2003
120 XC SP

Owner's Manual
for Vehicle Maintenance and Safety



POLARIS®
The Way Out.

Downloaded from www.Manualslib.com manuals search engine

⚠WARNING

Read, understand, and follow all of the instructions and safety precautions in this manual and on all product labels.

Failure to follow the safety precautions could result in serious injury or death.

PROPOSITION 65 WARNING

Snowmobile engines discharge fuel and exhaust, which contain chemicals known to the State of California to cause cancer and birth defects or other reproductive harm, onto the snow on which they operate. Keep this engine properly tuned and avoid unnecessary idling and spillage during fueling.

⚠WARNING

The engine exhaust from this product contains chemicals known to cause cancer, birth defects or other reproductive harm.

Downloaded from www.Manualslib.com manuals search engine

What's the hottest thing on snow?

Our new web site. It's designed just for YOU!

- Technical tips
- New product introductions
- Event schedules
- Parts and Service Manual information
- Exciting details about The Way Out

Check it out...

www.polarisindustries.com/owner

POLARIS®
The Way Out.

Downloaded from www.Manualslib.com manuals search engine

All information in this manual is based upon the latest product data and specifications available at the time of printing. Polaris Industries Inc. reserves the right to make product changes and improvements which may affect illustrations or explanations.

No part of this manual shall be reproduced or used without the written permission of Polaris Industries Inc.

Illustrations included in this manual are general representations of parts having a similar function. Your model may differ.

Comments and suggestions regarding this manual may be forwarded in writing to: Polaris Industries Inc., Consumer Service, 2100 Highway 55, Medina, MN 55340.

Copyright 2002
Polaris Industries Inc.
All Rights Reserved

Printed in U.S.A.

Downloaded from www.Manualslib.com manuals search engine

TABLE OF CONTENTS

Table of Contents 3

Welcome 4

Introduction 5

- Important Notes for Owners and Drivers 6
- Preservation of the Environment 7
- Vehicle Identification Numbers 9

Safety 10

YOUTH SECTION 13

- Know Your Snowmobile 14
- Pre-Ride Check 19
- Riding Rules 21

ADULT SECTION 25

- Pre-Ride Check 26
- Operation Warnings 30
- Component Identification 42
- Break-In Period 44
- Operation 46
- Maintenance 51
- Accessories 79
- Troubleshooting 79

Specifications 80

Polaris Recommended Products 82

Service and Warranty 83

Warranty 85

Index 89

Downloaded from www.Manualslib.com manuals search engine

WELCOME

Dear Parents:

We believe your children should have the opportunity to enjoy The Way Out experience along with you. We've provided this owner's manual to assist you and your children in learning about the safe operation and care of your new Polaris snowmobile. Please review the information in this manual with any child who may operate the snowmobile. Help your children learn to operate the snowmobile with safety as a top priority. Help them also learn to show respect for our environment and for the rights of others while operating the snowmobile. Since the operator will be a newcomer to the exciting winter sport of snowmobiling, please be sure he/she understands this information before riding the snowmobile. Never allow a child to operate the snowmobile without adult supervision.

The preventive maintenance program outlined in this manual is designed to ensure that all critical components on your child's snowmobile are thoroughly inspected at various intervals. For safe and enjoyable operation of the vehicle, be sure to follow all of the instructions and recommendations in this manual. A table of Polaris-recommended products is provided on page 82. If you have any questions about the snowmobile, contact a Polaris dealer for assistance.

This Owner's Manual contains instructions for minor maintenance, but major repairs are covered in the Polaris Service Manual and should be performed by a Factory Certified MSD (Master Service Dealer) Technician.

Dear Children:

Before you ride your new Polaris snowmobile, there are some important things that you need to know. Your parents and Polaris want you to enjoy riding your new snowmobile, and that's why you need to read and understand the information in your owner's manual.

Ask your parents to explain anything you don't understand, and pay close attention to the warnings and instructions you read. Your safety and the safety of others is the most important thing to think about at all times.

As the driver of the snowmobile, you must learn how to keep yourself and those around you safe while you're riding. So read your manual, and then enjoy riding your new Polaris snowmobile!

Downloaded from www.Manualslib.com manuals search engine

INTRODUCTION

After reading this manual, store it in the snowmobile for convenient reference. It should remain with the snowmobile when sold.

- This manual contains the latest information at the time of printing. We reserve the right to make product changes and improvements without notice.
- The illustrations and photos used in this manual are general representations. Your model may differ.
- Follow the maintenance program outlined in this manual. Preventive maintenance ensures that critical components of the snowmobile are inspected by your dealer at specific mileage intervals.
- A table of Polaris-recommended products for your snowmobile is provided on page 82.
- You and your dealer must complete the registration form included with your snowmobile and forward it to us. This completed form is necessary to ensure warranty coverage.
- Protect and preserve your right to ride by joining your local trail riding clubs.

IMPORTANT

Parents should sit down with their children and read the Youth Section with them before allowing them to use this snowmobile. Parents must also read the Adult Section before allowing their children to ride this snowmobile.

Downloaded from www.Manualslib.com manuals search engine

INTRODUCTION
Important Notes for Owners and Drivers

PARENTS: Do not allow anyone under the age of six (6) to operate this machine. Review the information in this manual with any child who may be operating the snowmobile. It is up to you to teach any operator the proper and safe way to ride a snowmobile. You must set boundaries and adhere to them, keeping the operator's safety foremost in your mind. Never allow a child to operate this machine without adult supervision.

These units are not designed for adult use. Serious damage to the vehicle may occur if the maximum rider weight capacity is exceeded. The maximum rider weight capacity is 140 lbs. (63.5 kg).

CHILDREN: Before you ride your new Polaris snowmobile, there are some important things that you need to know. Your safety and the safety of others is the most important thing to think about at all times. As the driver of the snowmobile, you must learn how to keep yourself and those around you safe while you're riding.

Pay attention when you see this symbol:



This is the safety alert symbol. When you see this symbol on your snowmobile or in this manual it means PAY ATTENTION because you could die or be seriously hurt if you don't follow the instructions.

Downloaded from www.Manualslib.com manuals search engine

Preservation of the Environment

Teach your child to drive their snowmobile with consideration for the protection and preservation of the environment.

Noise Level

One of the most publicized subjects with regard to snowmobiles is noise. The Society of Automotive Engineers (SAE), which is the standard-setting body for snowmobiles, has recommended that snowmobiles conform to prescribed sound levels. This Polaris snowmobile has been engineered to conform to these SAE standards.

In order to be meaningful, all regulations require the cooperation of the snowmobile owner. Muffling systems, designed to reduce noise levels, should not be altered or removed. Snowmobile drivers must be aware that they have a public responsibility to operate their snowmobiles with concern for others. As a snowmobile operator you may not realize the sound of your snowmobile may annoy non-snowmobilers. We are attempting to do our part through the manufacture of quieter machines, and we also ask your help in the effort to further reduce the impact of noise.

Air Pollution

As a part of Polaris' plan for the snowmobile's compatibility within the environment, our engineers are investigating ways to reduce emission levels of engines. We expect our efforts to lead to the reduction of potential air pollution.

The four-stroke engine used in this snowmobile produces less exhaust emissions and reduces noise, as well.

In addition to technological research, we also suggest that governmental agencies, manufacturers, distributors, dealers, ecologists, and other interested parties work together to develop data on environmental topics. We will continue to participate in this type of study so that someday we may find the answers to these difficult issues.

Downloaded from www.Manualslib.com manuals search engine

INTRODUCTION
Preservation of the Environment

Environmental Protection

As part of the continuing environmental education campaign, we are encouraging state and provincial governments across the snowbelt to adopt rigorous safety training programs which also encourage protection of our environment, wildlife and vegetation. Snowmobile clubs and other organizations are working together to protect our environment. It is very important that we encourage them as well as become actively involved ourselves. Teach your child the following:

Respect your snowmobile;
respect your environment;
and you will earn
the respect of everyone.

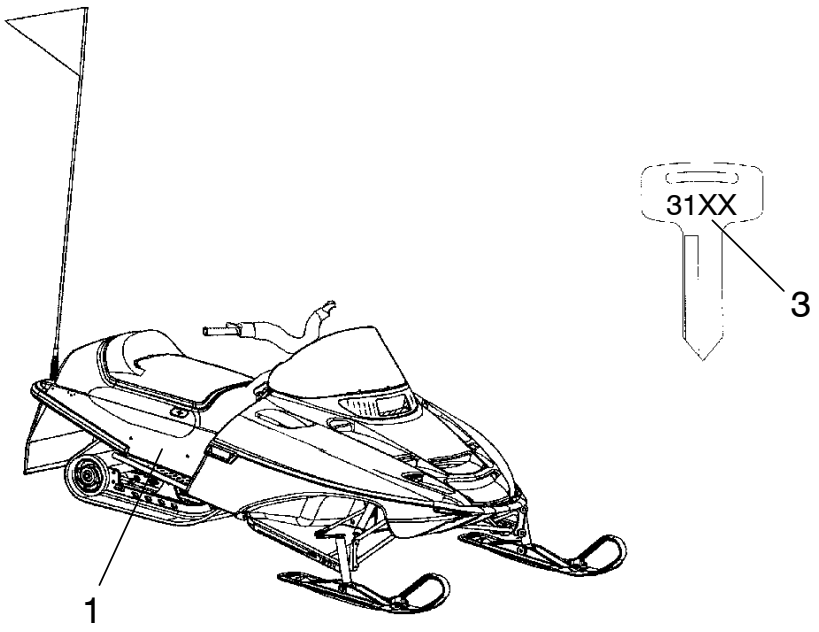
Downloaded from www.Manualslib.com manuals search engine

Vehicle Identification Numbers

The frame vehicle identification number (VIN) and engine serial number are important for model identification when registering your vehicle, when obtaining insurance, and when ordering replacement parts. In the event your vehicle is stolen, these numbers are essential to the recovery and identification of your vehicle.

Remove the spare key and store it in a safe place. Your key can be duplicated only by mating a Polaris key blank with one of your existing keys. If both keys are lost, the ignition switch must be replaced. See your Polaris dealer.

Please record your snowmobile identification numbers below for future reference:



1. Tunnel VIN (lower right side of the tunnel)

2. Engine Serial Number (right front side of engine crankcase)

3. Key Number:

Downloaded from www.Manualslib.com manuals search engine

⚠WARNING

Failure to follow the warnings in this manual can result in severe injury or death.

Read and understand the owner's manual and all warnings before operating a Polaris snowmobile. Adults must thoroughly explain this information to all operators of the snowmobile.

All operators must be at least six (6) years old and must understand the risk involved if these important warnings and cautions are not heeded.

Equipment Modifications

All Polaris snowmobiles have been designed and tested to provide safe operation when used as directed. Failure of critical machine components may result from operation with any modification; especially those that increase speed or power. There's a significant possibility of loss of control at higher speeds.

We are concerned for the safety of our customers and for the general public. Any modifications to the original equipment of the vehicle create a substantial safety hazard and increase the risk of bodily injury. Therefore, we strongly recommend that consumers do not install on a Polaris snowmobile any equipment that may increase the speed or power of the vehicle, or make any other modifications to the vehicle for these purposes.

The warranty on your Polaris snowmobile is terminated if any equipment has been added to the vehicle, or if any modifications have been made to the vehicle, that increase its speed or power.

Downloaded from www.Manualslib.com manuals search engine

Maintenance Program

As with all snowmobiles, caution must be observed to ensure operator safety. Particular caution must be taken to make sure that the snowmobile is in excellent operating condition at all times. We strongly recommend that the operator, as well as an adult, check major and vital safety components before each use of the vehicle.

We also recommend that you strictly follow the maintenance schedule outlined in this manual to ensure that all critical components on the snowmobile are thoroughly inspected by your dealer at various mileage intervals.

This snowmobile is not a toy. It is a well-engineered and well-constructed recreational vehicle. The information in this manual is provided to aid you in its safe operation.

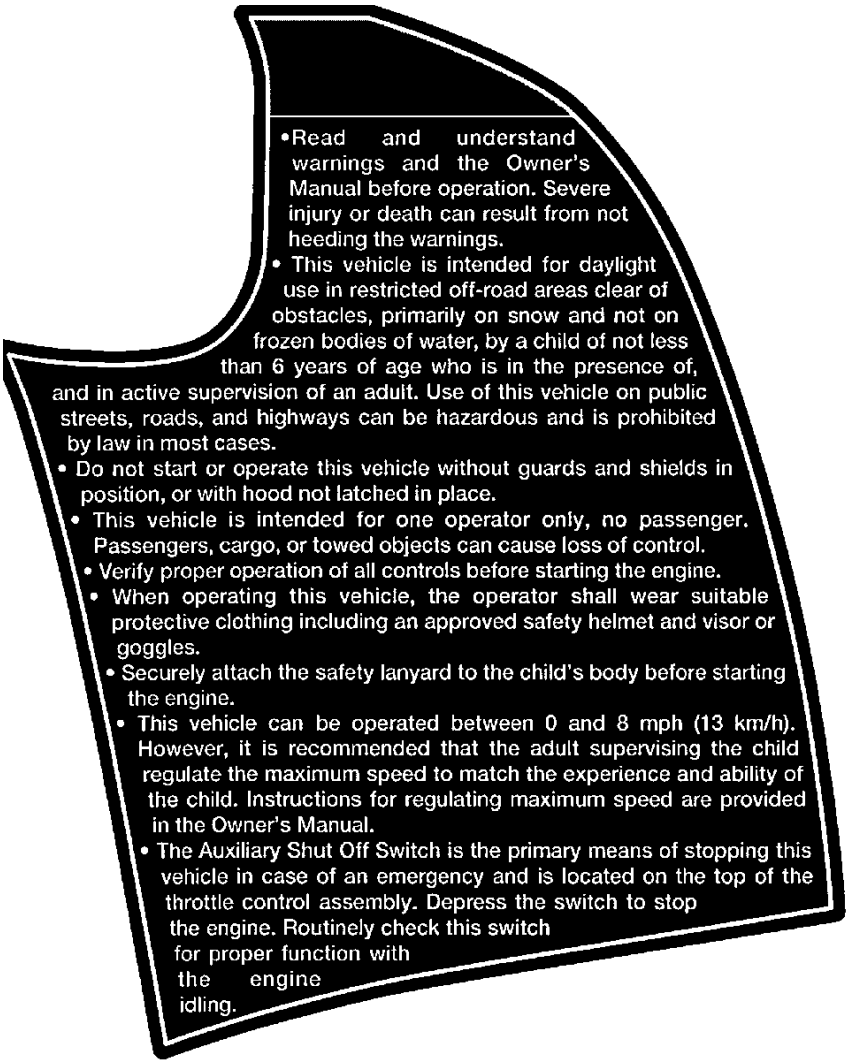
Downloaded from www.Manualslib.com manuals search engine

SAFETY
Safety Decals

Safety and warning decals have been placed on the vehicle for the operator's protection. Make sure the operator understands the information on all decals. If any decal becomes illegible or comes off, contact your Polaris dealer for a replacement. Any *safety* decal needing replacement will be provided by Polaris at no charge. The part number is printed on the decal.

⚠ CAUTION

Improper use of this snowmobile or failure to maintain it in good operating condition can result in injury. To reduce this possibility, read the important safety information on the following decal and make sure all operators and guests are familiar with all warnings, cautions and safe operating procedures. They must also understand the consequences and risks if they choose to ignore or neglect this information.



Downloaded from www.Manualslib.com manuals search engine

The following signal words and symbols appear throughout this manual and on your vehicle. Your safety is involved when these words and symbols are used. Become familiar with their meanings before reading the manual.



The *safety alert symbol*, on your vehicle or in this manual, alerts you to the potential for personal injury.

⚠WARNING

The *safety alert warning* indicates a potential hazard that may result in serious injury or death.

⚠ CAUTION

The *safety alert caution* indicates a potential hazard that may result in minor personal injury or damage to the vehicle.

CAUTION

A *caution* indicates a situation that may result in damage to the vehicle.

NOTE:

A *note* will alert you to key information or instructions.

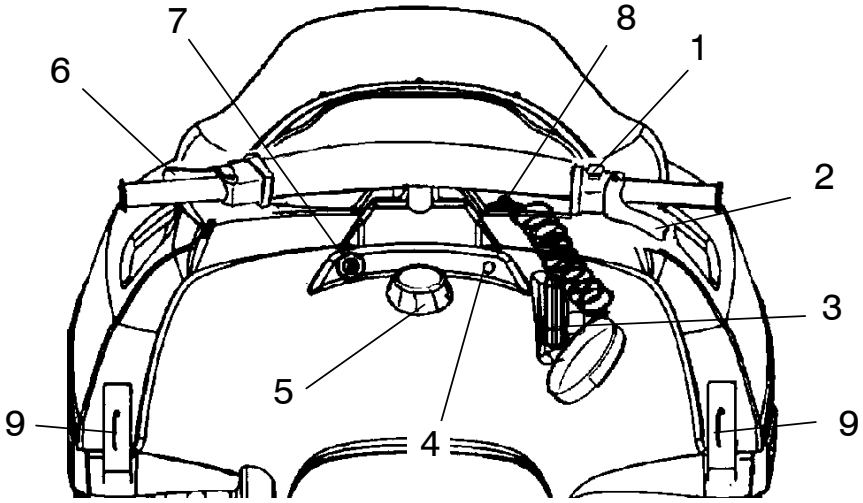
IMPORTANT

IMPORTANT will alert you to important information or instructions.

