

Dated: January 20, 2004.

**Howard L. Hime,**

*Acting Director of Standards, Marine Safety, Security, & Environmental Protection.*

[FR Doc. 04-1642 Filed 1-26-04; 8:45 am]

BILLING CODE 4910-15-P

## DEPARTMENT OF HOMELAND SECURITY

### Coast Guard

#### 33 CFR Part 165

[CGD13-03-018]

RIN 1625-AA00

#### Security and Safety Zone: Protection of Large Passenger Vessels, Puget Sound, WA

**AGENCY:** Coast Guard, DHS.

**ACTION:** Final rule; notice of enforcement.

**SUMMARY:** The Captain of the Port Puget Sound will begin, on February 8, 2004, enforcing the Large Passenger Vessel Security and Safety Zones that were published in the **Federal Register** on January 14, 2004. The zones provide for the security and safety of large passenger vessels in the navigable waters of Puget Sound and adjacent waters. These security and safety zones will be enforced until further notice.

**DATES:** 33 CFR 165.1317 will be enforced commencing February 8, 2004.

**FOR FURTHER INFORMATION CONTACT:** LTjg T. Thayer, c/o Captain of the Port Puget Sound, 1519 Alaskan Way South, Seattle, WA 98134 at (206) 217-6200 or (800) 688-6664 to obtain information concerning enforcement of this rule.

**SUPPLEMENTARY INFORMATION:** On January 14, 2004, the Coast Guard published a final rule (69 FR 2066) establishing regulations in 33 CFR 165.1317 for the security and safety of large passenger vessels in the navigable waters of Puget Sound and adjacent waters, Washington. These security and safety zones provide for the regulation of vessel traffic in the vicinity of certain large passenger vessels (as defined by the final rule) and exclude persons and vessels from the immediate vicinity of these large passenger vessels. Entry into these zones is prohibited unless otherwise exempted or excluded under the final rule or unless authorized by the Captain of the Port or his designee. The Captain of the Port Puget Sound will begin enforcing the Large Passenger Vessel Safety and Security Zones established in 33 CFR 165.1317 on February 8, 2004.

The Captain of the Port may be assisted by other Federal, State, or local agencies in enforcing this security zone.

Dated: December 10, 2003.

**Danny Ellis,**

*Captain, U.S. Coast Guard, Captain of the Port, Puget Sound.*

[FR Doc. 04-1613 Filed 1-26-04; 8:45 am]

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## DEPARTMENT OF TRANSPORTATION

### National Highway Traffic Safety Administration

#### 49 CFR Part 571

[Docket No. 03-16476; Notice 2]

RIN No. 2127-AJ30

#### Federal Motor Vehicle Safety Standards; Occupant Crash Protection

**AGENCY:** National Highway Traffic Safety Administration (NHTSA), Department of Transportation (DOT).

**ACTION:** Final rule, partial response to petitions for reconsideration.

**SUMMARY:** This final rule temporarily permits compliance with Federal Motor Vehicle Safety Standard (FMVSS) No. 208, *Occupant crash protection*, according to the test procedures of that standard prior to the amendments made by the November 19, 2003, final rule.<sup>1</sup> This document amends FMVSS No. 208 through the adoption of FMVSS 208a, which contains these "old" test procedures. This final rule permits the certification of motor vehicles under the "old" test procedures until August 31, 2004.

The agency received seven petitions for reconsideration of the November 2003 final rule, requesting that NHTSA consider modifying certain requirements of the amended FMVSS No. 208. Specifically, petitioners asked that the agency reconsider: The seat positioning procedures for the barrier tests, low risk deployment tests, and other test procedures; the test procedure for positioning the left foot of the 5th percentile adult female test dummy (barrier test); the "chin on rim" low risk deployment test procedure; the dummy positioning procedure for the head-on-instrument panel low risk deployment test with the 6-year-old test dummy; the definition of Plane C and D in the dummy positioning procedure for low risk deployment; and the effective date and content of Appendix A.

Petitioners have indicated that compliance with the amended

requirements of FMVSS No. 208, prior to resolution of petitions for reconsideration, would cause substantial economic hardship because certification testing for the model year 2004 fleet has completed. This rulemaking partially responds to the petitions for reconsideration by permitting manufacturers to temporarily certify vehicles according to the test procedures required prior to the effective date of the November 2003 final rule.

**DATES:** This final rule becomes effective on January 27, 2004.

**FOR FURTHER INFORMATION CONTACT:** For non-legal issues, you may call Louis Molino, Office of Crashworthiness Standards, at (202) 366-2264, facsimile (202) 366-4329.

For legal issues, you may contact Chris Calamita, Office of the Chief Counsel, at (202) 366-2992, facsimile (202) 366-3820.

#### SUPPLEMENTARY INFORMATION:

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#### I. Background

FMVSS No. 208 specifies the performance requirements for the protection of vehicle occupants in crashes. On November 19, 2003, the agency published a final rule that responded, in part, to petitions for reconsideration of the amendments to detailed seat and dummy positioning procedures we made in December 2001 to our May 2000 Advanced Air Bag Rule. In particular, we amended portions of FMVSS No. 208 regarding seat positioning procedures when using the 5th percentile adult female test dummy in the barrier test and the low risk deployment test; when using the 3-year-old and 6-year-old test dummies in the low risk deployment test; the fore and aft seat location for rear facing child restraint systems (RFCRSs); and the seat track position for the low risk deployment test. We also responded to petitions for reconsideration regarding test dummy positioning procedure issues, specifically those addressing foot positioning of the 5th percentile adult female test dummy; positioning out-of-position test dummies; and positioning of test dummy hands. The November 2003 final rule amended the definitions of "Plane C" and "Plane D" as they relate to test dummy positioning, Point 1 under the low risk deployment tests, and addressed other reference points and definitions. The November 2003 final rule also amended the list of child

<sup>1</sup> See, 68 **Federal Register** 65179.

restraint systems required for certain compliance testing.

## II. Petitions for Reconsideration

In response to the November 2003 final rule, the agency received seven petitions for reconsideration. Petitions were submitted by Evenflo Company, Inc. (Evenflo), Maserati S.p.A. (Maserati), Alliance for Automobile Manufacturers (Alliance), TRW Automotive (TRW), Automotive Occupant Restraint Council (AORC), American Honda Motor Co., Inc. (Honda), and Ferrari S.p.A. (Ferrari). Petitioners have asked the agency to reconsider the following issues.

### A. Seat Positioning Procedures

The Alliance has requested that the agency specify a vertical seat position when determining the seat cushion reference angle. Specifically, the Alliance requested that the seat be positioned in the full rear and full down position when determining the seat cushion reference angle. The Alliance also requested that S16.2.10.3.2 and S16.2.10.3.3 of FMVSS No. 208 be amended to specify that the reference point used in these sections is the seat cushion reference point.

### B. Left foot—5th percentile adult female test dummy (Barrier test)

The Alliance, Honda, and Ferrari petitioned to permit positioning of the left foot of the 5th percentile adult female test dummy in a manner more representative of a “real world” configuration. Ferrari and Honda requested that the left foot be permitted to rest on the foot rest. The Alliance requested that if spacer blocks are to be required, then the agency should specify the material properties of the spacer blocks for consistency in testing. Honda requested that the amendments for positioning the left foot of the 5th percentile adult female test dummy adopted in the November 2003 final rule be postponed until September 1, 2004. The Alliance requested that the amendments for positioning the left foot of the 5th percentile adult female test dummy, along with the rest of the November 2003 final rule, be postponed until September 1, 2005.

### C. “Chin on Rim” Test Procedure

The Alliance and Honda requested that the agency amend the chin on rim test procedure to provide for consistency and repeatability in testing out-of-position drivers. The Alliance requested that for vehicle models with adjustable and non-adjustable steering wheels, the adjustable steering wheel should be positioned as close as

possible to the position of the non-adjustable steering wheel. When spacer blocks are required to position the dummy’s chin on the steering wheel, Honda requested that the agency specify the shape of the blocks. Honda stated that the pre-test load applied to the neck can vary with the shape of the spacer blocks. Honda also requested that the amendments for the “chin on rim” test procedure adopted in the November 2003 final rule be postponed until September 1, 2004.

### D. Head-on-Instrument Panel Test Procedure

Honda petitioned the agency to permit rotation of the lower legs when positioning the head of the six-year-old dummy on the instrument panel, in order to prevent bracing by the feet on the vehicle floor. Honda stated that this bracing prevents the torso from being rotated into position.

Honda also requested that spacer blocks be permitted when space is present between the six-year-old dummy’s feet and the vehicle floor. Honda stated that variation of the feet due to lack of contact with the floor results in variation in the force required to maintain the thigh angle. Again with regards to the six-year-old dummy, Honda requested that the head-on-instrument panel test procedure specify the point and direction for applying the 222 N force to prevent differences in dummy position.

Honda further requested that the amendments for the head-on-instrument-panel test procedure adopted in the November 2003 rule be postponed until September 1, 2004.

### E. Definition of Planes C and D

The Alliance, Maserati, and Ferrari requested clarification of the procedure for determining the volumetric centers of an uninflated and statically inflated air bag, which are used to define Planes C and D. Maserati stated that the new definition of Plane C may alter the positioning of the dummy in low risk deployment testing by 50 mm and that the effect of this altered position on compliance is unknown at this time. The Alliance stated that one of its members has reported that the redefined Plane C may alter the positioning of the dummy by 30 mm.

The Alliance requested that the effective date for the amended definitions of Planes C and D be postponed to September 1, 2005. Ferrari requested a two year lead time and Maserati requested a three year lead time. AORC has requested that the agency revert to the previous method for defining Planes C and D.

### F. Appendix A

Evenflo and TRW have requested that Appendix A be amended to reflect child restraint systems (CRSs) currently manufactured and available for retail purchase. Evenflo stated that several of the discontinued CRS models in Appendix A are no longer available. TRW petitioned the agency to create a separate Appendix to indicate which CRSs will be used in testing through at least 2006. To facilitate the use of automatic suppression systems based on weight detection, Honda petitioned the agency to limit the weight of CRSs. Honda also petitioned the agency to permit 18 months of lead time for the amended Appendix A.

The Alliance requested that the agency develop a procedure for installing CRSs equipped with lower anchorages and tether attachments. The Alliance stated that artificially tight installations can cause some occupant classification systems to misclassify the occupant. The Alliance also requested the effective date for the revised Appendix A be postponed until September 1, 2005.

## III. Final Rule

The agency set a January 20, 2004 effective date for the amendments to the FMVSS No. 208 seat and dummy positioning procedures in the November 2003 final rule. The petitions filed by Evenflo, Maserati, the Alliance, TRW, AORC, Honda, and Ferrari have asked the agency to reconsider several aspects of that rulemaking. NHTSA is currently considering all seven petitions.

Given that the January 20, 2004 effective date occurred mid-model year, the agency has determined that it is appropriate to first partially respond to petitions concerning the effective date of the November 2003 final rule. Manufacturers are currently required to certify at least 20 percent of all vehicles manufactured between September 1, 2003 and August 31, 2004 as fully complying with the advanced air bag requirements, unless advanced credits are utilized. These production dates roughly correspond with the model year 2004 fleet. Much of the testing that manufacturers conduct to certify compliance of the 2004 model year fleet has already been done. Although we believe the new positioning procedures result in more accurate and repeatable dummy placement, the new procedures could result in a test dummy being placed differently relative to the air bag than it was during vehicle certification. As a result, it is possible that injury criteria could be exceeded under the new procedures, even though they were

not exceeded in certification testing. If so, manufacturers may need to make minor modifications to their designs to assure compliance with the new requirement. However, we note that no petitioner provided comparative test data between old and new dummy positions. Nor did any manufacturer state that they could not comply with the test requirements using the new dummy positions. Nonetheless, the agency is permitting compliance according to the testing procedures required by FMVSS No. 208 immediately prior to the November 2003 amendments.

