insurance institute for highway safety

the highway loss reduction

Status Report

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Small Cars Increase Injury Risk, Repair Costs

Two new studies by the Highway Loss Data Institute (HLDI) of insurance claims for 1974-76 model cars confirm earlier findings that the smaller the car, the greater the risk of injuries to occupants in a crash and the greater the chance of a large repair bill. (See *Status Report*, Vol. 12, No. 5, March 15, 1977.)

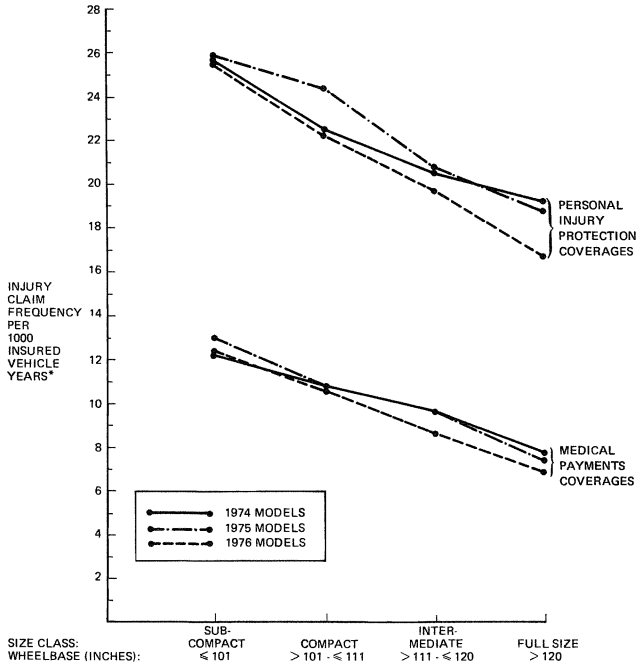
One report analyzes data relating to the injury claim frequencies under both medical payments coverage and "no-fault" personal injury protection coverage and offers comparisons of results by auto size, model year, body style and make. The other deals with data on collision coverage claim payments, breaking down results by car size, body style and age.

INJURY CLAIM FREQUENCY HIGHLIGHTS

The principal findings of the injury claim frequency study are:

- The frequency of injury claims under both medical payments and personal injury protection coverages is strongly related to vehicle size; smaller vehicles have the highest and larger vehicles have the lowest injury claim frequencies. This is true for all of the model years and ages of cars studied.

FIRST YEAR INJURY CLAIM FREQUENCIES OF CARS OF DIFFERENT SIZES – 1974, 1975, AND 1976 MODELS



*Standardized to 20% youthful and 80% no youthful exposure.

- Within each car size group, two-door models consistently have higher injury claim frequencies than four-door models.

- Within each car size group, sports and specialty cars generally have the highest injury claim frequencies.

- There are substantial variations in the injury claim frequencies of different cars of the same size and body style.

- Variations in the injury claim frequencies of the cars in each model year are much more pronounced than the differences between those in different model years.

The medical payments coverage data reflect the experience of 1,818,031 insured years of exposure for the 1974 models, 816,998 years for

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1975 models, and 409,372 for 1976 models. For the personal injury protection coverages, the corresponding exposures were 469,478 years, 266,294 years, and 160,677 years, respectively.

The first-year results for each model year show a "dramatic increase" in injury claim frequencies as vehicle size decreases, HLDI reports. "For example, for 1976 models under medical payments coverages, the injury claim frequencies for subcompacts were nearly 80 percent higher than the corresponding results for full-size cars," the report explains, "and under personal injury protection coverages (which have higher claim frequencies because of the nature of the coverages), the injury claim frequencies for the subcompact size cars were more than 50 percent higher than the corresponding results for the full-size vehicles. These relationships were consistent for each of the three model years."

COLLISION COVERAGE FINDINGS

In the study of collision coverage claims, HLDI points out these principal findings:

- Subcompacts consistently have the largest percentages of claims over $500, $1,000 and $2,000; full-size cars consistently have the smallest percentages of claims over these amounts.

- Among cars of the same sizes, sports and specialty models more frequently have larger claims than other models, and two-door models more frequently have larger claims than corresponding four-door models.

- The frequencies of large collision coverage claims increase with both age and the recency of model year.

