



Seat Airbag Seam Strength

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 procedure is to determine the strength of the seat airbag seams. The intention of this procedure is to determine whether the seam will be robust to customer interaction as well as allow for proper airbag deployment.

1.2 Applicability. This procedure applies to seat systems which provide a deployment seam for an airbag.

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.

None

3 Resources

3.1 Facilities. An approved GM certified test lab with an adequate bedplate or equivalent work surface necessary for mounting test samples and associated test fixtures.

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.

3.2.1 Mounting Blocks. Appropriate mounting blocks (fixture) to secure the seat cover sample in a tensile testing apparatus.

3.2.2 Load Application Device. Instron or similar tensile machine capable of inducing Zero (0) N to 1000 N (200 lbf) capacity.

3.2.3 Load Measuring Device. Device capable of measuring and providing a load versus displacement graph.

3.3 Test Vehicle/Test Piece. Test coupons with dimensions of 125 mm x 100 mm. The test coupon (sample) is to be cut from production representative seat covers. The coupon is to include the tear seam as shown in Figure 1. **Note:** Thread should not be cut and needs to be long enough to fasten the ends (knots).

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3.4 Test Time.

Calendar time: 1 to 2 days

Test hours: 1 to 2 hours

Coordination hours: 4 to 5 hours

3.5 Test Required Information. Not applicable.

3.6 Personnel/Skills. The following individuals are necessary to complete this test procedure; Design Release Engineer (DRE), GM Validation Engineer, Testing Organization's Test Engineer, and Testing Organization's Test Technician.

4 Procedure

4.1 Preparation. Obtain necessary details.

4.2 Conditions.

4.2.1 Environmental Conditions. Not applicable.

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. Prepare the test samples as show in Figure 1. The tear seam is to be notched 25 mm deep from the edge as shown and the thread tied off at both sides.

4.3.1 Mounting. The test coupon is to be mounted symmetrically from the seam line at least 50 mm from the seam line.

4.3.1.1 Loading Speed. The loading speed on the tensile tester is to be 100 mm/minute $\pm$ 10 mm/minute.

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