

DESCRIPTION

NOTE

During oil changes, remove and clean oil filter screen located on the right side of the engine accessory section.

OIL TEMPERATURE GAGE.

A capillary type, oil temperature gage (15, figure 1) is mounted within the engine instrument cluster on the right side of the instrument panel. A green arc on the gage dial indicates the normal operating range of oil temperatures. Refer to Section IV for instrument markings.

OIL PRESSURE GAGE.

An oil pressure gage (12, figure 1) is mounted within the engine instrument cluster on the right side of the instrument panel. The gage is calibrated in pounds per square inch. Refer to Section IV for instrument markings.

AIR INDUCTION SYSTEM.

Air is ducted to the carburetor from an air scoop located on the bottom of the engine cowl. Dirt and other foreign matter is filtered from the incom-

ing air by a filter screen located in the air scoop. Proper cleaning and servicing of this air filter is important to increase life and maintain top efficiency of the engine. The filter should be serviced every 25 hours (during regular oil change) or oftener when operating in dusty conditions. Under extremely dusty conditions, daily maintenance of the air filter is recommended. Refer to the servicing instructions stamped on the carburetor air filter for the servicing procedure to be used.

FUEL SYSTEM.

Fuel is supplied to the engine from two rubberized, bladder-type fuel cells, one located in each wing. From these tanks, fuel is gravity-fed through a fuel selector valve and fuel strainer to the engine carburetor.

FUEL SPECIFICATION AND GRADE.

Aviation grade fuel should always be used except under emergency conditions. The recommended fuel is 80 octane minimum rating. Highly leaded fuels are not recommended.

FUEL QUANTITY DATA (U. S. GALLONS).					
TANKS	NO	USABLE FUEL ALL FLIGHT CONDITIONS	ADDITIONAL USABLE FUEL FOR LEVEL FLIGHT ONLY	UNUSABLE FUEL	TOTAL FUEL VOLUME EACH
LEFT WING	1	27.5 gal.	3.5 gal.	1.5 gal.	32.5
RIGHT WING	1	27.5 gal.	3.5 gal.	1.5 gal.	32.5

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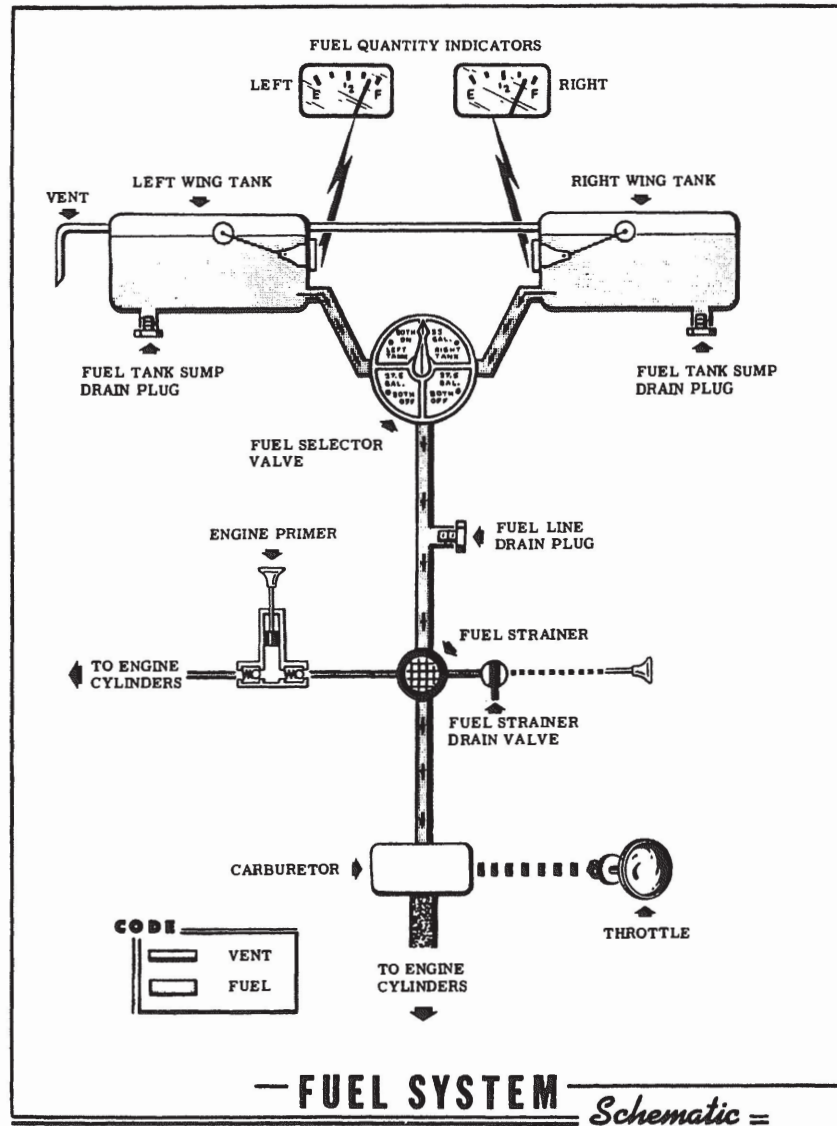


Figure 4.

