CHAPTER 7425
DEPARTMENT OF PUBLIC SAFETY
STATE PATROL DIVISION
LIGHTING, GLAZING, AND TOWING STANDARDS

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7425.0100 [Repealed, 9 SR 1252]

7425.0110 DEFINITIONS.

Subpart 1. **Scope.** The terms used in this chapter have the meanings given them in this part except in those instances when the context clearly indicates a different meaning.

Subp. 2. **After–market equipment.** "After–market equipment" means equipment other than "original equipment" as defined in subpart 31.

Subp. 3. **ANSI.** "ANSI" means American National Standards Institute.

Subp. 4. **Auxiliary driving lamp.** "Auxiliary driving lamp" means a lighting device that is mounted to provide illumination forward of the vehicle and that supplements the upper beam of a standard headlamp system. It is not intended for use alone or with the lower beam of a standard headlamp system.

Subp. 5. **Auxiliary lamps.** "Auxiliary lamps" means lighting devices on a motor vehicle used to supplement the other road lighting devices. They include those lamps sold commercially as driving lamps, passing lamps, fog lamps, auxiliary low–beam lamps, and motorcycle auxiliary front lamps.

Subp. 6. **Auxiliary low–beam lamp.** "Auxiliary low–beam lamp" means a type of lamp that supplements the lower beam of a standard headlamp system. It is not intended for use alone or with the upper beam of a standard headlamp system.

Subp. 7. **Auxiliary passing lamp.** "Auxiliary passing lamp" means an auxiliary low–beam lamp.

Subp. 8. **Backup lamp.** "Backup lamp" means a lamp used to furnish general illumination to the rear of a vehicle when it is in rearward motion and to provide a warning signal to pedestrians and other drivers when the vehicle is backing up or is about to back up.

Subp. 9. **Bicycle lighting devices.** "Bicycle lighting devices" includes:

A. a headlamp which is an electric lamp used to provide general illumination ahead of a nonmotorized bicycle and also to serve as a warning light to approaching motorists;

B. a rear red reflector which indicates the presence of the bicycle to an approaching driver by reflecting the light from the headlamps of a vehicle approaching from the rear; and

C. side reflectors, reflectorized pedals, and reflectorized tires which are devices designed to conform with the reflectorization requirements of applicable regulations issued by the Consumer Product Safety Commission.

Subp. 10. **Bulb.** "Bulb" means an indivisible assembly containing a source of light and normally used in a lamp.

Subp. 11. **Clearance lamp.** "Clearance lamp" means a lamp used on the upper left and right sides of the vehicle or load, and which shows to the front or rear to indicate the overall width of the vehicle or load.

Subp. 12. **Combination clearance and side marker lamp.** "Combination clearance and side marker lamp" means a single lamp which, when properly positioned and oriented, fulfills the requirements of both a clearance lamp and a side marker lamp.

Subp. 13. **Combination device.** "Combination device" includes:

A. a combination lamp so constructed and connected that from one position on a vehicle it serves two or more of the lighting functions described in this part; and

B. combination switches and flashers so constructed and connected as to serve two or more of the functions of a turn–signal switch or flasher or hazard–warning switch or flasher.

Subp. 14. **Commissioner.** "Commissioner" means the commissioner of public safety of the state of Minnesota.

Subp. 15. **Disabled vehicle warning device.** "Disabled vehicle warning device" means a device that is placed on the roadway to warn the driver of an approaching vehicle of a stationary vehicle hazard. "Disabled vehicle warning device" includes:

A. an emergency reflective triangle which is an equilateral triangle, each side of which displays both a daytime and nighttime warning area;

B. a portable red reflector device which is a holder with two reflex reflectors on each side, one above the other;

C. a flare which is a liquid burning device consisting of a vessel with a wick;

D. a fusee which consists of a solid fuel enclosed in a waterproof combustible tube and only used as a temporary or auxiliary signal flare; and

E. an electric emergency lantern which is a device capable of displaying a red light, either flashing or steady–burning.

Subp. 16. **Driving lamp.** "Driving lamp" means an auxiliary driving lamp.

Subp. 17. **Flashing warning lamp.** "Flashing warning lamp" means a lamp: used for authorized emergency, maintenance, and service vehicles; which may be directionally aimed; and, in which the light sources are turned on and off, interrupting the circuit and producing a repetitive flash of light.

Subp. 18. **Fog lamp.** "Fog lamp" means a lighting device mounted to provide illumination forward of the vehicle under conditions of rain, snow, dust, or fog. A fog lamp is an adverse weather lamp.

Subp. 19. **Front cornering lamp.** "Front cornering lamp" means a steady–burning lamp used in conjunction with the turn–signal system to supplement the headlamps by providing additional illumination in the direction of turn.

Subp. 20. **Hazard–warning signal flasher.** "Hazard–warning signal flasher" means a device which, as long as it is turned on, causes all the required signal lamps to flash that are listed in the description for hazard–warning signal switch.

Subp. 21. **Hazard–warning signal switch.** "Hazard–warning signal switch" means a driver–controlled device which causes at least one turn–signal lamp on the left and right to the front and on the left and right to the rear of the vehicle to flash simultaneously to indicate to the approaching driver the presence of a vehicular traffic hazard.

