April 21, 2023

Pete Buttigieg, Secretary U.S. Department of Transportation 1200 New Jersey Avenue SE Washington, DC 20590-0001

Ann Carlson, Acting Administrator National Highway Traffic Safety Administration 1200 New Jersey Avenue SE Washington, DC 20590-0001

Barbara Rhea, Chief State Data Reporting Systems Division National Highway Traffic Safety Administration 1200 New Jersey Avenue SE Washington, DC 20590-0001

PETITION under the Administrative Procedure Act

Dear Secretary Buttigieg:

In accordance with Administrative Procedure Act (APA), I hereby petition the U.S. Department of Transportation (USDOT) and the National Highway Traffic Safety Administration (NHTSA) to promptly issue, amend, modify, or repeal the relevant regulations or guidance documents (49 CFR 5.3; 5 U.S.C. §553(e)) in order to:

- Update the Fatality Analysis Reporting System (FARS) analytical user's manual (NCSA 2023), the 2021 FARS/CRSS Coding and Validation Manual (NHTSA 2023), the Model Minimum Uniform Crash Criteria (MMUCC; NHTSA 2023a) and other guidance documents to provide a standardized definition of underride (NHTSA 2022a) and override crashes for the required underride/override data element (see Appendices);
- Modify the existing underride FARS data element, which is already required to be reported by each State, in the FARS analytical user's manual (NCSA 2023), the 2021 FARS/CRSS Coding and Validation Manual (NHTSA 2023), the MMUCC (NHTSA 2023a), and other guidance documents, to differentiate and collect data on rear underride, side underride, and front override crashes (see Appendices);
- 3. Require an Underride/Override "Checkbox" and mandatory reporting of this data element on State Police Crash Report Forms when States upgrade and standardize their electronically reported State crash data systems to enable electronic real-or near real-time uploading of crash data; and

4. Provide training and information to State FARS analysts and State and local police departments on how to identify and record underride and override crashes.

The critical issue of underride crash fatalities is personal for me. I am a truck safety advocate and began in 2015, after my 16-year-old son Riley Eric Hein was tragically killed due to the lack of a side underride guard on a 2016 semitrailer produced by Utility Trailer Manufacturing Company. I am also on the Board of Directors of the Institute for Safer Trucking, a nonprofit organization focused on educating the public on truck safety issues and the data-driven solutions to address them.

Background

This petition seeks to modify interpretive rules and general policy statements of procedure, and practice within the USDOT and NHTSA. In addition to rulemakings and exemptions, the USDOT procedures, as amended, explicitly provide for the public to petition for retrospective reviews of existing rules and the *modification or rescission of guidance documents* (USDOT 2021; 86 FR 17293), which are interpretive rules and general policy statements of agency organization, procedure, and practice. This aligns with the Administrative Procedure Act's (APA) definition of rule, which is broad and covers a variety of agency actions, including several types of actions that are not subject to the APA's notice-and-comment rulemaking procedures. An agency statement will qualify as a "rule" under the APA definition if it: 1) is "of general or particular applicability," (2) has "future effect," and (3) is "designed to implement, interpret, or prescribe law or policy.

NHTSA is authorized by 49 U.S.C. 30182 and 23 U.S.C. 403 to collect data on motor vehicle traffic crashes to aid in the identification of issues and the development, implementation, and evaluation of motor vehicle and highway safety countermeasures to reduce fatalities and the property damage associated with motor vehicle crashes. Using this authority, NHTSA established the FARS, which collects data on fatal motor vehicle crashes. Among other things, the information aids in the establishment and enforcement of motor vehicle regulations and highway safety programs. The FARS collects data from all 50 States, the District of Columbia, and Puerto Rico. NHTSA established cooperative agreements with the 50 States, the District of Columbia and Puerto Rico to report a standard set of data on each fatal crash within their jurisdictions. As fatal crashes occur, the State employee (FARS Analyst) extracts and codes the required information (data elements) in the FARS records-based system (NHTSA 2022; 87 FR 19573).

