

INSURANCE INSTITUTE FOR HIGHWAY SAFETY

October 6, 2003

The Honorable Jeffrey W. Runge, M.D.
Administrator
National Highway Traffic Safety Administration
400 Seventh Street, S.W.
Washington, D.C. 20590

**Federal Motor Vehicle Safety Standards; Occupant Crash Protection
5th Percentile Female in Belted 35 mph Barrier Test
Docket No. NHTSA-03-15732**

Dear Dr. Runge:

The National Highway Traffic Safety Administration (NHTSA) has asked for comments on a proposed amendment to Federal Motor Vehicle Safety Standard 208 that would increase from 30 to 35 mph the speed of the full-width barrier test involving 5th percentile belted female dummies. Effective September 1, 2007, this amendment would bring the high-speed, rigid-barrier test requirements in line with those for tests involving 50th percentile male dummies.

The Insurance Institute for Highway Safety does not support this proposal. NHTSA has failed to provide a clear assessment of the benefits of the proposal and has offered little compelling evidence to indicate that vehicle design changes resulting from this rule would be meaningful in real-world crashes.

Other measures to improve frontal crash protection would prove far more beneficial. These include offset deformable barrier or pole tests, which are more representative of real-world crash scenarios.

The vehicles NHTSA tested in preparation for the proposal are not representative of the vehicles now entering the marketplace; in particular, none were designed to meet the new test requirements of the advanced airbag rule. In some of the tested vehicles, injury assessment reference values were exceeded because the 5th percentile female dummy interacted with the deploying airbag. NHTSA's cost-benefit analysis does not take into account any of the technological advancements in occupant restraints resulting from the advanced airbag rulemaking, which begins to be phased in with 2004 models. Such advancements should reduce injuries from interaction with the deploying airbag. Therefore, the minimal reductions in deaths and injuries that NHTSA anticipates by adopting the new test speed requirement are not likely to result.

The fundamental question is whether increasing the maximum speed of the rigid-barrier test ultimately will lead to better occupant protection. For a number of reasons, the Institute believes it will not:

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1. Full-width, rigid-barrier crash tests are not representative of most real-world crashes. They do not simulate the forces, intrusion, and crash durations that result from vehicle-to-vehicle crashes, whether distributed or offset; nor do they simulate crashes with narrow objects such as trees or poles.

2. Because of its complexity, the advanced airbag rule will require a balancing act to maintain occupant protection in high-speed crashes while minimizing injuries to occupants who may be close to deploying airbags. By potentially further increasing the complexity of the restraint system, the proposed rule would increase the possibility of a system failure.

3. Countermeasures to improve 35 mph test performance cited by NHTSA are far too test-specific and are not likely to result in real-world injury reduction. For example, tweaking of airbag and pretensioner firing times in an artificially short-duration crash test is not likely to improve protection in most real crashes with longer crash durations. Similarly, NHTSA states that manufacturers could meet the new requirements by modifying the lengths of seat tracks so the full-forward seating position required in the test is farther away from the steering wheel. NHTSA is missing the point. Dummy seating positions in crash tests should be based on where drivers really sit, not on some arbitrary seating position that can be manipulated to optimize crash test results. The agency should focus its efforts on changing its regulations so anthropometric data are used to determine seating positions during tests, as the Institute has petitioned (September 5, 2002 petition). In fact, we will change our own testing procedures, beginning in 2004, to reflect the changes we requested of NHTSA.

For these reasons, tests conducted at higher speeds do not necessarily result in better occupant crash protection. NHTSA should maintain the 30 mph test speed for 5th percentile belted female dummies. Because the proposed tests would increase the complexity of restraint systems, without addressing real-world crash situations, the Institute believes NHTSA should instead pursue a change in its frontal crash test procedure, moving away from rigid-barrier tests.

Sincerely,

A handwritten signature in black ink, appearing to read 'J. M. Nolan', with a long horizontal flourish extending to the right.

Joseph M. Nolan
Vice President, Research

cc: Docket Clerk, Docket No. NHTSA-03-15732