news

Subcommittee on Telecommunications, Consumer Protection and Finance

House Energy and Commerce Committee

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Chairman

Rep. Matthew J. Rinaldo
Ranking Minority Member

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WIRTH PRESSES TRAFFIC SAFETY ADMINISTRATION FOR ACTION ON ROLLOVER CRASHES

D.C. -- Rep. Tim Wirth, (D-Colo.) today called on the National Highway Traffic Safety Administration to take steps to protect people who drive jeeps and jeep-type vehicles from getting killed in rollover crashes.

"I want to see people enjoy these vehicles and not get hurt. The designs of some of these vehicles are so unstable that a high potential exists for death or serious injury," said Wirth, chairman of the Telecommunications, Consumer Protection and Finance Subcommittee, which has jurisdiction over automobile safety.

Several recent studies provide mounting evidence that certain utility vehicles will roll over when driven at speeds as low as 22 miles per hour in emergency situations. Because of the specific designs, the Jeep CJ-5 and CJ-7 and the pre-1978 Ford Bronco are the three most likely vehicles in this category to roll over, causing injury and or death to their drivers and passengers.

"Although these vehicles aren't being manufactured any longer, there are more than 400,000 still on the road and each of those vehicles poses a possible threat to innocent lives. The government has done nothing to prevent these designs from being used in the future.

"I am asking the National Highway Traffic Safety Administration to set standards to ensure the stability in future manufacture of these vehicles, and to take immediate steps to increase passenger and driver safety by identifying other unstable vehicles and warning people about them."

Wirth filed a petition today with the National Highway Traffic Safety Administration, NHTSA, which calls on Administrator Diane Steed to:

- Set federal motor vehicle safety performance standards for future manufacture of vehicles, which limit factors that contribute to rollovers in passenger cars, utility vehicles and pick up trucks;

more...

NINETY-NINTH CONGRESS

U.S. House of Representatives

SUBCOMMITTEE ON TELECOMMUNICATIONS,
CONSUMER PROTECTION AND FINANCE
OF THE
COMMITTEE ON ENERGY AND COMMERCE
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September 15, 1986

Honorable Diane K. Steed
Administrator
National Highway Traffic
Safety Administration
400 - 7th Street, S.W.
Room 5220
Washington, D.C. 20590

Dear Ms. Steed:

I am writing to request that the National Highway Traffic Safety Administration (NHTSA) immediately open proceedings to ensure the safety of the thousands of Americans who own Jeep-type vehicles which are unusually prone to roll over, causing death or injury to their occupants.

A new and important study conducted by A.B. Kelley and Dr. Leon Robertson points to the overwhelming need for NHTSA to take corrective and proactive action to ensure the public safety. This study isolates the cause of rollover when measured against many other factors including the age of the driver, miles driven, and alcohol use. I believe this new study addresses many questions which have heretofore been unresolved, and provides a basis for setting an objective and practicable safety standard.

This petition seeks the following actions by the National Highway Traffic Administration:

1. Propose a rulemaking to establish a federal motor vehicle safety performance standard, based on objective stability-factor criteria, to limit the rollover propensity of passenger automobiles, utility vehicles and pickup trucks.

2. Open or reopen a defect investigation covering makes and models of such vehicles whose propensity to roll over, based on their stability factors, exceeds that of the standard proposed above.

3. Obtain and publish information as to the stability factors and resulting rollover tendencies of vehicles being manufactured for sale in this country, including on-off road vehicles, passenger vehicles and pickup trucks, and make this information available to the public.

4. Take immediate steps to warn owners of vehicles with the greatest propensity for rollover about the limits of these vehicles and the steps they can take immediately to prevent death and injury.

Background

Since 1971 the National Highway Traffic Safety Administration has been aware that severe and unusual problems of rollover are associated with passenger vehicles possessing certain stability -- or more appropriate, lack of stability -- characteristics. Further, it has been aware that the occupant crash protection features of those vehicles have been severely deficient, especially when compared with those of more stable vehicles.

Three vehicles in particular have stood out in these respects -- the Jeep CJ-5 and CJ-7 models manufactured and sold by AMC Corporation until a few model years ago and the Bronco model manufactured and sold by Ford Motor Company prior to 1978. Some 450,000 of the former and some 50,000 of the latter two models are still on the highways.

In 1971, then-NHTSA Administrator Douglas Toms demonstrated the agency's concern about rollover when he notified the U.S. Army of NHTSA'a refusal to allow the sale to civilians of surplus M-151 military jeep-type vehicles. Toms based the refusal on the vehicles' handling and stability problems, and noted that rollover crashes accounted for 30 percent of all M-151 crash involvements. (Subsequent studies have found the figure to be an even more alarming 65 percent).

In 1973 NHTSA issued two advance notices proposing rulemaking to limit rollover tendencies in passenger vehicles, and later commissioned a series of studies to analyze the handling and rollover characteristics of a number of vehicles, including utility vehicles such as the CJ and Bronco models. The Motor Vehicle Manufacturers Association, American Motors Corp., its Jeep Corp. subsidiary and other car companies argued against the rulemaking.

