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MANUAL PREVIEW

# ***International Harvester***

**Operator's Manual**

**4500A**

**Fork Lift**

Operator's Manual

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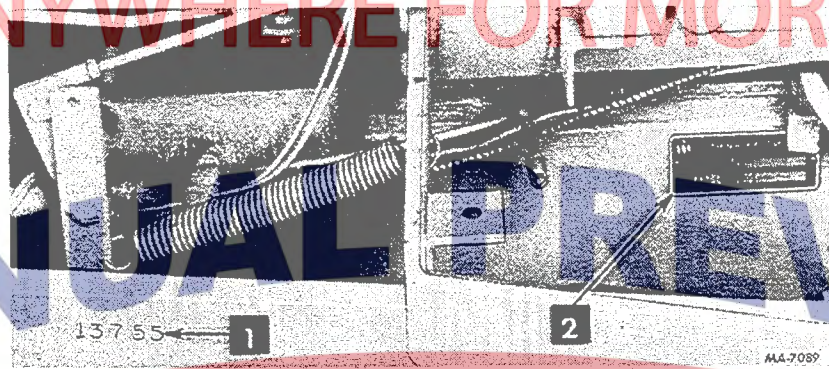
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**IH-O-4500A**

TO THE OWNER

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1 - Under frame serial number  
13755

2 - Tractor serial number  
MA-7089

Hour meter access door opened and battery access door removed.

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## OPERATING THE FORK LIFT

### TOWING THE FORK LIFT - Continued

After towing the fork lift, drain sufficient fluid (approximately four gallons) so the fluid level in the transmission case is at the "Full" mark on the transmission oil level gauge.

Do not tow over 15 miles per hour.

To start the fork lift by towing, the following procedure should be followed.

**Note:** Fork lifts equipped with forward and reverse drive cannot be tow started.

Select the desired gear, but do not exceed the normal ground speed attained in this gear while towing. Refer to "Specifications" for ground speeds.

When tow starting a fork lift do not tow more than twenty feet with the clutch pedal depressed.

### MAST CAPACITIES

Load center is the distance forward from the fork vertical face plate to the center line of the load. This is important because the capacity of a fork lift at a certain load center is a basic specification pertaining to all fork lift. As an example, a fork lift rated at 4000 pound capacity at 24-inch load centers has a 5000 pound capacity at 15 inch load centers.

10-1/2-foot mast - 4000 pound capacity: Rated maximum lift capacity of 4000 pounds at 24-inch load centers.

14-foot mast - 4000 pound capacity: Rated maximum lift capacity of 4000 pounds at 24-inch load centers.

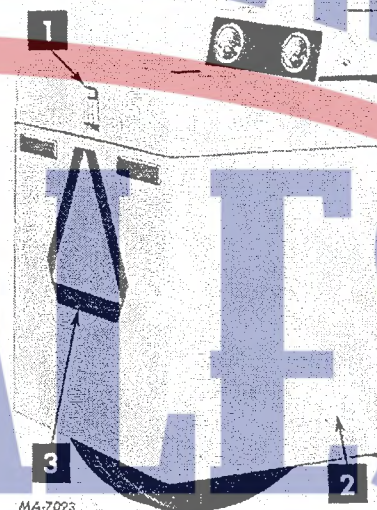
14-foot mast - 5000 pound capacity: Rated maximum lift capacity of 5000 pounds at 24-inch load centers.

\*21-1/2-foot mast - 4000 pound capacity: Rated maximum lift capacity 4000 pounds at 24-inch load center to 15 feet; 2500 pounds maximum over 15 feet at 24-inch load center.

\*28-foot mast - 4000 pound capacity: Rated maximum lift capacity 4000 pounds to 15 feet; 2500 pounds maximum to 21 feet; and 1000 pounds maximum over 21 feet.

\*Caution! Rated loads to 15 feet only. Not recommended for handling wide loads such as logs and lumber.

### COUNTERWEIGHT



- 1 - Cast top cover
- 2 - Integral box
- 3 - Slow moving vehicle emblem

Illust. 13

The fork lift is equipped with an integral box counterweight having a 675 pound cast top cover. See Illust. 13.

The box should be filled with metal punchings or bar stock amounting to 2000 pounds to counterbalance the weight of the front end.

A lifting hook tool is provided for raising the cast top cover. Remove the two top bolts, insert the lifting hook in the slot in the top cover, and using a chain hoist or other means remove the cover.

Tighten the bolts securely after reinstalling the cover.

