

(b) If an auxiliary power unit is installed in any airplane certificated to this part, that auxiliary power unit compartment must be served by a fire extinguishing system meeting the requirements of paragraph (a)(2) of this section.

[Amdt. 23-34, 52 FR 1833, Jan. 15, 1987, as amended by Amdt. 23-43, 58 FR 18975, Apr. 9, 1993; Amdt. 23-62, 76 FR 75759, Dec. 2, 2011]

#### § 23.1197 Fire extinguishing agents.

For all airplanes with engine(s) embedded in the fuselage or in pylons on the aft fuselage the following applies:

(1) Be capable of extinguishing flames emanating from any burning of fluids or other combustible materials in the area protected by the fire extinguishing system; and

(2) Have thermal stability over the temperature range likely to be experienced in the compartment in which they are stored.

(b) If any toxic extinguishing agent is used, provisions must be made to prevent harmful concentrations of fluid or fluid vapors (from leakage during normal operation of the airplane or as a result of discharging the fire extinguisher on the ground or in flight) from entering any personnel compartment, even though a defect may exist in the extinguishing system. This must be shown by test except for built-in carbon dioxide fuselage compartment fire extinguishing systems for which—

(1) Five pounds or less of carbon dioxide will be discharged, under established fire control procedures, into any fuselage compartment; or

(2) Protective breathing equipment is available for each flight crewmember on flight deck duty.

[Amdt. 23-34, 52 FR 1833, Jan. 15, 1987, as amended by Amdt. 23-62, 76 FR 75760, Dec. 2, 2011]

#### § 23.1199 Extinguishing agent containers.

For all airplanes with engine(s) embedded in the fuselage or in pylons on the aft fuselage the following applies:

(a) Each extinguishing agent container must have a pressure relief to prevent bursting of the container by excessive internal pressures.

(b) The discharge end of each discharge line from a pressure relief con-

nection must be located so that discharge of the fire extinguishing agent would not damage the airplane. The line must also be located or protected to prevent clogging caused by ice or other foreign matter.

(c) A means must be provided for each fire extinguishing agent container to indicate that the container has discharged or that the charging pressure is below the established minimum necessary for proper functioning.

(d) The temperature of each container must be maintained, under intended operating conditions, to prevent the pressure in the container from—

(1) Falling below that necessary to provide an adequate rate of discharge; or

(2) Rising high enough to cause premature discharge.

(e) If a pyrotechnic capsule is used to discharge the extinguishing agent, each container must be installed so that temperature conditions will not cause hazardous deterioration of the pyrotechnic capsule.

[Amdt. 23-34, 52 FR 1833, Jan. 15, 1987; 52 FR 34745, Sept. 14, 1987; Amdt. 23-62, 76 FR 75760, Dec. 2, 2011]

#### § 23.1201 Fire extinguishing systems materials.

For all airplanes with engine(s) embedded in the fuselage or in pylons on the aft fuselage the following applies:

(a) No material in any fire extinguishing system may react chemically with any extinguishing agent so as to create a hazard.

(b) Each system component in an engine compartment must be fireproof.

[Amdt. 23-34, 52 FR 1833, Jan. 15, 1987; 52 FR 7262, Mar. 9, 1987; Amdt. 23-62, 76 FR 75760, Dec. 2, 2011]

#### § 23.1203 Fire detector system.

(a) There must be means that ensure the prompt detection of a fire in—

(1) An engine compartment of—

(i) Multiengine turbine powered airplanes;

(ii) Multiengine reciprocating engine powered airplanes incorporating turbochargers;

(iii) Airplanes with engine(s) located where they are not readily visible from the cockpit; and