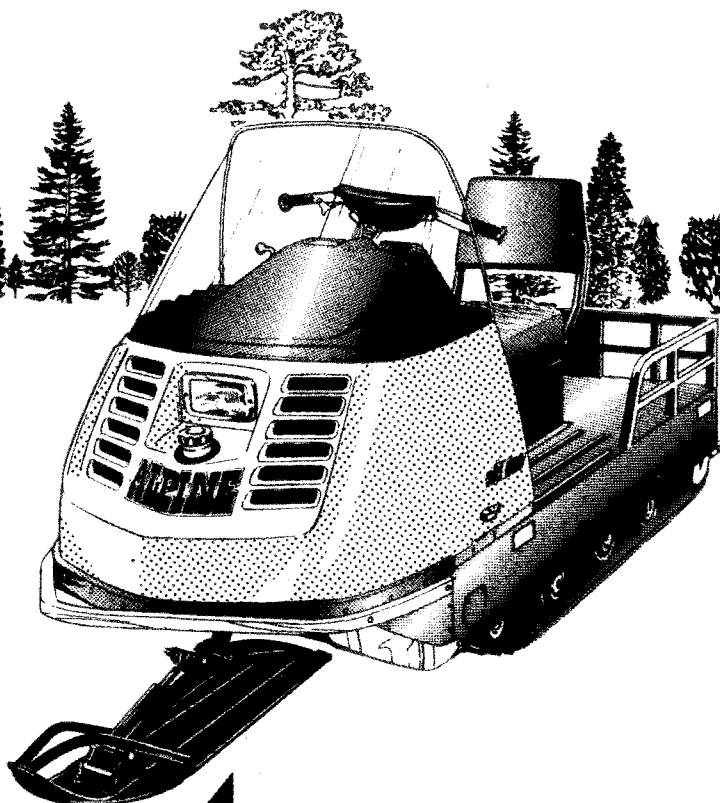




# 1982 OPERATOR'S MANUAL



# Alpine®

® \*Trademarks of Bombardier Inc.

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Litho'd in Canada

414 4438 00

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  
Bombardier Inc.  
Valcourt, Quebec  
Canada, JOE 2L0

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

# INDEX

<b>THE 1982 "LIMITED WARRANTY"</b> .....	<b>2</b>
<b>FOREWORD</b> .....	<b>4</b>
<b>OFTEN ASKED QUESTIONS</b> .....	<b>5</b>
<b>LISTING OF AREA DISTRIBUTORS</b> .....	<b>7</b>
<b>HOW TO IDENTIFY YOUR SNOWMOBILE</b> .....	<b>8</b>
<b>SAFETY IN MAINTENANCE</b> .....	<b>9</b>
<b>CONTROLS/INSTRUMENTS</b> Throttle lever, brake lever, ignition/light switch, headlamp dimmer switch, emergency cut-out switch, manual starter handle, primer, gear shift lever, access door latch, tether cut-out switch, speedometer, parking brake, horn button, hood removal, seat compartment, fuel gauge, fuse holder .....	<b>10</b>
<b>BREAK-IN PERIOD</b> Break-in, inspection, inspection checklist .....	<b>13</b>
<b>FUEL MIXING</b> Recommended gasoline, recommended oil, fuel mixture ratio, fuel mixing pro- cedure .....	<b>15</b>
<b>PRE-START CHECK</b> Check points .....	<b>16</b>
<b>STARTING PROCEDURE</b> Starting procedure, emergency starting .....	<b>17</b>
<b>DRIVING TIPS</b> Bogie wheel, front hood louvers, air silencer box, belt and guard removal .....	<b>18</b>
<b>LUBRICATION</b> Frequency, driven pulley, steering mechanism, gearbox oil level, bogie wheels, rear axles .....	<b>20</b>
<b>MAINTENANCE</b> Maintenance chart, spark plugs, battery, suspension, tracks, track tension and alignment, carburetor, air silencer box, drive belt, steering mechanism, drive chain tension, drive pulley, brake, steering adjustment, engine head nuts, engine mount nuts, muffler attachment, fan belt, general inspection, bulb replacement .....	<b>22</b>
<b>STORAGE</b> Tracks, suspension, ski assembly, fuel tank and carburetor, cylinder lubrication, gearbox, controls, driven pulley, battery, chassis, general inspection .....	<b>27</b>
<b>PRE-SEASON PREPARATION</b> Pre-season preparation chart .....	<b>30</b>
<b>TROUBLE SHOOTING</b> .....	<b>31</b>
<b>TOOLS</b> .....	<b>33</b>
<b>SPECIFICATIONS</b> .....	<b>34</b>
<b>WIRING DIAGRAM</b> .....	<b>35</b>
<b>SI METRIC INFORMATION GUIDE</b> .....	<b>36</b>
<b>CHANGE OF ADDRESS OR OWNERSHIP</b> .....	<b>37</b>

# 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 2L0

January 1981  
Bombardier Inc.  
Valcourt, Quebec, Canada, JOE 2L0


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# 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 and instruction which, if not followed, could cause personal injury.

 **CAUTION:** Denotes and 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.

## 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 OF 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, L4M 2Y8  
(705) 728-8600  
Province of Ontario

## 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.

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.

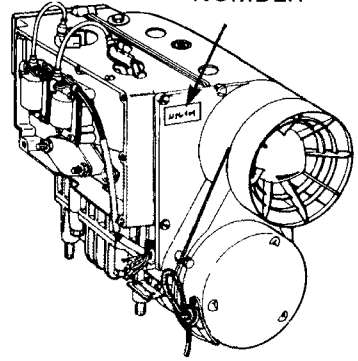
ELLIOTT & HUTCHINS INC.  
East Main Street Road  
Malone, New York 12953  
(518) 483-4411  
New York, Massachusetts, Connec-  
ticut, Rhode Island, Pennsylvania,  
New Jersey, Maryland, Delaware,  
District of Columbia, Northern half of  
Ohio, Maine, New Hampshire, Vermont.

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

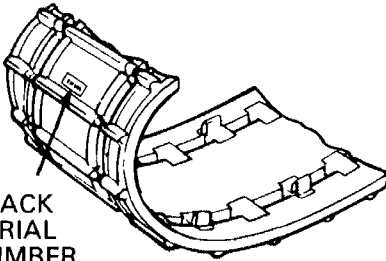
# HOW TO IDENTIFY YOUR SNOWMOBILE

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.

