



**1982
OPERATOR'S
MANUAL**



Elite®

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model _____

V.I.N. _____

purchase date _____

warranty expiry date _____

To be completed by dealer at time of sale.

DEALER IMPRINT AREA

TECHNICAL PUBLICATIONS
AFTER SALES SERVICE DEPARTMENT
BOMBARDIER INC.
VALCOURT, QUEBEC
CANADA, JOE 2L0

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SKI-DOO	CITATION	FUTURA
ALPINE	OLYMPIQUE	SPIRIT
BLIZZARD	T'NT	NUVIK
CARRY-BOOSE	NORDIK	MIRAGE
ELAN	SKANDIC	SUPER SONIC
ELITE		ULTRA SONIC
GRAND PRIX SPECIAL		SONIC


FOREWORD


The Operator Manual and the Snowmobile Safety handbook have been prepared to acquaint the owner / operator of a new snowmobile with the various vehicle controls maintenance and safe operating instructions. Each is indispensable for the proper use of the product, and should be kept with the vehicle at all times.

Should you have any questions pertaining to the warranty and its application, please consult the "Often Asked Question" section of this manual, or your selling dealer.

This manual uses the following symbols.

 **WARNING:** Identifies an instruction which, if not followed, could cause personal injury.

 **CAUTION:** Denotes an instruction which, if not followed, could severely damage vehicle components.

 **NOTE:** Indicates supplementary information needed to fully complete an instruction.

Although the mere reading of such information does not eliminate the hazard, your understanding of the information will promote its correct use.

SAFETY IN MAINTENANCE

Observe the following precautions:

- Throttle mechanism should be checked for free movement before starting engine.
- The snowmobile engine can be stopped by activating the emergency cut-out or tether switches or turning off the key.
- Clean and check operation of the headlight, tail light and brake light.
- Engine should be running only when pulley guard is secured in place.
- Never run the engine without drive belt installed. Running an unloaded engine can prove to be dangerous.
- Never run the engine when the track is raised off the ground.
- It can be dangerous to run engine with the hood removed.
- Gasoline is flammable and explosive under certain conditions. Always manipulate in a well ventilated area. Do not smoke or allow open flames or sparks in the vicinity. If gasoline fumes are noticed while driving, the cause should be determined and corrected without delay.
- Maintain your vehicle in top mechanical condition at all times.
- Your snowmobile is not designed to be driven or operated on black top, bare earth, or other abrasive surfaces. On such surfaces abnormal and excessive wear of critical parts is inevitable.
- Your snowmobile is not designed to be operated on public streets, road or highways. In most States and Provinces, it is considered an illegal operation.
- Installation of other than standard equipment, including ski-spreaders, bumpers, pack racks, etc., could severely affect the stability and safety of your vehicle. Avoid adding on accessories that alter the basic vehicle configuration.
- Whenever the vehicle is parked outdoors, overnight or for a long period, it is suggested to protect it against the inclemency of the weather with a snowmobile cover.
- Do not lubricate throttle and/or brake cables and housings.
- Only perform procedures as detailed in this manual. Unless otherwise specified, engine should be turned OFF for all lubrication and maintenance procedures.
- Since engine cooling is fully in effect only when the vehicle is in motion, it is not recommended that you allow the engine to idle for more than brief periods.
- When removing coolant tank cap, first place a cloth over cap then turn cap to its first step to release pressure. Never drain or refill the cooling system when engine is hot.

• PLEASE READ AND UNDERSTAND ALL WARNINGS AND CAUTIONS IN THIS MANUAL AND ON THE VEHICLE.

THIS MANUAL SHOULD REMAIN WITH THE VEHICLE AT THE TIME OF RESALE.

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LIMITED WARRANTY 1982 SKI-DOO® SNOWMOBILES

1 - PERIOD

BOMBARDIER® INC. as manufacturer, warrants FROM THE DATE OF FIRST CONSUMER SALES, every 1982 SKI-DOO® snowmobile, sold as NEW AND UNUSED, by an authorized SKI-DOO dealer, for periods of:

- 12 consecutive months for ELAN®, CITATION*, EVEREST®, ELITE® , ALPINE® models.
- 90 consecutive days for NORDIK*, SKANDIC*, BLIZZARD® 5500 MX and 9500 models subject to the following:
 1. If delivery is made after the 31st day of March of a given year and before the 1st day of December of the same year, the above 90 day warranty will start on December 1st.
 2. If delivery is made on/or after the 2nd day of January of a given year but before the 31st day of March of the same year, all the unused portion of the 90 day period will be carried over to the next winter and start again on the 1st day of December of the same year.

2 - WHAT BOMBARDIER WILL DO

BOMBARDIER will repair and/or replace, at its option, components defective in material and/or workmanship (under normal use and service,) with a genuine BOMBARDIER component without charge for parts or labour, at any authorized SKI-DOO dealer during said warranty period.

3 - CONDITION TO HAVE WARRANTY WORK PERFORMED

Present to the servicing dealer, the hard copy of the BOMBARDIER Customer Registration card received by the customer from the selling dealer at time of purchase.

4 - WARRANTY TRANSFER

This warranty is transferable to subsequent owner(s) for remainder of warranty period from original date of sale.

5 - EXCLUSIONS - ARE NOT WARRANTED

- Normal wear on all items such as, but not limited to:
 - drive belts
 - slider shoes
 - spark plugs
 - breaker points
 - runners on skis
- Replacement parts and/or accessories which are not genuine BOMBARDIER parts and/or accessories.
- Damage resulting from installation of parts other than genuine BOMBARDIER parts.
- Damage caused by failure to provide proper maintenance as detailed in the Operator Manual. The labour, parts and lubricants costs of all maintenance services, including tune-ups and adjustments will be charged to the owner.
- A sulphated battery.

- Vehicles used for racing purposes.
- All optional accessories installed on the vehicle.
(The normal warranty policy for parts and accessories, if any, applies).
- Damage resulting from accident, fire or other casualty, misuse, abuse or neglect.
- Damage resulting from modification to the snowmobile not approved in writing by BOMBARDIER.
- Losses incurred by the snowmobile owner other than parts and labour, such as, but not limited to, transportation, towing, telephone calls, taxis, or any other incidental or consequential damages.

Some states or provinces do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply.

6 - EXPRESSED OR IMPLIED WARRANTIES

This warranty gives you specific rights, and you may also have other legal rights which may vary from state to state, or province to province. Where applicable this warranty is expressly in lieu of all other expressed or implied warranties of BOMBARDIER, its distributors and the selling dealer, including any warranty of merchantability of fitness for any particular purpose; otherwise the implied warranty is limited to the duration of this warranty. However, some states or provinces do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply.

Neither the distributor, the selling dealer, nor any other person has been authorized to make any affirmation, representation or warranty other than those contained in this warranty, and if made, such affirmation, representation or warranty shall not be enforceable against BOMBARDIER or any other person.

BOMBARDIER INC. reserves the right to modify its warranty policy at any time, being understood that such modification will not alter the warranty conditions applicable to vehicles sold while the above warranty is in effect.

7 - CONSUMER ASSISTANCE

If a servicing problem or other difficulty occurs, we suggest the following:

1. Try to resolve the problem at the dealership with the Service Manager or Owner.
2. If this fails, contact your area distributor listed in the Operator Manual.
3. Then if your grievance still remains unsolved, you may write to us:

Bombardier Inc.
Service Department
Recreational Products
Valcourt, Quebec, Canada, JOE 2LO

January 1981
Bombardier Inc.
Valcourt, Quebec, Canada, JOE 2LO

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OFTEN ASKED QUESTIONS

Q: Why must my snowmobile be registered? After all I do have my original invoice as proof of when I purchased my snowmobile.

A: Your warranty is valid at any authorized dealer of the product. Your registration is the key element in providing the servicing dealer with the necessary data to complete warranty claim forms. This information is also used to notify owners in the event of a safety recall.

Q: How do I know my vehicle has been registered at the factory?

A: When you bought your snowmobile the dealer should have completed, and forwarded us the manufacturer's copy of the Customer Warranty Registration. YOUR DEALER SHOULD HAVE GIVEN YOU THE HARD COPY OF THE WARRANTY REGISTRATION FORM.

Q: I bought my snowmobile in O'King County but I snowmobile in Washington County. Can the dealer in Washington County accept to perform warranty work on my snowmobile?

A: Yes, any authorized dealer in North America can perform warranty repairs, providing the customer warranty registration card is presented.

Q: Where can I find information on the lubrication and maintenance of my snowmobile?

A: In this Operator Manual provided with the vehicle at the time of first sale.

Q: Will the entire warranty be void or cancelled, if I do not operate or maintain my new snowmobile exactly as specified in the Operator's Manual?

A: The warranty of the new snowmobile cannot be "Voided" or "Cancelled". However, if a particular failure is caused by operation or maintenance other than is shown in the Operator Manual, THAT failure may not be covered under warranty. This includes service work performed by the customer, especially the critical adjustments to ignition, timing, carburation and oil injection/or oil mixture.

Q: Would you give some examples of abnormal use or strain, neglect or abuse?

A: These terms are general and overlap each other in areas. Some specific examples may include: running the machine out of oil, chain failure caused by a lack of lubrication, operating the machine with a broken or damaged part which causes another part to fail, and so on. If you have any specific questions on operation or maintenance, please contact your dealer for advice.

Q: What costs are my responsibility during the warranty period?

A: The customer's responsibility includes all costs of normal maintenance services, non-warranty repairs, accidents and collision damage, as well as oils, and spark plugs, and incidental or consequential damages costs as explained in the warranty.

Q: Are "Genuine" Bombardier replacement parts used in warranty repairs covered by warranty?

A: Yes. When installed by an authorized dealer, any "genuine" Bombardier part used in warranty repairs assumes the remaining warranty that exists on the machine.

Q: If I sell my snowmobile within the warranty period, will the new owner qualify for the balance of the warranty?

A: Yes, provided the unit has already been registered with the manufacturer. Note that the change of ownership card in this manual should be completed and sent to Bombardier Inc.

Q: How can I receive the best owner assistance?

A: The satisfaction and goodwill of the owners of Bombardier products are of primary concern to your dealer and Bombardier Inc. Normally, any problems that arise in connection with the sales transaction or the operation of your snowmobile will be handled by your Dealers Sales or Service Departments. It is recognized, however, that despite the best intentions of everyone concerned, misunderstandings will sometimes occur. If you have a problem that has not been handled to your satisfaction through normal channels, we suggest that you discuss your problem with a member of dealership management. Frequently, complaints are the result of a breakdown in communications and can quickly be resolved by a member of the dealership management. If the problem already has been reviewed with the Sales Manager or Service Manager, contact the Dealer himself or the General Manager.

