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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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March, 1995 (Revised October, 1997)

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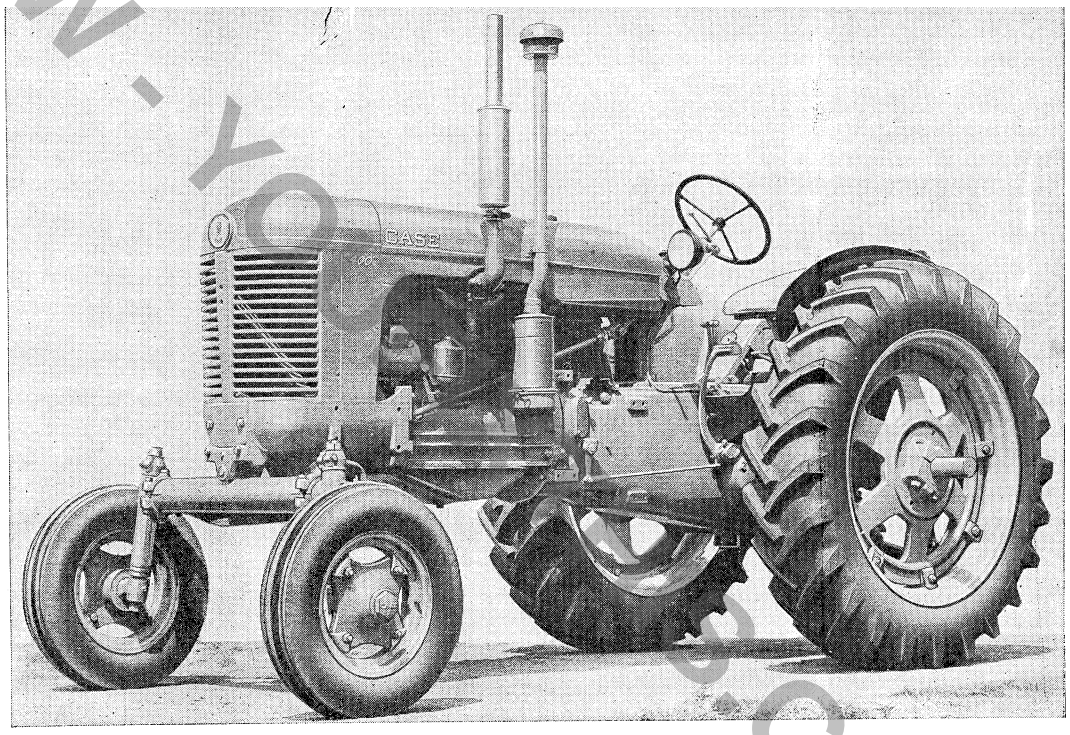
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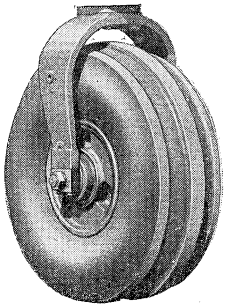
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MODEL 401
GENERAL PURPOSE TRACTOR

