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NHTSA's "Comprehensive" Approach to Rollover

The National Highway Traffic Safety Administration (NHTSA) issued a plan in 2003, which outlined its approach to address the troubling number of rollover crashes and casualties. Much of this plan was incorporated into the 2005 transportation law: the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). These measures included electronic stability control (ESC), roof crush resistance and occupant ejection mitigation. Unfortunately, NHTSA's implementation of the rollover occupant protection plan has been disjointed.

Electronic Stability Control

- NHTSA heralded the release of its standard mandating that all cars and light trucks have electronic stability control (ESC) systems by the 2012 model year, as the biggest safety improvement since seat belts.¹
- The agency's economic analysis noted that ESC could have saved 4,200 to 5,500 of the 10,816 rollover fatalities that occurred in 2005 – almost half of all rollover fatalities.
- This is very promising but there is a clear need for better occupant protection for those whose vehicles roll over even with ESC, which is being voluntarily installed on many new vehicles in advance of the 2012 mandate.²

Roof Crush

- NHTSA did not account for the potential impact of ESC on the projected benefits estimated for the 2005 proposed roof crush resistance (roof strength) proposal.³
- In its roof crush resistance Notice of Proposed Rulemaking, NHTSA estimated that its proposed amendment would save 13 to 44 lives.
- NHTSA's piecemeal approach relies too heavily on crash avoidance, leaving occupants at risk in vehicles that roll over. And until there are more ESC-equipped vehicles on the road, the savings are projections.
- NHTSA's 2008 proposal acknowledges the role of ESC but did not update the economic analysis or provide any assessment of the expected change.

Ejection

- NHTSA does not discuss the interaction of roof crush and ejection mitigation, yet they are totally intertwined.
- Occupants are often ejected through vehicle windows; tempered glass windows are more likely to break when the roof above them crushes.
- In 1971, NHTSA said that the static test roof strength standard would no longer be necessary when the dolly rollover test became a requirement. But the dolly rollover was never mandated.
- NHTSA will conduct a separate rulemaking on ejection mitigation, instead of incorporating it into an overall, dynamic occupant protection standard.

NHTSA's piecemeal approach substantially underestimates the benefits of a strong, dynamic roof crush standard and permits NHTSA to establish an unacceptably weak static test for roof crush resistance. The result will not only be less effective, it will lead to inefficient vehicle design.

¹ 72 FR 17236, FMVSS 126, Electronic Stability Control Systems, Final Rule: April 4, 2007. The NPRM was issued Sept. 18, 2006: 71 FR 54712.

² *Ibid.* According to the NPRM, 29 percent of model year 2006 U.S. light vehicles were equipped with some form of ESC: 65 percent of 2011 passenger cars and 77 percent of light trucks and vans will be equipped with ESC.

³ 70 FR 49223, FMVSS 216, Roof Crush Resistance NPRM, Aug. 23, 2005.