EVEREST® 444 L/C

1977 OPERATOR MANUAL

Litho'd in Canada 480 0137 00

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FOREWORD

Within the North American Continent, there exists a very special breed of people... people who enjoy ice and snow, and the unexcelled trails that lead to virtually every corner of the snowbelt. They enjoy too, the comfort of warm clothing, the friendliness of companions, and the recreational vehicle that made it all possible... the Ski-Doo snowmobile.

We, like millions of North American families, have never forgotten our pioneer heritage, or our love of nature and the great outdoors, consequently, we have designed and engineered all our models with safety, comfort and quietness foremost in our minds. We do respect your desires, and that of others.

Information has been prepared to acquaint the owner / operator of a new 1977 snowmobile with the various vehicle controls, owner-related maintenance, and safe operating instructions.

This is accomplished via three manuals; 'The Snowmobile Safety Handbook' the 'Warranty and Consumer Guide Booklet' and the 'Operator Manual'. Each is inseparable toward proper use of the product, and should be kept with the vehicle at all times.

This manual emphasizes particular information denoted by the wording and symbols;

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

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

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

Ride safe and have fun.

Bombardier Limited
Recreational Product Group

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.
- Since engine cooling is mainly in effect when the vehicle is in motion, it is recommended that you do not allow the engine to idle for more than brief periods. Prolonged idling may cause engine damage.
- 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. 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.
- When removing coolant tank cap, first place a cloth over cap then turn cap to its first step to release pressure.

Please read and understand all other warnings contained elsewhere.

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

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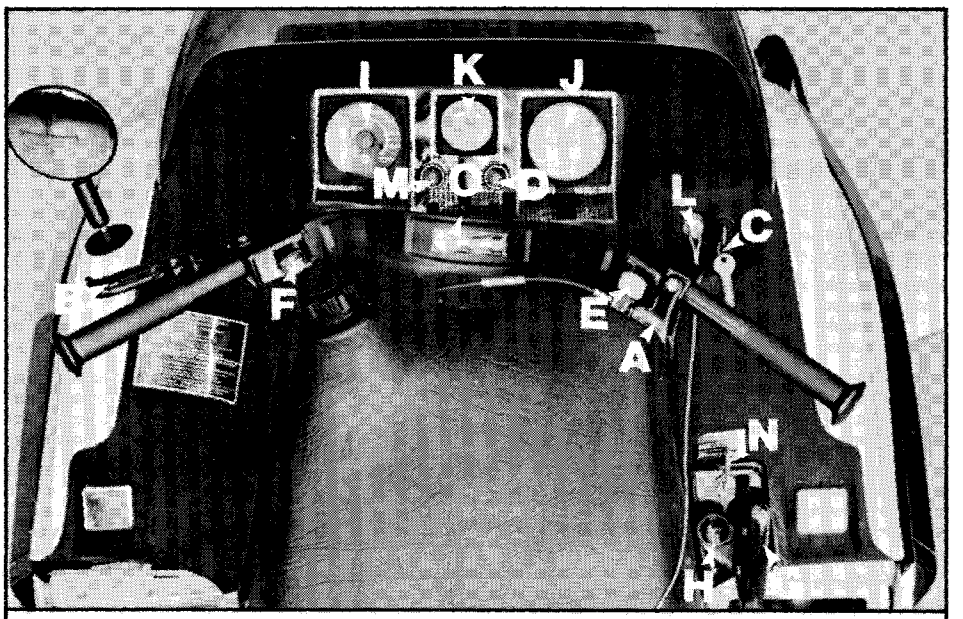


A) Throttle Control Lever
B) Brake Control Lever
C) Ignition Switch
D) Light Switch
E) Emergency Cut-Out Switch
F) Headlamp Dimmer Switch
G) Rewind Starter Handle
H) Primer
I) Tachometer
J) Speedometer
K) Temperature Gauge
L) Tether Cut-Out Switch
M) Lighter
N) Fuel Control Valve
O) Handle Heat Switch

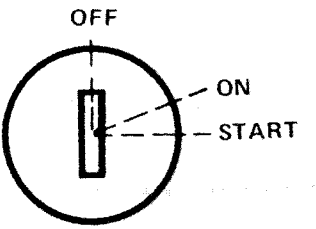
A) Throttle control Lever

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

B) Brake Control Lever

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

C) Ignition Switch



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

D) Light Switch

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

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) 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.

