

Rollover Worry Plagues Utility Vehicles

Memos Outline Safety Concerns Of Jeep's Maker

By JOHN R. EMSWILLER
Staff Reporter of THE WALL STREET JOURNAL

For nearly a decade, the National Highway Traffic Safety Administration has been looking into charges that Jeeps and other so-called utility vehicles tip over too easily.

So far, it's done little but look. All NHTSA has to show for its efforts is a 1984 requirement that such vehicles, which are designed for use both on and off the road, prominently display labels warning that they don't handle the same as cars and could roll over in certain maneuvers.

Only last summer, a recommendation by top agency officials about setting federal rollover standards was vetoed by Diane Steed, NHTSA's administrator, according to recently obtained internal agency documents. (NHTSA declines to comment on grounds that the matter involves private agency discussions.)

Amid all the inactivity, however, complaint about the problem is mounting—as is evidence. Documents have lately come to light indicating that engineers at American Motors Corp. itself, whose Jeep has been the centerpiece of NHTSA's investigations, have raised questions about the stability and safety of certain Jeep models.

A 'Great Travesty'

The failure to do more about the rollover problem is "one of the great travesties of auto safety," says Benjamin Kelley, a former federal auto-safety official who is now president of the Institute for Injury Reduction, a research group founded by plaintiffs' lawyers.

Adding urgency to the issue is the fact that utility vehicles are among the hottest automotive sellers now, claiming about 6% of the market, up from less than 2% a decade ago. Currently, there are some five million utility vehicles on the road.

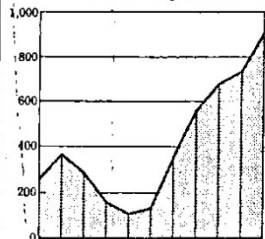
A recent NHTSA study estimates that such vehicles are involved in rollover accidents two to three times more frequently than passenger cars. Moreover, while 24% of all deaths in cars occur in rollovers, the rate is 66% in utility vehicles. This represented more than 600 fatalities in 1986, with thousands more injured.

Several vehicles have drawn criticism. For example, NHTSA recently received a petition from the Center for Auto Safety, a private Washington-based watchdog group, requesting a defect investigation into the Suzuki Samurai, a hot-selling new utility vehicle from Japan. Suzuki Motor Co.'s U.S. sales arm strenuously denies any stability problem.

And a study released earlier this month by Leon Robertson, a private researcher, suggests that Ford Motor Co.'s Bronco II and General Motors Corp.'s S-10 Blazer and Jimmy utility vehicles, have relatively high rollover rates. A GM spokeswoman says the company hasn't reviewed the study but adds that the two vehicles meet all applicable federal safety standards; a

Rising Utility Vehicle Sales: How Big a Risk?

Unit sales of utility vehicles



Source: Chrysler Corp.

Fatalities due to rollovers

VEHICLE TYPE	ROLLOVER DEATHS PER MILLION VEHICLES	% OF FATAL ACCIDENTS INVOLVING ROLLOVERS
Small car	68.7	26%
Large car	26.6	21
Small van	47.8	31
Standard van	54.4	40
Small pickup	127.7	45
Standard pickup	90.8	45
Utility vehicle	155.7	66

Source: A 1988 report by the National Highway Traffic Safety Administration, based on 1984 fatality data

Ford spokesman says the Bronco II is a "well-designed" and safe vehicle.

NHTSA's main focus, however, has been the most famous—and to some, the worst—alleged tumbler: the Jeep. Though the models most suspected of problems, the CJ-5 and CJ-7, went out of production in 1986, about 450,000 are still in use, and they remain at the center of the rollover dispute.

Indeed, Jeep CJ's were specifically mentioned as a possible target for recall in the petition from Sen. Timothy Wirth (D., Colo.) that prompted NHTSA's deliberations last summer. Besides asking for minimum stability standards for all new utility vehicles, Sen. Wirth wanted the agency to look at recalling older vehicles that didn't meet the standard.

Four major NHTSA departments, including the one for rule making, favored granting the Wirth petition, the internal agency documents show. Even after Ms. Steed's decision, the research-and-development department continued arguing within the agency for the measures.

Over the years, American Motors, which was purchased last year by Chrysler Corp., has vigorously defended the Jeep as safe and, like other auto makers, argued against such efforts to set federal rollover standards.

In-House Concerns

But internal American Motors documents—including memos, charts and meeting minutes—cast doubt on the company's safety claims. Some of these documents have been used in a handful of the more than 1,000 Jeep rollover lawsuits to date.

While Chrysler officials discount the importance of the documents, they agree that Jeeps and other utility vehicles tend to be less stable than standard automobiles. Since a utility vehicle has to be able to go over rocks and through gullies, it is relatively narrow and sits high off the ground. As with any object, the higher the center of gravity and the narrower the base, the easier it is to tip over.

But the stability difference is small and doesn't really matter, auto-company officials contend. "In the typical accident, there is more than enough energy to roll over any vehicle," says James Thornton, a former director of Jeep engineering.

