



# *ski-doo*®

## 1994 Operator's Guide



## **All models**

414 8757 00 - Version française disponible

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## SAFETY WARNING

Disregarding any of the safety precautions and instructions contained in this *Operator's Guide* could cause injury, including the possibility of death.

This *Operator's Guide* should remain with the snowmobile at all time.



AFTER SALES SERVICE  
BOMBARDIER INC.  
VALCOURT, QUEBEC  
CANADA J0E 2L0

The following are trademarks of Bombardier Inc.

ALPINE®

BOMBARDIER®

ÉLAN®

FORMULA\*

SAFARI\*

SKANDIC\*

SKI-DOO®

TUNDRA\*

Litho'd in Canada

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## FOREWORD

Congratulations on your purchase of a new SKI-D00 snowmobile. Whatever model you have chosen, it is backed by the Bombardier warranty and a network of authorized Ski-Doo snowmobile dealers ready to provide the parts, service or accessories you may require.

Your dealer is committed to your satisfaction. He has taken training to perform the initial set-up and inspection of your snowmobile as well as completed the final adjustment required to suit your specific weight and riding environment before you took possession. At delivery, your dealer would have explained the snowmobile controls and provided you with a brief explanation of the various suspension adjustments. We trust you have taken full advantage of this! If you need more complete servicing information, please ask your dealer about the proper model-year Ski-Doo Shop Manual.

At delivery, you were also informed of the warranty coverage and completed the Warranty Registration Form which is to be sent to us for processing. In the near future you should be receiving a warranty card which will confirm our receipt of the registration as well as be used for warranty or recall purposes.

You are invited to contact our customer relations staff should you experience problems which cannot be resolved by your dealer.



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## NOTICE

The *Operator's Guide* and the *Snowmobiler's Safety Handbook* have been prepared to acquaint the owner / operator or passenger of a new snowmobile with the various snowmobile controls, maintenance and safe operating instructions. Each is indispensable for the proper use of the product.

These guides use the following symbols.

◆ **WARNING** : Identifies an instruction which, if not followed, could cause serious personal injuries including possibility of death.

▼ **CAUTION** : Denotes an instruction which, if not followed, could severely damage snowmobile 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.

The information and components / system descriptions contained in this guide are correct at time of publication. Bombardier Inc. however, maintains a policy of continuous improvement of its products without imposing upon itself any obligation to install them on products previously manufactured.

We also reserve the right at any time to discontinue or change specifications, designs, features, models or equipment without incurring obligation.

The illustrations show the typical construction of the different assemblies and, in all cases, may not reproduce the full detail or exact shape of the parts shown, however, they represent parts which have the same or a similar function.

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## SAFETY MEASURES

### Observe the following warnings :

- ◆ Throttle mechanism should be checked for free movement before starting engine.
- ◆ The snowmobile engine can be stopped by activating the emergency cut-out button, pulling the tether cord or turning off the key.
- ◆ Engine should be running only when belt guard and / or pulley guard is secured in place. Never run the engine without drive belt installed. Running an unloaded engine can prove to be dangerous.
- ◆ Never run the engine when the track is raised off the ground or with the hood removed.
- ◆ Maintain your snowmobile in top mechanical condition at all times.
- ◆ 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.
- ◆ **Electric start models only :** Never charge or boost a battery while installed on snowmobile.
- ◆ Do not lubricate throttle and / or brake cables and housings.
- ◆ Only perform procedures as detailed in this guide. Unless otherwise specified, engine should be turned OFF for all lubrication and maintenance procedures.
- ◆ **Liquid cooled engines only :** When removing coolant tank cap, first place a cloth over cap then turn cap to its first step to release pressure. Never drain or refill the cooling system when engine is hot.
- ◆ Some snowmobiles are designed for the driver only and no provisions have been made for a passenger.
- ◆ The performance of some snowmobiles may significantly exceed that of other snowmobiles you have operated. Therefore, use by novice or inexperienced operators is not recommended.
- ◆ The engine and components used in a particular model should not be used on other models. Use of Rotax® snowmobile engines in other than Ski-Doo snowmobiles is not recommended or authorized by Bombardier Inc.
- ◆ Most components of this snowmobile are built with parts dimensioned in the metric system. Most fasteners are metric and must not be replaced by customary fasteners or vice versa.
- ◆ Maintenance procedures and tightening torques must be strictly adhered to, never attempt repairs unless the appropriate tools are available.

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# THE 1994 SNOWMOBILE LIMITED WARRANTY

## 1 - PERIOD

BOMBARDIER INC. as manufacturer, warrants FROM THE DATE OF DELIVERY TO THE FIRST CONSUMER, every 1994 BOMBARDIER® snowmobile, sold as NEW AND UNUSED, and predelivered by an authorized BOMBARDIER® dealer for a period of :

- 12 consecutive months.
- Warranty coverage on all new snowmobiles delivered between June 1<sup>st</sup> and December 1<sup>st</sup> of a year will expire on December 1<sup>st</sup> of the following year.
- All optional Bombardier accessories including but not limited to : electric starter reverse transmission, heat grips, double seat etc., when initially installed at the time of sale or delivery, carry the same warranty duration as the snowmobile.
- Optional accessories installed after the date of delivery of the snowmobile, carry the 90-days parts / accessories warranty.

## 2 - WHAT BOMBARDIER INC. WILL DO

BOMBARDIER INC. will repair and / or replace, at its option, original and genuine Bombardier components found defective in material and / or workmanship (under normal use and service), with a genuine BOMBARDIER® component without charge for parts and labour, at any authorized NORTH AMERICAN SKI-DOO® dealer during said warranty period. All parts replaced under warranty become the property of BOMBARDIER INC.

## 3 - CONDITION TO HAVE WARRANTY WORK PERFORMED

Present to the servicing dealer, the hard copy of the BOMBARDIER®. Warranty Registration card or proof of purchase received by the customer from the selling dealer at time of delivery. The snowmobile owner should sign the dealer warranty claim form after work has been performed.

## 4 - EXCLUSIONS - ARE NOT WARRANTED

- Normal wear on all items such as, but not limited to :
  - drive belts
  - slider shoes
  - spark plugs
  - bulbs
  - runners on skis
- Damage caused by failure to provide proper maintenance and lubrication as detailed on the *Operator's Guide*. The labor, parts and lubricants costs of all maintenance services, including tune-ups or adjustments will be charged to the owner.
- Damage resulting from running the snowmobile on surfaces other than snow.
- Damage resulting from improper repairs, modification, racing or use of non-approved parts.
- Losses incurred by the snowmobile owner other than the parts and labor, such as, but not limited to, transportation, towing, telephone calls, taxis or any other incidental or consequential damage.
- Damage resulting from accident, fire or other casualty, misuse, abuse or neglect.

## 5 - BATTERY WARRANTY

- 12 consecutive months (Prorated).
- 100% warranty coverage will start on the date the snowmobile was delivered and run to the following April 30<sup>th</sup>. The remainder of the 12-month period will be prorated as follows :
  - 50% from April 30<sup>th</sup> to December 1<sup>st</sup>.
  - 40% from December 1<sup>st</sup> to December 31<sup>st</sup>.
  - 30% from January 1<sup>st</sup> to end of warranty.

## 6 - EXPRESSED OR IMPLIED WARRANTIES

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

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

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

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

## 7 - CONSUMER ASSISTANCE

If a servicing problem or other difficulty occurs we suggest that you try to solve it with your selling dealer. Discuss your concern with the Service Manager or Owner. In most cases you will have your concern resolved at this level.

If you still have a service or product complaint, you may contact the Customer Relations in Valcourt. Write or call to :

Bombardier Inc.  
Ski-Doo® Customer Relations  
Valcourt, Quebec Canada J0E 2L0  
(514) 532-5000

March 1993  
Bombardier Inc.  
Valcourt, Québec CANADA

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## OFTEN ASKED QUESTIONS

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

A : *Registration is very important and your dealer must register your snowmobile with Bombardier Inc. Make sure the card has been sent. All of this will allow you to :*

- a) *have warranty work performed at any authorized Bombardier dealer in North America. Your registration card will provide the dealer with all the necessary data to complete warranty claim forms.*
- b) *be advised by Bombardier should there be a safety recall or particular warranty campaign.*
- c) *be contacted much faster by the police, the minute they find your stolen snowmobile (if such a case occurs).*

Q : Why must my snowmobile be registered with the governing body having jurisdiction over snowmobile use ?

A : *Snowmobile registration has two purposes : In many provinces or states it is mandatory to register a snowmobile in the same way as for a car. It allows the state or province to maintain records of existing snowmobiles and governmental agencies use part of the registration fees for establishing and maintaining trails.*

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

A : *In the Operator's Guide provided with the snowmobile at the time of delivery.*

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

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

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

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

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

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

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

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

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 re-sale has been registered with the manufacturer.*

Q : How can I receive the best owner assistance ?

A : *The satisfaction and goodwill of the owners of Bombardier products are of primary concern to your dealer and Bombardier Inc. Normally, any problems that arise in connection with the sales transaction or the operation of your snowmobile will be handled by your Dealers Sales or Service Departments. It is recognized, however, that despite the best intentions of everyone concerned, misunderstandings will sometimes occur. Frequently, complaints are the result of a breakdown in communications and can quickly be resolved by a member of the dealership management. If the problem already has been reviewed with the Sales Manager or Service Manager, contact the Dealer himself or the General Manager.*

**We are always pleased to receive your comments on the Ski-Doo snowmobile.**

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## LISTING OF AREA DISTRIBUTORS

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### CANADIAN DISTRIBUTORS

#### PROVINCE OF QUÉBEC AND MARITIMES

**SERVICE OFFICE**

BOMBARDIER INC.  
726 St-Joseph Street  
Valcourt, Quebec,  
J0E 2L0  
(514) 532-2211

**SALES OFFICE**

BOMBARDIER INC.  
75 J.A. Bombardier Street  
Sherbrooke, Quebec,  
J1L 1W3  
(819) 566-3000

#### PROVINCE OF ONTARIO

**SERVICE AND SALES OFFICE**

BOMBARDIER INC.  
230 Bayview Drive  
Barrie, Ontario, L4N 5E9  
(705) 728-8600

#### MANITOBA, SASKATCHEWAN, ALBERTA, BRITISH COLUMBIA, YUKON

**SERVICE AND SALES OFFICE**

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

#### NEWFOUNDLAND, LABRADOR

**SERVICE AND SALES OFFICE**

CHARLES R. BELL LIMITED  
Riverside Drive P.O. Box 1050  
Corner Brook, Newfoundland, A2H 6J3  
(709) 634-3533

#### NORTH-WEST TERRITORIES, FRANKLIN DISTRICT & KEEWATIN

**SERVICE AND SALES OFFICE**

THE NORTH WEST CO. INC.  
77 Main Street  
Winnipeg, Manitoba, R3C 2R1  
(204) 934-1566



## **AMERICAN DISTRIBUTORS**

### **EASTERN, EAST-CENTRAL, CENTRAL AND WESTERN REGIONS**

#### **SERVICE AND SALES OFFICE**

BOMBARDIER CORPORATION  
7575 Bombardier Court  
P.O. Box 8035, Wausau, WI  
54402-8035, U.S.A.  
(715) 842-8886

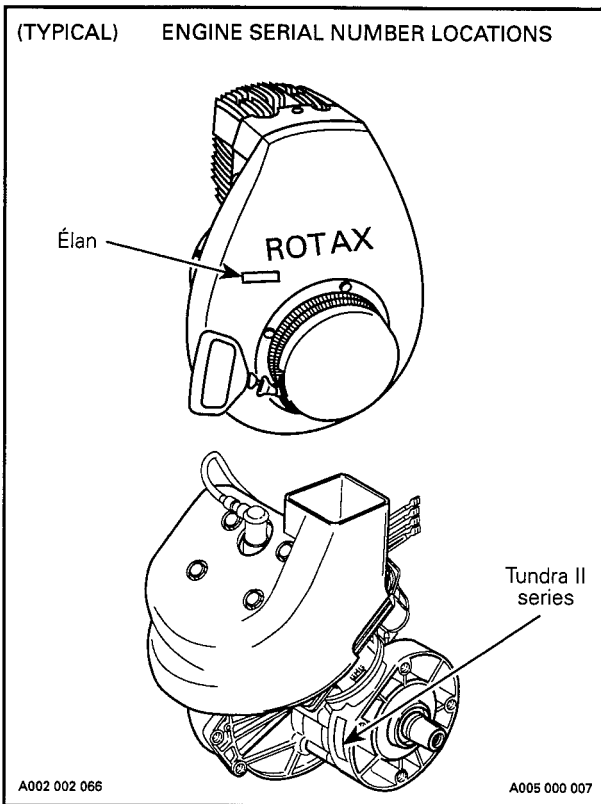
### **ALASKA**

#### **SERVICE AND SALES OFFICE**

THE BRYANT CORPORATION  
NE. 190th & Woodinville  
Snohomish Road  
P.O. Box 389  
Woodinville, Wa  
98072, U.S.A.  
(206) 483-0110

## HOW TO IDENTIFY YOUR SNOWMOBILE

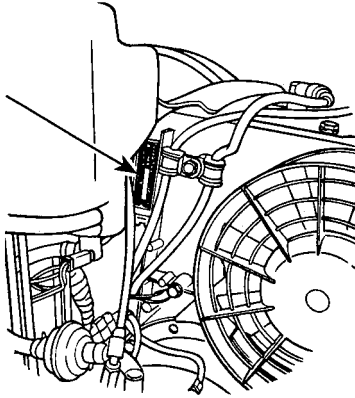
The main components of your snowmobile (engine, track and frame) are identified by different serial numbers. It may sometimes become necessary to locate these numbers for warranty purposes or to trace your snowmobile in the event of loss. These numbers are required by the dealer to complete warranty claims properly. No warranty will be allowed by Bombardier Inc. if the engine serial number or VIN is removed or mutilated in any way. We strongly recommend that you take note of all the serial numbers on your snowmobile and supply them to your insurance company.



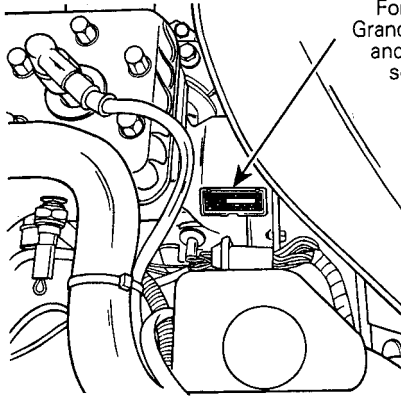


(TYPICAL) ENGINE SERIAL NUMBER LOCATIONS

Safari and  
Skandic  
series



MX, Summit,  
Formula,  
Grand Touring  
and Mach  
series

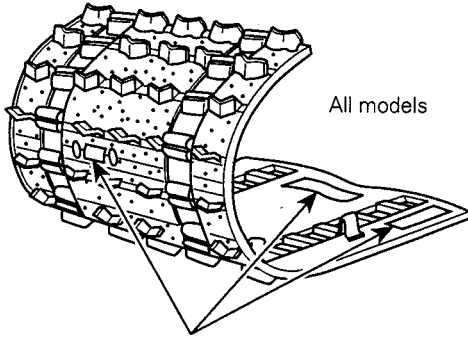


A025 002 022

A015 002 019

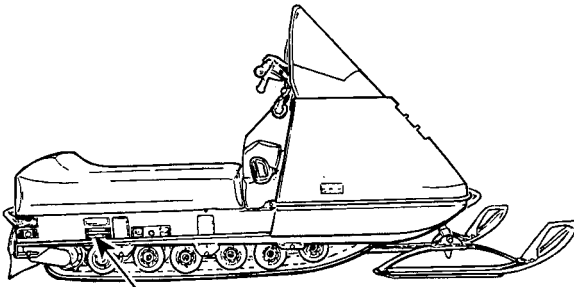
(TYPICAL)

### TRACK AND VEHICLE SERIAL NUMBER LOCATIONS

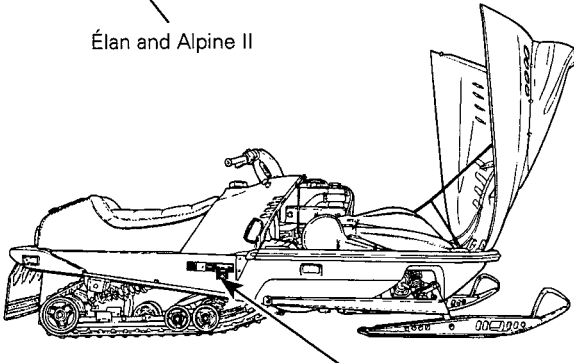


All models

One of these locations



Élan and Alpine II

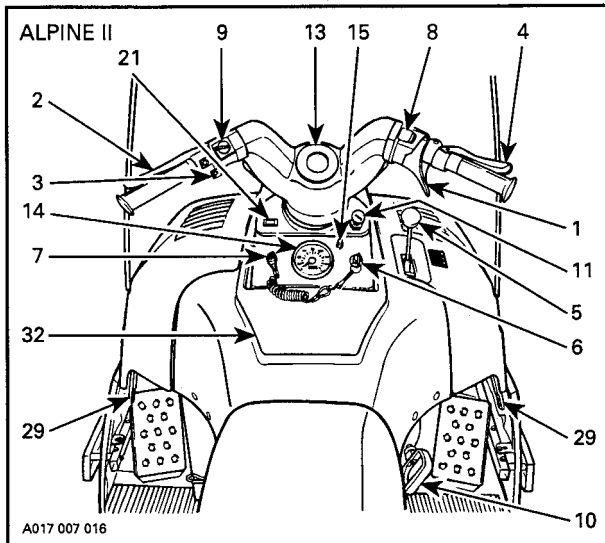
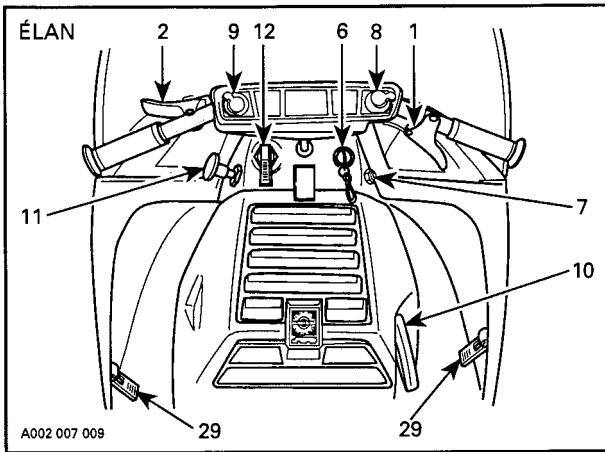


All models except Élan and Alpine II

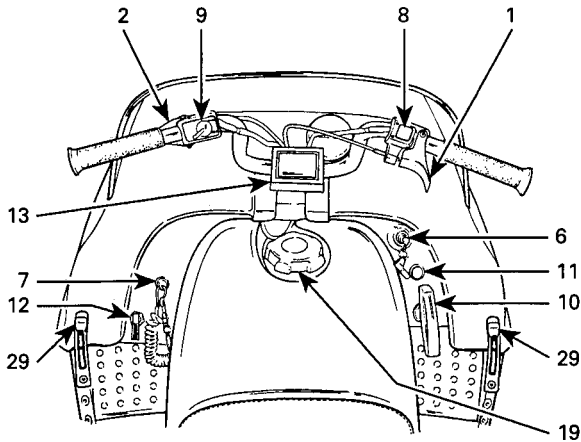
A001 000 061

## CONTROLS / INSTRUMENTS

○ NOTE : Some controls / instruments do not apply to some models. In these cases their reference numbers are deliberately missing in the illustrations. Some controls / instruments are optional on some models.

