



GSO 42 - Door Ajar Warning 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 purpose of this test procedure is to ensure that the vehicle electrical architecture is such that the driver is notified if a door is ajar, i.e., not fully open but not completely latched.

This test procedure is used to document compliance to the door ajar warning requirements listed in GSO 42, Section 31: GM Vehicle Requirements.

1.2 Applicability. This test procedure should be performed on all vehicle designs that will be exported to the Middle Eastern States which use GSO 42.

1.3 Remarks. This test procedure is primarily a functional test that may be used for development or validation purposes. All components involved must have the latest production intent released level software or production intent calibrations.

2 References

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

2.1 External Standards/Specifications.

GSO 42

2.2 GM Standards/Specifications.

None

3 Resources

3.1 Facilities. No special facilities are required for this test.

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. No special equipment is required for this test.

3.3 Test Vehicle/Test Piece. A vehicle is required to perform this test procedure. The test vehicle should be of the latest build phase with production intent wiring and electrical modules. The test vehicle should represent design intent body and doors.

3.4 Test Time.

Calendar time: 2 days

Test hours: 2 to 4 hours

Coordination hours: 2 to 8 hours

3.5 Test Required Information. Verify the entry control electrical architecture for the test vehicle. The test engineer should understand the entry control electrical architecture for the test vehicle such that they understand if a telltale, text message, or dome lamp will be used for door ajar warnings.

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May 2014

Page 1 of 12

3.6 Personnel/Skills. None required.

4 Procedure

4.1 Preparation. Identify test vehicle. A test assistant may be used to help expedite this testing. While performing this test, it may be helpful to have the assistant adjust the doors to the ajar position while remaining in the driver seat. Following vehicle procurement, assemble a Test Readiness Team (TRT). This team will determine the proper vehicle software and/or calibration configurations required for test, and verify that the test material is production intent per the appropriate software development system. Fill out Test Engineer Supplied Information in Appendix A.

4.2 Conditions.

4.2.1 Environmental Conditions. This test may require ambient light conditions to be adjusted such that Day and/or Night Modes as determined by the vehicle photocell are achievable.

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. This test must be completed for each driver information center, instrument panel cluster, interior lamp architecture, and transmission type to be released on vehicles using this particular test for compliance certification, depending on method of door ajar indication.

4.3.1 Determine Door Ajar Warning Method - Automatic Transmission Vehicles.

4.3.1.1 Enter Vehicle, Start Engine.

4.3.1.2 Allow time for bulb check to complete, acknowledge any messages from Driver Information Center (DIC) or message center if necessary.

4.3.1.3 Apply service brake pedal.

4.3.1.4 Move transmission gear selector to the drive position.

4.3.1.5 Adjust driver door to the ajar position.

4.3.1.6 Record on Data Sheet B1 in Appendix B, Section 1 the location that the Driver Door Ajar Warning is displayed.

4.3.1.7 Close Driver Door.

4.3.2 Step by Step Instructions - Automatic Transmission Vehicles.

4.3.2.1 Enter vehicle, start engine.

4.3.2.2 Allow time for bulb check to complete acknowledge any messages from DIC or message center if necessary.

4.3.2.3 Apply service brake pedal.

4.3.2.4 Move transmission gear selector to the drive position.

4.3.2.5 Adjust driver door to the ajar position.

4.3.2.6 Record on Data Sheet B1, in Appendix B, Section 2 if driver is notified of the ajar driver door.

4.3.2.7 Move transmission gear selector to the park position. Close driver door.

4.3.2.8 Release service brake pedal.

4.3.2.9 Adjust front passenger door to the ajar position.

4.3.2.10 Apply service brake pedal.

4.3.2.11 Move transmission gear selector to the drive position.

4.3.2.12 Record on Data Sheet B1, in Appendix B, Section 2 if driver is notified of the ajar front passenger door.

4.3.2.13 Move transmission gear selector to the park position.

4.3.2.14 Release service brake pedal. Close front passenger door.

Note: Paragraphs 4.3.2.15 thru 4.3.2.27 are applicable to vehicles with four doors.

4.3.2.15 Adjust left rear door to the ajar position.

4.3.2.16 Apply service brake pedal.

4.3.2.17 Move transmission gear selector to the drive position.

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May 2014

Page 2 of 12

Documents
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4.3.2.18 Record on Data Sheet B1, in Appendix B, Section 2 if driver is notified of the ajar left rear door.

4.3.2.19 Move transmission gear selector to the park position. Close left rear door.

4.3.2.20 Release service brake pedal.

4.3.2.21 Adjust right rear door to the ajar position.

4.3.2.22 Apply service brake pedal.

4.3.2.23 Move transmission gear selector to the drive position.

4.3.2.24 Record on Data Sheet B1, in Appendix B, Section 2 if driver is notified of the ajar right rear door.

4.3.2.25 Move transmission gear selector to the park position.

4.3.2.26 Release service brake pedal. Close right rear door.

4.3.2.27 Turn off engine.

4.3.3 Determine Door Ajar Warning Method – Manual Transmission Vehicles.

4.3.3.1 Enter vehicle, start engine.

4.3.3.2 Allow time for bulb check to complete, acknowledge any messages from DIC or message center if necessary.

4.3.3.3 Apply service brake pedal.

4.3.3.4 Ensure park brake is not set.

4.3.3.5 Adjust driver door to the ajar position.

4.3.3.6 Record on Data Sheet B2, in Appendix B, Section 3 the location that the driver door ajar warning is displayed.

4.3.3.7 Close driver door.

Note: On some manual transmission vehicles, it may be necessary to attain 8 km/h (5 mph), or other speed as defined by the TRT to activate the door ajar warnings. If a driver door ajar warning was not displayed after completing 4.3.3.5, it may be necessary to drive the vehicle over 8 km/h (5 mph), or other speed as defined by the TRT, with the door ajar and record the door ajar warning status on Data Sheet B2, in Appendix B, Section 3.

