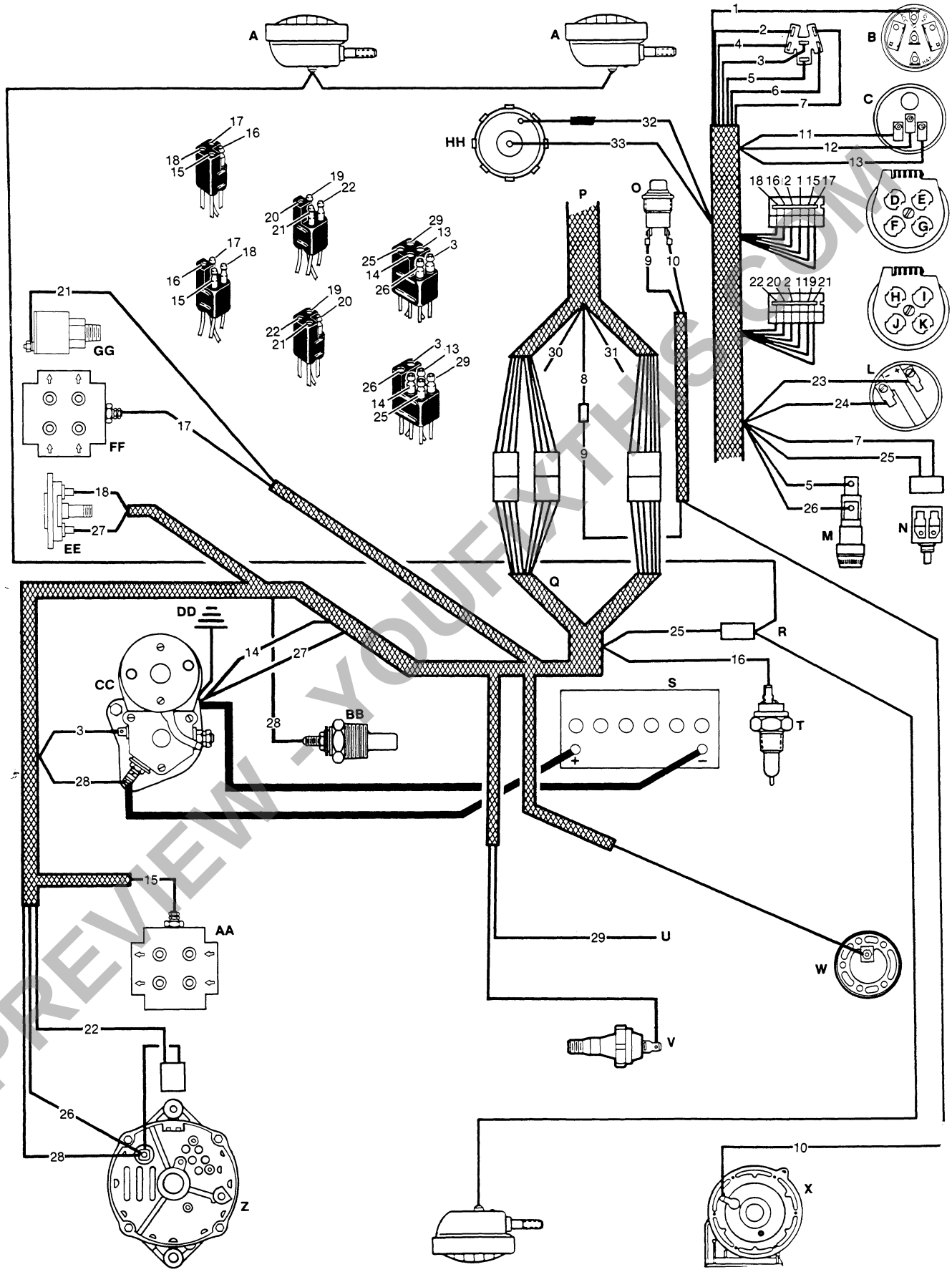
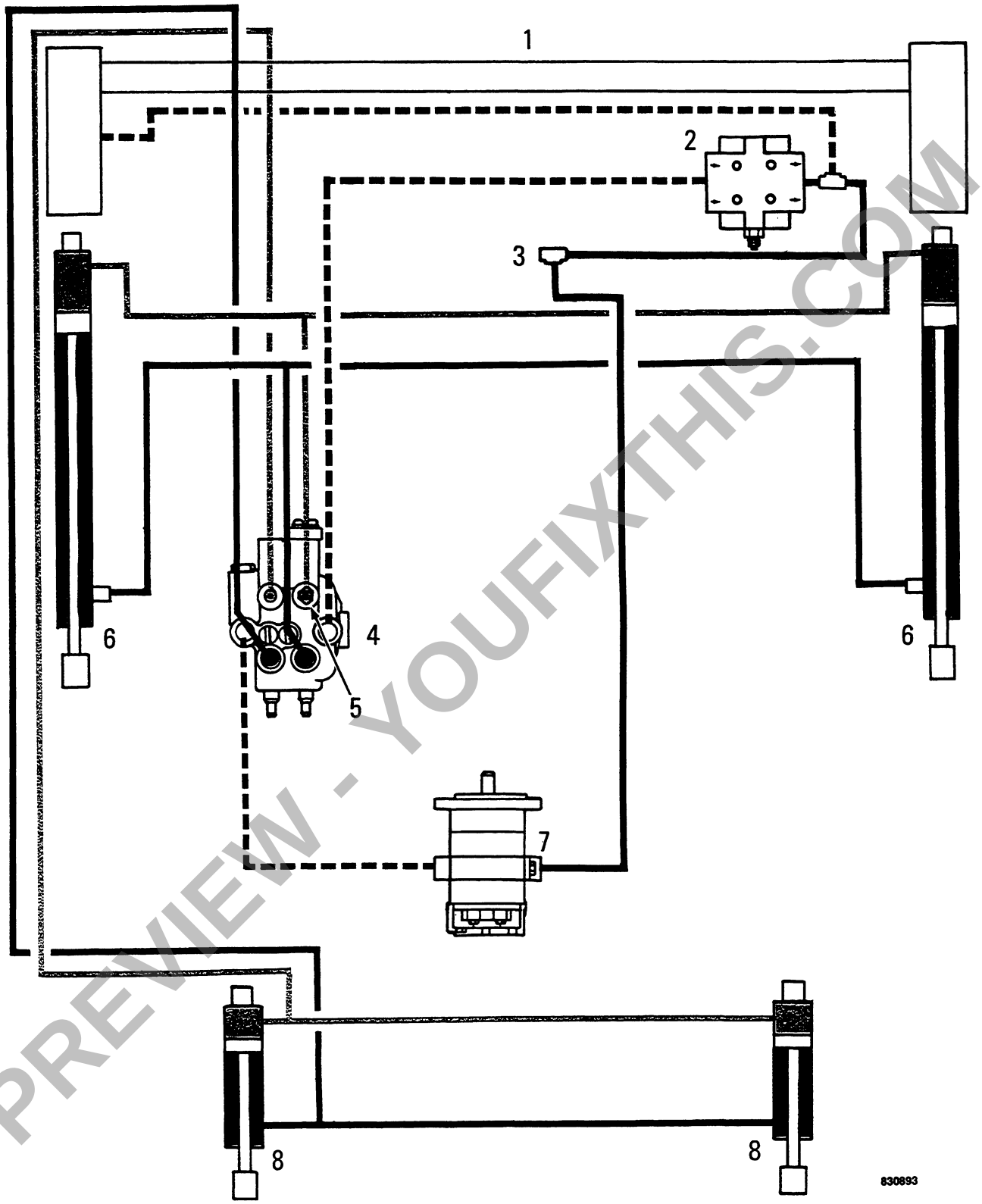


PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com



Suction Oil
Return Oil
Equipment Pump Flow
Oil To and From A Port
Oil To and From B Port

1. *Reservoir*
2. *System Filter*
3. *Connected to Bottom of Rear Piston Pump*
4. *Loader Control Valve*
5. *Restrictor*
6. *Lift Cylinder*
7. *Equipment Pump*
8. *Bucket Cylinder*

Hydraulic Diagram for the Loader

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

SPECIFICATIONS

Torque for gland with nylon plug ..... 200 to 300 pound-feet (271 to 406 N m, 28 to 41 kg/m)

Torque for gland with lock screw ..... 100 to 200 pound-feet (135 to 271 N m, 14 to 28 kg/m)

Torque for gland for grapple cylinder ..... 75 to 85 pound-feet (101 to 115 N m, 10 to 12 kg/m)

	Torque for Cap Screws with 242 (Blue) Loctite on Threads	Approximate Weight
Loader Cylinders		
Lift Cylinder	380 to 456 pound-feet (515 to 618 N m, 52 to 63 kg/m)	45 pounds (20 kg)
Bucket Cylinder	200 to 220 pound-feet (271 to 298 N m, 28 to 30 kg/m)	28 pounds (13 kg)
Backhoe cylinders		
Boom, Dipper and Bucket Cylinders	380 to 456 pound-feet (515 to 618 N m, 52 to 63 kg/m)	44 pounds (20 kg)
	Torque for Nuts	
Grapple Cylinder	77 pound-feet (104 N m, 10 kg/m)	25 pounds (11 kg)
Stabilizer Cylinders	150 to 180 pound-feet (203 to 244 N m, 21 to 34 kg/m)	26 pounds (12 kg)

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

SPECIFICATIONS

Equipment pump output ..... 14.8 U.S. gallons at 2250 psi at 2200 rpm
(56 litres at 15 513 kPa, 157 kg/cm² at 2200 r/min)

Main relief valve
Loader ..... 2275 to 2375 psi at full throttle
(15 869 to 16 375 kPa, 159 to 166 kg/cm² at full throttle)

Backhoe ..... 2125 to 2225 psi at full throttle
(14 651 to 15 340 kPa, 149 to 156 kg/cm² at full throttle)

Circuit relief valves **Hand pump setting**
Boom and dipper sections ..... 2800 to 2850 psi
(19 309 to 19 650 kPa, 196 to 199 kg/m²)

Restrictors
Loader
B port of lift spool ..... .180 inch (4.57 mm)
Backhoe
A port of boom section ..... .136 inch (3.45 mm)
Both ports of swing section ..... .0935 inch (2.375 mm)

Capacity of reservoir ..... 6 U.S. gallons (23 litres)

Capacity of complete system (approximate) ..... 8 U.S. gallons (30 litres)

Hydraulic oil ..... SAE 10W40 SE engine oil with Hydrostatic Transmission Oil Additive, part no. B17508. Mixture ratio is 20 to 1
Example:
20 U.S. quarts (18.9 litres) of SAE10W40 engine oil to one U.S. quart (0.9 litre) of Hydrostatic Transmission Oil Additive.

