

Saskatchewan Snowmobile Association



Snowmobile Safety

Student Manual



Working Together to Achieve a Safe Saskatchewan

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Snowmobile Safety

Student Manual



**Based on material developed by the
Saskatchewan Snowmobile Association Inc. and the
Saskatchewan Safety Council**

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The Saskatchewan Snowmobile Association

In 1971 a group of concerned snowmobilers formed the Saskatchewan Snowmobile Association (SSA). It was formed to bring snowmobile safety to the forefront of snowmobiling in the province. Over the years the SSA worked and continues to work with the Province to see mandatory snowmobile safety training, mandatory helmet usage, snowmobile speed limit, and updates to the snowmobile Act and Regulations to see them modernized for today's users. The SSA offers classroom snowmobile safety classes as well as on line snowmobile safety training, available 365/24/7. Saskatchewan was the first province in Canada to offer the mandatory snowmobile safety training on line.



At the SSA we take snowmobile safety training seriously, be it in the classroom or on line taking the training is proven to reduce accident, injuries, incidents and fatalities. Get the training - the life you save could be your own.

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Original Artwork by Debb Black

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INTRODUCTION

This student's manual is part of the Snowmobile Safety Course delivered by the Saskatchewan Snowmobile Association. All persons born on or after January 1, 1989 must take a certified snowmobile safety course before they can legally drive a snowmobile in Saskatchewan. However, many adults take the course too, and the Saskatchewan Snowmobile Association encourages family participation in the course.

The objectives of the Snowmobile Safety Course are to increase snowmobile operators' awareness, knowledge and skills in each of the following areas:

The machine – equipment safety

The operator – driving skills and positive attitude

The environment – safe use of trails and facilities and respect for the environment.

The Saskatchewan Snowmobile Association's Snowmobile Safety Course is 7.5 hours long. It consists of demonstrations and discussions and concludes with practical and written exams.

This manual is used during the course. It is also intended for home study before the course and for review after the course.

PART 1: Snowmobiling in Saskatchewan

Part One contains information on the following topics:

- Snowmobiling: A Popular Sport
- Snowmobile Laws
- Law Enforcement
- Respecting the Environment
- Snowmobile Code of Ethics

Part One concludes with a "Test Yourself" section for review and practice.

Snowmobiling: A Popular Sport

Snowmobiling is a very popular sport in Saskatchewan. There are over 50,000 snowmobiles in the province.

There are close to 70 snowmobile clubs in this province. These clubs operate over 10,000 kilometers of trails and 200 warm-up shelters. The warm-up shelters provide a place where snowmobilers can get warm or stay if they are in trouble. The shelters have heaters, solar lighting and first aid equipment. Some snowmobile clubs offer snowmobile safety courses in their home communities. To get information about a snowmobile club in your area of the province contact the Saskatchewan Snowmobile Association or visit their website at www.sasksnow.com

Snowmobiling contributes to Saskatchewan's economy, for example:

- Through the Trail Fund , snowmobile clubs spend in excess of \$2,500,000 annually to maintain groomed trails. These funds are used to purchase and maintain grooming equipment, buy gas and oil, and pay for part-time labor.
- Approximately \$1,000,000 has been invested in warm-up shelters throughout the province. These funds were used to buy materials and pay for labor to build the sheds. The sheds are repaired and maintained as needed which involves further purchases.
- Snowmobilers buy:
 - new and used snowmobiles and other equipment
 - gas and oil
 - the services of mechanics and other technicians
 - cold weather clothing and other specialized gear
 - safety equipment and supplies
 - restaurant meals
 - hotel accommodation

Snowmobilers contribute to their communities, for example:

- Periodically throughout the year snowmobile clubs will host events such as rally's, poker derbies, and festivals raising money for their clubs, helping to promote local business, and expose community groups to snowmobile safety
- Saskatchewan snowmobile clubs organize a variety of charitable events including raffles, silent auctions and draws. Often these charitable activities are done in conjunction with a safety program or have a safety theme.
- Each year hundreds of volunteers give generously of their time to help maintain and sign the trails. Thank you to all of these volunteers for their contributions.

Snowmobile Laws

When must snowmobiles be registered with SGI?

- You must register your snowmobile with Saskatchewan Government Insurance (SGI) if you intend to ride on any Saskatchewan Snowmobile Association designated trail, on Crown land such as highway right-of-ways, ditches, provincial parks, or on lakes and rivers. However, if a Saskatchewan Snowmobile Association designated trail is on land that you own personally, your snowmobile doesn't have to be registered to use the portion of the trail that is on your land.
- You are not required to register your snowmobile if you ride only on privately-owned land and if written permission is given by the owner/tenant.
- A snowmobile that is registered properly in another province or state does not have to be registered in Saskatchewan provided it has not been here for more than 90 days and has liability insurance.

Is a driver's license required?

- A driver's license is needed to operate a snowmobile that is required to be registered. (That is, a snowmobile that is used on public lands)
- Any valid Saskatchewan driver's license (except a learner's permit) allows the holder (born before January 1, 1989) to operate a snowmobile.
- People who are not residents of Saskatchewan and who are visiting here for no more than 90 days do not have to get a Saskatchewan license, if they have a valid license from their home province or state and if they produce this license immediately upon request by any peace officer.

Can people under the age of 16 operate a snowmobile?

People between the age of 12 and 15 may operate a snowmobile if two conditions are met:

- The underage operator must complete a certified safety course before being allowed to operate a snowmobile in public areas and must produce proof of safety course certification at the request of any peace officer.
- The underage operator must be supervised by someone who holds a valid class 5 or better Saskatchewan driver's license. The supervisor must not be under the graduated driver license program. The supervisor must be a valid snowmobile operator and must accompany the young driver on the same or on another snowmobile.
- The supervisor:
 - may supervise only one underage operator at a time.
 - may not be more than 50 metres from the underage operator.
 - must keep the underage operator in sight to permit visual communication.
 - is deemed to be the operator of the other machine and may be held liable for the actions of the underage operator.

What about someone who is 16 or over and does not have a driver's license?

- People who are 16 or over and do not have a driver's license are permitted to operate a snowmobile in public areas except for the travelled portion of a road, provided they have successfully completed a snowmobile safety course.
- People who are at least 16 years of age and holds a Class 7 learner's license is permitted to operate a snowmobile on the travelled portion of a road (where a bylaw exists allowing for the operation of snowmobiles on public roads), provided they are supervised or accompanied by someone who holds a valid driver's license. Snowmobile operators born after Jan. 1, 1989, must have completed a safety course to operate a snowmobile in a public area, even if they have a driver's license.

What insurance coverage do I have?

- If you are operating a registered snowmobile lawfully and in accordance with *The Automobile Accident Insurance Act*, the owner and operator are insured against third-party liability for up to \$200,000. This means that if you damage someone's property while you are driving your snowmobile, the coverage that comes with your license plate will provide up to \$200,000 coverage if you are found responsible. Plate insurance coverage is not provided if the snowmobile operator is impaired by alcohol or drugs, is over the legal blood-alcohol limit, is not qualified to drive, or is driving contrary to the driver's license conditions.
- The snowmobile plate insurance applies to snowmobile rallies as long as the rally is not a race or speed test.
- Many snowmobile owners get package policies to supplement the insurance coverage provided under their plate insurance. This supplementary insurance often provides coverage for personal injury, vehicle damage and increased coverage for third-party liability. The terms and conditions of package policies vary from one insurance company to another and some place conditions on snowmobile use, including restrictions on drivers under the age of 16. Check with individual insurance brokers about the conditions associated with their policies.
- Package policies are available from most insurance companies. Check with your insurance broker to determine your best insurance protection.

Trail Information

For trail information about the snowmobile club nearest you, call the Saskatchewan Snowmobile Association at 1-800-499-SLED or email through www.sasksnow.com. In Saskatchewan, trail permits are no longer required. The trail system is funded through the purchase of registrations.



What does the law say about alcohol and drugs?

It is illegal to:

- keep or consume liquor on a snowmobile; and/or marijuana (effective July 1, 2018) on a snowmobile
- drink liquor on or near a snowmobile trail open to the public, or on private property without the consent of the landowner
- transport liquor on a snowmobile, except from one lawful place of consumption to another such place

What other laws apply?

In addition to the provisions of ***The Snowmobile Act***, there is other legislation affecting snowmobilers:

All ***Criminal Code*** provisions regulating vehicle drivers apply to snowmobile operators, and most provisions apply on private as well as public land. If you lose your license because of a conviction for any of the following offences, you are not permitted to drive a snowmobile:

- driving while impaired by alcohol or drugs (exceeding .08 percent alcohol in blood).
- refusing to provide a breath sample.
- driving dangerously.
- driving while prohibited.
- leaving the scene of a collision (hit and run).

Under the terms of ***The Wildlife Act*** and the ***Saskatchewan Hunting Guide***, you are **prohibited from:**

- using a snowmobile to drive animals or birds towards hunters.
- chasing, disturbing, pursuing, injuring or killing any wild animal or bird.
- carrying a loaded firearm on, or discharging a firearm from a snowmobile.
- carrying a firearm on a snowmobile in some wildlife management zones during open season.
- using a snowmobile for any hunting purpose in some zones.
- carrying a firearm, unless encased, on a snowmobile in some zones and areas.

Source: Adapted from *Snowmobiling in Saskatchewan*. (2016). Saskatchewan Government Insurance.

Law Enforcement

In Saskatchewan, the RCMP and provincial conservation officers often patrol snowmobile trails. They check to ensure that:

- the snowmobile speed limit (80 km per hour, slower when posted) is being observed.
- all snowmobiles require an up-to-date registration to operate on public trails, and crown land.
- drivers are those who are born January 1, 1989 or later, are at least 12 years of age, have taken a certified safety course and are supervised by a licensed driver. The driver may operate alone if they are 16 years of age and have a certified snowmobile safety certificate.
- all snowmobilers are not under the influence of alcohol or drugs and are following the laws relating to alcohol and drugs.
- all snowmobilers are wearing a certified snowmobile helmet.
- Fine for driving without a license and a snowmobile safety card start at \$150.00
- Driving an unregistered snowmobile is \$100.00
- Speeding in excess of 80 km/h is \$150.00

Respecting the Environment

Saskatchewan is a beautiful province. Help keep it that way by respecting the environment.

- **Stay on Trails** – Staying on the trails helps to ensure that trees and plants aren't damaged or destroyed. Staying on the trails is a good safety precaution, too. There is less chance of hurting yourself by running into low-hanging tree branches and less chance of damaging your machine by hitting hidden rocks, roots and stumps when you stay on the trail.

Safety Highlight

Respect the environment!

