size factor specified, in appendix A of §571.109 for the tire's size designation.

S5.1.3 Each retreaded tire shall be capable of meeting the requirements of S5.1.1 and S5.1.2 when mounted on any rim in accordance with those sections.

S5.1.4 No retreaded tire shall have a size designation, recommended maximum load rating, or maximum permissible inflation pressure that is greater than that originally specified on the casing pursuant to S4.3 of §571.109, or specified for the casing in Table I.

S5.2 *Casings.*

S5.2.1 No retreaded tire shall be manufactured with a casing—

(a) On which bead wire or cord fabric is exposed before processing.

(b) On which any cord fabric is exposed during processing, except that cord fabric that is located at a splice, i.e., where two or more segments of the same ply overlap, or cord fabric that is part of the belt material, may be exposed but shall not be penetrated or removed to any extent whatsoever.

S5.2.2 No retreaded tire shall be manufactured with a casing—

(a) From which a belt or ply, or part thereof, is removed during processing; or

(b) On which a belt or ply, or part thereof, is added or replaced during processing.

S5.2.3 Each retreaded tire shall be manufactured with a casing that bears, permanently molded at the time of its original manufacture into or onto the tire sidewall, each of the following:

(a) The symbol DOT;

(b) The size of the tire; and

(c) The actual number of plies or ply rating.

S5.2.4 [Reserved]

S6. *Certification and labeling.*

S6.1 Each manufacturer of a retreaded tire shall certify that its product complies with this standard pursuant to Section 30115 of Title 49, United States Code, by labeling the tire with the symbol DOT in the location specified in section 574.5 of this chapter.

S6.2 [Reserved]

S6.3. *Labeling.* Each retreaded tire shall comply, according to the phase-in schedule specified in S7 of this standard, with the requirements of S5.5 and S5.5.1 of §571.139.

S7. *Phase-In Schedule for labeling*

S7.1. *Tires retreaded on or after September 1, 2005 and before September 1, 2006.* For tires manufactured on or after September 1, 2005 and before September 1, 2006, the number of tires complying with S6.3 of this standard must be equal to not less than 40% of the retreader's production during that period.

S7.2. *Tires retreaded on or after September 1, 2006 and before September 1, 2007.* For tires manufactured on or after September 1, 2006 and before September 1, 2007, the number of tires complying with S6.3 of this standard must be equal to not less than 70% of the retreader's production during that period.

S7.3. *Tires retreaded on or after September 1, 2007.* Each tire must comply with S6.3 of this standard.

[37 FR 5952, Mar. 23, 1972, as amended at 37 FR 11775, June 14, 1972; 38 FR 2982, Jan. 31, 1973; 38 FR 6999, Mar. 15, 1973; 38 FR 9688, Apr. 19, 1973; 39 FR 1443, Jan. 9, 1974; 39 FR 3553, Jan. 28, 1974; 39 FR 36016, Oct. 7, 1974; 39 FR 39884, Nov. 12, 1974; 61 FR 29494, June 11, 1996; 63 FR 28920, May 27, 1998; 67 FR 69627, Nov. 18, 2002; 69 FR 31319, June 3, 2004]

EDITORIAL NOTE: For an interpretation of §571.117, see 38 FR 10940, May 3, 1973.

§571.118 Standard No. 118; Power-operated window, partition, and roof panel systems.

S1. *Purpose and scope.* This standard specifies requirements for power operated window, partition, and roof panel systems to minimize the likelihood of death or injury from their accidental operation.

S2. *Application.* This standard applies to passenger cars, multipurpose passenger vehicles, and trucks with a gross vehicle weight rating of 4,536 kilograms or less. This standard's requirements for actuation devices, as provided in S6, need not be met for vehicles manufactured before October 1, 2008.

S3. *Definitions.*

Infrared reflectance means the ratio of the intensity of infrared light reflected and scattered by a flat sample of the test rod material to the intensity of infrared light reflected and scattered by

a mirror that reflects 99.99 percent of the infrared radiation incident on its surface as measured by the apparatus show in Figure 2.

Power operated roof panel systems mean moveable panels in the vehicle roof which close by vehicle supplied power either by a sliding or hinged motion, and do not include convertible top systems.

