



**Massey Harris
Massey Ferguson
Service Manual
555 Diesel
With PSB Pump**

Service Manual

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MANUAL PREVIEW

MASSEY-HARRIS

555 DIESEL

TRACTOR

WITH A SPECIAL SUPPLEMENT COVERING

THE MODEL 555 DIESEL WITH PSB PUMP



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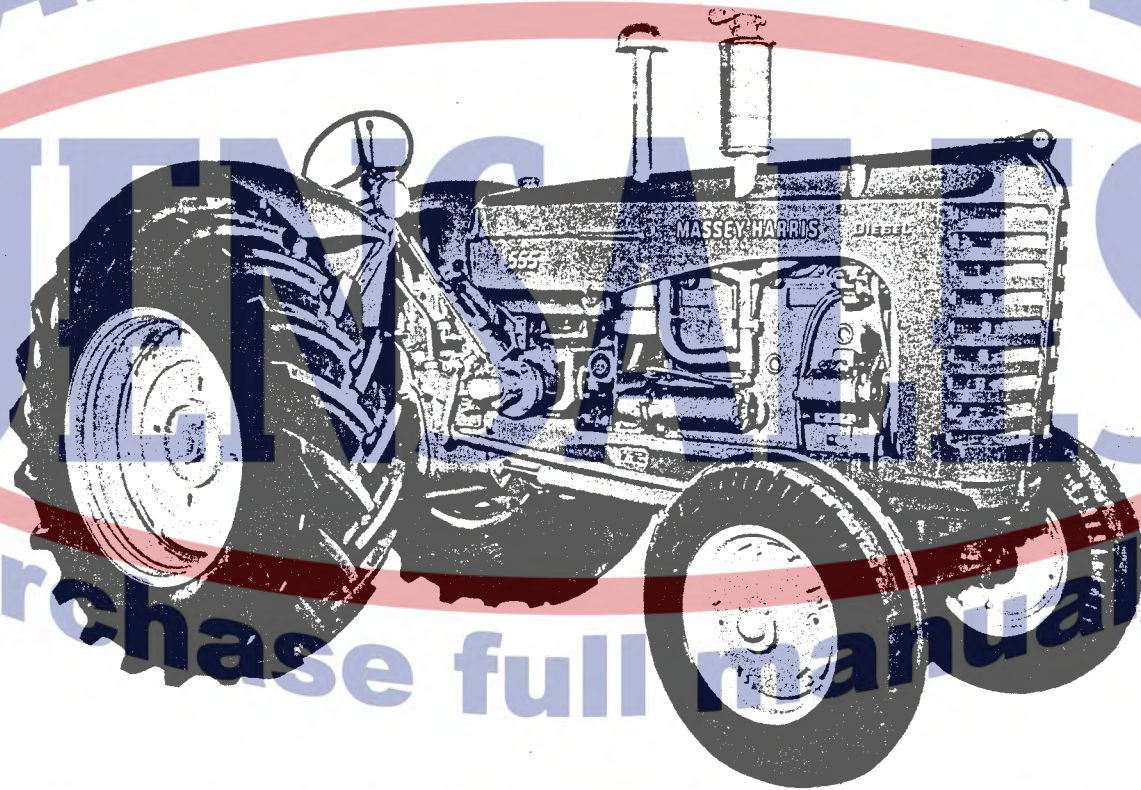
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555 DIESEL TRACTOR

