

1,290 cm<sup>2</sup> (200 in<sup>2</sup>) formed by a rectangle 33 cm by 45 cm (13 inches by 17¾ inches). The maximum radius of the corner arcs shall not exceed 152 mm (6 inches). The long axis of the rectangle shall not make an angle of more than 45 degrees with the surface on which the unladen vehicle stands. If the cab is designed with a folding door or doors or with clear openings where doors or windows are customarily located, no windows shall be required in those locations.

[70 FR 48052, Aug. 15, 2005]

**§ 393.62 Emergency exits for buses.**

(a) *Buses manufactured on or after September 1, 1994.* Each bus with a GVWR of 4,536 kg (10,000 pounds) or less must meet the emergency exit requirements of FMVSS No. 217 (S5.2.2.3) in effect on the date of manufacture. Each bus with a GVWR of more than 4,536 kg (10,000 pounds) must have emergency exits which meet the applicable emergency exit requirements of FMVSS No. 217 (S5.2.2 or S5.2.3) in effect on the date of manufacture.

(b) *Buses manufactured on or after September 1, 1973, but before September 1, 1994.* (1) Each bus (including a school bus used in interstate commerce for non-school bus operations) with a GVWR of more than 4,536 kg (10,000 lbs) must meet the requirements of FMVSS No. 217, S5.2.2 in effect on the date of manufacture.

(2) Each bus (including a school bus used in interstate commerce for non-school bus operations) with a GVWR of 4,536 kg (10,000 lbs) or less must meet the requirements of FMVSS No. 217, S5.2.2.3 in effect on the date of manufacture.

(c) *Buses manufactured before September 1, 1973.* For each seated passenger space provided, inclusive of the driver there shall be at least 432 cm<sup>2</sup> (67 square inches) of glazing if such glazing is not contained in a push-out window; or, at least 432 cm<sup>2</sup> (67 square inches) of free opening resulting from opening of a push-out type window. No area shall be included in this minimum prescribed area unless it will provide an unobstructed opening of at least 1,290 cm<sup>2</sup> (200 in<sup>2</sup>) formed by a rectangle 33 cm by 45 cm (13 inches by 17¾ inches). The maximum radius of the corner arcs

shall not exceed 152 mm (6 inches). The long axis of the rectangle shall not make an angle of more than 45 degrees with the surface on which the unladen vehicle stands. The area shall be measured either by removal of the glazing if not of the push-out type, or of the movable sash if of the push-out type. The exit must comply with paragraph (d) of this section. Each side of the bus must have at least 40 percent of emergency exit space required by this paragraph.

(d) *Laminated safety glass/push-out window requirements for buses manufactured before September 1, 1973.* Emergency exit space used to satisfy the requirements of paragraph (c) of this section must have laminated safety glass or push-out windows designed and maintained to yield outward to provide a free opening.

(1) *Safety glass.* Laminated safety glass must meet Test No. 25, Egress, of American National Standard for Safety Glazing Materials for Glazing Motor Vehicles and Motor Vehicle Equipment Operating on Land Highways—Safety Standards ANSI/SAE Z26.1/96, August 1997. (See § 393.7 (b) for information on incorporation by reference and availability of this document.)

(2) *Push-out windows.* Each push-out window shall be releasable by operating no more than two mechanisms and allow manual release of the exit by a single occupant. For mechanisms which require rotary or straight (parallel to the undisturbed exit surface) motions to operate the exit, no more than 89 Newtons (20 pounds) of force shall be required to release the exit. For exits which require a straight motion perpendicular to the undisturbed exit surface, no more than 267 Newtons (60 pounds) shall be required to release the exit.

(e) *Emergency exit identification.* Each bus and each school bus used in interstate commerce for non-school bus operations, manufactured on or after September 1, 1973, shall meet the applicable emergency exit identification or marking requirements of FMVSS No. 217, S5.5, in effect on the date of manufacture. The emergency exits and doors on all buses (including school buses used in interstate commerce for non-school bus operations) must be marked “Emergency Exit” or “Emergency

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Door” followed by concise operating instructions describing each motion necessary to unlatch or open the exit located within 152 mm (6 inches) of the release mechanism.

(f) *Exception for the transportation of prisoners.* The requirements of this section do not apply to buses used exclusively for the transportation of prisoners.

[70 FR 48052, Aug. 15, 2005]

**§ 393.63 [Reserved]**

**Subpart E—Fuel Systems**

AUTHORITY: Sec. 204, Interstate Commerce Act, as amended, 49 U.S.C. 304; sec. 6, Department of Transportation Act, 49 U.S.C. 1655; delegation of authority at 49 CFR 1.48 and 389.4.

**§ 393.65 All fuel systems.**

(a) *Application of the rules in this section.* The rules in this section apply to systems for containing and supplying fuel for the operation of motor vehicles or for the operation of auxiliary equipment installed on, or used in connection with, motor vehicles.

(b) *Location.* Each fuel system must be located on the motor vehicle so that—

(1) No part of the system extends beyond the widest part of the vehicle;

(2) No part of a fuel tank is forward of the front axle of a power unit;

(3) Fuel spilled vertically from a fuel tank while it is being filled will not contact any part of the exhaust or electrical systems of the vehicle, except the fuel level indicator assembly;

(4) Fill pipe openings are located outside the vehicle’s passenger compartment and its cargo compartment;

(5) A fuel line does not extend between a towed vehicle and the vehicle that is towing it while the combination of vehicles is in motion; and

(6) No part of the fuel system of a bus manufactured on or after January 1, 1973, is located within or above the passenger compartment.

(c) *Fuel tank installation.* Each fuel tank must be securely attached to the motor vehicle in a workmanlike manner.

(d) *Gravity or syphon feed prohibited.* A fuel system must not supply fuel by

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gravity or syphon feed directly to the carburetor or injector.

(e) *Selection control valve location.* If a fuel system includes a selection control valve which is operable by the driver to regulate the flow of fuel from two or more fuel tanks, the valve must be installed so that either—

(1) The driver may operate it while watching the roadway and without leaving his/her driving position; or

(2) The driver must stop the vehicle and leave his/her seat in order to operate the valve.

(f) *Fuel lines.* A fuel line which is not completely enclosed in a protective housing must not extend more than 2 inches below the fuel tank or its sump. Diesel fuel crossover, return, and withdrawal lines which extend below the bottom of the tank or sump must be protected against damage from impact. Every fuel line must be—

(1) Long enough and flexible enough to accommodate normal movements of the parts to which it is attached without incurring damage; and

(2) Secured against chafing, kinking, or other causes of mechanical damage.

(g) *Excess flow valve.* When pressure devices are used to force fuel from a fuel tank, a device which prevents the flow of fuel from the fuel tank if the fuel feed line is broken must be installed in the fuel system.

[36 FR 15445, Aug. 14, 1971, as amended at 37 FR 4341, Mar. 2, 1972; 37 FR 28752, Dec. 29, 1972]

**§ 393.67 Liquid fuel tanks.**

(a) *Application of the rules in this section.* The rules in this section apply to tanks containing or supplying fuel for the operation of commercial motor vehicles or for the operation of auxiliary equipment installed on, or used in connection with commercial motor vehicles.

(1) A liquid fuel tank manufactured on or after January 1, 1973, and a side-mounted gasoline tank must conform to all rules in this section.

(2) A diesel fuel tank manufactured before January 1, 1973, and mounted on a bus must conform to the rules in paragraphs (c)(7)(iii) and (d)(2) of this section.

(3) A diesel fuel tank manufactured before January 1, 1973, and mounted on