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NHTSA Opens Bumper Rule Colloquy

The National Highway Traffic Safety Administration has taken an initial step toward requiring that cars be designed to withstand minor low speed impacts without suffering annoying and costly damage.

In proposing its "no damage" bumper rule, the agency took the unusual step of promoting a dialogue in which auto makers, insurers and the public are given the opportunity to play a substantial role in shaping the final version of the rule. Rather than simply reviewing written comments on its proposal, the agency said it is scheduling a public meeting at which it will listen to comments from all interested parties. The public meeting is scheduled for Sept. 13, 1973. Further details on the meeting will be published later, the agency said.

The major difference between the agency's new "proposed bumper standard" (Docket 73-19, Notice 1) and its current "exterior protection standard" (FMVSS 215) is that the existing exterior protection standard is limited to protecting certain "safety related" items from damage in low speed crash tests; the proposed bumper standard – issued under the Motor Vehicle Information and Cost Savings Act of 1971 – would extend low speed damage protection to other "types of damages that are of economic consequence to the consumer."

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The Congress passed the Cost Savings Act "after reviewing extensive testimony on the prevalence of costly damage in low speed accidents," the agency said in explaining its new proposal. "Such damage is far from immaterial to the car owner, . . . who must face the choice of repair, which is likely to be expensive, or nonrepair, which diminishes the resale value of the car," the agency said.

NHTSA's proposal would require that all 1975 model passenger cars be able to withstand only five mile per hour barrier impacts – front and rear – with essentially no damage. However, the agency left the crash speed question open by specifically asking for "historical data on low speed (0 – 20 mph) crash experience during model years 1971 to 1973."

The Cost Savings Act directed NHTSA to issue standards that would "eliminate or reduce substantially physical damage to the front or rear ends (or both) of a passenger motor vehicle resulting from a low-speed collision." The Act does not define "low-speed." However, in its new bumper standard proposal, NHTSA has defined low speed crashes as those that occur between "0 – 20 miles per hour."

As proposed now, the new rule would require:

- No "breakage or release of fasteners or joints as a result of the test impacts" (NHTSA says that "damage typified by this would cover the ornament that falls off in an accident, by the chrome trim strip that springs loose from the fender, and by the bumper bolt that shears off.");

- "No separation of bonded coverings as a result of impact." (This would prohibit chipping, flaking and peeling of paint and polymeric coatings, the agency says.);

- No "geometric distortions in the vehicle's exterior surface – in the sheet metal, in the grille and other trim, and in the bumpers themselves, including displacement of the bumpers due to shortening of the bumper struts or mounting brackets."

For 1976 model cars, five mile per hour front and rear pendulum impact tests would be added to the standard. Vehicle corners would be pendulum impacted at three miles per hour. The pendulum tests are intended "to control the height and shape of the bumper for the purpose of reducing the tendency of cars to underride or override each other in collisions."

The tests prescribed in the proposal are identical to those required by NHTSA's current "exterior protection standard."

In the new proposal, as it does in its exterior protection standard, the agency calls for pendulum corner impacts at the walking speed of only three miles per hour. (IIHS has supplied NHTSA with two sets of data, one compiled by Ford Motor Co. and another by four major insurance companies, that show corners are damaged in 26 to 40 per cent of collisions. (See *Status Report*, Vol. 8, No. 2, Jan. 15, 1973.)

In releasing its new bumper standard proposal for public reaction, the agency has specifically requested comments on:

- "frequency distribution of crashes according to impact speed;

- "frequency distribution of crashes according to direction of impact;

- "frequency distribution of crashes according to damage repair cost;

- "type of damage and cost of repair following Standard No. 215 tests;

- "equivalence between crash damage and repair costs obtained from controlled test and actual experience;

- "rate of replacement or repair of bumpers by model year relative to each of the following: dents, damage to protective or decorative coating, deformation, and displacement of bumper;

- "type of damage and cost of repair as a function of crash speed in actual crashes;

- "changes in collision and property damage insurance rates ascribable to or expected from bumper standard requirements;

- "reductions in the losses for which consumers are not compensated by insurance;

- "effects that a reduction in the number of damage producing collisions will have upon public services and institutional activities such as police traffic services, court and legal processes, and traffic record systems;

- "impacts on consumer factors related to convenience and time delays;

- "effects on health and safety including emission standards, pedestrian injury severity, and struck vehicle occupant injury and property damage severity."

Interested persons are invited to submit comments on the proposal to the Docket Section, National Highway Traffic Safety Administration, Room 5221, 400 Seventh St., S.W., Washington, D.C. 20590.

