raceways having hinged or removable covers shall be installed complete between outlet, junction, or splicing points prior to the installation of conductors or cables. Where required to facilitate the installation of utilization equipment, the raceway shall be permitted to be initially installed without a terminating connection at the equipment. Prewired raceway assemblies shall be permitted only where specifically permitted in this *Code* for the applicable wiring method.

Exception: Short sections of raceways used to contain conductors or cable assemblies for protection from physical damage shall not be required to be installed complete between outlet, junction, or splicing points.

One of the primary functions of a raceway is to provide physical protection for conductors. If raceways are incomplete at the time of conductor installation, a greater possibility of damage to the conductors exists.

The installation of conductors in an incomplete raceway is permitted for connection of utilization equipment. The motor installation shown in Exhibit 300.13 is a typical example, in which the motor will be supplied through liquidtight flexible metal conduit (LFMC) that terminates in the motor terminal box through a 90-degree angle connector. Wiring a luminaire whip prior to connecting a luminaire is also permitted by this section.

(B) Welding. Metal raceways shall not be supported, terminated, or connected by welding to the raceway unless specifically designed to be or otherwise specifically permitted to be in this *Code*.

300.19 Supporting Conductors in Vertical Raceways.

(A) Spacing Intervals — Maximum. Conductors in vertical raceways shall be supported if the vertical rise exceeds the values in Table 300.19(A). At least one support method shall be provided for each conductor at the top of the vertical raceway or as close to the top as practical. Intermediate supports shall be provided as necessary to limit supported conductor lengths to not greater than those values specified in Table 300.19(A).

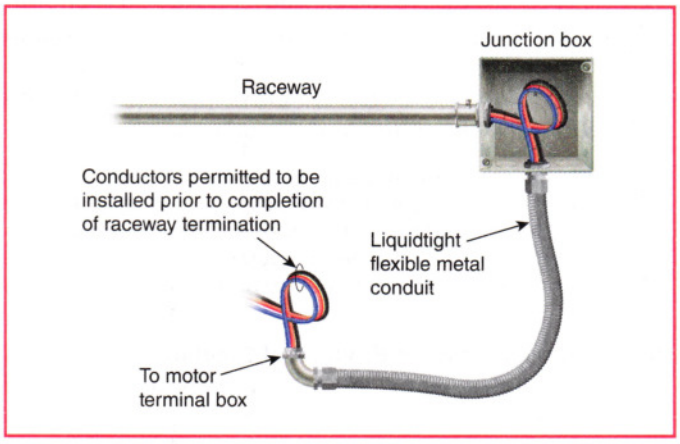

EXHIBIT 300.13 The conductors supplying a motor through LFMC are permitted to be installed prior to the connection of the raceway to the motor terminal box.

Exception: Steel wire armor cable shall be supported at the top of the riser with a cable support that clamps the steel wire armor. A safety device shall be permitted at the lower end of the riser to hold the cable in the event there is slippage of the cable in the wire-armored cable support. Additional wedge-type supports shall be permitted to relieve the strain on the equipment terminals caused by expansion of the cable under load.

This requirement prevents the weight of the conductors from damaging the insulation where they leave the conduit and prevents the conductors from being pulled out of the terminals. Support bushings or cleats such as those shown in Exhibits 300.14 and 300.15 may be used, in addition to many other types of grips manufactured for this purpose.

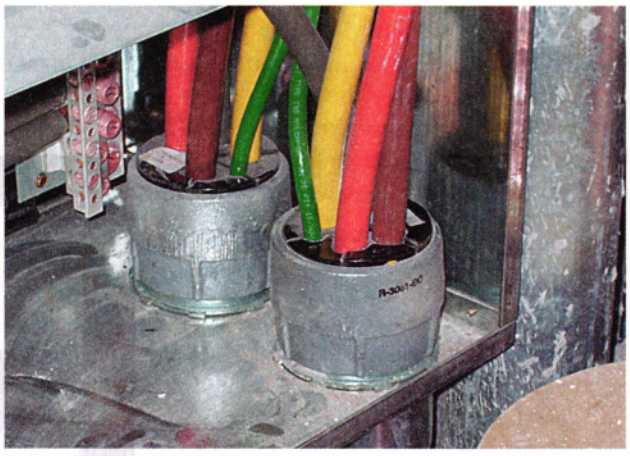

EXHIBIT 300.14 A support bushing, located at the top of a vertical conduit at a cabinet or pull box, used to prevent the weight of the conductors from damaging insulation or placing strain on termination points.

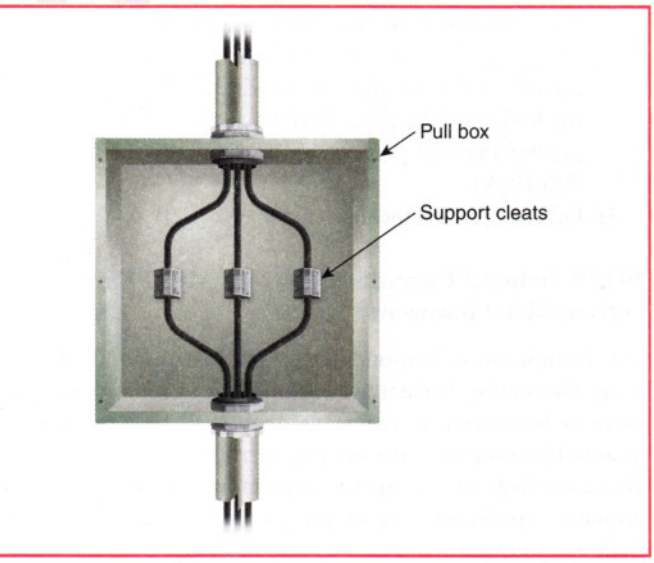

EXHIBIT 300.15 Support cleats used to prevent the weight of vertical conductors from damaging insulation or placing strain on termination points.