft of float slip back into housing.

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).



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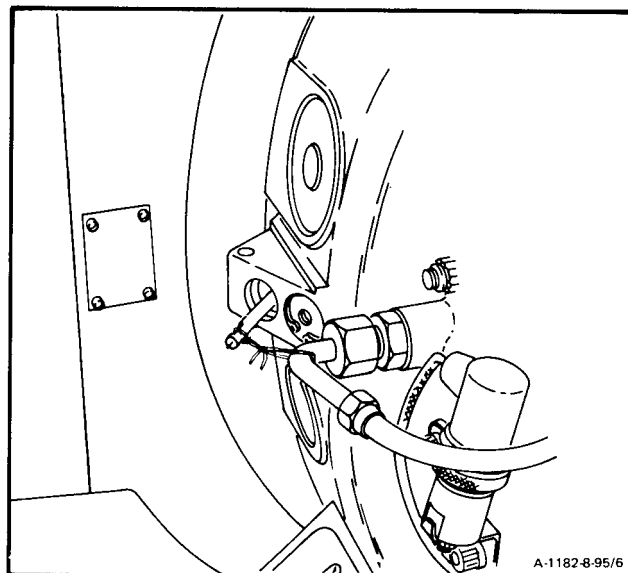
**8-95 REMOVE OIL LEVEL INDICATOR (Continued)**

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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

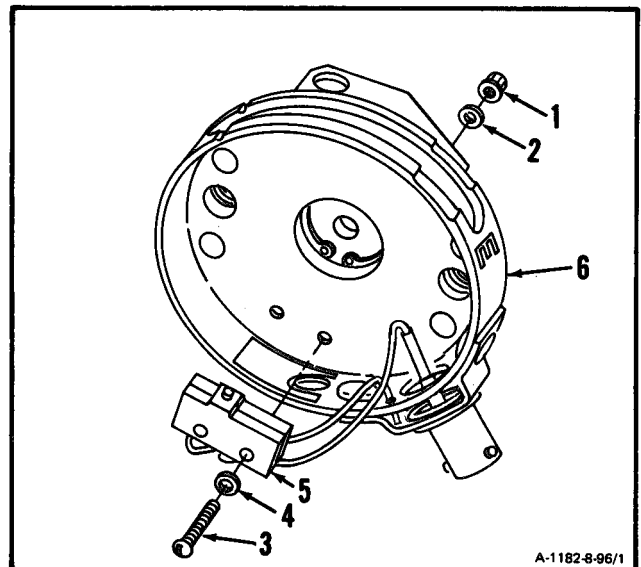
**Personnel Required:**

68B10 Aircraft Powerplant Repairer  
68F10 Aircraft Electrician

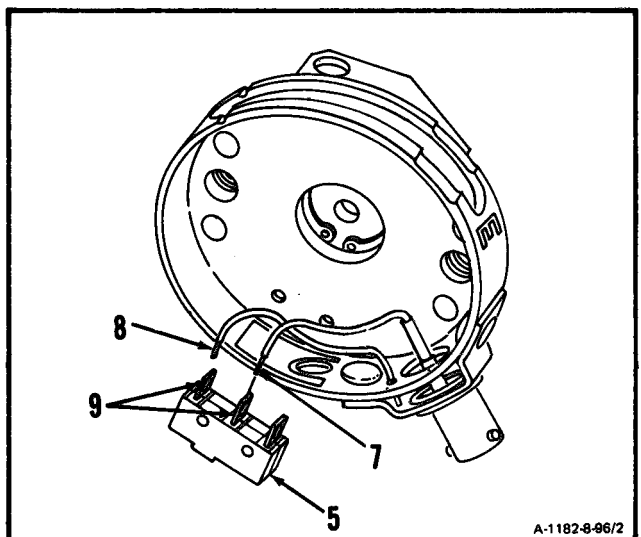
**Equipment Condition:**

Off Engine Task  
Oil Level Indicator Removed  
(Task 8-95)

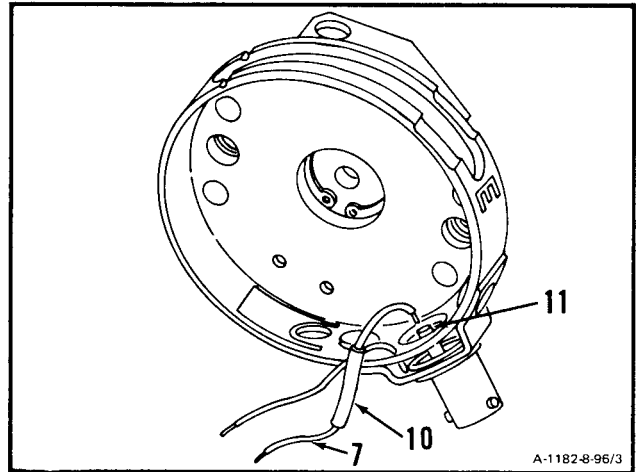
1. Remove two nuts (1), two washers (2), two screws (3), two washers (4), and pull switch (5) clear of housing (6).



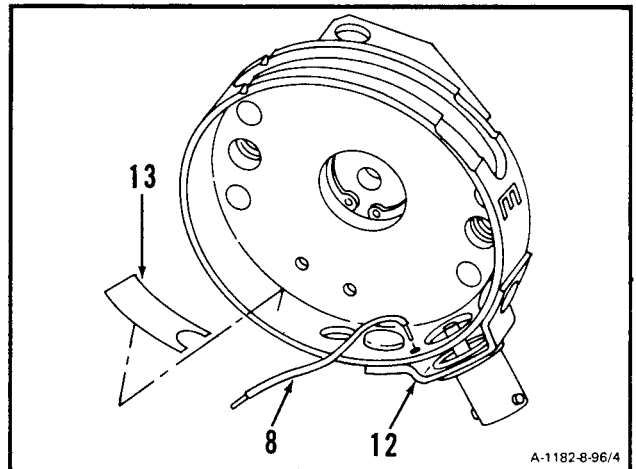
2. Unsolder two wires (7 and 8) from two switch terminals (9) and **remove switch (5)**.

**GO TO NEXT PAGE**

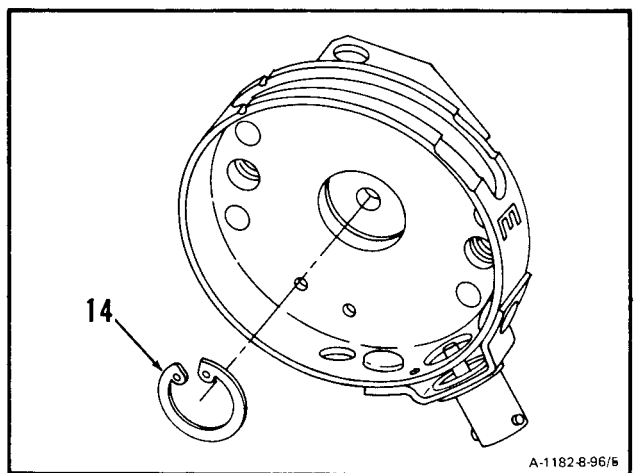
3. Slide insulation sleeving (10) back along wire (7). Unsolder and **remove wire (7)** from electrical connector pin (11).



4. Unsolder and **remove wire (8)** from bracket (12).
5. **Remove tape (13).**



6. **Remove retaining ring (14).** Use retaining ring pliers.

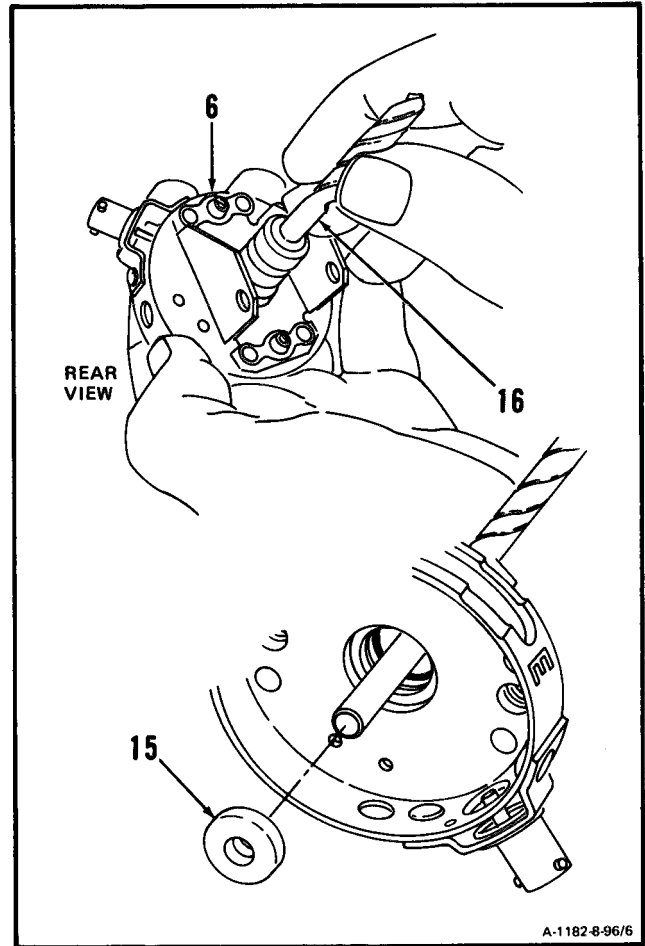


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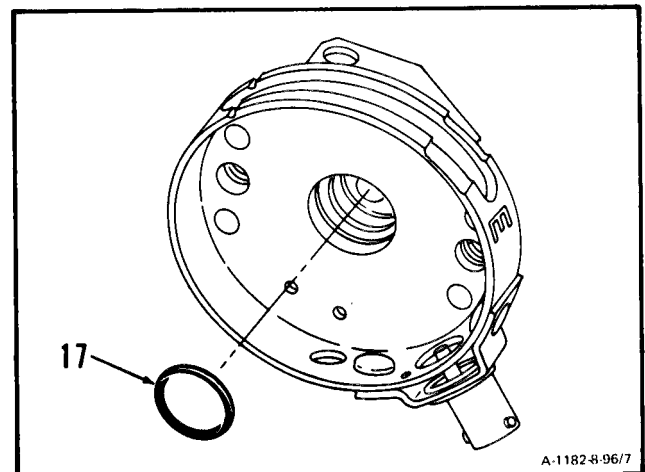
**8-96 DISASSEMBLE OIL LEVEL INDICATOR (Continued)**

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)

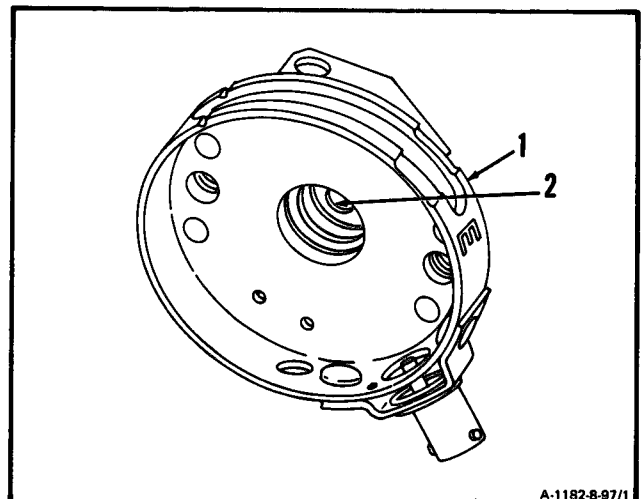
**General Safety Instructions:****WARNING**

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.



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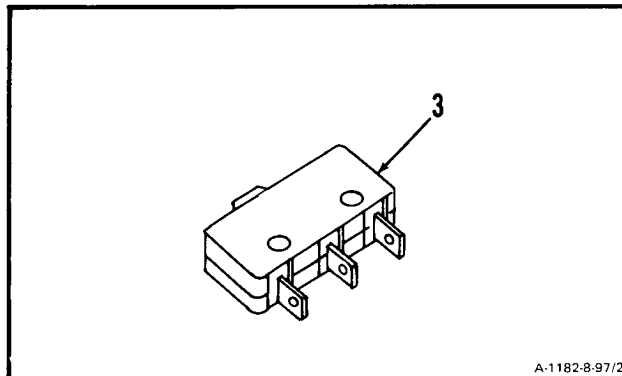
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**8-97 CLEAN OIL LEVEL INDICATOR (Continued)**

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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

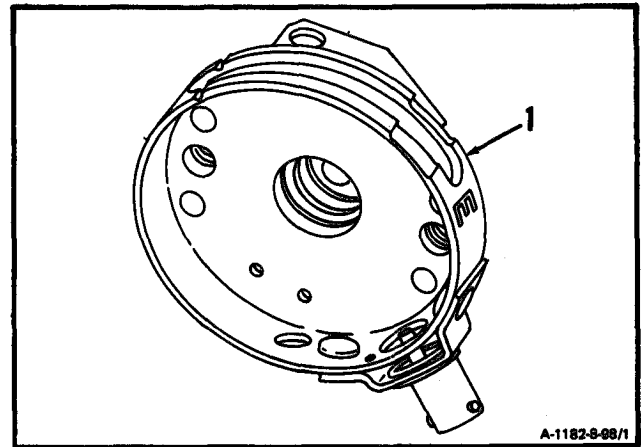
**Personnel Required:**

68B30 Aircraft Powerplant Inspector

**Equipment Condition:**

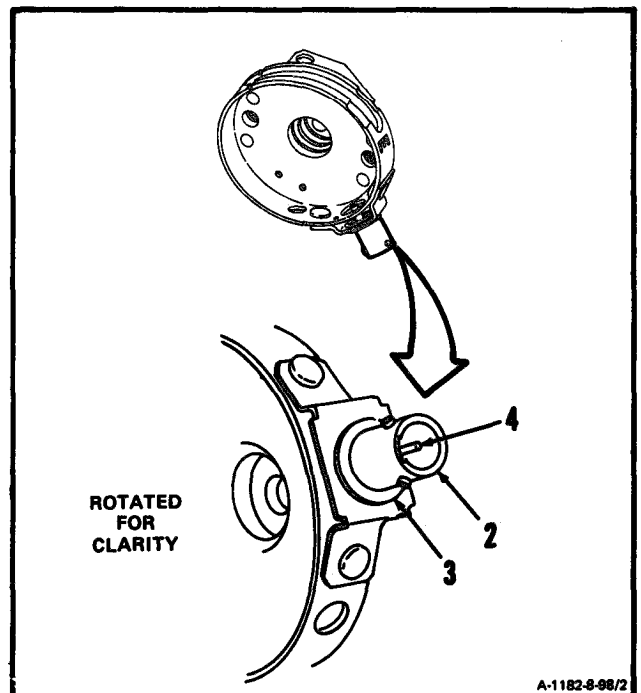
Off Engine Task

1. **Inspect housing (1).** There shall be no cracks.



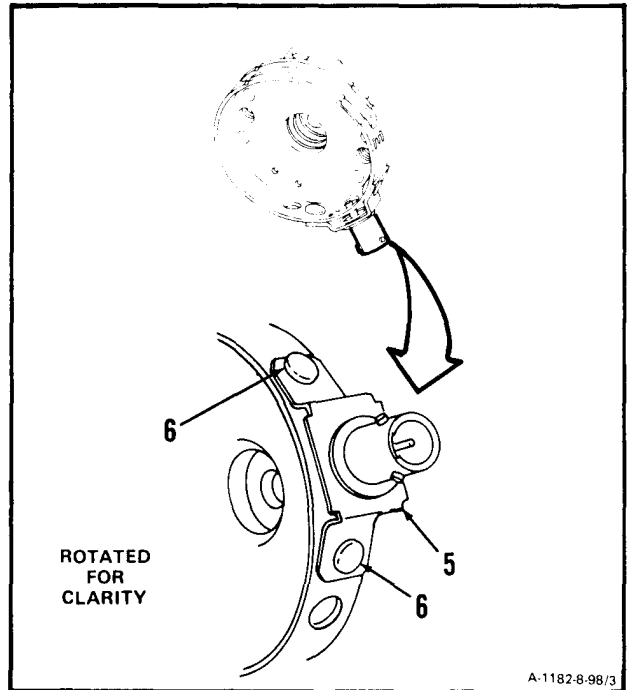
2. **Inspect electrical connector (2).**

- a. There shall be no cracks, corrosion, or looseness at joint (3).
- b. Pin (4) shall not be bent, broken, or corroded.

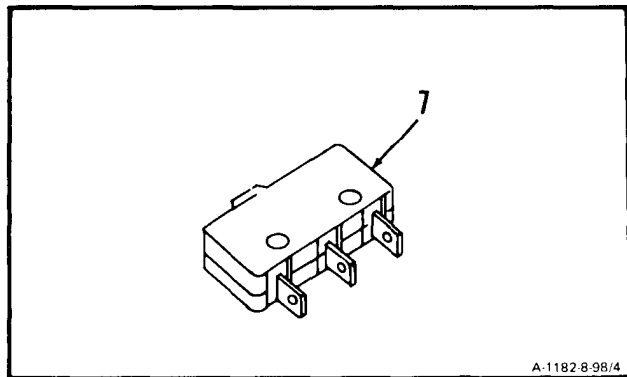


**GO TO NEXT PAGE**

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:**

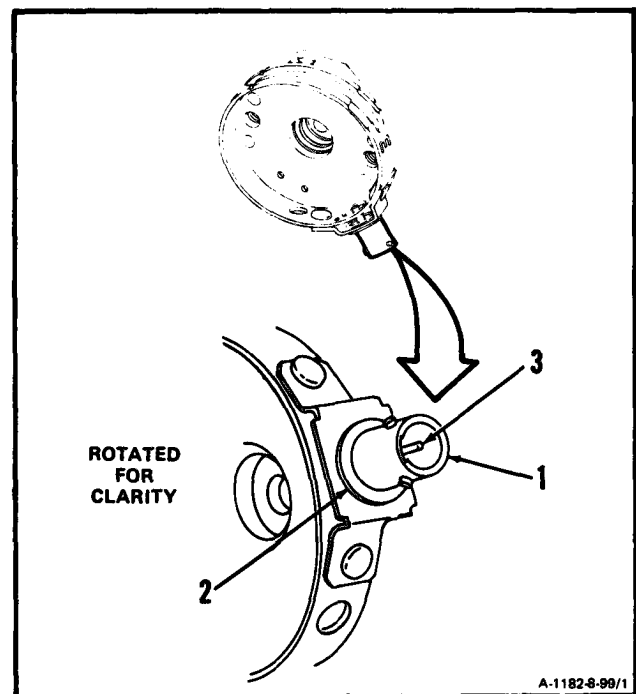
Off Engine Task

**1. Repair loose electrical connector (1) as follows:**

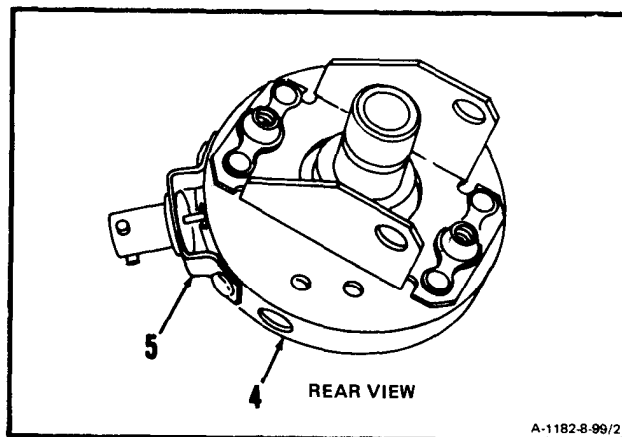
- a. Remove all surface contamination near joint (2). Use stainless steel wire brush.
- b. Solder joint (2). Use solder (E49) and soldering iron.

**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**

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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

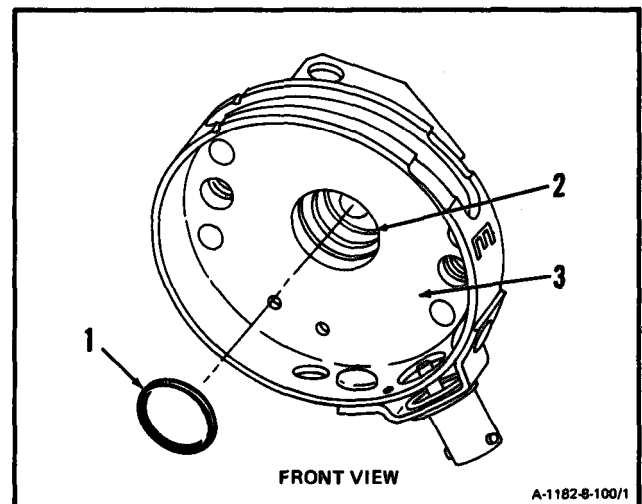
**Personnel Required:**

68B10 Aircraft Powerplant Repairer  
68F10 Aircraft Electrician  
68B30 Aircraft Powerplant Inspector

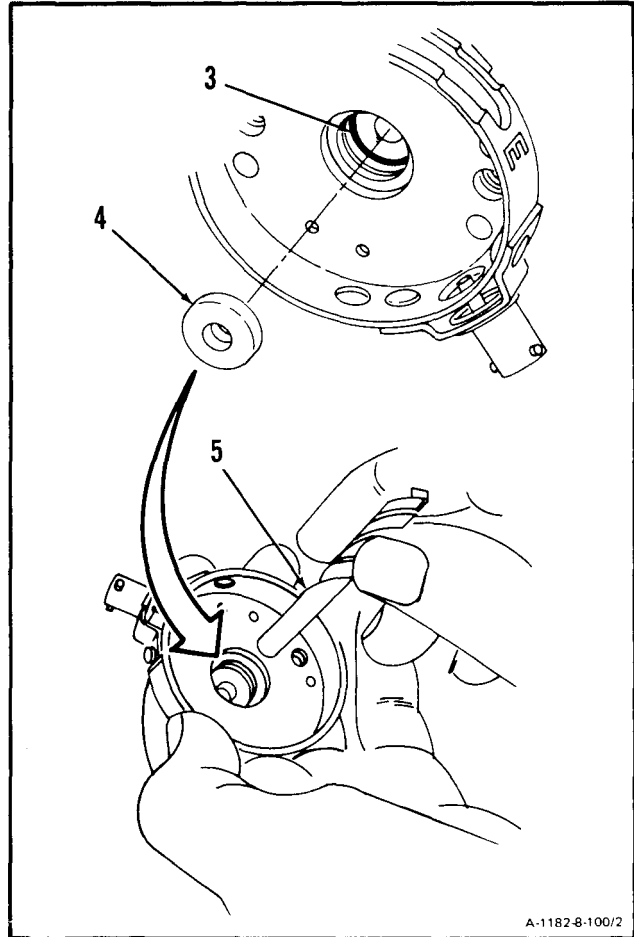
**References:**

TM 55-2840-254-23P

- 
1. Install packing (1) in groove (2) in housing (3).

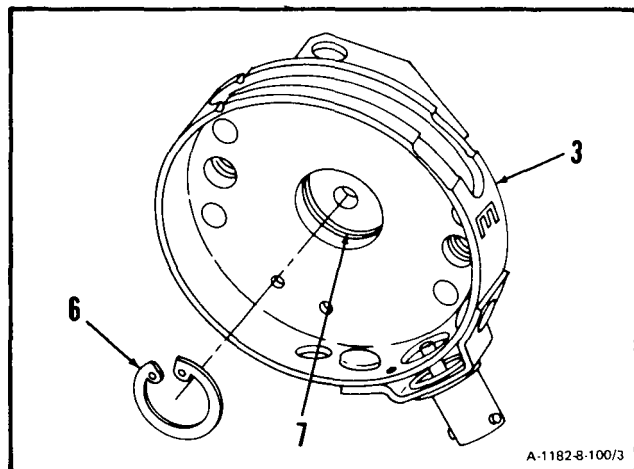
**GO TO NEXT PAGE**

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.



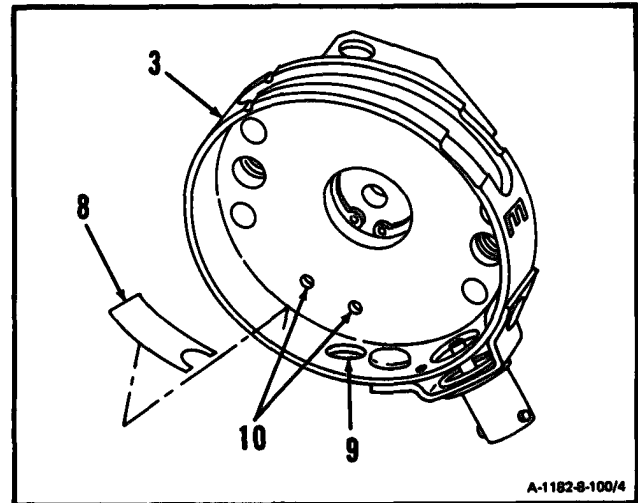
A-1182-8-100/3

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**CAUTION**

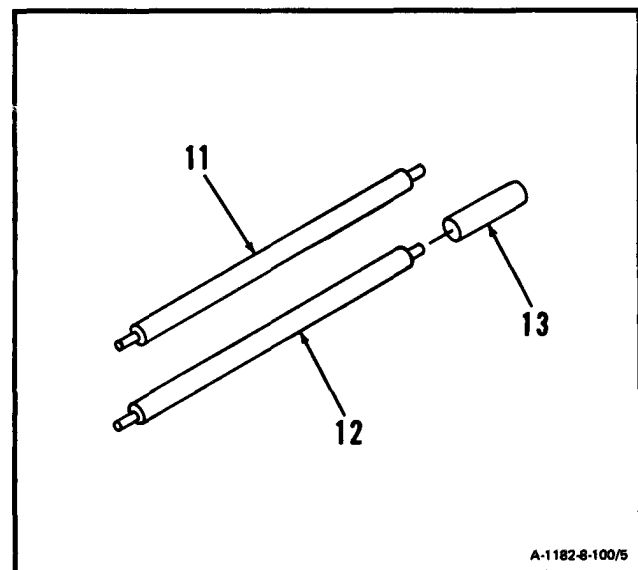
In following step 4., do not cover drain hole with tape. Failure to comply could cause accumulation of oil. This could cause faulty oil level indication.

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:

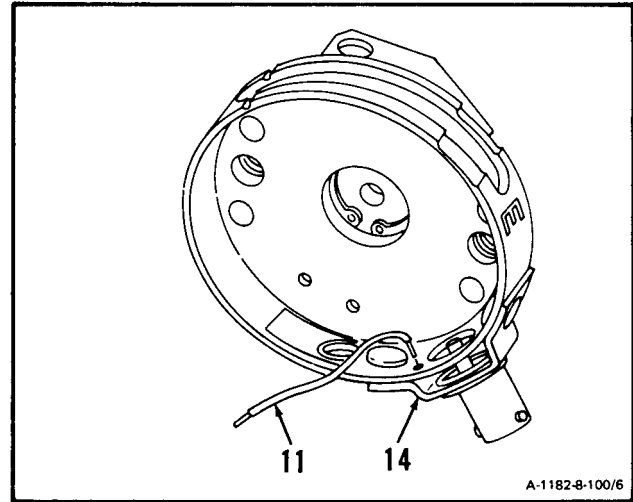
- Cut wires (11 and 12) to 1 1/2-inch length. Use wire (E59).
- Strip both ends of wires (11 and 12) to 1/4 inch length.
- Tin both ends of wires (11 and 12). Use solder (E49) and soldering iron.
- Cut 1/2-inch piece of insulation sleeving (E24). Slide sleeving (13) over wire (12).



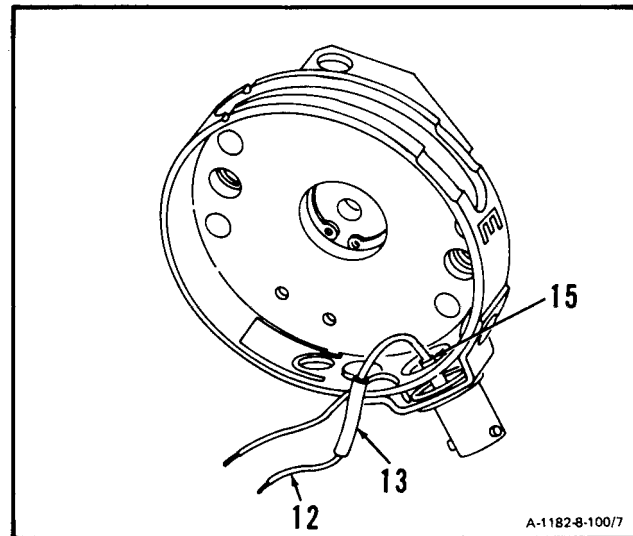
**GO TO NEXT PAGE**



- 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).

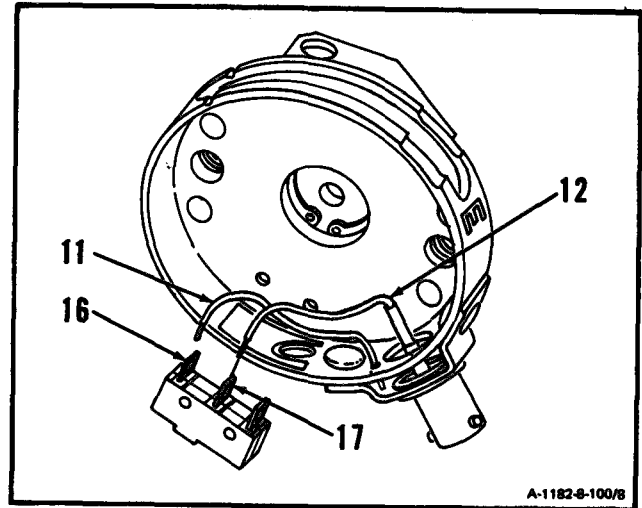


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## 8-100 ASSEMBLE OIL LEVEL INDICATOR (Continued)

8-100

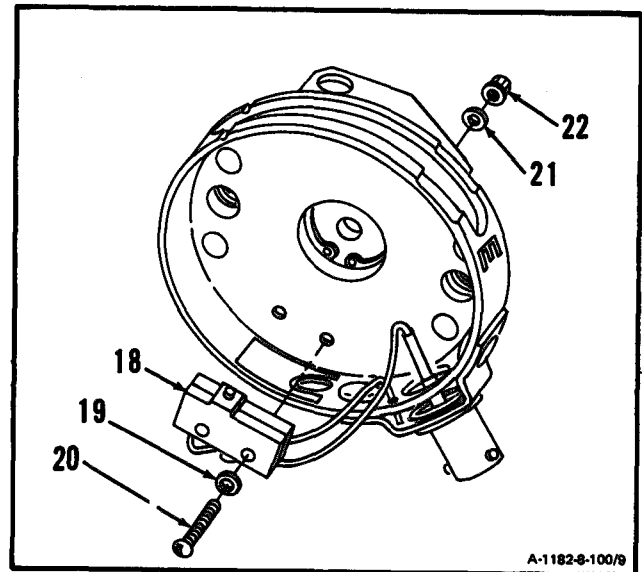
- g. Solder wire (11) to switch terminal (16). Use solder (E49) and soldering iron.
- h. Solder wire (12) to switch terminal (17). Use solder (E49) and soldering iron.

**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).

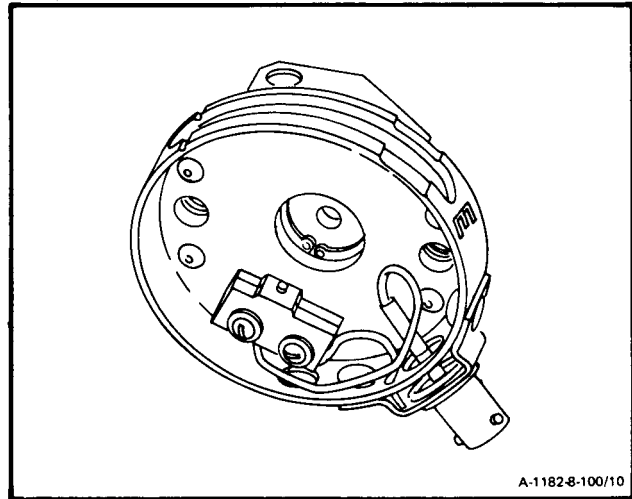
INSPECT



GO TO NEXT PAGE

FOLLOW-ON MAINTENANCE:

None



A-1182-8-100/10

END OF TASK

---

**8-101 INSTALL OIL LEVEL INDICATOR**

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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:**

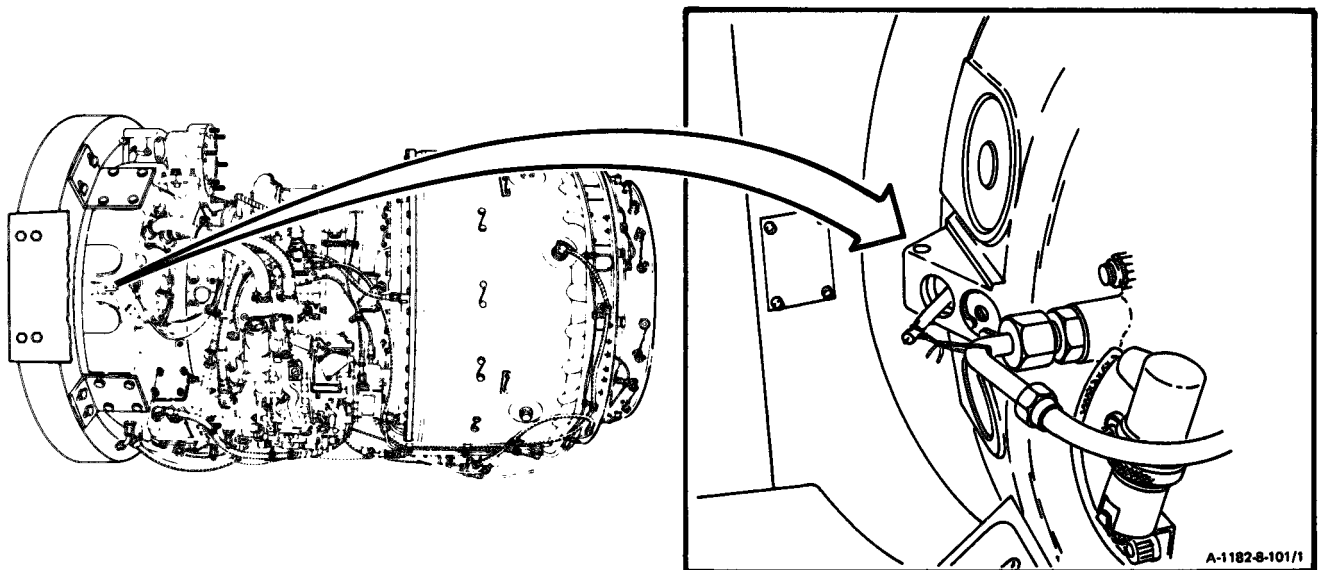
Packing

**Personnel Required:**

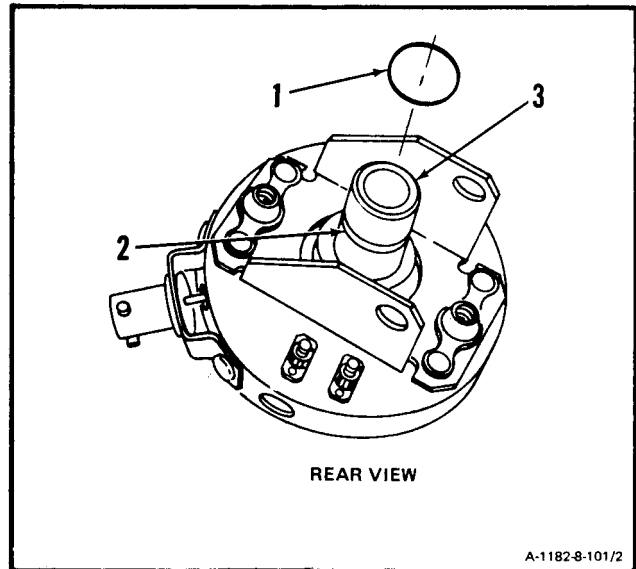
68B10 Aircraft Powerplant Repairer  
68B30 Aircraft Power plant Inspector

**References:**

TM 55-2840-254-23P  
Task 8-102

**GO TO NEXT PAGE**

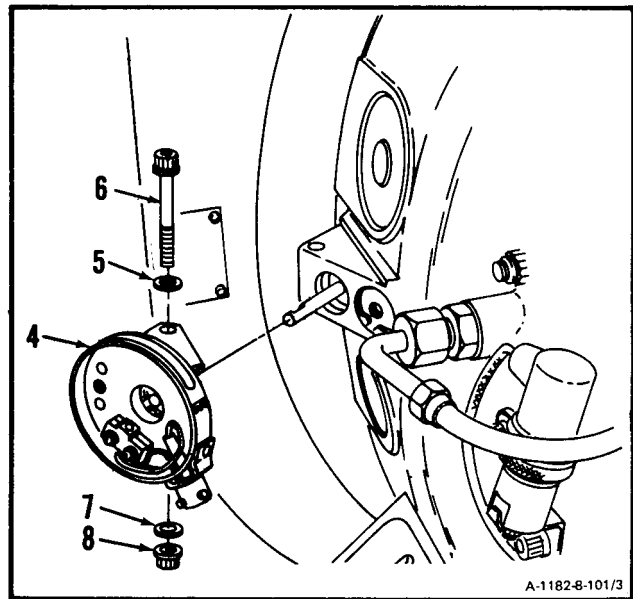
1. Install packing (1) in groove (2) in shaft (3).



**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).

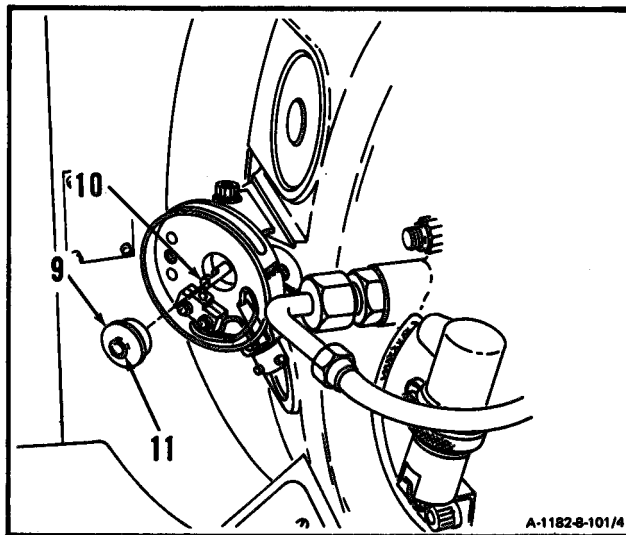


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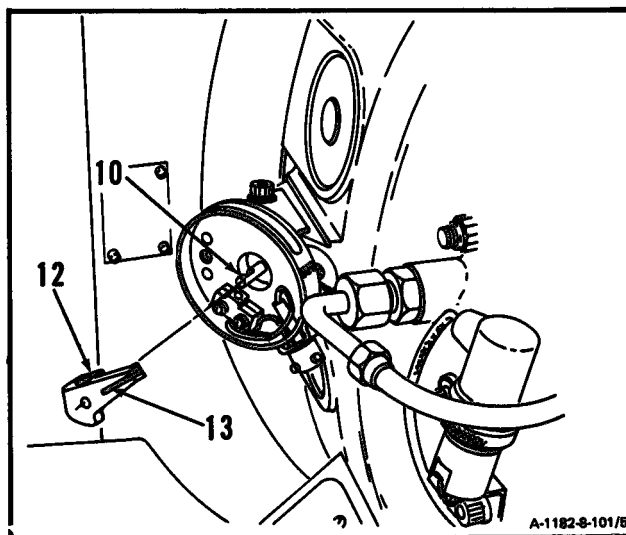
## 8-101 INSTALL OIL LEVEL INDICATOR (Continued)

8-101

3. **Install washer (9)** on shaft (10) with smaller diameter (11) facing out.



