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McCormick W4 Tractor

Operators Manual

1004211R2

Reprinted

CASE IH

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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.

WARNING

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.

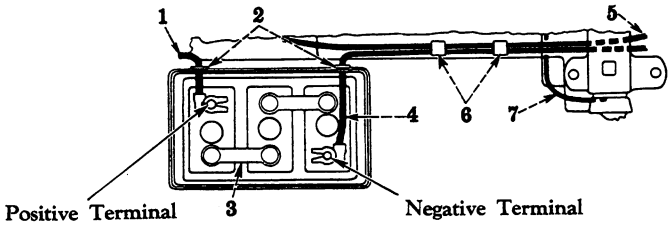
See your Authorized Case dealer for additional operator's manuals, parts catalogs, and service manuals.

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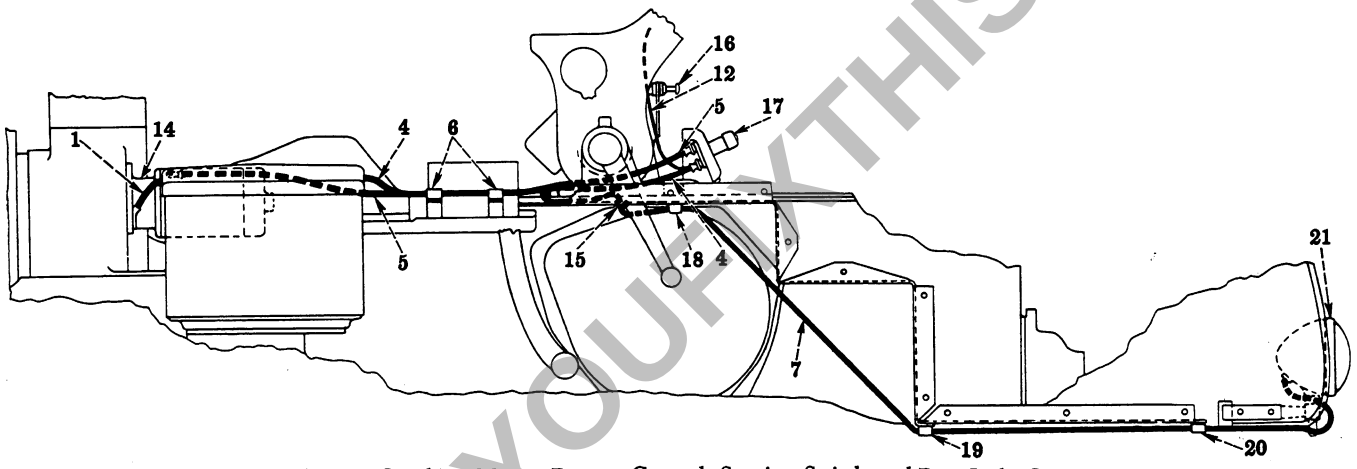
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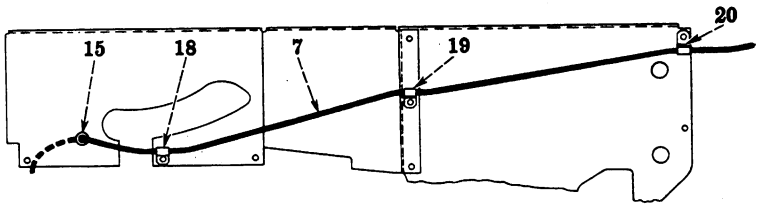
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View Showing Battery Connections



Left Side Showing Cranking Motor, Battery Ground, Starting Switch and Rear Light Connections



Bottom View of Platform Showing Rear Light Cable B-5102

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Illust. 49
Wiring diagram for starting and lighting on tractors with battery ignition and voltage regulation.

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Tire Protection During Storage

When not in use, store the tractor so the tires are protected from the light. Before storing the tractor, clean the tires thoroughly. Jack up the tractor so the load is off the tires when it is to be out of service for a long period. If not jacked up, inflate the tires at regular intervals. Before driving the tractor, inflate the tires to the correct operating pressures.

Tire Chains

In wet grass or ground conditions, use lug-type chains. The flexing of the tire and the creeping of chains will break the mud loose as the wheel rotates.

There is a possibility of the tire slipping within the chain; to prevent this, the use of spring-type chain fasteners is recommended.

