

## ***Honda Shows Car With Air Bags***

Honda has publicly exhibited a small car — an Accord — equipped with hand-tooled air bags and experimental knee bolsters for the front seat. The showing was at a recent meeting on experimental safety vehicles in Japan.

The manufacturer has had a long-standing research commitment to air bag development, a Honda representative said, and despite the National Highway Traffic Safety Administration's decision to drop a rule requiring automatic protection in cars, the auto maker has not abandoned such research.

The company is a long way from offering air bag-equipped cars to the public, the official added.

The international conference on auto safety research took place in Kyoto, Japan, October 30 - November 6.

## **High Court to Rule On Automatic Protection Case**

Further delay in implementing the automatic protection standard for new cars appears likely because the U.S. Supreme Court has agreed to review an appellate court decision reversing government efforts to kill the requirement.

On November 8 the High Court granted the petition of the Department of Transportation and the Motor Vehicle Manufacturers Association for a writ of certiorari in the restraints case. By this action they accepted the government and auto makers' appeal from an August appeals court ruling declaring rescission of the automatic restraint standard invalid.

### **Court Action Seen in Spring**

Court observers expect the appeal will be argued before the court next April and that a decision will be made by June. Meanwhile, the September 1983 deadline for installation of automatic protection in new cars remains in effect. However, an application to stay that effective date pending the Supreme Court decision is expected soon and probably will be granted.

The issue to be decided by the Supreme Court is whether the National Highway Traffic Safety Administration (NHTSA) acted in an "arbitrary and capricious" manner when it rescinded the automatic-restraint requirement in October 1981. The standard had been established in June 1977 after years of controversy and delay. (See *Status Report*, Vol. 17, No. 11, Aug. 12, 1982.)

The rescission was questioned in suits filed by State Farm Mutual Automobile Insurance Co. and the National Association of Independent Insurers. The U.S. Court of Appeals for the District of Columbia ordered the standard back in effect, although it gave

*(Cont'd on page 5)*

## **Commission Told Of IIHS Alcohol Studies**

The nation's "sense of outrage" over the drunk driving problem offers some promise of "making a permanent dent in the problem," an Insurance Institute for Highway Safety executive told members of the Presidential Commission on Drunk Driving in a hearing in San Francisco.

Appearing before the commission's Executive and Legislative Leadership Committee, Ben Kelley, Institute senior vice president, said, "For the first time

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## **Commission Told Of IIHS Alcohol Studies (Cont'd from Page 1)**

in the long history of the drunk-driving problem, it is not unrealistic to hope that at least partial solutions are available, and that society is willing to support and sustain the hard steps necessary to achieve them.”

Kelley reviewed the extensive research done by the Institute over the past decade into alcohol issues. He made special reference to the findings of Dr. H. Laurence Ross in his new book, “Deterring the Drinking Driver: Legal Policy and Social Control,” sponsored by the Institute. Ross had listed three basic criteria for consideration in future drunk-driving programs: certainty of apprehension, severity of penalty, and swiftness of administering penalties.

“Programs that incorporate these three characteristics will be neither cheap nor easy,” Kelley said, “particularly in view of the enforcement and administrative resources that would be required to convince drunk drivers that their probability of being caught and punished is very high. But the best evidence available is that nothing less than such an approach has much chance of making a difference.”

Kelley devoted special attention to reporting Institute research dealing with the highway crash toll of young Americans. “It is an area that offers opportunities for improvement,” he said, “both through approaches aimed specifically at the problem of alcohol use and driving, and those directed more generally at reducing young deaths and crippling injuries in crashes of all kinds, including the many caused by abusive drinkers who drive.” Effects of raising the drinking age, imposing driving curfews on teenagers, and promoting the use of child restraints were discussed.