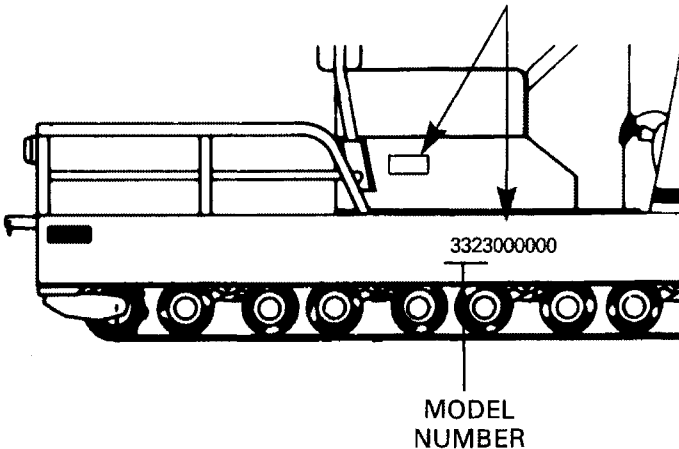
ENGINE  
SERIAL  
NUMBER



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.

# SAFETY IN MAINTENANCE

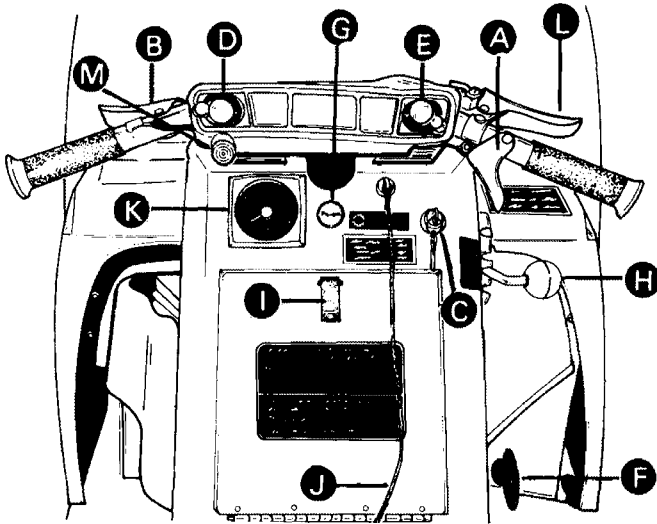
## Observe the following precautions:

- 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 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.
- 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.
- The snowmobile engine can be stopped by activating the emergency cut-out switch, tether switch or by turning off the key.
- 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.

**Please read and understand all other warnings contained elsewhere and on the vehicle.**

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

# CONTROLS / INSTRUMENTS



- A) Throttle Control Lever
- B) Brake Control Lever
- C) Ignition / Light Switch
- D) Headlamp Dimmer Switch
- E) Emergency Cut-Out Switch
- F) Manual Starter Handle
- G) Primer
- H) Gear Shift Lever
- I) Access Door Latch
- J) Tether Cut-Out Switch
- K) Speedometer
- L) Parking Brake Handle
- M) Horn Button

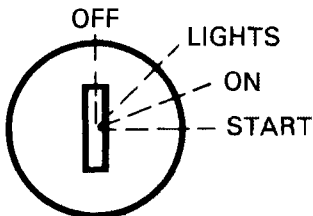
## A) Throttle Control Lever

Located on the right side of handlebar. When depressed, 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 depressed, 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 / Light Switch



Key operated, 4 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. To illuminate both headlamp and taillight, turn key to LIGHTS position.

## D) Headlamp Dimmer Switch

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

## E) Emergency Cut-Out Switch

A 3 position switch located on the right side of the handlebar. To stop the engine in an emergency, flick the lever to either upper or lower "OFF" position. To start engine, lever must be in middle "ON" position.

◆ **WARNING:** For safety reasons, the emergency cut-off switch is easily accessible; be careful not to operate it inadvertently.

The driver of this vehicle should familiarized 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 switch has been used in an emergency situation the source of malfunction should be determined and corrected before re-starting the engine.

## F) Manual Starter Handle

Auto rewind type located on right hand side of vehicle. To engage mechanism, pull handle.

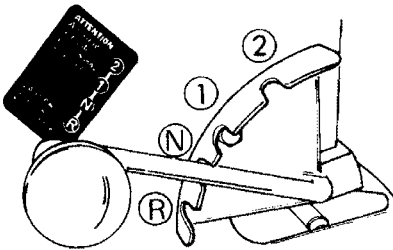
## G) Primer

A push-pull button. Pull and push button (2-3 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) Gear Shift Lever: 4 positions

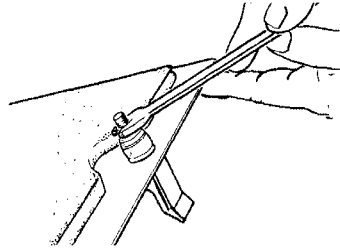
(2 Forward / Neutral / Reverse)

▼ **CAUTION:** The vehicle must be completely stopped before shifting.



## I) Access Door Latch

To gain access to the carburetor or spark plugs, lift pressure lock tab and pull open access door.



To adjust locking device turn nut in required direction.

## J) Tether Cut-Out Switch

Attach tether cord to wrist or other convenient location then snap tether cut-out cap over receptacle before starting engine.

If emergency engine "shut-off" is required completely pull cap from safety switch and engine power will automatically shut "off".

○ **NOTE:** The cap must be installed on the safety switch at all times in order to operate the vehicle.

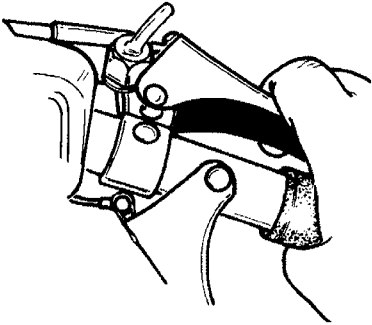
◆ **WARNING:** If the switch is used in an emergency situation the source of malfunction should be determined and corrected before restarting engine.

## K) Speedometer

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

## L) Parking Brake

Located on right side of steering handle. Parking brake should be used when vehicle is not in use. To engage parking brake, pull handle and turn cam then release a little for proper engagement.



To release parking brake, pull handle to disengage brake mechanism, turn cam, then release handle.

## M) Horn Button

Press to activate horn.

