Testimony of Joan Claybrook, President, Public Citizen,
Former Administrator, National Highway Traffic Safety Administration
before the
Subcommittee on Commerce, Trade and Consumer Protection of the
House Committee on Energy and Commerce
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Thank you, Mr. Chairman and members of the House Commerce, Science and Transportation Committee, for the opportunity to offer this written testimony on the importance of improvements in vehicle safety. My name is Joan Claybrook and I am the President of Public Citizen, a national non-profit public interest organization with over 150,000 members nationwide. We represent consumer interests through lobbying, litigation, regulatory oversight, research and public education. Public Citizen has a long history of working to improve consumer health and safety.

Vehicle crashes are the leading cause of death for Americans from 2 to 33– and kill 117 people every day of the year. Nearly a third of the people killed die in rollover crashes. The National Highway Traffic Safety Administration (NHTSA) estimates the direct cost in worker productivity and other economic losses from vehicle crashes is $230 billion each year (in 2000 dollars), or $820 for every man, woman and child in the U.S.[1]

The problem is only getting worse. In 2002, highway deaths reached 42,815, the highest level since 1990. An astounding 82 percent of the increase in deaths between 2001 and 2002 occurred in rollover crashes. Rollover-prone SUVs and pickups, combined with vans, now are 49 percent of new passenger sales and 36 percent of registered motor vehicles – a 70 percent increase between 1990 and 2000. Although NHTSA and the auto industry have known about the dangers of vehicle rollover and aggressivity for several decades, safety rules continue to lag far behind these market trends.

Federal regulators acknowledge that the number of lives lost is far too high. Dr. Jeffrey Runge, Administrator of NHTSA, predicted last year in *Newsday* that the total dead could reach *50,000 annually* in 2008. "This is a Vietnam War every year," he said. "That's just not tolerable." Public Citizen agrees – something must be done to address the unconscionably high loss of life on our roadways.

The bi-partisan McCain-Hollings-Snowe-DeWine vehicle safety provisions in S.1072, the Safe, Accountable, Flexible, and Efficient Transportation Equity Act of 2003 (SAFETEA),

would prevent thousands of needless deaths on the highway each year. These measures address long-overdue safety priorities that will continue to cost lives unless they are prioritized by Congress. The bill includes rollover prevention and survivability safeguards, ejection prevention measures, and vehicle compatibility measures. Also important are additional protections for 15-passenger vans and child safety both in and around vehicles. All of these are obvious, common-sense fixes which target the areas where lives may be saved cost-effectively, with feasible and available safety technology and design improvements.

Vehicle Safety Work Left Unfinished by Congress in 2000

In 2000, Congress quickly passed the Transportation Recall Enhancement Accountability and Documentation (TREAD) Act in the wake of the Ford/Firestone tragedy – but as Sen. John McCain (R.-AZ) said on the floor the day the Act was passed, major vehicle safety issues would have to be revisited.

The final bill failed to address key vehicle safety issues raised by the Ford/Firestone tragedy. As Senator McCain said on the floor of the Senate, October 11, 2000:

> *I say to my colleagues again that this issue isn't over. Tragically, I am in fear that there will be more deaths and injuries on America's highways before we finally make it much safer for Americans to be on America's highways.*

The Senator's words are sadly prophetic. Almost all of the 200 lives lost, and 700 known injuries, through the year 2000 from Ford Explorers with Firestone tires occurred when these vehicles rolled over. Since then, numerous lives have been lost when SUVs rolled over in crashes, roofs collapsed upon occupants, or occupants were violently ejected from the vehicle.

While the TREAD Act focused on information collection on defects and upgrades to the tire safety standard, among other items, fixing the tires was not even half of the battle, and many hazards remain unaddressed. We urge the House of Representatives to continue the lifesaving work begun in TREAD by addressing the vehicle to improve safety. The vehicle safety provisions in Title 4 of SAFETEA 2004 would establish rollover prevention and protection standards, anti-ejection standards, a standard to prevent the extensive harm from vehicle mismatch, and other crucial, long-overdue safeguards. It is time to ask American automakers to build a safer, better vehicle.

Cost-Benefit Canards and Auto Industry Myths

While the auto industry claims the "low hanging fruit" in vehicle safety has been picked and that additional regulations will have merely diminishing returns. This is not correct. In rollover crashes alone, 10,600 lives are lost annually – one-third of all occupant deaths – and this crash mode remains virtually unregulated while the death toll rises every year. The industry has known for decades about the need to improve vehicle rollover resistance and roof strength, as well as the problem of vehicle mismatch in crashes, called "compatibility" and need for improvements in child safety. Yet little has been done in these critical areas.

Bipartisan safety provisions in Title IV of the Highway Funding bill, passed by the full Senate on February 12, 2004, would be enormous step towards addressing the lives unnecessarily lost in crashes. The safety hazards addressed by the bill target those areas where new safety rules would do the most amount of good, and are feasible and reasonable next steps.

While the TREAD Act passed in the wake of the Ford/Firestone tragedy provided some new authority for NHTSA, it did not address SUV hazards that continue to cost record numbers of lives each year. Estimates of the lives to be saved are well above the numbers of people killed in the Ford/Firestone tragedy. The measures in the Senate highway bill would save thousands of lives:

- **A new roof crush resistance standard:** 1,400 deaths and 2,300 severe injuries, including paraplegia and quadriplegia, would be prevented each year by a more stringent standard.[2]
- **Improved head protection and side air bags:** 1,200 lives saved, and 975 serious head injuries prevented, would be saved by a new requirement each year.[3]
- **Side window glazing ("safety glass"):** A requirement would save 1,305 lives and prevent 575 major injuries each year.[4]
- **Upgrade to door locks and latches standard:** An upgrade would prevent hundreds of the 2,500 door-related ejection deaths each year.[5]
- **Rollover prevention standard that examines use of electronic stability control (ESC):** Several comprehensive studies estimate that ESC technology reduces deaths and injuries by as much as *one-third* by preventing crashes for occurring in the first place.[10]
- **Compatibility standards for light trucks:** NHTSA research estimates 1,000 lives a year could be saved.[11]
- **Stronger seatback design:** 400 lives saved, and 1,000 serious injuries prevented, each year.[12]
- **Effective seat belt reminders in all seats:** 900 lives each year would be saved by such a requirement.[13]

Preventing these deaths would save taxpayers billions of dollars in direct costs alone, and prevent untold suffering. Requirements for the issuance of new and upgraded rules in all of these areas are contained in the lifesaving NHTSA Reauthorization bill that passed the full Senate. The ongoing public relations effort on the part of the industry to downplay risks and avoid new rules should be dismissed by policy-makers and the media as an avoidance maneuver that is both wrong on the facts, and coldly indifferent to the potential for saving lives.