### **No Single Solution**

“There is no single countermeasure that will halt the immense drain on America’s resources and tranquility imposed by highway crash deaths and injuries,” Kelley told the committee. “But there are approaches that — if put in place — can make important inroads against the problem. Some involve reducing the likelihood of the crashes occurring in the first place, by limiting the combining of alcohol abuse and driving. Others involve reducing the likelihood of injuries when crashes do occur — whatever their causes — by better protecting the people in the vehicles, whether they are drunk or sober, young or old, drivers or passengers. Both approaches deserve the attention of public policy leaders committed to bringing America’s worst public health problem, that of highway crash deaths and crippling injuries, under control.”

## **Heavy Trucks Found To Play Big Role In Fatal Crashes**

Although large trucks are involved in fewer crashes per mile traveled than cars, their impacts are far more lethal, a government report has concluded. Such crashes are particularly hazardous to occupants of other vehicles.

In a report prepared for the Senate Appropriations Committee, the National Highway Traffic Safety Administration (NHTSA) reviewed research identifying driver, vehicle, and environmental factors associated with large truck impacts.

Trucks weighing 10,000 pounds and up accounted for 5.7 percent of all police-reported crashes, according to 1979-80 data, but the relative proportion of fatal crashes “was much greater for large trucks than that for cars, or light trucks and vans,” said NHTSA. Trucks were involved in 12 percent of all fatal crashes, taking 5,874 lives. NHTSA’s figures were based on data obtained from the Fatal Accident Reporting System (FARS), compiled between 1976-1981, and the National Accident Sampling System, gathered between 1979 and 1980.

### **Car Occupants Suffer Most**

Large trucks experienced twice the fatal crash rate per mile traveled of passenger cars, NHTSA reported, and three-quarters of all large truck crashes involved two or more vehicles, usually automobiles. In fatal crashes with cars, occupants of the automobiles were 29 times more likely to be killed than truck occupants, NHTSA said, and injury rates were four times greater for occupants of the other vehicles than for those in the trucks.

The overall trend toward increased crash severity will probably be accelerated, NHTSA reported, as roads become more crowded and cars grow smaller. By 1990, the proportion of fatal crashes involving large trucks can be expected to rise from the 1978 rate of about 12 percent to almost 14 percent.

In general, the kinds of crash configurations seen most frequently have changed dramatically since the 1950’s, NHTSA said. At that time, single-vehicle crashes accounted for most fatalities. During the 1970’s, multiple-vehicle crashes began to claim more lives.

Between 1976 and 1979, truck involvement in crashes resulted in a steady climb in fatality rates. But during 1980 the rate declined 11 percent, and in 1981 it declined another 3 percent. The decline in fatal crash

involvement, said NHTSA, “may be attributable in part to a reduction in vehicle miles of travel as a result of economic slow-down.”

In analyzing fatal crashes, NHTSA said, a variety of factors must be considered, including the driver’s condition, the limitations and handling characteristics of heavy truck equipment, and the relative hostility of the highway environment. Because of their size and weight, heavy trucks operate closer to their marginal limits than do cars, NHTSA said. Their large size implies less room for maneuvering, particularly under crowded highway conditions, and their weight and higher center of gravity mean that abrupt maneuvers to avoid hazards can often result in rollovers or jackknifing.

NHTSA analyzed the available research data in each of these areas and noted a variety of possible countermeasures:

#### **Driver-Related Factors**

- Drivers are expected to report their own violations to their employers, both at the time they are hired, and yearly thereafter. Self-reporting encourages deception on the part of drivers with poor records, and additional loopholes permit the widespread practice of holding multiple licenses in order to “spread points” and avoid license revocation. Closing the loopholes through an improved National Driver Register to screen out dangerous drivers is one countermeasure already adopted by Congress, although its benefits will not be seen for some time. (See *Status Report*, Vol. 17, No. 15, Oct. 21, 1982.)

- Experience of some motor carriers has shown that by providing incentives for fuel-efficient driving, a concurrent and significant drop in crash involvement can also occur.

