

# Status Report

## Survey Confirms Demand For 5 MPH Bumpers

Citing detailed new evidence of overwhelming public support for 5 mph bumpers, the Insurance Institute for Highway Safety has petitioned the National Highway Traffic Safety Administration (NHTSA) to reconsider its May 18 decision to roll back the current federal bumper standard from 5 mph to 2.5 mph.

The rollback would mean that bumpers could be 75 percent weaker than at present, in terms of their ability to prevent damage to cars. This is because crash forces increase with the square of the speed.

With its petition, the Institute released the results of a new public opinion survey conducted for it by Opinion Research Corporation (ORC) subsequent to announcement of NHTSA's bumper-standard rollback decision. Questions asked in the survey reflected cost and benefit figures provided to NHTSA by car companies and insurers. The survey's key findings were as follows:

- Informed that 2.5 mph bumpers would "reduce the cost of new cars by \$20 to \$40 and, because they weigh less, they would improve fuel consumption by two to six gallons per year," *71 percent of those surveyed expressed a preference for 5 mph bumpers*, 22 percent preferred 2.5 mph bumpers, and the rest had no preference.

- When the 78 percent who preferred 5 mph bumpers or had no preference were then asked what their preferences would be if 2.5 mph bumpers "reduced car prices by \$100," *the vast majority of those people still preferred 5 mph bumpers*.

- When those who initially said they preferred 2.5 mph bumpers or had no preference were asked how they would feel knowing that 5 mph bumpers would reduce the cost of the collision portion of automobile insurance coverage by 10 to 20 percent, *more than 40 percent of those people said they then would prefer 5 mph bumpers*.

In sum, the survey found that when those interviewed *knew that 2.5 mph bumpers would save gas, cost at least \$20-40 less in the purchase price of their new car, and increase insurance collision coverage costs by 10 to 20 percent, more than three-quarters of them preferred 5 mph bumpers*.

### Large Majority Wants 5 MPH Minimum

Those surveyed also were asked: "In your opinion, should the federal government require that bumpers on all new cars provide protection against collision damage up to some minimum speed?" In answer:

- *76 percent responded "yes." Of these,*
- *31 percent thought the speed should be 5 mph, and*
- *57 percent thought the speed should be greater than 5 mph.*

In its petition, IIHS pointed out that NHTSA virtually ignored an earlier ORC poll finding strong motorist support for the 5 mph bumper standard, claiming that the public generally lacked "detailed information concerning the

*(Cont'd on next page)*

## ***Congressman Files 5 MPH Standard Bill***

A bill intended to restore the 5 mph bumper standard by Congressional order has been filed in the House by Rep. Charles E. Schumer (D. -N.Y.), who termed it “an important test of this Congress’ willingness to protect the American consumer.”

On introducing the bill, Schumer attacked the NHTSA rationale for lowering the bumper standard as based on a “questionable cost effectiveness study,” and insisted that, “The relaxation or elimination of important damage and safety standards is not the way to help the ailing auto industry.”

Schumer’s bill specifies that “any impact test velocity specified in the bumper standard ... shall be 5 miles per hour.”

### ***Survey Confirms Demand For 5 MPH Bumpers (Cont’d from page 1)***

costs and benefits of bumpers.” Noting that the new survey finds similar strong support for the standard, IIHS said that NHTSA’s earlier refusal to take such information into account “shows a puzzling lack of respect for the experience and views of people who buy, own, and drive cars — and who, by the millions, find themselves in low speed crashes in those cars.”

#### **Petition Cites Flaws In Decision**

The IIHS petition also noted these failings of NHTSA’s bumper-standard rollback decision:

- The agency gave no serious consideration to amending its standard so as to encourage “lighter-weight, effective, and inexpensive 5 mph bumpers” on future new cars. (IIHS has been urging NHTSA to consider such possible amendments since 1975.)

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## ***NAII Supports Institute Petition***

The National Association of Independent Insurers (NAII) has filed a strong statement with NHTSA endorsing the Insurance Institute for Highway Safety petition for reconsideration of the bumper rollback decision. The property-casualty insurance trade association told NHTSA the decision “is unsupported by the record, is contrary to the intent of Congress, is not good public policy, and is unacceptable to the car-buying public.”

“The agency relied on highly-inflated estimates for the costs of the 5 mph standard,” the NAII said, “and rejected, without a proper basis, the estimates of increased insurance costs which most probably will result if the weakened standard is allowed to stand.”

The association cited testimony at hearings on the bumper issue that a rollback would result in increases of 10 to 20 percent, in auto collision coverage premiums, or annual increases of between \$22.50 to \$150, whereas NHTSA had predicted increases of \$65 over the life of a car.

