



DEPARTMENT OF TRANSPORTATION

Federal Motor Carrier Safety Administration

49 CFR Part 393

[Docket No. FMCSA-2021-0037]

RIN 2126-AC42

Parts and Accessories Necessary for Safe Operation; Authorized Windshield Area for the Installation of Vehicle Safety Technology

AGENCY: Federal Motor Carrier Safety Administration (FMCSA), Department of Transportation (DOT).

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: FMCSA proposes to amend the Federal Motor Carrier Safety Regulations (FMCSRs) to increase the area within which certain vehicle safety technology devices may be mounted on the interior of the commercial motor vehicle (CMV) windshields. In addition, FMCSA proposes to add items to the definition of *vehicle safety technology*. This NPRM responds to a rulemaking petition from Daimler Trucks North America (DTNA).

DATES: Comments must be received on or before [Insert date 30 days after date of publication in the FEDERAL REGISTER].

ADDRESSES: You may submit comments identified by Docket Number FMCSA-2021-0037 using any of the following methods:

- Federal eRulemaking Portal: Go to <https://www.regulations.gov/docket/FMCSA-2021-0037/document>. Follow the online instructions for submitting comments.
- Mail: Dockets Operations, U.S. Department of Transportation, 1200 New Jersey Avenue SE, West Building, Ground Floor, Room W12-140, Washington, DC 20590-0001.

- Hand Delivery or Courier: Dockets Operations, U.S. Department of Transportation, 1200 New Jersey Avenue SE, West Building, Ground Floor, Room W12-140, Washington, DC 20590-0001, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. To be sure someone is there to help you, please call (202) 366-9317 or (202) 366-9826 before visiting Dockets Operations.
- Fax: (202) 493-2251.

FOR FURTHER INFORMATION CONTACT: Mr. Luke W. Loy, Vehicle and Roadside Operations Division, Office of Policy, Federal Motor Carrier Safety Administration, 1200 New Jersey Avenue SE, Washington, DC 20590-0001; (202) 366-0676; Luke.Loy@dot.gov. If you have questions on viewing or submitting material to the docket, call Dockets Operations at (202) 366-9826.

SUPPLEMENTARY INFORMATION:

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I. PUBLIC PARTICIPATION AND REQUEST FOR COMMENTS

A. Submitting Comments

If you submit a comment, please include the docket number for this NPRM (FMCSA-2021-0037), indicate the specific section of this document to which your comment applies, and provide a reason for each suggestion or recommendation. You may submit your comments and material online or by fax, mail, or hand delivery, but please use only one of these means. FMCSA recommends that you include your name and a mailing address, an email address, or a phone number in the body of your document so FMCSA can contact you if there are questions regarding your submission.

To submit your comment online, go to <https://www.regulations.gov/docket/FMCSA-2021-0037/document>, click on this NPRM, click “Comment,” and type your comment into the text box on the following screen.

If you submit your comments by mail or hand delivery, submit them in an unbound format, no larger than 8½ by 11 inches, suitable for copying and electronic filing. If you submit comments by mail and would like to know that they reached the facility, please enclose a stamped, self-addressed postcard or envelope.

FMCSA will consider all comments and material received during the comment period.

Confidential Business Information (CBI)

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to the NPRM contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to the NPRM, it is important that you clearly designate the submitted comments as CBI. Please mark each page of

your submission that constitutes CBI as “PROPIN” to indicate it contains proprietary information. FMCSA will treat such marked submissions as confidential under the Freedom of Information Act, and they will not be placed in the public docket of the NPRM. Submissions containing CBI should be sent to Mr. Brian Dahlin, Chief, Regulatory Analysis Division, Office of Policy, Federal Motor Carrier Safety Administration, 1200 New Jersey Avenue SE, Washington DC 20590-0001. Any comments FMCSA receives not specifically designated as CBI will be placed in the public docket for this rulemaking.

B. Viewing Comments and Documents

To view documents mentioned as being available in the docket, go to <https://www.regulations.gov/docket/FMCSA-2021-0037/document> and choose the document to review. To view comments, click this NPRM, and click “Browse Comments.” If you do not have access to the internet, you may view the docket online by visiting Dockets Operations in Room W12-140 on the ground floor of the DOT West Building, 1200 New Jersey Avenue SE, Washington, DC 20590-0001, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. To be sure someone is there to help you, please call (202) 366-9317 or (202) 366-9826 before visiting Dockets Operations.

C. Privacy Act

DOT solicits comments from the public to better inform its rulemaking process, in accordance with 5 U.S.C. 553(c). DOT posts these comments, without edit, including any personal information the commenter provides, to www.regulations.gov, as described in the system of records notice (DOT/ALL 14 – Federal Docket Management System (FDMS)), which can be reviewed at www.transportation.gov/privacy.

II. EXECUTIVE SUMMARY

A. Purpose and Summary of the Regulatory Action

Section 393.60(e)(1)(i) of the FMCSRs prohibits obstruction of the driver's field of view by devices mounted at the top of the windshield. Antennas and similar devices must not be mounted more than 152 mm (6 inches) below the upper edge of the windshield, and must be outside the driver's sight lines to the road and highway signs and signals.

Section 393.60(e)(1)(i) does not apply to vehicle safety technologies, as defined in § 393.5, that include "a fleet-related incident management system, performance or behavior management system, speed management system, forward collision warning or mitigation system, active cruise control system, and transponder." Section 393.60(e)(1)(ii) requires devices with vehicle safety technologies to be mounted (1) not more than 100 mm (4 inches) below the upper edge of the area swept by the windshield wipers, or (2) not more than 175 mm (7 inches) above the lower edge of the area swept by the windshield wipers, and (3) outside the driver's sight lines to the road and highway signs and signals.

Specifically, the Agency proposes to modify § 393.60(e)(1)(ii) to increase from 100 mm (4 inches) to 216 mm (8.5 inches) the distance below the upper edge of the area swept by the windshield wipers within which vehicle safety technologies may be mounted. The other parameters would remain unchanged. The Agency believes the potential economic impact of these changes is negligible. The proposed amendments do not impose new or more stringent requirements, but simply codify the temporary exemptions granted pursuant to 49 CFR part 381 that allow the use of the devices/technologies in locations that would previously have been a violation of § 393.60(e)(1). More importantly, the amendments do not mandate the use of any devices/technologies, but simply permit their voluntary use while mounted in a location that maximizes their effectiveness without impairing operational safety.

