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DEPARTMENT OF TRANSPORTATION

National Highway Traffic Safety Administration

49 CFR part 572

[Docket No. NHTSA-2023-0031]

RIN 2127-AM20

Part 572; Anthropomorphic Test Devices; Test Device for Human Occupant Restraint 50th Percentile Adult Male Dummy (THOR-50M)

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

ACTION: Supplemental notice of proposed rulemaking (SNPRM).

SUMMARY: This document supplements NHTSA's September 2023 notice of proposed rulemaking to amend NHTSA's regulations to include an advanced crash test dummy (the Test Device for Human Occupant Restraint (THOR) 50th percentile adult male) by requesting comment on specifying an additional spine configuration and an alternative to the face foam, and announcing the availability of additional documents.

DATES: The documents referenced in this notification will be available in the docket as of [**INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER**]. You should submit your comments early enough to be received not later than [**INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER**].

ADDRESSES: You may submit comments electronically to the docket identified in the heading of this document by visiting the Federal eRulemaking Portal at https://www.regulations.gov. Follow the online instructions for submitting comments.

Alternatively, you can file comments using the following methods:

- Mail: Docket Management Facility: Docket Management, U.S. Department of Transportation, 1200 New Jersey Avenue, S.E., West Building, Suite W58-213, Washington, D.C. 20590.
- Hand Delivery or Courier: Docket Management, U.S. Department of Transportation, 1200 New Jersey Avenue, S.E., West Building, Suite W58-213, Washington, D.C. 20590, between 9 a.m. and 5 p.m., Monday through Friday, except on Federal holidays. To be sure someone is there to help you, please call (202) 366-9826 or (202) 366-9317 before coming.
- Fax: (202) 493-2251.

Regardless of how you submit your comments, you should mention the docket number identified in the heading of this document.

Instructions: All submissions must include the agency name and docket number or Regulatory Information Number (RIN) for this rulemaking. For detailed instructions on submitting comments and additional information on the rulemaking process, see the Public Participation heading of the Supplementary Information section of this document. Note that all comments received will be posted without change to https://www.regulations.gov, including any personal information provided. Please see the Privacy Act heading below.

Docket: For access to the docket to read background documents or comments received, go to https://www.regulations.gov. You may also access the docket at 1200 New Jersey Avenue, S.E., West Building, Room W58-213, Washington, D.C. 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal Holidays. Telephone: 202-366-9826 or 202-366-9317.

Confidential Business Information: If you claim that any of the information in your comment (including any additional documents or attachments) constitutes confidential business information within the meaning of 5 U.S.C. 552(b)(4) or is protected from disclosure pursuant to 18 U.S.C. 1905, please see the detailed instructions given under the Public Participation heading of the Supplementary Information section of this document.

Privacy Act: Please see the Privacy Act heading under the Regulatory Analyses section of this document.

FOR FURTHER INFORMATION CONTACT: For technical issues, you may contact Garry Brock at garry.brock@dot.gov. For legal issues, you may contact John Piazza at John.Piazza@dot.gov. You can reach these officials by phone at 202-366-1810. Address: National Highway Traffic Safety Administration, U.S. Department of Transportation, 1200 New Jersey Avenue, S.E., West Building, Washington, D.C. 20590.

SUPPLEMENTARY INFORMATION:

I. Background

On September 7, 2023, NHTSA published a Notice of Proposed Rulemaking (NPRM) to amend NHTSA's regulations to include an advanced crash test dummy, the Test Device for Human Occupant Restraint (THOR) 50th percentile adult male (THOR-50M).[1] The dummy represents an adult male of roughly average height and weight and is designed for use in frontal crash tests. The documentation for the dummy, including engineering drawings, qualification procedures and specifications, and procedures for assembly, disassembly, and inspection (PADI), would be incorporated by reference in 49 CFR part 572, Anthropomorphic Test Devices.

On July 9, 2024, NHTSA published a Supplemental Notice of Proposed Rulemaking (SNPRM)[2] to announce the availability of additional research reports and a Memorandum of Understanding (MOU) supplementing the September 2023 NPRM. The research reports described NHTSA's evaluation of alternative configurations of the THOR-50M, including an alternative shoulder design to the patented SD-3 shoulder and an alternative thoracic deflection measurement instrumentation, and presented further analysis of an in-dummy data acquisition system. Under the MOU, no restrictions will apply to copyrighted designs and drawings used as part of a NHTSA final rule issued under 49 CFR part 572 upon the effective date of the final

[1] 88 FR 61896.

[2] 89 FR 56251.

rule. Similarly, no restrictions will apply to a patented design used as part of a NHTSA final rule issued under 49 CFR part 572 upon effective date of the final rule, if the final rule does not specify the use of another design as an alternative to the patented design. Based on the MOU, NHTSA tentatively concluded that it would be preferable if the final rule specifies only the SD-3 shoulder.

Since the NPRM, and in response to the NPRM comments, NHTSA has evaluated additional modifications to the dummy. The main modifications proposed in this notice are specifying the four-position spine as an alternative or replacement for the proposed spine and an updated face insert as an alternative to the proposed face foam. NHTSA is also proposing a minor modification to the upper arm to address a durability concern. These supplemental proposals are discussed below.