Interval of oil change ..... After 1000 hours of operation or once a year, whichever occurs first

Interval for filter change ..... After 500 hours of operation or when the warning lamp for a filter stays illuminated

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

TROUBLESHOOTING CHART

PROBLEM	POSSIBLE CAUSE	CORRECTION
Discharged batteries	Low electrolyte level in battery(ies).	See Section 4005 for instructions to check electrolyte level.
	Short circuit in battery cell or cells.	Do the Capacity (Load) Test in Section 4005.
	Loose or dirty connections for the battery cables.	Clean the clamp on the battery cables and the battery posts.
	Dirty battery top.	Clean the top of the battery. See Section 4005 for instructions.
	Low output or no output from the alternator or voltage regulator.	Do the alternator and voltage regulator tests in this section.
	High resistance in the positive battery cable.	Do Test No. 3 on page 4002-13 to check the positive battery cable.
	High resistance in the negative battery cables.	Do Test No. 5 on page 4002-14 to check the negative battery cables.
Starter does not run or does not run correctly	Discharged batteries.	See corrections for problem of discharged batteries.
	Bad connections, wires, cables, or other parts in the starting circuit.	See Troubleshooting for the Starting Circuit for instructions.
	Using the wrong engine oil for cold weather operation.	See the Fluids and Lubricants Chart in Section 1002.
	Worn teeth on the starter drive pinion or the flywheel ring gear.	Remove the starter to check the teeth. Make repairs as necessary.
	Cap screws that fasten the starter to the flywheel housing are loose.	Tighten the cap screws.
	Worn or damaged parts inside the starter.	Do the No Load test for the starter that is installed on your machine according to the instructions in Section 4006. Make repairs as necessary.
	Damaged coils or contacts in the starter solenoid.	Do the Starter Solenoid tests for the starter that is installed on your machine according to the instructions in Section 4006. Make repairs as necessary.
Alternator does not charge or the output is too low		See Troubleshooting for the Charging Circuit.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

FLUIDS AND LUBRICANTS CHART

COMPONENT	CAPACITY		SPECIFICATIONS
	U.S.	Metric	
Fuel tank	14.5 gallons	55 litres	See Operators Manual
Crankcase (all engines) Without filter change With filter change	 6 quarts 7 quarts	 5.7 litres 6.6 litres	Case HDM engine oil Alternate engine oil: Gasoline engine - SE, SF Diesel engine - CD Above 32° F (0° C) ..... SAE30 10 to 50° F (-12 to 10° C) ..... SAE20W Below 32° F (0° C) SAE10W
Hydraulic system Reservoir	8 gallons 6 gallons	30 litres 23 litres	SAE 10W40 Engine oil with Hydrostatic Transmission Oil Additive, Part No. B17508. Mixture ratio is 20 to 1. Example: 20 U.S. quarts (18.9 litres) of SAE 10W40 engine oil to 1 U.S. quart (0.9 litres) of additive.
Chain compartment (ea)	4 quarts	3.8 litres	Engine oil - SAE30SD
Cooling system	16 quarts	15 litres	A mixture of half ethylene glycol (antifreeze) must be used at all times. If the coldest outside temperature will be less than -34° F (-36° C) add antifreeze.
Battery	As required		Add drinking water or distilled water.
Grease fittings	As required		Molydisulfide multipurpose grease.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

SAFETY RULES

This Symbol Shows Important Information About Safety In This Manual. When You See This Symbol, Carefully Read The Information That Follows and Understand The Possible Causes of Injury Or Death. 1-1-A

IMPORTANT: *To prevent injury on the job, follow the Warning, Caution, and Danger notes in this section and other sections throughout this manual. Follow the instructions carefully.*

The procedures recommended and shown in this manual are good, effective service methods. However, all possible procedures and service hazards may not be covered. Therefore, if you use a tool or procedure not recommended, you must make sure that the method you select is a safe method.

Put the warning tag shown below on the key for the key switch when you are servicing or repairing this machine. One warning tag is on every new machine. You can buy additional warning tags, part number 331-4614, from Service Parts Supply.



780449

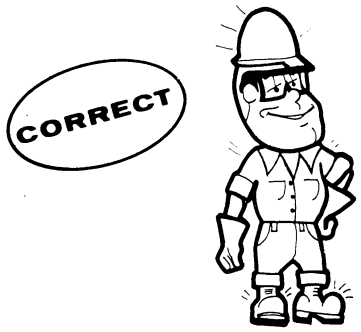
DANGER: *Engine exhaust fumes can cause death. If it is necessary to start the engine in a closed place, remove the exhaust fumes from the area with an exhaust pipe extension. If you do not have an exhaust pipe extension, open the doors and get outside air into the area.* 48-56

WARNING: *Read operator's manual to familiarize yourself with control lever functions.* 46-27

WARNING: *Operate tractor and equipment controls from the seat position only. Any other method could result in serious injury.* 48-55

WARNING: *This is a one man machine, no riders allowed.* 35-8

WARNING: *If you wear clothing that is too loose or do not use the correct safety equipment for your job, you can be injured. Always wear clothing that will not catch on objects. Extra safety equipment that can be required includes hard hat, safety shoes, ear protection, eye or face protection, heavy gloves and reflector clothing.* 45-3-A



750213

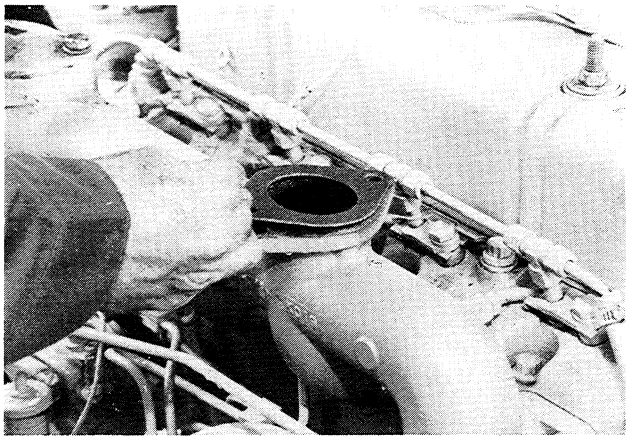
WARNING: *Operate controls from the operator's seat only.* 35-7

WARNING: *When working in the area of the fan belt with the engine running, avoid loose clothing if possible, and use extreme caution.* 35-4

PREVIEW - YOUFIXTHIS.COM

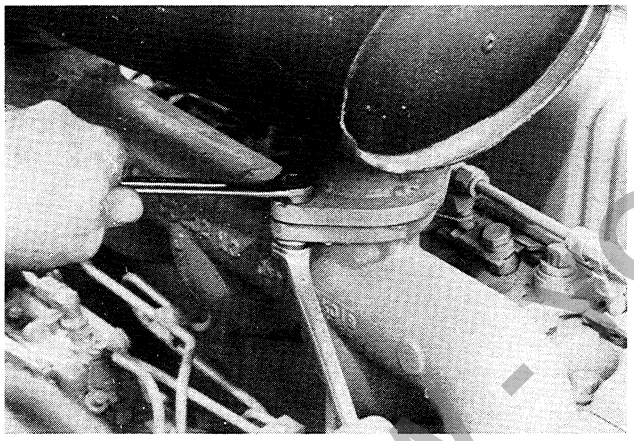
Download full manual at youfixthis.com

23. If necessary, install a new gasket for the muffler.



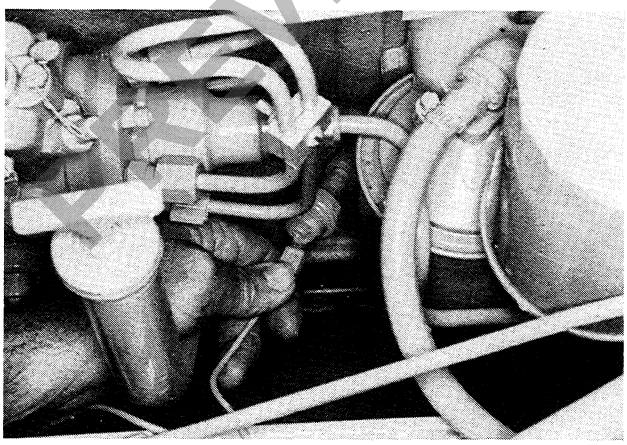
323244

24. Install the muffler, cap screw, bolts, lock washers, and nuts and tighten the cap screw and nuts.



323104

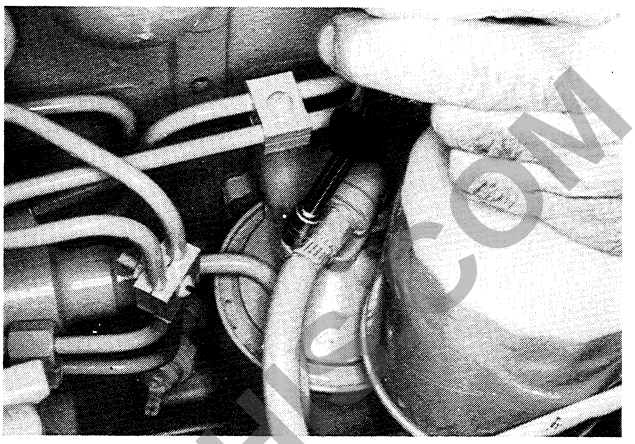
25. Connect the wire to the switch for engine oil pressure.