Subp. 22. **Headlamp assembly and optical unit.** "Headlamp assembly and optical unit" includes:

A. a sealed–beam headlamp housing assembly which is a major lighting assembly used to provide mounting and aiming adjustment for one or more sealed–beam units or replaceable bulb headlamps that provide general illumination ahead of the vehicle; and either

B. a sealed–beam headlamp unit which is a mechanically aimable, integral, indivisible, hermetically sealed optical assembly;

C. a mechanically aimable headlamp unit in which an O ring is used to seal an indexed replaceable bulb to the assembly; or

D. a mechanically aimable, hermetically sealed lens and reflector assembly with indexed replaceable bulb.

Subp. 23. **Headlamp beam–switching device.** "Headlamp beam–switching device" includes:

A. a driver–controlled headlamp beam–switching device used to select the upper or lower beam headlamp circuit; and

B. a semiautomatic headlamp beam–switching device providing either automatic or manual control of beam switching at the option of the driver. When the control is automatic, the headlamps switch from the upper beam to the lower beam when illuminated by the headlamps of an approaching car and switch back to the upper beam when the road ahead is dark. When the control is manual, the driver may obtain either beam manually regardless of the condition of lights ahead of the vehicle.

Subp. 24. **Identification lamps.** "Identification lamps" means lamps that are used in groups of three in a horizontal row, that show to the front or rear or both, and that are mounted as near as practicable to the vertical centerline and the top of the vehicle to identify certain types of vehicles.

Subp. 25. **License plate lamp.** "License plate lamp" means a lamp used to illuminate the license plate on the rear of a vehicle.

Subp. 26. **Lighting device.** "Lighting device" means any device mounted on or in conjunction with a vehicle to furnish or regulate illumination or to mark or identify a vehicle or to serve as a signal or warning either by self–illumination or by reflected light. Interior lighting devices, such as dome, dash, and map lights intended only for interior illumination, placed inside the vehicle, and not intended to serve as a signal or to be seen by persons outside the vehicle, are not considered lighting devices within the scope of this chapter.

Subp. 27. **Motorcycle auxiliary front lamp.** "Motorcycle auxiliary front lamp" means a unit, including sealed beam, intended to supplement either the upper or the lower beam from a motorcycle headlamp system.

Subp. 28. **Motorcycle headlamp.** "Motorcycle headlamp" means a major lighting device used to provide general illumination ahead of the motorcycle.

Subp. 29. **Motorcycle turn–signal lamp.** "Motorcycle turn–signal lamp" means the signaling element of a motorcycle turn–signal system which indicates a change in direction by giving a flashing light on the side toward which the turn will be made.

Subp. 30. **Optical unit.** "Optical unit" means an integral and indivisible assembly consisting of a lens, reflector, and light source.

Subp. 31. **Original equipment.** "Original equipment" means an item of motor vehicle equipment which was installed in or on a motor vehicle at the time of its delivery to the first purchaser if:

A. the item of equipment was installed on or in the motor vehicle at the time of its delivery to a dealer or distributor; or

B. the item of equipment was installed by the dealer or distributor with the express authorization of the motor vehicle manufacturer.

Subp. 32. **Parking lamps.** "Parking lamps," whether separate or in combination with other lamps, means lamps on both the left and right of the front of the vehicle which shine to the front and are intended to mark the vehicle when parked. In addition, these front lamps may serve as a reserve front position–indicating system in the event of headlamp failure. For rear parking lamps, see tail lamps.

Subp. 33. **Passing lamp.** "Passing lamp" means an auxiliary passing lamp.

Subp. 34. **Rear cornering lamp.** "Rear cornering lamp" means a lamp aimed and so connected as to illuminate an area to the side and rear of the vehicle only when the vehicle is moving backward or about to move backward.

Subp. 35. **Reflex reflector.** "Reflex reflector" means a lighting device used on vehicles to indicate a vehicle's presence to an approaching driver by reflecting the light from the headlamps of the approaching vehicle. This device may use a system of cube corners or, as a side marker only, a system of lens–mirror reflexes.

Subp. 36. **SAE.** "SAE" means Society of Automotive Engineers, Inc.

Subp. 37. **SAE standard or recommended practice.** "SAE standard or recommended practice" means a vehicle equipment standard or recommended practice contained in a SAE Standards Handbook published by the Society of Automotive Engineers, Inc.

Subp. 38. **Safety glass.** "Safety glass" means glazing materials so constructed, treated, or combined with other materials as to reduce, in comparison with ordinary sheet, float, or plate glass, the likelihood of injury to persons by objects from exterior sources or by the glazing materials when cracked or broken. The term also includes rigid and flexible safety glazing plastics.

Subp. 39. **School bus warning–signal devices.** "School bus warning–signal devices" includes:

A. flashing red signal lamps which are alternately flashing lamps mounted horizontally both front and rear and intended to identify a vehicle as a school bus and to inform other users of the highway that the school bus is stopped on the highway to take on or discharge school children;

B. flashing amber signal lamps which are alternately flashing lamps mounted horizontally both front and rear and intended to identify a vehicle as a school bus and to prewarn by informing other users of the highway that the school bus is about to stop to take on or discharge school children;

C. a white strobe lamp which is a 360–degree double–flash lamp mounted on top of a school bus and used only when atmospheric conditions or terrain restrict visibility of the flashing warning–signal lamps; and

D. a stop arm which is an auxiliary device used to signal that a school bus has stopped to load or discharge passengers. It supplements the flashing red signal lamps. It may have alternately flashing, red lamps and it may be reflectorized.