II. Four-Position Spine

The NPRM version of the THOR-50M spine contains a posture adjustment joint known as the lumbar spine pitch change mechanism (original spine), which allows the posture of the THOR-50M to be adjusted into various seating configurations in three-degree increments, including, but not limited to, four designated positions (erect, neutral, slouched, and super slouched). The NPRM also proposed an alternate configuration that accommodates use of an in-dummy data acquisition system (DAS).[3]

The original spine differs from the spine in THOR-50M units used in the European New Car Assessment Programme (Euro NCAP). Euro NCAP TB026 specifies a four-position lumbar spine box (four-position spine) that allows the spine to be set only in four distinct positions (erect, neutral, slouched, and super slouched). The four-position spine design accommodates the in-dummy installation of some DAS brands by providing a mounting surface for data loggers.

[3] The proposed specifications were based on, but not necessarily limited to, the system installed in the majority of the NHTSA fleet of THOR-50M anthropomorphic test devices (ATDs) equipped with in-dummy DAS, which was manufactured by Diversified Technical Systems (DTS), under their product name "SLICE6." The SLICE6 is not explicitly specified or called out by name, so that another system fitting with the defined specifications could also be utilized.

Additional modifications to support cable routing and DAS attachments are made throughout the dummies. THOR-50M units utilized in Euro NCAP are configured with a four-position spine and an in-dummy DAS.[4]

NHTSA is aware of two versions of the four-position spine, both of which are approved by Euro NCAP.[5] Humanetics Innovative Solutions (Humanetics) manufactures a version of the four-position spine which contains patented elements.[6] Kistler Group (Kistler) manufactures a different version of the four-position spine (*i.e.*, the specifications differ) for which Kistler does not hold a patent. NHTSA explained in the NPRM that it had tentatively decided not to specify the four-position spine because it had not tested with that spine, it was patented, and the original spine was more adjustable.

A. NPRM Comments on the Proposed Spine Specification

NHTSA received several comments on the proposed original spine specification in response to the NPRM. Several commenters (Automotive Safety Council [ASC], Partnership for Dummy Biomechanics [PDB], Mercedes-Benz Research and Development North America [Mercedes], General Motors [GM], Autoliv, Volkswagen [VW], the Alliance for Automotive Innovation [Auto Innovators], and Humanetics) requested that NHTSA align with Euro NCAP and allow use of the four-position spine. Commenters noted what they viewed as advantages of the four-position spine.

ASC, Auto Innovators, and GM commented that the four-position spine is easier to change with reduced risk of positioning errors. VW added that the four-position spine can be adjusted by a single user, whereas adjustment of the original spine requires an additional user. PDB, GM, and VW commented that incorrect adjustment of the original spine can result in damage. ASC, GM, and Autoliv commented that the positions available in the four-position

[4] Previous versions of this document were referred to as TB 026, but it has been referred to as CP 106 since 2026.

[5] Previous versions of this document were referred to as TB 029, but it has been referred to as G 003-1 and G 002-3 since 2026.

[6] U.S. Patent No US9965977 and EP3040960.

spine are adequate for most applications, including qualification tests, a wide variety of crash test protocols, and global NCAP load cases.

ASC, PDB, Mercedes, VW, Autoliv, and Humanetics commented that the four-position spine allows integration of additional in-dummy DAS that are not possible with the original spine. Mercedes and VW commented further that the four-position spine is required for use of in-dummy DAS based on a central DAS device (recorder) such as the Kistler Digital Transducer Interface (DTI) system.

Mercedes stated that it has extensive experience testing with a four-position spine and found the design to be equivalent to the original spine. It noted that all its THOR-50M dummies use a four-position spine manufactured by Kistler, which differs from the four-position spine manufactured by Humanetics. Mercedes commented and provided supporting evidence that the Kistler four-position spine has the same weight and center of gravity (CG) as the original spine. VW also commented that the four-position spine has the same geometry and dynamic properties as the original spine.

Humanetics commented that the weight, CG location, and moment of inertia (MOI) in its four-position spine closely match the original spine, and ASC and Humanetics commented that the proposed and four-position spines should provide equivalent performance if set in the same position. Humanetics provided data from qualification tests showing that dummies in both the four-position spine and original spine configurations meet the qualification specifications for the head, upper thorax, lower thorax, and abdomen test modes.

B. Additional NHTSA Research

In light of the NPRM comments, NHTSA has investigated whether the four-position spine is equivalent[7] to the original spine. NHTSA is docketing two documents related to this effort.