This document adopts FMVSS No. 208a, which contains the pre-November 2003 final rule test procedures. Manufacturers may rely on the test procedures in FMVSS No. 208a until August 31, 2004, after which, the manufacturers will be required to meet the new requirements of FMVSS No. 208. (The November 2003 amendments to Appendix A already have an effective date of September 1, 2004.) If a manufacturer opts to certify a vehicle according to the procedures in FMVSS No. 208a, it must certify using all of the relevant seat and dummy positioning procedures in FMVSS No. 208a in place of the corresponding test procedures in FMVSS No. 208. We have decided against any further extension of the old procedures because we believe the new positioning procedures should not require any more than minor modifications by affected manufacturers. Other issues raised in the petitions for reconsideration will be addressed by the agency in a separate document.

The agency believes that a partial response to the petitions for reconsideration is necessary so motor vehicle manufacturers do not face substantial economic hardship associated with certain new requirements of the amended FMVSS No. 208. As discussed in the petitions, the updated requirements of FMVSS No. 208 may necessitate retesting and recertification of occupant protection systems. By permitting compliance according to the old test procedures until August 31, 2004, vehicle manufacturers may avoid mid-model year product changes that would otherwise result from the November 2003 final rule, which went into effect on January 20, 2004.

NHTSA expects that all other issues raised in the petitions will be fully addressed prior to the new, September 1, 2004 effective date. In the event, however, that these issues have not been resolved, all affected manufacturers will be required to meet the new

requirements. Effective dates of agency final rules are not stayed due to outstanding petitions for reconsideration of those rules.

#### IV. Regulatory Analyses and Notices

##### A. Economic Impacts

Executive Order 12866, "Regulatory Planning and Review" (58 FR 51735, October 4, 1993), provides for making determinations whether a regulatory action is "significant" and therefore subject to Office of Management and Budget (OMB) review and to the requirements of the Executive Order. The Order defines a "significant regulatory action" as one that is likely to result in a rule that may:

(1) Have an annual effect on the economy of \$100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or Tribal governments or communities;

(2) Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;

(3) Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or

(4) Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

This rulemaking document was not reviewed under Executive Order 12866. It is not significant within the meaning of the DOT Regulatory Policies and Procedures. It does not impose any burden on manufacturers and effectively extends the compliance date for existing regulatory requirements for an additional seven months. The agency believes that this impact is so minimal as to not warrant the preparation of a full regulatory evaluation.

##### B. Regulatory Flexibility Act

Pursuant to the Regulatory Flexibility Act, we have considered the impacts of this rulemaking action will have on small entities (5 U.S.C. 601 *et seq.*). I certify that this rulemaking action will not have a significant economic impact upon a substantial number of small entities within the context of the Regulatory Flexibility Act. The following is our statement providing the factual basis for the certification (5 U.S.C. 605(b)). This action will not have a significant economic impact on a substantial number of small businesses because it does not significantly change the requirements of the November 2003 final rule. Small organizations and small

governmental units will not be significantly effected since the potential cost impacts associated with this rule remain unchanged from the November 2003 final rule.

##### C. Environmental Impacts

We have not conducted an evaluation of the impacts of this final rule under the National Environmental Policy Act. This rulemaking action effectively extends the date by which the manufacturers must comply with the newly upgraded requirements of FMVSS No. 208. This rulemaking does not impose any change that would have any environmental impacts. Accordingly, no environmental assessment is required.

##### D. Executive Order 13132 (Federalism)

E.O. 13132 requires NHTSA to develop an accountable process to ensure "meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications." E.O. 13132 defines the term "Policies that have federalism implications" to include regulations that have "substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government." Under E.O. 13132, NHTSA may not issue a regulation that has federalism implication, that imposes substantial direct compliance costs, and that is not required by statute, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by State and local governments, or NHTSA consults with State and local officials early in the process of developing the proposed regulation.

This final rule will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government as specified in E.O. 13132. Thus, the requirements of section 6 of the Executive Order do not apply to this rule.

##### E. The Unfunded Mandates Reform Act

The Unfunded Mandates Reform Act of 1995 (Pub. L. 104-4) requires agencies to prepare a written assessment of the costs, benefits and other effects of proposed or final rules that include a Federal mandate likely to result in the expenditure by State, local or tribal governments, in the aggregate, or by the private sector, of more than \$100

million annually. This action, which permits manufacturers to rely on test procedures required prior to the November 2003 upgrade for an additional seven months, will not result in additional expenditures by state, local or tribal governments or by any members of the private sector. Therefore, the agency has not prepared an economic assessment pursuant to the Unfunded Mandates Reform Act.

#### F. Paperwork Reduction Act

There are no information collection requirements in this rule.

#### G. Regulation Identifier Number (RIN)

The Department of Transportation assigns a regulation identifier number (RIN) to each regulatory action listed in the Unified Agenda of Federal Regulations. The Regulatory Information Service Center publishes the Unified Agenda in April and October of each year. You may use the RIN contained in the heading at the beginning of this document to find this action in the Unified Agenda.

#### H. Plain Language

Executive Order 12866 requires each agency to write all rules in plain language. Application of the principles of plain language includes consideration of the following questions:

- Have we organized the material to suit the public's needs?
- Are the requirements in the rule clearly stated?
- Does the rule contain technical language or jargon that is not clear?
- Would a different format (grouping and order of sections, use of headings, paragraphing) make the rule easier to understand?
- Would more (but shorter) sections be better?
- Could we improve clarity by adding tables, lists, or diagrams?
- What else could we do to make the rule easier to understand?

If you have any responses to these questions, please forward them to Chris Calamita, Office of Chief Counsel, National Highway Traffic Safety Administration, 400 Seventh Street, SW., Washington, DC 20590.

#### I. National Technology Transfer and Advancement Act

Under the National Technology and Transfer and Advancement Act of 1995 (NTTAA) (Pub. L. 104–113), “all Federal agencies and departments shall use technical standards that are developed or adopted by voluntary consensus standards bodies, using such technical standards as a means to carry out policy objectives or activities determined by

the agencies and departments.” This document permits temporary compliance with FMVSS No. 208 according to test procedures prior to amendments made in the November 2003 final rule. No new standards or procedures are adopted by this document.

#### J. Privacy Act

Anyone is able to search the electronic form of all comments received into any of our dockets by the name of the individual submitting the comment (or signing the comment, if submitted on behalf of an association, business, labor union, etc.). You may review DOT's complete Privacy Act Statement in the **Federal Register** published on April 11, 2000 (Volume 65, Number 70; Pages 19477–78), or you may visit <http://dms.dot.gov>.

#### List of Subjects in 49 CFR Part 571

Imports, Motor vehicle safety, Reporting and recordkeeping requirements, Tires.

■ In consideration of the foregoing, NHTSA amends 49 CFR Chapter V 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. Part 571 is amended by adding § 571.208a to read as follows:

#### 571.208a Optional test procedures for vehicles manufactured between January 27, 2004 and August 31, 2004.

For vehicles manufactured between January 27, 2004 and August 31, 2004, a manufacturer may, at its option, comply with certain requirements of Standard No. 208 in accordance with the test procedures set forth in this § 571.208a instead of the corresponding test procedures in § 571.208.

S1 through S15 [Reserved] See § 571.208, S1 through S15.

S16. *Test procedures for rigid barrier test requirements using 5th percentile adult female dummies.*

S16.1 *General provisions.* Crash testing to determine compliance with the requirements of S15 of this standard is conducted as specified in the following paragraphs (a) and (b).

(a) *Belted test.* Place a 49 CFR part 572 subpart O 5th percentile adult female test dummy at each front outboard seating position of a vehicle, in accordance with the procedures specified in S16.3 of this standard.

Impact the vehicle traveling longitudinally forward at any speed, up to and including 48 km/h (30 mph), into a fixed rigid barrier that is perpendicular within a tolerance of  $\pm 5$  degrees to the line of travel of the vehicle under the applicable conditions of S16.2 of this standard.

(b) *Unbelted test.* Place a 49 CFR part 572 subpart O 5th percentile adult female test dummy at each front outboard seating position of a vehicle, in accordance with the procedures specified in S16.3 of this standard, except S16.3.5. Impact the vehicle traveling longitudinally forward at any speed, from 32 km/h (20 mph) to 40 km/h (25 mph), inclusive, into a fixed rigid barrier that is perpendicular within a tolerance of  $\pm 5$  degrees to the line of travel of the vehicle under the applicable conditions of S16.2 of this standard.

S16.2 *Test conditions.*

S16.2.1 The vehicle, including test devices and instrumentation, is loaded as in S8.1.1 of FMVSS No. 208.

S16.2.2 Movable vehicle windows and vents are placed in the fully closed position, unless the vehicle manufacturer chooses to specify a different adjustment position prior to the time the vehicle is certified.

S16.2.3 Convertibles and open-body type vehicles have the top, if any, in place in the closed passenger compartment configuration.

S16.2.4 Doors are fully closed and latched but not locked.

S16.2.5 The dummy is clothed in form fitting cotton stretch garments with short sleeves and above the knee length pants. A size 7½W shoe which meets the configuration and size specifications of MIL-S-21711E (see S4.7) or its equivalent is placed on each foot of the test dummy.

S16.2.6 Limb joints are set at one g, barely restraining the weight of the limb when extended horizontally. Leg joints are adjusted with the torso in the supine position.

S16.2.7 Instrumentation shall not affect the motion of dummies during impact.

S16.2.8 The stabilized temperature of the dummy is at any level between 20.6 °C and 22.2 °C (69 °F to 72 °F).

S16.2.9 *Steering wheel adjustment.*

S16.2.9.1 Adjust a tilttable steering wheel, if possible, so that the steering wheel hub is at the geometric center of its full range of driving positions.

S16.2.9.2 If there is no setting detent at the mid-position, lower the steering wheel to the detent just below the mid-position.

S16.2.9.3 If the steering column is telescoping, place the steering column

in the mid-position. If there is no mid-position, move the steering wheel rearward one position from the mid-position.

S16.2.10 *Driver and passenger seat set-up.*

S16.2.10.1 *Lumbar support adjustment.* Position adjustable lumbar supports so that the lumbar support is in its lowest, retracted or deflated adjustment position.

S16.2.10.2 *Other seat adjustments.* Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position.

S16.2.10.3 *Seat position adjustment.* If the passenger seat does not adjust independently of the driver seat, the driver seat shall control the final position of the passenger seat.

S16.2.10.3.1 If the seat is adjustable in the fore and aft and/or vertical directions, move the seat to the rearmost position at the full down height adjustment. If the seat cushion adjusts fore and aft, independent of the seat back, set this adjustment to the full rearward position. If the seat cushion contains a height adjustment, independent of the seat back, set this adjustment to the full down position. Record a seat cushion reference angle.

S16.2.10.3.2 Using only controls which move the seat fore and aft, move the seat to the full forward position. If seat adjustments other than fore-aft are present and the seat cushion reference angle changes from that measured in S16.2.10.3.1, use those adjustments to maintain as closely as possible the angle recorded in S16.2.10.3.1.

S16.2.10.3.3 If the seat height is adjustable, determine the maximum and minimum heights at this position, while maintaining, as closely as possible, the angle recorded in S16.2.10.3.1. Set the seat at the midpoint height with the seat cushion reference angle set as closely as possible to the angle recorded in S16.2.10.3.1. Mark location of the seat for future reference.

S16.3 *Dummy seating positioning procedures.* The 49 CFR part 572 subpart O 5th percentile adult female test dummy is positioned as follows:

S16.3.1 *General provisions and definitions.*

S16.3.1.1 All angles are measured with respect to the horizontal plane unless otherwise stated.

S16.3.1.2 The dummy's neck bracket is adjusted to align the zero degree index marks.

S16.3.1.3 The term "midsagittal plane" refers to the vertical plane that separates the dummy into equal left and right halves.

S16.3.1.4 The term "vertical longitudinal plane" refers to a vertical plane parallel to the vehicle's longitudinal centerline.