** WITH A SPECIAL SUPPLEMENT COVERING
THE MODEL 555 DIESEL WITH PSB PUMP



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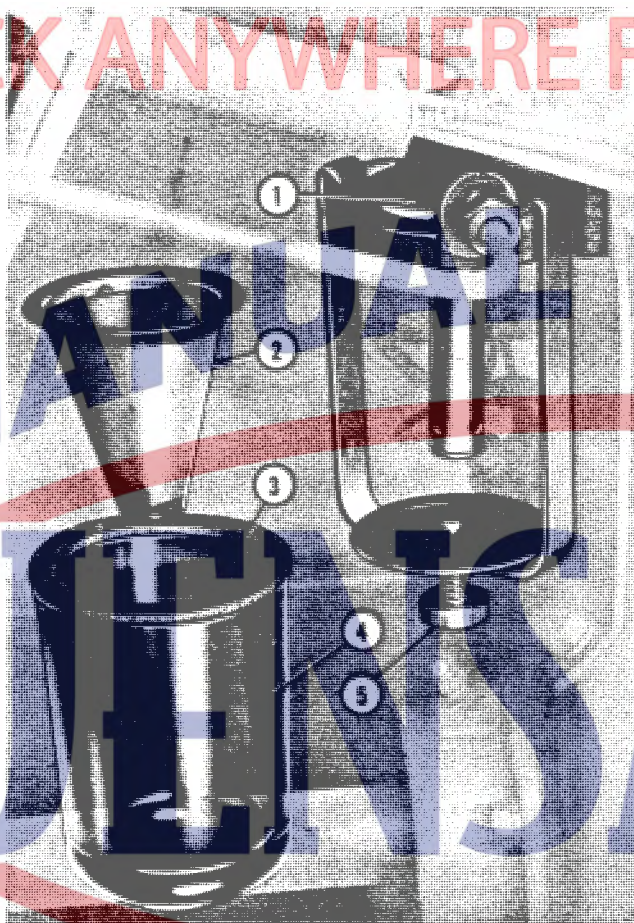


Fig. 12 - Water trap.

1. Fuel inlet from tank.
2. Strainer.
3. Gasket.
4. Bowl.
5. Thumb nut.

the start of each day's operation. The cartridge must be replaced at least every 240 hours. . . more often if necessary.

To replace cartridge, proceed as follows:

1. Wash outside of filter with clean Diesel fuel.
2. Close shut off valve at fuel tank No. 2, Fig. 11 and drain first stage filter completely.
3. Remove filter cover by loosening nut No. 1, Fig. 13.
4. Lift cartridge from fuel filter. **CAUTION:** Do not attempt to clean and re-use cartridge.
5. Wipe inside of filter with a clean, lintless, cloth.



Fig. 13 - First stage filter.

1. Nut and bleed screw.
2. Gasket.
3. Filter element.
4. Filter body.
5. Filter outlet.
6. Filter drain.

6. Install new filter, new gasket, and cover.
7. Open shut off valve No. 2, Fig. 11 on fuel tank.

8. Loosen bleed screw, No. 1, Fig. 13 until all air is out of the filter and clean fuel appears.

SECOND STAGE FILTER:

The second stage filter is a replaceable cartridge filter and is designed to stop any foreign matter that escapes the first stage filter.

CAUTION: Care should be exercised that lower seal plate No. 8 remains in filter body in the event that cartridge is changed and seal plate should stick to old cartridge.

The water and sludge in this filter must be drained from the filter at least every 60 hours. The replaceable cartridge must be replaced every 960 hours.

can be installed in the same position. Remove the eight cap screws holding the clutch cover to the flywheel. Loosen these screws in sequence, a little at a time otherwise there is danger of distorting the cover.

TO ASSEMBLE THE CLUTCH:

1. BE SURE NO GREASE, OIL, OR DIRT IS ON THE face of the flywheel, pressure plate, or disc facings.
2. Place clutch disc and clutch cover assembly against the face of the flywheel with the offset or reinforcing plate on the clutch

disc away from the flywheel or to the rear. (Note your cover and flywheel marks).

3. Clean the clutch drive shaft and push it back in place being sure that the release bearing and sleeve are in place. It may take a little patience to get the splines on the shaft lined up with the splines on the disc hub.
4. Replace the eight cap screws holding the cover assembly to the flywheel. Tighten the screws a little at a time so that the cover will pull up evenly without distortion.
5. Replace the clutch housing and bearing