322906

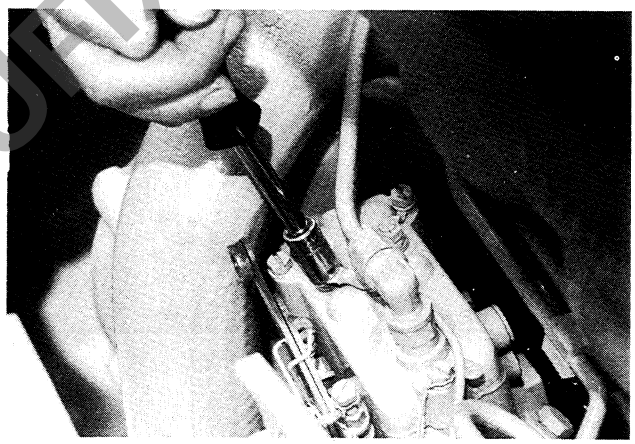
26. If equipped with a diesel engine:

a. Connect the fuel hose to the filter head and tighten the clamp.



322910

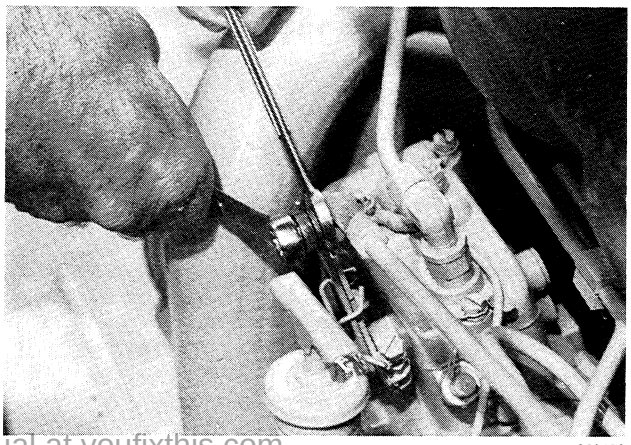
b. Connect the wire to the terminal on the fuel injection pump and tighten the nut.



323103

c. Connect the throttle rod to the fuel injection pump.

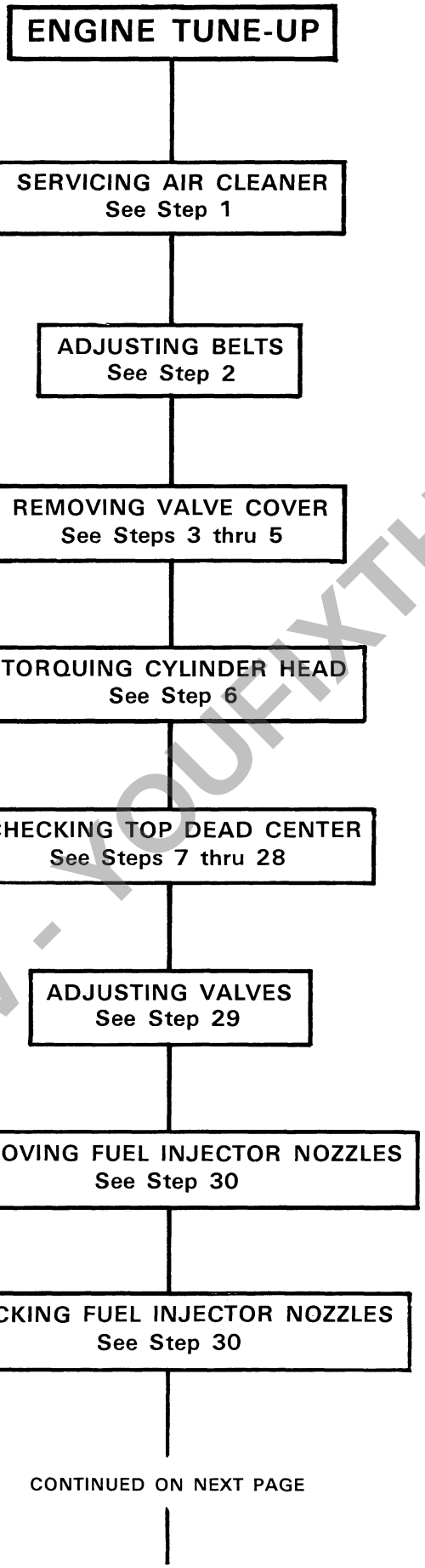
d. Install the lock washer and nut and tighten the nut.



323102

PREVIEW - YOUFIXTHIS.COM

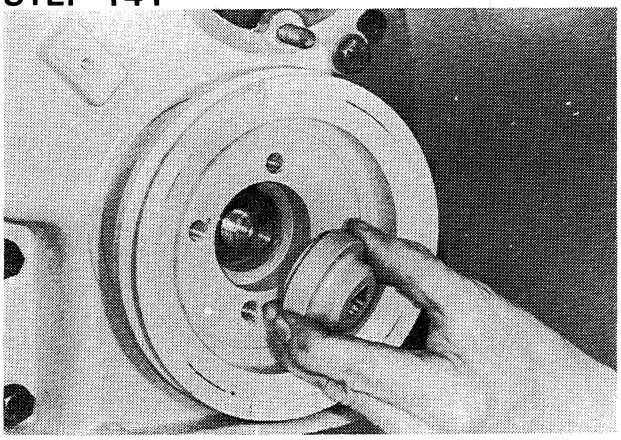
Download full manual at youfixthis.com



PREVIEW - YOUFIXTHIS.COM

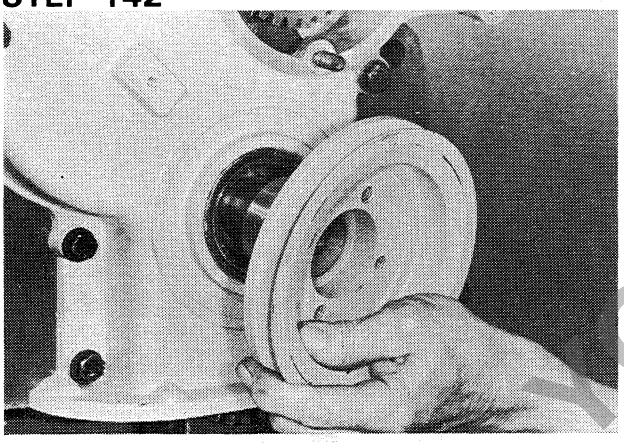
Download full manual at youfixthis.com

STEP 141



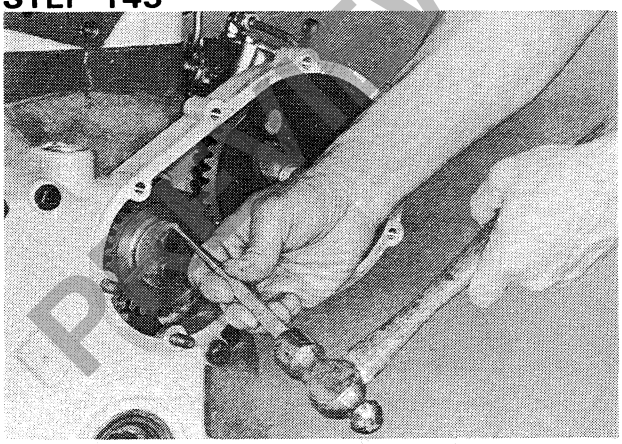
Remove crankshaft pulley mounting nut.

STEP 142



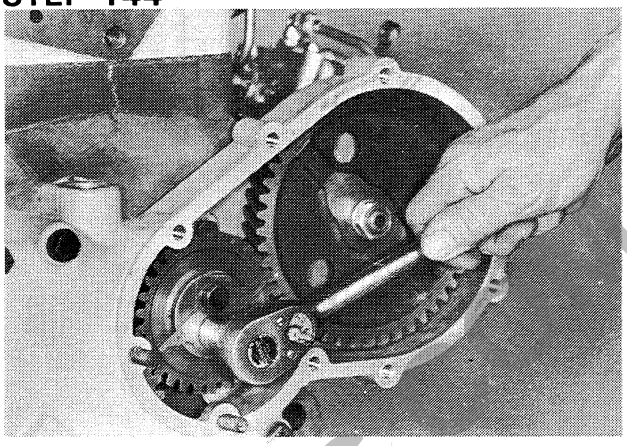
Remove crankshaft pulley.

