Massey Harris
Massey Ferguson

Operator's Manual

MF50

Gas & Diesel

Operator's Manual

MH-O-MF50

Serial Number Information forMassey-Ferguson 50

Serial Number:	Year Made:	Plate Location:
515708	1958	DASH PANEL
522693	1959	DASH PANEL
528163	1960	DASH PANEL
528418	1961	DASH PANEL
599821	1962	DASH PANEL
533422	1963	DASH PANEL
536062	1964	DASH PANEL

Paint Information for Massey-Ferguson 50

Color Application:	MFG Color Name:
BODY OF TRACTOR	INDUSTRIAL MASSEY FERGUSON YELLOW

MASSEY-FERGUSON

MF-50

GAS & DIESEL TRACTOR

Owners Manual

MASSEY-FERGUSON - MF 50

This combination of two tractor companies, Massey-Harris and Ferguson, was the merger in 1952, when Harry Ferguson decided to sell his company.

The name was shortly after to be changed to Massey-Ferguson. It has been said that in negotiating the sale there was a difference of one million dollars.

Harry Ferguson suggested tossing a coin--they did and he lost.

The merger of the two companies was not easily accomplished. For the next several years tractors were sold under the "gray" color of Ferguson and the "red" color of Massey-Harris.

The Ferguson TO-35 was sold as a Ferguson, and the Massey Harris 50 was sold with MH styling, but the design was similar to the TO-35. By 1957 the MH 50 was replaced by the Massey-Ferguson 50. This was the first tractor of the merged company to carry the new name. The MF 50 was to be sold until 1964.

Massey-Ferguson did not have a tractor of more than 60 horsepower for the North America market. To remedy this problem, they bought the MF 95 from Minneapolis-Moline.

It was a 425 CID engine, or about 63 HP on the drawbar. In 1961 Massey-Ferguson introduced the 97 version of the above tractor. This was to be the first Massey-Ferguson with over 100 HP on the belt and also to be offered with four wheel drive as an option.

About this same period, M-F was also to offer a MF 98 bought from Oliver Corporation. It was unusual, as it offered a 213 CID diesel engine of three-cylinder design built by General Motors.

Massey-Ferguson continued to compete in the big tractor market by producing the MF 1505 and 1805 powered with caterpillar engines producing 175 and 192 horsepower. The company continued its expansion by buying into the Landini Company of Italy.

By 1985 Massey-Ferguson claimed more than 17 percent of the world market. More than any other company. It has factories in Britain, France and Italy. The M-F offers tractors from 15 HP to 320 HP.

The next time you observe a Massey-Ferguson it is possible to see design features that resemble Ford-Ferguson, Massey-Harris, Case, Sawyer-Harris, Minneapoli-Moline, Oliver, Landini and Caterpillar.

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SERIAL NUMBER IDENTIFICATION

Each tractor is identified by means of a tractor serial number. This serial number is recorded on a plate attached to the left-hand side of the battery platform. Each engine has an engine serial number. The gasoline engine serial number is stamped on a plate attached to the left side of the engine block. The diesel engine serial number is stamped on the left side of the engine block, directly below the front end of the exhaust manifold. For prompt, efficient service at your local M-F Dealer, record these serial numbers and carry them with your personal papers for ready reference.

BREAK-IN PROCEDURE

Your MF 50 Tractor was designed for a long life of economical and trouble-free performance. A very important factor in that performance is proper break-in. A little time spent on careful break-in will be repaid by satisfactory service, month after month.

1. During the first 25 hours, run your engine under normal load at normal operating temperature. Avoid continuous light loads or low engine RPM.

2. When plowing or doing other heavy-load operations, avoid overloading or lugging the engine. Shift one gear lower than would normally be used. Vary the load, however, during this period by shifting to a higher gear for short intervals. This brings the engine up to full load.