[7] In this context, equivalent means that the dummy components would provide the same form, fit, and function, and ultimately dummies in either configuration would provide the same results from a full-scale vehicle crash test. Two

One is an additional research report that is being placed in the crashworthiness research docket.[8] The report provides an analysis of the Humanetics four-position spine and its equivalence to the original spine specified in the 2023 drawing package. NHTSA analyzed equivalence by comparing a dummy with the four-position spine to dummies with the original spine. This included comparison of the mass, CG, and MOI; responses in qualification tests; responses in Gold Standard 1 and 2 sled tests;[9] and responses in frontal vehicle crash tests. The testing showed equivalence between the original spine and the four-position spine within expected test-to-test variation. NHTSA also conducted some of these same tests on a dummy manufactured by Kistler and equipped with the Kistler four-position spine. However, NHTSA encountered issues with durability of the dummy during testing and was therefore unable to evaluate the Kistler four-position spine fully. Accordingly, the test report only includes information from testing the Humanetics four-position spine. However, information on the tests of the Kistler four-position spine can be found in NHTSA's crash test database.[10]

The other document NHTSA is placing in the research docket contains updated dummy drawings reflecting the component changes necessary to incorporate the four-position spine, as well as additional minor modifications for an in-dummy DAS system.[11] These drawings show the overall assembly of the four-position spine and in-dummy DAS components. (The drawing

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components would be considered equivalent if the variation in results from a given test is within the expected test-to-test variability of the test. In other words, the results of the test would not be dependent on which configuration of the dummy was tested.

[8] "THOR-50M Four-Position Spine System Evaluation" in Docket No. NHTSA-2019-0106. As NHTSA explained in the NPRM, it is placing the documentation and reports in the research docket and not the rulemaking docket but nevertheless intends these documents to be included in the rulemaking record for this rulemaking action. See further explanation in 88 FR at 61904.

[9] The Gold Standard conditions are simplified sled tests used in biofidelity assessment and development of thoracic injury criteria. The Gold Standard 1 condition uses a 40 km/h 12g peak pulse, a standard lap and shoulder belt, and a rigid knee restraint. The Gold Standard 2 condition uses a 30 km/h 9g peak pulse, a 3 kN load-limited shoulder belt, a standard lap belt, and a rigid knee restraint.

[10] Available at: https://www.nhtsa.gov/research-data/research-testing-databases/#/biomechanics, test numbers: 15258, 15259, 15260, 15261, 15265, 15266, 15267.

[11] "THOR-50th Percentile Male with In-Dummy DAS Frontal Crash Test Dummy (THOR-50M with In-Dummy DAS) Drawings, External Dimensions, and Mass Properties" in Docket No. NHTSA-2019-0106.

package that is being docketed includes all the dummy drawings, not just those that have changes related to the four-position spine and in-dummy DAS.)

C. Proposed Spine Specification

In light of the NPRM comments and the supplemental research described above and in the docketed documents, NHTSA is now proposing to specify the Humanetics four-position spine as a permitted optional configuration.[12] If NHTSA were to adopt this proposal, there would be two separate drawing packages: one for the original spine and one for the four-position spine. NHTSA could perform compliance tests using a dummy with either configuration. The four-position spine configuration contains modifications to incorporate an in-dummy DAS, as described in the research report. The specifications for the in-dummy DAS are generic, so that any conforming in-dummy DAS could be installed. Humanetics' four-position spine was designed to accommodate multiple DAS brands; it would accommodate the SLICE6 DAS, as well as other brands. The four-position spine configuration would not accommodate an external DAS. This is because NHTSA's understanding is that users, including the test labs that NHTSA utilizes, prefer an in-dummy DAS.

Should users desire to test with an external DAS, the originally proposed drawing package with the original spine—which accommodates an external DAS—would still be incorporated into part 572. However, under this supplemental proposal, the configuration consisting of the original spine with an in-dummy DAS that was proposed in the NPRM would not be incorporated into part 572; the four-position spine with an in-dummy DAS would take its place. Again, this is because NHTSA is unaware of demand from users to test with this configuration, and the agency would prefer to test with the four-position spine utilizing an in-dummy DAS, which also enables harmonization with Euro NCAP ATDs.

[12] Because the specifications for the Humanetics and Kistler four-position spines are not identical, the proposed specification would not accommodate the Kistler four-position spine.

Under this supplemental proposal, Humanetics would not need to provide either a notice of abandonment or letter of non-enforcement with respect to patented spine elements because the original spine would also be specified as a permissible alternate configuration.[13] NHTSA has generally avoided specifying patented components or copyrighted designs in part 572 without securing agreement from the rights-holder for the free use of the item, licensing it on reasonable terms, or developing an alternative unencumbered by any rights claims. In this case, because there would be an alternative configuration (the original spine) free of any intellectual property claims, NHTSA tentatively believes that specifying a patented component would be acceptable.

Though NHTSA is now proposing to specify the original spine and the Humanetics four-position spine as permissible configurations, NHTSA is also considering two other regulatory options.

One regulatory alternative would be to specify only the Humanetics four-position spine. Under the Memorandum of Understanding (MOU), Humanetics would provide either a notice of abandonment or letter of non-enforcement. The advantage of this approach (in addition to the advantages of the four-position spine) would be that, even though the two configurations are believed to be equivalent, it would rule out any possible variation between the two configurations in the event that NHTSA compliance testing was conducted using a different configuration than an OEM used for self-certification. The disadvantages would be that NHTSA and other industry members may already have THOR-50M dummies configured with the original spine, and would need to perform costly updates to these dummies to use them for compliance or self-certification purposes.

The other regulatory alternative would be to specify only the original spine. The advantage of this approach would minimize the risk of disparate outcomes if different configurations were used in compliance and self-certification testing. It would also reduce risk in

[13] *See* 89 FR 56251 (July 9, 2024).

that NHTSA has more experience testing with the original spine configuration than the four-position spine configuration. The disadvantages would be that the benefits of the four-position spine would not be realized.

