

Interlocks Scuttled

Conferees Allow Air Bag Go-Ahead

Meeting to settle differences between Senate and House motor vehicle safety legislation, conferees for the two bodies have voted to ban ignition interlocks but allow the Department of Transportation to mandate passive restraints such as air bags.

The conferees attached two stipulations to their air bag go-ahead:

- DOT first must hold a public hearing before issuing its passive restraint requirement;
- If the Congress is displeased with DOT's rule, it has 60 days after the rule is issued to overturn the measure by a majority vote of both houses.

In forbidding interlocks – a ban that DOT must implement within 120 days – the conferees voted to allow DOT to require an eight second buzzer that sounds when safety belts are not in use. The conference measure would not prohibit DOT from using other types of audible and visual warning devices, a congressional aide said. (Research by the Insurance Institute for Highway Safety has shown that warning devices in earlier model cars did not increase belt use. See *Status Report* Vol. 9, No. 13, July 8, 1974.)

Earlier, the House had voted to outlaw interlocks and to let DOT require only that passive restraints be offered as options on new cars. The Senate had gone on record as opposing mandatory interlocks and favoring DOT-sponsored hearings before passive restraints could be required. (See *Status Report*, Vol. 9, No. 17, Sept. 27, 1974.) The conference compromise will now go before each house for action. Both Houses are expected to act soon on the bill.

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Meanwhile, the National Highway Traffic Safety Administration is awaiting completion of congressional action before it implements its pending passive restraint proposal. NHTSA issued the proposal in March, 1974. An agency spokesman told *Status Report* that NHTSA had planned to translate the proposal into a rule by September. However, the congressional debate over interlocks and passive restraints caused the agency to delay action, he said.

Experts Attack Detroit Air Bag Stance

The engineer who headed General Motors' air bag research for two and a half years strenuously disagrees with Detroit's estimates of what air bag systems should cost the consumer.

Robert F. McClean said, in a recent briefing of government officials, that he based his disagreement on talks with the suppliers who provide air bag components, as well as with engineers currently involved in the effort.

Since leaving GM, McClean has worked as a consultant in the field of crashworthiness and occupant restraint systems.

McClean and John Z. DeLorean, a former top GM executive, told National Highway Traffic Safety Administration officials that air bags for front seat occupants should cost approximately \$148 per car, not the \$225 to \$335 auto makers have claimed. (See *Status Report*, Vol. 9, No. 12, June 18, 1974.)

NHTSA proposed a standard calling for installation of air bags by the 1977 model year. McClean and DeLorean testified that the auto industry should have no trouble meeting this deadline for standard size cars, and should be able to install them in all cars, including smaller ones, by the 1978 model year. Auto makers have claimed that the NHTSA proposal is unrealistic and that they could not introduce air bags until "the 1979 model year at the earliest." (See *Status Report*, Vol. 9, No. 12, June 18, 1974.)

DeLorean left GM in May, 1973. At that time, he was group executive in charge of North American truck operations — one of the highest ranking jobs in the corporation. He had previously been general manager of both the Pontiac and Chevrolet divisions.

McClean's final position at GM, until he left in 1971, was director of the air bag project. McClean now works for DeLorean in the latter's consulting firm. This organization, under contract to Allstate Insurance Co., is conducting what DeLorean called a "no holds barred" cost effectiveness evaluation of the air bag. They were joined in their testimony by Jack E. Martins, former chief safety engineer at American Motors, who is currently Allstate's director of auto engineering.

In describing their cost effectiveness study, McClean said they will be "using later data than anybody else has had available and we wish to go into societal costs quite deeply. The cost of death has been looked at quite seriously, but frequently I think the total cost of injury has not been adequately calculated. Days away from work, insurance costs, the Blue Cross costs, all those kinds of things that just sit right there as a very real part of vehicle accident costs."

