



CLICK ANYWHERE FOR MORE DETAILS

MANUAL PREVIEW

Allis Chalmers

Operator's Manual

45 Motor Grader

purchase full manual at

Operator's Manual

JENSALES.COM
or Call 800-443-0625



CLICK ANYWHERE FOR MORE DETAILS

THIS IS A MANUAL PRODUCED BY JENSALES INC. WITHOUT THE AUTHORIZATION OF
ALLIS CHALMERS OR IT'S SUCCESSORS. ALLIS CHALMERS AND IT'S SUCCESSORS
ARE NOT RESPONSIBLE FOR THE QUALITY OR ACCURACY OF THIS MANUAL.

TRADE MARKS AND TRADE NAMES CONTAINED AND USED HEREIN ARE THOSE OF OTHERS,
AND ARE USED HERE IN A DESCRIPTIVE SENSE TO REFER TO THE PRODUCTS OF OTHERS.

AC-O-45 MG

CLICK ANYWHERE FOR MORE DETAILS

OPERATING INSTRUCTIONS

**AND
FIELD MAINTENANCE**

MODEL 45

DIESEL MOTOR GRADER

(Effective with Grader Serial No. 1780)



ALLIS-CHALMERS MFG. CO.

MILWAUKEE, WISCONSIN, U. S. A.

LITHO. IN U. S. A.

Price \$1.00

626111

THIS MANUAL SHOULD BE KEPT WITH THE GRADER

The additional information provided in this supplement is for Motor Graders having transmissions with spray lubrication system. Trans-

mission with this type lubrication system became effective on: Model 45 Grader Serial No. 2013 and Models 145 and 145T Graders Serial No. 406.

OIL RECOMMENDED FOR TRANSMISSIONS WITH SPRAY LUBRICATION SYSTEM

A good quality Automatic Transmission Fluid "Type A", purchased from a reputable oil company, is recommended for all atmospheric temperature ranges

For atmospheric temperatures ABOVE 32° F., a good quality non-foaming SAE 10W engine crankcase oil may be used if desired.

NOTE: Automatic Transmission Fluid "Type A" MUST be used for atmospheric temperatures below 32° F.

LUBRICATION GUIDE

200-Hour Service

Inspect:

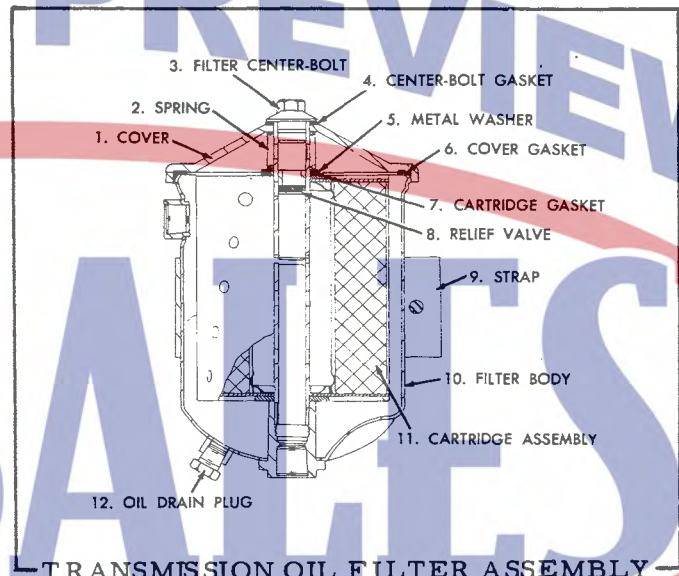
Transmission - Oil Level - Remove transmission oil level plug (Fig. 2) and check oil level. Remove transmission oil filler plug (Fig. 3) and add oil as necessary to raise oil level even with oil level plug opening in transmission case. Install and tighten the plugs.

