



DEPARTMENT OF TRANSPORTATION

[4910-EX-P]

Federal Motor Carrier Safety Administration

[Docket No. FMCSA-2019-0070]

Parts and Accessories Necessary for Safe Operation; Application for an Exemption from Laydon Composites Ltd.

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

ACTION: Notice of final disposition; grant of application for exemption.

SUMMARY: The FMCSA announces its decision to grant Laydon Composites Ltd.'s (Laydon) application for a limited 5-year exemption to allow motor carriers to operate certain commercial motor vehicles (CMVs) that are equipped with Laydon's OptiTail™ aerodynamic device with rear identification lamps and rear clearance lamps that are mounted lower than currently permitted by the Agency's regulations. The Agency has determined that locating the rear identification lamps and rear clearance lamps lower on the trailers and semitrailers, mounted at the same level as the stop lamps, tail lamps, and turn signals, will maintain a level of safety that is equivalent to, or greater than, the level of safety achieved without the exemption.

FOR FURTHER INFORMATION CONTACT: José Cestero, Vehicle and Roadside Operations Division, Office of Carrier, Driver & Vehicle Safety Standards, MC-PSV, (202) 366-5541; Federal Motor Carrier Safety Administration, 1200 New Jersey Avenue, SE., Washington, D.C., 20590-0001.

SUPPLEMENTARY INFORMATION:

Background

Pursuant to 49 CFR part 381, FMCSA has authority to grant exemptions from certain Federal Motor Carrier Safety Regulations (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 with 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 for public comment on the request.

The Agency reviews the safety analyses and the public comments 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(a)).

The decision of the Agency must be published in the **Federal Register** (49 CFR 381.315(b)). If the Agency denies the request, it must state the reason for doing so. If the decision is to grant the exemption, the notice must specify the person or class of persons receiving the exemption and the regulatory provision or provisions from which an exemption is granted. The notice must specify the terms and conditions of the exemption, as well as its effective period (up to 5 years). The exemption may be renewed (49 CFR 381.315(c) and 49 CFR 381.300(b)).

Laydon's Application for Exemption

Laydon, on behalf of motor carriers utilizing its OptiTail™ aerodynamic devices, applied for an exemption from 49 CFR 393.11 to allow rear identification lamps and rear clearance lamps to be mounted lower than currently permitted by the Agency's regulations.

Table 1 of section 393.11, “Required lamps and reflectors on commercial motor vehicles,” specifies the requirements for lamps, reflective devices, and associated equipment by type of CMV. All CMVs manufactured on or after December 25, 1968, must, at a minimum, meet the applicable requirements of Federal Motor Vehicle Safety Standard (FMVSS) No. 108, “Lamps, reflective devices, and associated equipment,” in effect at the time of manufacture of the vehicle. Rear identification lamps must be mounted as close as practicable to the top of the vehicle. One lamp must be as close as practicable to the vertical centerline and one must be on each side of the center lamp, with the lamp centers spaced not less than 6 inches or more than 12 inches apart, and all on the same level. One rear clearance lamp must be located on each side of the vertical centerline of the vehicle to indicate overall width, and both of these lamps must be on the same level and as high as practicable.

Laydon is wholly owned by WABCO Europe BVBA (i.e., private company with limited liability), with headquarters in Brussels, Belgium. Laydon and WABCO have developed a collapsible boat tail technology for trailers which improves the overall tractor trailer aerodynamic efficiency. Both OptiTail™ options, the fully automatic and manual versions, currently are installed on the rear doors of a CMV trailer with the upper panels below the trailer’s identification and clearance lamps. Laydon notes that installing the upper panels below the identification lights— about 1.25 to 3 inches below the trailer roof—is not the ideal aerodynamic condition, and that the upper panels could yield better aerodynamic flow characteristics if they were mounted flush with the trailer roof. However, mounting the upper panel of the OptiTail™ system flush with the roof will

block full view of the trailer identification and clearance lights, in violation of section 393.11 of the FMCSRs.

Laydon is requesting the exemption to allow trailers using its OptiTail™ system to have the required identification and clearance lights mounted lower than currently permitted, at the same location required for flatbed trailers and intermodal chassis.

Laydon states that while it has conducted (1) computer simulation analysis, (2) scaled wind tunnel testing, and (3) full scale environmental testing of the flush roof mounted configuration, the temporary exemption is necessary to complete actual performance testing in full environmental conditions by various fleet operators located in multiple areas of the U.S. with different standard travel routes.

