ALLIANCE FOR AUTOMOTIVE INNOVATION

April 9, 2021

Mr. Ryan Posten
Associate Administrator, Rulemaking
National Highway Traffic Safety Administration
1200 New Jersey Avenue, S.E.
Washington, D.C. 20590

RE: Advance Notice of Proposed Rulemaking (ANPRM); Federal Motor Vehicle Safety Standards (FMVSS): Test Procedures, Reopening of Comment Period, NHTSA Docket No. 2020-0109, 85 Fed. Reg. 79456 (December 10, 2020), 86 Fed. Reg. 13684 (March 10, 2021)

Dear Mr. Posten:

The Alliance for Automotive Innovation (Auto Innovators) appreciates the National Highway Traffic Safety Administration (NHTSA or "Agency") reopening the comment period for the Advance Notice of Proposed Rulemaking and welcomes the opportunity to provide supplemental comments in support of efforts to identify and resolve Federal Motor Vehicle Safety Standards (FMVSS) test procedures that are candidates for replacement, repeal, or modification for conventional non-ADS equipped vehicles.

With continued advancements in automotive safety technology, technical safety standards, and related test procedures it is important that NHTSA periodically review existing rules and regulations to ensure a more modernized approach. Auto Innovators will continue to periodically review the extensive number of regulations and Federal Motor Vehicle Safety Standards (FMVSSs) that contain detailed test procedures and will endeavor to provide suggested updates and recommendations for improvements as technology evolves.

As noted in Auto Innovators comments submitted in response to the December 10th, 2020, notice, many of the regulations and FMVSSs (identified herein and in our prior submission) have requirements and test procedures that reference industry standards (e.g., SAE, ISO, ANSI) many of which are out of date and some of which are even cancelled. Some of these issues may have more substantive aspects and may potentially require rulemaking as well. In such cases, we recommend that the agency include the issue in other appropriate rulemaking actions. If the issue is such that it cannot be addressed in another existing rulemaking, then we ask that it be treated as a petition for rulemaking.

As a general matter, adequate lead-time/alternative compliance options should be provided for changes that involve regulatory revisions or updates to referenced industry standards (e.g., SAE, etc.) that could influence current vehicle certifications.

Our comments detailed in Appendix A reflect our ongoing progress to evaluate FMVSS improvements (in addition to our previous submission to the docket), and the Association may provide additional recommendations in the future, either as supplemental comments to this docket, or separate petitions to the agency.

Auto Innovators appreciates the opportunity to provide input to NHTSA on this important topic. We look forward to any follow up with the agency to expand on these comment s further.

Sincerely,

Scott Schmidt
Vice President, Safety Policy

Enclosure

cc:

R. Posten
M. Versailles

APPENDIX A

Auto Innovators Recommended Candidates for FMVSS Test Procedure Replacement, Repeal, or Modification

Multiple Standards – References to SAE J211

Issue:

SAE J211 is incorporated by reference in several FMVSS. However, given that SAE J211 is updated at least every 5 years (to meet the needs for new instrumentation, assessment procedures, technical corrections, compatibility with other instrumentational documents (i.e., ISO 6487)), there is a need to update existing FMVSS to reflect the most recent version of the standard.

At present, the following regulations should be updated.

- FMVSS No. 208 & 214 reference SAE J211 Mar95.
- FMVSS No. 213 references SAE J211 1980.
- FMVSS Part 572 references SAE J211 Dec71, June88, Oct88, & Mar95.

Recommendation:

All FMVSS documents should include text to reference "the latest published version of SAE J211."

Multiple Standards - ATD Drawing Package Updates

Issue:

The current Anthropomorphic Test Device (ATD) drawing packages do not always include up to date information.

Recommendation:

All ATD drawing packages should be updated to include Humanetics Technical Bulletins (i.e., HIII 5th female spine box reinforcements) and allow for upgrades which continue to meet the weight and CG requirements of the drawing packages (i.e., THOR 50th variations of the pelvic tilt angle locking mechanism).

