

NHTSA Issues Passive Restraint Proposal

In a long-awaited proposal for a revised occupant crash protection standard, the National Highway Traffic Safety Administration has moved to reinstate its requirement for passive protection in new cars. Passive restraint systems, such as air bags, would be mandatory for the 1977 model year. Apparently the new proposal also would allow passive belt systems, recently suggested by Volkswagen.

In a companion notice, NHTSA requested comments on a proposal to require, beginning with the 1981 model year, protection for occupants in barrier test crashes at 45 or 50 miles per hour.

The proposed standard (FMVSS 208) would require passenger cars, beginning with the 1977 model year, to provide passive protection to all front seat occupants in frontal, angular and lateral 30 mile per hour barrier crash tests.

If a car could also meet a rollover test by passive means, front seat belts would be optional, though anchorages would be required. Otherwise, front seats would have to be equipped with belts and a warning system that would activate an audible signal and a light when the engine was operating, in a forward gear, and the seat belt had not been pulled out or fastened after a person sat down. Lap belts would continue to be required for rear seats. The standard would apply to small trucks and similar vehicles beginning with the 1979 model year.

The 1977 deadline is a delay of more than four years from the effective date of Jan. 1, 1972, originally proposed by the safety agency in a July, 1969, Advance Notice of Proposed Rulemaking. That date was postponed in a series of auto maker requested changes to the proposed standard, each of which resulted in a weakening of the rule. (See *Status Report*, Vol. 7, No. 5, March 13, 1972.)

The last revision, in March, 1971, called for passive protection in all 1976 model automobiles. A federal court decision in December, 1972, threw doubt on the future of that proposed standard. Although the court upheld the agency's power to issue such a rule, it set down several requirements, including specifications that would not eliminate sports cars and convertibles from the market and a "reasonable time" for auto

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No Public Warning**NHTSA Tells Employees Of Small Car 'Morbidity Reality'**

The federal agency that regulates auto safety has warned its own employees of the "morbidity reality" of small car crash hazards – but says it doesn't intend to do the same for the public at large.

The agency warned in its March 8, 1974, official *Weekly Bulletin* to employees that National Highway Traffic Safety Administration officials had received a briefing that "underscored the morbidity reality that occupants of smaller cars are at a definite disadvantage. This disadvantage is most pronounced in oblique car-to-car crashes where the small car meets the large car in an offset position. With the present trend toward more small cars on our highway, the probability of big car/small car encounters will be increased significantly," NHTSA told its employees.

A safety agency spokesman told *Status Report* that a similar *public* advisory would be a "funny thing for us to say" in light of current government emphasis on emission control and energy conservation. He suggested the press would "say 'ho-hum'" to such a pronouncement, but said he would discuss it with other agency officials. "Maybe it's a good idea," he said.

Widely reported research by the Insurance Institute for Highway Safety, the University of Michigan, the University of North Carolina and – under NHTSA contract – the New York State Department of Motor Vehicles, has documented the relative hazards faced by small car occupants when their cars crash with larger cars as well as with other small cars. (See *Status Report*, Vol. 9, No. 2, Jan. 28, 1974.)

makers to satisfy the changed standard. An NHTSA official said at that time that it was "unlikely" the court would consider a 1976 model deadline a "reasonable date."

NHTSA officials would not comment when asked about the possibility of a renewed legal challenge by auto makers contesting the lead time and availability of the test dummy. One auto maker, Chrysler Corp., has already indicated in Congressional testimony that it feels the new proposal is "unrealistic."

The earlier proposed standard would have required passive protection in rear as well as front seats and in rollovers. NHTSA said the new proposal does not require passive restraint devices for rear-seat occupants because "the limited data available indicate that such devices would not be cost-effective for rear-seat occupants, because of the low occupancy rate and the protection afforded by the back of the front seat."

Allowing the use of lap belts in order to meet rollover test requirements should mean that sports cars and convertibles would not have "more difficulty meeting these proposed requirements than any other vehicles of comparable size," the agency said.