3. Change crankcase oil after the first 50 hours of operation.

4. Change the transmission oil after the first 50 hours of operation.

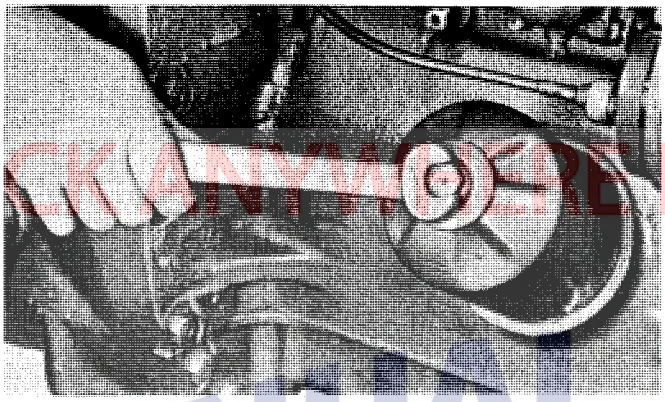

Fig. 6 – Removing Oil Filter from Gasoline Engine

Fig. 8 – Removing Oil Sump Screen

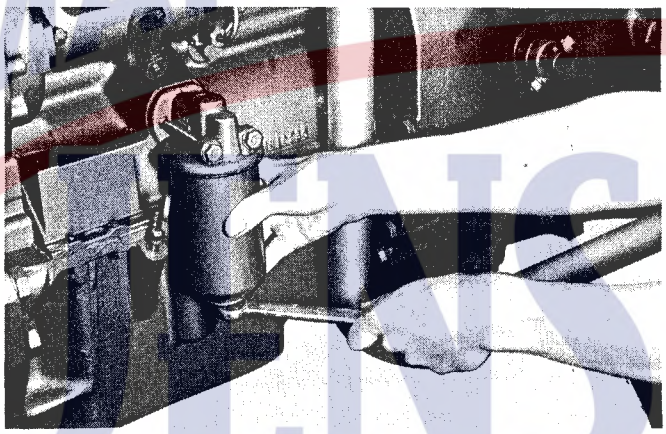

Fig. 7 – Removing Oil Filter from Diesel Engine

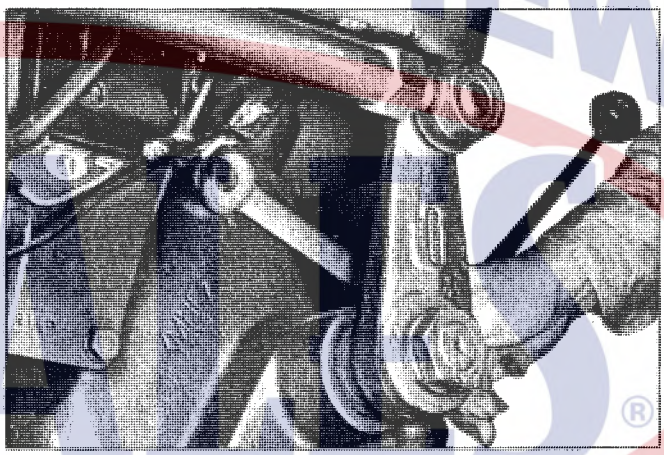

Fig. 9 – Checking Oil Level in Steering Gear Housing

drops on felt wick under rotor. Apply a trace of cup grease on distributor cam.

Oil the Generator

Put 10 drops light oil in each oiler. Do not over-lubricate!

IMPORTANT: Do not use excessive oil on Generator or Distributor.

200 200-HOUR LUBRICATION

Replace Engine Oil Filter Element

Replace the filter element at every other oil change. Wipe out the case. Check for leaks after installation, see Figs. 6 and 7.

Clean Oil Sump Screen (Diesel Tractors)

Remove the cover and screen from the bottom of the oil pan and thoroughly clean it every 200 hours (every oil filter change). See Fig. 8.

750 750-HOUR LUBRICATION

Change Transmission, Hydraulic System and Differential Oil

Drain when warm. Put the hydraulic control levers all the way down. Clean the magnetic drain plugs. See Lube Chart for recommended oil types.

Check Steering Housing Oil Level

Maintain oil level to filler plug opening with transmission oil, see Fig. 9.

Check Power Steering Reservoir

Clean outside of reservoir before removing cover on gas models or fill plug on diesel models. Keep reservoir filled with automatic transmission fluid "Type A". See Figs. 10 and 11.

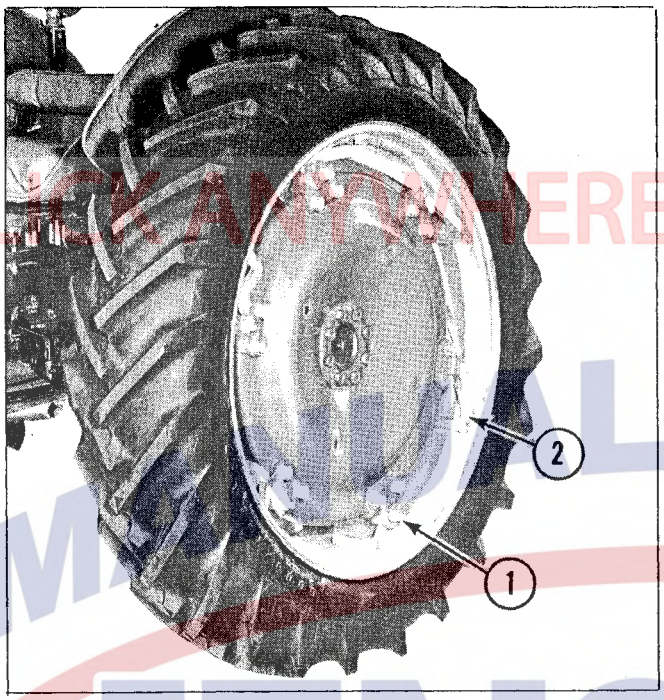

Fig. 32 – Eccentric Pin Type PAVT Wheels
1. Eccentric Pin 2. Rail

all six clamps. This centers the disc on the rim.

