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SAE J948 FEB86

Test Method for Determining Resistance to Abrasion of Automotive Bodycloth, Vinyl, and Leather, and the Snagging of Automotive Bodycloth

SAE Standard
Revised February 1986

Submitted for Recognition as
an American National Standard

RATIONALE:

Not applicable.

RELATIONSHIP OF SAE STANDARD TO ISO STANDARD:

Not applicable.

REFERENCE SECTION:

Not applicable.

APPLICATION:

Sponsor to supply scope.

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SAE The Engineering Resource For Advancing Mobility®
400 COMMONWEALTH DRIVE, WARRENDALE, PA 15096

PARTS AND COMPONENTS STANDARD

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TEST METHOD FOR DETERMINING RESISTANCE TO ABRASION OF AUTOMOTIVE BODYCLOTH, VINYL, AND LEATHER, AND THE SNAGGING OF AUTOMOTIVE BODYCLOTH

TABER METHOD

1. SCOPE: This method of test is applicable for determining the resistance to snagging and abrasion of automotive fabrics and/or vinyl coated fabrics.

2. MATERIALS AND EQUIPMENT REQUIRED:

2.1 Tabor Abraser Model No. 174 or equivalent, complete with vacuum accessory.

2.2 H-18 wheels (snagging).

2.3 CS-10 wheels (abrasion).

2.4 Diamond wheel dresser.

2.5 S-11 Abrasive Paper.

2.6 Camel's hair brush.

3. TEST SPECIMENS: Test specimens are prepared by folding a 108 x 108 mm sample (or equivalent circular sample) once in each direction and then clipping the folded point to produce a small central hole to fit over the turntable clamping screw. Specimens are then conditioned at 23 ± 2°C and 50 ± 3% relative humidity for 24 h.

Unless otherwise specified samples shall be taken no nearer the selvage edge than 1/10 the width of the material.

4. PROCEDURE:

1. Mount the refacing disc holder on the Taber Abraser and fasten to the disc holder a piece of S-11 abrasive paper.

2. Adjust test instrument for a 1000 g load. Loosen the knurled cap nuts and install the new set of wheels on their respective flanged holders as indicated by the printing on the side of the wheel. The one marked right side fits on the right hand mounting with printed side out; the same with the left. The nut is then replaced and moderately tightened. Check the wheels for alignment. H-18 wheels shall be used when testing snagging resistance and CS-10 wheels shall be used when testing abrasion resistance.

3. Reface abrasive wheels 25 cycles by running them against the S-11 abrasive paper disc mounted on the refacing disc holder. Remove any rough edges on the wheels by manually sanding lightly with the abrasive paper.

4. The wheels must be refaced before each test run to remove abraded materials from the wheels that collected in the prior test.

5. If the wheels are worn out of round, crowned or excessively clogged with abraded material, they should be dressed using the diamond refacer until the condition is corrected. In cases of doubt about the condition of the abrasive wheels, new wheels shall be used.

6. Dust the refaced abrasive wheels with a small camel's hair brush and remove the refacing disc holder.

7. With specimen turntable removed from the abraser, place test specimen on the turntable. Adjust the clamping ring to a tight fit over the specimen and holder and press the hold down ring over the circumference of the holder to pull the test material taut.

8. Remove any wrinkles in the test specimen by adjusting the fabric edges which extend below the clamping ring. Then, tighten the adjusting screw of the ring. Place the washer over the turntable screw and tighten the nut. Trim off the excess test specimen which extends beyond the lower edge of the clamping ring.

9. Lower the abrasive wheels carefully from their upright position to the surface of the test specimen. Set the counter mechanism at zero.

10. Position the vacuum nozzle along the diameter of the turntable 3 mm above the surface of the test specimen and set the vacuum dial in the range of 60-70.

11. Turn on the vacuum and start the Taber Abraser.

4. (Continued):

12. Run the specimen the number of cycles specified and remove for evaluation.

13. 1000 cycles shall be run for abrasion of bodycloth.

WYZENBEEK METHOD

1. SCOPE: This test method can be used to determine the resistance to abrasion of automotive vinyl and leather.

2. APPARATUS AND MATERIAL REQUIRED:

2.1 Wyzenbeek Wear Tester or equivalent.

The hardness of the rubber pads should remain between 55-75 when tested with a type "OO" durometer on the flat surfaces. Rubber pads which do not fit snugly in their respective holders should be replaced.

Due to misalignment or wear during use, the following procedure should be performed when necessary; after cleaning the drum surface with a solvent, insert a piece of 36 grit sandpaper and clamp into position. Lower the arms removing all applied pressure and abrade the rubber pad for 400 cycles or until they conform to the shape of the drum. Clean the resurfaced rubber pad with a stiff brush and re-insert in the same holder and in the same position. Once a rubber pad has been put through this procedure do not use in any other holder without re-surfacing.