- Studies have shown “significant increases in driving errors and decreases in driver alertness due to fatigue well within the 10-hour [driving] limit allowed by Bureau of Motor Carrier Safety regulations.” Motor carriers should be sure their drivers observe hours-of-service regulations, NHTSA said.

- Commercial truck drivers under the age of 25 “are twice as likely to be involved” in crashes as automobile drivers under the age of 25. Truckers under the age of 30 have the highest crash rate per vehicle miles traveled, while the lowest crash rate is for drivers between 30 and 49.

Motor carriers should improve their pre-hiring screening and provide increased training for their drivers, said NHTSA, because of the built-in complexities and limitations associated with handling large

## **Decision ‘Soon’ On Bumper Rollback**

The National Highway Traffic Safety Administration (NHTSA) has complied with a twice-postponed deadline for a filing in federal court to defend its bumper standard rollback, but still has not indicated whether it is willing to reconsider the rollback action.

As it filed a certified list of documents from the bumper standard docket with the U.S. Court of Appeals for the District of Columbia, the agency indicated that announcement of some action on the bumper standard is near. “The Administrator of NHTSA has not yet ruled on the petitions for reconsideration, but a decision is expected soon,” NHTSA told the court.

The Insurance Institute for Highway Safety on June 15 petitioned NHTSA to reconsider its order of May 14 reducing required bumper impact tests from 5 mph to 2.5 mph. Meanwhile, the State Farm Mutual Automobile Insurance Co. and the Center for Auto Safety have petitioned for appellate court review of the rollback action. (See *Status Report*, Vol. 17, No. 12, Sept. 2, 1982.)

trucks. Young drivers, especially, should be closely supervised.

#### **Vehicle-Related Factors**

- The effect of truck weight on crash incidence and severity is hampered by a lack of accurate data, said NHTSA. Data reveal that occupants of combination tractor trailers are at greatest risk and that crashes involving cab-over-engine designs rather than conventional cab-behind-engine designs result in higher occupant injury rates.

- Until quite recently, said NHTSA, it wasn’t considered “practical” to build in crash protection for truckers because the mass of large trucks combined with the high speeds at which they often operate, was “thought to preclude practical efforts to mitigate the effects of the high energy levels produced by their crashes.”

“Nevertheless,” said the NHTSA report, “a significant number of truck occupant fatalities and serious injuries might be avoided with crash protection features such as collapsible steering columns.” A recent Maryland study supported by the Insurance Institute for Highway Safety confirmed that heavy truck opera-

*(Cont’d on next page)*

## **Heavy Trucks Found To Play Big Role In Fatal Crashes**

**(Cont'd from Page 3)**

tors are particularly at risk. The study noted that many fatally-injured truck drivers suffered severe abdominal injuries from steering columns which do not meet the safety standards required for autos. (See *Status Report*, Vol. 17, No. 11, Aug. 12, 1982.)

- Virtually all — 97 percent — of fatally-injured truck occupants were not wearing safety belts, NHTSA reported. Many drivers refuse to wear them because they find them uncomfortable and inconvenient. Manufacturers should develop and install better systems, said the report, and motor carriers should require their employees to use them.

- “A potential ... may exist in making large trucks ‘less aggressive’ when they strike or are struck by smaller vehicles,” said the report. “Efforts to develop underride guards to improve the survival potential of occupants of cars that impact the rear of large trucks illustrate that some practical technical solutions are possible.” NHTSA is currently studying adoption of a “moderate strength” underride guard. (See *Status Report*, Vol. 16, No. 9, June 24, 1981.)

- Bureau of Motor Carrier Safety inspections have found that faulty, poorly-maintained brake systems are the most frequently cited reasons for declaring trucks “out of service” during surprise inspections. Motor carriers should conduct pre- and post-trip inspections and implement effective truck maintenance programs that emphasize braking systems, said the report.