B. Costs and Benefits

The Agency expects that if a final rule is adopted consistent with this NPRM, it would generate cost savings for both industry and the Federal Government by reducing the overall time burden associated with the exemption request and approval process associated with 49 U.S.C. 31315 and the implementing regulations under 49 CFR part 381. The Agency estimates this NPRM would result in total annualized cost savings of \$12,184 and \$10,705 at 3 percent and 7 percent discount rates, respectively.

III. ABBREVIATIONS

ADAS	Advanced Driver Assistance System
ANPRM	Advance Notice of Proposed Rulemaking
BLS	U.S. Bureau of Labor Statistics
CE	Categorical Exclusion
CIB	Crash Imminent Braking
CMV	Commercial Motor Vehicle
DOT	Department of Transportation
DBS	Dynamic Brake Support
DTNA	Daimler Trucks North America
ECEC	Employer Costs for Employee Compensation
ELD	Electronic Logging Devices
E.O.	Executive Order
FAST Act	Fixing America's Surface Transportation Act
FMCSA	Federal Motor Carrier Safety Administration
FMCSRs	Federal Motor Carrier Safety Regulations
FR	Federal Register
GS	General Schedule
GPS	Global Positioning System
NEPA	National Environmental Policy Act of 1969
NPRM	Notice of Proposed Rulemaking
OMB	Office of Management and Budget
PIA	Privacy Impact Assessment
PII	Personally Identifiable Information
Secretary	Secretary of Transportation
U.S.C.	United States Code

IV. LEGAL BASIS FOR THE RULEMAKING

This NPRM is based on the authority of the Motor Carrier Act, 1935 [1935 Act], the Motor Carrier Safety Act of 1984 [1984 Act], and the Fixing America's Surface Transportation (FAST) Act.

The 1935 Act, as amended, provides that “[t]he Secretary of Transportation may prescribe requirements for—(1) qualifications and maximum hours of service of

employees of, and safety of operation and equipment of, a motor carrier; and (2) qualifications and maximum hours-of-service of employees of, and standards of equipment of, a motor private carrier, when needed to promote safety of operation.” [49 U.S.C. 31502(b)].

The 1984 Act provides concurrent authority to regulate drivers, motor carriers, and vehicle equipment. It requires the Secretary to “prescribe regulations on commercial motor vehicle safety. The regulations shall prescribe minimum safety standards for commercial motor vehicles. At a minimum, the regulations shall ensure that—(1) commercial motor vehicles are maintained, equipped, loaded, and operated safely; (2) the responsibilities imposed on operators of commercial motor vehicles do not impair their ability to operate the vehicles safely; (3) the physical condition of operators of commercial motor vehicles is adequate to enable them to operate vehicles safely . . . ; (4) the operation of commercial motor vehicles does not have a deleterious effect on the physical condition of the operators; and (5) an operator of a commercial motor vehicle is not coerced by a motor carrier, shipper, receiver, or transportation intermediary to operate a commercial motor vehicle in violation of a regulation promulgated under this section, or chapter 51 or chapter 313 of this title.” [49 U.S.C. 31136(a)].

Section 5301 of the FAST Act directs FMCSA to exempt voluntary mounting of a vehicle safety technology on a windshield if that technology is likely to achieve a level of safety that is equivalent to or greater than the level of safety that would be achieved without the exemption [Pub. L. 114-94, 129 Stat. 1312, 1543, Dec. 4, 2015]. Section 5301(c) also specifies that any regulatory exemption for windshield-mounted technologies in effect on the date of enactment of the FAST Act “shall be considered likely to achieve a level of safety that is equivalent to or greater than the level of safety that would be achieved absent an exemption”

This NPRM is based in part on the 1935 Act, which allows the Agency to regulate the “safety of operation and equipment” of a motor carrier and the “standards of equipment” of a motor private carrier. The requirements of 49 U.S.C. 31136 (a)(1), (2), and (4) of the 1984 Act are also applicable to this rulemaking action. The Agency proposes to amend 49 CFR part 393 to allow certain safety equipment to be mounted within the area of the windshield swept by the windshield wipers. The Agency believes that these changes will be welcomed by motor carriers and drivers alike and that coercion to violate these revised provisions, which is prohibited by § 31136(a)(5), will not be an issue. The NPRM does not involve the physical condition of drivers under § 31136(a)(3).

This NPRM rests in part on the intent of Congress expressed in section 5301 of the FAST Act to exempt safety equipment mounted within the swept area of windshields, provided such devices do not degrade operational safety.

FMCSA must consider the “costs and benefits” of any proposal before promulgating regulations (49 U.S.C. 31136(c)(2)(A), 31502(d)).

V. BACKGROUND

The fundamental purpose of 49 CFR part 393, “Parts and Accessories Necessary for Safe Operation,” is to ensure that no employer shall operate a CMV, or cause or permit it to be operated, unless it is equipped in accordance with the requirements and specifications of this part. However, nothing contained in part 393 shall be construed to prohibit the use of additional equipment and accessories, not inconsistent with or prohibited by part 393, provided such equipment and accessories do not decrease the safety of operation of the CMVs on which they are used (§ 393.3).

Section 5301 of the FAST Act directed the Agency to amend the FMCSRs to allow devices to be mounted on the windshield that utilize “vehicle safety technology,” as defined in the Act. In addition, section 5301 stated that all windshield-mounted devices/technologies with a limited 2-year exemption in effect on the date of enactment

were considered to meet the safety standard required for the initial exemption, i.e., achieving a level of safety equivalent to, or greater than, the level that would be achieved absent the exemption. On September 23, 2016, FMCSA published a final rule titled “Parts and Accessories Necessary for Safe Operation; Windshield-Mounted Technologies,” (81 FR 65568), which amended the FMCSRs to allow the voluntary mounting of certain devices on the interior of the windshields of CMVs, including placement within the area that is swept by the windshield wipers (49 CFR 393.60(e)(1)).