Subp. 40. **Side marker lamps.** "Side marker lamps" means lamps that show to the side of the vehicle and are mounted on the permanent structure of the vehicle as near as practicable to the front and rear edges to indicate the overall length of the vehicle. Additional lamps may also be mounted at intermediate locations on the sides of the vehicle.

Subp. 41. **Side turn–signal lamps.** "Side turn–signal lamps" means lighting devices mounted on the side at or near the front of a vehicle and used as part of the turn–signal system to indicate a change in direction by giving a supplementary flashing, warning signal on the side toward which the vehicle operator intends to turn or maneuver.

Subp. 42. **Spot lamp.** "Spot lamp" means a lamp that provides a substantially parallel beam of light and which can be aimed at will. These lamps are not intended as substitutes for headlamps or as auxiliary lamps for road lighting, but are intended for use in emergencies and under conditions when a concentrated, controllable light beam is advantageous.

Subp. 43. **Stop lamp.** "Stop lamp" means a lamp giving a steady light to the rear of a vehicle or train of vehicles to indicate the intention of the operator of a vehicle to stop or diminish speed by braking.

Subp. 44. **Supplemental high–mounted stop and rear turn–signal lamps.** "Supplemental high–mounted stop and rear turn–signal lamps" means additional rear–facing lamps mounted high and possibly forward of the required tail, stop, and rear turn–signal lamps. They are intended to project a signal through intervening vehicles to operators of following vehicles.

Subp. 45. **Tail lamp or rear–position lamp.** "Tail lamp" or "rear–position lamp" means a lamp used to designate the rear of a vehicle by a steady–burning, low intensity light. Tail lamps are also used as rear parking lamps.

Subp. 46. **360–degree emergency warning–signal lamps.** "360–degree emergency warning–signal lamps" means devices that project light through a 360–degree arc in a regularly repeating pattern of flashes and that are designed for use on authorized emergency, maintenance, and service vehicles. The 360–degree emergency warning–signal lamps are used to signal other drivers to stop, to yield right–of–way, or to indicate the existence of a hazardous situation.

Subp. 47. **Towing device.** "Towing device" includes:

A. a coupling which is that part of the trailer–connecting mechanism by which the connection is actually made but which does not include any structural member, extension of the trailer frame, or brake actuator;

B. a hitch which is that part of a connecting mechanism including the ball support platform and ball and those components that extend and are attached to the towing vehicle;

C. a fifth wheel which is a load–carrying mechanical or structural towing device, including a kingpin and load–bearing plate–type device, that, when in use, serves as a primary connecting system for a semitrailer;

D. a saddle mount which is a device designed and constructed to be readily demountable and used in drive–away, tow–away operations to perform the functions of a conventional fifth wheel;

E. a tow bar which is a beam–type device fastened between the towing vehicle and the towed vehicle and used to transmit longitudinal loads between the vehicles; and

F. a safety chain which is a flexible tension member including chain, cable, or wire rope, and the attaching means, connected from the front of the trailer or trailer tongue to the rear of the towing vehicle for the purpose of retaining connection between the towing vehicle and the towed vehicle in the event the trailer coupling or ball should fail.

Subp. 48. **Turn–signal lamp.** "Turn–signal lamp" means the signaling element of a turn–signal system which indicates a change in direction by a flashing light indicating the side toward which the turn will be made. Turn–signal lamps may be flashed simultaneously as a vehicular traffic hazard–warning signal.

Subp. 49. **Turn–signal flasher.** "Turn–signal flasher" means a device that causes all the required signal lamps to flash when it is turned on.

Subp. 50. **Turn–signal switch.** "Turn–signal switch" means that part of a turn–signal system by which the vehicle operator causes the signal lamps to function.

Subp. 51. **Turn–signal system.** A "turn–signal system" consists of a turn–signal switch, a flasher unit, two or more turn–signal lamps, and one or two indicator lights.

Subp. 52. **VESC.** "VESC" means Vehicle Equipment Safety Commission.

Subp. 53. **Warning lamp alternating flasher.** "Warning lamp alternating flasher" means a device that alternately flashes warning–signal lamps used on authorized emergency vehicles or school buses.

Statutory Authority: *MS s 169.468; 169.65*

History: *9 SR 1252*

7425.0150 PURPOSE.

The purpose of this chapter is to prescribe requirements for motor vehicle lighting devices, safety glazing materials, and towing devices, which are not federally regulated and that are used on vehicles in Minnesota.

Statutory Authority: *MS s 169.468; 169.65*

History: *9 SR 1252*

7425.0160 SCOPE.

The scope of this chapter is intended to be consistent with Minnesota Statutes, sections 169.222, 169.223, 169.44, 169.467 to 169.469, 169.48 to 169.52, 169.53 to 169.66, 169.71, subdivision 4, 169.74, and 169.75.