- The differences in the sizes of collision claims generated by different cars chiefly affect their average claim sizes rather than the shapes of the distributions of their claims.

- During the first year of availability, the average claim payment was $534 for 1974 models, $634 for 1975 models, and $659 for 1976 models. The average claim payment increased to $567 for 1974 models in their second year of availability and to $601 in their third year.

EXPENSIVE CLAIMS INCREASE

In each of the three model years studied, expensive collision claims became more frequent. The first year that 1974 compacts were on the road, 13.6 percent of their claim payments exceeded $1,000. For 1975 compacts in their first year, this increased to 17.3 percent, and to 18.5 percent for the 1976 models. "It is known that rises in the costs of replacement parts and labor were significant contributors to these increases," the report notes. "It is also possible that changes in cars' resistance to damage have played a role in these increases."

A similar progression was noted as car models aged. In the first year of availability, 1974 subcompacts showed 15.7 percent of claim payments exceeding $1,000. In the second year this figure had increased to 18.5 percent, and in the third year it went to 20.3 percent. "Although inflation is a known contributor," the report observes, "it is not possible to determine the extent to which these increases are associated with vehicle aging effects, such as changes in the type of driving as cars age, with the different time periods involved, or with decreases in claims for minor damage because such damage may be less likely to be repaired as cars age."

Single copies of the reports may be obtained by writing to the Highway Loss Data Institute, Watergate Six Hundred, Washington, D.C. 20037. The reports are titled: *Automobile Insurance Losses,*

Injury Coverages; Claim Frequency Results for 1974, 1975, and 1976 Models (HLDI I 76-1), and *Automobile Insurance Losses, Collision Coverages; A Comparison of Collision Claim Size Distributions for 1974, 1975, and 1976 Models* (HLDI A-9).

PERCENTAGES OF COLLISION CLAIMS EXCEEDING GIVEN AMOUNTS BY CAR SIZE AND BODY STYLE 1976 MODELS, 1ST YEAR

CAR SIZE AND BODY STYLE	PERCENTAGE OF COLLISION CLAIMS EXCEEDING			SAMPLE SIZE
	$500	$1,000	$2,000	
SUBCOMPACT[2]	**39.5%**	**20.1%**	**8.1%**	**13,011**
Two-Door Models	39.4%	19.7%	7.8%	10,628
Four-Door Models	---	---	---	---
Station Wagons	35.9%	17.8%	5.9%	1,370
Sports	46.7%	28.5%	14.2%	952
COMPACT[3]	**36.1%**	**18.5%**	**6.7%**	**14,548**
Two-Door Models	36.3%	18.4%	6.6%	5,967
Four-Door Models	35.7%	18.0%	6.5%	3,889
Station Wagons	40.3%	18.5%	5.9%	420
Specialty	35.9%	18.6%	6.9%	4,272
INTERMEDIATE[4]	**35.4%**	**17.4%**	**7.0%**	**22,787**
Two-Door Models	36.3%	17.9%	6.8%	8,108
Four-Door Models	32.7%	15.2%	5.8%	2,520
Station Wagons	31.6%	15.5%	6.2%	1,904
Specialty	35.9%	17.9%	7.7%	10,255
FULL-SIZE[5]	**33.7%**	**16.2%**	**5.6%**	**13,965**
Two-Door Models	34.4%	16.8%	5.5%	3,969
Four-Door Models	31.7%	14.8%	4.7%	5,725
Station Wagons	30.8%	14.6%	4.6%	1,301
Specialty	38.4%	19.3%	7.6%	2,970
ALL	**36.0%**	**18.0%**	**6.9%**	**64,311**

FOOTNOTES FOR TABLE 1:

[1] Results are standardized by deductible amount and operator age group.
[2] Wheelbase less than or equal to 101 inches.
[3] Wheelbase greater than 101 inches and less than or equal to 111 inches.
[4] Wheelbase greater than 111 inches and less than or equal to 120 inches.
[5] Wheelbase greater than 120 inches.

NOTE: Results based on less than 400 samples are not listed.

DOT Rejects Protests To Restraints Ruling

By rejecting all petitions for reconsideration of the decision mandating passive restraints in passenger cars starting in model year 1982, Transportation Secretary Adams has issued a "final rule" in the occupant restraints proceedings. (See *Status Report*, Vol. 12, No. 13, Aug. 15, 1977.)