STEP 143



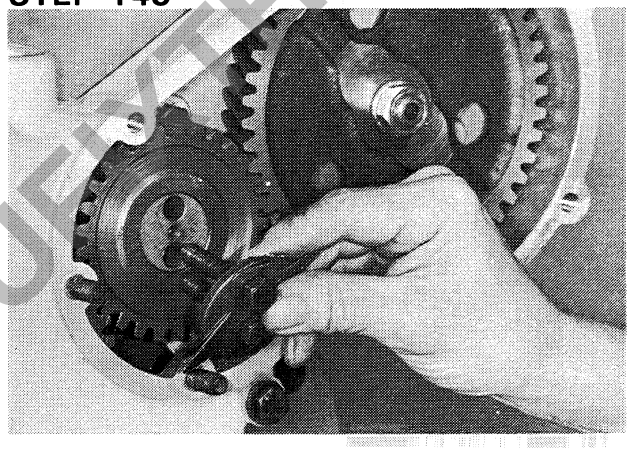
Using a punch and hammer, straighten out lock tab on the idler gear lock plate.

STEP 144



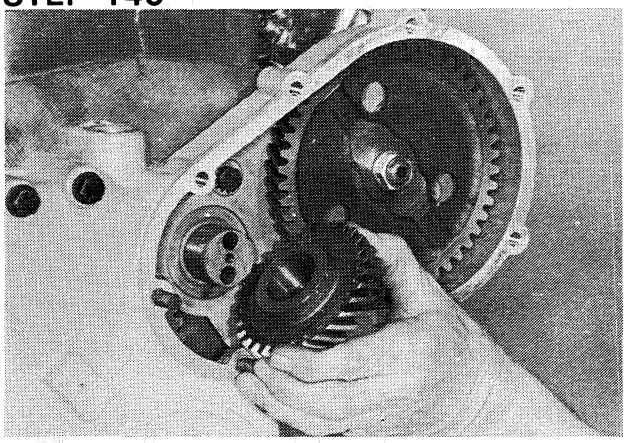
Loosen idler gear mounting bolts.

STEP 145



Remove bolts, lock plate, thrust plate and shims.

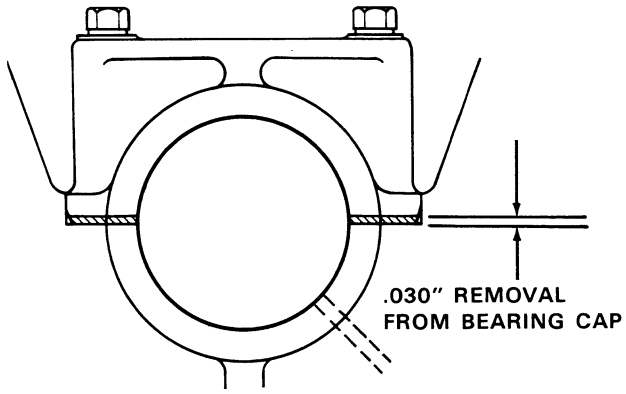
STEP 146



Remove idler gear.

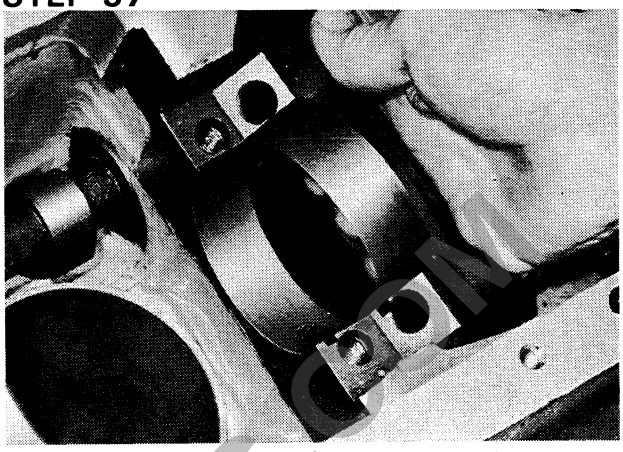
Download full manual at youfixthis.com

STEP 56



If vertical dimension is out of tolerance or cap is shifted side-wise, rework cap by removing .030" stock from mating surface and then bore out to meet tolerance as specified in Step 55. *IMPORTANT:* If .030" stock was required to be removed, the same amount must be machined from the lock groove, to prevent interference when installing liners.

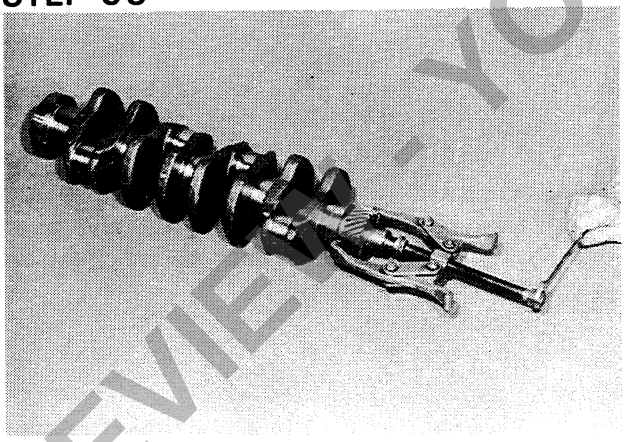
STEP 57



Be sure to machine new mounting surface flat, so that cap will set solid without wobbling in block.

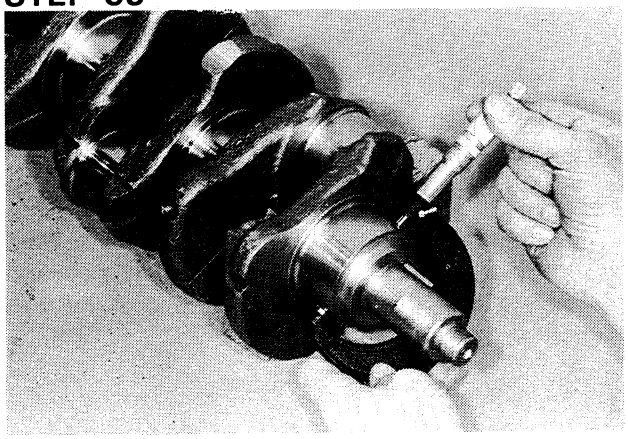
Crankshaft Inspection and Installation

STEP 58



Using a puller, remove crankshaft gear from crankshaft.

STEP 59



Measure the main bearing journals for wear. Measure front and rear of each journal. If diameters are smaller than 2.8730", undersize bearing liners (.002") must be used.

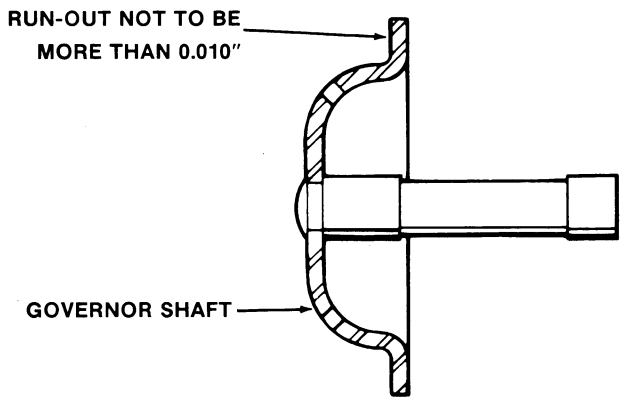
NOTE: When journals are worn more than .002", the crankshaft must be ground undersize .010",020" or .030". Refer to Specifications, Sections 1026 or 1027 for grinding dimensions.

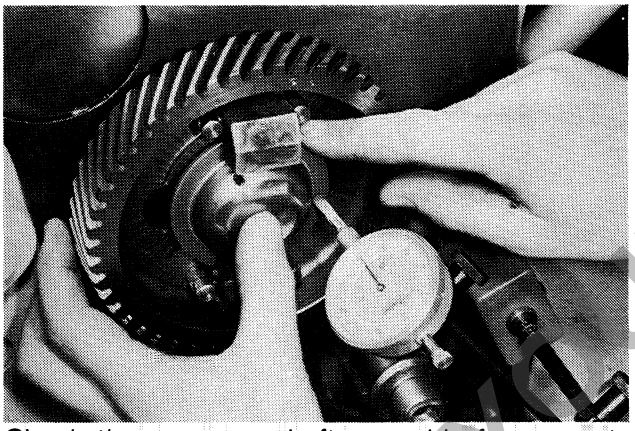
PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Governor Shaft And Flyweight Repair

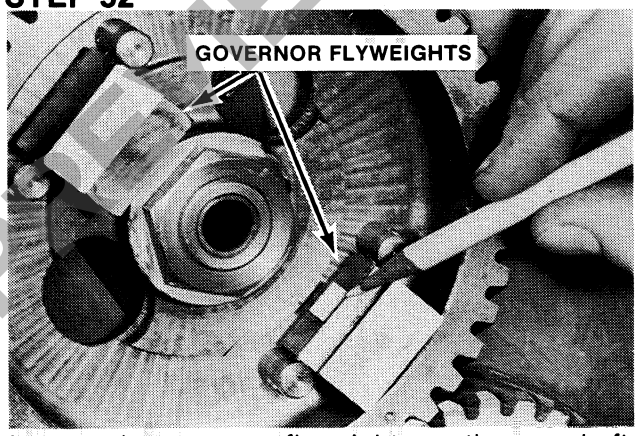
STEP 51





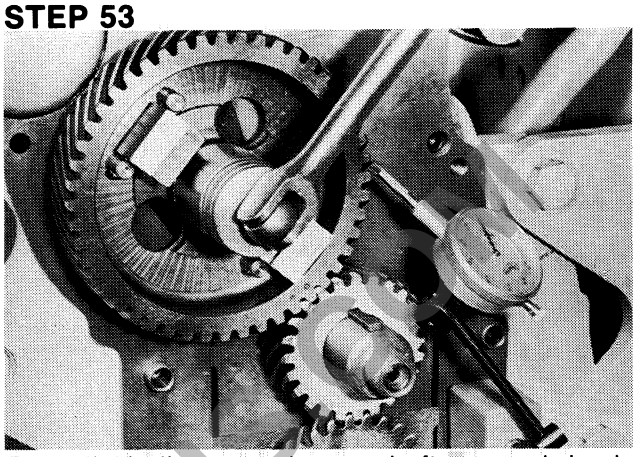
Check the governor shaft assembly for run-out. Use a dial indicator. Apply hand pressure to the governor shaft and rotate the governor shaft to check for run out. Run-out must not be more than 0.010" (0.254 mm). Replace the governor shaft if the run-out is more than 0.010" (0.254 mm).

