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International 3500 Series A Loader Tractor

Operators Manual

1084262R1
Reprinted

CASE

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WORK SAFELY—FOLLOW THESE RULES



This symbol is used to call your attention to instructions concerning your personal safety. Be sure to observe and follow these instructions.

A CAREFUL OPERATOR IS THE BEST INSURANCE AGAINST AN ACCIDENT

Know the controls and what they do.

This equipment can be dangerous if not used properly. The operator, therefore, should develop safe working habits and also be aware of hazardous conditions. In this way he will protect himself, other personnel, and the loader. Safe operation, for the most part, is the responsibility of the operator.

Check coolant and engine oil levels, and perform any other necessary services, before starting the engine.

When fueling an engine, keep any type of open flame away. Do not Smoke! Wait for the engine to cool before refueling it.

Check and straighten twisted hoses. Do not attempt to repair or tighten hoses when under pressure, when the boom is raised, or with the engine running.

Be sure muffler and exhaust pipe extensions are in place so exhaust gases are discharged away from the operator.

Clean dirt, trash, and grease from operator's platform, pedals, and steps.

Do not permit anyone except the operator on the machine.

Mounting assist handles and steps are provided for your safety. Use them when getting on or off the tractor.

Avoid loose-fitting clothing, which could catch on moving parts.

Before starting engine make sure helpers or observers stand clear of equipment.

Put all controls in stop position before starting the engine.

Operate the engine only in well ventilated areas.

Do not transport a load with the bucket raised above transport position.

Avoid sharp turns when backing up with the bucket filled and raised.

Never use the loader as a battering ram.

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

Use extreme care when working close to fences, ditches, or on hillsides.

Reduce speed when traveling on rough roads.

Avoid operating sideways on a steep slope whenever possible.

Check clearance carefully before driving under electric lines, bridges, or entering or leaving buildings.

Use warning devices (i.e. 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.

Carefully supervise inexperienced operators.

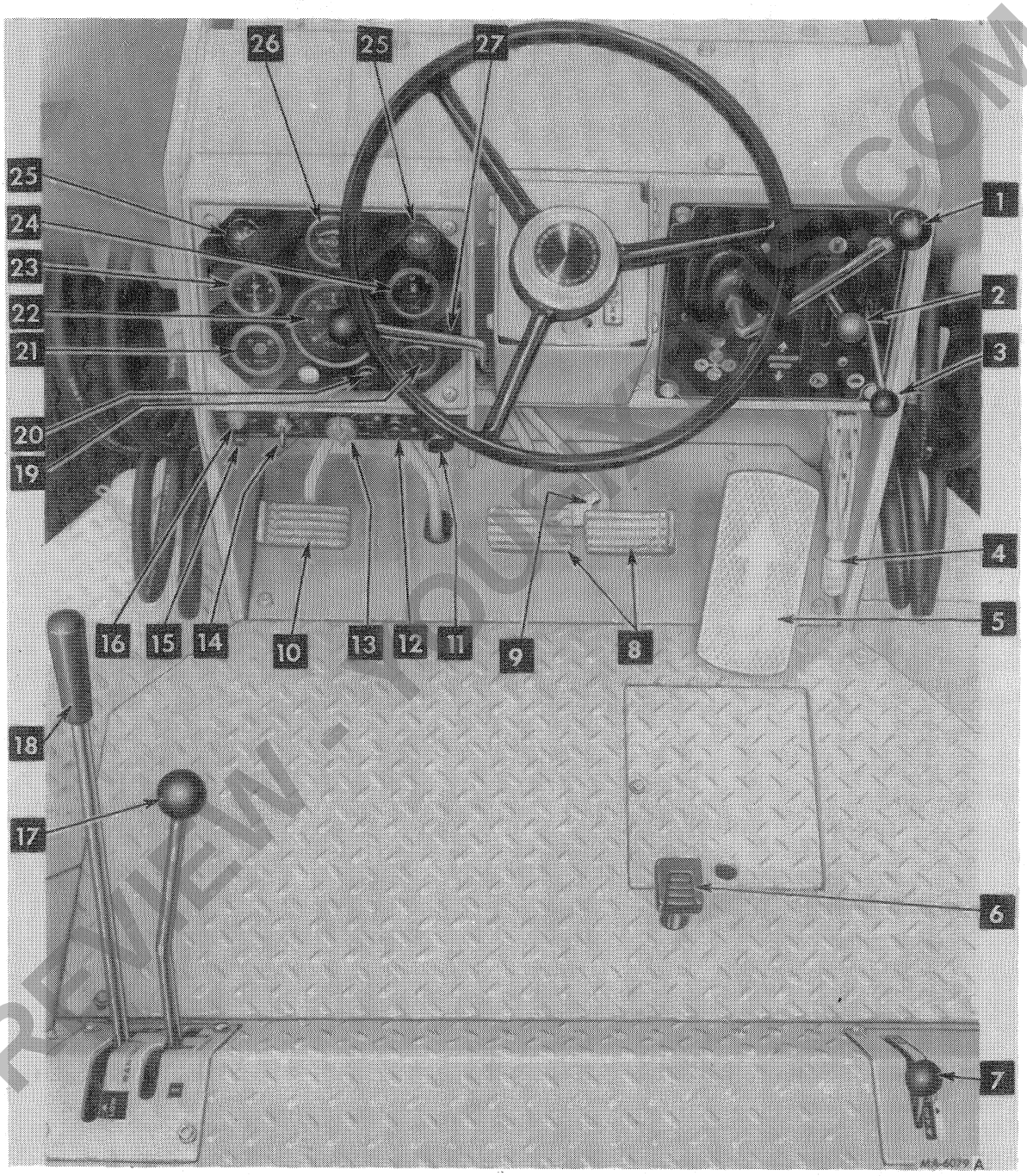
Wait for tractor to "STOP" before dismounting.

