

**INSURANCE INSTITUTE
FOR HIGHWAY SAFETY**

July 31, 2000

The Honorable Rosalyn G. Millman
Deputy Administrator
National Highway Traffic Safety Administration
400 Seventh Street, S.W.
Washington, D.C. 20590

**49 CFR Part 575
Consumer Information Regulations;
Federal Motor Vehicle Safety Standards;
Rollover Prevention
Docket No. NHTSA 2000-6859**

Dear Ms. Millman:

The Insurance Institute for Highway Safety is pleased to see some progress by the U.S. Department of Transportation in providing information for consumers about vehicle rollover risk. Rating rollover risk will allow consumers to consider this important vehicle characteristic when shopping for new cars and light trucks. However, this is only the beginning of what should be a major effort to reduce the number of rollover crashes.

Information on the vehicle static stability factor (SSF) and rollover risk has been in the literature dating back to the 1960s, and the relationships have been demonstrated numerous times, both on the test track and in real-world crashes. The recent statistical analysis by the National Highway Traffic Safety Administration, included in this docket, adds to the body of research. The proposed rollover rating system is based entirely on this new statistical analysis, which raises some questions especially because the analysis could be strengthened.

Many factors other than vehicle stability affect the likelihood of rollover in single-vehicle crashes. Some of these such as speed, road curvature, and driver age are accounted for in the new analysis. However, one very important factor -- the rural nature of the road -- is excluded from the final equation. This has the likely effect of overstating the relationship between SSF and rollover risk. The vehicles in the analysis with low SSFs (light trucks) had more rural exposure than the vehicles with high SSFs (cars). Vehicles running off the road in rural areas are much more likely to roll than those running off the road in urban areas because of the increased presence

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of tripping mechanisms and because of roadside embankments, ditches, etc. The road curvature variable may account for some of the urban/rural differences in exposure, but it seems likely that some of the correlation between SSF and rollover risk in this study is due to low SSF trucks having more rural exposure.

The Institute recommends revising the statistical analysis to account for differences in rural versus urban exposure. It is likely that the relationship between SSF and rollover risk will still be useful for consumer ratings, but it is important that the analysis underpinning this consumer information account for as many nonvehicle rollover risk factors as possible.

There is overwhelming evidence that some vehicles have a higher rollover risk than others, and much of these differences are due to vehicle design characteristics. Everything else being equal, vehicles with high centers of gravity and narrow track widths will roll over more often than vehicles with lower centers of gravity and wider track widths. The rollover risk for some vehicles has been unacceptably high. This means it is imperative for the National Highway Traffic Safety Administration to consider its proposed consumer information as little more than a small first step toward a rollover performance standard. Only a standard can guarantee that vehicles are designed to provide reasonable resistance to rollover.

Sincerely,

A handwritten signature in black ink, appearing to read "Charles M. Farmer". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Charles M. Farmer, Ph.D.
Senior Research Analyst

cc: Docket Clerk, Docket No. NHTSA 2000-6859