

elan®

OLYMPIQUE*

everest®

T'NT®

Alpine®



ski-doo®
snowmobiles

1978 OPERATOR MANUAL

model _____

V.I.N. _____

purchase date _____

warranty expiry date _____

DEALER IMPRINT AREA

Text by:

Technical Information Centre
After Sales Service Department
Bombardier Limited
Valcourt, Quebec
Canada, JOE 2L0

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BOMBARDIER	EVEREST	MOTO-SKI
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ALPINE	NORDIC	SPIRIT
BLIZZARD	OLYMPIQUE	NUVIK
CARRY-BOOSE	SKI-BOOSE	SONIC
ELAN	T'NT	
ELITE		

FOREWORD


CONGRATULATIONS... You are now the proud owner of a new 1978 Ski-Doo 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. We do respect your desires and that of others.


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.


Although the Alpine model is intended for utilitarian use rather than recreational for simplicity, it has been included in this operator manual.

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

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 at high R.P.M. when the track of the vehicle is 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 or tether switches, or turning off the key.
- On T'NT equipped with free air engine since the engine cooling is in effect only when the vehicle is in motion, it is recommended that you do not allow the engine to idle for more brief periods. Prolonged idling and low speed operation may cause engine damage.

Please read and understand all other warnings contained elsewhere in this manual.

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

INDEX

CONTROLS / INSTRUMENTS

Throttle control lever, brake control lever, ignition / light switch, headlamp dimmer switch, emergency cut-out switch, decompressor, manual starter handle, choke, primer, tachometer, speedometer, tether cut-out switch, gear shift lever, cab opening, tool box, seat compartment, fuel gauge. **5-7**

BREAK-IN PERIOD

10-hour inspection **7**

FUEL MIXING

Recommended gasoline, recommended oil, fuel mixture ratio, fuel mixing procedure **8**

PRE-START CHECK

Check points **9**

STARTING PROCEDURE

Manual starting, electric starting, emergency starting. **10-11**

LUBRICATION

Console removal, pulley guard removal, drive belt removal, bogie wheel suspension, slide suspension, steering mechanism, chaincase oil level, gearbox oil level, drive pulley, driven pulley. **12-16**

MAINTENANCE

Spark plug, battery, suspension condition, track condition, track tension and alignment, carburetor adjustment, drive belt, steering mechanism, drive chain tension brake, steering adjustment, engine head nuts, engine mount nuts, muffler attachment, fan belt, general inspection, ventilation, headlamp adjustment, bulb replacement. **16-26**

STORAGE

Track, suspension, ski, controls, chaincase, gearbox, driven pulley, drive pulley, fuel tank, carburetor, cylinder lubrication, battery, chassis, general inspection **27-29**

PRE-SEASON PREPARATION

Pre-season preparation chart **30**

TROUBLE SHOOTING GUIDE

31-32

HOW TO IDENTIFY YOUR SNOWMOBILE

33

THE 1978 "LIMITED WARRANTY"

34-35-36

OFTEN ASKED QUESTIONS

37

CONSUMER GUIDE

39

LISTING OF AREA DISTRIBUTORS

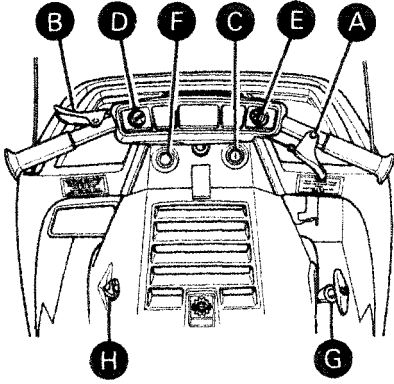
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CHANGE OF ADDRESS OR OWNERSHIP

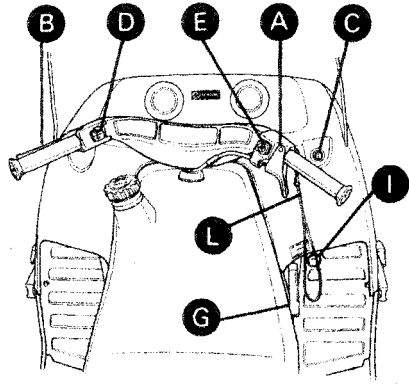
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CONTROLS / INSTRUMENTS

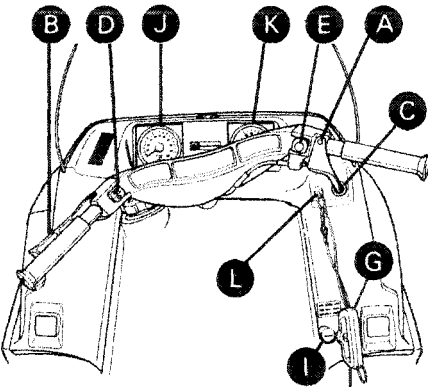
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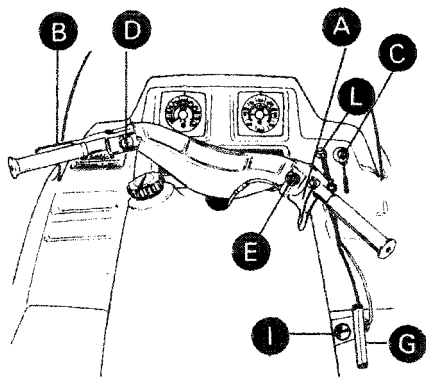
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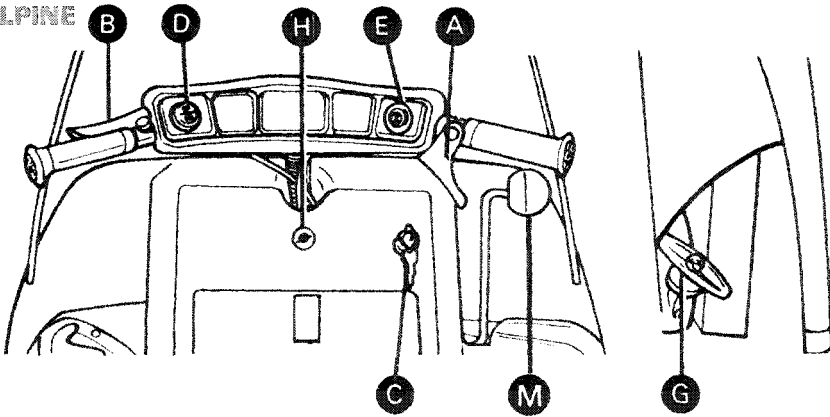
EVEREST



TWT



ALPINE



- A) Throttle Control Lever
- B) Brake Control Lever
- C) Ignition / Light Switch
- D) Headlamp Dimmer Switch
- E) Emergency Cut-Out Switch
- F) Decompressor (Elan single cylinder engine only)
- G) Manual Starter Handle

- H) Choke (Elan and Alpine models only)
- I) Primer
- J) Tachometer
- K) Speedometer
- L) Tether Cut-Out Switch
- M) Gear Shift Lever

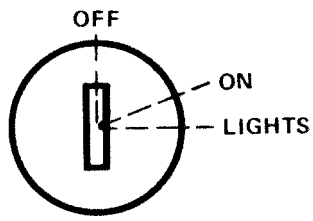
A) Throttle Control Lever

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

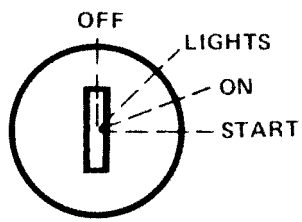
Located on the left side of handlebar. When compressed, the brake is applied. When released, it automatically returns to its original position. Braking effect is proportionate to the pressure applied on the lever.

C) Ignition / Light Switch (Manual Start Models)



Key operated, 3 position switch. To start engine, first turn key clockwise to ON position. **To stop engine**, turn key counter-clockwise to OFF position. Turning key fully clockwise, with engine running, illuminates both headlamp and taillight.

(Electric Start Models)



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

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

E) 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 situation the source of malfunction should be determined and corrected before restarting engine.

F) Decompressor (Single Cylinder Engine only, Elan Model)

Two position (OFF / ON). push-pull knob. To engage, pull decompressor knob fully out.

▼ CAUTION: The decompressor provides easier starting by reducing engine compression. However, leaving decompressor engaged while running will damage your engine. Always disengage after engine has started.

G) Manual Starter Handle

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

H) Choke

On Elan model, to engage choke, turn knob clockwise to ON position. To disengage, turn to OFF position. On Alpine model, pull button to engage choke, push to disengage. The choke should always be used for easier cold engine starts. After engine is warm however, it is not necessary to use choke when starting.