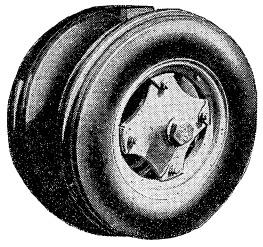
3 *Tractors In* 1



Adjustable Front Axle Attachment



Single Front Wheel Attachment



Dual Front Wheel Attachment

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ENGINE STALLS

Cause	Remedy
1. No fuel in tank.	1. Refill fuel tank. Bleed fuel system. Page 142.
2. Fuel tank shut-off valve closed.	2. Open shut-off valve. Bleed system, Page 142.
3. Unsuitable fuel or water in fuel.	3. Drain fuel system and refill with recommended fuel, Page 29. Bleed fuel system, Page 142.
4. Fuel tank breather plugged.	4. Wash breather filter and reinstall as described on Page 151.
5. Bleeder by-pass valve open.	5. Close bleeder by-pass valve. Page 142.
6. One or more fuel filters plugged.	6. Check and service filters as described on Pages 142 through 150.
7. Air leak in fuel line from the tank to first stage filter or to the transfer pump.	7. This will be indicated when air collects in fuel filters. Tighten and inspect fittings. Bleed fuel system, Page 142.
8. Air cleaner plugged.	8. Remove air cleaner oil cup, removable screens and intake pipe. Service as described on Page 154.
9. Coolant temperature too low.	9. Keep coolant temperature within 180 to 195° F. on temperature gauge.
10. Lack of coolant in engine (overheating).	10. Coolant level must be maintained well above radiator tubes.
11. Gum or varnish deposits forming in fuel, resulting in both plugging the fuel system and binding the governor action.	11. Use a "Diesel Fuel Conditioner" as described on Pages 37 and 38 of the Fuel Section.

ENGINE OVERSPEEDS OR SURGES

(Call Your Authorized Case Dealer)

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POWER TAKE-OFF CLUTCH ADJUSTMENT

The power take-off clutch will need adjustment occasionally to compensate for normal wear. Adjust the clutch immediately if slippage is noted when a power take-off driven machine is attached and started. Failure to make the adjustment will cause excessive wear on the clutch plates resulting in eventual breakdown.

To adjust the power take-off clutch:

1. Have the power take-off clutch hand lever in the full forward, disengaged position.

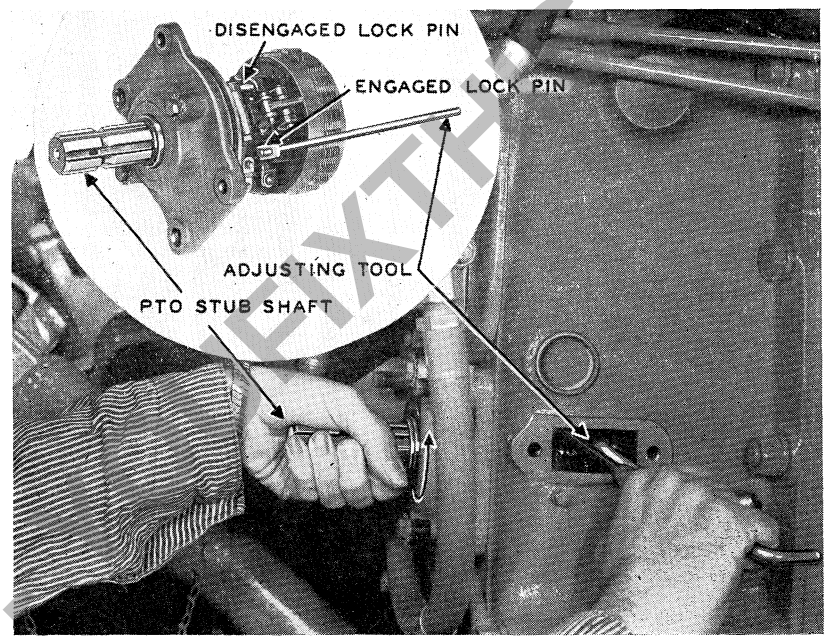


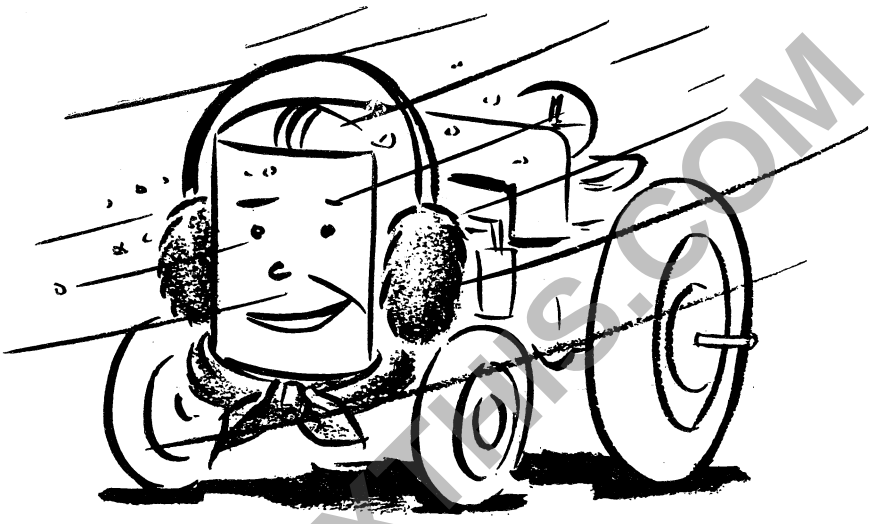
Figure 159. Adjusting PTO Clutch

2. Remove the adjusting hole cover from the hydraulic housing, Figure 159. Using a flashlight, look through the hole and manually turn the PTO shaft until the 2 spring loaded lock pins. are visible. You will note that one pin is engaged in the "in" position while the other is disengaged.
3. Insert the adjusting tool through the hole as shown and pull the engaged lock pin out with the forked end of the tool, Figure 159.
4. **To tighten the clutch,** turn the PTO stub shaft counter-clockwise, as shown until the disengaged lock pin drops into a notch. One adjustment is usually sufficient.
5. After each adjustment, check the engagement of the power take-off clutch hand lever by pulling it fully rearward. A correctly adjusted clutch will require approximately 60 to 65 pounds pull and will engage with a decided "snap" of the lever.

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COLD WEATHER OPERATION



To start and operate your Case Diesel Tractor during cold weather, the following precautions must be observed:

IMPORTANT—Always disengage Traction Clutch while starting engine to reduce drag from stiff transmission oil.

1. **Batteries** — Both storage batteries must be fully charged.
2. **Fuel Recommendations** — the diesel fuel must have a Pour Point 10 degrees Fahrenheit lower than the prevailing air temperatures and a Cetane rating from 45 to 55. The fuel must be clean and free of water. Refer to Page 32.
3. **Crankcase Oil** — the oil in the crankcase and in the air cleaner oil cup must be of the recommended viscosity. See Page 15.
4. **Transmission Oil** — the transmission oil may have changed to SAE 80. See Page 15.
5. **Hydraulic Housing Oil**—always use Automatic Transmission Fluid-Type A both winter and summer.
6. **Cooling System**—the cooling system must be protected by a reputable brand of "High Boiling Point" type (Ethylene Glycol) anti-freeze.
7. **Tires** — if there is liquid in the tires, it must be protected against freezing. Consult your Case Dealer.
8. **Stopping the Engine** — always allow the engine to reach operating temperature before stopping it. If the engine has been working under load, always idle the engine for a few minutes before stopping it so the engine parts can cool evenly.
9. **Condensation in Fuel Tank** — always fill the fuel tank at the end of the day's operation to prevent the tank from "sweating" and water entering the fuel.

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V

SERVICE SUGGESTIONS

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PREVENT ACCIDENTS

When operating tractors or self-propelled farm machines, or when trailing a farm machine or implement over a public thoroughfare after dark — —

1. **Be sure the unit is equipped with headlights and that they are adjusted for highway use.**
2. **Place suitable red lights and reflectors on the rear and sides of the unit so that its outline is well defined.**
3. **COMPLY WITH YOUR STATE AND LOCAL LAWS GOVERNING LIGHTING REGULATIONS AND MAXIMUM WIDTH REGULATIONS.**

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DRAWBAR

Type	Reversible Full Swinging Roller Mounted, Self-Locking
Drawbar Pin Hole Size	Will Accommodate 1 Inch pin
Height Adjustment	Refer To Diagrams on Pages 83 thru 85.