Downloaded from www.Manualslib.com manuals search engine

YOUTH SECTION
Know Your Snowmobile

Before you have an adult start the engine for you for the first time, let's learn about the controls on your new machine.



1. **Engine Stop Switch** - When the engine is running, you can push this button down and the engine will stop. The stop switch must be in the UP position to start the engine again.
2. **Throttle Control** - The throttle control makes your snowmobile go forward when you press it with your thumb. You must always make sure the throttle control does not stick before you operate your snowmobile. Read more about it on page 19.
3. **Recoil Starter Handle** - Pull the recoil starter handle to start your snowmobile. An adult will help you start it the first time.
4. **Choke Knob** - You may need to use the choke to help start your snowmobile if the engine is cold. Read more about it on page 48.
5. **Gas Cap** - The gas cap has to be taken off when an adult puts gas in your snowmobile. Never take the gas cap off. Always make sure it's tightly closed.

Always have an adult put gas in your snowmobile. Never try to do it yourself.

Downloaded from www.Manualslib.com manuals search engine

Know Your Snowmobile

6. **Brake Lever** - Squeeze the brake lever toward the handlebar to make your snowmobile slow down or stop.



Always take your thumb off the throttle lever when you squeeze the brake lever.

7. **Ignition Switch** - The ignition switch key must be turned ON before pulling on the recoil starter handle to start your snowmobile. You can also use this key to turn off the engine.

8. **Tether Strap/Switch** - The tether strap must *always* be attached snugly to your right wrist and to your snowmobile *every time you drive*. If you fall off your snowmobile, the tether strap will pull away from the switch and the engine will stop.



Never ride without the tether strap attached to your right wrist and to your snowmobile. Be careful not to let the cord get tangled around the handlebars or any part of your body.

9. **Hood Hold-Down Strap** - There are two straps to hold down the hood of your snowmobile. They must always be latched before you start your machine.

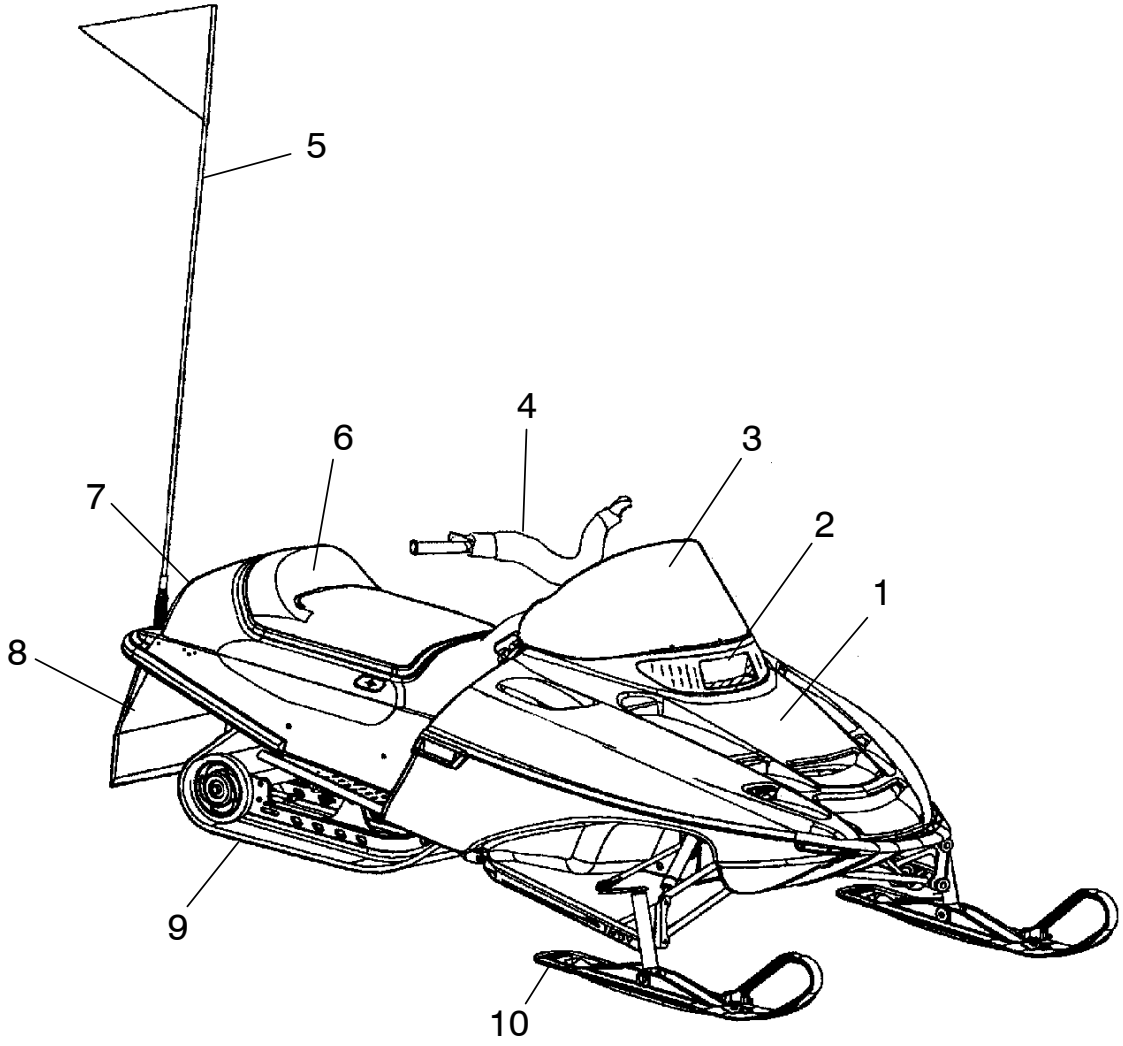


Always make sure the hood hold-down straps are latched before you ride.

Downloaded from www.Manualslib.com manuals search engine

YOUTH SECTION
Know Your Snowmobile

Let's learn more about the parts of your snowmobile before we talk about riding.



Downloaded from www.Manualslib.com manuals search engine

Know Your Snowmobile

1. **Hood** - The hood covers the moving and hot parts of the engine and must be securely latched before you ride the snowmobile.
2. **Headlight** - The headlight is always on when the engine is running. It helps others see you when you're riding during daylight, but it's not supposed to be strong enough to help you see in the dark. Drive your snowmobile only in the daylight.
3. **Windshield** - Always keep your windshield clean so you can see where you're driving.
4. **Handlebar** - The handlebar is connected to the skis. When you turn the handlebar, the skis turn in the same direction.
5. **Flag -** The flag helps other people see where you're riding. Your snowmobile is smaller than an adult snowmobile, so it's harder to see. Never remove the flag from your snowmobile.
6. **Seat and Storage** - When the engine isn't running, you can take the seat cushion off and put things under the seat in the special compartment.
7. **Taillight** - The taillight is always on when the engine is running. It will help others see you when you're riding.
8. **Snow Flap** - The snow flap keeps snow, ice or other things from flying out behind your snowmobile.
9. **Track** - The engine makes the track turn. The turning track makes your snowmobile go forward.

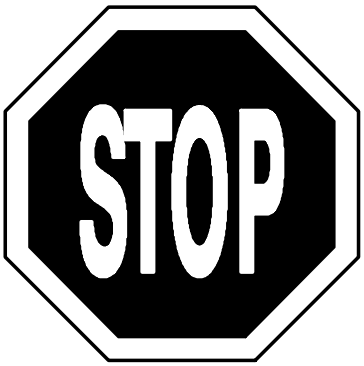


Never get close to a moving track. Never wear clothing that could get caught in a moving track, like a long scarf or baggy clothing. Tie up long hair.

10. **Skis** - The skis turn your snowmobile in the same direction that you turn the handlebar.

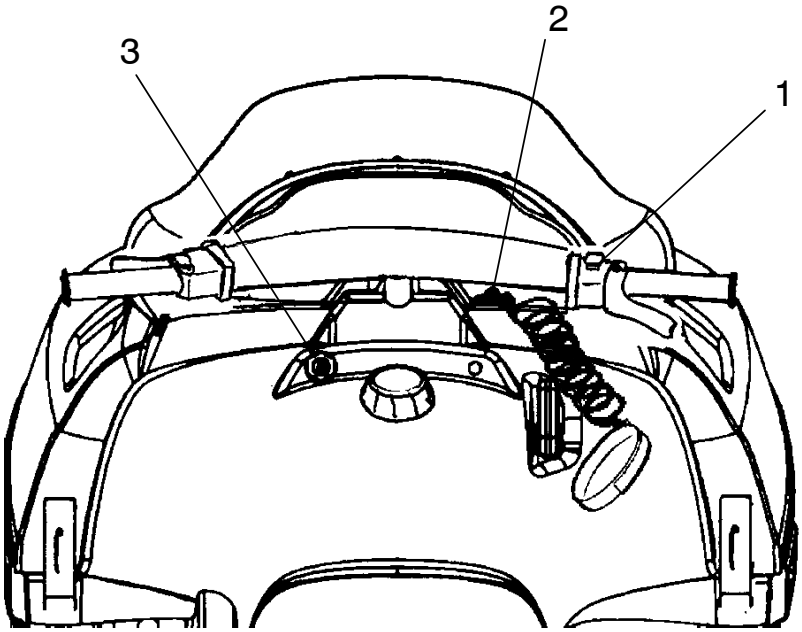
Downloaded from www.Manualslib.com manuals search engine

YOUTH SECTION
Know Your Snowmobile



Let's review the three ways to stop your snowmobile:

1. Push the stop switch down.
2. Pull off the tether strap.
3. Turn the key off.



Downloaded from www.Manualslib.com manuals search engine

Pre-Ride Check

You're almost ready to have an adult start your snowmobile. Before the snowmobile is started for the first time, you must do a PRE-RIDE CHECK. In fact, every time you ride your snowmobile you must have an adult help you check these things before starting it. Let's learn about these things now.

- Make sure the throttle doesn't stick. Push the throttle lever toward the handlebar and then let it go. The lever should come right back to where it was before you pushed it. If it comes back slowly or stays close to the handlebar, you have a sticky throttle. This means that something is wrong or broken. Don't start the snowmobile until an adult fixes the sticky throttle.



Never start the engine if you have a sticky throttle. You could get hurt if you ride with a sticky throttle. Have an adult or your Polaris dealer fix the throttle before you ride.

- Make sure the brakes don't stick. Squeeze the brake lever toward the handlebar and then let it go. It should come right back to where it was before you squeezed it. If it goes back slowly or stays close to the handlebar, your brakes are sticking.



Never start the engine if you have sticky brakes. You could get hurt if you ride with sticky brakes. Have an adult or your Polaris dealer fix the brakes before you ride.

- If you've used the storage area under the seat, make sure the seat locking tabs are in place.
- Make sure your hood is latched tight before starting your machine.
- Make sure your track and skis are not frozen to the snow. Stand behind the machine and lift up on the back of the sled. This will free the track if it is frozen to the ground. Turn the handlebars to move the skis back and forth to make sure they aren't frozen. If any of this is hard to do, have an adult help you.



Never check the track or skis when the engine is running. You could get hurt. Never stand behind or in front of any snowmobile when the engine is running.

Downloaded from www.Manualslib.com manuals search engine

YOUTH SECTION
Pre-Ride Check

- Have an adult check the gas level to see if your snowmobile needs more. Children should never add their own gasoline. This must always be done by an adult. Before anyone adds gasoline to your snowmobile they must read the instructions and warnings on page 46 in this Owner's Manual.



Always have an adult put gas in your snowmobile. Never try to do it yourself.

- Have an adult check the engine oil level when the engine is cold. The engine is very hot after it has been running. It could burn your skin. Children should never check the oil. Only an adult should be responsible for keeping the gas and oil levels to the full marks.

- The last check is done with the engine running. Always check to make sure that ALL THREE WAYS TO STOP THE SNOWMOBILE are working the way they should. Do you remember what they are? If you can't list them, go back to page 18 and review.

Downloaded from www.Manualslib.com manuals search engine

Riding Rules

Now you're ready to learn about driving your Polaris snowmobile. There are some things you can do and there are some things you must never do. Rules are very important when you're driving a snowmobile. Adults have riding rules, too. The rules help keep us safe when we ride.

You must be at least six (6) years old before you can ride this snowmobile. The adult with you is your teacher. Always pay attention to what your teacher says so you can learn how to always drive safely.

Let's learn how to ride!

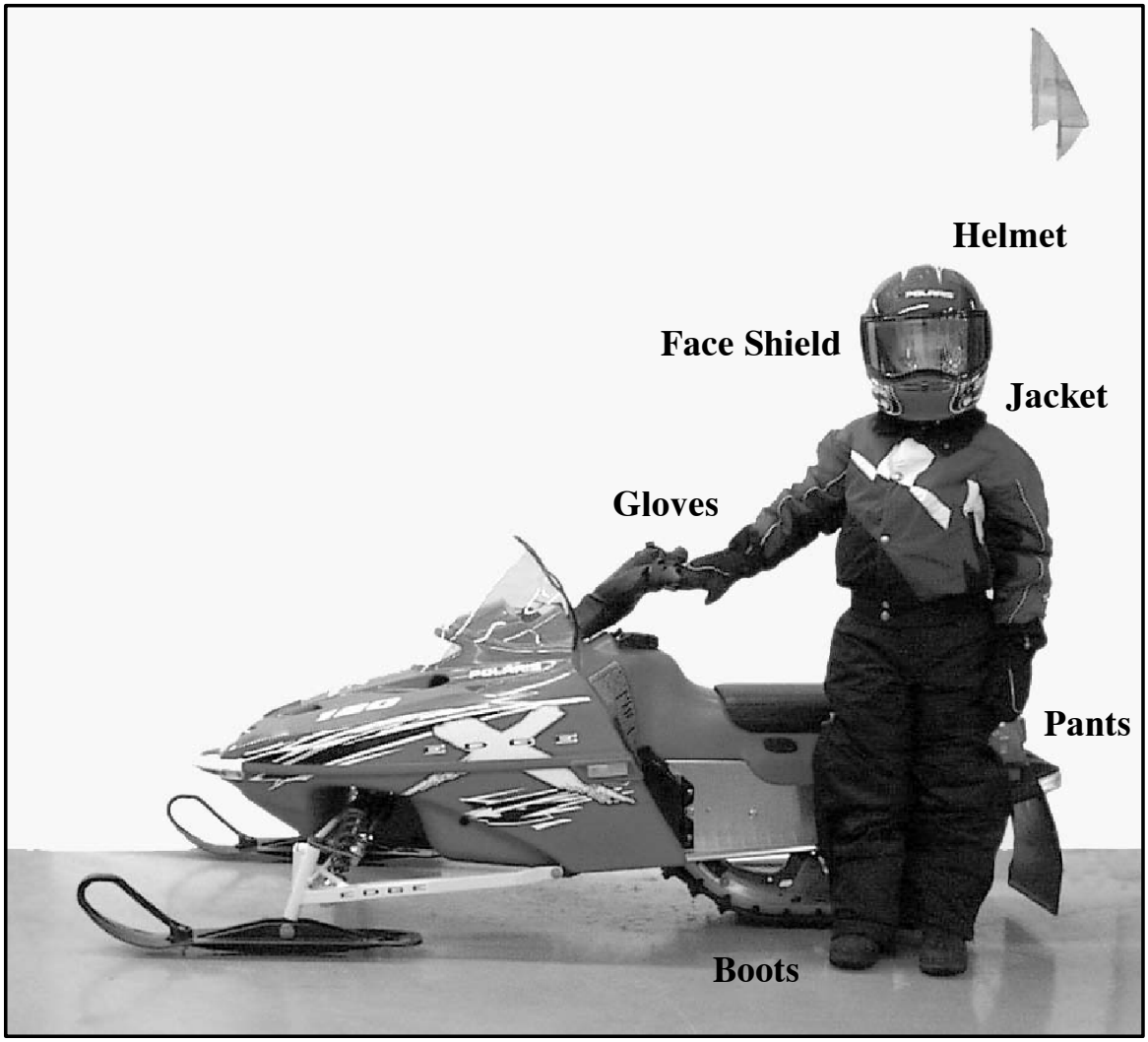


Always follow the safe riding rules found on the next pages. You or others around you could be seriously hurt or killed if you don't follow the safe riding rules.

- Your snowmobile is made for one person. Never carry a passenger. A passenger will make the snowmobile harder to drive. You may lose control and hurt yourself and your passenger.
- Never pull anything behind your snowmobile.
- Make sure you know where you're going to drive when your snowmobile is started. Make sure the area is safe all around your snowmobile.
- Never ride alone. An adult should always be watching you in case you need help. Always drive within the sight of an adult.
- Never ride on public trails.
- When you're a beginner, always stay on level ground.
- Don't ride your snowmobile on roads or over railroad tracks. Your snowmobile makes noise that will keep you from hearing cars, trucks or trains that may be coming towards you.
- Fences and snowmobiles don't mix. Make sure you know where all the fences are before you ride. If you drive into a fence, you could get hurt.
- Don't ride at night. The headlight on your snowmobile is there only so others can see you driving during the day.

