International 4300
Four-Wheel Drive Tractor

Operators Manual

1014467R1

Reprinted

CASE IH

THIS SAFETY ALERT SYMBOL INDICATES IMPORTANT SAFETY MESSAGES IN THIS MANUAL. WHEN YOU SEE THIS SYMBOL, CAREFULLY READ THE MESSAGE THAT FOLLOWS AND BE ALERT TO THE POSSIBILITY OF PERSONAL INJURY OR DEATH.

M171B

If Safety Decals on this machine use the words **Danger, Warning or Caution,** which are defined as follows:

- **DANGER:** Indicates an immediate hazardous situation which if not avoided, will result in death or serious injury. The color associated with Danger is RED.
- **WARNING:** Indicates an potentially hazardous situation which if not avoided, will result in serious injury. The color associated with Warning is ORANGE.
- **CAUTION:** Indicates an potentially hazardous situation which if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices. The color associated with Caution is YELLOW.

If Safety Decals on this machine are ISO two panel Pictorial, decals are defined as follows:

- The first panel indicates the nature of the hazard.
- The second panel indicates the appropriate avoidance of the hazard.
- Background color is YELLOW.
- Prohibition symbols such as  and 

if used, are RED.

WARNING

IMPROPER OPERATION OF THIS MACHINE CAN CAUSE INJURY OR DEATH. BEFORE USING THIS MACHINE, MAKE CERTAIN THAT EVERY OPERATOR:

- Is instructed in safe and proper use of the machine.
- Reads and understands the Manual(s) pertaining to the machine.
- Reads and understands ALL Safety Decals on the machine.
- Clears the area of other persons.
- Learns and practices safe use of machine controls in a safe, clear area before operating this machine on a job site.

It is your responsibility to observe pertinent laws and regulations and follow Case Corporation instructions on machine operation and maintenance.

