

NHTSA Issues New Fuel System Rule

The National Highway Traffic Safety Administration has issued a long-awaited broadening of its motor vehicle fuel system integrity standard.

The new standard requires that fuel systems of all motor vehicles under 10,000 pounds be able to withstand front-angular, lateral moving and rear moving-barrier crashes. After each crash, a rollover test is required. The new standard also specifies the amount and rate of allowable fuel spillage following both barrier crashes and rollovers.

The new standard, issued March 18, 1974, somewhat weakens a set of fuel system requirements and proposals issued last August by NHTSA. At that time Congressman John E. Moss (D-Cal.) called them "unacceptable" and "consumer abuse by government." (See *Status Report*, Vol. 8, No. 17, Sept. 10, 1973.)

NHTSA issued the August fuel system crash test requirements and proposals after Insurance Institute for Highway Safety crash test research showed design deficiencies existed that led to leaking gasoline and fires, even in moderate-speed rear-end crashes. (See *Status Report*, Vol. 8, No. 17, May 29, 1973.)

Because of NHTSA's delay in issuing an improved fuel system integrity standard, Moss and Sen. Joseph Montoya (D-N.M.) have both introduced bills to require the agency to issue an upgraded fuel system crashworthiness standard. (See *Status Report*, Vol. 9, No. 3, Feb. 6, 1974.)

The new standard does not contain requirements for rear corner impact tests. Rep. Moss had asked DOT Secretary Claude S. Brinegar why such requirements were not included when the proposed standards for front-angular, rear and lateral impacts were issued last August. (See *Status Report*, Vol. 8, No. 17, Sept. 10, 1973.) According to a 1972 insurance study, 30 per cent of property damage crash claims involved rear corners of cars.

Under the new standard's lateral impact provisions, the barrier will strike only the doors of a typical full-size four-door sedan, not the areas where the vehicle's filler pipes, filler system or fuel tank are installed.

Although NHTSA had proposed dynamic rollover tests last August, the agency

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deleted this test from the new standard, noting that "commenters pointed out the exceptional difficulty in measuring or even ascertaining a leakage when the vehicle is rolling over at 30 mph."

The standard does not include provisions for preventing doors from jamming closed during a crash. IIHS crash test research showed that design structure of some cars is "so inadequate that one or more doors jammed on impact." This could result in occupants being trapped in burning cars. A Senate Commerce Committee staff member told *Status Report* that Sen. Vance Hartke (D-Ind.) intends to urge NHTSA Administrator Dr. James B. Gregory to issue a standard to correct this hazard.

Vehicles that use propane or gaseous fuel are exempt from the new standard.

AUTO MAKER REQUESTS DENIED

In addressing other auto maker objections, NHTSA rejected a Ford Motor Co. analysis that, according to the auto maker, showed that the costs of rollover and fuel spillage requirements (\$11.20 per car and \$12.15 per light truck) would outweigh their benefits. Ford had asserted that — in rollover crashes alone — the consequences of fire "can be estimated as 180 deaths, 180 non-fatal injuries and 2100 other fire crashes." The auto maker said, "Similar analysis for other impact modes would be expected to yield comparable results, with the implementation costs far outweighing the expected benefits."

A Chrysler request that fuel which escapes from the carburetor bowl during a rollover not be included in the amount of fuel discharged from the vehicle was found "unacceptable." A Mercedes-Benz request that diesel-powered vehicles be excluded was also denied. The agency said that a Nissan request that the barrier test crash and the rollover test be conducted with two different vehicles was "without merit." NHTSA denied petitions asking that testing temperatures be between 60 degrees and 80 degrees and not be allowed to vary more than five degrees.

The agency also said that "no justification exists" for a Triumph Motors request that the weight of the 4,000-pound barrier be changed to the curb weight of the vehicle being tested. NHTSA notes that vehicles in use are often over 4,000 pounds in weight and a small vehicle is "as likely to collide with a vehicle of that size as one smaller."

More Delays Proposed For Truck Brake Rule

Attempts to decrease the gap between stopping distances of heavy trucks and buses and lighter vehicles, such as passenger cars, may suffer yet another setback.

In March, 1974, the National Highway Traffic Safety Administration, in response to requests from vehicle manufacturers, proposed further delays in implementing its safety standard for air brake equipped vehicles. Vehicle manufacturers have responded to NHTSA's proposed delay by seeking even greater postponement.

NHTSA's proposed delay and manufacturer requests for even more time come when DOT and the trucking industry are urging the Congress to allow heavier and longer trucks on the highways. NHTSA Administrator Dr. James B. Gregory has conceded that greater truck weight "should increase stopping distance, brake lining wear, and rate of brake performance fade."

CURRENT STANDARD

The air brake standard was first issued by NHTSA in February, 1971, with an effective date of January 1, 1973. In subsequent rulemaking, NHTSA refused to allow greater stopping distances, but slipped the effective date to Sept. 1, 1974, at the request of vehicle manufacturers.

In issuing the original standard, NHTSA said its purpose was "to insure that the braking performance of these large vehicles will compare favorably with passenger cars." The standard – if not changed – will require trucks and buses beginning Sept. 1, 1974, to stop from 60 miles per hour on a dry surface in 245 feet. (See *Status Report*, Vol. 6, No. 5, March 10, 1971.)

PROPOSED DELAYS

Now, in response to further requests, NHTSA has proposed that, except for trailers, the effective date be delayed until at least Jan. 1, 1975, and that the following further delays – some extending two years – be given:

- "oversized" or "special permit" vehicles would have until Sept. 1, 1976, to comply;
- fire fighting vehicles, which NHTSA generally gives a longer time to comply, would have until Sept. 1, 1975, to meet the standard;
- "on/off highway" vehicles would be exempt until Sept. 1, 1975, from all stopping distance requirements except those for a 20 mile per hour stop on a wet surface;
- standard trucks and buses would be granted a five per cent increase in stopping distances until Sept. 1, 1975.

The proposed five per cent increase in stopping distances for standard trucks and buses would give those vehicles 258 feet in which to stop from 60 miles per hour on a dry surface, rather than 245 feet as currently specified in the air brake standard. NHTSA's latest consumer information booklet shows that all but seven of the nearly 300 passenger cars listed can stop in less than 258 feet from 60 miles per hour.

Under NHTSA's current proposal, the 245 feet stopping requirement for standard trucks and buses would not go into effect until Sept. 1, 1975. At that time, passenger cars will be required by another federal standard (FMVSS 105a) to stop in as little as 194 feet from 60 miles per hour, 51 feet less than that required of trucks and buses.

The National Transportation Safety Board has repeatedly warned that the disparity in stopping distances between passenger cars and commercial vehicles contributes to crash frequency and severity and has urged that NHTSA use its authority to make stopping capabilities more compatible. (See *Status Report*, Vol. 8, No. 23, Dec. 20, 1973.)

MANUFACTURERS SUPPORT, TEAMSTERS OPPOSE DELAY

Both Ford and General Motors, which together produce more than half the trucks sold in this country, were among those requesting further delays in the effective date. They are also seeking additional relaxation of the requirements. Both manufacturers propose a gradual phase-in of the standard, starting Sept. 1, 1975, and extending through Sept. 1, 1976.

The International Brotherhood of Teamsters told NHTSA that it supports the Sept. 1, 1974, effective date for the standard and is "opposed to any further delay." Vehicle manufacturers have had

“sufficient notice of the original effective date” and there is “no merit to their contention that they need additional time,” the Teamsters said.

RECENT AMENDMENTS

In addition to proposing additional changes to the air brake standard, NHTSA has amended the standard to include:

- Specifications for trailers to be used in testing the stopping capability of a truck-tractor and trailer combination. The amendment specifies a minimum braking capability for the test trailer, but places no limit on how good the brakes can be. It is possible that a manufacturer could use a test trailer with brakes that exceed the specification and a truck-tractor that has poor brakes and meet the stopping distance requirements. An NHTSA official told *Status Report* that the agency is aware of the problem and will deal with it when it responds to pending requests for changes.
- Granting lightly loaded truck-tractors an increase in allowable stopping distances in stops with partially disabled braking systems. Truck-tractors will now have 720 feet instead of the originally required 613 feet to stop from 60 miles per hour. Beginning Sept. 1, 1975, passenger cars must stop under the same conditions in 456 feet, a difference of 264 feet.

NHTSA Proposal Would Heighten Seat Backs

The National Highway Traffic Safety Administration has proposed a standard which would require higher seat backs in a wide range of vehicles. The proposal combines current standards on seats and head restraints; it also would require head restraints, currently required only in passenger cars, to be added to multipurpose passenger vehicles (MPV's), trucks and buses.

The “broad and increasing use” of MPV's, trucks and buses as passenger vehicles requires that “they be well-equipped with passenger-car-type safety systems,” the agency said. The proposed head restraint-seat standard would go into effect with the 1977 model year.

The seat requirements of the proposed standard would apply to passenger cars, MPV's, trucks and the driver's seat in buses, regardless of the vehicle's weight. The head restraint requirements would only apply to those vehicles whose weight does not exceed 10,000 pounds. (In separate rulemaking begun in February, 1973, NHTSA proposed a seating standard for passenger seats in buses.)

The proposal would raise the current required height for head restraints from 27.5 inches to 31 inches. When measured in the “fully depressed design position” the driver's head restraint would have to be 31 inches in height and the right front passenger's head restraint would have to be at least 27.5 inches and be capable of adjustment to 31 inches.

NHTSA said the decision to allow the passenger's head restraint to be adjustable reflects a “balance between head restraint height and driver visibility.” Some current “bulky” head restraints can “adversely affect the driver's view to the side and rear” and “interfere with visibility through the inside rearview mirror,” the agency said. At least one manufacturer, Saab, has partially dealt with the visibility problem associated with current head restraints through use of a non-adjustable doughnut-shaped head restraint.

A study reporting on the effectiveness of head restraints, conducted by the Insurance Institute for Highway Safety, has pointed to one advantage of high seat backs over current adjustable head restraints. The study warned that “an adjustable head restraint if left in its lowest position actually may increase the

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GM Loses Suit On Hazardous Head Restraint Design

A federal court jury in New Jersey has awarded a \$2 million judgment against General Motors for the hazardous design of an automobile head restraint.

The suit was brought against General Motors after the death of a driver of a 1970 Chevrolet Nova. The Nova was struck in the rear by another vehicle traveling at a speed estimated to be between 50 and 72 miles an hour. The Nova's driver died from "massive brain injuries," according to plaintiff's attorney James E. Beasley.

During the trial, Beasley contended that the driver was killed because of the hazardous design of the Nova's head restraint. Beasley described the head restraint as being built around "a bar shaped in the form of an airplane wing, with the front sharp edge pointing directly at the rear of the skull." According to Beasley, an expert witness for the plaintiff testified that the driver's head "was moving at a speed significantly lower than 15 miles an hour at the time of [its] impact" with the head restraint. The driver, who was reportedly wearing his lap belt at the time of the crash, "would have survived" the crash with "only minor injuries" if the Nova's head restraint had been designed "to distribute the impact forces over a greater area of the head," the expert testified.

Attorney Beasley told *Status Report* that his investigations have revealed that every General Motors vehicle since 1968, "with the exception of certain models of the Cadillac," have a head restraint design which is "essentially similar" to the Nova's.

General Motors has asked the court for a new trial.

An NHTSA defects official told *Status Report* that the defects office is "looking at" the hazards of the 1970 Nova head restraint design.

chance of severe whiplash injuries by acting as a fulcrum for the head, especially for taller people." The report further cautioned that "unless designed properly, adjustable head restraints above their lowest positions may produce injury to both front and rear vehicle occupants who in crashes strike metal supports that have been left exposed by inept design. Examples of this design error — one not precluded by the federal standard issued in 1968 — are commonplace among cars produced during recent years." (See *Status Report*, Vol. 6, No. 17, Sept. 20, 1971.)

The current NHTSA proposal would not eliminate the designed-in dangers of exposed head restraint supports or hazardous internal structures. A federal safety standard (FMVSS 201) currently limits the force the head of a rear seat occupant can reach when it hits the front seat back, with the head restraint in its lowest position, at 15 miles per hour. A NHTSA official told *Status Report* that an amendment to FMVSS 201 "will be proposed" that will limit the force applied by a head restraint to a front seat occupant in an impact.

The current proposal also requires that each head restraint be attached so that it can only be removed by "disassembly of the seat back or shearing of metal." In the Institute's initial series of medium speed, head-on crash tests, conducted in 1971, one vehicle's head restraint flew out of the car in a crash.

The section of the proposal on vehicle seats would retain most of the requirements of the current standard (FMVSS 207). A new test would be added to determine the "resistance to collapse under

front-end impacts" of forward facing seats. In addition, manufacturers would have the option of using a dynamic test — a 30 mile per hour rear moving barrier impact — in place of several static tests to determine the seat and its anchorage's ability to withstand crash loads.

The proposal was published in the *Federal Register* for March 19, 1974. Comment on the proposed amendments to combine standard 202 and 207 should be submitted by June 17, 1974, to Docket 74-13, Docket Section, National Highway Traffic Safety Administration, Room 5108, 400 Seventh St., S.W., Washington, D.C. 20590.

Rule Seeks VIN's Of Recalled, Unrepaired Vehicles

The National Highway Traffic Safety Administration has required that auto makers provide the agency with identification numbers (VIN's) of vehicles that are not repaired during the first six months of a safety defect notification campaign.

The National Traffic and Motor Vehicle Safety Act of 1966, under which the new standard was issued, gives the Secretary of Transportation authority to require VIN's and other safety defect notification reports from manufacturers.

In issuing the standard, NHTSA said that "... the vehicle identification number is a useful tool for locating second and later owners of vehicles." Under present law, NHTSA can only require manufacturers to send defect notification letters to first purchasers and subsequent warranty holders of the vehicle. NHTSA cannot require manufacturers to recall the vehicles or repair them free of charge.

The agency cited a State Farm Mutual Automobile Insurance Co. — Ford Motor Co. study that showed, according to the agency, "... a fairly significant percentage of owners who either had not received or responded to the initial notification mailed by the manufacturer did respond to subsequent letters" sent by Ford or State Farm. The two companies used VIN's in State Farm's policyholder files to find and notify vehicle owners who had not responded to safety defect notification notices sent on the basis of Ford warranty records. (See *Status Report*, Vol. 8, No. 19, Oct. 17, 1973.)

However, J. C. Eckhold, director of Ford's automotive safety office, in a letter to NHTSA, said: "the results also indicate improved campaign completion rates can be achieved when name and address records of vehicle owners more current than original purchaser lists are used" by auto makers. Eckhold concluded that a "national register" of motor vehicle owners should be established, rather than requiring manufacturers to provide NHTSA with the VIN's of unrepaired vehicles involved in safety defect notification campaigns.

In a subsequent letter to NHTSA, Dr. Wayne Sorenson of State Farm said he agreed that some form of national register "would be desirable." However, Sorenson added, "In addition... we feel that the results of the study argue strongly for public release of the VIN's of vehicles recalled in safety defect campaigns."

NHTSA could use the VIN's of vehicles involved in safety defect notification campaigns to compare the crash experience of vehicles repaired as a result of a campaign with those not repaired or with vehicles not involved at all. The agency has no plans to conduct such a study. However, Andrew Detrick, acting director of NHTSA's office of defects investigation, told *Status Report* the study "would appear to be worthwhile."

NHTSA does not plan to provide the public with lists of the VIN's. Agency officials said NHTSA will act as a "clearinghouse" to make VIN's available to insurers and other third parties. NHTSA officials

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also claim that states with motor vehicle inspection programs will be able to use the VIN's to deny state inspection stickers to those vehicles that have not had necessary work done. NHTSA officials say that the agency also will be able to tell any individual with a car involved in a defect notification campaign if, as far as it knows, the vehicle still needs to be examined or repaired. NHTSA officials say the date they plan to make VIN's available is 22 days after the agency receives them from auto makers.

The standard was issued Jan. 30, 1974. It becomes effective May 6, 1974. Agency officials are uncertain whether auto makers must supply VIN's only for safety defect notification campaigns initiated after May 6, 1974, or must also include campaigns whose six-month VIN reporting date falls after May 6. They say they plan to clarify that point.

NHTSA first proposed that auto makers supply VIN's in a notice published Nov. 7, 1972. The proposal would have required that auto makers give NHTSA the VIN's of all defect notification-involved cars within five days after a defect is declared. (See *Status Report*, Vol. 7, No. 19, Nov. 27, 1972.) State Farm earlier that year had proposed that insurers could assist NHTSA in seeing that safety defect notices were sent to second and third owners. In correspondence with the then NHTSA Administrator Douglas Toms, State Farm indicated it was ready to implement such a program. (See *Status Report* Vol. 7, No. 13, July 17, 1972.)

As the requirement was finally issued, neither the agency nor the public will ever have complete information as to the precise identities of all the potentially defective vehicles in a safety defect notification campaign. In addition, the limited information that DOT is now to receive will not be required until nearly seven months after the manufacturer begins his campaign.

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