FMVSS No. 208 – Occupant Crash Protection

Issue:

Additional specificity required within the TP-208s-a3_tag_0 Seat Belt Latchplate Accessibility requirement

Recommendation:

We request clarification related to the term “or buckle” in the last sentence of the Latchplate Access procedure TP-208s-a3_tag_0, page C-3, step 2.7. We understand the clearance requirement for the stowed latchplate between the vehicle seat and the side of the vehicle interior. The procedure includes an evaluation of the test block “unhindered transit to the latchplate or buckle.” Given the

buckle is on the inboard side of the seat, it is unclear what the accessibility requirement is for the buckle to be compliant.

Issue:

The current unbelted test requirements may limit manufacturers in their ability to further optimize vehicle restraint performance for belted occupants.

Recommendation:

Auto Innovators requests that NHTSA update FMVSS 208 to allow for the use of a seat belt assurance system ("SBAS") or "interlock" to be equipped as an alternative compliance option to the unbelted test requirements. This request is consistent with comments submitted by the Alliance of Automobile Manufacturers and the Association of Global Automakers in response to the Department of Transportation's October 2, 2017, Notification of Regulatory Review.[1,2,3]

FMVSS No. 214

Issue:

The impact speeds listed in "general requirements" and "pre-test requirements" sections of the FMVSS No. 214 test procedure are inconsistent with those defined in section S7 of the standard (see below).

> *Section 571.214 - Standard No. 214; Side impact protection.*
>
> > S7. Moving Deformable Barrier (MDB) Requirements. Except as provided in section S5, when tested under the conditions of S8 each vehicle shall meet S7.3 and the following requirements in a **53 ± 1.0 km/h (33.5 mph)** impact in which the vehicle is struck on either side by a moving deformable barrier.
>
> *FMVSS 214 Test Procedure (TP-214D-09)*
>
> > "2. General Requirements
> > ...
> > Each vehicle shall be tested by impacting it on either side with a moving deformable barrier MDB moving at a velocity of **53.9 kph (33.5 mph)**. A Part 572, Subpart U male test dummy is placed in the front outboard seating position on the struck side of the vehicle. If the vehicle is equipped with rear seats, a Part 572, Subpart V female test dummy is placed on the outboard seating position of the second row rear seat on the struck side of the vehicle. The second row seat requirements do not apply to side-facing seats.
> >
> > 11. Pretest Requirements
> > ...
> > E. TOW AND GUIDANCE SYSTEM
> > The tow system must be capable of ensuring that the Moving Deformable Barrier (MDB) impacts the test vehicle at a constant speed of **52.9 kph ± 0.8 kph."**

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[1] DOT–OST–2017–0069-2700
[2] DOT–OST–2017–0069-2772
[3] 82 Fed. Reg. 45750

Recommendation:

We request that NHTSA update the "general requirements" and "pretest requirements" sections of the test procedure to be consistent with the FMVSS (see below).

> *FMVSS 214 Test Procedure (TP-214D-09)*
>
> "2. General Requirements
> …
> Each vehicle shall be tested by impacting it on either side with a moving deformable barrier MDB moving at a velocity of ~~**53.9 kph (33.5 mph)**~~ **53 ± 1.0 km/h (33.5 mph)**. A Part 572, Subpart U male test dummy is placed in the front outboard seating position on the struck side of the vehicle. If the vehicle is equipped with rear seats, a Part 572, Subpart V female test dummy is placed on the outboard seating position of the second row rear seat on the struck side of the vehicle. The second row seat requirements do not apply to side-facing seats.
> …
> 11. Pretest Requirements
> …
> E. TOW AND GUIDANCE SYSTEM
> The tow system must be capable of ensuring that the Moving Deformable Barrier (MDB) impacts the test vehicle at a constant speed of ~~**52.9 kph ± 0.8 kph**~~ **53 ± 1.0 km/h (33.5 mph).**"

Issue:

The FMVSS 214 Test Procedure does not define the pretest temperature range for the test vehicle.

Recommendation:

We recommend that the pretest requirements specified in Section 11.C of TP214D-09-1 be updated to be consistent with S11.3 of FMVSS No. 214 ("The stabilized temperature of the test dummy at the time of the test is at any temperature between 20.6 degrees C and 22.2 degrees C") and ensure commonality with the side impact pole test.

