

1; and Liners, Case, and Sheet, Overwrap; Water-Vapor Proof or Waterproof, Flexible, MIL-L-10547E-1975.

(e) *Grade and connections*—(1) *Horizontal vents*. Each vent shall extend vertically from its fixture “T” or point of connection with the waste piping to a point not less than 6 inches above the extreme flood level of the fixture it is venting before offsetting horizontally or being connected with any other vent pipe. Vents for horizontal drains shall connect above the centerline of the drain piping ahead (downstream) of the trap. Where required by structural conditions, vent piping may offset below the rim of the fixture at the maximum angle or height possible.

(f) *Vent terminal*—(1) *Roof extension*. Each vent pipe shall extend through its flashing and terminate vertically, undiminished in size, not less than 2 inches above the roof. Vent openings shall not be less than 3 feet away from any motor-driven air intake that opens into habitable areas.

(2) *Flashing*. The opening around each vent pipe shall be made watertight by an adequate flashing or flashing material.

(g) *Vent caps*. Vent caps, if provided, shall be of the removable type (without removing the flashing from the roof). When vent caps are used for roof space ventilation and the caps are identical to vent caps used for the plumbing system, plumbing system caps shall be identified with permanent markings.

[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 58 FR 55015, Oct. 25, 1993]

§ 3280.612 Tests and inspection.

(a) *Water system*. All water piping in the water distribution system shall be subjected to a pressure test. The test shall be made by subjecting the system to air or water at 100 psi for 15 minutes without loss of pressure.

(b) *Drainage and vent system and plumbing fixtures*. The waste and vent system shall be tested by one of the three following alternate methods for evidence or indication of leakage:

(1) *Water test*. Before plumbing fixtures are connected, all of the openings into the piping shall be plugged and the entire piping system subjected to a

static water test for 15 minutes by filling it with water to the top of the highest vent opening. There shall be no evidence of leakage.

(2) *Air test*. After all fixtures have been installed, the traps filled with water, and the remaining openings securely plugged, the entire system shall be subjected to a 2-inch (manometer) water column air pressure test. If the system loses pressure, leaks may be located with smoke pumped into the system, or with soap suds spread on the exterior of the piping (Bubble test).

(3) *Flood level test*. The manufactured home shall be in a level position, all fixtures shall be connected, and the entire system shall be filled with water to the rim of the water closet bowl. (Tub and shower drains shall be plugged). After all trapped air has been released, the test shall be sustained for not less than 15 minutes without evidence of leaks. Then the system shall be unplugged and emptied. The waste piping above the level of the water closet bowl shall then be tested and show no indication of leakage when the high fixtures are filled with water and emptied simultaneously to obtain the maximum possible flow in the drain piping.

(c) *Fixture test*. The plumbing fixtures and connections shall be subjected to a flow test by filling them with water and checking for leaks and retarded flow while they are being emptied.

(d) *Shower compartments*. Shower compartments and receptors shall be tested for leaks prior to being covered by finish material. Each pan shall be filled with water to the top of the dam for not less than 15 minutes without evidence of leakage.

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Subpart H—Heating, Cooling and Fuel Burning Systems

§ 3280.701 Scope.

Subpart H of this standard covers the heating, cooling and fuel burning equipment installed within, on, or external to a manufactured home.