

We are amending several seat positioning and dummy positioning test procedures for the purpose of clarification and to accommodate design diversity. Based on petitioner requests, the dummy positioning procedures for the barrier test and the low risk deployment test with the 5th percentile adult female test dummy are being amended for clarity. The positions will be maintained as initially intended, but the regulatory text is modified to clarify the descriptions of seat adjustment controls and to add a definition of "seat cushion reference." To clarify the seat set-up for the infant low risk deployment test using RFCRSs, we are amending the regulatory text to specify that the test is to be performed with the seat in the full forward position only. To further clarify the infant low risk deployment test seat set-up and eliminate any inadvertent confusion created by the December 2001 final rule, we are also amending the seating positioning procedure for the 64 km/h (40 mph) indicant test to specify that it be performed at the full forward, middle, and full rearward seat positions. We are denying petitioners' request that the passenger low risk deployment indicant test only be performed with the seat in the mid-track position.

As a result of issues raised by petitioners and to address the use of asymmetrical seats, the dummy positioning procedures for the 5th percentile adult female test dummy in the barrier tests and the procedures for advanced air bag tests with a CRS now reference the seating reference point (SgRP) when determining the longitudinal centerline of a bucket seat cushion.

In this document, we also address several issues that deal with dummy positioning procedures. We are establishing a prioritized list of three foot positioning adjustments to clear undesirable contact by the left foot of the 5th percentile adult female test dummy in the barrier tests. In response to a request for guidance in the instances where the heel of the right foot cannot initially contact the vehicle floor, the agency is amending the compliance test procedure to allow for the extension of the lower leg towards the accelerator. The procedure for positioning the test dummy in the driver's seat for the low risk deployment test is amended to limit adjustment positions so there is no contact between the dummy legs and the steering wheel. As a result of issues raised by petitioners, the positioning procedures for the 3-year-old and 6-year-old dummies in low risk deployment testing are amended to indicate that as the

dummy is moved forward its height is to be maintained from the point the dummy loses contact with the seat cushion. The low risk deployment testing positioning procedures are also amended to reflect that the femur angle of the test dummy with respect to the horizontal plane must be maintained.

In response to petitions to amend the reference point for positioning out-of-position dummies, we are establishing an objective method to transfer a point onto the air bag cover, relying on the volumetric center of the folded air bag and the volumetric center of the static inflated air bag.

This document also deals with issues associated with child restraints specified in Appendix A of FMVSS No. 208, and sets forth the methodology that the agency will utilize in making changes to the appendix in the future. Specifically, the appendix is amended to remove CRSs that are no longer in production and add CRSs that have the LATCH system. Several minor, non-substantive changes are also made to the final rule.

While the effective date of the amendments adopted today is sixty days after publication, manufacturers may choose to comply with the new requirements prior to such time. If asked, manufacturers will be required to tell NHTSA which set of requirements it relied on in certifying a particular vehicle.

#### IV. Seat Positioning Procedures

##### *A. Barrier Test (5th Percentile Adult Female Test Dummy), Low Risk Deployment Test (5th Percentile Adult Female, 3-Year-Old, and 6-Year-Old Test Dummies), and Other Test Procedures*

Based on requests for clarification in several petitions for reconsideration, we are amending the regulatory language to clarify the seat positioning procedures for the barrier test and low risk deployment testing procedures. In their petitions for reconsideration, Mitsubishi and Autoliv requested clarification of the requirements for seat cushion height and angle as they relate to the mid-height determination. The December 2001 final rule amended the seating procedure for the 5th percentile adult female test dummy in the barrier test. The amendments addressed the potential problem of early dummy contact with the steering wheel, steering column, or knee bolster when the dummy is in the full forward position.

Autoliv stated that there is sometimes a conflict between achieving the true midpoint height and maintaining the seat cushion reference angle when

following the seating procedure. With respect to S16.2.10.3.2, Autoliv stated:

The problem arises if [the correct mid-position] results in a discrepancy between the seat cushion angle and the "seat cushion reference angle"—where do you hold the height as you adjust the cushion angle? It would seem logical that the midpoint height should be held at the h-point, but this is not the most convenient reference to use, as it is not an actual part of the seat. (Docket No. NHTSA 2001-11110-7.)

Mitsubishi questioned whether the revised S16.2.10.3.3 takes into account the type of seat cushion capable of being adjusted up and down independently of the seat back, or if S16.2.10.3.3 applies only to up and down height adjustment mechanisms as they relate to the whole seat.

Ford, in its RFI, asked a related question about the position of the seat in the low risk deployment test with the 5th percentile adult female test dummy (S26.2.3). Ford asked:

Is a seat with separate controls/mechanism for adjusting the front and rear seat height an example of an "independent seat cushion angle adjustment mechanism"? If it is, then would setting front and rear heights independently to their respective mid height positions represent the proper seat cushion angle setting?

Based on these petitions, there appears to be some confusion in how to position the seat, both in terms of height and seat cushion angle, as well as the interaction between these two requirements. Therefore, the agency is amending the regulatory language to clarify the positioning procedures in S16.2 and S26.2 of FMVSS No. 208. The position will be maintained as initially intended, but is now clarified by the modification of the descriptions of seat adjustment controls and the addition of a definition of "seat cushion reference."

The regulatory text frequently uses the term "controls which move the seat fore and aft," and in traditional seat designs this would refer to the seat track adjustment. In fully powered seats there is typically an analogous control. However, both the manual and powered adjustments often also cause the seat height to change slightly, due to the pan/seat track angle from horizontal. As a result there may not be a seat adjustment mechanism that solely moves the seat fore and aft. Therefore, in S16.2 and S26.2, we are amending "seat adjustment" to include the phrase, "control which *primarily* moves the seat fore and aft." (Emphasis added.) For consistency, similar amendments are being made to S16.3 and S26.3.

S20, S22, and S24, which define test procedures for the suppression and low risk deployment testing for 12-month-