

CHAPTER 3520

STATE BOARD OF EDUCATION

STUDENT TRANSPORTATION

| | |
|---|---|
| STANDARDS FOR AID | |
| 3520.0200 | APPLICATION AND CLAIM FOR TRANSPORTATION AID. |
| 3520.0300 | AID LIMITATION. |
| 3520.0400 | TRANSPORTATION DATA REPORTING REQUIREMENTS. |
| 3520.0600 | CERTIFICATION OF ELIGIBLE PUPILS. |
| 3520.1000 | TRANSPORTATION AND BOARD AND LODGING CONTRACTS. |
| 3520.1200 | COMMISSIONER'S RULES. |
| 3520.1300 | TRANSPORTATION CONTRACTS. |
| 3520.1300 | PLANNING DETAIL, RECORDS. |
| 3520.1400 | REGULATIONS RELATING TO EQUAL TRANSPORTATION. |
| 3520.1500 | FREE AND EQUAL TRANSPORTATION TO SCHOOL DISTRICT BOUNDARY. |
| 3520.1600 | FREE AND EQUAL TRANSPORTATION AID ONLY FOR CONTRACT COSTS WITHIN THE DISTRICT. |
| 3520.1800 | TRANSPORTATION OF NONRESIDENT PUPILS. |
| RULES, OPERATION OF SCHOOL BUSES AND PUPIL TRANSPORTATION SAFETY EDUCATION PROGRAM | |
| 3520.2400 | OPERATION OF TYPE I AND TYPE II SCHOOL BUSES. |
| 3520.2500 | DRIVER OF TYPE I BUSES. |
| 3520.2600 | FLAGGING AT RAILROAD GRADE CROSSINGS. |
| 3520.2700 | TIRE REQUIREMENTS FOR ALL TYPES OF VEHICLES. |
| 3520.2800 | PRETRIP INSPECTION OF BUSES. |
| 3520.2900 | ADOPTION OF ADDITIONAL OPERATING RULES. |
| 3520.3000 | OPERATION OF TYPE III SCHOOL BUSES. (INCLUDES AUTOMOBILES, STATION WAGONS, AND OTHER VEHICLES DESIGNED FOR CARRYING NINE OR FEWER.) |
| 3520.3100 | DRIVER OF TYPE III BUSES. |
| 3520.3200 | ADOPTION OF ADDITIONAL OPERATING RULES. |
| 3520.3300 | TRANSPORTATION OF HANDICAPPED STUDENTS. |
| 3520.3400 | DRIVER OF VEHICLE FOR HANDICAPPED STUDENTS. |
| 3520.3500 | ADOPTION OF ADDITIONAL OPERATING RULES. |
| 3520.3600 | PUPIL TRANSPORTATION SAFETY EDUCATION PROGRAM. |
| 3520.3680 | INCORPORATIONS BY REFERENCE. |
| DESIGN OF SCHOOL TRANSPORTATION EQUIPMENT STANDARDS | |
| 3520.3700 | DESIGN OF SCHOOL TRANSPORTATION EQUIPMENT STANDARDS. |
| 3520.3701 | VEHICLE DESCRIPTIONS. |
| 3520.3801 | TYPE I CHASSIS. |
| 3520.3802 | COMPLIANCE. |
| 3520.3900 | AIR CLEANER. |
| 3520.4001 | AXLES. |
| 3520.4100 | BATTERY. |
| 3520.4201 | BRAKES. |
| 3520.4301 | FRONT BUMPER. |
| 3520.4400 | CERTIFICATION. |
| 3520.4500 | CLUTCH. |
| 3520.4510 | COLOR. |
| 3520.4531 | DRIVE SHAFT. |
| 3520.4540 | ELECTRICAL SYSTEM. |
| 3520.4550 | EXHAUST SYSTEM. |
| 3520.4560 | FENDERS, FRONT. |
| 3520.4570 | FRAME. |
| 3520.4600 | FUEL TANK. |
| 3520.4610 | GENERATOR OR ALTERNATOR. |
| 3520.4620 | GOVERNOR. |
| 3520.4630 | HEATING SYSTEM. |
| 3520.4640 | HORN. |
| 3520.4650 | INSTRUMENTS AND INSTRUMENT PANEL. |
| 3520.4670 | OPENINGS. |
| 3520.4680 | PASSENGER LOAD. |
| 3520.4701 | SHOCK ABSORBERS. |
| 3520.4711 | SPRINGS. |
| 3520.4720 | STEERING. |
| 3520.4731 | TIRES AND RIMS. |
| 3520.4741 | TRANSMISSION. |
| 3520.4750 | UNDERCOATING. |
| 3520.4761 | WEIGHT DISTRIBUTION. |
| 3520.4801 | TYPE I BODY. |
| 3520.4811 | AISLE. |
| 3520.4831 | BODY SIZES. |
| 3520.4840 | BOOK RACKS. |
| 3520.4850 | BUMPER. |
| 3520.4900 | COLOR. |
| 3520.4910 | CONSTRUCTION. |
| 3520.4930 | FLOOR CONSTRUCTION. |
| 3520.4980 | OPENINGS. |
| 3520.5000 | DEFROSTERS. |
| 3520.5010 | DOORS. |
| 3520.5111 | FIRE EXTINGUISHER. |
| 3520.5120 | FIRST AID KIT. |
| 3520.5141 | FLOOR COVERING. |
| 3520.5151 | HEATERS. |
| 3520.5160 | IDENTIFICATION. |
| 3520.5171 | INSIDE HEIGHT. |
| 3520.5180 | INSULATION. |
| 3520.5190 | INTERIOR. |
| 3520.5200 | LAMPS AND SIGNALS FOR NEW BUSES ONLY. |
| 3520.5220 | TURN SIGNAL LAMPS AND STOP LAMPS. |
| 3520.5230 | WARNING DEVICES. |
| 3520.5300 | METAL TREATMENT. |
| 3520.5310 | MIRRORS. |
| 3520.5330 | OVERALL LENGTH. |
| 3520.5340 | OVERALL WIDTH. |
| 3520.5361 | RUB RAILS. |
| 3520.5370 | SANDERS. |
| 3520.5380 | SEAT BELT FOR DRIVER. |
| 3520.5401 | SEATS AND CRASH BARRIERS. |
| 3520.5450 | STEPS. |
| 3520.5461 | STIRRUP STEPS. |
| 3520.5471 | STOP SIGNAL ARM. |
| 3520.5481 | STORAGE COMPARTMENT. |
| 3520.5490 | SUNSHIELD. |
| 3520.5500 | TAILPIPE. |
| 3520.5510 | UNDERCOATING. |
| 3520.5520 | VENTILATION. |
| 3520.5531 | WHEEL HOUSING. |
| 3520.5551 | WINDSHIELD AND WINDOWS. |
| 3520.5560 | WINDSHIELD WASHERS. |
| 3520.5570 | WINDSHIELD WIPERS. |
| 3520.5580 | WIRING. |
| 3520.5600 | TYPE II SCHOOL BUSES. |
| 3520.5611 | EQUIPMENT. |
| 3520.5700 | TYPE III SCHOOL BUSES. |
| 3520.5710 | EQUIPMENT. |
| 3520.5900 | CONSTRUCTION OF VEHICLES FOR CHILDREN WITH MOBILITY PROBLEMS. |
| 3520.5910 | MOTOR COACH USED FOR SCHOOL ACTIVITIES. |
| 3520.5920 | OPERATION OF MOTOR COACHES USED FOR SCHOOL ACTIVITIES. |

STANDARDS FOR AID

3520.0200 APPLICATION AND CLAIM FOR TRANSPORTATION AID.

Subpart 1. **Deadline.** A district making application for aid for transportation or board and lodging under Minnesota Statutes, sections 124.223 and 124.225 shall report to the State Department of Education and all claims submitted shall be postmarked not later than August 15 after the close of the school term for which aid is claimed in order to qualify for final payment at the regular time.

Subp. 2. **Frequency of reports.** For each fiscal year ending June 30, each district shall file a report pursuant to subpart 1. This report and the year-end reports required in subpart 1 shall provide the pupil counts on which the aid will be paid.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.0300 AID LIMITATION.

Transportation aid will be paid for the transportation of each eligible resident pupil for one round trip per day to the classified school attended.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.0400 TRANSPORTATION DATA REPORTING REQUIREMENTS.

Subpart 1. **Regular category.** An elementary or secondary pupil for which a school district is entitled to transportation aid under Minnesota Statutes, sections 124.223, clauses (1) and (2), must be transported 20 or more days to be eligible for state aid. A kindergarten pupil attending full-day, every other day classes must be transported ten or more days to be eligible for state aid. A district shall report annual mileage for regular category transportation.

Subp. 2. **Other authorized categories.** A district that transports pupils under Minnesota Statutes, sections 123.223, clauses (1) and (3) to (10), and 275.125, subdivision 5d, must report the number of pupils transported. Annual mileage must be reported only when separate routes are set up to provide this transportation.

Subp. 3. **Other unauthorized categories.** A district that transports pupils in categories that are not authorized for transportation aid must furnish information on students transported and mileage as requested on the annual transportation report.

Subp. 4. **Other transportation data.** A district shall furnish information on vehicle ownership, fuel consumption, and other data as requested on the annual transportation report.

Subp. 5. **Duplication of pupil counts.** A district must not report a pupil in more than one to and from school category. These categories are: regular, handicapped, secondary one to two miles, traffic hazards, and ineligible.

Statutory Authority: *MS s 169.45*

History: *L 1987 c 258 s 12; 13 SR 1860*

3520.0500 [Repealed, 13 SR 1860]**3520.0600 CERTIFICATION OF ELIGIBLE PUPILS.**

The administrative officer of the school district shall certify that every pupil for whom aid for transportation or board or lodging is claimed is eligible for aid.

Statutory Authority: *MS s 124.14*

3520.0700 [Repealed, 13 SR 1860]**3520.0800 [Repealed, 13 SR 1860]**

3520.0900 [Repealed, 13 SR 1860]

3520.1000 TRANSPORTATION AND BOARD AND LODGING CONTRACTS.

The school board shall enter into written contracts for the transportation and board and lodging of its resident pupils. (See part 3525.1200)

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.1100 [Repealed, 13 SR 1860]

3520.1200 COMMISSIONER'S RULES, TRANSPORTATION CONTRACTS.

The board of any school district may contract with another district, private contract hauler, or parent for the transportation of its resident pupils.

Transportation contracts should include at least the following specific items:

- A. the correct names of the contracting parties;
- B. date the contract begins and date the contract ends;
- C. kind of transportation equipment to be used;
- D. total amount to be paid during the school year or base per pupil rate;
- E. when and how payments are to be made;
- F. minimum number of pupils to be transported; and
- G. special terms to be mentioned:

- (1) holidays, specific dates;
- (2) vacations, beginning and ending dates;
- (3) conditions governing bus route changes;
- (4) how new and additional pupils will be provided for;
- (5) how extracurricular and other special trips are to be provided and paid for;
- (6) how adjustments and refunds are to be handled;
- (7) kinds and amounts of insurance to be carried and special coverage;
- (8) a statement that the local board shall approve any and all school bus routes, drivers, and alternate drivers; and
- (9) how contracts may be terminated.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.1300 PLANNING DETAIL, RECORDS.

The school board in making arrangements for pupil transportation to and from school shall determine and maintain supporting records of the following, when applicable:

- A. routes of the regular and special school buses;
- B. location of regular and special school bus loading areas;
- C. time schedule for all school bus routes;
- D. any changes to be made in school bus routes during the school year and the giving of adequate notice thereof;
- E. evidence that all bus drivers are legally qualified;
- F. local pupil transportation policies; and
- G. the distance each pupil transported resides from the school attended or if nonpublic the district line to which transported.

Statutory Authority: *MS s 123.39 subd 2*

3520.1400 REGULATIONS RELATING TO EQUAL TRANSPORTATION:

In accordance with Minnesota Statutes, sections 123.76 to 123.79, it is the policy of the State Board of Education that school districts provide free and equal transportation for all school children of the state.

Pursuant to the policy set out above, the State Board of Education:

A. Shall provide transportation aid in accordance with parts 3520.0200 to 3520.1700 for transportation provided by the school board for resident pupils to and from eligible schools located within the district.

B. Shall provide transportation aid in accordance with parts 3520.0200 to 3520.1700 for transportation provided by the school district for resident pupils attending eligible schools located in another district, provided that the aid shall be for only so much of the trip as is within the district of residence and, provided further that transportation aid may only be provided for such pupils within the limits specified in part 3520.1500. This limitation is not applicable to transportation of handicapped children.

C. Shall not provide transportation aid where a school district elects to provide transportation for nonresident pupils to a school or schools within its district.

D. Shall not provide transportation aid where a school district elects to provide transportation for nonresident pupils through its district enroute to a school located in another district.

Statutory Authority: *MS s 121.11 subd 12*

3520.1500 FREE AND EQUAL TRANSPORTATION TO SCHOOL DISTRICT BOUNDARY.

An eligible resident pupil shall receive free and equal transportation to the appropriate school district boundary if there is no nonpublic school within the district maintaining grades or departments that are maintained in another district, or if attendance can more safely, economically, or conveniently be provided by such means.

A nonpublic school located within the resident district shall be deemed unavailable if it does not maintain the appropriate grades or departments. The term "appropriate department" shall include a department of religion.

The public school administration shall annually and as necessary consult with the appropriate nonpublic school administration on attendance areas, safety, economics, conveniences, and availability of space for the pupils.

The final determination as to whether transportation shall be provided to the boundary of the resident district shall be made by the public school board pursuant to law.

Where transportation is provided within the district to the boundary of the district and the school district is eligible for transportation aid for such transportation, the "within the district" limitation shall not be applied in an arbitrary manner. Safety factors in loading or unloading buses at or near the school district boundary shall be given due consideration. Transporting pupils a reasonable distance into the adjoining district or stopping short of the district boundary to assure safety of the pupils shall be determined by the public school board.

