



DEPARTMENT OF TRANSPORTATION

Federal Motor Carrier Safety Administration

[Docket No. FMCSA–2022-0246]

Parts and Accessories Necessary for Safe Operation; Application for an Exemption From Polytech Plastic Molding, Inc., USDOT #1764512

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

ACTION: Notice of final disposition; denial of exemption.

SUMMARY: The Federal Motor Carrier Safety Administration (FMCSA) announces its decision to deny an application from Polytech Plastic Molding, Inc. (Polytech, USDOT #1764512) for an exemption to allow it to operate commercial motor vehicles (CMVs) equipped with a module manufactured by Intellistop, Inc. (Intellistop). The Intellistop module is designed to pulse the required rear clearance, identification, and brake lamps from a lower-level lighting intensity to a higher-level lighting intensity 4 times in 2 seconds when the brakes are applied and then return the lights to a steady-burning state while the brakes remain engaged. The Agency has determined that Polytech did not demonstrate that it would likely achieve a level of safety equivalent to, or greater than, the level of safety achieved by the regulation.

FOR FURTHER INFORMATION CONTACT: Mr. David Sutula, Vehicle and Roadside Operations Division, Office of Carrier, Driver, and Vehicle Safety, MC-PSV, (202) 366-9209, Federal Motor Carrier Safety Administration, 1200 New Jersey Avenue, SE., Washington, DC 20590-0001; MCPSV@dot.gov.

SUPPLEMENTARY INFORMATION:

I. Viewing Comments and Documents

To view comments, go to www.regulations.gov, insert the docket number “FMCSA-2022-0246” in the keyword box, and click “Search.” Next, sort the results by “Posted (Newer-Older),” choose the first notice listed, click “Browse Comments.”

To view documents mentioned in this notice as being available in the docket, go to www.regulations.gov, insert the docket number “FMCSA-2022-0246” in the keyword box, click “Search,” and chose the document to review.

If you do not have access to the internet, you may view the docket online by visiting Dockets Operations on the ground floor of the DOT West Building, 1200 New Jersey Avenue SE, Washington, DC 20590, between 9 a.m. and 5 p.m. ET, 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.

II. Legal Basis

FMCSA has authority under 49 U.S.C. 31136(e) and 31315(b) to grant exemptions from certain parts of the FMCSRs if it “finds such exemption would likely achieve a level of safety that is equivalent to, or greater than, the level that would be achieved absent the exemption.” FMCSA must publish a notice of each exemption request in the **Federal Register** and provide the public an opportunity to inspect the information relevant to the application, including the applicant’s safety analysis, and an opportunity for public comment on the request (49 U.S.C. 31315(b)(6)(A); 49 CFR 381.315(a)).

The Agency reviews safety analyses and public comments submitted and determines whether granting the exemption would likely achieve a level of safety equivalent to, or greater than, the level that would be achieved by the current regulation (49 CFR 381.305). The decision of the Agency must be published in the **Federal Register** (49 CFR 381.315(b)) with the reasons for denying or granting the application and, if granted, the name of the person or class of persons receiving the exemption, and

the regulatory provision from which the exemption is granted. The notice, if granted, must also specify the effective period and explain the terms and conditions of the exemption.

III. Background

A. Current Regulatory Requirements

Section 393.25(e) of the Federal Motor Carrier Safety Regulations (FMCSRs) requires all exterior lamps (both required lamps and any additional lamps) to be steady burning, with certain exceptions not relevant here. Two other provisions of the FMCSRs—section 393.11(a) and section 393.25(c)—mandate that required lamps on CMVs meet the requirements of Federal Motor Vehicle Safety Standard (FMVSS) No. 108 in effect at the time of manufacture. FMVSS No. 108, issued by the U.S. Department of Transportation’s National Highway Traffic Safety Administration (NHTSA), includes a requirement that installed brake lamps, whether original or replacement equipment, be steady burning.

B. Applicant’s Request

Polytech applied for an exemption from 49 CFR 393.25(e) to allow it to operate CMVs, equipped with Intellistop’s module. When the brakes are applied, the Intellistop module is designed to pulse the rear clearance, identification, and brake lamps from a lower-level lighting intensity to a higher-level lighting intensity 4 times in 2 seconds and then maintain the original equipment manufacturer’s (OEM) level of illumination for those lamps until the brakes are released and reapplied. Intellistop asserts that its module is designed to ensure that if the module ever fails, the clearance, identification, and brake lamps will default to normal OEM function and illumination.

