

DEPARTMENT OF TRANSPORTATION

National Highway Traffic Safety Administration

49 CFR Part 571

[Docket No. NHTSA-97-3191; Notice 2]

RIN 2127-AF66

Federal Motor Vehicle Safety Standards; Occupant Crash Protection

AGENCY: National Highway Traffic Safety Administration (NHTSA), DOT.

ACTION: Final rule.

Federal Register: January 26, 1998 (Volume 63, Number 16)

[Rules and Regulations] [Page 3662-3666]

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SUMMARY: This document amends the requirements for seat belts at forward-facing rear outboard seating positions of police cars and other law enforcement vehicles to facilitate the transporting of prisoners. It does so by permitting those belts to be equipped with manual adjustment devices instead of emergency locking retractors, and excluding them from requirements for the accessibility of belt latch plates, the simultaneous release of the lap and shoulder belt portions of a lap and shoulder belt, and the release of the latch mechanism at a single point. This action was initiated in response to a petition for rulemaking submitted by Laguna Manufacturing, Inc.

DATES: Effective Date: The amendments made in this rule are effective February 25, 1998.

Any petitions for reconsideration must be received by NHTSA no later than March 12, 1998.

ADDRESSES: Any petitions for reconsideration should refer to the docket and notice number of this notice and be submitted to: Administrator, National Highway Traffic Safety Administration, 400 Seventh Street, SW,

Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: For technical information: Mr. John Lee, Light Duty Vehicle Division, Office of Crashworthiness Standards, NPS-11, National Highway Traffic Safety Administration, 400 Seventh Street, SW., Washington, DC 20590. Telephone: (202) 366-4924. FAX number (202) 366-4329, Mr. Lee's e-mail address is: jlee@nhtsa.dot.gov, For legal information: Mr. Otto Matheke, Office of

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SUPPLEMENTARY INFORMATION:

I. Background

A. Standard No. 208

Standard No. 208, Occupant Crash Protection, requires an integral Type 2 (lap and shoulder) safety belt assembly to be installed at all forward-facing rear outboard seating positions in passenger cars and other light vehicles. The standard also requires that each of these safety belt assemblies be equipped with an emergency locking retractor (ELR). The ELR allows the belt webbing to unwind from the spool when the belt user leans forward or to the side and rewinds it when the user leans back against the seat. However, in the event of a sudden stop or crash, the retractor locks up to prevent the spooling out of any more webbing.

This type of retractor serves several purposes. By providing a comfortable belt fit and allowing the belt user some freedom of movement, this type of retractor makes it more likely that the typical vehicle occupant will use safety belts. This is important because although almost all states require the use of seat belts, the decision to use a belt still depends on each person's willingness to buckle up. The ELR also reduces the likelihood of excessive slack in safety belts

during use.

Standard No. 208 also requires that a seat belt must have a latch that is accessible in two different circumstances: (1) When the seat belt is not being worn and is stowed, and (2) when it is being worn. The latch must also release the lap belt and shoulder belt at a single point by a pushbutton action.

Law enforcement agencies in the United States typically use modified versions of conventional passenger cars and light trucks for patrol and other duties. These vehicles are certified by their original manufacturers as meeting the requirements of all applicable Federal motor vehicle safety standards. Although these vehicles are modified to meet the general needs of use in law enforcement, they are often subject to further modifications after they are purchased and before they are put into service. Typical modifications include the installation of a partition or barrier between the front and rear seats and replacement of the original rear seats with seats specifically designed for prisoner transport. Seats for prisoner transport must be resistant to damage by the occupant and should be designed so that they may be easily cleaned and disinfected if they become soiled with bodily fluids or other human effluents. As a result, standard rear seats in police vehicles may be removed and replaced with seats made from hard, damage resistant materials such as molded plastic or fiberglass. These seats are not only more damage resistant and easily disinfected, they also use less space inside the vehicle. Since the installation of a barrier between the front and rear seats may reduce space in the rear seat, the installation of specialized prisoner seating may provide greater room for rear seat occupants.

