

screw threaded into the luminaire canopy other than a mounting screw or cover screw, or attached to a listed grounding means (plate) in a nonmetallic outlet box for luminaire mounting. [Grounding means shall also be permitted for luminaire attachment screws.]

**(D) Grounding Connection in Nonmetallic Box.** A connection between the one or more equipment grounding conductors brought into a nonmetallic outlet box shall be so arranged that a connection of the equipment grounding conductor can be made to any fitting or device in that box that requires grounding.

**(E) Grounding Continuity.** Where more than one equipment grounding or bonding conductor of a branch circuit enters a box, all such conductors shall be connected together using a method specified in 250.8, and the arrangement shall be such that the disconnection or removal of a receptacle, luminaire, or other device fed from the box will not interfere with or interrupt the grounding continuity.

**(F) Cord-Connected Appliances.** Cord-connected appliances, such as washing machines, clothes dryers, refrigerators, and the electrical system of gas ranges, and so forth, shall be grounded by means of an approved cord with equipment grounding conductor and grounding-type attachment plug.

#### 551.56 Bonding of Non-Current-Carrying Metal Parts.

**(A) Required Bonding.** All exposed non-current-carrying metal parts that are likely to become energized shall be effectively bonded to the grounding terminal or enclosure of the panelboard.

**(B) Bonding Chassis.** A bonding conductor shall be connected between any panelboard and an accessible terminal on the chassis. Bonding terminations shall be suitable for the environment in which the conductors and terminations are installed.

*Exception: Any recreational vehicle that employs a unitized metal chassis-frame construction to which the panelboard is securely fastened with a bolt(s) and nut(s) or by welding or riveting shall be considered to be bonded.*

**(C) Bonding Conductor Requirements.** Grounding terminals shall be of the solderless type and listed as pressure terminal connectors recognized for the wire size used. The bonding conductor shall be solid or stranded, insulated or bare, and shall be 8 AWG copper minimum, or equal.

**(D) Metallic Roof and Exterior Bonding.** The metal roof and exterior covering shall be considered bonded where both of the following conditions apply:

- (1) The metal panels overlap one another and are securely attached to the wood or metal frame parts by metal fasteners.
- (2) The lower panel of the metal exterior covering is secured by metal fasteners at each cross member of the chassis, or the lower panel is connected to the chassis by a metal strap.

**(E) Gas, Water, and Waste Pipe Bonding.** The gas, water, and waste pipes shall be considered grounded if they are bonded to the chassis.

**(F) Furnace and Metal Air Duct Bonding.** Furnace and metal circulating air ducts shall be bonded.

**551.57 Appliance Accessibility and Fastening.** Every appliance shall be accessible for inspection, service, repair, and replacement without removal of permanent construction. Means shall be provided to securely fasten appliances in place when the recreational vehicle is in transit.

### Part V. Factory Tests

**551.60 Factory Tests (Electrical).** Each recreational vehicle designed with a 120-volt or a 120/240-volt electrical system shall withstand the applied voltage without electrical breakdown of a 1-minute, 900-volt ac or 1280-volt dc dielectric strength test, or a 1-second, 1080-volt ac or 1530-volt dc dielectric strength test, with all switches closed, between ungrounded and grounded conductors and the recreational vehicle ground. During the test, all switches and other controls shall be in the "on" position. Fixtures, including luminaires and permanently installed appliances, shall not be required to withstand this test. The test shall be performed after branch circuits are complete prior to energizing the system and again after all outer coverings and cabinetry have been secured. The dielectric test shall be performed in accordance with the test equipment manufacturer's written instructions.

Each recreational vehicle shall be subjected to all of the following:

- (1) A continuity test to ensure that all metal parts are properly bonded
- (2) Operational tests to demonstrate that all equipment is properly connected and in working order
- (3) Polarity checks to determine that connections have been properly made
- (4) GFCI test to demonstrate that the ground fault protection device(s) installed on the recreational vehicle are operating properly

### Part VI. Recreational Vehicle Parks

#### 551.71 Type Receptacles Provided.

**(A) 20-Ampere.** Every recreational vehicle site with electrical supply shall be equipped with recreational vehicle site supply equipment with at least one 20-ampere, 125-volt weather-resistant receptacle. This receptacle, when used in recreational vehicle site electrical equipment, shall not be required to be tamper-resistant in accordance with 406.12.

**(B) 30-Ampere.** A minimum of 70 percent of all recreational vehicle sites with electrical supply shall each be equipped with