4. Torque the clamp bolts at 90-100 ft.-lbs. and reinstall wheel.

ADJUSTING PAVT WHEEL WIDTH

Two types of PAVT wheels are used in conjunction with the MF 50 Tractors. The eccentric pin-type, as shown in Fig. 32, is used with the high clearance tractors. The ramp type, as shown in Fig. 33, is used with standard clearance tractors and requires a slightly different adjustment procedure.

Fig. 33 – Ramp Type PAVT Wheel
1. Ramp Clamp 2. Ramp Nut 3. Rail 4. Rim Stops

ADJUSTING ECCENTRIC PIN-TYPE PAVT WHEELS

1. Remove the two rim stops from each wheel. Replace a stop on each wheel at the desired setting.

NOTE: For the extreme settings, the rail ends will act as stops.

2. Loosen the four eccentric pins on each wheel.

3. Drive the tractor forward or backward until the wheel disc contacts the stop on the rail.

4. Install the remaining rim stop on each wheel.

5. Tighten the eccentric pins on each wheel, until the indicators are 90° to the right. Always start with the pins on the bottom side of the wheel.

ADJUSTING RAMP-TYPE PAVT WHEELS

1. Remove the two rim stops from each wheel. Replace a stop on each wheel at the desired setting.

2. Loosen two adjacent ramp nuts on each wheel.

3. Drive the tractor forward or backward until the wheel disc contacts the stop on the rail.

4. Install the remaining rim stop on each wheel.

5. Tighten the two loosened ramp nuts on each wheel to 100-125 ft.-lbs. torque.

6. Tighten the remaining ramp nuts to 100-125 ft.-lbs. torque.

LIQUID-FILLING THE TIRES

For certain operations, or for difficult conditions, it may be desirable to use additional weight for increased traction. The accessory wheel weights were especially designed for this purpose. They are easily removed for

Rear
All Models . . . . . 52 inches

Ground Clearance Under Front Axle

Standard Model . . . . . 20.3 inches
Hi-Arch Model . . . . . 26.7 inches

Under Center

Standard Model . . . . . 10.2 inches
High Clearance Models . . . . . 18.8 inches

Turning Radius (Using Brakes)

Approximately . . . . . 10 feet, 4 inches

Weight (Approximate—Includes Fuel, Oil and Water)

Gas Tractors
Standard Model . . . . . 3250 pounds
Hi-Arch Model . . . . . 3450 pounds
Twin Front Tricycle . . . . . 3350 pounds
Single Front Tricycle . . . . . 3350 pounds

Diesel Tractors
Standard Model . . . . . 3750 pounds

Tires

Front . . . . . 5.50-16, 6.00-16, 7.50-10, or 4.00-19

Rear . . . . . 12.4-28, 13.6-28, * 14.9-24 *, or 12.4-38

ENGINE

Gasoline Engine

Type . . . . . 4 cylinder, overhead valve
Cylinder Bore . . . . . 3-5/16 inches
Stroke . . . . . 3-7/8 inches
Displacement . . . . . 134 cubic inches
Compression Ratio
Standard Engine . . . . . 6.60 to 1
*Hi-Altitude Engine . . . . . 8.10 to 1
Firing Order 1-3-4-2
Tappet Clearance (hot) . . . . . .013 inch
Idle Speed . . . . . 450-500 RPM
Maximum Speed . . . . . 2200-2250 RPM
Governor . . . . Variable speed, centrifugal flyball type
Lubrication . . . Pressure feed at 20-30 PSI

Diesel Engine

Type . . . . . 3 cylinder
Cylinder Bore . . . . . 3.6 inches
Stroke . . . . . 5 inches
Piston Displacement . . . 152.7 cubic inches
Compression Ratio . . . . . 17.4 to 1
Firing Order 1-2-3
Idle Speed . . . . . .675-725 RPM
Maximum Speed . . . . . 2165 ± 25 RPM
Governor . . . . . Built in injection pump
Tappet Clearance (hot)
Intake . . . . . 0.010 inch
Exhaust . . . . . 0.010 inch
Lubrication . . . Pressure feed of 25-30 PSI at normal operating speed

FUEL SYSTEM

Gasoline Tractors

Type . . . . . Gravity Flow
Carburetor . . . . . Updraft dustproof type

Disele Tractors

Fuel . . . . . Pressure fed
Primary Fuel Pump . . . . Diaphragm type
Fuel Filters . . . Two filters, full flow, with replaceable elements
Injection Pump . . . . CAV Distributor type
Static Timing . . . . . 20° B. T. D. C.
Fuel Injectors . . . . . Multi-Hole type

COOLING SYSTEM

Thermostat

Gasoline Engine . .160° opening temperature, pellet type
Diesel Engine . . .176° opening temperature, bellows type

Pressure Cap . . . . . 7 PSI

ELECTRICAL SYSTEM

Gasoline Tractors

Battery . . . . . 12-volt, 50 amp.-hr. negatively grounded
Starter . . . . . Push button type with safety switch. 12-volt, 4-pole starting motor
Generator . . . . . 12-volt, brush-type, output 25 amperes
Regulator . . . . . Combination voltage-current control and cutout relay type