

## **§ 25.1715**

(c) Insulation on electrical wire and electrical cable, and materials used to provide additional protection for the wire and cable, installed in any area of the airplane, must be self-extinguishing when tested in accordance with the applicable portions of Appendix F, part I, of 14 CFR part 25.

### **§ 25.1715 Electrical bonding and protection against static electricity: EWIS.**

(a) EWIS components used for electrical bonding and protection against static electricity must meet the requirements of § 25.899.

(b) On airplanes having grounded electrical systems, electrical bonding provided by EWIS components must provide an electrical return path capable of carrying both normal and fault currents without creating a shock hazard or damage to the EWIS components, other airplane system components, or airplane structure.

### **§ 25.1717 Circuit protective devices: EWIS.**

Electrical wires and cables must be designed and installed so they are compatible with the circuit protection devices required by § 25.1357, so that a fire or smoke hazard cannot be created under temporary or continuous fault conditions.

### **§ 25.1719 Accessibility provisions: EWIS.**

Access must be provided to allow inspection and replacement of any EWIS component as necessary for continued airworthiness.

### **§ 25.1721 Protection of EWIS.**

(a) No cargo or baggage compartment may contain any EWIS whose damage or failure may affect safe operation, unless the EWIS is protected so that:

(1) It cannot be damaged by movement of cargo or baggage in the compartment.

(2) Its breakage or failure will not create a fire hazard.

(b) EWIS must be designed and installed to minimize damage and risk of damage to EWIS by movement of people in the airplane during all phases of flight, maintenance, and servicing.

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(c) EWIS must be designed and installed to minimize damage and risk of damage to EWIS by items carried onto the aircraft by passengers or cabin crew.

### **§ 25.1723 Flammable fluid fire protection: EWIS.**

EWIS components located in each area where flammable fluid or vapors might escape by leakage of a fluid system must be considered a potential ignition source and must meet the requirements of § 25.863.

### **§ 25.1725 Powerplants: EWIS.**

(a) EWIS associated with any powerplant must be designed and installed so that the failure of an EWIS component will not prevent the continued safe operation of the remaining powerplants or require immediate action by any crewmember for continued safe operation, in accordance with the requirements of § 25.903(b).

(b) Design precautions must be taken to minimize hazards to the airplane due to EWIS damage in the event of a powerplant rotor failure or a fire originating within the powerplant that burns through the powerplant case, in accordance with the requirements of § 25.903(d)(1).

### **§ 25.1727 Flammable fluid shutoff means: EWIS.**

EWIS associated with each flammable fluid shutoff means and control must be fireproof or must be located and protected so that any fire in a fire zone will not affect operation of the flammable fluid shutoff means, in accordance with the requirements of § 25.1189.

### **§ 25.1729 Instructions for Continued Airworthiness: EWIS.**

The applicant must prepare Instructions for Continued Airworthiness applicable to EWIS in accordance with Appendix H sections H25.4 and H25.5 to this part that are approved by the FAA.

### **§ 25.1731 Powerplant and APU fire detector system: EWIS.**

(a) EWIS that are part of each fire or overheat detector system in a fire zone must be fire-resistant.

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(b) No EWIS component of any fire or overheat detector system for any fire zone may pass through another fire zone, unless:

(1) It is protected against the possibility of false warnings resulting from fires in zones through which it passes; or

(2) Each zone involved is simultaneously protected by the same detector and extinguishing system.

(c) EWIS that are part of each fire or overheat detector system in a fire zone must meet the requirements of § 25.1203.

**§ 25.1733 Fire detector systems, general: EWIS.**

EWIS associated with any installed fire protection system, including those

required by §§ 25.854 and 25.858, must be considered an integral part of the system in showing compliance with the applicable requirements for that system.

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SOURCE: Docket No. FAA-2011-0186, Amdt. 25-133, 76 FR 12555, Mar. 8, 2011, unless otherwise noted.

**§ 25.1801 SFAR No. 111—Lavatory Oxygen Systems.**

The requirements of § 121.1500 of this chapter also apply to this part.