The installation of barriers and specialized seating systems may also require replacement of the safety belts originally supplied with the vehicle. The safety belts originally installed may be incompatible with the design of the prisoner transport seats. This may be because the prisoner transport seat places the occupant in a different position relative to the belts and belt anchorages installed during manufacture. The prisoner transport seat itself may, because of its geometry and design, change occupant dynamics in the event of a crash. In addition, barriers, which place an unyielding surface between the front and rear seats, may place a rear seat occupant in close proximity to a structure not in place when the original restraint system was designed. Under these circumstances, modification or replacement of the original belt

system may be both necessary and desirable.

B. Petition for Rulemaking

Believing that the considerations governing the design of safety belts for use by prisoners being transported in police cars and other law enforcement vehicles are different from those applicable to safety belts for use by the general public, Laguna Manufacturing, Inc. submitted to NHTSA a petition for rulemaking requesting that Standard No. 208 be amended. Laguna sought an amendment that would provide greater flexibility to design safety belt systems that are better suited to limiting the movement of prisoners being transported in forward-facing rear outboard seating positions in these vehicles. That company argued that the requirement for an ELR is inappropriate for safety belt systems used by prisoners, since it allows too much slack, and thus too much freedom of movement, in non-emergency situations. This is because these retractors freely spool out webbing in those situations. Laguna stated that concerns about ELRs have led some police departments to refrain altogether from safety belting a prisoner and instead use a "hog tie restraint" and lay the prisoner down on the rear seat. As a result, the prisoner does not have any safety belt protection.

More specifically, Laguna requested that Standard No. 208 be amended to permit the use of a manual tightening system, instead of an ELR, for safety belts intended for use by prisoners. That company stated that such an amendment would afford the prisoner all of the crash protection provided by the standard for other occupants and only eliminate the necessity for providing a feature intended to provide comfort and convenience. Laguna argued that a prisoner who is handcuffed behind his/her back would be unable to fasten the safety belts. Therefore, in such a situation, a feature intended to provide comfort and convenience would not make the occupant more likely to fasten the safety belt. Laguna also noted that existing requirements in Standard No. 208 make the use of belts which fasten adjacent to the side of the vehicle, rather than near the center, difficult. Laguna argued that such belts would be desirable for police use. The company indicated that belts that fasten on the outside may be connected by an officer without requiring that the officer lean over or across a prisoner, thereby reducing the risk of injury to that officer by a

violent prisoner.

In support of its petition, Laguna provided information about a special rear seat and safety belt system it has designed for police cars. The design includes two outboard integral lap and shoulder belt systems which use the same anchor point locations as conventional belt systems in the forward-facing rear outboard seats in current cars.

However, there are several significant differences between the Laguna belt system and a conventional safety belt system. First, the Laguna system includes a manual belt tightening system instead of an ELR. Second, the Laguna system uses two buckles instead of one. Third, the Laguna system reverses the permanent attachment points and the buckling points. The Laguna system is permanently attached at the anchorage where a conventional system is buckled and is buckled at the anchorages where the conventional system is permanently attached. The ends of the lap and shoulder belt portions of the conventional safety belt system are permanently attached to the outboard anchorages. The end of the lap

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belt portion is permanently attached to the lower outboard anchorage and the end of shoulder belt portion is permanently attached to the upper outboard anchorage. The buckle is mounted at the anchorage near the center of the vehicle. As noted above, the permanent attachment points and buckling points are reversed for the Laguna system. The middle of the Laguna belt is permanently anchored at the anchorage near the center of the vehicle. The end of the lap belt portion buckles at the lower outboard anchorage and the end of the shoulder belt buckles at the upper outboard anchorage. When the belt is not in use, magnets attached to the lap and the shoulder belt portions of the Laguna belt are used to attach them to the steel safety cage used to separate the front and rear seats in police vehicles.