I) 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.

J) Tachometer (Everest 440-440E models only)

The tachometer registers the impulses of magneto. Direct-reading dial indicates, in thousands, the number of revolutions per minute (RPM) of the engine.

▼ CAUTION: The tachometer is protected by a fuse. If tachometer stops operating, check fuse condition and if necessary, replace. The fuse is .1 amps. Do not use a higher rated fuse as this can cause severe damage to the tachometer.

K) Speedometer (Everest 440-440E models only)

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.

L) 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 be 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 re-starting engine.

M) Gear Shift Lever (Alpine model only)

A 2 position, (FORWARD / REVERSE) gear shift lever. Push **up** for forward and **down** for reverse.

▼ CAUTION: Do not activate gear shift lever while snowmobile is in motion.

○ NOTE: When towing a disabled vehicle, its drive belt must be removed from pulleys and the gear shift lever positioned into forward gear.

Cab Opening

For Elan models; unlock latches on both sides where cab meets frame. For Olympique and T'NT models; push down on cab and turn cab handles toward front of vehicle. On Everest models; lift both handles to disengage latches.

○ **NOTE:** Always lift cab gently up until stopped by restraining device.

On Alpine model, the cab is removable, unlatch cab by turning both handles toward front of vehicle, remove fuel tank cap, gently lift cab then disconnect junction block at right side of engine. Remove cab from vehicle.

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

Tool box (All models except Alpine)

Located under the cab. To gain access, tilt cab. Ideal location for spare plugs, belt, rope, etc.

Seat Compartment (Alpine model)

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

On all models except Elan models, unscrew fuel tank cap and withdraw dipstick to check fuel level. On Elan models, the tank is translucent and fuel level can be checked by opening cab and glancing at tank.

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

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, 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 hours inspection is at the expense of the vehicle owner.

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 (not less than 92 octane), available from all service stations.

CAUTION: Never experiment with different fuel or fuel ratios. Never use low lead or non leaded gasoline, 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.

5 gallons of regular gasoline plus 1 can of 50 / 1 concentrated Bombardier snowmobile oil = correct fuel mixture.

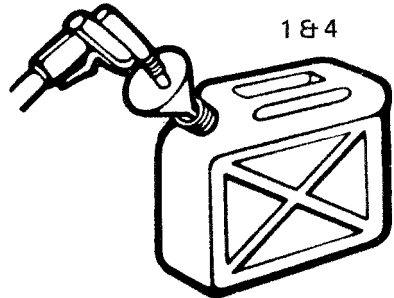
NOTE: To facilitate fuel mixing, oil should be kept at room temperature.

Fuel Mixing Procedure

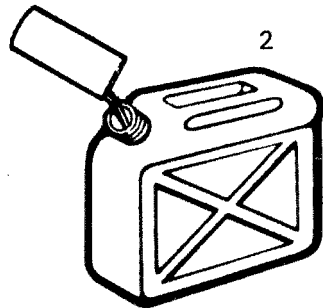
To mix the gasoline and oil always use a separate clean container. Never mix directly in your snowmobile tank. For best results, acquire two containers, either plastic or metal. Draw from one until empty then use the second one.

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.

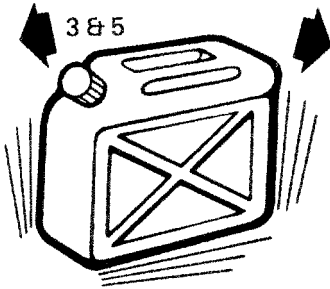


2. Add the full amount of oil.



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.

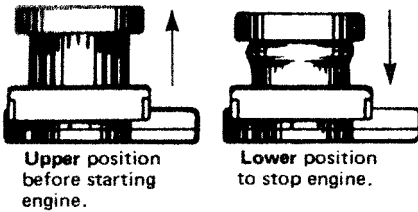
◆ **WARNING:** Never 'top up' gas tank before placing vehicle in a warm area. At certain temperatures, gasoline will expand and overflow.

Check Points

- Check fuel level.
- Check that the skis and the track are not frozen to the ground or snow surface and that the steering operates freely.
- 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.
- 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.

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

STARTING PROCEDURE



Emergency cut-out button

Manual Starting

1. Insert key in ignition and turn to ON position.
2. **Test throttle control lever.**
3. On vehicle equipped with a choke system, engage the choke, on other models activate the primer (2 to 3 times). (On Elan single cylinder model, also pull decompressor knob fully out).
- **NOTE:** Choke or primer are not necessary when engine is warm.
4. On vehicle equipped with emergency cut-out switch, make sure that the tether cut-out cap is in position and that the cord is attached to your clothing. Check that the emergency cut-out button is in the release upper position.
5. Grasp manual starter handle firmly and pull slowly until a resistance is felt then pull vigorously. Slowly release rewind starter handle.

◆ **WARNING: Do not apply throttle while starting.**

6. If applicable, disengage choke. On Elan single cylinder model, push in decompressor.
7. Check operation of the emergency cut-out switch, and where applicable, tether switch. Restart engine.

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

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

▼ **CAUTION: On T'NT free air model since engine cooling is in effect only when the vehicle is in motion. Prolonged idling and low speed operation may cause engine damage. Do not allow the engine to idle for more than brief periods.**

Electric Starting

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

1. Insert key in ignition switch.
2. **Test throttle control lever.** Activate primer (2 or 3 times) or engage choke.
- **NOTE:** Choke or primer are not necessary when engine is warm.
3. On vehicle equipped with emergency cut-out switch, make sure that the tether cut-out cap is in position and that the cord is attached to your clothing. Check that the emergency cut-out button is in the released upper position.
4. 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.**

5. Released key immediately engine has started. If applicable, disengage choke.
6. Check operation of the emergency cut-out switch and when applicable, tether switch. Restart engine.

◆ **WARNING: If engine does not shut-off when applying the emergency cut-out switch and where applicable, pulling the tether cut-out cap, 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.

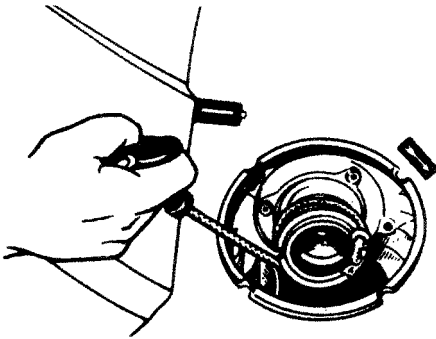
○ **NOTE:** If for some reasons, the vehicle cannot be started electrically, place ignition key to ON position and start engine manually.

Emergency Starting

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

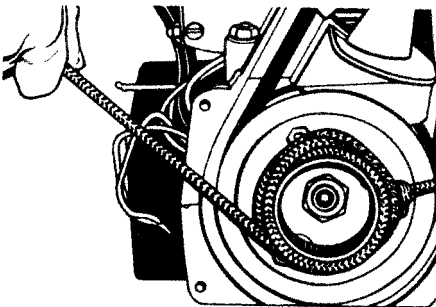
Remove the rewind starter assembly from the engine and transfer the rope handle to your emergency rope.

Wind rope around starting pulley.



Single Cylinder Engine

○ **NOTE:** On Elan twin cylinder, the knot of the emergency rope should be positioned behind one bolt head of the pulley.



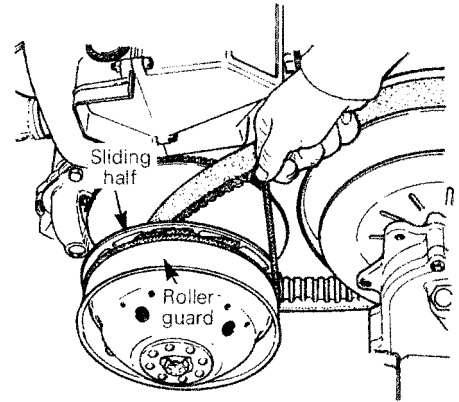
Elan Twin Cylinder

Pull vigorously as per usual manual starting to start 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.

On all models except Elan

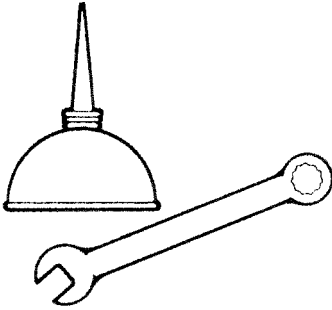
Remove pulley guard from vehicle and wind the emergency rope tight around the drive pulley between the sliding half and the roller guard. Start engine as per usual manual starting.



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

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 retain 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.