Statutory Authority: *MS s 169.468; 169.65*

History: *9 SR 1252*

7425.0200 [Repealed, 9 SR 1252]

7425.0300 [Repealed, 9 SR 1252]

7425.0400 [Repealed, 9 SR 1252]

OBTAINING APPROVAL

7425.0500 FEDERALLY REGULATED EQUIPMENT; INCORPORATION BY REFERENCE.

A lighting device, safety glazing material, or towing device certified by the manufacturer to meet applicable federal motor vehicle safety standards in Code of Federal Regulations, title 49, sections 571.108, 571.125, and 571.205 adopted under the National Traffic and Mo-

tor Vehicle Safety Act of 1966, United States Code, title 15, sections 1381 to 1431, is approved by the commissioner of public safety and hereby incorporated by reference.

Statutory Authority: *MS s 169.468; 169.65*

History: *9 SR 1252*

7425.0600 NONFEDERALLY REGULATED EQUIPMENT.

Before the device is offered for sale, every manufacturer who sells or offers for sale a lighting device or other safety equipment, component, or assembly not subject to and not certified in compliance with an applicable federal motor vehicle safety standard incorporated by reference in this chapter and of a type for which approval is required, must have laboratory test data showing compliance with the standards or recommended practices prescribed by this chapter. Tests may be conducted by the manufacturer.

Statutory Authority: *MS s 169.468; 169.65*

History: *9 SR 1252*

7425.0700 TEST REPORTS.

The commissioner at any time may request from the manufacturer a copy of the test or other supporting data on a lighting device, glazing material, or towing device showing proof of compliance with this chapter and additional evidence that due care was established in maintaining compliance during production. If the manufacturer fails to provide proof of compliance within 30 days following the request, the commissioner shall prohibit the sale of the device in Minnesota until acceptable proof of compliance is received.

Statutory Authority: *MS s 169.468; 169.65*

History: *9 SR 1252*

7425.0800 COMPLIANCE.

The commissioner shall require manufacturers of nonfederally regulated equipment to submit proof of compliance with this chapter signed by a responsible official of the manufacturer, or the manufacturer, under Minnesota Statutes, section 169.468, subdivision 2, may submit an unexpired certificate of approval or notice of compliance from the American Association of Motor Vehicle Administrators provided the certificate or notice shows proof of compliance with the rules, standards, and recommended practices adopted in this chapter.

Statutory Authority: *MS s 169.468; 169.65*

History: *9 SR 1252*

7425.0900 EXPIRATION OF APPROVAL OF MOTOR VEHICLE EQUIPMENT.

Approval for the sale of nonfederally regulated equipment expires after five years unless the manufacturer requests reapproval, in which case the manufacturer shall submit proof of current compliance in accordance with part 7425.0800 that the item as then being manufactured conforms to this chapter.

Statutory Authority: *MS s 169.468; 169.65*

History: *9 SR 1252*

7425.1000 TESTING.

The commissioner may purchase equipment sold for use on vehicles and test or retest the equipment for conformance with applicable requirements.

Statutory Authority: *MS s 169.468; 169.65*

History: *9 SR 1252*

7425.1100 FEE WAIVED.

The fee authorized to be set and collected by the commissioner under Minnesota Statutes, section 169.468, subdivision 2, for costs connected with tests and approval of equipment submitted without certification or notification by the American Association of Motor Vehicle Administrators is hereby waived.

Statutory Authority: *MS s 169.468; 169.65*

History: *9 SR 1252*

VEHICLE LIGHTING EQUIPMENT SPECIFICATIONS

7425.2000 GENERAL REQUIREMENTS.

Subpart 1. **Compliance.** Vehicle lighting equipment must conform to the general requirements listed in subparts 2 to 5.

Subp. 2. **Relation to statutes.** Lighting devices and components listed in part 7425.2100 must comply with the standard, recommended practice, or regulation stipulated for each device. A SAE standard or recommended practice is incorporated by reference to the extent that the standard or recommended practice is consistent with Minnesota statutory requirements delineated in parts 7425.0150 and 7425.0160.

Subp. 3. **Original and replacement equipment.** Original lighting equipment for a vehicle and after–market equipment made or sold for replacement of original lighting equipment must comply with the rules, federal regulations, standards, or recommended practices incorporated by reference in this chapter or the standards, recommended practices, or requirements in effect when the vehicle was manufactured.

Subp. 4. **Nonreplacement equipment.** After–market lighting equipment not made or sold for replacement of original equipment must comply with this chapter or the standards, recommended practices, or requirements in effect at the time, or up to one year prior to the time, that the equipment was manufactured.

Subp. 5. **Terms.** The words "it is recommended that," "recommendations," "should," or similar terms appearing in the SAE standards and recommended practices incorporated by reference in part 7425.2100 set forth a requirement except as otherwise expressly provided in this chapter. Items referred to as "a matter of information" or "attention is called to" in the SAE standards and recommended practices are not mandatory except as otherwise expressly provided in this chapter.