Barring unfavorable court action, the Federal Motor Vehicle Safety Standard (208) will take effect for new cars with wheelbases greater than 114 inches on Sept. 1, 1981, for new cars with wheelbases greater than 100 inches on Sept. 1, 1982, and for all new cars by Sept. 1, 1983.

Adams also rejected an application filed by the Pacific Legal Foundation to have the passive restraint decision stayed pending court action on a petition for review filed in September against the Department of Transportation (DOT). (See *Status Report*, Vol 12, No. 14, Sept. 26, 1977.)

AUTO MAKERS HAD ASKED REVIEW

Petitions for reconsideration were filed with the National Highway Traffic Safety Administration by all four domestic auto manufacturers – General Motors, Ford, Chrysler and American Motors – by Economics and Science Planning, Inc., and by the Center for Auto Safety and Ralph Nader.

The Center for Auto Safety and Ralph Nader, while supporting the Adams decision, called on DOT to accelerate its timetable by having the mandatory passive restraints rule become effective for all new cars by Sept. 1, 1980. DOT rejected that petition, stating that the lead time established was needed to allow the industries involved to design, test and manufacture the required equipment in an orderly manner. DOT noted, however, that "the lead time authorized is required . . . in this particular and complex rulemaking and in no way is to be considered as a precedent . . . ."

Nader has said he plans to take DOT to court to force it to move up its timetable.

FAULTY AIR BAG ANALYSIS CITED

DOT also rejected the Economics and Science Planning petition, which asked the department to modify its decision by requiring passive belts in all passenger cars with two front seats on or after Sept. 1, 1981, with passive restraints for other cars "to follow only after further evaluation of air bag effectiveness." Adams said, "ESP's preference for passive belts is grounded in its air bag analysis which . . . seriously underestimates air bag effectiveness."

Adams again emphasized that "Standard No. 208 is a performance standard that can be met by several designs, including the air bag and passive belt that have already been shown to be commercially feasible."

DOT denied General Motors' petition to suspend the decision while a third party analyzed DOT and General Motors effectiveness estimates for the air bag. DOT expressed confidence in its own estimates and cited major analytical weaknesses in the manufacturer's methodology.

Petitions by Ford, Chrysler and American Motors were rejected out of hand because, DOT said, they "raised no points that have not already been addressed . . . ."

In refusing to stay the passive restraint decision until a suit filed by the Pacific Legal Foundation is adjudicated, Adams said the items listed in the suit had "no merit."

In an effort to encourage development of passive restraints, Adams said a number of new perfecting amendments, primarily dealing with the positioning of test dummies, will become effective immediately and not next July as previously announced.

NHTSA Finds Low Usage Of Safety Belts

Safety belts are being used by only 18.5 percent of the nation's drivers, the National Highway Traffic Safety Administration (NHTSA) has reported after a nationwide survey.

Checking more than 84,000 drivers in 16 cities across the country, a NHTSA research contractor found that in cars equipped with lap/shoulder belt combinations there was 22 percent use. However, this usage rate dropped to 15.7 percent in cars equipped with separate lap and shoulder belts, and to 10.4 percent in vehicles having only lap belts.

SURVEY STUDIES PATTERNS OF USE

The survey, conducted from August 1976 through March 1977, attempted to discern patterns of safety belt use and arrived at these conclusions:

- While 29 percent of subcompact car drivers and 20.7 percent of the drivers of compact models use seat belts, the usage rate drops off in larger models such as intermediates (16.2 percent) and standard-sized cars (17.3 percent).

- More foreign car drivers use safety belts than drivers of domestic models. The peak use observed was 44.6 percent by drivers of Volvos.

- In western cities 27.3 percent of drivers were observed using safety belts, while in the East the usage rate was only 12 percent.

- Only 17.3 percent of male drivers observed were using belts, but 20.6 percent of women drivers used them.

- More young drivers (18.8 percent) were observed using belts than drivers over 50 (15.4 percent).

- Heaviest use of safety belts was found in evening rush-hour traffic, where 22.1 percent usage was observed.

