



Occupant Position Subsystem Diagnostics 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 procedures of this standard are intended to test Functional Diagnostics for the Occupant Position Subsystem as it is controlled by Global A modules as defined in the Global General Assembly Service Electrical (GGSE) Functional Diagnostic Requirements.

1.2 Applicability. The test procedures of this standard apply to the Global Occupant Position Subsystem controlled by Global A electrical architecture modules.

1.3 Remarks. The procedures of this standard test Diagnostics Trouble Codes (DTC), Parameter Identifier (PID), Control Packet Identifier (CPID), and Data Identifier (DID) meant for the Global A Occupant Position subsystem diagnostics as defined in the Global General Assembly Service and Electrical (GGSE) Functional Diagnostic Requirements.

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.

- CG2192 Global A Occupant Position Subsystem Diagnostics Test Procedure
- GGSE Functional Diagnostic Requirements, available at Uniform Resource Locator (URL): <http://avg.me.gm.com/standard/global/ggse.asp>

3 Resources

3.1 Facilities. These procedures should be performed on a vehicle or system bench or test frame with Occupant Position Subsystem production intent hardware, software, and calibrations applicable to the platform under test. This may include but is not limited to the combinations of memory, extending and/or folding mirrors, and the associated control module(s), switches, wiring, and General Motors Local Area Network (GMLAN) and Local Interconnect Network (LIN) serial data, seat assemblies, pedal assemblies, column assemblies, seat switches, pedal switches, column switches, memory modules, body electronics personalization master module. Simulators for seats, seat switches, column, column switches, pedals, pedal switches, mirrors, 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.

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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 production intent Occupant Position Subsystem modules, seats, and switches and calibrations applicable to the platform under test to perform the test procedure. This may include but is not limited to the combinations of memory, heated, extending, and/or folding mirrors, and the associated control module(s), switches, wiring, and LIN/GMLAN serial data, seat assemblies, pedal assemblies, column assemblies, seat switches, pedal switches, column switches, memory and/or heat modules, body electronics personalization master module.

3.4 Test Time.

Calendar time: 5 days

Test hours: 32 hours

Coordination hours: 8 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 CG2192 Global A Occupant Position Subsystem Diagnostics Test Procedure for test conditions.

4.2.1 Environmental Conditions. See the test procedure CG2192.

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. See the test procedure CG2192 for the test conditions needed to perform the test.

4.3 Instructions. The following tests are included within CG2192. 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 Diagnostic Services – DTC requirements (for supervised movement, memory, message, module, and mirror).

4.3.2 Diagnostic Services – PID requirements (for supervised movement, memory, message, module, and mirror).

4.3.3 Diagnostic Services – DID requirements (for supervised movement, memory, message, module, and mirror).

4.3.4 Diagnostic Services – device control requirements (for supervised movement, memory, message, module, and mirror).

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.

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