

the highway loss reduction

# Status Report

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## Senator Danforth Introduces Omnibus Highway Safety Bill

Declaring that traffic safety is "an issue of life, limb, and dollars," Sen. John C. Danforth (R.-Mo.) has introduced an omnibus highway safety bill that would, among other things, require air bags in cars and reinstate the 5 mph no-damage bumper rule.

Danforth introduced "The Highway Safety Act of 1983" on April 20 and was joined by Senators Robert Packwood (R.-Ore.), chairman of the Senate Commerce, Science, and Transportation Committee, and Claiborne Pell (D.-R.I.), a long-time supporter of highway safety measures. Danforth chairs the Commerce Committee's subcommittee on surface transport.

The bill contains four main provisions to improve auto safety, deter drunk and drugged driving, improve truck safety, and introduce a federally-coordinated approach to hazardous materials transportation.

### The Latest in Technology

In a statement introducing the proposed measure, Danforth said the bill "recognizes the importance of incorporating the most up-to-date technological advances in automobiles and trucks to save lives and reduce injuries and property damage. The bill also addresses the behavioral side of driving by encouraging states to take action to combat drunk and drugged driving and to enact laws requiring the use of child passenger safety seats."

"Motor carrier safety is also addressed in this bill," said Danforth. "This issue is especially important because of the larger trucks now allowed on the highways. Missouri and some other states opposed these larger trucks and I fought against them. One of the main concerns about the larger trucks was safety. The provisions of this bill expand upon the improvements in truck safety that were incorporated in the Sur-

face Transportation Assistance Act of 1982, namely a grant program to states for enforcement of safety regulations and whistleblower protection for trucking company employees."

Danforth said he had talked to administration officials about the bill. "My guess is that they will support parts of the bill, remain silent on some, and oppose others," he said. No House member has sponsored similar legislation, he noted. *(Cont'd on page 10)*

## Arizona Company Wins NHTSA Contract For Retrofitting Air Bags

A joint U.S.-Japanese air bag development venture has been awarded a \$458,000 contract by the National Highway Traffic Safety Administration (NHTSA) to build as many as 500 driver-side air bag systems for retrofit installation in police cars.

The firm, Romeo Kojyo Co., Inc., of Tempe, Ariz., received the contract under NHTSA's experimental retrofit air bag program announced last November. (See *Status Report*, Vol. 17, No. 19, Dec. 22, 1982.)

David J. Romeo, president of Romeo Kojyo, told *Status Report* that the project "could result in a comparable retrofit air bag program by our company for private fleets." He estimated that per-car costs for such a program would range from a high of \$700-\$800 for volumes of 100 cars to as low as \$300 for volumes of 10,000 or more cars.

Romeo also said that his firm is "interested in working with the General Services Administration" in the government agency's efforts to purchase cars equipped with driver-side air bags. (See related article on page 8.)

Under the NHTSA program, the company will produce retrofit air bag systems to equip existing or re- *(Cont'd on page 8)*

## NHTSA Estimates 1980 Motor Vehicle Crash Costs at \$57 Billion

In 1980, the aggregate economic costs of motor vehicle crashes — deaths, injuries, and property damage — amounted to \$57 billion, a new government study has concluded.

The report, "The Economic Cost to Society of Motor Vehicle Accidents," is a study prepared by the National Highway Traffic Safety Administration's (NHTSA) Office of Program and Rulemaking Analysis.

In a separate paper prepared for the Society of Automotive Engineers, NHTSA researchers Lawrence J. Blincoe and Stephen Luchter summarized the results of the study and concluded: "The results of this study indicate that motor vehicle accidents have a significant impact on the nation's economy."

In 1980, the nation's gross national product, a measure of the total national output of goods and services valued at market prices, was \$2,164 billion, according to the U.S. Council of Economic Advisors. The \$57 billion estimate would equal about 2.6 percent of the 1980 GNP.

Of the total estimated societal cost of \$57 billion, medical costs associated with crashes accounted for \$3 billion of the total, property losses for \$21 billion, lost productivity for \$14 billion, and other costs for \$19 billion, the report said.

In 1980, the latest year for which there are complete fatality and injury data available, more than 51,000 people were killed in motor vehicle crashes. Nearly 4 million more were injured, 250,000 of them seriously, the report said. About 48 million vehicles were damaged.

The study warned, "the true value of the lives and the physical and mental capabilities which are destroyed in motor vehicle accidents can never be adequately measured, because the pain, suffering, and frustration felt by individual accident victims cannot be measured in economic terms."

