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NHTSA-98-4358-1

DEPARTMENT OF TRANSPORTATION

National Highway Traffic Safety Administration

49 CFR Parts 571 and 572

[Docket No. NHTSA–98–4358]

RIN Nos. 2127–AG75, 2127–AG80, and 2127–AG94

Federal Motor Vehicle Safety Standards; Occupant Crash Protection; Anthropomorphic Test Dummy

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

ACTION: Final rule.

SUMMARY: This rule makes permanent three interim final rules related to the depowering of air bags. In March 1997, NHTSA amended the agency's occupant crash protection standard to ensure that vehicle manufacturers could quickly depower all air bags so that they inflate less aggressively. More specifically, the agency adopted an unbelted sled test protocol as a temporary alternative to the standard's full scale unbelted barrier crash-test. NHTSA took this action to provide an immediate, but interim, solution to the problem of the fatalities and injuries that air bags were causing in relatively low speed crashes to small, but growing numbers of children, and occasionally to adult occupants.

The agency subsequently issued three interim final rules related to depowering. Two of the interim final rules made further amendments to the occupant protection standard so that certain exclusions or special, less stringent test requirements in related standards that applied to vehicles certified to the unbelted barrier test would also apply to vehicles certified to the alternative sled test. The third interim final rule made modifications in the test dummy used in the occupant protection standard so that it would be consistent with respect to the instrumentation specified in the sled test protocol for measuring neck injury criteria.

DATES: ***Effective*** Date: The amendments made in this rule are effective September 1, 1998.

Petitions: Petitions for reconsideration must be received by October 13, 1998.

ADDRESSES: 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 information about air bags and related rulemakings:*** Visit the NHTSA web site at http://www.nhtsa.dot.gov and select "AIR BAGS: Information about air bags."

For non-legal issues: Mr. John Lee, Light Duty Vehicle Division. NPS- 11, National Highway Traffic Safety Administration, 400 Seventh Street, SW, Washington, DC 20590. Telephone: ***(202) 366-2264.*** Fax: (202) 366-4329.

For legal issues: J. Edward Glancy, Office of Chief Counsel, NCC-20, National Highway Traffic Safety Administration, 400 Seventh Street, SW, Washington, DC 20590. Telephone: ***(202)*** 366-2992. Fax: (202) 366-3820.

SUPPLEMENTARY INFORMATION:

I. Background

On March 19, 1997, NHTSA published in the Federal Register (62 FR 12960) a final rule amending Standard ***No. 208, Occupant Crash Protection,*** to ensure that vehicle manufacturers could quickly depower all air bags so that they inflate less aggressively. More specifically, the

agency adopted an unbelted sled test protocol, recommended by the American Automobile Manufacturers Association (AAMA), as a temporary alternative to Standard No. 208's full scale unbelted barrier crash test. The agency did not change the standard's full scale belted barrier crash test. NHTSA took this action to provide an immediate, but interim, solution to the problem of the fatalities and injuries that current air bags are causing in relatively low speed crashes to small, but growing numbers of children, and occasionally to adult occupants.

The agency subsequently issued three interim final rules related to depowering. Two of the interim final rules made further amendments to Standard No. 208 so that certain exclusions or special, less stringent test requirements in related standards that applied to vehicles certified to the unbelted barrier test would also apply to vehicles certified to the alternative sled test.

The first of these interim final rules resulted from a request made by AAMA in early April 1997. That organization advised the agency that its member companies had discovered that certain provisions in Standard No. 203, ***Impact protection for the driver from the steering control system,*** and Standard ***No. 209, Seat belt assemblies,*** could prevent or substantially delay depowering. Each of those other standards specified an exclusion from certain requirements for vehicles certified to meet Standard No. 208's barrier crash test requirements. Thus, neither exclusion would be available for a vehicle which was certified to Standard No. 208's alternative sled test requirement.

In an interim final rule published in the Federal Register (62 FR 26425) on May 14, 1997, the agency amended Standard No. 208, so that the exclusions in these two other standards would also be available for vehicles certified to the sled test. NHTSA explained that this action was necessary to prevent a delay in depowering, and also solicited comments on the amendment. The agency noted that because there had not been a prior opportunity for comment, it was limiting application of the interim final rule to vehicles manufactured before September 1, 1998. However, NHTSA explained that it contemplated making the amendment apply for the same duration as the depowering amendment.

