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SAE J278 OCT84

**Snowmobile Stop
Lamp**

SAE Recommended Practice
Reaffirmed October 1984

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SNOWMOBILE STOP LAMP

NOTE: 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 recommended practice provides test methods and requirements for the stop lamp on snowmobiles.
2. DEFINITIONS:
 - 2.1 Stop Lamp: Lamp giving a steady light to the rear of a vehicle to indicate the intent of the operator of a vehicle to stop or diminish speed.
 - 2.2 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.
 - 2.3 Multiple Lamp Arrangement: An array of two or more separated lamps on each side of the snowmobile which operate together to give a signal.
3. LABORATORY REQUIREMENTS:
 - 3.1 A multiple compartment lamp or multiple lamps may be used.
 - 3.2 The following sections from SAE J575 are a part of this recommended practice:
 - 3.4.1 Section B: Samples for Test
 - 3.4.2 Section C: Lamp Bulbs
 - 3.4.3 Section D: Laboratory Facilities

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- 3.4.4 Section E: Vibration Test
- 3.4.5 Section F: Moisture Test
- 3.4.6 Section G: Dust Test
- 3.4.7 Section H: Corrosion Test
- 3.4.8 Section J: Photometry
- 3.4.9 Section L: Warpage Test on Devices with Plastic Lenses, except that the lamp is to be operated 5 min on and 5 min off until the total time equals 1 h. If the tail lamp and/or side marker lamps are incorporated in the same device, they shall be operated continuously during the test. (The test is to be conducted in a circulating air type oven.)
- 3.3 Plastic Materials: Any plastic materials used in optical parts shall comply with the requirements set forth in SAE J576.
- 3.4 Color Test: The color of the light from stop lamps shall be red. (See SAE J578.)
- 3.5 If the stop lamp is optically combined with the tail lamp 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.
- 3.6 Photometric Requirements:
- 3.6.1 All beam candela measurements shall be made with the incandescent filament of the signal lamp at least 10 ft (3.05 m) from the photometer 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 center (filament).
- 3.6.2 Beam candela measurements of multiple compartment lamp(s) or multiple lamp arrangements shall be made by either of the following methods:
- All compartments or lamps may be photometered together, provided that a line from the optical center (filament) of each compartment or lamp to the center of the photometer sensing device does not make an angle of more than 0.6 deg with the photometer (H-V) axis.
 - Each compartment or lamp may be photometered separately by aligning its axis with the photometer and adding the value at each test point.
- 3.6.3 Table 1 lists design candela requirements for a stop lamp.

4. INSTALLATION REQUIREMENTS: The following requirements apply to the device as used on the snowmobile and are not part of the laboratory test requirements and procedures.

4.1 Visibility of the stop lamp shall not be obstructed by any part of the snowmobile throughout the photometric test angles for the lamp, unless the lamp is designed to comply with all photometric and visibility requirements with these obstructions considered. Signal from lamps on both sides of the snowmobile shall be visible through a horizontal angle from 45 deg to the left to 45 deg to the right. Where more than one lamp or optical area is lighted on each side of the snowmobile, only one such area on each side need comply. To be considered visible, the lamp must provide an unobstructed projected illuminated area of outer lens surface, excluding reflex, at least 2 in² (129 mm²) in extent, measured at 45 deg to the longitudinal axis of the vehicle.

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