

Critics 'Misunderstood or Misused' Issues

NHTSA Attacks Distortions Of Bumper Data

Rejecting criticisms of its cost-benefit studies, the National Highway Traffic Safety Administration (NHTSA) has strongly defended its endorsement of a 5 mph bumper standard.

In a letter to Rep. James H. Scheuer (D.-N.Y.), chairman of the House subcommittee on consumer protection and finance, Joan Claybrook, NHTSA administrator, stressed that bumper industry consultants critical of NHTSA's stand "have either misunderstood or misused" the issues involved. NHTSA had issued an assessment of bumper benefits in June 1979, then reaffirmed its belief in the 5 mph standard in a revised study released in January. (See *Status Report*, Vol. 15, No. 2, Jan. 25, 1980.)

Scheuer will be one of the House members of a conference committee who soon will meet with Senate representatives in an effort to iron out differences over a NHTSA authorizations bill. One of those differences is an amendment, pushed by Sen. Robert Byrd (D.-W.Va.), that would require NHTSA to roll back the bumper standard to 2.5 mph. The Byrd amendment was introduced on behalf of Houdaille Industries, a bumper manufacturer with a West Virginia plant. (See *Status Report*, Vol. 14, No. 11, July 13, 1979.)

Effectiveness 'Understated'

"With respect to bumper effectiveness," Claybrook wrote Scheuer, "Houdaille claims that we overstate the ability of 5 mph bumpers to reduce low speed crash damage. We believe that we can demonstrate that if anything, we have understated bumper effectiveness and that any claims to the contrary are incorrect. Moreover, a recently completed NHTSA survey of 10,000 households supports our contention that there is a significant reduction in the frequency of low speed crash damage for current bumpers. The survey shows that the frequency of crash damage for 1979-80 cars compared with prestandard (1972 and earlier) cars dropped by 60 percent."

Much of the Houdaille argument has been pinned to its allegations concerning the effects of rapidly rising gasoline prices on the bumper cost-benefit studies. "It is perplexing how any analysts . . . could make such fundamental errors in their review of the NHTSA report," Claybrook said.

"The truth is that NHTSA's analysis was based on a slice in time, 1979, which froze, at that point, bumper costs, weight, technology, fuel prices, and accident experience," the NHTSA administrator added. "The purpose of the analysis was to compare the net benefits of a 2.5 mph bumper standard, if one had existed *in that year*, with the net benefits of the 5 mph standard *in the same year*."

Claybrook said Houdaille also had "seriously flawed" its arguments by misusing data from the insurance industry. In one instance, she said, claims experience data from the State Farm Insurance Co. were

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cited in an effort to argue that the 5 mph bumpers had resulted in increased claims costs. But she pointed out that Houdaille had sought to compare claim costs for 1977 and 1978 cars with experience for pre-1973 cars. Claybrook pointed out that "one cannot accurately compare claim costs for newer cars with claim costs for older cars when those claims are measured during the same period of time."

Houdaille also had argued that Highway Loss Data Institute (HLDI) reports showed an increase in collision coverage claim frequencies for post-standard (1973 model year and later) cars. Claybrook, however, cited a recent analysis of the HLDI data by Brian O'Neill, HLDI senior vice president, to show that when proper adjustments in the data are made the reports produce quite different results. (See *Status Report*, Vol. 15, No. 4, March 5, 1980.)

"Mr. O'Neill's analysis of the data now indicates a rather marked reduction in claims frequency for post standard cars," Claybrook said. "Our initial analysis indicates that it makes a strong case in support of the existing standard."

News Report Challenged

NHTSA also has released a copy of a letter written to the *Wall Street Journal*, pointing out inaccuracies in conclusions drawn by a recent article on the bumper crash test program. "You cited three tests out of a program consisting of 53 tests and left any reader with the impression that the program was ill-conceived and a waste of the taxpayer's money," wrote Michael M. Finkelstein, associate administrator for rulemaking.

At issue were tests in which 1979 model cars equipped with soft-face bumpers were crashed into the sides of other vehicles. The tests were designed to check claims by makers of soft-face bumpers that their products cause less damage to the struck vehicle.