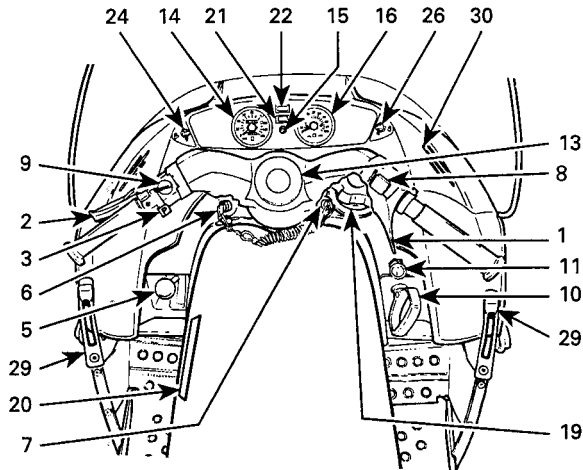


TUNDRA II SERIES



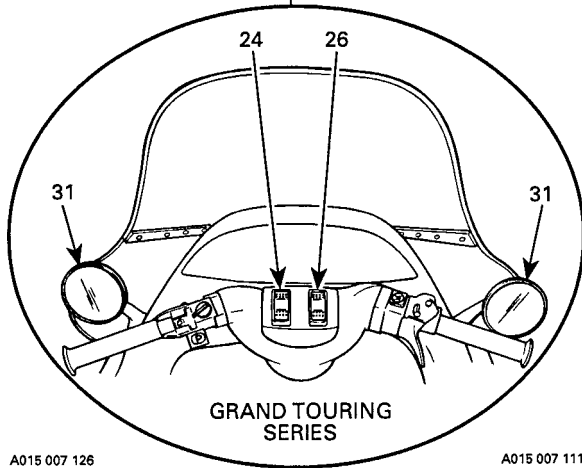
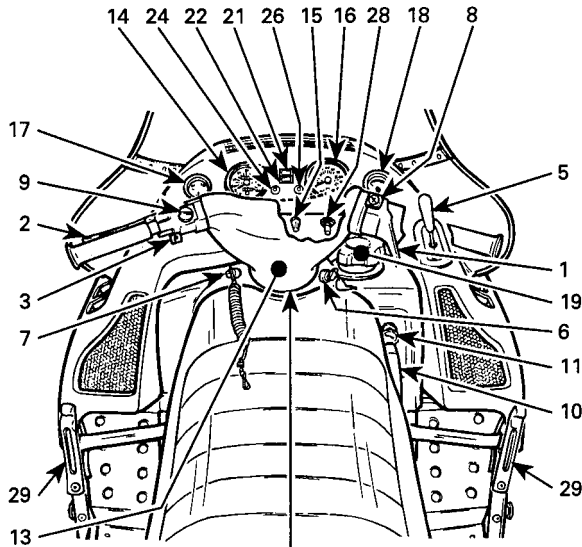
A005 007 026

SAFARI AND SKANDIC II SERIES



A025 007 121

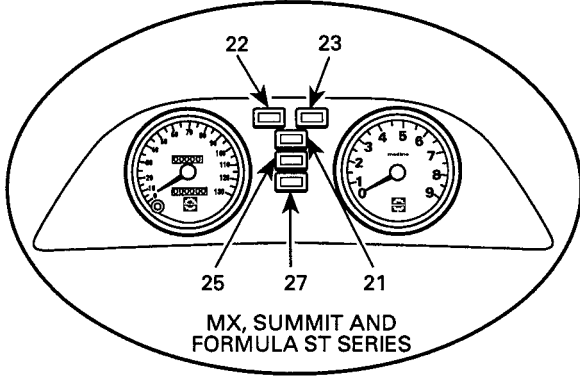
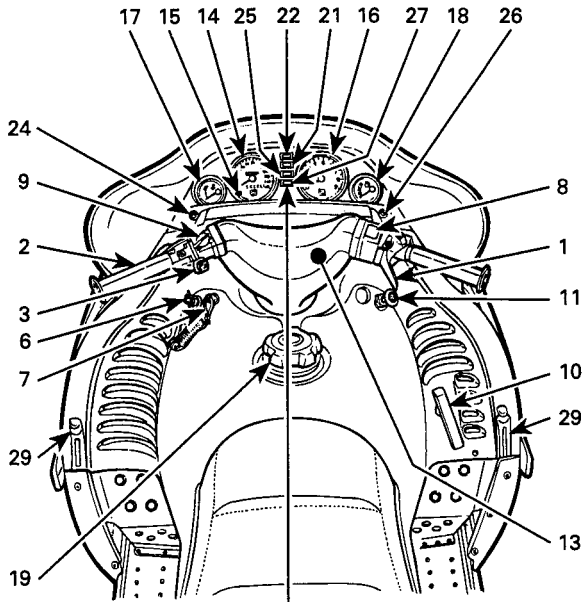
GRAND TOURING SERIES AND MACH I



A015 007 126

A015 007 111

FORMULA Z AND MACH Z



MX, SUMMIT AND  
FORMULA ST SERIES

A006 007 002

A006 007 003

◆ **WARNING:** If the throttle, brake, engine cut-out systems malfunction or do not operate as described, do not start the engine. Contact an authorized dealer for inspection / repair.

### 1) Throttle Lever

Located on the 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.

### 2) Brake 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 proportional to the pressure applied on the lever and to the type of terrain and its snow coverage.

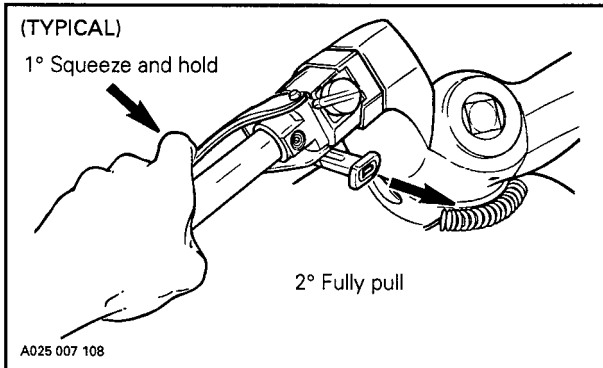
### 3) Parking Brake Button

Located on left side of handlebar. Parking brake should be used whenever snowmobile is parked.

Whenever parking brake is applied and engine is running, injection oil level pilot lamp lights up to remind you that it is engaged.

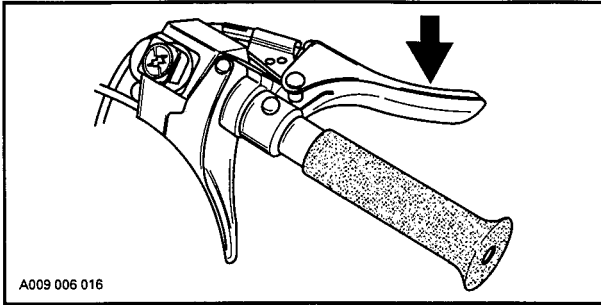
To engage mechanism, squeeze brake lever and maintain while pulling button with the other hand. There are two retaining notches on button lever; pull button until it locks on a notch then release brake lever.

To release mechanism, squeeze brake lever then fully push parking brake button. Always release parking brake before riding.



#### 4) Supplemental Brake Lever

Located on right side of handlebar. Use this supplemental brake lever when necessary.



#### 5) Gear Shift Lever

○ NOTE : On some snowmobiles, a warning buzzer will sound when the shift lever is in reverse gear position.

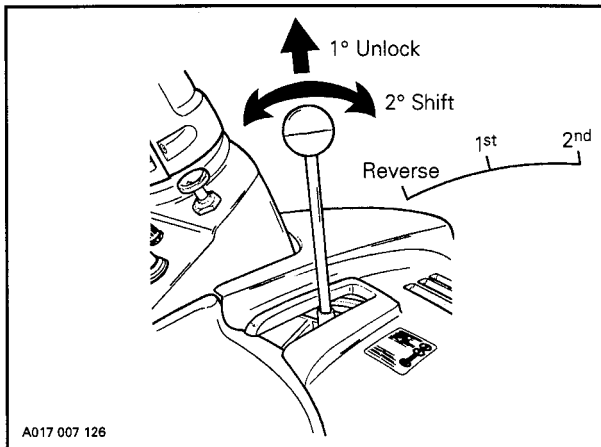
##### Alpine II

A three-position lever :

Up : 2<sup>nd</sup> gear.

Center : 1<sup>st</sup> gear.

Down : Reverse gear.



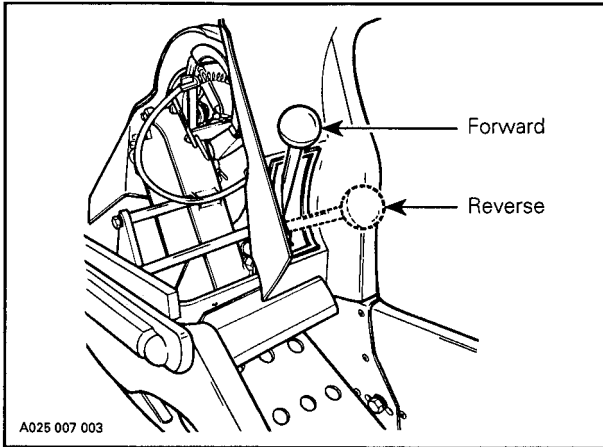


### Skandic II Series

A two-position lever :

Up : Forward gear.

Down : Reverse gear.

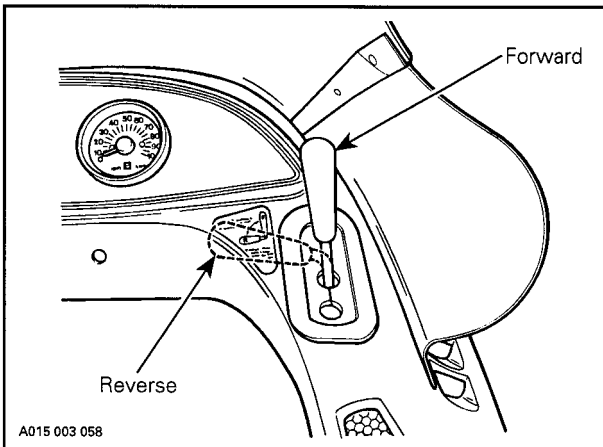


### Grand Touring Series

A two-position lever :

RH side : Forward gear.

LH side : Reverse gear.



## All Models with Reverse Gear

### Shifting Procedure

▼ **CAUTION** : Bring snowmobile to a complete stop before changing gear.

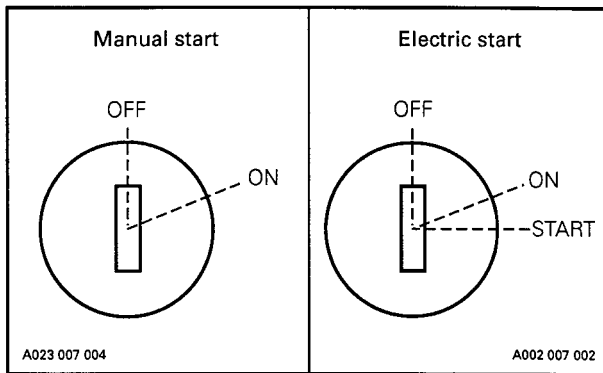
With snowmobile completely stopped and engine at idle, move lever to engage in desired gear.

Do not force lever. If unable to shift, apply throttle to move snowmobile and try again.

◆ **WARNING** : These snowmobiles are capable of a fast reverse. Always apply the brake before shifting and come to a complete stop then change gear. Ensure the path behind is clear of obstacles or bystanders. Fast reverse while turning, could result in loss of stability.

## 6) Ignition Switch

The lights are automatically ON whenever the engine is running.



### Manual Starting

Key operated, two-position switch. To start the engine, first turn the key to ON position. To stop the engine, turn the key to OFF position.

### Electric Starting

Key, operated, three-position switch. To start engine, turn key to START position and hold. See illustration above.

▼ **CAUTION** : Do not hold key at **START** position more than 30 seconds. A rest period should be observed between the cranking cycles to let starter cool down. Holding key in **START** position when engine has started could damage starter mechanism.

Release key immediately when engine has started. Key returns to **ON** position as soon as it is released.

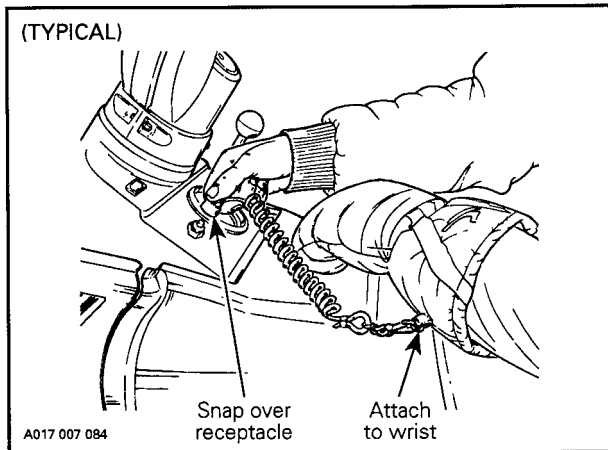
If engine does not start on first try, key must be turned fully back to **OFF** each time. To stop engine, turn key to **OFF** position.

○ **NOTE** : Engine may be manually started with rewind starter if necessary.

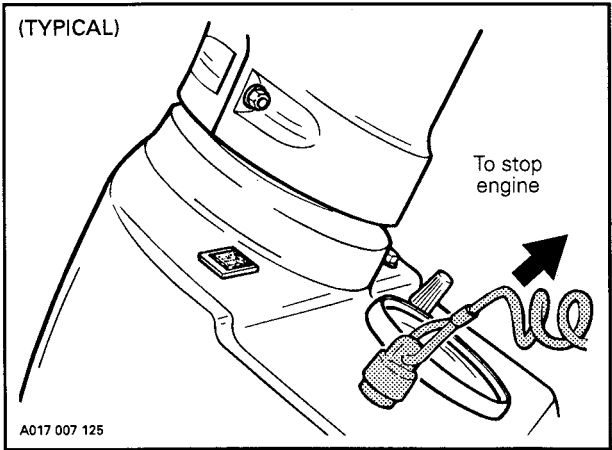
If starter does not operate, check starting system fuse condition. Refer to starting system fuse below.

## 7) Tether Cut-Out Switch

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



If emergency engine shut off is required, completely pull cap from safety switch.

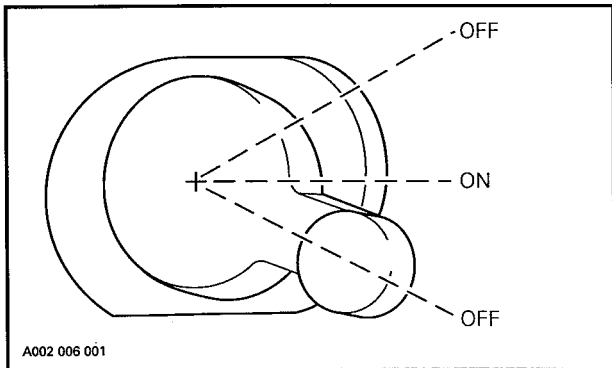


◆ **WARNING :** If the switch is used in a mechanical malfunction, the source of malfunction should be determined and corrected before restarting engine.

## 8) Emergency Cut-Out Switch

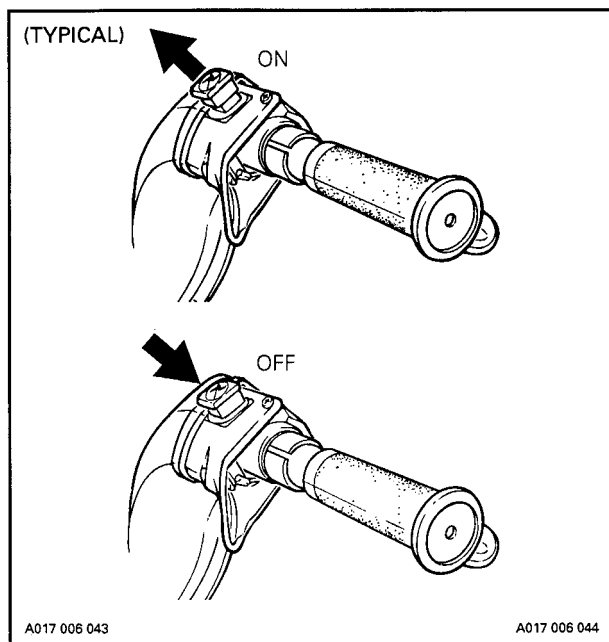
### Élan

A three position switch located on the right side of the handlebar. To stop the engine in an emergency, flick the lever either upper or lower OFF position and simultaneously apply the brake. To restart, lever must be in middle ON position.



### Other Models

A push-pull type switch located on the right side of the handlebar. To stop the engine in an emergency, push the button to the lower OFF position and simultaneously apply the brake. To restart, button must be at the upper ON position.



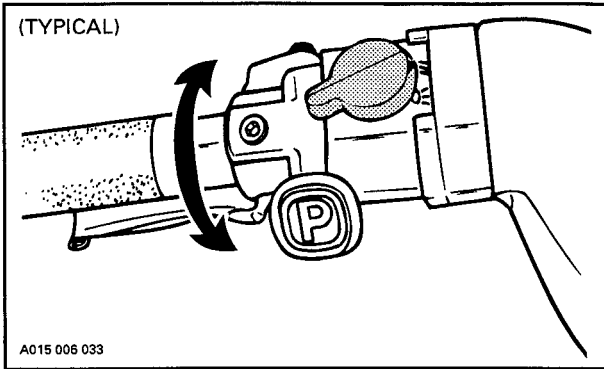
### All Models

All drivers of the snowmobile should familiarize themselves with the function of this device by using it several times on first outing and to stop the engine there after. Thereby being mentally prepared for emergency situations requiring its use.

◆ **WARNING** : If the switch has been used in a mechanical malfunction, the source of malfunction should be determined and corrected before restarting engine.

## 9) Headlamp Dimmer Switch

Located on left side of handlebar, allows selection of headlamp beam. To obtain high or low beam simply flick switch.



## 10) Rewind Starter Handle

Auto-rewind type located on right hand side of snowmobile. To engage mechanism, pull handle slowly until a resistance is felt then pull vigorously. Slowly release handle.

## 11) Primer Button

Pull and push button. It is not necessary when engine is warm.

To prime, activate button until a pumping resistance is felt. From this point, pump two or three times to inject fuel in intake manifold. After priming, ensure that primer button is pushed back.

○ **NOTE:** In very cold temperature, it is recommended to rotate primer button 3-4 turns prior to pull it. This will eliminate the possibility of sticking.

## 12) Decompressor Lever

If engine is hard to start, lift lever to operate. Tip down when engine has started.

▼ **CAUTION:** The decompressor provides easier starting by reducing engine compression. However, leaving the decompressor lever lifted while running might damage your engine. Always pull down after the engine has started.

### 13) Adjustable Steering Handle

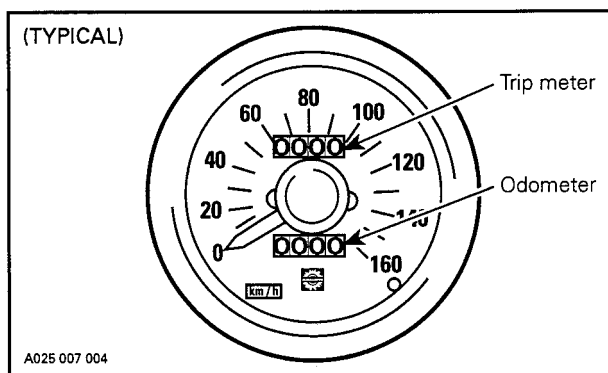
Steering handle height is adjustable, see an authorized dealer.

### 14) Speedometer / Odometer

Direct-reading dial indicates the speed of the snowmobile in kilometers or miles per hour. Odometer records the total distance travelled in kilometers or miles.

#### Trip Meter

Records distance travelled in kilometers or miles (according to its setup) until it is reset. It can be used to record a fuel tank range or distance between two relays for instance.



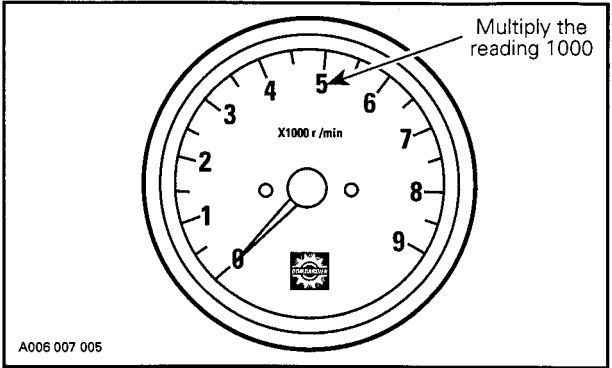
### 15) Trip Meter Reset Button

To reset, turn button (push on some models) until all numbers read zero.

### 16) Tachometer

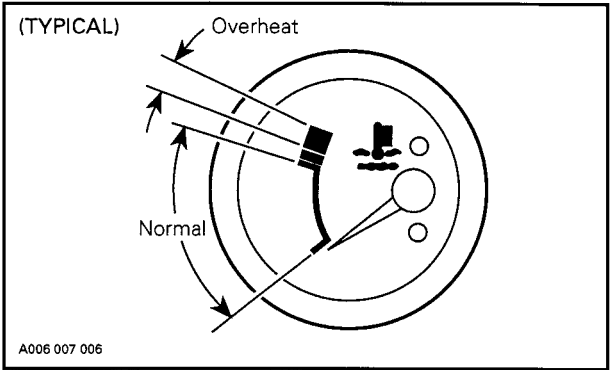
Direct-reading dial indicates the number of revolutions per minute (RPM) of the engine.

On some models, it is necessary to multiply the reading by 1000 to obtain the actual engine RPM.



### 17) Temperature Gauge

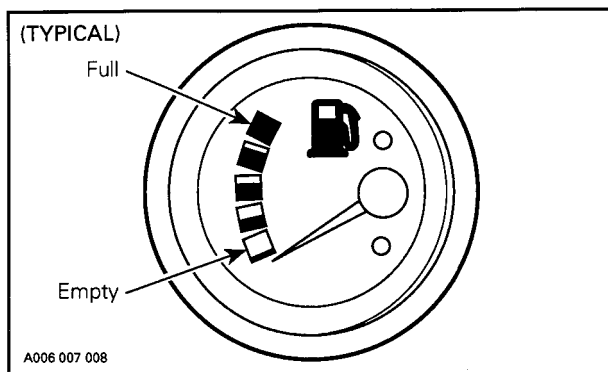
The gauge indicates engine coolant temperature. The needle moves to the normal range as engine warms. Under all riding conditions, the needle should stay within this range. If needle moves into the overheat range, reduce snowmobile speed and run snowmobile in loose snow or stop engine immediately.





