

# 1070 Tractor

## Operators Manual

9-2822

Reprinted

**CASE III**



***This symbol means ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED. The message that follows the symbol contains important information about your safety. Carefully read the message. Make sure you fully understand the causes of possible injury or death.***

SB001

IF THIS MACHINE IS USED BY AN EMPLOYEE, IS LOANED, OR IS RENTED, MAKE SURE THAT THE OPERATOR UNDERSTANDS THE TWO INSTRUCTIONS BELOW.

BEFORE THE OPERATOR STARTS THE ENGINE:

1. GIVE INSTRUCTIONS TO THE OPERATOR ON SAFE AND CORRECT USE OF THE MACHINE.
2. MAKE SURE THE OPERATOR READS AND UNDERSTANDS THE OPERATOR'S MANUAL FOR THIS MACHINE.



**IMPROPER OPERATION OF THIS MACHINE CAN CAUSE INJURY OR DEATH.**

BEFORE STARTING THE ENGINE, DO THE FOLLOWING:

1. READ THE OPERATOR'S MANUAL.
2. READ ALL SAFETY DECALS ON THE MACHINE.
3. CLEAR THE AREA OF OTHER PERSONS.

LEARN AND PRACTICE SAFE USE OF MACHINE CONTROLS IN A SAFE, CLEAR AREA BEFORE YOU OPERATE THIS MACHINE ON A JOB SITE.

It is your responsibility to observe pertinent laws and regulations and to follow manufacturer's instructions on machine operation and maintenance.

See your Authorized Case dealer for additional operator's manuals, parts catalogs, and service manuals.

## **TO THE PURCHASER OF A CASE TRACTOR**

The care you give your Case Tractor will greatly determine the satisfaction and service life you will obtain from it. Use this manual as your guide. By observing the instructions and suggestions in this manual, your Case Tractor will serve you well for many years.

As an Authorized Case Dealer, we stock Genuine Case Parts, which are manufactured with the same precision and skill as the original equipment. Our factory trained staff is kept well informed on the best methods of servicing Case equipment and is ready and able to help you.

Should you require additional aid or information, contact us.

*Your Authorized Case Dealer*



**LOOK FOR THIS SYMBOL TO POINT  
OUT IMPORTANT SAFETY PRECAUTIONS.  
IT MEANS - ATTENTION! BECOME ALERT!  
YOUR SAFETY IS INVOLVED.**

**TO INSURE EFFICIENT AND PROMPT SERVICE, PLEASE  
FURNISH US WITH THE MODEL, SERIAL, ENGINE, TRANS-  
MISSION AND CAB SERIAL NUMBERS OF YOUR TRACTOR  
IN ALL CORRESPONDENCE OR CONTACTS.**

