

**169.4502 ADDITIONAL MINNESOTA SCHOOL BUS CHASSIS STANDARDS.**

Subdivision 1. **Relation to national standards.** The bus chassis standards contained in this section are required in addition to those required by section 169.4501. When a Minnesota standard contained in this section conflicts with a national standard adopted in section 169.4501, the Minnesota standard contained in this section is controlling.

Subd. 2. **Brakes.** The braking system must meet federal motor vehicle safety standards in effect at the time of manufacture.

Subd. 3. **Certification.** A chassis manufacturer shall certify that the product meets Minnesota standards. All buses with a certified manufacturing date prior to April 1, 1977, shall not be recertified as a school bus after January 1, 1996.

Subd. 4. **Color of fenders, hood, and grill.** Fenders may be painted black. The hood may be painted nonreflective black or nonreflective yellow. The grill may be manufacturer's standard color or chrome.

Subd. 5. **Electrical system; battery.** (a) The storage battery, as established by the manufacturer's rating, must be of sufficient capacity to care for starting, lighting, signal devices, heating, and other electrical equipment. In a bus with a gas-powered chassis, the battery or batteries must provide a minimum of 800 cold cranking amperes. In a bus with a diesel-powered chassis, the battery or batteries must provide a minimum of 1050 cold cranking amperes.

(b) In a type B bus with a gross vehicle weight rating of 15,000 pounds or more, and type C and D buses, the battery shall be temporarily mounted on the chassis frame. The final location of the battery and the appropriate cable lengths in these buses must comply with the SBMI design objectives booklet.

(c) All batteries shall be mounted according to chassis manufacturers' recommendations.

(d) In a type C bus, other than are powered by diesel fuel, a battery providing at least 550 cold cranking amperes may be installed in the engine compartment only if used in combination with a generator or alternator of at least 130 amperes.

(e) A bus with a gross vehicle weight rating of 15,000 pounds or less may be equipped with a battery to provide a minimum of 550 cold cranking amperes only if used in combination with an alternator of at least 130 amperes. This paragraph does not apply to those buses with wheelchair lifts or diesel engines.

Subd. 6. [Repealed, 1Sp1997 c 4 art 12 s 34]

Subd. 7. [Repealed, 2004 c 294 art 2 s 34]

Subd. 8. **Trailer hitch.** Installation of a trailer hitch is permitted. A hitch shall be flush mounted.

Subd. 9. [Repealed, 2004 c 294 art 2 s 34]

Subd. 10. **Horn.** A bus shall be equipped with a horn in good working order and capable of emitting sound audible under normal conditions from a distance of not less than 200 feet.

Subd. 11. **Tire and rim.** The use of multipiece rims or tube-type tires is not permitted on school buses manufactured after October 31, 2004. Radial and bias-ply tires shall not be used on the same axle. Front tire tread depth shall not be less than 4/32 inch in any major tire tread

groove. Rear tire tread shall not be less than 2/32 inch. Tires must be measured in three locations around the tire, in two adjoining grooves. No recapped tires shall be used on the front wheels. Recapped tires are permitted on the rear wheels.

Subd. 12. **Transmission gear shift display.** The transmission shifting pattern must be permanently displayed in the driver's full view.

Subd. 13. [Repealed, 2004 c 294 art 2 s 34]

Subd. 14. [Repealed, 2004 c 294 art 2 s 34]

Subd. 15. [Repealed, 2007 c 146 art 8 s 15]

**History:** 1994 c 647 art 12 s 36; 1Sp1995 c 3 art 2 s 33; 1Sp1997 c 4 art 12 s 11-17; 2004 c 294 art 2 s 25; 2007 c 146 art 8 s 8