Statutory Authority: *MS s 121.11 subd 12*

3520.1600 FREE AND EQUAL TRANSPORTATION AID ONLY FOR CONTRACT COSTS WITHIN THE DISTRICT.

The school board of the district of residence may make contractual arrangements with private bus operators, nonpublic schools, public transit operators, parents, and/or other school districts for the transportation of school pupils for any portion of the pupil's trip to or from school, provided that the board ascertains that it is only paying for and claiming state aid for that portion of the

trip that is within the district of residence. The resident school board's responsibility relative to such contracts shall be limited to the pro rata cost per resident pupil based on mileage traveled within the resident district as the mileage relates to the total number of miles traveled. Equal transportation is not to be defined in terms of numbers of children transported or numbers of miles traveled or the average cost per pupil for the transportation of eligible pupils attending public schools. Each public school board shall require the other party to such contractual arrangements to substantiate and identify all transportation costs charged to the public school district. Each school board applying for transportation aid for nonpublic school pupils shall comply with regulations of the state board as specified in chapter 3520.

The resident district may transport eligible nonpublic pupils to a nonpublic school located in another district provided the nonpublic school shall pay the cost of that portion of the trip which is outside of the resident district boundary.

Statutory Authority: *MS s 121.11 subd 12*

3520.1700 [Repealed, 13 SR 1860]

3520.1800 TRANSPORTATION OF NONRESIDENT PUPILS.

A school district may transport nonresident pupils on district-owned and -operated buses or on privately owned and operated buses contracted for by the school board of the district. The equipment must not be required for the transportation of resident pupils. There must be available seating space in the bus for the nonresident pupils.

The routes must be within the area of the secondary school to be served and must be approved by the State Board of Education.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.1900 [Repealed, 13 SR 1860]

3520.2000 [Repealed, 13 SR 1860]

3520.2100 [Repealed, 13 SR 1860]

3520.2200 [Repealed, 13 SR 1860]

3520.2300 [Repealed, 13 SR 1860]

RULES, OPERATION OF SCHOOL BUSES AND PUPIL TRANSPORTATION SAFETY EDUCATION PROGRAM

3520.2400 OPERATION OF TYPE I AND TYPE II SCHOOL BUSES.

Subpart 1. Application of rules. The operating rules in parts 3520.2400 to 3520.2900 shall govern the operation of Type I and Type II school buses used for the transportation of school children when owned and operated by a school district or privately owned and operated under a contract with a school district.

Subp. 2. Transportation of pupils. Only pupils assigned to the school bus by the school board or designated administrative officer of the school district shall be transported at district expense.

Pupils are not to be evicted from the bus along the route for a breach of discipline. All breaches of discipline shall be reported by the bus driver to the administrative officer.

The entrance door shall be closed at all times when transporting pupils and the bus is in motion.

All buses shall load and unload in the right lane of the roadway, at pupil stops on bus routes approved by the administrative officer. Loading or unloading in a designated turn lane or in a lane immediately adjacent to a designated turn lane is prohibited.

There shall be no pupils in the bus while the gas tank is being filled. On leaving the vehicle when pupils are in the bus, the driver shall stop the motor, remove the ignition key, set the brakes, and otherwise render the bus immobile.

The administrative officer shall see that no materials, including guns, loaded or unloaded; gasoline cans, empty or full; animals; or any other object of a dangerous or objectionable nature are transported in the school bus when children are being transported.

Subp. 3. Driving on school grounds. Buses shall not be run backwards on the school grounds or at any other point if it can be avoided. If it is necessary to run a bus backwards, the driver should have adequate visibility to determine if any moving vehicles are within 500 feet in either direction, when on roadways. When there is a pupil pick-up or unloading at a backing point, the driver shall always load before backing and unload after backing. No pupils should be outside the bus when it is backing.

Subp. 4. In case of accidents. In case of an accident or breakdown of the bus the driver shall not leave the bus but send two of the patrol or other responsible pupils to the nearest house to summon help.

Immediate reports of all accidents, however slight, involving the school bus shall be made by the driver to the administrative officer and to such other authorities as required by law, rule, or regulation. The driver shall prepare and keep all records and reports required by the administrative officer.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.2500 DRIVER OF TYPE I BUSES.

The driver:

A. Shall bring the bus to a full stop and disengage gears by shifting into neutral or park before loading and unloading pupils.

B. Shall use the prewarning amber flashing signals, flashing red signals, and stop signal arm in accordance with Minnesota Statutes, section 169.44.

C. Shall maintain at least a 50-foot interval when following another bus entering or leaving the school ground, and at least 500 feet when traveling on the highway (Minnesota Statutes, section 169.18, subdivision 8, clause (b)).

D. Shall load or unload pupils only where the view is unobstructed to the motorist for 500 feet in either direction.

E. Shall be responsible for safely delivering the pupils who must cross the highway to the left side of the road by one of the following methods: the pupil shall pass around in front of the vehicle and cross the road only upon receiving word from the driver; or the pupil shall pass around in front of the bus and be conducted across the road by the school bus patrol; or the driver shall personally conduct the pupils across the road.

F. Shall stop at all railroad crossings whether carrying passengers or not in accordance with Minnesota Statutes, section 169.28. Eight-lamp prewarning alternately flashing amber signals and flashing red stop signals shall not be used at railroad crossings.

A school bus shall not be flagged across railroad grade crossings except at such railroad grade crossings as the local school administrative officer may designate.

Statutory Authority: *MS s 169.45*

3520.2600 FLAGGING AT RAILROAD GRADE CROSSINGS.

Flagging shall be done in the following manner.

The pupil shall take a position so as to have a clear view of the railroad tracks in both directions. If a train is approaching, the pupil shall not cross the track but

shall face the bus and signal the bus not to proceed by holding up both hands above his head. When pupil has made certain that the track is clear and safe for crossing, he shall signal the driver to cross the tracks by a forward motion of upraised arm. The driver shall be sure that the pupil has checked for approaching trains and it is safe to cross before driving bus across the tracks. The pupil shall not reenter the bus until the bus has crossed the tracks a safe distance.

Statutory Authority: *MS s 169.45*

3520.2700 TIRE REQUIREMENTS FOR ALL TYPES OF VEHICLES.

Subpart 1. Front wheels. No recapped tires shall be used. Minnesota Statutes, section 169.44, subdivision 11. Tire tread depth shall not be less than 4/32 inch in any two adjacent major tread grooves at three equally spaced intervals around the circumference of the tire. USA Standard Inspection Procedures for Motor Vehicles, USAS D 7.1-1968. Issued by United States of America Standards Institute, 1430 Broadway, New York, N.Y. 10018.

Subp. 2. Rear wheels. Recapped tires permitted on rear wheels. Tire tread depth shall not be less than 2/32 inch in any two adjacent major tread grooves at three equally spaced intervals around the circumference of the tire. USA Standard Inspection Procedures for Motor Vehicles, USAS D 7.1-1968. Issued by United States of America Standards Institute, 1430 Broadway, New York, N.Y. 10018.

Subp. 3. All wheels. Not acceptable if:

A. Tire regrooved or recut below original groove depth when extra undertread rubber was not provided for this purpose. USA Standard Inspection Procedures for Motor Vehicles, USAS D 7.1-1968, issued by United States of America Standards Institute, 1430 Broadway, New York, N.Y. 10018.

B. Tire has unrepaired fabric break or was repaired by use of a boot or blowout patch. USA Standard Inspection Procedures for Motor Vehicles, USAS D 7.1-1968, issued by United States of America Standards Institute, 1430 Broadway, New York, N.Y. 10018.

C. Tire has a bump, bulge, knot, or separation. USA Standard Inspection Procedures for Motor Vehicles, USAS D 7.1-1968, issued by United States of America Standards Institute, 1430 Broadway, New York, N.Y. 10018.

D. Tire has exposed or damaged body cords. USA Standard Inspection Procedures for Motor Vehicles, USAS D 7.1-1968, issued by United States of America Standards Institute, 1430 Broadway, New York, N.Y. 10018.

E. Tire has reinforcement repair to the cord body. USA Standard Inspection Procedures for Motor Vehicles, USAS D 7.1-1968, issued by United States of America Standards Institute, 1430 Broadway, New York, N.Y. 10018.

Statutory Authority: *MS s 169.45*

3520.2800 PRETRIP INSPECTION OF BUSES.

A daily pretrip inspection shall be conducted on every school bus. Any defects or deficiencies that may affect the vehicle's safe operation or result in a mechanical breakdown shall be promptly reported in writing to the administrative officer.

Statutory Authority: *MS s 169.45*

3520.2900 ADOPTION OF ADDITIONAL OPERATING RULES.

The school board of the district may adopt such additional operating rules as deemed necessary to meet local conditions and needs, providing they do not conflict with state laws and rules.

Statutory Authority: *MS s 169.45*

3520.3000 OPERATION OF TYPE III SCHOOL BUSES. (INCLUDES AUTOMOBILES, STATION WAGONS, AND OTHER VEHICLES DESIGNED FOR CARRYING NINE OR FEWER.)

Subpart 1. **Application.** The operating rules in parts 3520.3000 to 3520.3200 shall govern the operation of Type III school buses used for the transportation of school children when owned and operated by a school district or privately owned and operated under a contract with a school district.

Subp. 2. **Transportation of pupils.** Only pupils assigned to the vehicle by the school board or designated administrative officer of the school district shall be transported at district expense.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.3100 DRIVER OF TYPE III BUSES.

The driver:

A. Shall not operate vehicle as a Type I or Type II bus.

B. Shall not stop traffic.

C. Shall not load or unload in a vehicular traffic lane or on the shoulder. Shall be restricted to curb, nontraffic side (normal parking lane), off-street loading areas, driveways, yard service, and other areas to avoid any hazardous conditions.

D. Shall not load or unload in the right-hand lane of the roadway, designated turn lane, or lane immediately adjacent to a designated turn lane.

E. Shall not load or unload so that a child has to cross the road. Where not possible or impractical, the driver or aide shall personally escort the child across the road. If driver escorts, the motor must be stopped, ignition key removed, brakes set, and vehicle otherwise rendered immobile.

F. Shall not load or unload before making a complete stop and disengaging gears by shifting into neutral or park.

G. Shall not operate as a school bus, whether carrying pupil passengers or not, without displaying the "Vehicle Stops At RR Crossings" sign and stopping at all railroad crossings. See part 3520.5710, subpart 3. Sign may be covered or removed when vehicle is not operating as a school bus.

Statutory Authority: *MS s 169.45*

3520.3200 ADOPTION OF ADDITIONAL OPERATING RULES.

The school board of the district may adopt such additional operating rules as deemed necessary to meet local conditions and needs, providing they do not conflict with state laws and rules.

Statutory Authority: *MS s 169.45*

3520.3300 TRANSPORTATION OF HANDICAPPED STUDENTS.

Subpart 1. **Services provided.** Under the provisions of Minnesota Statutes, section 120.17, school districts are required to provide special education and services for handicapped school age residents. Accordingly, free transportation services shall be provided to any such handicapped child who requires special transportation services because of his or her handicapping conditions and/or special program needs.

These rules shall apply when the handicapping conditions of the child are such that the child cannot be safely transported on the regular school bus route and/or when the child is transported on a special route for the purpose of attending an approved special education program. These rules shall not be applicable to parents who transport their own child under contract with a school district.

Subp. 2. **Appeal process.** Any parent of a handicapped child who believes that

the transportation services provided for that child are not in compliance with these rules may utilize the due process procedures provided for in Laws of Minnesota 1976, chapter 211.

Subp. 3. Transportation of students. The length of time a handicapped child is transported shall be appropriate to the physical, mental, and emotional well-being of the child. In general, a handicapped child should not spend more time in transit than a nonhandicapped child except as may be required because of the unique location of the child's educational program.

The school district shall determine the type of vehicle used to transport handicapped students on the basis of the handicapping conditions of those students. Such vehicles shall comply with the provisions of parts 3520.3700 to 3520.5800 of the rules of the State Board of Education.

All vehicles used to transport handicapped students shall be equipped with a two-way communications system and/or have a responsible aide to provide necessary assistance and supervision which cannot safely be provided by the driver. A school district may determine that neither a communication system nor an aide is required. The determination of whether a communication system and/or an aide are required shall reflect the needs of the students and be based on such factors as handicaps of students transported, distance traveled, density of population, terrain, and any other factors which may affect the safety of the pupil passengers. Exceptions to this paragraph may be made upon mutual agreement between the parents and the school district.

Specially adapted seats, support, and/or protective devices shall be provided for all students who require such devices to insure their safe transportation. Such devices shall be selected by the school district in consultation with the child's parents and on the basis of the specific needs of the individual handicapped child.

Any school bus used to transport students in wheelchairs shall be equipped with fastening devices which will hold such wheelchairs securely in a fixed position.

Statutory Authority: *MS s 169.45*

3520.3400 DRIVER OF VEHICLE FOR HANDICAPPED STUDENTS.

Each driver of a vehicle for handicapped students should be carefully selected to fulfill the unique requirements of the job. Drivers shall be assigned to each route on a regular basis whenever possible. Each aide assigned to a vehicle transporting handicapped students, or driver if no aide is assigned, or both, shall:

A. Have available to them in the vehicle a typewritten card indicating the student's name and address; the nature of the student's handicaps; emergency health care information; and the names and telephone numbers of the student's physician, parents, guardians and/or custodians, and of some person other than the student's parents or custodians who can be contacted in case of an emergency.

B. Be instructed in the proper emergency health care procedures for the students under their care. In addition, within one month after the effective date of assignment, participate in a program of in-service training on the proper methods for dealing with the specific needs and problems of those students.

C. Assist such children on and off the bus when necessary for their safe ingress and egress from the bus.

D. Ensure that protective safety devices, as required in part 3520.3300, subpart 3, fourth paragraph, are in use and fastened properly.

Statutory Authority: *MS s 169.45*

3520.3500 ADOPTION OF ADDITIONAL OPERATING RULES.

The school district may adopt such additional operating rules governing transportation of handicapped students as deemed necessary to meet local conditions and needs, providing they do not conflict with state laws and rules.

