

## § 25.1142

(ii) When the valve has not responded as intended to the selected position or function.

[Doc. No. 5066, 29 FR 18291, Dec. 24, 1964, as amended by Amdt. 25-40, 42 FR 15044, Mar. 17, 1977; Amdt. 25-72, 55 FR 29785, July 20, 1990; Amdt. 25-115, 69 FR 40527, July 2, 2004]

### § 25.1142 Auxiliary power unit controls.

Means must be provided on the flight deck for starting, stopping, and emergency shutdown of each installed auxiliary power unit.

[Amdt. 25-46, 43 FR 50598, Oct. 30, 1978]

### § 25.1143 Engine controls.

(a) There must be a separate power or thrust control for each engine.

(b) Power and thrust controls must be arranged to allow—

- (1) Separate control of each engine; and
- (2) Simultaneous control of all engines.

(c) Each power and thrust control must provide a positive and immediately responsive means of controlling its engine.

(d) For each fluid injection (other than fuel) system and its controls not provided and approved as part of the engine, the applicant must show that the flow of the injection fluid is adequately controlled.

(e) If a power or thrust control incorporates a fuel shutoff feature, the control must have a means to prevent the inadvertent movement of the control into the shutoff position. The means must—

- (1) Have a positive lock or stop at the idle position; and
- (2) Require a separate and distinct operation to place the control in the shutoff position.

[Amdt. 25-23, 35 FR 5677, Apr. 8, 1970, as amended by Amdt. 25-38, 41 FR 55467, Dec. 20, 1976; Amdt. 25-57, 49 FR 6849, Feb. 23, 1984]

### § 25.1145 Ignition switches.

(a) Ignition switches must control each engine ignition circuit on each engine.

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

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(c) 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.

[Doc. No. 5066, 29 FR 18291, Dec. 24, 1964, as amended by Amdt. 25-40, 42 FR 15044 Mar. 17, 1977]

### § 25.1147 Mixture controls.

(a) If there are mixture controls, each engine must have a separate control. The controls must be grouped and arranged to allow—

- (1) Separate control of each engine; and
- (2) Simultaneous control of all engines.

(b) Each intermediate position of the mixture controls that corresponds to a normal operating setting must be identifiable by feel and sight.

(c) The mixture controls must be accessible to both pilots. However, if there is a separate flight engineer station with a control panel, the controls need be accessible only to the flight engineer.

### § 25.1149 Propeller speed and pitch controls.

(a) There must be a separate propeller speed and pitch control for each propeller.

(b) The controls must be grouped and arranged to allow—

- (1) Separate control of each propeller; and
- (2) Simultaneous control of all propellers.

(c) The controls must allow synchronization of all propellers.

(d) The propeller speed and pitch controls must be to the right of, and at least one inch below, the pilot's throttle controls.

### § 25.1153 Propeller feathering controls.

(a) There must be a separate propeller feathering control for each propeller. The control must have means to prevent its inadvertent operation.

(b) If feathering is accomplished by movement of the propeller pitch or speed control lever, there must be means to prevent the inadvertent