The current occupant crash protection standard, which offers three options for meeting protection requirements for front-seat occupants, was due to expire at the end of the 1975 model year. Under the new proposal, this standard would remain in effect until the end of the 1976 model year. Options include passive restraints alone, a combination of passive restraints and belts or belts with interlock devices. With the exception of a limited offering of air bags by General Motors, manufacturers have chosen to meet the

standard's requirements by using lap and shoulder belts in conjunction with ignition interlocks and a buzzer warning system.

In proposing the new standard, the agency said, "The experience to date with lap-and-shoulder belts continues to bear out this agency's judgment . . . that such systems fall short of providing the best universal crash protection that can be practicably achieved with today's technology." NHTSA cited public resistance to the interlock as "substantial, with current tallies of proper lap-shoulder belt usage on 1974 models running at or below the 60 per cent level." (See story on page 10.)

"The accumulating field experience with air-cushion restraint systems, on the other hand, continues to bear out earlier indications that they provide excellent frontal and angular crash protection with reliability extremely close to 100 per cent," the agency said. NHTSA also referred to passive belt systems, which "show promise of achieving close to 100 per cent usage," that are in "advanced stages of development." NHTSA recently proposed a change, requested by Volkswagen, in the current standard to allow auto makers to put passive belt systems in 1975 model cars.

The Center for Auto Safety applauded NHTSA's "courageous decision on passive restraints," urging the agency to "stand firmly" against expected auto industry opposition and prevent "unreasonable price increases on 1977 models."

Comments on the proposal to amend Standard 208 should be submitted by May 3, 1974, to Docket 74-14, Docket Section, National Highway Traffic Safety Administration, Room 5221, 400 Seventh St., S.W., Washington, D.C. 20590. Comments on the advance notice concerning higher speed protection requirements should be sent to the same docket by Sept. 19, 1974.

DOT Ford Lower Control Arm Finding Questioned

The Insurance Institute for Highway Safety has advised the Department of Transportation that the department has no alternative but to declare that control arms — a critical front-end suspension component on some 5.5 million 1965-1970 Ford-made cars — are defective and to direct that Ford notify owners of the defect. The Center for Auto Safety and an independent consulting metallurgist have termed the DOT investigation deficient.

In December, 1973, the department announced, despite almost 300 confirmed failures, that the arms are not defective.

The three parties individually questioned DOT's finding of no defect at an administrative hearing scheduled by the National Highway Traffic Safety Administration to receive comments on whether it should reconsider its December "no defect" announcement.

Following is a summary of the IIHS analysis based on an exhaustive study of the defect investigation file, presented at the hearing by Institute Vice President Albert B. Kelley.

1. The control arm failures under investigation are fatigue failures occurring at or near the holes in the lower control arm through which pass the rivets connecting the ball joint flange to the arm, at the end nearest the wheel. Final failure occurs when the lower control arm breaks at one or more of the fatigue failure locations.

This allows the front wheel to displace, resulting in loss of vehicle control. Some 5.5 million Ford motor vehicles of the 1965-1970 model years are equipped with "thin" lower control arms of the type involved in the bulk of the reported failures.

2. The failure-during-performance rates of the Ford thin lower control arms, in vehicle series for which failure data are reliable, are many times higher than failure rates that have prompted safety-related defect findings in other recent cases, such as the 1974 Chrysler lower control arm failures, the Ford rear-axle failures on three 1972 models, the GM steering lockup failure on four 1971-72 makes, and the Ford shoulder harness failure on 1970-71 models.

For this reason alone, DOT should find a safety-related defect in the Ford thin lower control arms and direct the manufacturer to initiate a defect notification campaign. As DOT itself has pointed out in a pending defect court case, a "defect in performance" is "alone sufficient to determine the existence of a safety related defect and sufficient to authorize the expeditious issuance of the safety warning or defect notifications" to the owners.

3. DOT's investigative file fails to support its conclusion that the Ford thin lower control arm failures are due to "cumulative damage fatigue due to severe impact events" – a conclusion which in effect blames the failures on defective driving rather than defective vehicles.

