666 Tractor

Operators Manual

1084168R1

Reprinted

CASE

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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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FREE GASOLINE CAP — See your dealer today.

International Harvester has developed a new gasoline cap designed to improve vapor venting and to inhibit the sudden eruption of liquid fuel if the safety precautions against cap removal are not observed.

New caps will be exchanged **free of charge** with owners of certain models of International Harvester farm tractors. To see whether your tractor already has the new cap or to arrange to obtain one, simply contact your local International Harvester dealer. Also ask him for a free International Harvester brochure "New Facts About Fuels" and for free "Warning" decals for all gasoline equipment.

Gasoline Tractor Models Included in Cap Exchange Program (See Note)			
A	100	*504	2404
AV	130	F-544 Only	2424
B	140	560	2444
BN	200	600	2504
C	230	*606	2544
H	240	650	*2606
HV	300	F-656 Only	2706
M	330	660	2756
MV	340	666	2806
O	350	686	2826
OS	400	706	2856
W	404	756	
WR	424	766	
70	444	806	
86	450	826	
	460	856	

NOTE: New cap **will not** fit on any of these tractors.

B-275	I-434
B-276	I-544
I -284	I-656
I -354	I-2656
B-414	

* New cap **will not** fit on these tractors above serial numbers shown.

F-504 above serial No. 13400
I -504 above serial No. 14272
I -606 above serial No. 6879
I -2606 above serial No. 6879

New cap **will not** fit on any lawn and garden tractor in the Cadet model series or on any tractor with the gasoline tank behind the operator's seat.

INTERNATIONAL HARVESTER COMPANY
401 NORTH MICHIGAN AVE / CHICAGO, ILLINOIS 60611 / U S A

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WORK SAFELY—FOLLOW THESE RULES

DURING OPERATION - Continued

Reduce speed before making a turn.

Always keep the tractor in gear when going down steep hills.

Avoid ... sudden starts, excessive speed, and sudden stops ... when operating on hillside, rough ground, and most off-the-road operations.

Carefully supervise inexperienced operators.

Stop the engine before leaving the tractor, and engage the brakes.

Hydraulic fluid escaping under pressure can have enough force to penetrate the skin. Hydraulic fluid may also infect a minor cut or opening in the skin. If injured by escaping fluid, see a doctor at once. Serious infection or reaction can result if medical treatment is not given immediately. Make sure all connections are tight and that hoses and lines are in good condition before applying pressure to the system. Relieve all pressure before disconnecting the lines or performing other work on the hydraulic system. To find a leak under pressure use a small peice of cardboard or wood. Never use hands.

TRANSPORTING

Reduce speed when traveling on rough roads.

Avoid heavily-traveled roads when moving equipment, if at all possible.

Use warning devices (ie, flags, S.M.V. emblem, lights, etc.) which are approved for use by your local government agencies, when moving equipment on public roads. Keep these devices clean and in good working condition.

Be sure hitches and/or drawbars are properly stabilized before towing equipment.

When moving on public roads, or from field to field, lock brake pedals together for simultaneous operation when making a stop.

Be courteous, have consideration for other traffic using the road.

AFTER OPERATING

Wait for tractor to "STOP" before dismounting.

Lower equipment to ground before leaving tractor.

