

TABLE 5—ALLOWABLE AMPERAGE OF CONDUCTORS—Continued

Conductor size (AWG)	Temperature rating of conductor insulation						
	60 °C (140 °F)	75 °C (167 °F)	80 °C (176 °F)	90 °C (194 °F)	105 °C (221 °F)	125 °C (257 °F)	200 °C (392 °F)
4 to 6 .....	.60						
7 to 24 .....	.50						
25 and above .....	.40						

[CGD 73-217, 42 FR 5944, Jan. 31, 1977; 42 FR 24739, May 16, 1977, as amended by CGD 81-092, 48 FR 55736, Dec. 15, 1983]

**§ 183.430 Conductors in circuits of less than 50 volts.**

(a) Each conductor in a circuit that has a nominal voltage of less than 50 volts must:

(1) Meet the requirements of § 183.435; or

(2) Meet:  
(i) The insulating material temperature rating requirements of SAE Standard J378; and

(ii) SAE Standard J1127, or SAE Standard 1128.

(b) This section does not apply to communication systems; electronic navigation equipment; resistance conductors that control circuit amperage; and pigtailed of less than seven inches of exposed length.

[CGD 73-217, 42 FR 5944, Jan. 31, 1977, as amended by CGD 87-009, 53 FR 36971, Sept. 23, 1988]

**§ 183.435 Conductors in circuits of 50 volts or more.**

(a) Each conductor in a circuit that has a nominal voltage of 50 volts or more must be:

(1) A conductor that has insulation listed and classified moisture resistant and flame retardant in Article 310, NFPA No. 70, National Electric Code;

(2) A flexible cord type SO, STO, ST, SJO, SJT, or SJTO listed in Article 400, NFPA No. 70, National Electric Code;

(3) A conductor that meets IEEE Standard 45.

(4) A conductor that meets UL Standard 1426.

(b) Where the nominal circuit voltage of each of three or more current carrying conductors in a duct, bundle, or cable is 50 volts or more, the amperages of each of those conductors must not exceed the value in table 5 multi-

plied by the correction factor in note 2 to Table 5 for the number of conductors that carry 50 volts or more.

(c) This section does not apply to communication systems; electronic navigation equipment; resistance conductors that control circuit amperage; conductors in secondary circuits of ignition systems; and pigtailed of less than seven inches of exposed length.

[CGD 73-217, 42 FR 5944, Jan. 31, 1977; 42 FR 24739, May 16, 1977, as amended by CGD 80-047 and CGD 80-046, 45 FR 85450, Dec. 29, 1980; CGD 87-009, 53 FR 36972, Sept. 23, 1988]

**§ 183.440 Secondary circuits of ignition systems.**

(a) Each conductor in a secondary circuit of an ignition system must meet SAE Standard J557.

(b) The connection of each ignition conductor to a spark plug, coil, or distributor must have a tight fitting cap, boot, or nipple.

[CGD 73-217, 42 FR 5944, Jan. 31, 1977, as amended by USCG-1999-5832, 64 FR 34716, June 29, 1999]

**§ 183.445 Conductors: Protection.**

(a) Each conductor or group of conductors that passes through a bulkhead, structural member, junction box, or other rigid surface must be protected from abrasion.

(b) Each ungrounded terminal or stud that is continuously energized must meet § 183.455 or must have a boot, nipple, cap, cover, or shield that prevents accidental short-circuiting at the terminals or studs.

[CGD 81-092, 48 FR 55736, Dec. 15, 1983]

**§ 183.455 Overcurrent protection: General.**

(a) Each ungrounded current-carrying conductor must be protected by a