FARS is an on-going data acquisition system with annual reviews determining whether annual changes are needed in the acquired and coded data. The FARS manuals are updated annually. State FARS analysts must use the manual appropriate to the current program year (NHTSA 2018). In the past, the FARS was a voluntary information collection of fatal motor vehicle traffic crashes; however, State participation and data collection in FARS is now mandatory (with the exception of American Samoa, Guam, the Commonwealth of the Northern Mariana Islands, and the United States Virgin Islands; 23 U.S.C. 02(b)(1)(F)(vi); NHTSA 2023b; 88 FR 7780).

Petitioned Actions

<u>Petitioned Action 1</u>: Update FARS User's and Coding Manuals, the Model Minimum Uniform Crash Criteria, and other guidance documents to provide a standardized definition of underride and override crashes

This petitioned action could use NHTSA's existing procedure and practice to annually modify and change the FARS analytical user's manual (NCSA 2023), change the 2021 FARS/CRSS Coding and Validation Manual (NHTSA 2023), change the draft MMUCC (NHTSA 2023a) and change any other guidance documents to provide a consistent and standardized definition of underride and override crashes (see Appendices). These changes would not affect the reporting burden of the individual States because the underride/override data element is already required to be coded and reported. In fact, the petitioned changes would ease extraction and coding by the State's FARS analysts.

The Government Accounting Office (GAO 2019) reported that NHTSA had previously identified anomalous patterns in underride crash data in FARS. The main reason for these anomalies has been varying definitions of this crash type, as reporting officers have many interpretations of what constitutes an underride crash. Including a standard definition of an underride and override crash would provide greater assurance that these crashes are accurately recorded.

The underreporting of underride and override crashes and fatalities due to variability in the data collection process limits NHTSA's ability to accurately determine the frequency of such crashes (GAO 2019). As demonstrated NHTSA's recent Advance notice of proposed rulemaking (ANPRM), underreporting of side underride crashes is coming in FARS. The petitioned action would help resolve the underreporting issue by providing additional information and clarity on how to identify and code underride and override crashes, to increase the reporting accuracy of the underride data element in FARS. These improvements would enable NHTSA to better identify and support rulemakings and research efforts on underride crashes (GAO 2019).

<u>Petitioned Action 2</u>: *Modify the existing FARS underride data element to differentiate and collect data on rear underride, side underride, and front override crashes*

This petitioned action would remove ambiguity on the procedure and practice of collecting and reporting of the underride/override FARS data element that currently codes the underride/override data element identical for rear underride, side underride, and front override crashes. This petitioned action requests that the USDOT and NHTSA modify the required underride/override data element in the FARS analytical user's manual (NCSA 2023), the 2021 FARS/CRSS coding and validation manual (NHTSA 2023), the draft MMUCC (NHTSA 2023a) and any other guidance documents to differentiate between and independently code rear underride, side underride, and front override crashes. This would enable more precise data capture and reporting and the resulting analyses of underride and override crashes to permit tracking of the differing regulatory categories that are important to evaluate countermeasure effectiveness, tracking crash outcomes, and to support NHTSA and FMCSA rulemaking

activities. In fact, NHTSA (2023c) used side impact, sideswipe, and angled crashes between the passenger vehicles and tractor-trailers to estimate side underride crashes because the underride/override FARS data element does not currently differentiate between rear or side underride crashes. The petitioned changes would also align with one of the important uses of FARS data to "...estimate the potential effectiveness of new technology", which could include side underride guards for semitrailers NHTSA (2016; 2023c).

Many researchers and organizations, including NHTSA, have reported the poor quality of NHTSA's underride crash data (NHTSA 2023c). For example, IIHS representatives compared underride crash cases in FARS and in NHTSA's and FMCSA's Large Truck Crash Causation Study and identified cases that involved underride crashes but were not categorized correctly in FARS (GAO 2019). Additionally, the University of Michigan's Transportation Research Institute reported that it can be difficult or impossible to identify underride in available computerized crash data files, such as FARS (GAO 2019).