Polytech’s application followed the Agency’s October 7, 2022 (87 FR 61133), denial of Intellistop’s application for an industry-wide exemption to allow all interstate motor carriers to operate CMVs equipped with the Intellistop module. While the Agency

determined that the scope of the exemption Intellistop sought was too broad to ensure that an equivalent level of safety would be achieved, the Agency explained that individual motor carrier applications for exemption may be more closely aligned with FMCSA authorities. Exemptions more limited in scope would allow the Agency to ensure compliance with all relevant FMCSA regulations because the individual exemptee would be easily identifiable and its compliance with applicable regulations could be monitored, thus providing a level of safety equivalent to compliance with 49 CFR 393.25(e).

Polytech stated that previous research demonstrated that the use of pulsating brake-activated lamps increases the visibility of vehicles and should lead to a significant decrease in rear-end crashes. In support of its application, Polytech submitted several reports of research conducted by NHTSA on the issues of rear-end crashes, distracted driving, and braking signals.^{1, 2, 3} This same body of research was also referenced in Intellistop's industry-wide exemption application. Relying on these studies, Polytech stated that the addition of brake-activated pulsating lamp(s) will not have an adverse impact on safety and would likely maintain a level of safety equivalent to or greater than the level of safety achieved without the exemption.

A copy of the application is included in the docket referenced at the beginning of this notice.

IV. Comments

¹ See NHTSA Study—Evaluation of Enhanced Brake Lights Using Surrogate Safety Metrics <https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/811127.pdf>; As part of the General Findings the NHTSA study report concluded that “rear lighting continues to look promising as a means of reducing the number and severity of rear-end crashes.”

² See also NHTSA Study—Enhanced Rear Lighting and Signaling Systems <https://tinyurl.com/y2romx76> or https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/task_3_results_0.pdf; As part of the conclusions NHTSA found that enhanced, flashing brake lighting “demonstrated improvements in brake response times and other related performance measures.”

³ See also NHTSA—Traffic Safety Facts <https://tinyurl.com/yxglsdax> or <https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/tsf811128.pdf>; which concluded that flashing brake lights were a promising signal for improving attention-getting during brake applications.

FMCSA published a notice of the application in the **Federal Register** on February 1, 2023, and asked for public comment (88 FR 6809). The Agency received 16 comments from the American Trucking Associations (ATA); Intellistop, Inc.; the National Truck Equipment Association (NTEA); the Transportation Safety Equipment Institute (TSEI); and 12 other commenters. Fifteen of the commenters favored the exemption application, while TSEI expressed concerns.

TSEI reiterated comments it had previously made in support of the safety benefits of brake-activated warning lamps when used in conjunction with steady burning red brake lamps as well as its prior support of the exemption requests from Groendyke Transport, National Tank Truck Carriers (NTTC), and Grote Industries. Despite these previous expressions of support for the potential benefits of some brake warning lamp configurations, TSEI stated that it is concerned about any exemption permitting the pulsing of lamps that are currently required to be steady burning without a thorough consideration of safety data and research. TSEI stated that the aim of future rulemaking should be to ensure consistent application across all vehicles equipped with such pulsating lamps and recommended that the Agency engage in a formal rulemaking to amend Part 393 to allow for pulsating brake lamps.

ATA supported Polytech's request and stated that enhanced rear signaling (ERS) can provide functionality beyond what traditional CMV lighting and reflective devices offer, including drawing attention to CMVs stopped ahead; increasing awareness of roadside breakdowns; notification of emergency braking; and improving driver confidence from both vehicles. ATA also stated that, in addition to these safety benefits, ERS performance is superior to that of steady burning brake lamps in conditions of severe weather, taillight glare, and around infrastructure obstacles. Specifically, ATA noted that this "request by Polytech presents another opportunity for the DOT to learn about the performance of ERS in real world applications." Further, ATA stated that "[it]

believes the exemption process is well-suited for these kinds of situations, where the DOT can monitor small, controlled deployments to learn about benefits and costs and gather important data to make sound judgments on a broader industry exemption or change in regulations.”

ATA recommended that, if granted, the Agency provide clear guidance in the terms and conditions of the exemption grant to aid the Agency in monitoring the exemption for unintended consequences and aid the Applicant in understanding expectations for potential renewal of the exemption application. ATA further commented that FMCSA should work with industry to develop research efforts that examine the performance of ERS to supplement future DOT decisions on ERS technologies. and aid the Applicant in understanding expectations for potential renewal of the exemption application. ATA further commented that FMCSA should work with industry to develop research efforts that examine the performance of ERS to supplement future DOT decisions on ERS technologies.

