"D" Tractor

Operators Manual

9-271

Reprinted

CASE

GENERAL SPECIFICATIONS OF CASE MODEL D SERIES TRACTORS

Engine

Type	Valve-in-head
Number of Cylinders	4
Firing Order	1-3-4-2
Engine Speed at No Load	1390 RPM
Engine Speed at Full Load	1200 RPM
Engine Idling Speed	500 RPM
Cylinder Bore	3 7/8 Inches
Cylinder Stroke	5 1/2 Inches
Cylinder Sleeve	Removable Wet Type
Connecting Rods	
Type Connecting Rod Bearings	Spun Babbitt
Adjustable	Yes
Main Bearings	
Type Bearings	Bronze Backed Spun Babbitt
Adjustable	Yes
Valves	
Valve Tappet Clearance	.018 Inch—Valve Closed Engine Cold
Spark Plug	Champion 15A—AC85S Commercial or Equivalent Thread 18 mm—Gap .025 Inch Shank Length—1/2 Inch
Fuel System	Gravity Flow Type
Carburetor	1 1/4 Inch SAE Flange
Carburetor Float Level From Top of Bowl	29/32 Inch
Carburetor Load Jet	Adjustable
Magneto	Case Model 41
Magneto Point Gap	.008 to .012 Inch
Air Cleaner	Case Oil Bath Type With Replaceable Filter Pads
Governor	Case Flyweight Type Variable Speed
Oil Pump	Gear Type Floating Oil Screen Inlet Non-adjustable Relief Valve

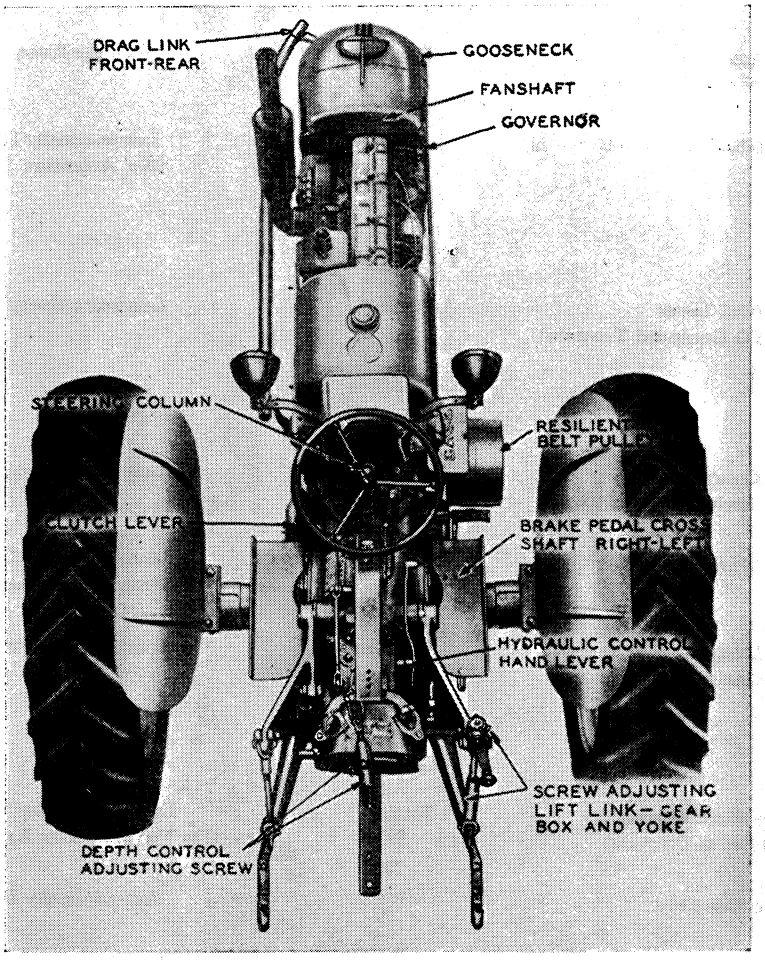

Figure 3. Model DC-3 Tractor

Wheels

Single Front Wheel Bearing (DC-3 Single Front Wheel Only)	1 Fitting	Lubricate Every 10 Hours

