

Special Issue

1972 Low-Speed Test Results

New model sedans and small cars tested in low-speed crashes by the Insurance Institute for Highway Safety are producing varied dollar amounts of crash damage — "some better, some worse, some the same" as compared with last year, according to Institute president William Haddon, Jr., M.D.

But, Haddon has stressed before a congressional hearing, much more important than "relatively minor ups and downs" between tested 1971 and 1972 models is this central point: "Not one dollar's worth of damage is necessary in any of the (low-speed barrier) crashes . . . and not one dollar's worth would have to be borne by consumers and insurers if these cars had been designed to make use of long-available energy-absorbing technology in their front and rear-end structures."

Filmed results of the Institute's crash tests of 1972-model cars have been presented to the House Committee on Interstate and Foreign Commerce's Subcommittee on Commerce and Finance, chaired by Rep. John E. Moss (D-Calif.). The subcommittee is considering legislation, along lines of that already passed by the Senate, aimed at curbing damage to vehicles in crashes.

The tests were of four basic sedan models that the Institute has tested each year since 1969 — Chevrolet Impala, Ford Galaxie, Plymouth Fury and American Ambassador — and in addition the latest models of four small cars — Chevrolet Vega, Ford Pinto, American Motors Gremlin and Toyota Corolla.

Haddon told the subcommittee that the 1972-model cars tested by the Institute produced "needless, avoidable dollar damage" yet in all cases met, and in many exceeded, the Department of Transportation's 1973-model requirements that the rear bumpers protect "safety related" items in crashes of 2.5 miles per hour into a barrier.

(Some models exceeded the standard by experiencing no damage to the specified "safety related" items at five miles per hour rear into barrier.)

"The sedans are doing somewhat better in the very lowest-speed crashes, but no better and sometimes worse," in 10 and 15 mile per hour crash tests, Haddon told the subcommittee. He offered the following examples:

- 1972 models averaged \$263.81 and 1971 models averaged \$331.69 in estimated repair costs when crashed at five miles per hour, front end into the barrier.
- 1972 models averaged \$205.81 and 1971 models averaged \$329.28 in estimated repair costs when crashed at five miles per hour, rear end into the barrier.
- 1972 models averaged \$761.61 and 1971 models averaged \$735.69 in estimated repair costs when crashed at 10 miles per hour, front end into the barrier.
- 1972 models averaged \$1,126.96 and 1971 models averaged \$1,113.90 in estimated repair costs when crashed at 15 miles per hour front end into the barrier.

The three "economy" cars tested in both years averaged as follows:

- When crashed at five miles per hour front end into barrier, \$216.92 for the 1972 models and \$155.60 for the 1971 models.
- When crashed at five miles per hour rear end into barrier, \$259.20 for the 1972 models and \$241.78 for the 1971 models.
- When crashed at 10 miles per hour front end into barrier, \$646.53 for the 1972 models and \$517.76 for the 1971 models.
- When crashed at 15 miles per hour front end into barrier, \$814.60 for the 1972 models and \$810.67 for the 1971 models.

Haddon cited performance claims made by Ford, General Motors and Chrysler which, he said, suggest that "bumpers on some new models are less inadequate than those on earlier models."

He noted, for example, that Ford claims to have made bumper design improvements on 1971 and 1972 models and has promised further improvements on 1973 and 1974 models. Institute tests have shown that Ford's Galaxie sedan experienced "consistently increased rather than decreased damage in our five mile per hour front end into barrier tests across the model years 1970-1972, starting with \$203.34 in estimated repair costs for the 1970 model, \$341.20 for the 1971 model and \$402.10 for the 1972 model," Haddon said.

A number of developments dating from the Institute's first low speed crash tests in early 1969 point to widespread concern over "the problem of the needless, designed-in susceptibility of modern automobiles to costly cosmetic damage in very low-speed 'fender benders'," he said.

He pointed to:

- Numerous "press stories, commentary and news cartoons evidencing public concern about the problem and public desire for the application of long-available technological solutions to eliminate it — and the huge needless sale of 'crash parts' it guarantees."

- Federal and state legislators who "have been at work on possible ways to stimulate solution of the problem through the passage of appropriate statutes."

- DOT's bumper standard (FMVSS 215) establishing "performance criteria as to the amount of protection that front and rear bumpers must provide to 'safety related' car features under very low-speed crash conditions."

- Auto makers' claims in their promotional materials that "newer-car bumpers have been designed to provide some protection against pocket-picking damage to front- and rear-end cosmetic structure in very low-speed encounters."

- Insurance companies' institution of "premium incentives to encourage the offering in the marketplace of automobiles designed to resist low-speed crash damage."

As in earlier Institute tests, repair costs were estimated by a panel of three automobile appraisers. The Institute's low speed crash tests were conducted by EG&G, Inc.

1972 MODEL LOW SPEED CRASH TEST RESULTS
Insurance Institute for Highway Safety

1972 MODELS		2.5 MPH REAR/ BARRIER	5 MPH FRONT/ BARRIER	5 MPH REAR/ BARRIER	10 MPH FRONT/ BARRIER	10 MPH FRONT/ REAR*	10 MPH FRONT/ SIDE**	15 MPH FRONT/ BARRIER
SEDANS	Chevrolet Impala	112.60	153.75	197.05	576.65	163.35 261.70	173.90 719.25	1133.52
	Ford Galaxie	20.00	402.10	242.60	917.17	265.65 423.81	341.70 598.65	1243.30
	Plymouth Fury	96.50	331.15	224.50	722.15	269.35 151.25	310.20 524.75	1035.10
	AMC Ambassador	12.00	168.25	159.10	830.50	220.00 280.40	338.65 421.65	1095.90
	Average	60.28	263.81	205.81	761.62	229.59 279.29	291.11 566.08	1126.96
SMALL CARS	Chevrolet Vega	71.70	190.90	274.45	619.20	250.53 273.75	128.35 218.30	777.41
	Ford Pinto	36.80	125.20	267.50	667.05	176.55 263.10	145.92 197.50	805.25
	AMC Gremlin	44.80	334.65	235.65	653.35	243.74 108.85	233.70 314.95	861.15
	(1971) Toyota Corolla	8.36	251.46	214.78	657.00	206.62 368.28	209.91 328.34	872.20
	Average	40.42	225.55	248.10	649.15	219.36 253.50	179.47 264.77	829.00