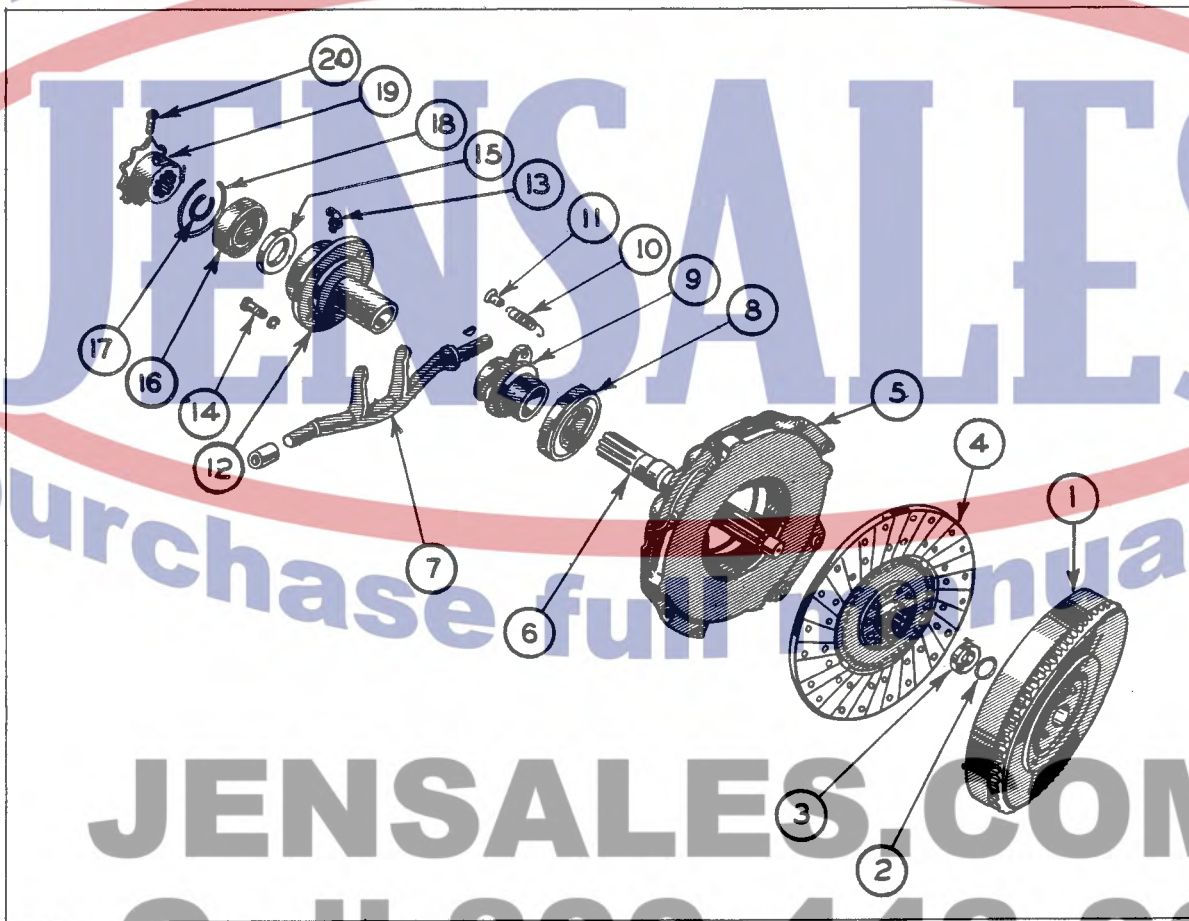


Fig. 42 - Clutch assembly.

1. Flywheel assembly.
2. Spacer for pilot bearing.
3. Pilot bearing (ND No. 7505).
4. Driven plate assembly.
5. Cover and pressure plate assembly.
6. Clutch shaft.
7. Clutch release fork.
8. Clutch release bearing.
9. Sleeve for clutch release bearing.
10. Bearing return spring.

11. Pin spring anchor.
12. Housing, clutch shaft bearing.
13. Grease fitting.
14. Bolt and lock washer.
15. Oil seal.
16. Clutch shaft bearing.
17. Snap ring bearing to shaft.
18. Snap ring bearing to housing.
19. Coupling.
20. Set screw.



1. Control valve handle.
2. High speed stop screw.
3. Slow speed stop screw.
4. Adjustable plate.
5. Manifold and control valve.
6. Slow speed stop screw.
7. Adjustable plate.
8. Mounting bracket.
9. High speed stop screw.

Fig. 73 - Control valve.

CONTROL VALVE:

The control valve, Fig. 73, is a double acting open center valve. The oil is by-passed through the valve when the valve is in neutral position. A relief valve is incorporated in the control valve and is set to open at approximately 1300 PSI.

HIGH SPEED ADJUSTMENT:

The speed the ram travels may be controlled by the high speed stop screws, Nos. 2 and 9, Fig. 73. If the high speed stop screws were set so the control valve could be fully open, then the ram would travel at its fastest speed. If these screws were set so the control

valve could be only partially opened, the ram would travel at a slower speed.