- Stay on trails
- Respect farmers
- Respect trap lines
- Respect hunters
- Respect wildlife
- Don't litter
- No Trespassing

- **Respect Farmers** – Stay away from farm buildings and livestock.
-
- **Respect Trap lines** – Stay away from trap lines, so that you don't damage traps or furs.
- **Respect Hunters** – Stay away from hunters, as the noise of the snowmobile will scare game. Staying away from hunters also reduces the potential of travelling between a hunter and game and being shot.
- **Respect Wildlife** – It is against the law to disturb or chase any type of wildlife including birds.
- **Don't Litter** – Leave nothing behind you except your tracks. When you are snowmobiling, you may have garbage such as wrappers from your lunch and containers from gasoline anti-freeze. Pack all of this garbage up and take it out with you and throw it in an appropriate garbage container. Keep our natural environment clean – don't litter.
- **No Trespassing**—It is important that all snowmobilers, young and old, respect private property when out snowmobiling. Pay attention to posted land and abide by "No Trespassing" signs. If permission is required, be sure to contact the land owner before entering their property. Many land owners provide their land to host the trails. It is important to comply with them so that these kind people continue to grant us access to these trails. Snowmobiling is a privilege and not a right, please respect land owners.

Snowmobile Code of Ethics

- I will know and obey all federal, provincial and local rules regulating the operation of snowmobiles in areas where I use my vehicle.
- I will be a good sportsperson and will respect nature. I recognize that people judge all snowmobilers by my actions. I will use my influence with other snowmobile owners and operators to promote good conduct.
- I will not litter trails or camping areas. I will not pollute lakes or streams. I will carry out what I carried in.
- I will not damage living trees, shrubs or other natural features.
- I will respect other people's property and rights.
- I will lend a helping hand when I see someone in distress.
- I will make myself and my machine available to assist in search and rescue operations.
- I will not interfere with or harass hikers, skiers, snowshoers, ice anglers or others. I will respect their rights to enjoy our shared recreation facilities.
- I will not harass wildlife. I will avoid areas posted for protection of wildlife.
- I will not snowmobile where prohibited.

Source: *Snowmobiling in Saskatchewan*. (2016). Saskatchewan Government Insurance.

Test Yourself: Snowmobiling in Saskatchewan

1. When can people aged 12-15 legally drive a snowmobile?
 - (a) When they pass a special driver's test.
 - (b) If they have passed a certified snowmobile safety course and are supervised by a licensed driver.
 - (c) If they have a learner's permit to drive a car.
 - (d) If they have a special underage snowmobile permit.
2. When must a snowmobile be registered with SGI?
 - (a) Always.
 - (b) If the snowmobile is used on privately-owned land.
 - (c) If the snowmobile is used for business purposes (for example, inspecting telephone, power or trap lines).
 - (d) If the snowmobile is used on Crown land or on public lands and trails.
3. What insurance coverage does snowmobile plate insurance provide?
 - (a) Third-party liability for up to \$200,000.
 - (b) Personal injury up to \$200,000.
 - (c) Damage to the snowmobile up to the value of the machine.
 - (d) Damage to the snowmobile up to \$10,000.
4. When can people under the age of 12 operate a snowmobile on Crown land and Saskatchewan Snowmobile Association Inc. trails?
 - (a) If they have passed a certified snowmobile safety course and are supervised by a licensed driver.
 - (b) If they have a special permit.
 - (c) If they have passed a special snowmobile driver's test.
 - (d) Never.
5. If you lose your driver's license for drinking and driving, what effect does this have on driving a snowmobile?
 - (a) You can drive a snowmobile only on private land.
 - (b) You must stay within 20 km of your home when driving a snowmobile.
 - (c) You are not permitted to drive a snowmobile.
 - (d) You can drive a snowmobile only on Crown land.
6. When can you use a snowmobile to chase wildlife you are hunting?
 - (a) Never.
 - (b) During hunting season only.
 - (c) When hunting birds only.
 - (d) When hunting deer, moose and elk only.
7. What is the snowmobile speed limit?
 - (a) 80 km per hour, slower if posted.
 - (b) 50 km per hour, slower if posted.
 - (c) 100 km per hour, slower if posted.
 - (d) Whatever is reasonable given the trail and weather conditions.

Answers: 1 - (b) 2 - (d) 3 - (a) 4 - (d) 5 - (c) 6 - (a) 7 - (a)

PART 2: Getting to Know Your Snowmobile

Part Two contains information on the following topics:

- Read the Owner's Manual
- The Parts of Your Snowmobile
- Snowmobile Instruments and Controls
- Spare Parts and Tools
- The Fuel System
- Pre-Start Check
- Starting Your Snowmobile
- After the Snowmobile Has Started
- Trailering Your Snowmobile
- Storing Your Snowmobile

Part Two concludes with a "Test Yourself" section for review and practice.

Read the Owner's Manual

The first step in getting to know your machine is to read your owner's manual. It lists the parts of your snowmobile and describes basic maintenance and repairs. Each model of snowmobile is slightly different, so it is important to become familiar with your own machine. Be sure to keep the manual with the machine.

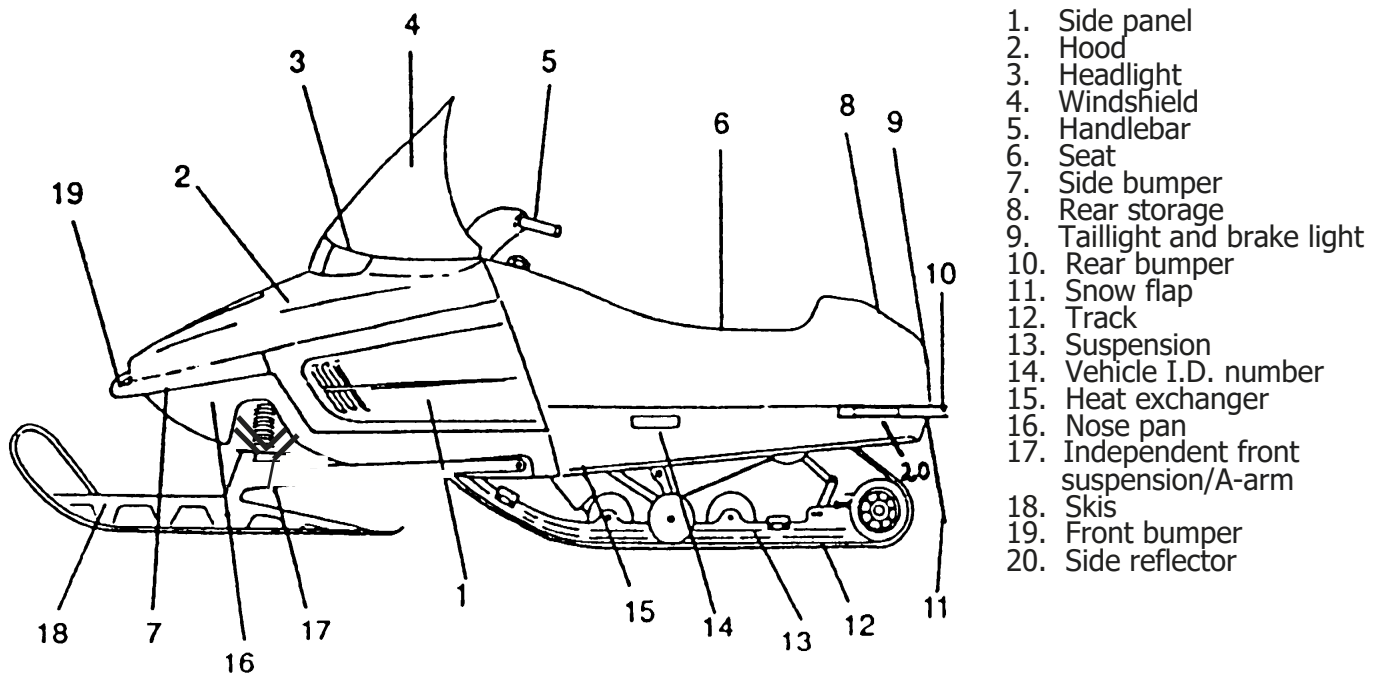
The Parts of Your Snowmobile

The three sections that follow are:

- The Outside of Your Snowmobile
- The Inside of Your Snowmobile
- Safety Equipment

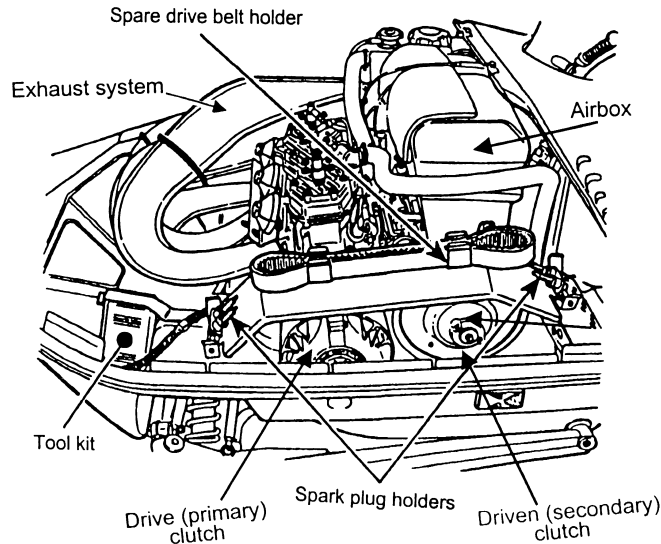
The Outside of Your Snowmobile

Every snowmobile is slightly different. The drawing below shows where the most important parts are located on the majority of snowmobiles.



The Inside of Your Snowmobile

Every snowmobile is slightly different. The drawing below is typical of most snowmobiles. On newer sleds, some disassembly may be required to reach basic operating parts.



Drawing courtesy of Bom-
and Marine, Regina.
Used with permission of Bom-

bardier Inc. and Sunwest Sport
bardier Inc.

Safety Equipment

Under Canadian law (the *Motor Vehicle Safety Act*), all new snowmobiles sold by manufacturers must be equipped with the following:

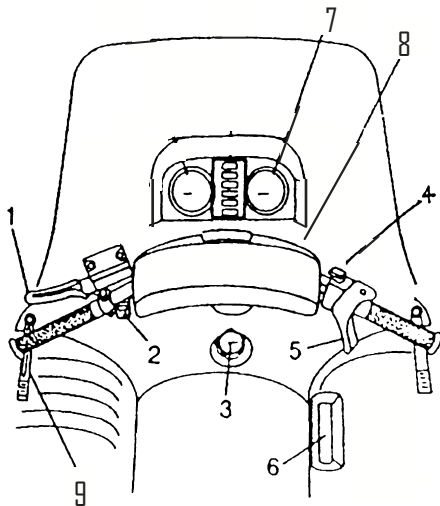
- Windshield – protects the operator by deflecting wind, snow and debris.
- Headlights – must be visible by approaching vehicles from 150 metres (500 feet).
- Taillights – must be visible from 60 metres (200 feet).
- Side reflectors on the front and rear of the machine – make the snowmobile more visible.
- Throttle control – changes the speed of the snowmobile.
- Brakes – slow down the snowmobile.
- Padded handlebar – protects the operator .
- Shields on movable parts – protects the operator if a belt or chain breaks.
- Emergency shut-off switch – permits the machine to be shut off in an emergency.
- Running board – supports and protects the feet.
- Snow flap – deflects stones, ice and other objects hurled back by the track.
- Front/rear bumper – protects the snowmobile in case of a minor collision and provides a place to grab.
- Passenger strap/handgrips – gives the passenger something to hold onto.

