

STATUS REPORT

INSURANCE INSTITUTE
FOR HIGHWAY SAFETY

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Two court decisions **BOTH SERVE SAFETY**

The Institute strongly supports two recent decisions by the U.S. Court of Appeals for the District of Columbia, one involving airbags and the other on truck drivers' hours. Both decisions serve the best interests of highway safety.

Truck driver decision, see page 2

Airbag decision, see page 5



TRY AGAIN **on rules governing** **truck driving hours,** **Court of Appeals** **tells FMCSA**

Last January truck drivers began working under new rules governing their driving time. The Federal Motor Carrier Safety Administration (FMCSA) issued the rules after repeated requests over many years, including several by the Institute, to shorten truckers' driving time and require computers in trucks to monitor hours behind the wheel.

The long-delayed rules accomplish neither. They extend driving hours. And after initially proposing to require onboard computers to track the hours, FMCSA backed off and failed to include this in the final standard.

Now FMCSA will have to try again. The U.S. Court of Appeals for the District of Columbia has ruled unanimously that the work-hour standard is "arbitrary and capricious because the agency failed to consider the impact of the rules on the health of drivers." The court noted that FMCSA "does not even acknowledge, much less justify, that the rule ... dramatically increases the maximum permissible hours drivers may work each week."



The ruling responds to a lawsuit filed by Public Citizen that challenged the work rules. The Institute supported the challenge in a brief filed with the court last December.

“Now maybe FMCSA will go back and get it right,” says Institute chief operating officer Adrian Lund. “This time the agency needs to remember that the ‘S’ in FMCSA stands for ‘safety.’ Then maybe the agency will do what’s best for the health of trucker drivers and the safety of everybody on the road instead of looking first to serve the economic interests of the motor carriers.”

Protracted rulemaking history: Rules on truck drivers’ hours hadn’t been substantially changed for more than 40 years when Congress directed truck regulators in 1995 to address “a variety of fatigue-related issues.” It wasn’t until 2000 that FMCSA responded

safety and didn’t provide any reasons based on science for making this turnaround.”

The court said the agency failed to establish a “rational connection between the facts found and the choices made” during the rule-making process. This disconnect is what led the court to tell FMCSA to go back and try again to justify its actions.

Ruling cites regulatory shortcomings: While stopping short of directing the agency to change specific aspects of the work-hour rules, the court did point to several FMCSA policies that raise what the court termed “troubling concerns.” For example, the court said FMCSA “cited absolutely no studies in support of its notion” that changing the total allowable work hours would “compensate for the conceded and documented ill effects from the increase” in daily driving time. The

FMCSA’S ATTEMPTED JUSTIFICATION FOR BACKING OFF FROM ITS PROPOSAL TO REQUIRE ONBOARD RECORDERS REFLECTS “QUESTIONABLE RATIONALITY,” THE COURT SAID.

with proposals for new work-hour rules. Then a three-year delay ensued before the agency issued the final standard, the one now rejected by the court.

The Institute supported several major aspects of the rules FMCSA initially proposed, particularly the plans to extend drivers’ rest periods and to require electronic recorders to monitor driving hours (see *Status Report*, Oct. 21, 2000; on the web at www.iihs.org). The Institute didn’t support a proposed increase in maximum allowable driving time but said the other proposals could yield a net safety improvement despite allowing longer stretches behind the wheel.

Then FMCSA issued the final rule, which wasn’t at all like the proposal (see *Status Report*, June 16, 2003; on the web at www.iihs.org).

“We were surprised by the final rule, to say the least,” Lund recalls. “It sure looked like FMCSA caved in to industry lobbying. The agency abandoned virtually all of the proposed provisions that would have enhanced

now-vacated rule allows truckers to go an extra hour behind the wheel at a stretch, which FMCSA said was justified by requiring a longer rest period between stretches.

The court criticized the agency’s attempted justification for backing off from its proposal to require onboard recorders. FMCSA’s attempt reflects “questionable rationality,” the court said, adding that it “cannot fathom ... why the agency has not even taken the seemingly obvious step of testing existing [recorders] on the road” to see if they should be required in all truck rigs.

Issue new rules based on science: Lund says “the gap between what FMCSA proposed to require and what it ended up requiring doesn’t make sense. The agency gave up on provisions that would have enhanced safety but that weren’t acceptable to the trucking industry. Now that FMCSA will have to try again, it’s imperative to stick to science-based requirements that improve truck safety instead of degrading it.”

