

1 Department of Public Safety

2

3 State Patrol Division

4

5 Adopted Rules Governing Requirements for Motor Vehicle Lighting

6 Devices, Safety Glazing Materials, and Towing Devices

7

8 Rules as Adopted

9 7425.0110 DEFINITIONS.

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

13 Subp. 2. After-market equipment. "After-market equipment"  
14 means equipment other than "original equipment" as defined in  
15 subpart 31.

16 Subp. 3. ANSI. "ANSI" means American National Standards  
17 Institute.

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

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

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

32 Subp. 7. Auxiliary passing lamp. "Auxiliary passing lamp"  
33 means an auxiliary low-beam lamp.

34 Subp. 8. Backup lamp. "Backup lamp" means a lamp used to  
35 furnish general illumination to the rear of a vehicle when it is  
36 in rearward motion and to provide a warning signal to

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1 pedestrians and other drivers when the vehicle is backing up or  
2 is about to back up.

3 Subp. 9. Bicycle lighting devices. "Bicycle lighting  
4 devices" includes:

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

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

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

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

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

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

26 Subp. 13. Combination device. "Combination device"  
27 includes:

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

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

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

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

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

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

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

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

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

19 Subp. 16. Driving lamp. "Driving lamp" means an auxiliary  
20 driving lamp.

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

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

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

34 Subp. 20. Hazard-warning signal flasher. "Hazard-warning  
35 signal flasher" means a device which, as long as it is turned  
36 on, causes all the required signal lamps to flash that are

1 listed in the description for hazard-warning signal switch.

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

8 Subp. 22. Headlamp assembly and optical unit. "Headlamp  
9 assembly and optical unit" includes:

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

15 B. a sealed-beam headlamp unit which is a  
16 mechanically aimable, integral, indivisible, hermetically sealed  
17 optical assembly;

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

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

23 Subp. 23. Headlamp beam-switching device. "Headlamp  
24 beam-switching device" includes:

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

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

35 Subp. 24. Identification lamps. "Identification lamps"  
36 means lamps that are used in groups of three in a horizontal

1 row, that show to the front or rear or both, and that are  
2 mounted as near as practicable to the vertical centerline and  
3 the top of the vehicle to identify certain types of vehicles.

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

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

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

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

23 Subp. 29. Motorcycle turn-signal lamp. "Motorcycle  
24 turn-signal lamp" means the signaling element of a motorcycle  
25 turn-signal system which indicates a change in direction by  
26 giving a flashing light on the side toward which the turn will  
27 be made.

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

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

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

1 distributor; or

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

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

12 Subp. 33. Passing lamp. "Passing lamp" means an auxiliary  
13 passing lamp.

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

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

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

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

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

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1 Subp. 39. School bus warning-signal devices. "School bus  
2 warning-signal devices" includes:

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

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

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

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

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

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

34 Subp. 42. Spot lamp. "Spot lamp" means a lamp that  
35 provides a substantially parallel beam of light and which can be  
36 aimed at will. These lamps are not intended as substitutes for

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1 headlamps or as auxiliary lamps for road lighting, but are  
2 intended for use in emergencies and under conditions when a  
3 concentrated, controllable light beam is advantageous.

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

8 Subp. 44. Supplemental high-mounted stop and rear  
9 turn-signal lamps. "Supplemental high-mounted stop and rear  
10 turn-signal lamps" means additional rear-facing lamps mounted  
11 high and possibly forward of the required tail, stop, and rear  
12 turn-signal lamps. They are intended to project a signal  
13 through intervening vehicles to operators of following vehicles.

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

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

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

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

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

34 C. a fifth wheel which is a load-carrying mechanical  
35 or structural towing device, including a kingpin and  
36 load-bearing plate-type device, that, when in use, serves as a

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1 primary connecting system for a semitrailer;

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

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

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

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

21 Subp. 49. Turn-signal flasher. "Turn-signal flasher"  
22 means a device that causes all the required signal lamps to  
23 flash when it is turned on.

24 Subp. 50. Turn-signal switch. "Turn-signal switch" means  
25 that part of a turn-signal system by which the vehicle operator  
26 causes the signal lamps to function.