Answering the industry: A history of select life-saving safety measures since 2000

A recent article[15] cited the auto industry as suggesting that three recent rulemakings demonstrate that safety rules are yielding limited returns: advanced air bags, tire-pressure monitoring systems, and fuel system integrity. In each case, the story has been distorted.

The real story on advanced air bags

In 1991, the Intermodal Surface Transportation Efficiency Act (ISTEA), was enacted into law. ISTEA requires all passenger cars manufactured on or after September 1, 1997, and light trucks manufactured on or after September 1, 1998, to have driver and passenger air bags, plus manual lap-shoulder belts in accordance with the safety standards issued by Secretary of Transportation Elizabeth Dole in 1984. Unfortunately, after arguing for a performance standard, many manufacturers responded by creating cut-rate airbags that were dangerous to children and small adults.

It is important to note that not all airbags, as originally designed, were unsafe. From the beginning, Honda designed airbags that never killed a single child, showing that good design was possible under the Dole rule. The industry in fact has an obligation, which it largely failed to meet, to make designs that encompassed all likely uses by customers, and did not cut corners to achieve the bare minimum for compliance with the standard.

Because of the danger posed by shoddily designed airbags on the market in the early 1990s, new "advanced" airbag rules had to be promulgated to protect children and small-statured women. In 1998, the Transportation Equity Act for the 21st Century (TEA-21) was passed by Congress, requiring that airbag safety "improve occupant protection for occupants of different sizes, belted and unbelted…while minimizing the risk to infants, children, and other occupants from injuries and deaths caused by air bags, by means that include advanced air bags."

In 2000, NHTSA promulgated a new advanced airbag rule, but caved to auto industry pressure and decreased the test speed from 30mph to 25mph. Public Citizen and other safety groups have challenged the decision to lower the test speed in federal court, and the case is now pending.

A *USA Today* article highlights the lack of deaths from air bags, which has been a welcome result of efforts to move children into the back seat of vehicles, but implies the rule only has minimal benefits. NHTSA's actual findings on the costs and benefits of the advanced air bag rule included the following:

- More than 95 percent of the at-risk population in low speed deployments would be protected by technologies to meet the rule's requirements.
- The cost per vehicle for the compliance options for consumers (or retail cost) is between $21 and $128 per vehicle (in 1997 dollars)—most consumers would happily pay that, given the major investment a vehicle represents and the value of safety to consumers.
- Property damage savings alone is over $85 per vehicle, or $1.3 billion in savings from the rule in property damage alone, while the overall *maximum* total cost in the most expensive compliance scenario is a comparatively small $2 billion.
- NHTSA reduced the likely benefits because it also lowered the testing speed to 25 mph. Because this produces a less protective air bag in high-speed crashes, Public Citizen has challenged this decision in court. A 30 mph standard would raise the amount of benefits (*i.e.*, the number of lives saved) anticipated from the rule.

The real story on tire pressure monitoring systems

The Transportation Recall Enhancement, Accountability and Documentation (TREAD) Act, passed in the wake of the Ford/Firestone fiasco, required the Secretary of Transportation to mandate, within one year, a standard that would mandate a warning system in new vehicles to alert operators when their tires are under-inflated. After extensive study, NHTSA determined that a direct tire pressure monitoring system should be installed in all new vehicles. But in a "return letter" issued after meetings with the auto industry, the Office of Management and Budget (OMB) demurred, claiming its cost-benefit calculations provided a basis for delaying a requirement for direct systems. The final rule, issued May 2002, would have allowed automakers to install ineffective TPMS and would have left too many drivers and passengers unaware of dangerously underinflated tires.

In June 2002, Public Citizen joined with other consumer safety groups to sue NHTSA because its final rule would have allowed manufacturers to choose to install the inferior (indirect) system. A year later, in August 2003, a unanimous three-judge panel of the United States Court of Appeals for the Second Circuit ordered NHTSA to rewrite the rule, agreeing with Public Citizen and others that NHTSA acted in an arbitrary and capricious manner by allowing installation of a clearly faulty (indirect) system.

In its decision, the Court reminded NHTSA that the notion that "cheapest is best" is contrary to Supreme Court precedent that safety improvements are a core responsibility of federal regulators. The court also reminded NHTSA that, in doing its cost-benefit calculations, the agency is supposed to "place a thumb on the safety side of the scale."[16]

The *USA Today* article gets the numbers wrong;[17] however, as the Court stated, the numbers are in fact beside the point. The real cost of the industry's undue influence over an improper rule is that no rule is now on the books despite clear directions from Congress to protect consumers from the harmful effects of tire underinflation. For each year of obfuscation and delay, NHTSA's own cost-benefit analysis shows that 142 lives are needlessly lost on the highway.

In the eight months since the rule was overturned by the Court, NHTSA has also failed to re-issue the rule, despite the substantial factual record collected by the agency in rulemaking which should make a new final rule an easy matter. Should NHTSA continue to delay, Public Citizen plans to bring an unreasonable delay case against the agency to encourage more timely action.

The real story on the fuel system integrity upgrade

About 15,820 occupants are exposed to a post-crash fire each year – 736 of whom received moderate or severe burns, three-quarters of whom had second or third degree burns over more than 90 percent of their body. In 2001, 1,449 occupants died in crashes that involved fire and in 341 of those cases, fire was the most harmful event in the crash. Preserving fuel system integrity in crashes is necessary to reduce these unnecessary deaths and injuries.