Snowmobile Instruments and Controls

The most important instruments and controls on your snowmobile are:

- Starter – may be either manual start or electric start. Electric start machines also have a manual capacity. 4-stroke machines have electric start only.
- Steering system – made up of the handle bars and the skis.
- Throttle control – used to control the speed of the machine. Located on the right handlebar, returns to idle position when released and has a safety switch so it can't be stuck open.
- Brake lever – used to stop or slow the machine, located on left handlebar, returns to the "off" position when released.
- Parking brake – used to lock the brake lever in the "on" position when parked, located next to the brake lever.
- Light switch – has "high beam" and "low beam" indicators, located on the left handlebar.
- Tether Switch—is usually found on the dashboard. It is a safety cord attached to your jacket that will act as a emergency kill switch should you fall off of your snowmobile.
- Kill Switch— is a safety mechanism used to shut off a device as quickly as possible.
- Choke – used to start the machine.

The diagram below shows the most important snowmobile controls and instruments. This diagram is typical of most snowmobiles, but yours may be slightly different. Refer to the owner's manual for your machine.



1. Brake control
2. Headlight dimmer switch (2 position)
3. Fuel filter cap/gas gauge
4. Auxiliary shut-off switch (push/pull)
5. Throttle control / with heater
6. Recoil starter handle (not found on all models)
7. Multi-function instrument pod
8. Safety decals
9. Hood hold down

Spare Parts and Tools

Always carry a supply of basic spare parts and tools with you in case you break down on the trail. The following items can save your life. The list below is a bare minimum. You may wish to carry more spare parts and tools if you have the room.

<ul style="list-style-type: none"><input type="checkbox"/> Spare key/tether<input type="checkbox"/> Owner's manual (wrapped in plastic to protect from moisture)<input type="checkbox"/> Spare spark plugs (new & adjusted)<input type="checkbox"/> Spark plug wrench<input type="checkbox"/> Pliers<input type="checkbox"/> Screwdriver with multiple heads<input type="checkbox"/> Flashlight<input type="checkbox"/> Wrenches that fit your machine<input type="checkbox"/> Spare drive belt (broken in)	<ul style="list-style-type: none"><input type="checkbox"/> Tow rope (nylon, about 15 metres long)<input type="checkbox"/> Fuel deicer isopropyl<input type="checkbox"/> Small set of booster cables for 4-strokes<input type="checkbox"/> Extension cord for block heater<input type="checkbox"/> Extra oil<input type="checkbox"/> Trail map/road map<input type="checkbox"/> Wire and/or strong fishing line<input type="checkbox"/> Matches wrapped in plastic<input type="checkbox"/> Duct Tape
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The Engine and Fuel System of Snowmobiles

Snowmobile engines can either be 2-stroke or 4-stroke.

2-Stroke Engine:

On a 2-stroke engine oil and gasoline are injected into the engine. The gasoline is for combustion (power) and oil is for engine lubrication. The advantage of a 2-stroke is its lighter weight.

4-Stroke Engine:

On a 4-stroke engine the engine oil is stored in a sump and used for lubrication when the machine is running. Gasoline is injected for combustion (power). The 4-stroke engine is very similar to an automobile engine. The advantage is a longer engine life, but it is heavier.

Filling the Snowmobile Tank

- Turn off the snowmobile before you refuel it
- Be sure the snowmobile is in a well-ventilated area when you refuel it
- Never smoke when you refuel your snowmobile

- For newer 2-stroke snowmobiles, the oil and gas are put into the machine separately and the system automatically regulates the oil and gas mixture. Most snowmobiles will run well on regular gas, but some high performance machines may require premium fuel. Use only approved 2-stroke snowmobile oil as suggested by either the owner's manual or the dealer. Oil is stored in the oil pan of a 4-stroke snowmobile (similar to a vehicle) and only needs to be changed at the time of an oil change.
- Read the owner's manual carefully to get information about the type of gas and oil to use. The manual will also give specific instructions for the "break-in" period.

Be Careful When Handling Gasoline

Be very careful when you are handling gasoline during cold weather. Gas does not freeze no matter how cold it gets. If you spill gas on your hands, they will freeze quickly and seriously. When gas touches your skin at sub-zero temperatures, it evaporates immediately. This reduces the skin's temperature and increases the risk of freezing. If you do spill gas on your skin:

- Wipe it up immediately (keep rags or paper towels nearby, just in case).
- Cover your skin with mitts or other clothing to restore warmth.
- Do not rub your skin.

Pre-Start Check

You can prevent breakdowns and collisions by ensuring that your snowmobile is in good operating condition. Do a pre-start check every time you take your snowmobile out. This check is important; breaking down is always inconvenient and if a breakdown happens on an isolated trail or in cold weather, it can be life-threatening.

Pre-Start Checklist

- ☐ Point the snowmobile in a safe direction and be sure no one is in front or behind.
- ☐ Check the throttle; make sure it does not stick.
- ☐ Check the fuel and/or oil level – don't rely on the gauge. Open the gas and oil filter caps and check the level with a flashlight.
- ☐ Check for loose bolts and defective parts.
- ☐ Make sure the brake lever operates properly – When the brake is fully applied, the lever should be approximately 2.4 cm away from the handlebars. When the lever is released, it should return to the full off position without sticking.
- ☐ Check to be sure the steering system is working properly by moving the skis manually from left to right.
- ☐ Check the drive belt and track for wear.
- ☐ On liquid-cooled snowmobiles, check coolant levels and hoses.
- ☐ Ensure that the hood and/or side panels are fastened.
- ☐ Be sure that spare parts and tools are securely fastened on the machine.
- ☐ Be sure that the lighting system works – headlight (dim and high beam), tail light and brake light.

Starting Your Snowmobile

The exact starting procedure for your snowmobile will be described in the owner's manual. A general procedure for starting the engine is as follows:

Snowmobile Starting Procedure

- ☐ Sit or kneel whenever possible – it is easier to control the machine in these positions. It may be necessary to stand when the engine is cold, as the starter rope may be hard to pull.
- ☐ Check to be sure the throttle is operating by depressing the throttle lever at least twice.
- ☐ Be sure the machine is pointed in a safe direction and there is no one in front or behind.
- ☐ Insert the key and turn it to the "on" position.
- ☐ Make sure the emergency switch is "on" and the tether cord is properly attached.
- ☐ If the motor is cold, apply the choke by lifting the choke lever up if so equipped.
- ☐ Be sure the snowmobile is not in reverse.
- ☐ Start the engine
 - If you have a manual start engine, pull the starter rope (recoil handle) and allow it to return to the normal position. Don't let the starter rope snap back.
 - If you have an electric start machine, turn the key to engage the starter. It may be necessary to do this several times to start the motor. If the engine doesn't start after several tries, use the manual starting procedure. Don't run down the battery.
 - On a 4-stroke engine a block heater may be needed to start and run smoothly in cold weather.
- ☐ Allow the engine to warm up before moving the snowmobile.

After the Snowmobile Has Started

Once your snowmobile has started and is running smoothly a few additional steps will help keep both you safe and your snowmobile in good condition.

After the Snowmobile Has Started Checklist

- ☐ Check the lights to be sure they are working.
 - Headlight – high and low beam
 - Taillight
 - Brake light
- ☐ Rotate the snowmobile track to clear it of bits of ice and frozen snow, rocks, wood, etc. Prop up the back of the snowmobile with an approved jack stand when you are rotating the track and be sure that it is pointed away from people and objects that could be damaged by flying objects. The track will be stiff and cold, so apply the throttle slowly. Use only enough throttle to get the track moving slowly, otherwise you will wear out the drive belt.
- ☐ Activate the emergency stop switch to be sure it is working.

Trailing Your Snowmobile

Most snowmobilers trailer their snowmobile if they are going to a trail or rally that is any distance from home.

Below are checklists for:

- Trailer Safety
- Snowmobile Loading Procedure
- Pre-Transport Safety Procedures
- Safety on the Road
- Snowmobile Unloading Procedures

Trailer Safety

The trailer that you use to transport your snowmobile must be registered with SGI and appropriately insured. When you register with SGI and pay the license fee, you will receive a license plate for your trailer.

Safety on the Road

When you are towing a trailer, your vehicle becomes heavier, longer and less maneuverable.

- Allow lots of extra stopping distance. You may take up to twice as long to stop.
- Leave extra space between your vehicle and other vehicles on the road.
- Allow extra room to turn corners.
- Look for extra long parking spaces.
- Allow a 5 second interval.

Trailer Safety Checklist

The trailer that you use to transport your snowmobile must be equipped with:

- ☐ Trailer ball – a solid ball with a lock washer and nut is required.
- ☐ Ball hitch lever – this lever must be secured and locked down.
- ☐ Safety chains – must be crossed under the tongue of the trailer and latched to the frame of the towing vehicle.
- ☐ Tilt bed – must be lubricated.
- ☐ Tires on trailer – tires must be adequately inflated.
- ☐ Spare tire.
- ☐ Lug nuts – all nuts must be in place.
- ☐ Brakes – must be in proper working condition if so equipped.
- ☐ Lights – taillights and brake lights must be visible and in working order.
- ☐ License plate – must be securely fastened, clean, visible and current.

Snowmobile Trailer Loading Procedure

Most snowmobile trailers are equipped with a “tilt” top that allows easy loading and unloading. Use extreme caution if you are driving a snowmobile onto a tilted trailer. Follow the procedure below to load a snowmobile.

Snowmobile Trailer Loading Procedure Checklist

- ☐ Bring the snowmobile to a complete stop.
- ☐ Test the brake lever several times.
- ☐ Slowly drive onto the trailer with your hand on the brake lever.
- ☐ Apply the brake firmly as soon as the snowmobile is in place.
- ☐ Hold the brake on and shut off the engine (or use the parking brake if your machine has one).
- ☐ Keep the brake (parking brake) engaged while you are getting off the snowmobile to keep the machine from sliding backwards until you have the trailer tilted up.
- ☐ Don't transport snowmobiles backwards on a trailer.

Pre-Transport Safety Procedures

Before you start to transport your snowmobile, follow the safety procedures below.

Pre-Transport Safety Procedures Checklist

- ☐ Secure the snowmobile to the trailer with a ski tie-down bar at the front and tie down straps or rope at the back.
- ☐ Fasten the trailer tongue securely to the towing vehicle – on-tilt-up trailers, engage the safety pin in the tongue.
- ☐ Cross the safety chains under the trailer tongue and latch them securely to the frame of the towing vehicle.
- ☐ Cover the snowmobile to protect it from salt on the road and flying rocks and ice.
- ☐ Check trailer lighting system before starting out.

Snowmobile Unloading Procedures

Snowmobile Unloading Procedures Checklist

To unload a snowmobile from a trailer:

- ☐ Remove the anchors that are holding the snowmobile to the trailer.
- ☐ Remove the snowmobile cover.
- ☐ Pull the snowmobile off the trailer by hand or use reverse if the machine has a reverse gear.
- ☐ Lock the trailer to the towing vehicle to prevent theft.
- ☐ Put your snowmobile cover, rubber tarp straps, ropes, etc. in your vehicle to prevent theft.