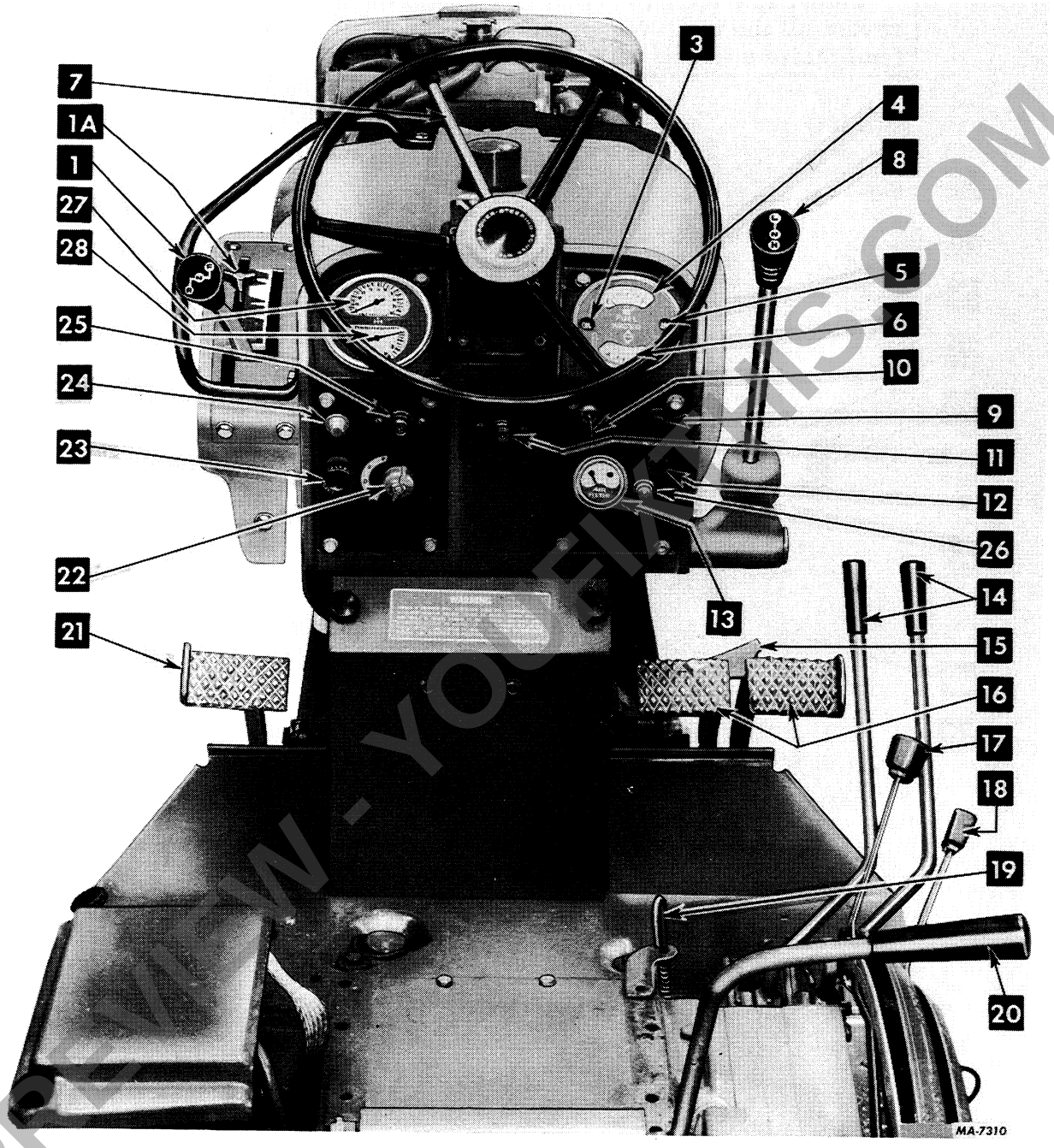
Shut off engine and remove ignition key.

Lock the brakes so tractor will not roll.

To remove the radiator cap when the engine is "HOT", turn the cap to pressure release point - let pressure and steam escape - then remove it.

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Illust. 6
Location of instruments and controls.
(Hydrostatic drive with forward and reverse speed ratio control and foot-n-inch pedal)

References for items illustrated above are shown on page 7.

NOTE: For the symbols used to pictorially identify various instruments and controls, refer to "Universal Symbols for Instruments and Controls".

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STARTING THE TRACTOR - Continued

Start the tractor in motion by slowly moving the speed ratio control and advancing the engine speed control lever to a position where the engine operates best for the load to be handled.

Rapid reversal at the higher speeds will overheat the hydraulic fluid as indicated by the transmission warning Tellite. Refer to "Electrical System".

Do not "ride" the Foot-n-Inch or brake pedals by resting the feet on the pedals while driving the tractor.

