INSTRUCTIONS FOR HANDLING AND OPERATING L. P. GAS EQUIPMENT

Used on

CASE

REGISTERED IN U. S. PATENT OFFICE

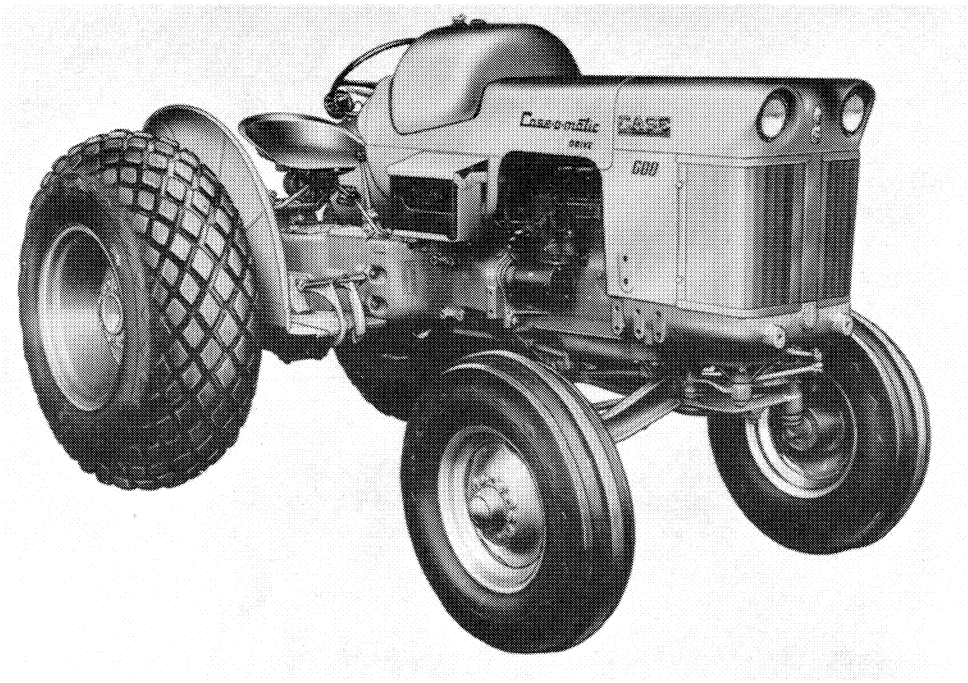
"500B"-"600B" SERIES TRACTORS

SUPPLEMENT TO R.I. FORM 9-481

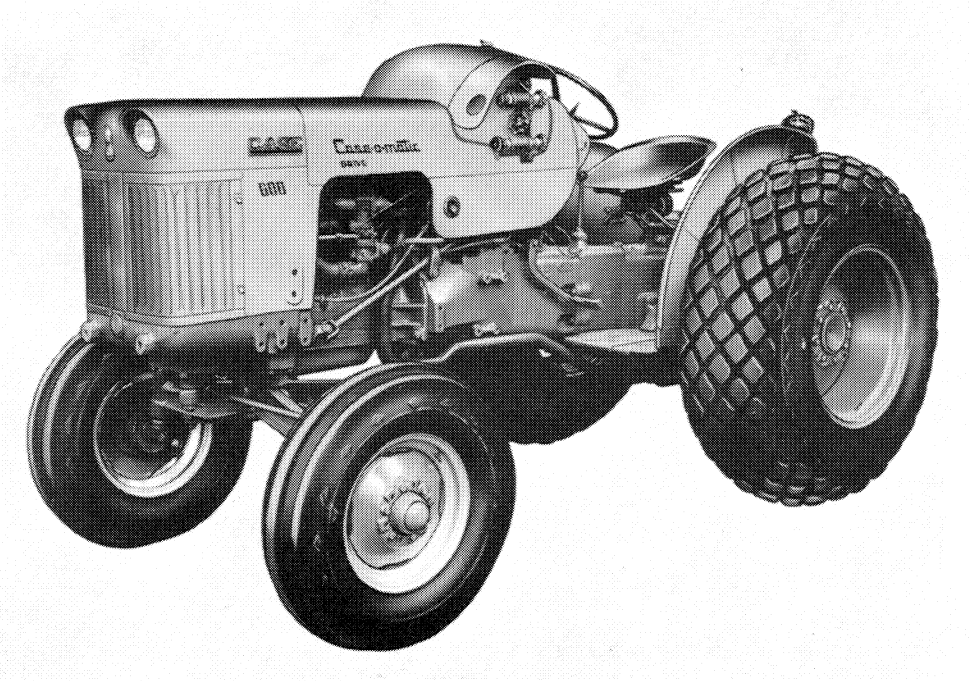
"OPERATORS INSTRUCTION MANUAL"

