The Engineering Society For Advancing Mobility Land Sea Air and Space®
INTERNATIONAL
400 Commonwealth Drive, Warrendale, PA 15096-0001

SURFACE VEHICLE STANDARD

SAE J1205

REV. APR97

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Superseding J1205 AUG78

Submitted for recognition as an American National Standard

PERFORMANCE REQUIREMENTS FOR SNAP-IN TUBELESS TIRE VALVES

1. ***Scope—***This SAE Standard for snap-in tubeless tire valves was developed by the qualified engineers in the tire, valve, and automotive industries. It is based upon sound engineering principles, supported by laboratory testing and field experience, to establish acceptable levels of performance criteria for valves.

1.1 **Purpose—**The purpose of this document is to define performance values for the test procedure of SAE J1206, Methods for Testing Snap-In Tubeless Tire Valves (April 1997).

2. ***References***

2.1 **Applicable Publications—**The following publications form a part of this specification to the extent specified herein. Unless otherwise indicated, the latest issue of SAE publications shall apply.

2.1.1 SAE PUBLICATION—Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001.

SAE J1206—Methods for Testing Snap-In Tubeless Tire Valves

2.1.2 ASTM PUBLICATION—Available from ASTM, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.

ASTM D 1171—Test Method for Rubber Deterioration—Surface Ozone Cracking Outdoors or Chamber (Triangular Specimens)

2.1.3 TIRE AND RIM ASSOCIATION PUBLICATION—Available from Tire and Rim Association, 175 Montrose West Avenue, Suite 150, Copley, OH 44321.

3. ***General—***Paragraph numbers of Section 4, Test Values, of this document correspond to Section 4, Test Methods, of SAE J1206.

4. ***Test Values***

4.1 **Adhesion—**Any interface separation between metal and rubber (or cement if used) less than 6.4 x 6.4 mm (0.25 × 0.25 in) in total area shall be considered acceptable.

4.2 **Hardness**

4.2.1 UNUSED VALVES—Hardness values of 60–70 Shore A durometer are acceptable.

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4.2.2 AGED VALVES—An increase of 10% maximum over the values obtained in 4.2.1 of this document, but limited to a maximum hardness values of 75 Shore A durometer is acceptable.

4.3 Valve Core Seal—In all of these tests (see 4.3.1, 4.3.2, and 4.3.3), leakage at a rate of 0.2 cc/min or less is considered acceptable. (This rate approximates 1 bubble/min in water with valve mouth down.)

4.4 Valve to Rim Seal

4.4.1 LOW TEMPERATURE—Leakage at a rate of 0.2 cc/min or less is considered acceptable at the rim seal before, during, or after revolving and flexing the valve.

4.4.2 HIGH TEMPERATURE—Leakage at a rate of 0.2 cc/min or less is considered acceptable at the rim seal before, during, or after revolving and flexing the valve.

4.5 Installation

4.5.1 FORCE TO SEAT—Force to seat shall not exceed 40 kg (90 lb) for 11.3 mm (0.453 in) hole or 45 kg (100 lb) for 15.7 (0.625 in) hole.

4.5.2 FORCE TO PULL OUT—A minimum force of 55 kg (125 lb) for valves designed to fit a nominal 11.3 mm (0.453 in) hole and 55 kg (125 lb) for valves designed to fit a nominal 15.7 mm (0.625 in) hole is acceptable to break the base or to pull the valve out of the hole.

4.6 Burst—A valve which withstands 3X the maximum rated pressure (as shown in the Tire and Rim Association's publications) for 2 min is acceptable.

4.7 Ozone Resistance—The valve rubber cover shall exhibit resistance to ozone equivalent to a zero rating at 5X magnification per ASTM D 1171.

4.8 Valve Core Opening or Unsealing Pressure—In test procedure, see 4.8, opening (or unsealing) pressure of less than 275 kPa (40 psig) is considered a failure.

PREPARED BY THE SAE HIGHWAY TIRE FORUM COMMITTEE