Static Electricity in Tractors Equipped with Pneumatic Tires Doing Belt Work

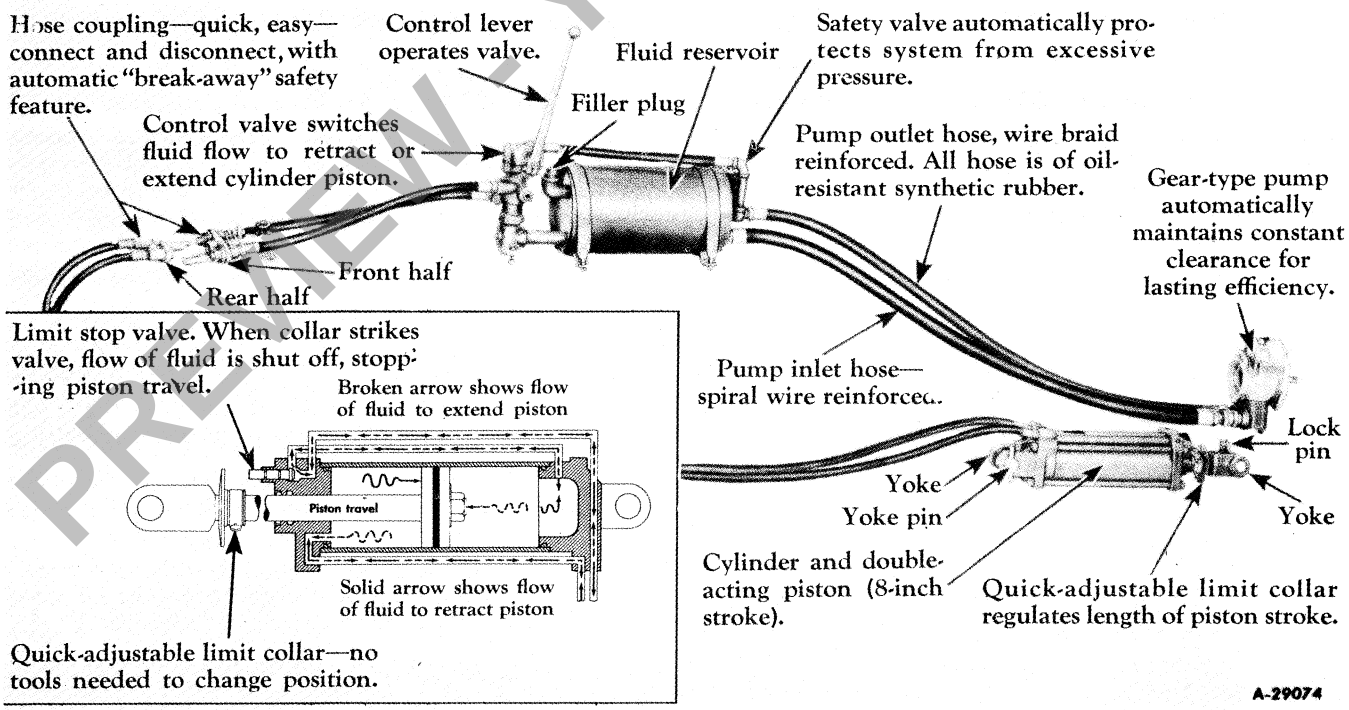
Static electricity generated by belt work can be discharged harmlessly by attaching a chain to the tractor and allowing it to touch the ground.

HYDRAULIC REMOTE CONTROL

You will obtain maximum satisfactory service from your Hydraulic Remote Control system by closely following a few simple precautions and service operations.

The pump is flange-mounted to the engine front cover plate. It is driven by the same shaft which drives the distributor on battery ignition engines or the magneto when the tractor is so equipped. An exclusive feature of this pump is its "pressure-loading" principle. Oil under pressure from the discharge of the pump is used to maintain minimum end clearance between the gear and bearing faces. This automatically compensates for wear and maintains pump pressure "like new" indefinitely.

The importance of keeping the Hydraulic Remote Control system free of all dirt, grit, and other foreign matter cannot be stressed too strongly. Keep the reservoir, pump, hose lines and connections as clean as possible at all times. As an added precaution against the entry of dirt into the system, the reservoir is constructed without an air vent. Sufficient air space is allowed above the fluid level to compensate for the pressure changes occurring during the operation of the system. As a result a small amount of pressure may be found in the reservoir upon removing the filler plug when checking the fluid level.



Illust. 64
Hydraulic remote control attachment.

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OIL FILTER

The life of your engine depends upon clean oil being circulated to all bearings. Every good tractor operator knows that dirt and other injurious materials eventually get into the crankcase of the engine and that in the normal course of engine operation the lubricating oil undergoes changes which produce sludge, acids, gums, varnish, and other harmful by-products.

