the highway loss reduction

STATUS REPORT

INSURANCE INSTITUTE for Highway Safety

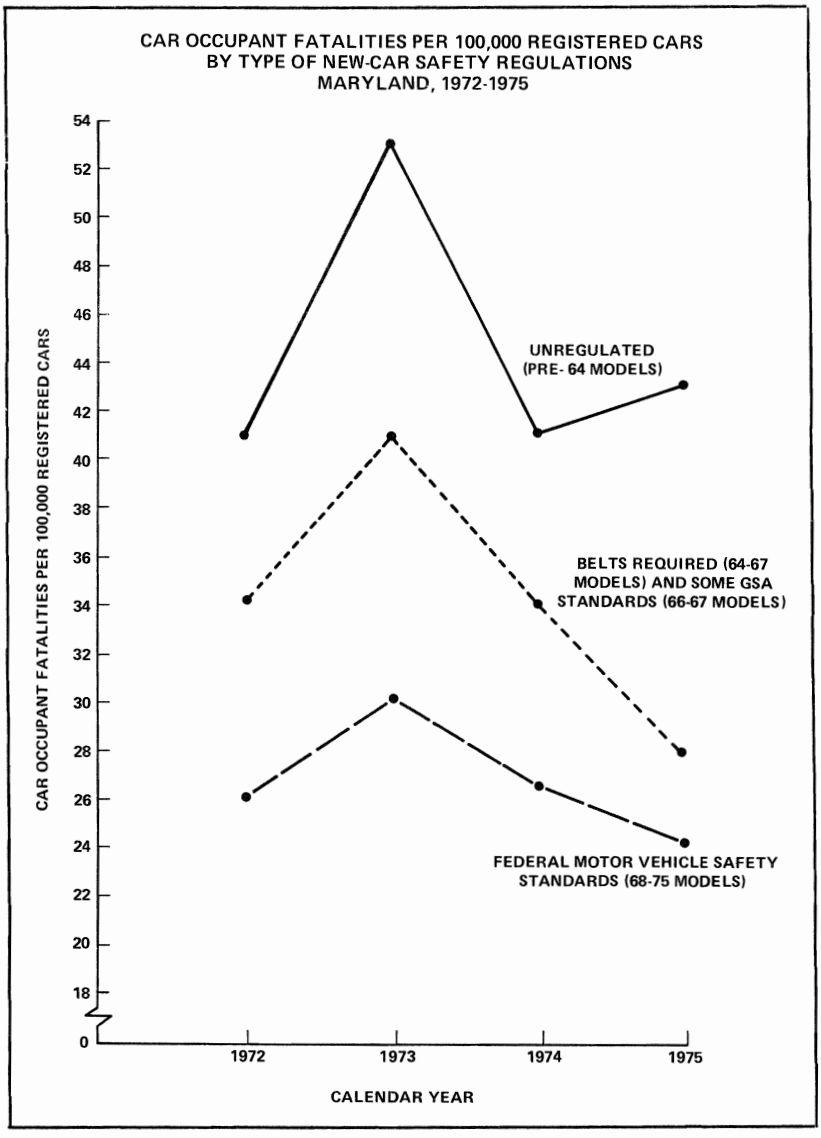
Vol. 11, No. 7 May 3, 1976

Fatality Rates Reduced

Auto Safety Regulation Found Working

In a large-scale comparison of cars manufactured prior to federal and earlier state motor vehicle safety regulations, and cars manufactured to comply with such regulations, the Insurance Institute for Highway Safety has found "substantial reductions in occupant fatality rates" for the regulated cars.

Coming ten years after enactment of the federal law mandating the current, on-going program of safety standards development for all new cars, the comparison is based on an eastern state's fatality data during 1972-1975. It is described in a report entitled *The Effects of New-Car Safety Regulation on Fatality Rates,* which finds:



- "Cars sold prior to the beginning of such state or federal regulation – models prior to 1964 – had an average yearly *occupant fatality rate of 44 per 100,000 registered cars.*"

- "Cars with front outboard lap seat belts as standard equipment required by state law – 1964 to 1967 models – as well as some crash protection installed in relation to General Services Administration (GSA) standards – mainly in 1967 models – averaged *35 occupant deaths per 100,000 registered cars, 20 percent less than pre-1964 cars.*" (Prior to the issuance of federal safety standards, GSA, the federal government's purchasing agency, required that cars it purchased meet higher safety standards than generally available cars.)

