



**International
Harvester
Operator's Manual
for McCORMICK-DEERING
W-30**

Operator's Manual

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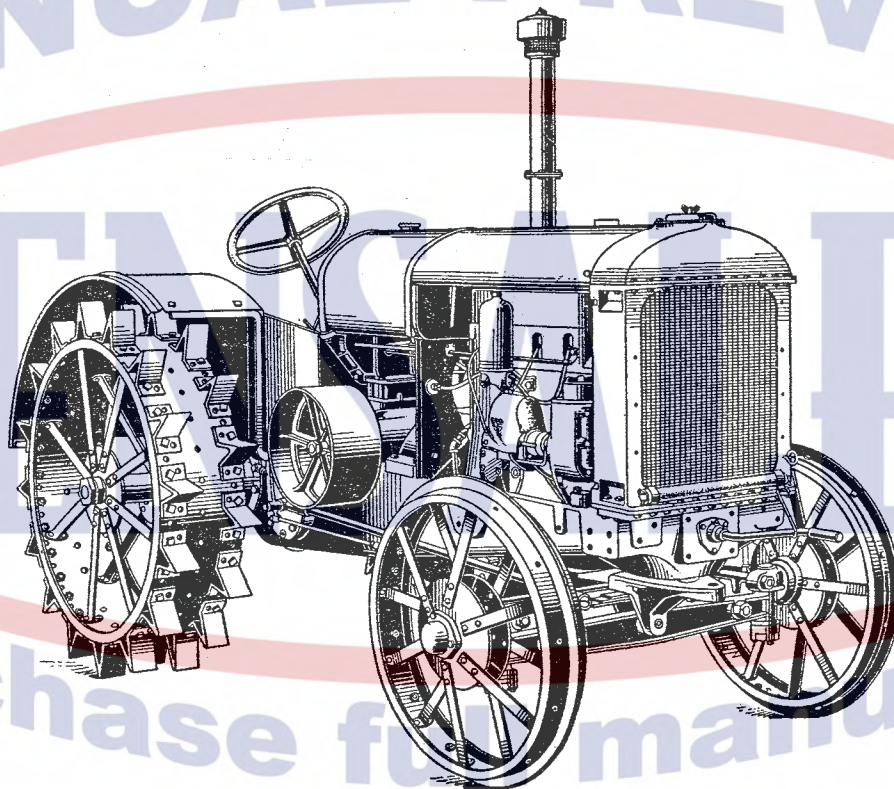


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IH-O-W30

Instruction Book
McCormick-Deering
Tractor
Model W-30



TO McCORMICK-DEERING OWNERS—

This pamphlet has been prepared and is furnished for the purpose of giving the user as much information as possible pertaining to the care and operation of this machine. The owner is urged to read and study this instruction pamphlet and if ordinary care is exercised, he will be assured of satisfactory service.

Manufactured By
INTERNATIONAL HARVESTER COMPANY
(INCORPORATED)

606 SO. MICHIGAN AVE.

CHICAGO, U. S. A.

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CLICK ANYWHERE FOR MORE DETAILS

