

# Elite<sup>®</sup>



## 1980 OPERATOR'S MANUAL



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model \_\_\_\_\_

V.I.N. \_\_\_\_\_

purchase date \_\_\_\_\_

warranty expiry date \_\_\_\_\_

DEALER IMPRINT AREA

TECHNICAL INFORMATION CENTRE  
AFTER SALES SERVICE DEPARTMENT  
BOMBARDIER LIMITED  
VALCOURT, QUEBEC  
CANADA, JOE 2L0

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ELAN		SUPER SONIC
ELITE		ULTRA SONIC
GRAND PRIX SPECIAL		


# FOREWORD


CONGRATULATIONS... You are now the proud owner of a new 1980 snowmobile. This vehicle is the result of incomparable teamwork between Bombardier designers, engineers and technicians. Consequently, this vehicle is designed and engineered with safety, handling, comfort and quietness in mind.


The information has been prepared to acquaint the owner/operator of a new snowmobile with the various vehicle controls, owner-related maintenance, and safe operating instructions. This is accomplished via 'The Snowmobile Safety Handbook Booklet' and the 'Operator Manual'. Each is inseparable toward 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 emphasizes particular information denoted by the wording and 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.

Ride safe and have fun.

Recreational Products Group  
Bombardier Limited,  
Valcourt, Quebec, Canada

**PLEASE ENSURE YOUR WARRANTY BY REGISTERING YOUR SNOWMOBILE THROUGH YOUR DEALER, AT THE FACTORY.**

# SAFETY IN MAINTENANCE

## Observe the following precautions:

- Throttle mechanism should be checked for free movement before starting engine.
- Engine should be running only when pulley guard is secured in place.
- Never run engine without drive belt installed. Running an unloaded engine can prove to be dangerous.
- Never run the engine when the tracks of the vehicle are raised off the ground.
- It can be dangerous to run engine with the cab open or removed.
- Gasoline is flammable and explosive under certain conditions. Always perform procedures 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.
- 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.
- 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.
- Only perform 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.
- Installation of other than "stock" 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.
- The snowmobile engine can be stopped by activating the emergency cut-out switch or turning off the key.
- When removing coolant tank cap, first place a cloth over cap then turn cap to its first step to release pressure.

Please read and understand all other warnings contained elsewhere.

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

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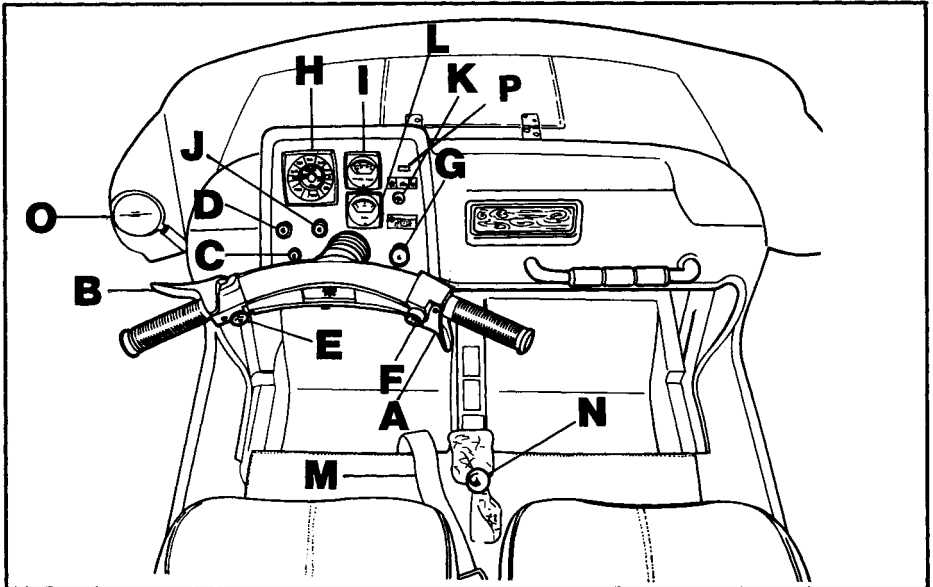
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# CONTROLS / INSTRUMENTS



- |                             |                              |
|-----------------------------|------------------------------|
| A) Throttle control lever   | I) Temperature gauge         |
| B) Brake control lever      | J) Lighter                   |
| C) Ignition switch          | K) Handle heat switch        |
| D) Light switch             | L) Fuel gauge                |
| E) Headlamp dimmer switch   | M) Seat belt                 |
| F) Emergency cut-out switch | N) Gear shift lever          |
| G) Primer                   | O) Mirror                    |
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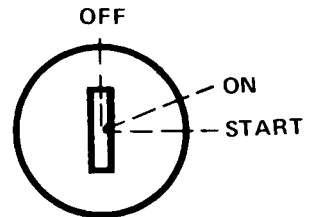
## A) Throttle Control Lever

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.

## 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**

The dimmer switch, located on left side of handlebar, allows correct selection of headlamp beam. To obtain high or low beam simply depress switch.

### **F) Emergency cut-out switch**

A push button switch located on right side of handlebar. To stop the engine in an emergency, press button down into lower position.

Before re-starting engine always depress button into released upper position. The driver of this vehicle should familiarize himself with the function of this device by using it several times on first outing. Thereby being mentally prepared for emergency situations requiring its use.

**◆ WARNING:** If the button has been used in an emergency situations the source of malfunction should be determined and corrected before restarting engine.

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

### **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 29

## 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.

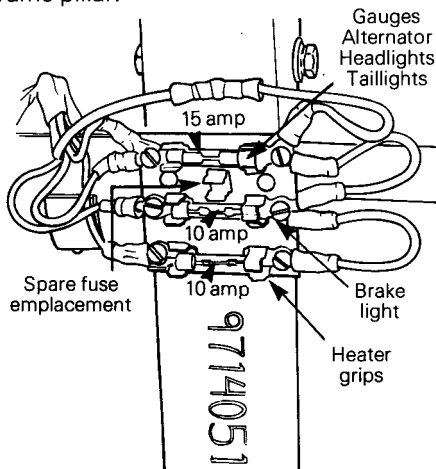
To gain access, lift engine compartment hood. Ideal location for spare plugs, rope, fuses, etc.

○ **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.

## Fuse holder

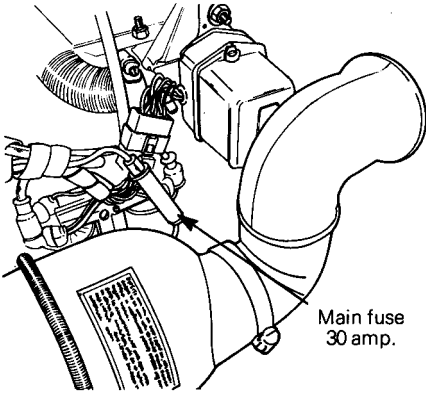
Located under the dash, on the center frame pillar.