The purpose of the oil filter is to separate and remove the dirt and other foreign substances from the oil to prevent these injurious materials from being circulated to the engine. This filter is so efficient it will keep the circulating oil free of harmful materials for 120 hours of operation; at this time the crankcase oil should be changed and the inexpensive filter element replaced. *Refer to pages 24 and 25* for the recommended oil to use for the prevailing temperature. By following the simple, common-sense procedure for keeping dirt and oil impurities away from precision-made engine parts, you will safeguard your tractor engine against undue wear and the operating troubles and upkeep expense which are a natural result of that condition.

NOTE: To avoid delays, we recommend that you carry extra filter elements on hand so that replacement can be made at the proper time.

To Change the Filter Element

1 Do not change the element while the engine is running. Stop the engine.

2. Remove the oil filter base drain plug and allow the oil filter to drain completely.

3. Clean the filter case to prevent dirt from dropping into the base.

4. Unscrew and remove the retaining bolt.

5. Lift up and remove the case.

6. Remove the old element.

NOTE: If some special equipment on the tractor prevents lifting the case over the element, remove the case and the element together.

7. Wipe out the base and the case with a cloth dampened with kerosene.

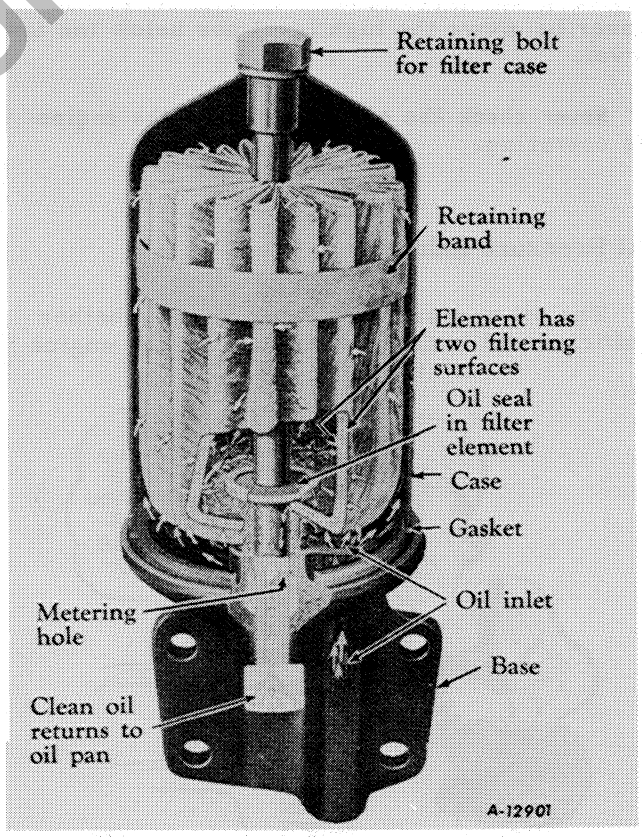
8. Install the new filter element as follows:

(a) Replace the drain plug in the filter base and install the new filter element, leaving the retaining band on the element.

(b) Inspect the small metering hole at the threaded end of the oil filter retainer bolt, and make sure that it is not plugged. A plugged metering hole will impair or stop all oil flow through the oil filter element.

(c) Make sure that the case gasket is in good condition. Then replace the case and retaining bolt, being careful not to jam the retaining bolt down into the filter seal located inside the filter element. Lower the retaining bolt carefully and screw it through the seal, into the filter base, and tighten securely.

9. Check the oil level in the crankcase to see that the new oil is up to the proper level. See the "Lubrication Guide." Now start the engine, check the oil pressure indicator to see whether sufficient oil is circulating through the engine, and inspect the filter for oil leaks.



Illust. 22

Cutaway view of oil filter showing passage of oil through inside and outside surfaces of the new accordion-pleated filter element.

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Fluid Level

When the tractor is shipped from the factory the Hydraulic Remote Control system is filled to the proper level with IH Touch-Control Fluid. The cylinder, cylinder hoses and rear half of break-away coupling are shipped without fluid, in a separate package and should be properly filled as instructed in "Preparing Your Tractor For Each Day's Work" *on page 9.*

If the Hydraulic Remote Control system should fail to operate in a satisfactory manner or if there are any noticeable leaks in the system, check the fluid level in the reservoir or see your International Harvester dealer's serviceman.

Never operate the tractor without having sufficient fluid in the reservoir. Insufficient fluid may cause damage to the Hydraulic Remote Control system.