NHTSA has a cooperative agreement with an agency in each State's government to report and populate FARS information for all qualifying fatal crashes in exchange for payments. The FARS is a mutually beneficial data collection effort which requires fiscal support to sustain the cost of the data acquisition (i.e., all manual and electronic methods of reporting). NHTSA (2021) provides funding for up to fifty-two non-competitive Cooperative Agreements to support the States to collect police-reported fatal crashes involving all motor vehicles, pedestrians, and cyclists. These cooperative agreements are a flexible instrument designed to provide money to support a public purpose, including fulfilling the required reporting requirements (2 CFR § 182.620, § 183.25). While States have their own procedure and practice to develop and use paper State Police Crash Report Forms, clearly differentiating and clearly defining rear underride, side underride, and front override would encourage greater uniformity of underride/override crash data.

<u>Petitioned Action 3</u>: Require an Underride/Override "Checkbox" on State Police Crash Report Forms when States upgrade and standardize their electronically reported State crash data systems

This petitioned action would require the inclusion of a checkbox for the mandatory reporting of the underride/override data element on all State electronic crash data systems. The inclusion of an underride/override checkbox would increase the timely and accurate reporting of the underride/override data element. This action also aligns with USDOT's (2022) National Roadway Safety Strategy and could easily be completed through the funding agreement for each State grant to collect electronic data which was established by NHTSA under the Infrastructure Investment and Jobs Act ("IIJA", 2021 P.L. 117-58; NHTSA 2022b; 87 FR 25565). This grant program enables the States to electronically transfer their motor vehicle crash data, which will increase the timely and accurate reporting of the underride/override data element and other crash information to the FARS database. The adoption of electronic crash reporting by State law enforcement agencies would standardize State crash data to align with the latest MMUCC.

FARS PETITION

<u>Petitioned Action 4</u>: *Provide annual training and information to State FARS analysts* and *State and local police departments on how to identify and record underride crashes*

This petitioned action would train the FARS analysts during the annual system-wide FARS meeting and reinforce uniform data coding procedures and practices for rear underride, side underride, and front override information. In this annual FARS meeting, NHTSA could provide information such as a PowerPoint presentation or a training video for the States to share with state and local police departments on how to identify and record underride/override crashes (e.g., see GAO 2019). Additionally, during each State's annual FARS Cooperative Agreement coordination meetings, NHTSA could train state and local police departments on how to identify and record underride police departments.

The USDOT and NHTSA can complete the petitioned actions quickly without time-consuming rulemaking and should do so promptly. For the reasons discussed above, I urge the USDOT and NHTSA to grant this petition. Thank you for your prompt attention to this petition.

Sincerely,

Eric Hein

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Literature Cited

Infrastructure Investment and Jobs Act. November 15, 2021 (2021). <u>H.R.3684</u>, <u>Invest in America</u> Act; Public law 117–58, 117th Congress.

Government Accounting Office. 2019. <u>Truck underride guards: Improved data collection</u>, inspections, and research needed. GAO-19-264.

National Center for Statistics and Analysis. (2023, April). <u>Fatality Analysis Reporting System</u> analytical user's manual, <u>1975-2021</u> (Report No. DOT HS 813 417).

National Highway Traffic Safety Administration (NHTSA). 2016. <u>Data Done Right:</u> <u>Understanding Fatality Analysis Reporting System (FARS) Data Reporting</u>. National Center for Statistics & Analysis Office of Data Acquisition, 19 pp.

NHTSA (2018, August). <u>Traffic records program assessment advisory</u>, 2018 edition (Report No. DOT HS 812 601). Washington, DC.

NHTSA. April 2, 2021 (2021). <u>Administrative Rulemaking, Guidance, and Enforcement</u> <u>Procedures</u>. [FR Doc. 2021–06416]. 86 FR 17292-17296.

NHTSA. April 4, 2022 (2022). <u>Agency Information Collection Activities; Notice and Request</u> <u>for Comment; Fatality Analysis Reporting System (FARS) and Non-Traffic Surveillance (NTS).</u> [Docket No. NHTSA–2022–0031]. 87 FR 19573-19576.

NHTSA. 2022a. Data collection and reporting of underride crashes by law enforcement. 2 pp.

NHTSA. April 29, 2022 (2022b). <u>Agency Request for Information; State Electronic Data</u> <u>Collection Grant Program</u>. [Docket No. NHTSA–2022–0030]. 87 FR 25565-25567.

NHTSA. (2023, April). <u>2021 FARS/CRSS coding and validation manual</u> (Report No. DOT HS 813 426). 1,061 pp.

