

The SNOWMOBILER'S SAFETY HANDBOOK may be ordered in quantities from
SNOWMOBILE SAFETY AND CERTIFICATION COMMITTEE, INC.
SUITE 850 SOUTH, 1800 M STREET, N.W.
WASHINGTON, D.C. 20036

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**SNOWMOBILE SAFETY and
CERTIFICATION COMMITTEE, INC.**

**THIS SNOWMOBILER'S SAFETY HANDBOOK
PREPARED AND DISTRIBUTED BY
MEMBERS OF
SNOWMOBILE SAFETY AND CERTIFICATION COMMITTEE, INC.
SUITE 850 SOUTH, 1800 M STREET, N.W.
WASHINGTON, D.C. 20036
DEVELOPED
WITH THE ASSISTANCE OF THE
NATIONAL SAFETY COUNCIL
1974**

All items pertinent to snowmobile use and safety may not be included, due to the various and everchanging aspects of snowmobiling. This handbook is to be used as a supplement to the manuals and instructions supplied by a snowmobile manufacturer, or its representative.

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CONTENTS

What Is Snowmobiling?	4	Trails and Signs	35
A Snowmobiler's Responsibility	5	Transporting and Towing	37
Safety Labeling	7	Weather/Wind Chill	37
The ABC's of a Snowmobile	8	How to Dress	39
General Maintenance	16	How to Prevent Emergencies	40
How to Fuel	20	Survival	41
A Word to All Snowmobilers	21	Responsibility—Environment	42
Before You Start	22	Responsibility—Code of Ethics	43
How to Ride Safely	24	Responsibility—Laws and Regulations	44
Terrain/Riding Variations	26	Summary of Accident Prevention Practices ..	44

WHAT IS SNOWMOBILING?

Snowmobiles have made the once inaccessible snowbound countryside a new world of fun and adventure. To the people in rural areas and small cities, a snowmobile is a vehicle that provides transportation, fun and recreation every snow day. For residents of larger cities, the snowmobile is utilized for weekend excursions and trail riding with family and friends. To farmers, ranchers, loggers, power line crews, conservation officers, police, trappers and others, the snowmobile is an everyday work vehicle.

Snowmobiling is one of the fastest growing winter sports in North America. This growth has emphasized the need for increased attention to the safe use of snowmobiles, respect for fellow winter outdoor enthusiasts and care of the environment. You, as a

snowmobiler, must assume some serious responsibilities, not only to yourself, but also to others.

A snowmobile is designed to be a safe vehicle when used as intended. However, there never has been any type of vehicle produced that is absolutely mechanically fail-safe. The key to safe operation is YOUR knowledge of the vehicle; recognizing and accepting it as a machine; respecting its capabilities and its limitations; varying operating conditions; knowledge of laws; good judgment and courtesy. Recognizing and respecting your own capabilities and limitations is also a very important factor for the safe operation of a snowmobile. A slight overconfidence in your machine handling ability can result in a serious accident.



A SNOWMOBILER'S RESPONSIBILITY

Driver etiquette and snowmobile safety go hand in hand. With snowmobiles cruising the countryside, it is vitally important that you do your part to make snowmobiling a welcome activity in rural and suburban neighborhoods.

Basic training is required for the safe operation of any snowmobile. Study your owner's/operator's manual. Join your local snowmobile club. Snowmobile club social activities and trail systems are planned for both fun and safety. Obtain basic instructions from your snowmobile dealer, friend or fellow club member. Enroll in your state or provincial safety training program. Enjoy the benefits of becoming a certified safe snowmobiler.

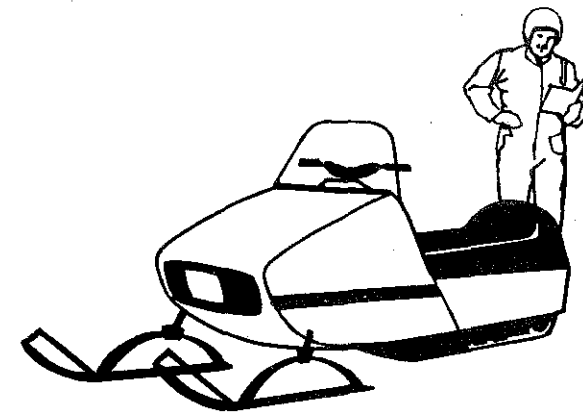
Know the laws regarding snowmobiles. Become familiar with and respect the federal, local, state

or provincial regulations governing the licensing and use of snowmobiles. Also, be aware of the liability, property damage and insurance laws relating to your equipment.

Treat your snowmobile with the respect and care due any power driven machine. A snowmobile is not

just a plaything; it must be accepted as a self-propelled vehicle. Common sense, proper handling, and proper maintenance will result in the safe and enjoyable use of your machine.

Show proper courtesy and respect for other people, their privacy and their property. **DO NOT TRESPASS.** Obtain consent of property owners before snowmobiling on

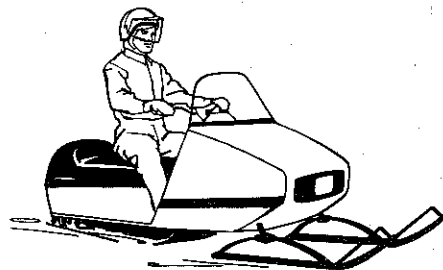


private lands. Check with officials before using public lands. Drive slowly in residential areas. Do not damage the landscape or existing facilities. Do not litter. Snowmobiling and liquor do not mix. Don't drink and drive.

Know your snowmobile. Become familiar with your vehicle, its capabilities and its limitations. Proper maintenance of your snowmobile is important. Have it checked by your dealer on a regular basis to assure all components are kept in good working condition. Check your machine before each ride.

Snowmobiling is a great sport. Work actively to keep it that way. Be a courteous driver, be safety minded, be responsible and be a good citizen.

If you are a parent, you must be the judge of your child's capability



to understand, to operate and to control a self-propelled vehicle. Children should be involved in the sport of snowmobiling on the basis that you, the parent, will determine responsibility. Warn against speed, overconfidence and carelessness. Never let children snowmobile unsupervised. A snowmobile, if not used properly and in a safe area, can be dangerous.

This manual is to be used as a supplement to the snowmobile

owner's/operator's manual. By studying these manuals, you will gain a better understanding of what makes a snowmobile go, how it should be operated safely, and the important part that you—the operator—have in its safe use.

The very nature of snowmobiling is simple; but due to the versatility of the machine, accessibility to a variety of terrain and topography, exposure to changing winter weather and conditions, it can be hazardous if you are the least bit reckless, inattentive, or uninformed about the vehicle under your command. The operation of a snowmobile requires all of the operator's attention and capabilities at all times. Know your limitations and those of your vehicle.

Get ready for your winter fun and safe snowmobiling.

SAFETY LABELING

Technological advances have greatly improved snowmobile reliability and product safety. Minimum safety standards for snowmobiles have been adopted by the Snowmobile Safety and Certification Committee, Incorporated. Assurance that your snowmobile meets these standards is

easily checked by locating the Certification Label on a right vertical portion of the vehicle.

This label, which will be affixed to snowmobiles manufactured by participating manufacturers after February 1, 1975, signifies that an independent testing laboratory has verified compliance with the safety

standards. Other labeling may be precautionary notices relative to maintenance and/or snowmobile operation. You, as the owner or as a snowmobiler, must ensure all such labeling is retained on the vehicle and related information is followed by vehicle operators and/or passengers.

CE MODELE A ÉTÉ ÉVALUÉ
PAR UN LABORATOIRE D'
ESSAIS INDÉPENDANT ET
SATISFAIT TOUTES LES
NORMES DE SÉCURITÉ
DU SSCC EN VIGUEUR À
LA DATE DE FABRICATION.

PARRAINÉ PAR LE COMITÉ DE
SÉCURITÉ ET DE CERTIFICA-
TION DE LA MOTONEIGE, INC

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CERTIFIÉ

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THIS MODEL HAS BEEN
EVALUATED BY AN INDE-
PENDENT TESTING LAB-
ORATORY AND IT MEETS
ALL SSCC SAFETY STAND-
ARDS IN EFFECT ON THE
DATE OF ITS MANUFAC-
TURE.

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MOBILE SAFETY AND CERTI-
FICATION COMMITTEE, INC

THE ABC'S OF A SNOWMOBILE

Despite its apparent simplicity, a snowmobile is a product of highly advanced engineering. Normally, a two-cycle air-cooled engine drives an automatic variable speed transmission which, through a drive chain, powers a drive sprocket whose teeth engage a track, thus making your snowmobile go.

A snowmobile is designed to travel on the snow because of its flotation; that is, the relationship between the weight of the snowmobile and the area of the track and skis' surfaces touching the snow. Also, it floats because it is laying its track on the snow over which the rest of the vehicle is moving.

You, as a snowmobiler, should become familiar with the major operating components of your snowmobile. It is important that you

study the manuals provided with your snowmobile and become thoroughly familiar with that vehicle. Most snowmobiles, although somewhat different in appearance, are similar in design. Know your vehicle and its limitations.

CHASSIS

A chassis or frame of a snowmobile, like that of a car, provides the means to fit everything together into one unit so the vehicle can fulfill its intended purpose. A number of these components are there for your protection and for the safe operation of your snowmobile.