Brakes

Brake Pedal Cross-shaft (D, DC-4, All DC-3 Models)	2 Fittings— (One Each End)	Lubricate Every 10 Hours
Brake Pedals (DO, DV, DS)	2 Fittings— (One Each Pedal)	Lubricate Every 10 Hours

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OPERATING INSTRUCTIONS

STEERING THE TRACTOR

General

The steering mechanism of a tractor is of prime importance because more of the operator's time is spent in steering than in any other phase of tractor operation.

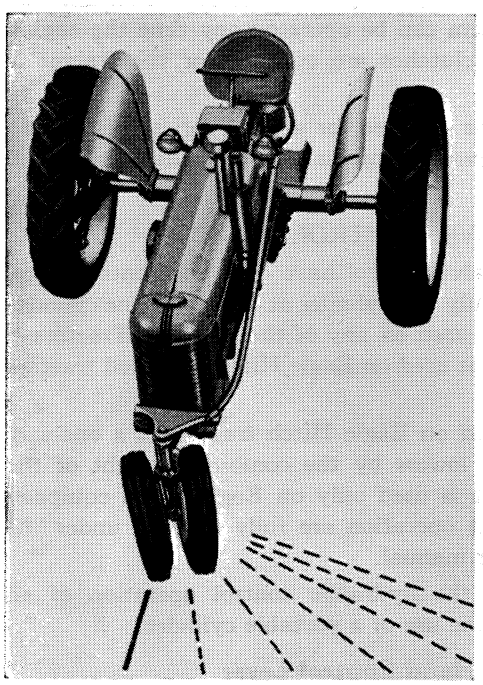

Figure 20.

With the comfort and safety of the operator in mind, the steering design of your tractor provides:

Shock-proof, high leverage control for difficult operating conditions.

The precision and responsive steering needed for modern farming practices.

Automatic lubrication of steering worm and gear.

Low cost maintenance to keep the steering in top condition during many years of use.

Quick Dodge

The quick dodge feature of Case steering allows the operator to obtain a maximum change in direction of travel with a minimum turning of the steering wheel. The variable steering leverage design provides the "quick dodge" area, plus high leverage control when making short turns. Figure 20 illustrates the variable leverage design.

A Careful Operator

IS THE BEST INSURANCE

AGAINST AN ACCIDENT

Figure 34 illustrates the latches in the locked position. The latches require no adjustment or lubrication.

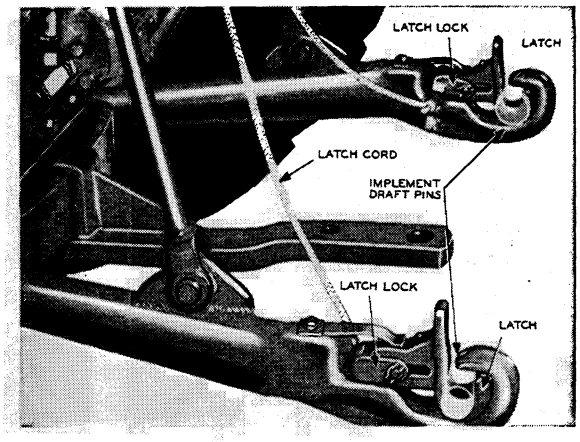

Figure 34.

EAGLE HITCH UNCOUPLING PROCEDURE

To uncouple the tractor from the latch-on implement, lower the implement to the ground and detach the depth control adjusting screw assembly from the implement mast. Be sure to replace the mast pin and keeper pin in the seat bracket, as shown in Figure 27.

Release the Eagle Hitch latch locks by pulling the latch cord upward.

