

FUEL SYSTEMS

Nikkole Heep

Ted Fairbairn



Purpose

Parts

Fuel pumps

Fuel tanks

Fuel gauges

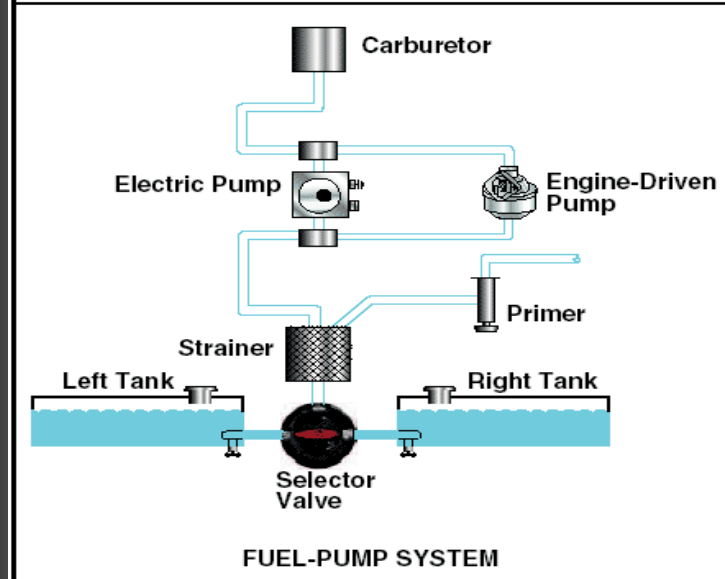
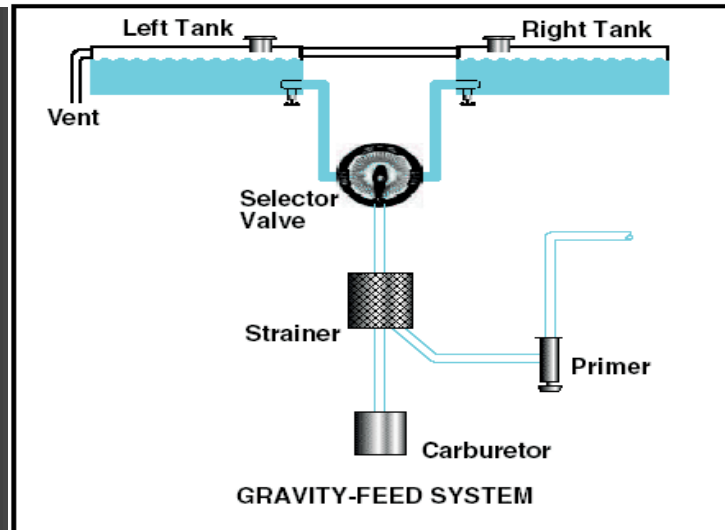
Fuel selectors

Fuel grades



Purpose of the Fuel System

- ❑ The fuel system provides uninterrupted flow of clean fuel from fuel tanks to engine in all phases of flight