In its application, Laydon states:

The safety impact of the proposed 49 CFR 393.11 exemption would be similar to existing CMVs already in operation, provided the relocation or addition of lower level identification and clearance lamps are installed on the CMV. Assuming additional lamps are installed lower on the trailer and just not relocated, the improved OptiTail™, auto version (AutoTail), would still have the existing centerline identification lamp and both clearance lamps visible when the trailer is traveling at slow speeds. Our AutoTail is self-deploying and self-retracting. The AutoTail will remain retracted until the tractor reaches a speed of approximately 40 mph and remain open until the tractor reduces speed to approximately 6 mph. The AutoTail will continue to remain closed as long as the trailer does not exceed 40 mph. As a result, the current centerline identification and clearance lights would be visible when the tractor trailer is stopped at a traffic light or other slow speed road condition. We are not advocating that this is sufficient to allow the exemption without additional clearance and identification lamps installed lower on the trailer. All CMV trailers have conspicuity materials installed across the width of the trailer. These reflex reflectors will still be visible with the OptiTail™ deployed or retracted. Both the two clearance and three identification lights should be relocated or additionally added to the approximate horizontal plane with other rear lamps. These are generally regarded as the brake and running lamps. This location is the same as found on some CMVs, such as flatbed trailers, with or without “curtain sides” and intermodal chassis trailers.

Laydon states that without the exemption, it will be unable to establish and verify the maximum fuel economy and environmental impacts of the OptiTail™ system, which could have long-term impacts on meeting future greenhouse gas or California Air Resources Board fuel economy requirements.

Comments

On March 28, 2019, FMCSA published a notice of the Laydon application (84 FR 11858). The Agency received one anonymous comment that was not relevant to the exemption application.

FMCSA Analysis

FMCSA agrees that it is important for motorists to be able readily to distinguish large trucks and trailers from other vehicles. FMVSS No. 108 and section 393.11 of the FMCSRs ensure this by requiring large vehicles to be equipped with a combination of lights, reflectors, and conspicuity treatments that help indicate the overall height, width, and length of these vehicles. Specifically, all CMVs manufactured on or after December 25, 1968, must, at a minimum, meet the applicable requirements of FMVSS No. 108 in effect at the time of manufacture of the vehicle. The purpose of FMVSS No. 108 is to reduce crashes and deaths and injuries from crashes, by providing adequate illumination of the roadway, and by enhancing the conspicuity of motor vehicles on the public roads so that their presence is perceived and their signals understood, both in daylight and in darkness or other conditions of reduced visibility. FMVSS No. 108 specifies requirements for original and replacement lamps, reflective devices, and associated equipment. The standard applies to passenger cars, multipurpose passenger vehicles, trucks, buses, trailers, and motorcycles.

Specifically, with respect to clearance lamps and identification lamps, all (1) trucks and buses 80 inches or more in width, (2) semitrailers and full trailers 80 inches or more in width (except converter dollies), and (3) pole trailers must be equipped with:

- Two red clearance lamps, one on each side of the vertical centerline of the vehicle, mounted as high as practicable to indicate the overall width of the vehicle; and
- A group of three red identification lights on the rear of the vehicle, mounted as close as practicable to the top of the vehicle. One lamp is required to be mounted as close as practicable to the vertical centerline of the vehicle, and one on each side with lamp centers spaced not less than 6 inches or more than 12 inches apart.

The grouping of three identification lamps on the top rear of large vehicles is intended to uniquely identify them with the longest sight preview possible. On February 5, 2003, the National Highway Traffic Safety Administration (NHTSA) denied a petition for rulemaking from Sierra Products, Inc. (Sierra), which – among other things – requested that NHTSA amend FMVSS No. 108 to require the identification lights to be mounted at eye height on heavy trucks (68 FR 5863). In denying Sierra’s petition, NHTSA stated “As the mounting height of identification lamps is lowered, the time that nearby drivers will have to identify the vehicle as a heavy truck will lessen. This is contrary to the intent of the requirement. On the other hand, the mounting height of identification lamps has been long established to be “as high as practicable.” This is to make nearby drivers aware of the vehicle’s size. If these lamps were lowered to eye level, approaching drivers *may not be able to distinguish large commercial vehicles from passenger vehicles.*” [Emphasis added.]

Notwithstanding the above, the three identification lamps are not the only means by which drivers are “able to distinguish large commercial vehicles from passenger vehicles,” as stated in NHTSA’s denial of the petition from Sierra. While FMCSA agrees that mounting identification lamps “as high as practicable” provides approaching motorists maximum time to identify a CMV, and that lowering the mounting location of the identification lamps reduces that time, FMVSS No. 108 (and, by incorporation, section 393.11 of the FMCSRs) also requires the rear of all trailers and semitrailers to be equipped with conspicuity materials (a strip of alternating red and white retroreflective sheeting or reflex reflectors) installed across both:

(1) The full width of the trailer, as close to the extreme edges as practicable, and as close as practicable to a position not less than 375 mm (14.77 in) and not more than 1525 mm (60.05 in) above the road surface at the centerline with the trailer at curb weight, and

(2) The full width of the horizontal member of the rear underride protection device required by FMVSS No. 224, “Rear impact protection.” The horizontal member is required to extend to within 100 mm (4 in) of the side extremity of the vehicle, and be located not more than 560 mm (20.05 in) above the ground at any point.