It added, "Persons injured in these accidents often suffer physical pain and mental and emotional anguish that is beyond any economic recompense. Permanent disability such as paraplegia, quadriplegia, loss of eyesight, or brain damage can deprive an individual of the ability to achieve even minor goals and aspirations and leave one dependent on others for economic support and routine physical care.

Families are severely strained, too, the report noted. "The emotional consequences of the victim's

**SUMMARY OF SOCIETAL COSTS OF MOTOR VEHICLE ACCIDENTS**  
(All costs in millions of 1980 dollars)

	Uninvolved	Property Damage Only	Injury Level (AIS)					Fatality	Total
			1	2	3	4	5		
<b>Medical Costs</b>			543	622	631	335	1,125	70	3,326
<b>Productivity Losses</b>			319	251	313	451	801	12,102	14,237
<b>Property Loss</b>		16,984	2,656	612	424	100	33	174	20,983
<b>Other Losses</b>	7,050	4,127	3,933	590	684	640	245	1,384	18,653
<b>Total</b>	7,050	21,111	7,451	2,075	2,052	1,526	2,204	13,730	57,199

**Notes:**

1. Government costs are not included in this table as they are not additive with the other cost categories.
2. Injury level represents the maximum AIS level survivors. All fatalities are shown in the Fatality category, no matter what the injury level prior to death.
3. The Uninvolved category represents costs born by owners of all motor-vehicles which were not involved in an accident.

Source: NHTSA

physical problems can often result in personality problems that affect family relationships and may even affect the cohesiveness of the family unit.”

In addition, the report commented, “there is considerable evidence to indicate that the most serious injuries are not adequately covered by insurance. Depending on the financial ability and insurance coverage of the individual victims, the medical and rehabilitative costs, as well as the loss in wages resulting from serious injury, can be as catastrophic to the victim’s economic wellbeing as the injuries are to their physical and emotional condition.”

The report summarized the costs of motor vehicle crashes by injury levels (see table). The main findings are these:

- Societal losses resulting from fatalities constituted about \$14 billion of the total cost of crashes. Injuries accounted for some \$15 billion, and property-damage-only crashes cost an estimated \$21 billion. An additional \$7 billion resulted from insurance overhead costs borne by consumers.

- The most serious injury types — AIS 4 and 5 — make up only one percent of all injuries resulting from motor vehicle crashes. Yet, because they can often result in long-term disability, they account for over 40 percent of the total cost of medical care.

- Medical costs associated with fatalities had the least impact on costs — only 2 percent of the total.

- Motor vehicle crashes cost the public sector a great deal as well. State and local governments shared about \$3 billion in additional costs attributable to crashes and the federal government lost about \$7 billion in foregone revenues and additional expenditures.

The administrative and overhead cost of motor vehicle insurance amounted to about \$14 billion in 1980. About \$9 billion of that sum results from the administrative and operational costs of underwriting insurance policies, the report said. These costs “will not change significantly” without “major changes in accident rates.”

Copies of the report may be obtained by asking for: “The Economic Cost to Society of Motor Vehicle Accidents,” DOT HS 806 342. Write the Office of Public Affairs, Room 5232, National Highway Traffic Safety Administration, 400 Seventh St., S.W., Washington, D.C. 20590. Copies of the SAE summary of the study, also titled “The Economic Costs to Society of Motor Vehicle Accidents,” by Lawrence J. Blincoe and Stephen Luchter, may be obtained from the SAE Order Department, 400 Commonwealth Drive, Warrendale, Pa. 15096.

## Securiflex Windshields Perform Well in State Police Fleet Test

The Maryland State Police and the Insurance Institute for Highway Safety, partners in a joint project to test a new type of anti-lacerative windshield, have praised the windshield’s performance in comments to the National Highway Traffic Safety Administration (NHTSA) docket.

Commenting on the agency’s proposed rulemaking to permit use of glass-plastic glazing (see *Status Report*, Vol. 18, No. 5, March 25, 1983), both the Institute and the Maryland police cited specific examples of how well such glazing has withstood severe problems as well as routine use.

The test project started in October 1981 with the Maryland State Police, Saint-Gobain Vitrage (makers of the Securiflex windshield), and the Institute participating. Standard HPR (high penetration resistant) windshields were shipped from this country to France, where Saint-Gobain applied the Securiflex “inner guard,” then returned them to the United States. They were installed in 50 new 1981 model Plymouth Gran Fury automobiles purchased for state police duty. In September 1982, with the cooperation of the Ford Motor Co., the project was expanded to include 100 new 1982 model Ford LTD’s.

