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International Harvester

Service Manual

TD-7G & TD-8G,

100G & 125G

Crawlers

Volume 1 of 2

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**TD7G, TD8G,
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INDEX

This manual is divided into major sections covering various components of the machines. These sections are also indexed by title with thumb index tabs as shown below and to the right. To use this manual, grasp the right-hand side of the book between thumb and fingers. Bend book back and find the pages containing the corresponding section index tab. Section identification is also contained in the upper corner of each page.

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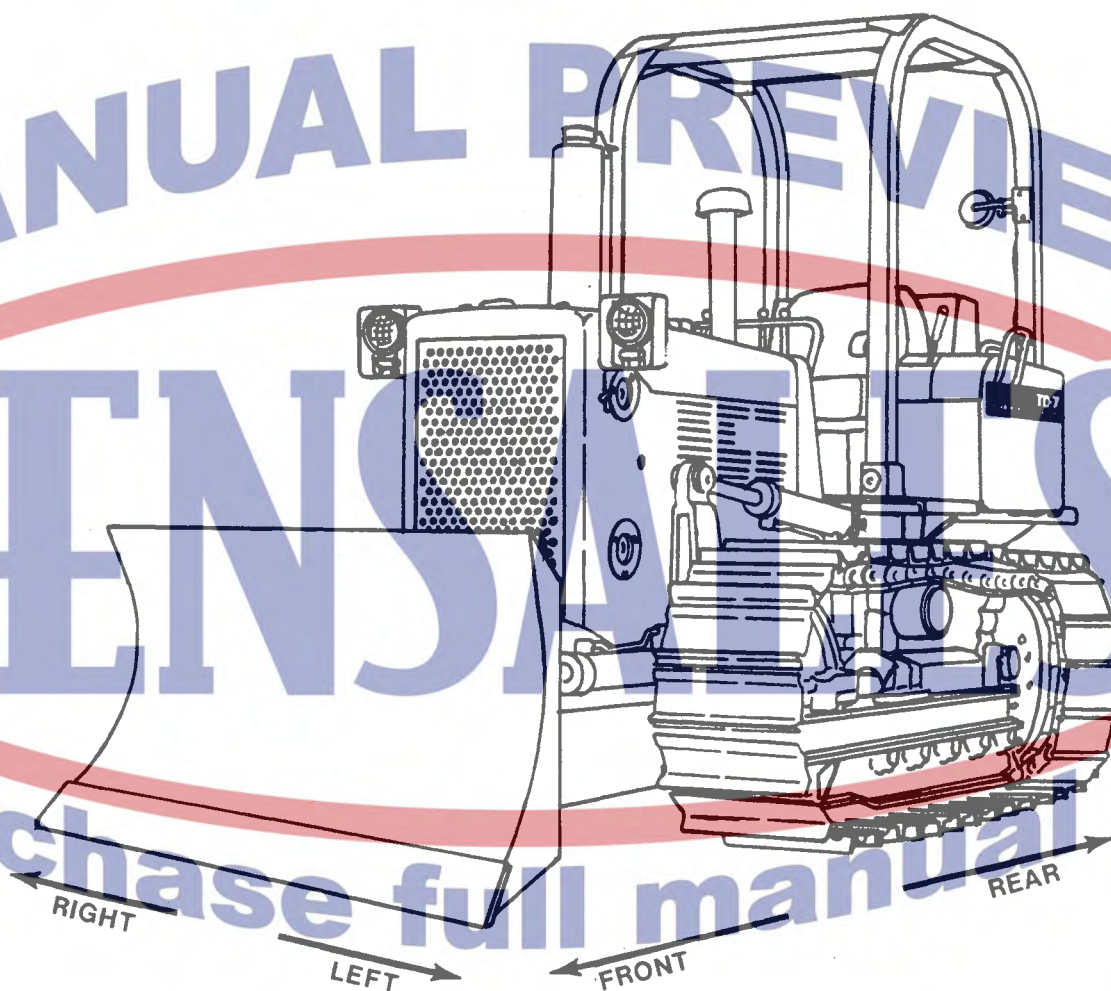
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GENERAL

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FIG. 1 — Model TD7E Crawler Tractor
Model TD7G Crawler Tractor Similar

The instructions contained in this service manual are for the information and guidance of the servicemen who are responsible for overhaul and repair of the machine.

