



SURFACE VEHICLE RECOMMENDED PRACTICE

J1038™

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Recommendations for Children's Snowmobile

RATIONALE

Revisions include Para. 4.2.4 and Para. 4.4.

1. SCOPE

This SAE Recommended Practice establishes the test procedures, performance requirements, and criteria necessary to evaluate minimum safety and reliability requirements of a children's snowmobile as identified in 1.2.

1.1 Purpose

The purpose of this document is to set forth minimum safety and reliability criteria for use in the design of a children's snowmobile as defined by SAE J33. Requirements not directly related to operator safety are not included, unless they are to delineate the intended purpose of the vehicle as distinct from a small-sized regular snowmobile.

1.2 Definition of Children's Snowmobile

A self-propelled vehicle intended for daylight use, in restricted off-road areas, primarily on snow. This vehicle is intended to be used by a child at least 6 years of age, under adult supervision.

2. REFERENCES

2.1 Applicable Documents

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

2.1.1 SAE Publications

Available from SAE International, 400 Commonwealth Drive, Warrendale, PA 15096-0001, Tel: 877-606-7323 (inside USA and Canada) or +1 724-776-4970 (outside USA), www.sae.org.

SAE J33	Snowmobile Definitions and Nomenclature - General
SAE J45	Brake System Test Procedure - Snowmobiles
SAE J68	Test for Snowmobile Switching Devices and Components
SAE J92	Snowmobile Throttle Control System

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SAE J280	Snowmobile Headlamps
SAE J288	Snowmobile Fuel Tanks
SAE J292	Snowmobile and Snowmobile Cutter Lamps, Reflective Devices, and Associated Equipment
SAE J592	Sidemarkers Lamps for Use on Road Vehicles Less Than 2032 mm in Overall Width
SAE J1161	Operational Sound Level Measurement Procedure for Snowmobiles

2.1.2 ANSI Publication

Copies of these documents are available online at <http://webstore.ansi.org/>

ANSI B71.1 Consumer Turf Care Equipment - Walk-Behind Mowers and Ride-On Machines with Mowers - Safety Specifications

3. GENERAL CRITERIA

3.1 Security Lock

A secure means of rendering the snowmobile inoperable so that it cannot be started (or operated) without the use of a removable key, or other such device, shall be provided.

3.2 Speed

Maximum speed shall be limited to 13 km/h (8 mph) for vehicles intended for use by children 6 years or older when operating on a smooth, level, hard packed snow surface.

3.3 Seating

Seating capacity shall be limited to one child.

3.4 Fuel Capacity

Fuel tank shall be limited to 2.0 L (0.5 gal) capacity.

3.5 Steering Padding

The nominal central portion of the steering mechanism or handlebars between the throttle and brake control lever facing the operator's position shall be covered by impact-absorbing non-rigid material at least 6 mm (1/4 in) thick.

3.6 Controls

All levers and controls shall have blunt ends. No switch, control, or console shall have sharp edges or protrusions hazardous to the operator under conditions of normal use.

3.7 Ski-Tips

The forward end or projection of the ski commonly known as the ski-tip shall have no edge radius less than 3 mm (1/8 in) in size.

3.8 Windshield

If the vehicle is equipped with a windshield, the windshield material shall meet these requirements.

3.8.1 Flexure Test

- a. Sample size is 30 cm (12 in) by 30 cm (12 in) square, flat sheet.
- b. Expose the sample to a temperature of $-29\text{ }^{\circ}\text{C} \pm 1\text{ }^{\circ}\text{C}$ ($-20\text{ }^{\circ}\text{F} \pm 2\text{ }^{\circ}\text{F}$) for 1 h minimum.
- c. Bend sample 180 degrees around a 38 mm (1.50 in) radius.