S4. *Operating requirements.* Except as provided in S5, power operated window, partition, or roof panel systems may be closed only in the following circumstances:

(a) When the key that controls activation of the vehicle's engine is in the ''ON'', ''START'', or ''ACCESSORY'' position;

(b) By muscular force unassisted by vehicle supplied power;

(c) Upon continuous activation by a locking system on the exterior of the vehicle;

(d) Upon continuous activation of a remote actuation device, provided that the remote actuation device shall be incapable of closing the power window, partition or roof panel from a distance of more than 6 meters from the vehicle;

(e) During the interval between the time the locking device which controls the activation of the vehicle's engine is turned off and the opening of either of a two-door vehicle's doors or, in the case of a vehicle with more than two doors, the opening of either of its front doors;

(f) If the window, partition, or roof panel is in a static position before starting to close and in that position creates an opening so small that a 4 mm diameter semi-rigid cylindrical rod cannot be placed through the opening at any location around its edge in the manner described in S5(b); or

(g) Upon continuous activation of a remote actuation device, provided that the remote actuation device shall be incapable of closing the power window, partition or roof panel if the device and the vehicle are separated by an opaque surface and provided that the remote actuation device shall be incapable of closing the power window, partition or roof panel from a distance of more than 11 meters from the vehicle.

S5. *Automatic reversal systems.* A power-operated window, partition, or roof panel system that is capable of closing or of being closed under any circumstances other than those specified in S4 shall meet the requirements of S5.1, S5.2, and, if applicable, S5.3.

S5.1. While closing, the power-operated window, partition, or roof panel shall stop and reverse direction either before contacting a test rod with properties described in S8.2 or S8.3, or before exerting a squeezing force of 100 newtons (N) or more on a semi-rigid cylindrical test rod with the properties described in S8.1, when such test rod is placed through the window, partition, or roof panel opening at any location in the manner described in the applicable test under S7.

S5.2. Upon reversal, the power-operated window, partition, or roof panel system must open to one of the following positions, at the manufacturer's option:

(a) A position that is at least as open as the position at the time closing was initiated;

(b) A position that is not less than 125 millimeters (mm) more open than the position at the time the window reversed direction; or

(c) A position that permits a semi-rigid cylindrical rod that is 200 mm in diameter to be placed through the opening at the same location as the rod described in S7.1 or S7.2(b).

S5.3. If a vehicle uses proximity detection by infrared reflection to stop and reverse a power-operated window, partition, or roof panel, the infrared source shall project infrared light at a wavelength of not less than 850 nm and not more than 1050 nm. The system shall meet the requirements in S5.1 and S5.2 in all ambient light conditions from total darkness to 64,500 lux (6,000 foot candles) incandescent light intensity.

S6. *Actuation Devices.*

(a) Any actuation device that is mounted in the occupant compartment of a vehicle and can be used to close a power-operated window, partition, or roof panel, shall not cause such window, partition, or roof panel to begin to close from any open position when tested in accordance with paragraphs (b) and (c) of S6.

(b)(1) Using a hemisphere with a smooth, rigid spherical surface and a

radius of 20 mm ± 1 mm, place the spherical surface of the hemisphere against any portion of the actuation device.

(2) Apply a force not to exceed 135 Newtons (30 lbs.) to the geometric center of and perpendicular (± 3 degrees) to the flat face of the hemisphere.

(3) While this force level is being applied, the plane of the flat face of the hemisphere may be at any angle.

(c) For actuation devices that cannot be contacted by the hemisphere specified in S6(b)(1) prior to the application of force, apply a force up to the level specified in S6(b)(2) at any angle in an attempt to make contact with the actuation device. The hemisphere is directionally applied in such a manner that, if unimpeded, it would make contact with the actuation device.

(d) The requirement in S6(a) does not apply to either—

(1) Actuation devices that are mounted in a vehicle's roof, headliner, or overhead console and that can close a window, partition, or roof panel only by continuous rather than momentary switch actuation, or

(2) Actuation devices for closing power-operated windows, partitions, and roof panels that comply with S5 of this standard.

S7. *Test procedures.*

S7.1. *Test procedure for testing power-operated window, partition, or roof panel systems designed to detect obstructions by physical contact or by light beam interruption:* Place the test rod of the type specified in S8.1 or S8.2, as appropriate, through the window, partition, or roof panel opening from the inside of the vehicle such that the cylindrical surface of the rod contacts any part of the structure with which the window, partition, or roof panel mates. Typical placements of test rods are illustrated in Figure 1. Attempt to close the power window, partition, or roof panel by operating the actuation device provided in the vehicle for that purpose.