## 18) Electric Fuel Level Gauge

Allows driver to observe the fuel level while riding the snowmobile.



## 19) Fuel Tank Cap / Gauge

Unscrew to fill up tank then fully tighten.

Some caps feature a dipstick or a mechanical gauge.



**NOTE :** On some models, it is necessary to open hood to reach fuel tank and cap.



**WARNING :** Never use an open flame to check fuel level.

## 20) Fuel Level Indicator

Provides visual indication of fuel level in tank.

## 21) High Beam Pilot Lamp (Blue)

Lights when headlamp is on HIGH beam.

## 22) Injection Oil Level Pilot Lamp (Red)

Lights when injection oil level is low. Check oil level and replenish as soon as possible. Also lights when parking brake is applied (with engine running).



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



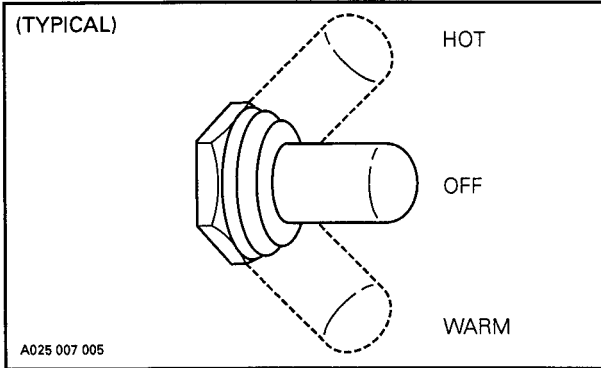
**NOTE :** Whenever brake lever is actuated, oil injection level pilot lamp should light up when engine is running. If not replace lamp.

### **23) Engine Overheat Warning Lamp (Red)**

If this lamp glows, reduce snowmobile speed and run snowmobile in loose snow or stop engine immediately.

### **24) Heated Grip Switch**

Three-position toggle switch. Select the desired position to keep your hands at a comfortable temperature.



### **25) Heated Grip Pilot Lamp (Amber)**

Lights when heated grip switch is on the high position. Lights dimmed when switch is in the low position.

### **26) Heated Throttle Lever Switch**

Three-position toggle switch. Select the desired position to keep your throttle thumb at a comfortable temperature. See illustration above.

### **27) Heated Throttle Lever Pilot Lamp (Amber)**

Lights when heated throttle lever switch is on the low position. Lights dimmed when switch is in the low position.

### **28) Rear Passenger Heated Grip Switch**

Three-position toggle switch. Select the desired position to keep rear passenger's hands at a comfortable temperature. Refer to illustration above.

## 29) Hood Latches

Unhook the latches to unlock the hood from its anchors.

▼ **CAUTION** : On some snowmobiles with reverse gear, gear shift lever must be in forward position before opening hood.

Always lift hood gently until stopped by retaining device.

◆ **WARNING** : It is dangerous to run an engine with the hood opened, unfastened or removed.

## 30) Snow Deflector

Close snow deflector when riding in powdered snow or when snowmobile is stored outdoor without a tarpaulin.

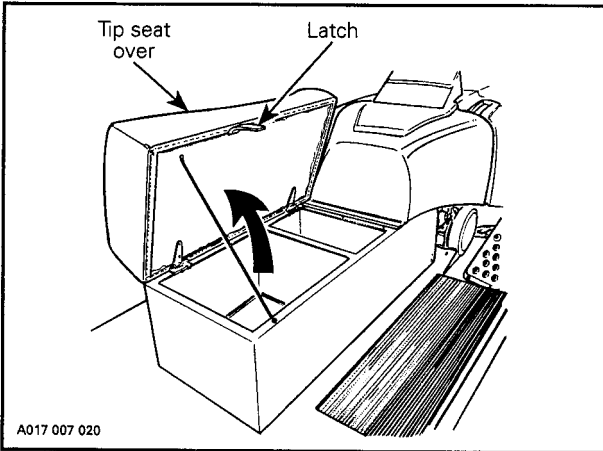
## 31) Adjustable Mirrors

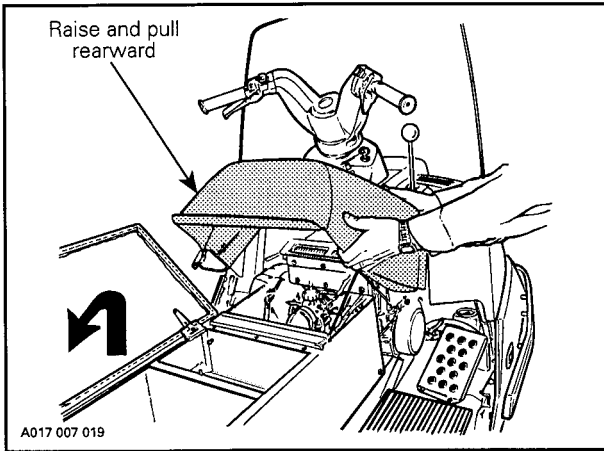
Each mirror can be adjusted to suit driver's preference.

## 32) Console

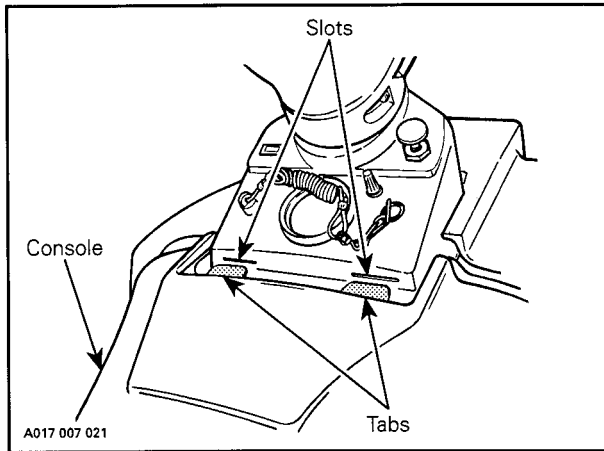
### Alpine II

To gain access to the engine, carburetor and spark plugs, pull down the latch and tip seat over from right, raise rear part console then pull rearward.





When reinstalling console, ensure to insert console tabs into dashboard slots.

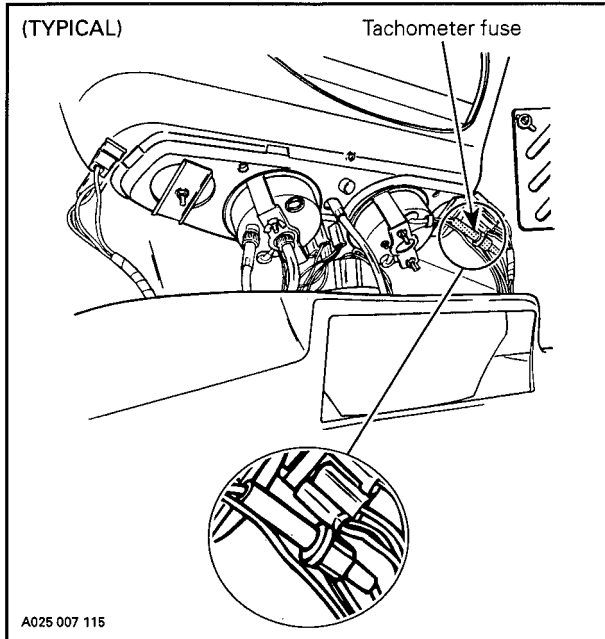


## Fuses

▼ **CAUTION** : Do not use a higher rated fuse as this can cause severe damage to electric components.

### Tachometer Fuse

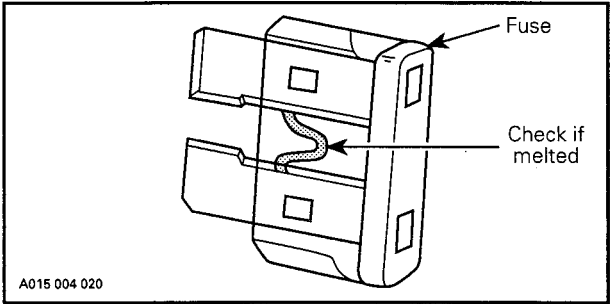
The tachometer is protected by a 0.1 ampere rated fuse. Fuse holder is located under the hood beside the tachometer. If tachometer stops operating, check fuse condition and replace if necessary.



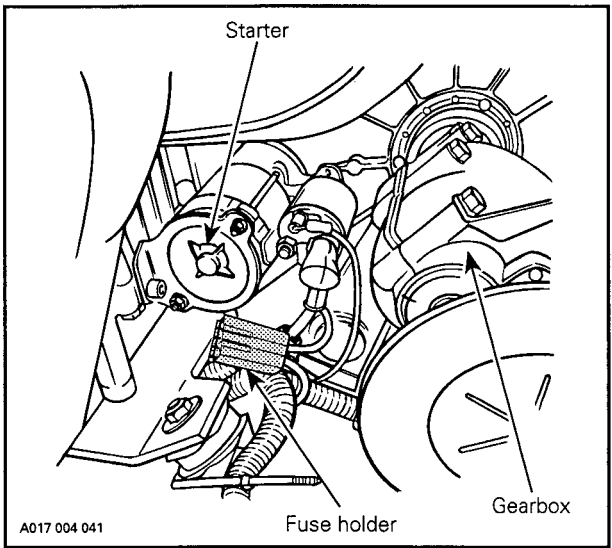
### Starting System Fuse

Starting system is protected with a 30 ampere rated fuse. See following illustration for fuse holder location. If starter does not operate, check fuse condition and replace if necessary.

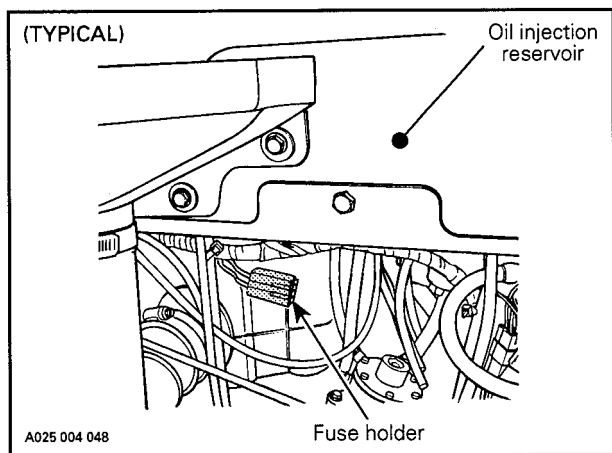
To remove fuse from holder, pull fuse out. Check if filament is melted.



Alpine II

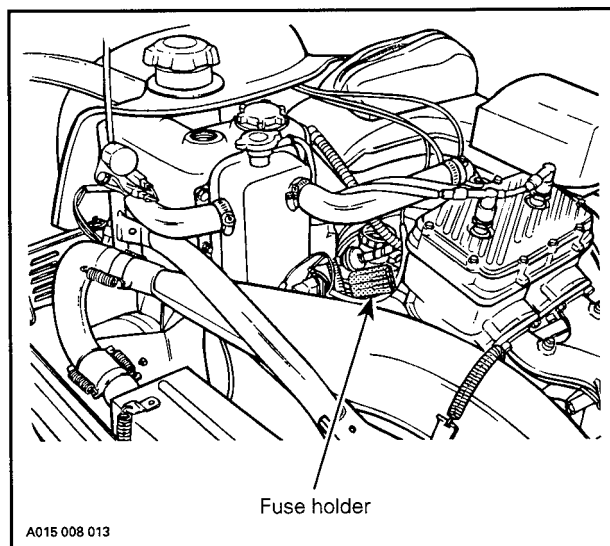


Safari Series



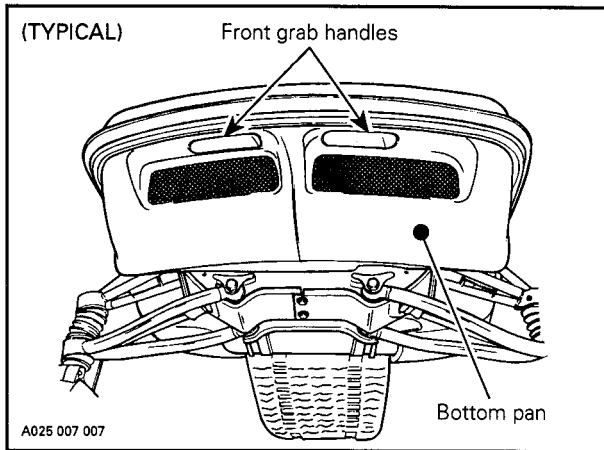
Check if this filament is melted.

Grand Touring Series



## Front Grab Handles / Front Bumper

To be used whenever front of snowmobile requires lifting.



◆ **WARNING** : Do not use skis to pull or lift snowmobile.

## Storage Compartment / Tool Kit

Depending on model, a storage compartment is provided in engine compartment, under seat or inside seat. A tool kit containing tools for basic maintenance will be found there.

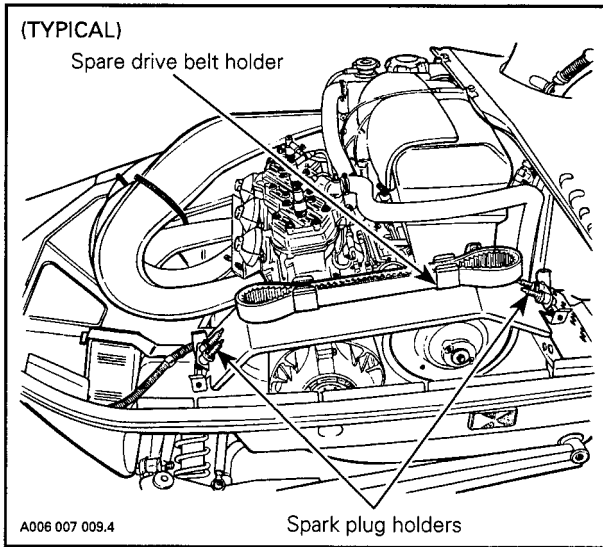
## Spark Plug Holder

To keep spare spark plugs dry and prevent shocks that might affect the adjustment or break them, a holder is provided in engine compartment.

Firmly tighten them into the holder with spark plug socket (in tool kit) to ensure that they will not be loosened by vibrations.

○ **NOTE** : Spare spark plugs are not supplied with snowmobile.





### **Spare Drive Belt Holder**

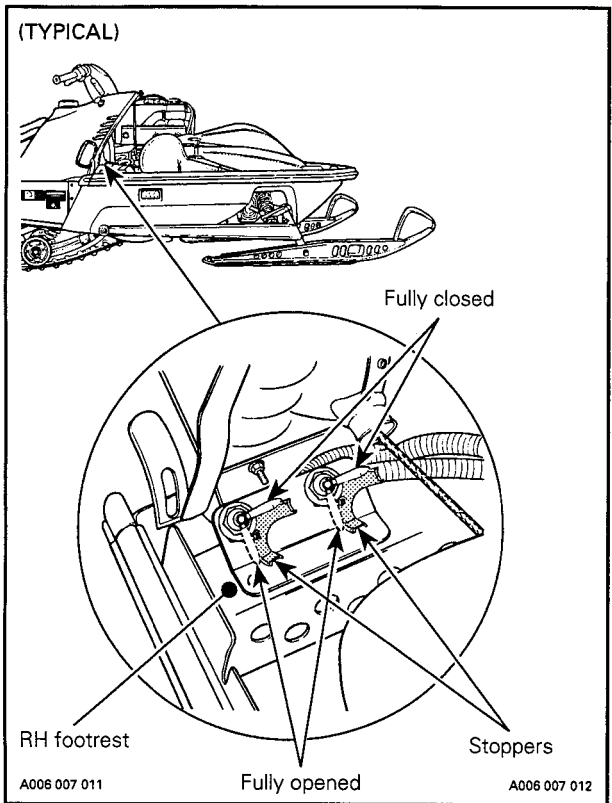
A spare drive belt can be installed in drive belt holder clips.

○ **NOTE** : Spare drive belt is not supplied with snowmobile.

### **Fuel Shut-Off Valve(s)**

Valve should be closed when transporting or storing snowmobile. The valve(s) is (are) under hood, on top of RH side footrest.

Two stoppers are provided on the fuel shut-off valve to prevent the lever from rotating due to vibration. They are set so that the inner tip of the lever contacts the stoppers while in the fully opened or fully closed positions.



When opening or closing valve(s), always rotate lever so that it flips over the stopper and maintains its position.

Fully open the valve(s) in order to operate the snowmobile.

▼ **CAUTION** : Always fully open the valve(s) before riding. Never allow the valve lever to remain between stoppers.

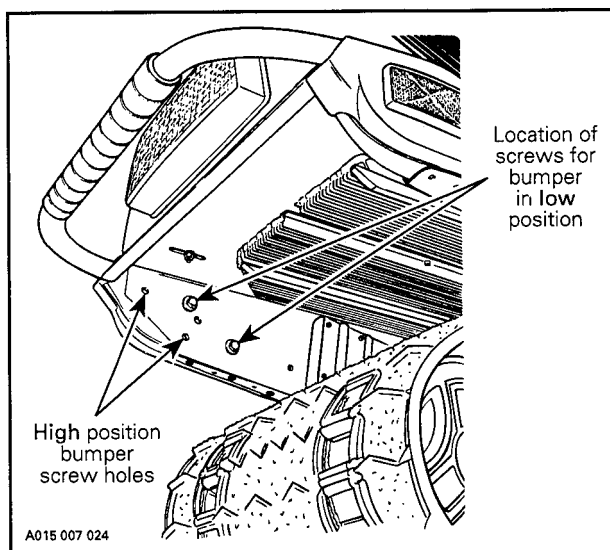
○ **NOTE** : It may be necessary to push against stopper if lever is hard to get in position.

## Rear Bumper

The rear bumper can be installed in two positions, as desired by the driver. The low position can be used in deep snow to provide a grip at a more convenient level.

To change bumper position, proceed as follows :

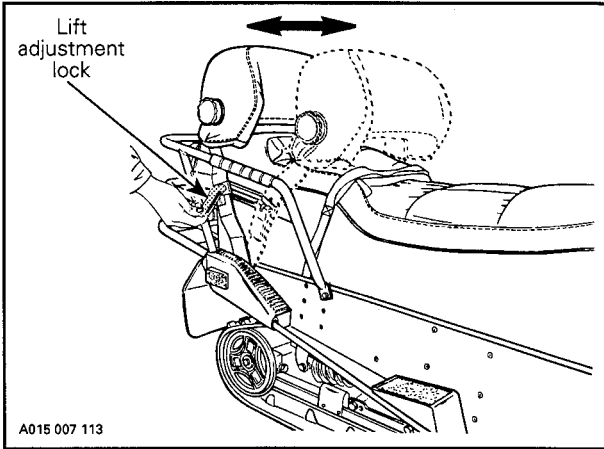
- Lift snow guard and block in that position.
- From inside tunnel, remove bumper retaining screws (two per side) and remove bumper.
- Reverse bumper position and insert in tunnel.
- When installing bumper, the retaining screws have to be relocated to different holes, refer to illustration.



- Firmly tighten bumper screws.
- Lower snow guard.

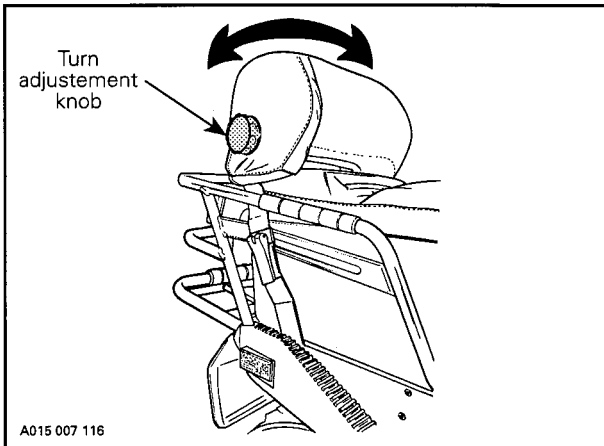
## Adjustable Backrest

The backrest position and support angle may be adjusted to suit driver or passenger convenience.



To adjust :

1. Lift adjustment lock on each side of backrest rack.



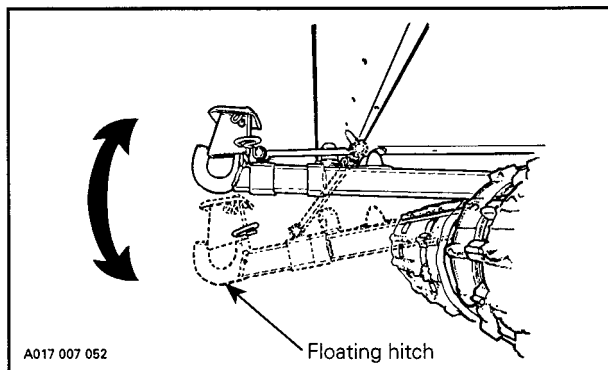
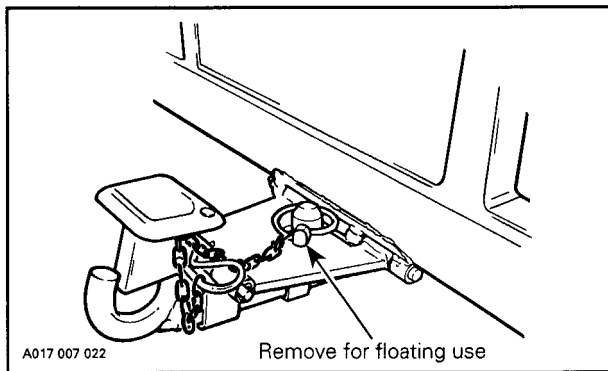
2. Move backrest forward or backward as desired.
3. Secure each adjustment lock.
4. Turn adjustment knob in either direction to change backrest angle as desired.