EVIDENCE MOUNTS that reducing the force of airbag inflation lowers the injury risk

*Findings of
recent studies
counter claims
that depowering
airbags could
cost lives
in crashes*

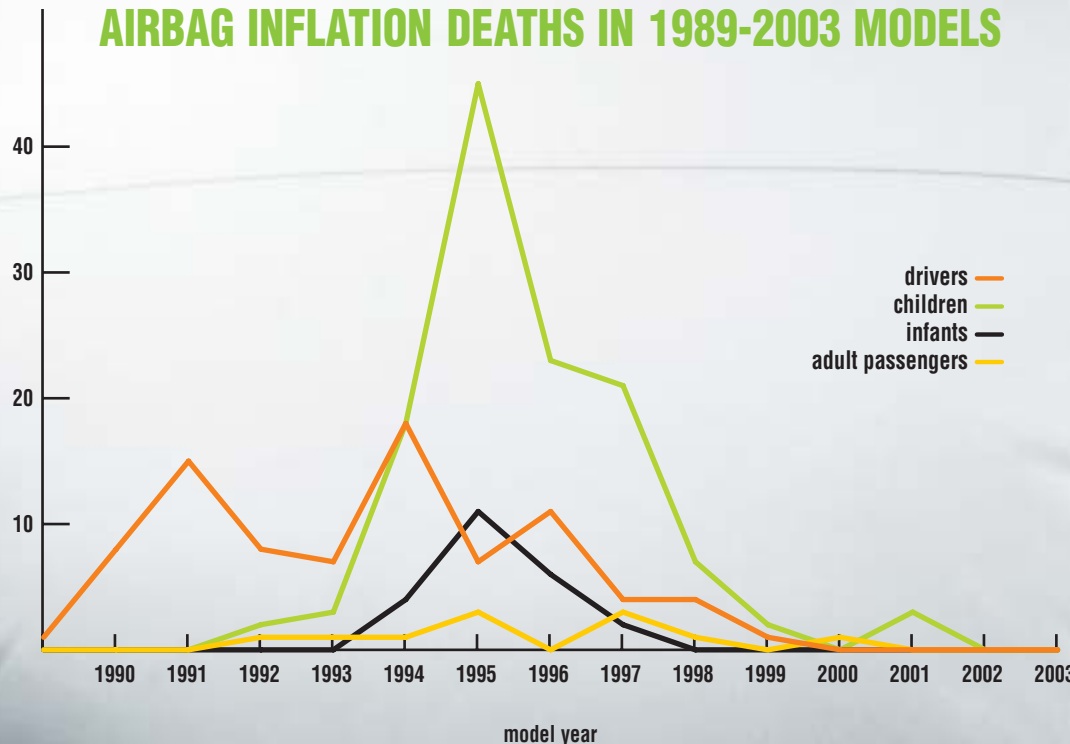
A federal court recently upheld a decision by the National Highway Traffic Safety Administration (NHTSA) that lets automakers reduce the inflation forces of frontal airbags. While the court was deliberating this decision, research evidence was mounting to indicate that depowered airbags, which have been installed in most passenger vehicles since the 1998 model year, have reduced deaths caused by airbags among children as well as adults, many of them women of short stature.

At the same time, no evidence has surfaced to indicate that reducing airbag inflation forces has compromised protection for bigger people in more severe crashes. It was this concern about the consequences of depowering airbags that motivated the legal challenge filed by Public Citizen and the Center for Auto Safety (see facing page).

"NHTSA's policy of allowing depowered airbags was right to begin with, and now the court is right to uphold the agency," says the Institute's senior vice president for research, Susan Ferguson.

From 1990 until April 2004, NHTSA reported 242 deaths attributed to airbags inflating in minor and moderate (continues on p.6)

AIRBAG INFLATION DEATHS IN 1989-2003 MODELS





COURT TELLS NHTSA the choice to test at 25 mph was justified; rejects case for 30 mph



In the long and convoluted history of airbag rulemaking and litigation, the latest issue to spark controversy involves the National Highway Traffic Safety Administration's (NHTSA) decision to lower the speed of rigid-barrier crash testing with unbelted dummies. Public Citizen and others filed suit in federal court against the agency, claiming the decision to require manufacturers to conduct airbag compliance tests at 25 mph instead of 30 mph "could result in hundreds of additional fatalities" because the airbags wouldn't provide sufficient protection to occupants of all sizes in serious crashes.

From the start, the Institute supported NHTSA. The consequence of returning to 30 mph testing with unbelted dummies "is a probable increase in airbag power, which would pose additional risks," the Institute told the court.

Now the U.S. Court of Appeals for the District of Columbia has weighed in, siding unanimously with NHTSA. The agency's "selection of twenty-five miles per hour is both supported by the record and rationally explained," the court ruled.

Why 25 mph is the better choice: The higher the speed at which a crash test is conducted, the greater the force that's needed to quickly inflate an airbag. An airbag with the inflation force necessary to restrain an unbelted crash test dummy at a speed as high as 30 mph would be likely to injure an occupant in a real-world crash who's very close to the airbag when it begins to inflate. This is what the Institute told the court in the brief it filed in support of NHTSA (see *Status Report*, March 15, 2003; on the web at www.iihs.org).