Statutory Authority: *MS s 169.468; 169.65*

History: *9 SR 1252*

7425.2100 INCORPORATIONS BY REFERENCE OF STANDARDS FOR LIGHTING DEVICES.

Subpart 1. **Incorporations by reference.** Each of the following standards, recommended practices, and regulations are incorporated by reference for the lighting device indicated:

A. auxiliary driving lamp: SAE standard J581a, "Auxiliary Driving Lamps – SAE J581a," revised 1980, 1983 SAE Handbook, published by Society of Automotive Engineers, Inc. (Warrendale, PA, 1983);

B. auxiliary low–beam lamp: SAE standard J582 SEP81, "Auxiliary Low Beam Lamp – SAE J582 SEP81," 1983 SAE Handbook, published by Society of Automotive Engineers, Inc. (Warrendale, PA, 1983);

C. auxiliary passing lamp: SAE standard J582, "Electric Supplementary Passing Lamp – SAE J582," SAE Handbook 1973, published by Society of Automotive Engineers, Inc. (New York, NY, 1973);

D. backup lamp: Code of Federal Regulations, title 49, section 571.108;

E. bicycle rear red reflector: SAE standard J594f, "Reflex Reflectors – SAE J594f," revised January 1977, 1983 SAE Handbook, published by Society of Automotive Engineers, Inc. (Warrendale, PA, 1983);

F. bicycle side reflector: Code of Federal Regulations, title 16, part 1512 (1983);

G. bicycle reflectorized pedal: Code of Federal Regulations, title 16, part 1512 (1983);

H. bicycle reflectorized tire: Code of Federal Regulations, title 16, part 1512 (1983);

I. clearance lamp: Code of Federal Regulations, title 49, section 571.108;

J. driving lamp: SAE standard J581a, "Auxiliary Driving Lamps – SAE J581a," 1983 SAE Handbook, published by Society of Automotive Engineers, Inc. (Warrendale, PA, 1983);

K. electric emergency lantern: SAE standard J596, "Electric Emergency Lanterns – SAE J596," SAE Handbook 1978, published by Society of Automotive Engineers, Inc. (Warrendale, PA, 1978);

L. emergency reflective triangle: Code of Federal Regulations, title 49, section 571.125;

M. flare: SAE standard J597, "Liquid Burning Emergency Flares – SAE J597," SAE Handbook 1978, published by Society of Automotive Engineers, Inc. (Warrendale, PA, 1978);

N. flashing warning lamp: SAE standard J595b, "Flashing Warning Lamps for Authorized Emergency, Maintenance and Service Vehicles – SAE J595b," revised July 1964, 1983 SAE Handbook, published by Society of Automotive Engineers, Inc. (Warrendale, PA, 1983);

O. fog lamp: SAE standard J583 MAY81, "Front Fog Lamps – SAE J583 MAY81," 1983 SAE Handbook, published by Society of Automotive Engineers, Inc. (Warrendale, PA, 1983);

P. front cornering lamp: SAE recommended practice J852b, "Cornering Lamps – SAE J852b," revised February 1965, 1983 SAE Handbook, published by Society of Automotive Engineers, Inc. (Warrendale, PA, 1983);

Q. fusee: Code of Federal Regulations, title 49, section 393.95 (1983);

R. hazard warning signal flasher: Code of Federal Regulations, title 49, section 571.108;

S. hazard warning signal switch: Code of Federal Regulations, title 49, section 571.108;

T. headlamp assembly and optical unit: Code of Federal Regulations, title 49, section 571.108;

U. headlamp beam switching device: Code of Federal Regulations, title 49, section 571.108;

V. identification lamps: Code of Federal Regulations, title 49, section 571.108;

W. license plate lamp: Code of Federal Regulations, title 49, section 571.108;

X. motorcycle auxiliary front lamp: SAE recommended practice J1306 JUN80, "Motorcycle Auxiliary Front Lamps – SAE J1306 JUN80," 1983 SAE Handbook, published by Society of Automotive Engineers, Inc. (Warrendale, PA, 1983);

Y. motorcycle headlamp: Code of Federal Regulations, title 49, section 571.108;

Z. motorcycle turn–signal lamp: Code of Federal Regulations, title 49, section 571.108;

AA. parking lamp: Code of Federal Regulations, title 49, section 571.108;

BB. portable red reflector: SAE recommended practice J774c, "Emergency Warning Device – SAE J774c," revised January 1971, 1983 SAE Handbook, published by Society of Automotive Engineers, Inc. (Warrendale, PA, 1983);

CC. rear cornering lamp: SAE recommended practice J1373 JUN82, "Rear Cornering Lamp – SAE J1373 JUN82," 1983 SAE Handbook, published by Society of Automotive Engineers, Inc. (Warrendale, PA, 1983);

DD. rear turn–signal lamp: SAE recommended practice J186a, "Supplemental High Mounted Stop and Rear Turn Signal Lamps – SAE J186a," revised September 1977, 1983 SAE Handbook, published by Society of Automotive Engineers, Inc. (Warrendale, PA, 1983);

EE. reflex reflector: Code of Federal Regulations, title 49, section 571.108;

FF. safety glass: Code of Federal Regulations, title 49, section 571.205;

GG. school bus prewarning flashing amber signal lamp: Code of Federal Regulations, title 49, section 571.108;

HH. school bus stop–warning flashing red signal lamp: Code of Federal Regulations, title 49, section 571.108;