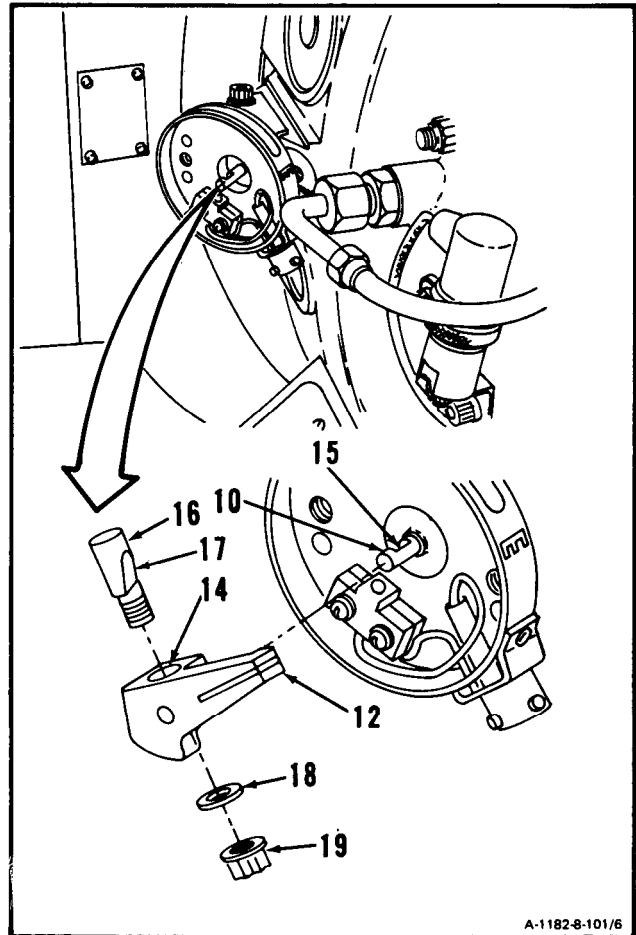
4. **Position pointer (12)** on shaft (10) with white stripe (13) facing out.



**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).

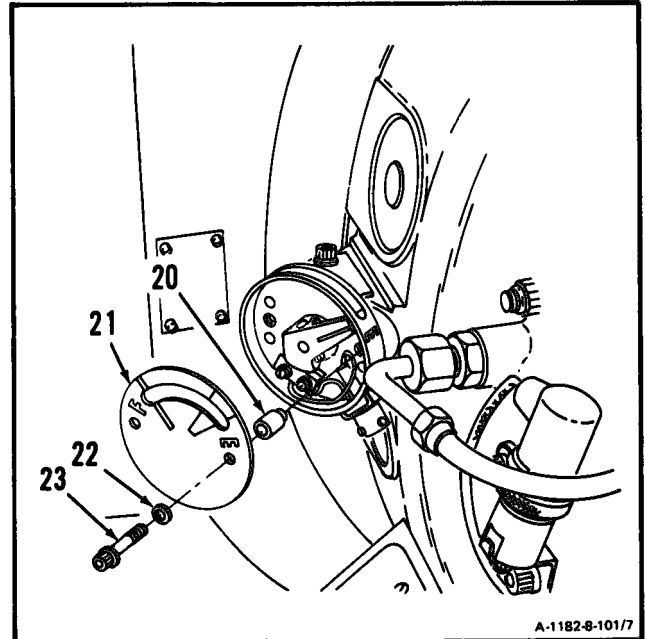


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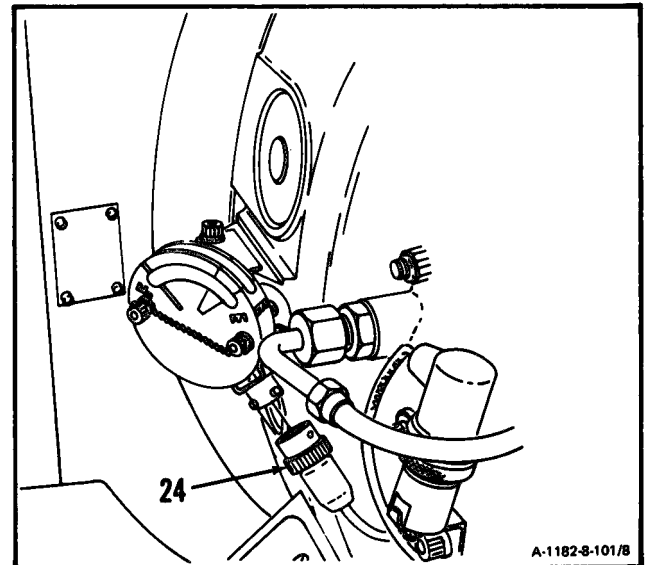
**8-101 INSTALL OIL LEVEL INDICATOR (Continued)**

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).



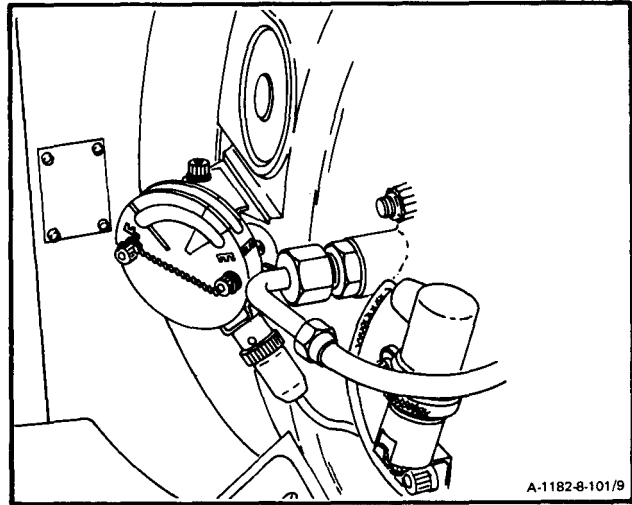
9. **Connect electrical connector (24).**

**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:**

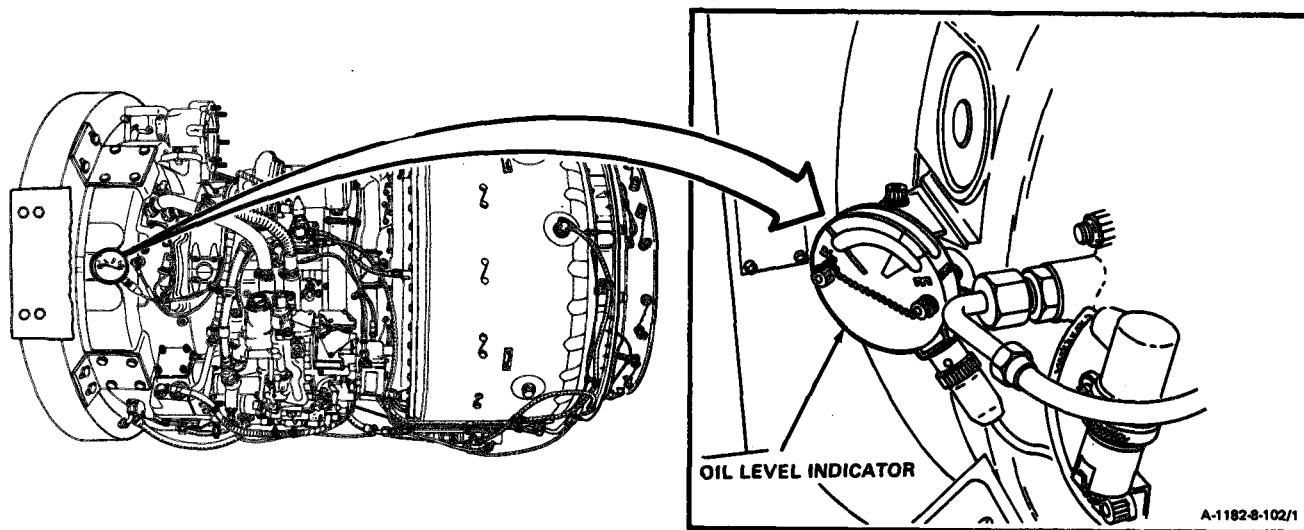
Lockwire (E29)

**Personnel Required:**

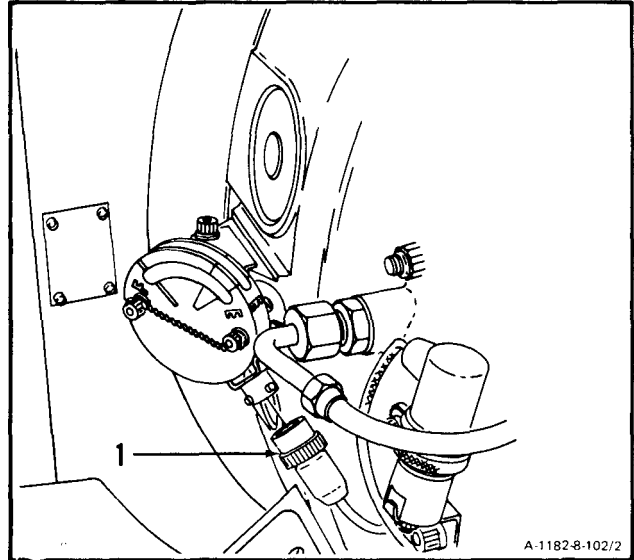
68B10 Aircraft Powerplant Repairer  
68B30 Aircraft Powerplant Inspector

**Equipment Condition:**

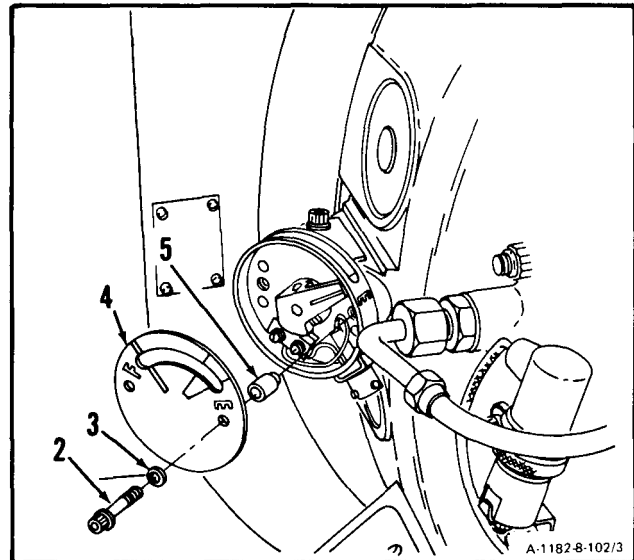
Engine Oil System Drained (Task 1-75)

**GO TO NEXT PAGE**

1. Disconnect electrical connector (1).



2. Remove lockwire, two bolts (2), two washers (3), cover (4), and two spacers (5).

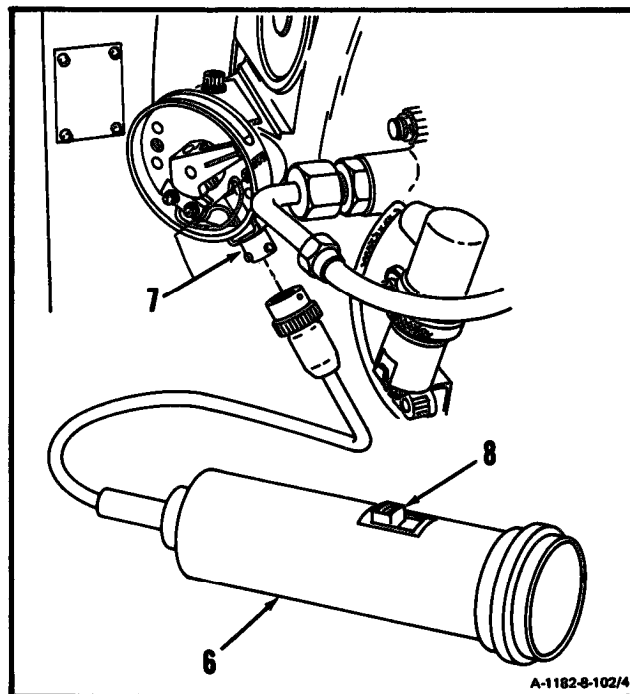


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## 8-102 ADJUST OIL LEVEL INDICATOR (Continued)

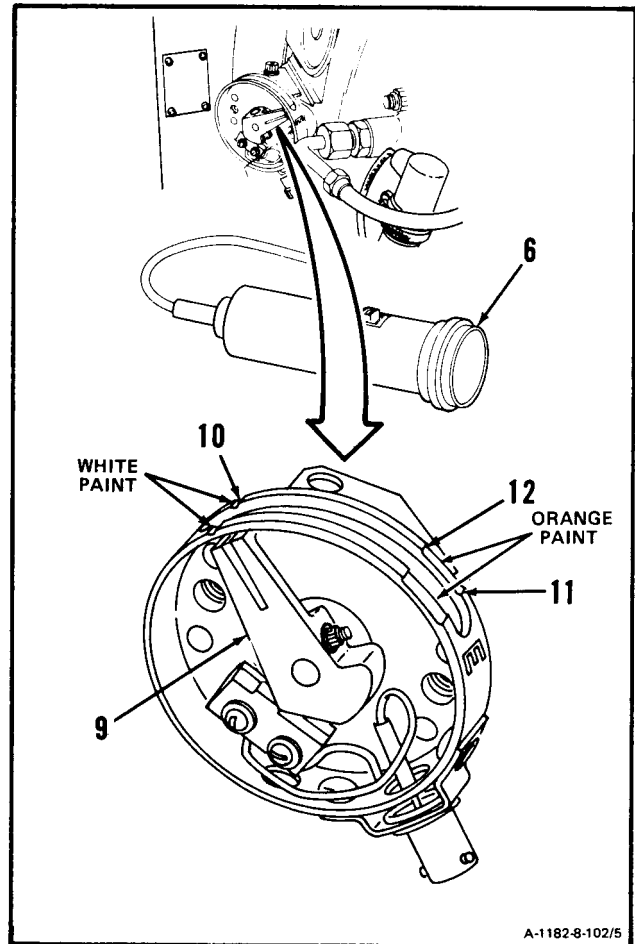
8-102

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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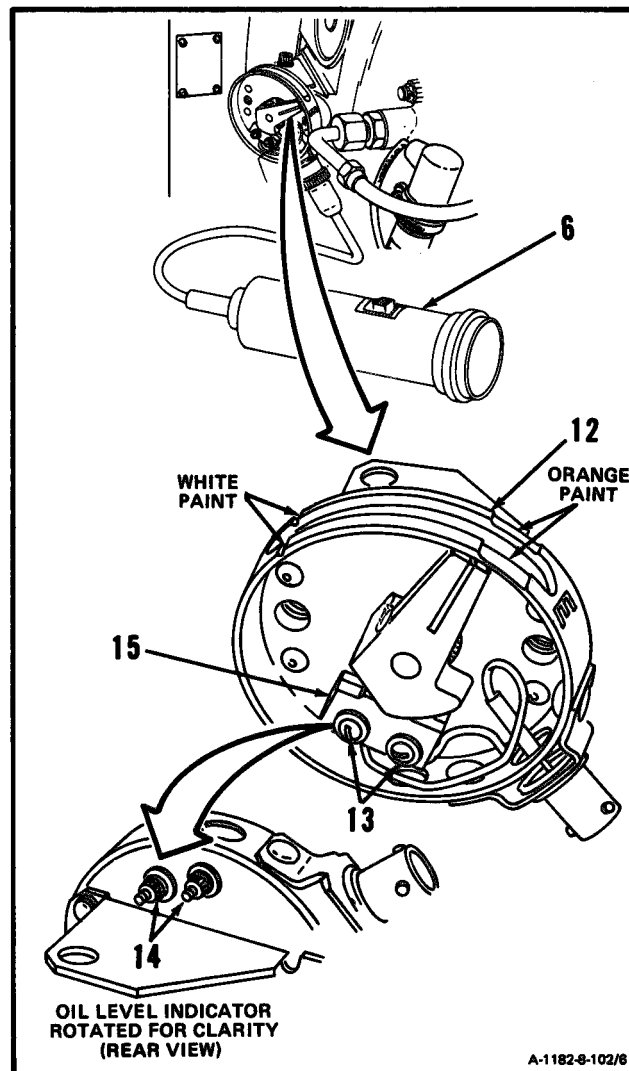
## 8-102 ADJUST OIL LEVEL INDICATOR (Continued)

8-102

## NOTE

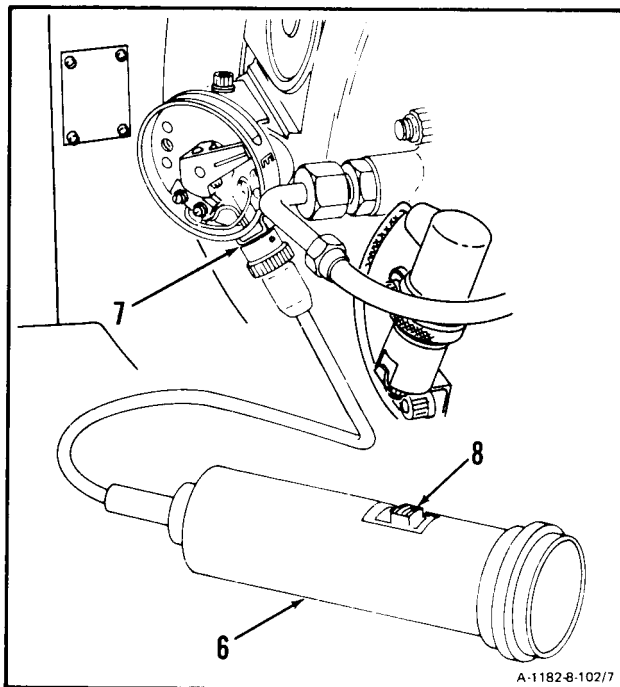
If test light indicates adjustment is needed, do steps 5. and 6. If test light indicates adjustment is not needed, omit steps 5 and 6.

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).

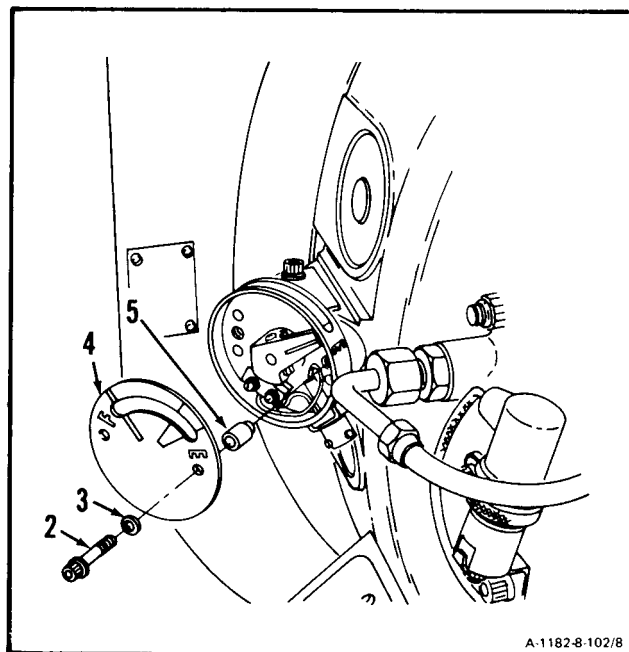


GO TO NEXT PAGE

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).



**GO TO NEXT PAGE**

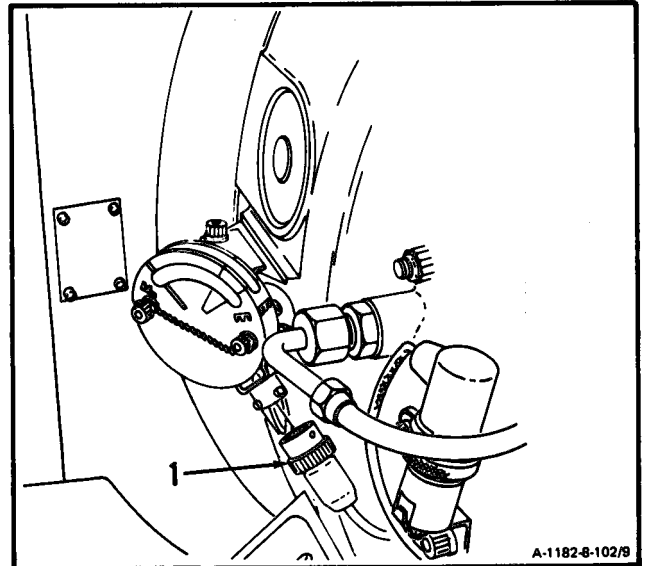
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**8-102 ADJUST OIL LEVEL INDICATOR (Continued)**

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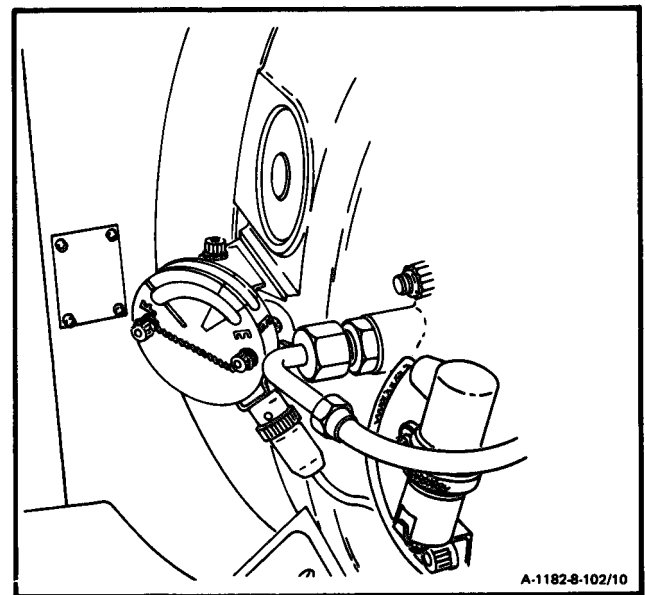
8-102

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:**

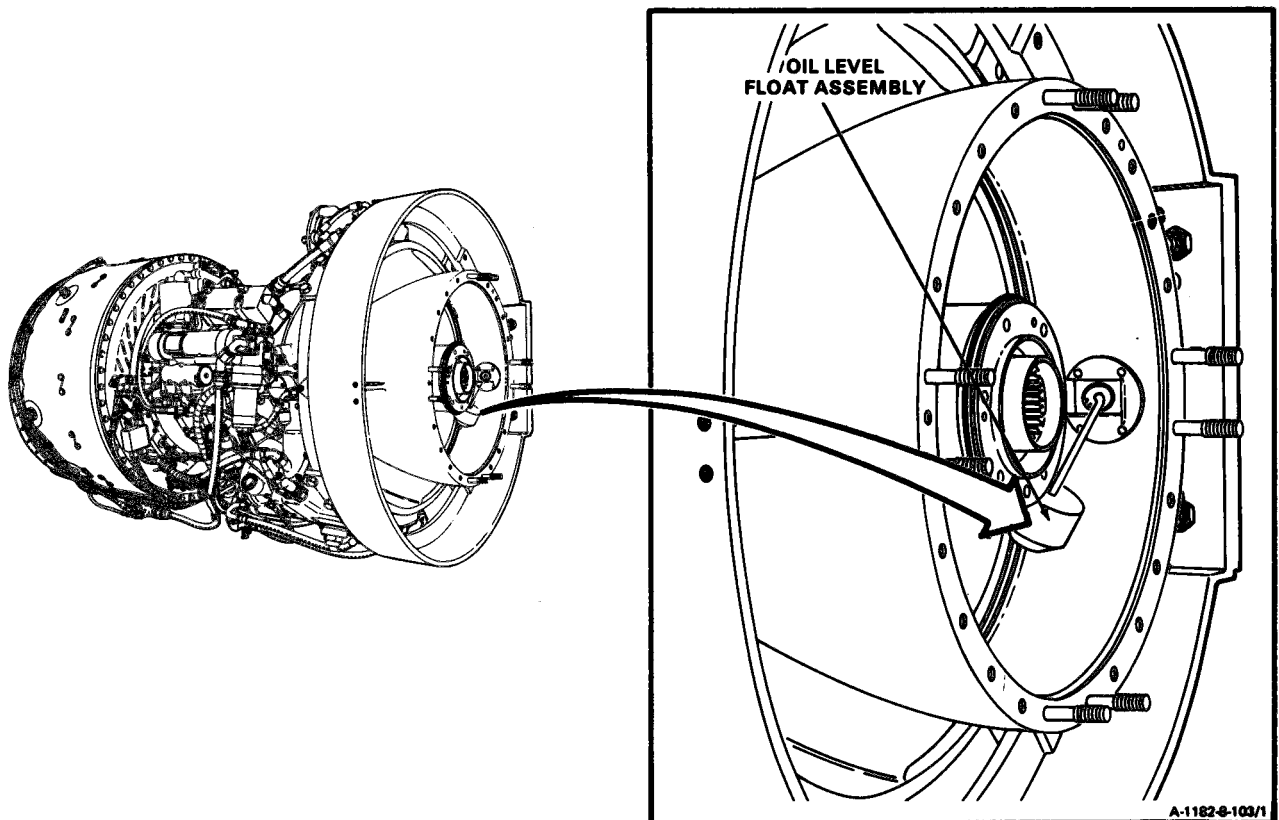
All

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

Wiping Rag (E58)

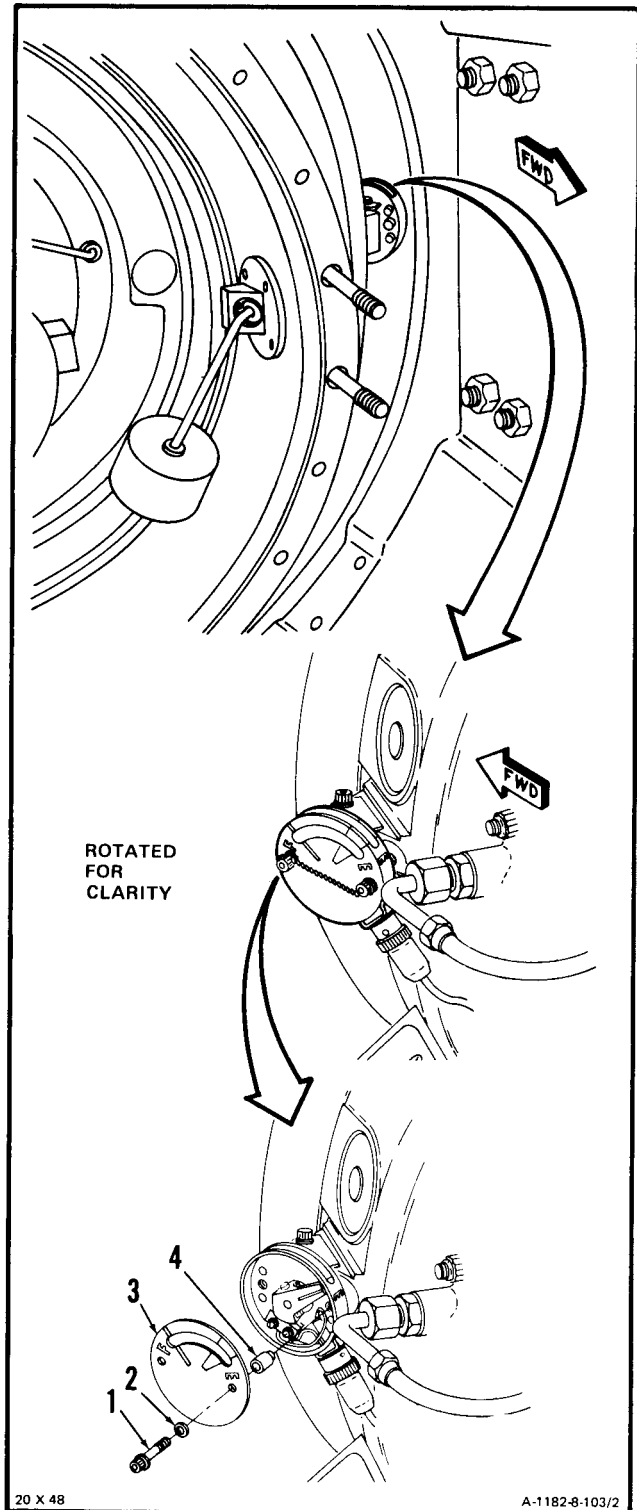
**Personnel Required:**

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).

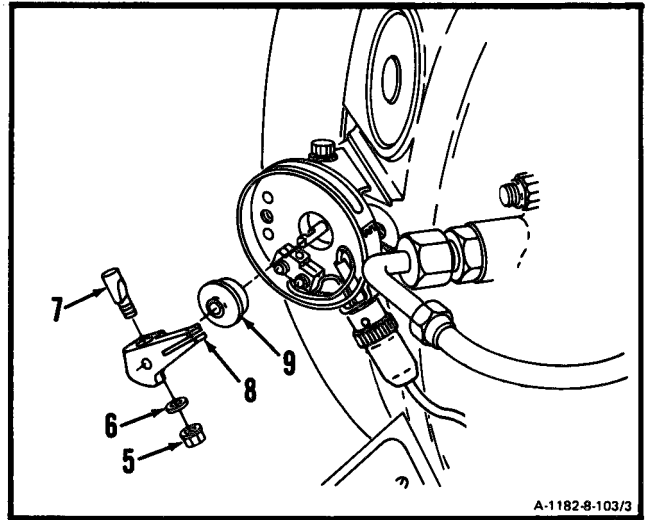


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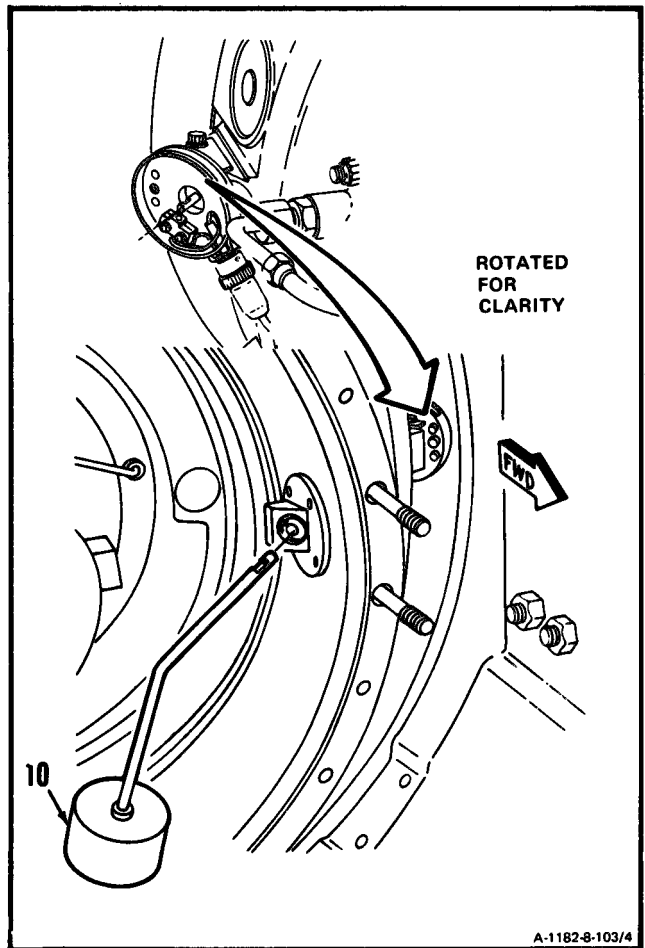
8-103 REMOVE OIL LEVEL FLOAT ASSEMBLY (AVIM) (Continued)

8-103

2. Remove nut (5), washer (6), bolt (7), pointer (8), and washer (9).



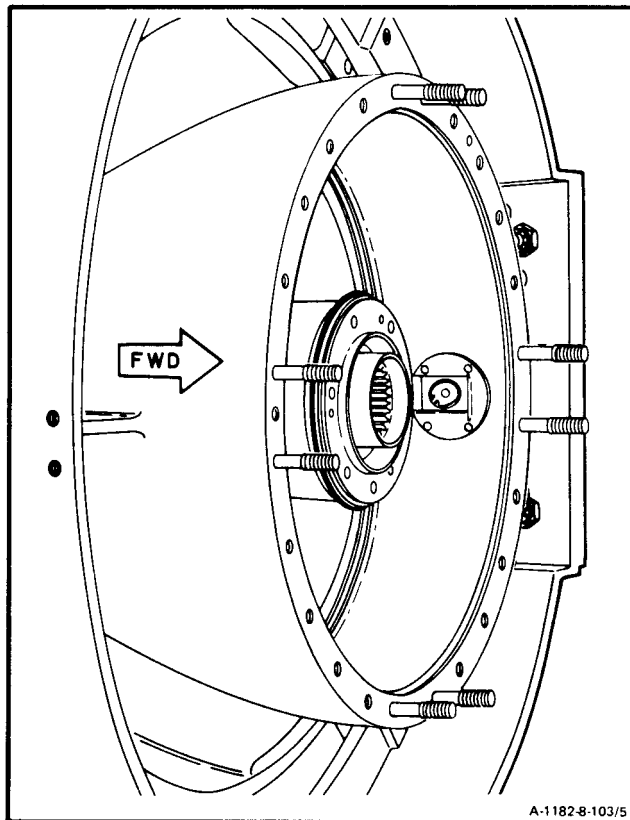
3. Remove oil level float assembly (10).



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FOLLOW-ON MAINTENANCE:

None



END OF TASK

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**8-104 DISASSEMBLE OIL LEVEL FLOAT ASSEMBLY (AVIM)**

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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:**

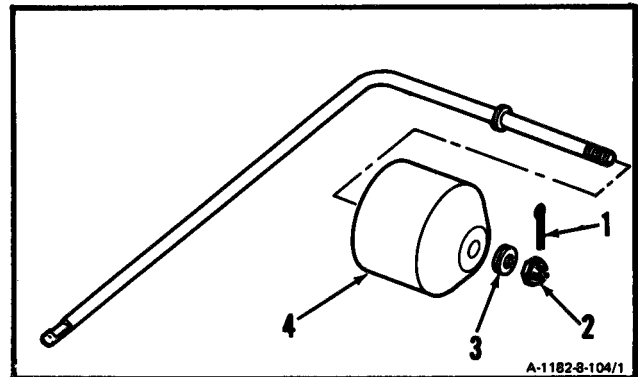
Off Engine Task

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.

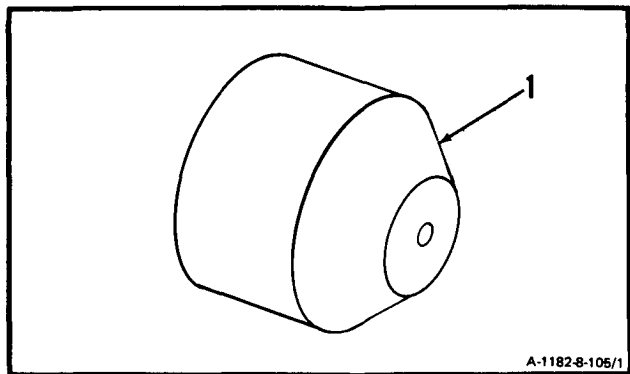
**Personnel Required:**

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).



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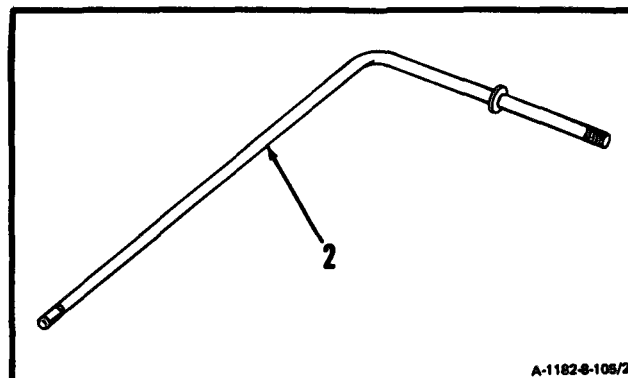
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**8-105 CLEAN OIL LEVEL FLOAT ASSEMBLY (AVIM) (Continued)**

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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

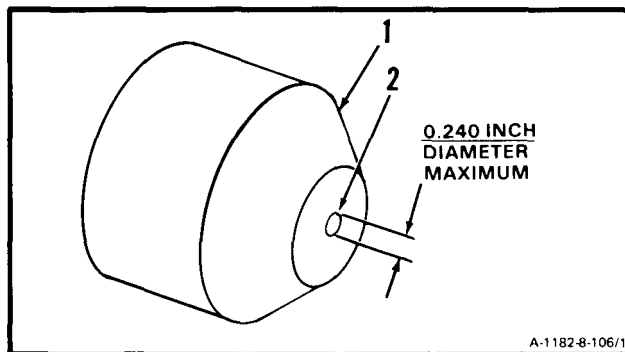
**Personnel Required:**

68B30 Aircraft Powerplant Inspector

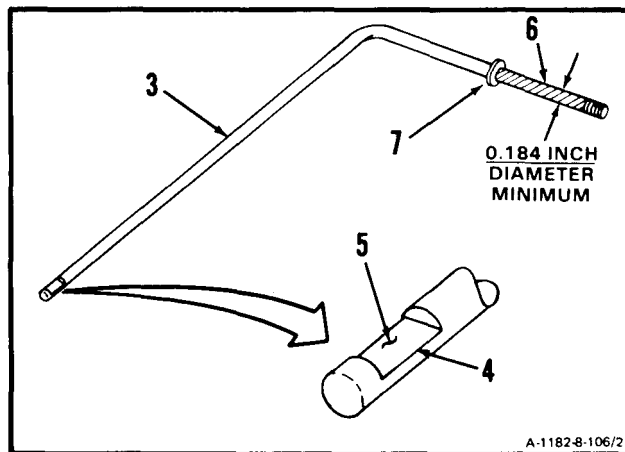
**Equipment Condition:**

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:**

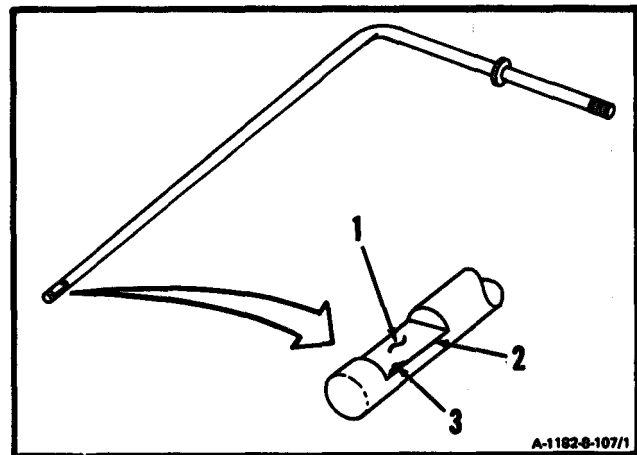
Off Engine Task

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

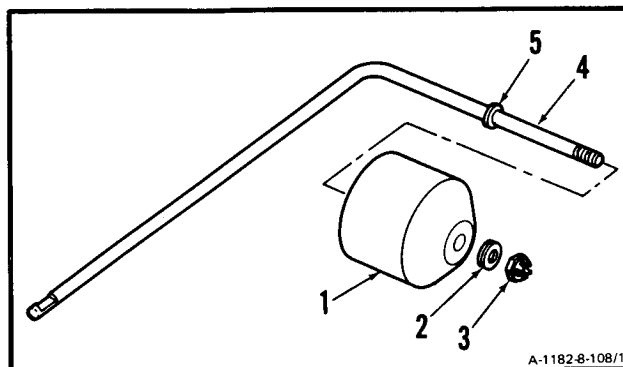
**Equipment Condition:**

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.

