

Primary Cable.

8. Wiring shall be arranged in at least six regular circuits, as follows:
 - a. Head, tail, stop (brake), clearance and instrument panel lamps
 - b. Step well lamps shall be actuated when the entrance door is open
 - c. Dome lamps
 - d. Ignition and emergency door signal
 - e. Turn signal lamps; and
 - f. Alternately flashing signal lamps
 9. Any of the above combination circuits may be subdivided into additional independent circuits.
 10. Heaters and defrosters shall be wired on an independent circuit.
 11. Whenever possible, all other electrical functions (such as sanders and electric-type windshield wipers) shall be provided with independent and properly protected circuits.
 12. Each body circuit shall be coded by number or letter on a diagram of circuits and shall be attached to the body in a readily accessible location.
- F. Buses may be equipped with a 12-volt power port in the driver's area.
- G. There shall be a manual noise suppression switch installed in the control panel. The switch shall be labeled and alternately colored. This switch shall be an on/off type that deactivates body equipment that produces noise, including at least the AM/FM radio, heaters, air conditioners, fans and defrosters. This switch shall not deactivate safety systems, such as windshield wipers or lighting systems.
- H. The entire electrical system of the body shall be designed for the same voltage as the chassis on which the body is mounted.

ELECTRONIC STABILITY CONTROL (ESC) (optional)

Buses should be equipped with Electronic Stability Control (ESC).

EMERGENCY EQUIPMENT

A. Fire Extinguisher

1. The bus shall be equipped with at least one (1) pressurized, dry, chemical fire extinguisher, complete with hose, to meet Underwriters Laboratories, Inc., approval. The extinguisher shall be mounted in a bracket, located in the driver's compartment and readily accessible to the driver and passengers. A pressure gauge shall be mounted on the extinguisher so as to be easily read without moving the extinguisher from its mounted position. The fire extinguisher shall not be located in the entrance door area.
2. The fire extinguisher shall be of a type approved by Underwriter Laboratories, Inc., with a total rating of 2A:10B:C or greater and at least 5 lbs. The operating mechanism shall be sealed with a type of seal which will not interfere with the use of the fire extinguisher.
3. Fire extinguishers must comply with State Fire Codes

B. First-Aid Kit

1. The bus shall have a removable, moisture-proof and dust-proof first-aid kit in an accessible place in the driver's compartment. It shall be properly mounted and identified as a first aid kit. The location for the first aid kit shall be marked.
2. Each kit shall include:
 - 2 - 1" x 2 1/2 yards adhesive tape rolls
 - 24 - sterile gauze pads 3" x 3"
 - 100 - 3/4" x 3" adhesive bandages
 - 8 - 2" bandage compress
 - 10 - 3" bandage compress
 - 2 - 2" x 6' sterile gauze roller bandages
 - 2 - non-sterile triangular bandages approximately
40" x 36" x 54" with 2 safety pins
 - 3 - sterile gauze pads 36" x 36"

- 3 - sterile eye pads
- 1 - round end scissors
- 1 - pair latex gloves
- 1 - mouth-to-mouth airway

C. Body Fluid Clean-up Kit

1. Each bus shall have a removable and moisture proof body fluid clean-up kit accessible to the driver. It shall be properly mounted and identified as a body fluid clean-up kit.
2. Each kit shall include:
 - 1 - 2 oz. package infectious liquid spill control powder
 - 1 - odor reducing mask
 - 2 - latex gloves
 - 2 - antiseptic wipes
 - 2 - paper crepe towels
 - 1 - scraper
 - 1 - plastic disposal bag with scoop and tie

D. Warning Devices

Each school bus shall contain at least three (3) reflectorized, triangle road warning devices that meet the requirements of FMVSS No. 125, *Warning Devices*. They shall be mounted in an accessible place.

- E. Any piece of emergency equipment may be mounted in an enclosed compartment, provided the compartment is labeled in not less than one-inch letters, identifying each piece of equipment contained therein.

EMERGENCY EXITS

Any installed emergency exit shall comply with the design and performance requirements of FMVSS No. 217, *Bus Emergency Exits and Window Retention and Release*, applicable to that type of exit, regardless of whether or not that exit is required by FMVSS No. 217.