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LIST OF CHARTS

LIST OF DIAGRAMS

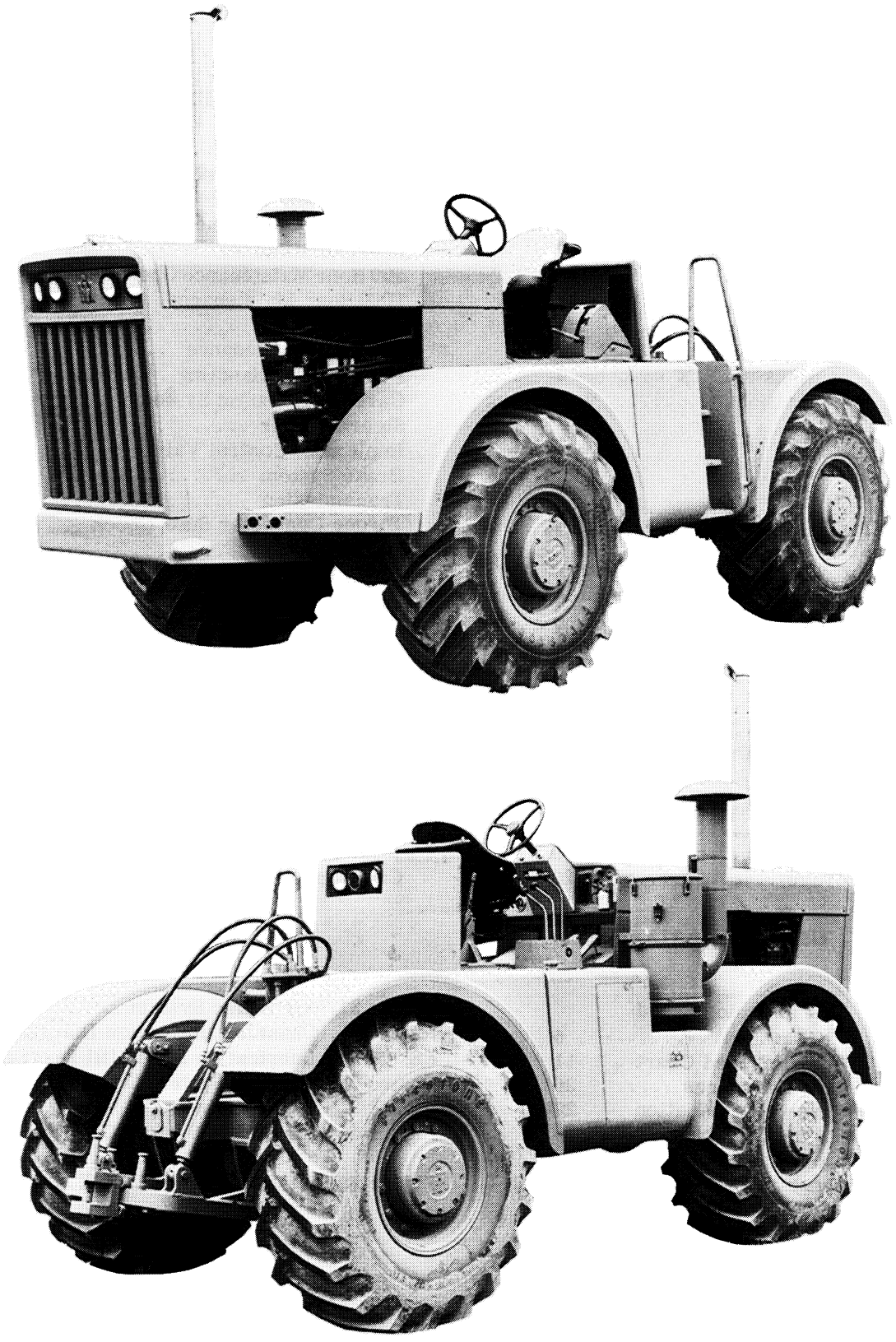

Figure 1. 4300 FOUR-WHEEL DRIVE TRACTOR

OPERATOR'S MANUAL
FOR
4300 FOUR-WHEEL DRIVE TRACTOR

SECTION I
INTRODUCTION

GENERAL

Operation and periodic service instructions for the 4300, four-wheel drive tractor are contained in this handbook. The tractor is made by THE FRANK G. HOUGH CO., Libertyville, Illinois. Its capacity for work, maneuverability and fast-acting hydraulic steering system make it a good piece of equipment for handling large capacity, heavy duty agricultural implements.

The drive train consists of a high speed, turbocharged, four-cycle diesel engine transmitting power to the drive axles through a torque converter and power shift transmission.

Two gear type pumps supply fluid for the hydraulic circuits of the tractor. They are gear driven by the engine. The hydraulic system reservoirs are pressure sealed units that are mounted so they are easily accessible on the right side of the tractor. A control valve, mounted in front of the implement reservoir, regulates the flow of oil to the implement and accessory disconnects at the rear of the tractor. Control of the steering-assist cylinders is regulated by a control valve on the steering gear.

The tractor wheel brakes are operated by a compressed air system. Compressed air for the system is pumped by a two-cylinder, engine driven compressor and is stored in an air tank. A treadle control valve in the operator's compartment varies the flow of compressed air to the wheel brake chambers.

Satisfactory performance of the tractor can always be obtained if the operator and maintenance personnel adapt the unit to existing work conditions. Being acquainted with necessary operation and service requirements will assist personnel in using the tractor to best advantage.

There are few rules which must be observed. A neglect of operating or service instructions will result in decreased tractor efficiency. It may also cause costly down-time and repairs due to accidents and premature failures. The important job which the operator performs while working the tractor will determine to a large degree its effectiveness.

LEFT and RIGHT in this manual indicate the left and right sides of the tractor when facing forward in the operator's seat. Reference to FRONT indicates the radiator end of the tractor; to REAR - the drawbar end.

All replaceable parts for this tractor are illustrated in the parts book for the 4300 four-wheel drive tractor. Requests for parts or additional information for a particular tractor should specify the tractor serial number and also the engine and transmission serial numbers.

SERIAL NUMBERS.

Record the tractor, engine and transmission serial numbers for service and parts replacement purposes. The tractor serial number plate (figure 2) is mounted on the steering column shrouding below the steering post. The engine serial number (figure 3) is stamped on the right side of the engine block below the rear exhaust manifold. The transmission serial number plate (figure 4) is located on the left side of the transmission housing near the rear of the housing. Record these numbers in the operator's and parts books that accompany each tractor.