### ‘Entirely Satisfied’

“The anti-lacerative windshields have posed no operational problems whatsoever, and we are entirely satisfied with their performance,” said Col. W. T. Travers, Jr., patrol superintendent.

The Institute filed a detailed report of a February crash in which a Maryland trooper impacted the windshield of his car with sufficient force to shatter the glass, yet was protected from lacerations and other injuries by the plastic film on the side of the windshield nearest the passenger compartment. The crash occurred at night when the officer’s Ford LTD, equipped with a Securiflex windshield, struck an abandoned car near Baltimore, Md., at a speed of 45-50 mph.

“Despite the extensive cracking of the windshield, there was a complete absence of fragments of glass in the vehicle interior,” crash investigators reported. “The Securiflex inner layer was completely intact, the interior surface remained smooth, there was no penetration from glass fragments, and the surface could be stroked with the bare hand without contacting glass.”

*(Cont’d on next page)*

## **Securiflex Windshields Perform Well in State Police Fleet Test (Cont'd from Page 3)**

The Maryland State Police also filed a report of an incident in November 1982 when one of the Securiflex-equipped Plymouths caught fire in the engine compartment. The fire burned the right side of the engine area, the hood, and adjacent sheet metal.

"Although the intense flame destroyed the portion of the right side of the windshield which it reached directly, the flame did not propagate beyond that immediate area," Maryland officials informed the NHTSA docket. "The Securiflex windshield construction did not propagate flame and proved to be self-extinguishing in this case."

NHTSA proposed rulemaking last month to modify Federal Motor Vehicle Safety Standard 205 to permit use of the glass-plastic construction in windshields and other vehicle glazing. The comment period will end April 25. Comments should refer to Docket No. 81-04; Notice 3 and be addressed to Docket Section, Room 5109, NHTSA, 400 Seventh St. S.W., Washington, D.C. 20590.

## **NHTSA Completes 1982 Model Crash Tests**

The National Highway Traffic Safety Administration (NHTSA) has finally completed its 35 mph crash tests of 1982 automobile models under its new car assessment program.

Crash testing of 1983 models is now under way and officials said they are hopeful most of the results will be made public prior to the end of the 1983 model year. (See box.)

Of the last four cars tested in the 1982 model group, only a 4-door Lincoln Continental exceeded desirable performance levels set by NHTSA. (See table.) In addition to the Lincoln Continental, NHTSA tested a 4-door Dodge Colt hatchback, a 4-door Chevette hatchback, and a 2-door Chrysler LeBaron convertible. Part of the Chrysler test results were invalidated because of test procedure problems, NHTSA officials said.

The 35 mph crash test speeds are 5 mph greater than the test speed requirements for compliance with federal safety rules. They consist of 35 mph front and rear barrier impacts. Instrumented dummies wearing seat belts measure the impacts in accordance with criteria established under Federal Motor Vehicle Safety Standard (FMVSS) 208, occupant crash protection.

NHTSA does not test the ability of any cars to protect unrestrained occupants despite the fact its belt-use surveys consistently show that about 9 out of 10 Americans ride unrestrained.

Head injury criteria (HIC) measurements should not exceed a value of 1,000 in 30 mph impacts under that rule, NHTSA noted. Chest deceleration levels for both the driver and passenger dummies should not exceed 60 G's under the 30 mph test criteria and femur loads under 2,250 pounds are required.

The automobiles' ability to retain their windshields under FMVSS 212, their ability to prevent intrusion into the occupant compartment under FMVSS 219, and their ability to prevent fuel leakage in a rear impact under FMVSS 301 are also examined.

Since the agency began testing 1979 models, 94 models have been crash-tested under the new car assessment program and out of those, 24 models have met or exceeded the desired 30-mph performance levels in the 35 mph impacts. Thirty-two models have had HIC scores below the 1,000 level. Since crash forces increase at an exponential rate as velocity increases, the 5 mph increase in the crash speed translates into approximately a 35 percent increase in the actual crash forces released compared to those generated in a 30 mph impact.

### **'New Car' Testing Lags**

Ever since it began the new car assessment program, the National Highway Traffic Safety Administration has had trouble publishing timely results.

The reason for delays, an official told *Status Report*, is because the program is "piggy-backed" onto the agency's compliance test program.

"On the surface, piggybacking is an excellent way to save money," he said, because the 35 mph crash test program waits for the compliance branch to procure and test cars and only then begins its own crash testing.

"But it's embarrassing," he acknowledged, since the agency finds itself disseminating "new car information" long after the model year is over.