Throughout this manual the use of the terms "left", "right", "front" and "rear" must be understood to avoid confusion when following instructions. These terms indicate the sides of the

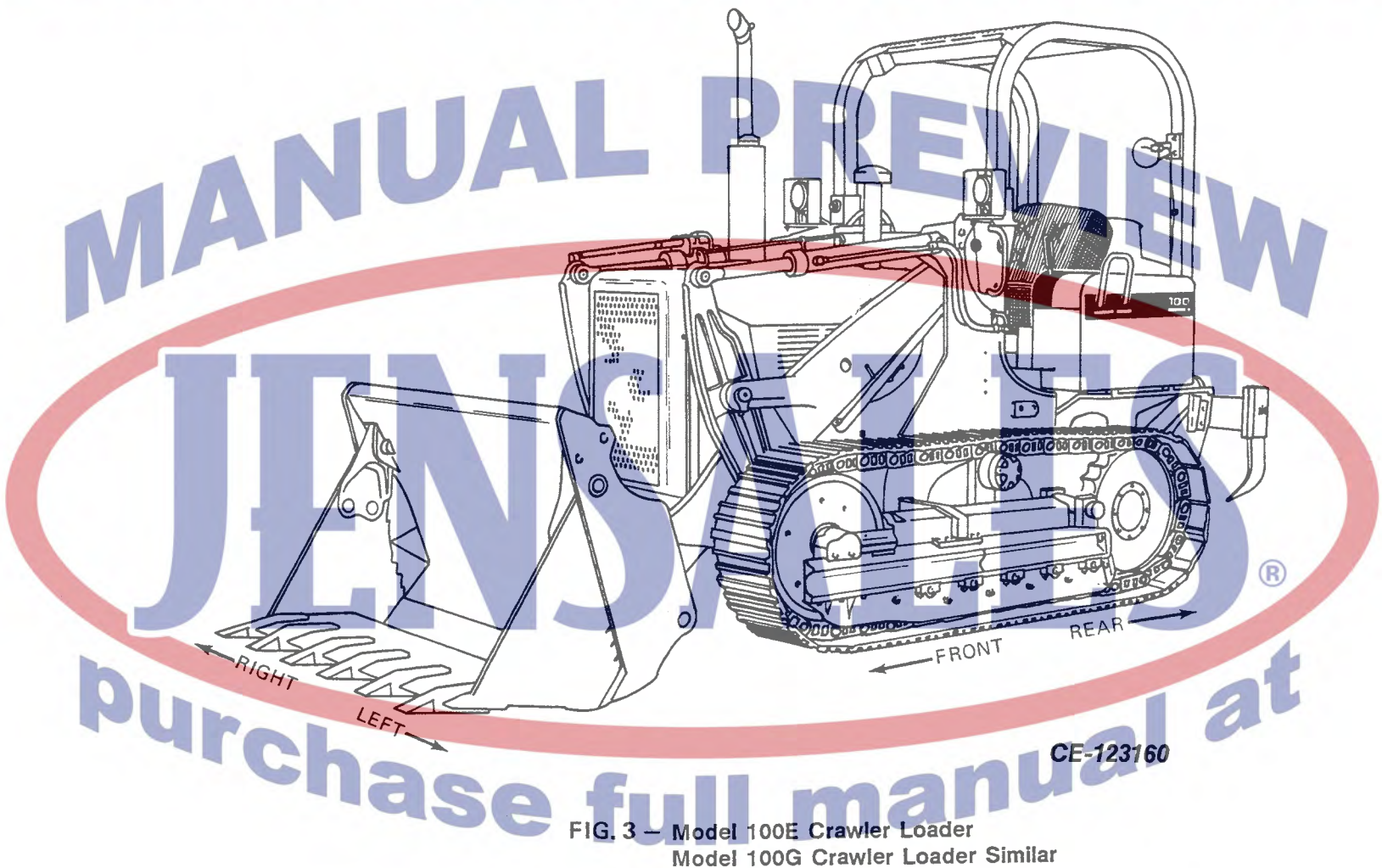
vehicle when facing forward in the operator's seat.