Of interest, Jeep Corp. noted in its argument that "the most significant difference between on-road and off-road vehicles (in terms of rollover resistance) is the ratio of center of gravity height to track width. Considerations for ground clearance and mobility require that this ratio for an off-road vehicle must be significantly greater than for an on-road vehicle. This means that, on an absolute grading scale, it is likely that the inherent tendency for rollover would be greater than that of a typical passenger car..."

It is worth noting that, at the time, the company was aggressively marketing and advertising CJ models for on-road as well as off-road use. Additionally, other utility vehicles, including the post-1978 Bronco and the Chevrolet Blazer, have center of gravity-track width ratios considerably more favorable to stability, and also have histories of lower crash involvements due to rollover.

In 1978 NHTSA dropped its rulemaking proceeding on the basis of a

study indicating that although utility vehicles and some pickup trucks would roll over on pavement surfaces and under conditions in which passenger cars could not be rolled over, the development of repeatable test procedures to replicate real-world driving conditions -- believed at the time to be a prerequisite to a rollover safety standard -- could not be developed.

In 1979, at the request of Edward W. Barrows, a California resident whose son was killed in a CJ-5 crash, NHTSA opened a defect investigation into the stability and crashworthiness characteristics of the CJ-5 and CJ-7. A year later, after receiving AMC's assurances that CJ vehicles are safe "when properly driven," NHTSA closed the investigation without action. In a letter disclosing this, an agency official stated that "...our analysis indicates that most instances of instability resulting in rollovers occur under circumstances in which the limits of the vehicle are exceeded."

In the same investigation the agency found no defect in the rollbar provided by AMC on some CJ vehicles, despite evidence that such rollbars were not preventing injuries and is some cases may have been aggravating injuries.

Subsequent studies, data results and demonstrations have added considerable evidence to these early indications that the CJ vehicles, for example, were so aberrantly unstable as to roll over under conditions that would cause few other vehicles to so behave. Further, the studies, data and demonstrations have shown that the CJ vehicles were designed to provide little if any occupant crash protection in these too frequent and, therefore, all too predictable events.

Such studies include the following:

--"On Road Crash Experience of Utility Vehicles," Snyder et al., University of Michigan Highway Safety Research Institute, February 1980.

--"IIHS Vehicle Handling Tests: AMC Jeep CJ-5," Insurance Institute for Highway Safety film and written results, December 1980.

--"A Comparison of the Crash Experience of Utility Vehicles Pickup Trucks, and Passenger Cars," Reinfurt et al., Highway Safety Research Center, University of North Carolina, and Insurance Institute for Highway Safety, September 1981.

--"A Further Look At Utility Vehicle Rollovers," Reinfurt et al., HSRC, UNC, August, 1984 (revised 1985)

--Highway Loss Data Institute Reports V79-2,V80-2, and R83-2, finding excessive injury claims experience for CJ-5 and CJ-7 vehicles compared with other utility vehicles.

-- AMC Jeep CJ Rollovers, Injuries: A Background Paper, A.B. Kelley, November, 1985.

Need And Basis For A Standard

The need for a standard to eliminate the excessive rollover tendencies of some vehicles, such as the CJs, has been made clear by the data and findings discussed above, and by the physical and emotional pain suffered by the injured and the bereaved from injury-producing rollovers of such vehicles and the hundreds of lawsuits they have brought against AMC.

The agency's past rationale for declining to develop a standard was the asserted lack of repeatability of handling tests on which such a standard could be based -- an understandable basis if in fact no such tests were devisable, since the law requires a consistent and dependable test basis for any motor vehicle safety standard.

However, a dependable and objective basis for setting a stability standard to reduce the liklihood of rollover does exist. Indeed, the Jeep Corp. statement opposing a standard in 1973 defined it: "...the ratio of center of gravity height to track width."

A recent study entitled "The Role of Stability In Rollover-Initiated Fatal Motor Vehicle Crashes Under On-Road Driving Conditions" (Leon S. Robertson, Ph.D. and A. Benjamin Kelley, May 1986) concludes that a direct and overriding correlation exists between a particular vehicle's center of gravity (cg) height-track width ratio, on one hand, and its rate of involvement in fatal rollover crashes, on the other. (A copy of this study is attached).

The study examined the fatal rollover crash rates (rollover-initiated fatal crashes as a percentage of all fatal crashes) for 14 passenger and utility-vehicle make models for which cg heights and track widths were established. Using the formula T/2/H, where T is track width and H is cg height, the study developed a stability index for each vehicle, which it then tested against four years of data from the Fatal Accident Reporting System (FARS) maintained by the NHTSA.

In addition to testing the relationship of the stability index factor for the studied vehicles, the study also tested other factors -- such as driver age, alcohol presence, road type, speed, etc. -- to see whether these variables, rather than stability, contributed to the excessive rollover rates of the less-stable vehicles.