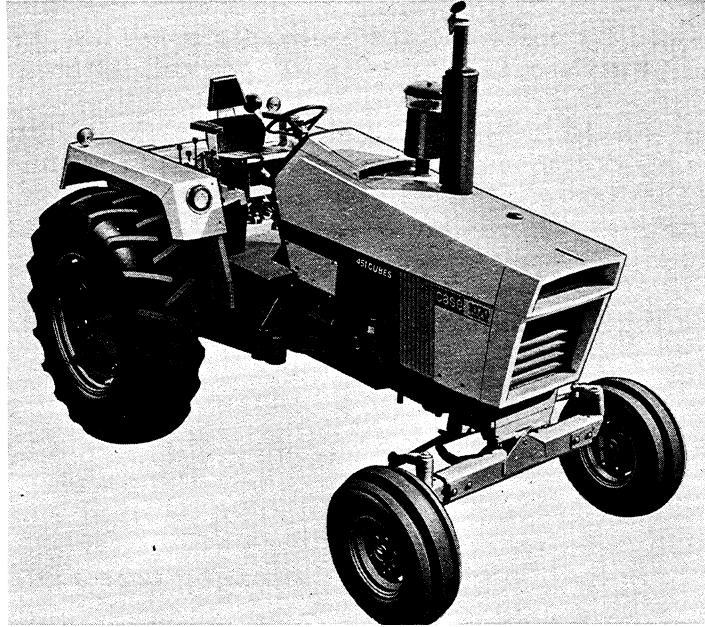


Figure 1

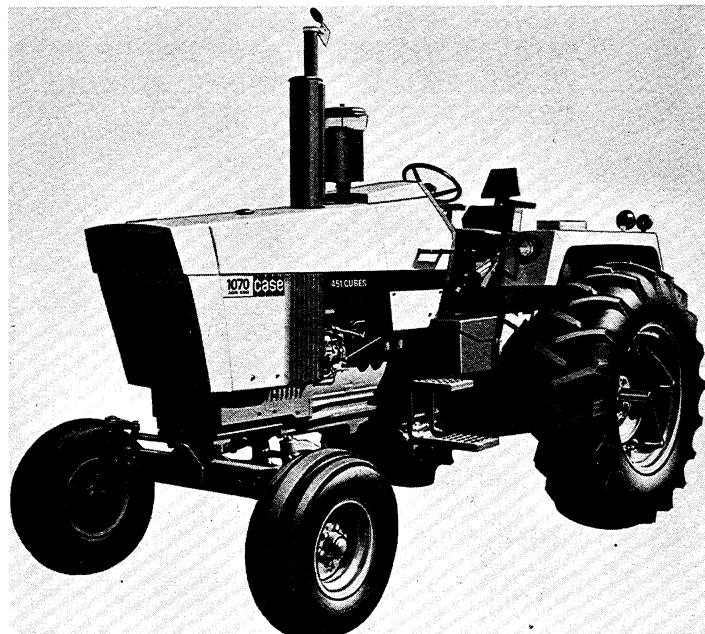


Figure 2

## SERIAL NUMBERS

The Model and Serial Numbers are stamped on the number plate located on the outside and lower left hand side of the fire wall assembly, Figure 3. The Engine Serial Number is stamped on a plate fastened to the rear right hand side of the engine block, Figure 4. The transmission Serial Number is stamped on a plate and fastened to the right hand side and to the front of the axle on the transmission housing, Figure 5. The Cab Serial Number is stamped on a plate fastened to the inside right hand support, Figure 6.

