

The Sad History of Rollover Prevention – 30 Years, Thousand of Deaths and Injuries, and Still No Safety Performance Standard

Rollover crashes are responsible for a full one-third of all vehicle occupant fatalities, yet meaningful federal action to reduce these crashes has been delayed for more than three decades.

- April 1973 The National Highway Traffic Safety Administration (NHTSA) issues an Advanced Notice of Proposed Rulemaking (ANPRM) on a rollover resistance standard “that would specify minimum performance requirements for the resistance of vehicles to rollover in simulations of extreme driving conditions encountered in attempting to avoid accidents.” No safety standard has ever been issued.
- 1986 NHTSA analysis shows that rollover crashes are the most dangerous collision type for passenger vehicles.
- Sept. 1986 Rep. Tim Wirth, the Chairman of the House Commerce Committee petitions NHTSA to issue a rollover standard based on Static Stability Factor (SSF) – a geometric measurement concerning the relationship between vehicle height and track width.
- Dec. 1987 Rep. Tim Wirth petition denied by NHTSA on the basis that SSF does not accurately predict rollover propensity. SSF was later adopted in the year 2000 as the basis for the agency’s rollover resistance consumer information program, but not as a minimum safety standard.
- Feb./July 1988 The Center for Auto Safety (CAS) and the Safety First Coalition (SFC) petition NHTSA to initiate a defect investigation on the highly rollover-prone Suzuki Samurai.
- June 1988 Consumers Union petitions NHTSA to protect occupants against “unreasonable risk of rollover.”
- Sept. 1988 NHTSA grants Consumers Union petition and states that it is already undertaking research into rollover safety and that the petition is consistent with the agency’s “steps to address the rollover problem.” NHTSA simultaneously denies the CAS and SFC petitions to investigate the Samurai
- 1988 -1993 NHTSA conducts an investigation and data analysis of more than 100,000 single-vehicle rollover crashes.
- Oct. 1991 Congress requests report from NHTSA regarding rollover and roof crush standards (FY'92 DOT Appropriations Act, Pub. L. 102-143, S. Rept. 102-148).

- Dec.1991 Congress requires NHTSA rulemaking to prevent unreasonable risk of rollover. An ANPRM or Notice of Proposed Rulemaking (NPRM) was required no later than May 31, 1992 and completion of a rulemaking action on rollover within 26 months of publication of the ANPRM. Yet Congress allowed the rulemaking to be considered completed when NHTSA either published a final rule or announced that the agency would not promulgate a rule.
- Jan. 1992 NHTSA publishes an ANPRM proposing multiple options for establishing a reasonable metric baseline for acceptable rollover propensity. The ANPRM states that NHTSA is considering regulatory action to reduce the frequency of rollovers and/or the number and severity of injuries resulting from vehicle rollovers. A Technical Assessment Paper was also published discussing testing activities, results, crash data collection and data analysis (NHTSA-1996-1683-4).
- April 1992 NHTSA issues Report to Congress, *Rollover Prevention and Roof Crush*, highlighting the research and its plans to address rollover prevention and survival.
- Sept. 1992 NHTSA delivers the agency's planning document, *Planning Document for Rollover Prevention and Injury Mitigation*,¹ at Society of Automotive Engineers Conference, giving an overview of the rollover problem and the action NHTSA was examining to address it, including vehicle measures for rollover resistance; improved roof crush resistance to prevent head and spinal injury, and improved side window glazing and door latches to prevent occupant ejection.
- June 1994 Rollover standard rulemaking terminated following a cost-benefit analysis that used out-dated late 1980s data regarding the prevalence of light trucks in the vehicle population and ignored the significant trend of increasing rollover-prone vehicles, namely SUVs, as a percentage of new vehicle sales and an increasing presence on the highway.
- June 1994 Secretary of Transportation, Federico Peña, announces NHTSA's plans to substitute a "comprehensive regulatory and information strategy" for the rollover propensity standard. This strategy included 1) a safety sticker to be placed on all vehicles that includes their rollover likelihood rating (watered down following Industry complaint, it now only mentions a generic likelihood of rollover); 2) the consideration of new standards for side windows and door latches (yet to be promulgated); and 3) examination of an upgraded roof crush standard (yet to be promulgated).

