

**§ 27.1145 Ignition switches.**

(a) There must be means to quickly shut off all ignition by the grouping of switches or by a master ignition control.

(b) Each group of ignition switches, except ignition switches for turbine engines for which continuous ignition is not required, and each master ignition control must have a means to prevent its inadvertent operation.

(Secs. 313(a), 601, and 603, 72 Stat. 752, 775, 49 U.S.C. 1354(a), 1421, and 1423; sec. 6(c), 49 U.S.C. 1655(c))

[Doc. No. 5074, 29 FR 15695, Nov. 24, 1964, as amended by Amdt. 27-12, 42 FR 15045, Mar. 17, 1977]

**§ 27.1147 Mixture controls.**

If there are mixture controls, each engine must have a separate control and the controls must be arranged to allow—

- (a) Separate control of each engine; and
- (b) Simultaneous control of all engines.

**§ 27.1151 Rotor brake controls.**

(a) It must be impossible to apply the rotor brake inadvertently in flight.

(b) There must be means to warn the crew if the rotor brake has not been completely released before takeoff.

[Doc. No. 28008, 61 FR 21907, May 10, 1996]

**§ 27.1163 Powerplant accessories.**

(a) Each engine-mounted accessory must—

- (1) Be approved for mounting on the engine involved;
- (2) Use the provisions on the engine for mounting; and
- (3) Be sealed in such a way as to prevent contamination of the engine oil system and the accessory system.

(b) Unless other means are provided, torque limiting means must be provided for accessory drives located on any component of the transmission and rotor drive system to prevent damage to these components from excessive accessory load.

[Amdt. 27-2, 33 FR 964, Jan. 26, 1968, as amended by Amdt. 27-20, 49 FR 6849, Feb. 23, 1984; Amdt. 27-23, 53 FR 34214, Sept. 2, 1988]

## POWERPLANT FIRE PROTECTION

**§ 27.1183 Lines, fittings, and components.**

(a) Except as provided in paragraph (b) of this section, each line, fitting, and other component carrying flammable fluid in any area subject to engine fire conditions must be fire resistant, except that flammable fluid tanks and supports which are part of and attached to the engine must be fireproof or be enclosed by a fireproof shield unless damage by fire to any non-fireproof part will not cause leakage or spillage of flammable fluid. Components must be shielded or located so as to safeguard against the ignition of leaking flammable fluid. An integral oil sump of less than 25-quart capacity on a reciprocating engine need not be fireproof nor be enclosed by a fireproof shield.

(b) Paragraph (a) does not apply to—

- (1) Lines, fittings, and components which are already approved as part of a type certificated engine; and
- (2) Vent and drain lines, and their fittings, whose failure will not result in, or add to, a fire hazard.

(c) Each flammable fluid drain and vent must discharge clear of the induction system air inlet.

[Doc. No. 5074, 29 FR 15695, Nov. 24, 1964, as amended by Amdt. 27-1, 32 FR 6914, May 5, 1967; Amdt. 27-9, 39 FR 35462, Oct. 1, 1974; Amdt. 27-20, 49 FR 6849, Feb. 23, 1984]

**§ 27.1185 Flammable fluids.**

(a) Each fuel tank must be isolated from the engines by a firewall or shroud.

(b) Each tank or reservoir, other than a fuel tank, that is part of a system containing flammable fluids or gases must be isolated from the engine by a firewall or shroud, unless the design of the system, the materials used in the tank and its supports, the shut-off means, and the connections, lines and controls provide a degree of safety equal to that which would exist if the tank or reservoir were isolated from the engines.

(c) There must be at least one-half inch of clear airspace between each tank and each firewall or shroud isolating that tank, unless equivalent