Continued on next page

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Before attempting to start or operate the machine, be sure to review all the instructions for the new machine and thoroughly familiarize yourself with the tractor instruments and controls.



Illust. 5
Location of instruments and controls - diesel shown with synchromesh transmission.
Reference numbers for items illustrated above are listed on page 4.

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

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DRIVING

PREPARING THE TRACTOR FOR EACH DAY'S WORK

Check the level of the coolant in the radiator. Refer to "Cooling System".

Check the oil level in the engine crankcase. Also lubricate the chassis points recommended for daily service. Refer to "Lubrication Guide" and "Lubrication Table".

Inspect the tires for general condition.

FUEL GAUGE

When the key switch is turned on, the fuel gauge indicates the level of the fuel in the fuel tank.

Note: The key must be left in the "On" position while the engine is running so the fuel gauge will function.

FILLING THE FUEL TANK

Caution! Never remove the fuel tank cap or fill the fuel tank when the engine is running, is hot, or when near an open flame. Do not smoke when working around inflammable fuel as the air around the tractor is mixed with highly explosive vapor. When pouring fuel, keep the container or hose nozzle in contact with the metal of the fuel tank to avoid the possibility of an electric spark igniting the fuel.

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

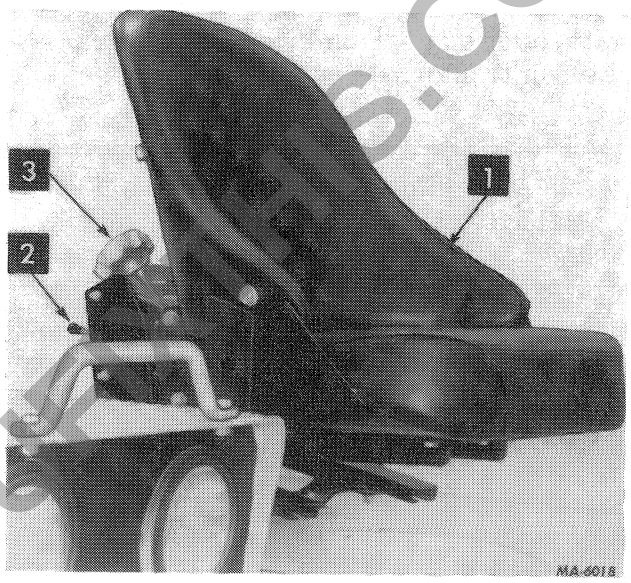
Note: Do not fill the tank to its full capacity as space is required for vapor expansion in the event of a temperature change. A tank filled to capacity may overflow if exposed to a rise in temperature or direct sunlight.

