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MANUAL PREVIEW

**International
Harvester
Operator's Manual
250
Track Loader**

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IH-O-250 T.L.

Operator's Manual

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INTERNATIONAL[®]
MODEL

250

LOADER

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IH-O-250 T.L.

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INTRODUCTION



Illust. 1
Model 250 loader.

PLEASE READ CAREFULLY

Instructions on operation, lubrication and maintenance for the basic loader and attachments are covered in this manual. Disregard any instructions that are not applicable to your loader.

Instructions on operation, lubrication and maintenance for the DROTT 4-in-1 and/or Skid-Shovel and attachments are covered in the DROTT equipment manuals also furnished with this machine.

Engine power is supplied by a full-diesel, six-cylinder, in-line, turbocharged engine with direct starting.

Tools are wrapped in waterproof paper and shipped with the machine.

Throughout this manual the use of the terms "left" and "right" and "front" and "rear" must be understood to avoid confusion when following instructions. (Illust. 1.)

Some illustrations and text in this manual are of general application on machines of this model and may not show your equipment accurately in all details.

SERIAL NUMBERS

The chassis serial number is stamped on a plate attached to the left hand seat side sheet (Illust. 2). The engine serial number is stamped on a pad located on the right side of the engine above the oil cooler-to-flywheel housing tube (Illust. 3). These serial numbers are to be used when ordering parts. For ready reference, we suggest that you write these serial numbers in the spaces provided.

Chassis Serial No. L-250 - _____

Engine Serial No. L-250M - _____



Illust. 2
Chassis serial number.

DESCRIPTION

SPECIFICATIONS AND CAPACITIES

Capacities (U.S. Measure)

Fuel tank	86 gals.
Cooling system	50 qts
Crankcase:	
With filters drained	25 qts
With filters changed	27 qts
Hydraulic system:	
Loaders equipped w/ 4-in-1	36 gals.
Loaders equipped w/ straight bucket	33 gals.
Sprocket drive housing (each side)	28 qts
Front idler (each side)	3-1/2 pts
Track idler (each side)	2-1/2 pts
Track roller (each)	2-1/4 pts
Rear frame*	40 gals.

*Common reservoir for the hydraulic steering boosters, planetary steering, torque converter and power shift transmission.

Specifications

Engine (429-Turbocharged Diesel, 4 Cycle, Valve-in-Head)

Cylinders	6
Bore	4-1/2 in.
Stroke	4-1/2 in.
Electrical system	24-volt neg. gnd.
Fan & generator belt tension	1/2 to 3/4 in.
Water pump belt tension	1/2 to 3/4 in.
Fuel injection pump	Roosa Master
Valve clearance (engine cold):	
Intake	.012-.014 in.
Exhaust	.024-.026 in.

Engine Speeds

Full load 2300 ± 10 rpm

**High idle:

 Engine on dynamometer. 2510 ± 40 rpm

 Engine in chassis 2480 ± 60 rpm

Low idle 775 ± 25 rpm

** - Attention is called to the two high idle speeds given. Note that the high idle speed is less when checked in the chassis than on a dynamometer. This is due to the parasitic horsepower loads of this loader which reduce the engine speed.

Loader Speeds (@ 2300 Engine rpm)

Forward Speeds:

1st low range	2.1 mph
1st high range	2.6 mph
2nd low range	4.0 mph
2nd high range	4.9 mph

Reverse Speeds:

1st low range	2.4 mph
1st high range	2.9 mph
2nd low range	4.5 mph
2nd high range	5.5 mph

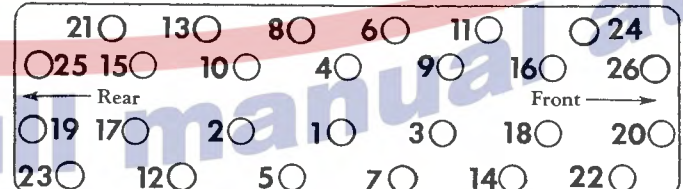
Torque Converter

Make	Rockford
Type	Single-stage with fixed stators
Fluid	Grade-10 engine oil
Track	

Tread (center to center of tracks)	76 in.
Ground contact length	107 in.
Track shoe width	18 in.