3.8.2 Impact Test

- a. Use 30 cm (12 in) by 30 cm (12 in) flat sheet sample, not the same sample used in 3.8.1 Flexure Test.
- b. Expose the sample to a temperature of $-29\text{ }^{\circ}\text{C} \pm 1\text{ }^{\circ}\text{C}$ ($-20\text{ }^{\circ}\text{F} \pm 2\text{ }^{\circ}\text{F}$) for 1 h minimum.
- c. Place sample on flat, hard, non-resilient surface, such that it is uniformly supported from underneath.
- d. Impact with a 1.25 kg (2.75 lb) weight from a height of 90 cm (36 in). The contact surface of the weight shall be spherical with a radius of 25 mm (1.0 in) maximum.

3.8.3 Acceptance

Cracking of the samples is allowable, provided that no particles break loose from the material. Fracturing of the material is not acceptable.

3.8.4 Edge Radius

Windshield edges which are exposed to the operator or bystanders must have a minimum edge radius of 3 mm (1/8 in).

3.9 Warning Labels

The following information shall be contained in Owner's/Operator's Manual or be displayed by a label or plaque permanently affixed to the vehicle:

3.9.1 Operation

This vehicle is intended for daylight use in restricted off-road areas, primarily on snow, by a child of not less than 6 years of age who is supervised by an adult. Use of this vehicle on public streets, roads, highways, or trails, can be hazardous and is prohibited by law in most cases.

3.9.2 Do not start or operate this vehicle without guards and shields in position, or with hood not latched in place.

3.9.3 This vehicle is intended for one operator only, no passenger.

3.9.4 Verify proper operation of all controls before starting the engine.

3.9.5 Protective Clothing

When operating this vehicle, the operator shall wear suitable protective clothing including an approved safety helmet and visor or goggles.

3.10 Durable Labels

Labels must meet the specification as stated in ANSI B71.1, Section 18.

3.11 Owner's/Operator's Manual

An Owner's/Operator's Manual shall be supplied with each snowmobile.

4. EQUIPMENT AND PERFORMANCE REQUIREMENTS

4.1 Speed Control

A device shall be provided to control the maximum speed of the vehicle as indicated in 3.2.

4.2 Shields and Guards

Power-driven parts of the engine, clutch, and drive system, with the exception of the vehicle track and sprocket systems adjacent to the track, shall be isolated by consoles, shields, or guards of sufficient size, shape, and configuration so as to prevent their physical contact with the occupant, bystanders, or any loose clothing worn by the occupant or bystanders during normal use of the vehicle with all consoles, shields, and guards in position and with the hood closed.

- 4.2.1 Shields and guards shall protect the occupant or bystanders in the case of failure of those parts of the drive train known as belts, gears, and chains should a part or parts be ejected from said components or in the case of breakage of such belts or chains as employed.
- 4.2.2 Shields and guards shall prevent inadvertent contact by the occupant with any exposed components at a temperature above 66 °C (150 °F) during normal operation of the vehicle with all consoles, guards, and shields in position and the engine hood closed.
- 4.2.3 A device shall be incorporated such that upon opening of the hood, ignition to the engine is interrupted. The ignition shall remain interrupted until manually reinstated.
- 4.2.4 As concerns centrifugal clutches, drive pulleys, driven pulleys, torque converters, or similar mechanisms; said components shall withstand being spun about their axis of rotation at an rpm equal to 1.5 times the maximum horsepower rpm of the prime mover and times any effective drive ratio. This rpm shall be maintained for 5 min.

4.3 Lighting System Requirements

A children's snowmobile shall be equipped with the following:

- 4.3.1 At least one white headlight which shall provide a beam that complies with the minimum photometric candlepower requirements set out in Table 1 when tested in accordance with SAE J280.

Table 1 - Minimum photometric candlepower requirements

Test Point Position in Degrees	Minimum Photometric Candlepower Requirement
1/2 D-V	10 000
1 1/2 D-V	5 000
1 1/2 D-6L to 6R	1 500
1 1/2 D-9L to 9R	1 000
1 1/2 D-15L to 15R	150
3 D-V	1 000
3 D-15L to 15R	100

- 4.3.2 One or two red identification lights on the rear centerline or symmetrically disposed about the rear centerline, in accordance with SAE J592, that shall be illuminated during headlight operation. No stop light shall be required.