Downloaded from www.Manualslib.com manuals search engine

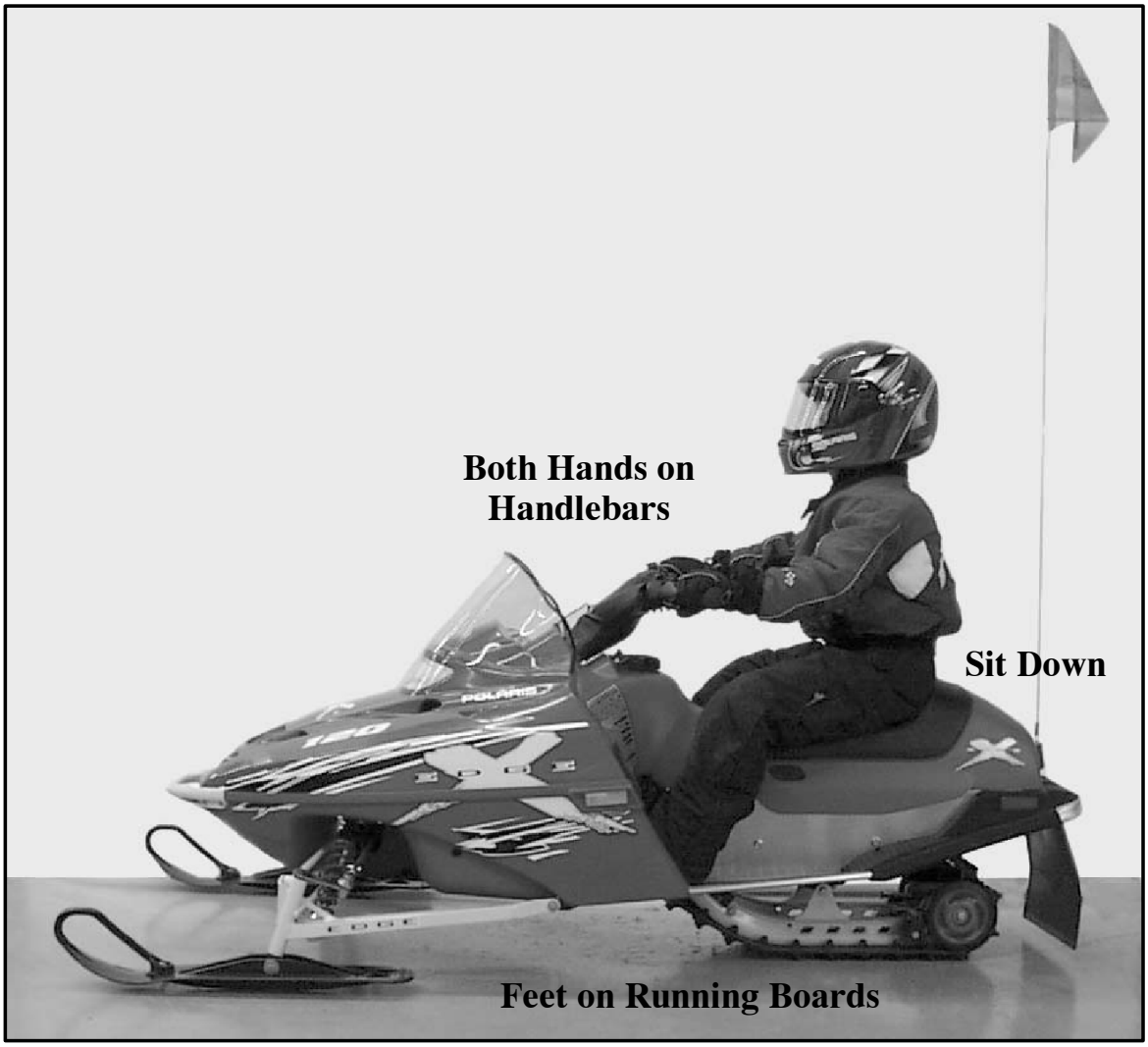
YOUTH SECTION
Riding Rules



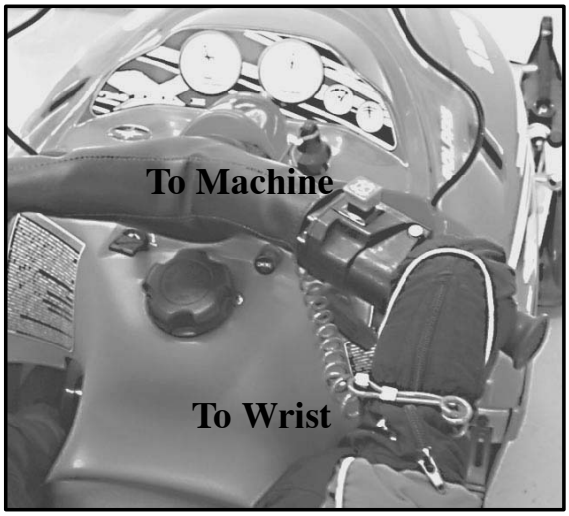
- Always wear the right kind of clothing when you're riding your snowmobile. You'll need a good helmet with a face shield or goggles. Wear a warm jacket and snowpants. Make sure your clothing fits properly. If it's too small, it could keep you from moving easily. If it's too big, it could hang down and get caught in the track or another moving part. *Never, ever wear a long scarf.* Wear warm snowmobile boots and gloves, and make sure your boot laces are tied. If you have long hair, be sure to tie it up.
- Learn where there are lakes, rivers, ponds and ditches in your driving area. Stay away from them. Never ride on frozen water. You could get hurt or you could even die. All ice can be dangerous!
- Always be alert and pay attention to where you're driving. Pay attention to other drivers and be even more careful around them because you don't know what they're going to do.

Downloaded from www.Manualslib.com manuals search engine

Riding Rules



- Always drive your snowmobile while sitting down. Keep both hands on the handlebars and keep both feet on the running boards.
- Never follow another snowmobile too closely. Always allow lots of time and space to stop your snowmobile.
- Ride your snowmobile only where you know it's safe to drive and where you have permission to drive. Be careful of the things around you.
- Always be a polite driver. (No driving through the flower garden or over the little trees you planted.)
- Always attach the tether strap to your wrist and machine before riding.



Downloaded from www.Manualslib.com manuals search engine

YOUTH SECTION
Riding Rules

Learn how to ride safely and correctly. Learn how to use your hands and arms as signals. Read and understand your Owner's Manual.



Left Turn



Right Turn



Stop

Downloaded from www.Manualslib.com manuals search engine

Pre-Ride Check

It's up to you, the adult, to teach your child the proper and safe way to ride a snowmobile. You must set boundaries and adhere to them, keeping your child's safety foremost in your mind. Never allow your child to operate this machine without adult supervision.

⚠WARNING

Teach the operators to perform the following Pre-Ride Check before each use of the snowmobile. Serious injury or death could result if they do not check the machine properly before riding.

- Check the throttle for proper operation.
- Check the brake for proper operation.
- Check for proper operation of steering system.
- Check the throttle safety switch for proper operation.
- Make sure all three ways to stop the engine are functioning.
- Inspect the track.
- Make sure the seat is locked into place.
- Make sure the track and skis are not frozen to the ground.
- An adult should check the gas and oil levels for the rider and add more if necessary.
- Make sure the hood is latched.
- Make sure headlight and taillight are working properly.

These checks should become automatic for your children before each ride. It's up to you, the adult, to instill in your children the importance of performing this Pre-Ride Check before they operate the snowmobile.

Downloaded from www.Manualslib.com manuals search engine

ADULT SECTION
Pre-Ride Check
Before Starting The Engine

Read and Understand Your Owner's Manual

Read and make sure the operators understand the Owner's Manual completely before allowing anyone to operate this snowmobile. It's also a good idea to review it periodically to reinforce the information. It's very important to familiarize the operator and guests with the cautions and warnings pertaining to the machine as well as safe operating procedures. We've attempted to provide you with as much information as possible to alert you to the safety requirements of snowmobiling.

⚠WARNING

The throttle and brake are the primary controls of the snowmobile. If either should malfunction, the operator could lose control, which could lead to serious injury or death. Always check the throttle and brake levers for proper operation before operating the vehicle.

Check throttle for proper operation

When checking the throttle, make sure the control lever compresses evenly and smoothly. When the lever is released, it should immediately return to the idle position without binding or hesitation. If the throttle does not function smoothly, do not attempt to start the engine. Have the throttle serviced before starting the engine.

Check brake for proper operation

The need for a properly functioning brake is critical. The brake must be checked for correct operation before starting the engine. See page 31 for brake lever travel specifications.

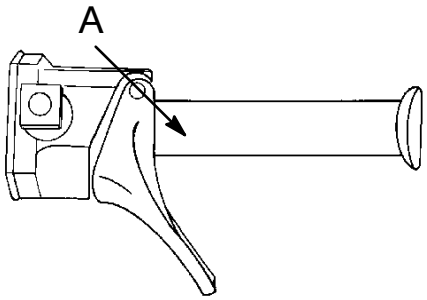
Check for proper operation of steering system

Check for proper operation of the steering system by manually turning the skis completely to the right and to the left. If difficulty is encountered, check for ice and snow buildup which may be obstructing the steering linkage. Make sure all greasable components are properly lubricated.

Downloaded from www.Manualslib.com manuals search engine

Pre-Ride Check

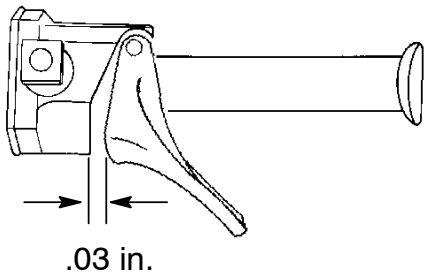
Check throttle safety switch



Test the throttle safety switch system on a daily basis before the machine is used.

While seated in a normal riding position, and with the engine idling, hold the throttle lever pin stationary by exerting pressure on the pivot pin in the direction shown in the illustration (A). Apply a slight amount of throttle opening. A properly functioning switch *must* shut down the engine.

The throttle safety switch is designed to stop the engine whenever all pressure is removed from the throttle lever and the throttle cable or valve does not return to the normal closed position.



If excessive play develops in the throttle cable, the safety switch may be activated and will prevent the engine from starting. If the engine doesn't start and throttle safety switch malfunction is suspected, return the machine to an authorized Polaris dealer for service. If an adult must start the engine in an emergency situation, the throttle safety switch and engine stop switch may be disconnected from the wire harness. In this situation, the ignition key switch must be used to shut off the engine. Be sure to reconnect the safety switches and have the snowmobile serviced before operating the vehicle again.

⚠WARNING

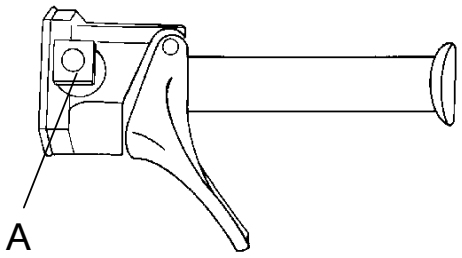
Do not continue to operate the machine with the throttle safety switch disconnected as serious injury or death could result. Return the machine to an authorized Polaris dealer for service before operating.

Downloaded from www.Manualslib.com manuals search engine

ADULT SECTION
Pre-Ride Check

Check engine stop switch

Test the engine stop switch before each use of the snowmobile. To stop the engine in an emergency, push down on the stop switch (A). This will ground out the ignition and bring the engine to a quick stop. To restart the engine, the switch must be pulled up to the ON position.



Inspect the track

Driving for extended periods of time with marginal lubrication could severely damage the track. Driving on icy trails or driving when there is little or no snow are two examples of situations that would provide marginal lubrication and are not recommended.

⚠WARNING

Operating the snowmobile with a damaged track will increase the possibility of additional track damage and/or failure. This could cause loss of control, resulting in severe injury or death. Always inspect for damage before using the snowmobile.

NOTE: Track damage or failure caused by operation under poor lubrication conditions will void the track warranty.

Downloaded from www.Manualslib.com manuals search engine

Operation Warnings

Do not carry passengers

This snowmobile is designed for a single operator.

Do not operate with intake silencer removed

CAUTION

If the engine is operated with the intake silencer removed, damage to the engine may occur. Do not operate the engine with the intake silencer removed.

Stay clear of track

⚠WARNING

During warm-up and operation, stand clear of the rotating track. Entanglement and serious injury or death may result. Use just enough throttle to rotate the track and warm up the engine.

Do not operate with drive chain guard removed

⚠WARNING

The drive chain guard is designed to protect the operator from metal parts in the event of a drive chain failure. Although the chance of failure is extremely remote, do not defeat the purpose of the guard by removing it. It is provided for *the safety of the child*.

Downloaded from www.Manualslib.com manuals search engine

ADULT SECTION
Operation Warnings

Do not touch the engine after it's been running

⚠WARNING

Hot components can cause serious burns to skin. Do not touch engine and exhaust parts after the engine has been running.

Disabled operators

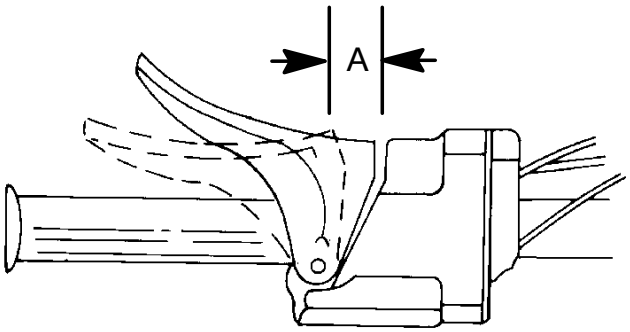
⚠WARNING

Safe operation of this rider-active vehicle requires good judgement and physical skills. Persons with cognitive or physical disabilities who operate this vehicle have an increased risk of overturns and loss of control, which could result in serious injury or death.

Downloaded from www.Manualslib.com manuals search engine

Operation Warnings

Check brake lever travel



Measure the clearance between the lever and brake block. Inspection should be made with the lever firmly depressed. Distance A should be no more than 3/4″ (1.9 cm).

Excessive travel indicates a need to adjust the brake cable. Refer to the mechanical brake adjustment information on page 59.

Make sure the hood is securely latched

The hood of the snowmobile protects the operator from moving and hot parts as well as aiding in sound emission control and various other functions. *Under no circumstances* should your snowmobile be operated with the hood open or removed.

Test stop switch operation

Start the engine and push the stop switch down to test for proper operation. The engine should immediately stop running.

Test tether switch operation

Start the engine and disconnect the tether switch to test for proper operation. The engine should immediately stop running.

Remove the ignition key

Don’t tempt someone to steal or ride your snowmobile without permission by leaving the key in the ignition.

Check lights

Start the engine and check that both the headlight and taillight are operating.

Downloaded from www.Manualslib.com manuals search engine

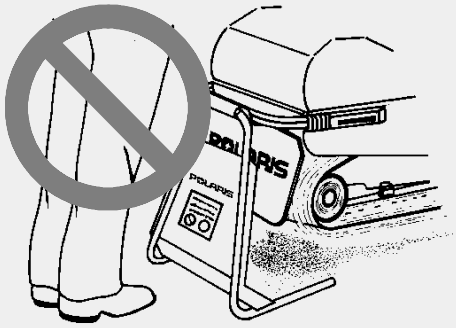
ADULT SECTION
Operation Warnings

Check surroundings to verify clear operating area

It's important to make sure there's a clear area all around the snowmobile, including an area clear of bystanders. Some sideways movement is possible when starting out, and debris may be thrown by the track. Teach the operator to check the operating area before riding.

Sit properly on the snowmobile

Improper operator position on the snowmobile can be the source of serious injury. Operating a snowmobile does require skill and balance for proper control, and an improper position can seriously reduce the child's ability to control the snowmobile. The riding position may vary as the operator becomes more skilled, but under most conditions the proper position is to be seated with both feet on the running boards, in a comfortable position for proper throttle, brake and steering control.



⚠WARNING

Never hold the snowmobile up or stand behind it while warming up the track. A loose track or flying debris could cause serious personal injury or death.

This snowmobile is propelled by a revolving track, which must be partially exposed for proper operation. Serious injuries may be caused by operator carelessness, resulting in hands, feet, hair or clothing becoming entangled in the track. Teach your child to respect this machine and all the moving parts. Stress that being properly seated keeps the child clear of the track.

Downloaded from www.Manualslib.com manuals search engine

Operation Warnings

Stop engine before attempting adjustments

⚠WARNING

The snowmobile engine compartment contains moving parts. Shields and guards have been provided for safety, but it is still possible to carelessly get your hands or fingers into a moving chain or a rotating shaft. For this reason *never* attempt adjustments with the engine running. Serious personal injuries can result. The proper method is to turn off the ignition, raise the hood, make the adjustment, secure shields and guards, secure the hood, and then re-start the engine to check its operation. The same is true of track alignment. If the track must be re-aligned, it is recommended that this service be performed by your dealer.

Always wear clothing designed for snowmobiling

Clothing designed for snowmobiling is warm, comfortable and safe.

⚠WARNING

Always make sure the operator is wearing an approved helmet and eye protection. Do not allow the child to wear loose clothing or long scarves because they can easily become entangled in moving parts. If your child has long hair, be sure it is always tied up securely and tucked into the helmet or jacket.

Extremely cold weather can cause frostbite and/or hypothermia. Always be aware of weather conditions, especially the wind chill. See the table on page 36.