A. Emergency Window Requirements

1. The rear emergency window shall have a lifting assistance device that will aid in lifting and holding the rear emergency window open.

2. Side emergency exit windows, when installed may be vertically hinged on the forward side of the window. No side emergency exit window will be located above a stop arm.

B. Emergency Door Requirements

1. The exposed area of the upper panel of emergency doors shall be a minimum of 400 square inches of approved safety glazing.
2. If installed, all glass panels on emergency doors shall be approved glazing.
3. There shall be no steps leading to an emergency door.
4. There shall be no obstruction higher than $\frac{1}{4}$ inch across the bottom of any emergency door opening. Fasteners used within the emergency exit opening shall be free of sharp edges or burrs.

C. Emergency Exit Requirements

The use of the following tables is to determine the required number and types of emergency exits to comply with this specification, based on the bus manufacturer's equipped seating capacity.

1. Use **Table 1** if the bus contains a rear emergency door, or
2. Use **Table 2** if the bus contains a rear pushout emergency window AND a left side emergency door, as required by FMVSS No. 217 for school buses without a rear emergency door.
3. When using either Table 1 or Table 2:
 - a. Enter the Table at the appropriate "CAPACITY" and select the desired row from the options for that capacity.
 - b. A school bus will meet the requirements of this specification and the requirements of FMVSS 217 if it contains the types and quantities of emergency exits listed on the row selected.

| TABLE 1 BUSES WITH REAR EMERGENCY DOOR (All Front Engine Buses) | | | | | |
|--|------------------------------------|---------------|--------------------------------|--------------------------------|-----------------------------|
| Available Combinations By Capacity | Manufacturers Equipped Capacity | Shall Have | And Shall Also Have | | |
| | | Roof Hatch | L. Side Emerg. Exit Windows | R. Side Emerg. Exit Windows | L. Side Emerg. Exit Door |
| 1-45 | 1-45 | 1 | 0 | 0 | 0 |
| 46-77 | 46-77 | 2 | 1 | 1 | 0 |
| | 46-77 | 2 | 0 | 0 | 1 |
| 78-93 | 78-93 | 2 | 2 | 2 | 0 |
| | 78-93 | 2 | 1 | 1 | 1 |

| TABLE 2 BUSES WITH REAR PUSHOUT WINDOW AND LEFT SIDE EMERGENCY DOOR (All Rear Engine Buses) | | | | | |
|--|------------------------------------|---------------|--------------------------------|--------------------------------|-----------------------------|
| Available Combinations By Capacity | Manufacturers Equipped Capacity | Shall Have | And Shall Also Have | | |
| | | Roof Hatch | L. Side Emerg. Exit Windows | R. Side Emerg. Exit Windows | R. Side Emerg. Exit Door |
| 1-45 | 1-45 | 1 | 0 | 0 | 0 |
| 46-89 | 46-89 | 2 | 1 | 1 | 0 |
| | 46-89 | 2 | 0 | 0 | 1 |
| 90-105 | 90-105 | 2 | 2 | 2 | 0 |
| | 90-105 | 2 | 1 | 1 | 1 |

EXHAUST SYSTEM

- A. The exhaust pipe, after-treatment system and tailpipe shall be outside the bus body compartment and shall be attached to the chassis so that any other chassis component is not damaged.
- B. The tailpipe and after-treatment system shall be constructed of a corrosion-resistant tubing material at least equal in strength and durability to 16-gauge steel tubing of equal diameter.
- C. The tailpipe may be flush with, or shall not extend more than two inches beyond, the perimeter of the body for side-exit pipe or the bumper for rear-exit pipe. The exhaust system shall be designed such that exhaust gas will not be trapped under the body of the bus.
- D. The tailpipe shall exit to the left or right of the emergency exit door in the rear of the vehicle or to the left side of the bus in front of or behind the rear drive axle or the tailpipe may extend through the bumper. The tailpipe exit location on all Types A-1 buses may be in accordance with the manufacturer's standards. The tailpipe shall not exit beneath any fuel filler location, emergency door or lift door.
- E. The exhaust system shall be insulated in a manner to prevent any damage to any fuel system component.
- F. The design of the after-treatment systems shall not allow active (non-manual) regeneration of the particulate filter during the loading and unloading of passengers. Manual regeneration systems will be designed such that unintentional operation will not occur.