In addition, manufacturers should “improve the braking performance of large trucks and trailers, and implement improvements to reduce in-service brake degradation,” said the report.

- Truckers are often faced with a confusing array of controls and displays which can result in loss of valuable time when they are faced with emergencies, said NHTSA. Manufacturers should standardize truck controls, displays, and mirrors to reduce confusion.

### **Environmental Factors**

- Fatal crashes involving combination tractor-trailers “appear to occur more frequently on highway grades than on level sections,” NHTSA noted. “Many more of the most serious large truck single-vehicle accidents occur on curved sections of highway than on straight sections,” said NHTSA. (See *Status Report*, Vol. 16, No. 2, Feb. 9, 1981.) State and federal governments should identify and correct hazardous locations.

- Often criteria used to establish and mark passing zones on two-lane roads don’t accommodate the sight-distance requirements necessary for trucks’ longer braking distances, NHTSA noted. In addition, guardrails, median barriers, and impact attenuators are not generally designed for large truck impacts.

Copies of the report, “Large Truck Accident Causation,” DOT HS 806 300, may be obtained through the National Technical Information Service, Springfield, Va. 22161.

## **Headlight Standard Changes Under Study**

- Major changes in the standard governing headlight systems have been under study by federal officials for more than a year. If adopted they could not only change the size and shape of your next car’s headlights, but also allow changes in the shape of the car itself.

Ford Motor Co. has petitioned for the most far-reaching change, proposing that for the sake of streamlining the car, the National Highway Traffic Safety Administration (NHTSA) permit use of “composite headlamp systems which will feature aerodynamically designed [plastic] lens surfaces and a new replaceable halogen light source.” Under Federal Motor Vehicle Safety Standard No. 108 auto makers are restricted to several prescribed sizes and shapes of sealed-beam lights. The composite system is used in Europe.

### **Fuel Penalty Estimated**

In documents submitted to NHTSA, Ford contends “the headlamp cavities can cause an air flow disturbance sufficient to increase the overall drag coefficient by as much as 4 percent compared to the same basic design with headlamps that have been aerodynamically blended into the front end theme.” This amounts to a penalty of up to one-half mile per gallon in fuel economy, the manufacturer estimates.

“The principal justification for limiting the shapes of headlamps has been to promote a ready supply of service replacements and thus reduce the incidence of ‘one-eyed’ vehicles on the road,” Ford says. “The new headlamp design developed by Ford will generally improve the facility for service repair of burned out headlamps because it includes an easily replaceable bulb.”

The American Association of Motor Vehicle Administrators agreed in a filed comment that the aerodynamic concept “has merit,” but said that “over the life of a vehicle ... the cost savings to an individual would be insignificant if he had to replace the housing of the basic lamp unit and lens which may cost \$80 or

more.” The California Highway Patrol said that rather than the net yearly consumer savings of over \$200 million a year estimated by Ford under the proposed plan, “Our calculations using much of the same Ford data instead show a net deficit approaching one-half billion dollars.” The New York Department of Motor Vehicles also had reservations, saying that “it is our position that the problems created will more than offset any gain.”

Ford stays with its arguments of consumer savings, however, and in additional comments filed last month predicted that while the proposed system would cost \$25 a vehicle more than today’s dual lamp rectangular lights and \$10 more than the rectangular halogen four-lamp system, savings in fuel and replacement costs could mean \$102.70 average lifetime savings per vehicle when all cars are so equipped.

Makers of sealed-beam lights have been actively opposing the Ford plan. Westinghouse has pointed out that “with the proposed reduction in lamp mounting heights and the reduction in the bumper standard to 2.5 mph, it seems likely that a lot more lamps will be taken out in front-end accidents.” Corning has argued that, “Consumers used to paying \$10 to fix a broken headlamp will postpone a \$100-\$150 repair bill and drive with a broken cracked lamps that are photometrically deficient.”