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

30 Subp. 52. VESC. "VESC" means Vehicle Equipment Safety  
31 Commission.

32 Subp. 53. Warning lamp alternating flasher. "Warning lamp  
33 alternating flasher" means a device that alternately flashes  
34 warning-signal lamps used on authorized emergency vehicles or  
35 school buses.

36 7425.0150 PURPOSE.

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

5 7425.0160 SCOPE.

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

10 7425.0500 FEDERALLY REGULATED EQUIPMENT; INCORPORATION BY  
11 REFERENCE.

12 A lighting device, safety glazing material, or towing  
13 device certified by the manufacturer to meet applicable federal  
14 motor vehicle safety standards in Code of Federal Regulations,  
15 title 49, sections 571.108, 571.125, and 571.205 adopted under  
16 the National Traffic and Motor Vehicle Safety Act of 1966,  
17 United States Code, title 15, sections 1381 to 1431, is approved  
18 by the commissioner of public safety and hereby incorporated by  
19 reference.

20 7425.0600 NONFEDERALLY REGULATED EQUIPMENT.

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

30 7425.0700 TEST REPORTS.

31 The commissioner at any time may request from the  
32 manufacturer a copy of the test or other supporting data on a  
33 lighting device, glazing material, or towing device showing  
34 proof of compliance with this chapter and additional evidence

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1 that due care was established in maintaining compliance during  
2 production. If the manufacturer fails to provide proof of  
3 compliance within 30 days following the request, the  
4 commissioner shall prohibit the sale of the device in Minnesota  
5 until acceptable proof of compliance is received.

6 7425.0800 COMPLIANCE.

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

17 7425.0900 EXPIRATION OF APPROVAL OF MOTOR VEHICLE EQUIPMENT.

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

23 7425.1000 TESTING.

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

27 7425.1100 FEE WAIVED.

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

34 7425.2000 GENERAL REQUIREMENTS.

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

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

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

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

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

30 7425.2100 INCORPORATIONS BY REFERENCE OF STANDARDS FOR LIGHTING  
31 DEVICES.

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

35 A. auxiliary driving lamp: SAE standard J581a,  
36 "Auxiliary Driving Lamps-SAE J581a," revised 1980, 1983 SAE

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1 Handbook, published by Society of Automotive Engineers, Inc.  
2 (Warrendale, PA, 1983);

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

7 C. auxiliary passing lamp: SAE standard J582,  
8 "Electric Supplementary Passing Lamp-SAE J582," SAE Handbook  
9 1973, published by Society of Automotive Engineers, Inc. (New  
10 York, NY, 1973);

11 D. backup lamp: Code of Federal Regulations, title  
12 49, section 571.108;

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

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

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

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

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

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

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

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

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

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- 1 N. flashing warning lamp: SAE standard J595b,  
2 "Flashing Warning Lamps for Authorized Emergency, Maintenance  
3 and Service Vehicles-SAE J595b," revised July 1964, 1983 SAE  
4 Handbook, published by Society of Automotive Engineers, Inc.  
5 (Warrendale, PA, 1983);
- 6 O. fog lamp: SAE standard J583 MAY81, "Front Fog  
7 Lamps-SAE J583 MAY81," 1983 SAE Handbook, published by Society  
8 of Automotive Engineers, Inc. (Warrendale, PA, 1983);
- 9 P. front cornering lamp: SAE recommended practice  
10 J852b, "Cornering Lamps-SAE J852b," revised February 1965, 1983  
11 SAE Handbook, published by Society of Automotive Engineers, Inc.  
12 (Warrendale, PA, 1983);
- 13 Q. fusee: Code of Federal Regulations, title 49,  
14 section 393.95 (1983);
- 15 R. hazard warning signal flasher: Code of Federal  
16 Regulations, title 49, section 571.108;
- 17 S. hazard warning signal switch: Code of Federal  
18 Regulations, title 49, section 571.108;
- 19 T. headlamp assembly and optical unit: Code of  
20 Federal Regulations, title 49, section 571.108;
- 21 U. headlamp beam switching device: Code of Federal  
22 Regulations, title 49, section 571.108;
- 23 V. identification lamps: Code of Federal  
24 Regulations, title 49, section 571.108;
- 25 W. license plate lamp: Code of Federal Regulations,  
26 title 49, section 571.108;
- 27 X. motorcycle auxiliary front lamp: SAE recommended  
28 practice J1306 JUN80, "Motorcycle Auxiliary Front Lamps-SAE  
29 J1306 JUN80," 1983 SAE Handbook, published by Society of  
30 Automotive Engineers, Inc. (Warrendale, PA, 1983);
- 31 Y. motorcycle headlamp: Code of Federal Regulations,  
32 title 49, section 571.108;
- 33 Z. motorcycle turn-signal lamp: Code of Federal  
34 Regulations, title 49, section 571.108;
- 35 AA. parking lamp: Code of Federal Regulations, title  
36 49, section 571.108;