The federal budget cycle presents an additional problem, officials noted. Ideally, funds would be set aside in the 1984 budget cycle to permit the agency to begin buying and crash testing 1985 models as soon as they are released by manufacturers. But actually the cars do not become available until much later.

**NEW CAR ASSESSMENT PROGRAM — 1982 MODELS  
35 MPH FRONTAL CRASH TEST RESULTS**

Make	Model	Doors	HIC No. driver/pass.	Chest Resultant Acceleration	Femur Loads (pounds)	
					Driver L/R	Passenger L/R
Chevrolet	Camaro	2	563/577	39/32	901/1004	258/358
Chevrolet	Cavalier <sup>1</sup>	2	708/821	42/37	1834/1654	1523/1673
Chevrolet	Celebrity	4	478/395	33/21	774/1052	918/595
Chevrolet	Chevette	4HB	1020/715	48/40	1007/1653	449/346
Chevrolet	Impala	4	1170/NA <sup>2</sup>	40/41	940/NA <sup>2</sup>	575/375
Chrysler	LeBaron <sup>3</sup>	2 (conv.)	NA	NA	NA	NA
Datsun	Sentra <sup>4</sup>	4	549/865	43/46	499/103	1111/251
Datsun	Stanza	4HB	974/879	55/39	377/449	704/1289
Dodge	Colt	4HB	932/1730	72/44	517/782	506/276
Dodge	400	2	520/756	44/41	1080/880	1011/914
Dodge	Omni	4HB	639/1703	58/43	460/825	600/1450
Ford	Escort	4HB	950/1070	47/39	1150/1050	1518/1530
Ford	Granada	4	860/1050	NA/52	980/800	460/340
Ford	LTD	4	960/808	50/43	360/640	350/180
Honda	Accord <sup>5</sup>	4	500/403	43/29	1078/1308	1145/754
Lincoln	Continental	4	757/728	46/37	723/1136	1393/612
Mazda	626	4	969/1693	47/50	575/1215	550/250
Renault	Fuego <sup>6</sup>	2	3768/2484	50/35	493/684	396/1136
Saab	900	4	734/1166	39/35	990/725	800/1275
Toyota	Celica	2	702/530	36/45	456/448	360/359
Toyota	Corona	4	842/828	59/40	1400/1178	888/507
Volkswagen	Quantum	4	1353/1194	53/41	180/436	561/413
Volkswagen	Scirocco	2	1482/683	54/37	330/275	200/175
Volvo <sup>7</sup>	DL	2	550/381	45/35	154/1147	892/227

**Legend:**

HB — Hatchback, Liftback, or Fastback  
L/R — Left/Right, NA — Not Available

**Scores:**

HIC — Head Injury Criteria: The head injury limit is 1,000.  
Chest Resultant Acceleration: The limit for chest acceleration is 60 g's.  
Femur Loads: The femur load limit is 2,250 pounds.  
All these measures are injury criteria of FMVSS 208, Occupant Protection.

**Footnotes:**

Unless stated otherwise, all of the above vehicles met the criteria of the following standards at 35 mph:

- FMVSS 212, which requires that a specific percentage of the windshield mounting remain attached.
- FMVSS 219, which requires that no vehicle parts from outside the occupant compartment may intrude into a defined zone in front of the windshield.
- FMVSS 301, which limits the amount of fuel leakage from any part of the fuel system during the crash test, and following the test when a vehicle is slowly rotated through 360 degrees.

1. In a rear impact, failed to meet the criteria of FMVSS 301 at 35 mph.
2. Instrumentation problem, data not available.
3. The frontal crash test scores were invalidated. However, this vehicle did meet the criteria of FMVSS 212, 219, and 301 in the 35 mph frontal impact.
4. Failed to meet FMVSS 201 and 301 in 35 mph frontal impact.
5. Failed to meet FMVSS 219 at 35 mph.
6. Failed FMVSS 212. Retested at 30 mph — passed.
7. Data on FMVSS 212, 219, and 301 are not available.

Source: NHTSA

## Brake Rule Credited With Preventing Crashes

A federal rule requiring dual braking systems in cars has prevented about 40,000 auto crashes annually, the National Highway Traffic Safety Administration (NHTSA) has reported.

While the systems add about \$17 to the lifetime costs of owning and operating an automobile, they annually prevent an estimated 260 fatalities, 24,000 injuries, and \$132 million in property damage, NHTSA said in a technical evaluation of the costs and benefits of Federal Motor Vehicle Safety Standard 105. The rule governs braking performance in cars, school buses, and light trucks.