Statutory Authority: *MS s 169.45*

3520.3600 PUPIL TRANSPORTATION SAFETY EDUCATION PROGRAM.

Each school district shall implement a program of safety education for all students who are transported in school buses. This program shall provide that:

A. at least twice during each school year, pupils shall be instructed in safe riding practices and shall participate in emergency evacuation drills; and

B. the instruction shall include, but need not be limited to, correct safety procedures for riding, loading, unloading, vehicle lane crossing, and emergency evacuation of school buses.

Statutory Authority: *MS s 123.80*

3520.3680 INCORPORATIONS BY REFERENCE.

Part or all of the documents and standards referred to in this part are incorporated by reference in chapter 3520. The documents are subject to frequent change and are conveniently available to the public through the Minitex interlibrary loan system. The latest edition available at the time the amendments to chapter 3520 are proposed is cited. Unless a later rulemaking by the Department of Education specifically restricts application of material incorporated by reference to a specific edition, later editions are incorporated by reference as they are published and made conveniently available to the public.

National Minimum Standards for School Buses and Operations, 1985 Revised Edition, National Safety Council, 444 North Michigan Avenue, Chicago, IL 60611.

SBMI School Bus Design Objectives, January 1985, School Bus Manufacturers Institute, 4907 Cordell Avenue, Bethesda, MD 20814.

Standard for Safety for Dry Chemical Fire Extinguishers ANSI-UL 299-1984, Approved March 2, 1984, American National Standard/Underwriter Laboratories, Inc., 333 Pfingsten Road, Northbrook, IL 60062.

School Bus Warning Lamps - SAE J887, May 1982, Society of Automotive Engineers Standards, 400 Commonwealth Drive, Warrendale, PA 15096.

Standard Method of Salt Spray (706) Testing - Designation B117-85, American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103.

Windshield Defrosting Systems Test Procedure - Trucks, Buses, and Multipurpose Vehicles - SAE J381 and SAE J382, June 1984, Society of Automotive Engineers Standards.

Standard for the Storage and Handling of Liquefied Petroleum Gases NFPA58, 1986 Edition, National Fire Protection Association, Batterymarch Park, Quincy, MA 02269.

School Bus Stop Arm - Recommended Practice - SAE J1133, April 1984, Society of Automotive Engineers Standards.

Windshield Defrosting Systems Performance Guidelines - Trucks, Buses, and Multipurpose Vehicles - Recommended Practice - SAE J382, October 1984, Society of Automotive Engineers Standards.

Turn Signal Lamps for Use on Motor Vehicles Less Than 2032 MM in Overall Width - SAE J588, November 1984 and SAE J588I, Society of Automotive Engineers Standards.

Manual on Uniform Traffic Control Devices for Streets and Highways, 1987, Federal Highway Administration, 400 7th S.W., Washington, D.C. 20590.

United States Standard Alphabets for Highway Signs, Series B and Series D, Federal Highway Administration.

Federal Specification TT-C-520B, Coating Compound, Bituminous Solvent Type Underbody (for Motor Vehicles), General Services Administration, Specification and Consumer Information, Distribution Center, Washington Navy Yard, Building 197, Washington, D.C. 20407.

Product Standard PS 1-83, Construction and Industrial Plywood, United

States Department of Commerce, National Bureau of Standards, Washington, D.C. 20234.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

DESIGN OF SCHOOL TRANSPORTATION EQUIPMENT STANDARDS

3520.3700 DESIGN OF SCHOOL TRANSPORTATION EQUIPMENT STANDARDS.

Subpart 1. General. The design and color of school buses used in the transportation of school children to and from school or to and from school-related activities, whether owned and operated by a school or school district or privately owned and operated under a contract with a school or school district, shall ensure safe and economical transportation of pupils at all times and shall conform to the minimum standards for design of school buses as established by the State Board of Education and shall comply with applicable federal standards. These are minimum standards and may be exceeded if exceeding them does not conflict with federal standards, state laws, or rules.

Subp. 2. [Repealed, 13 SR 1860]

Subp. 2a. Variances. The commissioner of the Department of Education, after consulting with the commissioner of the Department of Public Safety, may grant a variance to any of the standards to accommodate testing of new equipment related to school buses. The variance must not conflict with Minnesota Statutes, federal laws, or Federal Motor Vehicle Safety Standards.

A variance from the standards must be for the sole purpose of testing and evaluating for increased safety, efficiency, and economy of pupil transportation. The variance expires 12 months from the date of its granting by the commissioner unless the commissioner specifies an earlier expiration date.

The commissioner upon granting a variance must furnish the commissioner of the Department of Public Safety and the requesting operator with a written copy of the variance specifying the conditions imposed on the testing.

The commissioner shall also provide a copy of the variance in writing to all contract operators and school districts.

The commissioner may grant up to one 12-month extension on a variance.

Annually by June 30, the commissioner will review all variances for adoption into the minimum standards.

Subp. 3. [Repealed, 13 SR 1860]

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.3701 VEHICLE DESCRIPTIONS.

Subpart 1. Type I. A Type I school bus means a school bus of more than 10,000 pounds gross vehicle weight rating, designed for carrying more than ten persons. A Type I school bus may be either a conventional or forward control bus.

Subp. 2. Type II. A Type II school bus is a bus with a gross vehicle weight rating of 10,000 pounds or less, designed for carrying more than ten persons. It must be outwardly equipped and identified as a school bus. It need not comply with Type I standards unless specified in part 3520.5611.

Subp. 3. Type III. A Type III school bus is restricted to a passenger car, station wagon, van, or bus with a maximum manufacturer's rated seating capacity of ten persons including the driver, and with a gross vehicle weight rating of 10,000 pounds or less. A "gross vehicle weight rating" or "GVWR" means the value specified by the manufacturer as the loaded weight of a single vehicle. Actual gross vehicle weight must not exceed the manufacturer's gross vehicle weight rating.

A Type III school bus must not in any way be outwardly equipped and identified as a school bus and must not operate as a Type I or Type II bus and need not conform to standards for Type I or Type II buses.

Subp. 4. **Standards are for new buses.** The minimum standards apply to new school buses purchased for use in Minnesota after the effective date of these standards. Buses complying with these standards when purchased new for use in Minnesota need not comply with standards established later except as specifically provided by law.

Subp. 5. **Used buses.** A used school bus purchased for use in Minnesota that has a current or expired Minnesota inspection sticker must conform to the Minnesota minimum standards in effect on the date the vehicle was purchased new. A used school bus that has never been inspected in Minnesota must conform to current Minnesota minimum standards.

Subp. 6. **"MN" designation.** School bus bodies manufactured after January 1, 1986, and used on the streets and highways in this state must bear the designation "MN" in the body identification number. The manufacturer of the school bus body certifies by the "MN" designation that the bus body has been manufactured to meet the minimum standards required of school bus bodies. A school bus body manufactured before January 1, 1986, that does not bear a current inspection sticker, must not be used on the streets and highways in the state unless its manufacturer recertifies that the school bus body meets the minimum standards required of school bus bodies by law. Recertification must be made on a form provided by the Minnesota Department of Public Safety.

Automobiles, station wagons, and vans manufactured in a single stage are exempt from the requirements of this subpart.

Subp. 7. **Inspection.** Pursuant to Minnesota Statutes, section 169.451, school bus inspection procedures that indicate specific criteria and tolerances for each standard must be promulgated by the state patrol.

Subp. 8. **Interpretation.** The commissioner of the department of education and the commissioner of the department of public safety shall confer on interpretations and clarifications of rules.

Subp. 9. **Restructured defined.** "Restructured" means a vehicle produced by a chassis manufacturer which is converted into a school bus by a second manufacturer and upon completion shall meet or exceed the static load test code for school bus body structure.

Subp. 10. **No depreciation; exception.** A new bus body may be remounted on a chassis that is not more than three years old. Permission must be obtained from the commissioner of education in coordination with the commissioner of public safety before the remounting is done. A used bus body must not be remounted on a new or used chassis.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.3800 [Repealed, 13 SR 1860]

3520.3801 TYPE I CHASSIS.

The standards in parts 3520.3900 to 3520.4761 apply to Type I bus chassis.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.3802 COMPLIANCE.

Compliance with these standards is the responsibility of the chassis manufacturer.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

MINNESOTA RULES 1989

3123

STUDENT TRANSPORTATION 3520.4201

3520.3900 AIR CLEANER.

The engine intake air cleaner shall be furnished and properly installed by the chassis manufacturer to meet engine specifications.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.4000 [Repealed, 13 SR 1860]

3520.4001 AXLES.

The front and rear axles, including the suspension assembly, must have a gross weight rating at ground at least equal to that portion of the load imposed by the chassis manufacturer's maximum gross vehicle weight rating.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.4100 BATTERY.

Subpart 1. General requirement. 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 Minnesota.

A. In a bus with a gas-powered chassis, the battery or batteries must provide a minimum of 800 cold cranking amperes.

B. In a bus with a diesel-powered chassis, the battery or batteries must provide a minimum of 1,070 cold cranking amperes.

Subp. 2. Options. The following battery systems are optional.

A. A battery providing at least 550 cold cranking amperes may be installed in the engine compartment if used only in combination with a generator or alternator of at least 120 amperes.

B. A bus with a gross vehicle weight rating (GVWR) of more than 10,000 pounds, but not over 15,000 pounds GVWR may be equipped with a battery to provide a minimum of 475 cold cranking amperes (CCA) if used only in combination with an alternator of at least 80 amperes. This option does not apply to those buses with wheelchair lifts.

Subp. 3. Mounting of battery. When a battery is to be mounted on a sliding tray rather than the standard installation provided by the chassis manufacturer, the battery must be temporarily mounted on the chassis frame by the chassis manufacturer. The final location of the battery and the appropriate cable lengths shall agree with the SBMI Design Objectives, January 1985 Edition.

Subp. 4. [Repealed, 13 SR 1860]

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.4200 [Repealed, 13 SR 1860]

3520.4201 BRAKES.

Subpart 1. Adequate to control, stop, and hold. A school bus must have brakes adequate to control the movement of, and to stop and hold the bus.

Subp. 2. Federal brake standards. A school bus must meet federal brake standards in effect at the time of manufacture and must include a service brake, a parking brake, and an emergency brake system.

Subp. 3. Emergency brake system. A school bus must have either:

A. emergency features in the service brake system; or

B. a system separate from the service brake system.

Subp. 4. Control. A control by which the driver applies the emergency brake system must be located so that the driver can readily operate it while being

properly restrained by a seat belt assembly provided for the driver's use. The control for applying the emergency brake system may be combined with either the control for applying the service brake system or the control for applying the parking brake system. All three controls must not be combined.

Subp. 5. Interconnected systems. If the brake systems specified in subpart 2 are interconnected, they must be designed, constructed, and maintained so that if part of the operating mechanism of one or more of the systems fails, the vehicle will have operative brakes capable of performing as specified in Federal Motor Vehicle Safety Standard Number 105, Code of Federal Regulations, title 49, part 571.

Subp. 6. Brake tubing and hose. The brake tubing and brake hose must conform to Federal Motor Vehicle Safety Standard Number 106, Code of Federal Regulations, title 49, part 571.

Subp. 7. Brake lining. The brake lining on a school bus must be constructed and installed to avoid excessive fading and grabbing. The brake lining must be adequate in thickness, means of attachment, and physical characteristics to provide for safe and reliable stopping of the motor vehicle.

Subp. 8. Reservoirs required. A school bus using air or vacuum for braking must be equipped with reserve capacity or a reservoir sufficient to ensure a full service brake application with the engine stopped without depleting the air pressure or vacuum below 70 percent of that pressure or degree of vacuum indicated by the gauge immediately before the brake application is made. For purposes of this subpart, a full service brake application is made when the service brake pedal is pushed to the limit of its travel.

Subp. 9. Warning devices and gauges. A school bus must be equipped with a signal that provides a warning to the driver when a failure occurs in the vehicle's brake system.

A. Buses having service brakes activated by hydraulic fluid must be equipped with a warning signal that conforms to Federal Motor Vehicle Safety Standard Number 105, Code of Federal Regulations, title 49, part 571.

B. Buses having service brakes activated by air pressure must be equipped with warning devices that conform with Federal Motor Vehicle Safety Standard Number 121, Code of Federal Regulations, title 49, part 571.

C. Buses having service brakes activated by vacuum must be equipped with a device that provides a readily audible or visible continuous warning to the driver whenever the vacuum in the vehicle's supply reservoir is less than eight inches of mercury and with a vacuum gauge that indicates to the driver the vacuum in inches of mercury available for braking.

Subp. 10. Air or vacuum applied or assisted. A bus having a braking system in which hydraulically activated service brakes are applied or assisted by compressed air or vacuum must be equipped with both a warning signal that conforms to the requirements of subpart 9, item A and a warning device that conforms to the requirements of subpart 9, item B or C.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.4210 [Repealed, 13 SR 1860]

3520.4220 [Repealed, 13 SR 1860]

3520.4230 [Repealed, 13 SR 1860]

3520.4240 [Repealed, 13 SR 1860]

3520.4250 [Repealed, 13 SR 1860]

3520.4260 [Repealed, 13 SR 1860]

MINNESOTA RULES 1989

3125

STUDENT TRANSPORTATION 3520.4531

3520.4300 [Repealed, 13 SR 1860]

3520.4301 FRONT BUMPER.

The front bumper must be furnished by the chassis manufacturer as part of the chassis. The front bumper must extend beyond the forwardmost part of the body, grille, hood, and fenders and must extend to the outer edges of the fenders at the bumper top line. The front bumper, except the breakaway bumper ends, must be of sufficient strength to permit pushing a vehicle of equal gross vehicle weight without permanent distortion to the bumper, bumper braces, chassis, or body.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.4400 CERTIFICATION.

The chassis distributor or dealer, on request, must certify to the State Department of Education that its product meets minimum standards on items not covered by certification issued under the requirements of the National Traffic and Motor Vehicle Safety Act, United States Code, title 49, section 571.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.4500 CLUTCH.

Clutch torque capacity must be at least equal to engine torque output.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.4510 COLOR.

Subpart 1. [Repealed, 13 SR 1860]

Subp. 2. [Repealed, 13 SR 1860]

Subp. 3. **New buses.** The chassis including front bumper and wheels must be painted glossy black, the hood and cowl must be painted National School Bus Yellow, except that the hood may be either lusterless yellow or lusterless black.

