

WAC 296-150C-1310 Grounding—General. Grounding of both electrical and nonelectrical metal parts in a commercial coach must be through connection to a grounding bus in the commercial coach distribution panel. The grounding bus must be grounded through the green conductor in the supply cord. It may also be grounded through the feeder wiring to the service ground in the service-entrance equipment located adjacent to the commercial coach location. Do not connect either the frame of the commercial coach or the frame of any appliance to the neutral conductor in the commercial coach.

(1) The insulated neutral requirements are as follows:

(a) The grounded (neutral) circuit conductor must be insulated from the grounding conductors, from equipment enclosures, and from other grounded parts.

(b) The grounded (neutral) circuit terminals in the distribution panels and in ranges, clothes dryers, counter-mounted cooking units, and wall-mounted ovens must be insulated from the equipment enclosure.

(c) Bonding screws, straps, or buses in the distribution panel or in appliances *must be removed and discarded*.

(d) Connections of ranges and clothes dryers with 120/240 volt, 3-wire ratings must be made with 4-conductor cord and 3-pole, 4-wire grounding-type plugs or by type AC metalclad cable or individual conductors enclosed in flexible metal conduit.

(e) Type NM or type SE cable must not be used to connect a range or a dryer. This does not prohibit the use of type NM or type SE cable between the branch circuit overcurrent protective device and a junction box or range or dryer receptacle.

(f) For 120-volt rated devices, a 3-conductor cord and 2-pole, 3-wire grounding-type plug is permitted.

(2) The following equipment grounding means must be used:

(a) The green grounding wire in the supply cord or permanent feeder wiring must be connected to the grounding bus in the distribution panel or disconnecting means.

(b) In the electrical system, all exposed metal parts, enclosures, frames, lamp fixture canopies, etc., must be effectively bonded to the grounding terminal or enclosure of the distribution panel.

(c) Cord-connected appliances must be grounded by means of an approved cord with grounding conductor and grounding-type attachment plug.

(3) The following bonding requirements of noncurrent-carrying metal parts must apply:

(a) All exposed noncurrent-carrying metal parts that may become energized must be effectively bonded to the grounding terminal or enclosure of the distribution panelboard. A bonding conductor must be connected between each distribution panelboard and an accessible terminal on the chassis.

(b) Grounding terminals must be of the solderless type and approved as pressure-terminal connectors recognized for the wire size used.

(c) The bonding conductor must be solid or stranded, insulated or bare and must be No. 8 copper minimum or equal. It must be routed so as not to be exposed to physical damage.

(d) Metallic gas, water, and waste pipes and metallic air circulating ducts must be considered bonded if they are connected to the terminal on the chassis by clamps, solderless connectors or by suitable grounding-type straps.

(e) Any metallic roof and exterior covering must be considered bonded if:

(i) The metal panels overlap one another and are securely attached to the wood or metal frame parts by metallic fasteners;

(ii) The lower panel of the metallic exterior covering is secured at a cross member of the chassis by two metal fastener straps per commercial coach unit or section at opposite ends; and

(iii) The bonding strap must be a minimum of 30 gauge galvanized metal and must be a minimum of four inches wide.

[Statutory Authority: RCW 43.22.340, [43.22.]355, [43.22.]360, [43.22.]432, [43.22.]440 and [43.22.]480. WSR 96-21-146, § 296-150C-1310, filed 10/23/96, effective 11/25/96.]