

NHSB PROPOSES LOW QUALITY BUMPER STANDARD

The National Highway Safety Bureau has proposed a bumper standard aimed at minimizing safety-related damage to cars in front- and rear-end collisions. The standard would not significantly reduce property damage in crashes and would not provide the level of safety protection being advocated by many.

The proposal would require that, effective Aug. 1, 1972, newly manufactured cars be able to withstand five mile per hour impacts by a pendulum-like device equal to the vehicle's weight. The pendulum test would be appreciably less severe than one in which a car is driven into a rigid barrier at the same speed.

A series of 16 pendulum-test impacts is prescribed by the proposed rule (six on the rear bumper, six on the front and one at each corner). Following the tests, all lamps and reflective devices would have to be free of cracks and headlights would have to remain operable as prescribed in Safety Standard 108: hood, trunk and door latches would have to be "operable in the normal manner"; fuel and cooling systems would have to remain free of leaks or constrictions, and the exhaust system would have to be free of obstructions and without "open joints."

In addition to these requirements, justified in terms of occupant protection, the bureau believes that its rule also will provide property protection. In its preamble to the proposed rule it states that one purpose is to "reduce the frequency of override and underide"

The bureau apparently banks this claim on specifications for the tests which would require that the pendulum impact bumpers at 20 inches above the ground and at "any height between 20 inches and 14 inches." This, it apparently believes, would standardize bumper heights and thus reduce bumper "mismatch" that causes override in crashes.

The proposal does not, however, include anything that would preclude bumper contours which would permit such override. Nor would

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the requirements necessarily result in broadly faced bumpers which would further reduce override since the test requirements do not require pendulum impacts at any levels other than 20 inches above ground and, because of loosely drawn language, presumably "any" one point below that to 14 inches above ground — even, for example, at 19 inches.

The proposed rule also does not include any language which would prevent bumpers from being so susceptible to damage that they would no longer be serviceable after a low-speed crash, nor language which would prevent bumpers from being displaced so severely in a crash as to cause extensive damage to grilles, sheet metal and other costly body fixtures.

Thus, bumpers required under the proposal would hardly meet criteria of the Florida "bumper law" or qualify for insurance premium reductions being offered by some insurance companies for cars able to withstand five mile per hour front- and rear-end barrier crashes without damage.

The bureau is forbidden by law from issuing vehicle standards aimed at reducing property damages in crashes. (See Status Report Vol. 5, No. 20, Nov. 17, 1970.)

The proposed standard even falls short of the bureau's own "discussion paper" — actually a proposed bumper rule — issued Feb. 19, 1970, in that it does not include buses, multi-purpose vehicles and trucks weighing less than 10,000 pounds.

The earlier proposal also would have required that a vehicle's wheels be blocked during tests. Since the blocking requirement is eliminated in the new proposal, the test vehicle now would be free to roll backward when impacted by the pendulum, thereby decreasing the amount of crash forces to be absorbed by the bumper. The new proposal also allows the test vehicle to be empty of occupants, its transmission to be in neutral and its brakes to be unlocked.

(cont'd. on page 3)

'SMASH' KNOCKS NHSB PROPOSAL

Students Mobilizing on Auto Safety Hazards (SMASH), a group of Washington-based law students working in the field of automobile safety, has termed NHSB's new proposed bumper standard "totally inadequate."

A SMASH spokesman said that "while the rule would be a step forward, new cars would still sustain dangerous structural damage in low-speed crashes, and the American public would still have to pay billions of dollars in avoidable repair costs." It pointed out that energy-absorbing bumpers are available that would "in many cases eliminate entirely all damage in low-speed accidents."

SMASH is associated with attorney John Banzhaf, the George Washington University law professor who succeeded in forcing broadcasters to provide free air time for anti-smoking advertisements.

In addition to the property damage-related criteria excluded, several safety-related criteria are also absent from the proposed rule:

- Nothing in the proposal addresses the problem of hazards to pedestrians — thus allowing dangerous protrusions, rigid and low-energy absorbant materials and other hazards to pedestrians.
- The proposal does not cover the hazards of engine and drive train damage or displacement that could aggravate hazards in a crash.
- It does not address the potential problem of window or windshield breakage in a crash, a hazard since buckling of frame and sheet metal components can cause window damage.

In one other omission, the bureau did not include any proposal to attach a consumer information requirement to its rule, thus not providing car buyers any simplified method of determining how various models fared in the tests required for the proposed standard.

Parties interested in commenting on the proposed standard (Dockets No. 1-9 and 1-10) should address their comments to: Docket Section, National Highway Safety Bureau, Room 4223, 400 Seventh Street, S.W., Washington, D.C. 20591, prior to Jan. 25, 1971.

RESEARCHERS SEE NEED FOR IMPROVED HOSPITAL CARE OF CRASH VICTIMS

A study of hospital and autopsy records of persons injured in crashes who died while hospitalized has shown that in almost two-thirds of the cases investigated there had been "excessive delay or errors in diagnosis or treatment," and that in more than half of the total cases the victims had "a reasonable chance for survival if these errors in management had not occurred."

The study team concluded, "The investigation suggests we need to improve several aspects of hospital care of the injured."

The team screened post-mortem records of all motor vehicle collision deaths in Baltimore City from 1964 through 1969 and selected those 33 who died of abdominal injuries "because when death is due primarily to abdominal injury it is usually delayed long enough to permit medical attention," according to a paper authored by the team.

The paper was presented by Mrs. Susan P. Baker, an epidemiologist at the Johns Hopkins School of Hygiene and Public Health, at the Fourteenth Annual Conference of the American Association for Automotive Medicine at the University of Michigan Medical Center in Ann Arbor, Mich. Her co-authors were Harold R. Gertner, Jr., M.D., Surgical Resident of The Johns Hopkins Hospital; Robert B. Rutherford, M.D., Associate Professor of Surgery, The Johns Hopkins School of Medicine, and Werner U. Spitz, M.D., Maryland Deputy Chief Medical Examiner.

The team believes that "the reasons for failure to survive in these cases might suggest ways in which other lives could be saved," Mrs. Baker told the Ann Arbor meeting.

In 21 of the 33 cases there was evidence of "excessive delay or errors in diagnosis or treatment." Four of those 21 cases, however, had such severe injuries or diseases "that even with the best management their chances for survival would have been poor." The remaining 17, however, "should have had a reasonable chance for survival." Twelve of the 33 cases "either appeared to have been adequately managed or else were borderline cases which might or might not have had proper treatment."

The study was restricted to fatal cases. The study group said the study is limited since "we don't know the proportion of cases that survived abdominal injury because of proper management . . . (and) we don't know the proportion that survived in spite of inadequate management." Also the findings cannot be applied to other injury groups.

The most common error contributing to the in-hospital deaths, they reported, was inadequate blood volume replacement in patients who were in shock. It occurred in 12 of the 33 cases. Only three persons received any whole blood; four received plasma, dextrose or Ringer's lactate, but not in sufficient quantities.

The authors said four patients "seemed to have been inadequately observed, two of them after being transferred to the X-ray department." Blood sent for cross-matching, they said, was not available in time in one case in which the victim died two hours after arrival at the hospital.

"Even though most of these patients survived for many hours or days (after admission to the hospital), only 20 . . . were ever operated on," the team reported. Five were operated on within four hours, but one-third of the 20 operations began more than 12 hours after arrival at the hospital.

That, the group reported, was despite the fact that almost 75 per cent of the 33 deaths occurred six hours or more after the crash.

(None of the deaths occurred within an hour of the crash, and although the study did not exclude those who were dead on arrival at the hospital, only one such case was among the 33 — that of a man who went from the crash to a ball game and there collapsed with a ruptured spleen.)

The study team expressed concern that, because the average age of the 33 fatally injured persons was higher than that of most motor vehicle crash fatalities (median age in the group studied was 50), "there may (have been) a tendency to postpone definitive treatment in elderly patients — which is unfortunate, since the older patient is less tolerant of shock and of delay in treatment than a younger patient would be."

They said, however, that the higher average age of the cases might reflect older persons' "decreased ability to survive injuries which younger persons might survive" and that abdominal injuries in older patients is often more difficult to locate and identify. (The team noted that it had taken age into account in determining which patients should have had a chance of survival and that the age range in the 17 "salvageable" cases was younger than in the other cases.)

The cases were treated at 13 Baltimore hospitals. The team said distribution of the cases among the hospitals did not parallel their normal crash-injury caseloads: one-third of the deaths occurred in hospitals which usually see the fewest highway collision injury cases.

"Unfortunately," they said, "we don't know how many abdominal injury cases (both fatal and non-fatal) were seen at the various hospitals, so we can't compare case fatality rates. However, the possibility that hospitals may differ substantially in their ability to salvage the lives of highway victims points to the urgency of evaluating hospital care of the injured Some hospitals may be treating so few . . . (injury) cases that it is hard for staff members to gain the experience they need."

The study team suggested that consideration be given to setting standards for emergency care and allowing hospitals the options of either meeting the standards or not accepting highway casualties.

The study was supported by a grant from the Insurance Institute for Highway Safety.

VOLPE GETS INTERNATIONAL EFFORT ON ESV'S

Transportation officials of West Germany and Japan have signed agreements with the United States to cooperate in developing prototype "experimental safety vehicles" in the 2,000 pound range.

Each of the two agreements call for an exchange of engineering and technical data allowing one country to benefit from advances made by the other.

According to DOT announcements, the foreign ESV's will attempt to meet approximately the same specifications developed for the 4,000 pound ESV's now being designed under DOT contracts in the U. S.

Both the German and Japanese agreements are general in wording. The U. S. agreement with Germany states that "details concerning the nature and scope of the data exchange . . . will be agreed upon in later understandings." It says also that West German automakers now are "preparing a list of specifications" for ESV's, at least one of which, weighing 1,000 kilograms (2,205 pounds), will meet "requirements similar to those established for the American (domestic ESV) project."

The Japanese agreement stipulates that information that might be exchanged between Japan and the U. S. includes "procedures for establishing performance specifications for the experimental safety vehicles, for making safety advances developed in one program available for adaptation to the other, for the exchange of progress data and for the conduct of performance tests of the completed vehicles."

Earlier this year the Department of Transportation awarded ESV contracts to American Machine and Foundry Company's Advanced Systems Laboratory, Fairchild Hiller Corporation's Republic Aviation Division and General Motors.

If the foreign ESV's were built to the detailed specifications set forth in the American contracts, they would minimize injuries in 50 mile per hour front end barrier crashes and in two-car head-on collisions at 75 miles per hour.

The U. S. contracts also specify that in crashes of the domestically built ESV's, damage must be kept to "a minimum in impacts below approximately 10 miles per hour" in

front- and rear-end crashes, passenger compartments are to remain intact in a 70 mile per hour "uncomplicated" rollover, and passenger compartment intrusion will be limited to three inches in a side pole crash of 25 miles per hour.

The domestically built experimental safety vehicle prototypes also will have to meet numerous crash avoidance criteria, and their exteriors will have to be designed to "minimize injury to the pedestrian upon impact."

A National Highway Safety Bureau official pointed out that the criteria will be more difficult to meet for smaller foreign cars than for the larger domestic cars, but, he added, "when they hit these shores they're subject to the same safety standards."

The governments of Germany and Japan have not disclosed whether they intend to subsidize ESV development, although U. S. officials hope that they will. U. S. financial support is not part of the agreements.

According to a DOT announcement, Britain, France, Italy and Sweden have also expressed interest in the ESV program.

TOUGHENED BRAKE CRITERIA PROPOSED BY NHSB

The National Highway Safety Bureau says it is planning to amend its hydraulic brake performance criteria so that, starting Oct. 1, 1972, new cars will be required to have more effective brake systems than now are required.

One effect of the amendment might be to narrow the gap between "best" and "worst" stopping distance performances that now separates many car models. The bureau's consumer information data show that among 1971 model cars, foreign manufacturers' models occupied the top 12 performance berths in stopping distances from 60 miles per hour under heavy load conditions (130 to 175 feet) while U. S. -made cars dominated the bottom 12 rankings (241-263 feet).

The proposed standard amendment would specify maximum allowable stopping distances from speeds ranging from 30 miles per hour to the maximum speed attainable by each vehicle. It also would require that new cars stop, in all but "panic stop" situations, without locking any wheel and without leaving a 12 foot wide highway lane.

All vehicles with hydraulic brake systems would be required under the amendment to have split service brake systems so that failure of any pressure component in one part of the system would not impair operation of another. Maximum permissible stopping distances for partially inoperable systems also would be set.

The amendment also would require that various brake failure indicators be provided to drivers.

Comments on the amendment (to Standard 105) must be submitted by Feb. 4, 1971, to the NHSB docket section.

NADER URGES SENATE TO RESTORE HOUSE CUTS IN NHSB BUDGET

Attorney Ralph Nader has joined other safety program advocates in urging the Senate to restore \$12.6 million and 154 staff positions cut by the House from the National Highway Safety Bureau's 1971 budget request.

Nader urged the Senate's support for the NHSB budget in a rare four-page letter to Sen. John Stennis (D-Miss.), chairman of the Senate Appropriations Subcommittee on Transportation. The letter presented a detailed analysis of the safety issues involved, the bureau's needs and the cuts made by the House upon the recommendation of its transportation appropriations subcommittee, headed by Rep. Edward P. Boland (D-Mass.). In the letter to Stennis, Nader cited five specific items cut from the NHSB budget request by the House:

- "Crashworthiness" research contract funds were cut in the House by \$1 million, about 55 per cent of the increase requested for fiscal 1971 and 25 per cent of the fiscal 1970 budget. Nader called this program "clearly the most important priority in automobile safety . . . (since) it is now known and agree that incorporating features and designs in new vehicles to 'package' the occupants is the most effective, quickest and cheapest way to reduce the unrelenting death and injury toll."

- The program for a uniform tire quality grading system was cut in the House to \$970,000 (the same amount as was budgeted for 1970) from the \$4 million requested by the Administration.

- The program of testing for compliance with vehicle safety standards was cut by the House to \$1.7 million from the \$3.6 million requested. This, Nader said, "means that this part of the program has virtually not grown since the agency was created," even though the number of standards to be enforced has grown from 22 to 33, plus several amendments, four consumer information regulations and other major substantive regulations.

- The program to develop information on safety-related factors of vehicle inspection was eliminated entirely from the budget for the second year in succession; this, Nader said, "makes a mockery of the bureau's initial attempts to build a body of information about the safety characteristics of vehicles on the highway and the technology of maintaining a minimal level of safety through inspection."

- The Administration's request for a staff increase of 254 positions was cut by 60 per cent in the House. Nader remarked that the DOT has appealed only 74 of the 154 positions deleted in the House because "the enormity of the cut and the hope of recovering at least some of it (even though the full contingent is urgently needed) forced the department to compromise its original request."

The Insurance Institute for Highway Safety had earlier filed a statement with the Senate subcommittee urging that the House cuts be restored to the NHSB budget as "a barely acceptable minimum." The measure was expected to go to the full Senate this week.

NHSB REQUIRES RECORDS ON TIRE SALES

Tire manufacturers will be required by a new NHSB rule, effective May 1, 1971, to maintain records of names and addresses of tire purchasers to ensure purchaser notification when tires are suspected of being defective.

Manufacturers, brand name owners and retreaders will be required by the rule to label the sidewall of each tire with a serial number indicating at least the date of manufacture, name of manufacturer and size of tire, to facilitate safety defect notification campaigns involving groups of tires.

Dealers will be obligated under the rule to furnish manufacturers with the names and addresses of all purchasers. In the event of a tire defect notification campaign, the manufacturer will be responsible for notifying the purchasers.

Earlier this year, Congress adopted a law requiring that such record-keeping systems for tires be established by Nov. 18, 1970, unless the Secretary of Transportation could show "that a later effective date is in the public interest."

In announcing the rule, the bureau said that the later May 1, 1971, effective date is in the public interest because the additional time will allow the "establishment of more efficient tire record-keeping systems."

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