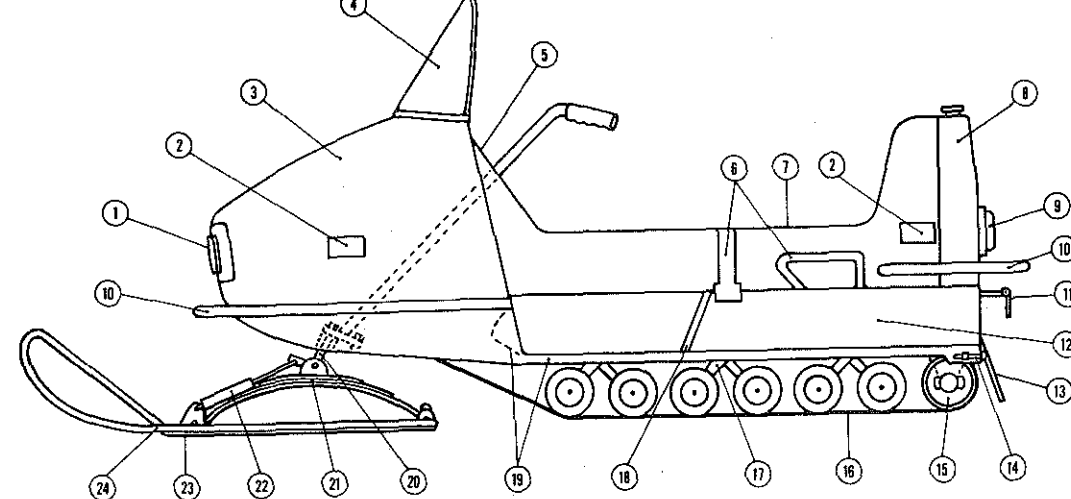
POWER TRAIN

The development of a lightweight power train is responsible for the successful use and application of the

snowmobile. It is made up of a power source and a drive system.

***Engines** - Snowmobile engines are of the two-cycle type (they produce power on every compression/power piston stroke that occurs with every revolution of the crank shaft); the four-cycle type; or a rotary type.

***Transmissions** - The key to most snowmobile drive systems is the variable speed transmission, known as a centrifugal clutch or torque converter, that automatically shifts to transmit power from the engine to the track through the range of engine speeds and vehicle loading.

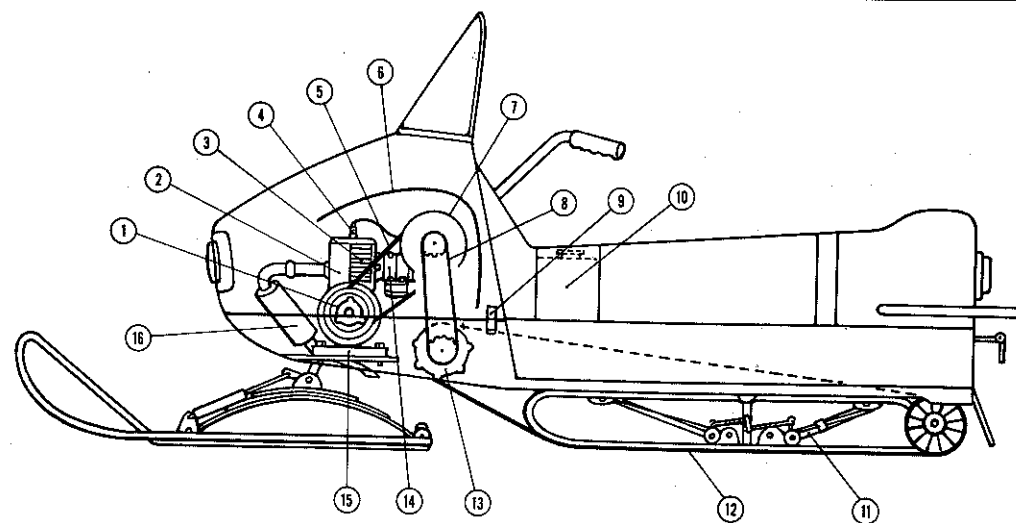


NOMENCLATURE

1. Headlight or Headlamp
2. Reflectors
3. Hood, Cowl or Cabin
4. Windshield and Protective Strip
5. Console or Dash
6. Passenger Grasp Strap or Grip Handles

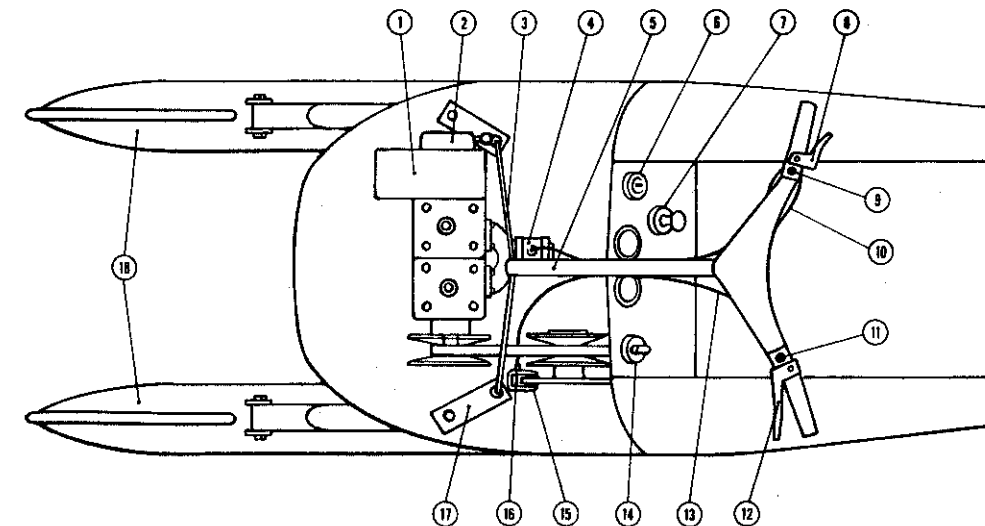
7. Seat
8. Fuel Tank
9. Tail and Brake Light or Lamp
10. Bumper or Lift Handle
11. Hitch
12. Frame
13. Snow Flap
14. Track Tension Adjustment
15. Rear Axle and Track Tension Idler

16. Track
17. Bogie Support Mechanism
18. Running Board Brace
19. Running Board or Footboard and Footrest
20. Spindle or Ski Leg
21. Ski Spring
22. Shock Absorber
23. Wear Rod, Skag or Runner
24. Ski



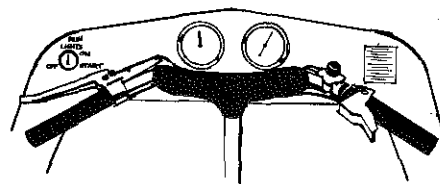
NOMENCLATURE

- | | | |
|-------------------------------|--------------------------------|---|
| 1. Drive (Centrifugal) Clutch | 6. Shield or Guard | 12. Track |
| 2. Engine | 7. Driven (Secondary) Clutch | 13. Driven Sprocket |
| 3. Cooling Fins | 8. Drive Chain and Sprockets | 14. Carburetor, Air Intake and Silencer |
| 4. Spark Plug (s) | 9. Hood Latch | 15. Engine Mount |
| 5. Drive Belt | 10. Fuel Tank | 16. Exhaust System and Muffler |
| | 11. Slide Suspension Mechanism | |



NOMENCLATURE

- | | | |
|--------------------------------|------------------------------|---|
| 1. Engine | 6. Ignition and Start Switch | 13. Brake Cable |
| 2. Manual Rewind Starter | 7. Choke Control | 14. Light Switch (May Be Combined with No. 6) |
| 3. Tie Rod (s) | 8. Throttle Control | 15. Brake Assembly |
| 4. Carburetor Assembly | 9. Emergency Stop Switch | 16. Brake Light Switch |
| 5. Steering Handlebar Assembly | 10. Throttle Cable | 17. Spindle Arm (s) |
| | 11. Hi-Lo Beam Switch | 18. Skis |
| | 12. Brake Control | |



CONTROLS

It is essential that you, as the operator of a snowmobile, be thoroughly familiar with the purpose and function of each component or system used to operate or to control the snowmobile. This is no different than operating any other mechanical device or vehicle.

Generally, the controls on a snowmobile include the throttle control, emergency stop switch, brake control, ignition or start switch, lighting switches, choke, starter and the steering system which is comprised of skis, spindles

and arms, tie rods and the steering handle.

***Steering** - The steering handlebar assembly controls the direction of travel of the snowmobile. As the handlebar is rotated to right or left, the skis are turned in the direction of intended travel.

Since a snowmobile is moving on snow and ice and relies on friction to turn, the proper shifting of your weight with both hands on the handlebars will help you to guide and turn it. Occasionally check your steering system to be sure its movement is not restricted.

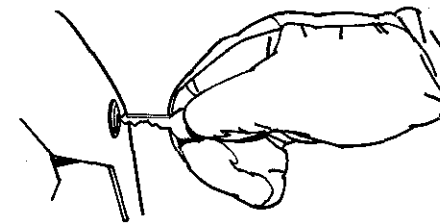
***Throttle** - The function of the throttle control, which is located on the right side of the handlebar, is to regulate the speed of your snowmobile. It is a very important control and safety feature of your

vehicle. When the spring-loaded throttle control is depressed, the throttle valve in the carburetor is opened by the connecting cable. This allows more gasoline and air into the engine, thus permitting the engine to speed up. When the pressure is released from the throttle control, the valve is closed, the engine returns to idle speed and the snowmobile will slow and come to a stop on level terrain.

That is why it is called a safety throttle. **CHECK YOUR THROTTLE EACH AND EVERY TIME BEFORE YOU TURN ON THE IGNITION KEY.** Be sure it moves freely without sticking in a partially or fully opened position, **AND THAT IT RETURNS TO THE CLOSED OR IDLING POSITION EVERY TIME WHEN IT IS RELEASED.**

If your vehicle's throttle should stick while you are operating it, turn the ignition key to the "off" position or stop the engine by the use of the emergency stop switch. Remember, a properly working throttle control is a safe throttle control.