It was prepared by Dr. Charles J. Kahane of NHTSA's Office of Program Evaluation in response to a 1981 executive order by the President, requiring federal agencies to evaluate the actual costs and benefits of existing standards.

### Front Disc Brakes Studied

The study also reviewed the costs and benefits of front disc brakes which, though not required, were universally adopted by automakers following revision of the standard in 1975 when specifications in fade and water resistance characteristics of brake systems were improved. While drum brakes had improved greatly, the report noted, manufacturers switched to more expensive front disc brake systems partly because of consumer preference, and partly because they made it easier for manufacturers to meet the new requirements. However, the report said "disc brakes have significant safety benefits, although they are only about one-fourth as large as the benefits for dual master cylinders."

Adoption of front disc brakes has resulted in an annual reduction of 10,000 crashes involving brake defects, the report said. It estimated the reduction in crashes prevents about 64 deaths, 5,700 injuries, and some \$32 million in property damage annually, while increasing the costs of owning and operating a car equipped with disc brakes by \$21.08 over the car's lifetime.

Other brake modifications that may have been adopted to ensure compliance with federal requirements were not evaluated because of difficulty in obtaining valid data for statistical analysis, the report noted.

Single copies of "A Preliminary Evaluation of Two Braking Improvements for Passenger Cars: Dual Master Cylinders and Front Disc Brakes" (DOT

## Supreme Court Hearing Set

Arguments on the legality of the government's cancellation of required automatic protection for vehicle occupants will be made before justices of the Supreme Court on April 26.

The High Court will hear the appeal of the Department of Transportation from the decision of the U.S. Circuit Court for the District of Columbia overturning government rescission of the automatic protection portions of Federal Motor Vehicle Safety Standard 208. That decision had sustained the legal challenges filed by the State Farm Mutual Automobile Insurance Co. and the National Association of Independent Insurers. (See *Status Report*, Vol. 17, No. 11, Aug. 12, 1982.)

Briefs of the legal arguments were filed with the Court in February. A majority of the numerous briefs filed by interested parties urged that the lower court decision be sustained. (See *Status Report*, Vol. 18, No. 3, March 1, 1983.) Following the oral arguments, the Supreme Court is expected to hand down its decision by June.

HS-806-359) may be obtained by sending a self-addressed label to the Office of Management Services, NHTSA, Room 4423, NAD-42, Washington, D.C. 20590.

## 'Car Book' Is Again Published Privately

The privately published sequel to *The Car Book*, a consumer guide for automobile purchasing originated by the National Highway Traffic Safety Administration (NHTSA), has been expanded and republished in a 1983 edition.

Edited by Jack Gillis, the former NHTSA employee who worked on the agency's first publishing of the book, and again supported by the Center for Auto Safety, the new edition incorporates features of earlier versions plus a variety of new information. Among features added to the sections on crash test performance, fuel economy, and operating costs are materials on air bags and child safety seats, an expanded insurance guide, guidelines for buying tires, and a used car guide.

Published by E. P. Dutton, Inc., *The Car Book* is available at bookstores or by order from the Center for Auto Safety, 1223 Dupont Circle Building, Washington, D.C. 20036. The price is \$7.95.



## New IIHS Bumper Film Is Available

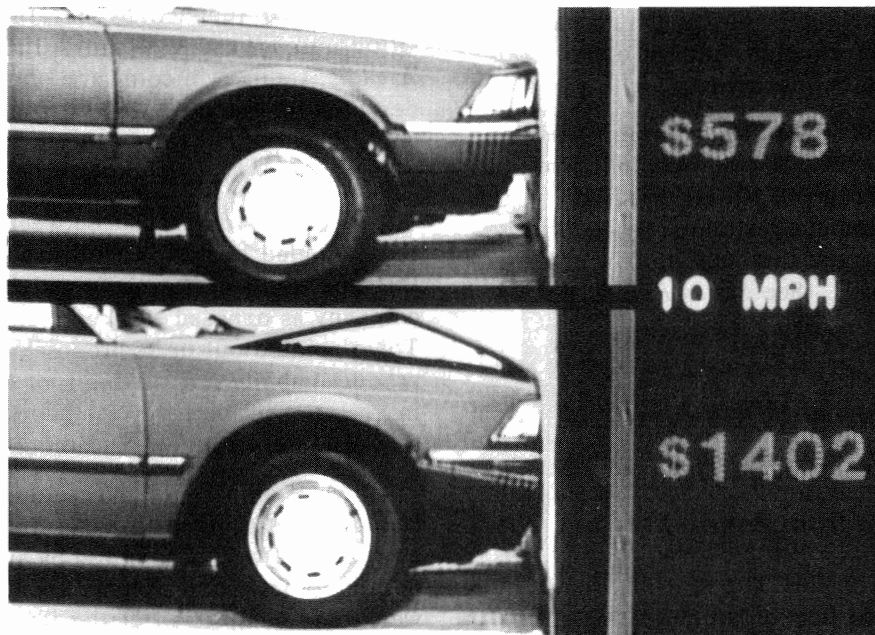
“Report on Bumpers,” a new Insurance Institute for Highway Safety film presentation that traces the development of effective auto bumpers, is now available from the Institute for loan or sale.