Always latch the brake pedals together before driving the tractor in high range. To latch the pedals together, engage the latch in the back of the left pedal into the slot in the back of the right pedal. See Illust. 10. When the brake pedals are not latched together, the latch should rest in the slot in the back of the left brake pedal.

Caution! To maintain safe control of tractor speed and to utilize the engine as a brake during downhill transport operation, the speed ratio control must be in the forward travel position at the desired speed (never in neutral) and Foot-n-Inch pedal must not be depressed. The brakes should also be used when towing a heavy load down a steep slope.

STARTING PROCEDURE FOR HYDROSTATIC DRIVE TRACTORS AFTER TRANSPORTING ON TRUCK OR FLATCAR

Follow the sequence listed below:

Place the Hi-Lo range selector control and the speed ratio control in the "N" (neutral) positions.

Latch the brake pedals together, press down on the brake pedals.

Depress the Foot-n-Inch pedal and start the engine. Set the engine speed control lever to approximately 1000 r.p.m. as shown on the tachometer.

Hold the speed-ratio control at the left end of the neutral slot (zero speed reverse).

Release the Foot-n-Inch pedal.

Slowly move the Hi-Lo range selector control to "H" (high) range for high speed engagement.

If gear clash is obvious the engine should be shut off immediately and the tractor unloaded by other means. Tow the tractor with the Range selector control in neutral to an area where the transmission can be checked by your International Harvester dealer. Refer to "Towing the Tractor" (hydrostatic drive).

If there is no obvious gear clash, drive the tractor in the normal manner.

TRANSMISSION OIL HEATER (Optional)

The 500 watt transmission oil heater for hydrostatic drive tractors is used to warm the oil to aid in starting the engine in extreme cold weather conditions. It is located on the drive housing bottom cover and requires a 3-wire extension cord and a 120 volt AC grounded outlet for safe operation.

At sub-zero temperatures, the heater should be operated a minimum of four hours or overnight, if so desired.

STOPPING THE TRACTOR

Do not stop the engine when the hydraulic fluid is overheated. Cool it down with the engine idling and the tractor stationary.

Move the speed ratio control to the neutral position, and apply the brakes.

When dismounting or parking the tractor move the Hi-Lo range selector control to the "N" (neutral) position and engage the brake pedal lock.

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TELLITES - Continued

TRANSMISSION WARNING TELLITE
(Hydrostatic drive tractors)

A transmission oil temperature switch (if so equipped) is mounted on the transmission housing close to the cranking motor.

The Tellite (located in the right instrument panel) lights when excessive temperature occurs. Refer to "Driving the Tractor".

To check for defective bulb - turn the key switch on. Remove the connection from the temperature warning switch. Ground the terminal on a clean and free from paint area of the housing. If the light does not come on the bulb is defective. Replace the bulb. Refer to "SPECIFICATIONS".

Checking the Tellites

Turn the key switch on. The lights should come on. The bulbs will burn steadily or flash off and on intermittently. Each time the engine is to be started, check whether the lights are functioning properly.

If a Tellite does not come on, check the bulb. Replace the bulb if burned out.

After the engine is started, the lights should go out in a few seconds. If a Tellite stays on, or comes on during engine operation, stop the engine and check the oil level in the crankcase. Add oil if necessary to bring to the proper level. Start the engine. If the light still comes on see your International Harvester dealer.

Alternator-Generator: If the light remains on when the engine speed is 700 r.p.m. or higher, check the alternator-generator.