- "For federally regulated – post-1967 – cars, *occupant deaths*

averaged 27 per 100,000 registered cars yearly, 23 percent less than 1964-1967 models and 39 percent less than pre-1964 models."

The graph on page one illustrates the report's findings.

The report found that there were "no consistent differences in the rates at which they killed pedestrians" among unregulated, state regulated or subsequently federally regulated cars. "Regulations promulgated thus far have had no apparent effect on pedestrian fatality rates," it said.

Leon S. Robertson, the Institute's senior behavioral scientist, carried out the research and wrote the report. Copies are available from IIHS on request. Please write for "The Effects of Safety Regulation," Insurance Institute for Highway Safety, Watergate Six Hundred, Washington, D.C. 20037.

FIRST COMPREHENSIVE STUDY

"Prior to the research reported here," Robertson pointed out, "no study had adequately separated vehicles subject to automobile safety standards from other vehicles operated on the roads in exactly the same period in order to assess the overall effect of regulation on different types of fatalities."

In the research, data on all reported fatal crashes in Maryland were obtained from state police records for the years 1972-1975. In each calendar year, occupant fatalities per 100,000 registered vehicles were determined for the various car model years involved. In parallel, pedestrian fatalities per 100,000 registered cars were determined according to the model years of the cars striking pedestrians in each of the 1972-1975 calendar years.

According to Robertson, the differences in fatality rates "cannot be attributed to younger drivers in older cars since no consistent differences in percent of drivers 25 or younger were found between regulated and unregulated vehicles or between state and federally regulated vehicles. The average fatality rate per year per 100,000 passenger cars nationally during 1960 to 1963 was 44, the same as that found for pre-1964 cars in the present study during 1972-1975. Therefore, the experience of these decade-old cars is to be expected from their experience when new, and cannot be attributed to their ages or to driver attributes that may be associated with older cars."

"In sum," said Robertson, "careful research methods that separate out the vehicles to which specific regulations applied reveal that, in the aggregate, the state and federal motor vehicle safety regulations issued in the 1960s and thereafter have greatly reduced automobile occupant fatalities. These regulations are not the end, but the beginning of a process to minimize the toll in human life that accompanies motor vehicle use."

Congressman Urges Passive Restraint Standard

A member of the House Consumer Protection Subcommittee has urged the Secretary of Transportation to mandate passive restraints – "whether air bags or passive belts" as "standard equipment in all new cars at the earliest possible date."

Rep. James Scheuer (D - N.Y.) told Secretary William Coleman, Jr., that "thousands of Americans who would otherwise be seriously or fatally injured in automobile accidents will be in your debt."

In a letter to Coleman, Scheuer said that as an interim measure the government "should take strong positive steps toward mandatory belt use laws," and "a comprehensive fleet-sized test of passive systems should be initiated immediately to provide us with much-needed field data." See article on page 6.

Scheuer's letter followed by a month the subcommittee's hearing on National Highway Traffic Safety Administration programs, including passive restraint rulemaking. (See *Status Report*, Vol. 11, No. 5, March 19, 1976.)

At that hearing, the Insurance Institute for Highway Safety showed a film on the effectiveness of air bags, which included a film sequence produced by General Motors in 1973 but never given wide circulation by the company. GM has indicated that it no longer plans to offer air bags as an option after the 1976 model year. Scheuer said at the hearing that "the film was eloquent beyond any words" in demonstrating the value of air bags.

In his letter to Coleman, Scheuer said "the obvious alternative to safety belts is passive restraint systems. They are effective; they require no action on the part of the occupants; they avoid the 'Big Brother' argument; and they would result in 100 percent 'use' instead of the 70 or 80 percent use we might hope to achieve with mandatory safety belt use laws."