Torques (Foot-pounds)

Compressor cover and turbine housing clamp nut	10
Engine lubricating oil filter case bolts	15-20
Fuel filter case cover retaining bolts	15-20
Hydraulic track adjuster cap screw	10-15
Radiator and air cleaner hose clamps	20-25 in-lbs
Track shoe bolts	220-250
Transmission pressure filter case hold-down bolt	55 max.
Transmission safety and/or suction filter housing cap screws	33-37
Track idler, track roller and front idler filler pipe plugs	15-20
Valve cover bolts	33-37
Cranking motor mounting bolts	160-180
Thermostat housing cap screws	10-15
Cylinder head torque (lubricated with Grade-50 engine oil)	310



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Illust. 4
Sequence for tightening cylinder head bolts.

NOTE: When retorquing cylinder head bolts, the engine must be at operating temperature. Only those below torque are to be retorqued to the proper specifications; those above torque are to remain as they are (Illust. 4).

NOTE: Every time the cylinder head is retorqued, the valve lash must be checked and adjusted if necessary. Refer to "VALVE LASH ADJUSTMENT" on pages 40 and 41.

General

Length, over-all (bucket on ground and rolled back):

 4-in-1 216 in.

 Straight bucket 207-1/2 in.

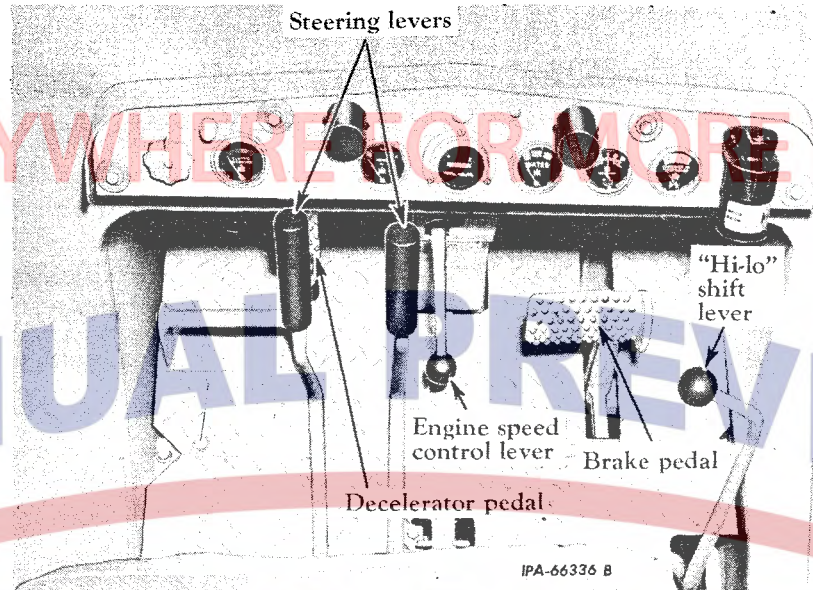
Width, over-all (width of bucket) . . . 96 in.

Height:

 Over-all less exhaust pipe, air

 cleaner pipe and lights . . . 92-7/8 in.

DESCRIPTION



Illust. 9
Operating controls.

Engine Speed Control Lever (Illust. 9)

Moving this lever "UP" increases the engine speed; moving it "DOWN" decreases the speed. With the lever all the way down, the engine is in the shut-off position.

control lever is at full speed (all the way up), it is used to slow the engine speed to approximately low idle so the loader can be gradually started in motion.

Steering Levers (Illust. 9)

These levers are used to steer the loader by engaging or disengaging the power flow from the transmission to either track.

Transmission "Hi-Lo" Shifter Lever (Illust. 9)

This lever is used to select the "HI" or "LO" transmission gear range. For additional information, refer to "Shifting Gears" on page 14.