NHTSA seeks comment on all aspects of this supplemental proposal and regulatory alternatives. NHTSA also seeks comments and any additional data on the equivalency between the Humanetics four-position spine and the original spine.

D. Technical Data Package

NHTSA is docketing an alternative dummy drawing package that specifies the four-position spine assembly and other modifications related to the in-dummy DAS.[14] Therefore, if NHTSA adopts the proposal, there would be two dummy drawing packages: one with the original spine and an external DAS, and one with the four-position spine and an in-dummy DAS.

After consideration of the comments that it receives in response to this SNPRM, NHTSA will make changes to the qualification procedures and PADI previously submitted as materials Incorporated by Reference. If NHTSA decides to include the four-position spine, NHTSA would also update the qualification procedures and PADI accordingly. For the qualification procedures, this would involve adding a section for setting the four-position spine, similar to the discussion currently in section 3, ATD Adjustment. For the PADI, this would include adding a section describing how to install the four-position spine in place of the original spine and a discussion of components which can be switched to incorporate in dummy DAS. If NHTSA decides not to include the original spine, references to the original spine will be removed from both documents. NHTSA intends to update the references to the material incorporated by reference in the final rule regulatory text, but make no other changes to the regulatory text proposed in the September 2023 NPRM.

III. Face Insert

[14] "THOR-50M 2026 SNPRM Drawing Packages" in Docket No. NHTSA–2019–0106

The NPRM proposed use of a confor memory foam (confor face foam) between the head skin and the face load cells on the skull. As the NPRM explained, the confor face foam has a few characteristics that necessitate care in qualification and crash testing. In the face impact qualification test, a fully-assembled THOR-50M is seated on a table and impacted on the face with rigid impactor. The test assesses the head CG accelerometers[15] at a level of severity similar to that expected from vehicle crash tests. The qualification procedure specifies acceptance intervals (consisting of minimum and maximum values) for the peak probe force and peak head CG resultant acceleration. The foam progressively degrades after each impact so that the peak probe force and peak head resultant acceleration increases with each test. If the response of the confor face foam is initially below the lower bound of the acceptance interval, repeated tests can therefore bring it within the acceptance interval. A recovery period is needed after a dynamic impact to allow the foam to recover (partially). NHTSA's current protocol is to impact the confor face foam until it is within the acceptance interval, with a 24-hour wait period between qualification tests. After repeated impacts, the response of the foam will eventually exceed the upper bound of the acceptance interval, so that the foam must be replaced.

Euro NCAP does not use the face impact qualification test and instead visually checks the confor face foams for cracking or damage.

The following section discusses the comments received on the confor face foam; NHTSA testing to validate an alternative to the confor face foam; and NHTSA's supplemental proposal for the face insert.

A. NPRM Comments Regarding Confor Face Foam

NHTSA received a number of comments in response to the 2023 NPRM regarding the proposed confor face foam. Mercedes, GM, PDB and Auto Innovators commented on the face impact qualification procedure and expressed concerns regarding the 24-hour recovery period

[15] The head CG accelerometers are used to calculate HIC_{15}, a head injury criterion that is based on the integration of resultant head acceleration over a 15-millisecond duration.

and presence of damage on the foam. Mercedes and Auto Innovators proposed to omit the face impact test and to add an inspection procedure for the confor face foam according to Euro NCAP (Euro NCAP TB026).

GM commented that the 24-hour recovery period is not practicable for an organization that may be conducting a high volume of tests every week. GM commented in support of the development of a more durable facial insert. PDB commented that the conditioning/recovering time of the confor face foam of 24 hours is too long and not practicable, especially as this test causes serious problems (*e.g.*, damage of the confor face foam). PDB commented that, if the confor face foam requires this time to recover, it should be replaced by another material. PDB also commented that the face impact qualification test could be removed because there is no available technical solution. PDB stated that, if there are no injury criteria required for the face, there is not a strong need for this test.

B. Additional NHTSA Research on Face Insert

Since the publication of the NPRM, Humanetics has developed a new face insert as an alternative to the confor face foam. The alternative face insert is a 3D-printed component comprised of thermoplastic polyurethane. The design incorporates an outer shell with a patterned infill. The face insert is designed to fit in the cavity between the head skin and the skull of the dummy.

In response to the comments regarding concerns with recovery time and use of the confor face foam, NHTSA has evaluated this face insert for use in THOR-50M. NHTSA's testing demonstrated similar weight, CG, and MOI as compared to the confor face foam. Face impact qualification testing showed that the face insert has advantages over the confor face foam, including that the face insert does not need to be struck multiple times before the response is within the corridor, and does not experience drift within the corridor with each successive impact. The 24-hour recovery period also was not necessary. Qualification testing of three inserts also showed improved repeatability and reproducibility compared to the confor face foam, with

limited variability between tests. Testing for durability at elevated energy did not cause damage to the face insert or change its response when re-tested at face impact qualification levels; the face insert therefore should not need frequent replacement. Results from this testing are provided in a research report NHTSA is placing in the crashworthiness research docket.[16] Based on this evaluation, NHTSA has tentatively concluded that the face insert is equivalent to the confor face foam, and leads to repeatable and reproducible measurements.