Uniform VIN Requirements Adopted

Uniform systems for vehicle identification numbers (VINs) have been adopted by the Vehicle Equipment Safety Commission (VESC) to be used on 1979 model passenger cars and non motor-powered recreational vehicles such as trailers.

Currently, vehicle manufacturers use different VIN systems with varying formats and lengths. This has led to a high rate of error in recording such VINs and has required needlessly complicated, and hence expensive, record keeping systems. The two VESC regulations – one for cars and one for the recreational vehicles – will require VINs of 15 characters, specify the information that must be encoded, and assign positions for the alphabetic or numeric codes conveying this information.

In announcing the new regulations, VESC stated that the new VIN system was developed "for the benefit and protection of the public and to increase the effectiveness of controls in titling and registering motor vehicles . . . . State motor vehicle administrators, inspection and law enforcement officials are unanimous in attesting to the need for . . . a uniform VIN system." VINs are widely used in the search and identification of stolen vehicles.

VESC is an interstate compact of 43 states and the District of Columbia which proposes uniform regulations for the states. Four of these states may adopt the regulations by administrative procedures. The other states and the District of Columbia are required to obtain legislative approval for the regulations.

Joseph Murphy, VESC chairman, indicated that future VIN regulations would cover motorcycles, trucks and buses.

NHTSA'S VIN STANDARD

The National Highway Traffic Safety Administration currently has a requirement (FMVSS 115) that vehicles must have a VIN that is visible and is not duplicated in a 10-year period. James Gregory, NHTSA administrator, has indicated that this standard will be expanded later this year to require some standardization of VINs.

Because both NHTSA and VESC now have VIN standards, the question of who has authority in this area – the federal government or the states – has been raised. An NHTSA attorney, in a letter replying to a General Motors inquiry, has stated that in the agency's opinion, the current federal requirement preempts any state regulation.

(Cont'd on page 4)

The federal agency is under no obligation, however, to engage in standard setting that would preempt a uniform VIN standard or any other uniform standard established by the states. VESC officials have also stated that, in their opinion, any NHTSA standard calling for uniform VINs would be a design standard. Federal law prohibits the agency from writing design standards; it may only issue performance requirements.

NHTSA Administrator Nominee Reported Chosen

President Ford will reportedly nominate John Snow as the next head of the National Highway Traffic Safety Administration.

Snow, currently deputy undersecretary of the Department of Transportation, will replace James Gregory who announced his resignation in February. (See *Status Report*, Vol. 11, No. 4, March 3, 1976.)

Although the nomination has been confirmed by several Department of Transportation sources, official announcement must await the President's transmittal of Snow's nomination to the Senate for confirmation.

Snow has been with DOT since June 1972, holding several posts. Previously, he was with a Washington, D.C. law firm. Snow is a native of Toledo, Ohio and a graduate of the University of Toledo. He has a law degree from George Washington University and a doctorate in economics from the University of Virginia.

DOT, NHSAC Seek Mandatory Belt Use Laws

State and local governments should give top priority to enacting mandatory safety belt use laws, according to a recent Department of Transportation study.

DOT emphasized, however, that its new study did not evaluate federal research and standards-making involving vehicle safety programs "such as air bags, or improved vehicle crashworthiness . . . although they are considered by the department to be no less important in reducing fatalities and injuries."

The DOT study, *The National Safety Needs Report*, was mandated by Congress in the Highway Safety Act of 1973. Federal motor vehicle safety standards, on the other hand, come under the 1966 National Traffic and Motor Vehicle Safety Act, which was not covered in this study.

The study evaluated 37 different state and local highway safety countermeasures and ranked mandatory belt use laws and the nationwide 55 mile per hour speed limit as the top two programs having a "very high payoff at a relatively small investment."

Combined alcohol safety action countermeasures were also cited as having a large potential for reducing crash fatalities.

(An Insurance Institute for Highway Safety study of the National Highway Traffic Safety Administration's current Alcohol Safety Action Programs (ASAPs) found that ASAPs failed to reduce crash fatalities. See *Status Report,* Vol. 9, No. 13, July 8, 1974.)