CASE "500B"-"600B" SERIES TRACTORS

R.I. Form 9-92171



Case Model "610B", L.P.G. Tractor – Right Side



Case Model "610B", L.P.G. Tractor – Left Side

GENERAL SPECIFICATIONS

ENGINE

Type	Four Cylinder; Overhead Valve
Firing Order	1 – 3 – 4 – 2
Cylinder Bore	$3\frac{9}{16}$ inches
Stroke	4⅛ inches
Piston Displacement	164 cubic inches
Compression Ratio	8.5 to 1
Valve Guides	Replaceable
Exhaust Valve Inserts	Hardened Alloy Steel
Valve Clearance	.014 (cold)
Cylinder Sleeves	Dry Replaceable Type
Air Cleaner	Oil Bath Type
Full Load Engine Speed ("500B" Series)	2000 R.P.M.
No Load Engine Speed ("500B" Series)	2180 R.P.M.
Full Load Engine Speed ("600B" Series)	2250 R.P.M.
No Load Engine Speed ("600B" Series)	2400 R.P.M.
Engine Idling Speed	500 R.P.M.
Governor Type	Case Sensitive Flyweight
Governor Control	Friction Type Hand Control
Ignition Timing	5° Before T.D.C.
Spark Plugs, Champion D14 or Equivalent	Gap .025", Thread 18 m/m
Battery	12 Volt, 55 Amp. Hr. Postive Post Grounded
Battery Size	S.A.E. No. 4NA
Generator (3 Brush) Third Brush Not Adjustable	w/Voltage Regulator
Starting Motor	With Sealed Starter Drive
Fuse	20 Amp., in Instrument Panel
Ignition Switch	Includes Key Starting

APPROXIMATE CAPACITIES

	U.S.	Imperial
Cooling System (Quarts)	12	10.02
Engine Crankcase (Quarts)	4	3.34
Engine Crankcase (with filter) (Quarts)	5	4.18
Air Cleaner Oil Cup (Pints)	1	0.83
L.P. Fuel Tank (filled to 80% full bleed valve) (Gallons)	18.4	15.4

CRANKCASE OIL CHANGE

1. Drain special "break-in" oil after first 20 hours of operation.
2. Fill crankcase as noted on page 19 of R.I. Form 9-481.
3. Under normal conditions change oil every 100 hours of operation.
4. Change oil filter every 200 hours or every other oil change.