Ford and DOT maintain this position despite the absence of any evidence that the Ford vehicles in question are driven to any extent more abusively than other vehicles not experiencing such failure rates. The department and its contractors, according to the file:

- Were unable to produce any lower control arm failures in the series of severe impact event tests run by General Testing Laboratory and cited in support of the DOT conclusion findings.
- Used, in many tests, arms supplied by Ford that were reinforced-thin rather than thin, and that had been disassembled and then put back together by Ford. DOT apparently ignored Ford's warning that the integrity of the arms was "questionable" and that results of tests run with them "may, therefore, be unpredictable."
- Relied on Ford evaluations of real-world thin arm failures – evaluations reflecting, in effect, the position that the failures had to have been associated with abusive use because, in Ford's view, abusive use is necessary to produce such failures.
- Disregarded the many reports indicating failures under normal, non-abusive driving conditions, and in vehicles with no past histories of abuse.

4. An analysis of DOT's investigative file shows that the department failed to adequately consider such essential and relevant points – points not supportive of its "severe impact" conclusion – as the following:

- The high failure rate virtually disappeared, according to Ford's own statements, when Ford abandoned the thin arm design in favor of a thickened arm.
- Syracuse University, whose work is extensively relied on in DOT's summary report, wanted to test the hypothesis that the thin arm failures are associated not with abusive use conditions, but with the normal use conditions that occur "each time the brakes are applied at low speeds during the lifetime of the car." In March, 1972, Syracuse University recommended a series of tests for proving or disproving this hypothesis. Its recommendations were not acted on by DOT.
- The National Bureau of Standards, in a report requested by DOT, found indications of a defect in the thin arm involving "a possible misfit between the arm and the ball joint flange." This finding was not further investigated by DOT.

- Ford Motor Co., in a March, 1971 presentation to DOT, referred to an “error” in a mechanized assembly machine, involving a “ball joint seating operation,” that it had found and corrected. DOT did not investigate the nature, magnitude, or duration of the error, or any other indication of a possible relationship between the “error” and the thin arm failures.

- The even higher failure rates for thin arms in heavier Ford cars, — especially, according to the record in the case, the Mark III — along with Ford’s decision to replace the thin arms with thicker ones, during the 1970 model production year, suggest that the failures are associated with vehicle weight.

(A copy of the full IIHS analysis is available from the Insurance Institute for Highway Safety, Watergate Six Hundred, Washington, D.C. 20037.)

CENTER CHALLENGES FINDING

The Center for Auto Safety termed DOT’s Ford lower control arm investigation “critically defective.” In addition to pointing out many of the same shortcomings noted by IIHS, the center said that DOT investigators:

- Failed “to obtain complete data from Ford on the volume of replacement control arm sales” as has been the practice in other defect investigations.
- Neglected to secure “information and design data available from Ford engineers” regarding a reported internal Ford engineering dispute over the adequacy of the arms’ design.
- Did not press Ford officials in instances when requested information supplied by the auto maker was “totally inadequate.”
- Presented control arm failure statistics in their final report in such a way that “ensures that no outsider can meaningfully evaluate any of the data relating to the investigation” of real-world failures.

The center also raised what it termed the “possibility of conflicts of interest” suggested “by an anonymous memo received by the center in late 1973.” According to the center, the memo alleged that DOT’s chief investigator in the case was a former Ford employee who, during the investigation, owned “approximately \$55,000 in Ford Motor Company stock.” The center had raised the point in earlier correspondence with NHTSA Administrator Dr. James B. Gregory. In a Nov. 30, 1973, response to the center’s initial inquiry, Gregory, while not denying the stock holding allegation, responded that, “I have no reason to believe that any past or pending investigation has been tainted by a conflict of interest”

METALLURGIST COMMENTS

John A. Bennett, a consulting metallurgist who had worked on a National Bureau of Standards analysis of several failed Ford lower control arms, testified on his own behalf, and charged that DOT’s “conclusion is not justified by the available evidence and that the public is exposed to an unnecessary hazard as a result.”

Bennett said that an error exists in the Syracuse University analysis on which DOT based its conclusion that the failures result from severe impacts. If that error is corrected, Bennett said, “it means that failure would require 600 curb strikes at 30 miles per hour plus 600 at 50 miles per hour.” He called such a conclusion “absurd.”

