Durability Event: Extended Trip

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. To subject a vehicle to operation similar to that experienced by customer vehicles during freeway driving for extended periods of time. Primarily speeds are between 80 km/h to145 km/h (50 mph to 90 mph).

1.2 Applicability. The test instructions covered in this standard are intended for use in passenger car and truck testing and should be adapted at all major GM test sites:

- Cruz Alta Proving Ground - Brazil
- Desert Proving Ground - Yuma, USA
- Dudenhofen Proving Ground - Germany
- Guangde Proving Ground - China
- Lang Lang Proving Ground - Australia
- Milford Proving Ground - USA

This global test procedure is intended to document the test facility requirements and driving instructions necessary to properly execute this durability event. Regional test procedures exist in order to implement this global procedure at the various GM proving grounds. Each regional test procedure includes the driving instructions for the specific access roads to and from the test facility, references to local signs and landmarks, and any other region-specific information necessary to implement this GMW durability event.

2 References

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

2.1 External Standards/Specifications.

None

2.2 GM Standards/Specifications.

GMW15444 GMW15445

2.3 Additional References.

2.3.1 Cruz Alta. DR.CA.1066

2.3.2 Dudenhofen. DR.DH.Ext Trip

2.3.3 Guangde. DR.GD.ET

2.3.4 Lang Lang. DR.LL.OS43

2.3.5 Milford. DR.MF.ET

2.3.6 Yuma. DR.YU.ET

3 Resources

3.1 Facilities. Circular track or similar high speed facility capable of vehicle operation up to 145 km/h (90 mph). The specific location/facility used at each proving ground varies. Refer to the appropriate proving ground driving instruction document.

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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. Refer to the appropriate proving ground driving instruction document.

3.3 Test Vehicle/Test Piece. Not applicable.

3.4 Test Time. 120 minutes (proving ground dependent).

3.5 Test Required Information. Not applicable.

3.6 Personnel/Skills. Refer to the appropriate proving ground driving instruction document.

4 Procedure

4.1 Preparation. Refer to the appropriate proving ground driving instruction document.

4.2 Conditions.

4.2.1 Environmental Conditions. Not applicable.

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 driving event provides 181 km (112.5 mi) of vehicle operation at speeds primarily between 80 km/h to145 km/h (50 mph to 90 mph). See Appendix A “Driving Instructions” for speeds and maneuvers relating to procedure.

5 Data

5.1 Calculations. Refer to the appropriate durability test standard.

5.2 Interpretation of Results. Refer to the appropriate durability test standard.

5.3 Test Documentation. Refer to the appropriate durability test standard.

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.

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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.

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.

7 Notes

7.1 Glossary. Refer to GMW15444 "Global Durability Test Instructions" for definitions of terms. Also, refer to GMW15445 "Vehicle Ballast" for definitions of ballast related terms.

7.2 Acronyms, Abbreviations, and Symbols.

WOT Wide Open Throttle

8 Coding System

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

Test to GMW15527

9 Release and Revisions

This standard was originated in December 2006. It was first approved by Global Proving Ground Correlation Team in March 2007. It was first published in May 2007.

Issue	Publication Date	Description (Organization)
1	MAY 2007	Initial publication.
2	JUL 2012	Five year refresh; removed Ding Yuan test site; added Guangde and Desert Proving Ground Yuma test sites. (Global Proving Ground Durability Test Development Team)
3	MAY 2013	Change distribution type permitted to External Highly Restricted - update template/replacement info. (Global Proving Ground Durability Test Development Team)
4	APR 2018	Five year refresh; removed Beijing and Millbrook Proving Grounds. (Global Durability Test Development Team)

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