The DOT study is available from: Superintendent of Documents, Government Printing Office, Washington, D.C. 20402.

ADVISORY COMMITTEE RECOMMENDATIONS

At its recent meeting, the National Highway Safety Advisory Committee, which advises DOT on its state and local highway safety programs, also supported state enactment of mandatory safety belt use laws and increasing alcohol safety countermeasures. These countermeasures include legislation to assess a one cent per proof tax on each gallon of alcoholic beverage sold in the U.S., with the revenue going for prevention and treatment of alcoholism and highway safety programs. The committee also recommended expansion of DOT's program to investigate all countermeasures, "including legal, medical and preventive" programs designed to reduce alcohol-related crashes.

Industry Seeks Advisory Panel On Truck Standards

The trucking industry wants the Department of Transportation to establish a special advisory group on truck safety standards. DOT, at this point, is receptive to the idea.

Trucking officials discussed the idea of the special advisory group with Secretary of Transportation William Coleman, Jr., at a March meeting. The trucking officials, representing Mack Trucks, Inc., the Heavy Duty Truck Manufacturers Association and Rockwell International Corp., asked Coleman to appoint a panel specifically "to make recommendations on any future change in the requirements" of the federal safety standard on air brakes – FMVSS 121, according to a DOT memo. (See *Status Report*, Vol. 11, No. 5, March 19, 1976.)

The trucking officials suggested that the panel be composed of two suppliers, two vehicle manufacturers, two truck operators, two DOT officials and two consumers.

Coleman told the group that whether or not to form such a panel should be decided by the National Highway Traffic Safety Administration, but that DOT officials should not sit on the panel "because their participation could conflict with statutory requirements for the conduct of rulemaking," the memo said.

At an April meeting between NHTSA's head, James Gregory, and the industry officials, an understanding was reached that Gregory would advise Secretary Coleman that "he favors an advisory committee of some type and that he will take steps to establish it," according to an NHTSA memo.

At present, there are at least 21 members out of the combined 58 person memberships of the National Motor Vehicle Safety Advisory Council and the National Highway Safety Advisory Committee that have experience with trucks and buses – including members representing manufacturers, fleet operators, dealers, drivers, safety researchers and state motor vehicle administrators.

Control Arm Case Still Pending

Ford Recalls Trucks And Buses For Suspension Defect

Ford Motor Co. is recalling over 11,000 trucks and buses for a front suspension defect that can cause a "loss of vehicle control with little or no driver warning."

Thus far, however, Ford has not recalled some 5.5 million of its 1965-1970 cars equipped with potentially defective front suspension components – lower control arms – that can also suddenly fail and

(Cont'd on page 8)

DOT Briefing

How Air Bags And Seat Belts Complement Each Other

This paper was presented by Leon Robertson, senior behavioral scientist at the Insurance Institute for Highway Safety, at a briefing requested by the Assistant Secretary for Environment, Safety and Consumer Affairs, and the Assistant Secretary for Systems Development and Technology of the U. S. Department of Transportation.

The public debate about how best to protect vehicle occupants in crashes has often centered on the relative merits of air bags and seat belts. It is too often assumed that if seat belt laws could increase belt use to 70 percent or so, there would be no need for air bags. However, the research evidence indicates that both air bags and seat belt use laws are needed because the sets of injuries they each prevent are only partially overlapping.

Air bags are designed to inflate in severe front and front-angle crashes – reducing crash forces by spreading them over a larger area of the body than belts and providing more space and time for the body to decelerate. Shoulder belts are designed to do the same but they do so less effectively than air bags because

TABLE 1
INJURIES (AIS ⩾2) BY TYPE OF CRASH AND BELT USE
TOWAWAY CRASHES OF 1973-75 MODEL CARS*

	FRONT AND FRONT-ANGLE CRASHES			SIDE, REAR AND ROLLOVER CRASHES		
	Unbelted	Lap Belted	Lap and Shoulder Belted	Unbelted	Lap Belted	Lap and Shoulder Belted
Percent Injured	12	10	8	13	7	5
Number of Occupants Involved	3,514	964	1,456	2,544	851	1,429
Percent Effectiveness of Lap Belt Only		$= \frac{12-10}{12} = 17\%$			$\frac{13-7}{13} = 46\%$	
Percent Effectiveness of Lap and Shoulder Belt		$= \frac{12-8}{12} = 33\%$			$\frac{13-5}{13} = 62\%$	