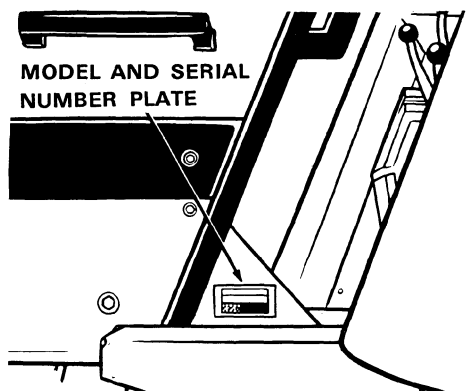


Figure 3

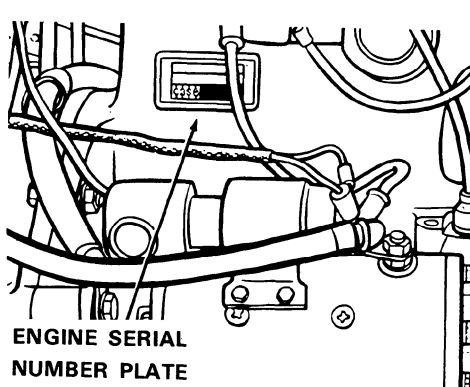


Figure 4

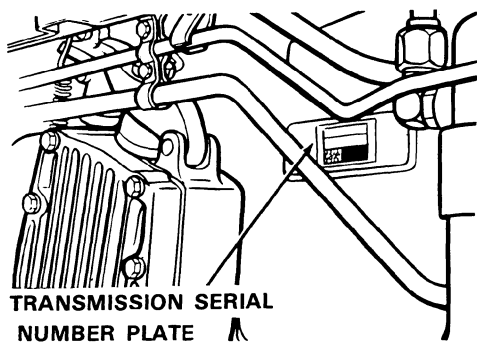


Figure 5

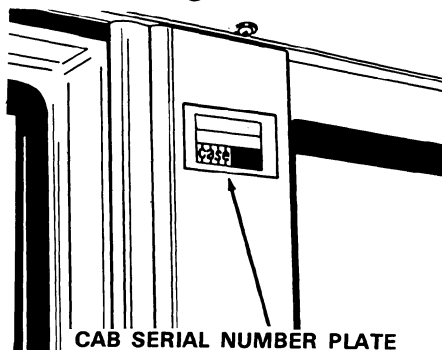


Figure 6

**NOTE:** The terms "Right Hand" and "Left Hand" whenever used in this manual, apply to the tractor when facing in the direction the tractor will move in forward position.

For reference, fill in the Serial Numbers of your tractor in the spaces provided below.

Model Designation \_\_\_\_\_  
Tractor Serial Number \_\_\_\_\_  
Engine Serial Number \_\_\_\_\_  
Transmission Serial Number \_\_\_\_\_  
Cab Serial Number \_\_\_\_\_

# Diesel Engine

## SPECIFICATIONS

### General

Type ----- 6 Cylinder, 4 Stroke Cycle,  
Valve-in-Head.  
Firing Order ----- 1-5-3-6-2-4  
Bore ----- 4-3/8 Inches (111mm)  
Stroke ----- 5 Inches (127mm)  
Piston Displacement ----- 451 Cubic Inches (7390.6cm<sup>3</sup>)  
Compression Ratio ----- 16.5 to 1  
Cylinder Sleeve ----- Removable Wet Type  
No Load Governed Speed ----- 2260 RPM  
Rated Engine Speed ----- 2100 RPM  
Engine Idling Speed ----- 725 RPM  
\*Valve Tappet Clearance (Exhaust) ----- (Hot) .020 Inch (0.508mm)  
----- (Cold) .025 Inch (0.635mm)  
----- (Intake)--- (Hot and Cold) .015 Inch (0.381mm)

\*Hot Settings Are Made After The Engine Has Operated At Thermostat Controlled Temperature For At Least Fifteen Minutes.

### Piston and Connecting Rods

Rings per Piston ----- 3  
Number of Compression Rings ----- 2  
Number of Oil Rings ----- 1  
Type Pins ----- Full Floating Type  
Type Bearing ----- Replaceable Precision, Steel  
Back, Copper-Lead or Aluminum Alloy Liners.

### Main Bearings

Number of Bearings ----- 7  
Type Bearings ----- Replaceable Precision Steel  
Back, Copper-Lead or Aluminum Alloy Liners.

## Engine Lubricating System

Oil Pressure ----- 45 to 55 PSI (3.2 to 3.9 kgs/cm<sup>2</sup>) with Engine Warm and Operating at Rated Engine Speed

Type System ----- Pressure and Spray Circulation

Oil Pump ----- Gear Type

Oil Filter ----- Full Flow Spin on Type

## Fuel System

Fuel Injection Pump ----- Robert Bosch, Type PES (Multiple Plunger).

Pump Timing ----- 30 Degrees Before Top Dead Center (Port Closing).

Fuel Injectors ----- Pencil Type  
Opening Pressure 2800 PSI (196.9 kgs/cm<sup>2</sup>)

Fuel Transfer Pump ----- Plunger Type, Integral Part of Injection Pump.

Governor ----- Variable Speed, Fly-Weight Centrifugal Type; Integral Parts of Injection pump.

1st Stage fuel filter ----- Full Flow Spin on Type

2nd Stage fuel filter ----- Full Flow Spin on Type

Fuel Tank Water Trap and Drain ---- Located in Base of Fuel Tank

Fuel Tank Capacity ----- 50 U.S. Gallons (189.3 liters)

Fuel Level Gauge ----- Electric, Located on Instrument Panel.

