

equipped with an external ABS malfunction indicator lamp. That period begins on March 1, 1998, the date on which ABS installation on trailers must also begin. The lamp must "be visible within the driver's forward field of view through the rearview mirrors." (60 FR 13244-13246). Truck tractors and other towing trucks will be required to be equipped with two separate in-cab lamps: one indicating malfunctions in the ABS of the towing truck and the other indicating malfunctions in the ABS of any towed trailer(s) or dolly(ies). All other powered heavy vehicles will be required to be equipped with a single in-cab lamp to indicate ABS malfunctions.

II. Petitions for Reconsideration

NHTSA received petitions for reconsideration from the American Trucking Associations (ATA), the American Automobile Manufacturers Association (AAMA), the Truck Trailer Manufacturers Association (TTMA), the Heavy Duty Brake Manufacturers Council (HDBC), the United Parcel Service (UPS), vehicle manufacturers, including Chrysler, Navistar, AM General, and brake system suppliers, including Midland-Grau, Jenflo, AlliedSignal, Rockwell WABCO, Rockwell International, Kelsey-Hayes, and Ferodo America.

The petitioners generally agreed with NHTSA's decision to require all heavy vehicles to be equipped with ABS and to comply with the stopping distance requirements, and to require truck tractors to comply with the braking-in-a-curve performance test requirements. Nevertheless, they requested modifications of various aspects of those rules.

This document responds to those petitioners which requested changes in the requirements concerning ABS malfunction indicators. The agency is responding to other requests for reconsideration in another document published elsewhere in today's Federal Register.

Midland-Grau and TTMA petitioned NHTSA to delete the requirement that the external malfunction indicator lamp on a trailer be visible from the driver's seating position "through the rearview mirrors." (see S5.2.3.3). Midland-Grau stated that since truck tractor manufacturers cannot control where the external lamp would be located, requiring tractor manufacturers to ensure that the lamp is visible from the cab of the truck tractor is unreasonable. TTMA stated that since trailer manufacturers cannot control where mirrors are located on tractors, requiring the ABS malfunction lamp on dollies

and trailers to be visible "through the rearview mirrors" is not appropriate. That organization also stated that there is no good, practical location for such a lamp on a dolly.

AAMA and TTMA requested that if the agency retains the requirement for an external ABS malfunction indicator lamp on the trailer,¹ then the agency should specify the location, color and intensity of the lamp in Standard No. 108, *Lamps, reflective devices, and associated equipment*.

III. Agency Response and Proposal

In a separate notice published elsewhere in today's Federal Register, NHTSA has denied requests by several petitioners to rescind the requirement for external ABS malfunction lamps on trailers and dollies. However, in response to the petitions from Midland-Grau and TTMA, NHTSA has decided to propose requirements concerning the location, color, activation protocol and intensity of the external ABS malfunction lamps on trailers and dollies.

A. Location

NHTSA is proposing to specify the location for the external ABS malfunction indicator lamp on trailers and dollies. The proposed location for trailers is similar to the one proposed by the agency when it was considering requiring a low air pressure warning lamp on trailers. (55 FR 4453, February 8, 1990) For most trailers, the ABS malfunction indicator lamp would be required to be located on the left side of each trailer, as close to the front as practicable, and at a height as close as practicable to 96 inches above the road surface. (If it is impracticable to mount the indicator lamp on the left side of the trailer at a height of 60 inches or more above the road surface, the lamp shall be mounted on a permanent structure on the front face of the trailer as far leftward as practicable and at a height as close as practicable to 96 inches above the road surface). For dollies, the indicator lamp would be required on a permanent structure of the dolly and to be visible to a person standing on the road surface near the location of the indicator.

Standard No. 111, *Rearview mirrors*, specifies requirements for the performance and location of rearview

mirrors, but it does not provide a requirement for the height of the mirror relative to the ground. A location requirement would have given some reference for locating the ABS malfunction indicator lamp on the trailer. However, S8.1 of Standard No. 111 specifies that "the mirrors shall be located so as to provide the driver a view to the rear along both sides of the vehicle, * * * " This requirement should ensure that the driver would have a view of an indicator lamp required to be mounted on the left side of the trailer.

NHTSA is basing its proposal regarding the height of the trailer malfunction indicator lamp on a report published by the University of Michigan Transportation Research Institute (UMTRI), "The Influence of Truck Driver Eye Position on the Effectiveness of Retroreflective Traffic Signs," by Sivak, Flannagan, and Gellatly, September 1991. This report includes data on driver eye heights for 188 heavy trucks. The mean driver eye height above the ground for heavy trucks in that study is 2.33 meters or 91.74 inches. Therefore, the location of a side rearview mirror for such vehicles is likely to be slightly above or below this mean driver eye height to ensure that the average driver would be provided "a view to the rear along both sides of the vehicle," as required in S8.1 of Standard No. 111.

NHTSA believes that if the malfunction indicator lamp is located on the left side of the trailer, as far forward as practicable and at a height as close as practicable to 96 inches above the road surface, it would coincide with the mean driver eye height, based on the data from the UMTRI report. In that location, the indicator lamp would be likely to be visible to the driver.

NHTSA recognizes that on some trailers, such as flatbed and platform trailers, there may be no side structure that is sufficiently high to locate the ABS malfunction lamp at or near a height of 96 inches. If it is impracticable to mount the indicator lamp on the left side of the trailer at a height of 60 inches or more above the road surface, then locating the lamp on the front face of the trailer would be a more appropriate lamp location for such a vehicle. To increase the likelihood of a lamp on the front face of the trailer being visible through the side rearview mirror, the lamp would be required to be positioned as far leftward as practicable and at a height as close as practicable to 96 inches above the road surface.

In response to notices issued on the ABS rulemaking, TTMA and other

¹ ATA and UPS petitioned the agency to delete the requirements for an external trailer mounted malfunction lamp. They claimed that the external malfunction lamp will lead to less safety because drivers will be looking in their mirrors during braking to see whether the ABS lamp is functioning, instead of looking at traffic conditions ahead of their vehicle.