C. Notice of Proposed Rulemaking

After considering the issues raised by Laguna, NHTSA published a Notice of Proposed Rulemaking (NPRM) on June 13, 1995 (60 FR 31132) proposing that Standard No. 208 be amended to provide more flexibility with respect to the design and performance of safety belts installed at

forward-facing rear outboard seating positions of law enforcement vehicles. The agency proposed two amendments: (1) That a manual tightening system, instead of an ELR, be permitted for those belts in law enforcement vehicles and (2) that safety belts installed at forward-facing rear outboard seating positions of these vehicles be excluded from a requirement that lap and shoulder belts must release at a single point. The agency also requested comments on requiring a warning label advising users of the rear seats that the belts must be tightened manually to provide a proper fit.

D. Public Comments

Comments were received in response to the June 13, 1995 NPRM from one prisoner seating manufacturer (AEDEC), fourteen law enforcement organizations, the Wisconsin Department of Transportation, the Chrysler Corporation and the Automotive Occupant Restraints Council (AORC). All but one of these commenters agreed with the agency's proposal to modify safety belt requirements for forward-facing rear outboard seating positions in law enforcement vehicles. In response to the agency's request for comments on labels, six commenters recommended that some type of label should be visible to non-prisoner occupants in the rear seating positions to remind them to manually tighten safety belts that are not equipped with retractors. The remaining commenters either opposed labeling or offered no comment.

The affirmative commenters generally agreed with the modifications presented in the NPRM. Three law enforcement organizations indicated that they transport prisoners in the front seat. One of these organizations recommended extending the applicability of the amendments to the front outboard passenger seating position. The Wisconsin Department of Transportation stated that the law enforcement agency should assume control of requiring re-installation of the original belts when a used law enforcement vehicle is sold to the general public. However, the Tennessee Department of Safety disagrees with requiring re-installation of the original belts. That Department claimed that re-installation could create a tremendous expense.

One commenter, AEDEC International Inc. (a prisoner safety seat manufacturer) strongly opposed the NPRM. AEDEC stated its concern that proposed changes in the requirements would inadvertently and unnecessarily diminish existing protection for prisoners found in

Standard No. 208. AEDEC argued that the idea of the restraint belt originating from the center of the seat and extending to the outboard side of the seating position is old technology and had been long discarded for more workable arrangements similar to its own system, which uses a shoulder belt, but not a lap belt. As is the case with the system described by Laguna in its petition, the AEDEC system does not meet Standard No. 208. AEDEC also indicated that the proposals in the NPRM were narrow in scope and could be construed to be product specific, exclude competitive products and endorse outdated technology. AEDEC also stated that the proposed changes overlooked hazards to handcuffed prisoners seated in a conventional fashion. The company noted that seated prisoner restrained in the manner proposed by the amendments would have the handcuff of the prisoner's rearwardly cuffed hands exposed to the hard fiberglass seat. Prisoners seated in this fashion have, according to AEDEC, regularly sustained damage to the wrist. AEDEC recommended a two-year innovation period that would grant greater latitude to the law enforcement community in their use of rear seat prisoner restraints as well as an in-depth study of prisoner seating and restraints. If such a study is not undertaken, AEDEC urged that amendments be adopted allowing use of a retractor or a manual adjusting device or a combination of the two. In addition, AEDEC advocated allowance of a belt assembly consisting of a shoulder belt only and stated that consideration be given to measures to retard lateral movement of prisoners and provide relief for the pressure of the handcuff against the wrist.