*Extracted from Table 3, p. 10 in Donald W. Reinfurt, Claudio Z. Silva, and Yosef Hochberg, "A Statistical Analysis of Seat Belt Effectiveness in 1973-75 Model Cars Involved in Towaway Crashes," University of North Carolina Highway Safety Research Center, October, 1975.

they concentrate the decelerative forces over a smaller area, involve more abrupt deceleration, and are not in use by three-quarters of drivers.

Belts are most effective in crash modes where air bags would have little or no effect. Table 1 presents data on injuries in crashes extracted from a study of 1973-75 model cars in towaway crashes, the only available study of three-point belt effectiveness in North America. Lap belts reduced severe injuries only 17 percent in front and front-angle crashes compared to 46 percent in side, rear and rollover crashes. Lap and shoulder belts in combination reduced severe injuries only 33 percent in front and front-angle crashes compared to 62 percent in side, rear and rollover crashes. The data in Table 2 indicate similar findings in other studies that have separated frontal from other crashes. Belts are consistently less effective in frontal than in other crash modes.

It is clear that even when used, belts do not provide sufficient protection in frontal and front-angle crashes. For this reason as well as the several reasons cited previously, regulation mandating at least the crash protection performance that can readily be provided by present air bag systems is essential. Air bags should be supplemented by lap belts, and laws mandating belt use are needed particularly to reduce injuries in other crash modes.

TABLE 2
CLAIMED BELT USE* AND EFFECTIVENESS IN FRONTAL CRASHES

Author(s)	Belt Use Claimed		Percent Fatals		Estimated Percent Effectiveness		Percent Serious Injury		Estimated Percent Effectiveness		Comment
	Number	Percent	Belted	Unbelted	Frontal	Total	Belted	Unbelted	Frontal	Total	
Campbell, 1968	367/3504	10	**	**	**	**	9.5	9.6	1	34	Lap belts, 1967 crashes
Council & Hunter, 1974	455/2594	18	**	**	**	**	8.1	12.0	33	51	Predominately lap belts, 1970 crashes
Kihlberg, 1969	984/5719	17	0.7	1.1	36	40	7.4	12.7	43	49	Lap belts, 1966-67 crashes
Levine & Campbell, 1971	1489/8662	17	**	**	**	**	4.7	8.7	46	48	Lap belts, 1966 & 68 crashes
Palmer & Toomath, 1972	190/500	38	2.1	3.9	46	59	7.9	17.1	54	69	Predominately 3 point belts, New Zealand, 1971-72
Tourin & Garrett, 1960	491/4553	11	**	**	**	**	4.2	3.6	17	28	Lap belts in crashes during 1950's

*No study adjusts for possibly inflated claims of belt use by less injured occupants which can inflate belt effectiveness estimates substantially.

**Data not given in the report.

(Cont'd from page 5)

cause unexpected loss of vehicle control. Ford has told the National Highway Traffic Safety Administration that it is aware of at least 870 reports of lower control arm failures. A six year old NHTSA investigation into the lower control arm defect continues to drag on, although the agency is apparently nearing a decision in the case, according to an NHTSA official. (See *Status Report*, Vol. 10, No. 18, Nov. 5, 1975.)

The current Ford recall involves certain 1975 F-series trucks and 1974-1975 B-series buses, most of which are used as school buses, according to an NHTSA official. The trucks and buses will be checked for front spring rear hanger brackets that are insufficiently riveted. The brackets can "eventually crack" as a result of several parts "becoming loose in severe duty service," allowing "front axle displacement or separation from the vehicle, with subsequent loss of vehicle control with little or no driver warning," Ford stated. The Ford recall applies to trucks and buses regardless of whether they were in "severe duty service" or not.