## Hood Removal

Unlatch cap by turning both handles toward front of vehicle, remove fuel tank cap, gently lift hood then disconnect junction block at right side of engine. Remove hood from vehicle.

◆ **WARNING:** It is dangerous to run engine with hood off. Personal injury could result.

## Seat Compartment

Remove backrest and tilt seat. Ideal location for spare plugs, belt, rope, etc.

○ **NOTE:** Emergency materials should be wrapped in foam or similar material. This will prevent possible damage to breakable items when travelling over rough or bumpy terrain.

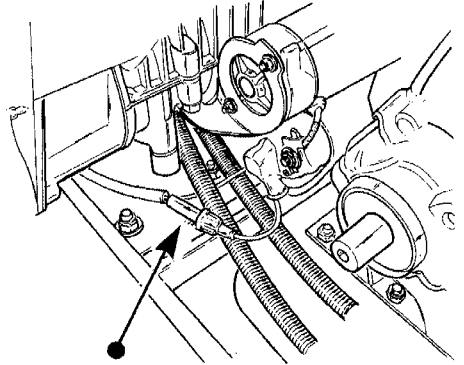
## Fuel Gauge

Unscrew fuel tank cap and withdraw dipstick to check fuel level.

◆ **WARNING:** Never use a lit match or open flame to check fuel level.

## Fuse Holder

Located in the engine compartment (front of engine R.H. side).



## BREAK-IN PERIOD

With Bombardier-Rotax snowmobile engines, a break-in period is required before running the vehicle at full throttle. Engine 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.

○ **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, that 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 hour inspection is at the expense of the vehicle owner.**

## 10-HOUR INSPECTION CHECKLIST



Engine timing	
Fan belt tension	
Spark plugs condition	
Carburetor adjustment	
Engine head nuts	
Engine mount nuts	
Muffler attachment	
Gearbox oil level	
Chain tension	
Battery electrolyte level	
Brake operation and lining condition	
Ski alignment (runner condition)	
Pulley alignment and drive belt condition	
Track condition, tension and alignment	
Lubricate (steering, suspension, driven pulley)	
Electrical wiring (loose connections, stripped wires, damaged insulation), tightened 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 switch	

**We recommend that you have your dealer sign this inspection list.**

\_\_\_\_\_  
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 fuel is regular leaded or unleaded gasoline.

▼ **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 UNITS

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

or

1 can 500 mL oil to 5 1/2 imp. gals = 50/1

### U.S. MEASURE

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

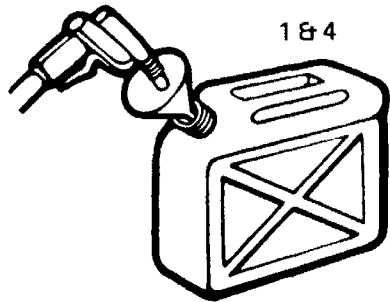
○ **NOTE:** To facilitate fuel mixing oil should be kept at room temperature.

## Fuel Mixing Procedure

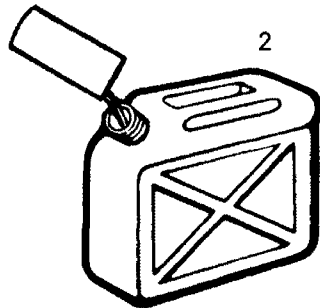
To mix the gasoline and oil always use a separate clean container. Never mix directly in your snowmobile tank. For best results, acquire two containers, either plastic or metal. Draw from one until empty then use the second one.

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

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

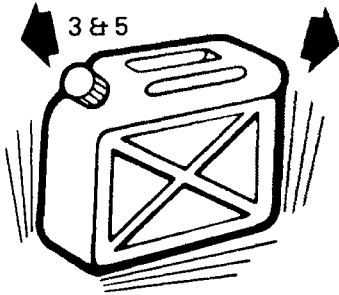


2. Add the full amount of oil.



## PRE-START CHECK

3. Replace the 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

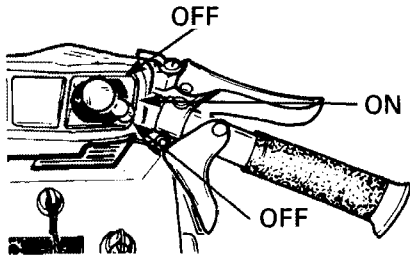
- Activate the throttle control lever several times to check that it operates easily and smoothly. The throttle control lever must return to idle position when released.
- Check fuel level.
- Check that the ski and tracks are not frozen to the ground or snow surface and that the steering operates freely.
- Activate the brake control lever and make sure the brake fully applies before the brake control lever touches the handlebar grip.
- Verify that the path ahead of the vehicle is clear of bystanders and obstacles.

Clean and check operation of the headlight, taillight and brake light.

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

# STARTING PROCEDURE

1. Insert key in ignition switch.
2. **Test throttle control lever.**
3. Activate primer (2 to 3 times). Primer is not necessary if engine is warm.
4. Ensure the tether cut-out cap is in position and that the cord is attached to your clothing. Check that the emergency cut-out switch is in the middle ON position.



5. Turn ignition key clockwise until starter engages. 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. Release key immediately after engine has started.

▼ **CAUTION:** Never operate your snowmobile with the battery removed or disconnected.

7. Check operation of emergency cut-out switch and the tether switch.

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

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

○ **NOTE:** If for some reason, the vehicle cannot be started electrically, place ignition key to ON position and start engine manually.

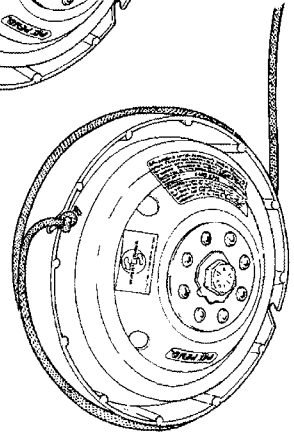
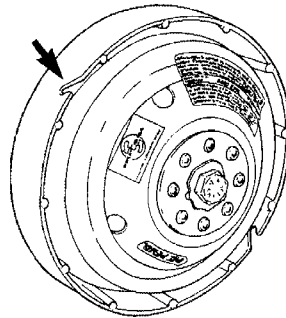
## Emergency Starting

Should the rewind starter rope fray and break, the engine can be started with an emergency starter rope.

○ **NOTE:** Transfer the rope handle to your emergency rope.

Remove pulley guard from vehicle and wind the emergency rope tight around the drive pulley sliding half.