S7.2. *Test procedure for testing power-operated window, partition, or roof panel systems designed to detect the proximity of obstructions using infrared reflectance:*

(a) Place the vehicle under incandescent lighting that projects 64,500 lux (6,000 foot candles) onto the infrared sensor. The light is projected onto the infrared sensor by aiming the optical axis of a light source outside the vehicle as perpendicular as possible to the lens of the infrared sensor. The intensity of light is measured perpendicular to the plane of the lens of the infrared sensor, as close as possible to the center of the lens of the infrared sensor.

(b) Place a test rod of the type specified in S8.3 in the window, partition, or roof panel opening, with the window, partition, or roof panel in any position. While keeping the rod stationary, attempt to close the window, partition, or roof panel by operating the actuation device provided in the vehicle for that purpose. Remove the test rod. Fully open the window, partition, or roof panel, and then begin to close it. While the window, partition, or roof panel is closing, move a test rod so that it approaches and ultimately extends through (if necessary) the window, partition, or roof panel opening, or its frame, in any orientation from the interior of the vehicle. For power partitions that have occupant compartment space on both sides of the partition, move the test rod into the partition opening from either side of the partition.

(c) Repeat the steps in S7.2(a) and (b) with other ambient light conditions within the range specified in S5.3.

S8. *Test rods.*

S8.1. *Rods for testing systems designed to detect obstructions by physical contact:*

(a) Each test rod is of cylindrical shape with any diameter in the range from 4 mm to 200 mm and is of sufficient length that it can be hand-held during the test specified in S7 with only the test rod making any contact with any part of the window, partition, or roof panel or mating surfaces of the window, partition, or roof panel.

(b) Each test rod has a force-deflection ratio of not less than 65 N/mm for rods 25 mm or smaller in diameter, and not less than 20 N/mm for rods larger than 25 mm in diameter.

S8.2. *Rods for testing systems designed to detect obstructions by light beam interruption:* Each test rod has the shape and dimensions specified in S8.1 and is, in addition, opaque to infrared, visible, and ultraviolet light.

S8.3. *Rods for testing systems designed to detect the proximity of obstructions using infrared reflection:*

(a) Each rod is constructed so that its surface has an infrared reflectance of not more than 1.0 percent when measured by the apparatus in Figure 2, in accordance with the procedure in S9.

(b) Each rod has the shape and dimensions specified in Figure 3.

S9. *Procedure for measuring infrared reflectance of test rod surface material.*

(a) The infrared reflectance of the rod surface material is measured using a flat sample and an infrared light source and sensor operating at a wavelength of 950 ± 100 nm.

(b) The intensity of incident infrared light is determined using a reference mirror of nominally 100 percent reflectance mounted in place of the sample in the test apparatus in Figure 2.

(c) Infrared reflectance measurements of each sample of test rod surface material and of the reference mirror are corrected to remove the contribution of infrared light reflected and scattered by the sample holder and other parts of the apparatus before computation of the infrared reflectance ratio.