◆ **WARNING :** Backrest should only be repositioned while the snowmobile is stopped. Adjust to provide maximum lower back support. Always consider your passengers' comfort and safety.

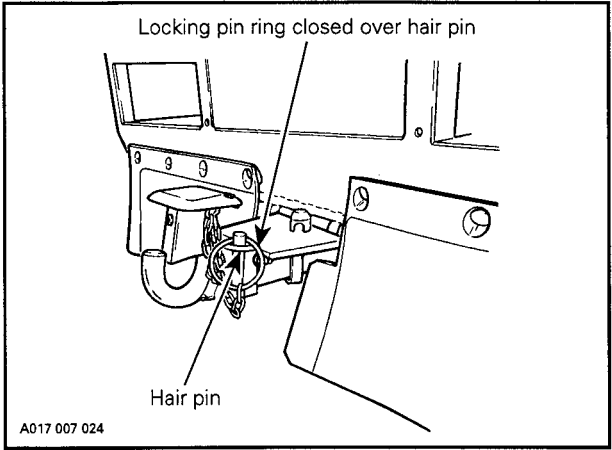
## Hitch

The hook-type hitch can be used to pull most equipment. The hitch may be used fixed or floating depending on the type of equipment towed. This allows smooth operation when towing a load.

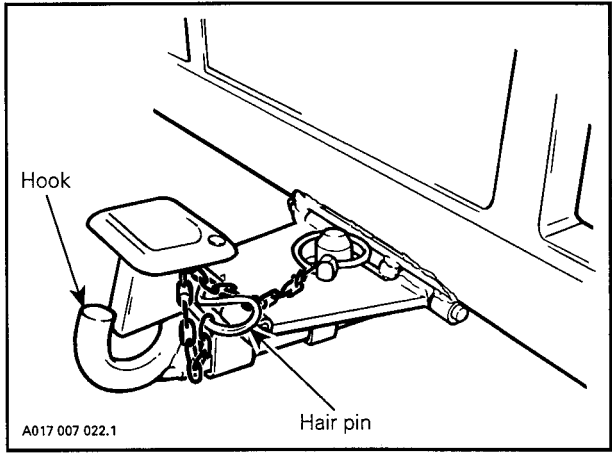
While towing a trailer with a fixed draw bar, keep the hitch locked. With a floating draw bar, allow the hitch to move up and down by removing its locking pin.



The locking pin can be installed into hair pin when the hitch is used floating.



○ **NOTE :** To maintain the hitch locked, install the locking pin into hitch post and place its flat side against the hitch plate. A hair pin is provided to lock the hook of the hitch.



◆ **WARNING :** When towing any sled or trailer, always ensure to lock the hook type attachment with the hair pin. Always use a sled with a rigid draw bar. Drive at moderate speed and avoid rough terrain. Have passengers get out of the towed snowmobile and walk across roads.

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## FUEL AND OIL

### Recommended Fuel

Use regular unleaded gasoline, available from most service stations or gasohol containing less than 10 % of ethanol. The gasoline used must have an octane number (R + M) / 2 of 87 or higher.

▼ **CAUTION** : Never experiment with other fuels or fuel ratios. The use of unrecommended fuel can result in snowmobile performance deterioration and damage to critical parts in the fuel system and engine components.

◆ **WARNING** : Never top up the fuel tank before placing the snowmobile in a warm area. As temperature increases, fuel expands and might overflow. Fuel is flammable and explosive under certain conditions. Always wipe off any fuel or oil spillage from the snowmobile.

### Recommended Oil

▼ **CAUTION** : Never mix brands of two-cycle oil as chemical reaction can cause engine damage. Never use out-board or straight mineral oils.

#### Élan and Alpine II Only

Oil must be added to the fuel in premeasured amounts then both oil and fuel should be thoroughly mixed together before fueling the snowmobile tank.

USE **BLIZZARD OIL** (P / N 496 0135 00 - 500 mL) available from your authorized dealer. This type of oil will flow at temperature as low as minus 40°C (-40°F). If unavailable, substitute with Bombardier injection oil (P / N 496 0133 00) or equivalent.

#### Other Models

Oil is contained in the oil injection reservoir.


USE **BOMBARDIER SNOWMOBILE INJECTION OIL** (P / N 496 0133 00 - 1 liter) available from authorized dealer. This type of oil will flow at temperatures as low as minus 40°C (-40°F). If unavailable, substitute with Blizzard Oil (P / N 496 0135 00).

### Fuel / Oil Mixture

#### Élan and Alpine II Only

##### Fuel / Oil Ratio

The importance of using the correct fuel / oil mixture cannot be overstressed. An incorrect fuel / oil ratio results in serious engine damage. Recommended fuel / oil ratio is 50:1 (40:1 during break-in period). See Fuel / Oil Mixing Charts below.

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

<b>50 TO 1 MIXTURE RATIO</b>		
<b>UNIT</b>	<b>OIL</b>	<b>GAS</b>
SI ①	500 mL	25 L
IMPERIAL	500 mL 16 oz	5.5 gal 5 gal
U.S. ②	500 mL 13 oz	6.6 gal 5 gal


① Système International (International System)


② United States

### Fuel / Oil Mixing Procedure

To mix the fuel and oil always use a separate clean container. Never mix directly in your snowmobile tank.

1. Pour approximately four liters (one gallon) of fuel into a clean container.
2. Add the amount of oil required for the total mixture.
3. Replace the container cap and shake the container thoroughly.
4. Add the remainder of the fuel.
5. Once again thoroughly agitate the container. Then using a funnel with a fine mesh screen to prevent the entry of foreign particles, pour the mixture into the snowmobile tank.


 **WARNING :** To prevent fuel spillage in the engine compartment, a funnel must always be used when filling the fuel tank.

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

## Oil Injection System

### All Models Except Élan and Alpine II

Always maintain a sufficient amount of recommended oil in the injection oil reservoir.

 **CAUTION :** Check level and refill every time you refuel. Wipe off any oil spills. Oil is highly flammable.



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## **BREAK-IN PERIOD**

### **Engine**

A break-in period of 10 to 15 operating hours is required before running the snowmobile at full throttle.

During this period, maximum throttle should not exceed 3/4. However, brief full acceleration and speed variations contribute to a good break-in. Continued wide open throttle accelerations, prolonged cruising speeds and engine overheating are detrimental during the break-in period.

To assure additional protection during the initial engine break-in, 500 mL (18 imp. oz) of BOMBARDIER Injection Oil (P / N 496 0133 00) should be added to fuel for the first full filling of fuel tank. Always remove and clean spark plugs after engine break-in.

### **Belt**

A new drive belt requires a break-in period of 25 km (15 miles). Avoid strong acceleration / deceleration, pulling a load or high speed cruising.

### **10 - Hour Inspection**

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


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The 10-hour inspection is at the expense of the snowmobile owner.

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## Break-In Fuel / Oil Ratio

Élan and alpine II Only

 **CAUTION :** The following chart only applies to break-in period to give a richer mixture of 40 to 1 ratio.

40 TO 1 MIXTURE RATIO		
UNIT	OIL	GAS
SI ①	500 mL	20 L
IMPERIAL	500 mL 20 oz	4.4 gal 5 gal
U.S. ②	500 mL 16 oz	5.3 gal 5 gal

① Système International (International System)


② United States

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## PRE-START CHECK

### Check Points :

- Activate the throttle control lever several times to check that it operates easily and smoothly. It 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. It must fully return when released.
- Verify skis and steering operate freely.
- Verify track and idler wheels are unfrozen and free to turn.
- Check fuel and injection oil level.
- Ensure fuel shut-off valve(s) is in **fully open** position.
- Verify air filter(s) is free of snow.
- Check gear shift lever position (models with reverse gear only).
- Clean and check operation of the headlight, taillight and brake light.

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

- Verify that the path ahead of the snowmobile is clear of bystanders and obstacles.

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## STARTING PROCEDURE

- Re-check throttle control lever operation.
- Ensure that the emergency cut-out switch is in the ON position.
- Ensure the tether cut-out cap is in position and that the cord is attached to your clothing.
- Activate the primer two or three times.



NOTE : Priming is not necessary when engine is warm.



CAUTION : Use of ether and / or other types of fluid as a starting aid can cause damage to engine components and is not recommended.

- Lift decompressor lever (if applicable).

### Manual Starting

Insert the key in the ignition switch and turn to ON position.

Grasp manual starter handle firmly and crank engine.



WARNING : Do not apply throttle while starting.

Tip decompressor down once engine has started.

### Electric Starting (some models only)

Insert key in ignition switch.

Turn key clockwise until starter engages.

Release key immediately when engine has started.



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

### Before Riding

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



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



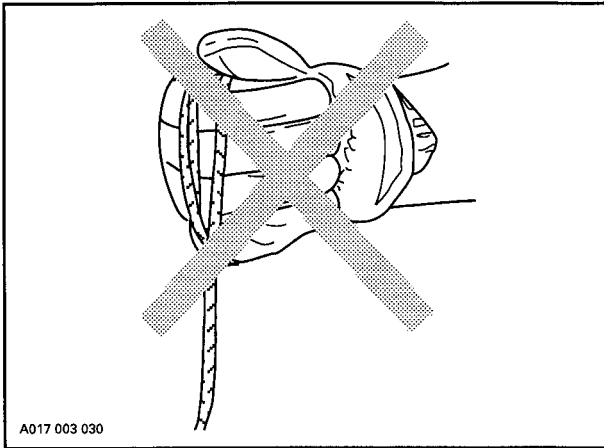
CAUTION : Allow the engine to warm before operating at full throttle.

## Emergency Starting

The engine can be started with the emergency starter rope supplied with the tool kit.

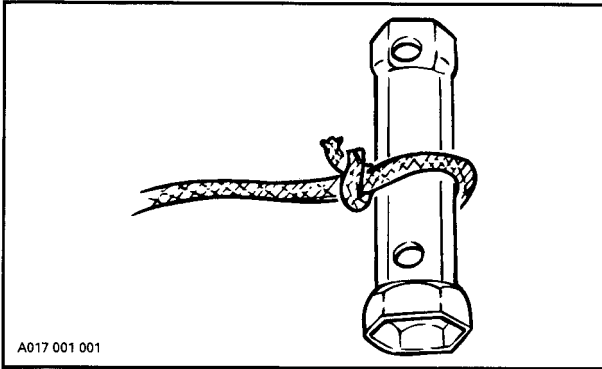
Remove belt guard (and console on some models).

◆ **WARNING :** Do not wind starting rope around your hand. Hold rope by the handle only. Do not start the snowmobile by the drive pulley unless it is a true emergency situation. Have the snowmobile repaired as soon as possible.

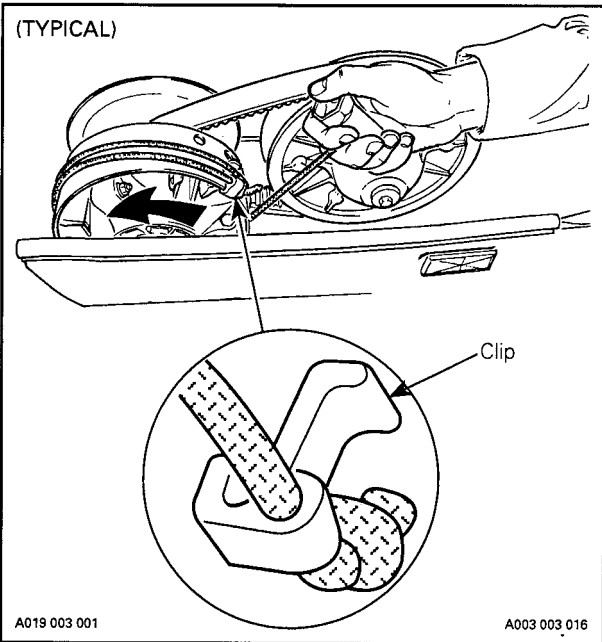


Attach emergency rope to rewind handle and to the starter clip supplied in the tool kit.

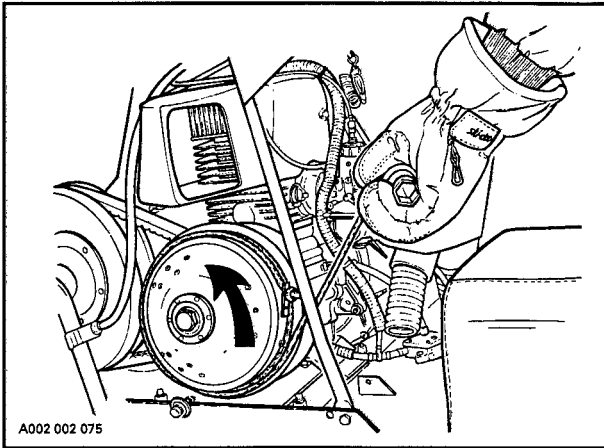
○ **NOTE :** The spark plug socket can be used as an emergency handle.



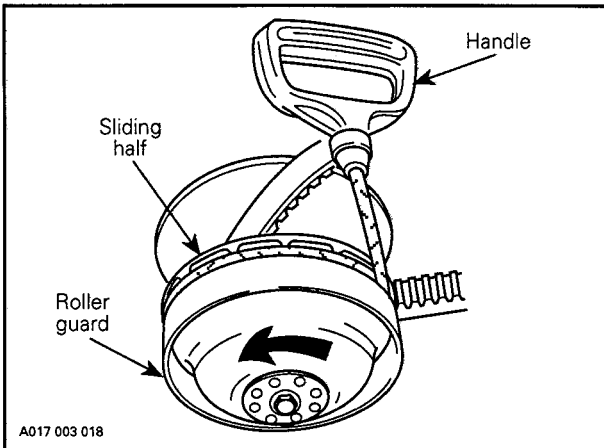
Wind the rope tightly around drive pulley. When pulled, pulley must rotate counterclockwise.



○ NOTE : On Élan, tie a knot on rivet head side of supplied clip from tool kit. Hook up clip on drive pulley and wind counterclockwise up to three turns.



○ NOTE : On Tundra II series, wind rope between sliding half pulley and roller guard. A clip is not necessary.



Start engine as per usual manual starting.






◆ **WARNING :** When starting the snowmobile in an emergency situation, using drive pulley, do not reinstall the belt guard and return slowly to have snowmobile repaired.






## LUBRICATION AND MAINTENANCE CHART

Some items may not apply to your particular model. Refer to LUBRICATION and MAINTENANCE section of *Shop Manual* for more details.

Most specifications are given in both metric and customary units. Where precise accuracy is not required, some conversions are rounded to even numbers for easier use.

- ① 10-HOUR INSPECTION (To be performed by dealer)
- ② WEEKLY OR EVERY 240 km (150 mi)
- ③ MONTHLY OR EVERY 800 km (500 mi)
- ④ ONCE A YEAR OR EVERY 3200 km (2000 mi)
- ⑤ STORAGE
- ⑥ PRE-SEASON PREPARATION (To be performed by dealer)

LUBRICATION AND MAINTENANCE CHART		①	②	③	④	⑤	⑥
	Starting Rope Condition						✓
	Engine Head Nuts	✓			✓		
	Engine Mount Nuts	✓			✓		
	Exhaust System	✓		✓			
	Engine Lubrication						✓
	Cooling System Condition	✓			✓		
	Coolant Replacement						✓
	Condition of Seals						✓
	Injection Oil Filter Condition			✓			
	Injection Oil Filter Replacement						✓
	Oil Injection Pump Adjustment	✓			✓		
	Fuel Stabilizer					✓	
	Fuel Filter Replacement						✓
	Fuel Lines and Connections	✓					✓
	Carburetor Adjustment	✓			✓		
	Throttle Cable Inspection	✓			✓		✓
	Air Filter Cleaning			✓			
	Drive Belt Condition	✓	✓				
	Condition of Drive and Driven Pulleys	✓		✓		✓	
	Cleaning of Drive and Driven Pulleys						✓
	Retorquing of Drive Pulley Screw	✓					
	Driven Pulley Preload	✓					

<b>LUBRICATION AND MAINTENANCE CHART</b>		①	②	③	④	⑤	⑥
	Brake Condition	✓	✓				
	Brake Adjustment			✓			
	Lubrication of Ratchet Wheel						✓
	Drive Chain Tension	✓	✓				
	Chaincase / Gearbox Oil Level	✓	✓			✓	
	Handlebar Bolts, Retorque to 26 N•m (19 lbf•ft)	✓					
	Steering and Front Suspension Mechanism	✓		✓		✓	
	Wear and Condition of Skis and Runners	✓	✓				
	Steering and Ski Leg Camber Adjustment	✓		✓			
	Suspension Adjustments		AS REQUIRED				
	Suspension Lubrication			✓	✓	✓	
	Suspension Condition	✓			✓	✓	
	Suspension Stopper Strap Condition				✓		
	Track Condition	✓		✓			
	Track Tension and Alignment	✓	AS REQUIRED				
	Spark Plugs*	✓	✓				
	Engine Timing	✓					✓
	Battery Condition	✓	✓		✓		
	Headlight Beam Aiming				✓		
	Wiring Harnesses, Cables and lines	✓		✓			
	Operation of Lighting System (HI / LO Beam, Brake Light, etc.), Test Operation of Emergency Cut-out Switch and Tether Cut-out Switch	✓	✓				✓
	Rags in Air Intake and Exhaust System					✓	✓
	Engine Compartment	✓		✓			
	General Inspection	✓		✓		✓	

\* Before installing new spark plugs at pre-season preparation, it is suggested to burn excess storage oil by starting the engine with the old spark plugs. Only perform this operation in a well ventilated area.



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## FLUID LEVELS

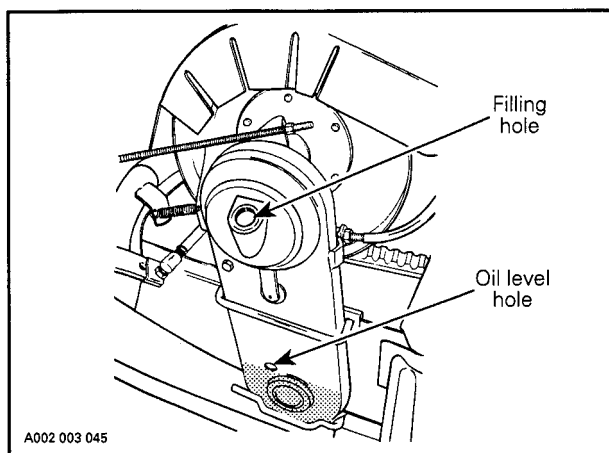
### Chaincase / Gearbox Oil Level

#### Élan

Remove tool box from snowmobile. Remove access plug and check oil level through hole. If necessary to replenish, remove filler plug and pour chaincase oil (P / N 413 8019 00) until it flows through oil level hole.

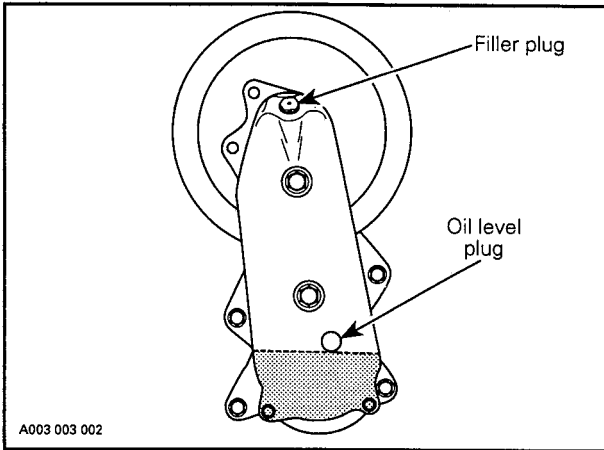
Wipe off any oil spillage.

Re-install plugs and tool box.



## Tundra II / LT

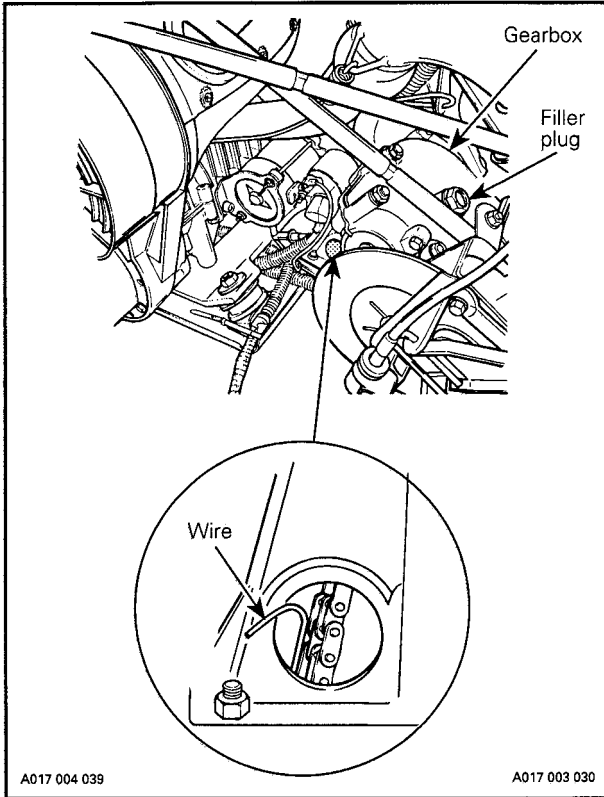
Check the oil level by removing the chaincase oil level plug.