Subp. 4. **Color options.** Items A to C list color options for specific parts of a school bus.

A. Front fenders may be painted glossy yellow or glossy black.

B. The following may be other than yellow or black: wheel rims; chassis grills; mirror backs, rims, and mounting brackets; reflector housings; window frames; accessories and other minor trim items.

C. Silver, black, or yellow retroflective material may be used on the front bumper for increased night visibility.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.4520 [Repealed, 13 SR 1860]

3520.4530 [Repealed, 13 SR 1860]

3520.4531 DRIVE SHAFT.

The drive shaft must be protected by adequate metal guard or guards to prevent it from whipping through the floor or dropping to the ground if broken.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.4540 STUDENT TRANSPORTATION

3126

3520.4540 ELECTRICAL SYSTEM.

Subpart 1. **Battery.** See chassis, part 3520.4100; and body, part 3520.4820.

Subp. 2. **Generator.** See chassis, part 3520.4610.

Subp. 3. **Lamp and signals.** See body, parts 3520.5200 to 3520.5230.

Subp. 4. **Wiring.** See body, part 3520.5580.

Subp. 5. **Electrical terminal.** The chassis manufacturer must install a readily accessible electrical terminal so that the body and chassis electrical load may be recorded through a chassis ammeter without dismantling or disassembling the chassis component. The chassis wiring system to the terminal must have a minimum of 100-ampere capacity. The chassis ammeter and wiring must be compatible with the generating capacity, and the ammeter must be capable of recording a continuous draw of 100 amperes.

Subp. 5a. **Option.** A voltmeter may be used in place of an ammeter.

Subp. 6. **Wiring codes, colors, diagram.** All wiring must use a standard color or number coding and each chassis must be delivered with a wiring diagram that coincides with the wiring of the chassis.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.4550 EXHAUST SYSTEM.

Subpart 1. **General.** The exhaust pipe muffler and tailpipe must be outside the bus body and attached to the chassis with adequate hangers of sufficient strength to maintain the position of the exhaust system under all normal operating conditions. The tailpipe must be constructed of seamless or electrically welded tubing of 16-gauge steel or its equivalent and must extend at least five inches beyond the chassis frame but should not go beyond the rear bumper. See body, part 3520.5500. The size of the tailpipe must not be reduced after it leaves the muffler.

Subp. 2. **Exception.** The exhaust system on vehicles designed for the transportation of special education pupils may be routed to the left of the right frame rail to allow for the installation of a lift on the right side of the vehicle.

Subp. 3. **Insulation.** The exhaust system on a gas-powered chassis must be properly insulated from fuel tank and tank connections by a securely attached metal shield at any point where the exhaust system is within 12 inches of the tank or tank connections.

Subp. 4. **Corrosion-resistant.** The muffler must be constructed of corrosion-resistant material.

Subp. 5. **Option; Type I school buses.** Left side exhaust systems are allowed on Type I school buses but must conform to the following requirements:

A. The exhaust system pipe must be of nonflexible, one-piece pipe and be a minimum of 16 gauge steel or its equivalent. Diesel buses may use flex pipe on crossover pipes.

B. The exhaust system pipe must extend a minimum of 18 inches straight rearward from the muffler before a maximum bend of 45 degrees is made in the pipe. More than one bend may be made to attain a 45-degree maximum bend.

C. The exhaust system may extend to a maximum of one inch beyond the body skirt.

D. The end of the exhaust pipe must be cut smooth.

E. An exhaust system that has its exit point behind the rear wheels need not comply with the 45-degree bend requirement.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.4560 FENDERS, FRONT.

Subpart 1. **General requirements.** The total spread of the outer edges of the front fenders, measured at the fender line, must exceed the total spread of the front tires when the front wheels are in the straight ahead position. The front fenders must be properly braced.

Subp. 2. **Exception.** The standard in subpart 1 does not apply to forward control buses.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.4570 FRAME.

The frame or its equivalent must be designed to correspond at least to standard practice for trucks that have the same general load characteristics and that are used for highway service. Any person or secondary manufacturer that modifies the original chassis frame shall guarantee the performance of workmanship and materials resulting from the modification. Any frame modification must not be for the purpose of extending the wheelbase. Extensions of frame lengths are permissible only when such alterations are behind the rear hanger of the rear spring or in front of the front spring hanger. Holes in top or bottom flanges of the frame side rail must not be permitted except as provided in the original chassis frame. There must be no welding to frame side rails except as provided above. Welding for installation of the trailer hitch is permissible. Frame lengths shall be provided in accordance with School Bus Manufacturers Institute design objectives.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.4580 [Repealed, 13 SR 1860]

3520.4600 FUEL TANK.

Subpart 1. **Capacity of 30 gallons.** The fuel tank or tanks having a minimum capacity of 30 gallons must be provided by the chassis manufacturer.

The fuel tank must be filled and vented to the outside of the body so that accidental fuel spillage will not drip or drain on any part of the exhaust system.

The portion of the fuel system that is located to the rear of the engine compartment, except the filler tube, must not extend above the top of the chassis frame rail. The fuel lines must be mounted to obtain maximum possible protection from the chassis frame in conformance with Federal Motor Vehicle Safety Standard 301, Code of Federal Regulations, title 49, part 371.

The fuel filter with a replaceable element must be installed between the fuel tank and the engine.

The fuel tank must meet the national standards that apply for the type of fuel used.

Subp. 2. [Repealed, 13 SR 1860]

Subp. 3. [Repealed, 13 SR 1860]

Subp. 4. [Repealed, 13 SR 1860]

Subp. 5. [Repealed, 13 SR 1860]

Subp. 6. **Rear engine powered buses.** In rear engine powered buses, the fuel system must have the fuel tank or tanks located ahead of the engine compartment.

Subp. 7. **Fuel, liquefied petroleum, compressed and liquefied natural gas.** Liquefied petroleum gas (LPG), or compressed or liquefied natural gas installations on school buses must meet National Fire Protection Association Standard Number 58 for "Installation of LP Gas Systems on Vehicles," as adopted by reference in the Minnesota Uniform Fire Code.

3520.4600 STUDENT TRANSPORTATION

3128

A school bus powered by liquefied petroleum or natural gas, or compressed liquefied natural gas must display markings as required by Minnesota Statutes, section 169.762 and parts 7510.4500 to 7510.4900.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.4610 GENERATOR OR ALTERNATOR.

Subpart 1. Output requirement. The generator or alternator (negative ground only) with rectifier must have an output of at least 100 amperes (in accordance with Society of Automotive Engineers rating) with a minimum charging of 30 amperes at the manufacturer's recommended engine idle speed (12-volt system) and must be ventilated and voltage-controlled and, if necessary, current-controlled. A matched dual belt drive must be used with the generator or alternator. A single belt, with longitudinal multigrooves, may be used in place of a dual belt drive. A heavy-duty full transistorized regulator must be supplied. A direct-drive generator or alternator may be used in place of a belt drive.

Subp. 2. More output if small battery. When a battery or batteries of less than 800 cold cranking amperes (CCA) is installed in the engine compartment, the generator or alternator must have an output of at least 120 amperes. (See part 3520.4100, subpart 2.)

Subp. 3. [Repealed, 13 SR 1860]

Subp. 4. [Repealed, 13 SR 1860]

Subp. 5. Option; some Type I buses. Type I buses with a gross vehicle weight rating of 15,000 pounds or less may be equipped with a single belt drive alternator.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.4620 GOVERNOR.

Subpart 1. Permissible. An engine governor is permissible and if used must be set at the manufacturer's recommended maximum engine speed. If it is desired to limit road speed, a road speed governor should be installed.

Subp. 2. Exception. If the engine is remotely located from the driver, the governor must be installed to limit engine speed to maximum revolutions per minute recommended by the engine manufacturer, or a tachometer must be installed so engine speed may be known to the driver.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.4630 HEATING SYSTEM.

The chassis engine must have plugged openings for the purpose of supplying hot water for the bus heating system. The opening must be suitable for attaching a 3/4-inch pipe thread/hose connector. The engine must be capable of supplying water having a temperature of at least 170 degrees Fahrenheit at a flow rate of 50 pounds per minute at the return end of 30 feet of one inch inside diameter automotive hot water heater hose. See also School Bus Manufacturers Institute Standard Number 001-Standard Code for Testing and Rating Automotive Bus Hot Water Heating and Ventilating Equipment.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.4640 HORN.

The bus must 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.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.4650 INSTRUMENTS AND INSTRUMENT PANEL.

Subpart 1. Requirements. The chassis must be equipped with the instruments and gauges listed in this part. Lights in place of gauges are not permitted unless indicated.

A. Speedometer.

B. Odometer that will give accrued mileage.

C. An ammeter, vane or shunt type, with graduated charge and discharge. The ammeter and its wiring must be compatible with the generating capacities and capable of handling a continuous current draw of 100 amperes. A voltmeter may be used in place of an ammeter.

D. Oil-pressure gauge.

E. Water-temperature gauge.

F. Fuel gauge.

G. Upper-beam headlamp indicator. A light indicator is permitted.

H. Brake indicator (vacuum or air). A light indicator in place of a gauge is permitted on a vehicle equipped with an hydraulic-over-hydraulic brake system.

I. Turn signal indicator lights.

Subp. 2. Accessibility, mounting, illumination. All instruments must be easily accessible for maintenance and repair.

All instruments and gauges must be mounted on the instrument panel so that each is clearly visible to the driver in a normal driving position. The instrument panel must have lamps of sufficient candlepower to illuminate all instruments and gauges and the shift selector indicator for the automatic transmission.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.4660 [Repealed, 13 SR 1860]

3520.4670 OPENINGS.

All openings in the floorboard or the firewall between the chassis and the passenger carrying compartments, such as for gearshift lever and auxiliary brake lever, must be sealed unless they are altered by the body manufacturer.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.4680 PASSENGER LOAD.

Subpart 1. Gross vehicle weight, defined. Average actual gross vehicle weight (GVW) is the sum of actual chassis weight, plus average body weight, plus 150 pounds for driver's weight, plus total seated pupil weight based on 120 pounds per pupil.

Subp. 2. Gross vehicle weight (GVW) limit. The actual gross vehicle weight (GVW) must not be more than the chassis manufacturer's gross vehicle weight rating (GVWR) for the chassis.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.4690 [Repealed, 13 SR 1860]

3520.4700 [Repealed, 13 SR 1860]

3520.4701 STUDENT TRANSPORTATION

3130

3520.4701 SHOCK ABSORBERS.

A school bus must be equipped with front and rear double acting shock absorbers compatible with the manufacturer's rated axle capacity at each wheel location.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.4710 [Repealed, 13 SR 1860]

3520.4711 SPRINGS.

Capacity of springs or suspension assemblies must be commensurate with the chassis manufacturer's gross vehicle weight rating. If rear springs are used on a chassis of 15,000 pounds and over, they must be of the progressive type.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.4720 STEERING.

The steering gear must be approved by the chassis manufacturer and designed to assure safe and accurate performance when the vehicle is operated with maximum load and at maximum speed. The steering mechanism must provide for easy adjustment for lost motion. Changes not approved by the chassis manufacturer must not be made in the steering apparatus. There must be a clearance of at least three inches between the steering wheel and the cowl, instrument panel, windshield, or any other surface. The steering system must be designed to provide for means for lubrication of all wear-points, if wear-points are not permanently lubricated. Power steering is required and must be of the integral type with integral valves.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.4730 [Repealed, 13 SR 1860]

3520.4731 TIRES AND RIMS.

Tires and rims of proper size and tires with a load rating commensurate with the chassis manufacturer's gross vehicle weight rating must be provided.

Dual rear tires must be provided on Type I school buses.

Tires of different size or ply rating may be used except that all tires on an axle must be the same size. Radial and bias tires must not be used on the same axle. If a spare tire is carried, it must be suitably mounted in an accessible location outside the passenger compartment.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.4740 [Repealed, 13 SR 1860]

3520.4741 TRANSMISSION.

An automatic transmission is permissible.

