INTRODUCTION

This technical manual is part of a twin concept of service.

FOS Manuals - for reference

Technical Manuals - for actual service

The two kinds of manuals work as a team to give you both the general background and technical details of shop service.

Fundamentals of Service (FOS) Manuals cover basic theory of operation, fundamentals of troubleshooting, general maintenance, and basic types of failures and their causes. FOS Manuals are for training new personnel and for reference by experienced technicians.

Technical Manuals are concise service guides for specific machines. Technical manuals are on-the-job guides containing only the vital information needed by an experienced service technician.



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FEATURES OF THIS TECHNICAL MANUAL

- John Deere ILLUSTRUCTION format emphasizing detailed pictures and fewer words in easy-to-use modules.
- Removal and installation groups preceding some repair groups.
- A section of system diagnostic testing.
- Table of contents of all sections at the front of the manual and a listing of all groups and headings at the front of each section.
- Special tools and specifications listed at the front of each group they are used in.
- Special tools illustrated in numerical order at end of manual.
- Alphabetical listing of all major components, specifications, and special tools.
- Safety rules, general specifications, and lubrication specificaitons.

This technical manual was planned and written for you - an experienced service technician. Keep it in a permanent binder in the shop where it is handy. Refer to it when you need to know correct service procedures or specifications.

Using the technical manual as a guide will reduce error and costly delay. It will also assure you the best in finished service work.



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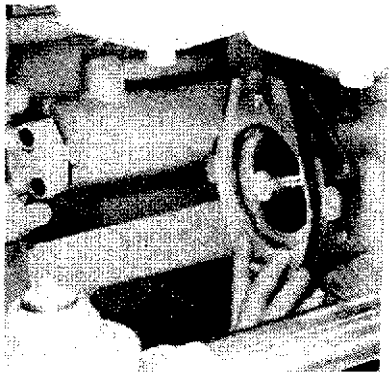
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REMOVE STRUT

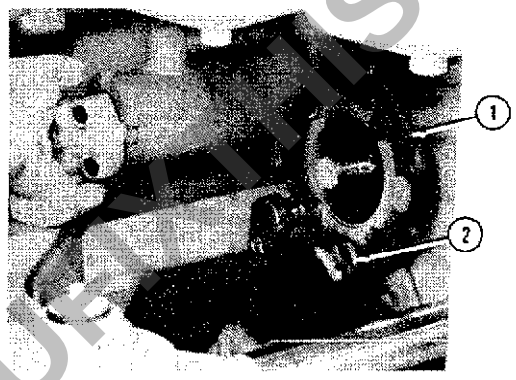


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REMOVE BACKING PLATE AND CAMSHAFT

1. Remove cap screws to remove backing plate (1) and camshaft (2) as an assembly.

NOTE: DO NOT disassemble camshaft unless replacement of parts is necessary.



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DISASSEMBLE AND ASSEMBLE CAMSHAFT

1. Make a mark on the camshaft (1) and brake lever (2), in alignment with each other, before removing camshaft.

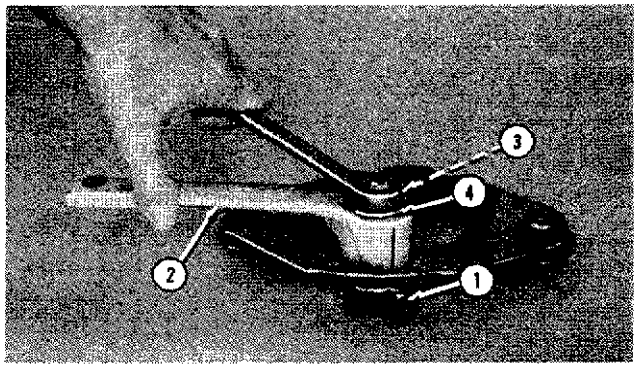
2. Remove nut (3) to remove washer (4), brake lever and camshaft.

3. Inspect camshaft assembly for wear or damage; replace parts as necessary.

4. Install camshaft (1), threaded end first, into bottom hole of backing plate.

5. Align marks on brake lever (2) and camshaft. Install brake lever.

6. Install washer (4) and nut (3). Tighten nut until the end play between backing plate and brake lever is (0.02 to 0.25 mm) 0.001 to 0.010 in. when measured with a feeler gauge.