C. Proposed Face Insert Specification

Because NHTSA has tentatively concluded that the face insert improves on the face foam in several respects while still leading to equivalent measurements, NHTSA is proposing to specify the face insert (drawing 472-1405, Face Insert, THOR-50M) as an alternative to the face foam (drawing 472-1401, Confor Foam, Face). Both the face insert and the confor face foam would be part of the drawing package, and the PADI would note the face insert as an alternate. The face insert drawing defines the overall shape, external dimensions across multiple cross sections, specifications with tolerances on mass, and performance specifications using a quasi-static compression test. This specification is intended to avoid over-specifying the face insert while allowing for technology-neutral solutions. The mass, CG, and MOI of the overall head assembly are also specified (drawing 472-0000, sheet 5). NHTSA anticipates conducting further testing on the face insert, including crash testing, in preparation for the final rule.

Although NHTSA has tentatively concluded that the face insert addresses the issues present with the confor face foam and is appropriate for inclusion in part 572, NHTSA recognizes that this is a new component with which dummy users other than NHTSA may not be familiar. NHTSA therefore tentatively believes it would be prudent to retain the confor face foam in the drawing package as a permissible optional configuration. As shown in a research report NHTSA is placing in the crashworthiness research docket,[17] the qualifications

[16] "THOR-50M Face Insert Report" in Docket No. NHTSA–2019–0106.

[17] "THOR-50M Face Insert Report" in Docket No. NHTSA–2019–0106.

specifications can be met using either the confor face foam or the face insert, and the resulting Head Injury Criterion (HIC) values are in the same range for both configurations.

NHTSA has also tentatively decided to retain the face impact qualification test and not to follow Euro NCAP and specify a visual inspection procedure. Omitting the face impact test would mean that there is no objective method to check the system response of the head skin, confor face foam, and remainder of the head assembly during impact through the face. This is especially important because an impact to the face can influence the HIC injury metric, which is based on the resultant acceleration at the CG of the head.

NHTSA believes the Euro NCAP visual inspection procedure for the confor face foam is not sufficient. Besides potentially lacking objectivity,[18] it assumes that the foam must have damage to be out of tolerance; this ignores the situation where there is no visible damage to the foam but the response does not meet the qualification specifications for other reasons (*e.g.*, damage not visible on the exterior surface, or improper material specification).

Regarding commenters' concern with waiting 24 hours between qualification tests of the confor face foam, NHTSA notes that other qualification tests can be conducted during that 24-hour span; the 24-hour wait time is for the confor face foam, not using the ATD. In addition, the face foam could be swapped with another one. Regarding commenters' concerns about damage to the confor face foam, NHTSA tentatively believes that the approach for the confor face foam described in the NPRM (and summarized above) continues to be feasible, should users decide to use the confor face foam instead of the face insert.

NHTSA requests comment on all aspects of this proposal, including any information relating to users' experience with the face insert (*e.g.*, usability, durability, test data, etc.), and whether the confor face foam should be retained as an alternate specification.

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[18] NHTSA is concerned with the difficulty in defining damage. The foam is a deformable material, which can have shape changes simply from handling it. There is subjectivity regarding what would qualify as damage and when a component needs to be replaced. This can result in the component being replaced more often than necessary or create uncertainty if a component can be used.

IV. Upper Arm Clevis

In response to the 2023 NPRM, Humanetics commented that the specification for the arm clevis assembly (472-3831) does not match Humanetics' current production part. Humanetics commented that, in 2018, it implemented a design update to address a durability concern for the arm clevis. NHTSA conducted tests to assess the range of motion and the durability of the new upper arm clevis, finding both to be acceptable. NHTSA has tentatively decided to update the drawing package to include the current production upper arm clevis specified by Humanetics. NHTSA is not aware of a patent pertaining specifically to the new upper arm clevis design. However, the upper arm clevis is a component of the SD-3 shoulder, for which Humanetics has two patents. The SD-3 shoulder is subject to the MOU[19] as described in the July 2024 SNPRM.[20] If NHTSA adopts its tentative conclusion that it would be preferable to specify only the SD-3 shoulder in the final rule, under the MOU Humanetics would provide to NHTSA either a notice of abandonment of the patent to the United States Patent and Trademark Office or a letter stating that the patent will not be enforced against any third-party use.

V. Rulemaking Analyses and Notices

Executive Order 12866 and DOT Rulemaking Procedures

NHTSA has considered the impact of this proposed rule under Executive Order (E.O.) 12866 and DOT's rulemaking procedures (49 CFR part 5). This rule does not meet the criteria of a "significant regulatory action" under E.O. 12866. Therefore, the Office of Management and Budget (OMB) has not reviewed this rule under that E.O. NHTSA has considered the qualitative costs and benefits of the proposed rule under the principles of E.O. 12866. For this discussion, the reader is referred to the NPRM preamble.[21] Although this rulemaking does not require the use of the THOR-50M in regulatory or consumer information crash testing, the amendments

[19] NHTSA-2023-0031-0021.

[20] 89 FR 56251.