II. Analysis of Public Comments

As noted above, AEDEC offered several comments voicing concern about the proposal contained in the NPRM. The company argued that the proposed amendments both endorsed outdated technology and were design specific. While AEDEC did not provide specific information on how adoption of the proposed rule embraced the use of outdated technology, NHTSA has concluded that the benefits of allowing greater design flexibility for prisoner safety belts outweigh any disadvantages. Elimination of the requirement that safety belts have retractors and allowing the use of manual adjusters could be said to be a technological step backward in the context of ordinary passenger cars. However, in the case of prisoner transport, a handcuffed occupant is

unable to fasten a belt and would have to have a safety belt fastened and adjusted by another person. The handcuffed occupant is not going to be deterred from using a safety belt because it must be manually adjusted or must be fastened in two places. Similarly, accessibility of the latch mechanism is of lesser concern than is the case in other vehicles because the latch location is not as critical to the occupant's use of the safety belt. AEDEC also contended that the proposed rule was unduly design specific and would limit competing products and systems. NHTSA notes that the proposal and the final rule both allow the use of either manual adjustment or retractors on safety belts for police vehicles. In addition, the final rule also allows different latch designs to be used. NHTSA has concluded that this provides manufacturers with greater flexibility, not less, and is certainly less design specific than previous requirements.

AEDEC also contends that the proposed amendments, which retain existing requirements for Type 2 belts rather than allowing the use of a shoulder belt without a lap belt (a design used in AEDEC's product), are also design specific, favor the Laguna design, and increase the risk of handcuff induced injuries to seated prisoners. NHTSA has concluded that employment of a shoulder belt alone, rather than a lap and shoulder belt, might very well increase the risk of injury to seated

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prisoners in the event of a crash. Prisoner transport seats are generally hard and unyielding. In comparison to upholstered seats, these seats increase the chance that an occupant may move both laterally and forward (i.e., submarining) in the event of a crash. Given the fact that an occupant moving forward is likely to contact the hard and stiff barrier between the front and rear seats, NHTSA concludes that elimination of the lap belt requirement would result in an increased risk of injury. While retention of the lap belt requirement may favor designs employing such belts, the agency concludes that such designs decrease the risk of injuries in the event of crash.

AEDEC also raised concerns regarding an injury mechanism known as handcuff neuropathy. Handcuff neuropathy apparently occurs when handcuffs are tightened to an extent that the peripheral nerves of the

wrist are damaged. AEDEC argued that safety belts that hold a prisoner tightly against a rigid seatback when the prisoner's hands are secured behind his back by handcuffs may result in an increased risk of handcuff neuropathy. The agency has concluded, however, that the risk of handcuff neuropathy may not be properly addressed by safety belt design. Review of medical literature submitted by AEDEC indicates that handcuff neuropathy results from over-tightening of handcuffs rather than the use of safety belts to restrain a handcuffed prisoner in a vehicle. The agency also concludes that countermeasures for any such risk may be employed without requiring or allowing loose fitting safety belts. AEDEC itself has attempted to address this concern by molding the hard plastic seat of its prisoner transport system with recesses for the prisoner's arms.

AEDEC also urged the agency to conduct a two year study of prisoner restraints and transport and consider the adoption of a separate safety standard for prisoner restraints. NHTSA notes that such a study and the promulgation of an entirely new safety standard, are well beyond the scope of the proposal contained in the NPRM. The agency does, however, agree with AEDEC's suggestion that in lieu of conducting a study of prisoner transport restraint systems that manufacturers be given an opportunity to evaluate new designs. The amendments NHTSA is adopting in this final rule will provide manufacturers with an opportunity to innovate.

Six commenters, (Rhode Island State Police, Missouri State Highway Patrol, Pennsylvania State Police, Washington State Patrol, Tennessee Department of Safety, and the Illinois State Police), advocated that the agency require a warning label advising users of a rear outboard seat equipped with a manually adjusted belt that the belts must be tightened after they are fastened. The agency concurs with any reasonable measure that will promote belt use. NHTSA has concluded in this instance, however, that such warning labels would be superfluous. Prisoners being transported are regularly restrained for their own protection and the protection of the officers transporting them. In the case of non-prisoners who use the seating systems, NHTSA observes that one commenter indicated that such labels would not be necessary since proper operation of the belt systems could be addressed through internal policies and training. NHTSA has concluded that in those cases where belts used for prisoner transport are not equipped with retractors, the characteristics of these belts, which will differ

markedly from standard safety belts, will be obvious to non-prisoner occupants. In view of these circumstances, the agency concludes that requiring a warning label for rear seat passengers, advising them to manually tighten belts equipped with manual adjusters, is unnecessary.