BRAKES

Type	Heavy Duty, Double Disc, Self Energizing Differential Brakes
Brake Pedals	Can be Locked Together for Road Travel; Can Be Used Individually For Steering Assistance

BELT PULLEY (Extra Equipment)

Method of Engaging	Independent Hand Shift
Pulley Diameter	10½ Inches
Pulley Face Width	7¼ Inches
Pulley Speed at No Load Governed Engine Speed at 1635 RPM	1271 RPM
Pulley Speed at Full Load Governed Engine Speed of 1500 RPM	1166 RPM
Pulley Speed at 600 RPM Engine Idling Speed	467 RPM
Belt Speed	3205 Feet Per Minute Under Load
Ratio Engine Speed to Belt Pulley Speed	1.286 to 1

INDEPENDENT POWER TAKE-OFF (Extra Equipment)

Rotation	Clockwise
PTO Shaft Speed at 1500 Engine RPM	558 RPM
PTO Shaft Speed at 600 RPM Idle Speed	223 RPM
Spline Size	Standard 1⅜ Inch Diameter
Location on Tractor	Tractor Center Line
Distance from Center of PTO Shaft to top of Drawbar	See Figures 59 thru 62, Page 84.
Method of Engaging	PTO Clutch Hand Lever
Type PTO Clutch	Oil Bath, Multiple Disc, Over Center Adjustable Type With Cone Brake
Fluid Recommendation	Automatic Transmission Fluid - Type A

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IMPLEMENT WARNING LAMP

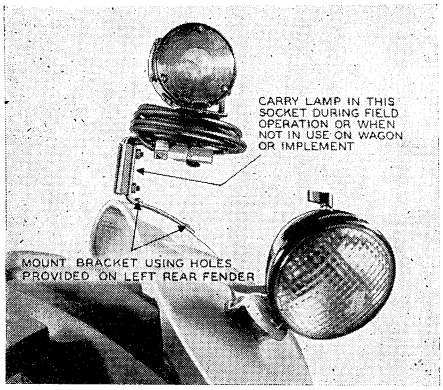


Figure 109

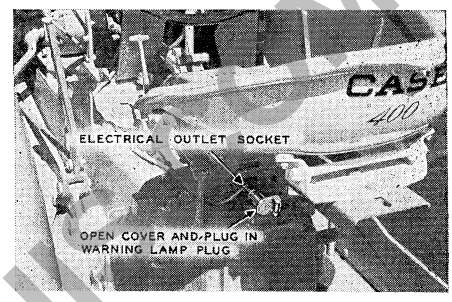
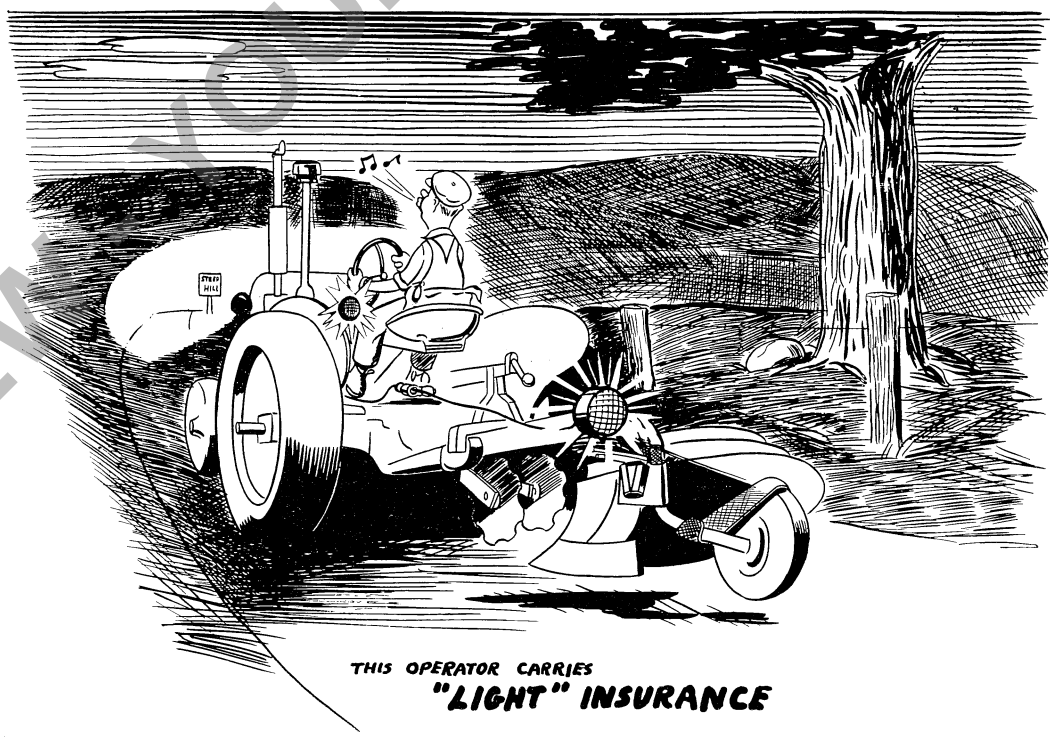