[21] 88 FR 61896, 61945-46 (Sept. 7, 2023).

proposed in this SNPRM would not impose any costs on those who choose to purchase and use the dummy. For users that have already purchased a THOR-50M with the original spine, they would not need to upgrade or purchase a new THOR-50M. For users purchasing a new THOR-50M, the two spine options would expand the dummy options available to manufacturers, and the four-position spine would allow installation of an in-dummy DAS that manufacturers are already familiar with and may already own. Furthermore, the proposed optional face insert could reduce testing and part replacement costs should users choose to install the optional face insert in place of the confor foam insert. NHTSA requests comment on the costs and benefits of the amendments proposed in this SNPRM.

Executive Order 14192

E.O. 14192, *Unleashing Prosperity Through Deregulation* (90 FR 9065 (Jan. 31, 2025)), requires that, for "each new [E.O. 14192 regulatory action] issued, at least ten prior regulations be identified for elimination." Implementation guidance for E.O. 14192 issued by OMB (Memorandum M-25-20 (Mar. 26, 2025)) defines an E.O. 14192 deregulatory action as "an action that has been finalized and has total costs less than zero." This rule would define the THOR-50M in part 572, but would not require its use, so it would not impose any regulatory burden. As this rule would not require its use, an entity would only choose to use and take on the costs associated with the THOR-50M if it was cost effective.

This regulatory action provides greater flexibility which can result in cost savings. In addition, Memorandum M-25-20 also states that "Regulatory activities associated with regulatory cooperation with foreign governments that reduce costs to entities or individuals within the United States, including at the border, or otherwise lower the cost of regulations on the United States economy, may qualify as E.O. 14192 deregulatory actions." The THOR-50M defined by this rulemaking action, particularly as amended by this SNPRM, shares many similarities with the test device used in foreign consumer information programs such as Euro NCAP. Using a similar crash test dummy in the United States would allow manufacturers to

realize cost efficiencies in vehicle design and testing. As such, NHTSA expects this rule to be an E.O. 14192 deregulatory action.

Promoting International Regulatory Cooperation

The policy statement in section 1 of E.O. 13609 provides that the regulatory approaches taken by foreign governments may differ from those taken by the United States to address similar issues, and that, in some cases, the differences between them might not be necessary and might impair the ability of American businesses to export and compete internationally. It further recognizes that, in meeting shared challenges involving health, safety, and other issues, international regulatory cooperation can identify approaches that are at least as protective as those that are or would be adopted in the absence of such cooperation and can reduce, eliminate, or prevent unnecessary differences in regulatory requirements.

In addition, section 24211 of the Infrastructure Investment and Jobs Act (Pub. L. No. 117-58), Global Harmonization, provides that DOT "shall cooperate, to the maximum extent practicable, with foreign governments, nongovernmental stakeholder groups, the motor vehicle industry, and consumer groups with respect to global harmonization of vehicle regulations as a means for improving motor vehicle safety."

This proposed change would align with some, but not all, of the specifications of the THOR-50M used internationally in NCAP programs. The proposed use of the four-position spine would align with the Euro NCAP THOR-50M specification.[22] However, NHTSA is not proposing to align with the confor face foam visual inspection procedure for reasons explained in the preamble. NHTSA is also not proposing to align with the use of the Hybrid III 50th lower leg and knee slider for reasons explained in the NPRM.

Regulatory Flexibility Act

[22] Euro NCAP Technical Bulletin CP 106, Version 2.1, July 2025.

Under the Regulatory Flexibility Act (RFA) (5 U.S.C. 601-612) (as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996; 5 U.S.C. 601, *et seq*.), for any rulemaking where publication of a proposed rule is required by 5 U.S.C. 553 or any other law, agencies must prepare and make available for public comment a regulatory flexibility analysis that describes the effect of the rule on small entities (*i.e.*, small businesses, small organizations, and small government jurisdictions). No regulatory flexibility analysis is required, however, if the head of an agency or an appropriate designee certifies that the rule will not have a significant economic impact on a substantial number of small entities.

NHTSA has considered the effects of this rulemaking under the Regulatory Flexibility Act. I hereby certify that this rulemaking action would not have a significant economic impact on a substantial number of small entities. This action would not have a significant economic impact on a substantial number of small entities because the addition of the test dummy to part 572 would not impose any requirements on anyone. This rulemaking only proposes to include the dummy in NHTSA's regulation for crash test dummies; it does not propose NHTSA's use of the ATD in agency testing or to require anyone to manufacture the dummy or to test motor vehicles or motor vehicle equipment with it. Therefore, a regulatory flexibility analysis is not required.

Unfunded Mandates Reform Act

The Unfunded Mandates Reform Act of 1995 (2 U.S.C. 1531-1538) (UMRA) requires Federal agencies to assess the effects of regulatory actions that may result in the expenditure by a State, local, or Tribal government, in the aggregate, or by the private sector of $214 million (the value equivalent of $100 million in 1995, adjusted for inflation to 2026 dollars) or more in any one year. This proposed rule does not contain Federal mandates (under the regulatory provisions of Title II of the UMRA) for State, local and Tribal governments, or the private sector of $206 million or more in any one year. Thus, the analytical requirements of the UMRA do not apply to this action.