LISTING OF AREA DISTRIBUTORS

CANADIAN DISTRIBUTORS

ALPINE DISTRIBUTORS LIMITED
Kalamalka Lake Road
P.O. Box 159
Vernon, British Columbia, V1T 6M2
(604) 545-1314
British Columbia

BOMBARDIER INC.
EASTERN CANADA DISTRIBUTION
DIVISION
Atlantic Branch
P.O. Box 670
Shediac, New Brunswick, E0A 3G0
(506) 532-4454
Magdalen Island, Nova Scotia, New
Brunswick, Prince Edward Island

BOMBARDIER INC.
EASTERN CANADA DISTRIBUTION
DIVISION
(Quebec Branch)
1350 Nobel Boulevard
Boucherville, Quebec, J4B 1A1
(514) 527-2469 or 655-6121
Province of Quebec

BOMBARDIER INC.
EASTERN CANADA DISTRIBUTION
DIVISION
Ontario Branch
230 Bayview Drive
Barrie, Ontario, L4N 4Y8
(705) 728-8600
Province of Ontario

BROOKS EQUIPMENT LIMITED
1616 King Edward Street
P.O. Box 985
Winnipeg, Manitoba, R3C 2V8
(204) 633-7247
Manitoba, Saskatchewan

HUDSON'S BAY CO. LTD.
165 Hymus Blvd
Pointe-Claire, Québec, M4W 1A8
(514) 697-8500
North-West Territories, Franklin
District & Keewatin

J.W. RANDALL LIMITED
West Street
P.O. Box 1050
Corner Brook, Newfoundland, A2H 6G7
(709) 634-3533
Newfoundland, Labrador

TRACT EQUIPMENT
14325, 114th Avenue
Edmonton, Alberta, T5M 2Y8
(403) 452-9910
Alberta, Dist. Mackenzie, Yukon,
N.W.T.

AMERICAN DISTRIBUTORS

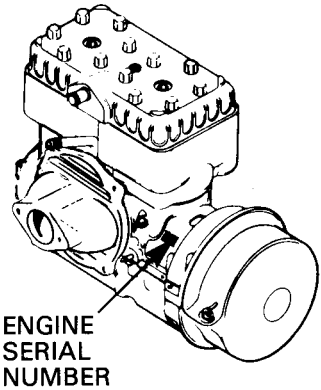
BOMBARDIER CORPORATION
4505 West Superior Street
P.O. Box 6106
Duluth, Minnesota 55806
(218) 628-2881
North Dakota, Minnesota, Wisconsin,
Illinois, Missouri, Michigan, Indiana,
Ohio (less eastern half), Tennessee,
Kentucky, West Virginia, Virginia,
Northern Idaho, Northern Wyoming,
Montana, Iowa, Washington.

ELLIOTT & HUTCHINS INC.
East Main Street Road
Malone, New York 12953
(518) 483-4411
New York, Massachusetts, Connec-
ticut, Rhode Island, Pennsylvania,
New Jersey, Maryland, Delaware,
District of Columbia, Eastern half of
Ohio, Maine, New Hampshire, Vermont.

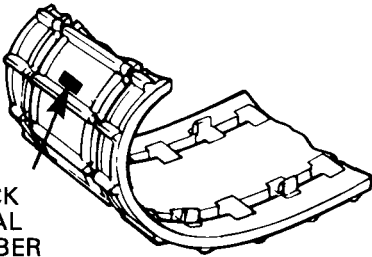
MILLER EQUIPMENT AND
RECREATIONAL CENTER
1049 Whitney Road
Anchorage, Alaska 99501
(907) 274-9513
Alaska

HOW TO IDENTIFY YOUR SNOWMOBILE

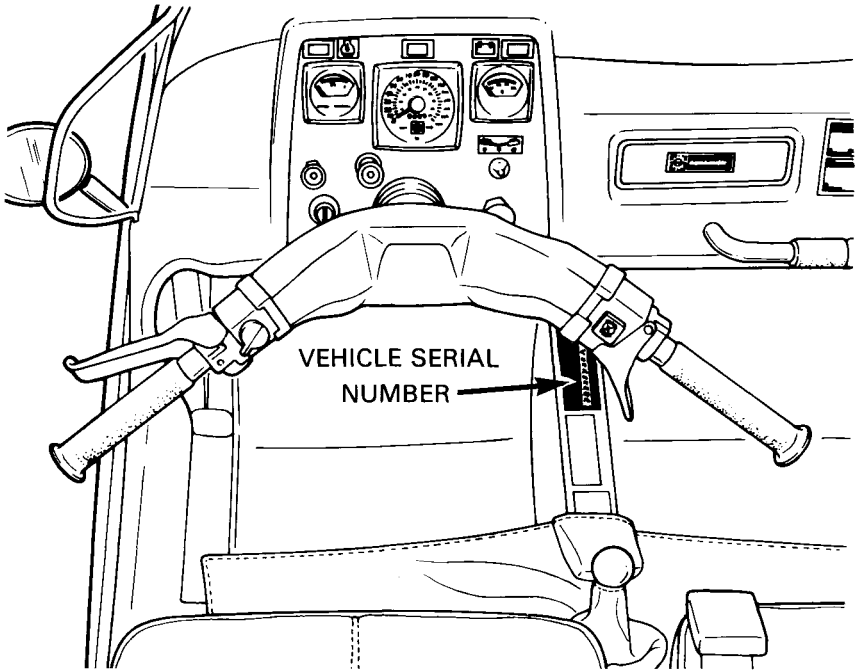
The main components of your snowmobile (engine, track and frame) are identified by different serial numbers. It may sometimes become necessary to locate these numbers for warranty purposes or to trace your snowmobile in the event of theft.



ENGINE
SERIAL
NUMBER



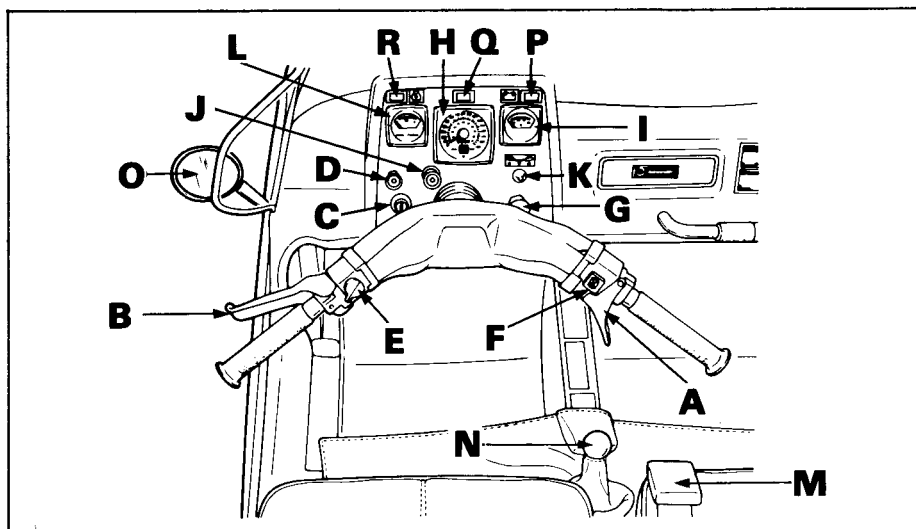
TRACK
SERIAL
NUMBER



VEHICLE SERIAL
NUMBER

NOTE: We strongly recommend that you take note of all the serial numbers on your vehicle and supply them to your insurance company. It will surely help in the event a snowmobile is stolen.

CONTROLS/INSTRUMENTS



- | | |
|-----------------------------|----------------------------------|
| A) Throttle control lever | J) Lighter |
| B) Brake control lever | K) Handle heat switch |
| C) Ignition switch | L) Fuel gauge |
| D) Light switch | M) Seat belt |
| E) Headlamp dimmer switch | N) Gear shift lever |
| F) Emergency cut-out switch | O) Mirror |
| G) Primer | P) Alternator charging light |
| H) Speedometer | Q) High beam indicator |
| I) Temperature gauge | R) Injection oil level indicator |

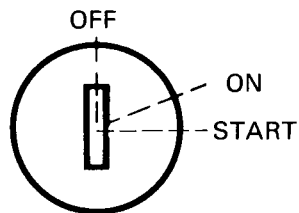
A) Throttle Control Lever

Located on right side of handlebar. When compressed, it controls the engine speed and the engagement of the transmission. When released, engine speed returns automatically to idle.

B) Brake Control Lever

Located on the left side of handlebar. When compressed, the brake is applied. When released, it automatically returns to its original position. Braking effect is proportionate to the pressure applied on the lever, and to the type of terrain and its snow coverage.

C) Ignition Switch



Key operated, 3 position switch. To start engine, turn key fully clockwise to START position and hold. Return key to ON position immediately engine has started. To stop engine, turn key counter-clockwise to OFF position.

▼ CAUTION: To prevent current flowing through the alternator, always stop the engine using the ignition switch.

D) Light switch

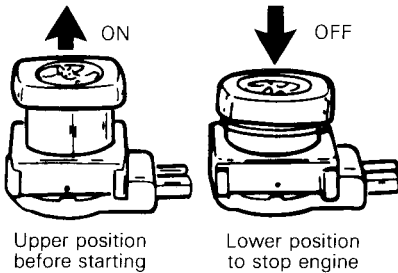
A push pull switch type, to illuminate headlamps and taillights, pull switch knob. (Ignition switch must be turned to ON position).

E) Headlamp Dimmer Switch

Located on left side of handlebar, flick switch to high or low beam.

F) Emergency Cut-Out Switch

A push pull type switch located on the right side of the handlebar. To stop the engine in an emergency, push the button to the lower off position. To start engine, button must be at the upper on position.



The driver of this vehicle should familiarize himself with the function of this device by using it several times on the first outing, thereby being mentally prepared for emergency situations requiring its use.

WARNING: If the switch has been used in an emergency situation the source of malfunction should be determined and corrected before re-starting engine.

G) Primer

A push-pull button. Pull and push button (5-6 times) to activate primer. The primer should always be used for cold engine starts. After engine is warm however, it is not necessary to use primer when starting.

H) Speedometer

The speedometer is linked directly to the drive axle. Direct-reading dial indicates the speed of the vehicle. Odometer records the total number of distance travelled.

I) Temperature Gauge

The gauge indicates engine coolant temperature. Normal operating temperature is 50°C (120°F). However, coolant temperature can vary depending on driving condition. If coolant temperature exceeds 95°C (200°F) reduce speed until the temperature drops to normal or stop engine immediately.

WARNING: To remove coolant tank cap, place a cloth over the cap and unscrew it to the first step to release the pressure. If this notice is disregarded loss of fluid and possible severe burns could occur.

J) Lighter

Push in to activate, lighter pops up automatically when lite.

K) Handle heat switch

Hi-off-low switch, located on the right center portion of the dash board. Place switch to either HI or LOW position and handlegrips will warm.