Console Removal (Elan model only)

For any procedure that may require removal of console, proceed as follows:

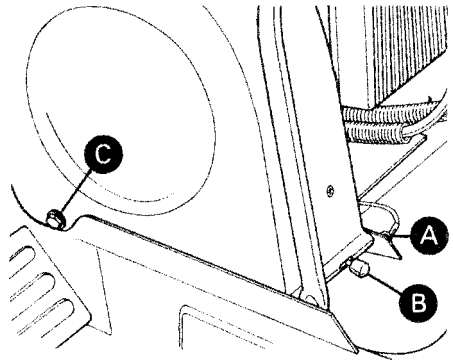
1. Unlock latch where console and dashpanel meet.
2. Push the console downward then tilt away from engine. To reinstall, reverse procedure.

Pulley Guard Removal

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

Elan Models

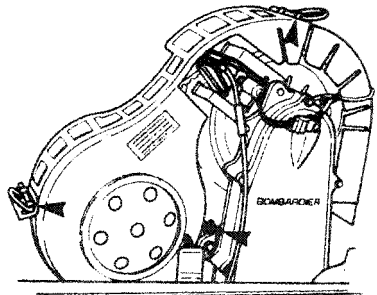
1. Tilt cab and remove console.
2. Remove driven pulley guard (front) by unlocking it from attaching points.
3. To remove drive pulley guard, pull out retaining clip (A) and pull on spring (B) to disengage pin from bracket.



4. Push pulley guard forward to disengage front attachment (C) from frame. Lift guard from vehicle.

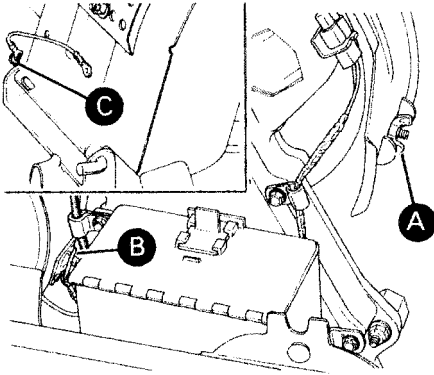
Olympique Models

Detach air duct from engine and pull it from muffler compartment wall. Unlock pulley guard from attaching points and remove from vehicle.



Everest and T'NT models

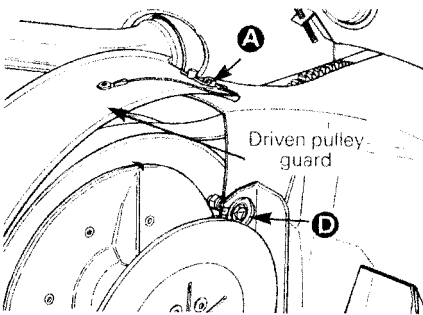
1. Tilt cab, unscrew wing nut (A) and pull out retaining clips (B & C).



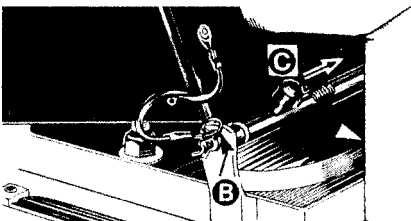
2. Disengage guard from rear and middle brackets then disengage pin from front bracket. Remove complete assembly.

Alpine Model

1. Remove cab. 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.

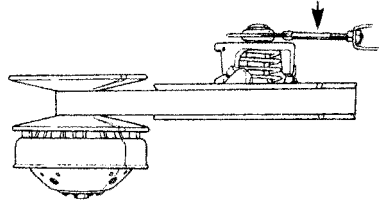
Drive Belt Removal

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

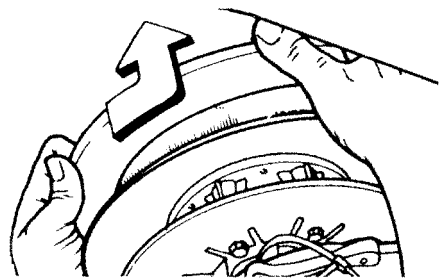
All models except Alpine

1. Tilt cab and remove pulley guard. On Everest and T'NT models, unlock and raise driven pulley support.

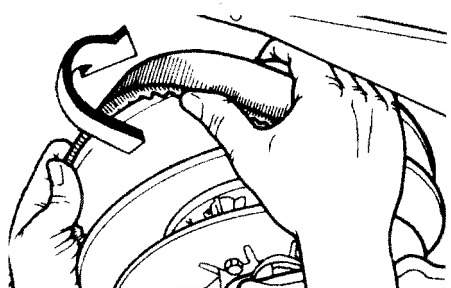
Driven pulley support



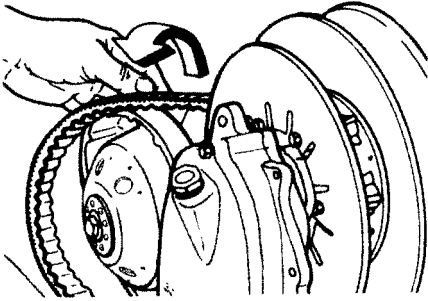
2. Open the driven pulley by twisting and pushing the sliding half. Hold in fully open position.



3. Slip slackened belt over the top edge of the sliding half.

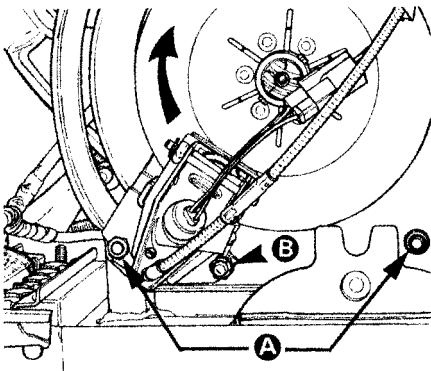


- Slip the belt out from the drive pulley and remove completely from vehicle. To install drive belt, reverse procedure.



Alpine model only

Remove cab 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.



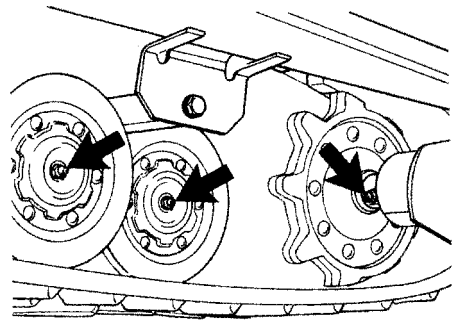
Bogie Wheel Suspension

Lubricate the suspension bogie wheels using low temperature grease. Pump through the grease fitting at center of

each wheel until new grease appears at the joint of inner side of shaft.

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

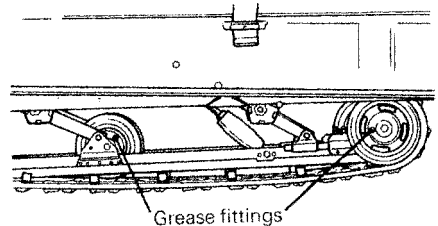
Lubricate the rear axle with low-temperature grease. Pump through the rear axle fittings.



CAUTION: Always use a low pressure grease gun when lubricating rear axle.

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.

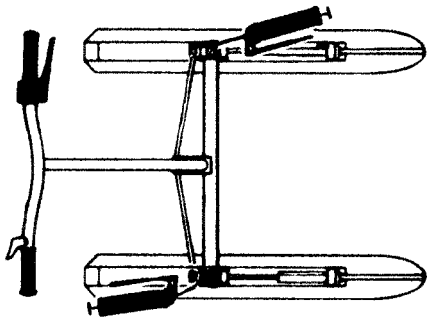


Steering Mechanism

WARNING: Do not lubricate throttle and / or brake cable and housings.

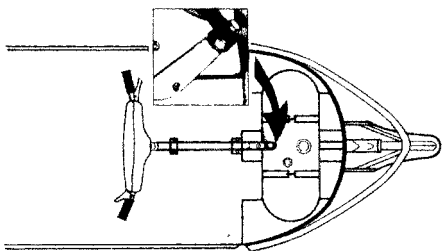
All models, except Alpine

Lubricate ski legs at grease fittings until new grease appears at joints. Oil spring coupler bolts.



Alpine model

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.

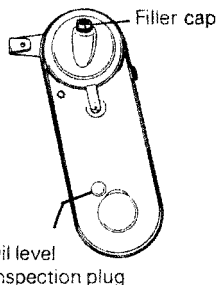


Grease the ski leg at grease fitting until new grease appears at the joint. Lubricate spring coupler bolt with oil.