Back the tractor a few inches until the latch in each draft arm has been pushed forward in the arms and the arms are clear to lower away from the implement draft pins.

PORTABLE CYLINDER EQUIPMENT FOR EAGLE HITCH TRACTOR

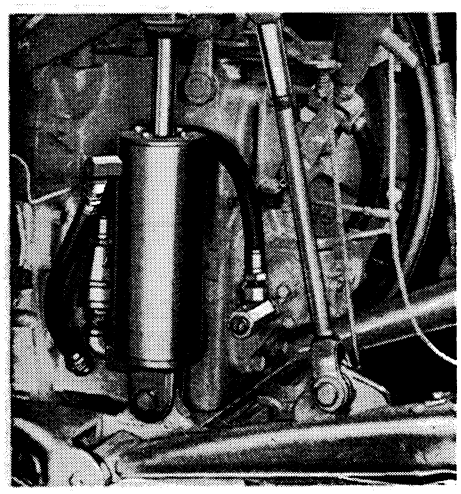

Figure 35.

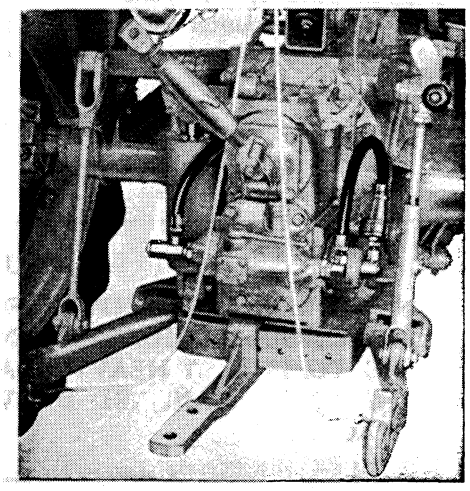

Figure 36.

Equipment for the use of a portable cylinder on a single valve control Eagle Hitch tractor can be ordered as extra equipment. Figures 35 and 36 illustrate this equipment coupled for mounted cylinder operation, and Figures 37 and 38 show it in position for use with a portable cylinder.

LOW COST FUEL EQUIPPED TRACTORS

The instructions presented in this manual for the regular straight gasoline burning Model D Series Tractors, apply to the low cost fuel equipped tractor, with the exception of the cooling system and the fuel system.

Low cost fuel equipped D Series Tractors are provided with a double compartment fuel tank. The large low cost fuel compartment holds 17 U. S. gallons and the small gasoline compartment holds 2 U. S. gallons. Shut off both fuel valves before filling compartments.

Note: Be sure the air vents in the fuel tank caps are kept open to assure proper flow of fuel.

Low cost fuels are heavier than gasoline and therefore require greater manifold and engine heat. To obtain this necessary operating heat, the tractor is equipped with a manifold heat regulator valve, a manifold shield and a radiator shutter in addition to the standard thermostat. The manifold heat regulator valve and the radiator shutter are controlled by the two hand cranks on the instrument panel, Figure 47.

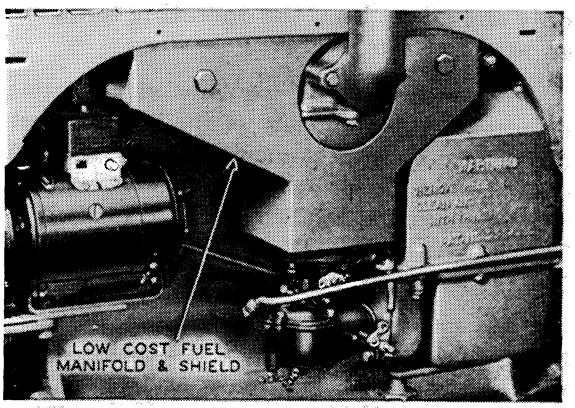

Figure 46.