The overall usage rate of 18.5 percent observed was consistent with earlier research findings and was particularly significant because of claims of much higher usage that were made by passive-restraints opponents during the recent Congressional hearings. Again, a somewhat higher usage rate (25.2 percent) was found in 1974 model cars, which originally were equipped with the starter interlock and continuous light-buzzer reminder systems.

FINDINGS SUPPORT RESTRAINTS RULING

"It is certainly discouraging to know that less than one in five American drivers are willing to take the simple life-saving step of buckling a safety belt," commented Joan Claybrook, NHTSA administrator. "These findings clearly support the decision to mandate passive restraint systems – a decision based on low belt usage rates and lack of available options to increase such usage."

In related research, the teams who noted safety belt use also checked the proper use of adjustable head restraints in the cars observed. They found a correlation between use of the two items of equipment. Where the head restraints were properly adjusted, 22.9 percent of the drivers were wearing their safety belts. Where the head restraints were not properly set, only 12.4 percent of the drivers used belts.

The safety belt survey was conducted in Atlanta, Baltimore, Birmingham, Boston, Chicago, Dallas, Fargo, N.D.-Morehead, Minn., Houston, Los Angeles, Minneapolis-St. Paul, New York, Phoenix, Pittsburgh, San Diego, San Francisco and Seattle.

Government Survey Disputes Safety Belt Gains

Sponsors of an intensive belt-use advertising program in Michigan have said that it modestly increased auto safety belt use, but their findings are disputed in a study commissioned by the National Highway Traffic Safety Administration.

Motorists Information, Inc., (MII), a safety belt promotion group financed by the domestic auto makers, announced that before-and-after surveys showed an increase of 6.3 percentage points in belt use. The group's surveys, based on more than 40,000 observations of driver belt use at 222 locations in southeastern Michigan, said belt use increased to 21 percent from 14.7 percent as the result of the campaign.

Such an increase meant that more than 387,000 additional Michigan drivers were using safety belts after the statewide campaign, Motorists Information estimated.

However, a NHTSA contractor carried out similar surveys, based on more than 30,000 observations in three Michigan cities, and the Department of Transportation said the result "disputes these findings." In Detroit the NHTSA study showed 15 percent use both before and after the advertising campaign, indicating no response to the "Somebody Needs You" advertising plea. In Marquette the NHTSA survey showed a 12 percent belt use rate both before and after the campaign dates, and in Traverse City belt use declined one percentage point from the pre-campaign level of 17 percent.

Even the more optimistic MII findings showed that "79 percent of the public refused" to use seat belts, observed William Haddon, Jr., M.D., president of the Insurance Institute for Highway Safety. "What the MII results once again demonstrate is not only the need for automatic protection," said Haddon, "but also that manufacturers should speed up their provision of it to the purchasers of their automobiles.

"We're talking about human life, and 21 percent protection of human life is not adequate."

Haddon Urges FHWA To Reject Lowered Design Standards

In comments filed with the Federal Highway Administration (FHWA) on its recent proposal to adopt lowered design standards for highway reconstruction-type projects, William Haddon, Jr., M.D., president of the Insurance Institute for Highway Safety, has urged the agency to reject the new standards on safety and cost-effectiveness grounds.

Adoption of the standards (see *Status Report*, Vol. 12, No. 15, Oct. 13, 1977) would be "a reversal of the emphasis – both of the highway program over many decades, and of the federal government with respect to many other aspects of life in the United States – to improve the quality of life for all of us and to reduce the damage we sustain in travel," Haddon said. He reminded the agency that federal highway law requires the Transportation Secretary to "give priority to" the incorporation of "improved standards and

features with safety benefits," and instructs him to approve only projects that are "conducive to safety." Use of the proposed lower standards would violate these statutory mandates, Haddon warned.

Haddon also challenged the argument being put forward by the American Association of State Highway and Transportation Officials (AASHTO) – the authors of the proposed lower standards – that the standards' use would be cost-effective.

"It may very well be true," Haddon said, "that levels of safety are not increased by increasing design standards above some certain point. The fact is, however, that no one knows where that certain point is in the design of various geometric elements, either separately or in interaction . . . . Until those data have been developed, there is no justification for reducing the design standards for any federal-aid highway program, particularly since the use of higher standards has consistently saved lives . . . ."