***Emergency Stop Switch** - Recently, snowmobiles have been equipped with an emergency stop switch so the operator has a convenient and alternate system that will provide instantaneous interruption of the engine ignition system. This stops the engine immediately. The switch is readily accessible for activation by the operator's right hand from the normal steering position, and it should maintain interruption of the ignition system—once activated—without continuous contact of the operator's hand.



Some snowmobiles are equipped with a built-in emergency stop switch that shuts off the ignition should the throttle cable become loose or stuck. This type of switch does not require operator action to effect its operation.

***Brake** - The brake control, which is located on the left side of the handlebar, operates the brake system on the drive train. The system is activated by applying steady pressure to the control lever which slows down or stops the snowmobile. The amount of pressure

applied determines how quickly the snowmobile slows down or stops.

Unlike a car that depends on dry pavement for traction, a snowmobile operates on snow and icy surfaces that have very low amounts of friction. Every snowmobiler should learn braking distances at various speeds under the many varied conditions in which they will be operating. Be certain to check for the smooth and free operation of the spring-loaded brake control often.

***Switches** - An ignition switch allows the engine to be started or to be stopped. It is usually key operated and has at least two positions. If your snowmobile is equipped with an electric starter, the switch will have a third or "start" position that activates the starter mechanism and, like start

switches on automobiles, it is spring-loaded to return the key to the "on" position when released.

Switches are provided to turn the headlights and taillights on and off. On most snowmobiles being manufactured today, a switch is provided to use either the high or low beam headlight pattern as necessary or desired.

***Choke** - A choke regulates the flow of air to the carburetor and, thus, the richness of the fuel/air mixture for the engine. It is controlled by a lever or by a cable connected to a control knob. Normally, a choke is only used when the engine is cold.

***Starters** - Most snowmobiles are equipped with an automatic rewind manual starter located on the engine. Others are equipped with electric starters. In addition, snowmobiles

are equipped so they can be started in case of a failure of either the manual recoil starter or the electric start mechanism.

OTHER SAFETY FEATURES

Other safety features are built into your vehicle for the protection of the operator. Check your snowmobile owner's/operator's manual provided by the manufacturer for other features that may be on your particular snowmobile model. Do not operate your snowmobile unless all its safety features are in place and in good working order.

***Lights** - Headlights and taillights are standard equipment. When snowmobiling at night, be sure lights are clear of dirt, slush or snow, and are in good working order.

Many manufacturers include either reflex reflectors or reflective

sheeting on snowmobiles to increase their visibility for the snowmobiler's safety.

***Shields and Guards** - Your snowmobile is provided with a number of shields and guards. Leave these in place on your vehicle as they are designed to keep clothing and hands out of moving parts and away from hot components. Never attempt to make adjustments to any moving part while the engine is running. Also, some vehicles are equipped with a rear snow flap.

***Windshields** - Windshields provide operator comfort, as well as protection by deflecting wind and snow away from the operator.

This brief list of safety features may be but a few of the safety features included on your vehicle. Do not remove or change any of these items. If replacement is necessary,

use only parts that meet or exceed the original requirements. Your safety is involved. Consult your dealer for advice.

Not only are these and many other components necessary for the safe operation of your vehicle, but they are also required for the continued operation of your snowmobile. Customizing your snowmobile can lead to serious consequences if safety features are disregarded. Unless you are prepared to assume the full consequences for so doing, do not modify your vehicle.

FUEL SYSTEM

Use of the correct fuel mixture in your snowmobile is very important. Most two-cycle engines must have their lubrication oil premixed with the gasoline, although some have an injection system. You, the operator,

should read the manual provided with your vehicle to learn what gasoline and oil is recommended by the manufacturer of your snowmobile.

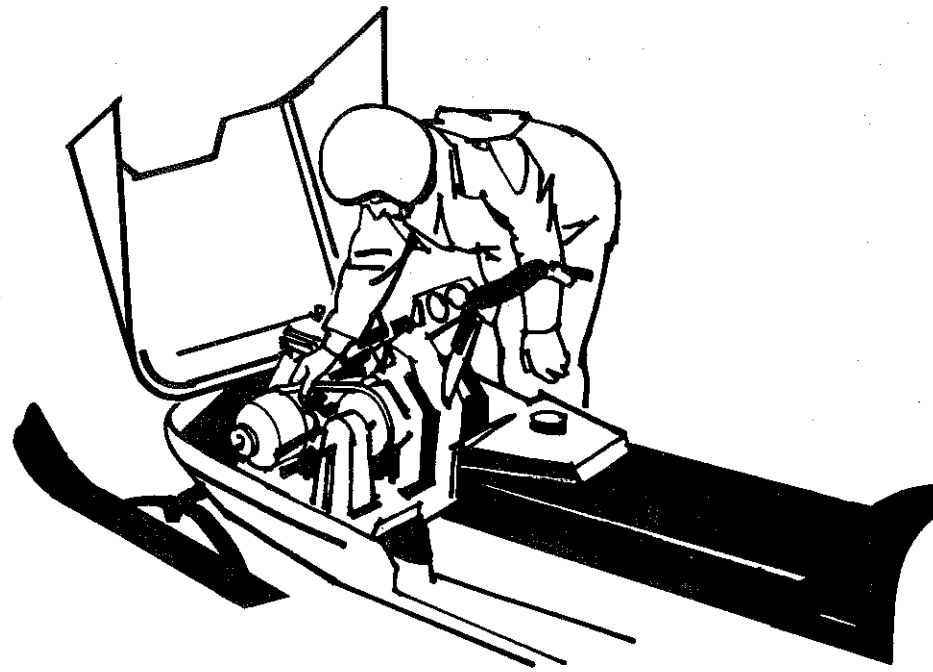
Too much oil in the gasoline can foul the plugs and engine. Too little oil in the gasoline may result in an

overheated engine which could cause engine damage and failure. It is very important that you use the proper gas, oil, gas/oil ratio and mixing procedure. A stalled engine while riding will not only spoil your fun, but may be unsafe. If you have any questions, contact your snowmobile dealer.

GENERAL MAINTENANCE

The maintenance and care you give your snowmobile contributes significantly to the fun and safety of your snowmobiling adventures. It is very important that every snowmobile receive regular maintenance and care, but it is doubly important that it be done correctly. Appreciate the complexity of your snowmobile, recognize the rough exposure it receives, and maintain it properly while recognizing your limitations to perform mechanical procedures.

Each snowmobile should be given a thorough check periodically, and a general check before each ride. Snowmobiles are often operated in the harshest conditions of weather and terrain. Always follow the maintenance schedules and procedures specified in your owner's/operator's manual to keep



the vehicle's components lubricated; to check for loose, worn or misaligned components; to be assured that the carburetor and throttle linkages are set correctly for efficient and proper operation; and for the periodic cleaning and adjustment of the spark plug(s) gap.

Always make certain that your throttle, emergency stop switch, brake, steering and light systems are functioning properly. Never operate your snowmobile unless the hood and the guards are in place and firmly attached.

PREPARATION FOR STORAGE

The summer storage period can be harder on your snowmobile than a winter's use, unless you properly prepare it for storage. To summerize your snowmobile, clean it up inside and out; lubricate and wax to protect the vehicle and its components; remove fuel; remove drive belt; remove tension from the track; and store the snowmobile in a cool, dry, sheltered area.

Your owner's/operator's manual will provide additional storage information. Your questions can be answered by your snowmobile dealer.

TROUBLE-SHOOTING

Regular maintenance of your snowmobile and the use of good judgment in its operation will generally prevent breakdowns. Many problems encountered on the trail can be corrected on the spot if you will carry a minimum assortment of tools and spare parts. Listed below for quick reference are some of the most common snowmobile problems and their probable causes. Following these procedures should get your vehicle started again.

TROUBLE**Engine won't start.****PROBABLE CAUSE**

Emergency stop switch depressed
 Ignition switch off
 Spark plug fouled
 Improper or no ignition

Fuel tank empty
 Engine starving for fuel

Plugged fuel line or filter
 Engine floods

REMEDY

Turn on.
 Turn on.
 Clean or replace.
 Check spark plug leads. Check for correct spark plug gap and condition.
 Fill.
 Prime and check carburetor adjustment. Check choke position. Check fuel pump operation. Check lines.
 Clean lines and filter.
 Check carburetor adjustment and position of choke. Open choke, wait one minute or more before restarting.

Rewind starter rope does not retract.

Friction too high in starter

Rewind starter rope fails to engage or retract.

Broken or worn parts internally

Engine runs rough or will not idle.

Carburetor out of adjustment
 Poor ignition

Tap starter housing while keeping small amount of tension on rope.

Use emergency start provisions.

Adjust carburetor.
 Follow procedure for "improper or no ignition" above under "engine won't start."

Idle speed set too low

Increase idle speed setting.

Low RPM.

Poor ignition
 Carburetor air intake plugged

Follow procedure above.
 Remove foreign material.

TROUBLE**Vehicle fails to move when throttle is depressed.****Low vehicle speed.****Lights won't light.****PROBABLE CAUSE**

Drive belt worn or broken
 Drive chain out of adjustment or broken
 Track blocked

Drive belt wrong size or worn
 Clutches out of alignment
 Operating on only one spark plug

Chain and/or track too tight or loose
 Packed snow in vehicle

Loose connections
 Corroded connections
 Bad switch
 Bulb burned out

REMEDY

Replace drive belt.
 Adjust or replace drive chain.
 Tilt machine on side and remove blockage.