Figure 110

The implement warning lamp can be ordered from your Authorized Case Dealer for use when trailing implements or wagons over public thoroughfares after dark. **Keep your machines and implements well outlined with lights and reflectors.**



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IV

OPERATING INSTRUCTIONS

Avoid Accidents

1. Before dismounting from the tractor, always place gear shift lever in the neutral position. Stop the tractor engine if tractor is to be left unattended. Always lock the brakes.

   If the tractor is equipped with a hand operated traction clutch, place clutch lever in disengaged position.

2. Before starting tractor engine, disengage the traction clutch. Make sure shift lever is in neutral position.
3. Before working on a power take-off driven machine, disengage the power take-off clutch and stop the tractor engine. Lock the brakes.

NOTE: On tractors equipped with hand operated traction clutch, the traction clutch hand lever must be used only when the operator is sitting on the tractor seat behind the steering wheel. Use of the traction clutch hand lever from any other position is extremely dangerous.

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RUN-IN PROCEDURE

IMPORTANT

AT ALL TIMES, MAINTAIN OPERATING TEMPERATURE AT 180 TO 210 DEGREES F.

ALWAYS OPERATE ENGINE AT FULL THROTTLE DURING RUN-IN PERIOD. DO NOT IDLE THE ENGINE.

Careful attention must be given to proper "Run-In" procedure. Piston rings and cylinder sleeves can be seriously damaged in a new engine if "run-in" instructions are not followed. The following procedure is recommended:

1. Load

For the 1st 50 hours, maintain a normal field load. Do not "baby" the engine, but do not "lug" it. (Engine must not be "lugged" down below its full load governed engine speed.)

2. Engine Speed

During "run-in" period, always operate the tractor at full governed RPM (throttle wide open). Avoid idling at reduced engine speed.

3. Operating Temperature

Maintain a coolant temperature of at least 180 degrees Fahrenheit.

Low operating temperatures contribute to the formation of destructive acids and harmful deposits in the engine.

4. Crankcase Oil

Case Diesel Tractors are shipped from the factory with a special "run-in" oil in the crankcase. After the first 20 hours of operation, drain this oil while the engine is hot and replace it with fresh oil.

NOTE: For the next 480 hours, change the crankcase oil at the recommended 120 hour intervals, but use one grade lighter oil than recommended in the table on page 49 when the air temperature is above 32 degrees F.

Do not drain special run-in oil until the engine has been operated 20 hours.

5. Traction Clutch Adjustment

NOTE: During the first 50 to 150 hours of operation, it may be necessary to adjust the clutch several times until the drive plate facings have "run-in". Failure to do so can cause serious clutch damage.

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