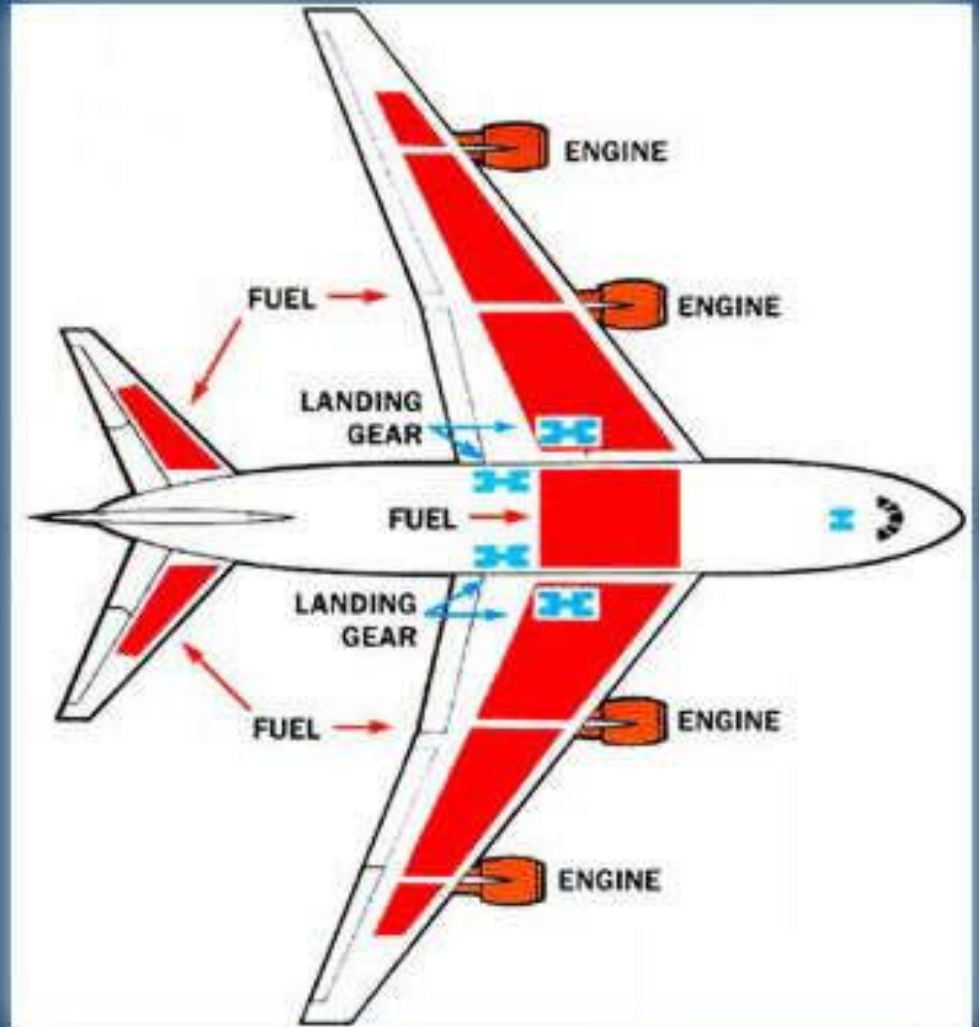
Fuel Pumps

- Some Airplanes with fuel pump systems have two fuel pumps
 - ▣ Engine Driven Fuel Pump (Gear Connection to Crankshaft)— provides positive pressure to Carburetor or Fuel Injector
 - ▣ Auxiliary pump provides positive pressure fuel to Engine Driven Pump
 - Aux Fuel Pump - Electric
 - For engine starts and if Engine driven pump fails



Fuel Tanks

- Fuel tanks usually in airplane wings – but may be in other spaces
- Tanks vent to ambient atmosphere to maintain atmospheric pressure inside tank



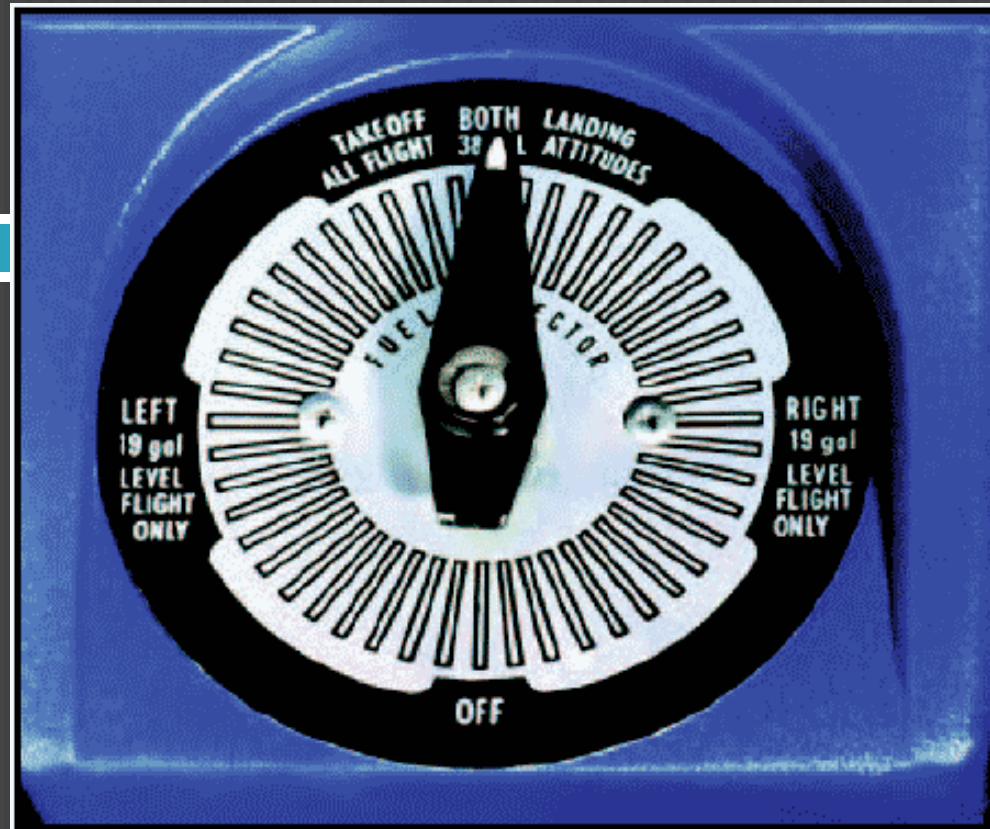
Fuel Gauges

- Fuel gauges measure fuel tank quantity
 - ▣ gallons or pounds
- Rule or Thumb – DON'T TRUST FUEL GAUGES – Keep track of fuel consumption
 - ▣ Fuel gauges indications are often inaccurate, especially in small GA aircraft.
 - ▣ Always do your own Fuel computations







Fuel Selectors

- Fuel selector valve allows selection of fuel from various tanks
 - ▣ Tank Choices (GA)
 - LEFT, RIGHT,
 - BOTH and OFF
- On large aircraft, fuel management is a critical crew task



Fuel Grades

- ❑ Fuel Grades match Fuel Colors
- ❑ Fuel Match with Engine – Critical
- ❑ Conventional Engines – AVGAS
- ❑ Jets- Jet A (or other, several kinds of Jet fuel)

FUEL TYPE AND GRADE	COLOR OF FUEL	EQUIPMENT COLOR
AVGAS 80	RED	
AVGAS 100	GREEN	
AVGAS 100LL	BLUE	
JET A	COLORLESS OR STRAW	

Summary

- ❑ Purpose
- ❑ Parts
 - ❑ Fuel pumps
 - ❑ Fuel tanks
 - ❑ Fuel gauges
 - ❑ Fuel selectors
- ❑ Fuel grades

References

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