If a manual transmission is used, second gear and higher gears must be synchronized except if to do so would be incompatible with engine power. A minimum of three forward speeds and one reverse speed must be provided. The bus transmission shifting pattern must be permanently displayed in the driver's full view.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

MINNESOTA RULES 1989

3131

STUDENT TRANSPORTATION 3520.4811

3520.4750 UNDERCOATING.

Unless fenders are constructed of a noncorrosion material, the chassis manufacturer must coat undersides of front fenders with a compound to prevent rust. The compound must meet or exceed Federal Specifications TT-C-520B using modified test procedures as defined under "Undercoating" of body standards.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.4760 [Repealed, 13 SR 1860]

3520.4761 WEIGHT DISTRIBUTION.

Weight distribution of a fully loaded bus on a level surface must not exceed the manufacturer's front gross axle weight rating and rear gross axle weight rating.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.4770 [Repealed, 13 SR 1860]

3520.4800 [Repealed, 13 SR 1860]

3520.4801 TYPE I BODY.

The standards in parts 3520.4811 to 3520.5580 apply to Type I bus bodies.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.4810 [Repealed, 13 SR 1860]

3520.4811 AISLE.

Minimum clearance of all aisles, including the aisle or passageway between seats leading to the emergency door, must be 12 inches. See part 3520.5010, subpart 2. Aisle supports of seat backs must be slanted away from the aisle sufficiently to give aisle clearance of 15 inches at the top of the seat backs.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.4820 [Repealed, 13 SR 1860]

3520.4830 [Repealed, 13 SR 1860]

MINNESOTA RULES 1989

3520.4831 STUDENT TRANSPORTATION

3132

3520.4831 BODY SIZES.

WATCH YOUR WEIGHT

RECOMMENDED BODY — CHASSIS SIZES FOR MINNESOTA SCHOOL BUSES

| PASSENGER CAPACITY | WHEELBASE | Items to specify to get proper minimum gross vehicle weights. | | | | | GVWR ² |
|---|-----------|---|-----------|---------------------|-------------------------|------------------------|-------------------|
| | | FRONT AXLE | REAR AXLE | TIRE SIZE | FRONT GEAR ¹ | REAR GEAR ¹ | |
| 29 | 151" | 5000# Gas 7500# Diesel * | 15000# | 8.25 x 20 10 ply | 5000# 7500# | 14200# | 19200# 21700# |
| 35 | 151-170" | 5000# Gas 7500# Diesel * | 15000# | 8.25 x 20 10 ply | 5000# 7500# | 14200# | 19200# 21700# |
| 41 ³ | 189-193" | 7000# Gas 7500# Diesel * | 15000# | 8.25 x 20 10 ply | 7000# 7500# | 14200# | 21200# 21700# |
| 47 ³ | 189-193" | 6000# Gas 7500# Diesel * | 15000# | 8.25 x 20 10 ply | 6000# 7500# | 14200# | 20200# 21700# |
| 53 | 216-218" | 7000# Gas 8000# Diesel * | 15000# | 8.25 x 20 12 ply | 7000# 8000# | 15000# | 22000# 23000# |
| 59 | 235-237" | 7000# Gas 8000# Diesel * | 17000# | 9.00 x 20 10 ply | 7000# 8000# | 16160# | 23160# 24160# |
| 65 | 254-255" | 7500# Gas 8000# Diesel * | 17500# | 9.00 x 20 12 ply | 7500# 8000# | 17500# | 25000# 25500# |
| 71 | 274-276" | 9000# Gas 9000# Diesel * | 19000# | 9.00 x 20 14 ply | 9000# | 19000# | 28000# |
| 77 | 274-276" | 9000# Gas 9000# Diesel * | 20000# | 9.00 x 20 14 ply | 9000# | 20000# | 29000# |
| <p>* Applies to diesel engines larger than 6.9 liter such as 8.2 and 9 liter and larger.</p> <p>¹ GAWR (Gross Axle Weight Rating) means the weight carrying capacity of the lightest components of the front or rear axle assembly including axle, tires, wheels, springs, frame, etc.</p> <p>² GVWR (Gross Vehicle Weight Rating) means the total maximum carrying capacity of a bus including body weight; chassis weight, passengers, and fuel. Specify Front GAWR - Rear GAWR and Total GVWR in your bid, using the above chart to properly distribute loaded weights.</p> <p>³ The shorter 41 passenger body puts more weight on the front axle than the longer 47 passenger.</p> | | | | | | | |

Chart provided by Minnesota School Bus Body Distributors Association.

REVISED 5/86

A. The above recommendations are designed to allow bidding of various body - chassis combinations and staying within federal weight tolerances.

B. Stock bus bids. Due to the fact that the body - chassis dealers know the exact weight of their units built for stock, axles and tire sizes may be less than those listed above and still be within the federal weight tolerances.

C. The following items add considerable weight and may require heavier axles or longer chassis and body: diesel engines; air brakes; luggage compartments; even size bodies such as 54-60-66 passenger. Uneven sizes as 53-59-65 as listed above are recommended over even sizes as they do not require a wasted nine inch space behind the rear seat.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.4840 BOOK RACKS.

Subpart 1. **Permitted.** Book racks are permitted only in buses with 72-inch or more headroom.

Subp. 2. **Location.** If book racks are permitted, they must be located above the side windows and must not extend forward of the foremost point of the front seat, across or above the emergency door and must not exceed 16 inches in width.

Book racks must have only padded, rounded edges on all surfaces exposed to school bus occupants. Padding must be at least one inch thick. There must be an upward extending edge on the aisle side of the rack that extends half the distance to the ceiling of the bus from the bottom of the rack. A minimum of two racks must have full height dividers above every seat to prevent any book or object from sliding front and back. Each rack must be padded on the aisle side.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

MINNESOTA RULES 1989

3133

STUDENT TRANSPORTATION 3520.4910

3520.4850 BUMPER.

Subpart 1. **Front.** See part 3520.4301.

Subp. 2. [Repealed, 13 SR 1860]

Subp. 3. **Rear.** Rear bumper must be of pressed steel channel at least 3/16 inch thick and eight inches wide (high) and be of sufficient strength to permit being pushed by another vehicle without permanent distortion to bumper, bumper braces, chassis, or body. It must be wrapped around back corners of the bus. It must extend forward at least 12 inches, measured from rearmost point of body at the floor line. The bumper must be attached to the chassis frame so that it may be easily removed, must be braced to develop full strength of bumper section from rear or side impact, and must be attached to prevent hitching of rides. The rear bumper must extend beyond rearmost part of body surface, excluding lights, at least one inch, measured at floor line.

Subp. 4. [Repealed, 13 SR 1860]

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.4860 [Repealed, 13 SR 1860]

3520.4870 [Repealed, 13 SR 1860]

3520.4900 COLOR.

Subpart 1. [Repealed, 13 SR 1860]

Subp. 2. [Repealed, 13 SR 1860]

Subp. 3. [Repealed, 13 SR 1860]

Subp. 4. [Repealed, 13 SR 1860]

Subp. 5. [Repealed, 13 SR 1860]

Subp. 6. **Body.** The body including the hood and the cowl must be painted National School Bus Yellow.

A. Rub rails: a minimum of three must be black.

B. Rear bumper, rubber rear fenders (if used), and lettering must be black.

C. The belt line may be yellow with black lettering or may be black with yellow lettering. Yellow or black reflectorization may be used.

Subp. 7. **Options.** The following color options may be used.

A. The front fenders may be painted glossy yellow or glossy black.

B. The hood may be lusterless yellow or black.

C. The following may be other than yellow or black: wheel rims; chassis grills; mirror backs, rims, and mounting brackets; reflector housings; window frames; accessories and other minor trim items. See part 3520.4510.

D. The use of yellow or red reflective material may be used on the rear bumper for increased night visibility.

Subp. 8. [Repealed, 13 SR 1860]

Subp. 9. [Repealed, 13 SR 1860]

Subp. 10. [Repealed, 13 SR 1860]

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.4910 CONSTRUCTION.

Construction must be of prime commercial quality steel or other metal or other material with strength at least equivalent to all-steel as certified by the bus body manufacturer and must conform to Federal Motor Vehicle Safety Standard Number 220, Code of Federal Regulations, title 49, part 571.

3520.4910 STUDENT TRANSPORTATION

3134

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.4920 [Repealed, 13 SR 1860]

3520.4930 FLOOR CONSTRUCTION.

Subpart 1. **Requirements.** The floor must be of prime commercial quality steel or other metal of at least 14-gauge. The metal floor must be covered with plywood. The plywood must be five-ply, at least five-eighths inch thick and it must equal or exceed properties of exterior-type softwood plywood, grade C-D, as specified in product standard PS 1-83 issued by the United States Department of Commerce. The floor must be level from front to back and from side to side except in wheel housing, toeboard, and driver's seat platform areas.

Subp. 2. **Option.** The underside of the metal floor may be undercoated with polyurethane floor insulation, foamed in place. The polyurethane floor insulation must be combustible resistant. This option does not replace the plywood required in subpart 1.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.4940 [Repealed, 13 SR 1860]

3520.4950 [Repealed, 13 SR 1860]

3520.4960 [Repealed, 13 SR 1860]

3520.4970 [Repealed, 13 SR 1860]

3520.4980 OPENINGS.

All openings between chassis and passenger-carrying compartment made due to alterations by body manufacturer must be sealed.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.4990 [Repealed, 13 SR 1860]

3520.5000 DEFROSTERS.

Defrosters and two auxiliary fans with metal blades and adequate guards shall be of sufficient capacity to keep the windshield, window to left of driver, and glass in entrance door clear of fog, frost, and snow. This may be done by taking the heat directly from an approved heater or auxiliary heaters. Defrosters must conform to Society of Automotive Engineers Standards J-381 and 382.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.5010 DOORS.

Subpart 1. **Service door.** The service door must be power or manually operated, under control of the driver, and designed to afford easy release and prevent accidental opening.

The service door must be located on the right side of the bus opposite the driver and within the driver's direct view.

The service door must have a minimum horizontal opening of 24 inches and a minimum vertical opening of 68 inches.

The service door must be of split type, sedan type, or jackknife type. If a split type door is used the front section must open outward.

The lower as well as upper glass panels must be of approved safety glass. See part 3520.5551. The bottom of the lower glass panel must not be more than 35

inches from the ground when the bus is unloaded. The top of the upper glass panel must not be more than six inches from the top of the door.

The vertical closing edges must be equipped with flexible material to protect children's fingers.

There shall be no door to the left of the driver in the front half of the bus.

Subp. 2. Emergency door and emergency window. An emergency door must be located in the center of the rear end of the bus or in the rear half of the left side of the bus.

The emergency door must have a minimum horizontal opening of 24 inches and a minimum vertical opening of 48 inches measured from floor level.

The emergency door must be hinged on the right side if it is in the rear end of the bus and on the front side if it is on the left side of the bus. The door must open outward and must be labeled inside to indicate how it operates.

All the glass in the emergency door must be approved safety glass. The exposed area of the safety glass must be not less than 400 square inches. See part 3520.5551.

There must be no steps leading to the emergency door.

A seat or other object must not be placed in the bus to restrict any part of the passageway leading to the emergency door to an opening smaller than a rectangle 12 inches in width and 48 inches in height, measured from floor level.

The words "EMERGENCY DOOR" or "EMERGENCY EXIT" both inside and outside in letters at least two inches high, must be placed at the top of or directly above the emergency door or on the door in the metal panel above the top glass.

If the emergency door is located on the left side of the bus, it must conform to Federal Motor Vehicle Safety Standard Number 217, Code of Federal Regulations, title 49, part 571, and the window at the rear must be designed as an emergency exit and must be no smaller than 16 inches in height and 54 inches in width on buses 80 inches or more in width; it must be no smaller than 16 inches in height and 49 inches in width on buses less than 80 inches in width. The window must be hinged from the top and devised and operated to ensure against an accidental closing in an emergency.

The emergency window in the rear must be equipped with a latch or latches on the inside connected with an electrical buzzer located in the driver's compartment that will go off when the latch is being released.

The emergency window must also be equipped on the outside with a nondetachable fastening device designed to prevent hitching-to, but to permit opening from the outside.

Paneling is required to cover the space between the top of the rear divan seat and the inside surface of emergency window at rear.

The words "EMERGENCY EXIT" in letters at least two inches high must be placed directly above the emergency window on the inside and directly below the window on the outside.

The emergency door and emergency window must be designed to be opened from the inside and the outside of the bus and must be equipped with a fastening device that may be quickly released but is designed to offer protection against accidental release. The opening of the emergency door and window must not be controllable from the driver's seat. The providing for opening from the outside must consist of a nondetachable device designed to prevent hitching-to but to permit opening when necessary.

The emergency door must be equipped with a slide-bar cam-operated lock. The slide bar must have a minimum stroke of one inch. The emergency door lock must be equipped with a suitable electric plunger type switch connected with a buzzer located in the driver's compartment. The switch must be enclosed in a

metal case, and the wires leading from the switch must be concealed in the bus body. The switch must be installed so that the plunger contacts the farthest edge of the slide bar so that any movement of the slide bar immediately closes the circuit on the switch and sets off the buzzer.

The emergency door lock must be equipped with an interior handle that extends approximately to the center of the emergency door. The handle shall lift up to release the lock.

The service door and the emergency door (side or rear) may be equipped with vandal locks if the locks comply with Federal Motor Vehicle Safety Standard Number 217, Code of Federal Regulations, title 49, part 571.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.5020 [Repealed, 13 SR 1860]

3520.5100 [Repealed, 13 SR 1860]

3520.5110 [Repealed, 13 SR 1860]

3520.5111 FIRE EXTINGUISHER.

A minimum of one 2-1/2 pound dry chemical type fire extinguisher, with not less than a 10-B-C rating, is required. It must be approved by Underwriters Laboratories, Inc. or an equivalent testing laboratory.

The extinguisher must be mounted in a bracket, located in the driver's compartment and readily accessible to the driver and passengers. A pressure indicator is required and must be easily read without removing the extinguisher from its mounted position.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.5120 FIRST AID KIT.

The bus must carry a removable Grade A metal, or other material of equal strength, dustproof first aid kit, mounted in full view or in a labeled accessible place in the driver's compartment.

The first aid kit must have the following units and packages per unit:

- A. ten units for vehicles of 16 or less capacity;
- B. 24 units for buses with passenger capacity in excess of 16 and up to and including 42 passengers; or
- C. 36 units for buses of passenger capacity in excess of 42.
- D. The table of required items and packages for items A to C:

| Unit Size | Item | Required Packages | | |
|--------------|---|----------------------|------------|------------|
| | | 10 Unit | 24 Unit | 36 Unit |
| 1 | Compress Bandage, 4 inch | 2 | 6 | 8 |
| 1 | Compress Bandage, 2 inch | 1 | 3 | 7 |
| 1 | Adhesive Compress, 1 inch | 2 | 2 | 4 |
| 1 | Triangular Bandage, 40 inch with 2 safety pins | 1 | 2 | 4 |
| 1 | Gauze Bandage, 4 inch | - | 2 | 4 |
| 1 | Absorbant Gauze Compress | - | 2 | 2 |
| 1 | Gauze Compress, 24 by 72 inches | 1 | 2 | 2 |
| 1 | Padded Tongue Blades | 1 | 1 | 1 |

MINNESOTA RULES 1989

3137

STUDENT TRANSPORTATION 3520.5160

| | | | | |
|---|---|---|---|---|
| 2 | Adhesive Tape, 1 inch by 2-1/2 yards | 2 | 2 | 2 |
| 1 | Wire Splint | - | 2 | 2 |

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.5130 [Repealed, 13 SR 1860]

3520.5140 [Repealed, 13 SR 1860]

3520.5141 FLOOR COVERING.

The floor in the underseat area, including the tops of wheel housings, driver's compartment, and toeboard, must be covered with rubber floor covering or its equivalent having a minimum overall thickness of 0.125 inch.

The floor covering in the aisle must be of aisle-type rubber or its equivalent, nonskid, wear-resistant, and ribbed. Minimum overall thickness must be 0.187 inch measured from top of ribs.