The second of these interim final rules resulted from a request made by AAMA in July 1997. That organization advised the agency that its member companies had discovered that a similar provision in Standard No. 201, ***Occupant protection in interior impact,*** could also prevent or substantially delay depowering. That provision specified a special, less stringent test requirement for vehicles which meet Standard No. 208's barrier crash test requirements by means of an air bag. Thus, the special requirement would also not apply to a vehicle which was certified to Standard No. 208's alternative sled test requirement,

Just as NHTSA decided to issue an interim final rule amending Standard No. 208 in order that the exclusions in Standard Nos. 203 and 209 would also be available for vehicles certified to the sled test, so it took similar action with respect to the special, less stringent test requirement set forth in Standard No. 201. This interim final rule was published in the Federal Register (62 FR 45 172) on August 26, 1997. The agency explained its belief that the Standard No. 20 1 situation mirrored those involving the other two standards.

NHTSA provided specific analysis in the preambles for these two interim final rules concerning Standards No. 20 1, 203 and 209. The analyses were as follows:

Standard No. 201

Standard No. 201 specifies a number of requirements to provide impact protection for occupants. One of the requirements concerns instrument panels. The standard generally requires that when specified portions of the instrument panel are impacted by a head form at 15 mph, the deceleration of the head form must not exceed 80 g continuously for more than 3 milliseconds. To comply with this requirement, vehicle manufacturers install energy absorbing materials. The use of these materials can prevent or reduce the severity of chest and head injuries resulting from contacts with the instrument panel.

In June 199 1, NHTSA published a final rule amending Standard No. 201 to specify a special, less stringent test requirement for vehicles equipped with passenger air bags. 56 FR 26036; June 6, 1991. The final rule reduced the velocity specified in the head form test for these vehicles from 15 mph to 12 mph.

The purpose of the June 199 1 final rule was to facilitate the introduction of more effective air bag designs, and provide an incentive for the increased use of passenger-side air bags. (This final rule was issued before Congress enacted the Intermodal Surface Transportation Efficiency Act of 1991, which directed NHTSA to amend Standard No. 208 to require air bags.) Vehicle manufacturers had provided information showing that Standard No. 201's existing 15 mph head form requirement created problems in designing top-mounted, upward-deploying passenger air bags. Manufacturers had also identified a number of benefits from installation of this type of air bag, including reduced risk of injury to out-of-position occupants or standing children. However, the final rule was not limited to passenger air bags with upward-deploying systems, as the agency wanted to allow manufacturers wide latitude in innovation for all passenger air bags.

NHTSA believes that the rationale for Standard No. 201's special, less stringent test requirement for vehicles equipped with passenger air bags and certified to Standard No. 208's barrier test is equally applicable to vehicles certified to the alternative sled test. The concern about the need to meet Standard No. 201's 15 mph head form test interfering with the design of passenger air bags, especially top-mounted, upward-deploying systems, would not differ depending on whether an air bag is depowered or not. Moreover, the need to meet the 15 mph requirement would interfere with depowering.

Vehicle manufacturers presumably test their air-bag-equipped vehicles to Standard No. 20 l's 12 mph head form requirement, rather than the 15 mph requirement, based on the current special requirement. Thus, the manufacturers do not know whether their vehicles would pass the more stringent requirement.

If the special requirement were not extended to vehicles certified to the alternative sled test, the vehicle manufacturers would need to conduct significant testing to determine whether those vehicles could comply with the 15 mph requirement. To the extent that a vehicle could not comply, the manufacturer would then need to determine whether it was possible to make design changes to achieve compliance. All of this would result in significant delays to depowering.

The agency also notes that the purposes of the depowering amendment and the special requirement in Standard No. 201 are complementary. While the depowering amendment was intended to facilitate quick action to address the problem of deaths and injuries to out-of-position occupants, the special requirement in Standard No. 201 was intended, in part, to facilitate the use of passenger air bag designs that reduce the risk of injury to out-of-position occupants or standing children. A failure to extend the special requirement in No. 201 to vehicles certified to the alternative sled test could result in the perverse effect of discouraging air bag designs that reduce the risk of injury to out-of-position occupants or standing children.