"In the side crashes, we were interested only in the damage *inflicted* by the bumper system of the striking car," Finkelstein said, in explaining why previously crashed cars were used as the *striking* vehicles. "The result of the two tests did not confirm the claims of the soft-face bumper manufacturer. Had we spent more money and used undamaged cars for the side crash tests, we would have learned no more."

Built-In Speed Ceilings Urged For Radioactive Cargo Carriers

As part of its current rulemaking to reduce the hazards from radioactive cargo transportation, the Department of Transportation has been urged to limit the top speeds of trucks carrying such cargoes on the nation's highways.

The Insurance Institute for Highway Safety stressed its recommendation in a letter to the Transportation Department, which currently is considering rules for the highway transportation of radioactive materials. The department has invited comments in the rulemaking (MTB Docket No. HM-164, Notice 80-1).

In the letter, William Haddon, Jr., M.D., the Institute's president, noted that "trucks carrying radioactive materials can by design operate on the roads of this country at speeds greatly in excess of the 55 mph speed limit. The violence of crashes at such excess speeds can easily defeat regulations designed to protect such cargoes (and people and property in their environments) moving at lower, legal speeds.

"Since we also know that telling drivers and operators to behave themselves and never speed does not sufficiently work, the solution is obvious, namely, that all vehicles carrying such materials should have built-in, top-speed limiting devices or designs."

For the department to do other than require that the 55 mph legal limit be built into vehicles carrying radioactive materials on the nation's highways would be "to guarantee that the potential for radioactive cargo disasters will continue needlessly for the foreseeable future," the letter warned.

The Institute noted that one of the department's own agencies, the National Highway Traffic Safety Administration, currently is considering a built-in speed limit policy for all commercial vehicles. The reasons for such a step "are even more pressing here, where crashes of hazardous cargoes are at issue," the letter said.

Manufacturers Reject Voluntary Recall Of Multipiece Rims

Three out of four manufacturers of hazardous multipiece rims have rejected an unpublicized bid by federal officials for a voluntary recall of RH 5° and "K type" rims. Meanwhile, additional evidence uncovered on rim mishaps has continued to pile up at the National Highway Traffic Safety Administration (NHTSA).

The manufacturers, who were quietly requested by NHTSA last October to participate in a voluntary recall campaign, were Firestone, Goodyear, Kelsey-Hayes, and Budd. So far, all but Goodyear have rejected the request, saying no defect exists. Goodyear has met with NHTSA officials, Robert Boaz, a NHTSA spokesman, told *Status Report*, but has made no formal response.

Multipiece rims, also called "split rims," are used on many of the trucks and buses now operating on U.S. highways. A split rim consists of at least two components, with the rim "base" serving as the primary support for the tire, while the "rings" serve as a flange and locking system for retention of the tire. They are used with tube-type tires and, when the tire is inflated, have enormous explosive potential. (See *Status Report*, Vol. 13, No. 9, June 29, 1978.)

Following petitions filed by the Insurance Institute for Highway Safety, the NHTSA Office of Defects Investigation has conducted an engineering analysis and, in the process, reopened an earlier investigation of the RH 5° and K-type rim assemblies which had been closed under the Nixon Administration.

Accidents 'Significantly Higher'

In letters to the rim makers requesting the recall, Lynn Bradford, head of the Office of Defects Investigation, said the RH 5° and K rims had been involved "in a significantly higher number of accidents of explosive disassembly than most other types of multipiece rims." Bradford said the agency has identified at least 47 shop accidents and nine deaths attributable to RH 5° rims, while K rims have caused "at least 42 accidents and 12 deaths." K rims have not been produced since 1968 and RH 5° went out of production in 1973.

"All types of multipiece rims can be subject to a variety of servicing procedures, including the use of worn, corroded, or mis-matched parts," Bradford said in his letters. "When recognizing this, the significantly higher accident rate found among [RH 5° or K type] rims is totally unacceptable and points toward an inherent safety defect in the rim."

Bradford noted that the RH 5° rims are particularly dangerous because it is not possible to confirm visually whether the side rings are properly seated before the tire is inflated.

New Cases Uncovered

In response to NHTSA's latest information request, a total of nearly 200 new cases involving all types of split rims (bringing the total to over 600) were reported by the manufacturers, with at least 31 additional

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deaths and 142 previously unreported injuries. Of these, 34 cases reportedly occurred on the road, either while the vehicle was in motion or when a driver added air to a tire. There were 127 reported mishaps occurring in tire service facilities and 29 in as yet unidentified locations.

