

ELECTRICAL SYSTEM

The airplane is equipped with a 14 volt, direct current system powered by an engine driven alternator. It is equipped with a 12-volt 35 amp/hour battery. Electrical energy is supplied by a 60 amp alternator located on the front of the engine. Electrical power is distributed through electrical buses and circuit breakers. If an electrical problem arises, always check circuit breakers. "Essential" circuit breakers should be reset in flight only once, and only if there is no smoke or "burning smell" and only if the affected system and equipment is needed for the operational environment. Do not reset any non-essential circuit breakers in flight.

STALL WARNING

A pneumatic type stall warning system consists of an inlet on the left wing leading edge, which is ducted to a horn near the top left of the windshield. As the aircraft approaches a stall, the lower pressure on top of the wing shifts forward drawing air through a horn resulting in an audible warning at five to ten knots above the stall.

ENVIRONMENTAL

Cabin heat is provided by air ducted through the exhaust shroud and into the cabin. It is controlled by a knob on the instrument panel. Air flow is controlled by a 'Cabin Air' knob on the instrument panel and additionally by ventilators near the top corners of both left and right windshields.

CARBURETOR HEAT

Under certain moist atmospheric conditions at temperatures of 20° to 70° F (-5° to 20° C), it is possible for ice to form in the induction system, even in summer weather. This is due to the high air velocity through the carburetor venturi and the absorption of heat from this air by vaporization of the fuel. To avoid this, the carburetor heat is provided to replace the heat lost by vaporization. The initial signs of carburetor ice can include engine roughness and a drop in engine RPM. Operated by the knob next to the throttle control, carburetor heat should be selected on if carburetor ice is expected/encountered or when significant power reduction is required.



CESSNA 172 SYSTEMS



SkyWarrior Flight Training Inc.
4141 Maygarden Road
Pensacola, FL 32514



ENGINE

The Cessna 172 K through N models are equipped with a Lycoming, four cylinder, normally aspirated, 320 cubic inch, horizontally opposed, air cooled, direct drive O-320-E2D engine. It is rated at 150 HP at 2700 RPM's. The 'O' stands for horizontally opposed. The '320' stands for the number of inches of cubic displacement in the cylinders, and the 'E2D' is the manufacturer code for the type of accessories used on the engine and the type of propeller mount on the front of the engine. Ignition is provided by two magnetos on the back of the engine which provide spark to eight spark plugs (two per cylinder). The engine has an eight quart oil sump. Minimum oil quantity for normal operations is six quarts.

PROPELLER

The engine drives a McCauley, 75 inch, two blade, all metal, fixed pitch propeller.

VACUUM SYSTEM

An engine-driven vacuum pump is located on the back of the engine, providing vacuum to the attitude and heading gyros, and has a normal operating range of 4.8-5.2 inches of mercury. Failure of a vacuum pump is indicated by an annunciator panel light (in some models).

LANDING GEAR

The landing gear is a fixed, tricycle type gear consisting of tubular spring steel providing shock absorption for the main wheels, and an oleo (air/oil) strut providing shock absorption on the nose wheel. The nose wheel contains a shimmy damper which damps nose wheel vibrations during ground operations at high speeds. The nose wheel is linked to the rudder pedals by a spring loaded steering bungee which turns the nose up to 10° each side of center. Differential braking allows for up to 30° of steering either side of center.

BRAKES

Brakes are hydraulically actuated, main wheel single-disc brakes controlled by master cylinders attached to both pilots' rudder pedals.

NOTE: The parking brake is not to be used during training with SkyWarrior.

FLAPS

The 172 has single slot type flaps driven electrically by a motor in the right wing. A flap position selector on the instrument panel indicates 0°, 10°, 20° and 30° positions. Normal full flap extension in flight takes approximately nine seconds while retraction is seven seconds.

PITOT STATIC SYSTEM

The Pitot Static system consists of a pitot tube on left wing providing ram air pressure to the airspeed indicator, and a static port on the left side of the fuselage providing static pressure to the Altimeter, Vertical Speed Indicator and Airspeed Indicator. The pitot tube is electrically heated and an alternate static source is located under the instrument panel (in some models).

FUEL SYSTEM

The fuel system consists of two tanks in the wings with a total fuel capacity of 42 gallons, of which 38 is usable. There are three fuel vents: one under the left wing and one in each fuel cap. Fuel is gravity fed from wing tanks to the fuel selector valve labeled: BOTH, RIGHT, LEFT, and OFF. Fuel flows past the fuel shutoff valve, through the strainer and the carburetor to the engine induction system. Fuel is then delivered to the fuel air control unit where it is metered and passed to a manifold where it is distributed to each cylinder.