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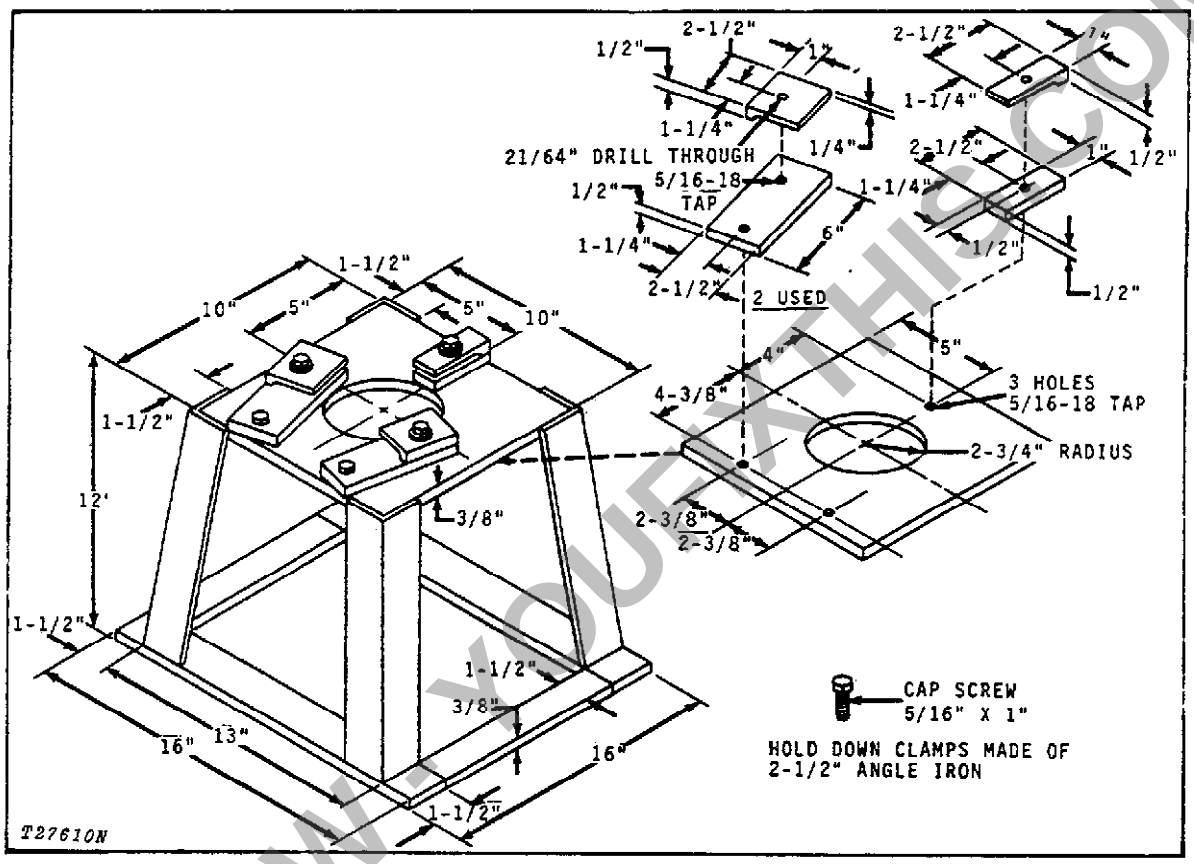
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— — — Liner Holding Fixture can be made in dealer shop to hold engine cylinder liners for deglazing.



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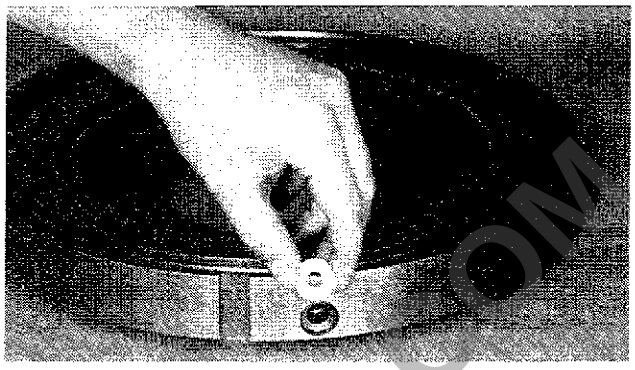
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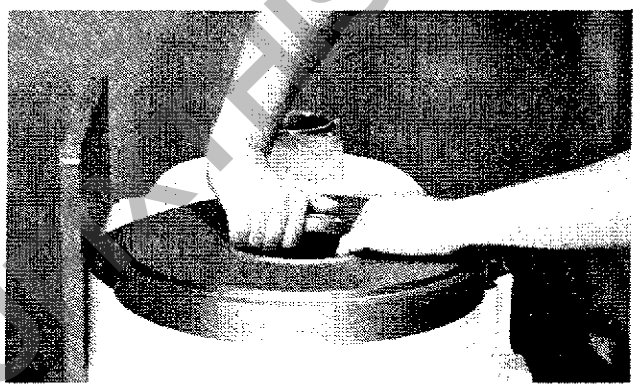
3. Install new insert into the low range clutch piston housing.