Standard No. 203

Standard No. 203 specifies requirements for steering control systems to minimize chest, neck, and facial injuries to the driver as a result of impact. The standard does not apply to "vehicles that conform to the frontal barrier crash requirements (S5.1) of Standard No. 208 (49 CFR 571.208) by means of other than seat belt assemblies."

The agency adopted this exclusion in 1975, in response to a petition from General Motors (GM). GM had advised that in developing driver air bags, it found that the changes in the steering control system made conformity with Standard No. 203 difficult and in some cases impossible. GM petitioned the agency

to exclude vehicles which meet the frontal barrier crash requirements of Standard No. 208 from Standard No. 203 on the grounds that compliance with the latter would be redundant and design restrictive in the development of air bags.

In deciding to provide the requested exclusion, NHTSA stated that it had determined that the redundant protection offered by Standard No. 203 is not justified where it directly interferes with the development of a more advanced, convenient and effective restraint system. 40 FR 17992, April 24, 1975. In the notice of proposed rulemaking, the agency explained that the level of protection offered by Standard No. 208's frontal barrier crash test is at least equivalent to that of the 15-mile-per-hour body impact of Standard No. 203. The agency also explained that Standard No. 208's barrier crash test requirements alone are designed to provide adequate protection to the driver from impact forces. NHTSA noted that in the case of an air bag, this protective level must be met by the uncushioned steering control system below the system's deployment level and by the air bag above the deployment level, at any speed up to 30 mph.

NHTSA believes that the rationale for Standard No. 203's exclusion for vehicles certified to Standard No. 208's barrier test is also applicable to vehicles certified to the alternative sled test. The concern about the need to meet Standard No. 203 interfering with the design of air bags would not differ depending on whether an air bag is depowered or not. Moreover, the need to meet Standard No. 203 would particularly interfere with depowering.

It is NHTSA's understanding, based on its discussions with AAMA, that the vehicle manufacturers do not test their air-bag-equipped vehicles to Standard No. 203, based on the current exclusion. Thus, the manufacturers do not know whether their vehicles would pass Standard No. 203's requirements.

In the absence of an exclusion for vehicles certified to the alternative sled test, the vehicle manufacturers would need to conduct significant testing to determine whether a vehicle could comply with Standard No. 203. To the extent that a vehicle could not comply, the manufacturer would then need to determine whether it was possible to make design changes that would result in compliance. All of this would result in significant delays to depowering.

NHTSA also believes that the protection specified by Standard No. 203 is redundant to that offered by depowered air bags certified to the alternative sled test. The agency notes that the alternative sled test addresses the same safety problems as the full scale barrier test.

In the depowering rulemaking, the agency recognized that a full scale barrier test does offer a number of advantages over a sled test. However, the agency decided to allow the sled test as a temporary measure given the need to provide manufacturers with maximum flexibility to respond rapidly to the risk posed by air bag activation in low speed crashes. See 62 FR 12965-66, March 19, 1997.

The agency believes that this same consideration leads to applying the Standard No. 203 exclusion to vehicles certified to the alternative sled test, even if the degree of redundancy is somewhat less than that afforded by the barrier test requirement. NHTSA notes that the sled test requirement need only be met at a single change in velocity, rather than at all speeds up to 30 mph. However, the agency believes that a depowered air bag will provide protection at speeds above the deployment level, and does not believe manufacturers will reduce the protection currently being offered by steering control systems at speeds below the deployment level.

Standard No. 209

One of the performance requirements specified by Standard No. 209 limits the amount that the webbing of a belt assembly is permitted to extend or elongate when subjected to certain forces. This requirement does not apply to seat belt assemblies that include a load limiter and that are installed at designated seating positions subject to the requirements of S5.1 of Standard No. 208.

This exclusion had its origin in a petition for rulemaking submitted by Mercedes-Benz (Mercedes). That company petitioned the agency to exclude from the elongation requirement seat belt assemblies installed in conjunction with air bags.