Replace drive belt.
 Realign.
 Follow same procedure as "improper or no ignition" under "engine won't start."

Readjust.
 Remove.

Check and tighten.
 Clean.
 Repair or replace.
 Replace bulb.
 CAUTION: If headlight burns out, voltage rise can also burn out taillight.

Do not operate your machine when it is faulty, or with guards or components removed.

HOW TO FUEL

PARTS AND TOOLS

Every snowmobiler should carry at least the following basic parts and tools that can help him and others in an emergency:

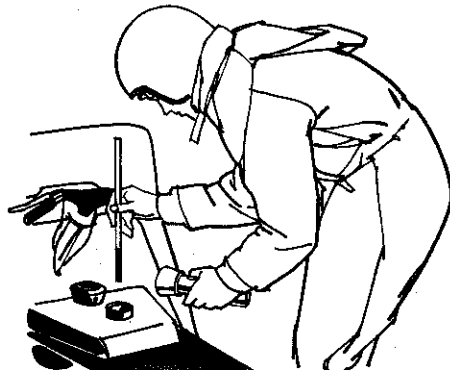
- * Owner's/Operator's Manual
- * Spark Plugs, Wrench and Gap Gauge
- * Friction Tape
- * Drive and Fan Belts
- * Starter Rope
- * Light Bulbs
- * Tool Kit (including at least pliers, screwdriver, adjustable wrench)
- * Knife
- * Flashlight

Include other items depending on the length and time of your ride.

The gas and oil mixing procedure is very important to the continued safe operation of your snowmobile. NOTE: See owner's/operator's manual for manufacturers' recommendations for efficient engine operation and lowest emissions.

Always mix oil and gas in a safe place and use a separate, clean container. Pour in a portion of the gasoline, add all of the oil (oil should be at room temperature), shake well, pour in remainder of gasoline. Shake again.

Always keep away from an idling machine when mixing, and never add fuel while your snowmobile engine is operating. Gasoline and the fumes of gasoline are explosive. Gasoline fumes are heavier than air and can be ignited by a pilot light in a furnace or hot water heater in a utility room,



basement or garage. Be familiar with laws pertaining to fuel storage.

Do not light any matches or smoke while filling the tank, and never check fuel with a lighted match. A full tank exposed to higher temperatures could result in an overflow.

A WORD TO ALL SNOWMOBILERS

Everyone is a beginner the first time he sits behind the controls of a snowmobile regardless of previous experience in driving an automobile, a motorcycle or a motorboat.

The safe use of your snowmobile is dependent on many conditions such as light, weather, environmental conditions, traffic, vehicle condition and the condition of the driver. A snowmobiler has to know each and every one of these conditions and how they relate to each other. You should learn how available light and weather conditions can affect your ability to see. You should know what effects snow and temperature have on ice and other surfaces. You should learn how to compensate for other vehicles or activities when snowmobiling, and to determine if you are both mentally and physically



prepared to operate a snowmobile safely.

You, as a snowmobiler, must accept the responsibility of operating your vehicle. You also have responsibility to train those whom

you allow to ride or drive your snowmobile. They too must learn the operation of the vehicle and the common sense rules of conduct.

Your snowmobile is relatively simple to operate; but like any other vehicle or mechanical equipment, it can be hazardous if you—the operator—or a passenger are the least bit reckless, thoughtless, inattentive or uninformed about its operation.

All operators of your snowmobile should become familiar with your vehicle. There may be noticeable handling and performance differences from one snowmobile to the next.

Every sport that offers excitement and exhilaration, whether it be snowmobiling, skiing, motorcycling, scuba diving, surfing or any other sport that requires skill and

BEFORE YOU START

judgment on the part of the participant, has an element of risk. If the required skill and judgment are deficient, an otherwise acceptable risk element can be magnified into a needless and unacceptable danger element. You must develop the skills and judgment necessary to keep the risks inherent in snowmobiling well within acceptable boundaries.

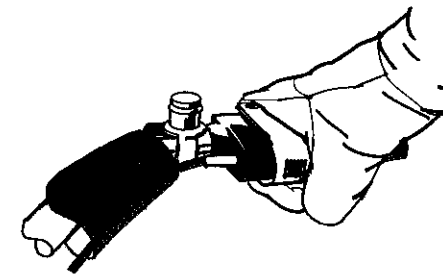
First, a pre-start inspection should be made.

- * Throttle - Operate the throttle two or three times before you turn on the ignition. Does it return freely to the idle or closed position?
- * Brake Controls - Test your brake control as you did the throttle.
- * Visual Inspection - Walk around and inspect the entire vehicle for loose parts or other obvious defects. Make certain hood is fastened. Remove any snow and ice buildup from lights, windshield and running boards.
- * Fuel - Do you have enough?
- * Steering - Be certain the handlebar works freely and turns both ways. There should be no excessive play in the steering linkage or connections to the skis.
- * Drive Belt - Check for wear and alignment.
- * Track - Be sure it turns freely and is free of ice, snow or other foreign objects.
- * Check weather forecast, your clothes and the wind chill index. Will you be warm enough?
- * Make certain your snowmobile is pointed away from people or objects before you start it.

HOW TO START

- * Never attempt to start the engine unless the throttle is in perfect working order. Be certain it is in the normal or idle position. Keep hands off of throttle.
- * Turn the ignition key to the "on" position.
- * Engage choke or press the primer only if the engine is cold.
- * Pull starter handle slowly until you feel resistance, and then briskly, smoothly to start.
- * Allow engine to warm up before operating at full throttle.

While the engine is warming up, check the headlights, high and low beams; taillights and brake lights;



then press the emergency switch operation to be certain it will stop the engine. Before restarting your snowmobile, recheck the throttle control and be sure the vehicle is headed away from people or objects. Now start your engine again.

As with automobiles, each snowmobile has its own starting characteristics or traits. After a little experience, you will learn how your vehicle reacts to priming, choking, or to throttle pressure when the engine is cold or warm.

HOW TO STOP

Before ever riding a snowmobile, you should understand how to stop it under all conditions. Normally, this is done by releasing the throttle and gradually depressing the brake control lever on the left side of the handlebar, and then turning the ignition key to the "off" position. In an emergency, you may stop your vehicle by pressing the emergency stop switch located near the throttle control and applying the brake. Remember, a snowmobile braking system cannot be designed to "stop on a dime" as the braking characteristics vary with deep snow, packed snow or ice. Usually, the brake will safely stop your machine under all normal and most emergency situations.

HOW TO RIDE SAFELY

Do not operate your snowmobile at excessive speeds or at fast acceleration rates. Consider your environmental/weather exposure, abilities and limitations, as well as those of the machine. Riding your snowmobile is relatively simple, but there are certain fundamentals that everyone should know before venturing forth.

Your riding position and your balance are the two basic principles of making your snowmobile go where you want it to. The principle of balance is quite simple. When turning and when on uneven terrain or the side of a hill, you—the operator—and your passenger must be ready to shift your weight to help the machine go in the direction that you want it to.

Experience will teach you how much lean to put into turns at

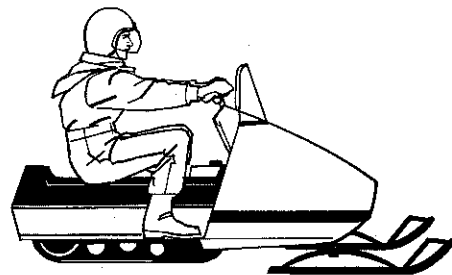
different speeds, and how much you will have to lean into a slope to maintain proper balance.

Generally, the riding position for best balance and control is sitting. However, the posting, kneeling or standing positions are also used under certain conditions.

SITTING

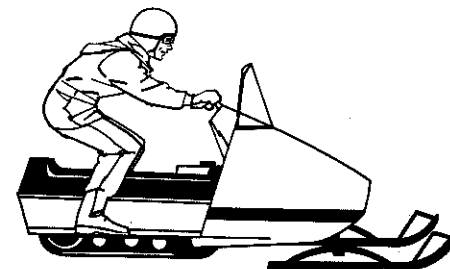
Feet on the running boards, body midway back on seat; an ideal position when operating the snowmobile over familiar, smooth terrain. In this position, the legs should not be fully extended under the hood. Knees and hips should remain flexible to absorb shocks.

WARNING: Do not sit with all your weight on your seat while riding over very rough terrain. Let your knees, instead of your kidneys or back, absorb the shock from bumps.



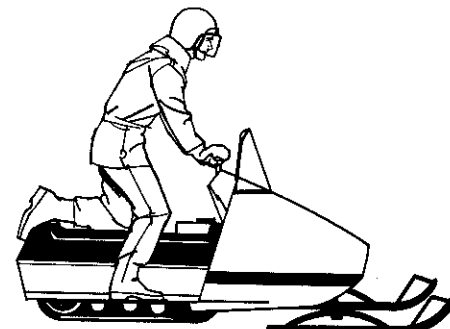
POSTING

A semi-sitting position with the body off the seat and the feet under the body in a sort of squatting posture, thus allowing the legs to absorb the shocks when traveling over uneven terrain.



KNEELING

This position is achieved by placing one foot firmly on the running board and the opposite knee on the seat.



