

MODEL 7ECA ——— CRUISE PERFORMANCE ——— ZERO WIND

ALTITUDE FEET	RPM	% BHP	TAS MPH	GPH	ENDURANCE HOURS	RANGE STATUTE MI.
2500	2800	90	122	9.6	3.6	445
	2700	76	117	8.0	4.4	510
	2600	66	113	5.9	5.9	670
	2500	59	108	5.2	6.7	725
	2400	53	104	4.7	7.4	770
	2300	49	100	4.3	8.1	810
	2200	45	96	4.0	8.8	840
	2100	42	92	3.7	9.5	870
	2000	40	88	3.5	10.0	880
	5000	2800	83	123	8.9	3.9
2700		72	118	6.3	5.6	655
2600		63	114	5.6	6.3	710
2500		56	108	4.9	7.1	770
2400		51	104	4.5	7.8	805
2300		47	99	4.1	8.5	845
2200		43	94	3.8	9.2	865
2100		40	90	3.6	9.7	875
7500	2800	77	124	8.2	4.3	525
	2700	67	119	5.9	5.9	705
	2600	60	114	5.2	6.7	765
	2500	53	109	4.7	7.4	810
	2400	48	103	4.3	8.1	835
	2300	44	98	3.9	9.0	875
	2200	41	92	3.6	9.7	890
	10000	2800	70	124	6.2	5.6
2700		62	119	5.5	6.4	755
2600		56	114	4.9	7.1	810
2500		50	107	4.4	8.0	855
2400		46	101	4.0	8.8	880
2300		42	93	3.7	9.5	880

- NOTES: 1) Maximum cruise is normally limited to 75% power.
- 2) All fuel consumption estimates are based on the recommended lean mixture when at or below 75% power and full rich above 75% power.
- 3) No fuel allowance is made for take-off, climb, descent or reserve.
- 4) All performance figures based on maximum gross weight of 1650 lbs.
- 5) Cruise performance using McCauley Propeller 1C90CLM72-46 only

All electrical switches and fuses are located on the electrical panel which is installed on the upper left side of the cabin. Additional spare fuses are also provided in the panel and can be used for replacement during flight if necessary.

A red master switch controls all electrical power from the battery and alternator to the distribution bus with the exception of the engine magnetos.

NOTE

Failure to turn the master switch OFF after securing the aircraft will result in a complete discharge of the battery.

The alternator circuit includes an overvoltage relay which automatically removes it from the circuit to prevent damage to the alternator or the radio equipment should an overvoltage condition occur. Cycling the master switch will reset the overvoltage relay should it drop the alternator off the circuit due to an overvoltage condition. This is indicated by a discharge on the ammeter. After resetting, if the overvoltage condition was temporary, the alternator will continue to operate normally.

FUEL SYSTEM

The Citabria fuel system is completely independent from the other aircraft systems and due to its simplicity is virtually trouble free. See Figure 6-5.

Fuel is supplied from two interconnected wing tanks and is gravity fed to the engine carburetor (fuel injector--7KCAB). Fuel quantity is registered by two direct reading float-type gauges, one for each tank. They are located in each wing root area of the cabin.

NOTE

Correct fuel indication is only provided with the aircraft in level flight attitude.

The fuel shut-off valve is located on the lower left side of the cabin forward of the pilot. Two positions are available, ON or OFF. A gascolator is mounted to the firewall with a quick drain feature provided. The quick drain control knob is located through the inspection door on the engine cowl. An additional drain is located under the fuselage aft of the baggage compartment and is easily accessible during the preflight inspection.

