

Subpart H—Emergency Equipment

§ 393.95 Emergency equipment on all power units.

Each truck, truck tractor, and bus (except those towed in driveaway-towaway operations) must be equipped as follows:

(a) *Fire Extinguishers.* (1) *Minimum ratings:* (i) A power unit that is used to transport hazardous materials in a quantity that requires placarding (See § 177.823 of this title) must be equipped with a fire extinguisher having an Underwriters' Laboratories rating of 10 B:C or more.

(ii) A power unit that is not used to transport hazardous materials must be equipped with either:

(A) A fire extinguisher having an Underwriters' Laboratories rating of 5 B:C or more; or

(B) Two fire extinguishers, each of which has an Underwriters' Laboratories rating of 4 B:C or more.

(2) *Labeling and marking.* Each fire extinguisher required by this section must be labeled or marked by the manufacturer with its Underwriters' Laboratories rating.

(3) *Visual Indicators.* The fire extinguisher must be designed, constructed, and maintained to permit visual determination of whether it is fully charged.

(4) *Condition, location, and mounting.* The fire extinguisher(s) must be filled and located so that it is readily accessible for use. The extinguisher(s) must be securely mounted to prevent sliding, rolling, or vertical movement relative to the motor vehicle.

(5) *Extinguishing agents.* The fire extinguisher must use an extinguishing agent that does not need protection from freezing. Extinguishing agents must comply with the toxicity provisions of the Environmental Protection Agency's Significant New Alternatives Policy (SNAP) regulations under 40 CFR Part 82, Subpart G.

(b) *Spare fuses.* Power units for which fuses are needed to operate any required parts and accessories must have at least one spare fuse for each type/size of fuse needed for those parts and accessories.

(c)–(e) [Reserved]

(f) *Warning devices for stopped vehicles.* Except as provided in paragraph (g) of

this section, one of the following options must be used:

(1) Three bidirectional emergency reflective triangles that conform to the requirements of Federal Motor Vehicle Safety Standard No. 125, § 571.125 of this title; or

(2) At least 6 fusees or 3 liquid-burning flares. The vehicle must have as many additional fusees or liquid-burning flares as are necessary to satisfy the requirements of § 392.22.

(3) Other warning devices may be used in addition to, but not in lieu of, the required warning devices, provided those warning devices do not decrease the effectiveness of the required warning devices.

(g) *Restrictions on the use of flame-producing devices.* Liquid-burning flares, fusees, oil lanterns, or any signal produced by a flame shall not be carried on any commercial motor vehicle transporting Division 1.1, 1.2, 1.3 (explosives) hazardous materials; any cargo tank motor vehicle used for the transportation of Division 2.1 (flammable gas) or Class 3 (flammable liquid) hazardous materials whether loaded or empty; or any commercial motor vehicle using compressed gas as a motor fuel.

(h)–(i) [Reserved]

(j) *Requirements for fusees and liquid-burning flares.* Each fusee shall be capable of burning for 30 minutes, and each liquid-burning flare shall contain enough fuel to burn continuously for at least 60 minutes. Fusees and liquid-burning flares shall conform to the requirements of Underwriters Laboratories, Inc., UL No. 912, Highway Emergency Signals, Fourth Edition, July 30, 1979, (with an amendment dated November 9, 1981). (See § 393.7(c) for information on the incorporation by reference and availability of this document.) Each fusee and liquid-burning flare shall be marked with the UL symbol in accordance with the requirements of UL 912.

(k) *Requirements for red flags.* Red flags shall be not less than 12 inches square, with standards adequate to

maintain the flags in an upright position.

(49 U.S.C. 304, 1655; 49 CFR 1.48(b) and 301.60) [33 FR 19735, Dec. 25, 1968, as amended at 35 FR 13019, Aug. 15, 1970; 35 FR 14619, Sept. 18, 1970; 37 FR 17176, Aug. 25, 1972; 40 FR 10685, Mar. 7, 1975; 41 FR 53031, Dec. 3, 1976; 47 FR 47837, Oct. 28, 1982; 59 FR 34712, July 6, 1994; 67 FR 61225, Sept. 27, 2002; 70 FR 48054, Aug. 15, 2005]

Subpart I—Protection Against Shifting and Falling Cargo

SOURCE: 67 FR 61225, Sept. 27, 2002, unless otherwise noted.

§ 393.100 Which types of commercial motor vehicles are subject to the cargo securement standards of this subpart, and what general requirements apply?

(a) *Applicability.* The rules in this subpart are applicable to trucks, truck tractors, semitrailers, full trailers, and pole trailers.

(b) *Prevention against loss of load.* Each commercial motor vehicle must, when transporting cargo on public roads, be loaded and equipped, and the cargo secured, in accordance with this subpart to prevent the cargo from leaking, spilling, blowing or falling from the motor vehicle.

(c) *Prevention against shifting of load.* Cargo must be contained, immobilized or secured in accordance with this subpart to prevent shifting upon or within the vehicle to such an extent that the vehicle's stability or maneuverability is adversely affected.

§ 393.102 What are the minimum performance criteria for cargo securement devices and systems?

(a) *Performance criteria.* Cargo securement devices and systems must be capable of withstanding the following three forces, applied separately:

- (1) 0.8 g deceleration in the forward direction;
- (2) 0.5 g acceleration in the rearward direction; and
- (3) 0.5 g acceleration in a lateral direction.

(b) *Performance criteria for devices to prevent vertical movement of loads that are not contained within the structure of the vehicle.* Securement systems must

provide a downward force equivalent to at least 20 percent of the weight of the article of cargo if the article is not fully contained within the structure of the vehicle. If the article is fully contained within the structure of the vehicle, it may be secured in accordance with § 393.106(b).

(c) *Prohibition on exceeding working load limits.* Cargo securement devices and systems must be designed, installed, and maintained to ensure that the maximum forces acting on the devices or systems do not exceed the working load limit for the devices under the conditions listed in paragraphs (a) and (b) of this section.

(d) *Equivalent means of securement.* Cargo that is immobilized, or secured in accordance with the applicable requirements of §§ 393.104 through 393.136, is considered as meeting the performance criteria of this section.

§ 393.104 What standards must cargo securement devices and systems meet in order to satisfy the requirements of this subpart?

(a) *General.* All devices and systems used to secure cargo to or within a vehicle must be capable of meeting the requirements of § 393.102.

(b) *Prohibition on the use of damaged securement devices.* All vehicle structures, systems, parts, and components used to secure cargo must be in proper working order when used to perform that function with no damaged or weakened components that will adversely effect their performance for cargo securement purposes, including reducing the working load limit, and must not have any cracks or cuts.

(c) *Vehicle structures and anchor points.* Vehicle structures, floors, walls, decks, tiedown anchor points, headerboards, bulkheads, stakes, posts and associated mounting pockets used to contain or secure articles of cargo must be strong enough to meet the performance criteria of § 393.102, with no damaged or weakened components that will adversely effect their performance for cargo securement purposes, including reducing the working load limit, and must not have any cracks or cuts.

(d) *Material for dunnage, chocks, cradles, shoring bars, blocking and bracing.* Material used as dunnage or dunnage