STANDING

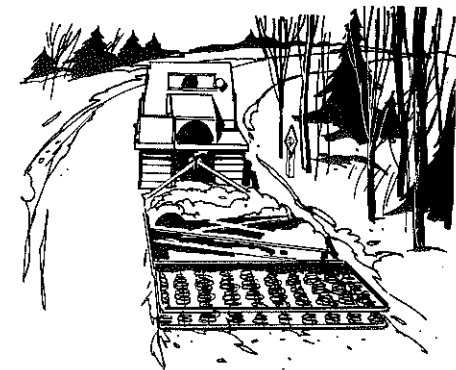
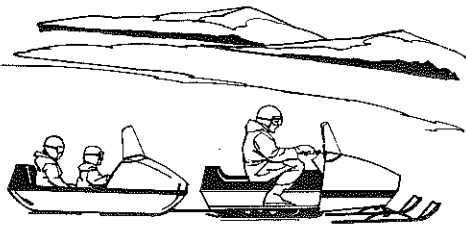
Place both feet on the running boards. Knees should be flexed to absorb the shock from surface bumps. This is an effective position to see better and to shift weight as conditions dictate.

The beginning driver should practice driving on a level area. You should become familiar with your snowmobile, its capabilities and its limitations; and you—as an operator—should master the basic riding positions, the turns and weight shifting techniques before venturing forth.

TERRAIN/RIDING VARIATIONS

Unlike a car, bicycle or motorbike which generally travels on a familiar road or definite trail, snowmobiles can get into areas that other vehicles cannot traverse. Also, drivers are often tempted to put their vehicles into such places and situations which may be hazardous. Know your vehicle and its limitations.

A snowmobile is a versatile vehicle; but, as with other types of machines, it has its limitations. You should always drive cautiously and have your vehicle under control at all times.



GROOMED TRAIL

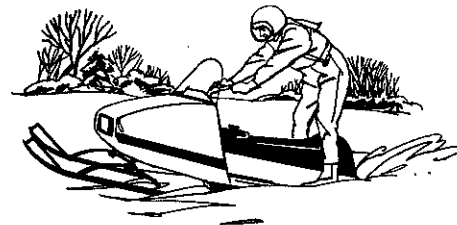
On a maintained trail, sitting is the most preferred riding position. Do not race and, above all, keep to the right hand side of the trail. Be prepared for the unexpected. Observe all trail signs. Do not zig-zag from one side of the trail to the other.

UNGROOMED TRAIL

Unless there has been a fresh snowfall, you can expect "washboard" and snowdrift conditions. Taken at excessive speeds, such conditions can be physically harmful. Slow down. Hold on to the handlebar and assume a posting position. Feet should be under the body assuming a crouched position to absorb any jarring effect. On longer stretches of "washboard" trails, the kneeling position of one knee on the seat can be adopted. This provides a certain amount of comfort, while at the same time keeps the body loose and capable of vehicle control. Beware of hidden rocks or tree stumps partially hidden by a recent light snowfall.

DEEP SNOW

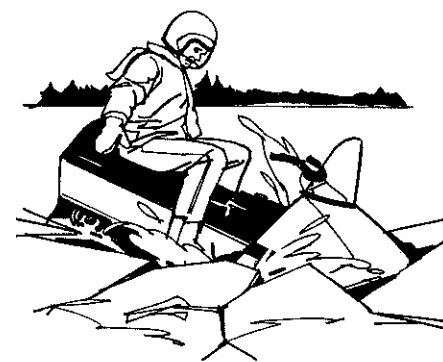
In deep "powder" snow, your vehicle could begin to "bog" down. If this occurs, turn in as wide an arc as possible and look for a firmer base. If you do get "bogged," and it happens to everyone, do not spin your track as this makes the vehicle sink deeper. Instead, turn the engine off, get off and move the vehicle rear onto new snow. Then tramp a clear path ahead of the vehicle. A few feet



will generally suffice. Restart the engine. Assume the standing position and rock the vehicle gently as you steadily and slowly apply the throttle. Depending on whether the front or rear end of the vehicle is sinking, your feet should be placed on the opposing end of the running boards. Never place foreign material beneath the track for support.

FROZEN WATER

Traveling frozen lakes and rivers can be fatal. AVOID WATERWAYS. If you are in an unfamiliar area, ask the local authorities or residents about the ice condition, inlets, outlets, springs, fast moving currents or other hazards. Never attempt to operate your snowmobile on ice that may be too weak to support you and the vehicle.



Operating a snowmobile on ice or icy surfaces can be very dangerous if you do not observe certain precautions. The very nature of ice is foreign to good control of a snowmobile or any vehicle. Traction for starting, turning or stopping is much less than that on snow. Thus, these distances can be multiplied manifold. Steering is minimal, and

uncontrolled spins are an ever present danger. When operating on ice, drive slowly with caution, and allow yourself plenty of room for stopping and turning. This is especially true at night.

A snowmobile, when used properly and in a safe area, is safe. Snowmobiling is fun.

HARD PACKED SNOW

Don't underestimate hard packed snow. It can be difficult to negotiate, as both skis and track do not have as much traction. Best advice is to slow down and avoid rapid acceleration, turning or braking.

WARNING: Side hills and steep slopes are not recommended for a beginner or a novice snowmobiler.



UPHILL

There are two types of hills you can encounter—the open hill on which there are few trees, cliffs or other obstacles, and a hill that can only be climbed directly. On an open hill, the approach is to climb it by side hilling or slalomming. Approach at an angle. Adopt a kneeling position. Keep your weight on the

uphill side at all times. Maintain a steady, safe speed. Continue as far as you can in this direction, then switch to an opposite hill angle and riding position.

A direct climb could also present problems. Assume the standing position, accelerate before you start the climb and then reduce throttle pressure to prevent track slippage.

In either case, vehicle speed should be as fast as the incline demands. Always slow down as you reach the crest. If you cannot proceed further, don't spin your track. Turn the engine off, free the skis by pulling them out and downhill, place the rear of the snowmobile uphill, restart the engine and ease it out with slow even throttle pressure. Position yourself to avoid tipping over, then descend.

DOWNHILL

Downhill driving requires that you have full control of your vehicle at all times. On steeper hills, keep your center of gravity low and both hands on the handlebar. Maintain slight throttle pressure, and allow the machine to run downhill with the engine operating. If a higher than



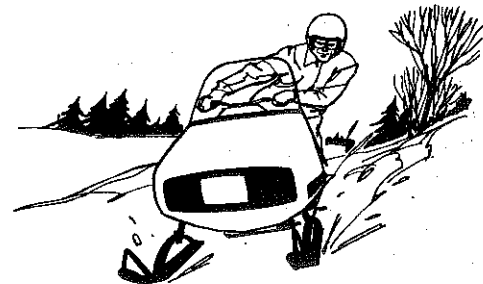
safe speed is reached, slow down by braking; but apply the brakes with frequent light pressure. Never jam the brake and lock the track.

SIDEHILL

When crossing a sidehill or traversing up or downhill, certain procedures must be followed. All riders should lean towards the slope as required for stability. The preferred operating positions are the kneeling position with the knee of the downhill leg on the seat and the foot of the uphill leg on the running board or the posting position. Thus, you can shift your weight quickly as needed.

SLUSH

Lake and river ice form cracks during extremely cold weather. Thus, the weight of the snow causes



the ice to sag, forcing water through the cracks and under the snow. This water mixes with the lower layers of snow, and the resulting slush does not freeze solidly because of the insulating action of the top layer of snow.

You should always check for slush before starting across any lake or river, and check your trail periodically. If dark spots appear in

your tracks, get off the ice immediately.

Slush should be avoided at all times. Ice and water can be thrown rearward into the path of a following snowmobile. Getting a vehicle out of a slush area is strenuous and, in some cases, impossible.

FOG OR WHITEOUTS

On land or water, under certain weather conditions or temperature differences, fog or visibility-limiting snow can form. If you have to proceed into the fog or heavy snow, do so slowly with your lights on and watch intently for hazards. If you are not sure of your way, do not proceed.

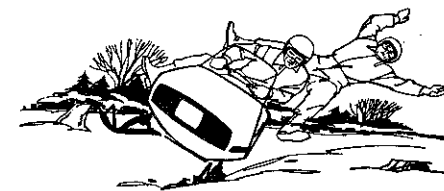
UNFAMILIAR TERRITORY

Whenever you enter an area that is new to you, drive with extreme

caution. Go slow enough to recognize potential hazards such as fences or fenceposts, brooks crossing your path, rocks, sudden dips, guy wires and countless other obstacles which could result in a termination of your snowmobile ride. Even when following existing tracks, be cautious. Travel at a speed so you can see what is around the next bend or over the top of the hill. Learn to recognize all snowmobile trail signs.

BRIGHT SUNSHINE

Bright sunny days can produce different problems for you, the snowmobiler. The glare from sun and snow may blind you to the extent that you cannot easily distinguish ravines, ditches or other obstacles. Goggles with dark colored lenses should always be worn under these conditions.



UNSEEN OBSTRUCTIONS

There may be obstructions hidden beneath the snow. Driving off established trails and in the woods requires reduced speed and increased vigilance. Driving too fast in an area can make even minor obstacles very hazardous. Even hitting a small rock or stump could throw your snowmobile out of control and cause injury to its riders. Stay on established trails to reduce your exposure to hazards. Be safe, slow down, and enjoy the scenery.

HIDDEN WIRES

Always be on the lookout for hidden wires, especially in areas that may have been farmed at one time or another. Too many accidents have been caused by running into wires in the fields, guy wires next to poles and roads, and into chains and wires used as road closures. Slow speeds are a must.

OBSTACLES AND JUMPING

Unplanned jumps of snowdrifts, snowplow ridges, culverts or other indistinguishable objects can be dangerous. You can avoid them by wearing the proper color lenses or face shields and by operating at a lower speed over uneven terrain.