G) Rewind Starter Handle

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

H) Primer

A push-pull button located alongside manual starter handle. 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.

I) Tachometer

The tachometer registers the impulses of magneto. Direct-reading dial indicates 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 0.1 amp. Do not use a higher rated fuse as this can cause severe damage to the tachometer.**

J) Speedometer

The speedometer is linked directly to the drive axle. Direct-reading dial indicates the speed of the axle in miles per hour (MPH) and in kilometers per hour (KPM). Odometer records the total number of miles travelled.

K) Temperature Gauge

The gauge indicates engine coolant temperature. Normal operating temperature is 70° C (160° F). However, coolant temperature can vary depen-din on driving condition. If coolant temperature exceeds 95° C (200° F) reduce speed and run vehicle in loose snow or stop engine immediately.

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

L) Tether Cut-Out Switch

A pull switch located on the rigt side of cab. 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 restarting engine.

M) Lighter

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

N) Fuel Control Valve

Located alongside manual starter handle, the fuel valve controls the admission of the fuel depending on the valve lever position. Valve lever toward seat (ON position), valve lever pointing up (OFF position), valve lever toward rewind starter handle (RESERVE position).

O) Handle Heat Switch

ON-OFF switch located between the lighter and the light switch. Place switch to ON position and handlebar grips will warm.

Cab Opening

To open cab, lift both handle to disengage latches. Always lift up cab gently up until stopped by restraining device.

WARNING: It is dangerous to run engine with cab open. Personal injury could result.

Tool Box

Located under the cab. To gain access tilt cab. Ideal location for belt, rope, etc. Spare spark plugs can be screwed on the bracket provided in the box.

Fuel Gauge

To check fuel level simply unscrew fuel tank cap and withdraw dipstick.

WARNING: Never use a lighted match or open flame to check fuel level.

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

Recommended Gasoline

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

CAUTION: Never experiment with different fuel or fuel ratios. Never use 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.

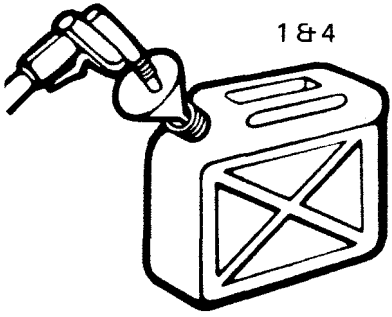
5 gallons of regular gasoline plus 1 can of 50 / 1 concentrated Bombardier snowmobile oil = correct fuel mixture.

Fuel Mixing Procedure

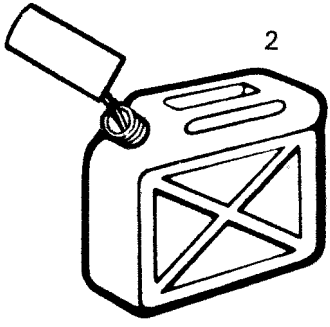
To mix the gasoline and oil always use a separate clean container. Never mix directly in your snowmobile tank. For best results, acquire two containers, either plastic or metal. Draw from one until empty then use the second one.

◆ **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 ski contact with fuel at below freezing temperatures.**

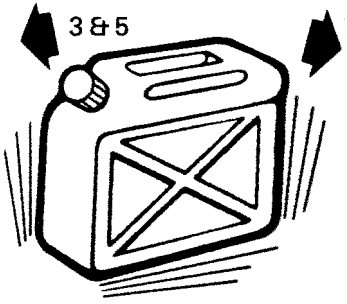
1. Pour approximately one gallon of gasoline into a clean container.



2. Add full amount of oil.



3. Replace container cap and shake the container thoroughly.



4. Add the remainer 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.**

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

Check Points

- Activate the throttle control lever several times to check that it operates easily and smoothly. The throttle control lever must return to idle position when released.
- Check that the skis and the track are not frozen to the ground or snow surface and that steering operates freely.
- Activate the brake control lever and make sure the brake fully applies before the brake control lever touches the handlebar grip.
- Check coolant level. Liquid should be 2.5 cm (1") below filler neck. If additional coolant is necessary, always use a 50 / 50 (50 parts of water for 50 parts of anti-freeze) solution. When entire system has to be refilled, use a solution of 3 parts of anti-freeze for 2 parts of water. See cooling system in storage.