## LUBRICATION

### HYDRAULIC FLUID FILTERS - Continued

#### Transmission Internal Filter - Continued



Illust. 42  
Hydraulic fluid filter disassembled.

Remove the filter element and by-pass valve from the cover. Discard the filter element.

Dissassemble the cap screw, seal retainer, O-ring and cover.

Remove the used filter cover gasket on multiple control valve flange and O-ring filter cover bolt (under large washer) and discard. Replace with new gasket and O-ring supplied in filter replacement package. Be sure to lubricate both gasket and O-ring with Hy-Tran fluid before installation.

Clean the by-pass valve screen with a brush using kerosene or diesel fuel.

Note: Check to make sure the rubber grommet "A" Illust. 42 stays attached to the by-pass valve while passing the cap screw through it.

Assemble by-pass valve and element in cover and insert bolt into multiple control valve flange. Hold filter cover against multiple control valve flange with enough pressure to overcome by-pass spring load. Tighten bolt finger tight while holding cover against multiple control valve flange. During last few turns of the center bolt also rotate filter cover assembly along with bolt. Take care to insure the filter cover is positioned properly in the groove when tightening the bolt. When the filter cover bolt is finger tight use wrench to draw bolt up snug. Do not over-tighten. If a torque wrench is available the bolt should be torqued to 70 - 72 foot pounds.

#### By-Pass valve

Phenolic valve must be seated on seat

Do not bend four legs

MA-3002

Illust. 42A

Make a visual check to insure a space exists between each of the four metal legs and the phenolic valve, after cleaning by-pass valve screen, or on a new by-pass valve.

If air has entered the system refer to "Freeing the system of trapped air."

## SPECIFICATIONS

### CAPACITIES (U.S. Measure - Approximate)

|                                                                                               | Gasoline Engines       | Diesel Engines         |
|-----------------------------------------------------------------------------------------------|------------------------|------------------------|
| Cooling system . . . . .                                                                      | 11.5 quarts            | 12.5 quarts            |
| Fuel Tank . . . . .                                                                           | 18.5 gallon            | 18.5 gallon            |
| Crankcase pan (with filter change . . . . .                                                   | 7 quarts               | 8 quarts               |
| Synchromesh transmission and differential case (Also reservoir for hydraulic system). . . . . | Approx. 13-1/2 gallons | Approx. 13-1/2 gallons |

### ENGINE

|                                        |                    |                      |
|----------------------------------------|--------------------|----------------------|
| Make and model . . . . .               | IH, C-157          | IH, D-179            |
| Cylinders . . . . .                    | 4                  | 3                    |
| Bore . . . . .                         | 3.375 in.          | 3.875 in.            |
| Stroke . . . . .                       | 4.390 in.          | 5.06 in.             |
| Displacement . . . . .                 | 157 cu. in.        | 179 cu. in.          |
| Engine speeds:                         |                    |                      |
| Full load (governed speed) . . . . .   | 2200               | 2,200 r.p.m.         |
| High idle (governed speed) . . . . .   | 2420               | Approx. 2,420 r.p.m. |
| Low idle speed . . . . .               | 625                | Approx. 750 r.p.m.   |
| Valve clearance (engine hot)           |                    |                      |
| Intake . . . . .                       | .027 in.           | .010 in.             |
| Exhaust . . . . .                      | .027 in.           | .012 in.             |
| Injection pump . . . . .               |                    | Robt. Bosch          |
| Injection nozzles . . . . .            |                    | Robt. Bosch          |
| Injection pump timing, engine stopped: |                    |                      |
| Start of injection . . . . .           |                    | 14° before TDC       |
| Battery ignition distributor           |                    |                      |
| Breaker point gap . . . . .            | .020 in.           |                      |
| Spark timing at high idle . . . . .    | 18 degrees advance |                      |
| Spark plug gap . . . . .               | .023 in.           |                      |

### ELECTRICAL SYSTEM

|                                                                     |                                               |
|---------------------------------------------------------------------|-----------------------------------------------|
| System voltage . . . . .                                            | 12 volt, neg. ground                          |
| Battery size                                                        |                                               |
| Gasoline engine . . . . .                                           | One, 12 volt                                  |
| Diesel engine . . . . .                                             | Two, 6 volt                                   |
| Alternator-generator, Delco-Remy (with internal regulator). . . . . | 37 amperes                                    |
| Cranking motor, Delco-Remy . . . . .                                | Positive engagement, key ignition controlled. |
| Light switch . . . . .                                              | 4 position                                    |

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