In speaking about the auto industry pricing structure, DeLorean pointed out that the manufacturers added about \$50 to the cost of each car for the interlock belt system. He predicted that when Congress eliminates this system, the auto manufacturers will not lower their prices to match that portion of the \$50 that they will save. "The implication is they have gotten all their money back and a little bonanza too," said DeLorean.

McClellan and DeLorean also described a second-generation air bag costing only \$84 per car which, they said, could be available after three years of full production of the presently available first generation model. They described this as an improved system working on pyrotechnic rather than electronic principles.

Both the \$148 estimate and the \$84 estimate included a 20 per cent profit margin for the auto dealer and a 10 per cent profit for the manufacturer, they said.

Although his estimate of the air bag's cost reflected this profit margin, DeLorean said, "I question the morality of making a profit on this kind of device, [by] either the dealer or the manufacturer. I honestly think it [the second-generation system] could be marketed for \$59 with the understanding there is no profit. There is enough profit in the rest of the automobile, and on that basis, certainly, it ought to go in as standard equipment, because it is cheaper than the system it replaces at this point in time."

McClellan said that a major part of their cost effectiveness analysis will include seat belt usage. He said his personal opinion was "that a three point [seat belt system] without an interlock or without a sequential buzzer of any sort would be the least used belt system we have ever seen in vehicles and I predict that the order of use would be less than five per cent of those who have those belt systems available to them. I think we have now the real world experience of what the industry, let's face it, what the industry brought forth as a solution to the restraint problem."

McClellan pointed out that even the interlock is of questionable value. "General Motors' own employees, as surveyed by their own people, have disabled 80 per cent of the 1974 interlock systems," he said.

Discussing noneconomic criticism of the air bag, McClellan said, "I think that roll over, noise levels, and side impact considerations in the case of the air cushion have been totally blown out of proportion. This has been done deliberately, in many cases, by those who would detract from the air cushion system."

When asked about the industry's obvious hesitation regarding the air bag, DeLorean said, "I believe this hesitancy is very misplaced . . . I think the air restraint system could be a very powerful marketing plus, and if I were in a position to do it, I would be embracing that concept very aggressively in the industry. I would love to have my line of cars with air bags sell against the other guy's without them. I would just knock them out of the way."

DeLorean said he feels strongly about the air bag, and decided to testify despite the fact that GM still owes him several hundred thousand dollars in deferred compensation. GM can cancel this payment if they decide that he is working against their best interests, DeLorean said.

Heavier Trucks Bogged Down

A drive by the trucking industry to get larger and heavier trucks on the federal highway system has stalled in the House, where it may die for this session of Congress.

Earlier this year, the House voted down an effort to increase current maximum truck weights from the present limits of 18,000 pounds per single axle, 32,000 pounds per tandem axle, and just over 73,000 pounds maximum gross weight, to new limits of 20,000 pounds, 34,000 pounds, and 90,000 pounds, respectively.

According to House aides, another try for increased truck weight was anticipated with the highway bill (H.R. 16093) expected to go before the House by Oct. 11. That bill, however, has been delayed — has

not been approved by the House Public Works Committee – and Committee sources see little chance that it can be acted on this session.

Should that be the case, the truck weight issue, which has met with success in the Senate (S. 3934), would expire in this session of Congress. Along with it would die a permanent 55 mile per hour speed limit and a proposed federally funded bike path program, both of which were included in the Senate highway bill along with increased truck weights.

Debate on increased truck weights has centered on the issues of safety, increased maintenance costs, and economic expediency.

Federal Highway Administrator Norbert T. Tiemann, in a Feb. 20 statement before the Senate Subcommittee on Transportation, came out in favor of increased truck weights. Citing the effects of the 55 mile per hour fuel emergency speed limit on trucking and the economy, he argued that “modest, calculated increases in weights . . . on the Interstate System alone, will provide substantial relief from the fuel pinch to the truckers, shippers, and the general public with minimal risk of lasting harm to the highway systems we rely on for this type of transport.”

