



U.S. Department
of Transportation
National Highway
Traffic Safety
Administration

Scheener
Memorandum

*cc: Faluci
William
Kitchcock*

Subject: Comments on Draft Evaluation of
Senator Wirth's Petition on
Vehicle Rollover

Date: **APR 17 1987**

Stephen L. Oesch
From: Stephen P. Wood
for Assistant Chief Counsel for Rulemaking

Reply to
Attn. of.

To Associate Administrator for Rulemaking

This responds to your request for comments on a draft evaluation of a petition submitted by Senator Wirth with respect to vehicle rollover. My first comment is that you have done a commendably thorough job of gathering and analyzing the voluminous data pertaining to this complex subject for your draft evaluation. The time that you have spent in preparing this draft evaluation will enable the agency to better discuss and respond to this petition.

Senator Wirth's petition asked the agency to do four things in response to the vehicle rollover problem. These were:

1. Initiate a rulemaking to establish a Federal motor vehicle standard to limit the rollover propensity of passenger cars, light trucks, and multipurpose passenger vehicles (MPV's), by requiring that those vehicles have a certain stability factor;
2. Open a defect investigation of those existing vehicles whose stability factor is less than the minimum required by the above-requested safety standard;
3. Obtain stability factor information for all vehicles being sold in this country and publish that information to make it available to the public; and
4. Take immediate steps to warn owners of vehicles with the greatest propensity for rollover about the limits of these vehicles and provide owners with information about the steps they can take to reduce the chances of death and injury from a vehicle rollover.

The stability factor to which the petition refers was defined as one-half of a vehicle's track width divided by the height of the vehicle's center of gravity. According to a research paper done by Robertson and Kelley, vehicles whose stability factor is less than 1.2 are excessively prone to



rollovers. Based on this research paper, Senator Wirth's petition asks us to establish a safety standard requiring all new vehicles to have a stability factor of at least 1.2. Based on your review and analysis of the available data, you recommend a denial of the first three parts of this petition and a grant of the fourth part. I have a number of concerns with both of these recommendations.

If we interpret Senator Wirth's petition narrowly and focus solely on the request to establish a vehicle stability factor as the solution to utility vehicle rollovers, I concur that we should deny it. Your statistical analyses appear to fully substantiate your conclusion that a vehicle's stability factor is not an accurate predictor of rollover accident involvement. However, if we focus on the broader issue of utility vehicle rollover and the petition as seeking some agency action to mitigate that problem, denial of the petition is difficult to justify. The data and analyses in your draft evaluation confirm that rollover is a significantly greater hazard for utility vehicles than it is for other vehicle classes. As you know, the agency currently has research in progress to try to quantify the relationship between a vehicle's center of gravity height and its rollover and rear wheel lockup propensity. Moreover, Figures 5 and 6 of the draft evaluation suggest that a requirement that utility vehicles have some minimum wheelbase could significantly reduce rollovers for these types of vehicles.

Given the publicly available data on this subject, I fear that we would look either uninformed or nitpicking by denying a petition on a subject that we agree appears to present a significant safety-related problem, simply because the petition's proposed solution to the problem would not be effective. I think it would be more appropriate to grant this petition. We could explain in the grant notice that the vehicle stability factor suggested in the petition apparently is not the answer to the problem of vehicle rollover. However, the notice would mention the ongoing research and state that the agency would continue to seek answers to the problem of utility vehicle rollover. This course of action would acknowledge both the potential safety hazards associated with vehicle rollover and this agency's responsibility to protect the public from such hazards. It would also make clear that there is no simple solution, such as requiring some vehicle stability factor, to this potential problem.

With respect to the petition's request for warnings to owners of utility vehicles, you recommend that the agency publish and distribute dashboard stickers and information pamphlets similar to those required by 49 CFR §575.105 for all utility vehicles manufactured after September 1, 1984, and distribute those pamphlets and stickers to owners of utility vehicles manufactured before September 1, 1984.

This recommendation was based on the conclusion that, "The analysis of the impact of the PTC warning on [Jeep CJ] accident involvement indicates the possibility of significant reductions in single vehicle accidents by altering driver behavior through information." This analysis, shown on pages 9 and 10 of the draft, shows that the reduction in single vehicle fatal accidents for the Jeep CJ was significantly greater than the reduction in rates for other vehicles, after the PTC warnings were sent

out. I am not sure that this point is very convincing. Table 5 in your evaluation shows that the single vehicle fatal accident rate for CJ's decreased from 3.87 times the rate for other utility vehicles before the warning to 3.28 times the rate for other utility vehicles after the warnings, and from 6.78 times the rate for passenger cars before the warning to 5.51 times the passenger car rate after the warning. While the reductions are no doubt significant, the level to which the single vehicle fatal accident rates has been reduced is still significantly greater than that for other vehicles. In fact, these fatal accident rates before and after the FTC warning could justifiably be interpreted as showing that, while the FTC warning may have reduced the CJ rates, the CJ rates remained significantly higher than even comparable vehicles after the warnings were issued. For this reason, I am concerned about using such data as the basis for saying that information labels could be a substitute for rulemaking action in this area.

cc: Associate Administrator for Enforcement
Associate Administrator for Plans and Policy
Associate Administrator for Research and Development