The oil should be level with the bottom of the oil level hole. Refill as required using Bombardier chaincase oil (P/N 413 8019 00) until it flows through oil level hole.

## Alpine II

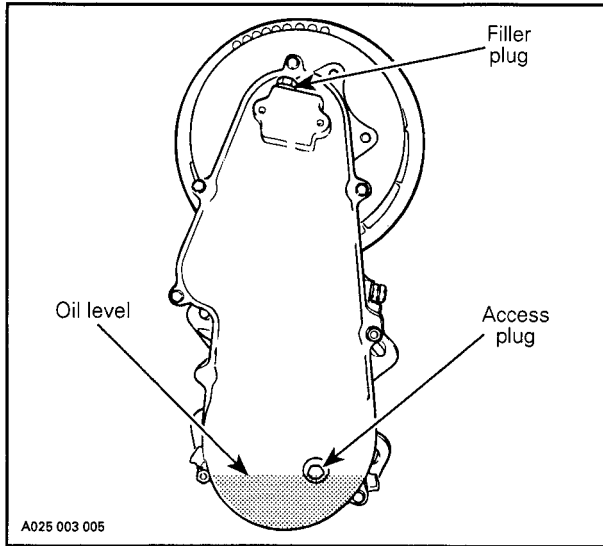
Remove rubber inspection cover located on bottom right side of gearbox. Using a rigid piece of wire as dipstick, check oil level. Oil level must reach 92 mm (3-5/8 in) on dipstick.



To fill, remove filler plug from top of gearbox. Refill as required using Bombardier chaincase oil (P / N 413 8019 00, 250 mL (9 oz)).

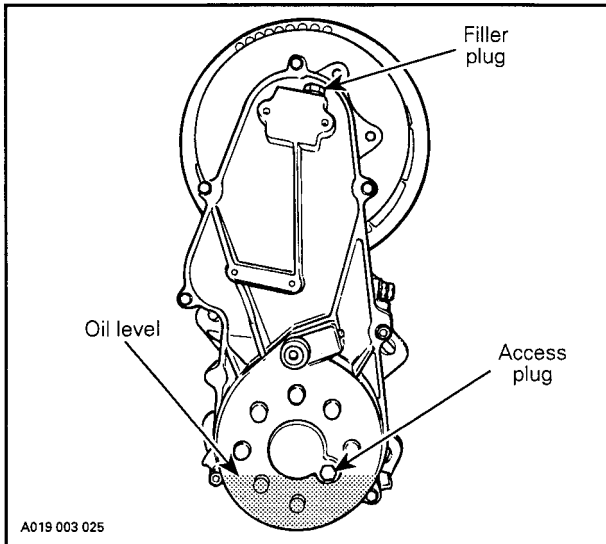
### Safaris and Skandic II without Reverse Gear

To check, remove access plug and check level through hole.



To fill, remove filler plug from top of transmission. Refill as required using Bombardier chaincase oil (P / N 413 8019 00 - 250 mL) until it flows through level hole.

## Skandic II with Reverse Gear



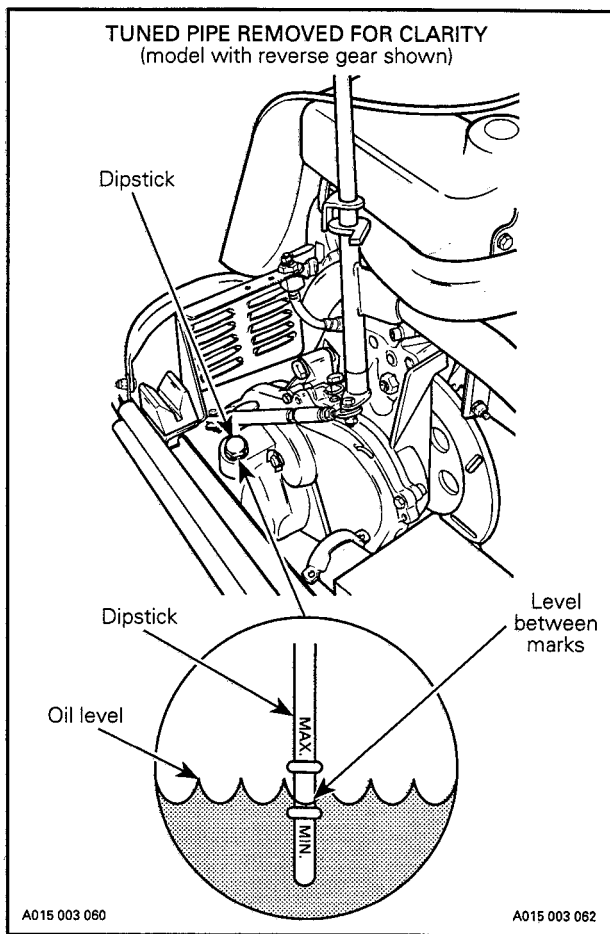
To fill, remove filler plug from top of transmission. Refill as required using Bombardier chaincase oil (P / N 413 8019 00 - 250 mL) until it flows through level hole.

### **MX, Summit, Formula, Grand Touring and Mach Series**

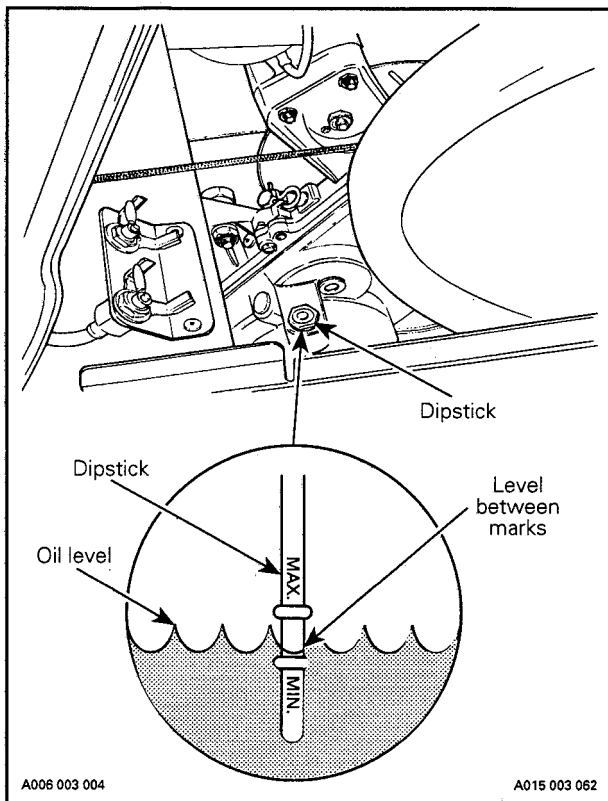
With snowmobile on a level surface, check the oil level by removing dipstick. With dipstick unscrewed, oil level must be **between** lower and upper marks. Refill up to upper mark using BOMBARDIER synthetic chaincase oil (P / N 413 8028 00 - 250 mL). Use spark plug socket to unscrew / screw dipstick.

▼ **CAUTION** : Do not use other types of oil than synthetic chaincase oil (P / N 413 8028 00) when servicing. Do not mix this synthetic oil with other types of oil.

## Grand Touring Series and Mach 1



## MX, Summit, Formula and Mach Z Series

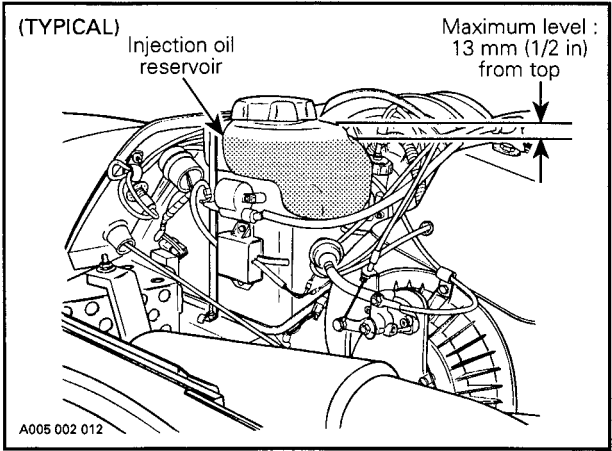


### Oil Injection System

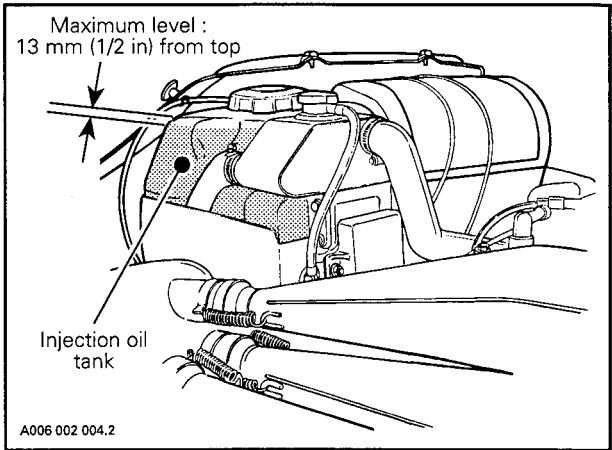
Always maintain a sufficient amount of BOMBARDIER Snowmobile Injection Oil in the injection oil reservoir.

▼ CAUTION : Never allow oil level to drop more than 2/3.

▼ CAUTION : Check level and refill every time you refuel. Do not overfill. Wipe off any spillage. Oil is highly flammable.



### MX, Summit and Formula Mach Z Series



## Cooling System

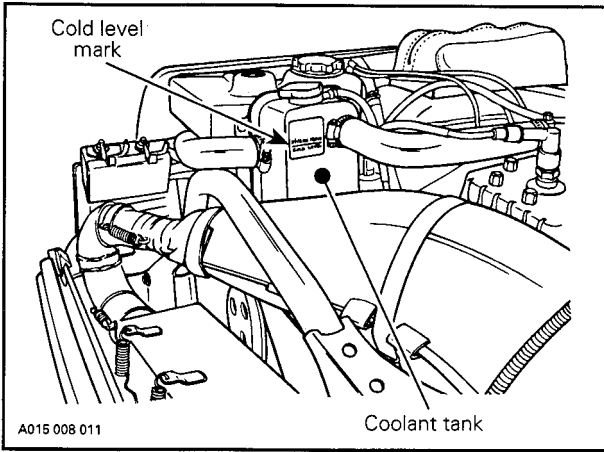
### Liquid Cooled Models Only

Check coolant level. Liquid should be at level marky (engine cold) of coolant tank.

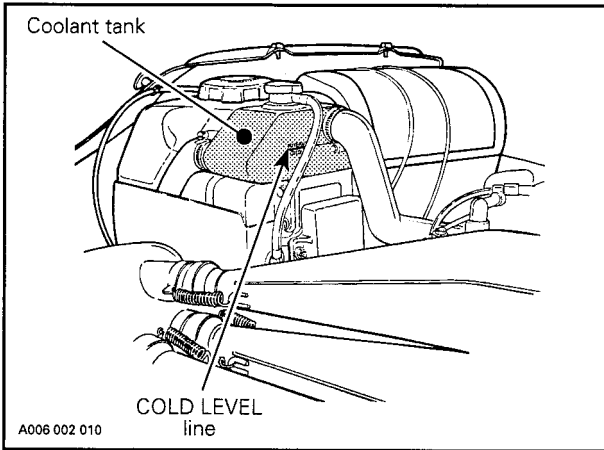
If additional coolant is necessary or if entire system has to be refilled, refer to an authorized dealer.



**Grand Touring Series and Mach 1**



**MX, Summit, Formula and Mach Z Series**



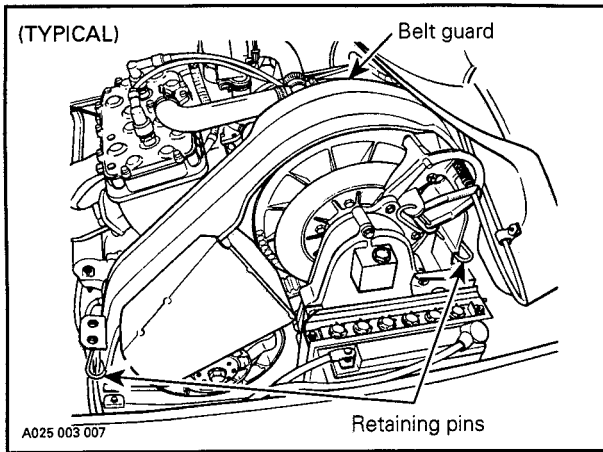
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## MAINTENANCE

### Belt Guard Removal and Installation

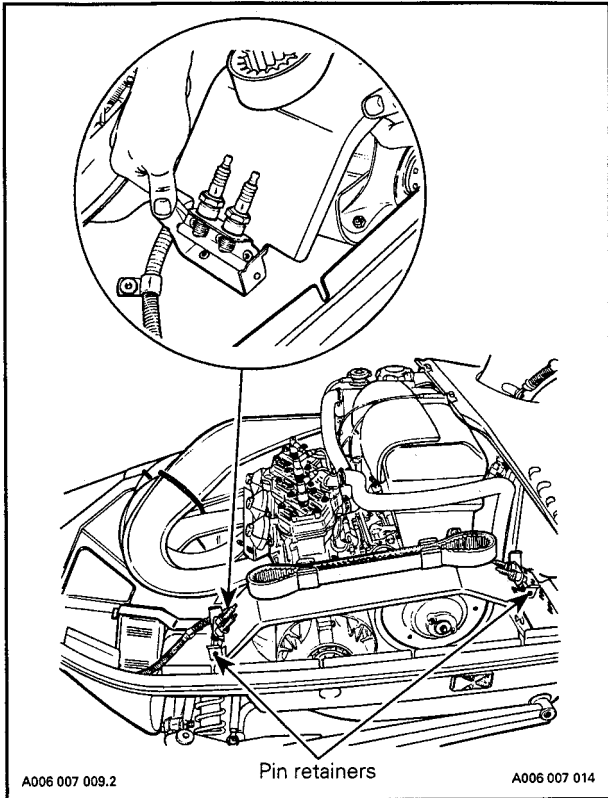
◆ **WARNING:** Engine should be running only when belt guard and / or pulley guard are secured in place. Turn off engine before servicing. Remove ignition key.

Open hood (console removal may be required on some models). Remove belt guard retaining pins(s) and lift off the guard.



### MX, Summit, Formula and Mach Z Series

1. Open hood
2. Open retainers to release pin then firmly lift belt guard. Proceed one end at a time.



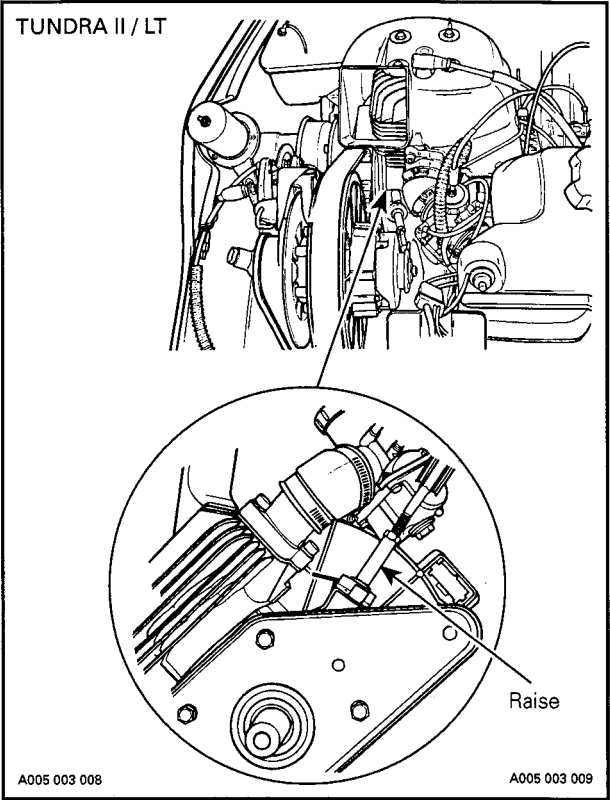
When reinstalling belt guard, position its cut-away toward front of snowmobile.

○ **NOTE :** Belt guards are purposely made slightly oversize to maintain tension on their pins and retainers preventing undue noise and vibration. It is important that this tension be maintained when reassembling.

# Drive Belt Removal / Installation

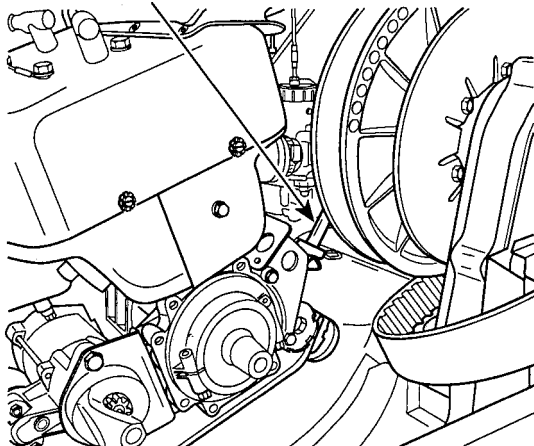
1. Open hood and remove belt guard.

Some models may also require the disconnection of driven pulley support.



## SAFARI AND SKANDIC II

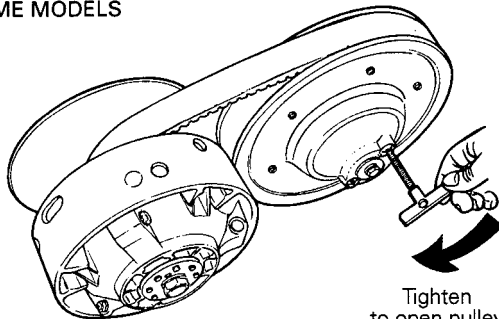
Push down



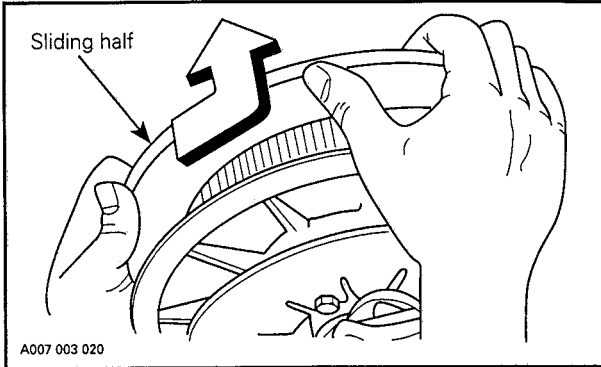
○ **NOTE :** Removal and installation of drive belt is easier when driven pulley is held with brake so that it can not rotate. Apply parking brake, on models so equipped, for this purpose. Drive pulley access plug can be removed from side pan on some models to make room for belt removal.

2. On some models, open the driven pulley with the drive belt installer / remover (P / N 529 0195 00) provided in tool box.
  - Screw tool in the threaded hole and tighten to open the pulley. Remove belt.

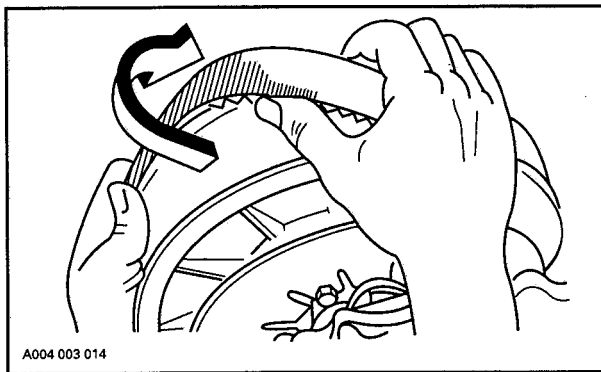
## SOME MODELS



On models not equipped with above driven pulley, open the driven pulley by twisting and pushing the sliding half. Hold in fully open position.

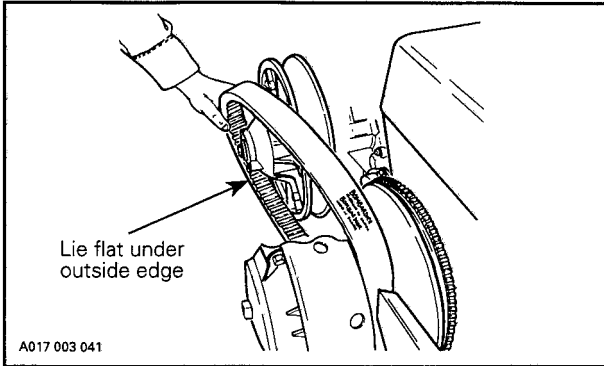


Slip the belt over the top edge of the sliding half, as shown.