A Ford representative, in a brief statement following the three presentations, said that Ford will refute all of the charges.

Crash Damage For 1973 Cars Reported

Increasingly popular sub compact cars have a greater number of crashes that result in insurance claims than larger cars in other major market classes, according to a report on frequency and size of insurance claim payments for 91 different 1973 passenger cars released by the Highway Loss Data Institute.

In addition to more frequent collision claims, seven of the eight sub compacts included in the report had an average loss payment per insured vehicle year greater than \$50. By contrast, "only five of the 29 full size series, five of the 15 compact series, and six of the 24 intermediate series had average loss payments per insured vehicle year above \$50." Only one of the 15 cars in the luxury, specialty, expensive specialty and sports market classes had an average loss payment per insured vehicle year below \$50.

Considered together, the claim frequency for 1973 models was 10.3 claims per 100 insured vehicle years. The average loss payment per claim was \$502. The average loss payment per insured vehicle year was \$52. The figures in the report are based on almost 600,000 insured vehicle years of exposure. All figures were standardized to minimize differences that might be attributed to driver age and insurance deductible amounts. The data represented claim settlements for crashes of 1973 cars that occurred September, 1972, through September, 1973.

VARIATIONS IN FREQUENCY AND DAMAGE

Wide variations were found in both frequency and size of crash damage. "Claim frequencies ranged from a low of 6.7 to a high of 16.7 per 100 insured vehicle years, average loss payments per claim ranged from a low of \$338 to a high of \$1,142, and average loss payment per insured vehicle year ranged from a low of \$28 to a high of \$191," the report said. In each case the low model was the Chevrolet Bel Air. The high model was Chevrolet's Corvette.

CLAIM FREQUENCIES

The claim frequencies (see page 7) range from less than seven to more than 16 claims per 100 insured vehicle years, a more than two-fold variation.

Six vehicle series had claim frequencies of less than eight: the Chevrolet Bel Air (6.7), the Dodge Polara (7.0), the AMC Hornet Sportabout Station Wagon (7.7), the Dodge Coronet (7.7), the Pontiac Catalina (7.8), and the Mercury Monterey Custom (7.8).

Five vehicle series had claim frequencies greater than 14: the Chevrolet Corvette (16.7), the AMC Javelin (16.1), the Pontiac Firebird (15.4), the Lincoln Mark IV (15.4), and the Ford Mustang (14.9).

AVERAGE LOSS PAYMENTS

The average loss payments for individual vehicle series ranged from less than \$350 to over \$1,100, a more than three-fold variation, although it should be noted that the highest, \$1,142 for the Chevrolet Corvette, was more than \$400 greater than the second highest average loss payment, \$717 for the Lincoln.

Five individual vehicle series had average loss payments of less than \$400: the Chevrolet Bel Air Station Wagon (\$338), the Ford Torino Station Wagon (\$371), the Buick Centurion (\$392), the Mercury Montego four door models (\$399), and the Ford Torino four door models (\$399).

(Cont'd on page 9)