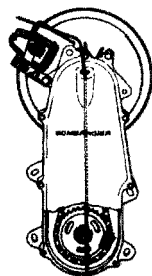
Chaincase Oil Level

Elan models

Remove tool box then check oil level by removing oil level inspection plug. Oil should be at bottom lip of hole. Replenish as necessary by removing the filler cap using a spark plug socket.



Elan



Olympique, Everest and T'NT

Olympique, Everest and T'NT models

Using the spark plug socket, remove the filler cap then using a rigid wire as a "dipstick" check oil level. The oil level on the "dipstick" should be 7.5 to 8.5 cm (3" to 3½"). Replenish as necessary.

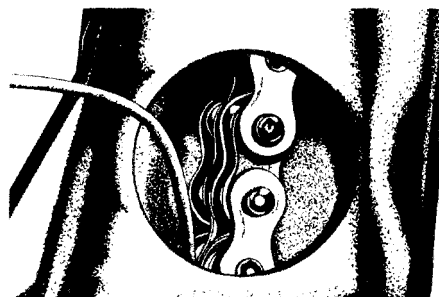
NOTE: On all models, the chaincase oil capacity is approximately 256 ml (9 oz.).

Gearbox Oil Level

Alpine model

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 8.2 cm (3¼") on dipstick.



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

Drive Pulley

Elan models only

The drive pulley requires lubrication bi-monthly or every 20 hrs. of operation. All other models, covered in this manual do not require lubrication.

◆ **WARNING:** The lubrication of the drive pulley should be performed only by an authorized dealer. A disassembly, cleaning, inspection and lubrication where applicable should also be performed by the dealer every 100 operating hours or at the end of each season, whichever occurs first.

IMPORTANT: The drive pulley assembly will be excluded from warranty, if the factory seal is broken by other than a duly authorized representative of Bombardier.

Driven Pulley (Alpine model only)

With cab 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.

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 year 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.

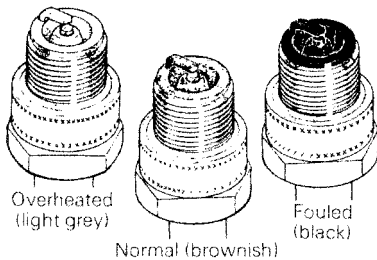
CODE WEEKLY		PAGE
W1	Spark plug	17
W2	Battery (electric start models)	17
W3	Suspension condition	17
W4	Track condition	18
W5	Track tension and alignment	18,19,20
W6	Carburetor adjustment	20,21,22
W7	Drive belt	22
W8	Steering mechanism	22,23
W9	Drive chain tension (Alpine)	23
CODE MONTHLY		PAGE
M1	Brake	23,24
M2	Steering adjustment	24,25
M3	Engine head nuts	25
M4	Engine mount nuts	25
M5	Muffler attachment	25
M6	Fan belt (twin cylinder fan cooled engine)	25
M7	General inspection	25,26
M8	Ventilation (Olympique)	26
	Headlamp adjustment	26

(W1) Spark Plugs

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.

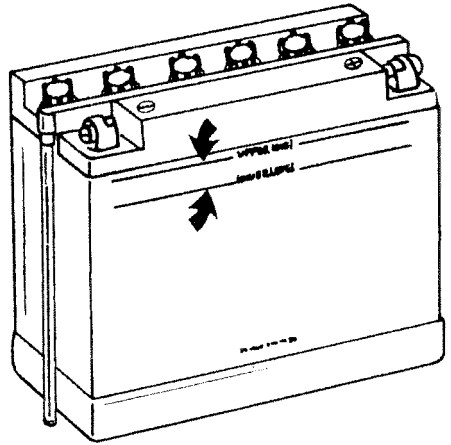
Check spark plug gap using a wire feeler gauge.

Reinstall plugs and connect wires.

(W2) Battery (Electric start models)

Check electrolyte level. Electrolyte level must be at upper level line on battery casing.

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



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

After reconnecting battery coat battery terminals and connectors with petroleum jelly to prevent corrosion. Check that battery is well secured and that battery overflow tube is not blocked or kinked.

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

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

(W4) Track Condition

Lift rear of vehicle and support it off the ground. With engine **off**, rotate track by hand and inspect condition. If bad cuts, missing or defective inserts or guides are noted, contact your dealer for replacement.

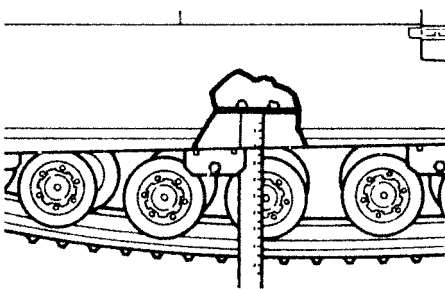
○ **NOTE:** On Alpine model, place gear shift lever in forward position before attempting to rotate the tracks manually.

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

(W5) Track Tension and Alignment

Bogie wheel suspension (All except Alpine model)

Lift the rear of the vehicle and support it off the ground. Using a rule, check the track tension from the middle set of bogie wheels. See the vehicle specification sheet to correctly adjust the tension (distance between the top inside edge of track and the bottom of the footboard).

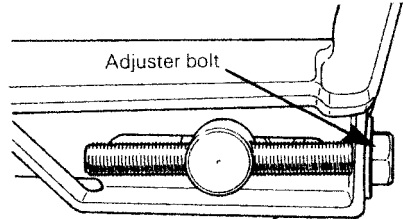


If track tension is too loose, the track will have a tendency to thump. If too tight, performance will be affected.

If necessary to adjust.

1. Using wrench, loosen both track adjusters by unscrewing the lock nuts situated on the inner side of the suspension springs.

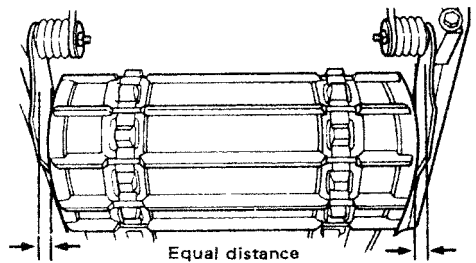
2. Adjust to proper tension by turning adjuster bolts clockwise to tighten track, counter-clockwise to slacken. Adjust both side equally.



3. Proceed with track alignment.

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

Support rear of vehicle with a mechanical stand. Start the engine and accelerate slightly so that track turns **slowly**. Check that track is well centered and turns evenly on the rear sprockets. The distance between the edges of the track and the link plates should be the same on both sides. Misalignment can cause excessive wear of track edges and sprocket teeth.



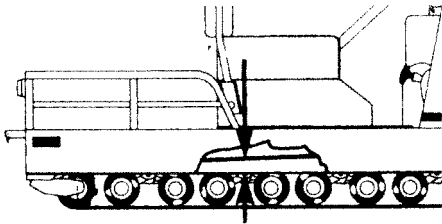
To adjust:

1. **Stop engine.** Using wrench, turn track adjuster bolt clockwise on the side where the track is closest to the link plate until track aligns.
2. Firmly retighten adjuster lock nuts.
3. Restart engine and rotate track **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, feet, tools and clothing clear of track.

Bogie wheel suspension
(Alpine model only)

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

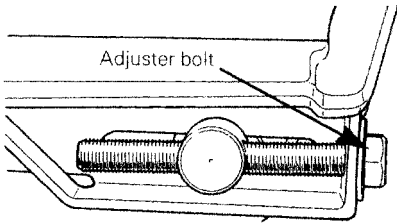


See vehicle specifications sheet to correctly adjust the tension (distance between top inside edge of track and center of bogie wheel set retaining bolt).

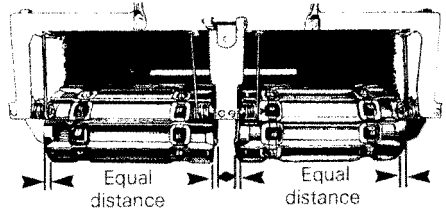
To adjust track use the following procedure:

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

Turn adjuster bolts clockwise to tighten tracks, counter-clockwise 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) counter-clockwise 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.

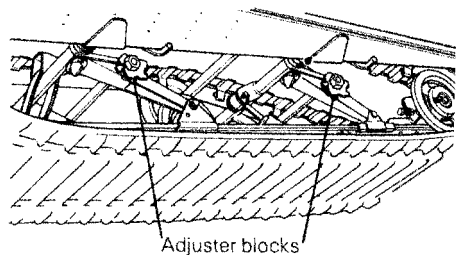
Rotate track slowly and recheck alignment.

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, feet, tools and clothing clear of track.