The fuel tank has an air vent tube. Periodically run a wire through the tube to assure proper flow of fuel from the tank to the engine.

Before starting the diesel tractor for each day's work, drain the primary fuel filter by opening the valve at the bottom of the filter case and draining until clear fuel appears.

Close the drain as soon as clean fuel appears.

SUSPENSION SEAT



1 - Adjusting handle (not seen)
2 - Lock-out lever
3 - Weight control adjusting knob

Illust. 8
Seat adjustment controls

The seat can be adjusted forward or rearward by means of the adjusting handle at the left side of the seat.

Weight Adjuster

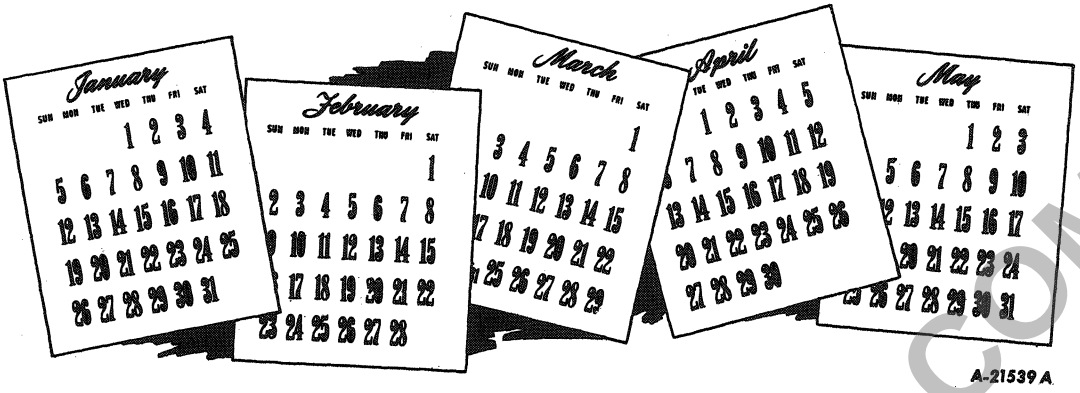
To adjust the seat to the operator's weight, turn the weight control adjusting knob in a clockwise or counterclockwise direction so that the indicator is set at the number nearest the operator's weight. See Illust. 8.

The lock-out lever provides the means to lock or unlock the preset position of the seat by simply moving the lock-out lever up or down.

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PREVENTIVE MAINTENANCE GUIDE



To keep your tractor performing efficiently, it is advisable to systematically inspect the following points of intervals as outlined below.

Before Operating the Tractor

Before operating a new machine for the first time, be sure to follow the instructions given in "Before Operating Your New Machine" and "Driving", also see "Lubrication", "Lubrication Table", and "Lubrication Guide".

After the First 10 Hours of Operation

Hydraulic fluid filter	Clean the by-pass valve screen and replace filter element. Refer to "Hydraulic Fluid Filter".
Water pump, fan, and alternator-generator belt	Check tension. Refer to "Water Pump, Alternator-Generator, and Fan Belt Tension".
Hoses and fittings	Check and tighten fittings to prevent leaks.

After Every 10 Hours of Operation

Cooling system	Check level of coolant in radiator. Refer to "Cooling System".
Fuel filter water drain cock (diesel engine). .	Drain off water and sediment.
Lubrication points	Refer to "Lubrication Guide".
Cotter pins and locks	Check for loss of retainers or cotter pins.
Booms, Linkage, and bucket pivot pins	Clean dirt, mud, etc. from parts to prevent rust and binding.
Transmission and hydraulic fluid level	Check fluid level. Refer to "Gear Lubricant".

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LUBRICATION TABLE

Engine oils meeting standards as shown under heading "Engine Oil" must be used in these engines.