NHTSA recognized this need in the 1970's, implementing the first requirement for fuel system integrity. The agency did not consider upgrading the standard until 1995 and did not promulgate an actual upgrade until December, 2003.

The upgrade proposed by NHTSA falls vastly short of the mark of what is necessary in rulemaking on this issue. There are two prominent explanations for the very low benefits associated with NHTSA's new fuel system integrity rule. First, NHTSA's data collection on fire-related deaths is extremely poor, and does not include roadside crashes, such as those involving police cars and the now-notorious Crown Victoria, which bursts into deadly flames when hit in the rear. Second, the new standard is so weak that most vehicles currently on the road pass the new standard. Even the CK pickup truck, which is associated with more than 2,000 terrible fire deaths, would pass. Where a standard is so inadequate, the benefits are also small.

The worst performers, known for killing hundreds in vehicle fires, the CK Pickup and the Crown Victoria, both pass the agency's new standard test. Crown Victoria crashes have burned to death at least 18 police officers, and GM C/K pickups have caused over 2,000 fatalities, yet NHTSA estimates its rule would save only 8 to 21 fatalities a year (of a total of, in NHTSA's count, an extremely low 58 burn deaths a year). The lesson? When a rule is too weak to require safety upgrades, the corresponding benefits, or number of lives saved, is also far too low.

The cost-benefit analysis on the upgrade of fuel system integrity available is based on NHTSA's extremely conservative analysis of an extremely inadequate standard. The low-ball savings estimated by the agency are 8 to 21 fatalities per year, and no injury prevention numbers were calculated. The costs for complying with this upgrade are minimal as well – only $5.31 per vehicle for rear impact test and because the agency combined two side impact tests, the manufacturers will actually save money on the standard for side impacts – savings of about $25,200 per model. Only one in 100 vehicles that were tested under the new standard failed — more evidence that it does not meaningfully move the ball forward on safety.[18]

New Safeguards Needed for Rollover Prevention and Survival

Rollover crashes are rare events, representing only 2.5 percent of all crashes. Yet rollovers cause approximately 10,600 fatalities – a full one-third of all vehicle occupant deaths – and 21,000 serious injuries each year.

SUVs and pickup trucks are a major part of the rollover problem: while 23 percent of passenger car occupant fatalities occur in rollover crashes, a whopping 61 percent of SUV occupant fatalities and 45 percent of pickup fatalities do.[19] The high frame and unstable design of these vehicles make SUV and pickup rollovers particularly likely, and the weak roofs and poor crash protection make rollovers particularly deadly for people when they do occur.

The high propensity of SUVs and pickups to rollover

The high center of gravity of SUVs and pickups and narrow track width makes them unstable during emergency maneuvers, such as swerving to avoid another vehicle, pedestrian or curb, or during a tire blowout. Loading of the vehicle, which is encouraged in SUVs and pickups

by the large cargo areas, raises the center of gravity of the vehicle, making it more dangerous and hard to control. Some vehicles are so tippy that even driving experts are unable to control them. In a rollover propensity test of the Ford Explorer by Little Rock, Arkansas, trial attorney Tab Turner, even an expert driver aware of the planned timing of the tire blowout was unable to keep the vehicle from rolling over.

And the problem is growing. The rate of passenger car occupants who died in fatal rollover crashes per 100,000 registered vehicles declined 18.5 percent between 1991 and 2000, while the rate of light truck occupants who died in fatal rollover crashes increased 36 percent between 1991 and 2000.[20] Rollover fatalities in all types of vehicles accounted for 82 percent of the total fatality increase between 2001 and 2002.[21]

Although charged by Congress to prepare a rollover propensity minimum standard in 1991, NHTSA terminated rulemaking on the standard in 1994. NHTSA defended its termination by citing obsolete statistics on the number of SUVs in the vehicle population in the late 1980s, without acknowledging the growing popularity and hazards of this vehicle class. At that time, NHTSA promised that a consumer information program and numerous crashworthiness protections would be forthcoming.

A decade and thousands of rollover deaths later, in January 2001, NHTSA at long last published very basic information based on a static measure of the rollover propensity of vehicles as a part of the agency's New Car Assessment Program (NCAP), which assesses a mere 40 or so vehicles in each model year. Rather than prominently displaying a vehicle's safety ratings next to the sticker price to help consumers make informed purchases, the safety information is only available on the agency's Web site, where many consumers do not know to look. NHTSA claimed that its program would highlight the poor performers and that public pressure would force manufacturers to improve the rollover tendencies of vehicles. The "Stars on Cars" program sponsored by Senator Mike DeWine and made part of the Highway Funding Bill passed by the Senate would fix this serious oversight by mandating that NCAP information be available on the window sticker at the point-of-sale. We urge the House of Representatives to enact a similar provision.

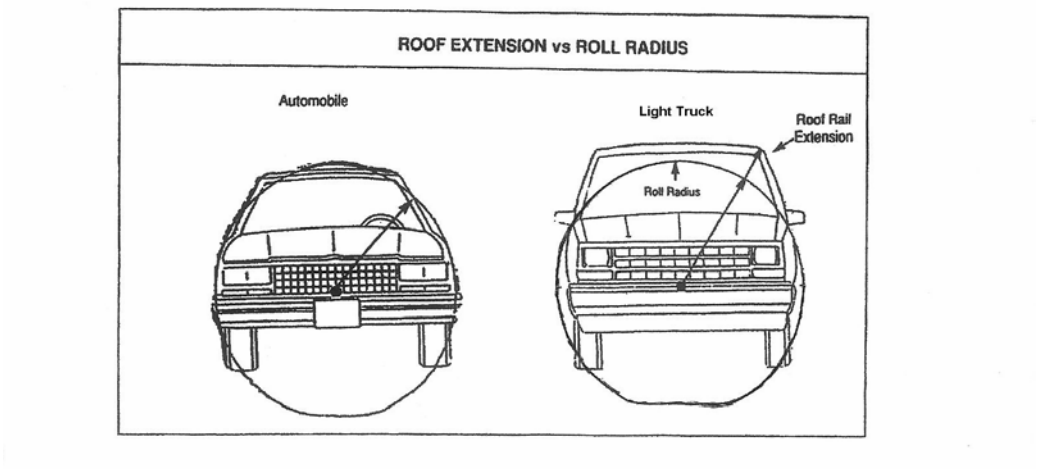
The Transportation, Recall Enhancement, Accountability and Documentation (TREAD) Act, passed in the wake of the Ford/Firestone disaster, included a requirement for a dynamic rollover consumer information program to be added to NCAP on the NHTSA Web site. In October of 2003, NHTSA adopted a "fishhook" maneuver as a dynamic procedure to be combined with a static measurement of a vehicle's stability for the consumer ratings. Four months later, the first round of ratings were published, again only on the agency's Web site.

