



SURFACE VEHICLE STANDARD

J33™

AUG2022

Issued 1973-03
Reaffirmed 2009-03
Revised 2022-08

Superseding J33 JUL2017

Snowmobile Definitions and Nomenclature

RATIONALE

This document was converted from an SAE Recommended Practices to an SAE Standard. Minor wording adjustments were made for inclusiveness of electric snowmobile. Added REESS definition and included it into the weight definitions.

1. SCOPE

This SAE Standard sets forth accepted definitions and terminology of major components and parts peculiar to snowmobiles.

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 Publication

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 J1038 Recommendations for Children's Snowmobile

3. DEFINITIONS

3.1 General Definitions

3.1.1 SNOWMOBILE

A self-propelled vehicle intended for off-road travel primarily on snow, having a curb weight of not more than 450 kg (1000 pounds), driven by a track or tracks in contact with the snow, steered by a ski or skis in contact with the snow, with the following special classes:

3.1.1.1 CLASS I - COMPETITION SNOWMOBILE

A snowmobile intended only for competition as stated and identified publicly by the manufacturer.

SAE Executive Standards Committee 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 revised, reaffirmed, stabilized, or cancelled. SAE invites your written comments and suggestions.

Copyright © 2022 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: +1 724-776-4970 (outside USA)
Fax: 724-776-0790
Email: CustomerService@sae.org
http://www.sae.org

SAE WEB ADDRESS:

For more information on this standard, visit
https://www.sae.org/standards/content/J33_202208/

3.1.1.2 CLASS II - CHILDREN'S SNOWMOBILE

A snowmobile intended only for use by children, as stated and identified publicly by the manufacturer. For a more detailed definition, refer to SAE J1038.

3.1.2 OPERATION WEIGHT

The total weight of a snowmobile including, where applicable, a 90% full fuel tank, oil, removable rechargeable electrical energy storage system (removable REESS), coolant, tool kit (supplied by manufacturer), and an 80 kg (175 pound) operator.

3.1.3 CURB WEIGHT (WET WEIGHT)

The total weight of a snowmobile including, where applicable, a 90% full fuel tank, removable rechargeable electrical energy storage system (removable REESS), oil, coolant, and tool kit (supplied by manufacturer), but without any occupant(s) or cargo.

3.1.4 UNLADEN WEIGHT (DRY WEIGHT)

The weight of a snowmobile without, where applicable, occupant(s), cargo, fuel, oil, and removable rechargeable electrical energy storage system (removable REESS), but comprising of all other materials necessary for its operation.

3.1.5 FLOTATION AREA (BEARING AREA)

The projection in a horizontal plane of the area on the surface of the track and skis which contact the snow. To account for machine penetration into snow, the projection plane is located 75 mm (3 inches) above a nonyielding horizontal surface supporting the snowmobile while in a curb weight condition (see side view Figure 1).

3.1.6 SNOWMOBILE CUTTER

A sleigh designed to be drawn behind a snowmobile.

3.1.7 DRIVER POSITION

The seated, forward-facing position which is necessary to operate the controls under normal operating conditions.

3.1.8 PASSENGER POSITION

(If provided.) The seated, forward-facing position in the area in which adequate handgrips have been provided.

3.1.9 RECHARGEABLE ELECTRICAL ENERGY STORAGE SYSTEM (REESS)

The rechargeable energy storage system that provides electric energy for electric propulsion.

3.2 Snowmobile Dimensional Definitions

The dimensions listed are defined by Figure 1 and are to be taken with the snowmobile in an unladen weight condition on any unyielding horizontal surface, with the following exceptions:

3.2.1 OVERALL LENGTH

The horizontal distance from the foremost part of the snowmobile, to include the bumper and ski or ski handles, to the rearmost part of the snowmobile, to include the bumper or other fixed attachments, excluding snow flap.

3.2.2 OVERALL HEIGHT

The vertical distance from any unyielding horizontal surface on which the snowmobile, in an unladen weight condition, rests to the topmost fixed part of the unladen snowmobile, including the windshield.

3.2.3 OVERALL WIDTH

The horizontal dimension of the minimum aperture through which the snowmobile can pass.

4. NOMENCLATURE

Illustrations have been selected to identify functional characteristics and to identify common mechanisms. They are not intended to show all existing commercial machines or to be exactly descriptive of any particular machine. These criteria were prepared to facilitate clear understanding and promote uniformity in snowmobile nomenclature.