GM Plans Air Bags In Some 1974 Cars

General Motors Corp. says it will offer air bags as optional equipment on its luxury cars "around the first of the year," following the National Highway Traffic Safety Administration's backing of a GM-sytled test dummy on an interim basis.

GM representatives have told the Senate Commerce Committee that the auto maker still favors a postponement of the requirement for mandatory passive restraints in the future, to provide the public with a choice among several restraint alternatives. (See *Status Report*, Vol. 8, No. 14, July 10, 1973.)

Ford Motor Co. executives claimed air bags are not "even the most desirable form" of passenger restraint, and urged a "fair trial" for the belt and starter interlock system that will be on all 1974 model cars. However, Ford spokesmen said the company would not pose a legal challenge to the GM plans.

Chrysler Corp. representatives also said their company would not file suit on the matter. Chrysler spokesmen said the company is prepared to offer air bags on all models in the 1976 model year.

GM witnesses said production would start "as soon as possible" on an expected 100,000 air bag equipped 1974 model year Cadillac, Buick Electra and Rivera, Oldsmobile "98" and Toronado automobiles, at a probable extra cost of $200 each. Front lap belts would cost an additional $25, the spokesman said.

The National Highway Traffic Safety Administration testified that it had just issued new regulations effective Aug. 1, 1973, for test dummy specifications to be applied to optional passive restraint systems in the next two years.

"We hope that our actions will remove all barriers to the optional manufacture of passive restraint vehicles in the immediate future," acting administrator James E. Wilson said.

The hearing, chaired by Sen. Vance Hartke (D-Ind.), presented testimony by auto makers, government and insurance companies on real world air bag crashes.

"Our best judgment is that reductions in occupant injuries and deaths due to air bags would approximate 25-30 per cent when compared to today's losses," Vice President John S. Trees of the Allstate Insurance Co. said.

Testifying on real world experience in the Allstate fleet of test cars, the insurance company's Automotive Engineering Director Jack Martens reported "enormous criticism" by present drivers of the ignition interlock system that is being tested on some cars.

Hartke urged greater efforts by the National Highway Traffic Safety Administration, saying that he sometimes felt that his patience was at an end with gradual approaches to the problem.

"There is no anguished outcry from the American public," Hartke said. "There seems to be very little reverence for human life in American society."

Both the NHTSA's test dummy rule and this week's Senate hearings were calculated to make it difficult for General Motors to do anything but go forward with air bag installation.

NHTSA's specifications apply to dummies used to test passive restraints that are installed in cars manufactured from Aug. 15, 1973, through Aug. 15, 1975, for sale in the U.S. "The question of the restraint system requirement to be in effect after Aug. 15, 1975, is not addressed by this notice and will be the subject of future rulemaking action," the agency said when it issued the specifications. GM has asked and continues to insist that DOT's 1976 model deadline for passive restraint protection be delayed "indefinitely."

In December, 1972, the Sixth Circuit Court of Appeals in Cincinnati told NHTSA to redraw its test dummy specifications after auto makers had complained about them. The agency proposed a new set of dummy specifications in March. (See *Status Report*, Vol. 8, No. 8, April 9, 1973.) The agency said at that time that the proposed specifications tracked the so-called GM Hybrid II Dummy, developed primarily by GM in cooperation with Alderson Research Laboratories and Sierra Engineering Co. Even with that, GM President Edward N. Cole told Transportation Secretary Claude S. Brinegar in a recent letter that "the GM test dummies cannot qualify under the proposed specification." The rule, which the agency has now issued, remains basically as it was proposed in March with some modifications, "largely as a result of comments from GM," the agency said when it issued the requirements.

The agency is making no secret of its desire to give GM whatever might be necessary to clear the path for the auto maker to fulfill its promise of 100,000 air bag equipped cars during the 1974 model year. The agency said that "one fact weighing in favor" of specifying the GM Hybrid II Dummy during the period (Aug. 15, 1973, through Aug. 15, 1975,) when auto makers are allowed to use passive restraints but are not required to do so is that General Motors has already used this dummy "to measure the conformity of its vehicles to the passive protection requirements of Standard 208" in preparation for limited 1974 model installation.

"No other vehicle manufacturer has announced plans for the production of passive restraint systems during the optional phase, nor has any other vehicle manufacturer come forward with suggestions for alternatives to Hybrid II," the agency said, emphasizing its eagerness to see that GM proceeds with plans to offer air bag equipped cars.