II. school bus stop arm: SAE recommended practice J1133a, "School Bus Stop Arm – SAE J1133a," revised November 1977, 1983 SAE Handbook, published by Society of Automotive Engineers, Inc. (Warrendale, PA, 1983);

JJ. school bus white strobe lamp: Minnesota Statutes, section 169.64, subdivision 7;

KK. side marker lamp: Code of Federal Regulations, title 49, section 571.108;

LL. side turn–signal lamp: SAE recommended practice J914b, "Side Turn Signal Lamps – SAE J914b," revised July 1978, 1983 SAE Handbook, published by Society of Automotive Engineers, Inc. (Warrendale, PA, 1983);

MM. spot lamp: SAE standard J591b, "Spot Lamps – SAE J591b," revised December 1972, 1983 SAE Handbook, published by Society of Automotive Engineers, Inc. (Warrendale, PA, 1983);

NN. stop lamp: Code of Federal Regulations, title 49, section 571.108;

OO. supplemental high–mounted stop lamp: Code of Federal Regulations, title 49, section 571.108;

PP. tail or rear–position lamp: Code of Federal Regulations, title 49, section 571.108;

QQ. 360–degree emergency warning signal lamp: SAE recommended practice J845, "360 Deg Emergency Warning Lamp – SAE J845," reaffirmed without change May 1972, 1983 SAE Handbook, published by Society of Automotive Engineers, Inc. (Warrendale, PA, 1983);

RR. turn–signal flasher: Code of Federal Regulations, title 49, section 571.108;

SS. turn–signal lamp: Code of Federal Regulations, title 49, section 571.108;

TT. turn–signal switch: Code of Federal Regulations, title 49, section 571.108;

UU. turn–signal system: Code of Federal Regulations, title 49, section 571.108;

VV. warning lamp alternating flasher: SAE recommended practice J1054, "Warning Lamp Alternating Flashers – SAE J1054," revised January 1977, 1983 SAE Handbook, published by Society of Automotive Engineers, Inc. (Warrendale, PA, 1983).

Subp. 2. **Availability of SAE standards.** The SAE standards and recommended practices incorporated by reference in subpart 1 are available for inspection and copying at the Hill Reference Library, 80 W. Fourth Street, Saint Paul, Minnesota 55102.

Subp. 3. **Frequency of changes to SAE standards.** The SAE standards and recommended practices incorporated by reference in subpart 1 are not subject to frequent changes.

Statutory Authority: *MS s 169.468; 169.65*

History: *9 SR 1252*

7425.2200 MODEL DESIGNATION.

Each lighting device must be marked with a model designation which differentiates one model from another unless the only differences are:

A. right– and left–hand mounting;

B. housing finish;

C. housing material;

D. mounting methods;

E. lens color;

F. lens material;

G. number of bulbs;

H. type of bulbs;

I. number of wiring connections; and

J. functions.

Statutory Authority: *MS s 169.468; 169.65*

History: *9 SR 1252*

7425.2300 IDENTIFICATION AND MARKING REQUIREMENTS.

Subpart 1. **In general.** Lighting devices must be marked and identified to conform with the requirements in subparts 2 to 9.

Subp. 2. **Federally regulated lighting devices.** Lighting devices required by federal regulations to conform to Code of Federal Regulations, title 49, section 571.108 must be

marked according to these federal requirements. Federally regulated equipment may also be marked according to subparts 3 to 5, except as may be prohibited by Code of Federal Regulations, title 49, section 571.108.

Subp. 3. **Nonfederally regulated lighting equipment; incorporation by reference.** Nonfederally regulated lighting equipment must be marked according to SAE recommended practice J759 MAR82, "Lighting Identification Code–J759 MAR82," 1983 SAE Handbook, published by Society of Automotive Engineers, Inc. (Warrendale, PA, 1983), specifying permanent markings to identify device manufacturer, model, year, and functions. This recommended practice is hereby incorporated by reference. The SAE recommended practice J759 MAR82 is available for copying and inspection at the Hill Reference Library, 80 W. Fourth Street, Saint Paul, Minnesota 55102. It is not subject to frequent change.

Subp. 4. **Removable bulb.** Each removable bulb must be marked so as to identify the bulb manufacturer and also with the model designation or trade number. The design voltage and either the wattage or ampere rating may be shown instead of model designation or trade number. Bulb markings must be indelible and readable without magnification. In cases of private branding, a means of tracing the actual manufacturer must be provided by the owner of the private brand.

Subp. 5. **Optical unit and assembly.** In addition to the manufacturer's name, initials, or lettered trademark, each optical unit and assembly not covered by a lens or filter when in use must have marked on the lens the function code of the SAE standard or recommended practice to which the lamp complies.

Subp. 6. **Location.** Lamp and reflex reflector markings sufficient to identify the device as approved, must be located so as to be visible without the removal of any part of the vehicle on which it is installed. Flasher units, built–in signal switches, built–in headlamp housing assemblies, and headlamp beam–switching devices must have the identification marking on the exterior or on the wiring harness, but the markings are not required to be visible on the equipment as installed. Sealed–beam headlamp optical units may have model markings located so as to not be visible as installed on a vehicle, but the manufacturer's name, initials, or lettered trademark, and the lamp designation markings, must be visible on the lens.

