

**§ 125.129**

(c) Fuel tanks must be isolated from personnel compartments by means of fume- and fuel-proof enclosures.

**§ 125.129 Fuel system lines and fittings.**

(a) Fuel lines must be installed and supported so as to prevent excessive vibration and so as to be adequate to withstand loads due to fuel pressure and accelerated flight conditions.

(b) Lines connected to components of the airplane between which there may be relative motion must incorporate provisions for flexibility.

(c) Flexible connections in lines that may be under pressure and subject to axial loading must use flexible hose assemblies rather than hose clamp connections.

(d) Flexible hoses must be of an acceptable type or proven suitable for the particular application.

**§ 125.131 Fuel lines and fittings in designated fire zones.**

Fuel lines and fittings in each designated fire zone must comply with § 125.157.

**§ 125.133 Fuel valves.**

Each fuel valve must—

(a) Comply with § 125.155;

(b) Have positive stops or suitable index provisions in the “on” and “off” positions; and

(c) Be supported so that loads resulting from its operation or from accelerated flight conditions are not transmitted to the lines connected to the valve.

**§ 125.135 Oil lines and fittings in designated fire zones.**

Oil lines and fittings in each designated fire zone must comply with § 125.157.

**§ 125.137 Oil valves.**

(a) Each oil valve must—

(1) Comply with § 125.155;

(2) Have positive stops or suitable index provisions in the “on” and “off” positions; and

(3) Be supported so that loads resulting from its operation or from accelerated flight conditions are not transmitted to the lines attached to the valve.

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(b) The closing of an oil shutoff means must not prevent feathering the propeller, unless equivalent safety provisions are incorporated.

**§ 125.139 Oil system drains.**

Accessible drains incorporating either a manual or automatic means for positive locking in the closed position must be provided to allow safe drainage of the entire oil system.

**§ 125.141 Engine breather lines.**

(a) Engine breather lines must be so arranged that condensed water vapor that may freeze and obstruct the line cannot accumulate at any point.

(b) Engine breathers must discharge in a location that does not constitute a fire hazard in case foaming occurs and so that oil emitted from the line does not impinge upon the pilots’ windshield.

(c) Engine breathers may not discharge into the engine air induction system.

**§ 125.143 Firewalls.**

Each engine, auxiliary power unit, fuel-burning heater, or other item of combusting equipment that is intended for operation in flight must be isolated from the rest of the airplane by means of firewalls or shrouds, or by other equivalent means.

**§ 125.145 Firewall construction.**

Each firewall and shroud must—

(a) Be so made that no hazardous quantity of air, fluids, or flame can pass from the engine compartment to other parts of the airplane;

(b) Have all openings in the firewall or shroud sealed with close-fitting fireproof grommets, bushings, or firewall fittings;

(c) Be made of fireproof material; and

(d) Be protected against corrosion.

**§ 125.147 Cowling.**

(a) Cowling must be made and supported so as to resist the vibration, inertia, and air loads to which it may be normally subjected.

(b) Provisions must be made to allow rapid and complete drainage of the cowling in normal ground and flight attitudes. Drains must not discharge in locations constituting a fire hazard.