L) Fuel Gauge

Direct-reading dial, indicates the amount of fuel in the tank.

M) Seat belt (lap)

Located on the passenger side, provides added security and comfort. It is recommended to always use the seat belt.

Position the seat belt across lap as low on hips as possible.

◆ **WARNING:** The seat belt must always be worn in a snug fit and as low on hips as possible (over the strong hip bone structure) to lessen the chance of injury.

N) Gear shift lever

A two position (forward / reverse) gear shift lever. Push towards front to proceed forward, and pull backwards to reverse.

◆ **WARNING:** Do not re-position gear shift lever while snowmobile is in motion. When towing the vehicle, the drive belt must be removed from pulleys and the gear shift lever positioned into forward gear.

O) Mirror

Adjust the mirror so you can just see the side of your vehicle in the in-board portion of the mirror.

◆ **WARNING:** This mirror is of the convex type (identified by its curved surface) to provide wider vision. Note that the vehicles or objects seen in such a mirror will appear smaller and farther away than they really are.

P) Alternator charging light

A glowing light indicates battery under-charging. Contact dealer immediately. Refer to "TROUBLE SHOOTING GUIDE", page 35.

Q) High Beam Indicator

Lights up when headlamp is on high beam.

R) Injection Oil Level Indicator

Will light up when injection oil level is low. Check level and replenish as soon as possible.

▼ **CAUTION:** Do not run engine out of oil. Serious engine damage will occur.

To test oil level indicator bulb, compress brake lever (ignition ON). If light does not glow, replace.

Engine compartment hood opening

To open, turn knob counterclockwise to unlock. Lift the hood and lean it into the support holder on top of the engine using the lid support (located on the mid-portion of the hood between the foam padding).

◆ **WARNING:** It is dangerous to run an engine with the hood lid opened or removed. Personal injury could result.

Tool box

Located in the engine compartment.

To gain access, lift engine compartment hood. Ideal location for spare plugs, rope, fuses, first aid kit, etc.

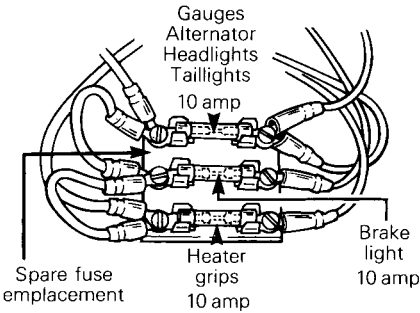
○ **NOTE:** A spare drive belt can be positioned on the left side of the engine compartment near the tool box.

◆ **WARNING:** Ensure that the engine is stopped prior to opening the tool box.

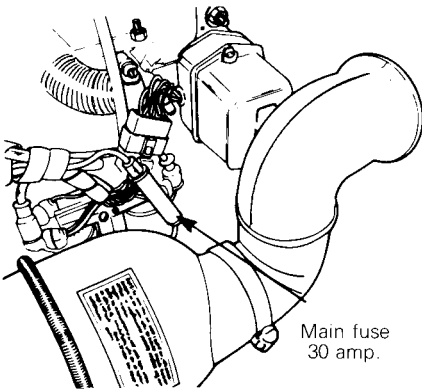
BREAK-IN PERIOD

Fuse holders

Located inside the trunk, on a support plate near the center pillar.



Another fuse is located in the engine compartment behind the air intake silencer on the right side.



Break-in

With Bombardier-Rotax snowmobile engines, a break-in period is required before running the vehicle at full throttle. Engine's manufacturer recommendation is 10 to 15 operating hours. During this period, maximum throttle should not exceed $\frac{3}{4}$, however, brief full acceleration and speed variations contribute to a good break-in. Continued wide open throttle accelerations, prolonged cruising speeds, and lugging are detrimental during the break-in period.

○ **NOTE:** For the break-in period only, 1 (16 oz) can of Bombardier 50/1 engine oil should be added to the first full fuel tank filling. This will assure additional protection during the initial engine break-in.

▼ **CAUTION:** Remove and clean spark plugs after engine break-in.

○ **NOTE:** A new drive belt requires a break-in period of 15-25 km (10-15 miles).

10-Hour Inspection

As with any precision piece of mechanical equipment, we suggest that after the first 10 hours of operation or 30 days after the purchase, whichever comes first, your vehicle be checked by your dealer. This inspection will give you the opportunity to discuss the unanswered questions you may have encountered during the first hours of operation.

The 10 hour inspection is at the expense of the vehicle owner.

10-HOUR INSPECTION CHECK LIST

Engine head nuts	
Engine mount nuts	
Muffler attachment	
Engine timing	
Spark plug condition	
Oil injection pump adjustment	
Carburetor adjustment	
Brake operation and lining condition	
Pulley alignment and drive belt condition	
Ski alignment (runners condition)	
Track condition, tension and alignment	
Fan belt tension and condition	
Chain tension	
Gearbox, injection and rotary valve oil levels	
Suspension and steering condition and lubrication	
Battery electrolyte level	
Engine coolant level	
Electrical wiring (loose connections, stripped wires, damaged insulation), tighten all loose bolts, nuts and linkage	
Operation of lighting system (HI / LO beam, brake light, etc.), test operation of emergency cut-out switch and tether cut-out switch	

We recommend that you have your dealer sign this inspection .

Date of 10 hour inspection

Dealer signature

Recommended Gasoline

Use a regular leaded or unleaded gasoline available from all service stations.

▼ **CAUTION:** Never experiment with different fuel. Never use naphtha, methanol, gasohol or similar products.

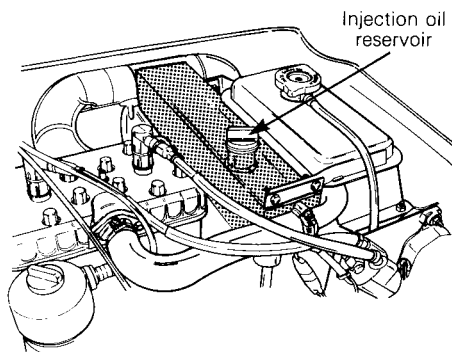
○ **NOTE:** For the break-in period only, 1 (16 oz) can of Bombardier snowmobile oil should be added to the first full fuel tank filling. This will assure additional protection during the initial engine break-in.

◆ **WARNING:** Never “top up” the gas tank before placing the vehicle in a warm area. At certain temperatures, gasoline will expand and overflow.

Recommended Injection Oil

Use concentrated Bombardier snowmobile oil available from your dealer.

Reservoir is located in the engine compartment.



Check Points

- **ACTIVATE THE THROTTLE CONTROL LEVER SEVERAL TIMES** to check that it operates easily and smoothly. The throttle control lever must return to idle position when released.
- Check that the skis and tracks are not frozen to the ground or snow surface and that the steering operates freely.
- Activate the brake control lever and make sure the brake fully applies before the brake control lever touches the handlebar grip.
- Check coolant level. Liquid should be 19-25 mm (3/4-1 in.) below filler neck. If additional coolant is necessary, always use a 50/50 (50 parts of water for 50 parts of anti-freeze) solution. When entire system has to be refilled use a solution of 3 parts of anti-freeze for 2 parts of water. See cooling system in storage.

◆ **WARNING:** Before removing the radiator pressure cap place a cloth over the coolant tank and release the pressure. Loss of fluid and possibility of severe burns could occur, if this notice is disregarded.

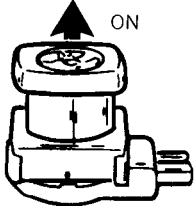
- Check fuel level.
- Check injection oil level.
- Verify that the path ahead of the vehicle is clear of bystanders and obstacles.

◆ **WARNING:** Only start your snowmobile once all components are checked and functioning properly.

STARTING PROCEDURE

Test throttle control lever.

Check that the emergency cut-out switch is in the ON position.



Upper position
before starting engine

Activate the primer (2 or 3 times).

○ NOTE: Primer is not necessary when the engine is warm.

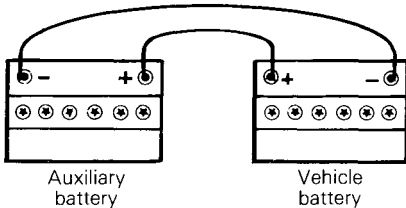
Electric Starting

Insert key in ignition switch.

Turn ignition key clockwise until starter engages. Release key immediately engine has started. If engine does not start on first try, key must be turned fully back to OFF each time.

◆ WARNING: Do not apply throttle while starting.

▼ CAUTION: If for any reason an auxiliary battery is used to boost the vehicle always ensure to respect the polarity, otherwise damage to the alternator could occur.



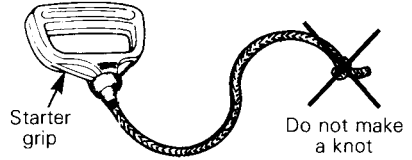
○ NOTE: If for some reasons, the vehicle cannot be started electrically, place ignition key to ON position and start engine as described in emergency starting.

Emergency starting

◆ WARNING: Do not start the vehicle by the drive pulley unless it is a true emergency situation, have the vehicle repaired as soon as possible.

Open the hood. Reach for the emergency rope and starter grip in the tool box. Reinstall the tool box cover.

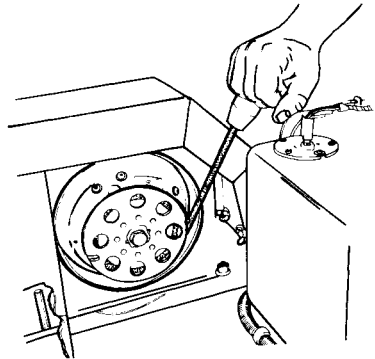
Attach emergency rope to starter grip.



Remove the belt guard from the vehicle.

Wind the emergency rope tight around the drive pulley disc. Test throttle control lever.

Grasp emergency starter handle firmly and pull slowly until a resistance is felt then pull vigorously.



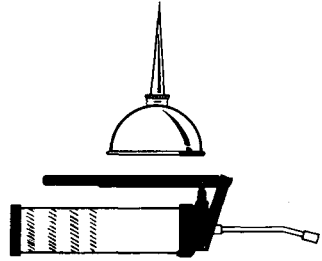
◆ WARNING: When starting the vehicle in an emergency situation by the drive pulley, do not make a knot at the end of the emergency rope and do not reinstall the belt guard. Do not attempt to put the emergency rope back in the tool box. Wait until restopping the engine.

Before riding

Check operation of the emergency cut-out switch, and tether switch. Restart engine.

◆ **WARNING:** If engine does not shut-off when applying the emergency cut-out switch and or when pulling the tether cut-out cap, stop the engine by turning off the ignition key. Do not operate the vehicle further, see your dealer.

Allow the engine to warm before operating at full throttle.