FUSE

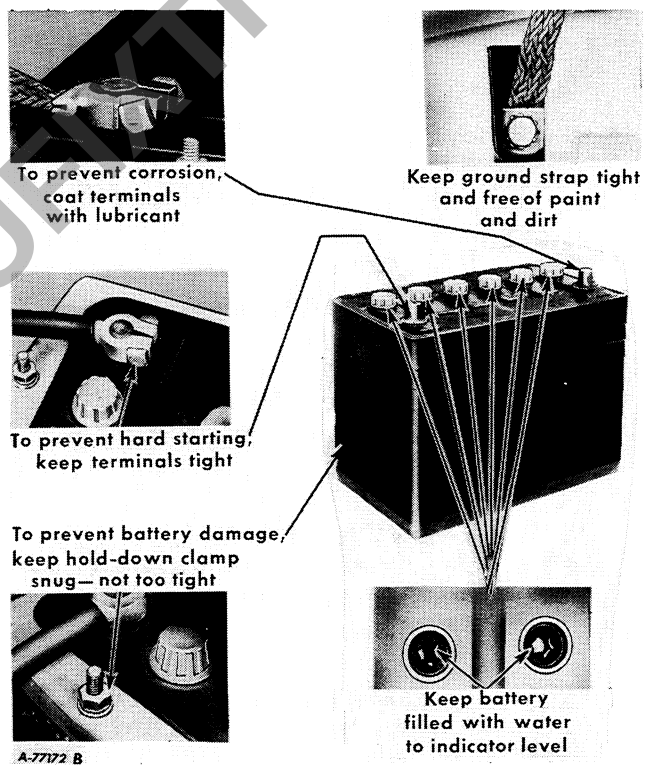
A cartridge-type AGC-20 ampere fuse is located in the fuse housing. If a short circuit occurs in the lighting circuit, the fuse will burn out and break the circuit, preventing damage to the electrical system.

It is important to use the same capacity fuse for replacement. If the lights fail, check the fuse. If the fuse continually burns out, check the electrical wiring for short circuits.

To install a new fuse, unscrew the fuse holder on the instrument panel, pull out the old fuse and replace it with a new one.

BATTERY

Cleaning and Servicing the Battery



Illust. 60
Major items of battery care.

To service the battery, loosen the wing nuts on the battery hold-down bolts, let the cover hang on the hold-down bolts.

Occasionally remove the battery cable and ground strap. Remove the ground strap first and reconnect it last for safety reasons. Brighten the terminal and cable contacting surfaces with wire wool, and reassemble.

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GEAR LUBRICANT - Continued

On hydrostatic drive tractors before checking the level of the transmission lubricant, put the range selector and speed ratio controls in "N" (neutral position).

With the engine running for three minutes at 1600 r.p.m. check the level on the gauge in the top of the transmission case. Keep the lubricant up to the full mark.

LUBRICATION FITTING GREASE

Use IH 251H EP grease or equivalent #2 multi-purpose lithium grease, for lubrication fittings on which the hand lubricator is applied.

Note: Keep your supply of lubricating oil and grease absolutely clean and free from dust. Always use clean containers. Keep the lubricant clean and wipe dirt from the fittings before applying the lubricator.

ENGINE OIL FILTERS

The life of your engine depends upon clean oil being circulated to all bearings.

The purpose of the oil filters 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. The filters will keep the circulating oil free of harmful materials.

If the filters are not replaced and become clogged the by-pass valve will open and unfiltered oil will be circulated through the engine.

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

Under normal operating conditions, replace the engine oil filters every second oil change (200 hours of operation).

CHANGING THE GASOLINE ENGINE FILTER ELEMENT

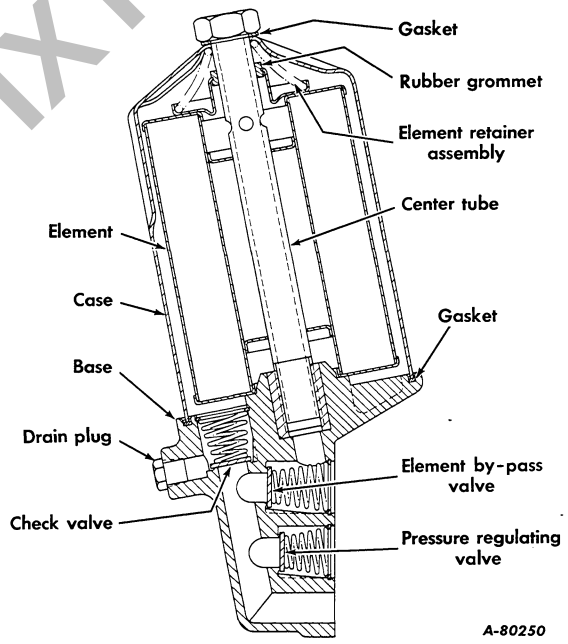
Do not change the element while the engine is running. Stop the engine.