S16.3.1.5 The term "vertical plane" refers to a vertical plane, not necessarily parallel to the vehicle's longitudinal centerline.

S16.3.1.6 The term "transverse instrumentation platform" refers to the transverse instrumentation surface inside the dummy's skull casting to which the neck load cell mounts. This surface is perpendicular to the skull cap's machined inferior-superior mounting surface.

S16.3.1.7 The term "thigh" refers to the femur between, but not including, the knee and the pelvis.

S16.3.1.8 The term "leg" refers to the lower part of the entire leg including the knee.

S16.3.1.9 The term "foot" refers to the foot including the ankle.

S16.3.1.10 The longitudinal centerline of a bucket seat cushion is determined at the widest part of the seat cushion. Measure perpendicular to the longitudinal centerline of the vehicle.

S16.3.1.11 For leg and thigh angles use the following references:

S16.3.1.11.1 *Thigh*—a straight line on the thigh skin between the center of the ½-13 UNC-2B tapped hole in the upper leg femur clamp (see drawings 880105-504 (left thigh) and 880105-505 (right thigh), upper leg femur clamp) and the knee pivot shoulder bolt (part 880105-527 in drawing 880105-528R & 528L, sliding knee assy. w/o pot).

S16.3.1.11.2 *Leg*—a straight line on the leg skin between the center of the ankle shell (parts 880105-609 & 633 in drawing 880105-660, ankle assembly) and the knee pivot shoulder bolt (part 880105-527 in drawing 880105-528R & 528L, sliding knee assy. w/o pot).

S16.3.2 *Driver dummy positioning.*

S16.3.2.1 *Driver torso/head/seat back angle positioning.*

S16.3.2.1.1 With the seat in the position determined in S16.2.10, use only the controls which move the seat fore and aft to place the seat in the rearmost position, without adjusting independent height controls. If the seat cushion reference angle automatically changes as the seat is moved from the full forward position, maintain, as closely as possible, the seat cushion reference angle in S16.2.10.3.1, for the final forward position when measuring the pelvic angle as specified in S16.3.2.1.11.

S16.3.2.1.2 Fully recline the seat back, if adjustable. Install the dummy into the driver's seat, such that when the legs are positioned 120 degrees to

the thighs, the calves of the legs are not touching the seat cushion.

S16.3.2.1.3 *Bucket seats.* Center the dummy on the seat cushion so that its midsagittal plane is vertical and coincides with the vertical longitudinal plane through the center of the seat cushion.

S16.3.2.1.4 *Bench seats.* Position the midsagittal plane of the dummy vertical and parallel to the vehicle's longitudinal centerline and aligned with the center of the steering wheel rim.

S16.3.2.1.5 Hold the dummy's thighs down and push rearward on the upper torso to maximize the dummy's pelvic angle.

S16.3.2.1.6 Place the legs at 120 degrees to the thighs. Set the initial transverse distance between the longitudinal centerlines at the front of the dummy's knees at 160 to 170 mm (6.3 to 6.7 in), with the thighs and legs of the dummy in vertical planes. Push rearward on the dummy's knees to force the pelvis into the seat so there is no gap between the pelvis and the seat back or until contact occurs between the back of the dummy's calves and the front of the seat cushion.

S16.3.2.1.7 Gently rock the upper torso relative to the lower torso laterally in a side to side motion three times through a  $\pm 5$  degree arc (approximately 51 mm (2 in) side to side) to reduce friction between the dummy and the seat.

S16.3.2.1.8 If needed, extend the legs slightly so that the feet are not in contact with the floor pan. Let the thighs rest on the seat cushion to the extent permitted by the foot movement. Keeping the leg and the thigh in a vertical plane, place the foot in the vertical longitudinal plane that passes through the centerline of the accelerator pedal. Rotate the left thigh outboard about the hip until the center of the knee is the same distance from the midsagittal plane of the dummy as the right knee  $\pm 5$  mm ( $\pm 0.2$  in). Using only controls which move the seat fore and aft, attempt to return the seat to the full forward position. If either of the dummy's legs first contacts the steering wheel, then adjust the steering wheel, if adjustable, upward until contact with the steering wheel is avoided. If the steering wheel is not adjustable, separate the knees enough to avoid steering wheel contact. Proceed with moving the seat forward until either the leg contacts the vehicle interior or the seat reaches the full forward position. (The right foot may contact and depress the accelerator and/or change the angle of the foot with respect to the leg during seat movement.) If necessary to avoid contact with the vehicles brake or clutch

pedal, rotate the test dummy's left foot about the leg. If there is still interference, rotate the left thigh outboard about the hip the minimum distance necessary to avoid pedal interference. If a dummy leg contacts the vehicle interior before the full forward position is attained, position the seat at the next detent where there is no contact. If the seat is a power seat, move the seat fore and aft to avoid contact while assuring that there is a maximum of 5 mm (0.2 in) distance between the vehicle interior and the point on the dummy that would first contact the vehicle interior. If the steering wheel was moved, return it to the position described in S16.2.9. If the steering wheel contacts the dummy's leg(s) prior to attaining this position, adjust it to the next higher detent, or if infinitely adjustable, until there is 5 mm (0.2 in) clearance between the wheel and the dummy's leg(s).

S16.3.2.1.9 For vehicles without adjustable seat backs, adjust the lower neck bracket to level the head as much as possible. For vehicles with adjustable seat backs, while holding the thighs in place, rotate the seat back forward until the transverse instrumentation platform of the head is level to within  $\pm 0.5$  degree, making sure that the pelvis does not interfere with the seat bight. Inspect the abdomen to ensure that it is properly installed. If the torso contacts the steering wheel, adjust the steering wheel in the following order until there is no contact: Telescoping adjustment, lowering adjustment, raising adjustment. If the vehicle has no adjustments or contact with the steering wheel cannot be eliminated by adjustment, position the seat at the next detent where there is no contact with the steering wheel as adjusted in S16.2.9. If the seat is a power seat, position the seat to avoid contact while assuring that there is a maximum of 5 mm (0.2 in) distance between the steering wheel as adjusted in S16.2.9 and the point of contact on the dummy.

S16.3.2.1.10 If it is not possible to achieve the head level within  $\pm 0.5$  degrees, minimize the angle.

S16.3.2.1.11 Measure and set the dummy's pelvic angle using the pelvic angle gage (drawing TE-2504, incorporated by reference in 49 CFR part 572, subpart O, of this chapter). The angle shall be set to 20.0 degrees  $\pm 2.5$  degrees. If this is not possible, adjust the pelvic angle as close to 20.0 degrees as possible while keeping the transverse instrumentation platform of the head as level as possible by adjustments specified in S16.3.2.1.9 and S16.3.2.1.10.

S16.3.2.1.12 If the dummy is contacting the vehicle interior after these adjustments, move the seat rearward until there is a maximum of 5 mm (0.2 in) between the contact point of the dummy and the interior of the vehicle or if it has a manual seat adjustment, to the next rearward detent position. If after these adjustments, the dummy contact point is more than 5 mm (0.2 in) from the vehicle interior and the seat is still not in its forwardmost position, move the seat forward until the contact point is 5 mm (0.2 in) or less from the vehicle interior, or if it has a manual seat adjustment, move the seat to the closest detent position without making contact, or until the seat reaches its forwardmost position, whichever occurs first.

S16.3.2.2 *Driver foot positioning.*

S16.3.2.2.1 If the vehicle has an adjustable accelerator pedal, adjust it to the full forward position. Rest the right foot of the test dummy on the undepressed accelerator pedal with the rearmost point of the heel on the floor pan in the plane of the pedal. If the foot cannot be placed on the accelerator pedal, set it initially perpendicular to the leg and then place it as far forward as possible in the direction of the pedal centerline with the rearmost point of the heel resting on the floor pan. If the vehicle has an adjustable accelerator pedal and the right foot is not touching the accelerator pedal when positioned as above, move the pedal rearward until it touches the right foot. If the accelerator pedal in the full rearward position still does not touch the foot, leave the pedal in that position.

S16.3.2.2.2 If the ball of the foot does not contact the pedal, change the angle of the foot relative to the leg such that the toe of the foot contacts the undepressed accelerator pedal.

S16.3.2.2.3 Place the left foot on the toe-board with the rearmost point of the heel resting on the floor pan as close as possible to the point of intersection of the planes described by the toe-board and floor pan, and not on the wheel-well projection or foot rest.

S16.3.2.2.4 If the left foot cannot be positioned on the toe board, place the foot perpendicular to the lower leg centerline as far forward as possible with the heel resting on the floor pan.

S16.3.2.2.5 If necessary to avoid contact with the vehicle's brake or clutch pedal, rotate the test dummy's left foot about the lower leg. If there is still pedal interference, rotate the left leg outboard about the hip the minimum distance necessary to avoid the pedal interference. If the left foot does not contact the floor pan, place the foot

parallel to the floor and place the leg as perpendicular to the thigh as possible.

S16.3.2.3 *Driver arm/hand positioning.*

S16.3.2.3.1 Place the dummy's upper arms adjacent to the torso with the arm centerlines as close to a vertical longitudinal plane as possible.

S16.3.2.3.2 Place the palms of the dummy in contact with the outer part of the steering wheel rim at its horizontal centerline with the thumbs over the steering wheel rim.

S16.3.2.3.3 If it is not possible to position the thumbs inside the steering wheel rim at its horizontal centerline, then position them above and as close to the horizontal centerline of the steering wheel rim as possible.

S16.3.2.3.4 Lightly tape the hands to the steering wheel rim so that if the hand of the test dummy is pushed upward by a force of not less than 9 N (2 lb) and not more than 22 N (5 lb), the tape releases the hand from the steering wheel rim.

S16.3.3 *Passenger dummy positioning.*

S16.3.3.1 *Passenger torso/head/seat back angle positioning.*

S16.3.3.1.1 With the seat in the position determined in S16.2.10, use only the controls which move the seat fore and aft to place the seat in the rearmost position, without adjusting independent height controls. If the seat cushion reference angle automatically changes as the seat is moved from the full forward position, maintain as closely as possible the seat cushion reference angle in S16.2.10.3.1, for the final forward position when measuring the pelvic angle as specified in S16.3.3.1.11.

S16.3.3.1.2 Fully recline the seat back, if adjustable. Install the dummy into the passenger's seat, such that when the legs are 120 degrees to the thighs, the calves of the legs are not touching the seat cushion.

S16.3.3.1.3 *Bucket seats.* Center the dummy on the seat cushion so that its midsagittal plane is vertical and coincides with the vertical longitudinal plane through the center of the seat cushion.

S16.3.3.1.4 *Bench seats.* Position the midsagittal plane of the dummy vertical and parallel to the vehicle's longitudinal centerline and the same distance from the vehicle's longitudinal centerline as the midsagittal plane of the driver dummy.

S16.3.3.1.5 Hold the dummy's thighs down and push rearward on the upper torso to maximize the dummy's pelvic angle.

S16.3.3.1.6 Place the legs at 120 degrees to the thighs. Set the initial

transverse distance between the longitudinal centerlines at the front of the dummy's knees at 160 to 170 mm (6.3 to 6.7 in), with the thighs and legs of the dummy in vertical planes. Push rearward on the dummy's knees to force the pelvis into the seat so there is no gap between the pelvis and the seat back or until contact occurs between the back of the dummy's calves and the front of the seat cushion.

S16.3.3.1.7 Gently rock the upper torso relative to the lower torso laterally side to side three times through a  $\pm 5$  degree arc (approximately 51 mm (2 in) side to side).

S16.3.3.1.8 If needed, extend the legs slightly so that the feet are not in contact with the floor pan. Let the thighs rest on the seat cushion to the extent permitted by the foot movement. With the feet perpendicular to the legs, place the heels on the floor pan. If a heel will not contact the floor pan, place it as close to the floor pan as possible. Using only controls which move the seat fore and aft, attempt to return the seat to the full forward position. If a dummy leg contacts the vehicle interior before the full forward position is attained, position the seat at the next detent where there is no contact. If the seats are power seats, position the seat to avoid contact while assuring that there is a maximum of 5 mm (0.2 in) distance between the vehicle interior and the point on the dummy that would first contact the vehicle interior.