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). Moreover, the agency's dynamic test is so weak that vehicles that experience vehicle "tip-up" during the test will not lose a star, yet tippy vehicles that do not tip-up in the test can gain a star, making the dynamic test a one-way ratchet.

Poor vehicle design increases rollover hazards

Despite the unconscionably high death toll, rollovers are actually highly survivable crashes. The forces in the collision are far lower than those in many other types of highway crashes. Race car drivers, who wear five point belts and drive vehicles with strong crash protections, often walk away from severe crashes that would be deadly in other vehicles because of superior crashworthiness designed into their vehicles. This survivability means that rollovers are primarily dangerous due to poor vehicle design. Safety belts and seat structures do not keep occupants in place during a crash, and vehicle roofs are so flimsy that they crush into occupants' heads and spines, inflicting very serious injuries.

These important crash protections are also missing in most vehicles, even in pickups and SUVs where rollovers are relatively common. The box-like, windowed passenger area of an SUV or pickup (called the "greenhouse"), protrudes into the air and in a roll hits the ground with more force due to its shape. Rolling "like a box" creates a more violent rollover crash upon impact with the ground, in comparison with the crash dynamics of passenger cars, which roll more like tubes. Centrifugal forces push passengers' heads towards the outside of the roll and into contact with the vehicle's sides and roof just as the vehicle impacts the ground, frequently crushing inward with deadly consequences.



These heightened risks distinguish SUVs and pickups from passenger cars and in part may account for the dramatically higher rollover fatality rates.

In addition, the heavy bodies and engines of light trucks place greater pressure on the roof during a roll, making roof strength a paramount concern for drivers of these vehicles. Most roofs are not strong enough to withstand the impact of a rollover crash. The current roof crush standard became effective in 1973 and has been revised since that time only for extension to vehicles with a gross vehicle weight (GVWR) of 6,000 pounds or less and to apply to vehicles with raised roofs.[22] This weight limit has allowed manufacturers to increase the gross weight of SUVs and pickups over 6,000 pounds to evade the standard, meaning that the vehicles most in need of a strong roof are totally unregulated. The weight limit should be raised by Congressional action to 10,000 pounds to correct this egregious oversight, as it is in the Senate bill.

NHTSA's 1994 termination of work on a rollover propensity standard was followed by subsequent public statements in which the agency promised many crashworthiness improvements, including a stronger roof crush standard as well as requirements for better door latches, door hinges and upper side impact protection. Among these tragically broken promises, the roof crush standard remains far out-of-date.

In order to "beat" the standard in recent years, manufacturers have taken the short cut of merely improving the bonding of the windshield to the vehicle structure, which helps the vehicle pass NHTSA's weak test without helping occupants, because in a crash the windshield is typically gone by the end of the first roll. Once the windshield is gone, typically one-third of the roof strength disappears with it, and the roof crushes.

When roofs crush in a rollover, the cardinal rule that occupant space not be intruded upon is broken. The survival space for occupants is greatly limited or eliminated altogether, so that the heads and spines of occupants contact the roof. In addition, roof crush can open ejection portals — making windows and the windshield area very large and leading to ejection of occupants, which is frequently fatal.

The current roof crush standard is woefully out of date. It tests just one side of the roof and passes vehicles that with roofs that collapse and kill occupants in real crashes on the highway. NHTSA estimates 3,700 belted passengers are killed each year by collapsing roofs and a more rigorous roof-crush standard would save 1,400 people. Its estimate is likely too low: it excludes occupants who are ejected when roof crush opens ejection portals, as well as occupants killed by roof collapse before being ejected. Approximately 13,000 fatalities each year involve ejection: 8,000 people are ejected through windows, while 2,500 are ejected through open doors. And, although rollovers remain one of the most survivable crash types, inadequate crash protection standards or lack of safeguards make rollovers unnecessarily deadly crashes, exposing people to seat failure, safety belt failure and ejection.

A dynamic roof crush test is feasible and far superior to a static upgrade

The image above depicts the fixture used to conduct roof crush dynamic testing in a testing laboratory in Salinas, California. The roadway surface moves forward along the track, contacting the roof of the vehicle as it rotates on the spit. The test surface impacts both *sides of the roof a single time*, imitating the first roll of a vehicle in a rollover crash, with repeatable results. The picture shows a 1994 Chevrolet Suburban with two dummies inside.

The current federal test is a static test using a platen, or plate, on the roof, and measures the impact of force *on only one side of the roof* through the steady exertion of pressure. *While a static test measures the strength of the roof, a dynamic tests measures injury to the occupants.*

A dynamic test such as the one above is far superior for the following reasons:

1) By showing the impact of the crash on instrumented dummies, it measures the occupant protection and survivability of the rollover crash— the human impact;
2) It is capable of testing safety belt performance and failure in a rollover crash;
3) It includes the lateral or sliding velocity of the roadway as it moves beneath the vehicle, as in a real-world rollover crash (the vehicle is *both* rolling and sliding on the road surface);
4) It tests *both sides* of the roof – the current test only tests one side, with the windshield intact. Yet research shows that passengers sitting in the seat below the second, or trailing edge, of the roll, are the ones severely injured or killed. At the second impact, the roof's integrity has been compromised and crush is typically far more severe.
5) It shows harm after the windshield shatters in the first impact. While windshields typically break on the first roll, the windshield and its bonding provide as much as one-third of the roof strength.
6) The test shows the real dynamic of crush as a function of roof geometry (roundness, curvature, etc.). Because the static test is not designed to measure the role of roof geometry, it fails to include a major factor in measuring occupant survivability.