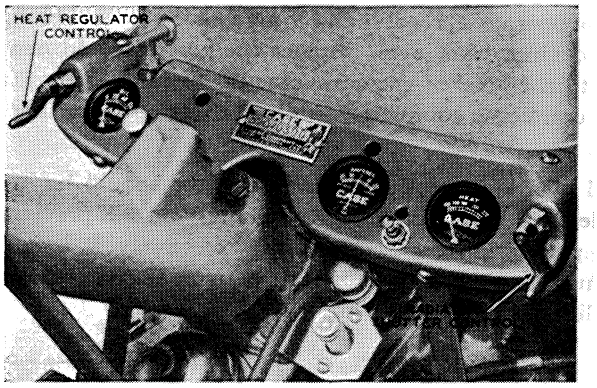

Figure 47.

Always close the radiator shutters completely when starting a low cost fuel equipped tractor. Turn the radiator shutter crank clockwise, to the right, to close the shutters. **Set the manifold heat regulator valve in the HOT position** by turning the control crank clockwise—to the right—as far as possible.

Before operating a low cost fuel equipped tractor continuously on gasoline, consult your Authorized Case Dealer regarding changes that should be made.

Genuine Case Thermostats are obtainable from your Authorized Case Dealer. This thermostat has been designed to provide efficient heat control for your Case Model D Series Tractor. Do not use substitutes.

CLEANING THE COOLING SYSTEM

Clean your radiator at least once a year. In those areas where anti-freeze is used, it is best to do it in the spring when the coolant is changed.

To drain the cooling system, remove the coolant drain plug, Figure 51, **while the engine is still hot.** Drain all liquid from the system and replace the plug.

To clean the cooling system, refill the system with clean water and add a radiator cleaner. Any nationally known commercial brand cleaner marketed by a reputable manufacturer may be used in the system.

After draining the cleaning solution, flush the cooling system thoroughly with clean water before refilling for operation.

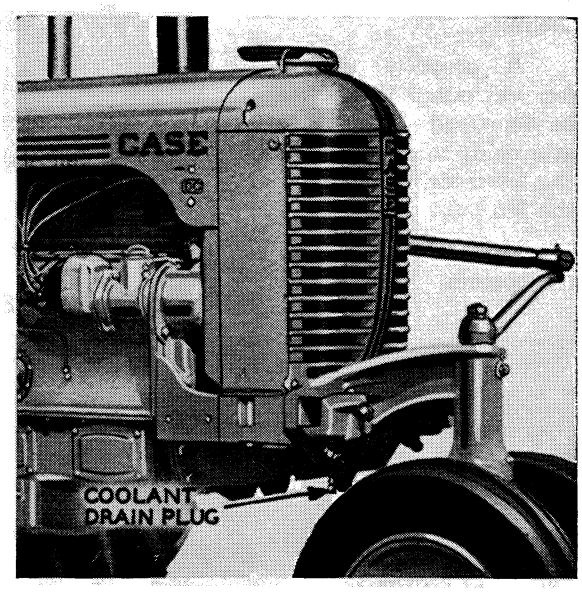

Figure 51.

After the cooling system is flushed, refilled and the engine has operated for a short period of time, check the radiator and hose connections for any indications of leakage. Keep the radiator hose connections tight. Replace cracked or collapsed radiator hoses immediately.

Remove any weeds or dirt from the radiator fins to prevent overheating.

FAN AND WATER PUMP VEE BELT

The effectiveness of the cooling system depends upon the condition and correct tautness of the Vee belt that drives the fan and water pump. Slippage in this belt may result in engine overheating, since neither the pump nor the fan will be driven at full speed.

Vee Belt Adjustment

As a safety precaution, remove the spark plug wires from the spark plugs before adjusting the Vee belt.

CRANKCASE BREATHER

The crankcase breather is located on the outside of the valve cover, Figure 63. It should be removed and cleaned after every 120 hours of operation. Under extremely dusty conditions, it should be cleaned more often. Wash the entire breather body and the breather screens in tractor fuel until all dirt and sediment are removed; then re-install it.

