Federal Aviation Administration, DOT

§ 27.1357 Circuit protective devices.

(a) Protective devices, such as fuses or circuit breakers, must be installed in each electrical circuit other than—

(1) Under the most adverse cooling condition likely to occur in service.

(b) Compliance with paragraph (b) of this section must be shown by test unless experience with similar batteries and installations has shown that maintaining safe cell temperatures and pressures presents no problem.

(c) No explosive or toxic gases emitted by any battery in normal operation, or as the result of any probable malfunction in the charging system or battery installation, may accumulate in hazardous quantities within the rotorcraft.

(d) No corrosive fluids or gases that may escape from the battery may damage surrounding structures or adjacent essential equipment.

(e) Each nickel cadmium battery installation capable of being used to start an engine or auxiliary power unit must have provisions to prevent any hazardous effect on structure or essential systems that may be caused by the maximum amount of heat the battery can generate during a short circuit of the battery or of its individual cells.

(f) Each nickel cadmium battery installation capable of being used to start an engine or auxiliary power unit must have—

(1) A system to control the charging rate of the battery automatically so as to prevent battery overheating;

(2) A battery temperature sensing and over-temperature warning system with a means for disconnecting the battery from its charging source in the event of an over-temperature condition; or

(3) A battery failure sensing and warning system with a means for disconnecting the battery from its charging source in the event of battery failure.