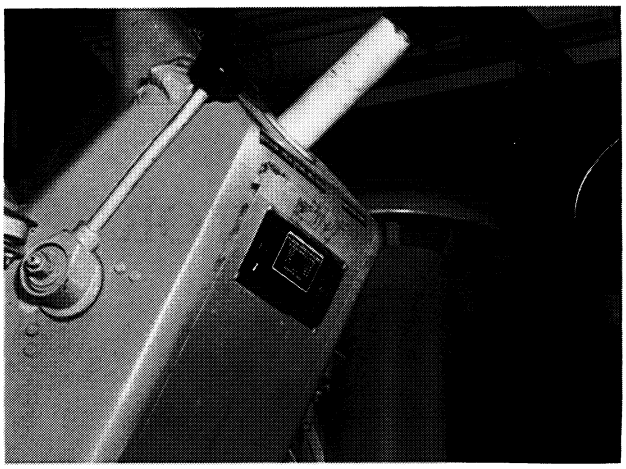

Figure 2. Tractor serial number plate

PRELIMINARY CHECKS.

Upon receipt of a new 4300, four-wheel drive tractor or when servicing it for active operation after a long period of storage, the tractor should be thoroughly inspected.

Note

Drain and refill crankcase with series #3 oil prior to any operation.

Check that such components as the engine, transmission, axles, drive shafts, steering gear linkages, etc., are securely mounted. Operate all control levers to check operation of the control linkages. Should the controls fail to work properly, check for bent control rods and loose fittings. Inspect all lines and connections in the cooling, hydraulic, brake, fuel and transmission systems.

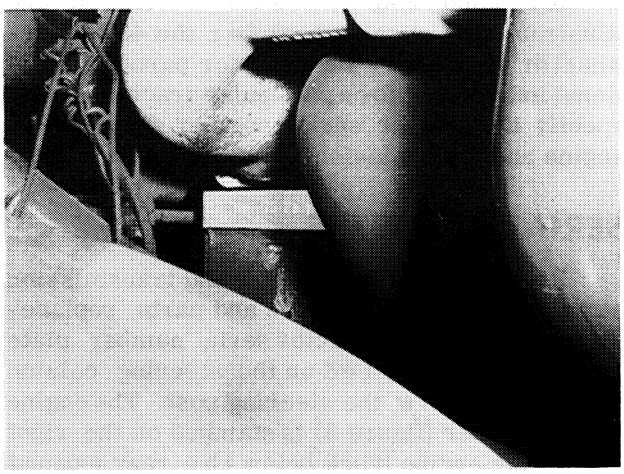

Figure 3. Engine serial number

Open the fuel line shut off at the tank and check the condition and supply of fuel. Check the fluid levels in the hydraulic oil reservoirs, transmission, engine crankcase, cooling system and the differentials and hubs of both axles. Refer to Section III, Periodic Maintenance.

The tractor battery cables are disconnected at the factory for shipping purposes. Before connecting the cables, check that each battery cell is filled with enough electrolyte to cover the cell plates. Do not connect the cables if the tractor is to remain in storage any length of time.

Prior to connecting the cables, refer to figure 68. Clean the battery terminals and the inside of the cable clamps with sandpaper or a wire brush. Then wipe the battery tops clean.

It is good practice after connecting cables to the battery terminals to grease them with a heavy bodied mineral grease or petroleum. Do not apply an excess amount as it may flow onto the battery sealing compound and soften it.

Always observe correct polarity. Connect the long negative lead to the negative battery power source as shown in figure 68. Connect the long positive lead to the positive battery power source as shown in figure 68. Proper battery hookup is necessary to protect the tractor charging system and to provide proper system voltage.

Connect the negative cable last. Arrange the cable clamps so they will not interfere with removal of the vent plugs and arrange the cables so they will not be chaffed.

Check that the batteries rest level in the holder and are properly secured. The hold-down nuts should be tight enough to hold the batteries secure but not so tight that either the battery hold-down or cases are distorted.