Storing Your Snowmobile

Each spring, when the snowmobile season is over, your machine must be prepared for storage and properly stored. Follow the steps in the checklist below.

Snowmobile Storage Checklist

- ☐ Clean the exterior of the machine and wax the hood.
- ☐ Wash the seat and the interior of the machine.
- ☐ Grease and lubricate the machine, as required.
- ☐ Replace any missing belts, screws, and cracked lights or reflectors.
- ☐ Add a fuel stabilizer.
- ☐ Remove the spark plugs and add one teaspoon of 2-cycle engine oil to each cylinder to prevent rust. Pull the recoil rope to lubricate the cylinder walls. Replace the spark plugs or put in new ones or you may fog the engine.
- ☐ Remove the drive belt and lubricate the drive clutch and chain.
- ☐ Store your snowmobile inside a garage or shed if possible. If this is not possible be sure it is well covered with canvas or plastic.
- ☐ Put boards under the snowmobile skis to prevent them from rusting – do not let the skis rest on a concrete floor.
- ☐ Block up the rear of the machine and loosen the track.
- ☐ Do at least one seasonal oil change on a 4-stroke.

Test Yourself: Getting to Know Your Snowmobile

1. When should you turn off your snowmobile?
 - (a) When passengers are getting on and off.
 - (b) When you are refueling.
 - (c) When you are stopped for more than 5 minutes in weather above 0°C.
 - (d) When you are waiting your turn at a rally or race.
2. If you spill gas on your skin what should you do?
 - (a) Rub your skin vigorously.
 - (b) Apply snow to your skin and keep your skin cold.
 - (c) Wipe up the gas and cover your skin to keep it warm.
 - (d) See a doctor immediately.
3. When do you need to do a pre-start check on your snowmobile?
 - (a) Every time you take it out.
 - (b) At the beginning of each season.
 - (c) Before trips of 50 km or more.
 - (d) Once a month.
4. What distance must the headlights on new snowmobiles be visible from?
 - (a) 80 metres (200 feet).
 - (b) 100 metres (330 feet).
 - (c) 125 metres (410 feet).
 - (d) 150 metres (500 feet).

Answers: 1 – (b) 2 – (c); 3 – (a); 4 – (d)

PART 3: Safe Snowmobile Operation

Part Three contains information on the following topics:

- Where to Ride
- Rules of the Road
- Driving Positions
- Driving Guidelines
- Basic Driving Techniques
- Snowmobile Trails
- Hand Signals
- Special Snowmobiling Situations
- If Your Snowmobile Breaks Down

Part Three concludes with a “Test Yourself” section for practice and review.

Where to Ride

Snowmobile riding is permitted:

- on Crown land, including highway right-of-way and designated park trails, except on roads and in areas prohibited by signs
- on privately-owned land with the written permission of the owner-tenant
- on privately-owned land outside the limits of cities, towns, villages and hamlets not posted with signs prohibiting trespassing or snowmobiling (snowmobile must be registered and plated).
- on Saskatchewan Snowmobile Association designated trails.

Some restrictions:

- **Provincial Highways** – Riding on a provincial highway is strictly prohibited, except to cross it. Cross all roads at right angles only.
- **Provincial Parks** – Riding in parks is permitted only on designated/signed trails.
- **Rural Municipalities** – Riding across rural roads is permitted, but riding on roads is governed by local bylaw.
- **Cities, Towns, Villages and Hamlets** – Unless permitted by local bylaw, riding on roads or even crossing roads is prohibited within the boundaries of any city, town, village or hamlet.

- **Crossing Roads, Highways and Railway Tracks** – The law permits you to go across highways and roads outside any city, town or village. The procedure as required by law is:
 - Bring the snowmobile to a complete stop before entering any highway lane including the shoulder.
 - Passengers must get off the snowmobile and any towed sled or toboggan.
 - For safety reasons, lift your face shield and look both ways for oncoming vehicles
 - Yield the right of way to all other vehicles and people using the highway.
 - Approach the highway or railway tracks at a right angle or as close to a right angle as possible.
- **Riding Beside a Road** – If you are riding in the highway ditch or right-of-way, you must travel in the same direction as the nearest traffic lane. This is a requirement at night when you are within 30 metres (100 feet) of the road, to prevent confusing and dangerous situations for automobile drivers. Riding in the median of divided highways at night is illegal. Take caution during the day. Always ride single file with low beams on even during the day to increase your visibility.
- **No Trespassing**—It is important that all snowmobilers, young and old, respect private property when out snowmobiling. Pay attention to posted land and abide by “No Trespassing” signs. If permission is required, be sure to contact the land owner before entering their property. Snowmobiling is a privilege and not a right, please respect land owners.
- **Privately-Owned Land** – Operation of a snowmobile is allowed on privately owned land unless it is posted with “**no trespassing**” or “**snowmobiling prohibited**” signs.
- **Cities, towns, villages and hamlets** – In order to ride on land that is owned by and within the limits of cities, towns, villages, and hamlets, the person must first get permission from the city, town, village, or hamlet.

Source: *Snowmobiling in Saskatchewan*. (2016). Saskatchewan Government Insurance.

Rules of the Road

Snowmobilers must obey all applicable traffic rules, including:

- the snowmobile speed limit of 80 km per hour, slower if posted.
- other posted speed limits.
- traffic control signs and lights regulating traffic on, approaching, or leaving highways.
- trail signs, markers and directional signs.
- following at a reasonable and safe distance.
- driving with due care and attention and with consideration for other people and property.
- yielding right-of-way:
 - keep to the right when approaching other vehicles, including snowmobiles.
 - yield to all vehicles approaching from the right.
 - keep clear of the other vehicle when passing.

Safety Highlight

- It is forbidden to ride on a provincial highway, except to cross it.
- Cross all highways, roads and railway tracks at a right angle only when safe to do so.

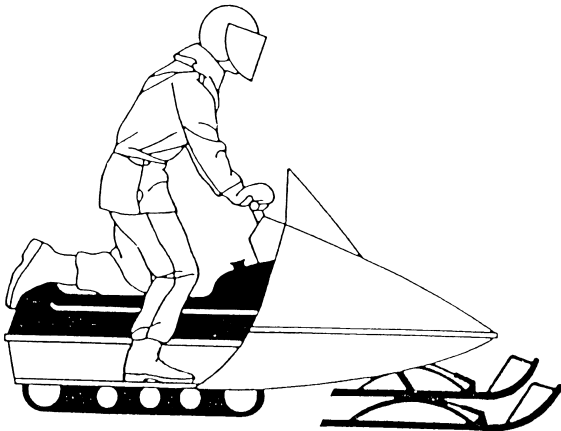
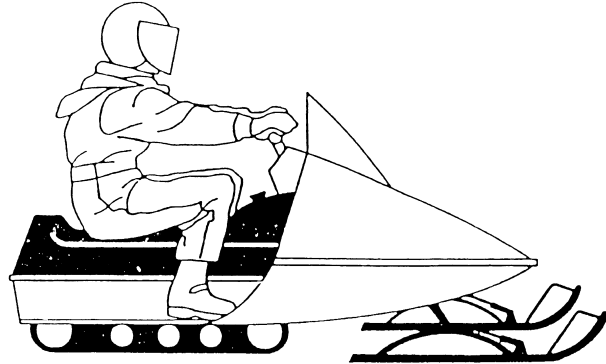
Source: *Snowmobiling in Saskatchewan*. (2016). Saskatchewan Government Insurance.

Driving Positions

Three driving positions are described below. They are sitting, kneeling and standing.

Sitting

Sitting is the most common position for operating a snowmobile and the safest. You should always sit when you are learning to operate a snowmobile. The sitting position allows you to easily shift your weight from side to side.

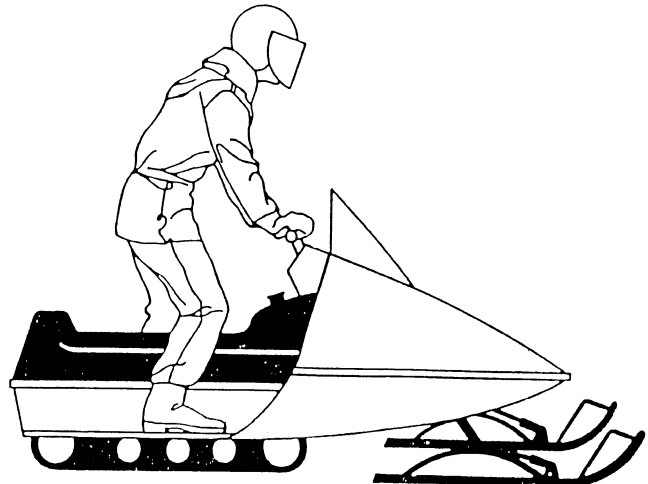


Kneeling

Use the kneeling position when you are operating in soft or lightly packed snow, or when you are "side-hilling". When you are kneeling it is easier to lean into a hill. Also, use the kneeling position when you are driving onto a trailer.

Standing

In the standing position, you can absorb shocks when you are travelling over bumpy ground, because your knees are bent. However, when you are standing it is difficult to gain quick control over the snowmobile in an emergency.



Driving Guidelines

Drive Safely

- Make sure you are familiar with the operation of your snowmobile.
- Tell someone where you are going, your route and when you expect to return.
- Carry a cell phone in a warm pocket and be aware of the coverage area of your cell phone.
- Travel with a buddy. In an emergency, you are each other's best chance of survival.
- Know the terrain where you are planning to travel.
- Never consume alcohol or drugs before or during snowmobiling.
- Do not drive too far until you are very familiar with the way your snowmobile operates.
- Operate at safe and reasonable speeds. The snowmobile speed limit of 80 km per hour is too fast for many situations.
- Whenever possible, let the engine slow you down instead of using the brake.
- If you need to use the brake, press it lightly. Pressing it hard when you are going fast will lock the track and cause the snowmobile to spin.
- Be extra careful at night. Drive slowly enough to stop within your headlight range.
- Keep your feet on the running boards, so they do not stick out. Keep both hands on the handlebars.
- If the throttle on your snowmobile suddenly becomes stuck or frozen, stay calm and maintain control of the machine. Activate the "emergency kill switch" to stop the motor. Do not try to restart the snowmobile until the problem is fixed.

Watch for Hazards

The snow hides many hazards. Watch out for:

- **Thin ice** – What may look like a smooth hard lake surface could turn out to be open water covered with a thin layer of ice. Be sure the ice on the lakes, rivers and streams is thick enough to carry the weight of your snowmobile.
- **Fences and posts** – Snow often hides fences; if you see fence posts, assume there is wire between the posts.
- **Ditches and excavations** – Ditches and excavations can become completely full of snow and you may not see the potential hazard. Be especially careful near roads and residential areas where there may be excavations for power and sewer lines, basements, etc.
- **Culverts** – When riding in a ditch, watch out for culverts. You can easily hook a ski in an open culvert and flip. Be especially careful in low lying areas of the ditch.
- **Guy wires** – Power poles and towers are usually supported by guy wires which extend several metres out from the pole or tower – watch out.
- **Metal or survey stakes** - snow may cover any metal or survey stakes near ditches.
- **Railway Crossings**— Never ride on a railway track or railway property. Cross only at authorized crossings. If not possible, the procedure for crossing a railway track is the same as crossing a highway, come to a complete stop, unload passengers and yield to any railway traffic then proceed straight across the track at a 90—degree angle.
- **Grain Bags**—They can be difficult to be seen as snow often hides grain bags. Please avoid and stay off them.