## BREAK-IN PERIOD

Located in the engine compartment behind the air intake silencer on the right side.



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, a richer mixture is needed (i.e. 40 parts of gas for 1 part of 50 / 1 Bombardier oil). 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.

### 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. Remember that it is easier to remedy at this time than to allow the snowmobile to operate until a possible failure occurs.

**The 10 hours inspection is at the expense of the vehicle owner.**

<b>10-HOUR INSPECTION CHECK LIST</b>	<input checked="" type="checkbox"/>
Engine timing	
Fan belt tension	
Spark plug(s) condition	
Carburetor adjustment	
Engine head nuts	
Engine mount nuts	
Muffler attachment	
Gearbox oil level	
Chain tension	
Engine coolant level	
Rotary valve reservoir oil level	
Battery electrolyte level	
Brake operation and lining condition	
Skis alignment (runners condition)	
Pulley alignment and drive belt condition	
Track condition, tension and alignment	
Lubricate (steering, suspension)	
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	

**We recommended that you have your dealer sign this inspection.**

\_\_\_\_\_  
Date of 10-hour inspection

\_\_\_\_\_  
Dealer signature



# FUEL MIXING

Oil must be added to the gasoline in pre-measured amounts then both oil and gasoline should be thoroughly mixed together before fueling the tank.

## Recommended Gasoline

The correct gasoline is regular gasoline, available from all service stations.

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

## Recommended Oil

Use concentrated Bombardier snowmobile oil available from your dealer. This type of oil has specially formulated oil bases to meet the lubrication requirements of the Bombardier-Rotax engine.

If Bombardier snowmobile oil is unavailable substitute with a high-quality 2 cycle snowmobile oil. The oil / gas mix must meet the vehicle requirements. See oil manufacturer recommendations on container.

▼ **CAUTION:** Never use outboard or straight mineral oils.

## Fuel Mixture Ratio

The importance of using the correct fuel mixture cannot be overstressed. An incorrect fuel ratio results in serious engine damage. Recommended fuel ratio is 50 / 1.

### SI measure

500 mL oil to 25 liters = 50/1.

### Imperial measure

1 can 16 oz oil to 5 imp. gals = 50/1.

### U.S. measure

1 can 12 oz oil to 5 U.S. gals = 50/1.

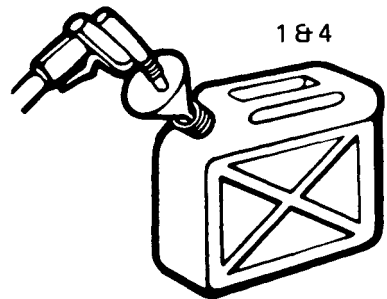
○ **NOTE:** To facilitate fuel mixing, oil should be kept at room temperature.

## Fuel Mixing Procedure

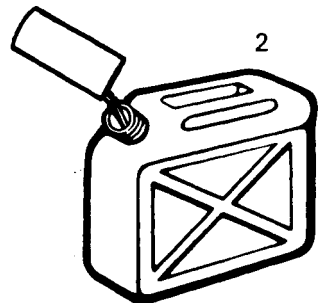
To mix the gasoline and oil always use a separate clean container. Never mix directly in your snowmobile tank. For best results, acquire two containers, either plastic or metal. Draw from one until empty then use the second one.

◆ **WARNING:** Gasoline is flammable and explosive under certain conditions. Always perform procedures 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. Never add fuel while engine is running. Avoid skin contact with fuel at below freezing temperatures.

1. Pour approximately one gallon of gasoline into a clean container.

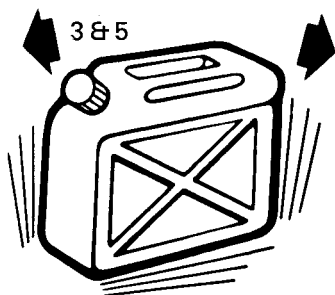


2. Add the full amount of oil.



## PRE-START CHECK

3. Replace container cap and shake the container thoroughly.



4. Add the remainder of the gasoline.
5. Once again thoroughly agitate the container. Then using a funnel with a fine mesh screen to prevent the entry of water and foreign particles, transfer mixture from container into the snowmobile tank.

○ **NOTE:** When using pre-mixed fuel, always shake the container thoroughly as the oil has a tendency to settle.

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

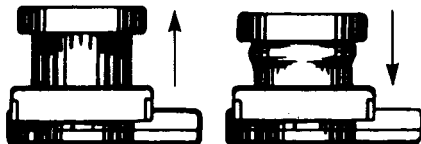
### Check Points

- 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 ( $\frac{3}{4}$  -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.
  - 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

Upper position  
before starting  
engine

Lower position  
to stop engine



1. Insert key in ignition switch.
2. **Test throttle control lever.**
3. Activate primer (5 or 6 times). Primer is not necessary if engine is warm.
4. Check that the emergency cut-out button is in the released upper position.
5. 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.

6. Check operation of the emergency cut-out switch. Restart engine.

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

7. Allow the engine to warm before operating at full throttle.

○ **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

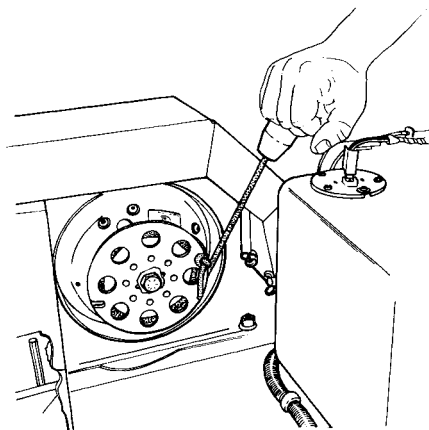
Should the battery go dead, the engine can be started using the emergency starter rope, included in the tool box.

Open the hood, reach for the emergency rope in the tool box. Re-install the tool box cover.

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:** Do not apply throttle while starting. Do not attempt to put the emergency rope back in the tool box. Wait until re-stopping the engine.

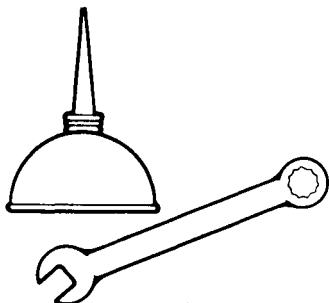


◆ **WARNING:** Do not start the vehicle by the drive pulley unless it is a true emergency situation. Have the vehicle repaired as soon as possible.