Jumping a snowmobile is an unsafe and dangerous practice. However, if the trail does suddenly drop away from you, crouch (stand)

towards the rear of the vehicle and keep the skis up and straight ahead. Apply partial throttle and brace yourself for the impact. Knees must be flexed to act as shock absorbers.

TURNING

Depending on terrain conditions, there are two preferred ways to turn or corner a snowmobile. For most snow surfaces, "body english" is the key to turning. Leaning towards the inside of the turn and positioning body weight on the inside foot will create a "banking" condition beneath the track. By adopting this position and positioning yourself as far forward as possible, weight will be transferred to the inside ski. NEVER PUT YOUR FOOT OUT TO ASSIST TURNING.

On occasion, you will find that the only way to turn the vehicle about in

deep snow is to lift the skis and pull the snowmobile around or you may be able to lift and swing the rear of the vehicle. Do not over-exert yourself; get assistance and, remember, always lift from the knees.

ROAD CROSSING

In some cases, you will be approaching the road from a ditch or snowbank. Choose a place where you know you can climb without

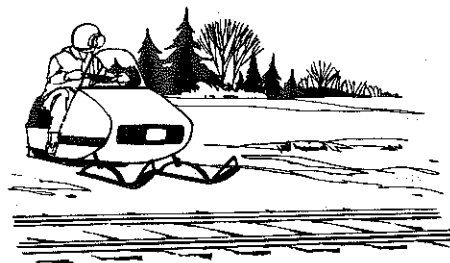


difficulty. Use the standing position and proceed with only as much speed needed to crest the bank. Stop completely at the top of the bank and wait for all traffic to clear. Judge the drop to the roadway. Cross the road at a 90 degree angle. If you encounter another snowbank on the opposite side, position your feet near the rear of the vehicle. Remember, your snowmobile is not designed to operate on bare pavement.

RAILROAD CROSSING

Never ride on railroad tracks. It is illegal. Railroad tracks and railroad rights-of-way are private property. A snowmobile is no match for a train. When crossing a railroad track, stop, look and listen.

Learn and follow your local, state or provincial laws concerning the operation of snowmobiles on roads



and rights-of-way. Observe all traffic rules and ride in safety.

NIGHT RIDES

The amount of natural and artificial light at a given time can affect your ability to see or to be seen. Nighttime snowmobiling is delightful, and it can be a unique experience if you acknowledge your reduced visibility.

Before you start, make certain your lights are clean and working

properly. Do not overdrive your headlights. Drive at speeds that will allow you to stop when you see an unknown or dangerous object ahead. Stay on established trails, and NEVER operate in unfamiliar territory. Avoid rivers and lakes. Guy wires, barbed wire fences, cabled road entrances and other objects such as tree limbs can be especially dangerous at night. Never drive alone. Always carry a flashlight. Wear clothing with reflective material. Keep away from residential areas. Respect the rights of others to sleep.

SAFARI RIDING

Before starting out, designate a "trail boss" to lead the party and another person to follow-up. Ensure that all members of the party are aware of the proposed route and destination.

Make certain that you are carrying all necessary tools and equipment and that you have sufficient fuel to complete the trip. Never overtake the trail boss or, for that matter, any other snowmobile. Use down-the-line hand signals to indicate hazards or intent of direction change. Assist others whenever necessary.

Whenever a number of snowmobiles are together, it is very important to keep a safe distance between them. You should always maintain a safe interval and allow sufficient stopping distance. Don't

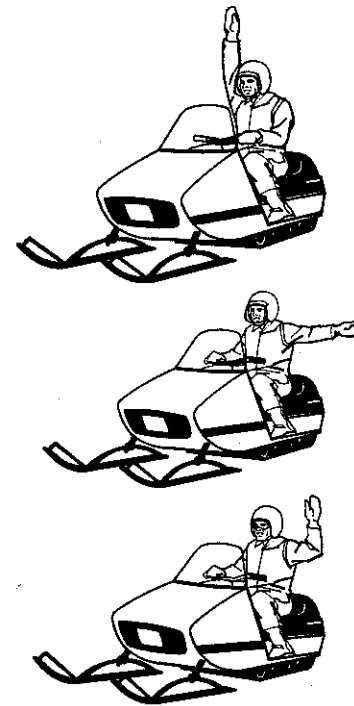
be a tailgater. Watch the machine ahead.

SIGNALS

If you intend to stop, raise either hand straight above your head. A left turn is indicated by extending your left hand straight out in the proper direction. For right turns, extend the left arm and raise the hand to a vertical position so it forms a right angle at the elbow. Every snowmobiler should relay any signal to the ones behind him.

CARRYING A PASSENGER

If your snowmobile is so designed and you are carrying a passenger, you should inform him of snowmobiling basics. Make sure that you instruct your passenger to maintain a firm grasp of the passenger strap or grips. FEET



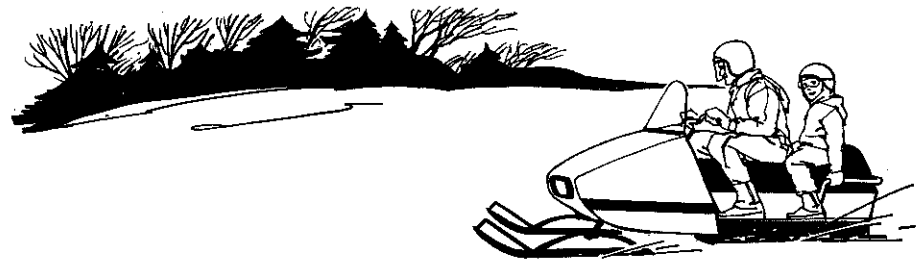
MUST BE KEPT ON THE RUNNING BOARDS AT ALL TIMES. Never carry more than one passenger. Overloading is dangerous. The machine is not designed for it.

Since "body english" is limited and you see more of the trail ahead than your passenger, slow down. An unforeseen bump can leave you passengerless. Remind your passenger to lean into the turn with you, without causing the vehicle to topple. Be extremely careful, go more slowly and check the passenger frequently.

Use extra caution and go more slowly with young passengers. Check frequently to make certain the child has a firm grip and is properly positioned with his feet on the running boards.

When carrying tots or other passengers, smooth starting and stopping are required. You have the benefit of knowing before you start and, also, the additional support of your grip on the handlebar.

Your passenger has to rely on your careful and safe operation of the vehicle. Use moderate speeds. Warn passengers of sidehills, bumps, branches, etc. Also, be certain that your passenger is warm enough.



Stop and check exposed flesh occasionally, especially with children. **YOUR PASSENGER CAN ONLY RELY ON YOUR CAREFUL AND SAFE OPERATION OF THE SNOWMOBILE.**

Small children are far safer in a properly designed snowmobile sled than on the seat of your snowmobile. When doing so, however, always use a rigid hitch and secured connection.

TRAILS AND SIGNS *

Trail signs are used to control, direct or regulate the use of snowmobiles on trails. You, as a snowmobiler, should recognize these symbols and know what they mean.

* Signs made of reflective material are recommended for use where any snowmobiling is done at night

I. REGULATORY



DEAD END/PRIVATE TRAIL

Purpose: To indicate restricted access and non-public trails.
Size: 12"x12" or 9"x9"
Background Color: Silver, red circle
Legend: Silver



STOP SIGN

Purpose: Mandatory usage on trail at road and railroad intersections; discretionary at trail intersections and at crossing locations for other recreationists.
Size: 12"x12" or 9"x9"
Background Color: Red
Border and Legend: Silver



snowmobile trail signs found to be necessary. You, as a snowmobiler, should become familiar with and be capable of recognizing any and all signs used in any area where you are snowmobiling.

SNOWMOBILES PERMITTED

Purpose: To indicate snowmobile trails and use areas.
Size: 12"x12" or 9"x9"
Background Color: Silver
Legend: Green circle, black snowmobile symbol



NO SNOWMOBILING

Purpose: To indicate areas where snowmobiling is not permitted.
Size: 12"x12" or 9"x9"
Background Color: Silver
Legend: Red circle and slash, black snowmobile symbol



ONE-WAY; DO NOT ENTER

Purpose: To indicate the wrong direction of travel along a one-way trail.
Background Color: Silver
Legend: Red circle and slash, black arrow symbol

II. GENERAL WARNING

DANGER



Purpose: To indicate hazards in areas of snowmobile use.
Size: 12"x12" or 9"x9"
Background Color: Yellow with black border
Legend: Black (with red stop sign for stop ahead)

Note: Diamond shape, yellow color with black legend and 12"x12" or 9"x9" size must be used for all optional signs of this generic family, including:

Right turn / left turn;
Steep hill;
Two-way traffic;
Snowmobile crossing;

Narrow bridge;
Railroad crossing; and
Ice.
See examples below:

RIGHT OR LEFT TURN



Purpose: To warn of a sharp turn on trail.
Size: 12"x12" or 9"x9"
Background Color: Yellow with black border
Legend: Black

SNOWMOBILE CROSSING



Purpose: To warn of a road and a snowmobile trail crossing.
Size: 12"x12" or 9"x9"
Background Color: Yellow with black border
Legend: Black

STEEP HILL



Purpose: To warn of steep hill on the trail ahead.
Size: 12"x12" or 9"x9"
Background Color: Yellow with black border
Legend: Black

TWO-WAY TRAFFIC



Purpose: To warn of on-coming traffic.
Size: 12"x12" or 9"x9"
Background Color: Yellow with black border
Legend: Black arrows and lines

III. TRAIL MARKER AND TRAIL INTERSECTION

U.S.