Mercedes was considering the use of a belt system that incorporates a load-limiting device. A load-limiter is a seat belt assembly component or feature that controls tension on the seat belt to modulate the forces that are imparted to occupants restrained by the belt assembly during a crash. These load-limiting systems are intended to reduce head and upper torso injuries through increased energy management.

Mercedes indicated that the webbing in its belt system would elongate beyond the limits that were specified in Standard No. 209. However, Mercedes argued that this type of belt system should be allowed in vehicles equipped with air bags since the two systems used in conjunction with one another can be designed to achieve the maximum reduction in head injuries and upper torso injuries.

NHTSA adopted the exclusion requested by Mercedes in 198 1. The agency limited the exclusion to vehicles equipped with automatic restraints since there were then no dynamic performance requirements or injury criteria for manual belt systems used alone. See 46 FR 2618-19, January 12, 1981. Later, however, after it established dynamic testing requirements for manual safety belt systems in passenger cars and light trucks, the agency extended this exclusion to permit the use of load limiters on all safety belts installed at seating positions subject to dynamic testing. See 56 FR 15295, April 16, 1991.

With respect to whether this exclusion should apply to vehicles certified to the alternative sled test, the key point is that these vehicles will continue to have to be certified to Standard No. 208's full scale ***belted*** barrier crash test. Thus, safety belts will continue to be subject to the same dynamic performance requirements as before the depowering final rule was issued. The agency therefore believes there is no reason why this exclusion should not be available for vehicles certified to the alternative sled test, which addresses unbelted, rather than belted, performance.

The third interim final rule made modifications in the Hybrid III test dummy used in Standard No. 208 to upgrade the dummy so that it would be consistent with respect to the instrumentation specified in the sled test protocol for measuring neck injury criteria. While the sled test protocol specified use of a six-axis neck transducer, the specifications for the Hybrid III dummy, set forth in Subpart E of Part ***572, Anthropomorphic Test Devices,*** did not include that instrumentation. This interim final rule was published in the Federal Register (62 FR 27511) on May 20, 1997.

II. Comments

A. Exclusions From Certain Requirements of Standards No. 203 and 209

NHTSA received four comments on the interim final rule concerning exclusions from certain requirements of Standards No. 203 and 209, from Advocates for Highway and Auto Safety (Advocates), the Insurance Institute for Highway Safety (IIHS), Mitsubishi, and Volkswagen. None of the commenters opposed the extension of the exclusions; however, Advocates raised a number of issues which it believed required further analysis.

IIHS stated that it fully supports the amendment. That commenter stated that the reasons for excluding the requirements regarding steering controls systems (Standard No. 203) and belt elongation (Standard No. 209) are just as applicable to vehicles certified to Standard No. 208's unbelted sled test alternative as they are to vehicles certified to the barrier crash test. IIHS stated that the amendment should be retained as long as the sled test alternative is available.

Mitsubishi and Volkswagen also supported the interim final rule and requested that the exclusions be available for as long as the unbelted sled test exists.

Advocates stated that it accepts that the extension of exemptions from testing under Standards No. 203 and 209 are necessary in order to ensure that depowering is not delayed. It also stated that it supports depowering as a necessary temporary measure to improve the safety of out-of-position occupants and does not want any delay in accomplishing that goal.

That organization argued, however, that the interim final rule raises concerns about the collateral results of

depowering. It stated that the agency had not presented any engineering results or safety analyses to establish that, if the exemptions for crash tested vehicles are extended to vehicles certified by sled test, there will be no diminution of the safety protection afforded to occupants under the circumstances and conditions addressed in Standards No. 203 and No. 209.

With respect to Standard No. 203 protection for drivers from vehicle steering columns, Advocates noted that the agency stated that "manufacturers do not know whether their vehicles would pass Standard No. 203's requirements." That organization stated that in light of this information, it does not understand how the agency can conclude that "the protection specified by Standard No. 203 is redundant to that offered by depowered air bags." Advocates argued that regardless of the rate at which the inflator powers the air bag, the agency is obliged to ascertain facts and conduct engineering evaluations in order to make a determination that Standard No. 203 has no application at all in vehicles with driver-side air bags.