The floor covering must be permanently bonded to the floor and must not crack if subjected to sudden change in temperature. Bonding or adhesive material must be waterproof and must be of a type recommended by the manufacturer of the floor covering material. All seams must be sealed with waterproof sealer.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.5150 [Repealed, 13 SR 1860]

3520.5151 HEATERS.

Heaters must be of the hot water or combustion type. If the heater is of the hot water type, the heater system must be equipped with a shutoff valve readily accessible to the driver. If only one heater is used, it must be of fresh air or combination fresh air and recirculating type. If more than one heater is used, the additional heaters may be of recirculating type. Each heater motor must be two speed.

All heaters installed by body manufacturers must bear a name plate that must indicate the heater rating in accordance with SBMI Code 001. The plate must be attached by the heater manufacturer. The attachment certifies that the heater performance is as shown on the plate.

All combustion-type heaters must be approved by the Federal Highway Administration, Motor Carrier Safety Regulations, Code of Federal Regulations, title 49, part 393.77.

If combustion-type heaters are used, they must be installed on new buses by body manufacturers and on buses now in operation by authorized dealers or by authorized garages.

Heaters must be capable of maintaining an inside temperature of 50 degrees Fahrenheit at average minimum January temperatures as established by the United States Department of Commerce, Weather Bureau, for the area in which the heater is required.

Heater lines inside the passenger compartment must be guarded to prevent accidental contact by the driver or passengers.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.5160 IDENTIFICATION.

Subpart 1. Requirements. The body must bear the words "SCHOOL BUS" in black letters at least eight inches high on both front and rear of the body or

on attached signs. The lettering must be placed as high as possible without impairment of its visibility. The lettering must conform to "Series B" of Standard Alphabets for Highway Signs.

Only signs and lettering approved by state law or rule, limited to name of owner or operator and home post office address, city, or town may appear on the sides of the bus, in accordance with Minnesota Statutes, section 221.031, subdivision 6. Any number or symbol necessary for identification may also appear on the sides of the bus.

Subp. 2. **Options.** Symbols or letters may be used on the outside of the bus for student identification. The manufacturer's name or logo may appear on the roof line. A manufacturer's nameplate may be placed on the side of the bus near the entrance door and on the rear.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.5170 [Repealed, 13 SR 1860]

3520.5171 INSIDE HEIGHT.

Inside body height must provide 72 inches of headroom, measured from the metal floor to the center line of the metal roof.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.5180 INSULATION.

Ceiling and walls must be insulated with proper material to deaden sound and to reduce vibrations to a minimum, and must be insulated to a minimum of one-inch fiberglass and installed so that the insulation does not compact or sag. Thermal insulation must be of fire-resistant material of a type approved by Underwriter's Laboratories, Inc.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.5190 INTERIOR.

Subpart 1. **Projections.** The interior of the bus must be free of all unnecessary projections likely to cause injury. Ceilings and walls must have an inner lining. If the ceiling is constructed so as to contain lapped joints, the forward panel must be lapped by the rear panel and exposed edges must be beaded, hemmed, flanged, or otherwise treated to minimize sharp edges.

Subp. 2. **Speakers.** Interior speakers except in the driver's compartment must not protrude more than one-half inch. A two-way speaker in the driver's compartment need not be flush mounted.

Subp. 3. **Flammability.** Flammability standards of interior materials covered by Federal Motor Vehicle Safety Standard Number 302, Code of Federal Regulations, title 49, part 571 must be met.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.5200 LAMPS AND SIGNALS FOR NEW BUSES ONLY.

Subpart 1. **Compliance required.** Installation of an eight-lamp alternately flashing warning signal system must comply with this part.

Subp. 2. **Installation.** All lamps on the exterior of the vehicle must conform with and be installed as required by Federal Motor Vehicle Safety Standard Number 108, Code of Federal Regulations, title 49, part 571.

Subp. 3. **Interior lamps.** Interior lamps that adequately illuminate the aisle and the step well must be provided.

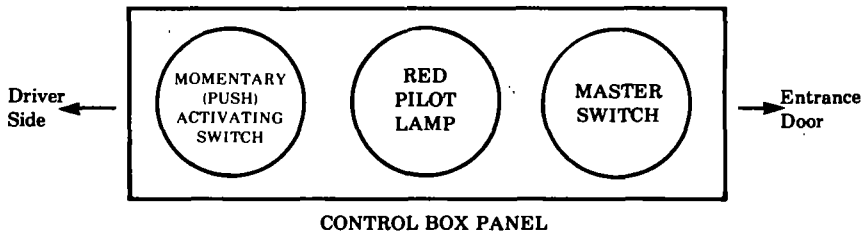
Subp. 4. Red and amber signal lamps. Each school bus must be equipped with a system consisting of four red signal lamps designed to conform to SAE Standard J887. "School Bus Red Signal Lamps," and four amber signal lamps designed to that standard, except for color, and except that their candlepower must be at least 2-1/2 times that specified for red signal lamps. Both red and amber signal lamps must be installed in accordance with SAE Standard, J887, except that each amber signal lamp must be located near each red signal lamp, at the same level, but closer to the vertical centerline of the bus.

Subp. 4a. Wiring, flashing. The system must be wired so that the amber signal lamps are activated only by hand operation, and if activated, are automatically deactivated and red signal lamps are automatically activated when the bus entrance door is opened. Right and left signal lamps must flash alternately. Each signal lamp must flash not less than 60 nor more than 120 flashes per minute. The "on" period must be long enough to permit bulb filament to come up to full brightness. A brake-operated switch is not permitted.

There must be a red pilot lamp which must go on when the respective amber or red systems are actuated. The pilot must either go out or flash at an altered rate in the event the system is not functioning normally.

Subp. 5. [Repealed, 13 SR 1860]

Subp. 6. Control box for signal lamps. The signal lamp system must include a closed control box. The box must be as small as practical, easily demounted or partially disassembled to provide simple access for maintenance purposes. The switches and red pilot lamp must be located in conformance with the following diagram.



The control box must be securely mounted to the right of the steering wheel, in the near proximity of the entrance door control, within easy unobstructed reach of the driver. Switches and pilot lamp must be readily visible to the driver. The activating switch may be self-illuminated (glow type). Other warning devices or lamp controls must not be placed near the light lamp control.

Subp. 7. System and stop arm. The signal lamp system and stop arm must operate as follows:

The stop signal arm must be of an automatic type. It must automatically extend and retract in conjunction with the alternately flashing red lights and must be activated and deactivated by the entrance door switch.

With the master switch on and the entrance door closed, depress hand switch. The red pilot lamp and amber signals will go on.

Open the entrance door. The pilot lamp and amber signal lamps will go off, and the pilot lamp and red signal lamps will go on. The stop arm will automatically extend.

Close the entrance door. The red pilot and signal lamps will go off and the stop arm will automatically retract.

Open the entrance door without depressing the hand switch. The red pilot lamp and red signal lamps will go on. The stop arm will automatically extend.

With the master switch off, depressing the hand switch will not actuate the

amber signal system, nor will opening the entrance door actuate the red signal system and stop arm.

Subp. 8. Installation requirements. Each alternately flashing signal lamp must be mounted with its axis substantially parallel to the longitudinal axis of the vehicle.

Front and rear alternately flashing signal lamps must be spaced as far apart laterally as practicable.

Alternately flashing signal lamps must be mounted at the front on the same horizontal center line and above the windshield, and at the rear on the same horizontal center line so that the lower edge of the lens is not lower than the top line of the side window.

The vertical and lateral vision of the front and rear alternately flashing warning lamps must not be obstructed by any part of the body or lamphouse insofar as standard bus body construction permits.

The area around the lens of each alternately flashing signal lamp and extending outward approximately three inches must be painted black. In installations where there is no flat vertical portion of body immediately surrounding entire lens of lamp, circular or square band of black approximately three inches wide, immediately below and to both sides of lens, must be painted on body or roof area against which signal lamp is seen from a distance of 500 feet along axis of vehicle.

A separate fuse or circuit breaker, adequate to prevent damage to the system in the event of a dead short, must be provided between the power source and the master switch.

All wiring must be a minimum of 14-gauge.

Subp. 9. Options. School buses may be equipped with the following safety equipment devices.

A. A driver-activated student control warning system to assist students in crossing roadways. The system must contain one high-intensity flashing red signal, an audible warning signal, and one high-intensity steady amber proceed-with-caution signal lamp. Red and amber signal lamps must be at least four inches in diameter and no larger than 4-1/2 inches in diameter.

The control system unit must be installed in a vertical position, with the red signal on the top and the amber signal on the bottom.

(1) One control system unit must be mounted on the left side of the bus next to the driver and one unit must be mounted on the right side just ahead of the entrance door. The units must be wired to be activated and deactivated in conjunction with the eight-lamp and stop arm, and to be controlled by the entrance door switch.

(2) Amber walk lamps of the units must be on a separate on/off switch controlled by the driver, but deactivated when the entrance door is closed.

B. The use of a crossing guard gate mounted on the front bumper to put students in view of the bus driver.

C. The use of an external public address system to assist students in crossing roadways.

D. The use of a roof mounted white double flash strobe light described in Minnesota Statutes, section 169.64, subdivision 7.

E. The use of electronic sensing devices.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.5210 [Repealed, 13 SR 1860]

3520.5220 TURN SIGNAL LAMPS AND STOP LAMPS.

Subpart 1. **Turn signal lamps.** The school bus must have turn signal indicators of an automatic type. The bus body must be equipped with amber or red rear turn signal lamps that are at least seven inches in diameter and meet specifications of the Society of Automotive Engineers (SAE J588). The turn signal lamps must be connected to the chassis hazard warning switch to cause simultaneous flashing of turn signal lamps when needed as a vehicular traffic hazard warning. The turn signal lamps must be placed as wide apart as practical and their center line must be approximately eight inches below the rear windows.

Subp. 2. **Stop lamps.** The school bus must be equipped with red stop lamps. If round, the stop lamps must be seven inches in diameter. If the stop lamps are a shape other than round, they must have a minimum 38 square inches of illuminated area. The stop lamps must be mounted on the rear of the bus just inside the turn signals, at the same height.

The brake lights must be wired to combine stop and tail lights.

Subp. 3. **Federal Motor Vehicle Safety Standard Number 108.** All lamps on the exterior of the vehicle must conform with and be installed as required by Federal Motor Vehicle Safety Standard Number 108, Code of Federal Regulations, title 49, part 571.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.5230 WARNING DEVICES.

Subpart 1. **Required.** The school bus must contain at least three reflectorized triangle road warning devices mounted in an accessible place in the driver's compartment. The mounting location is optional.

Subp. 2. **Prohibited equipment.** The school bus must not be equipped with liquid burning "pot type" flares or fuses.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.5300 METAL TREATMENT.

Subpart 1. **General requirements.** All ferrous metal less than 12-gauge that is used in the construction of the bus body must be zinc or aluminum coated, mill applied if it is used in structural members, inside and outside panels, floor panels, and floor sills. The metal need not be zinc or aluminum coated, mill applied if it is used in door handles, grab handles, stanchions, interior decorative parts, and other interior plated parts.

Subp. 1a. **Painted parts.** In addition to the requirement in subpart 1, all metal parts to be painted must be chemically cleaned, etched, zinc-phosphate-coated, and zinc-chromate or epoxy-primed or conditioned by an equivalent process.

Subp. 1b. **Particular attention.** In complying with subparts 1 and 2, particular attention must be given to lapped surfaces, welded connections of structural members, cut edges, punches or drilled hole areas in sheet metal, closed or box sections, unvented or undrained areas, and surfaces subjected to abrasion during vehicle operation.

Subp. 2. [Repealed, 13 SR 1860]

Subp. 3. **Test standard.** As evidence that the requirements of subparts 1, 1a, and 1b have been met, samples of materials and sections used in the construction of the bus body, when subjected to a 1000-hour salt spray test as provided for in the latest revision of ASTM designation; B-117 "Standard Method of Salt Spray (Fog) Testing" must not lose more than ten percent of material by weight.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.5310 MIRRORS.

Subpart 1. **Required equipment.** The interior clear view mirror must be at least 6 by 30 inches overall to afford good view of pupils and roadway to rear. If not metal-backed and framed, the mirror must be of laminated plate safety glass. It must have rounded corners and protected edges.

Two exterior clear-view, rearview mirrors must be provided, one to the left and one to the right of the driver. The area of each mirror must be not less than 70 square inches overall. Each mirror must be firmly supported and adjustable to give the driver a clear view past the left rear and right rear of the bus.

Subp. 2. **Optional equipment.** Small convex mirrors may be used in conjunction with the equipment required under subpart 1.

Subp. 3. **Required convex mirrors.** Four exterior convex mirrors at least 7-1/2 inches in diameter must be located as follows: two on the left and two on the right side of the bus in such a manner that the seated driver may observe, through their use, areas to front or side of bus where direct observation, as prescribed in Federal Motor Vehicle Safety Standard Number 17, Code of Federal Regulations, title 49, part 571, is not possible. The mirrors must comply with Federal Motor Vehicle Safety Standard Number 111, Code of Federal Regulations, title 49, part 571.

Transit-type buses must have at least three mirrors, two crossover mirrors, one in each corner, and one rearview mirror on the right side.

Subp. 4. **Optional equipment.** Elliptical or hemispherical mirrors may be substituted for the equipment required in subpart 3 on a one-for-one basis if indirect visibility requirements are met.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.5320 [Repealed, 13 SR 1860]

3520.5330 OVERALL LENGTH.

The overall length of a school bus must not exceed 40 feet.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.5340 OVERALL WIDTH.

The overall width of a school bus, excluding mirror brackets and stop arm, must not exceed 96 inches.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.5350 [Repealed, 13 SR 1860]

3520.5360 [Repealed, 13 SR 1860]

3520.5361 RUB RAILS.

There must be one rub rail located on each side of the bus approximately at seat level. The rub rail must extend from the rear side of the entrance door completely around the bus body (except for the emergency door) to the point of curvature near the outside cowl on the left side.

There must be one rub rail located approximately at the floor line which must cover the same longitudinal area as the upper rub rail, except at the wheel housings, and must extend only to the radii of the right and left rear corners.