In its comments, Ford has agreed that the composite light system has produced some problems in Europe of headlight deterioration because of dirty and corroded reflectors, but says under its proposal a sealing ring will prevent such degradation.

### **Suppliers See Higher Costs**

Critics of the Ford proposal have expressed concern over the proliferation of headlamp designs. The Motor and Equipment Manufacturers Association, an organization of vehicle equipment suppliers, observed: “The approval of aerodynamic composite assemblies is likely to substantially increase replacement costs, and ... would produce a tendency to concentrate the availability of these specialized assemblies at the vehicle manufacturers’ franchised outlets. Sealed beams are presently available at more than 400,000 over-the-counter retail outlets, while franchised dealers number less than 25,000.”

While the Ford proposal has not arrived at a rulemaking stage, another proposed change in the headlight standard did reach rulemaking last month. In response to a petition from the Chrysler Corp., NHTSA is proposing that a small two-lamp rectangular sealed-beam system be allowed. At present there are four permissible sealed-beam configurations: two large circular lights, four smaller circular lights, two large

rectangular lights, and four small rectangular lights. The Chrysler proposal is for two smaller rectangular lamps, allowing more freedom in front-end styling.

Comments on the rulemaking proposal should refer to Docket No. 82-17 Notice 1, and should be submitted by November 29 to Docket Section, Room 5109, Nassif Building, 400 Seventh St. S.W., Washington, D.C. 20590.

## **Safety Council Urges 21-Year Drinking Age**

In a recommendation to the Presidential Commission on Drunk Driving, the National Safety Council has urged nationwide adoption of laws setting the legal drinking age at 21.

“The National Safety Council is vitally concerned with the abnormally high percent of the deaths and injuries of our young people under 21 that are related to alcohol,” said the safety council, adding it “encourages the passage of appropriate legislation to reduce and prevent this highway tragedy.”

## **High Court to Rule On Automatic Protection Case (Cont'd from Page 1)**

NHTSA until October 1 to inform the court whether the September 1983 implementation date was “achievable” by the auto industry. In a filing with the court at that time NHTSA argued that the standard could not be met until September 1985, “at the earliest.” (See *Status Report*, Vol. 17, No. 15, Oct. 21, 1982.)

As the prolonged court battle promised further delays of automatic restraints, William Haddon, Jr., M.D., president of the Insurance Institute for Highway Safety, commented: “The tragedy of this situation for many of the Americans who will be needlessly killed in crashes is that the NHTSA is devoting great effort and spending large amounts of tax dollars to avoid having to tell both domestic and foreign automobile manufacturers to build far more crashworthy, protective cars.

“Whatever the outcome, we hope that we will soon see the day when the new cars sold in this country will do a far better job in protecting their occupants in crashes, and do that job automatically.”

## On The Inside

- **THE SUPREME COURT** agrees to review the appellate court decision in automatic protection case. ...Page 1
- **HONDA EXHIBITS** an air bag-equipped Accord at an international experimental vehicle meeting in Japan. ...Page 1
- **AN IIHS EXECUTIVE** reviews a decade of Institute work on drunk driving for a Presidential commission ...Page 1
- **HEAVY TRUCKS** have a disproportionate involvement in fatal crashes, NHTSA concludes in a report to Congress. ...Page 2
- **NHTSA AGAIN POSTPONES** decision on reconsidering bumper rollback, but complies with an appeals court order. ...Page 3
- **MAJOR CHANGES** in the federal standard governing auto headlights are being sought by car manufacturers. ...Page 4
- **THE NATIONAL SAFETY COUNCIL** has endorsed adoption of the 21-year minimum drinking age to help curb alcohol-related crashes. ...Page 5

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## Status Report

Watergate 600 • Washington, D.C. 20037 • 202/333-0770

Editor: Paul C. Hood

Writer in this issue: Rea Tyler

Production: Ron Bevilacqua, Luci Malone