Subp. 7. **Orientation markings.** For orientation markings, each lamp model and separable component and each reflex reflector that may be rotated or installed in an orientation that does not comply with the applicable standards incorporated by reference in this chapter, must be marked so that the installer and a person inspecting the installed device may readily identify when the equipment is not properly oriented.

Subp. 8. **Other markings.** Markings that are not required and not prohibited by Code of Federal Regulations, title 49, section 571.108, may also be applied but must not detract from or change the meaning of the required markings.

Subp. 9. **Permanent markings.** Markings that are required must be applied so as to be legible for the life of the device.

Statutory Authority: *MS s 169.468; 169.65*

History: *9 SR 1252*

7425.2400 CONSTRUCTION OF NONFEDERALLY REGULATED DEVICES.

Subpart 1. **In general.** Nonfederally regulated devices must be constructed to meet the requirements in subparts 2 to 8.

Subp. 2. **Convenient adjustments.** Lamps must be so constructed that bulb or lens replacements and aiming adjustments may conveniently be made by one person with ordinary hand tools.

Subp. 3. **Free from hazard.** Lighting devices must be so constructed as to present no unreasonable personal hazard to a qualified person servicing the unit.

Subp. 4. **Aim.** Lamp mountings must be so arranged that the aim of the lamp will not be disturbed under ordinary conditions of service. The range of aiming adjustment for any lamp requiring aim must be plus or minus four degrees in both the vertical and horizontal planes except as otherwise specified by the applicable SAE standard or recommended practice incorporated by reference in this chapter.

Subp. 5. **Replacement.** Lamps must be so constructed that an optical unit or bulb can be replaced without disturbing the aim of the lamp.

Subp. 6. **Attachment and removal.** The means of fastening split or solid rims or trim rings must be readily accessible and means must be provided for easy removal of lens–retaining rings when snap or lock rings are used.

Subp. 7. **Gaskets.** Gaskets must be constructed of a durable material which will retain shape and resiliency.

Subp. 8. **Electrical wiring.** The electrical wiring must be securely connected and protected from abrasion.

Statutory Authority: *MS s 169.468; 169.65*

History: *9 SR 1252*

7425.2500 SPECIFICATIONS FOR INDIVIDUAL LIGHTING DEVICES.

Subpart 1. **In general.** In addition to complying with standards incorporated by reference in this chapter, the requirements for individual devices are listed in subparts 2 to 11.

Subp. 2. **Bicycle headlamp.** Bicycle headlamp intensity above horizontal must not be greater than 250 candela. The lamp housing must be constructed so that a bulb and battery can be readily replaced. The headlamp must project a distinct beam of white light of uniform pattern.

Subp. 3. **Combination lamp.** In combination lamps, the requirements for each individual function must be met independently of any other function.

Subp. 4. **Electric emergency lantern.** Electric emergency lanterns, when placed on any clean, dry, paved road surface, must not tip or slide in a 40 mile–per–hour wind. To test these devices, three sample lanterns regularly marketed and sold must be chilled at a temperature of minus 20 degrees Fahrenheit for 12 hours, after which they must be placed in operation for 12 hours. Failure of two of the three samples to operate or to meet the intensity requirements of SAE standard J596 for electric emergency lanterns, incorporated by reference in part 7425.2100, subpart 1, item L, during the test is an automatic rejection.

Subp. 5. **Fusee.** Fusees must conform to the requirements in Code of Federal Regulations, title 49, section 393.95(j) (1983) for fusees. The color emitted must be red.

Subp. 6. **Alternate replacement bulb.** Each bulb designed or marketed as an alternate replacement must comply with the SAE standards or recommended practices incorporated by reference in this chapter applicable for that type of bulb to permit a lighting device in which it is an alternate replacement to continue to conform to this chapter.

Subp. 7. **Replacement lens.** Replacement lenses, when installed in the housings for which they are designed, must meet the mechanical test requirements for dust, moisture, vibration, and warpage specified in the standards or recommended practices incorporated in this chapter and applicable to the lamp. If gaskets, sealant, or other parts are supplied with the lens, the requirements must be met using the materials supplied.

The photometric and color requirements of this chapter that were in effect at the time the latest lamp was last manufactured must be met for each function performed. Instructions listing the original lamps or the year and model of the vehicles on which the replacement lenses are designed to be installed must be included with the lens, the retail packaging for the lens, or in a catalog readily available where the lens is sold or offered for sale.

Subp. 8. **School bus warning–lamp system.** Requirements for operating school bus warning–lamp systems are specified in parts 3520.5200 to 3520.5230 and 3520.5580.

Subp. 9. **Spot lamp.** Spot lamps must be mechanically or electrically aimed and operated from the inside of the vehicle. This requirement does not apply to those lamps designed for use as utility lights and mounted on public utilities vehicles and on authorized emergency, maintenance, and service vehicles.

Subp. 10. **Alternately flashing warning lamp.** Alternately flashing warning lamps may be used only on authorized emergency vehicles and school buses.

Subp. 11. **Installation of flashing warning lamp.** The installation recommendations in SAE standard J595b for flashing warning lamps, incorporated by reference at part 7425.2100, subpart 1, item O, on authorized emergency vehicles are not mandatory for law

enforcement vehicles when determined not practicable by the affected law enforcement agency.

