DEPARTMENT OF TRANSPORTATION

National Highway Traffic Safety Administration

49 CFR Part 571

[Docket No. 80–9; Notice 11] RIN 2127–AF59

Federal Motor Vehicle Safety Standards; Lamps, Reflective Devices and Associated Equipment

AGENCY: National Highway Traffic Safety Administration (NHTSA), DOT. **ACTION:** Notice of proposed rulemaking.

SUMMARY: This notice proposes that the rear of truck tractors be equipped with retroreflective sheeting similar to that required for the rear of heavy trailers. The agency tentatively concludes that the addition of such a conspicuity treatment would result in a reduction of deaths, injuries, and property costs. **DATES:** Comments are due September 11, 1995. The amendments would be effective 120 days after publication of the final rule in the Federal Register. ADDRESSES: Comments should refer to the docket number and notice number. and be submitted to: Docket Section. room 5109, 400 Seventh Street, SW., Washington, DC 20590 (Docket hours are from 9:30 a.m. to 4 p.m.) FOR FURTHER INFORMATION CONTACT: Patrick Boyd, Office of Rulemaking,

SUPPLEMENTARY INFORMATION:

NHTSA (202-366-6346).

Background

On December 10, 1992, NHTSA published a final rule amending Federal Motor Vehicle Safety Standard No. 108 Lamps, Reflective Devices, and Associated Equipment to add paragraph S5.7 Conspicuity Systems. (57 FR 58406). The rule has required, effective December 1, 1993, that large trailers, particularly the type that is hauled by truck tractors, be provided with reflective marking (either retroreflective tape or reflex reflectors) to enhance their detectability at night or under other conditions of reduced visibility. The preamble to the rule explained that the conspicuity requirements applied only to large trailers because most fatal accidents at night in which a truck is struck involves a truck tractor-trailer combination vehicle. But the notice also mentioned that the night accident involvement rate of truck tractors alone was much greater than that of other single unit trucks. The agency announced that it was considering truck tractors for future conspicuity rulemaking.

As part of its petition for reconsideration of the final rule, the Insurance Institute for Highway Safety (IIHS) asked that the conspicuity requirement be extended to single unit trucks and to truck tractors, citing accident statistics in support of its request.

NHTSA has tentatively concluded that motor vehicle safety would be enhanced if a conspicuity marking scheme were extended to truck tractors. Under 49 CFR 571.3(b), a truck tractor "means a truck designed primarily for drawing other motor vehicles and not so constructed as to carry a load other than a part of the weight of the vehicle and the load so drawn." Far fewer crashes involve vehicles colliding with the rear of truck tractors than with the rear of trailers, presumably because of a much lower exposure of tractors operating without trailers. However, NHTSA's data indicate that a higher proportion of rear end crashes involving truck tractors, including fatal crashes, occur at night than for either trailers or trucks.

It is obvious that truck tractors are less conspicuous at night from the rear than other motor vehicles. They are subject to fewer rear lighting requirements of Standard No. 108. Unlike other vehicles over 80 inches wide, tractors are not required to have rear side marker lamps, rear clearance lamps, or rear identification lamps. If double sided turn signal lamps are used on the front fenders, truck tractors are not required to have rear turn signal lamps either.

The only remaining rear marking lamps are the taillamps. These are usually mounted closer together on truck tractors than the taillamps are on other motor vehicles. Ongoing research at UMTRI concerning the relative placement of lower beam and upper beam headlamps demonstrates that the distance perception of motorists is distorted when viewing a vehicle with narrow lamp spacing. The taillamps on truck tractors are generally spaced closer together than the headlamps in UMTRI's study, and may have more influence on driving errors.

Since much of a truck tractor's operational life is spent in hauling trailers, it does not appear cost beneficial to require it to have the full panoply of rear lighting equipment required for other motor vehicles. Further, the configuration of truck tractors presents practicability problems for the mounting of the tail, stop, and turn signal lamps at the locations specified for other vehicles. However, the inexpensive and convenient use of retroreflective material would improve the detectability of the rear of truck

tractors when they are being operated or parked without trailers. The familiarity of the public with the Federal conspicuity treatment applied to large trailers should improve the recognition of similarly treated truck tractors and make such a treatment more effective for accident prevention than it would have been in the past.

Proposed Conspicuity Treatment for Rear of Tractor Trailers

In view of the relatively short length of truck tractors and the fact that they are equipped with a full complement of lamps at the front, NHTSA is proposing a conspicuity treatment for the rear only. Retroreflective material would be applied in locations not obscured by vehicle equipment in a rear orthogonal view. As with large trailers, two strips of white material 300 mm in length would be applied horizontally and vertically to the right and left upper contours of the body, as close to the top of the body and as far apart as practicable. As with the presently existing restriction for red reflex reflectors on truck tractors (paragraph S5.3.1.2), the strips on the cab rear would be mounted not less than 100 mm above the height of the rear tires. Relocation of the material would be allowed to avoid obscuration by vehicle equipment. If relocation is required for one side of the body but not the other, the manufacturer may relocate the other strips to achieve a symmetrical effect.

To indicate the overall width of the truck tractor, two strips of retroreflective sheeting, 600 mm in length, of alternating colors of red and white would also be required on the rear, to be mounted as horizontal as practicable and as far apart as practicable, not more than 1525 mm above the road surface. This sheeting could be applied to the truck body, or, if the tractor is so equipped, to the mud flaps or mud flap support brackets. However, if the strips are located on the mud flaps, they must be placed not lower than 300 mm below the mud flap support bracket to avoid excessive movement. Since the tire diameter, and consequently the distance from the mud flap support to the road surface, is nominally 1 meter, the lowest practicable location of the strips is about 700 mm above the road surface.

Under the proposal, manufacturers of truck tractors would have the option of using an array of reflex reflectors on the rear instead of retroreflective sheeting, the same option that is available to trailer manufacturers. However, reflex reflectors would still be required by Table I of Standard No. 108, in addition to the conspicuity material, whether sheeting or reflectors, because