Downloaded from www.Manualslib.com manuals search engine

ADULT SECTION
Operation Warnings

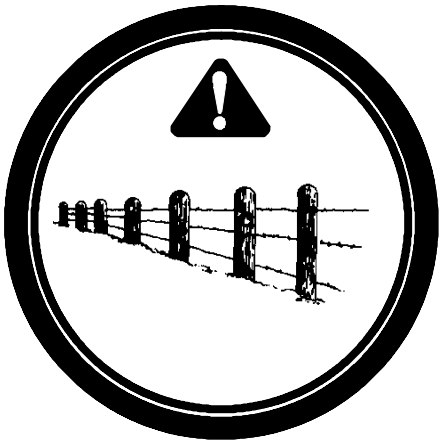
Know limitations of machine and skills of driver

The operator should be aware that there are state and local laws governing snowmobile operation and that these laws should be followed. They have been established for the protection of all snowmobile riders. Most states offer a snowmobile safety course for children. Check your state or county agencies for this service.

This vehicle is intended for daylight use only. Check both the headlight and taillight of the machine to ensure proper operation. **IMPORTANT:** The headlight and taillight are intended only to increase the visibility of the 120 XC SP during daylight operation. Do not operate the snowmobile in the dark.

Downloaded from www.Manualslib.com manuals search engine

Operation Warnings



Wire fences are a serious hazard. Teach your child to always be on the alert for fences. Single strands are especially dangerous, since there can be a great distance between posts. Guy wires on utility poles are also difficult to distinguish. Teach your child to reduce speed when traveling near poles, posts, or other obstacles.

Teach your child that the sound of the machine will make it difficult to hear the sound of approaching vehicles. Do not allow your child to operate the snowmobile on or near roads and railroad tracks.

Teach your child what it means to drive defensively. Never tailgate and always allow ample stopping distances.

Your child must be taught to always be alert and pay attention to the driving area ahead.

When teaching inexperienced operators to ride, set up a nearby predetermined course. Establish boundaries and make sure the operator(s) know and understand them. Make sure they know how to drive and control the snowmobile before you allow them to make supervised longer distance runs. Teach them proper snowmobile courtesy.

It's a good idea to predetermine some hand signals as a way to communicate with your child while giving instruction. It may be difficult for your child to hear your voice over the sound of the snowmobile and through a helmet.

Downloaded from www.Manualslib.com manuals search engine

ADULT SECTION
Operation Warnings
Windchill/Temperature Charts

The following information is provided as a guide to determine what temperatures are dangerous when riding your snowmobile.

WIND CHILL CHART (°F)

Esti-mated Wind Speed in MPH	Actual Thermometer Reading (°F)											
	50	40	30	20	10	0	-10	-20	-30	-40	-50	-60
	Equivalent Temperature (°F)											
Calm	50	40	30	20	10	0	-10	-20	-30	-40	-50	-60
5	48	37	27	16	6	-5	-15	-26	-36	-47	-57	-68
10	40	28	16	4	-9	-21	-33	-46	-58	-70	-83	-95
15	36	22	9	-5	-18	-36	-45	-58	-72	-85	-99	-112
20	32	18	4	-10	-25	-39	-53	-67	-82	-96	-110	-124
25	30	16	0	-15	-29	-44	-59	-74	-88	-104	-118	-133
30	28	13	-2	-18	-33	-48	-63	-79	-94	-109	-125	-140
35	27	11	-4	-20	-35	-49	-67	-82	-98	-113	-129	-145
40	26	10	-6	-21	-37	-53	-69	-85	-100	-116	-132	-148
Wind Speeds Greater Than 40 MPH Have Little Added Effect	Little Danger (For Properly Clothed Person)				Increasing Danger			Great Danger				
					Danger From Freezing of Exposed Flesh							

Downloaded from www.Manualslib.com manuals search engine

Operation Warnings

WIND CHILL CHART (°C)

Esti-mated Wind Speed in KPH	Actual Thermometer Reading (°C)									
	5	0	-5	-10	-15	-20	-25	-30	-35	-40
	Equivalent Temperature (°C)									
0	5	0	-5	-10	-15	-20	-25	-30	-35	-40
10	1	-4	-11	-16	-22	-27	-33	-38	-45	-50
20	-4	-9	-17	-23	-29	-36	-42	-48	-54	-61
30	-7	-13	-21	-28	-35	-42	-48	-55	-63	-69
40	-9	-16	-24	-32	-39	-47	-53	-61	-69	-76
50	-11	-18	-26	-34	-41	-49	-57	-64	-73	-80
60	-12	-19	-27	-35	-43	-51	-59	-66	-75	-82
70	-13	-20	-28	-36	-44	-52	-60	-68	-76	-84
Wind Speeds Greater Than 70 KPH Have Little Added Effect	Little Danger (For Properly Clothed Person)			Increasing Danger			Great Danger			
				Danger From Freezing of Exposed Flesh						

Downloaded from www.Manualslib.com manuals search engine

ADULT SECTION
Operation Warnings
Cold Weather Drive-Away

Whenever the machine has been parked for some length of time, especially overnight, always shake loose the skis and track for the operator before attempting to put the machine into motion. The throttle will require some pressure to move the machine. Teach the operator not to be afraid of applying pressure to the throttle but at the same time, teach them not to be too forceful with the throttle which could cause the machine to lurch forward.

Powder Snow Operation

This snowmobile is designed to operate best on snow. Maneuverability is attained by the steering, skis, and the shifting of the driver's body weight. Maximum control will be attained by shifting body weight. Maneuverability will change for lighter operators.

If the machine becomes stuck in snow, free the running board area and step down the snow in front of the machine so that when the throttle is opened the machine will be able to climb out. The operator can then get back on the machine and continue. It is best to encourage the operator to stay on established riding areas to avoid the possibility of getting stuck.

Track Lubrication

Do not operate for prolonged periods in conditions of marginal lubrication.

CAUTION

It's essential that this machine be operated under conditions with adequate snow cover, as snow provides the only lubrication for the track. Failure to do so will result in excessive wear and damage to the slide rail and track.

Downloaded from www.Manualslib.com manuals search engine

Operation Warnings

Snow and Ice Build-Up

Snow and ice buildup in the underhood area can interfere with the steering.

⚠WARNING

Before allowing your child to drive the machine, be sure that ice and snow are not interfering with the steering. Manually turn the skis to the left and right. If difficulty is encountered, check for ice and snow buildup which may be obstructing the steering linkage.

Hard Packed Snow

Teach your child to reduce speed as required to maintain control in all driving conditions. If necessary, maximum speed may be regulated by using the procedure outlined on page 47.

⚠WARNING

Steering and braking control are substantially reduced when operating on on hard surfaces, hard-packed snow or icy surfaces.

Downloaded from www.Manualslib.com manuals search engine

ADULT SECTION
Operation Warnings
Driving on Ice

It is dangerous to operate on ice or under slippery conditions. If ice or slippery conditions are unavoidable, use extreme caution and operate at speeds no faster than a walk. Never attempt an abrupt change of direction on a slippery surface. The chance of "spin-out" increases under these conditions. Being able to turn a snowmobile depends primarily on the skis being in snow. On hard surfaces, such as ice, the ability to turn is reduced and the machine will not turn very well. In this situation it may be best to dismount and move either the front or rear of the machine to point it in the proper direction.

Teach your child to respect the unknown. Children must be taught that they are not to venture out on their own in unapproved territory. They must learn that they must never ride a snowmobile on a frozen body of water. You and the driver of the machine should know and understand that severe injury or death can result if the snowmobile and its occupant break through the ice.

Driving in Hilly Terrain

⚠WARNING

Traveling on hilly terrain is not recommended. It takes some maneuvering of body weight that a child may not be capable of, which will leave the child at risk. If traveling on hilly terrain is unavoidable, teach your child to exercise extreme caution as well as the proper operating procedure as outlined below.

Driving Uphill

Riding uphill requires extreme caution and should be attempted only by experienced operators. The operator should assume a standing position with body weight kept low and forward, accelerating before the start of the climb and then releasing throttle pressure enough to prevent track slippage.

When reaching the crest of the hill, the operator must slow down and be prepared to react to obstacles, sharp drops, or other people or vehicles which may be on the other side of the hill.

Downloaded from www.Manualslib.com manuals search engine

Operation Warnings

Driving Downhill

When riding downhill, the operator must keep the speed at a minimum. It is important to apply just enough throttle to keep the clutch engaged while descending the hill. This will allow use of the engine's compression to help slow the machine, and keep the snowmobile from rolling freely downhill.

⚠WARNING

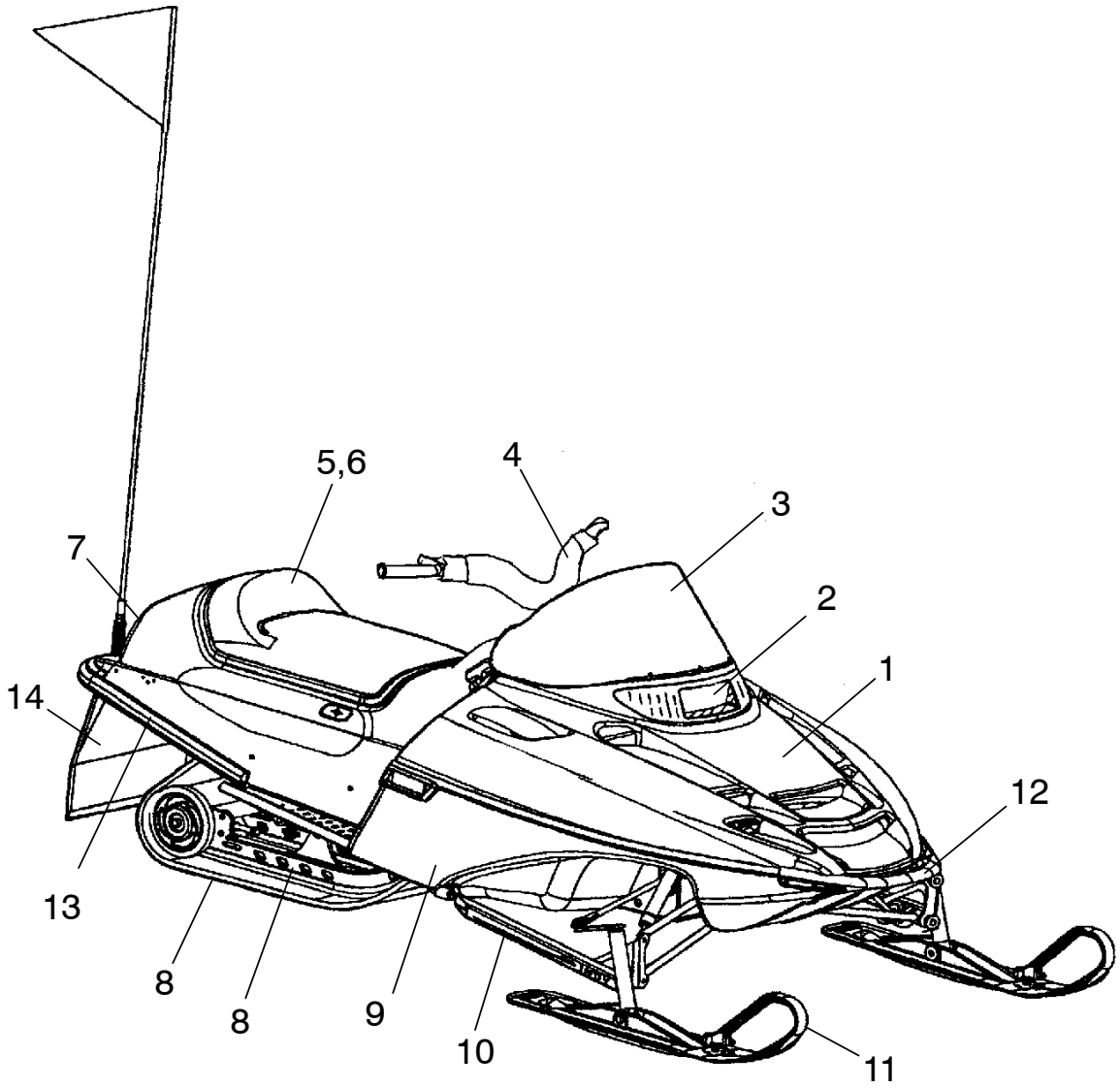
Teach your child to never stand or get off the machine on the downhill side of the machine. Serious injury or death could result.

Driving Responsibly

It is up to you, the adult, to teach your child the proper and safe way to ride a snowmobile. You must set boundaries and adhere to them, keeping your child's safety foremost in your mind. Never allow your child to operate this machine without adult supervision.

Downloaded from www.Manualslib.com manuals search engine

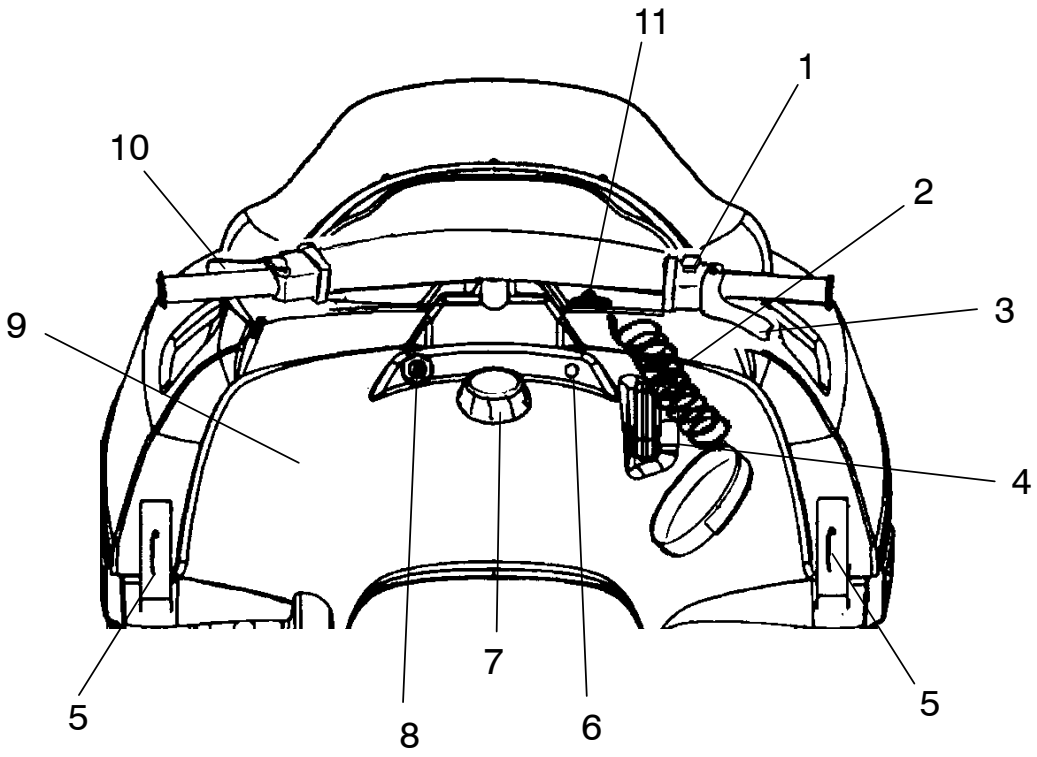
ADULT SECTION
Component Identification



1. Hood
2. Headlight
3. Windshield
4. Handlebar
5. Seat
6. Storage (under seat)
7. Taillight
8. Track
8. Rear Suspension
9. Nosepan
10. Trailing Arm
11. Skis
12. Front Bumper
13. Rear Bumper
14. Snow Flap

Downloaded from www.Manualslib.com manuals search engine

Component Identification



1. Stop Switch
2. Tether Strap
3. Throttle Control
4. Recoil Starter Handle
5. Hood Hold-Down
6. Choke Button
7. Gas Cap
8. Ignition Switch
9. Console
10. Brake Lever
11. Tether Switch

Downloaded from www.Manualslib.com manuals search engine

ADULT SECTION
Break-In Period
Engine Break-In

The break-in period for your new snowmobile is defined as the first ten hours of operation, or the time it takes to use the first two tanks full of gasoline. No single action on your part is as important as a proper break-in period. Careful treatment of a new engine will result in more efficient performance and longer life for the engine. Perform the following procedures carefully.

1. Drive slowly at first. Select an area that's open and will allow room to familiarize yourself with vehicle operation and handling.
2. Vary the throttle positions. Do not operate at sustained idle.
3. Perform regular checks on fluid levels, controls and all important areas on the vehicle, as outlined in the maintenance section.
4. Break in the oil. Change the oil after the first 20 hours of operation.

CAUTION

- Never mix brands of oil. Serious chemical reactions can cause oil passage blockage, resulting in severe engine damage and voiding of engine warranty. The only oil recommended for this system is Polaris Premium 4 All Season Synthetic oil. This oil has been specially formulated for all temperatures and has extreme cold flow characteristics.
- Do not operate at prolonged full throttle for the first three hours of operation. Vary the throttle openings and machine speeds. This will reduce friction on all close fitting machined parts and allow them to break in slowly without damage.
- Avoid operating on ice or hard-packed surfaces, roads, etc. The absence of lubrication and cooling by snow will lead to overheating of the slide rail and track resulting in premature wear and failure. Reduce speeds and frequently drive into fresh snow to allow adequate cooling and lubrication of the slide rail and track surfaces.
- Drive with extra caution during the break-in period. Perform regular checks on fluid levels, lines, and all important areas of the machine.