STEP 52



Inspect the governor flyweights on the camshaft gear. The weights must move freely on the hinge pins. Check the weights for flat areas in the groove where the weights make contact with the governor shaft. Replace the camshaft gear if the wear on the weights is too much.

STEP 53



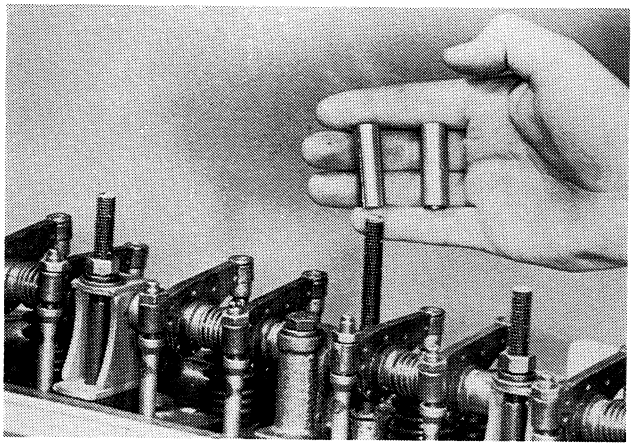
Put a dial indicator on the camshaft gear and check the gear clearance between the camshaft gear and the crankshaft gear. Gear clearance must be 0.0002 to 0.006" (0.00508 to 0.1524 mm). The gears must be replaced if the gear clearance is more than 0.006" (0.1524 mm).

NOTE: *Too much gear clearance can also be caused by worn camshaft bushings.*

PREVIEW YOUFIXTHIS.COM

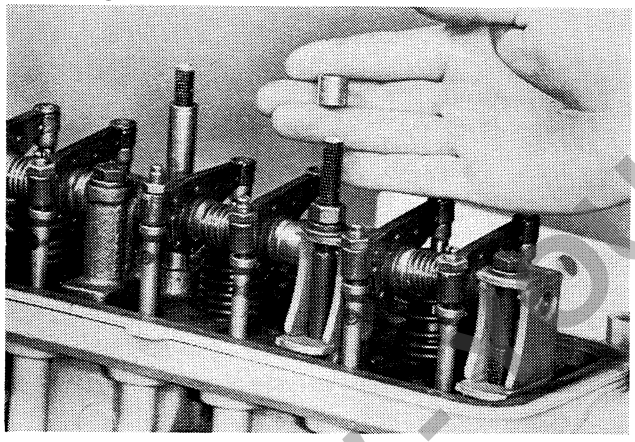
Download full manual at youfixthis.com
Issued 5-80 Printed in U.S.A.

STEP 96



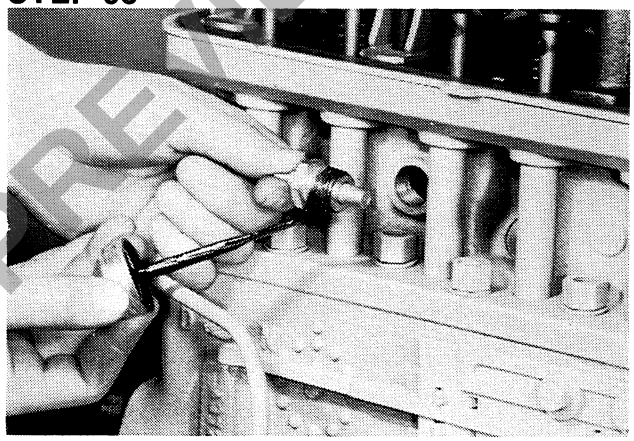
Install the two long spacers on the cover retaining stud.

STEP 97



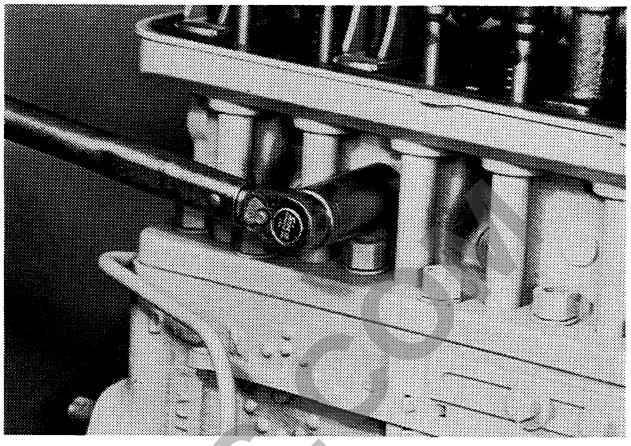
Install the short spacer on each intermediate bracket stud.

STEP 98



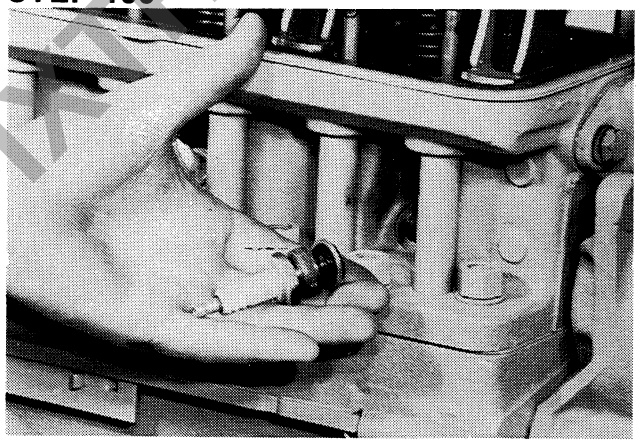
Put antiseize compound (Case Part Number M20458) on the threads of the water temperature sender.

STEP 99



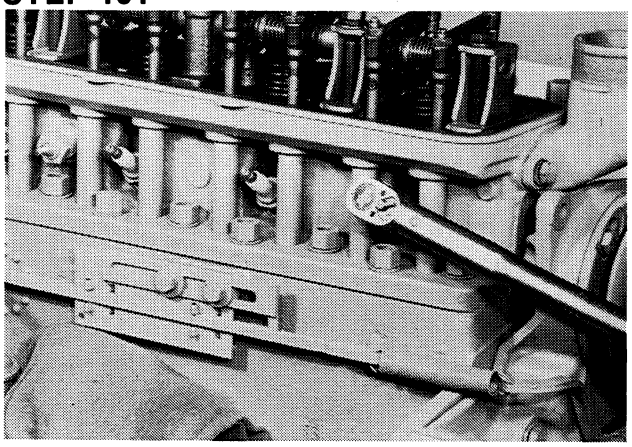
Install and tighten the water temperature sender.

STEP 100



Install the spark plugs and gaskets. The face of the gasket with the smallest outside diameter must be toward the spark plug.

STEP 101



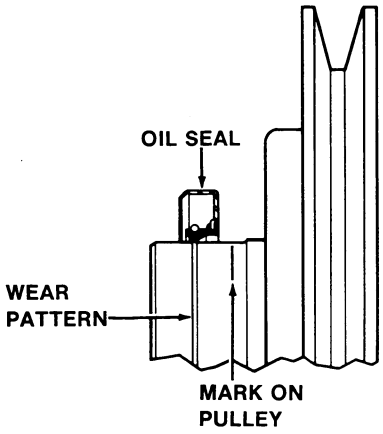
Tighten the spark plugs to a torque of 32 to 35 ft. lbs. (43 to 48 Nm)(4.3 to 4.8 kgm).

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

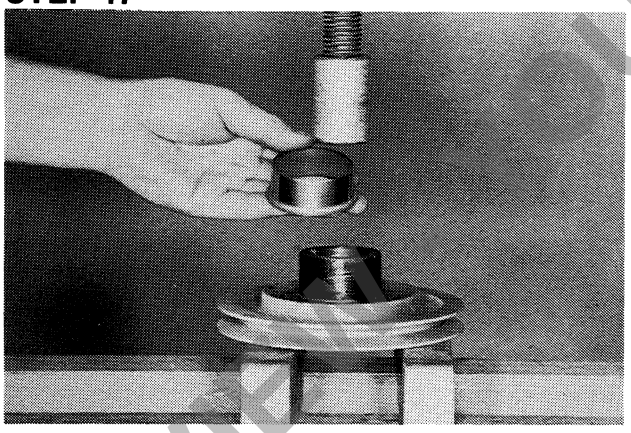
Issued 5-80 Printed in U.S.A.

