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MANUAL PREVIEW

Caterpillar

Service Manual

D7 & D7E Crawlers

S/n 47A3396 & up

48A6393 & up

Service Manual

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SERVICE MANUAL

for

CATERPILLAR

D7 TRACTOR

SERIAL NUMBERS 47A3396-UP AND 48A6393-UP

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FUEL TRANSFER PUMP

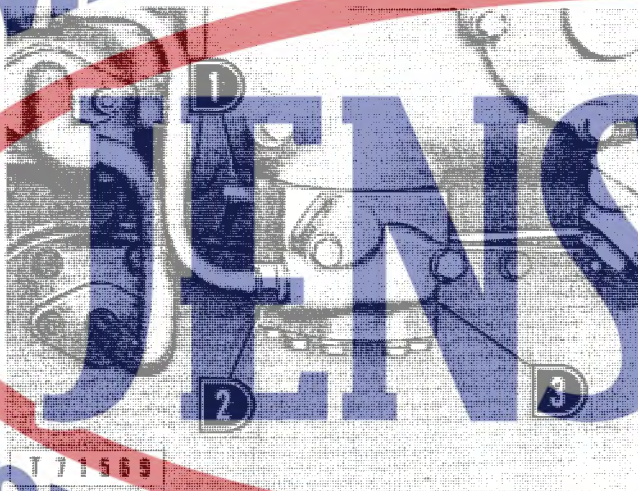
The gear-type fuel transfer pump is mounted on the bottom of the accessory drive housing and is driven by the accessory shaft.

Removal and Installation

Shut off the fuel at the fuel tank.

NOTE

Three bolts secure the transfer pump to the accessory drive housing. These three bolts have 9/16" hexagonal heads.



PREPARING TO REMOVE TRANSFER PUMP

1-Drain line. 2-Fuel line. 3-Transfer pump.

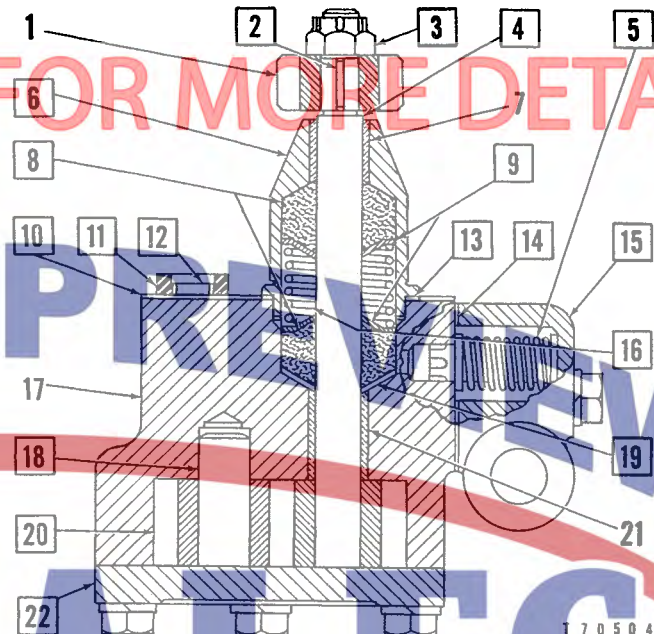
Lower pump (3) carefully to prevent loss of the rubber seals.

Replace all damaged seals and gaskets.

Disassembly and Assembly

1. Using a puller and a suitable step plate, remove gear (1) from shaft assembly (4).
2. Bearing (7) can be pressed out of seat assembly (6) and replaced if necessary.
3. The bearing (21) can be pressed out of the pump body (17) if necessary. See the group, SPECIFICATIONS.
4. Install the bearings (7) and (21) with the tapered ends toward the seals (8).
5. Replace all damaged seals and gaskets.

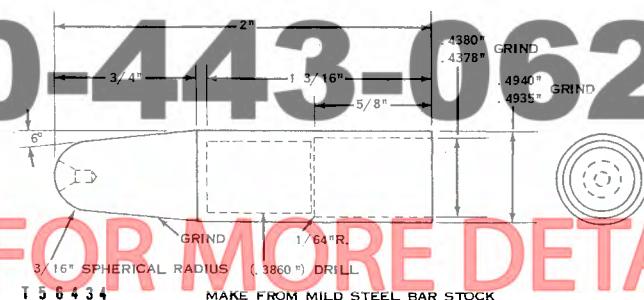
Prior to installation, soak seals (8), in a solution of 1/2 SAE 30 oil and 1/2 diesel fuel long enough to soften them. Tamp seals firmly into pump body bore and around shaft with a tamping tool. Use a guide over the end of pump shaft to guide seals over the



