GM	WORLDWIDE ENGINEERING STANDARDS	Test Procedure	SUPERCEDED GMW14603

Seat Subsystem Fore-and-Aft (Rocking and Lateral) Cross-Vehicle Stability and Slider Clearance Performance Test

Do Not Use on New Programs; Replaced by GMW14610

1 Scope

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 test procedure evaluates the stability of the lower seat structure and manual and power adjusters and track displacement.

1.2 Foreword. Not applicable.

1.3 Applicability. This test procedure shall be applied to all General Motors vehicles with free-standing seat systems mounted on adjusters.

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

2.3 Additional References.

GM Approved Test Report Form

3 Resources

3.1 Facilities. An approved GM certified test lab with an adequate bed plate or equivalent work surface necessary for mounting of the test sample and associated test fixtures.

3.2 Equipment.

3.2.1 Mounting Blocks. An appropriate model mounting blocks to hold seat subsystem in body position.

3.2.2 Force Gage. A force gage of 0 to 500 N (0 to 100 lb) capacity or equivalent.

3.2.3 Dial Indicator. A dial indicator with a range of 0 to 25 mm (0 to 1 in).

3.2.4 Weight. Sufficient weights to apply the specified load requirements identified in the Subsystem Technical Specification (SSTS).

3.3 Test Vehicle/Test Piece.

3.3.1 Complete Seat Structural Subsystem. An appropriate seat structural subsystem consisting of a back frame, bottom frame (pan), adjuster, and recliner as specified by the Design Release Engineer.

3.4 Test Time.

Calendar time:	2 days
Test hours:	2 hours
Coordination hours:	8 hours

3.5 Test Required Information. Not applicable.

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3.6 Personnel/Skills. The following individuals are necessary to complete this test procedure.

3.6.1 General Motors Design Release Engineer (DRE).

3.6.2 General Motors Validation Engineer.

3.6.3 Testing organization's Test Engineer/Technician.

4 Procedure

4.1 Preparation.

4.1.1 Fore-and-Aft Stability Performance Test.

4.1.1.1 Mounting. Mount the seat structure subsystem on the appropriate mounting blocks. Include mounting spaces if specified for installation.

4.1.1.2 Adjuster Positioning. Position the manual adjusters in full forward or full rearward lockbar station. Position the power adjusters approximately 6 mm from full up stops, and 6 mm from either horizontal front or rear stops.

Note: Use worst case seat adjuster position for movement, if known in this test.

4.1.1.3 Install Weights. Place weights on a platform that straddles the sides of the bottom frame (pan) to increase total seat weight to the heaviest seat option, plus the SSTS specified occupant load.

4.1.1.4 Install Indicators. Position the dial indicator at the rear of the seat structure midway between the left and right rear attaching points of the adjuster to the seat structure.

4.1.2 Slider Clearance Performance Test.

4.1.2.1 Mounting. Mount the seat structural subsystem on the appropriate model mounting blocks. Include mounting spaces if specified for installation.

4.1.2.2 Adjuster Positioning. Set the other adjuster systems of the seat except for the slider to the design reference position. In case of slider, test shall be conducted in all adjustable range of the slider.

4.1.2.3 Seat back may be removed if required.

4.1.2.4 Install Indicator. Position the dial indicator at the center of the upper guide rail. Dial indicator should be positioned at the both side of the slider to measure both inner and outer displacement.

4.1.3 Rocking Stability Performance Test.

4.1.3.1 Mounting. Mount the seat structure subsystem on the appropriate model mounting blocks. Include mounting spaces if specified for installation.

4.1.3.2 Adjuster Positioning. Position the manual adjusters in full forward or full rearward lockbar station.

Note: Position power adjusters in worst case seat adjuster position for movement if known in this test.

4.1.3.3 Install Weights. Place weights on a platform that straddles the sides of the bottom frame (pan) to increase total seat weight to the heaviest seat option, plus the SSTS specified occupant load.

4.1.4 Cross-Vehicle Stability Performance Test.

4.1.4.1 Mounting. Mount the seat structural subsystem on the appropriate model mounting blocks. Include mounting spaces if specified for installation.

4.1.4.2 Adjuster Positioning. Position the manual adjusters in full forward or full rearward lockbar station.

Note: Position power adjusters in worst case seat adjuster position for movement if known in this test.

4.1.4.3 Install Weights. Place weights on a platform that straddles the sides of the bottom frame (pan) to increase total seat weight to the heaviest seat option, plus the SSTS specified occupant load.

4.2 Conditions.

4.2.1 Environmental Conditions. Conduct test in a room temperature environment.

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 Total Seat System Fore-and-Aft Stability Performance Test.

4.3.1.1 Make sure that all preparation in 4.1.1 is satisfied to start the test procedure.

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