*In the front-to-rear crashes, the price listed first for each car model is the estimated repair cost for the striking car (front-end damage); listed second is the estimated repair cost for the struck car (rear-end damage).

**In the front-to-side crashes, the price listed first for each model is the estimated repair cost for the striking car (front-end damage); listed second is the estimated repair cost for the struck car (side damage).

Senate Passes, House Studying Damage Bill

The U. S. Senate has passed, by a vote of 89 to 4, a bill to require the Department of Transportation to set property loss reduction standards to limit automobile crash damage.

The bill (S. 976) withstood a last-ditch attack during Senate floor debate when Sen. Robert P. Griffin (R-Mich.) unsuccessfully proposed that the property damage provisions of the bill be deleted. Griffin called the provisions "mischievous meddling with the free enterprise system" that creates "illusionary expectations" that the "era of the undamageable car is around the corner."

The bill is basically a compromise between one introduced earlier by Sen. Philip A. Hart (D-Mich.) calling for property damage standards and a Nixon Administration proposal calling for a consumer information program on vehicle crash damage susceptibility.

The House is now considering its own slightly modified version (HR. 11627) of the Senate-passed bill as well as bills introduced earlier that parallel the Hart bill and the Administration-sponsored bill.

The Senate-passed compromise bill contains four major provisions, three of which direct DOT to: issue property damage standards; study methods of predicting and measuring property and human loss characteristics of cars by make and model and establish automobile diagnostic demonstration projects. The bill also would make odometer tampering a federal crime.

PROPERTY DAMAGE STANDARDS — which the bill would prohibit from becoming effective before July 1, 1973, — "would require manufacturers of automobiles to build cars that were more resistant to damage or were less expensive to repair if damaged," according to the Senate committee report that accompanied the bill.

As guidelines for establishing standards, the bill directs DOT to consider whether automobile price increases that might result from any standard would be offset by consumer savings in other areas such as reduced insurance costs and "savings in terms of consumer time and inconvenience." The bill also directs that property damage standards "not conflict with motor vehicle safety standards."

The bill authorizes DOT to:

- Obtain from auto makers — at no charge — "a reasonable number of production passenger motor vehicles" for testing. (This provision is part of the Senate-passed version but is not included in the bill currently under House consideration.)
- Require that auto makers submit data relating to costs and feasibility of loss reduction technology.

- Require insurers to submit data on physical damage insurance premium costs and claims data.
- Exempt "special use" vehicles, such as those designed for "off the road" use, from property damage standards.
- Require that auto makers certify that their cars meet property damage standards.

The bill also addresses the controversial issue of state preemption by forbidding any state from having a "property loss reduction standard which is not identical" to a federal standard unless the Secretary of Transportation determines that a "more stringent" state standard should be allowed because of "conditions peculiar to that state."

The Senate-passed bill and the House bill both authorize a total of \$25 million over three years to carry out property loss reduction provisions.

The **AUTOMOBILE CONSUMER INFORMATION STUDY** section of the bill directs DOT to study and report to the Congress methods that could be used to:

- Assess susceptibility of makes and models of cars to damage in crashes.
- Determine the scope of occupant protection offered by various makes and models of cars in crash situations.
- Determine "the ease of diagnosis and repair of mechanical and electrical systems which fail during use or which are damaged in motor vehicle accidents."
- Develop a consumer information program on vehicle crash damage susceptibility in order to aid consumers in their purchasing decisions. (The Senate-passed version requires only that DOT study ways of establishing a crash-damage consumer information program. The House bill, in addition, directs DOT to actually establish such a consumer information program. The House version of the bill would also require that auto dealers provide information to prospective customers on insurance premium rates on various model cars.)

The Senate-passed bill authorizes \$2 million to conduct the study. The House bill contains no funding provisions for the consumer information study.

DIAGNOSTIC INSPECTION DEMONSTRATION PROJECTS required by the Senate bill would carry a \$100 million authorization for two years to fund state demonstration projects of motor vehicle diagnostic inspection centers. (The House bill would authorize \$200 million for the demonstration projects.)

The **ODOMETER REQUIREMENTS** of the bill would make it "unlawful for any person . . . to disconnect, reset, or alter the odometer of any motor vehicle"

Low-Speed Crash Testimony Available

Single copies of testimony based on the Institute's 1972-model low-speed crash tests may be obtained by writing, "Low-Speed Tests," Communications Department, Insurance Institute for Highway Safety, Watergate Six Hundred, Washington, D. C. 20037.

Inquiries as to availability and cost of the low-speed crash test film should be addressed to "Low-Speed Test Films," Insurance Institute for Highway Safety, at the above address.

(Contents may be republished, whole or in part, with attribution.)

INSURANCE INSTITUTE for HIGHWAY SAFETY

WATERGATE SIX HUNDRED

600 NEW HAMPSHIRE AVENUE, N.W. • WASHINGTON, D. C. 20037

(AREA CODE 202-333-0770)

the highway
loss reduction

STATUS REPORT

IIHS MASTER FILE COPY