Two commenters, the Wisconsin Department of Transportation (DOT) and the Tennessee Department of Safety, took differing positions on whether law enforcement agencies should be required to re-install the original equipment belts prior to sale of a law enforcement vehicle. Wisconsin DOT argued that such re-installation should be required, while the Tennessee Department of Safety disagrees with requiring re-installation of the original belts. NHTSA strongly believes that any law enforcement vehicle should have its original restraint system re-installed prior to sale for civilian use. However, the agency does not have the authority to require law enforcement agencies to re-install the original restraint system.

III. Final Rule

As noted above, with the adoption of this final rule, NHTSA is amending Standard No. 208 as it applies to law enforcement vehicles to permit safety belts in such vehicles to be equipped with manual adjustment devices instead of emergency locking retractors, and excluding them from requirements for the accessibility of belt latch plates, the simultaneous release of the lap and shoulder belt portions of a lap and shoulder belt, and the release of the latch mechanism at a single point. The amendments will enhance safety for both law enforcement officers and prisoners. NHTSA believes that a restrained prisoner should be afforded the same or similar crash protection as non-prisoners. Modified seating and belt systems can increase law enforcement officer safety by reducing the need to reach across the prisoner to fasten the safety belt. These seating and belt systems will increase belt usage for prisoners.

Rulemaking Analyses and Notices

A. Executive Order 12866 and DOT Regulatory Policies and Procedures

NHTSA has considered the impact of this rulemaking action under E.O. 12866 and the Department of Transportation's regulatory policies

and procedures. This rulemaking document was not reviewed under E.O. 12866, ``Regulatory Planning and Review.'' This action has been determined to be ``non-significant'' under the Department of Transportation's regulatory policies and procedures. The amendments will not impose any new requirements but simply remove a restriction. There would be slight cost savings, on the order of \$5.00 or less per belt system, associated with not being required to provide an emergency locking retractor. For the Laguna system, these cost savings would be offset by the costs associated with some of the special features of its belt system, i.e., the extra buckle and the magnets. NHTSA notes, however, that these special features would not be required by the standard. Therefore, the impacts of the amendments will be so minor that a full regulatory evaluation is not required.

B. Regulatory Flexibility Act

NHTSA has considered the effects of this final rule under the Regulatory Flexibility Act. I hereby certify that it will not have a significant economic impact on a substantial number of small entities. The final rule primarily affects motor vehicle manufacturers, since the majority of NHTSA Federal Motor Vehicle Safety Standards apply to motor vehicles rather than to motor vehicle equipment. Almost all motor vehicle manufacturers do not qualify as small businesses.

The Small Business Administration's regulations define a small business, in part, as a business entity ``which operates primarily within the United States.'' (13 CFR 121.105(a)) SBA's size standards are organized according to Standard Industrial Classification Codes (SIC). SIC Code 3714 ``Motor Vehicle Parts and Accessories'' has a small business size standard of 750 employees or fewer.

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The agency notes that there are several manufacturers of equipment for police and emergency vehicles with fewer than 750 employees. The principal impact of the amendments contained in this final rule is to allow the installation of specialized prisoner restraint systems in emergency vehicles prior to the sale of the vehicle to the first purchaser for purposes other than resale. This provides the opportunity for the manufacturers to sell these systems to vehicle manufacturers or

dealers rather than directly to end users. As the rule does not impose any new burdens on manufacturers of prisoner restraint systems and allows greater opportunities, the economic effect for these small businesses would be beneficial.

C. Paperwork Reduction Act

In accordance with the Paperwork Reduction Act of 1980 (Pub. L. 96-511), there are no requirements for information collection associated with this rule.