Southwick Joins IIHS

Edward E. Southwick, a physiologist, has joined the research staff of the Insurance Institute for Highway Safety. He was formerly with the Duquesne University Department of Biological Sciences and has conducted research in biophysics at the University of Michigan.

Southwick received his Ph.D in zoophysiology at Washington State University, his M.S. in biology and his B.S. in mechanical engineering at the University of Michigan.

Highway Safety Funds Bill Reported

House and Senate conferees have reported out a long-awaited bill that, if passed, will provide the funding basis for the bulk of federal-aid highway safety activity in the United States over the next three fiscal years.

The bill, a compromise version of earlier House and Senate drafts of the Federal-Aid Highway Act of 1973, has gone to the House and Senate floors for a vote.

The conference bill (S.502) provides funds for a broad range of federally-assisted state highway safety programs. Included are modest funding levels for new programs to eliminate roadside obstacles on federal-aid highways, general hazard correction for roads off the federal-aid system, incentives to promote adoption of mandatory safety-belt use laws by state legislatures, and provision of continued funding for highway safety grants and research and development activities under the Highway Safety Act of 1966.

The Conference bill also includes a House-originated ban on DOT's issuance of any new highway safety program standards. Introduced as an amendment to the House bill by Rep. Kenneth J. Gray (D-Ill.), this provision also would prohibit DOT from making a change in any existing standard unless the Congress enacted specific legislation allowing such a change.

The bill's roadside hazard removal provisions are two-fold:

- A total of $175 million for fiscal years 1974 through 1976 is earmarked for the elimination of roadside obstacles on the federal-aid system, and,

- Under what it calls the "Federal-Aid Safer Roads Demonstration Program," the bill authorizes $250 million for the next three fiscal years for the elimination of roadside obstacles and other hazard correction programs on roads that are *not* part of the federal–aid system. Under this program, states would be required to identify hazards which require correction and assign priorities for their correction by June 30, 1974. States would also be allowed to use federal funds for 90 per cent of their hazard removal activities.

In other hazard correction provisions, the bill authorizes $175 million over the next three fiscal years for each of the following objectives: Survey and elimination of hazards at rail highway crossings on the federal-aid system, pavement marking demonstration projects to bring highways on and off the federal-aid system into conformance with FHWA requirements, and bridge reconstruction and replacement projects. $200 million is authorized for spot improvement of hazardous sections of the federal-aid system.

The conference report of the bill, with its emphasis on hazard removal and correction programs, coincided with the recent publication of a report on highway safety, design and operations compiled by the Subcommittee on Investigations and Review of the House Public Works Committee. (See following *Status Report* story.)

In other funding moves, the conference report authorizes, for the next three fiscal years, a total of $465 million for state and community highways safety grant programs (Section 402), and $192.5 million for highway safety research and development (Section 403). All funds for the highway safety programs will come from the Highway Trust Fund.

Other major aspects of the bill include the use of highway construction monies to build separate bike lanes and pedestrian walkways; $30 million for research on drug use and driver behavior; extending to Indian reservations eligibility for highway safety grants; projects to improve and evaluate the effectiveness of driver education programs, and requirements for curb ramps for the handicapped.

Indifference To Highway Hazards 'Depressing'

After six years of investigation that stretched nationwide and in 2616 pages of testimony from more than 80 witnesses, a congressional committee has documented what it calls the "depressing" story of state and federal inattentiveness to providing the public with a hazard-free roadside environment. It attributes the condition to "incipient institutional and individual failure . . . aided and abetted by the indifference of policy makers at all levels."

"Even some of the nation's newest Interstate Highways, ribbons of concrete that link major urban areas, in many cases have been designed and built without applying basic research knowledge and engineering principles and, in some cases, old-fashioned common sense. While the record showed increasing responsiveness by the Federal Highway Administration and state agencies over the six-year span of the hearings, the documented story overall is largely a depressing one," the House Committee on Public Works' Subcommittee on Investigations and Review said in a recent report summarizing its six-year look at highway design and operations.

"The nation's highway program has evolved from its very beginning without insistence upon the maximum application of safety knowledge and research. Highway professionals have been judged, and rewarded almost entirely by their ability to build, and hardly at all by their ability to engineer safety and human accommodation into what they have built," the subcommittee report says.

Investigators found "deficiencies" on "new Interstate highways in all regions of the Federal Highway Administration, as well as along older federally aided roads. Tragically, many of these deficiencies exist even today, despite corrective programs." They found:

- "Utility poles along the outside of a curve, where straying vehicles knock them down time and time again.

- "The use of fragile guardrail and bridge railings that break or collapse, failing to contain vehicles or to guide them to controlled stops.