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

2. Clean the outside of the filter case to prevent dirt from dropping into the base.

3. Unscrew the center tube.

4. Lift up and remove the center tube and case.



Illust. 83
Cutaway view of the oil Filter (Gasoline Engines).

5. Discard the old element.

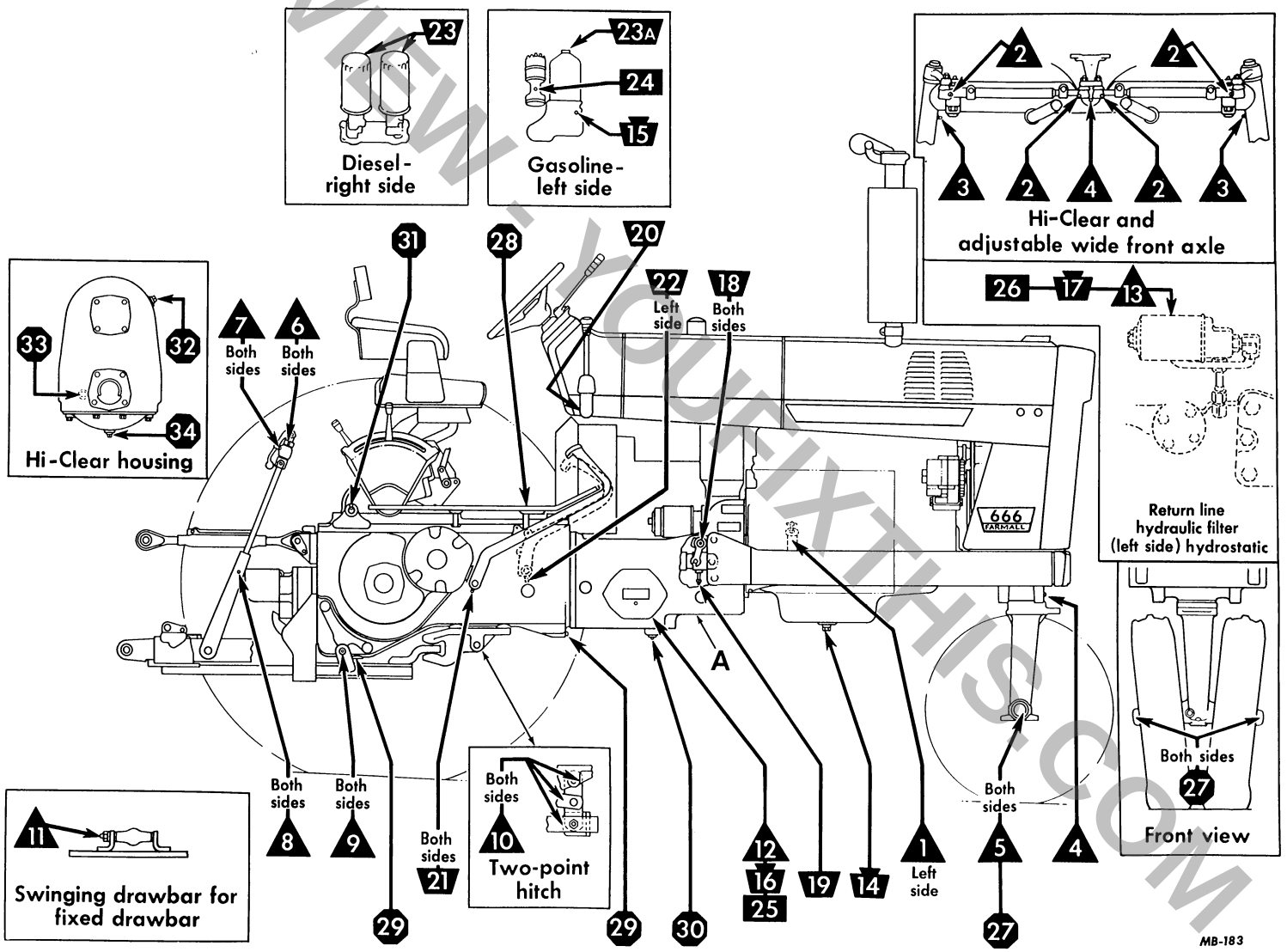
Note: If any equipment on the tractor prevents lifting the case over the element, remove the case and the element together.