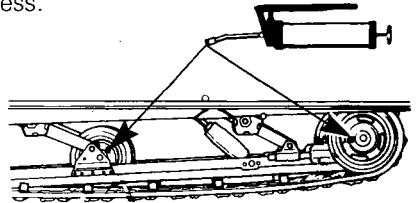
Frequency

Routine maintenance is necessary for all mechanized products, and the snowmobile is no exception. A weekly vehicle inspection contributes to the life span of the snowmobile as well as retains safe and dependable operation.

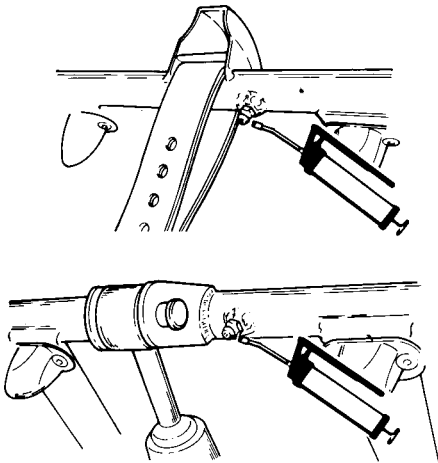
◆ **WARNING:** Only perform such procedures as detailed in this manual. It is recommended that dealer assistance be periodically obtained on other components/systems not covered in this manual. Unless otherwise specified, engine should be turned OFF for all lubrication and maintenance procedures.

Slide Suspension

Using a low pressure grease gun, lubricate the idler wheels with low temperature grease. Pump 3 to 4 times through the grease fitting located on each cap of idler wheel. Wipe off excess.

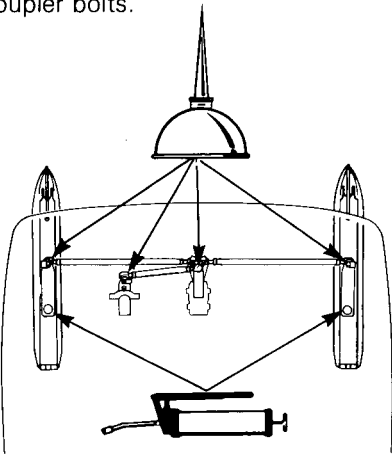


Lubricate front and rear arm cross shafts.



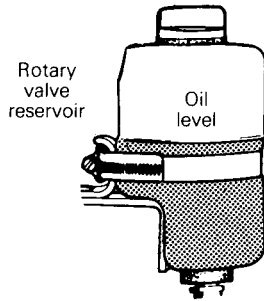
Steering mechanism

Lift the trunk lid and lean it against the windshield. Remove the shield away from the back of the footrest guard to gain access to the ski leg housing. Lubricate ski legs at grease fittings until new grease appears at joints. Oil spring coupler bolts.



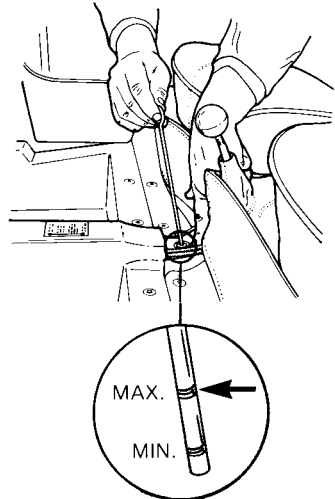
Rotary Valve System

Check reservoir oil level frequently. If necessary replenish oil level using "Bombardier Snowmobile Oil", or equivalent, available from your dealer.

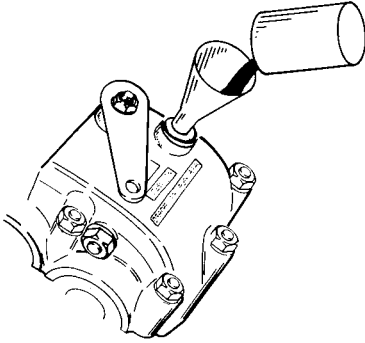


Gearbox Oil Level

The gearbox oil level should be checked weekly. A dipstick is provided with your tool bag. To check oil level, place vehicle on a flat surface lift edge of seat leatherette and remove the bolt from the dipstick guide tube. (The tube is in front of the gear shift lever). Insert dipstick into tube then withdraw. Oil should reach the MAX. mark on the dipstick.



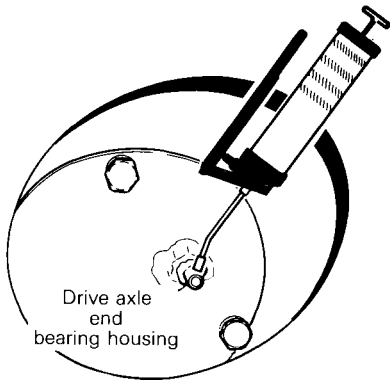
If not, remove filler cap from top of gear box and replenish gearbox with Ski-Doo chaincase oil or equivalent. Reinstall bolt.



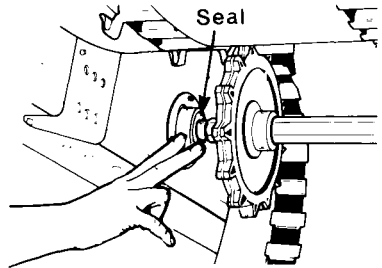
Drive Axle

Using a low pressure grease gun, grease the drive axle at the end bearing housing grease fitting. To gain access, remove the rubber cover from both side of the vehicle.

○ **NOTE:** The use of a low temperature grease is recommended.



▼ **CAUTION:** Always ensure to verify that the drive axle seal is properly seated after greasing procedure has been completed.

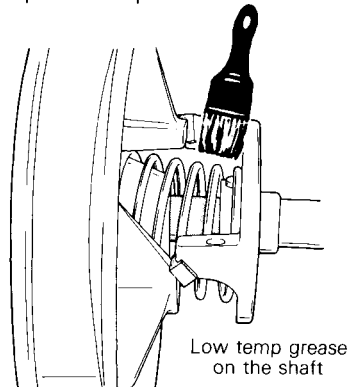


Driven Pulley

Remove pulley guard and slip off drive belt. Open the driven pulley, (push and twist sliding half).

Thoroughly clean the driven pulley shaft.

Apply a light coat of low-temp grease on the shaft. Always lubricate lightly and wipe off surplus.



○ **NOTE:** Activate the sliding half several times to distribute lubricant over full length of shaft. Be careful that lubricant does not get on inner halves of pulley.

MAINTENANCE

The following Maintenance Chart indicates regular servicing schedules to be performed by you or your servicing dealer. If these services are performed as suggested, your snowmobile will give you many years of low-cost use.

WARNING: Only perform such procedures as detailed in this manual. It is recommended that dealer assistance be periodically obtained on other components/systems not covered in this manual. Unless otherwise specified, engine should be turned OFF for all lubrication and maintenance procedures.

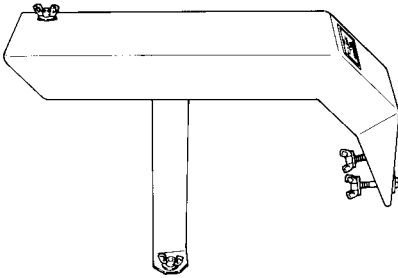
SERVICE AND MAINTENANCE CHART	Weekly or every 240 km (150 m)	Monthly or every 800 km (500 m)	Once a year or every 3200 km (2000 m)	Refer to page
Drive belt	●			21
Brake condition	●			22
Brake adjustment		●		22
Drive pulley		●		22
Drive chain tension		●		22
Suspension condition		●		23
Suspension adjustment	(as required)			23
Track condition		●		23
Track tension and alignment		●		24
Steering mechanism		●		25
Steering adjustment		●		25
Spark plug		●		26
Battery		●		26
Exhaust system		●		27
Engine head nuts			●	27
Engine mount nuts			●	27
Carburetor adjustment			●	27
Oil injection pump adjustment			●	27
Cooling system			●	28
Fan belt			●	28
Headlamp beam aiming			●	28
General inspection		●		29

○ **NOTE:** The ten hour inspection is a very important part of proper service and maintenance.

Belt Guard Removal

◆ **WARNING:** Engine should be running only when belt guard is secured in place.

1. Tilt the hood. Unscrew the four wing nuts.

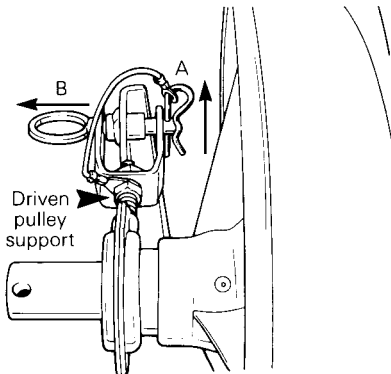


2. To remove, lift the belt guard front end and push it forward.

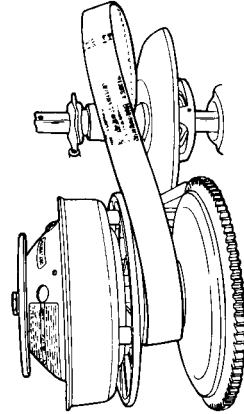
Drive Belt Removal

◆ **WARNING:** Never start or run engine without the drive belt installed. Running an unloaded engine is dangerous.

1. Lift and support the engine compartment hood. Remove the pulley guard.
2. To unlock the driven pulley support, remove the hair pin cutter (A) and pull out the locking pin (B).



3. Open the driven pulley by twisting and pushing the sliding half. Hold in fully open position and slip slackened belt over the top edge of the driven pulley.



Drive Belt Condition

Inspect belt for cracks, fraying or abnormal wear (uneven wear, wear on one side, missing cogs, cracked fabric). If abnormal wear is noted, probable cause could be pulley misalignment, excessive R.P.M. with frozen track, fast starts without warm-up period, burred or rusty sheave, oil on belt or distorted spare belt. Contact your dealer.

Check the drive belt width. If less than 30 mm (1 3/16 in), replace the drive belt.

New Drive Belt

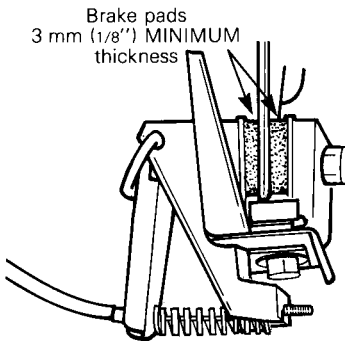
When installing a new drive belt, break-in period of 25 km (15 miles) is strongly recommended.

○ **NOTE:** Always store a spare belt in a manner to allow its natural shape to be maintained.

Brake Condition

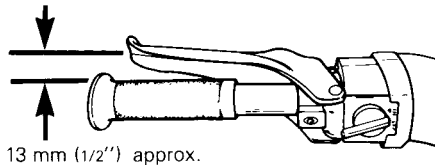
The brake mechanism on your snowmobile is an essential safety device. Keep this mechanism in proper working condition. Above all, do not operate your snowmobile without an effective brake system.