Firestone's earlier responses to NHTSA also established that, contrary to the company's stated intention, 11,000 RH 5° rim bases were produced in October 1973. NHTSA had agreed to drop its earlier investigation, based in part on its understanding that production would be halted by December 1972.

As late as 1977, Firestone had been supplying distributors with RH 5° side rings, ostensibly to provide replacements for worn or corroded side rings for vehicles still in use.

The manufacturers have consistently maintained in assertions to NHTSA that no defect exists with either of the rim types identified by NHTSA or with any other split rims.

Meanwhile, the rim manufacturers and the Rubber Manufacturers Association, an umbrella group representing the tire industry, have actively sought a safety rule to protect personnel in tire service facilities, where the majority of the reported explosions occur.

New OSHA Rule Issued

Recently, Eula Bingham, head of the Occupational Safety and Health Administration (OSHA), signed a new rule requiring service personnel to receive training from their employers on the hazardous art of handling multipiece rims. The OSHA rule requires that service workers be able to demonstrate "proficiency" in assembling and disassembling the rims, as well as be able to interpret detailed instructions and matching information charts.

One such matching chart, showing which components are interchangeable, was revised by NHTSA in 1978, with the help of rim manufacturers. The 37.5- by 48-inch wall poster contains 128 lines covering 29 types of multipiece rims in assorted sizes. A mistake in reading the chart could lead to the mismatching of parts and an increased potential for an explosion. In documents submitted to OSHA and NHTSA, manufacturers have agreed that tire service workers who will depend upon the charts, are sometimes "functional illiterates," or teenage boys filling part-time jobs who may not receive adequate instruction.

The OSHA rule also would require the use of clip-on chucks for air hoses and safety cages for inflating tires. But it does not address worker exposure when mounting and demounting the assembly, or protection from explosions that occur when an assembly is stored.

Beyond that, the rule will not prevent the possibility of explosive separations from occurring while a vehicle is in motion or when drivers, who may be unfamiliar with the hazards, stop to add air at service station air pumps.

Systematic Phase-Out Studied

In a separate rulemaking effort that could lead to an eventual ban on the production of multipiece rims (see *Status Report*, Vol. 13, No. 14, Oct. 11, 1978), a NHTSA engineer told *Status Report* a contractor is currently evaluating the cost of a systematic phase-out of such rims. Firestone has estimated that there are currently 43 million split rims in service on 5.5 million medium and heavy-duty trucks, school and other buses, as well as tractor trailers. Of those, about 2.9 million RH 5° rim assemblies are still in use. Goodyear estimates there are between 250,000 to 500,000 K-type rims still on the road.

Rim manufacturers agree, that many newer truck fleets are now equipped with tubeless truck tires mounted on single-piece rims which cannot separate explosively.

In a letter to NHTSA dated Nov. 17, 1978, Goodyear stated: "The way to handle this situation, we believe, is to continue to move to tubeless truck tires on single-piece rims." The cost of converting production lines was estimated at \$60.5 million over a five-year period.

A retrofit program, Goodyear figured, would cost about \$1.5 billion. But, Goodyear wrote, "The capacity to produce single-piece rims in the quantities required simply does not exist in the United States at the present time - nor in the world for that matter."

The economic stakes are unquestionably high. Firestone, alone, faces over 100 injury suits involving alleged split-rim failures. In the face of a possible rulemaking that would ban further production of multi-piece rims, the National Wheel and Rim Association in one of the 91 comments to the docket, argued it would cost up to \$20 billion to switch production to single-piece rims.

NHTSA rulemaking is not expected to go forward until the agency receives the results of a cost-benefit study that was begun only recently. In the meantime, the Office of Defects Investigation has said that "the whole thing is under consideration." One spokesman, who declined to be identified, would say only, "We're looking at everything we have on the subject of wheels." No date has been given for a decision on whether to open a formal defect investigation.

Highway Construction Standard Amendments Proposed

The Federal Highway Administration (FHWA) is seeking comments on amendments to highway design standards proposed by the American Association of State Highway and Transportation Officials (AASHTO).

The so-called "purple book" would incorporate and amend criteria now contained in at least five separate publications covering both rural and urban road construction and reconstruction projects receiving federal funds. The proposals would not apply to interstate highways, which have separate design standards.