Executive Order 13175

E.O. 13175 requires Federal agencies to consult and coordinate with Tribes on a government-to-government basis on policies that have Tribal implications, including regulations, legislative comments or proposed legislation, and other policy statements or actions that have substantial direct effects on one or more Indian Tribes, on the relationship between the Federal Government and Indian Tribes, or on the distribution of power and responsibilities between the Federal Government and Indian Tribes. NHTSA has assessed the impact of this proposed rule on Indian tribes and determined that this rule would not have Tribal implications that require consultation under E.O. 13175.

Paperwork Reduction Act

In accordance with the Paperwork Reduction Act of 1995 (44 U.S.C. 3501-3520), an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information, unless the collection displays a currently valid OMB control number. This proposed rule would not impose any additional information collection requirements.

E-Government Act Compliance

NHTSA is committed to complying with the E-Government Act, 2002 to promote the use of the internet and other information technologies to provide increased opportunities for citizen access to Government information and services, and for other purposes. The E-Government Act of 2002 (Pub. L. No. 107-347, sec. 208, 116 Stat. 2899, 2921, Dec. 17, 2002), requires Federal agencies to conduct a privacy impact assessment for new or substantially changed technology that collects, maintains, or disseminates information in an identifiable form. No new or substantially changed technology would collect, maintain, or disseminate information as a result of this proposed rule. Accordingly, NHTSA has not conducted a privacy impact assessment.

Federalism

NHTSA has examined this proposed rule pursuant to E.O. 13132 (64 FR 43255, August 10, 1999) and concluded that no additional consultation with States, local governments or their representatives is mandated beyond the rulemaking process. The agency has concluded that the

proposed rule would not have federalism implications because the proposed rule would 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." This proposed rule would not impose any requirements on anyone. Businesses will be affected only if they choose to manufacture or test with the dummy.

Further, no consultation is needed to discuss the preemptive effect of this proposed rule. Although NHTSA's safety standards can have preemptive effect, the proposed rule would amend 49 CFR part 572 and is not a safety standard. This part 572 proposed rule would not impose any requirements on anyone.

National Environmental Policy Act

The Department has analyzed the environmental impacts of this final rule pursuant to the National Environmental Policy Act of 1969 (NEPA) (42 U.S.C. 4321, *et seq*.). NHTSA has determined that this rule is categorically excluded pursuant to 23 CFR 771.118(c)(4). Categorical exclusions are categories of actions that the agency has determined normally do not significantly affect the quality of the human environment and therefore do not require either an environmental assessment (EA) or environmental impact statement (EIS). *See* DOT Order 5610.1D § 9. In analyzing the applicability of a categorical exclusion (CE), the agency must also consider whether extraordinary circumstances are present that would warrant the preparation of an EA or EIS. Id. § 9(b). Each Operating Administration (OA) of DOT may apply CEs established in another OA's procedures. *Id.* § 9(f). To do so, the OA "must evaluate the action for extraordinary circumstances identified in the OA procedures in which the CE is established to determine if a normally excluded action may have a significant impact and coordinate with the originating OA to ensure that the CE is being applied correctly." *Id.* This rulemaking, which would add a new crash test dummy to NHTSA's regulations, is categorically excluded pursuant to 23 CFR 771.118(c)(4): "Planning and administrative activities not involving or leading directly to construction, such as: Training, technical assistance and research; promulgation of rules,

regulations, directives, or program guidance; approval of project concepts; engineering; and operating assistance to transit authorities to continue existing service or increase service to meet routine demand." NHTSA has coordinated with the Federal Transit Administration (FTA) to ensure that this CE is being applied correctly. NHTSA does not anticipate any environmental impacts, and there are no extraordinary circumstances present in connection with this rulemaking.

Executive Order 12988 (Civil Justice Reform)

With respect to the review of the promulgation of a new regulation, section 3(b)(2) of E.O. 12988, "Civil Justice Reform" (61 FR 4729, February 7, 1996) requires that Executive agencies make every reasonable effort to ensure that the regulation: (1) clearly specifies the preemptive effect; (2) clearly specifies the effect on existing Federal law or regulation; (3) provides a clear legal standard for affected conduct, while promoting simplification and burden reduction; (4) clearly specifies the retroactive effect, if any; (5) adequately defines key terms; and (6) addresses other important issues affecting clarity and general draftsmanship under any guidelines issued by the Attorney General.

NHTSA has reviewed this rulemaking action and determined that it conforms to the applicable standards in section 3(b)(2) of E.O. 12988, Civil Justice Reform. The issue of preemption is discussed above in connection with E.O. 13132 (Federalism). NHTSA believes that this final rule specifies clearly the changes that would be made to part 572, defines any necessary key terms, and provides a clear legal standard for manufacturers to follow. The amendments do not take effect retroactively. NHTSA notes further that there is no requirement that an individual submit a petition for reconsideration or pursue other administrative proceedings before they may file suit in court.

National Technology Transfer and Advancement Act

Under the National Technology Transfer and Advancement Act of 1995 (NTTAA) (Pub. L. No. 104-113), "[A]ll 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." Voluntary consensus standards are technical standards (*e.g.*, materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standards bodies, such as SAE (formerly, the Society of Automotive Engineers). The NTTAA directs this agency to provide Congress, through OMB, explanations when the agency decides not to use available and applicable voluntary consensus standards.

