

 <b>SURFACE VEHICLE RECOMMENDED PRACTICE</b>	<b>J1038</b>	<b>REV. MAR2007</b>
	Issued	1975-12
	Revised	2007-03
Superseding		J1038 DEC1992
(R) Recommendations for Children's Snowmobile		

## RATIONALE

The changes are as follows:

**Section 1.2** Remove the word “or” usage of “or” implies alternative to at least 6 years old.

**Section 2.1.1** Add SAE J68 Test of Snowmobile Switching Devices and Components.

Add SAE J192 Maximum Exterior Sound Level for Snowmobiles. Current revision of SAE J192 includes test for snowmobiles which cannot attain 15 mph.

Removed SAE J1161.

**Section 2.1.2** Delete Date.

**Section 3.9.1** Delete “and” add “or trails”. Use on trails is prohibited in most areas.

**Section 3.9.6** Remove this section. Vehicle is designed for a max speed of 13 km/h (8 mph), see section 3.2. To allow user adjustment would potentially allow adjustment to exceed the max designed speed.

**Section 3.10** Delete Date.

**Section 3.11** Delete second sentence, same rationale as Section 3.9.6.

**Section 4.2.2** Correction of metric conversion.

**Section 4.2.3** Added to ensure hood is closed during engine operation.

**Section 4.3.1** Added table 1.

**Section 4.3.2** Removed table 1.

**Section 4.7.1** Correction of metric conversion.

**Section 4.8** Added test for snowmobile switching devices and components.

**Section 4.11** Removed SAE J1161, replaced by SAE J192.

SAE Technical Standards Board Rules provide that: “This report is published by SAE to advance the state of technical and engineering sciences. The use of this report is entirely voluntary, and its applicability and suitability for any particular use, including any patent infringement arising therefrom, is the sole responsibility of the user.”

SAE reviews each technical report at least every five years at which time it may be reaffirmed, revised, or cancelled. SAE invites your written comments and suggestions.

Copyright © 2007 SAE International

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of SAE.

**TO PLACE A DOCUMENT ORDER:** Tel: 877-606-7323 (inside USA and Canada)

Tel: 724-776-4970 (outside USA)

Fax: 724-776-0790

Email: [CustomerService@sae.org](mailto:CustomerService@sae.org)

SAE WEB ADDRESS:

<http://www.sae.org>

## 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 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](http://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
SAE J192	Maximum Exterior Sound Level for Snowmobiles
SAE J280	Snowmobile Headlamps
SAE J288	Snowmobile Fuel Tanks
SAE J292	Snowmobile and Snowmobile Cutter Lamps, Reflective Devices, and Associated Equipment
SAE J592	Side Marker Lamps for Use on Road Vehicles Less Than 2032 mm in Overall Width

#### 2.1.2 ANSI Publication

Available from ANSI, 25 West 43rd Street, New York, NY 10036-8002, Tel: 212-642-4900, [www.ansi.org](http://www.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 2 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 Requiremen
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.

#### 4.4 Reflectors

Except as noted, reflectors shall conform to the requirements of SAE J292.

Two red reflectors, one on each side as far to the rear as practicable and not less than 15 cm (6 in) above the ground. A reflector of any color except red on each side forward of the handlebars or steering mechanism, not less than 25 cm (10 in) above the ground.

#### 4.5 Emergency Control

The mechanism that controls the power delivered by the engine shall incorporate a device for automatically stopping the engine in the event of a malfunction of the mechanism or as an alternate, an emergency stop switch designed to provide an instantaneous interruption of the engine ignition system shall be provided. This device shall be readily accessible and designed for activation by the operator's right hand about the normal steering position; and it shall maintain interruption once activated without continuous contact from the operator's hand.

Maximum activating force shall be 9 N (2 lb) and the device shall be of a color contrasting with its surroundings.