Point of Lubrication	Capacity	Anticipated Temperatures			
		Above +32° F.	+32° F. to +10° F.	+10° F. to -10° F.	Below -10° F.
Gasoline Engine Crankcase	6 qt. **	IH (low ash) SAE-30 (See note)	IH (low ash) SAE-10W	IH (low ash) 5-1/2 qts. SAE-10W w/1/2 qt. kerosene or ***6-1/4 qt. SAE 5W20 or SAE-10W w/3/4 qt. kerosene.	IH (low ash) 5 qt. SAE-10W w/1 qt. kerosene or ***5-1/2 qts. SAE-10W w/1-1/2 qts. kerosene
Diesel Engine Crankcase	9 qt.**	IH No. 1® SAE-30	IH No. 1 SAE-10W	IH No. 1 8 qts. SAE-10W w/1 qt. kerosene or ***9 qts. SAE-10W w/1 qt. kerosene	IH No. 1 7-1/4 qts. SAE-10W w/1-3/4 qts. kerosene or ***8 qts. SAE-10W w/2 qts. kerosene

Point of Lubrication		Lubricant
Alternator-generator	XXX	No lubrication required
Synchromesh transmission and differential case (also reservoir for hydraulic system)	Approx. ***13-1/2 gallons	IH Hy-Tran® Fluid If fluid is used which does not meet requirements of IH B-6 specification, International Harvester Company will not be responsible for substandard performance of transmission and hydraulic components.
Hydrostatic transmission and differential case (also reservoir for hydraulic system)	Approx. 16-1/2 gallons	Note: Failures due to use of improper fluid or filters are not covered by warranty - For Maximum Protection Use IH Hy-Tran® Fluid and Filters.
Front wheel hubs	Hand pack bearings	Once a year remove, clean, and repack. Refer to "Lubricating the Front Wheels".
Lubrication fittings	XXX	Use IH 251H EP grease or equivalent #2 multi-purpose lithium grease for fittings on which the hand lubricator is applied.

** – When changing the filter, add one quart.
*** – With filter change.

Note: Do not substitute SAE-10W-30 or 10W-40.

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SPECIFICATIONS

TRACTOR

	Gasoline Engine	Diesel Engine
Capacities (U.S. Measure – Approximate)		
Cooling system	11-1/2 qt.	14-1/2 qt.
Fuel tank	Approx. 24. gal.	Approx. 24 gal.
Crankcase (with filter change)	7 qt.	10 qt.
Synchromesh transmission and differential case	13-1/2 gal.	13-1/2 gal.
Hydrostatic transmission and differential case	16-1/2 gal.	16-1/2 gal.
Engine		
Engine make, model, no cylinders	IH, C-200, 4	IH, D-239, 4
Bore x stroke, inches	3.812 x 4.390	3.875 x 5.060
Displacement	200 cu. in	239 cu. in.
Engine speeds:		
Fuel load (governed speed)	2200 r.p.m.	2200 r.p.m.
High idle (governed speed)	Approx. 2420 r.p.m.	Approx. 2420 r.p.m.
Low idle speed	Approx. 625 r.p.m.	Approx. 700 r.p.m.
Battery ignition distributor:		
Breaker point gap	.020 in.	
Spark timing at high idle	20 degrees BTC	
Spark plug gap	.023 in.	
Valve clearance (engine warm)		
Intake	.027 in.	.010 in.
Exhaust	.027 in.	.012 in.
Injection pump		Robert Bosch
Injection nozzles		Robert Bosch
Electrical System		
System voltage	12 volt, negative ground	
Battery size		
Gasoline engine	one, 12 volt	
Diesel engine		two, 6 volt
Alternator-generator, Delco-Remy	32 amperes	
Alternator-generator regulator	2 unit	
Cranking motor, Delco-Remy or Robert Bosch	Positive engagement, key switch controlled	
Light switch		
Tractor light switch	4 position	
Turn signals (optional)	3 position	
Fuse (cartridge type)	AGC-20 amperes	
Lamps - all glass, sealed beam units	12 volts	
Sealed beam lamps	Lamp No.	IH Part No.
Headlights (outer)	#4411	R.H. 387 730 R91
Floodlight (inner) Front and Rear	#4406	L.H. 387 927 R91
Flashing warning lights		536 679 R91
Taillight		535 671 R91
Brake and taillight		537 265 R91
Bulbs		
Taillight	#1156	9 417 866
Flashing warning lights	#1156	9 417 866
Instrument lights	Two #1155	Two 9 417 865
Hand brake warning light	#257	9 412 348
Brake and taillight (optional)	#1157	9 417 867

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