Ford told NHTSA that it is "not aware of any bracket separations nor of any accidents or loss of control incidents attributable to cracked spring hanger brackets."

Safety Board Issues Recommendations For Buses

The crash of a California school bus in May 1975 led the National Transportation Safety Board to again recommend improved rollover protection for school buses. The National Highway Traffic Safety Administration, however, ignored NTSB's earlier recommendations in issuing its latest school bus safety requirements. (See *Status Report* , Vol. 11, No. 3, Feb. 18, 1976.)

In a separate investigation of a Washington, D.C., commuter bus fire, NTSB recommended changes in bus design that would prevent the rapid spread of an exterior bus fire.

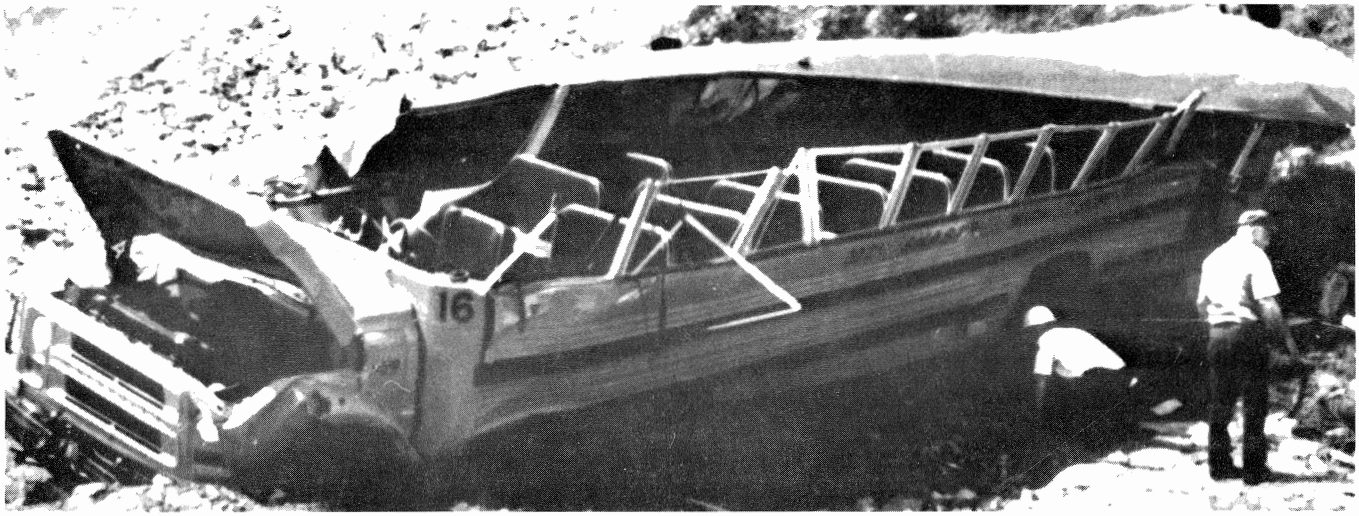
The California school bus crashed during a field trip in Oregon. The driver and two students were killed when the runaway bus vaulted off a mountain highway and plunged more than 200 feet down the mountainside. The driver, who was not using her safety belt, and both the fatally injured students were ejected from the bus, as were a teacher and 15 of the 16 other student passengers. According to the NTSB, "All but one of those ejected were killed or injured. The only occupant who remained in the bus was uninjured." (See photo page 9.)

The NTSB investigation found that the right front brake on the bus was maladjusted. The investigators also said the driver erred in entering a steep downgrade in fourth gear and in constantly pumping the brake pedal.

RECOMMENDATIONS

NTSB said the Oregon crash and similar earlier school bus crashes have demonstrated the need for school bus structural integrity even under dynamic rollover conditions, and added "such structural assurance is within current technologies and practical limits."

NTSB also recommended to the Governor of California that the state take action to insure "systematic preventative maintenance and the semiannual inspection of school buses" in accordance with the provisions of the federal Highway Safety Program Standard 17 (Pupil Transportation Safety).