1000-Hour Service

Service:

Transmission Oil Filter - Replace Oil Filter Cartridge - Thoroughly clean exterior of oil filter (Fig. 2). Refer to Fig. 1 and replace the filter cartridge as follows:

1. Loosen the filter center-bolt and cover and allow oil to drain from filter.
2. Remove filter center-bolt and cover as an assembly from filter body.
3. Withdraw cartridge from filter body and discard the cartridge. Remove and discard cover gasket.
4. Wipe out interior of filter body using a clean cloth dampened with clean fuel or solvent.
5. Withdraw cartridge gasket, metal washer, and the spring from filter center-bolt. Discard the cartridge gasket. Withdraw filter center-bolt from filter cover. Remove and discard center-bolt gasket and thoroughly wash the center-bolt and cover in a container of clean fuel or solvent.
6. Install a new center-bolt gasket in position on center-bolt, then insert the center-bolt into the filter cover.



TRANSMISSION OIL FILTER ASSEMBLY
FIG. 1

7. Place the spring in position on center-bolt, then install metal washer. Install a new cartridge gasket on the center-bolt. Install a new cover gasket in position in cover.
8. Install new cartridge in position on center-bolt and insert cartridge into filter body. Tighten the center-bolt to a torque of 25 to 30 lbs. ft.

Transmission Oil Pump Suction Pipe Screen - Clean - Loosen lower hose clamp on pump suction hose (Fig. 2) and free the hose from suction pipe welded in transmission cover assembly. Remove transmission cover assembly attaching capscrews and remove the cover assembly (with suction pipe and screen). Clean the suction pipe screen, reinstall transmission cover assembly, and connect the pump suction hose. Position and tighten the hose clamp.

Transmission - Change Oil - Climatic or operating conditions may require this service at shorter intervals. Remove transmission oil drain plug at lower rear of transmission case and allow oil to drain. Thoroughly clean the magnetic-type drain plug, then install and tighten securely. Remove transmission oil filler plug (Fig. 3), fill transmission with 2-1/2 gallons of the specified lubricant, and install oil filler plug.

After filling, start the engine and run at low idle speed (with engine clutch engaged) for several minutes to allow transmission oil filter to fill with oil, then stop the engine. Remove transmission oil level plug (Fig. 2) and check oil level; the oil level should be even with oil level plug opening. Add additional oil, if necessary, then install and tighten oil level and oil filler plugs.