NHTSA. February 2, 2023 (2023a). <u>Draft Model Minimum Uniform Crash Criteria (MMUCC)</u> <u>Guideline, Sixth Edition</u>. [Docket DOT-NHTSA-2023-0002]. 88 FR 7128-7129.

NHTSA. February 6, 2023 (2023b). <u>Uniform Procedures for State Highway Safety Grant</u> <u>Programs; Final Rule</u>. [Docket No. NHTSA–2022–0053]. 88 FR 7780-7832.

NHTSA. April 21, 2023 (2023c). <u>Side Underride Guards</u>. [Docket No. NHTSA–2023–0012]. 88 FR 24535-24543.

U.S. Department of Transportation (USDOT). April 2, 2021 (2021). <u>Administrative Rulemaking</u>, <u>Guidance</u>, and <u>Enforcement Procedures</u>. [RIN 2105–AF00]. 86 FR 17292-17296.

USDOT. 2022. <u>National Roadway Safety Strategy</u>. Office of the Secretary of Transportation, Washington, DC. 42 pp.

(NCSA 2023, replace page 142)

V31 Vehicle Underride/Override

Definition: This data element identifies whether this vehicle experienced an underride or override with another vehicle during the crash. An <u>underride</u> refers to a crash in which any portion of a passenger vehicle slides under the body of a larger truck or trailer. An override refers to this motor vehicle riding up over another motor vehicle. Either can occur with a parked motor vehicle.

- **Rear underride** when the crash impact between a passenger vehicle and truck/trailer occurs at the rear and slides under the truck/trailer.
- **Side underride** when the crash impact between a passenger vehicle and truck/trailer occurs on the side and slides under the truck/trailer.
- **Front override** when a truck collides with a vehicle in front of it and rides over that vehicle.

Additional Information: This data element also appears in the Parkwork data file as PUNDEROVERRIDE.

Note the striking vehicle, not the vehicle struck, determines the underride/override condition. Law enforcement should use any available mechanism in their reporting systems to carefully describe the relative location of the striking vehicle with respect to the struck vehicle and to accurately report rear or side underride crash data in individual crash reports, whether or not underride crash data fields are included in the crash form or in the event that officers use diagrams and narrative information.

SAS Name: UNDEROVERRIDE

Attribute Codes

2022-Later

- 0 No Underride or Override
- 1 Rear Underride (Compartment Intrusion)
- 2 Rear Underride (No Compartment Intrusion)
- 3 Rear Underride (Compartment Intrusion Unknown)
- 4 Side Underride (Compartment Intrusion)
- 5 Side Underride (No Compartment Intrusion)
- 6 Side Underride (Compartment Intrusion Unknown)
- 7 Front Override
- 8 Not Applicable
- 9 Not Reported
- 10 Reported as Unknown

(NCSA 2023, replace page 345)

V31 Vehicle Underride/Override

Definition: This element indicates whether this vehicle experienced an underride or override with another vehicle during the crash. An <u>underride</u> refers to a crash in which any portion of a passenger vehicle slides under the body of a larger truck or trailer. An override refers to this motor vehicle riding up over another motor vehicle. Either can occur with a parked motor vehicle.

- **Rear underride** when the crash impact between a passenger vehicle and truck/trailer occurs at the rear and slides under the truck/trailer.
- **Side underride** when the crash impact between a passenger vehicle and truck/trailer occurs on the side and slides under the truck/trailer.
- **Front override** when a truck collides with a vehicle in front of it and rides over that vehicle.

Additional Information:

SAS Name: PUNDEROVERRIDE

Attribute Codes

2022-Later

- 0 No Underride or Override
- 1 Rear Underride (Compartment Intrusion)
- 2 Rear Underride (No Compartment Intrusion)
- 3 Rear Underride (Compartment Intrusion Unknown)
- 4 Side Underride (Compartment Intrusion)
- 5 Side Underride (No Compartment Intrusion)
- 6 Side Underride (Compartment Intrusion Unknown)
- 7 Front Override
- 8 Not Applicable
- 9 Not Reported
- 10 Reported as Unknown

(NHTSA 2023, replace pages 356-357)