The study concluded the following:

o "Both of the lowest stability vehicles by physical measurement, the pre-1978 Broncos and the Jeep CJs, had rollover-initiated fatal crash rates greater than 16 per 100,000 registered vehicles compared to a range of 0.6 to 4.7 for other vehicles. Yet the crash rates of the Broncos and Jeep CJs in other types of fatal crashes were within the range of those of other vehicles. Excess fatal crashes and, therefore, excess deaths in the lowest stability vehicles were thus due to rollover.

o "The percent rollover of all fatal crashes among vehicle makes and models is strongly related to the physical stability measurement of these vehicles. This variable explains about 65 percent of the variation in percent rollover among vehicles in this study..."

o "The inevitable conclusion is that vehicles with lower measured stability roll over more than vehicles with higher measures because they are relatively unstable. They are designed in defiance of the laws of nature." (Emphasis added.)

The three vehicle make-models for which the study found excess rollover involvement in fatal crashes -- CJ-5, CJ-7 and pre-1978 Bronco -- have stability index factors of 1.01, 1.07 and 1.10, respectively. In contrast, the remaining vehicles studied, for which rollover contribution to fatal crashes was much lower, have factors ranging from 1.21 to 1.62.

In its rulemaking to consider an objective standard to reduce the likelihood of rollover, NHTSA should consider these findings as the basis for an objective criterion and require manufactures of vehicles to meet the prescribed stability factor. Certainly a factor of 1.10 has been shown to be unacceptably low.

NHTSA should consider 1.20 as the minimum standard acceptable level of stability. This is well-supported not only by the studies described above, but also by NHTSA's own findings.

Defect Investigation

A 1982 AMC memorandum (attached) calls for "rollover protection -- built into the vehicle body and structure" for the CJ's successor vehicles. It is the lack of such protection on the millions of open-top jeep-type vehicles already made and sold that has caused or aggravated injuries to the occupants when the vehicles experienced excessive and unexpected rollovers.

It is perhaps not possible for the agency to require, or the manufacturers to provide, modifications to raise the centers of gravity or widen the tracks of such vehicles still on the roads. However, it is very feasible for the agency to require, and manufacturers to provide, adequate occupant protection for those vehicles by means of a retrofit program.

The effectiveness of properly designed and retrofitted roll cages in substantially reducing the likelihood of injury in rollover crashes has been dramatically demonstrated by AMC itself, in fact, and in a very public setting. The company has provided retrofit rollcages for drivers of CJs in the televised "Celebrity Challenge" events in which popular entertainers compete in "scrambling" races on dirt courses. The taped replays of these events show clearly how well the rollcages protect the rollover occupants of the racing CJs from virtually all injury.

Clearly all our citizens deserve the same protection against death and injury as celebrities have been provided.

Public Information and Awareness

Despite labeling requirements and information provided to purchasers of utility vehicles concerning safe operation of these vehicles it is clear that many Americans are not aware of important safety precautions that they can implement immediately. Therefore, I am requesting that while NHTSA is considering this petition, and while standards are being developed and investigations pursued, the agency take immediate steps to educate the public on how to drive safely in these vehicles.

Clearly important safety information provided by manufacturers themselves over the years should be re-issued to benefit vehicle owners that may need reminding of safety precautions. Many new owners who purchased these vehicles used, may never have received such information, and thus would benefit by such a public information campaign.

The public information campaign should be specific to makes and models which have proved to be the most hazardous. Generally warning the public to drive slowly or carefully will do little to focus attention on specific problems associated with specific vehicles.

Additionally, NHTSA should obtain and publish information concerning stability factors of vehicles manufactured for sale in this country. Such information could be very important to the decisions of many prospective purchasers, and indeed could be vital to their safety. In this way purchasers could compare their intended uses of the vehicle with the stability of the vehicle.

Conclusion

1. The huge and deadly role of rollovers in initiating fatal and serious-injury crashes of Jeep CJs, pre-1978 Broncos and possibly other vehicles with low stability factors is a direct consequence of their cg height-to-track width relationships. NHTSA should set a safety standard to require the manufacture of passenger, utility and pickup vehicles with acceptable stability factors, so as to minimize the propensity for rollover.

2. The failure of manufacturers to provide unstable vehicles with adequate occupant crash protection -- a particulary disturbing failure since users of these vehicles require that protection even more than other motorists -- has contributed to the increased levels of fatal and serious injuries. NHTSA should open or reopen appropriate defect investigations with the goal of requiring availability, through retrofit programs, of adequate occupant crash protection for owners of such vehicles.

3. The stability factors of passenger and utility vehicles and pickup trucks now being sold to the American public should be obtained

and published by the agency. Such a consumer information effort will lead to greater awareness of the handling, rollover and injury hazards associated with vehicles having unacceptably low stability factors, and a greater awareness on the part of present owners of such hazards.

4. NHTSA should immediately commence a public information campaign to warn owners of vehicles with low stability factors of safe driving precautions.

In advance, thank you for your attention to this important issue. I urge you to pursue immediately the actions requested by this petition to ensure the safety of the thousands of Americans who own these vehicles, and to ensure that future models of utility vehicles are designed for the safety and enjoyment of their occupants.

I look forward to working with you.

With best wishes,

Sincerely yours,

Tim Wirth

Timothy E. Wirth
Chairman