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

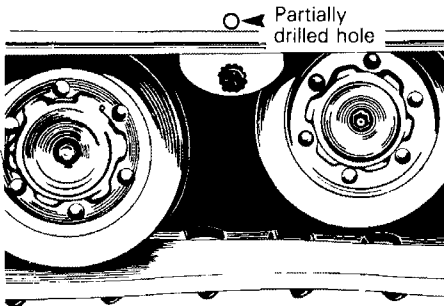


◆ **WARNING:** When starting the vehicle in an emergency situation by the drive pulley do not reinstall the pulley guard. Do not start the vehicle by the drive pulley unless it is a true emergency situation, have the vehicle repaired as soon as possible.

# DRIVING TIPS

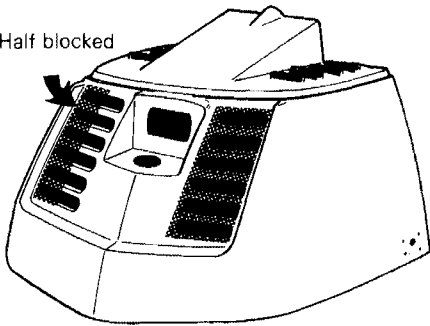
## Bogie wheel

By raising the outer attachment of the bogie wheel sets, vehicle maneuverability in deep snow will increase. You will note that there partially drilled holes located approx. 3.5 cm (1 3/8") above the original cross shaft holes of the frame. To reposition bogie wheel sets, drill holes fully through using a 5/16" dia. drill. Remove capscrews securing bogie wheel cross shafts to frame and reinstall bogie wheels in new position.



## Front Hood Louvers

Half blocked

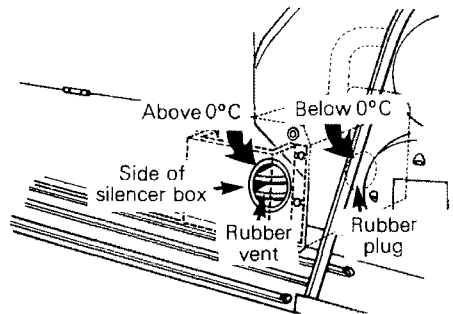


When operating the vehicle in powder snow it is advisable to block the front hood louvers as per illustration. Unblock the louvers as soon as snow condition becomes firmer or as soon as engine becomes too hot.

## Air Silencer Box

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

When operating the vehicle in temperature exceeding 0°C (32°F), the rubber plug must block the engine side orifice and the rubber vent must be positioned on the side of the silencer box to allow cold air circulation.



In temperatures below 0°C (32°F) and/or powder snow, the rubber plug must block the entry of fresh air on the side of the silencer box and the rubber vent must allow the warm air being emitted from the engine to be directed over the carburetor.

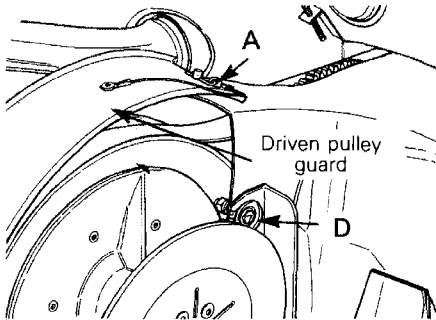
**CAUTION:** Observe temperature changes and locate plugs accordingly. Incorrect location of plugs may cause carburetor ice-up or engine overheating.

# BELT AND GUARD REMOVAL

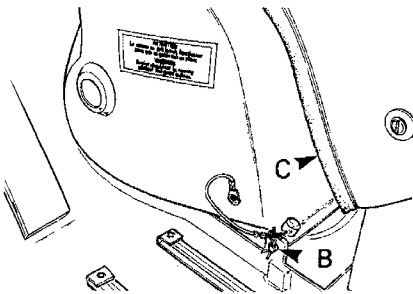
## Pulley Guard Removal

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

1. Remove hood. Pull out retaining clip (A) and tilt driven pulley guard toward front of vehicle.



2. Pull out retaining clip (B) to disengage pin (C) from bracket.

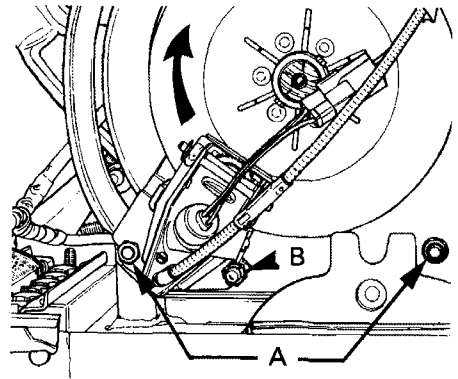


3. Move pulley guard toward front of vehicle to disengage front attaching device from front bracket.

## Drive Belt Removal

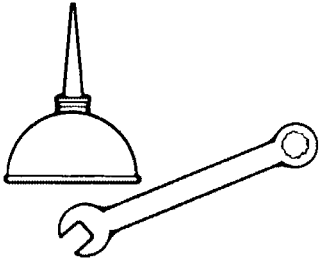
◆ **WARNING:** Never start or run engine without the drive belt installed. Running an unloaded engine is dangerous.

Remove hood and pulley guard. Remove the two bolts (A) holding disc brake to the frame. Loosen nut (B) to separate brake caliper from disc brake bracket. Pivot the brake bracket assembly half a turn. Open the driven pulley. Twist and push the sliding half then hold in open position; slip slackened belt over the top edge of the sliding half. Slip the belt out from the drive pulley and remove from vehicle by passing it under the driven pulley and disc brake assembly. To install drive belt follow reverse procedure.



# 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 safe and trouble-free 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. Unless otherwise specified, engine should be turned OFF for all lubrication and maintenance procedures.

## Driven Pulley

With hood removed, grease the driven pulley shaft as follows:

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

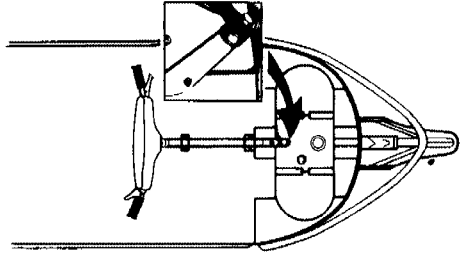
Thoroughly clean the driven pulley shaft.

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.