TRAIL MARKER

Purpose: To reassure the user he is on the trail.
Size: (U.S.) 5"x7" or 6"x6" (Canada) 6"x12" (15 cm x 30 cm)
Background: (U.S.) Orange (Canada) White with black and yellow borders



DIRECTIONAL MARKER

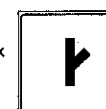
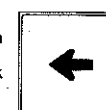
Purpose: To indicate changes in trail direction.
Size: (U.S.) 9 1/4"x12" or 9"x9" (Canada) 12"x12" (30 cm x 30 cm)
Background: (U.S.) Orange (Canada) White with black border
Legend: (U.S.) Black (Canada) Red



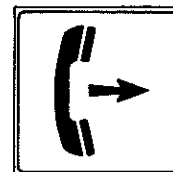
TRAIL INTERSECTION

Purpose: To indicate an intersection in a trail.
Size: (U.S.) 12"x12" or 9"x9" (Canada) 12"x12" (30 cm x 30 cm)
Background: (U.S.) Orange (Canada) White
Legend: (U.S.) Black (Canada) Red

CANADA



IV. INFORMATIONAL



Purpose: To advise of available services and facilities.
Size: (U.S.) 12"x12" or 9"x9" (Canada) 12"x12" (30 cm x 30 cm)
Colors: Blue and White
Legend: Universal symbols

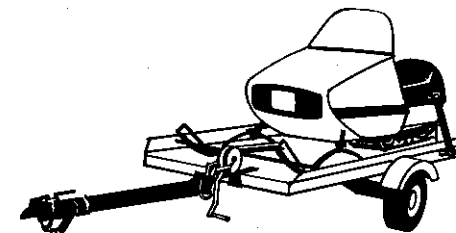
Note: Uses for this generic class of signs include:
Gasoline stations Emergency medical assistance
Eating facilities Camping, etc.
Telephone

TRANSPORTING AND TOWING

Tilt bed trailers can easily be equipped with a winch mechanism to afford maximum safety in loading. Simple as it may seem, never drive your snowmobile onto a tilt bed trailer or any other kind of trailer or vehicle. Many serious accidents have resulted from driving up and over a trailer.

Snowmobiles are designed to move over surfaces. Your trailer bed is no exception. Be certain to anchor your vehicle securely, front and rear, even on short hauls. Be certain all equipment is securely fastened, and cover your snowmobile when trailering.

Be certain your trailer meets state or provincial safety requirements; that the hitch and safety chains are secure; and the brake, turn indicators and clearance lights all function.



WEATHER /WIND CHILL

Snowmobiling is fun and enjoyed by persons of all ages. It can, however, be a strenuous sport. Occasionally, a snowmobiler will be required to exert a good deal of physical energy. Also, a snowmobiler can be outdoors for long periods of time and exposed to subzero temperatures with high wind chill factors.

When riding a snowmobile, your body—particularly those parts exposed to the air—is influenced by what is called wind chill. The wind chill factor is given as a still air temperature that has the same cooling effect on an exposed or inadequately protected human body as a combination of temperatures and wind or vehicle speed. Example: If you were riding your snowmobile at twenty miles per hour and the actual temperature was 0 degrees F,

it would have the same cooling effect on you as if you were standing outside and the temperature was -39 degrees F with no wind.

The following chart indicates the wind chill temperatures you can



expect to encounter while riding your snowmobile. All snowmobilers should learn how to use it and should refer to it often.

WIND CHILL CHART												
Estimated Wind Speed in MPH	Actual Thermometer Reading (°F)											
	50	40	30	20	10	0	-10	-20	-30	-40	-50	-60
Calm 5 10 15 20 25 30 35 40	Equivalent Temperature (°F)											
	50	40	30	20	10	0	-10	-20	-30	-40	-50	-60
	48	37*	27	16	6	-5	-15	-26	-36	-47	-57	-68
	40	28	16	4	-9	-21	-33	-46	-58	-70	-83	-95
	36	22	9	-5	-18	-36	-45	-58	-72	-85	-99	-112
	32	18	4	-10	-25	-39	-53	-67	-82	-96	-110	-124
	30	16	0	-15	-29	-44	-59	-74	-88	-104	-118	-133
	28	13	-2	-18	-33	-48	-63	-79	-94	-109	-125	-140
	27	11	-4	-20	-35	-49	-67	-82	-98	-113	-129	-145
	26	10	-6	-21	-37	-53	-69	-85	-100	-116	-132	-148
(wind speeds greater than 40 mph have little addi- tional effect)	LITTLE *DANGER (for properly clothed person)				INCREASING *DANGER				GREAT *DANGER			
*Danger from freezing of exposed flesh.												

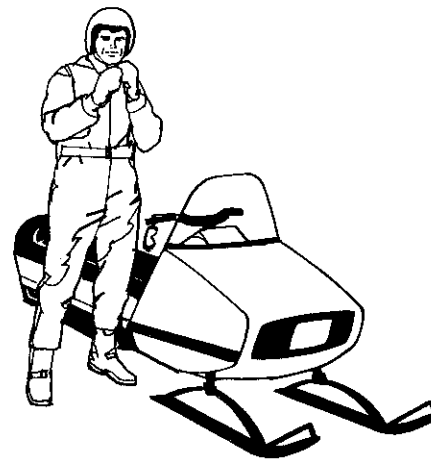
HOW TO DRESS

As with other types of winter sports, snowmobiling requires special and adequate clothing. The proper clothing for snowmobiling should be put on in layers, should be comfortable and not too tight. The amount and type of clothing to be worn depends on the wind chill factor expected and the weather. Always check the weather forecast and refer to the Wind Chill Chart before you go on a ride. Dress for the coldest weather expected, and consider the length of your exposure.

Good quality one- or two-piece snowmobile suits with water resistant covering and lightweight, high insulating linings should be worn by all snowmobilers. The amount and type of clothing to be worn underneath them depends on the day. Thermal underwear next to the skin provides the important layer

of dead air necessary for the proper insulation.

Approved helmets are recommended at all times. They can provide both warmth and protection from injuries. A stocking type cap and face mask should always be



carried or worn. Goggles or a face shield which attaches to the helmet are indispensable. Wear gray or dark green lenses for bright days. On dark days or late in the afternoon, wear amber or yellow lenses. These are also very useful for driving under flat light conditions, as they can reveal dangerous depressions in the snow. Colored lenses must be removed at night, and yellow lenses should not be worn on bright or sunny days.

Remember, only use the proper colored lenses for the lighting conditions present.

Your hands should be protected by a pair of snowmobile gloves or mitts that have sufficient insulation and that will permit use of your thumbs and fingers for operation of the controls.

Rubber bottom boots with either a nylon or a leather top, with

HOW TO PREVENT EMERGENCIES

removable felt liners are best suited for snowmobiling, provide good foot traction and, also, the necessary warmth and dryness. Adding wool socks gives your feet the required protection.

Body dryness is an important factor in keeping warm. You should keep yourself as dry as possible when snowmobiling. When you come indoors, take your snowmobile suit and boots off. Make certain they dry properly.

Do not, under any circumstances, wear long scarves or loose clothing that could get drawn into or caught by moving parts of your vehicle. Remember, you should always dress properly for the conditions.

Be certain that you dress warmly. Cover all exposed skin to prevent serious frostbite. Check for frostbite frequently.

Use your common sense and check advance weather predictions carefully BEFORE you make an extended ride.

If you encounter an accident while on a snowmobile ride or your snowmobile breaks down and it can't be fixed, you can become involved in an emergency situation. It is always better to avoid an emergency or survival situation than it is to be in one. Always have other snowmobilers with you on trail rides. Always let someone know where you are going, when you plan to return and report in upon returning. Be certain your snowmobile is in good running condition. Remember, a snowmobile, if not used properly in a safe area, can be dangerous.

The following is a guide list of essential equipment you should carry when going on an extended

snowmobile ride. (Know how to carry and use them.)

- * Extra Fuel (in a safe container)
- * Snowshoes or Skis (one pair per person)
- * Map and Compass
- * Knife
- * Candles
- * Extra Clothing (mittens, socks, boot liners)
- * Tool Kit and Spare Parts
- * Block and Tackle (with at least fifty feet of line)
- * Waterproof Matches
- * Axe or Saw
- * Gasoline Deicer
- * Flashlight and Extra Batteries
- * Flares
- * First Aid Kit
- * Large Metal Cup or Small Kettle

SURVIVAL

- * Brightly Colored Tarp or Plastic Sheet
- * High Energy Food

It is well to remember that just a half-hour ride at average speeds of twenty or thirty miles per hour can put you over ten miles from your starting point.

Snowmobiling safety depends on your common sense, the condition of your vehicle and your preparation for emergencies.

If you find yourself in a survival situation, sit down and stay calm. Plan ahead. You have only to keep dry and warm. An overnight stay in the field in the wintertime need not be a minute-by-minute life and death matter. Your brain is your best tool of survival. Use it.

There are no two identical survival situations. However, there are some basic points which will help you through a survival situation. Save a life. YOURS!

Remember these rules:

1. **Don't Panic** - Think and decide on a plan of action. Stay together. Conserve your energy and warmth.
2. **Check Food** - Carry dehydrated emergency rations.

3. **Melt Clean Snow** - Quench thirst. You can survive a long time on water alone.

4. **Make Shelter** - Use snowmobile snow, evergreen boughs or birch bark.

5. **Build Fire** - Use engine fuel and spark, flashlight batteries and steel wool.

6. **Make Signal** - Use fire, smoke, whistle, flares, snowmobile and parts or signs in the snow.