Source: *Snowmobiling in Saskatchewan*. (2016). Saskatchewan Government Insurance.

Basic Driving Techniques

Hills and hard-packed snow conditions call for special driving techniques. The techniques described below are:

- Going Uphill
- Going Downhill
- Side-Hilling
- Driving on Ice or Hard-Packed Snow

Going Uphill

When you are snowmobiling uphill:

- Sit on the machine and lean forward.
- Lean toward the hill if you must turn.
- Maintain enough speed so you don't spin out.
- Be careful – you often cannot see what is on the top of the hill – be ready to stop if there is another snowmobile, an animal or trees on the top of the hill.

Going Downhill

When you are snowmobiling downhill:

- Sit on the machine with your feet forward and braced on the running boards at the beginning of the tunnel track.
- Lean in the direction of the turn if you must turn.
- Keep speed to a minimum – losing control is the most serious danger when going downhill. Keep the clutch engaged – do not let the machine free-wheel. Apply the throttle and brake, alternately or at the same time.
- Squeeze the brake gently if you must stop.
- Be prepared to brake or stop at any time.
- In case of an emergency such as an unexpected icy spot or an obstacle in the trail, turn your machine to one side and lean into the hill.
- Be absolutely sure of what is at the bottom of the hill.

Side-Hilling

Side-hilling is a technique used in extremely hilly areas where riding straight uphill or downhill is too dangerous. Side-hilling involves moving up or down the hill by going in a zigzag motion across the hill. When side-hilling:

- Always lean toward the hill. The harder you lean, the better control you will have because of the pressure placed on the inside track.
- Be prepared to shift your position quickly and carefully when turning at the end of each zigzag.
- Try to avoid side-hilling on icy surfaces. Side-hilling is easier in fresh snow than on ice, so only experienced snowmobilers should try side-hilling under icy conditions.

Driving on Ice or Hard-Packed Snow

Hard-packed snow or ice are sometimes found in heavily used areas and groomed trails. When driving on an icy or hard-packed surface:

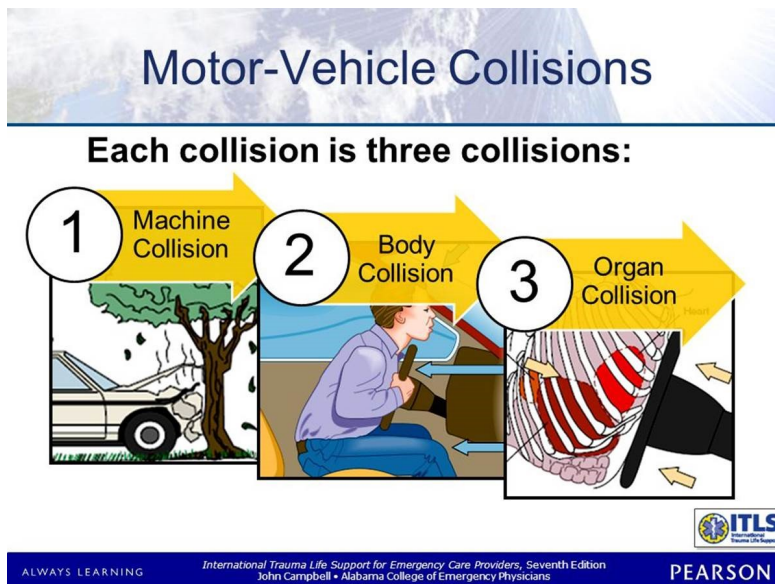
- Be very careful – it is more difficult to control your machine under these conditions.
- Use only moderate acceleration to avoid “fish-tailing”.
- Apply the brake lightly – fast stops will cause the snowmobile to slide out of control.
- To stop the snowmobile, slowly let up on the throttle and let the machine coast to a stop.
- If you begin to skid, turn into the direction of the skid and apply power lightly.
- Practice turning on ice or hard-packed snow in a safe area before you go out on the open trail.
- Carbide wear bars on the skis are very helpful.
- A studded track is also helpful in icy conditions.

Stopping Distances for Snowmobiles

Referring to stopping distances is to articulate a better description of the relationship with speed and how the lack of judgement of speed could likely lead to a potential mishap. In a crash, there is limited protection on a snowmobile compared to a vehicle. There is an emphasis that needs to be made on the fact that the faster the speed of travel, a longer distance will be travelled prior to reacting and then the actual distance that it takes to stop will be increased by the higher speeds. **SPEED KILLS!**



This three collision concept is taught in trauma care courses. (Machine Collision, Body Collision and Organ Collision) **SPEED KILLS!**



Snowmobile Trails

Use Snowmobile Trails - Groomed snowmobile trails are the safest place to ride. In Saskatchewan, most snowmobile injuries and fatalities occur off-trail.

Trails are safer because they:

- are well marked and well groomed and so offer fewer surprises
- are smoother and wider
- have better sight lines
- have fewer hazardous corners, intersections and obstacles

Designated snowmobile trails are mapped, so that you know where you are going, where you have been and can estimate distance. Your motor license issuer can provide you with trail maps and a SGI Snowmobiling Handbook. Be sure to ask for one!

Snowmobile Trail Signs – These are some signs that you will often see on snowmobile trails and public streets and highways.



Use Trail at your own Risk



Quiet in, quiet out



Areas where snowmobiling is permitted



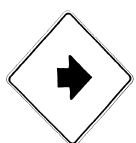
Intersecting snowmobile trail



Stop



Streets and highways where snowmobiling is prohibited



Snowmobile trail directional arrow (this sign indicates a right turn, arrow is reversed for left turn)



Stop ahead



Warning



Slow signs are for your safety



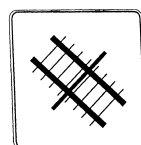
Railway crossing



Snowmobile crossing



Caution ahead (potential safety hazard)



Railway crossing



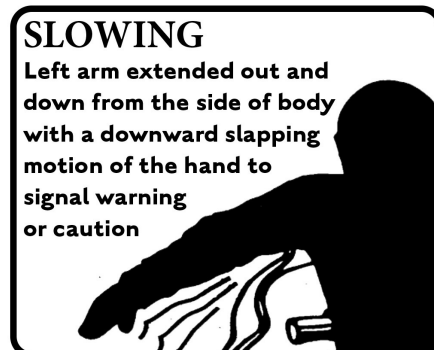
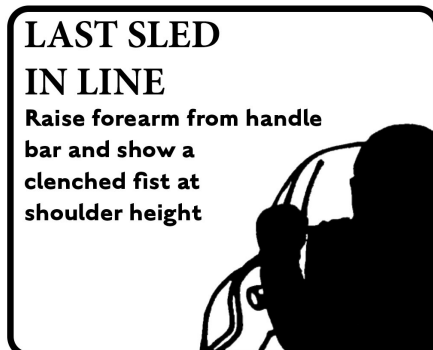
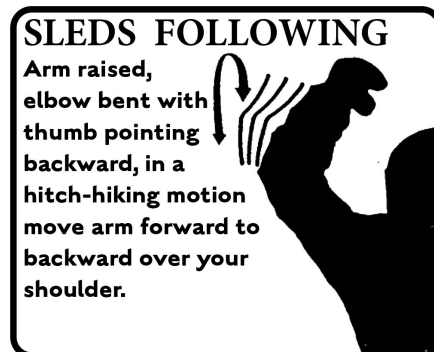
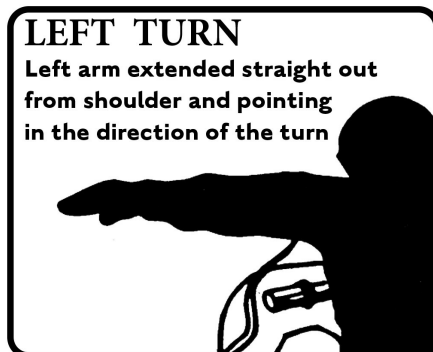
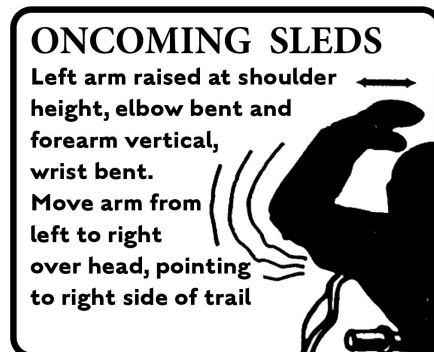
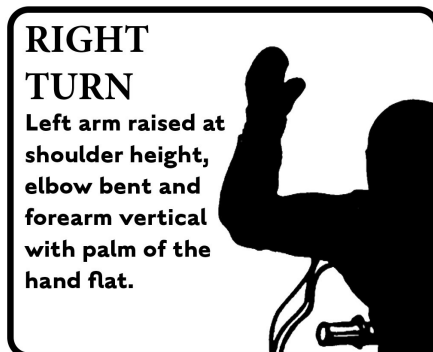
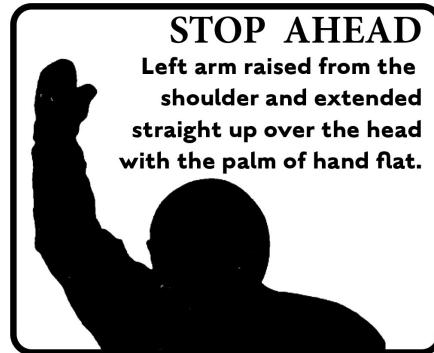
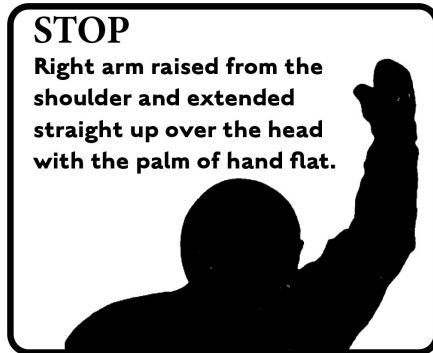
Caution (potential safety hazard)



Trail sign (indicates number of trail)

Hand Signals

As the lead organization promoting excellence in the management of organizes recreational snowmobiling., The International Association of Snowmobile Administrators recognizes the snowmobile community has established hand signals which riders may choose to use. Riders should also consider the merits of choosing to use only basic hand signals or keeping both hands on the handlebars.



