



Japanese Driver Seat Belt Warning System 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 purpose of this procedure is to define the tests that will determine if a vehicle meets the requirements of Japanese Driver Seatbelt Warning Device, Article 22-3 Attachment 33, TRIAS 22(3)-J033-01. Reference the GM Global Legal Database for any updates to the Standard and the applicability of this test to these updates.

1.2 Applicability. This specification applies to passenger cars, multipurpose passenger vehicles, trucks, and busses that have a gross vehicle weight rating of 4536 kg (10 000 lb) or less, and are sold in Japan and not used exclusively for passenger carriage.

1.3 Remarks. This standard covers the Japanese Driver Seatbelt Warning Device, Article 22-3 Attachment 33, TRIAS 22(3)-J033-01 requirements. It does not apply to any type of automatic or motorized belt restraint system. If an automatic or motorized belt system requires testing, contact GM Lead Engineer for further instructions.

1.3.1 Legal Requirements. Japanese regulatory requirements are found in the GM Global Legal Database. The GM Global Legal Database contains the most recent statement of regulatory requirements and supersedes those listed in any test procedure. Guidance for interpreting regulatory requirements may also be contained in the Global Legal Database.

1.3.2 Uniform Parts Classification (UPC). UPC(s) comprehended in this procedure include 12F.

2 References

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

2.1 External Standards/Specifications.

TRIAS 22(3)-J033-01

2.2 GM Standards/Specifications.

None

Note: (ID) = This reference is limited to internal distribution within General Motors and shall not be distributed outside this company. Contact the GM Lead Engineer for further instructions.

2.3 Additional References.

- GM Global Legal Database (ID)

3 Resources

3.1 Facilities. A garage vehicle bay or equivalent is required.

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 For Appendices C and D. A calibrated stop watch.

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3.2.2 For Appendix E. The ability to accurately measure and record time in seconds, distance in meters and vehicle speed in kilometers per hour for the "Warning During Running" portion of the test being initiated by meeting a speed of 10 km/h and stopped when the warning chime is heard. Accuracy needs to ensure that the vehicle tested never exceeds the limits identified on the test page.

Note: Milford Proving Ground will use either Daltron optical pickup with a CANSAS interface box controlled by a Vehicle Spy Program or Racelogic Vbox or OXTS RT GPS systems.

3.3 Test Vehicle/Test Piece. Test vehicles equipped with applicable driver's safety belt system.

Note: All components involved must have the latest production intent released level software and production intent calibrations.

3.4 Test Time.

Calendar time: 5 d
Test hours: 2 h
Coordination hours: 16 h

3.5 Test Required Information. See Appendix A. **Note:** "Test Requester Supplied Information" is required to be completed by the Test Requester.

3.6 Personnel/Skills. Tester must have doctor-approved vision and be wearing any prescribed corrective lenses. Tester must also have no hearing impairments.

4 Procedure

4.1 Preparation. Test Requester must complete the appropriate data sheet and correct any vehicle issues that may affect the test results.

Test Requester must verify that the test software/calibration is the latest production intent release per the appropriate software development system. Examples are: GM Electronic Controller (GMEC), and Global Data File Release System (GDFRS).

Test Requester must obtain approval of the vehicle configuration from the Test Readiness Team before testing can commence.

4.2 Conditions.

4.2.1 Environmental Conditions. An ambient garage environment or dry outside environment is required. The Test Requester must approve any other environmental conditions used.

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 Record stopwatch calibration information and any other instrumentation used for this test in Appendix B.

4.3.2 Read Appendix A, part of which is filled out and supplied by the Test Requester.

4.3.3 Apply the following criteria to all tests:

4.3.3.1 All visual and audible signals must activate once the initiating action has been performed. If there are any gaps, delays, or pauses in the signal, other than normal intermittent signal operations, (see 7.1), the Test Requester shall be contacted as soon as possible.

4.3.3.2 Caution must be observed if the front passenger seat is occupied so that the indicators for that position do not interfere with the testing of the driver's side belt system.

4.3.3.3 A combination of both a flashing and non-flashing visual indicator is permissible, so record the complete time of both as long as they are deemed continuous (see 7.1). If the indicator, audible or visual, stays on continuously, write **continuous** for the time and answer the question pertaining to that section appropriately.

4.3.4 Based on the ignition type, fill out the appropriate data sheets as specified: Keyed, including EASY KEY systems, use Appendix C and keyless systems use Appendix D. Multiple sheets of Appendix D may be utilized according to the number of "Run" power mode operations the Test Requester specifies in Appendix A.

4.3.5 If vehicle platform has remote start, the appropriate test data sheet specific to remote start must be completed in either Appendix C or Appendix D. A vehicle with remote start must be provided to the Tester.

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Note: If the program has Remote start available, but the test vehicle is not equipped or remote start does not function, contact Requesting Engineer.

4.3.6 Test and complete the **Warning During Running** pages in Appendix E. Included in this Appendix is information that applies to the entire system under "Basic Tests" heading.

Note: Milford Proving Ground operations requires at least an UNBELTED OCCUPANT sign to be affixed to the rear of the vehicle when testing without a seat belt. Check with Traffic Safety or equivalent at the specific test site for specific local safety requirements.