### **Alpine II Only**

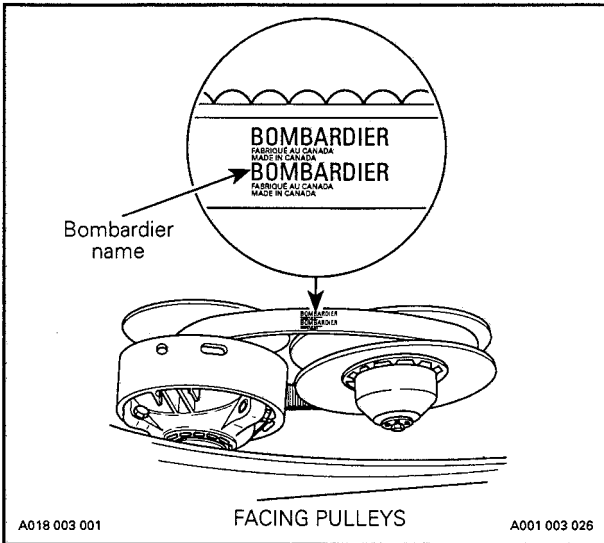
Completely remove the belt from the driven pulley and lie flat under the driven pulley outside edge.



### All Models

To install the drive belt, reverse the removal procedure, however pay attention to the following :

The maximum drive belt life span is obtained when the belt has the proper rotation direction. Install it so the Bombardier name on the belt can be read when facing pulleys.



▼ **CAUTION :** Do not force or use tools to pry the belt into place, as this could cut or break the cords in the belt.

Reposition and lock driven pulley support, on models so equipped. On models so equipped, remove belt installer. Reinstall belt guard.

## **Drive Belt Condition**

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

Check the drive belt width. Replace the drive belt if width is less than. The minimum width recommended in SPECIFICATIONS section.

## **Brake Condition**

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

## **Brake Adjustment**

### **Élan**


For brake adjustment, consult an authorized dealer.

### **All Models Except Élan**

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

## **Rear Suspension Condition**

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

 **NOTE** : During normal driving, snow will act as a lubricant and coolant for the slider shoes (except for Élan). Extensive riding on ice or sanded snow, will create excessive heat build-up and cause premature slider shoe wear.

## **Suspension Stopper Strap Condition**

### **All Models Except Élan, Grand Touring and Mach 1**

Inspect stopper strap for wear and cracks, bolt and nut for tightness. If loose inspect holes for deformation. Replace as required. Torque nut to 9 N•m (80 lbf•in).

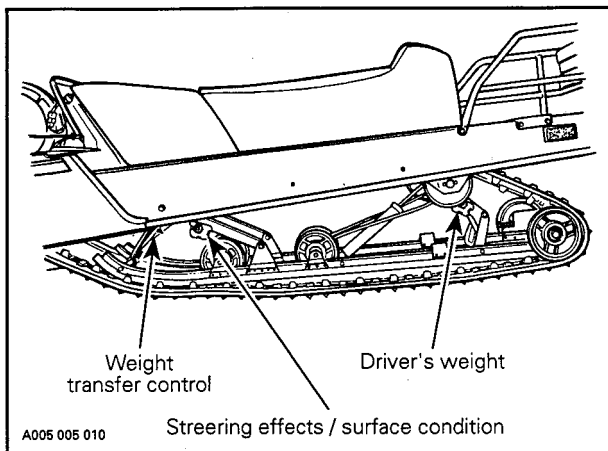


## Suspension Adjustment

If suspension is too stiff or soft, check for incorrect adjustments for weight and riding conditions. See your dealer for spring options.

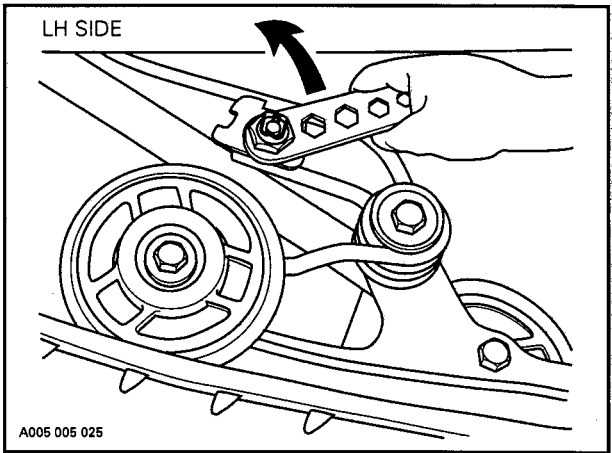
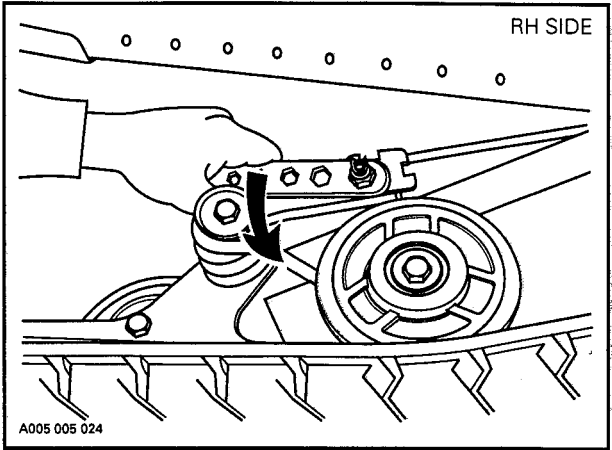
### Tundra II / LT

Choice of suspension adjustments depends on carrying load, driver's weight, personal preference, riding speed and field condition.



To adjust the front and rear cams, use the special key supplied in tool kit. Turn the cam(s) to increase or decrease stiffness.

▼ **CAUTION** : Always turn the left side adjustment cams in a clockwise direction, the right side cams in a counter-clockwise direction. Left and right adjustment cams must always be set at the same position.



### **Stopper Strap**

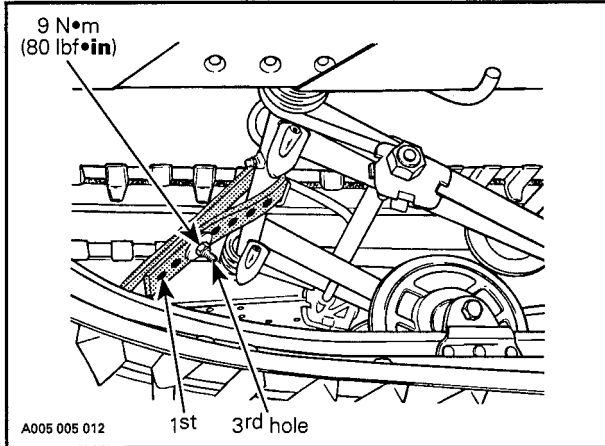
The function of the suspension stopper strap is to control the weight transfer.

The longer the strap, the more the weight will be transferred to the track to provide a better traction. The shorter the strap the lesser the weight transferred to the track, thus maintaining a more positive steering. A shorter strap also help when negotiating a particular snow condition.

▼ **CAUTION** : Whenever stopper strap length is changed, track tension must be readjusted to prevent any possibility of operating snowmobile with a too loose or too tight track tension.

For normal use, locate bolt through 3<sup>rd</sup> hole from strap end.

◆ **WARNING** : Always torque the nut to 9 N•m (80 lbf•in).  
Replace strap if worn or torn.



○ **NOTE** : When towing a load, it is suggested to adjust stopper strap to its shortest length, soften front springs of rear suspension and stiffen rear springs. These adjustments will improve steering.

### Alpine II

◆ **WARNING** : Always ensure to perform the same adjustments on each rear suspension.

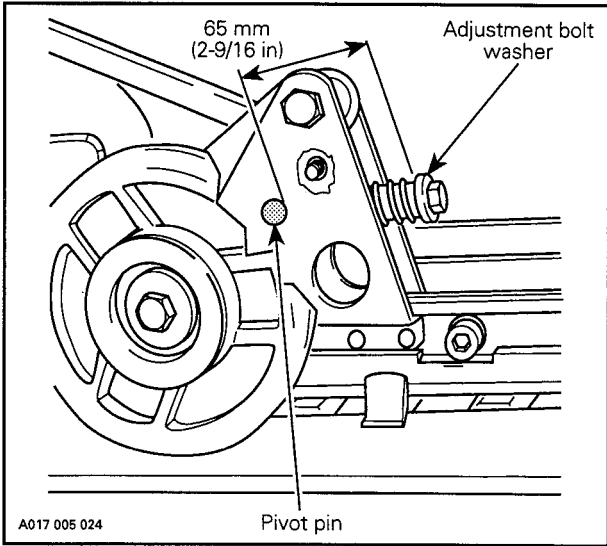
See Tundra II / LT for adjustment.

○ **NOTE** : When turning the external adjustment cam from one suspension, the internal one of the same suspension will automatically turn at the same time because they are linked together by a cross shaft.

▼ **CAUTION** : Always turn adjustment cam of the RH suspension in a counterclockwise direction and the one of the LH suspension, clockwise. Both suspension must always be set at the same elevation.

### Suspension Rear Pivot

To prevent the rear portion of the track from digging in the snow when in reverse, the slide suspension is hinged and spring loaded. To check for correct preload, measure the distance from the outer edge of the pivot pin to the inner edge of the adjustment bolt washer. The distance should be 65 mm (2-9/16 in).



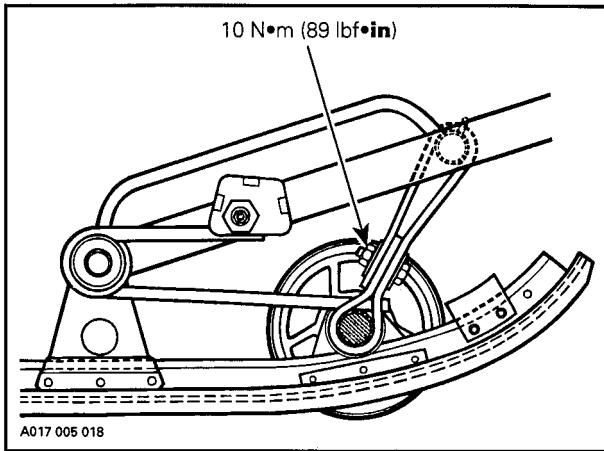
○ **NOTE** : The driver can customize this adjustment to meet its particular need. For instance should one is most of the time pulling a load and use rarely the reverse, the rear pivot could be “locked” by fully tighten the adjustment bolt thus getting a better traction and a more positive steering.

### Stopper Strap

See Tundra II / LT for adjustment.

For normal use, adjust the stopper to its longer length.

◆ **WARNING** : Always torque the nut to 10 N•m (89 lbf•in).



◆ **WARNING :** Always set stopper strap of each suspension to the same length.

### Safari and Skandic II Series

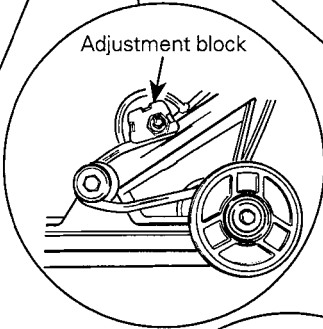
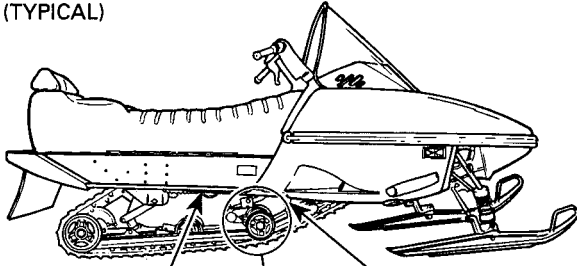
The front suspension (skis) includes two shock absorber / spring combination that have a three-position adjustment cam. See an authorized dealer for adjustment.

SPRING END / STOPPER DISTANCE	CONDITION
Smallest	Soft riding, smooth trail
Intermediate	Normal riding
Greatest	Hard surface

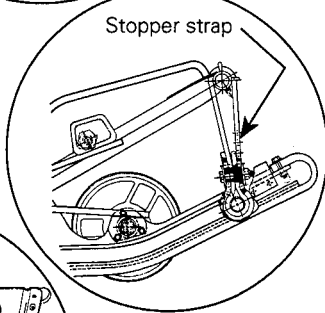
○ **NOTE :** Exhaust muffler or shock absorber may be removed to ease adjustment cam access. See an authorized dealer.

The rear suspension (track) includes two torsional springs at front portion that have a four-position adjustment block, and adjustable stopper strap and finally two shock absorber / spring combination at rear portion that have a five-position adjustment cam.

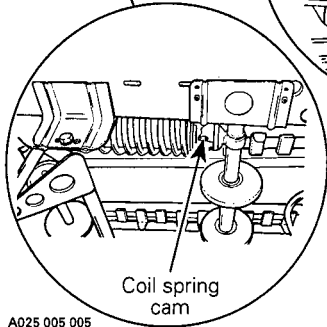
(TYPICAL)



Adjustment block



Stopper strap



Coil spring  
cam

A025 005 005

The front suspension is adjustable for surface condition, snowmobile handling and stability.

The front portion of rear suspension is adjustable for surface condition and steering effects.

The stopper strap is adjustable for snowmobile weight transfer control.

The rear portion of rear suspension is adjustable for driver's weight.

Choice of suspension adjustments depends on carrying load, driver's weight, personal preference, riding speed and field condition.

Cam / block position	Soft	—————→	Stiff
Operator's Weight	Light	—————→	Heavy
Riding speed	Low	—————→	High
Field condition	Flat	—————→	Bumpy

Slight suspension bottoming occurring under the worst riding conditions indicates a good choice of preload adjustment (cam / block position).

Optional different rate springs are available for your convenience. Ask an authorized dealer for more information.

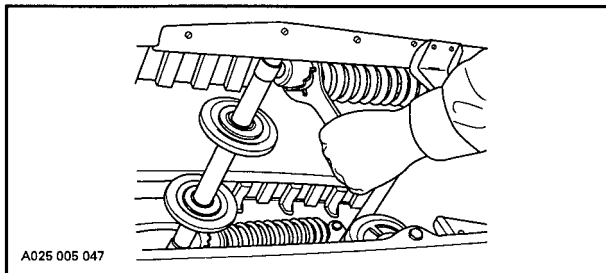
Suspension is adjusted as outlined in the following lines.

### Adjustment Cams

See Tundra II / LT for adjustment.

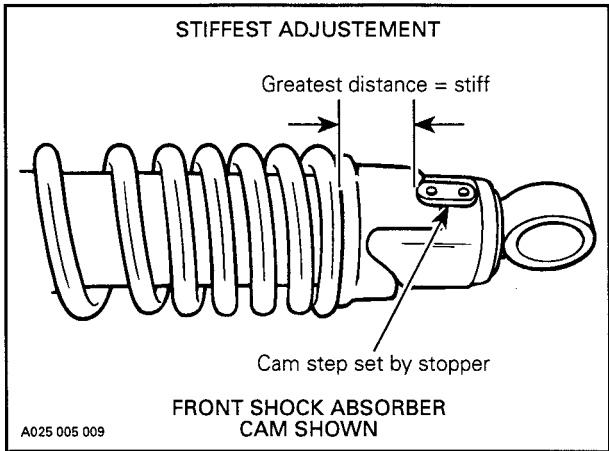
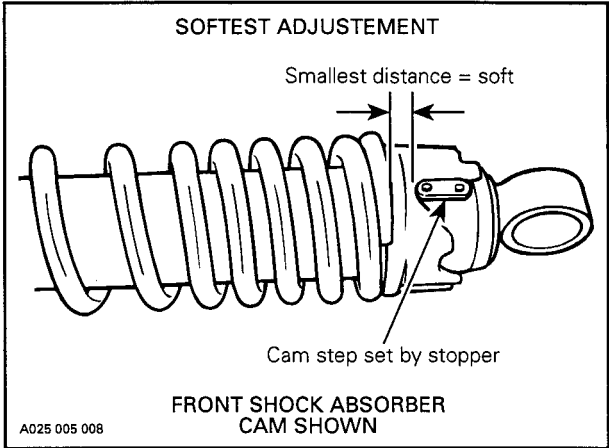
### Shock Absorber Spring Cam Tool

To adjust rear suspension shock absorber springs, use the special key supplied in tool kit.



Spring stiffness can be increased or decreased by turning the cam.

SPRING END / STOPPER DISTANCE	DRIVER'S WEIGHT kg (lb)	
	FROM	UP TO
Smallest	-	68 (150)
Intermediate	68 (150)	82 (180)
Greatest	82 (180)	-





▼ **CAUTION :** Always adjust left and right shock absorber spring cams to the same position.

### Rear Suspension Adjustment Block

See Tundra II / LT for adjustment.

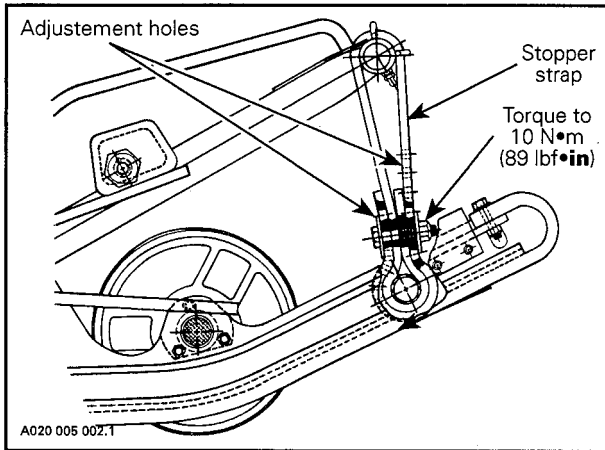
### Shock Absorber Pivot Positioning

Shock pivot position can be changed according to riding condition. Consult an authorized dealer.

### Stopper Strap

See Tundra II / LT for adjustment.

○ **NOTE :** The stopper strap may be adjusted to the second holes (counting from top) to get a softer suspension when riding mostly in trails with Skandic models.



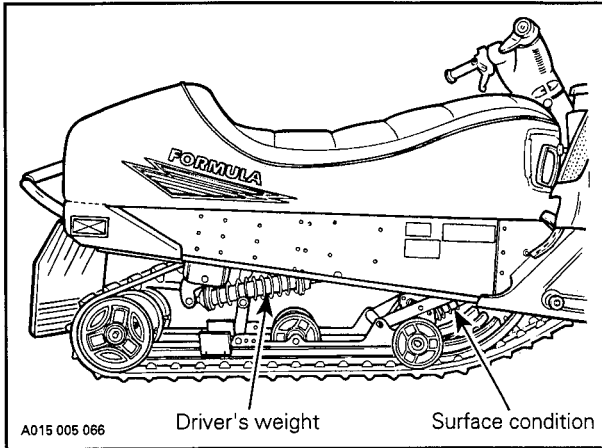
◆ **WARNING :** Always torque the nut to 10 N•m (89 lbf•in).

### Grand Touring and Mach 1 Series

The rear suspension has three adjustments :

- The front shock spring to control weight distribution on ski/ track.
- The rear shock springs for driver's weight.
- Limiter screw to control snowmobile weight transfer.

## Shock Absorber Spring Adjustment

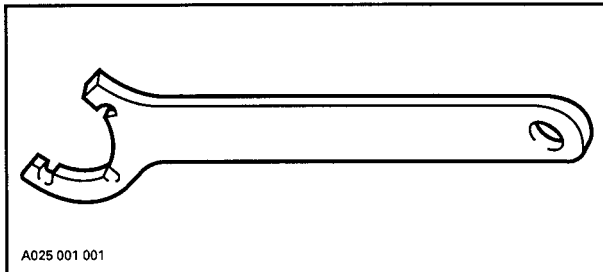


Each shock absorber has a cam located at the bottom of the shock. Spring preload may be increased or decreased by turning the cam. To adjust, use the adjustment key supplied in tool kit. Spray WD-40 between spring and spring cam to ease adjustment.

### Front Spring

○ NOTE : The front shock absorber of the rear suspension should be removed to adjust spring collar.

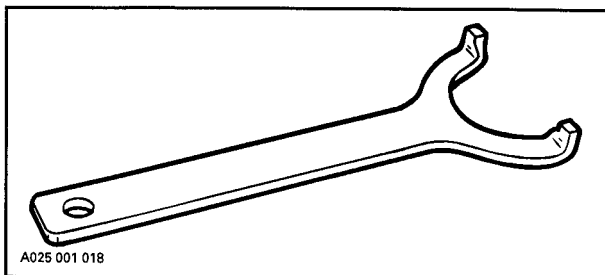
Use the following key.



See Safari for adjustment.

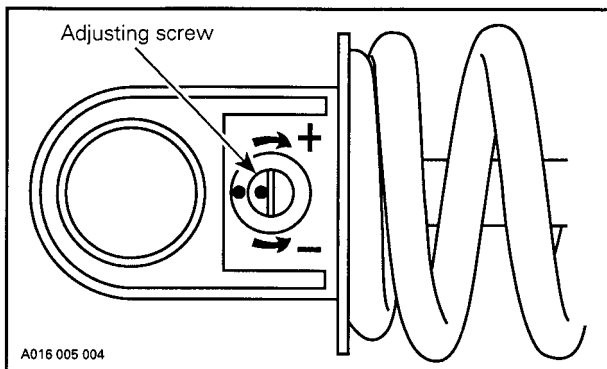
### Rear Springs

Use the following key.