S16.3.3.1.9 For vehicles without adjustable seat backs, adjust the lower neck bracket to level the head as much as possible. For vehicles with adjustable seat backs, while holding the thighs in place, rotate the seat back forward until the transverse instrumentation platform of the head is level to within  $\pm 0.5$  degrees, making sure that the pelvis does not interfere with the seat bight. Inspect the abdomen to insure that it is properly installed.

S16.3.3.1.10 If it is not possible to orient the head level within  $\pm 0.5$  degrees, minimize the angle.

S16.3.3.1.11 Measure and set the dummy's pelvic angle using the pelvic angle gage (drawing TE-2504, incorporated by reference in 49 CFR part 572, subpart O, of this chapter). The angle shall be set to 20.0 degrees  $\pm 2.5$  degrees. If this is not possible, adjust the pelvic angle as close to 20.0 degrees as possible while keeping the transverse instrumentation platform of the head as level as possible as specified in S16.3.3.1.9 and S16.3.3.1.10.

S16.3.3.1.12 If the dummy is contacting the vehicle interior after these adjustments, move the seat rearward until there is a maximum of 5

mm (0.2 in) between the contact point of the dummy and the interior of the vehicle or if it has a manual seat adjustment, to the next rearward detent position. If after these adjustments the dummy contact point is more than 5 mm (0.2 in) from the vehicle interior and the seat is still not in its forward most position, move the seat forward until the contact point is 5 mm (0.2 in) or less from the vehicle interior, or if it has a manual seat adjustment, move the seat to the closest detent position without making contact, or until the seat reaches its forward most position, whichever occurs first.

S16.3.3.2 *Passenger foot positioning.*

S16.3.3.2.1 Place the passenger's feet flat on the toe board.

S16.3.3.2.2 If the feet cannot be placed flat on the toe board, set them perpendicular to the leg center lines and place them as far forward as possible with the heels resting on the floor pan.

S16.3.3.3 *Passenger arm/hand positioning.*

S16.3.3.3.1 Place the dummy's upper arms in contact with the seat back and the torso.

S16.3.3.3.2 Place the palms of the dummy in contact with the outside of the thighs.

S16.3.3.3.3 Place the little fingers in contact with the seat cushion.

S16.3.4 *Driver and passenger adjustable head restraints.*

S16.3.4.1 If the head restraint has an automatic adjustment, leave it where the system positions the restraint after the dummy is placed in the seat.

S16.3.4.2 Adjust each head restraint to its lowest position.

S16.3.4.3 Measure the vertical distance from the top most point of the head restraint to the bottom most point. Locate a horizontal plane through the midpoint of this distance. Adjust each head restraint vertically so that this horizontal plane is aligned with the center of gravity (CG) of the dummy head.

S16.3.4.4 If the above position is not attainable, move the vertical center of the head restraint to the closest detent below the center of the head CG.

S16.3.4.5 If the head restraint has a fore and aft adjustment, place the restraint in the forwardmost position or until contact with the head is made, whichever occurs first.

S16.3.5 *Driver and passenger manual belt adjustment (for tests conducted with a belted dummy)*

S16.3.5.1 If an adjustable seat belt D-ring anchorage exists, place it in the manufacturer's design position for a 5th percentile adult female with the seat in the position specified in S16.2.10.3.

S16.3.5.2 Place the Type 2 manual belt around the test dummy and fasten the latch.

S16.3.5.3 Ensure that the dummy's head remains as level as possible, as specified in S16.3.2.1.9 and S16.3.2.1.10 and S16.3.3.1.9 and S16.3.3.1.10.

S16.3.5.4 Remove all slack from the lap belt. Pull the upper torso webbing out of the retractor and allow it to retract; repeat this operation four times. Apply a 9 N (2 lbf) to 18 N (4 lbf) tension load to the lap belt. If the belt system is equipped with a tension-relieving device, introduce the maximum amount of slack into the upper torso belt that is recommended by the manufacturer. If the belt system is not equipped with a tension-relieving device, allow the excess webbing in the shoulder belt to be retracted by the retractive force of the retractor.

S17 through S19 [Reserved] See § 571.208, S17 through S19.

S20 *Test procedure for S19 of FMVSS No. 208.*

S20.1 *General provisions.*

S20.1.1 Tests specifying the use of a car bed, a rear facing child restraint, or a convertible child restraint may be conducted using any such restraint listed in sections A, B, and C of Appendix A of FMVSS No. 208 respectively. The car bed, rear facing child restraint, or convertible child restraint may be unused or have been previously used only for automatic suppression tests. If it has been used, there shall not be any visible damage prior to the test.

S20.1.2 Each vehicle certified to this option shall comply in tests conducted with the right front outboard seating position, if adjustable fore and aft, at full rearward, middle, and full forward positions. If the child restraint or dummy contacts the vehicle interior, move the seat rearward to the next detent that provides clearance. If the seat is a power seat, move the seat rearward while assuring that there is a maximum of 5 mm (0.2 in) clearance.

S20.1.3 If the car bed, rear facing child restraint, or convertible child restraint is equipped with a handle, the vehicle shall comply in tests conducted with the handle at both the child restraint manufacturer's recommended position for use in vehicles and in the upright position.

S20.1.4 If the car bed, rear facing child restraint, or convertible child restraint is equipped with a sunshield, the vehicle shall comply in tests conducted with the sunshield both fully open and fully closed.

S20.1.5 The vehicle shall comply in tests with the car bed, rear facing child restraint, or convertible child restraint



uncovered and in tests with a towel or blanket weighing up to 1.0 kg (2.2 lb) placed on or over the restraint in any of the following positions:

(a) with the blanket covering the top and sides of the restraint, and

(b) with the blanket placed from the top of the vehicle's seat back to the forwardmost edge of the restraint.

S20.1.6 Except as otherwise specified, if the car bed, rear facing child restraint, or convertible child restraint has an anchorage system as specified in S5.9 of FMVSS No. 213 and is tested in a vehicle with a right front outboard vehicle seat that has an anchorage system as specified in FMVSS No. 225, the vehicle shall comply with the belted test conditions with the restraint anchorage system attached to the vehicle seat anchorage system and the vehicle seat belt unattached. It shall also comply with the belted test conditions with the restraint anchorage system unattached to the vehicle seat anchorage system and the vehicle seat belt attached. The vehicle shall comply with the unbelted test conditions with the restraint anchorage system unattached to the vehicle seat anchorage system.

S20.1.7 If the car bed, rear facing child restraint, or convertible child restraint comes equipped with a detachable base, the vehicle shall comply in tests conducted with the detachable base attached to the child restraint and with the detachable base unattached to the child restraint.

S20.1.8 Do not attach any tethers.

S20.1.9 *Seat set-up.* Unless otherwise stated,

S20.1.9.1 *Lumbar support adjustment.* Position adjustable lumbar supports so that the lumbar support is in its lowest, retracted or deflated adjustment position.

S20.1.9.2 *Other seat adjustments.* Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position.

S20.1.9.3 If the seat cushion adjusts fore and aft, independent of the seat back, set this adjustment to the full rearward position.

S20.1.9.4 If the seat height is adjustable, determine the maximum and minimum heights at the full rearward, middle, and full forward positions. Set the seat at the mid-point height for each of the three fore-aft test positions.

S20.1.9.5 The seat back angle, if adjustable, is set at the manufacturer's nominal design seat back angle for a 50th percentile adult male as specified in S8.1.3 of FMVSS No. 208.

S20.1.9.6 If adjustable, set the head restraint at the full down and full forward position.

S20.1.10 The longitudinal centerline of a bucket seat cushion is determined at the widest part of the seat cushion. Measure perpendicular to the longitudinal centerline of the vehicle.

S20.2 *Static tests of automatic suppression feature which shall result in deactivation of the passenger air bag.* Each vehicle that is certified as complying with S19.2 of FMVSS No. 208 shall meet the following test requirements.

S20.2.1 *Belted rear facing and convertible child restraints.*

S20.2.1.1 The vehicle shall comply in tests using any child restraint specified in section B and section C of Appendix A of FMVSS No. 208.

S20.2.1.2 Locate a vertical plane through the longitudinal centerline of the child restraint. This will be referred to as "Plane."

S20.2.1.3 For bucket seats, "Plane B" refers to a vertical plane parallel to the vehicle longitudinal centerline through the longitudinal centerline of the right front outboard vehicle seat cushion. For bench seats, "Plane B" refers to a vertical plane through the right front outboard vehicle seat parallel to the vehicle longitudinal centerline the same distance from the longitudinal centerline of the vehicle as the center of the steering wheel.

S20.2.1.4 *Facing rear.*

(a) The vehicle shall comply in both of the following positions, if applicable:

(1) Without attaching the child restraint anchorage system as specified in S5.9 of FMVSS No. 213 to a vehicle seat anchorage system specified in FMVSS No. 225, align the child restraint system facing rearward such that Plane A is aligned with Plane B.

(2) If the child restraint is certified to S5.9 of FMVSS No. 213, and the vehicle seat has an anchorage system as specified in FMVSS No. 225, attach the child restraint to the vehicle seat anchorage instead of aligning the planes. Do not attach the vehicle safety belt.

(b) While maintaining the child restraint positions achieved in S20.2.1.4(a), secure the child restraint by following, to the extent possible, the child restraint manufacturer's directions regarding proper installation of the restraint in the rear facing mode.

(c) Place any adjustable seat belt anchorages at the vehicle manufacturer's nominal design position for a 50th percentile adult male occupant. Cinch the vehicle belts to any tension from zero up to 134 N (30 lb) to secure the child restraint. Measure belt

tension in a flat, straight section of the lap belt between the child restraint belt path and the contact point with the belt anchor or vehicle seat, on the side away from the buckle (to avoid interference from the shoulder portion of the belt).

(d) Position the 49 CFR part 572 subpart R 12-month-old CRABI dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint for seating infants.

(e) Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, then check whether the air bag is deactivated.

S20.2.1.5 *Facing forward (convertible restraints only).*

(a) The vehicle shall comply in both of the following positions, if applicable:

(1) Without attaching the child restraint anchorage system as specified in S5.9 of FMVSS No. 213 to a vehicle seat anchorage system specified in FMVSS No. 225, align the child restraint system facing forward such that Plane A is aligned with Plane B.

(2) If the child restraint is certified to S5.9 of FMVSS No. 213, and the vehicle seat has an anchorage system as specified in FMVSS No. 225, attach the child restraint to the vehicle seat anchorage instead of aligning the planes. Do not attach the vehicle safety belt.

(b) While maintaining the child restraint positions achieved in S20.2.1.5(a), secure the child restraint by following, to the extent possible, the child restraint manufacturer's directions regarding proper installation of the restraint in the forward facing mode.

(c) Place any adjustable seat belt anchorages at the vehicle manufacturer's nominal design position for a 50th percentile adult male occupant. Cinch the vehicle belts to any tension from zero up to 134 N (30 lb) to secure the child restraint. Measure belt tension in a flat, straight section of the lap belt between the child restraint belt path and the contact point with the belt anchor or vehicle seat, on the side away from the buckle (to avoid interference from the shoulder portion of the belt).

(d) Position the 49 CFR part 572 subpart R 12-month-old CRABI dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint for seating infants.

(e) Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, then check whether the air bag is deactivated.



**S20.2.2 Unbelted rear facing and convertible child restraints.**

S20.2.2.1 The vehicle shall comply in tests using any child restraint specified in section B and section C of Appendix A of FMVSS No. 208.

S20.2.2.2 Locate a vertical plane through the longitudinal centerline of the child restraint. This will be referred to as "Plane A".