He gave a “rough estimate” of \$50 to \$100 million annually as the cost of repairing pavement damage resulting from the increased truck weights. The safety effects of increased truck weight would be “minimal,” Tiemann claimed, with the reduced speed limit “far more than offsetting any possible increases in braking distance with existing equipment which might be attributed to greater axle loads. To the extent that increased truck productivity leads to fewer trucks on the road, it means less exposure to accidents.” (See *Status Report*, Vol. 8, No. 8, April 9, 1973.)

James Gregory, the National Highway Traffic Safety Administrator, appearing before the subcommittee on March 26, was of the same opinion, despite his admission that “in no area of truck performance can we precisely quantify the extent of the changes” in terms of highway safety. These changes, he said, would occur in stopping distances; uphill speed; ability to accelerate; greater stresses on the suspension, steering, and trailer coupling linkages; increased passing distances and the increase of splash and spray problems. “Since the weight disparity between cars of any size and large trucks is already so great . . . the added truck weight would not significantly increase the existing tremendous disadvantage of a single car colliding with a large truck [though it could] . . . have some significance in the multi-vehicle, chain reaction accidents that occur occasionally on heavily traveled highways,” he added.

NTSB OPPOSED

John Reed, Chairman of the National Transportation Safety Board, told the subcommittee that the board is opposed to the proposed truck weight increases. Before such increases are permitted, Reed argued, they should be “preceded by standards specifying a ratio of gross weight to net horsepower, minimum performance standards for brakes, and for coupling systems between components in a vehicle combination,” as well as by standards for underride guards, the control of stability, the control of splash and spray, and improved performance for truck tires.

NHTSA’s recent air-brake standard (FMVSS 121) applies only to new vehicles, whereas the proposed additional weight measures would affect all trucks, Reed pointed out. (See *Status Report*, Vol. 8, No. 23, Dec. 20, 1973.) “In every problem area hazards will remain that are not fully compensated by reducing speed to 55 miles per hour,” he said.

In a position paper entitled “The Case for Truck Weight Relief,” the American Trucking Association has argued that weight increases “will have a minimal effect upon highway safety. The lowering of the speed limit to 55 has reduced braking distance materially – far more than any increases in braking

distance with existing equipment which might be attributed to greater axle loads.” “Better than half” the trucks on the road obeyed the 55 mile per hour limit, ATA said, citing an American Automobile Association report. (An AAA spokesman told *Status Report* that the study, produced by its Texas club, clocked trucks “on a slight but long uphill grade.”)

Quoting FHWA’s estimate that increased truck weight would result in up to \$100 million in additional highway maintenance costs, ATA said “there is valid evidence that DOT’s figures are based on an erroneous extrapolation”

In a letter to all Senators, the American Automobile Association urged defeat of the proposal to increase truck size weights. Larger trucks, it said, “pose a grave threat to the safety of all drivers.”

NHTSA Bus Proposal Still Flawed

The National Highway Traffic Safety Administration has issued a modified version of its bus occupant crash protection proposal that contains the same shortcomings as its original proposal issued in February, 1973.

In addition, the new NHTSA proposal would only cover school buses, instead of all types of buses as in the agency’s original proposal, and would delay the effective date of the standard from Sept. 1, 1974, to Jan. 1, 1976.

REQUIREMENTS

As with the original version, the new proposal is designed to protect bus occupants “by requiring passenger seating and barriers that are stronger, higher, and less hostile on impact than present seats and barriers,” NHTSA said. The agency noted that in several recent serious crashes, bus seats have failed when struck by occupants hurtled forward by the crash – a type of failure first reported by the University of California at Los Angeles seven years ago.

NHTSA proposed dropping an option from its original proposal that would have allowed, but not required, bus manufacturers to install safety belts and a warning system in buses. The agency said it “determined that a passive system of occupant containment by the seating system or a restraining barrier offers the most reliable crash protection in a school bus situation.” The NHTSA proposal would require manufacturers to provide seat belt anchorages, but those anchorages would be weaker than those in cars.