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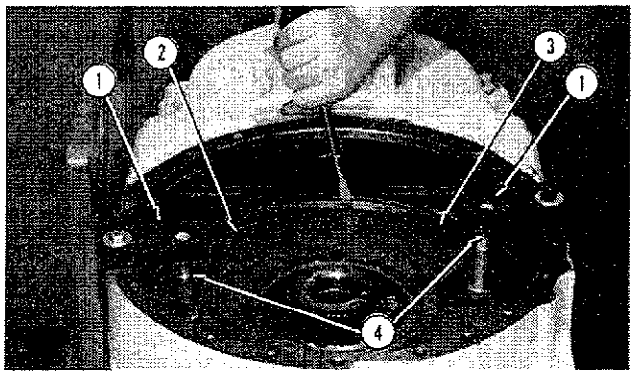
INSTALL LOW RANGE CLUTCH PISTON HOUSING

1. Align the anchor key slot in the piston housing with the anchor key.
2. Install the piston housing.



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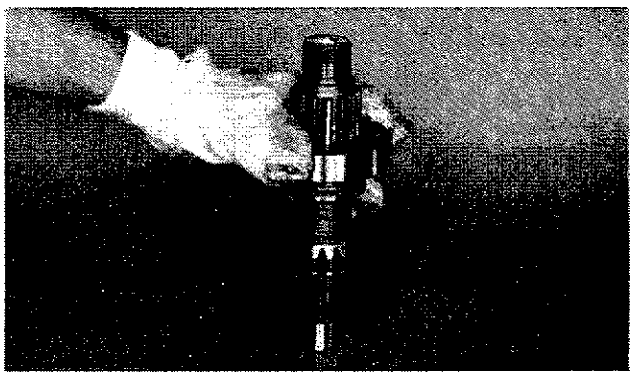
3. Install two JD-324A Plates (1) on the transmission housing with two 3/8 in. cap screws.
4. Install two 5/8 x 6.00 in. cap screws, nuts and washers (4) under the plates.
5. Turn nuts against the plates to compress the low range clutch piston housing (2).
6. Install snap ring (3) and remove the plates (1).



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ASSEMBLE REAR OUTPUT SHAFT (644C ONLY)

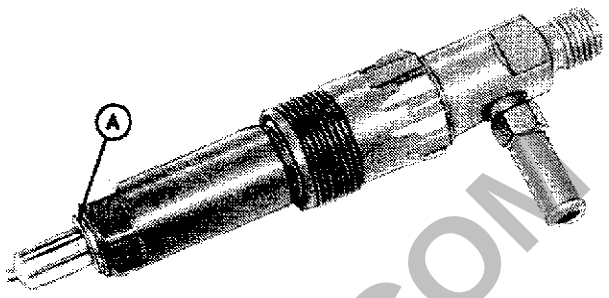
1. Heat bearing in oil to (149°C) 300°F and install it, shielded side last, onto the shaft. Be sure bearing is tight against the shaft shoulder.



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2. Install a new R64840 special steel washer (A) on tip end of injection nozzle.



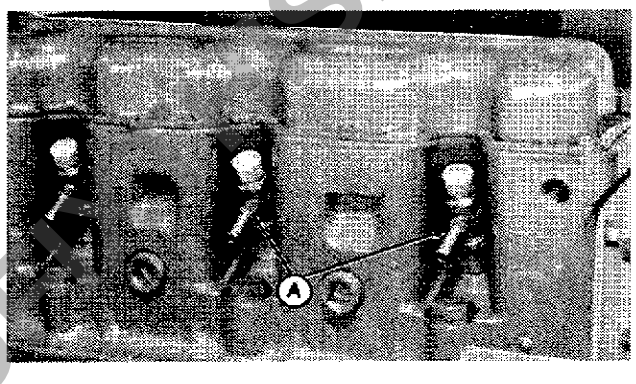
A84;RG3678 S11;0413 V 160482

3. Insert injection nozzle into the cylinder head. Turn gland nut by hand to make sure that it is threaded straight in cylinder head.

4. Remove the leak-off connectors (A) and washers.

5. Use outer socket of JDE-92 Nozzle socket and turn gland nut down to remove most of the looseness.

6. Rotate nozzle holder so that the hole for the leak-off connector threads are facing straight out from the cylinder head.



