



[4910-EX-P]

DEPARTMENT OF TRANSPORTATION

Federal Motor Carrier Safety Administration

[Docket No. FMCSA–2021–0048]

Parts and Accessories Necessary for Safe Operation; Application for an Exemption from Intellistop, Inc.

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

ACTION: Notice of final disposition; denial of exemption.

SUMMARY: The Federal Motor Carrier Safety Administration (FMCSA) announces its decision to deny Intellistop, Inc.'s (Intellistop) application for an exemption to allow motor carriers to operate commercial motor vehicles (CMVs) equipped with Intellistop's module which, when brakes are applied, pulses 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 and then returns the lights to a steady-burning state. Intellistop has not shown that an industry-wide exemption would likely achieve a level of safety equivalent to or greater than the level of safety provided by the regulation.

DATES: This decision is applicable [INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER].

FOR FURTHER INFORMATION CONTACT: Mr. Luke W. Loy, Vehicle and Roadside Operations Division, Office of Carrier, Driver, and Vehicle Safety, MC-PSV, (202) 366-0676, Federal Motor Carrier Safety Administration, 1200 New Jersey Avenue, SE., Washington, DC 20590-0001.

I. SUPPLEMENTARY INFORMATION

Docket: For access to the docket to read background documents, comments submitted, or the notice requesting public comments on the exemption application, go to

www.regulations.gov at any time or visit Dockets Operations, Room W12-140 on the ground level of the West Building, 1200 New Jersey Avenue, SE, Washington, DC, 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. The on-line Federal document management system is available 24 hours each day, 365 days each year. The docket number is listed at the beginning of this notice.

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 any safety analyses that have been conducted, 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 must also specify the effective period and explain the terms and conditions of the exemption. Granted exemptions may be renewed (49 CFR 381.300(b)).

III. 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) be steady-burning, except for turn signal lamps, hazard warning signal lamps, school bus warning lamps, amber warning lamps or flashing warning lamps on tow trucks and CMVs transporting oversized loads, and warning lamps on emergency and service vehicles authorized by State or local authorities. This FMCSR is consistent with the Federal Motor Vehicle Safety Standard (FMVSS) No. 108, "Lamps, reflective devices, and associated equipment" (49 CFR 571.108) issued by the U.S. Department of Transportation's National Highway Traffic Safety Administration (NHTSA), which, among other things, requires that brake lamps, whether original or replacement equipment, be steady burning.

IV. INTELLISTOP'S APPLICATION FOR EXEMPTION

Intellistop applied for an exemption from 49 CFR 393.25(e) to allow all motor carriers to operate CMVs equipped with Intellistop's module which, when the brakes are applied, pulses 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 maintains the original equipment manufacturer's (OEM) level of illumination for those lamps until the brakes are released and reapplied. Intellistop stated that if the module ever fails, the clearance, identification, and brake lamps will default to normal OEM function and illumination.

Intellistop stated that previous research has demonstrated that the use of pulsating brake-activated lamps increases visibility of vehicles and thus has the ability to reduce rear-end crashes with commercial motor vehicles (CMVs). Intellistop further stated that the use of the Intellistop module would allow motor carriers to maintain operational safety levels and implement more efficient and effective operations.

Intellistop noted that FMCSA has previously granted similar, but not identical, temporary exemptions¹ to the National Tank Truck Carriers Inc. (NTTC) (85 FR 63643, Oct. 8, 2020), Grote Industries, LLC (Grote) (85 FR 78918, Dec. 7, 2020) (Grote), and Groendyke Transport Inc. (Groendyke) (84 FR 17910, April 26, 2019).

In its application, Intellistop also referred to several studies conducted by the National Highway Traffic Safety Administration (NHTSA) on the issues of rear-end crashes, distracted driving, and braking signals. Intellistop stated that the addition of brake-activated pulsating lamp(s) will not have an adverse impact on safety, and that adherence to the terms and conditions of the exemption would likely achieve 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.

V. PUBLIC COMMENTS

FMCSA published a notice of the application in the Federal Register on June 14, 2021, and asked for public comment (86 FR 31552). The Agency received comments from the Transportation Safety Equipment Institute (TSEI), the National Truck Equipment Association (NTEA), the American Trucking Associations (ATA), Tankstar USA Inc. (Tankstar), the Commercial Vehicle Safety Alliance (CVSA) and 15 other stakeholders and individuals. Sixteen organizations and individuals supported approving the exemption application, three individuals or organizations opposed the exemption application, and one organization was noncommittal but offered comments.