Downloaded from www.Manualslib.com manuals search engine

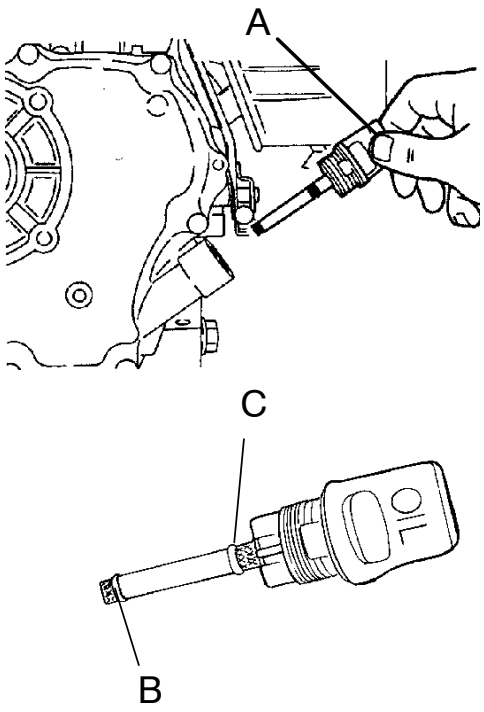
Break-In Period

CAUTION

Mixing brands or using a non-recommended oil may cause serious engine damage. We recommend the use of Polaris Premium 4 All Season Synthetic oil. Never substitute or mix oil brands.

Checking Engine Oil

Before checking or refilling engine oil, be sure the engine is stopped and the vehicle is positioned on a stable, level surface.
NOTE: Always change the oil if it's become contaminated.



1. Remove the dipstick and wipe it dry with a clean shop towel.
2. Insert the dipstick (A) into the oil fill hole, then remove it and read the oil level. **NOTE:** Do not thread the dipstick into the hole to perform the oil check.
3. If the oil level is below the lower level mark (B) on the dipstick, add the recommended oil to the upper mark (C).

NOTE: Always use Polaris Premium 4 All Season Synthetic Oil or any class SE, SF (API classification) or higher grade oil. If multi-grade oil is used, oil consumption will increase when the ambient temperature is high.

Downloaded from www.Manualslib.com manuals search engine

ADULT SECTION
Operation
Fuel
When refueling, use either leaded or unleaded gasoline with a minimum pump octane number of 87=(R+ M/2) octane.
Fuel Safety

⚠WARNING

Gasoline is highly flammable and explosive under certain conditions.

- Always exercise extreme caution whenever handling gasoline.
- Always refuel with the engine stopped, and outdoors or in a well ventilated area.
- Do not smoke or allow open flames or sparks in or near the area where refueling is performed or where gasoline is stored.
- Do not overfill the tank. Do not fill the tank neck.
- If gasoline spills on your skin or clothing, immediately wash it off with soap and water and change clothing.
- If you get gasoline in your eyes or if you swallow gasoline, see your doctor immediately.
- Never start the engine or let it run in an enclosed area. Engine exhaust fumes are poisonous and can cause loss of consciousness or death in a short time.
- Turn the fuel valve off whenever the vehicle is stored or parked.

⚠WARNING

The engine exhaust from this product contains chemicals known to cause cancer, birth defects or other reproductive harm.

Operate this vehicle only outdoors or in well-ventilated areas.

Downloaded from www.Manualslib.com manuals search engine

Operation

Speed/Performance Regulation

Adults have the responsibility for teaching children the proper and safe way to ride a snowmobile. Please set boundaries and adhere to them, keeping your child's safety foremost in your mind. Never allow a child to operate this machine without adult supervision.

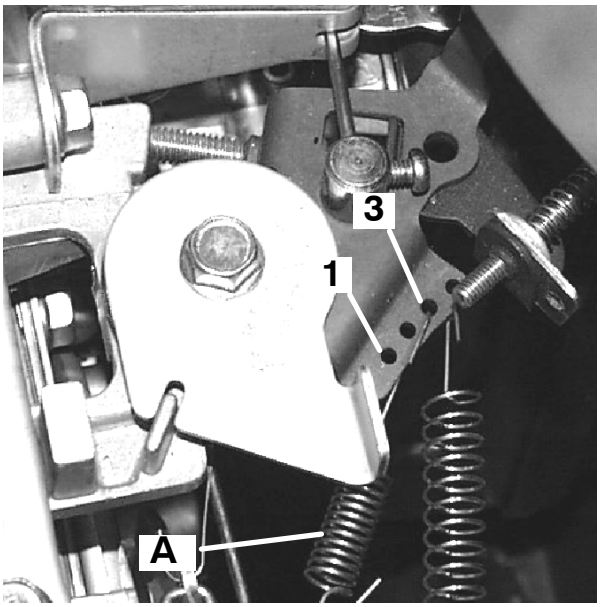
Under certain circumstances it may be necessary for an adult to regulate the speed and acceleration of the snowmobile by moving the governor lever spring. Use the following procedure to set the performance level.

⚠ CAUTION

Hot engine components can cause serious burns to skin. Always perform the following procedures when the engine is cool.

For maximum performance, move governor spring (A) to hole #3.

For minimum performance move governor spring to hole #1.



Downloaded from www.Manualslib.com manuals search engine

ADULT SECTION
Operation
Starting the Engine
Never start the snowmobile without checking all components to be sure of proper operation. Refer to the Pre-Ride Check beginning on page 25.

Starting a Cold Engine
1. Turn the key to ON.
2. Pull the engine stop switch (shut-off switch) up to the RUN position.
3. Pull the choke lever completely outward to the FULL ON position.

NOTE: Do not depress the throttle while starting.

4. Grasp the starter handle and pull slowly until the recoil engages, then pull abruptly to start.

CAUTION

Extending the starter rope too far or allowing it to snap back into the housing will cause damage to the recoil assembly. Do not extend the starter rope to its maximum length, and do not drop the rope handle during starting.

5. If the engine slows or stops, position the choke knob half way in to allow proper engine warm-up.
6. Apply the brakes and vary the engine RPM slightly with the throttle to aid in warm-up. When the engine idles smoothly, push the choke all the way in. **NOTE:** To prevent excessive wear on the clutch components, don't engage the clutch while performing the warm-up.

Starting a Warm Engine
1. Turn the key to ON.
2. Pull the engine stop switch (shut-off switch) up to RUN.
3. Grasp the starter rope handle and pull slowly until the recoil engages, then pull abruptly to start.

Downloaded from www.Manualslib.com manuals search engine

Operation

Emergency Stopping Procedures

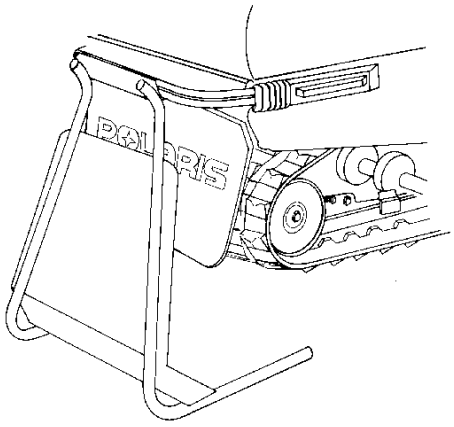
The following chart lists methods for stopping the engine in the event of an emergency.

SYSTEM	WHAT IT DOES	THROTTLE CONDITION
Engine Stop Switch	Interrupts ignition circuit	All
Ignition Switch	Interrupts ignition circuit	All
Tether Switch	Interrupts ignition circuit	All
Throttle Safety Switch	Interrupts ignition circuit	All
Choke	Floods engine	1/2 throttle or less
Brake	Slows drive shaft	All

Daily Storage

Whenever the machine is placed in overnight or daily storage the following steps must be taken:

1. Park the snowmobile on a level surface and support it at the rear so the track is suspended approximately 4″ (20 cm) from the ground.
2. Remove the key and cover the machine using the Polaris cover available for your model. See your dealer for more information.



Downloaded from www.Manualslib.com manuals search engine

ADULT SECTION
Operation
Pre-Ride Warm-Up

Always warm up the engine, drive train and track before operating the snowmobile. With the snowmobile securely supported by the rear bumper with a minimum clearance of 4″ (10 cm) from the ground, use the following procedure to properly warm up the snowmobile.

⚠WARNING

A loose track or flying debris could cause serious personal injury or death. Be sure the rear support is stable. Stand clear of the front of the machine and the moving track. Never hold the snowmobile up or stand behind it while performing this procedure. Do not use too much throttle during warm-up or when the track is free-hanging.

1. Start the engine and allow it to warm up two to three minutes.
2. Engage the drive system abruptly and allow it to rotate the track several revolutions. **NOTE:** The outside temperature will determine the amount of track warm-up required.
3. Shut off the engine and remove the rear support.
4. Grasp the skis by their front loops and move from side to side. This will loosen frozen snow from the ski bottoms, allowing the machine to move forward more easily.
5. The engine, drive system and track are now properly warmed up and the machine can be driven following normal safety practices.

Downloaded from www.Manualslib.com manuals search engine

Maintenance

Polaris Recommended Maintenance Program

Your Polaris snowmobile has been engineered and manufactured by skilled Polaris personnel to the highest degree of performance and reliability possible. In order to maintain this level of quality, your machine must have regular service and maintenance inspections.

The Polaris Recommended Maintenance Program is intended to assist you in performing routing maintenance that will ensure trouble-free enjoyment of your Polaris snowmobile. If the recommended regular maintenance and service checks are followed, you will be doing your part in keeping this snowmobile in excellent operating condition at all times.

The recommended maintenance schedule for your snowmobile calls for a service and maintenance inspection at 50 hours, at 100 hours and at 150 hours. These inspections should be performed by a qualified service technician.

NOTE: Any replacement parts and labor incurred, with the exception of authorized warranty repairs, are the responsibility of the registered owner. If parts failures occur during the course of the warranty period as a result of owner neglect in performing the recommended periodic maintenance, the cost of repairs shall be the responsibility of the owner.

Please read and follow the recommended maintenance program illustrated on the following pages to maintain the performance and reliability of your Polaris snowmobile.

Downloaded from www.Manualslib.com manuals search engine

ADULT SECTION
Maintenance

Careful periodic maintenance will help keep your vehicle in the safest, most reliable condition. Inspection, adjustment and lubrication of important components are explained in the following chart and in the maintenance section of this manual.

Service and adjustments are critical. If you're not familiar with safe service and adjustment procedures, have a qualified dealer perform these operations.

NOTE: The following chart is a guide based on average riding conditions. You may need to increase frequency based on riding conditions. When inspection reveals the need for replacement parts, we recommend the use of genuine Polaris parts, available from your Polaris dealer.

ITEM	DAILY	WEEKLY OR BEFORE EXTENDED PERIOD OF OPERATION	50 HRS	100 HRS	150 HRS	SEE PAGE
Check brake operation and adjustment	X					58-59
Test engine stop switch (auxiliary shut-off switch)	X					28
Test throttle safety switch	X					27
Test tether switch	X					31
Test throttle lever operation	X					26
Test brake lever operation	X					26
Check steering system operation	X					26
Check operation of headlight and taillight	X					31
Clean dust and chaff from engine	X					
Check ski skags, replace when worn to 1/2 original diameter	X					76
Inspect fuel lines, replace if needed	X					56
Check engine oil level	X					62
Oil the drive chain		Every 10 Hrs				
Check track tension, tighten if necessary		Every 10 Hrs				67
Grease the clutch		Every 15 Hrs				61
Change oil		At 20 Hrs	X	X	X	62

Downloaded from www.Manualslib.com manuals search engine

Maintenance

ITEM	DAILY	WEEKLY OR BEFORE EXTENDED PERIOD OF OPERATION	50 HRS	100 HRS	150 HRS	SEE PAGE
Check track alignment		X				69
Check drive chain tension		X				60
Check and tighten any loose suspension mounting bolts		X				77
Tighten ski saddle and spindle bolts if loose		X				74
Check front and rear limiter strap condition, tighten loose bolts		X				78
Check hi-fax thickness, replace when worn (see dealer)		X				72
Tighten rear idler wheel bolts if loose		X				69
Check spark plug condition		X				61
Check for brake cable wear and adjustment		X				58
Throttle cable pivot slug			X	X	X	58
Lubricate steering post support bracket and pivot (aerosol)			X	X	X	63
Grease ski spindles			X	X	X	63
Lubricate ski bushings to spindle area			X	X	X	63
Grease lower steering post pivot			X	X	X	77
Grease rear suspension pivot shafts			X	X	X	77
Lubricate throttle cable				X	X	58
Lubricate choke slide and cable				X	X	58
Inspect exhaust pipe for cracks or damage			X	X	X	56

Downloaded from www.Manualslib.com manuals search engine

ADULT SECTION
Maintenance

Present this section of your manual to your dealer each time your snowmobile is serviced. This will provide you and future owners with an accurate log of maintenance and services performed on the snowmobile.

50 Hour Initial Maintenance Inspection

Authorized Polaris Servicing Dealer_____

Servicing Technician_____

Date_____Mileage_____

100 Hour Maintenance Inspection

Authorized Polaris Servicing Dealer_____

Servicing Technician_____

Date_____Mileage_____

150 Hour Maintenance Inspection

Authorized Polaris Servicing Dealer_____

Servicing Technician_____

Date_____Mileage_____

Additional Services Performed

Authorized Polaris Servicing Dealer_____

Servicing Technician_____

Date_____Mileage_____

Type of Service_____

Additional Services Performed

Authorized Polaris Servicing Dealer_____

Servicing Technician_____

Date_____Mileage_____

Type of Service_____

Downloaded from www.Manualslib.com manuals search engine

Maintenance

Spark Plugs

A new engine can cause temporary spark plug fouling even though the heat range is proper, due to the preservative which has been added during assembly of the engine to combat rust and corrosion. Avoid prolonged idle speeds, as plug fouling and carbonization will result.

CAUTION

Using non-recommended spark plugs can result in serious engine damage. Always use Polaris-recommended spark plugs.

- Use BR6ES spark plugs.
- Proper electrode gap is .028″ (.70 mm).
- Spark plug torque is 12-14 ft. lbs. (16.6-19.3 Nm).
- Always carry spare spark plugs

Spark plug condition is indicative of engine operation. The spark plug firing end condition should be read after the engine has been warmed up and the vehicle has been driven. Immediately check the spark plug for correct color.

⚠WARNING

A hot exhaust system and engine can cause serious burns. Wear protective gloves when removing a spark plug for inspection.

1. Normal

The normal insulator tip is gray, tan or light brown. There will be few combustion deposits. The electrodes are not burned or eroded. This indicates the proper type and heat range for the engine and the service.

NOTE: The tip should not be white. A white insulator tip indicates overheating, caused by use of an improper spark plug or incorrect carburetion adjustments.

2. Wet Fouled

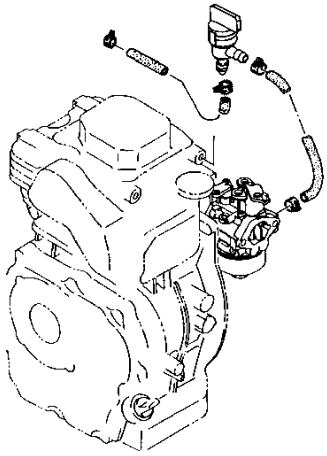
The wet fouled insulator tip is black. A damp oil film covers the firing end. There may be a carbon layer over the entire nose. Generally, the electrodes are not worn. General causes of fouling are excessive oil, use of non-recommended oil, improper use of the choke, or incorrect carburetion adjustments.

Downloaded from www.Manualslib.com manuals search engine

ADULT SECTION
Maintenance
Spark Plugs
Spark Plug Removal and Replacement

1. Remove the spark plug cap.
2. Using the special wrench provided in the tool pouch, rotate the spark plug counterclockwise to remove.
3. Reverse the procedure for spark plug installation. Torque to 12-14 ft. lbs. (16.6-19.3 Nm).

Fuel Valve/Fuel Lines



The fuel valve and the fuel lines should be inspected regularly. Special attention should be given to the system's fuel line condition after periods of storage. Normal deterioration from weather and fuel compounds can occur.

Exhaust System

At approximately 50 hours, check the exhaust system for wear or damage. To inspect, allow the engine and exhaust system to cool completely. Open the hood and inspect the muffler and pipes for cracks or damage. Check for weak or missing retaining springs or damper/support grommets.

⚠ CAUTION

Serious burns may occur if this inspection is performed without allowing adequate time for the exhaust system to cool. Exhaust system temperatures can exceed 900° F (500° C). Never perform this procedure with the engine running or shortly after it's been running.

Downloaded from www.Manualslib.com manuals search engine

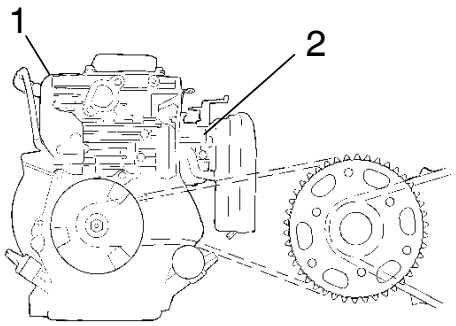
Maintenance

Carburetor

Proper carburetor adjustment is critical, since a mixture too lean (too much air, too little fuel) will result in overheating of the combustion chamber causing pre-ignition of the fuel. This results in piston burning, bearing failure, or complete engine failure. A lean mixture can be the result of fuel line restrictions, foreign matter in the carburetor, etc. A mixture too rich (too much fuel, too little air) is also unfavorable because it can foul plugs and cause generally poor engine performance.