4.3.4 Step by step instructions for manual transmission vehicles.

4.3.4.1 Enter vehicle, start engine.

4.3.4.2 Allow time for bulb check to complete, acknowledge any messages from DIC or message center if necessary.

4.3.4.3 Apply service brake pedal.

4.3.4.4 Ensure park brake is not set.

4.3.4.5 Adjust driver door to the ajar position.

4.3.4.6 Record on Data Sheet B2, in Appendix B, Section 4 if driver is notified of the ajar driver door.

Note: On some manual transmission vehicles, it may be necessary to attain 8 km/h (5 mph), or other speed as defined by the TRT, to activate the door ajar warnings. If a driver door ajar warning was not displayed after completing 4.3.4.5, it may be necessary to drive the vehicle over 8 km/h (5 mph), or other speed as defined by the TRT, with the door ajar and record the door ajar warning status on Data Sheet B2, in Appendix B, Section 4.

4.3.4.7 Set park brake.

4.3.4.8 Close driver door.

4.3.4.9 Adjust front passenger door to the ajar position.

4.3.4.10 Apply service brake pedal.

4.3.4.11 Release park brake.

4.3.4.12 Record on Data Sheet B2, in Appendix B, Section 4 if driver is notified of the ajar front passenger door.

Note: On some manual transmission vehicles, it may be necessary to attain 8 km/h (5 mph), or other speed as defined by the TRT, to activate the door ajar warnings. If a front passenger door ajar warning was not displayed after completing 4.3.4.11, it may be necessary to drive the vehicle over 8 km/h (5 mph), or other speed as defined by the TRT, with the door ajar and record door ajar warning status on Data Sheet B2, in Appendix B, Section 4.

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May 2014

Page 3 of 12



Documents

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Note: Paragraphs 4.3.4.13 thru 4.3.4.26 are applicable to vehicles with four doors.

4.3.4.13 Set park brake.

4.3.4.14 Close passenger door.

4.3.4.15 Adjust left rear door to the ajar position.

4.3.4.16 Apply service brake pedal.

4.3.4.17 Release park brake.

4.3.4.18 Record on Data Sheet B2, in Appendix B, Section 4 if driver is notified of the ajar left rear door.

Note: On some manual transmission vehicles, it may be necessary to attain 8 km/h (5 mph), or other speed as defined by the TRT, to activate the door ajar warnings. If a driver door ajar warning was not displayed after completing 4.3.4.17, it may be necessary to drive the vehicle over 8 km/h (5 mph), or other speed as defined by the TRT, with the door ajar and record door ajar warning status on Data Sheet B2, in Appendix B, Section 4.

4.3.4.19 Set park brake.

4.3.4.20 Close left rear door.

4.3.4.21 Adjust right rear door to the ajar position.

4.3.4.22 Apply service brake pedal.

4.3.4.23 Release park brake.

4.3.4.24 Record on Data Sheet B2, in Appendix B, Section 4 if driver is notified of the ajar right rear door.

Note: On some manual transmission vehicles it may be necessary to attain 8 km/h (5 mph), or other speed as defined by the TRT, to activate the door ajar warnings. If a driver door ajar warning was not displayed after completing 4.3.4.23, it may be necessary to drive the vehicle over 8 km/h (5 mph), or other speed as defined by the TRT, with the door ajar and record door ajar warning status on Data Sheet B2, in Appendix B, Section 4.

4.3.4.25 Close right rear door.

4.3.4.26 Turn off engine.

4.3.5 Step By Step Instructions for Automatic Transmission Vehicles Using Courtesy Lamp Activation for Door Ajar Warning.

4.3.5.1 Enter Vehicle. If equipped, determine vehicle photocell status. If the tester is not able to determine photocell status, contact test engineer for assistance. If the test vehicle is not equipped with photocell, proceed to 4.3.5.3.

4.3.5.2 Adjust vehicle photocell to day mode. Photocell should remain in day mode until Data Sheet B3, in Appendix B, Section 5 is complete.

4.3.5.3 Start engine.

4.3.5.4 Allow time for bulb check to complete, acknowledge any messages from DIC or message center if necessary.

4.3.5.5 Apply service brake pedal.

4.3.5.6 Move transmission gear selector to the drive position.

4.3.5.7 Adjust driver door to the ajar position.

4.3.5.8 Record on Data Sheet B3, in Appendix B, Section 5 if driver is notified of the ajar driver door.

4.3.5.9 Move transmission gear selector to the park position.

4.3.5.10 Release service brake pedal.

4.3.5.11 Close driver door.

4.3.5.12 Adjust front passenger door to the ajar position.

4.3.5.13 Apply service brake pedal.

4.3.5.14 Move transmission gear selector to the drive position.

4.3.5.15 Record on Data Sheet B3, in Appendix B, Section 5 if driver is notified of the ajar front passenger door.

4.3.5.16 Move transmission gear selector to the park position.

4.3.5.17 Close front passenger door.

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Page 4 of 12

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