A. Temporary Exemptions

Since the Agency amended § 393.60 in 2016, FMCSA has granted a number of temporary exemptions for the placement of safety technologies and devices that require a clear forward-facing visual field for proper operation. These devices either need to be mounted within the swept area of the windshield, or should be mounted on the windshield so that the driver does not have to take his/her eyes off the road to look at the device, such as Global Positioning System (GPS) displays.

On August 3, 2017 (82 FR 36182), FMCSA granted Hino Motors a 5-year exemption from 49 CFR 393.60(e)(1) on behalf of motor carriers to operate CMVs manufactured by Hino equipped with Automated Emergency Braking/Lane Departure Warning system cameras mounted in the approximate center of the windshield such that the bottom edge of the camera is not more than 7 inches below the upper edge of the windshield and outside the driver’s sight lines to all mirrors, highway signs, signals, and view of the road ahead.

On January 31, 2018 (83 FR 4543), FMCSA granted DTNA a 5-year exemption from 49 CFR 393.60(e)(1) on behalf of CMVs manufactured by DTNA equipped with the Attention Assist and Lane Departure Warning system camera mounted in the approximate center of the windshield such that the bottom edge of the camera is not more

than 8.5 inches below the top of the area swept by the windshield wipers and outside the driver's sight lines to all mirrors, highway signs, signals, and view of the road ahead.

On August 22, 2018 (83 FR 42552), FMCSA granted Traditional Trucking Corporation a 5-year exemption from 49 CFR 393.60(e)(1) on behalf of motor carriers to operate CMVs equipped with GPS devices mounted (1) not more than 100 mm (4 inches) below the upper edge of the area swept by the windshield wipers; or (2) not more than 175 mm (7 inches) above the lower edge of the area swept by the windshield wipers; and (3) outside the driver's sight lines to the road and highway signs and signals.

On April 15, 2019 (84 FR 15284), FMCSA granted SmartDrive a 5-year exemption from 49 CFR 393.60(e)(1) on behalf of motor carriers to operate CMVs equipped with the SmartDrive's Advanced Driver Assistance System (ADAS) camera system mounted in the approximate center of the windshield such that the bottom edge of the camera is not more than 8 inches below the upper edge of the swept area of the windshield wiper and outside the driver's sight lines to all mirrors, highway signs, signals, and view of the road ahead.

On November 25, 2019 (84 FR 64952), FMCSA granted Navistar a 5-year exemption from 49 CFR 393.60(e)(1) on behalf of motor carriers to operate CMVs equipped with Navistar's ADAS mounted in approximately the top center of the windshield and such that the bottom edge of the camera housing is approximately 8 inches below the upper edge of the windshield, outside of the driver's normal sight lines to the road ahead, highway signs and signals, and all mirrors.

On May 21, 2020 (85 FR 31021), FMCSA granted Lytx, Inc. a 5-year exemption from 49 CFR 393.60(e)(1) on behalf of motor carriers to operate CMVs equipped with Lytx's ADAS mounted in approximately the top center of the windshield and such that the bottom edge of the camera housing is approximately 8 inches below the upper edge of

the area swept by the windshield wipers, outside of the driver's normal sight lines to the road ahead, highway signs and signals, and all mirrors.

On October 9, 2020 (85 FR 64220), FMCSA granted Nauto, Inc. a 5-year exemption from 49 CFR 393.60(e)(1) on behalf of motor carriers to operate CMVs equipped with Nauto's multi-sensor device mounted in approximately the top center of the windshield and such that the bottom edge of the multi-sensor device housing is approximately 8 inches below the upper edge of the area swept by the windshield wipers, outside of the driver's normal sight lines to the road ahead, highway signs and signals, and all mirrors.

On October 28, 2020 (85 FR 68409), FMCSA granted Samsara Networks, Inc. a 5-year exemption from 49 CFR 393.60(e)(1) on behalf of motor carriers to operate CMVs equipped with Samsara's AI Dash Cam device mounted in approximately the top center of the windshield and such that the bottom edge of the AI Dash Cam device is approximately 8 inches below the upper edge of the area swept by the windshield wipers, outside of the driver's normal sight lines to the road ahead, highway signs and signals, and all mirrors.

On November 24, 2020 (85 FR 75106), FMCSA granted J.J. Keller & Associates, Inc. a 5-year exemption from 49 CFR 393.60(e)(1) on behalf of motor carriers operating CMVs equipped with J. J. Keller's ADAS camera mounted in approximately the top center of the windshield and such that the bottom edge of the camera housing is approximately 8 inches below the upper edge of the area swept by the windshield wipers, outside of the driver's normal sight lines to the road ahead, highway signs and signals.

On December 18, 2020 (85 FR 82575), FMCSA granted Netradyne Inc. a 5-year exemption from 49 CFR 393.60(e)(1) on behalf of motor carriers operating CMV's utilizing the Netradyne Driveri® Dash Cam which is mounted near the top center of the windshield, with the bottom of the camera housing located approximately 8 inches below

the top of the area swept by the windshield wipers, and outside the driver's sight lines to the road and highway signs and signals.

B. Petition for Rulemaking

On March 10, 2019, DTNA petitioned the Agency to initiate a rulemaking to amend 49 CFR 393.60, "Parts and Accessories Necessary for Safe Operation, Glazing in Specified Openings."¹ DTNA sought a revision to 49 CFR 393.60(e)(1)(ii)(A) to allow safety-enhancing technologies to be placed on the interior of the windshield within 8.5 inches below the upper edge of the area swept by the windshield wipers, which would make permanent the exemption the Agency granted DTNA in 2018. The petition also asked FMCSA to expand the definition of *vehicle safety technology*, found at § 393.5, to include additional items of equipment that are intended to promote driver, occupant, and roadway safety. These items included braking warning systems, braking assist systems, automatic emergency braking, driver camera system, attention assist warning, and traffic sign recognition.