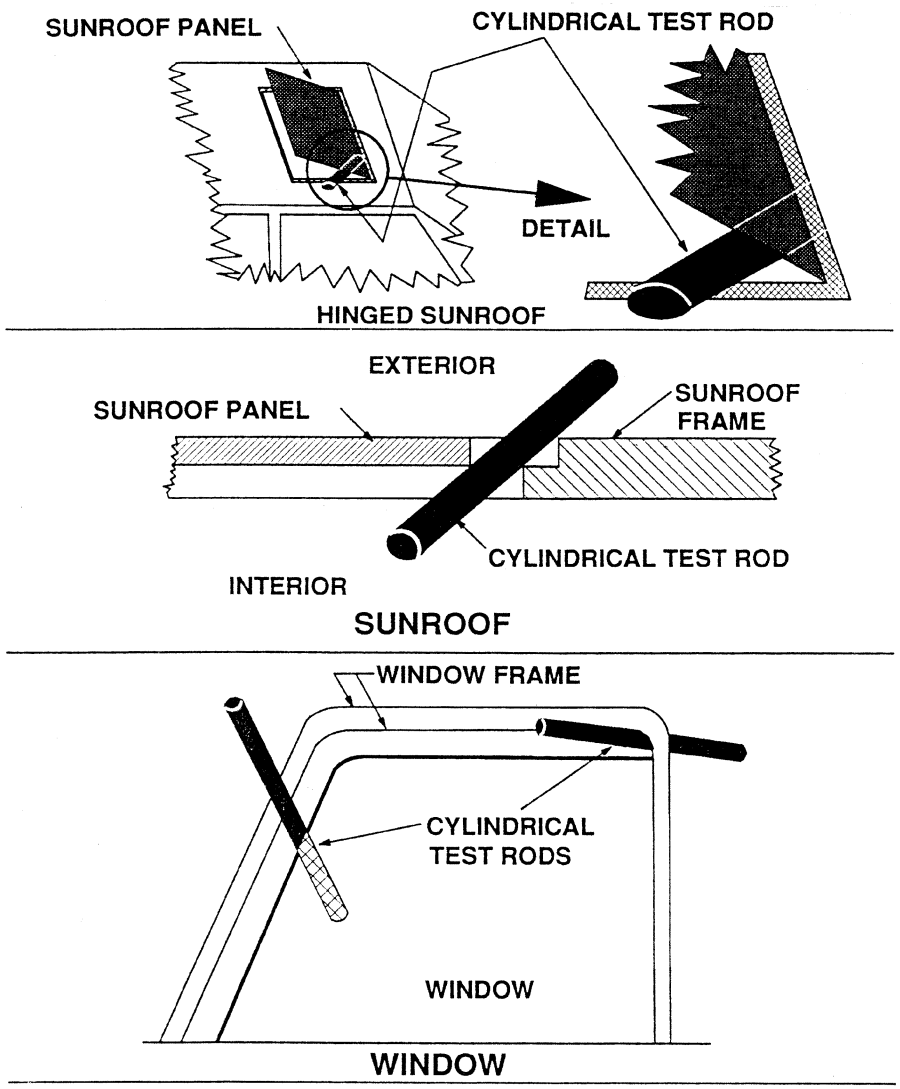

Figure 1 - Typical Cylindrical Test Rods Protruding through Sunroof and Window Daylight Openings