On the other hand, reducing the speed of compliance tests with unbelted dummies to 25 mph allows automakers to equip vehicles with airbags that inflate with less force and, therefore, pose less risk of inflation injury.

"Contrary to Public Citizen's claims, research indicates that depowered airbags are providing effective protection in serious crashes," Institute president Brian O'Neill says. "At the same time, there's less risk of inflation injury in crashes at lower speeds. It's a win-win."

O'Neill adds that he hopes "the court's ruling will help put this issue of 25 versus 30 mph testing to rest, so we can get on with other highway safety priorities."

Basis of the court's decision: In challenging the test speed of 25 mph, Public Citizen made two main arguments. One was that NHTSA violated Congressional directives under the Transportation Equity Act for the 21st Century. But the court disagreed, pointing out that "nowhere does [the statute] say anything about the particular vehicle-testing requirements NHTSA must adopt, much less the speed the agency must use in its unbelted rigid barrier crash test."

In response to Public Citizen's second argument, which claimed that NHTSA was arbitrary and capricious in choosing the 25 mph speed for compliance testing, the court responded this way: "NHTSA explained, reasonably in our view, why a twenty-five mile per hour unbelted test speed, considered in the context of the entire rule, serves the agency's overall safety goals."

O'Neill agrees with the court, saying "it was clear back in 2000 when NHTSA decided to go with 25 mph testing that this would serve overall safety goals. Now it's even clearer because accumulating evidence from real-world crashes indicates that depowered airbags are effective."

According to a number of recent studies, the airbags in newer vehicles are protecting people of all sizes in serious crashes. At the same time they're contributing to a reduction in airbag-related deaths (see facing page).

DEPOWERED AIRBAGS, WHICH HAVE BEEN IN VEHICLES SINCE THE 1998 MODEL YEAR, HAVE REDUCED DEATHS CAUSED BY INFLATING AIRBAGS. NO EVIDENCE INDICATES THAT DEPOWERING HAS COMPROMISED THE PROTECTION OF BIGGER OCCUPANTS IN MORE SEVERE CRASHES. IT WAS THIS CONCERN THAT MOTIVATED PUBLIC CITIZEN'S LAWSUIT, WHICH THE COURT HAS REJECTED.

(continued from p.4) crashes. More than half of the deaths (147) were infants and children. But the deaths weren't distributed evenly during the 14-year span. Since the 1998 model year, when depowering began, deaths have plummeted. There have been only 12 airbag-related deaths in 1998 model vehicles, down from 30 deaths in 1997 models. Seven deaths have been attributed to inflating airbags in 1999 and later models.

For adults the reduction in deaths can be attributed largely to the redesign of airbags and, in some part, to education encouraging shorter drivers to sit farther away from their steering wheels. NHTSA recommends that drivers choose positions at least 10 inches from the wheel (See *Status Report*, November 29, 1997; on the web at www.iihs.org). Increased belt use also has been a factor.

Keep children away from airbags: NHTSA conducts ongoing investigations of crashes in which airbag-related deaths are believed to have occurred. Data collected as part of these investigations show a decline in the rate of children who have been fatally injured by passenger airbags. The peak was 83 deaths per 100 million vehicle registration years during 1995-96. This rate declined to 6 deaths per 100 million during 2002-03. The reduction occurred even as the number of vehicles equipped with passenger airbags continued to rise.

Much of the fatality reduction among children was due to extensive education to



ensure that kids travel in the back seats of vehicles, away from frontal airbags. Less forceful airbag designs also contributed to the decline in deaths among children. Partners for Child Passenger Safety examined frontal crash injuries to children who were sitting in front passenger seats, finding the serious injury rate about 40 percent lower in 1998 and newer model vehicles compared with pre-1998 models.

Adults are benefitting, too: "Reducing airbag inflation force was the right decision for adults as well as children," Ferguson says. "Recent studies indicate that the airbags in newer vehicles provide as much protection in high-speed crashes but aren't as risky to out-of-position occupants, compared with the older airbags that inflate with more power."

Benefits of depowering: The findings of a number of studies were discussed at a recent meeting of the Blue Ribbon Panel for Evaluation of Advanced Airbags, a group of researchers and others gathering data on the newer airbag designs and evaluating them. Among the studies:

Data from the University of Miami's William Lehman Injury Prevention Center show lower fatality rates among patients who had been driving 1998 and newer model vehicles than pre-1998 models. The decline in airbag-related deaths among drivers in low-speed crashes was dramatic. Nine drivers of pre-1998 models died in crashes at

speeds slower than 20 mph. In contrast there were no airbag-related deaths among drivers of 1998 and newer models in crashes at less than 25 mph.