The presence of these two separate conspicuity treatments on the rear of all trailers and semitrailers, consisting of alternating red and white retroreflective material or reflex reflectors, serves as a clear indication to the motoring public that the vehicle is a large commercial vehicle as opposed to a passenger car. While these conspicuity treatments are not located at or near the very top of the trailer or semitrailer, FMCSA believes they provide a very distinctive visual pattern on the rear of trailers and

semitrailers that easily enables motorists to be aware that they are approaching a large vehicle.

It is important to note that Laydon is proposing that the required clearance and identification lights be *relocated* lower on vehicles using the aerodynamic devices, and is not simply requesting an exemption from the regulation because the required lights are obscured by the device. FMCSA believes that relocating the lamps to a lower position is an acceptable approach and ensures an equivalent level of safety for two reasons. First, as Laydon notes in its application, FMVSS No. 108 and section 393.11 of the FMCSRs permit the clearance and identification lamps to be mounted lower on flatbed trailers and intermodal chassis simply because there is no other way to mount the lamps due to the vehicle designs. FMCSA does not believe that locating the clearance and identification lamps in the same manner on trailers and semitrailers using Laydon's aerodynamic devices will pose an unreasonable risk, especially given the conspicuity requirements discussed above. Second, S6.2.2 of FMVSS No. 108 directly addresses vehicle designs when required lamps or reflective devices are obscured by motor vehicle equipment such as "mirrors, snow plows, wrecker booms, backhoes, winches," and also including Laydon's aerodynamic devices. In these instances, S6.2.2 of FMVSS No. 108 requires the vehicle to "be equipped with an additional lamp or device of the same type which meet[s] all applicable requirements of this standard, including photometry and visibility." This is exactly what Laydon is proposing to do – to install the same clearance and identification lamps, but in a lower position on the vehicle.

Some fleets and small-scale operators may not have the technical expertise to move the identification and clearance lamps to a lower position. FMCSA notes, however,

that it is the responsibility of each motor carrier to ensure that its vehicles fully comply with the FMCSRs at all times (see 49 CFR 393.1(c)), and this includes the terms and conditions of this temporary exemption. As such, if a motor carrier chooses to use Laydon's device, it must ensure that the required lights are properly moved and are fully operational at all times.

While FMVSS No. 108 and section 393.11 of the FMCSRs require the two conspicuity treatments to be installed on the rear of trailers and semitrailers, neither of the conspicuity treatments is required to be installed on single unit trucks (box trucks). For this reason, FMCSA believes that it is appropriate to limit the use of Laydon's aerodynamic device, when mounted at the top of the vehicle and obscuring the clearance and identification lights, to trailers and semitrailers only at this time.

FMCSA Decision

FMCSA has evaluated the Laydon exemption application. The Agency believes that granting the temporary exemption to allow rear identification lamps and rear clearance lamps to be located lower on trailers and semitrailers, mounted at the same level as the stop lamps, tail lamps, and turn signals, will likely maintain a level of safety that is equivalent to, or greater than, the level of safety achieved without the exemption. Granting the exemption will also be consistent with the Agency's February 14, 2018, decision to grant an exemption for motor carriers using a similar aerodynamic device manufactured by STEMCO LP (83 FR 6718).

Terms and Conditions for the Exemption

The Agency hereby grants the exemption for a five-year period, beginning [INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER] and ending

[INSERT DATE 5 YEARS FROM DATE OF PUBLICATION IN THE FEDERAL REGISTER]. During the temporary exemption period, motor carriers will be allowed to mount Laydon's OptiTail™ aerodynamic device at the top of trailers and semitrailers, provided that the rear clearance and identification lights are mounted at the same level as the stop lamps, tail lamps, and turn signals. The exemption will be valid for five years unless rescinded earlier by FMCSA. The exemption will be rescinded if: (1) motor carriers and/or CMVs fail to comply with the terms and conditions of the exemption; (2) the exemption has resulted in a lower level of safety than was maintained before it was granted; or (3) continuation of the exemption would not be consistent with the goals and objectives of 49 CFR part 381.

Interested parties possessing information that would demonstrate that motor carriers using trailers or semitrailers with Laydon's OptiTail™ aerodynamic device are not achieving the requisite statutory level of safety should immediately notify FMCSA. The Agency will evaluate any such information and, if safety is being compromised or if the continuation of the exemption is not consistent with 49 CFR part 381, will take immediate steps to revoke the exemption.

Preemption

In accordance with 49 U.S.C. 31315(d), as implemented by 49 CFR 381.600, during the period this exemption is in effect, no state shall enforce any law or regulation applicable to interstate commerce that conflicts with or is inconsistent with this

exemption with respect to a firm or person operating under the exemption. States may, but are not required to, adopt the same exemption with respect to operations in intrastate commerce.

James A. Mullen,
Acting Administrator.

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