VI. DISCUSSION OF PROPOSED RULEMAKING

FMCSA proposes to amend § 393.60(e) to allow certain additional vehicle safety technologies to be mounted on the interior of the windshield of a CMV, within a defined portion of the swept area of the windshield. FMCSA is proposing to modify the definition of *vehicle safety technology* in § 393.5 of the FMCSRs, to add technologies that had been granted temporary exemptions from § 393.60(e) since the 2016 final rule. Consistent with the terms and conditions outlined in the various temporary exemptions currently in effect, FMCSA proposes to require devices that must be mounted within the area swept by the windshield wipers to be located (1) not more than 216 mm (8.5 inches) below the upper edge, and (2) not more than 175 mm (7 inches) above the lower edge of the swept area. Additionally, and consistent with the existing regulation and the terms and conditions of

¹ The petition is available at <https://www.fmcsa.dot.gov/regulations/petitions-0>.

the temporary exemptions, the devices would have to be located outside the driver's sight lines to the road and highway signs and signals.

Similar to the 2016 amendments to § 393.60, this NPRM proposes to update the FMCSRs in response to the development and proliferation of devices that utilize new and innovative vehicle safety technologies that did not exist at the time the previous requirements were adopted. If finalized, this NPRM rule would add GPS to the list of vehicle safety technologies even though the GPS display does not require a clear forward-facing visual field through the windshield. As discussed in the Traditional Trucking Corporation temporary exemption, GPS devices cannot be mounted to the "face" of the CMVs control panel as that area is covered with controls and displays necessary for the operation of the CMV. The GPS device can be located on top of the dash, which in many cases leaves the GPS in the same visual field as if the GPS were located on the windshield in the lower allowable area. Mounting the GPS lower on the dash would take the driver's eyes farther from the road. The size of GPS display units is approximately the same size as the currently allowed vehicle safety technologies in the driver's visual field. These devices/technologies have been proven to improve safety and vehicle operations.

The first temporary exemption from § 393.60(e)(1) was granted in March 2009, and FMCSA has over 12 years of real-world experience overseeing motor carriers operating CMVs using devices mounted on the interior of the windshield and marginally within the area swept by the windshield wipers. FMCSA is unaware of any crashes during that time attributed to the location of such devices.

To assist in development of the proposed regulatory revisions, the Agency specifically requests responses to the following questions:

1. Does the definition of *vehicle safety technology* need to be expanded further to address other potential technologies and/or multifunction devices such as

electronic logging devices that incorporate technologies such as GPS that either require placement in the approximate middle of the CMV windshield or would benefit driver safety by not diverting the CMV driver's eyes from the road and would be subject to the positioning requirements of § 393.60(e)(1)?

2. Would the proposed position of allowable vehicle safety technologies (not more than 8.5 inches below the upper and 7 inches above the lower edge of the swept area of the windshield) be sufficient for current and developing devices?

VII. SECTION-BY-SECTION ANALYSIS

This section-by-section analysis describes the proposed changes in numerical order.

A. Section 393.5 Definitions.

The definition for *vehicle safety technology* would be revised by adding more examples of vehicle safety technologies to those listed in the definition.

B. Section 393.60 Glazing in specified openings.

This section would be revised by replacing “100 mm (4 inches)” with “216 mm (8.5 inches)” in paragraph (e)(1)(ii)(A). Additionally, a new paragraph (e)(1)(ii)(C) would be added to read “Outside the driver’s sight lines to the road and highway signs and signals.”

VIII. REGULATORY ANALYSES

A. Executive Order (E.O.) 12866 (Regulatory Planning and Review), E.O. 13563 (Improving Regulation and Regulatory Review), and DOT Regulatory Policies and Procedures

FMCSA has considered the impact of this notice of proposed rulemaking under E.O. 12866 (58 FR 51735, Oct. 4, 1993), Regulatory Planning and Review, E.O. 13563 (76 FR 3821, Jan. 21, 2011), Improving Regulation and Regulatory Review, and DOT’s regulatory policies and procedures. OIRA determined that this notice of proposed

rulemaking is not a significant regulatory action under section 3(f) of E.O. 12866, as supplemented by E.O. 13563, and does not require an assessment of potential costs and benefits under section 6(a)(3) of that Order. Accordingly, OMB has not reviewed it under these Orders.

Additionally, this NPRM supports Executive Order 13859 which states that “the policy of the United States Government is to sustain and enhance the scientific, technological, and economic leadership position of the United States in AI [artificial intelligence].”² The deployment of AI holds the promise to improve efficiency, effectiveness, safety, fairness, welfare, transparency, and other economic and social goals, and America’s continued status as a global leader in AI development is important to preserving our economic and national security. The importance of developing and deploying AI requires a regulatory approach that fosters innovation and growth and engenders trust, while protecting core American values, through both regulatory and non-regulatory actions and reducing unnecessary barriers to the development and deployment of AI. To support innovation and growth in the technological sector of CMV safety, FMCSA is issuing this NPRM as a response to a rulemaking petition from DTNA³ [redacted].

Baseline for the Analysis

The mounting of devices on the interior of the windshield within the area swept by the windshield wipers is prohibited under 49 CFR 393.60(e), unless they are vehicle safety technologies. FMCSA has authority under 49 U.S.C. 31315(b) to grant exemptions from certain parts of the FMCSRs. FMCSA must publish a notice of each exemption request in the *Federal Register* (49 CFR 381.315(a)). The Agency must provide the public an opportunity to inspect the information relevant to the application, including any safety analyses that have been conducted. The Agency must also provide an opportunity

² See Exec. Order No. 13,859, section 1, 84 FR 3967

³ <https://www.fmcsa.dot.gov/regulations/petitions-0>

for public comment on the request. FMCSA notes that the burden associated with preparing an exemption request is not included in a currently approved information collection request (ICR), and is pursuing completion of that ICR outside of this rulemaking.