## Steering Mechanism

Using light machine oil, lubricate the spring located on top of steering column housing. Allow oil to run in. Oil the mobile contact point at bottom end of steering arm. Using a small brush, dipped in low temp grease, lubricate steering arm ball joint.

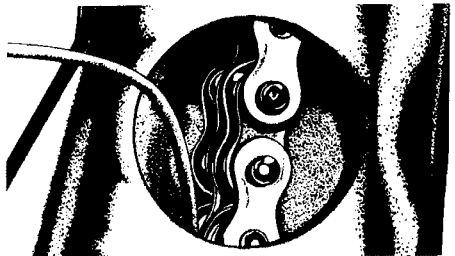


Grease the ski leg at grease fitting until new grease appears at the joint. Lubricate spring coupler bolt with oil.

## Gearbox Oil Level

The gearbox oil capacity is 454 mL (16 oz). To check level:

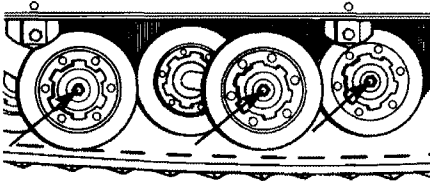
Remove rubber inspection cover located on bottom right side of gearbox. Using a rigid piece of wire as dipstick, check oil level. Oil level must reach 82 mm (3 1/4") on dipstick.



To fill, remove filler cap from top of gearbox. Refill as required using Bombardier chaincase oil.

## Bogie Wheels

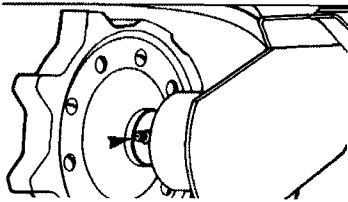
Grease the suspension bogie wheels with low-temperature grease. Pump through the grease fitting at the center of each wheel until new grease appears at the joint of inner side.



To grease the inner side bogie wheels, tilt vehicle on its side and apply pressure on track to expose grease fittings.

## Rear Axles

Lubricate the rear axles with low-temperature grease. Pump grease through the rear axle fittings.



▼ **CAUTION:** Always use a low-pressure grease gun.

# 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.

<b>SERVICE AND MAINTENANCE CHART</b>	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
Spark plugs		●		23
Battery	●			23
Suspension		●		23
Tracks		●		23
Track tension and alignment		●		24
Carburetor adjustment			●	24
Drive belt	●			25
Steering mechanism		●		25
Drive chain tension			●	25
Drive pulley		●		26
Brake condition	●			26
Steering adjustment		●		26
Engine head nuts			●	26
Engine mount nuts			●	26
Muffler attachment		●		26
Fan belt			●	26
General inspection		●		27

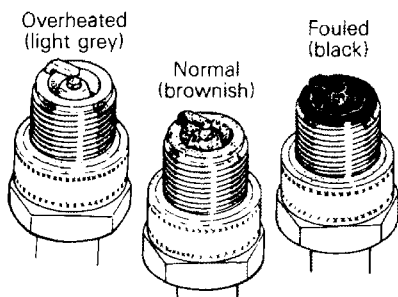
○ **NOTE:** The ten hour inspection is a very important part of proper service and maintenance.



## Spark Plugs

Open access door. Disconnect spark plug wires and remove plugs. Check condition of plugs.

- A brownish tip reflects ideal conditions. (Correct carburetor, spark adjustment, 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.



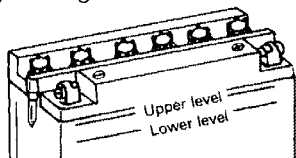
**CAUTION:** If spark plug condition is not ideal, contact your authorized dealer.

Check spark plug gap using a wire feeler gauge. Gap must be 0.5 mm (.020").

Reinstall plugs and connect wires.

## Battery

Check electrolyte level weekly. 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 overflow tube is not blocked or linked.

**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.

## Suspension

Visually inspect suspension springs. Replace any weak or broken spring.

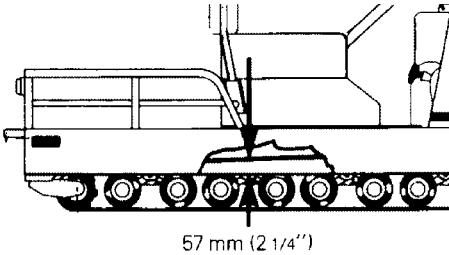
## Tracks

Lift rear of vehicle and support it off the ground. With the engine OFF, place gear shift lever in forward position, rotate tracks manually and inspect condition. If worn or cut, or if track fibers are exposed or missing or defective inserts are noted, contact your dealer.

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

## Track Tension and Alignment

Lift the rear of vehicle and support it off the ground. Using a ruler, check track tension, at the second set of bogie wheels from rear.

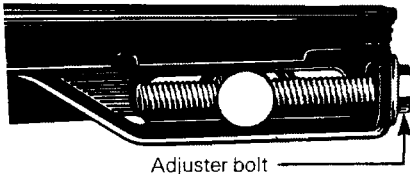


The deflection of each track should be 57 mm (2 1/4") between top inside edge of track and center of bogie wheel set retaining bolt.

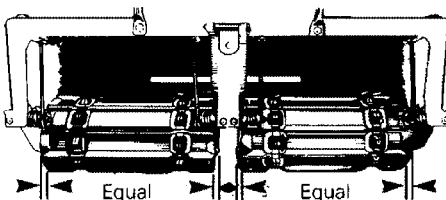
To adjust track use the following procedure:

Loosen link plate spring lock nuts (4) located on inner side of link plate springs.

Turn adjuster bolts clockwise to tighten tracks, counterclockwise to slacken.



Start engine and allow tracks to rotate **slowly**. Check if tracks are well centered and turn evenly on the rear sprockets. The distance between track edges and link plates should be equal.



To correct:

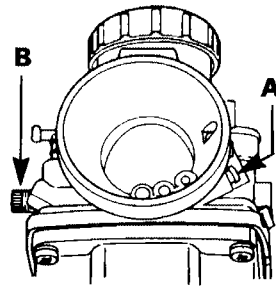
Turn inner side adjuster bolt(s) counterclockwise to bring track closer to center link plate(s), turn clockwise to withdraw track(s) from link plate(s).

Tighten link plate spring lock nuts.

Rotate tracks **slowly** and recheck alignment.