(Because it consistently found that ejection plays a major role in bus occupant deaths, the National Transportation Safety Board has continually urged NHTSA to require safety belts or other restraining devices in buses. See *Status Report*, Vol. 8, No. 7, March 26, 1973.)

The NHTSA proposal would apply to all buses “sold for the primary purpose of carrying children to and from school.” NHTSA said that this definition is meant to cover conventional long chassis school buses and small van-type buses, but not intercity or transit buses, which were covered in the agency’s original proposal. According to an estimate made by Booz-Allen Applied Research and placed in the NHTSA school bus rulemaking docket (73-3), “nearly 20 per cent of all urban transit buses in service [during 1973] are used to transport school children.” NHTSA said it was exempting intercity and transit bus seats because of the “adequacy of this seating as presently designed.”

NHTSA also denied a petition from the Center for Auto Safety seeking safety belts in new intercity buses. NHTSA said that safety belt usage surveys of intercity buses have indicated that “a very low percentage of passengers would utilize safety belts if they were provided.”

NHTSA also proposed dropping the requirement that forward facing bus seats pass an upward performance test designed to “reduce the chances that the seat will tear loose in a rollover.” It claimed that the remaining forward and rearward performance tests required by the proposal will “effectively test” the same seat components as the upward test. NHTSA also proposed lowering the required seat back height from its original proposal of 28 inches to 24 inches to “permit adequate supervision of school bus passengers by the driver while the bus is in motion.” The agency claimed that testing has shown that a 24-inch height will provide “adequate containment.” It made no mention as to whether such low seat backs might allow needless whiplash and other neck injuries in crashes, and also might allow collision between passengers’ heads, a source of injuries in some types of crashes.

PROPOSAL’S SHORTCOMINGS

As with its original version, NHTSA’s current proposal contains several serious shortcomings. The proposal does not:

- apply to side-facing or rear-facing seats;
- set requirements for seat strengths in oblique or side force loadings;
- address hostile window frame structure, overhead hand grasps, foot rests, luggage racks, aisle poles or other needlessly hazardous bus interior features that are beyond a small protected zone, designated by NHTSA, around the seat. Moreover, the new proposal would further reduce the designated protective zone.

Comments on the proposed rule should be sent, by Oct. 24, 1974, to: Docket 73-3, Notice 2, Docket Section, National Highway Traffic Safety Administration, 400 Seventh St., S.W., Room 5108, Washington, D.C. 20590.

HLDI Study Links Auto Density, Claim Frequency

There is a consistent increase in the level of collision coverage claim frequency as vehicle density increases, with a “dramatic” increase in frequency levels in large metropolitan areas with the highest densities.

This is the main finding of a new Highway Loss Data Institute study showing the relationship of vehicle density to collision insurance claim frequency and the average dollar amount of individual claims for 1972 and 1973 model vehicles.

Density was measured in the study by the number of registered vehicles per square mile for the listed garaging locations of the insured vehicles. Twelve categories of vehicle density were defined by the study, ranging from the lowest, group 1, with less than 12 registered passenger vehicles per square mile – rural areas – to the highest, group 12, with more than 1,808 registered vehicles per square mile – large metropolitan areas. (See Figure 1.)

Although “vehicles listed as garaged in areas with a high vehicle density generally produce more frequent claims,” the study also found that the more frequent claims of these vehicles are of “lower average amounts . . . than vehicles normally garaged in areas with low vehicle density.”

The report also confirmed the findings of earlier HLDI studies by showing that sub compact vehicles have consistently higher collision coverage insurance claim frequencies than full size vehicles.

This was true in each of the 12 categories of vehicle density defined by the study. (See Figures 2 and 3). Differences in distribution of exposure within density groups of market classes – sub compact, compact, intermediate and full size vehicles – were reported as minimal.

