

ARTICLE 250

GROUNDING AND BONDING

Introduction to Article 250—Grounding and Bonding

No other article can match this one for misapplication, violation, and misinterpretation. The terminology used in Article 250 has been a source of much confusion but has been improved during the last few *NEC* revisions. It is very important for you to understand the difference between grounding and bonding in order to correctly apply the provisions of this article. Pay careful attention to the definitions of important terms located in Article 100 that apply to grounding and bonding. Article 250 covers the grounding requirements for providing a path to the Earth to reduce overvoltage from lightning strikes, and the bonding requirements that establish a low-impedance fault current path back to the source of the electrical supply to facilitate the operation of overcurrent protective devices in the event of a ground fault.

This article is arranged in a logical manner as illustrated in Figure 250.1 in the *NEC*. It may be a good idea for you to just read through the entire article first to get a big picture overview. Then, study Article 250 closely so you understand the details and remember to check Article 100 for the definitions of terms that may be new to you. The illustrations that accompany the text in this textbook will help you better understand the key points.

250.96 Bonding Other Enclosures



Scan this QR code for a video of Mike explaining this topic; it's a sample from the videos that accompany this textbook.
www.MikeHolt.com/20BGvideos

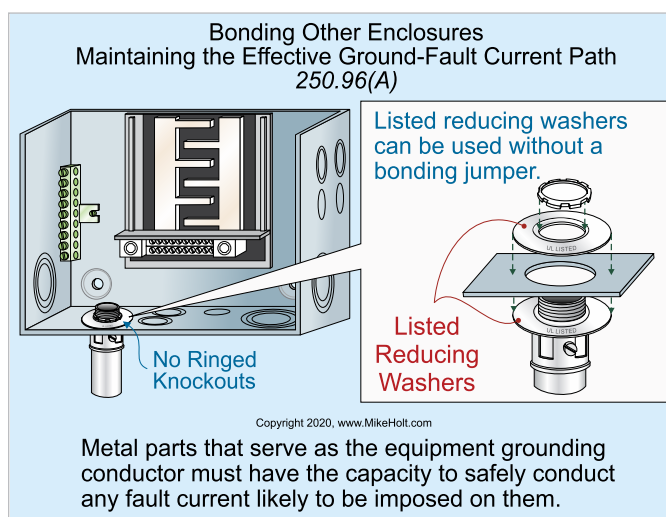
(A) Effective Ground-Fault Current Path. Metal parts intended to serve as equipment grounding conductors including raceways, cables, equipment, and enclosures must be bonded together to ensure they have the capacity to safely conduct any fault current likely to be imposed on them [110.10, 250.4(A)(5) and Table 250.122 Note].

►Figure 250-182

Nonconductive coatings such as paint, lacquer, and enamel on equipment must be removed to ensure an effective ground-fault current path, or the termination fittings must be designed so such removal is unnecessary [250.12].

Author's Comment:

- The practice of driving a locknut tight with a screwdriver and pliers is considered sufficient in removing paint and other nonconductive finishes to ensure an effective ground-fault current path.



►Figure 250-182