For buses using a rear luggage or rear engine compartment, the rub rails need not extend around rear corners.

There must be a rub rail at the base of the skirt of the bus.

MINNESOTA RULES 1989

3143

STUDENT TRANSPORTATION 3520.5401

All rub rails must be attached at each body post and all other upright structural members.

All rub rails must be four inches or more in width, must be of 16-gauge steel, and must be constructed in corrugated or ribbed fashion.

All rub rails must be applied outside the body or outside the body posts.

Pressed-in or snap-on rails do not satisfy this requirement.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.5370 SANDERS.

Sanders are not required equipment, but if used, sanders must:

- A. be of hopper cartridge-valve type;
- B. have a metal hopper with all interior surfaces treated to prevent condensation of moisture;
- C. be of at least 100-pound (grit) capacity;
- D. have a cover on the filler opening of the hopper that screws into place sealing the unit airtight;
- E. have discharge tubes extending to the front of each rear wheel under the fender;
- F. have no-clogging discharge tubes with slush-proof, nonfreezing rubber nozzles;
- G. be operated by an electric switch with a telltale light mounted on the instrument panel;
- H. be exclusively driver controlled; and
- I. have a gauge to indicate the hoppers need refilling when they are down to one-quarter full.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.5380 SEAT BELT FOR DRIVER.

A seat belt for the driver must be provided. The belt and mounting must comply with Federal Motor Vehicle Safety Standard Numbers 207 to 210, Code of Federal Regulations, title 49, part 571. Each belt section must be booted so as to keep the buckle and latch off the floor and within easy reach of the driver. The belt must be anchored or guided at the seat frame so as to prevent the driver from sliding sideways under the belt.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.5400 [Repealed, 13 SR 1860]

3520.5401 SEATS AND CRASH BARRIERS.

The school bus seats must be based on 13-inch rump room for each passenger. All seats must face forward, except that variations may be made to accommodate handicapped students. Seats, seat back cushions, and crash barriers must be covered with a material having 42-ounce finished weight, 54 inches width, and finished vinyl coating of 1.06 broken twill, or other material with equal tensile strength, tear strength, seam strength, adhesion strength, resistance to abrasion, resistance to cold, and flex separation. All seats and crash barriers must conform to Federal Motor Vehicle Safety Standard Number 222, Code of Federal Regulations, title 49, part 571.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.5450 STUDENT TRANSPORTATION

3144

3520.5410 [Repealed, 13 SR 1860]

3520.5420 [Repealed, 13 SR 1860]

3520.5430 [Repealed, 13 SR 1860]

3520.5440 [Repealed, 13 SR 1860]

3520.5450 STEPS.

Subpart 1. **General requirements.** The first step at the service door must be not less than 12 inches and not more than 18 inches from the ground, based on standard chassis specifications.

The service door entrance may be equipped with two-step or three-step step-well. Risers in each case must be approximately equal. When plywood floor is used on steel, differential may be increased by thickness of plywood used.

Steps must be enclosed to prevent accumulation of ice and snow.

Steps must not protrude beyond side body line.

Grab handle not less than ten inches in length must be provided in unobstructed location inside doorway.

Subp. 2. [Repealed, 13 SR 1860]

Subp. 3. **Step treads.** All steps, including the floor line platform area, must be covered with 3/16-inch rubber floor covering or other material equal in wear resistance and abrasion resistance to top grade rubber.

The metal back of the tread must be a minimum of 24-gauge cold roll steel and must be permanently bonded to ribbed rubber. The grooves in the grooved design must run at a 90-degree angle to long dimension of the step tread.

The 3/16-inch ribbed step tread must have a 1-1/2 inch white nosing as an integral piece without any joint.

The rubber portion for the step treads must have the following characteristics:

A. special compounding for good abrasion resistance and a high coefficient of friction;

B. flexibility to be bent around a 1/2-inch mandrel both at 130 degrees Fahrenheit and 20 degrees Fahrenheit without breaking, cracking, or crazing; and

C. show a durometer hardness of 85 to 95.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.5460 [Repealed, 13 SR 1860]

3520.5461 STIRRUP STEPS.

There must be at least one folding stirrup step or recessed foothold and suitably located handles on each side of the front of the body for easy accessibility for cleaning the windshield and lamps except when the windshield and lamps are easily accessible from the ground. Steps are permitted in or on the front bumper, in place of the stirrup steps, if the windshield and lamps are easily accessible for cleaning from that position.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.5470 [Repealed, 13 SR 1860]

3520.5471 STOP SIGNAL ARM.

Subpart 1. **The stop signal arm.** The stop signal arm must be installed on the left side of the bus and must be octagonal in shape. It must meet the applicable requirements of the Society of Automotive Engineers J1133. The stop signal arm must be of an automatic type. See part 3520.5200.

It shall display a stop signal on both sides, the word "STOP" in white or silver-white letters at least one-third the height of the signal, and have a red background.

The stop arm must be equipped with two alternately flashing double faced (front and rear) red warning signals and must be activated and deactivated by the entrance door switch. The sign need not be reflectorized.

Subp. 2. The stop signal. The stop signal must be of the shape, size, legend, and colors specified by the "Manual on Uniform Traffic Control Devices for Streets and Highways," Federal Highway Administration.

The stop signal may be 18 or 24 inches in height.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.5480 [Repealed, 13 SR 1860]

3520.5481 STORAGE COMPARTMENT.

Subpart 1. Location, cover. If tools, tire chains, or tow chains are carried on the bus, a container of adequate strength and capacity must be provided for them. The storage container may be located inside or outside the passenger compartment. If inside, it must have a cover capable of being securely latched and must be fastened to the floor convenient to either the service or emergency door. A seat cushion must not be used as the cover.

Subp. 2. Option. In place of the container required in subpart 1, an overhead storage compartment may be placed in the front of the cab for storage of emergency equipment and labeled as the location of this equipment. It must be properly secured.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.5490 SUNSHIELD.

An interior, adjustable transparent sunshield not less than 6 by 30 inches in size with a finished edge must be installed in a position convenient for use by the driver.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.5500 TAILPIPE.

Subpart 1. Tailpipe. The tailpipe must extend to the body perimeter and must extend no more than one-half inch beyond the rear bumper. See part 3520.4550.

Subp. 2. Trailer hitch. The trailer hitch, if used, must be of a flush mounted type and must not extend beyond the rear bumper when not in use.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.5510 UNDERCOATING.

Subpart 1. Required. The entire underside of the bus body, including floor sections, cross members, and below floor line side panels, must be coated with a rust-proofing compound for which the compound manufacturer has issued notarized certification of compliance to the bus body builder that the compound meets or exceeds all performance requirements of Federal Specification TT-C-520a using modified test procedures for the following requirements:

A. salt spray resistance - pass test modified to five percent salt and 1,000 hours;

3520.5510 STUDENT TRANSPORTATION

3146

B. abrasion resistance - pass; and

C. fire resistance - pass.

Subp. 2. **Modified test procedures.** Test panels are to be prepared in accordance with Federal Specification TT-C-520a paragraph 4 6.12 with a modified procedure requiring that tests be made on a 48-hour air cured film at thickness recommended by the compound manufacturer.

The undercoating compound must be applied with suitable airless or conventional spray equipment to recommended film thickness and must show no evidence of voids in cured film.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.5520 VENTILATION.

Subpart 1. **General requirement.** The body must be equipped with a suitable, controlled ventilating system of sufficient capacity to maintain proper quantity of air under operating conditions without opening of windows except in extremely warm weather.

If static-type exhaust roof ventilators are desired, they must be installed in a low-pressure area of the roof panel.

Subp. 2. **Option.** In addition to the ventilation equipment required in subpart 1, the body may be equipped with multi-position roof ventilators of sufficient number and capacity to maintain proper quantity of air under normal operating conditions without opening of windows except in extremely warm weather.

Subp. 3. **Exhaust vent.** Roof ventilators may include a leak resistance static-type exhaust vent as an integral part of the design.

Subp. 4. **Rear roof ventilator.** The rear roof ventilator must not be installed beyond the rear axle.

Roof ventilators may also include auxiliary release handles to permit operation as emergency exits in compliance with Federal Motor Vehicle Safety Standard Number 217, Code of Federal Regulations, title 49, part 571.

Exit release handles, if used, must be equipped with an electric plunger-type switch connected with a buzzer located in the driver's compartment to indicate when the exit is opened.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.5530 [Repealed, 13 SR 1860]

3520.5531 WHEEL HOUSING.

Wheel house openings must allow for easy tire removal and service.

Wheel housings must be attached to floor sheets so as to prevent any dust, water, or fumes from entering the body.

The wheel housing must be constructed of 16-gauge steel or other material of equal strength.

The inside height of the wheel housings above floor line must not exceed 12 inches.

Wheel housings must provide clearance for dual installation and use of tire chains on dual drive wheels.

No part of a raised wheel housing may extend into the emergency door opening.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

MINNESOTA RULES 1989

3147

STUDENT TRANSPORTATION 3520.5580

3520.5540 [Repealed, 13 SR 1860]

3520.5550 [Repealed, 13 SR 1860]

3520.5551 WINDSHIELD AND WINDOWS.

Subpart 1. **Glazing.** Laminated or tempered glass is permitted in all side windows. Windshield, entrance, and rear emergency exit doors must be of approved safety glass and be federally approved and marked as provided in Minnesota Statutes, section 169.74.

Subp. 2. **Tint.** The windshield may be of uniform tint throughout or may have a horizontal gradient band starting slightly above the line of the driver's vision and gradually decreasing in light transmission to 20 percent or less at the top of the windshield.

Subp. 3. **Side and rear windows.** The first two sections of the side windows, rear door, and rear windows must be of clear glass. The use of approved tinted glass is permitted on other side windows.

Each full side window must provide an unobstructed emergency opening at least nine inches high and 22 inches wide, obtained by lowering of the window.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.5560 WINDSHIELD WASHERS.

A windshield washer system must be provided.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.5570 WINDSHIELD WIPERS.

A windshield wiping system, two-speed or more, must be provided.

The wipers must be operated by one or more air or electric motors of sufficient power to operate wipers. If one motor is used, the wipers must work in tandem to give full sweep of the windshield.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.5580 WIRING.

Subpart 1. **Standard.** All wiring must conform to the current standards of the Society of Automotive Engineers.

Subp. 2. **Circuits.** Wiring must be arranged in at least eight regular circuits, as follows: head, tail, stop (brake), and instrument panel lamps; clearance lamps; dome and step-well lamps; starter motor; ignition and emergency door signal; turn signal lamps; alternately flashing red signal lamps; and horn.

Any of the circuits may be subdivided into additional independent circuits.

If heaters and defrosters are used, at least one additional circuit must be installed.

If installed, all other electrical functions must be provided with independent and properly protected circuits.

Each body circuit must be coded by number or letter on a diagram of circuits. The diagrams must be furnished with the bus body.

Subp. 2a. **Additional requirements.** If wires pass through metal openings, they must be protected by a grommet.

Wires not enclosed within the body must be fastened securely at intervals of not more than 18 inches. All joints must be soldered or joined by equally effective connectors.

The entire electrical system of the body must be designed for the same voltage as the chassis on which the body is mounted.

All wiring must have an amperage capacity equal to or exceeding the designed load. All wiring splices are to be done at an accessible location and noted as splices on the wiring diagram.

The body power wire must be attached to the special terminal on the chassis.

Subp. 3. [Repealed, 13 SR 1860]

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.5600 TYPE II SCHOOL BUSES.

The standards in part 3520.5611 apply to Type II school buses.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.5610 [Repealed, 13 SR 1860]

3520.5611 EQUIPMENT.

Subpart 1. **Standards.** All related equipment provided on Type II school buses must comply with Type I school bus equipment standards except as specified in this part.

Subp. 2. **Age of bus.** Type II buses have no maximum age limit and may continue to transport school children as long as the bus passes inspection.

Subp. 3. **Alternator.** The alternator must be a minimum of 60 amperes (12 volts). When the bus is equipped with a power lift, at least an 80-ampere alternator is required.

Subp. 4. **Battery.** The battery must provide a minimum of 475 cold cranking amperes (CCA).

Subp. 5. **Bumpers.** Bumpers must meet manufacturer's standards.

Subp. 6. **Color.** The color must comply with Type I school bus equipment standards except that only two rub rails must be painted black.

Subp. 7. **Defrosters.** Defrosters of sufficient capacity to clear the windshield, window to the left of the driver, and glass in the entrance door of condensation, ice, and snow must be provided. Defrosters must conform to Society of Automotive Engineers Standards J-381 and 382. Auxiliary fans with metal blades and adequate guards may be used.

Subp. 8. **Door.** The entrance door must be under the control of the driver, and designed to afford easy release and prevent accidental opening. The door opening must provide a minimum opening area of 1,200 square inches.

Subp. 9. **Emergency door.** The emergency door must comply with Type I school bus equipment standards except that the emergency door may be a double door.

Subp. 10. **Exhaust system.** The exhaust system must meet the manufacturer's standard and is not required to extend out the rear. It must have an exit point behind the rear wheels. The exhaust system on a gas-powered chassis must be properly insulated from fuel tank connections by a securely attached metal shield at any point where it is 12 inches or less from tank or tank connections.

Subp. 11. **First aid kit.** The bus must carry a removable Grade A metal, or other material of equal strength, dust-proof first aid kit, mounted in full view or in a labeled accessible place in the driver's compartment. Required units and required packages per unit first aid kit is to include: ten units for Type II vehicles of 16 or less capacity; and 24 units for Type II buses with passenger capacity in excess of 16.

Subp. 12. **Floor.** The floor must be of prime commercial quality steel or other metal and must be covered with a minimum one-half inch thick exterior type plywood.

Subp. 13. **Fuel tanks.** Tank size and location may be manufacturer's standard and must conform with Federal Motor Vehicle Safety Standard Number 301, Code of Federal Regulations, title 49, part 571.

Subp. 14. **Glazing.** Laminated or tempered glass is permitted in all side windows except that windshield, entrance, and rear emergency exit doors must be of approved safety glass and be federally approved and marked.

The use of approved tinted glass is permitted.