Copies of Research Report HLDI A-2 are available from the Highway Loss Data Institute, Watergate Six Hundred, Washington, D.C. 20037.

FIGURE 1
RELATIONSHIPS BETWEEN VEHICLE DENSITY GROUPS AND CLAIM FREQUENCY
- COLLISION GROUPS

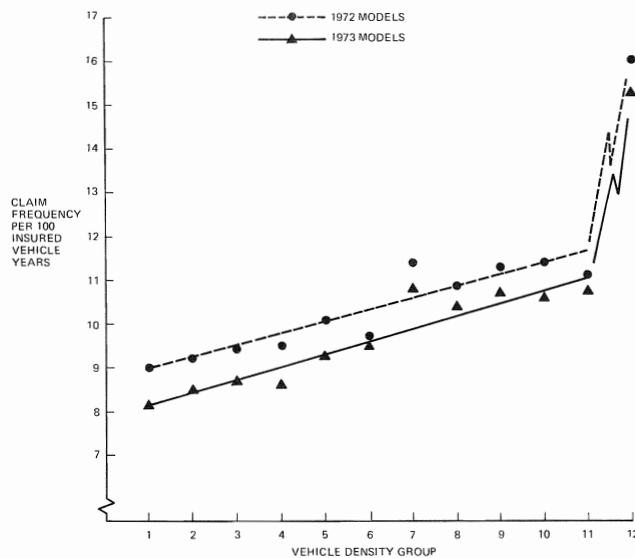


FIGURE 2
RELATIONSHIPS BETWEEN VEHICLE DENSITY GROUPS AND CLAIM FREQUENCY
BY MARKET CLASS - COLLISION COVERAGES - 1973 MODELS

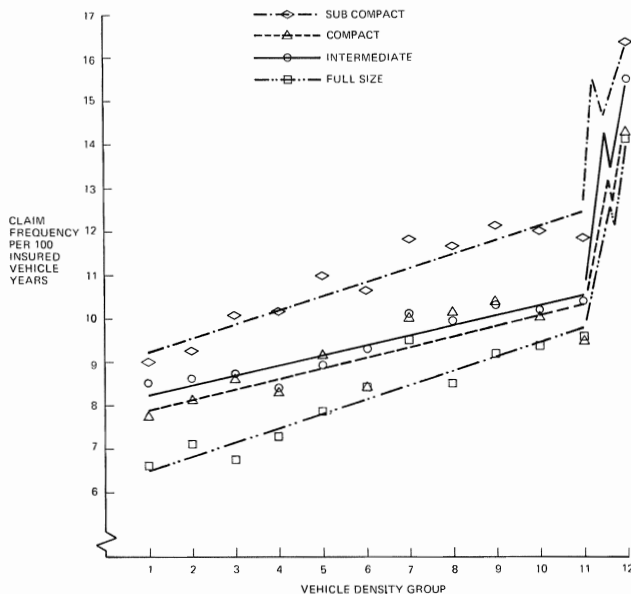
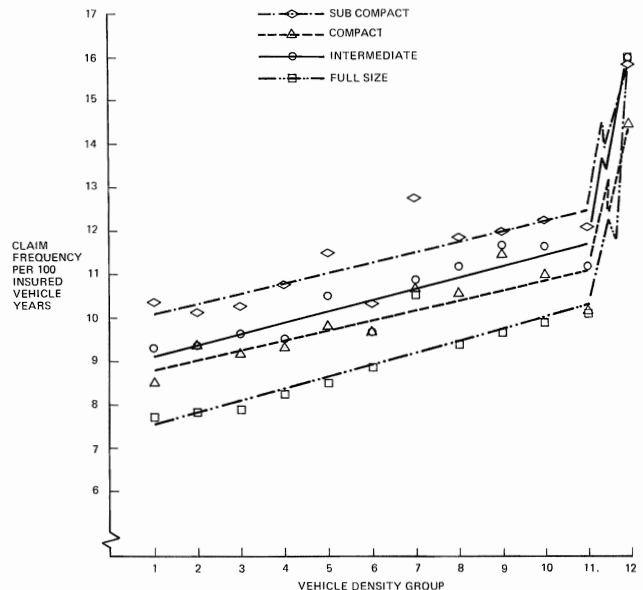