FHWA said the new publication is meant to incorporate the latest research on design concepts and to adapt highways to the smaller, lighter cars now on the road, in addition to incorporating current practices and guidelines into one governing document for federal-aid highways.

The AASHTO proposals also contain new material on driver performance and new sections covering pedestrian safety. According to FHWA, highway design criteria would be amended to improve visibility for drivers in smaller, lower cars, along with the addition of new material covering skid resistance, traffic barriers, noise control, park and ride facilities, ramps for the physically handicapped, and on-street parking. Criteria covering curves at intersections also would be affected, along with new criteria covering safe sight distances for vehicles turning left onto two-lane highways and at railroad crossings.

The new proposals, "A Policy on Geometric Design of Highways and Streets," are available from FHWA national and regional offices and from AASHTO, Suite 225, 444 N. Capitol St., Washington, D.C. 20001. A limited number of copies of the 971-page draft publication are available on request from Wilson B. Harkins, Highway Design Division, Office of Engineering, FHWA, 400 Seventh St. S.W., Washington, D.C. 20590.

Comments on the proposed changes must be received on or before May 14, 1980, and should be addressed to FHWA, Docket No. 80-2, Room 4205, HCC-10, 400 Seventh St. S.W., Washington, D.C. 20590.

'That Reasoning Is Like Condemning Penicillin . . .

The following letter, written by Joan Claybrook, head of the National Highway Traffic Safety Administration, to Edward T. Thompson, editor-in-chief of the *Reader's Digest*, was in response to publication of an article, "Who Needs Air Bags?" in the March 1980 issue of the magazine:

Injuries and fatalities in motor vehicle crashes are one of the most serious public health problems facing this country. Most of the victims of automobile accidents are our younger people. As a recent major report from the U.S. Congress' Office of Technology Assessment noted, "Measured in terms of working life lost, traffic deaths represent a social problem comparable to heart disease and cancer."

Safety belts have the potential to save lives and reduce injuries in some types of automobile accidents, but their potential has never been realized. According to the findings of our National Crash Severity Study, only 4.6 percent of all vehicle occupants were wearing lap and shoulder belts in cars involved in accidents in which at least one vehicle had to be towed from the scene. Another 4 percent were wearing only lap belts.

Despite the dismal fact that each year 28,000 automobile occupants are being killed, and nearly 300,000 are being seriously injured in crashes, we are fortunate that the technology of automobiles has progressed so that automobile occupants can be automatically protected from the second collision with the interior of the car in an accident. This type of protection does not have to depend on a person's buckling a safety belt.

Automatic safety belts are little different from manual belts except that you don't have to remember to use them in order to get their protection. Automatic safety belts have been well-proven over the last five years in Volkswagen Rabbits to dramatically increase belt use rates, and to reduce fatalities and serious injuries by one-half.

Air bags are an alternative approach that eliminates the shoulder belt (which many people find objectionable) and provides good frontal crash protection whether a person uses a lap belt or not. Air bags are well-proven for their protective capability in frontal crashes and have shown exceptional reliability in service.

Now comes the *Reader's Digest*, a magazine read and trusted by millions of people, with an ill-informed article written by two people with little knowledge, but obvious preconception on the subject. The article is replete with half-truths and defective logic. The automatic crash protection standard is a safety performance requirement that allows manufacturers to design any of the available tech-

nologies for protecting people from crash injury into their cars.

The standard has been reviewed extensively by both Houses of Congress, by the Federal Courts, by the General Accounting Office (GAO), and by the National Transportation Safety Board. None of these bodies recommended either repeal or amendment of the standard. The primary recommendation of both of the latter agencies was that the National Highway Traffic Safety Administration (NHTSA) have a plan for evaluating the standard as it goes into effect, and such a plan has been developed for public comment. Although the National Transportation Safety Board and the General Accounting Office had minor comments on the NHTSA's plan, both complimented the Agency on the timeliness and comprehensive nature of the plan. Another GAO recommendation, on research into out-of-position children, is now moot since General Motors has successfully addressed its earlier concerns.