First presented during hearings on auto safety and durability before the Surface Transportation Subcommittee of the Senate Commerce Committee (see *Status Report*, Vol. 18, No. 3, March 1, 1983), the film shows the dramatic improvements in bumper designs made by car manufacturers during the 1970’s and early 1980’s, largely in response to federal “safety” and “no-damage” bumper standards issued by the National Highway Traffic Safety Administration (NHTSA). It also uses low-speed crash test footage to show the differences in repair costs between the bumpers of a decade ago — those manufactured before federal standards were passed — and the 5 mph bumpers manufactured under federal standards during 1973-1982.

“Will the improvement continue?” the film asks. “If technology dictates the answer it should.” Improved technologies such as soft-face bumpers and efficient, lightweight energy-absorbers are displayed by the film’s narrator, Institute senior vice president Ben Kelley.

“Report on Bumpers” also includes examples of the recent applications of obsolete bumper technology that have been made by some car manufacturers since NHTSA weakened its bumper requirements for new models. In all of the Institute’s recent crash tests shown in the film, repair costs for 1983 models with the new, weakened bumpers (2.5 mph bumpers) were very high and far exceeded those for earlier, virtually identical models with 5 mph bumpers.

The 14-minute presentation is available in 16mm film and 3/4-inch and 1/2-inch videotape formats. To inquire about purchase or loan of “Report on Bumpers,” contact the Communications Department, Insurance Institute for Highway Safety, Watergate 600, Washington, D.C. 20037.



*In a scene from the new IIHS film presentation, “Report on Bumpers,” two models of the Honda Accord LX are shown, in a split-screen technique, on impact with a barrier at 10 mph. The 1982 model (top) with 5 mph bumpers met the test with \$578 damage. The 1983 model (bottom) with 2.5 mph bumpers, suffered \$1,402 damage.*

## **GSA Signs Agreement For Air Bag Fleet**

The General Services Administration (GSA) this year will purchase up to 5,000 compact cars equipped with air bags installed as original equipment on the driver side only, the agency has announced.

GSA and the National Highway Traffic Safety Administration (NHTSA) signed an interagency agreement March 10, with NHTSA agreeing to bear the cost of the air bags. The cars will be a part of GSA's interagency motor pool.

When the air bag trial was first announced, NHTSA had expected the fleet size to be between 2,000 to 4,000 models. (See *Status Report*, Vol. 17, No. 19, Dec. 22, 1982.) The cost of equipping the government vehicles is expected to range from \$300 to \$500 per car, GSA said, although exact costs will not be known until manufacturers bid for the contract.

"This agreement illustrates the commitment of the Reagan Administration to auto safety without resorting to the heavy hand of government regulation," said Carmen. "We are optimistic about this project, but only on-the-road experience in saving lives and reducing injuries from auto impacts can confirm our optimism."

Under the terms of the agreement, NHTSA will track any crashes involving the air bag fleet, recording damage and injury information, and an expert team will investigate each air bag deployment.

The results of this limited test will be in addition to the air bag safety record already compiled by the more than 12,000 cars of the 1972-1976 model years equipped with the automatic restraints. By 1979 those cars had been driven more than 600 million miles on U.S. and Canadian roads. (See *Status Report*, Vol. 14, No. 14, Sept. 7, 1979.)

## **Arizona Company Wins NHTSA Contract For Retrofitting Air Bags (Cont'd from Page 1)**

cently ordered police vehicles. The state of Arizona intends to equip 130 of its fleet of late-model Ford LTD police cars with the driver-side systems. NHTSA reportedly has also contacted other state police departments to encourage participation in the program.

NHTSA has said that the driver-only air bag system is uniquely suited for police fleets because usually only drivers are in the cars when they are in use.

The agency also pointed out that when police cars are involved in crashes they often are travelling at high rates of speed compared to other classes of vehicles.