Special Snowmobiling Situations

The special situations described below are:

- Night Riding
- Ditch Riding
- Frozen Lakes, Rivers and Slush
- Blizzards and White-Outs
- Flat-Light Conditions
- Operating with a Passenger
- Avalanche Precautions

Night Riding

Collisions happen often at night. Objects such as fence posts and guy wires are difficult to see, and thin ice is nearly impossible to detect during night riding. When riding at night:

- Do not ride alone.
- Reduce your speed (do not overdrive your headlights).
- Avoid unfamiliar terrain, especially lakes and rivers.
- Carry a flashlight or flare.
- If you are riding near a highway, ride in the same direction as the lane of traffic nearest to you. (If you want to ride in the opposite direction to traffic, you must be at least 30 metres (about 100 feet) from the road.)
- Make sure all lights and reflectors are clean, free of snow and working properly.
- Watch out for low hanging tree branches, guy wires, fences, and cable chain at road entrances.
- Watch for stopped snowmobiles – most snowmobile lights don't work when the engine is stopped.

Ditch Riding

Ditches are one of the most dangerous places to ride your snowmobile. Many collisions and injuries happen in ditches because they are not groomed or maintained for snowmobile use. When riding in ditches:

- If you are riding at night and are within 30 metres of the highway, always ride in the same direction as traffic on the lane nearest you (this is the law).
- Do not exceed the snowmobile speed limit of 80 km per hour. If the speed limit on the road or highway is less, observe the highway speed limit.
- At railway crossings bring the snowmobile to a complete stop, have passengers get off, cross at a right angle.
- Watch out for:
 - rocks and stumps
 - garbage such as bottles, cans, old tires, boxes, pieces of wood, etc.
 - guy wires from power poles
 - farm and construction equipment
 - barbed wire and electric fences
 - culverts

Frozen Lakes, Rivers and Slush

Frozen waterways often provide ideal locations for snowmobiling, but they are also very dangerous. Falling through the ice is often fatal. If you don't drown immediately, your body temperature may be lowered so much that you will lose consciousness. The ice must be at least 12 cm (5 inches) thick to hold one snowmobile and rider and even thicker to hold a snowmobile with two passengers or several snowmobiles.

Remember, just because the ice is thick enough in one spot, doesn't mean it will be thick enough all over. The ice will be thinner and weaker where there are undercurrents, pressure ridges and air holes.

Don't guess; it isn't worth it. Before going on a frozen lake or river, check the ice thickness with a police officer or conservation officer.

IF YOU DON'T KNOW, DON'T GO!

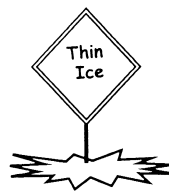
KNOW BEFORE YOU GO

Recommended Minimum Ice Thickness for New, Clear, Hard Ice

No ice is without some risk. Be sure to measure clear, hard ice in several places. Minimize your risk.

- It is critical that the ice quality or type be evaluated before you travel.
- Clear, hard, new ice is the only kind of ice recommended for travel.

- Avoid:
 - Slushy ice
 - ice on or near moving water (rivers or currents)
 - ice that has thawed and refrozen
 - layered or rotten ice caused by sudden temperature changes
- Other risk factors that weaken or rot ice include:
 - snow on the ice that acts as a blanket to prevent hardening of ice
 - pressure ridges due to wind or current pressure



**5 cm (2")
or less**



STAY OFF!

10 cm (4")

Ice Fishing
Walking
Cross Country
Skiing

12 cm (5")

Snowmobile or
ATV

20-30 cm (8-12")

Car or
Small Pick-up

30-38 cm (12-15")

Medium Truck

Source: Minnesota Department of Natural Resources, 2010, <http://www.dnr.state.mn.us/safety/ice/thickness.html>.

Be especially careful around moving water, like flowing rivers and streams. The movement of the water prevents thick ice from forming. A lake may be deeply frozen, but the river that feeds it may have only a thin layer of ice.

Watch out for slush. Lake and river ice cracks in very cold weather and the water from below rushes up through the cracks, forming slush. If you get caught in slush:

- Make sure it's only slush and not open water.
- Go fast so that you have the necessary momentum to carry you through.
- Be careful not to follow any one else's trail through the slush because you can bog down – make your own trail.
- Never stop to help someone who is bogged down in the slush until you are on hard snow or ice.
- When you are on hard snow or ice again, clear the slush from the snowmobile suspension and track tunnel.

Safety Highlight

- Stay off thin ice. Falling through the ice is often fatal.
- Be very careful around moving water. The ice that covers it is often very thin.
- Check ice thickness before riding on a frozen lake or river.

Frozen Lakes, Rivers and Slush

- Ice must be at least 12 cm (5 inches thick) to hold one snowmobile and one rider.
- Ice has different thickness in different areas.
- If you don't know—don't go.
- Carry Ice Picks.
- Wear a floatation suit.



Blizzards and White-Outs

In Saskatchewan, blizzards and white-outs are common and can come up without warning. It doesn't take much snow to create a white-out. A little loose snow and a strong wind will do it. Blizzards and white-outs are extremely dangerous because they reduce visibility to zero. In addition, the strong wind that usually accompanies a blizzard can cause frostbite and hypothermia. Under blizzard and white-out conditions:

- Check weather conditions before you go out. If the weather forecast includes a blizzard warning, don't go out.
- If you get caught in a blizzard or white-out, slow down and try to get to a sheltered area such as a stand of trees or a farmyard.
- Don't stop on the trail – a stopped snowmobile is a hazard for other snowmobilers.

Flat-Light Conditions

Flat-light conditions occur at sunrise and sunset and on overcast cloudy days. Under these conditions a snowmobiler has very little depth perception and it is difficult to gauge the height of hills and the depth of valleys. It may also be difficult to see bumps or holes in the trail. Under flat-light conditions:

- Wear sunglasses with yellow lenses
- Be sure to **SLOW DOWN**

Operating with a Passenger

Follow these rules when carrying a passenger:

- Carry only one passenger.
- Make sure the passenger is wearing a certified helmet. This is the law.
- Make sure the passenger is properly dressed – warm, windproof clothing, no loose clothing or scarves that could get caught in machinery.
- Use moderate speed.
- Warn the passenger of low-lying branches, bumps or rough ground.
- Check your passenger regularly for frostbite.

Remember your passenger has less protection, visibility and support than you do. Drive slowly and carefully. Law requires a 2 up sled (This is a sled designed for a passenger.)

Avalanche Precautions

Avalanches are not a problem in Saskatchewan, but many Saskatchewan snowmobilers travel to locations in the mountains. Avalanches are a constant concern in the mountains and can kill you.

Vibrations, high winds and storms can trigger avalanches, but the most common cause of an avalanche is people moving on or near the snow. About 92 percent of avalanches are triggered by the victims themselves.

When snowmobiling in the mountains always check avalanche conditions before starting out. Find out which areas are prone to avalanches and which areas are safer. Find out what the avalanche danger is on the days when you will be snowmobiling. Avalanche information is available from local police and park officials. It also often appears on radio and television.

Taking an Avalanche Safety Course is the best way to protect yourself. Visit Sasksnow.com to find an avalanche safety course near you or for online training options.

General tips:

- Register with officials or hotel staff and tell them where you are going and when you will be back. (Some parks have regulations about registering – check with officials to find out what the rules are.)
- Avoid slopes whenever possible. If you must cross a slope, go across one person at a time and be sure the first snowmobiler is in a safe zone before the second snowmobiler starts.
- Stick to ridge tops or cross in valley bottoms.
- If you aren't sure about an area, don't go there – better safe than sorry.
- Travel in groups with slower riders near the front.
- Stay together so that all members of the group are in voice and visual contact.
- Carry a cell phone.
- Carry survival equipment (transceiver, probe, shovel, extra food and clothing, first aid kit).

If Your Snowmobile Breaks Down: Troubleshooting

The two topics covered are:

- Trail Servicing
- Towing Your Snowmobile

Even with regular maintenance, a snowmobile may require minor servicing on the trail. A few common problems and their solutions are described in the charts on the next page. When doing any type of trail servicing, be sure to:

- Remove your snowmobile from the trail.
- Be extra careful with small parts. It is easy to drop small parts in the snow when your fingers are cold, and small parts are very hard to find again. If possible, place a rag under your work area to catch any small parts that may fall.
- Always clean up after yourself. Do not leave a mess on trail or on the land owners property.

Except for minor repairs, it is recommended that the sled be towed home.



Symptom: The motor suddenly stalls and will not start.	
Possible Causes	What to Do
Spark plugs are dead	<ul style="list-style-type: none"> • Be sure the ignition key is on and all emergency shut-off switches are in the "run" or "on" position. • Check the spark. • Remove the spark plug, leave it attached to the cap and hold (ground) the bottom of the plug to the engine casing to see if the spark plug is working. Be sure the spark plug is always grounded or you will burn out the CDI box. If it isn't working, replace it.
Motor is seized	<ul style="list-style-type: none"> • Check the spark as described in #1 above. • If the spark plug is working, pull the starter rope. If the starter rope doesn't turn the motor over, the motor is seized. Tow the machine home.
Loose wiring	<ul style="list-style-type: none"> • If the starter rope turns the motor over, but the machine won't start, try another spark plug and check for loose wiring. If the engine still won't start, tow the machine home.
Frozen or plugged gas line	<ul style="list-style-type: none"> • If the engine starts, but keeps quitting right away, the problem might be in the fuel system. Add gas-line antifreeze, wait 10 minutes. • If this doesn't fix the problem, tow the machine home.
Symptom: A twin-cylinder motor is suddenly lacking power and begins to falter.	
Possible Causes	What to Do
One of the spark plugs has fouled	<ul style="list-style-type: none"> • Be sure the ignition key is on and that all emergency shut-off switches are in the "run" or "on" position. • Determine which plug has fouled and change it or change both plugs.

Symptom: The motor revs freely but the track will not turn.	
Possible Causes	What to Do
Broken drive belt	<ul style="list-style-type: none"> • Be sure the ignition key is off and all emergency shut-off switches are in the "run" or "on" position. • Replace the drive belt following the directions that appear below.
	Drive Belt Removal <ol style="list-style-type: none"> 1. Be sure the engine and key switch are off. Remove the retaining knob and open the clutch guard. 2. To remove the drive belt from the driver/secondary clutch use the provided tool to spread the clutch. (do not use your hands) 3. Allow the unit to open, allowing enough slack for the belt to be slipped over the driven clutch. Remove the belt.
	Drive Belt Installation <ol style="list-style-type: none"> 1. Drop the drive belt over the drive clutch (primary clutch) and pull back the slack. 2. After installing the belt correctly use the provided tool to close the clutches. (do not put your hands in the clutches) 3. Close the belt guard and reinstall the retaining knob.
Symptom: The engine suddenly begins to overheat beyond the recommended engine temperature.	
Leaking coolant (in a liquid cooled motor)	<ul style="list-style-type: none"> • Look for broken hoses, loose clamps, damaged radiators or heat exchanges.
Symptom: The recoil starter does not work properly.	
Possible Causes	What to Do
Recoil starter is broken	<ul style="list-style-type: none"> • Use auxiliary starting procedures. (Check owner's manual to determine the auxiliary starting procedures for your machine.) Do not take the recoil starter apart on the trail. Parts can be lost in the snow and the tightly wound main spring can jump out and hit your face.

Towing Your Snowmobile

If your snowmobile breaks down on the trail and minor servicing procedures don't fix the problem, tow the snowmobile home behind another snowmobile. Always remove the drive belt from a disabled snowmobile before you tow it.