◆ **WARNING:** Brake pad or pucks less than 3 mm (1/8") thick must be replaced. Replacement must be performed by an authorized dealer.

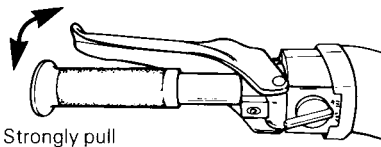


Brake Adjustment

Brake should apply fully when lever is 13 mm (1/2") from handlebar grip. If not, do not tamper with the brake, contact your servicing dealer.

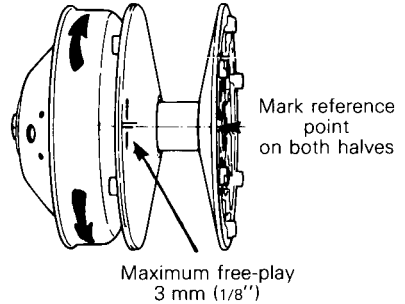


The brake mechanism is a self-adjusting type. If a quicker brake response is desired, strongly pull the brake lever several times, this will actuate the self adjusting mechanism.



Drive Pulley

Inspect the Duralon bushing condition by checking the free-play of the sliding half pulley. This is achieved by restraining the inner half and checking if the sliding half moves in the direction of the arrows more than 3 mm (1/8"). If so, contact your dealer.



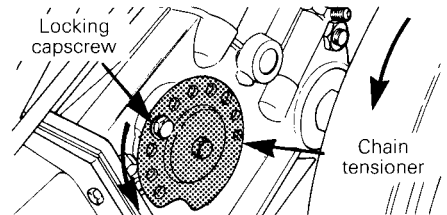
Drive Chain Tension

Place the gear shift lever in the forward position.

Remove the seats and access panels.

Turn the driven pulley forward to obtain the maximum play.

Remove capscrew locking chain tensioner in place (tensioner is located at bottom left of gearbox).



While holding the driven pulley forward, rotate the tensioner counter-clockwise until chain is tight, without over straining.

▼ **CAUTION:** Do not overtighten.

Replace capscrew in one of the appropriate holes. Lock chain tensioner in place.

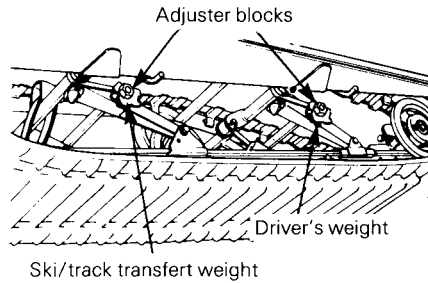
Suspension Condition

Visually inspect all suspension components including slider shoes, springs, wheels, etc...

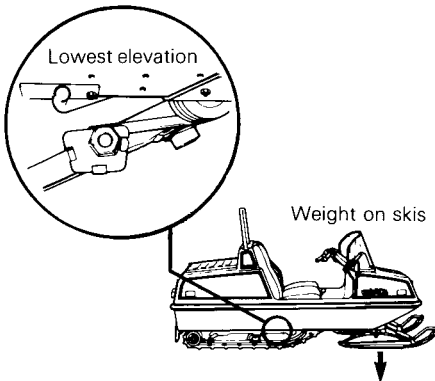
○ **NOTE:** During normal driving, snow will act as a lubricant and coolant for the slider shoes. Extensive riding on ice or sanded snow, (not to mention dirt, asphalt, etc. never recommended) will create excessive heat build-up and cause premature slider shoe wear.

Suspension Adjustment

The suspension is adjustable. The front adjustment for surface condition, the rear for driver's weight. Use the special key located in tool box.



When the front adjuster blocks are at the lowest elevation more weight is distributed on the skis.



At the highest position the weight is transferred from the skis to the track.

○ **NOTE:** The suggested adjustment for a comfortable ride is as follows. (Assuming that the first position is the lowest and that the fourth position is the highest).

2 persons weighing 68 kg (150 lbs) each.

Rear adjuster blocks at the lowest position.

Front adjuster blocks at the second position.

2 persons weighing 90 kg (200 lbs) each.

Rear adjuster blocks at the second position.

Front adjuster blocks at the third position.

▼ **CAUTION:** Always turn the left side adjuster blocks in a clockwise direction, the right side blocks in a counter-clockwise direction. Left and right adjuster blocks of each adjustment must always be set at the same elevation.

Track Condition

Lift rear of vehicle and support it off the ground. With engine OFF, rotate tracks by hand, and inspect condition. If worn, cut or track fibers are exposed or missing or defective inserts or guides are noted, contact your dealer for replacement.

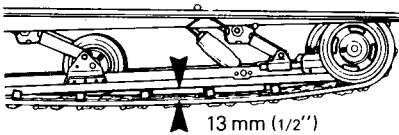
○ **NOTE:** Place gear shift lever in forward position before attempting to rotate the track manually.

◆ **WARNING:** Do not operate a snowmobile with cut, torn or damaged tracks.

Track Tension and Alignment

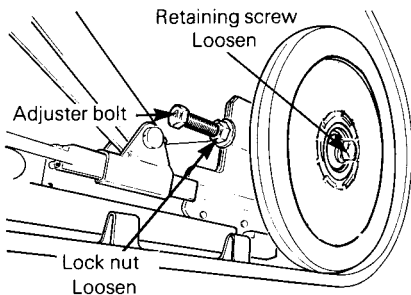
Tension:

Lift the rear of vehicle and support with a mechanical stand. Allow the slide to extend normally. Check the gap 13 mm (1/2") between the slider shoe and the bottom inside of the track. If the track tension is too loose, the track will have a tendency to thump.



CAUTION: Too much tension will result in power loss and excessive stresses on suspension components.

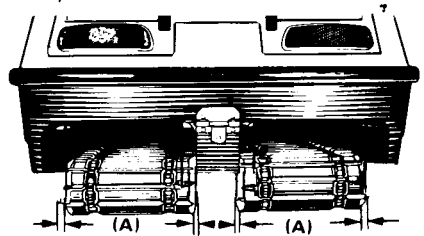
If necessary to adjust. Loosen the rear idler wheel retaining screw and then loosen or tighten the adjuster bolts located on the inner side of the rear idler wheels. If correct tension is unattainable. Contact your dealer.



NOTE: Track tension and alignment are inter-related. Do not adjust one without the other.

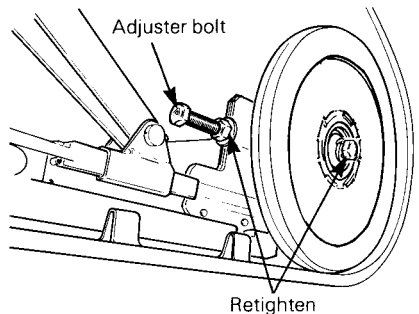
Alignment:

Start the engine and accelerate slightly so that the tracks turn SLOWLY. Check that tracks are well centered and turn evenly.



WARNING: Before checking track alignment, ensure that the tracks are free of all particles which could be thrown out while tracks are rotating. Keep hands, tools, feet and clothing clear of tracks.

To correct, stop engine, loosen the rear idler wheels retaining screws then loosen the lock nuts and tighten the adjuster bolt on side where tracks are closest to the frame. Tighten lock nuts and recheck alignment. Ensure to retighten the idler wheel retaining screws.



Steering Mechanism

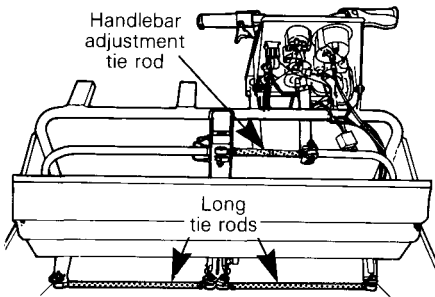
Inspect the steering mechanism for tightness of components (steering arms, tie rods, ball joints, spring coupler bolts, etc.). If necessary, replace or retighten.

◆ **WARNING:** Check the condition of the skis and the ski runners. Replace if runners are worn more than half.

Steering Adjustment

Skis should have a toe out of 3 mm (1/8 in.). To check, measure distance between each ski at front and rear of leaf springs. The front distance should be 3 mm (1/8") more than the rear when the handlebar is horizontal.

IMPORTANT: Close front of skis manually to take all slack from steering mechanism.



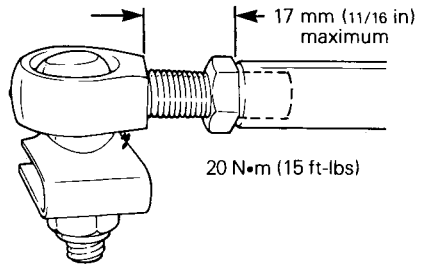
If adjustment is required:

○ **NOTE:** To gain access to the tie rods, the guard in the trunk must first be removed.

Unscrew the long tie rod lock nuts.

Turn tie rod manually until skis are parallel to each other.

◆ **WARNING:** The maximum ball joint external threaded length not engaged in the tie rod end must not exceed 17 mm (11/16 in). Torque lock nut to 20 N•m (15 ft-lbs).



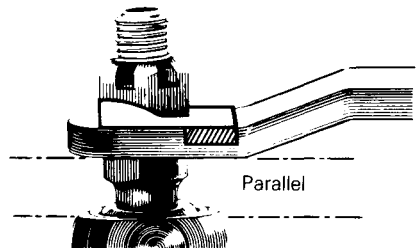
Then measuring at front of leaf springs add an additional 1.5 mm (1/16 in.) on each side by rotating the tie rods.

Tighten the tie rod locking nuts firmly.

Check tightness of the steering arm locking bolts, ball joints wear, etc.

Handlebar should also be horizontal when the skis are pointed toward front. To adjust; loosen the lock nuts of the shorter tie rod. Turn tie rod manually until handlebar is horizontal. Retighten lock nuts firmly.

◆ **WARNING:** The ball joint socket must run parallel with the steering arm. The socket must be restrained when tightening the tie rod end lock nuts.

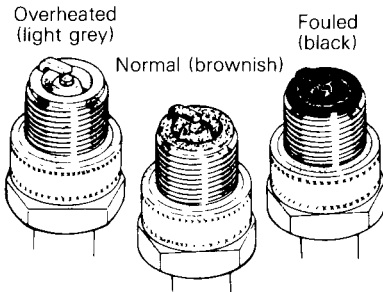


Spark Plugs

Disconnect the spark plug wires and remove the spark plugs.

Check the condition of the plugs.