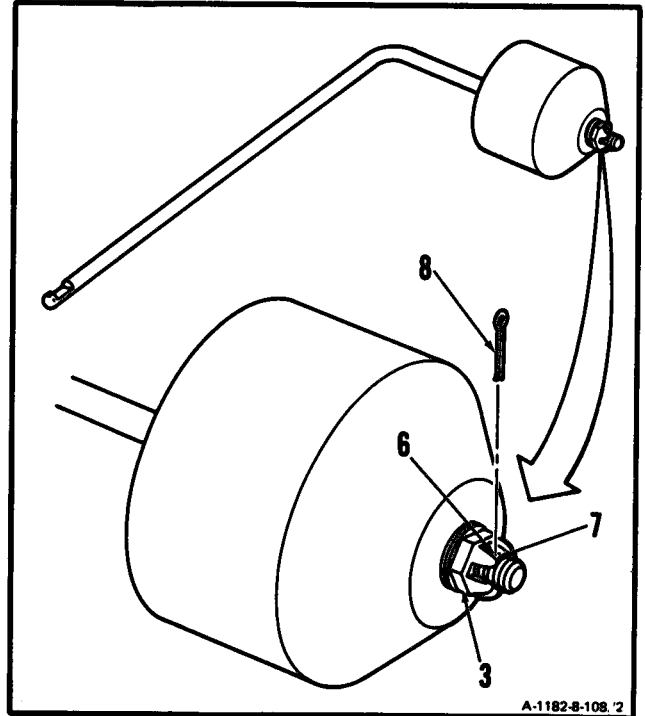
1. Install float (1), washer (2), and nut (3) on shaft (4).
2. Hand-tighten nut (3) until float (1) is seated against washer (5).

**GO TO NEXT PAGE**

**8-108 ASSEMBLE OIL LEVEL FLOAT ASSEMBLY (AVIM) (Continued)**

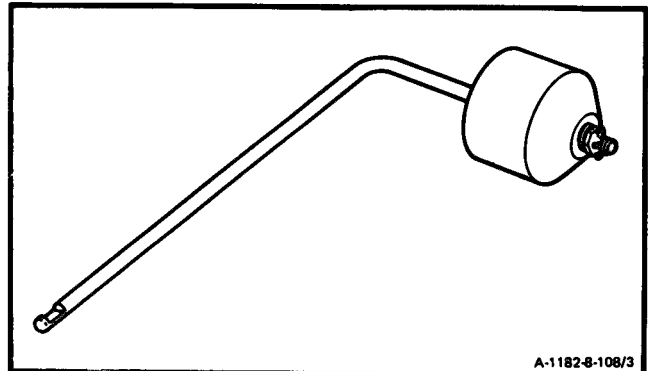
8-108

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:**

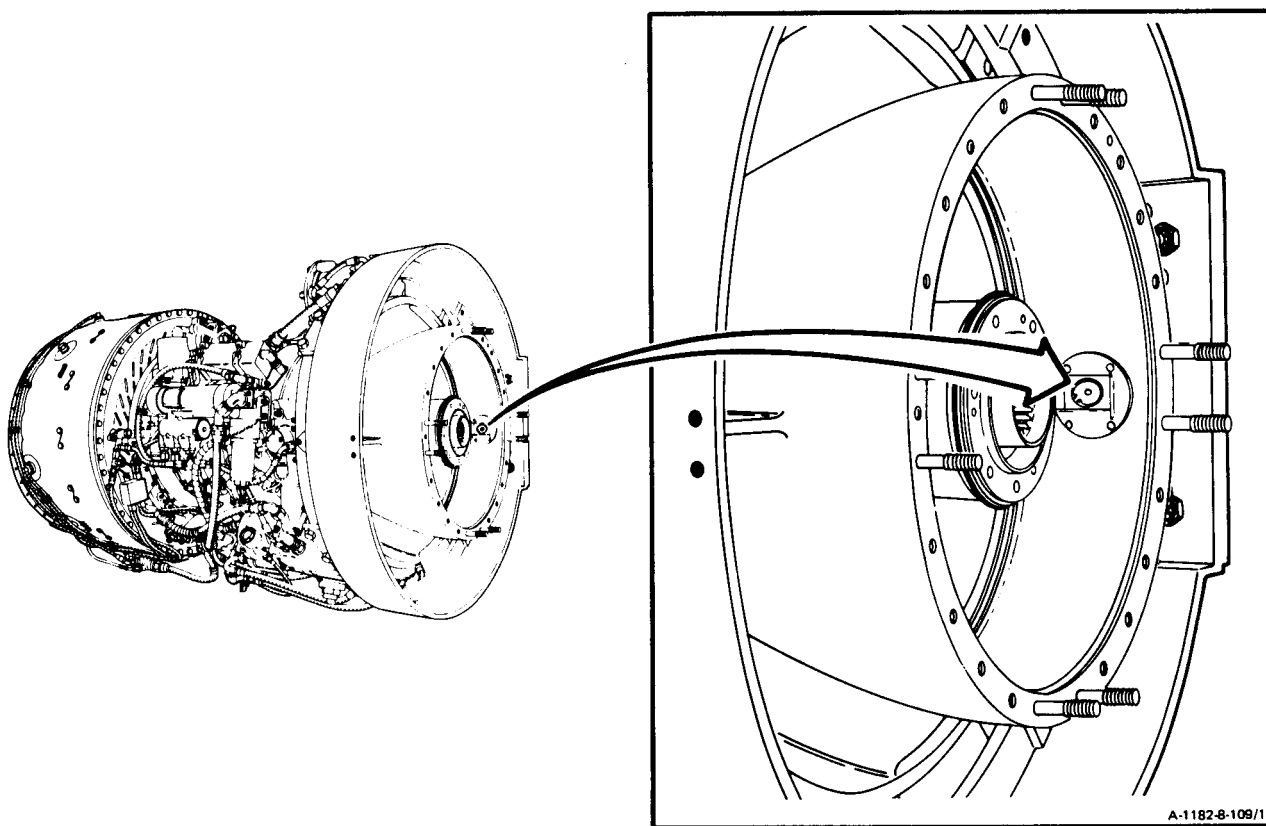
Lockwire (E29)

**Personnel Required:**

68B10 Aircraft Powerplant Repairer  
68B30 Aircraft Powerplant Inspector

**References:**

Task 8-102



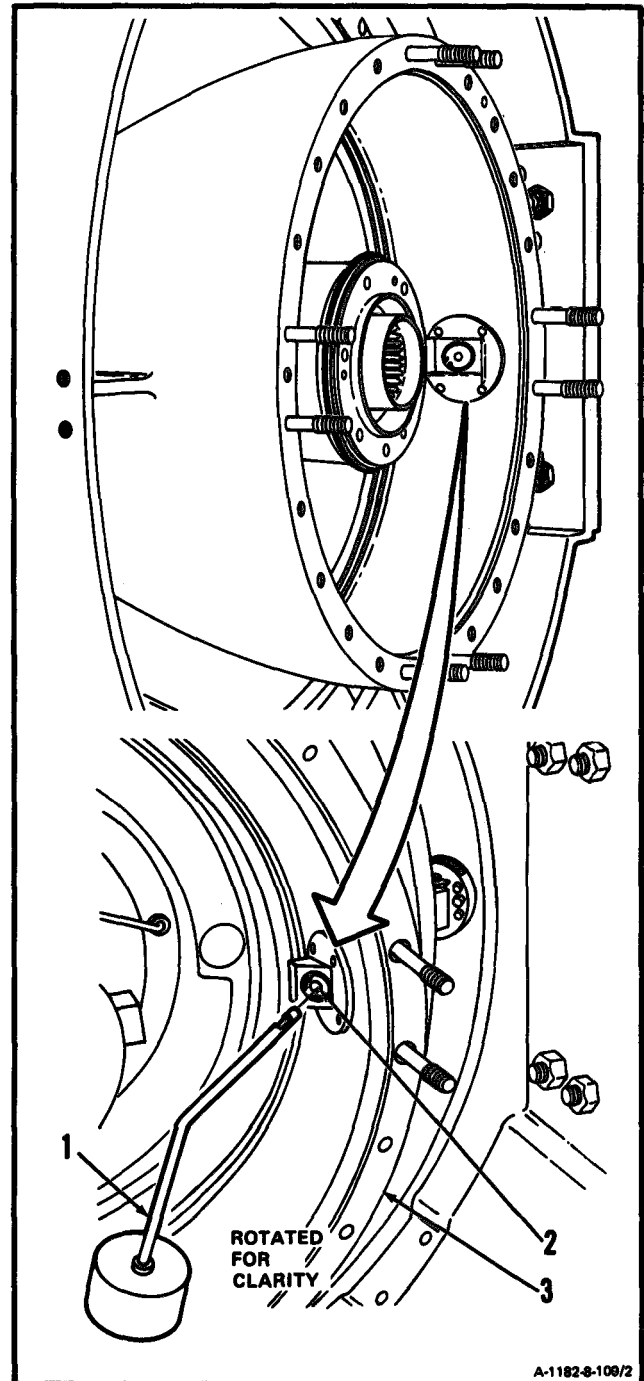
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8-109 INSTALL OIL LEVEL FLOAT ASSEMBLY (AVIM) (Continued)

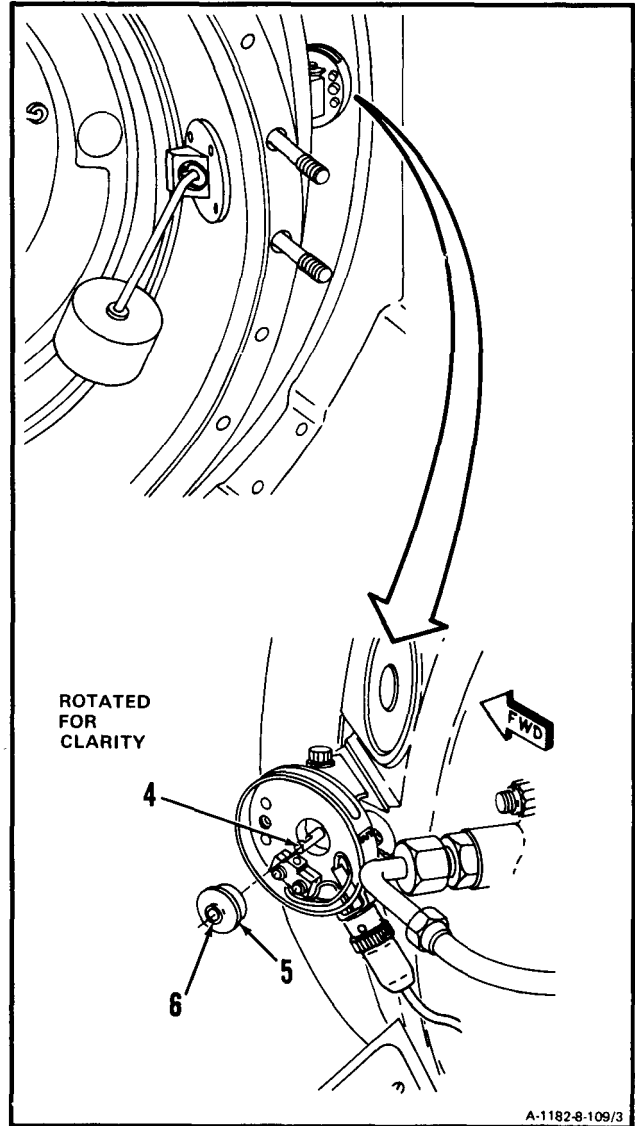
8-109

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.

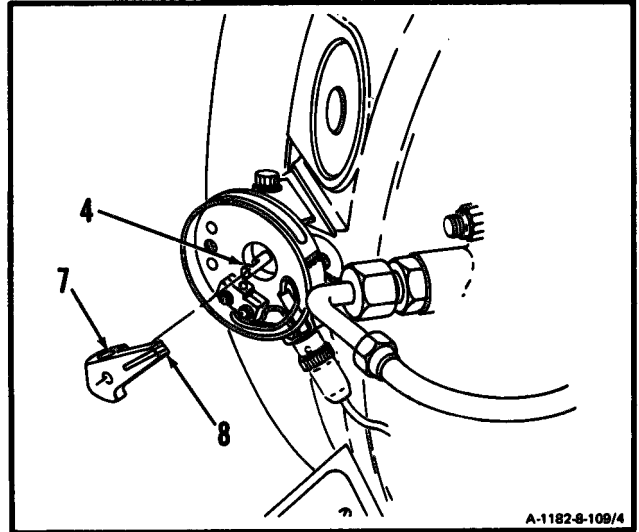


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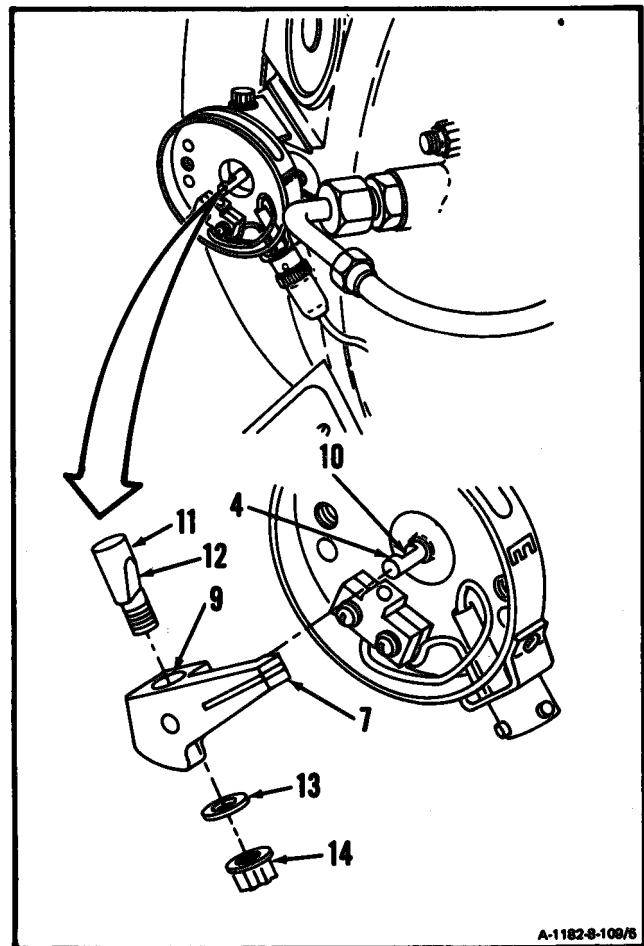
## 8-109 INSTALL OIL LEVEL FLOAT ASSEMBLY (AVIM) (Continued)

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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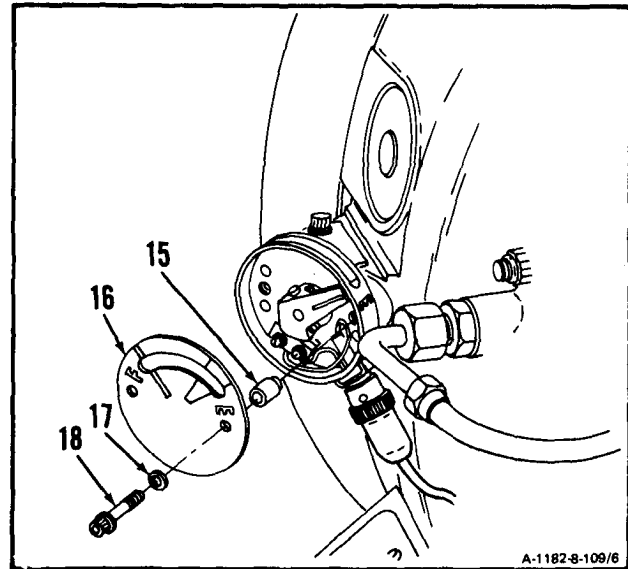
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**8-109 INSTALL OIL LEVEL FLOAT ASSEMBLY (AVIM) (Continued)**

---

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**

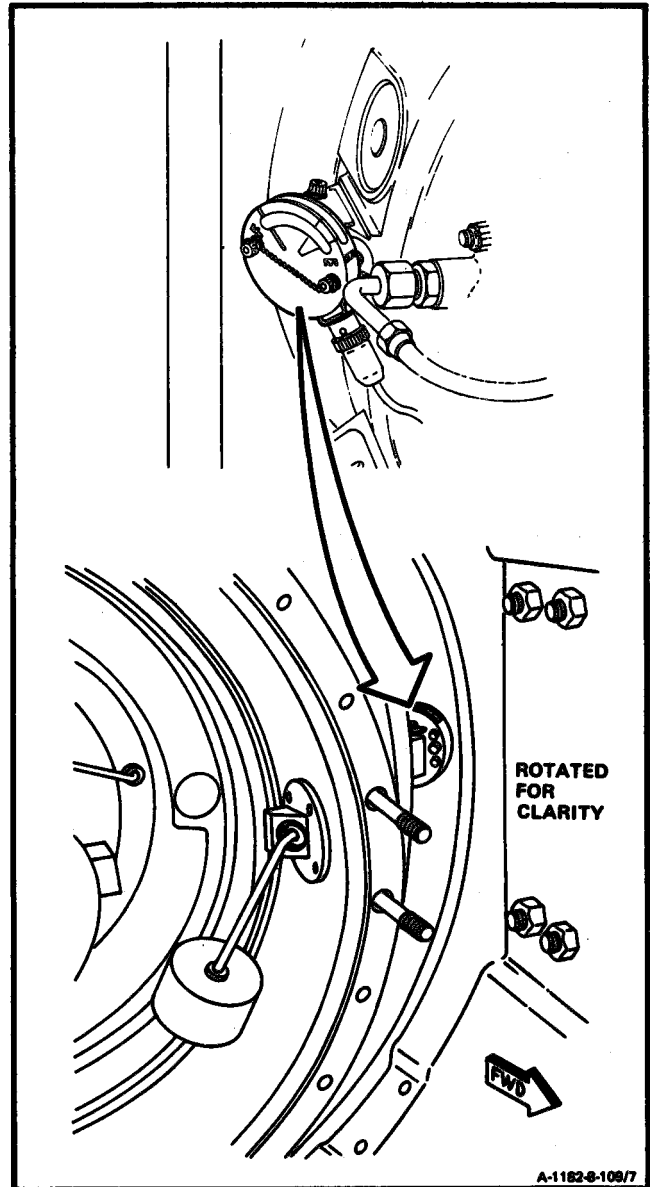


**8-109 INSTALL OIL LEVEL FLOAT ASSEMBLY (AVIM) (Continued)**

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**

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## 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:**

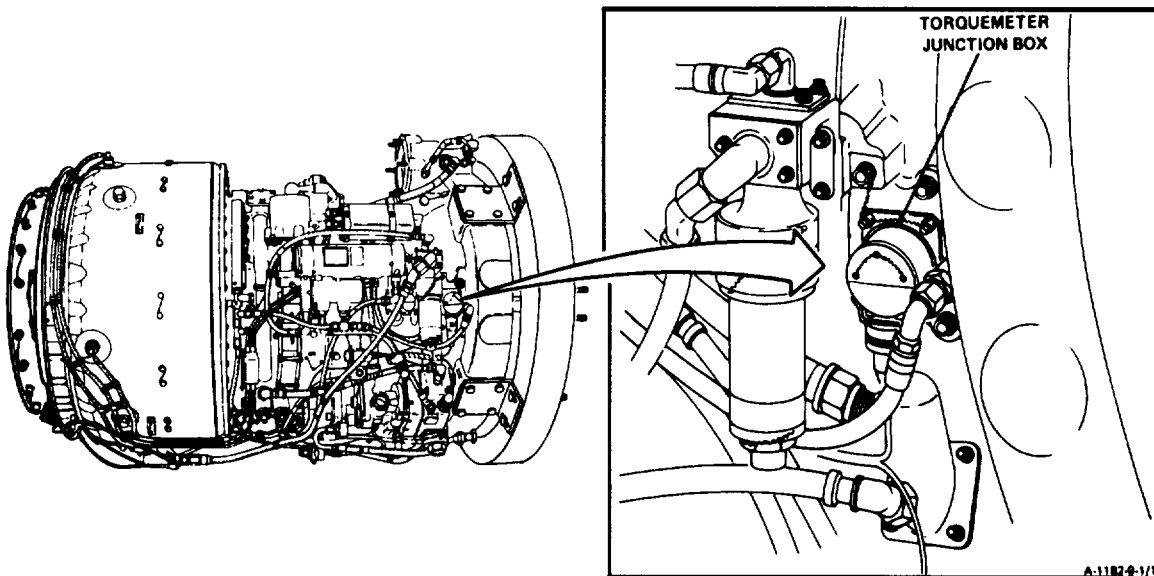
Wiping Rag (E58)

**Personnel Required:**

68B10 Aircraft Powerplant Repairer

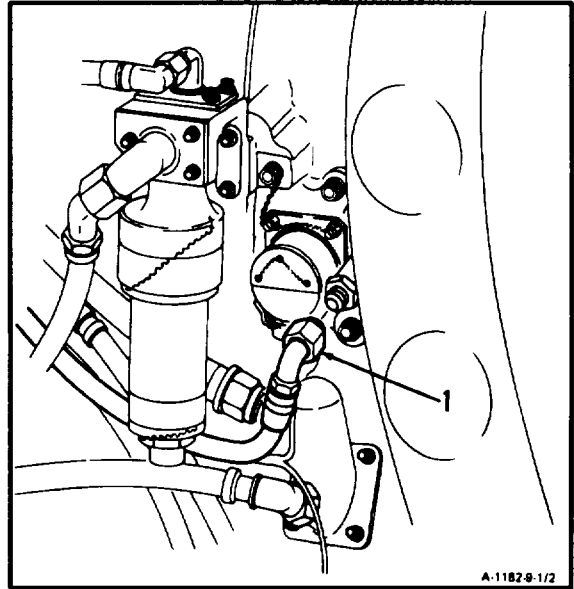
**WARNING**

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.

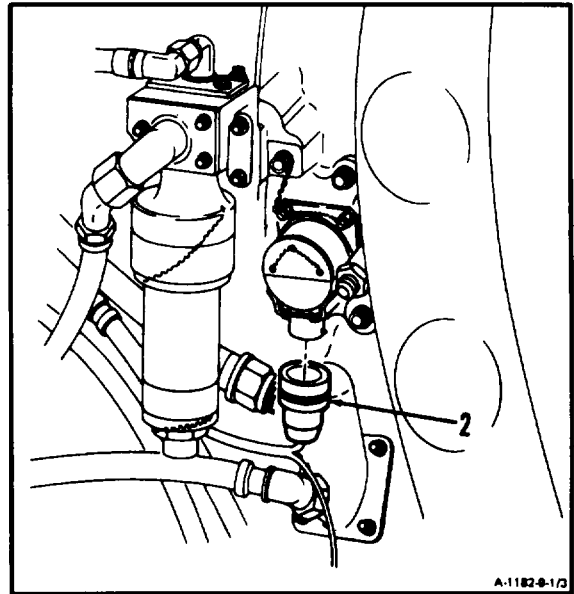
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Change 6 9-3

1. Disconnect hose assembly (1).



2. Disconnect electrical connector (2).

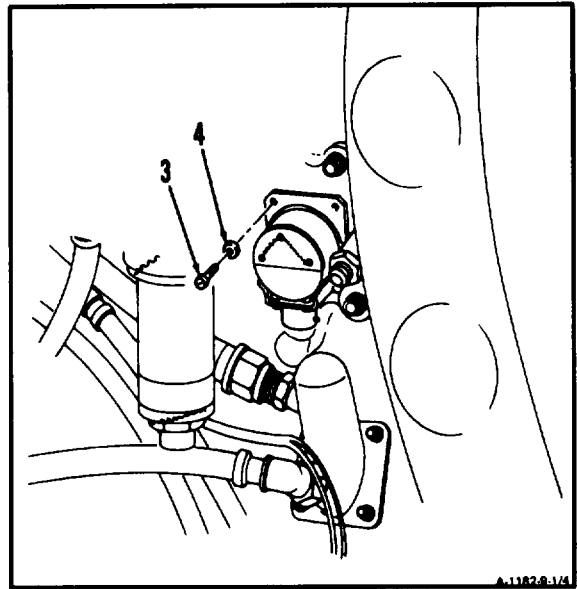


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## 9-1 REMOVE TORQUEMETER JUNCTION BOX (Continued)

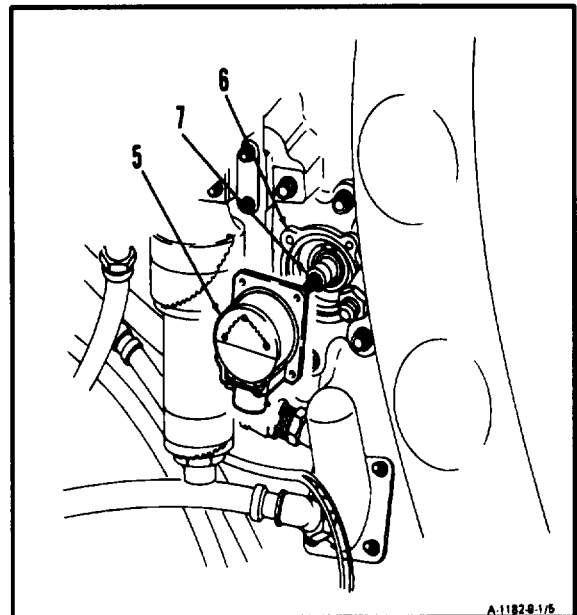
9-1

3. Remove lockwire, four screws (3), and washers (4).

**CAUTION**

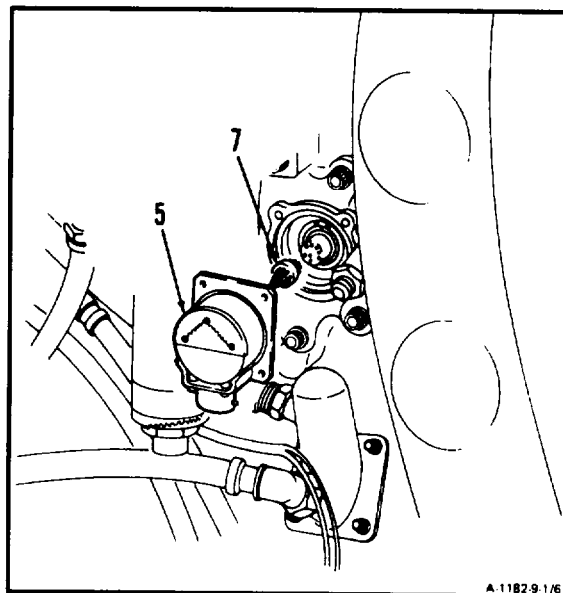
In following step 4, do not jerk torque meter junction box away from flange. This will strain electrical connectors and cause damage to wiring.

4. Carefully separate torque meter junction box (5) from flange (6) to permit access to electrical connector (7).

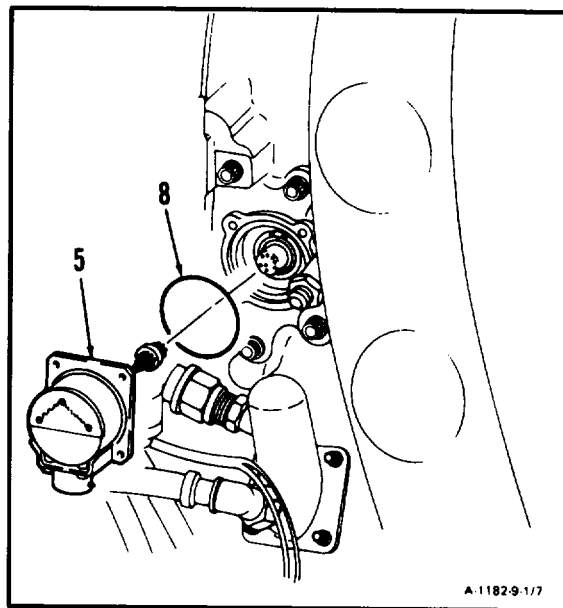
**GO TO NEXT PAGE**

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).



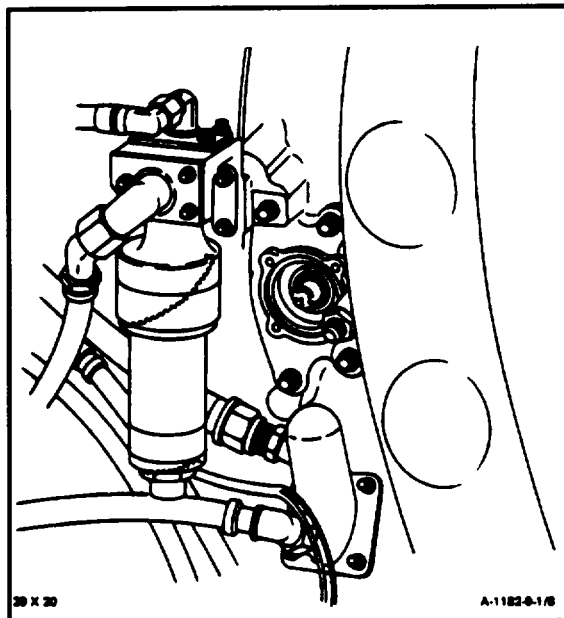
**GO TO NEXT PAGE**

9-1 REMOVE TORQUEMETER JUNCTION BOX (Continued)

9-1

FOLLOW-ON MAINTENANCE:

None



END OF TASK

Change 6 9-7

## 9-2 REMOVE TORQUEMETER JUNCTION BOX

9-2

## INITIAL SETUP

**Applicable Configurations:**

All

**Tools:**

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

**Materials:**

Solvent (E48.1)  
Gloves (E20)  
Lint-Free Cloth (E26)

**Personnel Required:**

68B 10 Aircraft Powerplant Repairer

**Equipment Condition:**

Off Engine Task  
Torquemeter Junction Box Removed (Task 9-1)

**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.

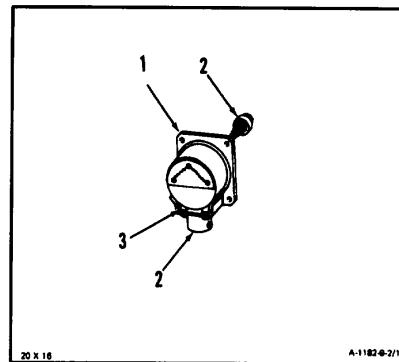
1. **Clean torquemeter junction box (1) as follows:**

- a. Wear gloves (E20) and clean junction box (1). Use lint-free cloth (E26) dampened with solvent (E49.1).
- b. Use dry, lint-free cloth (E26) to remove solvent.

**WARNING**

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

- c. Wear goggles. Blow dry electrical connectors (2) and inside surfaces (3). Use clean, dry compressed air.



## FOLLOW-ON MAINTENANCE

Install Torquemeter Junction Box (Task 9-3).

**END OF TASK**

9-8 Change 6



## 9-3 REMOVE TORQUEMETER JUNCTION BOX

9-3

## INITIAL SETUP

**Applicable Configurations:**

All

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

None

**Personnel Required:**

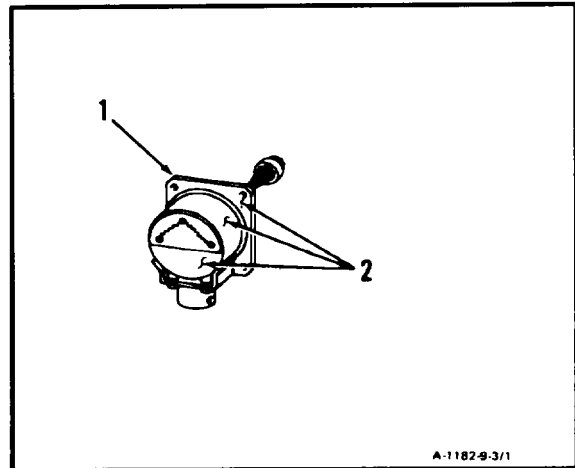
68B30 Aircraft Powerplant Inspector

**Equipment Condition:**

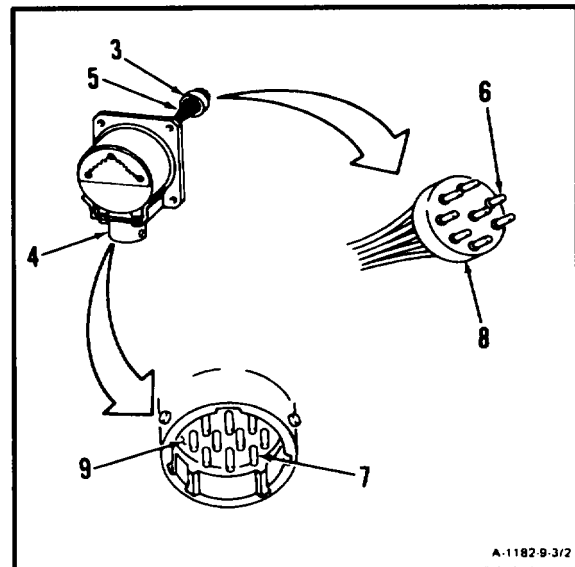
Off Engine Task

1. **Inspect 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

Change 6 9-9/(9-10 blank)

## 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

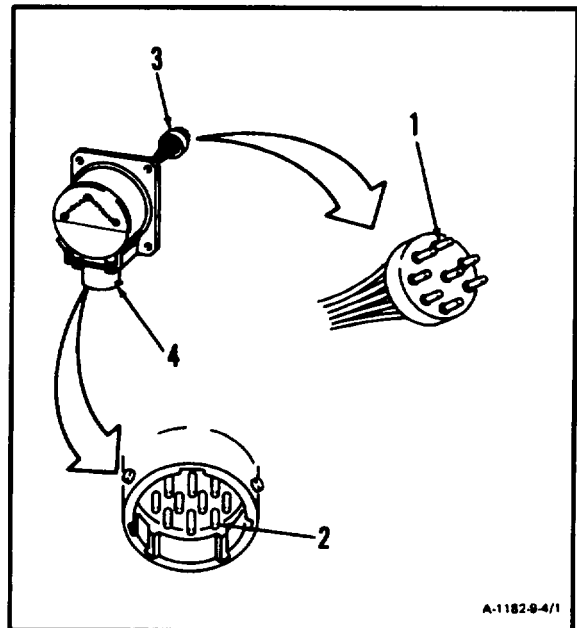
**Equipment Condition:**

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.



A-1182-9-4/1

**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.

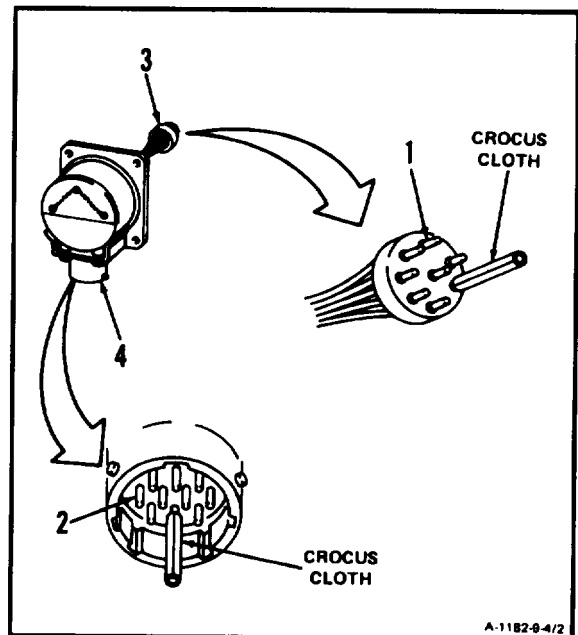
**INSPECT**

## 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:**

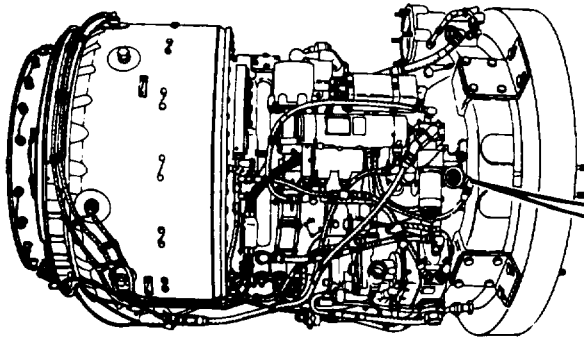
Packings

**Personnel Required:**

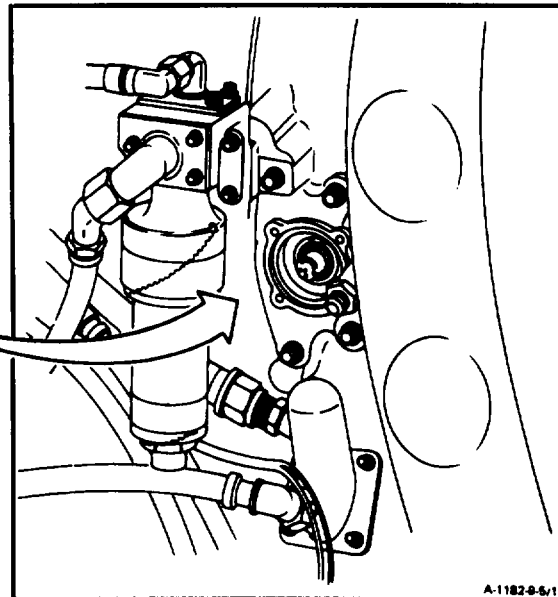
68B10 Aircraft Powerplant Repairer  
68B30 Aircraft Powerplant Inspector

**References:**

TM 55-2840-254-23P  
Task 9-6  
Task 9-10  
Task 9-11  
Task 9-14



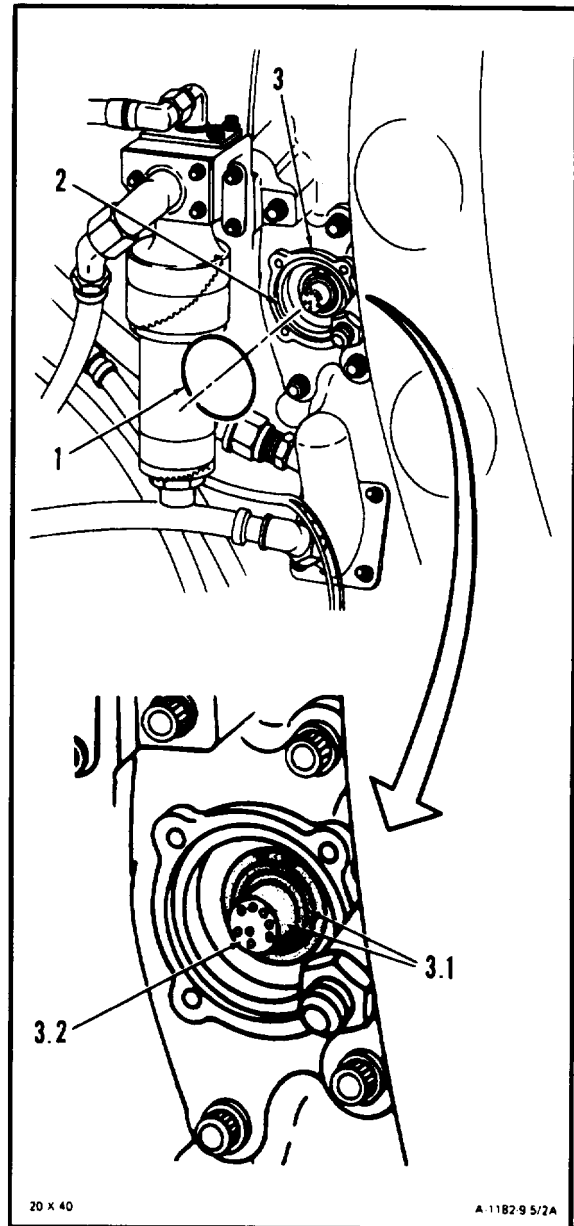
42 X 20

**GO TO NEXT PAGE**

**NOTE**

The output shaft, torque meter head and torque meter junction box are supplied as a calibrated matched 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 sealant. Coat pin area (3.2) of connector with silicone grease (E23.1).