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

# LUBRICATION

## 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 maintaining it in safe and dependable operation. It is recommended that the steering system and suspension, be lubricated monthly or every 40 hours of operation. If the vehicle is operated in wet snow or in severe conditions these items should be lubricated more frequently.

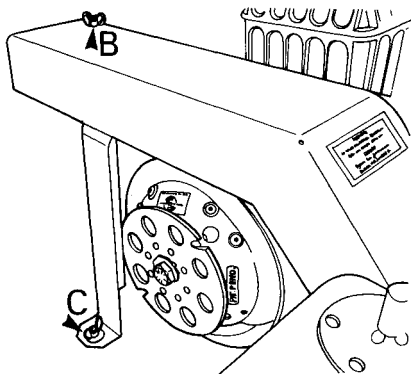
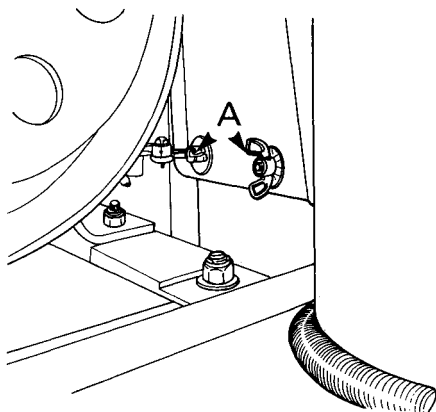
◆ **WARNING:** Only perform such procedures as detailed in this manual. It is recommended that dealer assistance be periodically obtained on other components / systems not covered in this manual. Unless otherwise specified, engine should be turned OFF for all lubrication and maintenance procedures.

○ **NOTE:** To ease any engine compartment maintenance or repairs, the seats can be removed by unscrewing the 4 retaining wing nuts (located in the engine compartment) and by removing the two (2) access panels.

## Pulley Guard Removal

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

1. Lift and support the engine compartment hood. Unscrew the wing nuts (A) located behind the drive pulley, the wing nut (B) on top of pulley guard and the wing nut (C) at the pulley guard center support.

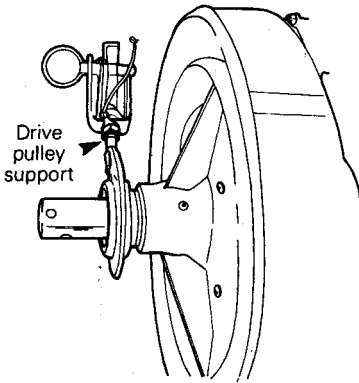


2. Disengage guard with a forward movement and remove complete assembly.

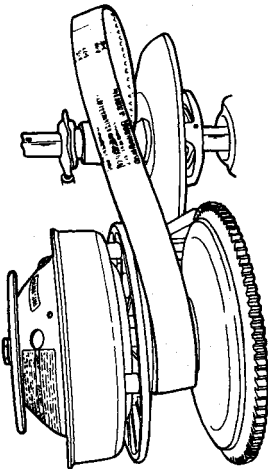
## Drive Belt Removal

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

1. Lift and support the engine compartment hood. Remove the pulley guard. Unlock and raise driven pulley support.

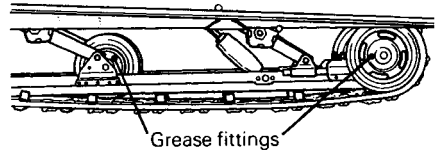


2. Open the driven pulley by twisting and pushing the sliding half. Hold in fully open position and slip slackened belt over the top edge of the driven pulley.



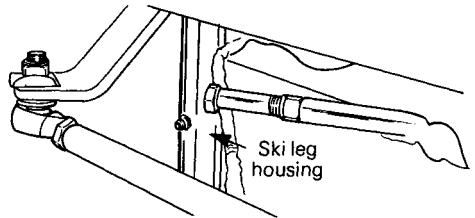
## Slide Suspension

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.



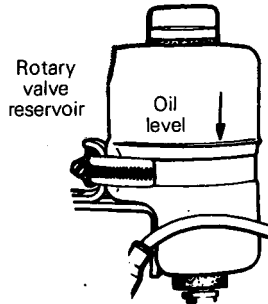
## Steering Mechanism

Lift the trunk lid and lean it against the windshield. Remove the cardboard 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

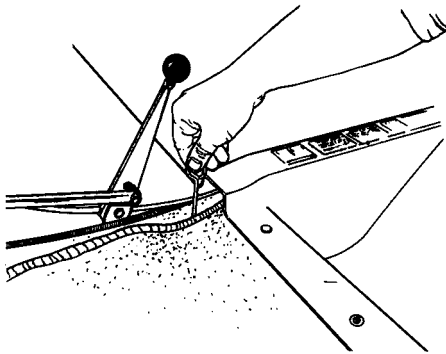
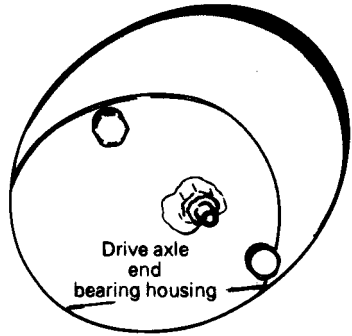
Check reservoir oil level frequently. If necessary replenish oil level using "Castrol Injector Oil", or equivalent, available from your dealer.





## Gearbox Oil Level

The gearbox oil level should be checked weekly. A dipstick is provided with your tool bag. To check oil level, 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 TOP mark on the dipstick. If not, remove filler cap from top of gear box and replenish gearbox with Ski-Doo chain-case oil or equivalents. 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.

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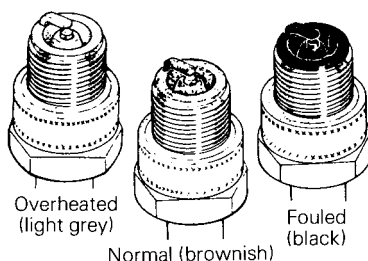
## W1 Spark Plug

Disconnect spark plug wires and remove spark plugs.

Check condition of 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.

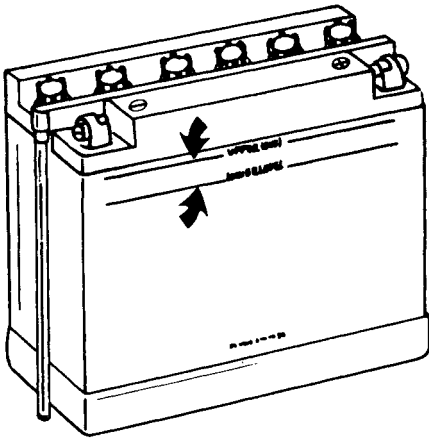
Reinstall plugs and connect wires.

## W2 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.

○ **NOTE:** To facilitate the above mentioned procedure, the air silencer elbow must be removed. Ensure to re-install the elbow properly.