As originally enacted, 49 U.S.C. 31315(b) allowed an exemption from a regulation (and a renewal) for no longer than 2 years from its approval date. Section 5206(a)(3) of the FAST Act (Public Law 114-94, 129 Stat. 1312, 1534-1535 Dec. 4, 2015) amended section 31315(b) to allow an exemption to be granted for no longer than 5 years and to be renewed, upon request, for subsequent periods no longer than 5 years. 49 CFR 381.300 (b)

Section 393.60(e)(1)(i) of the FMCSRs prohibits the obstruction of the driver's field of view by devices mounted on the interior of the windshield. Antennas and similar devices must not be mounted more than 152 mm (6 inches) below the upper edge of the windshield, and outside the driver's sight lines to the road and highway signs and signals. Section 393.60(e)(1)(i) does not apply to vehicle safety technologies, as defined in 49 CFR 390.5, including "a fleet-related incident management system, performance or behavior management system, speed management system, lane departure warning system, forward collision warning or mitigation system, active cruise control system, and transponder." Section 393.60(e)(1)(ii) requires devices with vehicle safety technologies to be mounted (1) not more than 100 mm (4 inches) below the upper edge of the area swept by the windshield wipers, or (2) not more than 175 mm (7 inches) above the lower edge of the area swept by the windshield wipers, and outside the driver's sight lines to the road and highway signs and signals.

This NPRM proposes revisions to 49 CFR 393.60 to expand the area where vehicle safety technologies (e.g., lane departure warning systems, forward collision warning and mitigation systems utilizing automated emergency braking, enhanced driver

performance and behavior management and coaching systems) could be installed on the interior of windshields of CMVs. The NPRM, if finalized consistent with the terms proposed, would generate cost savings for both industry and government and is anticipated to achieve a level of safety equivalent to, or greater than, the level that would be achieved by the current regulation.

Table 1 provides a summary of the affected population, costs, cost savings, and benefits of this NPRM.

Table 1: Summary of the impacts of this NPRM

Category	Summary
Applicability	Revisions to 49 CFR 393.60 to expand the area vehicle safety technologies could be installed on the interior windshield of CMVs
Affected Population	Potentially, all CMVs, as defined in 49 CFR 390.5
Costs	There would be no costs to industry or the Federal Government
Industry Costs Savings (\$, 7 percent discount rate)	10-year: \$3,992 Annualized: \$568
Federal Government Cost Savings (\$, 7 percent discount rate)	10-year: \$71,196 Annualized: \$10,136
Total Cost Savings (\$, 7 percent discount rate)	10-year: \$75,189 Annualized: \$10,705
Benefits	This NPRM, if finalized, would provide a greater available area for the voluntary deployment of windshield-mounted safety technologies such as lane departure warning systems and automated emergency braking safety systems which have the potential to reduce fatalities, injuries, and property damages while maintaining a level of safety equivalent to, or greater than, the level that would be achieved by the current regulation.

Cost, Cost Savings & Benefits

This NPRM proposes two changes to the Parts and Accessories Necessary for Safe Operation regulations in 49 CFR part 393, subpart A and subpart D.

Under the existing § 393.5 definitions, vehicle safety technology includes a fleet-related incident management system, performance or behavior management system, speed management system, lane departure warning system, forward collision warning or mitigation system, active cruise control system, and transponder. Under the proposed rulemaking § 393.5 definitions would now also include braking warning systems, braking assist systems, automatic emergency braking, driver camera systems, attention assist warning, Global Positioning Systems and traffic sign recognition. Vehicle safety technology includes systems and devices that contain cameras, lidar, radar, sensors and/or video.

As a result of the proposed change, there would be new examples of vehicle safety technology devices and systems which would better accommodate the vehicle manufacturer advancements in the field of driver assistance technologies. The proposed change would have no cost. There would be benefits accrued through improved safety performance of CMVs via fatality, injury, and property damage prevention. For example, lane departure warning systems are anticipated to prevent accidents involving striking a car in an adjoining lane, which could either involve “sideswiping” a vehicle traveling in the same direction or hitting a vehicle traveling in the opposite direction, and rollovers, which often occur when a vehicle leaves the road. Additionally, automatic Emergency Braking systems engage dynamic brake support or crash-imminent braking to potentially save lives and reduce moderate and less severe rear-end crashes.

With regards to the existing § 393.60, (e)(1)(ii), Paragraph (e)(1)(i) of this section does not apply to vehicle safety technologies, as defined in §393.5, that are mounted on the interior of a windshield. Devices with vehicle safety technologies must be mounted outside the driver's sight lines to the road and to highway signs and signals, and:

- Not more than 100 mm (4 inches) below the upper edge of the area swept by the windshield wipers
- Not more than 175 mm (7 inches) above the lower edge of the area swept by the windshield wipers.

Under the proposed change to § 393.60, (e)(1)(ii), Paragraph (e)(1)(i) of this section does not apply to vehicle safety technologies, as defined in §393.5, that are mounted on the interior of a windshield. Devices with vehicle safety technologies must be mounted outside the driver's sight lines to the road and to highway signs and signals, and:

- Not more than 216 mm (8.5 inches) below the upper edge of the area swept by the windshield wipers; or
- Not more than 175 mm (7 inches) above the lower edge of the area swept by the windshield wipers; and
- Outside the driver's sight lines to the road and highway signs and signals.

This proposed change would expand the area available for mounting vehicle safety technologies on the interior of a windshield. The proposed change would have no cost but would result in an annualized cost savings from reduced exemption application and approval process. The cost savings are estimated to be \$12,184 and \$10,705 at 3 percent and 7 percent discount rates.

Wage Rates

For this analysis, we calculated private sector wages using 2019 wage data from the U.S. Bureau of Labor Statistics (BLS) Occupational Employment Statistics for the Management of Companies and Enterprises (North American Industry Classification System 551100). We used median hourly wage for Standard Occupational Classification Code 11-2021 - Marketing Managers which is \$65.79⁴^[OBJ]

⁴ https://www.bls.gov/oes/2019/may/oes_nat.htm (last accessed April 20, 2021)

We added a load factor to the industry wages for Marketing Managers using December 2019 wage and total compensation data from the BLS Employer Costs for Employee Compensation (ECEC) survey, which accounts for employee benefits. This load factor represents the total benefits as a percentage of total salary.⁵ We multiply the median hourly wage by the load factor to get the full loaded wage of \$94.74.

