§ 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 pigtails of less than seven inches of exposed length.


§ 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, SJT, or SJT0 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 1420.

(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 multiplied 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 pigtails of less than seven inches of exposed length.


## Table 5—Allowable Amperage of Conductors—Continued

<table>
<thead>
<tr>
<th>Conductor size (AWG)</th>
<th>Temperature rating of conductor insulation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>60 °C (140 °F)</td>
</tr>
<tr>
<td>4 to 6</td>
<td>.60</td>
</tr>
<tr>
<td>7 to 24</td>
<td>.50</td>
</tr>
<tr>
<td>25 and above</td>
<td>.40</td>
</tr>
</tbody>
</table>


§ 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.


§ 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.


§ 183.455 Overcurrent protection: General.

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