Slide Suspension

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

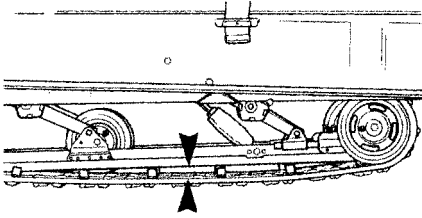
When the front adjuster blocks are at the lowest elevation more weight is distributed on skis. At the highest position the weight is transferred from the skis to the track. The rear adjuster blocks should be adjusted to suit the driver's preference.



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.

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



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

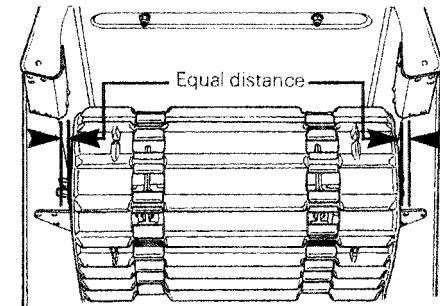
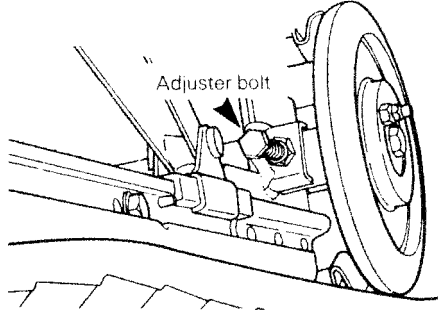
If necessary to adjust, loosen or tighten adjuster bolts located on inner side of rear idler wheels. If correct tension is unobtainable. Contact your dealer.

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

Start the engine and accelerate slightly so that track turns **slowly**. Check that track is well centered and turns evenly.

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.

To correct, stop engine then loosen the lock nuts and tighten the adjuster bolt on side where track is closest to the frame. Tighten lock nuts and recheck alignment.



(W6) Carburetor Adjustment

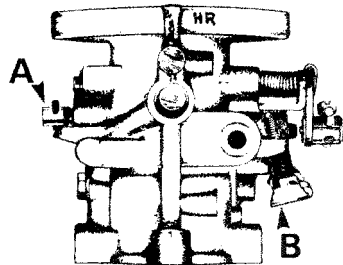
CAUTION: Never operate your snowmobile with the air intake silencer disconnected. Serious engine damage will occur if this notice is disregarded.

Elan models only

The carburetor adjustments are:

A) Low Speed Mixture

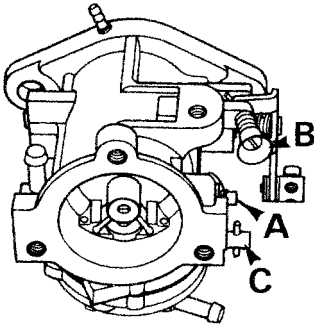
B) Idle Speed



Alpine model only

On this model the carburetor adjustments are:

- A) Low Speed Mixture
- B) Idle Speed
- C) High Speed Mixture



A) Low Speed Mixture Adjustment

Turn Low Speed Mixture screw fully clockwise (until a slight seating resistance is felt). Back off screw as indicated in the vehicle specifications sheet.

▼ CAUTION: When pulling heavy loads, such as trail groomer, it is strongly recommended to enrich the Low Speed Mixture by turning its screw an additional $\frac{1}{4}$ of a turn counter-clockwise.

B) Idle Speed Adjustment

With engine running and warm, turn the idle speed screw clockwise to increase idling speed, counter-clockwise to decrease. See vehicle specifications sheet for proper idle speed engine R.P.M.

C) High Speed Mixture Adjustment

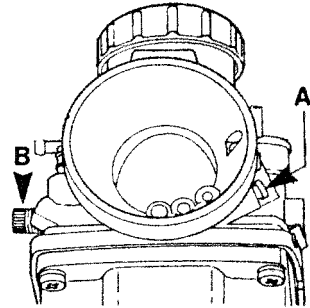
With engine OFF, turn High Speed Mixture screw fully clockwise (until a slight seating resistance is felt) then back off screw as indicated in the vehicle specifications sheet.

◆ WARNING: A final High Speed Mixture Adjustment must be carried out only by an authorized dealer.

All models, except Elan and Alpine models

For this type of carburetor, the adjustments are:

- A) Air Screw
- B) Idle Speed



A) Air Screw Adjustment

Completely close the air screw (until a slight seating resistance is felt) then back off screw as indicated in the vehicle specification sheet.

B) Idle Speed Adjustment

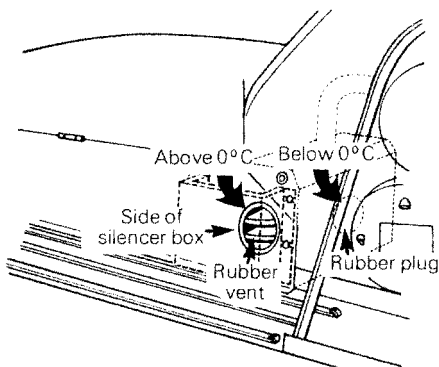
Turn idle speed screw clockwise until it contacts the throttle slide then continue turning two (2) additional turns. This will provide a preliminary idle speed setting. Start engine and allow it to warm then adjust idle speed (See vehicle specification sheet) by turning idle speed screw clockwise or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

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

Air Silencer

Alpine model only

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.

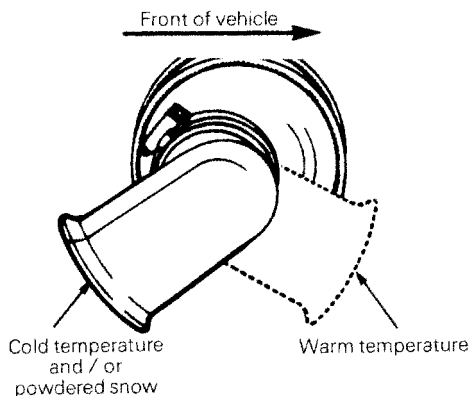


All models, except Elan & Alpine

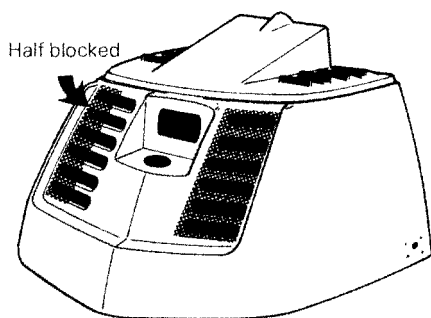
At cold temperature and / or when the vehicle is operated in powdered snow, the air intake silencer elbow must be turned toward the rear of the vehicle. The elbow may be turned to the front of the vehicle only when the vehicle is operated at warm temperature.

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 engine overheating.



Front cab louvers



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

(W7) 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 stipulated in the vehicle specification sheet, replace belt.

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

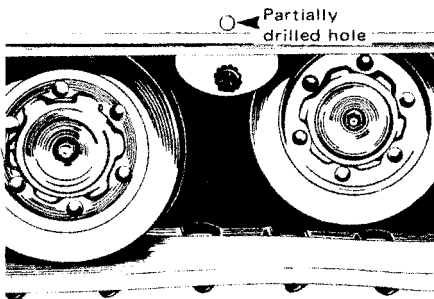
(W8) Steering Mechanism

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.

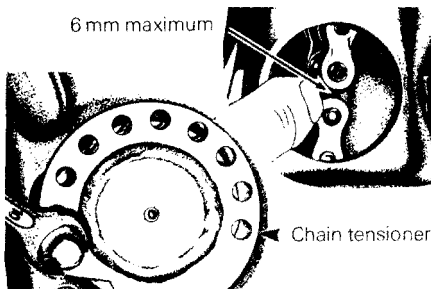
Driving Tip (Alpine model only)

By raising the outer attachment of the bogie wheel sets, vehicle maneuverability in deep snow will increase. You will note that there are 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.



(W9) Drive Chain Tension (Alpine model only)

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.

NOTE: If the vehicle is used to carry or pull heavy loads, it is advisable to change the gear ratio. Contact your dealer for optional gears.

(M1) Brake

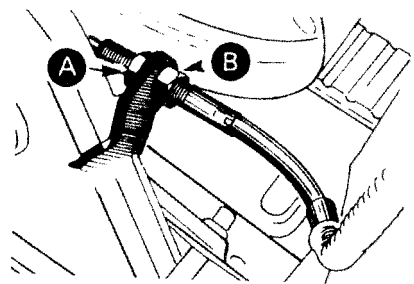
The brake mechanism on your snowmobile is an essential safety device. Keep this mechanism in proper working condition. Above all, do not operate your snowmobile without an effective brake system.