RESPONSIBILITY

Nationally Accepted Distress Signals

- I Require Doctor - Serious Injury
- II Require Medical Supplies
- X Unable to Proceed
- O Need Map and Compass
- F Need Food and Water
- V Indicate Direction to Proceed
- LL All Well

7. Make your situation clear by tramping a signal one hundred feet long in the snow. Use upright boughs for casting shadows so the signal can be seen from a plane.

BEFORE YOU LEAVE on a snowmobile trip, let your intended journey and time of expected return be clearly known to friends and/or local authorities.

THIS ADVICE has been cut to a minimum. Read more about survival techniques. It is information you can't obtain when you need it most.

ENVIRONMENT

The protection of environmental quality is the responsibility of each and every individual. All human activities produce an effect on the environment. Snowmobiling is no exception. Remember, in snowmobiling as in all human activities, you—the user—while enjoying your activity, have a responsibility not to destroy the area you are using. Common sense should be your guide. Courtesy should be your watchword.

The following are some things you can do to protect your environment:

- * Do not operate your snowmobile when there is insufficient snow cover to protect the ground vegetation.
- * Do not run over trees or shrubs.

- * In encounters with animals, stop and allow them to move off leisurely. Do not chase them.
- * Adopt a policy of "what you carry in, you carry out; take only pictures and leave only tracks."

CODE OF ETHICS

Driver etiquette and snowmobile safety go hand in hand. You, as a snowmobiler, must do your part to make snowmobiling a welcome activity in your area. Snowmobiling can be annoying to those who don't themselves snowmobile, particularly in residential areas. Do not race the engine or ride the vehicle at night near dwellings, hospitals or other quiet zones. Work actively to keep snowmobiling a great sport by

observing the Snowmobiler's Code of Ethics.

1. I will be a good sportsman and conservationist. I recognize that people judge all snowmobilers by my actions. I will use my influence with other snowmobile owners and operators to promote sportsman-like conduct.

2. I will not litter any trails or areas, nor will I pollute streams or lakes. I will carry out what I carry in.

3. I will not damage living trees, shrubs or other natural features.

4. I will respect other peoples' properties and rights.

5. I will lend a helping hand when I see someone in need.

6. I will make myself and my vehicle available to assist in search and rescue operations.

7. I will not interfere with the activities of other winter sportsmen. I will respect their right to enjoy their recreational activity.

8. I will know and obey all federal, state or provincial and local rules regulating the operation of snowmobiles in areas where I use my vehicle.

9. I will not harass wildlife.

10. I will not snowmobile where prohibited.

SUMMARY OF ACCIDENT PREVENTION PRACTICES

LAWS AND REGULATIONS

Federal, state, provincial and local government agencies have enacted laws and regulations pertaining to the safe use and operation of snowmobiles. It is your responsibility as a snowmobile owner or operator to learn and obey these laws and regulations. Respect and observance will result in safer snowmobiling for all.

- * Unlike a car, bicycle or motorbike which generally travels on a familiar road or a fixed trail, snowmobiles can get into areas where other vehicles cannot; and snowmobilers are often tempted to put their vehicles into such places and situations which may be hazardous. It is, therefore, important that such hazards, although not necessarily applicable to all terrain, be known. Awareness can prevent accidents.
- * Lighting - Snowmobiling at night can be a delightful experience; but, because of reduced visibility, be extra cautious. Don't overdrive your lights. Avoid unfamiliar terrain, and be sure your lights

are working—headlight, taillight and stop light. Always carry a flashlight and spare bulbs.

- * If you leave your keys in the ignition switch, it presents an invitation to thieves and a danger to young children.
- * Nature is wonderful, but don't let it distract your attention from driving. If you want to truly appreciate winter's scenery, stop your snowmobile on the side of the trail so that you don't become a hazard to others.
- * Fences represent a very serious threat for both you and your snowmobile. Give a wide berth to telephone poles or posts.

- * Hidden wires unseen from a distance can cause serious accidents. Obtain reflective tape or markings to identify hazardous wires near your trail.
- * Overhead branches can cause driver distraction, cut faces and even cause eye damage. Always wear an approved safety helmet, eye protection, and possibly a face shield. This also applies to your passenger.
- * Smoking while refueling or while checking the fuel level is dangerous. All fuel gives off fumes. If you do smoke, do so away from the snowmobile.
- * Although the snow on the ground measures several inches and even feet in depth, dry

grasses—in certain areas—may extend above snow level. Remove any such accumulation from track, engine and gas tank areas.

- * Avoid road traveling. If you must do so and it is permitted, reduce speed. The snowmobile is not designed to operate or turn on paving. When crossing a road, make a full stop, then look carefully in both directions before crossing at a 90 degree angle. Be wary of parked vehicles.
- * Tailgating another snowmobile should be avoided. If the snowmobile in front of you slows for any reason, its driver and passenger could be harmed through your neglect. Older

model snowmobiles may not have a warning brake light. Maintain a safe stopping distance between you and the snowmobile in front of you. Depending on the terrain condition, stopping may require a little more space than you think. Play it safe. Be prepared to use evasive driving.

- * Although it is rare and subject to certain conditions, condensation accumulating around the carburetor can freeze the throttle or its control rendering it inoperable. Always check the throttle movement before starting the snowmobile.
- * An inexperienced operator or uninformed passenger is

among the major causes of snowmobile accidents. Always show a new operator how to start and stop the vehicle. Indicate the correct riding positions and, above all else, only allow him to operate the snowmobile in a restricted flat area—at least until he is completely familiar with its operation. If there is a snowmobile operator's training course existing, have him enroll. The same applies to your passenger. Make sure he is dressed properly for the weather with no long scarves or loose fitting apparel that could get caught in moving parts. Make sure his feet are on the running boards and that he maintains a firm grasp of the

passenger strap or grips, or you.

- * Never have the engine running while the hood is open. Even at idle, a snowmobile engine is turning around 1,800 revolutions per minute. Always turn off the ignition key before opening the hood for any reason.
- * Never remove any original equipment from your snowmobile. Each vehicle has many safety features built in. Such features include various guards and consoles, plus reflective materials and warning labels.
- * Venturing out alone with your snowmobile could also be

hazardous. You could run out of fuel, have an accident, or damage your snowmobile. Remember, your snowmobile is capable of traveling further in half an hour than you may be able to walk in a day in deep snow. Always ride with a friend or members of your snowmobile club. Even then, tell someone where you are going and the approximate time you plan to return.

- * Meadows sometimes have low areas where waters accumulate and freeze over in winter. This ice is usually glare ice. Attempting to turn or brake on this surface could cause your vehicle to spin out of control. Never brake or attempt speeding or turning on glare ice.

If you do happen to travel over such a condition, reduce speed by carefully releasing the throttle.

- * Certain snowmobiles have a frame support bar over the running boards. This should never be considered as a foot stirrup. Doing so could result in serious injury in event of a spill. If you are a driver, place your feet on the footrests beneath the hood or on the running board either in front of or behind the support bar. Your passenger's feet should be behind the support bar or resting against it—never in it.
- * Never "jump" your snowmobile. This should be left to professional stunt men. Don't

show off by hurdling. Be responsible.

- * Many snowmobilers may pass their days by visiting various clubhouses. This is one of the social benefits of the sport; but remember, alcohol and snowmobiling do not mix, even if limited.
- * Wildlife complements your snowmobiling day; and your snowmobile track can provide firm ground over which animals can travel from area to area. Do not violate this privilege by chasing or harassing wildlife. Fatigue and exhaustion can lead to death. Avoid areas posted for the protection or feeding of wildlife. If you happen to be fortunate enough

to see an animal, stop your snowmobile and observe quietly.

- * Excessive speeding can be fatal. In many cases, you cannot react or respond quickly enough to the unexpected. Ride at a speed which is compatible with the trail width, condition and length. If a maximum speed is posted, observe it. Go more slowly when carrying a passenger.
- * A poorly maintained snowmobile itself can be a potential hazard. Excessively worn components could render the vehicle completely inoperative. Keep the snowmobile in good working condition at all times. Follow your daily, weekly and

monthly routine maintenance and lubrication procedures as detailed in your owner's/operator's manual. Consult a snowmobile dealer.

- * Raising the rear of your snowmobile while the engine is running could cause snow, ice or debris to be thrown back at an observer. Never raise the rear of the vehicle while the engine is running. To clear the track, tilt the vehicle on its side. Remove blockage with a piece of wood or other such device.
- * While on safari, do not "gun" the throttle. Snow and ice can be thrown back into the path of a following snowmobile. In addition, when "gunning" the

throttle, the vehicle digs into and leaves an irregular snow surface.

- * Safaris are both fun and enjoyable, but don't show off or overtake others in the group. A less experienced operator might try to do the same as you and fail. When riding with others, limit your abilities to the experience of others. Help others, when needed.
- * Laws are made to restrict the actions of those people who are inconsiderate toward the property and rights of others. If you violate the law, you are being inconsiderate and should suffer the consequences. Know and obey all federal, state,

provincial, local and club rules and laws.

- * The best advice anyone can give to the novice snowmobiler is to "watch and learn from experienced drivers, then practice...practice....." Learn the capabilities of yourself and of the vehicle.
- * Do have fun; be a responsible snowmobiler. Join a snowmobile club, or help form one so that you and other responsible snowmobilers can cooperate in promoting safe snowmobiling and in developing safe areas in which to use snowmobiles.

A SNOWMOBILE, WHEN USED PROPERLY AND IN A SAFE AREA, IS SAFE. SNOWMOBILING IS FUN!