
Per the February 2010 minutes (WS-2-7), Section 4.7

Typical Components of NHTSA Durability Evaluation

Certification Testing

NHTSA conducts multiple certification tests on the various body segments (head, neck, shoulder, thorax, abdomen, pelvis, etc.) to establish the dummy's response corridors and to evaluate repeatability and reproducibility (R&R). During this process, the dummy is constantly monitored for damage and excessive wear.

High-Energy Certification Tests

These tests are generally the same as the certifications tests, except the kinetic energy of the impact is increased by 10 – 25% by increasing the speed of impact, the mass of the impactor, or a combination of the two.

Out-of-Position (OOP) Testing

If the dummy is likely to be exposed to air bags in its intended regulatory use, the dummy may be exposed to a series of OOP air bag tests.

Sled Testing

Sled testing of the dummies is typically performed at FMVSS and at NCAP/SNCAP crash test energy levels. For side impact dummies sled testing is normally performed in a flat wall sliding hard-seat type buck with and without wall padding.

Crash Testing

A candidate dummy is typically subjected to full-vehicle crash tests in the anticipated FMVSS or NCAP/SNCAP test configuration.

Reference

Rhule, D., Rhule, H., Donnelly, B., The Process of Evaluation and Documentation of Crash Test Dummies for Part 572 of the Code of Federal Regulations. 19th International Technical Conference on the Enhanced Safety of Vehicles, No. 05-0284