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

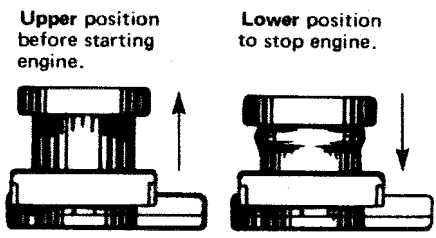
- Check fuel level.
- Verify that the path ahead of the vehicle is clear of bystanders and obstacles.

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

With Ski-Doo snowmobile engines, a break-in period is required before running the vehicle at full throttle. Manufacturers, recommendation for the Bombardier-Rotax engine 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 ¾, 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.

Inspection

After the break-in period, each Ski-Doo snowmobile should have an inspection check. This inspection is at the expense of the vehicle owner.



1. Insert key in ignition switch.
2. **Test throttle control lever.** Activate primer (2 or 3 times). Primer is not necessary if engine is warm.
3. Make sure the tether cut-out cap is in position and that the cord is attached to your body. Check that the emergency cut-oput button is in the released upper position.
4. Turn ignition key clockwise until starter engages. Release key immediately engine has started. If engine does not start on first try, key must be turned fully back to OFF each time.

WARNING: Do not apply throttle while starting.

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

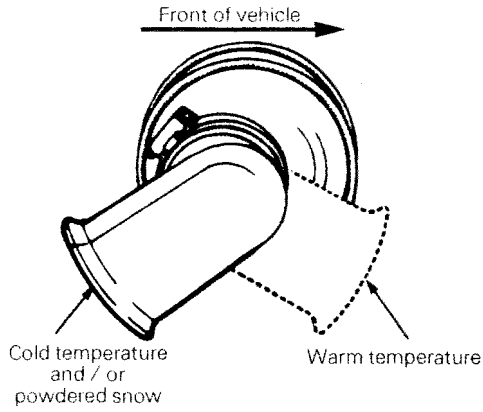
WARNING: If engine does not shut-off when applying the emergency cut-out switch and or when pulling the tether cut-out cap, stop the engine by turning off the ignition key. Do not operate the vehicle further, see your dealer.

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

CAUTION: Since 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 than brief periods. Prolonged idling may cause engine damage.

Air Intake Silencer

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.



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

Slide Suspension

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.

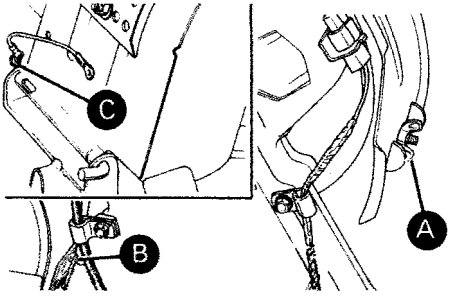
Routine maintenance is necessary for all mechanized products, and the snowmobile is no exception. A weekly vehicle inspection contributes to the life span of the snowmobile as well as retain safe and reliable operation. It is recommended that the steering system and suspension, be lubricated monthly 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.

Pulley Guard Removal

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

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

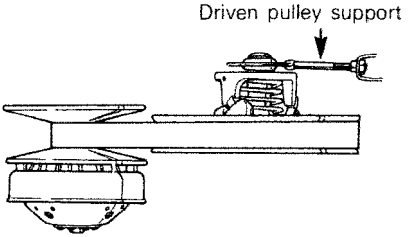


2. Disengage guard from rear and middle brackets then disengage pin from front bracket. Remove complete assembly.

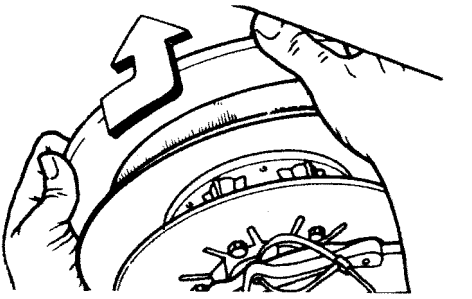
Drive Belt Removal

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

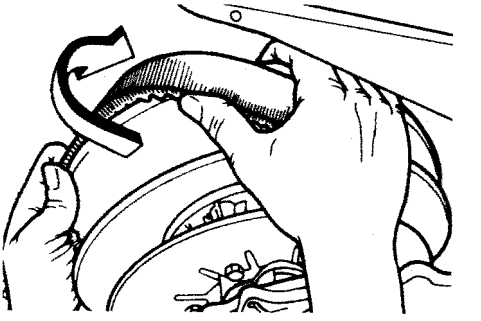
1. Tilt cab and remove pulley guard. If applicable, unlock and raise driven pulley support.