It is important to note that most automobile companies will initially produce air bags in small numbers, as is traditional with new products. It is expected that only about 5 percent of the new car fleet will initially be equipped with air bags, and that this number will rise as familiarity with these systems grows, and as market demand for them manifests itself. However, Mercedes Benz, whose cars are considered among the best engineered in the world, will make air bags standard equipment on all of the 1982 model cars sold in the U.S. — one year in advance of the requirements of the Federal standard for compact size cars.

Your article highlights as a "deficiency" of air bags the fact that they protect occupants only in frontal crashes (where more than half of all fatalities occur) and not in side or rollover crashes. That reasoning is like condemning penicillin because it doesn't cure cancer! To protect occupants in side impacts, the structure of a vehicle (including its doors, hinges, and latches) must be capable of controlling intrusion and must force the impacting vehicle to absorb more of the crash energy. The interior surface of the door and side glass should also be made more energy absorbing to cushion the occupant in a side crash. For protection in rollover crashes, the basic integrity of the occupant compartment must be sufficient to prevent ejection, which is the primary cause of serious injury in such collisions. Occupant restraints of any kind play only a secondary role in either of these crash modes.

The *Reader's Digest* erred in other respects as well. For example, on the question of cost, General Motors' President Elliott Estes has stated publicly that the cost of complying with all motor vehicle safety standards through 1984, including the automatic crash protection standard, will be

. . . Because It Doesn't Cure Cancer'

\$115 per car — not \$500 or \$800 as your article implies. Furthermore, in its marketing studies for air bags, General Motors has used a price differential between air bags and automatic belts of between \$250 and \$300. The cost figures of \$500 to \$800 for air bags is based on the very “worst case” projections of cost in very limited production with development and tooling costs amortized in the early years of production, and with a full dealer mark-up — a combination of scenarios almost unheard of today.

The *Reader's Digest* assertion that “there is a striking lack of solid data to support” the estimates of the life saving capability of air bags is unfounded. Not only is there the solid evidence of many thousands of proving ground tests of air bags carried out by the auto companies and the government, there is extensive fleet experience.

Air bags have been tested more than any other safety system prior to wide-spread introduction in a consumer product. Cars with air bags have been field tested in the hands of the general public since 1973. The 10,000 1974-76 GM cars with air bags sold to the public have traveled more than 600 million miles and have been involved in more than 230 crashes in which the air bags deployed. In these crashes, the fatality and serious injury rates have been about half the rates in a similar fleet of cars equipped with manual belts, confirming the estimates made in 1976 by the Department of Transportation of the effectiveness of air bag systems. Major research into the technology of inflatable restraints was first undertaken in the late 1960's. The strongest proponents were General Motors under the leadership of the late Edward Cole and the Eaton Corporation. The automobile companies and the supplier industry have carried out extensive research and testing to improve the performance and reliability of air bags for more than ten years. A substantial government research program has also contributed to air bag development.

Neither air bags nor automatic belts are a panacea. No one has guaranteed that a person can survive any and all crashes with an air bag or with any other device. Rather, what has been claimed, and backed up with hard evidence, is that air bags or automatic safety belts will substantially improve your chances of survival in the most common types of crashes: those in which the forces are in the frontal direction. These crashes make up more than half of all serious, injury producing accidents. While we have great faith in the protective capability of belt systems, to say that safety belts provide more protection than air bags is mere wishful thinking since so few people wear them, and air bags do a better job of spreading the crash forces in the critical head and chest areas. But with the substantially higher

usage rate of automatic belts, compared with manual belts, we expect the public to reap substantial safety benefits.

Finally, your article recommends further postponement of the standard. But it does not present a sufficient rationale or evidence for so drastic a step involving the life and limb of thousands of people. Against the flimsy assertions of the article stand the strong faith of industry and auto safety professionals, backed up by the years of major research and testing programs, in the capability of air bags and other automatic restraints to reduce the killing and maiming of our citizens in automobile crashes. Government policy should be made only on the basis of substantial evidence. In its 1979 decision in *Pacific Legal Foundation v. DOT*, the U.S. Court of Appeals asserted that the automatic crash protection standard is based on the need to improve motor vehicle safety, and successful development of technologies to do so. The Court concluded: “After reviewing the record in this case, we find that the Secretary's decision was rational.” (593 F.2d 1338)

In conclusion, we would like to make several suggestions. First, we would like to be invited (as we understand others have been) to brief the Editorial Board of the *Reader's Digest* on automatic restraints and the Government's policies for automatic crash protection in new cars.