- "Exposed trees, stone walls and bridge abutments within a few feet of the roadside.

- "Dangerous approach ends of guard rail . . . .

- "Guardrail installed without washers, so that bolts can pull through the metal and the guardrail become deformed.

- "Ditches, roadside drains and culverts, steep slopes and other topography that actually serve to steer a vehicle into a fixed object, over an embankment, or cause it to turn.

- "Gaps in guardrails that 'snag' veering vehicles.

- "Muddy, soft, or rutted shoulders, sometimes with severe drop-offs.

- "Narrow so-called safety walks and curbs on bridges that fail to provide safety for the stranded motorist and at the same time constitute a hazard for vehicles.

- "Unguarded open space between parallel bridge spans where an out-of-control vehicle can hurtle onto a roadway or into a river below."

The Federal Highway Administration "in recent years has displayed sporadic concern over the unthinking design of hazards into the Federal-aid system." However, the agency has not moved "forcefully enough to fully correct the practice" even though it has "full authority to insist upon compliance with safety related design features on projects throughout the Federal-aid highway system." Instead, the report points out, FHWA prefers to "rely largely on persuasive techniques." Also, the report claims that efforts to clean up the roadside environment "have gone largely unendorsed and unsupported by outside corporate might."

One of the problems, according to the report, is that "we have permitted ourselves essentially to be borne along by the momentum of the past." (Last year, an FHWA official told *Status Report* that the agency has worked with states on a cooperative basis for 40 years. "Why tamper with it?" he asked. See *Status Report*, Vol. 7, No. 19, Oct. 16, 1972.)

In its report the subcommittee also deals with its findings regarding improper signing practices, wet pavement hazards, and the lack of uniform traffic laws among states.

Copies of the 46-page report, entitled *Highway Safety, Design and Operations (93-7),* are available at no charge from the Subcommittee on Investigations and Review, Room B376, Rayburn Office Building, U.S. House of Representatives, Washington, D.C. 20515.

Magnuson Urges Full Funding For NHTSA

The chairman of the Senate Commerce Committee, Sen. Warren G. Magnuson (D-Wash.), has called for increased appropriations for the National Highway Traffic Safety Administration. The Commerce Committee sets funding ceilings for NHTSA.

In a letter to Sen. Robert C. Byrd (D-W.Va.), chairman of the Transportation Subcommittee of the Senate Appropriations Committee, Magnuson suggested several priority areas for additional funding in NHTSA, as well as the Federal Railroad Administration. The subcommittee is now studying DOT's budget request.

"I believe that a small additional investment in the Motor Vehicle Program and Research Institute of the NHTSA . . . will result in a high rate of return in terms of lives saved, injuries mitigated and economic damage involved," Magnuson said.

After an analysis of the agency's plans, Magnuson wrote Byrd he finds NHTSA's requested appropriations of $35,063,000 for fiscal 1974 "inadequate to meet the needs of motor vehicle safety." The Commerce Committee authorized $46,773,000 to upgrade the agency's level of activity.

Magnuson named four priority areas:

- The Office of the Chief Counsel is severely understaffed, delaying vital work.
- No funds were requested by the Administration for vehicle degradation studies, necessary to apply vehicle-in-use standards.
- NHTSA needs to contract with outside parties for evaluation of the agency's standards.
- Additional work is needed in the area of school bus safety.

Magnuson also requested the full appropriation of $23,000,000 authorized to implement the Motor Vehicle Information and Cost Savings Act's requirements that NHTSA develop bumper standards, establish vehicle inspection centers, and provide the public with information on vehicle damageability.

"I believe this is a modest investment for the potentially high payoffs to consumers that the program offers," Magnuson said.

He concluded by telling Byrd that NHTSA's safety programs have the unique potential of saving literally thousands of lives at a small cost to the nation. Further, the potential savings to consumers from unneeded or improperly performed repairs and excessively high premiums for automobile property damage insurance would make full funding of the Cost Savings Act an appropriate expenditure."

Gregory Nominated To Head NHTSA

James B. Gregory, 48, former manager of environmental sciences for Union Oil Co. of California, has been nominated to head the National Highway Traffic Safety Administration. The agency has been without an administrator since Douglas W. Toms resigned in March, 1973, to join AMF, Inc.

Gregory joined Union Oil in 1951 as a research chemist. From that time to 1972 he held various research and management positions with the company.

He is a graduate of Whittier College and holds a Ph.D. in chemistry from Stanford University. He has also studied at Harvard Business School.

The Senate is expected to move rapidly on Gregory's confirmation.

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