

### § 393.26

Lamps and Front- and Rear-Turn Signal Lamps for Use on Motor Vehicles 2032 mm or More in Overall Width, January 2002; J585—Tail Lamps (Rear Position Lamps) for Use on Motor Vehicles Less Than 2032 mm in Overall Width, March 2000; J588—Turn Signal Lamps for Use on Motor Vehicles Less Than 2032 mm in Overall Width, March 2000; J2040—Tail Lamps (Rear Position Lamps) for Use on Vehicles 2032 mm or More in Overall Width, March 2002; J592—Sidemarker Lamps for Use on Road Vehicles Less Than 2032 mm in Overall Width, August 2000. (See § 393.7 for information on the incorporation by reference and availability of these documents.)

(d) (Reserved)

(e) *Lamps to be steady-burning.* All exterior lamps (both required lamps and any additional lamps) shall be steady-burning with the exception of turn signal lamps; hazard warning signal lamps; school bus warning lamps; amber warning lamps or flashing warning lamps on tow trucks and commercial motor vehicles transporting oversized loads; and warning lamps on emergency and service vehicles authorized by State or local authorities. Lamps combined into the same shell or housing with a turn signal are not required to be steady burning while the turn signal is in use. Amber warning lamps must meet SAE J845—Optical Warning Devices for Authorized Emergency, Maintenance and Service Vehicles, May 1997. Amber flashing warning lamps must meet SAE J595—Directional Flashing Optical Warning Devices for Authorized Emergency, Maintenance and Service Vehicles, January 2005. Amber gaseous discharge warning lamps must meet SAE J1318 Gaseous Discharge Warning Lamp for Authorized Emergency, Maintenance, and Service Vehicles, May 1998. (See § 393.7(b) for information on the incorporation by reference and availability of these documents.)

(f) *Stop lamp operation.* The stop lamps on each vehicle shall be activated upon application of the service brakes. The stop lamps are not required to be activated when the emergency feature of the trailer brakes is used or when the stop lamp is optically

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combined with the turn signal and the turn signal is in use.

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#### § 393.26 Requirements for reflectors.

(a) *Mounting.* Reflex reflectors shall be mounted at the locations required by § 393.11. In the case of motor vehicles so constructed that requirement for a 381 mm (15-inch) minimum height above the road surface is not practical, the reflectors shall be mounted as close as practicable to the required mounting height range. All permanent reflex reflectors shall be securely mounted on a rigid part of the vehicle. Temporary reflectors on projecting loads must be securely mounted to the load and are not required to be permanently mounted to a part of the vehicle. Temporary reflex reflectors on vehicles transported in driveaway-towaway operations must be firmly attached.

(b) *Specifications.* All required reflex reflectors (except reflex reflectors on projecting loads, vehicles transported in a driveaway-towaway operation, converter dollies and pole trailers) on vehicles manufactured on or after December 25, 1968, shall meet the applicable requirements of FMVSS No. 108 in effect on the date of manufacture of the vehicle. Reflex reflectors on projecting loads, vehicles transported in a driveaway-towaway operation, and all reflex reflectors on converter dollies and pole trailers must conform to SAE J594—Reflex Reflectors, December 2003.

(c) *Substitute material for side reflex reflectors.* Reflective material conforming to ASTM D 4956-04, Standard Specification for Retroreflective Sheeting for Traffic Control, may be used in lieu of reflex reflectors if the material as used on the vehicle, meets the performance standards in either Table I of SAE J594 or Table IA of SAE J594—Reflex Reflectors, December 2003. (See § 393.7(b) for information on the incorporation by reference and availability of these documents.)

(d) *Use of additional retroreflective surfaces.* Additional retroreflective surfaces may be used in conjunction with, but not in lieu of the reflex reflectors required in subpart B of part 393, and the substitute material for side reflex reflectors allowed by paragraph (c) of this section, provided:

(1) Designs do not resemble traffic control signs, lights, or devices, except that straight edge striping resembling a barricade pattern may be used.

(2) Designs do not tend to distort the length and/or width of the motor vehicle.

(3) Such surfaces shall be at least 3 inches from any required lamp or reflector unless of the same color as such lamp or reflector.

(4) No red color shall be used on the front of any motor vehicle, except for display of markings or placards required by § 177.823 of this title.

(5) Retroreflective license plates required by State or local authorities may be used.

[33 FR 19735, Dec. 25, 1968, as amended at 35 FR 3167, Feb. 19, 1970; 53 FR 49397, Dec. 7, 1988; 70 FR 48047, Aug. 15, 2005]

**§ 393.27 [Reserved]**

**§ 393.28 Wiring systems.**

Electrical wiring shall be installed and maintained to conform to SAE J1292—Automobile, Truck, Truck-Tractor, Trailer, and Motor Coach Wiring, October 1981, except the jumper cable plug and receptacle need not conform to SAE J560. The reference to SAE J1292 shall not be construed to require circuit protection on trailers. (See § 393.7(b) for information on the incorporation by reference and availability of this document.)

[70 FR 48047, Aug. 15, 2005]

**§ 393.29 [Reserved]**

**§ 393.30 Battery installation.**

Every storage battery on every vehicle, unless located in the engine compartment, shall be covered by a fixed part of the motor vehicle or protected by a removable cover or enclosure. Removable covers or enclosures shall be substantial and shall be securely latched or fastened. The storage battery compartment and adjacent metal parts which might corrode by reason of battery leakage shall be painted or coated with an acid-resisting paint or coating and shall have openings to provide ample battery ventilation and drainage. Wherever the cable to the starting motor passes through a metal compartment, the cable shall be pro-

tected against grounding by an acid and waterproof insulating bushing. Wherever a battery and a fuel tank are both placed under the driver's seat, they shall be partitioned from each other, and each compartment shall be provided with an independent cover, ventilation, and drainage.

**§ 393.31—393.33 [Reserved]**

**Subpart C—Brakes**

**§ 393.40 Required brake systems.**

(a) Each commercial motor vehicle must have brakes adequate to stop and hold the vehicle or combination of motor vehicles. Each commercial motor vehicle must meet the applicable service, parking, and emergency brake system requirements provided in this section.

(b) Service brakes. (1) *Hydraulic brake systems.* Motor vehicles equipped with hydraulic brake systems and manufactured on or after September 2, 1983, must, at a minimum, have a service brake system that meets the requirements of FMVSS No. 105 in effect on the date of manufacture. Motor vehicles which were not subject to FMVSS No. 105 on the date of manufacture must have a service brake system that meets the applicable requirements of §§ 393.42, 393.48, 393.49, 393.51, and 393.52 of this subpart.

(2) *Air brake systems.* Buses, trucks and truck-tractors equipped with air brake systems and manufactured on or after March 1, 1975, and trailers manufactured on or after January 1, 1975, must, at a minimum, have a service brake system that meets the requirements of FMVSS No. 121 in effect on the date of manufacture. Motor vehicles which were not subject to FMVSS No. 121 on the date of manufacture must have a service brake system that meets the applicable requirements of §§ 393.42, 393.48, 393.49, 393.51, and 393.52 of this subpart.

(3) *Vacuum brake systems.* Motor vehicles equipped with vacuum brake systems must have a service brake system that meets the applicable requirements of §§ 393.42, 393.48, 393.49, 393.51, and 393.52 of this subpart.