5 Data

5.1 Calculations. Not applicable.

5.2 Interpretation of Results. Only **Yes** answers to all questions on any Appendices C thru E constitute passing this procedure. If **No** answers result, contact the Test Requester immediately.

5.3 Test Documentation. See the Appendices.

6 Safety

This standard may involve hazardous materials, operations, and equipment. This standard does not propose to address all the safety problems associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.

In general, a risk assessment needs to be performed for every driving instruction prior to executing this standard. (**Note:** National law needs to be considered while performing a risk assessment.) The required rating of risk by exposure probability and possible violation will be done in a separate document. Every identified risk must be named inside the risk assessment for the relevant driving instruction in order to announce that risk to employees. Within the risk assessment, the vehicle equipment and different vehicle build stages have to be considered. After performing a risk assessment, non-acceptable risk needs to be mitigated by appropriate countermeasures. Here technical measures are preferred because these are independent from attendant circumstances. In case technical measures are not appropriate, organizational and/or personal measures will apply. This includes training, wearing of Personal Protection Equipment, or arrangement of idle time.

6.1 Safety Precautions.

6.1.1 Instrumentation and other test equipment must be securely mounted in accordance with proving grounds traffic safety guidelines for mounting and usage of in-vehicle instrumentation.

6.1.2 All running lights and vehicle safety features must be operational according to proving grounds rules for running lights and power windows. Exterior lights must not be obscured by styling add-ons, covers or camouflage packages. The horn may be disabled because of steer angle transducer installation.

6.1.3 A helmet is required in accordance with the regulations of the test facility. The vehicle should never be operated in a manner where the vehicle leaves the roadway or goes onto the shoulder for any reason.

6.1.4 Check for proper attachment of the steering wheel to the gear via the intermediate shaft. If it feels loose or abnormal, do not run the test until the parts are properly assembled according to the intended design.

6.1.5 Check to be certain that all wheel lugs are present and have the specified torque. Loose or missing wheel fasteners are to be replaced, installed or tightened before the test may begin.

6.1.6 The driver's seatbelt must be worn at all times during the test. Passengers accompanying the test operator must also be safely belted in the vehicle, preferably in the right rear seat.

Note: Passengers are allowed for observation or training purposes.

Note: When performing unbuckled test operations, check with the local traffic safety representative for the appropriate precautions to take during the **Warning While Running** portion of the test.

6.1.7 If a crossbar is used to hold the steering wheel angle transducer base plate, the passenger side airbag is to be disabled or disconnected.

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Documents

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7 Notes

7.1 Glossary.

Continuous Signal Operation: The chime or visual indicator remains activated constantly with no breaks in operation from when the timing is initiated until the indicator deactivates.

Intermittent Signal Operation: The chime or visual indicator pulses **on** then **off** in a uniform fashion with no other breaks in operation that would be interpreted as non-continuous as described in the preceding.

Keyed System: Ignition system that uses a key as the main means of starting the vehicle and placing the system in the **ON** position for this test.

Keyless System: Ignition system that uses a switch on the dash as the main means of starting the vehicle and placing the system in the **"Run"** power mode.

Key On: This position is where the vehicle will stay running after engine start and the initiation point for the seat belt warning system. This position is also known as the **Run** position.

Key Start: This position is where the vehicle's engine will turn over and start. This position is also known as the **Crank** position.

Test Readiness Team: A team consisting of the following members:

- Assembly Verification Software Engineer/Dynamic Vehicle Testing (AVSE/DVT).
- Design Release Engineer (DRE)
- Engineering Group Manager (EGM)
- Validation Engineer (VE)
- Vehicle Software Integration Engineer (VSIE)

7.2 Acronyms, Abbreviations, and Symbols.

AVSE	Assembly Verification Software Engineer
DRE	Design Release Engineer
DVT	Dynamic Vehicle Testing
EGM	Engineering Group Manager
GDFRS	Global Data File Release System
GMEC	GM Electronic Controller
RPO	Regular Production Option
UPC	Uniform Parts Classification
VE	Validation Engineer
VSIE	Vehicle Software Integration Engineer

8 Coding System

This standard shall be referenced in other documents, drawings, etc., as follows:

Test to GMW16131

9 Release and Revisions

This standard was originated in October 2008. It was first approved by Electrical Global SDM PDT and Electrical Development and Validation in September 2010. It was first published in September 2010.

Issue	Publication Date	Description (Organization)
1	SEP 2010	Initial publication.
2	MAR 2015	Revised to current template. (Electrical - Displays, Controls and Audio Systems)

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Appendix A

Sheet ____ of ____

Data Sheet A1: Test Requester Supplied Information

Request Number: _____ Vehicle Number: _____

Year _____ Make: _____ Model: _____ Body Style: _____

Test Objective: (✓)

Development:

☐

Validation:

☐

Vehicle Build Level: (✓)

Mule:

☐

Integration:

☐

Manufacturing Integration:

☐

Production:

☐

Identify Module Hardware and Software that Impact Testing:

	Module	Module Part Number	Module Software/Calibration Level
a)	_____	_____	_____
b)	_____	_____	_____
c)	_____	_____	_____
d)	_____	_____	_____
e)	_____	_____	_____

If module software calibration files are not available at the time the test is performed, but the module configurations need to be changed to meet the requirements of the test, explain how this will be done:

Test Readiness Team Configuration Approval

Completed by: _____ Date: _____

Signature: _____

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