LOSS PAYMENT SUMMARY BY MAKE AND SERIES – 1973 MODELS – COLLISION COVERAGES

Make	Series	Total Exposure (insured vehicle years)	Claim Frequency per 100 insured vehicle years	Average Loss Payment per claim	Average Loss Payment per insured vehicle year
All	All	593,744	10.3	\$502	\$52
SUB COMPACT		103,944	11.6	495	57
Chevrolet	Vega Kammback S.W.	6,875	9.1	459	42
Volkswagen	Beetle	24,438	11.1	473	53
Ford	Pinto S.W.	17,320	11.4	479	55
Volkswagen	Type 3 Squareback	1,912	11.1	517	57
Ford	Pinto	19,045	12.4	495	61
American	Gremlin	8,427	12.0	524	63
Chevrolet	Vega	22,417	12.0	522	63
Volkswagen	412 Wagon	1,320	11.8	672	79
COMPACT		101,399	9.9	485	48
Dodge	Dart Swinger	7,498	8.1	408	33
Plymouth	Valiant Scamp	3,093	8.3	403	33
Oldsmobile	Omega	3,055	8.1	448	36
Plymouth	Valiant	3,127	8.9	432	38
Dodge	Dart	4,847	8.1	473	38
American	Hornet Sportabout S.W.	3,305	7.7	602	46
Chevrolet	Nova	23,657	9.1	509	46
Plymouth	Valiant Duster	14,852	10.5	448	47
Ford	Maverick 4 Dr. Models	7,009	10.2	464	47
Pontiac	Ventura	4,999	9.4	523	49
Dodge	Dart Demon	4,015	10.6	477	51
American	Hornet	5,608	10.6	511	54
Mercury	Comet 4 Dr. Models	1,918	10.8	513	55
Mercury	Comet 2 Dr. Models	2,872	13.1	477	62
Ford	Maverick 2 Dr. Models	11,544	12.0	523	63
INTERMEDIATE		152,755	10.1	500	50
Buick	Centruy 4 Dr. Models	2,861	8.5	404	34
Ford	Torino S.W.	6,595	9.1	371	34
Chevrolet	Chevelle S.W.	2,655	8.0	435	35
Dodge	Coronet	2,494	7.7	455	35
Oldsmobile	Cutlass 4 Dr. Models	3,091	8.9	400	36
Plymouth	Satellite S.W.	1,420	8.5	438	37
Mercury	Montego 4 Dr. Models	2,764	9.6	399	38
Ford	Torino 4 Dr. Models	5,921	9.7	399	39
Chevrolet	Chevelle 4 Dr. Models	3,790	8.7	468	41
Buick	Century 2 Dr. Models	11,557	9.1	476	43
American	Matador	1,693	8.0	541	43
Pontiac	Lemans 4 Dr. Models	2,210	8.7	503	44
Mercury	Montego 2 Dr. Models	4,626	10.2	446	45
Oldsmobile	Vista Cruiser S.W.	1,133	8.7	528	46
Plymouth	Satellite 4 Dr. Models	2,042	10.3	443	46
Plymouth	Satellite 2 Dr. Models	6,259	10.3	476	49
Chevrolet	Chevelle 2 Dr. Models	11,842	9.9	493	49
Dodge	Charger	6,226	10.9	462	50

Make	Series	Total Exposure (insured vehicle years)	Claim Frequency per 100 insured vehicle years	Average Loss Payment per claim	Average Loss Payment per insured vehicle year
Chevrolet	Monte Carlo	17,578	11.1	\$498	\$55
Ford	Torino 2 Dr. Models	12,297	11.7	481	56
Oldsmobile	Cutlass 2 Dr. Models	18,801	10.2	548	56
Dodge	Coronet S.W.	1,453	9.1	660	60
Pontiac	Lemans 2 Dr. Models	10,956	10.8	608	66
Pontiac	Grand Prix	9,204	11.1	653	72
FULL SIZE		187,833	8.8	489	43
Chevrolet	Bel Air	10,529	6.7	413	28
Chevrolet	Bel Air S.W.	4,735	8.4	338	28
Pontiac	Safari S.W.	1,377	8.1	431	35
Dodge	Polara	2,911	7.0	504	35
Buick	Centurion	2,113	9.2	392	36
Chevrolet	Caprice Estate S.W.	3,664	8.4	446	37
Buick	Lesabre	9,783	8.3	462	38
Pontiac	Catalina	12,303	7.8	500	39
Chevrolet	Caprice Classic	12,260	8.4	466	39
Chevrolet	Impala	16,568	8.6	448	39
Pontiac	Bonneville	2,916	8.1	498	40
Plymouth	Fury 3	4,126	8.9	455	40
Oldsmobile	Delta 88	13,160	8.0	500	40
Chrysler	Newport	4,677	8.5	468	40
Plymouth	Fury Gran Coupe & Sedan	1,705	10.1	425	43
Pontiac	Grand Ville	4,307	8.6	502	43
Mercury	Monterey Custom	1,117	7.8	561	44
Chrysler	New Yorker	2,731	8.2	543	45
Oldsmobile	Ninety Eight	7,564	8.7	515	45
Oldsmobile	Custom Cruiser	1,830	9.8	483	47
Ford	Galaxie 500	7,425	9.3	508	47
Chrysler	Newport Custom	2,215	8.6	549	47
Ford	Country Sedan	8,318	9.9	489	48
Plymouth	Suburban S.W.	1,925	9.0	554	50
Ford	LTD	23,399	9.9	530	52
Buick	Electra	8,594	10.6	497	53
Buick	Estate Wagon S.W.	1,515	10.4	626	65
American	Ambassador	1,028	10.6	637	68
Mercury	Brougham	3,441	11.5	649	75
LUXURY		11,798	10.2	590	60
Cadillac	De Ville	8,855	9.3	532	49
Lincoln	Lincoln	1,983	13.3	717	95
SPECIALTY		22,422	14.1	524	74
Dodge	Challenger	1,617	12.2	445	54
Chevrolet	Camaro	5,043	13.3	463	62
Pontiac	Firebird	2,200	15.4	478	74
Mercury	Cougar	3,286	13.2	564	74
Ford	Mustang	7,710	14.9	532	79
Plymouth	Barracuda	1,107	13.1	695	91
American	Javelin	1,459	16.1	571	92