**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.

**CAUTION:** Prior to charging the battery, always remove it from the vehicle to prevent electrolyte spillage, and possible damage to the alternator.

### W3 Suspension Condition

Visually inspect suspension springs. Replace any weak or broken spring. If vehicle is equipped with a slide suspension, inspect shoe condition and replace as necessary.

**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 re-

commended) will create excessive heat build-up and cause premature slider shoe wear.

### W4 Tracks 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.

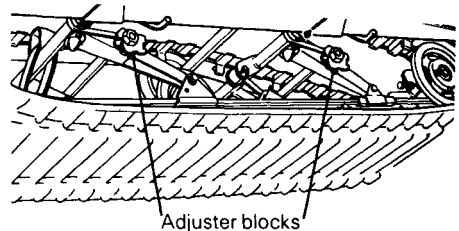
**NOTE:** Place gear shift lever in forward position before attempting to rotate the track manually.

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

### W5 Suspension Adjustment

The suspension is adjustable, the front adjustment for surface condition, the rear for driver's weight.

When the front adjuster blocks are at the lowest elevation more weight is distributed on skis. At the highest position the weight is transferred from the skis to the tracks. The rear adjuster blocks should be adjusted to suit the driver's preference.



**CAUTION:** Always turn 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.

**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 weighting 68 kg (150 lbs) each.

Rear adjuster blocks at the lowest position.

Front adjuster blocks at the second position.

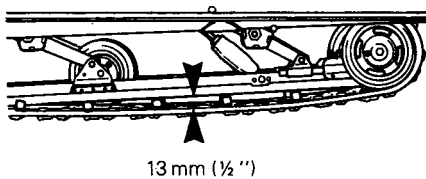
2 persons weighting 90 kg (200 lbs) each.

Rear adjuster blocks at the second position.

Front adjuster blocks at the third position.

## W6 Tracks Tension and Alignment

Lift rear of vehicle and support with a mechanical stand. Allow slide to extend normally. Check the gap 13 mm ( $\frac{1}{2}$ " ) between slide shoe and bottom inside of tracks. If tracks tension are too loose, the tracks will have a tendency to thump.

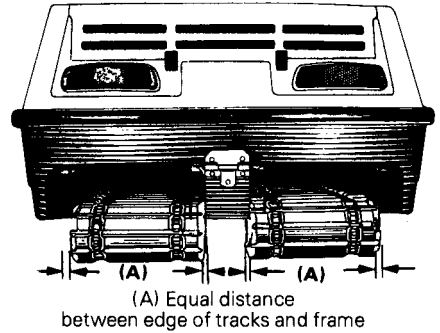


**CAUTION:** Too much tension will result in power loss and excessive stresses on suspension components.

If necessary to adjust, loosen or tighten adjuster bolts located on inner side of rear idler wheels. If correct tension is unobtainable. Contact your dealer.

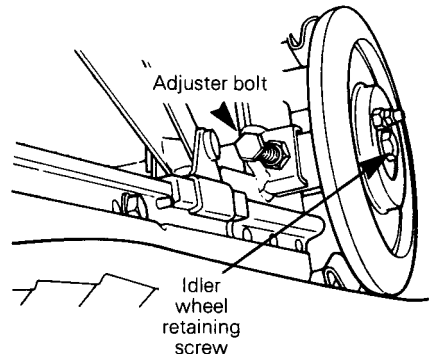
**NOTE:** Tracks tension and alignment are inter-related. Do not adjust one without the other.

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



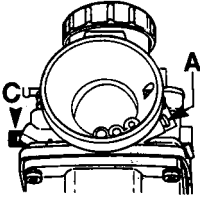
**WARNING:** Before checking tracks alignment, ensure that the tracks are free of all particles which could be thrown out while tracks are rotating. Keep hands, tools, feet and clothing clear of tracks.

To correct, stop engine 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 re-check alignment. Ensure to retighten the idler wheel retaining screws.



## W7 Carburetor Adjustment

The carburetor adjustments are: Air Screw Adjustment, Throttle Slide Adjustment and Idle Speed Adjustment.



### A) Air Screw Adjustment

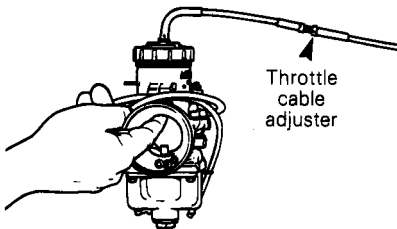
Completely close the air screw (until a slight seating resistance is felt) then back off screw 1 turn  $\pm$  1/4.

### B) Throttle Slide Adjustment

◆ **WARNING:** Ensure the engine is turned **OFF**, prior to the throttle slide adjustment.

With the throttle cable adjuster jam nut unlocked, press the throttle lever against the handle grip. Unscrew the cable adjuster by hand to obtain maximum carburetor slide opening. (With the air silencer removed, check with your finger if the carburetor slide is well seated against the carburetor top portion).

Then, screw the cable adjuster in two turns in order to nullify any possible tension on the throttle cable and tighten the cable adjuster jam nut.



### C) Idle Speed Adjustment

Turn idler 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 1500-1800 RPM. 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 unobtainable contact your authorized dealer.

○ **NOTE:** For warm weather riding, the fuel pump can be installed under the gas tank (contact your dealer for more information).

## W8 Drive Belt

Inspect belt for cracks, fraying or abnormal wear (uneven wear, wear on one side, etc.) if abnormal wear is noted, probable cause is pulley misalignment. Contact your dealer.

Check drive belt width, if less than 30 mm (1 3/16"), replace belt.

○ **NOTE:** When installing a new drive belt, a break-in period of 15-25 km (10-15 miles) is strongly recommended.

## W9 Steering Mechanism

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

Check condition of skis and ski runners. Replace if worn.

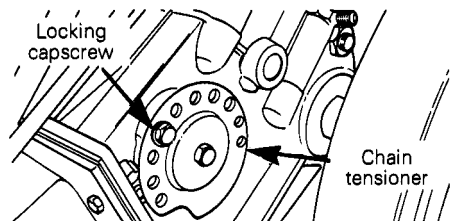
## W10 Drive Chain Tension

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 3 appropriate holes. Lock chain tensioner in place.

## M1 Brake

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.

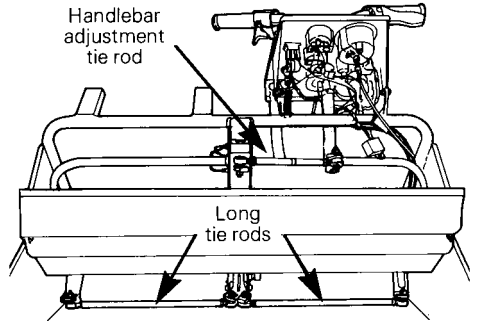
**WARNING:** Brake pad or pucks less than 3 mm (1/8 in.) thick must be replaced. Replacement must be performed by an authorized dealer.

