



Load Compartment Cover

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. Testing the Hatchback (HB) load compartment cover according to various performance criteria.

1.2 Applicability. For all load compartment covers for hatchback.

1.3 Remarks. Not applicable.

2 References

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

2.1 External Standards/Specifications.

None

2.2 GM Standards/Specifications.

GMW3059

GMW14124

GMW14264

2.3 Additional References.

Dimensional Technical Specification (DTS)

SOR Appendix C2

3 Test Preparation and Evaluation

3.1 Resources.

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.

3.1.3 Facilities.

3.1.3.1 Dudenhofen test center or equivalent proving ground (torture track left, Belgian block wave road; Rheinstraße).

3.1.3.2 Motorway, federal road, cobblestones.

3.1.3.3 Climatic chamber.

3.1.4 Equipment. (See Appendix A: Data Sheet A1, to list measuring devices).

3.1.4.1 Two tensile/compression gauges with hook, piston with a diameter of 20 mm; measuring range 0 N to 500 N.

3.1.4.2 Dial gauge.

3.1.4.3 Finished sizes.

3.1.4.4 Steel ruler.

3.1.4.5 Weights: 5 kg, 15 kg, and 20 kg.

3.1.4.6 Wooden panel: 5 mm x 135 mm x 260 mm.

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3.1.5 Test Vehicle/Test Piece. Load compartment cover in installed condition.

3.1.6 Test Time. Not applicable.

Calendar time: days

Test hours: hours

Coordination hours: hours

3.1.7 Test Required Information. Not applicable.

3.1.8 Personnel/Skills. Not applicable.

3.2 Preparation. Not applicable.

3.3 Conditions.

3.3.1 Environmental Conditions. Not applicable.

3.3.2 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.

3.4 Instructions. Not applicable.

3.5 Data. Not applicable.

3.6 Safety. This standard may involve hazardous materials, operations, and equipment. This standard does not propose to address all the safety problems associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.

3.7 Documentation. Samples of components or material released to this standard shall be tested for conformity with the requirements of this standard and approved by the responsible GM Department prior to the start of delivery of production level components or materials.

Any change to the component or material, e.g., design, function, properties, manufacturing process and/or location of manufacture requires a new release of the product. It is the sole responsibility of the supplier to provide the customer, unsolicited, with documentation of any change or modification to the product/process, and to apply for a new release.

If not otherwise agreed to, the entire verification test shall be repeated and documented by the supplier prior to start of delivery of the modified or changed product. In some cases, a shorter test can be agreed to between the responsible GM department and the supplier.

3.7.1 Test Results. Variables shall be provided for values which are not explicitly listed. The values are defined in SOR Appendix C2. Deviations are given in the relevant drawing under the relevant variables.

Subjective evaluation shall be performed according to GMW14264.

The results shall be entered in the relevant data sheets (see Appendix B: Data Sheet B1, Appendix C: Data Sheet C1, Appendix D: Data Sheet D1).

3.7.2 Deviations from Test Procedure. Deviations from the requirements of the test procedures shall have been agreed upon. Such requirements shall be specified on component drawings, test certificates, reports, etc.

3.7.2.1 All performance requirements shall be fulfilled within a temperature range of -30 °C to +115 °C. See Table 1 for glass angle and solar glass application requirements.

Table 1: Glass Angle and Solar Glass Application

Glass Angle	Glass Application
90 degree to 120 degree	Vertical with Solar Glass at 95 °C
90 degree to 120 degree	Vertical with NON-Solar Glass at 105 °C
121 degree to 180 degree	Horizontal with Solar Glass at 105 °C
121 degree to 180 degree	Horizontal with NON-Solar Glass at 115 °C

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3.7.2.2 Requirements for load compartment cover engaging and disengaging forces shall be fulfilled within a temperature range of -30 °C to +80 °C.

3.7.2.3 The following three temperature ranges shall be selected for the other tests:

- -30 °C to -25 °C
- +20 °C to +25 °C
- 80 °C to +85 °C

4 Requirements and Procedure

4.1 General. The load compartment cover shall be checked for conformance to the current development or release status before each test.

All fasteners shall be present, undamaged and correctly installed. If this is not the case, the fasteners shall be supplemented or corrected. Any modifications shall be noted.

All deviations shall be noted and, if possible corrected.

4.2 Appearance.

4.2.1 Surface Condition. The surface of the load compartment cover shall be tested. Rating 8 shall be attained in the subjective evaluation according to GMW14264.

Laminated load compartment covers shall have a uniform surface structure.

Plastic components shall be free from streaks, sink marks or discoloration. Surface grain shall be uniform, if present.

4.3 Haptic. The haptic characteristics of the load compartment cover shall be tested and subjectively evaluated according to GMW14264.

Laminated load compartment covers shall attain Rating 8.

Non-laminated load compartment covers shall attain Rating 6.

All components shall be free of burrs.

4.4 Actuation Forces. All actuation forces shall be recorded three times and an average value determined.

4.4.1 Disengaging Force F1 for Retaining Straps. The disengaging force for the retaining straps shall be measured using the tensile/compression gauge with piston or hook, depending upon version.

The piston or hook is applied to the plastic pin at the upper end of the retaining strap and pushes or pulls it in the disengaging direction, out of the detent element (see Figure 1).

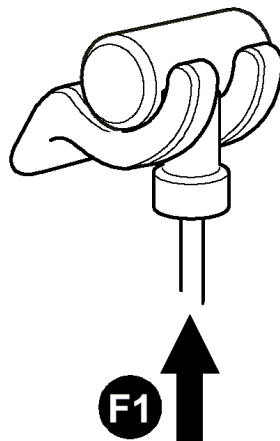


Figure 1: Disengaging Force F1 for Retaining Straps

Note: The specified disengaging Force F1 shall be taken from the SOR Appendix C2 Table.