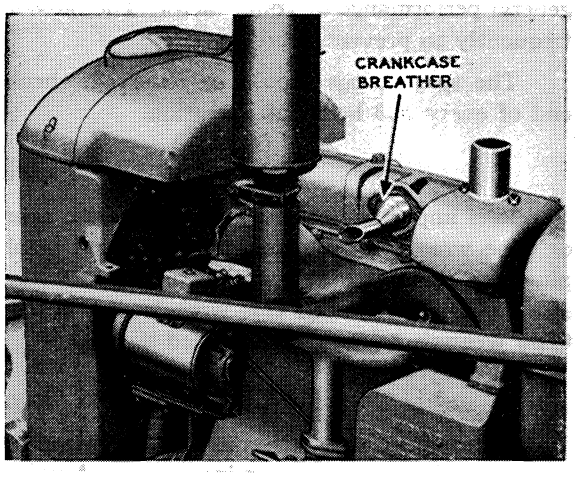

Figure 63.

TRANSMISSION BREATHER

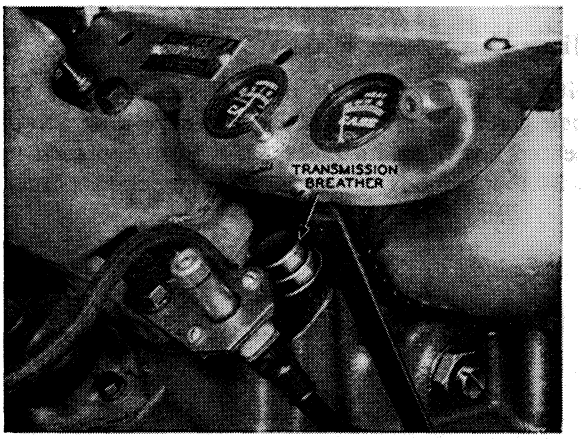

Figure 64.

The transmission breather located on the transmission case top cover, Figure 64, should be removed and cleaned in tractor fuel every 120 hours. Under extremely dusty conditions, this breather should be checked and cleaned more often. Put a few drops of engine oil in the breather before re-installing it.

SPARK PLUGS

The type spark plug provided in your new Model D Series Tractor is classed as "medium" in the spark plug heat range comparison chart—Champion 15-A —AC 85s Commercial—or equivalent. The shank length is ½ inch with a 18 mm. thread size. A gap of .025 of an inch wide should be maintained between the electrodes. This is true for Gasoline, Low Cost Fuel and LP Gas Burning Tractors.

NOTE: It is possible that under unusual conditions, "hotter" or "colder" type spark plugs may be required. Consult your Case Dealer regarding the proper type spark plug to use for your particular conditions.

Figure 75 shows the lock pin being depressed. **The tractor has been split for illustrative purposes only.**

IMPORTANT: After each adjustment be certain the spring loaded lock pin enters the hole in the adjusting collar and locks the collar in position. Use the clutch adjusting tool to check that the spring loaded lock pin is in place in the hole in the adjusting collar.

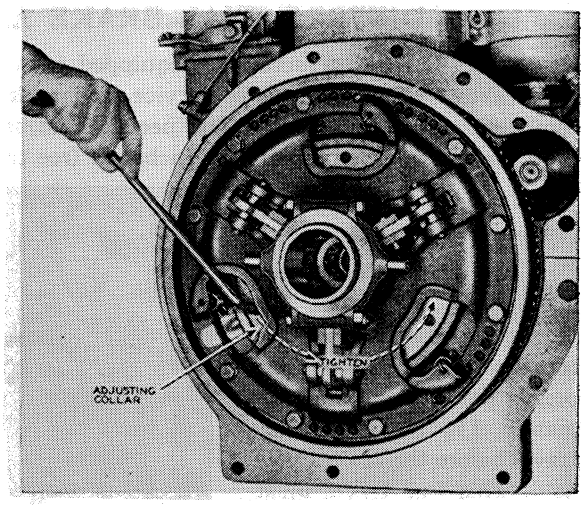

Figure 75.