Vehicle Underride/Override

V31 – Vehicle Underride/Override

FORMAT: 1 numeric SAS NAME: Vehicle.UNDEROVERRIDE, Parkwork.PUNDEROVERRIDE ELEMENT VALUES:

Codes	Attributes
0	No Underride or Override Noted
1	Rear Underride a Motor Vehicle In-Transport (Compartment Intrusion)
2	Rear Underride a Motor Vehicle In-Transport (No Compartment Intrusion)
3	Rear Underride a Motor Vehicle In-Transport (Compartment Intrusion Unknown)
4	Side Underride a Motor Vehicle In-Transport (Compartment Intrusion)
5	Side Underride a Motor Vehicle In-Transport (No Compartment Intrusion)
6	Side Underride a Motor Vehicle In-Transport (Compartment Intrusion Unknown)
7	Front Override
8	Not Applicable
9	Not Reported
10	<u>Reported as Unknown</u>

Definition: This element indicates whether this vehicle experienced an underride or override with another vehicle during the crash.

An underride refers to a crash in which any portion of a passenger vehicle slides under the body of a larger truck or trailer. An override refers to this motor vehicle riding up over another motor vehicle. Either can occur with a parked motor vehicle.

- Rear underride when the crash impact between a passenger vehicle and truck/trailer occurs at the rear and slides under the truck/trailer.
- Side underride when the crash impact between a passenger vehicle and truck/trailer occurs on the side and slides under the truck/trailer.
- Front override when a truck collides with a vehicle in front of it and rides over that vehicle.

Vehicle Underride/Override

Rationale: Needed to identify crashes in which an underride or override occurs to support NHTSA rulemaking activities.

Remarks: When coding this element, try to assess the outcome for each vehicle in a vehicleto-vehicle collision—if this vehicle slid under the body of a larger truck or trailer during the events of the crash, then this vehicle <u>is coded as UNDERRIDE</u> while the other vehicle is coded <u>as OVERRIDE</u>.

In vehicle-to-vehicle collisions, a vehicle is either overriding another vehicle while the other vehicle is underriding, or a vehicle is neither overriding nor underriding, or the vehicle-to-vehicle collision is not applicable because it involves a motorcycle, ATV/ATC, or snowmobile.

Law enforcement should use any available mechanism in their reporting systems to carefully describe the relative location of the striking vehicle with respect to the struck vehicle and to accurately report rear or side underride crash data in individual crash reports, whether or not underride crash data fields are included in the crash form or in the event that officers use diagrams and narrative information.

HIERARCHY FOR VEHICLES WITH MULTIPLE COLLISIONS WITH OTHER MOTOR VEHICLES: If this vehicle is involved in more than one collision with another vehicle, then code underride/override based on the following priority:

- 1. Events involving an underride and override.
- 2. Events where underride/override are Reported as Unknown.
- 3. Events where underride/override are Not Reported.
- 4. Events where it can be determined that No underride or override apply.
- 5. Events for which underride/override are Not Applicable.

0 (No Underride or Override) is used when it can be determined from the case material that neither underride nor override occurred for this vehicle.

1-3 (Rear Underride) is used when this vehicle traveled or was pushed under the rear of another vehicle (including a parked vehicle) during the crash. These codes are also used for this vehicle when another passes over it.

4-6 (Side Underride) is used when the crash impact between a passenger vehicle and truck/trailer occurs on the side and slides under the truck/trailer.

The classic example is an automobile striking the rear end or side of a tractor-trailer and coming to a stop under back or side of the trailer. In these examples, the automobile is the underriding vehicle, and the tractor-trailer is overriding. Indications that an underride occurred can include crash descriptions in the narrative. Example statements may include

Vehicle Underride/Override

descriptions such as "passed under," "struck and wedged beneath/under," "struck and went/slid under," "slid below/under after impact," etc.

Underride events can occur at any plane of contact and at any angle. It is possible in an underride of a trailer for a vehicle to pass under the trailer and emerge from the other side.

7 (Override) is used when this vehicle rode up over another vehicle (including a parked vehicle) during the crash. This code is also used for this vehicle when another vehicle passed under it. The classic example is a truck striking the front end or rear end of an automobile and coming to a stop on top of it. In this example, the truck is the overriding vehicle, and the automobile is the underriding vehicle. Indications that an override occurred can include crash descriptions in the narrative. Example statements may include descriptions such as "drove up on to," "struck and traveled over," "struck and went/slid over," "ended up on top," etc.