FIGURE 3
RELATIONSHIPS BETWEEN VEHICLE DENSITY GROUPS AND CLAIM FREQUENCY
BY MARKET CLASS - COLLISION COVERAGES - 1972 MODELS



Research Indicates License Loss Not Always 'Hardship'

Traffic courts should examine more carefully defendants' claims that license revocation or suspension would cause undue economic hardship or possibly even job loss, a recent study suggests.

In a survey sponsored by the Insurance Institute for Highway Safety, 450 respondents were asked: "If your leg were in a cast so that you couldn't drive for an extended period of time, how would you get to work?" Half of the respondents said that a friend, relative, or co-worker could take them to work; 24 per cent said that they could commute by bus, and five per cent said they could take a taxi or other means of transportation. Only 21 per cent of the drivers said they would be unable to get to work without driving.

Of the drivers who could find alternative transportation, 47 per cent said the alternative would take the same amount of time, and two per cent said it would take less time than driving themselves. Only 18 per cent said their travel time would be increased by more than half an hour per day.

Twenty-two per cent of the respondent drivers said that alternative means of travel would cost less than driving. Forty-four per cent said that other transportation would cost about the same.

The study's authors were Susan P. Baker, assistant professor at the Johns Hopkins School of Hygiene and Public Health, and Leon S. Robertson, senior behavioral scientist at the Institute.

They pointed out, "It is probable that some of the drivers who said they couldn't get to work with their leg in a cast would in fact be able to do so if [their license were] suspended since 'unable to get to work' included some drivers who would not attempt to work with a broken leg, regardless of availability of transportation. Furthermore, options such as walking and biking would be open to unlicensed drivers but not to persons with a leg in a cast."

The study was conducted in three population areas: Martinsburg, West Virginia; Huntington, West Virginia; and Washington, D.C. Martinsburg has no mass transit system. Although Huntington and Washington have public bus systems, 84 per cent and 75 per cent, respectively, of their work force commute by private auto.

The study, entitled "How Drivers Prevented From Driving Would Reach Work: Implications For Penalties," will be published in a forthcoming issue of *Accident Analysis & Prevention*. A prepublication copy may be obtained by writing to "Alternative Travel," Insurance Institute for Highway Safety, Watergate Six Hundred, Washington, D.C. 20037.

Attitudes Toward Interlocks Studied

At least 29 per cent of drivers of 1974 model cars consider the ignition interlock one of the least liked features of their new car, according to a recently completed Insurance Institute for Highway Safety survey. Yet this dissatisfaction was no more greatly associated with drivers who wore belts than with those who did not, the study found.

Although most of the interviewed drivers of 1974 model cars gave high ratings to the value and effectiveness of safety belts, more than 40 per cent of drivers observed on the road were not using the belts in their interlock equipped cars.

The study, conducted by Dr. Leon Robertson, IIHS's senior behavioral scientist, employed interviews of drivers whose use or non-use of safety belts had already been observed. This technique was necessary since claimed belt use is often higher than observed belt use.

In the study, safety belt use was observed in six large metropolitan areas across the country. Descriptions of drivers and the license plate numbers of their cars were recorded. The appropriate state motor vehicle administration provided the owner's name and address from license plate records. Experienced telephone interviewers, who were unaware of observed belt use or non-use, located the driver by matching the description. Almost 400 drivers were interviewed.