The NTEA supported a temporary exemption. The NTEA, however, expressed concern that some of its members who are manufacturers and alterers of motor vehicles receive requests from fleet operators to install brake-activated pulsating warning lamps on certain new vehicles they construct or modify. As manufacturers of new motor vehicles, NTEA members are required to certify these vehicles to applicable NHTSA Federal Motor Vehicle Safety Standards (FMVSS). NTEA noted that FMCSA does not have the authority to exempt CMV manufacturers from their obligation to certify FMVSS compliance. It recommended the Agency clarify in the terms and conditions carrier, manufacturer, and repair facility responsibilities and limitations and the conditions under which such modifications may be made. NTEA specifically requested that FMCSA “make clear that [this] exemption does not currently change any NHTSA regulations

applying to the certification of federal motor vehicle safety standards,” if it grants the exemption.

Intellistop supported the Applicant’s request for exemption. It commented that for over 20 years, multiple States have allowed pulsing or flashing of brake lamps. Intellistop also asserted many State driver training schools recommend tapping brakes to warn other motorists when a CMV is slowing or stopping. Intellistop stated that it is unlikely that other motorists would confuse the use of their module with the recommendation to tap brakes when a CMV is slowing or stopping, as “[s]eeing brake lights flash is a commonly communicated method to alert other drivers that a vehicle is slowing down or stopping.”

Twelve additional comments were submitted in support of granting the exemption. These commenters believe that any technology that has been shown to reduce rear-end crashes should be allowed and cited various benefits of brake activated pulsating lamps, including (1) enhanced awareness that the vehicle is making a stop, especially at railroad crossings, and (2) increased visibility in severe weather conditions. Several commenters noted that 37 States currently allow brake lamps to flash. In addition, three commenters noted that the guidelines developed by the American Driver and Traffic Safety Education Association advise driving instructors to teach new drivers to pulse brake lamps when stopping to improve visibility.

V. FMCSA Equivalent Level of Safety Analysis

Polytech petitioned FMCSA to grant an exemption from 49 CFR 393.25(e) – requiring certain exterior lamps to be steady burning – to allow it to operate CMVs equipped with Intellistop’s module. FMCSA has determined that in order for Polytech to operate vehicles in compliance with the FMCSRs, an exemption from 49 CFR 393.25(e) must be accompanied by limited exemptions from 49 CFR 393.11(a) and 393.25(c), both of which mandate that required lamps on CMVs operated in interstate commerce must, “at a minimum, meet the applicable requirements of 49 CFR 571.108 (FMVSS No. 108)

in effect at the time of manufacture of the vehicle.” FMCSA grants exemptions only when it determines “such exemption[s] would likely achieve a level of safety that is equivalent to, or greater than, the level that would be achieved absent the exemption[s].”

Rear-end crashes generally account for approximately 30 percent of all crashes. They often result from a failure to respond (or delays in responding) to a stopped or decelerating lead vehicle. Data on crashes that occurred between 2010 and 2016 show that large trucks are consistently three times more likely than other vehicles to be struck in the rear in two-vehicle fatal crashes.⁴⁵ FMCSA is deeply interested in the development and deployment of technologies that can reduce the frequency, severity, and risk of rear-end crashes.

Both FMCSA and NHTSA have examined alternative rear-signaling systems to reduce the incidence of rear-end crashes. While research efforts concluded that improvements in the incidence of rear-end crashes could be realized through certain rear-lighting systems that flash,⁶ the FMCSRs do not currently permit the use of pulsating, brake-activated lamps on the rear of CMVs. FMCSA believes that the two agencies’ previous research programs demonstrate that rear-signaling systems may be able to “improve attention getting” to reduce the frequency and severity of rear-end crashes. Any possible benefit must be balanced against a possible risk of increased driver distraction and confusion. In balancing these interests, the Agency was compelled to deny the Intellistop application for exemption because the industry-wide scope of the request was too broad for the Agency to effectively monitor for the potential risk of driver distraction or confusion.

⁴ U.S. Department of Transportation, National Highway Traffic Safety Administration (2012), Traffic Safety Facts – 2010 Data; Large Trucks, Report No. DOT HS 811 628, Washington, DC (June 2012), *available at*: <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/811628>.

⁵ U.S. Department of Transportation, National Highway Traffic Safety Administration (2018), Traffic Safety Facts – 2016 Data; Large Trucks, Report No. DOT HS 812 497, Washington, DC (May 2018), *available at*: <https://crashstats.nhtsa.dot.gov/Api/Public/Publication/812497>.

⁶ Expanded Research and Development of an Enhanced Rear Signaling System for Commercial Motor Vehicles: Final Report, William A. Schaudt *et al.* (Apr. 2014) (Report No. FMCSA-RRT-13-009).

