



Leather Depression

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 procedure is used to determine the depression depth of a leather sample under the 5 mm load plunger of a BLC ST300 Leather Softness Tester. This test is primarily intended for determining a relative rating for softness of finished and unfinished leathers. The depression depth of the load plunger is defined by the covered distance in millimeters at the calibrated pressure of 0.5 Pa.

1.2 Applicability. This standard applies to all seating, steering wheel, and instrument panel (IP) leather constructions.

2 References

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

2.1 External Standards/Specifications.

None

2.2 GM Standards/Specifications.

GMW3221

2.3 Additional References.

BLC ST300 Leather Softness Tester Operating Manual (Included in the instrument's package) available for purchase from MSA Engineering Systems Limited, 12 Shibden Hall Croft, Shibden Hall Road, Halifax, West Yorkshire, HX3 9XF, United Kingdom - sales@msa-engineering.co.uk.

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.

3.2.1 BLC ST300 Softness Tester.

3.2.2 Twenty-five millimeter (25 mm) Reducing Ring.

Note: The BLC ST300 Softness Tester is available for purchase from MSA Engineering Systems Limited, 12 Shibden Hall Croft, Shibden Hall Road, Halifax, West Yorkshire, HX3 9XF, United Kingdom - sales@msa-engineering.co.uk.

3.3 Test Vehicle/Test Piece. Not applicable.

3.4 Test Time. Ten (10) minutes per each specimen after the material was conditioned.

3.5 Test Required Information. Not applicable.

3.6 Personnel/Skills. Personnel trained in accordance with the laboratory accreditation and Standard Operating Procedure requirements.

4 Procedure

Specimens are placed under the load bin on the surface of the bottom leather clamp. The Top Arm of the BLC ST300 is then depressed using the Operating Lever only.

4.1 Preparation. Take one (1) specimen $300\text{ mm} \pm 10\text{ mm} \times 300\text{ mm} \pm 10\text{ mm}$ from a hide in the specified area as shown in the BLC ST300 Leather Softness Tester Operating Manual. If the hide is not to be cut, it should be fully supported so that there is no pull or tension on the area to be tested.

4.2 Conditions.

4.2.1 Environmental Conditions. All test specimens shall be conditioned to GMW3221, Code A.

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.

4.3.1 Ensure that the BLC ST300 has been calibrated so that it is reading zero.

4.3.2 Release the Top Arm by applying a downward pressure to the Operating Lever and pressing the Release Button. The Top Arm should then swing upward.

4.3.3 Place the leather specimen with the grain side up in the Tester so that it covers the Bottom Leather Clamp completely. Make sure that there is no tension on the specimen in the area to be tested.

4.3.4 Lower the Top Arm by pressing down on the Operating Lever. The Load Plunger must be retracted while the Top Arm is being lowered. Once the Top Arm is down, there will be an audible click and the leather is now clamped in the Tester.

4.3.5 Release the Operating Lever.

4.3.6 The measurement is to be taken $30\text{ s} \pm 2\text{ s}$ after releasing the Operating Lever.

4.3.7 Repeat 4.3.2 through 4.3.6 for a total of nine (9) readings. Readings are to be taken following Figure 1.

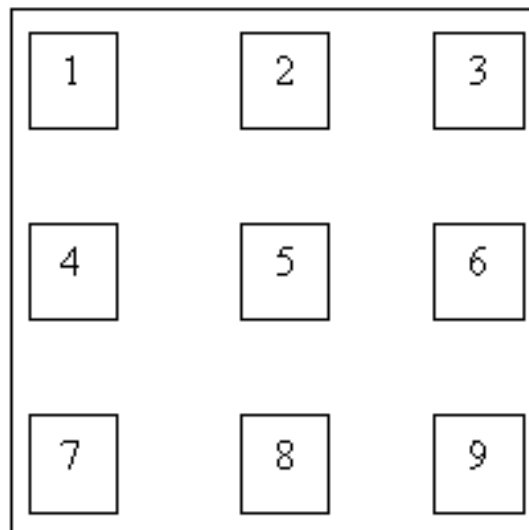


Figure 1: Reading Locations on Sample

5 Data

5.1 Calculations. Report the average of the nine (9) data points to the nearest 0.1 mm.

5.2 Interpretation of Results. Not applicable.

5.3 Test Documentation. Not applicable.