

material, it may be necessary to seal the material to reduce the venting. The volumetric center of the static fully inflated air bag is the second point that the deployment axis passes through.

The intersection of this reference axis and the surface of the dash board or steering wheel hub is the point used to line-up the dummy for the low risk deployment tests. When marking a target point at this intersection, we will allow a tolerance of ± 6 mm (± 0.2 in). A reference point on the dummy is aligned with vertical and horizontal planes that pass through the previously defined dash board or steering wheel hub target point. We will allow the reference planes a tolerance of ± 10 mm (± 0.4 in) about the target point. This is in recognition that the target point placement on the dash board or steering wheel hub will have inherent variability as will the placement of the dummy reference point on the target.

Key to this method is that the air bag must be inflated with sufficient pressure that no additional pressure alters the location of the center of volume. In addition, the inflated air bag must be stationary. Thus, it may be necessary to dampen any inherent oscillation. In reality, the agency anticipates that manufacturers will provide the target point based on their computer based drawings of the air bag system and surrounding structure.

The Static Inflated Air Bag Method provides a more objective procedure and more clearly defines the previous intent of the agency when it specified the "opening through which the air bag deploys." Furthermore, the Static Inflated Air Bag Method does not have the major disadvantages of the other methods discussed.

The agency will monitor the deployment path of air bags using high-speed cinematography during compliance and research test programs to confirm that our method continues to adequately represent the trajectory of the air bag itself.

C. Point 1 (Low Risk Deployment Test)

The December 2001 final rule redefined the location of "Point 1" to place it in a location relative to the upper edge of the chest jacket rather than the center of the chest/rib plate. ("Point 1" is a point on the child dummy's chest used for positioning the dummy in the low risk deployment tests under S22.4 and S24.4.) Toyota stated that the new location of "Point 1" on the flexible jackets of the 3-year-old and 6-year-old dummies will result in variability. Further, they petitioned that because this change was made without sufficient notice, the regulatory text

should revert back to that specified in the Advanced Air Bag final rule.

In the preamble to the December 2001 final rule we decided against measuring "Point 1" relative to fixed hardware because we determined that degree of specificity is not required, and also there is very little exposed fixed hardware from which to reference. While the chest jacket moves about the dummy's ribcage the upper edge of the chest jacket remains in largely the same location, making it a preferable point of reference. (66 FR 65376, 65395.) Furthermore, "Point 1" was defined in the Advanced Air Bag Rule using the chest/rib plate, but was redefined to address concerns raised by manufacturers' during the December 2000 technical workshop. Based on the above, we are denying Toyota's petition to amend the definition of "Point 1."

D. "Air Bag System"

DaimlerChrysler requested clarification of two issues pertaining to the phrase "deploy the right front outboard frontal air bag system," as it appears in the test procedures for the low risk deployment tests (S20.4.9, S22.4.4 and S24.4.4). First, DaimlerChrysler asked if it is the agency's intent to have, in addition to the air bag, other pyrotechnic devices such as seat belt pretensioners, inflatable seat belts, inflatable knee bolsters, etc. also deploy. Second, they point out that if the reference to "right" air bags is intended to signify passenger-side air bags, this would not be appropriate for right hand drive vehicles.

While neither "air bag [system]" or "inflatable restraint [system]" is defined in FMVSS No. 208 or any other place in 49 CFR Part 571, the intent of the term "air bag" is to describe the components that make up the passenger-side dash-mounted and driver-side steering wheel hub-mounted, inflatable restraints used for occupant protection in a frontal impact. This does not refer to any other pyrotechnic system such as a belt pretensioner or inflatable knee bolster. We are not aware of other pyrotechnic devices contemplated for vehicles in frontal impacts, such as inflatable belts or inflatable seat components intended to reduce occupant submarining, but such devices would not be included in the term "air bag."

The agency has no data on the effect deploying devices other than the frontal air bag will have on the Advanced Air Bag Rule low risk deployment test procedure. Nor do we have any data on the performance of any of these other pyrotechnic devices for out-of-position occupants in the field. We are

concerned that inflatable knee bolsters could negatively impact the repeatability of the low risk deployment tests, even though they would inflate in a real crash. Only the infant low risk deployment test is conducted with the seat belt fastened. Accordingly, any inflatable restraints incorporated into the seat belt should not impact the test. In order to maximize repeatability, we have decided that only the frontal air bag should be deployed in the low risk deployment tests. More specifically, only the dash or steering wheel mounted air bag should be deployed in these tests. We do not believe that the regulatory text should be amended to specify this because there may be a future frontal air bag mounting location other than the dash or steering wheel.

The agency also notes that for the suppression option, only the frontal air bag (dash or steering wheel mounted) should be suppressed. Again, we have no data to determine if other pyrotechnic devices should be suppressed in the suppression compliance option. These other devices should be suppressed at the option of the manufacturer, who should be in a position to determine the relative merits of suppression or deployment.

The DaimlerChrysler petition also indicated a concern with the reference to the "right front outboard frontal air bag" in S20.4.9, S22.4.4, and S24.4.4. The more appropriate term and the term used elsewhere is "passenger air bag." Accordingly, we have replaced "right front outboard" with "front outboard passenger" in these sections. For consistency the regulatory text has also been amended to replace the term "left front outboard frontal air bag" with "driver frontal air bag" in S26.4.

VII. Miscellaneous Issues

A. Separation in Test Speed Between the Low Risk Deployment Indicant and the Unbelted Barrier Test

DaimlerChrysler petitioned the agency to amend FMVSS No. 208 such that a 14 km/h (9 mph) separation exists between the low risk deployment indicant test (S22.5) and the Unbelted Barrier Test (S5.1.2(b) and S16.1(b)). The petition is denied. DaimlerChrysler had previously requested similar amendments in comments to the Supplementary Notice of Proposed Rulemaking (SNPRM) (64 FR 60556; November 5, 1999) and comments to the Advanced Air Bag Rule.³

In the SNPRM, the agency proposed a 29 km/h (18 mph) indicant test. We

³ See, DaimlerChrysler's comments and petitions at NHTSA-1999-6407-44 and NHTSA-2001-11110-7.