ATA supported granting the exemption. ATA stated that:

Consistent with DOT's reports and research, National Tank Truck Carriers (NTTC) and Grote Industries have successfully petitioned the agency to recognize the value of enhanced rear signaling (ERS) for improving safe operations when compared with traditional standard brake lamps. ERS can provide functions beyond what traditional

¹ During the pendency of Intellistop's exemption application FMCSA also granted a similar exemption to Waste Management Inc. (Waste Management) (*See* 87 FR 3166, Jan. 20, 2022).

commercial motor vehicle (CMV) lighting and reflective devices offer, including: attention to CMVs stopped ahead; awareness of roadside breakdowns; emergency braking; and driver confidence from both vehicles. In addition to these safety benefits, ERS performance is superior to steady burning brake lamps in severe weather conditions, tail light glare and around infrastructure obstacles. ERS also reduces the chances of damage to both vehicles involved in a rear-end crash, which improves commercial operation uptime, CSA scores for the CMV owner, and traffic inconvenience.

Tankstar operates a small group of trucking and bulk transport companies and supported Intellistop's request. Tankstar said that its companies had experienced a number of rear end collisions. It also noted that the 34 percent reduction in rear end crashes reported by Groendyke while using pulsating brake lamps supported the Intellistop request. Tankstar pointed out that the Intellistop flash rate of 4 times in 2 seconds does not match the higher intensity strobing lamps of emergency vehicle lighting systems, and the application should not be denied on the ground of possible confusion with such vehicles. TankStar stated that it is testing the Intellistop module on a few of its trailers, noting that the testing has been very successful in reducing crashes. Tankstar stated that this type of safety product should have the ability to be retrofitted, so as to impact highway safety immediately, and be affordable.

TSEI urged the Agency to deny the petition and offered the following comment:

The requirement that stop lamps and marker/clearance lamps be steady burning is longstanding. We do not believe FMCSA should make the leap from pulsating brake-activated warning or auxiliary lamps to pulsating *required* lamps without a thorough consideration of safety data and research[footnote omitted] with the aim of setting standards (including those related to flash patterns) to ensure consistency across all vehicles equipped with such lamps. . . . In our comments to FMCSA related to prior exemption petitions, TSEI acknowledged the safety benefits of brake-activated warning lamps when used in conjunction with steady burning red brake lamps and we have generally supported exemption requests for such lamps. However, we also expressed concerns regarding the proliferation of multiple lamps on the rear of commercial vehicles in the absence of consistent standards related to number, color, intensity, flash patterns, duty cycle, location, and other characteristics.

The CVSA commented that it is opposed to allowing red brake-activated pulsating lamps because pulsating red lamps are typically associated with emergency vehicles. It stated that allowing red pulsating lamps on the rear of commercial motor

vehicles may negatively impact the driving public's recognition and response to emergency vehicles. CVSA further noted that many state laws prohibit nonemergency vehicles from having pulsating red lights. CVSA stated that it would support allowing motor carriers to equip commercial motor vehicles with amber brake-activated pulsating lights, but not red brake-activated pulsating lights, because of what it believes are likely unintended safety impacts related to emergency vehicles. A different commenter supported granting Intellistop's application specifically for red pulsing lights, and not amber pulsing lights, based on the commenter's review of studies on the effect of different wavelength lights (i.e. different color lights) on human vision and crash data for vehicles currently equipped with different colored flashing lights.

The NTEA was noncommittal as to the exemption. However, NTEA noted, "In an effort to clarify the distinctions between the FMCSA authority over motor carrier operations and those of NHTSA over the manufacturer of new motor vehicles and the make inoperative prohibitions to used vehicle modifications, we respectfully request that FMCSA include in any notices granting such exemptions a brief description of the difference between FMCSA and NHTSA responsibilities and the limitations to the involved entities and conditions under which they may perform these modifications."

One individual opposed the petition, noting the potential for driver confusion or distraction, while fourteen stakeholders and individuals submitted brief comments in support of granting the exemption. The commenters who supported the exemption generally asserted that this technology may be able to reduce rear-end crashes and should therefore be allowed, citing various benefits of brake activated pulsating lamps, including (1) enhanced awareness that the vehicle is making a stop, especially at railroad crossings, (2) anecdotal reduction in rear-end crashes within commenter fleets, presumably due to increased reaction time for following drivers, and (3) increased visibility near rail-road crossings and in severe weather conditions. Two commenters noted that flashing lights

are used on other vehicles, like utility trucks and emergency responder vehicles, to improve driver awareness of those vehicles and therefore pulsing lights on CMVs would similarly alert nearby drivers to the vehicles. In general, the comments received were conclusory and anecdotal and did not provide specific data or research in support of their position.

