

MD & MDV Tractors

Operators Manual

1004008R5

Reprinted

CASE III



This symbol means ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED. The message that follows the symbol contains important information about your safety. Carefully read the message. Make sure you fully understand the causes of possible injury or death.

SB001

IF THIS MACHINE IS USED BY AN EMPLOYEE, IS LOANED, OR IS RENTED, MAKE SURE THAT THE OPERATOR UNDERSTANDS THE TWO INSTRUCTIONS BELOW.

BEFORE THE OPERATOR STARTS THE ENGINE:

1. GIVE INSTRUCTIONS TO THE OPERATOR ON SAFE AND CORRECT USE OF THE MACHINE.
2. MAKE SURE THE OPERATOR READS AND UNDERSTANDS THE OPERATOR'S MANUAL FOR THIS MACHINE.



IMPROPER OPERATION OF THIS MACHINE CAN CAUSE INJURY OR DEATH.

BEFORE STARTING THE ENGINE, DO THE FOLLOWING:

1. READ THE OPERATOR'S MANUAL.
2. READ ALL SAFETY DECALS ON THE MACHINE.
3. CLEAR THE AREA OF OTHER PERSONS.

LEARN AND PRACTICE SAFE USE OF MACHINE CONTROLS IN A SAFE, CLEAR AREA BEFORE YOU OPERATE THIS MACHINE ON A JOB SITE.

It is your responsibility to observe pertinent laws and regulations and to follow manufacturer's instructions on machine operation and maintenance.

See your Authorized Case dealer for additional operator's manuals, parts catalogs, and service manuals.

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Unless otherwise specified the information in this book applies to both the Farmall MD and Farmall MDV.

INTRODUCTION

The purpose of this Owner's Manual is to explain maintenance requirements and routine adjustments which are necessary for the most efficient operation of your tractor. To protect your tractor investment, study your manual before starting or operating your tractor.

If you should need information not given in this manual, or require the services of a trained mechanic, we urge you to use the extensive facilities offered by the International Harvester dealer in your locality. Dealers are kept informed on the best methods of tractor servicing and are equipped to provide prompt, high-class service in the field or in an up-to-date service station.

Throughout this manual the use of the terms LEFT, RIGHT, FRONT and REAR must be understood to avoid confusion when following instructions.

LEFT and RIGHT indicate the LEFT and RIGHT sides of the tractor when facing forward in the driver's seat.

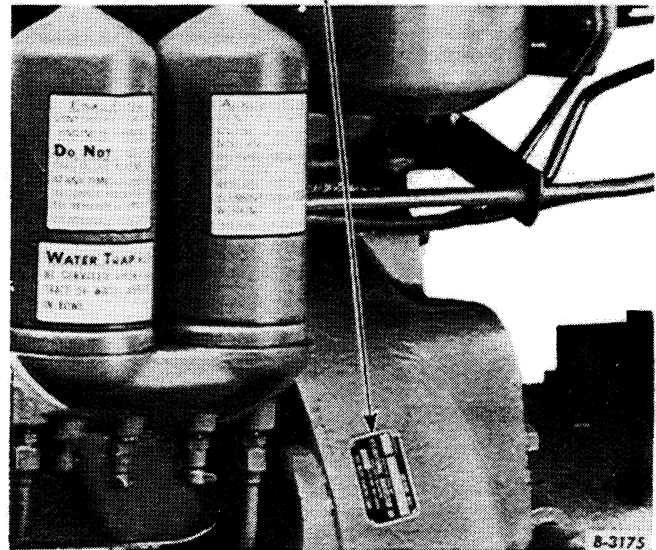
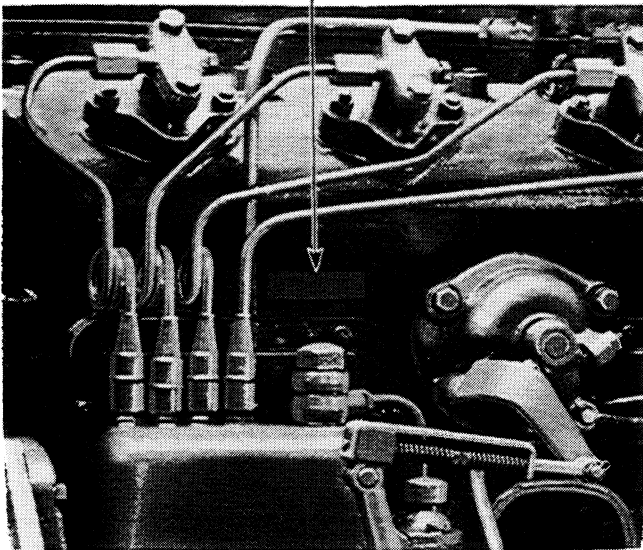
Reference to FRONT indicates the radiator end of the tractor, and REAR the drawbar.