Second, we think you should visit a major medical trauma center, such as at the University of Maryland in Baltimore, to see the victims of automobile crashes — so that you might sense, first hand, the damage automobile accidents inflict unnecessarily on human beings.

Third, we recommend that you view the enclosed films showing the performance of air bags and seat belts in comparison with what happens to unrestrained occupants, and to hear the views of people who have survived crashes in cars with air bags. These interviews with people who have been saved by air bags will allow you to see for yourself the enthusiasm of people who have lived to tell about their accidents.

Fourth, in view of the important life and death questions involved, we think you owe it to your readers to publish an article presenting the other side of the automatic crash protection issue so that your readers will at least understand the views of the industries that have supported automatic crash protection (particularly the air bag supplier industry and the insurance industry), the researchers and engineers, inside and out of industry, who have worked to develop this technological vaccine, and the people who have had the advantage of automatic crash protection in their own cars.

HLDI Finds Utility Vehicle Insurance Losses High

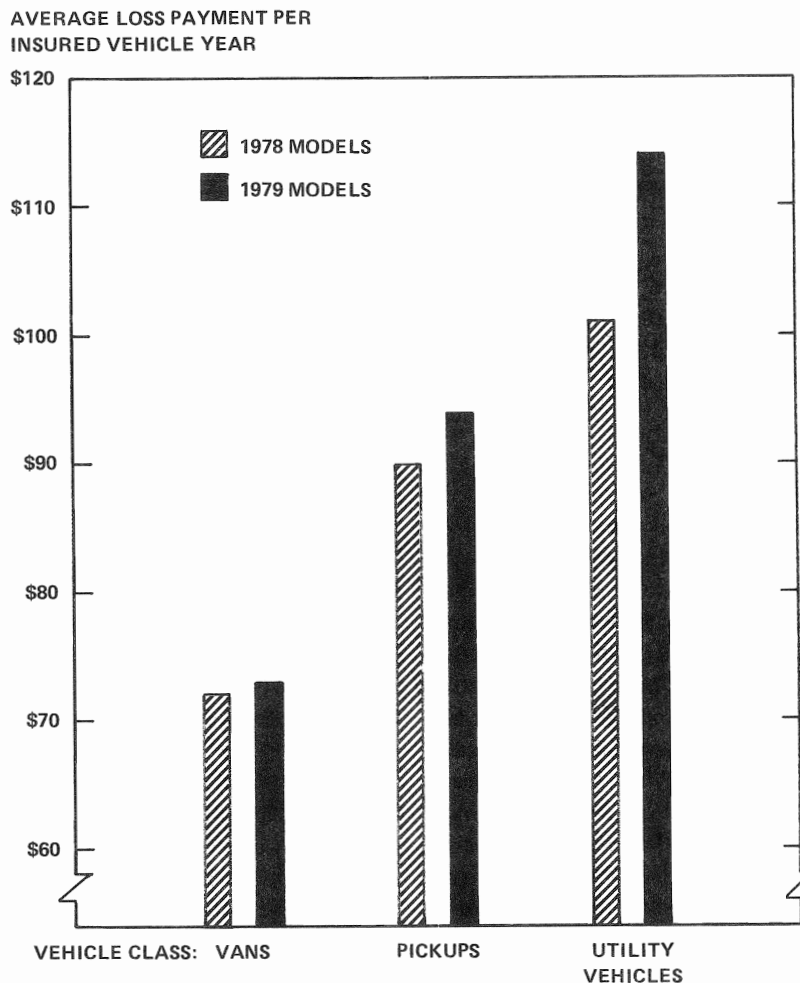
Vans had the lowest, and utility vehicles the highest, average loss payments per insured vehicle year, the Highway Loss Data Institute (HLDI) has reported in a comparison of collision coverage loss experience among 1978 and 1979 model multipurpose passenger vehicles.

Using non-commercial collision coverage and loss data provided by nine insurers, HLDI found “there were large differences in the average loss payments per claim among the three vehicle classes” – vans, pickups, and utility vehicles. For example, among 1979 models, utility vehicles’ average loss payment per claim was \$1,298, or 55 percent higher than the \$837 average for vans. Only small differences were found between model years.