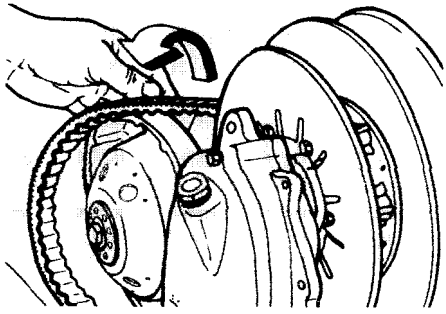
2. Open the driven pulley by twisting and pushing the sliding half. Hold in fully open position.



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

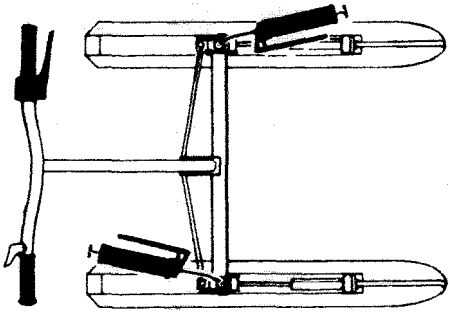


4. Slip the belt out from the drive pulley and remove completely from vehicle. To install drive belt, reverse procedure.



Steering Mechanism

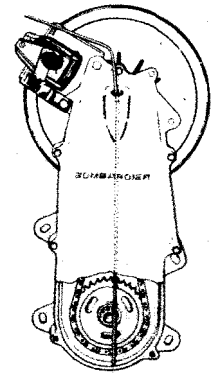
Lubricate ski legs at grease fittings until new grease appears at joints. Oil spring coupler bolts.



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

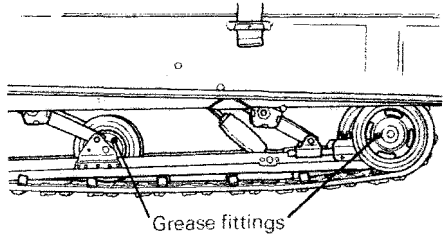
Chaincase Oil Level

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. The chaincase oil capacity is approximately 256 ml (9 oz).



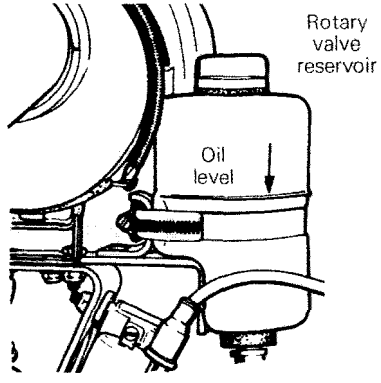
Suspension

Using a low pressure grease gun, lubricate the five (5) 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.



Rotary Valve System

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



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

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

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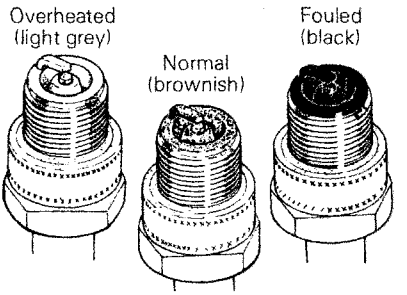
(W1) Spark Plugs

1. Disconnect spark plug wires and remove spark plugs.
2. Check condition of plugs.

- A brownish tip reflects ideal conditions (correct carburetor 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 mixing 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.

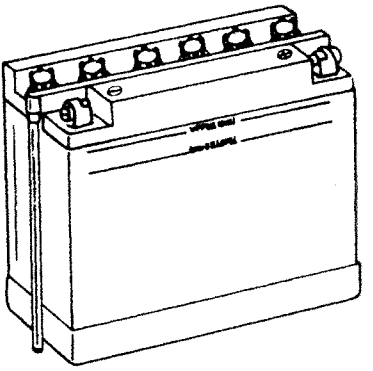


CAUTION: If spark plug condition is not ideal, contact your dealer.

3. Reinstall plugs and connect wires.

(W2) Battery

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



If necessary add distilled water. Battery

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

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. Inspect shoe condition and replace as necessary.