Chrysler officials add that the rollover statistics for utility vehicles may be

skewed by factors that have nothing to do with design. Jeeps, they argue, may be driven in places and in ways that expose them to more rollover risks. Due to insufficient data, "a valid rollover study can't be done," asserts Kent Joscelyn, a Chrysler attorney.

These officials deride as "junk science" the Jeep testing done by critics, in which rollovers have occurred at speeds as low as 22 miles an hour. The tests are run under artificial conditions that don't occur in the real world, company officials maintain. (See accompanying story.)

American Motors in 1981 hired an outside contractor to put Jeeps through some maneuvering tests. The contractor concluded the Jeeps weren't susceptible to rollovers unless subjected to steering maneuvers that "greatly exceed" those used by "average drivers."

Yet in those tests, a Jeep rolled onto its side while taking a turn at about 22 miles an hour—confirmation, critics say, of its instability. Kenneth Gluckman, a Chrysler assistant general counsel, dismisses that mishap as a case where the driver "just steered quickly and was going too fast," and says the same result could have occurred with other vehicles.

More damaging to the Jeep's defense, though, were discussions going on inside American Motors.

Over the Limit?

Among the documents that have surfaced in lawsuits is one written in 1979 by American Motors' department of advanced vehicle engineering, citing "deficiencies to be corrected" in the CJ-5 and CJ-7. Topping the list are "handling, stability, rollover characteristics." In another 1979 memo, Dennis Renneker, then the department's director, wrote that the CJ-7 would "probably roll over quite easily" in a test in which the typical car would just skid.

Mr. Renneker also wrote in the same year that the Jeep CJ-7 failed to meet the "true safe design limit" against rollovers. Mr. Renneker recommended giving the vehicles a wider track and a lower center of gravity. "While not a cure for rollover, I believe (this) would make a significant improvement," he wrote.

Another major area where private records conflict with public pronouncements involves the roll bars installed on open-top CJ's to keep passengers from being crushed in rollovers. Chrysler officials say

Jeep roll bars are so strong that they offer more protection than a car roof.

As long ago as 1973, however, doubts about Jeep roll bars were being raised within the company. In a memo recently obtained by this newspaper, D.C. Mallett, an American Motors safety engineer, wrote to the director of Jeep engineering at the time that the "integrity" of the roll bars "appears to be questionable" and "doesn't appear to meet Jeep engineering requirements."

Mr. Mallett asked for testing to "establish that the roll bar will provide a customer the protection he thinks he is buying and, in fact, will not cause further severe injury." Roll-bar integrity was also on the 1979 "deficiencies to be corrected" list.

Perhaps most telling were some 1980 maneuvering tests of the CJ-5. American Motors acknowledges that it decided the version being sold to the public didn't offer enough protection for the test driver in the event of a rollover. So it added reinforcements to the roll bar and window frame of the test vehicles. Critics say the company didn't make significant stability and crash-protection improvements in production models until 1986, when it replaced the CJ series with a new vehicle, the Wrangler.

The internal documents apparently have begun costing Chrysler. In 1986, a jury in St. Lucie County (Fla.) State Court, which saw some of the documents mentioned above, awarded \$19.5 million to a 29-year-old woman who was left quadriplegic after a rollover accident. Chrysler appealed, but earlier this month it settled the case for \$11.5 million.

In another 1986 rollover case, heard in Santa Clara County (Calif.) State Court, attorney David Rude says internal company documents were "critical" to his winning a \$550,000 verdict for his clients. "They established to the point of overkill that the company knew it had a serious rollover problem," says Mr. Rude. Chrysler is appealing the verdict.

'We Can Neutralize Them'

The documents are "extremely damaging when first shown," concedes Mr. Gluckman, the Chrysler lawyer. "But if we get a fair hearing, we can neutralize them." The company says that it has won four of the seven cases where the documents were used.

He and other company officials say the documents aren't evidence of safety problems. For instance, Mr. Renneker, now an engineering director with Chrysler, says he never believed the Jeep CJ's were unsafe. His documents were just "talking papers" to stimulate discussion on new vehicle designs, he says, adding, "Some of the things I wrote may not have been worded as well as they should have been."

And adding roll-bar reinforcements in the 1980 tests wasn't meant to signal a lack of faith in the Jeep's crashworthiness, Chrysler officials maintain. It was merely that the test driver was going to be exposed to some "very dangerous situations," says Mr. Gluckman.

Nor, the company points out, did it try to hide documents criticizing the Jeeps. Chrysler officials say the existence of the 1973 roll-bar memo wasn't disclosed because they didn't know it existed until contacted by this newspaper. The officials dismiss the memo as merely the observations of one engineer.

SUV Rollovers Explained

Parenting, October
1989

On July 3, 1987, James Broach, his wife, Clara, and their five-year-old daughter, Ashley, were driving through Georgia in their 1983 Chevrolet S-10 Blazer, a sport utility vehicle (SUV). During the trip, a passing car clipped their rear fender as it tried to overtake them. Police reports indicate that the Blazer sped across the highway divider, where it rolled over and, landing on its wheels, continued into the oncoming lanes. When it reached the paved shoulder on the other side of the highway, it flipped twice more. Clara, belted in the passenger seat, was partially ejected as the car rolled, and her torso, protruding from the window, was caught under the vehicle. She was killed instantly. Ashley was thrown from the car; miraculously, her injuries were not severe. James escaped unhurt.