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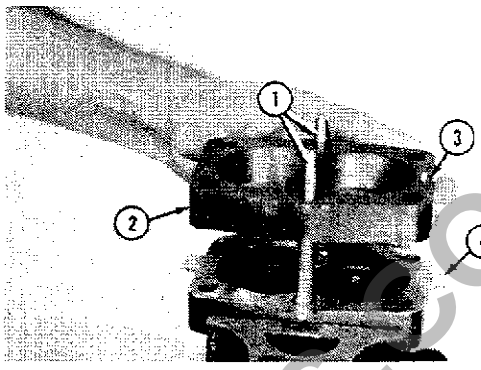
6. Install the JDH-42-2 Aligning Dowels (1).

IMPORTANT: New shims must be used. The shim is made of a silvery film material. DO NOT use the paper separator for the shim.

7. Carefully install shim (4).

IMPORTANT: Pump body (2) must be installed with identification mark (3) up.

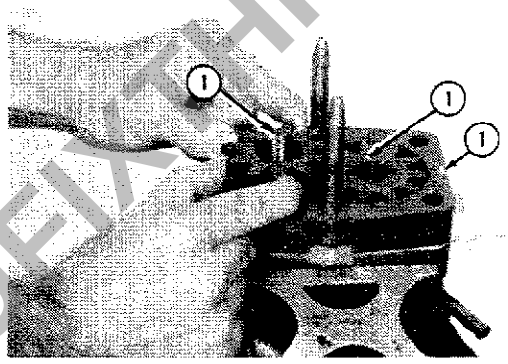
8. Install pump body.



04A;T75686 T09;0960 103 061280

IMPORTANT: Gears must be installed with identification marks (1) up.

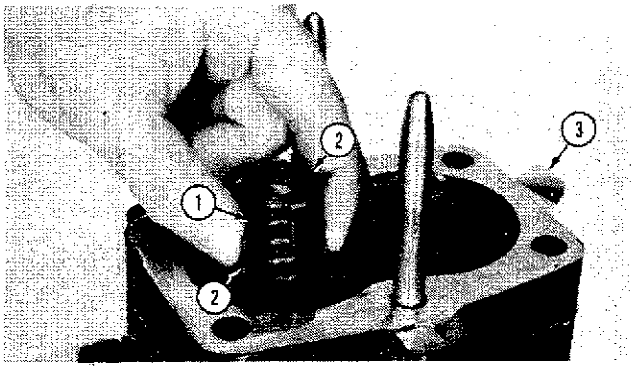
9. Install gears.



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10. Carefully install shim (3).

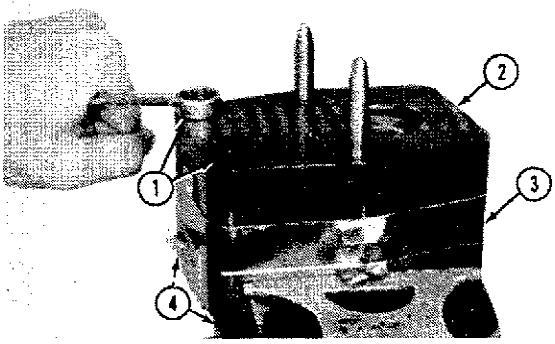
11. Install friction plates (2) and spring (1) into idler gear.



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12. Install base (2) on body (3). Be careful not to wrinkle or damage the shim.

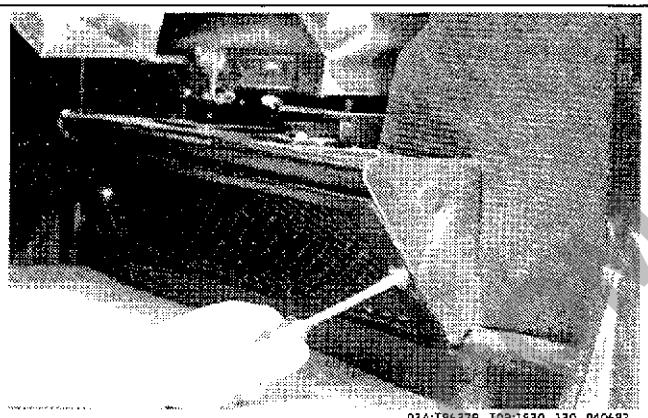
13. Install cap screws (1) and nuts (4). Tighten until base contacts body.



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6. Remove recirculating air filter grille and filter.