The brake mechanism is self-adjusting, therefore, periodic adjustment is not required. However, check operation of brake mechanism by depressing brake control lever. Brake should apply fully when lever is 13 mm (1/2 in.) approx. from handlebar grip. If not, do not temper with the brake, contact your servicing dealer.

## M2 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 in.) 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.

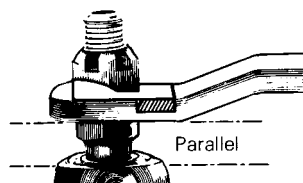
Then, measuring at front of leaf springs add an additional 1.5 mm (1/16 in.) on each side by rotating the tie rods.

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. Ensure at least half of the ball joint threads are inserted into the tie rod.



### M3 Engine Head Nuts

After the first 5 hours of operation, check that engine head nuts are tight and equally torqued 39 N•m (28 ft-lbs) when engine is cold.

### M4 Engine Mount Nuts

Check engine mount nuts for tightness. Retighten if necessary.

### M5 Exhaust System

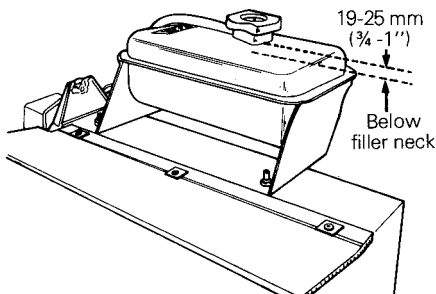
The engine / muffler attaching parts are vital toward efficient muffler function. Check all attachments. Replace springs and / or tighten if necessary.

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

### M6 Cooling System

Place a cloth over the coolant tank cap and release it to the first step to check that the cap pressurizes 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.

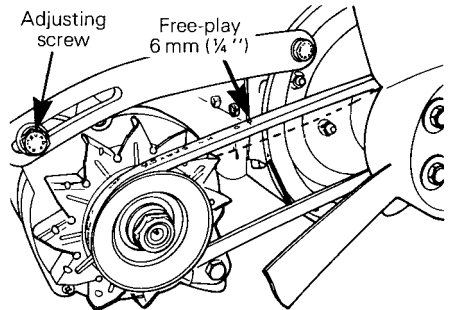
The coolant level must be at 19-25 mm ( $\frac{3}{4}$  - 1 in.) below the filler neck of the coolant tank.



▼ **CAUTION:** If coolant loss is excessive contact your dealer.

### M7 Fan Belt

Inspect belt for cracks, uneven wear, etc. Check fan belt tension 6 mm ( $\frac{1}{4}$  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.

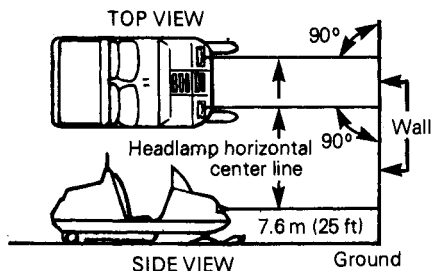
### General Inspection

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. Inspect skis and ski runners for wear.

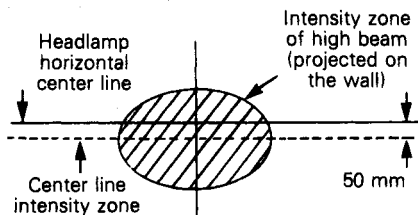
▼ **CAUTION:** When replacing bolts, nuts, wires, etc., use only genuine Bombardier parts or equivalent being the same type and having the same construction and resistance.

## Headlamp Beam Aiming

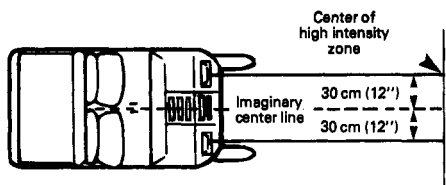
The angle of the headlamp beam has been pre-adjusted prior to delivery. Should you wish re-adjustment, place vehicle on a flat surface 7.6 m (25') from a wall or screen.



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



Ensure that the distance between the center of the high intensity zone and the imaginary line drawn in the vehicle axis is equal to 30 cm (12") on both sides.



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

## Bulb Replacement

If headlamp is burnt, lift the trunk lid. Unplug connector from headlamp. Remove rubber boot and unfasten bulb retainer clips. Detach bulb and replace. If taillight bulb is burnt, expose bulb by removing red plastic lens. To remove, unscrew the two (2) Phillips head screws. Verify all lights after replacement.

## STORAGE

Storage of the snowmobile during long periods of inactivity consists of checking and replacing missing broken or worn parts: Proper lubrication and treatments to insure that parts do not become rusted; cleaning items such as carburetor or oil mixtures, to prevent gum varnish formation within the carburetor; 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

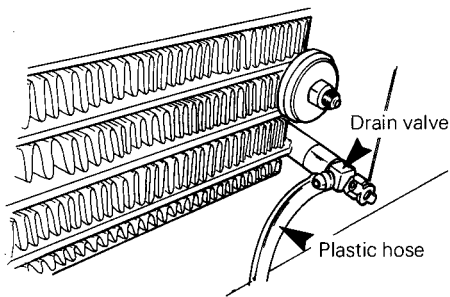
To drain the cooling system, remove the coolant tank cap.

Remove the R.H. access trellis, 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.

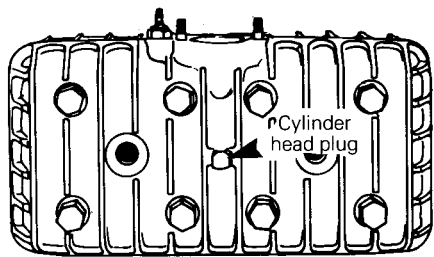
**WARNING:** Be careful not to burn yourself on the exhaust system.





**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 (¾ -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 (¾ -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 does not stay in contact with cement floor or bare ground.

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

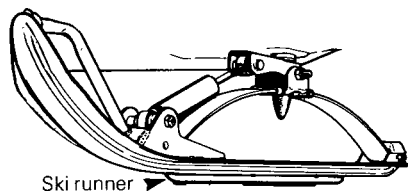
**CAUTION:** To prevent track damage, temperature in the storage area must not exceed 38°C (100°F).

## 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 worn or weak.



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

## Controls

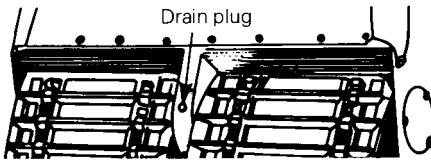
Lubricate steering mechanism. Inspect components for tightness, (spring coupler bolts, steering arm locking bolts, tie rods, ball joints, etc.). Tighten if necessary.