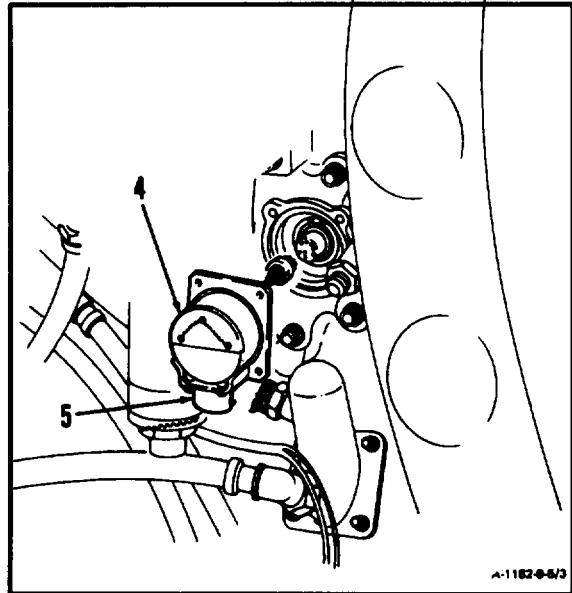
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9-14 Change 6

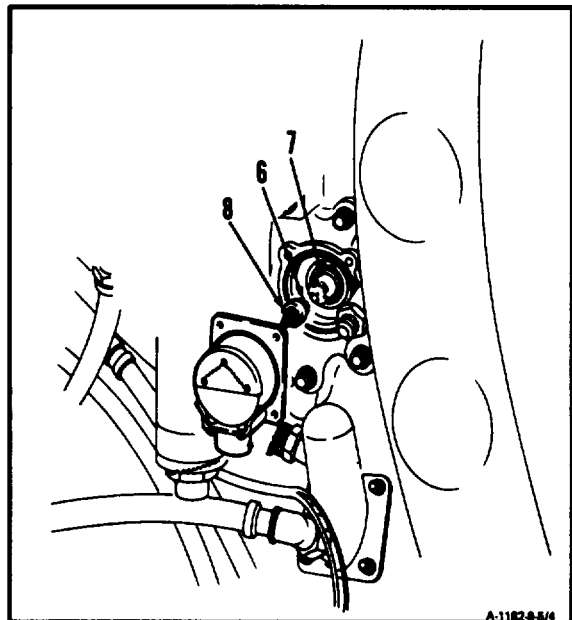
## 9-5 INSTALL TORQUEMETER JUNCTION BOX (CONTINUED)

9-5

2. Position torquemeter junction box (4) with electrical connector (5) at 6-o'clock location.



3. Align pins (6) with holes (7) and **connect electrical connector (8)**.

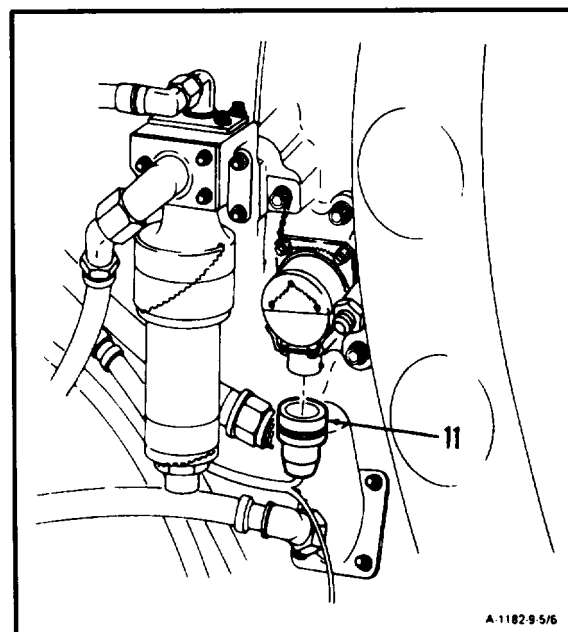
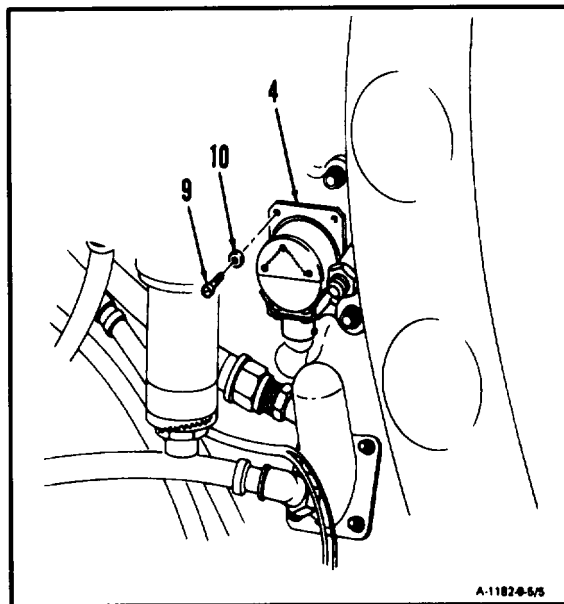


**GO TO NEXT PAGE**

Change 6 9-15

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

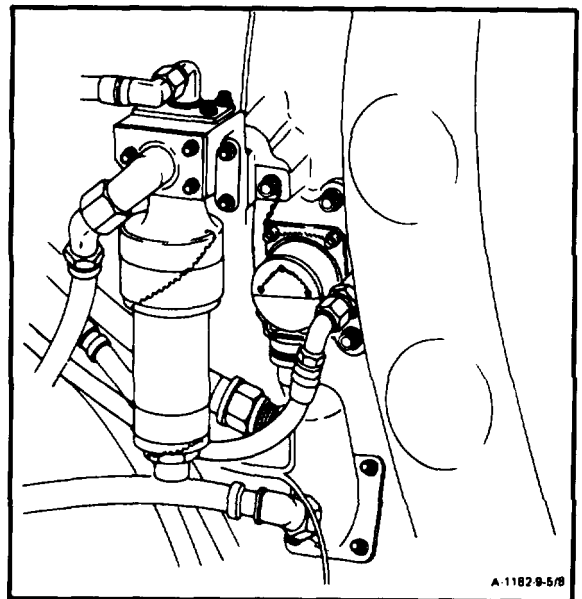
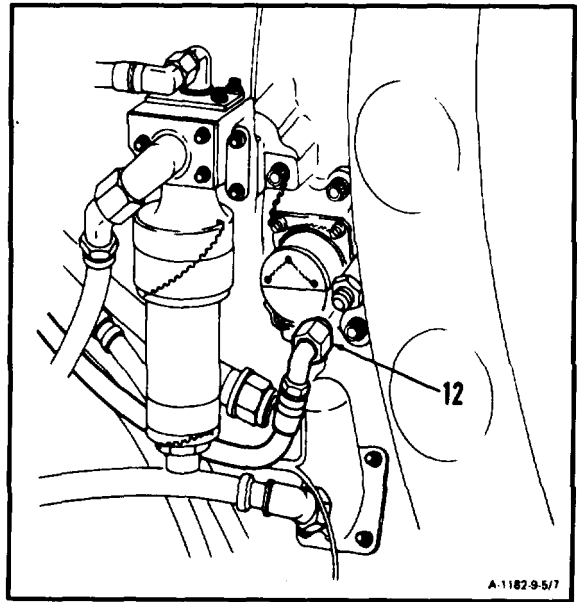
9-5

- 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:**

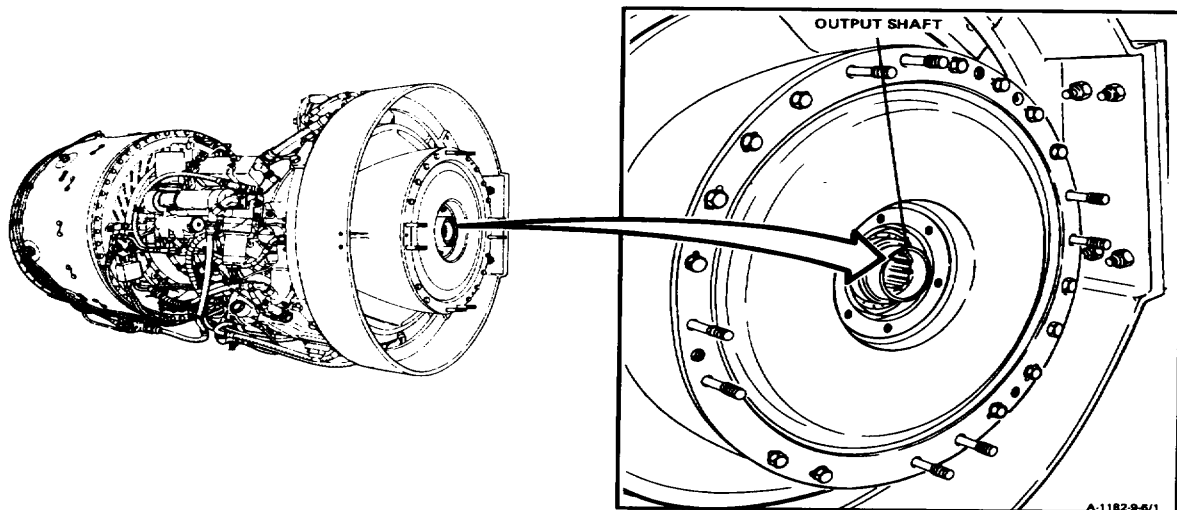
Lint-Free Cloth (E26)  
Wiping Rag (E58)

**Personnel Required:**

68B10 Aircraft Powerplant Repairer

**Equipment Condition:**

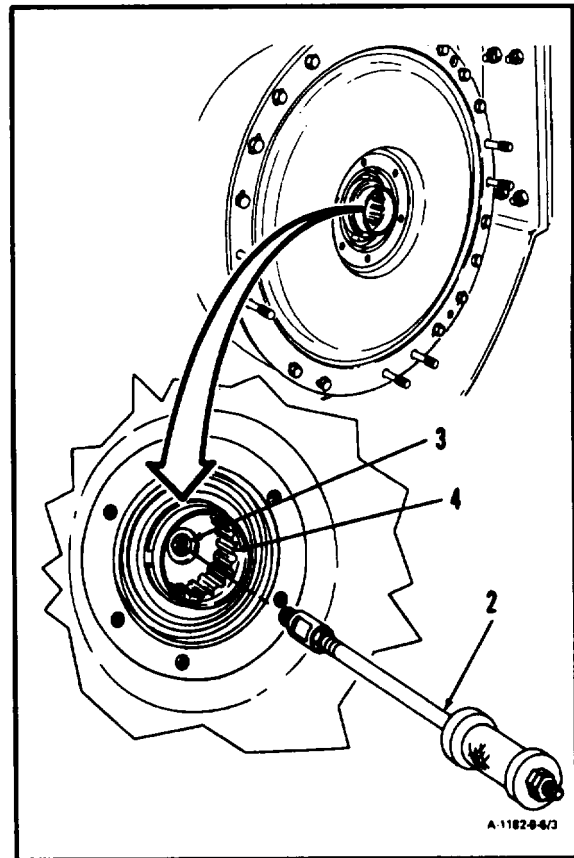
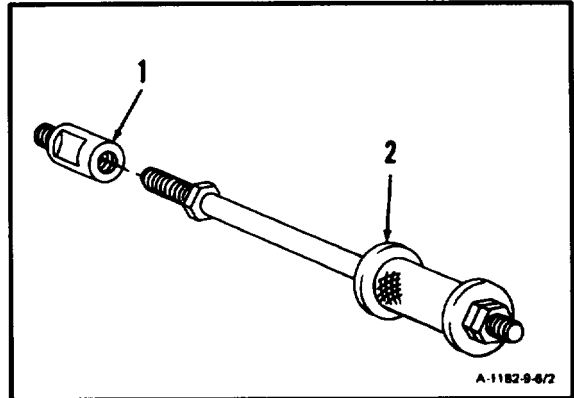
Engine Oil System Drained (Task 1-75)  
Output Shaft Seal and Housing Assembly  
Removed  
(Task 2-48)



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).

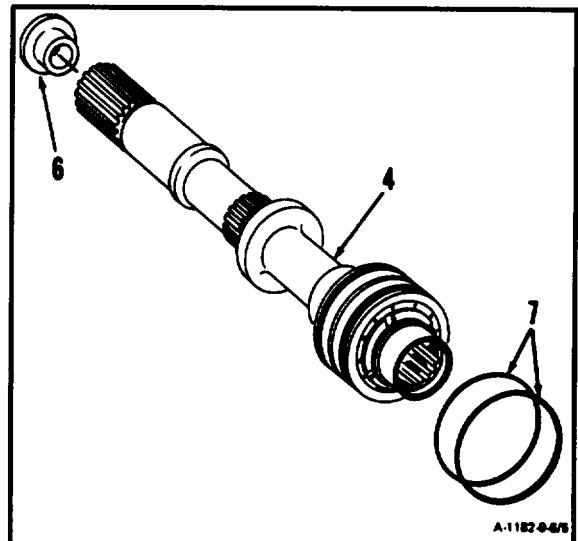
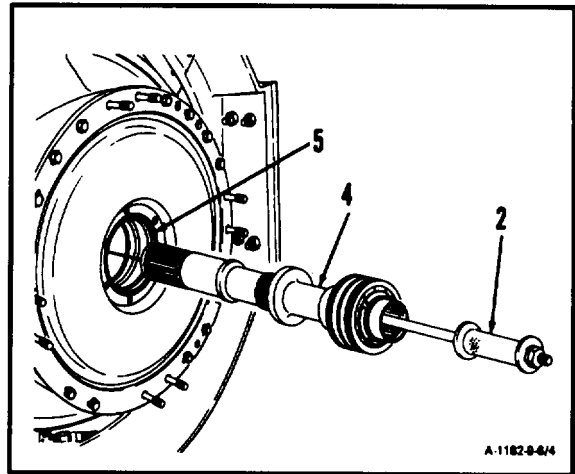
**NOTE**

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.



**GO TO NEXT PAGE**

Change 6 9-21

**CAUTION**

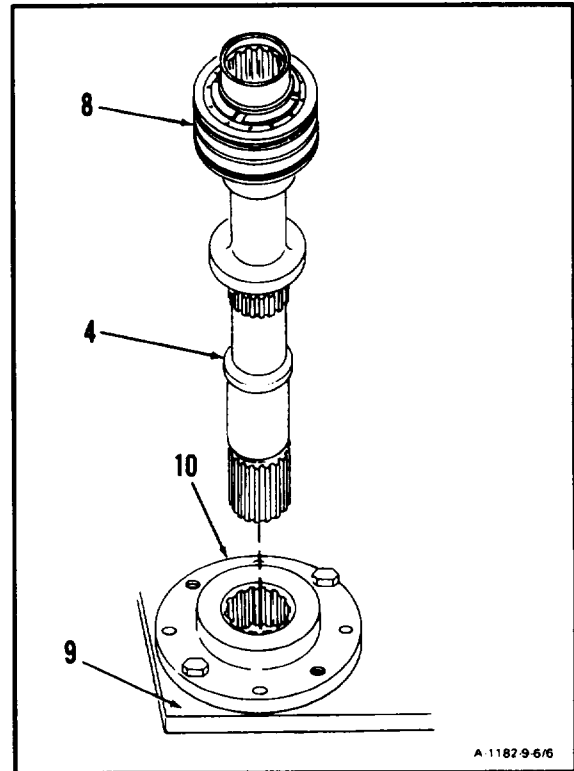
Protect bearings from damage. Handle only in clean area. Use clean, lint-free cloth (E26). Damaged bearings can cause engine failure.

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).

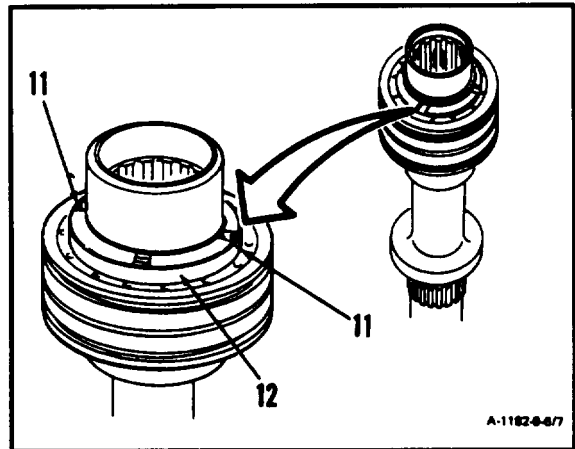


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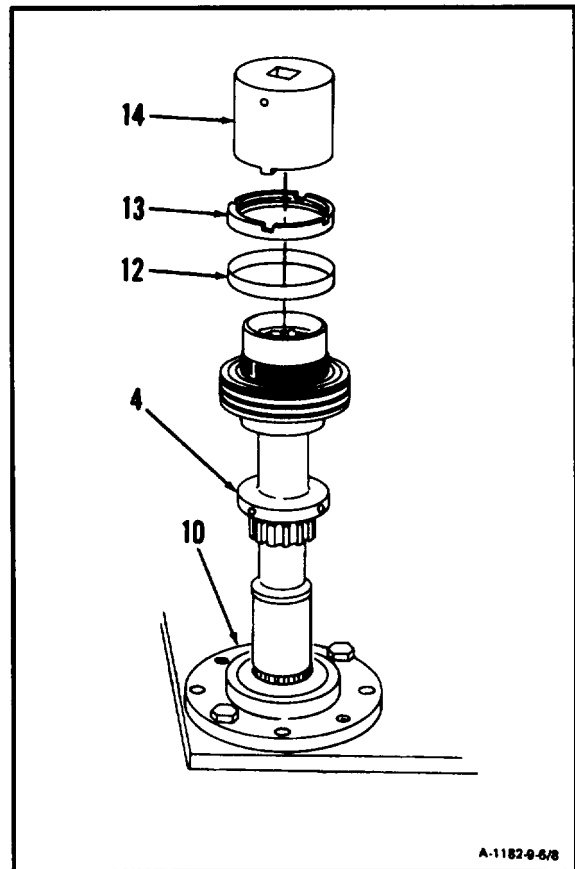
## 9-6 REMOVE OUTPUT SHAFT (Continued)

9-6

- b. **Straighten** bent portions (11) of **locking cup (12)**.

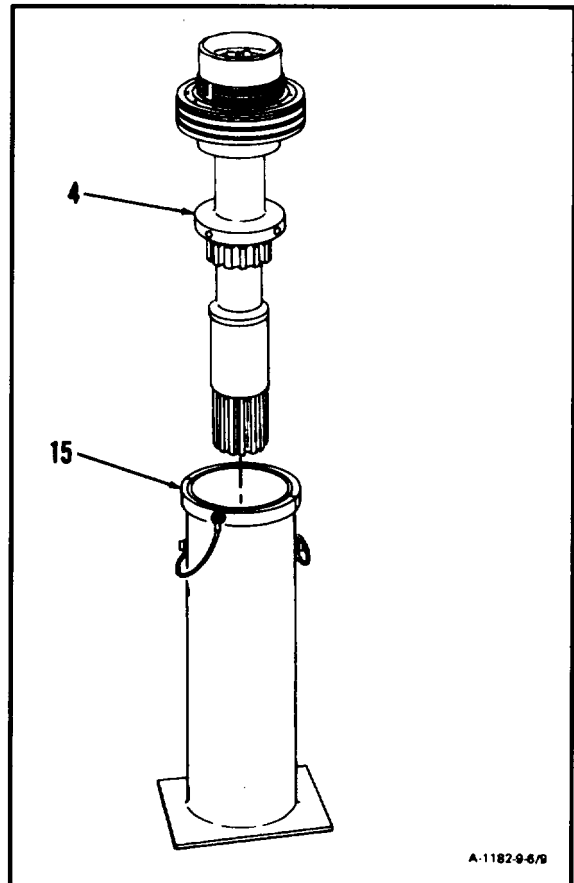


- c. **Remove nut (13) and recessed washer (12)**. Use socket wrench assembly (T22) (14), socket wrench adapter, and 1/2-inch breaker bar.
- d. Remove output shaft (4) from shaft holding tool (T23) (10).



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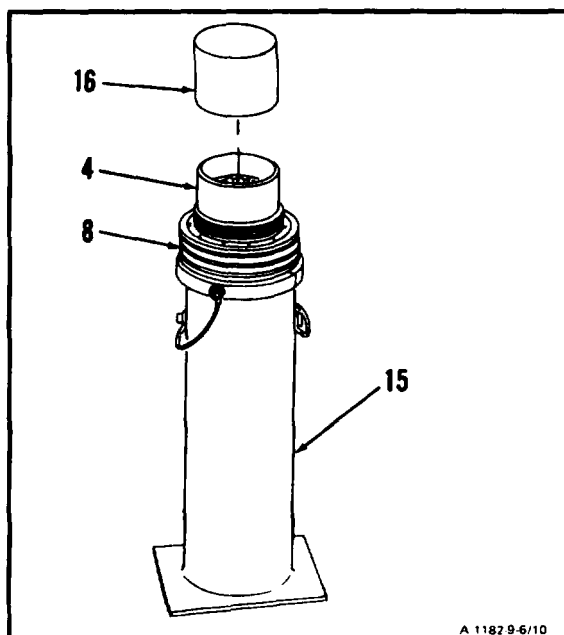
- e. Install output shaft (4) in bearing removal tool (T59) base (15).



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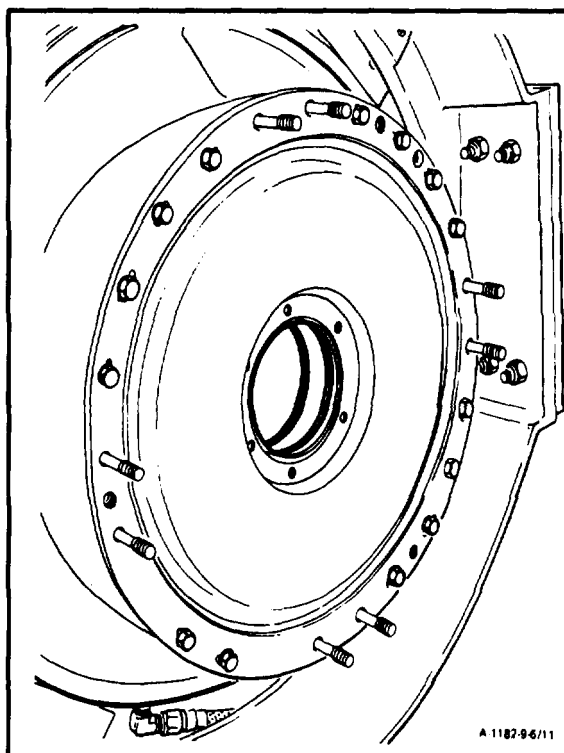
Change 6 9-24

- 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)

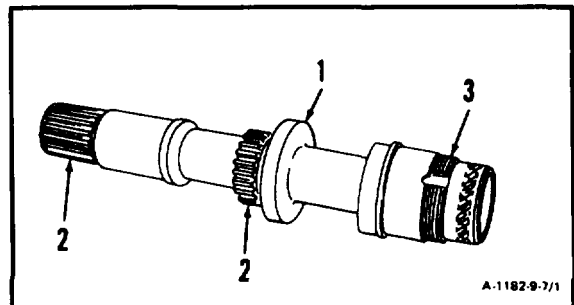
1. Clean output shaft (1). Wear gloves (E20). Immerse dry-cleaning solvent (E17) and agitate. Use brush on splines (2) and threads (3).
2. Wipe dry. Use clean, dry lint-free cloth (E26).
3. Wear goggles. Blow dry. Use clean, dry compressed air.

**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)**

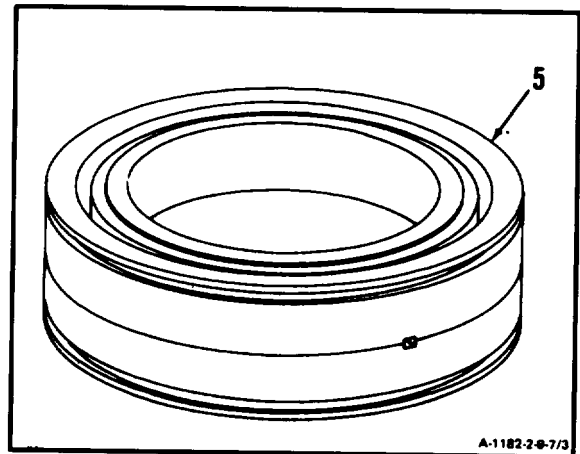
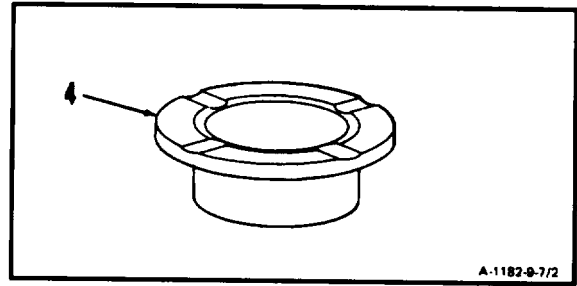
9-7

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

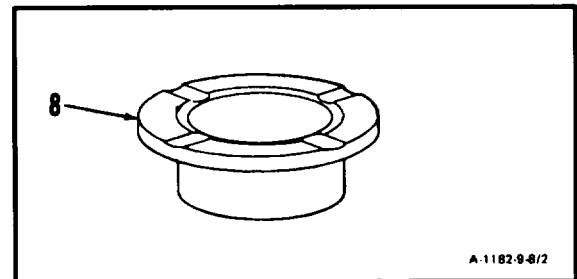
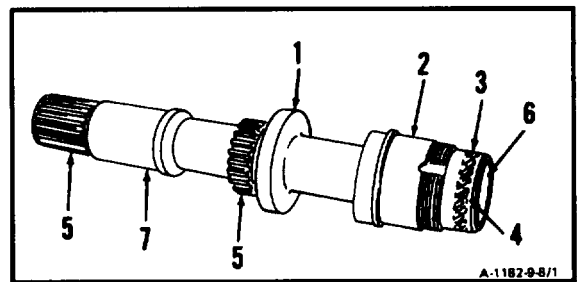
**References:**

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.

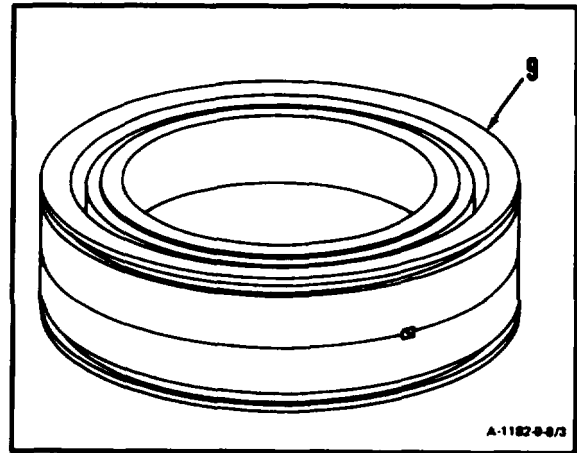
**GO TO NEXT PAGE**

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:
- There shall be no rust or broken parts.
  - There shall be no pits or dents deeper than 0.002 inch.
  - There shall be no foreign matter clogging the bearing which would obstruct free rotation.
  - There shall be no purple, red-purple or blue discoloration.

**FOLLOW-ON MAINTENANCE:**

None

**END OF TASK**

**INITIAL SETUP**

Crocus Cloth (E1 5)

**Applicable Configurations:**

All

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

Carborundum Stone (E10)

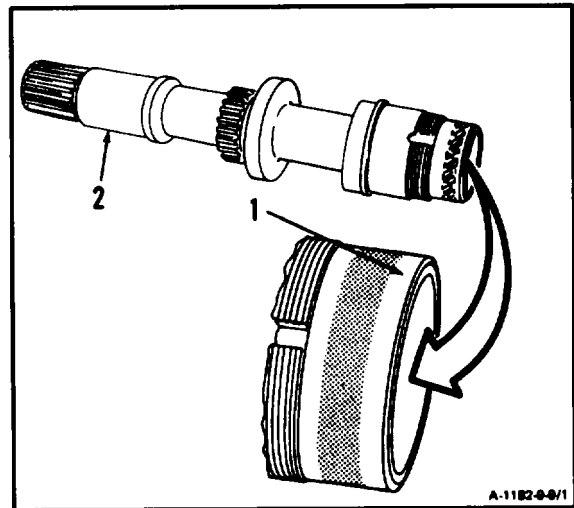
**Personnel Required:**68B 10 Aircraft Powerplant Repairer  
68B30 Aircraft Powerplant Inspector**References:**

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

**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  
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:**

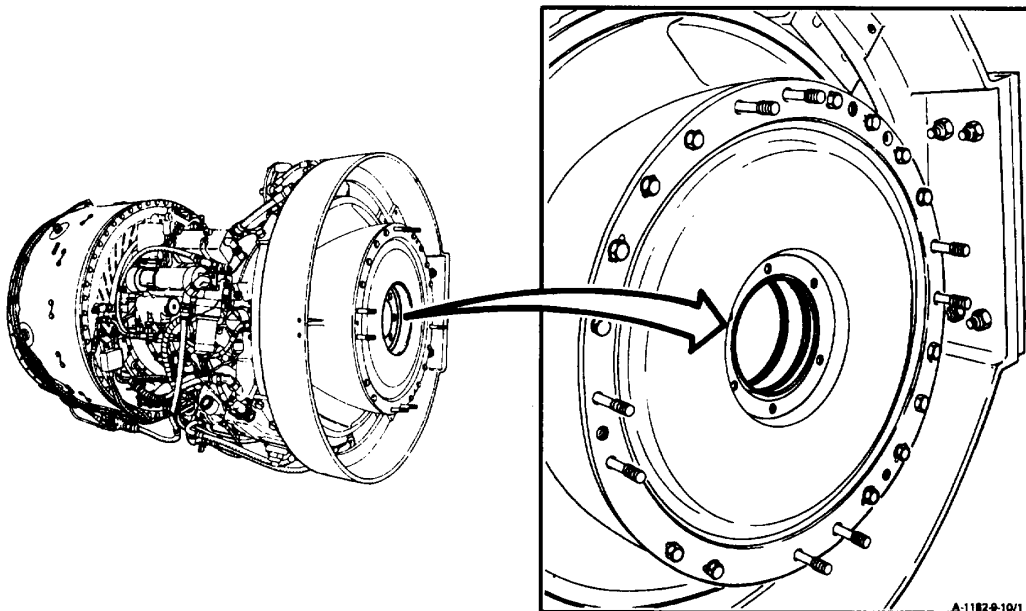
Packings  
Spacer

**Personnel Required:**

68B 10 Aircraft Powerplant Repairer  
68B30 Aircraft Powerplant Inspector

**References:**

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).

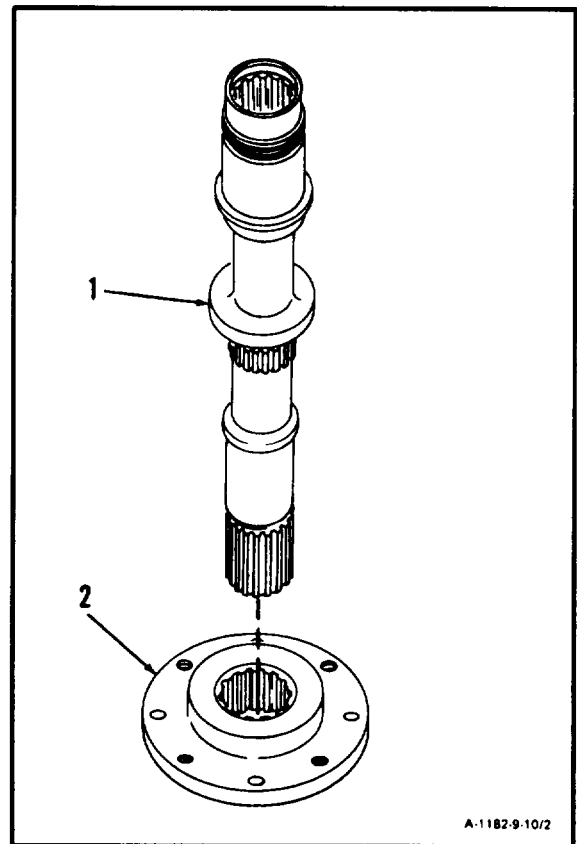
**CAUTION**

Protect bearings from damage. Handle only in clean area. Use clean, lint-free cloth (E26). Damaged bearings can cause engine failure.

**NOTE**

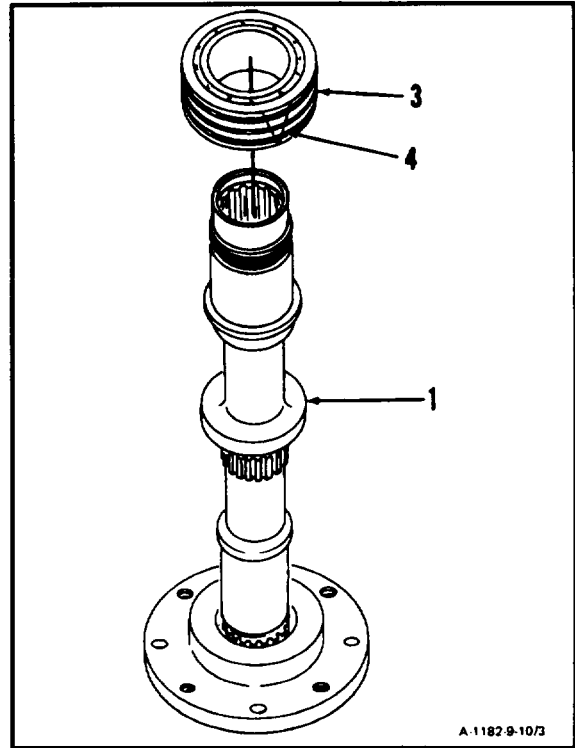
If bearings have not been removed omit step 1.

1. Install bearing on output shaft (1) as follows:
  - a. Install output shaft (1) in shaft holding tool (T23) (2).

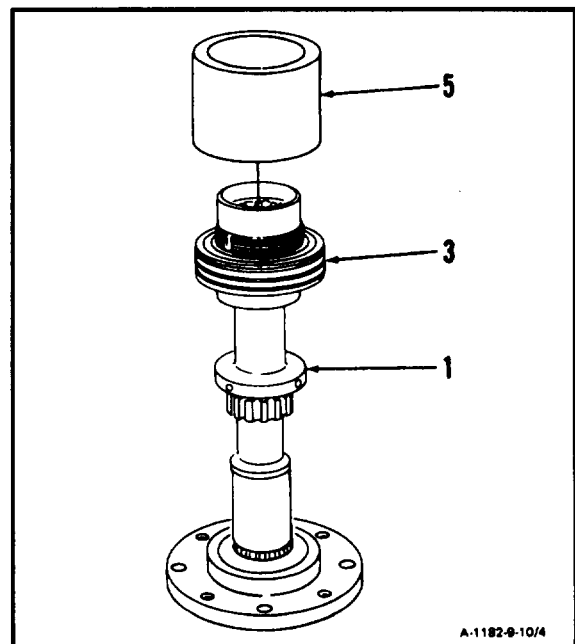


**GO TO NEXT PAGE**

- 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.