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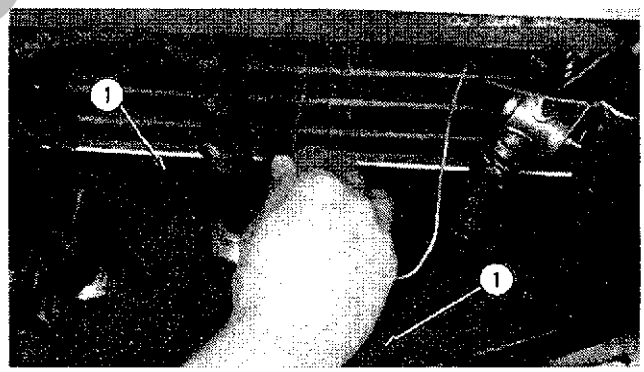
7. Reach in through the recirculation air filter opening and pull the end of the temperature sensing tube out of the evaporator.

IMPORTANT: Use caution when removing the thermostat sensing tube. DO NOT kink or pinch the sensing tube or thermostat switch operation may be adversely affected.



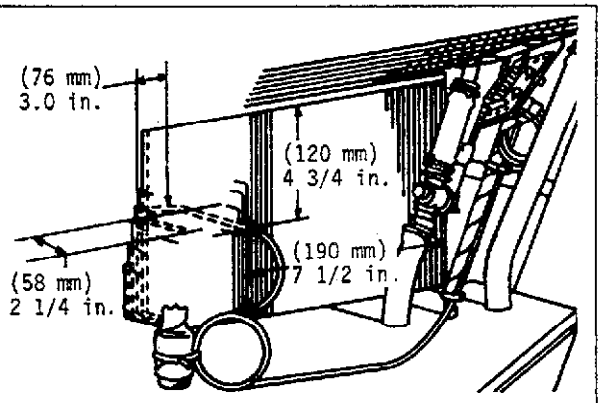
03A;T76121 T09;1830 131 040682

8. Remove cab left access panel.
9. Pull temperature sensing tube out of evaporator.
10. Carefully pull the temperature sensing tube up out of the heater/evaporator area.



03A;T76122 T09;1830 132 040682

11. Install the temperature control switch sensing tube per the dimensions given.
12. Coil the excess tube and secure with a tie band.



03A;T76170 T09;1830 133 040682

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Fuel System

The fuel system parts are:

1. Tank
2. Outlet screen
3. Transfer pump
4. Check valve
5. Two filters
6. Injection pump
7. Injection lines
8. Injection nozzles
9. Leak off tubes
10. Vent hoses
11. Filler screen

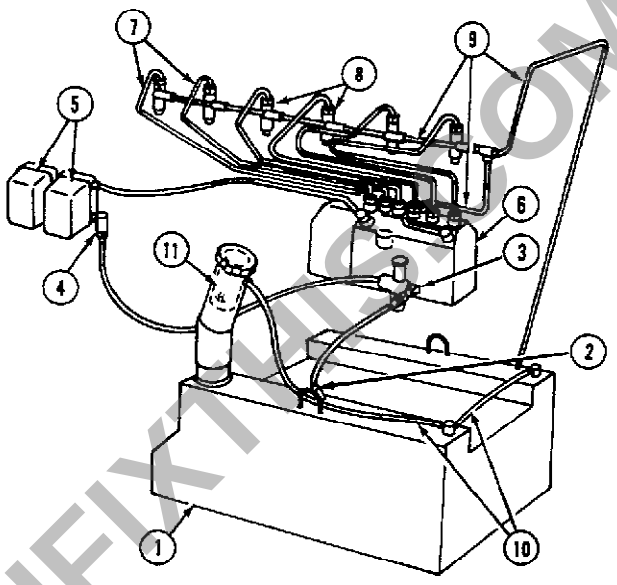
The filler screen removes large debris from fuel as it is put into the tank.

The transfer pump removes fuel from the fuel tank through the outlet screen and moves it through the check valve to the filters. The filters remove debris from the fuel.

The fuel goes into the injection pump which pumps the fuel through injection lines to each injection nozzle. Fuel going to injection nozzles has high pressure and is timed with piston travel. The injection nozzles spray fuel into the combustion chamber as the piston raises during the compression stroke.

Some fuel leaks off the injection nozzles and the injection pump. This fuel is returned to the fuel tank in the leak off tubes.

The filler cap and vent hoses let air into the tank to prevent a vacuum in the tank when fuel is removed.



T75981

1—Tank
2—Outlet Screen
3—Transfer Pump
4—Check Valve
5—Filter (2 used)
6—Injection Pump
7—Injection Line
8—Injection Nozzle
9—Leak Off Tube
10—Vent Hose
11—Filler Screen

Fig. 10-Fuel System Parts

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