We utilize Federal Government employee wage rates based on the Office of Personnel Management (OPM) 2019 General Schedule (GS) pay for the DC-MD-VA-WV-PA locality for a GS-15 grade.⁶ Using OPM data, we generate an hourly wage for a GS-15 Step 1 grade to be \$66.05.⁷

OMB publishes an object class analysis of the budget of the U.S. Government.⁸ The object class provides the actual values that, in 2019, DOT spent \$5,931 million in full-time permanent employee compensation and \$2,497 million in civilian employee benefits. Based on this, FMCSA estimates a fringe benefit rate of 42.10 percent ($2,497/5,931$) for FMCSA personnel or \$27.81 ($\66.05×42.10 percent). The fully loaded hourly wage for a GS-15 Step 1 is \$93.86 ($\$66.05 + \27.81).

Costs

Motor carriers, industry technological manufacturers, and drivers would not incur any new costs associated with this NPRM. Adopting and using windshield-mounted technologies is purely optional. Those who install and use windshield-mounted technologies would experience no added burdens or costs.

⁵ We calculate the load factor for wages by dividing total compensation by wages and salaries. For this analysis, we used BLS' ECEC/Management, professional, and related occupations. Using December 2019 data, we divided the total compensation amount of \$60.83 by the wage and salary amount of \$42.33 to get the load factor of 1.44 ($\$60.83$ divided by $\$42.33$). This data is found in table 9 of the ECEC Historical Listing. <https://www.bls.gov/web/ecec/ececqrtn.pdf>

⁶ <https://www.opm.gov/policy-data-oversight/pay-leave/salaries-wages/salary-tables/pdf/2019/DCB.pdf>

⁷ https://www.opm.gov/policy-data-oversight/pay-leave/salaries-wages/salary-tables/pdf/2019/DCB_h.pdf

⁸ <https://www.govinfo.gov/content/pkg/BUDGET-2021-OBJCLASS/pdf/BUDGET-2021-OBJCLASS.pdf>

In CMVs, drivers sit in an elevated position that greatly improves the forward visual field. When FMCSA previously granted exemptions, it found that doing so would likely achieve a level of safety equivalent to, or greater than, the level of safety achieved without the exemption. As described in Section VI. of this NPRM, since issuing the first temporary exemption from § 393.60(e)(1) in 2009, FMCSA is unaware of any crashes that have been attributed to the location of such devices.

The expanded location – not more than 216 mm (8.5 inches) below the upper edge of the area swept by the windshield wipers, and not more than 175 mm (7 inches) above the lower edge of the area swept– is expected to keep pace with technological advances and further aid in meeting the statutory requirements of the FAST Act. The expanded area is outside the driver’s line of sight to the road, highway signs, and signals.

Cost Savings

We anticipate that this NPRM, if finalized consistent with the terms proposed, would generate cost savings to (1) motor carrier companies that file fewer periodic exemption requests, and (2) the Federal Government by reducing the volume of exemption requests to be reviewed and processed.

Several manufacturers of windshield-mounted technologies have requested exemptions from FMCSA. We estimate that this takes about 2 hours of company time. Manufacturers, on average, apply for 3 exemptions per year. Table 3 provides the 10-year time horizon cost savings stream based on the yearly undiscounted \$568 (rounded to the nearest whole dollar) cost savings to industry if this NPRM would be finalized in 2022.⁹

Table 3: Total and Annualized Cost Savings to Industry¹⁰

YEAR	TOTAL UNDISCOUNTED COSTS SAVINGS	TOTAL DISCOUNTED	
		7 percent	3 percent

⁹ Loaded Hourly wage x Number of Hours x Average number of exemptions (\$94.74 x 2 x 3).

¹⁰ (Total Cost Savings in this table may not equal the sum total of yearly cost savings due to rounding in underlying calculations).

2022	\$568	\$531	\$552
2023	\$568	\$496	\$536
2024	\$568	\$464	\$520
2025	\$568	\$434	\$505
2026	\$568	\$405	\$490
2027	\$568	\$379	\$476
2028	\$568	\$354	\$462
2029	\$568	\$331	\$449
2030	\$568	\$309	\$436
2031	\$568	\$289	\$423
TOTAL	\$5,684	\$3,992	\$5,519
ANNUALIZED		\$568	\$647

Federal Government employees who possess the technical knowledge required to review windshield exemption applications are senior engineers and attorneys at the GS-15 grade. A final approval letter for an exemption is granted by the Associate Administrator at the Senior Executive Service level.¹¹ We estimate the total time from initial exemption receipt to final approval to be 12 hours. Table 4 provides the 10-year time horizon cost savings stream based on the yearly undiscounted \$10,137 (rounded to the nearest whole dollar) cost savings to the Federal Government if this NPRM would be finalized in 2022.¹²

Table 4: Total and Annualized Cost Savings to the Federal Government¹³

YEAR	TOTAL UNDISCOUNTED COSTS SAVINGS	TOTAL DISCOUNTED	
		7 percent	3 percent
2022	\$10,137	\$9,474	\$9,842
2023	\$10,137	\$8,854	\$9,555
2024	\$10,137	\$8,275	\$9,277
2025	\$10,137	\$7,733	\$9,006
2026	\$10,137	\$7,227	\$8,744

¹¹ The Agency is assuming that an Associate Administrator at the Senior Executive Service level is equivalent to a GS-15 grade for the purpose of this analysis.

¹² Loaded Hourly Wage x Number of Hours x Average number of exemptions x Personnel (\$93.86 x 12 x 3 x 3)

¹³ (Total Cost Savings in this table may not equal the sum total of yearly cost savings due to rounding in underlying calculations).

2027	\$10,137	\$6,755	\$8,489
2028	\$10,137	\$6,313	\$8,242
2029	\$10,137	\$5,900	\$8,002
2030	\$10,137	\$5,514	\$7,769
2031	\$10,137	\$5,153	\$7,543
TOTAL	\$101,368.	\$71,197	\$98,416
ANNUALIZED		\$10,137	\$11,537

Table 5 provides the total 10-year time horizon cost savings stream based on the yearly undiscounted cost savings of \$10,705 (rounded to the nearest whole dollar) for both industry and the Federal Government.