WARNING: Brake pad or pucks less than 5 mm (3/16 in.) thick must be replaced. Replacement must be performed by an authorized dealer.

On Elan model only

Brake should apply fully while brake control level is still 2.5 cm (1 inch) minimum from handlebar grip.

If a minor adjustment is indicated, slacken off cable housing nut (A) and tighten nut (B) to increase lever clearance. Turn each nut vice versa to decrease.



One minor adjustment is completed, firmly tighten nuts (A and B) against bracket. If correct brake control lever clearance is unattainable, proceed with major adjustment as follows:

Slacken off the nut retaining brake cable to lower brake lever. Adjust cable to required length by lengthening or shortening brake cable. Retighten nut. Ensure that minor adjustment nuts are located approximately half way on adjuster threads.

◆ **WARNING:** Always check the stop light to see if it functions after performing brake adjustment.

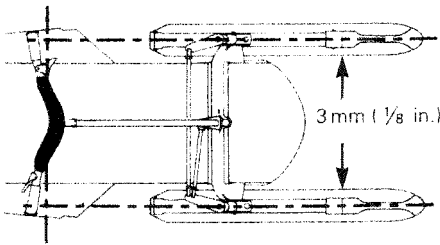
Self-Adjusting Brake (All models except Elan)

The brake mechanism is self-adjusting, therefore, periodic adjustment is not required. However, check operation of brake mechanism by depressing brake control level. Brake should apply fully when lever is 13 mm (½ in.) approx. from handlebar grip. If not, do not tamper with the brake, contact your servicing dealer.

(M2) Steering Adjustment

Elan models

Skis should have a toe out of 3 mm (⅛ in.). To check, measure distance between skis at front and rear of leaf springs. The front distance should be 3 mm (⅛ in.) more than the rear when the handlebar is horizontal.



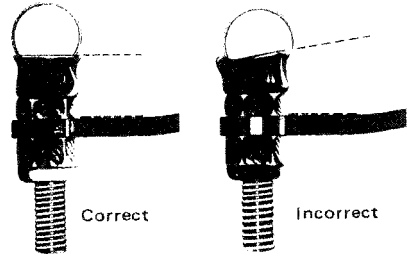
If necessary to adjust:

Loosen lock nuts of the longer tie rod. Turn tie rod manually until skis are properly aligned. Firmly retighten lock nuts.

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

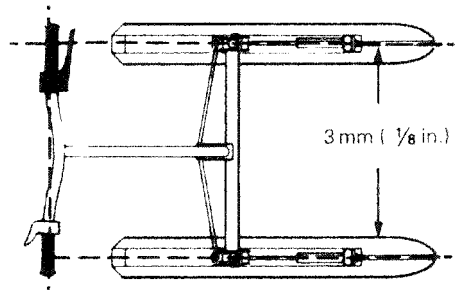
◆ **WARNING:** The cut off section of the ball joint must run parallel with the steering arm. When tightening lock nuts, restrain ball joint with appropriate size wrench. Ensure at least half of the ball joint threads are inserted into the tie rod.



Olympique, Everest and TNT models

Skis should have a toe out of 3 mm (⅛ in.). To check, measure distance between each ski at front and rear of leaf springs. The front distance should be 3 mm (⅛ in.) more than the rear when the handlebar is horizontal.

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

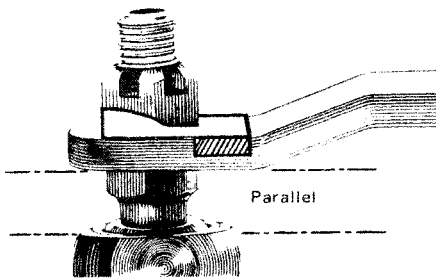


If adjustment is required:

Unscrew the nuts locking the tie rods in place. Turn one or both tie rods until

skis are parallel to each other. Then, measuring at front of leaf springs, add an additional 1.5 mm ($\frac{1}{16}$ in.) on each side by rotating turnbuckles. Tighten the nuts firmly against the tie rod. Check tightness of the steering arm locking bolts, ball joints wear, etc.

◆ **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.



Alpine model

Ski should be perpendicular to handlebar. To align:

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 4.1-4.8 kg-m (30-35 ft-lbs).

○ **NOTE:** If correct spline alignment is unattainable at handlebar, move lower steering bracket to obtain proper location. (Lower steering bracket holes are slotted).

(M3) Engine Head Nuts

With **engine cold**, check that engine head nuts are tight and equally torqued (See vehicle specifications sheet).

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

(M4) Engine Mount Nuts

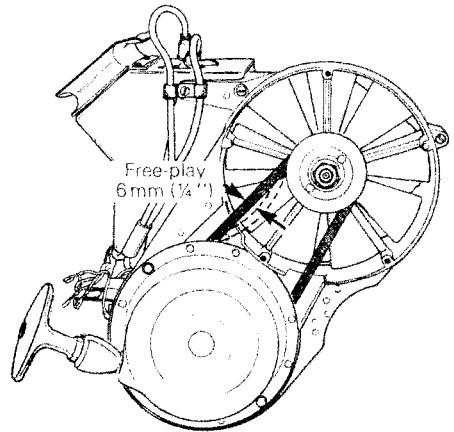
Check engine mount nuts for tightness. Retighten if necessary.

(M5) Muffler Attachment

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

(M8) Fan Belt (All twin cylinder fan cooled engine)

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

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

(M7) General Inspection

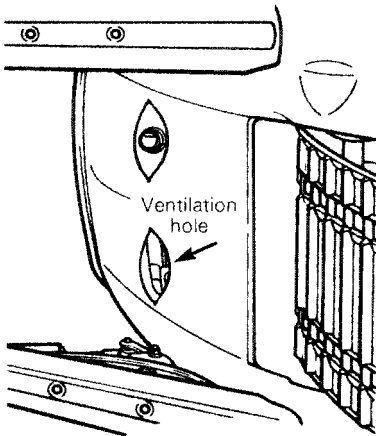
Check electrical wiring and components, retighten loose connections. Check for stripped wires or damaged insulation. Thoroughly inspect the ve-

hicle and tighten loose bolts, nuts and linkage. Inspect skis and ski runners for wear.

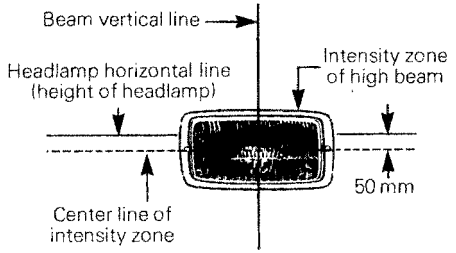
(M8) Ventilation (Olympique models only)

Check that the belly pan ventilation hole is not blocked or obstructed. Blockage of the system will create engine overheating.

○ **NOTE:** The condition of the ventilation must be checked more often if the vehicle is used on rough trails.



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



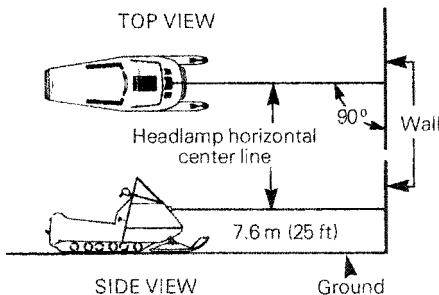
To adjust, on vehicle so equipped remove headlamp chrome ring, turn upper or lower adjusting screws to obtain desired beam position.

Bulb Replacement

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

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.



STORAGE

It is during summer, or when a vehicle is not in use for any length of time that proper storage is a necessity. Storage of the snowmobile during long period of inactivity consists of checking and replacing missing broken or worn parts: Proper lubrication and treatment to insure that parts do not become rusted; Cleaning items such as carburetor of oil mixtures, to prevent gum varnish formation 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.

Track

Inspect track for cuts, missing track guides and broken rods. Make any necessary replacement.

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

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

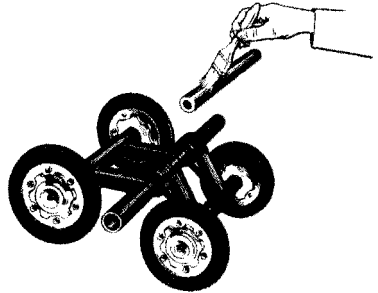
○ **NOTE:** The track should be rotated periodically, (every 40 days). Do not release track tension.

Suspension

Bogie Wheels

Remove bogie wheel sets. On Olympique 300 model, identify the installation position of each set. Remove cross shaft from each bogie wheel set. Clean bogie wheel assembly and shaft of dirt and rust. Check condition of cross

shaft, replace if worn. Apply a coat of low temperature grease over shaft.