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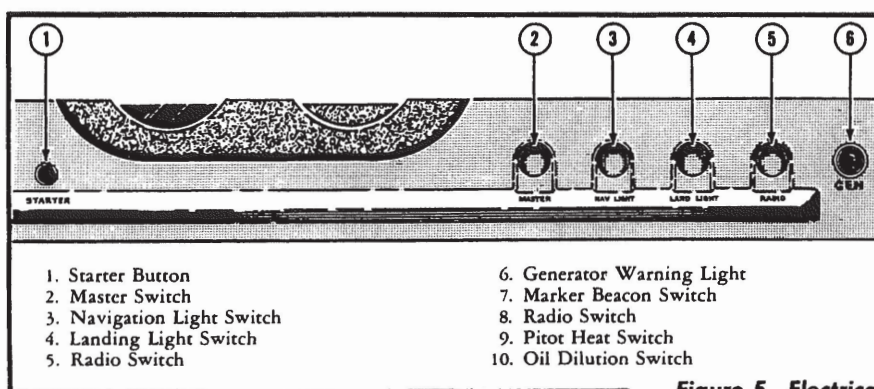


Figure 5. Electrical

FUEL SELECTOR VALVE.

A rotary-type fuel selector valve is located between the front seats at the aft end of the cabin floor tunnel. The valve has four positions labeled "BOTH OFF", "LEFT TANK", "BOTH ON", and "RIGHT TANK". The "BOTH OFF" position shuts off both fuel tanks from the fuel system and allows no fuel to pass the fuel selector valve. The "LEFT TANK" or "RIGHT TANK" position allows fuel to flow from only one fuel tank at a time, while "BOTH ON" permits simultaneous flow from both tanks. *Important* — The fuel valve *handle* is the pointer for the fuel selector valve and indicates the setting of the valve by its position above the dial. *Take-off should be made in the "BOTH ON" position to prevent inadvertent take-off on an empty tank.*

FUEL STRAINER DRAIN KNOB.

A fuel strainer drain knob decalated "STRAINER DRAIN" (26, figure 1) is mounted slightly to the left of center below the instrument panel.

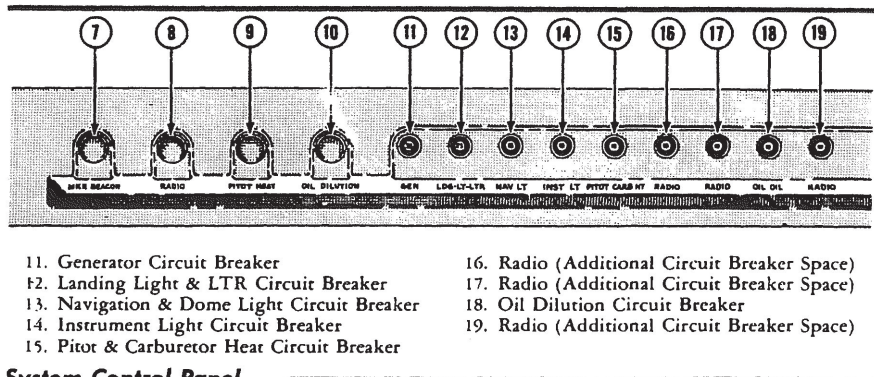
The knob provides a quick, convenient method of draining water and sediment that may have collected in the fuel strainer. The fuel strainer is located in the lower aft section of the engine compartment just forward of the firewall.

A two ounce quantity of fuel (approximately 3 to 4 seconds of drain knob operation) should be drained from the strainer before the initial flight of the day or after each refueling operation to insure against the presence of water or sediment in the fuel. The spring loaded drain valve in the strainer is OPEN when the fuel strainer drain knob is *pulled out* all the way. The drain valve automatically *closes* when the knob is *released*.

FUEL TANK SUMP DRAIN PLUG.

A fuel tank sump drain plug is located on the underside of each wing in line with the rear edge of the cabin door and out a few inches from the fuselage. These plugs are used to drain any sediment or water that may collect in the fuel tanks. Under normal

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System Control Panel

operating conditions, it is recommended that the wing tank sumps be drained at each 100 hour inspection period.

FUEL LINE DRAIN PLUG.

A fuel line drain plug is located on the underside of the airplane directly below the fuel tank selector valve. At each 100 hour inspection period, this plug should be removed to drain any sediment or water accumulated in the fuel line.

FUEL QUANTITY INDICATORS.

Electrically-operated fuel quantity indicators (11 and 17, figure 1) are mounted below the tachometer within the engine instrument cluster.

NOTE

After the master switch is turned on, a warming period is required before the indicator needles will arrive at the actual reading. Also, the needles will require several seconds to readjust themselves to the actual reading after any abrupt change in flight attitude of the

airplane.

The indicators, identified "LEFT" and "RIGHT" indicate the amount of fuel remaining in their respective tank. A red arc extending from the empty to $\frac{1}{4}$ full range on each indicator dial warns the pilot that the respective tank is $\frac{1}{4}$ full or less. *Do not take off if the pointer is in the red arc.*

ELECTRICAL SYSTEM.

Electrical energy is supplied by a 12-volt, direct-current system powered by an engine-driven generator. A 12-volt storage battery, located aft of the baggage compartment curtain, serves as a stand-by power source, supplying current to the system when the generator is inoperative or when the generator voltage is insufficient to close the reverse-current relay.

MASTER SWITCH.

The master switch (2, figure 5) is mounted at the left end of the switch row in front of the left front seat. The switch positions are: "ON" (out posi-