Figure 4. Transmission serial number plate

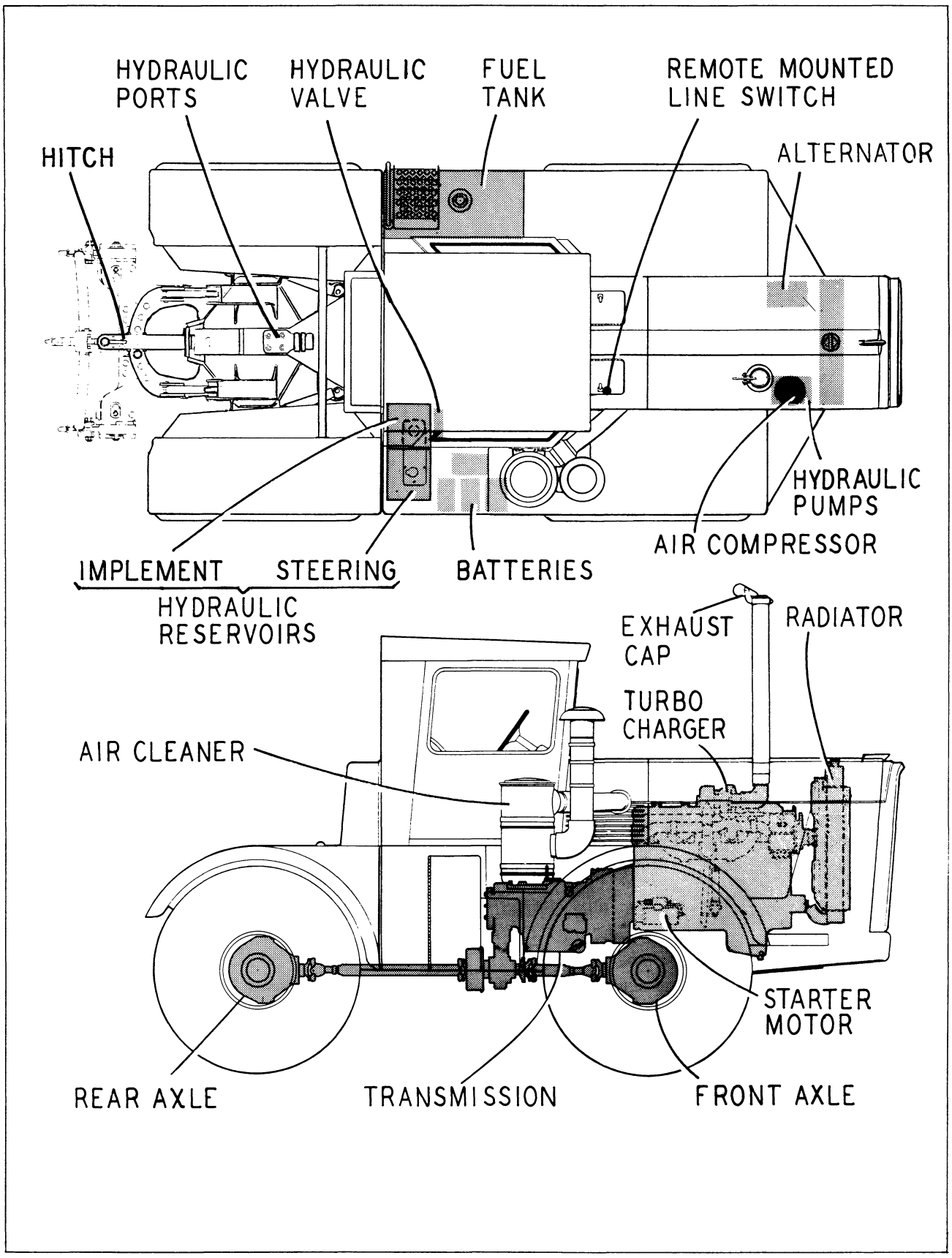

Figure 5. General arrangement

SAFETY PRECAUTIONS.

Farm tractors of this size, if not properly used, are dangerous. For this reason the operator should be aware of hazardous conditions and develop safe working habits. In this way, he can protect himself, other personnel and the tractor. Avoid all safety risks. Safe operation of the tractor, for the most part, is the responsibility of the operator.