Hand Primer Pump ----- Located On Top of The Fuel Transfer Pump

Preliminary Fuel Filter ----- Located At The Bottom of the Fuel Transfer Pump

Fuel Tank Filter ----- Located in Fuel Shut-Off Valve in Base of Fuel Tank

# *general specifications*

## **Cooling System**

Capacity ----- 40 U.S. Quarts (37.9 liters)  
Type of System ----- Pressurized, Thermostat Controlled  
By-Pass Type: Forced Circulation. (Impeller Type Pump).  
Radiator ----- Heavy Duty Fin and Tube Type  
Thermostat ----- Starts to Open at Approximately 175°F. (79°C.)  
Fully at 202°F. (94°C.)  
Pressure Cap Required --- (w/o air conditioner) 7 PSI (0.492 kg/cm<sup>2</sup>)  
Pressure Cap Required ---- (w/air conditioner) 14 PSI (0.984 kg/cm<sup>2</sup>)

When using a proper operating 7 PSI (0.492 kg/cm<sup>2</sup>) pressure cap, the engine temperature can safely rise to 230°F. (110°C), with a 14 PSI (0.984 kg/cm<sup>2</sup>) pressure cap the engine temperature can safely rise to 250°F. (121°C.).

## **Electrical System**

Type of System ----- 12 Volt Negative Ground  
Batteries ----- (2) 12 Volt Batteries Connected  
in parallel.

Group Size 30H, Rated at 1.255 to 1.265  
Specific Gravity. Discharge Rate 300 Amps  
at 0° F. Voltage drops to 9.2 after 10 seconds.  
Voltage drops 1.0 Volt per cell after 4 min.

Alternator ----- 12 Volt 55 Amp Output  
Voltage Regulator ----- 12 Volt, Solid State,  
Mounted on Alternator.

Starter Motor ----- 12 Volt with Solenoid Switch  
Head Lights (2) ----- 12 Volt, 35 Watt, Sealed Beam  
Flood Lights (2) ----- 12 Volt, 35 Watt, Sealed Beam  
Amber Warning Light (2)----- 12 Volt, Double Face, Flasher Type  
Rear Tail Light ----- 12 Volt, 60 Watt Sealed Beam  
Combination Tail and Flood Lamp.

Circuit Breaker System over load check - 12 Volt Twin 40 AMP  
Breakers connected in parallel, 80 AMP rating.  
60 AMP . Min. Continuous capacity.

Lights Circuit Breaker -----30 Amp., Located on Light Switch  
Parking Brake Warning Light ----- 12 Volt, Red Flasher Type



## **Parking Brake**

Type ----- Cable Actuated by Or-  
chlin Type Handle - Adjustable  
from Operator's Seat.

## **Hydraulic Brakes**

Type ----- Hydraulic Actuated, Self-  
Adjusting Disc Type Differential  
Brakes.

## **Hydraulic Power Assist Brakes**

Type ----- Hydraulic, Power Assisted,  
Self-Adjusting Disc Type Diff-  
erential Brakes.

## **Mechanical Transmission**

Type ----- 2 Speed Gear Range With  
a 4 Speed Gear Section.

Gear Selection ----- 8 Speeds Forward - 2 Speeds  
Reverse.

Shifting ----- Mechanical With Plunger Type  
Locks and Tube Type Inter-  
locks.

## **Power Shift Transmission**

Type ----- 3 Speed Compound Planetary  
With Hydraulically Actuated  
Clutches and a 4 Speed Gear  
Range Section.

Gear Selection ----- 12 Speeds Forward and 4 Speeds  
Reverse

Shifting ----- Hydraulic Power Shifting Con-  
trolled By a Lever On Operators  
Console. 4 Speed Range Con-  
trolled By a Mechanical Shifter  
From a Lever On Operator's  
Console.

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