The interview questions included some about the interlock system, in addition to questions asked of a similarly chosen sample in an earlier IIHS study prior to the introduction of buzzer light and interlock systems. (See *Status Report*, Vol. 6, No. 18, Oct. 4, 1971.) Results of the two studies "differ considerably," Robertson said.

Dissatisfaction with the interlock was reflected by "at least 29 per cent of the drivers who mentioned it as one of the three things they liked least about their new cars," the study reported. The dislike of the interlock, however, was not found associated with observed use or non-use of safety belts.

The majority of drivers interviewed "appreciate the efficacy of safety belts as indicated by the ratings of belts as valuable and safe," the study said. "Yet belt use was not related to these ratings and more than 40 per cent of the drivers observed went to the trouble of circumventing or disconnecting the interlock system rather than using the belts."

"Belt use was significantly related to type and frequency of use of the car, but in an opposite way to what might be expected," the study also found. Of employed drivers, those who used a car on the job were more often observed using belts than those who did not use a car on the job. Among all drivers interviewed, those who said they were in and out of a car frequently during the day were seen using belts more often than those who said they were not.

Belt use in interlock equipped cars was found not to be related to education, race, comfort-convenience ratings of belts, or having had a friend injured but not killed in a crash. These were all factors that had been found, in the earlier IIHS study, to be related to belt use in cars not equipped with starter interlock systems.

Copies of the new study are available by writing to: "Interlock Factors," Insurance Institute for Highway Safety, Watergate Six Hundred, Washington, D.C. 20037.

NTSB Urges Bridge Railing Standards

A crash in which five children and three adults died when their car plunged off a bridge in Tennessee has resulted in a National Transportation Safety Board recommendation that would establish national standards for bridge railings.

The crash occurred on the Silliman Evans Bridge in Nashville on July 27, 1973. Cited as contributing factors "which may have confused the driver," were the built-in hazards and misleading signs that lined the approach to the bridge. The report listed them as:

- "the transition from two lanes to one . . .";

- “roadway geometrics,” which increased the sharpness of the turn on the approach ramp;
- a “Merging Traffic” sign when, in fact, there was no merging traffic;
- “misleading pavement markings . . .”;
- a “narrow pathway, less than [the] usual width of an interstate lane, at the end of the ramp, bounded on the left by a curb and barrier system and on the right by a raised unmarked concrete island.”

It was the striking of this “unnecessary” concrete island, the Board speculated, that caused the car’s loss of control – under otherwise good conditions – and its subsequent impact with the bridge railing.

Once that impact took place, however, it was the design of the curb and barrier system itself that “catapulted” the car through the rail and off the bridge, the report said.

“A search of the literature available in 1966 and 1967 on bridge rails and box-beam [median strip] barriers did not reveal any basis for using a barrier with the deflective qualities of the box-beam involved in this accident to contain vehicles on bridges,” the report said.

It noted that there have been at least eleven fatalities on that bridge attributable to the box-beam system’s failure to restrain impacting vehicles.

Neither the police nor the Tennessee Bureau of Highways “made any effort to conduct an in-depth multidisciplinary investigation into any of the fatal accidents on the bridge. Nor was there evidence to demonstrate that the Maintenance Division of the Bureau of Highways had a program to document and analyze crash-damaged highway appurtenance.”

The Federal Highway Administration showed a similar lack of interest, it said. After the unprecedented installation of the box-beam rail barrier system on the bridge, which FHWA approved, “there was no evidence of any maintenance inspections by the FHWA . . .,” the report said.