◆ **WARNING:** Do not lubricate throttle and/or brake cable housing. Avoid getting oil on 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 chain-case 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.

### **Fuel Tank**

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

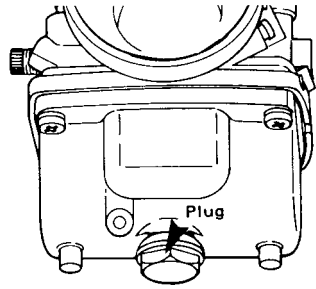
◆ **WARNING:** Gasoline is flammable and explosive under certain

conditions. Always perform procedures in a well ventilated area. Do not smoke or allow open flames or sparks in the vicinity.

### **Carburetor**

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

Assure that carburetor inlet fuel line is disconnected. Remove plug of the float chamber. Drain carburetor.



Reinstall plug and connect fuel line.

### **Cylinder Lubrication**

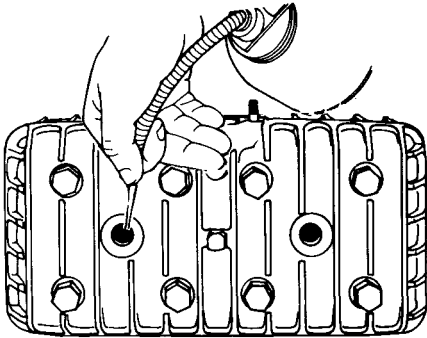
Engine internal parts must be lubricated to protect cylinder walls from possible rust formation during the storage period.

○ **NOTE:** This operation should be repeated every 40 days during storage.

Remove spark plugs.

Bring piston at top position, by turning the drive pulley.

Pour the equivalent of one spoonful of oil into spark plug hole.



Slowly turn the engine several times using the drive pulley. Repeat above steps for other cylinder. Install spark plugs.

▼ **CAUTION:** To prevent ignition system damage, make sure that the ignition switch is in off position and that the cut-out button is in the lower position.

## 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 should 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

Snow is falling and you are now anticipating the next snowmobile safari. If you have observed and adhered to the storage procedures outlined in this manual, your vehicle preparation become a relatively easy task.

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 oil level	○
Check pulley, verify components and clean. Lubricate driven pulley	●
Check steering alignment and ski runner condition	○
Replace fuel filter	○
Check tracks tension and alignment	○
Lubricate suspension	○
Inspect drive belt and install	○
Check throttle cable for damage and free operation	○
Inspect brake condition and operation	●
Inspect oil seals for possible cuts or leaks	○
Test battery, clean and install	●
Set engine timing, if necessary replace breaker points	●
Check electrical wiring (broken wire, damaged insulation)	○
Check coolant level and condition	○
Check tightness of all bolts, nuts and linkage	○
Refill gas tank	○
Adjust carburetor	●
Check oil level, rotary valve reservoir	○

# TROUBLE SHOOTING GUIDE

SYMPTOMS	POSSIBLE CAUSES	WHAT TO DO
Engine turns over but fail to start or starts with difficulty	1. No fuel to the engine	Check the tank level and fill up with correct gas-oil mixture. Check for possible clogging of fuel line, item 5.
	2. Spark plug	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 or head, 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, check item 3.
	3. Faulty ignition	Disconnect spark plug wire from plug, unscrew the spark plug cap then hold wire about 3 mm ( $\frac{1}{8}$ " ) from the cylinder head. Follow engine starting procedure and if no sparks appear, it means a faulty ignition system. Do not attempt to repair. Contact your dealer.
	4. 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.
	5. Clogged fuel line (water or dirt)	Remove and clean the fuel filter. If applicable, change filter cartridge. Check condition and connections of fuel lines. Check the cleanliness of fuel tank.
	6. Faulty carburetor	First make primary adjustments on carburetor (See Maintenance Section). If carburetor is still faulty, contact your dealer for repair.
	7. Too much oil in fuel	Drain the fuel tank and refill with the correct gas/ oil mixture.
	8. Engine timing	Engine timing may be defective or out of adjustment. Contact your dealer.
	9. 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. Seizure is a direct result of poor lubrication.

<b>SYMPTOMS</b>	<b>POSSIBLE CAUSES</b>	<b>WHAT TO DO</b>
Engine is slow to warm up	1. Thermostat defective or 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 defective or 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 or defective 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. Carburetors	Readjust the carburetor. (See Maintenance section). If trouble persists, 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.

<b>SYMPTOMS</b>	<b>POSSIBLE CAUSES</b>	<b>WHAT TO DO</b>
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		
Fan belt	1. Fan-belt slipping	Readjust the tension of belt.
Alternator	1. Stator coil grounded or disconnected	Repair or replace stator assembly if necessary.
	2. Rotor coil disconnected	Replace.
	3. Brush and slip-ring insufficient contact. (Difficulty of brush to seat properly)	Worn brushes to be renewed, (holders to be cleaned). Slip-ring polished.
	4. Diode intermittently operated	Replace rectifier assembly.
	5. Puncture of condenser	Replace.
Battery under-charging		
Regulator	1. Low-speed point insufficient contact	Point to be polished.
	2. Adjusting voltage too low	Readjust.
	3. High-speed point melted	Replace regulator.
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	Tightening after cleaning.

<b>SYMPTOMS</b>	<b>POSSIBLE CAUSES</b>	<b>WHAT TO DO</b>
Wiring	1. Disconnection or insufficient contact between key-switch and regulator IG terminal	Repair.
	2. Above-mentioned circuit fuse melted or bad contact.	Change fuse. Repair contact of fuse holder
	3. Disconnection or insufficient contact between regulator F terminal and alternator F terminal	Repair.
Battery over-charging		
Overload of electricity	1. Additional installment of electrical load beside the standard electrical load	Inspect the alternator output in proportion to regular driving speed.
Wiring	1. Mis-connection or short-circuit between regulator IG terminal and F terminal	Readjust.
	2. Regulator E terminal insufficient grounding	Readjust.
Regulator	1. Disconnection of pressure coil	Replace.
	2. Low speed contact point melted	Replace.
	3. High-speed contact point insufficient contact.	Point to be polished.
	4. Too high adjusting voltage	Readjust.