Dealers carry ample stocks of essential IH parts. These dealers are backed in every case by the full facilities of a conveniently located International Harvester branch.

Each machine carries both tractor and engine serial numbers. Prefix letters indicate the unit model, suffix letters and numbers in the tractor serial number are used to indicate any attachments or special features with which the tractor has been equipped at the factory. When in need of parts, always give the International Harvester dealer your tractor and engine serial numbers. We suggest that you write these serial numbers in the spaces provided in the illustrations below, for ready reference when parts are required.

Engine Serial Number

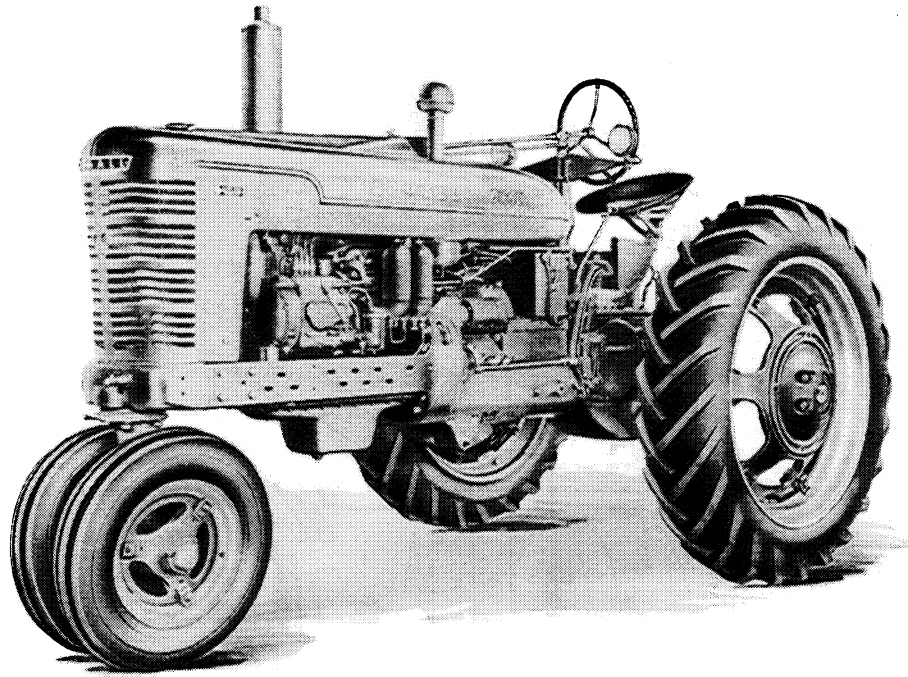
Tractor Serial Number



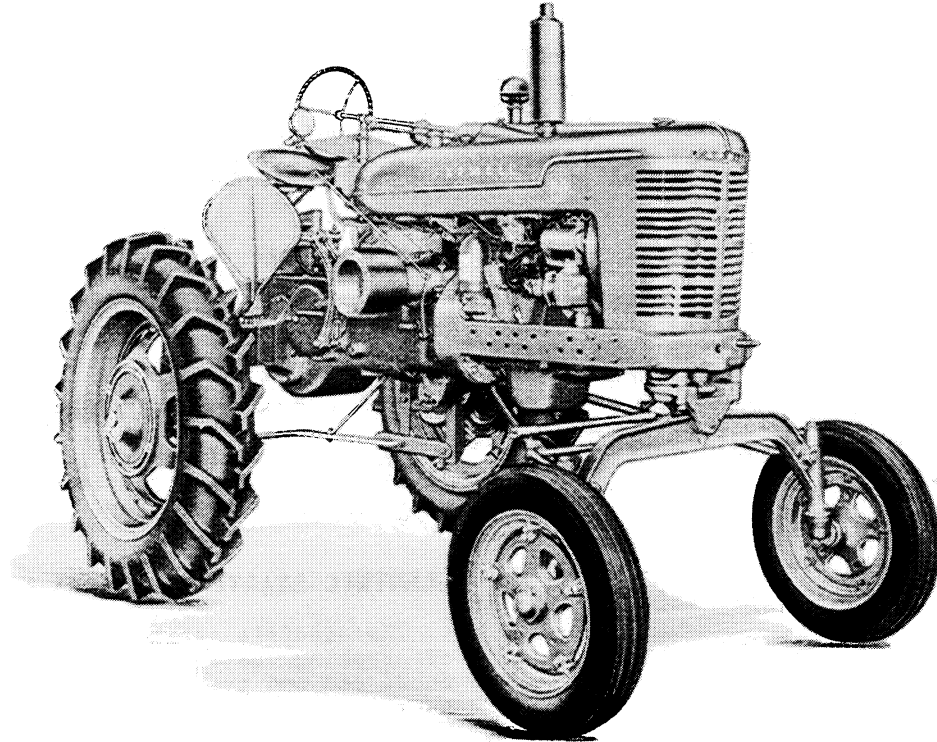
Illust. 1 - Engine Serial No. on Left Side of Crankcase.

Illust. 2 - Tractor Serial No. on Left Side of Clutch Housing.

DESCRIPTION

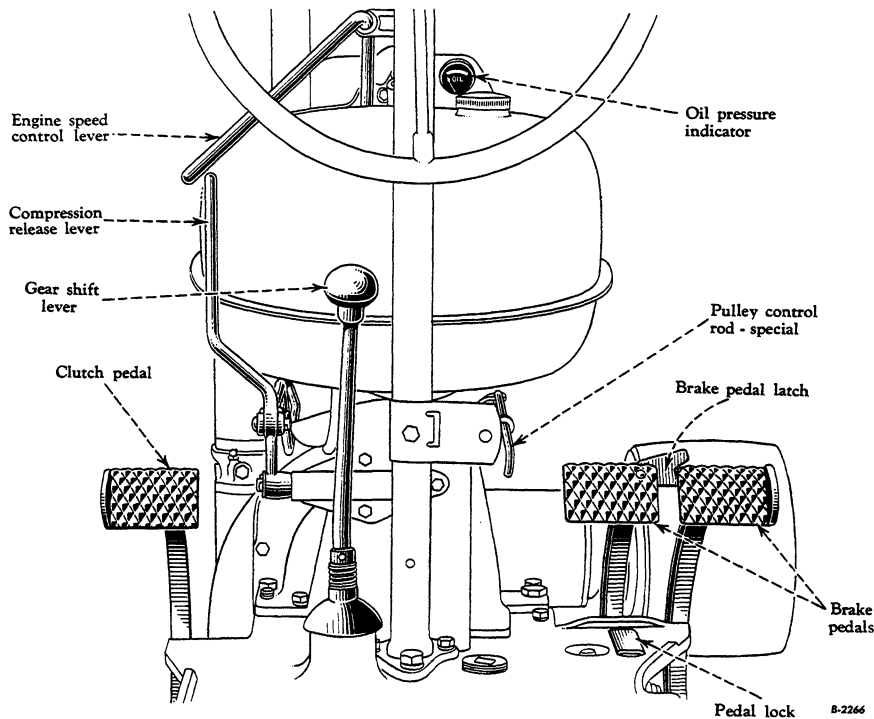


Left side view of the Farmall MD tractor. The pneumatic tires, electric starting and lighting and exhaust muffler are special features.