All carburetors have been pre-set at the factory for adequate fuel supply. Higher altitude operation may require different adjustment and settings. The number stamped in the end of the main jet indicates the jet size that was installed at the time of manufacture. For questions about optional jetting for conditions in your area, see your Polaris dealer.

1. Engine
2. Carburetor



Correct setup provides engine RPM within its given power band at full throttle settings and also provides maximum efficiency and operation at all other throttle openings. See your dealer for carburetor adjustments, which may include the following:

- Carburetor component changes for specific altitude and ambient temperatures;
- Choke adjustment;
- Air screw settings, if applicable;
- Idle RPM adjustments;
- Throttle safety switch checks and servicing;
- Throttle block to throttle flipper clearance adjustment

CAUTION

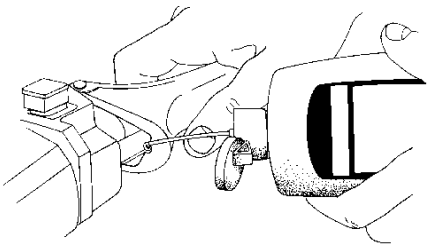
Improper carburetor adjustments can result in safety hazards as well as serious engine damage. We recommend that all carburetor adjustments be performed by your Polaris dealer.

Downloaded from www.Manualslib.com manuals search engine

ADULT SECTION
Maintenance

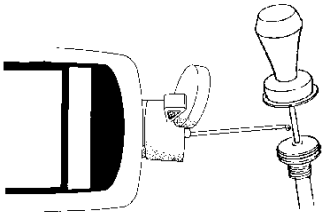
Throttle Cable Lubrication

With the engine off, lubricate the throttle cable occasionally. Turn the handlebars to the left and lubricate liberally with Polaris All Season Grease.



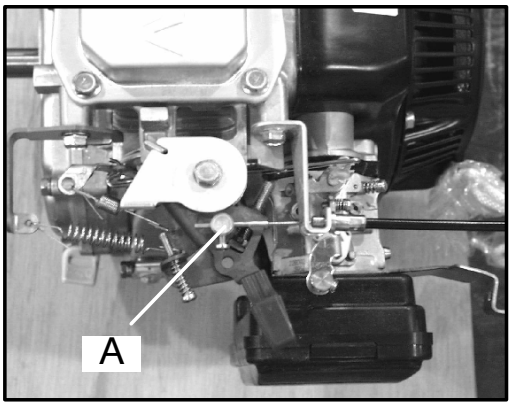
Choke/Cable Lubrication

Lubricate the choke slide and cables occasionally as shown. Operate the choke intermittently before turning the machine off. This draws moisture out of the choke plunger area and reduces the possibility of the choke becoming frozen.



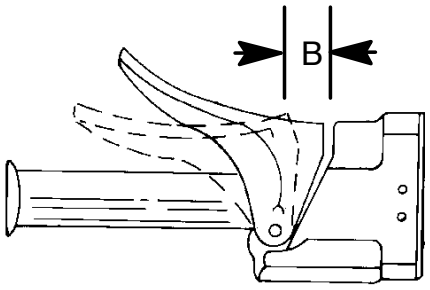
Throttle Cable Pivot Slug

Lubricate the throttle cable pivot slug (A) every 50 hours or twice a year using an aerosol lubricant.



Brake Lever Travel

Measure the clearance between the lever and brake block. Inspection should be made with the lever firmly depressed. Distance B should be no more than 3/4″ (1.9 cm)



Excessive travel indicates a need for brake cable adjustment.

Downloaded from www.Manualslib.com manuals search engine

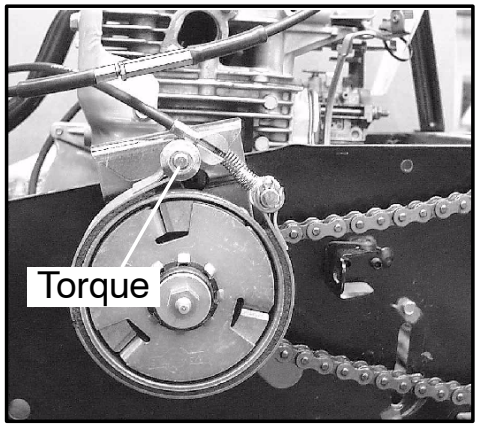
Maintenance

Brake Adjustment

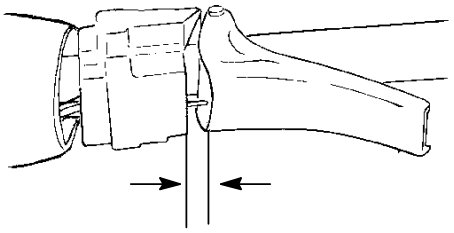
If excessive brake lever to brake block clearance is evident, the brake cable should be adjusted. If proper adjustment cannot be achieved by using the following methods, check the brake band for excessive wear. Your snowmobile dealer can install a new brake band when necessary.

⚠WARNING

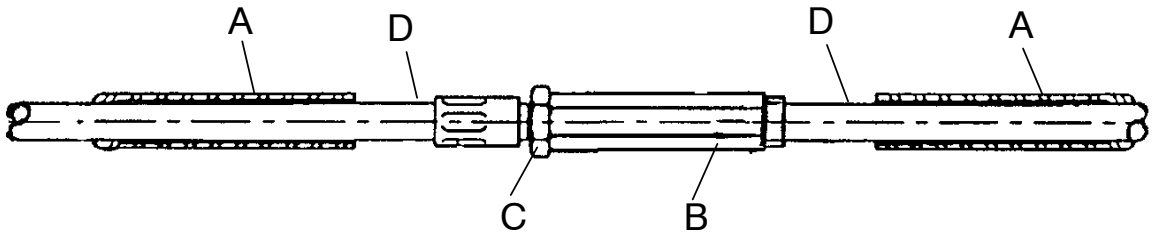
Improper brake adjustment can result in brake failure, which could result in severe injury or death. Perform the adjustment procedures exactly as outlined or see your Polaris dealer for service.



1. Slide the two rubber protector covers (A) back to expose the cable adjuster.
2. Using an 8mm wrench to hold the barrel nut (B), loosen the jam nut (C) with a 10mm wrench.
3. With your left hand, grasp the cables (D) as close to the adjuster as possible. Use your right hand to rotate the barrel nut until you have reached the proper brake lever adjustment.



4. Check the actuator linkage to ensure there is adequate freedom of movement for positive brake operation and that all floating parts move freely and that all parts are mounted securely. Tighten hardware as required.
5. Tighten the adjuster jam nut and slide the rubber protectors back onto the adjuster.
6. The brake band is adjusted correctly when there's 1/4" - 3/8" (6-10mm) brake lever freeplay and clearance between the brake lever and block with the lever fully depressed is no more than 3/4" (1.9cm). Torque the band bolt nut to 6 ft. lbs. (83 kg 2-m)



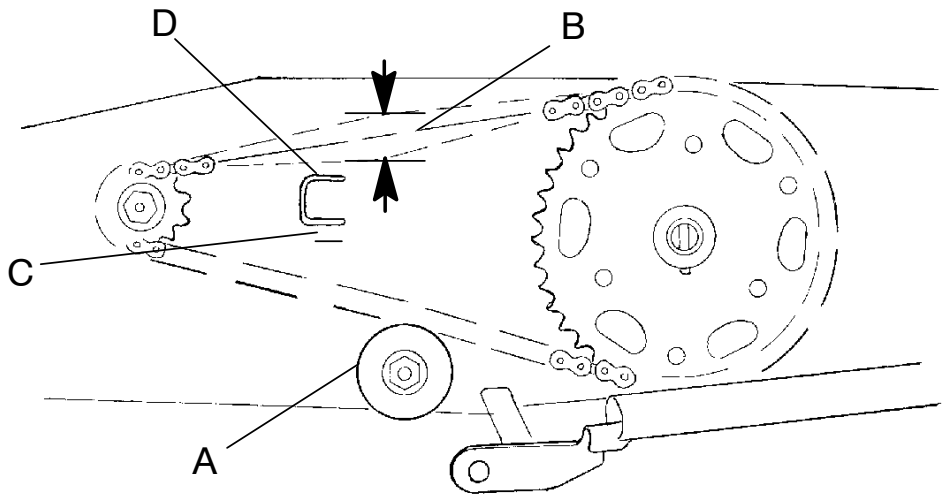
Downloaded from www.Manualslib.com manuals search engine

ADULT SECTION
Maintenance
Chain Tensioner

Inspect the chain. The chain should have 1″ of deflection as shown. If not, loosen the nut on the chain tensioner (A) and raise until 1″ (B) of deflection is attained. Tighten nut to 15-18 ft. lbs.

When the chain comes within 1/8″ (C) of the muffler mount bracket (D) on the chassis, the chain has stretched and must be replaced.

Inspect the sprockets as they also become worn and often need replacement when the chain is replaced.



Downloaded from www.Manualslib.com manuals search engine

Maintenance

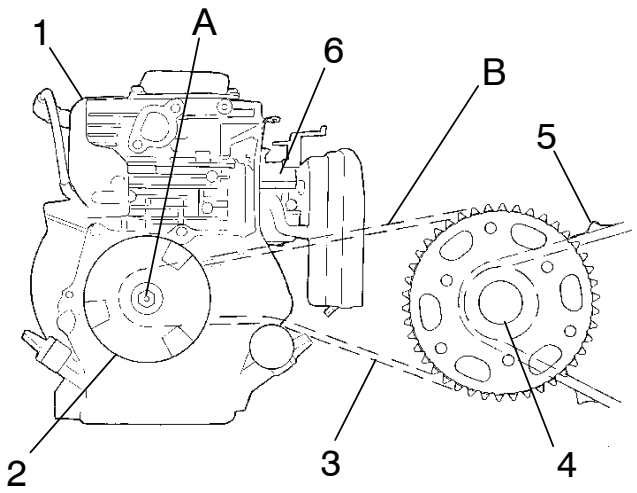
Lubrication

NOTE: Driveline noise is normal and inherent in a chain drive system such as this machine uses.

To ensure long life of the snowmobile's driveline, lubricate as follows:

- Lubricate Point A every 15 hours of operation with a small amount of Polaris Premium All Season Grease.
- Lubricate Point B every 10 hours of operation with aerosol chain lube or SAE 30 oil.

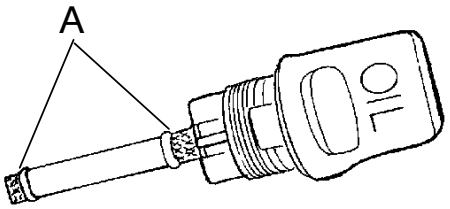
1. Engine
2. Torque Converter (Centrifugal Clutch)
3. Chain
4. Drive Shaft
5. Track
6. Carburetor



Downloaded from www.Manualslib.com manuals search engine

ADULT SECTION
Maintenance

Oil Level



Maintain the oil level between the safe marks (A) on the dipstick.

Oil Change

Change the oil after the initial 20 hours of operation and again after each 50 hours.

Washing Your Snowmobile

Keeping your snowmobile clean will not only improve its appearance but it can also extend the life of various components. With a few precautions, your sled can be cleaned much like an automobile.

The best and safest way to clean your sled is with a garden hose and a pail of mild soap and water. Use a professional type washing mitten, cleaning the upper body first and the lower parts last. Rinse with water frequently and dry with a chamois to prevent water spots. **NOTE:** If warning labels are damaged, contact your a Polaris dealer for free replacement.

If a high pressure type car wash system is used, extreme care must be taken to avoid water damage to the hood, console, nosepan, decals, and warning labels. Many expensive repair bills can result from using high pressure detergent systems.

NOTE: If a high pressure car wash is used, grease all zerk fittings immediately after washing. Also run the vehicle to evaporate any water that might have entered the engine or exhaust system.

Waxing Your Snowmobile

Your snowmobile can be waxed with any high quality brand of automotive paste wax. Avoid the use of harsh cleaners since they can scratch the body finish.

Downloaded from www.Manualslib.com manuals search engine

Maintenance

Controls and Linkage

All bushings, spindle shafts, and tie rod ends should be coated with a light coat of oil or grease. Throttle and brake controls and cables should be lubricated with Polaris Premium All Season Grease. Force a small amount of lubricant down the cable.

Bearings

To prevent corrosion which will destroy the bearings, always grease drive shaft clutch side bearings with a high quality bearing grease.

Electrical Connections

Separate electrical connector blocks and clean corrosive build up from connectors. Lubricate or pack connector blocks with Nyogel™ grease and re-connect. Replace worn or frayed electrical wire and connectors. Be sure wiring harness is properly secured away from sharp edges, steering linkage, moving parts, and hot exhaust.

Front Suspension

To minimize fatigue on the front shocks and springs during extended storage, it is recommended that the front end of the machine be safely blocked off the ground to remove tension from the shocks and springs.

Downloaded from www.Manualslib.com manuals search engine

ADULT SECTION
Maintenance
Engine

Proper off-season preparation of the engine and fuel system is vital to the prevention of rust and corrosion formation on precision engine parts during storage.

Without proper storage, jet restriction can cause lean conditions and very poor slow speed driving quality.

When preparing your snowmobile for off-season storage, we recommend that you add fuel conditioner/stabilizer or Premium Carbon Clean (PN2871326) to the fuel tank. Follow the instructions on the can. Run the engine for five minutes to get additives through the entire fuel system. Then top off the tank with fresh fuel.

NOTE: This procedure is performed best when the front of the machine is elevated and the engine is tilted rearward.

Storage

Off season or extended storage of your snowmobile requires you to take preventative measures to aid against deterioration and to prolong the useful life of many components.

Your snowmobile should be stored in a dry garage or shed, out of direct sunlight, and covered with a fabric snowmobile cover. Plastic tarp can cause condensation to form and may damage some snowmobile components.

Downloaded from www.Manualslib.com manuals search engine

Maintenance

Carburetor Protection During Off-Season Storage

When preparing your snowmobile for off-season storage we recommend that you add a fuel conditioner/stabilizer or Premium Carbon Clean (2871326) to the fuel tank. Follow the instructions on the can. Run the engine for five minutes to get additives through the entire fuel system. Then top off with fresh fuel and turn the fuel valve to OFF.

If stabilizer is not used, make sure the fuel valve is OFF and drain the carburetor. Catch fuel in a container or shop cloth.

Remove the spark plug and pour approximately 5cc of engine oil into cylinder. Slowly pull the recoil starter so the engine turns over two or three times. Reinstall plug securely. Position piston at bottom dead center (BDC). Observe all fire safety rules when draining carburetor. See gasoline warnings on page 46.

Slowly pull the recoil starter handle until resistance is felt. Leave it in that position. Clean the engine thoroughly with an oiled cloth.

If stabilizer is not used, turn the fuel valve to OFF. Remove the strainer cup, place the strainer over a container, and open the strainer cock to discharge fuel from the fuel tank. Remove the carburetor float chamber bolt from the bottom and discharge fuel from the carburetor. Replace bolt.

Downloaded from www.Manualslib.com manuals search engine

ADULT SECTION
Maintenance
Transporting the Snowmobile
Whenever the snowmobile is transported the following measures should be taken:

1. Turn the fuel valve off.
2. Be sure the fuel cap is installed correctly.
3. Always tie the snowmobile to the transporting unit securely using suitable straps.

NOTE: Transportation to and from a Polaris dealer is the responsibility of the snowmobile owner. Any expenses involved will not be reimbursed.

Fall Tune-Up
To obtain maximum performance and use from your snowmobile, we encourage you to arrange for a fall service tune-up with your Polaris dealer. He has an experienced and trained service technician who is interested in keeping your machine in peak operating condition.

Towing
Do not use this snowmobile to tow.

If a situation arises requiring the snowmobile to be towed by another snowmobile, attach the tow rope to the spindles, not to the ski toe loops.

For Your Protection
For your added protection it is a good idea to carry the following items in your snowmobile when traveling farther than a five-minute walk from home.

- Extra Spark Plugs
- First Aid Kit
- Winter Survival Kit
- Extra Gloves
- Owner’s Manual

Downloaded from www.Manualslib.com manuals search engine

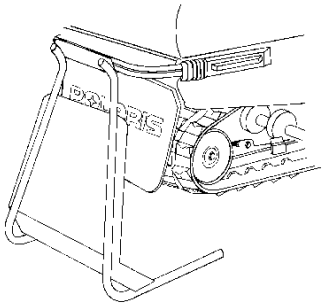
Maintenance

⚠WARNING

Your snowmobile is propelled by a revolving track, which must be partially exposed for proper operation. Serious injuries may be caused by the operator's hands, feet or clothing becoming entangled in the track. Be alert. Always sit properly on the seat.

Track and Suspension

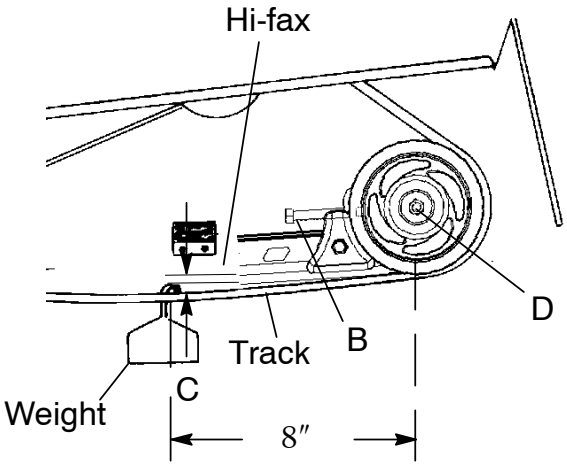
Under normal conditions moderate track tension should be maintained during summer storage. The rear of the machine should be supported off the ground to allow free hanging of the track.