Due to a continuous program of research and development, some procedures, specifications and parts may be altered in a constant effort to improve the machines. Some illustrations are of a general application and may not show component parts accurately in all details.

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GENERAL



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RADIATOR

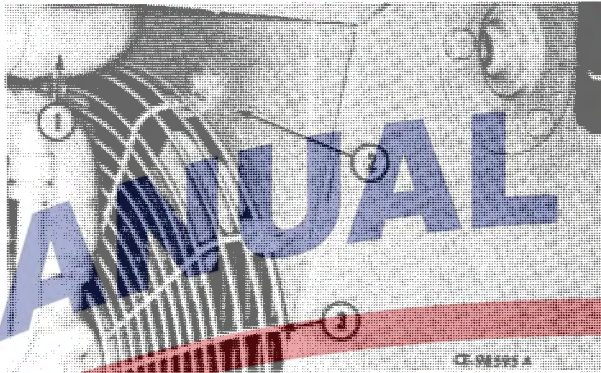


FIG. 4 — Fan Guard and Shroud Removal

1. Radiator upper hose
2. Fan shroud
3. Fan guard

6. Loosen the drive train oil cooler lower mounting bolts. Remove the top mounting bolts. Secure the top brackets to the door guard bracket (Fig. 5) leaving slack in the cable support cable. Remove the bottom mounting bolts and spacer and let the cooler hang in place.

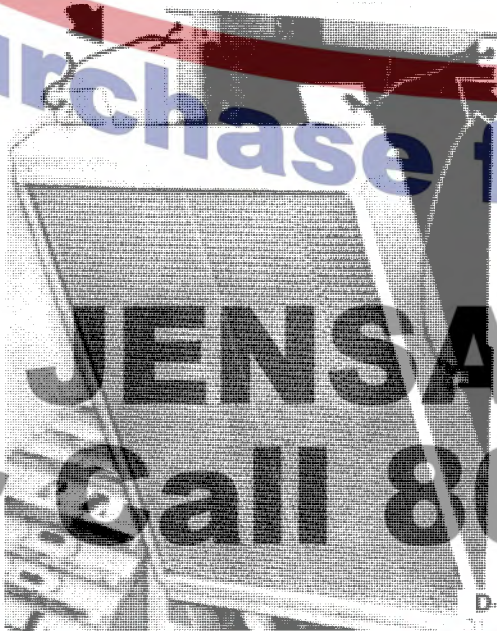


FIG. 5 — Oil Cooler

7. Attach two lifting adapters (1, Fig. 6) to the radiator (2). Connect the adapters to a hoist with a lifting sling (3).

8. Remove the four mounting brackets (4) by prying them free of the rubber mountings. It is not necessary to remove the rubber mountings from the radiator.