As to seat belt elongation requirements under Standard No. 209, Advocates stated that it understands the agency's rationale that safety belt systems remain subject to dynamic performance requirements and that the sled test applies to unbelted, rather than belted, performance for occupant protection. That organization noted that the agency had pointed out that the exclusion was originally provided on the basis that air bags and load-limiter equipped seat belt systems "used in conjunction with one another can be designed to achieve maximum reduction in head injuries and upper torso injuries." Advocates argued, however, that the question that needs to be answered is what effect depowering has on the combined performance of these occupant protection systems for belted systems. Advocates stated that the original exclusion most likely was granted in contemplation of the use of full powered air bags meeting the 30 mph crash test and that, in this situation as well, NHTSA is obliged to provide an engineering analysis to prove that depowering has no deleterious effect on the safety performance required under Standard No. 209.

Advocates also argued that the agency should provide the public with another opportunity to comment after it has conducted safety and engineering analyses. It also expressed concern about the use of an interim final rule, arguing that these issues should have been raised in the depowering rulemaking.

B. Special, Less Stringent Test Requirement for Standard No. 201

NHTSA received only one comment on the interim final rule concerning the special, less stringent test requirement for Standard No. 201, from Advocates. That organization concurred with the amendment subject to the exception for depowered air bags remaining temporary. Advocates stated that it believes there is a potential for increased numbers of serious head impact injuries as a result of depowering. It stated that the agency lacked any test data or other information to support the change on a permanent basis. Advocates also expressed additional concerns about the making of regulatory changes by means of interim final rules.

C. Six-Axis Neck Transducer

NHTSA received seven comments on the interim final rule amending specifications for the Hybrid III dummy to include the six-axis neck transducer.

General Motors (GM), Ford, and IIHS supported making the changes permanent. GM and Ford pointed out a typographical error in which section 572.36(i) (8) identified a channel class of 1000 for femur loads, instead of a channel class of 600.

The other commenters, Nissan, Mercedes-Benz (Mercedes), Toyota, and Mitsubishi, requested either that use of the six-axis neck transducer be optional or that a longer period of time be provided before it becomes mandatory.

Nissan stated that there is not any need to require the six-axis neck transducer for test requirements other than the sled test, since the other tests do not include neck injury criteria. Given concerns about the limited number of available six-axis transducers, that company asked that the agency either limit application of the six-axis neck transducer to the sled test or that it be optional for a period of six months.

Mitsubishi similarly argued that the six-axis neck transducer should only be specified for the sled test. That company argued that manufacturers should have the option of using the neck transducer structural replacement, three-axis neck transducer, or six-axis transducer for barrier testing.

Mitsubishi noted that the agency had stated in the preamble to the interim final rule that the six-axis transducer with appropriate head modification is identical in mass, center of gravity location, and rigidity compared to the three-axis neck transducer or neck transducer replacement. That commenter argued, however, that it is concerned that the modifications to the dummy to incorporate the six-axis transducers might make it necessary for a manufacturer to re-test its vehicles, in some cases, to be sure that are no unforeseeable differences in dummy kinematics.

Mitsubishi also argued that since the barrier test does not include neck injury criteria, requiring the six-axis transducer on the Hybrid III dummy for barrier testing is unnecessarily burdensome. That commenter stated that should the agency nonetheless make the six-axis transducer a permanent requirement for all Hybrid III dummies, a lead time of at least one year should be provided.

Mercedes stated that it believes there should be an interim period of several years time where either a three-axis or six-axis neck transducer may be used for the purpose of the sled test. Mercedes stated that the three-axis neck transducer is sufficient for purposes of measuring the neck injury criteria specified as part of Standard No. 208's sled test.

Toyota made similar arguments to those of some of the other manufacturers concerning use of either the three-axis or six-axis transducer, and the need for lead time if the agency makes the six-axis transducer mandatory. Toyota also stated that it conducted a neck calibration test to investigate the influence of a change from the three-axis neck transducer to a six-axis neck transducer. It stated that data for both transducers are in the requirement corridor, but there is a difference in moment value. That company stated that, as a result, it does not know to what extent this difference affects the Head Injury Criterion value. Toyota stated that it would therefore need time to investigate this influence on its vehicles under development, as well as to assess the need for design changes.