Right side view of Farmall MDV tractor. The belt pulley, pneumatic tires, starting and lighting, fenders and exhaust muffler are special features.

FARMALLS MD AND MDV



Illust. 3 - Instruments and Controls.

Instruments and Controls

The belt pulley, power take-off, exhaust muffler, pneumatic tires and electric starting and lighting equipment are special features and are furnished only when ordered. If your tractor is not so equipped you may ignore the instructions that are found throughout this manual for operating and maintaining these attachments. A complete list of the equipment that is furnished on special order is shown on pages 53 and 54.

ENGINE SPEED CONTROL LEVER

The engine speed control lever enables you to adjust the speed of the engine to the load that is to be handled. After you have selected the desired engine speed, the governor will automatically maintain this engine speed under variable loads. Retarding the engine speed control lever will decrease the load which the tractor can handle.

The rated or maximum full load governed speed is 1450 r.p.m.; maximum idle speed is approximately 1580 to 1640 r.p.m.; minimum speed (hand throttle) is approximately 525 r.p.m.

GEARSHIFT LEVER

The gearshift lever is used to select the various gear ratios provided in the transmission. There are five forward speeds and one reverse speed.

The fifth speed is locked out when steel wheels are used; for further instructions refer to page 10.

CLUTCH PEDAL

This pedal when depressed all the way, disengages the engine from the transmission.

CLUTCH PEDAL HOLD-OUT LEVER

This lever is used to lock the clutch pedal in the disengaged position to aid easier starting in cold weather.

ELECTRIC STARTER (Special Equipment)

The electric starter is a convenient means of cranking the engine. To start, adjust the choke rod and press the starter, as explained on page 8.

COMPRESSION RELEASE LEVER

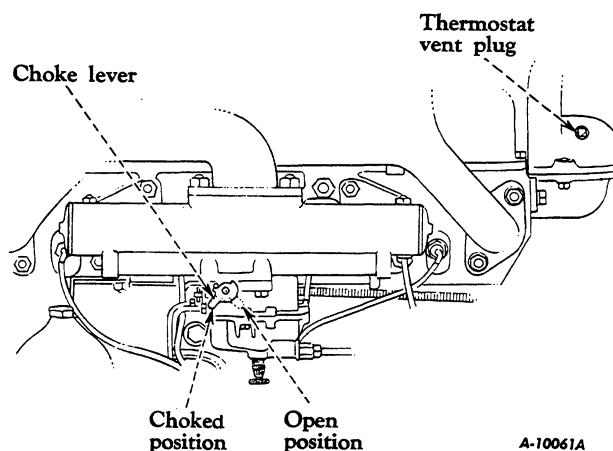
Pulling back on the compression release lever converts the Diesel engine into a gasoline engine for starting. Reduced compression,

DESCRIPTION

spark plug ignition, and carbureted gasoline fuel permits starting the engine as a gasoline engine. After a quick cylinder warm-up, switch the engine to Diesel operation by pushing the compression release lever all the way up. Refer to pages 8 and 9 for the correct method of starting on gasoline and changing to Diesel operation. Refer to pages 9 and 10 for changing back to gasoline operation before stopping the engine.

CARBURETOR CHOKE LEVER

If your tractor is not equipped with an electric starter and choke rod, it will be necessary to use the carburetor choke lever when cranking the engine, *Illust. 4*. This lever when turned clockwise to the choked position cuts off the air supply, thereby enriching the fuel mixture for starting the engine. As the engine warms up gradually turn the choke lever counterclockwise all the way (open position).



Illust. 4 - The Choke Lever and Thermostat Vent Plug.