In submitting its bid last December for the NHTSA contract, Romeo Kojyo told the agency: "The benefits of an air bag system are universally accepted. However, the costs, complexities, and availabilities of these systems appear to be widely misunderstood. This program will take much of the 'mystery' out of the air bag and demonstrate to fleet operators and to the public at large that air bag technology, components, and systems presently exist and can be acquired at a reasonable cost."

The retrofit system proposed by Romeo Kojyo involves replacement of the regular vehicle steering wheel with one containing the gas generator and air bag, the installation of a sensor device to trigger the system in the event of a crash, and necessary wiring system to link the system's units. Romeo told *Status Report* that the firm will determine whether knee bolsters also should be provided for the air bag-equipped cars as it learns which models are to be involved.

The Romeo Kojyo system will draw together commercially available production components that have already been tested and approved. The steering wheel, designed specifically for retrofit use, will be produced by Takata Kojyo Co., Ltd., of Tokyo. That company also will produce the air bag and module. The gas generator, designed for Mercedes-Benz production cars, will be supplied by Bayern-Chemie GmbH of Ottobrunn, West Germany. From Technar, Inc., Arcadia, Calif., will come the crash sensor, originally designed for use on BMW production vehicles. Technar also will supply the diagnostic system and the complete electrical system.

"The key difference between this program and those funded by NHTSA during the past 12 years is that the contract recipient will be a manufacturing company as opposed to a research company," Romeo Tojyo pointed out in its proposal. "Acceptance of the product liability responsibility of having real systems in real cars driven by real people will separate the manufacturers from the researchers."

The company's projected schedule for the NHTSA contract is to have the system design completed within 24 weeks, followed by system evaluation by both sled tests and vehicle crash tests by the 34th week, and completion of the fleet retrofitting by the 44th week.

David Romeo was director of the air bag development program at Talley Industries before establishing the present company, which was "formed specifically to help provide high quality, high technology air bag restraint system components at fair market prices to



automobile manufacturers and consumers who have a serious commitment toward improving the crash survivability of the vehicles they produce and use.”

Americans have not had the opportunity since 1975 of purchasing vehicles equipped with air bags. However, Mercedes-Benz has announced its plans to offer a driver-side air bag option on some of its 1984 models to be sold in this country. It already is successfully selling such an option in Europe.

## Opinion Divided On Tough Alcohol Laws

The public has mixed reactions to recent proposals for combating driving under the influence of alcohol, according to a survey conducted by an insurance research group.

The survey, based on a national sampling of 1,252 adults, was conducted by the All-Industry Research Advisory Council (AIRAC), a group funded by property-liability insurers for public policy research.

“Some of the ‘get tough’ drunk driving laws now being enacted have penalty provisions that exceed what the majority of respondents in this national sample say they would favor,” AIRAC reported. “The findings of this survey provide a benchmark for measuring whether the laws will swing public opinion toward support for tougher penalties, or whether law enforcement agencies and the courts will have difficulty in enforcing provisions that lack solid public support.”

Some 86 percent of those surveyed said all drivers involved in injury-producing crashes should be tested for blood alcohol, and 60 percent said drivers should be tested whenever they are involved in a crash. Just over half — 54 percent — said drivers should be tested when stopped for moving violations, and 45 percent believe police should set up roadblocks and conduct mass testing at times and places where driving under the influence is most likely to occur.

Respondents also had mixed reactions to penalties, AIRAC said. Forty percent said a driver who caused serious injury while under the influence should receive a jail term, 27 percent thought the driver’s license should be suspended, 25 percent thought the driver’s license should be suspended except for commuting to or from work, and 6 percent favored a fine.

“If a person convicted of drunk driving has had no such prior convictions and has caused no injury, the

public is inclined to be relatively lenient,” said AIRAC. For first-time offenders, only 7 percent thought a jail term appropriate and 8 percent thought the driver should lose all driving privileges. About 36 percent said it would be appropriate to suspend the driver’s license except for commuting, 43 percent favored a fine, and 6 percent believed there should be no penalty.

Copies of the survey, “Public Attitude Monitor 1982,” may be obtained from AIRAC, 1200 Harger Rd., Suite 222, Oak Brook, Ill. 60521.

## CB Coalition Against Drunk Driving Urged

The Alliance of American Insurers, a national trade association, has proposed formation of a CB Radio Coalition Against Drunk Driving to bring a new weapon into play in the war on alcohol-impaired drivers.

In a national survey conducted by Opinion Research Corp. for the Alliance, nearly nine out of ten persons interviewed said they would use CB (citizen band) radio to notify police of a drunk driver were they in a position to do so. More than eight of ten said such CB use would be effective against drunk driving, and more than eight of ten also felt the plan “would bring people together to help solve a common problem.”

