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SAFETY
Safety Rules

Understand that your safety and the safety of other persons is measured by how you service, and operate this machine. Know the positions and operations of all controls before you try to operate. MAKE SURE YOU CHECK ALL CONTROLS IN A SAFE AREA BEFORE STARTING YOUR WORK.

READ THIS MANUAL COMPLETELY and make sure you understand the controls. All equipment has a limit. Make sure you understand the speed, brakes, steering, stability and load characteristics of this machine before you start to operate.

The safety information given in this manual does not replace safety codes, insurance needs, federal, state and local laws. Make sure your machine has the correct equipment needed by the local laws and regulations.

CASE IH is continuing to work for your safety by making tractors with better protection and by giving these rules for safe operation.



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.

The safety decals on this machine contain instructions for your safety, and are reproduced on the following pages. Read their safety messages before operating this machine.

Additional safety messages are included throughout this manual. Read the section pertaining to your activity before you start. Refer to page locations in the TABLE OF CONTENTS.

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NOTES

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DIESEL ENGINE SPECIFICATIONS

General

Type	Three Cylinder, Four Stroke Cycle, Valve in Cylinder Head, Cross Flow Porting
Firing Order	1-3-2
Bore	3.307 Inch (84 mm)
Stroke	3.543 Inch (90 mm)
Piston Displacement	91.29 Inch^3 (1 496 cm^3)
Compression Ratio	23 to 1
Governor Engine Speed Without Load	2825 to 2880 RPM
Rated Engine Speed	2700 RPM
Engine Idle Speed	900 to 950 RPM
Maximum Horsepower (Per SAE J816b and J245)	31 HP at 2700 RPM
Valve Clearance (Both Intake and Exhaust)	0.010 Inch (0.25 mm) at Engine Cold

IMPORTANT: *Rocker Arm-to-Valve clearance adjustment must be made when the engine is not running.*

Crankshaft

Main Bearing Journal Diameter	2.244 Inch (57 mm)
Rod Bearing Journal Diameter	1.890 Inch (48 mm)

Piston and Rod

Rings per Piston	3
Compression Rings per Piston	2
Oil Rings per Piston	1
Type of Piston Pin	Full Float
Type of Bearings	Replacement Bearings Available, Steel Back with Aluminum Liners

Main Bearings

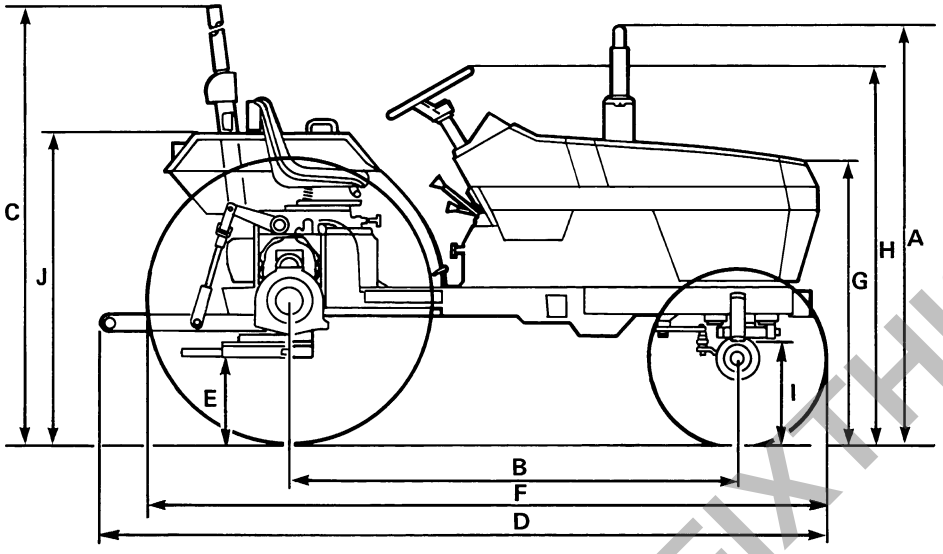
Number of Bearings	4
Type of Bearings	Replacement Bearings Available, Steel Back with Aluminium Liners

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APPROXIMATE MEASUREMENTS AND WEIGHTS

2WD Tractor with 2 Post ROPS



TIRE AND WHEEL EQUIPMENT FOR DATA SHOWN BELOW	
Front – 5.50 x 16 F2	Rear – 12.4 x 24 R1
A. 76.8 Inch (1950 mm)	F. 107.5 Inch (2730 mm)
B. 70.9 Inch (1800 mm)	G. 44.9 Inch (1140 mm)
C. 85.8 Inch (2180 mm)	H. 59.1 Inch (1500 mm)
D. 115.4 Inch (2930 mm)	I. 15.2 Inch (385 mm)
E. 12.0 Inch (305 mm)	J. 48.2 Inch (1225 mm)