Insurers offered “judgmental discounts” on rates when the 5 mph bumper standard became effective, the NAII said, based on assumptions that experience of fewer claims and lower payouts would justify this move. “Those assumptions proved to be correct,” the association explained. “We have every reason to believe those judgmental discounts and lowered collision costs will be rescinded and rates raised when this decision results in production of inferior bumpers as expected.”

**Survey Confirms Demand For 5 MPH Bumpers (Cont'd from page 2)**

- The decision ignored the legislative history of the 1972 Motor Vehicle Information and Cost Savings Act, which mandated the bumper standard. Based on the House debate prior to adoption of the Act, the legislative intent “is evident: 5 mph performance was the minimum level expected by Congress,” IIHS said.
- A NHTSA estimate that 2.5 mph bumpers would weigh between 15 and 33 pounds less than 5 mph bumpers ignored contrary evidence submitted by auto companies themselves, including Volkswagen’s statement that “it would expect a weight saving of only eight pounds on its Volkswagen Rabbit model....”
- In assuming that a bumper system loses all its effectiveness in impacts that are twice the design speed, NHTSA ignored evidence in its own docket, taken from IIHS car crash tests, to the contrary.
- Safety was inadequately considered in the NHTSA decision. “Severe injuries can and do occur in crashes at speeds as low as 10-15 mph,” the petition said it is “hardly rational for the agency to overturn a Congressionally congenial 5 mph performance level which its own analysis shows cannot be ruled out as being more cost effective than the 2.5 mph standard.”

**Few High School Drivers Found Using Seat Belts**

Surveying traffic at six high schools and nearby locations, Insurance Institute for Highway Safety researchers have found that teenaged drivers, who are more frequently involved in motor vehicle crashes than adults, use seat belts far less than older drivers.

At five of the six schools, non-high school drivers observed at nearby locations used belts at more than double the rates for student drivers observed at school parking lots. The non-high school rates were more than five times as high as student rates at three of the schools. Belt-use rates for high school drivers ranged from one to 21 percent, compared with use rates of 8 to 31 percent for the non-high school drivers observed nearby. In areas where belt use was relatively low for the teenagers it was correspondingly low for the non-high school drivers. Belt use for each group varied with socioeconomic status of the area, with the highest use found in the area with the highest median housing value and the lowest in an area with the lowest median housing value.

**Little Protection For Those Needing It Most**

These results were reported by three Institute staff members, Allan F. Williams, JoAnn K. Wells, and Adrian K. Lund, after analyzing observation data collected in the Maryland suburbs of Washington, D.C., and Baltimore. “The results of this study provide further indication that people at greatest risk of being involved in crashes are least likely to have the protection from injury provided by seat belts,” the researchers noted.

Copies of the study, “Seat Belt Use Among High School Students,” are available from the Insurance Institute for Highway Safety, Watergate 600, Washington, D.C. 20037.

FIGURE 1

<u>School</u>	<u>High School Student Belt Use</u>	<u>Non-High School Belt Use</u>	<u>Median Housing Value</u>
A	1%	8%	\$39,200
B	3	19	67,700
C	3	22	57,600
D	5	23	56,400
E	12	26	87,200
F	21	31	175,000

## **IIHS Official Sees Encouraging Trends In Marketplace**

Speaking before the Comstock Club in Sacramento, Calif., an Insurance Institute for Highway Safety executive cited some encouraging trends indicating new public awareness of highway safety problems and their potential solutions.

Ben Kelley, senior vice president of the Institute, said such awareness has been stimulated in part by the transition to smaller cars with their attendant hazards. But it also has resulted from insurance companies and their trade associations giving the public new opportunities to learn of motor vehicle crash problems and possible protective measures, as well as elements of the auto industry beginning to realize that the "safety doesn't sell" idea is a myth.

"Why American car makers have failed to use safety to compete, particularly in recent years when their sales were being badly damaged by Japanese competition and they clearly required innovative approaches to regain their footing in the marketplace, will be debated for years to come," Kelley said. "Whatever the reasons, it is apparent that the marketing of safety improvements has an important and growing potential for increasing new car sales and company profits while reducing the numbers of Americans who are killed or crippled in car crashes."

### **GM Campaign Shows The Way**

"The market for safety is certainly there," Kelley said, "waiting to be nurtured by car companies. If the new interest of General Motors in advertising on the basis of superior safety is a bellwether, this country's manufacturers will seize the challenge. Of course, if they don't move quickly enough, the Japanese may well get there first."