### Grand Touring SE Only

In addition to adjustment previously described, the shock valving (damping reaction) can be adjusted by turning screw at rear of shock.



### MX, Summit, Formula and Mach Z Series

#### Spring Stiffness Adjustment

See Grand Touring for adjustment.

#### Adjustment Tools

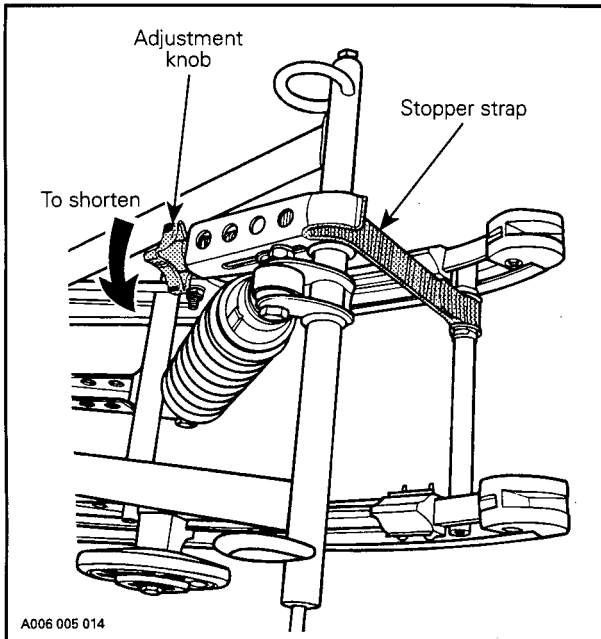
##### Stopper Strap Adjustment

The function of the suspension stopper strap is to control the snowmobile weight transfer.

The longer the strap, the more the weight will be transferred to the track to provide a better traction. The shorter the strap, the less the weight will be transferred to the track, maintaining a more positive

steering. Stopper strap allows weight transfer adjustment according to driver's requirement, field and / or snow conditions.

The stopper strap is set by turning the adjustment knob by hand. When facing knob, turning the knob clockwise shortens stopper strap and conversely turning it counterclockwise lengthens it.

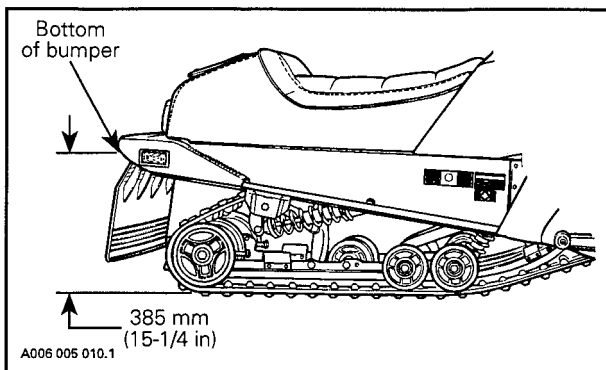


○ **NOTE :** Ensure that adjustment knob is tightened enough so that front shock absorber is compressed by approximately 5 mm (1/4 in) when rear of snowmobile is lifted and track does not touch the ground. Stopper strap must act as the limiter of suspension travel.

▼ **CAUTION :** Shock absorber damage might occur if stopper strap is not tightened enough.

### Guidelines to adjust suspension

A comfort zone exists when the distance between ground and rear bumper tube is approximately 385 mm (15-1/4 in) with the driver seated on snowmobile.



The best way to set up suspension, is to start from factory settings then customize each adjustment one at a time (refer to next table). Then, test run the snowmobile always with the same conditions ; trail, speed, snow, driver riding position etc. Change adjustment and retest. Proceed methodically until you get satisfied.

▼ **CAUTION** : Whenever adjusting rear suspension, check track tension and adjust as necessary.

FACTORY SETTINGS (Cam Position From Lowest Preload)	
Front Suspension	2
Front Portion of Rear Suspension	4
Rear Portion of Rear Suspension	4

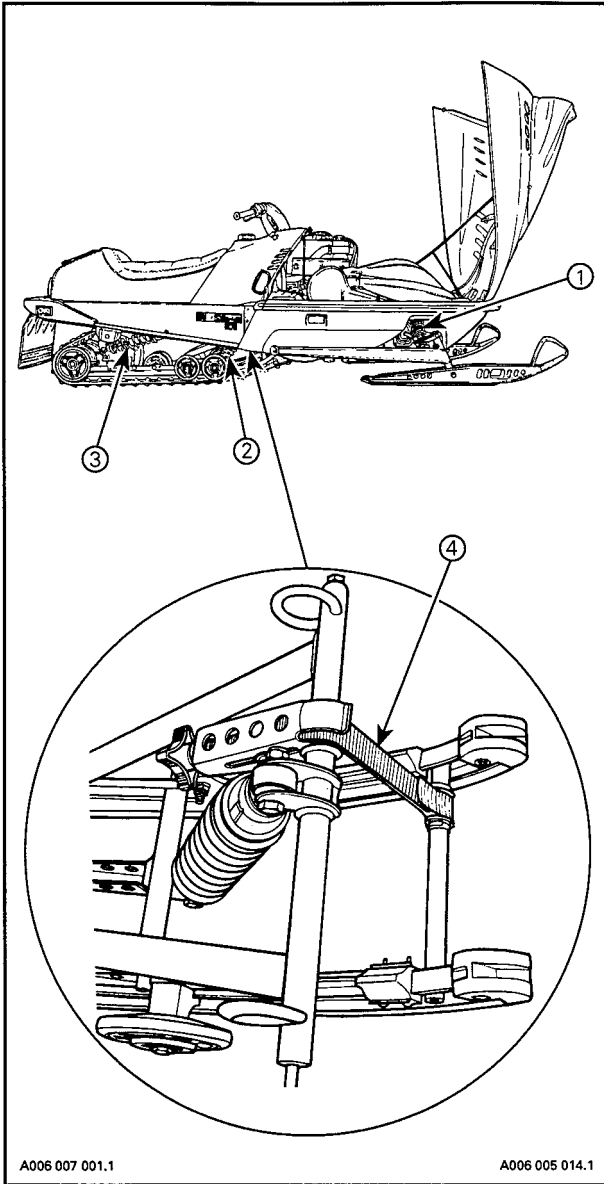
Slight suspension bottoming occurring under the worst riding conditions indicates a good choice of spring preload.

### In Deep Snow

When operating the snowmobile in deep snow, it may be necessary to vary the position of front spring adjustment cam (rear suspension) stopper strap and / or riding position, to change the angle at which the track rides on the snow. Operator's familiarity with the various adjustments as well as snow conditions will dictate the most efficient combination.

OVERALL EFFECTS OF COMPONENTS ADJUSTMENT	
Front Suspension	Snowmobile handling and stability. ①
Front Portion of Rear Suspension	Steering behavior. ②
Rear Portion of Rear Suspension	Driver's ride comfort. ③
Stopper Strap	Snowmobile weight transfert. ④

① ② ③ ④ : See illustration on next page.



A006 007 001.1

A006 005 014.1

<b>REAR SUSPENSION SETTINGS GUIDELINES</b>	
<b>SPRINGS OF FRONT SUSPENSION</b>	
<b>Increasing stiffness</b>	<b>Decreasing stiffness</b>
• Gives more aggressive steering.	Eases steering action.
• Stiffens action of suspension.	Softens action of suspension.
• Increases ski ground pressure.	Decreases ski ground pressure.
<b>FRONT SPRING OF REAR SUSPENSION</b>	
<b>Increasing stiffness</b>	<b>Decreasing stiffness</b>
• Tends to reduce steering effort.	Softens rear suspension reaction.
• Produces more responsive steering.	Increases comfort at moderate speed.
• Reduces bottoming of rear suspension front spring in rough trails.	Increases ski ground pressure.
• Reduce ski ground pressure.	
<b>REAR SPRINGS OF REAR SUSPENSION</b>	
<b>Increasing stiffness</b>	<b>Decreasing stiffness</b>
• Softens suspension reaction by placing the rear shocks in their comfort zone.	Stiffens rear suspension reaction.
• Lifts rear of snowmobile and increases rear suspension travel during compression.	Lowers rear of snowmobile and produces a more sporty handling.
• Increases ski ground pressure.	Reduces ski ground pressure.
<b>STOPPER STRAP</b>	
<b>Lengthening</b>	<b>Shortening</b>
• Increases snowmobile weight transfer to the track.	Reduces snowmobile weight transfer to the track.



## TROUBLESHOOTING CHART

Problem	Corrective measures
Front suspension wandering	<ul style="list-style-type: none"> <li>– Check ski alignment and camber angle adjustment. See an authorized dealer.</li> <li>– Reduce ski ground pressure.                             <ul style="list-style-type: none"> <li>• Reduce front suspension spring stiffness.</li> <li>• Increase rear suspension front spring stiffness.</li> <li>• Reduce rear suspension rear spring stiffness.</li> </ul> </li> </ul>
Snowmobile is unstable and seems to pivot around its center	<ul style="list-style-type: none"> <li>– Reduce rear suspension front arm pressure.                             <ul style="list-style-type: none"> <li>• Reduce rear suspension front spring stiffness.</li> <li>• Increase rear suspension rear spring stiffness.</li> <li>• Increase front suspension spring stiffness.</li> </ul> </li> </ul>
Steering is too heavy	<ul style="list-style-type: none"> <li>– Reduce ski ground pressure.                             <ul style="list-style-type: none"> <li>• Reduce front suspension spring stiffness.</li> <li>• Increase rear suspension front spring stiffness.</li> </ul> </li> </ul>
Rear of snowmobile seems too stiff	<ul style="list-style-type: none"> <li>– Increase rear suspension rear spring stiffness.</li> </ul>
Rear of snowmobile seems too soft	<ul style="list-style-type: none"> <li>– Reduce rear suspension rear spring stiffness.</li> </ul>
Rear suspension front shock absorber is frequently bottoming	<ul style="list-style-type: none"> <li>– Lengthten stopper strap.</li> <li>– Increase rear suspension front shock stiffness.</li> </ul>
Track slides too much at start	<ul style="list-style-type: none"> <li>– Lengthten stopper strap.</li> <li>– Change driving position.</li> </ul>

## Track Condition

Lift the rear of the snowmobile and support it off the ground. With the engine off, rotate the track by hand, and inspect condition. If worn or cut, or if track fibers are exposed, or if missing or defective inserts or guides are noted ; contact an authorized dealer.

◆ **WARNING** : Do not operate or rotate a track under power if torn or damaged.

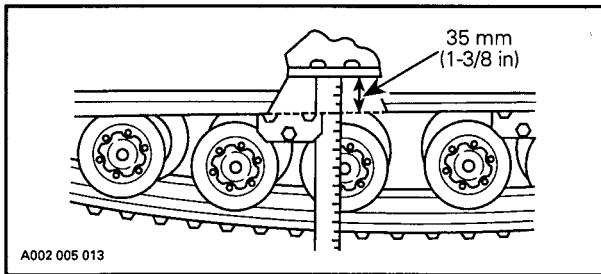
## Track tension and Alignment

### Tension

#### Élan

Lift the rear of snowmobile and support it off the ground. Using a ruler, check track tension.

The distance between the top inside edge of the track and the bottom of the footboard at the middle set of bogie wheels should be 35 mm (1-3/8 in).



▼ **CAUTION** : Too much tension will result in power loss and excessive stresses on suspension components. If the track tension is too loose, the track will have a tendency to thump.

#### All Models Except Élan

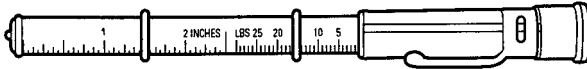
○ **NOTE** : Ride the snowmobile in snow about 15 to 20 minutes prior to adjusting track tension.

Lift rear of snowmobile and support it with a mechanical stand.

Allow the suspension to extend normally and check gap half-way along slider shoe. The gap should be as given in the specification section of this guide. If the track tension is too loose, track will have a tendency to thump.

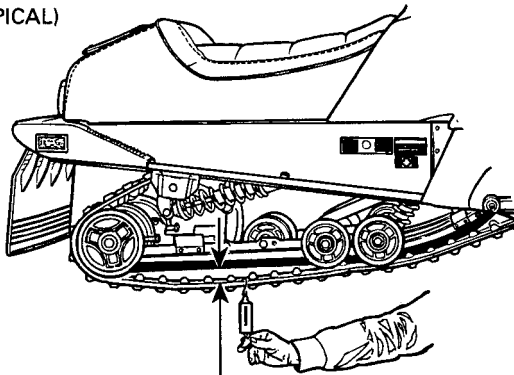
○ **NOTE** : A belt tension tester (P / N 414 3482 00) may be used to measure deflection as well as force applied.

### Belt tension tester



A000 002 007

(TYPICAL)



Tension measured with  
7.3 kg (16 lb)

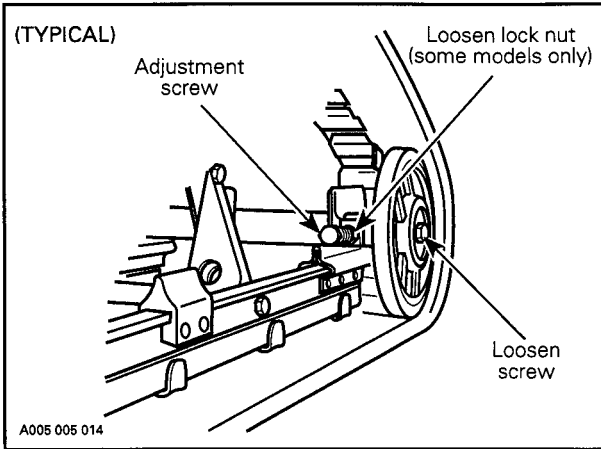
A006 005 015

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

To adjust tension :

- Loosen the rear idler wheel retaining screws.
- Loosen the lock nuts (on some models only) then turn adjustment screws to adjust.

If correct tension is unattainable, contact an authorized dealer.



### Alignment

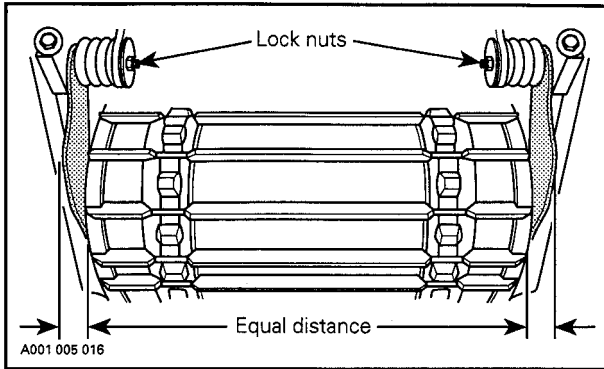
○ NOTE : Track tension and alignment are inter-related. Do not adjust one without the other.

◆ 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 snowmobile.

### Élan

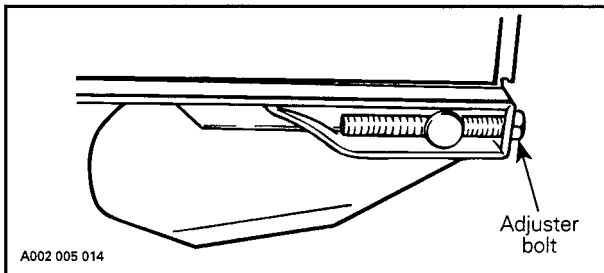
Start engine and allow track to barely turn. Check if track is well centered and turns evenly on the rear sprockets. The distance between track edges and link plates should be equal on each side.

Misalignment can cause excessive wear of track edges and sprocket teeth.



To correct :

**Stop engine**, loosen lock nuts on link plate springs and on appropriate side, turn adjuster bolt clockwise to withdraw track from link plate.

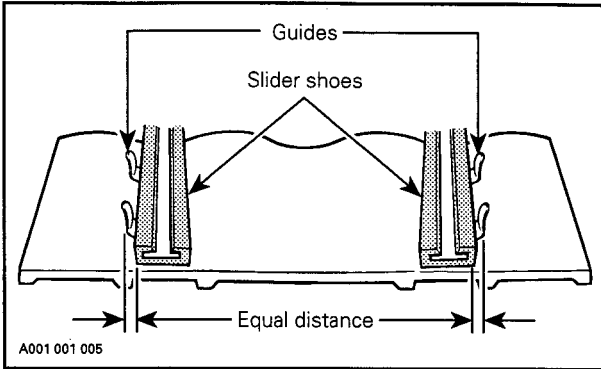


Tighten link plate spring lock nuts.

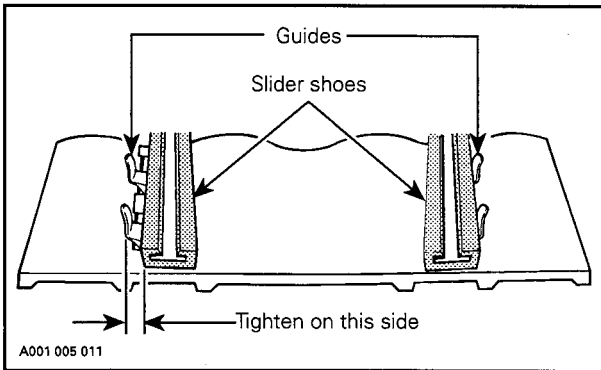
Restart engine and rotate track slowly and recheck alignment.

#### All Models Except Élan

Start the engine and accelerate slightly so that track barely turns. This must be done in a short period of time (one to two minutes). Check that the track is well centered ; equal distance on both sides between edges of track guides and slider shoes.

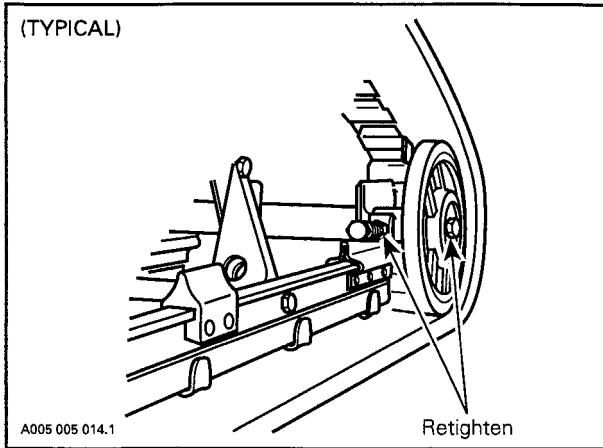


To correct, stop the engine : Loosen the lock nuts (some models only) and tighten the adjustment screw on side where the slider shoe is the farthest from the track insert guides.



Tighten lock nuts (some models only) and adjustment screws.

◆ **WARNING** : If lock nuts or retaining screws are not tightened properly, the adjusting screws could loosen causing the track to become extremely loose and, under some operating conditions, allow the idler wheels to climb over the track lugs forcing the track against the tunnel causing the track to "lock"



Restart engine and rotate track slowly to recheck alignment.  
Reposition snowmobile on ground.

## Steering and Front Suspension Mechanism

Visually inspect steering and front suspension mechanism for tightness of components (steering arms, control arms and links, tie rods, ball joints, ski coupler bolts etc.) If necessary, replace or retighten.

## Wear and Condition of Skis and Runners

Check the condition of the skis and the ski runners. If worn, contact your authorized dealer.

◆ **WARNING:** Excessively worn skis and / or ski runners will affect proper snowmobile control.

## Exhaust System

The tail pipe of the muffler should be centered with the exit hole in the bottom pan.

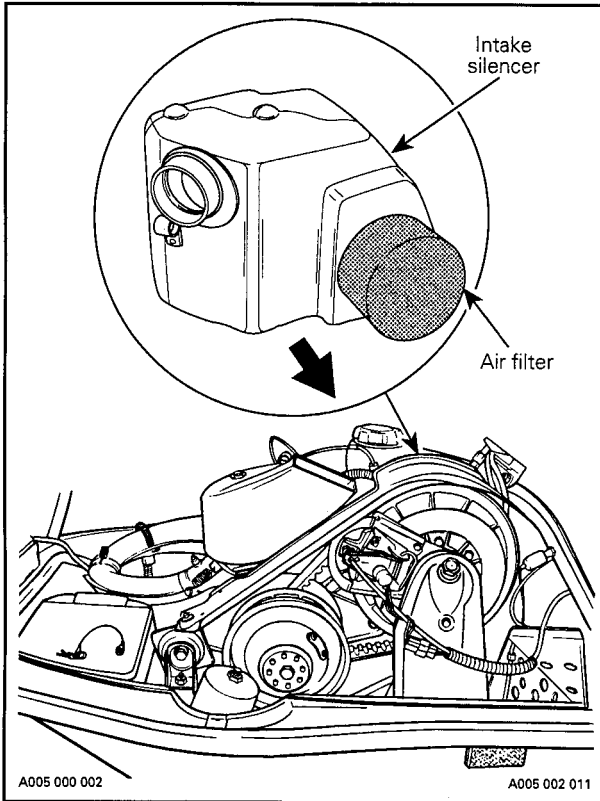
The exhaust system is designed to reduce noise and to improve the total performance of the engine. If any exhaust system component is removed from the engine, severe engine damage will result.

## Air Filter Cleaning

### Tundra II / LT

Air filter is located on lower side portion of air intake silencer. Lift hood and remove belt guard. Gently pull air filter sideward.

Ensure it is clean and dry. Shake snow out. Clean with a solvent and dry as necessary.

