

§ 3280.804

24 CFR Ch. XX (4-1-04 Edition)

(iii) The neutral conductor shall be connected to the system grounding conductor on the supply side of the main disconnect in accordance with Articles 250-23, 25, and 53 of NFPA No. 70-1993.

(iv) The manufacturer shall include in its written installation instructions one method of grounding the service equipment at the installation site;

(v) The minimum size grounding electrode conductor shall be specified in the instructions; and

(vi) A red "Warning" label shall be mounted on or adjacent to the service equipment. The label shall state:

"Warning—do not provide electrical power until the grounding electrode is installed and connected (see installation instructions)."

[40 FR 58752, Dec. 18, 1975. Redesignated at 44 FR 20679, Apr. 6, 1979, as amended at 52 FR 4589, Feb. 12, 1987; 58 FR 55019, Oct. 25, 1993]

**§ 3280.804 Disconnecting means and branch-circuit protective equipment.**

(a) The branch-circuit equipment shall be permitted to be combined with the disconnecting means as a single assembly. Such a combination shall be permitted to be designated as a distribution panelboard. If a fused distribution panelboard is used, the maximum fuse size of the mains shall be plainly marked with lettering at least ¼-inch high and visible when fuses are changed. See section 110-22 of the National Electrical Code (NFPA No. 70-1993) concerning identification of each disconnecting means and each service, feeder, or branch circuit at the point where it originated and the type marking needed.

(b) Plug fuses and fuseholders shall be tamper-resistant, Type "S," enclosed in dead-front fuse panelboards. Electrical distribution panels containing circuit breakers shall also be dead-front type.

(c) Disconnecting means. A single disconnecting means shall be provided in each manufactured home consisting of a circuit breaker, or a switch and fuses and their accessories installed in a readily accessible location near the point of entrance of the supply cord or conductors into the manufactured home. The main circuit breakers or fuses shall be plainly marked "Main."

This equipment shall contain a solderless type of grounding connector or bar for the purposes of grounding with sufficient terminals for all grounding conductors. The neutral bar termination of the grounded circuit conductors shall be insulated.

(d) The disconnecting equipment shall have a rating suitable for the connected load. The distribution equipment, either circuit breaker or fused type, shall be located a minimum of 24 inches from the bottom of such equipment to the floor level of the manufactured home.

(e) A distribution panelboard employing a main circuit breaker shall be rated 50 amperes and employ a 2-pole circuit breaker rated 40 amperes for a 40-ampere supply cord, or 50 amperes for a 50-ampere supply cord. A distribution panelboard employing a disconnect switch and fuses shall be rated 60 amperes and shall employ a single 2-pole, 60-ampere fuseholder with 40- or 50-ampere main fuses for 40- or 50-ampere supply cords, respectively. The outside of the distribution panelboard shall be plainly marked with the fuse size.

(f) The distribution panelboard shall not be located in a bathroom, or in any other inaccessible location, but shall be permitted just inside a closet entry if the location is such that a clear space of 6 inches to easily ignitable materials is maintained in front of the distribution panelboard, and the distribution panelboard door can be extended to its full open position (at least 90 degrees). A clear working space at least 30 inches wide and 30 inches in front of the distribution panelboard shall be provided. This space shall extend from floor to the top of the distribution panelboard.

(g) Branch-circuit distribution equipment shall be installed in each manufactured home and shall include overcurrent protection for each branch circuit consisting of either circuit breakers or fuses.

(1) The branch circuit overcurrent devices shall be rated:

(i) Not more than the circuit conductors; and

(ii) Not more than 150 percent of the rating of a single appliance rated 13.3

amperes or more which is supplied by an individual branch circuit; but

(iii) Not more than the fuse size marked on the air conditioner or other motor-operated appliance.

(h) A 15-ampere multiple receptacle shall be acceptable when connected to a 20-ampere laundry circuit.

(i) When circuit breakers are provided for branch-circuit protection 240 circuits shall be protected by 2-pole common or companion trip, or handle-tied paired circuit breakers.

(j) A 3 inch by 1-3/4 inch minimum size tag made of etched, metal-stamped or embossed brass, stainless steel, anodized or alclad aluminum not less than 0.020 inch thick, or other approval material (e.g., 0.005 inch plastic laminates) shall be permanently affixed on the outside adjacent to the feeder assembly entrance and shall read: This connection for 120/240 Volt, 3-Pole, 4-Wire, 60 Hertz, \_\_\_\_\_ Ampere Supply. The correct ampere rating shall be marked on the blank space.

(k) When a home is provided with installed service equipment, a single disconnecting means for disconnecting the branch circuit conductors from the service entrance conductors shall be provided in accordance with Part F of Article 230 of the National Electrical Code, NFPA No. 70-1993. The disconnecting means shall be listed for use as service equipment. The disconnecting means may be combined with the disconnect required by § 3280.804(c). The disconnecting means shall be rated not more than the ampere supply or service capacity indicated on the tag required by paragraph (l) of this section.

(l) When a home is provided with installed service equipment, the electrical nameplate required by § 3280.804(j) shall read: "This connection for 120/240 volt, 3 pole, 3 wire, 60 Hertz, \_\_\_\_\_ Ampere Supply." The correct ampere rating shall be marked in the blank space.

[40 FR 58752, Dec. 18, 1975, as amended at 42 FR 961, Jan. 4, 1977. Redesignated at 44 FR 20679, Apr. 6, 1979, as amended at 52 FR 4589, Feb. 12, 1987; 58 FR 55019, Oct. 25, 1993]

#### § 3280.805 Branch circuits required.

(a) The number of branch circuits required shall be determined in accordance with the following:

(1) Lighting, based on 3 volt-amperes per square foot times outside dimensions of the manufactured home (coupler excluded) divided by 120 volts times amperes to determine number of 15 or 20 ampere lighting area circuits. e.g.  $[3 \times \text{length} \times \text{width} - [120 \times (15 \text{ or } 20)]] = \text{number of 15 or 20 ampere circuits}$ .

(2) *Small appliances*. For the small appliance load in kitchen, pantry dining room and breakfast rooms of manufactured homes, two or more 20-ampere appliance branch circuits, in addition to the branch circuit specified in § 3280.805(a)(1), shall be provided for all receptacle outlets in these rooms, and such circuits shall have no other outlets. Receptacle outlets supplied by at least two appliance receptacle branch circuits shall be installed in the kitchen.

(3) *General appliances (Including furnace, water heater, range, and central or room air conditioner, etc.)*. There shall be one or more circuits of adequate rating in accordance with the following:

(i) Ampere rating of fixed appliances not over 50 percent of circuit rating if lighting outlets (receptacles, other than kitchen, dining area, and laundry, considered as lighting outlets) are on same circuit;

(ii) For fixed appliances on a circuit without lighting outlets, the sum of rated amperes shall not exceed the branch-circuit rating. Motor loads or other continuous duty loads shall not exceed 80 percent of the branch circuit rating.

(iii) The rating of a single cord and plug connected appliances on a circuit having no other outlets, shall not exceed 80 percent of the circuit rating.

(iv) The rating of range branch circuit shall be based on the range demand as specified or ranges in § 3280.811, Item B(5) of Method 1. For central air conditioning, see Article 440 of the National Electrical Code (NFPA No. 70-1993).

(v) Where a laundry area is provided, a 20 ampere branch circuit shall be provided to supply laundry receptacle outlets. This circuit shall have no other outlets. See § 3280.806(a)(7).