III. Legislation Requiring Improved Air Bags

Subsequent to the comment closing dates for the three interim final rules at issue, Congress required the agency to conduct rulemaking to improve air bags. The NHTSA Reauthorization Act of 1998 directs the agency to issue, not later than September 1, 1998,

> a notice of proposed rulemaking to improve occupant protection for occupants of different sizes, belted and unbelted, under Federal Motor Vehicle Safety Standard No. 208, while minimizing the risk to infants, children, and other occupants from injuries

and deaths caused by air bags, by means that include advanced air bags.

In a paragraph titled "Coordination of Effective Dates," the Act provides that the unbelted sled test option "shall remain in effect unless and until changed by [the final rule for improved air bags]." The Conference Report states that the current sled test certification option remains in effect "unless and until phased out according to the schedule in the final rule."

This legislation is relevant to the three interim final rules at issue in two primary ways. First, the agency originally adopted the sled test alternative (to which the interim final rules apply) as a temporary amendment with a specific termination date. That date has been superseded by the provision of the legislation which specifies that the sled test remains in effect unless it is changed by the final rule for improved air bags. Second, while the agency already had plans to thoroughly examine in rulemaking what occupant protection requirements are appropriate for the future, this rulemaking will be conducted according to a statutory mandate.

IV. Agency Decision

After carefully considering the comments, NHTSA has decided to make permanent all of the interim final rules. The agency notes that the term "permanent," as used in this context, is a word of art. It refers to the reissuance, after notice and comment, of a final rule initially issued as an interim final rule. The use of the term with respect to the final rules relating to the sled test does not mean that the agency is deciding in this rulemaking to make the sled test permanent. The agency will address the duration of the sled test itself in the separate rulemaking on advanced air bags.

A. Exclusions/Special Requirements Related to Standards No. 201,203 and 209

As indicated above, the only commenter which raised concerns about the exclusions/special requirements related to Standards No. 201, 203 and 209 was Advocates. In responding to that organization's concerns, NHTSA believes it is important to emphasize that each of these exclusions/special requirements was adopted in the past because of considerations related to safety and air bags generally. In particular:

- The agency adopted the special requirement in Standard No. 201 in 199 1 primarily because of concerns that the existing Standard No. 201 requirement created problems in designing top-mounted, upward-deploying passenger air bags.
- The agency adopted the Standard No. 203 exclusion in 1975 because that standard's existing requirement interfered with the development of driver air bags.
- The agency adopted the Standard No. 209 exclusion concerning belt system elongation in 1981 because the standard's existing requirement prevented the use of belts that, as part of a combined seat belt/air bag system, achieved the maximum reduction in head injuries and upper torso injuries.

None of these rationales varies depending on whether an air bag-equipped vehicle is certified to a barrier test or a sled test, and Advocates has not provided any arguments or analysis suggesting otherwise. Additional "engineering analysis" is not needed to make this obvious point. Thus, the agency believes it is necessary to extend the special requirements/exclusions to vehicles certified to the sled test. Otherwise, the requirements of Standard No. 201 would create problems in designing top-mounted, upward-deploying passenger air bags, Standard No. 203 would interfere with the development of driver air bags, and Standard No. 209 would prevent the use of belts that, as part of a combined seat belt/air bag system, achieve the maximum reduction in head injuries and upper torso injuries.

NHTSA believes that Advocates' real concerns are with the potential safety consequences related to depowering and with adoption of the unbelted sled test, rather than with the special requirements/exclusions that were the subject of the interim final rules at issue. However, this concern will be addressed by the upcoming rulemaking concerning advanced air bags. As indicated above, NHTSA will shortly be issuing, pursuant to a statutory mandate, "a notice of proposed rulemaking to improve occupant protection for occupants of different sizes, belted and unbelted, under Federal Motor Vehicle Safety Standard No. 208, while minimizing the risk to infants, children, and other occupants from injuries and deaths caused by air bags, by means that include advanced air bags." NHTSA Reauthorization Act of 1998. The agency will thoroughly consider, as part of this rulemaking, what occupant protection requirements are appropriate for the future, including issues related to the unbelted sled test.

As to Advocates' concerns about the use of interim final rules, the agency agrees that this type of rulemaking procedure should only be used where absolutely necessary, in accordance with statutory criteria. The agency believes that the need to avoid delaying depowering justified issuing the rules at issue on an interim basis.

