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Submitted for recognition as an American National Standard

**SNOWMOBILE AND SNOWMOBILE CUTTER LAMPS, REFLECTIVE DEVICES,
AND ASSOCIATED EQUIPMENT**

Foreword—This Reaffirmed Document has been changed only to reflect the new SAE Technical Standards Board Format.

This SAE Recommended Practice is intended as a guide toward standard practice, but may be subject to frequent change to keep pace with experience and technical advances. Hence, its use where flexibility of revision is impractical, is not recommended.

1. Scope—This SAE Recommended Practice describes requirements for lamps, reflective devices, and associated equipment for signaling to enable safe operation in darkness and other conditions of reduced visibility.

2. References

2.1 Applicable Publications—The following publications form a part of the specification to the extent specified herein. Unless otherwise indicated the latest revision of SAE publications shall apply.

2.1.1 SAE PUBLICATIONS—Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001.

SAE J68—Tests for Snowmobile Switching Devices and Components
SAE J277—Maintenance of Design Voltage—Snowmobile Electrical Systems
SAE J278—Snowmobile Stop Lamp
SAE J279—Snowmobile Tail Lamp (Rear Position Lamp)
SAE J280—Snowmobile Headlamps
SAE J564—Headlamp Beam Switching
SAE J592—Clearance, Side Marker, and Identification Lamps
SAE J594—Reflex Reflectors

3. Application—This document applies to snowmobiles and snowmobile cutters.¹

¹. As presently defined by law in Canada.

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4. Requirements

- 4.1 Vehicles shall be equipped with lamps, reflective devices, and associated equipment, in the numbers of units and designed to conform to the references cited in Table 1.

Reflex reflectors as used for rear and side markers shall conform to one of the following.

TABLE 1—EQUIPMENT (MINIMUM) SNOWMOBILE AND SNOWMOBILE CUTTER

Item	Number and Color Required on Snowmobile	Number and Color Required on Snowmobile Cutter	In Accordance With
Headlamp	1 white or amber	—	SAE J280
Tail lamp	1 red	—	SAE J279
Stop lamp	1 red	—	SAE J278
Reflex reflectors	3 red ^{(1),(2)} and 2 amber ^{(1),(2)} or colors as indicated in 4.1.2	3 red ^{(1),(2)} and 2 amber ^{(1),(2)} or colors as indicated in 4.1.2	SAE J594 or Federal Specification L-S-300A and CGSB62GP11P
Side marker Lamps (optional)	2 red, 2 amber ⁽³⁾	—	SAE J592

1. See 4.1.1.
2. See 4.1.2.
3. See 4.1.3

- 4.1.1 Unit-type reflex reflectors in accordance with SAE J594.

- 4.1.2 Area-type reflex reflectors of any shape, which conform to color limitations, may be used which provide a minimum reflective intensity of 1.5 cd per incident foot-candle (lux) at all incidence angles of 0 to 20 degrees at 0.2 degree divergence when measured within a 230 cm² (36 in²) area not exceeding 600 mm (24 in) in length.

Front reflectors may be of any color or color combination; however, only the color red shall be used for rear and rear side reflectors.

In addition, the reflective sheeting used in manufacturing area-type reflex reflectors shall conform to Federal Specifications L-S-300A, Sheet and Tape, Reflective: Nonexposed Lens, Adhesive Backing, and Canadian Specification Board 62GP11P for the following characteristics:

Adhesive—Class 1-2-3-4-5, 4.3.4, Adhesive Backing.

Photometric Measurement—4.4.7, Reflective Intensity, and 3.5.6.1, Rainfall.

Durability—4.4.9, Resistance to Accelerated Weathering—Exposure 1000 h and retain 50% of the previously specified reflective intensity; 4.4.10, Resistance to Heat, Cold, and Humidity.

- 4.1.3 Lighted side markers conforming to SAE J592 may be used in addition to reflex reflectors.

- 4.1.4 No additional lamp, reflective device, or associated equipment shall be installed if it impairs the effectiveness of the required equipment.

4.2 Location of Lamps and Reflectors—Lamps, reflective devices, and associated equipment required by 3.1 shall be installed in accordance with Table 2.

TABLE 2—LOCATION OF EQUIPMENT SNOWMOBILE AND SNOWMOBILE CUTTER

Item	Location on Snowmobile	Location on Snowmobile Cutter	Height Above Trail Surface Measured from Center of Item on Vehicle at Curb Weight
Headlamp	On or within 150 mm (6 in) of front centerline, except that, if two lamps are used, they shall be symmetrically disposed about the front centerline	—	Not less than (380 mm) 15 in
Tail lamp	On rear centerline, except that, if two lamps are used, they shall be symmetrically disposed about the rear centerline	—	Not less than 200 mm (8 in) nor more than 760 mm (30 in)
Stop lamp	On rear centerline, except that, if two lamps are used, they shall be symmetrically disposed about the rear centerline	—	Not less than 200 mm (8 in) nor more than 760 mm (30 in)
Reflex reflectors	1 red on rear centerline, except that, if two reflectors are used on the rear, they shall be symmetrically disposed about the rear centerline ^{(1),(2)}	1 red on rear centerline, except that, if two reflectors are used on the rear, they shall be symmetrically disposed about the rear centerline ^{(1),(2)}	Not less than 200 mm (8 in) nor more than 760 mm (30 in)
	2 red, 1 on each side, as far to rear as practicable ^{(1),(2)}	2 red, 1 on each side, as far to rear as practicable ^{(1),(2)}	
	2 amber or other color, 1 on each side, as far forward as practicable ^{(1),(2)}	2 amber or other color, 1 on each side, as far forward as practicable ^{(1),(2)}	— —
Side marker lamps (optional)	On each side: 1 amber lamp as far forward as practicable and 1 red lamp as far to rear as practicable	—	Not less than 200 mm (8 in) nor more than 760 mm (30 in)

1. See 4.1.1.

2. See 4.1.2.

4.3 Lamp Combinations and Equipment Combinations—Two or more lamps, reflective devices, and items of associated equipment may be combined if the requirements for each lamp, reflective device, and item of associated equipment are met.

4.4 Special Wiring Requirements

- 4.4.1 A means for switching between lower and upper headlamp beams shall be provided that is designed to conform to SAE J564, except that in 3.2.2, Temperature Test, the temperature range shall be between –40 and +52 °F (–40 and +125 °F); in 3.2.3, Endurance Requirements, the cycle requirements shall be reduced by a factor of 10; and in 3.2.3.2, Upper Beam Indicator, the indicator is not required and if used, the signal color need not be red.

SAE J292 Reaffirmed MAY95

4.4.2 As a minimum, the tail lamp shall be illuminated when the headlamp is illuminated.

4.4.3 The stop lamp shall be illuminated upon application of the service brake or by some other means that automatically results in the steady illumination of the stop lamp to indicate the intent of the operator of the snowmobile to stop or diminish speed.

A means for illuminating the stop lamp shall be provided, which is designed to conform to SAE J68.

4.5 **Lighting Display**—When energized, each lamp specified in Table 1 shall, in normal operation, be steady burning.

4.6 **Maintenance of Design Voltage**—The snowmobile electrical system shall be designed to conform to SAE J277.

PREPARED BY THE SAE SNOWMOBILE COMMITTEE

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