(W4) Track

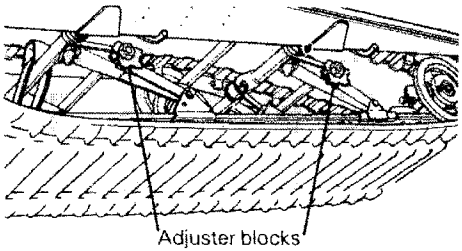
With rear of vehicle off the ground, rotate track and inspect condition. Check for bad cuts, missing inserts or track guides. If bad cuts missing or defective inserts or guides are noted, contact your dealer for replacement.

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

(W5) Suspension Adjustment

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

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

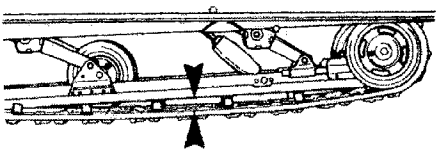


CAUTION: Always turn left side adjuster blocks in a clockwise direction, the right side blocks in a counter-clockwise direction. Left and right adjuster blocks of each adjustment must always be set at the same elevation.

Tension and Alignment

Lift rear of vehicle and support with a mechanical stand. Allow slide to extend normally. A gap of 19 mm (¾ inch) should exist between slider shoe and bottom inside of track.

If track tension is too loose, the track will have a tendency to thump.

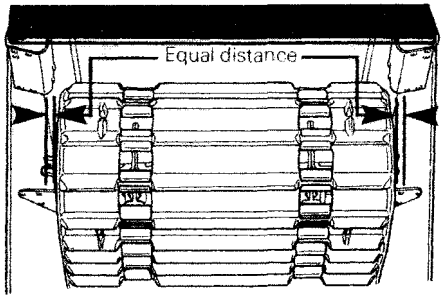


CAUTION: Too much tension will result in power loss and excessive stresses on suspension components.

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.

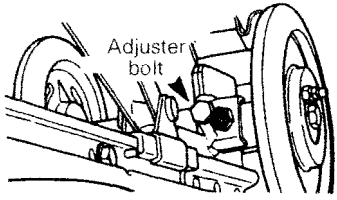
NOTE: Track tension and alignment are inter-related. Do not adjust one without the other.

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. Ensure no-one is standing in close proximity to the vehicle.

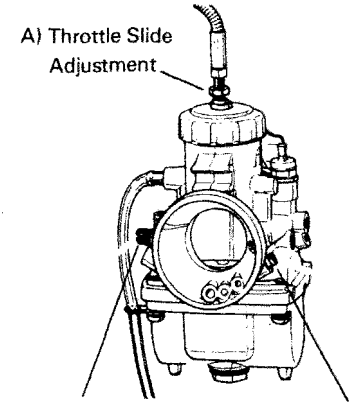
To correct, stop engine then loosen the lock nuts and tighten the adjuster bolt on side where track is closest to the frame. Tighten lock nuts and recheck alignment.



(W6) Carburetor Adjustment

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

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



A) Throttle Slide Adjustment

Completely open (counter-clockwise) the idle speed screw, unlock cable adjuster lock nut then adjust the throttle cable to remove all slack when operating throttle control lever. Lock cable adjuster in position by tightening the adjuster lock nut against the carburetor top cover.

B) Idle Speed Mixture

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

C) Idle Speed

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

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

(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, the drive belt width should not be less than 30 mm (1 3/16 "), wide.

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.

M1 Brake

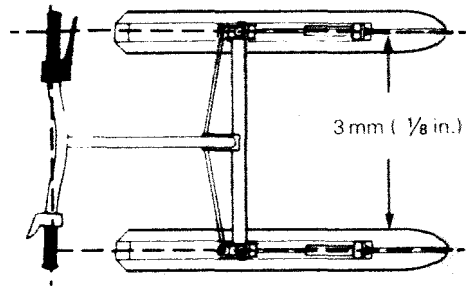
The brake mechanism is self-adjusting, therefore, periodic adjustment is not required. However, check operation of brake mechanism by depressing brake control lever. Brake should apply fully when lever is 13 mm (½ in.) approx. from handlebar grip. If not, do not tamper with the brake, contact your servicing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

WARNING: Brake linings less than 4.5 mm (3/16 in.) must be replaced. Replacement must be performed by an authorized Ski-Doo dealer.