Turning Radius Without Brake Assistance . . . . . 118 Inch (3000 mm)
Turning Radius With Brake Assistance . . . . . 112 Inch (2850 mm)

Approximate Tractor Weight

Approximate Weight Equipped as Noted . . . . . Front 937 lbs (425 kg)
Rear 1632 lbs (740 kg)
Total 2569 lbs (1165 kg)

NOTE: *Weight is based on tractor equipped with most common optional equipment, minimum fuel no iron or liquid ballast and no operator.*

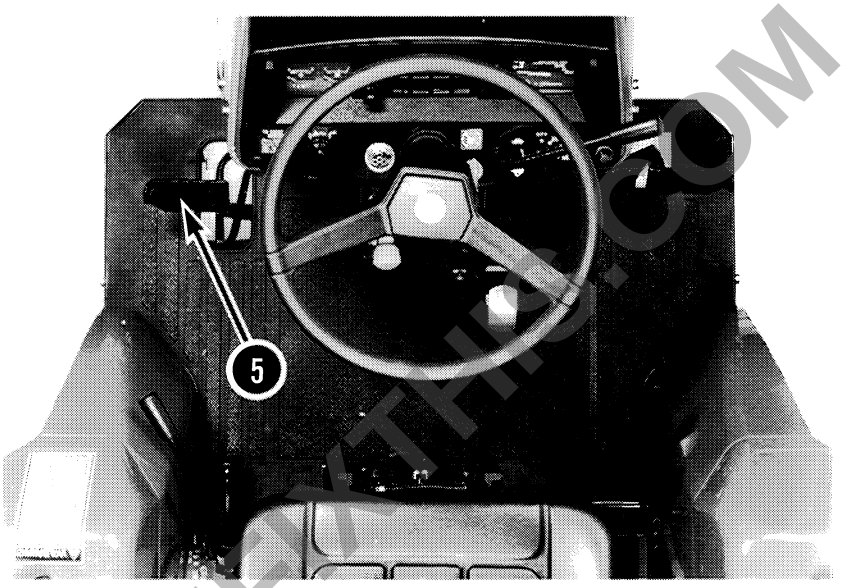
Machine Weight

Maximum Front Axle Load . . . . . 3307 lbs (1500 kg)
Maximum Rear Axle Load . . . . . 3307 lbs (1500 kg)
Maximum Tractor Operating Weight . . . . . 5171 lbs (2345 kg)

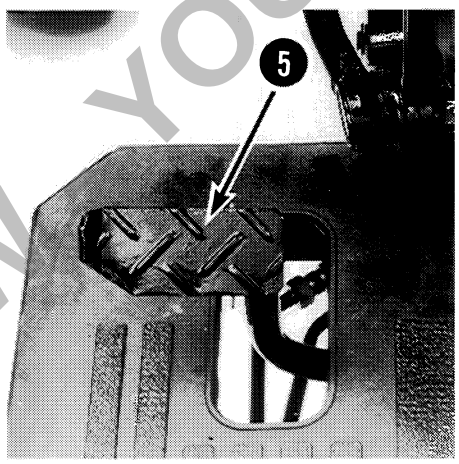
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OPERATING CONTROLS
Control Pedals



5. CLUTCH PEDAL — The clutch must be disengaged when stopping the tractor, turning on the power take-off, operating the gear shift lever, operating the range shift lever or operating the MFD control lever.



To disengage the clutch, push the pedal all the way down. Let the clutch pedal up slowly to start the tractor in motion.

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Operation

WARNING: *Operate controls only when seated in the Operators seat.*

WARNING: *Travel speed should be such that complete control and machine stability is maintained at all times. Where possible, avoid operating near ditches, embankments and holes. Reduce speed when turning, crossing slopes, and on rough, slick, or muddy surfaces.*

WARNING: *Tractors equipped with mechanical front drive (MFD) have increased traction and can climb steeper slopes. Stay off slopes too steep for safe operation. To prevent rear overturns, back up steeper slopes.*

CAUTION: *Do not drive on roads, or at high speed anywhere, with the differential lock engaged. Difficult steering will occur, and can result in an accident. In field operation, use the differential lock for traction improvement, but release for turning at row ends.*

WARNING: *Collision of high speed road traffic and tractors or implements can cause personal injury or death. On roads, use flasher/lights according to local laws. Keep SMV emblem visible. Pull over to let faster traffic pass. Slow down and signal before turning off.*

WARNING: *Stay off slopes too steep for safe operation. Shift down before you start up or down a hill with a heavy load. Avoid "free wheeling".*

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TRACTOR BALLAST

Ballast for your tractor includes front end weights, rear wheel weights and liquid ballast in the rear tires. Front end weights improve the steering characteristic when heavy hitch loads cause a movement of tractor weight from the front to the rear wheels. Rear wheel weights and adding liquid to the rear tires increase traction by putting weight on the driving wheels.