Among the three vehicle types, average loss payments per insured vehicle year also varied greatly. For instance, among 1979 model vans the Ford E-150 Club Wagon had average loss payments per insured vehicle year of only \$36 compared to \$87 for the GMC G2500 Vandura.

For 1978 pickup trucks, the lowest average loss payment per insured vehicle year was \$77 for the Chevrolet C20/K20, in sharp contrast to \$154 for the Subaru Brat. And among 1979 pickups, the gap

**Average Loss Payment Per Insured Vehicle Year
Vans, Pickups, and Utility Vehicles
1978 and 1979 Models**



was even wider, with the Chevrolet Luv having an average loss payment per insured vehicle year of \$72, compared to the Brat, at \$192.

For further information, write for "Automobile Insurance Losses, Non-Commercial Coverages, Variations by Make and Series, Vans, Pickups, and Utility Vehicles, 1979 Models During Their First Year, 1978 Models During Their First Two Years," HLDI V79-1, Highway Loss Data Institute, Watergate 600, Washington, D.C. 20037.

Optional Tests Granted For Side-Door Strength Standard

Auto makers have been given the option of leaving seats in cars during testing of the vehicles' ability to comply with federal side-door strength requirements.

The National Highway Traffic Safety Administration has amended Federal Motor Vehicle Safety Standard 214, side-door strength, to allow the change in response to a petition by Volvo of America Corp. Volvo, which has developed a side-impact protection system dispensing with side-door beams and using the vehicle seats as essential components for crush resistance, asked for the revised standard last year. (See *Status Report*, Vol. 14, No. 14, Sept. 7, 1979.)

The standard still specifies three static tests of side-door strength to determine how a vehicle can withstand intrusion into the passenger compartment in side impacts. Because the original tests were designed only to prove the strength of the door itself, the revised standard prescribes higher crush resistance requirements for vehicles tested with the seats in place.

Driver Fatigue Blamed For Highway Shoulder Collisions

Lack of rest for commercial drivers has been identified as the chief cause of truck collisions into vehicles parked on highway shoulders by the Federal Highway Administration's Bureau of Motor Carrier Safety.

A contributing factor, the bureau said, is the tendency of motorists to park their cars on highway shoulders "without good cause and without taking precautionary safety measures."

In a study of the causes and results of collisions with vehicles parked on highway shoulders, the bureau reviewed in-depth crash investigations it performed between 1976 and 1978. It found that the majority of the crashes (83 percent) occurred on Interstate highway shoulders, with commercial vehicles precipitating the collision sequence in 84 percent of the 75 incidents studied. Only 31 percent of the parked vehicles were pulled over because they were disabled, while 53 percent were parked for other reasons, the bureau said.

Analysis of the crashes revealed that 56 percent were attributed to drivers dozing or falling asleep behind the wheel.

The bureau has decided to clamp down on commercial drivers who violate the hours-of-service work rules. Under a new regulation, any commercial driver who fails to produce on request current logs containing hours of service for the preceding seven days will be prohibited from driving a commercial vehicle for eight consecutive days.

The bureau has also recommended that guidelines to improve highway shoulders, increase the availability of rest areas, and promote pedestrian safety be adopted by the Federal Highway Administration.

Seat Belt Use Continues To Decline

Safety belt use continues to drop in the United States, with only one out of every nine drivers and even fewer passengers bothering to buckle up. The National Highway Traffic Safety Administration (NHTSA) has charged that poor design has discouraged belt use.

In a nationwide survey sponsored by the agency, observers found that belt use among drivers had declined from 13 percent in December 1978 to less than 11 percent in 1979. The largest decline was seen in the use of lap belts, while 3-point belt use held steady.

In a separate NHTSA study evaluating the comfort and convenience characteristics of the restraints in 36 new cars, even the car receiving the highest marks was criticized by one-third of the consumers who rated the system.

Joan Claybrook, NHTSA administrator, said although belts are the best life-saving devices currently available to the motoring public, the agency's recommendations for improving belt systems have been ignored by manufacturers.

"Yet, they continue to install inferior belt systems in new cars," Claybrook charged, "while at the same time complaining that automatic restraints such as air bags and automatic belts aren't needed." The poor designs, Claybrook added, are a "significant disincentive" to motorists. The agency has begun rule-making that would require manufacturers to meet specific comfort and convenience criteria. (See *Status Report*, Vol. 15, No. 1, Jan. 11, 1980.)