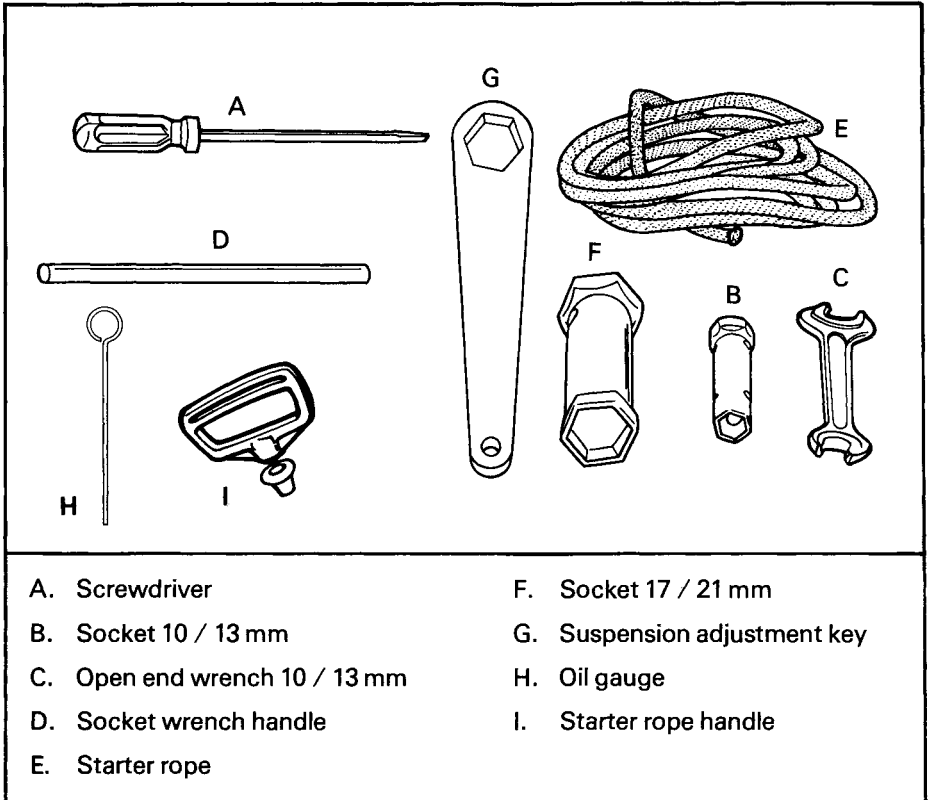


<b>SYMPTOMS</b>	<b>POSSIBLE CAUSES</b>	<b>WHAT TO DO</b>
Ammeter needle unstable (if applicable) Fan-belt	Loose fan-belt	Readjust belt tension.
Key-switch	Key-switch insufficient contact	Change key-switch.
Wiring	Connection point loose, almost disconnected wires.	Tightening, repair.
Regulator	Action at each point bad	Readjustment.
Abnormal noise from alternator Alternator	1. Inferior bearings	Change grease.
	2. Puncture of diode	Replace rectifire assembly.
	3. Stator coil grounded or layer-shortcd	Replace stator assembly.
Charging circuit fuse melted Wiring	B terminal shorted	Repair.
Alternator	1. Positive side and negative side diode shorted	Replace rectifire assembly.
	2. Condenser puncture	Change.
Regulator	Adjustment voltage too high	Readjustment.
Battery	Battery mis-connected	Connect properly.

# TOOLING

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

## Standard tools



# SPECIFICATIONS

<b>ENGINE</b> No. of cylinders Bore Stroke Displacement Compression ratio (corrected) Carburetor type Carburetor adjustment — air screw — idle speed Engine head nuts (torque) Coolant level Cooling system   — SI* — Imp. — U.S. Thermostat Radiator pressure cap Fan belt free-play	2 69.5 mm (2.736 in.) 57.5 mm (2.264 in.) 436.3 cm <sup>3</sup> (26.6 in. <sup>3</sup> ) 6.7:1 VM-34-201 1 turn ± 1/4 1500-1800 R.P.M. 39 N•m (28 ft-lbs) 19-25 mm (3/4 - 1 in.) below filler neck 6.2 liters 220 oz. 211 oz. 43°C (110°F) 13 lbs 6 mm (1/4 in.)
<b>CHASSIS</b> Overall length Overall width Overall height w/o windshield & roll bar Ski stance (center to center) Ski alignment (toe out) Mass (weight) Bearing area Ground pressure	271.8 cm (107 in.) 113 cm (44 1/2 in.) 101.6 cm (40 in.) 87.6 cm (34 1/2 in.) 3 mm (1/8 in.) 358.3 kg (790 lbs) 13896 cm <sup>2</sup> (2154 in. <sup>2</sup> ) 2.528 kPa (.366 lbs/in. <sup>2</sup> )
<b>POWER TRAIN</b> Track dimensions Track tension Track alignment Std gear/ratio Gearbox oil level Drive belt (minimum width)	38.1 cm (15 in.) x 304.8 cm (120 in.) 13 mm (1/2") gap that should exist between slide shoe and bottom inside of track Equal distance between edges of track and frame 17/38 Up to the gauge full mark 3 cm (1 3/16")
<b>ELECTRICAL</b> Alternator output Lighting system (output) Headlamp bulb Tail/stop light Spark plug (Bosch)   — (normal use) — (severe use) Spark plug (gap) Breaker points (gap) Advanced ignition timing (B.T.D.C.) Main fuse battery Gauges alternator, headlamp, taillight fuse Brake light fuse Heater grips fuse	35 amp (420 watts) 12 volts 45/45 W 5/21 W W 260 MZ-2 W 280 MZ-2 0.50 mm (.020 in.) 0.35-0.45 mm (.014-.018 in.) 2.25-2.45 mm (0.090-0.094") 30 Amp. 15 Amp. 10 Amp. 10 Amp.
<b>FUEL</b> Tank capacity   — SI* — Imp. — U.S. Gasoline Gas/oil ratio	30.7 liters 6.75 gals 8.1 gals Regular 50/1
<b>BRAKE</b> Brake type Brake adjustment (control lever) Brake lining (minimum thickness)	Disc, self-adjusting 13 mm (1/2") minimum distance from handlebar grip when fully applied 3 mm (1/8")

\*International Standard

Bombardier Limited 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.

# LIMITED WARRANTY SKI-DOO® SNOWMOBILES 1980

BOMBARDIER Limited as manufacturer, warrants FROM THE DATE OF FIRST CONSUMER SALE, every 1980 Ski-Doo® snowmobile, sold as NEW AND UNUSED, by an authorized SKI-DOO dealer, subject to the following limitations and conditions, for a period of:

- **two (2) seasons maximum** for models:

Elan® , Citation\* , Everest® , Elite® ,

Warranty STARTS on the date of sale to the first consumer and ENDS the SECOND APRIL 30TH following the date warranty coverage started.

or

- **Ninety (90) consecutive** days for the following models:

BLIZZARD® 5500-7500-9500 and ALPINE® subject to the following:

1. When a sale is made after MARCH 31ST of a given year but before THE 1ST DAY OF DECEMBER of the same year, the warranty will start on DECEMBER 1ST following the date of sale and terminate 90 days later.
2. When a sale is made on/or after JANUARY 2ND of a given year, the unused portion of the 90 days warranty as of MARCH 31ST, of that year will be carried over to the next season, beginning the 1ST DAY OF DECEMBER.