6. Clean the base and the case with a clean cloth dampened with kerosene.

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The symbols around the reference numbers indicate the intervals of lubrication.

▲ - 10 hours, ⬟ - 100 hours, ▼ - 200 hours, ■ - 250 hours, ■ - 500 hours, ⬢ - Periodic



Illust. 89 - Right side view of tractor.

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LUBRICATION GUIDE

■ - After Every 250 Hours of Operation

24. Distributor (gasoline engines)	Remove the grease plug and insert a lubrication fitting. Apply four or five strokes of the lubricator (approx. 1/4 oz.) to the distributor fitting using IH 251H EP grease or equivalent #2 multi-purpose lithium grease.
25. Hydraulic fluid filter. (Gear drive) 25. Hydraulic fluid filter. (Hydrostatic drive)	Remove and clean the filter relief valve screen and replace the element as instructed on pages 84 to 86.
26. Return line hydraulic filter. (Hydrostatic drive)	Change the filter and replace with a new one as instructed on page 87.

● - Periodic

27. Dual Front Wheels	Once a year remove, clean, and repack the front wheel bearings with IH 251H EP grease or equivalent #2 multi-purpose lithium grease. Note: Front wheel hubs of new tractors are not completely filled with grease. If tractor is operated in rice field or a similar severe wet condition, wheel hub must be completely filled with grease, and daily greasing is essential, when wheel hub has a lubrication fitting.
Transmission and Hydraulic System	Hydrostatic Drive Tractors only: Before checking the level of the transmission lubricant, put the range selector and speed ratio controls in "N" neutral position. Run the engine to operating temperature. Then run the engine for three minutes at 1200 r.p.m. and check the level on the gauge in the top of the transmission case. Keep the lubricant up to the full mark. (Oil level will register 1-1/2 inches higher if the engine is not run prior to checking level). Note: THE OIL LEVEL IN THE REAR FRAME MUST DROP TO A LOWER LEVEL AFTER THE ENGINE IS STARTED. IF THE LEVEL STAYS ABOVE THE FULL MARK SEE YOUR INTERNATIONAL HARVESTER DEALER.

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SPECIFICATIONS

POWER TAKE-OFF SHAFT SPEEDS, R.P.M. - Continued (Hydrostatic Drive)	Gasoline Engines	Diesel Engines
At 2400 r.p.m. rated engine speed	652	652
At high idle engine speed	706	706
At low idle engine speed	115	190
At 2000 r.p.m. engine speed for standard shaft speed	543	543

ELECTRICAL SYSTEM

System voltage		12 volt, neg. ground
Battery size	(Gasoline	One - 12 volt, 50 amp.
	(Diesel	Two - 6 volt, 120 amp.
Alternator-Generator, Delco-Remy		37 amp. with integral regulator
Cranking motor, Delco-Remy		Positive engagement, push button controlled
Light switch		4 position
Lamps - all glass, sealed beam units		12 volt
Fuse		AGC-20

	Lamp No.	IH Part No.	Assembly No.
Sealed beam lamps (All 12 volt)			
Headlights	4411	535 850 R1	388 945 R91
Floodlights (fender)	4406	390 756 R91	388 946 R91
Rear light (Combination rear light and taillight)	4603	371 461 R91	387 729 R91
Bulbs			
Taillight (Combination rear light and taillight)	1003	455 490	387 729 R91
Warning light	1156	9 417 866	537 328 R91
Tellites - oil and amp.	257	9 412 348	
Instrument lights	1895	9 417 863	
Shift quadrant control light (Hydrostatic Drive)	1155	9 417 865	399 232 R91
Tellite - Trans. oil temperature warning (Hydrostatic Drive)	1895	9 417 863	392 441 R91

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