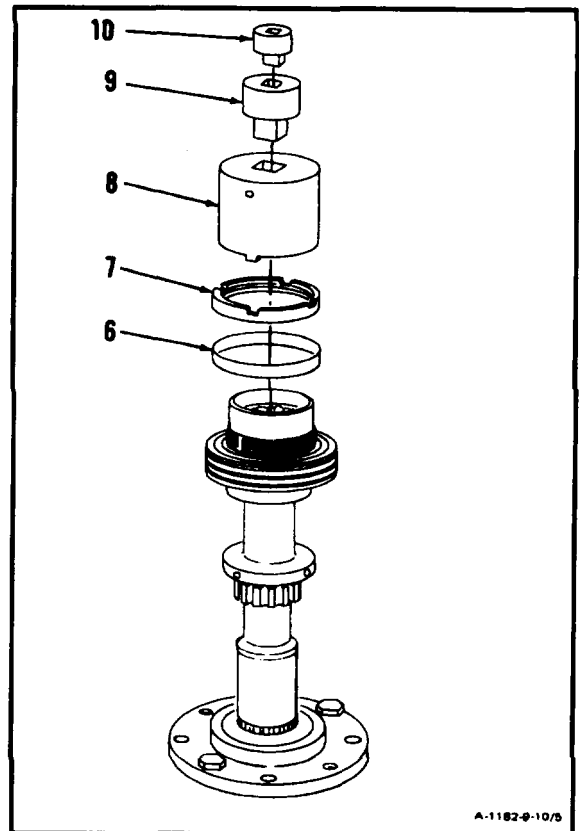


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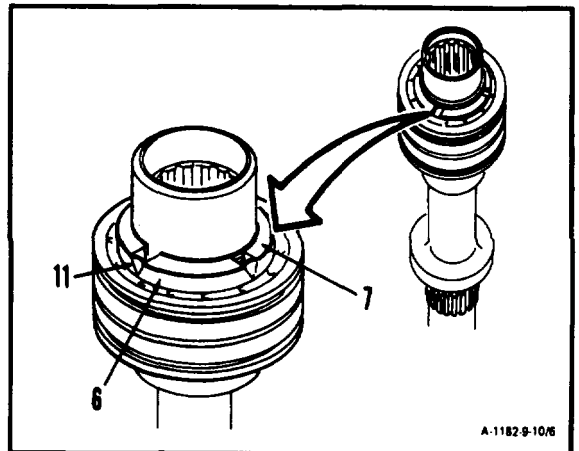
**WARNING**

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.**



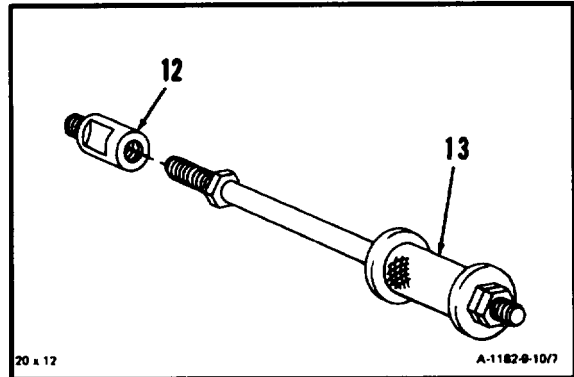
- e. **Bend recessed washer (6) into two opposite slots (11) in nut (7).**



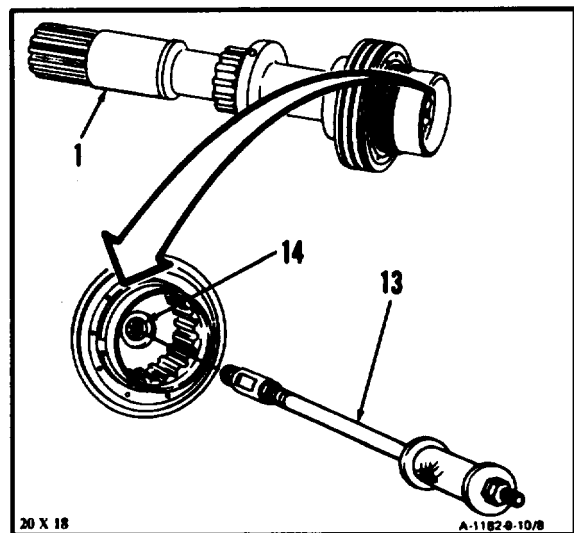
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2. Install output shaft puller adapter (T35) (12) on mechanical puller (T6) (13).



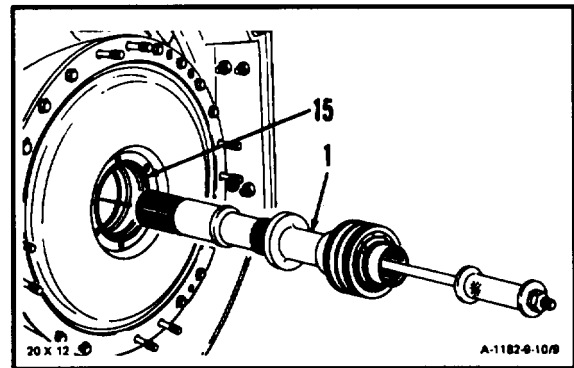
3. Install mechanical puller (T6) (13) in threaded hole (14) in output shaft (1).



**CAUTION**

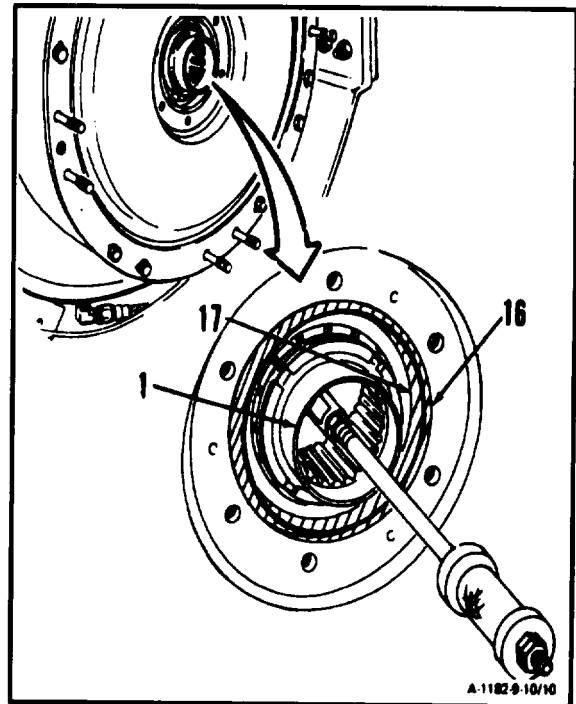
In following step 4; be sure all gear teeth are aligned when installing output shaft.

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.

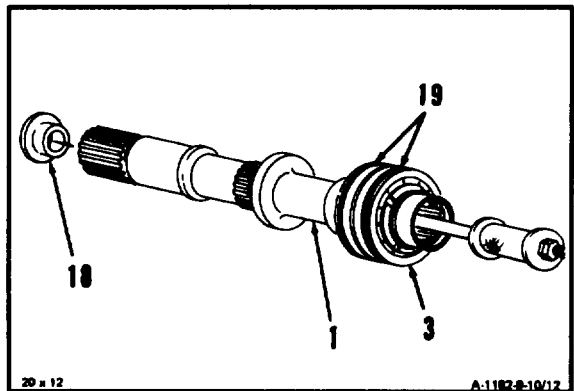
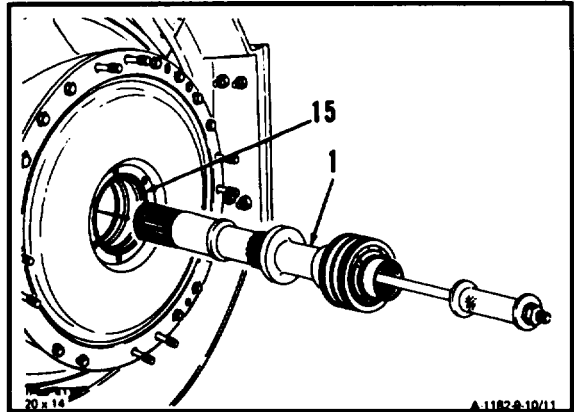
SPACER SELECTION TABLE		
IN DEPTH MEASURES	SPACER THICKNESS REQUIRED	USE SPACER PART NUMBER
INCHES	INCHES	
0.620 to 0.644	0.110	2-141-341-03
0.645 to 0.664	0.130	2-141-341-04
0.665 to 0.684	0.150	2-141-341-05
0.685 to 0.704	0.170	2-141-341-06
0.705 to 0.724	0.190	2-141-341-07
0.725 to 0.744	0.210	2-141-341-08
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.

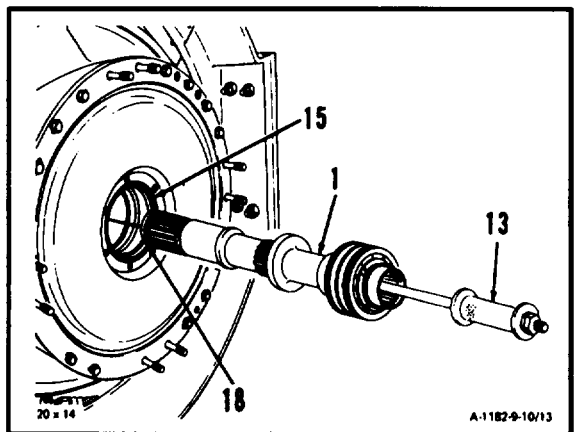
5. Carefully pull and lift output shaft (1) from housing (15).
6. Install spacer (18) in output shaft (1).
7. Install packings (19) on bearings (3).



**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).



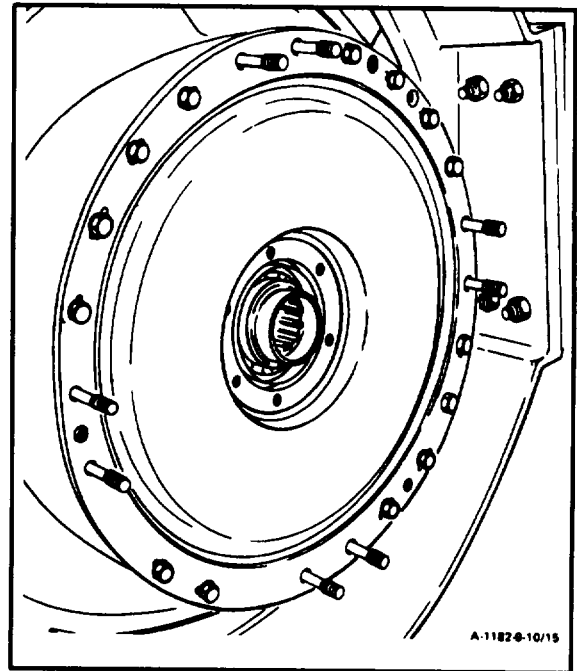
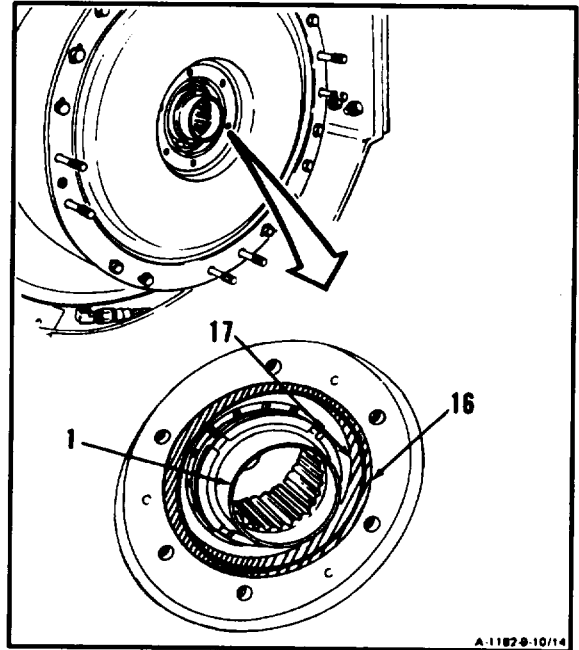
**GO TO NEXT PAGE**

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.

**INSPECT**

**FOLLOW-ON MAINTENANCE:**

Install Output Shaft Seal and Housing Assembly  
 (Task 2-52).  
 Service Engine Oil System (Task 1-74.)



**END OF TASK**

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:**

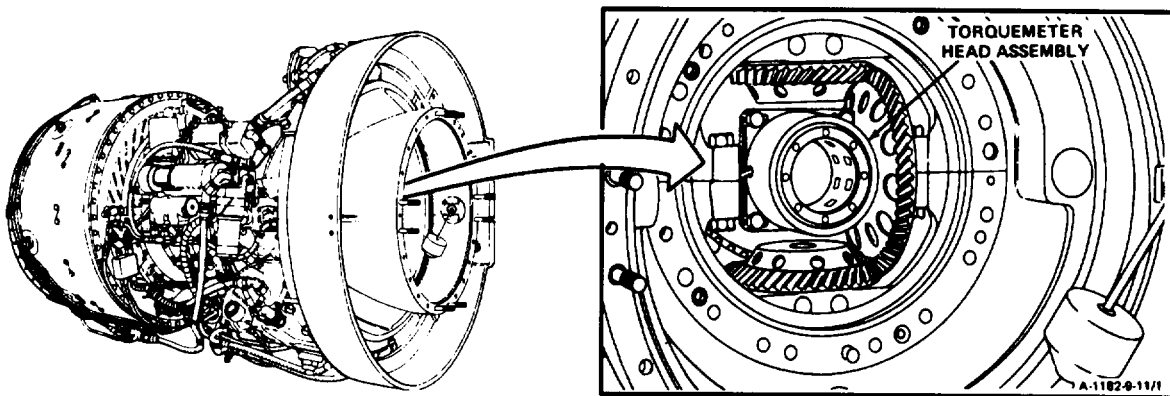
Engine Oil System Drained (Task 1-75)  
Torquemeter Junction Box Removed (Task 9-1)  
Tube Assembly Removed (Inlet Housing to Main  
Oil Pump) (Task 8-50)  
Overspeed Drive and Outlet Cover Assembly  
Removed (Task 5-17)

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:*

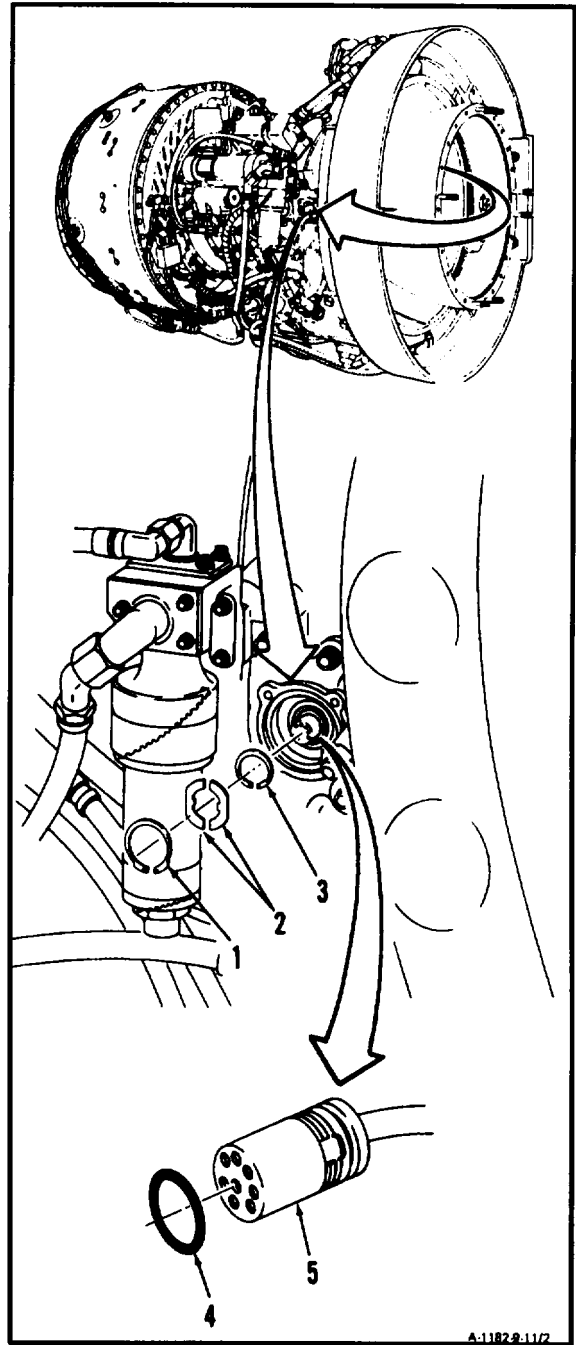
**WARNING**

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.



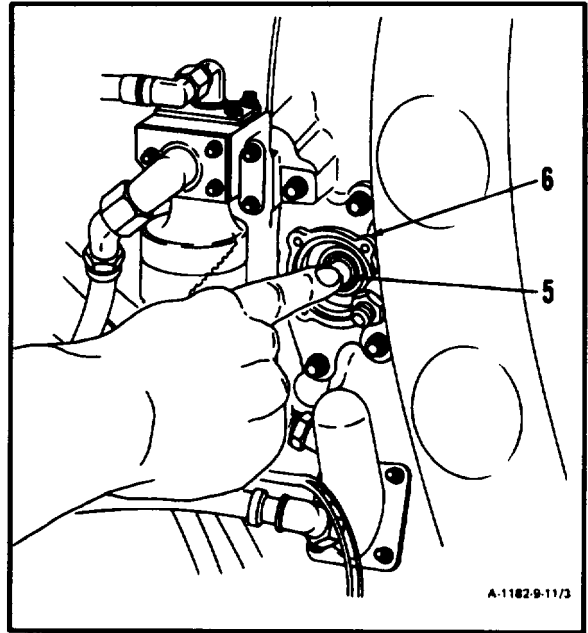
**GO TO NEXT PAGE**

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).



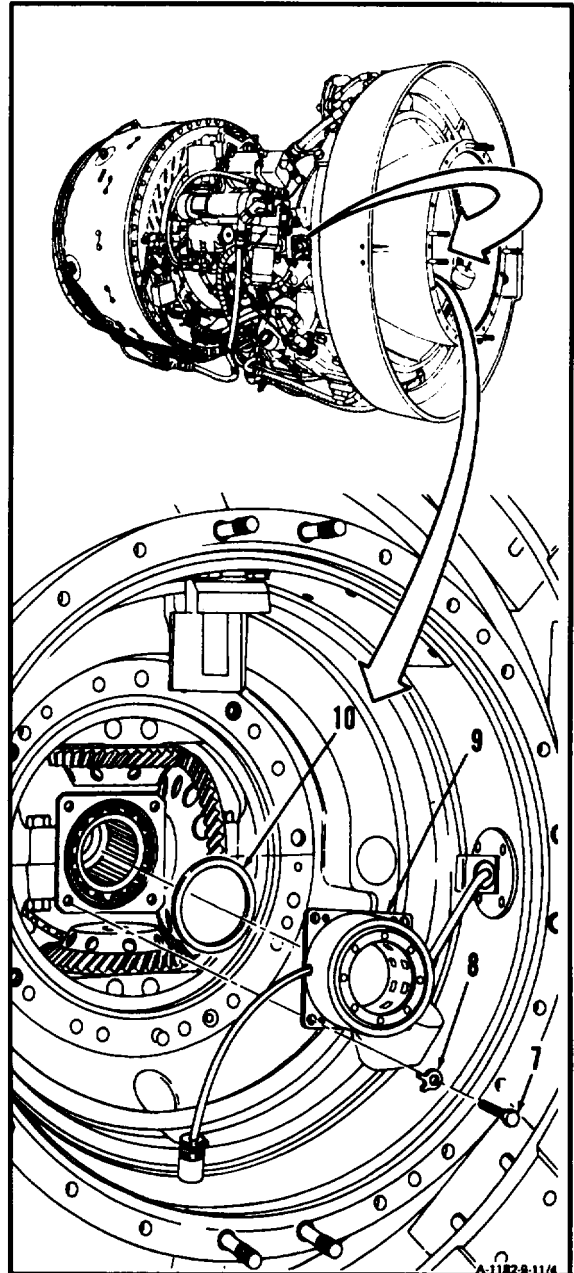
**GO TO NEXT PAGE**

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**

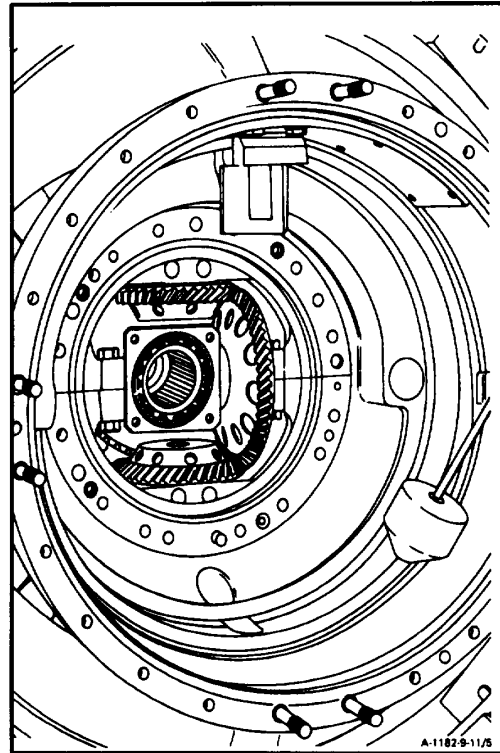


**9-11 REMOVE TORQUEMETER HEAD ASSEMBLY (Continued) 9-11**

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).

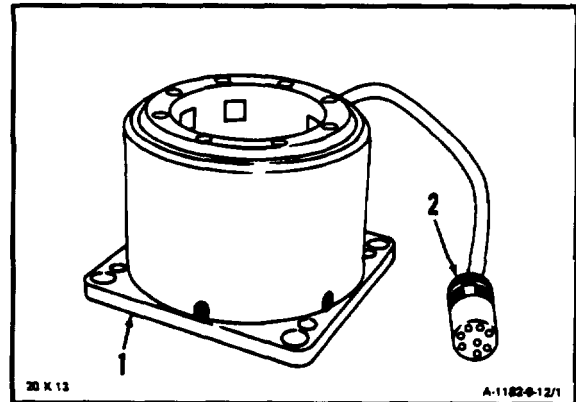
**WARNING**

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)

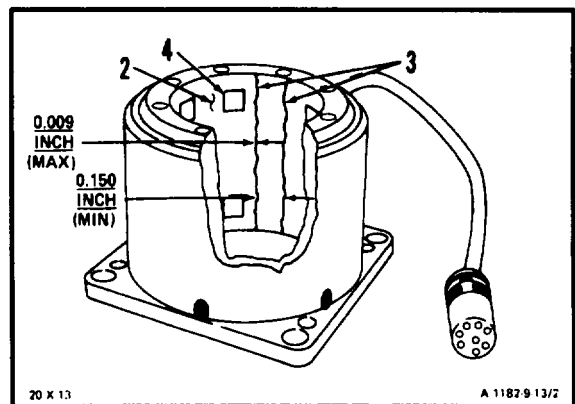
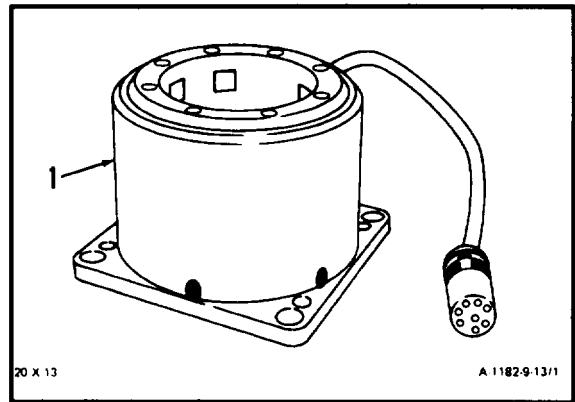
**Personnel Required:**

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).

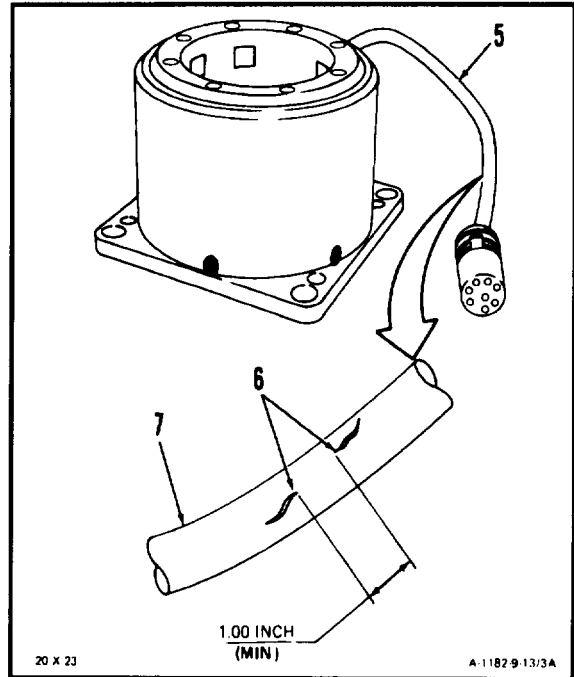


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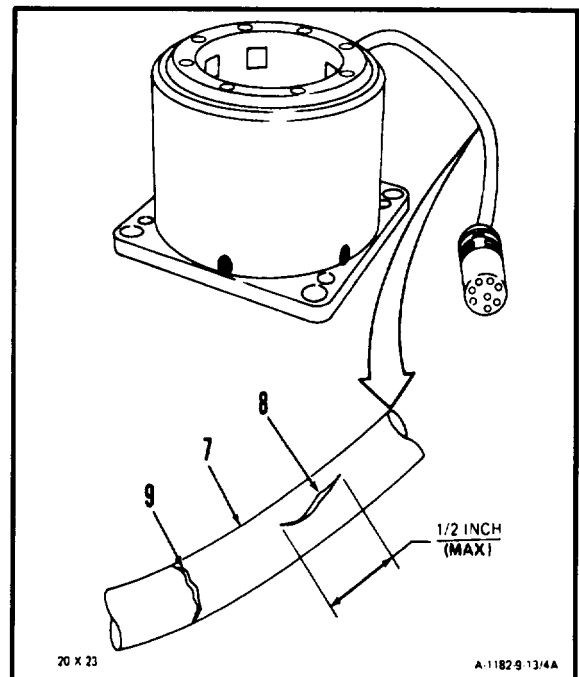
9-46 Change 6

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.

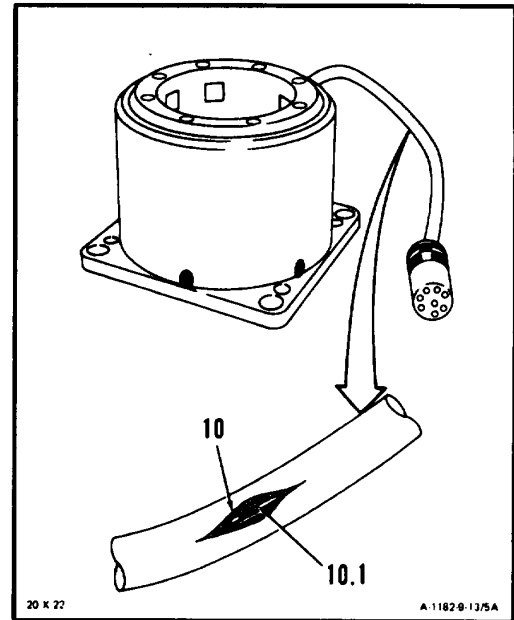


- b. There shall be no longitudinal cracks or tears (8) that exceed 1/2 inch in length.
- c. There shall be no circumferential cracks or tears (9) that extend more than half way around the outer covering (7). These cracks or tears shall not exceed 1/2 inch in length.



**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).



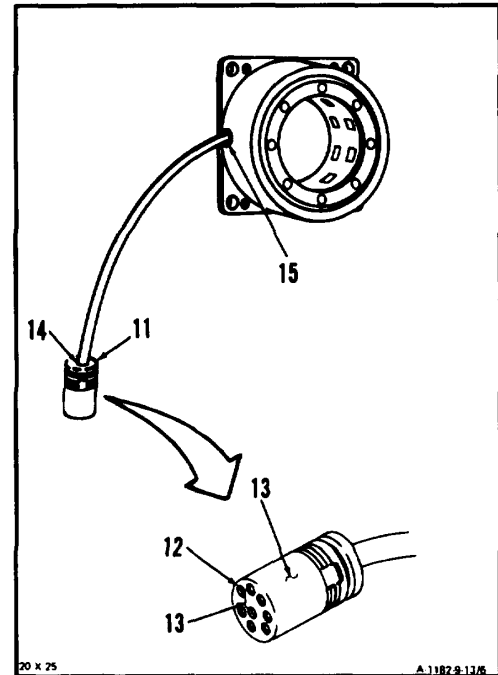
**GO TO NEXT PAGE**

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

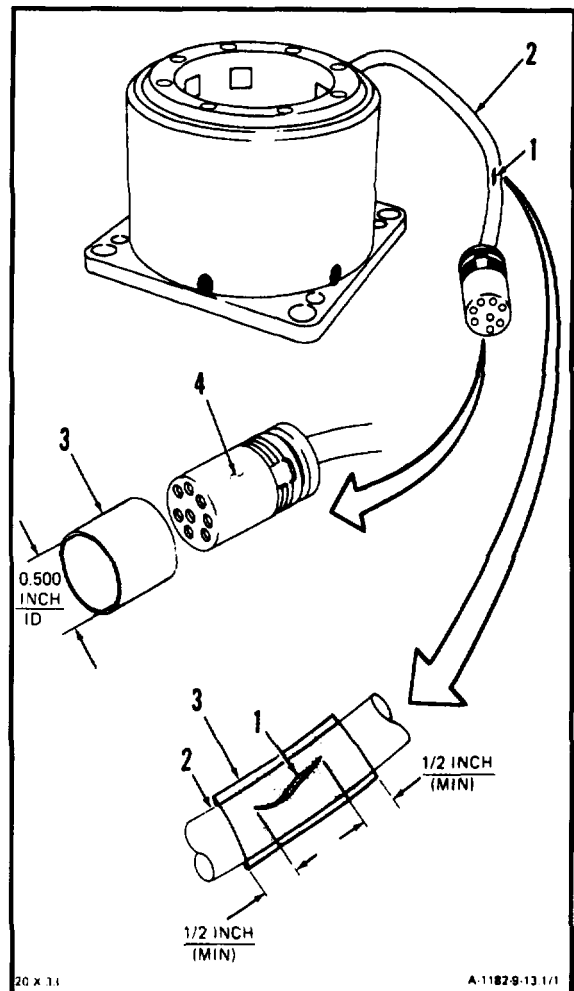
**Equipment Condition:**

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

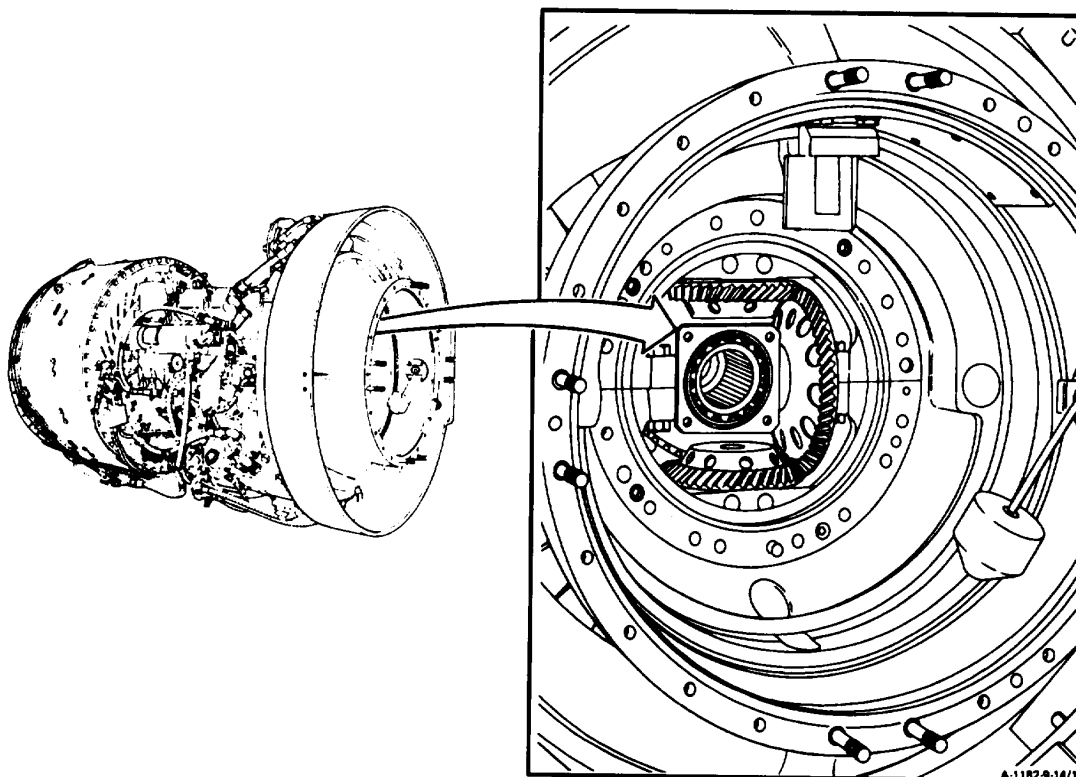
**Tools:****Personnel Required:**

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**

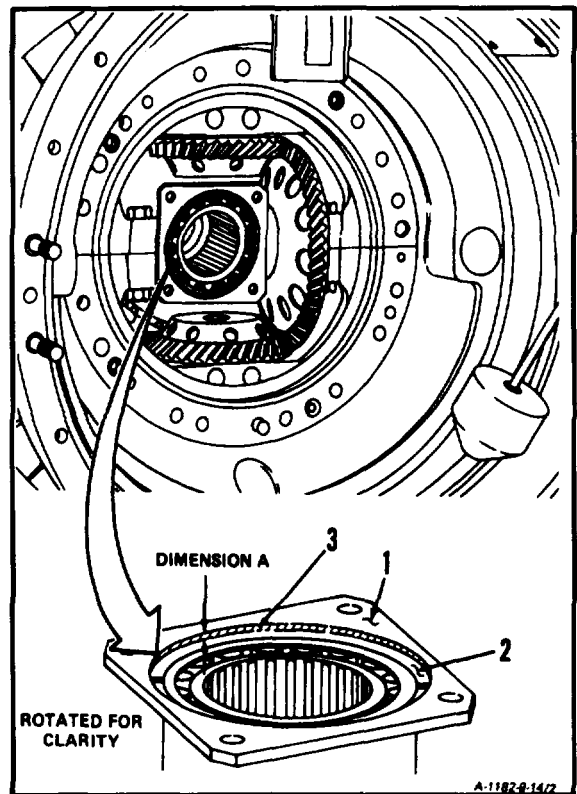
**NOTE**

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).

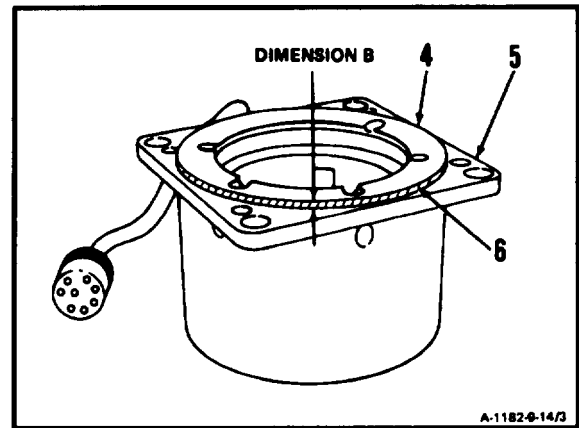
**NOTE**

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).

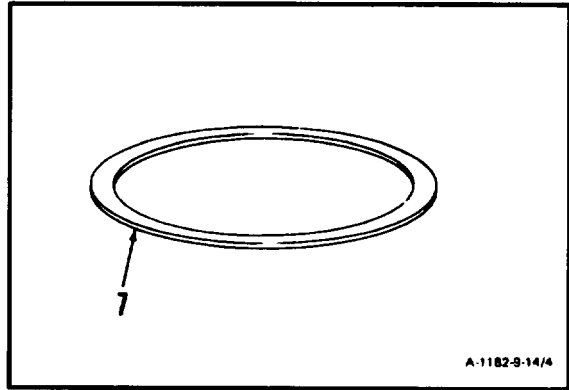
**SHIM SELECTION TABLE**

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

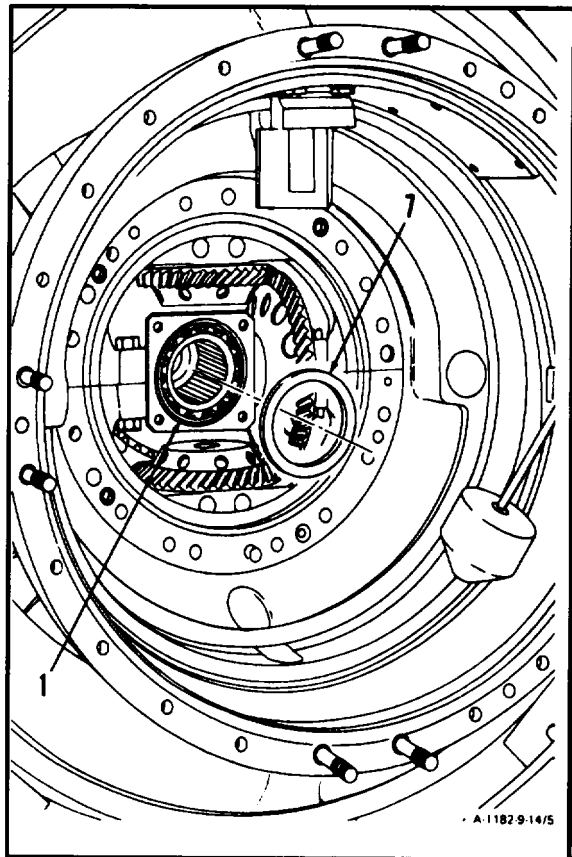
**GO TO NEXT PAGE**

2. Measure thickness of shim (7) and check against shim selection table.

INSPECT

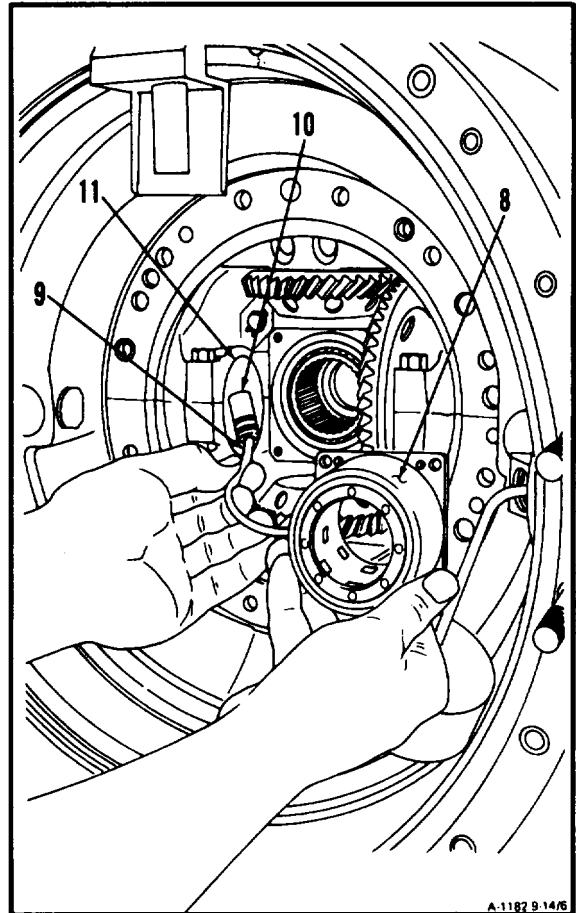


3. Install shim (7) inside flange (1).



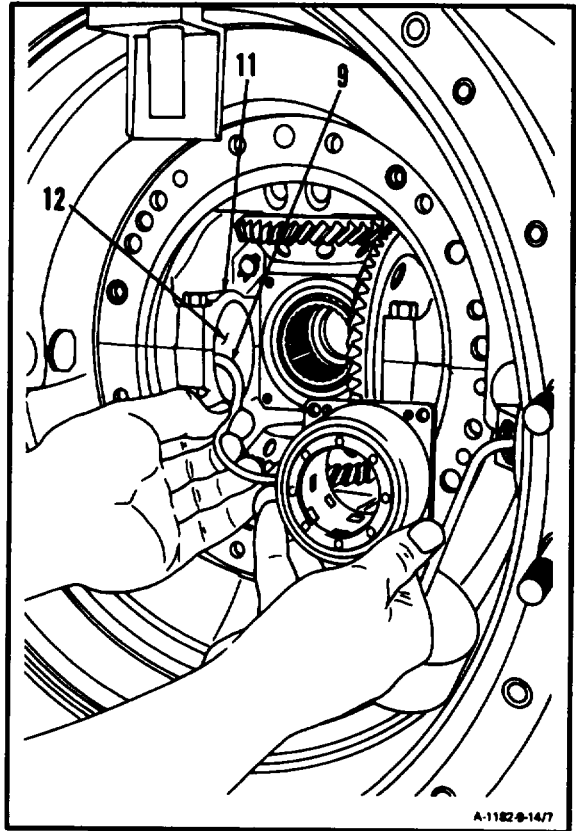
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4. Position torquemeter head assembly (8) with electrical cable (9) at 9-o'clock position (looking aft) and insert electrical connector (10) through carrier (11).