Dynamic drop tests for roof strength are repeatable and have long been in use by industry. As a 2002 Society of Automotive Engineers (SAE) paper attests:

> *The automotive industry and researchers have used drop testing for years to evaluate roof strength. In the late 1960s's, SAE developed a standardized procedure to perform full vehicle inverted drop testing. Many domestic and import auto manufacturers have utilized the inverted drop test technique as far back as the 1960s and 1970s to evaluate roof strength.. . . Mercedes-Benz continues to use inverted drop testing as one of their many standard crash tests and has recommended inverted drop tests in its comments to the docket regarding roof strength rulemaking.*[23]

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The House of Representatives should enact measures for rollover prevention and survival:

- A rollover resistance standard that will require design improvements in the tippiest vehicles and support the use and further development of technologies to improve roll resistance and vehicle handling.
- A roof strength dynamic test standard to prevent extensive roof collapse, which can measure injuries to people in evolving crash situations and test safety belt performance in rollovers.
- A rollover crashworthiness standard, including improved seat structure, safety belt design (with safety belt pretensioners that tighten in a rollover crash), side impact airbags and roof padding protection, all of which will dramatically increase rollover survivability.
- An ejection mitigation standard using a combination of safety technologies, including advanced safety window glazing, side window curtain airbags and side impact airbags.
- An upgraded door lock and retention standard to reduce door openings in rollovers and other crashes and prevent ejection.
- An enhancement of the NCAP program that would mandate crash ratings (frontal, side and rollover) be added to the manufacturer's window sticker so that consumers are provided with the information when they go to purchase a vehicle.

Addressing Vehicle Mismatch in Crashes to Level the Playing Field

The growing number of light trucks on the highway is contributing to the increasing fatalities in crashes between light tucks and passenger cars, showing vehicle incompatibility and aggressivity is a serious problem. The design of light trucks — and large SUVs and pickup trucks in particular — with a high center of gravity, high bumpers, and steel bars and frame-on-rail construction, makes these vehicles act like battering rams in a crash with another vehicle.

While the National Highway Traffic Safety Administration has taken a few tentative first steps, there are few signs that NHTSA and the auto industry are treating this grave problem with the needed seriousness and expediency.

The problem is a serious one:

- When an SUV strikes the side of a passenger car, the car driver is 22 times more likely to die than is the driver of the SUV. When the striking vehicle is a pickup, the car driver is *39* times more likely to be killed.

- NHTSA's Administrator estimated as long ago as 1997 that the aggressive design of light trucks kills 2,000 additional people needlessly each year.[24]
- Another analysis found that 1,434 passenger car drivers who were killed in collisions with light trucks would have lived if they had been hit instead by *a passenger car of the same weight as the light truck*, even under the same crash conditions.[25]
- For every Ford Explorer driver saved in a two-vehicle crash because that driver chose an Explorer over a large car, five drivers are killed in vehicles hit by Explorers.[26]

Auto manufacturers have responded to the carnage inflicted on other motorists from light trucks' high bumpers and menacing front grilles, by building ever-more heavy and aggressive SUVs over time and continuing to market them militaristically, such as with ads calling the Lincoln Navigator an "urban assault vehicle." In fact, General Motors' Hummer is a direct adaptation of a military vehicle. The chief designer of the 2006 Toyota Tundra recently bragged that his threatening design for the huge pickup truck is intended to highlight "the power of the fist."[27]

Despite shocking highway statistics and mounting research, in its June report NHTSA focuses myopically on only the struck vehicle — *bulking up cars, but ignoring the equally important challenge of changes to reduce the aggressiveness of pickups and SUVs*. Rather than addressing the issue directly, NHTSA's proposal mimics, to a disturbing degree, industry suggestions that overwhelmingly focus on occupant protection in the struck vehicle, support only voluntary measures, and distance themselves from design changes to make the striking vehicle less aggressive. While improving occupant protection is critically important, the total crash dynamic can and must be considered.

An Attempt to Stave Off Real Action: Promises, Promises by Manufacturers, Ratified by NHTSA

In December 2003, auto manufacturers announced a voluntary initiative to address incompatibility and aggressivity. Their plan, currently to be phased-in on *most* vehicles by September 2009, would gradually increase the numbers of side impact air bags in vehicle and lower the bumpers of SUVs or add a barrier to prevent them from riding over cars.

Yet the Alliance made no specific or time-bound commitments to redesign vehicles to protect consumers, despite the fact that pickup trucks act as battering rams in crashes, and that the height and stiffness of SUVs makes them devastating on the highway. *Moreover, there is no requirement that all vehicles become compliant with the plan, and no outside body will verify vehicle compliance.* While the commitment may increase occupant protection, it does little to address the violence that will be inflicted by the striking vehicle in crashes, ignoring the need to reduce stiffness and address ever-larger vehicle weights.

A voluntary "commitment" is a particularly inapt solution where, as here, thousands of lives are at stake. In fact, Congress rejected them almost three decades ago when it passed the National Traffic and Motor Vehicle Safety Act in 1966. As the Senate Committee Report stated:

> *The promotion of motor vehicle safety through voluntary standards has largely failed. The unconditional imposition of mandatory standards at the earliest practicable date is the only course commensurate with the highway death and injury toll.*[28]

The 1966 Congressional legislators were right. The historical path of automakers' voluntary efforts is paved with broken promises. From General Motors' promises in 1970 to voluntarily put air bags in all its vehicles by the mid-1970s (GM installed just 10,000 in model year 1974 and 1975 vehicles, and then discontinued the program), to Ford, DaimlerChrysler and GM's recent recanting of their widely publicized 2001 promises to voluntarily improve the fuel economy of their light trucks by 25 percent (withdrawn after the threat of Congressional action on fuel economy receded). "Voluntary" is often just another name for manufacturers' tactical maneuvers and delay.

