



Occupant Position Subsystem Memory 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. This procedure is intended to test the memory functionality of the Occupant Position Subsystem as it is controlled by Global A module(s) as defined in the Global A Occupant Position Memory Subsystem Technical Specification (SSTS).

1.2 Applicability. This test procedure applies to the Occupant Position Subsystem of vehicle programs of the Global A Electrical Architecture with Memory.

1.3 Remarks. This procedure tests the electrical functions that support the memory function as defined by the Global A Occupant Position Memory and Personalization SSTSs.

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.

- CG2188 Global A Occupant Position Subsystem Memory Test Procedure
- Global A Architecture Occupant Position Memory SSTS
- Global A Personalization SSTS

3 Resources

3.1 Facilities. This procedure can be performed on a vehicle or system bench or test frame with production intent Memory Subsystem hardware, software calibrations and serial data applicable to the platform under test. This may include, but is not limited to, the Memory Driver, Co-Driver, Left Rear and Right Rear Seat Assemblies, Memory Left and Right Outside Rearview Mirror assemblies, Memory Brake Pedal Assemblies, Memory Column Assemblies, Memory Modules, Bolster Modules, Local Interconnect Network (LIN) Seat Switch (LSS), Body Electronics Personalization Master Module, and the associated Control Switches, Wiring and General Motors Local Area Network (GMLAN) and LIN Serial Data.

Testing should be completed such that it is performed on both vehicle and bench. Testing can also be done on a subsystem bench if the testing is during the development phase of the software, module, or subsystem. Seat, Column, Pedal, Mirror switch simulators 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.

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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.

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 vehicles, benches, or frames will require the production intent Memory Subsystem hardware, software and calibrations applicable to the platform under test. This may include but is not limited to the Memory Driver, Co-Driver, Left Rear and Right Rear Seat Assemblies, Memory Left and Right Outside Rearview Mirror assemblies, Memory Brake Pedal Assemblies, Memory Column Assemblies, Memory Modules, Bolster Modules, LSS, 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: 15 days

Test hours: 100 hours

Coordination hours: 20 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 CG2188, Global A Occupant Position Subsystem Memory Test Procedure for test conditions.

4.2.1 Environmental Conditions. See the test procedure CG2188.

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 CG2188. 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 Memory Features' association with Memory Switches.

4.3.2 Power Mode.

4.3.3 Voltage.

4.3.4 Load Shed.

4.3.5 Switch Interfaces

4.3.5.1 Manual Memory Control Switches.

4.3.5.2 Column Control Switch.

4.3.5.3 Pedal Control Switch.

4.3.5.4 Seat Movement Control.

4.3.5.5 Seat Lumbar Control Switch.

4.3.5.6 Massaging Lumbar Control Switch.

4.3.5.7 Easy Entry Control Switch.

4.3.5.8 Head Rest Control Switch.

4.3.5.9 Outside rear View Mirror (OSRVM) Control Switch.

4.3.5.10 Redundant Co-Driver Seat Control.

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