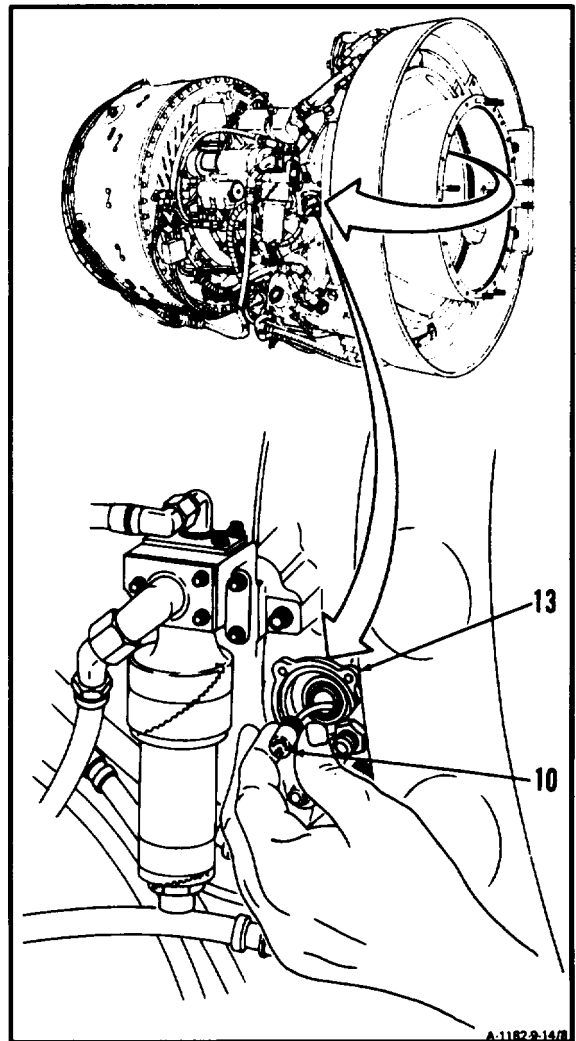
**GO TO NEXT PAGE**

5. Feed electrical cable (9) through carrier (11) into inlet housing hollow strut (12).



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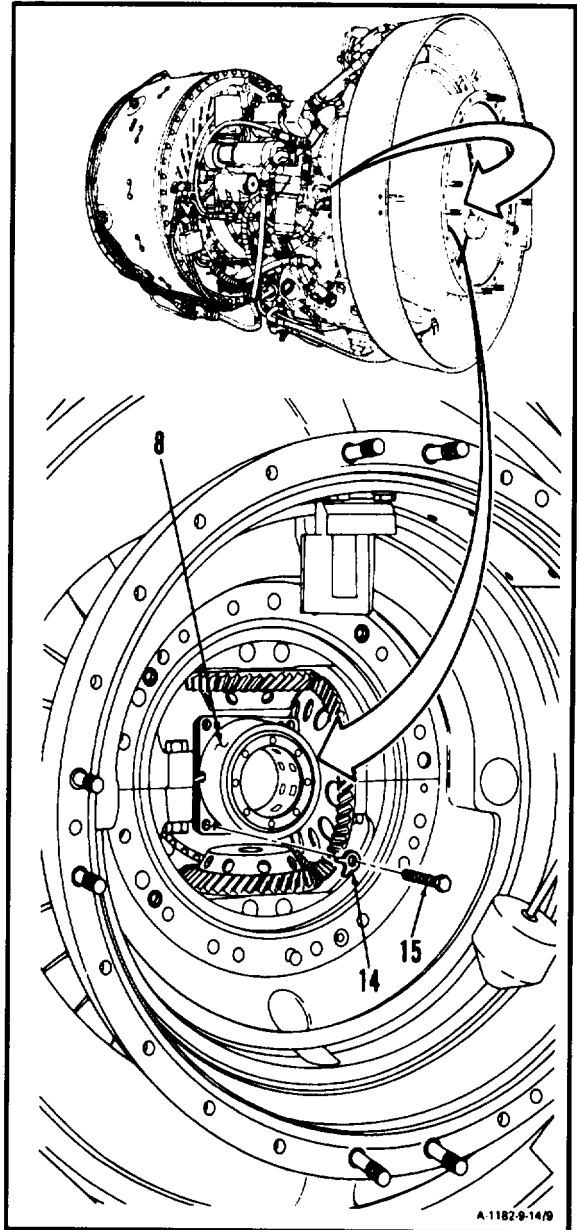
6. Pull electrical connector (10) through housing (13).



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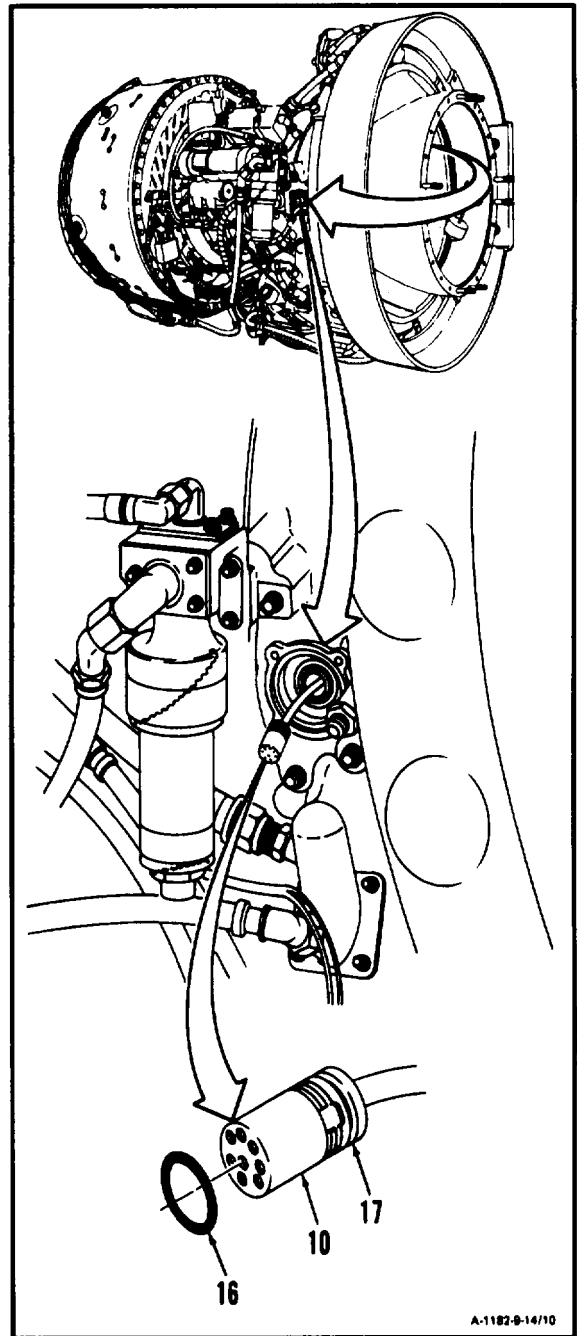


7. Install torquemeter head assembly (8), four key washers (14), and four bolts (15). Bend key washers (14).



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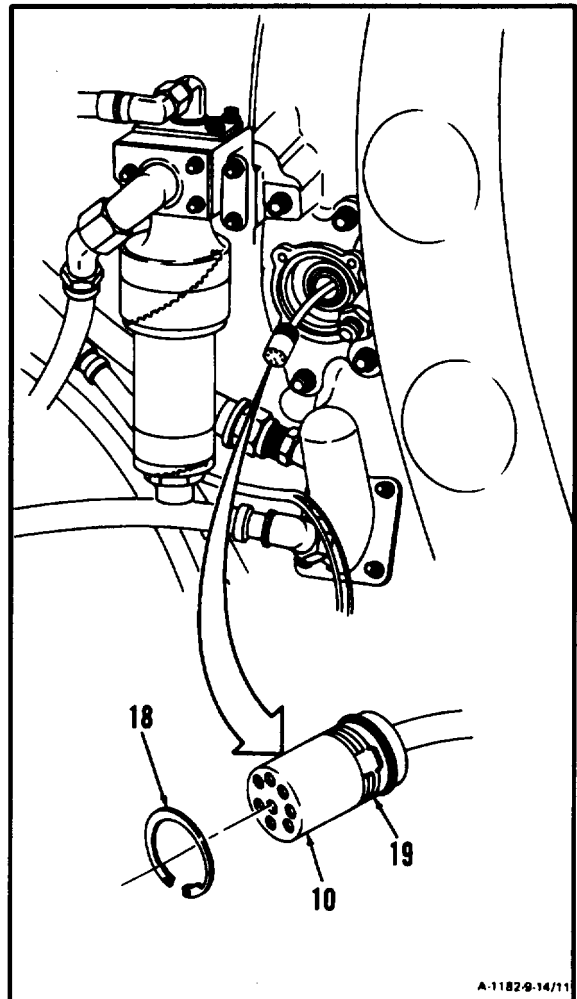
8. Install packing (16) in groove (17) on electrical connector (10).



A-1182-9-14/10

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9. Install retaining ring (18) in groove (19) on electrical connector (10).

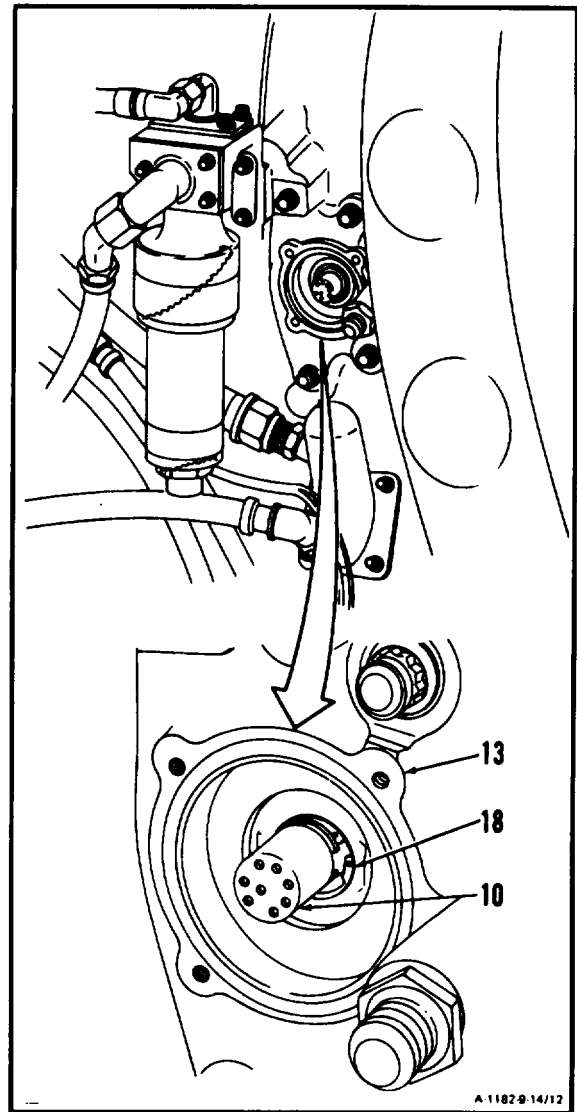


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**9-14 INSTALL TORQUEMETER HEAD ASSEMBLY (Continued)**

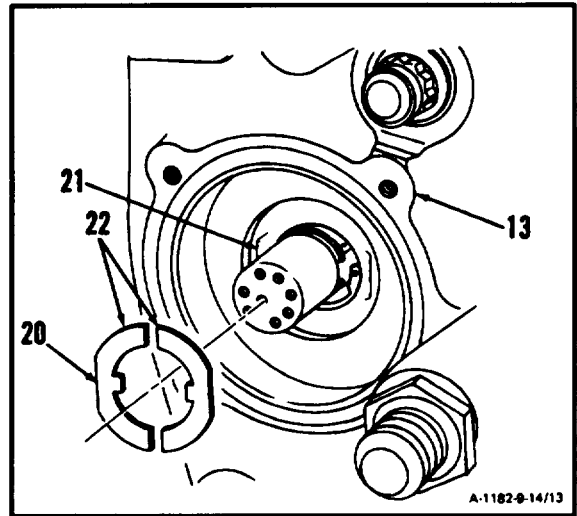
9-14

10. Carefully push electrical connector (10) back into housing (13) until retaining ring (18) is fully seated.

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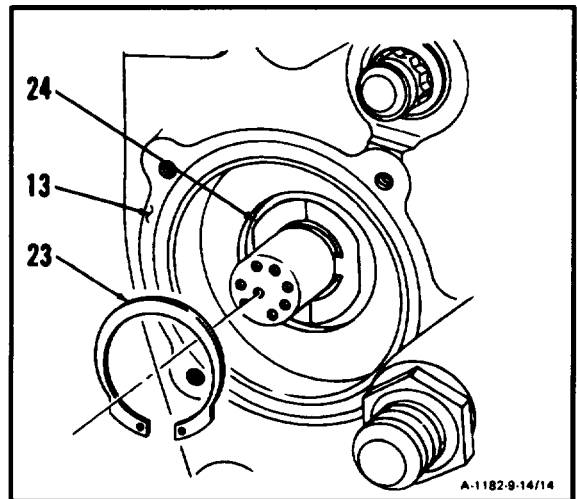
9-60 Change 6

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).

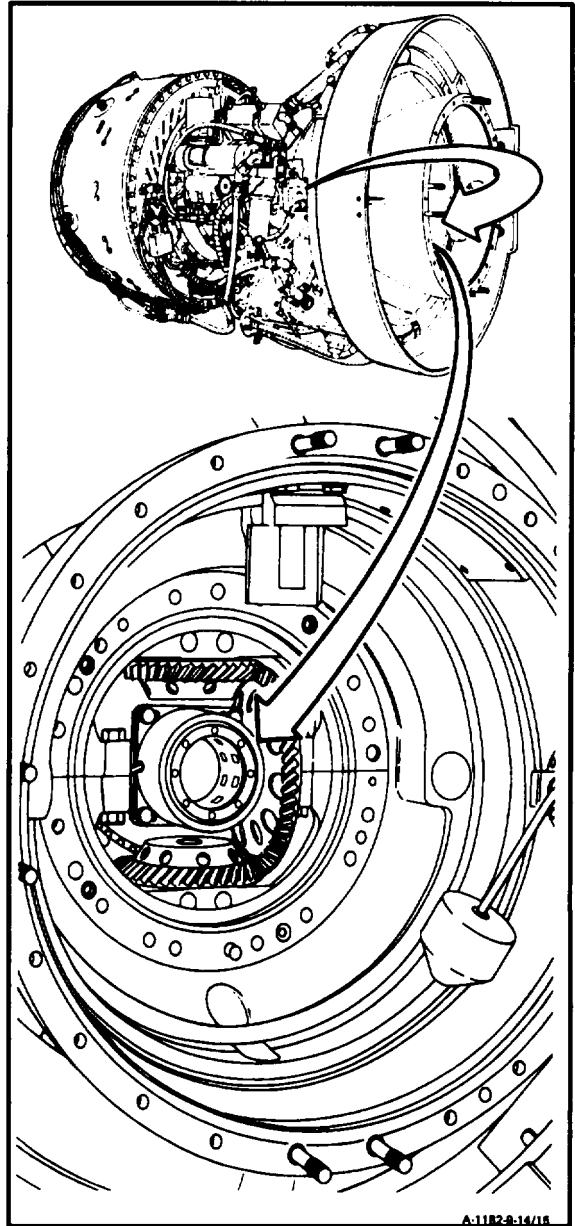
INSPECT



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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

**APPENDIX A  
REFERENCES**

PUBLICATION NUMBER	TITLE
AR750-50	Army Material Maintenance Concepts and Policies
CTA50-970	Expendable Items (Except Medical, Class V, Repair Parts and Heraldic Items)
TB43-0106	Spectrographic Oil Analysis
TB43-0142	Lifting Devices, Inspection, Testing and Maintenance
TB55-8100-200-25	Maintenance of Specialized Reusable Containers for Aircraft Equipment
TB55-9150-200-25	Engine and Transmission Oils, Fuels, and Additives for Army Aircraft
TM43-0103	Non-Destructive Inspection Methods
TM55-1500-204-25/1	General Aircraft Maintenance Manual
TM55-1500-328-25	Aeronautical Equipment Maintenance Management Policies and Procedures
TM55-1520-240-MTF	Maintenance Test Flight Manual Army Model CH-47D Helicopter
TM55-1520-240-T	Aviation Unit and Aviation Intermediate Troubleshooting Manual Army CH-47D Helicopter
TM55-1520-240-10	Operator's Manual Army CH-47D Helicopter Aircraft
TM55-1520-240-23	Aviation Unit and Aviation Intermediate Maintenance Manual Army CH-47D Helicopter
TM55-2840-254-23P	Aviation Unit and Intermediate Maintenance Repair Parts and Special Tool List
TM55-4920-328-13	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	Functional Users Manual for the Army Maintenance Management System-Aviation (TAMMS-A)
TM 750-244-1-5	Procedures for the Destruction of Aircraft and Associated Equipment to Prevent Enemy Use

APPENDIX A (Continued)

REFERENCES

PUBLICATION NUMBER	TITLE
TM55-4920-328-13	Modular Engine Test Systems Maintenance Manual.
FM 1-511	Maintenance Quality Control and Technical Inspection Guide for Army Aircraft.
DA PAM 738-751	Functional Users Manual for the Army Maintenance Management System-Aviation (TAMMS-A)
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 alignment 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 services<sup>1</sup>, including fault location/troubleshooting<sup>2</sup>, removal/installation, and disassembly/assembly<sup>3</sup> procedures, and maintenance actions<sup>4</sup> 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.

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<sup>1</sup>Services - inspect, test, service, adjust, align, calibrate, and/or replace.

<sup>2</sup>Fault locate/troubleshoot - The process of investigating and detecting the cause of equipment malfunctioning; the act of isolating a fault within a system or unit under test (UUT).

<sup>3</sup>Disassemble/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.

<sup>4</sup>Actions - welding, grinding, riveting, straightening, facing, remachining and/or resurfacing.

**B-4 FUNCTIONAL GROUPS (COLUMNS 1 and 2 )**

The functional groupings shown in the sample below identify maintenance significant components, assemblies, subassemblies, and modules with the next higher assembly.

GROUP NUMBER	DESCRIPTION	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		
<b>NOTE</b> 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	
		REPAIR	--			57C, D, E	
040205	IMPELLER	INSPECT	--			56, 57	
		REPAIR	--			56, 57D	
		REPLACE			--		
040206	NO. 1 BEARING	INSPECT			--		
		REPLACE			--		
040207	NO. 2 BEARING	INSPECT		--		48, 51, 53, 56	
		REPLACE		--		22, 28, 41, 53, 57	
040208	NO.3 BEARING	INSPECT		--		48, 58	
		REPLACE		--		2, 23, 48, 57	
040209	INTERSTAGE AIR BLEED BAND	INSPECT	--			56, 57	
		REPLACE	--			56, 57A	
040210	BLEED ACTUATOR	INSPECT	--			56, 57	
		ADJUST	--			56, 57A, I, H	



MAINTENANCE ALLOCATION CHART							
NOMENCLATURE OF END ITEMS							
T55-L-712							
(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE CATEGORY			(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 040801	LUBRICATION SYSTEM OIL PUMP	REPLACE	--			56, 57	C
		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 T55-L-712 Turbine Engine

TOOL OR TEST EQUIPMENT REFERENCE CODE	MAINTENANCE CATEGORY	NOMENCLATURE	NATIONAL/NATO STOCK NUMBER	TOOL NUMBER
25	AVIM	Holding Tool, Shaft	5120-00-109-4669	LTCT3927
26	AVUM	Installation Tool	4920-00-475-2552	LTCT1
27	AVUM	Installation Tool	4920-00-509-8087	LTCT1
28	AVIM	Installing Tool	5120-00-109-4568	LTCT4968
29	AVIM	Installing Tool, Bearing	5120-00-370-3939	LTCT1
30	AVIM	Kit, Maintenance (Skimming)	4920-00-134-0163	LTCT6629
31	AVIM	Kit, Torquemeter	4920-00-187-5728	LTCT1
32	AVUM	Light, Test, Oil Level	4920-00-940-2910	LTCT1
33	AVIM	Mobil, Engine, Test Stand	4920-00-167-9178	LTCT1
34	AVIM	Multiplier, Torque	5120-00-482-2543	PD2501
35	AVIM	Puller	5120-01-111-4312	LTCT1
36	AVUM	Puller, Mechanical	5120-00-509-2965	LTCT121
36.1	AVUM	Masking Kit, First Stage Stator, RTV		LTCT7612
37	AVIM	Puller, Mechanical	5120-00-110-4235	LTCT1
38	AVIM	Puller, Mechanical	5120-00-370-3934	LTCT1
38.1	AVUM	Application Kit, RTV		LTCT1
39	AVUM	Puller, Mechanical	5120-00-784-1276	LTCT1
40	AVIM	Puller, Mechanical	5120-00-109-4670	LTCT3961
41	AVIM	Puller, Mechanical	5120-00-109-4674	LTCT6173
42	AVIM	Puller, Turbine Disc	5120-01-111-4311	LTCT1
43	AVIM	Puller	5120-01-137-3852	LTCT1
44	AVIM	Puller, Wheel, Hydraulic	5130-01-115-6996	LTCT1
45	AVUM	Punch, Locking Cup	5120-00-951-8622	LTCT1
46	AVIM	Screwdriver, Special	5120-00-125-4015	LTCT6909
47	AVIM	Shop Set, Machine	4920-00-405-9279	SC492099-CLA91
48	AVIM	Shop Set, Turbine	4920-00-224-3684	SC492099-CLA91

**TOOL AND TEST EQUIPMENT REQUIREMENTS**

**NOMENCLATURE OF END ITEMS**

**Tool and Test Equipment Requirements, T55-L-712 Turbine Engine**

TOOL OR TEST EQUIPMENT REF CODE	MAINTENANCE CATEGORY	NOMENCLATURE	NATIONAL/NATO STOCK NUMBER	TOOL NUMBER
49	AVIM	Shop Set, Welding	4920-00-163-5093	SC492099CLA 1WEAM
50	AVUM	Sling, Aircraft Maintenance	1730-01-007-6990	LTCT14700
51	AVIM	Support, Dial Indicator	4920-00-110-9986	LTCT6098
52	AVIM	Plate, Wrenching Pin	4920-00-509-8060	LTCT1252
53	AVIM	Tester, Seal Leakage	4920-00-444-2362	LTCT13606
54	AVIM	Tool, Bearing Removal	5120-01-137-3558	LTCT14686
55	AVUM	Tool, Installing	4920-00-898-7925	LTCT1644
56	AVUM	Tool Kit, AVUM #2	4920-00-567-0476	SC492099CLA 92
57	AVUM	Tool Kit, Mechanics	5180-00-323-4944	SC5180- 99CLA07
58	AVIM	Tool Kit, Installation	5180-00-125-4106	LTCT6623
59	AVUM	Tool Set, Seal Removal	4920-00-866-0858	LTCT13868
60	AVUM	VIB, Monitoring Kit	4920-00-879-0331	171170-0104
61	AVIM	Wrench, Assembly Socket	5120-00-918-1883	LTCT3009
62	AVIM	Fixture, Torque	4920-00-834-2178	LTCT13771
63	AVUM	Fixture, Gear Holding	4920-00-872-7858	LTCT1260
64	AVIM	Puller, Mechanical	5120-00-012-8865	LTCT1009
65	AVUM	Wrench, Open End	5120-00-834-2141	LTCT13911
66	AVIM	Fixture, Holding Gear	4920-00-115-6995	LTCT14616
67	AVUM	Adapter, Puller, Output Shaft		LTCT7285
68	AVUM	Plate, Turbine Disc Separating		LTCT7309
69	AVUM	Torque Adapter, Wrench	5120-00-972-8191	LTCT1409
70	AVUM	Clinching Tool	5120-00-481-3117	LTCT13411
71	AVUM	Crawfoot, Open-End	5120-00-184-8414	FRES7
72	AVUM	Tool Kit, Technical Inspector	5180-00-323-5114	SC5180-99-A09

Section IV. REMARKS

REFERENCE CODE	REMARKS
A	Functional Test at AVUM - Engine in Airframe
B	Functional Test at AVIM - Engine in METS
C	Repairs at AVUM includes minor repair of the engine and minor repair/replacement of components and accessories
D	Blend Repair
E	Corrosion Control, Pitting
F	Magnetic-Particle Inspection
G	Nicks, Dents, Burrs, Cracks & Distortion
H	Adjust, Engine in Airframe
I	Bleed Band, Ground Idle, Maximum Power, Engine in Airframe
J	O-Rings, Drive Shaft Seal, Solenoid Valve
K	Seals and O-Rings
L	Torquemeter Junction Box, Output Shaft, Torquemeter Head Assembly, replace as a complete Calibrated Assembly
M	Repair is limited to Blend Repair and Seal/O-Ring Replacement
N	Refer to the airframe manual, TM 55-1520-240-23.
O	Less than 50 blades total since new or last depot repair.

## APPENDIX C

## EXPENDABLE SUPPLIES AND MATERIALS LIST

## Section I. INTRODUCTION

**C-1 SCOPE**

This appendix lists expendable supplies and materials you will need to operate and maintain the engine. These items are authorized to you by CTA 50-970, Expendable Items (Except Medical, Class V, Repair Parts, and Heraldic Items).

**C-2 EXPLANATION OF COLUMNS**

- a. Column 1 - Item number. This number is assigned to the entry in the listing and is referenced in the narrative instructions to identify the material, e.g., "Use dry cleaning solvent (E17) ."
- b. Column 2- National Stock Number. This is the National Stock Number assigned to the item; use it to request or requisition the item.
- c. Column 3- Description. Indicates the Federal item name and, if required, a description to identify the item. The last line for each item indicates the part number followed by the Federal Supply Code for Manufacturer (FSCM) in parenthesis, if applicable.

**EXPENDABLE SUPPLIES AND MATERIALS LIST**

(1) Item Number	(2) National Stock Number	(3) Description
E1	6810-00-184-4796	Acetone, Technical (O-A-51
E2	7920-00-514-2417	Acid Swabbing Brush
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 Preventive Compound MIL-C-1 Class 3
E14	8030-00-838-7789	Corrosion Preventive Compound, WD40 WD40 Co. San Diego, California LPS2 LPS Research Laboratories Inc. Los Angeles, California
E15	5350-00-221-0572	Crocus Cloth (P-C-458)
E1	6850-00-264-6562	Desiccant Bag MIL-D-3464, Type III W.R. Grace & Son Davison Chemical Div. Baltimore, Maryland 21203
E1	6850-00-285-8011	Dry Cleaning Solvent (P-D-680) Type II
E1		Emery Cloth (No. 500) Carborundum Co. Niagara Falls, New York
E19	6850-00-782-2732 6850-00-782-2730	Fluorescent-Penetrant Materials, Group, V, VI MIL-I-25135 Magnaflux Corp. Chicago, Illinois 60656
E20	8415-00-227-1220 8415-00-227-1221 8415-00-227-1222	Gloves MI
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, MI Dow Corning Corp. Midland, Michigan



EXPENDABLE SUPPLIES AND MATERIALS LIST (Continued)

(1) Item Number	(2) National Stock Number	(3) Description
E23.1	9150-00-119-9291 9150-00-273-8633	2 Ounce Tube 8 Ounce Tube Grease, Silicone Molycote 55M or equivalent
E24	5970-00-929-8595	Insulation Sleeving Flexite HTI05C for No. 18 Wire MIL-I-23053/12
E25	8010-00-007-8165	Iron Blue Pigment (TT-P-385)
E26	7920-00-205-3453	Lint-Free Cloth (CCC-C-46A)
E27	8520-00-141-2519	Liquid Soap (P-S-624)
E28	9505-00-221-2650	Lockwire, MS20995C20
E29	9505-00-847-1663	Lockwire, MS20995C32
E30	9150-00-141-4481	Lubricant, Plastilube Moly No. 3 Warren Refining and Chemical Co. Cleveland, Ohio
E31	9150-00-274-2388	Lubricating Oil MIL-L-6081, Grade 1010
E32	9150-00-782-2627	Lubricating Oil MIL-L-7808
E33	9150-00-180-6266	Lubricating Oil MIL-L-23699
E34	7510-00-465-0994	Marking Pencil, Yellow Colorbrite No. 2127 or 4127 Eberhard Faber Inc. Crestwood Industrial Park Wilkes Barre, Pennsylvania 18703
E35	7510-00-266-6712	Masking Tape (UU-T-106)
E35.1	Methanol (O-M-232)	
E36	6810-00-281-2785	Methyl Ethyl Ketone (Tr-M-261)

## EXPENDABLE SUPPLIES AND MATERIALS LIST (Continued)

(1) Item Number	(2) National Stock Number	(3) Description
E37	8030-00-105-0270	Nickel Ease, Nickel Special Fel-Pro Inc. Division of Felt Product Manufacturing Co Skokie, Illinois
E38 E38.1	6810-00-237-2918 3030-00-213-3079	Nitric Acid (O-N-350) Non-Lead Gear Marking Compound G-2 Stutz Company Chicago, Illinois
E39	9150-00-261-7899	Penetrating Oil (WVV-P-216)
E40	9150-00-250-0926	Petrolatum (W-P-236)
E41	1730-00-181-202	Plastic Covers (PSK 3355)
E42	5970-00-833-1702	Pressure Sensitive Teflon Tape, 3/8-inch wide by 0.006 inch thick with temperature range of -65 to 350°F Connecticut Hard Rubber Co. New Haven, Connecticut 06509
E43	6850-01-013-9937	Layout Dye, Red DX-296
E44	8030-00-213-3279	Rust Inhibitor and Preservative MIL-C-81309D
E45	5350-00-214-7203	Sandpaper (P-P-101)
E45.1		Silicone 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)

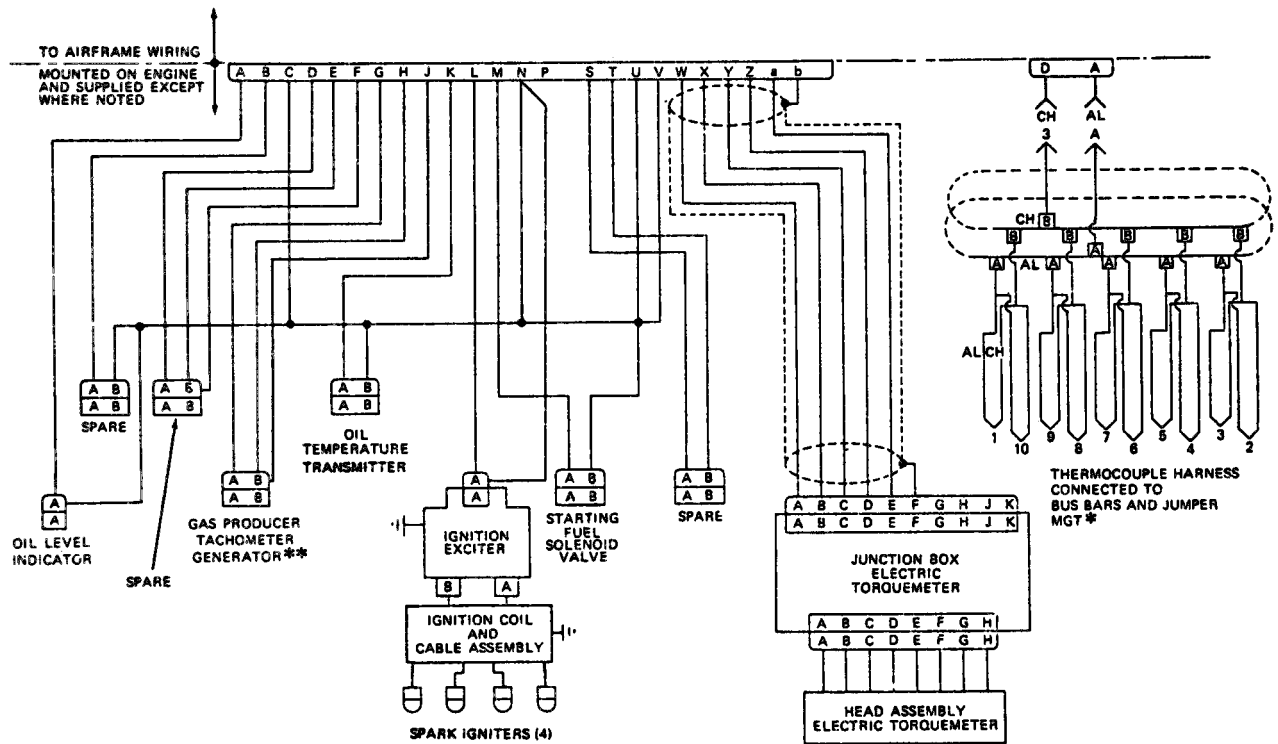
**EXPENDABLE SUPPLIES AND MATERIALS LIST (Continued)**

(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, 22 Gauge Standard No. 8522-1 Type 4 (71002) Bimback Co., Inc. Freeport, L.I., New York 11520
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 11
E63	6850-01-372-8303	MIL-C-85704 Type 11, 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 IIHA, 55 Gal
E67		Compound Retaining MIL-R-46082 Type II Loctite 640 Loctite Corp. 705 North Mountain Rd. Newington, CT 06111

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

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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)

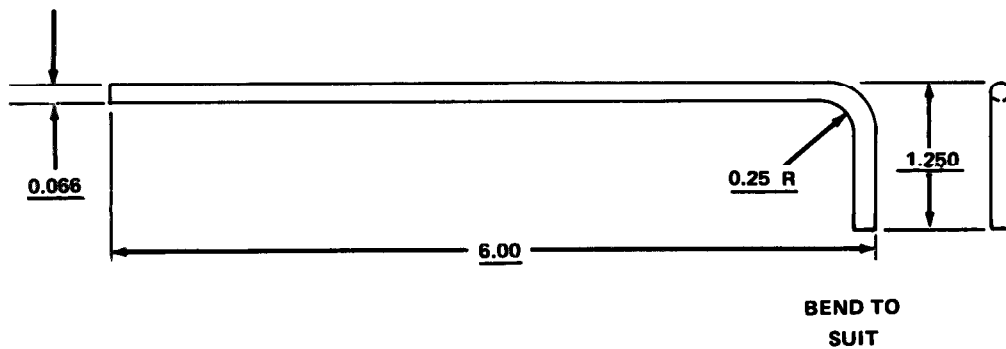
**Fabrication Instructions:**

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)

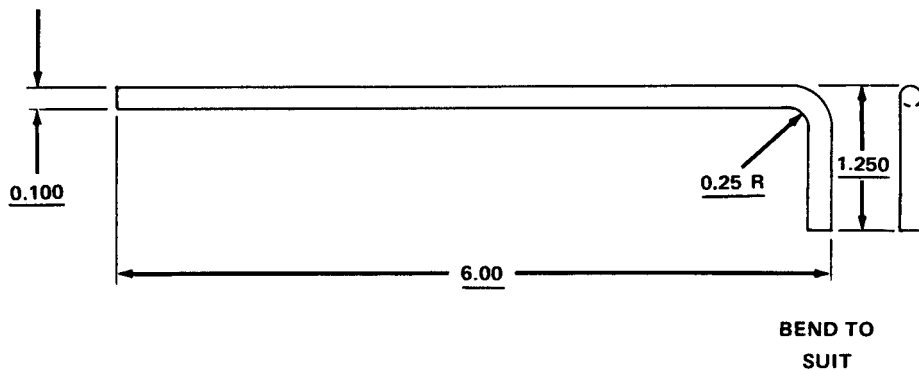
**Fabrication Instructions:**

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)

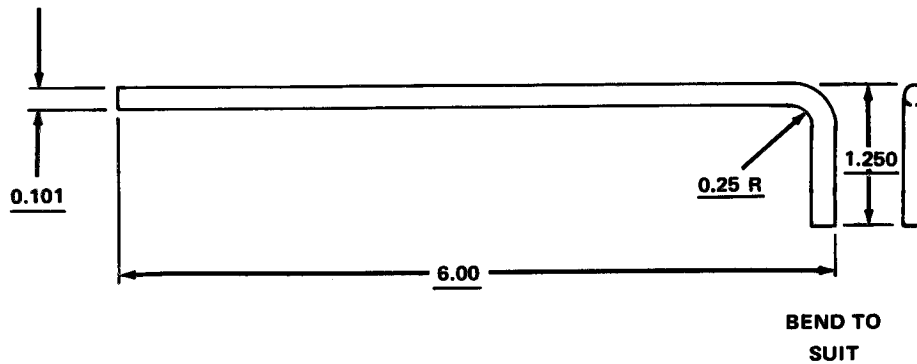
**Fabrication Instructions:**

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)

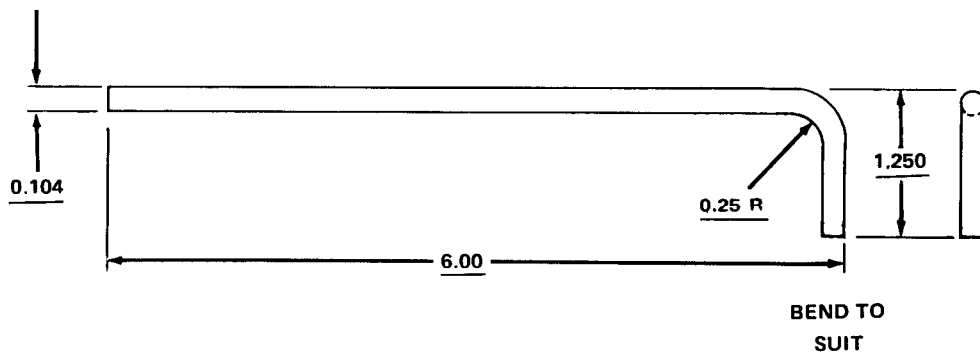
**Fabrication Instructions:**

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)