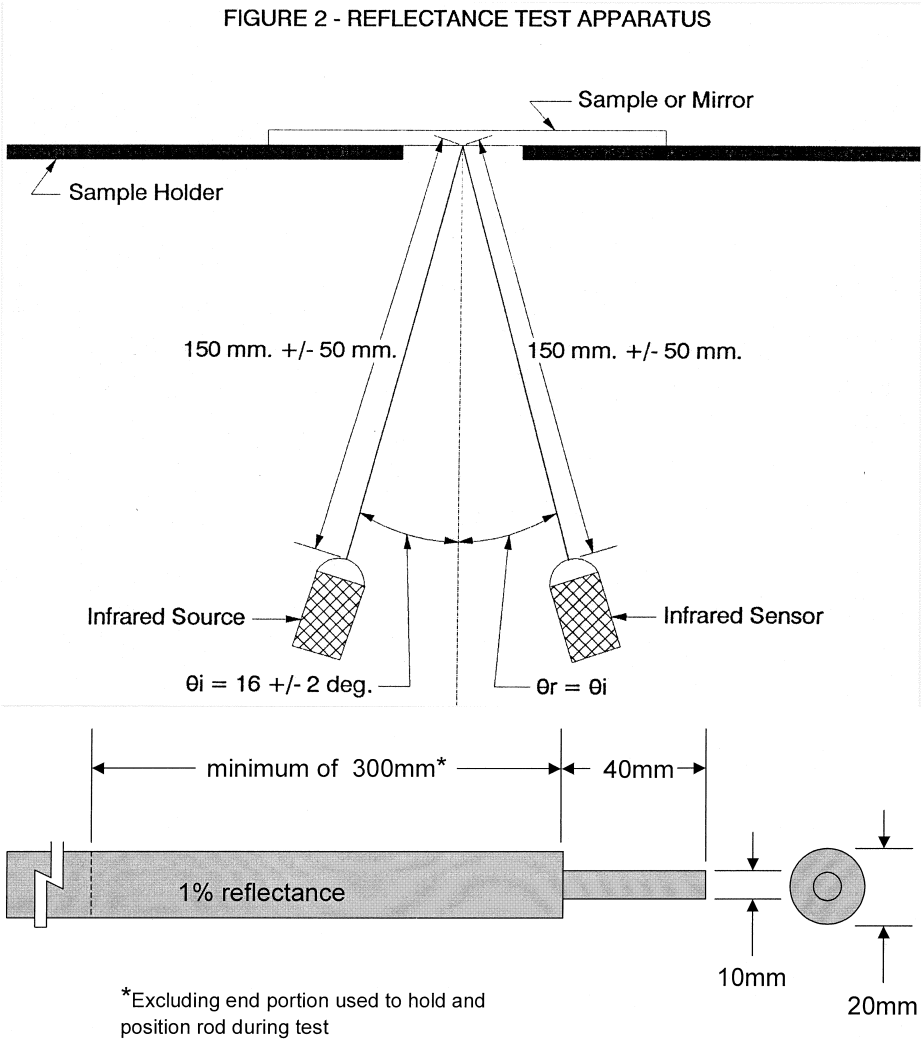

Figure 3

Cylindrical Rod

for Testing Non-Contact Infrared Reflection Systems

[56 FR 15294, Apr. 16, 1991, as amended at 57 FR 23963, June 5, 1992; 57 FR 28012, June 23, 1992; 58 FR 16785, Mar. 31, 1993; 60 FR 13644, Mar. 14, 1995; 69 FR 55531, 55544, Sept. 15, 2004]

§571.119 Standard No. 119; New pneumatic tires for vehicles other than passenger cars.

S1. *Scope*. This standard establishes performance and marking requirements for tires for use on multipurpose passenger vehicles, trucks, buses, trailers, and motorcycles.

S2. *Purpose*. The purpose of this standard is to provide safe operational performance levels for tires used on motor vehicles other than passenger cars, and to place sufficient information on the tires to permit their proper selection and use.

S3. *Application*. This standard applies to new pneumatic tires designed for highway use on multipurpose passenger vehicles, trucks, buses, trailers, and motorcycles manufactured after 1948.

S4. *Definitions*. All terms defined in the Act and the rules and standards issued under its authority are used as defined therein.

Light truck tire means a tire designated by its manuafacturer as primarily intended for use on lightweight trucks or multipurpose passenger vehicles.

Model rim assembly means a test device that (a) includes a rim which conforms to the published dimensions of a commercially available rim, (b) includes an air valve assembly when used for testing tubeless tires or an innertube and flap (as required) when used for testing tubetype tires, and (c) undergoes no permanent rim deformation and allows no loss of air through the portion that it comprises of the tire-rim pressure chamber when a tire is properly mounted on the assembly and subjected to the requirements of this standard.

S5. *Tire and rim matching information*.

S5.1 Each manufacturer of tires shall ensure that a listing of the rims that may be used with each tire that he produces is provided to the public. For purposes of this section each rim listing shall include dimensional specifications and a diagram of the rim. However a listing compiled in accordance with paragraph (a) of this section need not include dimensional specifications or a diagram of a rim if the rim's dimensional specifications and diagram are contained in each listing published in accordance with paragraph (b) of this standard. The listing shall be in one of the following forms:

(a) Listed by manufacturer name or brand name in a document furnished to dealers of the manufacturer's tires, to any person upon request, and in duplicate to: Docket Section, National Highway Traffic Safety Administration, 400 Seventh Street SW., Washington, DC 20590; or

(b) Contained in publications, current at the date of manufacture of the tire or any later date, of at least one of the following organizations:

The Tire and Rim Association
The European Tyre and Rim Technical Organisation
Japan Automobile Tire Manufacturers' Association, Inc.
Deutsche Industrie Norm
British Standards Institution
Scandinavian Tire and Rim Organization
The Tyre and Rim Association of Australia

S5.2 Information contained in a publication specified in S5.1(b) which lists general categories of tires and rims by size designation, type of construction, and/or intended use, shall be considered to be manufacturer's information pursuant to S5.1 for the listed tires, unless the publication itself or specific information provided according to S5.1(a) indicates otherwise.

S6. *Requirements*. Each tire shall be capable of meeting any of the applicable requirements set forth below, when mounted on a model rim assembly corresponding to any rim designated by the tire manufacturer for use with the tire in accordance with S5. However, a particular tire need not meet further requirements after having been subjected to and met the endurance test (S6.1), strength test (S6.2), or high speed performance test (S6.3).

S6.1 *Endurance*.

S6.1.1 Prior to testing in accordance with the procedures of S7.2, a tire shall exhibit no visual evidence of tread, sidewall, ply, cord, innerliner, or bead separation, chunking, broken cords, cracking, or open splices.

S6.1.2 When tested in accordance with the procedures of S7.2: