

DEPARTMENT OF TRANSPORTATION

National Highway Traffic Safety
Administration

49 CFR Part 571

[Docket No. 99-5682]

RIN 2127-AG48

Federal Motor Vehicle Safety
Standards; Seat Belt Assemblies**AGENCY:** National Highway Traffic
Safety Administration (NHTSA), DOT.**ACTION:** Denial of petitions for
reconsideration.

SUMMARY: This notice announces the denial of petitions for reconsideration of the agency's final rule deleting the provision in Standard No. 209, Seat belt assemblies, requiring that the lap belt portion of a safety belt system "shall be designed to remain on the pelvis under all conditions."

FOR FURTHER INFORMATION CONTACT: *For non-legal issues:* Mr. John Lee, Office of Crashworthiness Standards, NPS-11, National Highway Traffic Safety Administration, 400 Seventh Street, SW., Washington, DC 20590, telephone (202) 366-2264, facsimile (202) 366-4329, electronic mail jlee@nhtsa.dot.gov.

For legal issues: Mr. Otto G. Matheke, III, NCC-20, Rulemaking Division, Office of Chief Counsel, National Highway Traffic Safety Administration, 400 Seventh Street, SW., Washington, DC 20590, telephone (202) 366-2992, facsimile (202) 366-3820, electronic mail omatheke@nhtsa.dot.gov.

SUPPLEMENTARY INFORMATION:**I. Background**

Federal Motor Vehicle Safety Standard No. 209, Seat belt assemblies, specifies requirements for seat belt assemblies, including the pelvic restraint (i.e., lap belt) and the upper torso restraint (i.e., shoulder belt). Other requirements address the release mechanism, attachment hardware, adjustment, webbing, strap, marking and other informational instructions. NHTSA adopted Standard No. 209 in 1967 as one of the initial Federal motor vehicle safety standards (32 FR 2408, February 3, 1967).¹

From the time the Standard was issued until the issuance of the final rule deleting the provision, S4.1(b) contained the following requirement:

A seat belt assembly shall provide pelvic restraint whether or not upper torso restraint is provided, and the pelvic restraint shall be designed to remain on the pelvis under all conditions, including collision or roll-over of the motor vehicle. Pelvic restraint of a Type 2 seat belt assembly that can be used without upper torso restraint shall comply with requirement for Type 1 seat belt assembly in S4.1 to S4.4.

Although the brief preamble of the notice establishing the standard and paragraph S4.1(b) in 1967 did not discuss the purpose of that paragraph, NHTSA subsequently indicated that it regarded the purpose of S4.1(b) to be the reduction of the likelihood of restrained occupants sliding forward and under a fastened safety belt during a crash (referred to as submarining). It is important that the lap belt remains on the pelvis so that the crash forces transferred by a lap belt are imposed on the strong, bony pelvis, instead of the more vulnerable abdominal region.

In a notice of proposed rulemaking (NPRM) published on July 7, 1997 (62 FR 36251),² NHTSA proposed to delete S4.1(b). NHTSA tentatively concluded that S4.1(b) was unclear and should either be clarified or deleted. The agency explained that it was unclear how it would objectively determine that a lap belt complied with the Standard and was in fact "designed" to remain on the pelvis. NHTSA raised the issue of whether a lap belt's failure to remain on the pelvis during a crash could be sufficient to establish that the belt was not "designed" to remain on the pelvis under all conditions. In addition, NHTSA noted that the meaning of the words, "remain on the pelvis," was unclear. The agency also stated its belief that Standard No. 208, other provisions in Standard No. 209, and Standard No. 210 contained more specific requirements that collectively have the effect of requiring effective pelvic restraint and thereby reducing the likelihood of occupants submarining during a crash. NHTSA tentatively concluded that the requirement appeared to be unnecessary and unenforceable and was an appropriate candidate for deletion.

NHTSA received nine comments in response to the NPRM. General Motors Corporation (GM), Mercedes Benz, the

Automotive Occupant Restraint Council (AORC), the Association of International Automobile Manufacturers (AIAM), Chrysler Corporation (Chrysler), Ford Motor Company (Ford), and Volkswagen of America, Inc. (VW) all favored the agency's proposal to delete S4.1(b) from Standard No. 209. Advocates for Highway Safety (Advocates) and the National Transportation Safety Board (NTSB) opposed it.

In a final rule published in the **Federal Register** on May 19, 1999 (64 FR 27203, DOT docket #99-5682-1), NHTSA deleted S4.1(b) from Standard No. 209. As the agency explained at that time, NHTSA concluded that S4.1(b) is unnecessary because subsequently adopted provisions in Standard No. 208 and Standard No. 210, and other provisions in Standard No. 209, contained more specific requirements that collectively achieved the same objective for a broad category of vehicle occupants. These provisions regulating belt angle, adjustment, fit, and the amount of slack in the belt were viewed by NHTSA as adequately addressing the likelihood of occupant submarining. In particular, the agency determined that Standards No. 208 and 209 address seat belt fit and adjustment by requiring seat belts to fit a wide range of vehicle occupants, thereby assuring that belts are likely to be correctly located on an occupant. Further, NHTSA also observed that it amended S4.3.1 of Standard No. 210 in 1990 to increase the minimum lap belt angle from 20 degrees to 30 degrees. (55 FR 17970, April 30, 1990), thereby reducing the potential for occupant submarining. The agency also noted that the potential for occupant submarining is also affected by the amount of slack in a lap belt and that S4.3(j) of Standard No. 209, promulgated after S4.1(b), lowered the risk of occupant submarining by controlling the amount of slack that may be introduced into the belt.

The agency also concluded that S4.1(b) was essentially unenforceable. The agency did not have a test procedure for evaluating compliance with S4.1(b), and did not believe that a repeatable, practicable test could be devised to determine compliance with the provision. NHTSA determined that no single test could be devised to determine if a belt was designed to stay on the pelvis under all conditions.

II. Petitions for Reconsideration

The agency received one petition for reconsideration and two comments regarding the May 19, 1999 final rule. Syson-Hille & Associates (Syson), a consulting group, filed its petition on June 22, 1999. Ms. Kimberly Abood

¹ Standard No. 209 was adopted from a Department of Commerce standard (32 FR 2408, February 3, 1967), which was adopted from a Society of Automotive Engineers (SAE) standard. (29 FR 16973, December 11, 1964).

² The NPRM was issued in response to a May 24, 1996 petition for rulemaking from the Association of International Automobile Manufacturers, Inc. (AIAM). AIAM petitioned NHTSA to delete S4.1(b) of Standard No. 209. AIAM stated that the phrase "designed to remain on the pelvis under all conditions" was redundant of other, more specific and more stringent requirements in Standard No. 208, Occupant Crash Protection, Standard No. 209, and Standard No. 210, Seat Belt Assembly Anchorages, which already provide specific requirements that affect pelvic restraint.

submitted comments opposing the final rule on July 7, 1999 and Mr. Chad Cloud filed similar comments on November 8, 1999.³ All were concerned that the deletion of S4.1(b) would increase submarining injuries. In addition, Syson believed that the deletion of S4.1(b) would also have an impact on the performance of belt latches in rollovers, as the requirement that a belt remain over the pelvis implicitly demands that a belt remain fastened at all times.

Syson disagreed with NHTSA's determination that other provisions in Standards No. 208, No. 209 and No. 210 would provide adequate assurance that submarining would not occur in a crash. Syson argued that the parameters affected by the foregoing provisions (i.e., lap belt angles, shoulder belt anchorages and junction to centerline distance) addressed only three of 20 conditions that Syson considers to be important in submarining. Syson further claimed that the current agency standards applicable to lap belt angles, shoulder belt anchorage locations, and junction to centerline distance addressed these factors in the most general sense without adequate assurances of performance. Syson urged that NHTSA make a submarining test specification part of the FMVSS No. 208 crash test procedures and cautioned the agency, stating that the elimination of S4.1(b) imposes a safety cost and offers no benefits. Syson also stated its belief that the elimination of S4.1(b) increased risks to occupants in all collisions, not just frontal impacts. In Syson's view, S4.1(b)'s command that the belt be designed to remain on the pelvis under all conditions required that the belt remain on an occupant's pelvis in any and all impacts and events. Because of this, Syson believes that S4.1(b) not only served to ensure that belts remain properly located, but also required that belts always remain fastened as an unfastened belt will not remain on the pelvis. In particular, Syson alleged that certain buckle designs are likely to unlatch in side impacts or rollovers.

Ms. Kimberly Abood submitted comments indicating her concern about the deletion of S4.1(b) from Standard No. 209. In Ms. Abood's view, the original requirement that the lap belt be designed to remain on the pelvis was inserted in the Standard for good reason and should not be deleted for the convenience of the auto industry. Ms. Abood related how she had been in a

minor crash, but had sustained extremely severe injuries when she submarined under her lap belt. Ms. Abood stated her belief that automakers will not test for submarining if S4.1(b) is eliminated and the same manufacturers will be able to cut costs without being held accountable for their designs.

Mr. Chad Cloud submitted comments similar to those submitted by Ms. Abood. Mr. Cloud indicated that his son suffered severe spinal injuries and resulting paralysis after submarining under a rear seat lap belt in a 1988 Plymouth Horizon involved in a crash. Mr. Cloud argued that his son's injuries were caused by the fact that the 1988 Horizon did not comply with S4.1(b) of Standard No. 209. Because of this experience, Mr. Cloud urged NHTSA not to modify the Standard.

III. Response To Petitions for Reconsideration

In response to the petitions for reconsideration the agency has reviewed its decision to delete S4.1(b) from Standard No. 209. For the reasons stated below, the agency is affirming its earlier decision.

Standard No. 209 was among the initial set of safety standards issued by the agency. The section at issue here, S4.1(b), dates from the original issuance of Standard No. 209 in 1967. The agency notes that both automobile safety and NHTSA's own safety standards have evolved considerably since that time. As the agency noted in the preamble accompanying the final rule deleting S4.1(b), upgrades to a number of standards that have occurred since the adoption of Standard No. 209 now provide adequate, if not superior, safety benefits beyond those that may have been realized through the adoption of S4.1(b).

The agency also notes that, for a number of reasons, compliance with S4.1(b) could neither be measured nor enforced. S4.1(b) contained the general command that a seat belt "shall be designed to remain on the pelvis under all conditions * * *." The particular language of S4.1(b), which would have required examination of whether a configuration was "designed to" achieve a result rather than measuring actual performance, made the development of a practical compliance test unlikely. Assessing the performance of a device under "all conditions," is not practicable.

Elimination of the subjective requirement that a belt must have a specific design goal and the requirement that it meet this goal under all conditions would reduce the

requirement to a general command that the belt remain on the pelvis. Unless limited to some type of crash, this command would be the equivalent of "under all conditions." As the risk of submarining is greatest in a frontal impact, the logical choice would be to specify that the belt remain on the pelvis in a frontal crash. However, as the agency noted when it issued the final rule, NHTSA has concluded that existing provisions in other standards, particularly Standard No. 210, Standard No. 209 and Standard No. 208, adequately protect against this risk.

The agency concedes that, in theory, S4.1(b) could have been modified to include a practicable test procedure applicable to some crash conditions. However, as noted above and in the preamble to the May 19, 1999 final rule, NHTSA believes that any safety need that might have been addressed by such a test has been met by other provisions in existing safety standards. In particular, the agency notes that the minimum lap belt angle requirements now found in Standard No. 210, reduce the risk of submarining.⁴

Mr. Chad Cloud and Ms. Kimberly Abood both urged NHTSA to reconsider its decision to delete S4.1(b) on the basis that the provision operated to prevent manufacturers from employing belt systems which might allow occupants to "submarine" under a lap belt in a crash and suffer abdominal injuries as a result of the lap belt moving off the pelvis and onto the abdomen. As Ms. Abood and Mr. Cloud pointed out, a lap belt may inflict serious or fatal injuries if such submarining occurs. NHTSA is aware of this risk, and has concluded that deletion of S4.1(b) does not increase it.

Submarining occurs when an occupant moves forward and underneath a lap belt in a frontal crash. A number of measures instituted by the agency since the adoption of S4.1(b) require manufacturers to use seat belts minimize the risk of submarining in frontal crashes. For example, Standard No. 208 was modified in 1985 through the issuance of a final rule requiring improvements in seat belt comfort and fit (50 FR 46056, November 6, 1985). Later amendments to that standard required dynamic testing of seat belts in passenger cars (51 FR 9800, March 21, 1986) and in light trucks (52 FR 44898, November 23, 1987). In November 1989, the risk of injuries from submarining was significantly reduced by the

³ The comments filed by Mr. Cloud and Ms. Abood did not meet the formal requirements for petitions for reconsideration and were filed after the deadline for such petitions had passed. Nonetheless, the agency is treating these comments as if they were proper petitions.

⁴ NHTSA test data have shown that the occurrence of submarining is diminished as lap belt angles increase ("Rear Seat Submarining Investigation," DOT HS 807-347, May 1988).

issuance of a requirement that lap and shoulder belts be provided at all front facing outboard seating positions in passenger cars, light trucks and multipurpose vehicles (54 FR 46257, November 2, 1989). An amendment to Standard No. 210 increasing the minimum lap belt angle was issued by NHTSA in April 1990 (55 FR 17970, April 30, 1990).

Neither Mr. Cloud or Ms. Abood submitted any data with their comments other than to provide an account of the seat-belt related injuries suffered by themselves or a family member in individual crashes. In both instances, the injuries appear to have occurred in older vehicles designed and built before the effective dates of the amendments discussed above. NHTSA believes that, in both cases, the presence of shoulder belts in addition to lap belts, the modifications to the minimum lap belt angle, and the other changes to Standard No. 208 might very well have been sufficient to prevent or reduce the severity of the injuries described in the comments.

As is the case with Mr. Cloud and Ms. Abood, Syson did not submit any data supporting its contention that the agency should reconsider its decision to delete S4.1(b). Syson's principal argument is that the amendments to Standards No. 208 and 210 that were cited by the agency as providing, in the aggregate, superior protection than that offered by S4.1(b), were too general and do not sufficiently address submarining. Syson further stated that it had identified 20 variables that it viewed as affecting submarining and that, at best, the measures adopted by NHTSA subsequent to the promulgation of S4.1.(b) addressed only three of those variables.

NHTSA does not agree. The amendments cited by the agency, particularly those relating to lap belt angles and requiring shoulder belts, reduce the risks of submarining to a far greater extent than the requirements of S4.1(b). Furthermore, an examination of the 20 factors submitted by Syson indicates that these factors are either addressed by existing standards, are variables that could not reasonably be controlled by regulation, or are variables particular to a specific user or crash. At least four of the factors noted by Syson (belt angles, belt elongation, anchorage location and retractor locking) are subject to existing regulations. Others, such as vehicle pitch, vehicle deceleration pulse, seat back position, the occupant's seated position, friction between occupant and belt, friction between occupant and seat, and the

occupant's clothing are variables unique to an individual crash.

Syson also urged the agency to adopt additional tests and modify the Hybrid III dummy to address submarining. Again, in light of the amendments to Standards No. 208 and 210, NHTSA does not believe these steps are necessary. Lastly, Syson argues that S4.1(b)'s requirement that the belt remain on the pelvis provides an additional safeguard against seat belt buckle failure and unlatching. The agency notes that Standard No. 209 already contains a number of requirements that require that seat belt latches perform as they should. In regard to Syson's claim that certain buckle designs may release in side impacts and rollovers, the agency notes that its Office of Defects Investigation (ODI) completed an extensive investigation involving the alleged problem of inadvertent unlatching of the buckle of certain designs of safety belts. (The investigation is documented in a 1992 Vehicle Research and Test Center test report titled, "Tests Regarding Alleged Inertial Unlatching of Safety Belt Buckles." This document may be obtained from NHTSA's Technical Information Services office.)

IV. Conclusion

For the reasons provided above, the petitions are denied.

Issued on: March 30, 2001.

Stephen R. Kratzke,

Associate Administrator for Safety Performance Standards.

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DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 80

RIN 1018-AD83

Federal Aid in Sport Fish Restoration Program; Participation by the District of Columbia and U.S. Insular Territories and Commonwealths

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), will conform our regulations for the Federal Aid in Sport Fish Restoration Program to a recently enacted law by letting the States spend up to 15 percent (not just 10 percent as previously allowed) of their Federal Aid funds on aquatic

education and outreach and communications. Because their circumstances are different, we will also let the Commonwealth of Puerto Rico, the District of Columbia, the Commonwealth of the Northern Mariana Islands, Guam, the Virgin Islands, and American Samoa spend in excess of 15 percent for these purposes, with the approval of the appropriate Fish and Wildlife Service Regional Director. We are also defining existing requirements for the collection of information required by the Paperwork Reduction Act and the Office of Management and Budget's implementing regulation.

DATES: This rule is effective on May 7, 2001.

ADDRESSES: The administrative record for this rule is available for viewing Monday through Friday, 8 a.m. to 4 p.m., in the Division of Federal Aid, 4401 North Fairfax Drive, Suite 140, Arlington, Virginia 22203.

FOR FURTHER INFORMATION CONTACT: Kris E. LaMontagne, Chief, Division of Federal Aid, U.S. Fish and Wildlife Service. Telephone: (703) 358-2156.

SUPPLEMENTARY INFORMATION:

Background

Through the Federal Aid in Sport Fish Restoration Program, the Service disburses funds to States (including the District of Columbia and the U.S. insular territories and Commonwealths) to restore and manage the Nation's fishery resources. The States use the funds to fund fisheries research, surveys, and management; purchase and restore habitat; operate hatcheries; build boat access; and provide aquatic education and outreach and communications programs.

The Federal Aid in Sport Fish Restoration Act (Act), 16 U.S.C. 777 *et seq.*, authorizes the program. It was enacted in 1950, and carried out by regulations in 50 CFR part 80, "Administrative Requirements, Federal Aid in Fish and Federal Aid in Wildlife Restoration Acts." The Service derives funds for the Program from excise and import taxes on fishing tackle and motorboat fuel. The manufacturer or importer collects the tax and pays it to the U.S. Department of the Treasury, who transfers the money to the Service for distribution to the States.

Congress has amended the Act several times. The Transportation Equity Act for the 21st Century (Public Law 105-178), passed in 1998, commonly called TEA-21, increased from 10 percent to 15 percent the maximum allowable expenditure of Sport Fish Restoration apportioned dollars for aquatic education, which now also applies to