◆ **WARNING:** Before checking track alignment, ensure that the track is free of all particles which could be thrown out while track is rotating. Keep hands, tools, feet and clothing clear of track. Ensure nobody is standing near the vehicle.

## Carburetor



### A) Air Screw Adjustment

Completely close the air screw (until a slight reseating resistance is felt) then back off screw: 1 1/2 turn  $\pm$  1/8.

### B) Idle Speed Adjustment

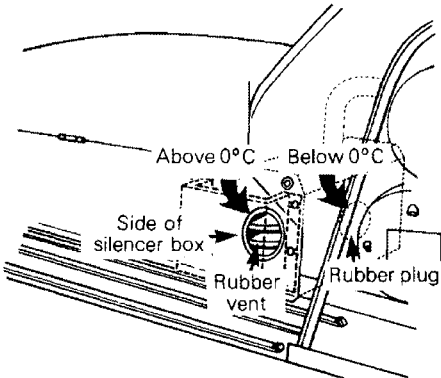
Turn the idle speed screw clockwise until it contacts the throttle slide then continue turning two (2) additional turns. This will provide a preliminary idle speed setting. Start the engine and allow it to warm then adjust the idle speed to 1500-1800 R.P.M. by turning the idle speed screw clockwise or counterclockwise.

▼ **CAUTION:** Do not attempt to set the idle speed by using the air screw. Severe engine damage can occur.

## Air Silencer Box

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

When operating the vehicle in temperature exceeding 0°C (32°F), the rubber plug must block the engine side orifice and the rubber vent must be positioned on the side of the silencer box to allow cold air circulation.



In temperatures below 0°C (32°F) and/or powder snow, the rubber plug must block the entry of fresh air on the side of the silencer box and the rubber vent must allow the warm air being emitted from the engine to be directed over the carburetor.

▼ **CAUTION:** Observe temperature changes and locate plugs accordingly. Incorrect location of plugs may cause carburetor ice-up or engine overheating.

## 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, it should not be less than 30 mm (1 3/16") wide.

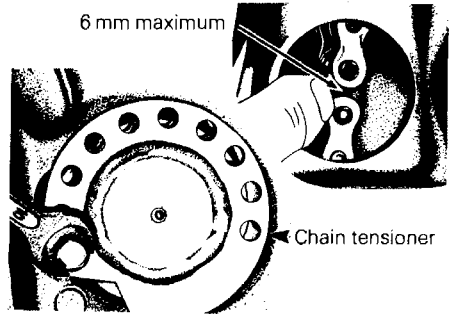
○ **NOTE:** When installing a new drive belt, break-in period of 15-25 km (10-15 miles) is strongly recommended.

## Steering Mechanism

Inspect steering mechanism for tightness of components (steering arm, ball joint, etc.). If necessary, replace or retighten. Check condition of ski and ski runner. Replace if more than half worn.

## Drive Chain Tension

Run vehicle forward so that true free-play can be taken. Check tension then turn driven pulley 1/2 turn counter-clockwise and recheck. Starting from maximum reading, adjust chain tension to 6 mm (1/4") free-play. Remove capscrew locking chain tensioner in place. (Tensioner is located at bottom left of gearbox).

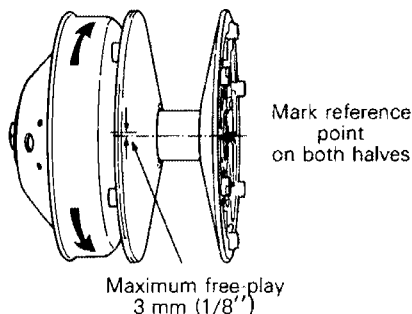


Rotate the tensioner as required to obtain correct chain tension.

Replace capscrew to lock chain tensioner in place.

## 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.



## Brake

The brake mechanism is self-adjusting, therefore, periodic adjustment is not required. However, the brake mechanism can be checked by depressing brake control lever. Brake should apply fully when lever is 13 mm (1/2") approx. from handlebar grip. If it does not, do not tamper with the brake, contact your servicing dealer. Check the stop light to see if it functions. If necessary, readjust switch position.

◆ **WARNING:** Brake pucks less than 5 mm (3/16 in.) thick must be replaced. Replacement must be performed by an authorized Bombardier dealer. Always check the stop light to see if it functions.

## Steering Adjustment

Ski should be perpendicular to handlebar. To align:

Remove steering padding.

Remove bolt securing handlebar to steering column.

Remove handlebar to expose splined end of steering column.

Reposition handlebar on splines so that it is perpendicular with ski. Install and tighten bolt to 40-47 N•m (30-35 ft-lbs).

○ **NOTE:** If correct spline alignment is unobtainable at handlebar, move lower steering bracket (located on top of gearbox) to obtain proper location. Lower steering bracket holes are slotted.

## Engine Head Nuts

**IMPORTANT:** The engine head nut torque should be checked after the first 5 hours of operation.

With **engine cold**, check that engine head nuts are tight and equally torqued to 20 N•m (15 ft-lbs).

## Engine Mount Nuts

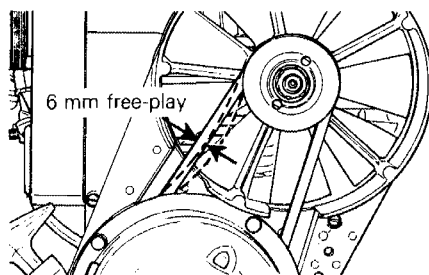
Check engine mount nuts for tightness. Retighten if necessary.

## Muffler Attachment

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

## Fan belt

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



If belt seems damaged or if tension is incorrect, contact your dealer immediately.

◆ **WARNING:** If fan protector is removed, always reinstall after servicing.

# STORAGE

## 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 ski and ski runner for wear.

## Bulb Replacement

If headlamp is burnt, remove hood. 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.

◆ **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.

## Tracks

Inspect tracks for wear, cuts, missing tracks inserts or broken rods and make any necessary replacement.

◆ **WARNING:** Do not operate a snowmobile with a cut, torn or damage track.

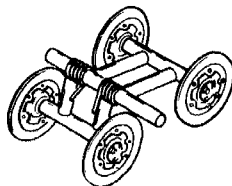
Lift rear of vehicle until tracks are clear of ground, then support it with a brace or trestle. The snowmobile should be stored in such a way that the tracks does not stay in contact with cement floor or bare ground.