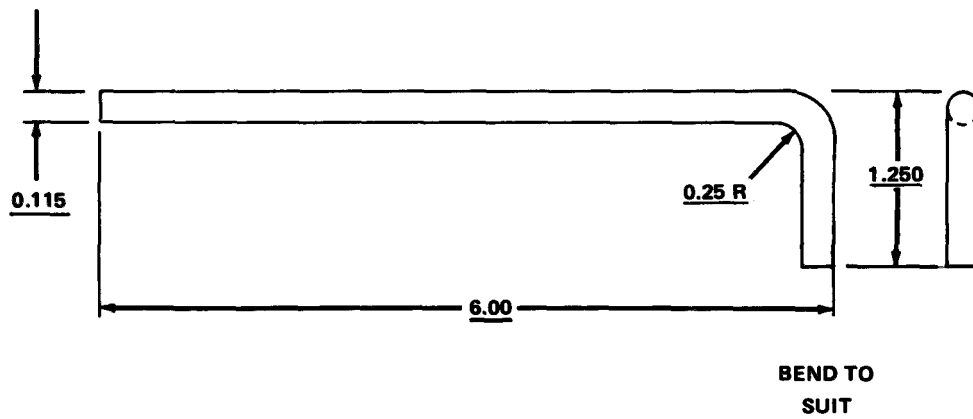
**Fabrication Instructions:**

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)

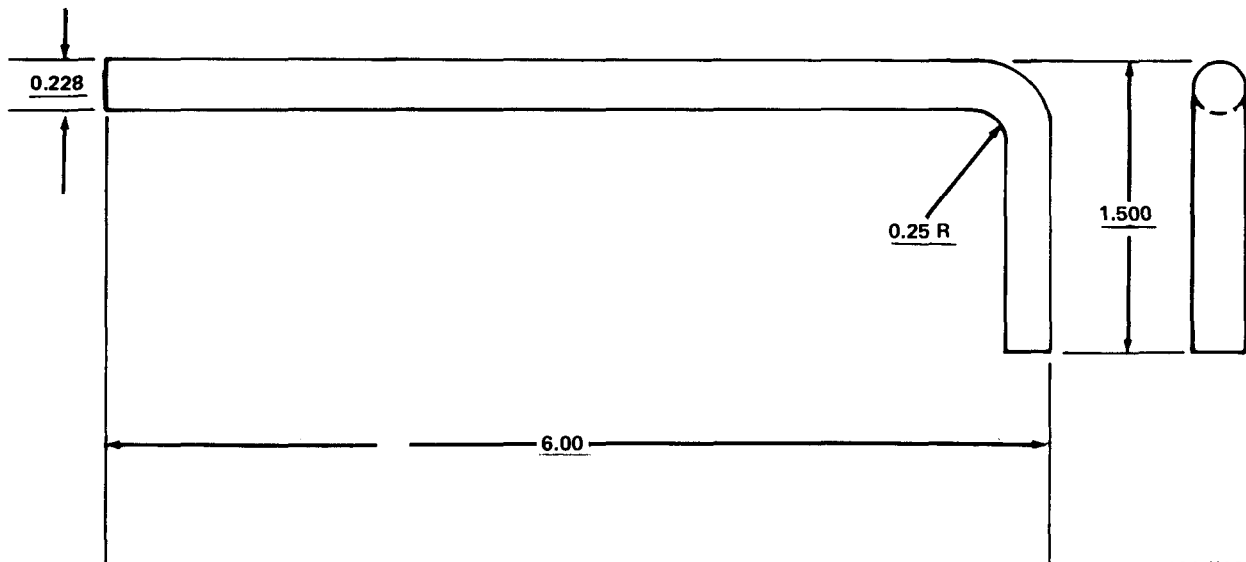
**Fabrication Instructions:**

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)

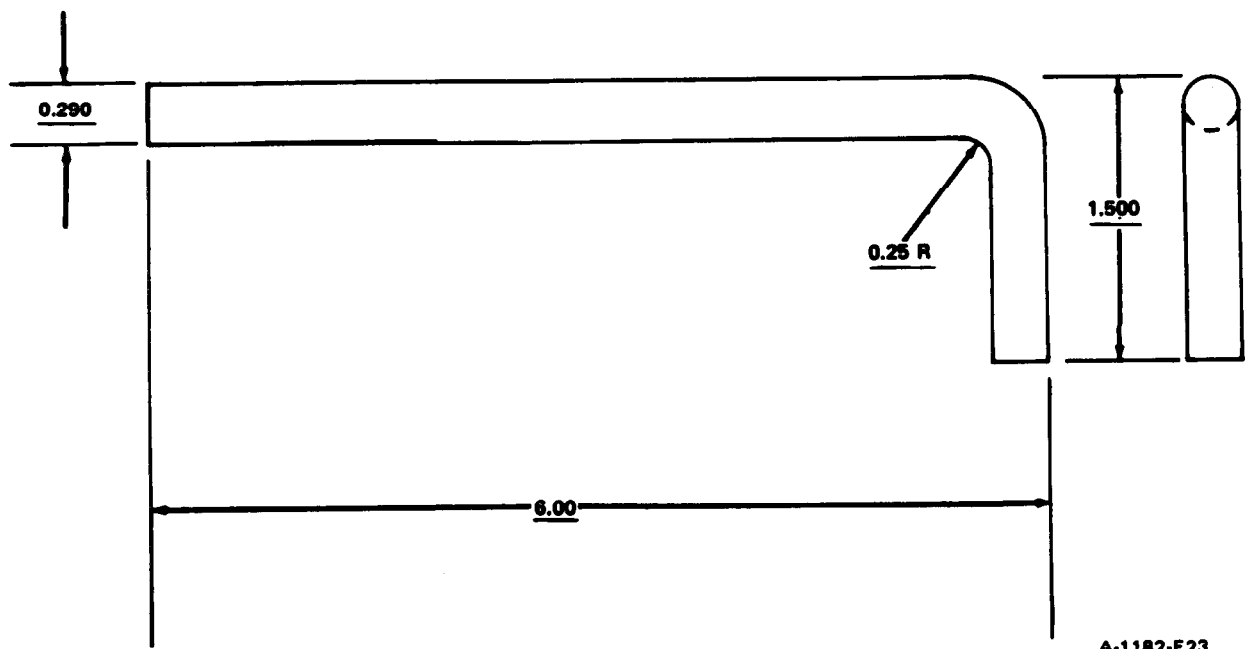
**Fabrication Instructions:**

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:**

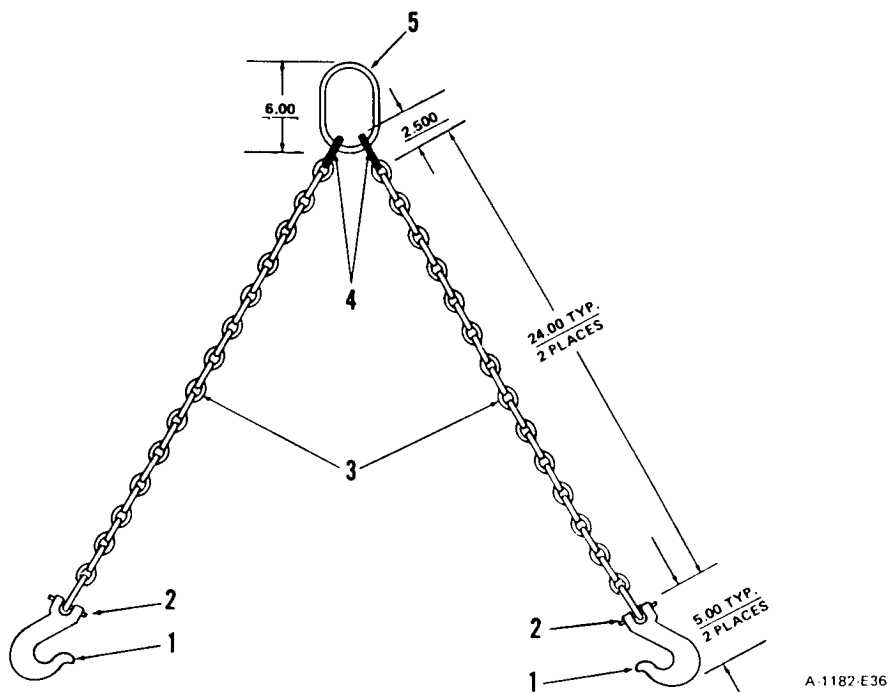
**NOTE:** The chain and hooks must have a certified 1 ton load limit capacity. Therefore it is suggested that only certified vendors be used to procure this item, The specifications require a (1) ton steel heavy duty chain hoist.

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)

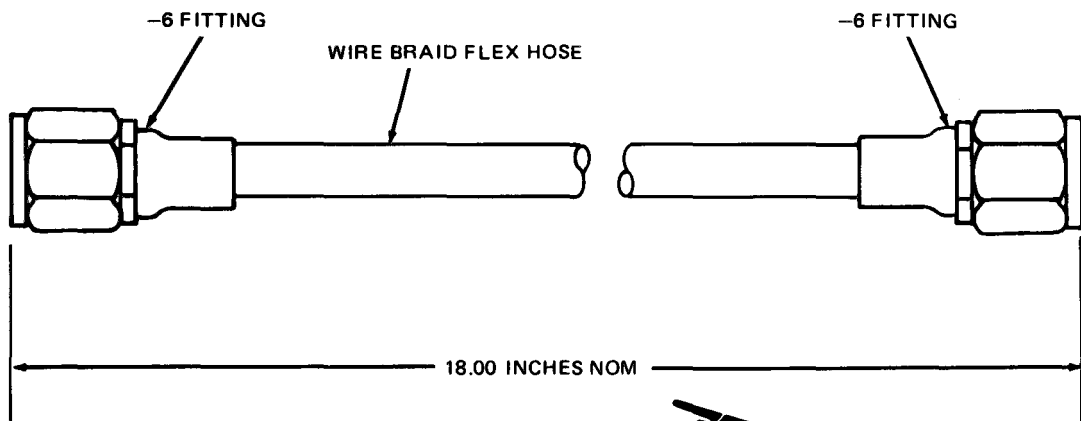
Nomenclature	Reference Task No.	Material Required
Drain Hose	1-27, 1-111	Scrap flexible hose with -6 fittings or hose assembly NSN 4720-01-114-1017.

**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)

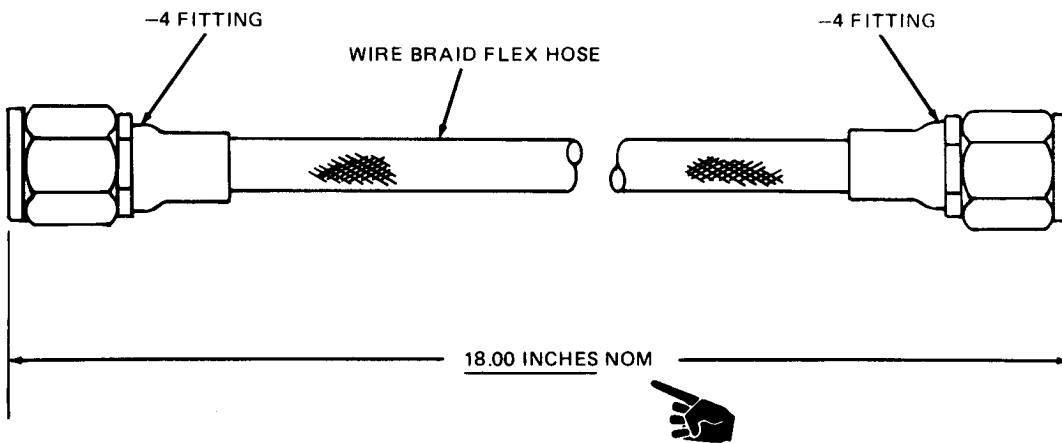
Nomenclature	Reference Task No.	Material Required
Drain Hose	1-111	Scrap flexible hose with -4 fittings or hose assembly NSN 4720-00-725-5659.

**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)

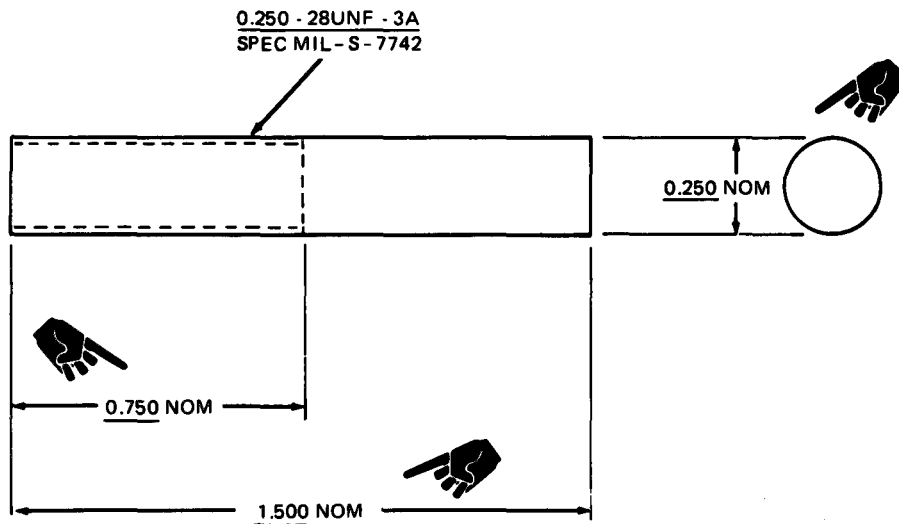
**Fabrication Instructions:**

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)

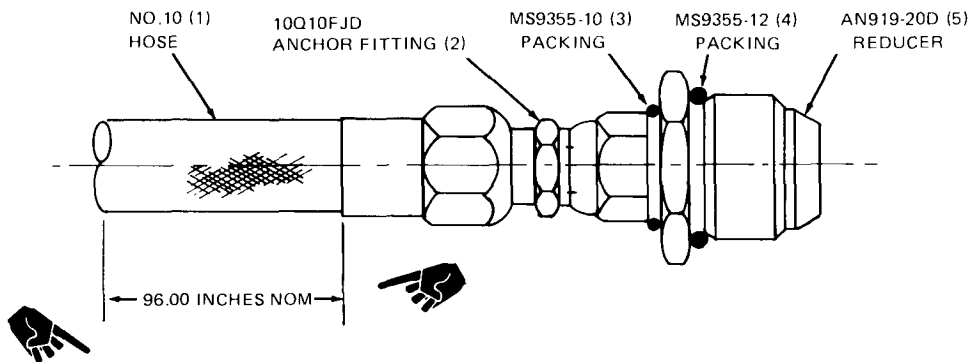
Nomenclature	Reference Task No.	Material Required
Hose Assembly	1-111	(8 Feet) No. 10 Hose, (1) 10Q10FJD Anchor Fitting, (2) MS9355-10 Packing, (3) MS9355-12 Packing, (4) AN919-20D Reducer, (5)

**Fabrication Instructions:**

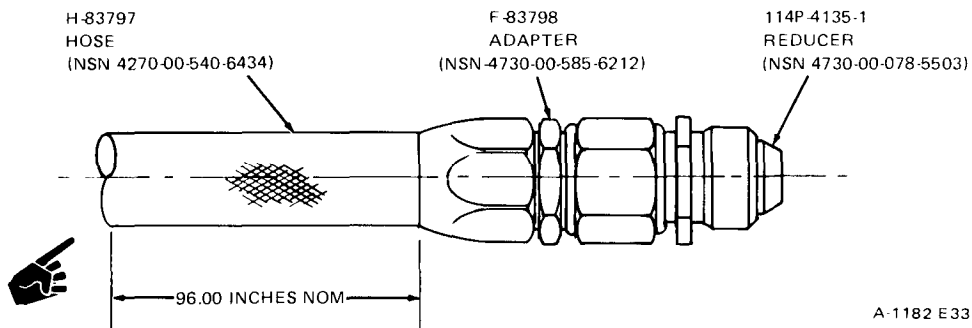
Assemble hose assembly from material required and sketch shown below as follows:

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:**



NOTE: THE FOLLOWING ITEMS MAY BE USED IF THE ITEMS LISTED ABOVE ARE NOT AVAILABLE.



A-1182 E33A

ILLUSTRATED LIST OF MANUFACTURED ITEMS (Continued)

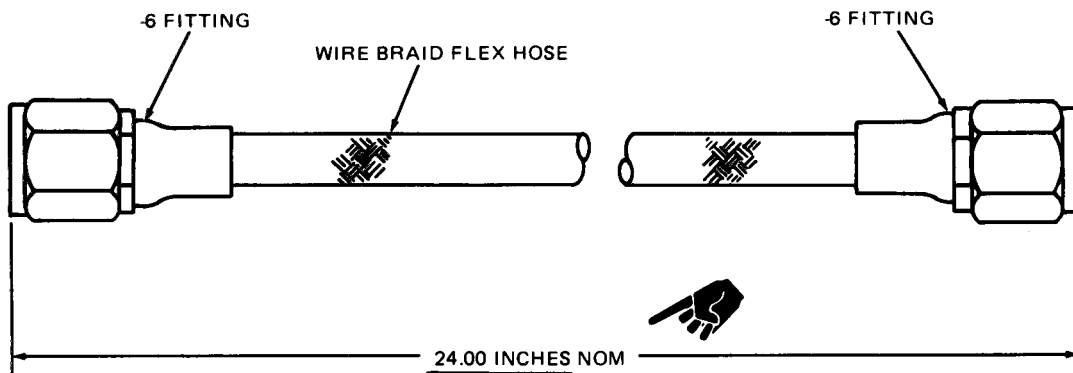
Nomenclature	Reference Task No.	Material Required
Hose Assembly	6-7	Scrap flexible hose with -6 fittings or hose assembly NSN 4720-00-105-2957

**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)

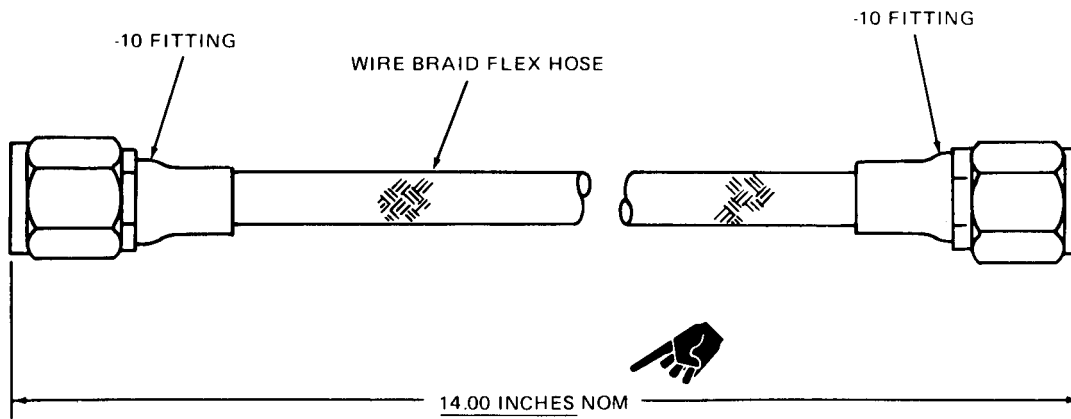
Nomenclature	Reference Task No.	Material Required
Hose Assembly	6-7	Scrap flexible hose with -10 fittings or hose assembly NSN 4720-00-103-9439

**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

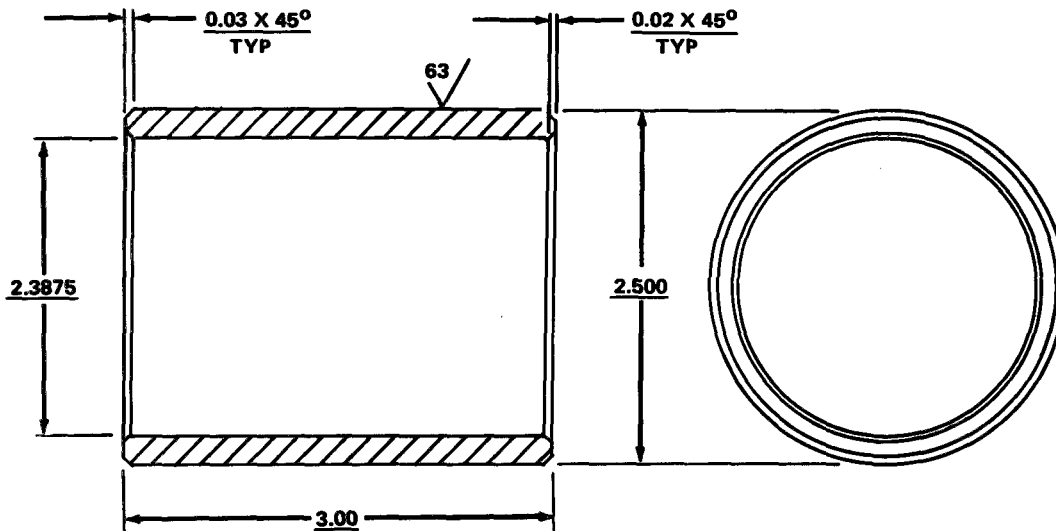
**Fabrication Instructions:**

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

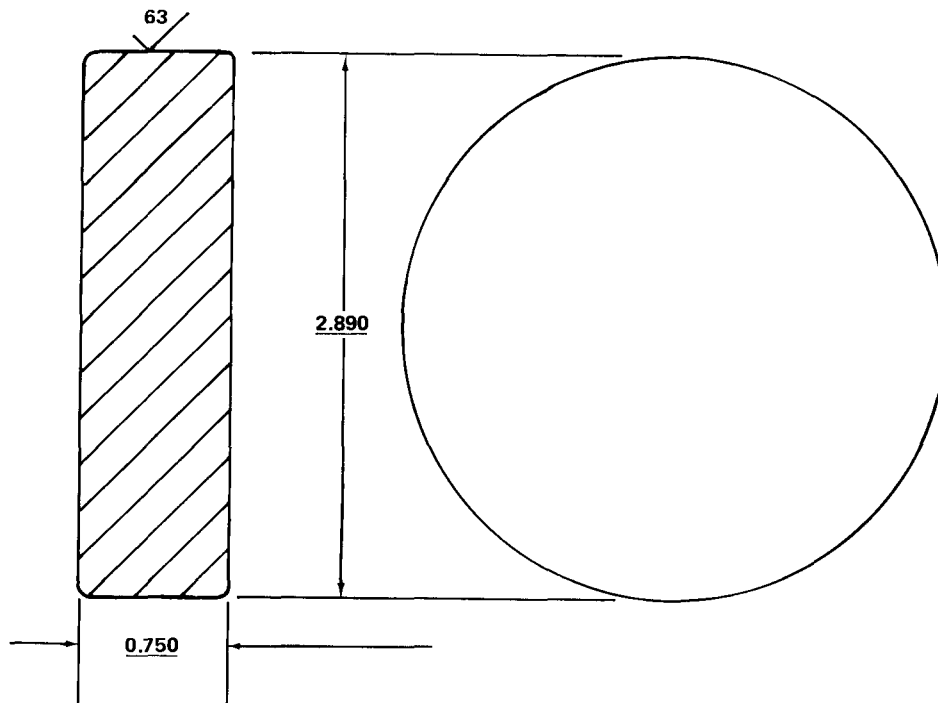
**Fabrication Instructions:**

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

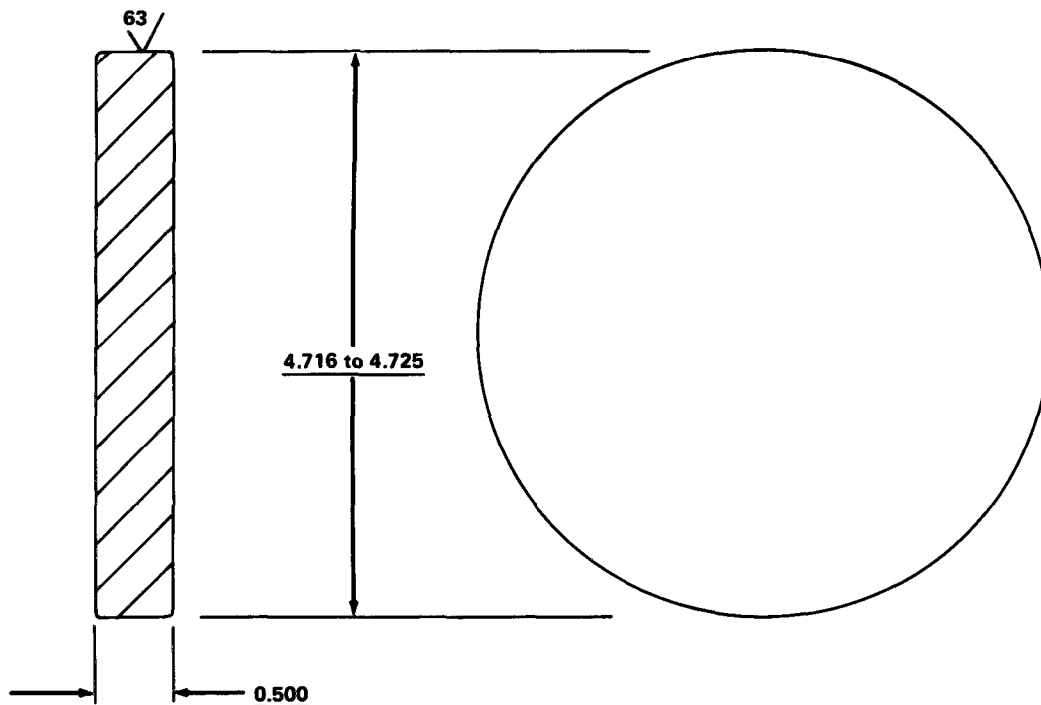
**Fabrication Instructions:**

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

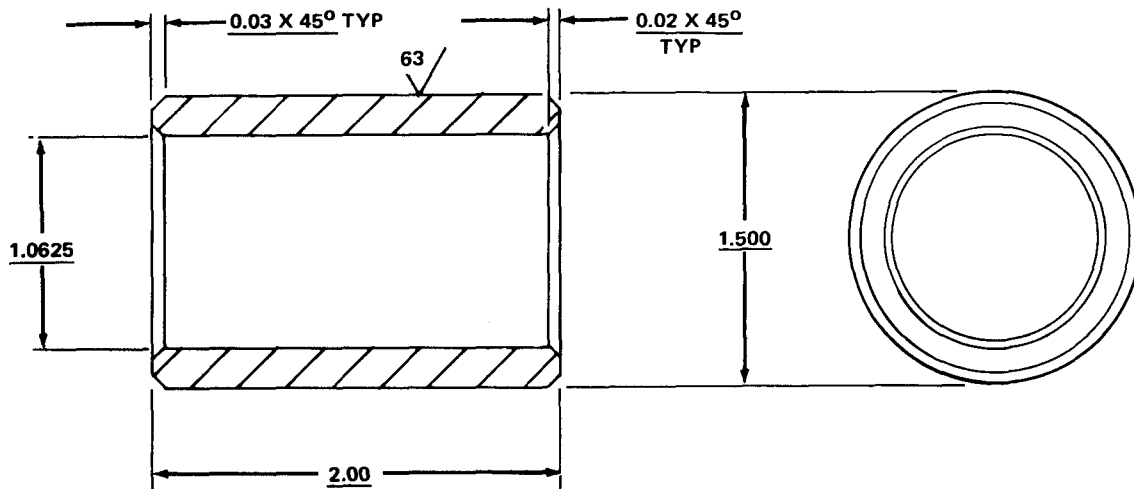
**Fabrication Instructions:**

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

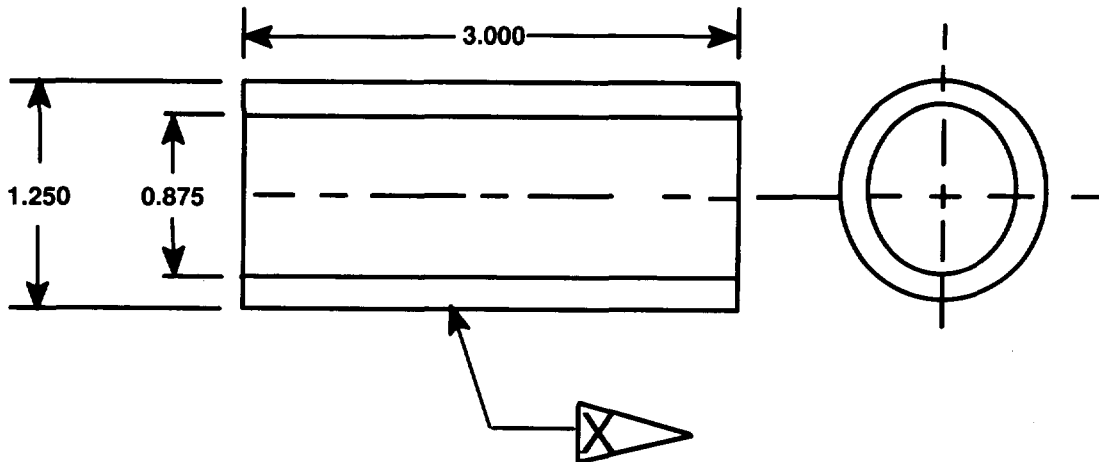
**FABRICATION INSTRUCTIONS:**

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

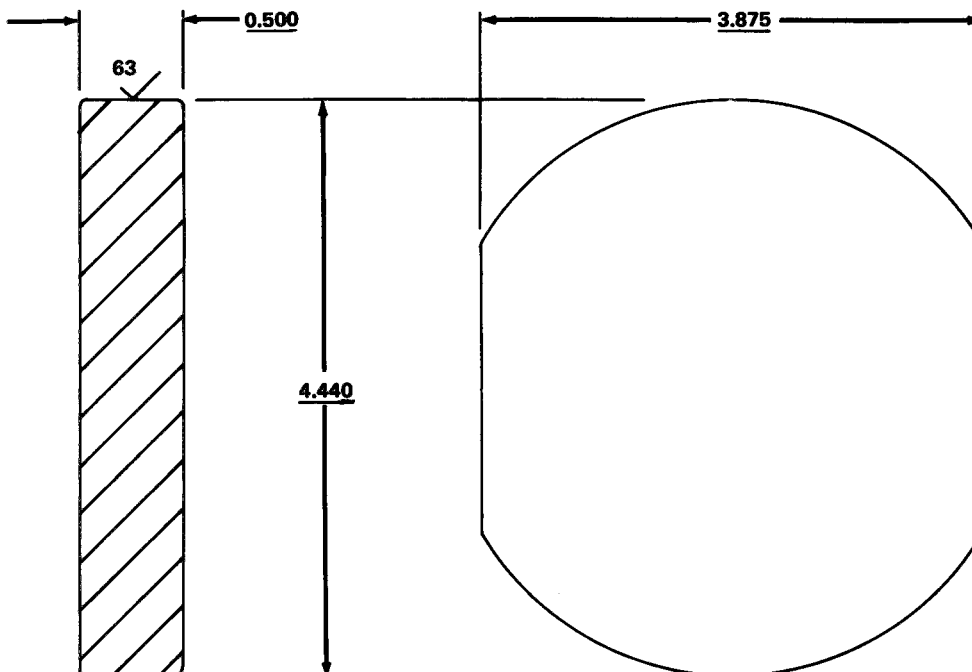
**Fabrication Instructions:**

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

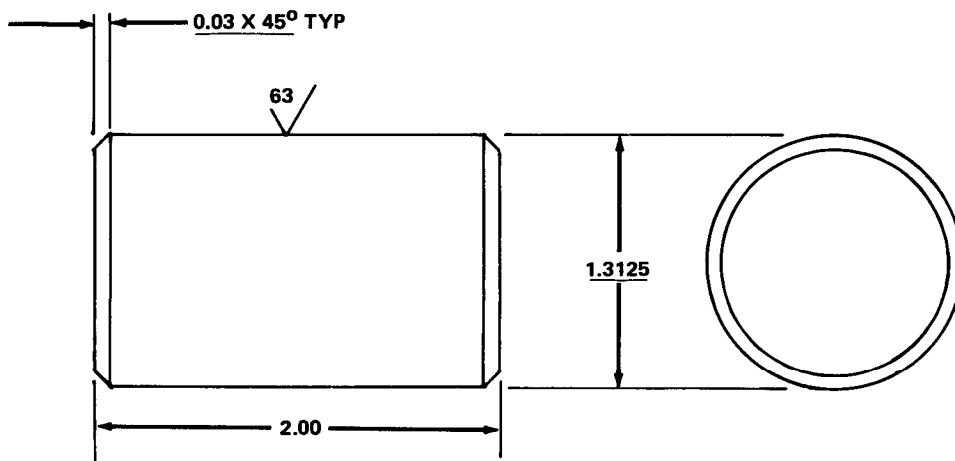
**Fabrication Instructions:**

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

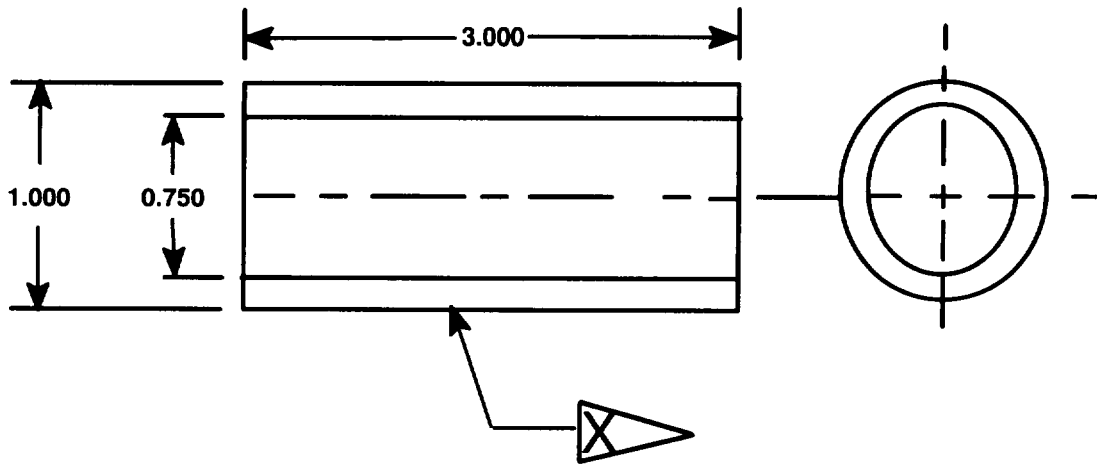
**FABRICATION INSTRUCTIONS:**

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

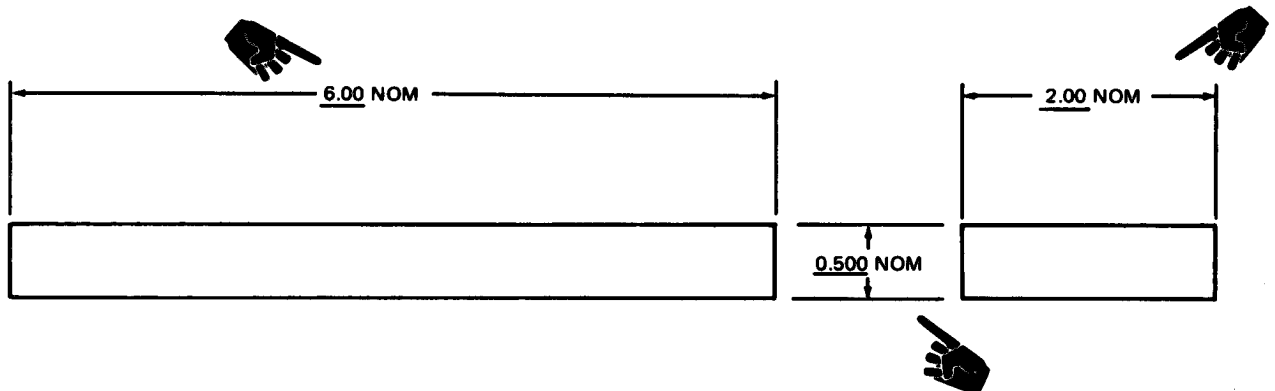
**Fabrication Instructions:**

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)

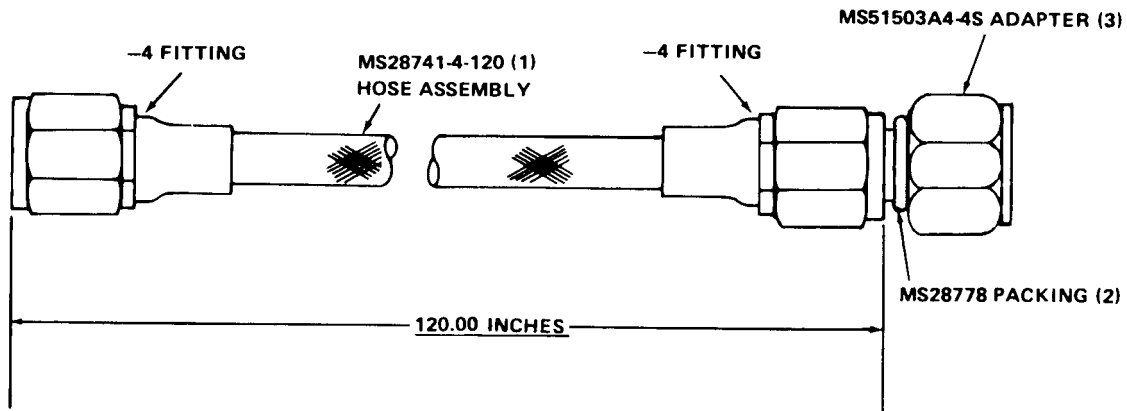
Nomenclature	Reference Task No.	Material Required
Pressure Gage Tube Assembly	1-110	(2) MS28741-H-120 Hose Assembly (2) MS28778 Packing (2) MS51503A4-4S Adapter

**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

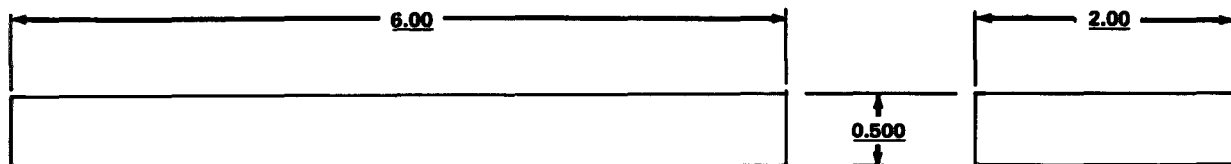
**Fabrication Instructions:**

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)

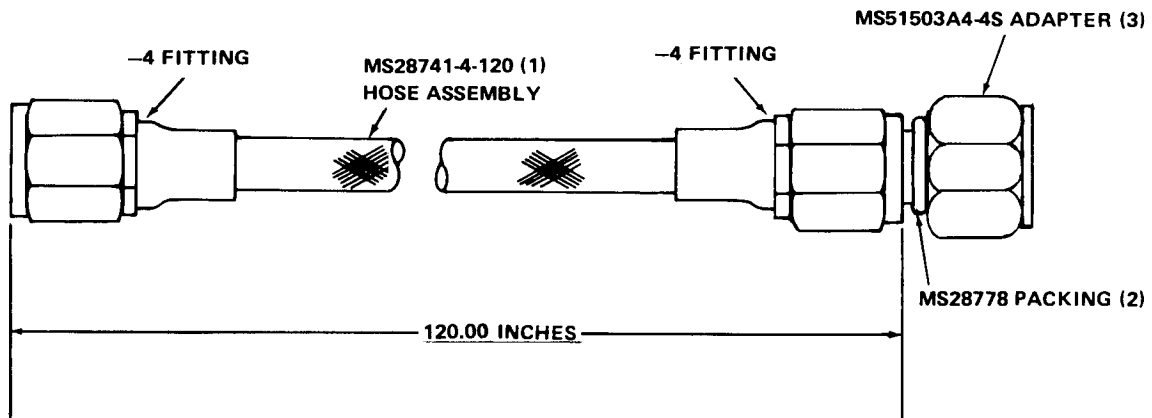
Nomenclature	Reference Task No.	Material Required
Pressure Gage Tube Assembly	1-110	(2) MS28741-H-120 Hose Assembly (2) MS28778 Packing (2) MS51503A4-4S Adapter