Track Tension

Track adjustment is critical for proper handling. Always maintain correct tension and alignment.

Tension adjustments should be made only after the track is warmed up and limber.



1. Turn the machine off.
2. Lift the rear of the machine and safely support it off the ground.
3. Hang a 10 pound weight 8 inches from the center of the rear idler wheel. The deflection at this point with this amount of weight should measure 3/4″ between the bottom of hi-fax and the inside of the track.

NOTE: Measure at the point where the weight is hanging.

4. Check for specified slack between the wear surface of the track clip and the plastic hi-fax (C).

Downloaded from www.Manualslib.com manuals search engine

ADULT SECTION
Maintenance
Track Adjustment

If the track needs adjustment:

1. Loosen rear idler shaft bolt (D).
2. Tighten or loosen the track adjusting screws (B) as necessary to provide equal adjustment on both sides of the track.
3. Repeat measurement on the other side of the track.
   NOTE: Check more frequently when the machine is new.
4. Start machine and slowly rotate the track at least five revolutions, let the track stop rotating by itself (do not apply brakes).
5. Check track alignment (side to side) by comparing the distance from the drive lug to the Hi-fax on both sides. Readjust until centered.
6. Tighten Idler Shaft Bolt (D).
7. Readjust the toe block to proper spacing and tighten.

Downloaded from www.Manualslib.com manuals search engine

Maintenance

Track Alignment

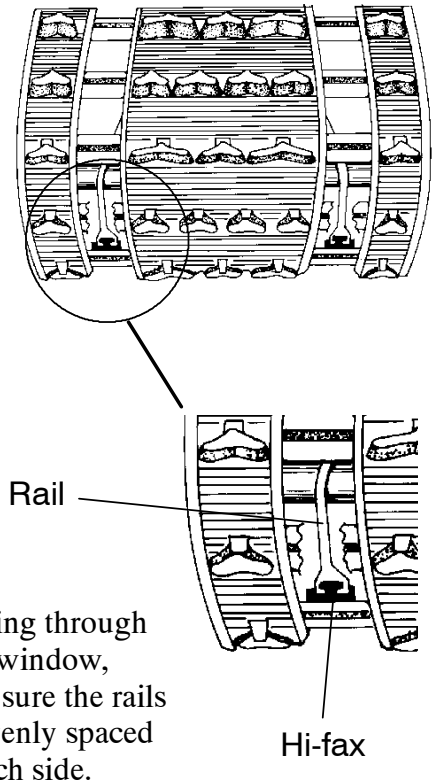
A periodic check should be made to see that the track is centered and running evenly on the slide rails. Misalignment will cause excessive wear to the track and slide rail.

⚠WARNING

When performing the following checks and adjustments, stay clear of all moving parts to avoid serious personal injury.

Before checking track tension, make sure the track contains no objects that could be thrown out while the track is rotating. Keep clear of track. This includes but is not limited to hands, tools, feet and clothing. Make sure no one is standing close to the machine while the track is rotating.

1. Safely support the rear of the machine with the track off the ground using a jackstand.
2. Start the engine and apply a small amount of throttle until the track turns *slowly* at least five complete revolutions. Stop the engine.
3. Inspect track alignment by looking through the track windows to make sure the rails are evenly spaced on each side. If the track runs to the left, loosen left idler wheel mounting bolt and tighten the left track adjusting bolt. If the track runs to the right, loosen right idler wheel mounting bolt and tighten the right track adjusting bolt.



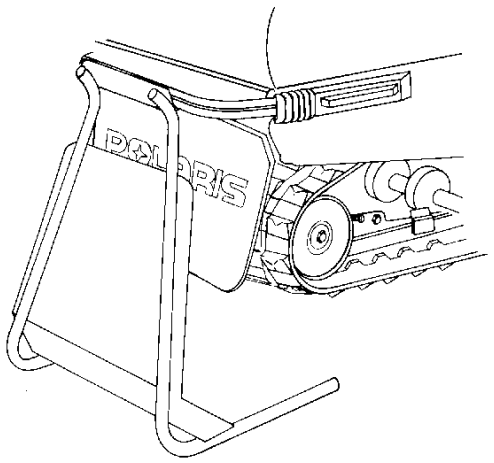
Looking through track window, make sure the rails are evenly spaced on each side.

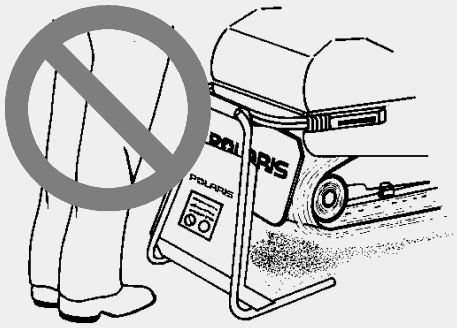
4. After adjustments are complete, be sure to tighten locknuts and idler shaft bolts. Torque to 35-40 ft. lbs. (4.8-5.5 kg/m).
5. Repeat step 2 to verify proper alignment.

Downloaded from www.Manualslib.com manuals search engine

ADULT SECTION
Maintenance
Track Warm Up

When storing your snowmobile outside overnight, it is recommended that the track be warmed up prior to driving the snowmobile. This reduces drive clutch wear. To warm up the track, safely support the rear of the snowmobile off the ground, start the engine and *abruptly* engage the clutch. Allow the track to turn for a short time. Release the throttle, apply the brakes and shut the engine off prior to lowering it to the ground.





⚠WARNING

Never hold the snowmobile up or stand behind it while warming up the track. A loose track or flying debris could cause serious personal injury or death.

Downloaded from www.Manualslib.com manuals search engine

Maintenance

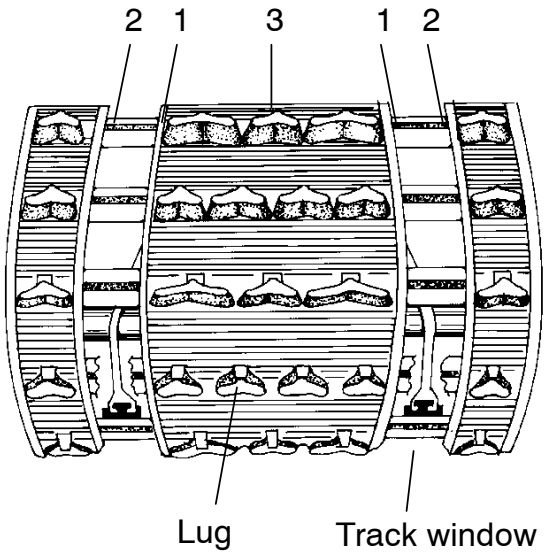
Track Inspection

⚠WARNING

Inspecting the track while the engine is running can result in serious personal injury if the track should being to move. *Never* inspect the track with the engine running

Using a hoist or jackstand, safely lift and support the rear of the snowmobile off the ground. Rotate the track by hand to check for any possible damage.

To inspect track rods, carefully examine the track along the entire length of each rod, bending the track and inspecting for breakage. The three most common places where breakage occurs are shown in the illustration.



Check the track clips and tighten if loose. If any rod damage is found, the track should be replaced.

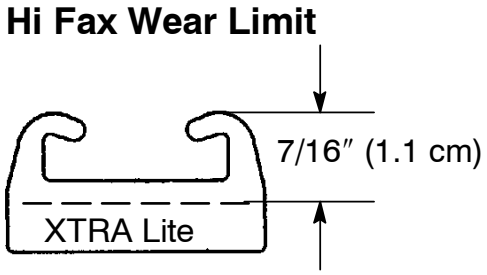
⚠WARNING

Serious personal injury or death may occur if the snowmobile is operated with a damaged track. Broken track rods are a serious hazard, since they can cause a rotating track to come off the machine. Never operate the snowmobile or rotate under power a track that's torn or damaged.

NOTE: The 120 XC SP track has molded in track clips. It is common for a thin layer of rubber to detach from clip area and peel off during initial use.

Downloaded from www.Manualslib.com manuals search engine

ADULT SECTION
Maintenance
Hi-Fax Replacement



The 120 XC SP uses XTRA Lite style Hi-Fax. When any area of the Hi-Fax is worn to 7/16″ (1.1 cm), it should be replaced. This will save wear on other vital components.

The slide rail is designed to operate in conditions with adequate snow cover to provide sufficient lubrication. Excessive wear may be due to improper alignment, improper track adjustment or machine operation on surfaces without snow. Take the machine to your dealer for Hi-fax replacement.

Downloaded from www.Manualslib.com manuals search engine

Maintenance

Track Lubrication

Track failure, loss of vehicle control and braking ability can result from extended use of this vehicle on surfaces providing marginal lubrication between hi-fax and track guide clips. Examples of marginal lubrication would include lakes without snow cover, icy trails and no-snow conditions.

The slide rail is designed to operate in conditions with adequate snow cover in order to provide sufficient lubrication. Excessive wear indicates insufficient lubrication. New hi-fax can cause faster heat build up in limited lubrication than used hi-fax, resulting in excessive wear.

NOTE: Track damage or failure caused by operation on ice or poor lubrication conditions may void the track warranty.

Steering System

⚠WARNING

Improper alignment or adjustment may cause loss of steering control, resulting in serious injury or death. Do not attempt to change the ski alignment. Contact your Polaris dealer.

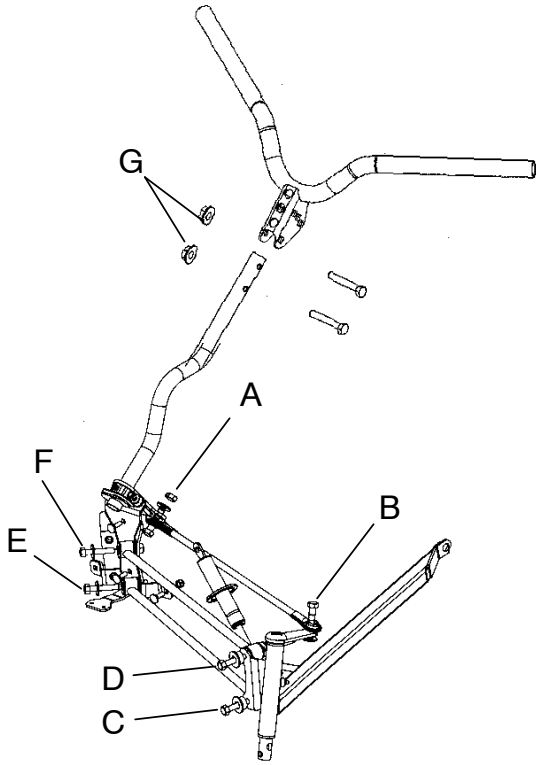
The steering systems on Polaris snowmobiles can be adjusted with ski toe alignment. Improper toe alignment can cause erratic steering. Consult your dealer if a need for adjustment should become necessary.

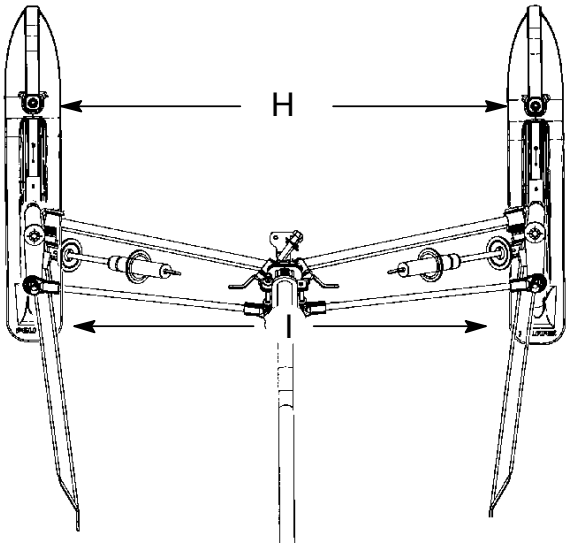
Downloaded from www.Manualslib.com manuals search engine

ADULT SECTION
Maintenance
Steering Inspection and Adjustment

The steering assembly of the machine should be checked periodically for loose nuts and bolts. See A,B,C,D,E, F, and G in illustration at right.

With handlebars in straight ahead position and measuring from the straight edge of the skis, the measurement between the skis at point H should be 1/8 inches greater than point I, as shown on the following page. **NOTE:** This measurement should be taken with the vehicle weight compressing the suspension. If the skis are misaligned, we recommend that your dealer make the necessary adjustments.

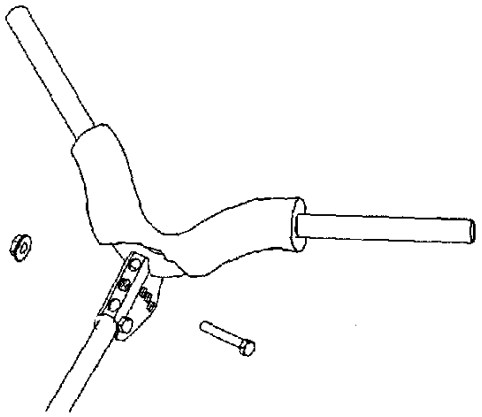




Downloaded from www.Manualslib.com manuals search engine

Maintenance

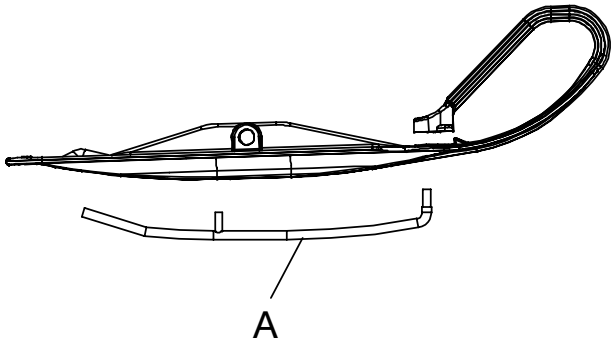
Handlebar Adjustment



6. Slide the handlebar pad upward to access the adjuster bolts. If additional room is required, unzip one of the handlebar pad zippers and roll the pad to the side.
7. To adjust, remove the upper flange nut and carriage bolt.
8. Loosen the lower flange nut only enough so the bracket can move freely.
9. Position the handlebar to the desired height and re-install the upper carriage bolt and flange nut.
10. Torque the flange nuts to 15-17 ft. lbs.
11. Reinstall the handlebar pad.

Downloaded from www.Manualslib.com manuals search engine

ADULT SECTION
Maintenance
Ski Skags



The skag (A) is a replaceable bar attached to the underside of the ski. The purpose of the skag is to assist in turning the snowmobile and to prevent the wearing away of the ski caused by contact with roads and other bare terrain. We recommend that skags be checked once a week to maintain positive steering characteristics. Skags must be replaced when worn to half their original diameter.

NOTE: See dealer track studding and skag chart for recommended skags.

⚠WARNING

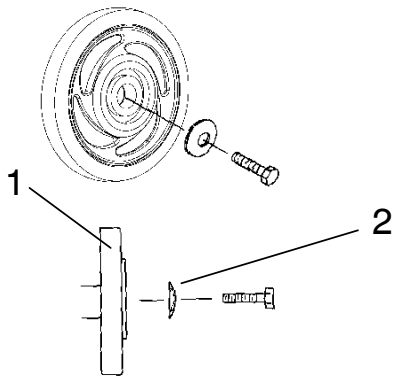
Worn skis and/or skags will adversely affect handling and can cause loss of vehicle control, which can lead to serious injury or death. Replace worn skis and/or skags when inspection reveals wear.

Skag Replacement

1. Raise and support the front of the machine so the skis are approximately 6″ (15.2 cm) from the ground.
2. Remove the attaching nuts and pry the skag downward.
3. Remove the forward portion of the skag.

Reverse this procedure for new skag installation.

NOTE: If the rear idler wheel assembly (1) washers are removed, be sure they are reinstalled with the domed side of the washer facing out (2) as shown.



Downloaded from www.Manualslib.com manuals search engine

Maintenance

Suspension Lubrication

To maintain rider comfort and to retard wear of the pivot shafts, the suspension pivot shafts should be lubricated with Polaris Premium All Season Grease several times during the season and again before summer storage each year. The riding characteristics of the snowmobile will be affected by lack of lubrication of these shafts.

NOTE: A grease gun kit complete with grease and adaptors is available to lubricate all fittings on Polaris snowmobiles. See page 82.