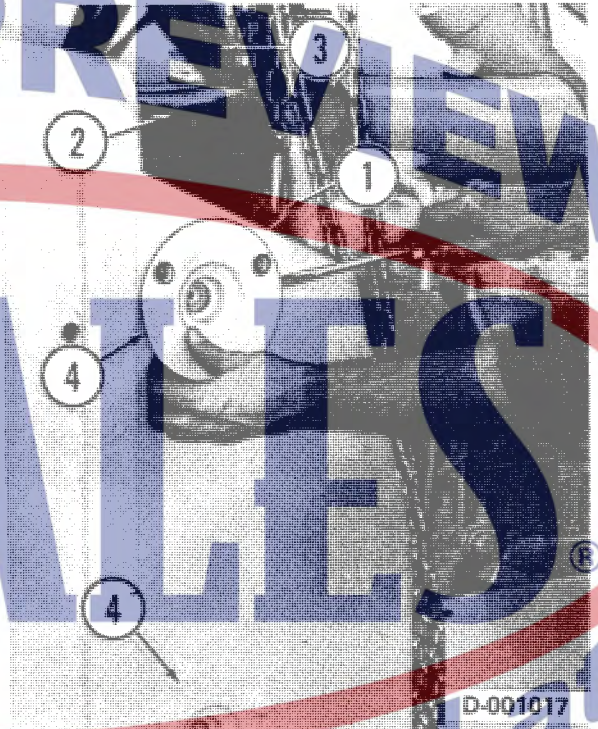


FIG. 6 — Mounting Bracket Removal

1. Lifting adapters
2. Radiator
3. Lifting sling
4. Mounting brackets

9. Disconnect the fan and position in the lower shroud.

10. Carefully hoist the radiator assembly with fan and lower fan shroud from between the guard and engine. Remove the fan from the lower fan shroud when the radiator is about half way up. As the lower fan shroud nears the fan hub on the engine, tip the radiator so it can pass without interference.

NOTE: If replacement of the rubber mountings in the radiator is necessary, they can be removed using a slide hammer threaded into the 3/8" NF nut of the mountings. Do not allow the slide hammer threaded rod to enter below the nut as it may contact and damage the radiator core fins.

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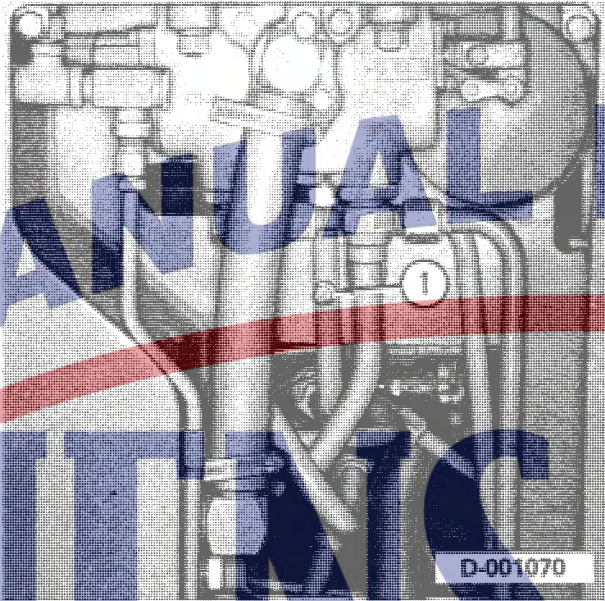


FIG 2 — Pressure Gauge Connection

2. **DOZER MODELS:** Start the engine and set at full throttle. Activate the blade lift circuit and hold on demand.

2. **LOADER MODELS:** Start the engine and set at full throttle. Activate the bucket rollback circuit and hold on demand.

3. Read and record the pressure on the gauge at which the relief valve unloads. Release the control lever. Refer to "SPECIFICATIONS" for the correct pressure setting.

4. If the pressure readings obtained are higher or lower than the amount specified, adjust the relief valve as follows:

a. Remove the plug (1, Figure 3) from the relief valve cap (3).

b. Turn the adjusting screw (2) clockwise to increase the pressure or counterclockwise to decrease the pressure. After the correct pressure is obtained, install the plug.

Note: Later models have a redesigned main relief valve with an external adjusting screw. Adjust the relief valve as follows:

Loosen locknut on relief valve while holding the adjusting screw from turning. Turn adjusting screw clockwise to increase pressure and counterclockwise to decrease pressure. After the correct pressure is obtained, tighten locknut.

5. Remove the gauge and install the access cover.

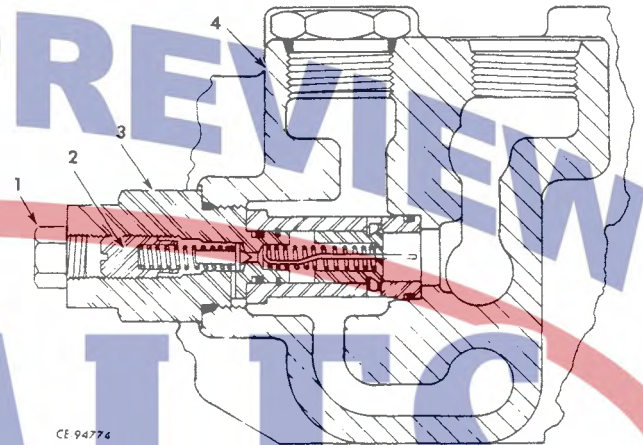


FIG 3 — Inlet Valve Cross Section

1. Pipe plug
2. Adjusting screw
3. Relief valve cap
4. Inlet valve body

LOADER CIRCUIT RELIEF VALVES



WARNING! Refer to "SAFETY PRECAUTIONS" in this section.