The following safety precautions are those which are most common to a majority of working conditions. Safety precautions that are peculiar to certain specific work situations should be added to this list.

a. Make sure no one is in the path of the tractor and the attached implement before moving the tractor.

b. Always mount and dismount the tractor on the left side. Use the ladder provided to avoid falls and accidental movement of control levers. Keep the ladder clean.

c. Select the direction and a speed range that is safe for the particular job. Operate at reduced road speeds when slippery conditions exist.

d. Always face the direction the tractor is traveling.

e. Do not carry passengers on the tractor.

f. Never leave the tractor unattended with the engine running. Place the transmission lever in neutral, set the hand brake and shut down the engine before leaving the operator's seat.

g. Stop the engine and set the hand brake before refueling, lubricating or cleaning the tractor.

h. Avoid smoking while refueling or using starting fluid.

i. Do not add makeup fluid to the cooling system of a hot engine. Give it a chance to cool before removing the radiator cap. Remove the cap slowly to release all pressure build-up in the system.

j. Keep operating controls and hands free of grease, water and mud to insure positive control lever movement. The deck of the operator's compartment and the ladder must be kept free of oil and grease to lessen the danger of slipping.

k. Apply the hand brake when the tractor is parked or when the operator's seat is vacated. Wheel blocks may also be needed to hold the tractor if it is parked on a grade.

l. Disconnect the battery ground when working on the engine or electrical system.

m. Keep the tractor in gear while traveling on steep slopes.

TRACTOR SPECIFICATIONS

ENGINE.

Make	International Harvester
Model	DT-817 (Turbo-Charged)
Type	High Speed, Four Cycle Diesel
Governed Speed	2100 rpm
Low Idle Speed	650 rpm
Horsepower (2100 rpm)	300
Maximum Torque (1500 rpm)	825 ft. lb.
Number of Cylinders	6
Type Injectors	Open
Fuel Pump Make	International Harvester
Fuel Pump Model	Type "C" - Twin Plunger
Piston Displacement	817 cu. in.
Stroke	6 in.
Bore	5-3/8 in.
Compression Ratio	15.04 to 1
Lubricating Pressure	20 to 55 psi
Crankcase Capacity	34 qt.
Oil Cooler	Liquid to Liquid Type
Oil Filtration	Three Radial Fin, Mechanical Type Units
Air Cleaner	Dry Type
Operating Temperature Range	180° - 195°

GENERAL.

A Height With Cab	10 ft. 9 in.
B Height to Top of Steering Wheel	8 ft. 10-1/2 in.
C Height to Top of Exhaust Stack	12 ft. 4 in.
D Width at Axle Hubs	9 ft. 4 in.
E Length (Grille to Drawbar)	21 ft. 9-1/4 in.
F Wheel Base	10 ft. 0 in.
G Ground Clearance	1 ft. 7-1/2 in.
Total Rear Axle Oscillation	13°
Inside Turning Radius (Four Wheel Steer)	10 ft. 2 in.
Inside Turning Radius (Two Wheel Steer)	23 ft. 6 in.