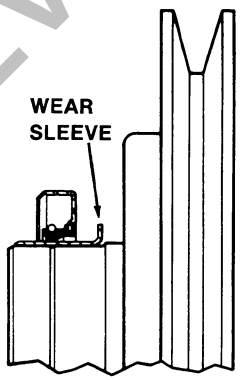
STEP 16



Check the wear pattern on the pulley boss caused by the lip of the oil seal. The wear sleeve must be put over the worn area. Put a mark on the pulley boss to find how far the wear sleeve must be pressed on the pulley boss.

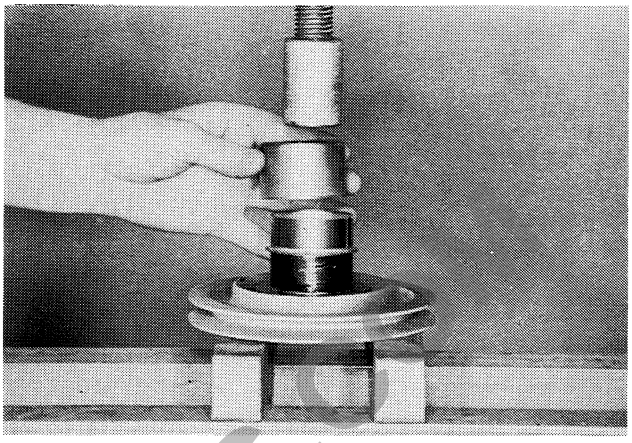
STEP 17





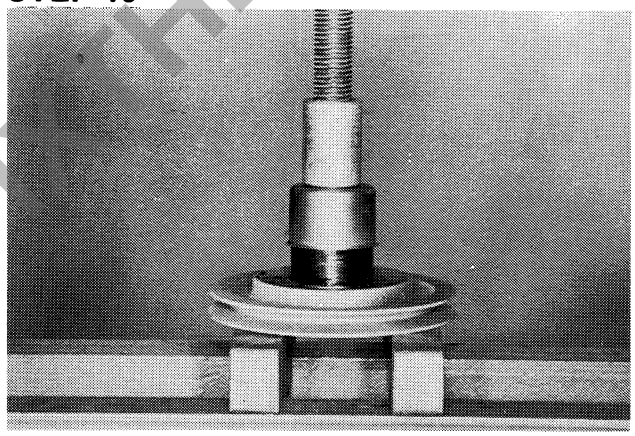
Install the wear sleeve over the boss on the crankshaft pulley. The flange on the wear sleeve must go on the boss first.

STEP 18



Install the installation tool over the wear sleeve.

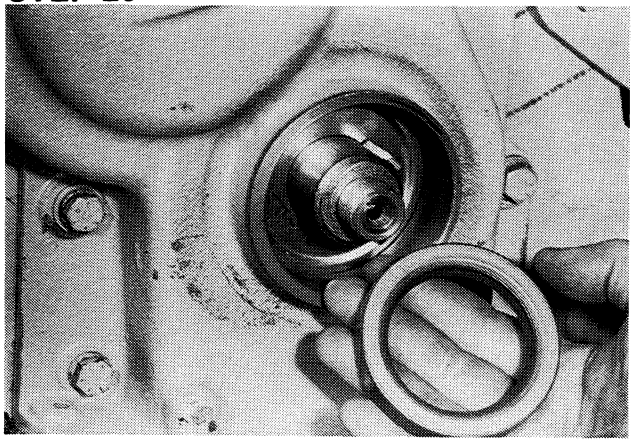
STEP 19



Press the wear sleeve on the boss until the sleeve reaches the mark that was put on the boss in Step 16. Remove the installation tool.

NOTE: *The flange of the wear sleeve does not have to be removed. There is enough clearance.*

STEP 20



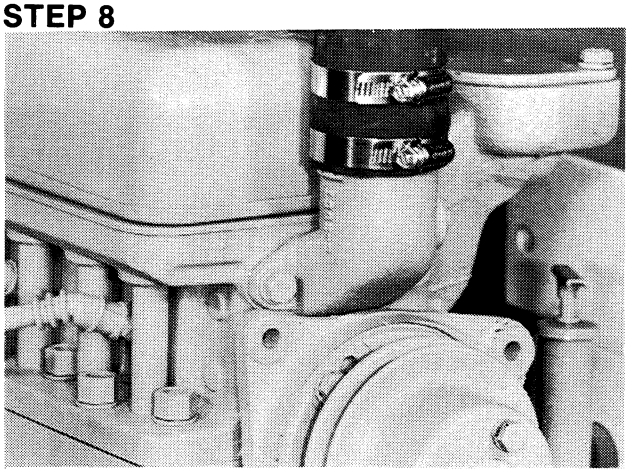
Install a new oil seal into the timing gear cover. The lip of the oil seal must be toward the inside of the cover. Put petroleum jelly on the oil seal before installation.

Download full manual at youfixthis.com

Thermostat Removal

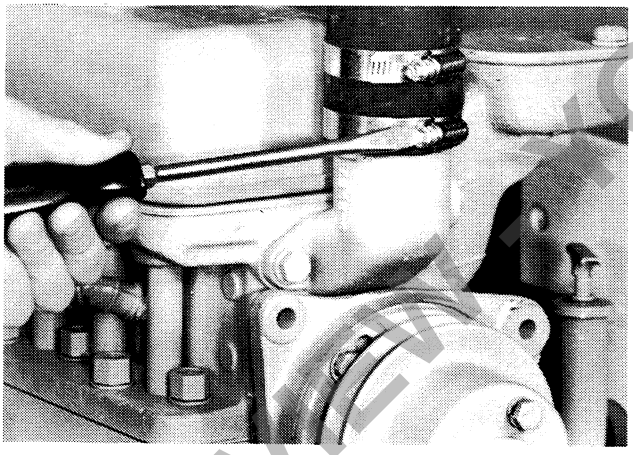
NOTE: *Drain the radiator before removing the thermostat.*

STEP 8



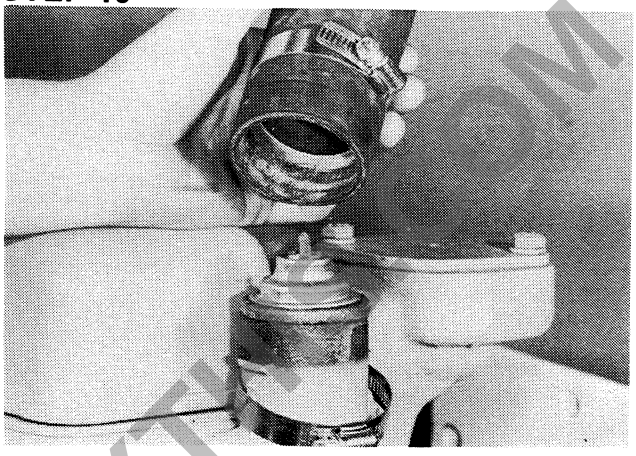
The thermostat is in the water outlet elbow on the front of the cylinder head.

STEP 9



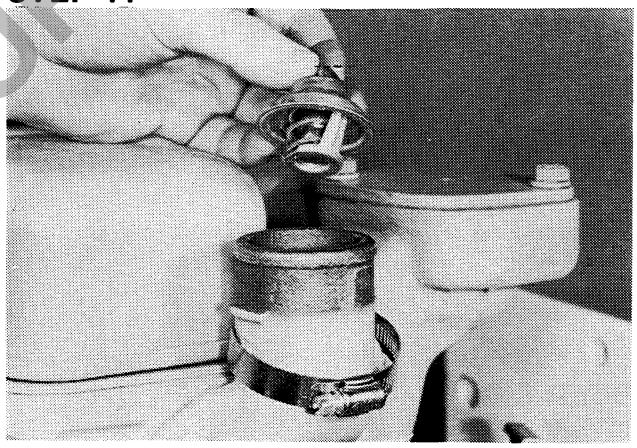
Loosen the lower hose clamp.

STEP 10



Remove the hose from the water outlet elbow.

STEP 11



Remove the thermostat.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Issued 5-80 Printed in U.S.A.

SPECIFICATIONS

INJECTOR NUMBER	NUMBER OF ORIFICES	VALVE LIFT	NOZZLE LEAKOFF RATE	MAXIMUM OPENING PRESSURE BETWEEN CYLINDERS
A37836 A50970 A51234 A140827 A140828 A140829 A154542	4	0.009″ (0.2286 mm) or 1/2 turn off valve seat	3 to 10 drops in 30 seconds at 1500 PSI (10 341 kPa) after first drop appears (service injector)	100 PSI (689.5 kPa)
A51987	5	0.0135″ (0.3429 mm) or 3/4 turn off valve seat	3 to 10 drops in 30 seconds at 1500 PSI (10 341 kPa) after first drop appears (service injector)	100 PSI (689.5 kPa)

INJECTOR NUMBER	COLOR CODE	FREE LENGTH	NO. COILS	WIRE DIAMETER	SPRING OD	COMPRESSED
A50970 A51234 A51987 A140827 A140828 A140829 A154542	RED	0.563″ (14.3 mm)	7.5	0.058″ (1.47 mm)	0.276″ (7.01 mm)	0.456 to 0.478″ at 29 lbs. (11.58 to 12.14 mm at 13.2 kg)
A37836	NO COLOR	0.536″ (13.61 mm)	7	0.056″ (1.42 mm)	0.272″ (6.91 mm)	0.435 to 0.457″ at 27 lbs. (11.05 to 11.61 mm at 12.3 kg)

SPECIAL TORQUES

Fuel Injector Clamp Capscrews	18 to 22 ft. lbs.	24 to 30 Nm
Fuel Injector Leakoff Nuts	35 to 45 in. lbs.	4 to 5 Nm
Fuel Injector Pressure Adjusting Screw Locknut	70 to 75 in. lbs.	7.8 to 8.4 Nm
Fuel Injector Tube Nuts	18 to 22 ft. lbs.	24 to 30 Nm
Fuel Injector Valve Lift Adjusting Screw Locknut	40 to 45 in. lbs.	4.5 to 5.0 Nm

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

TROUBLESHOOTING FOR THE STARTING CIRCUIT

General Information

Many problems in starting the engine can be corrected by doing the following checks:

1. Check the condition of the 20 ampere fuse in the instrument panel.

2. Check the condition of the battery. See Section 4005 for instructions. Clean the battery posts and the connectors at each end of the battery cables. Also check the ground cable between the starter mounting bolt and the left side of the frame.