- **Rope** – Use a rope for towing only on flat ground. It is dangerous going downhill, because the weight of the machine being towed will cause it to slide forward and hit the towing vehicle. Your manual will tell you how to hook a rope on your machine for towing. If possible have a driver on the towed snowmobile to steer and use the brake.
- **Toboggan** – The toboggan used to tow a disabled snowmobile should be about 2.5 metres long and equipped with a rigid tow bar. Place the disabled snowmobile on the toboggan and tie it down securely. This method of towing is very safe, because once the snowmobile is fastened down, it cannot move or hit the towing machine. A Crazy Carpet makes a good emergency toboggan. It rolls up to form a very small package on your snowmobile. If you are towing a snowmobile on a Crazy Carpet with a tow rope, use extreme caution so that the disabled snowmobile does not slide forward into the towing machine.

Test Yourself: Safe Snowmobile Operation

1. What is the safest snowmobiling position?
 - (a) Standing
 - (b) Kneeling
 - (c) Sitting
 - (d) Any of the above
2. When you are driving in a ditch at night near a road, what direction should you be traveling?
 - (a) In the same direction as the traffic in the nearest lane
 - (b) In the opposite direction to the traffic in the nearest lane
 - (c) In the same direction as the traffic in the lane that is furthest away from you
 - (d) It doesn't matter
3. Where can you ride in provincial parks?
 - (a) Nowhere – riding is not permitted in provincial parks
 - (b) On trails that are wider than 4 metres
 - (c) On any trails that are at least 1 km from towns or residential areas
 - (d) On designated/signed trails only
4. What should you do when you are going uphill?
 - (a) Kneel on the machine and lean back
 - (b) Sit on the machine and lean back
 - (c) Stand on the machine and lean forward
 - (d) Sit on the machine and lean forward
5. How thick must ice be to safely bear the weight of one snowmobile and driver?
 - (a) 10 cm (4")
 - (b) 12 cm (5")
 - (c) 15 cm (6")
 - (d) 20 cm (8")

Answers: 1 – (c) 2 – (a) 3 – (d) 4 – (d) 5 – (b)

PART 4: Survival and Collisions

Part Four contains information on the following topics:

- Snowmobiling Gear
- Hypothermia and Frostbite
- First Aid
- Survival

Part Four concludes with a “Test Yourself” section for practice and review.

Snowmobiling Gear

Four categories of snowmobiling gear are discussed in the sections that follow:

- Clothing
- Hand Protection
- Foot Protection
- Head/Eye Protection

Clothing

Appropriate clothing is very important. It will keep you warm (hypothermia and frostbite are serious problems for snowmobilers) and protect you from whipping tree branches and bits of flying ice.

Hand Protection

Snowmobile Clothing Checklist

- ☐ Your outer layer of clothing should be windproof and waterproof.
- ☐ Wear mittens when it is very cold – although gloves give you better control of your machine, mittens are warmer.
- ☐ Avoid skintight clothing – space between your skin and the outer layer of clothing helps ventilation.
- ☐ Be sure that your clothing has no loose parts that could get caught in the machine; for example, wear a neck tube rather than a scarf.
- ☐ Your first layer of clothing should be underwear that draws moisture away from your body.
- ☐ Polypropylene or other synthetics are best for drawing moisture away from your body. Wool is okay. Never wear cotton; it traps moisture and holds it next to your skin.
- ☐ A couple of thin layers of clothing are better than one thick layer.
- ☐ When buying a snowmobile suit, test it in different positions such as kneeling, sitting and crouching. If the suit is uncomfortable in any of these positions, try a larger size or different model of suit.
- ☐ Be sure your outer layer of clothing has reflective strips or patches so you can be seen by other riders.

Keeping hands warm is a major problem for snowmobilers. Ordinary gloves with straight fingers won't keep you warm. When you curve your hands around the handlebar, the insulating quality of the glove is greatly reduced at the knuckles.

Hand Protection Checklist

- ☐ Wear mittens rather than gloves.
- ☐ Choose mittens that have an insulated back and are waterproof and windproof.
- ☐ Wear a thin pair of synthetic gloves under the mitts. They will draw moisture away from your body and will make it easier to handle metal or small parts.
- ☐ If your hands get very cold, put them next to your body (under your arms or between your legs) to warm them up.
- ☐ Use your snowmobile thumb and handlebar warmers.

Foot Protection

Your feet tend to sweat, which makes your socks and boot liners moist. This moisture reduces the insulating capacity of your socks and boots and makes your feet cold. It is important to keep your feet dry.

Foot Protection Checklist

- ☐ Wear a pair of synthetic or wool socks next to your skin to draw away moisture.
- ☐ Be sure that there is air space between your socks and boots to provide additional insulation.
- ☐ Choose boots with rubber soles rather than plastic soles.
- ☐ Take the felt liners of your snowmobile boots out after each trip and dry them thoroughly.
- ☐ Always carry a spare pair of socks in case your feet get sweaty and cold.
- ☐ If your feet get cold, move your toes, walk around, stamp your feet.
- ☐ If you are driving a long distance before snowmobiling, wear your regular shoes to drive so that your feet don't get sweaty; put on your snowmobile boots when you get there.

Head/Eye Protection

Head protection is vital for several reasons:

- Saskatchewan law requires that both driver and passenger wear a certified helmet. Helmets provide both safety and warmth. When choosing a good helmet, ensure that:
 - Approved as complying with the standards of BSI, CSA, DOT, SNELL, ECE or ANSI. For snowmobile or motorcycle use.
 - Large enough to fit comfortably over a balaclava (however, the helmet should not be loose if worn without a balaclava)
 - Secured properly with the straps provided.
 - Has a full-face shield (if no shield, goggles must be worn)
 - Protective goggles (if helmet has no shield) Goggles with tinted grey or green lenses are recommended for bright days. Amber or yellow lenses are good for overcast days or late afternoon. These lenses, when used properly, can reveal dangerous depressions in the snow, in addition protect your eyes. Tinted lenses should never be worn for night riding.
- If you are in a collision, your helmet can save your life.
- Your helmet protects you from whipping tree branches and bits of flying ice and debris. Your helmet keeps your head warm.
- Helmets reduce the risk of severe brain injuries by up to 80%. Your brain is the most important part of your body, it allows every part of your body to function. If you sustain a brain injury, it lasts a lifetime.

Head/Eye Protection Checklist

- ☐ Wear a helmet that meets one of these safety standards: BSI, CSA, DOT, SNELL, ECE or ANSI.
- ☐ Wear a balaclava or toque under your helmet for warmth.
- ☐ Take your balaclava or toque with you when you buy your helmet.
- ☐ A helmet that fits properly, with the chin strap fastened, will not move on your head without your scalp moving.
- ☐ Use a clear face shield with UV protection.
- ☐ Use sunglasses under your face shield for bright conditions. It is not advisable to wear a tinted visor or goggles at night.
- ☐ Always check the screws that hold the face shield to the helmet before each use.
- ☐ Helmets have expiry dates. With wear and tear and exposure to the elements, the materials making up your helmet break down over time. It is recommended to replace your helmet every 3–5 years.

Personal Gear

The personal gear that you take with you on a snowmobile trip will vary depending on where you are going and your personal choice. As a minimum try to bring the following items in a **backpack**:

Personal Gear Checklist

- ☐ Snowmobile registration
- ☐ All insurance documents
- ☐ Cell phone. Keep it close to your body for warmth to protect it's battery life. Cold temperatures will kill the battery.
- ☐ Sunscreen
- ☐ Sunglasses
- ☐ Toilet paper and/or Kleenex
- ☐ Vaseline or similar salve to protect face and lips from the wind and cold
- ☐ Lip protection, like Chapstik
- ☐ Extra socks, gloves and hat
- ☐ Food and water
- ☐ Driver's license (or safety course certificate)

Hypothermia and Frostbite

Our Saskatchewan winters can get very cold. Winter temperatures of -16°C to -20°C are normal and it is not unusual for the temperatures to get as low as -35°C a few days each winter. The wind makes it seem even colder and when calculating outdoor temperature, it is important to consider wind chill as well as actual temperature. As the chart on the right shows, a -10°C day is pleasant if there is no wind, but dangerous if there is a strong wind.

When you are snowmobiling, the wind chill is intensified by the speed of your machine. You will feel colder if the wind is in your face than if the wind is on your back. Sweaty, wet clothing, gloves and boots will also make you cold quickly.

Estimating Wind Chill

Wind Speed (km/h)	What to Look for When Estimating Wind Speed	Temperature (°C)									
		0	-5	-10	-15	-20	-25	-30	-35	-40	-45
10	Wind felt on face; wind vane begins to move.	-3	-9	-15	-21	-27	-33	-39	-45	-51	-57
20	Small flags extended.	-5	-12	-18	-24	-30	-37	-43	-49	-56	-62
30	Wind raises loose paper, large flags flap and small tree branches move.	-6	-13	-20	-26	-33	-39	-45	-52	-59	-65
40	Small trees begin to sway and large flags extend and flap strongly.	-7	-14	-21	-27	-34	-41	-48	-54	-61	-68
50	Large branches of trees move, telephone wires whistle and it is hard to use an umbrella.	-8	-15	-22	-29	-35	-42	-49	-56	-63	-69
60	Trees bend and walking against the wind is hard.	-9	-16	-23	-30	-36	-43	-50	-57	-64	-71

Source: Environment Canada <http://www.ec.gc.ca>

Wind Chill Hazards and What To Do

Wind Chill	Risk of Frostbite	Other Health Concerns	What to Do
0 to -9	Low	<ul style="list-style-type: none"> Slight increase in discomfort 	<ul style="list-style-type: none"> Dress warmly Stay dry
-10 to -27	Low	<ul style="list-style-type: none"> Uncomfortable Risk of hypothermia if outside for long periods without adequate protection. 	<ul style="list-style-type: none"> Dress in layers of warm clothing, with an outer layer that is wind-resistant. Wear a hat, mittens or insulated gloves, a scarf and insulated, water-proof footwear. Stay dry. Keep active
-28 to -39	Risk: exposed skin can freeze in 10 to 30 minutes	<ul style="list-style-type: none"> Risk of frosting or frostbite: Check face and extremities for numbness or whiteness. Risk of hypothermia if outside for long periods without adequate clothing or shelter from wind and cold. 	<ul style="list-style-type: none"> Dress in layers of warm clothing, with an outer layer that is wind-resistant Cover exposed skin Wear a hat, mittens or insulated gloves, a scarf, neck tube or face mask and insulated, waterproof footwear Stay dry Keep active
-40 to -47	High risk: exposed skin can freeze in 5 to 10 minutes	<ul style="list-style-type: none"> High Risk of frostbite: Check face and extremities for numbness or whiteness. Risk of hypothermia if outside for long periods without adequate clothing or shelter from wind and cold. 	<ul style="list-style-type: none"> Dress in layers of warm clothing, with an outer layer that is wind-resistant. Cover all exposed skin. Wear a hat, mittens or insulated gloves, a scarf, neck tube or face mask and insulated, waterproof footwear. Stay dry Keep active.
-48 to -54	Very High risk: exposed skin can freeze in 2 to 5 minutes	<ul style="list-style-type: none"> Very High Risk of frostbite: Check face and extremities frequently for numbness or whiteness. Serious risk of hypothermia if outside for long periods without adequate clothing or shelter from wind and cold. 	<ul style="list-style-type: none"> Be careful. Dress very warmly in layers of clothing, with an outer layer that is wind-resistant. Cover all exposed skin Wear a hat, mittens or insulated gloves, a scarf, neck tube or face mask and insulated, waterproof footwear. Be ready to cut short or cancel outdoor activities. Stay dry. Keep active.
-55 and colder	Extremely High risk: exposed skin can freeze in less than 2 minutes*	<ul style="list-style-type: none"> DANGER! Outdoor conditions are hazardous. 	<ul style="list-style-type: none"> Stay indoors.