The speed of the ram would depend on the amount the control valve was opened.

LOW SPEED ADJUSTMENT:

At times it is desirable to have high speed and also low speed control for fine adjustments. This can be done by moving the control lever to the left and moving it backward or forward. This slow speed would then be controlled by slow speed stop screws Nos. 3 and 6, Fig. 73 and would be adjusted similar to the high speed screws for whatever speed would be desired.

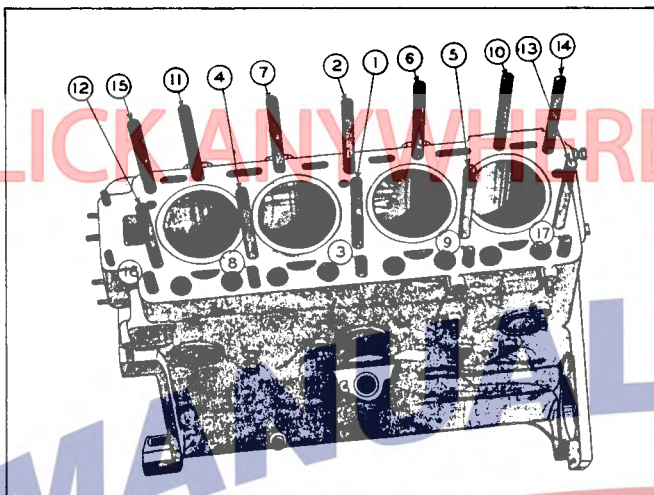


Fig. 26 - Cylinder head studs.

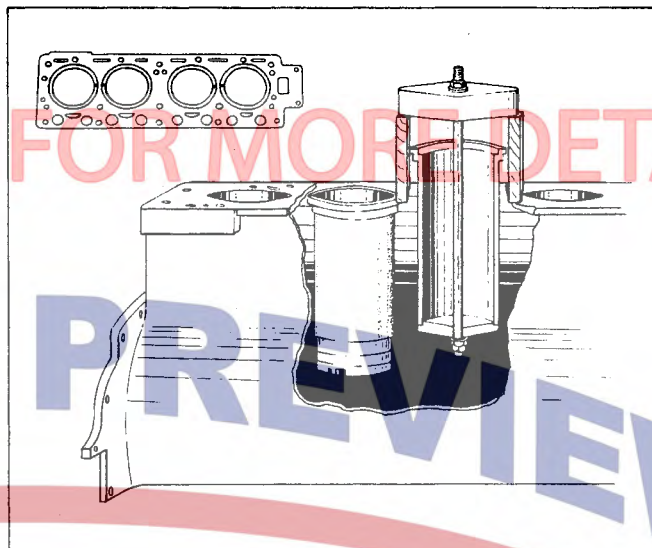


Fig. 27 - Sleeves.

INSTALLING SLEEVES:

After a long period of use, natural wear enlarges the cylinders which widens the clearance between the cylinder and piston. When the clearance between the cylinder and piston is worn to .010 of an inch, the worn cylinder sleeves should be replaced with a new sleeve and piston assembly.

This assembly consists of sleeve, piston and pin, and piston rings.

Wash and clean the tractor thoroughly removing all dirt and grease from whole tractor. You will enjoy working on a clean machine and will be able to do a much more satisfactory and longer lasting overhaul job if no dirt and grit is allowed to get into the engine. One of the most common causes of engine failure can be directly traced to dirt getting into the moving parts.

"KEEP IT CLEAN" should be the slogan of every repair man overhauling a tractor.

Remove the hood from the tractor and drain the cooling system. Drain the oil from the crankcase. Disconnect the water outlet hose to the radiator. Remove heat indicator. Disconnect governor linkage rod and air hose from the manifold. Remove air cleaner.

The manifold can be removed as a unit. Remove the valve cover, rocker arms and push rods. Be sure to keep the push rods in order so they may be put back in the same sockets from which they are removed. Remove the cylinder head and set it on a solid flat surface. Remove the oil pan. Take off the connecting rod caps and push the pistons and rods out through the top of the cylinders.

When removing the sleeves from this

engine, a puller will be required similar to the one illustrated. The puller should be centered over the top of the barrel before proceeding to pull it.