2.2 1.34-100% Cotton Warp Sateen fabric; count 104 x 55, 214 gms/m^2. (Obtainable from Test Fabrics, Inc., 200 Blackford Ave., Middlesex, NJ 08846.)

2.3 Double faced tape - 3M - No. 400.

2.4 Masking tape, 76 mm wide.

3. TEST SPECIMENS: Test specimens 63.5 x 230 mm are prepared to template (Fig. 1) size in both warp and fill directions. Condition the test specimens for a minimum of 16 h at 23 ± 2°C and 50 ± 3% relative humidity. Unless otherwise specified samples shall be taken no nearer the selvage edge than one tenth (1/10) the width of the material. All materials other than rigid, nonstretch materials, shall have the back of the test specimen completely covered with 76 mm masking tape.

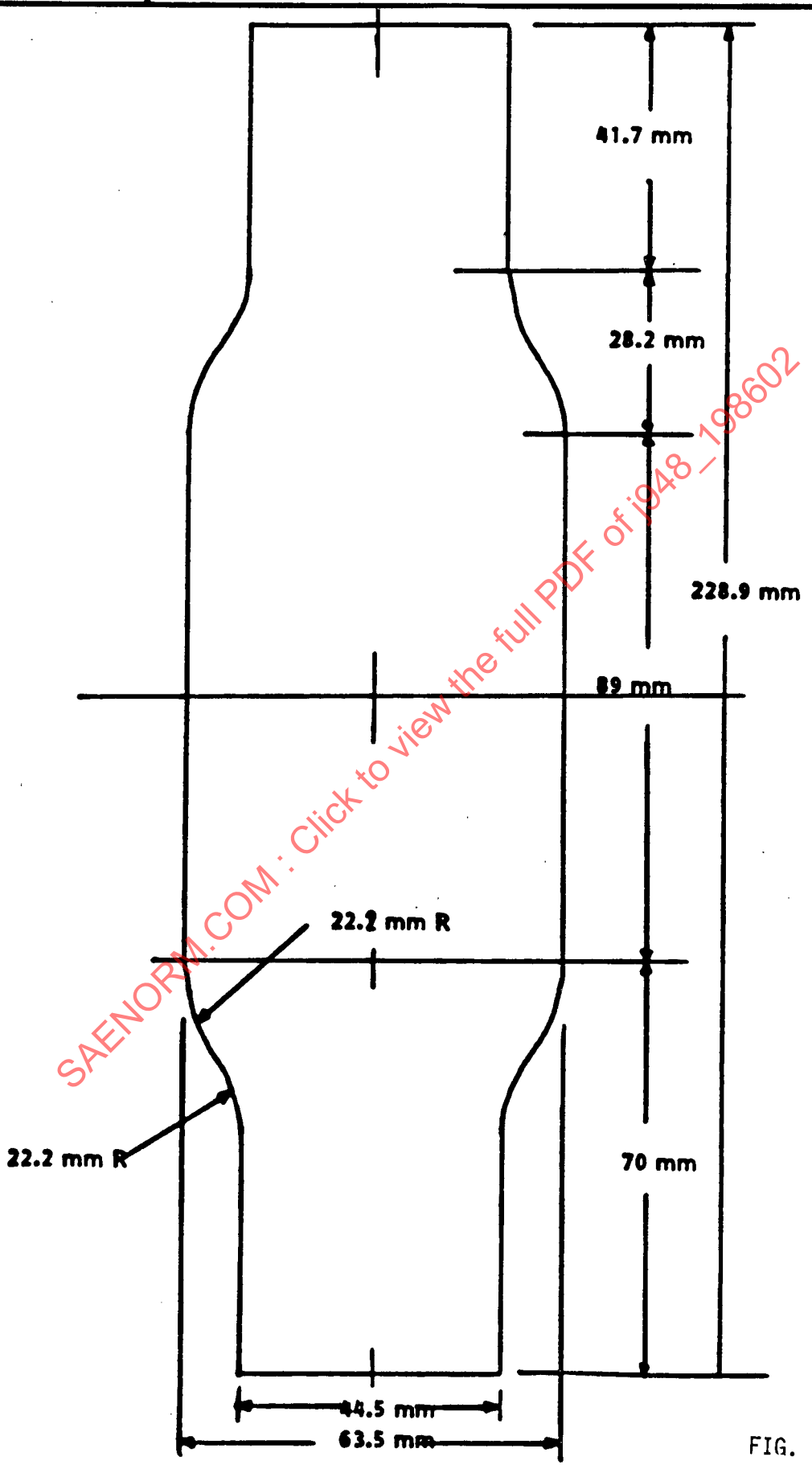

FIG. 1