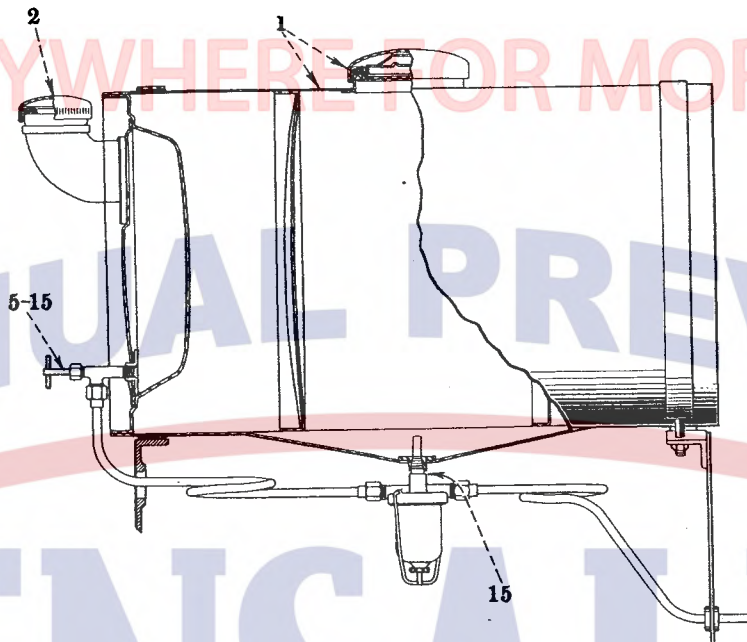


Illustration No. 1
Fuel Tank and Connections

Paragraphs are numbered to correspond with numbers on the illustrations.

Preparations for Starting

Paragraph Illustration

- | | | |
|---|-----|--|
| 1 | 1 | Fill fuel tank with clean kerosene (capacity 22 gallons gallons). Carefully strain all fuel and be sure it is free from water. |
| 2 | 1 | Fill gasoline tank with gasoline (capacity 1-1/4 gallons gallon). |
| 3 | --- | Fill radiator with clean water to the level 1" above baffle plate (inside of filler hole) and keep filled to this level. Use soft or rain water if obtainable. Do not pour cold water into an empty system when engine is very hot. (See page 21). |

Radiator Curtain

- | | | |
|---|-----|--|
| 4 | --- | In cold weather and if engine is cold, pull up radiator curtain to top of radiator when starting, or cover the radiator completely. This will assist in warming up the engine more rapidly and will prevent cold air being drawn through the radiator core and freezing the water in the cooling system. |
| 5 | --- | After the engine is thoroughly warmed up, the curtain may be lowered completely, except during cold weather. |
| 6 | --- | Important! Do not start the engine in freezing weather without first covering the radiator completely. |

AIR CLEANING SYSTEM

The engine is equipped with an International Air Cleaner.

Air Pipe Screen

The air intake pipe is provided with a screen to prevent large particles of matter from entering the air cleaner. Keep this screen clean, as water or oil on it may catch sufficient dust to restrict the air flow to the engine.

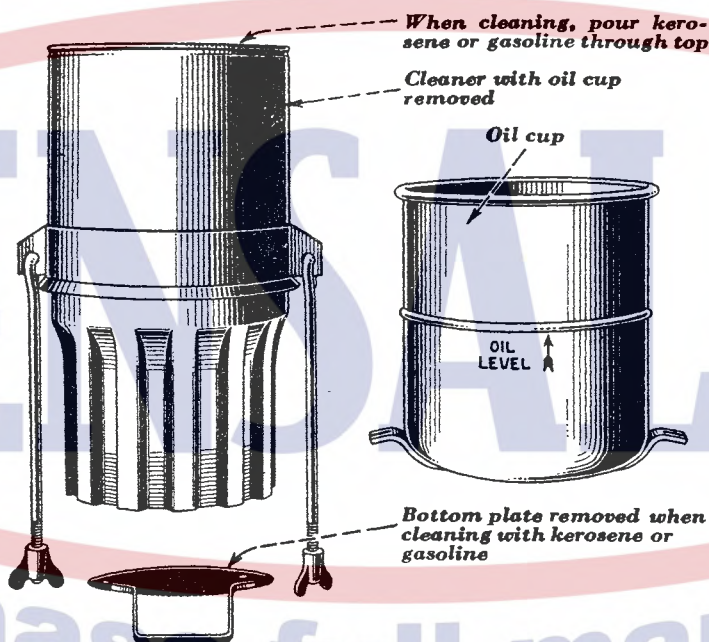


Illustration No. 11

Air cleaner showing oil cup removed for cleaning.

Oil Cup

The oil cup must be filled to the indicated oil level with S.A.E. No. 20 or lighter oil before starting the engine. Oil should be added to keep up to indicated level.

Clean and refill cup to oil level daily with S.A.E. No. 20 or lighter oil. Cleaning may be extended to 30 hours when operating in light or no dust.