There are no technical standards with regard to the THOR-50M spine box.

Plain Language

E.O. 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 include them in your comments on this proposal.

Regulation Identifier Number (RIN)

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

Privacy Act

In accordance with 5 U.S.C. 553(c), DOT solicits comments from the public to inform its rulemaking process better. DOT posts these comments, without edit, to www.regulations.gov, as described in the system of records notice, DOT/ALL-14 FDMS, accessible through www.dot.gov/privacy. In order to facilitate comment tracking and response, we encourage commenters to provide their name, or the name of their organization; however, submission of names is completely optional. 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, or other organizations). For information on DOT's compliance with the Privacy Act, see https://www.transportation.gov/privacy.

Rule Summary

As required by 5 U.S.C. 553(b)(4), a summary of this rule can be found at regulations.gov, Docket No. NHTSA-2023-0031, in the SUMMARY section of this proposed rule.

Public Participation

How do I prepare and submit comments?

Your comments must be written and in English. To ensure that your comments are correctly filed in the docket, please include the docket number indicated in this document in your comments.

Your comments must not be more than 15 pages long. (49 CFR 553.21). NHTSA established this limit to encourage you to write your primary comments in a concise fashion. However, you may attach necessary additional documents to your comments. There is no limit on the length of the attachments.

If you are submitting comments electronically as a PDF (Adobe) file, NHTSA asks that the documents be submitted using the Optical Character Recognition (OCR) process, thus allowing NHTSA to search and copy certain portions of your submissions.

Please note that pursuant to the Data Quality Act, in order for substantive data to be relied upon and used by the agency, it must meet the information quality standards set forth in the OMB and DOT Data Quality Act guidelines. Accordingly, NHTSA encourages you to consult the guidelines in preparing your comments. OMB's guidelines may be accessed at https://www.transportation.gov/regulations/dot-information-dissemination-quality-guidelines.

How can I be sure that my comments were received?

If you wish the docket to notify you upon its receipt of your comments, enclose a self-addressed, stamped postcard in the envelope containing your comments. Upon receiving your comments, the docket will return the postcard by mail.

How do I submit confidential business information?

You should submit a redacted "public version" of your comment (including redacted versions of any additional documents or attachments) to the docket using any of the methods identified under **ADDRESSES**. This "public version" of your comment should contain only the portions for which no claim of confidential treatment is made and from which those portions for which confidential treatment is claimed has been redacted. See below for further instructions on how to do this.

You also need to submit a request for confidential treatment directly to the Office of Chief Counsel. Requests for confidential treatment are governed by 49 CFR part 512. Your request must set forth the information specified in part 512. This includes the materials for which confidentiality is being requested (as explained in more detail below); supporting information, pursuant to § 512.8; and a certificate, pursuant to § 512.4(b) and part 512, appendix A.

You are required to submit to the Office of Chief Counsel one unredacted "confidential version" of the information for which you are seeking confidential treatment. Pursuant to §

512.6, the words "ENTIRE PAGE CONFIDENTIAL BUSINESS INFORMATION" or "CONFIDENTIAL BUSINESS INFORMATION CONTAINED WITHIN BRACKETS" (as applicable) must appear at the top of each page containing information claimed to be confidential. In the latter situation, where not all information on the page is claimed to be confidential, identify each item of information for which confidentiality is requested within brackets: "[ ]."

You are also required to submit to the Office of Chief Counsel one redacted "public version" of the information for which you are seeking confidential treatment. Pursuant to § 512.5(a)(2), the redacted "public version" should include redactions of any information for which you are seeking confidential treatment (*i.e.*, the only information that should be unredacted is information for which you are not seeking confidential treatment).

NHTSA is currently treating electronic submission as an acceptable method for submitting confidential business information to the agency under part 512. Please do not send a hardcopy of a request for confidential treatment to NHTSA's headquarters. The request should be sent to Dan Rabinovitz in the Office of the Chief Counsel at Daniel.Rabinovitz@dot.gov. You may either submit your request via email or request a secure file transfer link. If you are submitting the request via email, please also email a courtesy copy of the request to John Piazza at john.piazza@dot.gov.

Will the agency consider late comments?

We will consider all comments received before the close of business on the comment closing date indicated above under DATES. To the extent possible, we will also consider comments that the docket receives after that date. If the docket receives a comment too late for us to consider in developing a final rule (assuming that one is issued), we will consider that comment as an informal suggestion for future rulemaking action.

How can I read the comments submitted by other people?

You may read the comments received by the docket at the address given above under ADDRESSES. The hours of the docket are indicated above in the same location. You may also see the comments on the Internet. To read the comments on the Internet, go to https://www.regulations.gov. Follow the online instructions for accessing the dockets.

Please note that even after the comment closing date, NHTSA will continue to file relevant information in the docket as it becomes available. Further, some people may submit late comments. Accordingly, NHTSA recommends that you periodically check the docket for new material. You can arrange with the docket to be notified when others file comments in the docket. See www.regulations.gov for more information.

Issued under authority delegated in 49 CFR 1.95.

Jonathan Morrison,

Administrator.

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