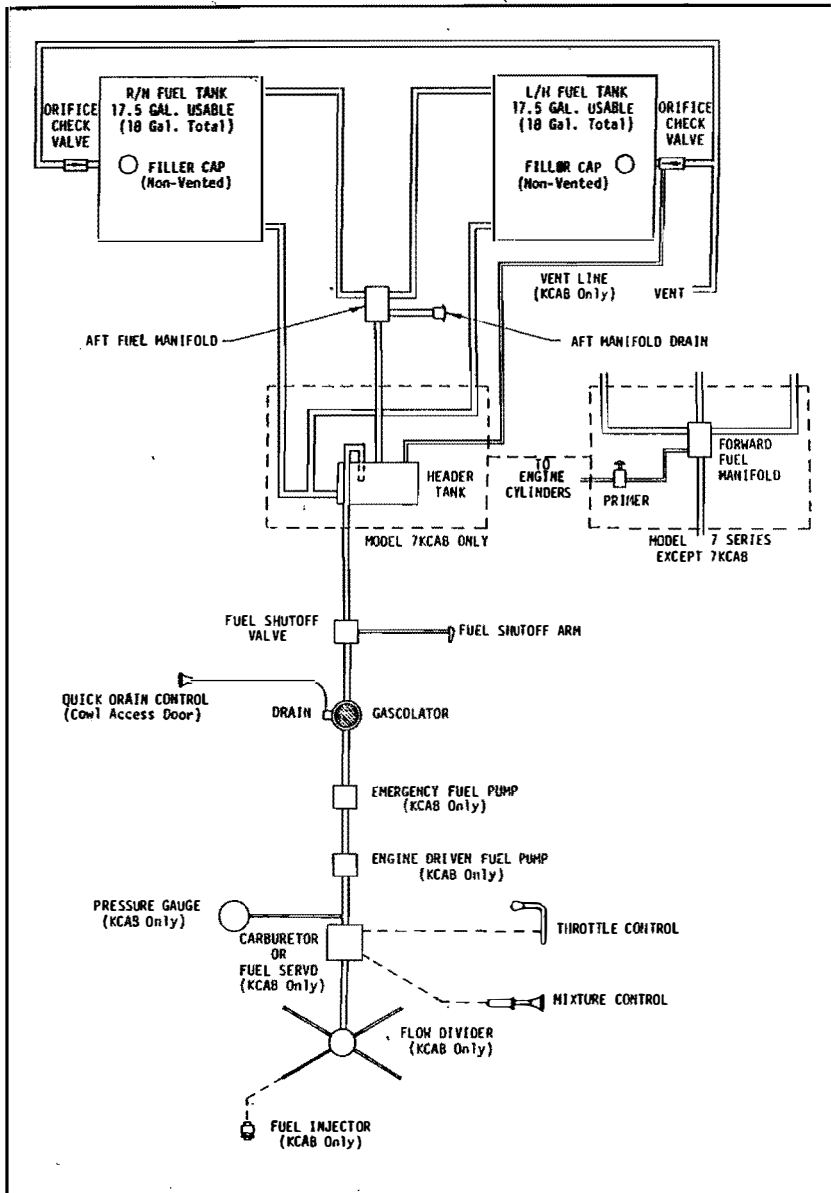


FIGURE 6-5 FUEL SYSTEM SCHEMATIC

The fuel tanks are vented together with the vent located on the left wing. An orificed one-way check valve allows a minimum of fuel to be vented overboard during negative G aerobatic maneuvers. An ice deflector is provided to aid in preventing vent obstruction should the aircraft inadvertently encounter icing conditions.

WARNING

The fuel caps are the non-vented type. Failure to properly secure the caps will result in fuel leakage and unequal fuel feed between the two tanks during flight.

An engine fuel primer is located on the instrument panel to facilitate starting. Turn the knob to release the plunger then pump the desired amount.

WARNING

After using the primer, insure that the knob is locked in place to prevent additional fuel from entering the engine cylinders.

The 7MCAB only, is fuel injected and has additional provisions for limited inverted flight. See Figure 6-5. This includes an engine driven fuel pump and an electric boost pump, which is used for starting and for emergency use should the engine driven pump fail. The switch is located on the electrical panel. A direct reading fuel pressure gauge is installed in the instrument panel.

A 1.5 gallon header tank is mounted aft of the firewall. A standpipe in the tank allows .75 gallons to be used for inverted flight which is approximately 2-3 minutes depending on power settings. During positive G conditions, the tank automatically refills by gravity from the main wing tanks.

WARNING

Continuous inverted flight is limited to 2 minutes. Approximately 3.5 minutes of flight under positive G conditions is required to completely refill the header tank. Temporary fuel starvation may result during an extended series of aerobatic maneuvers involving a majority of negative G conditions.

NOTE

Should fuel starvation result during inverted flight, return to positive G conditions. The engine will restart within 10 seconds.