**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

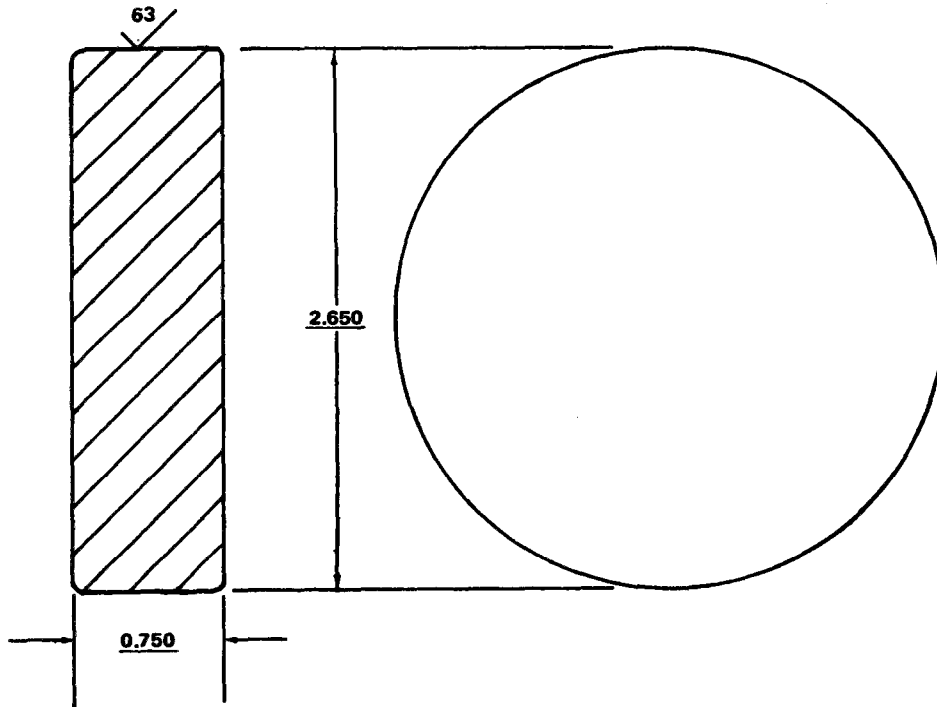
**Fabrication Instructions:**

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

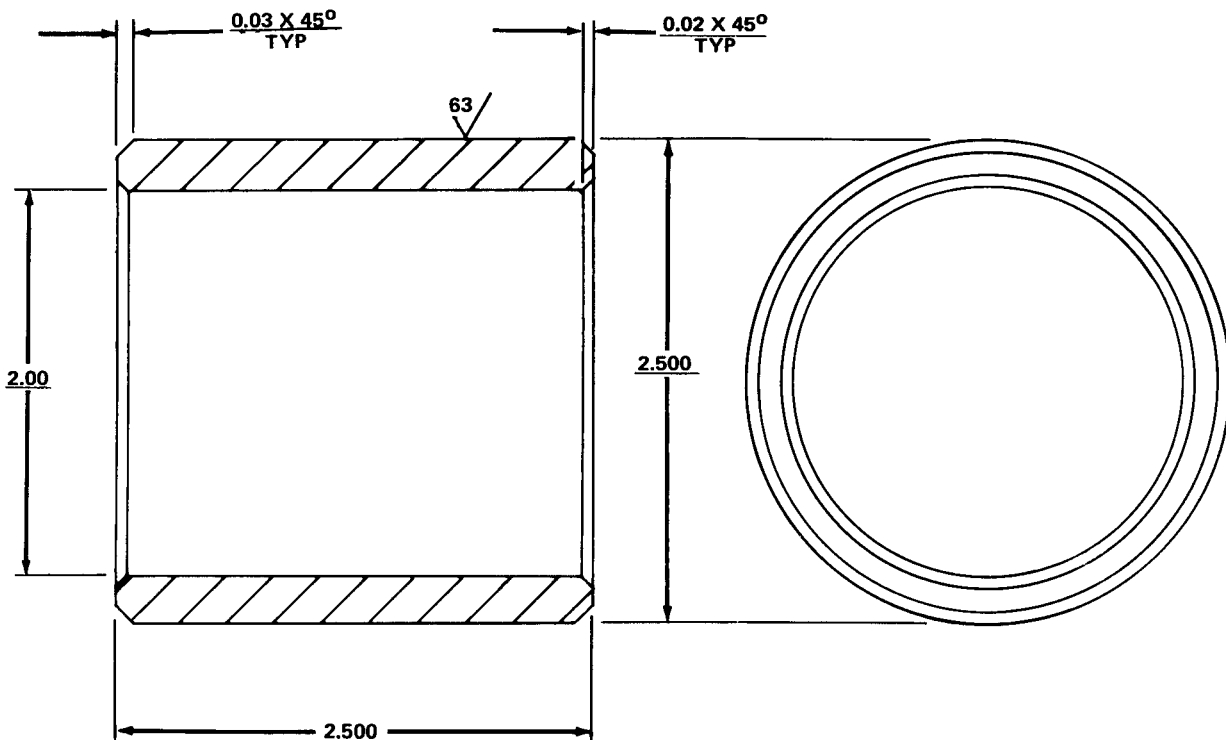
**Fabrication Instructions:**

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

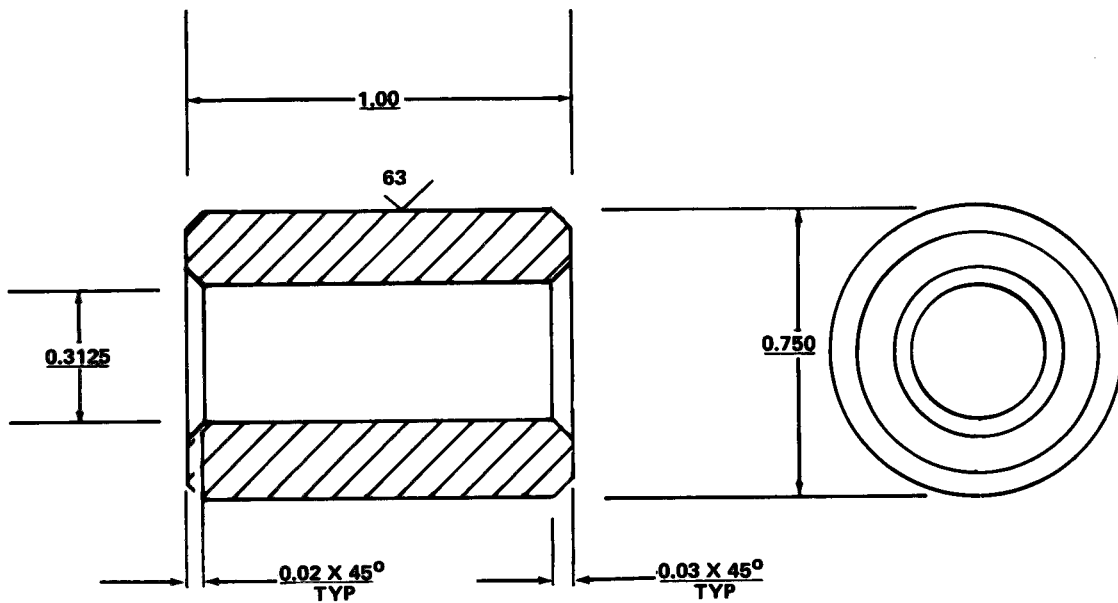
**Fabrication Instructions:**

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

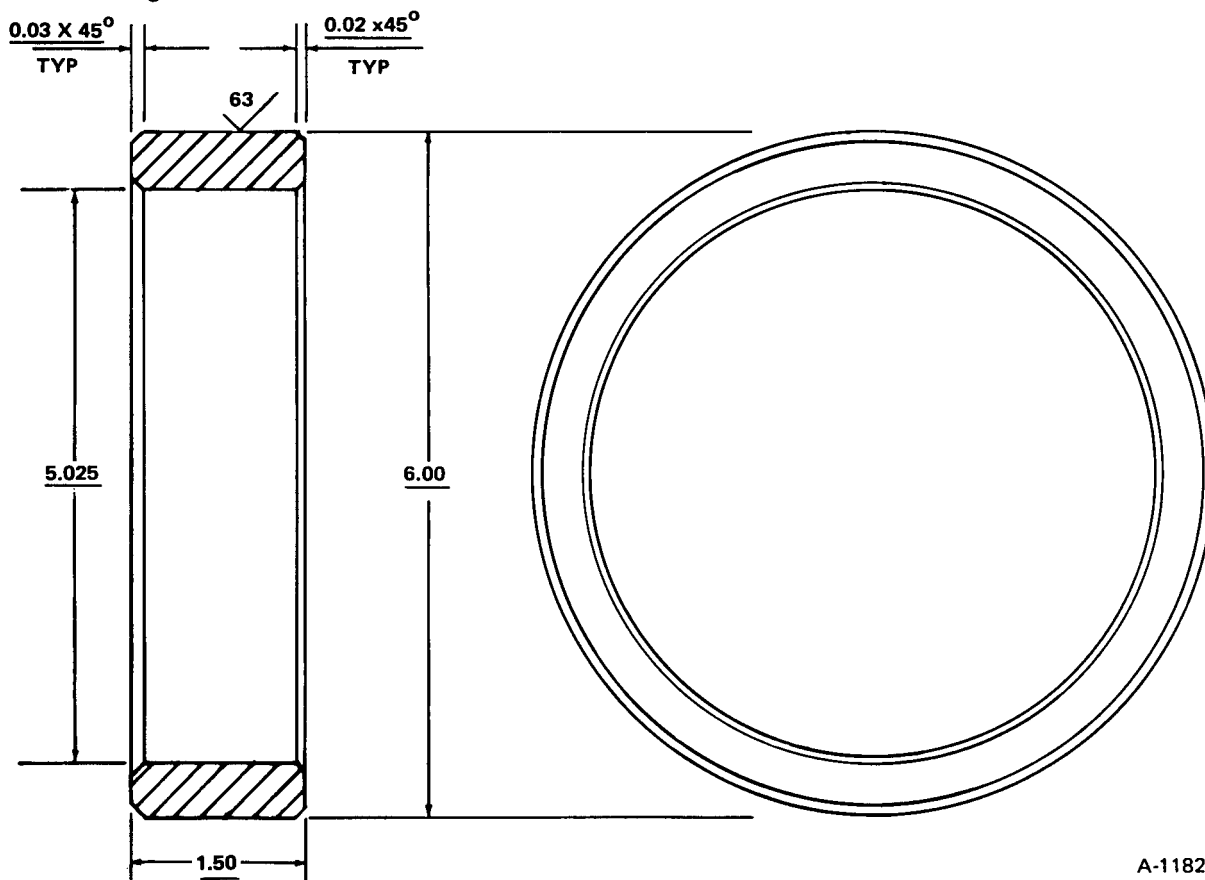
**Fabrication Instructions:**

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

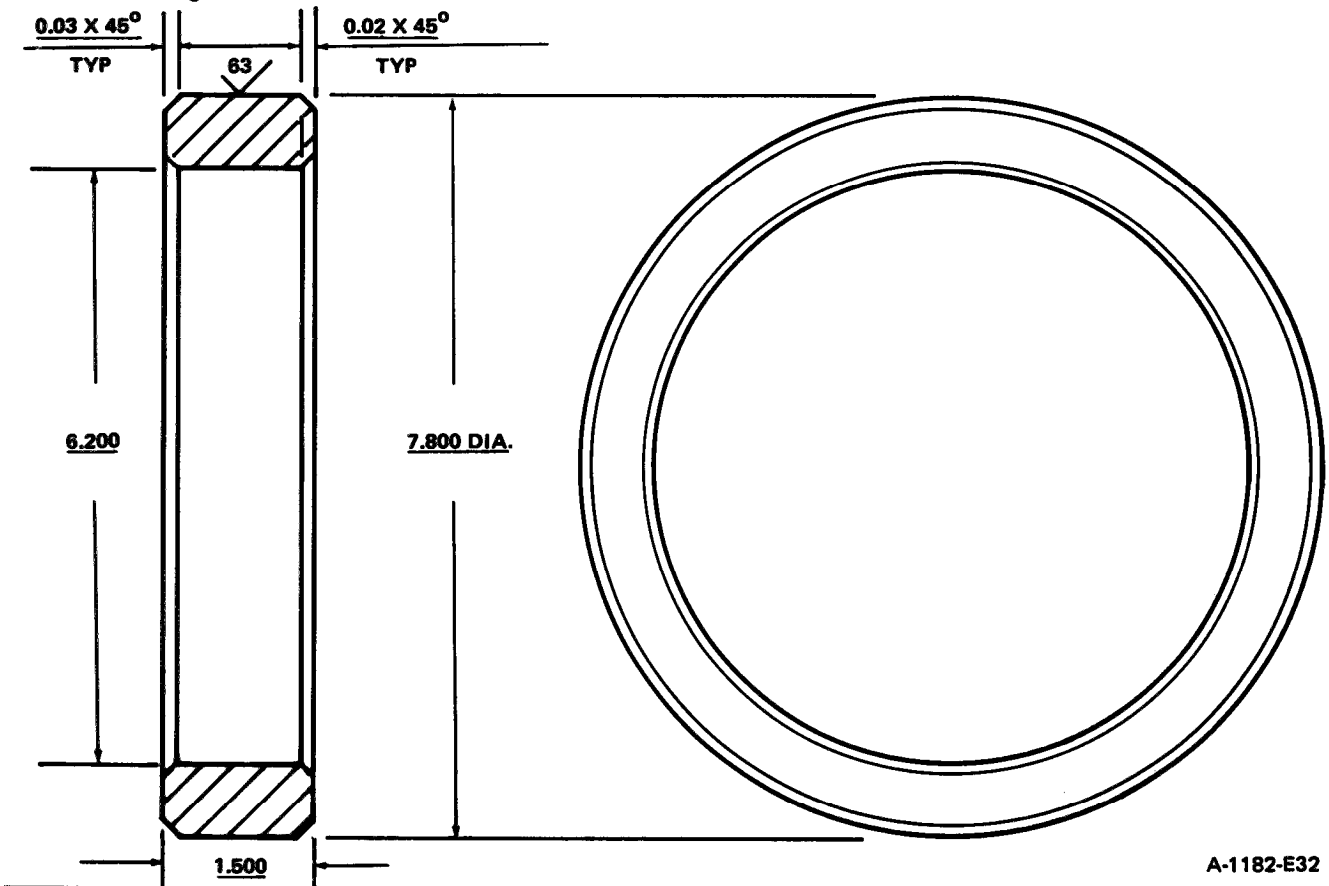
**Fabrication Instructions:**

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

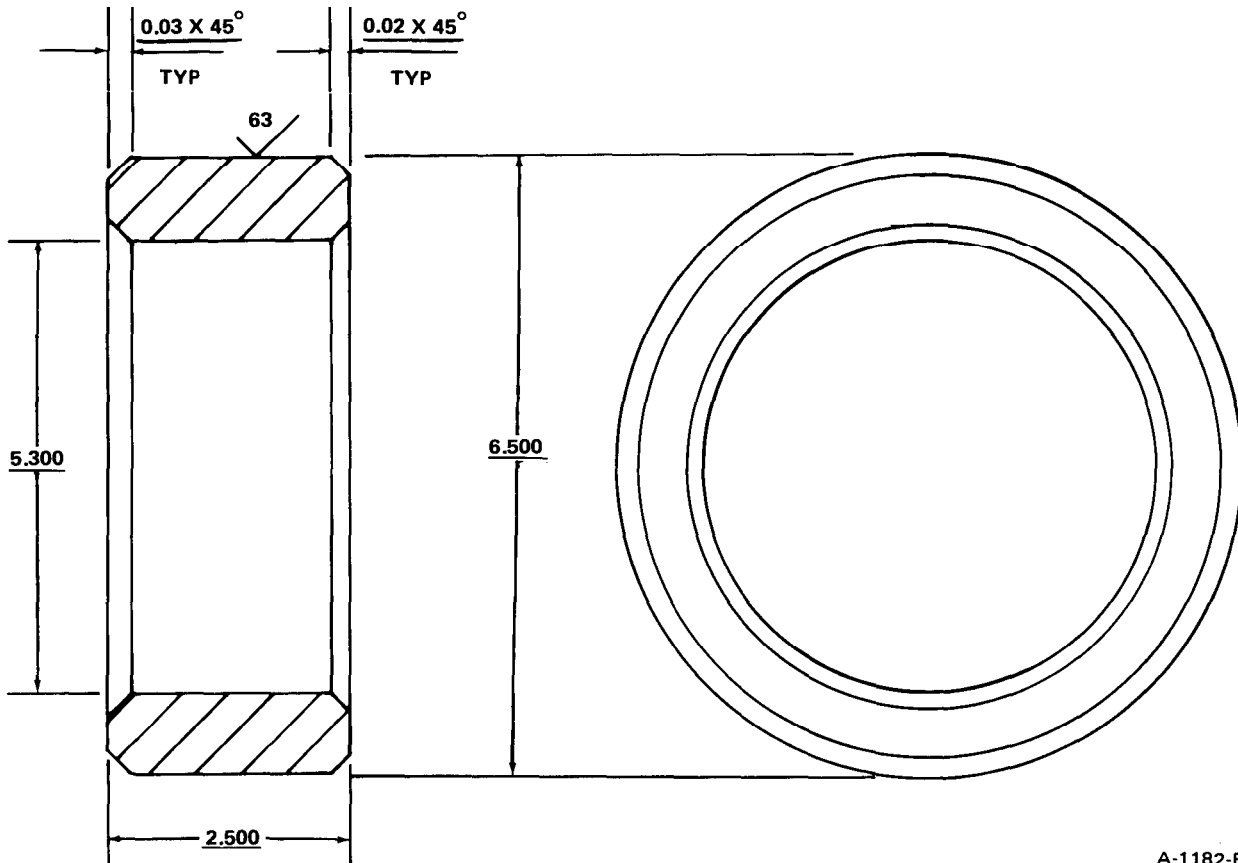
**Fabrication Instructions:**

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

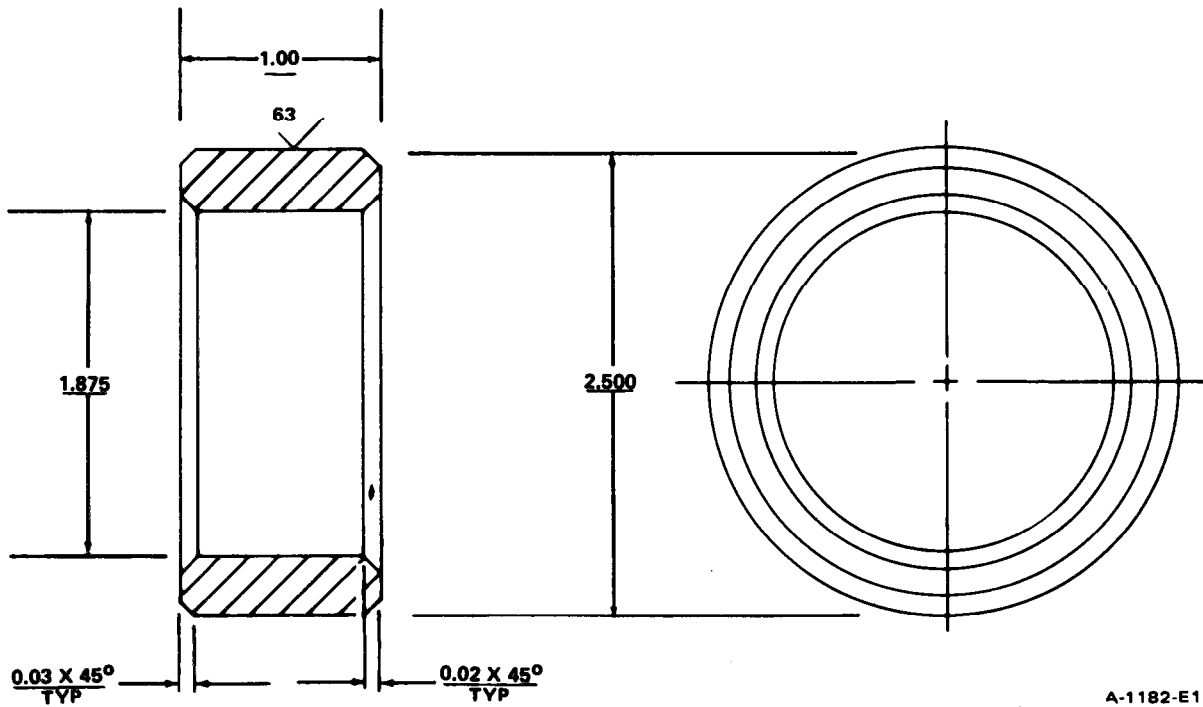
**Fabrication Instructions:**

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:**

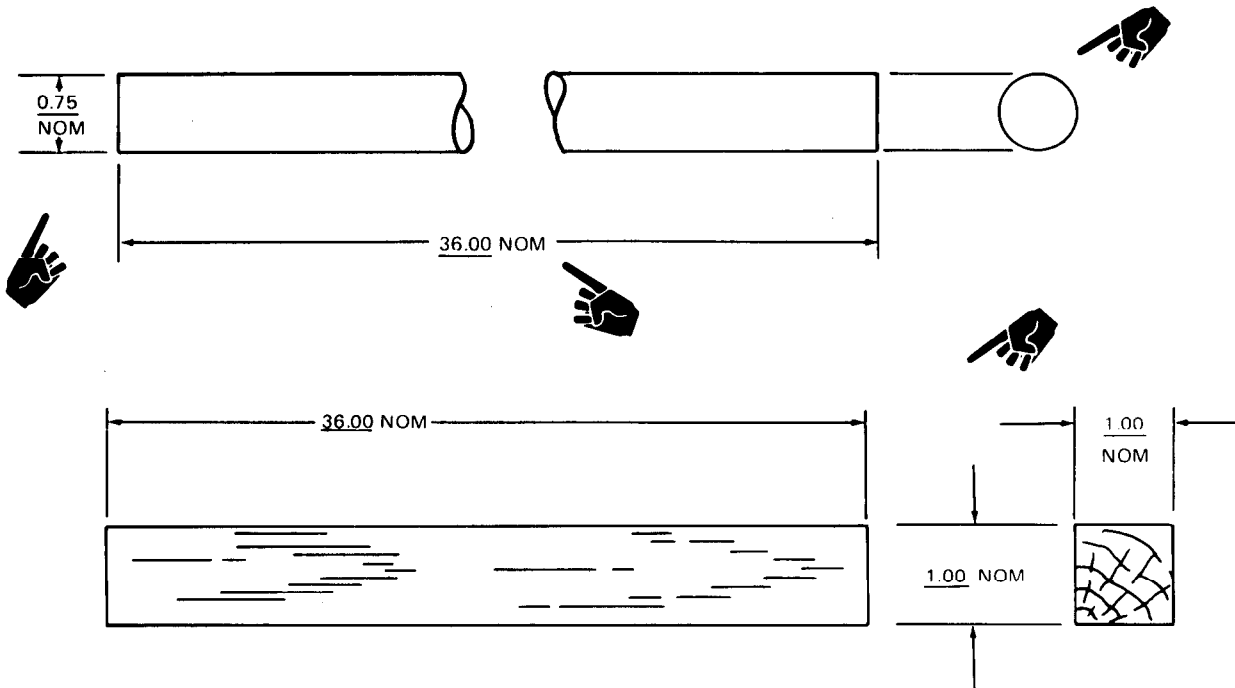
Fabricate stirring rod from hardwood stock as follows:

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

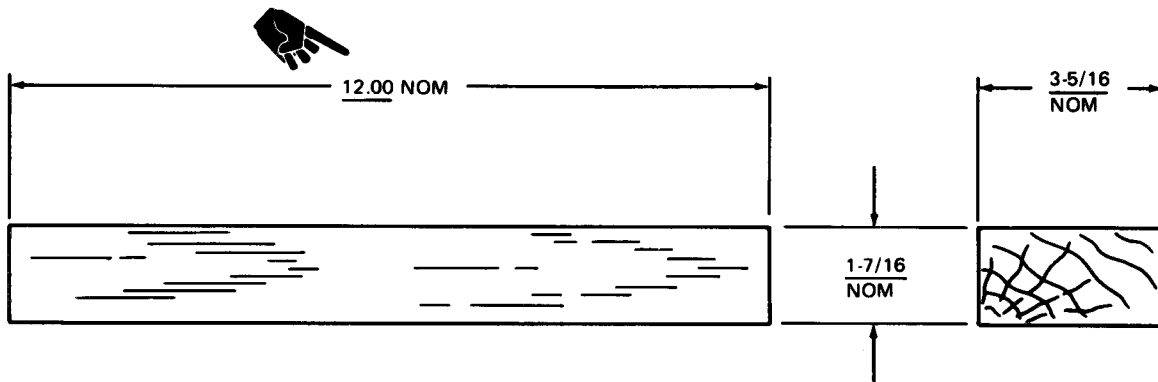
**Fabrication Instructions:**

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

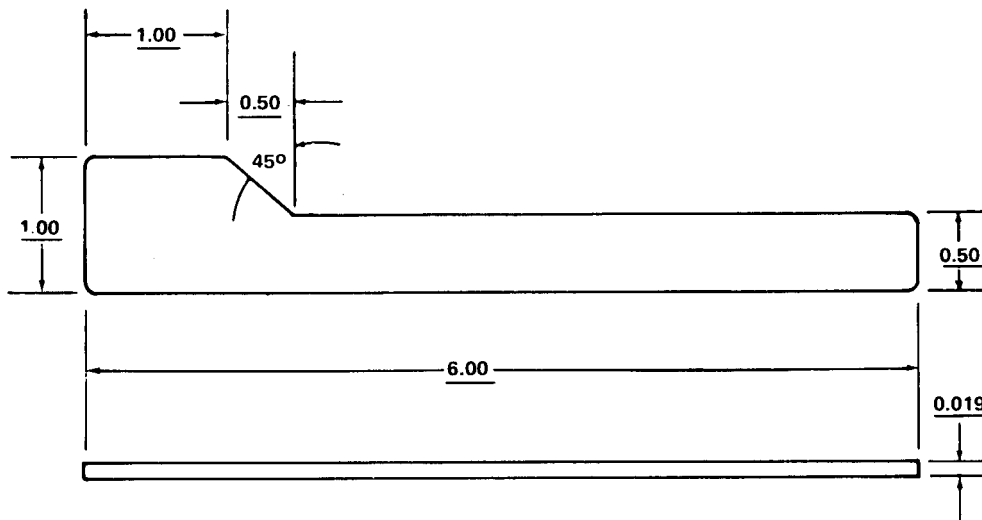
**Fabrication Instructions:**

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

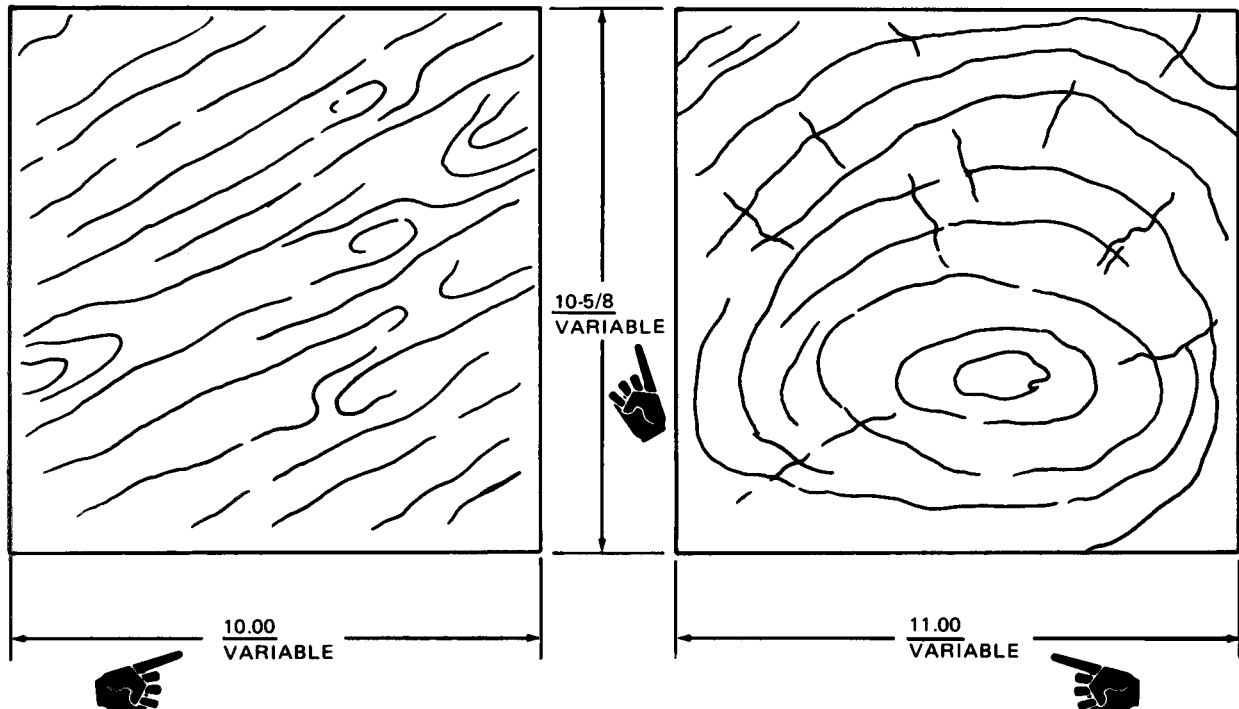
**Fabrication Instructions:**

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

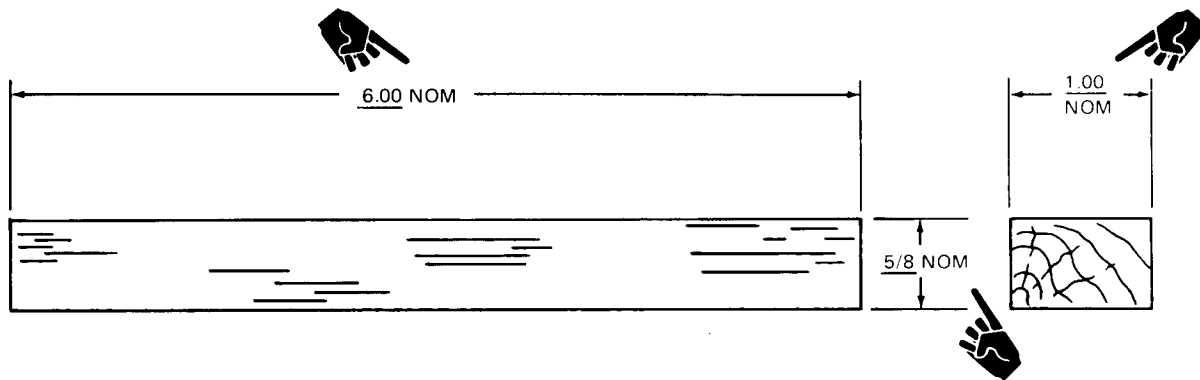
**Fabrication Instructions:**

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

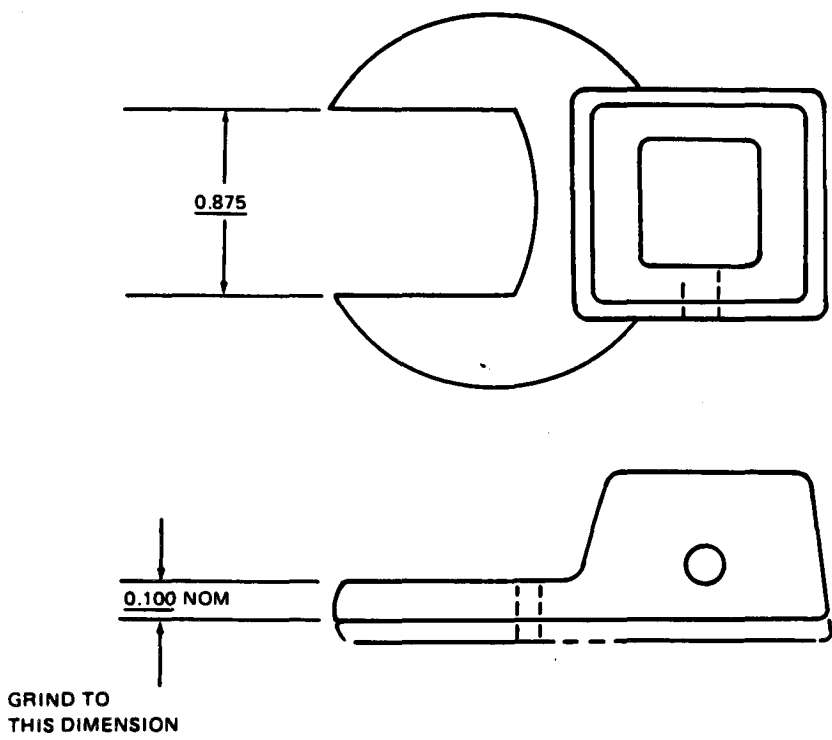
**Fabrication Instructions:**

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:**

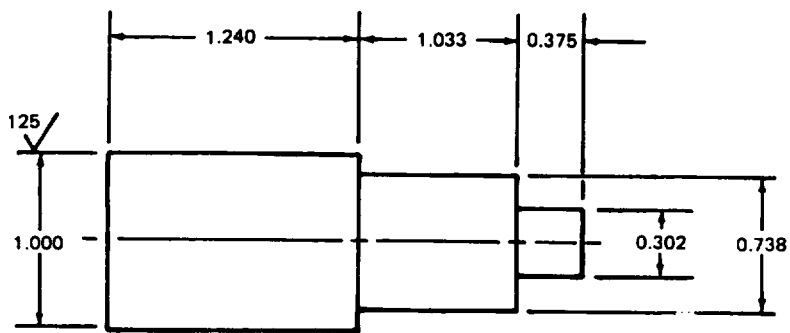
Fabricate top seal installation tool out of aluminum stock as follows:

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

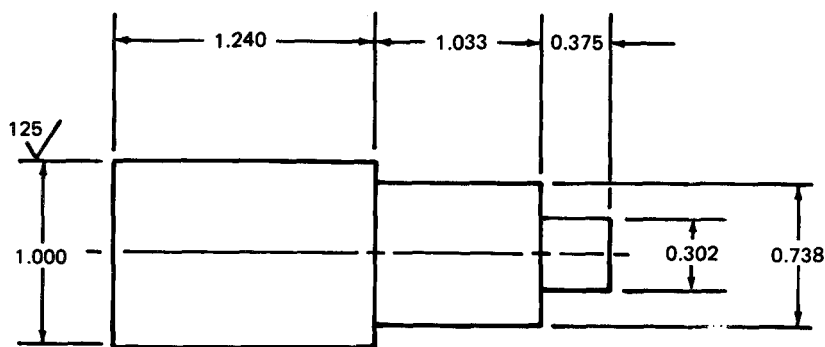
Fabrication Instructions:

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  $\pm 0.005$

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.

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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
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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*

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COA, 3d ENGINEER BN  
FT. BELLEARDWOOD, MD 63108

DATE SENT

PUBLICATION NUMBER

TM 55-2840-254-23-4

PUBLICATION DATE

26 Apr 83

PUBLICATION TITLE

Engine, Gas Turbine  
Model T55-L-712

BE EXACT... PIN-POINT WHERE IT IS

PAGE NO

6

PARA-GRAPH

2-1  
a

FIGURE NO.

4-3

TABLE NO

81

125

line 20

SAMPLE

IN THIS SPACE TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:

In line 6 of paragraph 2-1a the manual states the engine has 6 cylinders. The engine on my set only has 4 cylinders. Change the manual to show 4 cylinders.

Callout 16 on figure 4-3 is pointing at a bolt. In key to figure 4-3, item 16 is called a shim - Please correct one or the other.

I ordered a gasket, item 19 on figure B-16 by NSN 2 910-00-762-3001. I got a gasket but it doesn't fit. Supply says I got what I ordered, so the NSN is wrong. Please give me a good NSN

PRINTED NAME, GRADE OR TITLE, AND TELEPHONE NUMBER

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FIGURE NO.

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TEAR ALONG  
PERFORATED LINE

# 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  
 1 kilometer = 10 hectometers = 3,280.8

## Weights

1 centigram = 10 milligrams = .15 grain  
 1 decigram = 10 centigrams = 1.54 grain  
 1 gram = 10 decigrams = .035 ounce  
 1 dekagram = 10 grams = .35 ounce  
 1 hectogram = 10 dekagrams = 3.52 ounces  
 1 kilogram = 10 hectograms = 2.2 pounds  
 1 quintal = 100 kilograms = 220.46 pounds  
 1 metric ton = 10 quintals = 1.1 short tons

## Liquid Measure

1 centiliter = 10 milliliters = .34 fl. ounce  
 1 deciliter = 10 centiliters = 3.38 fl. ounces  
 1 liter = 10 deciliters = 33.81 fl. ounces  
 1 quart = 1.05669 gallons  
 1 gallon = 4 quarts = 3.78541 liters

## Area Measure

1 millimeter = .003937 inches  
 1 centimeter = .3937 inches  
 1 decimeter = 10.76 centimeters  
 1 meter = 1,076.4 centimeters  
 1 hectometer = 107,639 centimeters  
 1 kilometer = 107,639 meters

## Cubic Measure

1 millimeter = .06 cu. inch  
 1 centimeter = 61.02 cu. inches  
 1 meter = 35.31 cu. feet

#1

TM 55-2840-254-23-4

DATE	NAME	PHONE

To change	To	To	Multiply by
inches	centimeters	newton-meters	.007062
feet	meters	inches	.394
yards	meters	feet	3.280
miles	kilometers	yards	1.094
square inches	square centimeters	inches	.621
square feet	square meter	square inches	.155
square yards	square meter	square feet	10.764
square miles	square kilometer	square yards	1.196
acres	square hectometer	square miles	.386
cubic feet	cubic meters	acres	2.471
cubic yards	cubic meters	cubic feet	35.315
fluid ounces	milliliters	cubic yards	1.308
pints	liters	fluid ounces	.034
quarts	liters	pints	2.113
gallons	liters	quarts	1.057
ounces	grams	gallons	.264
pounds	kilograms	ounces	.035
short tons	metric tons	pounds	2.205
pound-feet	newton-meters	short tons	1.102
pound-inches	newton-meters		

## Temperature (Exact)

°F Fahrenheit temperature      5/9 (after subtracting 32)      Celsius temperature      °C

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