OTHER COMMENTS

A review of the docket indicates that among those commenting against the FHWA proposal are the American Trucking Association, the Motor Vehicle Manufacturers Association, the New York State Automobile Association, the Institute for Municipal Engineering of the American Public Works Association, several top-level FHWA field representatives, the FHWA associate administrator for research and development, the National Highway Traffic Safety Administration, and the Center for Auto Safety. At its recent meeting, the Presidentially-appointed National Highway Safety Advisory Committee voted to recommend to the Department of Transportation that the proposed rulemaking be halted until more extensive data can be developed on the safety and economic effects of altering design standards. The National Transportation Safety Board has called for a halt in the rulemaking until DOT can "complete a comprehensive analysis" of the standards' potential safety impact. (See *Status Report* , Vol. 12, No. 16, Nov. 8, 1977.)

Howard L. Anderson, FHWA's associate administrator for safety, recently submitted an addendum to his earlier stinging criticism of the proposal (see *Status Report*, Vol. 12, No. 17, Nov. 30, 1977). In his latest submission, Anderson said: "Any recommendation whatsoever that recognizes that the AASHTO R-R-R standards have any validity would be unacceptable . . . .Any [FHWA] division administrator or [FHWA] Washington representative that approves the construction of projects under R-R-R standards as proposed by AASHTO is, in my opinion, willfully approving projects that he knows are dangerous for the traveling public and, therefore, he and not the state highway department should be liable for his actions and the court justifiably should find it so."

The docket is now closed on this issue and a task force has been set up by FHWA to consider the comments received and develop a recommended course of action for the FHWA administrator, William Cox.

Hearings Review Truck Brake Antilock Problems

Two more government hearings have produced extensive arguments over the effectiveness of truck braking systems required by FMVSS 121 and have raised questions about the future of the standard.

Sen. Thomas Eagleton (D.-Mo.), chairman of the Senate Subcommittee on Governmental Efficiency, heard two days of testimony from Department of Transportation officials, truck and brake manufacturers, truck operators and other interested parties on how the brakes have – or have not – worked. This was followed a week later by a National Highway Traffic Safety Administration public meeting dealing with the brake systems' problems.

The hearings, summarizing the record of more than seven years of controversy over the safety standard (see *Status Report*, Vol. 10, No. 19, Nov. 24, 1975), took on a new urgency this time. Barring NHTSA action, a moratorium on FMVSS 121 as it applies to buses will be lifted January 1, and bus equipment delivered after that date would have to comply with the standard. A similar moratorium covering school buses will expire April 1.

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RECOMMENDATIONS FOR ADAMS

After hearing all the testimony, Eagleton said, "If the decision were mine . . . I would suspend the effective date of the regulation for both buses and school buses." He announced his intention of conveying such an opinion to Transportation Secretary Brock Adams, together with a recommendation that the Department of Transportation prepare "one very substantial test" to determine the effects of the standard for both truck and bus brakes.

While the standard deals with many aspects of the required braking systems, the one feature on which critics have focused their opposition is the antiskid requirement. Although the means to accomplish this goal is not specified by the standard, brake manufacturers have employed computerized antilock systems that release braking pressure when sensors detect the tendency for wheels to lock into a skid.

Truck operators, seeking relief from the standard, attacked the antilock requirement, charging that:

- Unreliability of the brake systems' electronic equipment has led to increased accidents.

- The "fail-safe" feature, designed to by-pass malfunctioning electronic equipment, has not performed adequately.

- Maintenance of the sophisticated braking systems has been difficult. Two large trucking companies told Eagleton that they had given up in October trying to maintain the antilock systems and had ordered them all disconnected.

- Incompatibility between 121-equipped tractors and non-121-equipped trailers (and vice versa) has complicated the braking problems.

MANUFACTURERS DEFEND EQUIPMENT

Brake manufacturers, while acknowledging some early problems with the new brake designs, were united in their testimony before Eagleton's committee that the problems have been solved and their equipment is effective and reliable. David E. Martin of General Motors said "the inherent reliability of the AC wheel lock control system has been enhanced through the evolutionary design and development process and in our opinion is now a viable system for buses as well as trucks." He commented that "the continuation of the standard as it has now evolved is appropriate."