Results Reported At NHTSA Meeting

Results of research studies conducted by the Opinion Research Corp. for NHTSA, were presented at a technical conference held at NHTSA's Washington headquarters.

Among the results of the belt use survey were these points:

- Volkswagen Rabbits equipped with automatic belts had the highest belt use, with 79 percent of the drivers observed wearing their belts, compared to 13 percent for cars equipped with combination belts, 12 percent for cars with two-piece belts, and a low of 8 percent for cars equipped with lap belts only.
- West Coast drivers were found to wear belts 18 percent of the time, compared to a low of 9 percent in the North Central and Southwest regions.
- Among 1976 through 1980 model cars, driver belt use was highest in subcompacts (19 percent), followed by 11 percent in compacts, 10 percent in intermediates, and 7 percent in full-size cars. Belt use in foreign cars was higher than in American-built cars.

In a separate telephone survey, owners of Chevettes and Rabbits equipped with automatic belts were asked to rate the systems. Eighty percent of the Rabbit owners said they would purchase another new car equipped with automatic belts, compared to only 41 percent of the Chevette owners who said they would choose the system again.

In the comfort and convenience study performed by Verve Research Corp. for NHTSA, participants gave the highest rating to a Department of Transportation experimental car equipped with a motorized automatic belt. The top-ranked belt system among production models was in the BMW 3201.

The GM Chevette and VW Rabbit equipped with manual belts received the most complaints about

comfort and convenience. In actual observations, driver belt use in Chevettes was 11 percent, while the observed belt use in the Rabbit was 36 percent, highest of all cars equipped with manual belts.

Dr. Robert Knaff, head of NHTSA's office of driver and pedestrian research told *Status Report* that the apparent discrepancy between the observed use and comfort and convenience findings for the VW Rabbits was not surprising, in NHTSA's opinion, because VW owners "are usually of a higher socioeconomic status, [with] better education, with a high safety consciousness, riding around in a subcompact foreign car," all factors which would result in higher belt use rates.

Study Suggests Unbelted Drivers Take Greater Risks

Drivers who don't wear seat belts and are unprotected in a crash are more likely to take chances behind the wheel than belt wearers, a recent General Motors study indicates.

Conducted by four GM researchers, the study measured differences in risk-taking between belted and unbelted drivers by examining how closely they followed behind other vehicles. Photographs of traffic taken from an overpass above a Detroit-area freeway were used to determine belt use and vehicle "headways" — time intervals between successive vehicles. Data was obtained for the drivers of 2,197 cars, small trucks, and vans.

Unbelted drivers followed other vehicles at shorter average headways than belted drivers, the study reported, adding that they were more likely to tail other vehicles at "close, risky headways." Thus, the study pointed out, the drivers "most in need of crash protection were less likely to be wearing seat belts."

"Seat Belt Usage and Risk Taking in Driving Behavior" (800388), by Von Buseck, Evans, Schmidt, and Wasielewski, is included in *Accident Causation*, February 1980, published by the Society of Automotive Engineers, Inc., 400 Commonwealth Drive, Warrendale, Pa. 15096.

Chevette No Longer Has Automatic Belt Interlock System

An automobile salesman was quoted in the last issue of *Status Report* (Vol. 15, No. 5, March 26, 1980), referring to Chevrolet Chevette automatic belts, "You can't start the car without having them on — just like that system they used to have in '72-'73 — remember?"

While this comment was true of the 1979 model Chevettes, which were equipped with an ignition interlock system for the optional automatic belts, the 1980 models will start with the belts disconnected, although a buzzer-light warning system is activated. (The Volkswagen Rabbit, which also offers optional automatic belts, still has an interlock device.) The Department of Transportation is forbidden by law from requiring interlock belt systems. (See *Status Report*, Vol. 9, No. 19, Oct. 29, 1974.)

Status Report Index Available

An index of the contents of *Status Report* for 1979, Volume 14, is now available at no charge. Single-copy requests should be directed to Status Report Index, Insurance Institute for Highway Safety, Watergate 600, Washington, D.C. 20037. A limited number of earlier indexes, 1973 through 1978, also are available on request.

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