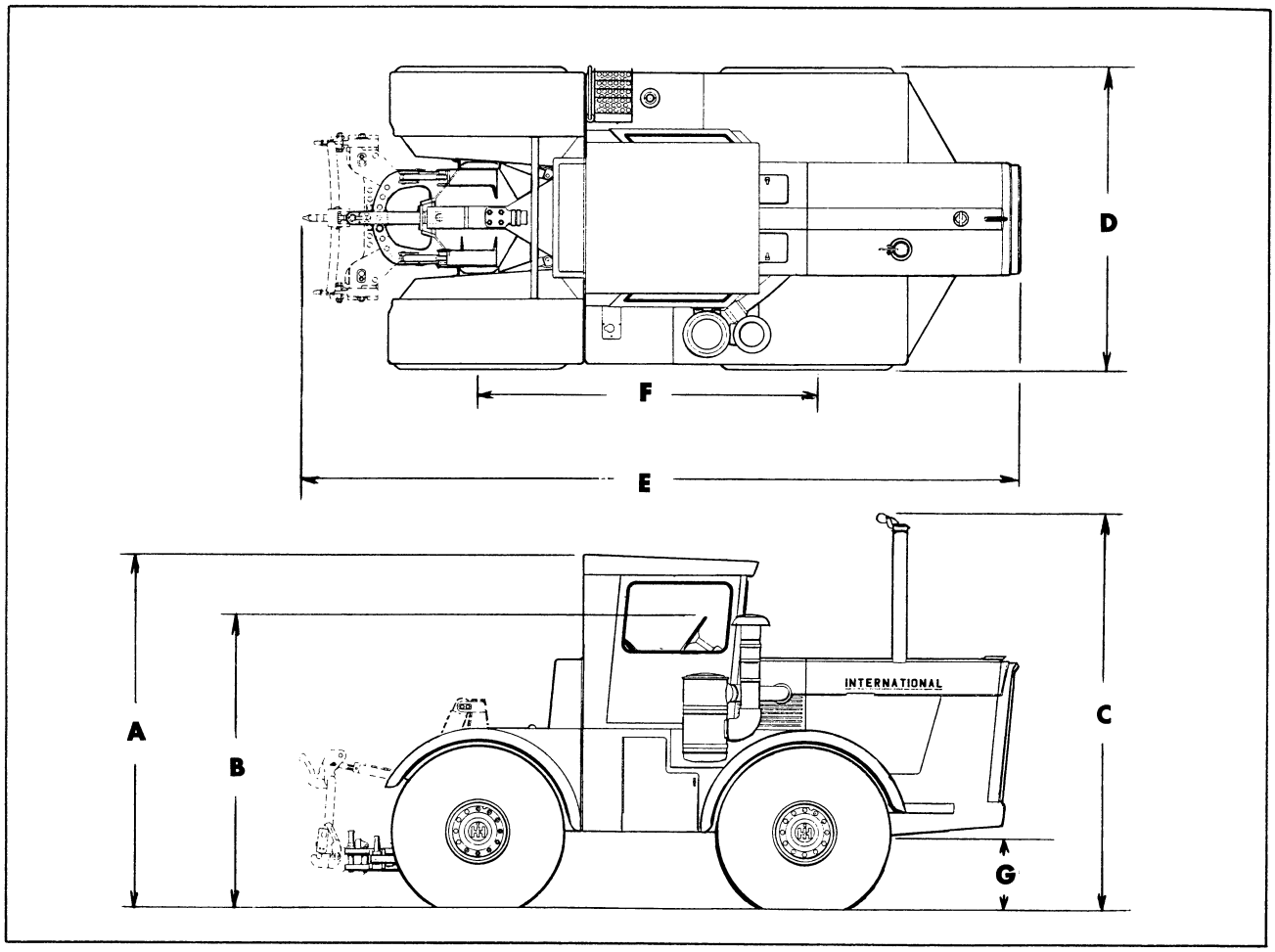

Figure 6. Exterior dimensions

Outside Turning Radius
(Four Wheel Steer) . . . . . 17 ft. 0 in.
(Two Wheel Steer) . . . . . 30 ft. 6 in.
Weight on Front Axle . 19,000 lb. (estimated)
(Standard Tractor)
Weight on Rear Axle . . 11,000 lb. (estimated)
(Standard Tractor)
Total Weight . . . . . 30,000 lb. (estimated)
(Standard Tractor)

TRANSMISSION.

Make . . . Allison Division of General Motors Corp.
Model . . . . . CLBT 4460 Series
Type . . Torque Converter and Planetary Gear
Rotation (looking at input). . Input: Clockwise
Output: Clockwise (in forward gears)
Torque Converter Type. . Single-stage, Polyphase, Three-element
Stall Torque Ratio . . . . . 2.55 to 1
Transmission Capacity . . Initial fill: 10 gal.
Refill: 6-3/4 gal.
Oil Specification . . . Type C-1 or SAE 10W, MS (sequence tested) qualified to MIL-L-2104A Supplement 1 or MIL-L-2104B
Maximum Temperature . . 250°F. at Torque Converter Outlet
Heat Exchanger . . . . . .Oil to Water
Remote Mounted Oil . . . Pleated Paper Type
Filter Element . . . . . 55 Micron Rating
Input Pressure . . . . External-Tooth Spur
Pump Type . . . . Gear, Positive Displacement, Dual Section
Scavenge Pump Type. . External-Tooth Spur Gear, Positive Displacement
Oil Pressure . . . . Fwd. Ranges 205 psi min.
Schedule (1000 . Rev. Range - 280 psi max.
Engine RPM - . . . . . 235 psi min.
Output Shaft . . .Converter Out - 40 to 65 psi
Stalled) . . . . . Lubrication - 25 to 30 psi
Parking Brake . . Two-Shoe, Internal, Drum Type

Our support email:

ebooklibonline@outlook.com