



Wheel Trim On-Vehicle Test Specifications

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 Scope. This specification lists on-vehicle test specifications/procedures that are used to evaluate wheel trim performance.

1.2 Mission/Theme. The listed on-vehicle specifications/procedures were originally developed to evaluate other vehicle and/or system areas, but have since been shown to correlate to wheel trim performance in specific regional market road systems.

1.3 Classification. Not applicable.

2 References

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

2.1 External Standards/Specifications.

None

2.2 GM Standards/Specifications.

GMW3059	GMW14993	GMW15934 (ID)	GMW16616
GMW3425	GMW15443	GMW15975	GMW16617
GMW3428	GMW15531	GMW15981	

(ID) = This standard 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.

Sourcing Documents

3 Requirements

Refer to Sourcing Documents.

4 Validation

4.1 General.

4.1.1 Method A. European market road system.

4.1.1.1 For new wheel trim retention designs on passenger cars, wheel trim should be exposed to one of the listed durability schedules (or an equivalent schedule):

- GMW3425 (G0 – GME Driving Instructions)
- GMW3428 (E0 – GME Driving Instructions)

4.1.2 Method B. North American market road system.

4.1.2.1 For new wheel trim retention designs on passenger cars, wheel trim should be exposed to one of the listed durability schedules (or an equivalent schedule):

- GMW3425

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- GMW3428
- GMW15443
- GMW16616

4.1.2.2 For new wheel trim retention designs on midsize sport utility trucks, wheel trim should be exposed to one of the listed durability schedules (or an equivalent schedule):

- GMW15975
- GMW15443
- GMW15531

4.1.2.3 For new wheel trim retention designs on midsize pickup trucks, wheel trim should be exposed to the listed durability schedule (or an equivalent schedule):

- GMW16617

4.1.2.4 For new wheel trim retention designs on full size light trucks, wheel trim should be exposed to one of the listed durability schedules (or an equivalent schedule):

- GMW15531
- GMW15981

4.1.3 Method C. Australian market road system. Samples supplied to General Motors for testing in 4.1.3 should be representative of tolerance extremes and accompanied by qualifying documentation.

4.1.3.1 Global Durability (Optional if 4.1.3.2 is performed).

4.1.3.1.1 Objective. To test the retention and integrity of the wheel trim in a total vehicle environment when driving for a long distance over known test roads at the Holden Proving Ground.

4.1.3.1.2 Location. Holden Proving Ground.

4.1.3.1.3 Procedure. Wheel trim is to be subjected to GMW15443, Passenger Vehicle Established Road Regions General (Global) Durability Test at the Holden Proving Ground, comprising sealed and unsealed road for approximately 42 000 km.

The wheel trim may be removed during test as required, to service brakes, tires, suspension, general inspection, etc.

Indicative test time is approximately twenty (20) weeks after vehicle commences test schedule.

4.1.3.1.4 Bogey. One hundred (100) cycles (100% Global Durability).

4.1.3.1.5 Requirements. At the completion of testing, wheel trim must still be firmly attached to the wheels and must be free from cracks and rattles. Should cracks develop, a satisfactory result can still be obtained, should the wheel trim pass GMW14993, Wheel Trim Retention and Noise Evaluation. Rotation of trim is not permissible if it touches the valve or if the maximum rotation exceeds 10 mm.

4.1.3.2 Wheel Trim Accelerated Testing (Optional).

4.1.3.2.1 Objective. To apply the same fatigue influence to the wheel trim as seen on Global General Durability in an accelerated manner.

4.1.3.2.2 Procedure. Refer to GMW14993, Wheel Trim Retention and Noise Evaluation.

4.1.3.3 Trailer Towing Test (Optional for Alloy Wheel Trim).

4.1.3.3.1 Objective. To test the retention and integrity of the wheel trim in a total vehicle environment when driving for a long distance over known test roads at the Holden Proving Ground.

4.1.3.3.2 Location. Holden Proving Ground.

4.1.3.3.3 Procedure. Wheel trim is to be subjected to GMW15934, Trailer Hitch Durability Test for Body Frame Integral (BFI) Vehicles Up to 3500 kg Trailer Weight Rating, at the Holden Proving Ground.

The wheel trim may be removed during test as required to service brakes, tires, suspension, general inspection, etc.

Indicative test time is approximately six weeks after vehicle commences test schedule.

4.1.3.3.4 Bogey. Fifteen (15) cycles (50% trailer towing).

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