D. National Environmental Policy Act

NHTSA has also analyzed this rule under the National Environmental Policy Act and determined that it does not have a significant impact on the human environment.

E. Executive Order 12612 (Federalism)

NHTSA has analyzed this rule in accordance with the principles and criteria contained in E.O. 12612, and has determined that the rule does not have significant federalism implications to warrant the preparation of a Federalism Assessment.

F. Civil Justice Reform

This rule will not have any retroactive effect. Under 49 U.S.C. 30103, whenever a Federal motor vehicle safety standard is in effect, a State may not adopt or maintain a safety standard applicable to the same aspect of performance which is not identical to the Federal standard, except to the extent that the state requirement imposes a higher level of performance and applies only to vehicles procured for the State's use. 49 U.S.C. 30161 sets forth a procedure for judicial review of final rules establishing, amending or revoking Federal motor vehicle safety standards. That section does not require submission of a petition for reconsideration or other administrative proceedings before parties may file suit in court.

List of Subjects in 49 CFR Part 571

Imports, Motor vehicle safety, Motor vehicles.

In consideration of the foregoing, 49 CFR part 571 is amended as follows:

PART 571--FEDERAL MOTOR VEHICLE SAFETY STANDARDS

1. The authority citation for part 571 of title 49 continues to read as follows:

Authority: 49 U.S.C. 322, 30111, 30115, 30117, and 30166; delegation of authority at 49 CFR 1.50.

2. Section 571.208 is amended by revising sections S7, S7.1.1.2, S7.1.1.3 and S7.2 to read as follows:

Sec. 571.208 Standard No. 208, Occupant Crash Protection.

* * * * *

S7. Seat belt assembly requirements. As used in this section, a law enforcement vehicle means any vehicle manufactured primarily for use by the United States or by a State or local government for police or other law enforcement purposes.

* * * * *

S7.1.1.2 (a) A seat belt assembly installed in a motor vehicle other than a forward control vehicle at any designated seating position other than the outboard positions of the front and second seats shall adjust either by a retractor as specified in S7.1.1 or by a manual adjusting device that conforms to Sec. 571.209.

(b) A seat belt assembly installed in a forward control vehicle at any designated seating position other than the front outboard seating positions shall adjust either by a retractor as specified in S7.1.1 or by a manual adjusting device that conforms to Sec. 571.209.

(c) A seat belt assembly installed in a forward-facing rear outboard seating position in a law enforcement vehicle shall adjust either by a retractor as specified in S7.1.1 or by a manual adjusting device that conforms to Sec. 571.209.

S7.1.1.3 A Type 1 lap belt or the lap belt portion of any Type 2 seat belt assembly installed at any forward-facing outboard designated seating position of a vehicle with a gross vehicle weight rating of 10,000 pounds or less to comply with a requirement of this standard, except walk-in van-type vehicles and school buses, and except in rear seating positions in law enforcement vehicles, shall meet the requirements of S7.1 by means of an emergency locking retractor that conforms to Standard No. 209 (49 CFR 571.209).

* * * * *

S7.2 Latch mechanism. Except as provided in S7.2(e), each seat belt assembly installed in any vehicle shall have a latch mechanism that complies with the requirements specified in S7.2(a) through (d).

(a) The components of the latch mechanism shall be accessible to a seated occupant in both the stowed and operational positions;

(b) The latch mechanism shall release both the upper torso restraint and the lap belt simultaneously, if the assembly has a lap belt and an upper torso restraint that require unlatching for release of the occupant;

(c) The latch mechanism shall release at a single point; and;

(d) The latch mechanism shall release by a pushbutton action.

(e) The requirements of S7.2 do not apply to any automatic belt assembly. The requirements specified in S7.2(a) through (c) do not apply to any safety belt assembly installed at a forward-facing rear outboard seating position in a law enforcement vehicle.

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Issued on: January 29, 1998.

Ricardo Martinez,
Administrator.

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