- July 1994 NHTSA issues a notice of rulemaking on a vehicle safety consumer information label for rollover stability.
- July 1994 Advocates for Highway and Auto Safety (Advocates) and Insurance Institute for Highway Safety (IIHS) petition NHTSA to reconsider decision to terminate rulemaking on rollover standard.
- Sept. 1994 Congress requires National Academy of Sciences (NAS) study of vehicle safety consumer information (FY'95 DOT Appropriations Act, Pub. L. 103-331, *see* H. Rept. 103-543, Part 1); NHTSA suspends rulemaking on vehicle rollover safety consumer information labeling until study is completed.
- Aug. 1995 Responding to a 1991 ISTEA requirement that NHTSA initiate and complete a rulemaking to address "improved head impact protection from interior components of passenger cars (i.e., roof rails, pillars, and front headers)," the agency issues a final rule amending FMVSS 201 to require passenger cars and light trucks with a GVWR of 10,000 pounds or less to provide greater protection when an occupant's head hits upper interior components (such as A-pillars and side rails) during a crash. A rulemaking intended to address roof crush is thereby transformed into a rule on interior padding. **What does the statute say exactly?**
- March 1996 NAS issues study of vehicle safety information, *Shopping for Safety*², on NHTSA's proposed consumer information program, stating that consumers need more information than they are currently provided and that a safety label, like the one currently used for displaying fuel economy, should be displayed on all new passenger vehicles sold at U.S. dealerships listing standardized safety ratings.
- May 1996 NHTSA issues *Status Report for Rollover Prevention and Injury Mitigation*, with a description of NHTSA's planned development of a dynamic rollover propensity test.
- June 1996 NHTSA re-opens 1994 rulemaking docket on a rollover consumer warning label.
- June 1996 NHTSA denies Advocates/IIHS July 1994 petition for reconsideration of decision to terminate rulemaking on rollover prevention standard, stating that a standard based on static vehicle measurements would eliminate a "very popular vehicle type" – the compact SUV and was not justified on cost-benefit grounds.

Aug. 1996 Consumers Union petitions NHTSA to develop a standard that would produce meaningful, comparative data on the emergency-handling characteristics of various SUVs and to provide test results to the public as consumer information.

May 1997 NHTSA grants CU petition, stating: "NHTSA will initially focus on exploring whether it can develop a practicable, repeatable and appropriate dynamic emergency handling test that assesses, among other issues, a vehicle's propensity for involvement in an on-road, untripped rollover crash."

April 1998 NHTSA issues an NPRM on a SUV rollover warning label for the vehicle visor.

Mar. 1999 NHTSA issues final rule on revised SUV rollover warning label, requiring a rollover warning sticker on the vehicle's visor or window that says "Warning: Higher Rollover Risk" and instructions to avoid abrupt maneuvers and excessive speed, and to buckle up, are written beneath the heading.

June 2000 NHTSA proposes rollover consumer information based on static stability factor (SSF) measurements as part of the agency's New Car Assessment Program (NCAP) that provides comparative vehicle performance information on the agency's Web site, but declines to require that the information be placed on the window sticker at the point-of-sale.

Oct. 23, 2000 Congress funds NAS study of NHTSA proposed rollover information rating based on SSF.

Nov. 2000 Following the Ford Explorer/ Firestone tire tragedy, Congress requires dynamic testing of vehicle rollover be added to NHTSA's consumer information rating program with testing to begin by November, 2002 (TREAD Act, Sec. 12, Pub.L. 106-414).

Jan. 2001 NHTSA begins publishing rollover ratings based on a vehicle's static stability factor (SSF) on the agency's Website.

July 2001 NHTSA issues request for comments on developing dynamic test as basis for rollover rating consumer information program beginning in 2003.

Sept. 2001 According to a Louis Harris poll commissioned by Advocates for Highway and Auto Safety, 85 percent of Americans support a federal rollover prevention minimum standard.