Broach filed a lawsuit against General Motors Corporation, the maker of the car, claiming manufacturer negligence. When the case comes to trial this winter, Broach's lawyer will argue that the Blazer showed an "inherent propensity to roll over." Another car in the same circumstances, he will charge, would not have rolled. This, he asserts, coupled with an allegedly faulty seat belt that failed to hold its lock, was responsible for the death of Clara Broach. Because the case is pending, attorneys for General Motors declined to comment on the lawsuit.

H. Keith Brewer of the Department of Transportation's National Highway Traffic Safety Administration says SUVs, as a class, are more

vulnerable to rollovers than any other class of vehicle. They are involved in rollover accidents two to three times more often than passenger cars. He adds that while some SUV models are safer than others, all sport utility vehicles are potentially at risk of rolling over because they sit higher off the ground. (An independent study showed that one SUV, the Jeep Cherokee, has a good rollover record.) According to Department of Transportation (DOT) statistics, a person in an SUV is six times likelier to be involved in a fatal rollover than someone in a large passenger car, three times likelier than someone in a medium-size car, and slightly less than two-and-a-half times likelier than someone in a small car.

Words of Warning

Since 1984, manufacturers have been required to put a sticker on most SUVs warning drivers about rollovers: "This is a multipurpose passenger vehicle which will handle and maneuver differently from an ordinary passenger car, in driving conditions which may occur on streets and highways and off road. As with other vehicles of this type, if you make sharp turns or abrupt maneuvers, the vehicle may roll over or may go out of control and crash."

As Tom Wood, an engineer at General Motors, told *Parenting*, SUVs have "some characteristics that make them more susceptible to rollovers: They have a high center of gravity, a narrow wheelbase, and they're boxy." Measured together, these characteristics make up what is

known as a vehicle's stability factor, explains Leon Robertson, a public-health lecturer at Yale University and a nationally known expert in the field of injury prevention.

Robertson examined five years' worth of accident reports involving 1,100 sport utility vehicles and has concluded that it's the stability factor that most heavily determines whether or not a vehicle will roll over. Some SUV manufacturers claim that the high rollover rate is inflated by adventuresome drivers who take their vehicles off of paved roads. But Ben Kelley, president of the Institute for Injury Reduction, a national research group founded by plaintiff lawyers, insists that "it's not the people who drive these vehicles [who cause the rollovers]. It's the laws of physics." Robertson agrees. His research shows that the majority of rollovers occur not on curvy, unpaved roads, but on paved streets and highways.

In the end, the rollover problem will be settled not in the courts but on the drawing board, since it is, according to Robertson, a problem of design. Meanwhile everyone agrees that seat belts, because they prevent ejection, are a passenger's greatest protection: A DOT spokesperson reports that 75 percent of SUV rollover victims die because they are either partially or totally ejected from the vehicle. Given their vulnerability to rollovers, passage of a safety regulation calling for automatic restraints in multipurpose vehicles becomes even more urgent.

Study of utility-vehicle rollovers prompts call for new regulations

By Helen Kahn
WASHINGTON BUREAU CHIEF

Two new studies of utility-vehicle rollovers have prompted a congressman to call for recall of and new government regulations for the vehicles.

The papers were published by former associates of the Insurance Institute for Highway Safety. One, by A. Benjamin Kelley, details rollovers and injuries of the Jeep CJ. The other, by Kelley with Dr. Leon S. Robertson, is on rollover fatalities in general.

One finding is that the CJs and the pre-1978 Ford Broncos (the models given the lowest stability values) had rollover-induced fatal crash rates many times greater than other models: 16 per 100,000 registered vehicles compared with 0.6 to 4.7 for all other models.

Another finding: The lowest stability values are associated with the highest crash rates. About 65 percent of the variation in percent of rollovers is explained by variation in stability, according to the authors.

This finding is unaffected by the age, sex or condition of driver,

weather, time of day, speed, traffic conditions or road surfaces.

To make the fatality rate of the CJ or pre-1978 Bronco like that of other vehicles, it would take males driving an average of about 123,000 miles each year — more than could be reasonably expected, the authors conclude.

At a press conference in Denver, Rep. Tim Wirth, D-Colo., said he plans to ask the National Highway Traffic Safety Administration to investigate whether utility vehicles should be recalled and modified to reduce the likelihood for rollovers and to lower their death and injury rates.

Wirth specifically mentioned using a rollcages and requiring drivers to wear helmets and harnesses.

A spokesman for American Motors noted that Wirth is running for re-election. "The whole thing is a nutty idea," he said. The Jeep, he said, is safe when it is driven in a responsible fashion.

Wirth said that he will also request that NHTSA start to write standards for the future design of all on-off road utility vehicles to minimize the danger of rollover.