Before removing the filler plug *(Illust. 64)* for inspection, thoroughly clean the plug and surrounding area of all dirt and grit.

The reservoir is filled to the proper level when the fluid is visible in the filler opening. If it is necessary to add fluid use IH Touch-Control Fluid. It is essential that the fluid be absolutely clean and free from foreign matter when placed in the system. Cloudiness of the fluid may indicate the presence of moisture.

Before adding fluid to the Hydraulic Remote Control system; loosen the stroke limit collar clamp on the remote control cylinder piston and move the collar to the yoke end of the piston. Then set the piston in the retracted position (piston all the way in).

Add IH Touch-Control Fluid until it appears at the filler opening.

Start the engine and operate it at a moderate idle speed.

With the filler plug removed, operate the cylinder piston to its maximum stroke in both directions by moving the control lever back and forth about ten times. This quickly frees the system of trapped air. Then with the cylinder piston in the retracted position, stop the engine.

Now add clean fluid to the reservoir until the fluid level is again visible in the filler opening. Replace and tighten the filler plug.

The refill capacity of the Hydraulic Remote Control system, if drained for any reason, is approximately 8 quarts.

When in use, the cylinder is mounted on the pull-behind implement. When not in use, it may be disconnected from the tractor at the break-away coupling and stored away, or it can be left on the implement for future use.

TROUBLE SHOOTING

Possible Cause	Possible Remedy
Hard to Start	
No gasoline in starting tank or carburetor	Fill tank with gasoline; check fuel lines, and carburetor.
Distillate in starting fuel or carburetor	Drain the carburetor and use gasoline for starting *refer to page 13.*
Gasoline strainer or fuel lines clogged	Open fuel shut-off valve. Clean fuel strainer. Check fuel lines and carburetor fuel screen.
Impulse coupling inoperative (tractors with magneto)	Flush with light oil or kerosene; *refer to page 42.*
Water in gasoline	Drain fuel tank and carburetor. Use new fuel and dry the spark plugs.*
Water in cylinders	Check cylinder head gasket or look for clogged drain hole in exhaust manifold.
Choked improperly. Flooded engine.	Follow starting instructions *on page 11.*
Defective ignition or loose wiring	Check wiring, plugs, battery ignition unit or magneto, etc.; *refer to pages 38 to 55.*
Defective battery or cranking motor	Check and service; *refer to pages 48 to 57* or replace.
Spark plugs dirty or improper gap	Clean, adjust gap to .023", or replace plugs.
Magneto grounded (tractors with magneto)	Pull out on ignition switch.
Engine speed control not advanced	Advance lever one-third for starting.

*See your International Harvester dealer.

Continued on next page.

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SPECIFICATIONS

APPROXIMATE CAPACITIES (U.S. Measures)

Cooling system	4-1/4 gal.
Fuel tank	17-1/2 gal.
Gasoline starting tank (with distillate or kerosene engine)	7/8 gal.
Crankcase pan	6 qt.
Transmission and differential case	6 gal.
Steering gear housing	1-1/4 pt.
Air cleaner oil cup	1-5/8 pt.

ENGINE

Cylinders	4
Bore	3-3/8 in.
Stroke	4-1/4 in.
Engine speeds: Minimum speed (governed)	400 to 450 r.p.m.
Maximum idle speed (no load)	1815 r.p.m.
Maximum (full load)	1650 r.p.m.
Battery ignition unit (clockwise rotation, 40° advance)	IH
Magneto (when so equipped) (fixed spark, clockwise rotation)	IH Type H-4
Spark plug gap	.023 in.
Valve clearance (engine hot)	.017 in.
Carburetor (with Donaldson air cleaner)	IH 1-in updraft

CLUTCH

Single-plate, dry-disc (spring loaded)	10 in.

FUSE AND HEADLIGHT LAMPS

Fuse (cartridge type) (No. 106 653)	SFE-20
Headlight lamp (No. 142 309--Trade No. 1133)	6-8 volt 32 candlepower

BELT PULLEY

Pulley speeds: Low idle (no load)	262 r.p.m.
Fast idle (no load)	1121 r.p.m.
Maximum (full load)	1019 r.p.m.
Belt speed (with 9-3/4-in. pulley) (at full load engine speed)	2601 ft. per min.
Pulley diameter	9-3/4 in.
Pulley face	7-1/2 in.

POWER TAKE-OFF

Power take-off shaft speeds: maximum (full load)	540 r.p.m.
Low idle (no load)	139 r.p.m.
Fast idle (no load)	594 r.p.m.

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