S20.2.2.3 For bucket seats, "Plane B" refers to a vertical plane parallel to the vehicle longitudinal centerline through the longitudinal centerline of the right front outboard vehicle seat cushion. For bench seats, "Plane B" refers to a vertical plane through the right front outboard seat parallel to the vehicle longitudinal centerline the same distance from the longitudinal centerline of the vehicle as the center of the steering wheel.

**S20.2.2.4 Facing rear.**

(a) Align the child restraint system facing rearward such that Plane A is aligned with Plane B and the child restraint is in contact with the seat back.

(b) Position the 49 CFR part 572 subpart R 12-month-old CRABI dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint for seating infants.

(c) Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, then check whether the air bag is deactivated.

**S20.2.2.5 Facing forward.**

(a) Align the child restraint system facing forward such that Plane A is aligned with Plane B and the child restraint is in contact with the seat back.

(b) Position the 49 CFR part 572 subpart R 12-month-old CRABI dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint for seating infants.

(c) Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, then check whether the air bag is deactivated.

**S20.2.3 Tests with a belted car bed.**

S20.2.3.1 The vehicle shall comply in tests using any car bed specified in section A of Appendix A of FMVSS No. 208.

S20.2.3.2(a) Install the car bed by following, to the extent possible, the car bed manufacturer's directions regarding proper installation of the car bed.

(b) Place any adjustable seat belt anchorages at the vehicle manufacturer's nominal design position for a 50th percentile adult male

occupant. Cinch the vehicle belts to secure the car bed.

(c) Position the 49 CFR part 572 subpart K Newborn Infant dummy in the car bed by following, to the extent possible, the car bed manufacturer's instructions provided with the car bed for positioning infants.

(d) Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, then check whether the air bag is deactivated.

**S20.3 Static tests of automatic suppression feature which shall result in activation of the passenger air bag system.**

S20.3.1 Each vehicle certified to this option shall comply in tests conducted with the right front outboard seating position, if adjustable fore and aft, at the full rearward, middle, and, subject to S16.3.3.1.8, full forward positions. All tests are conducted with the seat height, if adjustable, in the mid-height position.

S20.3.2 Place a 49 CFR part 572 subpart O 5th percentile adult female test dummy at the right front outboard seating position of the vehicle, in accordance with procedures specified in S16.3.3 of this standard, except as specified in S20.3.1, subject to the fore-aft seat positions in S20.3.1. Do not fasten the seat belt.

S20.3.3 Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and then close all vehicle doors.

S20.3.4 Wait 10 seconds, then check whether the air bag system is activated.

**S20.4 Low risk deployment test.**

Each vehicle that is certified as complying with S19.3 of FMVSS No. 208 shall meet the following test requirements.

S20.4.1 Position the right front outboard vehicle seat in the full forward seat track position, adjust the seat height (if adjustable) to the mid-height position, and adjust the seat back (if adjustable) to the nominal design position for a 50th percentile adult male as specified in S8.1.3 of FMVSS No. 208. Position adjustable lumbar supports so that the lumbar support is in its lowest, retracted or deflated adjustment position. Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. If the seat cushion adjusts fore and aft, independent of the seat back, set this adjustment to the full rearward position. If adjustable, set the head restraint at the full down position. If the child restraint or dummy contacts the vehicle interior, move the seat rearward to the next detent that provides

clearance. If the seat is a power seat, move the seat rearward while assuring that there is a maximum of 5 mm (0.2 in) clearance.

S20.4.2 The vehicle shall comply in tests using any child restraint specified in section B and section C of Appendix A to FMVSS No. 208.

S20.4.3 Locate a vertical plane through the longitudinal centerline of the child restraint. This will be referred to as "Plane A".

S20.4.4 For bucket seats, "Plane B" refers to a vertical plane parallel to the vehicle longitudinal centerline through the geometric center of the right front outboard seat cushion. For bench seats, "Plane B" refers to a vertical plane through the right front outboard seat parallel to the vehicle longitudinal centerline that is the same distance from the longitudinal centerline of the vehicle as the center of the steering wheel.

S20.4.5 Align the child restraint system facing rearward such that Plane A is aligned with Plane B.

S20.4.6 If the child restraint is certified to S5.9 of FMVSS No. 213, and the vehicle seat has an anchorage system as specified in FMVSS No. 225, attach the child restraint to the vehicle seat anchorage instead of aligning the planes. Do not attach the vehicle safety belt.

S20.4.7 While maintaining the child restraint position achieved in S20.4.5, secure the child restraint by following, to the extent possible, the child restraint manufacturer's directions regarding proper installation of the restraint in the rear facing mode. Place any adjustable seat belt anchorages at the manufacturer's nominal design position for a 50th percentile adult male occupant. Cinch the vehicle belts to any tension from zero up to 134 N (30 lb) to secure the child restraint. Measure belt tension in a flat, straight section of the lap belt between the child restraint belt path and the contact point with the belt anchor or vehicle seat, on the side away from the buckle (to avoid interference from the shoulder portion of the belt).

S20.4.8 Position the 49 CFR part 572 subpart R 12-month-old CRABI dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint for seating infants.

S20.4.9 Deploy the right front outboard frontal air bag system. If the air bag system contains a multistage inflator, the vehicle shall be able to comply at any stage or combination of stages or time delay between successive stages that could occur in the presence of an infant in a rear facing child restraint and a 49 CFR part 572, subpart

R 12-month-old CRABI dummy positioned according to S20.4 in a rigid barrier crash test at speeds up to 64 km/h (40 mph).

S21 [Reserved] See § 571.208, S21.

S22 *Test procedure for S21 of FMVSS No. 208.*

S22.1 *General provisions and definitions.*

S22.1.1 Tests specifying the use of a forward facing child restraint, including a booster seat where applicable, may be conducted using any such restraint listed in section C and section D of Appendix A of FMVSS No. 208, respectively. The child restraint may be unused or have been previously used only for automatic suppression tests. If it has been used, there shall not be any visible damage prior to the test. Booster seats are to be used in the manner appropriate for a 3-year-old child of the same height and weight as the 3-year-old child dummy.

S22.1.2 Unless otherwise specified, each vehicle certified to this option shall comply in tests conducted with the right front outboard seating position at the full rearward, middle, and the full forward positions. If the dummy contacts the vehicle interior, move the seat rearward to the next detent that provides clearance. If the seat is a power seat, move the seat rearward while assuring that there is a maximum of 5 mm (0.2 in) clearance.

S22.1.3 Except as otherwise specified, if the child restraint has an anchorage system as specified in S5.9 of FMVSS No. 213 and is tested in a vehicle with a right front outboard vehicle seat that has an anchorage system as specified in FMVSS No. 225, the vehicle shall comply with the belted test conditions with the restraint anchorage system attached to the vehicle seat anchorage system and the vehicle seat belt unattached. It shall also comply with the belted test conditions with the restraint anchorage system unattached to the vehicle seat anchorage system and the vehicle seat belt attached.

S22.1.4 Do not attach any tethers.

S22.1.5 The definitions provided in S16.3.1 through S16.3.10 apply to the tests specified in S22.

S22.1.6 For leg and thigh angles use the following references:

(a) *Thigh*—a straight line on the thigh skin between the center of the  $\frac{5}{16} \times \frac{1}{2}$  in. screw (part 9001024, item 10 in drawing 210-0000 sheet 2 of 7, complete assembly (HYB III 3 YR OLD)) and the knee bolt (part 210-5301 in drawing 210-5000-1 & -1, leg assembly).

(b) *Leg*—a straight line on the leg skin between the center of the ankle bolt

(part 210-5701 in drawing 210-5000-1 & -2, leg assembly) and the knee bolt (part 210-5301 in drawing 210-5000-1 & -2, leg assembly).

S22.1.7 *Seat set-up.* Unless otherwise stated,

S22.1.7.1 *Lumbar support adjustment.* Position adjustable lumbar supports so that the lumbar support is in its lowest, retracted or deflated adjustment position.

S22.1.7.2 *Other seat adjustments.* Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position.

S22.1.7.3 If the seat cushion adjusts fore and aft, independent of the seat back, set this adjustment to the full rearward position.

S22.1.7.4 If the seat height is adjustable, determine the maximum and minimum heights at the full rearward seat track position, the middle seat track position, and the full forward seat track position. Set the seat at the mid-point height for each of the three fore-aft test positions.

S22.1.7.5 The seat back angle, if adjustable, is set at the manufacturer's nominal design seat back angle for a 50th percentile adult male as specified in S8.1.3 of FMVSS No. 208.

S22.1.7.6 If adjustable, set the head restraint at the full down and full forward position.

S22.2 *Static tests of automatic suppression feature which shall result in deactivation of the passenger air bag.* Each vehicle that is certified as complying with S21.2 of FMVSS No. 208 shall meet the following test requirements:

S22.2.1 *Belted test with forward facing child restraints or booster seats.*

S22.2.1.1 Install the restraint in the right front outboard seat in accordance, to the extent possible, with the child restraint manufacturer's instructions provided with the seat for use by children with the same height and weight as the 3-year-old child dummy.

S22.2.1.2 Locate a vertical plane through the longitudinal centerline of the child restraint. This will be referred to as "Plane A".

S22.2.1.3 For bucket seats, "Plane B" refers to a vertical longitudinal plane through the longitudinal centerline of the seat cushion of the right front outboard vehicle seat. For bench seats, "Plane B" refers to a vertical plane through the right front outboard vehicle seat parallel to the vehicle longitudinal centerline the same distance from the longitudinal centerline of the vehicle as the center of the steering wheel.

S22.2.1.4 The vehicle shall comply in both of the following positions, if applicable:

(a) Without attaching the child restraint anchorage system as specified in S5.9 of FMVSS No. 213 to a vehicle seat anchorage system specified in FMVSS No. 225 and without attaching any tethers, align the child restraint system facing forward such that Plane A is aligned with Plane B.

(b) If the child restraint is certified to S5.9 of FMVSS No. 213, and the vehicle seat has an anchorage system as specified in FMVSS No. 225, attach the child restraint to the vehicle seat anchorage instead of aligning the planes. Do not attach the vehicle safety belt.

S22.2.1.5 *Forward facing child restraint.*

S22.2.1.5.1 Place any adjustable seat belt anchorages at the vehicle manufacturer's nominal design position for a 50th percentile adult male occupant. Cinch the vehicle belts to any tension from zero up to 134 N (30 lb) to secure the child restraint. Measure belt tension in a flat, straight section of the lap belt between the child restraint belt path and the contact point with the belt anchor or vehicle seat, on the side away from the buckle (to avoid interference from the shoulder portion of the belt).

S22.2.1.5.2 Position the 49 CFR part 572 subpart P 3-year-old child dummy in the child restraint such that the dummy's lower torso is centered on the child restraint and the dummy's spine is against the seat back of the child restraint. Place the arms at the dummy's sides.

S22.2.1.5.3 Attach all belts that come with the child restraint that are appropriate for a child of the same height and weight as the 3-year-old child dummy, if any, by following, to the extent possible, the manufacturer's instructions provided with the child restraint for seating children.

S22.2.1.6 *Booster seat.*

S22.2.1.6.1 Place any adjustable seat belt anchorages at the vehicle manufacturer's nominal design position for a 50th percentile adult male occupant. For booster seats designed to be secured to the vehicle seat even when empty, cinch the vehicle belts to any tension from zero up to 134 N (30 lb) to secure the booster seat. Measure belt tension in a flat, straight section of the lap belt between the child restraint belt path and the contact point with the belt anchor or vehicle seat, on the side away from the buckle (to avoid interference from the shoulder portion of the belt).

S22.2.1.6.2 Position the 49 CFR part 572 subpart P 3-year-old child dummy

in the booster seat such that the dummy's lower torso is centered on the booster seat cushion and the dummy's back is parallel to and in contact with the booster seat back or, if there is no booster seat back, the vehicle seat back. Place the arms at the dummy's sides.

S22.2.1.6.3 If applicable, attach all belts that come with the child restraint that are appropriate for a child of the same height and weight as the 3-year-old child dummy, if any, by following, to the extent possible, the manufacturer's instructions provided with the child restraint for seating children.