A. Track surface

1. Contact length
2. Contact width
3. Flotation length

B. Ski surface

1. Contact length
2. Projected width
3. Projected length
4. Flotation length

C. Height

1. To top of windshield
2. Without windshield, excluding handlebars
3. To top of seat cushion (driver position), excluding snow flap
4. To top of tunnel (highest part)
5. To center of headlamp(s)
6. To center of tail lamp(s)
7. To center of bumper (front)
8. To center of bumper (rear, widest part)
9. To bottom of snow flap

D. Length

1. Bumper to bumper
2. Overall

E. Width

1. Tunnel
2. Seat cushion
3. Overall

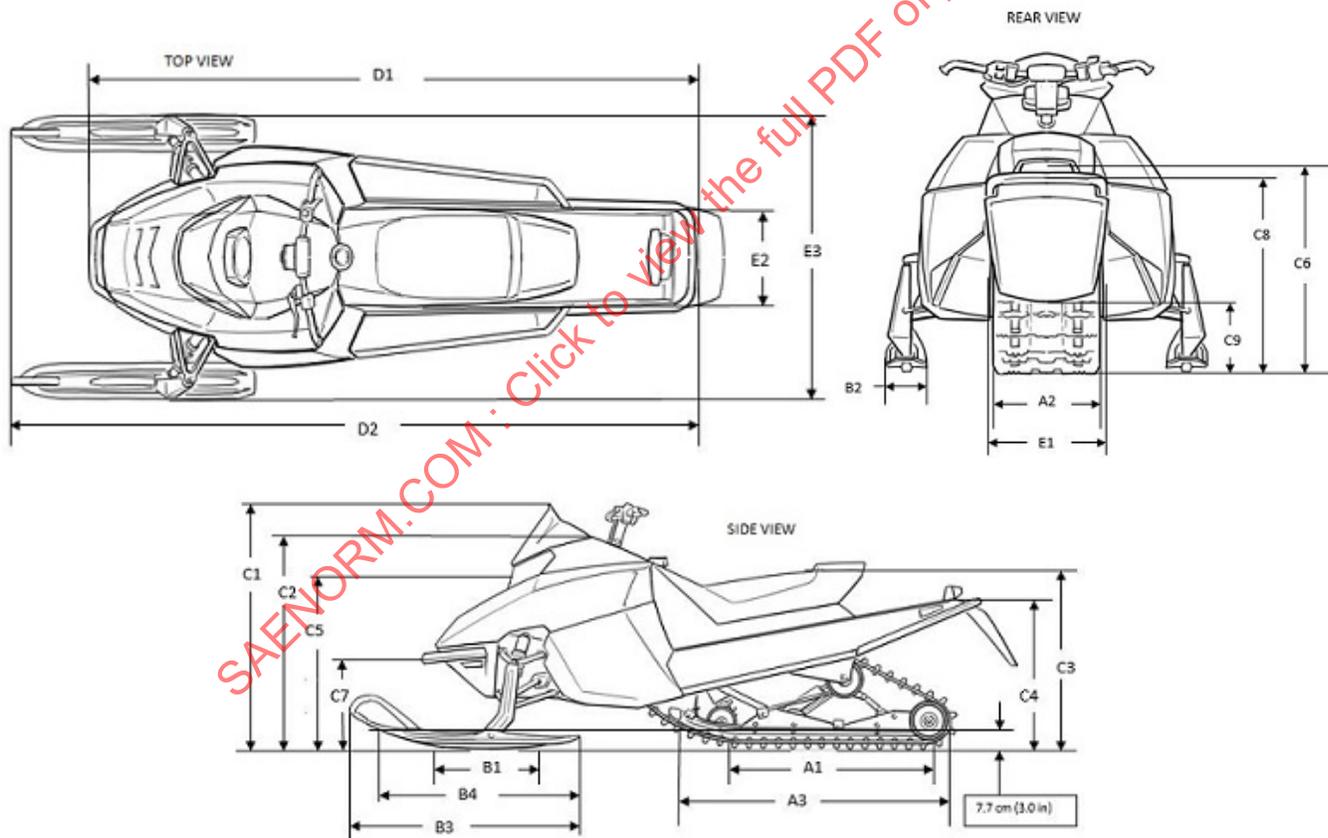


Figure 1 - Snowmobile dimensional definitions