The same confidence was express by Richard W. Hildebrandt of the Bendix Corp. He explained that after spending $8 million in antilock development, Bendix discontinued production in 1973 because "we determined that our antilock system did not have the necessary durability, reliability and cost effectiveness" to meet the standard's start-up deadline.

"Subsequent to our antilock decision and our belief that antilock is a major contribution to reducing stopping distances while maintaining vehicle stability under most operational conditions," Hildebrandt said, "we continued antilock system development and initiated production in June 1977 . . . . The additional 3½ years of development time has provided Bendix with a reliable and durable antilock brake system which has a full labor and material warranty for 100,000 miles."

THE STANDARD IS BENEFICIAL

Joan Claybrook, NHTSA administrator, agreed under Eagleton's questioning that the government was "pushing the state of the art" when it established Standard 121, but she insisted that "Evidence indicates that the standard is beneficial."

"To our knowledge, we have investigated or are in the process of investigating every serious truck accident in which malfunction of brakes on a 121-equipped truck is alleged," said Claybrook. "In no case has there been probative evidence that the new brake systems caused the accident."

Claybrook's predecessor, John W. Snow, told Eagleton that he had reservations about the braking standard, although he thought the antilock feature "a promising and potentially significant highway safety improvement."

The problem lies in "NHTSA's having pushed this new technology too far, too fast without adequate testing of the antilock system's reliability in the real-world environment," Snow said.

DRIVERS' SPOKESMEN FAVOR STANDARD

Although some truck operators testified that their drivers disliked and feared the 121 brakes, representatives of the Teamsters Union spoke in favor of the standard and contended that poor maintenance by the trucking lines has led to many of the problems. Claybrook reported that "Data-gathering inspections by the NHTSA and Bureau of Motor Carrier Safety of the Federal Highway Administration solicited 500 truck driver's views, 20 percent of whom stated that they believed the standard had helped them avoid accidents. Two drivers (0.4 percent) stated that they believe the standard had contributed to an accident."

A spokesman for the Professional Drivers Council, a dissident group of Teamster Union members, said that "given the recent increase in truck accident deaths and the many studies linking that carnage with truck braking capacity, the attempts to weaken NHTSA's improved truck braking standard must be viewed as a frontal attack on public safety."

Claybrook and her assistant administrator, Howard Dugoff, conducted the day-long NHTSA meeting on the braking problems. Instead of formal statements and presentations, the meeting took the form of an interchange of information and opinions between brake manufacturers and truck operators, monitored by a panel of NHTSA technical staff representatives. Claybrook announced no indications of future action as a result of the session.

NHTSA Is Urged To Upgrade Crashworthiness Standards

The Insurance Institute for Highway Safety has urged the National Highway Traffic Safety Administration (NHTSA) to extend passenger car steering assembly safety standards to cover multipurpose passenger vehicles, light trucks and buses.

In a petition, the Institute asked that FMVSS 203 (energy-absorbing steering assemblies) and FMVSS 204 (steering control rearward displacement) be modified to apply to multipurpose passenger vehicles, trucks and buses of up to 10,000 pounds gross vehicle weight rating. The petition also asks that NHTSA revise compliance test procedures for FMVSS 203 "to insure acceptable performance in real world crashes for all vehicle types."

The Institute cited a recent Institute-supported study by Trudy Karlson, Susan Baker and Bert Morton on "Fatally Injured Truck Drivers" (see *Status Report*, Vol. 12, No. 15, Oct. 13, 1977) as evidence of the need for added protection for drivers of pickup trucks. That study reported that "seven of the 22 pickup drivers had injury patterns and crash configurations consistent with steering column injuries."

Engineering approaches are available for the steering column problems in multipurpose vehicles, the Institute pointed out, citing a report to the Society of Automotive Engineers in February by Volkswagen engineers. In a paper on "The Volkswagen Safety Steering Columns for Forward Control Vehicles," the engineers discussed a steering wheel and column design used in the VW microbus that permits the steering wheel and column to collapse and absorb the impact of the driver's body in a crash.