Moreover, government reliance on voluntary "commitments" violates core principles of democratic accountability and transparency, because such voluntary agreements:

- **Contain no mechanisms for accountability**: If the voluntary proposal proves dangerously deficient, automakers shirk liability because there is no recourse for injured consumers, nor for the government to initiate a defect investigation or compel the industry to perform a recall;
- **Involve closed, secret processes and meetings**: The public, which is at risk, is shut out of the development of the proposal, which instead is designed in secret by industry working groups who are not subject to oversight, compliance with statutory requirements, responsibility for explaining the basis for their decisions, or judicial review of their decisions;
- **Lack transparency**: The public has no means to secure an independent evaluation of the quality of the industry's voluntary tests or standards. The public receives no verification that a particular vehicle actually complies with the industry's voluntary tests, as they do with government standards that are subject to public compliance testing and enforcement, and there is no vehicle sticker at the point-of-sale to indicate that a standard is met;
- **Lack a baseline for safety**: High-income purchasers, who can afford safety extras may be protected, but low-income purchasers remain vulnerable to cost-based decisions by manufacturers;
- **Produce weak and non-binding results**: Proposals are invariably weak because they represent the lowest common denominator among companies looking out for their own costs and product plans, and there is no obligation to install technology in compliance with the group standard, meaning that companies can change their minds at will and decide to withdraw any protection offered by the voluntary "standard."
- **Lack any means of enforcement**: Voluntary "commitments" are just that – voluntary and therefore not enforceable. Consumers and NHTSA have no legal recourse against a manufacturer's failure to meet the agreed-upon initiative. NHTSA cannot bring an enforcement action, force a statutory recall, or even influence a voluntary recall for

failure to abide by the voluntary agreement. Industry group decision makers are not subject to oversight, compliance with statutory requirements, responsibility for explaining the basis for their decisions, or judicial review of those decisions;

- **Replete with Exemptions:** Voluntary "commitments" usually have exemption clauses permitting manufacturers to opt out of "compliance" because of marketing considerations, costs, or for other reasons.
- **Undermine Regulatory Agencies:** Voluntary efforts often sideline agency involvement in safety policy by allowing willing agencies to defer or avoid regulation in a timely and vigorous manner.
- **Discourages New Agency Research:** Agency research likely will stop or be directed toward other areas in light of adopted industry voluntary commitments and industry research to support those agreements.
- **Produces Limited Remedies:** because voluntary "commitments" are developed and agreed to by industry they include little or no remedies for consumers in the event the standards are not met or are ineffective.

In fact, automakers latest round of voluntary "commitments" on compatibility is just an older, recycled campaign in updated clothing. In 1998, the auto industry promised the NHTSA Administrator Dr. Ricardo Martinez that it would make modifications to achieve safer designs, mainly by adjusting vehicle suspension, but the industry refused to provide any details of their plans. There is little evidence that any substantial design changes were made.

The House of Representatives should enact measures to address vehicle mismatch in crashes:

- A vehicle compatibility and aggressivity reduction standard addressing bumper height, weight and other compatibility characteristics.
- A consumer information program to rate vehicles according to aggressivity and compatibility in multiple-vehicle collisions.
- An upgrade of the side and frontal impact standards to ensure that vehicle design also protects occupants who are inside both the struck and striking vehicle.

Fixing the Needlessly Deadly 15-Passenger Van

There were about 500,000 15-passenger vans on the road as of July 2001.[29] Between 1990 and 2000, 864 occupants of these vans died in crashes, 424 of them in single-vehicle rollover crashes, producing a vehicle death rate that is far higher than it should be given the relatively small number of these vehicles that are on the road, as well as an extraordinarily high death rate in rollover crashes.[30] There is no question that 15-passenger vans are over-involved in single-vehicle rollover crashes compared to other passenger vehicles. From 1991 to 2000, 33 percent of passenger vehicles involved in single-vehicle, fatal accidents experienced a rollover, compared to 52 percent for 15-passenger vans involved in such crashes. *A shocking 81 percent of all 15-passenger van occupant fatalities occurs in single-vehicle rollover crashes*.[31]

Further, NHTSA has found that the number of occupants in a 15-passenger van has a large effect on the frequency of rollover in fatal crashes. In fatal single-vehicle crashes, cars

with 10 or more occupants rolled over 85 percent of the time, compared to 38 percent of the time in those vans with fewer than 10 occupants and 28 percent of the time for those vehicles with fewer than five.[32]

The vans fall outside of the scope of many federal motor vehicle safety standards, such as roof crush, head restraints, braking systems and rollover warning labels. Under current law, these vans are not tested by the New Car Assessment Program (NCAP), so consumers have no idea of their crash or rollover ratings. Many innocent passengers have no idea that these vehicles are deadly, particularly when carrying more than 5 occupants.

In recent years, high-profile rollover crashes of 15-passenger vans have killed or injured many riders in crashes particularly notable for the high numbers of people hurt and the concentration and close association of those affected. A number of such crashes involved college sports teams and church groups, and finally caught the attention of the U.S. Department of Transportation's highway safety agency, NHTSA.

After conducting an inquiry into the problem, NHTSA issued a Consumer Advisory and Research Note in April 2001, and reissued another Consumer Advisory a year later in April 2002.[33] In its consumer warnings, NHTSA highlighted the riskiness of the vans. A few insurers of churches and schools are no longer selling policies to insure these vehicles and are raising the rates for existing policyholders.[34]

The National Transportation Safety Board (NTSB) also issued a safety report on November 1, 2002, with recommendations to address the safety hazards of the vans in letters directed to General Motors, Ford and NHTSA.[35] The NTSB recommends that NHTSA include 15-passenger vans in its pending plan for a dynamic rollover testing program and test these vehicles in crash tests as part of the agency's New Car Assessment Program, which publishes results by make and model for consumers. The NTSB further requested that NHTSA, in conjunction with the manufacturers, test and evaluate technological handling systems, particularly electronic stability control systems, which have potential to assist drivers in maintaining control of these rollover-prone vans.

