SAE International™

SURFACE VEHICLE RECOMMENDED PRACTICE

J279

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Snowmobile Tail Lamp (Rear Position Lamp)

RATIONALE

The section reference numbers to the required SAE J575 tests have been renumbered to agree with the latest J575 numbers.

A correction has been made in conversion from inches to centimeters in paragraph 5 – Installation Requirements.

FOREWORD

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 document provides test methods and requirements for tail lamps for snowmobiles.

2. REFERENCES

2.1 Applicable Publications

The following publications form a part of this specification to the extent specified herein. The latest issue of SAE publications shall apply.

2.1.1 SAE Publications

Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001, Tel: 877-606-7323 (inside USA and Canada) or 724-776-4970 (outside USA), www.sae.org.

SAE J567 Lamp Bulb Retention System

SAE J575 Test Methods and Equipment for Lighting Devices and Components, for Use on Vehicles Less than 2032 mm in Overall Width

SAE J576 Plastic Materials for Use in Optical Parts Such as Lenses and Reflectors of Motor Vehicle Lighting Devices

SAE J578 Color Specifications

3. DEFINITIONS

3.1 Tail Lamp

Lamp used to designate the rear of a snowmobile by a steady-burning, low-intensity light.

3.2 Multiple-Compartment Lamp

A device which gives its indication by two or more separately lighted areas which are joined by one or more common parts such as a housing or lens.

3.3 Multiple Lamp Arrangement

An array of two or more separated lamps on each side of the snowmobile which operate together to give a signal.

4. LABORATORY REQUIREMENTS

4.1 A multiple compartment lamp or multiple lamps may be used.

4.2 The following sections from SAE J575 are a part of this document.

4.2.1 Section 3

Definitions.

4.2.2 Section 3.2

Bulbs.

4.2.3 Section 4.1

Vibration.

4.2.4 Section 4.2

Moisture Test.

4.2.5 Section 4.3

Dust Test.

4.2.6 Section 4.4

Corrosion Test.

4.2.7 Section 4.5

Photometry.

4.2.8 Section 4.6

Warpage Test on Devices with Plastic Components

4.3 Plastic Materials

Any plastic materials used in optical parts shall comply with the requirements set forth in SAE J576.

4.4 Color Test

The color of the light from a tail lamp shall be red. (See SAE J578.)

4.5 If the tail lamp is optically combined with another lamp such as a stop lamp or turn signal and a two-filament bulb is used, the bulb shall have an indexing base and the socket shall be designed so that bulbs with nonindexing bases cannot be used. As a matter of information, attention is called to typical sockets shown in SAE J567.

4.6 Photometric Requirements

4.6.1 All beam candela measurements shall be made with the incandescent filament of the signal lamp at least 3 m (10 ft) from the photometric screen. The H-V axis shall be taken as parallel to the longitudinal axis of the vehicle. When compartments or lamps are photometered together, the H-V axis shall intersect the midpoint between the optical centers (filament).

4.6.2 Beam candela measurements of multiple compartment lamp or multiple lamp arrangements shall be made by either of the following methods:

a. All compartments or lamps may be photometered together, provided that a line from the optical axis (filament centers) of each compartment or lamp to the center of the photometer sensing device does not make an angle of more than 0.6 degree with the photometer (H-V) axis.

b. Each compartment or lamp may be photometered separately by aligning its axis with the photometer and adding the value at each test point.

4.6.3 Table 1 lists design candela requirements for a tail lamp.

TABLE 1 - MINIMUM DESIGN CANDELA REQUIREMENTS

Test Points, degrees	Test Points, degrees	Lighted Sections 1	Lighted Sections 2	Lighted Sections 3
10U and 10D	10L	0.2	0.3	0.4
	V	0.3	0.5	0.8
	10R	0.2	0.3	0.4
5U and D	20L	0.2	0.3	0.4
	10L	0.4	0.7	1.0
	5L	0.7	1.0	1.5
	V	0.9	1.5	2.3
	5R	0.7	1.0	1.5
	10R	0.4	0.7	1.0
	20R	0.2	0.3	0.4
H	20L	0.2	0.4	0.5
	10L	0.4	0.7	1.0
	5L	1.0	1.8	2.5
	V	1.0	1.8	2.5
	5R	1.0	1.8	2.5
	10R	0.4	0.7	1.0
	20R	0.2	0.4	0.5

NOTE 1: Specifications are based on laboratories using accurate, rated bulbs during testing.

NOTE 2: Lamps designed to operate on the vehicle through a resistor or equivalent shall be photometered with the listed design voltage of the design source applied across the combination of resistance and filament.

NOTE 3: A multiple device tail lamp gives its indication by two or more separately lighted sections which may be separate lamps, or areas that are joined by common parts. The photometric values are to apply when all sections which provide the tail signal are considered as a unit.

5. INSTALLATION REQUIREMENTS

The following requirements apply to the device as used on the vehicle and are not part of the laboratory test requirements and procedures.