When installing the new sleeves, be sure to clean the two grooves at the bottom so the seals can seat properly to prevent distortion of the new sleeve when it is put in place. It is very important to have the composition rings properly seated in the recess in the sleeve to prevent water leaking into the crankcase.

Be sure the two slots at bottom of sleeves are properly aligned for clearance of connecting rod. IF THE SLEEVE IS NOT INSTALLED WITH THE RELIEF SLOTS AT RIGHT ANGLES TO THE CRANKSHAFT, THE CONNECTING ROD WILL NOT CLEAR THE BOTTOM END OF THE SLEEVE AND DAMAGE WILL RESULT.

THE TOP OF THE SLEEVE HAS A MARK ON THE FLANGE AND SHOULD BE INSTALLED AS SHOWN IN THE UPPER LEFT HAND CORNER OF FIG. 27.

The top flange of the sleeve (where it sets into the recess in the block) should be cleaned thoroughly and coated with light oil before being tapped down in place.

The sleeves in this engine are designed so that the shoulder on the sleeve is of greater length than the depth of the counterbore in the block, thus the sleeve projects from the block from .002 to .004 above the cylinder head gasket contact surface. This is intended to assure a positive seal at this point by putting increased pressure on the Head Gasket. Shims of varying thickness are provided to be inserted in

POWER STEERING

SPECIFICATIONS:

Viscosity of Oil SAE 10W

NOTE: Use SAE 5W oil if temperatures of -10° F. are frequently encountered.

Use SAE 30 oil if temperatures of 90° F. and above are frequently encountered.

Oil and Filter Cartridge Change --

Once each year or every 1500 hours whichever comes first.

Oil Capacity Approx. 2-1/2 Qts.

NOTE: Operate steering, recheck oil level and add if necessary.

Oil Check Every 60 Hrs.



Fig. 72 - Right side view.

1. Cap for supply tank.
2. Hydraulic pump.
3. Belt tension adjustment.
4. Fan belt adjustment.
5. Oil drain.
6. Grease fittings on drag link.

DESCRIPTION:

The power steering system on the Model 555 tractor is composed of a pump driven by a V belt from the crankshaft pulley. The pump operates at twice engine speed. A cylinder and control valve assembly is contained in the steering drag link. This is not power steering but is power assist steering. The tractor may be steered manually if the hydraulic power fails. This may be done without changing any part of the system.

The pump has a flow control valve that controls the amount of oil that the pump is pumping. This flow control valve maintains a 3-1/2 gallon per minute flow of oil regardless of the speed or load of the engine.

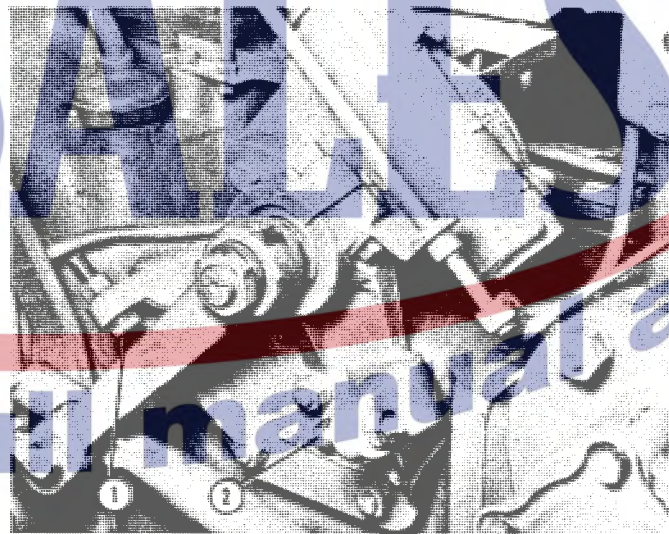


Fig. 73 - Steering sector arm stop screws.

1. Stop screw for left turn.
2. Stop screw for right turn.

ADJUSTMENTS:

Pump Drive Belt:

Adjust tension by loosening bolts in bracket No. 3, Fig. 72 and move pump upward until the belt will deflect not more than 1/2 in. when thumb pressure is applied, midway between the pulleys. Retighten bolts securely. The pump drive belt tension should be checked frequently and adjusted if necessary to prevent slippage and noise. A loose belt will result in