- A brownish tip reflects ideal conditions. (Correct carburetor, spark plug heat range; etc.).
- A black insulator tip indicates fouling caused by: carburetor idle speed mixture and/or high speed mixture too rich, incorrect fuel mixture ratio, wrong type of spark plug (heat range), or excessive idling.
- A light grey insulator tip indicates a lean mixture caused by; carburetor high speed mixture adjusted too lean, wrong spark plug heat range, incorrect fuel mixture ratio, or a leaking seal or gasket.



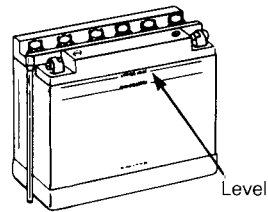
CAUTION: If spark plug condition is not ideal, contact your authorized dealer.

Check spark plug gap using a wire feeler gauge.

Reinstall plugs and connect wires.

Battery

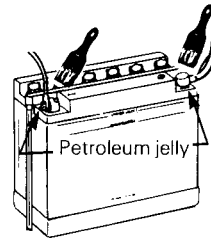
Check electrolyte level. Electrolyte level must be at upper level line on battery casing. If necessary add distilled water.



Battery connections must also be free of corrosion. If cleaning is necessary remove corrosion using a stiff brush then clean with a solution of baking soda and water. Rinse and dry well.

CAUTION: Do not allow cleaning solution to enter battery. It will destroy the chemical properties of the electrolyte.

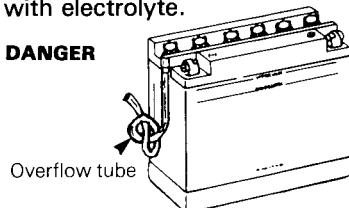
After reconnecting battery coat battery terminals and connectors with petroleum jelly to prevent corrosion.



Check that battery is well secured and that battery overflow tube is not blocked or kinked.

WARNING: Overflow tube must be free and open. A kinked or bent tube will restrict ventilation and create gas accumulation that could result in an explosion. Avoid skin contact with electrolyte.

DANGER



CAUTION: Prior to charging the battery, always remove it from the vehicle to prevent electrolyte spillage.

Exhaust System

The engine/muffler attaching parts are vital toward efficient muffler function. Check all attachments. Replace springs and/or tighten if necessary.

▼ **CAUTION:** Do not operate vehicle with muffler disconnected otherwise serious engine damage will occur.

Engine Head Nuts

After the first 5 hours of operation check that engine head nuts are tight and equally torqued 22 N•m (16 ft-lbs) when engine is cold.

Engine Mount Nuts

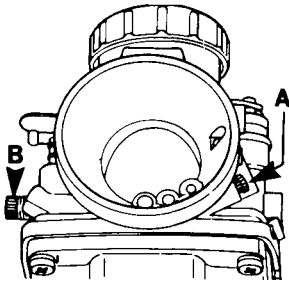
Check engine mount nuts for tightness. Retighten if necessary.

Carburetor Adjustment

▼ **CAUTION:** Never operate your snowmobile with the air intake silencer disconnected. Serious engine damage will occur if this notice is disregarded.

A) Air Screw Adjustment

Completely close the air screw (until a slight reseating resistance is felt) then back off screw: 1 turn.



B) Idle Speed Adjustment

Turn idle speed screw clockwise until it contacts the throttle slide then continue turning two (2) additional turns. This will provide a preliminary idle speed setting. Start engine and allow it to warm then adjust idle speed to 1800-2000 R.P.M. by turning idle speed screw clockwise or counter-clockwise.

▼ **CAUTION:** Do not attempt to set the idle speed by using the air screw. Severe engine damage can occur. If idle speed is unattainable contact your authorized dealer.

Oil Injection Pump Adjustment

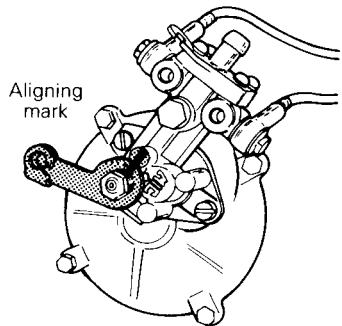
▼ **CAUTION:** The carburetor must be adjusted before adjusting the oil injection pump. Make sure the idle speed is 2000 RPM.

To adjust:

Eliminate the throttle cable free-play by pressing the throttle lever until a light resistance is felt, then hold in place.

The aligning marks on the pump casting and lever must align perfectly. If not, contact your dealer.

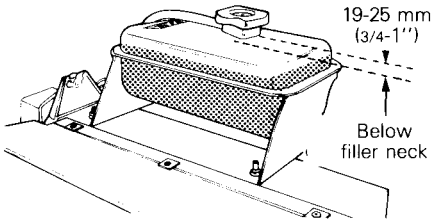
Injection pump should be adjusted by your dealer.



Cooling System

Place a cloth over the coolant tank cap and release it to the first step to check that the cap pressurized the system. If not, install a new 13 lb cap. Do not exceed the 13 lb. pressure. Using a hydrometer check that the anti-freeze solution is strong enough for the temperature in which the vehicle is operated.

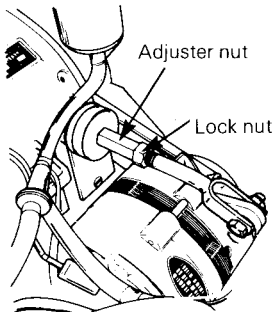
The coolant level must be at 19-25 mm (3/4-1 in.) below the filler neck of the coolant tank.



CAUTION: If coolant loss is excessive contact your dealer.

Fan Belt

Inspect belt for cracks, uneven wear etc. Check fan belt tension 6 mm (1/4 in.) free-play should exist when deflection is correct.

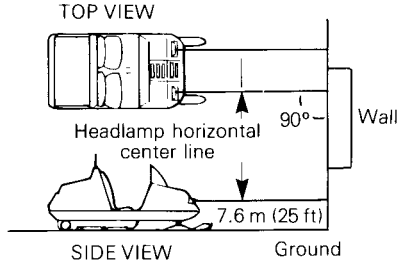


If tension is incorrect:

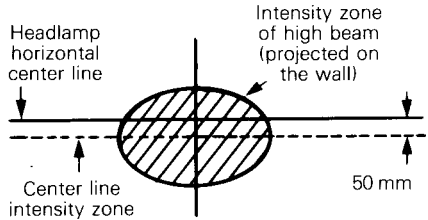
Loosen the top adjusting nut, and pry the alternator in the direction to obtain the recommended belt tension. Retighten the adjusting nut.

Headlamp Beam Aiming

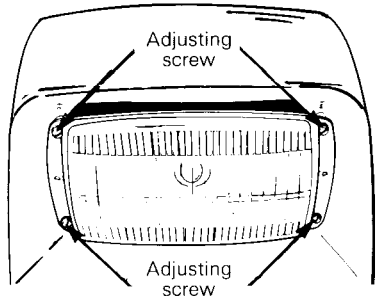
The angle of the headlamp beam has been pre-adjusted prior to delivery. Should you wish re-adjustment, place the vehicle on a flat surface 7.6 m (25') from a wall or screen.



With the suspension correctly adjusted, the rider seated on the vehicle and the high beam ON check that the center of high intensity zone of high beam is 50 mm (2") below horizontal line of headlamp height.



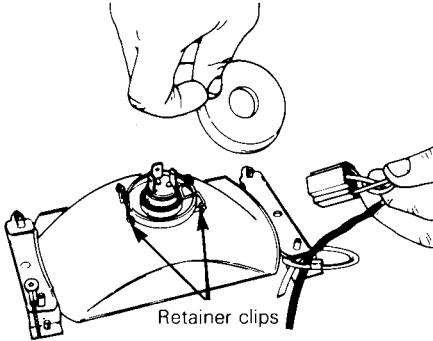
To adjust, remove headlamp chrome ring, turn upper or lower adjusting screws to obtain desired beam position.



STORAGE

Bulb Replacement

If the headlamp bulb is burnt, tilt hood, unplug the connector from the headlamp. Remove the rubber boot and unfasten bulb retainer clips. Detach the bulb and replace.



If taillight bulb is burnt, expose the bulb by removing the red plastic lens. To remove, unscrew the two (2) Phillips head screws.

◆ **WARNING:** Always check light operation after bulb replacement.

General Inspection

Check the electrical wiring and components, retighten loose connections. Check for stripped wires or damaged insulation. Thoroughly inspect the vehicle and tighten loose bolts, nuts and linkage. Inspect skis and ski runners for wear.

It is during summer, or when a vehicle is not in use for any length of time that proper storage is a necessity. Storage of the snowmobile during long period of inactivity consists of checking and replacing missing, broken or worn parts, proper lubrication and treatment to insure that parts do not become rusted; cleaning items such as carburetor of oil mixtures, to prevent gum varnish formation and in general, preparing the vehicle so that when the time comes to use the snowmobile again it will start and be in top condition.

◆ **WARNING:** Only perform such procedures as detailed in this manual. It is recommended that dealer assistance be periodically obtained on other components/systems not covered in this manual. Unless otherwise specified, engine should be turned OFF for all lubrication and maintenance procedures.

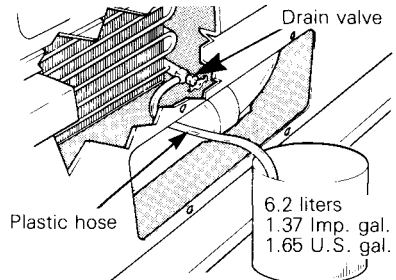
Cooling System

To drain the cooling system, remove the coolant tank cap.

Remove the access panel and connect a length of plastic hose to the radiator drain valve in order to drain the cooling system outside of the body.

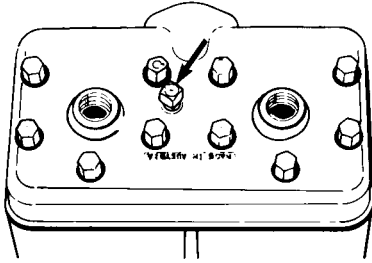
Open the drain valve.

◆ **WARNING:** Be careful not to burn yourself on the exhaust system.



▼ **CAUTION:** To prevent rust formation in the cooling system, always replenish the system with the recommended solution (60% anti-freeze 40% water).

To refill the cooling system, unscrew the plug on top of the cylinder head, then slowly pour the liquid into the coolant tank until it reaches the plug hole in the cylinder head. Re-install the plug. Continue to pour the liquid in the coolant tank until the coolant level reaches 19-25 mm (3/4-1 in.) below filler neck of reservoir.



With the pressure cap removed, start engine to allow the coolant to circulate and let it run until normal temperature is reached.

◆ **WARNING:** Keep hands away from revolving engine fan.

Stop engine.

Then re-check coolant level. Ensuring that it is 19-25 mm (3/4-1 in) below filler neck of reservoir.