CITY BUS FIRE

NTSB also recently investigated a fire in a Washington, D.C. commuter bus. The bus, carrying about 65 passengers, was traveling at about 55 mph when the fire was discovered. A passenger noticed the exterior fire and reported it to the driver, who evacuated the passengers. There were no injuries.

The driver tried to put out the fire but the extinguisher carried on the bus was not working. The fire was not controlled by the fire department until after the interior of the bus was fully ablaze.

The NTSB investigation found that a wheel bearing in the left-rear wheel assembly had failed. This failure raised the operating temperature of the wheel hub beyond the autoignition temperature of the wheel bearing lubricant; fire ensued and rapidly spread to the tires and other components underneath the bus.

NTSB recommended that NHTSA "develop and issue a Federal Motor Vehicle Safety Standard to insure that wheelwell components can withstand fires and resist penetration by objects propelled by wheel rotation."

Single copies of the Oregon school bus report (NTSB-HAR-76-1) and of the safety recommendation (H-76-7) for the Washington, D.C. bus fire may be obtained without charge by writing to the Publication Branch, National Transportation Safety Board, Washington, D.C. 20594.

Cost Information Required

DOT Sets Regulation Review Policies

The Department of Transportation has announced three new internal policies "to improve analysis and review" of its regulations and grant programs.

Secretary of Transportation William Coleman, Jr. said the new policies were established "to ensure that regulations issued by the department itself are sound and do not impose unnecessary burdens on the private sector, on consumers, or on federal, state and local governments."

In summary, the new policies, which take effect on May 1, 1976, "except for proposals whose development is essentially complete on that date" require that:

• Each DOT agency must assess a regulation's costs and benefits to the public and government prior to beginning rulemaking and prior to issuing a final rule. The costs and benefits of grant programs must also be measured.

• If a regulation is "potentially costly or controversial" each agency must submit a memo on the regulation, to the Secretary 30 days prior to both beginning rulemaking and issuing a final rule. The memo must summarize, among other things, the agency's evaluation of the costs and benefits of the regulation, alternatives considered by the agency and the anticipated positions of parties interested in the regulation.

• Each agency must set up a system to periodically gather comments from persons affected by DOT's regulations and grant programs so that the agency can determine if changes are needed.

The policies were announced in the *Federal Register* for April 16, 1976.

UPDATE . . .

SUPREME COURT UPHOLDS CONSTITUTIONALITY OF SAFETY ACT'S PENALTIES: The U.S. Supreme Court has rejected a Ford Motor Co. attack on the constitutionality of the penalty provisions of the National Traffic and Motor Vehicle Safety Act of 1966.

The court affirmed a lower court's decision rejecting Ford's claim that the risk of incurring an $800,000 civil penalty deters manufacturers from going to court to challenge allegedly erroneous National Highway Traffic Safety Administration defect determinations. (See *Status Report,* Vol. 10, No. 10, Sept. 30, 1975.)

Ford had challenged the constitutionality of the act after being ordered by NHTSA to recall 1968-1969 Ford Mustangs and Mercury Cougars to remedy defective seat back brackets. The U.S. Supreme Court decision is *Ford Motor Co. v. Coleman,* No. 75-870, decided April 19, 1976.

FHWA CIRCULATING HAZARD INFORMATION: The Federal Highway Administration is sending copies of *Priorities for Roadside Hazard Modification* to state and federal highway officials. The publication, supported by the Insurance Institute for Highway Safety and the Georgia Institute of Technology, is described by FHWA as "a unique quantitative method for assessing" roadside hazards and identifying "some factors which appear to be significantly involved in the occurrence of fatal accidents." (See *Status Report*, Vol. 11, No. 4, March 3, 1976.)

MANUFACTURERS OBJECT TO BUMPER RULE: Seven manufacturers have filed petitions for reconsideration of the new property-damage bumper standard recently issued by the National Highway Traffic Safety Administration. The standard requires that 1979 model vehicles sustain no damage except to the bumper system, in five mile per hour barrier and pendulum crash tests and three mile per hour corner impact crash tests. In subsequent years, only very limited damage to the bumper face bar is allowed. (See *Status Report*, Vol. 11, No. 4, March 3, 1976 for details.)