Table 5: Total Cost Savings for Industry & the Federal Government¹⁴

YEAR	TOTAL UNDISCOUNTED COSTS SAVINGS	TOTAL DISCOUNTED	
		7 percent	3 percent
2022	\$10,705	\$10,005	\$10,393
2023	\$10,705	\$9,350	\$10,091
2024	\$10,705	\$8,739	\$9,797
2025	\$10,705	\$8,167	\$9,511
2026	\$10,705	\$7,633	\$9,234
2027	\$10,705	\$7,133	\$8,965
2028	\$10,705	\$6,667	\$8,704
2029	\$10,705	\$6,231	\$8,451
2030	\$10,705	\$5,823	\$8,205
2031	\$10,705	\$5,442	\$7,966
TOTAL	\$107,053	\$75,189	\$103,934
ANNUALIZED		\$10,705	\$12,184

Benefits

The Agency was unable to identify literature that quantified the benefits of increasing the allowable windshield area for the mounting of vehicle safety technologies. In the absence of such analyses, the Agency did not quantify benefits associated with the

¹⁴ (Total Cost Savings in this table may not equal the sum total of yearly cost savings due to rounding in underlying calculations).

NPRM, though it believes that the rule has the potential to improve the safety of CMV operations.¹⁵¹⁶ The Agency also finds that CMVs outfitted with vehicle safety technologies under current exemptions do not present an increased safety risk compared to other CMVs.

Discussion of Alternatives

When preparing this NPRM, FMCSA considered two alternatives. In this section, we examine how the cost of the proposal would change with each alternative.

Alternative 1:

No Action

Using this alternative, FMCSA would accept the status quo and not change the current exemption approval requirements. This alternative currently limits the windshield area in which new safety technologies can be mounted to not more than 100 mm (4 inches) below the upper edge of the area swept by the windshield wipers or not more than 175 mm (7 inches) above the lower edge of the area swept by the windshield wipers. This alternative does not favor innovation and technological growth, nor does it reduce the overall burden to industry of applying for, and to the Federal Government of reviewing, exemptions. This alternative would maintain the approximately \$10,705 (annualized, 7 percent discount rate) in annual costs associated with the overall exemption request and approval process.

Alternative 2:

Preferred Alternative— Revise 49 CFR 393.60 to expand the windshield area where vehicle safety technologies could be installed on CMVs and revise 49 CFR 393.5 to broaden the definition of *vehicle safety technology*.

¹⁵ <https://rosap.ntl.bts.gov/view/dot/4>

¹⁶ <https://rosap.ntl.bts.gov/view/dot/10>

Using this alternative, FMCSA would increase the allowable windshield area for installation of vehicle safety technologies. This would lead to an estimated \$10,705 in annual cost savings without any estimated cost increase or reduction in benefits, as this analysis shows.

B. Congressional Review Act

Pursuant to the Congressional Review Act (5 U.S.C. 801-808), the Office of Information and Regulatory Affairs designated this rule as not a “major rule,” as defined by 5 U.S.C. 804(2).¹⁷

C. Advance Notice of Proposed Rulemaking

Under 49 U.S.C. 31136(g), FMCSA is required to publish an advance notice of proposed rulemaking (ANPRM) or proceed with a negotiated rulemaking, if a proposed rule is likely to lead to the promulgation of a major rule. As this proposed rule is not likely to result in the promulgation of a major rule, the Agency is not required to issue an ANPRM or to proceed with a negotiated rulemaking.

D. Regulatory Flexibility Act

The Regulatory Flexibility Act (5 U.S.C. 601 et seq.), as amended by the Small Business Regulatory Enforcement Fairness Act of 1996,¹⁸ requires Federal agencies to consider the effects of the regulatory action on small business and other small entities and to minimize any significant economic impact. The term “small entities” comprises small businesses and not-for-profit organizations that are independently owned and operated and are not dominant in their fields, and governmental jurisdictions with populations of less than 50,000 (5 U.S.C. 601(6)). Accordingly, DOT policy requires an analysis of the

¹⁷ A “major rule” means any rule that OMB finds has resulted in or is likely to result in (a) an annual effect on the economy of \$100 million or more; (b) a major increase in costs or prices for consumers, individual industries, Federal agencies, State agencies, local government agencies, or geographic regions; or (c) significant adverse effects on competition, employment, investment, productivity, innovation, or on the ability of United States-based enterprises to compete with foreign-based enterprises in domestic and export markets (5 U.S.C. 804(2)).

¹⁸ Pub. L. 104–121, 110 Stat. 857, (Mar. 29, 1996).

impact of all regulations on small entities, and mandates that agencies strive to lessen any adverse effects on these businesses.

The Agency expects that this NPRM, if finalized consistent with the proposed terms, would not have a significant economic impact on small entities. We expect a final rule consistent with the NPRM to result in cost savings to industry and the Federal Government.

FMCSA expects the average costs to manufacturers of windshield-mounted equipment associated with avoiding the need for exemption applications would be reduced by \$568 per year (annualized, 7 percent discount rate). We calculate that 100 percent of small equipment manufacturers impacted by this NPRM would have a cost savings less than 1 percent of their annual revenue. No small governmental jurisdictions would be impacted by this NPRM.

Consequently, I certify that the proposed action would not have a significant economic impact on a substantial number of small entities. If you think that your business, organization, or governmental jurisdiction qualifies as a small entity and that this NPRM would have a significant economic impact on it, please submit a comment to the docket at the address listed in the ADDRESSES section of this preamble. In your comment, explain why you think it qualifies and how and to what degree this NPRM would economically affect it.

E. Assistance for Small Entities

In accordance with section 213(a) of the Small Business Regulatory Enforcement Fairness Act of 1996,¹⁹ FMCSA wants to assist small entities in understanding this NPRM so they can better evaluate its effects on themselves and participate in the rulemaking initiative. If the NPRM would affect your small business, organization, or governmental jurisdiction and you have questions concerning its provisions or options for

¹⁹ Pub. L. 104–121, 110 Stat. 857, (Mar. 29, 1996).

compliance; please consult the person listed under FOR FURTHER INFORMATION CONTACT.