Tracks

Inspect tracks for cuts, missing track inserts and/or guides and broken rods. Make any necessary replacement. Lift rear of vehicle until tracks are clear of ground then support with brace or trestle. The snowmobile should be stored in such a way that tracks do not stay in contact with cement floor or bare ground.

○ **NOTE:** The tracks should be rotated periodically, (every 40 days). Do not release track tension.

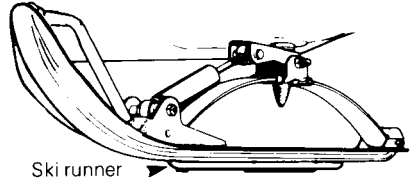
▼ **CAUTION:** To prevent track damage, temperature in the storage area must not exceed 38°C (100°F).

Suspension

Remove any dirt or rust. Grease idler wheels at grease fittings. Wipe off surplus. Replace worn slider shoes.

Skis Assembly

Wash or brush all dirt or rust accumulation from skis and springs. Grease ski legs at grease fittings. Check condition of skis, ski runners and leaf springs. Replace if weak or worn more than half.



Apply metal protector on ski assembly. If unavailable, wipe the entire ski with cloth soaked in oil to prevent rust formation.

Controls

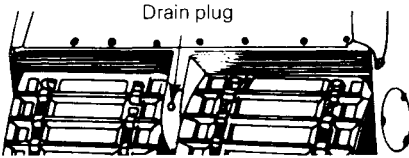
Lubricate steering mechanism. Inspect all components for tightness, (spring coupler bolts, steering arm locking bolts, tie rods, ball joints, etc.). Tighten if necessary. Oil metal moving joints of the brake mechanism.

◆ **WARNING:** Do not lubricate throttle and/or brake cable housing. Avoid getting oil on the brake pads.

Coat electrical connections and switches with a greaseless metal protector. If unavailable, use petroleum jelly.

Gearbox

Drain gearbox and refill to dipstick full mark with fresh Bombardier chaincase oil (drain plug is located beneath frame).



Driven Pulley

Remove pulley guard and drive belt.

Thoroughly clean the driven pulley shaft. Apply a light coat of low-temperature grease on shaft. Activate the sliding half several times to distribute grease on shaft. Activate the sliding half several times to distribute lubricant. Spray internal pulley surfaces with metal protector.

○ **NOTE:** Leave drive belt OFF during entire storage period.

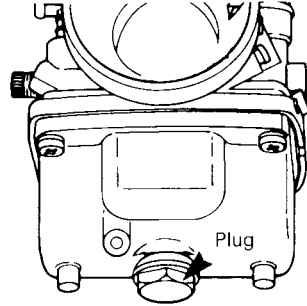
Drive Pulley

Inspection and cleaning must be performed by the dealer at the end of each season.

Carburetor

Carburetor must be dried out completely to prevent gum formation during the storage period.

Once the fuel tank is emptied, remove the float chamber drain plug on each carburetor. Drain carburetor.



Re-install plug and connect fuel line.

Check all fuel lines, replace if necessary.

Fuel Tank

Remove the cap then using a syphon, remove the gasoline from tank.

◆ **WARNING:** Gasoline is flammable and explosive under certain conditions. Always manipulate in a well ventilated area. Do not smoke or allow open flames or sparks in the vicinity.

Cylinder Lubrication

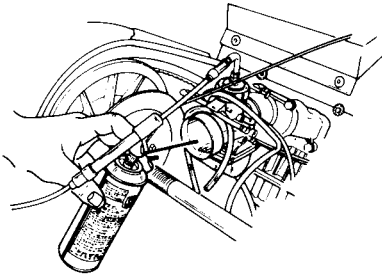
Engine internal parts must be lubricated to protect cylinder walls from possible rust formation during the storage period.

Use storage oil (8 oz) P/N 413 9048 00. Protection will last for the normal storage period.

Procedure:

- Insert plastic tube in spray head nozzle.
- Remove air silencer.
- Run engine at idle speed.
- Spray storage oil directly into carburetor until engine stalls. (On twin carburetor models alternate between carburetors).

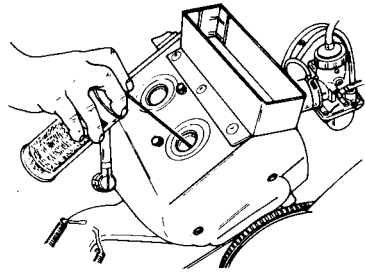
▼ **CAUTION:** Only perform this procedure in a well ventilated area.



If adequate ventilation is not available.

- Remove spark plugs and spray approximately 1 ounce of storage oil in each spark plug hole and in each carburetor.

▼ **CAUTION:** Ensure cut-out switch and/or ignition key is in OFF position.



- Crank engine over several times.
- Reinstall plugs.

Do not run engine during storage period.

Battery

Remove battery from vehicle and clean outside surface of battery with solution of baking soda and water. Remove all deposits from posts then rinse with clear tap water.

▼ **CAUTION:** Do not allow cleaning solution to enter battery interior since it will destroy the electrolyte.

Check electrolyte level. Refill if necessary with distilled water. Fully charge battery. A stored battery must be recharged at least every 40 days.

◆ **WARNING:** Gases given off by a battery being charged are highly explosive. Always charge in a well ventilated area. Keep battery away from cigarettes or open flames. Avoid skin contact with electrolyte.

Coat battery terminals with petroleum jelly and store the battery in a cool, dry place.

IMPORTANT: Lack of preventive maintenance could void battery warranty.

Chassis

Clean the vehicle thoroughly, removing all dirt and grease accumulation.

▼ **CAUTION:** Plastic alloy components such as throttle and brake control handles, windshield, etc., can be cleaned using mild detergents or isopropyl alcohol. Do not use strong soaps, degreasing solvents, abrasive cleaners, paint thinners, gasoline, etc.

Inspect top body and repair damage.

Touch up all metal spots where paint has been scratched off. Spray all bare metal parts of vehicle with metal protector. Wax the body for better protection.

○ **NOTE:** Apply wax on glossy finish of body only. Protect the vehicle with a clean cover to prevent dust accumulation during storage.

▼ **CAUTION:** If for some reason the snowmobile has to be stored outside it is necessary to cover it with an opaque tarpaulin. This caution will prevent the sun rays affecting the plastic components and the vehicle finish.

General Inspection

Check electrical wiring and components, retighten loose connections. Check for stripped wires or damaged insulation.

Thoroughly inspect the vehicle and tighten loose bolts, nuts and linkage.

PRE-SEASON PREPARATION

To simplify the pre-season preparation we have drawn up a small chart. The chart indicates servicing points to be performed by you and your servicing dealer. If these services are performed as suggested, your vehicle will give you many hours of fun and low cost use.

IMPORTANT: Observe all Warnings and Cautions mentioned throughout this manual which are pertinent to the item being checked. When component conditions seem less than satisfactory, replace with genuine Bombardier parts or suitable equivalents.

PRE-SEASON PREPARATION CHART	TO BE PERFORMED BY DEALER	●
	TO BE PERFORMED BY OWNER	○
Change spark plugs*		○
Check gearbox, injection and rotary valve oil level		○
Clean or replace fuel filter		○
Check track condition, tension and alignment		○
Check and lubricate suspension		○
Inspect drive belt and install		○
Check throttle cable for damage and free operation		○
Check steering alignment and ski runner condition		○
Inspect seals for possible cuts or leaks		○
Check electrical wiring (broken wire, damaged insulation)		○
Check fan belt condition and tension		○
Check coolant level and condition		○
Inspect condition of starting rope		○
Check tightness of all bolts, nuts and linkage		○
Test battery, clean and install		●
Inspect brake condition and operation		●
Set engine timing		●
Check pulleys, verify components and clean. Lubricate.		●
Adjust carburetor(s)		●
Adjust oil injection pump		●

○ ***NOTE:** Before installing new spark plugs, it is suggested to burn the excess storage oil by starting the engine, using the old spark plugs. Only perform this procedure in a well ventilated area.

TROUBLE SHOOTING

○ **NOTE:** The possible causes have been listed in an order of frequency. Therefore, items should be checked out in the same order as mentioned in the trouble shooting guide.

SYMPTOMS	POSSIBLE CAUSES	WHAT TO DO
Engine turns over but fails to start or starts with difficulty	1. No fuel to the engine	Check the tank level and fill up with correct fuel. Check for possible clogging of fuel line, item 4.
	2. Flooded engine	Remove wet spark plugs, turn ignition to OFF and crank engine several times. Install clean dry spark plugs. Start engine following usual starting procedure. If engine continues to flood, see your dealer.
	3. Spark plug/ignition	Check for fouled or defective spark plug. Disconnect spark plug wire, unscrew plug and remove from cylinder head. Reconnect wire and ground exposed plug on engine cowl, being careful to hold away from spark plug hole . Follow engine starting procedure and check for spark. If no sparks appear, replace spark plug. If trouble persists, contact your dealer.
	4. Clogged fuel line (water or dirt)	Remove and clean the fuel filter. Change filter cartridge if necessary. Check condition and connections of fuel lines. Check the cleanliness of fuel tank.
	5. Incorrect carburetor adjustment	Contact your dealer.
	6. Incorrect injection pump adjustment	See your dealer.
	7. Engine timing	Engine timing may be defective or out of adjustment. Contact your dealer.
	8. Poor engine compression	Running with a lean fuel mixture may produce excessive engine wear resulting in poor engine compression. If this occurs, contact your dealer at once.
Engine will not turn manually	1. Seized engine	In the case of a seized engine contact your dealer.