Removing Cleaner

It is important to remove the entire air cleaner occasionally and wash it thoroughly. To do so, remove the oil cup and the nuts or studs at the top of the casting, taking care not to injure the gasket when separating the air cleaner from the top casting. Remove the bottom plate (held in place by screws) and pour gasoline or kerosene through from the top. Before replacing, be sure to replace the bottom plate and top gasket. Clean the air pipe occasionally. Keep the clamps on hose leading to carburetor tight, and renew the hose connections before they have rotted out.

Carburetor (Zenith Model K-5)

Ref. No.	DESCRIPTION
1	Throttle shaft.
2	Throttle plate adjusting screw.
3	Idling needle valve.
4	Main jet adjustment.
5	Drain plug.
6	Air intake.
7	Drip plug.

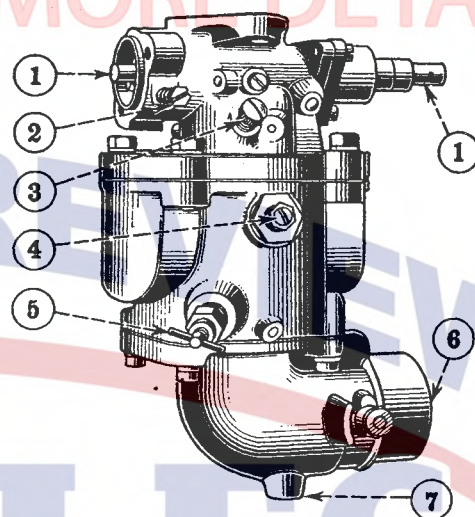


Illustration No. 12

Zenith Carburetor, Model "K-5"
1 $\frac{1}{4}$ " (20810DB).

Idling Adjustment

Do not expect a new engine that is too stiff to "rock" on compression when stopped, to idle well at low speed. Set stop screw on throttle lever so that engine will run sufficiently fast to keep it from stalling. Turn in or out on idling needle valve, until engine hits evenly and without rolling or skipping. Then back off on stop screw until desired engine speed is obtained.

The correct idling adjustment is usually found between 1 and 3 turns open of the idling needle valve. A good starting point is 1 $\frac{1}{2}$ turns from its seat.

Main Jet Adjustment

To regulate main jet adjustment, retard the spark and open the throttle to approximately $\frac{1}{4}$ open and turn the adjustment clockwise, shutting off the fuel so the R.P.M. of the engine drops because of lean mixture; then open the adjustment until the R.P.M. drops because of a rich mixture, then turn back halfway between these two points to where the R.P.M. of the engine is the highest.

Fuel Level

The fuel level on the "K-5" Carburetor is measured from the top edge of the fuel bowl. The correct level should be between $\frac{13}{32}$ " and $\frac{27}{64}$ " from this edge. Fuel valve seat assemblies are interchangeable.

Note: Do not bend the float hinge to change the fuel level.

Care of Carburetor

About the only thing that can disturb the functioning of the carburetor is the presence of dirt and water. Accordingly, it should be cleaned periodically, as this will insure uninterrupted operation. The fuel screen is removed by unscrewing the filter plug, as shown in illustration No. 13.

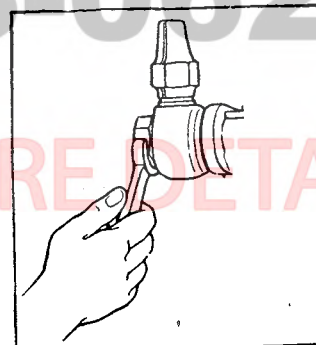


Illustration No. 13

Engine

Valve Adjustment

The valve levers must be kept properly adjusted, otherwise hard starting and lack of power will result. The firing order of the engine is 1-3-4-2.

If, for any reason, the valve setting has been disturbed or cam gear is to be replaced, care must be taken to restore to original setting. To facilitate this, all gears are properly marked and the marked teeth must be meshed together. Every time the nuts are tightened on cylinder head studs, the valve levers must be adjusted by means of the valve lever screws, using the valve clearance gauge so that there is a clearance of .016" between ends of valve lever and valve stem when valve is closed. This clearance is very necessary. (See illustration No. 23.)