VI. Equivalent Level of Safety Analysis

As noted, Intellistop petitions FMCSA to grant motor carriers an exemption from 49 CFR 393.25(e)—which requires certain exterior lamps to be steady burning—in order to permit them use its device. FMCSA may only grant such exemptions if it “finds 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.^{2,3} Accordingly, 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 considered alternative rear-signaling systems to reduce the incidence of rear-end crashes. While these efforts concluded that improvements could be realized through certain rear-lighting systems that flash,⁴ neither

² 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>.

³ 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#:~:text=Fatalities%20in%20crashes%20involving%20large,to%204%2C317%20fatalities%20in%202016>.

⁴ 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 FMCSRs nor the FMVSSs 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, though that benefit must be balanced against increased risk of driver distraction and confusion.

While the Agency recognizes the existing data that supports the potential safety value of alternative rear-signaling systems in general, it is also mindful of the data deficiencies in this area. Data deficiencies include the effect on nearby drivers if many vehicles on a roadway are equipped with pulsing brake lights and whether such lighting would serve to improve driver attention or, alternatively, cause confusion or distraction. Commenters also disagree on which color light is most appropriate to pulse on the rear of a vehicle, red or amber, and at this time, FMCSA does not have sufficient data to support one conclusion over the other.

In addition to FMCSA's and NHTSA's research on rear-end crashes into CMVs outlined above, there is also data from other industry applicants whose exemption requests the Agency has previously granted. FMCSA acknowledges that the number of vehicles operating under those exemptions is significant. Intellistop's exemption application, however, is potentially far broader in scope than most previous exemption applications FMCSA has granted, as it would apply to any motor carrier that sought to use Intellistop's equipment and also, importantly, alters the functioning of required lamps.⁵ FMCSA is required to monitor implementation of the exemption to ensure compliance with its terms and conditions and ensure that operation under the exemption meets and maintains an equivalent level of safety. Because of the broad scope of

⁵ In contrast, the Groendyke exemption is specific to the individual motor carrier and applies to a single, amber, auxiliary lamp. The NTTC and Waste Management exemptions were both granted to organizations and apply to tens of thousands of vehicles, but again, apply to auxiliary lamps (whether red or amber, single or double mounted). Finally, the Grote exemption does apply to all motor carriers, but only allows flashing of an auxiliary lamp, unlike Intellistop's device that alters the required lamps.

Intellistop's application, FMCSA would not be able to sufficiently monitor operations under the exemption.

Importantly, all other pulsing rear-light exemptions that FMCSA has previously granted involved the addition of non-mandatory auxiliary lighting systems, whereas Intellistop seeks permission to alter the functionality of original equipment manufacturers' lamps, which are covered by an existing FMVSS. The Agency believes this is a crucial distinction, and one that TSEI highlighted in its comment. TSEI explained that while it has generally supported other similar exemption applications, in this instance it cautioned against making "the leap from pulsating brake-activated warning or auxiliary lamps to pulsating *required* lamps."⁶ The Agency, in consultation with NHTSA, has determined that it does not currently have data to support a blanket exemption for industry⁷ to alter the performance of a required lamp covered by the FMCSRs and FMVSSs.

Moreover, FMCSA and NHTSA are concerned that additional requests for industry-wide exemption from section 393.25(e) might follow, from other companies seeking to market similar but perhaps slightly varying brake lamp products that modify existing FMVSS brake lights. Industry-wide exemptions are not the norm and FMCSA grants them only on a very limited basis, especially when doing so would involve equipment mandated by an FMVSS. The Agency has no data on the effect that such broad adoption of pulsing brake lamps would have on driver distraction, confusion, and overall safety, particularly if large numbers of trucks quickly became equipped with such devices.

⁶ Transportation Safety Equipment Institute, Comment to Docket FMCSA-2021-0048 at 2 (July 14, 2021) (emphasis in original), *available at*: <https://www.regulations.gov/comment/FMCSA-2021-0048-0020>.

⁷ FMCSA seeks to make clear that this decision does not preclude individual MCs from seeking an exemption to use an Intellistop device.

Commenting on this exemption application, TSEI articulated its' long-standing "concerns regarding the proliferation of multiple lamps on the rear of commercial vehicles in the absence of consistent standards related to number, color, intensity, flash patterns, duty cycle, location, and other characteristics."⁸ FMCSA shares TSEI's concerns regarding the unknown safety effects from a sudden and industry-wide proliferation of a variety of non-conforming lighting.