A good method to check the clutch adjustment is to set the brakes, start the engine and place the shift lever in 4th gear; then engage the traction clutch. If the engine stalls, the adjustment should be correct.

BELT PULLEY BRAKE ADJUSTMENT

Adjusting the clutch may affect the belt pulley brake adjustment. After the clutch has been adjusted, inspect the pulley brake to make sure it contacts the hub when the clutch throw-out lever is pulled fully rearward. At the same time, make sure that it does not interfere with the proper release of the clutch.

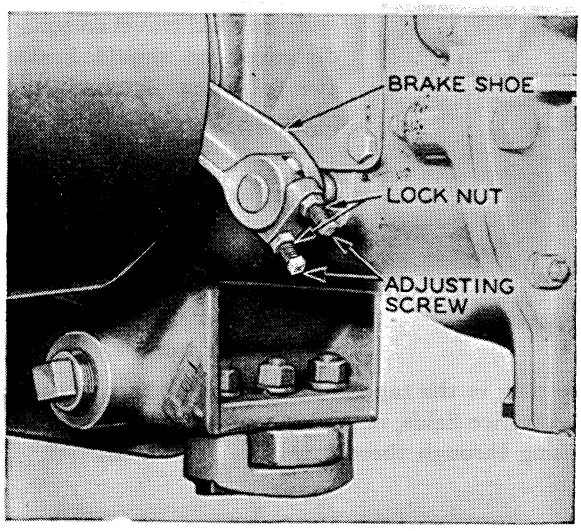

Figure 76.

Should the pulley brake need adjustment, loosen the lock nuts on the adjusting screws, Figure 76. To apply the brake earlier during the rearward movement of the clutch lever, loosen the lower screw and tighten the upper screw. To apply the brake later and to make sure the brake is released when the clutch is engaged, loosen the upper screw and tighten the lower screw. When the adjustment is completed, secure it by tightening the lock nuts.