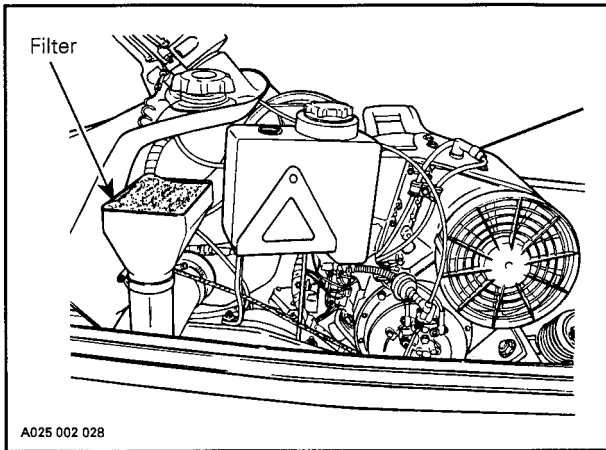


### Safari and Skandic II Series

Leaving the snowmobile uncovered during a snowfall or riding in deep powder snow may block air filter and choke the engine.

While riding in deep powder snow, periodically stop, lift hood and remove air filter from air intake silencer. Shake the snow from the filter and reinstall filter.



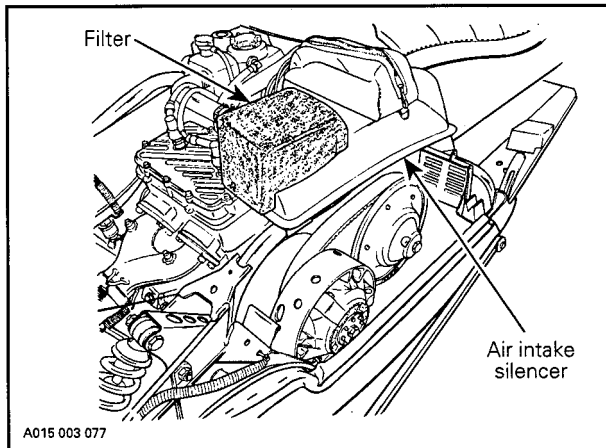


○ **NOTE:** To avoid snow from blocking filter, close snow deflector when riding in powdered snow or when snowmobile is stored outdoor without a tarpaulin.

### **Grand Touring and Mach 1 Series**

Leaving the snowmobile uncovered during a snowfall or riding in deep powder snow may block air filter.

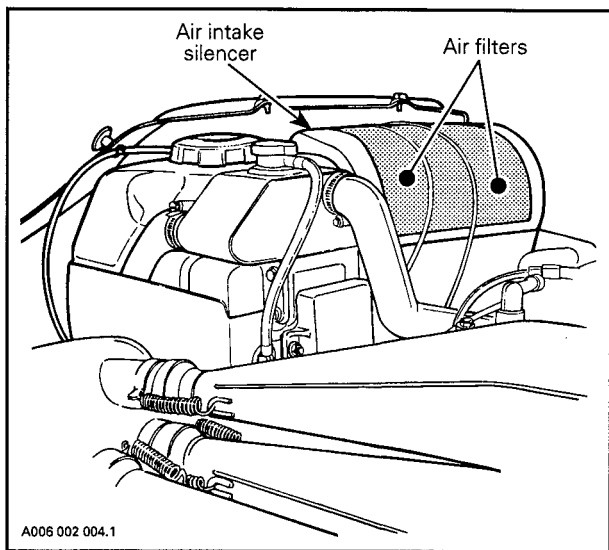
Lift hood and remove air filter from air intake silencer.



To clean the filter, shake the snow out of it then, dry it out.

## MX, Summit, Formula and Mach Z Series

Lift hood and remove air filter from air intake silencer.



Shake the snow out of filter(s) then, dry it out.

### All Models

Check that the air box is clean and dry and properly reinstall the filter.

▼ **CAUTION:** These snowmobiles have been calibrated with the filter installed. Operating the snowmobile without it may cause engine damage.

### High Altitude Kit

If you reside or ride at altitudes above 1200 m (4000 ft), your snowmobile should have a high altitude kit installed. Refer to your authorized BOMBARDIER dealer. Summit models are factory calibrated for high altitude. These models can be converted for sea level utilization.

▼ **CAUTION:** Do not change original factory calibration if snowmobile is used below 1200 m (4000 ft) (except Summit models).

## Bulb Replacement

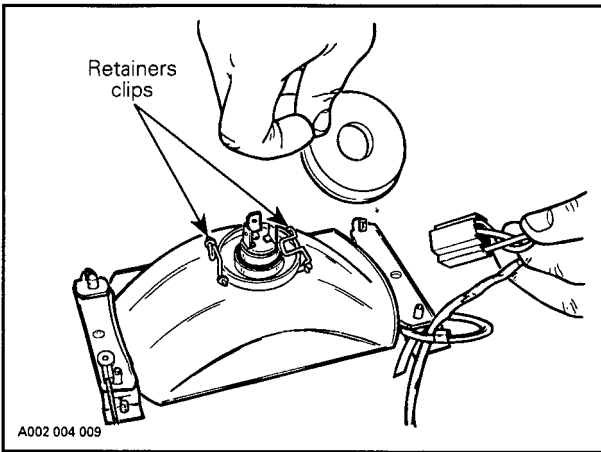
◆ **WARNING** : Always check light operation after bulb replacement.

### Headlight

▼ **CAUTION** : On applicable models, never touch glass portion of a halogen bulb with bare fingers, it shortens its operating life. If by mistake glass is touched, clean it with isopropyl alcohol which will not leave a film on the bulb.

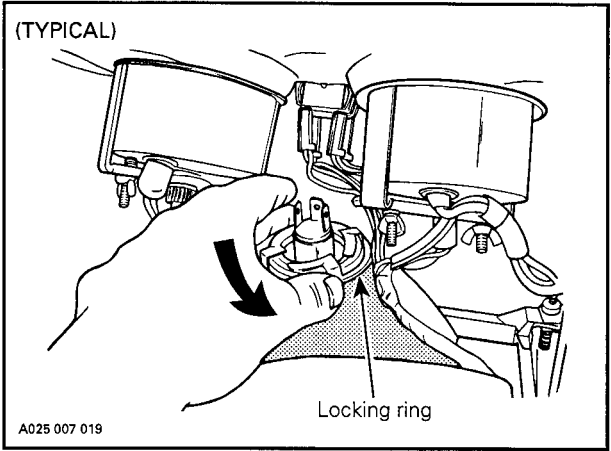
#### Tundra II / LT and Alpine II

If headlamp is burnt, tilt hood. Unplug connector from headlamp. Remove protector cap and unfasten bulb retainer clips. Detach bulb and replace.



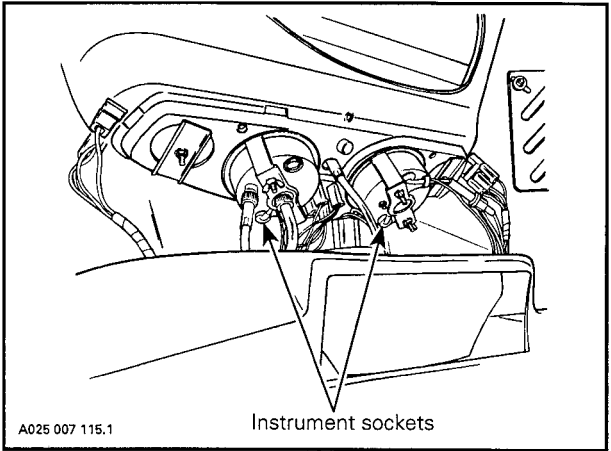
#### All Models Except Tundra II / LT and Alpine II

If the headlight bulb is burnt, tilt hood, unplug the connector from the headlight. Remove the rubber boot and unfasten bulb retainer ring. Detach the bulb and replace. Properly reinstall parts.



### Instrument(s)

Bulb socket is always behind the instrument under a black rubber boot. Pull rubber boot and socket to expose bulb. To release bulb, push bulb and at the same time, rotate bulb counterclockwise.



### Taillight

If taillight bulb is burnt, expose the bulb by removing the red plastic lens. To remove, unscrew the two lens screws.

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## **STORAGE**

It is during summer, or when a snowmobile is not in use for more than one month that proper storage is a necessity.

To prepare your snowmobile, follow the maintenance chart in Maintenance Section.

## TROUBLESHOOTING

<b>SYMPTOM : <i>Engine turns over but fails to start</i></b>	
<b>Possible causes</b>	<b>What to do</b>
1. Ignition switch, emergency cut-out switch or tether switch is in the OFF position.	Place all switches in the RUN or ON position.
2. Mixture not rich enough to start cold engine.	Check fuel tank level and check starting procedure, particularly use of the primer.
3. Flooded engine (spark plug wet when removed).	Do not overprime. Remove wet spark plug, turn ignition switch to OFF and crank engine several times. Install clean dry spark plug. Start engine following usual starting procedure. If engine continues to flood, see an authorized dealer.
4. No fuel to the engine (spark plug dry when removed).	Check fuel tank level ; turn fuel valve on if applicable ; check fuel filter ; replace if clogged ; check condition of fuel and impulse lines and their connections. A failure of the fuel pump or carburetor has occurred. Contact an authorized dealer.
5. Spark plug / ignition (no spark).	Check that emergency cut-out switch is at the ON position and the tether cut-out switch cap is snapped over the receptacle. If no spark appears, replace spark plug. If trouble persists, contact an authorized dealer.
6. Engine compression.	As the engine is pulled over with the rewind starter, "cycles" of resistance should be felt as piston goes past top dead center (each piston on twin-cylinder engines). If no pulsating resistance is felt, it suggests a major loss of compression. Contact an authorized dealer.

<b>SYMPTOM : <i>Engine lacks acceleration or power</i></b>	
<b>Possible causes</b>	<b>What to do</b>
1. Fouled or defective spark plug.	Check item 5 of "Engine turns over but fails to start".
2. Lack of fuel to engine.	Check item 4 of "Engine turns over but fails to start".
3. Carburetor adjustments.	Contact an authorized dealer.
4. Drive belt worn too thin.	If the drive belt has lost more than 3 mm (1/8 in) of its original width, it will affect vehicle performance.
5. Drive and driven pulleys require servicing.	Contact an authorized dealer.
6. Engine is overheating.	On liquid cooled engines, check coolant level, pressure cap, thermostat and for air locks in cooling system. On fan cooled engines, check fan belt and its tension ; clean cooling fins of engine ; if overheating persists, contact an authorized dealer.
7. Engaged decompressor (if applicable).	Release decompressor.
<b>SYMPTOM : <i>Engine backfire</i></b>	
<b>Possible causes</b>	<b>What to do</b>
1. Faulty spark plug (carbon accumulation).	See item 5 of "Engine turns over but fails to start".
2. Engine is running too hot.	See item 6 of "Engine lacks acceleration or power".
3. Ignition timing is incorrect or there is an ignition system failure.	Contact an authorized dealer.

<b>SYMPTOM : <i>Engine misfire</i></b>	
<b>Possible causes</b>	<b>What to do</b>
1. Fouled / defective / worn spark plugs.	Clean/verify spark plug and heat range. Replace as required.
2. Too much oil supplied to engine.	Improper oil pump adjustment, refer to an authorized dealer. Improper fuel / oil mixture. Drain fuel tank and refill with appropriate mixture ratio.
3. Water in fuel.	Drain fuel system and refill with fresh fuel.
<b>SYMPTOM : <i>Snowmobile cannot reach full speed</i></b>	
<b>Possible causes</b>	<b>What to do</b>
1. Drive belt.	Check item 4 of "Engine lacks acceleration or power".
2. Incorrect track adjustment.	See maintenance section for proper alignment and tension adjustments.
3. Pulleys misaligned.	Contact an authorized dealer.
4. Engine.	See items 1, 2, 3, 6 and 7 of "Engine lacks acceleration or power".



## SPECIFICATIONS

GENERAL	ELAN	ALPINE II
<b>Drive belt</b>		
- Number	570 0411 00	570 2777 00
- New belt width      mm (in)	30.2 (1-3/16)	35.0 (1-3/8)
- Wear limit width      mm (in)	26.4 (1-1/16)	32.0 (1-1/4)
<b>Spark plug</b>		
- Type	BOSCH M7A	NGK BR 8 ES
- Gap                      mm (in)	0.55 (.022)	0.45 (.018)
<b>Track</b>		
- Tension                      mm (in)	35 (1-3/8) ①	30 - 40 (1-3/16 - 1-9/16) ②
- Alignment	③	④
<b>FLUIDS</b>		
<b>Fuel</b>		
- Type	⑤	⑤
- Tank capacity              L (US gal)	13.6 (3.6)	34.2 (9)
<b>Oil (engine)</b>		
- Type	⑥	⑥
- Tank capacity              L (US oz)	N.A.	2.1 (71)
<b>Chaincase/ Transmission oil</b>		
- Type	⑧	⑧
- Capacity                      mL (US oz)	200 (7)	500 (17)
<b>Cooling System</b>		
- Type	N.A.	N.A.
- Capacity                      L (US oz)	N.A.	N.A.

①, ②, ③, ④, ⑤, ⑥, ⑦, ⑧, ⑨, ⑩, ⑪ and N.A. :  
See at end of specifications.

GENERAL	TUNDRA II SERIES	SAFARI / SKANDIC II 377 SERIES
<b>Drive belt</b>		
- Number	414 8276 00	414 6175 00
- New belt width mm (in)	36.5 (1-7/16)	34.6 (1-3/8)
- Wear limit width mm (in)	30.0 (1-3/16)	32.0 (1-1/4)
<b>Spark plug</b>		
- Type	NGK BR 9 ES	NGK BR 9 ES
- Gap mm (in)	0.45 (.018)	0.45 (.018)
<b>Track</b>		
- Tension mm (in)	35 - 45 (1-3/8 - 1-3/4) ②	40 - 55 (1-9/16 - 2-3/16) ②
- Alignment	④	④
<b>FLUIDS</b>		
<b>Fuel</b>		
- Type	⑤	⑤
- Tank capacity L (US gal)	26.0 (6.9)	28.6 (7.6)
<b>Oil (engine)</b>		
- Type	⑦	⑦
- Tank capacity L (US oz)	2.1 (71)	2.6 (86.2)
<b>Chaincase/ Transmission oil</b>		
- Type	⑧	⑧
- Capacity mL (US oz)	200 (7)	250 (8) ⑨
<b>Cooling System</b>		
- Type	N.A.	N.A.
- Capacity L (US oz)	N.A.	N.A.

①, ②, ③, ④, ⑤, ⑥, ⑦, ⑧, ⑨, ⑩, ⑪ and N.A. :  
See at end of specifications.

GENERAL	SAFARI / SKANDIC II 503 SERIES	GRAND TOURING SERIES AND MACH 1
<b>Drive belt</b>		
- Number	414 6175 00	414 7413 00
- New belt width mm (in)	34.6 (1-3/8)	34.5 (1-3/8)
- Wear limit width mm (in)	32.0 (1-1/4)	31.8 (1-1/4)
<b>Spark plug</b>		
- Type	NGK BR 9 ES	NGK BR 9 ES
- Gap mm (in)	0.45 (.018)	0.45 (.018)
<b>Track</b>		
- Tension mm (in)	40 - 55 (1-9/16 - 2-3/16) ②	40 - 45 (1-9/16 - 1-3/4) ②
- Alignment	④	④
<b>FLUIDS</b>		
<b>Fuel</b>		
- Type	⑤	⑤
- Tank capacity L (US gal)	28.6 (7.6)	35.3 (9.3)
<b>Oil (engine)</b>		
- Type	⑦	⑦
- Tank capacity L (US oz)	2.6 (86.2)	2.9 (98.1)
<b>Chaincase/ Transmission oil</b>		
- Type	⑧	⑩
- Capacity mL (US oz)	250 (8) ⑨	350 (12)
<b>Cooling System</b>		
- Type	N.A.	⑪
- Capacity L (US oz)	N.A.	4.2 (142)

①, ②, ③, ④, ⑤, ⑥, ⑦, ⑧, ⑨, ⑩, ⑪ and N.A. :  
See at end of specifications.

GENERAL		MX SERIES SUMMIT SERIES AND FORMULA Z / ST SERIES	MACH Z
<b>Drive belt</b>			
- Number		414 8287 00	414 7948 00
- New belt width	mm (in)	34.5 (1-3/8)	35.5 (1-13/32)
- Wear limit width	mm (in)	31.8 (1-1/4)	33 (1-5/16)
<b>Spark plug</b>			
- Type		NGK BR 9 ES	NGK BR 9 ES
- Gap	mm (in)	0.45 (.018)	0.45 (.018)
<b>Track</b>			
- Tension	mm (in)	45 – 50 (1-3/4 – 2) ②	45 – 50 (1-3/4 – 2) ②
- Alignment		④	④
<b>FLUIDS</b>			
<b>Fuel</b>			
- Type		⑤	⑤
- Tank capacity	L (US gal)	42.1 (11.1)	42.1 (11.1)
<b>Oil (engine)</b>			
- Type		⑦	⑦
- Tank capacity	L (US oz)	4.1 (138.7)	4.1 (138.7)
<b>Chaincase/ Transmission oil</b>			
- Type		⑩	⑩
- Capacity	mL (US oz)	350 (12)	350 (12)
<b>Cooling System</b>			
- Type		⑪	⑪
- Capacity	L (US oz)	4.7 (159)	4.7 (159)

- ① Measure gap between top inside edge of track and the bottom of the footboard.
- ② Measure gap between slider shoe and bottom inside of track when exerting a downward pull of 7.3 kg (16 lbf) to the track.
- ③ Equal distance between edges of track and link plates.
- ④ Equal distance between edges of track guides and slider shoes.
- ⑤ Regular unleaded gasoline with a minimum octane number of 87 (R + M) / 2.
- ⑥ Requires pre-mix; Blizzard Oil (P / N 496 0135 00 – 500 mL) mixed with gas (50 to 1 ratio).
- ⑦ Bombardier Injection Oil (P / N 496 0133 00 – 1 L).
- ⑧ Bombardier Chaincase Oil (P / N 413 8019 00 – 250 mL).
- ⑨ 500 mL (17 oz) on models with reverse gear.
- ⑩ Bombardier Synthetic Chaincase Oil (P / N 413 8028 00).
- ⑪ Ethylene-glycol antifreeze for aluminum engines mixed with water (3 parts of antifreeze for 1 part of water).

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## OTHER PUBLICATIONS AVAILABLE

PUBLICATION		P / N
1994	Shop Manual (English)	484 0609 00
1990 - 1994	High Altitude Technical data (Loose Sheets)	484 0605 00
	Binder	484 8548 00
1990 - 1994	Specification Booklet	480 1296 00
1994	Racing Handbook	484 0607 00

Order from your SKI-DOO dealer. For additional information, call (514) 532-5000 and ask for Customer Relations.

\$

## EXPENSES LOG

DATE Y M D	km / mile	DESCRIPTION	COST	TOTAL



\$

# EXPENSES LOG

DATE Y M D	km / mile	DESCRIPTION	COST	TOTAL







# TRAVEL LOG

DATE Y M D	km / mile	VISITED LOCATIONS









## NAMES AND IMPORTANT ADDRESSES

NAME	ADDRESS	TELEPHONE
Ski-Doo Customer Relations	Valcourt, Québec, Canada J0E 2L0	(514) 532-2211
My Dealer		
My Snowmobile Club		
Insurance Cie		



## NAMES AND IMPORTANT ADDRESSES

NAME	ADDRESS	TELEPHONE

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## **CHANGE OF ADDRESS OR OWNERSHIP**

If your address or owner has changed, be sure to fill out and mail the card provided on next page.

Such notification is likewise necessary for your own safety even after expiration of the original warranty, since Bombardier will be in a position to contact you if correction to your snowmobile becomes necessary.

**NOTICE TO ALL NEW OWNERS :** Make sure to receive the warranty registration card from the previous owner, when the ownership is transferred, as you are entitled to the unexpired portion of the warranty.

### **STOLEN UNITS**

If the event that your snowmobile is stolen, you should notify your area distributor's warranty department of such.

Please provide your name, address, phone number, vehicle serial number and date it was stolen.

Bombardier will provide a list of stolen units to all Ski-Doo dealers on a monthly basis to aid in recovery of such units to their owners.





**CHANGE OF ADDRESS**

**CHANGE OF OWNERSHIP**

VEHICLE IDENTIFICATION NUMBER

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
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OLD ADDRESS  
OR PREVIOUS OWNER :

NAME \_\_\_\_\_

NO \_\_\_\_\_ STREET \_\_\_\_\_ APT. \_\_\_\_\_

CITY \_\_\_\_\_ STATE / PROVINCE \_\_\_\_\_ ZIP / POSTAL CODE \_\_\_\_\_

OLD ADDRESS  
OR PREVIOUS OWNER :

NAME \_\_\_\_\_

NO \_\_\_\_\_ STREET \_\_\_\_\_ APT. \_\_\_\_\_

CITY \_\_\_\_\_ STATE / PROVINCE \_\_\_\_\_ ZIP / POSTAL CODE \_\_\_\_\_

**BOMBARDIER INC.**  
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VALCOURT (QUEBEC)  
CANADA JOE 2LO





  
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