GM WORLDWIDE ENGINEERING STANDARDS	Test Procedure	GMW16109

Occupant-Position Subsystem Supervised Movement Functional Test Procedure

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 procedure of this standard is intended to test the Supervised Movement functions of the Global Architecture Occupant Position Subsystem as defined in the Global A Occupant Position Supervised Movement Subsystem Technical Specification (SSTS).

1.2 Applicability. The procedure of this standard tests the Electrical Functions that support the Supervised Movement function as defined by the Global A Occupant Position Supervised Movement SSTS.

1.3 Remarks. This procedure tests the electrical functions that support the memory function as defined by the Global A Occupant Position Supervised Movement SSTS.

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.

- CG2190 Global Occupant Position Subsystem Supervised Movement Functional Test Procedure
- Global A Occupant Position Supervised Movement SSTS

3 Resources

3.1 Facilities. The procedure of this standard shall be performed on a vehicle, system bench or test frame with production intent Occupant Position Subsystem hardware, software, calibrations, and serial data applicable to the platform under test. This may include but is not limited to seat assemblies, pedal assemblies, column assemblies, seat switches, pedal switches, column switches, memory modules, body electronics personalization master module, and their associated control switches, wiring and General Motors Local Area Network (GMLAN) and Local Interconnect Network (LIN) serial data. Simulators for seats, column, pedal, mirrors, seat switches, column switches, pedal switches, and mirror switches are not the production intent and as such shall not be used.

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 A serial data interface and supporting Personal Computer (PC) application software to monitor GMLAN signals.

3.2.2 An oscilloscope to measure current, analog or digital signals.

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3.2.3 A stop watch to measure timing and latency.

3.2.4 A Direct Current (DC) variable power supply or equivalent (to simulate high and low vehicle battery voltage).

3.3 Test Vehicle/Test Piece. Test apparatuses will require the production intent Occupant Position Subsystem hardware, software, and calibrations applicable to the platform under test. This may include but is not limited to seat assemblies, pedal assemblies, column assemblies, seat switches, pedal switches, column switches, memory modules, body electronics personalization master module, and their associated control switches, wiring and LIN/GMLAN serial data to perform the test procedure.

3.4 Test Time.

Calendar time:	3 days
Test hours:	20 hours
Coordination hours:	4 hours

3.5 Test Required Information. Not applicable.

3.6 Personnel/Skills. The tests will require at least one subsystem validation engineer that is responsible for the subsystem under test. Testing requires knowledge of GMLAN/LIN serial data, the ability to read and interpret the serial data, and the ability to transmit serial data messages.

4 Procedure

4.1 Preparation. All components involved must have the latest production intent hardware, software, and calibrations.

4.2 Conditions. See the test procedure CG2190 Global Occupant Position Subsystem Supervised Movement Functional Test Procedure for test conditions.

4.2.1 Environmental Conditions. See the test procedure CG2190.

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. The following tests are included within CG2190. These features are based on the latest SSTS data dictionary 16.16.106 which may get updated based on the future SSTS release(s):

4.3.1 Power Mode.

4.3.2 Vehicle System Voltage.

4.3.3 Switch Interfaces.

4.3.4 Motor Interfaces.

4.3.5 Steering Column Operation.

4.3.5.1 Two/Four way Operation.

4.3.5.2 Column Bottom Adjust (CBA) Operation.

4.3.6 Pedals Operation.

4.3.7 Fault and Stall Operation.

4.3.8 System Latency.

5 Data

5.1 Calculations. Not applicable.

5.2 Interpretation of Results.

- Meets Requirement: Indicates that the test has been completed and the system is working as intended.
- Does Not Meet Requirements: Indicates that the test has been completed, but the system is not working as intended.
- Not Tested: Indicates that the test applies and has been delivered, but has not been completed.
- Not applicable: Indicates that the test does not apply.

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