8 (Not Applicable) is populated by the data entry system for single vehicle crashes (i.e., underride or override events require two vehicles), for any vehicle in a multi-vehicle crash that has no vehicle-to-vehicle collision events (e.g., 12, 14, 45, or 55), and for all vehicle-to-vehicle collisions involving motor vehicle types for which this data is not collected—specifically, motorcycles, all-terrain cycles, and snowmobiles, but excluding "autocycles."

9 (Not Reported) If a State's crash report manual instructs to leave blank data blocks that are not applicable, then a blank in those data blocks is NOT considered "Not Reported." Code 9 (Not Reported) in these two situations:

- 1. No field or coding block exists on the State's crash report to provide the information to code this element, AND no other information is available to code the element (e.g., narrative, diagram, case material); or
- 2. A field or coding block exists on the State's crash report that would provide the information needed to code this element, but it has been left blank, AND no other information is available to code the element (e.g., narrative, diagram, case material).

10 (Reported as Unknown) is used when the case material reports that it is unknown if an underride or override occurred AND no other information is available to code the element.

We distinguish between those underriding vehicles with compartment intrusion versus those with no compartment intrusion.

• Compartment intrusion indicates a breach of the passenger compartment of this underriding (striking) vehicle. For example, damage to the windshield or glass area.

• No compartment intrusion means that the underridden vehicle (struck vehicle) did not directly enter the passenger compartment of this vehicle (for example, damage to the hood or front bumper).

Compartment Intrusion Guidelines:

Compartment Intrusion Codes "1" or "4" are used when the police crash report indicates that the passenger compartment of the underriding vehicle has been damaged. Sources of this information can be the police crash report narrative and/or the vehicle damage scale. If the top of the vehicle is damaged, as noted by the vehicle damage scale, codes "1" or "4" would apply.

No Compartment Intrusion Codes "2" or "5" are used when a portion of the vehicle is under another and it is known that there is no passenger compartment intrusion.

Compartment Intrusion Unknown Codes "3" or "6" are used when it is unknown if there is passenger compartment intrusion.

(NHTSA 2023a, replace page 139)

V42. Underride / Override

V42. Vehicle Underride / Override

Element Definition:

An <u>underride</u> refers to a crash in which any portion of a passenger vehicle slides under the body of a larger truck or trailer. An override refers to this motor vehicle riding up over another motor vehicle. Either can occur with a parked motor vehicle.

Attribute Values:

Select 1

- Not Applicable
- No Underride or Override
- Rear Underride
- Side Underride
- Front Override
- Unknown

Remarks:

Complete this element for all motor vehicles. The information it provides can be important in helping NHTSA and FMCSA make decisions on regulatory strategies for different types of underride/override crashes.

- **Rear underride** when the crash impact between a passenger vehicle and truck/trailer occurs at the rear and slides under the truck/trailer.
- Side underride when the crash impact between a passenger vehicle and truck/trailer occurs on the side and slides under the truck/trailer.
- Front override when a truck collides with a vehicle in front of it and rides over that vehicle.

Highway Safety Rationale:

This element is important to evaluate countermeasure effectiveness, tracking crash outcomes, and to support NHTSA and FMCSA rulemaking activities.

Implementation Suggestions:

• Law enforcement should use any available mechanism in their reporting systems to carefully describe the relative location of the striking vehicle with respect to the struck vehicle and to accurately report rear or side underride crash data in individual crash reports, whether or not underride crash data fields are included in the crash form or in the event that officers use diagrams and narrative information.

Validation Rules:

None

Alignment Rules for VEHICLE UNDERRIDE/OVERRIDE:

None

(NHTSA 2023a, replace term on page 259)

Glossary of Terms

Glossary of Terms

VEHICLE UNDERRIDE/OVERRIDE - An <u>underride</u> refers to a crash in which any portion of a passenger vehicle slides under the rear or side body of a larger truck or trailer. A front override refers to this motor vehicle riding up over another motor vehicle. Either can occur with a parked vehicle.