1 BB. portable red reflector: SAE recommended practice  
2 J774c, "Emergency Warning Device-SAE J774c," revised January  
3 1971, 1983 SAE Handbook, published by Society of Automotive  
4 Engineers, Inc. (Warrendale, PA, 1983);

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

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

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

16 FF. safety glass: Code of Federal Regulations, title  
17 49, section 571.205;

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

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

22 II. school bus stop arm: SAE recommended practice  
23 J1133a, "School Bus Stop Arm-SAE J1133a," revised November 1977,  
24 1983 SAE Handbook, published by Society of Automotive Engineers,  
25 Inc. (Warrendale, PA, 1983);

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

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

30 LL. side turn-signal lamp: SAE recommended practice  
31 J914b, "Side Turn Signal Lamps-SAE J914b," revised July 1978,  
32 1983 SAE Handbook, published by Society of Automotive Engineers,  
33 Inc. (Warrendale, PA, 1983);

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

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1 NN. stop lamp: Code of Federal Regulations, title  
2 49, section 571.108;

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

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

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

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

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

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

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

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

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

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

32 7425.2200 MODEL DESIGNATION.

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

36 A. right- and left-hand mounting;

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- 1 B. housing finish;
- 2 C. housing material;
- 3 D. mounting methods;
- 4 E. lens color;
- 5 F. lens material;
- 6 G. number of bulbs;
- 7 H. type of bulbs;
- 8 I. number of wiring connections; and
- 9 J. functions.

10 7425.2300 IDENTIFICATION AND MARKING REQUIREMENTS.

11 Subpart 1. In general. Lighting devices must be marked  
12 and identified to conform with the requirements in subparts 2 to  
13 9.

14 Subp. 2. Federally regulated lighting devices. Lighting  
15 devices required by federal regulations to conform to Code of  
16 Federal Regulations, title 49, section 571.108 must be marked  
17 according to these federal requirements. Federally regulated  
18 equipment may also be marked according to subparts 3 to 5,  
19 except as may be prohibited by Code of Federal Regulations,  
20 title 49, section 571.108.

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

32 Subp. 4. Removable bulb. Each removable bulb must be  
33 marked so as to identify the bulb manufacturer and also with the  
34 model designation or trade number. The design voltage and  
35 either the wattage or ampere rating may be shown instead of  
36 model designation or trade number. Bulb markings must be

1 model designation or trade number. Bulb markings must be  
2 indelible and readable without magnification. In cases of  
3 private branding, a means of tracing the actual manufacturer  
4 must be provided by the owner of the private brand.

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

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

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

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

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

36 7425.2400 CONSTRUCTION OF NONFEDERALLY REGULATED DEVICES.

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

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

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

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

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

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

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

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

28 7425.2500 SPECIFICATIONS FOR INDIVIDUAL LIGHTING DEVICES.

29 Subpart 1. In general. In addition to complying with  
30 standards incorporated by reference in this chapter, the  
31 requirements for individual devices are listed in subparts 2 to  
32 11.

33 Subp. 2. Bicycle headlamp. Bicycle headlamp intensity  
34 above horizontal must not be greater than 250 candela. The lamp  
35 housing must be constructed so that a bulb and battery can be  
36 readily replaced. The headlamp must project a distinct beam of

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1 white light of uniform pattern.