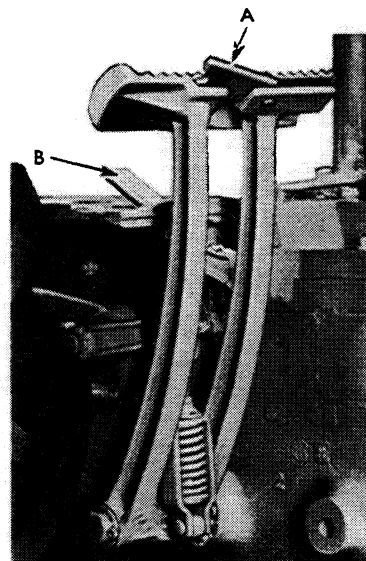
BRAKE PEDALS

These pedals are used to stop the tractor, to hold the tractor in a stationary position, or to assist in making sharp turns as outlined below:

To stop the tractor, latch the pedals together so that both brakes will operate simultaneously.

To hold the tractor in a stationary position, latch the pedals together, depress and lock them in this depressed position by using the brake pedal lock.

To assist in making a sharp turn, the pedals must be operated individually, depressing the pedal on the side toward which the turn is to be made.



Illust. 5 - Rear View of Brake Pedals Locked Together.

- (A) Brake Pedal Latch.
- (B) Brake Pedal Lock.

BRAKE PEDAL LATCH

This latch is used to latch both brake pedals together, causing the brakes to operate simultaneously.

Caution! Always latch the brake pedals together when driving the tractor in high gear (5th speed). To latch the pedals together, engage the latch "A" (located in back of left pedal, *Illust. 5*) in the slot in back of the right pedal. When brake pedals are not latched together, the latch should rest in the slot in back of the left brake pedal.

LOCKING BRAKES

To lock the brakes, first latch the brake pedals together as described above. Then push both pedals all the way down and lift the brake pedal lock "B" with your finger, and the brake pedals will lock in this position. To release the brakes, simply push the brake pedals further in and the lock will automatically release.

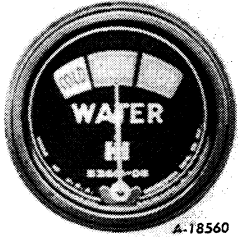
RADIATOR SHUTTER CONTROL CRANK

The radiator shutter is not regular equipment on Diesel tractors. The control crank opens and closes the radiator shutter, controlling the engine temperature. Turn the crank counterclockwise to close the shutter, and clockwise to open it.

FARMALLS MD AND MDV

HEAT INDICATOR

This instrument (located on the engine hood) indicates the temperature of the liquid in the cooling system. The needle should be in the center of the run range for best engine performance.

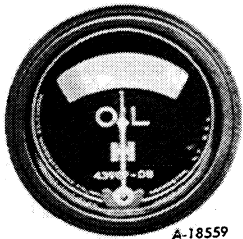


Illust. 6 - Heat Indicator Showing Needle in Correct Operating Position.

OIL PRESSURE INDICATOR

This instrument indicates whether sufficient oil is circulating through the engine. The indicator needle should be in the white area when the engine is operating, *Illust. 6*. If it is not in the white area, stop the engine immediately and investigate the cause of the oil pressure failure.

If you are unable to find cause, be sure to consult your International Harvester dealer before operating the engine.



Illust. 6A - Oil Pressure Indicator, Showing Needle in Correct Operating Position.

Before Starting Your New Tractor

LUBRICATION

1. Lubricate the entire tractor, using the "Lubrication Charts," pages 16 to 21, as a guide.

2. Check the oil levels of engine crankcase, air cleaner, transmission case and steering gear case to see that they are filled to the correct levels with the proper grades of oil for the prevailing temperature; refer to specifications of lubricants on page 22.

3. Tractors shipped to destinations in the United States of America, Canada, and Mexico are filled with oil before leaving the

factory. The lubricant in the crankcase, air cleaner and injection pumps of Diesel engine, when shipped from the factory is for preservative purposes only and is not suitable for use in regular service. The original oil should be drained from the crankcase, air cleaner and injection pump and replaced with the required amount of fresh oil having the physical properties and proper viscosity grade for the prevailing air temperature and type of service. Tractors for export shipment have all oil drained from the crankcases, air cleaners, and injection pumps.

4. For further information refer to lubrication instructions on pages 14 to 23.

PNEUMATIC TIRES

Before moving the tractor, check the air pressure in the pneumatic tires and inflate or deflate to correct pressures as shown in chart on page 43.