3. Check for broken wires and damaged insulation on the wires. Replace all broken or damaged wiring.

4. Check all connections at the starter solenoid (or magnetic switch), key switch, and wiring harness plugs. Clean and tighten all connections.

5. If the starter still does not run after you do these checks, check the starting circuit.

Starting Circuit Check

1. Use a voltmeter or 12 volt test lamp to do the following checks.

2. If the machine has a:

   a. Diesel engine, disconnect the wire from the fuel shutoff solenoid at the fuel injection pump.

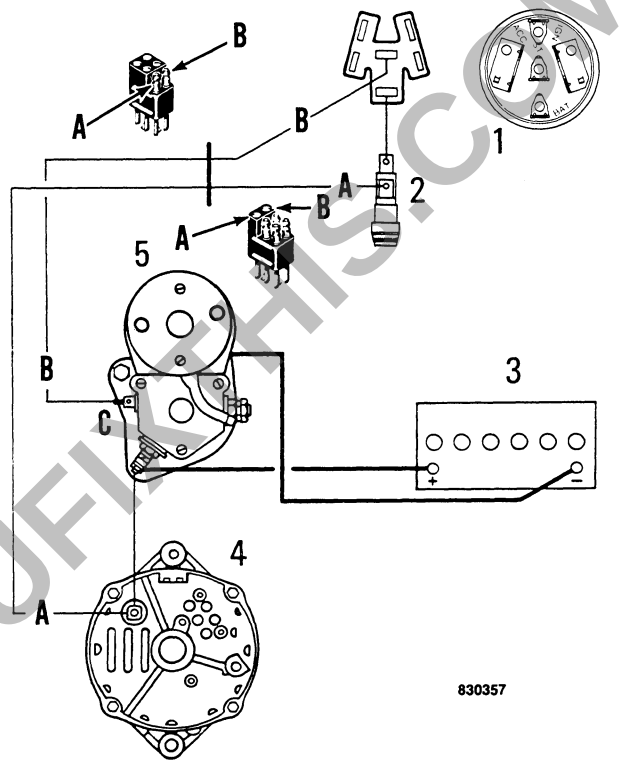
   b. Gasoline engine, remove the coil wire from the ignition coil.

3. Use the starting circuit diagram for the machine you are checking.

   a. Connect a jumper cable to the BAT and S terminals on the starter solenoid (or magnetic switch).

   b. If the starter ran correctly, the starter and starter solenoid (or magnetic switch) are good. Continue the check at step 5.

   c. If the starter did not run, continue the check.



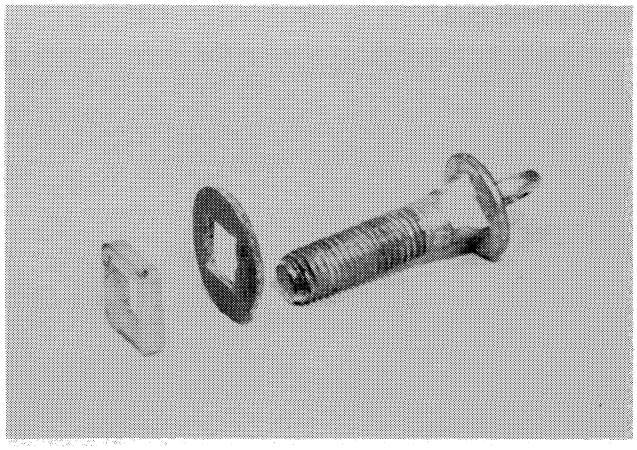
1. *Key Switch*
2. *20 Ampere Fuse*
3. *12 Volt Battery*
4. *Alternator*
5. *Starter*

Starting Circuit, Diesel Engine

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

11. Remove the insulators from the field terminal.



005420

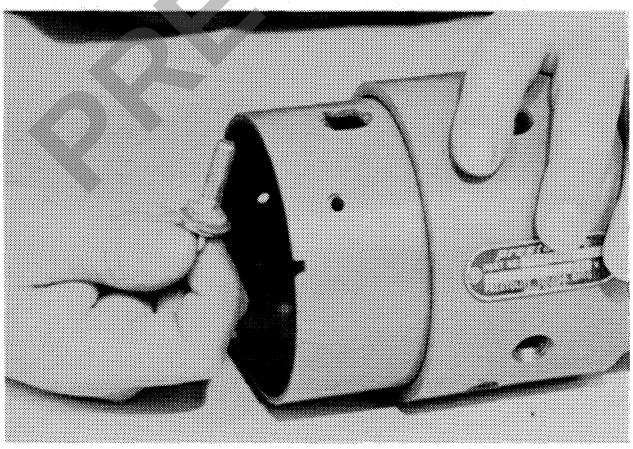
Installing the Field Coils and Field Terminal

1. Install the insulators on the field terminal in the sequence shown.



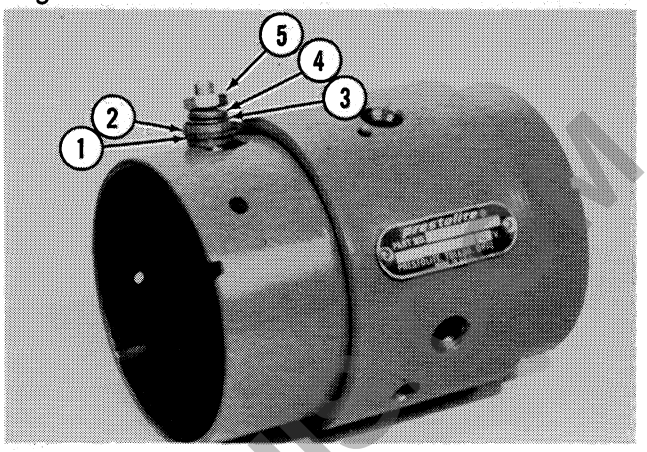
005420

2. Install the field terminal.



005419

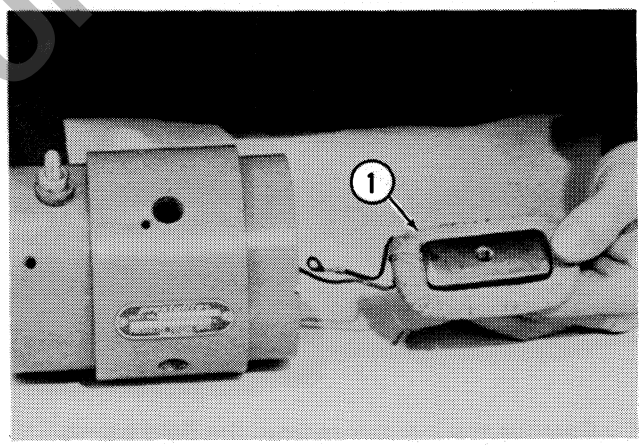
3. Install the thin insulator, thick insulator, flat washer, lock washer, and nut on the field terminal. Tighten the nut.



005416

1. *Thin Insulator*
2. *Thick Insulator*
3. *Flat Washer*
4. *Lock Washer*
5. *Nut*

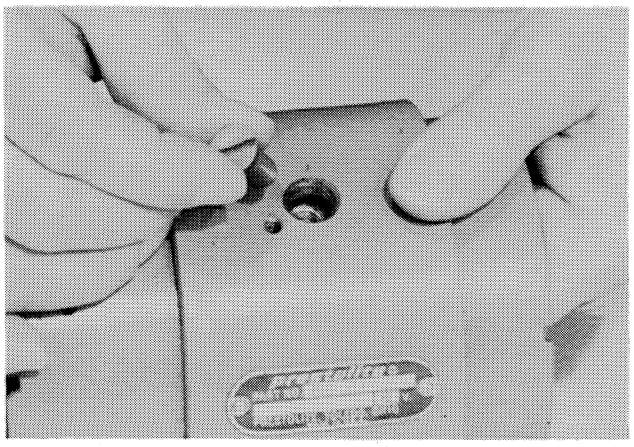
4. Install the single field coil and pole shoe as shown.