- Feb. 2002 NAS study, *Rating System for Rollover Resistance, An Assessment*, issued. The report recommends that NHTSA expand the scope of its program, consider metrics other than stars, and develop an overall measure of vehicle safety to be integrated into the vehicle label. The NAS also points that NHTSA should evaluate the appropriateness of a rollover rating program in the absence of a minimum standard (the other consumer information ratings, for frontal and side impact crashes, reward performance above a minimum compliance standard).
- Oct. 2002 NHTSA issues NPRM on dynamic test procedure for rollover consumer information.
- Feb. 26, 2003 Senate Commerce Committee holds a well-publicized hearing on SUV safety where Senators, auto industry representatives, the administrator of NHTSA and spokespeople from consumer safety groups speak about the rollover prevention and survivability.
- April 2003 NHTSA publishes *Characteristics of Fatal Rollover Crashes*³ and reports the following:
 - Rollovers are more likely to result in fatality than other crashes are;
 - Rollovers constitute about one-fifth of all fatal crashes;
 - SUVs have the highest rollover fatality rate at 11.06 per 100,000 registered SUVs, followed by pickups at 7.52, vans at 4.09 and cars at 3.48 (for 1999).
- June 2003 NHTSA issues *Initiatives to Address the Mitigation of Vehicle Rollover*⁴ – reporting that rollover mitigation is one of its four major priority areas, but proposing few concrete actions or deadlines. The other three priority areas include vehicle compatibility, safety belt use and impaired.
- July 2003 NHTSA issues *Motor Vehicle Traffic Crash Injury and Fatality Estimates: 2002 Annual Report*⁵, finding that rollover crashes accounted for 82 percent of the total fatality increase between 2001 and 2002. The report also reveals that in 2002, 10,666 occupants were killed in rollovers – one-third of all occupant deaths.
- Oct. 2003 In accordance with the TREAD mandate, NHTSA adopts a “fishhook” maneuver as the dynamic test procedure to be combined with SSF in rollover consumer information ratings and to be used beginning with its 2004 model year tests. .

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NHTSA issues first round of rollover ratings for 14 vehicle models and their corporate twins, based on a new dynamic test/SSF measurement. While the dynamic test provides an indication of on-road performance, the absence of a standard, or performance “floor” means that every vehicle starts with at least one star, and inflates the performance results on the tests (*i.e.*, with a two-star “floor,” vehicles now earning three stars would receive substantially lower ratings).

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Senate passes S.1072, the Safe, Accountable, Flexible, and Efficient Transportation Equity Act of 2003 (SAFETEA 2003), which includes safety provisions concerning rollover that would:

- Mandate a rollover prevention standard that would assure the improvement of the basic design characteristics of vehicles under 10,000 lbs to increase their resistance to rollover (NPRM 6-30-04, final rule not later than 18 months following NPRM);
- Require the consideration of additional technologies that would increase handling and reduce the likelihood of instability (NPRM 6-30-04, final rule not later than 18 months following NPRM); and
- Assign NHTSA to study Electronic Stability Control systems and report to Congress on their findings (due 12-31-05).

Endnotes

¹ Planning Document for Rollover Prevention and Injury Mitigation. Docket 91-68. No. 1. Office of Vehicle Safety Standards, Sept., 13 pp. NHTSA. 1993

² *Shopping for Safety: Providing consumer automotive safety information*, Transportation Research Board, National Research Council, National Academy Press, 1996.

³ NCSA, *Characteristics of Rollover Crashes*, DOT HS 809 438, (Apr. 2002), at 14 and 20; *See also* "Registration Data for 1975-2001

⁴ National Highway Traffic Safety Administration; *Initiatives to Address the Mitigation of Vehicle Rollover.*, 2003. 50 IAMV NHTSA

⁵ National Center for Statistics and Analysis, National Highway Traffic Safety Administration. *2002 Annual assessment of motor vehicle crashes. Motor vehicle traffic crash fatality and injury estimates for 2002*. Washington, DC: NCSA, 2003