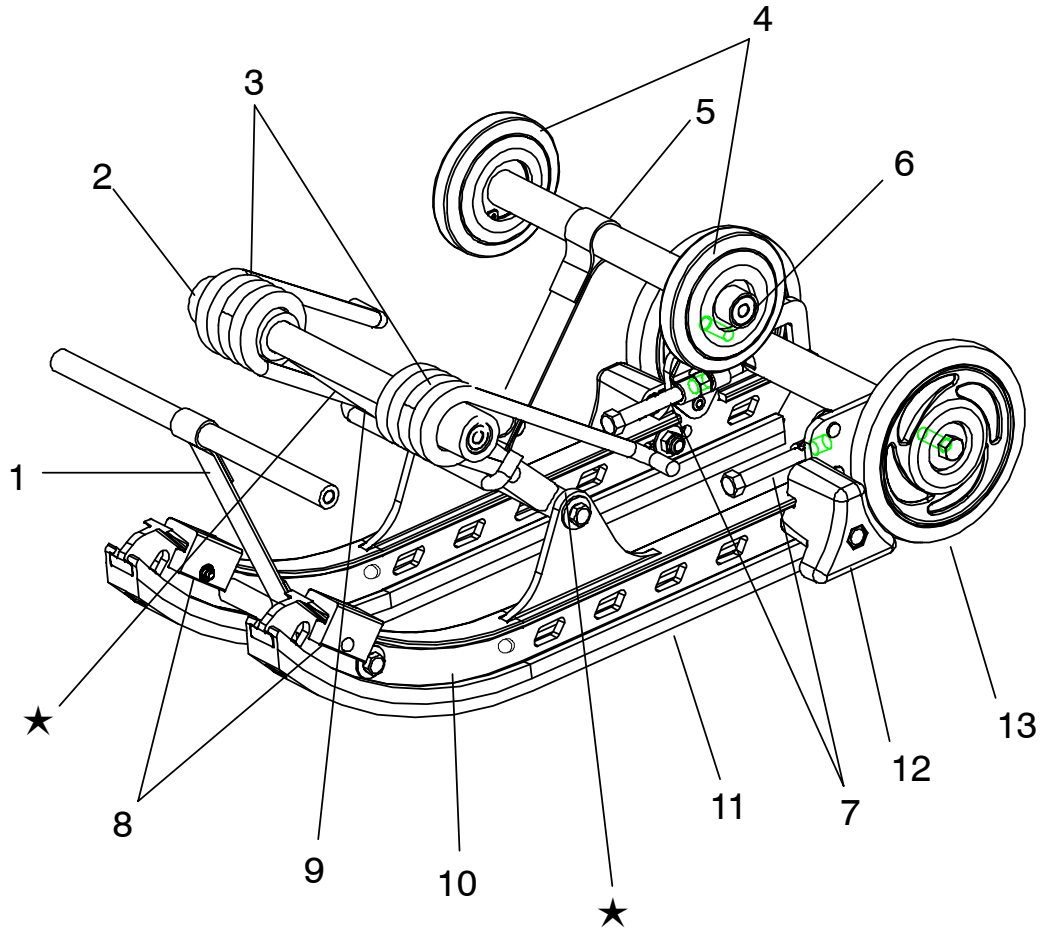
IMPORTANT: Make it a weekly practice to check for loose bolts and nuts on the suspension system. If any loose bolts are found on the rail be sure to clean the threads and apply Loctite 262 before tightening.

Downloaded from www.Manualslib.com manuals search engine

ADULT SECTION
Maintenance
Suspension Components

Suspension Lubrication points are indicated by a ★.

1. Front Limiter Strap
2. Torsion Spring Sleeves
3. Torsion Spring
4. Carrier Wheel
5. Rear Limiter Strap
6. Spacer
7. Adjuster Bolts
8. Rail Bumper
9. Torque Arm
10. Rail
11. Hi-fax
12. Toe Guard
13. Idler Wheel



Downloaded from www.Manualslib.com manuals search engine

Accessories

Maintenance Items and Accessories

The tools and maintenance items mentioned in this book, as well as a long line of other Polaris accessories, are available at your Polaris dealer.

Paint Codes

Color Description	Polaris "P" No.	Raw Material No.
Indy Red	P293	8520297
Indy Black	P067	8520246

Paints can be ordered direct from Midwest Industrial Coatings (612) 942-1836. Mix as directed.

Troubleshooting

Contact your Polaris dealer for service if you're unable to identify solutions using the following chart.

Engine Turns Over, Fails to Start

Possible Cause	Solution
Tether switch not engaged	Install tether switch/strap
Engine stop switch not on	Pull stop switch up to RUN position
Throttle safety switch malfunction	See your Polaris dealer
Out of fuel	Refuel
Clogged fuel valve or filter	Inspect and clean or replace
Water is present in fuel	Drain the fuel system and refuel
Fuel valve is turned off	Turn the fuel valve on
Old or non-recommended fuel	Replace with new fuel
Fouled or defective spark plug(s)	Inspect plug(s), replace if necessary
No spark to spark plug	Inspect plug(s), verify stop switch is on
Overuse of choke	Inspect, clean and/or replace spark plugs
Mechanical failure	See your Polaris dealer

Downloaded from www.Manualslib.com manuals search engine

SPECIFICATIONS
Jetting Chart

Altitude	Ambient Temperature	Below -30°F Below -34°C	-30° to -10°F -34° to -23°C	-10° to +10°F -23° to -12°C	+10° to +30°F -12° to -1°C	+30° to +50° F -1° to +10°C	Above +50°F Above +10°C
Meters (Feet)	0-600 (0-2000)	75	72.5	72.5	72.5	70	70
	600-1200 (2000-4000)	75	72.5	72.5	72.5	70	70
	1200-1800 (4000-6000)	72.5	70	70	70	67.5	67.5
	1800-2400 (6000-8000)	70	67.5	67.5	67.5	65	65
	2400-3000 (8000-10000)	67.5	65	65	65	62.5	62.5
	3000-3600 (10000-12000)	65	62.5	62.5	62.5	60	60

Clutching Chart DELETE CHART, N/A

Altitude Meters (Feet)	Shift Weight	Drive Clutch Spring	Driven Clutch Spring	Driven Helix	Chaincase Gearing
0-900 (0-3000)	10-62	Yellow	Black	R-11 #2	18:39 72P HYVO
900-1800 (3000-6000)	10-62	Yellow	Black	R-11 #2	18:39 72P HYVO
1800-2700 (6000-9000)	10-58	Yellow	Black	R-11 #2	17:41 72P HYVO
2700-3700 (9000-12000)	10-56	Yellow	Black	R-11 #2	17:41 72P HYVO

Downloaded from www.Manualslib.com manuals search engine

SPECIFICATIONS

Capacities and Dimensions	
Body Style	Mini Indy
Riders/Weight	1/150 lbs./68 kg maximum
Engine Oil	.6 qts./.57 l
Dry Weight (est.)	147.5 lbs./67 kg
Fuel Tank	.5 gal./1.9 l
Height	31 in./78.7 cm
Length	75 in./190.5 cm
Ski Center Distance	30 in./76.2 cm
Width	34 in./86.4 cm
Brake Type	Mechanical
Clutch Type	Centrifugal
Track Length	69 in./175.3 cm
Track Width	10 in./25.4 cm
Drive Chain Length	#40
Suspension	
Front Type	IFS
IFS Shock Type	Mini
Rear Type	Mini Indy
Engine and Cooling	
Engine Model Number	EH122PM013
Alternator Output	50 watt @ 3600 rpm
Bore x Stroke	60 x 43 mm
Displacement	121 cc
Carburetor Model	Mikuni BV18
Main Jet	72.5
Pilot Jet	50
Cutaway	170 Throttle Valve
Fuel Screw	1.5 Turns
Pilot Air Jet	1.3
Idle RPM	1600 +/- 200
Cooling	Air
Cylinders	1
Ignition Timing	23° BTDC @ 3600 rpm
Ignition Type	Flywheel Magneto (solid state)
Oil Injection	0W-40 Synthetic
Spark Plug	NGK BR6ES
Spark Plug Gap	.70 mm/.028 in.
Minimum Fuel Requirement	87 Octane Non-Oxygenated or 89 Octane Oxygenated

Downloaded from www.Manualslib.com manuals search engine

POLARIS RECOMMENDED PRODUCTS

Part No.	Description
	Engine Lubricant
2871281	Premium 4 Synthetic 0W-40 Engine Oil (4-Cycle)(qt.)
	Gearcase / Transmission Lubricants
2873602	Premium Synthetic Gearcase Lubricant (qt.)
2871653	Premium Front Gearcase Lube (8 oz.)
2871654	Premium Drive Hub Fluid (8 oz.)
	Grease / Specialized Lubricants
2871312	Grease Gun Kit, Premium All Season (3 oz.)
2871322	Premium All Season Grease (3 oz. cartridge)
2871423	Premium All Season Grease (14 oz. cartridge)
2871460	Starter Drive Grease (2 oz.)
2871515	Premium U-Joint Lube (3 oz.)
2871551	Premium U-Joint Lube (14 oz.)
2871329	Dielectric Grease (Nyogel™)
	Coolant
2871323	60/40 Coolant (gal.)
2871534	60/40 Coolant (qt.)
	Additives / Miscellaneous
2870791	Fogging Oil (12 oz. Aerosol)
2871326	Carbon Clean Plus (12 oz.)
2870652	Fuel Stabilizer (16 oz.)
2870990	DOT3 Brake Fluid (12 oz.)
2872893	Engine Degreaser (12 oz.)

Downloaded from www.Manualslib.com manuals search engine

Polaris Anti-Theft System

The Polaris anti-theft system monitoring program (PATS) is designed to aid owners of registered snowmobiles in recovery of their machines, if stolen.

Administration

1 Polaris snowmobile owner reports theft.

A. In addition to notifying the proper law enforcement officials, the owner must call the Polaris warranty department in the United States and Canada.

US #763-542-0500

Canada #204-925-7100

B. Owners must provide their name, address, telephone number and model and serial number of stolen machines.

2 Polaris warranty will provide all dealerships with a monthly updated list of all stolen units, to further monitor thefts.

3 Polaris warranty will aid in notification of recovered units to their proper owner.

Obtaining Service and Warranty Assistance

Read carefully and understand the service data and the Polaris Warranty contained in this manual. Contact your Polaris dealer in matters pertaining to replacement parts, service or warranty. He is constantly kept up to date on changes, modifications and tips on snowmobile maintenance, which may supersede information contained in this manual. He is familiar with our policies and procedures and will be happy to assist you.

Downloaded from www.Manualslib.com manuals search engine

SERVICE AND WARRANTY

When writing about parts, service or warranty, always include the following information:

1. Serial number
2. Model number
3. Dealer name
4. Date of purchase
5. Details of trouble experienced
6. Length of time and conditions of operation
7. Indicate previous correspondence

Use the following space to record the model and serial numbers of your machine and engine.

Machine Model No._____

Machine Serial No._____

Engine Model No._____

Engine Serial No._____

Downloaded from www.Manualslib.com manuals search engine

LIMITED WARRANTY

Polaris Industries Inc., 2100 Highway 55, Medina, Minnesota 55340, gives a ONE YEAR LIMITED WARRANTY on all components of the Polaris snowmobile against defects in material or workmanship. This warranty covers the parts and labor charges for repair or replacement of defective parts which are covered by this warranty. This warranty begins on the date of purchase. This warranty is transferrable to another consumer during the warranty period through a Polaris dealer.

REGISTRATION

At the time of sale, the Warranty Registration Form must be completed by your dealer and submitted to Polaris within ten days. Upon receipt of this registration, Polaris will record the registration for warranty. No verification of registration will be sent to the purchaser as the copy of the Warranty Registration Form will be the warranty entitlement. If you have not signed the original registration and received the "customer copy", please contact your dealer immediately. NO WARRANTY COVERAGE WILL BE ALLOWED UNLESS YOUR SNOWMOBILE IS REGISTERED WITH POLARIS.

Initial dealer preparation and set-up of your snowmobile is very important in ensuring trouble-free operation. Purchasing a machine in the crate or without proper dealer set-up will void your warranty coverage.

WARRANTY COVERAGE AND EXCLUSIONS:

LIMITATIONS OF WARRANTIES AND REMEDIES

The warranty excludes any failures that are not caused by a defect in material or workmanship. This warranty does not cover accidental damage, normal wear and tear, abuse or improper handling. This warranty also does not cover any snowmobile that has been altered structurally, neglected, improperly maintained, used for racing, or used for purposes other than for which it was manufactured, or for any damages which occur during trailer transit or as a result of unauthorized service or the use of unauthorized parts. In addition, this warranty does not cover physical damage to paint or finish, stress cracks, tearing or puncturing of upholstery material, corrosion, or defects in parts, components or snowmobile due to fire, explosions or any other cause beyond Polaris' control.

Downloaded from www.Manualslib.com manuals search engine

WARRANTY

This warranty does not cover the use of unauthorized lubricants, chemicals, or fuels that are not compatible with the snowmobile.

The exclusive remedy for breach of this warranty shall be, at Polaris' exclusive option, repair or replacement of any defective materials, or components or products. THE REMEDIES SET FORTH IN THIS WARRANTY ARE THE ONLY REMEDIES AVAILABLE TO ANY PERSON FOR BREACH OF THIS WARRANTY. POLARIS SHALL HAVE NO LIABILITY TO ANY PERSON FOR INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES OF ANY DESCRIPTION, WHETHER ARISING OUT OF EXPRESS OR IMPLIED WARRANTY OR ANY OTHER CONTRACT, NEGLIGENCE, OR OTHER TORT OR OTHERWISE. Some states do not permit the exclusion or limitation of incidental or consequential damages or implied warranties, so the above limitations or exclusions may not apply to you if inconsistent with controlling state law.

ALL IMPLIED WARRANTIES (INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE) ARE LIMITED IN DURATION TO THE ABOVE ONE YEAR WARRANTY PERIOD. POLARIS FURTHER DISCLAIMS ALL EXPRESS WARRANTIES NOT STATED IN THIS WARRANTY. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you if inconsistent with controlling state law.

Downloaded from www.Manualslib.com manuals search engine

HOW TO OBTAIN WARRANTY SERVICE

If your snowmobile requires warranty service, you must take it to a Polaris dealer authorized to repair Polaris snowmobiles. When requesting warranty service you must present your copy of the Warranty Registration form to the dealer. (THE COST OF TRANSPORTATION TO AND FROM THE DEALER IS YOUR RESPONSIBILITY). Polaris suggests that you use your original selling dealer; however, you may use any Polaris Servicing Dealer to perform warranty service.

Please work with your dealer to resolve any warranty issues. Should your dealer require any additional assistance they will contact the appropriate person at Polaris.

This warranty also gives you specific legal rights, and you may also have other rights which vary from state to state.

If any of the above terms are void because of state or federal law, all other warranty terms will remain in effect.

Engine Oil

1. Mixing oil brands or using non-recommended oil may cause engine damage. We recommend the use of Polaris engine oil.
2. Damage resulting from the use of non-recommended lubricants may not be covered by warranty.

Downloaded from www.Manualslib.com manuals search engine

WARRANTY

Polaris Extended Service Contract

Polaris now is offering an extended engine service contract which provides the following benefits:

- Additional engine protection beyond the original twelve month warranty.
- Backed by the strength of Polaris - no third party involvement.
- Repairs use only genuine top quality Polaris parts.
- Peace of mind. The Polaris Extended Service Contract is honored by all authorized Polaris snowmobile dealers in North America. However, where possible we urge you to contact the selling dealer. There are no cards for you to carry as repair authorization for your dealer is only a phone call away.
- The Polaris Extended Service Contract is very affordable and can be financed with the Polaris Star Card.

Conditions:

- The Polaris Extended Service Contract must be purchased within 90 days from the date of the unit's registration.
- Each repair visit it subject to a $50.00 deductible.
- The Extended Service Contract applies to the first 5000 miles or two calendar years from date of registration, whichever comes first. Tampering with the odometer shall void the Extended Service Contract. No extensions to coverage under the Extended Service Contract will be given.
- Snowmobiles used in commercial purposes or for racing are excluded from coverage.

Downloaded from www.Manualslib.com manuals search engine

INDEX

A

Accessories 79
Auto Chain Tensioner 60

B

Brake Adjustment 59
Brake Lever Travel 58
Break-In Period 44-45

C

Carburetor 57
Carburetor Protection 65
Checking Engine Oil 45
Choke and Cable Lubrication 58
Clutching Chart 80
Component Identification 42-43

E

Electrical Connections 63
Emergency Stopping Procedure 49
Engine Break-In 44
Engine Stop Switch 28
Equipment Modifications 10
Exhaust System 56

F

Fall Tune-Up 66
Front Suspension 63
Fuel Safety 46

H

Hi-Fax Inspection, Replacement 72

J

Jetting Chart 80

K

Know Your Snowmobile 14-18

L

Lubrication 61

M

Maintenance Inspection 54
Maintenance Program 11, 51

O

Oil 45
Oil Change 62
Oil Level 62
Operation 46-50
Operation Warnings 29-41
Oxygenated Fuels 46

P

Paint Codes 79
Pre-Ride Warm Up 50
Pre-Ride Check 19-20
Preservation of the Environment . . . 7-8

R

Riding Rules 21-24

S

Safety 10-13
Safety Decals 12
Service and Warranty Information 83-84
Signal words 13
Skag Replacement 76
Ski Skags 76
Spark Plugs 55-56
Specifications 80-81
Speed Regulation 47
Starting a Cold Engine 48
Starting a Warm Engine 48
Starting the Engine 48
Steering Inspection and Adjustment . 74
Steering System 73
Storage 49, 63-64
Maintenance 51-78
Suspension Components 78
Suspension Lubrication 77
Symbols 13

T

Throttle Cable Lubrication 58
Throttle Cable Pivot Slug 58
Throttle Safety Switch 27
Towing 66
Track Adjustment 68
Track Alignment 69
Track and Suspension 67
Track Inspection 71
Track Lubrication 73
Track Tension 67
Track Warm-Up 70
Transporting 66
Troubleshooting 79

V

Vehicle Identification Numbers 9

W

Warranty 85-88
Washing 62
Waxing 62
Welcome 4
Windchill/Temperature Charts 36

Downloaded from www.Manualslib.com manuals search engine

POLARIS®
The Way Out.

Part No. 9917595
PRINTED IN THE USA

Downloaded from www.Manualslib.com manuals search engine