M2 Steering

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

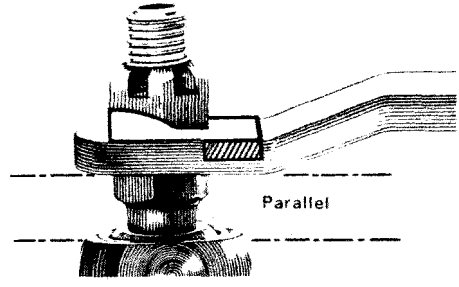
IMPORTANT: Close front of skis manually to take all slack from steering mechanism.



If adjustment is required:

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 (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.



M3 Engine Head Nuts

After the first 5 hours of operation,

check that engine head nuts are tight and equally torqued 1.5-1.8 kg-m (11-13 ft-lbs) **when engine is cold.**

M4 Engine Mount Nuts

Check engine mount nuts for tightness. Retighten if necessary.

M5 Exhaust System

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

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

M6 Cooling System

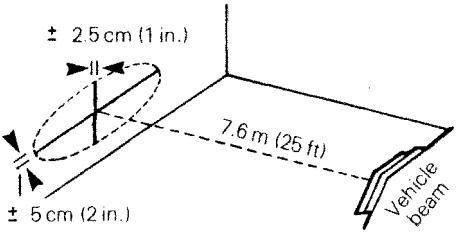
Place a cloth over the coolant tank cap and release it to the first step to check that the cap pressurizes the system. If not, install a new 13 lb cap. Do not exceed the 13 lb. pressure. Using a hydrometer check that the anti-freeze solution is strong enough for the temperature in which the vehicle is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

M7 General Inspection

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

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 meter (25 feet) from a wall or screen. Turn Hi beam on, beam aiming is correct when beam center is equal with horizontal deviation of 5 cm (2 inches) and a maximum vertical deviation of 2.5 cm (1 inch.



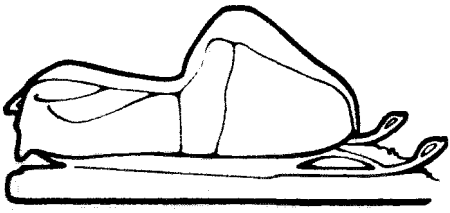
If applicable remove chrome ring then turn upper or lower adjustment screws to obtain specified beam position.

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 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.

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 carburetors. (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	Carburetors set too lean. Contact your dealer. Replenish coolant level. Check for restricted or leaking hose (or gasket), replace as required. Air in cooling system, bleed the system. Engine coolant pump inoperative, see 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.

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, 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, 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. Change filter cartridge if necessary. 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 seized engine contact your dealer. Seizure is a direct result of poor lubication or use of improper type of oil. Incorrect fuel / oil ratio.



Storage of the snowmobile during long periods of inactivity consists of checking and replacing missing broken or worn parts: Proper lubrication and treatments to insure that parts do not become rusted; cleaning items such as carburetor 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 inserts and / or guides and broken rods. Make any necessary replacement. 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 track does not stay in contact with cement floor or bare ground.

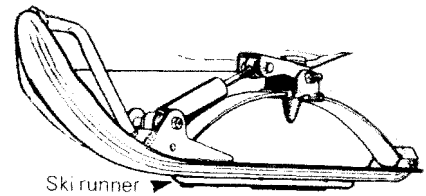
○ **NOTE:** The track should be rotated periodically, (every 40 days). Do not release track tension.

Suspension

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

Skis Assembly

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



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

Fuel Tank

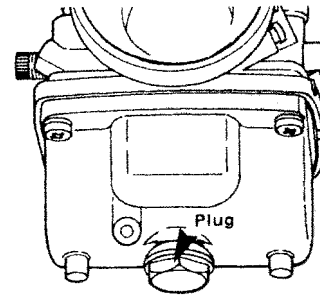
Remove cap then using a syphon, remove gasoline from tank.

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

Carburetor

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

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



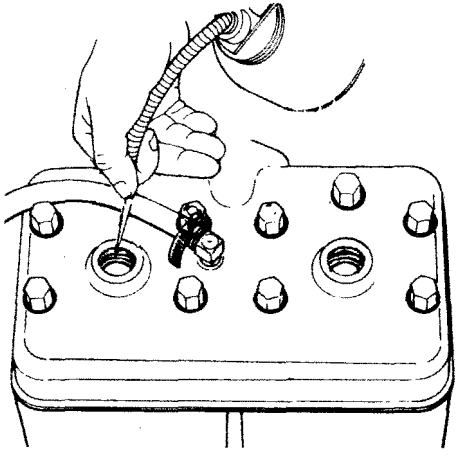
Reinstall plug and connect fuel line.