S22.2.1.6.4 If applicable, place the Type 2 manual belt around the test dummy and fasten the latch. Remove all slack from the lap belt portion. Pull the upper torso webbing out of the retractor and allow it to retract; repeat this four times. Apply a 9 to 18 N (2 to 4 lb) tension load to the lap belt. Allow the excess webbing in the upper torso belt to be retracted by the retractive force of the retractor.

S22.2.1.7 Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and then close all vehicle doors.

S22.2.1.8 Wait 10 seconds, then check whether the air bag is deactivated.

S22.2.2 *Unbelted tests with dummies.* Place the 49 CFR part 572 subpart P 3-year-old child dummy on the right front outboard seat in any of the following positions (without using a child restraint or booster seat or the vehicle's seat belts):

S22.2.2.1 *Sitting on seat with back against seat back*

(a) Position the dummy in the seated position and place it on the right front outboard seat.

(b) In the case of vehicles equipped with bench seats, position the midsagittal plane of the dummy vertically and parallel to the vehicle's longitudinal centerline and the same distance from the vehicle's longitudinal centerline as the center of the steering wheel. In the case of vehicles equipped with bucket seats, position the midsagittal plane of the dummy vertically such that it coincides with the longitudinal centerline of the seat cushion. Position the torso of the dummy against the seat back. Position the dummy's thighs against the seat cushion.

(c) Allow the legs of the dummy to extend off the surface of the seat.

(d) Rotate the dummy's upper arms down until they contact the seat back.

(e) Rotate the dummy's lower arms until the dummy's hands contact the seat cushion.

(f) Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and then close all vehicle doors.

(g) Wait 10 seconds, then check whether the air bag is deactivated.

S22.2.2.2 *Sitting on seat with back against reclined seat back.* Repeat the test sequence in S22.2.2.1 with the seat back angle 25 degrees rearward of the manufacturer's nominal design position for the 50th percentile adult male. If the seat will not recline 25 degrees rearward of the nominal design position, use the closest position that does not exceed 25 degrees.

S22.2.2.3 *Sitting on seat with back not against seat back.*

(a) Position the dummy in the seated position and place it on the right front outboard seat.

(b) In the case of vehicles equipped with bench seats, position the midsagittal plane of the dummy vertically and parallel to the vehicle's longitudinal centerline and the same distance from the vehicle's longitudinal centerline as the center of the steering wheel. In the case of vehicles equipped with bucket seats, position the midsagittal plane of the dummy vertically such that it coincides with the longitudinal centerline of the seat cushion. Position the dummy with the spine vertical so that the horizontal distance from the dummy's back to the seat back is no less than 25 mm (1.0 in) and no more than 150 mm (6.0 in), as measured along the dummy's midsagittal plane at the mid-sternum level. To keep the dummy in position, a material with a maximum breaking strength of 311 N (70 lb) may be used to hold the dummy.

(c) Position the dummy's thighs against the seat cushion.

(d) Allow the legs of the dummy to extend off the surface of the seat.

(e) Position the upper arms parallel to the spine and rotate the dummy's lower arms until the dummy's hands contact the seat cushion.

(f) Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and then close all vehicle doors.

(g) Wait 10 seconds, then check whether the air bag is deactivated.

S22.2.2.4 *Sitting on seat edge, spine vertical, hands by the dummy's sides.*

(a) In the case of vehicles equipped with bench seats, position the midsagittal plane of the dummy vertically and parallel to the vehicle's longitudinal centerline and the same distance from the vehicle's longitudinal centerline as the center of the steering wheel. In the case of vehicles equipped with bucket seats, position the

midsagittal plane of the dummy vertically such that it coincides with the longitudinal centerline of the seat cushion.

(b) Position the dummy in the seated position forward in the seat such that the legs are vertical and the back of the legs rest against the front of the seat with the spine vertical. If the dummy's feet contact the floor pan, rotate the legs forward until the dummy is resting on the seat with the feet positioned flat on the floor pan and the dummy spine vertical. To keep the dummy in position, a material with a maximum breaking strength of 311 N (70 lb) may be used to hold the dummy.

(c) Place the upper arms parallel to the spine.

(d) Lower the dummy's lower arms such that they contact the seat cushion.

(e) Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and then close all vehicle doors.

(f) Wait 10 seconds, then check whether the air bag is deactivated.

S22.2.2.5 *Standing on seat, facing forward.*

(a) In the case of vehicles equipped with bench seats, position the midsagittal plane of the dummy vertically and parallel to the vehicle's longitudinal centerline and the same distance from the vehicle's longitudinal centerline as the center of the steering wheel rim. In the case of vehicles equipped with bucket seats, position the midsagittal plane of the dummy vertically such that it coincides with the longitudinal centerline of the seat cushion. Position the dummy in a standing position on the right front outboard seat cushion facing the front of the vehicle while placing the heels of the dummy's feet in contact with the seat back.

(b) Rest the dummy against the seat back, with the arms parallel to the spine.

(c) If the head contacts the vehicle roof, recline the seat so that the head is no longer in contact with the vehicle roof, but allow no more than 5 mm (0.2 in) distance between the head and the roof. If the seat does not sufficiently recline to allow clearance, omit the test.

(d) If necessary use a material with a maximum breaking strength of 311 N (70 lb) or spacer blocks to keep the dummy in position.

(e) Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and then close all vehicle doors.

(f) Wait 10 seconds, then check whether the air bag is deactivated.

S22.2.2.6 *Kneeling on seat, facing forward.*

(a) In the case of vehicles equipped with bench seats, position the midsagittal plane of the dummy vertically and parallel to the vehicle's longitudinal centerline and the same distance from the vehicle's longitudinal centerline as the center of the steering wheel. In the case of vehicles equipped with bucket seats, position the midsagittal plane of the dummy vertically such that it coincides with the longitudinal centerline of the seat cushion.

(b) Position the dummy in a kneeling position in the right front outboard seat with the dummy facing the front of the vehicle with its toes at the intersection of the seat back and seat cushion. Position the dummy so that the spine is vertical. Push down on the legs so that they contact the seat as much as possible and then release. Place the arms parallel to the spine.

(c) If necessary use a material with a maximum breaking strength of 311 N (70 lb) or spacer blocks to keep the dummy in position.

(d) Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and then close all vehicle doors.

(e) Wait 10 seconds, then check whether the air bag is deactivated.

#### S22.2.2.7 *Kneeling on seat, facing rearward.*

(a) In the case of vehicles equipped with bench seats, position the midsagittal plane of the dummy vertically and parallel to the vehicle's longitudinal centerline and the same distance from the vehicle's longitudinal centerline as the center of the steering wheel. In the case of vehicles equipped with bucket seats, position the midsagittal plane of the dummy vertically such that it coincides with the longitudinal centerline of the seat cushion.

(b) Position the dummy in a kneeling position in the right front outboard seat with the dummy facing the rear of the vehicle. Position the dummy such that the dummy's head and torso are in contact with the seat back. Push down on the legs so that they contact the seat as much as possible and then release. Place the arms parallel to the spine.

(c) Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and then close all vehicle doors.

(d) Wait 10 seconds, then check whether the air bag is deactivated.

S22.2.2.8 *Lying on seat.* This test is performed only in vehicles with 3 designated front seating positions.

(a) Lay the dummy on the right front outboard seat such that the following criteria are met:

(1) The midsagittal plane of the dummy is horizontal,

(2) The dummy's spine is perpendicular to the vehicle's longitudinal axis,

(3) The dummy's arms are parallel to its spine,

(4) A plane passing through the two shoulder joints of the dummy is vertical,

(5) The anterior of the dummy is facing the vehicle front,

(6) The head of the dummy is positioned towards the passenger door, and

(7) The horizontal distance from the topmost point of the dummy's head to the vehicle door is 50 to 100 mm (2–4 in).

(8) The dummy is as far back in the seat as possible.

(b) Rotate the thighs as much as possible toward the chest of the dummy and rotate the legs as much as possible against the thighs.

(c) Move the dummy's upper left arm parallel to the vehicle's transverse plane and the lower left arm 90 degrees to the upper arm. Rotate the lower left arm about the elbow joint and toward the dummy's head until movement is obstructed.

(d) Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and then close all vehicle doors.

(e) Wait 10 seconds, then check whether the air bag is deactivated.

#### S22.3 *Static tests of automatic suppression feature which shall result in activation of the passenger air bag system.*

S22.3.1 Each vehicle certified to this option shall comply in tests conducted with the right front outboard seating position at the full rearward, middle, and, subject to S16.3.3.1.8, full forward positions. All tests are conducted with the seat height, if adjustable, in the mid-height position.

S22.3.2 Place a 49 CFR part 572 subpart O 5th percentile adult female test dummy at the right front outboard seating position of the vehicle, in accordance with procedures specified in S16.3.3 of this standard, except as specified in S22.3.1. Do not fasten the seat belt.

S22.3.3 Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and then close all vehicle doors.

S22.3.4 Wait 10 seconds, then check whether the air bag system is activated.

#### S22.4 *Low risk deployment tests.*

S22.4.1 Each vehicle that is certified as complying with S21.4 shall meet the following test requirements with the 49 CFR part 572, subpart P 3-year-old child dummy in both of the following

positions: Position 1 (S22.4.2) and Position 2 (S22.4.3).

S22.4.1.1 Locate and mark a point on the front of the dummy's chest jacket on the midsagittal plane which is 114 mm (4.5 in)  $\pm$  3 mm ( $\pm$  0.1 in) along the surface of the skin from the top of the skin at the neck line. This is referred to as "Point 1."

S22.4.1.2 Locate the vertical plane parallel to the vehicle longitudinal centerline through the geometric center of the opening through which the right front air bag deploys into the occupant compartment. This is referred to as "Plane D."

S22.4.1.3 Locate the horizontal plane through the geometric center of the opening through which the right front air bag deploys into the occupant compartment. This is referred to as "Plane C."

#### S22.4.2 *Position 1 (chest on instrument panel).*

S22.4.2.1 If a seat is adjustable in the fore and aft and/or vertical directions, move the seat to the rear-most seating position and full-down height adjustment. If the seat cushion adjusts fore and aft, independent of the entire seat, adjust the seat cushion to the full-rearward position. If the seat back is adjustable, place the seat back at the manufacturer's nominal design seat back angle for a 50th percentile adult male as specified in S8.1.3 of FMVSS No. 208. Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. If adjustable, set the head restraint in the lowest position.

S22.4.2.2 Place the dummy in the front passenger seat such that:

S22.4.2.2.1 The midsagittal plane is coincident with Plane D.

S22.4.2.2.2 The legs are initially vertical to the floor pan. The legs and thighs shall be adjusted to the extent necessary for the head/torso to contact the instrument panel as specified in S22.4.2.3.

S22.4.2.2.3 The upper arms are parallel to the torso and the hands are in contact with the thighs.

S22.4.2.3 Without changing the seat position and with the dummy's thorax instrument cavity rear face vertical, move the dummy forward until the dummy head/torso contacts the instrument panel. If the dummy loses contact with the seat cushion because of the forward movement, maintain the height of the dummy and the angle of the thigh with respect to the torso. Once contact is made, raise the dummy vertically until Point 1 lies in Plane C. If the dummy's head contacts the windshield and keeps Point 1 from

reaching Plane C, lower the dummy until there is no more than 5 mm (0.2 in) clearance between the head and the windshield. (The dummy shall remain in contact with the instrument panel while being raised or lowered, which may change the dummy's fore-aft position.)

S22.4.2.4 If possible, position the legs of the dummy so that the legs are vertical and the feet rest flat on the floor pan of the vehicle. If the positioning against the instrument panel does not allow the feet to be on the floor pan, the feet shall be parallel to the floor pan.

S22.4.2.5 If necessary, material with a maximum breaking strength of 311 N (70 lb) and spacer blocks may be used to support the dummy in position. The material should support the torso rather than the head. Support the dummy so that there is minimum interference with the full rotational and translational freedom for the upper torso of the dummy and the material does not interfere with the air bag.