Make	Series	Total Exposure (insured vehicle years)	Claim Frequency per 100 insured vehicle years	Average Loss Payment per claim	Average Loss Payment per insured vehicle year
EXPENSIVE SPECIALTY		12,024	12.8	\$ 571	\$ 73
Buick	Riviera	1,534	12.6	463	58
Ford	Thunderbird	4,231	12.6	484	61
Oldsmobile	Toronado	2,484	10.3	589	61
Cadillac	Eldorado	1,318	13.1	633	83
Lincoln	Mark IV	2,456	15.4	658	101
SPORTS		1,569	16.7	1,142	191
Chevrolet	Corvette	1,569	16.7	\$1,142	\$191

(Cont'd from page 6)

Seven vehicle series had average loss payments greater than \$650: the Chevrolet Corvette (\$1,142), the Lincoln (\$717), the Plymouth Barracuda (\$695), the Volkswagen 412 Wagon (\$672), the Dodge Coronet Station Wagon (\$660), the Lincoln Mark IV (\$658), and the Pontiac Grand Prix (\$653).

AVERAGE LOSS PAYMENTS PER INSURED VEHICLE YEAR

The average loss payments per insured vehicle year ranged from \$28 to \$191, a more than six-fold variation, although the highest, \$191 for the Chevrolet Corvette, was \$90 higher than that for the vehicle series with the second highest average loss payment per insured vehicle year, \$101 for the Lincoln Mark IV.

Six vehicle series had average loss payments per insured vehicle year of less than \$35: the Chevrolet Bel Air (\$28), the Chevrolet Bel Air Station Wagon (\$28), the Dodge Dart Swinger (\$33), the Plymouth Valiant Scamp (\$33), the Buick Century four door models (\$34), and the Ford Torino Station Wagon (\$34).

Five vehicle series had average loss payments per insured vehicle year greater than \$90: the Chevrolet Corvette (\$191), the Lincoln Mark IV (\$101), the Lincoln (\$95), the AMC Javelin (\$92), and the Plymouth Barracuda (\$91).

MARKET CLASS VARIATIONS

"Within market classes, there was considerable variation in the results, indicating that even among vehicles intended to serve the same market segments, there are substantial variations in the losses," the report said. The variations within market class occurred both in claim size and frequency. "In the intermediate market class, for example, the claim frequencies ranged from a low of 7.7 for the Dodge Coronet to a high of 11.7 for the Ford Torino two door models. Similarly, in the full size market class, the average loss payments ranged from a low of \$338 for the Chevrolet Bel Air Station Wagon to a high of \$649 for the Mercury Brougham. In the sub compact market class, the average loss payments per insured vehicle year ranged from \$42 for the Chevrolet Vega Kamback Station Wagon to \$79 for the Volkswagen 412 Wagon."

HLDI was formed in December, 1972, as an outgrowth of a special data project initiated earlier by the Insurance Institute for Highway Safety. (See *Status Report*, Vol. 8, No. 1, Jan. 3, 1973.) It is a nonprofit organization that gathers, processes and provides the public with insurance data concerned with human and economic losses resulting from highway crashes.