The House should enact basic safeguards for 15-passenger vans:

- The inclusion of 15-passenger vans in all relevant safety standards for occupant protection and vehicle crash avoidance and in NHTSA's dynamic rollover testing program.
- The incorporation of ratings of 15-passenger vans into NHTSA's NCAP program
- Testing and evaluation of potential technological systems to assist drivers in controlling15-passenger van
- The inclusion of all 15-passenger vans used in commercial purposes in all relevant truck safety standards and regulations.

Making the road safer for America's children

Motor vehicle crashes are the single leading cause of death for children age 2 and every age 4 through 18.[36] During the 1990s, more than 90,000 children were killed and 9 million injured in motor vehicle crashes. Many of these children were harmed because they were improperly restrained, and many others were hurt because the vehicles they were riding in were not designed to properly protect them.

Unrestrained or incorrectly restrained children are at risk

Many children who are too large for child seats and too small for adult belts are strapped into adult belts or are left wholly unrestrained. A small percentage of these children are placed in booster seats that can slide or tip in a collision; are often installed incorrectly or simply incompatible with the family vehicle; are not regulated for children over 50 pounds; and are not crash-tested in vehicles, even though compatibility is a crucial issue for safety.

The current federal safety standard for child restraints was put in place in the early 1970s. It applies only to children who weigh less than 50 pounds, meaning that booster seats for larger children are completely unregulated and not required to meet safety tests. It is based on adult injury criteria never designed for children, and only frontal, not all, crash modes.

Due to conflicting and complex messages put out by the auto industry and NHTSA, parents too often do not know how to protect their child. Although it is dangerous to place a children under age 9 in an adult safety belt, 29 states require parents to place children in either a safety seat or an adult belt when a child reaches age 4.

Child restraint devices that address the "safety gap" were pioneered by researchers outside of the auto industry as far back as 1974. But instead of designing effective safety belts or child seats integrated into rear seats to accommodate children in the 4 to 8 age group, auto companies promoted aftermarket booster seats as the gap filler, despite their knowledge that the seats could be hazardous in collisions.

The terrible risk of vehicle backover

In 2002, the Center for Disease Control announced that 9,160 children are treated in U.S. emergency rooms every year following involvement in non-traffic, non-crash events related to vehicles.[37] The non-profit group, Kids and Cars, documented at least 154 deaths in 2003 due to non-traffic, non-crash events.

According to news reports gathered by Kids and Cars, 58 children were killed by being accidentally backed over, usually by family members, in 2002 and at least 72 were killed in 2003. SUVs, minivans and pickups have larger blind spots than do passenger cars and with the increase of these vehicles on the highway, and in the driveway, there is an increased likelihood that additional children will be accidentally run-over.

Although NHTSA recognizes that it is responsible for motor vehicle safety when a crash occurs off the public roadway, lacks a method to collect data, or an office in which these significant types of injuries and deaths are researched. And, even though numerous technologies exist that could greatly reduce the likelihood of backover incidents, no standards require them and few manufacturers offer them as standard equipment.

The House should enact crucial measures to improve child safety in and around vehicles:

- A backover avoidance study and assess technologies that let drivers know when a child is behind the vehicle.
- The beginning of a collection of basic data on the number and types of non-traffic vehicular deaths and injuries.
- The establishment of a state based incentive program that encourages states to enact laws mandating booster seat use for children too big for child safety seats.
- A new child-sized dummy for increased testing of how rollover and other crashes injure children.
- A report on technologies designed to prevent and reduce the number of injuries and deaths of children because of automatic windows.
- And a standard would require window switches be designed to reduce the accidental closing by children of power windows and issue performance-based regulations that child-safe switches or related technologies be designed to prevent accidental closing.

Additional important safeguards in the Senate-passed bill

Increasing safety belt use

NHTSA estimates that 12,144 lives were saved by safety belts alone in 2001, and wearing a safety belt reduces a person's risk of dying in a crash by 50 percent. Current law prohibits a regulation for an audible reminder longer than 8 seconds, though Ford and other companies have tested superior reminders. The safety provisions in the Senate-passed bill would allow new and innovative safety belt reminder systems that will increase belt usage.

Improving the frontal impact standard

Most occupant fatalities that occur on America's highways occur in frontal impact crashes. In 2002, 16,870 died when their vehicle was involved in a frontal crash.[38] Even though few of these crashes are head on into solid barriers, the only test NHTSA does to assess a vehicle's frontal impact safety is head-on into a solid barrier. The Senate-passed bill would require the improvement of frontal impact standards for passenger vehicles, including the evaluation of additional test barriers and different measurements of occupant head and neck injuries.

Enhancing the side impact standard

In 2002, 9,197 occupant fatalities were attributed to side-impact crashes.[39] As discussed above, the danger of being a passenger car occupant in a side impact crash with a light truck is extreme and these dangers only grow as the population of light trucks on the road increase. In October 1999, NHTSA granted a petition from Advocates for Highway and Auto Safety on improving side impact standards, but no rulemaking has occurred to date. This is despite a recent study showing that side air bags can reduce side impact crash fatalities by up to 50 percent.[40] The Senate-passed bill would assure an upgrade in the current standard to improve impact protection to passenger vehicle occupants as well as an update of new barriers and head and neck injury measurements.

Upgrading tire safety

In June, 2003, in response to directives in the 2000 TREAD Act, NHTSA issued a ruling updating safety performance standards for tires. However, counter to Congressional intent, NHTSA left serious holes in the updated standard. Despite the clear mandate, the new rule failed to adequately address tire strength and road hazard protection, or to establish minimum standards for bead unseating resistance and aging. The Senate-passed bill would upgrade the tire standards to respond to the TREAD directives and would increase tire resistance to bead unseating and aging.