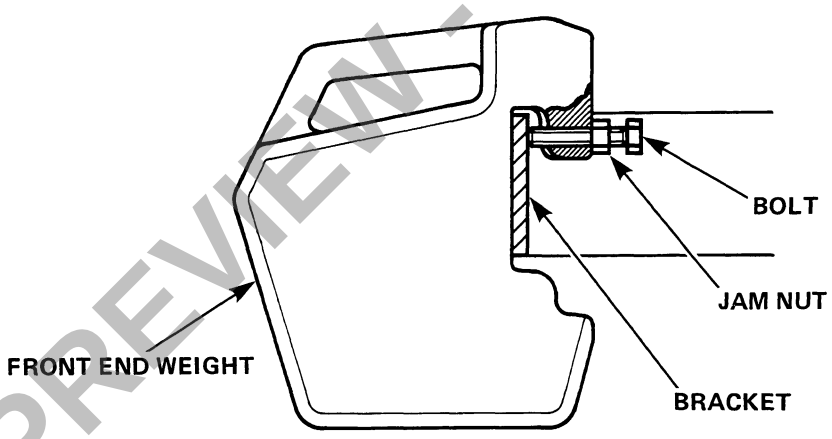
Adding ballast to the rear of the tractor is an easy and efficient method of increasing traction in most conditions.

The maximum operating weight of the tractor is 5171 lbs (2345 kg). This weight can be obtained by adding fluid to the rear tires and four rear wheel weights plus six front end weights.

Front End Weights

Front end weights can be mounted on the front end bracket of the tractor with locking bolts and nuts. The weights, locking bolts and nuts are available from your dealer. A maximum of six weights at 49 pounds (22 Kg) each can be installed, depending on implement application and soil conditions.

Use front end weights as needed to provide effective steering control and front end stability and to achieve maximum operating efficiency and tractor field performance. Refer to the weight table in this section for optional methods of adding weight to the tractor.



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HITCH OPERATION

Operating with Draft Control

For example, the draft control adjustment for a moldboard plow is as follows:

1. Set the upper link at the 20.5 inch (520 mm) length, pin to pin.
2. Place the draft control lever at the center of its operating range.
3. Starting at the end of the field, move the hitch control lever fully forward to the LOWER position and drive ahead several feet.
4. Stop the tractor and adjust the length of the upper link to level the plow front to rear.
5. Adjust the lift link turnbuckle to level the plow side to side.
6. After the plow has been leveled, adjust the draft control lever either forward (to go deeper) or rearward (for shallower depth) until the desired depth is reached.
7. If the drop action of the plow is too fast, rotate the hydraulic flow control knob slowly until the plow reacts at the desired speed. See Hitch Lowering Speed Adjustment in this manual.
8. When the control levers are set for the field conditions, set the stop so the hitch control lever is returned to this position each time the plow is lowered into the ground.
9. When reaching the end of the field, move the hitch control lever rearward to lift the plow to the transport position.
10. Re-enter the field and lower the plow by moving the hitch control lever forward to the stop.
11. The plow will maintain the desired depth as previously set by the draft control lever.

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SERIAL NUMBERS

When ordering parts or when requesting information or assistance, always give the model and serial numbers of your tractor.

Write the model and serial numbers of your tractor on the lines below.