For these reasons, FMCSA concludes that Intellistop failed to demonstrate that its device is likely to provide the equivalent level of safety as 49 CFR 393.25(e).

VII. Exemption Decision

Given the scope of the exemption sought, to include *all* motor carriers, and the limitations of the research studies completed to date, the Agency believes an exemption to allow the alteration of the performance of an FMVSS-required lighting device (i.e., stop lamps) on all CMVs is not supported at this time.

Applicants requesting an exemption bear the burden of demonstrating that the exemption from existing regulatory requirements will likely provide an equivalent level of safety to the existing regulations. FMCSA has evaluated Intellistop's application and the comments received in support of and opposition to the exemption. FMCSA has also reviewed and analyzed the research cited by Intellistop in support of its application.

Unlike other exemption requests received by the Agency relating to rear lighting, Intellistop's application seeks to alter the performance of the FMVSS-required lighting device on all CMVs rather than adding additional pulsating lights. Intellistop did not provide any specific data relating to the operation of its device. Intellistop did not provide data specific to the use of its module which pulses the existing brake lamps rather than the use of additional lamps as identified in the exemptions to Waste Management, Grote,

⁸ Transportation Safety Equipment Institute, Comment to Docket FMCSA-2021-0048 at 2 (July 14, 2021), available at: <https://www.regulations.gov/comment/FMCSA-2021-0048-0020>.

NTTC, and Groendyke, or regarding the distraction, confusion, or safety effects of large numbers of trucks being so equipped.

Generally, Intellistop relied on studies of other lighting configurations proposing to add additional pulsating lights rather than altering the performance of the existing brake lights. Further, Intellistop did not provide data to demonstrate that the installation of the device would safely interact with the CMV's existing systems or to support its claim that a malfunction of the Intellistop device would result in the brake lights returning to OEM functionality, in conformance with the required FMVSS.

While the technology at issue may have promise, FMCSA believes a blanket exemption for all motor carriers to use Intellistop's product is not supported by the currently available data, is not an appropriate approach, and lacks the necessary monitoring controls to ensure highway safety. Previous research programs demonstrate the potential effectiveness of rear-signaling systems to "improve attention getting" to reduce the frequency and severity of rear-end crashes, but that previous research does not address the potential safety benefits or risks of a lighting system that would replace rather than merely supplement a light required by an FMVSS. Thus, at this stage, the record before the Agency does not show that Intellistop's petition for an industry-wide exemption adequately demonstrates the required threshold, of likely to achieve an equivalent level of safety.

FMCSA notes that this decision does not necessarily preclude motor carriers from seeking exemptions from 49 CFR 393.25(e) to purchase, install, and use the Intellistop device subject to the terms and conditions of an exemption if granted by FMCSA, as one of the bases of the Agency's decision here is the broad reach of Intellistop's request. Moreover, receipt and specific consideration by FMCSA of separate applications for exemption from individual motor carriers or motor carrier trade groups (especially those representing a particular class or type of CMV operators) also more

closely aligns FMCSA’s exemption granting practice with the Motor Vehicle Safety Act administered by NHTSA, which states that, “[a] manufacturer, distributor, dealer, rental company, or motor vehicle repair business may not knowingly make inoperative any part of a device or element of design installed on or in a motor vehicle or motor vehicle equipment in compliance with an applicable motor vehicle safety standard prescribed under this chapter,” other than to make repairs.⁹ Here, this would mean that the installation of equipment like that included in Intellistop’s petition would likely run afoul of this prohibition if installed by any entity other than the operator or owner. Granting an industry-wide exemption would make it extremely difficult, if not impossible, to monitor the installation of the devices and the “make inoperative” provisions of the Safety Act. However, individual exemption applications from motor carriers may more closely align with FMCSA and NHTSA authorities to ensure compliance with all applicable regulations, since the exemption grantee would be easily identifiable, and their compliance with the “make inoperative” prohibition and any other related regulations could be checked.

For the above reasons, Intellistop’s application seeking an industry-wide exemption for its pulsing brake light module is denied.

Robin Hutcheson,
Administrator.

[FR Doc. 2022-21875 Filed: 10/6/2022 8:45 am; Publication Date: 10/7/2022]

⁹ 49 USC 30112(b). *See also* NHTSA Interpretation Letter from Steve Wood to Wolfred Freeman (approx. 1989), *available at*: <https://www.nhtsa.gov/interpretations/aia4661> (explaining that the Safety Act “prohibits modifications by persons other than the owner of the vehicle if they render inoperative, in whole or in part, equipment that is installed pursuant to a safety standard.”)