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4.4.2 Engaging Force F2 for Retaining Straps. The engaging force for the retaining straps shall be measured using the tensile/compression gauge with piston or hook, depending upon version.

The piston or hook is applied to the plastic pin at the upper end of the retaining strap and pushes or pulls it in the engaging direction, out of the detent element (see Figure 2).

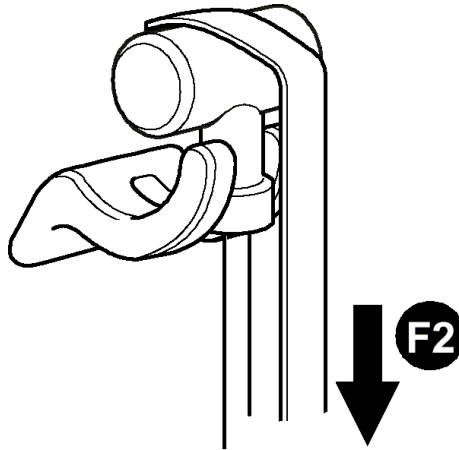


Figure 2: Engaging Force F2 for Retaining Straps

Note: The specified engaging Force F2 shall be taken from the SOR Appendix C2 Table.

4.4.3 Folding Force F3 for Load Compartment Cover. The folding force shall be measured using the tensile/compression gauge with hook.

The tensile/compression gauge is applied to center of the rear edge of the load compartment cover and pulls it upwards to the maximum folding position (see Figure 3).

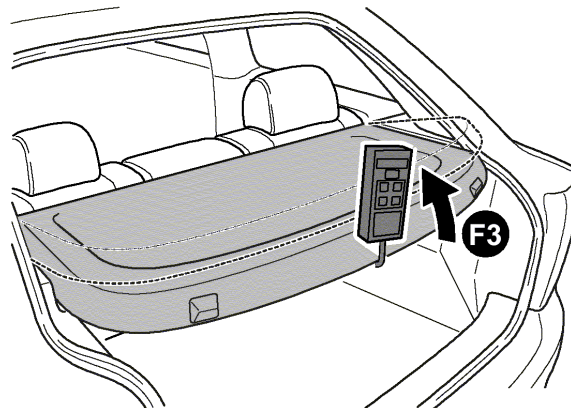


Figure 3: Folding Force F3 for Load Compartment Cover

Note: The specified folding Force F3 shall be taken from the SOR Appendix C2 Table.

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4.4.4 Disengaging Force F4 for Load Compartment Cover. The disengaging force shall be measured using the tensile/compression gauge with hook.

The tensile/compression gauge is applied to center of the rear edge of the load compartment cover and pulls it horizontally out of the detent mechanisms in the side consoles (see Figure 4).

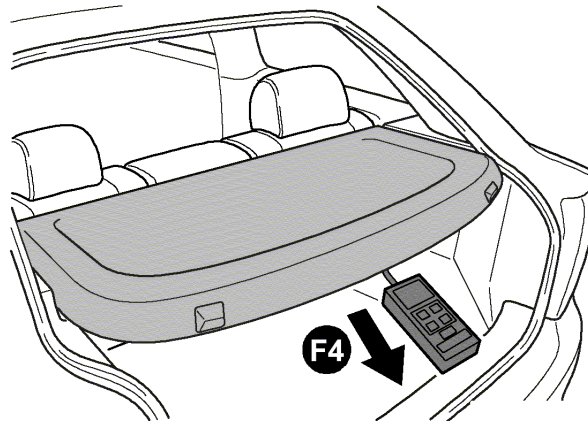


Figure 4: Disengaging Force F4 for Load Compartment Cover

Note: The specified disengaging Force F4 shall be taken from the SOR Appendix C2 Table.

4.4.5 Insertion Force F5 for Load Compartment Cover. The Insertion force shall be measured using the tensile/compression gauge with piston.

The tensile/compression gauge with piston is applied to center of the rear edge of the load compartment cover and pushes it horizontally into the detent mechanisms in the side consoles (see Figure 5).

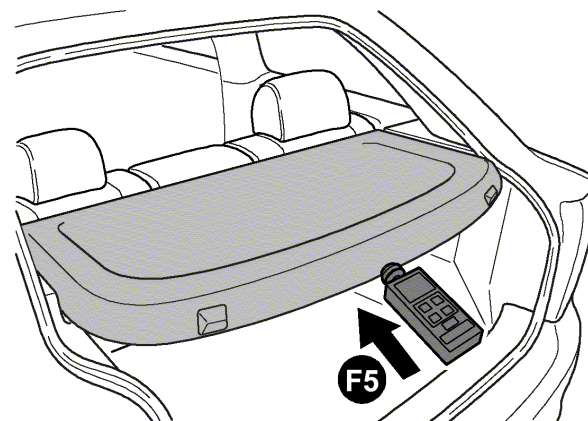


Figure 5: Insertion Force F5 for Load Compartment Cover

Note: The specified insertion Force F5 shall be taken from the SOR Appendix C2 Table.

4.5 Folding and Swivel Uniformity. In accordance with GMW14264, subjective testing shall be performed to determine whether force variations can be detected over the entire folding movement.

Rating 7 according to GMW14264 shall be attained.

4.6 Function Tests Associated with the Load Compartment Cover. All associated functions shall be ensured with the load compartment cover in folded down and folded up positions.

With open and closed tailgate, the load compartment cover shall not jump out of the detent mechanism when the rear seat backrest is folded back vigorously.

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