The Agency acknowledges the limitations of the research studies completed to date and the overall data deficiencies in this area. Nonetheless, as noted in its Intellistop decision, the Agency recognizes that existing data do suggest a potential safety value in the use of alternative rear-signaling systems, generally. Specifically, FMCSA considered NHTSA's research concerning the development and evaluation of rear-signaling applications designed to reduce the frequency and severity of rear-end crashes via enhancements to rear-brake lighting. The study examined enhancements for (1) redirecting drivers' visual attention to the forward roadway (for cases involving a distracted driver) and (2) increasing the saliency or meaningfulness of the brake signal (for inattentive drivers).⁷ The research considered the attention-getting capability and discomfort glare of a set of candidate rear brake lighting configurations using driver judgments and eye-drawing metrics. The results of this research served to narrow the set of candidate lighting configurations to those that would most likely be carried forward for additional on-road study. Based on subjective participant responses, this research indicates some form of flashing or variation in brake light brightness may be more than two times more attention-getting than the baseline, steady-burning brake lights for distracted drivers.⁸

While some of the data collected in the study may not be statistically significant, the study results nonetheless indicate that additional efforts to get drivers' attention when they are approaching the rear of a CMV that is stopping may be helpful to reduce driver distraction and, ultimately, rear-end crashes. This was among several reasons why

⁷ See NHTSA Study—Evaluation of Enhanced Brake Lights Using Surrogate Safety Metrics <https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/811127.pdf>.

⁸ Ibid. While data demonstrated that brighter flashing lights were the most attention-getting combination for distracted drivers in this study, flashing lights with no increase in brightness were still more effective at capturing a distracted driver's attention than the baseline steady-burning brake lamps. Both look-up (eye drawing) data and interview data supported the hypothesis that simultaneous flashing of all rear lighting combined with increased brightness would be effective in redirecting the driver's eyes to the lead vehicle when the driver is looking away with tasks that involve visual load.

researchers concluded that the promising nature of enhanced brake lighting systems warranted additional work and research. FMCSA believes the acquisition of relevant data through real-world monitoring is of critical importance as the Agency continues to seek new and innovative options for reducing crashes. This is particularly true given the data limitations noted in previous studies.

Despite finding a potential safety value in the use of alternative rear-signaling technology, in the Intellistop decision the Agency determined that the data presently available did not justify an exemption to allow all interstate motor carriers to alter the performance of an FMVSS-required lighting device (*i.e.*, stop lamps) on any CMV. In contrast, however, Polytech's application requests an exemption from the steady-burning brake lamp requirement for CMV operations for only a single interstate motor carrier. As FMCSA noted in its denial of Intellistop's industry-wide exemption application, individual motor carrier exemption requests more closely align with FMCSA and NHTSA authorities to ensure compliance with all other applicable regulations and with the safety performance of the smaller population of affected motor carriers. With an individual motor carrier exemption, the Agency can also more easily monitor compliance with terms and conditions intended to ensure operations conducted under the exemption do in fact provide an equivalent level of safety. Polytech's application demonstrates why this is particularly true, since the vehicles operated by Polytech under the exemption would be easily identifiable, and compliance with NHTSA's "make inoperative" prohibition and other related regulations could be readily checked.

The Agency's decision to deny this exemption is based on the unavailability of carrier and safety data. Polytech was issued a notice for "Failure to complete biennial update" on April 8, 2015, which deactivated its USDOT number. Any subsequent operations in interstate commerce were illegal. FMCSA is unable to ascertain how many CMVs operated by Polytech would have an Intellistop module installed, nor does the

Agency have any safety data to compare the performance of Polytech against industry averages.

Additionally, the Polytech website states that it maintains a small fleet of delivery vehicles to service a delivery area within the US and Canada. FMCSA notes that these deliveries must be occurring with delivery vehicles owned by Polytech that are not registered under a USDOT carrier number. Thus, Polytech is either using delivery vehicles that are not subject to the FMCSRs because they do not meet the definition of a CMV or is operating in violation of the FMCSRs. In the former case, FMCSA does not have jurisdiction to grant an exemption. In the latter case, nine years of illegal operations strongly suggests that Polytech is unlikely to comply with the terms and conditions of an exemption.

VI. Exemption Decision

a. Denial of Exemption

FMCSA has evaluated Polytech's exemption application and the comments received. For the reasons given above, the Agency is denying Polytech's application for a temporary exemption.

Vincent G. White,
Deputy Administrator.

[FR Doc. 2024-28376 Filed: 12/3/2024 8:45 am; Publication Date: 12/4/2024]