**Any 1980 model not listed is not warranted.**

## WHAT WE 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.

## EXCLUSIONS

### Items and components:

Any of the following expendable items and/or components that are damaged or worn due to normal use: variable speed drive belt, windshield, filters, ignition breaker points, condensers, spark plugs, light bulbs, protective lenses, brake linings, ski runner shoes, slider shoes on suspension and variable speed pulleys, labels, soft trim, appearance items, lubricants and paints and all tune-ups, seized, melted or holed piston and adjustments required.

### Also excluded are:

- 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** supplied with each SKI-DOO snowmobile. The labour, parts and lubricants cost of all maintenance services, including tune-ups and adjustments will be charged to the owner.
- Damage resulting from improper servicing or adjustment of the drive pulley assembly. **The drive pulley assembly is factory sealed, and can only be serviced by an authorized SKI-DOO dealer.**
- Vehicles used for racing purposes.
- Vehicle used for rental purpose or other business purposes.
- All optional accessories installed on the vehicle. **(The normal warranty policy for parts and accessories, if any, applies).**
- Damage resulting from operation of the snowmobile on surfaces other than snow.

- 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.

### **CONDITION TO HAVE WARRANTY WORK PERFORMED**

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

### **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.

### **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 Limited  
Customer Relations Department  
Recreational Product Group  
Valcourt, Quebec, Canada, JOE 2LO

**Bombardier Limited 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.**

November 1978

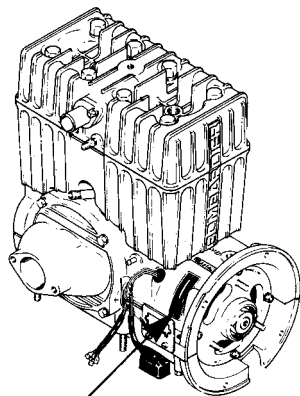
Bombardier Limited  
Valcourt, Quebec, Canada, JOE 2LO

\*Trademark of Bombardier Limited

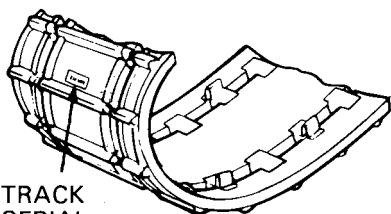
® Registered Trademark Bombardier Limited

# HOW TO IDENTIFY YOUR SNOWMOBILE

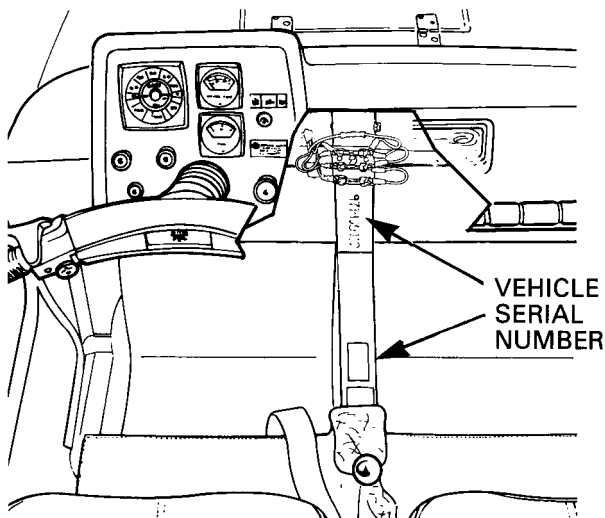
The main components of your snowmobile (engine, track and frame) are identified by different serial numbers. It may sometimes become necessary to locate these numbers for warranty purposes or to trace your snowmobile in the event of theft.



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.

## 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: *The information provided by the Customer Warranty Registration card is computerized, and all warranty claims thereafter, are processed by the computer. Without this valuable information on the Warranty Registration Card, we cannot acknowledge warranty or notify owners of a possible 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. The **hard copy** of the card is your proof that the snowmobile is registered.*

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, carburetion 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, sustained high r.p.m. full throttle use, chain failure caused by a lack of lubrication and/or adjustments, 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: What is Bombardier's policy on extending a warranty?

*A: It is not Bombardier's policy to extend warranty. Bombardier has selected a warranty period sufficiently long to permit adequate use of the machine to allow for possible concealed manufacturing defects to occur.*

Q: Manufacturer does not accept warranty work on seized, scored or melted pistons, why?

*A: From testing and experience, we know that such piston failures can only be caused by detonation or pre-ignition, which are directly related to the following factors and therefore, are beyond the manufacturer's control.*

- Incorrect oil/gas mixture (too little or too much oil).
- Poor quality, outboard or straight mineral oils.
- Removal of intake silencer.
- Hot spark plug(s) (improper heat range).

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 Valcourt.*



# CONSUMER GUIDE

## WHEN YOU BUY ...

our product you will receive:

**SERVICE** — from the product itself

**SERVICE** — from the dealer who sells the product

If, however, the service or product is unsatisfactory,

### 1<sup>st</sup>

Return to your dealer's service department and discuss the details of the problem with the manager. He is in a position to help you with all maintenance and service needs. If the matter cannot be resolved, he may want to bring the sales manager or the general manager into discussion.

If the dealer cannot solve the situation.

### 2<sup>nd</sup>

Write to your nearest area distributor.

**TELL HIM THE FACTS**

- Vehicle identification number.
- Date of purchase.
- Name and address of your selling dealer.
- Your name, address and phone number.
- The specific problem.

The matter will receive immediate attention from the distributor's service department.

If at this point your grievance still remains unresolved, **contact**

### 3<sup>rd</sup>

**Bombardier Limited,  
Valcourt, P.Q. J0E 2L0  
Att'n Customer relations**

Provide all necessary details (including names of persons previously contacted). Your problem will be reviewed and instructions will be provided to the persons responsible for product service in your area or we may contact you directly.

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

**BOMBARDIER LIMITED**  
EASTERN CANADA DISTRIBUTION DIVISION  
Ontario Branch  
230 Bayview Drive  
Barrie, Ontario, L4M 2Y8  
(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 Boulevard  
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, Connecticut, Rhode Island,  
Pennsylvania, New Jersey, Maryland, Delaware, District of  
Columbia, Northern half of Ohio.

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

**TIMBERLAND MACHINES INC.**  
10 North Main Street  
Lancaster, New Hampshire 03584  
(603) 788-4738  
Maine, New Hampshire, Vermont

# 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. This will help us to maintain our files up-to-date.

## 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



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

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