TRANSMISSION SPRAY LUBRICATION SYSTEM

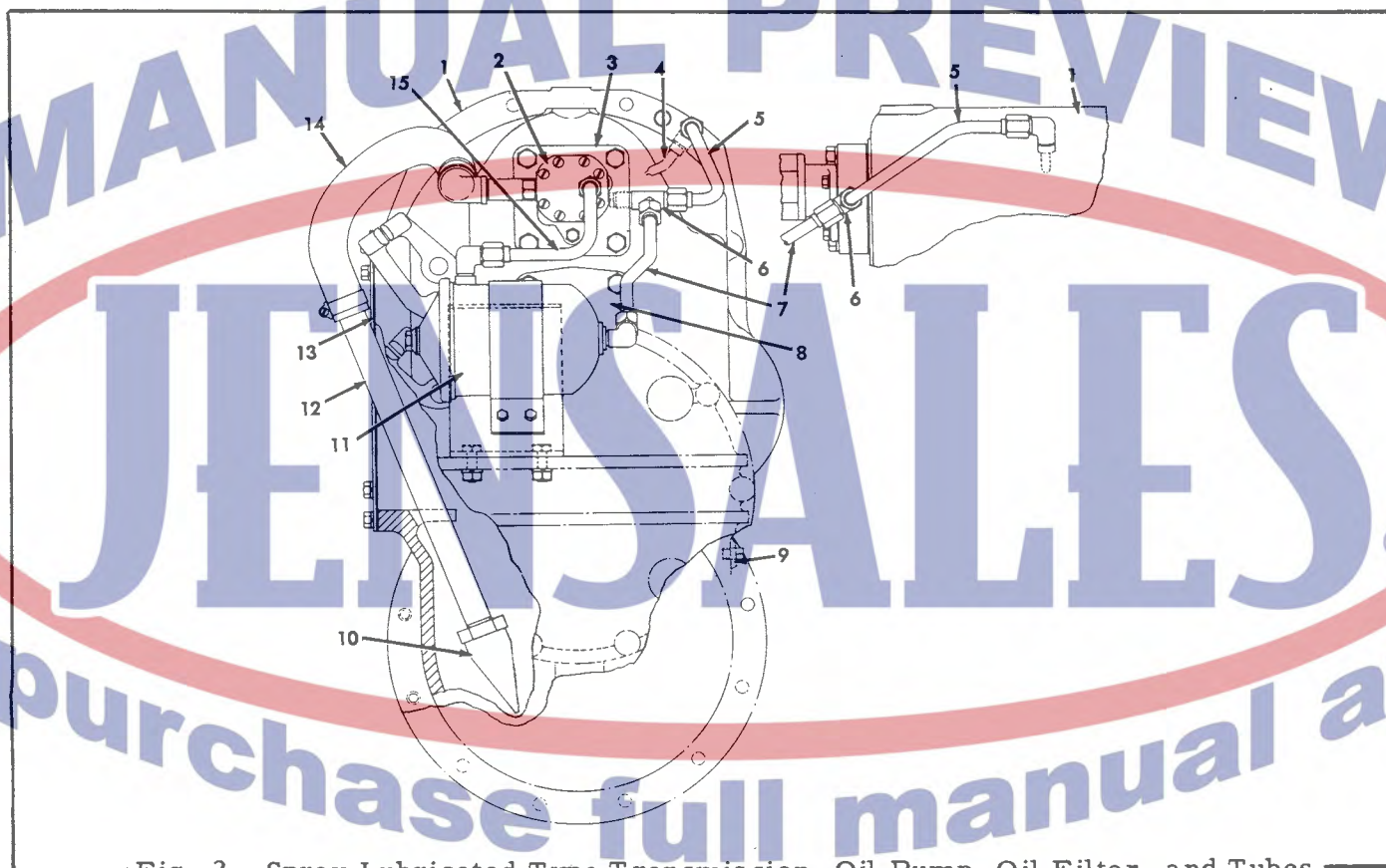


Fig. 2 - Spray Lubricated Type Transmission, Oil Pump, Oil Filter, and Tubes (Front View)

- | | |
|---|---------------------------------|
| 1. Transmission Case | 9. Oil Level Plug |
| 2. Transmission Oil Pump | 10. Oil Suction Screen |
| 3. Oil Pump Adapter | 11. Oil Filter |
| 4. Oil Spray Elbow | 12. Oil Suction Pipe |
| 5. Tee Fitting-to-Spray Elbow Oil Tube | 13. Transmission Cover |
| 6. Tee Fitting | 14. Oil Suction Hose |
| 7. Oil Filter-to-Tee Fitting Oil Tube | 15. Oil Pump-to-Filter Oil Tube |
| 8. Intermediate Shaft Front Bearing Cover | |

A. DESCRIPTION

The spray-type lubrication system of transmission (Fig. 2) consists basically of a gear type oil pump driven from front end of transmission top shaft, pump adapter assembly, full-flow type oil filter, oil spray elbow, and the necessary oil tubes and fittings. The oil

suction pipe with screen is welded in transmission cover as shown in Fig. 2.

With engine running and engine clutch engaged, the transmission oil pump draws oil from oil sump in bottom of transmission case and forces oil under pressure through the full-flow type oil filter. From the oil filter, oil is forced