1. *Long Lip of Pole Shoe*

005415

5. Install the pole shoe screw.



005522

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

6003

HYDROSTATIC SYSTEM DIAGRAMS AND OPERATION

TABLE OF CONTENTS

General Information 6003-2

Piston Pump 6003-2

Circuit Relief Valve 6003-2

Pressure Release Valve 6003-2

Oil Flow, Piston Pumps in Neutral 6003-2

Diagram 6003-3

Oil Flow, Machine Moving Forward 6003-4

Diagram 6003-5

Oil Flow, Machine Moving Backward 6003-6

Diagram 6003-7

How Oil From a Piston Pump Turns the Motor 6003-8

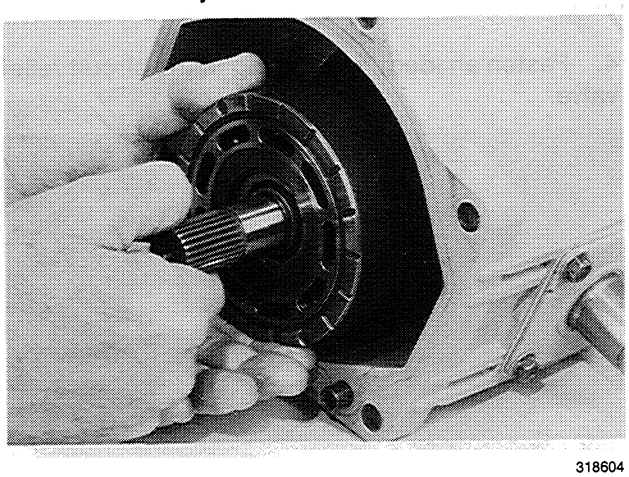
Written In *Clear And Simple English*

PREVIEW - YOUFIXTHIS.COM

CASE CORPORATION 8-42080 Printed in U.S.A.
Issued January 1984

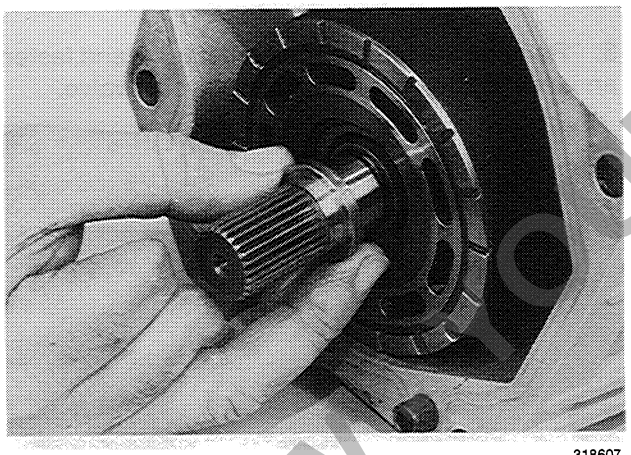
Download full manual at youfixthis.com

47. Install the cylinder block on the shaft.



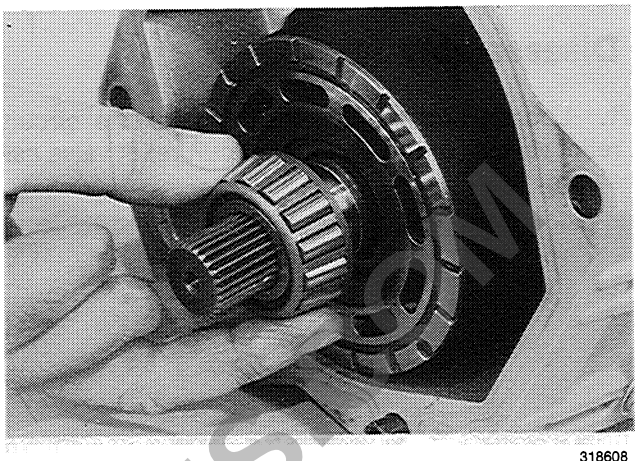
318604

48. Install the spacer so that the chamfer is toward the cylinder block.



318607

49. Install the bearing.



318608

PREVIEW YOUFIXTHIS.COM

Download full manual at youfixthis.com

6006

HYDROSTATIC CONTROLS

TABLE OF CONTENTS

Illustration of Hydrostatic Controls 6006-2

Troubleshooting 6006-3

Machine Moves Slightly With Control Lever in Neutral 6006-3

Machine Will Not Move at Maximum Speed 6006-3

Adjustment of Control Linkage 6006-4

Written In *Clear And Simple English*

PREVIEW - YOUFIXTHIS.COM

CASE CORPORATION

8-42080

Printed in U.S.A.
Issued January 1984

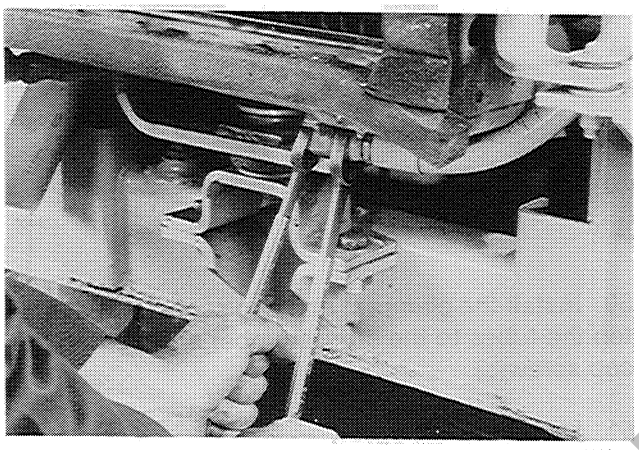
Download full manual at youfixthis.com

36. Loosen and remove the plug from the hose connected to the left side of the oil cooler and the cap from the fitting.

37. Connect the hose to the oil cooler.

38. Remove the plug from the other hose and the cap from the fitting.

39. Quickly connect the hose to the oil cooler.



323024

40. Make sure that the drain valve in the radiator is closed and fill the cooling system with coolant. The mixture must be half water and half ethylene glycol. If the outside temperature will be colder than -34° F (-36° C) add ethylene glycol.

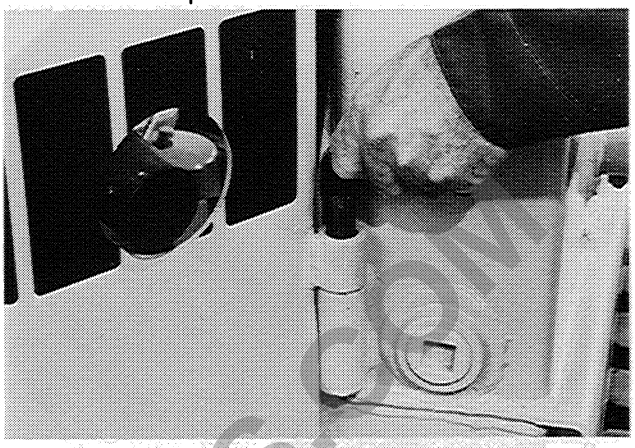
41. Start the engine and check for coolant, oil, and fuel leaks. Stop the engine.

42. Install the door.



323021

43. Install the pins that hold the door.



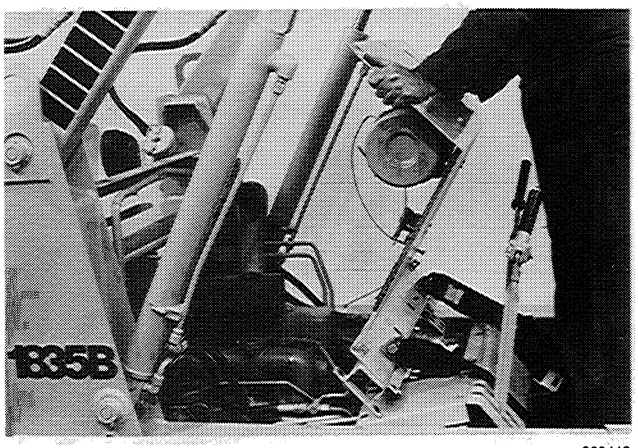
323019

44. Install the hair pins.



323017

45. Install the heat shield and align the heat shield with the rear crossmember and the crossmember with the frame.



323442

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

8004

DUAL GEAR PUMP (EQUIPMENT AND CHARGING)

TABLE OF CONTENTS

Specifications 8004-2

Operation 8004-2

Removal 8004-3

Installation 8004-7

Disassembly 8004-10

Inspection 8004-14

Identification of Causes of Pump Failure 8004-15

Assembly 8004-16

Illustration of Pump 8004-21

Written In *Clear And Simple English*

PREVIEW - YOUFIXTHIS.COM

CASE CORPORATION

8-42080

Printed in U.S.A.
Issued January 1984

Download full manual at youfixthis.com

8006

AUXILIARY CONTROL VALVE

TABLE OF CONTENTS

Exploded View 8006-2

Illustration of Installation 8006-3

Removal 8006-4

Installation 8006-8

Disassembly 8006-12

Inspection 8006-14

Assembly 8006-15

Written In *C*lear *A*nd *S*imple *E*nglish

PREVIEW - YOUFIXTHIS.COM

CASE CORPORATION

8-42080

Printed in U.S.A.
Issued January 1984

Download full manual at youfixthis.com

9001

LOADER

TABLE OF CONTENTS

Replacement of Cutting Edge 9001-2

Removing the Loader Frame 9001-4

Installing the Loader Frame 9001-9

Illustrations

Loader Frame 9001-16

Lift Cylinder Hydraulic Installation 9001-17

Bucket Cylinder Hydraulic Installation 9001-18

Loader Auxiliary Hydraulic Installation 9001-19

Pallet Forks and Brick Guard Installation 9001-20

Manure Fork and Grapple Attachment Installation 9001-21

Tool-Tach Attachment Installation ... 9001-22

Written In *Clear And Simple English*

PREVIEW - YOUFIXTHIS.COM

CASE CORPORATION 8-42080 Printed in U.S.A.
Issued January 1984

Download full manual at youfixthis.com

PREVIEW ONLY

You're viewing 25 of 1038 pages

The full manual includes:

- All 1038 pages, complete
- Searchable PDF (find any keyword)
- No watermarks
- Instant download
- Print-ready quality

GET FULL MANUAL NOW

Case 1835B Service Manual

Scan or click anywhere
youfixthis.com

Click anywhere on this page to get the full manual