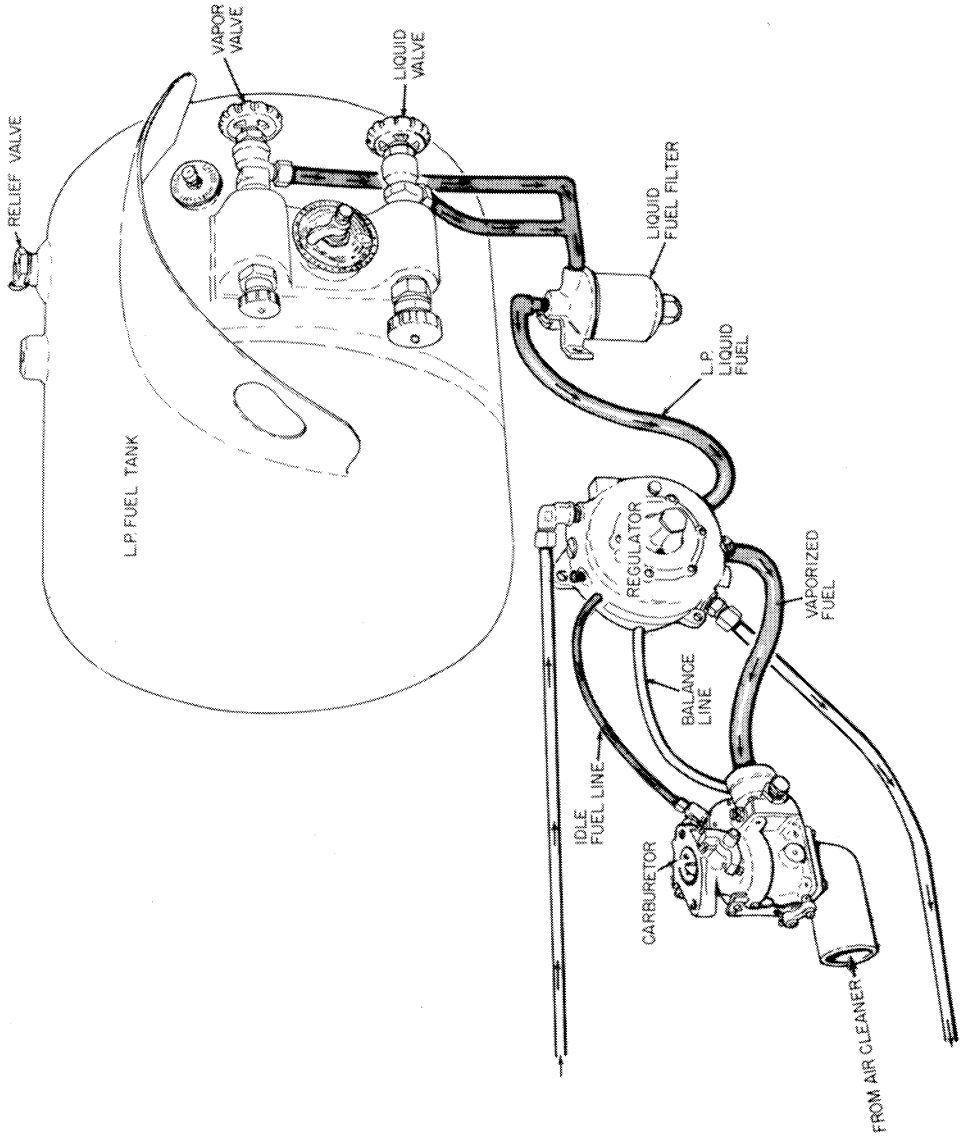


Fig 3. "500B"-"600B" Tractor L.P.G. System

GENERAL DESCRIPTION

The Liquefied Petroleum Gas, (L.P.G.), fuel system for CASE "500B"-"600B" Series tractors operates in the following manner.

1. **L.P. Gas Tank.** The fuel tank contains approximately 18.4 gallons of L. P. Gas when properly filled to the 80% full bleed valve. (See page 8).

2. **Fuel Filter** – The filter is installed between the fuel tank and the regulating unit in order to remove any dirt or scale which might be present in the tank.

3. **Vaporizer Regulator.** The regulator combines two stages of regulation and vaporization in one unit. The fuel enters the regulator as a liquid, is reduced in pressure, becomes a gas and by means of valves accurately controlled by diaphragms is fed to the engine in response to demand. When the liquid fuel is reduced in pressure and converted into a gas in the first stage of the regulator, a tremendous amount of heat is absorbed and a refrigeration action results. For this reason heat must be supplied from the water of the engine cooling system. With the engine running at usual temperature, this water supplies sufficient heat to overcome the natural effect of refrigeration and permits the conversion of the liquid fuel into a gaseous fuel at maximum efficiency.

TEMPERATURE CHARACTERISTICS OF VARIOUS LP GAS FUELS

	Propane		50-50 Propane-Butane		Butane	
Air Temperature	Pressure	Lbs. of Fuel	Pressure	Lbs. of Fuel	Pressure	Lbs. of Fuel
– 40° F.	1½	88.3				
– 20° F.	10	86.5				
0° F.	25	84.6	8	90.2	0	94.8
+ 20° F.	40	82.8	20	88.3	0	92.9
+ 40° F.	65	81	30	86.5	3	91.1
+ 60° F.	95	78.2	50	83.7	12	89.2
+ 80° F.	130	75.4	75	82	25	87.4
+100° F.	170	72.7	105	79.1	40	85.6
+120° F.	225	69.9	140	76.4	55	83.7

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