NHTSA notes that, as part of today's final rule, it is also amending the provision at issue in Standard No. 201 to reflect an updated reference in Standard No. 208.

B. Six-Axis Neck Transducer

NHTSA is also making final the amendments to Part 572 so that the Hybrid III test dummy incorporates the six-axis neck transducer. The agency is correcting the typographical error identified by GM and Ford.

As noted earlier, the agency specified use of the six-axis neck transducer as part of the final rule establishing the sled test alternative, but needed to make a conforming amendment to Part 572 so that the Hybrid III dummy incorporated that instrumentation. NHTSA specified use of the six-axis neck transducer rather than the three-axis transducer because the three-axis transducer does not provide information about the effects of off-axis loading that may occur in air bag impacts and crash tests involving the dummy's rotational kinematics.

Those commenters which stated that the three-axis transducer could be used to measure the neck injury criteria specified for Standard No. 208's unbelted sled test are correct. However, in specifying a test procedure for measuring neck criteria, the agency believed it was appropriate to specify the more advanced instrumentation. The six-axis transducer has been available for about a decade and has been extensively used by both the agency and industry. NHTSA has used the six-axis transducer in its New Car Assessment Program and for nearly all of its research and development tests.

NHTSA also notes that, as part of its upcoming rulemaking concerning advanced air bags, it may consider the adoption of more advanced neck injury criteria than currently specified in Standard No. 208. Such criteria are already used for research purposes. Measurement of the more advanced injury criteria may require the additional information provided by the six-axis transducer.

NHTSA disagrees that specification of the six-axis transducer is burdensome. The agency will use that transducer in compliance testing. However, manufacturers certifying compliance with the safety standards are not required to follow exactly the compliance test procedures set forth in the applicable standard. In fact, manufacturers are not even required to

conduct any actual testing before certifying that their products comply with applicable safety standards.

To avoid liability for civil penalties in connection with any noncompliance that may be determined to exist, manufacturers must exercise "due care" to assure compliance and in making their certification. It may be simplest for a manufacturer to establish that it exercised "due care" if the manufacturer has conducted testing that strictly followed the compliance test procedures set forth in the standard. However, "due care" might also be shown using modified test procedures if the modifications were not likely to have had a significant impact on the test results.

As discussed in the preamble to the May 1997 interim final rule, the six-axis neck transducer with appropriate head modification is identical in mass, center of gravity location, and rigidity with the previously specified head that was equipped with either the neck transducer structural replacement or the optionally available three-axis neck transducer. Moreover, the modifications in the Hybrid Ill dummy necessary to accommodate the six-axis neck transducer were very minor.

This, coupled with the agency's experience in using the Hybrid Ill dummy with the six-axis neck transducer, leads it to believe that use of the six-axis transducer does not have any influence on measurements of Standard No. 208's longstanding injury criteria, e.g., HIC. The agency notes that while Toyota identified some difference in measuring moment value, it did not present any data showing an effect on HIC. Therefore, the agency believes there is no reason manufacturers could not certify their vehicles based on tests using the dummy with the three-axis neck transducer or its structural replacement, with the possible exception (depending on the specific circumstances) of the neck criteria for the sled test.

Some commenters suggested that the rule specify dummy neck options, which would result in multiple dummy designs. For reasons discussed earlier, this is not necessary. Reiterating the most significant reasons, the agency has stated that it will test with the six-axis load cell, the dummy changes to accomplish this change are simple to implement, there is no indication that dummy HIC data are affected by this neck configuration, and manufacturers are not required to use the six-axis load cell.

Moreover, NHTSA observes that the manufacturer comments are now over a year old. Thus, the amount of time requested by some of the manufacturers for procuring and evaluating the six-axis neck transducers has already passed. In the past year, vehicle manufacturers and the agency have had considerable additional experience in this area. The agency is not aware of any application or functional problems that have resulted from specifying use of the six-axis transducer.

IV. Effective Date

The effective date for today's amendments is September 1, 1998. The agency has selected this date because, while the amendments are already in effect as interim final rules, some of them would expire on September 1, 1998 in the absence of today's final rule.