Kelley pointed to the fact that progress in motor vehicle safety in recent years has been dependent on federal regulatory action. "The payoffs from auto safety regulation have been positive and low-cost, according to both government and private studies," he said. "Even the U.S. Department of Transportation — which currently is moving to weaken or set aside standards requiring damage-resistant bumpers, passive restraints, and other new-car safety technologies — has estimated that existing vehicle safety rules have saved at least 83,000 lives since 1966, and promise to save 10,000 additional lives each year. It found that these gains have added an average cost of only \$370 to the price of a new car. Regulation has made cars somewhat safer, but much more can be done. The marketplace can be a decisive force in bringing about vehicle safety progress."

## **Cars Meeting Brake Standard Perform Better In Test**

Cars equipped with brakes that meet federal safety requirements appear to perform better in braking tests than cars built before the rule went into effect, a recent study by the National Highway Traffic Safety Administration (NHTSA) has indicated.

As part of NHTSA's ongoing review of current federal motor vehicle safety standards (FMVSS), the agency tested a small number of cars to evaluate the effects of aging and maintenance on hydraulic brake systems, comparing pre-standard 1973 automobiles to 1978 post-standard cars. The current version of the standard went into effect on Jan. 1, 1976. The agency subjected the cars to compliance tests required under FMVSS 105-75, the current version of the brake standard.

Five 1973 cars were selected for the study, along with five 1978 cars. Each was tested "as is," and with original equipment replacement brake linings. The 1978 models were also tested with a lining available in the "aftermarket," in order to "determine the best stopping distances obtainable," the agency said.

None of the 1973 cars met the standard when tested in "as is" condition, the agency said, while over half the 1978 models did. Replacing the linings on the used cars did improve their braking performance, the agency said, "but the improvement was not as pronounced for the 1973's as it was for the 1978's. Original equipment equivalent linings and the one brand of aftermarket lining tested were found to be equally successful in improving the stopping distance performance of used post-standard cars."

## **Lasers Found Promising for Crash Warning Systems**

An Institute-supported evaluation of alternative technologies available for vehicle automatic braking and collision warning systems has produced some encouraging evidence. The study indicates that many of the handicaps of earlier experimental systems might be overcome by use of laser technology.

For many years, a number of automotive research organizations have worked on development of radar braking and/or crash warning equipment. These experimental efforts have been concentrated in the use of microwave radar systems, similar to those first developed for military weapons and guidance. Such equipment, however, has presented a variety of disadvantages. Principal among these were possible radiation safety hazards and target identification problems caused by roadside objects, curves, and hills, with resulting false alarms.

### **Three Approaches Evaluated**

The new study, conducted by Industrial Vision Systems, Inc., of Wakefield, Mass., apparently for the first time has made a careful comparative evaluation of the advantages and disadvantages of the microwave approach compared to use of lasers (optically-based radar) and sound waves. The researchers concluded: "Simple, stand-alone optically-based radar systems appear to be at least as effective as microwave-based radar systems. They are sensitive, inexpensive, and meet eye radiation safety requirements."

(While lasers are popularly considered to be high-energy beams capable of cutting, destroying, or fusing target materials, the lasers considered for collision warning systems would operate at much lower energy levels and should pose no health or environmental hazards.)

Although there are no known radiation hazards for the laser and acoustic systems, this is a concern for microwave radar even though most microwave-based systems conform to U.S. safety standards.

### **Limitation for Sound Waves**

Acoustic-based radar has a limitation that caused the researchers to dismiss it rather readily. Wind noise would limit such systems to a range of about 35 feet, yet it is believed that for dry roads and typical vehicle driving speeds, ranges of from 100 to 200 feet would be required. For wet roads, 200 to 300 feet range would be needed, and for icy roads considerably more.

Bad weather would be the principal limiting factor for a laser system, the study indicates, although this is not believed to be a serious problem.

Copies of the technical report summarizing the comparative evaluation of the various radar systems have been provided to all major motor vehicle manufacturers doing business in the United States, for their information and possible use.

## **Child Restraint Legislative Guidelines Offered**

Legislative interest in many states in the child restraint issue has caused the Physicians for Automotive Safety to prepare a series of "Guidelines for State Legislation" to familiarize lawmakers with child protection needs.

The guidelines, prepared by Annemarie Shelness, the organization's executive director, cover such matters as the age of children to be protected, the best means of protection, optional seat belt use, and enforcement problems. A copy is available from Physicians for Automotive Safety, Communications Dept., P.O. Box 208, Rye, N.Y. 10580.