Cylinder Lubrication

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

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

Remove spark plugs. Operate rewind starter to bring piston at top position. Pour the equivalent of one spoonful of oil into spark plug hole.

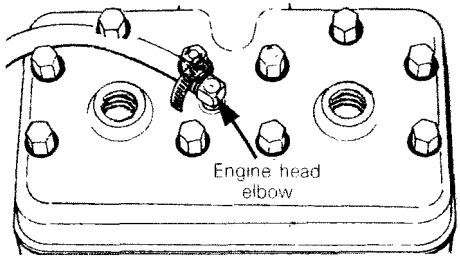


Slowly crank engine several times using manual starter. Repeat above steps for other cylinder. Install spark plugs.

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

Cooling System

To drain the cooling system, remove the coolant tank cap and disconnect the hose from the engine head elbow, keep the elbow blocked until the entire system is drained.



NOTE: To completely drain the system the elbow has to be blocked, otherwise no syphoning effect will be provided and a certain quantity of liquid will remain in the system.

CAUTION: To prevent rust formation in the cooling system, always replenish the system with the recommended solution (60% antifreeze 40% water).

To refill the cooling system; position the disconnected end of the hose higher than the engine head, then pour the liquid into the hose until it reaches the elbow fitting in the engine head. Reconnect the hose. Continue to pour the liquid in the coolant tank until the coolant level reaches 2.5 cm (1 in.) below filler neck of reservoir.

Drive Pulley

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

Chaincase

Drain the chaincase completely and refill to proper level using fresh chaincase oil. To drain, remove chaincase cover.

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 joints of brake mechanism.

WARNING: Do not lubricate throttle and / or brake cables housings. Avoid getting oil on brake linings.

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

Battery

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

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

Check electrolyte level. Refill if neccessary 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 throttle and brake control handles, windshield, etc., can be cleaned using mild detergents or isopropyl alcohol. Do not use strong soaps, degreasing solvents, abrasive cleaners, paint thinners, gasoline, etc.

Inspect cab and repair damage. Clean frame with "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 clean cover to prevent dust accumulation during storage.

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

General Inspection

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

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

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 approved equivalents.

PRE-SEASON PREPARATION

To be performed by dealer ● To be performed by owner ○	
Change spark plugs	○
Check chaincase oil level	○
Check drive pulley condition and clean	●
Check ski alignment / ski runners	○
Replace fuel filter	○
Connect fuel lines and check attaching points	○
Check track condition, 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 coolant level and condition	●
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 oil level of roaty valve reservoir	○

SPECIFICATIONS

Engine	Number of cylinders	2
	Bore	69.5 mm (2.736")
	Stroke	57.5 mm (2.264")
	Displacement	436.3 cm^3 (26.6 $in.^3$)
	Compression ratio	11.5:1
	Carburetor	Mikuni VM-34-150
	Starting	Electric
Chassis	Overall length	268.6 cm (105¾")
	Overall width	92.1 cm (36¼")
	Height	104.1 cm (41")
	Height w / o windshield	86.4 cm (34")
	Weight	205 kg (471 lbs)
	Bearing area	8.710 cm^2 (1350 $in.^2$)
	Ground pressure	23.5 kg-cm^2 (.348 lb-in^2)
Power Train	Track width	41.9 cm (16½")
	Std. gear ratio	20 / 34
Electrical	Lighting system (output)	140W
	Headlamp	60 / 60W
	Tail / stop light	5 / 21W
	Spark plug (Bosch)	W-280-MZ-2
	Spark plug (gap)	0.50 mm (.020")
	Advanced ignition timing (direct) B.T.D.C.	2.03-2.54 mm (.080"-1.00")
Fuel	Tank capacity — SI*	28 liters
	— Imp	6 gal
	— US	7.5 gal
	Gasoline	Regular
	Gas / oil ratio	50 / 1
Brake	Type	Disc, self-adjusting

* International Standard

All the information, illustrations and component / system descriptions contained in this manual are correct at the time of publication. However, Bombardier Limited reserves the right to make changes in design and specifications, and / or to make additions to or improvements in its products without imposing any obligations upon itself to install them on its products previously manufactured.