FUEL TRANSFER PUMP

- | | |
|--------------------------|--------------------|
| 1-Gear. | 12-Ferrule. |
| 2-Key. | 13-Gasket. |
| 3-Nut. | 14-Gasket. |
| 4-Shaft assembly. | 15-Adapter. |
| 5-Bypass valve assembly. | 16-Spring. |
| 6-Seat assembly. | 17-Body. |
| 7-Bearing. | 18-Shaft assembly. |
| 8-Seals. | 19-Gasket. |
| 9-Retainer. | 20-Idler gear. |
| 10-Gasket. | 21-Bearing. |
| 11-Seal. | 22-Cover. |

threads and sharp corners of shaft. Guide should remain in place when using tamping tool.



SEAL TAMPING TOOL GUIDE

PRIMARY FUEL FILTER

The primary fuel filter is located in the supply line between the fuel tank and the fuel transfer pump.

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Assembly



T 7 4 7 1 4

PREPARING TO DISASSEMBLE IMPULSE
DRIVE COUPLING

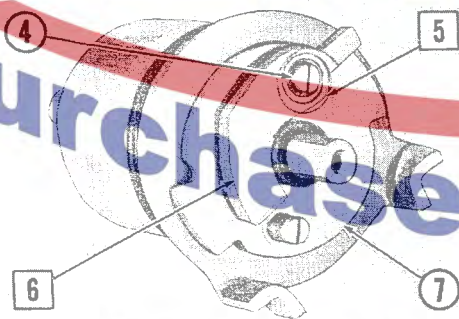
1-Locknut. 2-Drive cup. 3-Rotor shaft.

3. Mark the direction of the drive spring spiral in drive cup (2) and remove the spring.

NOTE

The spiral of the spring will wind in the wrong direction if the spring is installed incorrectly.

4. Mark pin (4) to allow the trip arm to be installed on the correct pin.



T 7 4 7 1 5

PREPARING TO REMOVE TRIP ARM

4-Pin. 5-Trip arm spring. 6-Trip arm. 7-Drive flange.

NOTE

If only drive cup (2) and trip arm (6) are to be removed, it is not necessary to remove the rotor from the magneto housing. Block or hold drive cup (2) to prevent it from turning and loosen locknut (1). Proceed with Steps 1 through 4.

5. Press drive flange (7) from the rotor shaft.

NOTE

When an arbor press is used to remove drive flange (7), the oil slinger is usually damaged and a new one must be installed.

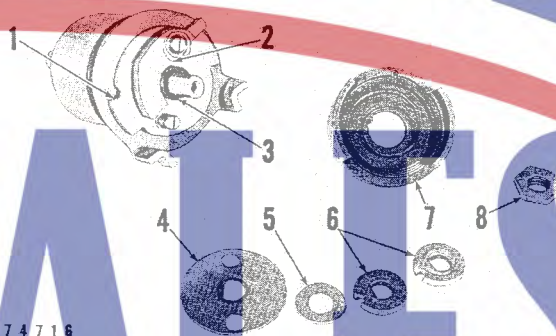
1. Make certain all parts are clean. Apply ball and roller bearing lubricant between the turns of the impulse spring.

2. Press drive flange (1) on the rotor shaft.

NOTE

Make certain an undamaged oil slinger is in place, before the drive flange is installed.

3. Install trip arm (2) and the trip arm spring.



T 7 4 7 1 6

IMPULSE DRIVE COUPLING ASSEMBLY

1-Drive flange. 2-Trip arm. 3-Spacer. 4-Plate. 5-Washer. 6-Drive cup spacers. 7-Drive cup. 8-Locknut.

4. Install spacer (3), plate (4), washer (5) and drive cup spacers (6).

5. Install drive cup (7) by first pulling the inner eye of the drive spring one turn out of the drive cup. Next place the cup on the rotor shaft and latch the inner eye of the spring in the notches in the drive cup spacers (6). Push the drive cup a short distance on the shaft and turn the cup one full turn (to wind up the drive spring). Push the drive cup (7) in place to engage the drive flange (1).

6. Install locknut (8) and stake it in two places to lock the nut on the shaft.

BEARING REMOVAL

A replaceable bearing is located in a bearing assembly on the rotor shaft between the magneto drive and the rotor magnet. The rotor must be removed from the magneto housing and the drive (either an impulse drive coupling or a driving lug) removed before the bearing assembly can be removed from the rotor shaft. See covering topics.

NOTE

The seal must be installed with the lip facing the magneto drive.

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TRACK ROLLER FRAME

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