S22.4.3 *Position 2 (head on instrument panel).*

S22.4.3.1 Place the passenger seat in the full rearward seating position. Place the seat back at the manufacturer's nominal design seat back angle for a 50th percentile adult male as specified in S8.1.3 of FMVSS No. 208. If adjustable in the vertical direction, place the seat in the mid-height position. If the seat cushion adjusts fore and aft, independent of the entire seat, adjust the seat cushion to the full rearward position. Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. If adjustable, set the head restraint in the lowest position.

S22.4.3.2 Place the dummy in the front passenger seat such that:

S22.4.3.2.1 The midsagittal plane is coincident with Plane D.

S22.4.3.2.2 The legs are vertical to the floor pan, the back of the legs are in contact with the seat cushion, and the dummy's thorax instrument cavity rear face is vertical. If it is not possible to position the dummy with the legs in the prescribed position, rotate the legs forward until the dummy is resting on the seat with the feet positioned flat on the floor pan, and the back of the legs are in contact with the front of the seat cushion. Set the transverse distance between the longitudinal centerlines at the front of the dummy's knees at 86 to 91 mm (3.4 to 3.6 in), with the thighs and the legs of the dummy in vertical planes.

S22.4.3.2.3 The upper arms are parallel to the torso and the hands are in contact with the thighs.

S22.4.3.3 Move the seat forward, while maintaining the thorax instrument cavity rear face orientation until any part of the dummy contacts the vehicle's instrument panel.

S22.4.3.4 If dummy contact has not been made with the vehicle's instrument panel at the full forward seating position of the seat, slide the dummy forward until contact is made. Maintain the thorax instrument cavity rear face vertical orientation, the height of the dummy, and the angle of the thigh with respect to the horizontal.

S22.4.3.5 If head/torso contact with the instrument panel has not been made, maintain the angle of the thighs with respect to the horizontal while applying a force towards the front of the vehicle on the spine of the dummy between the shoulder joints until the head or torso comes into contact with the vehicle's instrument panel.

S22.4.3.6 If necessary, material with a maximum breaking strength of 311 N (70 lb) and spacer blocks may be used to support the dummy in position. The material should support the torso rather than the head. Support the dummy so that there is minimum interference with the full rotational and translational freedom for the upper torso of the dummy and the material does not interfere with the air bag.

S22.4.4 Deploy the right front outboard frontal air bag system. If the frontal air bag system contains a multistage inflator, the vehicle shall be able to comply with the injury criteria at any stage or combination of stages or time delay between successive stages that could occur in a rigid barrier crash test at or below 26 km/h (16 mph), under the test procedure specified in S22.5.

S22.5 *Test procedure for determining stages of air bag systems subject to low risk deployment (low speed crashes) test requirement.*

S22.5.1 The test described in S22.5.2 shall be conducted with an unbelted 50th percentile adult male test dummy in the driver seating position according to S8 of FMVSS No. 208 as it applies to that seating position and an unbelted 5th percentile adult female test dummy either in the right front seating position according to S16 as it applies to that seating position or at any fore-aft seat position on the passenger side.

S22.5.2 Impact the vehicle traveling longitudinally forward at any speed, up to and including 26 km/h (16 mph) into a fixed rigid barrier that is perpendicular  $\pm 5$  degrees to the line of travel of the vehicle under the applicable conditions of S8 and S10 of FMVSS No. 208, and S16 of this standard excluding S10.7, S10.8 and

S10.9 of FMVSS No. 208 and S16.3.5 of this standard.

S22.5.3 Determine which inflation stage or combination of stages are fired and determine the time delay between successive stages. That stage or combination of stages, with time delay between successive stages, shall be used in deploying the air bag when conducting the low risk deployment tests described in S22.4, S24.4, and S26.

S22.5.4 If the air bag does not deploy in the impact described in S22.5.2, the low risk deployment tests described in S22.4, S24.4, and S26 shall be conducted with all stages using the maximum time delay between stages.

S23 [Reserved] See § 571.208, S23.

S24 *Test procedure for S23 of FMVSS No. 208.*

S24.1 *General provisions and definitions.*

S24.1.1 Tests specifying the use of a booster seat may be conducted using any such restraint listed in section D of Appendix A of FMVSS No. 208. The booster seat may be unused or have been previously used only for automatic suppression. If it has been used, there shall not be any visible damage prior to the test. Booster seats are to be used in the manner appropriate for a 6-year-old child of the same height and weight as the 6-year-old child dummy.

S24.1.2 Unless otherwise specified, each vehicle certified to this option shall comply in tests conducted with the right front outboard seating position at the full rearward seat track position, the middle seat track position, and the full forward seat track position. If the dummy contacts the vehicle interior, move the seat rearward to the next detent that provides clearance. If the seat is a power seat, move the seat rearward while assuring that there is a maximum of 5 mm (0.2 in) distance between the vehicle interior and the point on the dummy that would first contact the vehicle interior. All tests are conducted with the seat height, if adjustable, in the mid-height position, and with the seat back angle, if adjustable, at the manufacturer's nominal design seat back angle for a 50th percentile adult male as specified in S8.1.3 of FMVSS No. 208.

S24.1.3 Except as otherwise specified, if the booster seat has an anchorage system as specified in S5.9 of FMVSS No. 213 and is tested in a vehicle with a right front outboard vehicle seat that has an anchorage system as specified in FMVSS No. 225, the vehicle shall comply with the belted test conditions with the restraint anchorage system attached to the vehicle seat anchorage system and the vehicle seat belt unattached. It shall also

comply with the belted test conditions with the restraint anchorage system unattached to the vehicle seat anchorage system and the vehicle seat belt attached. The vehicle shall comply with the unbelted test conditions with the restraint anchorage system unattached to the vehicle seat anchorage system.

S24.1.4 Do not attach any tethers.

S24.1.5 The definitions provided in S16.3.1 through S16.3.10 apply to the tests specified in S24.

S24.1.6 For leg and thigh angles, use the following references:

S24.1.6.1 *Thigh*—a straight line on the thigh skin between the center of the 5/16–18 UNC–2B threaded access hole in the upper leg clamp (drawing 127–4004, 6 YR H3—upper leg clamp) and the knee screw (part 9000248 in drawing 127–4000–1 & –2, leg assembly).

S24.1.6.2 *Leg*—a straight line on the leg skin between the center of the lower leg screw (part 9001170 in drawing 127–4000–1 & –2, leg assembly) and the knee screw (part 9000248 in drawing 127–4000–1 & –2, leg assembly).

S24.2 *Static tests of automatic suppression feature which shall result in deactivation of the passenger air bag.* Each vehicle that is certified as complying with S23.2 of FMVSS No. 208 shall meet the following test requirements.

S24.2.1 Except as provided in S24.2.2, conduct all tests as specified in S22.2, except that the 49 CFR part 572 subpart N 6-year-old child dummy shall be used.

S24.2.2 *Exceptions.* The tests specified in the following paragraphs of S22.2 need not be conducted: S22.2.1.5, S22.2.2.3, S22.2.2.5, S22.2.2.6, S22.2.2.7, and S22.2.2.8.

S24.2.3 *Sitting back in the seat and leaning on the right front passenger door.*

(a) Position the dummy in the seated position and place the dummy in the right front outboard seat. For bucket seats, position the midsagittal plane of the dummy vertically such that it coincides with the longitudinal center line of the seat cushion. For bench seats, position the midsagittal plane of the dummy vertically and parallel to the vehicle's longitudinal centerline and the same distance from the longitudinal centerline of the vehicle as the center of the steering wheel.

(b) Place the dummy's back against the seat back and rest the dummy's thighs on the seat cushion.

(c) Allow the legs and feet of the dummy to extend off the surface of the seat. If this positioning of the dummy's legs is prevented by contact with the instrument panel, move the seat

rearward to the next detent that provides clearance. If the seat is a power seat, move the seat rearward, while assuring that there is a maximum of 5 mm (0.2 in) distance between the vehicle interior and the part of the dummy that was in contact with the vehicle interior.

(d) Rotate the dummy's upper arms toward the seat back until they make contact.

(e) Rotate the dummy's lower arms down until they contact the seat.

(f) Close the vehicle's passenger-side door and then start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system.

(g) Push against the dummy's left shoulder to lean the dummy against the door; close all remaining doors.

(h) Wait 10 seconds, then check whether the air bag is deactivated.

S24.3 Static tests of automatic suppression feature which shall result in activation of the passenger air bag system.

S24.3.1 Each vehicle certified to this option shall comply in tests conducted with the right front outboard seating position at the full rearward seat track position, the middle seat track position, and, subject to S16.3.3.1.8, the full forward seat track position. All tests are conducted with the seat height, if adjustable, in the mid-height position.

S24.3.2 Place a 49 CFR part 572 subpart O 5th percentile adult female test dummy at the right front outboard seating position of the vehicle, in accordance with procedures specified in S16.3.3 of this standard, except as specified in S24.3.1. Do not fasten the seat belt.

S24.3.3 Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and then close all vehicle doors.

S24.3.4 Wait 10 seconds, then check whether the air bag system is activated.

S24.4 *Low risk deployment tests.*

S24.4.1 Each vehicle that is certified as complying with S23.4 of FMVSS No. 208 shall meet the following test requirements with the 49 CFR part 572 subpart N 6-year-old child dummy in both of the following positions: Position 1 (S24.4.2) or Position 2 (S24.4.3).

S24.4.1.1 Locate and mark a point on the front of the dummy's chest jacket on the midsagittal plane which is 139 mm (5.5 in)  $\pm$  3 mm ( $\pm$  0.1 in) along the surface of the skin from the top of the skin at the neckline. This is referred to as "Point 1."

S24.4.1.2 Locate the vertical plane parallel to the vehicle longitudinal centerline through the geometric center of the opening through which the right

front air bag deploys into the occupant compartment. This is referred to as "Plane D."

S24.4.1.3 Locate the horizontal plane through the geometric center of the opening through which the right front air bag deploys into the occupant compartment. This is referred to as "Plane C."

S24.4.2 *Position 1 (chest on instrument panel).*

S24.4.2.1 If a seat is adjustable in the fore and aft and/or vertical directions, move the seat to the rearmost seating position and full down height adjustment. If the seat cushion adjusts fore and aft, independent of the entire seat, adjust the seat cushion to the full rearward position. If the seat back is adjustable, place the seat back at the manufacturer's nominal design seat back angle for a 50th percentile adult male as specified in S8.1.3. Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. Position an adjustable head restraint in the lowest position.

S24.4.2.2 Remove the legs of the dummy at the pelvic interface.

S24.4.2.3 Place the dummy in the front passenger seat such that:

(a) The midsagittal plane is coincident with Plane D.

(b) The upper arms are parallel to the torso and the hands are next to where the thighs would be.

(c) Without changing the seat position and with the dummy's thorax instrument cavity rear face 6 degrees forward of the vertical, move the dummy forward until the dummy head/torso contacts the instrument panel. If the dummy loses contact with the seat cushion because of the forward movement, maintain the height of the dummy while moving the dummy forward. If the head contacts the windshield before head/torso contact with the instrument panel, maintain the thorax instrument cavity angle and move the dummy forward such that the head is following the angle of the windshield until there is head/torso contact with the instrument panel. Once contact is made, raise or lower the dummy vertically until Point 1 lies in Plane C. If the dummy's head contacts the windshield and keeps Point 1 from reaching Plane C, lower the dummy until there is no more than 5 mm (0.2 in) clearance between the head and the windshield. (The dummy shall remain in contact with the instrument panel while being raised or lowered which may change the dummy's fore-aft position.)

S24.4.2.4 If necessary, material with a maximum breaking strength of 311 N

(70 lb) and spacer blocks may be used to support the dummy in position. The material should support the torso rather than the head. Support the dummy so that there is minimum interference with the full rotational and translational freedom for the upper torso of the dummy and the material does not interfere with the air bag.