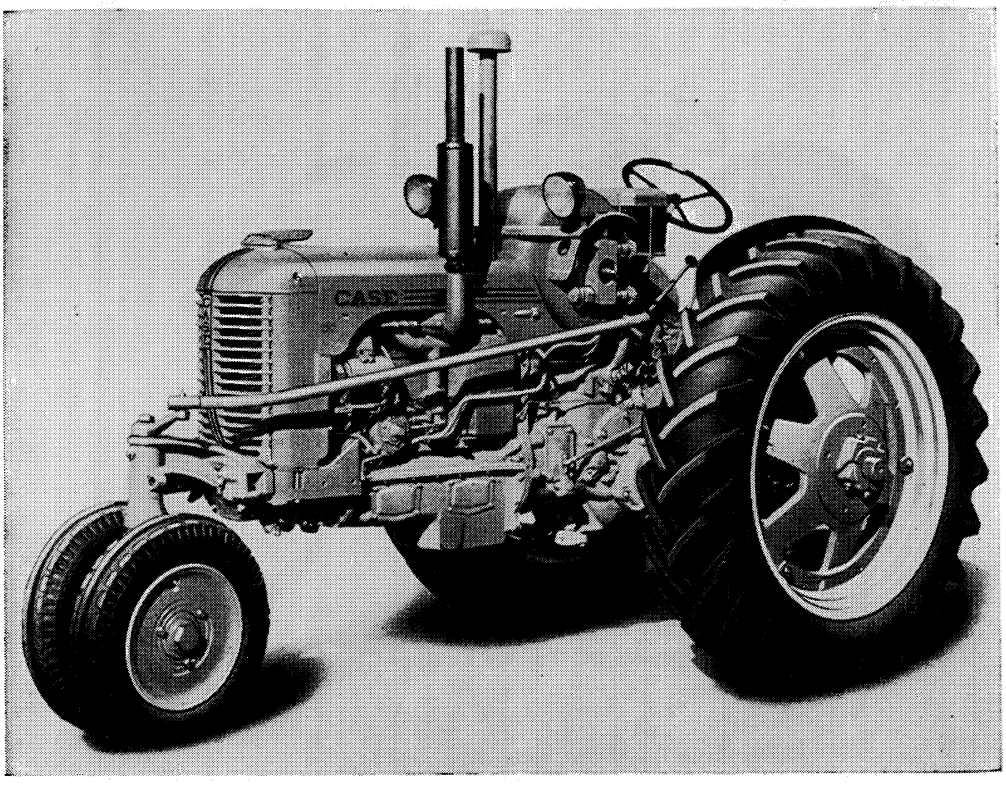

Figure 83. Model DC Tractor Equipped for LP Gas

LP GAS EQUIPMENT

on

Model D Series Tractors

COLD WEATHER STARTING

When the tractor is to be started and operated during extremely cold weather, it is advisable to start the engine on vapor instead of liquid. Follow the normal starting procedure instructions, except for opening the liquid outlet valve. Keep the liquid outlet valve closed and open the vapor outlet valve, Figure 90, slowly. After the engine has started and warmed up, open the liquid outlet valve and close the vapor outlet valve.

NOTE: Do not operate the tractor under load until the radiator coolant is thoroughly warmed up.

TO STOP THE ENGINE

Close the throttle and pull out the magneto switch.

When the tractor is not to be used for an extended period of time, it is advisable to stop the engine by closing the liquid outlet valve on the fuel tank and allowing the engine to use up the fuel in the line. After the engine has stopped, be sure to pull the magneto switch out.

Cold Weather Stopping

Whenever the engine is stopped in cold weather long enough to permit the engine to cool off, be sure to shut off the liquid or vapor outlet valve, whichever you are operating on, and allow the engine to use up the fuel in the line. When the engine stops pull the magneto switch out.

OPERATING PRECAUTIONS

The liquid fuel filter, Figure 91, catches and retains in its settling bowl all the solid particles coming through with the liquid fuel. This filter works until it becomes clogged up sufficiently to restrict the flow of fuel. A sure indication

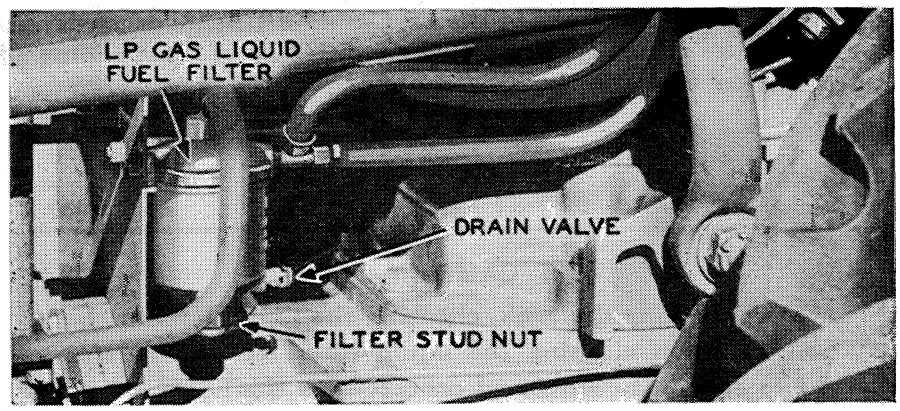

Figure 91.

of a clogged filter is frost forming on the outside of the filter body. An occasional opening of the drain in the bottom of the bowl with the fuel shut off at the tank will keep the filter clean under normal conditions. To open the drain on the filter,

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