GM WORLDWIDE ENGINEERING STANDARDS	Test Procedure	GMW17103

Car Wash Simulation Test

1 Introduction

Note: Nothing in this standard supercedes applicable laws and regulations.

Note: In the event of conflict between the English and domestic language, the English language shall take precedence.

1.1 Purpose. This standard describes the test method to test the ability of coating and polymeric surfaces to resist scratching and loss of gloss from car washing. One (1) minute of testing is approximately equal to one (1) year of typical car washing. This procedure can be applied to flat plaques and relatively flat parts.

1.2 Applicability. All vehicles with painted exteriors.

1.3 Remarks. Not applicable.

2 References

Note: Only the latest approved standards are applicable unless otherwise specified.

2.1 External Standards/Specifications.

ISO 12103-1

2.2 GM Standards/Specifications.

None

2.3 Additional References.

None

3 Resources

3.1 Facilities.

3.1.1 Calibration. The test facilities and equipment shall be in good working order and shall have a valid calibration label.

3.1.2 Alternatives. Alternative test facilities and equipment may also be used. However, all measuring variables as specified in this standard shall be determined correctly with respect to their physical definition.

3.2 Equipment. See Figure 1.

3.2.1 Test Apparatus. Car wash unit of such design and construction as to provide for the following:

3.2.1.1 Standard fixture to mount sample (101.6 mm x 305 mm) using double side foam adhesive tape.

3.2.1.2 A brush with polyethylene bristles, strand length 190 mm, length from center of hub to end of strand 255 mm, width of brush 165 mm (available from PECO Car Wash Systems, 244 Rex Boulevard, Auburn Hills, Michigan 48326, (800) 448-3946, www.pecocarwash.com).

3.2.1.3 A motor capable of rotating the hub 185 rpm ± 10 rpm.

3.2.1.4 An enclosure to contain the car wash solution during testing.

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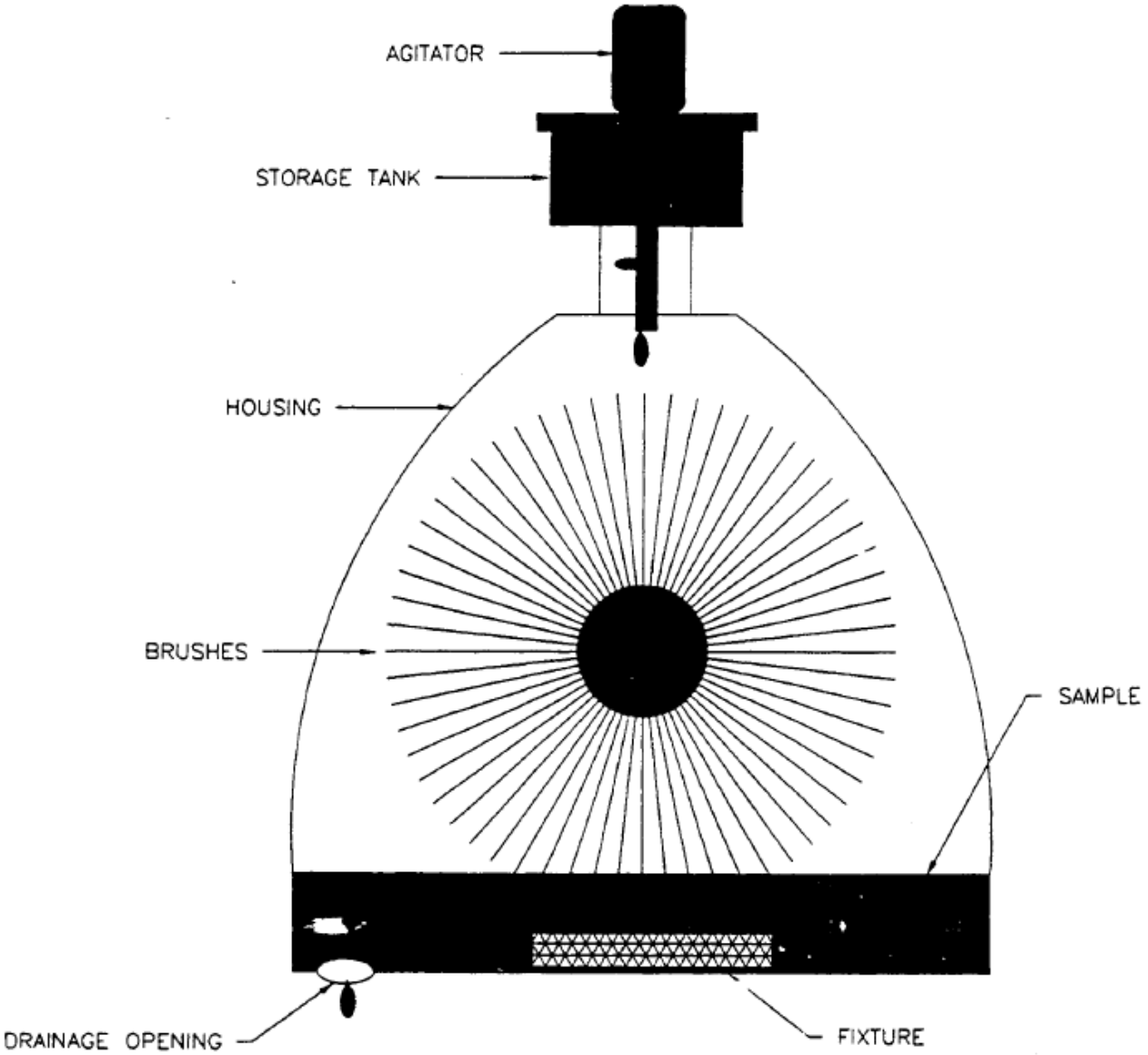

Figure 1: Representative Car Wash Test Apparatus

3.2.2 Car Wash Solution, a mixture consisting of:

- Two (2) g ISO 12103-1, A4 Coarse Test Dust (available from Powder Technology, Inc., 14331 Ewing Avenue South, Burnsville, Minnesota 55306, (800) 718-8737, www.powdertechnologyinc.com)
- Ten (10) g No. 7 (16330) Car and Truck Wash Powder (available at www.amazon.com)
- One hundred (100) g NaCl, technical grade
- Two (2) L Deionized (DI) water

3.2.3 A 2**%** solution of No. 7 (16330) Car and Truck Wash Powder in DI water.

3.2.4 A gloss meter capable of measurement at 20°, 60° and 85° geometries.

3.2.5 A timer measuring in seconds.

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