Grease each set then spray springs with metal protector, or wire with an oil soaked cloth. Assemble and install each set in proper position.

Lubricate rear hub through grease fittings.

Slide Suspension

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

Ski

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.

Controls

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

◆ **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.

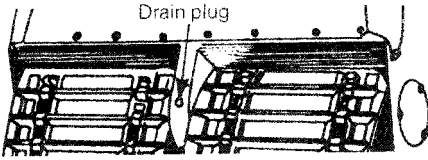
Chaincase

Drain the chaincase and refill to proper

level. To drain chaincase on Elan models, remove access plug (lower plug) and tilt vehicle hard left. On all other models, remove chaincase cover.

Gearbox (alpine model only)

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



Driven Pulley (Alpine model only)

Remove cab 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

The drive pulley should be cleaned and inspected. On the Elan models, the drive pulley also requires lubrication.

◆ **WARNING:** The lubrication of the drive pulley should be performed only by an authorized dealer. A disassembly, cleaning, inspection and lubrication where applicable should also be performed by the dealer every 100 operating hours or at the end of each season, whichever occurs first.

IMPORTANT: The drive pulley assembly will be excluded from warranty, if the factory seal is broken by other than a duly authorized representative of Bombardier.

Fuel Tank

Remove cap then using a siphon, 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 fuel line is disconnected (on vehicle equipped with float type carburetor disconnect the fuel pump inlet line) then start the engine and run it at idle until out of gas.

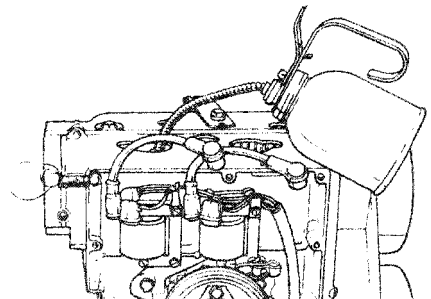
On Elan and Alpine models, engage choke and allow engine to turn a few more times to eliminate the remaining fuel. Connect previously disconnected fuel line.

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. 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. If applicable, 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.

Battery (Electric start models only)

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 unit 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 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.

Inspect cab and repair damage. Repair kits are available at your authorized dealer. Clean frame. For aluminum frame use only "Aluminum cleaner" and follow instructions on container.

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

○ **NOTE:** Apply wax on glossy finish of cab only. Protect the vehicle with a 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.

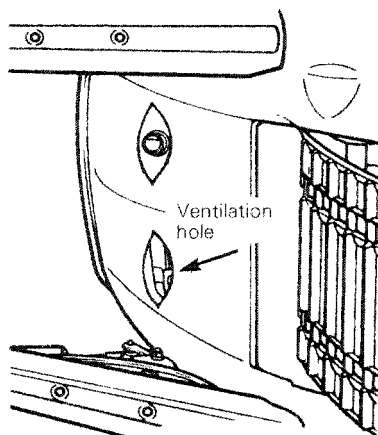
General Inspection

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.

○ **NOTE:** Leave drive belt off pulleys for the entire storage period.

▼ **CAUTION:** On olympique models, to retain the efficiency of the cooling system, check that the belly pan ventilation hole is not blocked or obstructed.



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 PREPERATION CHART

To be performed by dealer	●
To be performed by owner	○
Change spark plugs	○
Check chaincase or gearbox oil level	○
Check pulleys, verify components and clean. If applicable, lubricate	●
Check steering alignment and ski runner condition	○
On vehicle equipped with fuel filter cartridge, replace cartridge.	○
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.	○
If applicable, 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.	●
On twin cylinder fan cooled engine, check fan belt condition and tension.	○

TROUBLE SHOOTING GUIDE

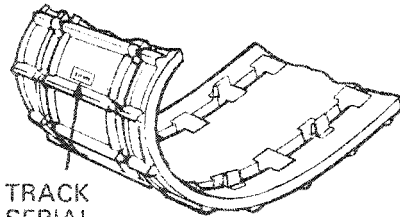
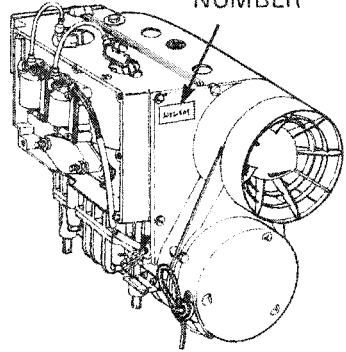
SYMPTOMS	POSSIBLE CAUSES	WHAT TO DO
Engine turns over but fails to start or starts with difficulty	1. No fuel to the engine	Check the tank level and fill up with correct gas-oil mixture. Check for possible clogging of fuel line, item 5.
	2. Spark plug	Check for fouled or defective spark plug. Disconnect 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 (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.

SYMPTOMS	POSSIBLE CAUSES	WHAT TO DO
Engine lacks acceleration or power	1. Fouled or defective spark plug	Check item 2 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 5 of "Engine turns over but fails to start or starts with difficulty").
	3. Carburetor	Readjust the carburetor. (See Maintenance section). If trouble persists, contact your dealer.
	4. Faulty ignition	First check item 2 and 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. Faulty spark plug	Check item 2 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. Faulty engine	Check item 1 to 5 of "Engine lacks acceleration or power".
	4. Pulley misaligned	Contact your dealer.

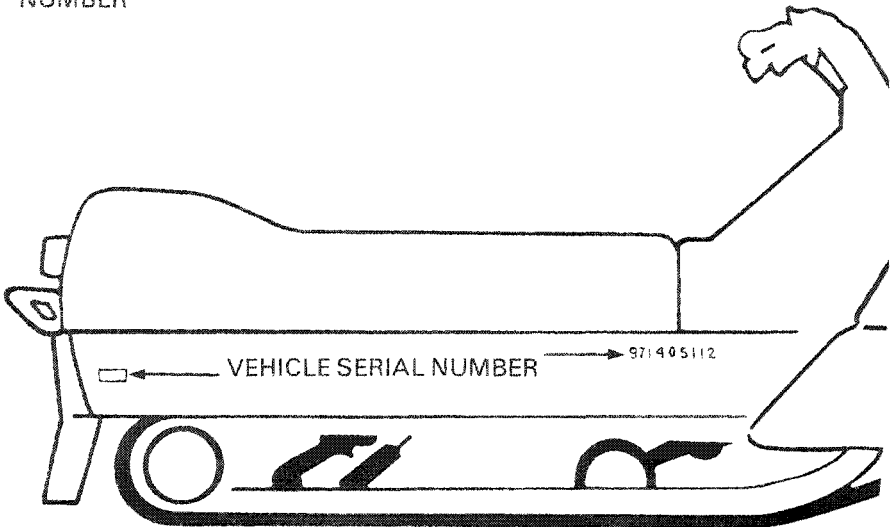
HOW TO IDENTIFY YOUR SNOWMOBILE

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



○ **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.

LIMITED WARRANTY SKI-DOO® SNOWMOBILES

BOMBARDIER Limited as manufacturer, warrants FROM THE DATE OF FIRST CONSUMER SALE, every Ski-Doo® snowmobile, sold AFTER MAY 1ST, 1977, 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:

1976-77-78 Elan® Olympique* T'NT® F/A - F/C Everest® Elite®

Warranty STARTS on DECEMBER 1ST of the year of sale if sold between APRIL 30TH and before DECEMBER 1ST of the same year, or from the date of sale if sold between DECEMBER 1ST of one year and APRIL 30TH of the following year.

The warranty period ENDS the SECOND APRIL 30TH following the date warranty coverage started.

Ninety (90) consecutive days for models:

1976-77-78 RV* Blizzard® 6500 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.
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 models not listed above are covered by the original manufacturer warranty (if any) in effect at the time of manufacturing.

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 the specified period.

EXCLUSION

Items and components:

Any expendable items and / or components that are damaged or worn due to normal use or lack of proper maintenance, are excluded from this warranty.

Bombardier under this warranty, will not remedy or pay for the following:

- 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.
- 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 incidental or consequential damages.

Some states 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 SKI-DOO 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.

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 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 Dept.
Recreational Product Group
Valcourt, Quebec, Canada, JOE 2L0

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.