“The significant point is that people today apparently are ready to take action if they have the means,” said L. C. Christopher, Alliance vice president-communications. “A CB radio gives the driver an immediate communications link to alert the highway patrol when he or she sees another driver who appears impaired.”

## Update

**Child Restraint Use Legislation** has been adopted by six more state legislatures and the District of Columbia, bringing to 30 the total number of jurisdictions with such laws. (See *Status Report*, Vol. 17, No. 19, Dec. 22, 1982.) The six states are Illinois, Oklahoma, South Carolina, Georgia, New Jersey, and North Dakota.

## **Senator Danforth Introduces Omnibus Highway Safety Bill**

**(Cont'd from Page 1)**

It is the most comprehensive piece of highway safety legislation introduced in Congress in recent years, Danforth told reporters.

While he acknowledged he may not get the "whole loaf," he said he was optimistic about the bill's prospects because of increased citizen awareness of highway safety issues stemming from grass roots campaigns to curb drunk driving and a general awareness of the hazards of small cars.

Danforth added that assertions that air bags and 5 mph bumpers are not cost effective are "manifestly not correct."

While air bags would probably cost several hundred dollars, Danforth said, they are no more expensive than many automobile accessories and the accompanying reduction in lives lost and injuries prevented would achieve a cost savings that would be "truly remarkable."

The main provisions of the bill are outlined below.

**Title I, Automotive Safety Improvement**, would explicitly direct the Department of Transportation to:

- Require manufacturers to install air bags in all cars manufactured on or after Sept. 1, 1985.
- Reinstate the 5 mph no-damage bumper standard for all cars manufactured or sold in the U.S. on or after Sept. 1, 1984.
- Reinstate rulemaking to improve side-impact protection for automobiles, light trucks, vans, and multipurpose passenger vehicles, with a final rule to be published by July 1, 1984.
- Require installation of anti-lacerative windshields in cars manufactured on or after Sept. 1, 1984.
- Require the installation of high-mounted rear stop lights, beginning Sept. 1, 1984.
- Develop standards for vehicle crashworthiness, to set labeling requirements for new vehicles, and to provide a booklet regarding the crashworthiness of cars along with other consumer information for distribution to consumers in new car showrooms.
- Undertake a study of the safety potential of flare kits and other distress signalling devices with an eye toward requiring they be carried in cars.

- Begin an investigation of potential and known hazards to truck occupants and evaluate potential safety standards to ameliorate them.

- Provide special funding for enforcement of state laws requiring the use of restraints for children under the age of 5.

**Title II, Driving While Under the Influence**, would encourage state adoption of countermeasures by:

- Amending the provisions of drunk driving legislation enacted last year that would add enforcement of drugged driving laws as one of the supplemental criteria states may meet in order to qualify for special federal grants.

- Providing an additional \$30 million in incentive grants for enforcement of state laws setting the "minimum legal drinking age" at 21.

- Providing \$75 million in grant funds for updating and computerizing state traffic safety records in order to enhance state enforcement of drunk and drugged driving laws.

It would also require annual Congressional oversight hearings for three years following enactment of the title in order to review its implementation and effects.

**Title III, Motor Carrier Safety**, is intended to increase compliance with safety and health rules affecting commercial motor carriers involved in interstate commerce. Under it, DOT would be required to:

- Revise its rules and regulations as necessary to assure that commercial motor vehicles are safely maintained, equipped, and operated.

- Require DOT to undertake a study in conjunction with the National Institute for Occupational Safety and Health to assess the health hazards to which motor carrier employees are exposed.

- Investigate serious complaints concerning safety violations and take steps to protect the identity of informants.

- Establish new and strengthen existing civil and criminal penalties for legal infractions.

- Permit states to establish even more stringent standards governing motor carriers so long as they do not conflict with federal rules.

- Set up annual equipment inspection requirements to be administered by the states.

- Undertake a comprehensive study of safety questions surrounding heavy truck handling, stability, and crashworthiness.

Additionally, the bill proposes tough new enforcement and investigative powers for DOT inspectors.

**Title IV, Hazardous Materials**, is intended to provide greater federal resources to states for preventing the accidental release of hazardous materials during their transport and for responding to such incidents when they do occur. Under this section, the Hazardous Materials Transportation Act would be amended to:

- Require DOT to set standards for routing hazardous materials shipments and require prenotification of shipments to state officials.
- Provide \$60 million in state incentive grants to support state enforcement efforts.

Hearings on the bill are expected in May.

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## Status Report

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