The petitioning companies, which are asking for various combinations of delays and weakenings of the standard, are: General Motors Corp., Ford Motor Co., Chrysler Corp., American Motors Corp., Gulf & Western Industries, Inc., British Leyland Ltd. and Nissan Motor Co.

Roadside Hazard Study Reviewed

The following copyrighted review is reprinted with permission from the March 1976 issue of the *American Bar Association Journal.* (Also see *Status Report*, Vol. 10, No. 1, Jan. 10, 1975.)

THE LAW AND ROADSIDE HAZARDS. By James F. Fitzpatrick, Michael N. Sohn, Thomas E. Silfen, and Robert H. Wood. Michie Company, P.O. Box 7587, Charlottesville, Virginia 22906. 1974. $28.50. Pages 593. *Reviewed by A.J.G. Priest, scholar-in-residence, University of Virginia Law School.*

This thorough, scholarly, comprehensive examination of the staggering problems with which roadside hazards confront our society was commissioned by the Insurance Institute for Highway Safety. It is a literate, admirable contribution to the profession, and it describes in full range how the cruel booby traps of the road may be successfully fought in the courts and administrative agencies. My first reaction is one of regret that so many years have rolled by. I served in World War I and almost certainly can't get back into the practice and collect some plaintiffs, but I wish I could.

Highway hazards, whether guard rail, tree, slope, sign post, utility pole, traffic signal, fallen rock, or bridge pier, turn into a slaughterhouse that portion of the highway margin in which drivers of straying vehicles should be able to regain control. Any structure that lessens the chance of achieving control without a serious crash is, says the introduction to this volume, a "roadside booby trap." These crashes are believed to produce a third of our highway deaths.

Something plainly can be done about them, as researchers at General Motors demonstrated in the late 1950s, but the official response has been slow at both federal and state levels. Makers of highway policy must be brought into court and persuaded that dangerous roadside hazards can be removed. If enough judgments accumulate, the brethren may be convinced that they should build fewer new highways and go about making the old ones safe.

Techniques for legal action had long been generally available, but they had not been marshaled tellingly until our authors undertook their task. They inquire searchingly into federal and state law, both statutes and the cases, and they put down their results lucidly and cogently.

They begin, after an over-all summary of their conclusions, with the basic Federal-Aid Highway Act, under which the state and federal governments have created the nationwide network of federal-aid highways. That act, say the authors, is the "key to an effective attack upon federal highway roadside hazards," an attack that "would yield an enormous safety pay-off." It is his vital power over funding and his other duties and responsibilities under the act that make the Secretary of Transportation a major "handle" for legal action in this area. The road to a judgment against him will usually be uphill, but travelers do have a right to be heard, and their protests may well reach the judgment stage in spite of such formidable defenses as contributory negligence, assumption of risk, and the grim doctrine of sovereign immunity, which is called "the most powerful, complicated and troublesome defense of all." The plaintiff's burden of proof, however, should "definitely be maintainable." Each state seems required to develop a safety program which identifies and corrects hazards, makes use of breakaway poles and standards, and designs protective devices which will minimize the severity of accidents.

Omnibus suits apparently may combine statutory claims against federal officials with common law claims against state dignitaries. And relief may be equitable or may take the form of compensatory damages. There are few strong majority groups of decisions, but the courts seem increasingly cordial in their approach to the plaintiff who has been victimized by highway hazards.

All of the relevant federal statutes are examined in some detail and attention is paid not only to the state decisions but also to particular state legislation, notably that of New York, California, Illinois, and Texas. Chapter topics include pendent jurisdiction, negligent conduct by private parties, vital elements of causation, breach of statutory duty, hazards as public nuisance, remedies, and answers to defenses. An abundant lawyer's table is offered. The would-be plaintiff's lawyer will have certain additional research to undertake, but his path has been vastly smoothed and eased. The authors have given the profession a new and superb facility. We should be warmly grateful to them. —A.J.G. PRIEST

In This Issue

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STATUS REPORT

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