Hypothermia

Hypothermia occurs when the body loses heat faster than it can produce it. Symptoms include shivering, fumbling, dizziness, slow speech, loss of memory, drowsiness and exhaustion.

Hypothermia Checklist

Prevention

- ☐ Stay dry. Clothes lose about 90 percent of their insulating value when they are wet.
- ☐ Avoid strong winds. Winds carry heat away from your body.
- ☐ Never ignore shivering. Shivering is your body's way of generating heat and is a message that immediate warming is needed.
- ☐ Check the members of your group frequently for symptoms of hypothermia.
- ☐ If you feel very cold, seek shelter, dry off and warm up.
- ☐ Avoid alcohol. Contrary to popular belief, alcohol doesn't warm you up.

Treatment

- ☐ Get the victim out of the wind and cold.
- ☐ Remove wet clothes.
- ☐ Cover the victim with dry clothes or blankets.
- ☐ Take the victim to a doctor.
- ☐ If a doctor is not immediately available, keep the victim awake, offer a warm drink and provide person-to-person contact in a sleeping bag.

Frostbite

Frostbite usually affects exposed ears, cheeks, noses, fingers and toes. Frostbitten skin is numb. It has a waxy white look. In severe cases of frostbite, the flesh is hard and solid to the touch. Frostbite always causes damage to body tissues. In severe cases it can result in intense coldness, confusion and impaired judgment.

Frostbite Checklist

Prevention

- ☐ Stay out of strong winds and extreme cold.
- ☐ Keep skin covered and wear adequate clothing.
- ☐ Check members of your group frequently for signs of frostbite.
- ☐ ALWAYS USE THE BUDDY SYSTEM

Treatment

- ☐ Get to shelter as quickly as possible.
- ☐ Do not rub the affected area or apply snow.
- ☐ If fingers or toes are frostbitten, exercise to increase circulation to these areas.
- ☐ Place warm hands gently on the affected area.
- ☐ In cases of severe frostbite, take the victim to the hospital immediately.

First Aid

Preventing Injuries

Most injuries are the result of hitting something or falling off the machine. Preventing injuries from happening is the best first aid – 90 percent of injuries can be prevented. Prevent injuries by following these rules:

- Don't drink and ride.
- Don't ride beyond your capabilities.
- Stick to familiar terrain.
- Go slow.
- Take a snowmobile safety course.

Coping with Injuries

Although it is not required by law, all snowmobilers of all ages should take a first aid course. There is no substitute for being knowledgeable and prepared.

Some common first aid procedures are:

- Immediately after a collision:
 - Protect yourself.
 - Do not move the injured person. (Move the person only if their location puts them in greater danger than moving them would, for example, if they are in the middle of a busy highway.)
 - Always suspect a head or spine injury.
- If the victim is in shock (signs of shock are cold, pale clammy skin; irregular breathing, dizziness, disorientation):
 - Maintain body heat by covering with warm, dry clothes and a blanket.
 - Keep the person lying down flat.
- If there is bleeding:
 - Have the victim lie down and keep still.
 - Apply direct pressure to the area and cover with a bandage.
 - Get medical attention immediately.

Safety Highlight

- **Do not move an injured person.** Move the person only if their location puts them in greater danger than moving them would (i.e. if they are in the middle of a busy highway).
- **Always suspect a head or spine injury.**
- **Get help as soon as possible.**

- If there are broken bones (signs of broken bones are odd positions of the limbs and severe pain):
 - Immobilize the limb by splinting it with two straight sticks, one on each side of the limb.
 - Tie one bandage above the break and one below it. Never tie right on the break.
 - Give the victim painkillers.
 - Do not give the victim alcohol. Alcohol only makes the situation worse.

First Aid Kit

The contents of a trail first aid kit are listed in the checklist below. It is important to take a first aid course so that you know how to use the items in the first aid kit.

The best first aid kit in the world is no use if you don't know basic first aid procedures.

First Aid Kit Checklist
<input type="checkbox"/> Gauze pads (small and large)
<input type="checkbox"/> Band-Aids (small/large)
<input type="checkbox"/> Roll of gauze
<input type="checkbox"/> Tape
<input type="checkbox"/> Burn ointment
<input type="checkbox"/> Antibiotic ointment
<input type="checkbox"/> Disinfectant wipes
<input type="checkbox"/> Wet wipes
<input type="checkbox"/> Pain reliever/ASA
<input type="checkbox"/> Knife or scissors to cut clothing and bandages
<input type="checkbox"/> Tweezers
<input type="checkbox"/> Latex gloves
<input type="checkbox"/> Space /Survival blanket
<input type="checkbox"/> Sling
★ Make sure all products and supplies are up-to-date and are in good condition.

Survival

Survival Procedures

Your brain is your best tool for survival. When you leave on a snowmobile outing, always tell someone where you are going and when you are expected back. Always carry a cell phone. Snowmobile with a buddy for extra safety. If your snowmobile breaks down and you are unable to fix it or have it towed out, it is usually best to stay with your machine – don't try to walk out. Wait for rescuers to find you.

Remember:

- Stay calm
- Stay warm
- Stay dry

Safety Highlight

- Always tell someone where you are going and when you will be back
- Carry a cell phone
- Snowmobile with a buddy
- Carry a first aid kit
- Carry basic survival gear
- If your machine breaks down, it is usually best to stay with the machine, don't walk away

Survival Procedures Checklist

- ☐ Use your machine as a windbreak or seek shelter in a protected area.
- ☐ Make a lean-to with tree branches or dig a snow cave in a deep drift.
- ☐ Line your windbreak or snow cave with any material you might have such as the seat of the snowmobile or a blanket.
- ☐ Use dead twigs and branches to make a fire.
- ☐ Use a ski from the snowmobile as a digging tool.
- ☐ Melt snow in a small metal pan. Do not melt snow in your mouth, as this will lower your body temperature rapidly.
- ☐ If you are with other people, stay together.
- ☐ Conserve energy and warmth – don't move around too much.
- ☐ Use your cell phone to call for help. Depending on the situation use your judgment to either stay with the machine or walkout.

Survival Gear

Always carry supplies and equipment that will help you survive if your machine breaks down.

Survival Gear Checklist	
<input type="checkbox"/> Extra snowmobile key/tether	<input type="checkbox"/> First Aid Kit
<input type="checkbox"/> Cell phone and GPS	<input type="checkbox"/> Chocolate bars and/or energy bars
<input type="checkbox"/> Maps and compass	<input type="checkbox"/> Space blanket/Survival Blanket
<input type="checkbox"/> First aid kit	<input type="checkbox"/> Axe
<input type="checkbox"/> Pocket knife	<input type="checkbox"/> Waterproof matches
<input type="checkbox"/> Candles and canned heat	<input type="checkbox"/> Shovel
<input type="checkbox"/> Flashlight	<input type="checkbox"/> Extra socks, gloves and hat
<input type="checkbox"/> Tow rope	<input type="checkbox"/> Small metal pan for melting snow

Safety Tips on Snowmobile Trails

- Always ride on the right side of the trail.
- Obey all trail signs, markers and speed limits.
- Watch for approaching snowmobiles.
- Move to the right when meeting snowmobiles.
- On narrow trails, yield to machines going up steep hills.
- Do not stop on a curve or hill.
- Watch for branches and other obstacles.
- Remove obstacles or notify club or park office.
- Watch for trail-grooming equipment, even at night.
- Use hand signals to acknowledge awareness of others when passing or meeting other snowmobiles.
- Remove your machine from the trail – especially at night – if breakdown occurs.

Source: *Snowmobiling in Saskatchewan*. (2016). Saskatchewan Government Insurance.

Test Yourself: Survival and Collisions

1. How does a properly fitting snowmobile helmet fit with the chin strap done up?
 - (a) It will not move on the head without the scalp moving.
 - (b) It has slight movement forward and back.
 - (c) It has slight movement from side to side.
 - (d) There is a ventilation space between the helmet and the head.
2. What is the best treatment for minor frostbite?
 - (a) Rub the area vigorously.
 - (b) Apply snow to the area.
 - (c) Warm the area with your hands.
 - (d) Put Vaseline or similar protective salve on the area.
3. If your snowmobile breaks down and you can't fix it, what should you do?
 - (a) Follow your trail back and walk out.
 - (b) Call for help on your cell phone and stay with the machine.
 - (c) If there are two people, one should stay with the machine and the other walk out.
 - (d) Any of the above depending on the situation.
4. What does frostbitten skin look like?
 - (a) It looks the same as normal skin.
 - (b) It is red and crusty looking.
 - (c) It has a waxy, white look.
 - (d) It looks like a sunburn.

Answers: 1 – (a) 2 – (c); 3 – (d); 4 – (c)

Snowmobile Safety Summary

- Never drink and ride. Most collisions are caused by alcohol and excessive speed.
- Operators aged 12-15 may operate a snowmobile if they have taken a certified safety course and if they are supervised by someone who holds a valid driver's license. Once they are 16 and have taken the course they may operate alone.
- Observe the snowmobile speed limit—80 km per hour, or slower if posted.
- Stay on the trails—there is less chance of collisions.
- Be sure your machine is properly registered.
- Read your owner's manual and get to know how your snowmobile works.
- Always carry a supply of basic spare parts and tools with you.
- Turn off the engine before refueling your snowmobile.
- Never smoke when refueling.
- Handle gas carefully in cold weather—it can freeze the skin instantly.
- Always do a thorough check of your machine and equipment before starting your snowmobile.
- Allow lots of extra stopping distance when you are towing a snowmobile.
- Never ride on highways or roads.
- Cross roads, highways and railway tracks at a right angle.
- Sitting is the safety riding position.
- At night, drive slowly enough to stop within your headlight range.
- Always tell someone where you are going, your route and when you will be back.
- Ride with a buddy.
- Watch for hazards in ditches.
- Avoid lakes and rivers unless you are absolutely sure the ice is thicker than 12 cm.
- Always wear a certified helmet in the proper manner. This is the law.
- Wear protective goggles if your helmet does not have a face shield.
- Be sure that your clothes have no loose parts that could get caught in machinery.
- Take a first aid course so that you know what to do in an emergency.
- Carry a first aid kit.
- Carry emergency equipment, extra clothing and food.
- Be careful in cold or windy weather—frostbite and hypothermia are serious.
- Know and apply all snowmobiling laws.



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