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

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

## Suspension

Remove the bogie wheel sets from the vehicle. Remove cross shaft from bogie wheel set. Clean bogie wheel assembly and cross shaft of dirt or rust. Grease each bogie wheel until a old grease is flushed out. Spray bogie wheel springs with metal protector. If unavailable, wipe with cloth or rag soaked in oil. Check condition of shaft and replace if bent or worn. Apply a coat of low temp. grease on cross shaft.



Reassemble entire bogie wheel set, making sure assembly moves freely. Reinstall bogie wheel set. Repeat above steps on remaining bogie wheel sets. Lubricate rear hubs through grease fittings.

## Ski Assembly

Wash or brush all dirt or rust accumulation from ski and spring. Grease ski leg at grease fitting. Check condition of ski and ski runner. Replace if worn or weak. Apply metal protector on ski assembly. If unavailable, wipe the entire ski with a cloth soaked in oil to prevent rust formation.

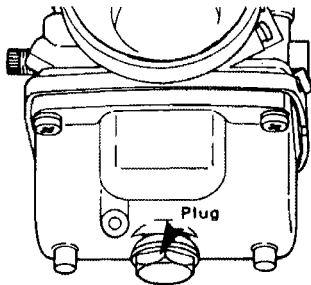
## Fuel Tank and Carburetor

Remove cap the using a syphon, remove 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.

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.



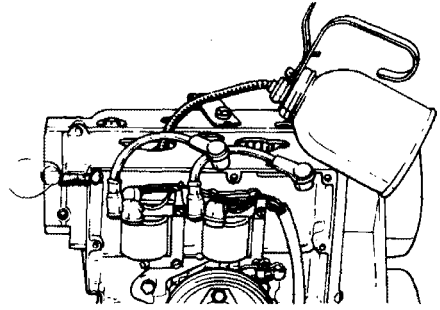
Reinstall plug and connect fuel line. Check all fuel lines, replace if necessary.

## 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, operate rewind starter to bring piston at top position. Pour the equivalent of one spoonful of oil into spark plug hole.

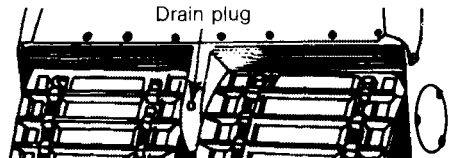


Slowly crank engine several times using manual starter. Repeat above steps for other cylinder. Install spark plugs.

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

## Gearbox

Drain gearbox and refill with 454 mL (16 oz) of fresh Bombardier chaincase oil. (Drain plug is located beneath frame).



## Controls

Lubricate steering mechanism. Inspect components for tightness, spring coupler bolt, steering arm locking bolt, ball joint, etc.). Tighten if necessary. Oil moving joints of brake mechanism.

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

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

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

## Driven Pulley

Remove hood 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.

## 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 is necessary with distilled water. Fully charge battery. (A stored battery should be recharged at least every 40 days).

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

◆ **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 electrical connections and switches with a greaseless metal protector, if unavailable, use petroleum jelly. Store unit in a cool, dry place.

## Chassis

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

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

Inspect hood and repair damage. Repair kits are available at your authorized Bombardier dealer.

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

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

▼ **CAUTION:** Cover the snowmobile with an opaque tarpaulin. This caution will prevent the sun rays or grime from 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.

## PRE-SEASON PREPARATION CHART

To be performed by dealer ●	
To be performed by owner ○	
Change spark plugs	○
Check gear box oil level	○
Check pulleys, clean and check condition of drive pulley	●
Check steering adjustment / ski runner	○
Replace fuel filter	○
Connect fuel lines and check attaching points	○
Check track 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)	○
Inspect condition of starting rope	○
Check tightness of all bolts, nuts and linkage	○
Refill gas tank	○
Adjust carburetor	●
Check fan belt condition and tension	●



# 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.

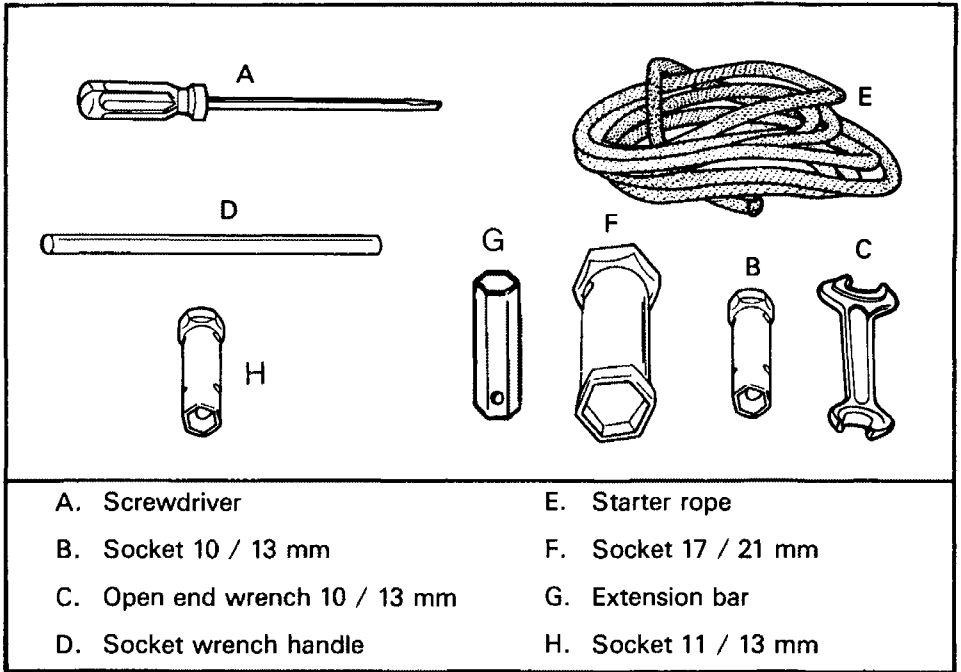
SYMPTOMS	POSSIBLE CAUSES	WHAT TO DO
Engine turns over but fails to start or starts with difficulty	1. No fuel to the engine	Check the tank level and fill up with correct gas-oil mixture. Check for possible clogging of fuel line, item 5.
	2. Flooded engine	Remove wet spark plugs, turn ignition to OFF 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/faulty 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, <b>being careful to hold away from spark plug hole</b> . 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)	Check condition and connections of fuel lines. Check the cleanliness of fuel tank.
	5. Incorrect carburetor adjustment	Contact your dealer.
	6. Too much oil in fuel	Drain the fuel tank and refill with the correct gas/oil mixture.
	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.