Statutory Authority: *MS s 169.468; 169.65*

History: *9 SR 1252*

7425.2600 NONSTANDARD LIGHTING DEVICES.

Subpart 1. **In general.** The following device descriptions and requirements in subparts 2 to 7 are for lighting devices permitted or required by Minnesota Statutes for use and for which there are no published SAE standards or federal standards in effect. Approval is not required.

Subp. 2. **Courtesy lamp.** A courtesy lamp, providing a low intensity white to yellow light used to aid visibility when a person is entering or exiting a vehicle, must not exceed 15 candlepower in any direction outboard of the vehicle and must not be visible outboard unless the door is opened.

Subp. 3. **Emergency vehicle flashing white lamp.** An emergency vehicle flashing white lamp, that may be used by an authorized emergency vehicle to display a flashing white light in addition to a flashing red light, does not include flashing headlamps during times when the headlamps are required for visibility. The flash rate, duration, and intensity must follow the SAE standard J595b incorporated by reference at part 7425.2100, subpart 1, item N, or SAE recommended practice J845 incorporated by reference at part 7425.2100, subpart 1, item QQ, as applicable to emergency vehicle warning lamps, except that when used as a traffic signal priority device it must flash as authorized by the commissioner. The white light must be at least four times the intensity required for a red warning light in SAE standard J595b or SAE recommended practice J845, as applicable to the lamp type.

Subp. 4. **Fender lamp or side cowl lamp.** A fender lamp or side cowl lamp providing a low intensity white light, must not exceed one candlepower intensity in any direction.

Subp. 5. **School bus white strobe lamp.** A school bus white strobe lamp must be certified to the commissioner by the manufacturer, as provided in Minnesota Statutes, section 169.64, subdivision 7.

Subp. 6. **Volunteer firefighter lamp.** A volunteer firefighter lamp, providing a single steady–burning red light mounted facing forward on the front of a vehicle, must follow the performance requirements for stop lamps, incorporated by reference in part 7425.2100, subpart 1, item NN, or in effect at the time of manufacture. This type of lamp does not include a reflex reflector.

Subp. 7. **Volunteer ambulance driver lamp.** A volunteer ambulance driver lamp is the same type lamp as a volunteer firefighter lamp and must comply with the requirements in subpart 6.

Statutory Authority: *MS s 169.468; 169.65*

History: *9 SR 1252; 17 SR 1279*

SAFETY GLAZING MATERIAL; TOWING DEVICES

7425.5000 SPECIFICATIONS FOR SAFETY GLAZING MATERIAL; INCORPORATION BY REFERENCE.

Safety glass and plastic must comply with the specifications in Code of Federal Regulations, title 49, section 571.205 which is incorporated by reference, and with Minnesota Statutes, section 169.71, subdivision 4, as applicable to type of material, location on the vehicle, performance, and markings. Material that complies with the applicable standard incorporated by reference in this part is approved by the commissioner.

Statutory Authority: *MS s 169.468; 169.71*

History: *9 SR 1252*

7425.6000 SPECIFICATIONS FOR TRAILER AND SEMITRAILER TOWING DEVICES; INCORPORATIONS BY REFERENCE.

Subpart 1. **Federally regulated towing devices.** Federally regulated towing devices must comply with the requirements in Code of Federal Regulations, title 49, section 393.70

or 393.71 (1983) which are both incorporated by reference, as applicable according to the towing method.

Subp. 2. **Nonfederally regulated towing devices.** Nonfederally regulated towing devices must comply with the performance, identification, and installation requirements of the regulations in item A, B, or C which are all incorporated by reference, as applicable according to the vehicle type and weight and the towing method.

A. Hitches and couplings for trailers and semitrailers with a gross vehicle weight rating of 10,000 pounds or less must comply with the requirements in VESC regulation V–5, "Minimum Requirements for Motor Vehicle Connecting Devices and Towing Methods," revised July 1977, Vehicle Equipment Safety Commission (Washington, D.C., 1977), which is hereby incorporated by reference. VESC regulation V–5 is available through the Minitex interlibrary loan system. It is not subject to frequent change.

B. Towbars and fifth wheel connecting devices for semitrailers with a gross vehicle weight rating of 30,000 pounds or less and towbar connections not covered by VESC regulation V–5 must comply with the requirement in VESC regulation VESC–19, "Performance Requirements for Fifth Wheel Vehicle Connecting Devices and Towing Methods," approved July 1980 by the VESC–19 Committee, Vehicle Equipment Safety Commission (Alexandria, VA, 1980), which is hereby incorporated by reference. VESC regulation VESC–19 is available through the Minitex interlibrary loan system. It is not subject to frequent change.

C. Towing devices not covered by VESC regulation VESC–19 or V–5 must comply with the requirements in Code of Federal Regulations, title 49, section 393.70 or 393.71 (1983), incorporated by reference in subpart 1.

Subp. 3. **Towing devices.** Towing devices are not required to be registered or certified. Devices that comply with subpart 1 or 2 are approved by the commissioner. No other towing devices are approved.

Statutory Authority: *MS s 169.468; 169.82*

History: *9 SR 1252*