



The victim of this crash, Reverend Lawrence Harris, is now a quadriplegic. His vehicle, the Ford E-250, has a strength-to-weight ratio of 2.5 and would pass the government's proposed new standard for roof crush.

## NHTSA's Roof Crush Proposal Fails to Save Lives; Undercuts Compensation for Victims

**The issue:** The National Highway Traffic Safety Administration (NHTSA) proposed a new roof crush resistance safety standard in August 2005. The comment period closes November 21, 2005.

**The problem:** After more than 30 years of inaction, 70 percent of new vehicles will require no upgrade in safety to meet the standard, yet rollover crashes kill over 10,000 people each year – one-third of all occupant deaths. The proposal is so weak it is projected by NHTSA to save only 13 to 44 lives annually – fewer than one-half of 1 percent of rollover deaths.

**NHTSA's proposal is flawed:** The agency's proposal is rife with industry-based junk science:

- 1) **It tests only for the impact of half a roll.** A new law requires testing on both sides, and a July 2004 NHTSA study found that "roof deformation was most severe on the side of the vehicle *opposite the side that makes first contact with the ground.*" Most severe injuries occur when the second side strikes the ground. **Many vehicles that will pass NHTSA's new test will collapse on the second impact.**
- 2) **A strong roof prevents window glass from breaking, keeping people in the vehicle, yet NHTSA ignores the relationship between roof crush and ejection risks.** Dynamic tests confirm that when the roof crushes less than 3 inches, safety glass in side window glazing is preserved, limiting ejection. **In rollover tests of the Volvo XC90, the windows remain totally intact and unbroken even after multiple rolls because there is little roof crush.** When a weak roof collapses, the supporting pillars deform, shattering the windshield and side windows, allowing full or partial occupant ejection.
- 3) **It tests the strength of the wrong roof support and ignores the speed of roof intrusion.** NHTSA's proposal allows the B pillar (beside the front seatback) to absorb the force. In a real rollover, A pillar (near the windshield) strength is essential. Also, the static test ignores the speed of roof intrusion. **When a weak A-pillar buckles, it can cave into the survival space at up to 22 mph, causing severe injury.**
- 4) **It eviscerates automaker incentives to improve on safety and attacks state sovereignty.** The proposal assaults state common law, suggesting that the rule would preempt tort liability for automakers. Yet most of the information about the preventable risks from roof crush has come to light from cases brought by injured plaintiffs. **This unprecedented power grab by federal authorities would leave victims uncompensated and remove any incentive to improve roof strength beyond the minimum required by the agency's weak rule – imposing a ceiling as well as a floor on public safety.**

No roof crush after multiple rolls  
in the Volvo XC-90 –  
What Volvo can do,  
we all deserve.