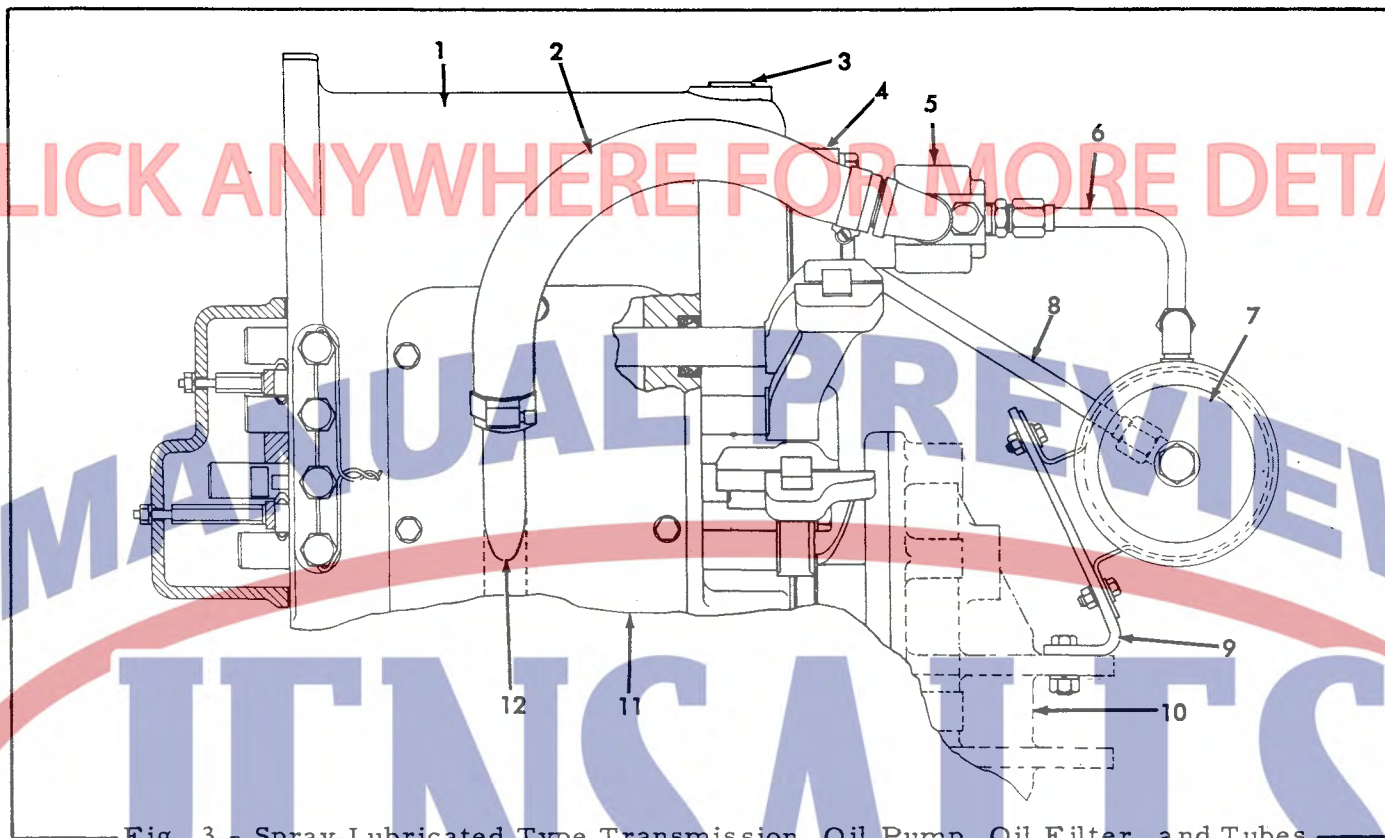


Fig. 3 - Spray Lubricated Type Transmission, Oil Pump, Oil Filter, and Tubes
(Right Side View)

1. Transmission Case
2. Oil Suction Hose
3. Oil Filler Plug
4. Oil Pump Adapter
5. Transmission Oil Pump
6. Oil Pump-to-Filter Oil Tube

7. Oil Filter
8. Oil Filter-to-Tee Fitting Oil Tube
9. Filter Mounting Bracket
10. Transmission Brake Cover
11. Transmission Cover
12. Oil Suction Pipe

through an external tube assembly to a tee fitting installed in oil pump adapter located on front of the transmission. A portion of oil entering the tee fitting passes through a drilled passage and a restricting plug (plug having a 1/16" diameter hole) in the pump adapter assembly to the top shaft front bearing. Oil forced into the top shaft front bearing then spills back to oil sump.