## Quoted Without Comment

Mr. Raymond A. Peck, Jr.  
Administrator  
National Highway Traffic Safety Administration  
Nassif Building  
400 Seventh Street, S.W.  
Washington, D.C. 20590

Dear Mr. Peck:

The benefits of a four-ply "inner guard" glass developed for windshield use have been brought to my attention. I understand it differs from the high penetration resistance windshield currently required by federal standard for motor vehicles manufactured for sale in the United States in only one respect, an extra layer of clear plastic film is added to the inside surface. Available literature indicates that this layer of film on the inside surface shields vehicle occupants against contact with a shattered windshield in a crash, greatly reducing painful and disfiguring lacerations.

The "inner guard" windshield is in use on many cars in Europe. The Calspan Corporation also used this type of windshield for the Calspan/Chrysler Research Safety Vehicle developed under a research contract with the U.S. Department of Transportation. However, this windshield currently cannot be used in the United States because of an NHTSA interpretation that FMVSS 205 requires an abrasion test for both the exterior and interior windshield surfaces.

The American Association of Motor Vehicle Administrators believes that the four-ply "inner guard" windshield does comply with FMVSS 205, and the Insurance Institute for Highway Safety has supported the request of the manufacturer that the standard be amended to permit its use.

Your agency has forecast an increase in motor vehicle fatalities and injuries in coming years because of the reduction in vehicle size. At the same time, federal and state monies budgeted for the promotion of highway safety are being reduced. It would seem appropriate then to authorize the use of this product that would provide passive safety protection to vehicle occupants, particularly since one purpose of FMVSS 205 is to "reduce injuries resulting from impact to glazing surfaces."

In view of these facts, I request that your agency expedite its evaluation of this product with a view to amending Standard 205 to permit the use of this windshield in vehicles manufactured for sale in the United States.

Sincerely,

Leslie G. Foschio

*(This letter, written by Leslie G. Foschio, commissioner of the New York Department of Motor Vehicles, refers to the availability of a new anti-lacerative windshield technology that still does not have NHTSA approval despite successful test results and years of use in tens of thousands of European vehicles. See Status Report, Vol. 16, No. 6, April 27, 1981.)*

# Detering the Drinking Driver

Legal Policy and  
Social Control

**H. LAURENCE ROSS**

Alcohol-impaired driving is a major cause of the more than 50,000 deaths every year on U.S. highways and of comparable tragic losses in all countries where the automobile is the basic means of transportation. The problem involves not only the stereotyped killer drunk but also the masses of drivers whose impairment is not evident either to the casual observer or to routine police patrol, but whose likelihood of accident is greatly increased by the influence of alcohol.

Attempts to use legal measures to control drinking and driving have produced numerous examples throughout the world of law-enforcement crackdowns and campaigns to increase the severity of legal penalties. This survey of the results of these attempts finds that measures aimed at increasing the perceived certainty of punishment for drinking drivers usually have produced reductions in deaths and injuries, although the effect of these measures has always disappeared after a short time. Increasing the perceived severity of penalties has not reduced the extent of drinking and driving. In **Detering the Drinking Driver** Dr. H. Laurence Ross provides an explanation for these facts in the light of the

theory of deterrence. His findings have implications for understanding the capabilities and limitations of law as a tool of social policy, and they lead to practical suggestions for more effective laws to deal with the problem of drinking and driving.

State and federal lawmakers are beginning to take steps to lower the soaring rate of death and disability caused by intoxicated drivers. New policies and laws must be implemented quickly, but they should also draw on information and lessons gained from past experiences. **Detering the Drinking Driver** can play a vital role in the development of these campaigns through its detailed explorations of existing deterrence programs and its explanations of their successes and failures. No one can afford to ignore this problem any longer.

**H. Laurence Ross** is professor of sociology and adjunct professor of law at the State University of New York at Buffalo. He received the Ph.D. in sociology in 1959 from Harvard University. He has taught at Northwestern University, New York University, and the University of Denver, and was director of the Program in Law and Social Sciences at the National Science Foundation. He has held visiting appointments in socio-legal studies at Oxford University and the University of Geneva, and has been Fulbright Lecturer at the University of Louvain, Belgium. He has written extensively concerning law and the automobile.

**The Insurance Institute for Highway Safety** is an independent, nonprofit, scientific, and educational organization. It is dedicated to reducing the losses—deaths, injuries, and property damage—resulting from crashes on the nation's highways. The Institute is supported by the American Insurance Highway Safety Association, the American Insurers Highway Safety Alliance, the National Association of Independent Insurers Safety Association, and several individual insurance companies.

Please send me \_\_\_\_\_ copies of *Detering the Drinking Driver* @ \$22.95

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# Status Report

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