Boom Lift Circuit

1. Lower the boom and rest the bucket on the ground. Stop the engine and activate the loader controls to relieve any pressure in the system.

2. If equipped with an accumulator, close the manual shut-off valve.

3. Disconnect the hose from the tube to piston end of the boom cylinder. Plug the tube.

4. Connect a hand pump equipped with a 34474 kPa (5000 psi) pressure gauge to the open hose.

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PUMPS AND MOTORS

EQUIPMENT PUMP 125E & G WITH HYDRECO PUMP - Continued INSPECTION AND REPAIR - Continued

3. Check the clearance between the body and gear teeth. To measure this clearance, place a 0.127 mm (0.005 in.) thick shim at point "A", measure clearance at point "B" while holding the gear against the shim at point "A". The body and/or gears should be replaced if the clearance exceeds 0.254 mm (0.010 in.) at point "B". See Figure 26.

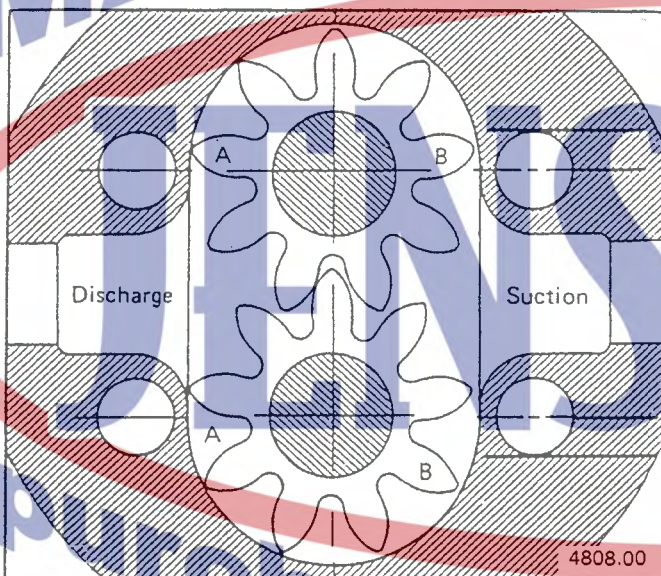


Figure 26 - Checking Body to Gear Clearance

5. Bearings should be examined visually for evidence of spalling of rollers and fracture of stamped cages. Check roughness of outer race by sliding rollers around periphery of cage. Any of these defects would be reason for replacement. Note: Bearings should be replaced in sets of four.

6. Check roller bearing for internal clearance by use of a feeler gauge. Bearings and gear assemblies should be replaced if clearance exceeds 0.075 mm (0.003 in.). See Figure 27. Note: Always replace the bearings if the gear assembly is replaced or vice versa.



Figure 27 - Checking Bearing Clearance

REASSEMBLY

Prior to reassembly, all parts should be deburred by sanding or stoning; washed in a solvent, wiped with a clean lint free cloth and dried with compressed air.

1. Install bearings using arbor press or bearing driver (Refer to Service/Special Tools in Section 2). Install flush to a maximum of 0.127 mm (0.005 in.) below front mounting plate and body face.

2. Assemble body section in the following steps:

A. Install seal (9) and backup ring (8) in seal plates (10). Seal and backup rings can be assembled before installation.

Note: Sharp edge of backup ring into groove of seal plate ... radius edge exposed.

Apply a film of grease on seal and backup ring to ensure retention in seal plate groove.

B. Place seal plate in body, bronze side up; again making sure seal and backup ring remain in place. High pressure pocket in seal plate must be towards outlet (high pressure) side of body.

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