Endnotes

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[3] "NHTSA's New Head Protection Rule Puts New Technology on Fast Track." Press Release. Washington: NHTSA, 30 July 1998.
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[13] *The UCS Guardian & Guardian XSE: A Blue Print For A Better SUV*. Washington: Union of Concerned Scientists, 2003. <http://www.suvsolutions.org/blueprint.asp>.
[15] Jayne O'Donnell, "Will more safety rules save many more lives?" *USA Today*, Feb. 25, 2004.
[16] *Public Citizen v. Mineta*, 340 F.3d 39, [*get quote cite]*, (2nd Cir. 2003).
[17] According to the figures in the agency final rulemaking, a direct tire pressure monitoring system requirement would save between 79 and 124 lives a year, but would only cost $54 per vehicle (not $90, as the article states). The cost per life saved would be $4.3 (not $5 million, as the article states). The shoddy, indirect system had even higher costs per life saved, $5.8 million, because it offers only very meager benefits.
[18] 68 Fed. Reg. at 67079
[19] NHTSA, *Motor Vehicle Traffic Crash Injury and Fatality Estimates: 2002 Annual Report*, July 2003.
[20] NCSA, *Characteristics of Rollover Crashes*, DOT HS 809 438, (Apr. 2002), at 14 and 20; *See also* "Registration Data for 1975-2001: Data Source" FHWA and Polk" provided by a NCSA researcher to Public Citizen on Feb. 6, 2003, (The rate of passenger car occupants who died in fatal rollover crashes declined 18.5 percent between 1991 and 2000 (from 4.32 to 3.52 deaths per 100,000 registered vehicles) while the rate of light truck occupants who died in fatal rollover crashes increased 36 percent between 1991and 2000 (from 7.55 to 10.27 deaths per 100,000 registered vehicles.).
[21] NHTSA, *Motor Vehicle Traffic Crash Injury and Fatality Estimates: 2002 Annual Report*, July 2003.
[22] The current standard requires a static test, in which the platen on the vehicle roof corner, above the A pillar, must bear one and a half times the vehicle's weight with the windshield intact.
[23] Brian Herbst, Stephen Forrest, Steven E. Mayer and Davis Hock, Alternative Roof Crush Resistance Testing with Production and Reinforced Roof Structures, 2002-01-2076, SAE 2002.
[24] Bradsher, Keith. *High and Mighty: SUVs-The World's Most Dangerous Vehicles and How They Got That Way.* New York: Public Affairs 2002, at 193 (Referring to Hans C. Joksch, "Vehicle Design versus Aggressivity," (April 2000), DOT HS 809 194. p. 40-42).
[25] Joksch, Hans C. "Vehicle Design versus Aggressivity," at 41. Further calculations contained in an electronic mail communication between Public Citizen and safety researcher Hans Joksch stated: "In 1996, 890 car occupants died in collisions with SUVs. If the risk in collisions with cars of the same weight had been half as high, as estimated at that time, 445 deaths would not have occurred if SUVs had been replaced by cars of the same weight." Email from Hans Joksch to Laura MacCleery of Public Citizen, on Feb. 24, 2003 (on file with Public Citizen).
[26] Bradsher. at 449, fn. 13 (Leaving aside SUVs and considering just the number of drivers killed per 5,000 crashes, in which a large car hits another car of any size, an average of 2.2 drivers die in large cars and 5.5 drivers die in the other cars that were truck. Together these numbers render a total of 7.7 deaths per 5,000 crashes. Because the large cars are heavier than most of the cars they hit, the drivers of the large cars tend to fare better. When looking at the crashes involving Explorers, on average only 1.2 Explorer drivers die when involved in the same number of collisions with cars. Compared to the 2.2 drivers who died in the large cars, the Explorers actually save a life. However, this is misleading because, doubling to 11 deaths. Therefore, on average 5.5 extra driver deaths occur in the struck cars. The combined death rate for drivers on both sides of the collision has now risen to 12.2 for collisions involving Explorers, compared with 7.7 when there were just large cars hitting the other cars.)
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[28] Committee Report on S. 3005, The Traffic Safety Act of 1966, June 23, 1966, at 271, 273, 274.
[29] Conversation of Rajesh Subramanian, Statistician, National Center for Statistics and Analysis (NCSA) with Ed Ricci, Policy Analyst, Public Citizen, Nov. 7, 2002.
[30] *Id.*
[31] Safety recommendation letter from National Transportation Safety Board to William Clay Ford, Jr., Chairman and Chief Executive Office, Ford Motor Company and Mr. G. Richard Wagoner, Jr., President and Chief Executive Officer, General Motors Corporation, Nov. 1, 2002, H-02-29.
[32] *Id.*
[33] *See* NHTSA Consumer Advisory, April 9, 2001, http://www.nhtsa.dot.gov/nhtsa/announce/press/2001/pressdisplay.cfm?year=2001&filename=ca-010409.html; W. Riley Garrott, "The Rollover Propensity of Fifteen-Passenger Vans," April 2001, NHTSA Research Note; NHTSA**,** *NHTSA Repeats Rollover Warning To Users of 15-Passenger Vans***,** April 15, 2002, http://www.nhtsa.dot.gov/nhtsa/announce/press/pressdisplay.cfm?year=2002&filename=pr27-02.html.
[34] GuideOne Insurance News Release, *GuideOne Insurance takes a Stand on Dangerous 15-Pssenger Vans,* Aug. 13, 2002.
[35] Safety recommendation letter from National Transportation Safety Board to William Clay Ford, Jr., Chairman and Chief Executive Office, Ford Motor Company and Mr. G. Richard Wagoner, Jr., President and Chief Executive Officer, General Motors Corporation, Nov. 1, 2002, H-02-29.
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[37] CDC "Injuries and Deaths among Children Left Unattended in or Around Motor Vehicles," *Morbidity and Mortality Report* Vol. 51. No. 26. July 5, 2002.
[38] Data Source: Occupant Fatalities in Vehicles in Crashes with Initial Side, Rear, and Frontal Impact, and Rollover, by Year, Restraint Use, Ejection, and Vehicle Body Type. FARS 1992-2001 FINAL & 2002 ARF. Data Request. Washington: NCSA, Sept. 2003.
[39] *Id.*
[40] Insurance Institute for Highway Safety Status Report, 6-28-2002.