**S24.4.3 Position 2 (head on instrument panel).**

**S24.4.3.1** Place the passenger seat in the full rearward seating position. Place the seat back at the manufacturer's nominal design seat back angle for a 50th percentile adult male as specified in S8.1.3 of FMVSS No. 208. If adjustable in the vertical direction, place the seat in the mid-height position. If the seat cushion adjusts fore and aft, independent of the entire seat, adjust the seat cushion to the full rearward position. Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. Position an adjustable head restraint in the lowest position.

**S24.4.3.2** Place the dummy in the front passenger seat such that:

(a) The midsagittal plane is coincident with Plane D.

(b) The legs are perpendicular to the floor pan, the back of the legs are in contact with the seat cushion, and the dummy's thorax instrument cavity rear face is 6 degrees forward of vertical. If it is not possible to position the dummy with the legs in the prescribed position, rotate the legs forward until the dummy is resting on the seat with the feet positioned flat on the floor pan and the back of the legs are in contact with the front of the seat cushion. Set the transverse distance between the longitudinal centerlines at the front of the dummy's knees at 112 to 117 mm (4.4. to 4.6 in), with the thighs and the legs of the dummy in vertical planes.

(c) The upper arms are parallel to the torso and the hands are in contact with the thighs. **S24.4.3.3** Move the seat forward, while maintaining the thorax instrument cavity rear face orientation until any part of the dummy contacts the vehicle's instrument panel.

**S24.4.3.4** If dummy contact has not been made with the vehicle's instrument panel at the full forward seating position of the seat, slide the dummy forward on the seat until contact is made. Maintain the thorax instrument cavity rear face orientation, the height of the dummy, and the angle of the thigh with respect to the horizontal.

**S24.4.3.5** If head/torso contact has not been made with the instrument panel, maintain the angle of the thighs

with respect to the horizontal while applying a force towards the front of the vehicle on the spine of the dummy between the shoulder joints until the head/torso comes into contact with the vehicle's instrument panel.

**S24.4.3.6** If necessary, material with a maximum breaking strength of 311 N (70 lb) and spacer blocks may be used to support the dummy in position. Material should support the torso rather than the head. Support the dummy so that there is minimum interference with the full rotational and translational freedom for the upper torso of the dummy and the material does not interfere with the air bag.

**S24.4.4** Deploy the right front outboard frontal air bag system. If the frontal air bag system contains a multistage inflator, the vehicle shall be able to comply with the injury criteria at any stage or combination of stages and at any time delay between successive stages that could occur in a rigid barrier crash at speeds up to 26 km/h (16 mph) under the test procedure specified in S22.5.

**S25** [Reserved] See § 571.208, S25.

**S26 Procedure for low risk deployment tests of driver air bag.**

**S26.1** Each vehicle that is certified as complying with S25.3 of FMVSS No. 208 shall meet the requirements of S25.3 and S25.4 with the 49 CFR part 572 subpart O 5th percentile adult female dummy in both of the following positions: Driver position 1 (S26.2) and Driver position 2 (S26.3).

**S26.2 Driver position 1 (chin on module).**

**S26.2.1** Adjust the steering controls so that the steering wheel hub is at the geometric center of the locus it describes when it is moved through its full range of driving positions. If there is no setting at the geometric center, position it one setting lower than the geometric center. Set the rotation of the steering wheel so that the vehicle wheels are pointed straight ahead.

**S26.2.2** Locate the vertical plane parallel to the vehicle longitudinal axis which passes through the geometric center of the opening through which the driver air bag deploys into the occupant compartment. This is referred to as "Plane E."

**S26.2.3** Place the seat in the full rearward seating position. If adjustable in the vertical direction, place the seat in the mid-height position. If the seat cushion adjusts fore and aft, independent of the entire seat, adjust the seat cushion to the full rearward position. If the seat back is adjustable, place the seat back at the manufacturer's nominal design seat back angle for a 50th percentile adult male as specified

in S8.1.3 of FMVSS No. 208. If the seat cushion contains an independent seat cushion angle adjustment mechanism, adjust the seat cushion angle to the middle of the range of seat cushion angles. Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. Position an adjustable head restraint in the lowest position.

**S26.2.4** Place the dummy in the driver's seat such that:

**S26.2.4.1** The midsagittal plane is coincident with Plane E.

**S26.2.4.2** The legs are perpendicular to the floor pan and the back of the legs are in contact with the seat cushion. The legs may be adjusted if necessary to achieve the final head position.

**S26.2.4.3** The dummy's thorax instrument cavity rear face is 6 degrees forward (toward the front of the vehicle) of the steering wheel angle (*i.e.*, if the steering wheel angle is 25 degrees from vertical, the thorax instrument cavity rear face angle is 31 degrees).

**S26.2.4.4** The initial transverse distance between the longitudinal centerlines at the front of the dummy's knees is 160 to 170 mm (6.3 to 6.7 in), with the thighs and legs of the dummy in vertical planes.

**S26.2.4.5** The upper arms are parallel to the torso and the hands are in contact with the thighs.

**S26.2.5** Maintaining the spine angle, slide the dummy forward until the head/torso contacts the steering wheel.

**S26.2.6** While maintaining the spine angle, adjust the height of the dummy so that the bottom of the chin is in the same horizontal plane as the highest point of the air bag module cover (dummy height can be adjusted using the seat height adjustments and/or spacer blocks). If the seat prevents the bottom of the chin from being in the same horizontal plane as the module cover, adjust the dummy height to as close to the prescribed position as possible.

**S26.2.7** If necessary, material with a maximum breaking strength of 311 N (70 lb) and spacer blocks may be used to support the dummy in position. The material should support the torso rather than the head. Support the dummy so that there is minimum interference with the full rotational and translational freedom for the upper torso of the dummy and the material does not interfere with the air bag.

**S26.3 Driver position 2 (chin on rim).**

**S26.3.1** Place the seat in the full rearward seating position. If adjustable in the vertical direction, place the seat in the mid-height position. If the seat



cushion adjusts fore and aft, independent of the entire seat, adjust the seat cushion to the full rearward position. If the seatback is adjustable, place the seat back at the manufacturer's nominal design seat back angle for a 50th percentile adult male as specified in S8.1.3 of FMVSS No. 208. If the seat cushion contains an independent seat cushion angle adjustment mechanism, adjust the seat cushion angle to the middle of the range of seat cushion angles. Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. Position an adjustable head restraint in the lowest position.

S26.3.2 Adjust the steering controls so that the steering wheel hub is at the geometric center of the locus it describes when it is moved through its full range of driving positions. If there is no setting at the geometric center, position it one setting lower than the geometric center. Set the rotation of the steering wheel so that the vehicle wheels are pointed straight ahead.

S26.3.3 Locate the vertical plane parallel to the vehicle longitudinal axis which passes through the geometric center of the opening through which the driver air bag deploys into the occupant compartment. This is referred to as "Plane E."

S26.3.4 Place the dummy in the driver's seat position such that:

S26.3.4.1 The midsagittal plane is coincident with Plane E.

S26.3.4.2 The legs are perpendicular to the floor pan and the back of the legs are in contact with the seat cushion. The legs may be adjusted if necessary to achieve the final head position.

S26.3.4.3 The dummy's thorax instrument cavity rear face is 6 degrees forward (toward the front of the vehicle) of the steering wheel angle (*i.e.*, if the steering wheel angle is 25 degrees from vertical, the thorax instrument cavity rear face angle is 31 degrees).

S26.3.4.4 The initial transverse distance between the longitudinal centerlines at the front of the dummy's knees is 160 to 170 mm (6.3 to 6.7 in), with the thighs and legs of the dummy in vertical planes.

S26.3.4.5 The upper arms are parallel to the torso and the hands are in contact with the thighs.

S26.3.5 Maintaining the spine angle, slide the dummy forward until the head/torso contacts the steering wheel.

S26.3.6 While maintaining the spine angle, position the dummy so that a point on the chin 40 mm below the center of the mouth (chin point) is in contact with the rim of the uppermost portion of the steering wheel. If the

dummy's head contacts the vehicle windshield or upper interior before the prescribed position can be obtained, lower the dummy until there is no more than 5 mm (0.2 in) clearance between the vehicle's windshield or upper interior, as applicable.

S26.3.7 If the steering wheel can be adjusted so that the chin point can be in contact with the rim of the uppermost portion of the steering wheel, adjust the steering wheel to that position and readjust the spine angle to coincide with the steering wheel angle. Position the dummy so that the chin point is in contact with the rim of the uppermost portion of the steering wheel.

S26.3.8 If necessary, material with a maximum breaking strength of 311 N (70 lb) and spacer blocks may be used to support the dummy in position. The material should support the torso rather than the head. Support the dummy so that there is minimum interference with the full rotational and translational freedom for the upper torso of the dummy and the material does not interfere with the air bag.

S26.4 Deploy the left front outboard frontal air bag system. If the air bag system contains a multistage inflator, the vehicle shall be able to comply with the injury criteria at any stage or combination of stages or time delay between successive stages that could occur in a rigid barrier crash at speeds up to 26 km/h (16 mph) under the test procedure specified in S22.5.

S27 through S29 [Reserved] See § 571.208, S27 through S29.

Issued on: January 16, 2004.

**Jeffrey W. Runge,**  
Administrator.

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## DEPARTMENT OF COMMERCE

### National Oceanic and Atmospheric Administration

#### 50 CFR Part 679

[Docket No. 031126297-3297-01; I.D. 012204A]

#### Fisheries of the Exclusive Economic Zone Off Alaska; Pollock in Statistical Area 610 of the Gulf of Alaska

**AGENCY:** National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

**ACTION:** Closure.

**SUMMARY:** NMFS is prohibiting directed fishing for pollock in Statistical Area

610 of the Gulf of Alaska (GOA). This action is necessary to prevent exceeding the first seasonal allowance of the pollock interim total allowable catch (TAC) for Statistical Area 610 of the GOA.

**DATES:** Effective 1200 hrs, Alaska local time (A.l.t.), January 22, 2004, until superseded by the notice of Final 2004 Harvest Specifications of Groundfish for the GOA, which will be published in the **Federal Register**.

**FOR FURTHER INFORMATION CONTACT:** Josh Keaton, 907-586-7228.

**SUPPLEMENTARY INFORMATION:** NMFS manages the groundfish fishery in the GOA exclusive economic zone according to the Fishery Management Plan for Groundfish of the Gulf of Alaska (FMP) prepared by the North Pacific Fishery Management Council under authority of the Magnuson-Stevens Fishery Conservation and Management Act. Regulations governing fishing by U.S. vessels in accordance with the FMP appear at subpart H of 50 CFR part 600 and 50 CFR part 679.

The first seasonal allowance of the pollock interim TAC in Statistical Area 610 of the GOA is 2,894 metric tons (mt) as established by the interim 2004 harvest specifications for groundfish of the GOA (68 FR 67964, December 5, 2003).

In accordance with § 679.20(d)(1)(i), the Administrator, Alaska Region, NMFS (Regional Administrator), has determined that the first seasonal allowance of the pollock interim TAC in Statistical Area 610 will soon be reached. Therefore, the Regional Administrator is establishing a directed fishing allowance of 2,694 mt, and is setting aside the remaining 200 mt as bycatch to support other anticipated groundfish fisheries. In accordance with § 679.20(d)(1)(iii), the Regional Administrator finds that this directed fishing allowance will soon be reached. Consequently, NMFS is prohibiting directed fishing for pollock in Statistical Area 610 of the GOA.

Maximum retainable amounts may be found in the regulations at § 679.20(e) and (f).

#### Classification

This action responds to the best available information recently obtained from the fishery. The Assistant Administrator for Fisheries, NOAA, (AA), finds good cause to waive the requirement to provide prior notice and opportunity for public comment pursuant to the authority set forth at 5 U.S.C. 553(b)(B) as such requirement is impracticable and contrary to the public interest. This requirement is