



Exterior Trim Component Tape Wet-out 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. The purpose of this test is to verify that adhesively attached exterior trim components have appropriate tape wet-out to the mating vehicle surface, in order to obtain optimal adhesion performance. The tape wet-out test will measure the percentage of wet-out between the component and the mating vehicle surface.

1.2 Applicability.

1.2.1 This standard applies to all adhesively attached exterior trim components such as moldings, emblems, wheel flares, spoilers, sill plates, and appliques that GM assembly plants install onto a vehicle during vehicle manufacturing builds. In addition, this standard applies to all adhesively applied components that are sub assembled to a part by a supplier.

1.2.2 This standard applies to all adhesively attached exterior trim components such as moldings, emblems, and appliques that Suppliers install onto part assemblies before they are shipped to GM assembly plants.

1.2.3 This standard applies to all adhesively attached exterior trim including GM Accessory components such as moldings, emblems, and appliques that GM dealers install onto vehicles.

1.2.4 This standard can be referenced for the attachment method of adhesively attached exterior trim components for GMW15308 and GMW15719.

1.2.5 This standard does not apply to decals or films.

1.3 Remarks. This standard is to be used to support validation activities. GM assembly plant will confirm wet-out with their production installation equipment per GMW15851.

2 References

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

2.1 External Standards/Specifications.

None

2.2 GM Standards/Specifications.

GMW15308

GMW15719

GMW15851

2.3 Additional References.

- Exterior Trim and Bumper/Fascia/Grille Component Technical Specification (CTS)
- Exterior Trim and Bumper/Fascia/Grille Subsystem Technical Specification (SSTS)

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.

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3.2 Equipment.



Clutch Roller

GM Tool Number:	T76145
Manufacturer.:	Guardian
Manufacturer Phone:	(734)591-1454

Figure 1: Adjustable Clutch Roller

3.2.1 Transfer Coating. A transfer coating such as dry erase marker or powder spray is required to mark the area of the mating vehicle surface that interfaces with the exterior trim component.

3.2.2 Clutch Roller. An adjustable clutch roller per Figure 1 is required to manually wet-out the exterior trim component to the mating vehicle surface. This tool is specifically for components installed at GM assembly plants and dealerships.

3.2.3 Camera. A camera is required for pre and post-test photographs.

3.2.4 Production Press or Roller. When components are adhered to other part assemblies by a supplier, the production installation equipment per Figure 2 must be used for wet-out confirmation of exterior trim component to the mating part. This will ensure the production press/roller and holding fixtures are sufficient to achieve the proper wet-out percentage per the SSTs/CTS.

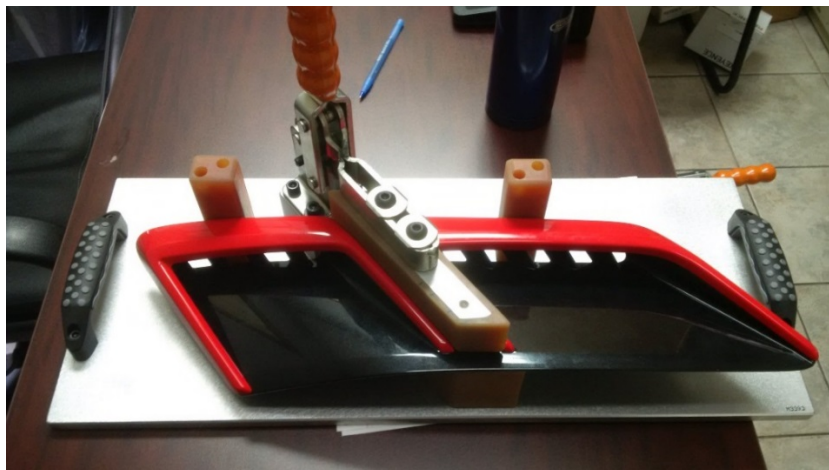


Figure 2: Production Installation Fixture

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3.3 Test Vehicle/Test Piece. Not applicable.

3.4 Test Time.

Calendar time: 1 d

Test hours: 1 h

Coordination hours: 1 h

3.5 Test Required Information.

3.5.1 Wet-out Surface Area. Total wet-out surface area of each exterior trim component needs to be determined before start of test, in order to make wet-out calculations in Data Sheet B1 in Appendix B. The Design Engineer is to provide this value by measuring the component in math data. See Figure 2 for example.

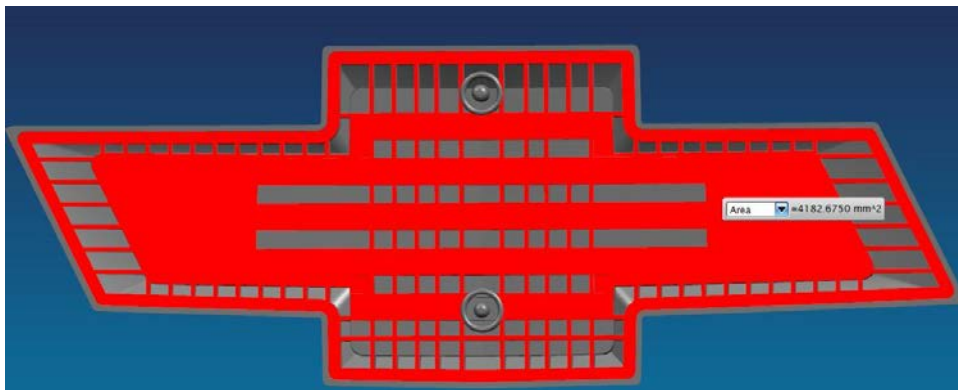


Figure 2: Wet-out Surface Area

3.5.2 Wet-out Roller Force. Roller force should be minimized to avoid damaging (such as micro stress cracks) parts during installation but force must be enough to achieve tape wet-out percentages. If force needed to achieve wet-out requirement exceeds 6.8 kgf, the GM Design Release Engineer and Validation Engineers must be notified for root cause analysis and corrective actions.

3.6 Personnel/Skills. Prior experience in setting up and running similar tests, and experience in the use of the referenced test equipment is critical to achieving repeatable/reliable results.

4 Procedure

4.1 Preparation.

4.1.1 This test can be applied to pre-production and production components.

4.1.2 All non-production intent items should be noted and the components should be replaced if defect will affect the test results.

4.1.3 Clean the mating vehicle surface before application of the exterior trim component by wiping with a 50/50 distilled water/isopropyl alcohol saturated cloth to remove dust or contamination. Then dry with a lint-free clean cloth.

4.1.4 Confirm proper location of the exterior trim component by collecting reference measurements on the mating vehicle surface. Document these reference measurements in Data Sheet A1 in Appendix A.

4.2 Conditions.

4.2.1 Environmental Conditions.

4.2.1.1 Wet-out testing will be done on a dry surface with both the exterior trim component and mating vehicle surface temperature at $23\text{ }^{\circ}\text{C} \pm 5\text{ }^{\circ}\text{C}$.

4.2.2 Test Conditions. Deviations from the requirements of this standard shall have been agreed upon. Such requirements shall be specified on component drawings, test certificates, reports, etc.

4.3 Instructions.

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