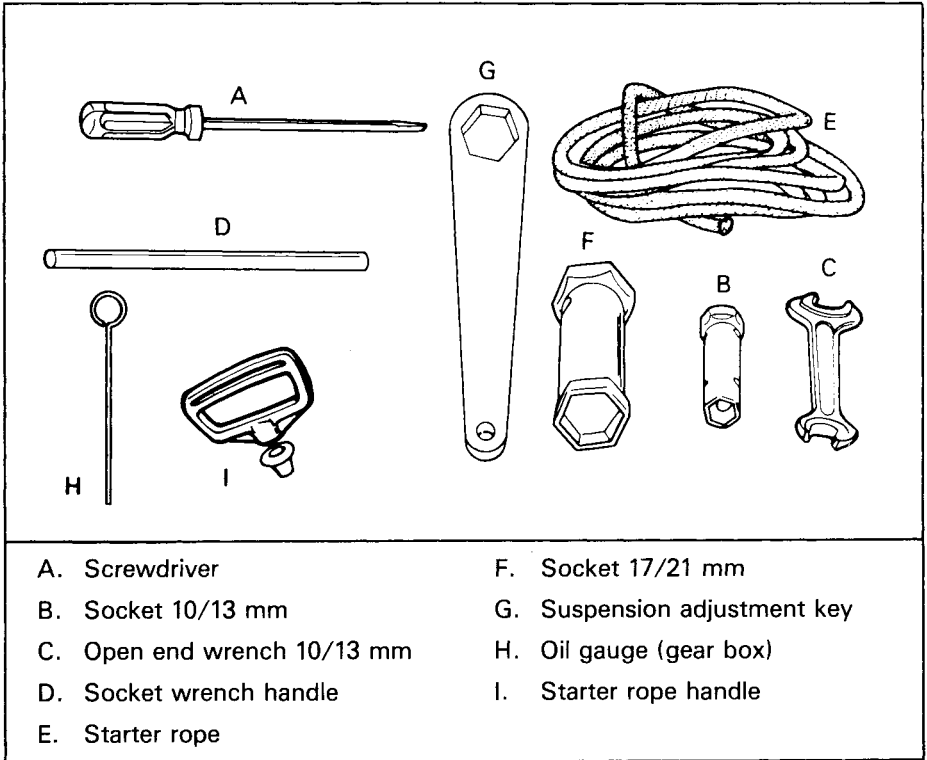
SYMPTOMS	POSSIBLE CAUSES	WHAT TO DO
Engine is slow to warm up	1. Thermostat remains open	Replace the thermostat.
	1. Defective temperature sending unit or dash unit	Check for failure and replace if necessary.
Engine is overheating	1. Low engine coolant level	Check and fill to specifications if necessary.
	2. Thermostat remains close	Replace the thermostat.
	3. Air lock in the cooling system	Check and bleed the system if necessary.
	4. Retarded ignition timing	Contact your dealer.
	5. Damaged, rotted or collapsed water hose	Check and replace if necessary.
	6. Exterior of radiator obstructed by foreign object	Check and clean if necessary.
Engine lacks acceleration or power	1. Fouled spark plug	Check item 3 of "Engine turns over but fails to start or starts with difficulty".
	2. Clogged fuel line (water or dirt)	Check fuel line condition. (See item 4 of "Engine turns over but fails to start or starts with difficulty").
	3. Carburetor	Contact your dealer.
	4. Faulty ignition	First check item 3 of "Engine turns over but fails to start or starts with difficulty". If the ignition system still seems faulty, contact your dealer.
	5. Engine	If unable to located specific symptoms, contact your dealer.
Engine continually backfires	1. Faulty spark plug	Check item 3 of "Engine turns over but fails to start or starts with difficulty".
	2. Overheated	Carburetor set too lean. Contact your dealer.
	3. Engine timing incorrectly set	Contact your dealer.

SYMPTOMS	POSSIBLE CAUSES	WHAT TO DO
Snowmobile cannot reach full speed	1. Drive belt	Check for damaged or worn drive belt. Replace if necessary.
	2. Incorrect track adjustment	Check track tension and alignment. Readjust to specifications. (See Maintenance Section).
	3. Faulty engine	Check item 1 to 5 of "Engine lacks acceleration or power".
	4. Pulley misaligned	Contact your dealer.
Battery under-charging or overcharging		
Fan belt	1. Fan-belt slipping	Readjust the tension of belt. If trouble persists contact your dealer.
Battery	1. Not enough or bad electrolyte	Supply, remeasuring specific gravity.
	2. Sulphated plate (Shorted circuit)	Change battery.
	3. Insufficient in contact due to corroded terminal	Tighten after cleaning.

TOOLS

As standard equipment each new snowmobile is supplied with a basic tool kit such as screwdriver, wrenches, emergency starter rope, etc...

Standard Tools



SPECIFICATIONS — ELITE

ENGINE

No. of cylinders	_____	2
Bore	_____	69.5 mm (2.736 in.)
Stroke	_____	61 mm (2.401 in.)
Displacement	_____	462.8 cm ³ (28.2 in. ³)
Compression ratio (corrected)	_____	7:1
Carburetor type	_____	VM 34-258
Carburetor adjustment		
— air screw	_____	1 turn \pm 1/8
— idle speed	_____	1800-2000 R.P.M.
Torque:		
— engine head nuts	_____	22 N•m (16 ft-lbs)
— crankcase nuts	_____	M6: 9 N•m (6 ft-lbs) M18: 22 N•m (16 ft-lbs)
— magneto ring nut	_____	95 N•m (69 ft-lbs)
— crankcase engine support nuts	_____	38 N•m (27 ft-lbs)
— exhaust manifold bolts	_____	22 N•m (16 ft-lbs)
— electrical starter bolts	_____	M8: 22 N•m (16 ft-lbs) M5: 4 N•m (3 ft-lbs)
Rotary valve oil reservoir	— SI* _____ — Imp./U.S. _____	568 mL 20 ounces app.
Coolant level	_____	19-25 mm (3/4 - 1 in.) below filler neck
Cooling system	— SI* _____ — Imp. _____ — U.S. _____	6.2 liters 220 oz 211 oz
Thermostat	_____	43°C (110°F)
Radiator pressure cap	_____	13 lbs
Fan belt free-play	_____	6 mm (1/4 in.)

CHASSIS

Overall length	_____	271.8 cm (107 in.)
Overall width	_____	113 cm (44 1/2 in.)
Overall height	_____	139.7 cm (55 in.)
Ski stance (center to center)	_____	87.6 cm (34 1/2 in.)
Ski alignment (toe out)	_____	3 mm (1/8 in.)
Mass (weight)	_____	365 kg (805 lbs)
Bearing area	_____	13893 cm ² (2154 in ²)
Ground pressure	_____	2.57 kPa (.373 lb-in ²)

POWER TRAIN

Track dimensions _____	38.1 cm (15 in.) x 304.8 (120 in.)
Track tension _____	13 mm (1/2") gap that should exist between slide shoe and bottom inside of track
Track alignment _____	Equal distance between edges of track and frame
Std gear/ratio _____	17/34
Drive belt:	
— number _____	414 3758 00
— max. width _____	33.3 mm (1 5/16")
— min. width _____	30.1 mm (1 3/16")

ELECTRICAL

Alternator output _____	420 W
Lighting system (output):	
Bulb:	
— headlamp _____	60/60 W
— tail/stop _____	5/21 W
— speedometer _____	5W
Fuse:	
— main wiring _____	30 Amp.
— ignition switch _____	10 Amp.
— brake light _____	10 Amp.
— heater grips _____	10 Amp.
Spark plug:	
— type _____	NGK BR-8ES
— gap _____	0.4 mm (0.016")
Ignition timing:	
— timing mark (B.T.D.C.) _____	2.52 mm (.099") (21°)
— stroboscopic timing _____	6000 R.P.M.

FUEL

Gas type _____	Regular leaded or unleaded
Fuel tank capacity — SI* _____	30.7 liters
— Imp. _____	6.75 gals
— U.S. _____	8.1 gals
Injection oil:	
— type _____	Bombardier oil
— tank — SI* _____	2.3 liters
capacity — Imp. _____	80 oz.
— U.S. _____	77 oz.

BRAKE

Type _____	Disk, self-adjusting
Lining minimum thickness _____	3 mm (1/8")
Control lever adjustment _____	13 mm (1/2") minimum distance from handlebar grip when fully applied.

Bombardier Inc. reserves the right to make changes in design and specifications and/or to make additions to, or improvements in its product without imposing any obligation upon itself to install on its product previously manufactured.



UNFOLD

SI* METRIC INFORMATION GUIDE

BASE UNITS

DESCRIPTION	UNIT	SYMBOL
length	meter	m
mass	kilogram	kg
liquid	liter	L
temperature	celsius	°C
pressure	kilopascal	kPa
torque	Newton meter	N•m
speed	kilometer per hour	km/h

PREFIXES

PREFIX	SYMBOL	MEANING	VALUE
kilo	k	one thousand	1,000
centi	c	one hundredth of a	0.01
milli	m	one thousandth of a	0.001

*THE INTERNATIONAL SYSTEM OF UNITS (SYSTEME INTERNATIONAL) ABBREVIATES "SI" IN ALL LANGUAGES.

CHANGE OF ADDRESS AND OWNERSHIP

Any change in address or ownership should be brought to the attention of the manufacturer by completing and sending out the card supplied below.

CHANGE OF ADDRESS



VEHICLE IDENTIFICATION NUMBER

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

OLD ADDRESS:

NAME

NO STREET APT.

CITY STATE ZIP / POSTAL CODE

NEW ADDRESS:

NAME

NO STREET APT.

CITY STATE ZIP / POSTAL CODE

CHANGE OF OWNERSHIP



VEHICLE IDENTIFICATION NUMBER

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

The ownership of this vehicle is transferred

FROM:

NAME

NO STREET APT.

CITY STATE ZIP / POSTAL CODE

TO:

NAME

NO STREET APT.

CITY STATE ZIP / POSTAL CODE





BOMBARDIER INC.
ATT.: WARRANTY DEPARTMENT
VALCOURT, QUEBEC
CANADA, J0E 2L0

BOMBARDIER INC.
ATT.: WARRANTY DEPARTMENT
VALCOURT, QUEBEC
CANADA, J0E 2L0



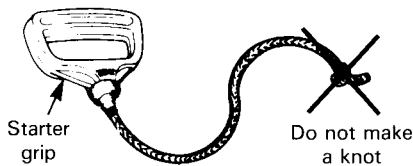
EMERGENCY STARTING PROCEDURE INSTRUCTION SHEET FOR 1982—ELITE

○ **NOTE:** This procedure replaces the EMERGENCY STARTING PROCEDURE explained in the 1982 — ELITE Operator's Manual (P/N 414 4652 00) on page 16.

◆ **WARNING:** Do not start the vehicle by the drive pulley unless it is a true emergency situation, have the vehicle repaired as soon as possible.

Open the hood. Reach for the emergency rope and starter grip in the tool box. Reinstall the tool box cover.

Attach emergency rope to starter grip.



Remove belt guard, place nuts and washers in tool box.

Attach starter rope to plastic handle.

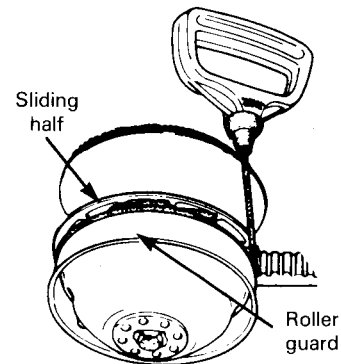
Make sure ignition key and emergency cut-out switch are at "ON" position.

Wind the rope tightly around the drive pulley, between the sliding half and the roller guard.

Pull vigorously until all rope is pulled out.

○ **NOTE:** If engine is cold, use of primer will be necessary.

◆ **WARNING:** When starting the vehicle in an emergency situation by the drive pulley, do not make a knot at the end of the emergency rope and do not reinstall the belt guard.



THIS INSTRUCTION SHEET MUST REMAIN WITH THE OPERATOR'S MANUAL AND VEHICLE AT TIME OF RESALE.