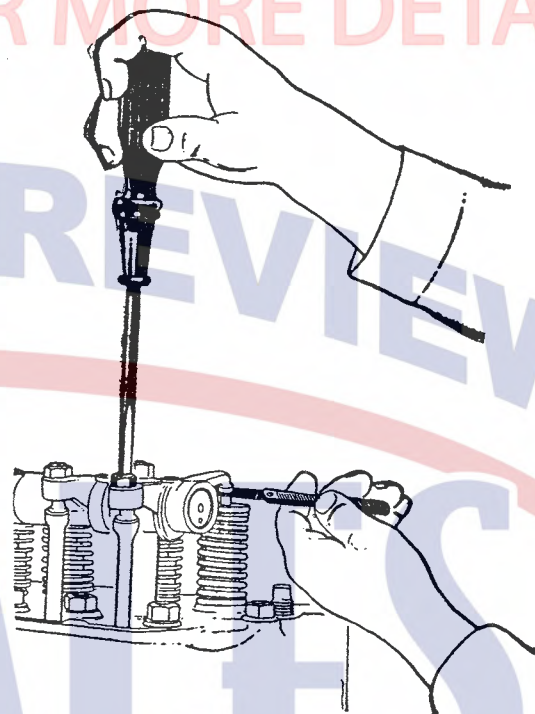


Illustration No. 23
Gauging valve levers with a
"feeler" gauge.

Illustration No. 24 shows drain trough properly placed to deflect water collected on top of cylinder head from passing into crankcase through breather tube.

Gaskets

Before putting on new gaskets, the surface for the joint must be thoroughly cleaned. When tightening up a joint after a new gasket has been inserted, screw up all nuts fairly snug, then tighten uniformly, giving each nut a small part of a turn at a time. Continue this until all nuts are tight. Do not screw one nut down perfectly tight, and then go to the next, as you will not secure an even pressure on the gasket in this manner. After engine has been running a few minutes, tighten the nuts again.

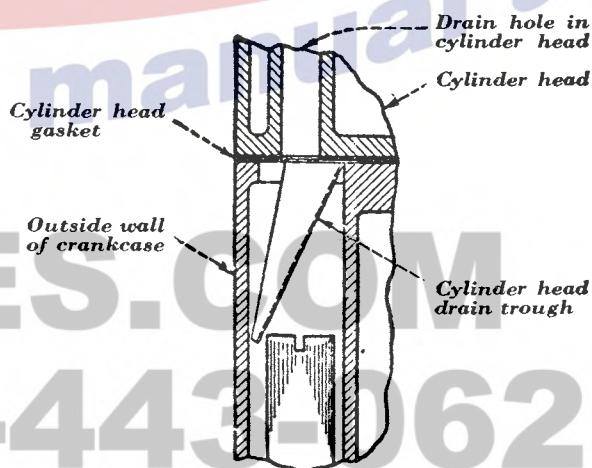


Illustration No. 24
Cylinder head drain trough.

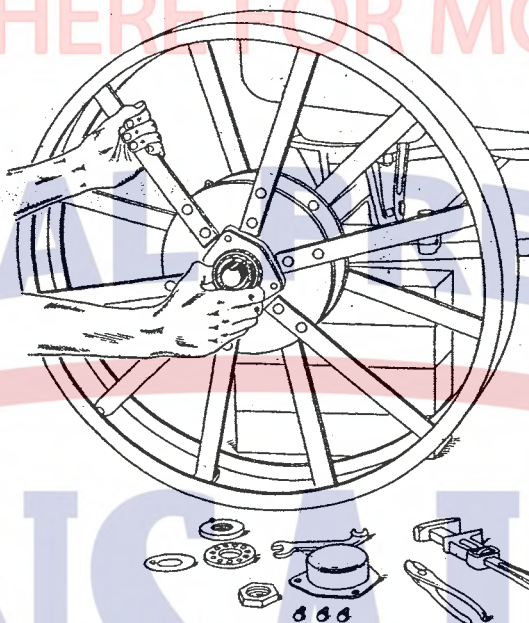
CAUTION—Be sure to adjust valve tappet clearance after the last tightening of cylinder head stud nuts. (See "Valve Adjustment.")

Remember — Overhauling and repairing are best done by an expert.