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

5 Subp. 4. Electric emergency lantern. Electric emergency  
6 lanterns, when placed on any clean, dry, paved road surface,  
7 must not tip or slide in a 40 mile-per-hour wind. To test these  
8 devices, three sample lanterns regularly marketed and sold must  
9 be chilled at a temperature of minus 20 degrees Fahrenheit for  
10 12 hours, after which they must be placed in operation for 12  
11 hours. Failure of two of the three samples to operate or to  
12 meet the intensity requirements of SAE standard J596 for  
13 electric emergency lanterns, incorporated by reference in part  
14 7425.2100, subpart 1, item L, during the test is an automatic  
15 rejection.

16 Subp. 5. Fusee. Fusees must conform to the requirements  
17 in Code of Federal Regulations, title 49, section 393.95(j)  
18 (1983) for fusees. The color emitted must be red.

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

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

32 The photometric and color requirements of this chapter that  
33 were in effect at the time the latest lamp was last manufactured  
34 must be met for each function performed. Instructions listing  
35 the original lamps or the year and model of the vehicles on  
36 which the replacement lenses are designed to be installed must

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1 be included with the lens, the retail packaging for the lens, or  
2 in a catalog readily available where the lens is sold or offered  
3 for sale.

4 Subp. 8. School bus warning-lamp system. Requirements for  
5 operating school bus warning-lamp systems are specified in parts  
6 3520.5200 to 3520.5230 and 3520.5580.

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

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

15 Subp. 11. Installation of flashing warning lamp. The  
16 installation recommendations in SAE standard J595b for flashing  
17 warning lamps, incorporated by reference at part  
18 7425.2100, subpart 1, item O, on authorized emergency vehicles  
19 are not mandatory for law enforcement vehicles when determined  
20 not practicable by the affected law enforcement agency.

21 7425.2600 NONSTANDARD LIGHTING DEVICES.

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

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

32 Subp. 3. Emergency vehicle flashing white lamp. An  
33 emergency vehicle flashing white lamp, that may be used by an  
34 authorized emergency vehicle to display a flashing white light  
35 in addition to a flashing red light, does not include flashing  
36 headlamps during times when the headlamps are required for

1 visibility. The flash rate, duration, and intensity must follow  
2 the SAE standard J595b incorporated by reference at part  
3 7425.2100, subpart 1, item N, or SAE recommended practice J845  
4 incorporated by reference at part 7425.2100, subpart 1, item QQ,  
5 as applicable to emergency vehicle warning lamps, except that  
6 when used as a traffic signal priority device it must flash as  
7 authorized by the commissioner. The white light must be at  
8 least four times the intensity required for a red warning light  
9 in SAE standard J595b or SAE recommended practice J845, as  
10 applicable to the lamp type.

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

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

18 Subp. 6. Volunteer fireman lamp. A volunteer fireman  
19 lamp, providing a single steady-burning red light mounted facing  
20 forward on the front of a vehicle, must follow the performance  
21 requirements for stop lamps, incorporated by reference in part  
22 7425.2100, subpart 1, item NN, or in effect at the time of  
23 manufacture. This type of lamp does not include a reflex  
24 reflector.

25 Subp. 7. Volunteer ambulance driver lamp. A volunteer  
26 ambulance driver lamp is the same type lamp as a volunteer  
27 fireman lamp and must comply with the requirements in subpart 6.

28 7425.5000 SPECIFICATIONS FOR SAFETY GLAZING MATERIAL;  
29 INCORPORATION BY REFERENCE.

30 Safety glass and plastic must comply with the  
31 specifications in Code of Federal Regulations, title 49, section  
32 571.205 which is incorporated by reference, and with Minnesota  
33 Statutes, section 169.71, subdivision 4, as applicable to type  
34 of material, location on the vehicle, performance, and markings.  
35 Material that complies with the applicable standard incorporated  
36 by reference in this part is approved by the commissioner.

1 7425.6000 SPECIFICATIONS FOR TRAILER AND SEMITRAILER TOWING  
2 DEVICES; INCORPORATIONS BY REFERENCE.

3 Subpart 1. Federally regulated towing devices. Federally  
4 regulated towing devices must comply with the requirements in  
5 Code of Federal Regulations, title 49, section 393.70 or 393.71  
6 (1983) which are both incorporated by reference, as applicable  
7 according to the towing method.

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

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

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

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

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

5

6 Repealer. Minnesota Rules, parts 7425.0100; 7425.0200;  
7 7425.0300; 7425.0400 are repealed.

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