STEEL WHEELS

If your tractor is equipped with steel wheels, or has new wheel and lug installations, it is advisable to check and tighten the rear wheel bolts a couple of times at short intervals to be sure that the lugs seat properly.

ENGINE COOLING SYSTEM

If the cooling system has been drained, before refilling be sure the radiator and crankcase drains are closed. Remove the vent plug in side of thermostat housing, *Illust. 35*; add water and replace the plug when water appears at the vent hole. After replacing the vent plug continue filling the radiator to a level approximately 2-1/4 inches below the top of the filler neck. Use clean water. Soft or rain water is recommended as it does not contain alkali which forms scale and eventually clogs the passages.

For further information, see pages 33 to 35. If the tractor is to be operated in freezing temperatures (32° F. or lower), refer to "Cold Weather Precautions" pages 32 and 33.

FUEL SYSTEM

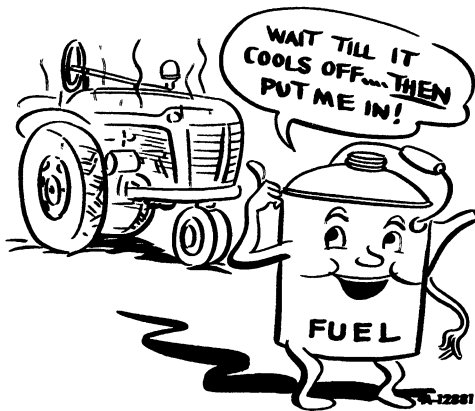
Fill the fuel tank (capacity 20-1/2 U.S. gallons). Fill the gasoline tank (capacity approximately 7/8 U.S. gallon) with a good grade of clean gasoline. Carefully strain the gasoline and Diesel fuel to be sure they are free from foreign substances. Do not use dirty fuel. (Refer to "Diesel Fuel Specifications" on page 7). Vent the entire fuel system as described on page 30.

DESCRIPTION

How to Prepare Your Tractor For Each Day's Work

FUEL SYSTEM

Fill the fuel tank at the end of each day's work. This will force out any moisture-laden air and prevent condensation.



Never refuel tractor while engine is running or extremely hot.

Safety First! Never fill the fuel tank when lamps are lighted, when near an open flame, or when the engine is operating. When pouring in fuel, keep the funnel and container in contact with the metal of the fuel tank, *Illust. 7*, to avoid the possibility of an electric spark igniting the gas. Do not light matches near gasoline as the air within a radius of several feet is mixed with a highly explosive vapor.



Illust. 7 - Filling the Fuel Tank.

Both fuel tanks have air vents in the filler caps. These vents should be kept open at all times to assure proper flow of the fuels, *Illust. 8*.



Illust. 8 - Vent Holes in Filler Cap.

LUBRICATION

Air cleaner--Change the oil in the air cleaner oil cup.

Engine crankcase--Be sure the oil in the crankcase pan is up to the "Full" mark on the oil level gauge.

Grease fittings--Refer to "Lubrication Charts," pages 16 to 21, for complete daily lubrication requirements.

COOLING SYSTEM

Remove the radiator cap and check to see that the water is approximately 2-1/4 inches below top of the filler neck. Be sure to replace the radiator cap and tighten to the stop after you have made the inspection.

DIESEL FUEL SPECIFICATIONS

IH Diesel engines do not require special Diesel fuel for satisfactory performance. Most refiners market fuel oils designated as Diesel fuel to distinguish them from burner and heater fuels. These fuels are usually made from straight run distillate or blends of straight run and thermal cracked or catalytically cracked stocks and are satisfactory fuels for IH Diesel engines if their physical properties come within the specifications shown below.

Some refiners market one grade of fuel for both Diesel and burner consumption. Many of these fuels, when within the fuel specifications shown below, can also be safely used in IH Diesel engines. However, the quality and suitability of these fuels for IH Diesel engines are definitely the responsibility of the supplier. Laboratory tests of a large number of commercial fuels in IH Diesel engines have shown that satisfactory performance can be obtained with fuels having the following specifications.

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