Subp. 15. **Headroom.** The bus must provide at least a minimum 62-inch headroom, measured from metal floor to center line of metal roof.

Subp. 16. **Heater.** The heater must comply with Type I school bus minimum standards except that the opening for supplying hot water must be suitable for attaching a pipe thread/hose connector. The heater shut-off valve does not have to be located in the driver's compartment.

Subp. 17. **Lamps and signals.** An eight-lamp alternately flashing warning signal system must be installed and operate in conformance with Type I buses.

All lamps on the exterior of the vehicle must conform with and be installed as required by Federal Motor Vehicle Safety Standard Number 108, Code of Federal Regulations, title 49, part 571.

Subp. 18. **Metal treatment.** Type II school buses do not have to comply with Type I school bus equipment standards for metal treatment.

Subp. 19. **Mirrors.** The mirrors must comply with Type I school bus equipment standards except that the interior clear view mirror must only be at least six inches by 16 inches overall.

The area of each exterior clear view mirror must be not less than 50 square inches overall.

Subp. 20. **Rub rails.** There must be one rub rail located on each side of the bus approximately at seat level which must extend from the rear side of the entrance door to the rear corner of the bus body.

There must be one rub rail located approximately at the floor line which must cover the same longitudinal area as the upper rub rail, except at the wheel housings, and must extend to the right and left rear corners.

All rub rails must be attached in conformance with federal standards.

All rub rails must be four inches or more in width, must be of 16-gauge steel, and must be constructed in corrugated or ribbed fashion.

Pressed-in or snap-on rails do not satisfy this requirement.

Additional rub rails may be used.

Subp. 21. **Seat belt; driver.** The bus must have a seat belt and shoulder harness for the driver that comply with Federal Motor Vehicle Safety Standard Numbers 208, 209, and 210, Code of Federal Regulations, title 49, part 571.

Subp. 22. **Seats and barriers.** School bus seating provided must be based on 13-inch rump room for each passenger. All seats must face forward, except variations may be made to accommodate handicapped students. Seats and seat back cushions must be covered with a material having 42-ounce finished weight, 54 inches width, and finished vinyl coating of 1.06 broken twill, or other material with equal tensile strength, tear strength, seam strength, adhesion strength, resistance to abrasion, resistance to cold, and flex separation. All seats and seat belts must conform to Federal Motor Vehicle Safety Standard Number 222, Code of Federal Regulations, title 49, part 571.

A school bus of 10,000 pounds gross vehicle weight or less must be equipped with a barrier or padded stanchion on the right side forward of the foremost seat.

Subp. 23. **Shock absorbers.** Type II school buses must be equipped with front and rear shock absorbers that comply with manufacturer's standard.

Subp. 24. **Steps.** The step or steps must comply with Type I school bus

equipment standards except that Type II school buses with cab doors do not have to have the step or steps enclosed. The first step at the service door must not be less than ten inches and not more than 18 inches from the ground.

Subp. 25. Sunshield. Type II school buses do not have to comply with Type I school bus equipment standards for sunshields. A standard manufacturer's sunshield must be provided for the driver.

Subp. 26. Undercoating. Type II buses, except for the heat shield area, must be undercoated.

Subp. 27. Ventilation. If any ventilation is provided, it must comply with Type I school bus equipment standards.

Subp. 28. Wheel housing. The wheel housing must meet the manufacturer's standard.

Subp. 29. Wheels. Type II school buses may be equipped with either single or dual rear wheels.

Subp. 30. Windows. The windows must comply with Type I school bus equipment standards except that all windows may have approved tinted glass.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.5700 TYPE III SCHOOL BUSES.

The standards in part 3520.5710 apply to Type III school buses.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.5710 EQUIPMENT.

Subpart 1. Standards. All related equipment provided on the vehicle must comply with federal motor vehicle safety standards where applicable. If no federal standard applies, equipment must be manufacturer's standard.

Subp. 1a. Age of vehicle. Vehicles ten years or older must not be used as Type III vehicles to transport school children, except those vehicles that are manufactured to meet the structural requirements of Federal Motor Vehicle Safety Standard 222, Code of Federal Regulations, title 49, part 571, for Type II school buses.

Subp. 2. Color. Vehicles must be painted a color other than National School Bus Yellow or Minnesota Golden Orange.

Subp. 2a. Fire extinguisher. A minimum of one 2-1/2 pound dry chemical type fire extinguisher, with not less than a 10-B-C rating, is required. It must be approved by Underwriters Laboratories, Inc. or an equivalent testing laboratory.

The extinguisher must be mounted in a bracket, and must be located in the driver's compartment and be readily accessible to the driver and passengers. A pressure indicator is required and must be easily read without removing the extinguisher from its mounted position.

Subp. 2b. First aid kit. A minimum of a ten unit first aid kit is required. The bus must have a removable, moisture- and dust-proof first aid kit mounted in an accessible place within the driver's compartment and must be marked to indicate its location.

Subp. 3. Identification. The vehicle must not have the words "School Bus" in any location on the exterior of the vehicle, or in any interior location visible to a motorist.

The vehicle must display to the rear of the vehicle this sign: "VEHICLE STOPS AT RR CROSSINGS."

The lettering (except for "AT," which may be one inch smaller) must be a minimum two-inch "Series D" as specified in Standard Alphabets for Highway

Signs as specified by the Federal Highway Administration. The printing must be in a color giving a marked contrast with that of the part of the vehicle on which it is placed.

The sign must have provisions for being covered, or be of a removable or fold down type.

Subp. 4. Lamps and signals. Installation and use of the eight-lamp warning system is prohibited.

All lamps on the exterior of the vehicle must conform with and be installed as required by Federal Motor Vehicle Safety Standard 108, Code of Federal Regulations, title 49, part 571.

Subp. 5. Stop signal arm. Installation and use of a stop signal arm is prohibited.

Subp. 6. Mirrors. The interior clear rearview mirror must afford a good view of pupils and roadway to the rear.

Two exterior clear rearview mirrors must be provided, one to the left and one to the right of the driver.

Each mirror must be firmly supported and adjustable to give the driver clear view past the left rear and the right rear of the bus.

Subp. 7. Warning device. A Type III bus must contain at least three red reflectorized triangle road warning devices. Fuses may also be used. Liquid burning "pot type" flares are not allowed.

Subp. 8. Emergency doors. The doors on Type III buses must remain unlocked when carrying passengers.

Subp. 9. Option. Passenger cars and station wagons may carry fire extinguisher, first aid kit, and warning triangles in the trunk or trunk area of the vehicle, if a label in the driver and front passenger area clearly indicates the location of these items.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.5800 [Repealed, 13 SR 1860]

3520.5900 CONSTRUCTION OF VEHICLES FOR CHILDREN WITH MOBILITY PROBLEMS.

Subpart 1. Standards. The standards in this part apply to vehicles constructed to transport children with mobility problems so severe as to prohibit them from using the regular service door entrance. Vehicles constructed for transporting these children must meet all federal and Minnesota school bus construction standards.

Subp. 2. Alteration of vehicle. The interior of the vehicle may be altered if all seats and barriers, component parts, anchorages, wheelchair securement devices, and placement of seats and barriers and wheelchair securement devices comply with federal standards as of the date of manufacture. All equipment must be supplied by the original component equipment manufacturer or authorized dealer, be installed according to the original equipment manufacturer's specification, and must meet state specifications. Alterations that remove all wheelchair securement devices that return the vehicle to conventional passenger seating must also make the power lift and special service door inoperable.

Subp. 3. Power lift or ramp. A school bus purchased specifically or partially for the transportation of these children must be equipped with a power lift or ramp located on the right side of the bus body.

Subp. 4. Seating capacity. A statement of the actual seating capacity, excluding wheelchairs, following the modification of a vehicle, must be placed above the windshield on the interior of the body.

Subp. 5. **Special service opening.** An enclosed service opening must be located on the right side of the body. The door opening must be not less than 38 inches wide and 52 inches high.

Subp. 6. **Reinforcement.** Door posts, headers, and all floor sections around the special opening must be reinforced to provide strength and support equal to adjacent side wall and floor construction of an unaltered model.

Subp. 7. **Drip mold.** A drip mold must be installed above the opening so as to effectively channel the water away from the entrance.

Subp. 8. **Header pad.** A header pad, at least three inches wide, extending the width of the special service door, must be placed above the opening on the inside of the bus or on the lift if it has a top cross bar.

Subp. 9. **Special service door enclosure.** The lift may be enclosed by either one or two doors. All doors must open outwardly.

Subp. 10. **Two-panel door.** If the door is made of two panels, the standards in this subpart apply.

A. The forward panel must be provided with an overlapping flange to close the space where the door panels meet, and a weather seal must be provided around the doors or opening to eliminate water leakage or heat loss.

B. Each door must have a safety glass window, set in rubber and aligned with the lower line of the adjacent sash. The window must be, as nearly as practical, of the same size as other bus windows.

C. Each door panel must open outwardly and a positive fastening device must be installed to hold the doors in an open position.

Subp. 11. **One-piece construction door.** If the door is made of one-piece construction, the standards in this subpart apply.

A. The door must open outwardly and a positive fastening device must be installed to securely hold the door in an open position.

B. The door must be equipped with a slide-bar, cam-operated type locking device.

C. Weather stripping must be installed around the entire door or opening to eliminate water leakage or heat loss.

D. The door must have a safety glass window, set in rubber and aligned with the lower line of the adjacent sash. The window must be, as nearly as practical, of the same size as other bus windows.

Subp. 12. **Door equipment.** The door must be equipped with a device that actuates a flashing visible signal, located in the driver's compartment, when the door is not securely closed, and the emergency brake is not on. An audible signal must not be used.

Subp. 13. **Door construction.** All doors must be constructed to meet the standards in law, in strength and materials for other school bus doors.

Subp. 14. **Power lift.** The power lift must be of at least a 750 pound capacity rating and capable of lifting the wheelchair, occupant, and attendant.

Subp. 15. **Power lift controls.** All power lift controls must be portable and conveniently located on the inside of the bus lift door. A master cut-off switch must be located in the driver's compartment.

Subp. 16. **Power lift platform.** The power lift platform must be covered with skid-resistant material or be so designed so as to prevent slipping. The lift platform must be constructed to permit vision through that portion of the platform covering the window of the special service door when the platform is in the "up" position. The power lift must be designed so that the lift does not operate unless the special service door is opened.

Subp. 17. **Ramp.** A self-adjusting ramp made of steel or equivalent material, if needed, must be attached to the lift platform or to the bus and be of sufficient

length to minimize the incline. The ramp must be equipped with skid-resistant surface. The ramp must be in a secured position while the bus is in motion. The ramp must be of sufficient width on the surface to accommodate a standard wheelchair.

Subp. 18. Barriers. A padded crash barrier meeting federal manufacturing requirements for school bus seats and crash barriers must be properly installed between the special service door and passenger seats to the rear of the door.

In vehicles of 10,000 pounds gross vehicle weight rating and less, padded stanchions may be used.

Subp. 19. Elevator-type lift. In the event that an elevator-type lift is used with the body floor section serving as lift platform, both the forward and rear sides of the platform must be protected with crash barriers extending from the wall of the body toward the aisle. A covered chain must be fastened to the rear barrier adjacent to the lift platform, and must extend across the platform opening and attach with hook and eye to the forward barrier adjacent to the lift platform.

Subp. 20. Wheelchair securement devices. Wheelchair securement devices must be as provided by Minnesota Statutes, section 299A.11.

Subp. 21. Special student restraining devices. Special restraining devices such as shoulder harnesses, lap belts, and chest restraint systems may be installed to the seats if the devices do not require the alteration in any form of the seat, seat cushion, framework, or related seat components. The restraints must be for the sole purpose of restraining handicapped students.

Subp. 22. Seats. All seats and related components shall comply with applicable federal standards on date of manufacture. Seat frames may be equipped by the school bus body manufacturer with rings or other devices to which passenger restraint systems may be attached if seat anchorages can handle the increased load demands that may occur.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.5910 MOTOR COACH USED FOR SCHOOL ACTIVITIES.

Subpart 1. Definitions. A motor coach owned by a school district or an area vocational technical institute is a bus that has been designed or used for intercity transit or charter service. The motor coach must have a capacity of 20 or more persons.

A motor coach used for school activities must comply with this part and must have been acquired before March 26, 1986.

A school activity is any activity involving students under the sponsorship of a school district.

Subp. 2. Standards. Equipment standards for motor coaches must conform to the Federal Motor Carrier Safety Regulations, Code of Federal Regulations, title 49.

Relevant standards are in chapter III, subpart D, sections 393.61, 393.62, and 393.63; subpart E, section 393.67; subpart G, sections 393.78, 393.79, 393.80, 393.81, 393.82, 393.83, 393.84, 393.89, 393.90, 393.91, 393.92, and 393.93; and subpart H, section 393.95.

Subp. 3. Identification. Motor coaches must not be outwardly equipped and identified as a school bus and must be identified as provided in Minnesota Statutes, section 168.012.

Subp. 4. Inspection. Motor coaches must be inspected annually by the Minnesota State Patrol using vehicle standards for motor carriers in Minnesota Statutes, section 221.031, subdivision 1.

Subp. 5. Certification. Upon passing an annual inspection, a motor coach will be issued a motor carrier safety sticker.

MINNESOTA RULES 1989

3520.5910 STUDENT TRANSPORTATION

3154

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*

3520.5920 OPERATION OF MOTOR COACHES USED FOR SCHOOL ACTIVITIES.

Subpart 1. **Comply with this part.** A driver of a motor coach used for school activities must have the qualifications referred to in subpart 2 and follow the rules referred to in subpart 3.

Subp. 2. **Driver qualifications.** The driver of a motor coach operating within Minnesota must have a minimum Class B driver license with a school bus endorsement.

Subp. 3. **Driving rules.** The driver must comply with the rules for driving of motor coaches in chapter III, part 392 of the Federal Motor Carrier Safety Regulations, Code of Federal Regulations, title 49.

Subp. 4. **Operation.** A motor coach must not be used for activities that are eligible for state transportation aid.

A motor coach must not be leased to another entity.

Statutory Authority: *MS s 169.45*

History: *13 SR 1860*