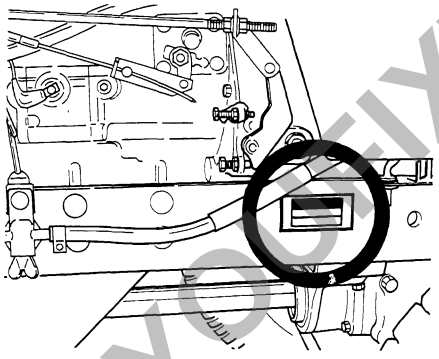
1. TRACTOR MODEL NUMBER _____

2. PRODUCT IDENTIFICATION NUMBER _____

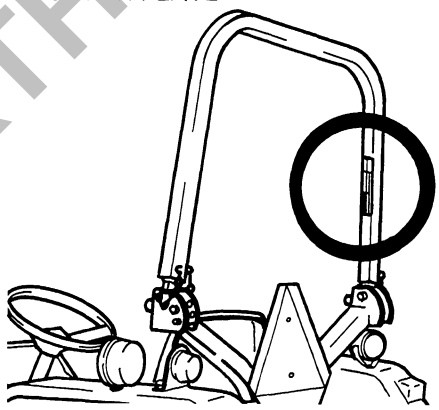
3. ENGINE SERIAL NUMBER _____

4. ROPS SERIAL NUMBER _____

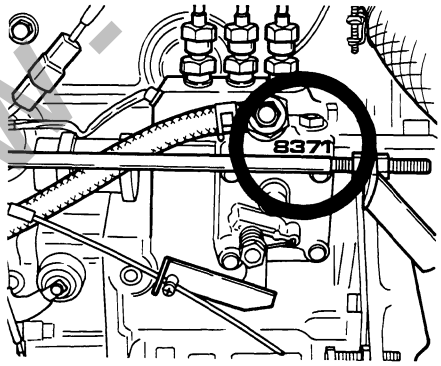
TRACTOR MODEL NUMBER AND PRODUCT IDENTIFICATION NUMBER PLATE



ROPS PRODUCT INDENTIFICATION NUMBER PLATE



ENGINE SERIAL NUMBER



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BEFORE STARTING THE ENGINE

Before starting your tractor for the first time and before each operating period after that, make these checks:

1. Make sure all persons that operate or do maintenance on the tractor understand that clean fuel is important.

2. Check all lubrication fittings for grease as given in the Lubrication Chart.

3. Check the oil level in the engine crankcase. Check the fluid level in the transmission.

4. Check that the tractor fuel tank is filled with clean fuel that has the specifications given in this manual.

NOTE: *Clean around the fuel tank cap before you remove the cap.*

5. Check the fuel system, cooling system and engine oil pan for leaks.

6. Check that the fan belt is adjusted correctly.

7. Remove any water or sediment from the fuel filter cup.

8. Check the air pressure of the tires.

9. Make sure the PTO safety guard is installed.

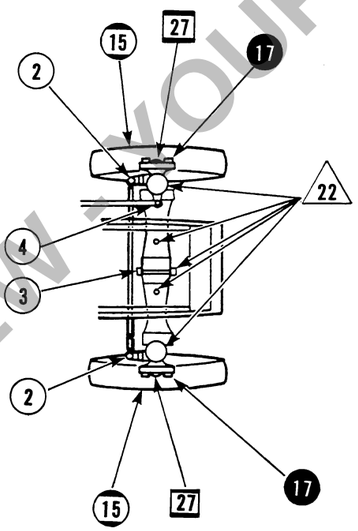
10. Check the coolant level in the radiator. Add water and ethylene glycol coolant as needed.

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LUBRICATION CHART NOTES

Note 1: *Check for clutch pedal movements. See Clutch Pedal Adjustment in this manual.*
Note 2: *Consult your Case IH dealer for this service.*
Note 3: *Replace element after 10 cleanings or yearly.*



Service After First 50 Hours of Operation

1. Engine Oil
   Drain all the oil from the crankcase while the engine is warm and refill with new oil to the F (Full) mark on the engine oil dipstick. See Engine Oil Change in this manual.

2. Engine Oil Filter
   Replace the engine oil filter with engine oil change. See Engine Oil Filter in this manual.

3. Transmission & Hydraulic System
   (1) Gear and Range Transmission Oil
   Check the level of the gear and range transmission oil. Add CASE IH HY-TRAN ® PLUS fluid as needed to maintain proper level. See Gear Transmission Oil Level Check and Range Transmission Oil Level Check in this manual.

   (2) Hydraulic filter screen
   Remove and clean the filter screen. See Hydraulic Filter Screen in this manual.

4. Differential Housing Lubricant (MFD)
   Change the Oil. See FRONT AXLE LUBRICATION (MFD) in this manual.

5. Rear Axle Gear Case
   Check the oil level of rear axle gear case. Add CASE IH HY-TRAN® PLUS fluid as needed to maintain proper level. See REAR AXLE LUBRICATION in this manual.

6. Radiator Core
   Inspect the radiator core and clean if necessary.
   See COOLING SYSTEM in this manual.

7. Hoses and Connections between Air Cleaner and Manifold
   Inspect for loose fit or leakage. See AIR INDUCTION SYSTEM in this manual.

8. Water Pump, Fan and Alternator Belt Tension
   Check the belt for tension, replace if necessary. See Fan Belt Adjustment in this manual.

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