> TEST VEHICLE PREPARATION BUILDING
> The test vehicle preparation building/structure encloses the area where the test vehicle is prepped during pre-test set-up that occurs just prior to the impact test. This building or structure shall be temperature-controlled and large enough to house the test vehicle, test equipment and instrumentation while allowing room for personnel to move freely about the test vehicle. For facilities that require testing outdoors, the preparation structure must be capable of being removed quickly prior to conducting the test. **The temperature inside the test vehicle must be maintained between 20.6°C and 22.2°C (69°F and 72°F) for a minimum of four (4) hours prior to the side impact event.**

FMVSS No. 214 (Side Impact Protection) and No. 301 (Fuel System Integrity)

Issue:

There are inconstancies between the force-deflection properties of the MDB honeycomb impact face defined in the test procedures for both FMVSS No. 214 and FMVSS No. 301.

*FMVSS No. 214 **(**TP-214D-09)*

Force-deflection properties (i.e.,crush strength) for honeycomb impact face shall be 310 kpa ± 17 kpa and **1,689 kpa** ± 103 kpa for the bumper.

FMVSS No. 301 (TP-301R-02)

Force-deflection properties (i.e.,crush strength) for honeycomb impact face shall be 310 kpa ± 17 kpa and **1,690 kpa** ± 103 kpa for the bumper.

Recommendation:

We request that NHTSA update the pretest requirements for the FMVSS No. 214 test procedure as follows:

11. Pretest Requirements

…

(9) Force-deflection properties (i.e.,crush strength) for honeycomb impact face shall be 310 kpa ± 17 kpa and ~~1,689 kpa~~ **1,690 kpa** ± 103 kpa for the bumper.

FMVSS No. 225 - Child Restraint Anchorage Systems

Issue:

Additional clarification is needed regarding TP-225-01 "Determination of Tether Anchorage Zone"

Recommendation:

We request the test procedure be updated to include additional clarification for determining the FMVSS 225 tether anchorage zone. When the 2D Template is placed in the seat, what is the correct seat back angle for determining the zone if that seat back is adjustable?

Tether anchorage strength testing is to be performed with the SFAD1 or SFAD2 (when lower anchorages are present) with the seat in the most upright position or the most upright position that allows the SFAD2 to be attached to the lower anchorages.

Using FMVSS 210 as an example, the torso restraint anchorage zones are determined with the seat back in the most upright position. This is aligned with CMVSS 210. However, CMVSS 210.1 requires the tether anchorage zone to be determined with the seat back in the most upright position. FMVSS 225 and TP-225-01 do not specify the seat back angle for determining the tether anchorage zone.

FMVSS 301 – Fuel System Integrity

Issue:

There are inconsistencies between the FMVSS No. 301 and FMVSS No. 305 in terms of the allowable time for conducting a static rollover test -- The test procedure for FMVSS No. 301 (TP-301R-02) specifies that "[w]ithin 30 minutes after the impact test, the test vehicle shall be rotated on the static rollover device" (see S5.3). Section 13.3 of the test procedure for FMVSS No. 305 states

that a static rollover test be conducted within 45 minutes after the vehicle impact. In addition, because of time required for vacuuming airbag gases and removing dummies, we recommend that additional time also be provided to allow for a more reasonable transition between the impact test and the static rollover test.

Recommendation:

We request that NHTSA update the test procedures for FMVSS No. 301 and FMVSS No. 305 to increase the time available for conducting a static rollover test to 75 minutes after the impact test. This would also ensure that the allowable time for conducting a static rollover test in both test procedures is consistent.

> **FMVSS No. 301 (TP-301R-02)**
> 5.3 Static Rollover
>
> Within ~~30~~ **75** minutes after the impact test, the test vehicle shall be rotated on the Static Rollover Device.
>
> **FMVSS No. 305 (TP-305-01)**
> 13.3 Static Rollover Test
> ...
> The Contractor must conduct a static rollover test within ~~45~~ **75** minutes after the vehicle impact only after the "quick look" data provides assurance that the vehicle has met the performance requirements of FMVSS No. 208, 214D, and/or 301, and 305.