FRONT WHEELS AND AXLE

Removing and Replacing Bearings, Washers, etc.

Illustration No.29



Removing Front Wheels

Jack up the front axle until the wheel clears the ground. Take out the three cap screws which fasten hub cap to hub; this exposes the large nut secured by a nut lock. Use a blunt instrument to straighten out the nut lock. Take off the nut and nut lock; this permits the removal of the thrust washer. Unscrew the thrust plate and slip it off the spindle.

To Adjust the Front Wheel Bearings

After removing adjusting lock, draw up nut tightly, at the same time rotating the wheel several turns. Now turn the nut back about one-sixteenth of a turn and reassemble the nut lock and locking nut. Make sure that nut lock is bent over one of the "flats" of locking nut.

Front Wheel Steering Knuckle

When overhauling or replacing steering knuckle, care should be taken in tightening up pivot nut "A" so that the front axle pivot thrust bearing "B" has sufficient clearance to prevent binding the front axle pivot.

This should pivot freely after the pivot nut is tightened.

Before the steering knuckle pivot cap "C" is replaced, it should be filled with transmission lubricating oil.

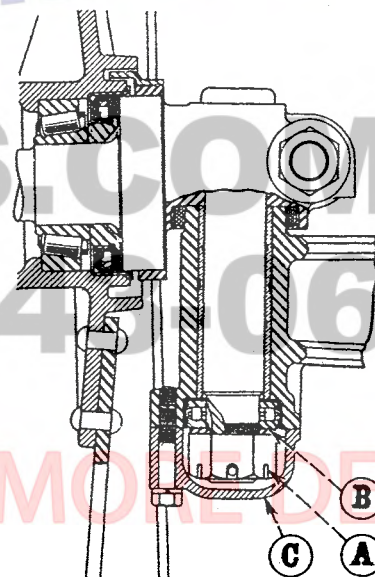


Illustration No.30

Remember—Overhauling and repairing are best done by an expert.

REAR WHEELS

Removing Rear Wheels

Raising the Tractor to Remove Rear Wheels

To remove either or both rear wheels, it will first be necessary to block up the rear end of the tractor. If a heavy jack is available, this will answer, but a long lever and some wooden blocks will serve just as well.

Place the blocks under the rear end of the main frame, just back of the large drain plug in the bottom, as shown in illustration No. 31.

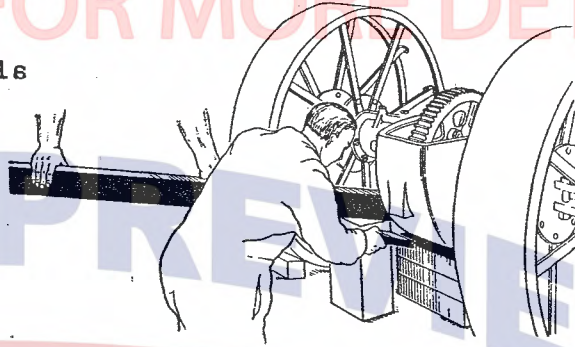


Illustration No. 31

Removing Rear Wheels from Axle

With a wrench of sufficient size, remove the two large nuts and nut lock from rear wheel axle. After the nuts have been removed, the wheel can easily be slipped off the splined axle. This may be done without disturbing any other part of the tractor.

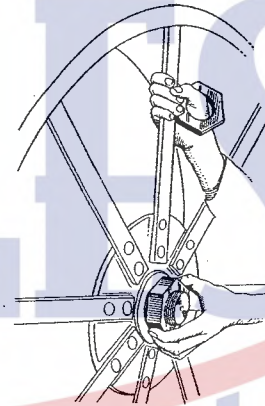


Illustration No. 32

Rear Axle Oil Seals

When Tractor is operated in Rice Fields or under similar wet and very muddy conditions, the oil seals on the rear axles should be inspected at least once a year, and any dirt that has collected on the outside of the diaphragm removed. It is advisable at this time to remove and dip the leather diaphragm and packings in oil.

NOTE:-Do not keep the leather diaphragm exposed to the weather after cleaning, if same has been washed in gasoline.

Remember-Overhauling and repairing are best done by an expert.