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Crash Heard Around The World Of Safety

Five utility trucks were demolished recently in southern Arizona in a crash that will be heard throughout the safety world. Aside from the spectacular aspect of five trucks colliding with a concrete wall, these collisions are noteworthy in that they mark the beginning of active enforcement of the DOT safety standards on truck trailers, truck bodies, and equipment.

Up to now, the only enforcement activity that the National Highway Traffic Safety Administration of DOT has conducted in this industry has been in response to formal complaints. That is, if one manufacturer complains that his competitor is not complying with the safety standards in a price-competitive situation, the NHTSA would make an investigation after a formal complaint is filed. If the competitor is in fact not complying with the law, the NHTSA has forced some very expensive recall campaigns and retro-fitting of the required equipment. Penalty fines have been rare, but the recall and retrofit are burdensome enough.

The only trouble with this complaint system of enforcement is that the NHTSA people feel compelled to investigate the complainant as well as the offender. This has worked to minimize the number of complaints. One solution would be to make an anonymous complaint, but the NHTSA people have largely ignored anonymous information on non-compliance.

The five trucks that crashed were all purchased with NHTSA enforcement funds from the friendly Chevrolet and Ford dealers in Phoenix. Each was specified to be equipped with a utility body from a different manufacturer, plus ladder racks and rear bumpers. Each truck was loaded with 300 pounds of cargo and two dummy occupants. Each truck made a straight frontal impact into the wall at 29½ miles per hour.

The five test crashes were made by NHTSA to determine the extent of industry compliance with Standard 301, which requires essentially no fuel spillage after the 30-mph impact. All five trucks passed with flying colors. Credit for this successful performance belongs to the chassis manufacturers who had already pretested in their own labs, to the utility body manufacturers who had conducted an industry-wide cooperative campaign on finding the best ways of meeting the new standard, and to the spirit of sharing that was developed between chassis engineers and truck body engineers. All this cooperative effort was conducted in spite of the hectic atmosphere resulting from a too-soon effective date for the standard and a too-late announcement of the chassis factory requirements.

The body mountings resulting from this cooperative effort were so successful that all five utility bodies came through the impacts practically unscathed. The five truck chassis will be scrapped, but the truck bodies will be sold as slightly used or remounted by the government on new chassis.

The five truck equipment distributors who mounted the equipment not knowing that the customer represented the long arm of the law also performed their jobs well, as attested by the fact that the bodies stayed in place with no damage to the fuel system. However, there were two mix-ups on the paperwork. One distributor neglected to put the month of manufacture on the certification label, and another distributor neglected to put the certification label on the truck. Both of these problems were corrected before the testing, for the government investigators cannot test an uncertified vehicle.

This is just the beginning. NHTSA has plans to buy five more trucks for testing in early 1978. These will probably have other types of bodies, and at least one will be a wrecker. They will be purchased in the Arizona or Southern California market areas, and they will have to undergo a more rigorous test: front impact at an angle, side impact or rear impact. After the crash each truck will be mounted on a rotisserie-like machine to roll it over to measure fuel spillage. No spillage is allowed.

The important thing to realize is that NHTSA is the most aggressive of all agencies, and they're out on the war path looking for safety standards offenders.

(Reprinted from *Trailer/Body Builders* magazine, November 1977, with permission of the publishers.)

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CENTER FOR AUTO SAFETY PETITION

In another petition for rulemaking, the Center for Auto Safety (CAS) also has asked for changes in vehicle crashworthiness standards. CAS urged that NHTSA upgrade FMVSS 214 (side door strength) to provide more occupant protection in side crashes. As the standard is presently written, the CAS petition pointed out, side door strength is correlated to vehicle weight. As many cars become smaller and lighter, the required crush resistance decreases. CAS urged that rulemaking be initiated in three areas:

- More stringent structural specifications "to decrease intrusion of the striking vehicle into the target vehicle."

- Requirement of energy-absorbing material on side interior surfaces to lessen impact forces.

- Improved side glazing to prevent occupant ejection in a crash and to minimize laceration.

"The National Highway Traffic Safety Administration has, in recent years, focused its standard development activity on frontal crashworthiness, virtually ignoring other collision modes that greatly contribute to the nation's highway losses," CAS said. "However, NHTSA's Fatal Accident Reporting Systems reveals that about 30 percent of vehicle occupant fatalities are due to side collisions."

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