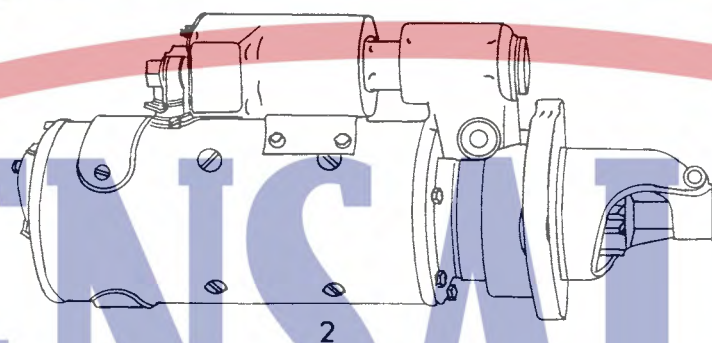
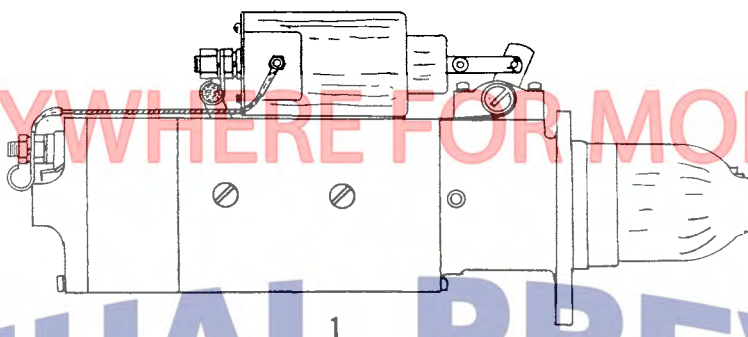
Another external oil tube connected to the tee fitting directs the main supply of oil from the pump to an oil spray elbow installed inside the transmission case. The oil spray elbow then directs the oil onto transmission top shaft and components. This oil returning to sump also lubricates the other internal components of transmission.

B. GENERAL

An oil pressure relief valve is provided in the

transmission oil pump assembly. The relief valve is of the pre-set type; the specified opening pressure is 80 to 100 P. S. I. Whenever the relief valve opens, oil is by-passed from the output side (pressure side) of the gears to the inlet side (suction side) of the gears. During normal operation, this valve remains closed. When operating in cold weather and the oil is too thick to flow freely, this valve opens and prevents excessive high pressure build up within the system.

The transmission oil filter assembly contains a relief valve assembly (Fig. 1). This valve is located in the filter center-bolt and is provided to direct the flow of oil from the inlet side of the filter cartridge to the outlet side (by-passing the cartridge) if the cartridge becomes clogged, or if in cold weather the oil is too thick to flow through the cartridge. This relief valve is of the pre-set type; the specified opening pressure is 35 to 40 P. S. I.



STARTER TYPES

1. Dyer Drive Type Starter
2. Enclosed Shift Type Starter with Over-running clutch

PERIODIC SERVICES

ENGINE STARTER - Dyer drive type starters (Item 1) used on units with dry type engine clutches and mounted on the exhaust manifold side of the engine must be removed periodically and cleaned after approximately each 1000 hours of service. Refer to the illustration in this supplement for positive starter drive identification. (Observe the exposed shift linkage of the Dyer drive type starter as opposed to the enclosed shift linkage of the over-running clutch type starter). If inspection discloses that the unit has a Dyer drive type starter (Item 1), and that it is mounted on the exhaust manifold side of the engine, service as follows:

1. On units so equipped, turn the electrical system master switch to the "OFF" position. On units not having an electrical system master switch, disconnect the battery-to-ground cable.
2. Disconnect the starter-to-ground strap from the starter. Disconnect solenoid switch wiring harness.
3. Remove capscrews and lockwashers attaching starter to flywheel housing and remove starter and adapter.
4. Clean any accumulation of foreign material from the starter drive.
5. After cleaning, coat the drive and armature shaft with S. A. E. 10 engine oil.
6. Saturate the oil wicks with S. A. E. 10 engine oil.
7. Install the starter and adapter in the clutch housing and tighten the attaching capscrews to a torque 95-116 lbs. ft.
8. Turn the electrical system master switch to the "ON" position, connect the battery-to-ground cable.
9. Start the engine and observe for proper operation of the starter.