Small businesses may send comments on the actions of Federal employees who enforce or otherwise determine compliance with Federal regulations to the Small Business Administration's Small Business and Agriculture Regulatory Enforcement Ombudsman and the Regional Small Business Regulatory Fairness Boards. The Ombudsman evaluates these actions annually and rates each agency's responsiveness to small business. If you wish to comment on actions by employees of FMCSA, call 1-888-REG-FAIR (1-888-734-3247). DOT has a policy regarding the rights of small entities to regulatory enforcement fairness and an explicit policy against retaliation for exercising these rights.

F. Unfunded Mandates Reform Act of 1995

The Unfunded Mandates Reform Act of 1995 (2 U.S.C. 1531-1538) requires Federal agencies to assess the effects of their discretionary regulatory actions. The Act addresses actions that may result in the expenditure by a State, local, or Tribal government, in the aggregate, or by the private sector of \$170 million (which is the value equivalent of \$100 million in 1995, adjusted for inflation to 2020 levels) or more in any 1 year. Because this NPRM would not result in such an expenditure, a written statement is not required. However, FMCSA does discuss the costs and benefits of this NPRM in the preamble.

G. Paperwork Reduction Act

This NPRM contains no new information collection requirements under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501-3520). FMCSA notes that the burden associated with preparing an exemption request is not included in a currently approved information collection request (ICR), and is pursuing completion of that ICR outside of this rulemaking.

H. E.O. 13132 (Federalism)

A rule has implications for federalism under section 1(a) of E.O. 13132 if it has “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.” FMCSA has determined that this rule would not have substantial direct costs on or for States, nor would it limit the policymaking discretion of States. Nothing in this document preempts any State law or regulation. Therefore, this rule does not have sufficient federalism implications to warrant the preparation of a Federalism Impact Statement.

I. Privacy

The Consolidated Appropriations Act, 2005,²⁰ requires the Agency to assess the privacy impact of a regulation that will affect the privacy of individuals. This NPRM would not require the collection of personally identifiable information (PII). Because this NPRM does not require the collection of PII, the Agency is not required to conduct a privacy impact assessment (PIA). Section 208 of the E-Government Act of 2002 (44 U.S.C. 3501 note) requires Federal agencies to conduct a PIA 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 rule. Accordingly, FMCSA has not conducted a PIA.

The Agency will complete a Privacy Threshold Assessment (PTA) to evaluate the risks and effects the NPRM might have on collecting, storing, and sharing personally identifiable information. The DOT Privacy Office has determined that this rulemaking does not create privacy risk.

J. E.O. 13175 (Indian Tribal Governments)

²⁰ Pub. L. 108-447, 118 Stat. 2809, 3268, note following 5 U.S.C. 552a (Dec. 4, 2014).

This rule does not have Tribal implications under E.O. 13175, Consultation and Coordination with Indian Tribal Governments, because it does not have a substantial direct effect 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.

K. National Environmental Policy Act of 1969

FMCSA analyzed this NPRM for the purpose of the National Environmental Policy Act of 1969 (NEPA) (42 U.S.C. 4321 et seq.) and determined this action is categorically excluded from further analysis and documentation in an environmental assessment or environmental impact statement under FMCSA Order 5610.1 (69 FR 9680), Appendix 2, paragraph 6.bb. The Categorical Exclusion (CE) in paragraph 6.bb. addresses regulations concerning vehicle operation safety standards (e.g., regulations requiring: Certain motor carriers to use approved equipment which is required to be installed such as an ignition cut-off switch, or carried onboard, such as a fire extinguisher, and/or stricter blood alcohol concentration standards for drivers, etc.), equipment approval, and/or equipment carriage requirements (e.g., fire extinguishers and flares).

The proposed requirements in this rule are covered by this CE and the NPRM does not have any effect on the quality of the environment.

List of Subjects in 49 CFR Part 393

Highway safety, Motor carriers, Motor vehicle safety.

Accordingly, FMCSA proposes to amend 49 CFR chapter III, part 393 as follows:

PART 393—PARTS AND ACCESSORIES NECESSARY FOR SAFE OPERATION

1. The authority citation for part 393 continues to read as follows:

Authority: 49 U.S.C. 31136, 31151, and 31502; sec. 1041(b) of Pub. L. 102-240, 105 Stat. 1914, 1993 (1991); sec. 5301 and 5524 of Pub. L. 114-94, 129 Stat. 1312, 1543, 1560; and 49 CFR 1.87.

2. Amend § 393.5 by revising the definition of *Vehicle safety technology* to read as follows:

§ 393.5 Definitions.

* * * * *

Vehicle safety technology. Vehicle safety technology includes systems and items of equipment to promote driver, occupant and roadway safety. Examples of vehicle safety technology systems and devices include a fleet-related incident management system, performance or behavior management system, speed management system, lane departure warning system, forward collision warning or mitigation system, active cruise control system, transponder, braking warning system, braking assist system, automatic emergency braking, driver camera system, attention assist warning, Global Positioning Systems and traffic sign recognition. Vehicle safety technology includes systems and devices that contain cameras, lidar, radar, sensors and/or video.

* * * * *

3. Amend § 393.60 by revising paragraph (e)(1)(ii) to read as follows:

§ 393.60 Glazing in specified openings.

* * * * *

(e) *Prohibition on obstructions to the driver's field of view—(1) Devices mounted on the interior of the windshield.*

* * * * *

(ii) Paragraph (e)(1)(i) of this section does not apply to *vehicle safety technologies*, as defined in § 393.5, that are mounted on the interior of a windshield.

Devices with vehicle safety technologies must be mounted:

A. Not more than 216 mm (8.5 inches) below the upper edge of the area swept by the windshield wipers;

B. Not more than 175 mm (7 inches) above the lower edge of the area swept by the windshield wipers; and

C. Outside the driver's sight lines to the road and highway signs and signals.

* * * * *

Issued under the authority of delegation in 49 CFR 1.87

Meera Joshi,
Deputy Administrator.

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