Transmission Gear Selector Lever (Illust. 10)

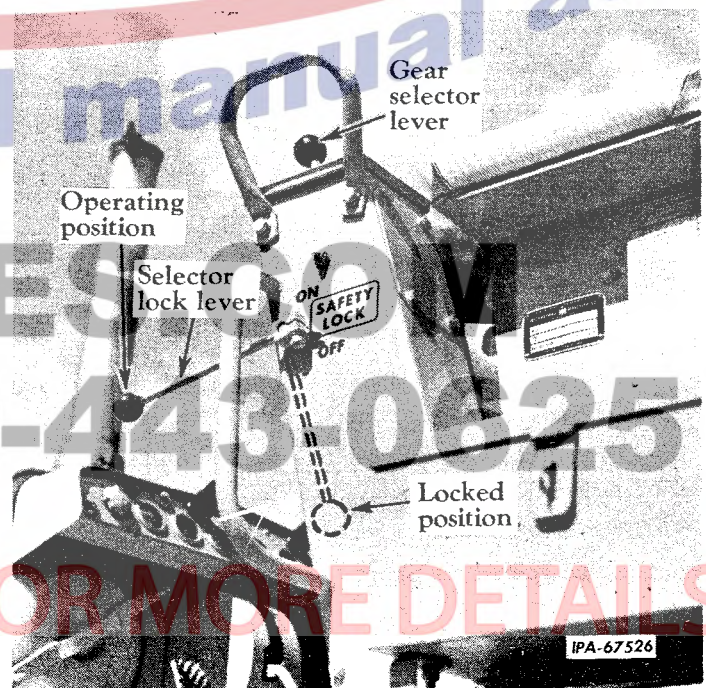
This lever is used to select the various transmission gear ranges. For additional information, refer to "Shifting Gears" on page 14.

Transmission Selector Lock Lever (Illust. 10)

This lever is used to lock the selector lever in the "NEUTRAL" position.

Decelerator Pedal (Illust. 9)

Depressing this pedal overrides the setting of the engine speed control lever which slows down the engine speed. When the engine speed



Illust. 10
Transmission gear selector lever and selector lock lever.

OPERATION



Illust. 12
Fuel shut-off valve and drain valve.

OPERATING THE LOADER

FOR OPERATING INSTRUCTIONS OF THE LOADER EQUIPMENT, REFER TO THE DROTT MANUAL FURNISHED WITH THIS LOADER.

Starting the Engine

This engine cannot be started by towing or coasting the loader.

NOTE: Before starting a new engine, the turbocharger must be primed. Refer to "Priming the Turbocharger" on page 48.

Not Equipped with an Air Shut-off and Ether Injector

1. The fuel shut-off valve, underneath the fuel tank, must be open (Illust. 12). To prevent leakage and seepage from this valve when open, be sure to screw the needle stem out until the seat of the stem is tight against the stop.

2. Place the electrical system master switch (Illust. 8) in the "ON" position.

NOTE: To prevent any possible damage to the generator and/or voltage regulator, the electrical system master switch must be in the "ON" position when the engine is running. The switch must be in the "OFF" position only when the engine is shut down at the end of each day or when the operator leaves the loader unattended.

3. Fully apply and lock the foot pedal (Illust. 15).

4. Place the transmission gear selector lever in the "NEUTRAL" position. (Illust. 14.)

5. Place the selector lock lever in the "ON" position (Illust. 10).

6. Move the engine speed control lever up to the high idle position (all the way up); then return it to half throttle (approximately to the fourth notch).

7. Depress the starter button. Do not operate the cranking motor for more than 30 seconds at one time. If the engine does not start, allow the cranking motor to cool for at least two or three minutes before cranking again.

NOTE: Allow the engine to run at 800 to 1200 rpm (engine speed control lever in the first or second notch) for 5 to 10 minutes to allow thorough distribution of the lubricating oil. The engine must not be placed under load until normal oil pressure is reached.

8. If the engine will not start or runs roughly, there may be air in the fuel system and the system must be vented. Refer to "Priming and Venting the Fuel System" on page 45.

9. Check all instruments for the proper readings. (Refer to "Instrument Check" on pages 12 and 13.)