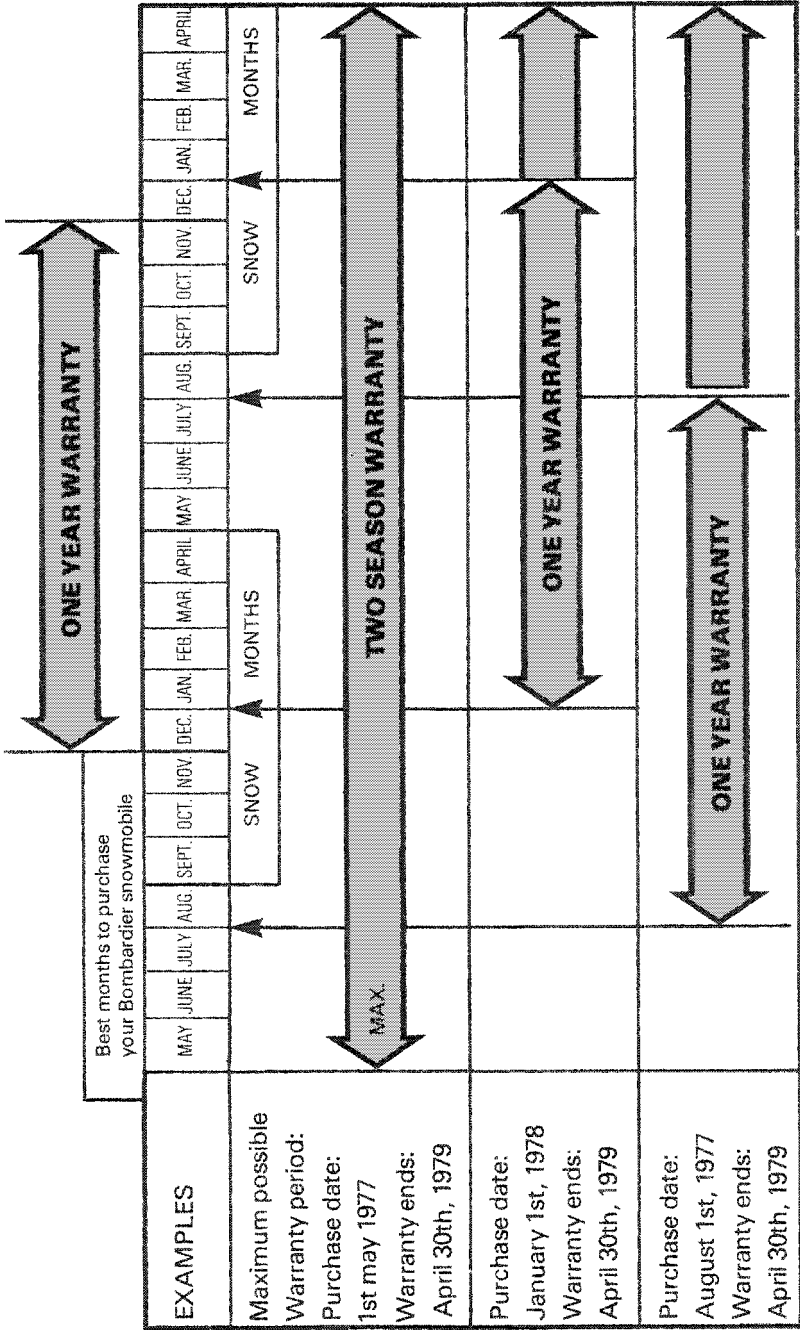
March 1977

BOMBARDIER LIMITED
Valcourt, Quebec, Canada, JOE 2L0

*Trademark of Bombardier Limited

®Registered Trademark of Bombardier Limited

HOW THE BOMBARDIER SNOWMOBILE TWO SEASON WARRANTY WORKS *



* Refer to warranty text




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 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, signed 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.

 Recreational Products Produits Récréatifs		CUSTOMER WARRANTY REGISTRATION ENREGISTREMENT DE LA GARANTIE			
Model No./No du Modèle	Serial No./No de série	Engine Ser. No./No Sér. du Moteur	Track Ser. No./No Sér. Chen.		
<input type="text"/>	<input type="text"/>	* <input type="text"/>	* <input type="text"/>		
Dealer's Name Nom du Concessionnaire		Distributor Code Code du distribut.	Dealer Code Code du concess.	Date of Sale Date de la vente	
<input type="text"/>		<input type="text"/>	<input type="text"/>	M. D./J. Y./A.	
Customer Name Nom du client		First Name/Prénom			
Mr./M. Mrs./Mme Miss/Mlle		Family Name/Nom de famille			
Address/Adresse		<input type="text"/>			
City/Ville		<input type="text"/>			
State/Province—Zip code/Code postal		<input type="text"/>			
 		Manufacturer's copy / Copie du fabricant		Part no. / No de pièce 484 0258 70	
* If applicable / s'il y a lieu					

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.



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: 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.*

- *Lean carburetor settings.*
- *Use of no-lead or low-lead gasoline or use of regular gasoline when premium is recommended.*
- *Incorrect oil / gas mixture (too little or too much oil).*
- *Poor quality, outboard or straight mineral oils.*
- *Removal of intake silencer.*
- *Retarded or advanced ignition timing.*
- *Hot spark plug(s) (improper heat range).*

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

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

Q: As I read through the warranty, I find that expendable items are not covered. What are some examples of expendable items?

A: *Expendable items are those subject to wear and tear through normal use. To list a few, light bulbs, spark plugs, brake linings, belts, suspension and ski runner shoes, etc...*

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,

1st

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,

2nd

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**

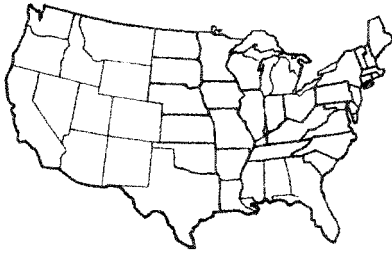
3rd

**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.

REMEMBER The faster we are informed of unresolved grievances, the faster we can investigate them.

LISTING OF AREA DISTRIBUTORS



CANADIAN DISTRIBUTORS

ALPINE DISTRIBUTORS LTD
3206 - 28th Street
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
New Brunswick, Nova Scotia, Prince Edward Island,
Magdalen Island

BOMBARDIER LIMITED
Eastern Canada Distribution Division
Quebec Branch
1350 Nobel Street
Boucherville, Quebec, J4B 1A1
(514) 527-4361
Quebec, Eastern Ontario

BOMBARDIER LIMITED
Eastern Canada Distribution Division
Ontario Branch
28 Currie Street
Barrie, Ontario, L4M 4S2
(705) 728-8600
Ontario, less Eastern of Ontario

BROCKS EQUIPMENT
1616 King Edward Street
P.O. Box 986
Winnipeg, Manitoba, R3C 2V8
(204) 633-7247
Manitoba, Saskatchewan

HUDSON'S BAY CO.
185 Hymus Boulevard
Pointe-Claire, Quebec, M4W 1A8
(514) 697-9500
North-West Territories, Franklin District & Keewatin

J.W. RANDALL LTD
P.O. Box 757
West Street
Corner Brook, Newfoundland, A2H 6G7
(709) 634-3533
Newfoundland, Labrador

TRACT EQUIPMENT LIMITED
14325, 114th Avenue
Edmonton, Alberta, T5M 2Y8
(403) 452-8910
Alberta, Dist. McKenzie, Yukon, N.W.T.

AMERICAN DISTRIBUTORS

CRAIG TAYLOR EQUIPMENT CO.
733 Whitney Road
P.O. Box 3338
Anchorage, Alaska 99501
(907) 272-3577
Alaska

ELLIOTT & HUTCHINS INC.
East Main Street Road
Malone, New York
(518) 483-4411
Connecticut, Delaware, Maryland, Massachusetts, New Jersey,
New York, Pennsylvania, Rhode Island, District of Columbia

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

BOMBARDIER CORPORATION
4505 West Superior Street
P.O. Box 6106
Duluth, Minnesota 55806
(218) 628-2881
North Dakota, South Dakota, Minnesota, Wisconsin, Iowa,
Illinois, Missouri, Michigan, Indiana, Ohio, Tennessee,
Kentucky, West Virginia

BOMBARDIER WEST INC.
609 West Broadway
Idaho Falls, Idaho 83401
(208) 623-6870
California, Nevada, Montana, Idaho, Wyoming, Utah, Colorado,
New Mexico, Arizona, Kansas, Nebraska, Washington, Oregon

THROUGHOUT THE WORLD

BOMBARDIER-ROTAX GmbH
Vienna Branch, P.O. Box 86
Donaufelderstrasse 73-79
1210 Vienna
Austria

COLBJORNSEN & CO. A / S
P.O. Box 80, 1341 Bekkestua
Norway

KY LAATUVAUNU
Italahdenkatu 25
SF-00210 Helsinki 21
Finland

MOYAC AB
Ostra, Rednugatan 2
902 46, Umea
Sweden

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

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