Members of HLDI are: Allstate Insurance Co., The Hartford Insurance Group, The Home Insurance Co., Kemper Insurance Group, Liberty Mutual Insurance Co., Nationwide Mutual Insurance Co., Prudential Property and Casualty Insurance Co., State Farm Mutual Automobile Insurance Co. and The Travelers Insurance Co. The report on 1973 model year automobiles is based on collision coverages – that is, insurance that covers damage to the insured vehicle itself – supplied by Allstate, The Home, Kemper, Liberty, Nationwide, Travelers, and State Farm.

The full report, entitled *Automobile Insurance Losses, Collision Coverages, Variations by Make and Series, 1973 Models*, Research Report HLDI R73-2, March 1974, is available in single copies by writing to R73-2, Highway Loss Data Institute, Watergate Six Hundred, Washington, D.C. 20037.

IIHS Finds Increased Belt Use In New Cars

Driver use of combined lap and shoulder belts in 1974 cars has reached 44 per cent in city driving, according to a preliminary research report on belt use conducted by the Insurance Institute for Highway Safety.

“This study indicates that belt use was increased in urban areas by the introduction of the interlock system in 1974 vehicles. Lap and shoulder belts, in combination, were in use by 44 per cent of the drivers observed in 1974 vehicles compared to eight per cent in 1973 vehicles” equipped with buzzer-light warning systems. Total belt use (lap belts or lap and shoulder belts combined) was 53 per cent in 1974 cars and 27 per cent in 1973 models observed at the same time.

“In spite of the interlock system, however, nearly half of the drivers (47 per cent) in the 1974 vehicles were not using any belts. Thus, they continued to be unprotected by restraint systems in low to moderate speed, as well as high speed, crashes,” stressed Dr. Leon S. Robertson, IIHS’s senior behavioral scientist, the report’s author.

Both the earlier buzzer-light warning system and the current interlock system were brought about by federal standard (FMVSS 208).

Among the 1974 cars observed, “Belt use was highest in cars produced by General Motors (61 per cent including lap only) and Chrysler (50 per cent), lowest in Volkswagens (35 per cent) and intermediate in Ford cars (45 per cent),” Robertson noted. The “large differences among usage rates in vehicles produced by different manufacturers could be a result of differences in the equipment provided, manufacturer and dealer communications regarding belts and possibly other factors,” he said.

Robertson pointed out that the difference in per cent belt use between Ford and General Motors cars is the reverse of figures reported earlier this year by those two auto makers. Ford reported greater belt use in Ford-produced cars than GM reported in GM-produced cars.

Ford says its survey of 1974 cars found 63 per cent lap and shoulder belt use. General Motors has reported 40 per cent lap and shoulder belt use by city drivers, and 65 per cent in the suburbs, for the 1974 cars.

Neither Ford nor GM reported how long the cars had been owned. However, the preliminary IIHS study found that “the similarity of belt use in vehicles recently registered compared to those registered a few months earlier suggests that the interlock’s effect on belt use persists for at least a few months.” Observation of equipped vehicles after they have been in use for longer periods of time “will be required before it can be assumed that the effect is permanent,” Robertson cautioned.

Copies of the preliminary report are available by writing "Interlock", Insurance Institute for Highway Safety, Suite 300, Watergate 600, Washington, D.C. 20037.

Comparison of Belt Use in 1973 Automobiles Equipped with Buzzer-Light Systems and 1974 Automobiles Equipped with Interlock Systems

<u>Belt Use</u>	<u>1973 Models Buzzer-Light Equipped</u>		<u>1974 Models Interlock Equipped</u>	
	<u>Per Cent</u>	<u>Number Observed</u>	<u>Per Cent</u>	<u>Number Observed</u>
Lap and Shoulder	8	192	44	267
Lap Only	19	418	9	52
None	<u>73</u>	<u>1,636</u>	<u>47</u>	<u>287</u>
	100	2,246	100	606

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STATUS REPORT

Ralph W. Hoar, Jr., Editor

INSURANCE INSTITUTE for HIGHWAY SAFETY
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