As a result of its investigation of this crash, the Safety Board recommended that the FHWA:

1. “Establish national performance standards, including dynamic testing procedures, for bridge rail systems. Such standards should extend performance criteria to include impact by heavy vehicles and should improve performance characteristics for impacts by all classes of vehicles. The establishment of these standards should be of high priority and compliance should be mandatory for all new bridge rail systems used on public roadways.
2. “Assure that the State of Tennessee is maintaining Federal-aid highway projects in accordance with Federal law”

The report also recommended that the State of Tennessee implement those Federal Highway Safety Program Standards pertaining to “identification and surveillance of accident locations” and “highway design, construction and maintenance,” with “special emphasis on the provisions relating to each State’s having a systematically organized program to identify and correct potential or existing hazardous conditions within the highway right-of-way.” Standard 18, “Accident Investigation and Reporting,” which requires “in-depth accident investigations,” was also cited.

Copies of Highway Accident Report Number NTSB-HAR-74-2 are available from the National Transportation Safety Board, Department of Transportation, 800 Independence Ave., S.W., Washington, D.C. 20590.

Wide Range Of Risk For Various Makes And Models

Researchers at the University of North Carolina have verified the substantial range of injury potential that exists from one make of car to another.

Their study, *Driver Injury in Automobile Accidents Involving Certain Car Models: An Update*, authored by B. J. Campbell, is based on police reports of more than half a million crashes involving passenger car driver injuries in North Carolina in 1966 and 1968-1972. In each crash, the police filled out a standard form that was coded for later analysis.

The results of this study show certain automobiles producing considerably more serious and fatal injuries to drivers in crashes than others.

Injury index values are computed for the most common automobiles produced from 1960 through 1972. These index figures show the likelihood of "serious and fatal injuries" and "all injuries" once a crash has occurred.

Driver injury in each of 74 distinct make-model groups is compared to a standard reference group of 559,475 crash-involved cars in order to arrive at an index value. The comparison takes into account a variety of crash conditions by controlling for crash type, area of car damaged, and estimated speed prior to impact.

Drivers wearing seat belts were eliminated from the make-model comparison, because seat belt usage in the reference group was negligible.

In addition to the tabulations by make and model, the study also presents tables by model year which list all autos studied by decreasing frequency of injury.

Copies of the report can be obtained for \$3.50, by writing to Lyn White, Assistant Manager, Highway Safety Research Center, University of North Carolina, Chapel Hill, N. C. 27514. The study was sponsored and funded by the Insurance Institute for Highway Safety.

Belts Urged For Children

When child restraints are not available, it is "far better that children be restrained" with safety belts "than allowed to become free missiles in a crash," according to a recent article in the *American Academy of Orthopaedic Surgeons Bulletin*.

Writing for the *Bulletin* (Vol. 22, No. 2, July, 1974), Dr. John E. McDermott also called for improved restraints for children that are "acceptable to them, the parents and the children's safety needs." He said, "Children must have restraints tailored to age as reflected by height and weight." The current federal safety standard (FMVSS 213) on child seating systems requires those systems to be labelled with the maximum height and the minimum and maximum weight of children who can safely use the seating systems. For the infant, McDermott suggested the "tub" device "available from at least one automobile manufacturer." For children weighing more than 30 pounds, he suggested a rigid cushion "of sufficient

height to allow direct passage of the adult seat belt over the lower pelvis areas, yet keeping the head below the level of the seat top.”

“The real problem is the toddler,” McDermott wrote. Two seat type child restraints and one harness type “are currently in the safety acceptable category” for this age and size group. But the seat type restraints restrict the child’s vision or movement, making them “less acceptable for this restless age group.” The harness has “not performed well in crash testing, particularly lateral impacts.” Current harness models are also “too complicated in application to be routinely used even by the most patient parents.”

McDermott did not identify any of the devices by name.

Correction

NOTE: The American Association of Automotive Medicine has pointed out that its resolution, adopted at its recent annual meeting and reported in *Status Report*, Vol. 9, No. 17, Sept. 27, 1974, took no position on the pros and cons on any particular restraint system, but instead simply urged that the U. S. Department of Transportation continue to be permitted to assess such systems and set standards for them. *Status Report* inaccurately characterized the resolution as “endorsing air bags.”

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the highway
loss reduction

STATUS REPORT

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