V. Regulatory 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 "nonsignificant" under the Department of Transportation's regulatory policies and procedures.

As to the exclusions/special requirements related to Standards No. 201,203 and 209, the amendments do not impose any new requirements, but simply ensure that the vehicle manufacturers do not face design impediments with respect to air-bag-equipped vehicles certified to the unbelted sled test that they do not face for air-bag-equipped vehicles certified to the unbelted barrier test. As to the amendments related to the Hybrid Ill test dummy, the amendments do not require any vehicle design changes. Instead, they only require minor modifications in the test dummies used to evaluate a vehicle's compliance with Standard No. 208. The incremental costs associated with procuring six axis neck transducers, where manufacturers do not already have such transducers, represent a negligible cost impact for vehicles. The agency concludes that the impacts of the amendments are so minimal that a full regulatory evaluation is not required.

B. Regulatory Flexibility Act

NHTSA has also considered the impacts of this final rule under the Regulatory Flexibility Act. 1 hereby certify that this rule does not have a significant economic impact on a substantial number of small entities.

As indicated above, as to the exclusions/special requirements related to Standards No. 201, 203 and 209, the amendments do not impose any new requirements but simply ensure that the vehicle manufacturers do not face design impediments with respect to air-bag-equipped vehicles certified to the unbelted sled test that they do not face for air-bag-equipped vehicles certified to the unbelted barrier test.

As to the amendments related to the Hybrid Ill test dummy, the amendments do not require any vehicle design changes but instead only specify minor modifications in the test dummies used to evaluate a vehicle's compliance with Standard No. 208. Further, the costs associated with the amendments are so minor that they will not have any effect on vehicle prices. Therefore, small organizations and small governmental units are not affected in their capacity as purchasers of vehicles.

C. Paperwork Reduction Act

In accordance with the Paperwork Reduction Act of 1980 (P.L. 96-5 1 1), 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 will 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 this rule will not have significant federalism implications to warrant the preparation of a Federalism Assessment.

F. Civil Justice Reform

This rule does 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

49 CFR Part 571

Imports, Motor vehicle safety, Motor vehicles, Rubber and rubber products, Tires.

49 CFR Part 572

Motor vehicle safety.

In consideration of the foregoing, 49 CFR Chapter V is amended as follows:

PART 571-FEDERAL MOTOR VEHICLE SAFETY STANDARDS

1. The authority citation for part 57 1 of Title 49 continues to read as follows:

Authority: 49 U.S.C. 322. 30111, 30115, 30 117. and 30 166; delegation of authority at 49 CFR 1.50.

2. Section 57 1.20 1 is amended by revising S5.1 (b) to read as follows:

§ 571.201 Standard No. 201; Occupant protection in interior impact

* * * * *

s5.1 * * *

(b) A relative velocity of 19 kilometers per hour for vehicles that meet the occupant crash protection requirements of S5.1 of 49 CFR 571.208 by means of inflatable restraint systems and meet the requirements of S4.1.5.1 (a) (3) by means of a Type 2 seat belt assembly at the right front designated seating position, the deceleration of the head form shall not exceed 80 g continuously for more than 3 milliseconds.

* * * * *

3. Section 57 1.208 is amended by revising the last sentence of S3 to read as follows:

§ 571.208 Standard No. 208; Occupant crash protection.

* * * * *

S3 * * * Compliance with S13 shall, for purposes of Standards No. 201, 203 and 209, be deemed as compliance with the unbelted frontal barrier requirements of S5.1 of this section.

* * * * *

The interim final rule amending 49 CFR part 572 which was published at 62 FR 27514 on May 20, 1997 is adopted as a final rule with the following change:

PART 572—ANTHROPOMORPHIC TEST DEVICES

4. The authority citation for Part 572 of Title 49 continues to read as follows:

Authority: 49 U.S.C. 322, 30111, 30115, 30 117, and 30 166; delegation of authority at 49 CFR 1.50.

Subpart E-Hybrid III Test Dummy

5. Section 572.36 is amended by revising paragraph (i)(8) to read as follows:

§ 572.36 Test conditions and instrumentation.

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(i) * * *

(8) Femur Force-Class 600

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Issued: August 25, 1998.

Ricardo Martinez,

Administrator.

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