Data from NHTSA's special investigations of drivers killed by airbags show a drop from a peak rate of 80 per 100 million vehicle registration years during 1990-91 to 5 during 2002-03.

A study comparing injury frequencies and severities in frontal crashes, using data from the National Automotive Sampling System/Crashworthiness Data System, indicates that drivers

of 1998 and newer models were less likely to sustain moderate or severe injuries than people driving vehicles with older airbags. Injury reductions occurred among both men and women in crashes at all speeds.

The University of Michigan Transportation Research Institute found that frontal crash protection for the heads, faces, necks, chests and abdomens (body regions airbags are designed to protect) of drivers in Michi-

gan was at least as good in 1998 and newer models as in older vehicles. This study found very few cases of drivers or passengers sustaining severe injuries because their airbags didn't provide enough protection.

Last March the Institute compared driver fatality rates in 1998-99 model vehicles versus 1997s. The focus was on vehicles that didn't undergo significant structural changes during the study's three model years to better isolate the effects of the newer airbag designs. For all passenger vehicles except pickup trucks, driver fatality risk in frontal crashes was 11 percent lower in the 1998-99 models than in the 1997s. Fatality risk was higher among drivers of pickup trucks. Yet even with the pickups factored in, the overall risk of driver death was 6 percent lower in the passenger vehicles equipped with less powerful airbags (see *Status Report*, March 6, 2004; on the web at www.iihs.org).

"Taken together, these and other studies indicate a small but measurable increase in the effectiveness of the newer airbag designs compared with the older airbags that inflated with more force. Just as important, we haven't seen the large increase in deaths in high-speed crashes that some people were predicting," Ferguson says.

For more about the studies presented to the Blue Ribbon Panel, go to brp.iihs.org.

Road to depowered airbags: Automakers were able to make airbag design changes to reduce inflation forces because of modifications NHTSA made in frontal crash test requirements. A 1997 decision gave automakers an option of running less demanding 30 mph sled tests instead of the full front-into-barrier crash tests with unbelted dummies that had been required. This option was a stopgap until NHTSA had time to modify the occupant crash protection standard.

In 2000 the agency announced changes to the frontal crash test standard that went into effect in 2003. The modified rule reinstated full-front barrier tests with unbelted dummies but lowered the test speed from 30 to 25 mph. This led to the lawsuit challenging the test speed. The U.S. Court of Appeals for the District of Columbia decided the case in NHTSA's favor last month (see p.5).

In other highway safety news ...

Tennessee enacts primary law: Legislators updated the safety belt law to allow for primary enforcement. Now officers may stop drivers solely for not buckling up. In states where enforcement is secondary, police must stop motorists for other violations before writing tickets for belt use violations. This brings the number of U.S. jurisdictions with primary enforcement laws to 21 states and the District of Columbia. According to the National Highway Traffic Safety Administration, states with primary enforcement average belt use rates of about 83 percent compared with 75 percent in states with secondary enforcement.

Now all U.S. states have 0.08 BAC laws: Delaware became the 50th state to lower to 0.08 percent the blood alcohol concentration (BAC) threshold at which it becomes illegal to drive. Colorado and Minnesota lowered their thresholds from 0.10 percent to 0.08 percent earlier this year. The laws in Delaware and Colorado took effect last month, and Minnesota's goes into effect in August 2005. Among drivers who were fatally

insurance coverage of \$10,000 or more). Using data from the federal Fatality Analysis Reporting System, researchers at the University of Arkansas examined fatality rates among motorcyclists before and after the change. Controlling for an increase in motorcycle registrations and miles traveled, the researchers estimated that 46 to 82 additional cyclists died in Florida the year after legislators changed the coverage. About half of the underage riders and 60 percent of the adults who died in crashes after the law change weren't wearing helmets. "The legal age restriction is barely effective and amounts to a de facto helmet law repeal," the researchers noted. The report, "Florida's motorcycle helmet law repeal and fatality rates" by A. Muller is published in *American Journal of Public Health* (April 2004).



Motorcyclist deaths went up almost 50 percent after Florida's helmet law was weakened.

injured on U.S. roads in 2002, about one-third had BACs at or above 0.08 percent. This proportion has remained relatively constant since 1997, after declining from the 1980s to the mid-1990s.

Deaths of motorcyclists go up in Florida: The number of fatally injured cyclists went up almost 50 percent after the mandatory helmet use law was weakened in 2000 (the law change exempts riders 21 and older with

Helmet law strengthened in Louisiana: The governor recently signed a law reinstating universal coverage under Louisiana's helmet use law. Now motorcyclists of all ages will have to wear helmets (riders 18 and older had been exempt). The law change, which will take effect later this month, brings the number of U.S. jurisdictions with universal coverage to 20 states plus the District of Columbia.

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