<b>SYMPTOMS</b>	<b>POSSIBLE CAUSES</b>	<b>WHAT TO DO</b>
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. Carburetor	Contact your dealer.
	4. 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 locate specific symptoms, contact your dealer.
Engine continually backfires	1. 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.
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. Engine	Check item 1 to 5 of "Engine lacks acceleration or power".
	4. Pulley misaligned	Contact your dealer.

# TOOLS

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

## Standard Tools

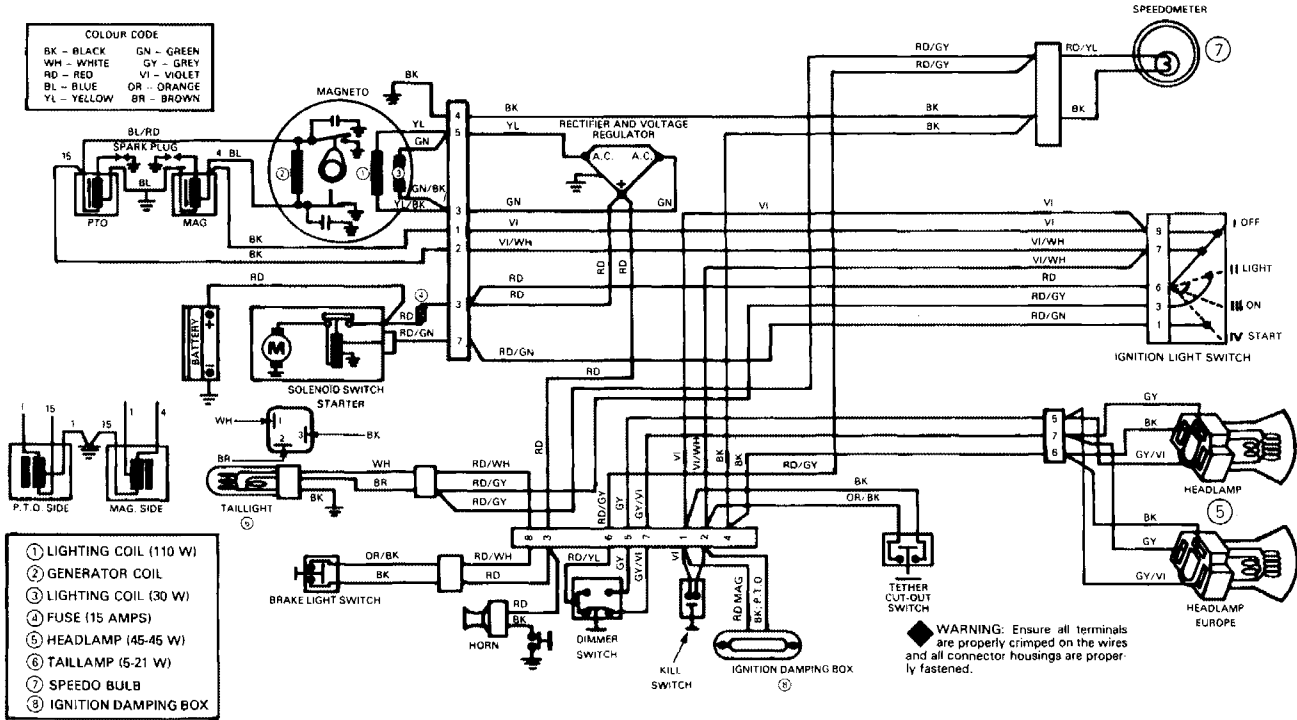


# SPECIFICATIONS

	ALPINE 640 ER
<b>ENGINE</b> No. of cylinders Bore Stroke Displacement Compression ratio (corrected) Carburetor type Carburetor adjustment — air screw — main jet — idle speed Engine head nuts (torque) Fan belt free-play	2 76 mm (2.992 in.) 70 mm (2.755 in.) 635.1 cm <sup>3</sup> (38.76 in. <sup>3</sup> ) 6:1 VM 34-215 1 1/2 turn $\pm$ 1/8 280 1500-1800 R.P.M. 20 N•m (15 ft-lbs) 6 mm (1/4 in.)
<b>CHASSIS</b> Overall length Overall width Overall height Ski alignment Handlebar / steering column bolt torque Weight Bearing area Ground pressure	288.3 cm (113.5 in.) 90.1 cm (35 1/2 in.) 123.5 cm (48 1/2 in.) Ski perpendicular to handlebar 40-47 N•m (30-35 ft-lbs) 292.6 kg (645 lbs) 13936.3 cm <sup>2</sup> (2160 in. <sup>2</sup> ) 2.05 kPa (.298 lbs/in. <sup>2</sup> )
<b>POWER TRAIN</b> Track dimensions Track tension  Track alignment Std. gearbox ratio Gearbox oil capacity Gearbox chain tension Drive belt (minimum width)	2 x 38.1 cm (15 in.) x 353 cm (139 in.) A deflection of 57 mm (2 1/4 in. $\pm$ 1/8 in.) should exist between the top inside edge of the track and the retaining bolt of the second bogie wheel set from the rear of the vehicle. Equal distance between edges of tracks and link plates. 17/38 454 mL (16 oz.) 6 mm (1/4 in.) 30 mm (1 3/16 in.)
<b>ELECTRICAL</b> Lighting system (output) Headlamp bulb Tail/stop light Spark plug Spark plug gap Breaker point gap Advanced ignition timing — indirect	12 volts, 140 watts 45/45 W 5/21 W Bosch M 240 T1 (M4A2) 0.5 mm (.020 in.) .36 - .41 mm (.014 - .016 in.) 3.9 - 4.4 mm (0.153 - 0.173 in.)
<b>FUEL</b> Tank — SI* capacity — Imp. — U.S. Gasoline Gas/oil ratio	22.7 liters 5 gallons 6 gallons Regular (leaded or unleaded) 50/1
<b>BRAKE</b> Brake type Brake adjustment (control lever)  Brake linings (minimum thickness)	Disc, self-adjusting 13 mm (1/2 in.) minimum distance from handlebar grip when fully applied 5 mm (3/16 in.)

\*International Standard

*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 them on its product previously manufactured.*



# 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

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## 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. 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





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

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VALCOURT, QUEBEC  
CANADA, JOE 2L0